Human Papillomavirus and Related Diseases Report

EUROPE

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ICO
Institut Català d'Oncologia

Abbreviations

Table 1: Abbreviations

Abbreviation	Full term
HPV	Human papillomavirus
HPV Information Centre	ICO/IARC Information Centre on HPV and Cancer
GW	Genital warts
RRP	Recurrent respiratory papillomatosis
SIL	Squamous intraepithelial lesions
LSIL	Low-grade cervical lesions
HSIL	High-grade cervical lesions
ICC	Invasive cervical cancer
CIS	Carcinoma in situ
CIN	Cervical intraepithelial neoplasia
AIN2/3	Anal intraepithelial neoplasia of grade 2 and/or 3
VIN 2/3	Vulvar intraepithelial neoplasia of grade 2 and/or 3
VaIN 2/3	Vaginal intraepithelial neoplasia of grade 2 and/or 3
PeIN 2/3	Penile intraepithelial neoplasia of grade 2 and/or 3
95% CI	95% confidence interval
N	Number of cases tested
HPV Prev	HPV prevalence
ASR	Age-standardised rate
MSM	Men who have sex with men
Non MSM	Heterosexual men
SCC	Squamous cell carcinomas
STI	Sexually transmitted infections
HIV/AIDS	Human immunodeficiency virus/acquired immunodeficiency syndrome
TS	Type specific
EIA	Enzyme immunoassay
RLBM	Reverse line blotting method
RFLP	Restriction fragment length polymorphism
RHA	Reverse hybridisation assay
RLH	Reverse line hybridisation
LiPA	Line probe assay
SBH	Southern blot hybridisation
ISH	In situ hybridisation
MABA	Micro array-based assay
LBA	Line blot assay
HC2	Hybrid Capture 2
SAT	Suspension array technology
PCR	Polymerase chain reaction
SPF	Short primer fragment
q-PCR	Quantitative polymerase chain reaction
RLBH	Reverse line blot hybridisation
RT-PCR	Real-time polymerase chain reaction
DBH	Dot blot hybridisation
HR	High risk
DSA	Direct sequence analysis
MAA	Microchip array assay

Executive summary

Human papillomavirus (HPV) infection is now a well-established cause of cervical cancer and there is growing evidence of HPV being a relevant factor in other anogenital cancers (anus, vulva, vagina and penis) as well as head and neck cancers. HPV types 16 and 18 are responsible for about 70% of all cervical cancer cases worldwide. HPV vaccines that prevent HPV 16 and 18 infections are now available and have the potential to reduce the incidence of cervical and other anogenital cancers.

This report provides key information for Europe on: cervical cancer; other anogenital cancers and head and neck cancers; HPV-related statistics; factors contributing to cervical cancer; cervical cancer screening practises; HPV vaccine introduction; and other relevant immunization indicators. The report is intended to strengthen the guidance for health policy implementation of primary and secondary cervical cancer prevention strategies in the region.

Europe has a population of 327.91 million women aged 15 years and older who are at risk of developing cervical cancer. Current estimates indicate that every year 58,169 women are diagnosed with cervical cancer and 25,989 die from the disease. Cervical cancer ranks* as the 9th most frequent cancer among women in Europe.

* Ranking of cervical cancer incidence to other cancers among all women according to highest incidence rates (ranking 1st) excluding non-melanoma skin cancer. Ranking is based on crude incidence rates (actual number of cervical cancer cases). Ranking using age-standardized rate (ASR) may differ.

Table 2: Key statistics

Population	Europe	Eastern Europe	Northern Europe	Southern Europe	Western Europe
Women at risk for cervical cancer (Female population aged >=15 yrs) in millions	327.9	130.4	44.8	67.8	84.9
Burden of cervical cancer and other HPV-related cancer					
Annual number of new cervical cancer cases	58,169	32,348	6,666	9,053	10,102
Annual number of cervical cancer deaths	25,989	15,854	2,134	3,705	4,296
Standardized incidence rates per 100,000 population:					
Cervical cancer	10.7	14.5	10.4	7.72	7.03
Anal cancer					
Men	0.66	0.41	0.79	0.62	0.96
Women	1.05	0.50	1.57	0.70	1.95
Vulva cancer	1.68	1.30	1.85	1.35	2.43
Vaginal cancer	0.33	0.31	0.38	0.29	0.36
Penile cancer	0.94	0.91	1.11	0.86	0.95
Oropharyngeal cancer					
Men	3.74	4.36	4.00	2.11	4.06
Women	0.92	0.68	1.21	0.45	1.53
Oral cavity cancer					
Men	7.03	9.22	6.01	5.18	6.20
Women	2.38	1.87	3.10	2.08	3.06
Laryngeal cancer					
Men	5.36	7.58	3.16	5.38	3.55
Women	0.64	0.53	0.62	0.64	0.80
Burden of cervical HPV infection					
Prevalence (%) of HPV 16 and/or HPV 18 among women with:					
Normal cytology	3.8	9.7	4.2	3.8	2.6
Low-grade cervical lesions (LSIL/CIN-1)	27.1	31.8	30.6	25.4	25.2
High-grade cervical lesions (HSIL/ CIN-2 / CIN-3 / CIS)	54.5	60.5	54.9	53.2	59.4
Cervical cancer	74.0	84.7	77.0	68.0	78.7

LSIL, low-grade intraepithelial lesions; HSIL, high-grade intraepithelial lesions; CIN, cervical intraepithelial neoplasia; CIS, carcinoma in-situ.

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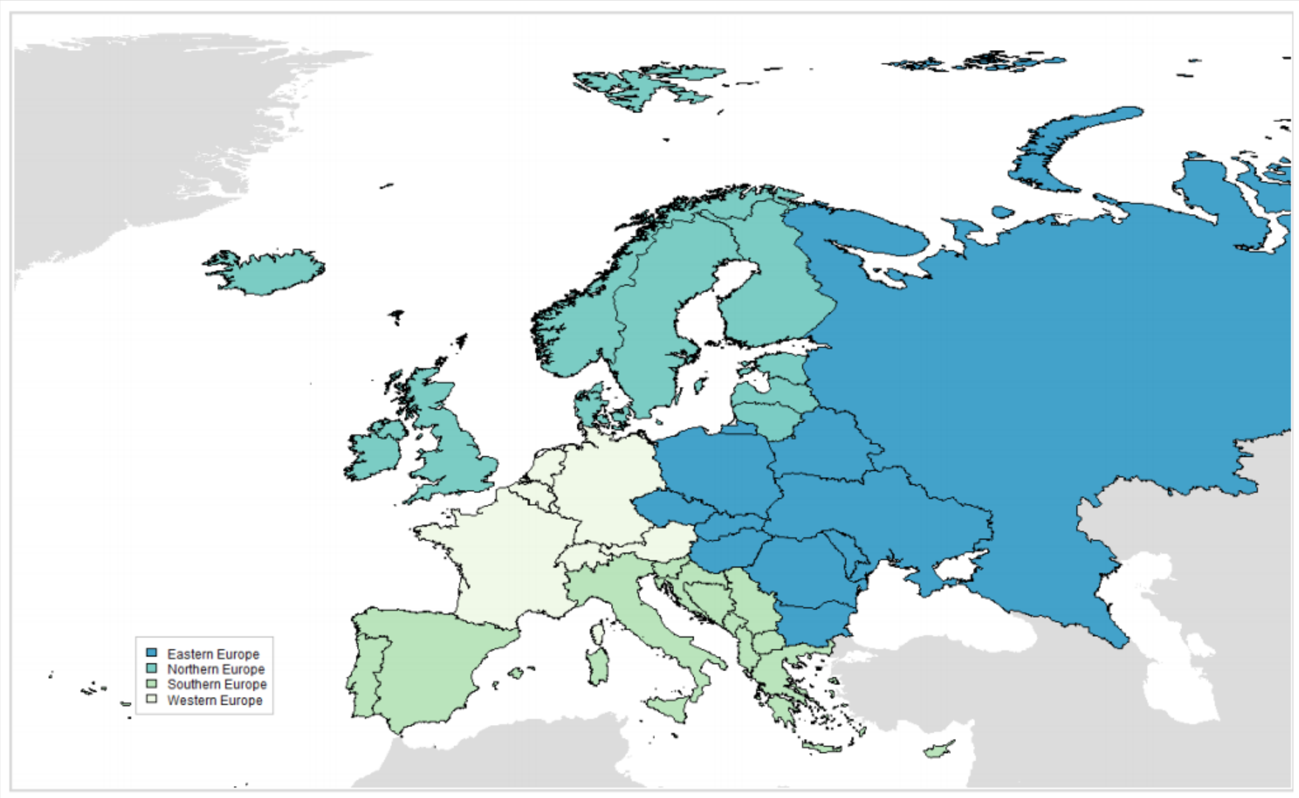
Figure 1: European regions



The HPV Information Centre aims to compile and centralize updated data and statistics on HPV and HPV-related cancers. This report aims to summarize the data available to fully evaluate the burden of disease in Europe and to facilitate stakeholders and relevant bodies of decision makers to formulate recommendations on the prevention of cervical cancer and other HPV-related cancers. Data include relevant cancer statistic estimates, epidemiological determinants of cervical cancer such as demographics, socioeconomic factors, risk factors, burden of HPV infection in women and men, and cervical screening and immunization practices. The report is structured into the following sections:

Section 2, Demographic and socioeconomic factors. This section summarizes the sociodemographic profile of Europe. For analytical purposes, Europe is divided in these regions: Eastern Europe, Northern Europe, Southern Europe, and Western Europe

Section 3, Burden of HPV related cancers. This section describes the current burden of invasive cervical cancer and other HPV-related cancers in Europe with estimates of prevalence, incidence and mortality rates. Information in other HPV-related cancers includes other anogenital cancers (anus, vulva, vagina, and penis) and head and neck cancers (oral cavity, oropharyngeal, and larynx).

Section 4, HPV related statistics. This section reports on prevalence of HPV and HPV type-specific distribution in Europe, in women with normal cytology, precancerous lesions and invasive cervical cancer. In addition, the burden of HPV in other anogenital cancers (anus, vulva, vagina, and penis), head and neck cancers (oral cavity, oropharynx, and larynx) and men are presented.

Section 5, Factors contributing to cervical cancer. This section describes factors that can modify the natural history of HPV and cervical carcinogenesis such as smoking, parity, oral contraceptive use and co-infection with HIV.

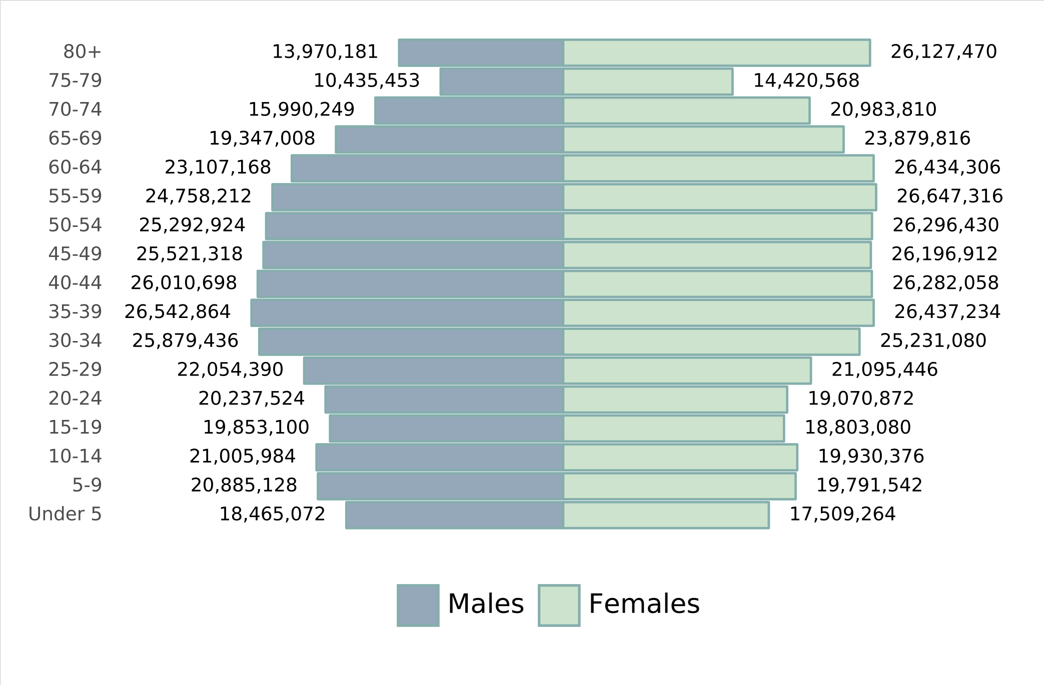
Section 6, Sexual and reproductive health behaviour indicators. This section presents sexual and reproductive behaviour indicators that may be used as proxy measures of risk for HPV infection and anogenital cancers, such as age at first sexual intercourse, average number of sexual partners, and anal intercourse among others.

Section 7, HPV preventive strategies. This section presents preventive strategies that include basic characteristics and performance of cervical cancer screening status, status of HPV vaccine licensure introduction, and recommendations for national immunization programmes.

Section 8, Protective factors for cervical cancer. This section presents the prevalence of male circumcision and condom use.

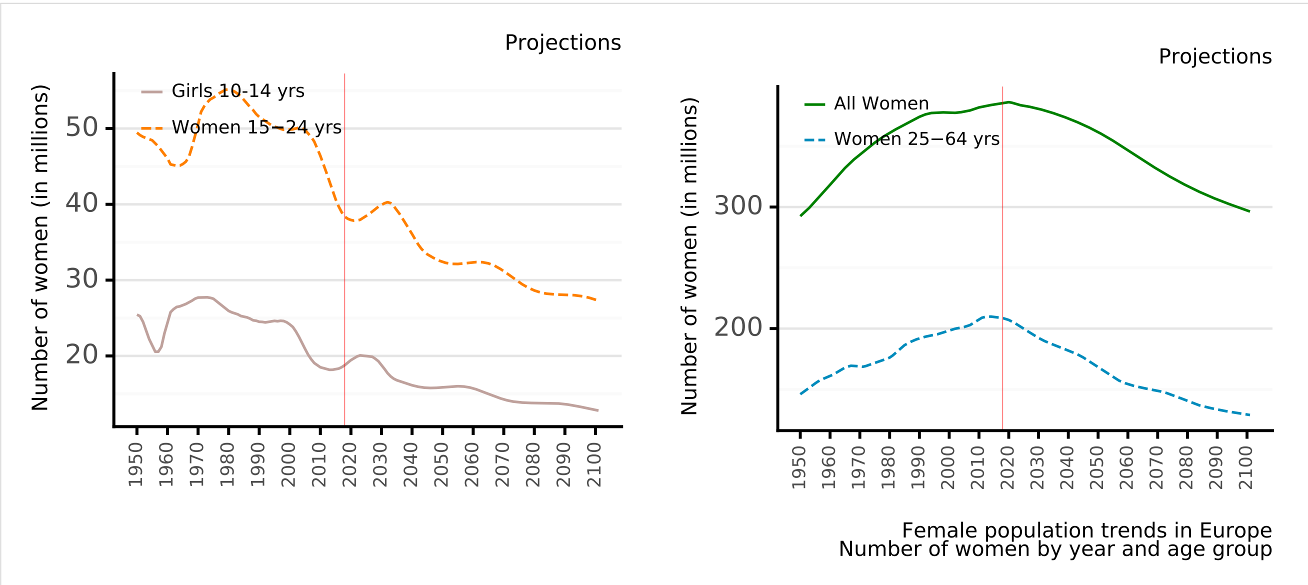
2 Demographic and socioeconomic factors

Figure 2: Population pyramid of Europe for 2022



Data accessed on 30 Jul 2022
Please refer to original source for methods of estimation.
Year of estimate: 2022
Data Sources:
United Nations, Department of Economic and Social Affairs, Population Division (2022). World Population Prospects 2022, Online Edition. [Accessed on July 30, 2022].

Figure 3: Population trends in four selected age groups in Europe



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Data Sources:
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Table 3: Population estimates in Europe for 2022 (in millions)

	Males			Females		
Region Country	**10-14 years**	**15+ years**	**Total**	**10-14 years**	**15+ years**	**Total**
Europe	21.01	299.0	359.36	19.93	327.91	385.14
Eastern Europe	8.45	111.87	136.69	8.03	130.41	153.93
Belarus	0.28	3.58	4.4	0.27	4.36	5.15
Bulgaria	0.17	2.82	3.31	0.16	3.06	3.52
Czechia	0.3	4.31	5.17	0.28	4.51	5.33
Hungary	0.24	3.92	4.64	0.23	4.36	5.04
Poland	1.07	15.47	18.49	1.01	16.89	19.75
Republic of Moldova	0.1	1.14	1.45	0.09	1.3	1.6
Romania	0.54	7.73	9.31	0.51	8.45	9.95
Russian Federation	4.33	54.03	67.22	4.12	65.02	77.52
Slovakia	0.15	2.21	2.66	0.14	2.36	2.78
Ukraine	1.27	16.66	20.05	1.19	20.1	23.29
Northern Europe	3.32	43.13	52.6	3.16	44.79	53.77
Denmark	0.17	2.43	2.92	0.16	2.49	2.95
Estonia	0.04	0.52	0.63	0.04	0.59	0.7
Finland	0.16	2.3	2.74	0.15	2.39	2.8
Iceland	0.01	0.16	0.19	0.01	0.15	0.18
Ireland	0.18	1.97	2.48	0.18	2.04	2.53
Latvia	0.05	0.71	0.86	0.05	0.86	1.0
Lithuania	0.07	1.08	1.3	0.07	1.26	1.47
Norway	0.17	2.26	2.73	0.16	2.24	2.68
Sweden	0.33	4.34	5.3	0.31	4.32	5.22
United Kingdom	2.13	27.22	33.3	2.03	28.32	34.1
Southern Europe	3.96	63.52	74.15	3.73	67.79	77.82
Albania	0.08	1.19	1.42	0.08	1.2	1.43
Andorra	0.0	0.04	0.04	0.0	0.03	0.04
Bosnia & Herzegovina	0.09	1.35	1.6	0.08	1.41	1.65
Croatia	0.1	1.67	1.97	0.1	1.8	2.07
Cyprus	0.03	0.52	0.62	0.03	0.53	0.62
Greece	0.28	4.35	5.1	0.27	4.6	5.31
Italy	1.44	25.01	28.82	1.36	26.7	30.3
Malta	0.01	0.24	0.28	0.01	0.22	0.25
Montenegro	0.02	0.25	0.31	0.02	0.27	0.32
North Macedonia	0.06	0.87	1.05	0.06	0.89	1.05
Portugal	0.25	4.15	4.85	0.24	4.76	5.43
San Marino	0.0	0.01	0.02	0.0	0.01	0.02
Serbia	0.18	2.94	3.48	0.17	3.28	3.78
Slovenia	0.06	0.9	1.07	0.06	0.9	1.05
Spain	1.3	19.9	23.32	1.22	21.04	24.26
Western Europe	5.27	80.47	95.91	5.01	84.92	99.61
Austria	0.22	3.73	4.4	0.2	3.91	4.53
Belgium	0.35	4.76	5.75	0.33	4.95	5.89
France	2.05	25.51	31.21	1.95	27.9	33.35
Germany	1.93	35.19	41.16	1.82	36.61	42.26
Liechtenstein	0.0	0.02	0.02	0.0	0.02	0.02
Luxembourg	0.02	0.27	0.32	0.02	0.27	0.32
Monaco	0.0	0.02	0.02	0.0	0.02	0.02
Netherlands	0.49	7.32	8.71	0.46	7.5	8.82
Switzerland	0.22	3.65	4.33	0.21	3.75	4.39

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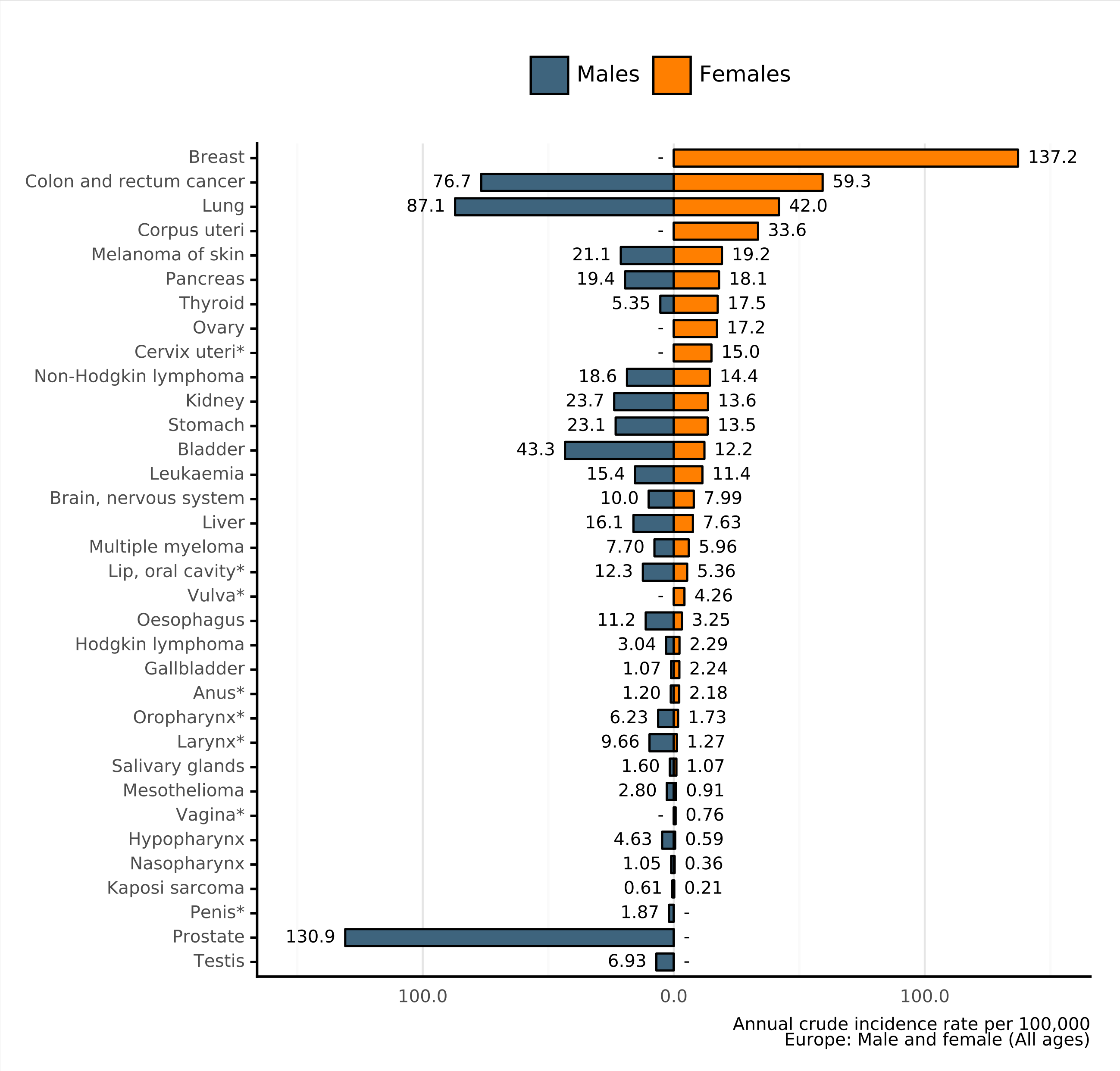
United Nations, Department of Economic and Social Affairs, Population Division (2022). World Population Prospects 2022, Online Edition. [Accessed on July 30, 2022].

3 Burden of HPV related cancers

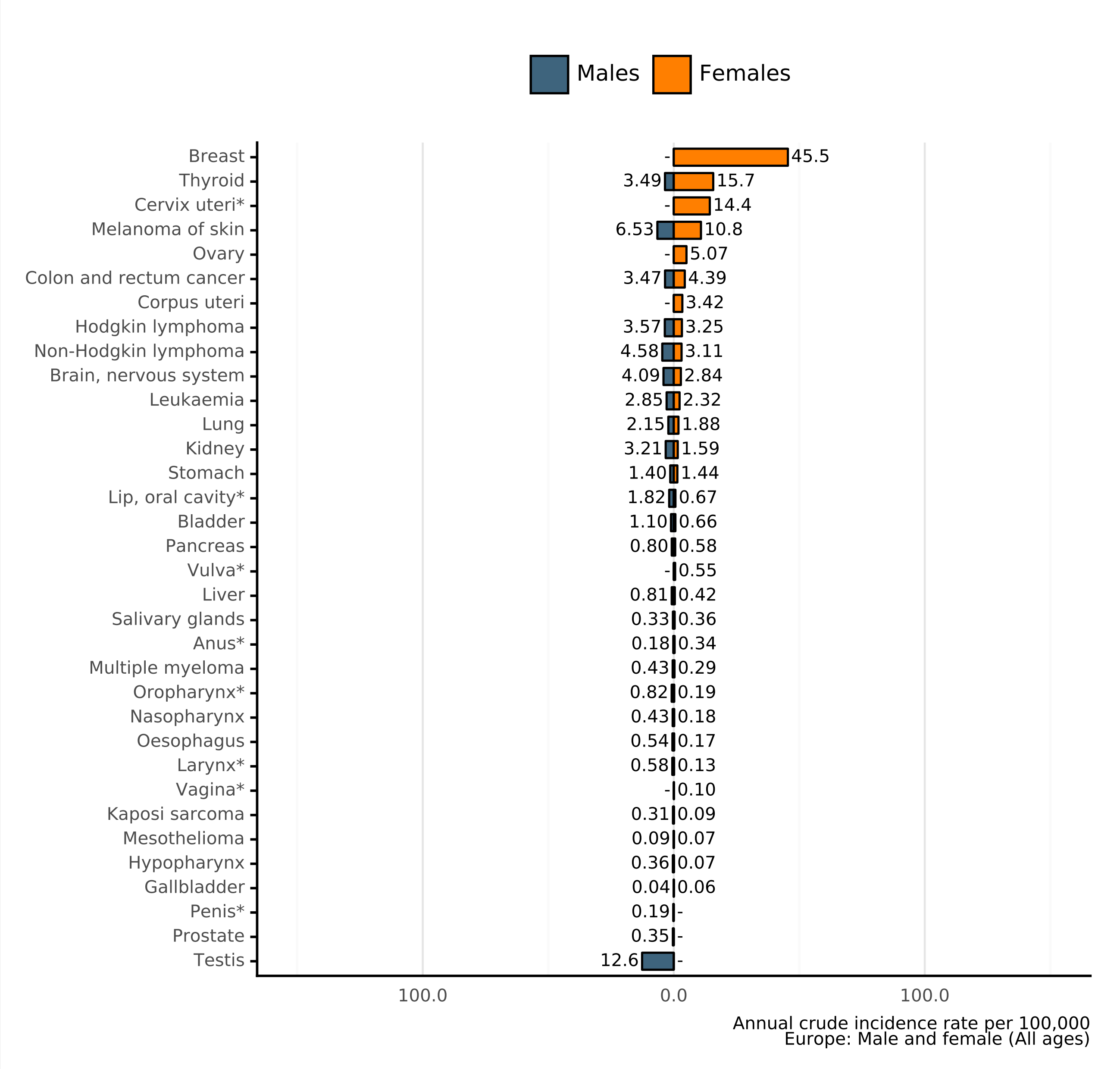
3.1 HPV related cancers incidence

Figure 4: Comparison of HPV related cancers incidence to other cancers in men and women of all ages in Europe (estimates for 2020)



Data accessed on 27 Jan 2021
For more detailed methods of estimation please refer to http://gco.iarc.fr/today/data-sources-methods
Non-melanoma skin cancer is not included
Rates per 100,000 men per year.
Rates per 100,000 women per year.
Data Sources:
Ferlay J, Ervik M, Lam F, Colombet M, Mery L, Piñeros M, Znaor A, Soerjomataram I, Bray F (2020). Global Cancer Observatory: Cancer Today. Lyon, France: International Agency for Research on Cancer. Available from: https://gco.iarc.fr/today, accessed [27 January 2021].

Figure 5: Comparison of HPV related cancers incidence to other cancers among men and women 15-44 years of age in Europe (estimates for 2020)



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3.2 HPV related cancers mortality

Figure 6: Comparison of HPV related cancers mortality to other cancers in men and women of all ages in Europe (estimates for 2020)

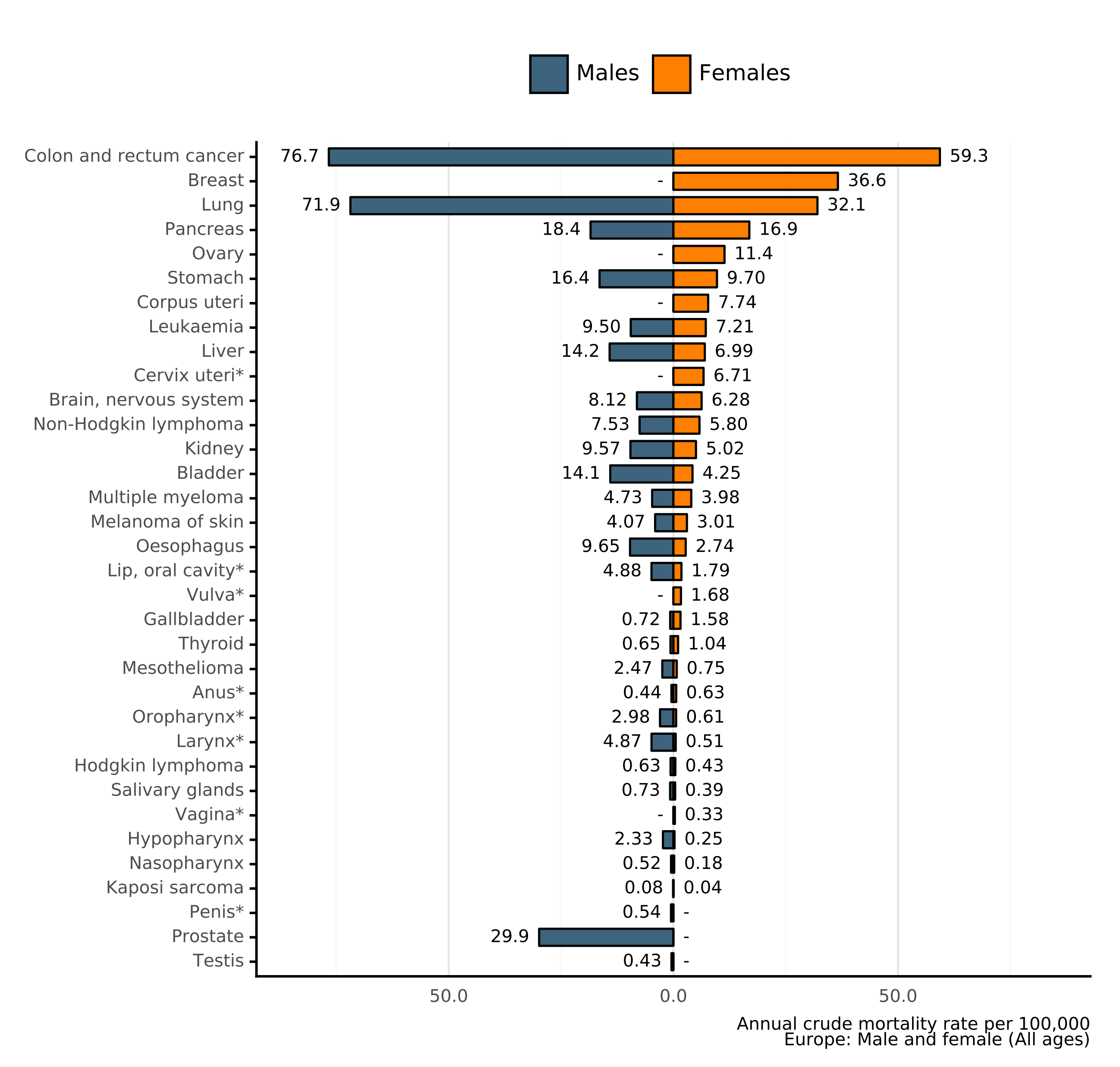

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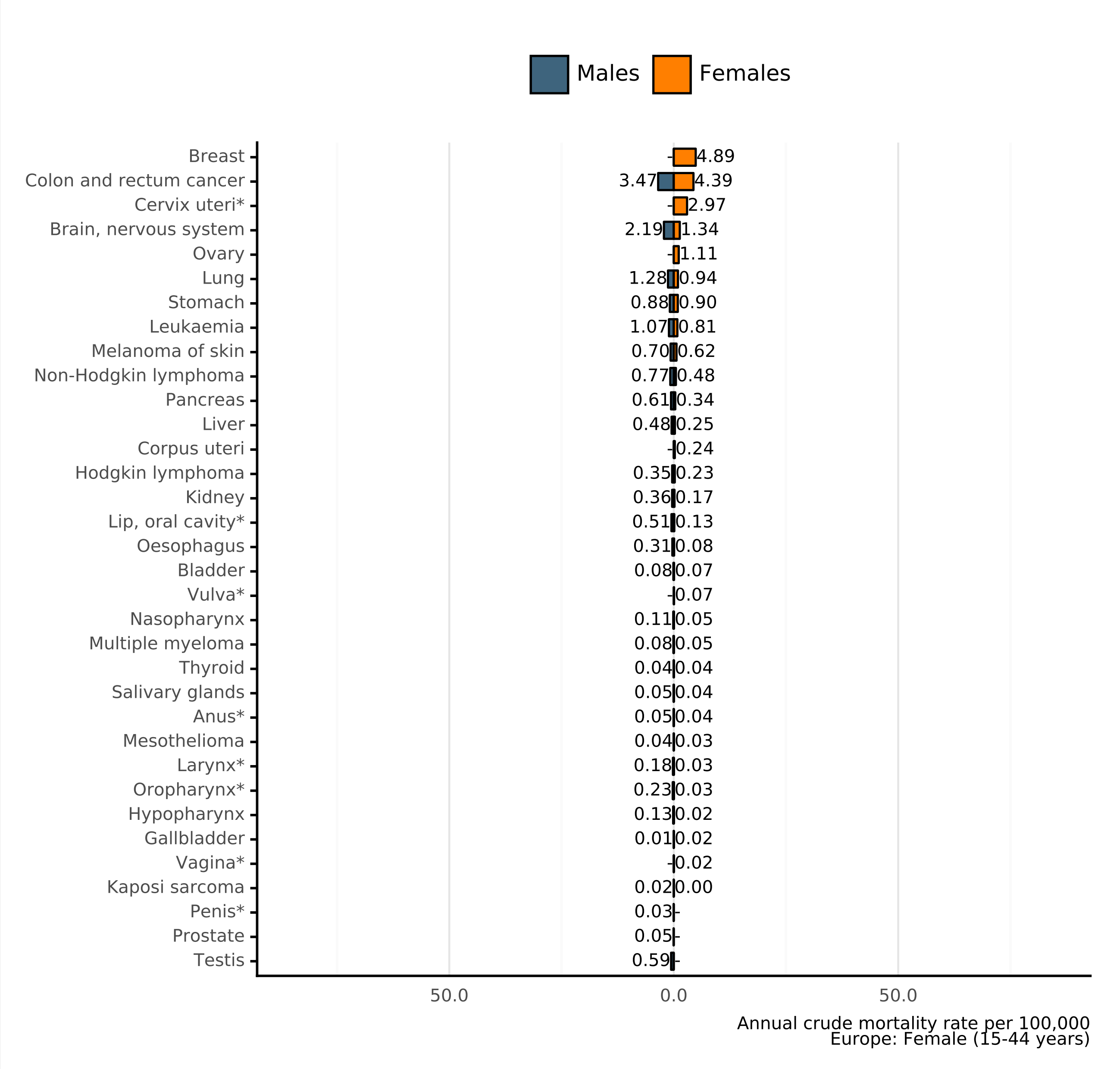
Figure 7: Comparison of HPV related cancers mortality to other cancers among men and women 15-44 years of age in Europe (estimates for 2020)



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Rates per 100,000 men per year.
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3.3 Cervical cancer

Cancer of the cervix uteri is the 4^{th} most common cancer among women worldwide, with an estimated 604,127 new cases and 341,831 deaths in 2020. Worldwide, mortality rates of cervical cancer are substantially lower than incidence with a ratio of mortality to incidence to 57% (GLOBOCAN 2020). The majority of cases are squamous cell carcinoma followed by adenocarcinomas. *(Vaccine 2006, Vol. 24, Suppl 3; Vaccine 2008, Vol. 26, Suppl 10; Vaccine 2012, Vol. 30, Suppl 5; IARC Monographs 2007, Vol. 90)*

This section describes the current burden of invasive cervical cancer in Europe and in comparison to geographic region, including estimates of the annual number of new cases, deaths, incidence, and mortality rates.

3.3.1 Cervical cancer incidence

Key Stats.

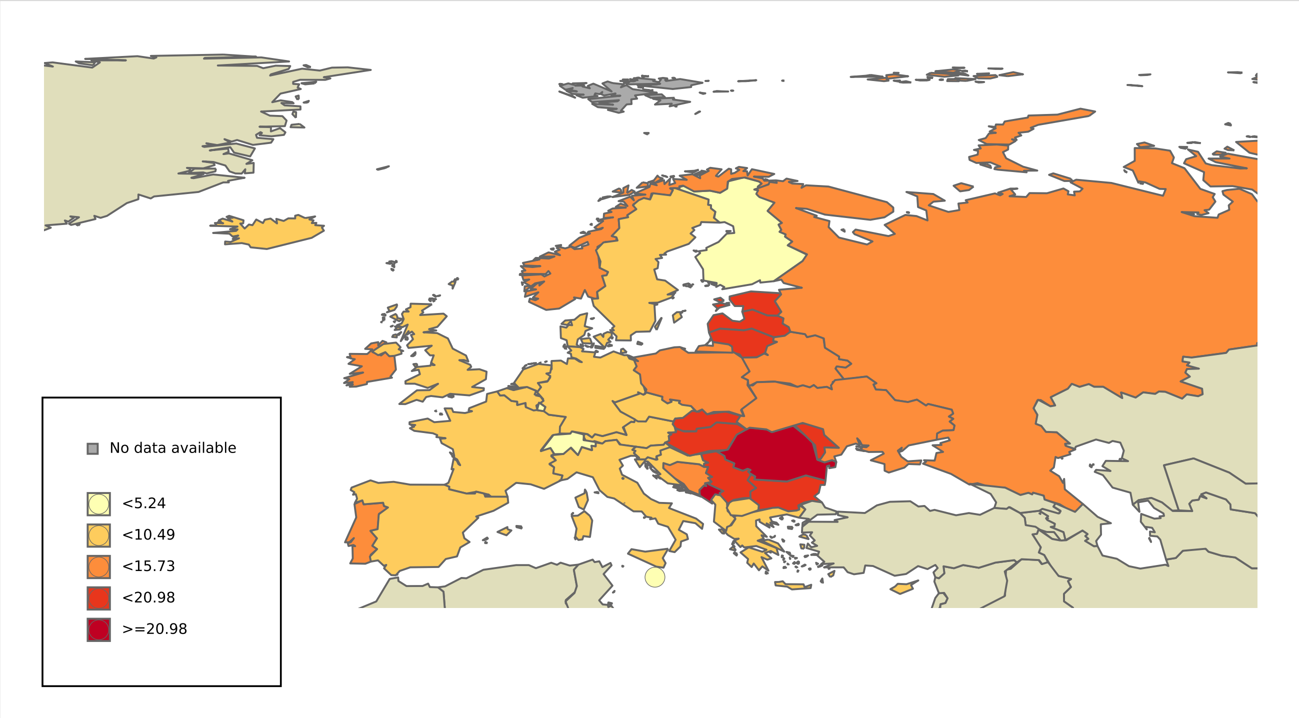
About **58,169 new cervical cancer cases** are diagnosed **annually** in **Europe** (estimations for 2020).

Cervical cancer **ranks* as the 9th leading cause** of female cancer in **Europe**.

Cervical cancer is the **3rd most common** female cancer in **women aged 15 to 44 years in Europe**.

* Ranking of cervical cancer incidence to other cancers among all women according to highest incidence rates (ranking 1st) excluding non-melanoma skin cancer. Ranking is based on crude incidence rates (actual number of cervical cancer cases). Ranking using age-standardized rate (ASR) may differ.

Figure 8: Age-standardised incidence rates of cervical cancer in Europe (estimates for 2020)



Data accessed on 27 Jan 2021

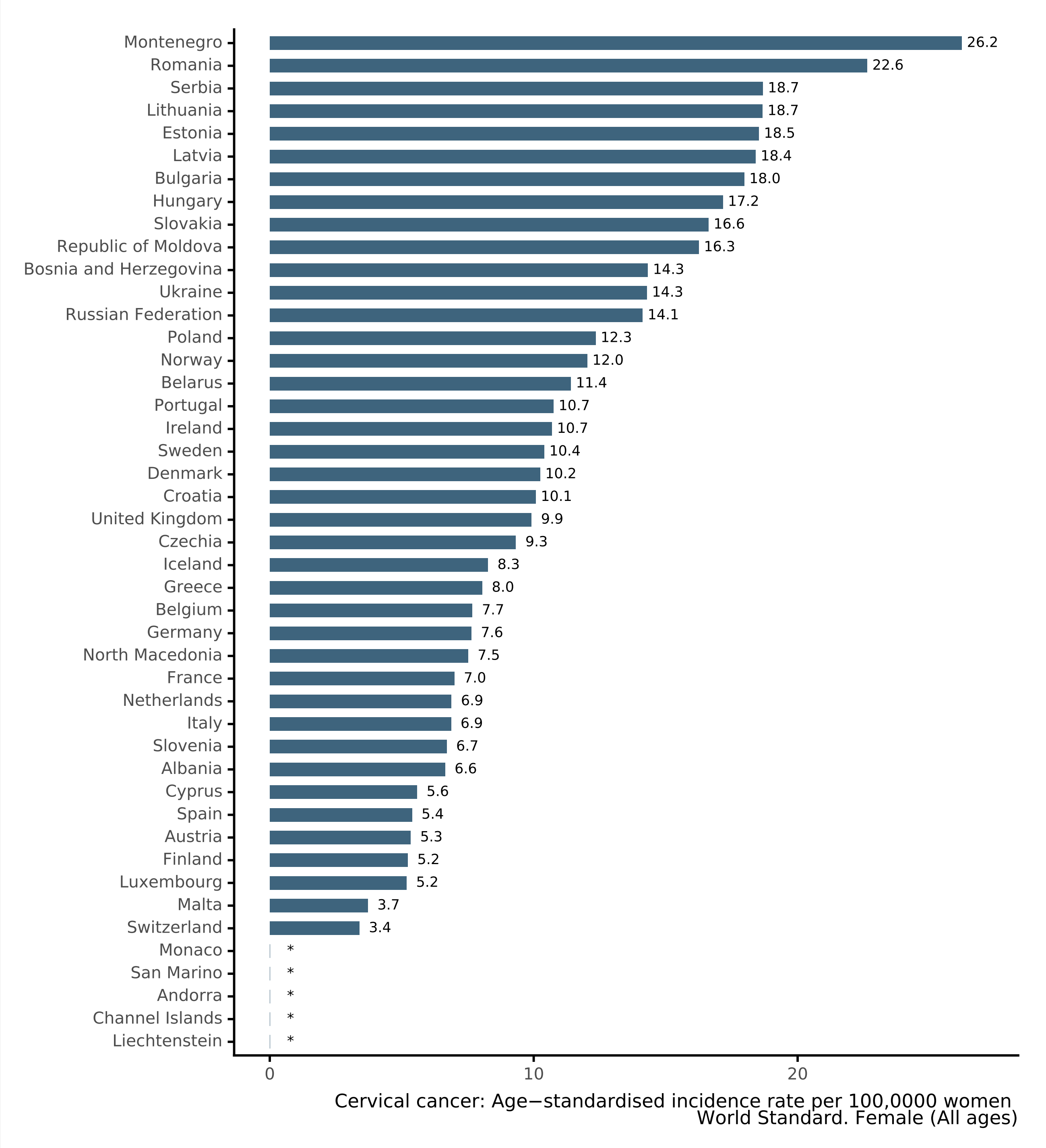
For more detailed methods of estimation please refer to http://gco.iarc.fr/today/data-sources-methods

[a] Rates per 100,000 women per year.

Data Sources:

Ferlay J, Ervik M, Lam F, Colombet M, Mery L, Piñeros M, Znaor A, Soerjomataram I, Bray F (2020). Global Cancer Observatory: Cancer Today. Lyon, France: International Agency for Research on Cancer. Available from: https://gco.iarc.fr/today, accessed [27 January 2021].

Figure 9: Age-standardised incidence rate of cervical cancer cases attributable to HPV by country in Europe (estimates for 2020)



Data accessed on 27 Jan 2021

For more detailed methods of estimation please refer to http://gco.iarc.fr/today/data-sources-methods

[a] Rates per 100,000 women per year.

* No rates are available

Data Sources:

Ferlay J, Ervik M, Lam F, Colombet M, Mery L, Piñeros M, Znaor A, Soerjomataram I, Bray F (2020). Global Cancer Observatory: Cancer Today. Lyon, France: International Agency for Research on Cancer. Available from: https://gco.iarc.fr/today, accessed [27 January 2021].

Table 4: Incidence of cervical cancer in Europe (estimates for 2020)

Area	N Cases	Uncertainty intervals of new cancer cases [95% UI]	Crude rate[b]	ASR[b]	Cumulative risk (%) ages 0-74 years[a]	Ranking	
						All women	Women 15-44 years
Europe	58,169	[56,344.7-60,052.4]	15.0	10.7	1.03	9	3
Eastern Europe	32,348	[31,583.5-33,131]	20.8	14.5	1.42	5	2
Hungary	1,251	[1,025.9-1,525.5]	24.7	17.2	1.64	6	3
Republic of Moldova	480	[375.3-614]	22.8	16.3	1.58	4	2
Poland	3,862	[3,582.6-4,163.2]	19.8	12.3	1.30	6	3
Romania	3,380	[3,019-3,784.1]	34.2	22.6	2.31	3	2
Russian Federation	15,308	[14,910.1-15,716.5]	19.6	14.1	1.36	4	2
Slovakia	698	[638.6-762.9]	24.9	16.6	1.66	5	2
Bulgaria	1,009	[863.5-1,179]	28.2	18.0	1.86	4	2
Belarus	835	[777.5-896.8]	16.5	11.4	1.12	7	3
Ukraine	4,756	[4,386.8-5,156.3]	20.3	14.3	1.38	4	2
Czechia	769	[654.5-903.5]	14.1	9.32	0.91	11	3
Northern Europe	6,666	[6,414.5-6,927.3]	12.4	10.4	0.90	12	2
Ireland	342	[252.9-462.6]	13.8	10.7	1.02	9	4
Iceland	16	[9.60-26.6]	9.42	8.26	0.74	12	2
Lithuania	412	[351.2-483.3]	28.2	18.7	1.83	4	2
Latvia	267	[197.5-361]	26.3	18.4	1.79	7	2
Norway	397	[336.3-468.6]	14.8	12.0	1.07	10	2
Sweden	656	[585.4-735.1]	13.0	10.4	0.93	10	3
Estonia	196	[145.7-263.7]	28.1	18.5	1.86	5	2
Finland	185	[133.7-256.1]	6.59	5.23	0.47	17	4
United Kingdom	3,791	[3,562.9-4,033.7]	11.0	9.91	0.81	12	2
Denmark	384	[322.7-456.9]	13.2	10.2	0.91	12	3
Southern Europe	9,053	[8,181.3-10,017.5]	11.5	7.72	0.76	14	4
Serbia	1,205	[1,024.7-1,417]	27.0	18.7	1.86	5	2
Portugal	865	[705.9-1,060]	16.1	10.7	1.01	8	3
Spain	1,957	[1,697.1-2,256.8]	8.23	5.39	0.52	15	4
Cyprus	46	[30.8-68.7]	7.62	5.58	0.52	11	3
Slovenia	104	[65.1-166.3]	9.96	6.70	0.66	14	4
Bosnia & Herzegovina	312	[253.1-384.6]	18.6	14.3	1.31	6	2
Albania	133	[92.4-191.4]	9.41	6.64	0.71	5	2
Croatia	336	[271.9-415.2]	15.8	10.1	1.02	10	3
Greece	697	[530-916.6]	13.1	8.05	0.77	10	3
Italy	3,152	[2,648-3,751.9]	10.2	6.87	0.68	15	4
North Macedonia	113	[78.8-162]	10.9	7.51	0.77	5	3
Montenegro	113	[90.9-140.5]	35.6	26.2	2.65	4	2
Malta	13	[6.60-25.8]	5.91	3.72	0.38	15	5
Western Europe	10,102	[9,650.9-10,574.2]	10.1	7.03	0.67	14	4
Luxembourg	24	[10.1-57.1]	7.76	5.18	0.50	12	4
Netherlands	773	[670.4-891.3]	8.99	6.88	0.63	12	3
Switzerland	236	[166.4-334.7]	5.41	3.39	0.33	17	5
France	3,379	[2,994.8-3,812.5]	10.0	6.99	0.65	12	4
Germany	4,666	[4,366.3-4,986.3]	11.0	7.63	0.73	14	3
Belgium	639	[562.4-726.1]	10.9	7.67	0.75	13	4
Austria	385	[298.5-496.5]	8.43	5.34	0.53	14	4

Data accessed on 27 Jan 2021

For more detailed methods of estimation please refer to http://gco.iarc.fr/today/data-sources-methods

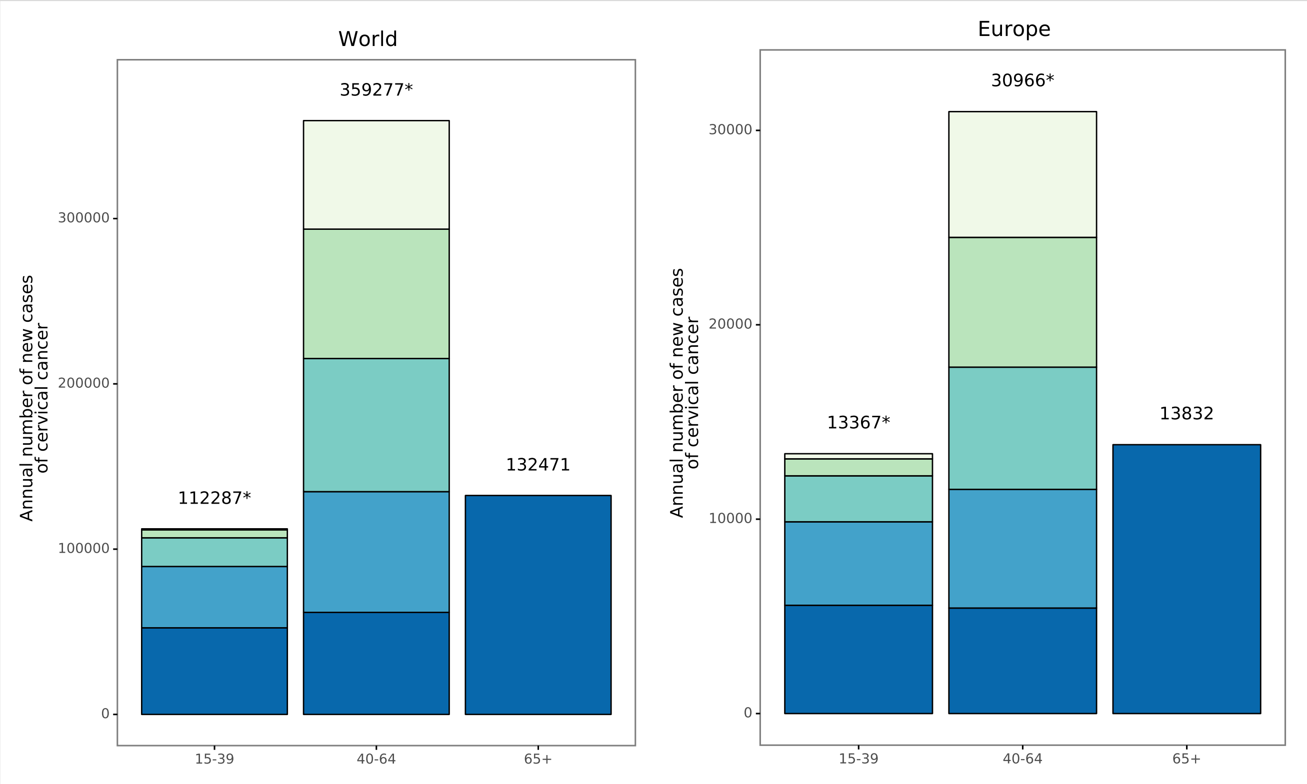
[a] Cumulative risk (incidence) is the probability or risk of individuals getting from the disease during ages 0-74 years. For cancer, it is expressed as the % of new born children who would be expected to develop from a particular cancer before the age of 75 if they had the rates of cancer observed in the period in the absence of competing causes.

[b] Rates per 100,000 women per year.

Data Sources:

Ferlay J, Ervik M, Lam F, Colombet M, Mery L, Piñeros M, Znaor A, Soerjomataram I, Bray F (2020). Global Cancer Observatory: Cancer Today. Lyon, France: International Agency for Research on Cancer. Available from: https://gco.iarc.fr/today, accessed [27 January 2021].

Figure 10: Annual number of new cases of cervical cancer in the World and Europe (estimates for 2020)



Data accessed on 27 Jan 2021

For more detailed methods of estimation please refer to http://gco.iarc.fr/today/data-sources-methods

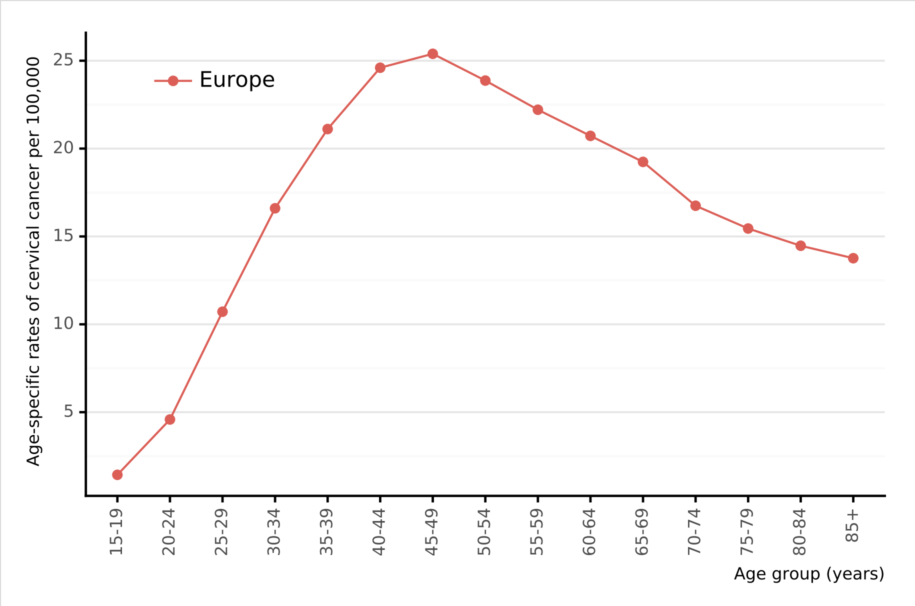
* World: 15-19 yrs: 616 cases. 20-24 yrs: 4819 cases. 25-29 yrs: 17357 cases. 30-34 yrs: 37106 cases. 35-39 yrs: 52389 cases. 40-44 yrs: 65657 cases. 45-49 yrs: 78299 cases. 50-54 yrs: 80544 cases. 55-59 yrs: 73053 cases. 60-64 yrs: 61724 cases.

* Europe: 15-19 yrs: 265 cases. 20-24 yrs: 873 cases. 25-29 yrs: 2365 cases. 30-34 yrs: 4295 cases. 35-39 yrs: 5569 cases. 40-44 yrs: 6469 cases. 45-49 yrs: 6677 cases. 50-54 yrs: 6287 cases. 55-59 yrs: 6105 cases. 60-64 yrs: 5428 cases.

Data Sources:

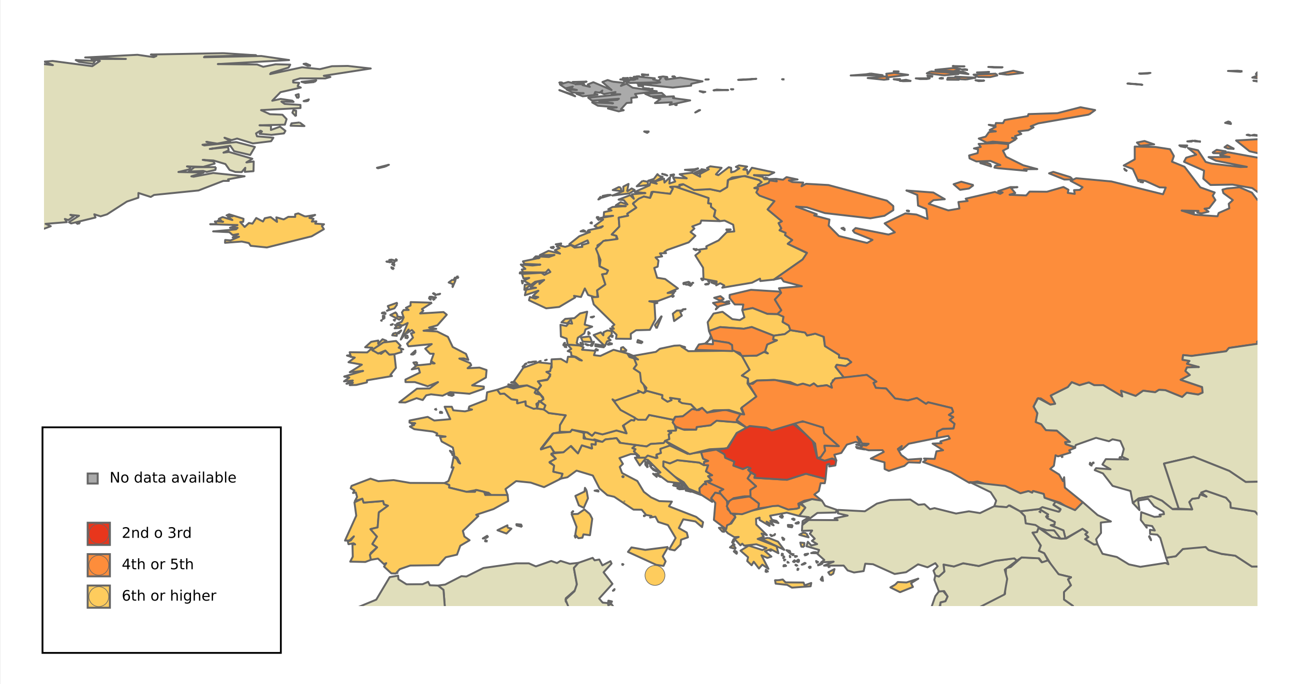
Ferlay J, Ervik M, Lam F, Colombet M, Mery L, Piñeros M, Znaor A, Soerjomataram I, Bray F (2020). Global Cancer Observatory: Cancer Today. Lyon, France: International Agency for Research on Cancer. Available from: https://gco.iarc.fr/today, accessed [27 January 2021].

Figure 11: Age-specific incidence rates of cervical cancer in Europe (estimates for 2020)



Data accessed on 27 Jan 2021
For more detailed methods of estimation please refer to http://gco.iarc.fr/today/data-sources-methods
[a] Rates per 100,000 women per year.
Data Sources:
Ferlay J, Ervik M, Lam F, Colombet M, Mery L, Piñeros M, Znaor A, Soerjomataram I, Bray F (2020). Global Cancer Observatory: Cancer Today. Lyon, France: International Agency for Research on Cancer. Available from: https://gco.iarc.fr/today, accessed [27 January 2021].

Figure 12: Ranking of cervical cancer versus other cancers among all women, according to incidence rates in Europe (estimates for 2020)



Data accessed on 27 Jan 2021

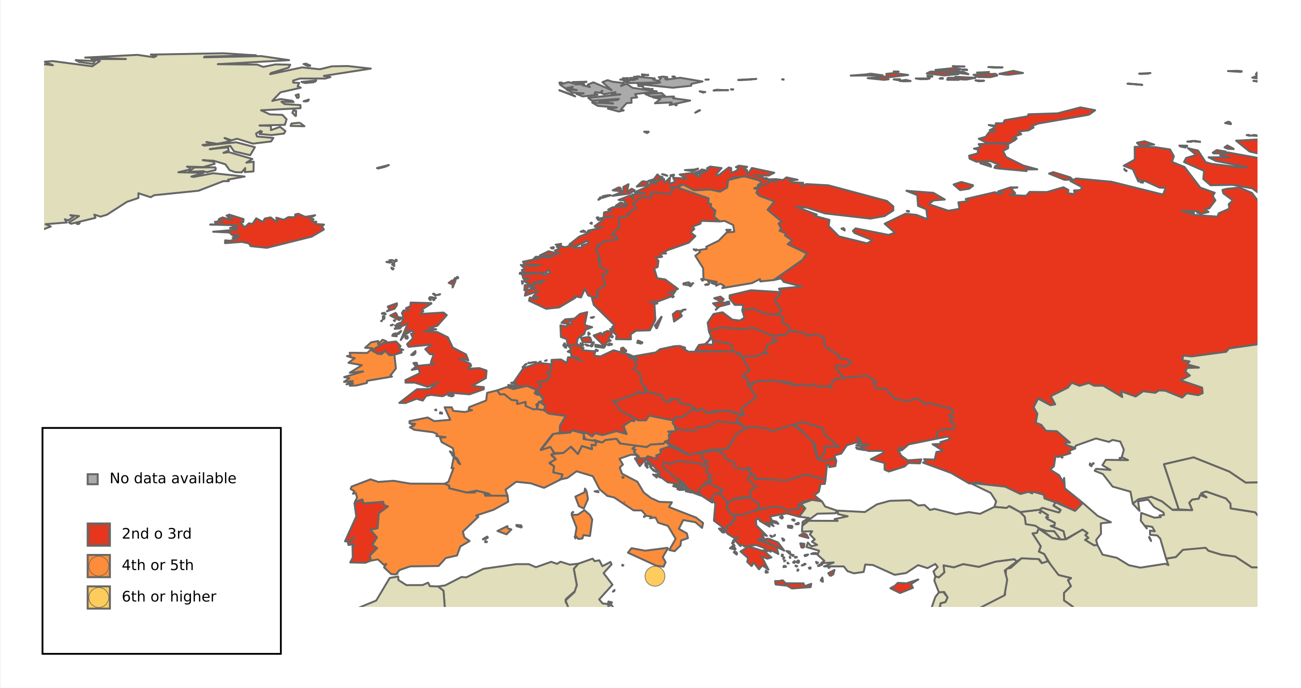
For more detailed methods of estimation please refer to http://gco.iarc.fr/today/data-sources-methods

[a] Non-melanoma skin cancer is not included

Data Sources:

Ferlay J, Ervik M, Lam F, Colombet M, Mery L, Piñeros M, Znaor A, Soerjomataram I, Bray F (2020). Global Cancer Observatory: Cancer Today. Lyon, France: International Agency for Research on Cancer. Available from: https://gco.iarc.fr/today, accessed [27 January 2021].

Figure 13: Ranking of cervical cancer versus other cancers among women aged 15-44 years, according to incidence rates in Europe (estimates for 2020)



Data accessed on 27 Jan 2021
For more detailed methods of estimation please refer to http://gco.iarc.fr/today/data-sources-methods
[a] Non-melanoma skin cancer is not included
Data Sources:
Ferlay J, Ervik M, Lam F, Colombet M, Mery L, Piñeros M, Znaor A, Soerjomataram I, Bray F (2020). Global Cancer Observatory: Cancer Today. Lyon, France: International Agency for Research on Cancer. Available from: https://gco.iarc.fr/today, accessed [27 January 2021].

3.3.2 Cervical cancer mortality

Key Stats.

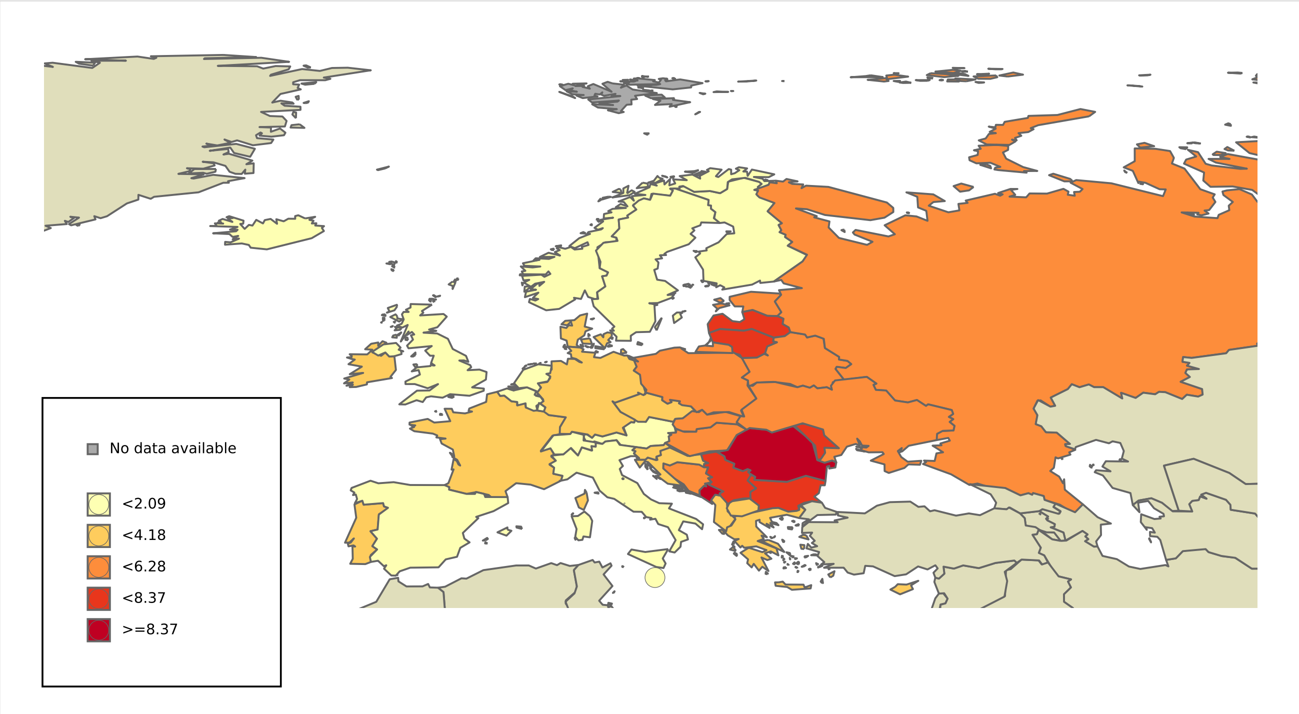
About **25,989 new cervical cancer cases** are diagnosed **annually** in **Europe** (estimations for 2020).

Cervical cancer **ranks* as the 10th leading cause** of female cancer in **Europe**.

Cervical cancer is the **3rd most common** female cancer in **women aged 15 to 44 years in Europe**.

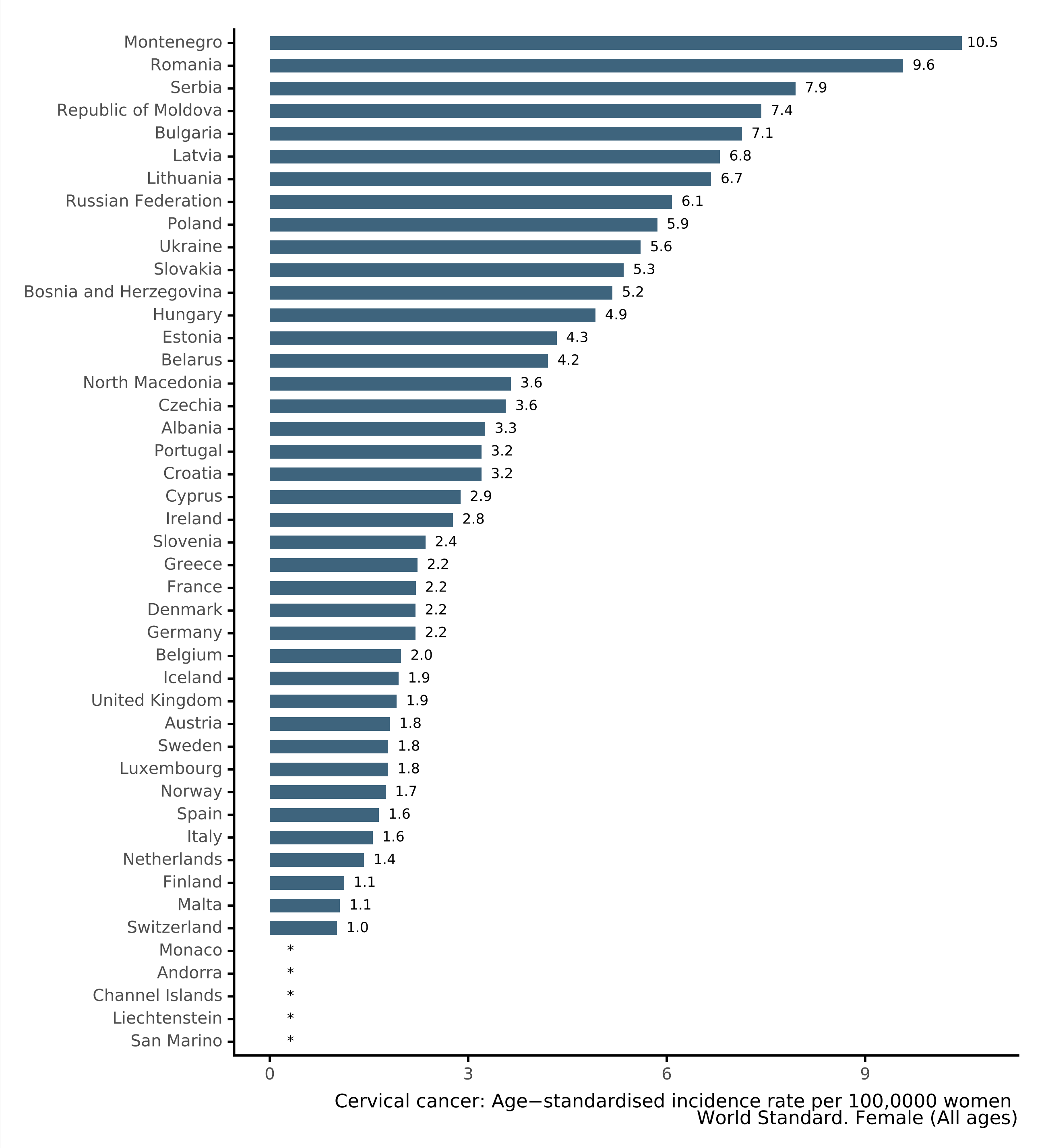
* Ranking of cervical cancer incidence to other cancers among all women according to highest incidence rates (ranking 1st) excluding non-melanoma skin cancer. Ranking is based on crude incidence rates (actual number of cervical cancer cases). Ranking using age-standardized rate (ASR) may differ.

Figure 14: Age-standardised mortality rates of cervical cancer in Europe (estimates for 2020)



Data accessed on 27 Jan 2021
For more detailed methods of estimation please refer to http://gco.iarc.fr/today/data-sources-methods
[a] Rates per 100,000 women per year.
Data Sources:
Ferlay J, Ervik M, Lam F, Colombet M, Mery L, Piñeros M, Znaor A, Soerjomataram I, Bray F (2020). Global Cancer Observatory: Cancer Today. Lyon, France: International Agency for Research on Cancer. Available from: https://gco.iarc.fr/today, accessed [27 January 2021].

Figure 15: Age-standardised mortality rate of cervical cancer cases attributable to HPV by country in Europe (estimates for 2020)



Data accessed on 27 Jan 2021

For more detailed methods of estimation please refer to http://gco.iarc.fr/today/data-sources-methods

[a] Rates per 100,000 women per year.

* No rates are available

Data Sources:

Ferlay J, Ervik M, Lam F, Colombet M, Mery L, Piñeros M, Znaor A, Soerjomataram I, Bray F (2020). Global Cancer Observatory: Cancer Today. Lyon, France: International Agency for Research on Cancer. Available from: https://gco.iarc.fr/today, accessed [27 January 2021].

Table 5: Mortality of cervical cancer Europe (estimates for 2020)

Area	N Cases	Uncertainty intervals of new cancer cases [95% UI]	Crude rate[b]	ASR[b]	Cumulative risk (%) ages 0-74 years[a]	Ranking	
						All women	Women 15-44 years
Europe	25,989	[24,919.5-27,104.4]	6.71	3.76	0.40	10	3
Eastern Europe	15,854	[15,372.7-16,350.4]	10.2	6.06	0.65	7	2
Hungary	482	[414.6-560.4]	9.52	4.92	0.53	7	3
Republic of Moldova	248	[206.1-298.4]	11.8	7.43	0.81	5	1
Poland	2,137	[2,012.2-2,269.5]	11.0	5.86	0.65	7	3
Romania	1,805	[1,653.6-1,970.2]	18.3	9.57	1.08	4	2
Russian Federation	7,550	[7,313.9-7,793.7]	9.64	6.08	0.64	7	1
Slovakia	284	[233.3-345.7]	10.1	5.35	0.59	7	3
Czechia	398	[338.6-467.8]	7.32	3.56	0.39	8	3
Bulgaria	503	[409-618.6]	14.1	7.13	0.77	6	2
Belarus	358	[316.1-405.4]	7.09	4.20	0.44	8	3
Ukraine	2,089	[1,938.8-2,250.9]	8.90	5.60	0.60	7	1
Northern Europe	2,134	[1,983.5-2,295.9]	3.97	2.18	0.22	16	3
Lithuania	193	[160.1-232.7]	13.2	6.67	0.73	7	2
Ireland	106	[73-154]	4.26	2.77	0.30	14	4
Iceland	5	[1.90-12.9]	2.94	1.94	0.20	14	4
Latvia	136	[98.6-187.5]	13.4	6.80	0.71	8	2
Norway	96	[57.5-160.4]	3.58	1.75	0.18	15	5
Sweden	200	[159.6-250.6]	3.97	1.79	0.18	16	4
Finland	67	[50.8-88.3]	2.39	1.12	0.12	17	4
Estonia	62	[43.8-87.7]	8.88	4.33	0.49	8	2
United Kingdom	1,121	[1,035.8-1,213.2]	3.26	1.92	0.19	16	3
Denmark	140	[79.8-245.6]	4.81	2.20	0.23	13	4
Southern Europe	3,705	[3,430.7-4,001.2]	4.72	2.31	0.25	14	3
Portugal	379	[323.2-444.5]	7.05	3.20	0.34	11	3
Spain	814	[728.8-909.1]	3.42	1.65	0.18	15	4
Serbia	634	[559.1-718.9]	14.2	7.94	0.88	5	3
Slovenia	54	[34.8-83.8]	5.17	2.35	0.25	15	3
Cyprus	33	[20.7-52.5]	5.46	2.88	0.25	11	3
Bosnia & Herzegovina	153	[127.9-183]	9.14	5.18	0.56	9	3
Albania	74	[53-103.3]	5.24	3.25	0.38	6	5
Croatia	150	[115.8-194.3]	7.06	3.20	0.36	14	5
Greece	282	[226.4-351.2]	5.31	2.23	0.23	12	3
Italy	1,011	[884.5-1,155.6]	3.26	1.55	0.17	15	4
North Macedonia	62	[45.7-84.1]	5.95	3.64	0.41	10	4
Montenegro	54	[38.5-75.8]	17.0	10.5	1.08	4	1
Malta	5	[1.90-13.3]	2.27	1.06	0.11	17	16
Western Europe	4,296	[4,063.9-4,541.4]	4.31	2.05	0.22	15	4
Luxembourg	10	[4.80-20.9]	3.23	1.79	0.22	14	28
Switzerland	100	[74.2-134.7]	2.29	1.01	0.11	17	8
France	1,452	[1,320.9-1,596.1]	4.31	2.20	0.24	15	5
Belgium	236	[189.2-294.4]	4.04	1.98	0.21	16	4
Germany	2,075	[1,939-2,220.5]	4.90	2.20	0.24	15	3
Austria	170	[132.2-218.6]	3.72	1.81	0.19	15	4
Netherlands	253	[202.2-316.6]	2.94	1.42	0.15	17	5

Data accessed on 27 Jan 2021

For more detailed methods of estimation please refer to http://gco.iarc.fr/today/data-sources-methods

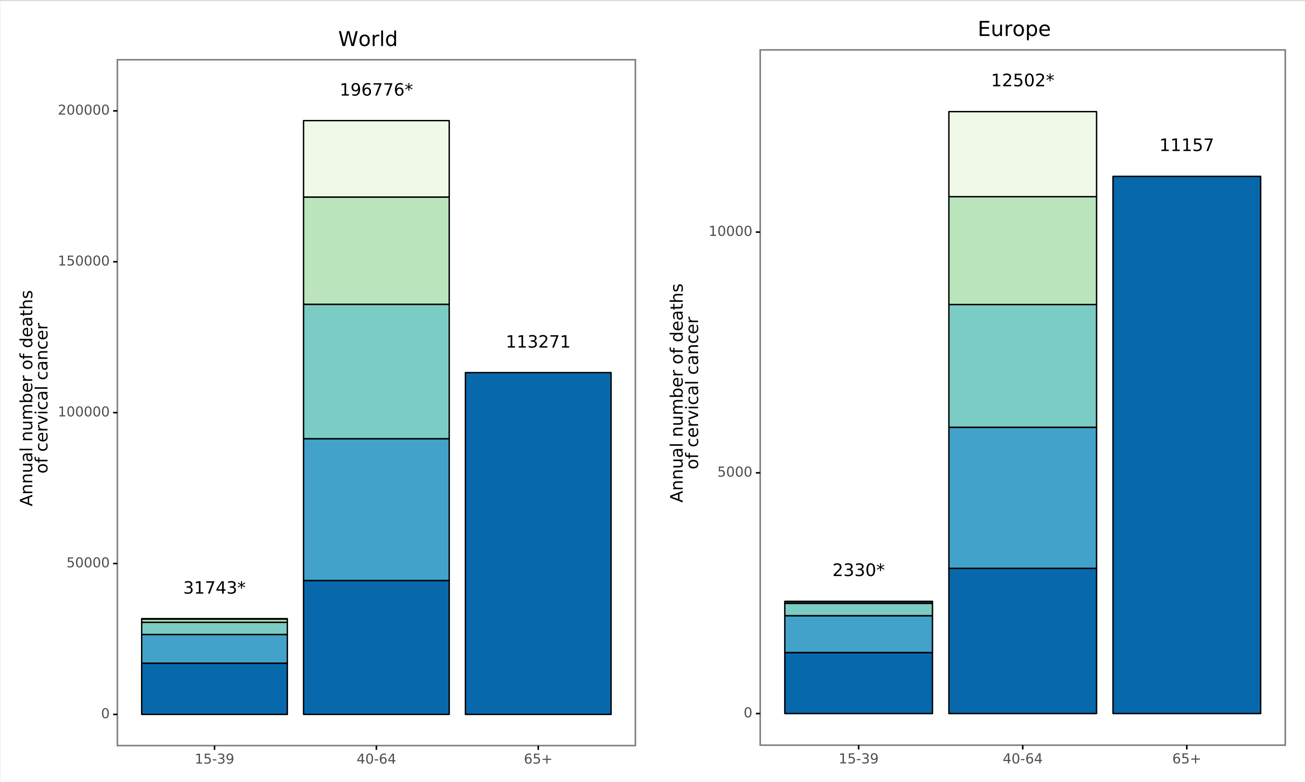
[a] Cumulative risk (mortality) is the probability or risk of individuals dying from the disease during ages 0-74 years. For cancer, it is expressed as the % of new born children who would be expected to die from a particular cancer before the age of 75 if they had the rates of cancer observed in the period in the absence of competing causes.

[b] Rates per 100,000 women per year.

Data Sources:

Ferlay J, Ervik M, Lam F, Colombet M, Mery L, Piñeros M, Znaor A, Soerjomataram I, Bray F (2020). Global Cancer Observatory: Cancer Today. Lyon, France: International Agency for Research on Cancer. Available from: https://gco.iarc.fr/today, accessed [27 January 2021].

Figure 16: Annual number of deaths of cervical cancer in the World and Europe (estimates for 2020)



Data accessed on 27 Jan 2021

For more detailed methods of estimation please refer to http://gco.iarc.fr/today/data-sources-methods

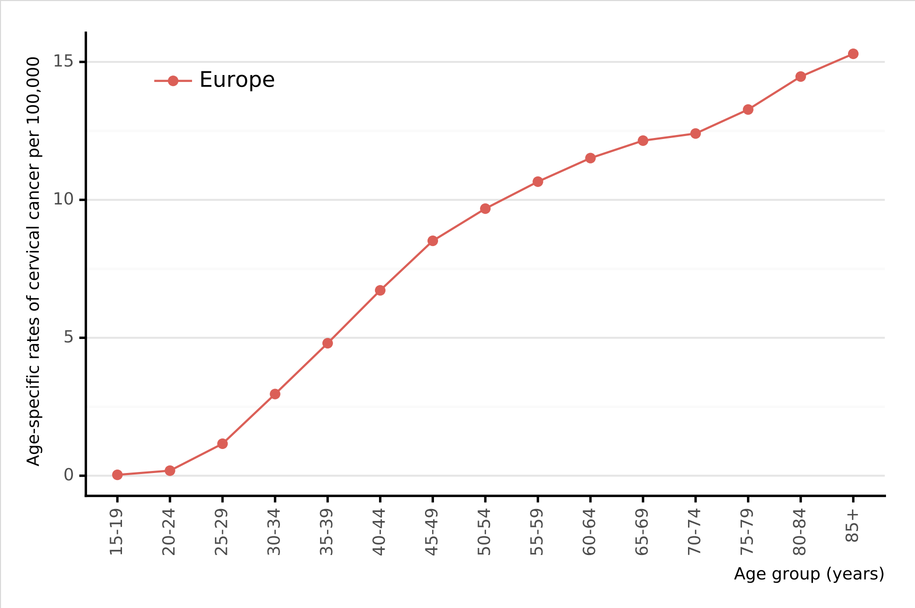
* World: 15-19 yrs: 144 cases. 20-24 yrs: 1055 cases. 25-29 yrs: 4057 cases. 30-34 yrs: 9506 cases. 35-39 yrs: 16981 cases. 40-44 yrs: 25334 cases. 45-49 yrs: 35535 cases. 50-54 yrs: 44540 cases. 55-59 yrs: 46997 cases. 60-64 yrs: 44370 cases.

* Europe: 15-19 yrs: 6 cases. 20-24 yrs: 35 cases. 25-29 yrs: 256 cases. 30-34 yrs: 766 cases. 35-39 yrs: 1267 cases. 40-44 yrs: 1767 cases. 45-49 yrs: 2239 cases. 50-54 yrs: 2550 cases. 55-59 yrs: 2930 cases. 60-64 yrs: 3016 cases.

<u>Data Sources</u>:

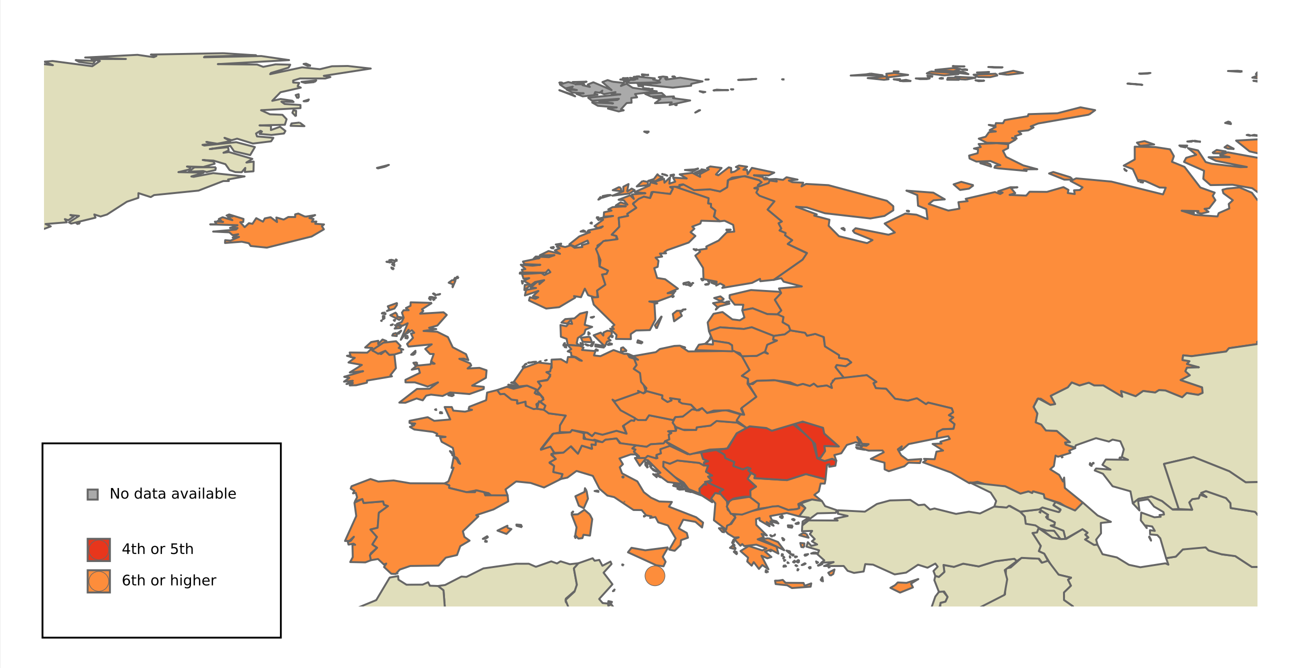
Ferlay J, Ervik M, Lam F, Colombet M, Mery L, Piñeros M, Znaor A, Soerjomataram I, Bray F (2020). Global Cancer Observatory: Cancer Today. Lyon, France: International Agency for Research on Cancer. Available from: https://gco.iarc.fr/today, accessed [27 January 2021].

Figure 17: Age-specific mortality rates of cervical cancer in Europe (estimates for 2020)



Data accessed on 27 Jan 2021
For more detailed methods of estimation please refer to http://gco.iarc.fr/today/data-sources-methods
[a] Rates per 100,000 women per year.
Data Sources:
Ferlay J, Ervik M, Lam F, Colombet M, Mery L, Piñeros M, Znaor A, Soerjomataram I, Bray F (2020). Global Cancer Observatory: Cancer Today. Lyon, France: International Agency for Research on Cancer. Available from: https://gco.iarc.fr/today, accessed [27 January 2021].

Figure 18: Ranking of cervical cancer versus other cancers among all women, according to mortality rates in Europe (estimates for 2020)



Data accessed on 27 Jan 2021

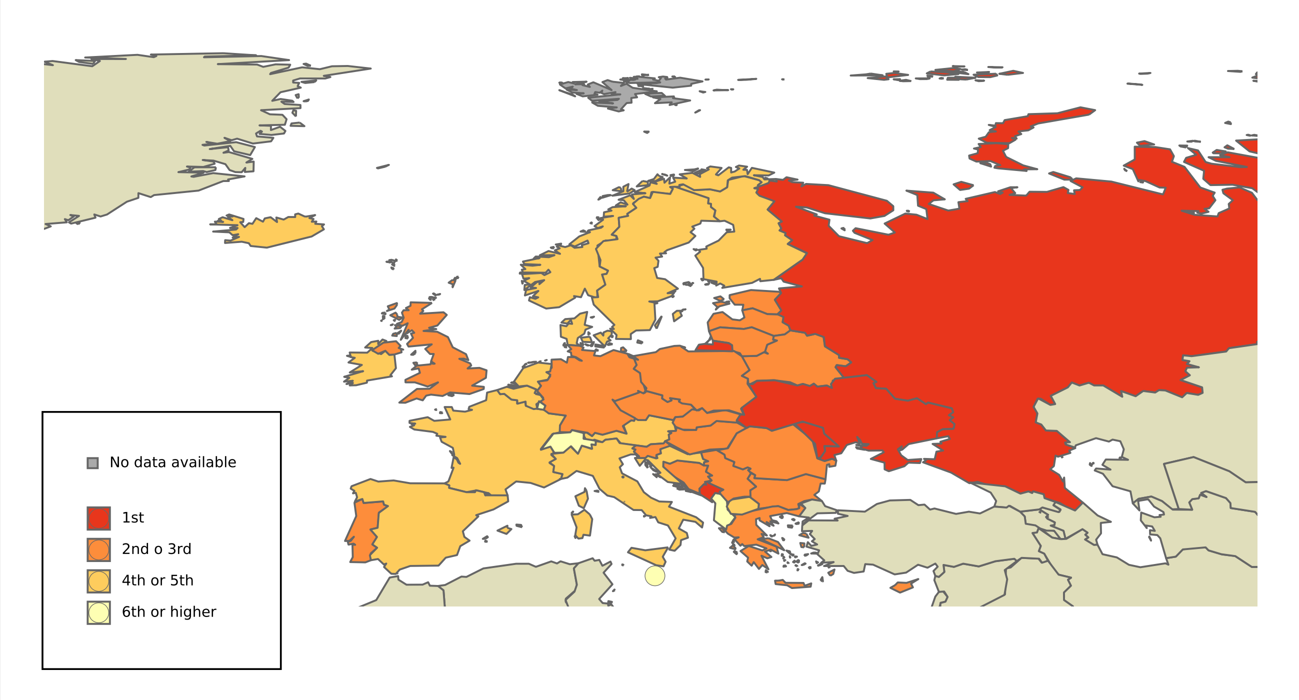
For more detailed methods of estimation please refer to http://gco.iarc.fr/today/data-sources-methods

[a] Non-melanoma skin cancer is not included

Data Sources:

Ferlay J, Ervik M, Lam F, Colombet M, Mery L, Piñeros M, Znaor A, Soerjomataram I, Bray F (2020). Global Cancer Observatory: Cancer Today. Lyon, France: International Agency for Research on Cancer. Available from: https://gco.iarc.fr/today, accessed [27 January 2021].

Figure 19: Ranking of cervical cancer versus other cancers among women aged 15-44 years, according to mortality rates in Europe (estimates for 2020)



Data accessed on 27 Jan 2021

For more detailed methods of estimation please refer to http://gco.iarc.fr/today/data-sources-methods

[a] Non-melanoma skin cancer is not included

Data Sources:

Ferlay J, Ervik M, Lam F, Colombet M, Mery L, Piñeros M, Znaor A, Soerjomataram I, Bray F (2020). Global Cancer Observatory: Cancer Today. Lyon, France: International Agency for Research on Cancer. Available from: https://gco.iarc.fr/today, accessed [27 January 2021].

3.4 Anogenital cancers other than the cervix

3.4.1 Anal cancer

3.4.1.1 Anal cancer incidence

Table 6: Incidence of anal cancer in women by Europe and sub regions (estimates for 2020)

Area	N Cases	Uncertainty intervals of new cancer cases [95% UI]	Crude rate[b]	ASR[b]	Cumulative risk (%) ages 0-74 years[a]	Ranking	
						All women	Women 15-44 years
Europe	8,449	[7,571.8-9,427.8]	2.18	1.05	0.12	23	21
Eastern Europe	1,558	[1,227.7-1,977.1]	1.00	0.50	0.06	24	26
Hungary	30	[13.2-68.3]	0.59	0.33	0.04	29	27
Republic of Moldova	9	[1.90-42.5]	0.43	0.22	0.03	25	25
Poland	280	[192.4-407.5]	1.44	0.59	0.07	24	24
Romania	135	[94.1-193.8]	1.37	0.64	0.08	22	26
Russian Federation	636	[488.8-827.6]	0.81	0.44	0.05	25	26
Slovakia	28	[17.8-44]	1.00	0.51	0.07	25	23
Bulgaria	30	[20.2-44.6]	0.84	0.41	0.05	26	22
Ukraine	242	[192.1-304.9]	1.03	0.50	0.06	23	25
Belarus	58	[41-82]	1.15	0.61	0.07	22	18
Czechia	110	[59.1-204.8]	2.02	0.97	0.12	24	18
Northern Europe	1,557	[1,449.8-1,672.1]	2.90	1.57	0.19	21	20
Ireland	34	[22.3-51.8]	1.37	0.79	0.09	23	20
Iceland	1	[0.20-5.20]	0.59	0.29	0.07	26	24
Lithuania	17	[9.60-30.1]	1.16	0.42	0.04	24	24
Latvia	19	[11.5-31.3]	1.87	0.70	0.07	22	21
Norway	59	[44.6-78.1]	2.20	1.20	0.14	22	21
Sweden	114	[86.9-149.6]	2.26	1.11	0.13	22	22
Finland	27	[17.9-40.8]	0.96	0.48	0.06	25	21
Estonia	16	[9-28.3]	2.29	0.92	0.10	21	21
United Kingdom	1,141	[1,048.4-1,241.7]	3.32	1.85	0.22	21	18
Denmark	124	[89.6-171.7]	4.26	2.24	0.27	22	21
Southern Europe	1,385	[1,081.9-1,773.1]	1.77	0.70	0.08	23	25
Spain	242	[168.6-347.4]	1.02	0.40	0.04	24	23
Serbia	41	[21.4-78.7]	0.92	0.36	0.05	24	27
Portugal	89	[52.3-151.3]	1.66	0.56	0.06	21	23
Cyprus	6	[2-17.8]	0.99	0.58	0.09	22	22
Slovenia	10	[4.80-20.9]	0.96	0.33	0.04	27	24
Bosnia & Herzegovina	6	[1.20-31.1]	0.36	0.19	0.02	29	24
Albania	1	[0.70-1.50]	0.07	0.04	0.00	30	31
Croatia	15	[8.40-26.9]	0.71	0.27	0.03	26	27
Greece	84	[46.3-152.5]	1.58	0.72	0.07	21	31
Italy	887	[656.4-1,198.6]	2.86	1.10	0.13	21	25
North Macedonia	2	[1.30-3]	0.19	0.09	0.01	27	23
Montenegro	2	[0.40-9.60]	0.63	0.38	0.02	28	17
Malta	0	[0-7.20]	0	0	0	30	16
Western Europe	3,949	[3,658.6-4,262.4]	3.96	1.95	0.22	21	18
Luxembourg	3	[0.20-42.8]	0.97	0.69	0.09	25	11
Switzerland	173	[111.4-268.6]	3.97	1.89	0.22	19	16
Belgium	154	[101.4-234]	2.63	1.28	0.15	21	22
Austria	115	[64-206.5]	2.52	1.25	0.15	21	20
France	1,726	[1,377.6-2,162.5]	5.12	2.53	0.29	19	15
Germany	1,623	[1,320.1-1,995.4]	3.83	1.90	0.22	21	17
Netherlands	155	[93.4-257.2]	1.80	0.93	0.11	23	23

Data accessed on 27 Jan 2021

For more detailed methods of estimation please refer to http://gco.iarc.fr/today/data-sources-methods

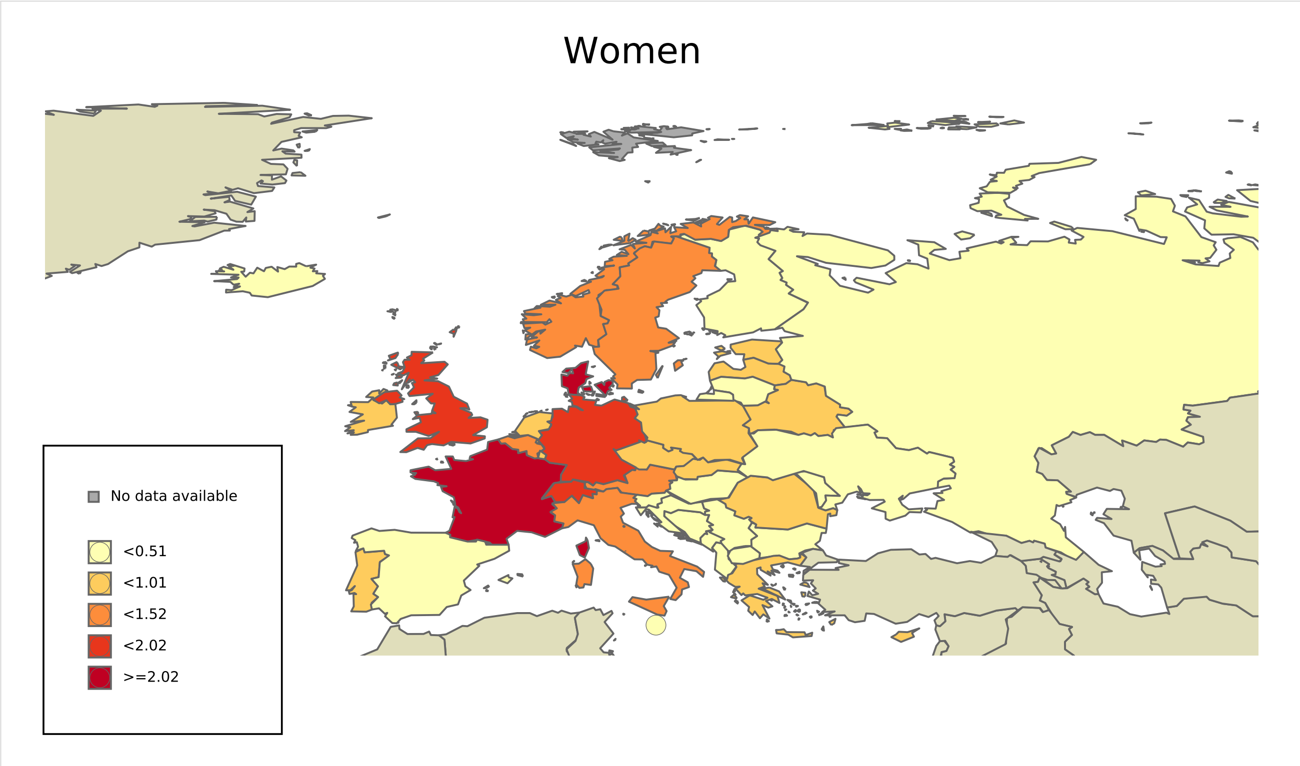
[a] Cumulative risk (incidence) is the probability or risk of individuals getting from the disease during ages 0-74 years. For cancer, it is expressed as the % of new born children who would be expected to develop from a particular cancer before the age of 75 if they had the rates of cancer observed in the period in the absence of competing causes.

[b] Rates per 100,000 women per year.

Data Sources:

Ferlay J, Ervik M, Lam F, Colombet M, Mery L, Piñeros M, Znaor A, Soerjomataram I, Bray F (2020). Global Cancer Observatory: Cancer Today. Lyon, France: International Agency for Research on Cancer. Available from: https://gco.iarc.fr/today, accessed [27 January 2021].

Figure 20: Age-standardised incidence rates of anal cancer among women in Europe (estimates for 2020)



Data accessed on 27 Jan 2021
For more detailed methods of estimation please refer to http://gco.iarc.fr/today/data-sources-methods
[a] Rates per 100,000 women per year.
Data Sources:
Ferlay J, Ervik M, Lam F, Colombet M, Mery L, Piñeros M, Znaor A, Soerjomataram I, Bray F (2020). Global Cancer Observatory: Cancer Today. Lyon, France: International Agency for Research on Cancer. Available from: https://gco.iarc.fr/today, accessed [27 January 2021].

Table 7: Incidence of anal cancer in men by Europe and sub regions (estimates for 2020)

Area	N Cases	Uncertainty intervals of new cancer cases [95% UI]	Crude rate[b]	ASR[b]	Cumulative risk (%) ages 0-74 years[a]	Ranking	
						All men	Men 15-44 years
Europe	4,327	[3,714.5-5,040.4]	1.20	0.66	0.08	25	26
Eastern Europe	900	[648-1,250.1]	0.65	0.41	0.05	27	27
Hungary	12	[5.40-26.7]	0.26	0.14	0.02	27	27
Republic of Moldova	4	[0.80-18.9]	0.21	0.15	0.03	28	24
Poland	216	[154.1-302.8]	1.18	0.65	0.08	26	22
Romania	106	[67.8-165.7]	1.13	0.62	0.07	25	25
Russian Federation	276	[189.1-402.8]	0.41	0.28	0.03	27	27
Slovakia	26	[16.2-41.8]	0.98	0.57	0.06	27	26
Bulgaria	23	[14.6-36.3]	0.68	0.35	0.04	27	27
Ukraine	126	[94.5-167.9]	0.62	0.39	0.05	25	26
Belarus	35	[20-61.2]	0.80	0.51	0.05	24	26
Czechia	76	[55.9-103.3]	1.44	0.73	0.08	25	28
Northern Europe	750	[675.8-832.3]	1.43	0.79	0.09	25	25
Lithuania	12	[6.10-23.6]	0.95	0.45	0.05	25	27
Ireland	28	[17.4-45.2]	1.14	0.64	0.06	24	25
Iceland	0	[0-8.60]	0	0	0	28	18
Latvia	6	[2.40-15.2]	0.69	0.32	0.04	25	28
Norway	28	[18-43.5]	1.02	0.55	0.06	24	23
Sweden	58	[43.3-77.8]	1.15	0.61	0.08	25	23
Estonia	5	[1.60-15.4]	0.80	0.33	0.03	26	22
Finland	21	[13.3-33.1]	0.77	0.40	0.05	26	20
United Kingdom	544	[434.2-681.5]	1.62	0.93	0.11	24	23
Denmark	48	[35.1-65.7]	1.67	0.77	0.09	25	21
Southern Europe	966	[704.1-1,325.3]	1.29	0.62	0.07	28	26
Serbia	45	[25.8-78.5]	1.05	0.55	0.07	26	27
Croatia	13	[7.30-23]	0.66	0.34	0.04	27	27
Portugal	91	[48.6-170.5]	1.89	0.70	0.08	23	28
Spain	320	[232.4-440.6]	1.39	0.71	0.08	26	25
Slovenia	7	[2.70-18.3]	0.68	0.37	0.04	27	26
Cyprus	2	[0.40-9.60]	0.33	0.24	0.03	26	22
Bosnia & Herzegovina	6	[1.60-22.3]	0.37	0.20	0.03	27	27
Albania	3	[1.90-4.70]	0.20	0.13	0.02	27	20
Greece	62	[32.9-116.8]	1.21	0.59	0.07	24	22
Italy	406	[282.5-583.4]	1.38	0.62	0.07	27	23
North Macedonia	5	[3.20-7.80]	0.48	0.28	0.04	26	26
Montenegro	4	[1.30-12.3]	1.29	0.77	0.12	24	21
Malta	2	[0.60-6.50]	0.90	0.37	0.07	26	28
Western Europe	1,711	[1,532.8-1,909.9]	1.78	0.96	0.11	24	22
Luxembourg	4	[0.90-18.6]	1.26	0.74	0.09	25	20
Switzerland	75	[36.9-152.6]	1.75	0.87	0.10	24	21
Belgium	78	[60.7-100.3]	1.36	0.75	0.09	25	25
Austria	66	[47.8-91.1]	1.49	0.74	0.09	24	21
France	413	[287.1-594.2]	1.31	0.75	0.08	26	24
Germany	947	[718.2-1,248.7]	2.29	1.20	0.14	24	15
Netherlands	128	[77-212.8]	1.50	0.80	0.09	24	21

Data accessed on 27 Jan 2021

For more detailed methods of estimation please refer to http://gco.iarc.fr/today/data-sources-methods

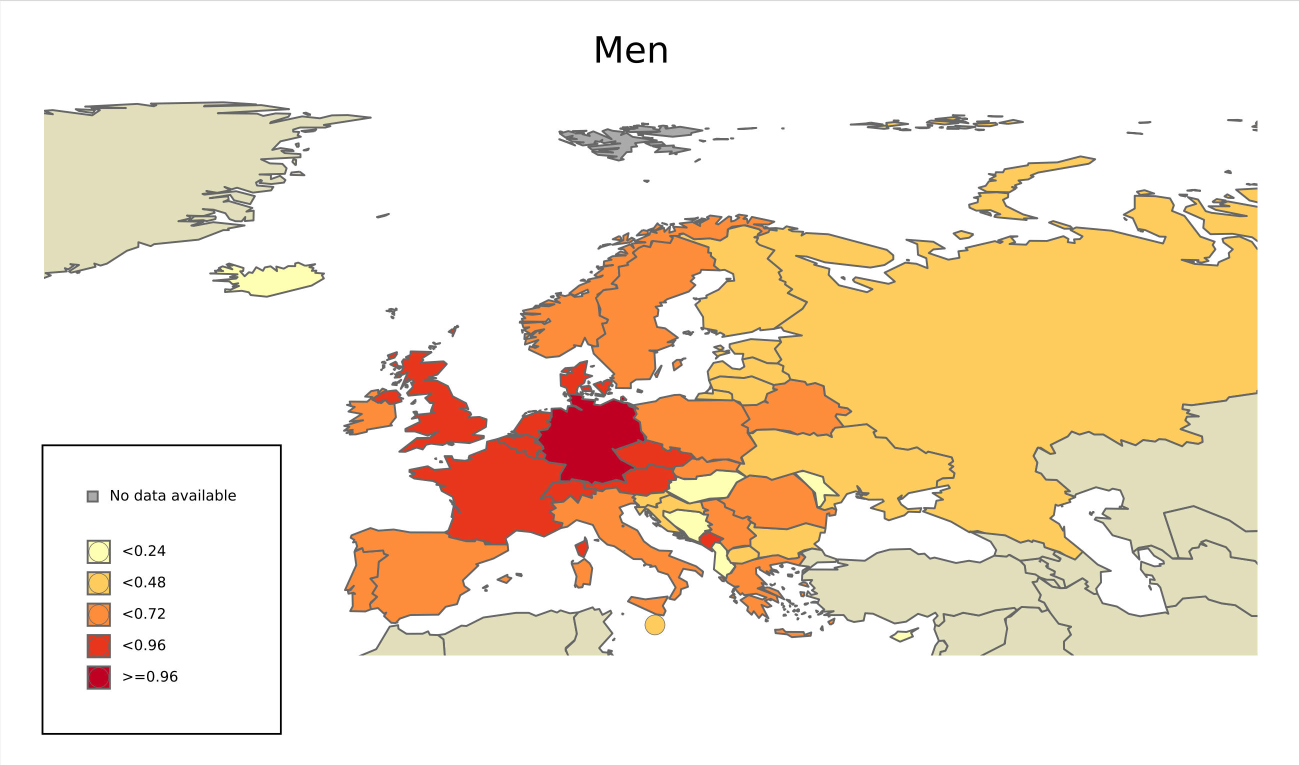
[a] Cumulative risk (incidence) is the probability or risk of individuals getting from the disease during ages 0-74 years. For cancer, it is expressed as the % of new born children who would be expected to develop from a particular cancer before the age of 75 if they had the rates of cancer observed in the period in the absence of competing causes.

[b] Rates per 100,000 men per year.

Data Sources:

Ferlay J, Ervik M, Lam F, Colombet M, Mery L, Piñeros M, Znaor A, Soerjomataram I, Bray F (2020). Global Cancer Observatory: Cancer Today. Lyon, France: International Agency for Research on Cancer. Available from: https://gco.iarc.fr/today, accessed [27 January 2021].

Figure 21: Age-standardised incidence rates of anal cancer among men in Europe (estimates for 2020)



Data accessed on 27 Jan 2021

For more detailed methods of estimation please refer to http://gco.iarc.fr/today/data-sources-methods

[a] Rates per 100,000 men per year.

Data Sources:

Ferlay J, Ervik M, Lam F, Colombet M, Mery L, Piñeros M, Znaor A, Soerjomataram I, Bray F (2020). Global Cancer Observatory: Cancer Today. Lyon, France: International Agency for Research on Cancer. Available from: https://gco.iarc.fr/today, accessed [27 January 2021].

3.4.1.2 Anal cancer mortality

Table 8: Mortality of anal cancer in women by Europe and sub regions (estimates for 2020)

Area	N Cases	Uncertainty intervals of new cancer cases [95% UI]	Crude rate[b]	ASR[b]	Cumulative risk (%) ages 0-74 years[a]	Ranking	
						All women	Women 15-44 years
Europe	2,427	[2,042.4-2,884]	0.63	0.24	0.03	23	23
Eastern Europe	715	[514.6-993.4]	0.46	0.20	0.02	25	29
Hungary	12	[6.30-22.8]	0.24	0.10	0.01	30	31
Republic of Moldova	3	[0.90-10.4]	0.14	0.06	0.00	26	31
Poland	148	[110.3-198.6]	0.76	0.26	0.03	24	27
Romania	57	[42.8-76]	0.58	0.22	0.03	24	23
Russian Federation	284	[166.4-484.7]	0.36	0.17	0.02	25	28
Slovakia	14	[7.60-25.7]	0.50	0.21	0.02	24	19
Czechia	59	[43.9-79.3]	1.09	0.42	0.05	21	19
Bulgaria	12	[6.20-23.2]	0.34	0.11	0.01	27	18
Ukraine	96	[72.9-126.4]	0.41	0.19	0.02	23	29
Belarus	30	[19.7-45.6]	0.59	0.24	0.03	21	27
Northern Europe	452	[394.7-517.6]	0.84	0.33	0.04	23	18
Ireland	8	[3.40-18.9]	0.32	0.16	0.02	25	18
Iceland	0	[0-8.60]	0	0	0	29	23
Lithuania	13	[7.30-23.2]	0.89	0.31	0.03	22	23
Latvia	6	[2.60-13.9]	0.59	0.21	0.03	25	19
Norway	11	[5.50-21.9]	0.41	0.16	0.02	22	27
Sweden	34	[23.4-49.3]	0.67	0.27	0.03	22	19
Finland	11	[5.70-21.1]	0.39	0.17	0.02	25	26
Estonia	2	[0.80-5.30]	0.29	0.03	0	25	12
United Kingdom	344	[289.4-408.9]	1.00	0.41	0.04	22	17
Denmark	23	[14.3-36.9]	0.79	0.27	0.03	22	13
Southern Europe	376	[307.3-460.1]	0.48	0.16	0.02	26	23
Serbia	18	[10.6-30.6]	0.40	0.14	0.02	26	22
Portugal	27	[17.6-41.4]	0.50	0.16	0.02	22	18
Spain	64	[48-85.3]	0.27	0.09	0.01	27	28
Cyprus	1	[0.10-9.50]	0.17	0.05	0	24	16
Slovenia	2	[0.50-7.60]	0.19	0.03	0	28	9
Bosnia & Herzegovina	3	[0.70-12.2]	0.18	0.08	0.01	29	28
Albania	0	[0-17.8]	0	0	0	31	25
Croatia	8	[3.80-17]	0.38	0.08	0.00	28	18
Greece	22	[13.3-36.3]	0.41	0.15	0.01	26	25
Italy	230	[183.4-288.4]	0.74	0.23	0.03	23	20
North Macedonia	0	[0-9.90]	0	0	0	31	21
Montenegro	1	[0.20-4.90]	0.31	0.14	0.04	26	29
Malta	0	[0-9]	0	0	0	24	6
Western Europe	884	[781.9-999.4]	0.89	0.31	0.03	23	19
Luxembourg	0	[0-9.40]	0	0	0	27	18
Switzerland	38	[26.8-53.8]	0.87	0.27	0.02	22	30
France	348	[292.7-413.7]	1.03	0.39	0.04	21	17
Germany	417	[354.9-490]	0.98	0.33	0.04	23	18
Belgium	22	[13.7-35.3]	0.38	0.11	0.01	25	29
Austria	32	[21.7-47.2]	0.70	0.27	0.04	23	16
Netherlands	27	[17.6-41.4]	0.31	0.13	0.02	26	30

Data accessed on 27 Jan 2021

For more detailed methods of estimation please refer to http://gco.iarc.fr/today/data-sources-methods

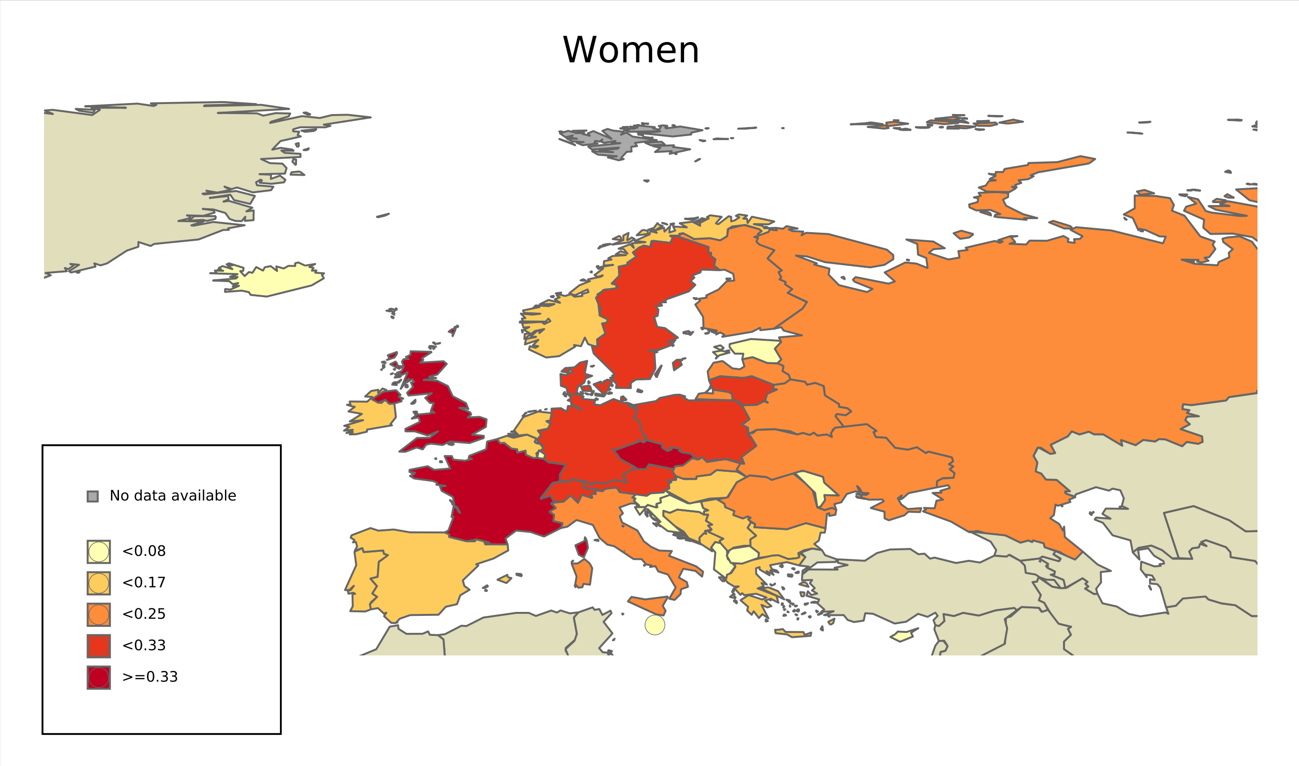
[a] Cumulative risk (mortality) is the probability or risk of individuals dying from the disease during ages 0-74 years. For cancer, it is expressed as the % of new born children who would be expected to die from a particular cancer before the age of 75 if they had the rates of cancer observed in the period in the absence of competing causes.

[b] Rates per 100,000 women per year.

Data Sources:

Ferlay J, Ervik M, Lam F, Colombet M, Mery L, Piñeros M, Znaor A, Soerjomataram I, Bray F (2020). Global Cancer Observatory: Cancer Today. Lyon, France: International Agency for Research on Cancer. Available from: https://gco.iarc.fr/today, accessed [27 January 2021].

Figure 22: Age-standardised mortality rates of anal cancer among women in Europe (estimates for 2020)



Data accessed on 27 Jan 2021

For more detailed methods of estimation please refer to http://gco.iarc.fr/today/data-sources-methods

[a] Rates per 100,000 women per year.

Data Sources:

Ferlay J, Ervik M, Lam F, Colombet M, Mery L, Piñeros M, Znaor A, Soerjomataram I, Bray F (2020). Global Cancer Observatory: Cancer Today. Lyon, France: International Agency for Research on Cancer. Available from: https://gco.iarc.fr/today, accessed [27 January 2021].

Table 9: Mortality of anal cancer in men by Europe and sub regions (estimates for 2020)

Area	N Cases	Uncertainty intervals of new cancer cases [95% UI]	Crude rate[b]	ASR[b]	Cumulative risk (%) ages 0-74 years[a]	Ranking	
						All men	Men 15-44 years
Europe	1,600	[1,287.9-1,987.7]	0.44	0.22	0.02	26	22
Eastern Europe	523	[355.7-769.1]	0.38	0.23	0.03	27	23
Hungary	10	[5.40-18.6]	0.22	0.11	0.01	27	27
Republic of Moldova	2	[0.60-7]	0.10	0.08	0.02	28	25
Poland	103	[79-134.2]	0.56	0.29	0.03	26	22
Romania	79	[56.3-110.9]	0.84	0.42	0.05	21	24
Russian Federation	138	[58.9-323.4]	0.20	0.14	0.02	27	20
Slovakia	25	[15.5-40.2]	0.94	0.52	0.06	21	27
Bulgaria	18	[10.6-30.5]	0.53	0.24	0.03	25	23
Belarus	19	[11.3-32]	0.43	0.28	0.03	23	27
Ukraine	66	[43.3-100.6]	0.33	0.20	0.03	27	25
Czechia	63	[47.8-83]	1.19	0.55	0.07	20	19
Northern Europe	301	[254.7-355.7]	0.57	0.27	0.03	21	19
Lithuania	6	[2.70-13.2]	0.48	0.24	0.03	25	21
Ireland	4	[1.40-11.6]	0.16	0.09	0.00	27	26
Iceland	0	[0-8.60]	0	0	0	22	10
Latvia	4	[1.30-12.3]	0.46	0.22	0.03	24	26
Norway	7	[2.90-16.8]	0.26	0.12	0.01	26	23
Sweden	18	[11-29.4]	0.36	0.15	0.02	25	18
Finland	11	[5.60-21.6]	0.40	0.19	0.03	24	23
Estonia	2	[0.60-7]	0.32	0.15	0.02	26	19
United Kingdom	231	[173.5-307.5]	0.69	0.34	0.04	20	18
Denmark	18	[10.4-31.3]	0.63	0.24	0.02	22	25
Southern Europe	266	[206.9-342]	0.35	0.15	0.02	27	26
Spain	75	[58.2-96.7]	0.33	0.16	0.02	26	26
Serbia	26	[16.6-40.8]	0.61	0.29	0.03	26	28
Portugal	18	[10.9-29.8]	0.37	0.14	0.02	27	25
Cyprus	1	[0.10-9.50]	0.17	0.07	0	23	19
Slovenia	1	[0.20-5.70]	0.10	0.04	0.01	26	27
Bosnia & Herzegovina	4	[1.30-12.1]	0.25	0.12	0.02	27	26
Albania	0	[0-17.8]	0	0	0	27	19
Croatia	4	[1.40-11.7]	0.20	0.07	0.01	27	18
Greece	18	[10.6-30.6]	0.35	0.14	0.02	26	22
Italy	118	[89.9-155]	0.40	0.15	0.02	26	23
North Macedonia	1	[0.10-9.90]	0.10	0.06	0.01	26	21
Montenegro	0	[0-9.90]	0	0	0	28	23
Malta	0	[0-9]	0	0	0	26	21
Western Europe	510	[433-600.7]	0.53	0.24	0.03	23	18
Luxembourg	0	[0-9.40]	0	0	0	27	22
Switzerland	17	[9.70-29.8]	0.40	0.18	0.02	25	20
France	152	[115-200.9]	0.48	0.23	0.02	23	18
Germany	265	[219.9-319.4]	0.64	0.28	0.03	24	17
Belgium	24	[14.4-40.1]	0.42	0.19	0.02	24	25
Austria	17	[9.90-29.2]	0.38	0.18	0.02	24	14
Netherlands	35	[24.2-50.6]	0.41	0.16	0.02	24	23

Data accessed on 27 Jan 2021

For more detailed methods of estimation please refer to http://gco.iarc.fr/today/data-sources-methods

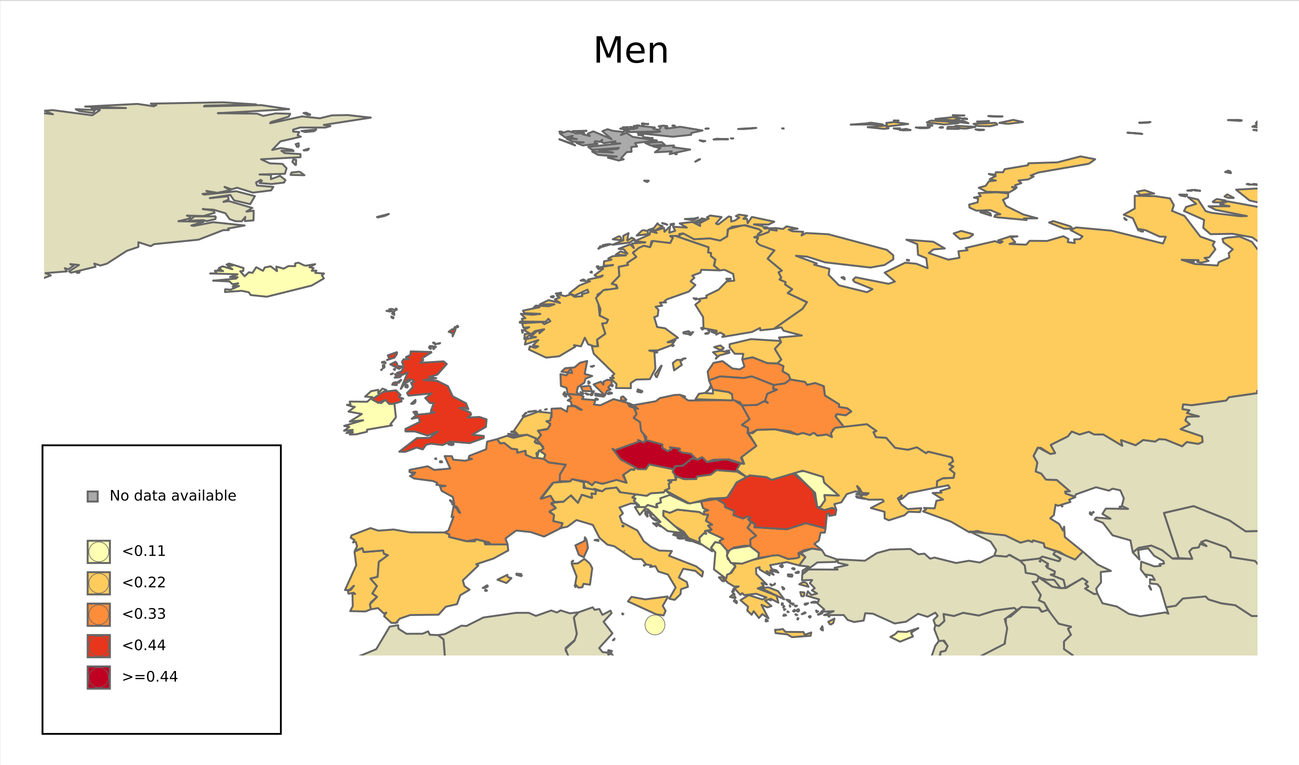
[a] Cumulative risk (mortality) is the probability or risk of individuals dying from the disease during ages 0-74 years. For cancer, it is expressed as the % of new born children who would be expected to die from a particular cancer before the age of 75 if they had the rates of cancer observed in the period in the absence of competing causes.

[b] Rates per 100,000 men per year.

Data Sources:

Ferlay J, Ervik M, Lam F, Colombet M, Mery L, Piñeros M, Znaor A, Soerjomataram I, Bray F (2020). Global Cancer Observatory: Cancer Today. Lyon, France: International Agency for Research on Cancer. Available from: https://gco.iarc.fr/today, accessed [27 January 2021].

Figure 23: Age-standardised mortality rates of anal cancer among men in Europe (estimates for 2020)



Data accessed on 27 Jan 2021
For more detailed methods of estimation please refer to http://gco.iarc.fr/today/data-sources-methods
[a] Rates per 100,000 men per year.
Data Sources:
Ferlay J, Ervik M, Lam F, Colombet M, Mery L, Piñeros M, Znaor A, Soerjomataram I, Bray F (2020). Global Cancer Observatory: Cancer Today. Lyon, France: International Agency for Research on Cancer. Available from: https://gco.iarc.fr/today, accessed [27 January 2021].

3.4.2 Vulvar cancer

3.4.2.1 Vulvar cancer incidence

Table 10: Incidence of vulvar cancer in women by Europe and sub regions (estimates for 2020)

Area	N Cases	Uncertainty intervals of new cancer cases [95% UI]	Crude rate[b]	ASR[b]	Cumulative risk (%) ages 0-74 years[a]	Ranking	
						All women	Women 15-44 years
Europe	16,506	[15,463.8-17,618.4]	4.26	1.68	0.19	19	18
Eastern Europe	5,012	[4,689.4-5,356.8]	3.23	1.30	0.15	19	19
Hungary	245	[171.9-349.1]	4.84	1.90	0.21	18	19
Republic of Moldova	44	[25-77.4]	2.09	1.00	0.12	18	28
Poland	761	[626.8-924]	3.90	1.41	0.16	19	19
Romania	491	[350-688.9]	4.97	1.85	0.22	17	23
Russian Federation	2,087	[1,990.3-2,188.4]	2.67	1.14	0.13	19	19
Slovakia	102	[79.9-130.3]	3.64	1.56	0.19	20	21
Czechia	276	[195.5-389.6]	5.08	1.97	0.22	18	17
Bulgaria	118	[91.9-151.5]	3.30	1.21	0.14	18	20
Ukraine	648	[591.5-709.9]	2.76	1.09	0.13	18	21
Belarus	240	[167.7-343.5]	4.75	1.82	0.22	15	20
Northern Europe	2,227	[2,091.7-2,371.1]	4.14	1.85	0.20	20	16
Lithuania	62	[46.5-82.7]	4.24	1.25	0.15	18	30
Ireland	60	[43.9-82.1]	2.41	1.32	0.14	21	16
Iceland	4	[1.40-11.4]	2.36	1.25	0.17	21	14
Latvia	42	[29.8-59.1]	4.13	1.39	0.16	18	15
Norway	90	[65.8-123]	3.36	1.48	0.17	19	22
Sweden	179	[138.9-230.7]	3.55	1.34	0.15	19	20
Estonia	22	[14.4-33.6]	3.15	0.89	0.10	19	25
United Kingdom	1,521	[1,399.2-1,653.4]	4.43	2.09	0.23	20	15
Finland	106	[71.2-157.9]	3.77	1.32	0.15	19	18
Denmark	135	[101.2-180.1]	4.63	1.99	0.21	20	15
Southern Europe	3,048	[2,591.8-3,584.4]	3.89	1.35	0.15	19	18
Spain	1,018	[841.8-1,231.1]	4.28	1.66	0.17	19	15
Croatia	97	[59.2-159]	4.56	1.67	0.20	19	19
Portugal	200	[120.4-332.2]	3.72	1.16	0.13	19	22
Serbia	188	[117-302]	4.22	1.67	0.21	20	20
Cyprus	15	[7.30-30.6]	2.48	1.09	0.12	19	20
Slovenia	55	[39.6-76.3]	5.27	1.83	0.21	18	19
Bosnia & Herzegovina	42	[23.6-74.8]	2.51	1.06	0.14	21	25
Albania	24	[9.50-60.3]	1.70	0.89	0.09	17	17
Greece	170	[125.6-230]	3.20	0.87	0.09	20	27
Italy	1,204	[1,020.5-1,420.5]	3.88	1.16	0.13	19	24
North Macedonia	13	[4.20-39.9]	1.25	0.60	0.09	21	21
Montenegro	9	[4.10-19.9]	2.83	1.36	0.16	21	29
Malta	12	[5.80-24.7]	5.45	1.82	0.21	18	24
Western Europe	6,219	[5,899.9-6,555.4]	6.23	2.43	0.26	19	15
Luxembourg	9	[1.50-53.1]	2.91	1.88	0.21	21	8
Netherlands	565	[471.1-677.6]	6.57	2.84	0.32	19	14
Switzerland	159	[107.1-236]	3.65	1.38	0.15	21	19
France	1,114	[844.8-1,469.1]	3.31	1.06	0.11	22	29
Germany	3,882	[3,338.5-4,514]	9.16	3.61	0.39	15	12
Belgium	316	[253-394.7]	5.41	2.21	0.24	20	15
Austria	173	[123.5-242.3]	3.79	1.54	0.18	19	17

Data accessed on 27 Jan 2021

For more detailed methods of estimation please refer to http://gco.iarc.fr/today/data-sources-methods

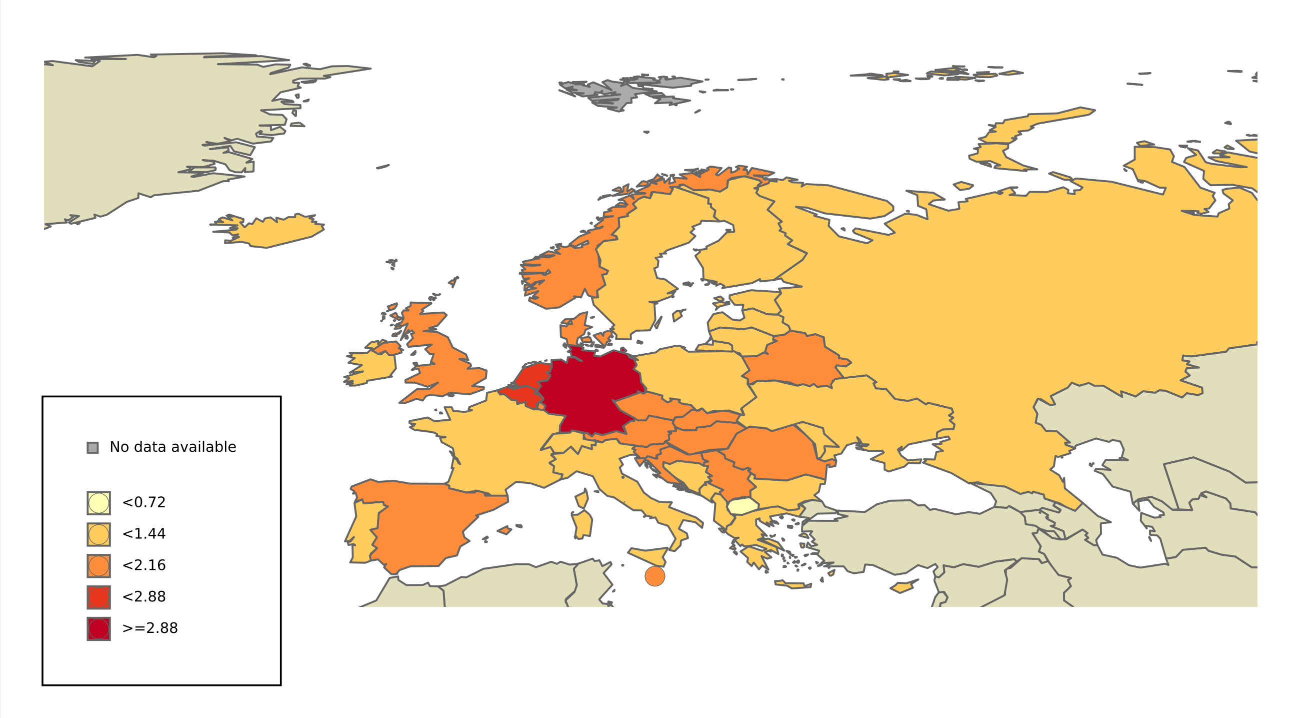
[a] Cumulative risk (incidence) is the probability or risk of individuals getting from the disease during ages 0-74 years. For cancer, it is expressed as the % of new born children who would be expected to develop from a particular cancer before the age of 75 if they had the rates of cancer observed in the period in the absence of competing causes.

[b] Rates per 100,000 women per year.

Data Sources:

Ferlay J, Ervik M, Lam F, Colombet M, Mery L, Piñeros M, Znaor A, Soerjomataram I, Bray F (2020). Global Cancer Observatory: Cancer Today. Lyon, France: International Agency for Research on Cancer. Available from: https://gco.iarc.fr/today, accessed [27 January 2021].

Figure 24: Age-standardised incidence rates of vulvar cancer among women in Europe (estimates for 2020)



Data accessed on 27 Jan 2021

For more detailed methods of estimation please refer to http://gco.iarc.fr/today/data-sources-methods

[a] Rates per 100,000 women per year.

Data Sources:

Ferlay J, Ervik M, Lam F, Colombet M, Mery L, Piñeros M, Znaor A, Soerjomataram I, Bray F (2020). Global Cancer Observatory: Cancer Today. Lyon, France: International Agency for Research on Cancer. Available from: https://gco.iarc.fr/today, accessed [27 January 2021].

3.4.2.2 Vulvar cancer mortality

Table 11: Mortality of vulvar cancer in women by Europe and sub regions (estimates for 2020)

Area	N Cases	Uncertainty intervals of new cancer cases [95% UI]	Crude rate[b]	ASR[b]	Cumulative risk (%) ages 0-74 years[a]	Ranking	
						All women	Women 15-44 years
Europe	6,503	[5,811.5-7,276.8]	1.68	0.51	0.05	19	19
Eastern Europe	2,561	[2,144.3-3,058.7]	1.65	0.59	0.06	20	18
Hungary	110	[84.5-143.1]	2.17	0.67	0.07	19	20
Republic of Moldova	26	[16.7-40.5]	1.24	0.56	0.06	17	21
Poland	407	[349.6-473.9]	2.09	0.65	0.07	19	20
Romania	220	[170.1-284.5]	2.23	0.70	0.08	17	28
Russian Federation	1,161	[887.3-1,519.1]	1.48	0.59	0.07	20	17
Slovakia	60	[43.9-82.1]	2.14	0.71	0.07	18	24
Czechia	99	[69.5-141.1]	1.82	0.54	0.06	20	30
Bulgaria	44	[30.9-62.7]	1.23	0.36	0.04	18	24
Ukraine	355	[306-411.8]	1.51	0.54	0.06	16	19
Belarus	79	[60.8-102.6]	1.56	0.50	0.05	18	30
Northern Europe	795	[712.9-886.5]	1.48	0.45	0.04	19	20
Lithuania	24	[16.1-35.8]	1.64	0.37	0.04	20	27
Ireland	19	[11.1-32.4]	0.76	0.35	0.04	21	24
Iceland	0	[0-8.60]	0	0	0	22	15
Latvia	26	[16.9-39.9]	2.56	0.54	0.05	17	26
Norway	33	[22.6-48.3]	1.23	0.37	0.03	19	21
Sweden	74	[51.5-106.3]	1.47	0.40	0.03	20	29
Estonia	13	[7.40-22.9]	1.86	0.45	0.05	19	28
United Kingdom	526	[455.6-607.2]	1.53	0.49	0.05	19	21
Finland	37	[26-52.7]	1.32	0.34	0.03	20	18
Denmark	42	[29.1-60.5]	1.44	0.39	0.03	19	26
Southern Europe	1,293	[1,155.8-1,446.5]	1.65	0.40	0.04	18	27
Croatia	50	[36.7-68.2]	2.35	0.54	0.04	18	19
Portugal	71	[48.1-104.8]	1.32	0.29	0.02	20	25
Spain	372	[322-429.8]	1.56	0.38	0.04	18	23
Serbia	89	[62.1-127.6]	2.00	0.69	0.08	18	20
Cyprus	4	[1.20-13]	0.66	0.17	0	19	29
Slovenia	24	[15.4-37.4]	2.30	0.54	0.05	18	16
Bosnia & Herzegovina	24	[14.8-38.9]	1.43	0.57	0.07	18	24
Albania	12	[4.80-30.2]	0.85	0.37	0.04	16	16
Greece	84	[65.2-108.2]	1.58	0.33	0.03	17	29
Italy	544	[480.4-616]	1.75	0.39	0.04	19	31
North Macedonia	7	[2.70-17.8]	0.67	0.29	0.04	19	26
Montenegro	8	[3.40-19]	2.52	0.90	0.12	17	21
Malta	4	[1.20-13]	1.82	0.40	0.03	20	5
Western Europe	1,854	[1,704.8-2,016.2]	1.86	0.49	0.05	18	16
Luxembourg	2	[0.40-8.90]	0.65	0.13	0	19	26
Switzerland	50	[36.6-68.3]	1.15	0.28	0.03	21	25
Germany	1,145	[1,050.5-1,248]	2.70	0.71	0.07	18	15
Belgium	77	[59.4-99.9]	1.32	0.33	0.03	19	31
France	391	[316.2-483.5]	1.16	0.28	0.03	19	28
Austria	69	[49.9-95.4]	1.51	0.38	0.04	19	21
Netherlands	120	[93.2-154.6]	1.40	0.40	0.04	19	19

Data accessed on 27 Jan 2021

For more detailed methods of estimation please refer to http://gco.iarc.fr/today/data-sources-methods

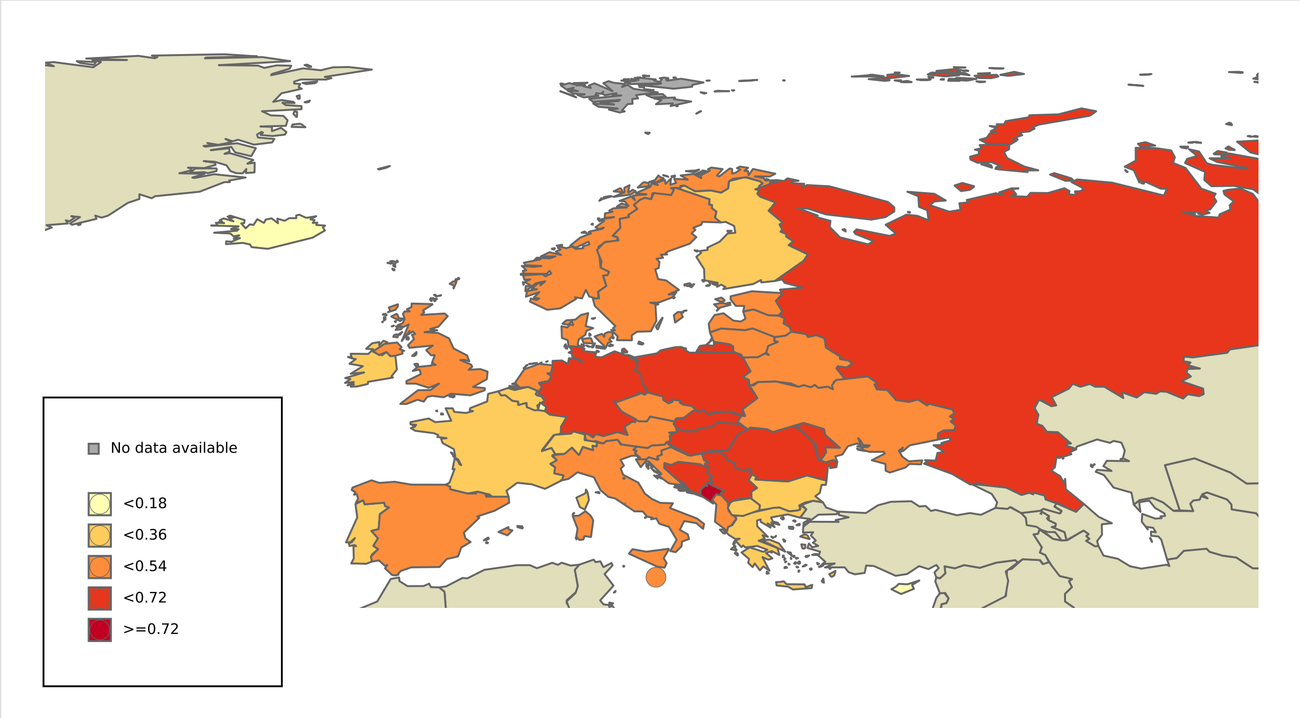
[a] Cumulative risk (mortality) is the probability or risk of individuals dying from the disease during ages 0-74 years. For cancer, it is expressed as the % of new born children who would be expected to die from a particular cancer before the age of 75 if they had the rates of cancer observed in the period in the absence of competing causes.

[b] Rates per 100,000 women per year.

Data Sources:

Ferlay J, Ervik M, Lam F, Colombet M, Mery L, Piñeros M, Znaor A, Soerjomataram I, Bray F (2020). Global Cancer Observatory: Cancer Today. Lyon, France: International Agency for Research on Cancer. Available from: https://gco.iarc.fr/today, accessed [27 January 2021].

Figure 25: Age-standardised mortality rates of vulvar cancer among women in Europe (estimates for 2020)



Data accessed on 27 Jan 2021

For more detailed methods of estimation please refer to http://gco.iarc.fr/today/data-sources-methods

[a] Rates per 100,000 women per year.

Data Sources:

Ferlay J, Ervik M, Lam F, Colombet M, Mery L, Piñeros M, Znaor A, Soerjomataram I, Bray F (2020). Global Cancer Observatory: Cancer Today. Lyon, France: International Agency for Research on Cancer. Available from: https://gco.iarc.fr/today, accessed [27 January 2021].

3.4.3 Vaginal cancer

3.4.3.1 Vaginal cancer incidence

Table 12: Incidence of vaginal cancer in women by Europe and sub regions (estimates for 2020)

Area	N Cases	Uncertainty intervals of new cancer cases [95% UI]	Crude rate[b]	ASR[b]	Cumulative risk (%) ages 0-74 years[a]	Ranking	
						All women	Women 15-44 years
Europe	2,947	[2,536.3-3,424.3]	0.76	0.33	0.04	28	27
Eastern Europe	1,005	[876.9-1,151.8]	0.65	0.31	0.04	27	29
Hungary	61	[36.8-101.1]	1.21	0.46	0.06	27	30
Republic of Moldova	6	[1.30-28.3]	0.29	0.17	0.02	27	29
Poland	108	[78.1-149.4]	0.55	0.20	0.02	29	30
Romania	55	[32.6-92.9]	0.56	0.25	0.03	28	30
Russian Federation	492	[446.3-542.3]	0.63	0.32	0.04	28	28
Slovakia	24	[15-38.5]	0.86	0.43	0.05	26	22
Bulgaria	33	[22.8-47.8]	0.92	0.37	0.05	25	29
Belarus	28	[19.9-39.4]	0.55	0.27	0.03	25	24
Ukraine	149	[116.2-191]	0.63	0.31	0.04	26	26
Czechia	49	[36-66.6]	0.90	0.37	0.04	27	28
Northern Europe	450	[389.9-519.4]	0.84	0.38	0.04	28	26
Ireland	13	[6.70-25.1]	0.52	0.31	0.04	27	26
Iceland	2	[0.30-11.6]	1.18	0.41	0.07	24	15
Lithuania	14	[7.80-25.1]	0.96	0.36	0.05	25	31
Latvia	13	[7-24.2]	1.28	0.47	0.04	24	19
Norway	15	[8.80-25.5]	0.56	0.24	0.03	27	31
Sweden	34	[24.1-48]	0.67	0.26	0.03	27	26
Estonia	8	[3.80-16.9]	1.15	0.46	0.06	25	24
United Kingdom	306	[241.3-388]	0.89	0.43	0.05	28	26
Denmark	20	[12.3-32.5]	0.69	0.29	0.03	29	26
Finland	25	[16.3-38.3]	0.89	0.31	0.03	26	25
Southern Europe	553	[384.9-794.5]	0.70	0.29	0.03	28	24
Croatia	19	[11.2-32.3]	0.89	0.33	0.04	24	31
Portugal	49	[26.9-89.4]	0.91	0.29	0.02	24	25
Spain	150	[105.5-213.3]	0.63	0.25	0.02	27	24
Serbia	38	[20.3-71.2]	0.85	0.33	0.04	26	23
Slovenia	10	[4.70-21.5]	0.96	0.37	0.04	25	30
Cyprus	1	[0.10-7.80]	0.17	0.05	0	27	19
Bosnia & Herzegovina	16	[4.90-51.7]	0.96	0.41	0.06	25	29
Albania	8	[5.40-11.8]	0.57	0.32	0.04	25	18
Greece	15	[5.30-42.5]	0.28	0.13	0.01	29	28
Italy	236	[165.3-336.9]	0.76	0.35	0.03	29	22
North Macedonia	6	[0.70-50.6]	0.58	0.27	0.03	23	28
Montenegro	5	[1.40-18.2]	1.57	0.74	0.07	25	28
Malta	0	[0-6.30]	0	0	0	28	29
Western Europe	939	[813-1,084.5]	0.94	0.36	0.04	29	29
Luxembourg	1	[0.10-12.6]	0.32	0.17	0.04	27	23
Netherlands	70	[52.4-93.4]	0.81	0.34	0.04	28	25
Switzerland	38	[18-80.1]	0.87	0.32	0.03	29	25
France	207	[120-357.1]	0.61	0.22	0.02	29	31
Belgium	45	[32.2-62.9]	0.77	0.30	0.03	29	27
Germany	532	[414-683.7]	1.26	0.47	0.05	26	25
Austria	46	[32.5-65]	1.01	0.35	0.04	26	25

Data accessed on 27 Jan 2021

For more detailed methods of estimation please refer to http://gco.iarc.fr/today/data-sources-methods

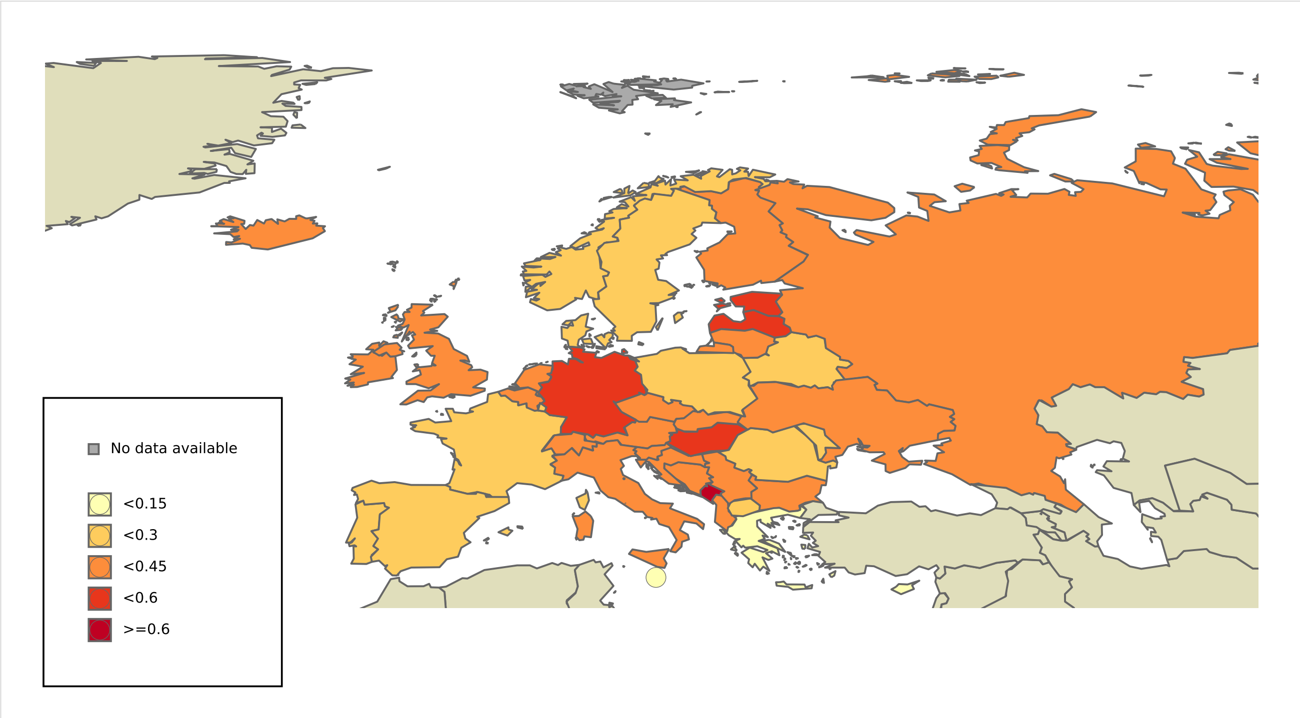
[a] Cumulative risk (incidence) is the probability or risk of individuals getting from the disease during ages 0-74 years. For cancer, it is expressed as the % of new born children who would be expected to develop from a particular cancer before the age of 75 if they had the rates of cancer observed in the period in the absence of competing causes.

[b] Rates per 100,000 women per year.

Data Sources:

Ferlay J, Ervik M, Lam F, Colombet M, Mery L, Piñeros M, Znaor A, Soerjomataram I, Bray F (2020). Global Cancer Observatory: Cancer Today. Lyon, France: International Agency for Research on Cancer. Available from: https://gco.iarc.fr/today, accessed [27 January 2021].

Figure 26: Age-standardised incidence rates of vaginal cancer among women in Europe (estimates for 2020)



Data accessed on 27 Jan 2021

For more detailed methods of estimation please refer to http://gco.iarc.fr/today/data-sources-methods

[a] Rates per 100,000 women per year.

Data Sources:

Ferlay J, Ervik M, Lam F, Colombet M, Mery L, Piñeros M, Znaor A, Soerjomataram I, Bray F (2020). Global Cancer Observatory: Cancer Today. Lyon, France: International Agency for Research on Cancer. Available from: https://gco.iarc.fr/today, accessed [27 January 2021].

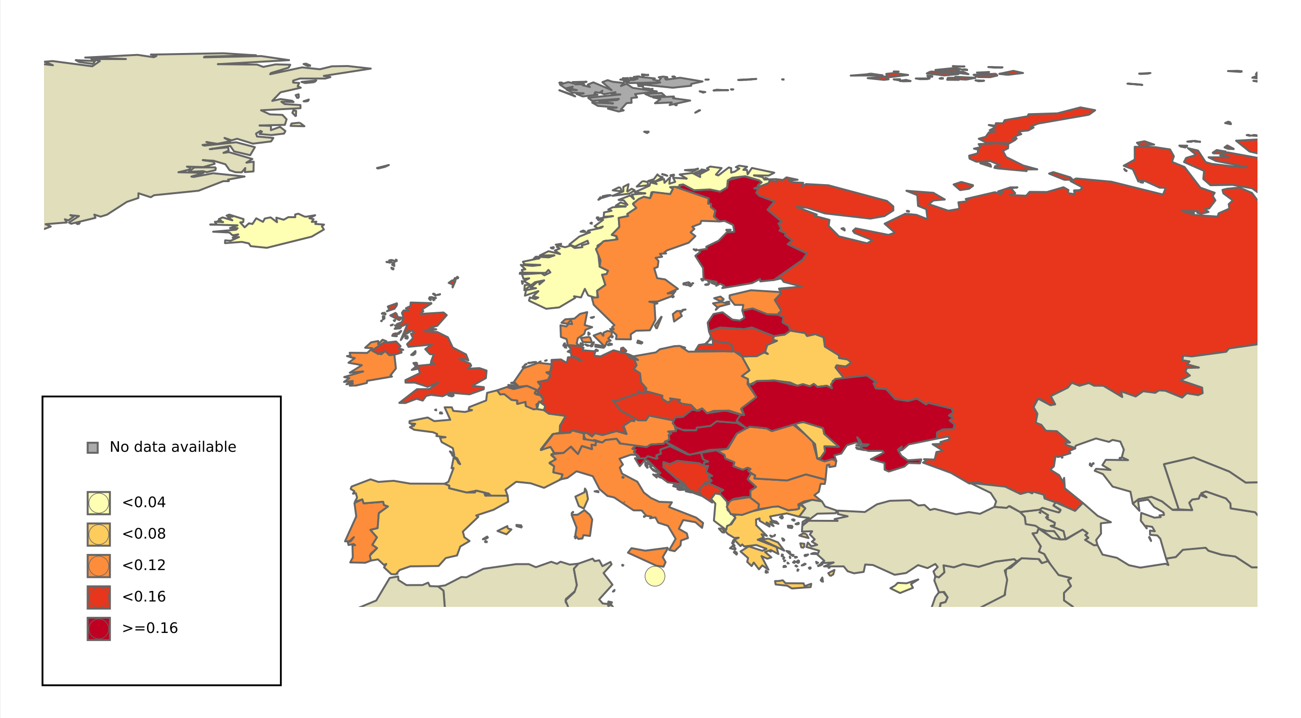
3.4.3.2 Vaginal cancer mortality

Table 13: Mortality of vaginal cancer in women by Europe and sub regions (estimates for 2020)

Area	N Cases	Uncertainty intervals of new cancer cases [95% UI]	Crude rate[b]	ASR[b]	Cumulative risk (%) ages 0-74 years[a]	Ranking	
						All women	Women 15-44 years
Europe	1,267	[978.5-1,640.6]	0.33	0.11	0.01	28	30
Eastern Europe	485	[322.4-729.7]	0.31	0.13	0.01	28	30
Hungary	30	[20.2-44.5]	0.59	0.19	0.02	25	26
Republic of Moldova	3	[0.90-10.6]	0.14	0.07	0.01	29	22
Poland	73	[55.8-95.5]	0.37	0.12	0.01	28	28
Romania	25	[16.5-37.9]	0.25	0.09	0.01	30	30
Russian Federation	221	[121-403.6]	0.28	0.13	0.01	29	30
Czechia	23	[14.6-36.1]	0.42	0.13	0.01	27	29
Slovakia	11	[5.60-21.8]	0.39	0.17	0.02	26	16
Bulgaria	9	[4.40-18.6]	0.25	0.09	0.01	29	25
Belarus	9	[4.10-19.5]	0.18	0.06	0.01	28	29
Ukraine	81	[59.6-110.1]	0.35	0.17	0.02	25	23
Northern Europe	185	[147.6-231.9]	0.34	0.13	0.01	27	22
Lithuania	8	[4-16.1]	0.55	0.13	0.01	24	28
Ireland	6	[2.60-13.7]	0.24	0.11	0.01	27	25
Iceland	0	[0-8.60]	0	0	0	23	14
Latvia	7	[2.60-18.5]	0.69	0.20	0.02	23	27
Norway	3	[1-9.30]	0.11	0.02	0	29	16
Sweden	12	[6.80-21.3]	0.24	0.10	0.01	27	28
Estonia	3	[0.90-10.5]	0.43	0.10	0.02	23	27
Finland	13	[7-24]	0.46	0.17	0.02	24	15
United Kingdom	125	[93-168]	0.36	0.15	0.02	27	22
Denmark	8	[3.60-17.9]	0.27	0.08	0.01	29	30
Southern Europe	247	[189.5-322]	0.31	0.09	0.01	28	22
Spain	62	[46.9-82]	0.26	0.08	0.01	28	19
Croatia	10	[4.90-20.5]	0.47	0.17	0.02	26	30
Serbia	20	[12-33.3]	0.45	0.16	0.02	24	26
Portugal	22	[13.6-35.7]	0.41	0.11	0.01	23	20
Slovenia	6	[2.60-13.6]	0.57	0.19	0.01	25	17
Cyprus	0	[0-10.6]	0	0	0	31	30
Bosnia & Herzegovina	6	[2.20-16.1]	0.36	0.15	0.01	25	29
Albania	0	[0-17.8]	0	0	0	29	20
Greece	7	[2.90-16.8]	0.13	0.04	0.00	29	28
Italy	110	[84.2-143.7]	0.35	0.09	0.01	28	24
North Macedonia	2	[0.30-12.1]	0.19	0.11	0.02	25	27
Montenegro	2	[0.20-19.7]	0.63	0.16	0	25	13
Malta	0	[0-9]	0	0	0	23	14
Western Europe	350	[287.4-426.2]	0.35	0.10	0.01	27	29
Luxembourg	0	[0-8.50]	0	0	0	23	27
Netherlands	25	[15.8-39.6]	0.29	0.09	0.01	27	23
Switzerland	14	[7.80-25.3]	0.32	0.10	0.01	27	24
France	81	[53.3-123.1]	0.24	0.07	0.01	29	29
Germany	194	[153.9-244.5]	0.46	0.13	0.01	26	26
Belgium	19	[11.6-31.2]	0.33	0.08	0.01	27	30
Austria	17	[10.1-28.5]	0.37	0.10	0.01	28	22

Data accessed on 27 Jan 2021
For more detailed methods of estimation please refer to http://gco.iarc.fr/today/data-sources-methods
[a] Cumulative risk (mortality) is the probability or risk of individuals dying from the disease during ages 0-74 years. For cancer, it is expressed as the % of new born children who would be expected to die from a particular cancer before the age of 75 if they had the rates of cancer observed in the period in the absence of competing causes.
[b] Rates per 100,000 women per year.
Data Sources:
Ferlay J, Ervik M, Lam F, Colombet M, Mery L, Piñeros M, Znaor A, Soerjomataram I, Bray F (2020). Global Cancer Observatory: Cancer Today. Lyon, France: International Agency for Research on Cancer. Available from: https://gco.iarc.fr/today, accessed [27 January 2021].

Figure 27: Age-standardised mortality rates of vaginal cancer among women in Europe (estimates for 2020)



Data accessed on 27 Jan 2021

For more detailed methods of estimation please refer to http://gco.iarc.fr/today/data-sources-methods

[a] Rates per 100,000 women per year.

Data Sources:

Ferlay J, Ervik M, Lam F, Colombet M, Mery L, Piñeros M, Znaor A, Soerjomataram I, Bray F (2020). Global Cancer Observatory: Cancer Today. Lyon, France: International Agency for Research on Cancer. Available from: https://gco.iarc.fr/today, accessed [27 January 2021].

3.4.4 Penile cancer

3.4.4.1 Penile cancer incidence

Table 14: Incidence of penile cancer in men by Europe and sub regions (estimates for 2020)

Area	N Cases	Uncertainty intervals of new cancer cases [95% UI]	Crude rate[b]	ASR[b]	Cumulative risk (%) ages 0-74 years[a]	Ranking: All men	Ranking: Men 15-44 years
Europe	6,762	[6,053.1-7,553.9]	1.87	0.94	0.11	23	25
Eastern Europe	2,038	[1,828.1-2,272]	1.48	0.91	0.11	23	23
Hungary	75	[42.6-131.9]	1.63	0.86	0.11	23	28
Republic of Moldova	28	[12.3-63.8]	1.45	1.08	0.11	22	27
Poland	440	[313.7-617.2]	2.40	1.25	0.15	21	23
Romania	196	[137.7-279]	2.10	1.15	0.13	22	21
Russian Federation	713	[642.1-791.7]	1.05	0.71	0.08	23	23
Czechia	125	[78.3-199.7]	2.37	1.14	0.13	23	21
Slovakia	49	[34.5-69.5]	1.84	1.07	0.12	23	25
Bulgaria	53	[39.9-70.4]	1.57	0.77	0.10	23	25
Ukraine	304	[248.1-372.5]	1.50	0.94	0.11	23	23
Belarus	55	[40.8-74.1]	1.25	0.83	0.10	23	23
Northern Europe	1,155	[1,055.5-1,263.9]	2.20	1.11	0.13	22	23
Lithuania	26	[16.9-40]	2.06	1.02	0.12	22	23
Ireland	39	[26.1-58.4]	1.59	0.92	0.10	23	23
Iceland	5	[1.80-13.9]	2.92	1.74	0.23	20	25
Latvia	19	[11.3-31.8]	2.19	1.27	0.14	23	16
Norway	66	[50.7-85.9]	2.41	1.27	0.15	22	21
Sweden	108	[70.5-165.6]	2.13	0.91	0.11	22	24
Estonia	11	[5.90-20.5]	1.75	0.94	0.12	22	28
United Kingdom	763	[599.9-970.5]	2.27	1.18	0.14	22	22
Denmark	77	[60.2-98.5]	2.67	1.15	0.13	23	19
Finland	40	[28.7-55.8]	1.46	0.68	0.08	23	24
Southern Europe	1,471	[1,127.2-1,919.6]	1.96	0.86	0.10	23	25
Serbia	83	[51.1-134.9]	1.94	1.01	0.12	23	24
Spain	506	[353.3-724.7]	2.20	0.95	0.11	22	24
Portugal	119	[74.3-190.5]	2.47	1.08	0.12	22	23
Cyprus	12	[5.10-28.2]	1.99	1.13	0.12	21	15
Slovenia	15	[7.60-29.4]	1.45	0.67	0.08	24	28
Bosnia & Herzegovina	15	[4.90-46]	0.93	0.48	0.06	24	28
Albania	10	[2.40-42.1]	0.68	0.37	0.04	25	23
Croatia	33	[22.7-48]	1.67	0.82	0.09	24	26
Greece	97	[61-154.2]	1.90	0.77	0.09	21	23
Italy	540	[375.8-776]	1.83	0.79	0.09	25	22
North Macedonia	33	[14.3-76.2]	3.17	1.73	0.18	18	21
Montenegro	5	[1.80-13.6]	1.61	0.82	0.07	21	26
Malta	3	[0.80-11.1]	1.35	0.38	0.04	24	12
Western Europe	2,098	[1,892.5-2,325.9]	2.18	0.95	0.11	23	26
Luxembourg	9	[3-26.6]	2.84	1.61	0.27	21	27
Switzerland	80	[40.3-159]	1.86	0.79	0.09	23	24
France	569	[399.4-810.6]	1.80	0.76	0.09	24	26
Germany	1,046	[890.7-1,228.4]	2.53	1.10	0.13	23	23
Belgium	120	[65.9-218.6]	2.09	1.01	0.11	24	26
Austria	82	[61.2-109.9]	1.85	0.86	0.10	22	23
Netherlands	192	[149.9-245.8]	2.25	0.97	0.11	22	24

Data accessed on 27 Jan 2021

For more detailed methods of estimation please refer to http://gco.iarc.fr/today/data-sources-methods

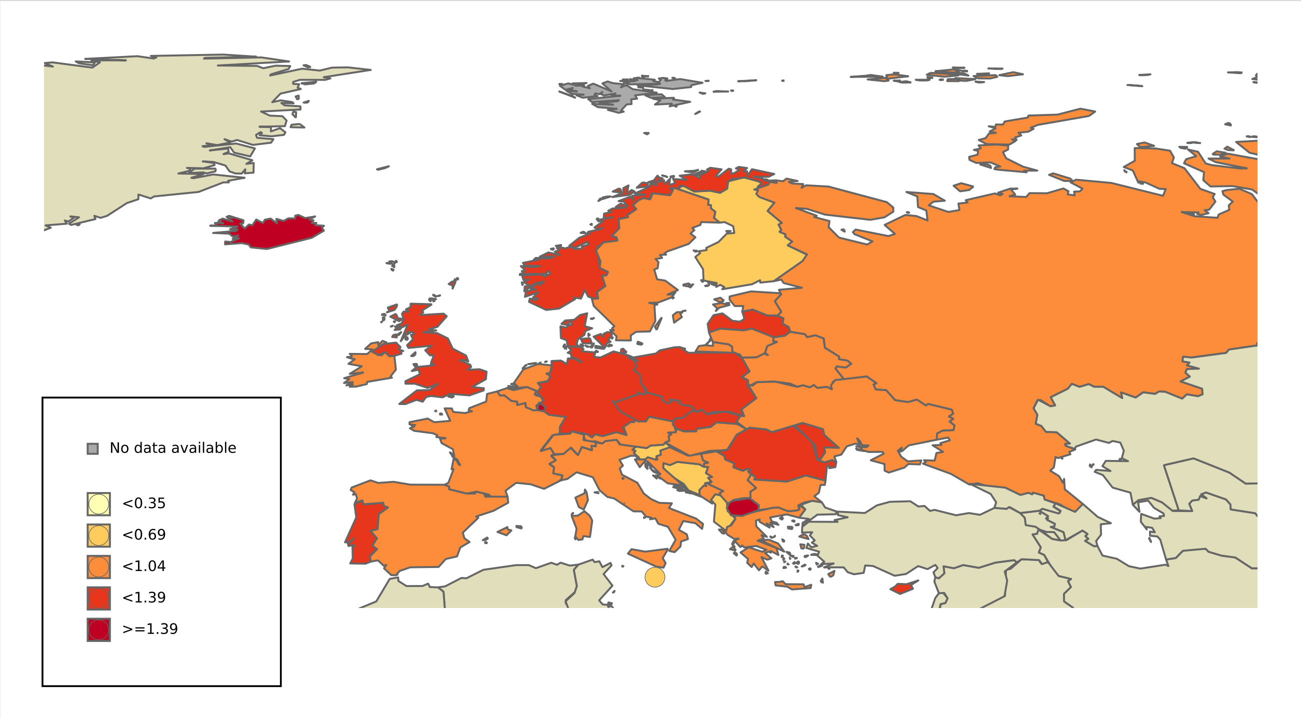
[a] Cumulative risk (incidence) is the probability or risk of individuals getting from the disease during ages 0-74 years. For cancer, it is expressed as the % of new born children who would be expected to develop from a particular cancer before the age of 75 if they had the rates of cancer observed in the period in the absence of competing causes.

[b] Rates per 100,000 men per year.

Data Sources:

Ferlay J, Ervik M, Lam F, Colombet M, Mery L, Piñeros M, Znaor A, Soerjomataram I, Bray F (2020). Global Cancer Observatory: Cancer Today. Lyon, France: International Agency for Research on Cancer. Available from: https://gco.iarc.fr/today, accessed [27 January 2021].

Figure 28: Age-standardised incidence rates of penile cancer among men in Europe (estimates for 2020)



Data accessed on 27 Jan 2021
For more detailed methods of estimation please refer to http://gco.iarc.fr/today/data-sources-methods
[a] Rates per 100,000 men per year.
Data Sources:
Ferlay J, Ervik M, Lam F, Colombet M, Mery L, Piñeros M, Znaor A, Soerjomataram I, Bray F (2020). Global Cancer Observatory: Cancer Today. Lyon, France: International Agency for Research on Cancer. Available from: https://gco.iarc.fr/today, accessed [27 January 2021].

3.4.4.2 Penile cancer mortality

Table 15: Mortality of penile cancer in men by Europe and sub regions (estimates for 2020)

Area	N Cases	Uncertainty intervals of new cancer cases [95% UI]	Crude rate[b]	ASR[b]	Cumulative risk (%) ages 0-74 years[a]	Ranking All men	Ranking Men 15-44 years
Europe	1,938	[1,569.7-2,392.7]	0.54	0.25	0.03	24	26
Eastern Europe	762	[550.6-1,054.6]	0.55	0.33	0.04	26	26
Hungary	22	[14.2-34.2]	0.48	0.25	0.03	25	28
Republic of Moldova	11	[5.80-21]	0.57	0.42	0.05	22	28
Poland	174	[133.5-226.9]	0.95	0.49	0.05	22	20
Romania	58	[43.8-76.8]	0.62	0.32	0.04	23	20
Russian Federation	324	[179.4-585.1]	0.48	0.31	0.04	25	26
Czechia	34	[23.5-49.2]	0.64	0.29	0.03	23	18
Slovakia	16	[9.10-28.1]	0.60	0.34	0.04	26	23
Bulgaria	16	[9.40-27.2]	0.47	0.22	0.02	27	27
Ukraine	89	[66.4-119.3]	0.44	0.27	0.03	26	26
Belarus	18	[10.5-30.8]	0.41	0.23	0.03	25	25
Northern Europe	252	[204.2-311]	0.48	0.21	0.02	25	20
Ireland	11	[5.60-21.6]	0.45	0.23	0.02	24	16
Iceland	0	[0-8.60]	0	0	0	19	7
Lithuania	11	[5.80-20.9]	0.87	0.41	0.04	21	18
Latvia	6	[2.60-13.8]	0.69	0.36	0.05	22	21
Norway	10	[4.90-20.4]	0.36	0.19	0.02	22	20
Sweden	30	[19.2-46.9]	0.59	0.24	0.03	22	27
Estonia	4	[1.20-13.6]	0.64	0.24	0.01	21	15
United Kingdom	150	[117.5-191.5]	0.45	0.19	0.02	25	23
Denmark	20	[11.9-33.6]	0.69	0.27	0.02	21	22
Finland	10	[5-20.1]	0.37	0.15	0.02	25	15
Southern Europe	414	[336-510.1]	0.55	0.21	0.02	25	25
Serbia	36	[24.3-53.4]	0.84	0.42	0.05	23	23
Spain	119	[90.6-156.3]	0.52	0.21	0.02	25	22
Portugal	34	[23.3-49.6]	0.70	0.25	0.02	24	22
Cyprus	1	[0.20-5.30]	0.17	0.13	0.02	22	15
Slovenia	3	[1-8.70]	0.29	0.11	0.02	25	22
Bosnia & Herzegovina	7	[2.70-18]	0.44	0.20	0.02	26	17
Albania	6	[1.40-25.3]	0.41	0.22	0.02	25	28
Croatia	13	[7-24.2]	0.66	0.28	0.03	24	22
Greece	35	[23.7-51.6]	0.68	0.25	0.02	21	24
Italy	144	[109.7-189.1]	0.49	0.17	0.02	25	26
North Macedonia	12	[6-24]	1.15	0.62	0.05	17	27
Montenegro	4	[1.30-12.6]	1.29	0.77	0.05	19	18
Malta	0	[0-9]	0	0	0	23	16
Western Europe	510	[434.2-599.1]	0.53	0.20	0.02	24	25
Luxembourg	0	[0-9.40]	0	0	0	25	9
Switzerland	18	[10.5-31]	0.42	0.17	0.02	24	26
Belgium	20	[12.1-33.1]	0.35	0.15	0.01	25	23
Austria	20	[12.2-32.8]	0.45	0.19	0.02	23	22
France	136	[103.7-178.4]	0.43	0.17	0.02	25	25
Germany	281	[228.3-345.8]	0.68	0.25	0.03	22	20
Netherlands	35	[24.3-50.4]	0.41	0.16	0.02	23	26

Data accessed on 27 Jan 2021

For more detailed methods of estimation please refer to http://gco.iarc.fr/today/data-sources-methods

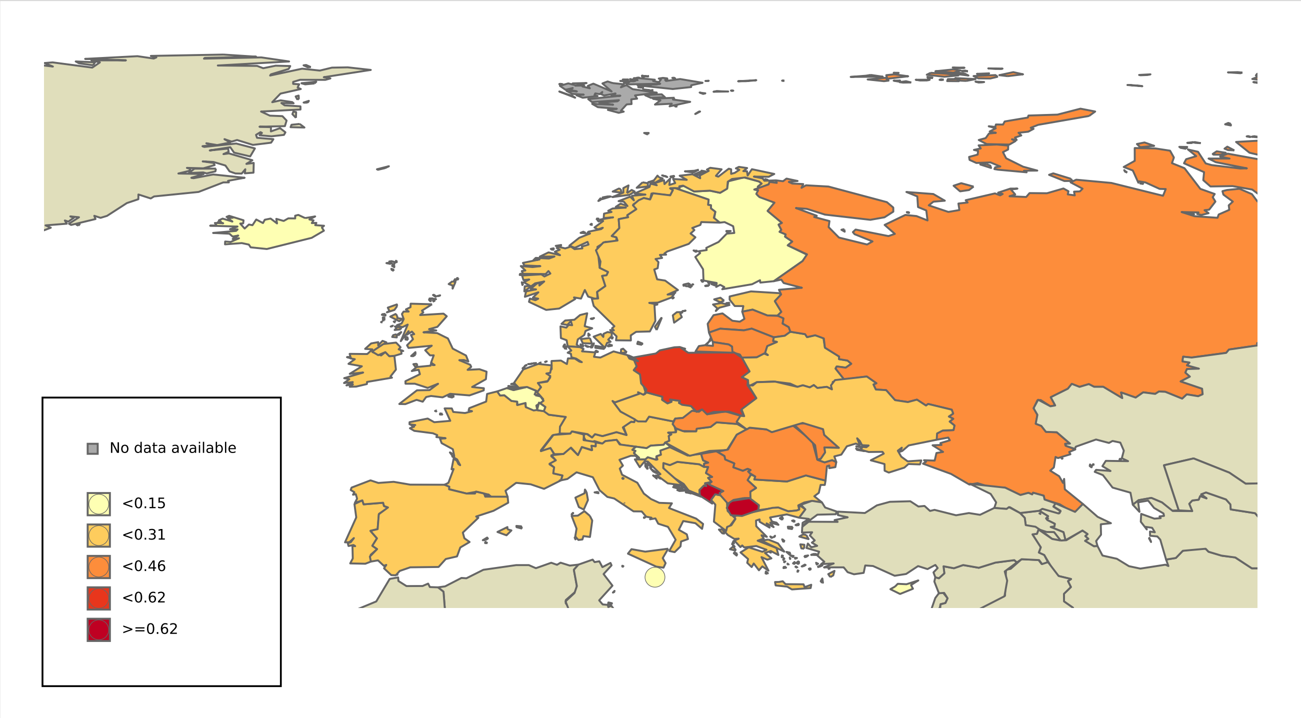
[a] Cumulative risk (mortality) is the probability or risk of individuals dying from the disease during ages 0-74 years. For cancer, it is expressed as the % of new born children who would be expected to die from a particular cancer before the age of 75 if they had the rates of cancer observed in the period in the absence of competing causes.

[b] Rates per 100,000 men per year.

Data Sources:

Ferlay J, Ervik M, Lam F, Colombet M, Mery L, Piñeros M, Znaor A, Soerjomataram I, Bray F (2020). Global Cancer Observatory: Cancer Today. Lyon, France: International Agency for Research on Cancer. Available from: https://gco.iarc.fr/today, accessed [27 January 2021].

Figure 29: Age-standardised mortality rates of penile cancer among men in Europe (estimates for 2020)



Data accessed on 27 Jan 2021

For more detailed methods of estimation please refer to http://gco.iarc.fr/today/data-sources-methods

[a] Rates per 100,000 men per year.

Data Sources:

Ferlay J, Ervik M, Lam F, Colombet M, Mery L, Piñeros M, Znaor A, Soerjomataram I, Bray F (2020). Global Cancer Observatory: Cancer Today. Lyon, France: International Agency for Research on Cancer. Available from: https://gco.iarc.fr/today, accessed [27 January 2021].

3.5 Head and neck cancers

3.5.1 Oropharyngeal cancer

3.5.1.1 Oropharyngeal cancer incidence

Table 16: Incidence of oropharyngeal cancer in women by Europe and sub regions (estimates for 2020)

Area	N Cases	Uncertainty intervals of new cancer cases [95% UI]	Crude rate[b]	ASR[b]	Cumulative risk (%) ages 0-74 years[a]	Ranking	
						All women	Women 15-44 years
Europe	6,717	[6,016.9-7,498.6]	1.73	0.92	0.11	24	23
Eastern Europe	1,891	[1,696.2-2,108.2]	1.22	0.68	0.08	23	22
Hungary	151	[85.4-267]	2.98	1.65	0.21	22	21
Republic of Moldova	8	[2.30-27.3]	0.38	0.21	0.02	26	22
Poland	399	[272.7-583.8]	2.05	1.09	0.14	22	20
Romania	162	[116.5-225.4]	1.64	0.83	0.10	21	24
Russian Federation	767	[679.1-866.3]	0.98	0.58	0.07	23	20
Slovakia	36	[24.4-53.1]	1.29	0.72	0.08	23	30
Bulgaria	23	[14.5-36.5]	0.64	0.31	0.03	27	25
Ukraine	171	[143.3-204.1]	0.73	0.41	0.05	25	23
Belarus	28	[18.6-42.1]	0.55	0.32	0.03	26	23
Czechia	146	[100.6-212]	2.69	1.37	0.17	21	22
Northern Europe	1,090	[990.5-1,199.5]	2.03	1.21	0.15	24	22
Ireland	23	[13.7-38.5]	0.93	0.62	0.07	25	24
Iceland	0	[0-5.80]	0	0	0	28	19
Lithuania	10	[5.10-19.5]	0.68	0.33	0.04	27	21
Latvia	10	[4.70-21.2]	0.98	0.54	0.06	26	20
Norway	42	[30.2-58.5]	1.57	0.93	0.12	23	19
Sweden	111	[79.6-154.7]	2.20	1.31	0.16	23	23
Estonia	4	[1.50-10.5]	0.57	0.39	0.04	27	16
Finland	54	[40.3-72.3]	1.92	0.91	0.11	23	20
United Kingdom	700	[545.3-898.6]	2.04	1.25	0.15	24	22
Denmark	134	[98.7-181.9]	4.60	2.58	0.32	21	18
Southern Europe	770	[546.9-1,084.1]	0.98	0.45	0.06	27	29
Serbia	33	[16.5-66.1]	0.74	0.42	0.05	27	30
Spain	205	[135-311.3]	0.86	0.43	0.06	26	31
Portugal	21	[10.9-40.6]	0.39	0.17	0.02	30	30
Slovenia	18	[10.6-30.4]	1.72	1.00	0.12	23	20
Cyprus	0	[0-10.5]	0	0	0	30	27
Bosnia & Herzegovina	9	[2.30-34.5]	0.54	0.27	0.03	27	23
Albania	12	[3.60-40]	0.85	0.39	0.06	22	28
Croatia	15	[8.50-26.6]	0.71	0.36	0.05	27	25
Greece	21	[9.40-46.7]	0.40	0.15	0.02	28	24
Italy	430	[301.5-613.3]	1.39	0.59	0.08	26	26
North Macedonia	2	[0.20-16.9]	0.19	0.08	0	28	18
Montenegro	4	[1.10-14.6]	1.26	0.64	0.11	27	26
Malta	0	[0-8.50]	0	0	0	27	20
Western Europe	2,966	[2,699.3-3,259.1]	2.97	1.53	0.19	22	25
Luxembourg	2	[0.20-18.9]	0.65	0.41	0.06	26	18
Netherlands	145	[106.4-197.6]	1.69	0.82	0.11	24	28
Switzerland	89	[52.7-150.3]	2.04	0.97	0.12	24	26
France	1,323	[1,018.5-1,718.6]	3.93	2.25	0.27	20	25
Belgium	129	[76.5-217.6]	2.21	1.28	0.15	23	26
Austria	103	[79.4-133.5]	2.26	1.21	0.14	22	19
Germany	1,175	[993.2-1,390.1]	2.77	1.28	0.17	22	27

Data accessed on 27 Jan 2021

For more detailed methods of estimation please refer to http://gco.iarc.fr/today/data-sources-methods

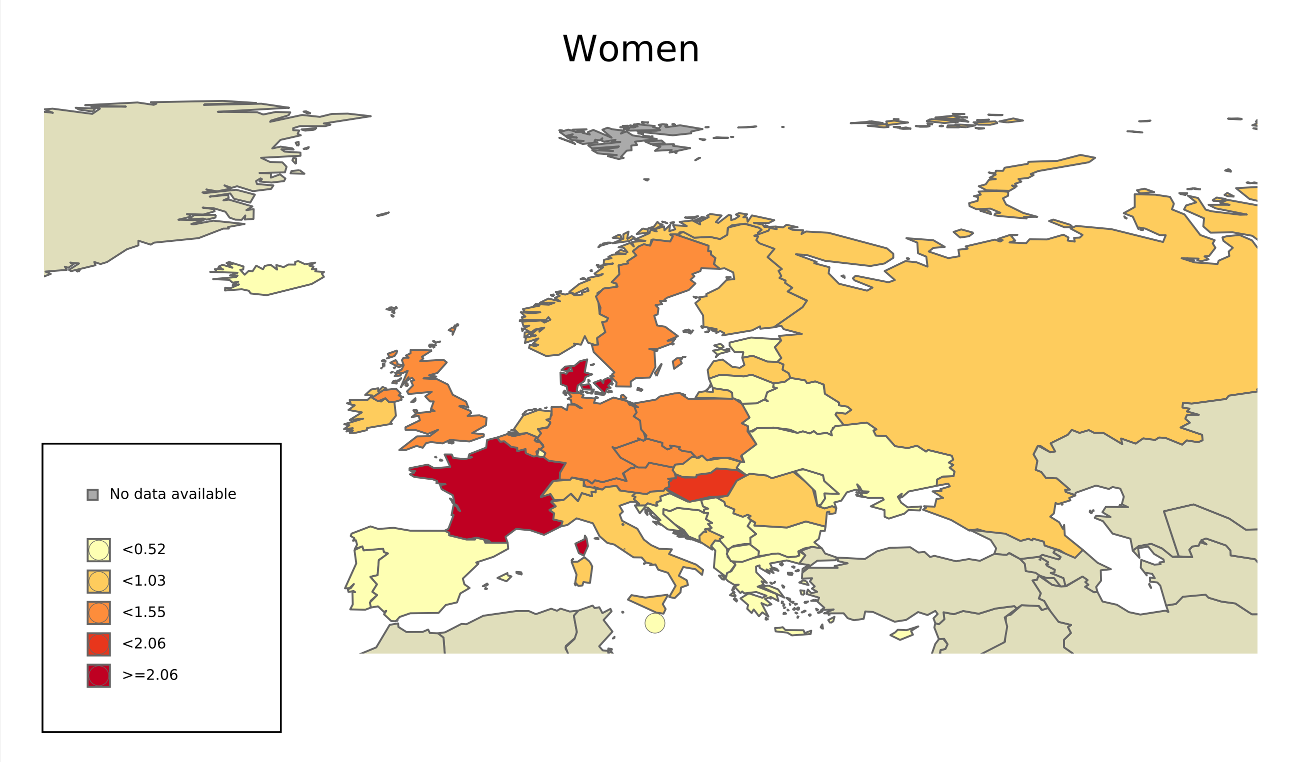
[a] Cumulative risk (incidence) is the probability or risk of individuals getting from the disease during ages 0-74 years. For cancer, it is expressed as the % of new born children who would be expected to develop from a particular cancer before the age of 75 if they had the rates of cancer observed in the period in the absence of competing causes.

[b] Rates per 100,000 women per year.

Data Sources:

Ferlay J, Ervik M, Lam F, Colombet M, Mery L, Piñeros M, Znaor A, Soerjomataram I, Bray F (2020). Global Cancer Observatory: Cancer Today. Lyon, France: International Agency for Research on Cancer. Available from: https://gco.iarc.fr/today, accessed [27 January 2021].

Figure 30: Age-standardised incidence rates of oropharyngeal cancer among women in Europe (estimates for 2020)



Data accessed on 27 Jan 2021

For more detailed methods of estimation please refer to http://gco.iarc.fr/today/data-sources-methods

[a] Rates per 100,000 women per year.

Data Sources:

Ferlay J, Ervik M, Lam F, Colombet M, Mery L, Piñeros M, Znaor A, Soerjomataram I, Bray F (2020). Global Cancer Observatory: Cancer Today. Lyon, France: International Agency for Research on Cancer. Available from: https://gco.iarc.fr/today, accessed [27 January 2021].

Table 17: Incidence of oropharyngeal cancer in men by Europe and sub regions (estimates for 2020)

Area	N Cases	Uncertainty intervals of new cancer cases [95% UI]	Crude rate[b]	ASR[b]	Cumulative risk (%) ages 0-74 years[a]	Ranking	
						All men	Men 15-44 years
Europe	22,522	[21,230.9-23,891.7]	6.23	3.74	0.46	18	14
Eastern Europe	9,200	[8,757.3-9,665]	6.67	4.36	0.54	16	13
Hungary	375	[269.7-521.4]	8.16	4.90	0.63	18	16
Republic of Moldova	186	[136.4-253.6]	9.63	6.92	0.85	11	10
Poland	1,260	[1,075.6-1,476]	6.87	4.13	0.52	17	14
Romania	1,189	[955.8-1,479]	12.7	8.00	0.94	11	7
Russian Federation	3,471	[3,322.5-3,626.1]	5.13	3.50	0.44	17	15
Czechia	378	[300.9-474.9]	7.17	4.00	0.50	17	14
Slovakia	273	[235.7-316.2]	10.3	6.58	0.78	16	13
Bulgaria	114	[87.5-148.6]	3.38	1.93	0.23	18	16
Ukraine	1,422	[1,274.9-1,586]	7.02	4.62	0.58	15	13
Belarus	532	[438.5-645.5]	12.1	7.99	0.97	11	12
Northern Europe	3,342	[3,163-3,531.1]	6.37	4.00	0.48	17	12
Lithuania	70	[50.8-96.5]	5.56	3.27	0.41	18	20
Ireland	75	[56.4-99.7]	3.06	2.09	0.26	18	18
Iceland	8	[3.50-18.4]	4.67	3.18	0.35	17	13
Latvia	39	[27.3-55.8]	4.49	2.70	0.35	18	17
Norway	143	[102.2-200]	5.22	3.18	0.40	18	18
Sweden	334	[272.1-410]	6.60	3.85	0.49	17	17
Estonia	23	[14.8-35.7]	3.66	2.20	0.30	18	26
United Kingdom	2,110	[1,879.5-2,368.8]	6.29	4.08	0.48	19	12
Finland	161	[123.9-209.2]	5.89	3.15	0.39	17	13
Denmark	368	[311.2-435.2]	12.8	7.41	0.91	13	10
Southern Europe	2,941	[2,483.5-3,482.8]	3.92	2.11	0.27	19	21
Croatia	94	[60.9-145]	4.75	2.62	0.34	19	25
Spain	978	[830-1,152.5]	4.26	2.31	0.31	19	27
Serbia	182	[124.9-265.1]	4.25	2.72	0.32	18	21
Portugal	359	[261.3-493.2]	7.44	4.14	0.49	18	17
Slovenia	120	[83.9-171.5]	11.6	6.54	0.78	13	8
Cyprus	6	[1.70-21.1]	0.99	0.70	0.07	24	24
Bosnia & Herzegovina	40	[23.5-68]	2.49	1.42	0.17	21	19
Albania	16	[6.40-40.2]	1.09	0.69	0.08	22	22
Greece	57	[35.3-92.1]	1.11	0.57	0.07	25	25
Italy	1,064	[902.4-1,254.5]	3.61	1.84	0.22	21	20
North Macedonia	13	[5.30-31.9]	1.25	0.77	0.09	20	18
Montenegro	5	[1.80-13.6]	1.61	1.18	0.12	22	16
Malta	5	[1.90-13.2]	2.26	1.18	0.18	22	16
Western Europe	7,039	[6,609-7,497]	7.30	4.06	0.51	17	15
Luxembourg	18	[4-81.5]	5.69	3.53	0.51	20	24
Switzerland	302	[186.2-489.8]	7.03	3.97	0.48	17	10
Germany	2,271	[2,030.8-2,539.6]	5.48	3.00	0.36	18	14
Belgium	383	[322.1-455.5]	6.67	3.77	0.51	18	23
Austria	246	[174.1-347.7]	5.54	3.10	0.39	18	17
France	3,522	[3,036-4,085.7]	11.1	6.48	0.82	16	20
Netherlands	294	[225.5-383.4]	3.44	1.74	0.23	19	25

Data accessed on 27 Jan 2021

For more detailed methods of estimation please refer to http://gco.iarc.fr/today/data-sources-methods

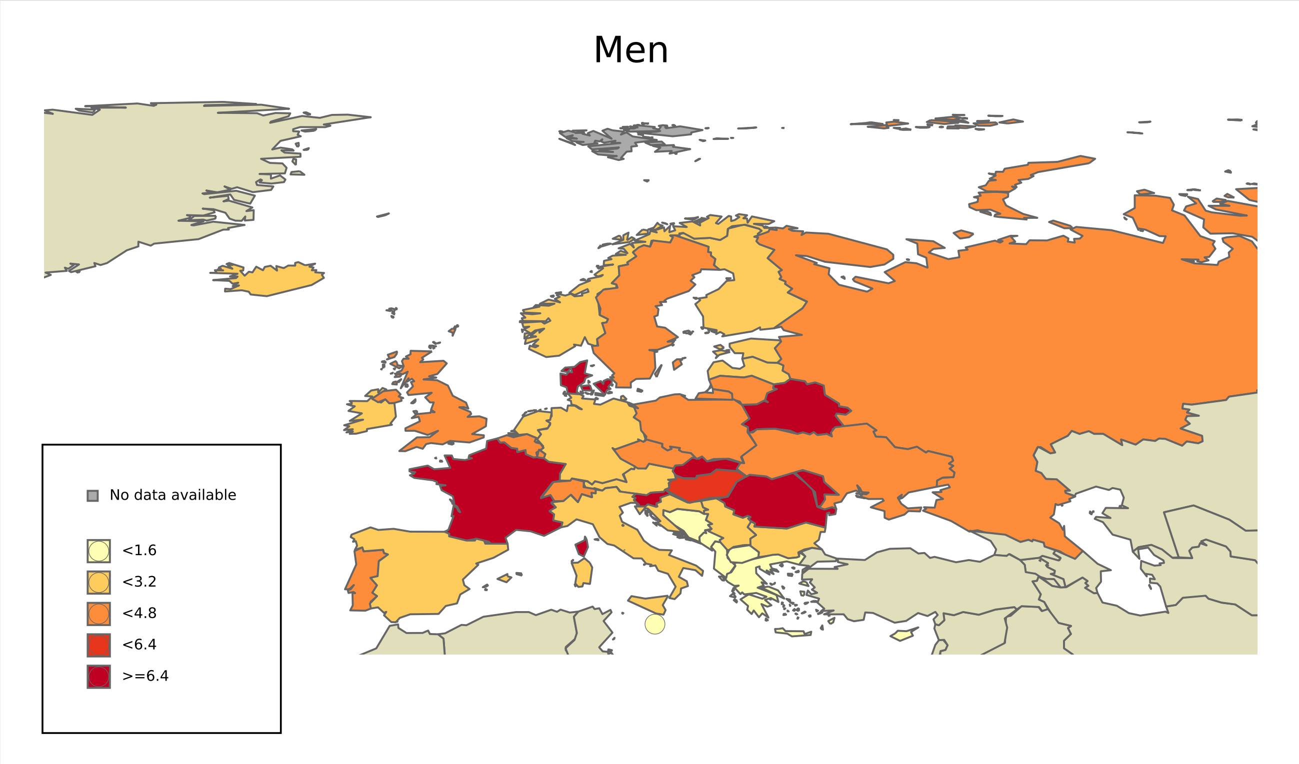
[a] Cumulative risk (incidence) is the probability or risk of individuals getting from the disease during ages 0-74 years. For cancer, it is expressed as the % of new born children who would be expected to develop from a particular cancer before the age of 75 if they had the rates of cancer observed in the period in the absence of competing causes.

[b] Rates per 100,000 men per year.

Data Sources:

Ferlay J, Ervik M, Lam F, Colombet M, Mery L, Piñeros M, Znaor A, Soerjomataram I, Bray F (2020). Global Cancer Observatory: Cancer Today. Lyon, France: International Agency for Research on Cancer. Available from: https://gco.iarc.fr/today, accessed [27 January 2021].

Figure 31: Age-standardised incidence rates of oropharyngeal cancer among men in Europe (estimates for 2020)



Data accessed on 27 Jan 2021

For more detailed methods of estimation please refer to http://gco.iarc.fr/today/data-sources-methods

[a] Rates per 100,000 men per year.

Data Sources:

Ferlay J, Ervik M, Lam F, Colombet M, Mery L, Piñeros M, Znaor A, Soerjomataram I, Bray F (2020). Global Cancer Observatory: Cancer Today. Lyon, France: International Agency for Research on Cancer. Available from: https://gco.iarc.fr/today, accessed [27 January 2021].

3.5.1.2 Oropharyngeal cancer mortality

Table 18: Mortality of oropharyngeal cancer in women by Europe and sub regions (estimates for 2020)

Area	N Cases	Uncertainty intervals of new cancer cases [95% UI]	Crude rate[b]	ASR[b]	Cumulative risk (%) ages 0-74 years[a]	Ranking	
						All women	Women 15-44 years
Europe	2,352	[1,973.5-2,803.1]	0.61	0.28	0.03	24	27
Eastern Europe	710	[506.4-995.5]	0.46	0.23	0.03	26	26
Hungary	54	[35.3-82.5]	1.07	0.56	0.07	23	24
Republic of Moldova	5	[1.90-13.3]	0.24	0.13	0.02	25	28
Poland	147	[109.1-198.1]	0.75	0.36	0.05	25	23
Romania	66	[50.8-85.8]	0.67	0.31	0.04	22	24
Russian Federation	258	[142.9-465.9]	0.33	0.18	0.02	27	29
Slovakia	23	[14.3-36.9]	0.82	0.42	0.05	22	30
Czechia	47	[34-65.1]	0.86	0.39	0.05	23	25
Bulgaria	10	[4.40-22.6]	0.28	0.11	0.01	28	30
Ukraine	83	[60.4-114]	0.35	0.19	0.02	24	20
Belarus	17	[9.80-29.3]	0.34	0.15	0.01	25	18
Northern Europe	328	[279.1-385.5]	0.61	0.30	0.04	24	23
Ireland	11	[5.60-21.6]	0.44	0.22	0.03	22	15
Iceland	0	[0-8.60]	0	0	0	30	19
Lithuania	9	[4.60-17.4]	0.62	0.32	0.04	23	20
Latvia	3	[1-8.90]	0.30	0.18	0.02	26	15
Norway	6	[2.70-13.5]	0.22	0.10	0.01	26	23
Sweden	17	[9.80-29.5]	0.34	0.14	0.02	25	23
Estonia	3	[1-9]	0.43	0.23	0.03	22	16
United Kingdom	236	[192.5-289.4]	0.69	0.35	0.04	24	20
Finland	10	[5-19.9]	0.36	0.12	0.01	26	31
Denmark	33	[22.4-48.6]	1.13	0.56	0.07	20	29
Southern Europe	393	[323.5-477.5]	0.50	0.19	0.02	25	29
Croatia	12	[6.60-21.9]	0.56	0.21	0.03	23	27
Portugal	17	[10-28.9]	0.32	0.11	0.01	27	31
Spain	97	[70.6-133.2]	0.41	0.18	0.02	25	26
Serbia	17	[9.70-29.9]	0.38	0.17	0.02	27	30
Cyprus	0	[0-10.6]	0	0	0	28	13
Slovenia	7	[3.40-14.6]	0.67	0.24	0.03	23	30
Bosnia & Herzegovina	4	[1.30-12.5]	0.24	0.07	0.01	28	21
Albania	8	[2.70-23.6]	0.57	0.24	0.03	20	24
Greece	12	[6.10-23.4]	0.23	0.07	0.01	27	27
Italy	215	[164.7-280.7]	0.69	0.25	0.03	24	22
North Macedonia	1	[0.20-6]	0.10	0.03	0	27	18
Montenegro	3	[0.90-10.2]	0.94	0.53	0.08	23	26
Malta	0	[0-9]	0	0	0	30	28
Western Europe	921	[817-1,038.3]	0.92	0.40	0.05	22	22
Luxembourg	1	[0.20-6.70]	0.32	0.22	0.04	20	13
Netherlands	63	[47.5-83.6]	0.73	0.32	0.04	23	28
Switzerland	29	[19.2-43.9]	0.66	0.28	0.03	24	23
France	277	[226.6-338.6]	0.82	0.41	0.05	22	18
Germany	468	[404-542.1]	1.10	0.44	0.05	22	28
Belgium	47	[33.2-66.5]	0.80	0.29	0.04	21	27
Austria	36	[24.8-52.2]	0.79	0.31	0.04	22	28

Data accessed on 27 Jan 2021

For more detailed methods of estimation please refer to http://gco.iarc.fr/today/data-sources-methods

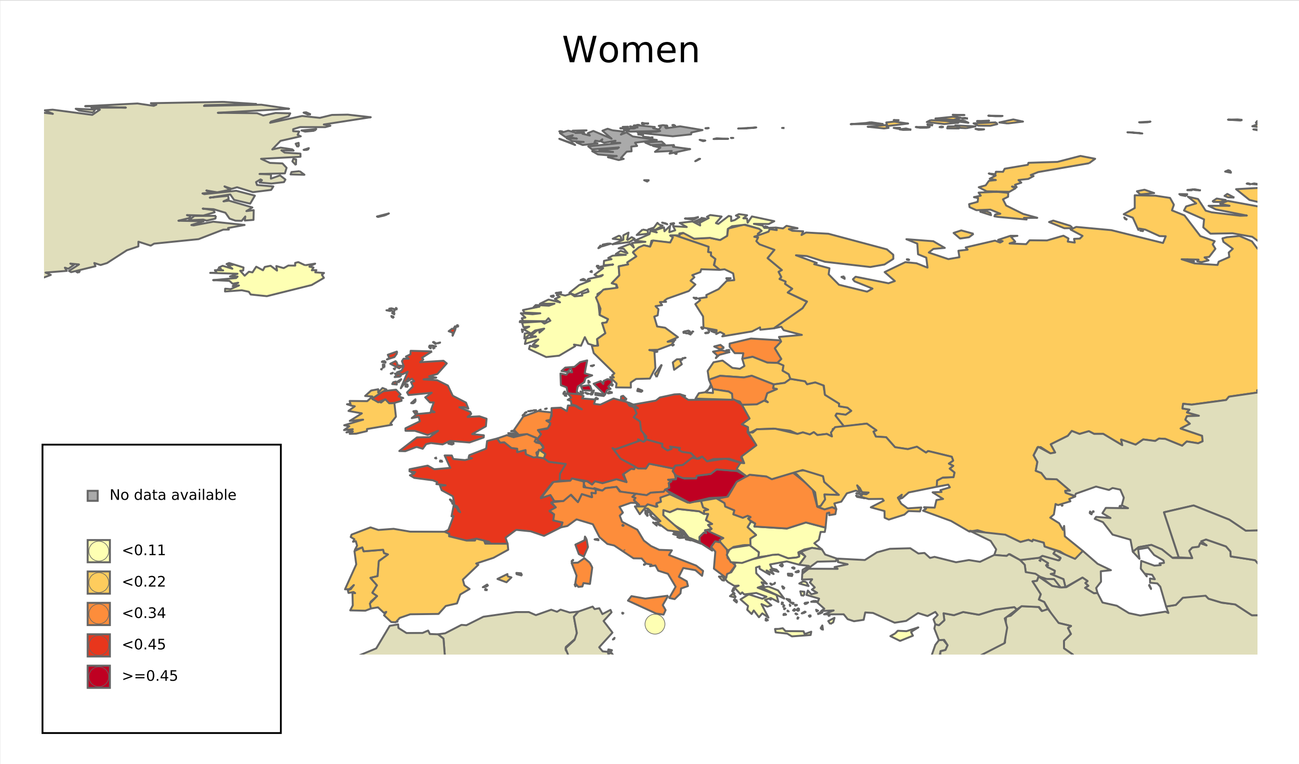
[a] Cumulative risk (mortality) is the probability or risk of individuals dying from the disease during ages 0-74 years. For cancer, it is expressed as the % of new born children who would be expected to die from a particular cancer before the age of 75 if they had the rates of cancer observed in the period in the absence of competing causes.

[b] Rates per 100,000 women per year.

Data Sources:

Ferlay J, Ervik M, Lam F, Colombet M, Mery L, Piñeros M, Znaor A, Soerjomataram I, Bray F (2020). Global Cancer Observatory: Cancer Today. Lyon, France: International Agency for Research on Cancer. Available from: https://gco.iarc.fr/today, accessed [27 January 2021].

Figure 32: Age-standardised mortality rates of oropharyngeal cancer among women in Europe (estimates for 2020)



Data accessed on 27 Jan 2021
For more detailed methods of estimation please refer to http://gco.iarc.fr/today/data-sources-methods
[a] Rates per 100,000 women per year.
Data Sources:
Ferlay J, Ervik M, Lam F, Colombet M, Mery L, Piñeros M, Znaor A, Soerjomataram I, Bray F (2020). Global Cancer Observatory: Cancer Today. Lyon, France: International Agency for Research on Cancer. Available from: https://gco.iarc.fr/today, accessed [27 January 2021].

Table 19: Mortality of oropharyngeal cancer in men by Europe and sub regions (estimates for 2020)

Area	N Cases	Uncertainty intervals of new cancer cases [95% UI]	Crude rate[b]	ASR[b]	Cumulative risk (%) ages 0-74 years[a]	Ranking	
						All men	Men 15-44 years
Europe	10,793	[9,874-11,797.5]	2.98	1.70	0.21	17	15
Eastern Europe	4,925	[4,330.6-5,601]	3.57	2.31	0.29	15	15
Hungary	221	[172.9-282.4]	4.81	2.83	0.37	16	12
Republic of Moldova	136	[108.2-170.9]	7.04	5.03	0.63	10	11
Poland	686	[606-776.6]	3.74	2.16	0.27	17	15
Romania	681	[577-803.8]	7.28	4.45	0.54	12	9
Russian Federation	1,695	[1,321.3-2,174.5]	2.51	1.69	0.22	17	16
Slovakia	201	[157.7-256.2]	7.56	4.76	0.58	13	3
Bulgaria	84	[54.1-130.5]	2.49	1.41	0.18	16	16
Ukraine	793	[701-897.1]	3.91	2.58	0.32	15	16
Belarus	259	[224.1-299.3]	5.89	3.88	0.49	13	10
Czechia	169	[132.6-215.4]	3.21	1.82	0.22	17	9
Northern Europe	1,154	[1,055.9-1,261.2]	2.20	1.16	0.15	18	15
Ireland	45	[31-65.3]	1.84	1.12	0.14	17	25
Iceland	0	[0-8.60]	0	0	0	25	9
Lithuania	62	[47.8-80.4]	4.92	2.88	0.37	16	13
Latvia	37	[25.7-53.3]	4.26	2.40	0.30	16	13
Norway	31	[20.6-46.5]	1.13	0.58	0.08	18	28
Sweden	60	[45.4-79.3]	1.19	0.58	0.08	17	21
Finland	29	[19.3-43.5]	1.06	0.52	0.07	18	18
Estonia	19	[11.8-30.7]	3.02	1.74	0.23	18	22
United Kingdom	768	[685.9-859.9]	2.29	1.21	0.15	17	15
Denmark	100	[63.7-157]	3.47	1.69	0.22	16	14
Southern Europe	1,605	[1,446-1,781.5]	2.14	1.07	0.13	18	16
Portugal	201	[157.5-256.5]	4.17	2.15	0.26	16	18
Spain	506	[446.7-573.2]	2.20	1.13	0.14	17	17
Serbia	116	[87.2-154.3]	2.71	1.62	0.20	17	19
Cyprus	1	[0.20-6.50]	0.17	0.11	0.01	24	18
Slovenia	60	[45.7-78.8]	5.80	3.06	0.37	15	5
Bosnia & Herzegovina	24	[15.4-37.4]	1.49	0.80	0.11	19	18
Albania	13	[5.70-29.7]	0.89	0.53	0.06	17	20
Croatia	88	[55.2-140.3]	4.45	2.22	0.26	17	10
Greece	34	[22.7-50.8]	0.66	0.31	0.04	22	25
Italy	547	[483.3-619.1]	1.86	0.85	0.10	18	15
North Macedonia	9	[4.30-18.9]	0.86	0.52	0.07	18	18
Montenegro	4	[1.30-12.6]	1.29	0.66	0.05	20	21
Malta	2	[0.50-7.80]	0.90	0.55	0.07	18	4
Western Europe	3,109	[2,911.8-3,319.6]	3.23	1.64	0.21	17	15
Luxembourg	2	[0.60-7.20]	0.63	0.45	0.06	19	8
Netherlands	124	[90.8-169.3]	1.45	0.70	0.09	18	18
Switzerland	92	[64-132.3]	2.14	1.08	0.14	17	15
France	983	[877.1-1,101.6]	3.11	1.70	0.21	16	14
Germany	1,645	[1,515-1,786.1]	3.97	1.90	0.24	15	14
Belgium	124	[78.1-196.9]	2.16	1.23	0.16	18	17
Austria	139	[109.4-176.6]	3.13	1.67	0.21	16	11

Data accessed on 27 Jan 2021

For more detailed methods of estimation please refer to http://gco.iarc.fr/today/data-sources-methods

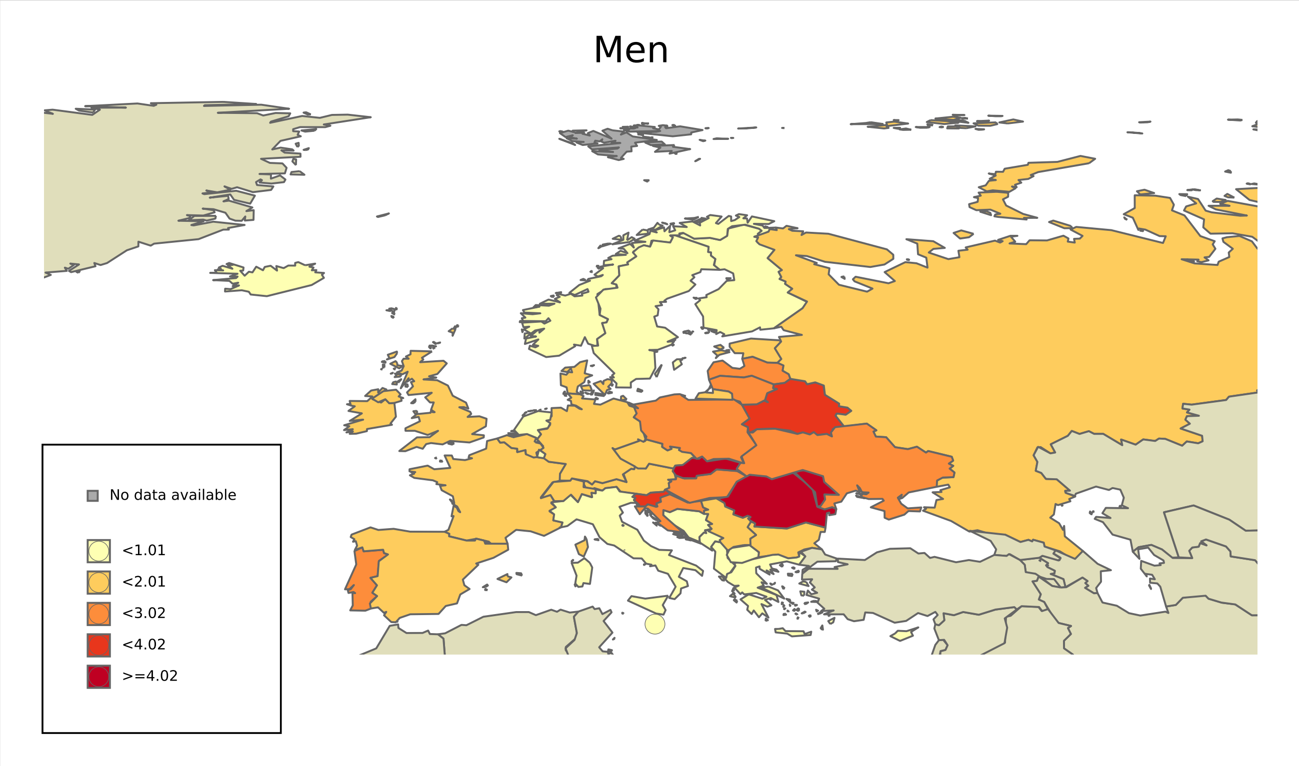
[a] Cumulative risk (mortality) is the probability or risk of individuals dying from the disease during ages 0-74 years. For cancer, it is expressed as the % of new born children who would be expected to die from a particular cancer before the age of 75 if they had the rates of cancer observed in the period in the absence of competing causes.

[b] Rates per 100,000 men per year.

Data Sources:

Ferlay J, Ervik M, Lam F, Colombet M, Mery L, Piñeros M, Znaor A, Soerjomataram I, Bray F (2020). Global Cancer Observatory: Cancer Today. Lyon, France: International Agency for Research on Cancer. Available from: https://gco.iarc.fr/today, accessed [27 January 2021].

Figure 33: Age-standardised mortality rates of oropharyngeal cancer among men in Europe (estimates for 2020)



Data accessed on 27 Jan 2021

For more detailed methods of estimation please refer to http://gco.iarc.fr/today/data-sources-methods

[a] Rates per 100,000 men per year.

Data Sources:

Ferlay J, Ervik M, Lam F, Colombet M, Mery L, Piñeros M, Znaor A, Soerjomataram I, Bray F (2020). Global Cancer Observatory: Cancer Today. Lyon, France: International Agency for Research on Cancer. Available from: https://gco.iarc.fr/today, accessed [27 January 2021].

3.5.2 Oral cavity cancer

3.5.2.1 Oral cavity cancer incidence

Table 20: Incidence of oral cancer in women by Europe and sub regions (estimates for 2020)

Area	N Cases	Uncertainty intervals of new cancer cases [95% UI]	Crude rate[b]	ASR[b]	Cumulative risk (%) ages 0-74 years[a]	Ranking	
						All women	Women 15-44 years
Europe	20,760	[19,532.1-22,065.1]	5.36	2.38	0.27	18	15
Eastern Europe	6,199	[5,864-6,553.2]	3.99	1.87	0.21	17	15
Hungary	361	[262.3-496.8]	7.13	3.33	0.39	15	17
Republic of Moldova	32	[14.9-68.8]	1.52	0.76	0.08	19	18
Poland	1,304	[1,063.4-1,599.1]	6.68	2.83	0.33	16	14
Romania	322	[222.9-465.1]	3.26	1.29	0.14	19	21
Russian Federation	2,820	[2,680.5-2,966.7]	3.60	1.83	0.21	18	15
Slovakia	113	[89.8-142.2]	4.03	1.88	0.21	19	17
Bulgaria	138	[100.8-188.9]	3.86	1.71	0.20	17	17
Ukraine	649	[545.1-772.6]	2.77	1.20	0.14	17	17
Belarus	141	[104-191.1]	2.79	1.15	0.13	19	21
Czechia	319	[250-407.1]	5.87	2.78	0.33	17	15
Northern Europe	3,457	[3,283.5-3,639.7]	6.43	3.10	0.36	19	15
Ireland	115	[76.1-173.8]	4.63	2.63	0.31	19	15
Iceland	5	[2-12.4]	2.94	1.12	0.13	19	17
Lithuania	49	[35.6-67.5]	3.35	1.42	0.16	19	17
Latvia	35	[24-51.1]	3.44	1.31	0.15	19	17
Norway	156	[107.5-226.4]	5.82	2.59	0.29	17	14
Sweden	331	[277.3-395.1]	6.57	2.76	0.31	15	14
Estonia	29	[18.6-45.3]	4.15	1.74	0.21	18	15
United Kingdom	2,386	[2,111.4-2,696.4]	6.95	3.50	0.41	18	14
Denmark	166	[128.4-214.6]	5.70	2.81	0.34	18	19
Finland	176	[141.9-218.3]	6.27	2.23	0.26	18	16
Southern Europe	4,461	[3,852.4-5,165.7]	5.69	2.08	0.23	18	17
Spain	1,779	[1,424.4-2,221.8]	7.48	2.65	0.29	16	17
Serbia	221	[156.8-311.5]	4.96	2.43	0.27	18	16
Portugal	299	[184-485.8]	5.57	1.87	0.19	18	15
Cyprus	13	[6.30-26.9]	2.15	1.03	0.10	20	17
Slovenia	44	[31.2-62]	4.22	1.90	0.21	20	16
Bosnia & Herzegovina	57	[28-116]	3.40	1.56	0.18	18	18
Albania	48	[23.5-98]	3.40	1.57	0.20	15	26
Croatia	89	[61.2-129.3]	4.19	1.72	0.20	20	18
Greece	202	[146.4-278.8]	3.81	1.15	0.11	18	18
Italy	1,669	[1,417.4-1,965.2]	5.38	1.98	0.23	18	18
North Macedonia	14	[4.40-44.1]	1.34	0.59	0.07	20	16
Montenegro	15	[7.40-30.5]	4.72	2.08	0.23	17	15
Malta	10	[5.20-19.4]	4.54	1.45	0.17	19	31
Western Europe	6,643	[6,249.6-7,061.2]	6.66	3.06	0.36	18	17
Luxembourg	10	[1.80-54.3]	3.23	1.68	0.18	20	13
Netherlands	673	[537.2-843.1]	7.83	3.40	0.40	15	16
Switzerland	224	[160.9-311.9]	5.14	2.08	0.26	18	31
France	2,333	[1,851.5-2,939.7]	6.93	3.40	0.38	18	14
Belgium	352	[291.9-424.5]	6.02	3.17	0.37	17	14
Austria	196	[150.2-255.8]	4.29	2.10	0.24	18	15
Germany	2,855	[2,363.1-3,449.3]	6.74	2.93	0.36	19	19

Data accessed on 27 Jan 2021

For more detailed methods of estimation please refer to http://gco.iarc.fr/today/data-sources-methods

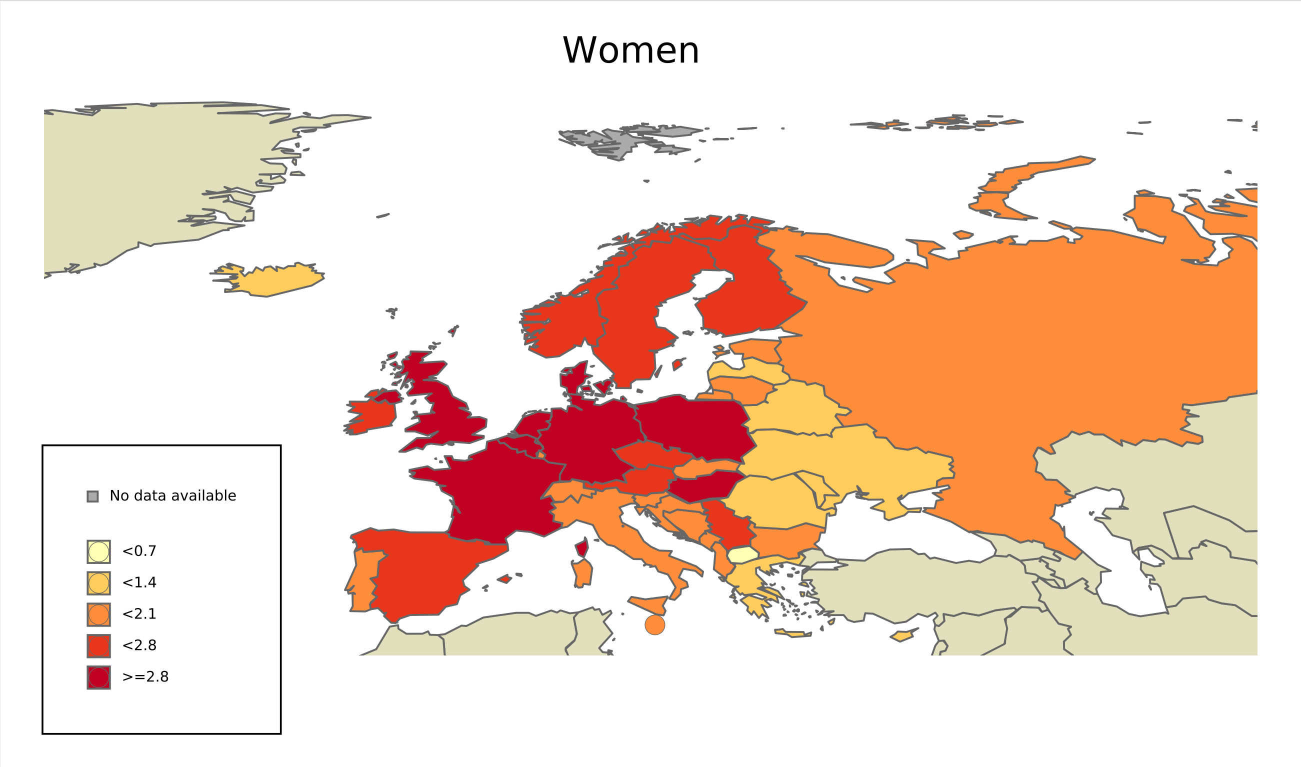
[a] Cumulative risk (incidence) is the probability or risk of individuals getting from the disease during ages 0-74 years. For cancer, it is expressed as the % of new born children who would be expected to develop from a particular cancer before the age of 75 if they had the rates of cancer observed in the period in the absence of competing causes.

[b] Rates per 100,000 women per year.

Data Sources:

Ferlay J, Ervik M, Lam F, Colombet M, Mery L, Piñeros M, Znaor A, Soerjomataram I, Bray F (2020). Global Cancer Observatory: Cancer Today. Lyon, France: International Agency for Research on Cancer. Available from: https://gco.iarc.fr/today, accessed [27 January 2021].

Figure 34: Age-standardised incidence rates of oral cancer among women in Europe (estimates for 2020)



Data accessed on 27 Jan 2021

For more detailed methods of estimation please refer to http://gco.iarc.fr/today/data-sources-methods

[a] Rates per 100,000 women per year.

Data Sources:

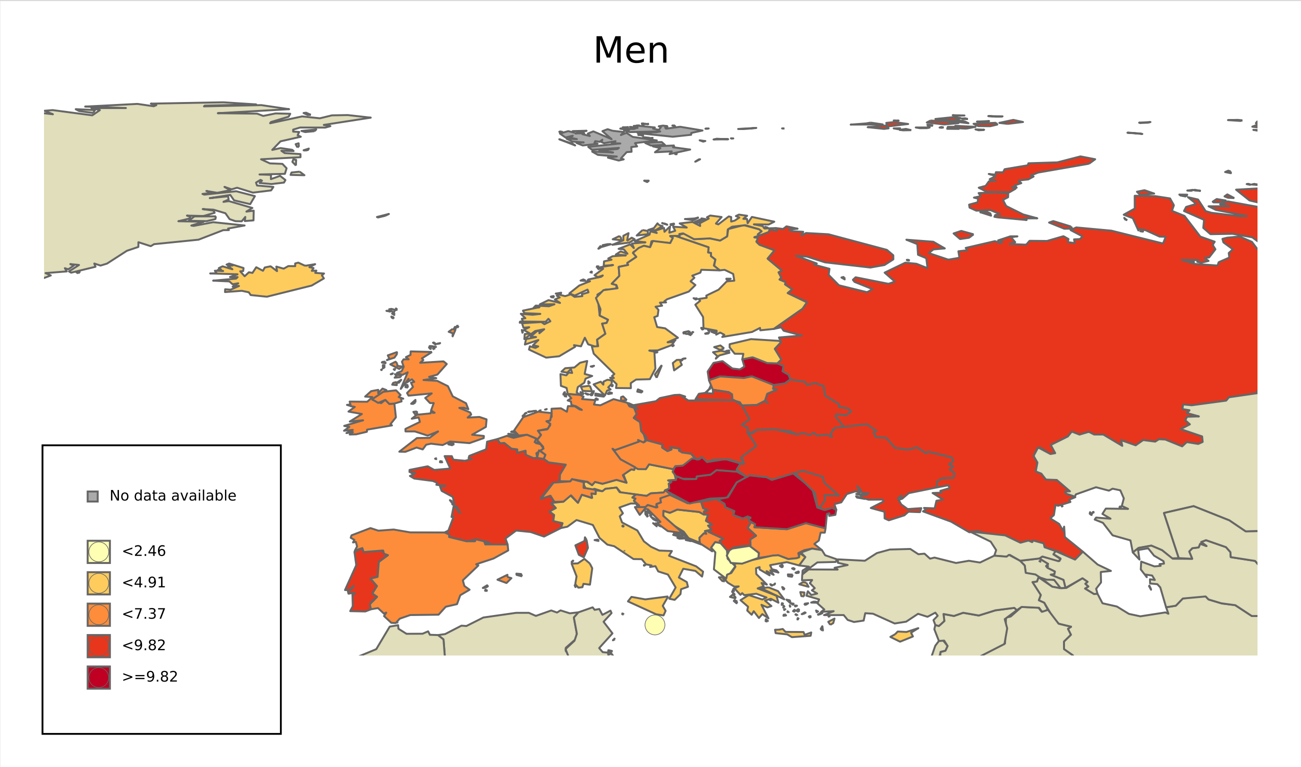
Ferlay J, Ervik M, Lam F, Colombet M, Mery L, Piñeros M, Znaor A, Soerjomataram I, Bray F (2020). Global Cancer Observatory: Cancer Today. Lyon, France: International Agency for Research on Cancer. Available from: https://gco.iarc.fr/today, accessed [27 January 2021].

Table 21: Incidence of oral cancer in men by Europe and sub regions (estimates for 2020)

Area	N Cases	Uncertainty intervals of new cancer cases [95% UI]	Crude rate[b]	ASR[b]	Cumulative risk (%) ages 0-74 years[a]	Ranking	
						All men	Men 15-44 years
Europe	44,519	[42,859.3-46,243]	12.3	7.03	0.85	12	11
Eastern Europe	19,884	[19,288.1-20,498.3]	14.4	9.22	1.12	8	11
Hungary	792	[667.3-940]	17.2	9.93	1.24	8	11
Republic of Moldova	245	[181.9-330.1]	12.7	9.18	1.11	9	13
Poland	2,985	[2,605.8-3,419.3]	16.3	9.57	1.14	7	6
Romania	1,607	[1,409.1-1,832.7]	17.2	10.0	1.21	10	9
Russian Federation	9,582	[9,340.7-9,829.6]	14.2	9.58	1.18	8	8
Slovakia	466	[415.6-522.6]	17.5	10.9	1.30	8	7
Bulgaria	317	[263.8-380.9]	9.40	5.01	0.60	12	11
Ukraine	2,773	[2,544.3-3,022.3]	13.7	8.90	1.08	8	10
Belarus	545	[457.6-649.2]	12.4	8.16	0.98	9	13
Czechia	572	[483-677.4]	10.8	5.98	0.73	12	10
Northern Europe	5,582	[5,371.5-5,800.8]	10.6	6.01	0.72	13	11
Ireland	202	[137.7-296.3]	8.24	5.32	0.63	15	11
Iceland	8	[3.80-16.7]	4.67	2.49	0.27	19	15
Lithuania	144	[97.6-212.4]	11.4	6.55	0.79	15	15
Latvia	183	[113.5-295.1]	21.1	12.3	1.54	8	8
Norway	235	[194.4-284.1]	8.58	4.48	0.54	16	14
Sweden	356	[303-418.3]	7.04	3.41	0.40	16	12
Estonia	53	[29.9-94.1]	8.43	4.76	0.58	15	16
United Kingdom	3,931	[3,724.9-4,148.5]	11.7	6.77	0.81	13	11
Denmark	238	[182.9-309.8]	8.27	4.33	0.55	17	14
Finland	214	[170.8-268.1]	7.83	3.76	0.44	15	11
Southern Europe	7,926	[7,158.6-8,775.6]	10.6	5.18	0.61	14	11
Serbia	642	[477.7-862.8]	15.0	7.90	0.93	9	12
Portugal	804	[590.8-1,094.2]	16.7	9.08	1.02	11	4
Spain	3,035	[2,574.3-3,578.2]	13.2	6.55	0.80	11	10
Cyprus	23	[13.2-40]	3.81	2.56	0.29	17	12
Slovenia	114	[84.6-153.6]	11.0	5.85	0.69	14	11
Bosnia & Herzegovina	141	[98.5-201.7]	8.78	4.78	0.57	12	14
Albania	58	[31.9-105.5]	3.96	2.11	0.22	13	15
Croatia	250	[188.2-332]	12.6	6.90	0.83	14	13
Greece	401	[280.6-573]	7.84	3.84	0.46	15	12
Italy	2,368	[2,051.8-2,733]	8.04	3.63	0.42	17	12
North Macedonia	38	[20.5-70.4]	3.65	2.15	0.26	15	16
Montenegro	35	[23.2-52.7]	11.3	6.91	0.81	11	17
Malta	9	[4.20-19.3]	4.06	1.80	0.29	19	20
Western Europe	11,127	[10,646.6-11,629.1]	11.5	6.20	0.76	13	12
Luxembourg	35	[10.9-112.1]	11.1	6.71	0.84	12	26
Netherlands	885	[788.3-993.6]	10.4	5.23	0.63	13	12
Switzerland	471	[318.6-696.3]	11.0	5.69	0.70	13	11
France	4,244	[3,724.8-4,835.5]	13.4	7.49	0.93	12	12
Germany	4,478	[4,183.1-4,793.7]	10.8	5.71	0.68	14	11
Belgium	640	[554.2-739]	11.1	6.16	0.80	14	14
Austria	369	[297.2-458.2]	8.31	4.72	0.56	14	11

Data accessed on 27 Jan 2021
For more detailed methods of estimation please refer to http://gco.iarc.fr/today/data-sources-methods
[a] Cumulative risk (incidence) is the probability or risk of individuals getting from the disease during ages 0-74 years. For cancer, it is expressed as the % of new born children who would be expected to develop from a particular cancer before the age of 75 if they had the rates of cancer observed in the period in the absence of competing causes.
[b] Rates per 100,000 men per year.
Data Sources:
Ferlay J, Ervik M, Lam F, Colombet M, Mery L, Piñeros M, Znaor A, Soerjomataram I, Bray F (2020). Global Cancer Observatory: Cancer Today. Lyon, France: International Agency for Research on Cancer. Available from: https://gco.iarc.fr/today, accessed [27 January 2021].

Figure 35: Age-standardised incidence rates of oral cancer among men in Europe (estimates for 2020)



Data accessed on 27 Jan 2021

For more detailed methods of estimation please refer to http://gco.iarc.fr/today/data-sources-methods

[a] Rates per 100,000 men per year.

Data Sources:

Ferlay J, Ervik M, Lam F, Colombet M, Mery L, Piñeros M, Znaor A, Soerjomataram I, Bray F (2020). Global Cancer Observatory: Cancer Today. Lyon, France: International Agency for Research on Cancer. Available from: https://gco.iarc.fr/today, accessed [27 January 2021].

3.5.2.2 Oral cavity cancer mortality

Table 22: Mortality of oral cancer in women by Europe and sub regions (estimates for 2020)

Area	N Cases	Uncertainty intervals of new cancer cases [95% UI]	Crude rate[b]	ASR[b]	Cumulative risk (%) ages 0-74 years[a]	Ranking All women	Ranking Women 15-44 years
Europe	6,930	[6,194.8-7,752.4]	1.79	0.70	0.08	18	16
Eastern Europe	2,729	[2,286.3-3,257.5]	1.76	0.82	0.09	18	15
Hungary	134	[105.7-169.9]	2.65	1.26	0.15	18	17
Republic of Moldova	14	[7.70-25.6]	0.67	0.34	0.04	20	16
Poland	542	[461.9-636]	2.78	1.13	0.13	18	16
Romania	117	[88.5-154.7]	1.18	0.47	0.05	19	19
Russian Federation	1,352	[1,042.4-1,753.5]	1.73	0.86	0.10	17	15
Slovakia	46	[32.3-65.4]	1.64	0.80	0.09	19	12
Bulgaria	40	[27.9-57.3]	1.12	0.48	0.05	19	16
Ukraine	263	[215.8-320.6]	1.12	0.51	0.06	19	16
Belarus	87	[68.2-110.9]	1.72	0.78	0.09	17	14
Czechia	134	[97.2-184.7]	2.46	1.07	0.12	18	10
Northern Europe	1,004	[910.7-1,106.9]	1.87	0.72	0.08	18	14
Lithuania	28	[18.9-41.6]	1.91	0.76	0.09	18	18
Ireland	28	[18.5-42.4]	1.13	0.53	0.06	19	11
Iceland	2	[0.60-7]	1.18	0.32	0	18	17
Latvia	18	[11.1-29.1]	1.77	0.68	0.08	20	13
Norway	37	[25.9-52.9]	1.38	0.46	0.04	18	13
Sweden	107	[74.4-154]	2.12	0.72	0.09	18	15
Finland	68	[52-89]	2.42	0.80	0.08	16	8
Estonia	8	[4.30-14.9]	1.15	0.37	0.05	21	18
United Kingdom	656	[583.6-737.4]	1.91	0.76	0.08	18	14
Denmark	51	[37-70.2]	1.75	0.72	0.08	18	15
Southern Europe	1,483	[1,340.4-1,640.8]	1.89	0.56	0.06	17	16
Serbia	72	[54.5-95.1]	1.62	0.73	0.08	19	18
Croatia	31	[20.9-45.9]	1.46	0.55	0.06	20	14
Spain	479	[404.6-567.1]	2.01	0.64	0.07	17	16
Portugal	92	[63.4-133.5]	1.71	0.50	0.05	17	15
Slovenia	14	[7.60-25.8]	1.34	0.45	0.05	20	28
Cyprus	4	[1.10-14.2]	0.66	0.24	0.02	20	19
Bosnia & Herzegovina	16	[8.80-29]	0.96	0.37	0.04	22	20
Albania	18	[9.50-34.2]	1.27	0.57	0.06	14	23
Greece	76	[58-99.5]	1.43	0.37	0.03	18	17
Italy	653	[577.6-738.3]	2.10	0.55	0.06	17	15
North Macedonia	6	[2.30-15.6]	0.58	0.25	0.03	22	16
Montenegro	14	[7.30-26.7]	4.41	1.61	0.14	12	24
Malta	8	[3.50-18.2]	3.63	1.06	0.10	14	26
Western Europe	1,714	[1,563.2-1,879.3]	1.72	0.59	0.07	19	18
Luxembourg	2	[0.50-8.30]	0.65	0.41	0.07	18	31
Netherlands	156	[121.9-199.6]	1.81	0.61	0.07	18	27
Switzerland	71	[54.6-92.2]	1.63	0.57	0.07	18	31
France	534	[447.2-637.6]	1.59	0.58	0.07	18	15
Belgium	109	[79.2-150.1]	1.86	0.77	0.09	18	13
Austria	79	[53.4-116.9]	1.73	0.64	0.07	18	14
Germany	763	[689.3-844.6]	1.80	0.57	0.07	19	22

Data accessed on 27 Jan 2021

For more detailed methods of estimation please refer to http://gco.iarc.fr/today/data-sources-methods

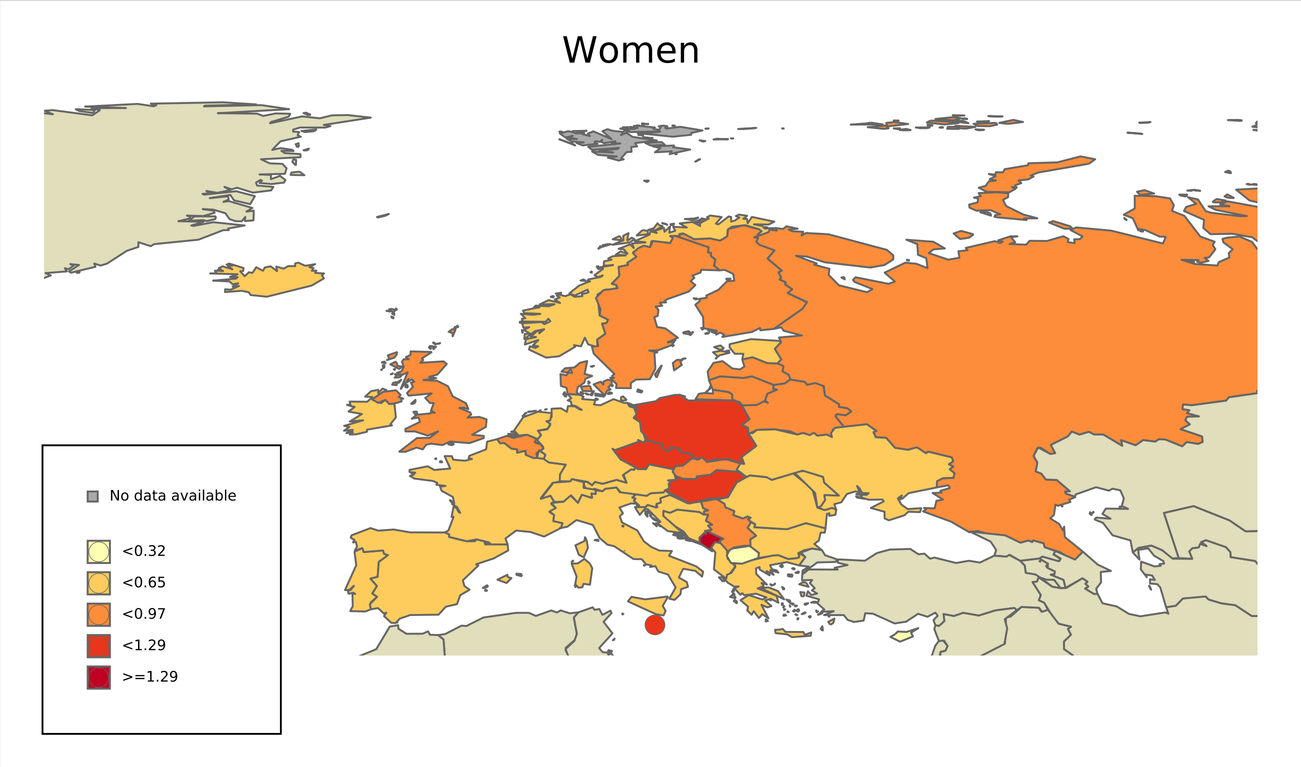
[a] Cumulative risk (mortality) is the probability or risk of individuals dying from the disease during ages 0-74 years. For cancer, it is expressed as the % of new born children who would be expected to die from a particular cancer before the age of 75 if they had the rates of cancer observed in the period in the absence of competing causes.

[b] Rates per 100,000 women per year.

Data Sources:

Ferlay J, Ervik M, Lam F, Colombet M, Mery L, Piñeros M, Znaor A, Soerjomataram I, Bray F (2020). Global Cancer Observatory: Cancer Today. Lyon, France: International Agency for Research on Cancer. Available from: https://gco.iarc.fr/today, accessed [27 January 2021].

Figure 36: Age-standardised mortality rates of oral cancer among women in Europe (estimates for 2020)



Data accessed on 27 Jan 2021

For more detailed methods of estimation please refer to http://gco.iarc.fr/today/data-sources-methods

[a] Rates per 100,000 women per year.

Data Sources:

Ferlay J, Ervik M, Lam F, Colombet M, Mery L, Piñeros M, Znaor A, Soerjomataram I, Bray F (2020). Global Cancer Observatory: Cancer Today. Lyon, France: International Agency for Research on Cancer. Available from: https://gco.iarc.fr/today, accessed [27 January 2021].

Table 23: Mortality of oral cancer in men by Europe and sub regions (estimates for 2020)

Area	N Cases	Uncertainty intervals of new cancer cases [95% UI]	Crude rate[b]	ASR[b]	Cumulative risk (%) ages 0-74 years[a]	Ranking	
						All men	Men 15-44 years
Europe	17,645	[16,366.6-19,023.3]	4.88	2.73	0.33	13	10
Eastern Europe	9,761	[8,900.6-10,704.5]	7.08	4.54	0.56	11	7
Hungary	430	[378.5-488.4]	9.35	5.49	0.69	11	11
Republic of Moldova	155	[124.5-193]	8.02	5.76	0.70	9	10
Poland	1,509	[1,356.6-1,678.5]	8.23	4.80	0.57	11	9
Romania	784	[709.5-866.3]	8.38	4.92	0.59	10	10
Russian Federation	4,385	[3,752-5,124.8]	6.48	4.38	0.55	10	8
Czechia	227	[181.1-284.6]	4.31	2.28	0.29	15	15
Slovakia	198	[144.6-271.1]	7.45	4.63	0.56	14	4
Bulgaria	124	[92.1-167]	3.68	2.00	0.24	15	12
Ukraine	1,543	[1,411.7-1,686.5]	7.61	4.99	0.62	9	7
Belarus	406	[361.5-456]	9.23	6.16	0.75	8	4
Northern Europe	1,714	[1,590.6-1,846.9]	3.27	1.67	0.20	16	12
Lithuania	118	[89.5-155.6]	9.37	5.38	0.68	13	5
Ireland	56	[41.4-75.7]	2.28	1.43	0.18	16	9
Iceland	4	[1.40-11.4]	2.33	1.42	0.17	16	27
Latvia	78	[53.5-113.8]	8.97	5.08	0.64	10	7
Norway	54	[39.7-73.4]	1.97	0.99	0.12	16	12
Sweden	124	[95.4-161.2]	2.45	1.02	0.12	16	12
Estonia	32	[22.3-46]	5.09	3.05	0.38	15	24
Finland	80	[62.7-102.1]	2.93	1.24	0.15	16	13
United Kingdom	1,074	[967.9-1,191.7]	3.20	1.63	0.19	16	12
Denmark	89	[62.4-127]	3.09	1.55	0.19	17	9
Southern Europe	2,751	[2,537.1-2,982.9]	3.67	1.67	0.20	16	13
Serbia	322	[257.3-403]	7.52	3.86	0.43	12	11
Spain	791	[698-896.3]	3.44	1.59	0.19	15	14
Portugal	290	[228.9-367.4]	6.01	3.09	0.35	15	7
Cyprus	9	[3.50-22.9]	1.49	0.89	0.10	16	12
Slovenia	26	[17.3-39.2]	2.51	1.30	0.15	19	8
Bosnia & Herzegovina	62	[45.9-83.7]	3.86	2.12	0.25	14	8
Albania	32	[18.7-54.8]	2.18	1.10	0.09	13	15
Croatia	100	[72.4-138.2]	5.05	2.67	0.32	16	9
Greece	141	[106.6-186.5]	2.76	1.23	0.15	16	15
Italy	932	[836.8-1,038]	3.17	1.30	0.15	17	13
North Macedonia	22	[13.2-36.7]	2.11	1.26	0.14	15	16
Montenegro	19	[10.6-34.1]	6.12	3.52	0.32	13	7
Malta	5	[2-12.7]	2.26	1.05	0.14	17	2
Western Europe	3,419	[3,207.7-3,644.2]	3.55	1.71	0.21	15	14
Luxembourg	4	[1.50-10.6]	1.26	0.75	0.07	18	6
Switzerland	148	[110.3-198.5]	3.45	1.64	0.20	16	11
France	1,131	[1,023.2-1,250.1]	3.58	1.86	0.23	15	13
Belgium	202	[164.3-248.3]	3.52	1.79	0.23	16	19
Austria	202	[156-261.5]	4.55	2.32	0.30	15	13
Germany	1,557	[1,422.1-1,704.7]	3.76	1.70	0.21	16	11
Netherlands	175	[142.4-215]	2.05	0.95	0.11	17	14

Data accessed on 27 Jan 2021

For more detailed methods of estimation please refer to http://gco.iarc.fr/today/data-sources-methods

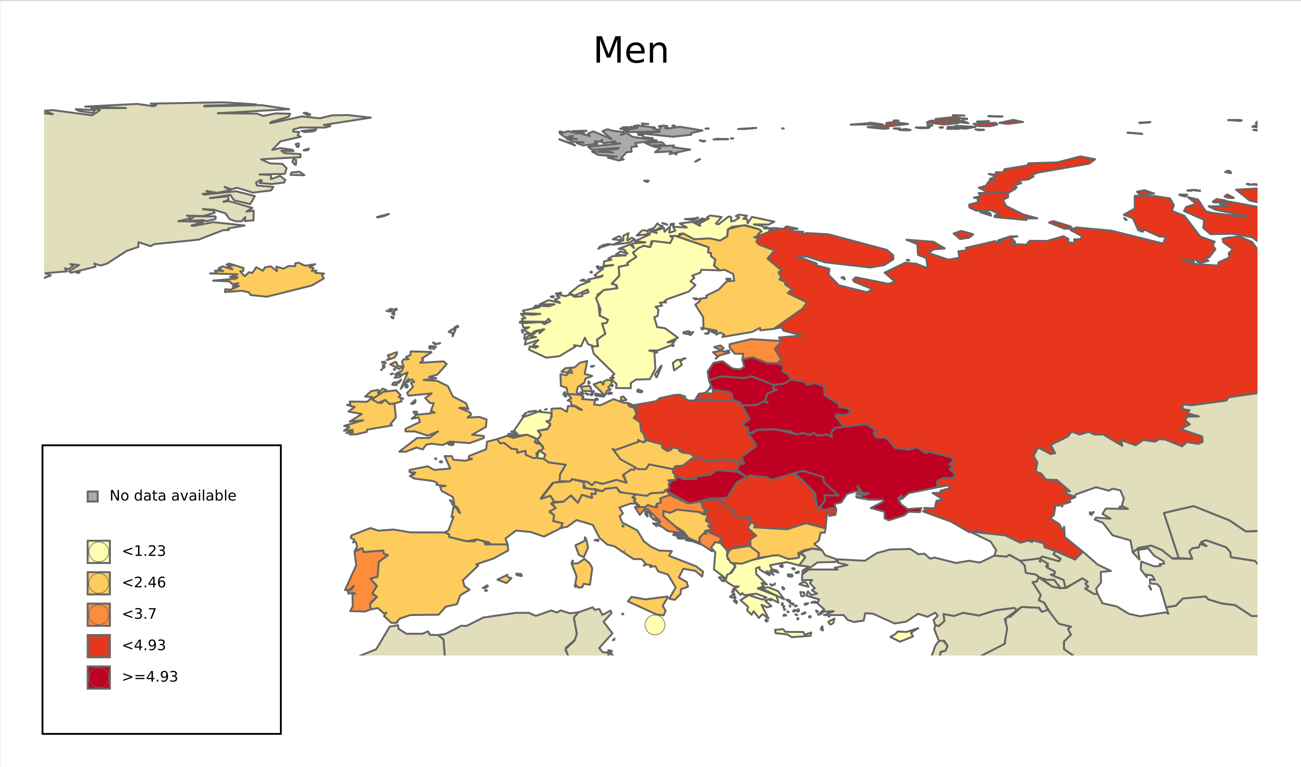
[a] Cumulative risk (mortality) is the probability or risk of individuals dying from the disease during ages 0-74 years. For cancer, it is expressed as the % of new born children who would be expected to die from a particular cancer before the age of 75 if they had the rates of cancer observed in the period in the absence of competing causes.

[b] Rates per 100,000 men per year.

Data Sources:

Ferlay J, Ervik M, Lam F, Colombet M, Mery L, Piñeros M, Znaor A, Soerjomataram I, Bray F (2020). Global Cancer Observatory: Cancer Today. Lyon, France: International Agency for Research on Cancer. Available from: https://gco.iarc.fr/today, accessed [27 January 2021].

Figure 37: Age-standardised mortality rates of oral cancer among men in Europe (estimates for 2020)



Data accessed on 27 Jan 2021

For more detailed methods of estimation please refer to http://gco.iarc.fr/today/data-sources-methods

[a] Rates per 100,000 men per year.

Data Sources:

Ferlay J, Ervik M, Lam F, Colombet M, Mery L, Piñeros M, Znaor A, Soerjomataram I, Bray F (2020). Global Cancer Observatory: Cancer Today. Lyon, France: International Agency for Research on Cancer. Available from: https://gco.iarc.fr/today, accessed [27 January 2021].

3.5.3 Laryngeal cancer

3.5.3.1 Laryngeal cancer incidence

Table 24: Incidence of laryngeal cancer in women by Europe and sub regions (estimates for 2020)

Area	N Cases	Uncertainty intervals of new cancer cases [95% UI]	Crude rate[b]	ASR[b]	Cumulative risk (%) ages 0-74 years[a]	Ranking	
						All women	Women 15-44 years
Europe	4,912	[4,313.9-5,593]	1.27	0.64	0.08	25	26
Eastern Europe	1,550	[1,367.4-1,756.9]	1.00	0.53	0.07	25	23
Hungary	163	[103.3-257.2]	3.22	1.78	0.22	21	20
Republic of Moldova	21	[6.70-66.1]	1.00	0.72	0.08	21	13
Poland	423	[325.8-549.1]	2.17	1.11	0.14	21	23
Romania	120	[73.4-196.1]	1.21	0.61	0.07	24	22
Russian Federation	544	[480.6-615.8]	0.69	0.38	0.05	27	25
Czechia	72	[54.7-94.7]	1.32	0.60	0.08	25	26
Slovakia	22	[13.4-36.3]	0.79	0.43	0.05	27	25
Bulgaria	41	[29-57.9]	1.15	0.61	0.07	23	23
Belarus	19	[11.2-32.3]	0.38	0.19	0.02	27	25
Ukraine	125	[94.8-164.8]	0.53	0.30	0.03	27	24
Northern Europe	666	[593.5-747.3]	1.24	0.62	0.08	27	27
Lithuania	12	[6.40-22.3]	0.82	0.40	0.05	26	27
Ireland	27	[16.9-43.1]	1.09	0.66	0.08	24	25
Iceland	1	[0.10-8.60]	0.59	0.29	0.07	25	28
Latvia	9	[4.30-18.8]	0.89	0.40	0.05	27	25
Norway	23	[14.5-36.6]	0.86	0.47	0.06	26	23
Sweden	22	[14.8-32.6]	0.44	0.22	0.03	28	29
Finland	15	[8.50-26.6]	0.53	0.22	0.03	28	31
Estonia	7	[3.20-15.5]	1.00	0.42	0.04	26	22
United Kingdom	503	[416.4-607.6]	1.46	0.74	0.09	26	27
Denmark	47	[34.6-63.9]	1.61	0.77	0.10	24	25
Southern Europe	1,101	[848.5-1,428.6]	1.40	0.64	0.08	24	27
Serbia	88	[58.2-133]	1.97	0.88	0.12	22	26
Spain	307	[175.5-536.9]	1.29	0.68	0.08	23	27
Croatia	24	[15.9-36.3]	1.13	0.50	0.06	23	28
Portugal	45	[24.8-81.7]	0.84	0.36	0.04	25	24
Slovenia	12	[6.10-23.5]	1.15	0.59	0.07	24	28
Cyprus	4	[0.70-22]	0.66	0.35	0.05	24	30
Bosnia & Herzegovina	40	[22.3-71.6]	2.39	1.08	0.13	22	20
Albania	22	[9.70-50]	1.56	0.88	0.08	18	13
Greece	75	[47.1-119.5]	1.41	0.56	0.07	22	25
Italy	455	[343.1-603.5]	1.47	0.62	0.08	25	28
North Macedonia	15	[5.70-39.6]	1.44	0.82	0.10	19	25
Montenegro	10	[4.70-21.1]	3.15	1.64	0.18	18	16
Malta	4	[1.30-11.9]	1.82	0.90	0.14	22	30
Western Europe	1,595	[1,413.2-1,800.2]	1.60	0.80	0.10	25	26
Luxembourg	4	[0.30-50.5]	1.29	0.82	0.13	23	28
Switzerland	50	[24.2-103.5]	1.15	0.47	0.06	25	29
Germany	682	[536.7-866.6]	1.61	0.76	0.10	25	26
Belgium	100	[60.6-165]	1.71	0.97	0.12	24	24
France	552	[368.1-827.7]	1.64	0.89	0.10	24	26
Austria	50	[35.7-70.1]	1.09	0.58	0.07	25	23
Netherlands	157	[96.9-254.5]	1.83	0.86	0.11	22	26

Data accessed on 27 Jan 2021

For more detailed methods of estimation please refer to http://gco.iarc.fr/today/data-sources-methods

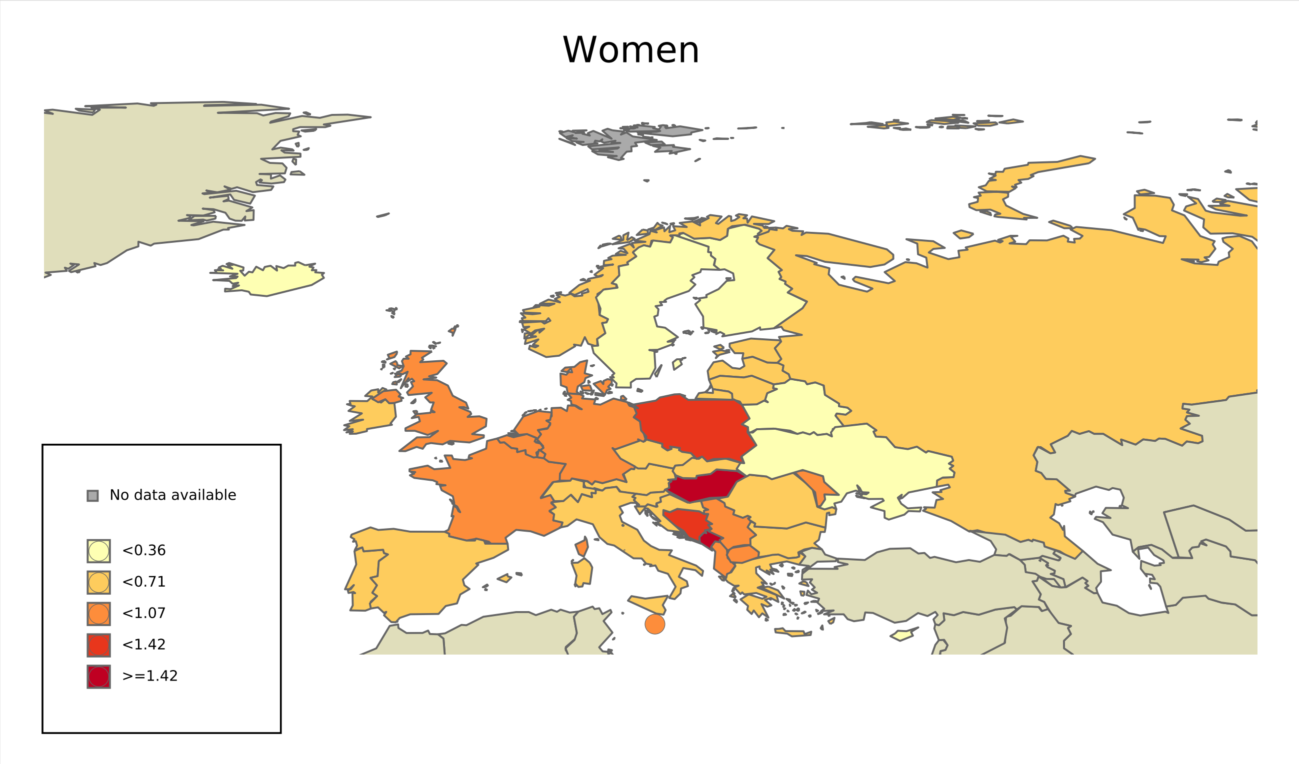
[a] Cumulative risk (incidence) is the probability or risk of individuals getting from the disease during ages 0-74 years. For cancer, it is expressed as the % of new born children who would be expected to develop from a particular cancer before the age of 75 if they had the rates of cancer observed in the period in the absence of competing causes.

[b] Rates per 100,000 women per year.

Data Sources:

Ferlay J, Ervik M, Lam F, Colombet M, Mery L, Piñeros M, Znaor A, Soerjomataram I, Bray F (2020). Global Cancer Observatory: Cancer Today. Lyon, France: International Agency for Research on Cancer. Available from: https://gco.iarc.fr/today, accessed [27 January 2021].

Figure 38: Age-standardised incidence rates of laryngeal cancer among women in Europe (estimates for 2020)



Data accessed on 27 Jan 2021
For more detailed methods of estimation please refer to http://gco.iarc.fr/today/data-sources-methods
[a] Rates per 100,000 women per year.
Data Sources:
Ferlay J, Ervik M, Lam F, Colombet M, Mery L, Piñeros M, Znaor A, Soerjomataram I, Bray F (2020). Global Cancer Observatory: Cancer Today. Lyon, France: International Agency for Research on Cancer. Available from: https://gco.iarc.fr/today, accessed [27 January 2021].

Table 25: Incidence of laryngeal cancer in men by Europe and sub regions (estimates for 2020)

Area	N Cases	Uncertainty intervals of new cancer cases [95% UI]	Crude rate[b]	ASR[b]	Cumulative risk (%) ages 0-74 years[a]	Ranking All men	Ranking Men 15-44 years
Europe	34,951	[33,406.8-36,566.6]	9.66	5.36	0.68	15	17
Eastern Europe	16,580	[15,999.7-17,181.3]	12.0	7.58	0.97	9	16
Hungary	664	[540.1-816.3]	14.4	8.23	1.08	13	18
Republic of Moldova	325	[248.7-424.7]	16.8	11.9	1.53	7	16
Poland	2,712	[2,441.7-3,012.2]	14.8	8.39	1.05	9	16
Romania	1,802	[1,556.9-2,085.7]	19.3	11.4	1.42	7	11
Russian Federation	6,709	[6,453.4-6,974.8]	9.92	6.61	0.86	11	17
Slovakia	377	[332-428.1]	14.2	8.69	1.09	12	14
Bulgaria	501	[429-585.1]	14.8	7.67	1.03	8	20
Belarus	625	[499.4-782.1]	14.2	9.22	1.16	8	14
Ukraine	2,437	[2,273.2-2,612.6]	12.0	7.74	1.01	9	17
Czechia	428	[355.5-515.3]	8.12	4.27	0.56	16	18
Northern Europe	3,160	[2,995.5-3,333.5]	6.02	3.16	0.39	19	22
Ireland	182	[133.9-247.3]	7.42	4.59	0.56	17	19
Iceland	8	[3.70-17.5]	4.67	2.29	0.30	18	21
Lithuania	150	[106.2-211.8]	11.9	6.70	0.85	14	19
Latvia	111	[76.4-161.3]	12.8	7.40	0.94	12	15
Norway	95	[66.5-135.8]	3.47	1.73	0.22	20	24
Sweden	132	[93.8-185.8]	2.61	1.17	0.15	20	26
Finland	102	[75.7-137.5]	3.73	1.65	0.22	19	22
Estonia	58	[43.4-77.6]	9.23	5.31	0.66	14	18
United Kingdom	2,115	[1,899.3-2,355.2]	6.31	3.30	0.41	18	21
Denmark	198	[160.4-244.4]	6.88	3.50	0.43	18	18
Southern Europe	8,174	[7,470.6-8,943.7]	10.9	5.38	0.67	13	19
Spain	2,503	[2,231-2,808.1]	10.9	5.59	0.72	13	23
Portugal	484	[391.9-597.8]	10.0	5.08	0.63	16	25
Serbia	659	[529.5-820.2]	15.4	8.84	1.09	8	14
Cyprus	45	[29.7-68.1]	7.46	4.68	0.63	14	26
Slovenia	89	[60.1-131.9]	8.60	4.30	0.56	17	22
Bosnia & Herzegovina	235	[187.5-294.5]	14.6	7.96	1.01	10	13
Albania	125	[86.3-181.1]	8.53	5.36	0.66	10	14
Croatia	266	[221.2-319.9]	13.4	6.97	0.89	12	15
Greece	736	[575.1-941.9]	14.4	6.86	0.85	12	17
Italy	2,774	[2,417.1-3,183.6]	9.42	4.24	0.52	15	17
North Macedonia	166	[96.7-284.9]	15.9	10.2	1.21	8	7
Montenegro	64	[47.3-86.6]	20.6	12.9	1.57	5	10
Malta	22	[13-37.2]	9.94	4.43	0.58	12	24
Western Europe	7,037	[6,639.6-7,458.2]	7.30	3.55	0.46	18	24
Luxembourg	26	[9.70-69.5]	8.21	4.94	0.74	18	17
Netherlands	581	[513.1-657.9]	6.81	3.17	0.41	17	23
Switzerland	188	[108.1-326.8]	4.38	2.19	0.28	21	27
France	2,710	[2,376.7-3,090]	8.58	4.55	0.55	19	17
Belgium	517	[449.2-595.1]	9.00	4.68	0.62	16	24
Austria	231	[171-312]	5.20	2.72	0.34	19	20
Germany	2,781	[2,502-3,091.1]	6.71	3.01	0.42	17	27

Data accessed on 27 Jan 2021

For more detailed methods of estimation please refer to http://gco.iarc.fr/today/data-sources-methods

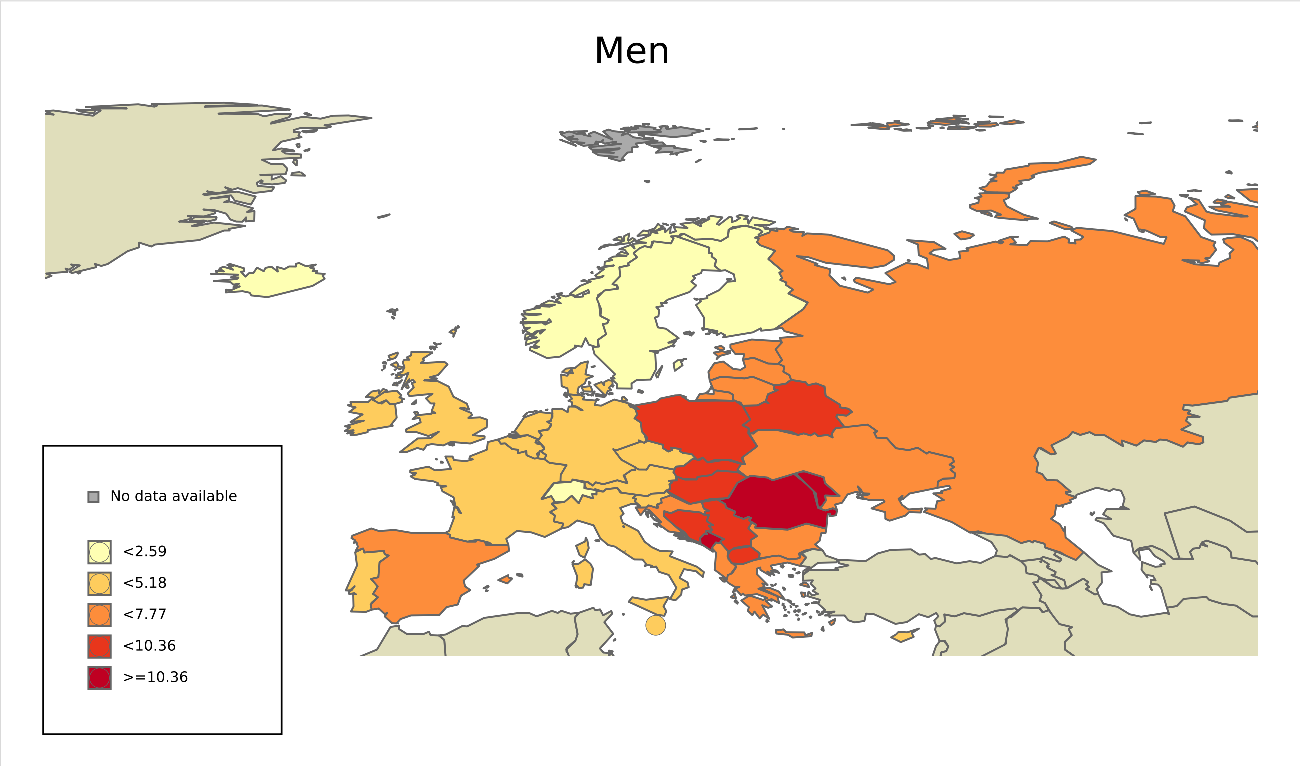
[a] Cumulative risk (incidence) is the probability or risk of individuals getting from the disease during ages 0-74 years. For cancer, it is expressed as the % of new born children who would be expected to develop from a particular cancer before the age of 75 if they had the rates of cancer observed in the period in the absence of competing causes.

[b] Rates per 100,000 men per year.

Data Sources:

Ferlay J, Ervik M, Lam F, Colombet M, Mery L, Piñeros M, Znaor A, Soerjomataram I, Bray F (2020). Global Cancer Observatory: Cancer Today. Lyon, France: International Agency for Research on Cancer. Available from: https://gco.iarc.fr/today, accessed [27 January 2021].

Figure 39: Age-standardised incidence rates of laryngeal cancer among men in Europe (estimates for 2020)



Data accessed on 27 Jan 2021
For more detailed methods of estimation please refer to http://gco.iarc.fr/today/data-sources-methods
[a] Rates per 100,000 men per year.
Data Sources:
Ferlay J, Ervik M, Lam F, Colombet M, Mery L, Piñeros M, Znaor A, Soerjomataram I, Bray F (2020). Global Cancer Observatory: Cancer Today. Lyon, France: International Agency for Research on Cancer. Available from: https://gco.iarc.fr/today, accessed [27 January 2021].

3.5.3.2 Laryngeal cancer mortality

Table 26: Mortality of laryngeal cancer in women by Europe and sub regions (estimates for 2020)

Area	N Cases	Uncertainty intervals of new cancer cases [95% UI]	Crude rate[b]	ASR[b]	Cumulative risk (%) ages 0-74 years[a]	Ranking	
						All women	Women 15-44 years
Europe	1,986	[1,675.4-2,354.2]	0.51	0.22	0.03	25	26
Eastern Europe	741	[632.8-867.8]	0.48	0.24	0.03	24	24
Hungary	69	[49.2-96.9]	1.36	0.69	0.08	21	23
Republic of Moldova	7	[2.80-17.3]	0.33	0.21	0.02	24	18
Poland	218	[177.7-267.5]	1.12	0.52	0.07	22	25
Romania	63	[43.4-91.5]	0.64	0.28	0.03	23	18
Russian Federation	259	[213.3-314.4]	0.33	0.18	0.02	26	24
Czechia	30	[20.2-44.6]	0.55	0.21	0.03	25	23
Slovakia	8	[4-15.9]	0.29	0.13	0.01	27	21
Bulgaria	26	[16.5-40.9]	0.73	0.30	0.03	22	22
Belarus	16	[9.20-27.8]	0.32	0.17	0.02	26	26
Ukraine	45	[32.3-62.7]	0.19	0.11	0.01	29	24
Northern Europe	251	[208.1-302.7]	0.47	0.19	0.02	25	26
Lithuania	6	[2.70-13.5]	0.41	0.19	0.03	26	24
Ireland	9	[4.20-19.2]	0.36	0.19	0.02	24	20
Iceland	0	[0-8.60]	0	0	0	25	27
Latvia	3	[1-8.60]	0.30	0.07	0.01	27	22
Norway	9	[4.20-19.2]	0.34	0.12	0.01	23	29
Sweden	10	[5.20-19.1]	0.20	0.07	0.01	28	17
Estonia	0	[0-3.90]	0	0	0	29	15
United Kingdom	192	[148.7-247.9]	0.56	0.23	0.03	25	23
Denmark	18	[10.5-30.7]	0.62	0.23	0.03	24	22
Finland	4	[1.60-10]	0.14	0.05	0.01	28	21
Southern Europe	475	[391.2-576.8]	0.61	0.22	0.03	23	24
Serbia	49	[35-68.5]	1.10	0.45	0.06	21	23
Portugal	21	[13-33.9]	0.39	0.14	0.02	25	19
Spain	117	[76.5-178.9]	0.49	0.21	0.03	23	24
Slovenia	6	[2.70-13.3]	0.57	0.22	0.03	24	13
Cyprus	0	[0-10.6]	0	0	0	25	24
Bosnia & Herzegovina	21	[12.9-34.2]	1.25	0.57	0.06	20	18
Albania	14	[6.70-29.3]	0.99	0.47	0.04	15	13
Croatia	12	[6.70-21.6]	0.56	0.19	0.02	22	22
Greece	34	[23-50.2]	0.64	0.19	0.02	23	23
Italy	187	[151.2-231.2]	0.60	0.18	0.02	25	29
North Macedonia	9	[4-20.1]	0.86	0.45	0.06	17	23
Montenegro	4	[1.30-12.6]	1.26	0.53	0.03	20	31
Malta	1	[0.10-8.10]	0.45	0.14	0.03	22	10
Western Europe	519	[440.8-611.1]	0.52	0.22	0.03	25	30
Luxembourg	0	[0-8.50]	0	0	0	28	22
Netherlands	52	[38.2-70.9]	0.60	0.25	0.03	24	31
Switzerland	15	[8.40-26.7]	0.34	0.13	0.02	26	28
France	165	[120.9-225.2]	0.49	0.22	0.03	25	26
Belgium	30	[20-44.9]	0.51	0.23	0.03	24	23
Germany	239	[193.2-295.7]	0.56	0.22	0.03	25	30
Austria	18	[11.1-29.1]	0.39	0.16	0.02	26	24

Data accessed on 27 Jan 2021

For more detailed methods of estimation please refer to http://gco.iarc.fr/today/data-sources-methods

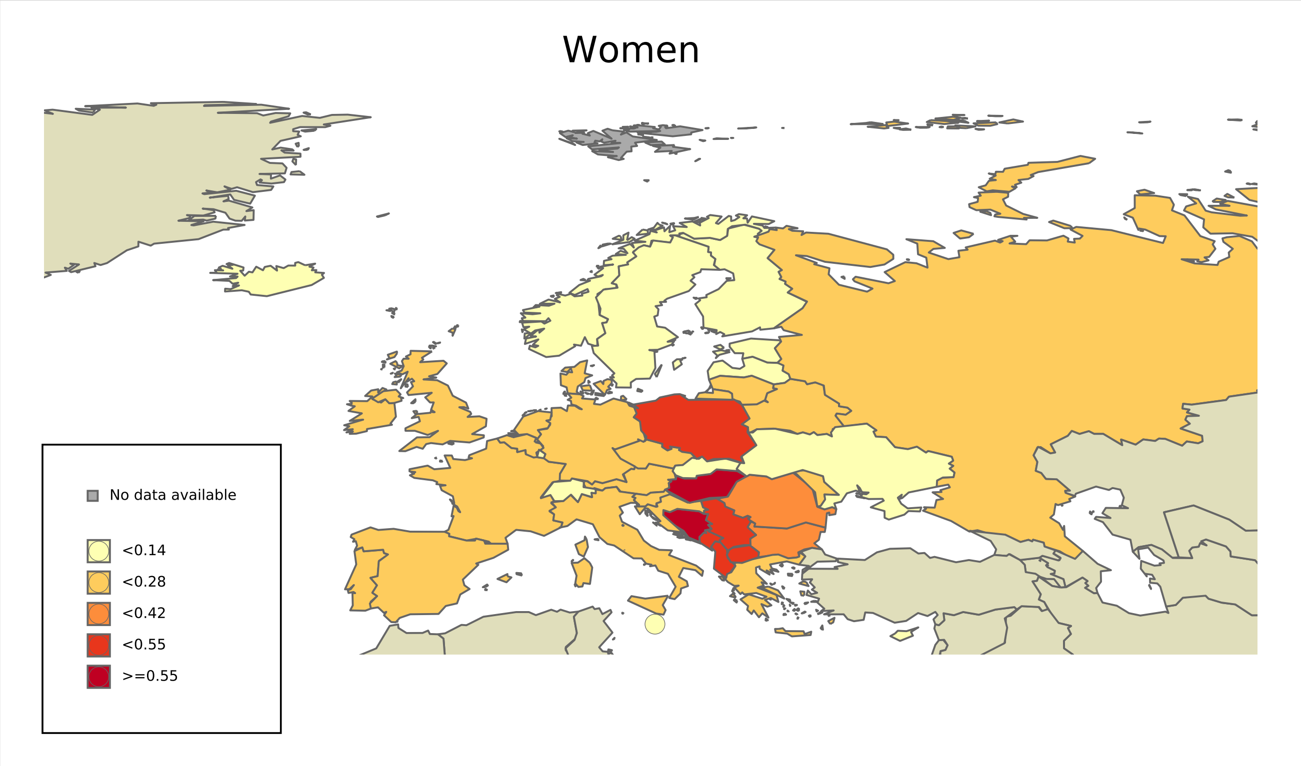
[a] Cumulative risk (mortality) is the probability or risk of individuals dying from the disease during ages 0-74 years. For cancer, it is expressed as the % of new born children who would be expected to die from a particular cancer before the age of 75 if they had the rates of cancer observed in the period in the absence of competing causes.

[b] Rates per 100,000 women per year.

Data Sources:

Ferlay J, Ervik M, Lam F, Colombet M, Mery L, Piñeros M, Znaor A, Soerjomataram I, Bray F (2020). Global Cancer Observatory: Cancer Today. Lyon, France: International Agency for Research on Cancer. Available from: https://gco.iarc.fr/today, accessed [27 January 2021].

Figure 40: Age-standardised mortality rates of laryngeal cancer among women in Europe (estimates for 2020)



Data accessed on 27 Jan 2021

For more detailed methods of estimation please refer to http://gco.iarc.fr/today/data-sources-methods

[a] Rates per 100,000 women per year.

Data Sources:

Ferlay J, Ervik M, Lam F, Colombet M, Mery L, Piñeros M, Znaor A, Soerjomataram I, Bray F (2020). Global Cancer Observatory: Cancer Today. Lyon, France: International Agency for Research on Cancer. Available from: https://gco.iarc.fr/today, accessed [27 January 2021].

Table 27: Mortality of laryngeal cancer in men by Europe and sub regions (estimates for 2020)

Area	N Cases	Uncertainty intervals of new cancer cases [95% UI]	Crude rate[b]	ASR[b]	Cumulative risk (%) ages 0-74 years[a]	Ranking	
						All men	Men 15-44 years
Europe	17,618	[16,676.2-18,613]	4.87	2.54	0.32	14	16
Eastern Europe	9,518	[9,129.8-9,922.7]	6.91	4.26	0.55	13	16
Hungary	354	[303.6-412.8]	7.70	4.21	0.55	12	16
Republic of Moldova	199	[163.4-242.4]	10.3	7.17	0.96	7	15
Poland	1,593	[1,467.1-1,729.7]	8.69	4.65	0.59	10	16
Romania	1,045	[935.2-1,167.7]	11.2	6.34	0.80	8	11
Russian Federation	3,804	[3,641.2-3,974.1]	5.62	3.70	0.49	13	15
Slovakia	157	[118.3-208.4]	5.91	3.51	0.43	17	16
Czechia	217	[178-264.6]	4.12	2.19	0.27	16	13
Bulgaria	330	[278.7-390.8]	9.78	5.20	0.64	9	10
Ukraine	1,458	[1,332.9-1,594.8]	7.20	4.60	0.60	10	15
Belarus	361	[319.3-408.1]	8.21	5.28	0.68	9	14
Northern Europe	1,223	[1,116.1-1,340.1]	2.33	1.07	0.13	17	18
Lithuania	118	[91-153.1]	9.37	5.15	0.66	12	11
Ireland	69	[51.5-92.5]	2.81	1.46	0.15	15	15
Iceland	1	[0.20-5.50]	0.58	0.19	0	18	12
Latvia	62	[41.9-91.7]	7.13	3.91	0.49	13	15
Norway	33	[22.2-49]	1.20	0.53	0.06	17	24
Sweden	54	[40-72.8]	1.07	0.39	0.05	18	16
Estonia	40	[28.3-56.5]	6.36	3.39	0.46	13	25
United Kingdom	723	[649.8-804.5]	2.16	0.96	0.11	18	19
Finland	41	[29.1-57.8]	1.50	0.61	0.07	17	21
Denmark	79	[52.8-118.3]	2.74	1.22	0.14	18	23
Southern Europe	4,054	[3,789.5-4,337]	5.41	2.31	0.28	14	17
Croatia	151	[119.4-191]	7.63	3.68	0.45	12	12
Spain	1,141	[1,045.6-1,245.2]	4.97	2.21	0.27	13	20
Serbia	394	[333.7-465.2]	9.21	4.85	0.62	10	17
Portugal	308	[261.9-362.2]	6.38	2.92	0.36	14	21
Cyprus	20	[11.1-36]	3.31	1.80	0.21	14	24
Slovenia	54	[39.7-73.4]	5.22	2.33	0.27	16	19
Bosnia & Herzegovina	150	[124.2-181.2]	9.34	4.54	0.58	9	16
Albania	76	[54.5-106]	5.19	2.98	0.38	11	14
Greece	345	[284.3-418.6]	6.74	2.62	0.31	12	18
Italy	1,272	[1,146.9-1,410.7]	4.32	1.55	0.18	16	19
North Macedonia	94	[62.4-141.7]	9.02	5.49	0.69	9	12
Montenegro	39	[26-58.4]	12.6	7.06	0.82	7	19
Malta	7	[2.90-17]	3.16	1.12	0.14	14	17
Western Europe	2,823	[2,632.6-3,027.2]	2.93	1.26	0.15	18	24
Luxembourg	9	[4-20.4]	2.84	1.74	0.26	15	26
Netherlands	195	[150.9-252]	2.28	0.96	0.11	16	17
Switzerland	65	[42.9-98.5]	1.51	0.69	0.08	19	23
Germany	1,356	[1,218.8-1,508.7]	3.27	1.33	0.16	17	28
Belgium	159	[118.1-214.1]	2.77	1.37	0.16	17	14
Austria	138	[108.7-175.1]	3.11	1.44	0.19	17	15
France	901	[814.7-996.5]	2.85	1.29	0.15	17	24

Data accessed on 27 Jan 2021

For more detailed methods of estimation please refer to http://gco.iarc.fr/today/data-sources-methods

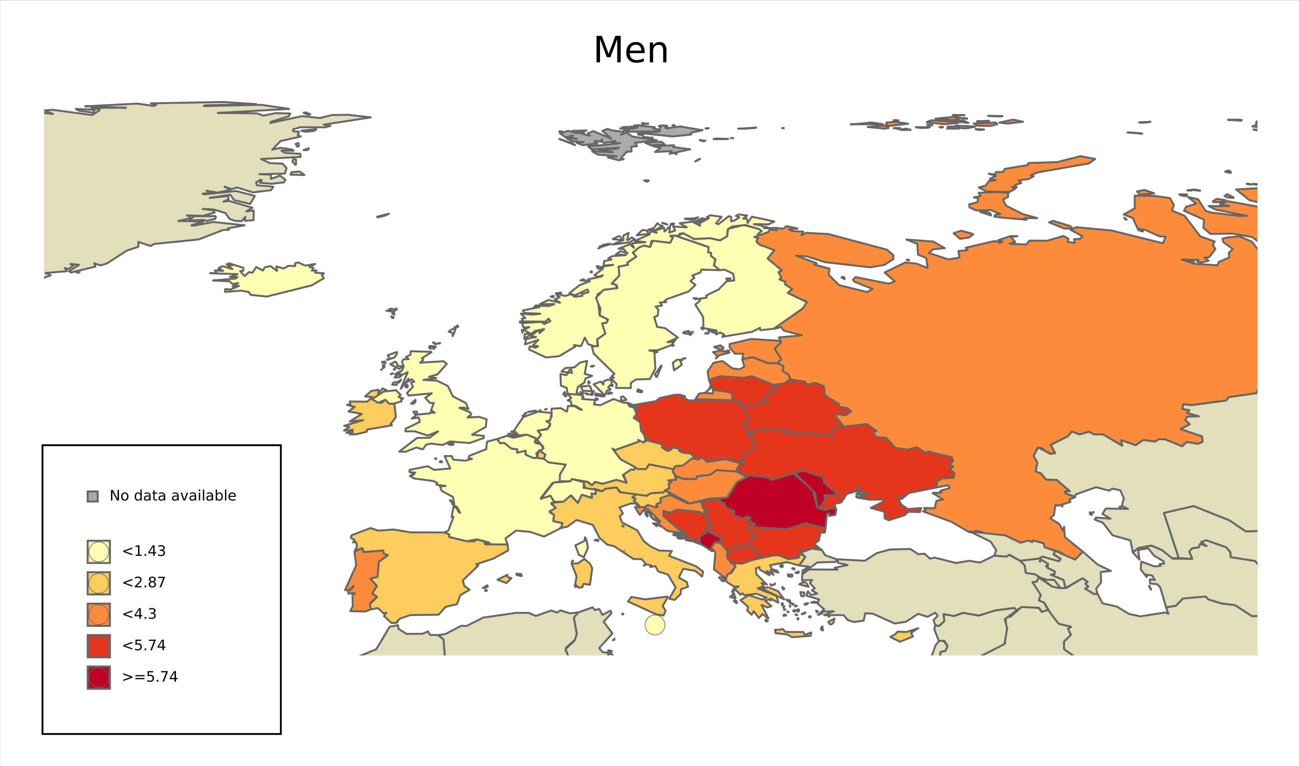
[a] Cumulative risk (mortality) is the probability or risk of individuals dying from the disease during ages 0-74 years. For cancer, it is expressed as the % of new born children who would be expected to die from a particular cancer before the age of 75 if they had the rates of cancer observed in the period in the absence of competing causes.

[b] Rates per 100,000 men per year.

Data Sources:

Ferlay J, Ervik M, Lam F, Colombet M, Mery L, Piñeros M, Znaor A, Soerjomataram I, Bray F (2020). Global Cancer Observatory: Cancer Today. Lyon, France: International Agency for Research on Cancer. Available from: https://gco.iarc.fr/today, accessed [27 January 2021].

Figure 41: Age-standardised mortality rates of laryngeal cancer among men in Europe (estimates for 2020)



Data accessed on 27 Jan 2021

For more detailed methods of estimation please refer to http://gco.iarc.fr/today/data-sources-methods

[a] Rates per 100,000 men per year.

Data Sources:

Ferlay J, Ervik M, Lam F, Colombet M, Mery L, Piñeros M, Znaor A, Soerjomataram I, Bray F (2020). Global Cancer Observatory: Cancer Today. Lyon, France: International Agency for Research on Cancer. Available from: https://gco.iarc.fr/today, accessed [27 January 2021].

4 HPV related statistics

HPV infection is commonly found in the anogenital tract of men and women with and without clinical lesions. The aetiological role of HPV infection among women with cervical cancer is well-established, and there is growing evidence of its central role in other anogenital sites. HPV is also responsible for other diseases such as recurrent juvenile respiratory papillomatosis and genital warts, both mainly caused by HPV types 6 and 11(Lacey CJ, Vaccine 2006; 24(S3):35). For this section, the methodologies used to compile the information on HPV burden are derived from systematic reviews and meta-analyses of the literature. Due to the limitations of HPV DNA detection methods and study designs used, these data should be interpreted with caution and used only as a guide to assess the burden of HPV infection in the population. (Vaccine 2006, Vol. 24, Suppl 3; Vaccine 2008, Vol. 26, Suppl 10; Vaccine 2012, Vol. 30, Suppl 5; IARC Monographs 2007, Vol. 90).

4.1 HPV burden in women with normal cervical cytology, cervical precancerous lesions or invasive cervical cancer

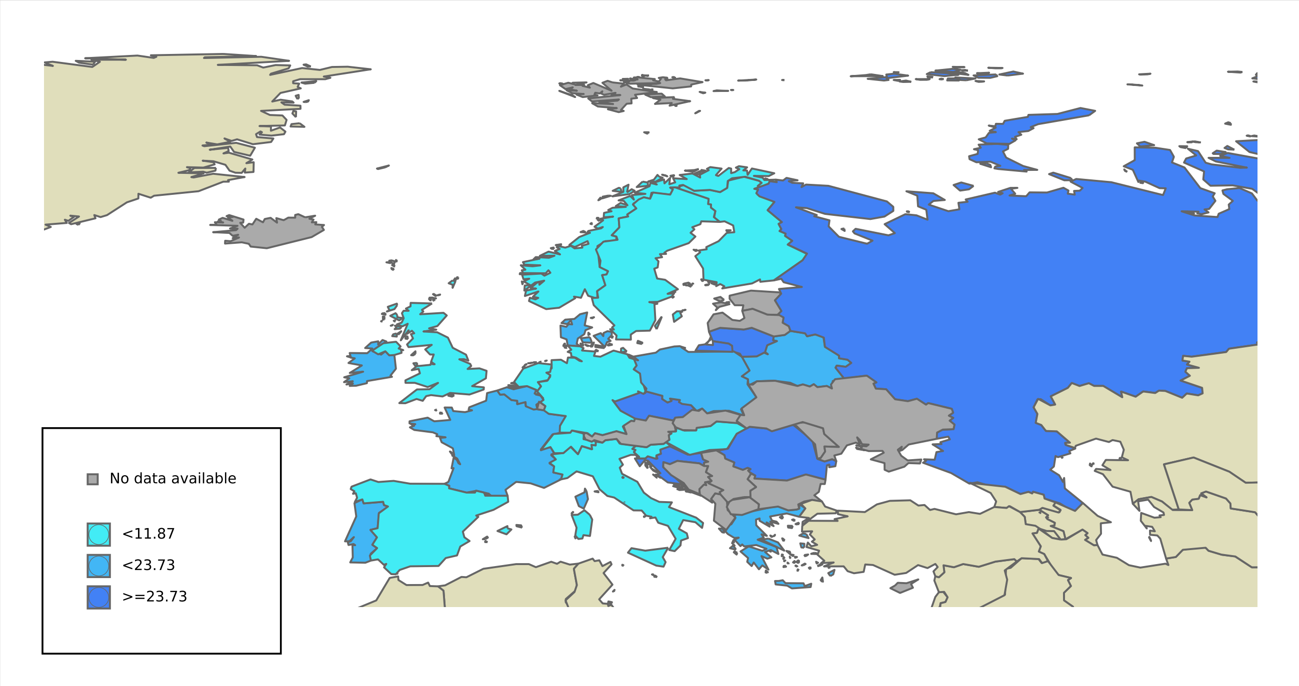
The statistics shown in this section focus on HPV infection in the cervix uteri. HPV cervical infection results in cervical morphological lesions ranging from normalcy (cytologically normal women) to different stages of precancerous lesions (CIN-1, CIN-2, CIN-3/CIS) and invasive cervical cancer. HPV infection is measured by means of HPV DNA detection in cervical cells (fresh tissue, paraffin embedded or exfoliated cells).
The prevalence of HPV increases with severity of the lesion. HPV causes virtually 100cervical cancer, and an underestimation of HPV prevalence in cervical cancer is most likely due to the limitations of study methodologies. Worldwide, HPV-16 and 18, the two vaccine-preventable types. contribute to over 7016-32% of low-grade cervical lesions. After HPV-16/18, the six most common HPV types are the same in all world regions, namely 31, 33, 35, 45, 52 and 58; these account for an additional 20cancers worldwide (Clifford G et al. Vaccine 2006;24(S3):26-34).

Methods: Prevalence and type distribution of human papillomavirus in cervical carcinoma, low-grade cervical lesions, high-grade cervical lesions and normal cytology: systematic review and meta-analysis

A systematic review of the literature was conducted regarding the worldwide HPV-prevalence and type distribution for cervical carcinoma, low-grade cervical lesions, high-grade cervical lesions and normal cytology from 1990 to 'data as of' indicated in each section. The search terms for the review were 'HPV' AND cerv* using Pubmed. There were no limits in publication language. References cited in selected articles were also investigated. Inclusion criteria were: HPV DNA detection by means of PCR or HC2, a minimum of 20 cases for cervical carcinoma, 20 cases for low-grade cervical lesions, 20 cases for highgrade cervical lesions and 100 cases for normal cytology and a detailed description of HPV DNA detection and genotyping techniques used. The number of cases tested and HPV positive extracted for each study were pooled to estimate the prevalence of HPV DNA and the HPV type distribution globally and by geographical region. Binomial 95% confidence intervals were calculated for each HPV prevalence. For more details refer to the methods document.

4.1.1 HPV prevalence in women with normal cervical cytology

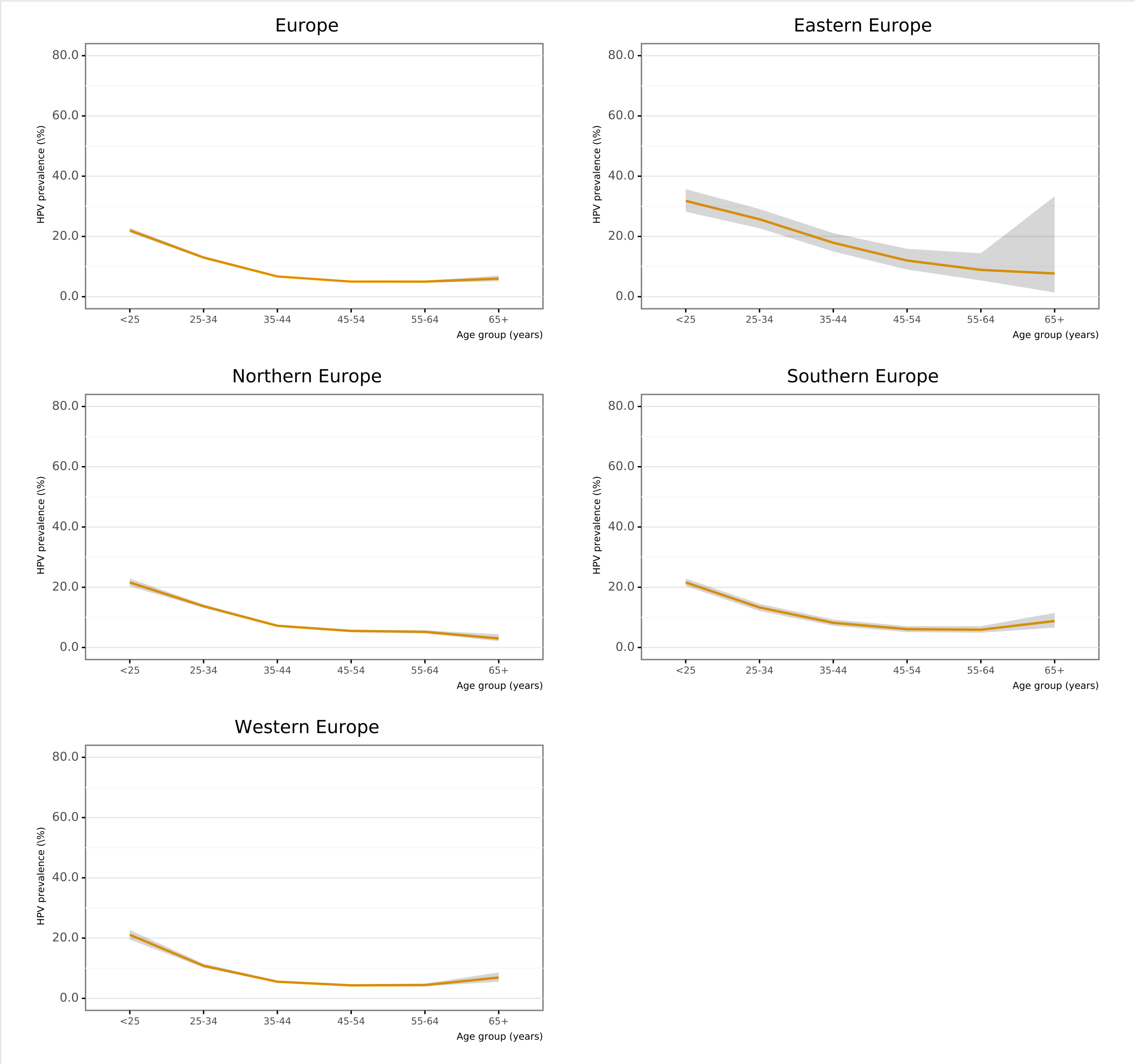
Figure 42: Prevalence of HPV among women with normal cervical cytology in Europe



Data updated on 22 May 2023 (data as of 30 Jun 2015)

Data Sources: See references in Section 9 References.

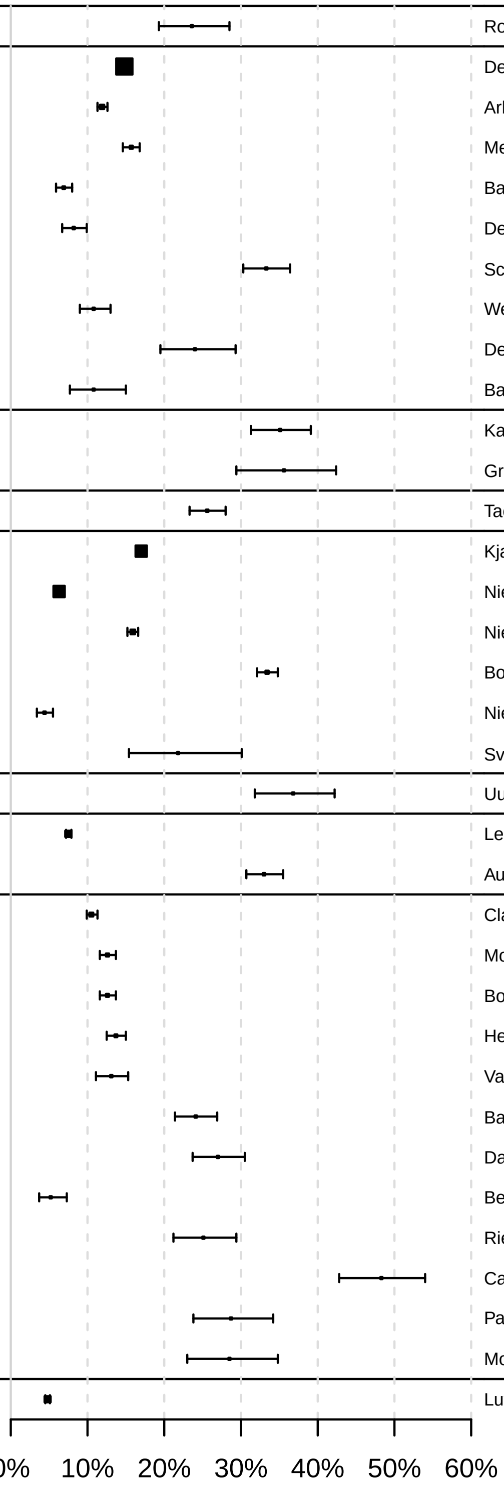
Figure 43: Crude age-specific HPV prevalence (%) and 95% confidence interval in women with normal cervical cytology in Europe and its regions



Data updated on 22 May 2023 (data as of 30 Jun 2014)

Data Sources: See references in Section 9 References.

Figure 44: Prevalence of HPV among women with normal cervical cytology in Europe, by country and study

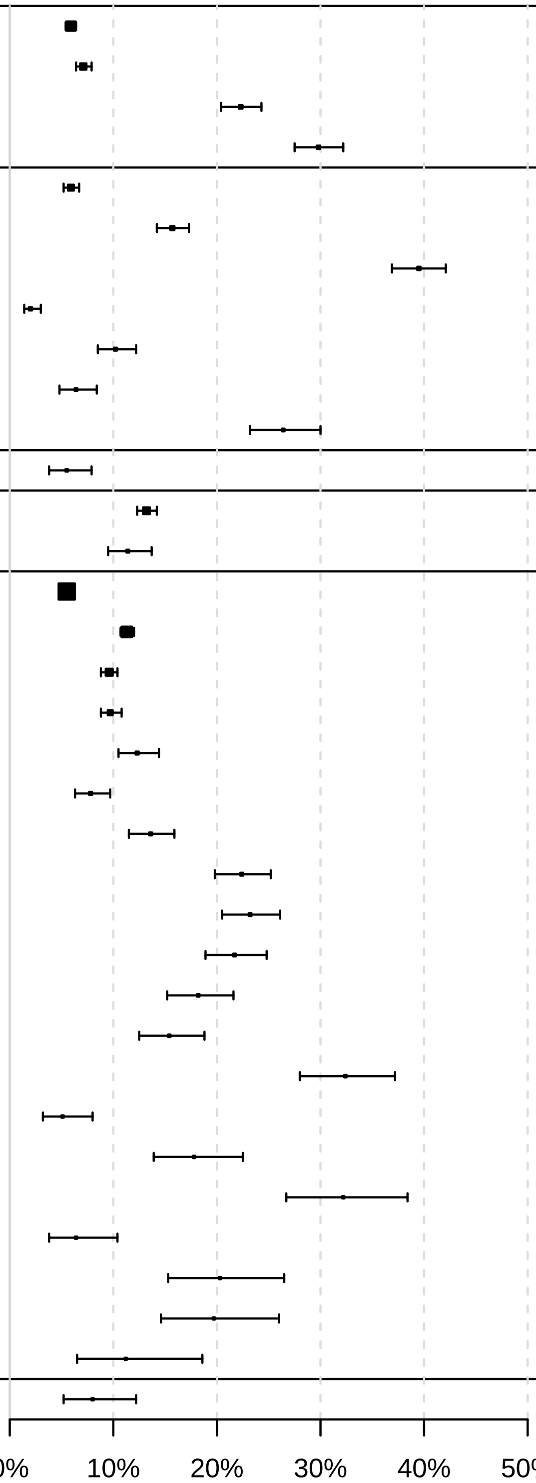


Country	Study	Age	N	% (95% CI)
Belarus	Rogovskaya 2013 (Minsk)	15−63	322	23.6 (19.3−28.5)
Belgium	Depuydt 2010 (Flanders)	14−97	57876	14.8 (14.5−15.1)
	Arbyn 2009 (Antwerp)	15−85	8729	11.9 (11.3−12.6)
	Merckx 2014 (Flanders and Brussels)	4−18	4180	15.7 (14.6−16.8)
	Baay 2005 (Antwerp)	20−50	2293	6.9 (5.9−8.0)
	Depuydt 2012	30−65	1139	8.2 (6.7−9.9)
	Schmitt 2013 (Flanders)[b]	15−86	913	33.3 (30.3−36.4)
	Weyn 2013 (Brussels)	>=20	906	10.8 (9.0−13.0)
	Depuydt 2003 (Flanders)	17−85	287	24.0 (19.5−29.3)
	Baay 2001 (Antwerp)	17−78	286	10.8 (7.7−15.0)
Croatia	Kaliterna 2007 (Split and Dalmatian County)	18−62	570	35.1 (31.3−39.1)
	Grahovac 2007 (Zagreb,Rijeka)	−	205	35.6 (29.4−42.4)
Czechia	Tachezy 2013	14−79	1302	25.6 (23.3−28.0)
Denmark	Kjær 2014 (Copenhagen)	14−95	37958	17.0 (16.6−17.4)
	Nielsen 2012 (Copenhagen)	14−95	37958	6.3 (6.1−6.5)
	Nielsen 2008 (Copenhagen)	20−29	10220	15.9 (15.2−16.6)
	Bonde 2014 (Copenhagen and Frederiksberg)	16−89	4671	33.4 (32.1−34.8)
	Nielsen 2008 (Copenhagen)	40−50	1443	4.4 (3.4−5.5)
	Svare 1998[c]	20−39	119	21.8 (15.4−30.1)
Estonia	Uusküla 2010 (Tartu)	18−35	326	36.8 (31.8−42.2)
Finland	Leinonen 2008 (Uusimaa)	25−65	16895	7.5 (7.2−7.9)
	Auvinen 2005 (Helsinki)	19−47	1469	33.0 (30.7−35.5)
France	Clavel 2001 (Reims)	15−76	7339	10.5 (9.9−11.3)
	Monsonego 2011 (Paris)	20−65	4004	12.6 (11.6−13.7)
	Boulanger 2004 (Amiens)	20−62	3617	12.6 (11.6−13.7)
	Heard 2013	−	3023	13.7 (12.5−15.0)
	Vaucel 2011 (Nantes)	17−86	980	13.1 (11.1−15.3)
	Baudu 2014 (Franche−Comté)[d]	15−23	948	24.1 (21.4−26.9)
	Dalstein 2003 (Besançon)	16−76	652	27.0 (23.7−30.5)
	Beby−Defaux 2004 (Poitiers)	17−77	613	5.2 (3.7−7.3)
	Riethmuller 1999 (Besançon, Belfort)	16−76	426	25.1 (21.2−29.4)
	Casalegno 2011 (Lyon)	15−88	302	48.3 (42.8−54.0)
	Pannier−Stockman 2008 (Amiens)[e]	18−78	289	28.7 (23.8−34.2)
	Monsonego 2005 (Paris)	19−79	221	28.5 (23.0−34.8)
Germany	Luyten 2009 (Wolfsburg)	>=30	16386	4.8 (4.5−5.1)

Data updated on 22 May 2023 (data as of 30 Jun 2014)

The samples for HPV testing come from cervical specimens (fresh/fixed biopsies or exfoliated cells)
[a] Number of women tested
[b] Geneve, Vaud, Neuchatel, Fribourg, Valais and Tessin
[c] Alava, Girona, Guipuzcoa, Murcia, Navarra, Salamanca, Sevilla, Vizcaya, Zaragoza
[d] Alsace, Auvergne, Centre - Pays de Loire, Ile-de-France and Vaucluse
[e] Birmingham, Edinburg, London, Manchester and Mansfield
Data Sources: See references in Section 9 References.

Figure 44: Prevalence of HPV among women with normal cervical cytology in Europe, by country and study (continued)

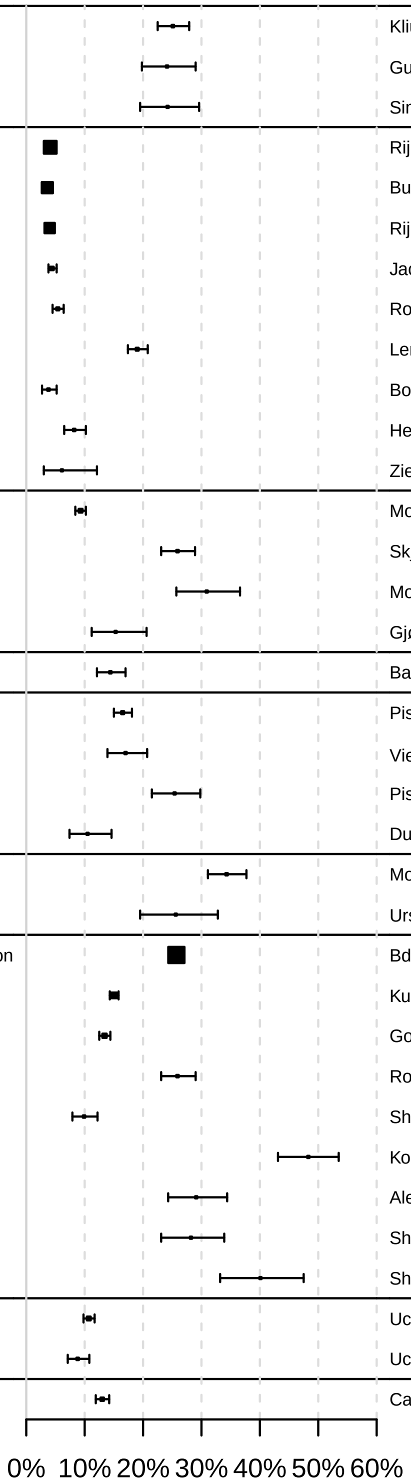


Country	Study	Age	N	% (95% CI)
Germany	Petry 2003 (Hannover and Tuebingen)	30−85	7832	5.9 (5.4−6.4)
	Schneider 2000 (East Thuringia)	18−70	4604	7.1 (6.4−7.9)
	Iftner 2010	10−30	1692	22.3 (20.4−24.3)
	de Jonge 2013	>=20	1463	29.8 (27.5−32.2)
Greece	Agorastos 2009	−	4139	5.9 (5.2−6.7)
	Argyri 2013 (Athens)	14−70	2218	15.7 (14.2−17.3)
	Tsiodras 2011	−	1348	39.5 (36.9−42.1)
	Agorastos 2004	17−69	1272	2.0 (1.4−3.0)
	Tsiodras 2010 (Athens)	21−45	1029	10.2 (8.5−12.2)
	Paraskevaidis 2001 (Ioannina)	17−79	738	6.4 (4.8−8.4)
	Panotopoulou 2007 (Athens)	18−48	639	26.4 (23.2−30.0)
Hungary	Nyári 2006	20−60	491	5.5 (3.8−7.9)
Ireland	Anderson 2013 (Northern Ireland)	20−64	5068	13.2 (12.3−14.2)
	Keegan 2007 (Dublin)	16−72	886	11.4 (9.5−13.7)
Italy	Ronco 2006	35−60	15361	5.5 (5.2−5.9)
	Agarossi 2009[b]	15−73	9148	11.3 (10.7−12.0)
	Ronco 2006	25−34	5334	9.6 (8.8−10.4)
	Giorgi Rossi 2011	25−64	3151	9.7 (8.8−10.8)
	Tenti 1997 (Pavia)	16−47	1064	12.3 (10.5−14.4)
	Ronco 2005 (Turin)	25−70	997	7.8 (6.3−9.7)
	Giambi 2013[c]	18−26	907	13.6 (11.5−15.9)
	Ammatuna 2008 (Sicily)	18−24	894	22.4 (19.8−25.2)
	Del Prete 2008 (Apulia)[c]	>=20	871	23.2 (20.5−26.1)
	Verteramo 2009 (Rome)	17−57	737	21.7 (18.9−24.8)
	Panatto 2013 (Turin, Milan and Genoa)	16−26	566	18.2 (15.2−21.6)
	Centurioni 2005 (Genova)	20−81	500	15.4 (12.5−18.8)
	Sammarco 2013 (Molise)	18−63	398	32.4 (28.0−37.2)
	Carozzi 2000 (Florence)	25−64	332	5.1 (3.2−8.0)
	Masia 2009 (Sardinia)	18−46	309	17.8 (13.9−22.5)
	Piana 2011 (North Sardinia)	15−54	242	32.2 (26.7−38.4)
	Zappacosta 2009 (Molise)	21−64	220	6.4 (3.8−10.4)
	Astori 1997 (Udine)	18−67	197	20.3 (15.3−26.5)
	Tornesello 2006 (Milan, Naples)	18−63	183	19.7 (14.6−26.0)
	Tornesello 2008 (Naples)	−	107	11.2 (6.5−18.6)
Latvia	Silins 2004	18−89	237	8.0 (5.2−12.2)

Data updated on 22 May 2023 (data as of 30 Jun 2014)

The samples for HPV testing come from cervical specimens (fresh/fixed biopsies or exfoliated cells)
[a] Number of women tested
[b] Abruzzo, Campania, Lazio, Sardinia and Sicily
[c] Turin, Trento, Veneto, Emilia Romagna, Florence and Lazio
Data Sources: See references in Section 9 References.

Figure 44: Prevalence of HPV among women with normal cervical cytology in Europe, by country and study (continued)

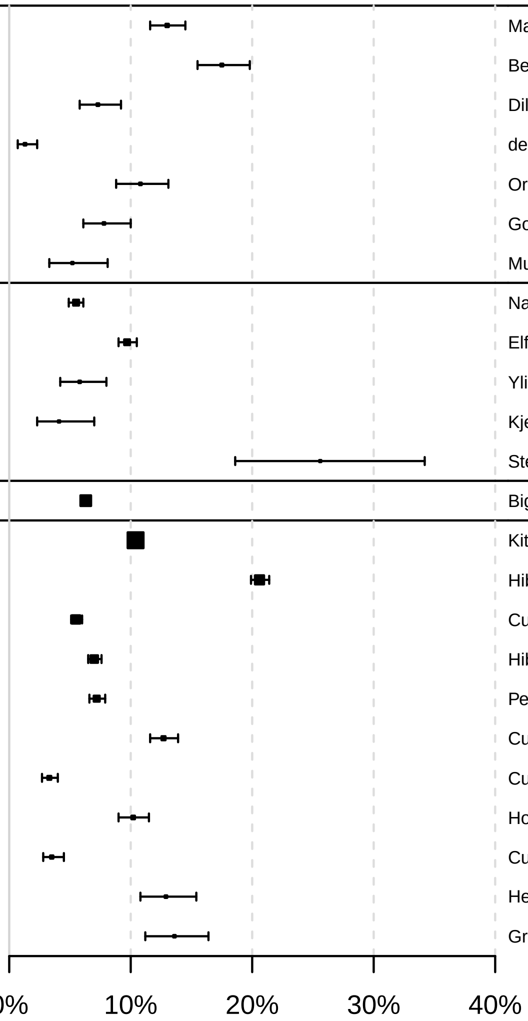


Country	Study	Age	N	% (95% CI)
Lithuania	Kliucinskas 2006	18−50	1001	25.1 (22.5−27.9)
	Gudleviciene 2005 (Vilnius)[b]	16−64	332	24.1 (19.8−29.0)
	Simanaviciene 2014 (Vilnius)	18−81	277	24.2 (19.5−29.6)
Netherlands	Rijkaart 2012 (Utrecht)	29−61	25196	4.1 (3.8−4.3)
	Bulkmans 2004 (Amsterdam)[c]	30−60	21245	3.6 (3.3−3.9)
	Rijkaart 2012	30−56	19373	4.0 (3.7−4.2)
	Jacobs 2000 (Amsterdam)	16−68	3299	4.4 (3.8−5.2)
	Rozendaal 2000 (Amsterdam)	34−54	2250	5.4 (4.5−6.4)
	Lenselink 2008	18−29	2065	19.0 (17.4−20.8)
	Boers 2014	30−60	900	3.8 (2.7−5.2)
	Hesselink 2013 (Utrecht region)	31−60	858	8.2 (6.5−10.2)
	Zielinski 2001 (Zeeland)	34−54	114	6.1 (3.0−12.1)
Norway	Molden 2005 (Oslo)	30−69	3970	9.3 (8.4−10.2)
	Skjeldestad 2008 (Oslo, Trondheim, and Levanger)	16−24	896	25.9 (23.1−28.9)
	Molden 2006 (Oslo)	<=30	275	30.9 (25.7−36.6)
	Gjøoen 1996 (Oslo)	20−44	222	15.3 (11.2−20.6)
Poland	Bardin 2008 (Warsaw)	18−59	799	14.4 (12.1−17.0)
Portugal	Pista 2011	18−64	2172	16.5 (15.0−18.1)
	Vieira 2013[d]	18−76	464	17.0 (13.9−20.7)
	Pista 2011	18−67	425	25.4 (21.5−29.8)
	Dutra 2008 (Açores)	16−81	286	10.5 (7.4−14.6)
Romania	Moga 2014 (Brasov County)	17−57	801	34.3 (31.1−37.7)
	Ursu 2011 (Northeast)[d]	−	164	25.6 (19.5−32.8)
Russian Federation	Bdaizieva 2010 (Moscow)	15−69	33112	25.7 (25.2−26.1)
	Kubanov 2005 (Moscow)	−	8533	15.0 (14.3−15.8)
	Goncharevskaya 2011 (Moscow)	15−77	5182	13.4 (12.5−14.4)
	Rogovskaya 2013 (Moscow and Novgorod)	16−76	833	25.9 (23.1−29.0)
	Shipitsyna 2011 (St Petersburg)	30−65	741	9.9 (7.9−12.2)
	Komarova 2010 (Moscow)	16−76	352	48.3 (43.1−53.5)
	Alexandrova 1999 (St. Petersburg)	15−45	309	29.1 (24.3−34.4)
	Shargorodskaya 2011 (Moscow)	18−30	266	28.2 (23.1−33.9)
	Shipulina 2011 (Moscow)	13−19	177	40.1 (33.2−47.5)
Slovenia	Ucakar 2012	20−64	4199	10.7 (9.8−11.7)
	Ucakar 2014	20−64	944	8.8 (7.1−10.8)
Spain	Castellsagué 2012	18−65	3059	13.0 (11.9−14.2)

Data updated on 22 May 2023 (data as of 30 Jun 2014)

The samples for HPV testing come from cervical specimens (fresh/fixed biopsies or exfoliated cells)
[a] Number of women tested
[b] Arnhem, Nijmegen, and Den Bosch
[c] Lisbon area and southern region
[d] Gothenburg, Malmö, Uppsala, Umeå, and Stockholm
Data Sources: See references in Section 9 References.

Figure 44: Prevalence of HPV among women with normal cervical cytology in Europe, by country and study (continued)



Country	Study	Age	N	% (95% CI)
Spain	Martorell 2010 (Valencia)	18−64	1956	13.0 (11.6−14.5)
	Bernal 2008 (Zaragoza)	−	1200	17.5 (15.5−19.8)
	Dillner 2008 (Maresme)	14−82	939	7.3 (5.8−9.2)
	de Sanjose 2003 (Barcelona)	14−75	847	1.3 (0.7−2.3)
	Ortiz 2006 (Madrid and Alicante)	14−67	818	10.8 (8.8−13.1)
	González 2006 (Alicante)	−	703	7.8 (6.1−10.0)
	Muñoz 1996	18−75	329	5.2 (3.3−8.1)
Sweden	Naucler 2007	29−46	5877	5.5 (4.9−6.1)
	Elfström 2014	32−38	5772	9.7 (9.0−10.5)
	Ylitalo 2000 (Uppsala)	15−49	617	5.8 (4.2−8.0)
	Kjellberg 1998 (Västerbotten County)	20−63	295	4.1 (2.3−7.0)
	Stenvall 2007 (Uppsala)	35−50	117	25.6 (18.6−34.2)
Switzerland	Bigras 2005	17−93	13349	6.3 (5.9−6.7)
United Kingdom	Kitchener 2006 (Manchester)	20−64	21380	10.4 (10.0−10.8)
	Hibbitts 2014 (Wales)	20−22	10890	20.6 (19.9−21.4)
	Cuzick 2003	30−60	9709	5.5 (5.1−6.0)
	Hibbitts 2008 (South Wales)	20−65	8434	7.0 (6.5−7.6)
	Peto 2004 (Manchester)	15−64	6128	7.2 (6.6−7.9)
	Cuschieri 2004 (Edinburgh)	16−78	3089	12.7 (11.6−13.9)
	Cuzick 1999 (London)[b]	34−70	2855	3.3 (2.7−4.0)
	Howell−Jones 2010	25−64	2404	10.2 (9.0−11.5)
	Cuzick 1995 (London)	17−59	1818	3.5 (2.8−4.5)
	Herbert 2007 (London)[c]	20−49	813	12.9 (10.8−15.4)
	Grainge 2005 (Nottingham)	21−51	656	13.6 (11.2−16.4)

Data updated on 22 May 2023 (data as of 30 Jun 2014)

The samples for HPV testing come from cervical specimens (fresh/fixed biopsies or exfoliated cells)
[a] Number of women tested
[b] Gateshead, Birmingham, London, Gloucestershire and Norfolk
[c] Thessaloniki, Thermi, Mihaniona, Corfu, Veria and Serres
Data Sources: See references in Section 9 References.

4.1.2 HPV type distribution among women with normal cervical cytology, precancerous cervical lesions and cervical cancer

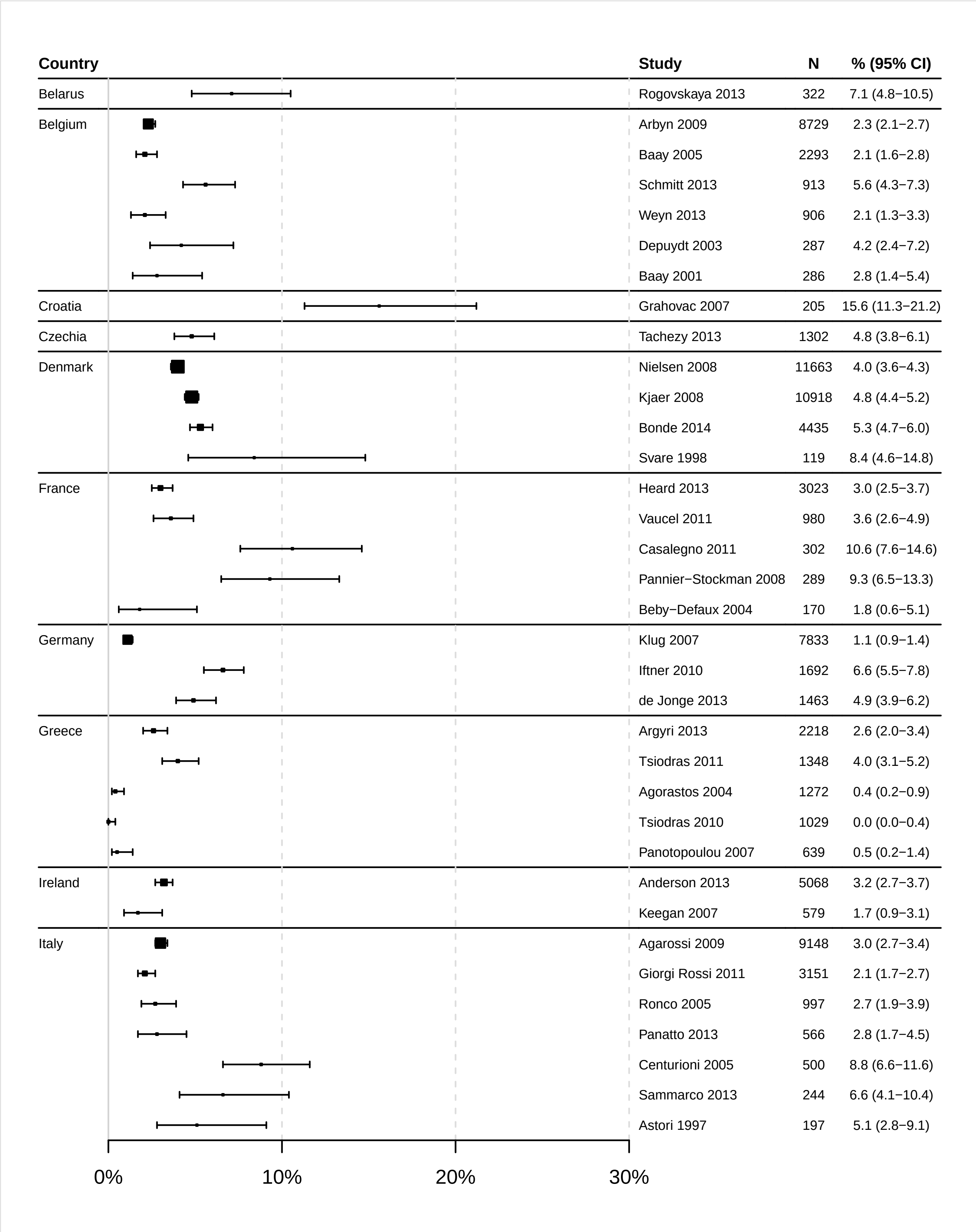
Table 28: Prevalence of HPV16 and HPV18 by cytology in Europe

	No. tested[a]	HPV 16/18 Prevalence % (95% CI)[b]
Normal cytology[1,2]	180090	3.8 (3.7-3.9)
Low-grade lesions[3,4]	19401	27.1 (26.5-27.7)
High-grade lesions[5,6]	21140	54.5 (53.8-55.2)
Cervical cancer[7,8]	18406	74.0 (73.4-74.6)

Data updated on 22 May 2023 (data as of 30 Jun 2015 / 30 Nov 2014)

The samples for HPV testing come from cervical specimens (fresh/fixed biopsies or exfoliated cells)
[a] Number of women tested
[b] 95% Confidence Interval
Data Sources: See references in Section 9 References.

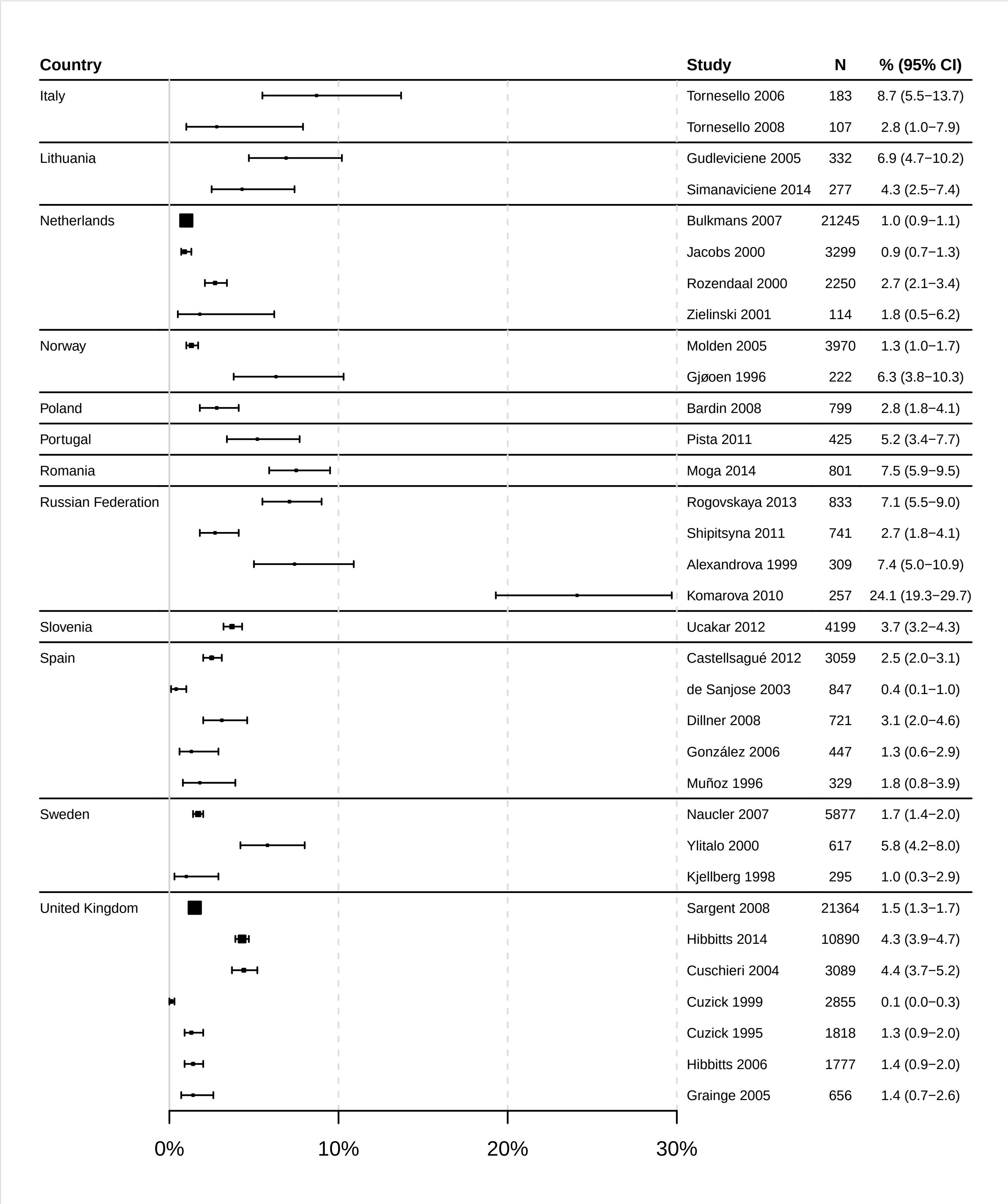
Figure 45: Prevalence of HPV 16 among women with normal cervical cytology in Europe, by country and study



Data updated on 22 May 2023 (data as of 30 Jun 2014)

The samples for HPV testing come from cervical specimens (fresh/fixed biopsies or exfoliated cells)
[a] Number of women tested
Data Sources: See references in Section 9 References.

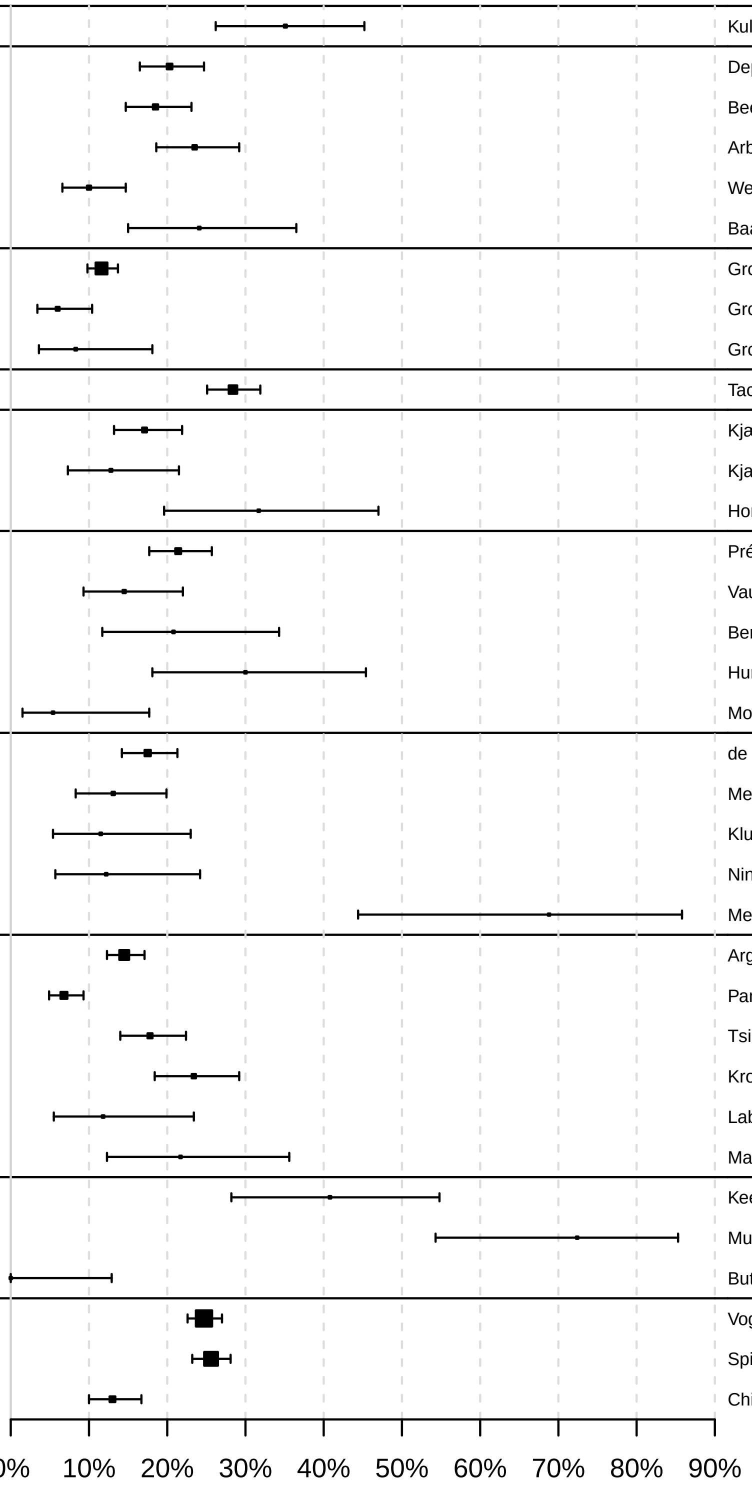
Figure 45: Prevalence of HPV 16 among women with normal cervical cytology in Europe, by country and study (continued)



Data updated on 22 May 2023 (data as of 30 Jun 2014)

The samples for HPV testing come from cervical specimens (fresh/fixed biopsies or exfoliated cells)
[a] Number of women tested
Data Sources: See references in Section 9 References.

Figure 46: Prevalence of HPV 16 among women with low-grade cervical lesions in Europe, by country and study

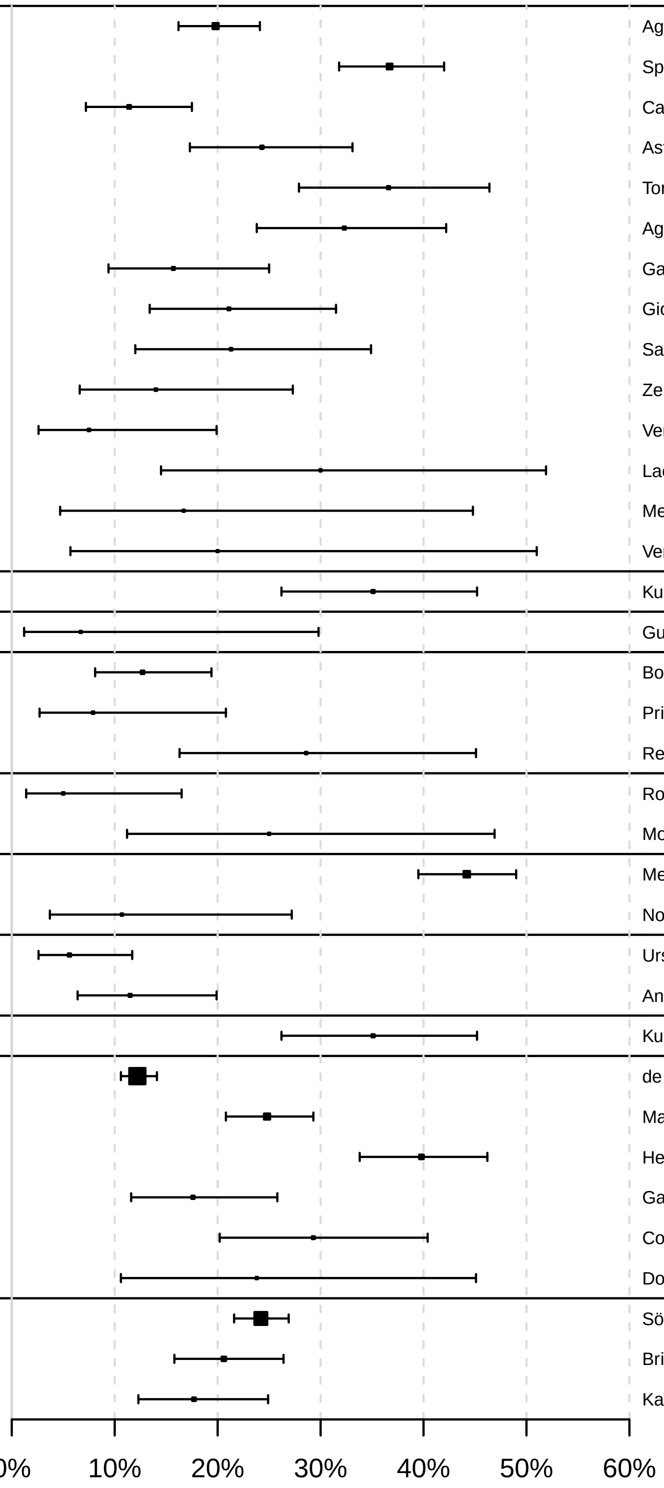


Country	Study	N	% (95% CI)
Belarus	Kulmala 2007	94	35.1 (26.2−45.2)
Belgium	Depuydt 2003	369	20.3 (16.5−24.7)
	Beerens 2005	324	18.5 (14.7−23.1)
	Arbyn 2009	243	23.5 (18.6−29.2)
	Weyn 2013	211	10.0 (6.6−14.7)
	Baay 2001	58	24.1 (15.0−36.5)
Croatia	Grce 2001	1028	11.6 (9.8−13.7)
	Grce 1997	183	6.0 (3.4−10.4)
	Grce 2004	60	8.3 (3.6−18.1)
Czechia	Tachezy 2011	676	28.4 (25.1−31.9)
Denmark	Kjær 2014	287	17.1 (13.2−21.9)
	Kjaer 2008	86	12.8 (7.3−21.5)
	Hording 1995	41	31.7 (19.6−47.0)
France	Prétet 2008	397	21.4 (17.7−25.7)
	Vaucel 2011	117	14.5 (9.3−22.0)
	Bergeron 1992	48	20.8 (11.7−34.3)
	Humbey 2002	40	30.0 (18.1−45.4)
	Monsonego 2008	37	5.4 (1.5−17.7)
Germany	de Jonge 2013	441	17.5 (14.2−21.3)
	Meyer 2001	130	13.1 (8.3−19.9)
	Klug 2007	52	11.5 (5.4−23.0)
	Nindl 1999	49	12.2 (5.7−24.2)
	Merkelbach−Bruse 1999	16	68.8 (44.4−85.8)
Greece	Argyri 2013	821	14.5 (12.3−17.1)
	Panotopoulou 2007	516	6.8 (4.9−9.3)
	Tsiodras 2011	314	17.8 (14.0−22.4)
	Kroupis 2007	235	23.4 (18.4−29.2)
	Labropoulou 1997	51	11.8 (5.5−23.4)
	Mammas 2008	46	21.7 (12.3−35.6)
Ireland	Keegan 2014	49	40.8 (28.2−54.8)
	Murphy 2003	29	72.4 (54.3−85.3)
	Butler 2000	26	0.0 (0.0−12.9)
Italy	Voglino 2000	1499	24.7 (22.6−27.0)
	Spinillo 2014	1240	25.6 (23.2−28.1)
	Chironna 2010	385	13.0 (10.0−16.7)

Data updated on 22 May 2023 (data as of 30 Jun 2015)

The samples for HPV testing come from cervical specimens (fresh/fixed biopsies or exfoliated cells)
[a] Number of women tested
Data Sources: See references in Section 9 References.

Figure 46: Prevalence of HPV 16 among women with low-grade cervical lesions in Europe, by country and study (continued)

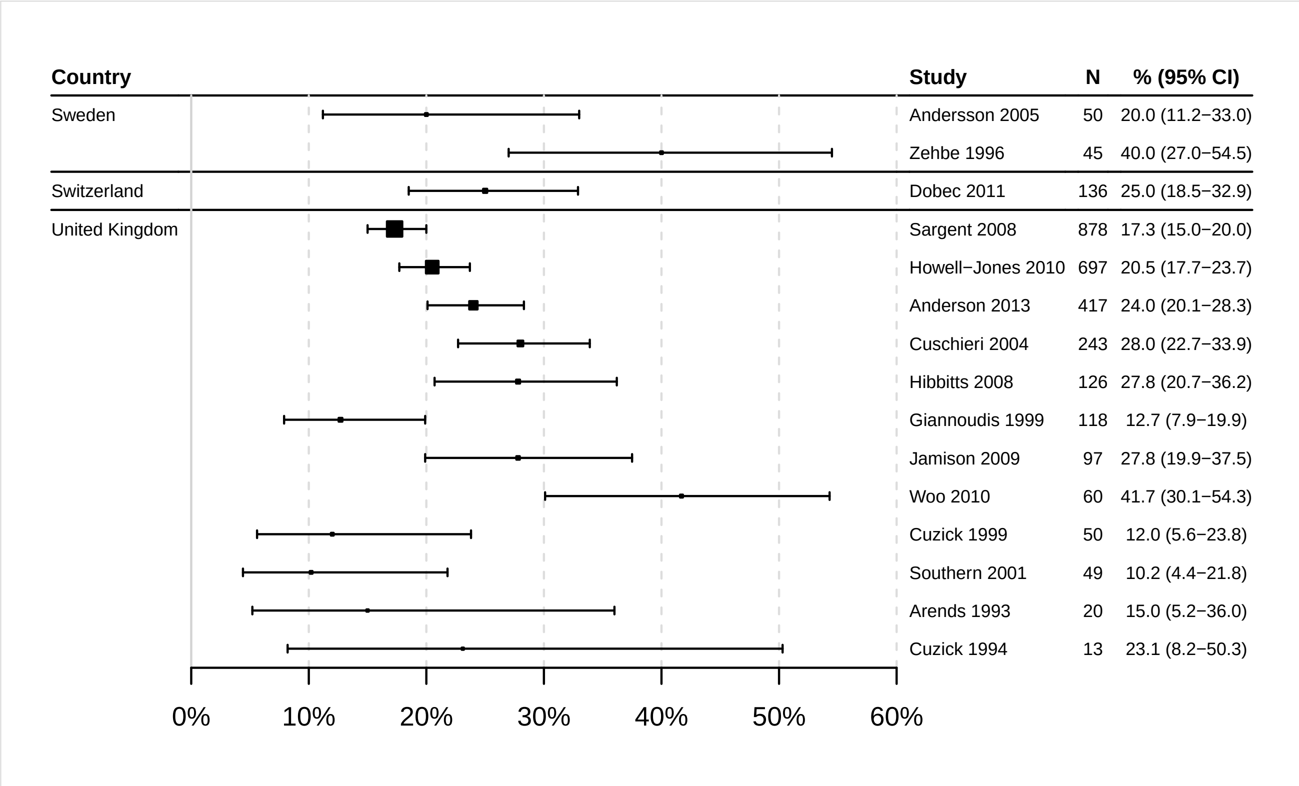


Country	Study	N	% (95% CI)
Italy	Agarossi 2009	383	19.8 (16.2−24.1)
	Spinillo 2009	343	36.7 (31.8−42.0)
	Capra 2008	149	11.4 (7.2−17.5)
	Astori 1997	111	24.3 (17.3−33.1)
	Tornesello 2006	101	36.6 (27.9−46.4)
	Agodi 2009	96	32.3 (23.8−42.2)
	Gargiulo 2007	83	15.7 (9.4−25.0)
	Giorgi Rossi 2010	76	21.1 (13.4−31.5)
	Sandri 2009	47	21.3 (12.0−34.9)
	Zerbini 2001	43	14.0 (6.6−27.3)
	Venturoli 2002	40	7.5 (2.6−19.9)
	Laconi 2000	20	30.0 (14.5−51.9)
	Menegazzi 2009	12	16.7 (4.7−44.8)
	Venturoli 2008	10	20.0 (5.7−51.0)
Latvia	Kulmala 2007	94	35.1 (26.2−45.2)
Lithuania	Gudleviciene 2005	15	6.7 (1.2−29.8)
Netherlands	Bollen 1997	134	12.7 (8.1−19.4)
	Prinsen 2007	38	7.9 (2.7−20.8)
	Reesink−Peters 2001	35	28.6 (16.3−45.1)
Norway	Roberts 2006	40	5.0 (1.4−16.5)
	Molden 2005	20	25.0 (11.2−46.9)
Portugal	Medeiros 2005	416	44.2 (39.5−49.0)
	Nobre 2010	28	10.7 (3.7−27.2)
Romania	Ursu 2011	107	5.6 (2.6−11.7)
	Anton 2011	87	11.5 (6.4−19.9)
Russian Federation	Kulmala 2007	94	35.1 (26.2−45.2)
Spain	de Oña 2010	1356	12.2 (10.6−14.1)
	Martín 2011	387	24.8 (20.8−29.3)
	Herraez−Hernandez 2013	236	39.8 (33.8−46.2)
	García−Sierra 2009	108	17.6 (11.6−25.8)
	Conesa−Zamora 2009	75	29.3 (20.2−40.4)
	Doménech−Peris 2010	21	23.8 (10.6−45.1)
Sweden	Söderlund−Strand 2011	1035	24.2 (21.6−26.9)
	Brismar−Wendel 2009	223	20.6 (15.8−26.4)
	Kalantari 1997	141	17.7 (12.3−24.9)

Data updated on 22 May 2023 (data as of 30 Jun 2015)

The samples for HPV testing come from cervical specimens (fresh/fixed biopsies or exfoliated cells)
[a] Number of women tested
Data Sources: See references in Section 9 References.

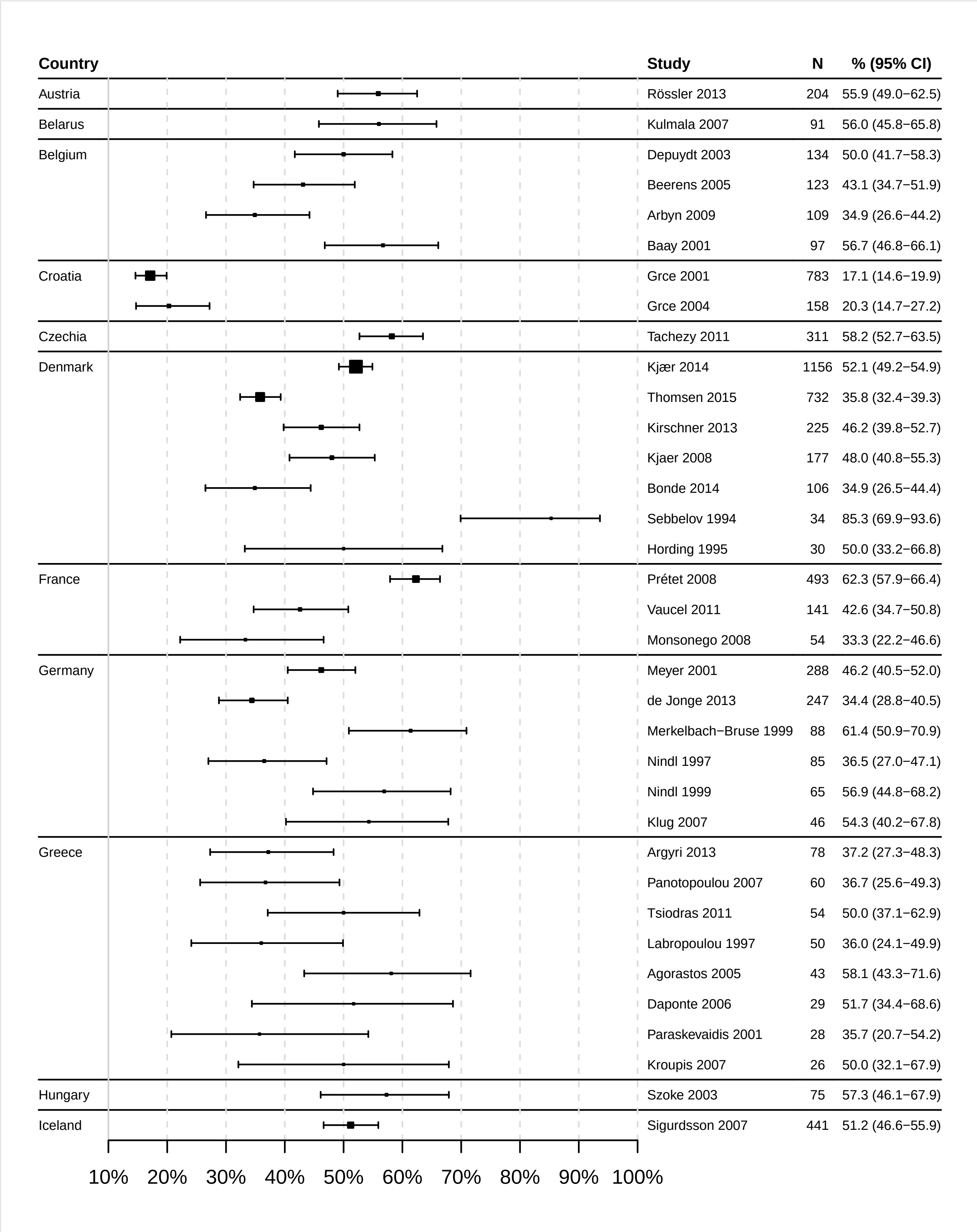
Figure 46: Prevalence of HPV 16 among women with low-grade cervical lesions in Europe, by country and study (continued)



Data updated on 22 May 2023 (data as of 30 Jun 2015)

The samples for HPV testing come from cervical specimens (fresh/fixed biopsies or exfoliated cells)
[a] Number of women tested
Data Sources: See references in Section 9 References.

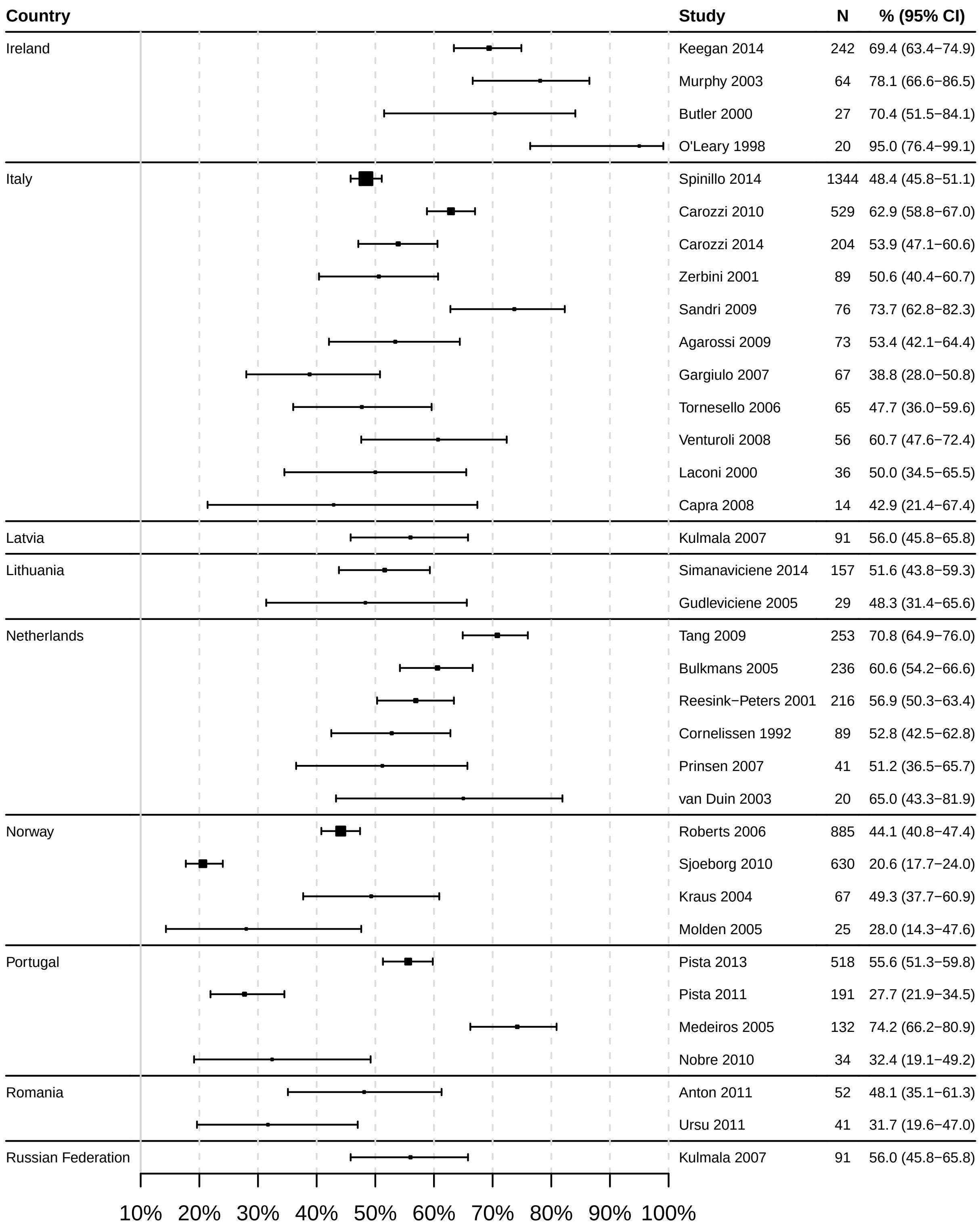
Figure 47: Prevalence of HPV 16 among women with high-grade cervical lesions in Europe, by country and study



Data updated on 22 May 2023 (data as of 30 Jun 2015)

The samples for HPV testing come from cervical specimens (fresh/fixed biopsies or exfoliated cells)
[a] Number of women tested
Data Sources: See references in Section 9 References.

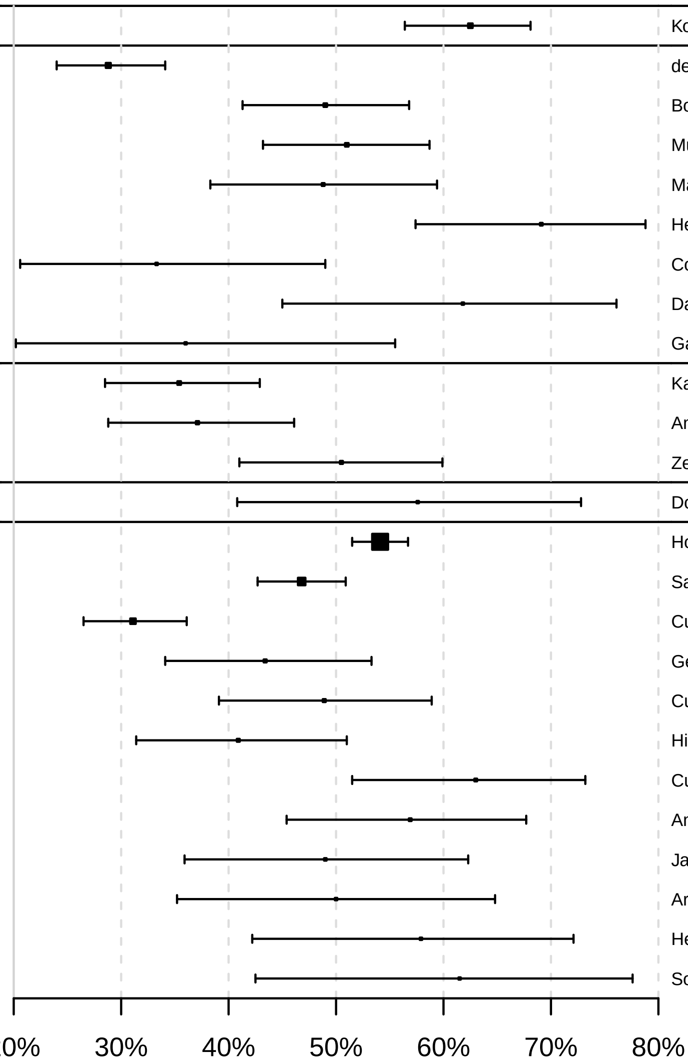
Figure 47: Prevalence of HPV 16 among women with high-grade cervical lesions in Europe, by country and study (continued)



Data updated on 22 May 2023 (data as of 30 Jun 2015)

The samples for HPV testing come from cervical specimens (fresh/fixed biopsies or exfoliated cells)
[a] Number of women tested
Data Sources: See references in Section 9 References.

Figure 47: Prevalence of HPV 16 among women with high-grade cervical lesions in Europe, by country and study (continued)

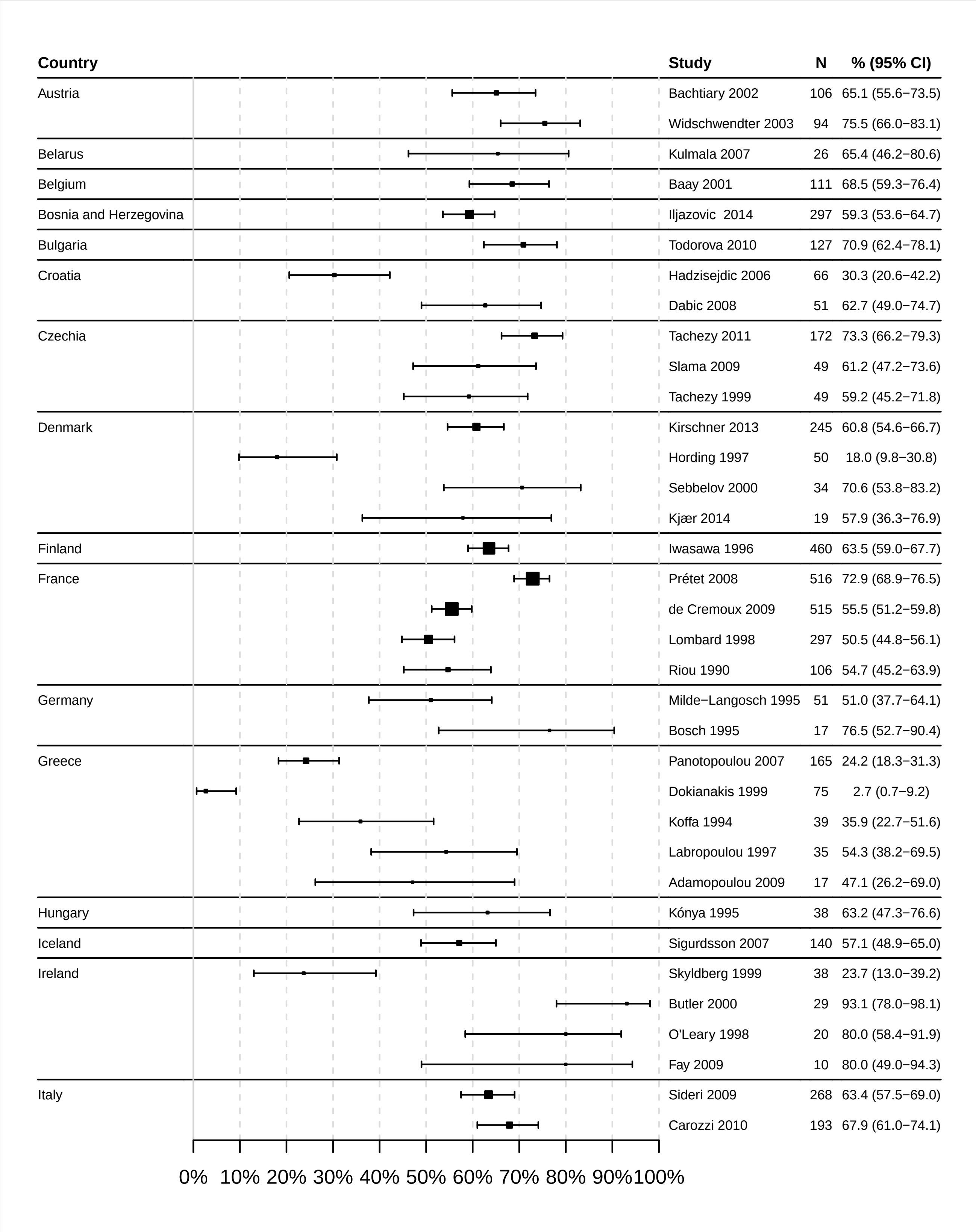


Country	Study	N	% (95% CI)
Slovenia	Kovanda 2009	261	62.5 (56.4−68.1)
Spain	de Oña 2010	306	28.8 (24.0−34.1)
	Bosch 1993	157	49.0 (41.3−56.8)
	Muñoz 1992	157	51.0 (43.2−58.7)
	Martín 2011	82	48.8 (38.3−59.4)
	Herraez−Hernandez 2013	68	69.1 (57.4−78.8)
	Conesa−Zamora 2009	39	33.3 (20.6−49.0)
	Darwich 2011	34	61.8 (45.0−76.1)
	García−Sierra 2009	25	36.0 (20.2−55.5)
Sweden	Kalantari 1997	164	35.4 (28.5−42.9)
	Andersson 2005	116	37.1 (28.8−46.1)
	Zehbe 1996	103	50.5 (41.0−59.9)
Switzerland	Dobec 2011	33	57.6 (40.8−72.8)
United Kingdom	Howell−Jones 2010	1425	54.1 (51.5−56.7)
	Sargent 2008	562	46.8 (42.7−50.9)
	Cuzick 2014	354	31.1 (26.5−36.1)
	Geraets 2014	99	43.4 (34.1−53.3)
	Cuschieri 2004	94	48.9 (39.1−58.9)
	Hibbitts 2008	93	40.9 (31.4−51.0)
	Cuzick 1994	73	63.0 (51.5−73.2)
	Anderson 2013	72	56.9 (45.4−67.7)
	Jamison 2009	51	49.0 (35.9−62.3)
	Arends 1993	40	50.0 (35.2−64.8)
	Herrington 1995	38	57.9 (42.2−72.1)
	Southern 1998	26	61.5 (42.5−77.6)

Data updated on 22 May 2023 (data as of 30 Jun 2015)

The samples for HPV testing come from cervical specimens (fresh/fixed biopsies or exfoliated cells)
[a] Number of women tested
Data Sources: See references in Section 9 References.

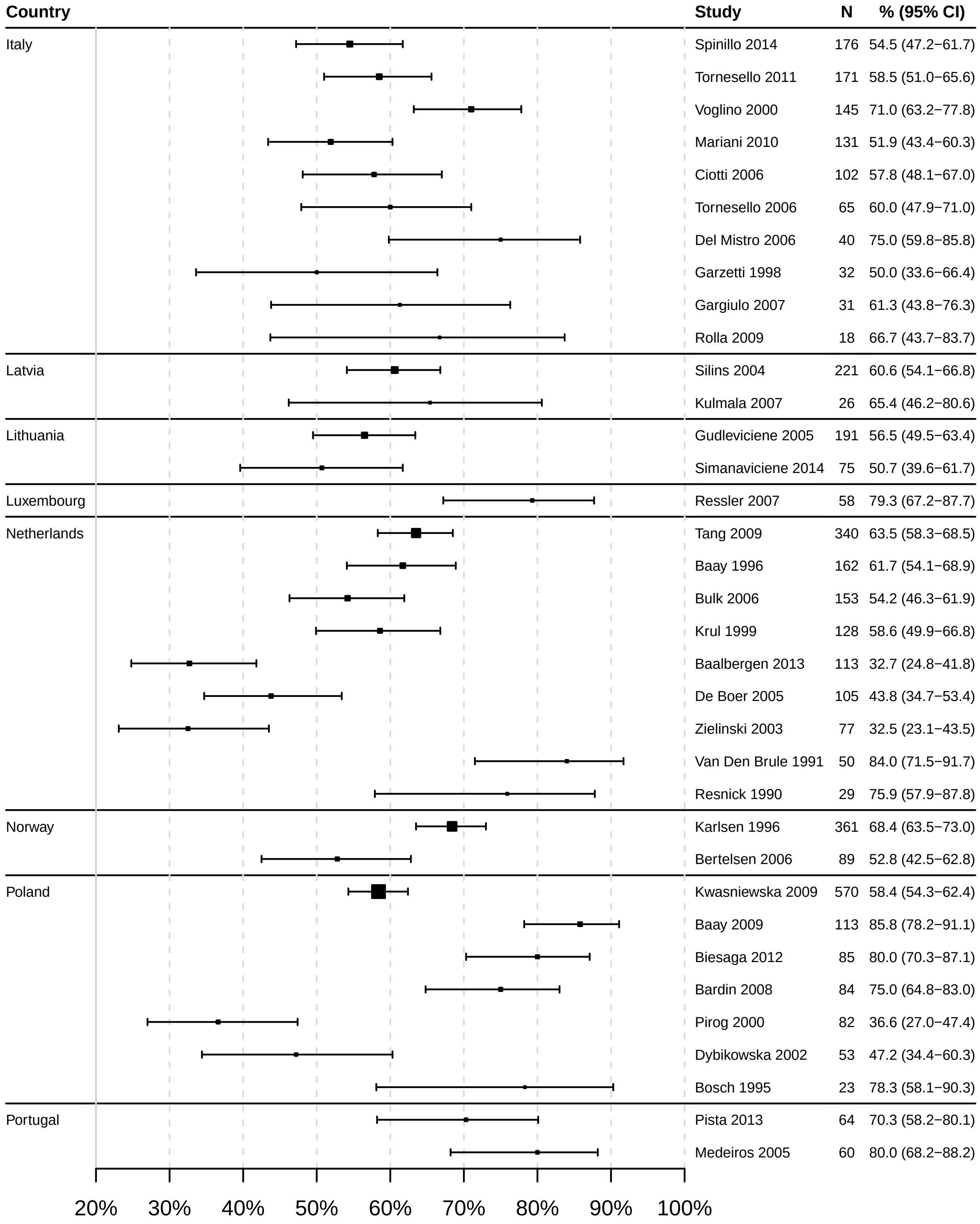
Figure 48: Prevalence of HPV 16 among women with invasive cervical cancer in Europe, by country and study



Data updated on 22 May 2023 (data as of 30 Jun 2015)

The samples for HPV testing come from cervical specimens (fresh/fixed biopsies or exfoliated cells)
[a] Number of women tested
Data Sources: See references in Section 9 References.

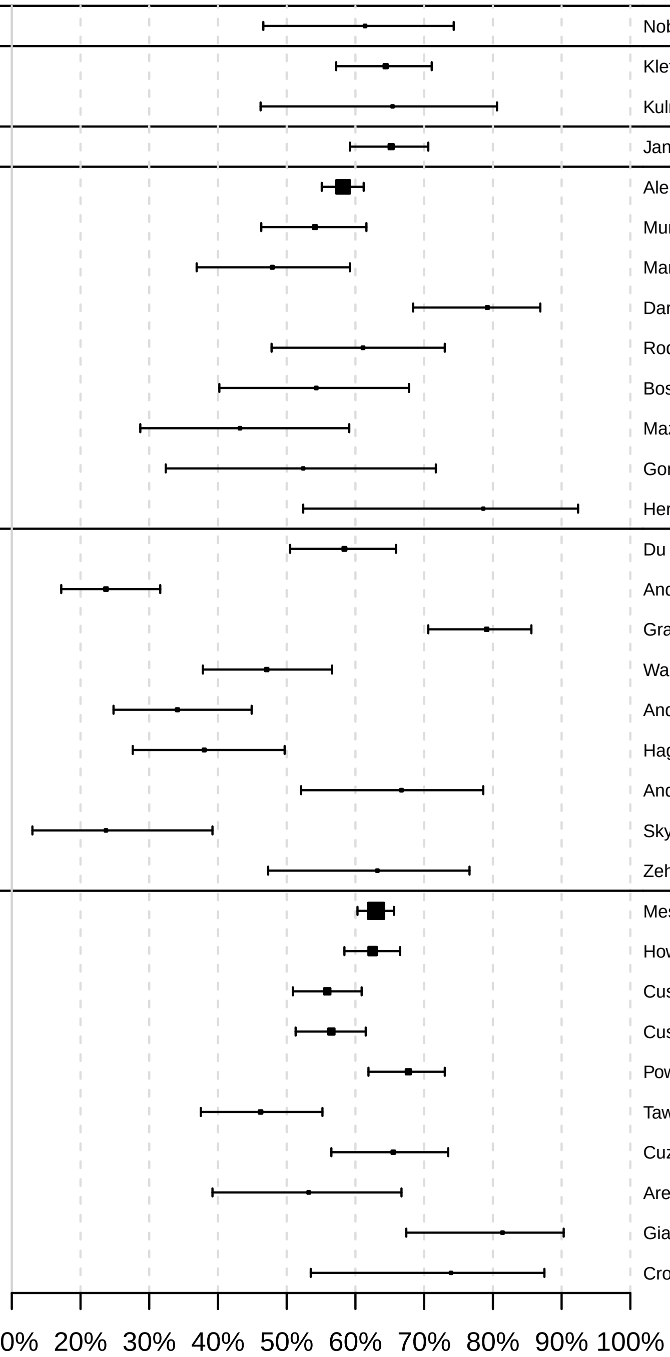
Figure 48: Prevalence of HPV 16 among women with invasive cervical cancer in Europe, by country and study (continued9



Data updated on 22 May 2023 (data as of 30 Jun 2015)

The samples for HPV testing come from cervical specimens (fresh/fixed biopsies or exfoliated cells)
[a] Number of women tested
Data Sources: See references in Section 9 References.

Figure 48: Prevalence of HPV 16 among women with invasive cervical cancer in Europe, by country and study (continued9

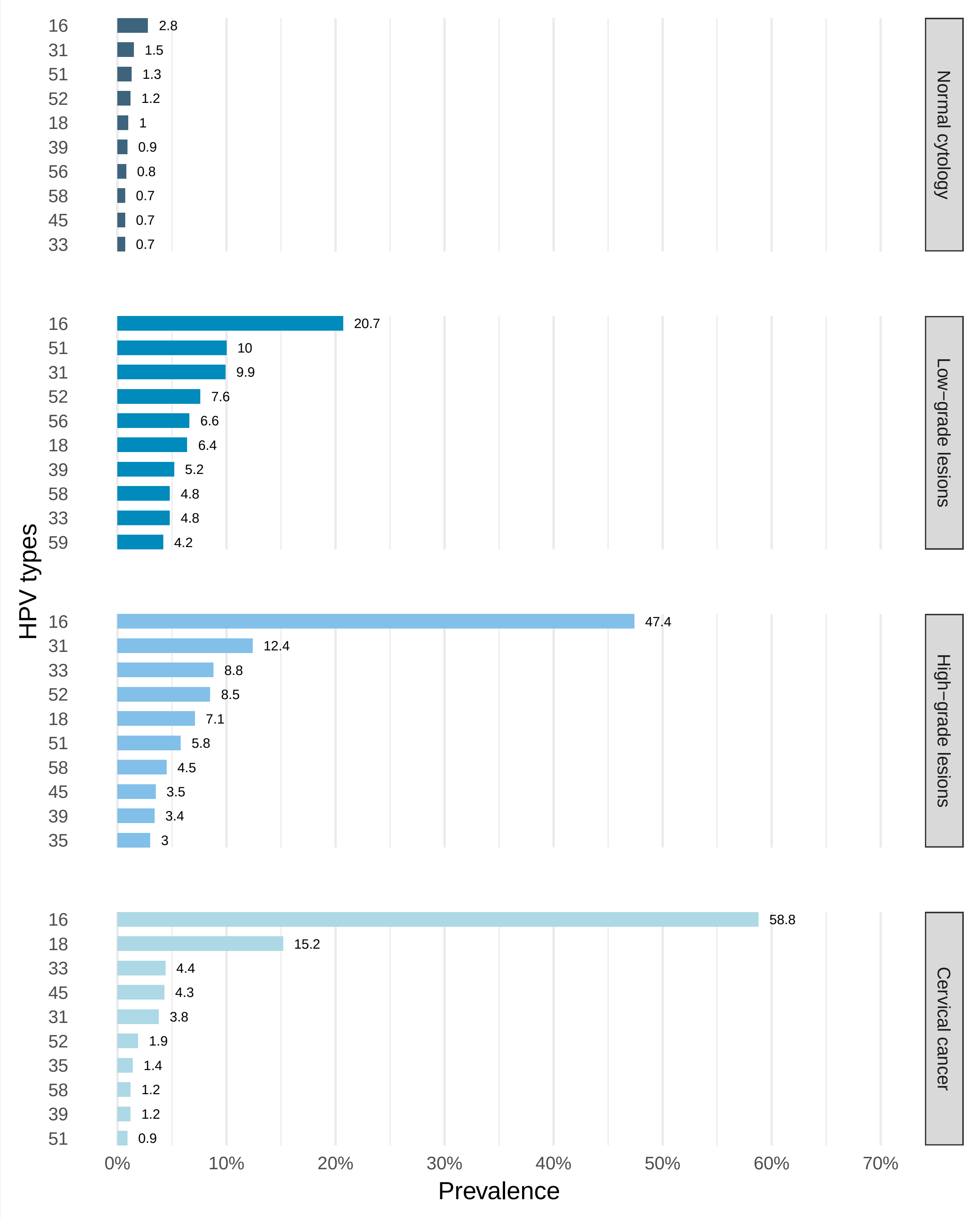


Country	Study	N	% (95% CI)
Portugal	Nobre 2010	44	61.4 (46.6−74.3)
Russian Federation	Kleter 1999	180	64.4 (57.2−71.1)
	Kulmala 2007	26	65.4 (46.2−80.6)
Slovenia	Jancar 2009	264	65.2 (59.2−70.6)
Spain	Alemany 2012	1012	58.2 (55.1−61.2)
	Muñoz 1992	159	54.1 (46.3−61.6)
	Martró 2012	73	47.9 (36.9−59.2)
	Darwich 2011	72	79.2 (68.4−86.9)
	Rodriguez 1998	54	61.1 (47.8−73.0)
	Bosch 1995	46	54.3 (40.2−67.8)
	Mazarico 2012	37	43.2 (28.7−59.1)
	González−Bosquet 2008	21	52.4 (32.4−71.7)
	Herraez−Hernandez 2013	14	78.6 (52.4−92.4)
Sweden	Du 2011	154	58.4 (50.5−65.9)
	Andersson 2001	131	23.7 (17.2−31.6)
	Graflund 2004	110	79.1 (70.6−85.6)
	Wallin 1999	104	47.1 (37.8−56.6)
	Andersson 2003	82	34.1 (24.8−44.9)
	Hagmar 1992	71	38.0 (27.6−49.7)
	Andersson 2005	45	66.7 (52.1−78.6)
	Skyldberg 1999	38	23.7 (13.0−39.2)
	Zehbe 1997	38	63.2 (47.3−76.6)
United Kingdom	Mesher 2015	1235	63.0 (60.3−65.6)
	Howell−Jones 2010	555	62.5 (58.4−66.5)
	Cuschieri 2014	370	55.9 (50.9−60.9)
	Cuschieri 2010	363	56.5 (51.3−61.5)
	Powell 2009	269	67.7 (61.9−73.0)
	Tawfik El−Mansi 2006	119	46.2 (37.5−55.2)
	Cuzick 2000	116	65.5 (56.5−73.5)
	Arends 1993	47	53.2 (39.2−66.7)
	Giannoudis 1999	43	81.4 (67.4−90.3)
	Crook 1992	23	73.9 (53.5−87.5)

Data updated on 22 May 2023 (data as of 30 Jun 2015)

The samples for HPV testing come from cervical specimens (fresh/fixed biopsies or exfoliated cells)
[a] Number of women tested
<u>Data Sources</u>: See references in Section 9 References.

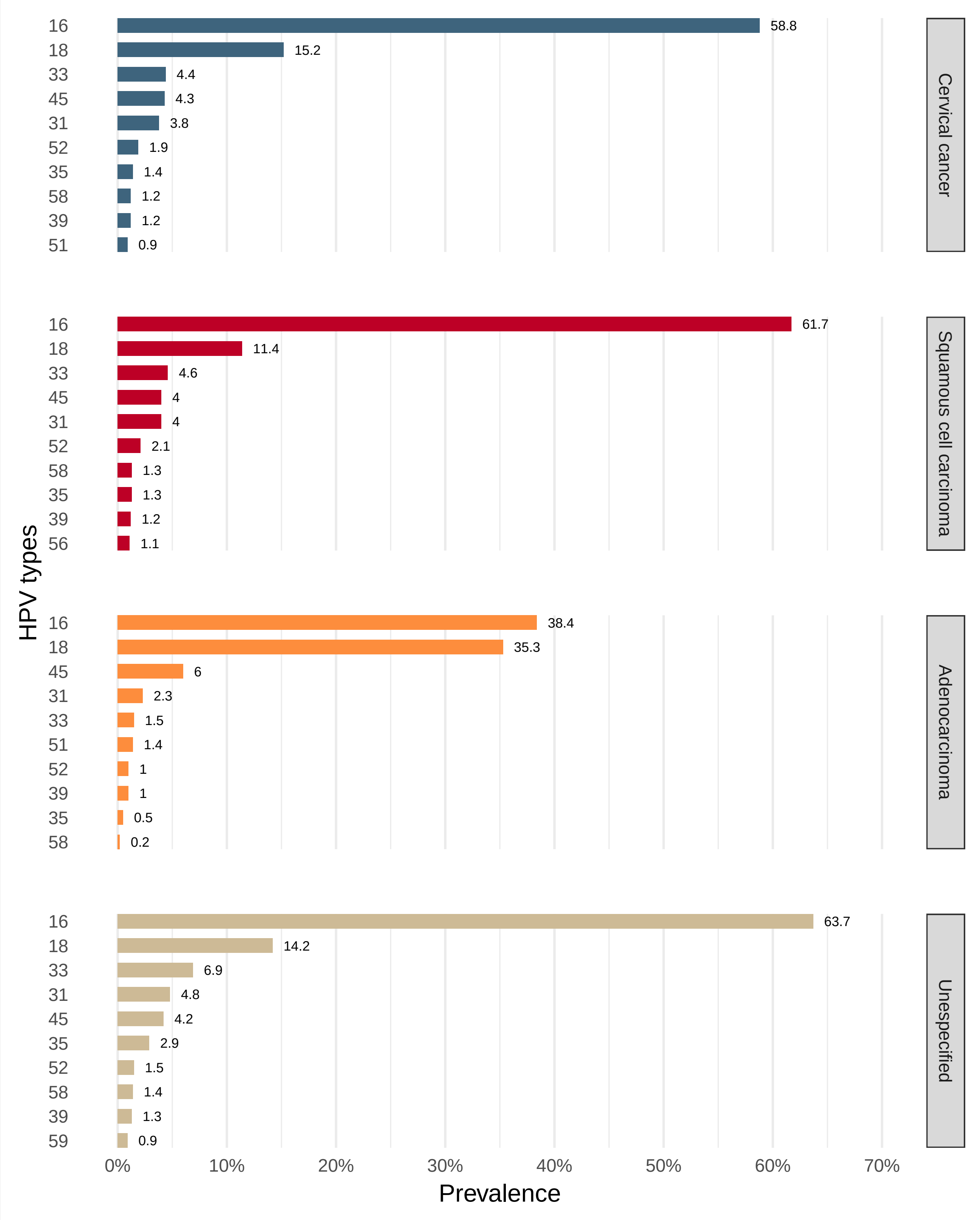
Figure 49: Comparison of the ten most frequent HPV oncogenic types in Europe among women with and without cervical lesions



Data updated on 22 May 2023 (data as of 30 Jun 2015)

Data Sources: See references in Section 9 References.

Figure 50: Comparison of the ten most frequent HPV oncogenic types in Europe among women with invasive cervical cancer by histology



Data updated on 22 May 2023 (data as of 30 Jun 2015)

* No data available. No more types than shown were tested or were positive
Data Sources: See references in Section 9 References.

Table 29: Type-specific HPV prevalence in women with normal cervical cytology, precancerous cervical lesions and invasive cervical cancer in Europe

	Normal cytology		Low-grade lesions		High-grade lesions		Cervical cancer	
HPV Type	No. tested	HPV Prev % (95% CI)	No. tested	HPV Prev % (95% CI)	No. tested	HPV Prev % (95% CI)	No. tested	HPV Prev % (95% CI)
ONCOGENIC HPV TYPES								
High-risk HPV types								
16	180,090	2.8 (2.7-2.8)	19,401	20.7 (20.1-21.2)	21,140	47.4 (46.8-48.1)	18,406	58.8 (58.1-59.5)
18	178,318	1.0 (0.9-1.0)	18,972	6.4 (6.0-6.7)	20,697	7.1 (6.7-7.4)	18,328	15.2 (14.7-15.7)
31	164,983	1.5 (1.4-1.6)	18,505	9.9 (9.5-10.3)	20,002	12.4 (11.9-12.9)	16,082	3.8 (3.6-4.2)
33	164,623	0.7 (0.7-0.7)	18,233	4.8 (4.5-5.1)	20,312	8.8 (8.4-9.2)	16,704	4.4 (4.1-4.8)
35	153,819	0.4 (0.3-0.4)	14,105	3.2 (3.0-3.5)	17,923	3.0 (2.7-3.2)	15,013	1.4 (1.2-1.6)
39	152,061	0.9 (0.8-0.9)	12,984	5.2 (4.8-5.6)	17,575	3.4 (3.2-3.7)	13,552	1.2 (1.0-1.3)
45	155,359	0.7 (0.7-0.8)	14,489	3.6 (3.3-3.9)	17,944	3.5 (3.3-3.8)	14,711	4.3 (4.0-4.6)
51	154,244	1.3 (1.2-1.4)	11,648	10.0 (9.5-10.6)	17,104	5.8 (5.4-6.1)	13,589	0.9 (0.8-1.1)
52	153,700	1.2 (1.1-1.2)	12,892	7.6 (7.2-8.1)	17,530	8.5 (8.1-8.9)	14,152	1.9 (1.7-2.1)
56	153,487	0.8 (0.8-0.9)	12,792	6.6 (6.2-7.0)	17,595	2.5 (2.3-2.8)	13,301	0.9 (0.8-1.1)
58	155,224	0.7 (0.6-0.7)	13,272	4.8 (4.4-5.2)	17,174	4.5 (4.2-4.8)	14,085	1.2 (1.0-1.4)
59	150,513	0.7 (0.6-0.7)	11,034	4.2 (3.8-4.5)	15,866	1.5 (1.3-1.7)	13,153	0.7 (0.6-0.8)
Probable/possible carcinogen								
26	19,838	0.0 (0.0-0.1)	4,439	0.3 (0.2-0.5)	5,108	0.3 (0.2-0.5)	5,751	0.1 (0.0-0.2)
30	3,184	0.3 (0.1-0.5)	1,242	0.4 (0.2-0.9)	1,077	0.0 (0.0-0.4)	2,986	0.2 (0.1-0.4)
34	10,695	0.1 (0.1-0.2)	2,045	0.1 (0.0-0.4)	1,767	0.2 (0.1-0.5)	3,993	0.1 (0.0-0.2)
53	48,490	1.1 (1.1-1.2)	9,586	8.7 (8.2-9.3)	10,426	4.1 (3.7-4.5)	8,175	0.7 (0.6-1.0)
66	92,854	0.9 (0.9-1.0)	11,953	7.7 (7.2-8.1)	15,331	2.4 (2.2-2.7)	11,552	0.4 (0.3-0.5)
67	7,882	0.3 (0.2-0.4)	3,855	1.9 (1.6-2.4)	3,790	0.5 (0.3-0.8)	4,702	0.2 (0.1-0.3)
68	151,288	0.6 (0.5-0.6)	10,908	2.4 (2.2-2.7)	14,286	2.1 (1.8-2.3)	12,165	0.8 (0.7-1.0)
69	5,342	0.0 (0.0-0.1)	3,812	0.3 (0.1-0.5)	3,730	0.2 (0.1-0.4)	4,472	0.0 (0.0-0.1)
70	60,471	1.0 (0.9-1.1)	7,420	2.4 (2.1-2.8)	7,319	1.8 (1.5-2.1)	7,295	0.2 (0.1-0.3)
73	24,040	0.3 (0.3-0.4)	6,275	2.7 (2.4-3.2)	6,992	1.5 (1.3-1.8)	6,345	0.9 (0.7-1.1)
82	24,702	0.2 (0.1-0.2)	6,338	1.3 (1.1-1.6)	6,972	1.0 (0.8-1.3)	6,538	0.1 (0.1-0.3)
85	2,580	0.0 (0.0-0.2)	1,056	0.1 (0.0-0.5)	1,165	0.2 (0.0-0.6)	-	-
97	1,479	0.0 (0.0-0.3)	-	-	-	-	370	0.3 (0.0-1.5)
LOW RISK HPV TYPES								
6	135,895	1.0 (1.0-1.1)	12,720	7.0 (6.5-7.4)	10,473	3.4 (3.1-3.7)	8,735	0.7 (0.6-0.9)
11	126,704	0.4 (0.4-0.4)	12,119	3.2 (2.9-3.6)	9,537	1.3 (1.1-1.6)	8,579	0.5 (0.4-0.7)
32	4,795	0.1 (0.1-0.3)	549	0.0 (0.0-0.7)	-	-	600	0.0 (0.0-0.6)
40	64,728	0.2 (0.2-0.3)	2,490	1.9 (1.4-2.5)	2,841	0.5 (0.3-0.8)	4,728	0.0 (0.0-0.1)
42	75,738	0.8 (0.8-0.9)	2,490	11.7 (10.5-13.0)	2,175	3.0 (2.4-3.8)	4,797	0.2 (0.1-0.4)
43	73,183	0.3 (0.3-0.4)	2,334	2.0 (1.5-2.6)	2,464	0.6 (0.4-1.0)	4,002	0.0 (0.0-0.1)
44	78,797	1.0 (1.0-1.1)	3,289	8.8 (7.8-9.8)	3,302	4.2 (3.6-5.0)	4,603	0.3 (0.2-0.5)
54	60,726	0.7 (0.6-0.8)	1,121	2.3 (1.6-3.4)	2,382	0.8 (0.5-1.2)	5,136	0.4 (0.3-0.6)
55	-	-	-	-	-	-	-	-
57	14,231	0.0 (0.0-0.1)	549	0.0 (0.0-0.7)	829	0.0 (0.0-0.5)	928	0.0 (0.0-0.4)
61	14,155	0.5 (0.4-0.6)	941	1.2 (0.7-2.1)	1,180	1.4 (0.8-2.2)	3,960	0.1 (0.0-0.3)
62	8,033	0.6 (0.4-0.8)	941	1.2 (0.7-2.1)	1,180	1.7 (1.1-2.6)	1,128	0.3 (0.1-0.8)
64	-	-	-	-	-	-	-	-
71	10,787	0.0 (0.0-0.1)	834	0.8 (0.4-1.7)	1,180	0.0 (0.0-0.3)	1,541	0.0 (0.0-0.2)
72	12,418	0.1 (0.0-0.1)	834	0.4 (0.1-1.1)	1,180	0.3 (0.1-0.9)	1,356	0.0 (0.0-0.3)
74	48,207	1.0 (0.9-1.1)	836	1.3 (0.7-2.3)	2,031	0.9 (0.6-1.5)	3,522	0.1 (0.0-0.2)
81	12,418	0.3 (0.2-0.4)	834	1.4 (0.8-2.5)	1,180	1.1 (0.6-1.9)	1,440	0.1 (0.0-0.5)
83	15,477	0.2 (0.2-0.3)	598	0.3 (0.1-1.2)	1,112	0.3 (0.1-0.8)	1,273	0.0 (0.0-0.3)
84	16,479	0.2 (0.2-0.3)	941	1.4 (0.8-2.3)	1,180	0.3 (0.1-0.7)	1,128	0.4 (0.1-0.9)
86	2,278	0.0 (0.0-0.2)	-	-	-	-	-	-
87	1,479	0.5 (0.3-1.1)	549	0.0 (0.0-0.7)	-	-	-	-
89	12,022	0.3 (0.2-0.4)	785	1.7 (1.0-2.8)	897	0.3 (0.1-1.0)	1,287	0.1 (0.0-0.4)
90	3,014	1.0 (0.7-1.4)	549	0.0 (0.0-0.7)	-	-	420	0.0 (0.0-0.9)
91	913	0.5 (0.2-1.3)	549	0.0 (0.0-0.7)	-	-	2,722	0.0 (0.0-0.2)

Data updated on 22 May 2023 (data as of 30 Jun 2015 / 30 Nov 2014)

The samples for HPV testing come from cervical specimens (fresh/fixed biopsies or exfoliated cells)
Data Sources: See references in Section 9 References.

Table 30: Type-specific HPV prevalence among invasive cervical cancer cases in Europe by histology

HPV Type	Any Histology		Squamous cell carcinoma		Adenocarcinoma		Unespecified	
	No. tested	HPV Prev % (95% CI)	No. tested	HPV Prev % (95% CI)	No. tested	HPV Prev % (95% CI)	No. tested	HPV Prev % (95% CI)
ONCOGENIC HPV TYPES								
High-risk HPV types								
16	18,406	58.8 (58.1-59.5)	13,161	61.7 (60.9-62.6)	2,570	38.4 (36.6-40.3)	2,815	63.7 (61.9-65.4)
18	18,328	15.2 (14.7-15.7)	13,161	11.4 (10.9-12.0)	2,570	35.3 (33.5-37.2)	2,737	14.2 (12.9-15.5)
31	16,082	3.8 (3.6-4.2)	11,877	4.0 (3.6-4.3)	2,123	2.3 (1.7-3.0)	2,222	4.8 (4.0-5.7)
33	16,704	4.4 (4.1-4.8)	12,419	4.6 (4.3-5.0)	2,242	1.5 (1.1-2.1)	2,183	6.9 (5.9-8.1)
35	15,013	1.4 (1.2-1.6)	11,517	1.3 (1.1-1.5)	1,882	0.5 (0.3-0.9)	1,754	2.9 (2.2-3.8)
39	13,552	1.2 (1.0-1.3)	10,831	1.2 (1.0-1.4)	1,812	1.0 (0.6-1.6)	1,049	1.3 (0.8-2.2)
45	14,711	4.3 (4.0-4.6)	11,195	4.0 (3.7-4.4)	2,047	6.0 (5.0-7.1)	1,609	4.2 (3.3-5.3)
51	13,589	0.9 (0.8-1.1)	10,731	0.8 (0.7-1.0)	1,832	1.4 (0.9-2.0)	1,166	0.7 (0.3-1.3)
52	14,152	1.9 (1.7-2.1)	11,038	2.1 (1.8-2.3)	1,926	1.0 (0.7-1.6)	1,328	1.5 (1.0-2.3)
56	13,301	0.9 (0.8-1.1)	10,426	1.1 (0.9-1.3)	1,721	0.1 (0.0-0.4)	1,294	0.8 (0.4-1.4)
58	14,085	1.2 (1.0-1.4)	11,126	1.3 (1.1-1.5)	1,754	0.2 (0.1-0.6)	1,345	1.4 (0.9-2.2)
59	13,153	0.7 (0.6-0.8)	10,398	0.8 (0.6-0.9)	1,779	0.2 (0.1-0.5)	1,116	0.9 (0.5-1.6)
Probable/possible carcinogen								
26	5,751	0.1 (0.0-0.2)	-	-	-	-	-	-
30	2,986	0.2 (0.1-0.4)	2,494	0.2 (0.1-0.5)	260	0.0 (0.0-1.5)	232	0.0 (0.0-1.6)
34	3,993	0.1 (0.0-0.2)	3,212	0.1 (0.0-0.3)	401	0.0 (0.0-0.9)	380	0.0 (0.0-1.0)
53	8,175	0.7 (0.6-1.0)	-	-	-	-	-	-
66	11,552	0.4 (0.3-0.5)	9,141	0.4 (0.3-0.6)	1,563	0.1 (0.0-0.5)	848	0.5 (0.2-1.2)
67	4,702	0.2 (0.1-0.3)	3,893	0.2 (0.1-0.3)	502	0.0 (0.0-0.8)	307	0.7 (0.2-2.3)
68	12,165	0.8 (0.7-1.0)	9,762	1.0 (0.8-1.2)	1,488	0.1 (0.0-0.4)	915	0.5 (0.2-1.3)
69	4,472	0.0 (0.0-0.1)	-	-	-	-	-	-
70	7,295	0.2 (0.1-0.3)	-	-	-	-	-	-
73	6,345	0.9 (0.7-1.1)	4,303	0.8 (0.6-1.1)	578	0.2 (0.0-1.0)	864	2.0 (1.2-3.1)
82	6,538	0.1 (0.1-0.3)	5,128	0.1 (0.0-0.2)	647	0.2 (0.0-0.9)	763	0.4 (0.1-1.1)
85	-	-	-	-	-	-	-	-
97	370	0.3 (0.0-1.5)	370	0.3 (0.0-1.5)	-	-	-	-
LOW RISK HPV TYPES								
6	8,735	0.7 (0.6-0.9)	-	-	-	-	-	-
11	8,579	0.5 (0.4-0.7)	-	-	-	-	-	-
32	600	0.0 (0.0-0.6)	-	-	-	-	-	-
40	4,728	0.0 (0.0-0.1)	-	-	-	-	-	-
42	4,797	0.2 (0.1-0.4)	4,061	0.1 (0.1-0.3)	377	0.0 (0.0-1.0)	359	1.1 (0.4-2.8)
43	4,002	0.0 (0.0-0.1)	-	-	-	-	-	-
44	4,603	0.3 (0.2-0.5)	3,858	0.3 (0.2-0.5)	423	0.5 (0.1-1.7)	322	0.6 (0.2-2.2)
54	5,136	0.4 (0.3-0.6)	-	-	-	-	-	-
55	-	-	-	-	-	-	-	-
57	928	0.0 (0.0-0.4)	-	-	-	-	-	-
61	3,960	0.1 (0.0-0.3)	-	-	-	-	-	-
62	1,128	0.3 (0.1-0.8)	-	-	-	-	-	-
64	-	-	-	-	-	-	-	-
71	1,541	0.0 (0.0-0.2)	-	-	-	-	-	-
72	1,356	0.0 (0.0-0.3)	-	-	-	-	-	-
74	3,522	0.1 (0.0-0.2)	-	-	-	-	-	-
81	1,440	0.1 (0.0-0.5)	-	-	-	-	-	-
83	1,273	0.0 (0.0-0.3)	-	-	-	-	-	-
84	1,128	0.4 (0.1-0.9)	-	-	-	-	-	-
86	-	-	-	-	-	-	-	-
87	-	-	-	-	-	-	-	-
89	1,287	0.1 (0.0-0.4)	-	-	-	-	-	-
90	420	0.0 (0.0-0.9)	-	-	-	-	-	-
91	2,722	0.0 (0.0-0.2)	-	-	-	-	-	-

Data updated on 22 May 2023 (data as of 30 Jun 2015)

The samples for HPV testing come from cervical specimens (fresh/fixed biopsies or exfoliated cells)
[a] Number of women tested
[b] 95% Confidence Interval
Data Sources: See references in Section 9 References.

4.1.3 HPV type distribution among HIV+ women with normal cervical cytology

Table 31: Studies on HPV prevalence among HIV+ women with normal cytology in Europe

Study	HPV detection method and targeted HPV types	No. Tested[a]	HPV Prevalence		Prevalence of 5 most frequent HPVs, HPV type (%)
			%	(95% CI)[b]	
Tanzi 2009 (Italy)	PCR-MY09/MY11, RFLP, (HPV 6, 11, 16, 18, 26, 30-35, 39, 40, 42, 44, 45, 51-59, 61, 62, 64, 66-73, 77, 81-84)	103	39.8	(30.3-49.9)	-
Cubie 2000 (United Kingdom)	HC2 (HPV 6, 11, 16, 18, 31, 33, 35, 39, 42, 43, 44, 45, 51, 52, 56, 58, 59, 68), No genotyping	44	25.0	(13.2-40.3)	-
Gonzalez 2008 (Spain)	PCR (E6/E7), HC2, TS, (HPV 6, 11, 16, 18, 31, 33, 35, 39, 45, 51, 52, 56, 58, 59, 68)	7	42.9	(9.9-81.6)	-
Cañadas 2010 (Spain)	PCR (E6/E7), TS, (HPV 6, 11, 16, 18, 31, 33, 35, 39, 45, 51, 52, 56, 58, 59, 68)	168	38.7	(31.3-46.5)	-
De Sanjose 2000 (Spain)	PCR (MY09/11),EIA, DBH, (HPV6, 11, 16, 18, 31, 33, 35, 39, 40, 41, 45, 51, 52, 53, 54, 56, 58, 59, 66, 73, 81)	52	34.6	(22.0-49.1)	-
Van Doornum 1993 (Netherlands)	PCR-,TS (HPV 6/11, 16, 18, 33), DBH	25	32.0	(14.9-53.5)	-
Jong 2008 (Netherlands)	PCR-SPF10, RHA, (HPV 6, 11, 16, 18, 31, 33-35, 39, 40, 42-45, 51-54, 56, 58, 59, 66, 68, 70, 71, 74)	19	36.8	(16.3-61.6)	-
Uberti-Foppa 1998 (Italy)	HC2 (HPV 6, 11, 16, 18, 31, 33, 35, 39, 42, 43, 44, 45, 51, 52, 56, 58, 59, 68), No genotyping	111	51.4	(41.7-61.0)	-
Tornesello 2008 (Italy)	PCR-(GP5+/GP6+, MY09/MY11), sequencing (DSA)	79	20.3	(12.0-30.8)	-
Melbye 1996 (Denmark)	PCR-L1, TS (HPV 6, 11, 16, 18, 31, 33, 35, 39, 45, 51, 52)	52	46.2	(32.2-60.5)	-
Del mistro 2001 (Italy)	PCR-MY09/MY11, RFLP, (HPV 6, 11, 16, 18, 26, 30-35, 39, 40, 42, 44, 45, 51-59, 61, 62, 64, 66-73, 77, 81-84)	72	23.6	(14.4-35.1)	-
Cappiello 1997 (Italy)	PCR-MY09/MY11, RFLP, (HPV 6, 11,16, 18, 26, 30-35, 39, 40, 42, 44, 45, 51-59, 61, 62, 64, 66-73, 77, 81-84)	86	20.9	(12.9-31.0)	-
Branca 2000 (Italy)	PCR-MY09/MY11, RFLP,(HPV 6, 11, 16, 18, 26, 30-35, 39, 40, 42, 44, 45, 51-59, 61, 62, 64, 66-73, 77, 81-84)	155	22.6	(16.3-30.0)	-
Ammatuna 2000 (Italy)	PCR- (MY09/MY11, GP5/GP6), No genotyping	51	33.3	(20.8-47.9)	-
Leibenson 2011 (Israel)	PCR-, sequencing	67	49.3	(36.8-61.8)	-
Kuhler-Obbarius 1994 (Germany)	PCR-MY11/MY09, No genotyping	34	52.9	(35.1-70.2)	-
Weissenborn 2003 (Germany)	PCR-GP5+/GP6+, TS (HPV 16, 18, 31, 33, 45, 56)	212	57.5	(50.6-64.3)	-

Data updated on 22 May 2023 (data as of 31 Dec 2011)

DBH: Dot Blot Hybridization; EIA: Enzyme ImmunoAssay; HC2: Hybrid Capture 2; PCR: Polymerase Chain Reaction; TS: Type Specific
[a] Number of women tested
[b] 95% Confidence Interval
Data Sources: See references in Section 9 References.

4.1.4 Terminology

Cytologically normal women
No abnormal cells are observed on the surface of their cervix upon cytology.

Cervical Intraepithelial Neoplasia (CIN) / Squamous Intraepithelial Lesions (SIL)
SIL and CIN are two commonly used terms to describe precancerous lesions or the abnormal growth of squamous cells observed in the cervix. SIL is an abnormal result derived from cervical cytological screening or Pap smear testing. CIN is a histological diagnosis made upon analysis of cervical tissue obtained by biopsy or surgical excision. The condition is graded as CIN 1, 2 or 3, according to the thickness of the abnormal epithelium (1/3, 2/3 or the entire thickness).

Low-grade cervical lesions (LSIL/CIN-1)
Low-grade cervical lesions are defined by early changes in size, shape, and number of abnormal cells formed on the surface of the cervix and may be referred to as mild dysplasia, LSIL, or CIN-1.

High-grade cervical lesions (HSIL/ CIN-2 / CIN-3 / CIS)
High-grade cervical lesions are defined by a large number of precancerous cells on the surface of the cervix that are distinctly different from normal cells. They have the potential to become cancerous cells and invade deeper tissues of the cervix. These lesions may be referred to as moderate or severe dysplasia, HSIL, CIN-2, CIN-3 or cervical carcinoma in situ (CIS).

Carcinoma in situ (CIS)
Preinvasive malignancy limited to the epithelium without invasion of the basement membrane. CIN 3 encompasses the squamous carcinoma in situ.

Invasive cervical cancer (ICC) / Cervical cancer
If the high-grade precancerous cells invade the basement membrane is called ICC. ICC stages range from stage I (cancer is in the cervix or uterus only) to stage IV (the cancer has spread to distant organs, such as the liver).

Invasive squamous cell carcinoma
Invasive carcinoma composed of cells resembling those of squamous epithelium.

Adenocarcinoma
Invasive tumour with glandular and squamous elements intermingled.

4.2 HPV burden in anogenital cancers other than cervix

Methods: Prevalence and type distribution of human papillomavirus in carcinoma of the vulva, vagina, anus and penis: systematic review and meta-analysis

A systematic review of the literature was conducted on the worldwide HPV-prevalence and type distribution for anogenital carcinomas other than cervix from January 1986 to 'data as of' indicated in each section. The search terms for the review were 'HPV' AND (anus OR anal) OR (penile) OR vagin* OR vulv* using Pubmed. There were no limits in publication language. References cited in selected articles were also investigated. Inclusion criteria were: HPV DNA detection by means of PCR, a minimum of 10 cases by lesion and a detailed description of HPV DNA detection and genotyping techniques used. The number of cases tested and HPV positive cases were extracted for each study to estimate the prevalence of HPV DNA and the HPV type distribution. Binomial 95% confidence intervals were calculated for each HPV prevalence.

4.2.1 Anal cancer and precancerous anal lesions

Anal cancer is similar to cervical cancer with respect to overall HPV DNA positivity, with approximately 100% of anal squamous cell carcinoma cases associated with HPV infection worldwide (de Martel C et al. Lancet Glob Health 2020;8(2):e180-e190). HPV16 is the most common type detected, representing 73% of all HPV-positive tumours. HPV18 is the second most common type detected and is found in approximately 5% of cases. HPV DNA is also detected in the majority of precancerous anal lesions (AIN) (91.5% in AIN1 and 93.9% in AIN2/3) (De Vuyst H et al. Int J Cancer 2009; 124: 1626-36). In this section, the burden of HPV among cases of anal cancers and precancerous anal lesions in Europe are presented.

Table 32: Studies on HPV prevalence among anal cancer cases in Europe (male and female)

Country	Study	HPV detection method and targeted HPV types	No. Tested	HPV Prevalence		Prevalence of 5 most frequent HPVs, HPV type (%)
				%	(95% CI)[a]	
France	Abramowitz 2011	PCR-SPF10, (HPV 6, 11, 16, 18, 26, 31, 33, 35, 39, 40, 43, 44, 45, 51, 52, 53, 54, 56, 58, 59, 66, 68, 69, 70, 71, 73, 82)	728	96.7	(95.1-97.8)	HPV 16 (75.5), HPV 18 (5.9), HPV 11 (3.7), HPV 6 (3.0), HPV 52 (2.6)
United Kingdom	Alemany 2015	PCR-SPF10, EIA, (HPV 6, 11, 16, 18, 26, 30, 31, 33, 34, 35, 39, 40, 42, 43, 44, 45, 51, 52, 53, 54, 56, 58, 59, 61, 66, 67, 68, 69, 70, 73, 74, 82, 83, 87, 89, 91)	169	87.6	(81.8-91.7)	HPV 16 (73.4), HPV 18 (3.6), HPV 6 (3.6), HPV 11 (3.0), HPV 33 (2.4)
Slovenia	Alemany 2015	PCR-SPF10, EIA, (HPV 6, 11, 16, 18, 26, 30, 31, 33, 34, 35, 39, 40, 42, 43, 44, 45, 51, 52, 53, 54, 56, 58, 59, 61, 66, 67, 68, 69, 70, 73, 74, 82, 83, 87, 89, 91)	169	87.6	(81.8-91.7)	HPV 16 (73.4), HPV 18 (3.6), HPV 6 (3.6), HPV 11 (3.0), HPV 33 (2.4)
Bosnia & Herzegovina	Alemany 2015	PCR-SPF10, EIA, (HPV 6, 11, 16, 18, 26, 30, 31, 33, 34, 35, 39, 40, 42, 43, 44, 45, 51, 52, 53, 54, 56, 58, 59, 61, 66, 67, 68, 69, 70, 73, 74, 82, 83, 87, 89, 91)	169	87.6	(81.8-91.7)	HPV 16 (73.4), HPV 18 (3.6), HPV 6 (3.6), HPV 11 (3.0), HPV 33 (2.4)
Portugal	Alemany 2015	PCR-SPF10, EIA, (HPV 6, 11, 16, 18, 26, 30, 31, 33, 34, 35, 39, 40, 42, 43, 44, 45, 51, 52, 53, 54, 56, 58, 59, 61, 66, 67, 68, 69, 70, 73, 74, 82, 83, 87, 89, 91)	169	87.6	(81.8-91.7)	HPV 16 (73.4), HPV 18 (3.6), HPV 6 (3.6), HPV 11 (3.0), HPV 33 (2.4)
Poland	Alemany 2015	PCR-SPF10, EIA, (HPV 6, 11, 16, 18, 26, 30, 31, 33, 34, 35, 39, 40, 42, 43, 44, 45, 51, 52, 53, 54, 56, 58, 59, 61, 66, 67, 68, 69, 70, 73, 74, 82, 83, 87, 89, 91)	169	87.6	(81.8-91.7)	HPV 16 (73.4), HPV 18 (3.6), HPV 6 (3.6), HPV 11 (3.0), HPV 33 (2.4)

Continued on next page

Table 32 – continued from previous page

Country	Study	HPV detection method and targeted HPV types	No. Tested	HPV Prevalence %	HPV Prevalence (95% CI)[a]	Prevalence of 5 most frequent HPVs, HPV type (%)
Czechia	Alemany 2015	PCR-SPF10, EIA, (HPV 6, 11, 16, 18, 26, 30, 31, 33, 34, 35, 39, 40, 42, 43, 44, 45, 51, 52, 53, 54, 56, 58, 59, 61, 66, 67, 68, 69, 70, 73, 74, 82, 83, 87, 89, 91)	169	87.6	(81.8-91.7)	HPV 16 (73.4), HPV 18 (3.6), HPV 6 (3.6), HPV 11 (3.0), HPV 33 (2.4)
Germany	Alemany 2015	PCR-SPF10, EIA, (HPV 6, 11, 16, 18, 26, 30, 31, 33, 34, 35, 39, 40, 42, 43, 44, 45, 51, 52, 53, 54, 56, 58, 59, 61, 66, 67, 68, 69, 70, 73, 74, 82, 83, 87, 89, 91)	169	87.6	(81.8-91.7)	HPV 16 (73.4), HPV 18 (3.6), HPV 6 (3.6), HPV 11 (3.0), HPV 33 (2.4)
Spain	Alemany 2015	PCR-SPF10, EIA, (HPV 6, 11, 16, 18, 26, 30, 31, 33, 34, 35, 39, 40, 42, 43, 44, 45, 51, 52, 53, 54, 56, 58, 59, 61, 66, 67, 68, 69, 70, 73, 74, 82, 83, 87, 89, 91)	169	87.6	(81.8-91.7)	HPV 16 (73.4), HPV 18 (3.6), HPV 6 (3.6), HPV 11 (3.0), HPV 33 (2.4)
France	Alemany 2015	PCR-SPF10, EIA, (HPV 6, 11, 16, 18, 26, 30, 31, 33, 34, 35, 39, 40, 42, 43, 44, 45, 51, 52, 53, 54, 56, 58, 59, 61, 66, 67, 68, 69, 70, 73, 74, 82, 83, 87, 89, 91)	169	87.6	(81.8-91.7)	HPV 16 (73.4), HPV 18 (3.6), HPV 6 (3.6), HPV 11 (3.0), HPV 33 (2.4)
United Kingdom	Baricevic 2015	PCR-L1C1/C2, PCR L1-Consensus primer, PCR-E6, PCR-E7, PCR-MULTIPLEX (HPV 6, 11, 16, 18, 31, 33, 45, 52, 58)	151	95.4	(90.7-97.7)	HPV 16 (88.7), HPV 6 (11.9), HPV 33 (6.6), HPV 18 (4.6), HPV 58 (4.6)
Italy	Indinnimeo 1999	PCR, TS (HPV 6, 11, 16, 18)	14	64.3	(38.8-83.7)	HPV 16 (42.9)
Sweden	Laytragoon-Lewin 2007	PCR-MY09/11, Sequencing (HPV 16, 18, 33)	72	90.3	(81.3-95.2)	HPV 16 (69.4), HPV 18 (34.7), HPV 33 (2.8)
Germany	Rödel 2015	PCR-SPF10, PCR-MULTIPLEX, (HPV 6, 11, 16, 18, 26, 31, 33, 35, 39, 40, 42, 43, 44, 45, 51, 52, 53, 54, 56, 58, 59, 66, 68, 69, 70, 71, 73, 74, 81, 82)	91	100.0	(95.9-100.0)	HPV 16 (94.5), HPV 11 (2.2), HPV 31 (2.2), HPV 35 (2.2), HPV 18 (1.1)
Denmark	Serup-Hansen 2014	PCR-E6, PCR-E7, PCR-MULTIPLEX (HPV 16, 18, 31, 33, 45, 52, 58)	137	87.6	(81.0-92.1)	HPV 16 (81.0), HPV 33 (5.1), HPV 18 (2.2), HPV 58 (0.7)
Czechia	Tachezy 2011	PCR L1-Consensus primer, , Sequencing (HPV 6, 11, 16, 18, 20, 21, 22, 23, 26, 30, 31, 32, 33, 34, 35, 38, 39, 40, 42, 43, 44, 45, 51, 52, 53, 54, 56, 57, 58, 59, 60, 61, 62, 66, 67, 68, 69, 70, 71, 72, 73, 74, 80, 81, 82, 83, 84, 85, 86, 87, 89, 90, 91)	26	73.1	(53.9-86.3)	HPV 16 (73.1)
France	Valmary-Degano 2013	PCR-E6, (HPV 6, 11, 16, 18, 26, 31, 33, 35, 39, 40, 43, 44, 45, 51, 52, 53, 54, 56, 58, 59, 66, 68, 69, 70, 71, 73, 74, 82)	73	98.6	(92.6-99.8)	HPV 16 (89.0), HPV 39 (4.1), HPV 33 (2.7), HPV 11 (1.4), HPV 18 (1.4)
Germany	Varnai 2006	PCR-MY09/11, TS, Sequencing (HPV 6, 11, 16, 18, 31, 33, 45, 58)	47	83.0	(69.9-91.1)	HPV 16 (74.5), HPV 33 (6.4), HPV 18 (2.1), HPV 31 (2.1), HPV 45 (2.1)
France	Vincent-Salomon 1996	PCR L1-Consensus primer, PCR-E6, TS (HPV 6, 11, 16, 18, 33)	27	74.1	(55.3-86.8)	HPV 16 (63.0), HPV 18 (7.4)

Data updated on 22 May 2023 (data as of 30 Jun 2015)

DBH: Dot Blot Hybridization; EIA: Enzyme ImmunoAssay; HC2: Hybrid Capture 2; ISH: In Situ Hybridization; LBA: Line-Blot Assay; LiPA: Line Probe Assay; PCR: Polymerase Chain Reaction; RFLP: Restriction Fragment Length Polymorphism; RLBH: Reverse Line Blot Hybridization; RT-PCR: Real Time Polymerase Chain Reaction; SBH: Southern Blot Hybridization; SPF: Short Primer Fragment; TS: Type Specific;
[a] 95% Confidence Interval
Data Sources: See references in Section 9 References.

Table 33: Studies on HPV prevalence among cases of AIN2/3 in Europe

Country	Study	HPV detection method and targeted HPV types	No. Tested	HPV Prevalence %	(95% CI)[a]	Prevalence of 5 most frequent HPVs, HPV type (%)
Poland	Alemany 2015	PCR-SPF10, EIA, (HPV 6, 11, 16, 18, 26, 30, 31, 33, 34, 35, 39, 40, 42, 43, 44, 45, 51, 52, 53, 54, 56, 58, 59, 61, 66, 67, 68, 69, 70, 73, 74, 82, 83, 87, 89, 91)	23	95.7	(79.0-99.2)	HPV 16 (65.2), HPV 18 (8.7), HPV 51 (8.7), HPV 6 (8.7), HPV 74 (8.7)
Portugal	Alemany 2015	PCR-SPF10, EIA, (HPV 6, 11, 16, 18, 26, 30, 31, 33, 34, 35, 39, 40, 42, 43, 44, 45, 51, 52, 53, 54, 56, 58, 59, 61, 66, 67, 68, 69, 70, 73, 74, 82, 83, 87, 89, 91)	23	95.7	(79.0-99.2)	HPV 16 (65.2), HPV 18 (8.7), HPV 51 (8.7), HPV 6 (8.7), HPV 74 (8.7)
Czechia	Alemany 2015	PCR-SPF10, EIA, (HPV 6, 11, 16, 18, 26, 30, 31, 33, 34, 35, 39, 40, 42, 43, 44, 45, 51, 52, 53, 54, 56, 58, 59, 61, 66, 67, 68, 69, 70, 73, 74, 82, 83, 87, 89, 91)	23	95.7	(79.0-99.2)	HPV 16 (65.2), HPV 18 (8.7), HPV 51 (8.7), HPV 6 (8.7), HPV 74 (8.7)
Germany	Alemany 2015	PCR-SPF10, EIA, (HPV 6, 11, 16, 18, 26, 30, 31, 33, 34, 35, 39, 40, 42, 43, 44, 45, 51, 52, 53, 54, 56, 58, 59, 61, 66, 67, 68, 69, 70, 73, 74, 82, 83, 87, 89, 91)	23	95.7	(79.0-99.2)	HPV 16 (65.2), HPV 18 (8.7), HPV 51 (8.7), HPV 6 (8.7), HPV 74 (8.7)
Bosnia & Herzegovina	Alemany 2015	PCR-SPF10, EIA, (HPV 6, 11, 16, 18, 26, 30, 31, 33, 34, 35, 39, 40, 42, 43, 44, 45, 51, 52, 53, 54, 56, 58, 59, 61, 66, 67, 68, 69, 70, 73, 74, 82, 83, 87, 89, 91)	23	95.7	(79.0-99.2)	HPV 16 (65.2), HPV 18 (8.7), HPV 51 (8.7), HPV 6 (8.7), HPV 74 (8.7)
Spain	Alemany 2015	PCR-SPF10, EIA, (HPV 6, 11, 16, 18, 26, 30, 31, 33, 34, 35, 39, 40, 42, 43, 44, 45, 51, 52, 53, 54, 56, 58, 59, 61, 66, 67, 68, 69, 70, 73, 74, 82, 83, 87, 89, 91)	23	95.7	(79.0-99.2)	HPV 16 (65.2), HPV 18 (8.7), HPV 51 (8.7), HPV 6 (8.7), HPV 74 (8.7)
Slovenia	Alemany 2015	PCR-SPF10, EIA, (HPV 6, 11, 16, 18, 26, 30, 31, 33, 34, 35, 39, 40, 42, 43, 44, 45, 51, 52, 53, 54, 56, 58, 59, 61, 66, 67, 68, 69, 70, 73, 74, 82, 83, 87, 89, 91)	23	95.7	(79.0-99.2)	HPV 16 (65.2), HPV 18 (8.7), HPV 51 (8.7), HPV 6 (8.7), HPV 74 (8.7)
France	Alemany 2015	PCR-SPF10, EIA, (HPV 6, 11, 16, 18, 26, 30, 31, 33, 34, 35, 39, 40, 42, 43, 44, 45, 51, 52, 53, 54, 56, 58, 59, 61, 66, 67, 68, 69, 70, 73, 74, 82, 83, 87, 89, 91)	23	95.7	(79.0-99.2)	HPV 16 (65.2), HPV 18 (8.7), HPV 51 (8.7), HPV 6 (8.7), HPV 74 (8.7)
United Kingdom	Alemany 2015	PCR-SPF10, EIA, (HPV 6, 11, 16, 18, 26, 30, 31, 33, 34, 35, 39, 40, 42, 43, 44, 45, 51, 52, 53, 54, 56, 58, 59, 61, 66, 67, 68, 69, 70, 73, 74, 82, 83, 87, 89, 91)	23	95.7	(79.0-99.2)	HPV 16 (65.2), HPV 18 (8.7), HPV 51 (8.7), HPV 6 (8.7), HPV 74 (8.7)
United Kingdom	Fox 2005	, PCR-MY09/11, (HPV 16, 18, 31, 33, 35, 39, 45, 51, 52, 56, 58, 59)	74	97.3	(90.7-99.3)	HPV 16 (64.9), HPV 18 (25.7), HPV 33 (24.3), HPV 58 (21.6), HPV 31 (18.9)
Spain	García-Espinosa 2013	PCR-GP5/6, PCR L1-Consensus primer, DBH (HPV 6, 11, 16, 18, 26, 31, 33, 35, 39, 40, 42, 43, 44, 45, 51, 52, 53, 54, 56, 57, 58, 59, 61, 66, 68, 70, 71, 72, 73, 81, 82, 84)	20	100.0	(83.9-100.0)	HPV 16 (50.0), HPV 58 (35.0), HPV 44 (35.0), HPV 31 (30.0), HPV 43 (30.0)

Continued on next page

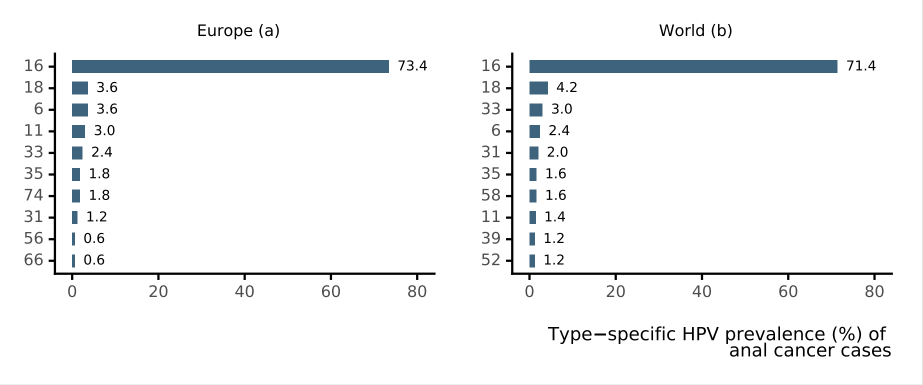
Table 33 – continued from previous page

Country	Study	HPV detection method and targeted HPV types	No. Tested	HPV Prevalence		Prevalence of 5 most frequent HPVs, HPV type (%)
				%	(95% CI)[a]	
Germany	Hampl 2006	, PCR-MY09/11, Sequencing (HPV 6, 11, 20, 21, 22, 23, 26, 30, 32)	16	87.5	(64.0-96.5)	
Netherlands	Richel 2014	PCR L1-Consensus primer, PCR-SPF10, EIA, (HPV 6, 11, 16, 18, 26, 31, 33, 34, 35, 39, 40, 42, 43, 44, 45, 51, 52, 53, 54, 56, 58, 59, 66, 67, 68, 69, 70, 73, 74)	17	100.0	(81.6-100.0)	HPV 16 (58.8), HPV 31 (17.6), HPV 18 (11.8), HPV 53 (11.8), HPV 58 (11.8)
Germany	Silling 2012	PCR- MULTIPLEX (HPV 6, 11, 16, 18, 26, 30, 31, 33, 34, 35, 39, 40, 42, 43, 44, 45, 51, 52, 53, 54, 56, 57, 58, 59, 61, 66, 67, 68, 70, 71, 72, 73, 81, 82, 83, 84, 89)	42	100.0	(91.6-100.0)	HPV 16 (69.0), HPV 11 (23.8), HPV 18 (23.8), HPV 6 (19.0), HPV 67 (19.0)
Spain	Sirera 2013	PCR- MULTIPLEX (HPV 6, 11, 16, 18, 31, 33, 35, 39, 45, 51, 52, 56, 58, 59, 68)	69	84.1	(73.7-90.9)	HPV 16 (55.1), HPV 58 (34.8), HPV 33 (29.0), HPV 51 (23.2), HPV 18 (21.7)
Italy	Tanzi 2009	PCR-MY09/11, PCR L1-Consensus primer, RFLP (HPV 6, 11, 16, 18, 20, 21, 22, 23, 26, 30, 31, 32, 33, 34, 35, 38, 39, 40, 42, 43, 44, 45, 51, 52, 53, 54, 56, 57, 58, 59, 60, 61, 62, 66, 67, 68, 69, 70, 71, 72, 81, 83, 84)	62	91.9	(82.5-96.5)	HPV 6 (38.7), HPV 16 (37.1), HPV 11 (27.4), HPV 58 (8.1), HPV 18 (4.8)
Spain	Torres 2013	LBA (HPV 6, 11, 16, 18, 26, 31, 33, 34, 35, 39, 40, 42, 44, 45, 51, 52, 53, 54, 56, 58, 59, 61, 62, 66, 67, 68, 69, 70, 71, 72, 73, 81, 82, 83, 84)	44	97.7	(88.2-99.6)	HPV 16 (59.1), HPV 6 (34.1), HPV 66 (31.8), HPV 52 (29.5), HPV 53 (29.5)
Germany	Varnai 2006	, PCR-MY09/11, TS, Sequencing (HPV 6, 11, 16, 18, 31, 33, 45, 58)	24	95.8	(79.8-99.3)	HPV 16 (70.8), HPV 11 (12.5), HPV 6 (8.3), HPV 58 (4.2)
Germany	Wieland 2006	PCR, EIA (HPV 6, 11, 16, 18, 31, 33, 34, 35, 42, 44, 45, 52, 53, 54, 56, 58, 59, 66, 68, 70, 72, 73, 81, 82, 83, 84, 89)	18	100.0	(82.4-100.0)	HPV 16 (88.9), HPV 18 (44.4), HPV 83 (38.9), HPV 52 (33.3), HPV 58 (27.8)

Data updated on 22 May 2023 (data as of 30 Jun 2015)

DBH: Dot Blot Hybridization; EIA: Enzyme ImmunoAssay; HC2: Hybrid Capture 2; ISH: In Situ Hybridization; LBA: Line-Blot Assay; LiPA: Line Probe Assay; PCR: Polymerase Chain Reaction; RFLP: Restriction Fragment Length Polymorphism; RLBH: Reverse Line Blot Hybridization; RT-PCR: Real Time Polymerase Chain Reaction; SBH: Southern Blot Hybridization; SPF: Short Primer Fragment; TS: Type Specific;
AIN 2/3: Anal intraepithelial neoplasia of grade 2/3
[a] 95% Confidence Interval
Data Sources: See references in Section 9 References.

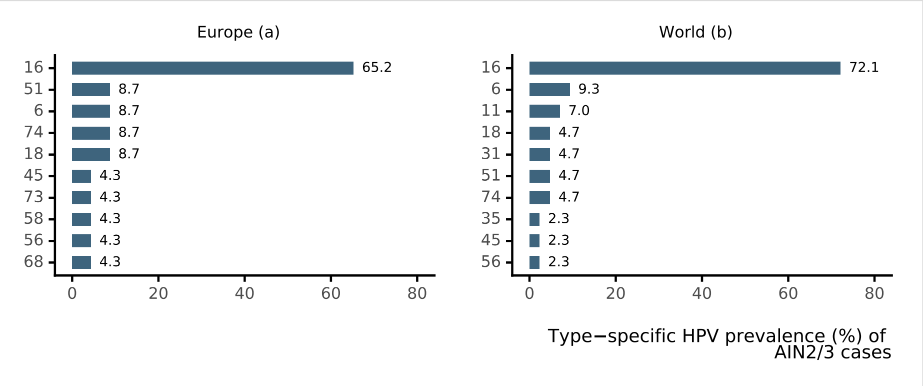
Figure 51: Comparison of the ten most frequent HPV types in anal cancer cases in Europe and the World



Data updated on 22 May 2023 (data as of 30 Jun 2014)

[a] Includes cases from Bosnia-Herzegovina, Czech Republic, France, Germany, Poland, Portugal, Slovenia, Spain and United Kingdom
[b] Includes cases from Europe (Bosnia-Herzegovina, Czech Republic, France, Germany, Poland, Portugal, Slovenia, Spain and United Kingdom); America (Chile, Colombia, Ecuador, Guatemala, Honduras, Mexico, Paraguay and United States); Africa (Mali, Nigeria and Senegal); Asia (Bangladesh,India and South Korea)
Data Sources: See references in Section 9 References.

Figure 52: Comparison of the ten most frequent HPV types in AIN 2/3 cases in Europe and the World



Data updated on 22 May 2023 (data as of 30 Jun 2014)

AIN 2/3: Anal intraepithelial neoplasia of grade 2/3
[a] Includes cases from Bosnia-Herzegovina, Czech Republic, France, Germany, Poland, Portugal, Slovenia, Spain and United Kingdom
[b] Includes cases from Europe (Bosnia-Herzegovina, Czech Republic, France, Germany, Poland, Portugal, Slovenia, Spain and United Kingdom); America (Chile, Colombia, Ecuador, Guatemala, Honduras, Mexico, Paraguay)
Data Sources: See references in Section 9 References.

4.2.2 Vulvar cancer and precancerous vulvar lesions

HPV attribution for vulvar cancer is 48% among age 15-54 years, 28% among age 55-64 years, and 15% among age 65+ worldwide (de Martel C et al. Lancet Glob Health 2020;8(2):e180-e190). Vulvar cancer has two distinct histological patterns with two different risk factor profiles: (1) basaloid/warty types (2) keratinising types. Basaloid/warty lesions are more common in young women, are frequently found adjacent to VIN, are very often associated with HPV DNA detection (86%), and have a similar risk factor profile as cervical cancer. Keratinising vulvar carcinomas represent the majority of the vulvar lesions (>60%). These lesions develop from non HPV-related chronic vulvar dermatoses, especially lichen sclerosus and/or squamous hyperplasia, their immediate cancer precursor lesion is differentiated VIN, they occur more often in older women, and are rarely associated with HPV (6%) or with any of the other risk factors typical of cervical cancer. HPV prevalence is frequently detected among cases of high-grade VIN (VIN2/3) (85.3%). HPV 16 is the most common type detected followed by HPV 33 (De Vuyst H et al. Int J Cancer 2009; 124: 1626-36).In this section, the HPV burden among cases of vulvar cancer cases and precancerous vulvar lesions in Europe are presented.

Table 34: Studies on HPV prevalence among vulvar cancer cases in Europe

Country	Study	HPV detection method and targeted HPV types	No. Tested	HPV Prevalence %	(95% CI)[a]	Prevalence of 5 most frequent HPVs, HPV type (%)
United Kingdom	Abdel-Hady 2001	TS (HPV 6, 11, 16, 18, 31, 33)	11	27.3	(9.7-56.6)	HPV 16 (27.3), HPV 33 (18.2), HPV 18 (9.1)
Spain	Alonso 2011	PCR-SPF10, (HPV 6, 11, 16, 18, 31, 33, 35, 42, 45, 51, 52, 53, 54, 56, 58, 66)	98	19.4	(12.8-28.3)	HPV 16 (14.3), HPV 33 (2.0), HPV 31 (1.0), HPV 51 (1.0), HPV 52 (1.0)
Italy	Bonvicini 2005	PCR-MY09/11 (HPV 16, 18, 31, 33, 35, 45, 52, 58)	16	0	(0.0-19.4)	
Denmark	Bryndorf 2004	PCR-SPF10, (HPV 6, 11, 16, 18, 31, 33, 35, 42, 44, 45, 51, 52, 56, 58)	10	60	(31.3-83.2)	HPV 16 (40.0), HPV 33 (20.0), HPV 56 (10.0)
Poland	Bujko 2012	PCR, LBA (HPV 6, 11, 16, 18, 26, 31, 33, 34, 35, 39, 40, 42, 43, 44, 45, 51, 52, 53, 54, 56, 57, 58, 59, 61, 66, 68, 70, 71, 72, 73, 81, 82, 83, 84)	44	34.1	(21.9-48.9)	HPV 16 (20.5), HPV 11 (11.4), HPV 44 (4.5), HPV 52 (4.5), HPV 58 (4.5)
Germany	Choschzick 2011	PCR-MY09/11, Sequencing (HPV 6, 11, 16, 18, 33)	39	46.2	(31.6-61.4)	HPV 16 (43.6), HPV 33 (2.6)
Italy	de Sanjosé 2013	PCR-SPF10, EIA, (HPV 6, 11, 16, 18, 26, 30, 31, 33, 34, 35, 39, 40, 42, 43, 44, 45, 51, 52, 53, 54, 56, 58, 59, 61, 66, 67, 68, 69, 70, 73, 74, 82, 83, 87, 89, 91)	903	19.3	(16.8-22.0)	HPV 16 (13.8), HPV 33 (1.2), HPV 18 (0.6), HPV 31 (0.6), HPV 44 (0.4)
Spain	de Sanjosé 2013	PCR-SPF10, EIA, (HPV 6, 11, 16, 18, 26, 30, 31, 33, 34, 35, 39, 40, 42, 43, 44, 45, 51, 52, 53, 54, 56, 58, 59, 61, 66, 67, 68, 69, 70, 73, 74, 82, 83, 87, 89, 91)	903	19.3	(16.8-22.0)	HPV 16 (13.8), HPV 33 (1.2), HPV 18 (0.6), HPV 31 (0.6), HPV 44 (0.4)
Germany	de Sanjosé 2013	PCR-SPF10, EIA, (HPV 6, 11, 16, 18, 26, 30, 31, 33, 34, 35, 39, 40, 42, 43, 44, 45, 51, 52, 53, 54, 56, 58, 59, 61, 66, 67, 68, 69, 70, 73, 74, 82, 83, 87, 89, 91)	903	19.3	(16.8-22.0)	HPV 16 (13.8), HPV 33 (1.2), HPV 18 (0.6), HPV 31 (0.6), HPV 44 (0.4)
Austria	de Sanjosé 2013	PCR-SPF10, EIA, (HPV 6, 11, 16, 18, 26, 30, 31, 33, 34, 35, 39, 40, 42, 43, 44, 45, 51, 52, 53, 54, 56, 58, 59, 61, 66, 67, 68, 69, 70, 73, 74, 82, 83, 87, 89, 91)	903	19.3	(16.8-22.0)	HPV 16 (13.8), HPV 33 (1.2), HPV 18 (0.6), HPV 31 (0.6), HPV 44 (0.4)

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Table 34 – continued from previous page

Country	Study	HPV detection method and targeted HPV types	No. Tested	HPV Prevalence %	(95% CI)[a]	Prevalence of 5 most frequent HPVs, HPV type (%)
Bosnia & Herzegovina	de Sanjosé 2013	PCR-SPF10, EIA, (HPV 6, 11, 16, 18, 26, 30, 31, 33, 34, 35, 39, 40, 42, 43, 44, 45, 51, 52, 53, 54, 56, 58, 59, 61, 66, 67, 68, 69, 70, 73, 74, 82, 83, 87, 89, 91)	903	19.3	(16.8-22.0)	HPV 16 (13.8), HPV 33 (1.2), HPV 18 (0.6), HPV 31 (0.6), HPV 44 (0.4)
Belarus	de Sanjosé 2013	PCR-SPF10, EIA, (HPV 6, 11, 16, 18, 26, 30, 31, 33, 34, 35, 39, 40, 42, 43, 44, 45, 51, 52, 53, 54, 56, 58, 59, 61, 66, 67, 68, 69, 70, 73, 74, 82, 83, 87, 89, 91)	903	19.3	(16.8-22.0)	HPV 16 (13.8), HPV 33 (1.2), HPV 18 (0.6), HPV 31 (0.6), HPV 44 (0.4)
Czechia	de Sanjosé 2013	PCR-SPF10, EIA, (HPV 6, 11, 16, 18, 26, 30, 31, 33, 34, 35, 39, 40, 42, 43, 44, 45, 51, 52, 53, 54, 56, 58, 59, 61, 66, 67, 68, 69, 70, 73, 74, 82, 83, 87, 89, 91)	903	19.3	(16.8-22.0)	HPV 16 (13.8), HPV 33 (1.2), HPV 18 (0.6), HPV 31 (0.6), HPV 44 (0.4)
France	de Sanjosé 2013	PCR-SPF10, EIA, (HPV 6, 11, 16, 18, 26, 30, 31, 33, 34, 35, 39, 40, 42, 43, 44, 45, 51, 52, 53, 54, 56, 58, 59, 61, 66, 67, 68, 69, 70, 73, 74, 82, 83, 87, 89, 91)	903	19.3	(16.8-22.0)	HPV 16 (13.8), HPV 33 (1.2), HPV 18 (0.6), HPV 31 (0.6), HPV 44 (0.4)
Portugal	de Sanjosé 2013	PCR-SPF10, EIA, (HPV 6, 11, 16, 18, 26, 30, 31, 33, 34, 35, 39, 40, 42, 43, 44, 45, 51, 52, 53, 54, 56, 58, 59, 61, 66, 67, 68, 69, 70, 73, 74, 82, 83, 87, 89, 91)	903	19.3	(16.8-22.0)	HPV 16 (13.8), HPV 33 (1.2), HPV 18 (0.6), HPV 31 (0.6), HPV 44 (0.4)
Poland	de Sanjosé 2013	PCR-SPF10, EIA, (HPV 6, 11, 16, 18, 26, 30, 31, 33, 34, 35, 39, 40, 42, 43, 44, 45, 51, 52, 53, 54, 56, 58, 59, 61, 66, 67, 68, 69, 70, 73, 74, 82, 83, 87, 89, 91)	903	19.3	(16.8-22.0)	HPV 16 (13.8), HPV 33 (1.2), HPV 18 (0.6), HPV 31 (0.6), HPV 44 (0.4)
United Kingdom	de Sanjosé 2013	PCR-SPF10, EIA, (HPV 6, 11, 16, 18, 26, 30, 31, 33, 34, 35, 39, 40, 42, 43, 44, 45, 51, 52, 53, 54, 56, 58, 59, 61, 66, 67, 68, 69, 70, 73, 74, 82, 83, 87, 89, 91)	903	19.3	(16.8-22.0)	HPV 16 (13.8), HPV 33 (1.2), HPV 18 (0.6), HPV 31 (0.6), HPV 44 (0.4)
Greece	de Sanjosé 2013	PCR-SPF10, EIA, (HPV 6, 11, 16, 18, 26, 30, 31, 33, 34, 35, 39, 40, 42, 43, 44, 45, 51, 52, 53, 54, 56, 58, 59, 61, 66, 67, 68, 69, 70, 73, 74, 82, 83, 87, 89, 91)	903	19.3	(16.8-22.0)	HPV 16 (13.8), HPV 33 (1.2), HPV 18 (0.6), HPV 31 (0.6), HPV 44 (0.4)
Spain	Guerrero 2011	PCR L1-Consensus primer, (HPV 6, 11, 16, 18, 26, 31, 33, 34, 35, 39, 40, 42, 43, 44, 45, 51, 52, 53, 54, 56, 57, 58, 59, 61, 66, 68, 70, 71, 72, 73, 81, 82, 83, 84)	30	16.7	(7.3-33.6)	HPV 59 (10.0), HPV 16 (3.3), HPV 18 (3.3), HPV 6 (3.3)
Germany	Hampl 2006	PCR-MY09/11, Sequencing (HPV 16, 18, 20, 21, 22, 23, 26, 30, 31, 32, 33, 35, 42, 44, 45, 51, 52, 56, 58, 61, 67, 73, 91)	48	60.4	(46.3-73.0)	HPV 16 (39.6), HPV 33 (8.3), HPV 31 (4.2), HPV 18 (2.1)
Denmark	Hørding 1993	PCR-E6, PCR-E7, TS (HPV 6, 11, 16, 18, 33)	62	30.6	(20.6-43.0)	HPV 16 (21.0), HPV 18 (4.8), HPV 33 (4.8)
Denmark	Hørding 1994	PCR-E6, PCR-E7, TS (HPV 6, 11, 16, 18, 33)	78	30.8	(21.6-41.7)	HPV 16 (28.2), HPV 33 (3.8)
Finland	Iwasawa 1997	PCR-MY09/11, PCR L1-Consensus primer, PCR-E6, TS (HPV 6, 11, 16, 18, 33)	74	36.5	(26.4-47.9)	HPV 16 (25.7), HPV 18 (12.2), HPV 33 (1.4)

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Table 34 – continued from previous page

Country	Study	HPV detection method and targeted HPV types	No. Tested	HPV Prevalence %	(95% CI)[a]	Prevalence of 5 most frequent HPVs, HPV type (%)
Netherlands	Kagie 1997	PCR-CPI/CPIIG, Sequencing (HPV 6, 11, 16, 31, 33, 45)	66	19.7	(11.9-30.8)	HPV 16 (16.7), HPV 33 (1.5), HPV 45 (1.5)
Sweden	Larsson 2012	PCR-E6, (HPV 6, 11, 16, 18, 31, 33, 39, 45, 51, 52, 56, 58, 59)	130	30.8	(23.5-39.2)	HPV 16 (23.8), HPV 33 (3.8), HPV 18 (1.5), HPV 56 (0.8), HPV 59 (0.8)
Spain	Lerma 1999	PCR L1-Consensus primer, TS (HPV 16, 18)	57	12.3	(6.1-23.2)	HPV 16 (12.3)
Sweden	Lindell 2010	PCR-CPI/CPIIG, TS, Sequencing (HPV 6, 11, 16, 18, 33, 52)	75	30.7	(21.4-41.8)	HPV 16 (21.3), HPV 18 (2.7), HPV 33 (2.7), HPV 52 (1.3)
Poland	Liss 1998	PCR-MY09/11, PCR L1-Consensus primer, PCR-E6, PCR-E7, RFLP (HPV 6, 11, 16, 18, 31, 33, 35, 45, 52, 58)	18	16.7	(5.8-39.2)	HPV 16 (16.7)
Denmark	Madsen 2008	EIA, (HPV 6, 11, 16, 18, 31, 33, 35, 42, 44, 45, 51, 52, 56, 58, 61, 67, 73)	60	51.7	(39.3-63.8)	HPV 16 (36.7), HPV 33 (11.7), HPV 73 (3.3), HPV 51 (1.7), HPV 6 (1.7)
Germany	Milde-Langosch 1995	PCR-MY09/11, TS (HPV 6, 11, 16, 18, 31, 33, 35)	40	27.5	(16.1-42.8)	HPV 16 (25.0)
Germany	Reuschenbach 2013	PCR- MULTIPLEX (HPV 6, 11, 16, 18, 31, 33, 35, 39, 42, 43, 44, 45, 51, 52, 56, 58, 59, 68, 70, 71, 73, 82)	183	43.7	(36.7-51.0)	HPV 16 (36.1), HPV 18 (2.7), HPV 33 (1.1), HPV 11 (0.5), HPV 31 (0.5)
Germany	Riethdorf 2004	PCR L1-Consensus primer, TS (HPV 16)	71	87.3	(77.6-93.2)	HPV 16 (87.3)
Czechia	Tachezy 2011	PCR L1-Consensus primer, , Sequencing (HPV 6, 11, 16, 18, 20, 21, 22, 23, 26, 30, 31, 32, 33, 34, 35, 38, 39, 40, 42, 43, 44, 45, 51, 52, 53, 54, 56, 57, 58, 59, 60, 61, 62, 66, 67, 68, 69, 70, 71, 72, 73, 74, 80, 81, 82, 83, 84, 85, 86, 87, 89, 90, 91)	46	41.3	(28.3-55.7)	HPV 16 (23.9), HPV 33 (8.7), HPV 42 (2.2), HPV 45 (2.2), HPV 6 (2.2)
Netherlands	Trietsch 2013	PCR, (HPV 6, 11, 16, 18, 26, 31, 33, 35, 39, 40, 43, 44, 45, 51, 52, 53, 54, 56, 58, 59, 66, 68, 69, 70, 71, 73, 74, 82)	108	16.7	(10.8-24.8)	HPV 16 (10.2), HPV 33 (5.6), HPV 18 (1.9)
Netherlands	van de Nieuwenhof 2009	PCR L1-Consensus primer, (HPV 6, 11, 16, 18, 31, 33, 35, 42, 45, 51, 52, 53, 54, 56, 58, 66, 73)	130	34.6	(27.0-43.1)	HPV 16 (15.4), HPV 33 (5.4), HPV 18 (2.3), HPV 52 (1.5), HPV 54 (1.5)
Netherlands	van der Avoort 2006	PCR L1-Consensus primer, PCR-SPF10, (HPV 6, 11, 16, 18, 31, 33, 35, 42, 44, 45, 51, 52, 56, 58)	16	0	(0.0-19.4)	

Data updated on 22 May 2023 (data as of 30 Jun 2015)

DBH: Dot Blot Hybridization; EIA: Enzyme ImmunoAssay; HC2: Hybrid Capture 2; ISH: In Situ Hybridization; LBA: Line-Blot Assay; LiPA: Line Probe Assay; PCR: Polymerase Chain Reaction; RFLP: Restriction Fragment Length Polymorphism; RLBH: Reverse Line Blot Hybridization; RT-PCR: Real Time Polymerase Chain Reaction; SBH: Southern Blot Hybridization; SPF: Short Primer Fragment; TS: Type Specific;
[a] 95% Confidence Interval
Data Sources: See references in Section 9 References.

Table 35: Studies on HPV prevalence among VIN 2/3 cases in Europe

Country	Study	HPV detection method and targeted HPV types	No. Tested	HPV Prevalence %	(95% CI)[a]	Prevalence of 5 most frequent HPVs, HPV type (%)
United Kingdom	Abdel-Hady 2001	TS (HPV 06/11, 16, 18, 31, 33)	32	71.9	(54.6-84.4)	HPV 16 (62.5), HPV 6/11 (18.8), HPV 31 (3.1), HPV 33 (3.1)

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Table 35 – continued from previous page

Country	Study	HPV detection method and targeted HPV types	No. Tested	HPV Prevalence %	HPV Prevalence (95% CI)[a]	Prevalence of 5 most frequent HPVs, HPV type (%)
United Kingdom	Baldwin 2003	PCR L1-Consensus primer, Sequencing (HPV 6, 11, 16, 18, 31, 33)	11	100	(74.1-100.0)	HPV 16 (90.9), HPV 33 (9.1)
Italy	Bonvicini 2005	PCR-MY09/11 (HPV 16, 18, 31, 33, 35, 45, 52, 58)	25	44	(26.7-62.9)	HPV 16 (36.0), HPV 35 (8.0), HPV 33 (4.0), HPV 52 (4.0)
United Kingdom	Bryant 2011	PCR- MULTIPLEX (HPV 6, 11, 16, 18, 31, 33, 35, 40, 42, 43, 44, 45, 51, 52, 53, 56, 58, 59, 66, 73)	49	81.6	(68.6-90.0)	HPV 16 (67.3), HPV 33 (16.3), HPV 6 (10.2), HPV 18 (2.0), HPV 31 (2.0)
United Kingdom	Daayana 2010	EIA, (HPV 6, 11, 16, 26, 31, 33, 34, 35, 39, 40, 42, 43, 44, 45, 51, 52, 53, 54, 56, 57, 58, 59, 61, 66, 68, 70, 71, 72, 73, 81, 82, 83, 84)	19	78.9	(56.7-91.5)	HPV 16 (73.7), HPV 33 (5.3), HPV 42 (5.3), HPV 84 (5.3)
France	de Sanjosé 2013	PCR-SPF10, EIA, (HPV 6, 11, 16, 18, 26, 30, 31, 33, 34, 35, 39, 40, 42, 43, 44, 45, 51, 52, 53, 54, 56, 58, 59, 61, 66, 67, 68, 69, 70, 73, 74, 82, 83, 87, 89, 91)	312	86.9	(82.7-90.2)	HPV 16 (69.6), HPV 33 (11.2), HPV 18 (2.2), HPV 6 (1.6), HPV 52 (1.3)
United Kingdom	de Sanjosé 2013	PCR-SPF10, EIA, (HPV 6, 11, 16, 18, 26, 30, 31, 33, 34, 35, 39, 40, 42, 43, 44, 45, 51, 52, 53, 54, 56, 58, 59, 61, 66, 67, 68, 69, 70, 73, 74, 82, 83, 87, 89, 91)	312	86.9	(82.7-90.2)	HPV 16 (69.6), HPV 33 (11.2), HPV 18 (2.2), HPV 6 (1.6), HPV 52 (1.3)
Portugal	de Sanjosé 2013	PCR-SPF10, EIA, (HPV 6, 11, 16, 18, 26, 30, 31, 33, 34, 35, 39, 40, 42, 43, 44, 45, 51, 52, 53, 54, 56, 58, 59, 61, 66, 67, 68, 69, 70, 73, 74, 82, 83, 87, 89, 91)	312	86.9	(82.7-90.2)	HPV 16 (69.6), HPV 33 (11.2), HPV 18 (2.2), HPV 6 (1.6), HPV 52 (1.3)
Poland	de Sanjosé 2013	PCR-SPF10, EIA, (HPV 6, 11, 16, 18, 26, 30, 31, 33, 34, 35, 39, 40, 42, 43, 44, 45, 51, 52, 53, 54, 56, 58, 59, 61, 66, 67, 68, 69, 70, 73, 74, 82, 83, 87, 89, 91)	312	86.9	(82.7-90.2)	HPV 16 (69.6), HPV 33 (11.2), HPV 18 (2.2), HPV 6 (1.6), HPV 52 (1.3)
Belarus	de Sanjosé 2013	PCR-SPF10, EIA, (HPV 6, 11, 16, 18, 26, 30, 31, 33, 34, 35, 39, 40, 42, 43, 44, 45, 51, 52, 53, 54, 56, 58, 59, 61, 66, 67, 68, 69, 70, 73, 74, 82, 83, 87, 89, 91)	312	86.9	(82.7-90.2)	HPV 16 (69.6), HPV 33 (11.2), HPV 18 (2.2), HPV 6 (1.6), HPV 52 (1.3)
Bosnia & Herzegovina	de Sanjosé 2013	PCR-SPF10, EIA, (HPV 6, 11, 16, 18, 26, 30, 31, 33, 34, 35, 39, 40, 42, 43, 44, 45, 51, 52, 53, 54, 56, 58, 59, 61, 66, 67, 68, 69, 70, 73, 74, 82, 83, 87, 89, 91)	312	86.9	(82.7-90.2)	HPV 16 (69.6), HPV 33 (11.2), HPV 18 (2.2), HPV 6 (1.6), HPV 52 (1.3)
Austria	de Sanjosé 2013	PCR-SPF10, EIA, (HPV 6, 11, 16, 18, 26, 30, 31, 33, 34, 35, 39, 40, 42, 43, 44, 45, 51, 52, 53, 54, 56, 58, 59, 61, 66, 67, 68, 69, 70, 73, 74, 82, 83, 87, 89, 91)	312	86.9	(82.7-90.2)	HPV 16 (69.6), HPV 33 (11.2), HPV 18 (2.2), HPV 6 (1.6), HPV 52 (1.3)
Greece	de Sanjosé 2013	PCR-SPF10, EIA, (HPV 6, 11, 16, 18, 26, 30, 31, 33, 34, 35, 39, 40, 42, 43, 44, 45, 51, 52, 53, 54, 56, 58, 59, 61, 66, 67, 68, 69, 70, 73, 74, 82, 83, 87, 89, 91)	312	86.9	(82.7-90.2)	HPV 16 (69.6), HPV 33 (11.2), HPV 18 (2.2), HPV 6 (1.6), HPV 52 (1.3)

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Table 35 – continued from previous page

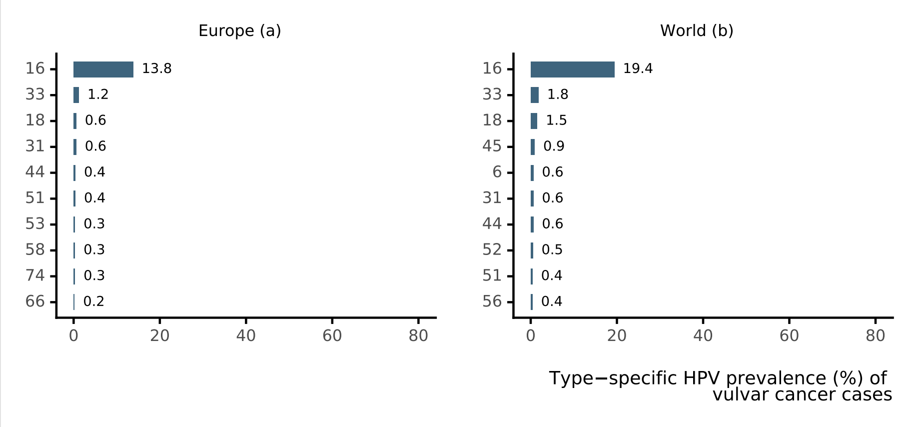
Country	Study	HPV detection method and targeted HPV types	No. Tested	HPV Prevalence %	HPV Prevalence (95% CI)[a]	Prevalence of 5 most frequent HPVs, HPV type (%)
Czechia	de Sanjosé 2013	PCR-SPF10, EIA, (HPV 6, 11, 16, 18, 26, 30, 31, 33, 34, 35, 39, 40, 42, 43, 44, 45, 51, 52, 53, 54, 56, 58, 59, 61, 66, 67, 68, 69, 70, 73, 74, 82, 83, 87, 89, 91)	312	86.9	(82.7-90.2)	HPV 16 (69.6), HPV 33 (11.2), HPV 18 (2.2), HPV 6 (1.6), HPV 52 (1.3)
Germany	de Sanjosé 2013	PCR-SPF10, EIA, (HPV 6, 11, 16, 18, 26, 30, 31, 33, 34, 35, 39, 40, 42, 43, 44, 45, 51, 52, 53, 54, 56, 58, 59, 61, 66, 67, 68, 69, 70, 73, 74, 82, 83, 87, 89, 91)	312	86.9	(82.7-90.2)	HPV 16 (69.6), HPV 33 (11.2), HPV 18 (2.2), HPV 6 (1.6), HPV 52 (1.3)
Spain	de Sanjosé 2013	PCR-SPF10, EIA, (HPV 6, 11, 16, 18, 26, 30, 31, 33, 34, 35, 39, 40, 42, 43, 44, 45, 51, 52, 53, 54, 56, 58, 59, 61, 66, 67, 68, 69, 70, 73, 74, 82, 83, 87, 89, 91)	312	86.9	(82.7-90.2)	HPV 16 (69.6), HPV 33 (11.2), HPV 18 (2.2), HPV 6 (1.6), HPV 52 (1.3)
Italy	de Sanjosé 2013	PCR-SPF10, EIA, (HPV 6, 11, 16, 18, 26, 30, 31, 33, 34, 35, 39, 40, 42, 43, 44, 45, 51, 52, 53, 54, 56, 58, 59, 61, 66, 67, 68, 69, 70, 73, 74, 82, 83, 87, 89, 91)	312	86.9	(82.7-90.2)	HPV 16 (69.6), HPV 33 (11.2), HPV 18 (2.2), HPV 6 (1.6), HPV 52 (1.3)
Germany	Hampl 2006	PCR-MY09/11, Sequencing (HPV 6, 11, 16, 18, 20, 21, 22, 23, 26, 30, 31, 32, 33, 35, 42, 44, 45, 51, 52, 56, 58, 61, 67, 73, 74, 91)	168	100	(97.8-100.0)	HPV 16 (79.8), HPV 33 (10.7), HPV 31 (4.2), HPV 18 (3.0)
Denmark	Junge 1995	PCR-E6, PCR-E7, TS (HPV 6, 11, 16, 18, 31, 33)	58	87.9	(77.1-94.0)	HPV 16 (77.6), HPV 33 (10.3)
Spain	Lerma 1999	PCR L1-Consensus primer, TS (HPV 16, 18)	18	27.8	(12.5-50.9)	HPV 16 (27.8)
Germany	Riethdorf 2004	PCR L1-Consensus primer, TS (HPV 16)	60	68.3	(55.8-78.7)	HPV 16 (68.3)
Czechia	Tachezy 2011	PCR L1-Consensus primer, , Sequencing (HPV 6, 11, 16, 18, 20, 21, 22, 23, 26, 30, 31, 32, 33, 34, 35, 38, 39, 40, 42, 43, 44, 45, 51, 52, 53, 54, 56, 57, 58, 59, 60, 61, 62, 66, 67, 68, 69, 70, 71, 72, 73, 74, 80, 81, 82, 83, 84, 85, 86, 87, 89, 90, 91)	94	94.7	(88.1-97.7)	HPV 16 (71.3), HPV 33 (8.5), HPV 18 (5.3), HPV 6 (4.3), HPV 11 (2.1)
Greece	Tsimplaki 2012	(HPV 6, 11, 16, 18, 31, 33, 35, 40, 42, 43, 44, 45, 51, 52, 53, 56, 58, 59, 66, 73)	14	78.6	(52.4-92.4)	HPV 16 (64.3), HPV 18 (7.1), HPV 51 (7.1), HPV 52 (7.1), HPV 53 (7.1)
Netherlands	van Beurden 1995	PCR-CPI/CPIIG, Sequencing (HPV 6, 11, 16, 18, 20, 21, 22, 23, 26, 30, 31, 32, 33, 45)	46	95.7	(85.5-98.8)	HPV 16 (89.1), HPV 33 (2.2), HPV 45 (2.2)
Netherlands	van der Avoort 2006	PCR L1-Consensus primer, PCR-SPF10, (HPV 6, 11, 16, 18, 31, 33, 35, 42, 43, 44, 45, 51, 52, 56, 58, 59, 74)	32	56.3	(39.3-71.8)	HPV 16 (40.6), HPV 31 (6.3), HPV 6 (6.3), HPV 33 (3.1)
Netherlands	van Esch 2014	TS (HPV 16, 18, 33, 73)	43	100	(91.8-100.0)	HPV 16 (81.4), HPV 33 (14.0), HPV 73 (2.3)
United Kingdom	Winters 2008	EIA, (HPV 6, 11, 16, 18, 26, 31, 33, 34, 35, 39, 40, 42, 43, 44, 45, 51, 52, 53, 54, 56, 57, 58, 59, 61, 66, 68, 70, 71, 72, 73, 81, 82, 83, 84)	20	85	(64.0-94.8)	HPV 16 (75.0), HPV 18 (5.0), HPV 33 (5.0)

Data updated on 22 May 2023 (data as of 30 Jun 2015)

DBH: Dot Blot Hybridization; EIA: Enzyme ImmunoAssay; HC2: Hybrid Capture 2; ISH: In Situ Hybridization; LBA: Line-Blot Assay; LiPA: Line Probe Assay; PCR: Polymerase Chain Reaction; RFLP: Restriction Fragment Length Polymorphism; RLBH: Reverse Line Blot Hybridization; RT-PCR: Real Time Polymerase Chain Reaction; SBH: Southern Blot Hybridization; SPF: Short Primer Fragment; TS: Type Specific;
VIN 2/3: Vulvar intraepithelial neoplasia of grade 2/3

[a] 95% Confidence Interval
Data Sources: See references in Section 9 References.

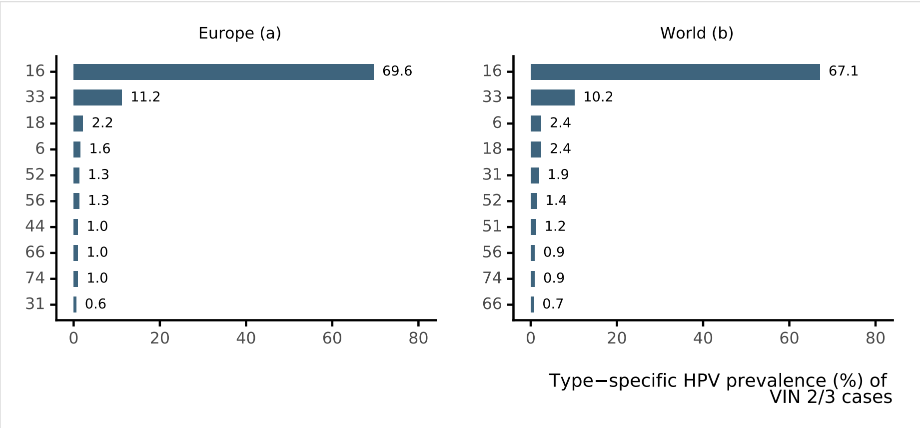
Figure 53: Comparison of the ten most frequent HPV types in cases of vulvar cancer in Europe and the World



Data updated on 22 May 2023 (data as of 30 Jun 2015)

[a] Includes cases from Austria, Belarus, Bosnia-Herzegovina, Czech Republic, France, Germany, Greece, Italy, Poland, Portugal, Spain and United Kingdom.
[b] Includes cases from America (Argentina, Brazil, Chile, Colombia, Ecuador, Guatemala, Honduras, Mexico, Paraguay, Uruguay, United States of America and Venezuela); Africa (Mali, Mozambique, Nigeria, and Senegal); Oceania (Australia and New Zealand); Europe (Austria, Belarus, Bosnia-Herzegovina, Czech Republic, France, Germany, Greece, Italy, Poland, Portugal, Spain and United Kingdom); and in Asia (Bangladesh, India, Israel, South Korea, Kuwait, Lebanon, Philippines, Taiwan and Turkey)
Data Sources: See references in Section 9 References.

Figure 54: Comparison of the ten most frequent HPV types in VIN 2/3 cases in Europe and the World



Data updated on 22 May 2023 (data as of 30 Jun 2014)

VIN 2/3: Vulvar intraepithelial neoplasia of grade 2/3
[a] Includes cases from Austria, Belarus, Bosnia-Herzegovina, Czech Republic, France, Germany, Greece, Italy, Poland, Portugal, Spain and United Kingdom.
[b] Includes cases from America (Argentina, Brazil, Chile, Colombia, Ecuador, Guatemala, Honduras, Mexico, Paraguay, Uruguay and Venezuela); Oceania (Australia and New Zealand); Europe (Austria, Belarus, Bosnia-Herzegovina, Czech Republic, France, Germany, Greece, Italy, Poland, Portugal, Spain and United Kingdom); and in Asia (Bangladesh, India, Israel, South Korea, Kuwait, Lebanon, Philippines, Taiwan and Turkey)
Data Sources: See references in Section 9 References.

4.2.3 Vaginal cancer and precancerous vaginal lesions

Vaginal and cervical cancers share similar risk factors and it is generally accepted that both carcinomas share the same aetiology of HPV infection although there is limited evidence available. Women with vaginal cancer are more likely to have a history of other ano-genital cancers, particularly of the cervix, and these two carcinomas are frequently diagnosed simultaneously. HPV DNA is detected among 78% of invasive vaginal carcinomas and 91% of high-grade vaginal neoplasias (VaIN2/3). HPV16 is the most common type in high-grade vaginal neoplasias and it is detected in at least 78% of HPV-positive carcinomas (de Martel C et al. Lancet Glob Health 2020;8(2):e180-e190; De Vuyst H et al. Int J Cancer 2009; 124:1626-36). In this section, the HPV burden among cases of vaginal cancer cases and precancerous vaginal lesions in Europe are presented.

Table 36: Studies on HPV prevalence among vaginal cancer cases in Europe

Country	Study	HPV detection method and targeted HPV types	No. Tested	HPV Prevalence %	HPV Prevalence (95% CI)[a]	Prevalence of 5 most frequent HPVs, HPV type (%)
Spain	Alemany 2014	PCR-SPF10, EIA, (HPV 6, 11, 16, 18, 26, 30, 31, 33, 35, 39, 42, 45, 51, 52, 53, 56, 58, 59, 66, 67, 68, 69, 73, 82)	152	71.1	(63.4-77.7)	HPV 16 (47.4), HPV 18 (3.3), HPV 73 (3.3), HPV 33 (2.6), HPV 56 (2.6)
Austria	Alemany 2014	PCR-SPF10, EIA, (HPV 6, 11, 16, 18, 26, 30, 31, 33, 35, 39, 42, 45, 51, 52, 53, 56, 58, 59, 66, 67, 68, 69, 73, 82)	152	71.1	(63.4-77.7)	HPV 16 (47.4), HPV 18 (3.3), HPV 73 (3.3), HPV 33 (2.6), HPV 56 (2.6)
Germany	Alemany 2014	PCR-SPF10, EIA, (HPV 6, 11, 16, 18, 26, 30, 31, 33, 35, 39, 42, 45, 51, 52, 53, 56, 58, 59, 66, 67, 68, 69, 73, 82)	152	71.1	(63.4-77.7)	HPV 16 (47.4), HPV 18 (3.3), HPV 73 (3.3), HPV 33 (2.6), HPV 56 (2.6)
Czechia	Alemany 2014	PCR-SPF10, EIA, (HPV 6, 11, 16, 18, 26, 30, 31, 33, 35, 39, 42, 45, 51, 52, 53, 56, 58, 59, 66, 67, 68, 69, 73, 82)	152	71.1	(63.4-77.7)	HPV 16 (47.4), HPV 18 (3.3), HPV 73 (3.3), HPV 33 (2.6), HPV 56 (2.6)
Poland	Alemany 2014	PCR-SPF10, EIA, (HPV 6, 11, 16, 18, 26, 30, 31, 33, 35, 39, 42, 45, 51, 52, 53, 56, 58, 59, 66, 67, 68, 69, 73, 82)	152	71.1	(63.4-77.7)	HPV 16 (47.4), HPV 18 (3.3), HPV 73 (3.3), HPV 33 (2.6), HPV 56 (2.6)
France	Alemany 2014	PCR-SPF10, EIA, (HPV 6, 11, 16, 18, 26, 30, 31, 33, 35, 39, 42, 45, 51, 52, 53, 56, 58, 59, 66, 67, 68, 69, 73, 82)	152	71.1	(63.4-77.7)	HPV 16 (47.4), HPV 18 (3.3), HPV 73 (3.3), HPV 33 (2.6), HPV 56 (2.6)
Belarus	Alemany 2014	PCR-SPF10, EIA, (HPV 6, 11, 16, 18, 26, 30, 31, 33, 35, 39, 42, 45, 51, 52, 53, 56, 58, 59, 66, 67, 68, 69, 73, 82)	152	71.1	(63.4-77.7)	HPV 16 (47.4), HPV 18 (3.3), HPV 73 (3.3), HPV 33 (2.6), HPV 56 (2.6)
United Kingdom	Alemany 2014	PCR-SPF10, EIA, (HPV 6, 11, 16, 18, 26, 30, 31, 33, 35, 39, 42, 45, 51, 52, 53, 56, 58, 59, 66, 67, 68, 69, 73, 82)	152	71.1	(63.4-77.7)	HPV 16 (47.4), HPV 18 (3.3), HPV 73 (3.3), HPV 33 (2.6), HPV 56 (2.6)
Greece	Alemany 2014	PCR-SPF10, EIA, (HPV 6, 11, 16, 18, 26, 30, 31, 33, 35, 39, 42, 45, 51, 52, 53, 56, 58, 59, 66, 67, 68, 69, 73, 82)	152	71.1	(63.4-77.7)	HPV 16 (47.4), HPV 18 (3.3), HPV 73 (3.3), HPV 33 (2.6), HPV 56 (2.6)
Portugal	Ferreira 2008	PCR, (HPV 6, 11, 16, 18, 31, 33, 35, 40, 42, 44, 45, 51, 52, 56, 58)	21	81	(60.0-92.3)	HPV 16 (33.3), HPV 31 (28.6), HPV 40 (14.3), HPV 18 (9.5), HPV 33 (9.5)
Spain	Fuste 2010	PCR-SPF10, (HPV 6, 11, 16, 18, 31, 33, 35, 39, 40, 42, 45, 51, 52, 56, 58, 59, 68)	32	78.1	(61.2-89.0)	HPV 16 (56.3), HPV 52 (6.3), HPV 35 (3.1), HPV 51 (3.1), HPV 58 (3.1)
Sweden	Larsson 2013	PCR-E6, (HPV 6, 11, 16, 18, 31, 33, 35, 39, 45, 51, 52, 56, 58, 59)	69	53.6	(42.0-64.9)	HPV 16 (37.7), HPV 18 (2.9), HPV 31 (2.9), HPV 33 (2.9), HPV 52 (2.9)
Denmark	Madsen 2008	EIA, (HPV 6, 11, 16, 18, 31, 33, 35, 39, 40, 42, 44, 45, 51, 52, 56, 58)	27	88.9	(71.9-96.1)	HPV 16 (77.8), HPV 33 (7.4), HPV 18 (3.7), HPV 39 (3.7), HPV 45 (3.7)

Continued on next page

Table 36 – continued from previous page

Country	Study	HPV detection method and targeted HPV types	No. Tested	HPV Prevalence		Prevalence of 5 most frequent HPVs, HPV type (%)
				%	(95% CI)[a]	

Data updated on 22 May 2023 (data as of 30 Jun 2015)

DBH: Dot Blot Hybridization; EIA: Enzyme ImmunoAssay; HC2: Hybrid Capture 2; ISH: In Situ Hybridization; LBA: Line-Blot Assay; LiPA: Line Probe Assay; PCR: Polymerase Chain Reaction; RFLP: Restriction Fragment Length Polymorphism; RLBH: Reverse Line Blot Hybridization; RT-PCR: Real Time Polymerase Chain Reaction; SBH: Southern Blot Hybridization; SPF: Short Primer Fragment; TS: Type Specific;
[a] 95% Confidence Interval
Data Sources: See references in Section 9 References.

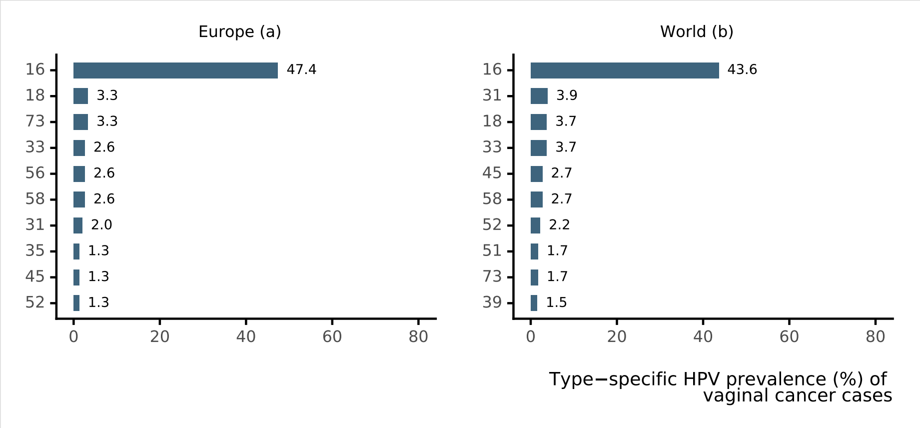
Table 37: Studies on HPV prevalence among VaIN 2/3 cases in Europe

Country	Study	HPV detection method and targeted HPV types	No. Tested	HPV Prevalence		Prevalence of 5 most frequent HPVs, HPV type (%)
				%	(95% CI)[a]	
Spain	Alemany 2014	PCR-SPF10, EIA, (HPV 6, 11, 16, 18, 26, 30, 31, 33, 35, 39, 42, 45, 51, 52, 53, 56, 58, 59, 66, 67, 68, 69, 73, 82)	96	97.9	(92.7-99.4)	HPV 16 (65.6), HPV 33 (7.3), HPV 18 (5.2), HPV 52 (3.1), HPV 73 (3.1)
France	Alemany 2014	PCR-SPF10, EIA, (HPV 6, 11, 16, 18, 26, 30, 31, 33, 35, 39, 42, 45, 51, 52, 53, 56, 58, 59, 66, 67, 68, 69, 73, 82)	96	97.9	(92.7-99.4)	HPV 16 (65.6), HPV 33 (7.3), HPV 18 (5.2), HPV 52 (3.1), HPV 73 (3.1)
Germany	Alemany 2014	PCR-SPF10, EIA, (HPV 6, 11, 16, 18, 26, 30, 31, 33, 35, 39, 42, 45, 51, 52, 53, 56, 58, 59, 66, 67, 68, 69, 73, 82)	96	97.9	(92.7-99.4)	HPV 16 (65.6), HPV 33 (7.3), HPV 18 (5.2), HPV 52 (3.1), HPV 73 (3.1)
Poland	Alemany 2014	PCR-SPF10, EIA, (HPV 6, 11, 16, 18, 26, 30, 31, 33, 35, 39, 42, 45, 51, 52, 53, 56, 58, 59, 66, 67, 68, 69, 73, 82)	96	97.9	(92.7-99.4)	HPV 16 (65.6), HPV 33 (7.3), HPV 18 (5.2), HPV 52 (3.1), HPV 73 (3.1)
Czechia	Alemany 2014	PCR-SPF10, EIA, (HPV 6, 11, 16, 18, 26, 30, 31, 33, 35, 39, 42, 45, 51, 52, 53, 56, 58, 59, 66, 67, 68, 69, 73, 82)	96	97.9	(92.7-99.4)	HPV 16 (65.6), HPV 33 (7.3), HPV 18 (5.2), HPV 52 (3.1), HPV 73 (3.1)
United Kingdom	Alemany 2014	PCR-SPF10, EIA, (HPV 6, 11, 16, 18, 26, 30, 31, 33, 35, 39, 42, 45, 51, 52, 53, 56, 58, 59, 66, 67, 68, 69, 73, 82)	96	97.9	(92.7-99.4)	HPV 16 (65.6), HPV 33 (7.3), HPV 18 (5.2), HPV 52 (3.1), HPV 73 (3.1)
Greece	Alemany 2014	PCR-SPF10, EIA, (HPV 6, 11, 16, 18, 26, 30, 31, 33, 35, 39, 42, 45, 51, 52, 53, 56, 58, 59, 66, 67, 68, 69, 73, 82)	96	97.9	(92.7-99.4)	HPV 16 (65.6), HPV 33 (7.3), HPV 18 (5.2), HPV 52 (3.1), HPV 73 (3.1)
Belarus	Alemany 2014	PCR-SPF10, EIA, (HPV 6, 11, 16, 18, 26, 30, 31, 33, 35, 39, 42, 45, 51, 52, 53, 56, 58, 59, 66, 67, 68, 69, 73, 82)	96	97.9	(92.7-99.4)	HPV 16 (65.6), HPV 33 (7.3), HPV 18 (5.2), HPV 52 (3.1), HPV 73 (3.1)
Austria	Alemany 2014	PCR-SPF10, EIA, (HPV 6, 11, 16, 18, 26, 30, 31, 33, 35, 39, 42, 45, 51, 52, 53, 56, 58, 59, 66, 67, 68, 69, 73, 82)	96	97.9	(92.7-99.4)	HPV 16 (65.6), HPV 33 (7.3), HPV 18 (5.2), HPV 52 (3.1), HPV 73 (3.1)
Italy	Frega 2007	PCR, TS (HPV 16, 18)	30	100	(88.6-100.0)	HPV 16 (86.7), HPV 18 (13.3)
Germany	Hampl 2006	PCR-MY09/11, Sequencing (HPV 6, 11, 16, 18, 20, 21, 22, 23, 26, 30, 31, 32, 33, 35, 40, 44, 52, 56, 58)	11	90.9	(62.3-98.4)	HPV 16 (63.6)
Greece	Tsimplaki 2012	(HPV 6, 11, 16, 18, 31, 33, 35, 39, 40, 42, 44, 45, 51, 52, 53, 56, 58, 66, 70)	10	40	(16.8-68.7)	HPV 16 (20.0), HPV 33 (20.0)

Data updated on 22 May 2023 (data as of 30 Jun 2015)

DBH: Dot Blot Hybridization; EIA: Enzyme ImmunoAssay; HC2: Hybrid Capture 2; ISH: In Situ Hybridization; LBA: Line-Blot Assay; LiPA: Line Probe Assay; PCR: Polymerase Chain Reaction; RFLP: Restriction Fragment Length Polymorphism; RLBH: Reverse Line Blot Hybridization; RT-PCR: Real Time Polymerase Chain Reaction; SBH: Southern Blot Hybridization; SPF: Short Primer Fragment; TS: Type Specific;
VAIN 2/3: Vaginal intraepithelial neoplasia of grade 2/3
[a] 95% Confidence Interval
Data Sources: See references in Section 9 References.

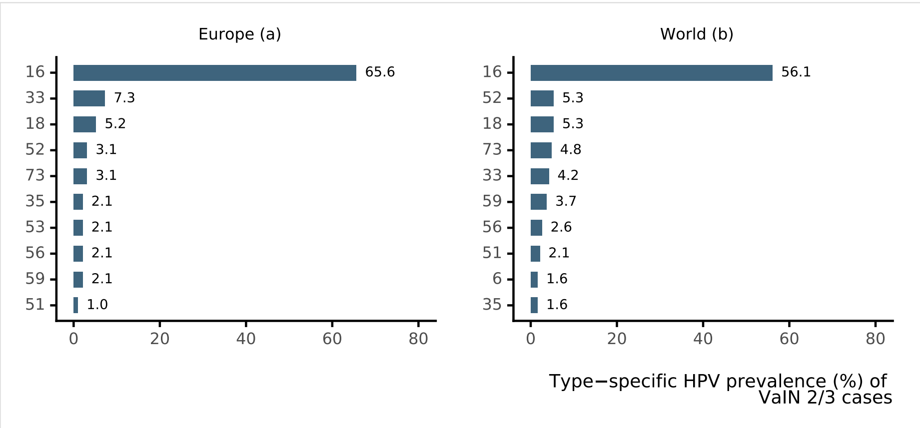
Figure 55: Comparison of the ten most frequent HPV types in cases of vaginal cancer in Europe and the World



Data updated on 22 May 2023 (data as of 30 Jun 2015)

[a] Includes cases from Austria, Belarus, Czech Republic, France, Germany, Greece, Poland, Spain and United Kingdom.
[b] Includes cases from Europe (Austria, Belarus, Czech Republic, France, Germany, Greece, Poland, Spain and United Kingdom); America (Argentina, Brazil, Chile, Colombia, Ecuador, Guatemala, Mexico, Paraguay, Uruguay, United states of America and Venezuela); Africa (Mozambique, Nigeria); Asia (Bangladesh, India, Israel, South Korea, Kuwait, Philippines, Taiwan and Turkey); and Oceania (Australia)
Data Sources: See references in Section 9 References.

Figure 56: Comparison of the ten most frequent HPV types in VaIN 2/3 cases in Europe and the World



Data updated on 22 May 2023 (data as of 30 Jun 2014)

VAIN 2/3: Vaginal intraepithelial neoplasia of grade 2/3
[a] Includes cases from Austria, Belarus, Czech Republic, France, Germany, Greece, Poland, Spain and United Kingdom.
[b] Includes cases from Europe (Austria, Belarus, Czech Republic, France, Germany, Greece, Poland, Spain and United Kingdom); America (Argentina, Brazil, Chile, Colombia, Ecuador, Guatemala, Mexico, Paraguay, Uruguay, United states of America and Venezuela); Asia (Bangladesh, India, Israel, South Korea, Kuwait, Philippines, Taiwan and Turkey); and Oceania (Australia)
Data Sources: See references in Section 9 References.

4.2.4 Penile cancer and precancerous penile lesions

HPV DNA is detectable in approximately 51% of all penile cancers (de Martel C et al. Lancet Glob Health 2020;8(2):e180-e190). Among HPV-related penile tumours, HPV16 is the most common type detected, followed by HPV18 and HPV types 6/11 (Miralles C et al. J Clin Pathol 2009;62:870-8). Over 95% of invasive penile cancers are SCC and the most common penile SCC histologic sub-types are keratinising (49%), mixed warty-basaloid (17%), verrucous (8%), warty (6%), and basaloid (4%). HPV is commonly detected in basaloid and warty tumours but is less common in keratinising and verrucous tumours. In this section, the HPV burden among cases of penile cancer cases and precancerous penile lesions in Europe are presented.

Table 38: Studies on HPV prevalence among penile cancer cases in Europe

Country	Study	HPV detection method and targeted HPV types	No. Tested	HPV Prevalence		Prevalence of 5 most frequent HPVs, HPV type (%)
				%	(95% CI)[a]	
Austria	Aumayr 2013	PCR-GP5+/6+, PCR L1-Consensus primer, TS (HPV 16, 18, 31, 33)	26	69.2	(50.0-83.5)	
Belgium	D'Hauwers 2012	PCR-E6, PCR-E7, qPCR (HPV 6, 11, 16, 18, 31, 33, 35, 39, 45, 51, 52, 53, 56, 58, 59, 66, 67, 68)	36	61.1	(44.9-75.2)	HPV 16 (47.2), HPV 59 (5.6), HPV 11 (2.8), HPV 33 (2.8), HPV 39 (2.8)
Spain	Ferrándiz-Pulido 2013	PCR-SPF10, EIA, LiPA (HPV 6, 11, 16, 18, 31, 33, 34, 35, 39, 40, 42, 43, 44, 45, 51, 52, 53, 54, 56, 58, 59, 66, 68, 70, 73, 74)	78	37.2	(27.3-48.3)	HPV 16 (26.9), HPV 58 (3.8), HPV 6 (2.6), HPV 33 (1.3), HPV 45 (1.3)
Italy	Gentile 2006	PCR-(MY09/11, GP5+/6+), sequencing	11	72.7	(43.4-90.3)	HPV 16 (45.5), HPV 18 (18.2), HPV 53 (9.1)
Spain	Guerrero 2008	PCR-GP5+/6+, RLBM, (HPV 6, 11, 16, 18, 26, 31, 33-35, 39, 40, 42-45, 51-59, 61, 66, 68, 70-73, 81(CP8304), 82/MM4, 82/IS39, 83(MM7), 84(MM8), CP6108)	24	45.8	(27.9-64.9)	HPV 16 (45.8), HPV 39 (4.2)
Netherlands	Heideman 2007	PCR-GP5+/6+, EIA, RLBM, (HPV 6, 11, 16, 18, 26, 31, 33-35, 39, 40, 42-45, 51-59, 61, 66, 68, 70-73, 81(CP8304), 82/MM4, 82/IS39, 83(MM7), 84(MM8), CP6108)	83	55.4	(44.7-65.6)	HPV 16 (22.8), HPV 18 (2.3), HPV 45 (1.8), HPV 33 (1.2), HPV 56 (0.6)
France	Humbey 2003	PCR-(MY09/MY11, FAP59/FAP64), TS (HPV 5, 6, 8, 11, 16, 18, 31, 33, 35, 45, 51, 52, 58, 68), sequencing	36	66.7	(50.3-79.8)	HPV 16 (25.0)
Sweden	Kirrander 2011	PCR-(HPV 6,11, 16,18,31,33,35,39,45,51,52,56,58,59), sequencing	151	80.8	(73.8-86.3)	
Denmark	Krustrup 2009	PCR-GP5+/6+, EIA, RLBM, (HPV 6, 11, 16, 18, 26, 31, 33-35, 39, 40, 42-45, 51-59, 61, 66, 68, 70-73, 81(CP8304), 82/MM4, 82/IS39, 83(MM7), 84(MM8), CP6108)	145	61.4	(53.3-68.9)	
Netherlands	Lont 2006	PCR-GP5+/6+, RLBM, (HPV 6, 11, 16, 18, 26, 31, 33-35, 39, 40, 42-45, 51-59, 61, 66, 68, 70-73, 81(CP8304), 82/MM4, 82/IS39, 83(MM7), 84(MM8), CP6108)	171	29.2	(22.9-36.5)	

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Table 38 – continued from previous page

Country	Study	HPV detection method and targeted HPV types	No. Tested	HPV Prevalence %	HPV Prevalence (95% CI)[a]	Prevalence of 5 most frequent HPVs, HPV type (%)
Austria	Mannweiler 2013	PCR L1-Consensus primer, PCR-SPF10, LiPA (HPV 6, 11, 16, 18, 26, 31, 33, 35, 39, 40, 43, 44, 45, 51, 52, 53, 54, 56, 58, 59, 66, 68, 69, 70, 71, 72, 73, 74, 82)	123	58.5	(49.7-66.9)	HPV 16 (45.5), HPV 33 (4.9), HPV 18 (4.1), HPV 45 (3.3), HPV 56 (0.8)
Spain	Pascual 2007	PCR-(MY09/11, GP5+/6+), sequencing	49	77.6	(64.1-87.0)	HPV 16 (65.3), HPV 18 (8.2)
Germany	Perceau 2003	PCR-GP5+/6+, TS (HPV 16, 18, 31, 33)	17	35.3	(17.3-58.7)	
Germany	Poetsch 2011	PCR-,TS (HPV 6/11, 16, 18)	52	38.5	(26.5-52.0)	HPV 16 (32.7), HPV 6/11 (3.8), HPV 18 (1.9)
United Kingdom	Prowse 2008	PCR-SPF10, LIPA, (HPV 6, 11, 16, 18, 26, 31, 33-35, 39, 40, 42-45, 51-54, 56, 58, 59, 66, 68-71, 73, 74)	26	53.8	(35.5-71.2)	
United Kingdom	Stankiewicz 2011	PCR-SPF10, LIPA, (HPV 6, 11, 16, 18, 26, 31, 33-35, 39, 40, 42-45, 51-54, 56, 58, 59, 66, 68-71, 73, 74)	102	55.9	(46.2-65.1)	HPV 16 (45.1), HPV 11 (9.8), HPV 45 (5.9), HPV 6 (5.9), HPV 31 (4.9)
Italy	Tornesello 2008	PCR-GP5+/6+, PCR-MY09/11, PCR-L1C1/C2, PCR-E6, PCR-E7, Sequencing (HPV 6, 16, 18, 33, 35)	61	47.5	(35.5-59.8)	HPV 16 (42.6), HPV 18 (3.3), HPV 35 (1.6)

Data updated on 22 May 2023 (data as of 30 Jun 2014)

DBH: Dot Blot Hybridization; EIA: Enzyme ImmunoAssay; HC2: Hybrid Capture 2; ISH: In Situ Hybridization; LBA: Line-Blot Assay; LiPA: Line Probe Assay; PCR: Polymerase Chain Reaction; RFLP: Restriction Fragment Length Polymorphism; RLBH: Reverse Line Blot Hybridization; RT-PCR: Real Time Polymerase Chain Reaction; SBH: Southern Blot Hybridization; SPF: Short Primer Fragment; TS: Type Specific;
[a] 95% Confidence Interval
Data Sources: See references in Section 9 References.

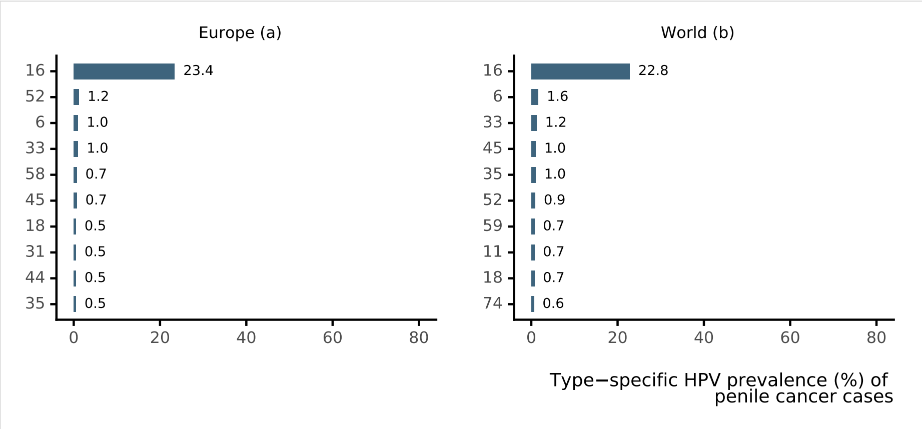
Table 39: Studies on HPV prevalence among PeIN 2/3 cases in Europe

Country	Study	HPV detection method and targeted HPV types	No. Tested	HPV Prevalence %	HPV Prevalence (95% CI)[a]	Prevalence of 5 most frequent HPVs, HPV type (%)
Belgium	D'Hauwers 2012	PCR-E6, PCR-E7, qPCR (HPV 6, 11, 16, 18, 31, 33, 35, 39, 45, 51, 52, 53, 56, 58, 59, 66, 67, 68)	13	84.6	(57.8-95.7)	HPV 16 (61.5), HPV 18 (23.1), HPV 11 (15.4), HPV 53 (15.4), HPV 56 (15.4)
Sweden	Kirrander 2011	PCR-(HPV 6, 11, 16, 18, 31, 33, 35, 39, 45, 51, 52, 56, 58, 59), sequencing	62	88.7	(78.5-94.4)	
Austria	Mannweiler 2013	PCR L1-Consensus primer, PCR-SPF10, LiPA (HPV 6, 11, 16, 18, 26, 31, 33, 35, 39, 40, 43, 44, 45, 51, 52, 53, 54, 56, 58, 66, 68, 69, 70, 71, 72, 73, 74, 82)	43	76.7	(62.3-86.8)	HPV 16 (62.8), HPV 18 (9.3), HPV 33 (2.3), HPV 73 (2.3)
Sweden	Wikström 2012	PCR-GP5+/6+, PCR-MY09/11, PCR L1-Consensus primer (HPV 6, 11, 16, 18, 31, 33, 42, 45, 52, 58, 70, 73)	28	85.7	(68.5-94.3)	HPV 16 (39.3), HPV 6 (21.4), HPV 31 (7.1), HPV 33 (7.1), HPV 45 (7.1)

Data updated on 22 May 2023 (data as of 30 Jun 2014)

PeIN 2/3: Penile intraepithelial neoplasia of grade 2/3
DBH: Dot Blot Hybridization; EIA: Enzyme ImmunoAssay; HC2: Hybrid Capture 2; ISH: In Situ Hybridization; LBA: Line-Blot Assay; LiPA: Line Probe Assay; PCR: Polymerase Chain Reaction; RFLP: Restriction Fragment Length Polymorphism; RLBH: Reverse Line Blot Hybridization; RT-PCR: Real Time Polymerase Chain Reaction; SBH: Southern Blot Hybridization; SPF: Short Primer Fragment; TS: Type Specific;
[a] 95% Confidence Interval
Data Sources: See references in Section 9 References.

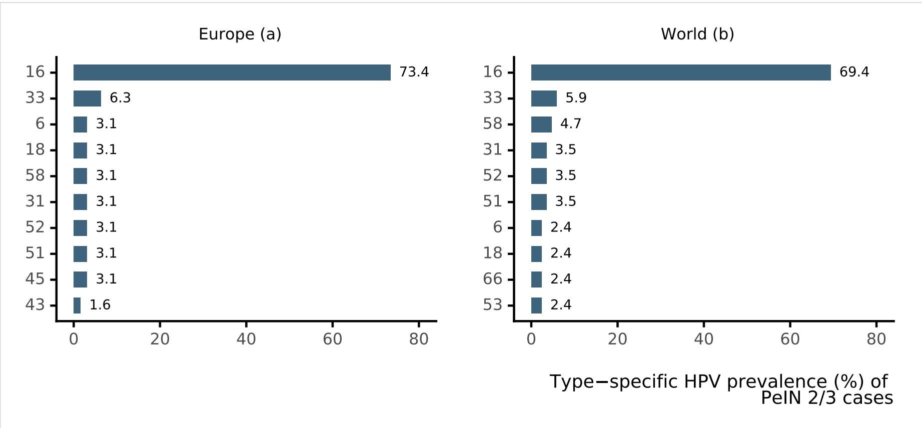
Figure 57: Comparison of the ten most frequent HPV types in cases of penile cancer in Europe and the World



Data updated on 22 May 2023 (data as of 30 Jun 2015)

[a] Includes cases from Czech Republic, France, Greece, Poland, Portugal, Spain and United Kingdom
[b] Includes cases from Australia, Bangladesh, India, South Korea, Lebanon, Philippines, Chile, Colombia, Ecuador, Guatemala, Honduras, Mexico, Paraguay, Venezuela and United States, Mozambique, Nigeria, Senegal, Czech Republic, France, Greece, Poland, Portugal, Spain and United Kingdom.
Data Sources: See references in Section 9 References.

Figure 58: Comparison of the ten most frequent HPV types in PeIN 2/3 cases in Europe and the World



Data updated on 22 May 2023 (data as of 30 Jun 2015)

PeIN 2/3: Penile intraepithelial neoplasia of grade 2/3
[a] Includes cases from Czech Republic, France, Greece, Poland, Portugal, Spain and United Kingdom
[b] Includes cases from Australia, Bangladesh, India, South Korea, Lebanon, Philippines, Chile, Colombia, Ecuador, Guatemala, Honduras, Mexico, Paraguay, Venezuela, Mozambique, Nigeria, Senegal, Czech Republic, France, Greece, Poland, Portugal, Spain and United Kingdom.
Data Sources: See references in Section 9 References.

4.3 HPV burden in men

The information to date regarding anogenital HPV infection is primarily derived from cross-sectional studies of selected populations such as general population, university students, military recruits, and studies that examined husbands of control women, as well as from prospective studies. Special subgroups include mainly studies that examined STD (sexually transmitted diseases) clinic attendees, MSM (men who have sex with men), HIV positive men, and partners of women with HPV lesions, CIN (cervical intraepithelial neoplasia), cervical cancer or cervical carcinoma in situ. Globally, prevalence of external genital HPV infection in men is higher than cervical HPV infection in women, but persistence is less likely. As with genital HPV prevalence, high numbers of sexual partners increase the acquisition of oncogenic HPV infections (Vaccine 2012, Vol. 30, Suppl 5). In this section, the HPV burden among men in Europe is presented.

Methods

HPV burden in men was based on published systematic reviews and meta-analyses (Dunne EF, J Infect Dis 2006; 194: 1044, Smith JS, J Adolesc Health 2011; 48: 540, Olesen TB, Sex Transm Infect 2014; 90: 455, and Hebnes JB, J Sex Med 2014; 11: 2630) up to October 31, 2015. The search terms for the review were human papillomavirus, men, polymerase chain reaction (PCR), hybrid capture (HC), and viral DNA. References cited in selected articles were also investigated. Inclusion criteria were: HPV DNA detection by means of PCR or HC (ISH if data are not available for the country), and a detailed description of HPV DNA detection and genotyping techniques used. The number of cases tested and HPV positive cases were extracted for each study to estimate the anogenital prevalence of HPV DNA. Binomial 95% confidence intervals were calculated for each anogenital HPV prevalence.

Table 40: Studies on HPV prevalence among men in Europe

Country	Study	Anatomic sites samples	HPV detection method	Population	Age (years)	No. Tested	HPV Prevalence %	HPV Prevalence (95% CI)[a]
Croatia	Grce 1996	Urethra	Filter hybridization (slot-blot, TS 6,11,16,18)	Family planning clinic attendees	-	79	26.6	(17.3-37.7)
	Vardas 2011[b]	Penis	RT-PCR-Multiplex or Biplex	Heterosexual men enrolled in a HPV vaccine trial	Median 20 (15-24)	3132	21.2	(19.8-22.7)
Denmark	Hebnes 2015	Coronal sulcus, glans, preputial cavity, scrotum, shaft and perineum	HC2	Male employees and conscripts at military barracks	Mean 23 (18-65)	2436	22.2	(20.6-24.0)
	Hebnes 2015	Coronal sulcus, glans, preputial cavity, scrotum, shaft and perineum	PCR-LIPAv2	Male employees and conscripts at military barracks	Mean 23 (18-65)	2436	41.8	(39.9-43.8)
	Kjaer 2005	Glans and corona sulcus	PCR-GP5+/6+ TS oligoprobes	Military conscripts	18-29	337	33.8	(28.8-39.2)

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Table 40 – continued from previous page

Country	Study	Anatomic sites samples	HPV detection method	Population	Age (years)	No. Tested	HPV Prevalence	
							%	(95% CI)[a]
Finland	Hippeläinen 1993	Glans, prepuce, corona sulcus, urethral meatus	PCR-MY09/11 TS 6,11,16,18,31,33	Voluntary conscripts	Mean 20	285	16.5	(12.4-21.3)
	Kero 2011	Urethra	PCR-MY09/11 and GP5+/6+	Sexual partners of pregnant women	19-46	128	22.7	(15.7-30.9)
Germany	Grussendorf-Conen 1987	Coronal sulcus and glans	ISH	Blood donors or patients from department of dermatology	16-79	530	5.8	(4.0-8.2)
	Vardas 2011[b]	Penis	RT-PCR-Multiplex or Biplex	Heterosexual men enrolled in a HPV vaccine trial	Median 20 (15-24)	3132	21.2	(19.8-22.7)
Italy	Lorenzon 2014	Coronal sulcus, shaft, prepuce, and urethral	PCR-Roche Linear Array HPV Genotyping test	Heterosexual men for routine HPV testing	18-68	378	40.5	(35.5-45.6)
	Nasca 2006	Penis	PCR-MY09/11 and GP5+/6+	Hospital based controls attending clinic for nongenital complaints	27-79	46	8.7	(2.4-20.8)
Spain	Franceschi 2002	Glans, corona, urethra	PCR-GP5+/6+	Husbands of control women	24-78	168	3.6	(1.3-7.6)
	Vardas 2011[b]	Penis	RT-PCR-Multiplex or Biplex	Heterosexual men enrolled in a HPV vaccine trial	Median 20 (15-24)	3132	21.2	(19.8-22.7)
Sweden	Forslund 1993	Urethra	PCR-TS (6,11,16,18,31,33,35) and unespecified consensus primer	Military conscripts	20-23	138	8.7	(4.6-14.7)
	Kataoka 1991	Urethra	PCR-TS 6,11,16,18,33	Army conscripts with normal epithelium	18-23	66	12.1	(5.4-22.5)

Data updated on 22 May 2023 (data as of 31 Oct 2015)

HC2: Hybrid Capture 2; ISH: In Situ Hybridization; PCR: Polymerase Chain Reaction; RT-PCR: Real Time Polymerase Chain Reaction; SPF: Short Primer Fragment; TS: Type Specific; MSM: Men who have sex with men; MSW:Men who have sex with women; STD: sexually transmitted diseases
[a] 95% Confidence Interval
[b] Includes cases from Australia, Brazil, Canada, Croatia, Germany, Mexico, Spain, and USA.
Data Sources: See references in Section 9 References.

Table 41: Studies on HPV prevalence among men from special subgroups in Europe

Country	Study	Anatomic sites samples	HPV detection method	Population	Age (years)	No. Tested	HPV Prevalence	
							%	(95% CI)[a]
Croatia	Goldstone 2011[b]	Penis	RT-PCR-Multiplex or Biplex	HIV- MSM	Median 22 (16-27)	602	18.4	(15.4-21.8)
	Goldstone 2011[b]	Anus	RT-PCR-Multiplex or Biplex	HIV- MSM	Median 22 (16-27)	602	42.4	(38.4-46.4)
Denmark	Svare 2002	Coronal sulcus, glans, perianal area, scrotum, and shaft	PCR-GP5+/6+ and TS 6,11,16,18,31,33	STD clinic attendees	>=18	198	44.9	(37.9-52.2)
France	Piketty 2004	Anal canal	PCR-MY09/11	HIV+ MSM	27-62	45	80.0	(65.4-90.4)
	Damay 2010	Anal canal	PCR-PapilloCheck®	HIV+ MSM	Median 45 (39-49.5)	67	74.6	(62.5-84.5)
	Philibert 2014	Anus	PCR-Cobas HR-HPV	HIV+ MSM	Mean 46.4 (SD=9.4)	82	76.8	(66.2-85.4)
	Philibert 2014	Anus	PCR-Cobas HR-HPV	HIV- MSM	Mean 46.4 (SD=9.4)	16	75.0	(47.6-92.7)
	Aynaud 2003	Meatal urethra	PCR-TS 6,11,42,16,18,33	Men with penile and urethral lesions whose female partners have genital HPV lesions	Mean 29	55	87.3	(75.5-94.7)
	Aynaud 2003	Meatal urethra	PCR-TS 6,11,42,16,18,33	Men with normal peniscopy whose female partners have genital HPV lesions	Mean 30	34	2.9	(0.1-15.3)
Germany	Goldstone 2011[b]	Penis	RT-PCR-Multiplex or Biplex	HIV- MSM	Median 22 (16-27)	602	18.4	(15.4-21.8)
	Goldstone 2011[b]	Anus	RT-PCR-Multiplex or Biplex	HIV- MSM	Median 22 (16-27)	602	42.4	(38.4-46.4)
	Schneider 1988	Glans, prepuce, fossa navicularis, shaft	Filter hybridization DNA/DNA	Sexual partners of women with HPV associated lesions of the cervix	Mean 36.5	156	39.1	(31.4-47.2)
	Wieland 2015	Anus	PCR-Multiplex and hybridization	HIV+ MSM	18-80	801	91.5	(89.4-93.3)

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Table 41 – continued from previous page

Country	Study	Anatomic sites samples	HPV detection method	Population	Age (years)	No. Tested	HPV Prevalence	
							%	(95% CI)[a]
Greece	Hadjivassiliou 2007	Urethra	HC2 HR, LR	HIV- STD clinic attendees without genital warts and sexual partners of women with genital warts	15-65	64	20.3	(11.3-32.2)
Ireland	Sadlier 2014	Anus	PCR-TS 16,18,31	HIV- MSM	Mean 32 (SD=8)	80	61.3	(49.7-71.9)
	Sadlier 2014	Anus	PCR-TS 16,18,31	HIV+ MSM	Mean 40 (SD=10)	83	77.1	(66.6-85.6)
Italy	Orlando 2008	Anus	HC2	HIV+	Median 34 (IQR=30-42)	233	87.1	(82.1-91.1)
	Giovannelli 2007	Coronal sulcus, frenulum, glans, prepuce, shaft	PCR-LiPA, GP5+/6+ and MY09/11	Partners of women with HPV	23-58	47	68.1	(52.9-80.9)
	Dona 2015	Anus	PCR-Linear Array	HIV+ MSM	Median 41 (IQR=33-47)	172	93.0	(88.1-96.3)
	Pierangeli 2008	Anal canal	PCR-MY09/11	HIV- MSM	28-62	9	88.9	(51.8-99.7)
	Dona 2015	Anus	PCR-Linear Array	HIV- MSM	Median 32 (IQR=27-39)	437	72.1	(67.6-76.2)
	Sammarco 2016	Coronal sulcus	PCR-Multiplex and RFLP and sequencing	HIV+ MSM	Mean 38 (IQR=20-53)	50	22.0	(11.5-36.0)
	Sammarco 2016	Urethra	PCR-Multiplex and RFLP and sequencing	HIV+ MSM	Mean 38 (IQR=20-53)	50	10.0	(3.3-21.8)
	Sammarco 2016	Anus	PCR-Multiplex and RFLP and sequencing	HIV+ MSM	Mean 38 (IQR=20-53)	50	56.0	(41.3-70.0)
	Pierangeli 2008	Anal canal	PCR-MY09/11	HIV+ MSM	25-65	18	94.4	(72.7-99.9)
	Garbuglia 2015	Anus	PCR-MY09/11	HIV+ MSM	Median 39 (IQR=33-44)	220	88.6	(83.7-92.5)
	Della Torre 1992	Urethra	PCR-TS 6,11,16,18	Partners of women with HPV	-	64	21.9	(12.5-34.0)
	Benevolo 2008	Coronal sulcus, urethra, prepuce, shaft	PCR-L1	Male partners of women with CIN and/or positive HPV	20-61	71	35.2	(24.2-47.5)

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Table 41 – continued from previous page

Country	Study	Anatomic sites samples	HPV detection method	Population	Age (years)	No. Tested	HPV Prevalence	
							%	(95% CI)[a]
	Barzon 2010	Glans, corona, shaft, perianal area, urethra, and semen	PCR-General primers for L1 (MY09/11, GP5 + /6+)	Men referred for HPV testing. Indications for testing: STD screening, HPV suspected lesions, HPV-positive partners	20-72	947	41.7	(38.5-44.9)
	Chiarini 1998	Urethra	PCR-Generic primers in E1	Men with symptoms of nongonococcal urethritis	-	247	31.2	(25.5-37.4)
Netherlands	van Rijn 2014	Penile shaft	PCR-LIPA TS 16,18,31,33,45,52,58	HIV- MSM	Median 37.6 (IQR=33.6-42.2)	441	11.1	(8.3-14.4)
	Welling 2015	Penis	PCR-SPF DEIA LIPA	HIV- MSM	Median 38 (IQR=33-42)	461	29.5	(25.4-33.9)
	Welling 2015	Anus	PCR-SPF DEIA LIPA	HIV- MSM	Median 38 (IQR=33-42)	461	60.1	(55.5-64.6)
	Welling 2015	Anus	PCR-SPF DEIA LIPA	HIV+ MSM	Median 46 (IQR=39-53)	317	78.2	(73.3-82.7)
	Welling 2015	Penis	PCR-SPF DEIA LIPA	HIV+ MSM	Median 46 (IQR=39-53)	317	49.5	(43.9-55.2)
	Vriend 2013	Anal canal	PCR-LIPA	MSW STD clinic attendees	Median 22 (16-24)	124	33.1	(24.9-42.1)
	Vriend 2013	Penis	PCR-LIPA	MSW STD clinic attendees	Median 22 (16-24)	124	16.1	(10.1-23.8)
	Vriend 2013	Anal canal	PCR-LIPA	MSM STD clinic attendees	Median 22 (16-24)	56	3.6	(0.4-12.3)
	Vriend 2013	Penis	PCR-LIPA	MSM STD clinic attendees	Median 22 (16-24)	56	26.8	(15.8-40.3)
	van Rijn 2014	Anal canal	PCR-LIPA TS 16,18,31,33,45,52,58	HIV- MSM	Median 37.6 (IQR=33.6-42.2)	441	33.6	(29.2-38.2)
	van der Snoek 2003	Perianal area	PCR-TS primers and LiPA	HIV+ MSM	29-59	17	64.7	(38.3-85.8)
	van Rijn 2014	Anal canal	PCR-LIPA TS 16,18,31,33,45,52,58	HIV+ MSM	Median 45.6 (IQR=39.4-52.5)	306	56.9	(51.1-62.5)
	van Rijn 2014	Penile shaft	PCR-LIPA TS 16,18,31,33,45,52,58	HIV+ MSM	Median 45.6 (IQR=39.4-52.5)	306	23.2	(18.6-28.3)

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Table 41 – continued from previous page

Country	Study	Anatomic sites samples	HPV detection method	Population	Age (years)	No. Tested	HPV Prevalence	
							%	(95% CI)[a]
	Bleeker 2005	Corona, frenulum, glans, inner prepuce	PCR-GP5+/6+	Men visiting department of dermatology for non-STI complaints	22.8-73.2	83	25.3	(16.4-36.0)
	Bleeker 2005	Corona, frenulum, glans, inner prepuce	PCR-GP5+/6+	Partners of women with dyskaryosis and/or CIN	22.5-57.7	181	72.9	(65.8-79.3)
	van der Snoek 2003	Coronal sulcus	PCR-TS primers and LiPA	HIV+ MSM	29-59	17	23.5	(6.8-49.9)
	Bleeker 2002	Glans, corona, frenulum, prepuce	PCR-GP5+/6+	Partners of women with CIN	24-58	119	58.8	(49.4-67.8)
	van der Snoek 2003	Coronal sulcus	PCR-TS primers and LiPA	HIV- MSM	19-76	241	15.8	(11.4-21.0)
	Van Doornum 1994	Corona, urethra, anus, rectum	PCR-TS 6/11,16,18,33	STD clinic attendees	Mean 37	85	28.2	(19.0-39.0)
	van der Snoek 2003	Perianal area	PCR-TS primers and LiPA	HIV- MSM	19-76	241	32.8	(26.9-39.1)
Russian Federation	Wirtz 2015	Anus	PCR-TS 6,11,16,18,31,33	HIV- MSM	Median 29 (19-50)	65	30.8	(19.9-43.4)
	Wirtz 2015	Anus	PCR-TS 6,11,16,18,31,33	HIV+ MSM	Median 29 (19-50)	58	50.0	(36.6-63.4)
Slovenia	Milosevic 2010	Anal canal	PCR-Linear Array	HIV+ MSM	20-57	20	95.0	(75.1-99.9)
	Milosevic 2010	Anal canal	PCR-Linear Array	HIV- MSM	16-80	116	75.0	(66.1-82.6)
	Golob 2014	Penis	PCR-Linear Array	Men from infertile couples	Mean 33	299	37.1	(31.6-42.9)
Spain	Videla 2013	Coronal sulcus, glans, urethra, shaft	PCR-TS primers in E6/E7 F-HPVTM typing (Molgentix SL, Spain)	HIV+ MSM attending an outpatient HIV clinic	36-47	457	24.9	(21.0-29.2)
	Franceschi 2002	Glans, corona, urethra	PCR-GP5+/6+	Husbands of women with invasive cervical cancer	25-74	84	11.9	(5.9-20.8)
	Franceschi 2002	Glans, corona, urethra	PCR-GP5+/6+	Husbands of women with cervical carcinoma in situ	22-76	102	21.6	(14.0-30.8)
	Goldstone 2011[b]	Penis	RT-PCR-Multiplex or Biplex	HIV- MSM	Median 22 (16-27)	602	18.4	(15.4-21.8)
	Goldstone 2011[b]	Anus	RT-PCR-Multiplex or Biplex	HIV- MSM	Median 22 (16-27)	602	42.4	(38.4-46.4)
	Hidalgo-Tenorio 2015	Anus	PCR-GeneAmp HR-HPV	HIV+ MSM	Mean 37.4 (SD=9.5)	197	80.2	(73.9-85.5)

Continued on next page

Table 41 – continued from previous page

Country	Study	Anatomic sites samples	HPV detection method	Population	Age (years)	No. Tested	HPV Prevalence %	HPV Prevalence (95% CI)[a]
	Sendagorta 2014	Anus	PCR-Genomic amplification	HIV+ MSM/bisexual men	>=18	298	93.0	(89.4-95.6)
	Sendagorta 2015	Anus	PCR-HR Clart HPV2	HIV+ MSM	Median 42 (IQR=33-50)	101	82.2	(73.3-89.1)
	Torres 2013	Anus	PCR-Roche Linear Array HPV Genotyping test	HIV+ MSM	IQR=28.2-40.1	1439	95.8	(94.6-96.7)
	Álvarez-Argüelles 2013	Anus	PCR-General primers in L1 (MY09/11, GP5 + /6+), PCR with TS primers in E6/E7 for typing	STD clinic attendees	17-87	123	49.6	(40.5-58.8)
	Videla 2013	Coronal sulcus, glans, urethra, shaft	PCR-TS primers in E6/E7 F-HPVTM typing (Molgentix SL, Spain)	HIV+ Heterosexual men attending an outpatient HIV clinic	40-48	191	27.2	(21.0-34.1)
	Videla 2013	Anus	PCR-TS primers in E6/E7 F-HPVTM typing (Molgentix SL, Spain)	HIV+ Heterosexual men attending an outpatient HIV clinic	40-48	195	41.5	(34.5-48.8)
	Álvarez-Argüelles 2013	Balanopreputial	PCR-General primers in L1 (MY09/11, GP5 + /6+), PCR with TS primers in E6/E7 for typing	STD clinic attendees	17-87	1318	36.9	(34.3-39.5)
	Videla 2013	Anus	PCR-TS primers in E6/E7 F-HPVTM typing (Molgentix SL, Spain)	HIV+ MSM attending an outpatient HIV clinic	36-47	538	84.2	(80.8-87.2)
Sweden	Löwhagen 1999	Anus	PCR-MY09/11	HIV- MSM	26-62	13	53.8	(25.1-80.8)
	Kataoka 1991	Urethra	PCR-TS 6,11,16,18,33	Army conscripts with aceto-white epithelium	18-23	39	25.6	(13.0-42.1)
	Löwhagen 1999	Anus	PCR-MY09/11	HIV+ MSM	27-54	17	94.1	(71.3-99.9)
	Wikström 2000	Corona, glans, and prepuce	PCR-GP5+/6+	STD clinic attendees	18-54	235	13.2	(9.1-18.2)

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Table 41 – continued from previous page

Country	Study	Anatomic sites samples	HPV detection method	Population	Age (years)	No. Tested	HPV Prevalence	
							%	(95% CI)[a]
	Wikström 1991	Coronal sulcus, inner part of the prepuce, urethra	PCR-TS primers followed by dot blot	STD clinic attendees	17-58	228	53.9	(47.2-60.5)
	Voog 1997	Glans and prepuce	PCR-MY09/11 and GP5+/6+	STD clinic attendees	19-67	20	25.0	(8.7-49.1)
	Strand 1993	Coronal sulcus, glans, preputium, and shaft	PCR-MY09/11 and GP5+/6+	STD clinic attendees	20-53	65	29.2	(18.6-41.8)
United Kingdom	Hillman 1993	Urethra	PCR-GP5+/6+	Men infected with gonorrhea	17-55.6	100	18.0	(11.0-26.9)
	Jalal 2007	Urethra	PCR-General primers for L1 (MY09/11, GP5 + /6+) and RLH	Genitourinary clinic attendees	15-77	437	20.8	(17.1-24.9)
	King 2015	Anus	PCR-Multiplex and Bio-Plex Any nonavalent vaccine HPV types	MSM	Median 30 (IQR=25-35)	454	40.1	(35.5-44.8)
	King 2015	Coronal sulcus, glans, penis shaft, scrotum and perianal area	PCR-Multiplex and Bio-Plex Any nonavalent vaccine HPV types	MSM	Median 30 (IQR=25-35)	446	36.1	(31.6-40.7)
	Lacey 1999	Anal canal	PCR-GP5+/6+	HIV+ MSM	19-62	57	84.2	(72.1-92.5)
	Bissett 2011	Glans, prepuce, shaft, scrotum	PCR-General primers (GP5 + /6+), Bio-Plex array technology for typing	Genitourinary clinic attendees with multiple sexual partners or diagnosis of genital warts within 6 months	-	87	49.4	(38.5-60.4)
	Cuschieri 2011	Shaft	PCR-INNO-LiPA	Drop-in sexual health service attendees	16-25	117	29.1	(21.0-38.2)

Data updated on 22 May 2023 (data as of 31 Oct 2015)

DBH: Dot Blot Hybridization; EIA: Enzyme ImmunoAssay; HC2: Hybrid Capture 2; LiPA: Line Probe Assay; PCR: Polymerase Chain Reaction; RFLP: Restriction Fragment Length Polymorphism; RLH: Reverse Line Hybridisation; RT-PCR: Real Time Polymerase Chain Reaction; SPF: Short Primer Fragment; TS: Type Specific; MSM: Men who have sex with men; MSW:Men who have sex with women; STD: sexually transmitted diseases

[a] 95% Confidence Interval

[b] Includes cases from Australia, Brazil, Canada, Croatia, Germany, Mexico, Spain, and USA.

Data Sources: See references in Section 9 References.

4.4 HPV burden in the head and neck

The last evaluation of the International Agency for Research in Cancer (IARC) on the carcinogenicity of HPV in humans concluded that (a) there is enough evidence for the carcinogenicity of HPV type 16 in the oral cavity, oropharynx (including tonsil cancer, base of tongue cancer and other oropharyngeal cancer sites), and (b) limited evidence for laryngeal cancer (IARC Monograph Vol 100B). There is increasing evidence that HPV-related oropharyngeal cancers constitute an epidemiological, molecular and clinical distinct form as compared to non HPV-related ones. Some studies indicate that the most likely explanation for the origin of this distinct form of head and neck cancers associated with HPV is a sexually acquired oral HPV infection that is not cleared, persists and evolves into a neoplastic lesion. Around 30% of oropharyngeal cancers (which mainly comprises the tonsils and base of tongue sites) are caused by HPV with HPV16 being the most frequent type (de Martel C et al. Int J Cancer 2017;141(4):664-670). Attributable fraction varies greatly worldwide, being highest in more developed countries (60% in Republic of Korea, 51% in North America, 50% in Eastern Europe, 46% in Japan, 42% in North-Western Europe, 41% in Australia/New Zealand, 24% in South Europe, 23% in China, 22% in India, and 13% in elsewhere) (de Martel C et al. Lancet Glob Health 2020;8(2):e180-e190). In this section, the HPV burden in the head and neck in Europe is presented.

4.4.1 Burden of oral HPV infection in healthy population

Table 42: Studies on oral HPV prevalence among healthy in Europe

Study	Specimen collection method / anatomic site	HPV detection method[a]	Population	% males	Age (years)[b]	No. tested[c]	HPV prevalence % (95% CI)	High-Risk HPV prevalence % (95% CI)	5 most frequent HPVs, HPV type (n)[d]
Eike 1995	Brush/swab / Most parts of mouth	PCR-MY09/11	Convenient samples from out-patients	0	20-79	61	0 (0.0-5.9)	-	-
Leimola-Virtanen 1996	Brush/swab / Most parts of mouth	PCR-GP5/6	Convenient samples from general population	0	55	131	10.7 (6.5-17.1)	-	-
Lambropoulos 1997	Brush/swab / Most parts of mouth	PCR-MY09/11	Convenient samples from out-patients	50	14-85	169	9.5 (9.5-14.8)	-	HPV6 (6); X (5); 16 (4); 11 (1)
Herrero 2003	Brush/swab & oral rinse & gargle / Oral mucosa and throat	PCR-GP5+/6+	Age-matched controls	86	20-85	114	12.3 (7.5-19.6)	-	-
Hansson 2005	Brush/swab / Tonsillar fossa	PCR-GP5+/6+ MY09/11	Age-matched controls	67	33-89	320	2.5 (1.3-4.9)	0.3 (0.1-1.7)	HPV76 (3); 75 (2); 13 (2); 16 (1); 25 (1); 54 (1); 44 (1); 62 (1); 67 (1); 68 (1); 87 (1); X (1)
Montaldo 2007	Saliva / Oral mucosa	GP5 + N/MY09	Convenient samples from out-patients	42	4-77	164	18.3 (13.1-24.9)	18.3 (13.1-24.9)	HPV16 (23); 31 (7)
Szarka 2009	Brush/swab / Oral mucosa	PCR-GP5+/6+ MY09/11	Age-matched controls	26	22-77	72	4.2 (1.4-11.5)	2.8 (0.8-9.6)	HPV16 (2); 11 (1)
Migaldi 2012	Brush/swab / Oral mucosa	PCR-MY09/11 TS-E6/E7	Convenient samples from out-patients	50	49-77	81	0 (0.0-4.5)	0 (0.0-4.5)	HPV90 (1)

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Table 42 – continued from previous page

Study	Specimen collection method / anatomic site	HPV detection method[a]	Population	% males	Age (years)[b]	No. tested[c]	HPV prevalence % (95% CI)	High-Risk HPV prevalence % (95% CI)	5 most frequent HPVs, HPV type (n)[d]
Kero 2012	Brush/swab / Most parts of mouth	PCR-GP5+/6+ MY09/11	Convenient samples from general population	100	19-46	131	18.3 (12.6-25.8)	13 (8.3-19.8)	HPV16 (12); 33 (3); 82 (3); 6 (1); 11 (1); 18 (1); 31 (1); 43 (1); 70 (1)
Nordfors 2013	Oral rinse and gargle / Oral mucosa and throat	PCR-Multiplex	Convenient samples from general population	52	17-21	335	1.8 (0.8-3.9)	1.8 (0.8-3.9)	HPV16 (4); 56 (1); 58
Morbini 2013	Brush/swab / Cheeks	PCR-SPF10	Age-matched controls	84	31-NS	51	15.7 (8.2-28.0)	2 (0.3-10.3)	HPVX (7); 16 (1)
Meyer 2014	Brush/swab & oral rinse / Oral mucosa and tonsils	PCR-A5/A10 A6/A8	General population	0	-	129	5.4 (2.7-10.8)	-	-
Tatar 2015	Brush/swab / Most parts of mouth	PCR-GP5+/6+ MY09/11	Convenient samples from out-patients	21	10-82	209	5.7 (3.3-9.8)	2.4 (1.0-5.5)	HPVX (4); 16 (3); 44 (2); 11 (1); 33 (1); 35 (1); 66 (1)

Data updated on 19 Oct 2021 (data as of 19 May 2015)

(95% CI): 95% Confidence Interval
[a] TS: type-specific; RT-PCR: real-time PCR; qPCR: quantitative PCR
[b] NS: not specified
[c] number of cases tested for HPV DNA
[d] number of cases positive for the specific HPV-type

Data Sources:
Eike A, Clin Otolaryngol Allied Sci 1995;20(2):171-3 | Hansson BG, Acta Otolaryngol 2005;125(12):1337-44 | Herrero R, J Natl Cancer Inst 2003;95(23):1772-83 | Kero K, Eur Urol 2012;62(6):1063-70 | Lambropoulos AF, Eur J Oral Sci 1997;105(4):294-7 | Leimola-Virtanen R, Clin Infect Dis 1996;22(3):593-4 | Meyer MF, Oral Oncol 2014;50(1):27-31 | Migaldi M, J Oral Pathol Med 2012;41(1):16-20 | Montaldo C, J Oral Pathol Med 2007;36(8):482-7 | Morbini P, Oral Surg Oral Med Oral Pathol Oral Radiol 2013;116(4):474-84 | Nordfors C, Scand J Infect Dis 2013;45(11):878-81 | Szarka K, Oral Microbiol Immunol 2009;24(4):314-8 | Tatar TZ, J Oral Pathol Med 2015;44(9):722-7
Systematic review and meta-analysis was performed by ICO HPV Information Centre until May 19, 2015. Reference publication: Mena M et al. J Infect Dis 2019;219(10):1574-1585.

4.4.2 HPV burden in head and neck cancers

Table 43: Studies on HPV prevalence among cases of oral cavity cancer in Europe

Country	Study	HPV detection method and targeted HPV types	No. Tested	HPV Prevalence %	(95% CI)[a]	Prevalence of 5 most frequent HPVs, HPV type (%)
MEN						
Germany	Krüger 2014	PCR L1-Consensus primer, PCR-SPF10, LiPA (HPV 6, 11, 16, 18, 16/18, 26, 31, 33, 35, 39, 40, 43, 44, 45, 51, 52, 53, 54, 56, 58, 59, 66, 68, 69, 70, 71, 73, 74, 81)	56	8.9	(3.9-19.3)	-
Hungary	Nemes 2006	MY09/MY11 (L1) Hybridization with TS probes (16. 18. 31. 33. 45. 51. 52. 58)	67	44.8	(33.5-56.6)	-
Ireland	Herrero 2003	GP5+/GP6+ (L1) Hybridization with EIA oligonucleotide probes (2. 6. 11. 16. 18. 31. 33. 35. 39. 40. 42. 43. 44. 45. 51. 52. 56. 58. 59. 66. 68)	22	4.5	(0.8-21.8)	HPV 16 (4.5)
Italy	Herrero 2003	GP5+/GP6+ (L1) Hybridization with EIA oligonucleotide probes (2. 6. 11. 16. 18. 31. 33. 35. 39. 40. 42. 43. 44. 45. 51. 52. 56. 58. 59. 66. 68)	32	0	-	-
Netherlands	Cruz 1996	GP5+/GP6+ (L1) and CPI/CPII (L1) Amplification with TS primers and hybridization with TS probes (2. 4. 6. 10. 11. 13. 16. 18. 25. 31. 33. 46. 51. 52)	22	63.6	(43.0-80.3)	HPV 16 (54.5) HPV 6 (4.5)
Poland	Herrero 2003	GP5+/GP6+ (L1) Hybridization with EIA oligonucleotide probes (2. 6. 11. 16. 18. 31. 33. 35. 39. 40. 42. 43. 44. 45. 51. 52. 56. 58. 59. 66. 68)	53	0	-	-
Serbia	Kozomara 2005	TS-PCR E6 for 16. L1 for 18. E4 for 31 and E1 for 33 Amplification with TS primers (16. 18. 31. 33)	42	61.9	(46.8-75.0)	-
Slovenia	Kansky 2003	PGMY09/11 (L1). GP5+/GP6+ (L1) and WD72/76/66/67/154 (E6) RFLP	48	4.2	(1.2-14.0)	HPV 33 (2.1) HPV 58 (2.1)
Spain	Herrero 2003	GP5+/GP6+ (L1) Hybridization with EIA oligonucleotide probes (2. 6. 11. 16. 18. 31. 33. 35. 39. 40. 42. 43. 44. 45. 51. 52. 56. 58. 59. 66. 68)	140	5.7	(2.9-10.9)	HPV 16 (5.7)
Spain	Llamas-Martínez 2008	WD-66/67/72/76/154 (E6) RFLP (6.11.16.18.31.33.39.42.45.52)	19	47.4	(27.3-68.3)	-
Sweden	Dahlgren 2004	GP5+/GP6+ (L1) and CPI/CPII (L1) Amplification with TS primers (16. 18. 33) and sequencing	51	3.9	(1.1-13.2)	-
WOMEN						
Germany	Krüger 2014	PCR L1-Consensus primer, PCR-SPF10, LiPA (HPV 6, 11, 16, 18, 16/18, 26, 31, 33, 35, 39, 40, 43, 44, 45, 51, 52, 53, 54, 56, 58, 59, 66, 68, 69, 70, 71, 73, 74, 81)	32	0	-	-
Hungary	Nemes 2006	MY09/MY11 (L1) Hybridization with TS probes (16. 18. 31. 33. 45. 51. 52. 58)	12	25	(8.9-53.2)	-
Ireland	Herrero 2003	GP5+/GP6+ (L1) Hybridization with EIA oligonucleotide probes (2. 6. 11. 16. 18. 31. 33. 35. 39. 40. 42. 43. 44. 45. 51. 52. 56. 58. 59. 66. 68)	8	25	(7.1-59.1)	HPV 16 (25.0)
Italy	Herrero 2003	GP5+/GP6+ (L1) Hybridization with EIA oligonucleotide probes (2. 6. 11. 16. 18. 31. 33. 35. 39. 40. 42. 43. 44. 45. 51. 52. 56. 58. 59. 66. 68)	21	9.5	(2.7-28.9)	HPV 16 (9.5)
Netherlands	Cruz 1996	GP5+/GP6+ (L1) and CPI/CPII (L1) Amplification with TS primers and hybridization with TS probes (2. 4. 6. 10. 11. 13. 16. 18. 25. 31. 33. 46. 51. 52)	13	38.5	(17.7-64.5)	HPV 16 (23.1)
Poland	Herrero 2003	GP5+/GP6+ (L1) Hybridization with EIA oligonucleotide probes (2. 6. 11. 16. 18. 31. 33. 35. 39. 40. 42. 43. 44. 45. 51. 52. 56. 58. 59. 66. 68)	30	0	-	-
Serbia	Kozomara 2005	TS-PCR E6 for 16. L1 for 18. E4 for 31 and E1 for 33 Amplification with TS primers (16. 18. 31. 33)	8	75	(40.9-92.9)	-
Slovenia	Kansky 2003	PGMY09/11 (L1). GP5+/GP6+ (L1) and WD72/76/66/67/154 (E6) RFLP	7	14.3	(2.6-51.3)	HPV 16 (14.3)
Spain	Herrero 2003	GP5+/GP6+ (L1) Hybridization with EIA oligonucleotide probes (2. 6. 11. 16. 18. 31. 33. 35. 39. 40. 42. 43. 44. 45. 51. 52. 56. 58. 59. 66. 68)	32	6.3	(1.7-20.1)	HPV 16 (6.3)
Spain	Llamas-Martínez 2008	WD-66/67/72/76/154 (E6) RFLP (6.11.16.18.31.33.39.42.45.52)	14	35.7	(16.3-61.2)	-
Sweden	Dahlgren 2004	GP5+/GP6+ (L1) and CPI/CPII (L1) Amplification with TS primers (16. 18. 33) and sequencing	34	0	-	-
BOTH OR UNSPECIFIED						
Belarus	Gudleviciene 2014	PCR-GP5+/6+, PCR-PGMY09/11, PCR L1-Consensus primer, PCR-E6, PCR-MULTIPLEX (HPV 6, 11, 16, 18, 31, 33, 35, 39, 45, 51, 52, 56, 58, 59, 66, 68, 73, 82)	55	18.2	(10.2-30.3)	-
Belgium	Duray 2012	PCR-GP5+/6+, PCR L1-Consensus primer, PCR-E6, PCR-E7, qPCR, TS (HPV 6, 11, 16, 18, 31, 33, 35, 39, 45, 51, 52, 53, 56, 58, 59, 66, 67, 68)	147	44.2	(36.4-52.3)	-
Czechia	Ribeiro 2011	PGMY09/11 (L1) Amplification with TS primers (16)	132	0	-	-
Finland	Mork 2001	GP5+/GP6+ (L1) and CPI/CPII (L1) Amplification with TS primers (6. 11. 16. 18. 33)	91	7.7	(3.8-15.0)	HPV 16 (4.4) HPV 11 (1.1) HPV 33 (1.1) HPV 6 (1.1)
Finland	Koskinen 2003	SPF10 (L1) LiPA 25	28	64.3	(45.8-79.3)	HPV 16 (46.4) HPV 33 (21.4)

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Table 43 – continued from previous page

Country	Study	HPV detection method and targeted HPV types	No. Tested	%	(95% CI)[a]	Prevalence of 5 most frequent HPVs, HPV type (%)
Germany	Ostwald 2003	TS-PCR E6 for 6/11/16/18 Hybridization with TS probes (6/11. 16. 18)	118	43.2	(34.6-52.2)	HPV 16 (29.7) HPV 18 (13.6)
Germany	Weiss 2011	RT-PCR E6/E7 for 16 Hybridization with TS probes (16)	34	2.9	(0.5-14.9)	HPV 16 (2.9)
Germany	Krüger 2014	PCR L1-Consensus primer, PCR-SPF10, LiPA (HPV 6, 11, 16, 18, 16/18, 26, 31, 33, 35, 39, 40, 43, 44, 45, 51, 52, 53, 54, 56, 58, 59, 66, 68, 69, 70, 71, 73, 74, 81)	88	5.7	(2.5-12.6)	-
Germany	Klussmann 2001	A10/A5-A6/A8 (L1) and CP62/70-CP65/69a (L1) Sequencing	22	18.2	(7.3-38.5)	HPV 16 (13.6) HPV 19 (4.5)
Greece	Romanitan 2008	GP5+/GP6+ (L1). CPI/CPIIG (E1) and TS-PCR E6/E7 for 16 Amplification with TS primers (16)	75	1.3	(0.2-7.2)	-
Greece	Blioumi 2014	PCR-GP5+/6+, PCR-MY09/11, PCR L1-Consensus primer, Sequencing (HPV 16, 56, 66)	63	22.2	(13.7-33.9)	-
Greece	Aggelopoulou 1999	L1 consensus primers and TS-PCR E7 for 16/18 Amplification with TS primers (16. 18)	81	49.4	(38.8-60.0)	HPV 18 (27.2) HPV 16 (6.2)
Hungary	Nemes 2006	MY09/MY11 (L1) Hybridization with TS probes (16. 18. 31. 33. 45. 51. 52. 58)	79	41.8	(31.5-52.8)	HPV 16 (34.2) HPV 18 (6.3) HPV 31 (3.8) HPV 33 (2.5)
Hungary	Szarka 2009	MY09/MY11 (L1) and GP5+/GP6+ (L1) RFLP	65	47.7	(36.0-59.6)	HPV 16 (27.7) HPV 11 (6.2) HPV 18 (6.2) HPV 33 (3.1) HPV 31 (1.5)
Ireland	Herrero 2003	GP5+/GP6+ (L1) Hybridization with EIA oligonucleotide probes (2. 6. 11. 16. 18. 31. 33. 35. 39. 40. 42. 43. 44. 45. 51. 52. 56. 58. 59. 66. 68)	30	10	(3.5-25.6)	HPV 16 (10.0)
Italy	Badaracco 2000	MY09/MY11 (L1) Amplification with TS primers (6.16) and hybridization with TS probes (11.16.18.31.45.56.57)	38	26.3	(15.0-42.0)	HPV 18 (13.2) HPV 16 (10.5) HPV 6 (10.5) HPV 11 (5.3) HPV 56 (5.3)
Italy	Badaracco 2007	MY09/MY11 (L1) and GP5+/GP6+ (L1) Sequencing	53	11.3	(5.3-22.6)	HPV 16 (7.5) HPV 33 (1.9) HPV 58 (1.9)
Italy	Herrero 2003	GP5+/GP6+ (L1) Hybridization with EIA oligonucleotide probes (2. 6. 11. 16. 18. 31. 33. 35. 39. 40. 42. 43. 44. 45. 51. 52. 56. 58. 59. 66. 68)	53	3.8	(1.0-12.8)	HPV 16 (3.8)
Italy	Rittà 2009	MY09/MY11 (L1) and GP5+/GP6+ (L1) Sequencing	25	36	(20.2-55.5)	HPV 16 (36.0)
Italy	Scapoli 2009	RT-PCR for 16/18/31/45 Hybridization with TS probes (16. 18. 31. 45)	247	1.2	(0.4-3.5)	HPV 16 (1.2)
Netherlands	van Monsjou 2012	PCR, LiPA (HPV 6, 11, 16, 18, 26, 31, 33, 35, 39, 40, 43, 44, 45, 51, 52, 53, 54, 56, 58, 59, 66, 68, 69, 70, 71, 72, 73, 82)	20	10	(2.8-30.1)	-
Netherlands	Cruz 1996	GP5+/GP6+ (L1) and CPI/CPII (L1) Amplification with TS primers and hybridization with TS probes (2. 4. 6. 10. 11. 13. 16. 18. 25. 31. 33. 46. 51. 52)	35	54.3	(38.2-69.5)	HPV 16 (42.9) HPV 6 (2.9)
Netherlands	Braakhuis 2004	GP5+/GP6+ (L1) and TS-PCR RLBH (6. 11. 16. 18. 26. 31. 33. 34. 35. 39. 40. 42. 43. 44. 45. 51. 52. 53. 54. 55. 56. 57. 58. 59. 61. 66. 68.70.72.73. 82/MM4. 83. 84. 82/IS39. 71/CP8061. 81/CP8304. 89)	106	9.4	(5.2-16.5)	HPV 16 (9.4)
Norway	Matzow 1998	GP5+/GP6+ (L1). CPI/CPIIG (E1) and TS-PCR for 6/16/18/31/33 Amplification with TS primers (6. 16. 18. 31. 33)	30	0	-	-
Norway	Mork 2001	GP5+/GP6+ (L1) and CPI/CPII (L1) Amplification with TS primers (6. 11. 16. 18. 33)	91	7.7	(3.8-15.0)	HPV 16 (4.4) HPV 11 (1.1) HPV 33 (1.1) HPV 6 (1.1)
Poland	Herrero 2003	GP5+/GP6+ (L1) Hybridization with EIA oligonucleotide probes (2. 6. 11. 16. 18. 31. 33. 35. 39. 40. 42. 43. 44. 45. 51. 52. 56. 58. 59. 66. 68)	83	0	-	-
Poland	Ribeiro 2011	PGMY09/11 (L1) Amplification with TS primers (16)	132	0	-	-
Poland	Snietura 2010	Real-time High Risk HPV test (Abbott Molecular) using L1 consensus primers Amplification with TS primers (16. 18. 31. 33. 35. 39. 45. 51. 52. 56. 58. 59. 66 and 68 - the technique only differentiates 16-18-other)	45	4.4	(1.2-14.8)	HPV 16 (4.4)
Romania	Ribeiro 2011	PGMY09/11 (L1) Amplification with TS primers (16)	132	0	-	-
Russian Federation	Ribeiro 2011	PGMY09/11 (L1) Amplification with TS primers (16)	132	0	-	-
Serbia	Kozomara 2005	TS-PCR E6 for 16. L1 for 18. E4 for 31 and E1 for 33 Amplification with TS primers (16. 18. 31. 33)	50	64	(50.1-75.9)	HPV 31 (32.0) HPV 16 (26.0) HPV 18 (26.0)
Slovakia	Ribeiro 2011	PGMY09/11 (L1) Amplification with TS primers (16)	132	0	-	-
Slovenia	Kansky 2003	PGMY09/11 (L1). GP5+/GP6+ (L1) and WD72/76/66/67/154 (E6) RFLP	55	5.5	(1.9-14.9)	HPV 16 (1.8) HPV 33 (1.8) HPV 58 (1.8)
Spain	García-de Marcos 2014	PCR L1-Consensus primer, PCR-SPF10, EIA, LiPA (HPV 6, 11, 16, 18, 31, 33, 35, 39, 40, 42, 43, 44, 45, 51, 52, 53, 54, 56, 58, 59, 66, 68, 70, 73, 74)	61	26.2	(16.8-38.4)	-
Spain	Herrero 2003	GP5+/GP6+ (L1) Hybridization with EIA oligonucleotide probes (2. 6. 11. 16. 18. 31. 33. 35. 39. 40. 42. 43. 44. 45. 51. 52. 56. 58. 59. 66. 68)	172	5.8	(3.2-10.4)	HPV 16 (5.8)
Spain	Llamas-Martínez 2008	WD-66/67/72/76/154 (E6) RFLP (6.11.16.18.31.33.39.42.45.52)	33	42.4	(27.2-59.2)	HPV 16 (33.3) HPV 6 (30.3) HPV 31 (9.1)
Sweden	Dahlgren 2004	GP5+/GP6+ (L1) and CPI/CPII (L1) Amplification with TS primers (16. 18. 33) and sequencing	85	2.4	(0.6-8.2)	HPV 16 (2.4)

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Table 43 – continued from previous page

Country	Study	HPV detection method and targeted HPV types	No. Tested	%	(95% CI)[a]	Prevalence of 5 most frequent HPVs, HPV type (%)
Sweden	Mork 2001	GP5+/GP6+ (L1) and CPI/CPII (L1) Amplification with TS primers (6. 11. 16. 18. 33)	91	7.7	(3.8-15.0)	HPV 16 (4.4) HPV 11 (1.1) HPV 33 (1.1) HPV 6 (1.1)
Sweden	Sand 2000	MY09/MY11 (L1) Amplification with TS primers (6b/11. 16. 18)	24	12.5	(4.3-31.0)	HPV 16 (4.2) HPV 18 (4.2)
United Kingdom	Lopes 2011	GP5+/GP6+ (L1) and qPCR for 16/18 Hybridization with TS probes (16. 18)	142	3.5	(1.5-8.0)	HPV 16 (2.1) HPV 18 (2.1)
United Kingdom	Snijders 1996	GP5+/GP6+ (L1) Amplification with TS primers and SBH with TS probes (6. 11. 16. 18. 31. 33)	25	20	(8.9-39.1)	HPV 16 (20.0)
United Kingdom	Yeudall 1991	TS-PCR E6/E7 for 16. E6 for 18 and specific for 4 Hybridization with TS probes (4. 16. 18)	39	46.2	(31.6-61.4)	HPV 16 (25.6) HPV 18 (20.5)

Data updated on 22 May 2023 (data as of 31 Dec 2015)

DBH: Dot Blot Hybridization; EIA: Enzyme ImmunoAssay; HC2: Hybrid Capture 2; ISH: In Situ Hybridization; LBA: Line-Blot Assay; LiPA: Line Probe Assay; PCR: Polymerase Chain Reaction; RFLP: Restriction Fragment Length Polymorphism; RLBH: Reverse Line Blot Hybridization; RT-PCR: Real Time Polymerase Chain Reaction; SBH: Southern Blot Hybridization; SPF: Short Primer Fragment; TS: Type Specific;
Only for European countries
[a] 95% Confidence Interval
Data Sources: See references in Section 9 References.

Table 44: Studies on HPV prevalence among cases of oropharyngeal cancer in Europe

Country	Study	HPV detection method and targeted HPV types	No. Tested	HPV Prevalence %	HPV Prevalence (95% CI)[a]	Prevalence of 5 most frequent HPVs, HPV type (%)
MEN						
Czechia	Rotnáglová 2011	GP5+/GP6+ (L1) RBLH (6. 11. 16. 18. 26. 31. 33. 34. 35. 39. 40. 42. 43. 44. 45. 51. 52. 53. 54. 55. 56. 57. 58. 59. 61. 66. 68. 70. 71. 72. 73. 81. 82. 83. 84. 89)	90	64.4	(54.2-73.6)	-
France	Charfi 2008	GP5+/GP6+ (L1) and TS-PCR for 6/11/16/18/33 Amplification with TS primers (6. 11. 16. 18. 33)	36	55.6	(39.6-70.5)	-
Germany	Hoffmann 2010	GP5+/GP6+ (L1). MY09/MY11 (L1) and TS-PCR for 6/11/16/18 Hybridization with TS probes - Multiplex luminex*	31	54.8	(37.8-70.8)	HPV 16 (51.6) HPV 35 (6.5)
Germany	Reimers 2007	A10/A5-A6/A8 (L1) and CP62/70-CP65/69a (L1) Sequencing	83	25.3	(17.2-35.6)	-
Italy	Herrero 2003	GP5+/GP6+ (L1) Hybridization with EIA oligonucleotide probes (2. 6. 11. 16. 18. 31. 33. 35. 39. 40. 42. 43. 44. 45. 51. 52. 56. 58. 59. 66. 68)	30	23.3	(11.8-40.9)	HPV 16 (20.0) HPV 33 (3.3) HPV 35 (3.3)
Norway	Hannisdal 2010	GP5+/GP6+ (L1) Sequencing	99	56.6	(46.7-65.9)	-
Spain	Herrero 2003	GP5+/GP6+ (L1) Hybridization with EIA oligonucleotide probes (2. 6. 11. 16. 18. 31. 33. 35. 39. 40. 42. 43. 44. 45. 51. 52. 56. 58. 59. 66. 68)	40	5.0	(1.4-16.5)	HPV 16 (5.0)
Sweden	Attner 2010	GP5+/GP6+ (L1). CPI/IIG (E1) and TS-PCR E6/7 for 16/33 Amplification with TS primers (16. 33) and sequencing	65	75.4	(63.7-84.2)	-
Sweden	Dahlgren 2004	GP5+/GP6+ (L1) and CPI/CPII (L1) Amplification with TS primers (16. 18. 33) and sequencing	18	44.4	(24.6-66.3)	-
Sweden	Hammarstedt 2006	GP5+/GP6+ (L1). CPI/CPIIG (E1) and TS-PCR E6 for 16 Sequencing	145	48.3	(40.3-56.3)	-
Sweden	Näsman 2009	GP5+/GP6+ (L1). CPI/CPIIG (E1) and TS-PCR E6 for 16 Sequencing	76	81.6	(71.4-88.7)	-
Switzerland	Lindel 2001	SPF10 (L1) Sequencing	75	8.0	(3.7-16.4)	-
WOMEN						
Czechia	Rotnáglová 2011	GP5+/GP6+ (L1) RBLH (6. 11. 16. 18. 26. 31. 33. 34. 35. 39. 40. 42. 43. 44. 45. 51. 52. 53. 54. 55. 56. 57. 58. 59. 61. 66. 68. 70. 71. 72. 73. 81. 82. 83. 84. 89)	19	68.4	(46.0-84.6)	-
France	Charfi 2008	GP5+/GP6+ (L1) and TS-PCR for 6/11/16/18/33 Amplification with TS primers (6. 11. 16. 18. 33)	16	75.0	(50.5-89.8)	-
Germany	Hoffmann 2010	GP5+/GP6+ (L1). MY09/MY11 (L1) and TS-PCR for 6/11/16/18 Hybridization with TS probes - Multiplex luminex*	8	50.0	(21.5-78.5)	HPV 16 (50.0)
Germany	Reimers 2007	A10/A5-A6/A8 (L1) and CP62/70-CP65/69a (L1) Sequencing	23	39.1	(22.2-59.2)	-
Italy	Herrero 2003	GP5+/GP6+ (L1) Hybridization with EIA oligonucleotide probes (2. 6. 11. 16. 18. 31. 33. 35. 39. 40. 42. 43. 44. 45. 51. 52. 56. 58. 59. 66. 68)	6	0.0	(0.0-39.0)	-
Norway	Hannisdal 2010	GP5+/GP6+ (L1) Sequencing	38	39.5	(25.6-55.3)	-
Spain	Herrero 2003	GP5+/GP6+ (L1) Hybridization with EIA oligonucleotide probes (2. 6. 11. 16. 18. 31. 33. 35. 39. 40. 42. 43. 44. 45. 51. 52. 56. 58. 59. 66. 68)	4	50.0	(15.0-85.0)	HPV 16 (50.0)
Sweden	Attner 2010	GP5+/GP6+ (L1). CPI/IIG (E1) and TS-PCR E6/7 for 16/33 Amplification with TS primers (16. 33) and sequencing	30	73.3	(55.6-85.8)	-
Sweden	Dahlgren 2004	GP5+/GP6+ (L1) and CPI/CPII (L1) Amplification with TS primers (16. 18. 33) and sequencing	7	28.6	(8.2-64.1)	-
Sweden	Hammarstedt 2006	GP5+/GP6+ (L1). CPI/CPIIG (E1) and TS-PCR E6 for 16 Sequencing	58	50.0	(37.5-62.5)	-
Sweden	Näsman 2009	GP5+/GP6+ (L1). CPI/CPIIG (E1) and TS-PCR E6 for 16 Sequencing	22	95.5	(78.2-99.2)	-
Switzerland	Lindel 2001	SPF10 (L1) Sequencing	24	33.3	(18.0-53.3)	-
BOTH OR UNSPECIFIED						

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Table 44 – continued from previous page

Country	Study	HPV detection method and targeted HPV types	No. Tested	%	(95% CI)[a]	Prevalence of 5 most frequent HPVs, HPV type (%)
Czechia	Klozar 2008	GP5+/GP6+ (L1) RLBH (6. 11. 16. 18. 26. 31. 33. 34. 35. 39. 40. 42. 43. 44. 45. 51. 52. 53. 54. 55. 56. 57. 58. 59. 61. 66. 68. 70. 71. 72. 73. 81. 82. 83. 84. 89)	20	45.0	(25.8-65.8)	HPV 16 (40.0) HPV 33 (5.0)
Czechia	Rotnáglová 2011	GP5+/GP6+ (L1) RBLH (6. 11. 16. 18. 26. 31. 33. 34. 35. 39. 40. 42. 43. 44. 45. 51. 52. 53. 54. 55. 56. 57. 58. 59. 61. 66. 68. 70. 71. 72. 73. 81. 82. 83. 84. 89)	109	65.1	(55.8-73.4)	HPV 16 (60.6) HPV 33 (1.8) HPV 18 (0.9) HPV 26 (0.9) HPV 52 (0.9)
Czechia	Ribeiro 2011	PGMY09/11 (L1) Amplification with TS primers (16)	136	0.7	(0.1-4.0)	HPV 16 (0.7)
France	Fouret 1997	TS-PCR E6 for 16/18/31/33/45 Hybridization with TS probes (16. 18. 31. 33. 45)	58	17.2	(9.6-28.9)	HPV 16 (15.5)
France	Charfi 2008	GP5+/GP6+ (L1) and TS-PCR for 6/11/16/18/33 Amplification with TS primers (6. 11. 16. 18. 33)	52	61.5	(48.0-73.5)	HPV 16 (51.9) HPV 33 (1.9)
Germany	Hoffmann 2010	GP5+/GP6+ (L1). MY09/MY11 (L1) and TS-PCR for 6/11/16/18 Hybridization with TS probes - Multiplex luminex*	39	53.8	(38.6-68.4)	HPV 16 (51.3) HPV 35 (5.1)
Germany	Wittekindt 2005	A10/A5-A6/A8 (L1) and (L1) Sequencing	34	52.9	(36.7-68.5)	HPV 16 (50.0) HPV 33 (2.9)
Germany	Weiss 2011	RT-PCR E6/E7 for 16 Hybridization with TS probes (16)	86	38.4	(28.8-48.9)	HPV 16 (38.4)
Germany	Reimers 2007	A10/A5-A6/A8 (L1) and CP62/70-CP65/69a (L1) Sequencing	106	28.3	(20.6-37.5)	HPV 16 (27.4) HPV 33 (0.9)
Germany	Klussmann 2001	A10/A5-A6/A8 (L1) and CP62/70-CP65/69a (L1) Sequencing	33	45.5	(29.8-62.0)	HPV 16 (42.4) HPV 33 (3.0) HPV 5 (3.0) HPV 96 (3.0)
Germany	Hoffmann 1998	MY09/MY11 (L1) and TS-PCR for 6/11/16/18/33 SBH (6. 11. 16. 18. 31. 33. 45)	23	26.1	(12.5-46.5)	HPV 16 (8.7) HPV 45 (8.7) HPV 6 (4.3)
Germany	Andl 1998	TS-PCR for 6/11/16/18 Hybridization with TS probes (6. 11. 16. 18) and cycle sequencing system of BRL	21	52.4	(32.4-71.7)	HPV 16 (38.1) HPV 33 (4.8)
Greece	Romanitan 2008	GP5+/GP6+ (L1). CPI/CPIIG (E1) and TS-PCR E6/E7 for 16 Amplification with TS primers (16)	28	42.9	(26.5-60.9)	HPV 16 (32.1)
Italy	Boscolo-Rizzo 2009	MY09/MY11 (L1) RFLP* and amplification with TS primers E6/E2 for 16	22	18.2	(7.3-38.5)	HPV 16 (18.2)
Italy	Herrero 2003	GP5+/GP6+ (L1) Hybridization with EIA oligonucleotide probes (2. 6. 11. 16. 18. 31. 33. 35. 39. 40. 42. 43. 44. 45. 51. 52. 56. 58. 59. 66. 68)	36	19.4	(9.8-35.0)	HPV 16 (16.7) HPV 33 (2.8) HPV 35 (2.8)
Italy	Licitra 2006	RT-PCR E1 for 16/18 Hybridization with TS probes (16. 18)	90	18.9	(12.1-28.2)	HPV 16 (18.9)
Italy	Rittà 2009	MY09/MY11 (L1) and GP5+/GP6+ (L1) Sequencing	22	50.0	(30.7-69.3)	HPV 16 (50.0)
Netherlands	Braakhuis 2004	GP5+/GP6+ (L1) and TS-PCR RLBH (6. 11. 16. 18. 26. 31. 33. 34. 35. 39. 40. 42. 43. 44. 45. 51. 52. 53. 54. 55. 56. 57. 58. 59. 61. 66. 68.70.72.73. 82/MM4. 83. 84. 82/IS39. 71/CP8061. 81/CP8304. 89)	37	37.8	(24.1-53.9)	HPV 16 (37.8)
Norway	Hannisdal 2010	GP5+/GP6+ (L1) Sequencing	137	51.8	(43.5-60.0)	HPV 16 (48.9) HPV 31 (2.9) HPV 18 (2.2) HPV 33 (0.7) HPV 67 (0.7)
Poland	Ribeiro 2011	PGMY09/11 (L1) Amplification with TS primers (16)	136	0.7	(0.1-4.0)	HPV 16 (0.7)
Poland	Snietura 2010	Real-time High Risk HPV test (Abbott Molecular) using L1 consensus primers Amplification with TS primers (16. 18. 31. 33. 35. 39. 45. 51. 52. 56. 58. 59. 66 and 68 - the technique only differentiates 16-18-other)	14	50.0	(26.8-73.2)	HPV 16 (50.0)
Poland	Szkaradkiewicz 2002	MY09/MY11 (L1) Amplification with TS primers (16. 18)	28	10.7	(3.7-27.2)	-
Romania	Ribeiro 2011	PGMY09/11 (L1) Amplification with TS primers (16)	136	0.7	(0.1-4.0)	HPV 16 (0.7)
Russian Federation	Ribeiro 2011	PGMY09/11 (L1) Amplification with TS primers (16)	136	0.7	(0.1-4.0)	HPV 16 (0.7)
Slovakia	Ribeiro 2011	PGMY09/11 (L1) Amplification with TS primers (16)	136	0.7	(0.1-4.0)	HPV 16 (0.7)
Spain	Herrero 2003	GP5+/GP6+ (L1) Hybridization with EIA oligonucleotide probes (2. 6. 11. 16. 18. 31. 33. 35. 39. 40. 42. 43. 44. 45. 51. 52. 56. 58. 59. 66. 68)	44	9.1	(3.6-21.2)	HPV 16 (9.1)
Sweden	Attner 2010	GP5+/GP6+ (L1). CPI/IIG (E1) and TS-PCR E6/7 for 16/33 Amplification with TS primers (16. 33) and sequencing	95	74.7	(65.2-82.4)	HPV 16 (64.2) HPV 33 (7.4) HPV 35 (2.1) HPV 58 (1.1)
Sweden	Dahlgren 2004	GP5+/GP6+ (L1) and CPI/CPII (L1) Amplification with TS primers (16. 18. 33) and sequencing	25	40.0	(23.4-59.3)	HPV 16 (28.0) HPV 33 (4.0) HPV 35 (4.0) HPV 38 (4.0)
Sweden	Hammarstedt 2006	GP5+/GP6+ (L1). CPI/CPIIG (E1) and TS-PCR E6 for 16 Sequencing	203	48.8	(42.0-55.6)	HPV 16 (42.9) HPV 33 (1.5) HPV 35 (0.5) HPV 45 (0.5)
Sweden	Lindquist 2012	GP5+/GP6+ (L1) and CPI/CPIIG (E1) Amplification with TS primers (16) and Multiplex Luminex (6. 11. 16. 18. 26. 31. 33. 35. 39. 42. 43. 44. 45. 51. 52. 53. 56. 58. 59. 66. 68. 70. 73. 82)	56	64.3	(51.2-75.5)	HPV 16 (64.3)
Sweden	Näsman 2009	GP5+/GP6+ (L1). CPI/CPIIG (E1) and TS-PCR E6 for 16 Sequencing	98	84.7	(76.3-90.5)	HPV 16 (78.6) HPV 33 (1.0) HPV 35 (1.0) HPV 59 (1.0)
Switzerland	Lindel 2001	SPF10 (L1) Sequencing	99	14.1	(8.6-22.3)	HPV 16 (11.1) HPV 33 (1.0) HPV 35 (1.0) HPV 45 (1.0)
United Kingdom	Anderson 2007	GP5+/GP6+ (L1) Hybridization with Roche LBA (6. 11. 16. 18. 26. 31. 33. 35. 39. 40. 42. 45. 51. 52. 53. 54. 55. 56. 58. 59. 61. 62. 64. 66. 67. 68. 69. 70. 71. 72. 73. 81. 82. 83. 84. 89)	36	22.2	(11.7-38.1)	HPV 16 (19.4) HPV 11 (2.8)

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Table 44 – continued from previous page

Country	Study	HPV detection method and targeted HPV types	No. Tested	%	(95% CI)[a]	Prevalence of 5 most frequent HPVs, HPV type (%)
United Kingdom	Schache 2011	TS-PCR E6 for 16 Amplification with TS primers (16)	98	40.8	(31.6-50.7)	HPV 16 (40.8)
United Kingdom	Thavaraj 2011	GP5+/GP6+ (L1) Luminex 200 IS (16. 18. 26. 31. 33. 35. 39. 45. 51. 52. 53. 56. 58. 59. 66. 68. 73. 82)	142	70.4	(62.5-77.3)	HPV 16 (64.1) HPV 33 (2.1) HPV 18 (0.7) HPV 35 (0.7)

Data updated on 22 May 2023 (data as of 31 Dec 2015)

DBH: Dot Blot Hybridization; EIA: Enzyme ImmunoAssay; HC2: Hybrid Capture 2; ISH: In Situ Hybridization; LBA: Line-Blot Assay; LiPA: Line Probe Assay; PCR: Polymerase Chain Reaction; RFLP: Restriction Fragment Length Polymorphism; RLBH: Reverse Line Blot Hybridization; RT-PCR: Real Time Polymerase Chain Reaction; SBH: Southern Blot Hybridization; SPF: Short Primer Fragment; TS: Type Specific
Only for European countries
[a] 95% Confidence Interval
Data Sources: See references in Section 9 References.

Table 45: Studies on HPV prevalence among cases of hypopharyngeal or laryngeal cancer in Europe

Country	Study	HPV detection method and targeted HPV types	No. Tested	HPV Prevalence		Prevalence of 5 most frequent HPVs, HPV type (%)
				%	(95% CI)[a]	
MEN						
Germany	Hoffmann 2009	MY09/MY11 (L1) and TS-PCR for 6/11/16/18 Hybridization with TS and consensus probes and further confirmation by SBH with TS and consensus probes (6. 11. 16. 18. 31. 33. 45)	21	33.3	(17.2-54.6)	HPV 16 (19.0)
Germany	Hoffmann 2006	MY09/MY11 (L1) and TS-PCR for 6/11/16/18/33 Hybridization with TS and consensus probes and further confirmation by SBH with TS and consensus probes (6. 11. 16. 18. 31. 33. 45)	17	23.5	(9.6-47.3)	HPV 16 (23.5)
Italy	Azzimonti 2004	GP5+/GP6+ (L1) Sequencing	23	56.5	(36.8-74.4)	HPV 16 (43.5) HPV 18 (13.0)
Italy	Cattani 1998	MY09/MY11 (L1) and TS-PCR for 33 Hybridization with TS probes (6.11.16.18.31) and amplification with TS primer (33)	70	30.0	(20.5-41.5)	-
Italy	Gallo 2009	MY09/MY11 (L1). LCRF1. LCRF2. LCRF3. LCRF4. E7R1. E7R2. E7R3. E7R4 (E6) and TS-PCR E1 for 6/11/16/18-31/33 Sequencing	36	0.0	-	-
Norway	Lie 1996	CP (E1). MY09/MY11 (L1) and GP5+/GP6+ (L1) Amplification with TS primers (6.11.16.18.31.33.35)	38	7.9	(2.7-20.8)	HPV 16 (2.6)
Poland	Morshed 2008	SPF10 (L1) LiPA 25	78	34.6	(25.0-45.7)	-
WOMEN						
Germany	Hoffmann 2009	MY09/MY11 (L1) and TS-PCR for 6/11/16/18 Hybridization with TS and consensus probes and further confirmation by SBH with TS and consensus probes (6. 11. 16. 18. 31. 33. 45)	6	16.7	(3.0-56.4)	-
Germany	Hoffmann 2006	MY09/MY11 (L1) and TS-PCR for 6/11/16/18/33 Hybridization with TS and consensus probes and further confirmation by SBH with TS and consensus probes (6. 11. 16. 18. 31. 33. 45)	3	33.3	(6.1-79.2)	HPV 16 (33.3)
Italy	Azzimonti 2004	GP5+/GP6+ (L1) Sequencing	2	50.0	(9.5-90.5)	HPV 16 (50.0)
Italy	Cattani 1998	MY09/MY11 (L1) and TS-PCR for 33 Hybridization with TS probes (6.11.16.18.31) and amplification with TS primer (33)	28	21.4	(10.2-39.5)	HPV 16 (21.4)
Italy	Gallo 2009	MY09/MY11 (L1). LCRF1. LCRF2. LCRF3. LCRF4. E7R1. E7R2. E7R3. E7R4 (E6) and TS-PCR E1 for 6/11/16/18-31/33 Sequencing	4	0.0	-	-
Norway	Lie 1996	CP (E1). MY09/MY11 (L1) and GP5+/GP6+ (L1) Amplification with TS primers (6.11.16.18.31.33.35)	10	0.0	-	-
Poland	Morshed 2008	SPF10 (L1) LiPA 25	15	40.0	(19.8-64.3)	-
BOTH OR UNSPECIFIED						
Belarus	Gudleviciene 2014	PCR-GP5+/6+, PCR-PGMY09/11, PCR L1-Consensus primer, PCR-E6, PCR-MULTIPLEX (HPV 6, 11, 16, 18, 31, 33, 35, 39, 45, 51, 52, 56, 58, 59, 66, 68, 73, 82)	34	5.9	(1.6-19.1)	HPV 6 (2.9) HPV 16 (2.9)
Belgium	Duray 2011	GP5+/GP6+ (L1) and RT-PCR E6/E7 for 6. 11. 16. 18. 31. 33. 35. 39. 45. 51. 52. 53. 56. 58. 59. 66. 67-L1. 68 TS real-time and consensus PCR E6/E7 (6. 11. 16. 18. 31. 33. 35. 39. 45. 51. 52. 53. 56. 58. 59. 66. 67-L1. 68)	59	79.7	(67.7-88.0)	HPV 16 (62.7) HPV 18 (16.9) HPV 51 (8.5) HPV 33 (5.1) HPV 66 (5.1)
Czechia	Ribeiro 2011	PGMY09/11 (L1) Amplification with TS primers (16)	239	0.8	(0.2-3.0)	HPV 16 (0.8)
Denmark	Lindeberg 1999	MY09/MY11 (L1). GP5+/GP6+ (L1) and CPII/II (L1) Hybridization with TS probes (6.11.16.18.30.31.33.35)	30	3.3	(0.6-16.7)	-
Finland	Mork 2001	GP5+/GP6+ (L1) and CPI/CPII (L1) Amplification with TS primers (6. 11. 16. 18. 33)	40	2.5	(0.4-12.9)	HPV 16 (2.5)
Finland	Koskinen 2007	MY09/MY11 (L1). GP5+/GP6+ (L1) and SPF10 (L1) LiPA 25	69	4.3	(1.5-12.0)	HPV 16 (1.4)
Finland	Koskinen 2003	SPF10 (L1) LiPA 25	28	50.0	(32.6-67.4)	HPV 16 (46.4) HPV 33 (14.3) HPV 6 (10.7) HPV 11 (3.6) HPV 51 (3.6)

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Table 45 – continued from previous page

Country	Study	HPV detection method and targeted HPV types	No. Tested	%	(95% CI)[a]	Prevalence of 5 most frequent HPVs, HPV type (%)
France	Fouret 1997	TS-PCR E6 for 16/18/31/33/45 Hybridization with TS probes (16. 18. 31. 33. 45)	103	6.8	(3.3-13.4)	HPV 16 (6.8)
Germany	Kleist 2000	MY09/MY11 (L1) Amplification with TS primers (16. 18)	35	20.0	(10.0-35.9)	HPV 16 (8.6) HPV 18 (8.6)
Germany	Krupar 2014	PCR-E6, PCR-E7, PCR- MULTIPLEX (HPV 11, 16, 18, 31, 33, 35, 39, 42, 43, 44, 45, 51, 52, 56, 58, 59, 66, 68)	49	0.0	-	-
Germany	Klussmann 2001	A10/A5-A6/A8 (L1) and CP62/70-CP65/69a (L1) Sequencing	30	16.7	(7.3-33.6)	HPV 16 (13.3) HPV 19 (3.3)
Germany	Hoffmann 2009	MY09/MY11 (L1) and TS-PCR for 6/11/16/18 Hybridization with TS and consensus probes and further confirmation by SBH with TS and consensus probes (6. 11. 16. 18. 31. 33. 45)	27	29.6	(15.9-48.5)	HPV 16 (14.8)
Germany	Hoffmann 2006	MY09/MY11 (L1) and TS-PCR for 6/11/16/18/33 Hybridization with TS and consensus probes and further confirmation by SBH with TS and consensus probes (6. 11. 16. 18. 31. 33. 45)	20	25.0	(11.2-46.9)	HPV 16 (25.0)
Germany	Hoffmann 1998	MY09/MY11 (L1) and TS-PCR for 6/11/16/18/33 SBH (6. 11. 16. 18. 31. 33. 45)	51	21.6	(12.5-34.6)	HPV 16 (3.9) HPV 18 (2.0) HPV 45 (2.0)
Germany	Fischer 2003	L1-CP65F. 66F. 69F. 70F Sequencing	47	34.0	(22.2-48.3)	HPV 73 (4.3) HPV 21 (2.1) HPV 22 (2.1) HPV 38 (2.1) HPV 41 (2.1)
Greece	Vlachtsis 2005	TS-PCR for 16/18 Amplification with TS primers (16. 18)	90	40.0	(30.5-50.3)	HPV 16 (34.4) HPV 18 (6.7)
Greece	Gorgoulis 1999	MY09/MY11 (L1) and GP5/GP6 (L1) Amplification with TS primers (6. 11. 16. 18. 31. 33. 35) and confirmation by DBH with TS probes (6.11.16.18. 31.33.35).	91	20.9	(13.8-30.3)	HPV 16 (14.3) HPV 18 (3.3) HPV 33 (3.3) HPV 6 (3.3)
Hungary	Major 2005	MY09/MY11 (L1) and GP5+/GP6+ (L1) RFLP (6. 11. 16. 18)	22	54.5	(34.7-73.1)	HPV 11 (18.2) HPV 16 (13.6) HPV 6 (13.6)
Italy	Azzimonti 2004	GP5+/GP6+ (L1) Sequencing	25	56.0	(37.1-73.3)	HPV 16 (44.0) HPV 18 (12.0)
Italy	Badaracco 2000	MY09/MY11 (L1) Amplification with TS primers (6.16) and hybridization with TS probes (11.16.18.31.45.56.57)	22	50.0	(30.7-69.3)	HPV 16 (27.3) HPV 6 (18.2) HPV 45 (4.5)
Italy	Badaracco 2007	MY09/MY11 (L1) and GP5+/GP6+ (L1) Sequencing	30	16.7	(7.3-33.6)	HPV 16 (10.0) HPV 6 (6.7)
Italy	Boscolo-Rizzo 2009	MY09/MY11 (L1) RFLP* and amplification with TS primers E6/E2 for 16	45	4.4	(1.2-14.8)	HPV 16 (4.4)
Italy	Cattani 1998	MY09/MY11 (L1) and TS-PCR for 33 Hybridization with TS probes (6.11.16.18.31) and amplification with TS primer (33)	75	29.3	(20.2-40.4)	HPV 16 (12.0) HPV 18 (10.7) HPV 33 (1.3)
Italy	Gallo 2009	MY09/MY11 (L1). LCRF1. LCRF2. LCRF3. LCRF4. E7R1. E7R2. E7R3. E7R4 (E6) and TS-PCR E1 for 6/11/16/18-31/33 Sequencing	40	0.0	-	-
Lithuania	Gudleviciene 2009	Consensus primers from Master Mix Amplification with TS primers (16. 18)	25	32.0	(17.2-51.6)	HPV 16 (12.0)
Lithuania	Gudleviciene 2014	PCR-GP5+/6+, PCR-PGMY09/11, PCR L1-Consensus primer, PCR-E6, PCR-MULTIPLEX (HPV 6, 11, 16, 18, 31, 33, 35, 39, 45, 51, 52, 56, 58, 59, 66, 68, 73, 82)	53	20.8	(12.0-33.5)	HPV 6 (1.9) HPV 16 (1.9) HPV 31 (1.9) HPV 39 (1.9) HPV 58 (1.9)
Norway	Koskinen 2007	MY09/MY11 (L1). GP5+/GP6+ (L1) and SPF10 (L1) LiPA 25	69	4.3	(1.5-12.0)	HPV 16 (1.4)
Norway	Lie 1996	CP (E1). MY09/MY11 (L1) and GP5+/GP6+ (L1) Amplification with TS primers (6.11.16.18.31.33.35)	39	7.7	(2.7-20.3)	HPV 16 (2.6)
Norway	Mork 2001	GP5+/GP6+ (L1) and CPI/CPII (L1) Amplification with TS primers (6. 11. 16. 18. 33)	40	2.5	(0.4-12.9)	HPV 16 (2.5)
Poland	Morshed 2008	SPF10 (L1) LiPA 25	93	35.5	(26.5-45.6)	HPV 16 (30.1) HPV 18 (6.5) HPV 33 (5.4)
Poland	Ribeiro 2011	PGMY09/11 (L1) Amplification with TS primers (16)	239	0.8	(0.2-3.0)	HPV 16 (0.8)
Poland	Snietura 2011	Real-time High Risk HPV test (Abbott Molecular) using L1 consensus primers RT-PCR (16. 18. 31. 33. 35. 39. 45. 51. 52. 56. 58. 59. 66. 68)	65	0.0	-	-
Romania	Ribeiro 2011	PGMY09/11 (L1) Amplification with TS primers (16)	239	0.8	(0.2-3.0)	HPV 16 (0.8)
Russian Federation	Ribeiro 2011	PGMY09/11 (L1) Amplification with TS primers (16)	239	0.8	(0.2-3.0)	HPV 16 (0.8)
Slovakia	Ribeiro 2011	PGMY09/11 (L1) Amplification with TS primers (16)	239	0.8	(0.2-3.0)	HPV 16 (0.8)
Slovenia	Poljak 1997	PGMY09/11 (L1). GP5+/GP6+ (L1) and WD72/76/66/67/154 (E6) Amplification with TS primers (6.11.16.18.31.33.51)	30	3.3	(0.6-16.7)	HPV 16 (3.3)
Spain	Alvarez Alvarez 1997	TS-PCR E6 and L1 for 6b/16/18 Amplification with TS primers (6b. 16. 18)	35	25.7	(14.2-42.1)	HPV 6 (22.9) HPV 16 (5.7)
Spain	Pérez-Ayala 1990	TS-PCR E6 for 6/11 Hybridization with TS probes (11.16)	51	56.9	(43.3-69.5)	HPV 16 (56.9)
Sweden	Koskinen 2007	MY09/MY11 (L1). GP5+/GP6+ (L1) and SPF10 (L1) LiPA 25	69	4.3	(1.5-12.0)	HPV 16 (1.4)
Sweden	Mork 2001	GP5+/GP6+ (L1) and CPI/CPII (L1) Amplification with TS primers (6. 11. 16. 18. 33)	40	2.5	(0.4-12.9)	HPV 16 (2.5)
Switzerland	Adams 1999	MY09/MY11 (L1) RFLP (6.11.16.18.31.33.35.51.53.56)	36	16.7	(7.9-31.9)	HPV 16 (16.7)

Continued on next page

Table 45 – continued from previous page

Country	Study	HPV detection method and targeted HPV types	No. Tested	%	(95% CI)[a]	Prevalence of 5 most frequent HPVs, HPV type (%)
United Kingdom	Anderson 2007	GP5+/GP6+ (L1) Hybridization with Roche LBA (6. 11. 16. 18. 26. 31. 33. 35. 39. 40. 42. 45. 51. 52. 53. 54. 55. 56. 58. 59. 61. 62. 64. 66. 67. 68. 69. 70. 71. 72. 73. 81. 82. 83. 84. 89)	64	0.0	-	-
United Kingdom	Conway 2012	PCR-GP5+/6+, TS, Sequencing (HPV 16, 18, 20, 21, 22, 23, 26, 30, 31, 32, 33, 34, 35, 38, 39, 40, 42, 43, 44, 45, 51, 52, 53, 54, 56, 57, 58, 59, 60, 61, 62, 66, 67, 68, 69, 70, 71, 72, 73, 74, 80, 81, 82, 83, 84, 85, 86, 87, 89, 90, 91)	12	0.0	-	-
United Kingdom	Salam 1995	MY09/MY11 (L1) RFLP (6. 11. 16. 18. 33)	36	22.2	(11.7-38.1)	HPV 6 (8.3) HPV 16 (5.6) HPV 11 (2.8)
United Kingdom	Snijders 1996	GP5+/GP6+ (L1) Amplification with TS primers and SBH with TS probes (6. 11. 16. 18. 31. 33)	31	19.4	(9.2-36.3)	HPV 16 (19.4)

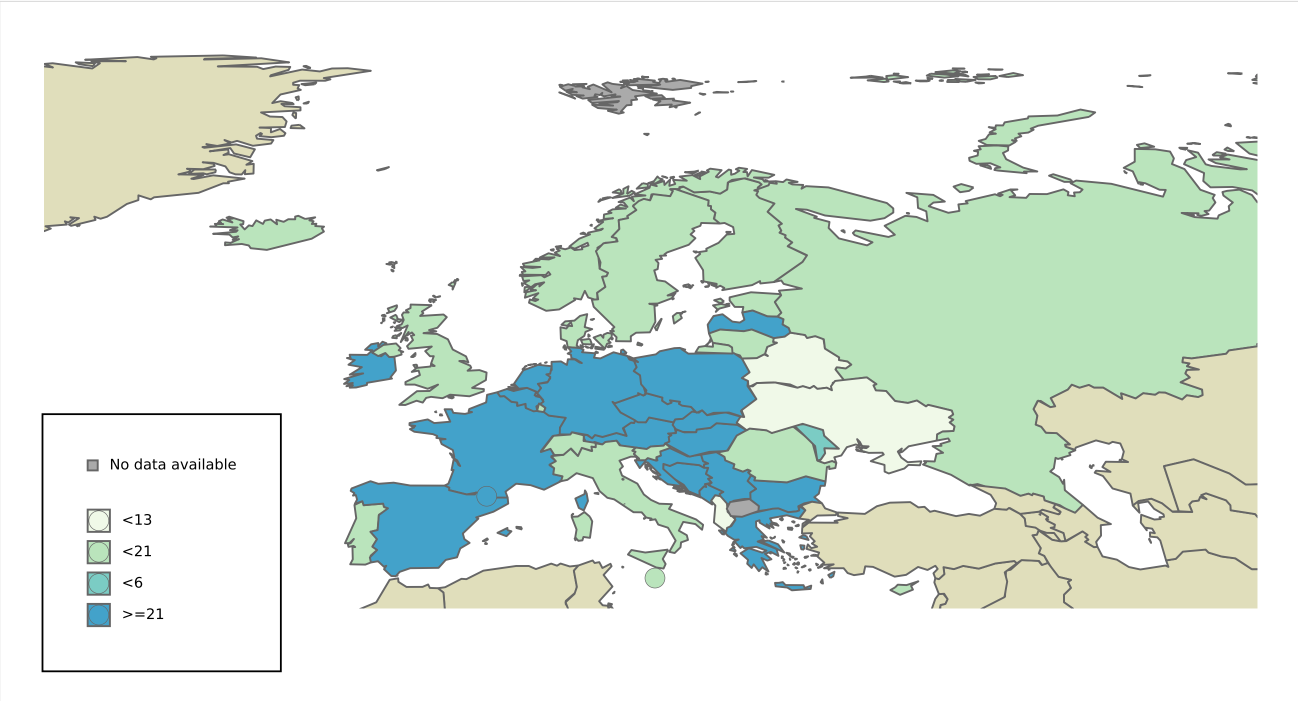
Data updated on 22 May 2023 (data as of 31 Dec 2015)

DBH: Dot Blot Hybridization; EIA: Enzyme ImmunoAssay; HC2: Hybrid Capture 2; ISH: In Situ Hybridization; LBA: Line-Blot Assay; LiPA: Line Probe Assay; PCR: Polymerase Chain Reaction; RFLP: Restriction Fragment Length Polymorphism; RLBH: Reverse Line Blot Hybridization; RT-PCR: Real Time Polymerase Chain Reaction; SBH: Southern Blot Hybridization; SPF: Short Primer Fragment; TS: Type Specific
Only for European countries
[a] 95% Confidence Interval
Data Sources: See references in Section 9 References.

5 Factors contributing to cervical cancer

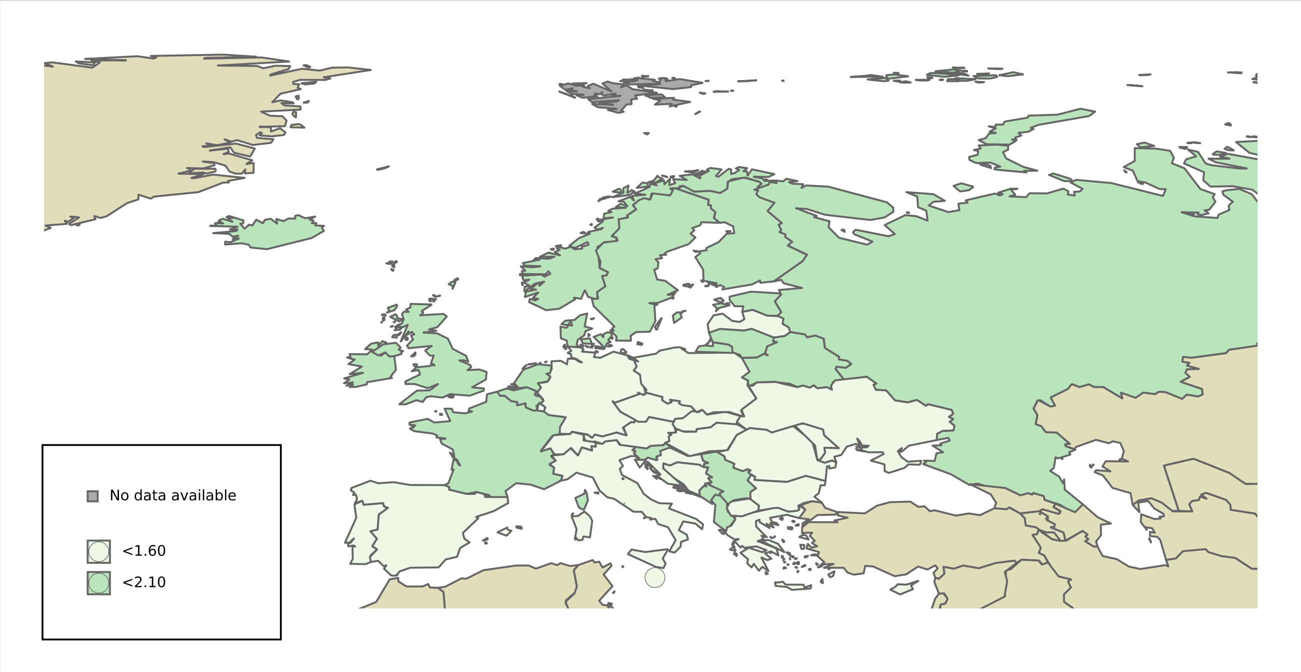
HPV is a necessary cause of cervical cancer, but it is not a sufficient cause. Other cofactors are necessary for progression from cervical HPV infection to cancer. Tobacco smoking, high parity, long-term hormonal contraceptive use, and co-infection with HIV have been identified as established cofactors. Co-infection with Chlamydia trachomatis and herpes simplex virus type-2, immunosuppression, and certain dietary deficiencies are other probable cofactors. Genetic and immunological host factors and viral factors other than type, such as variants of type, viral load and viral integration, are likely to be important but have not been clearly identified. (Muñoz N, Vaccine 2006; 24(S3): 1-10). In this section, the prevalence of smoking, parity (fertility), oral contraceptive use, and HIV in Europeare presented.

Figure 59: Prevalence of female tobacco smoking in Europe



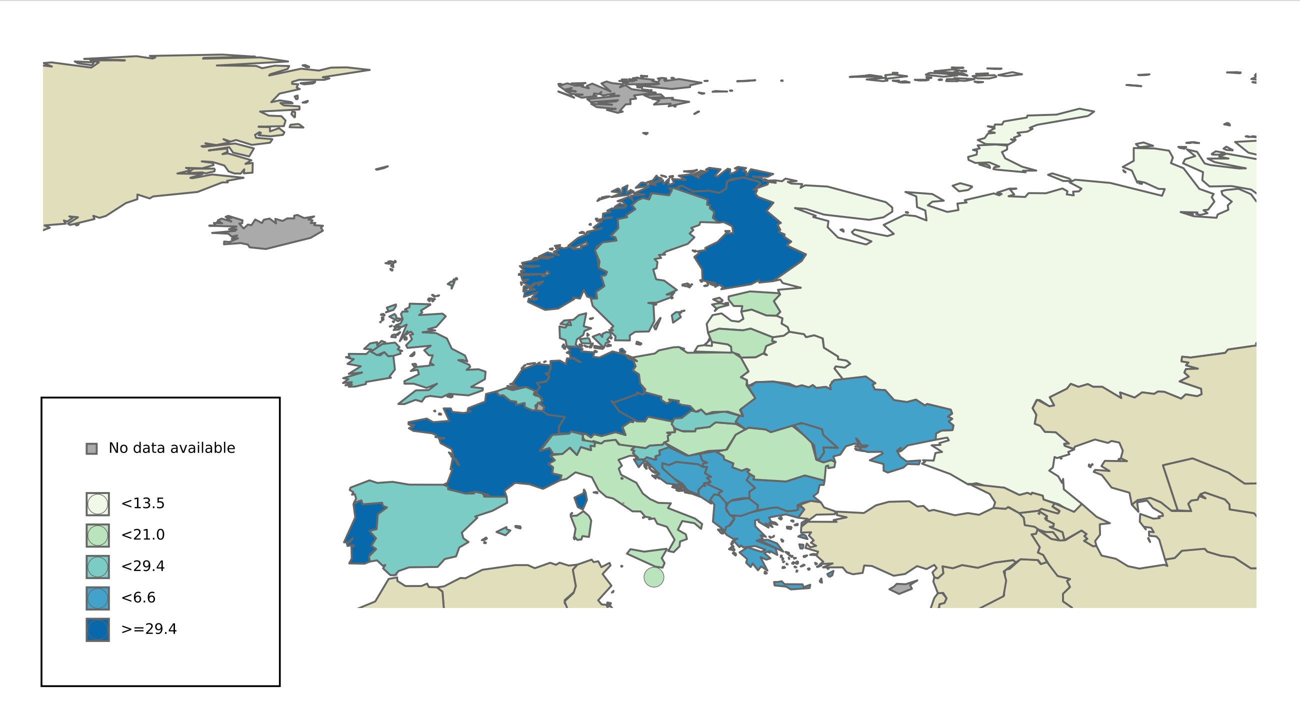
Data accessed on 12 Nov 2019
Crude adjusted prevalence (%) estimates of tabacco use among people aged >= 15 years by country, for the year 2016.
Data Sources:
WHO global report on trends in prevalence of tobacco use 2000–2025, third edition. Geneva: World Health Organization; 2019. Available at https://www.who.int/publications/i/item/who-global-report-on-trends-in-prevalence-of-tobacco-use-2000-2025-third-edition

Figure 60: Total fertility rates in Europe



Data accessed on 13 Nov 2019
Year of estimate: 2017
Data Sources:
Eurostat - Statistical office of the European Comission [web site]. Luxembourg: European Commission; 2017. Available at: https://ec.europa.eu/eurostat/web/products-datasets/-/demofrate. [Accessed on November 13, 2019].
United Nations, Department of Economic and Social Affairs, Population Division (2017). World Population Prospects: The 2017 Revision, DVD Edition. Available at: https://www.un.org/en/development/desa/population/publications/dataset/fertility/wfd2017.asp. [Accessed on November 13, 2019].

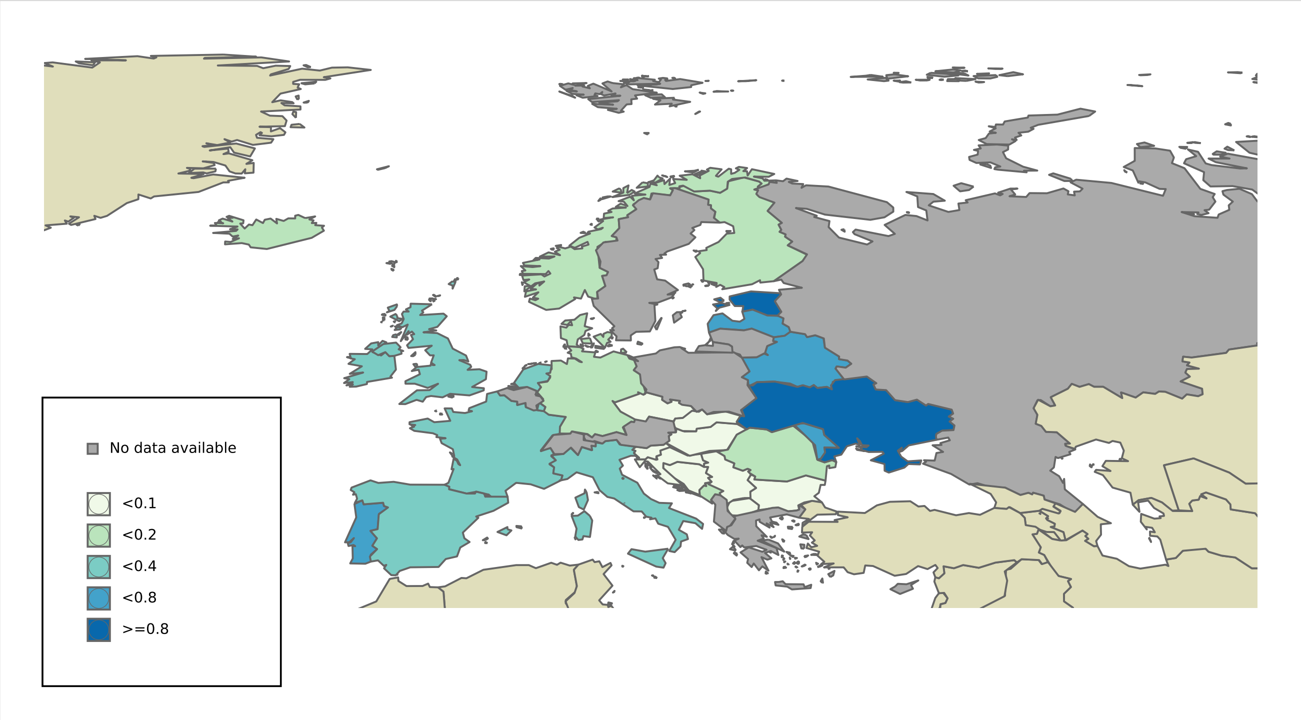
Figure 61: Oral contraceptive use (%) among women who are married or in union in Europe



Data accessed on 18 Nov 2019

Data Sources:
United Nations, Department of Economic and Social Affairs, Population Division (2019). World Contraceptive Use 2019 (POP/DB/CP/Rev2019). https://www.un.org/en/development/desa/population/publications/dataset/contraception/wcu2019.asp. Available at: [Accessed on November 18, 2019].

Figure 62: Prevalence of HIV in Europe



Data accessed on 21 Nov 2019

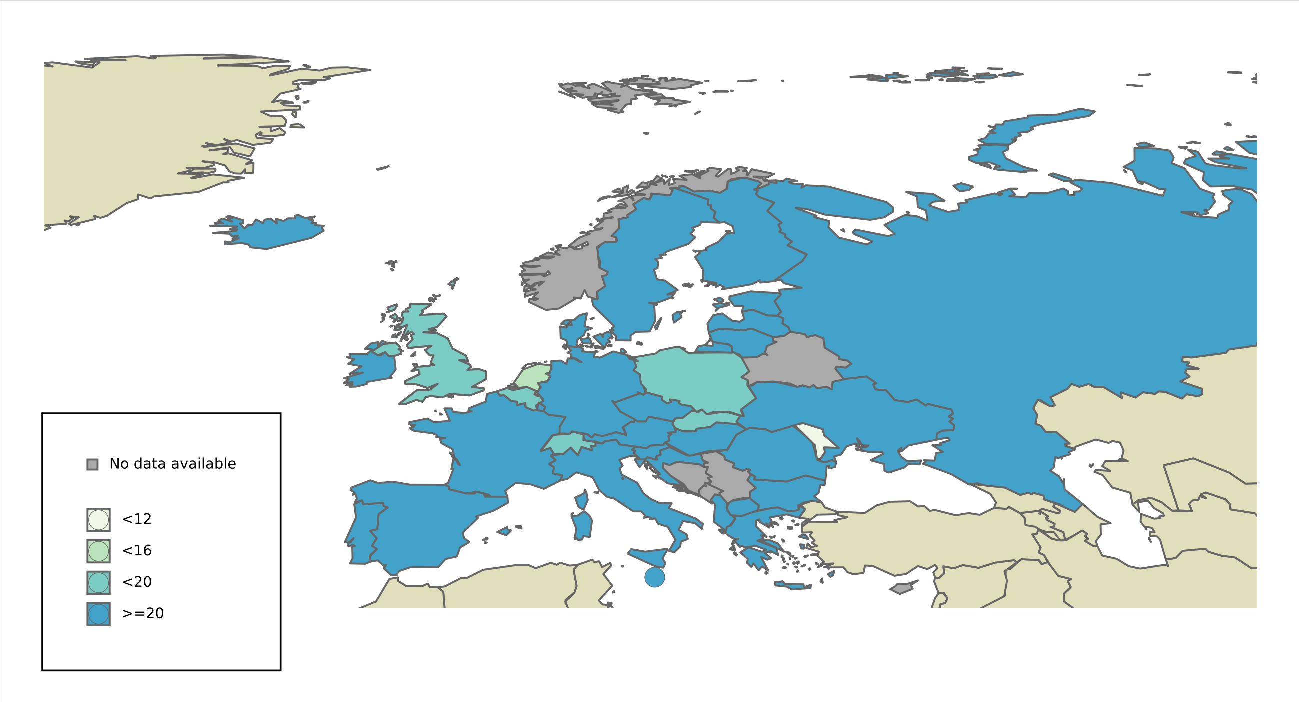
Data Sources:

UNAIDS database [internet]. Available at: http://aidsinfo.unaids.org/ [Accessed on November 21, 2019]

6 Sexual and reproductive health behaviour indicators

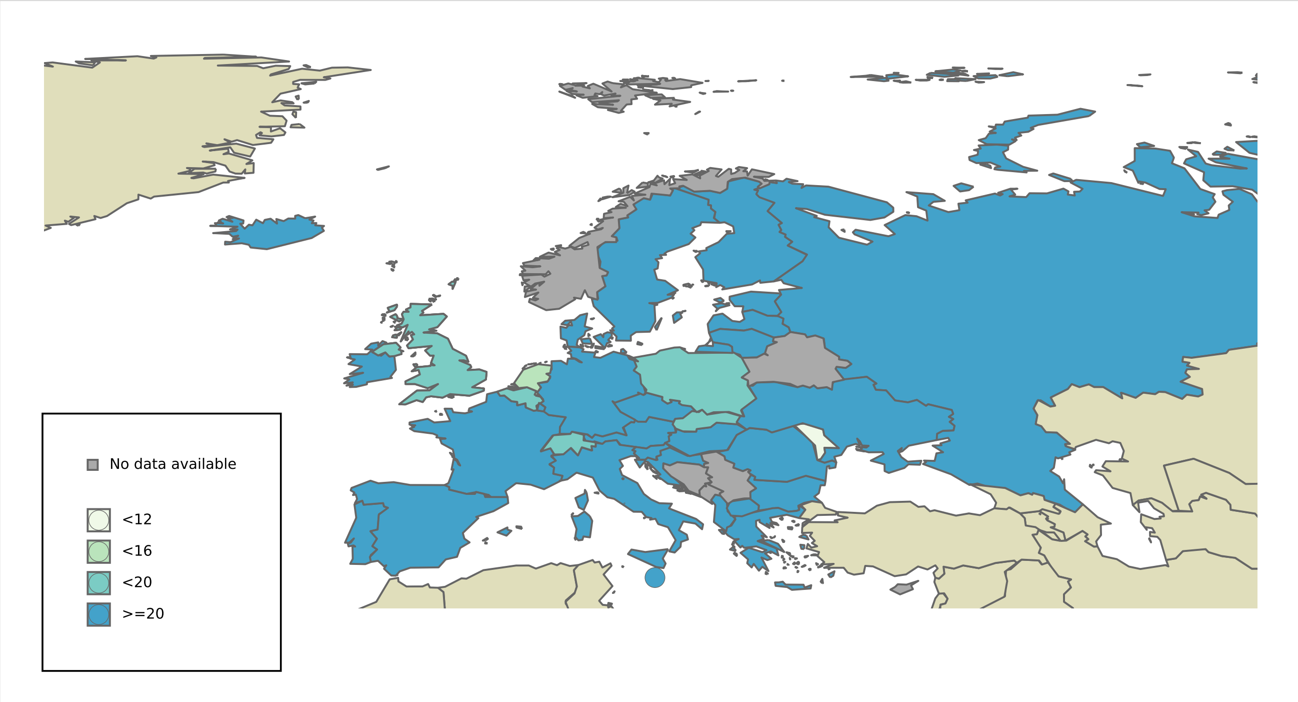
Sexual intercourse is the primary route of transmission of genital HPV infection. Information about sexual and reproductive health behaviours is essential to the design of effective preventive strategies against anogenital cancers. In this section, we describe sexual and reproductive health indicators that may be used as proxy measures of risk for HPV infection and anogenital cancers. Several studies have reported that earlier sexual debut is a risk factor for HPV infection, although the reason for this relationship is still unclear. In this section, information on sexual and reproductive health behaviour in Europeare presented.

Figure 63: Percentage of 15-year-old girls who report sexual intercourse in Europe



Data accessed on 16 Mar 2017
Please refer to original source for methods of estimation
[a] Year of estimation: 2013-2014
[b] Fifteen-year-olds teenagers only were asked whether they had ever had sexual intercourse.
[c] Indicates a significant gender difference (at p<0.05).
Data Sources:
[1] Growing up unequal: gender and socioeconomic differences in young people's health and well-being. Health Behaviour in School-aged Children (HBSC) study: international report from the 2013/2014 survey. Inchley J, Currie D, Young T, et al. Copenhagen, WHO Regional Office for Europe, 2016 (Health Policy for Children and Adolescents, No. 7). Available at: http://www.euro.who.int/__data/assets/pdf_file/0003/303438/HSBC-No.7-Growing-up-unequal-Full-Report.pdf?ua=1

Figure 64: Percentage of 15-year-old boys who report sexual intercourse in Europe



Data accessed on 16 Mar 2017
Please refer to original source for methods of estimation
[a] Year of estimation: 2013-2014
[b] Fifteen-year-olds teenagers only were asked whether they had ever had sexual intercourse.
[c] Indicates a significant gender difference (at p<0.05).
Data Sources:
[1] Growing up unequal: gender and socioeconomic differences in young people's health and well-being. Health Behaviour in School-aged Children (HBSC) study: international report from the 2013/2014 survey. Inchley J, Currie D, Young T, et al. Copenhagen, WHO Regional Office for Europe, 2016 (Health Policy for Children and Adolescents, No. 7). Available at: http://www.euro.who.int/__data/assets/pdf_file/0003/303438/HSBC-No.7-Growing-up-unequal-Full-Report.pdf?ua=1

Table 46: Median age at first sex in Europe

Country	Study	Year/period	Birth cohort	Male		Female		Total	
				N	Median age at first sex	N	Median age at first sex	N	Median age at first sex
Albania	Albania DHS 2008/2009[1]	2008-2009	1964-1968	23.2	497	21.3	1216	-	-
	Albania DHS 2008/2009[1,a]	2008-2009	1984-1988	19.9	268	-	516	-	-
	Albania DHS 2008/2009[1,a]	2008-2009	1989-1993	-	129	-	182	-	-
	Albania BBSS 2005[2,b]	2005	1956-1987	17.0	312	20.0	317	19.0	629
	Albania DHS 2008/2009[1]	2008-2009	1969-1973	21.9	366	20.8	1071	-	-
	Albania DHS 2008/2009[1,c]	2008-2009	1959-1983	22.0	-	21.3	-	-	-
	Albania DHS 2008/2009[1]	2008-2009	1959-1983	22.3	1904	20.9	4894	-	-
	Albania DHS 2008/2009[1,d]	2008-2009	1959-1983	22.6	-	20.7	-	-	-
	Albania DHS 2008/2009[1]	2008-2009	1979-1983	20.4	244	20.8	711	-	-
	Albania DHS 2008/2009[1]	2008-2009	1959-1963	23.4	535	21.1	1079	-	-
	Albania DHS 2008/2009[1]	2008-2009	1974-1978	20.8	262	20.6	817	-	-
	Albania DHS 2008/2009[1,a]	2008-2009	1984-1993	-	397	-	697	-	-
Austria	Cibula 2008[3,b,e,f]	2006	1957-1991	-	-	16.6	507	-	-
Belarus	Syrjanen 2003[4,e,g,h]	1998-2001	1913-1983	-	-	18.4	722	-	-
	Syrjanen 2003[4,i,e,h]	1998-2001	1913-1983	-	-	19.6	1692	-	-

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Table 46 – continued from previous page

Country	Study	Year/period	Birth cohort	Male		Female		Total	
				N	Median age at first sex	N	Median age at first sex	N	Median age at first sex
	Syrjanen 2003[4,j,e,h]	1998-2001	1913-1983	-	-	19.0	761	-	-
Belgium	Hubert 1998[5,k]	1993	1952-1961	18.5	411	18.8	509	-	-
	Hubert 1998[5,k]	1993	1932-1941	20.4	245	20.9	252	-	-
	Hubert 1998[5,k]	1993	1967-1971	18.1	216	18.7	229	-	-
	Hubert 1998[5,k]	1993	1942-1951	19.0	385	20.0	408	-	-
	Hubert 1998[5,k]	1993	1962-1966	18.0	199	18.6	240	-	-
	Hubert 1998[5,k]	1993	1972-1973	17.4	105	18.0	90	-	-
	Fronteira 2009[6,e,b,l]	2005-2006	1986-1989	-	-	-	-	15.2	369
Bosnia and Herzegovina	Delva 2007[7,e,m]	2004	1989-1993	15.5	418	16.3	232	-	-
	Arza 2012[8,n,e]	2007-2009	-	17.3	1871	18.2	1788	-	-
Croatia	Hirsl-Hecej 2006[9,l,o]	1997	1978-1982	-	-	-	-	16.0	686
	Hirsl-Hecej 2006[9,l,o]	2001	1982-1986	-	-	-	-	16.0	624
	Stulhofer 2009[10]	2005	1981-1987	17.0	433	17.0	460	-	-
	Croatia KABP 2010 (Landripet 2011)[11]	2010	1985-1992	-	-	-	-	17.0	861
Czechia	Crochard 2009[12]	2006-2007	1982-1988	17.0	530	17.0	509	-	-
	Fronteira 2009[6,l,e,b]	2005-2006	1986-1989	-	-	-	-	16.4	392
	Czech Republic RHS 1993[13]	1993	1969-1978	-	-	17.5	1058	-	-
Denmark	Jensen 2011[14]	2005	1983-1986	-	-	16.0	-	-	-
	Hubert 1998[5,k]	1989	1967-1971	17.5	178	17.0	206	-	-
	Jensen 2011[14]	2005	1979-1982	-	-	16.0	-	-	-
	Hubert 1998[5,k]	1989	1952-1961	17.8	328	17.7	390	-	-
	Hubert 1998[5,k]	1989	1942-1951	18.2	269	18.3	351	-	-
	Hubert 1998[5,k]	1989	1972-1973	17.4	164	16.7	202	-	-
	Jensen 2011[14]	2005	1969-1973	-	-	16.5	-	-	-
	Hubert 1998[5,k]	1989	1962-1966	17.1	179	16.8	199	-	-
	Jensen 2011[14]	2005	1974-1978	-	-	16.0	-	-	-
	Hubert 1998[5,k]	1989	1932-1941	18.4	232	19.0	295	-	-
	Jensen 2011[14]	2005	1964-1968	-	-	16.0	-	-	-
	Jensen 2011[14]	2005	1959-1963	-	-	16.0	-	-	-
Estonia	Uusküla 2008[e]	2005-2006	1970-1987	-	-	-	-	17.6	526
	Haldre 2012[15]	2004/2005	1949-1953	18.6	-	20.2	-	-	-
	Haldre 2012[15]	2005	1976-1980	17.5	-	17.4	-	-	-

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Table 46 – continued from previous page

Country	Study	Year/period	Birth cohort	Male		Female		Total	
				N	Median age at first sex	N	Median age at first sex	N	Median age at first sex
	Part 2007[16]	2004-2005	1980-1986	-	-	17.0	908	-	-
	Haldre 2012[15]	1996	1951-1955	18.0	-	20.0	-	-	-
	Part 2007[16]	2004-2005	1987-1988	-	-	15.0	90	-	-
	Haldre 2012[15]	2004/2005	1964-1968	18.2	-	19.1	-	-	-
	Haldre 2012[15]	1994	1949-1953	-	-	20.1	-	-	-
	Part 2007[16]	2004-2005	1960-1969	-	-	18.0	680	-	-
	Haldre 2012[15]	1994	1964-1968	-	-	19.3	-	-	-
	Part 2007[16]	2004-2005	1970-1979	-	-	18.0	707	-	-
	Haldre 2012[15]	1996	1966-1970	18.0	-	18.0	-	-	-
	Fronteira 2009[6,b,e,l]	2005-2006	1986-1989	-	-	-	-	15.3	435
	Haldre 2012[15]	2007	1978-1982	17.4	-	17.5	-	-	-
Finland	Hubert 1998[5,k]	1992	1972-1973	18.0	46	16.6	40	-	-
	Hubert 1998[5,k]	1992	1932-1941	18.7	134	20.0	149	-	-
	Hubert 1998[5,k]	1992	1952-1961	18.0	256	17.7	246	-	-
	Hubert 1998[5,k]	1992	1942-1951	18.2	227	19.0	209	-	-
	Hubert 1998[5,k]	1992	1962-1966	17.3	123	17.8	109	-	-
	Hubert 1998[5,k]	1992	1922-1931	18.8	148	20.7	187	-	-
	Hubert 1998[5,k]	1992	1967-1971	18.0	113	18.0	121	-	-
France	Hubert 1998[5,p,k]	1992	1942-1951	18.1	432	19.3	341	-	-
	Hubert 1998[5,k,p]	1992	1952-1961	17.6	679	18.3	560	-	-
	Hubert 1998[5,p,k]	1992	1972-1973	17.0	150	18.1	159	-	-
	Hubert 1998[5,p,k]	1992	1967-1971	17.7	539	18.3	471	-	-
	France KABP 2005[17]	2001	1947-1983	16.8	1149	17.3	1452	-	-
	Hubert 1998[5,p,k]	1992	1962-1966	17.4	502	18.2	386	-	-
	Bajos 2010[18]	1970	1939	18.1	-	22.0	-	-	-
	France KABP 2010[19,q]	2010	1956-1992	16.5	-	17.2	-	-	-
	Hubert 1998[5,k,p]	1992	1922-1931	18.0	140	21.1	100	-	-
	France KABP 2005[17]	1994	1940-1976	16.6	516	17.6	653	-	-
	Bajos 2010[18]	2006	1937-1988	17.2	-	17.6	-	-	-
	Crochard 2009[12]	2006-2007	1982-1988	16.0	446	17.0	482	-	-
	France KABP 2005[17]	2004	1950-1986	16.6	1281	17.2	1609	-	-
	France KABP 2005[17]	1998	1944-1980	16.7	838	17.4	874	-	-
	Hubert 1998[5,p,k]	1992	1932-1941	18.4	200	20.6	161	-	-
Germany	Hubert 1998[5,k,r]	1990	1952-1961	18.0	362	17.5	454	-	-

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Table 46 – continued from previous page

Country	Study	Year/period	Birth cohort	Male		Female		Total	
				N	Median age at first sex	N	Median age at first sex	N	Median age at first sex
	Hubert 1998[5,k,r]	1990	1922-1931	20.2	125	20.9	161	-	-
	Hubert 1998[5,k,r]	1990	1962-1966	17.7	263	17.6	241	-	-
	Hubert 1998[5,k,r]	1990	1932-1941	19.0	203	19.7	237	-	-
	Hubert 1998[5,r,k]	1990	1967-1971	17.7	182	17.7	198	-	-
	Hubert 1998[5,r,k]	1990	1942-1951	18.4	263	18.6	325	-	-
	Griesinger 2007[20,e,s]	2004	1984-1990	-	-	15.2	521	-	-
Greece	Hubert 1998[5,k]	1990	1967-1971	17.5	152	19.0	155	-	-
	Tsitsika 2010[21,t,e]	2007-2008	1991-1997	13.0	185	14.5	61	14.0	246
	Hubert 1998[5,k]	1990	1942-1951	17.3	213	20.6	258	-	-
	Hubert 1998[5,k]	1990	1962-1966	17.6	136	19.2	163	-	-
	Hubert 1998[5,k]	1990	1932-1941	17.3	54	22.8	57	-	-
	Hubert 1998[5,k]	1990	1952-1961	17.5	259	19.5	322	-	-
Iceland	Hubert 1998[5,k]	1992	1932-1941	17.8	33	18.7	39	-	-
	Hubert 1998[5,k]	1992	1952-1961	16.9	143	17.2	143	-	-
	Hubert 1998[5,k]	1992	1942-1951	17.5	85	18.0	100	-	-
	Jensen 2011[14]	2005	1959-1963	-	-	16.0	-	-	-
	Hubert 1998[5,k]	1992	1967-1971	16.8	56	16.9	76	-	-
	Hubert 1998[5,k]	1992	1962-1966	16.8	67	17.1	87	-	-
	Hubert 1998[5,k]	1992	1972-1973	16.4	49	16.3	63	-	-
	Jensen 2011[14]	2005	1964-1968	-	-	16.0	-	-	-
	Jensen 2011[14]	2005	1969-1973	-	-	16.0	-	-	-
	Bender 1999[22,o,e]	1996	1976-1979	15.4	273	15.4	1423	15.4	1696
	Jensen 2011[14]	2005	1979-1982	-	-	16.0	-	-	-
	Jensen 2011[14]	2005	1974-1978	-	-	16.0	-	-	-
	Jensen 2011[14]	2005	1983-1986	-	-	16.0	-	-	-
Ireland	O'Connell 2009[23,u]	2004-2005	1970-1988	-	-	17.0	215	-	-
	ISSHR 2006[24,b]	2006	1952-1956	19.0	265	21.0	366	-	-
	ISSHR 2006[24,b]	2006	1942-1946	22.0	205	23.0	242	-	-
	ISSHR 2006[24,b]	2006	1962-1966	19.0	347	20.0	441	-	-
	ISSHR 2006[24,b]	2006	1977-1981	17.0	454	18.0	587	-	-
	ISSHR 2006[24,b]	2006	1982-1988	17.0	759	17.0	908	-	-
	ISSHR 2006[24,b]	2006	1972-1976	18.0	247	18.0	357	-	-
	Crochard 2009[12]	2006-2007	1982-1988	16.0	398	17.0	403	-	-

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Table 46 – continued from previous page

Country	Study	Year/period	Birth cohort	Male		Female		Total	
				N	Median age at first sex	N	Median age at first sex	N	Median age at first sex
	ISSHR 2006[24,b]	2006	1947-1951	20.0	302	22.0	368	-	-
	ISSHR 2006[24,b]	2006	1957-1961	19.0	309	20.0	389	-	-
	ISSHR 2006[24,b]	2006	1967-1971	18.0	300	19.0	573	-	-
Italy	Panatto 2009[25,v]	2006-2007	1982-1999	15.0	377	15.0	914	15.0	1291
	Signorelli 2006[26]	2002	1953-1957	-	-	-	-	18.0	266
	Signorelli 2006[26]	2002	1978-1984	-	-	-	-	17.0	306
	Tafuri 2010[27,e,w]	2008	1978-1992	16.7	-	16.8	-	16.8	960
	Signorelli 2006[26]	2002	1968-1972	-	-	-	-	18.0	261
	Panatto 2009[25,x]	2006-2007	1982-1987	16.0	282	16.0	493	16.0	775
	Crochard 2009[12,x]	2006-2007	1982-1988	16.0	453	16.0	371	-	-
	Signorelli 2006[26]	2002	1963-1967	-	-	-	-	18.0	226
	Signorelli 2006[26]	2002	1973-1977	-	-	-	-	18.0	297
	Pannato 2012[28,y]	2008-2011	1984-1994	16.0	1166	16.0	2739	16.0	3905
	Signorelli 2006[26]	2002	1958-1962	-	-	-	-	18.0	340
Latvia	Syrjanen 2003[4,i,h,e]	1998-2001	1913-1983	-	-	19.6	1692	-	-
	Syrjanen 2003[4,g,h,e]	1998-2001	1913-1983	-	-	18.4	722	-	-
	Syrjanen 2003[4,e,j,h]	1998-2001	1913-1983	-	-	19.0	761	-	-
Malta	Malta HIS 2002[29]	2002	<=1986	-	-	-	-	20.0	4854
Montenegro	Labovic 2011[30,e]	2009	1985-1994	16.6	411	18.4	194	17.2	605
	Delva 2007[7,e,m]	2004	1989-1993	15.5	418	16.3	232	-	-
Netherlands	Lenselink 2008[31,z,e]	2007	1978-1989	-	-	16.7	1944	-	-
	deGraaf 2010[32,e]	2005	1985-1988	-	-	-	-	16.5	1124
	Crochard 2009[12]	2006-2007	1982-1988	16.0	526	16.0	481	-	-
	Hubert 1998[5,k]	1989	1967-1971	18.3	52	18.3	74	-	-
	deGraaf 2010[32,e]	2005	1989-1993	-	-	-	-	14.4	295
	deGraaf 2010[32,e]	2005	1980-1993	16.8	1273	16.7	1360	-	-
	Hubert 1998[5,k]	1989	1932-1941	21.2	28	21.6	39	-	-
	Hubert 1998[5,k]	1989	1962-1966	17.8	73	17.8	93	-	-
	Hubert 1998[5,k]	1989	1952-1961	18.2	154	18.4	195	-	-
	Hubert 1998[5,k]	1989	1942-1951	19.1	94	19.7	162	-	-
	deGraaf 2010[32,e]	2005	1981-1984	-	-	-	-	17.5	1214
North Macedonia	Delva 2007[7,m,e]	2004	1989-1993	15.5	418	16.3	232	-	-
Norway	Trfen 2003	2002	1980-1984	17.5	-	17.1	-	-	-
	Hubert 1998[5,k]	1992	1932-1941	19.3	256	19.5	271	-	-

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Table 46 – continued from previous page

Country	Study	Year/period	Birth cohort	Male		Female		Total	
				N	Median age at first sex	N	Median age at first sex	N	Median age at first sex
	Jensen 2011[14,b]	2005	1974-1978	-	-	17.0	-	-	-
	Jensen 2011[14,b]	2005	1979-1982	-	-	17.0	-	-	-
	Trfen 2003	1987	1965-1969	18.2	-	17.2	-	-	-
	Jensen 2011[14,b]	2005	1964-1968	-	-	17.0	-	-	-
	Jensen 2011[14,b]	2005	1983-1986	-	-	16.0	-	-	-
	Hubert 1998[5,k]	1992	1942-1951	18.8	442	18.8	536	-	-
	Trfen 2003	1997	1975-1979	18.2	-	17.4	-	-	-
	Hubert 1998[5,k]	1992	1967-1971	18.3	311	17.6	396	-	-
	Jensen 2011[14,b]	2005	1969-1973	-	-	17.0	-	-	-
	Hubert 1998[5,k]	1992	1962-1966	18.4	308	17.5	392	-	-
	Pedersen 2003[33,A,e]	1992	1976-1980	17.9	646	17.3	753	-	-
	Hubert 1998[5,k]	1992	1972-1973	18.1	125	17.5	143	-	-
	Bakken 2007[34,e,B]	2005	1975-1987	17.5	1032	-	-	-	-
	Jensen 2011[14,b]	2005	1959-1963	-	-	17.0	-	-	-
	Hubert 1998[5,k]	1992	1952-1961	18.3	548	17.7	714	-	-
Poland	Olszewski 2010[35,e,C]	2008	1981-1990	-	-	18.7	993	-	-
	Crochard 2009[12]	2006-2007	1982-1988	17.0	489	18.0	409	-	-
Portugal	Fronteira 2009[6,e,l,b]	2005-2006	1986-1989	-	-	-	-	15.6	361
	Hubert 1998[5,k]	1991	1932-1941	16.4	29	24.3	39	-	-
	Hubert 1998[5,k]	1991	1967-1971	17.1	256	19.9	234	-	-
	Aboim 2012[36,e]	2007	1942-1989	17.2	-	19.5	-	-	3055
	Ferreira 2011[37,e,v]	2005	1986-1990	-	-	-	-	15.5	240
	Hubert 1998[5,k]	1991	1962-1966	16.8	142	19.8	147	-	-
	Hubert 1998[5,k]	1991	1952-1961	16.5	379	20.3	394	-	-
	Hubert 1998[5,k]	1991	1942-1951	16.8	383	21.9	334	-	-
	Hubert 1998[5,k]	1991	1972-1973	16.2	66	> 19.0	68	-	-
Romania	Romania RHS 1999[38]	1999	1955-1984	-	-	19.8	5627	-	-
	Romania RHS 1999[38]	1999	1960-1964	-	-	19.9	946	-	-
	Romania RHS 1999[38]	1999	1955-1959	-	-	20.1	1086	-	-
	Romania RHS 1999[38,a]	1999	1980-1984	-	-	-	237	-	-
	Romania RHS 1993[39,b]	1993	1954-1958	-	-	20.1	877	-	-
	Romania RHS 1999[38]	1999	1970-1974	-	-	19.9	1242	-	-
	Romania RHS 1993[39,b]	1993	1949-1978	-	-	20.2	4832	-	-

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Table 46 – continued from previous page

Country	Study	Year/period	Birth cohort	Male		Female		Total	
				N	Median age at first sex	N	Median age at first sex	N	Median age at first sex
	Romania RHS 1993[39,b]	1993	1959-1963	-	-	19.9	792	-	-
	Romania RHS 1993[39,b]	1993	1969-1973	-	-	20.5	888	-	-
	Romania RHS 1993[39,b]	1993	1949-1953	-	-	20.2	697	-	-
	Romania RHS 1999[38]	1999	1965-1969	-	-	19.9	1343	-	-
	Romania RHS 1999[38]	1999	1975-1979	-	-	19.5	963	-	-
	Romania RHS 1993[39,b]	1993	1964-1968	-	-	20.1	828	-	-
Russian Federation	Syrjanen 2003[4,j,h,e]	1998-2001	1913-1983	-	-	19.0	761	-	-
	Bobrova 2005[40,e]	2002	1973-1987	-	-	-	-	17.7	929
	Syrjanen 2003[4,e,i,h]	1998-2001	1913-1983	-	-	19.6	1692	-	-
	Syrjanen 2003[4,g,e,h]	1998-2001	1913-1983	-	-	18.4	722	-	-
	Crochard 2009[12]	2006-2007	1982-1988	16.0	637	17.0	574	-	-
Serbia	Delva 2007[7,m,e]	2004	1989-1993	15.5	418	16.3	232	-	-
Slovenia	Klavs 2006[41,b]	1999-2001	1957-1988	17.0	849	18.0	903	-	-
Spain	Castellsague 2012[42,e,D]	2007-2008	1942-1952	-	-	22.7	479	-	-
	de Sanjose 2008[43,e]	2005	1935-1987	-	-	20.9	6249	-	-
	Spain ESHS 2003[44]	2003	1954-1963	18.0	-	19.0	-	19.0	-
	Spain ESHS 2003[44]	2003	1964-1973	18.0	-	18.0	-	18.0	-
	Castellsague 2012[42,e,D]	2007-2008	1982-1990	-	-	16.7	1617	-	-
	Vaccarella 2006[45,e,E]	1998-2000	1925-1984	-	-	21.0	908	-	-
	Spain ESHS 2003[44]	2003	1974-1985	17.0	-	18.0	-	18.0	-
	Gomez 2007[46,e,E]	2001-2003	1981-1990	-	-	16.5	384	-	-
Sweden	Jensen 2011[14]	2005	1983-1986	-	-	16.0	-	-	-
	Jensen 2011[14]	2005	1974-1978	-	-	17.0	-	-	-
	Hdggstrvm-Nordin 2010[l]	2009	1989-1994	-	-	-	-	15.0	209
	Stenhammar 2015[47,F,e]	2014	1979-1997	-	-	16.7	359	-	-
	Jensen 2011[14]	2005	1969-1973	-	-	17.0	-	-	-
	Jensen 2011[14]	2005	1964-1968	-	-	17.0	-	-	-
	Jensen 2011[14]	2005	1979-1982	-	-	16.0	-	-	-
	Priebe 2009[48,e,l]	2003-2004	1983-1987	15.7	1558	15.9	819	-	-
	Jensen 2011[14]	2005	1959-1963	-	-	16.0	-	-	-
Switzerland	Hubert 1998[5,k]	1992	1952-1961	18.5	495	18.7	478	-	-

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Table 46 – continued from previous page

Country	Study	Year/period	Birth cohort	Male		Female		Total	
				N	Median age at first sex	N	Median age at first sex	N	Median age at first sex
	Hubert 1998[5,k]	1992	1942-1951	19.2	239	19.5	229	-	-
	Hubert 1998[5,k]	1992	1962-1966	18.7	237	18.5	224	-	-
	Hubert 1998[5,k]	1992	1967-1971	18.1	227	18.4	233	-	-
	Hubert 1998[5,k]	1992	1972-1973	18.2	128	18.4	123	-	-
Ukraine	Ukraine DHS 2007[49,c]	2007	1958-1982	18.5	-	19.7	-	-	-
	Ukraine DHS 2007[49,d]	2007	1958-1982	19.1	-	19.5	-	-	-
	Ukraine DHS 2007[49,b]	2007	1958-1962	18.8	509	20.3	1080	-	-
	Ukraine DHS 2007[49]	2007	1983-1992	19.3	568	22.4	930	-	-
	Ukraine DHS 2007[49,b]	2007	1973-1977	18.6	474	19.1	967	-	-
	Ukraine DHS 2007[49,b]	2007	1963-1967	18.9	398	19.8	929	-	-
	Ukraine DHS 2007[49]	2007	1958-1982	18.7	2259	19.6	4972	-	-
	Ukraine DHS 2007[49,d]	2007	1958-1987	19.0	-	19.5	-	-	-
	Ukraine DHS 2007[49,b]	2007	1978-1982	18.4	430	19.3	954	-	-
	Ukraine DHS 2007[49,b]	2007	1968-1972	18.6	446	19.4	1043	-	-
	Ukraine DHS 2007[49,b]	2007	1983-1987	18.3	421	19.4	790	-	-
	Ukraine DHS 2007[49,b]	2007	1958-1987	18.6	2679	19.6	5762	-	-
	Ukraine DHS 2007[49,c]	2007	1958-1987	18.5	-	19.6	-	-	-
	Ukraine DHS 2007[49,a]	2007	1988-1992	-	147	-	140	-	-
United Kingdom	Wellings 2001[50,b]	2001	1957-1961	17.0	578	17.0	613	-	-
	Hubert 1998[5,k]	1991	1952-1961	17.5	2268	18.2	3031	-	-
	Wellings 2013[51,b]	2010-2012	1946-1955	18.0	758	18.0	1015	-	-
	Hubert 1998[5,k]	1991	1967-1971	17.1	864	17.4	1125	-	-
	Wellings 2013[51,b]	2010-2012	1966-1975	17.0	792	17.0	1196	-	-
	Wellings 2001[50,b]	2001	1957-1985	17.0	4743	17.0	6364	-	-
	Wellings 2013[51,b]	2010-2012	1936-1994	17.0	6207	17.0	8746	-	-
	Hubert 1998[5,k]	1991	1932-1941	19.1	1318	20.9	1980	-	-
	Wellings 2013[51,b]	2010-2012	1956-1965	17.0	780	17.0	1106	-	-
	Wellings 2013[51,b]	2010-2012	1986-1994	16.0	1712	16.0	2110	-	-

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Table 46 – continued from previous page

Country	Study	Year/period	Birth cohort	Male		Female		Total	
				N	Median age at first sex	N	Median age at first sex	N	Median age at first sex
	Wellings 2001[50,b]	2001	1982-1985	16.0	827	16.0	1131	-	-
	Hubert 1998[5,k]	1991	1972-1973	17.0	288	17.3	350	-	-
	Wellings 2013[51,b]	2010-2012	1936-1945	18.0	657	19.0	850	-	-
	Wellings 2001[50,b]	2001	1967-1971	17.0	808	17.0	1160	-	-
	Wellings 2001[50,b]	2001	1977-1981	17.0	903	16.0	1279	-	-
	Wellings 2013[51,b]	2010-2012	1976-1985	17.0	1508	16.0	2469	-	-
	Wellings 2001[50,b]	2001	1972-1976	17.0	981	17.0	1357	-	-
	Hubert 1998[5,k]	1991	1942-1951	18.3	1924	19.5	2306	-	-
	Wellings 2001[50,b]	2001	1962-1966	17.0	646	17.0	824	-	-
	Hubert 1998[5,k]	1991	1962-1966	17.2	1202	17.9	1629	-	-

Data accessed on 16 Mar 2017

Please refer to original source for methods of estimation

[a] Data omitted because less than 50 percent of respondents had intercourse for the first time before reaching the beginning of the age group.
[b] Number of subjects refers to the number of surveyed men/women (not all sexually active).
[c] Urban.
[d] Rural.
[e] Mean age at first sex.
[f] Data pertain to women randomly selected from a panel of more than three million women who had stated in a previous internet interview.
[g] Data pertain to women attending a sexually transmitted disease clinic.
[h] Data pertain to women attending six clinics in Belarus, Latvia and Russian Federation.
[i] Data pertain to women participating in cervical cancer screening.
[j] Data pertain to gynecological patients.
[k] Not especified if estimations are among sexually active or surveyed.
[l] Data pertain to high school students.
[m] Data pertain to high school students in Bosnia (Sarajevo), the FYR of Macedonia (Skopje), and Serbia and Montenegro (Belgrade and Podgorica).
[n] Sarajevo, Tuzla, Mostar, Banja Luka.
[o] Not especified if estimations are among sexually active or surveyed (provided N among surveyed).
[p] Data from the Analysis on Sexual Behaviour in France (ACSF).
[q] Ile-de-France.
[r] Data from the Survey performed in the Federal Republic of Germany (before reunification).
[s] Data pertain to women attending a sample of gyneacologists in Berlin.
[t] Data pertain to students attending 20 public junior high and high schools.
[u] Data pertain to students attending student health units in three high education institutions (two universities and one institute of education).
[v] Data pertain to secondary schools students.
[w] Data pertain to school-leavers attending a pre-university study course.
[x] Data pertain to workers.
[y] Data pertain to secondary school students from Genova, Florence, Turin, Sassari and Cagliari.
[z] Data pertain to unscreened women.
[A] Data pertain to schools students.
[B] Data pertain to men recruited at student health services.
[C] Data pertain to high school and secondary schools students.
[D] Data pertain to women attending routine cervical cancer screening.
[E] Data pertain to population attending family planning centers or screening centers.
[F] Swedish female university students from Uppsala undergoing contraceptive counseling at the students health center.

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Table 47: Average number of sexual partners in Europe

Country	Study	Period of estimate	Year/period	Birth cohort	Male Mean(N)	Female Mean(N)	Total Mean (N)
Albania	Albania DHS 2008-9[1]	Lifetime	2008-2009	(1959-1969)	2.1	1.0	-
	Albania DHS 2008-9[1]	Lifetime	2008-2009	(1969-1979)	3.1	1.1	-
	Albania DHS 2008-9[1]	Lifetime	2008-2009	(1979-1984)	3.3	1.1	-
	Albania DHS 2008-9[1]	Lifetime	2008-2009	(1984-1989)	3.5	1.1	-
	Albania DHS 2008-9[1]	Lifetime	2008-2009	(1984-1994)	3.0	1.1	-
	Albania DHS 2008-9[1]	Lifetime	2008-2009	(1989-1994)	1.9	1.0	-
Belarus	Syrjanen 2003[2,a,b]	Last 2 years	1998	-	-	2.2	-
	Syrjanen 2003[2,c,b]	Last 2 years	1998	-	-	1.7	-
	Syrjanen 2003[2,d,b]	Last 2 years	1998	-	-	1.6	-
Belgium	Hubert 1998[3,e,f,g,h]	Last year	1993	(1944-1975)	1.4	1.0	-
Czechia	Crochard 2009[4,i,j]	Lifetime	2006-2007	(1982-1989)	4.0	3.0	-
Denmark	Buttmann 2011[5,k]	Lifetime	2006-2007	(1961-1989)	8.0	-	-
	Kjaer 2007[6,k]	Lifetime	2004-2005	(1959-1987)	-	8.4	-

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Table 47 – continued from previous page

Country	Study	Period of estimate	Year/period	Birth cohort	Male Mean(N)	Female Mean(N)	Total Mean (N)
Estonia	Lõhmus 2003[7]	Last year	2002-2003	(1973-1978)	2.1	1.4	1.7
	Lõhmus 2003[7]	Last year	2002-2003	(1978-1984)	3.0	1.9	2.3
	Lõhmus 2003[7]	Last year	2002-2003	(1984-1987)	3.8	1.9	2.7
	Lõhmus 2003[7]	Last year	2002-2003	(1987-1989)	2.7	1.9	2.3
	Part 2007[8]	Lifetime	2004-2005	(1960-1970)	-	5.9	-
	Part 2007[8]	Last year	2004-2005	(1960-1970)	-	1.1	-
	Part 2007[8]	Lifetime	2004-2005	(1970-1980)	-	7.5	-
	Part 2007[8]	Last year	2004-2005	(1970-1980)	-	1.5	-
	Part 2007[8]	Lifetime	2004-2005	(1980-1987)	-	4.5	-
	Part 2007[8]	Last year	2004-2005	(1980-1987)	-	1.5	-
	Part 2007[8]	Lifetime	2004-2005	(1987-1989)	-	2.7	-
	Part 2007[8]	Last year	2004-2005	(1987-1989)	-	1.7	-
France	Bajos 2010[9,k]	Lifetime	1970	<=1950	11.8	1.8	-
	Bajos 2010[9,k]	Lifetime	1970	<=1920	12.2	1.6	-
	Bajos 2010[9,k]	Lifetime	1970	(1921-1940)	12.8	1.9	-
	Bajos 2010[9,k]	Lifetime	1970	(1941-1950)	9.4	2.0	-
	Bajos 2010[9,k]	Lifetime	1992	(1923-1942)	10.3	2.0	-
	Bajos 2010[9,k]	Lifetime	1992	(1923-1974)	11.0	3.3	-
	Bajos 2010[9,k]	Lifetime	1992	(1943-1962)	12.6	4.0	-
	Bajos 2010[9,k]	Lifetime	1992	(1963-1972)	10.4	3.9	-
	Bajos 2010[9,k]	Lifetime	2006	(1937-1956)	12.9	3.9	-
	Bajos 2010[9,k]	Lifetime	2006	(1937-1988)	11.6	4.4	-
	Bajos 2010[9,k]	Lifetime	2006	(1957-1976)	12.9	5.1	-
	Bajos 2010[9,k]	Lifetime	2006	(1977-1986)	7.7	3.8	-
	Hubert 1998[3,k,e,f,g,h]	Lifetime	1991-1992	(1942-1974)	11.5	3.8	-
	Hubert 1998[3,e,f,g,h]	Last year	1991-1992	(1942-1974)	1.4	1.1	-
	Crochard 2009[4,i,j]	Lifetime	2006-2007	(1982-1989)	4.0	3.0	-
Germany	Griesinger 2007[10,l]	Lifetime	2004	(1984-1990)	-	3.5	-
	Hubert 1998[3,e,f,g,h]	Last year	1990	(1941-1972)	1.4	1.1	-
Greece	Hubert 1998[3,e,f,g,h]	Last year	1990	(1941-1972)	1.2	1.0	-
	Kordoutis 2000[11,i]	Lifetime	-	-	4.0	2.0	-
Hungary	Takacs 2006[12,m]	Lifetime	2003-2004	(1976-1988)	19.1	10.8	16.5
	Takacs 2006[12,m]	Last year	2003-2004	(1976-1988)	4.6	4.2	4.5
Iceland	Kjaer 2007[6,k]	Lifetime	2004-2005	(1959-1987)	-	8.8	-
Ireland	Crochard 2009[4,i,j]	Lifetime	2006-2007	(1982-1989)	6.0	4.0	-
	ISSHR 2006[13,n]	Lifetime	2004-2005	(1940-1987)	9.1	3.1	-
	ISSHR 2006[13,n]	Last 5 years	2004-2005	(1940-1987)	9.1	3.1	-
	ISSHR 2006[13,n]	Last year	2004-2005	(1940-1987)	9.1	3.1	-
	O'Connell 2009[14,o]	Lifetime	2004-2005	(1970-1988)	-	4.7	-
Italy	Crochard 2009[4,i,j]	Lifetime	2006-2007	(1982-1989)	5.0	3.0	-
	Panatto 2012[15,p,q]	Lifetime	2008-2011	(1984-1991)	3.0	2.0	-
	Panatto 2012[15,p,q]	Lifetime	2008-2011	(1989-1994)	3.0	2.0	-
	Panatto 2012[15,p,q]	Lifetime	2008-2011	(1992-1997)	2.0	1.0	-
Latvia	Syrjanen 2003[2,a,b]	Last 2 years	1998	-	-	2.2	-
	Syrjanen 2003[2,c,b]	Last 2 years	1998	-	-	1.7	-
	Syrjanen 2003[2,d,b]	Last 2 years	1998	-	-	1.6	-
Montenegro	Labovic 2011[16]	Last year	2009	(1985-1994)	2.6	1.3	-
Netherlands	Crochard 2009[4,i,j]	Lifetime	2006-2007	(1982-1989)	4.0	3.0	-
	deGraaf 2010[17]	Lifetime	2005	(1980-1993)	4.9	3.3	-
	deGraaf 2010[17]	Lifetime	2005	(1981-1984)	-	-	4.7
	deGraaf 2010[17]	Lifetime	2005	(1985-1988)	-	-	3.4
	deGraaf 2010[17]	Lifetime	2005	(1989-1993)	-	-	3.8
	Hubert 1998[3,e,f,g,h]	Last year	1989	(1940-1971)	1.2	1.1	-
	Kuyper 2010[18,f]	Lifetime	2005-2006	(1935-1987)	-	4.1	-
Norway	Bakken 2007[19,i]	Last year	2005	(1975-1987)	2.0	-	-
	Bakken 2007[19,i]	Last 6 months	2005	(1975-1987)	1.0	-	-
	Hubert 1998[3,k,e,f,g,h]	Lifetime	1992	(1943-1974)	11.7	5.5	-

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Table 47 – continued from previous page

Country	Study	Period of estimate	Year/period	Birth cohort	Male Mean(N)	Female Mean(N)	Total Mean (N)
	Hubert 1998[3,e,f,g,h]	Last year	1992	(1943-1974)	1.5	1.2	-
	Kjaer 2007[6,k]	Lifetime	2004-2005	(1959-1987)	-	7.4	-
	Træen 2003[20,r]	Lifetime	1997	(1975-1979)	7.0	6.0	-
	Træen 2003[20,s]	Lifetime	1997	(1975-1979)	6.0	6.0	-
	Træen 2003[20,r]	Lifetime	2002	(1980-1984)	7.0	6.0	-
	Træen 2003[20,s]	Lifetime	2002	(1980-1984)	6.0	7.0	-
Poland	Crochard 2009[4,i,j]	Lifetime	2006-2007	(1982-1989)	3.0	2.0	-
Portugal	Hubert 1998[3,e,f,g,h]	Last year	1990-1991	(1941-1973)	1.8	1.0	-
Republic of Moldova	Moldova DHS 2005[21]	Lifetime	2005	(1956-1965)	6.3	1.5	-
	Moldova DHS 2005[21]	Lifetime	2005	(1966-1975)	7.1	1.7	-
	Moldova DHS 2005[21]	Lifetime	2005	(1976-1980)	8.0	1.8	-
	Moldova DHS 2005[21]	Lifetime	2005	(1981-1985)	6.6	1.8	-
	Moldova DHS 2005[21]	Lifetime	2005	(1981-1990)	5.7	1.7	-
	Moldova DHS 2005[21]	Lifetime	2005	(1986-1990)	4.4	1.6	-
Russian Federation	Crochard 2009[4,i,j]	Lifetime	2006-2007	(1982-1989)	5.0	3.0	-
	Syrjanen 2003[2,a,b]	Last 2 years	1998	-	-	2.2	-
	Syrjanen 2003[2,c,b]	Last 2 years	1998	-	-	1.7	-
	Syrjanen 2003[2,d,b]	Last 2 years	1998	-	-	1.6	-
	Takacs 2006[12,m]	Lifetime	2003-2004	(1976-1988)	14.1	4.1	8.8
	Takacs 2006[12,m]	Last year	2003-2004	(1976-1988)	3.6	1.8	2.7
Slovenia	Klavs 2009[22,k]	Lifetime	1999-2001	(1950-1966)	9.5	3.1	-
	Klavs 2009[22,k]	Last 5 years	1999-2001	(1950-1966)	2.1	1.1	-
	Klavs 2009[22,k]	Last year	1999-2001	(1950-1966)	1.2	1.0	-
	Klavs 2009[22,k]	Lifetime	1999-2001	(1950-1983)	8.3	3.2	-
	Klavs 2009[22,k]	Last 5 years	1999-2001	(1950-1983)	3.2	1.5	-
	Klavs 2009[22,k]	Last year	1999-2001	(1950-1983)	1.4	1.0	-
	Klavs 2009[22,k]	Lifetime	1999-2001	(1965-1976)	7.9	3.4	-
	Klavs 2009[22,k]	Last 5 years	1999-2001	(1965-1976)	3.1	1.4	-
	Klavs 2009[22,k]	Last year	1999-2001	(1965-1976)	1.3	1.0	-
	Klavs 2009[22,k]	Lifetime	1999-2001	(1975-1983)	6.5	2.9	-
	Klavs 2009[22,k]	Last 5 years	1999-2001	(1975-1983)	5.5	2.5	-
	Klavs 2009[22,k]	Last year	1999-2001	(1975-1983)	1.8	1.1	-
Spain	Castellsague 2012[23,t]	Lifetime	2007-2008	(1942-1952)	-	1.4	-
	Castellsague 2012[23,t]	Lifetime	2007-2008	(1982-1990)	-	2.8	-
	Gomez 2007[24,u]	Lifetime	2001-2003	(1981-1990)	-	1.9	-
	HSBS 2003[25]	Last year	2003	(1954-1963)	2.2	1.0	1.6
	HSBS 2003[25]	Last year	2003	(1954-1985)	2.6	1.2	1.9
	HSBS 2003[25]	Last year	2003	(1964-1973)	2.8	1.1	2.0
	HSBS 2003[25]	Last year	2003	(1974-1985)	2.8	1.4	2.1
	Vaccarella 2006[26,u]	Lifetime	1998-2000	(1923-1986)	-	1.5	-
Sweden	Häggström-Nordin 2010[27,v,i]	Lifetime	2009	(1989-1994)	3.0	2.0	2.0
	Kjaer 2007[6,k]	Lifetime	2004-2005	(1959-1987)	-	8.6	-
	Langstrom 2006[28,k]	Lifetime	1996	(1936-1978)	1.4	1.2	-
	Tyden 2012[29,k,w]	Lifetime	2009	-	-	11.0	-
	Tyden 2012[29,k,w]	Last year	2009	-	-	2.6	-
Switzerland	Jeannin 2009[30,x,i,k]	Lifetime	2007	(1962-1976)	6.0	4.0	-
	Jeannin 2009[30,i,k,x]	Last year	2007	(1962-1976)	1.0	1.0	-
	Jeannin 2009[30,i,k,x]	Lifetime	2007	(1977-1986)	5.0	3.0	-
	Jeannin 2009[30,i,x,k]	Last year	2007	(1977-1986)	1.0	1.0	-
	Jeannin 2009[30,i,k,x]	Lifetime	2007	(1987-1990)	2.0	1.0	-
	Jeannin 2009[30,i,k,x]	Last year	2007	(1987-1990)	1.0	1.0	-
	Jeannin 2009[30,y]	Last year	2007	(1933-1946)	1.0	0.6	0.8
	Jeannin 2009[30,y]	Last year	2007	(1947-1961)	1.3	0.9	1.1

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Table 47 – continued from previous page

Country	Study	Period of estimate	Year/period	Birth cohort	Male Mean(N)	Female Mean(N)	Total Mean (N)
	Jeannin 2009[30,y]	Last year	2007	(1962-1976)	1.4	1.1	1.2
	Jeannin 2009[30,y]	Last year	2007	(1977-1990)	2.2	1.3	1.7
Ukraine	Ukraine DHS 2007[31]	Lifetime	2007	(1958-1967)	6.8	2.1	-
	Ukraine DHS 2007[31]	Lifetime	2007	(1968-1977)	6.0	2.2	-
	Ukraine DHS 2007[31]	Lifetime	2007	(1978-1982)	5.6	2.1	-
	Ukraine DHS 2007[31]	Lifetime	2007	(1983-1987)	5.3	2.2	-
	Ukraine DHS 2007[31]	Lifetime	2007	(1983-1992)	4.6	2.1	-
	Ukraine DHS 2007[31]	Lifetime	2007	(1988-1992)	2.9	1.6	-
United Kingdom	Almonte 2011[32,z,k]	Lifetime	2003-2007	(1959-1972)	-	5.6	-
	Almonte 2011[32,z,k]	Lifetime	2003-2007	(1959-1990)	-	7.5	-
	Almonte 2011[32,z,k]	Lifetime	2003-2007	(1969-1982)	-	7.7	-
	Almonte 2011[32,z,k]	Lifetime	2003-2007	(1979-1990)	-	12.0	-
	Hubert 1998[3,k,e,f,g,h]	Lifetime	1990-1991	(1941-1973)	10.4	3.7	-
	Hubert 1998[3,e,f,g,h]	Last year	1990-1991	(1941-1973)	1.3	1.1	-
	Johnson 2001[33,n]	Lifetime	1999-2001	(1955-1966)	16.0	6.8	-
	Johnson 2001[33,n]	Last 5 years	1999-2001	(1955-1966)	2.2	1.5	-
	Johnson 2001[33,n]	Lifetime	1999-2001	(1955-1985)	12.7	6.5	-
	Johnson 2001[33,n]	Last 5 years	1999-2001	(1955-1985)	3.8	2.4	-
	Johnson 2001[33,n]	Lifetime	1999-2001	(1965-1976)	13.6	7.3	-
	Johnson 2001[33,n]	Last 5 years	1999-2001	(1965-1976)	4.2	2.2	-
	Johnson 2001[33,n]	Lifetime	1999-2001	(1975-1985)	6.9	5.0	-
	Johnson 2001[33,n]	Last 5 years	1999-2001	(1975-1985)	5.3	3.8	-
	Mercer 2009[34,n]	Last year	1999-2001	(1955-1985)	1.8	1.3	-

Data accessed on 8 Aug 2013

Please refer to original source for methods of estimation

[a] Data pertain to women attending a sexually transmitted disease clinic.

[b] Data pertain to women attending six clinics in Belarus, Latvia and Russian Federation.

[c] Data pertain to gynecological patients.

[d] Data pertain to women participating in cervical cancer screening.

[e] Data among responders who ever had a heterosexual partner.

[f] Data from "every man/woman who presents herself as heterosexual"; all partners are included.

[g] Data from the Survey performed in the Federal Republic of Germany (before reunification).

[h] Data from the Analysis on Sexual Behaviour in France (ACSF).

[i] Median number of sexual partners.

[j] Weighted data based on national age distributions for Ireland, the Netherlands and Russia.

[k] Number of surveyed people (not all sexually active).

[l] Data pertain to women attending a sample of gyneacologists in Berlin.

[m] Data pertain to heterosexual members from 12 social networks.

[n] Number of heterosexual partners among surveyed (not all sexually active).

[o] Data pertain to students attending student health units in three high education institutions (two universities and one institute of education)

[p] Data pertain to secondary schools students.

[q] Data pertain to students who reported regular sexual activity after their sexual debut.

[r] Data pertain to heterosexuals not living with a partner.

[s] Data pertain to heterosexuals married or living with a partner.

[t] Data pertain to women attending routine cervical cancer screening.

[u] Data pertain to population attending family planning centers or screening centers.

[v] Data pertain to high school students.

[w] Data pertain to university students.

[x] Data from the EPSS (Enquête téléphonique périodique sur la Prévention du VIH/sida en Suisse).

[y] Data from the ESS 2007 (Enquête Suisse sur la Santé). Some of the questions that were only included in the EPSS survey were also integrated into the Swiss Health Survey (ESS) in 2007. This allowes the documentation of these aspects also for people aged 46 to 74 years.

[z] The authors used the following formula to estimate the Number of lifetime partners in year 2000 in women aged 17-45 years= Number of lifetime partners - Number of new partners in the last 5 years.

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Table 48: Lifetime prevalence of anal intercourse among women in Europe

Country	Study	Year/period	Birth cohort	N surveyed	N sexual active	% among sexually active
Belgium	Hubbert 1998[1,a,b,c,d]	1993	(1934-1978)	-	631	20.0
Croatia	Stulhofer 2009[2]	2005	(1981-1987)	574	475	21.5
	Stulhofer 2011[3]	2010	(1985-1992)	495	-	29.8
Czechia	Brody 2011[4,e]	1993	<=1978	-	542	16.6
	Brody 2011[4,e]	1998	<=1983	-	696	18.0
	Brody 2011[4,e]	2003	<=1988	-	799	17.4
	Brody 2011[4,e]	2008	<=1993	-	843	19.7
Estonia	Part 2007[5,f]	2004-2005	(1970-1980)	721	707	32.9
	Part 2007[5,f]	2004-2005	(1980-1987)	1068	908	25.1
	Part 2007[5,f]	2004-2005	(1987-1989)	194	90	7.2
	Part 2007[5,f]	2004-2005	(1960-1970)	689	680	24.7
Finland	Hubbert 1998[1,a,b,c,d]	1991-1992	(1917-1974)	-	570	23.0
France	Bajos 2010[6]	1992	(1923-1974)	11098	-	28.1
	Bajos 2010[6]	1992	(1963-1972)	11098	-	23.8
	Bajos 2010[6]	1992	(1943-1962)	11098	-	30.3
	Bajos 2010[6]	2006	(1937-1988)	6824	-	40.8
	Bajos 2010[6]	2006	(1977-1986)	6824	-	36.8
	Bajos 2010[6]	2006	(1957-1976)	6824	-	42.5
	Bajos 2010[6]	1970	(1921-1940)	1375	-	14.0
	Bajos 2010[6]	1970	(1941-1950)	1375	-	16.0
	Bajos 2010[6]	1970	<=1950	1375	-	15.0
Germany	Hubbert 1998[1,a,b,c,d]	1990	(1921-1972)	-	856	15.5
Greece	Hubbert 1998[1,a,b,c,d]	1990	(1941-1975)	-	721	10.1
Ireland	ISSHR 2006[7,e,g,h]	2004-2005	(1970-1980)	953	-	6.0
	ISSHR 2006[7,e,g,h]	2004-2005	(1960-1970)	829	-	7.0
	ISSHR 2006[7,e,g,h]	2004-2005	(1950-1960)	736	-	13.0

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Table 48 – continued from previous page

Country	Study	Year/period	Birth cohort	N surveyed	N sexual active	% among sexually active
	ISSHR 2006[7,e,g,h]	2004-2005	(1940-1950)	264	-	9.0
	ISSHR 2006[7,e,g,h]	2004-2005	(1980-1987)	1497	-	4.0
	ISSHR 2006[7,e,g,h]	2004-2005	(1940-1987)	4253	-	8.0
Montenegro	Labovic 2011[8,f]	2009	(1985-1994)	544	194	16.4
Netherlands	Bakker 2006[9,i,g,h]	2005-2006	(1936-1987)	2046	1689	22.7
	Hubbert 1998[1,a,b,c,d]	1989	(1939-1971)	-	461	11.6
Slovenia	Klavs 2009[10]	1999-2001	(1975-1983)	312	-	19.6
	Klavs 2009[10]	1999-2001	(1950-1983)	864	-	22.3
	Klavs 2009[10]	1999-2001	(1965-1976)	213	-	30.6
	Klavs 2009[10]	1999-2001	(1950-1966)	339	-	18.3
Spain	Faílde Garrido 2008[11,j,h]	-	-	1086	719	6.0
Sweden	Tyden 2012[12,k,f]	1999	-	333	-	27.0
	Tyden 2012[12,k,f]	2009	-	350	-	39.0
	Tyden 2012[12,k,f]	2004	-	315	-	32.0
	Häggström-Nordin 2010[13,l,f]	2009	(1989-1994)	213	118	15.4
United Kingdom	Stone 2006[14,e,m]	2003-2005	(1984-1990)	765	-	9.3
	Johnson 2001[15,e,g]	1999-2001	(1955-1985)	6399	-	11.3
	Johnson 2001[15,e,g]	1990-1991	(1946-1975)	7765	-	6.5

Data accessed on 8 Aug 2013

Please refer to original source for methods of estimation

[a] Proportion among women who ever practice receptive anal intercourse with current partner.
[b] Data pertain to women in current steady heterosexual relationship.
[c] Data from the Survey performed in the Federal Republic of Germany (before reunification).
[d] Proportion among women who recently practice receptive anal intercourse with current partner.
[e] Instead of number of women sexually active, this time was number of women who answered the question on anal intercourse.
[f] Proportion among surveyed women (not all sexually active).
[g] Data pertain to heterosexual women.
[h] Proportion among women who ever practice receptive anal intercourse in the last 6 months.
[i] Data on anal intercourse was not provided by the authors but calculated from percentage of those that have never practice anal intercourse.
[j] Data pertain to adolescents and young adults.
[k] Data pertain to university students.
[l] Data pertain to high school students.
[m] Data pertain to full and part time students.

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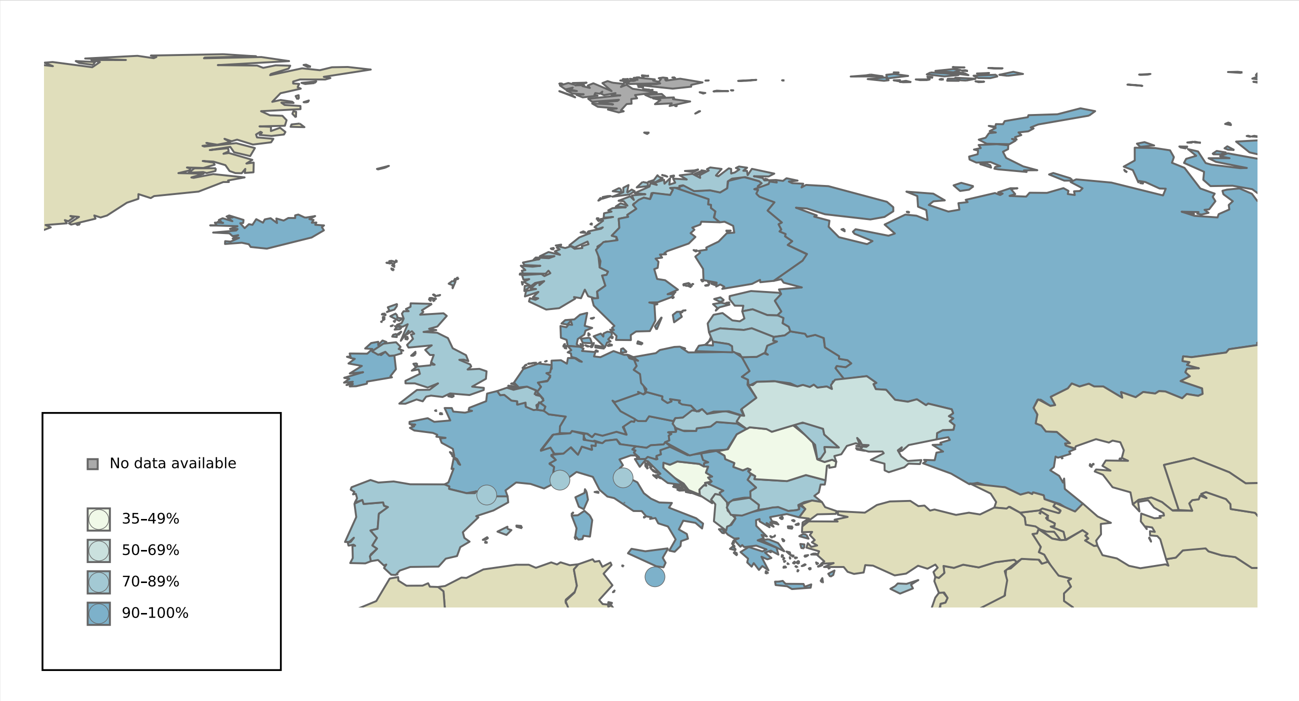
7 HPV preventive strategies

It is established that well-organised cervical screening programmes or widespread good quality cytology can reduce cervical cancer incidence and mortality. The introduction of HPV vaccination could also effectively reduce the burden of cervical cancer in the coming decades. This section presents indicators on basic characteristics and performance of cervical cancer screening, status of HPV vaccine licensure and introduction in Europe.

7.1 Cervical cancer screening practices

Screening strategies differ between countries. Some countries have population-based programmes, where in each round of screening women in the target population are individually identified and invited to attend screening. This type of programme can be implemented nationwide or only in specific regions of the country. In opportunistic screening, invitations depend on the individual's decision or on encounters with health-care providers. The most frequent method for cervical cancer screening is cytology, and there are alternative methods such as HPV DNA tests and visual inspection with acetic acid (VIA). VIA is an alternative to cytology-based screening in low-resource settings (the 'see and treat' approach). HPV DNA testing is being introduced into some countries as an adjunct to cytology screening ('co-testing') or as the primary screening test to be followed by a secondary, more specific test, such as cytology

Figure 65: Ever in lifetime cervical cancer screening coverage in women 25–65 years in 2019 by country in Europe

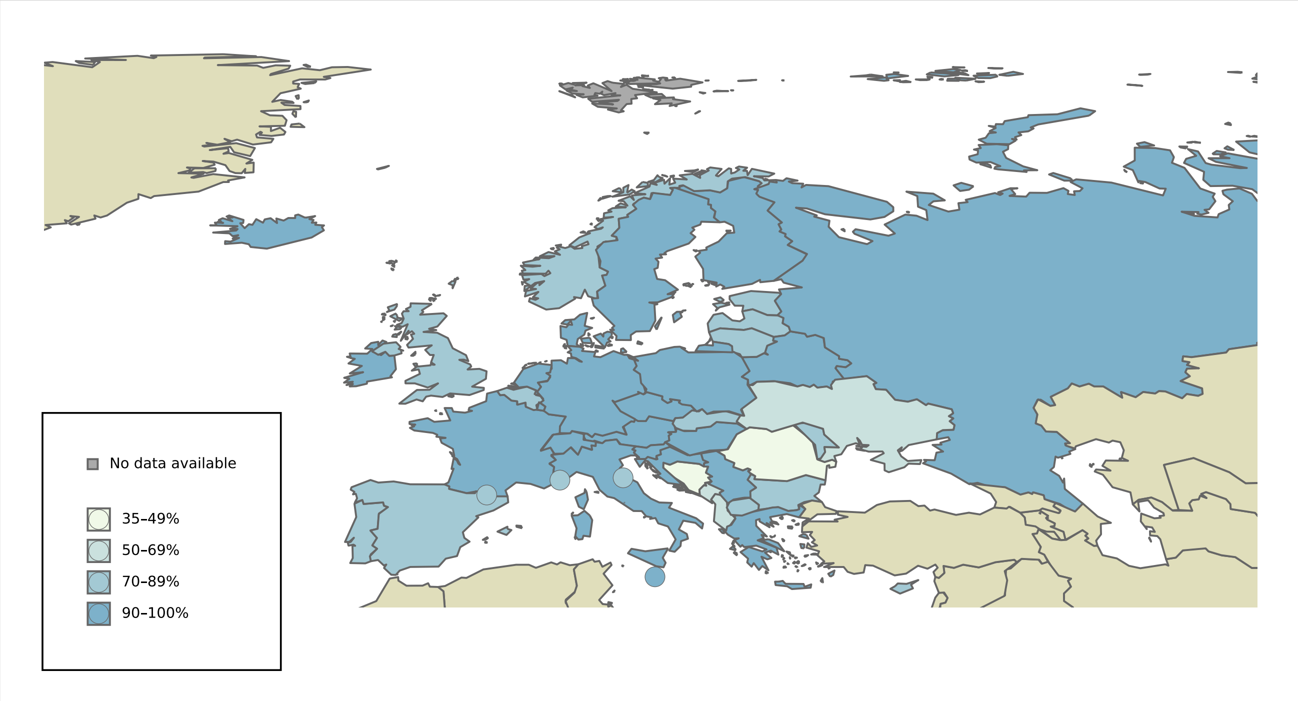


Data accessed on 31 Aug 2022

Data Sources:

Bruni L, Serrano B, Roura E, Alemany L, Cowan M, Herrero R, et al. Cervical cancer screening programmes and age-specific coverage estimates for 202 countries and territories worldwide: a review and synthetic analysis. Lancet Glob Health. 2022;10(8):e1115.

Figure 66: Ever in lifetime cervical cancer screening coverage in women 30-49 years in 2019 by country in Europe



Data accessed on 31 Aug 2022

Data Sources:
Bruni L, Serrano B, Roura E, Alemany L, Cowan M, Herrero R, et al. Cervical cancer screening programmes and age-specific coverage estimates for 202 countries and territories worldwide: a review and synthetic analysis. Lancet Glob Health. 2022;10(8):e1115.

Table 49: Main characteristics of cervical cancer screening in Europe

Country	Region	Existence of official national recommendations	Starting year of current recommendations	Active invitation to screening	Screening ages (years), primary screening test used, and screening interval or frequency of screenings
Albania	Albania	Yes	2019	Yes	40-50 (HPV test, 5 years)
Andorra	Andorra	No	-	-	-
Austria	Austria	Yes	1970	No	>=18 (cytology, 1 year)
Belarus	Belarus	Yes	2019	No	>=18 (cytology, 2 years)
Belgium	Flemish region	Yes	2013	Yes	25-64 (cytology, 3 years)
Belgium	Walloon region, Brussels-capital region	Yes	1992	No	25-64 (cytology, 3 years)
Bosnia and Herzegovina	Bosnia and Herzegovina	Yes	Unk	No	25-60 (cytology, 3 years)
Bulgaria	Bulgaria	Yes	Unk	No	30-40 (cytology, 3 years)
Croatia	Croatia	Yes	2012	Yes	25-64 (cytology, 3 years)
Cyprus	Cyprus	Yes	Unk	No	>=18 (cytology, Unk years)
Czechia	Czech Republic	Yes	2014	Yes	25-60 (cytology, 1 year)
Denmark	Denmark	Yes	2012	Yes	23-49 (cytology, 3 years); 50-59 (cytology, 5 years); 60-64 (HPV test, 5 years)
Estonia	Estonia	Yes	2015	Yes	30-59 (cytology, 5 years)
Finland	Finland	Yes	2017	Yes	30-60 (cytology, 5 years)
France	France	Yes	2020	Yes	25-29 (cytology, 3 years); 30-65 (HPV test, 5 years)
Germany	Germany	Yes	2020	-	20-34 (cytology, 1 year); 35-65 (cytology OR HPV test, 3 years)
Greece	Greece	Yes	2018	No	>=18 (cytology, 1 year); 21-60 (HPV test, 5 years)
Hungary	Hungary	Yes	2003	Yes	25-65 (cytology, 3 years)
Iceland	Iceland	Yes	2015	Yes	23-65 (cytology, 3 years)
Ireland	Ireland	Yes	2020	Yes	25-29 (HPV test, 3 years); 30-65 (HPV test, 5 years)
Italy	Sardegna	Yes	2018	Yes	25-29 (cytology, 3 years); 30-64 (HPV test, 5 years)

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Table 49 – continued from previous page

Country	Region	Existence of official national recommendations	Starting year of current recommendations	Active invitation to screening	Screening ages (years), primary screening test used, and screening interval or frequency of screenings
Italy	Umbria	Yes	2013	Yes	25-34 (cytology, 3 years); 35-64 (HPV test, 5 years)
Italy	Toscana	Yes	2013	Yes	25-34 (cytology, 3 years); 35-64 (HPV test, 5 years)
Italy	Emilia Romagna	Yes	2013	Yes	25-29 (cytology, 3 years); 30-64 (HPV test, 5 years)
Italy	Liguria	Yes	2013	Yes	25-29 (cytology, 3 years); 30-64 (HPV test, 5 years)
Italy	Veneto	Yes	2014	Yes	25-29 (cytology, 3 years); 30-64 (HPV test, 5 years)
Italy	Trento	Yes	2017	Yes	25-30 (cytology, 3 years); 31-64 (HPV test, 5 years)
Italy	Piemonte	Yes	2013	Yes	25-29 (cytology, 3 years); 30-64 (HPV test, 5 years)
Italy	Lazio	Yes	2017	Yes	25-29 (cytology, 3 years); 30-64 (HPV test, 5 years)
Italy	Abbruzzo	Yes	2015	Yes	25-29 (cytology, 3 years); 30-64 (HPV test, 5 years)
Italy	Sicilia	Yes	2017	Yes	25-33 (cytology, 3 years); 34-64 (HPV test, 5 years)
Italy	Calabria	Yes	2016	Yes	25-29 (cytology, 3 years); 30-64 (HPV test, 5 years)
Italy	Basilicata	Yes	2012	Yes	25-34 (cytology, 3 years); 35-64 (HPV test, 5 years)
Italy	Puglia	Yes	2018	Yes	25-29 (cytology, 3 years); 30-64 (HPV test, 5 years)
Italy	Campania, Friuli-Venezia Giulia, Lombardia, Marche, Molise, Val d'Aoste	Yes	1996	Yes	25-64 (cytology, 3 years)
Latvia	Latvia	Yes	2009	Yes	25-69 (cytology, 3 years)
Lithuania	Lithuania	Yes	2008	Yes	25-60 (cytology, 3 years)
Luxembourg	Luxembourg	No	-	-	-
Malta	Malta	Yes	2016	Yes	25-35 (cytology, 3 years)
Monaco	Monaco	Yes	Unk	No	21-65 (cytology, 3 years)
Montenegro	Montenegro	Yes	2018	Yes	30-64 (HPV test, 5 years)
Netherlands	Netherlands	Yes	2017	Yes	30-60 (HPV test, 5 years)
Norway	Norway	Yes	2019	Yes	25-34 (cytology, 3 years); 35-69 (HPV test, 5 years)
Poland	Poland	Yes	2016	No	25-59 (cytology, 3 years)
Portugal	ARS Alentejo	Yes	2020	Yes	25-64 (HPV test, 5 years)
Portugal	ARS Algarve	Yes	2019	Yes	25-64 (HPV test, 5 years)
Portugal	Madeira	Yes	Unk	No	25-60 (cytology, 3 years)
Portugal	Azores	Yes	2010	Yes	25-64 (cytology, 3 years)
Portugal	ARS de Lisboa e Vale do Tejo	Yes	2017	Yes	25-64 (HPV test, 5 years)
Portugal	ARS Centro	Yes	2019	Yes	25-64 (HPV test, 5 years)
Portugal	ARS Norte	Yes	2017	Yes	25-64 (HPV test, 5 years)
Republic of Moldova	Republic of Moldova	Yes	2017	No	25-61 (cytology, 3 years)
Republic of North Macedonia	Macedonia, TFYR	Yes	2006	Yes	24-60 (cytology, 3 years)
Romania	Romania	Yes	2012	No	25-64 (cytology, 5 years)
Russian Federation	Russian Federation	Yes	2019	No	18-64 (cytology, 3 years)
San Marino	San Marino	Yes	2006	Yes	25-30 (cytology, 3 years); 31-65 (HPV test, 5 years)
Serbia	Serbia	Yes	2013	Yes	25-64 (cytology, 3 years)
Slovakia	Slovakia	Yes	2020	No	23-64 (cytology, 3 years)
Slovenia	Slovenia	Yes	2011	Yes	20-64 (cytology, 3 years)
Spain	Castilla y Leon	Yes	2008	Yes	35-64 (cytology OR HPV test, 5 years)

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Table 49 – continued from previous page

Country	Region	Existence of official national recommendations	Starting year of current recommendations	Active invitation to screening	Screening ages (years), primary screening test used, and screening interval or frequency of screenings
Spain	Castilla la Mancha	Yes	2019	Yes	25-34 (cytology, 3 years); 35-65 (HPV test, 5 years)
Spain	Cataluña	Yes	2006	No	25-65 (cytology, 3 years)
Spain	Ceuta	Yes	Unk	No	25-65 (cytology, 3 years)
Spain	Comunidad Valenciana	Yes	2019	No	20-65 (cytology, 3 years)
Spain	Extremadura	Yes	2017	No	20-65 (cytology, 2 years)
Spain	Galicia	Yes	2019	Yes	25-34 (cytology, 3 years); 35-65 (HPV test, 5 years)
Spain	La Rioja	Yes	2018	Yes	25-65 (cytology, 3 years)
Spain	Madrid	Yes	2019	No	35-65 (HPV test, 5 years)
Spain	Melilla	Yes	Unk	No	25-65 (cytology, 3 years)
Spain	Murcia	Yes	2012	No	14-65 (cytology, 3 years)
Spain	Navarra	Yes	2000	No	25-65 (cytology, 3 years)
Spain	País Vasco	Yes	2018	Yes	25-34 (cytology, 3 years); 35-65 (HPV test, 5 years)
Spain	Cantabria	Yes	2015	No	25-65 (cytology, 3 years)
Spain	Canarias	Yes	2013	No	25-65 (cytology, 3 years)
Spain	Baleares	Yes	2004	No	25-64 (cytology, 3 years)
Spain	Asturias	Yes	2017	No	25-65 (cytology, 3 years)
Spain	Aragon	Yes	2019	No	25-34 (cytology, 3 years); 35-65 (HPV test, 5 years)
Spain	Andalucia	Yes	Unk	No	25-65 (cytology, 3 years)
Sweden	Sweden	Yes	2015	Yes	23-29 (cytology, 3 years); 30-50 (HPV test, 3 years); 51-70 (HPV test, 7 years)
Switzerland	Switzerland	Yes	2018	No	21-29 (cytology, 3 years); 30-70 (cytology and HPV test, 3 years)
Ukraine	Ukraine	Yes	2014	No	18-65 (cytology, 3 years)
United Kingdom of Great Britain and Northern Ireland	England	Yes	2020	Yes	25-49 (HPV test, 3 years); 50-64 (HPV test, 5 years)
United Kingdom of Great Britain and Northern Ireland	Northern Ireland	Yes	2011	Yes	25-49 (cytology, 3 years); 50-64 (cytology, 5 years)
United Kingdom of Great Britain and Northern Ireland	Scotland	Yes	2020	Yes	25-64 (HPV test, 5 years)
United Kingdom of Great Britain and Northern Ireland	Wales	Yes	2019	Yes	25-49 (HPV test, 3 years); 50-64 (HPV test, 5 years)

Data accessed on 31 Aug 2022

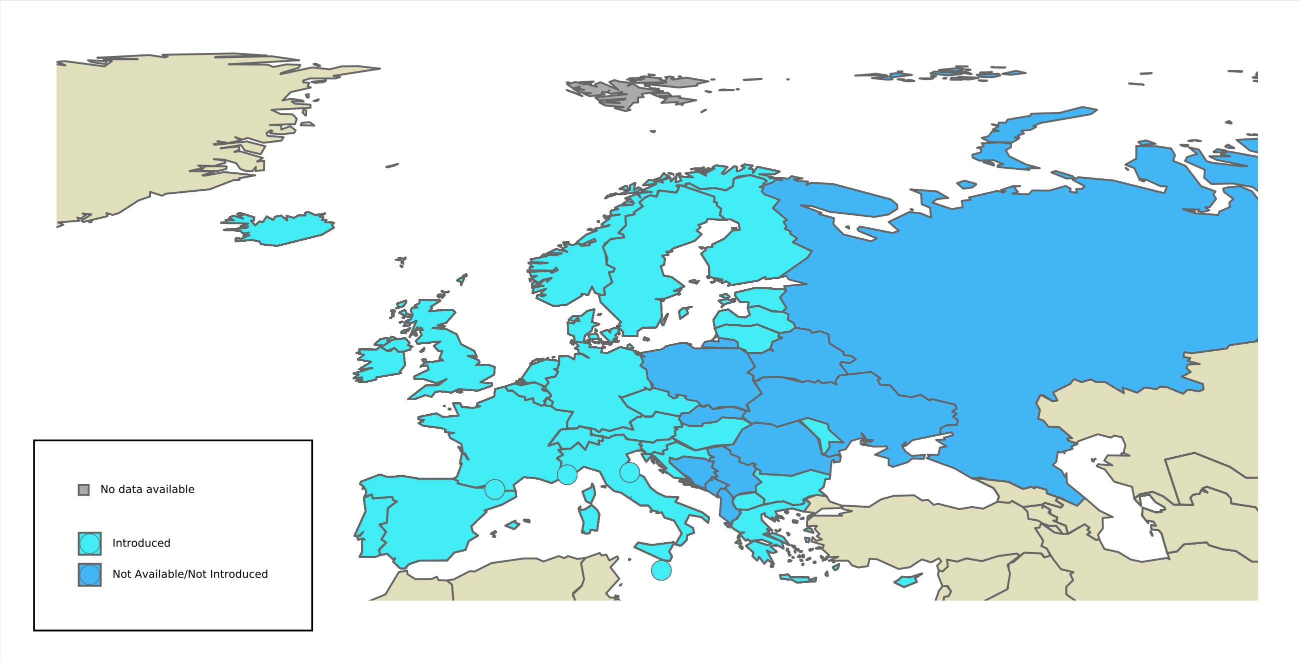
Data Sources:

Bruni L, Serrano B, Roura E, Alemany L, Cowan M, Herrero R, et al. Cervical cancer screening programmes and age-specific coverage estimates for 202 countries and territories worldwide: a review and synthetic analysis. Lancet Glob Health. 2022;10(8):e1115.

7.2 HPV vaccination

7.2.1 HPV vaccine licensure and introduction

Figure 67: Countries with HPV vaccine in the national immunization programme in Europe



Data accessed on 24 Oct 2022

Data Sources:

Human papillomavirus (HPV) vaccination coverage. World Health Organization. 2022. Available from: https://immunizationdata.who.int/pages/coverage/hpv.html, accessed [24 Oct 2022]

Bruni L, Saura-Lázaro A, Montoliu A, Brotons M, Alemany L, Diallo MS, et al. HPV vaccination introduction worldwide and WHO and UNICEF estimates of national HPV immunization coverage 2010-2019. Prev Med. 2021;144(106399):106399.

Table 50: HPV vaccination policies in Europe

Country	Sex	Programme	Introduction year	Year of estimation of HPV vaccination coverage	HPV coverage – first dose (%)	HPV coverage – last dose (%)
Andorra	Female	Introduced	2014	2021	83	83
Austria	Female	Introduced	2014	2021	-	-
Austria	Male	Introduced	2014	2021	-	-
Belgium	Female	Introduced	2007	2021	70	78
Belgium	Male	Introduced	2019	2021	64	71
Bulgaria	Female	Introduced	2012	2021	3	8
Croatia	Female	Introduced	2016	2021	-	-
Croatia	Male	Introduced	2016	2021	-	-
Cyprus	Female	Introduced	2016	2021	-	-
Czechia	Female	Introduced	2012	2021	-	-
Czechia	Male	Introduced	2018	2021	-	-
Denmark	Female	Introduced	2009	2021	80	92
Denmark	Male	Introduced	2019	2021	78	89
Estonia	Female	Introduced	2018	2021	57	64
Finland	Female	Introduced	2013	2021	-	71
Finland	Male	Introduced	2020	2021	-	62
France	Female	Introduced	2007	2021	37	46
Germany	Female	Introduced	2007	2021	47	63
Germany	Male	Introduced	2019	2021	5	20
Greece	Female	Introduced	2008	2021	-	-
Hungary	Female	Introduced	2014	2021	82	78
Hungary	Male	Introduced	2020	2021	69	64
Iceland	Female	Introduced	2011	2021	90	86
Ireland	Female	Introduced	2010	2021	71	74
Ireland	Male	Introduced	2019	2021	67	70
Italy	Female	Introduced	2008	2021	-	-
Italy	Male	Introduced	2018	2021	-	-
Latvia	Female	Introduced	2010	2021	42	43
Lithuania	Female	Introduced	2016	2021	66	61
Luxembourg	Female	Introduced	2008	2021	-	-
Luxembourg	Male	Introduced	2019	2021	-	-
Malta	Female	Introduced	2013	2021	99	94
Monaco	Female	Introduced	2011	2021	-	-
Netherlands	Female	Introduced	2010	2021	66	66
Norway	Female	Introduced	2009	2021	93	93
Norway	Male	Introduced	2018	2021	91	92
Portugal	Female	Introduced	2008	2021	76	91
Portugal	Male	Introduced	2020	2021	53	81
Republic of Moldova	Female	Introduced	2018	2021	35	39
Republic of North Macedonia	Female	Introduced	2009	2021	21	32
San Marino	Female	Introduced	2008	2021	23	46
Slovenia	Female	Introduced	2009	2021	50	50
Spain	Female	Introduced	2007	2021	77	83
Sweden	Female	Introduced	2010	2021	83	87
Sweden	Male	Introduced	2020	2021	77	83
Switzerland	Female	Introduced	2008	2021	71	74
Switzerland	Male	Introduced	2016	2021	49	52
United Kingdom of Great Britain and Northern Ireland	Female	Introduced	2008	2021	59	77
United Kingdom of Great Britain and Northern Ireland	Male	Introduced	2019	2021	48	71

Data accessed on 24 Oct 2022

Data Sources:

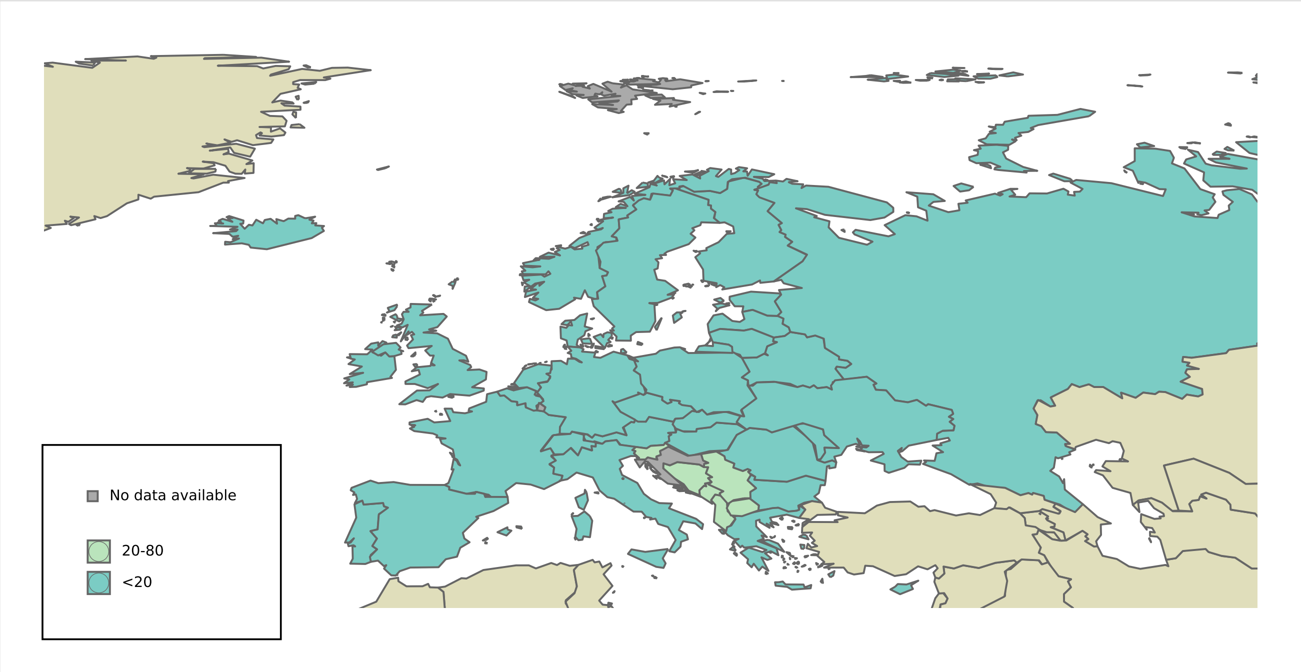
Human papillomavirus (HPV) vaccination coverage. World Health Organization. 2022. Available from: https://immunizationdata.who.int/pages/coverage/hpv.html, accessed [24 Oct 2022]

Bruni L, Saura-Lázaro A, Montoliu A, Brotons M, Alemany L, Diallo MS, et al. HPV vaccination introduction worldwide and WHO and UNICEF estimates of national HPV immunization coverage 2010-2019. Prev Med. 2021;144(106399):106399.

8 Protective factors for cervical cancer

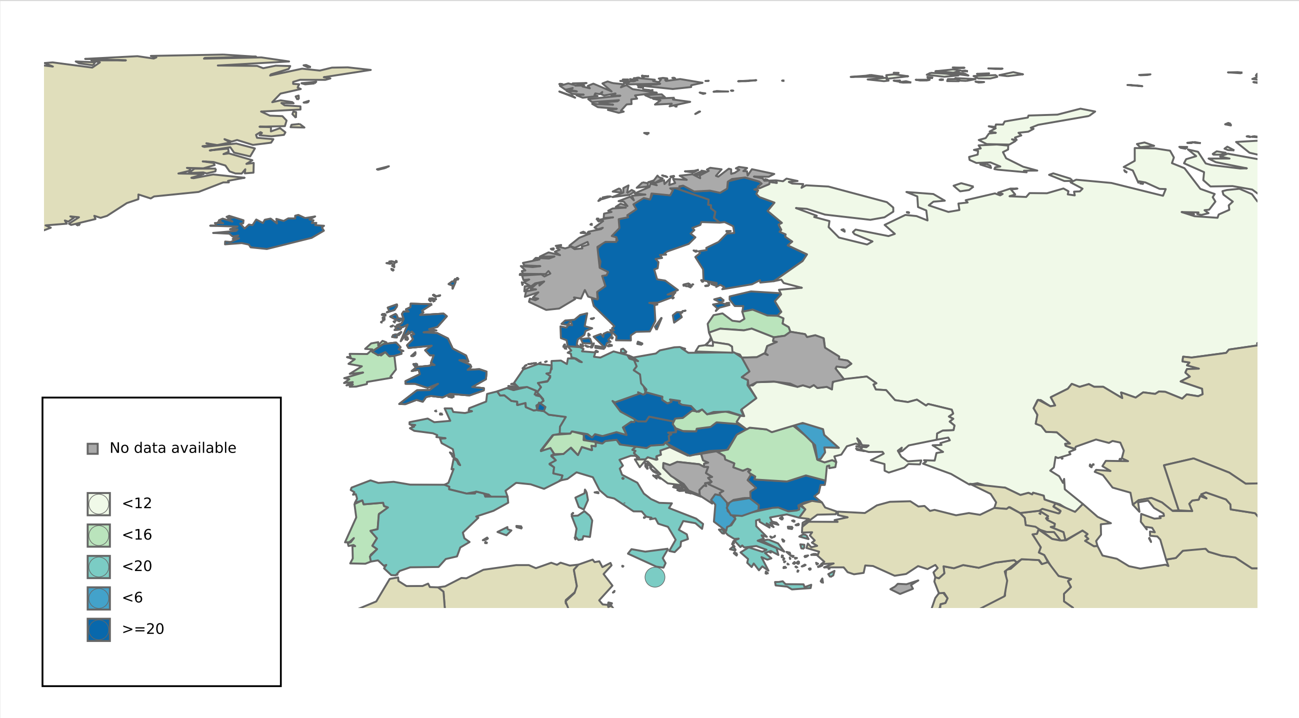
Male circumcision and the use of condoms have shown a significant protective effect against HPV transmission.

Figure 68: Prevalence of male circumcision in Europe



Data accessed on 31 Aug 2015
Please refer to country-specific reference(s) for full methodologies.
Data Sources:
Based on systematic reviews and meta-analysis performed by ICO. The ICO HPV Information Centre has updated data until August 2015. Reference publication: Albero G, Sex Transm Dis. 2012 Feb;39(2):104-13.

Figure 69: Prevalence of condom use in Europe



Data accessed on 16 Mar 2017

Please refer to original source for methods of estimation

[a] Year of estimation: 2013-2014

[b] Fifteen-year-olds teenagers only were asked whether they had ever had sexual intercourse.

[c] Indicates a significant gender difference (at p<0.05).

Data Sources:

[1] Growing up unequal: gender and socioeconomic differences in young people's health and well-being. Health Behaviour in School-aged Children (HBSC) study: international report from the 2013/2014 survey. Inchley J, Currie D, Young T, et al. Copenhagen, WHO Regional Office for Europe, 2016 (Health Policy for Children and Adolescents, No. 7). Available at: http://www.euro.who.int/__data/assets/pdf_file/0003/303438/HSBC-No.7-Growing-up-unequal-Full-Report.pdf?ua=1

9 References

HPV-related statistics were gathered from specific databases created at the Institut Català d'Oncologia and the International Agency for Research on Cancer.
Systematic collection of published literature from peer-reviewed journals is stored in these databases. Data correspond to results from the following reference papers as well as updated results from continuous monitoring of the literature by the HPV Information Centre:

Table 51: References of studies included

Country	Study
HPV prevalence and HPV type distribution for cytologically normal women	
General sources	Based on systematic reviews and meta-analysis performed by ICO. The ICO HPV Information Centre has updated data until June 2014. Reference publications: 1) Bruni L, J Infect Dis 2010; 202: 1789. 2) De Sanjosé S, Lancet Infect Dis 2007; 7: 453
Belarus	Rogovskaya SI, Vaccine 2013; 31 Suppl 7: H46
Belgium	Arbyn M, Cancer Epidemiol Biomarkers Prev 2009; 18: 321 ǀ Baay MF, Eur J Cancer 2005; 41: 2704 ǀ Baay MF, Eur J Gynaecol Oncol 2001; 22: 204 ǀ Depuydt CE, Br J Cancer 2003; 88: 560 ǀ Depuydt CE, Gynecol Obstet Invest 2010; 70: 273 ǀ Depuydt CE, J Clin Microbiol 2012; 50: 4073 ǀ Merckx M, Eur J Cancer Prev 2014; 23: 288 ǀ Schmitt M, Int J Cancer 2013; 132: 2395 ǀ Weyn C, Cancer Epidemiol 2013; 37: 457, Baay MF, Eur J Cancer 2005; 41: 2704 ǀ Baay MF, Eur J Gynaecol Oncol 2001; 22: 204 ǀ Weyn C, Cancer Epidemiol 2013; 37: 457, Arbyn M, Cancer Epidemiol Biomarkers Prev 2009; 18: 321 ǀ Baay MF, Eur J Cancer 2005; 41: 2704 ǀ Baay MF, Eur J Gynaecol Oncol 2001; 22: 204 ǀ Depuydt CE, Br J Cancer 2003; 88: 560 ǀ Schmitt M, Int J Cancer 2013; 132: 2395 ǀ Weyn C, Cancer Epidemiol 2013; 37: 457, Arbyn M, Cancer Epidemiol Biomarkers Prev 2009; 18: 321 ǀ Baay MF, Eur J Cancer 2005; 41: 2704 ǀ Baay MF, Eur J Gynaecol Oncol 2001; 22: 204 ǀ Depuydt CE, Br J Cancer 2003; 88: 560 ǀ Depuydt CE, J Clin Microbiol 2012; 50: 4073 ǀ Schmitt M, Int J Cancer 2013; 132: 2395 ǀ Weyn C, Cancer Epidemiol 2013; 37: 457
Croatia	Grahovac M, Coll Antropol 2007; 31 Suppl 2: 73 ǀ Kaliterna V, Coll Antropol 2007; 31 Suppl 2: 79, Grahovac M, Coll Antropol 2007; 31 Suppl 2: 73
Czechia	Tachezy R, PLoS ONE 2013; 8: e79156
Denmark	Svare EI, Eur J Cancer 1998; 34: 1230, Bonde J, BMC Infect Dis 2014; 14: 413 ǀ Kjaer SK, BMJ 2002; 325: 572 ǀ Kjaer SK, Int J Cancer 2008; 123: 1864 ǀ Nielsen A, Sex Transm Dis 2008; 35: 276 ǀ Nielsen A, Sex Transm Infect 2012; 88: 627 ǀ Svare EI, Eur J Cancer 1998; 34: 1230, Bonde J, BMC Infect Dis 2014; 14: 413 ǀ Kjær SK, Cancer Causes Control 2014; 25: 179 ǀ Nielsen A, Sex Transm Dis 2008; 35: 276 ǀ Nielsen A, Sex Transm Infect 2012; 88: 627 ǀ Svare EI, Eur J Cancer 1998; 34: 1230
Estonia	Uusküla A, BMC Infect Dis 2010; 10: 63
Finland	Auvinen E, Scand J Infect Dis 2005; 37: 873 ǀ Leinonen M, Int J Cancer 2008; 123: 1344, Leinonen M, Int J Cancer 2008; 123: 1344
France	Beby-Defaux A, J Med Virol 2004; 73: 262 ǀ Dalstein V, Int J Cancer 2003; 106: 396 ǀ Monsonego J, Gynecol Oncol 2005; 99: 160 ǀ Monsonego J, Int J Cancer 2011; 129: 691 ǀ Pannier-Stockman C, J Clin Virol 2008; 42: 353 ǀ Vaucel E, Arch Gynecol Obstet 2011; 284: 989, Baudu A, J Epidemiol Glob Health 2014; 4: 35 ǀ Beby-Defaux A, J Med Virol 2004; 73: 262 ǀ Casalegno JS, Int J Gynaecol Obstet 2011; 114: 116 ǀ Heard I, PLoS ONE 2013; 8: e79372 ǀ Monsonego J, Gynecol Obstet Fertil 2013; 41: 305 ǀ Pannier-Stockman C, J Clin Virol 2008; 42: 353 ǀ Vaucel E, Arch Gynecol Obstet 2011; 284: 989, Baudu A, J Epidemiol Glob Health 2014; 4: 35 ǀ Beby-Defaux A, J Med Virol 2004; 73: 262 ǀ Boulanger JC, Gynecol Obstet Fertil 2004; 32: 218 ǀ Casalegno JS, Int J Gynaecol Obstet 2011; 114: 116 ǀ Clavel C, Br J Cancer 2001; 84: 1616 ǀ Dalstein V, Int J Cancer 2003; 106: 396 ǀ Heard I, PLoS ONE 2013; 8: e79372 ǀ Monsonego J, Gynecol Oncol 2005; 99: 160 ǀ Monsonego J, Int J Cancer 2011; 129: 691 ǀ Pannier-Stockman C, J Clin Virol 2008; 42: 353 ǀ Riethmuller D, Diagn Mol Pathol 1999; 8: 157 ǀ Vaucel E, Arch Gynecol Obstet 2011; 284: 989
Germany	de Jonge M, Acta Cytol 2013; 57: 591 ǀ Iftner T, J Med Virol 2010; 82: 1928 ǀ Luyten A, J Clin Virol 2009; 46 Suppl 3: S5 ǀ Petry KU, Br J Cancer 2003; 88: 1570 ǀ Schneider A, Int J Cancer 2000; 89: 529, Iftner T, J Med Virol 2010; 82: 1928, de Jonge M, Acta Cytol 2013; 57: 591 ǀ Iftner T, J Med Virol 2010; 82: 1928 ǀ Klug SJ, J Med Virol 2007; 79: 616
Greece	Agorastos T, Eur J Cancer Prev 2004; 13: 145 ǀ Agorastos T, Eur J Cancer Prev 2009; 18: 504 ǀ Argyri E, BMC Infect Dis 2013; 13: 53 ǀ Panotopoulou E, J Med Virol 2007; 79: 1898 ǀ Paraskevaidis E, Gynecol Oncol 2001; 82: 355 ǀ Tsiodras S, BMC Cancer 2010; 10: 53 ǀ Tsiodras S, Clin Microbiol Infect 2011; 17: 1185, Agorastos T, Eur J Cancer Prev 2004; 13: 145 ǀ Argyri E, BMC Infect Dis 2013; 13: 53, Agorastos T, Eur J Cancer Prev 2004; 13: 145 ǀ Argyri E, BMC Infect Dis 2013; 13: 53 ǀ Panotopoulou E, J Med Virol 2007; 79: 1898 ǀ Tsiodras S, BMC Cancer 2010; 10: 53 ǀ Tsiodras S, Clin Microbiol Infect 2011; 17: 1185, Agorastos T, Eur J Cancer Prev 2004; 13: 145 ǀ Argyri E, BMC Infect Dis 2013; 13: 53 ǀ Panotopoulou E, J Med Virol 2007; 79: 1898 ǀ Paraskevaidis E, Gynecol Oncol 2001; 82: 355 ǀ Tsiodras S, BMC Cancer 2010; 10: 53 ǀ Tsiodras S, Clin Microbiol Infect 2011; 17: 1185
Hungary	Nyári T, Eur J Obstet Gynecol Reprod Biol 2006; 126: 246
Ireland	Keegan H, Br J Biomed Sci 2007; 64: 18, Anderson L, J Med Virol 2013; 85: 295 ǀ Keegan H, Br J Biomed Sci 2007; 64: 18

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Table 51 – continued from previous page

Country	Study
Italy	Agarossi A, J Med Virol 2009; 81: 529 ǀ Ammatuna P, Cancer Epidemiol Biomarkers Prev 2008; 17: 2002 ǀ Astori G, Virus Res 1997; 50: 57 ǀ Carozzi F, Br J Cancer 2000; 83: 1462 ǀ Centurioni MG, BMC Infect Dis 2005; 5: 77 ǀ Giambi C, BMC Infect Dis 2013; 13: 74 ǀ Giorgi Rossi P, Infect Agents Cancer 2011; 6: 2 ǀ Masia G, Vaccine 2009; 27 Suppl 1: A11 ǀ Panatto D, BMC Infect Dis 2013; 13: 575 ǀ Piana A, BMC Public Health 2011; 11: 785 ǀ Ronco G, Eur J Cancer 2005; 41: 297 ǀ Ronco G, J Natl Cancer Inst 2006; 98: 765 ǀ Ronco G, Lancet Oncol 2006; 7: 547 ǀ Sammarco ML, Eur J Obstet Gynecol Reprod Biol 2013; 168: 222 ǀ Tenti P, J Infect Dis 1997; 176: 277 ǀ Tornesello ML, J Gen Virol 2008; 89: 1380 ǀ Tornesello ML, J Med Virol 2006; 78: 1663 ǀ Verteramo R, BMC Infect Dis 2009; 9: 16 ǀ Zappacosta B, New Microbiol 2009; 32: 351, Agarossi A, J Med Virol 2009; 81: 529 ǀ Ammatuna P, Cancer Epidemiol Biomarkers Prev 2008; 17: 2002 ǀ Astori G, Virus Res 1997; 50: 57 ǀ Carozzi F, Br J Cancer 2000; 83: 1462 ǀ Centurioni MG, BMC Infect Dis 2005; 5: 77 ǀ Del Prete R, J Clin Virol 2008; 42: 211 ǀ Giambi C, BMC Infect Dis 2013; 13: 74 ǀ Giorgi Rossi P, Infect Agents Cancer 2011; 6: 2 ǀ Masia G, Vaccine 2009; 27 Suppl 1: A11 ǀ Panatto D, BMC Infect Dis 2013; 13: 575 ǀ Piana A, BMC Public Health 2011; 11: 785 ǀ Ronco G, Eur J Cancer 2005; 41: 297 ǀ Ronco G, J Natl Cancer Inst 2006; 98: 765 ǀ Ronco G, Lancet Oncol 2006; 7: 547 ǀ Sammarco ML, Eur J Obstet Gynecol Reprod Biol 2013; 168: 222 ǀ Tenti P, J Infect Dis 1997; 176: 277 ǀ Tornesello ML, J Gen Virol 2008; 89: 1380 ǀ Tornesello ML, J Med Virol 2006; 78: 1663 ǀ Verteramo R, BMC Infect Dis 2009; 9: 16 ǀ Zappacosta B, New Microbiol 2009; 32: 351, Carozzi F, Br J Cancer 2000; 83: 1462 ǀ Centurioni MG, BMC Infect Dis 2005; 5: 77 ǀ Panatto D, BMC Infect Dis 2013; 13: 575 ǀ Ronco G, Eur J Cancer 2005; 41: 297 ǀ Tornesello ML, J Med Virol 2006; 78: 1663, Agarossi A, J Med Virol 2009; 81: 529 ǀ Astori G, Virus Res 1997; 50: 57 ǀ Centurioni MG, BMC Infect Dis 2005; 5: 77 ǀ Giorgi Rossi P, Infect Agents Cancer 2011; 6: 2 ǀ Panatto D, BMC Infect Dis 2013; 13: 575 ǀ Ronco G, Eur J Cancer 2005; 41: 297 ǀ Sammarco ML, Eur J Obstet Gynecol Reprod Biol 2013; 168: 222 ǀ Tenti P, J Infect Dis 1997; 176: 277 ǀ Tornesello ML, J Gen Virol 2008; 89: 1380 ǀ Tornesello ML, J Med Virol 2006; 78: 1663
Latvia	Silins I, Gynecol Oncol 2004; 93: 484
Lithuania	Gudleviciene Z, Medicina (Kaunas) 2005; 41: 910 ǀ Kliucinskas M, Gynecol Obstet Invest 2006; 62: 173 ǀ Simanaviciene V, J Med Virol 2014, Gudleviciene Z, Medicina (Kaunas) 2005; 41: 910, Gudleviciene Z, Medicina (Kaunas) 2005; 41: 910 ǀ Simanaviciene V, J Med Virol 2014
Netherlands	Boers A, PLoS ONE 2014; 9: e101930 ǀ Bulkmans NW, Int J Cancer 2004; 110: 94 ǀ Hesselink AT, J Clin Microbiol 2013; 51: 2409 ǀ Jacobs MV, Int J Cancer 2000; 87: 221 ǀ Lenselink CH, PLoS ONE 2008; 3: e3743 ǀ Rijkaart DC, Br J Cancer 2012; 106: 975 ǀ Rijkaart DC, Lancet Oncol 2012; 13: 78 ǀ Rozendaal L, J Clin Pathol 2000; 53: 606 ǀ Zielinski GD, Br J Cancer 2001; 85: 398, Bulkmans NW, Int J Cancer 2004; 110: 94 ǀ Jacobs MV, Int J Cancer 2000; 87: 221 ǀ Rozendaal L, J Clin Pathol 2000; 53: 606, Bulkmans NW, Br J Cancer 2007; 96: 1419 ǀ Jacobs MV, Int J Cancer 2000; 87: 221 ǀ Rozendaal L, J Clin Pathol 2000; 53: 606 ǀ Zielinski GD, Br J Cancer 2001; 85: 398, Boers A, PLoS ONE 2014; 9: e101930 ǀ Bulkmans NW, Int J Cancer 2004; 110: 94 ǀ Hesselink AT, J Clin Microbiol 2013; 51: 2409 ǀ Jacobs MV, Int J Cancer 2000; 87: 221 ǀ Rijkaart DC, Br J Cancer 2012; 106: 975 ǀ Rijkaart DC, Lancet Oncol 2012; 13: 78 ǀ Rozendaal L, J Clin Pathol 2000; 53: 606 ǀ Zielinski GD, Br J Cancer 2001; 85: 398
Norway	Gjøoen K, APMIS 1996; 104: 68 ǀ Molden T, Cancer Epidemiol Biomarkers Prev 2005; 14: 367 ǀ Molden T, Gynecol Oncol 2006; 100: 95, Gjøoen K, APMIS 1996; 104: 68 ǀ Molden T, Cancer Epidemiol Biomarkers Prev 2005; 14: 367 ǀ Molden T, Gynecol Oncol 2006; 100: 95 ǀ Skjeldestad FE, Acta Obstet Gynecol Scand 2008; 87: 81, Gjøoen K, APMIS 1996; 104: 68, Gjøoen K, APMIS 1996; 104: 68 ǀ Molden T, Cancer Epidemiol Biomarkers Prev 2005; 14: 367
Poland	Bardin A, Eur J Cancer 2008; 44: 557
Portugal	Pista A, Clin Microbiol Infect 2011; 17: 941 ǀ Pista A, Int J Gynecol Cancer 2011; 21: 1150 ǀ Vieira L, Eur J Microbiol Immunol (Bp) 2013; 3: 61, Dutra I, Infect Agents Cancer 2008; 3: 6 ǀ Pista A, Clin Microbiol Infect 2011; 17: 941 ǀ Pista A, Int J Gynecol Cancer 2011; 21: 1150 ǀ Vieira L, Eur J Microbiol Immunol (Bp) 2013; 3: 61, Pista A, Int J Gynecol Cancer 2011; 21: 1150, Pista A, Clin Microbiol Infect 2011; 17: 941
Romania	Moga MA, Asian Pac J Cancer Prev 2014; 15: 6887 ǀ Ursu RG, Virol J 2011; 8: 558, Moga MA, Asian Pac J Cancer Prev 2014; 15: 6887
Russian Federation	Alexandrova YN, Cancer Lett 1999; 145: 43 ǀ Bdaizieva 2010: reported in De Vuyst H, Vaccine 2013; 31 Suppl 5: F32 ǀ Goncharevskaya 2011: reported in De Vuyst H, Vaccine 2013; 31 Suppl 5: F32 ǀ Komarova 2010: reported in De Vuyst H, Vaccine 2013; 31 Suppl 5: F32 ǀ Kubanov 2005: reported in De Vuyst H, Vaccine 2013; 31 Suppl 5: F32 ǀ Rogovskaya SI, Vaccine 2013; 31 Suppl 7: H46 ǀ Shargorodskaya 2011: reported in De Vuyst H, Vaccine 2013; 31 Suppl 5: F32 ǀ Shipitsyna E, Cancer Epidemiol 2011; 35: 160 ǀ Shipulina 2011: reported in De Vuyst H, Vaccine 2013; 31 Suppl 5: F32, Alexandrova YN, Cancer Lett 1999; 145: 43, Alexandrova YN, Cancer Lett 1999; 145: 43 ǀ Komarova 2010: reported in De Vuyst H, Vaccine 2013; 31 Suppl 5: F32 ǀ Rogovskaya SI, Vaccine 2013; 31 Suppl 7: H46 ǀ Shipitsyna E, Cancer Epidemiol 2011; 35: 160
Slovenia	Ucakar V, J Med Virol 2014; 86: 1772 ǀ Ucakar V, Vaccine 2012; 30: 116
Spain	Bernal M, Infect Agents Cancer 2008; 3: 8 ǀ Castellsagué X, J Med Virol 2012; 84: 947 ǀ de Sanjose S, Sex Transm Dis 2003; 30: 788 ǀ Dillner J, BMJ 2008; 337: a1754 ǀ González C, Sex Transm Infect 2006; 82: 260 ǀ Martorell M, Scand J Infect Dis 2010; 42: 549 ǀ Muñoz N, Sex Transm Dis 1996; 23: 504 ǀ Ortiz M, J Clin Microbiol 2006; 44: 1428, Castellsagué X, J Med Virol 2012; 84: 947 ǀ de Sanjose S, Sex Transm Dis 2003; 30: 788 ǀ Dillner J, BMJ 2008; 337: a1754 ǀ González C, Sex Transm Infect 2006; 82: 260 ǀ Muñoz N, Sex Transm Dis 1996; 23: 504, Bernal M, Infect Agents Cancer 2008; 3: 8 ǀ Castellsagué X, J Med Virol 2012; 84: 947 ǀ de Sanjose S, Sex Transm Dis 2003; 30: 788 ǀ Dillner J, BMJ 2008; 337: a1754 ǀ González C, Sex Transm Infect 2006; 82: 260 ǀ Muñoz N, Sex Transm Dis 1996; 23: 504

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Table 51 – continued from previous page

Country	Study
Sweden	Elfström KM, BMJ 2014; 348: g130 ∣ Kjellberg L, Am J Obstet Gynecol 1998; 179: 1497 ∣ Naucler P, N Engl J Med 2007; 357: 1589 ∣ Stenvall H, Acta Derm Venereol 2007; 87: 243 ∣ Ylitalo N, Cancer Res 2000; 60: 6027, Naucler P, N Engl J Med 2007; 357: 1589 ∣ Ylitalo N, Cancer Res 2000; 60: 6027, Kjellberg L, Am J Obstet Gynecol 1998; 179: 1497 ∣ Naucler P, N Engl J Med 2007; 357: 1589 ∣ Ylitalo N, Cancer Res 2000; 60: 6027
Switzerland	Bigras G, Br J Cancer 2005; 93: 575
HPV type distribution for invasive cervical cancer (ICC)	
General sources	Based on meta-analysis performed by IARC's Infections and Cancer Epidemiology Group up to November 2011, the ICO HPV Information Centre has updated data until June 2014. Reference publications: 1) Guan P, Int J Cancer 2012;131:2349 2) Li N, Int J Cancer 2011;128:927 3) Smith JS, Int J Cancer 2007;121:621 4) Clifford GM, Br J Cancer 2003;88:63 5) Clifford GM, Br J Cancer 2003;89:101.
Austria	Contributing studies: Bachtiary B, Int J Cancer 2002; 102: 237 ∣ Widschwendter A, Cancer Lett 2003; 202: 231, Bachtiary B, Int J Cancer 2002; 102: 237 ∣ Widschwendter A, Cancer Lett 2003; 202: 231
Belarus	Kulmala SM, J Med Virol 2007; 79: 771, Contributing studies: Kulmala SM, J Med Virol 2007; 79: 771
Belgium	Baay MF, Eur J Gynaecol Oncol 2001; 22: 204, Contributing studies: Baay MF, Eur J Gynaecol Oncol 2001; 22: 204
Bosnia and Herzegovina	Iljazović E, Cancer Epidemiol 2014; 38: 504, Contributing studies: Iljazovic E, Cancer Epidemiol 2014; 38: 504
Bulgaria	Contributing studies: Todorova I, J Clin Pathol 2010; 63: 1121, Todorova I, J Clin Pathol 2010; 63: 1121
Croatia	Contributing studies: Dabic MM, Acta Obstet Gynecol Scand 2008; 87: 366 ∣ Hadzisejdic I, Coll Antropol 2006; 30: 879, Dabic MM, Acta Obstet Gynecol Scand 2008; 87: 366 ∣ Hadzisejdic I, Coll Antropol 2006; 30: 879
Czechia	Contributing studies: Slama J, Int J Gynecol Cancer 2009; 19: 703 ∣ Tachezy R, J Med Virol 1999; 58: 378 ∣ Tachezy R, PLoS ONE 2011; 6: e21913, Slama J, Int J Gynecol Cancer 2009; 19: 703 ∣ Tachezy R, J Med Virol 1999; 58: 378 ∣ Tachezy R, PLoS ONE 2011; 6: e21913
Denmark	Hording U, APMIS 1997; 105: 313 ∣ Kirschner B, Acta Obstet Gynecol Scand 2013; 92: 1023 ∣ Kjær SK, Cancer Causes Control 2014; 25: 179 ∣ Sebbelov AM, Microbes Infect 2000; 2: 121, Contributing studies: Hording U, APMIS 1997; 105: 313 ∣ Kirschner B, Acta Obstet Gynecol Scand 2013; 92: 1023 ∣ Kjær SK, Cancer Causes Control 2014; 25: 179 ∣ Sebbelov AM, Microbes Infect 2000; 2: 121
Finland	Iwasawa A, Cancer 1996; 77: 2275, Contributing studies: Iwasawa A, Cancer 1996; 77: 2275
France	Contributing studies: de Cremoux P, Int J Cancer 2009; 124: 778 ∣ Lombard I, J Clin Oncol 1998; 16: 2613 ∣ Prétet JL, Int J Cancer 2008; 122: 424 ∣ Riou G, Lancet 1990; 335: 1171, de Cremoux P, Int J Cancer 2009; 124: 778 ∣ Lombard I, J Clin Oncol 1998; 16: 2613 ∣ Prétet JL, Int J Cancer 2008; 122: 424 ∣ Riou G, Lancet 1990; 335: 1171
Germany	Contributing studies: Bosch FX, J Natl Cancer Inst 1995; 87: 796 ∣ Milde-Langosch K, Int J Cancer 1995; 63: 639, Bosch FX, J Natl Cancer Inst 1995; 87: 796 ∣ Milde-Langosch K, Int J Cancer 1995; 63: 639
Greece	Contributing studies: Adamopoulou M, Anticancer Res 2009; 29: 3401 ∣ Dokianakis DN, Oncol Rep 1999; 6: 1327 ∣ Koffa M, Int J Oncol 1994; 5: 189 ∣ Labropoulou V, Sex Transm Dis 1997; 24: 469 ∣ Panotopoulou E, J Med Virol 2007; 79: 1898, Adamopoulou M, Anticancer Res 2009; 29: 3401 ∣ Dokianakis DN, Oncol Rep 1999; 6: 1327 ∣ Koffa M, Int J Oncol 1994; 5: 189 ∣ Labropoulou V, Sex Transm Dis 1997; 24: 469 ∣ Panotopoulou E, J Med Virol 2007; 79: 1898
Hungary	Kónya J, J Med Virol 1995; 46: 1, Contributing studies: Kónya J, J Med Virol 1995; 46: 1
Iceland	Sigurdsson K, Int J Cancer 2007; 121: 2682, Contributing studies: Sigurdsson K, Int J Cancer 2007; 121: 2682
Ireland	Contributing studies: Butler D, J Pathol 2000; 192: 502 ∣ Fay J, J Med Virol 2009; 81: 897 ∣ O'Leary JJ, J Clin Pathol 1998; 51: 576 ∣ Skyldberg BM, Mod Pathol 1999; 12: 675, Butler D, J Pathol 2000; 192: 502 ∣ Fay J, J Med Virol 2009; 81: 897 ∣ O'Leary JJ, J Clin Pathol 1998; 51: 576 ∣ Skyldberg BM, Mod Pathol 1999; 12: 675
Italy	Contributing studies: Carozzi FM, Cancer Epidemiol Biomarkers Prev 2010; 19: 2389 ∣ Ciotti M, Oncol Rep 2006; 15: 143 ∣ Del Mistro A, Infect Agents Cancer 2006; 1: 9 ∣ Gargiulo F, Virus Res 2007; 125: 176 ∣ Garzetti GG, Cancer 1998; 82: 886 ∣ Mariani L, BMC Cancer 2010; 10: 259 ∣ Rolla M, Eur J Gynaecol Oncol 2009; 30: 557 ∣ Sideri M, Vaccine 2009; 27 Suppl 1: A30 ∣ Spinillo A, J Med Virol 2014; 86: 1145 ∣ Tornesello ML, Gynecol Oncol 2011; 121: 32 ∣ Tornesello ML, J Med Virol 2006; 78: 1663 ∣ Voglino G, Pathologica 2000; 92: 516, Carozzi FM, Cancer Epidemiol Biomarkers Prev 2010; 19: 2389 ∣ Ciotti M, Oncol Rep 2006; 15: 143 ∣ Del Mistro A, Infect Agents Cancer 2006; 1: 9 ∣ Gargiulo F, Virus Res 2007; 125: 176 ∣ Garzetti GG, Cancer 1998; 82: 886 ∣ Mariani L, BMC Cancer 2010; 10: 259 ∣ Rolla M, Eur J Gynaecol Oncol 2009; 30: 557 ∣ Sideri M, Vaccine 2009; 27 Suppl 1: A30 ∣ Spinillo A, J Med Virol 2014; 86: 1145 ∣ Tornesello ML, Gynecol Oncol 2011; 121: 32 ∣ Tornesello ML, J Med Virol 2006; 78: 1663 ∣ Voglino G, Pathologica 2000; 92: 516
Latvia	Contributing studies: Kulmala SM, J Med Virol 2007; 79: 771 ∣ Silins I, Gynecol Oncol 2004; 93: 484, Kulmala SM, J Med Virol 2007; 79: 771 ∣ Silins I, Gynecol Oncol 2004; 93: 484
Lithuania	Gudleviciene Z, Medicina (Kaunas) 2005; 41: 910 ∣ Simanaviciene V, J Med Virol 2014, Contributing studies: Gudleviciene Z, Medicina (Kaunas) 2005; 41: 910 ∣ Simanaviciene V, J Med Virol 2014
Luxembourg	Ressler S, Clin Cancer Res 2007; 13: 7067, Contributing studies: Ressler S, Clin Cancer Res 2007; 13: 7067

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Country	Study
Netherlands	Baalbergen A, Gynecol Oncol 2013; 128: 530 ǀ Baay MF, J Clin Microbiol 1996; 34: 745 ǀ Bulk S, Br J Cancer 2006; 94: 171 ǀ De Boer MA, Int J Cancer 2005; 114: 422 ǀ Krul EJ, Int J Gynecol Cancer 1999; 9: 206 ǀ Resnick RM, J Natl Cancer Inst 1990; 82: 1477 ǀ Tang N, J Clin Virol 2009; 45 Suppl 1: S25 ǀ Van Den Brule AJ, Int J Cancer 1991; 48: 404 ǀ Zielinski GD, J Pathol 2003; 201: 535, Contributing studies: Baalbergen A, Gynecol Oncol 2013; 128: 530 ǀ Baay MF, J Clin Microbiol 1996; 34: 745 ǀ Bulk S, Br J Cancer 2006; 94: 171 ǀ De Boer MA, Int J Cancer 2005; 114: 422 ǀ Krul EJ, Int J Gynecol Cancer 1999; 9: 206 ǀ Resnick RM, J Natl Cancer Inst 1990; 82: 1477 ǀ Tang N, J Clin Virol 2009; 45 Suppl 1: S25 ǀ Van Den Brule AJ, Int J Cancer 1991; 48: 404 ǀ Zielinski GD, J Pathol 2003; 201: 535
Norway	Bertelsen BI, Virchows Arch 2006; 449: 141 ǀ Karlsen F, J Clin Microbiol 1996; 34: 2095, Contributing studies: Bertelsen BI, Virchows Arch 2006; 449: 141 ǀ Karlsen F, J Clin Microbiol 1996; 34: 2095
Poland	Contributing studies: Baay MF, Eur J Gynaecol Oncol 2009; 30: 162 ǀ Bardin A, Eur J Cancer 2008; 44: 557 ǀ Biesaga B, Folia Histochem Cytobiol 2012; 50: 239 ǀ Bosch FX, J Natl Cancer Inst 1995; 87: 796 ǀ Dybikowska A, Oncol Rep 2002; 9: 871 ǀ Kwasniewska A, Eur J Gynaecol Oncol 2009; 30: 65 ǀ Pirog EC, Am J Pathol 2000; 157: 1055, Baay MF, Eur J Gynaecol Oncol 2009; 30: 162 ǀ Bardin A, Eur J Cancer 2008; 44: 557 ǀ Biesaga B, Folia Histochem Cytobiol 2012; 50: 239 ǀ Bosch FX, J Natl Cancer Inst 1995; 87: 796 ǀ Dybikowska A, Oncol Rep 2002; 9: 871 ǀ Kwasniewska A, Eur J Gynaecol Oncol 2009; 30: 65 ǀ Pirog EC, Am J Pathol 2000; 157: 1055
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Russian Federation	Kleter B, J Clin Microbiol 1999; 37: 2508 ǀ Kulmala SM, J Med Virol 2007; 79: 771, Contributing studies: Kleter B, J Clin Microbiol 1999; 37: 2508 ǀ Kulmala SM, J Med Virol 2007; 79: 771
Slovenia	Contributing studies: Jancar N, Eur J Obstet Gynecol Reprod Biol 2009; 145: 184, Jancar N, Eur J Obstet Gynecol Reprod Biol 2009; 145: 184
Spain	Alemany L, Gynecol Oncol 2012; 124: 512 ǀ Bosch FX, J Natl Cancer Inst 1995; 87: 796 ǀ Darwich L, Int J Gynecol Cancer 2011; 21: 1486 ǀ González-Bosquet E, Gynecol Oncol 2008; 111: 9 ǀ Herraez-Hernandez E, J Virol Methods 2013; 193: 9 ǀ Martró E, Enferm Infecc Microbiol Clin 2012; 30: 225 ǀ Mazarico E, Gynecol Oncol 2012; 125: 181 ǀ Muñoz N, Int J Cancer 1992; 52: 743 ǀ Rodriguez JA, Diagn Mol Pathol 1998; 7: 276, Contributing studies: Alemany L, Gynecol Oncol 2012; 124: 512 ǀ Bosch FX, J Natl Cancer Inst 1995; 87: 796 ǀ Darwich L, Int J Gynecol Cancer 2011; 21: 1486 ǀ González-Bosquet E, Gynecol Oncol 2008; 111: 9 ǀ Herraez-Hernandez E, J Virol Methods 2013; 193: 9 ǀ Martró E, Enferm Infecc Microbiol Clin 2012; 30: 225 ǀ Mazarico E, Gynecol Oncol 2012; 125: 181 ǀ Muñoz N, Int J Cancer 1992; 52: 743 ǀ Rodriguez JA, Diagn Mol Pathol 1998; 7: 276
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HPV type distribution for cervical high grade squamous intraepithelial lesions	
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Austria	Rössler L, Wien Klin Wochenschr 2013; 125: 591, Contributing studies: Rössler L, Wien Klin Wochenschr 2013; 125: 591
Belarus	Kulmala SM, J Med Virol 2007; 79: 771, Contributing studies: Kulmala SM, J Med Virol 2007; 79: 771
Belgium	Arbyn M, Cancer Epidemiol Biomarkers Prev 2009; 18: 321 ǀ Baay MF, Eur J Gynaecol Oncol 2001; 22: 204 ǀ Beerens E, Cytopathology 2005; 16: 199 ǀ Depuydt CE, Br J Cancer 2003; 88: 560, Contributing studies: Arbyn M, Cancer Epidemiol Biomarkers Prev 2009; 18: 321 ǀ Baay MF, Eur J Gynaecol Oncol 2001; 22: 204 ǀ Beerens E, Cytopathology 2005; 16: 199 ǀ Depuydt CE, Br J Cancer 2003; 88: 560
Croatia	Grce M, Anticancer Res 2001; 21: 579 ǀ Grce M, J Clin Microbiol 2004; 42: 1341, Contributing studies: Grce M, Anticancer Res 2001; 21: 579 ǀ Grce M, J Clin Microbiol 2004; 42: 1341
Czechia	Tachezy R, PLoS ONE 2011; 6: e21913, Contributing studies: Tachezy R, PLoS ONE 2011; 6: e21913
Denmark	Bonde J, BMC Infect Dis 2014; 14: 413 ǀ Hording U, Eur J Obstet Gynecol Reprod Biol 1995; 62: 49 ǀ Kirschner B, Acta Obstet Gynecol Scand 2013; 92: 1032 ǀ Kjaer SK, Int J Cancer 2008; 123: 1864 ǀ Kjær SK, Cancer Causes Control 2014; 25: 179 ǀ Sebbelov AM, Res Virol 1994; 145: 83 ǀ Thomsen LT, Int J Cancer 2015; 137: 193, Contributing studies: Bonde J, BMC Infect Dis 2014; 14: 413 ǀ Hording U, Eur J Obstet Gynecol Reprod Biol 1995; 62: 49 ǀ Kirschner B, Acta Obstet Gynecol Scand 2013; 92: 1032 ǀ Kjaer SK, Int J Cancer 2008; 123: 1864 ǀ Kjær SK, Cancer Causes Control 2014; 25: 179 ǀ Sebbelov AM, Res Virol 1994; 145: 83 ǀ Thomsen LT, Int J Cancer 2015; 137: 193
France	Monsonego J, Int J STD AIDS 2008; 19: 385 ǀ Prétet JL, Int J Cancer 2008; 122: 424 ǀ Vaucel E, Arch Gynecol Obstet 2011; 284: 989, Contributing studies: Monsonego J, Int J STD AIDS 2008; 19: 385 ǀ Prétet JL, Int J Cancer 2008; 122: 424 ǀ Vaucel E, Arch Gynecol Obstet 2011; 284: 989

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Country	Study
Germany	de Jonge M, Acta Cytol 2013; 57: 591 ∣ Klug SJ, J Med Virol 2007; 79: 616 ∣ Merkelbach-Bruse S, Diagn Mol Pathol 1999; 8: 32 ∣ Meyer T, Int J Gynecol Cancer 2001; 11: 198 ∣ Nindl I, Int J Gynecol Pathol 1997; 16: 197 ∣ Nindl I, J Clin Pathol 1999; 52: 17, Contributing studies: de Jonge M, Acta Cytol 2013; 57: 591 ∣ Klug SJ, J Med Virol 2007; 79: 616 ∣ Merkelbach-Bruse S, Diagn Mol Pathol 1999; 8: 32 ∣ Meyer T, Int J Gynecol Cancer 2001; 11: 198 ∣ Nindl I, Int J Gynecol Pathol 1997; 16: 197 ∣ Nindl I, J Clin Pathol 1999; 52: 17
Greece	Agorastos T, Eur J Obstet Gynecol Reprod Biol 2005; 121: 99 ∣ Argyri E, BMC Infect Dis 2013; 13: 53 ∣ Daponte A, J Clin Virol 2006; 36: 189 ∣ Kroupis C, Epidemiol Infect 2007; 135: 943 ∣ Labropoulou V, Sex Transm Dis 1997; 24: 469 ∣ Panotopoulou E, J Med Virol 2007; 79: 1898 ∣ Paraskevaidis E, Gynecol Oncol 2001; 82: 355 ∣ Tsiodras S, Clin Microbiol Infect 2011; 17: 1185, Contributing studies: Agorastos T, Eur J Obstet Gynecol Reprod Biol 2005; 121: 99 ∣ Argyri E, BMC Infect Dis 2013; 13: 53 ∣ Daponte A, J Clin Virol 2006; 36: 189 ∣ Kroupis C, Epidemiol Infect 2007; 135: 943 ∣ Labropoulou V, Sex Transm Dis 1997; 24: 469 ∣ Panotopoulou E, J Med Virol 2007; 79: 1898 ∣ Paraskevaidis E, Gynecol Oncol 2001; 82: 355 ∣ Tsiodras S, Clin Microbiol Infect 2011; 17: 1185
Hungary	Szoke K, J Med Virol 2003; 71: 585, Contributing studies: Szoke K, J Med Virol 2003; 71: 585
Iceland	Sigurdsson K, Int J Cancer 2007; 121: 2682, Contributing studies: Sigurdsson K, Int J Cancer 2007; 121: 2682
Ireland	Butler D, J Pathol 2000; 192: 502 ∣ Keegan H, J Virol Methods 2014; 201: 93 ∣ Murphy N, J Clin Pathol 2003; 56: 56 ∣ O'Leary JJ, J Clin Pathol 1998; 51: 576, Contributing studies: Butler D, J Pathol 2000; 192: 502 ∣ Keegan H, J Virol Methods 2014; 201: 93 ∣ Murphy N, J Clin Pathol 2003; 56: 56 ∣ O'Leary JJ, J Clin Pathol 1998; 51: 576
Italy	Agarossi A, J Med Virol 2009; 81: 529 ∣ Capra G, Virus Res 2008; 133: 195 ∣ Carozzi F, J Clin Virol 2014; 60: 257 ∣ Carozzi FM, Cancer Epidemiol Biomarkers Prev 2010; 19: 2389 ∣ Gargiulo F, Virus Res 2007; 125: 176 ∣ Giorgi Rossi P, BMC Infect Dis 2010; 10: 214 ∣ Laconi S, Pathologica 2000; 92: 524 ∣ Sandri MT, J Med Virol 2009; 81: 271 ∣ Spinillo A, J Med Virol 2014; 86: 1145 ∣ Tornesello ML, J Med Virol 2006; 78: 1663 ∣ Venturoli S, J Med Virol 2008; 80: 1434 ∣ Zerbini M, J Clin Pathol 2001; 54: 377, Contributing studies: Agarossi A, J Med Virol 2009; 81: 529 ∣ Capra G, Virus Res 2008; 133: 195 ∣ Carozzi F, J Clin Virol 2014; 60: 257 ∣ Carozzi FM, Cancer Epidemiol Biomarkers Prev 2010; 19: 2389 ∣ Gargiulo F, Virus Res 2007; 125: 176 ∣ Giorgi Rossi P, BMC Infect Dis 2010; 10: 214 ∣ Laconi S, Pathologica 2000; 92: 524 ∣ Sandri MT, J Med Virol 2009; 81: 271 ∣ Spinillo A, J Med Virol 2014; 86: 1145 ∣ Tornesello ML, J Med Virol 2006; 78: 1663 ∣ Venturoli S, J Med Virol 2008; 80: 1434 ∣ Zerbini M, J Clin Pathol 2001; 54: 377
Latvia	Kulmala SM, J Med Virol 2007; 79: 771, Contributing studies: Kulmala SM, J Med Virol 2007; 79: 771
Lithuania	Gudleviciene Z, Medicina (Kaunas) 2005; 41: 910 ∣ Simanaviciene V, J Med Virol 2014, Contributing studies: Gudleviciene Z, Medicina (Kaunas) 2005; 41: 910 ∣ Simanaviciene V, J Med Virol 2014
Netherlands	Bulkmans NW, Int J Cancer 2005; 117: 177 ∣ Cornelissen MT, Virchows Arch, B, Cell Pathol 1992; 62: 167 ∣ Prinsen CF, BJOG 2007; 114: 951 ∣ Reesink-Peters N, Eur J Obstet Gynecol Reprod Biol 2001; 98: 199 ∣ Tang N, J Clin Virol 2009; 45 Suppl 1: S25 ∣ van Duin M, Int J Cancer 2003; 105: 577, Contributing studies: Bulkmans NW, Int J Cancer 2005; 117: 177 ∣ Cornelissen MT, Virchows Arch, B, Cell Pathol 1992; 62: 167 ∣ Prinsen CF, BJOG 2007; 114: 951 ∣ Reesink-Peters N, Eur J Obstet Gynecol Reprod Biol 2001; 98: 199 ∣ Tang N, J Clin Virol 2009; 45 Suppl 1: S25 ∣ van Duin M, Int J Cancer 2003; 105: 577
Norway	Kraus I, Br J Cancer 2004; 90: 1407 ∣ Molden T, Cancer Epidemiol Biomarkers Prev 2005; 14: 367 ∣ Roberts CC, J Clin Virol 2006; 36: 277 ∣ Sjoeborg KD, Gynecol Oncol 2010; 118: 29, Contributing studies: Kraus I, Br J Cancer 2004; 90: 1407 ∣ Molden T, Cancer Epidemiol Biomarkers Prev 2005; 14: 367 ∣ Roberts CC, J Clin Virol 2006; 36: 277 ∣ Sjoeborg KD, Gynecol Oncol 2010; 118: 29
Portugal	Medeiros R, Eur J Cancer Prev 2005; 14: 467 ∣ Nobre RJ, J Med Virol 2010; 82: 1024 ∣ Pista A, Clin Microbiol Infect 2011; 17: 941 ∣ Pista A, Int J Gynecol Cancer 2013; 23: 500, Contributing studies: Medeiros R, Eur J Cancer Prev 2005; 14: 467 ∣ Nobre RJ, J Med Virol 2010; 82: 1024 ∣ Pista A, Clin Microbiol Infect 2011; 17: 941 ∣ Pista A, Int J Gynecol Cancer 2013; 23: 500
Romania	Anton G, APMIS 2011; 119: 1 ∣ Ursu RG, Virol J 2011; 8: 558, Contributing studies: Anton G, APMIS 2011; 119: 1 ∣ Ursu RG, Virol J 2011; 8: 558
Russian Federation	Kulmala SM, J Med Virol 2007; 79: 771, Contributing studies: Kulmala SM, J Med Virol 2007; 79: 771
Slovenia	Kovanda A, Acta Dermatovenerol Alp Pannonica Adriat 2009; 18: 47, Contributing studies: Kovanda A, Acta Dermatovenerol Alp Pannonica Adriat 2009; 18: 47
Spain	Bosch FX, Cancer Epidemiol Biomarkers Prev 1993; 2: 415 ∣ Conesa-Zamora P, BMC Infect Dis 2009; 9: 124 ∣ Darwich L, Int J Gynecol Cancer 2011; 21: 1486 ∣ de Méndez MT, Acta Cytol 2009; 53: 540 ∣ de Oña M, J Med Virol 2010; 82: 597 ∣ García-Sierra N, J Clin Microbiol 2009; 47: 2165 ∣ Herraez-Hernandez E, J Virol Methods 2013; 193: 9 ∣ Martín P, BMC Infect Dis 2011; 11: 316 ∣ Muñoz N, Int J Cancer 1992; 52: 743, Contributing studies: Bosch FX, Cancer Epidemiol Biomarkers Prev 1993; 2: 415 ∣ Conesa-Zamora P, BMC Infect Dis 2009; 9: 124 ∣ Darwich L, Int J Gynecol Cancer 2011; 21: 1486 ∣ de Méndez MT, Acta Cytol 2009; 53: 540 ∣ de Oña M, J Med Virol 2010; 82: 597 ∣ García-Sierra N, J Clin Microbiol 2009; 47: 2165 ∣ Herraez-Hernandez E, J Virol Methods 2013; 193: 9 ∣ Martín P, BMC Infect Dis 2011; 11: 316 ∣ Muñoz N, Int J Cancer 1992; 52: 743
Sweden	Andersson S, Br J Cancer 2005; 92: 2195 ∣ Kalantari M, Hum Pathol 1997; 28: 899 ∣ Zehbe I, Virchows Arch 1996; 428: 151, Contributing studies: Andersson S, Br J Cancer 2005; 92: 2195 ∣ Kalantari M, Hum Pathol 1997; 28: 899 ∣ Zehbe I, Virchows Arch 1996; 428: 151
Switzerland	Dobec M, J Med Virol 2011; 83: 1370, Contributing studies: Dobec M, J Med Virol 2011; 83: 1370
HPV type distribution for cervical low grade squamous intraepithelial lesions	

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Country	Study
General sources	Based on meta-analysis performed by IARC's Infections and Cancer Epidemiology Group up to November 2011, the ICO HPV Information Centre has updated data until June 2015. Reference publications: 1) Guan P, Int J Cancer 2012;131:2349 2) Clifford GM, Cancer Epidemiol Biomarkers Prev 2005;14:1157
Belarus	Kulmala SM, J Med Virol 2007; 79: 771, Contributing studies: Kulmala SM, J Med Virol 2007; 79: 771
Belgium	Arbyn M, Cancer Epidemiol Biomarkers Prev 2009; 18: 321 ǀ Baay MF, Eur J Gynaecol Oncol 2001; 22: 204 ǀ Beerens E, Cytopathology 2005; 16: 199 ǀ Depuydt CE, Br J Cancer 2003; 88: 560 ǀ Weyn C, Cancer Epidemiol 2013; 37: 457, Contributing studies: Arbyn M, Cancer Epidemiol Biomarkers Prev 2009; 18: 321 ǀ Baay MF, Eur J Gynaecol Oncol 2001; 22: 204 ǀ Beerens E, Cytopathology 2005; 16: 199 ǀ Depuydt CE, Br J Cancer 2003; 88: 560 ǀ Weyn C, Cancer Epidemiol 2013; 37: 457
Croatia	Grce M, Anticancer Res 2001; 21: 579 ǀ Grce M, Eur J Epidemiol 1997; 13: 645 ǀ Grce M, J Clin Microbiol 2004; 42: 1341, Contributing studies: Grce M, Anticancer Res 2001; 21: 579 ǀ Grce M, Eur J Epidemiol 1997; 13: 645 ǀ Grce M, J Clin Microbiol 2004; 42: 1341
Czechia	Tachezy R, PLoS ONE 2011; 6: e21913, Contributing studies: Tachezy R, PLoS ONE 2011; 6: e21913
Denmark	Hording U, Eur J Obstet Gynecol Reprod Biol 1995; 62: 49 ǀ Kjaer SK, Int J Cancer 2008; 123: 1864 ǀ Kjær SK, Cancer Causes Control 2014; 25: 179, Contributing studies: Hording U, Eur J Obstet Gynecol Reprod Biol 1995; 62: 49 ǀ Kjaer SK, Int J Cancer 2008; 123: 1864 ǀ Kjær SK, Cancer Causes Control 2014; 25: 179
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Germany	de Jonge M, Acta Cytol 2013; 57: 591 ǀ Klug SJ, J Med Virol 2007; 79: 616 ǀ Merkelbach-Bruse S, Diagn Mol Pathol 1999; 8: 32 ǀ Meyer T, Int J Gynecol Cancer 2001; 11: 198 ǀ Nindl I, J Clin Pathol 1999; 52: 17, Contributing studies: de Jonge M, Acta Cytol 2013; 57: 591 ǀ Klug SJ, J Med Virol 2007; 79: 616 ǀ Merkelbach-Bruse S, Diagn Mol Pathol 1999; 8: 32 ǀ Meyer T, Int J Gynecol Cancer 2001; 11: 198 ǀ Nindl I, J Clin Pathol 1999; 52: 17
Greece	Adamopoulou M, Anticancer Res 2009; 29: 3401 ǀ Argyri E, BMC Infect Dis 2013; 13: 53 ǀ Kroupis C, Epidemiol Infect 2007; 135: 943 ǀ Labropoulou V, Sex Transm Dis 1997; 24: 469 ǀ Mammas IN, Oncol Rep 2008; 20: 141 ǀ Panotopoulou E, J Med Virol 2007; 79: 1898 ǀ Tsiodras S, Clin Microbiol Infect 2011; 17: 1185, Contributing studies: Adamopoulou M, Anticancer Res 2009; 29: 3401 ǀ Argyri E, BMC Infect Dis 2013; 13: 53 ǀ Kroupis C, Epidemiol Infect 2007; 135: 943 ǀ Labropoulou V, Sex Transm Dis 1997; 24: 469 ǀ Mammas IN, Oncol Rep 2008; 20: 141 ǀ Panotopoulou E, J Med Virol 2007; 79: 1898 ǀ Tsiodras S, Clin Microbiol Infect 2011; 17: 1185
Ireland	Butler D, J Pathol 2000; 192: 502 ǀ Keegan H, J Virol Methods 2014; 201: 93 ǀ Murphy N, J Clin Pathol 2003; 56: 56, Contributing studies: Butler D, J Pathol 2000; 192: 502 ǀ Keegan H, J Virol Methods 2014; 201: 93 ǀ Murphy N, J Clin Pathol 2003; 56: 56
Italy	Agarossi A, J Med Virol 2009; 81: 529 ǀ Agodi A, Int J Gynecol Cancer 2009; 19: 1094 ǀ Astori G, Virus Res 1997; 50: 57 ǀ Capra G, Virus Res 2008; 133: 195 ǀ Chironna M, J Prev Med Hyg 2010; 51: 139 ǀ Gargiulo F, Virus Res 2007; 125: 176 ǀ Giorgi Rossi P, BMC Infect Dis 2010; 10: 214 ǀ Laconi S, Pathologica 2000; 92: 524 ǀ Menegazzi P, Infect Dis Obstet Gynecol 2009; 2009: 198425 ǀ Sandri MT, J Med Virol 2009; 81: 271 ǀ Spinillo A, Gynecol Oncol 2009; 113: 115 ǀ Spinillo A, J Med Virol 2014; 86: 1145 ǀ Tornesello ML, J Med Virol 2006; 78: 1663 ǀ Venturoli S, J Clin Virol 2002; 25: 177 ǀ Venturoli S, J Med Virol 2008; 80: 1434 ǀ Voglino G, Pathologica 2000; 92: 516 ǀ Zerbini M, J Clin Pathol 2001; 54: 377, Contributing studies: Agarossi A, J Med Virol 2009; 81: 529 ǀ Agodi A, Int J Gynecol Cancer 2009; 19: 1094 ǀ Astori G, Virus Res 1997; 50: 57 ǀ Capra G, Virus Res 2008; 133: 195 ǀ Chironna M, J Prev Med Hyg 2010; 51: 139 ǀ Gargiulo F, Virus Res 2007; 125: 176 ǀ Giorgi Rossi P, BMC Infect Dis 2010; 10: 214 ǀ Laconi S, Pathologica 2000; 92: 524 ǀ Menegazzi P, Infect Dis Obstet Gynecol 2009; 2009: 198425 ǀ Sandri MT, J Med Virol 2009; 81: 271 ǀ Spinillo A, Gynecol Oncol 2009; 113: 115 ǀ Spinillo A, J Med Virol 2014; 86: 1145 ǀ Tornesello ML, J Med Virol 2006; 78: 1663 ǀ Venturoli S, J Clin Virol 2002; 25: 177 ǀ Venturoli S, J Med Virol 2008; 80: 1434 ǀ Voglino G, Pathologica 2000; 92: 516 ǀ Zerbini M, J Clin Pathol 2001; 54: 377
Latvia	Kulmala SM, J Med Virol 2007; 79: 771, Contributing studies: Kulmala SM, J Med Virol 2007; 79: 771
Lithuania	Gudleviciene Z, Medicina (Kaunas) 2005; 41: 910, Contributing studies: Gudleviciene Z, Medicina (Kaunas) 2005; 41: 910
Netherlands	Bollen LJ, Am J Obstet Gynecol 1997; 177: 548 ǀ Prinsen CF, BJOG 2007; 114: 951 ǀ Reesink-Peters N, Eur J Obstet Gynecol Reprod Biol 2001; 98: 199, Contributing studies: Bollen LJ, Am J Obstet Gynecol 1997; 177: 548 ǀ Prinsen CF, BJOG 2007; 114: 951 ǀ Reesink-Peters N, Eur J Obstet Gynecol Reprod Biol 2001; 98: 199
Norway	Molden T, Cancer Epidemiol Biomarkers Prev 2005; 14: 367 ǀ Roberts CC, J Clin Virol 2006; 36: 277, Contributing studies: Molden T, Cancer Epidemiol Biomarkers Prev 2005; 14: 367 ǀ Roberts CC, J Clin Virol 2006; 36: 277
Portugal	Medeiros R, Eur J Cancer Prev 2005; 14: 467 ǀ Nobre RJ, J Med Virol 2010; 82: 1024, Contributing studies: Medeiros R, Eur J Cancer Prev 2005; 14: 467 ǀ Nobre RJ, J Med Virol 2010; 82: 1024
Romania	Anton G, APMIS 2011; 119: 1 ǀ Ursu RG, Virol J 2011; 8: 558, Contributing studies: Anton G, APMIS 2011; 119: 1 ǀ Ursu RG, Virol J 2011; 8: 558
Russian Federation	Kulmala SM, J Med Virol 2007; 79: 771, Contributing studies: Kulmala SM, J Med Virol 2007; 79: 771

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Country	Study
Spain	Conesa-Zamora P, BMC Infect Dis 2009; 9: 124 ❘ de Méndez MT, Acta Cytol 2009; 53: 540 ❘ de Oña M, J Med Virol 2010; 82: 597 ❘ Doménech-Peris A, Gynecol Obstet Invest 2010; 70: 113 ❘ García-Sierra N, J Clin Microbiol 2009; 47: 2165 ❘ Herraez-Hernandez E, J Virol Methods 2013; 193: 9 ❘ Martín P, BMC Infect Dis 2011; 11: 316, Contributing studies: Conesa-Zamora P, BMC Infect Dis 2009; 9: 124 ❘ de Méndez MT, Acta Cytol 2009; 53: 540 ❘ de Oña M, J Med Virol 2010; 82: 597 ❘ Doménech-Peris A, Gynecol Obstet Invest 2010; 70: 113 ❘ García-Sierra N, J Clin Microbiol 2009; 47: 2165 ❘ Herraez-Hernandez E, J Virol Methods 2013; 193: 9 ❘ Martín P, BMC Infect Dis 2011; 11: 316
Sweden	Andersson S, Br J Cancer 2005; 92: 2195 ❘ Brismar-Wendel S, Br J Cancer 2009; 101: 511 ❘ Kalantari M, Hum Pathol 1997; 28: 899 ❘ Söderlund-Strand A, Am J Obstet Gynecol 2011; 205: 145.e1 ❘ Zehbe I, Virchows Arch 1996; 428: 151, Contributing studies: Andersson S, Br J Cancer 2005; 92: 2195 ❘ Brismar-Wendel S, Br J Cancer 2009; 101: 511 ❘ Kalantari M, Hum Pathol 1997; 28: 899 ❘ Söderlund-Strand A, Am J Obstet Gynecol 2011; 205: 145.e1 ❘ Zehbe I, Virchows Arch 1996; 428: 151
Switzerland	Dobec M, J Med Virol 2011; 83: 1370, Contributing studies: Dobec M, J Med Virol 2011; 83: 1370
HPV type distribution for invasive anal cancer	
General sources	Based on systematic reviews (up to 2008) performed by ICO for the IARC Monograph on the Evaluation of Carcinogenic Risks to Humans volume 100B and IARC's Infections and Cancer Epidemiology Group. The ICO HPV Information Centre has updated data until June 2015. Reference publications: 1) Bouvard V, Lancet Oncol 2009;10:321 2) De Vuyst H, Int J Cancer 2009;124:1626
Bosnia and Herzegovina	Alemany L, Int J Cancer 2015; 136: 98
Czechia	Alemany L, Int J Cancer 2015; 136: 98 ❘ Tachezy R, PLoS ONE 2011; 6: e21913
Denmark	Serup-Hansen E, J Clin Oncol 2014; 32: 1812
France	Abramowitz L, Int J Cancer 2011; 129: 433 ❘ Alemany L, Int J Cancer 2015; 136: 98 ❘ Valmary-Degano S, Hum Pathol 2013; 44: 992 ❘ Vincent-Salomon A, Mod Pathol 1996; 9: 614
Germany	Alemany L, Int J Cancer 2015; 136: 98 ❘ Rödel F, Int J Cancer 2015; 136: 278 ❘ Varnai AD, Int J Colorectal Dis 2006; 21: 135
Italy	Indinnimeo M, J Exp Clin Cancer Res 1999; 18: 47
Poland	Alemany L, Int J Cancer 2015; 136: 98
Portugal	Alemany L, Int J Cancer 2015; 136: 98
Slovenia	Alemany L, Int J Cancer 2015; 136: 98
Spain	Alemany L, Int J Cancer 2015; 136: 98
Sweden	Laytragoon-Lewin N, Anticancer Res 2007; 27: 4473
HPV type distribution for anal intraepithelial neoplasia (AIN)	
General sources	Based on systematic reviews (up to 2008) performed by ICO for the IARC Monograph on the Evaluation of Carcinogenic Risks to Humans volume 100B and IARC's Infections and Cancer Epidemiology Group. The ICO HPV Information Centre has updated data until June 2015. Reference publications: 1) Bouvard V, Lancet Oncol 2009;10:321 2) De Vuyst H, Int J Cancer 2009;124:1626
Bosnia and Herzegovina	Alemany L, Int J Cancer 2015; 136: 98
Czechia	Alemany L, Int J Cancer 2015; 136: 98
France	Alemany L, Int J Cancer 2015; 136: 98
Germany	Alemany L, Int J Cancer 2015; 136: 98 ❘ Hampl M, Obstet Gynecol 2006; 108: 1361 ❘ Silling S, J Clin Virol 2012; 53: 325 ❘ Varnai AD, Int J Colorectal Dis 2006; 21: 135 ❘ Wieland U, Arch Dermatol 2006; 142: 1438
Italy	Tanzi E, Vaccine 2009; 27 Suppl 1: A17
Netherlands	Richel O, J Infect Dis 2014; 210: 111
Poland	Alemany L, Int J Cancer 2015; 136: 98
Portugal	Alemany L, Int J Cancer 2015; 136: 98
Slovenia	Alemany L, Int J Cancer 2015; 136: 98
Spain	Alemany L, Int J Cancer 2015; 136: 98 ❘ García-Espinosa B, Diagn Pathol 2013; 8: 204 ❘ Sirera G, AIDS 2013; 27: 951 ❘ Torres M, J Clin Microbiol 2013; 51: 3512
HPV type distribution for invasive vulvar cancer	
General sources	Based on systematic reviews (up to 2008) performed by ICO for the IARC Monograph on the Evaluation of Carcinogenic Risks to Humans volume 100B and IARC's Infections and Cancer Epidemiology Group. The ICO HPV Information Centre has updated data until June 2015. Reference publications: 1) Bouvard V, Lancet Oncol 2009;10:321 2) De Vuyst H, Int J Cancer 2009;124:1626
Austria	de Sanjosé S, Eur J Cancer 2013; 49: 3450
Belarus	de Sanjosé S, Eur J Cancer 2013; 49: 3450
Bosnia and Herzegovina	de Sanjosé S, Eur J Cancer 2013; 49: 3450
Czechia	de Sanjosé S, Eur J Cancer 2013; 49: 3450 ❘ Tachezy R, PLoS ONE 2011; 6: e21913
Denmark	Bryndorf T, Cytogenet Genome Res 2004; 106: 43 ❘ Hørding U, Gynecol Oncol 1994; 52: 241 ❘ Hørding U, Int J Cancer 1993; 55: 394 ❘ Madsen BS, Int J Cancer 2008; 122: 2827
Finland	Iwasawa A, Obstet Gynecol 1997; 89: 81
France	de Sanjosé S, Eur J Cancer 2013; 49: 3450
Germany	Choschzick M, Int J Gynecol Pathol 2011; 30: 497 ❘ de Sanjosé S, Eur J Cancer 2013; 49: 3450 ❘ Hampl M, Obstet Gynecol 2006; 108: 1361 ❘ Milde-Langosch K, Int J Cancer 1995; 63: 639 ❘ Reuschenbach M, J Low Genit Tract Dis 2013; 17: 289 ❘ Riethdorf S, Hum Pathol 2004; 35: 1477
Greece	de Sanjosé S, Eur J Cancer 2013; 49: 3450
Italy	Bonvicini F, J Med Virol 2005; 77: 102 ❘ de Sanjosé S, Eur J Cancer 2013; 49: 3450

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Country	Study
Netherlands	Kagie MJ, Gynecol Oncol 1997; 67: 178 ǀ Trietsch MD, Br J Cancer 2013; 109: 2259 ǀ van de Nieuwenhof HP, Cancer Epidemiol Biomarkers Prev 2009; 18: 2061 ǀ van der Avoort IA, Int J Gynecol Pathol 2006; 25: 22
Poland	Bujko M, Acta Obstet Gynecol Scand 2012; 91: 391 ǀ de Sanjosé S, Eur J Cancer 2013; 49: 3450 ǀ Liss J, Ginekol Pol 1998; 69: 330
Portugal	de Sanjosé S, Eur J Cancer 2013; 49: 3450
Spain	Alonso I, Gynecol Oncol 2011; 122: 509 ǀ de Sanjosé S, Eur J Cancer 2013; 49: 3450 ǀ Guerrero D, Int J Cancer 2011; 128: 2853 ǀ Lerma E, Int J Gynecol Pathol 1999; 18: 191
Sweden	Larsson GL, Int J Gynecol Cancer 2012; 22: 1413 ǀ Lindell G, Gynecol Oncol 2010; 117: 312
HPV type distribution for vulvar intraepithelial neoplasia (VIN)	
General sources	Based on systematic reviews (up to 2008) performed by ICO for the IARC Monograph on the Evaluation of Carcinogenic Risks to Humans volume 100B and IARC's Infections and Cancer Epidemiology Group. The ICO HPV Information Centre has updated data until June 2015. Reference publications: 1) Bouvard V, Lancet Oncol 2009;10:321 2) De Vuyst H, Int J Cancer 2009;124:1626
Austria	de Sanjosé S, Eur J Cancer 2013; 49: 3450
Belarus	de Sanjosé S, Eur J Cancer 2013; 49: 3450
Bosnia and Herzegovina	de Sanjosé S, Eur J Cancer 2013; 49: 3450
Czechia	de Sanjosé S, Eur J Cancer 2013; 49: 3450 ǀ Tachezy R, PLoS ONE 2011; 6: e21913
Denmark	Junge J, APMIS 1995; 103: 501
France	de Sanjosé S, Eur J Cancer 2013; 49: 3450
Germany	de Sanjosé S, Eur J Cancer 2013; 49: 3450 ǀ Hampl M, Obstet Gynecol 2006; 108: 1361 ǀ Riethdorf S, Hum Pathol 2004; 35: 1477
Greece	de Sanjosé S, Eur J Cancer 2013; 49: 3450 ǀ Tsimplaki E, J Oncol 2012; 2012: 893275
Italy	Bonvicini F, J Med Virol 2005; 77: 102 ǀ de Sanjosé S, Eur J Cancer 2013; 49: 3450
Netherlands	van Beurden M, Cancer 1995; 75: 2879 ǀ van der Avoort IA, Int J Gynecol Pathol 2006; 25: 22 ǀ van Esch EM, Int J Cancer 2014; 135: 830
Poland	de Sanjosé S, Eur J Cancer 2013; 49: 3450
Portugal	de Sanjosé S, Eur J Cancer 2013; 49: 3450
Spain	de Sanjosé S, Eur J Cancer 2013; 49: 3450 ǀ Lerma E, Int J Gynecol Pathol 1999; 18: 191
HPV type distribution for invasive vaginal cancer	
General sources	Based on systematic reviews (up to 2008) performed by ICO for the IARC Monograph on the Evaluation of Carcinogenic Risks to Humans volume 100B and IARC's Infections and Cancer Epidemiology Group. The ICO HPV Information Centre has updated data until June 2015. Reference publications: 1) Bouvard V, Lancet Oncol 2009;10:321 2) De Vuyst H, Int J Cancer 2009;124:1626
Austria	Alemany L, Eur J Cancer 2014; 50: 2846
Belarus	Alemany L, Eur J Cancer 2014; 50: 2846
Czechia	Alemany L, Eur J Cancer 2014; 50: 2846
Denmark	Madsen BS, Int J Cancer 2008; 122: 2827
France	Alemany L, Eur J Cancer 2014; 50: 2846
Germany	Alemany L, Eur J Cancer 2014; 50: 2846
Greece	Alemany L, Eur J Cancer 2014; 50: 2846
Poland	Alemany L, Eur J Cancer 2014; 50: 2846
Portugal	Ferreira M, Mod Pathol 2008; 21: 968
Spain	Alemany L, Eur J Cancer 2014; 50: 2846 ǀ Fuste V, Histopathology 2010; 57: 907
Sweden	Larsson GL, Gynecol Oncol 2013; 129: 406
HPV type distribution for vaginal intraepithelial neoplasia (VAIN)	
General sources	Based on systematic reviews (up to 2008) performed by ICO for the IARC Monograph on the Evaluation of Carcinogenic Risks to Humans volume 100B and IARC's Infections and Cancer Epidemiology Group. The ICO HPV Information Centre has updated data until June 2015. Reference publications: 1) Bouvard V, Lancet Oncol 2009;10:321 2) De Vuyst H, Int J Cancer 2009;124:1626
Austria	Alemany L, Eur J Cancer 2014; 50: 2846
Belarus	Alemany L, Eur J Cancer 2014; 50: 2846
Czechia	Alemany L, Eur J Cancer 2014; 50: 2846
France	Alemany L, Eur J Cancer 2014; 50: 2846
Germany	Alemany L, Eur J Cancer 2014; 50: 2846 ǀ Hampl M, Obstet Gynecol 2006; 108: 1361
Greece	Alemany L, Eur J Cancer 2014; 50: 2846 ǀ Tsimplaki E, J Oncol 2012; 2012: 893275
Italy	Frega A, Cancer Lett 2007; 249: 235
Poland	Alemany L, Eur J Cancer 2014; 50: 2846
Spain	Alemany L, Eur J Cancer 2014; 50: 2846
HPV type distribution for invasive penile cancer	
General sources	The ICO HPV Information Centre has updated data until June 2015. Reference publications (up to 2008): 1) Bouvard V, Lancet Oncol 2009;10:321 2) Miralles-Guri C,J Clin Pathol 2009;62:870
Austria	Mannweiler S, J Am Acad Dermatol 2013; 69: 73, Aumayr K, Int J Immunopathol Pharmacol 2013; 26: 611 ǀ Mannweiler S, J Am Acad Dermatol 2013; 69: 73
Belgium	D'Hauwers KW, Vaccine 2012; 30: 6573
Denmark	Krustrup D, Int J Exp Pathol 2009; 90: 182

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Country	Study
France	Humbey O, Eur J Cancer 2003; 39: 684, Humbey O, Eur J Cancer 2003; 39: 684 ∣ Perceau G, Br J Dermatol 2003; 148: 934
Germany	Perceau G, Br J Dermatol 2003; 148: 934 ∣ Poetsch M, Virchows Arch 2011; 458: 221, Poetsch M, Virchows Arch 2011; 458: 221
Italy	Gentile V, Int J Immunopathol Pharmacol 2006; 19: 209 ∣ Tornesello ML, Cancer Lett 2008; 269: 159, Barzon L, Am J Pathol 2014; 184: 3376 ∣ Gentile V, Int J Immunopathol Pharmacol 2006; 19: 209 ∣ Tornesello ML, Cancer Lett 2008; 269: 159
Netherlands	Heideman DA, J Clin Oncol 2007; 25: 4550, Heideman DA, J Clin Oncol 2007; 25: 4550 ∣ Lont AP, Int J Cancer 2006; 119: 1078
Spain	Ferrándiz-Pulido C, J Am Acad Dermatol 2013; 68: 73 ∣ Guerrero D, BJU Int 2008; 102: 747 ∣ Pascual A, Histol Histopathol 2007; 22: 177
Sweden	Kirrander P, BJU Int 2011; 108: 355
HPV type distribution for penile intraepithelial neoplasia (PEIN)	
General sources	The ICO HPV Information Centre has updated data until June 2014. Reference publication (up to 2008): Bouvard V, Lancet Oncol 2009;10:321
Austria	Mannweiler S, J Am Acad Dermatol 2013; 69: 73
Belarus	Gudleviciene Z, J Med Virol 2014; 86: 531
Belgium	D'Hauwers KW, Vaccine 2012; 30: 6573, Duray A, Laryngoscope 2012; 122: 1558
Czechia	Ribeiro KB, Int J Epidemiol 2011; 40: 489
Finland	Koskinen WJ, Int J Cancer 2003; 107: 401 ∣ Mork J, N Engl J Med 2001; 344: 1125
Germany	Klussmann JP, Cancer 2001; 92: 2875 ∣ KrÃ¼ger M, J Craniomaxillofac Surg 2014; 42: 1506 ∣ Ostwald C, Med Microbiol Immunol 2003; 192: 145 ∣ Weiss D, Head Neck 2011; 33: 856
Greece	Aggelopoulou EP, Anticancer Res 1999; 19: 1391 ∣ Blioumi E, Oral Oncol 2014; 50: 840 ∣ Romanitan M, Anticancer Res 2008; 28: 2077
Hungary	Nemes JA, Oral Surg Oral Med Oral Pathol Oral Radiol Endod 2006; 102: 344 ∣ Szarka K, Oral Microbiol Immunol 2009; 24: 314
Ireland	Herrero R, J Natl Cancer Inst 2003; 95: 1772
Italy	Badaracco G, Anticancer Res 2000; 20: 1301 ∣ Badaracco G, Oncol Rep 2007; 17: 931 ∣ Herrero R, J Natl Cancer Inst 2003; 95: 1772 ∣ Rittà M, Head Neck 2009; 31: 318 ∣ Scapoli L, Mod Pathol 2009; 22: 366
Netherlands	Braakhuis BJ, J Natl Cancer Inst 2004; 96: 998 ∣ Cruz IB, Eur J Cancer, B, Oral Oncol 1996; 32B: 55 ∣ van Monsjou HS, Int J Cancer 2012; 130: 1806
Norway	Matzow T, Acta Oncol 1998; 37: 73 ∣ Mork J, N Engl J Med 2001; 344: 1125
Poland	Herrero R, J Natl Cancer Inst 2003; 95: 1772 ∣ Ribeiro KB, Int J Epidemiol 2011; 40: 489 ∣ Snietura M, Pol J Pathol 2010; 61: 133
Romania	Ribeiro KB, Int J Epidemiol 2011; 40: 489
Russian Federation	Ribeiro KB, Int J Epidemiol 2011; 40: 489
Serbia	Kozomara R, J Craniomaxillofac Surg 2005; 33: 342
Slovakia	Ribeiro KB, Int J Epidemiol 2011; 40: 489
Slovenia	Kansky AA, Acta Virol 2003; 47: 11
Spain	GarcÃa-de Marcos JA, Int J Oral Maxillofac Surg 2014; 43: 274 ∣ Herrero R, J Natl Cancer Inst 2003; 95: 1772 ∣ Llamas-MartÃnez S, Anticancer Res 2008; 28: 3733
Sweden	Kirrander P, BJU Int 2011; 108: 355 ∣ Wikström A, J Eur Acad Dermatol Venereol 2012; 26: 325, Dahlgren L, Int J Cancer 2004; 112: 1015 ∣ Mork J, N Engl J Med 2001; 344: 1125 ∣ Sand L, Anticancer Res 2000; 20: 1183, Wikström A, J Eur Acad Dermatol Venereol 2012; 26: 325
The anogenital prevalence of HPV-DNA in men: HPV in men	
General sources	Based on published systematic reviews, the ICO HPV Information Centre has updated data until October 2015. Reference publications: 1) Dunne EF, J Infect Dis 2006; 194: 1044 2) Smith JS, J Adolesc Health 2011; 48: 540 3) Olesen TB, Sex Transm Infect 2014; 90: 455 4) Hebnes JB, J Sex Med 2014; 11: 2630.
Croatia	Grce M, Anticancer Res 1996; 16: 1039 ∣ Vardas E, J Infect Dis 2011; 203: 58
Denmark	Hebnes JB, Sex Transm Dis 2015; 42: 463 ∣ Kjaer SK, Cancer Epidemiol Biomarkers Prev 2005; 14: 1528
Finland	Hippeläinen M, Sex Transm Dis 1993; 20: 321 ∣ Kero K, J Sex Med 2011; 8: 2522
Germany	Grussendorf-Conen EI, Arch Dermatol Res 1987; 279 Suppl: S73 ∣ Vardas E, J Infect Dis 2011; 203: 58
Italy	Lorenzon L, J Clin Virol 2014; 60: 264 ∣ Nasca MR, Int J Dermatol 2006; 45: 681
Spain	Franceschi S, Br J Cancer 2002; 86: 705 ∣ Vardas E, J Infect Dis 2011; 203: 58
The anogenital prevalence of HPV-DNA in men: HPV in special subgroups (HIV, MSM, etc)	
General sources	Based on published systematic reviews, the ICO HPV Information Centre has updated data until October 2015. Reference publications: 1) Dunne EF, J Infect Dis 2006; 194: 1044 2) Smith JS, J Adolesc Health 2011; 48: 540 3) Olesen TB, Sex Transm Infect 2014; 90: 455 4) Hebnes JB, J Sex Med 2014; 11: 2630.
Croatia	Goldstone S, J Infect Dis 2011; 203: 66
Denmark	Svare EI, Sex Transm Infect 2002; 78: 215
France	Aynaud O, Urology 2003; 61: 1098 ∣ Damay A, J Med Virol 2010; 82: 592 ∣ Philibert P, J Clin Med 2014; 3: 1386 ∣ Piketty C, Sex Transm Dis 2004; 31: 96

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Country	Study
Germany	Goldstone S, J Infect Dis 2011; 203: 66 ∣ Schneider A, J Urol 1988; 140: 1431 ∣ Wieland U, Int J Med Microbiol 2015; 305: 689
Greece	Hadjivassiliou M, Int J STD AIDS 2007; 18: 329
Ireland	Sadlier C, HIV Med 2014; 15: 499
Italy	Barzon L, J Med Virol 2010; 82: 1424 ∣ Benevolo M, J Med Virol 2008; 80: 1275 ∣ Chiarini F, Minerva Urol Nefrol 1998; 50: 225 ∣ Della Torre G, Am J Pathol 1992; 141: 1181 ∣ Dona MG, J Infect 2015; 71: 74 ∣ Garbuglia A, J Clin Virol 2015; 72: 49 ∣ Giovannelli L, J Clin Microbiol 2007; 45: 248 ∣ Orlando G, J Acquir Immune Defic Syndr 2008; 47: 129 ∣ Pierangeli A, AIDS 2008; 22: 1929 ∣ Sammarco ML, J Med Virol 2016; 88: 911
Netherlands	Bleeker MC, J Am Acad Dermatol 2002; 47: 351 ∣ Bleeker MC, Int J Cancer 2005; 113: 36 ∣ Bleeker MC, Clin Infect Dis 2005; 41: 612 ∣ van der Snoek EM, Sex Transm Dis 2003; 30: 639 ∣ Van Doornum GJ, Genitourin Med 1994; 70: 240 ∣ van Rijn VM, PLoS ONE 2014; 9: 133 ∣ Vriend HJ, PLoS ONE 2013; 8: 130 ∣ Welling CA, Sex Transm Dis 2015; 42: 297
Russian Federation	Wirtz AL, Euro Surveill 2015; 20: 23
Slovenia	Golob B, Biomed Res Int 2014; 2014: 117 ∣ Milosevic M, Cent Eur J Med 2010; 5: 698
Spain	Álvarez-Argüelles ME, PLoS ONE 2013; 8: 129 ∣ Franceschi S, Br J Cancer 2002; 86: 705 ∣ Goldstone S, J Infect Dis 2011; 203: 66 ∣ Hidalgo-Tenorio C, PLoS One 2015; 10: 120 ∣ Sendagorta E, Dis Colon Rectum 2014; 57: 475 ∣ Sendagorta E, J Med Virol 2015; 87: 1397 ∣ Torres M, J Clin Microbiol 2013; 51: 3512 ∣ Videla S, Sex Transm Dis 2013; 40: 03
Sweden	Kataoka A, J Med Virol 1991; 33: 159 ∣ Löwhagen GB, Int J STD AIDS 1999; 10: 615 ∣ Strand A, Genitourin Med 1993; 69: 446 ∣ Voog E, Int J STD AIDS 1997; 8: 772 ∣ Wikström A, Int J STD AIDS 1991; 2: 105 ∣ Wikström A, Int J STD AIDS 2000; 11: 80
HPV prevalence and type distribution in oral specimens collected from healthy population	
General sources	Systematic review and meta-analysis was performed by ICO HPV Information Centre until July 2012. Pubmed was searched using the keywords oral and papillomavirus. Inclusion criteria: studies reporting oral HPV prevalence in healthy population in Europe; n > 50. Exclusion criteria: focused only in children or immunosuppressed population; not written in English; case-control studies; commentaries and systematic reviews and studies that did not use HPV DNA detection methods.
Denmark	Eike A, Clin Otolaryngol 1995;20:171, Eike A, Clin Otolaryngol Allied Sci 1995;20(2):171-3
Finland	Kero K, Eur Urol 2012;62(6):1063-70 ∣ Leimola-Virtanen R, Clin Infect Dis 1996;22(3):593-4, Kero K, J Sex Med 2011;8:2522, Kero K, Eur Urol 2012;62(6):1063-70
Germany	Meyer MF, Oral Oncol 2014;50(1):27-31
Greece	Lambropoulos AF, Eur J Oral Sci 1997;105(4):294-7, Lambropoulos AF, Eur J Oral Sci 1997;105:294
Hungary	Szarka K, Oral Microbiol Immunol 2009;24(4):314-8 ∣ Tatar TZ, J Oral Pathol Med 2015;44(9):722-7
Italy	Migaldi M, J Oral Pathol Med 2012;41(1):16-20 ∣ Montaldo C, J Oral Pathol Med 2007;36(8):482-7 ∣ Morbini P, Oral Surg Oral Med Oral Pathol Oral Radiol 2013;116(4):474-84, Migaldi M, J Oral Pathol Med 2012;41:16, Montaldo C, J Oral Pathol Med 2007;36:482
Spain	Cañadas MP, J Clin Microbiol 2004;42:1330, Herrero R, J Natl Cancer Inst 2003;95(23):1772-83
Sweden	Hansson BG, Acta Otolaryngol 2005;125(12):1337-44 ∣ Nordfors C, Scand J Infect Dis 2013;45(11):878-81
HPV prevalence and type distribution in invasive oral cavity squamous cell carcinoma	
General sources	Based on systematic reviews and meta-analysis performed by ICO. Reference publications: 1) Ndiaye C, Lancet Oncol 2014; 15: 1319 2) Kreimer AR, Cancer Epidemiol Biomarkers Prev 2005; 14: 467
Belarus	Gudleviciene Z, J Med Virol 2014; 86: 531
Belgium	Duray A, Laryngoscope 2012; 122: 1558
Czechia	Ribeiro KB, Int J Epidemiol 2011; 40: 489
Finland	Koskinen WJ, Int J Cancer 2003; 107: 401 ∣ Mork J, N Engl J Med 2001; 344: 1125
Germany	Klussmann JP, Cancer 2001; 92: 2875 ∣ Krüger M, J Craniomaxillofac Surg 2014; 42: 1506 ∣ Ostwald C, Med Microbiol Immunol 2003; 192: 145 ∣ Weiss D, Head Neck 2011; 33: 856
Greece	Aggelopoulou EP, Anticancer Res 1999; 19: 1391 ∣ Blioumi E, Oral Oncol 2014; 50: 840 ∣ Romanitan M, Anticancer Res 2008; 28: 2077
Hungary	Nemes JA, Oral Surg Oral Med Oral Pathol Oral Radiol Endod 2006; 102: 344 ∣ Szarka K, Oral Microbiol Immunol 2009; 24: 314
Ireland	Herrero R, J Natl Cancer Inst 2003; 95: 1772
Italy	Badaracco G, Anticancer Res 2000; 20: 1301 ∣ Badaracco G, Oncol Rep 2007; 17: 931 ∣ Herrero R, J Natl Cancer Inst 2003; 95: 1772 ∣ Rittà M, Head Neck 2009; 31: 318 ∣ Scapoli L, Mod Pathol 2009; 22: 366, Badaracco G, Anticancer Res 2000; 20: 1301 ∣ Badaracco G, Oncol Rep 2007; 17: 931 ∣ Herrero R, J Natl Cancer Inst 2003; 95: 1772 ∣ Rittà M, Head Neck 2009; 31: 318 ∣ Scapoli L, Mod Pathol 2009; 22: 366
Netherlands	Braakhuis BJ, J Natl Cancer Inst 2004; 96: 998 ∣ Cruz IB, Eur J Cancer, B, Oral Oncol 1996; 32B: 55 ∣ van Monsjou HS, Int J Cancer 2012; 130: 1806
Norway	Matzow T, Acta Oncol 1998; 37: 73 ∣ Mork J, N Engl J Med 2001; 344: 1125
Poland	Herrero R, J Natl Cancer Inst 2003; 95: 1772 ∣ Ribeiro KB, Int J Epidemiol 2011; 40: 489 ∣ Snietura M, Pol J Pathol 2010; 61: 133
Romania	Ribeiro KB, Int J Epidemiol 2011; 40: 489
Russian Federation	Ribeiro KB, Int J Epidemiol 2011; 40: 489
Serbia	Kozomara R, J Craniomaxillofac Surg 2005; 33: 342
Slovakia	Ribeiro KB, Int J Epidemiol 2011; 40: 489
Slovenia	Kansky AA, Acta Virol 2003; 47: 11

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Country	Study
Spain	García-de Marcos JA, Int J Oral Maxillofac Surg 2014; 43: 274 | Herrero R, J Natl Cancer Inst 2003; 95: 1772 | Llamas-Martínez S, Anticancer Res 2008; 28: 3733
Sweden	Dahlgren L, Int J Cancer 2004; 112: 1015 | Mork J, N Engl J Med 2001; 344: 1125 | Sand L, Anticancer Res 2000; 20: 1183
HPV prevalence and type distribution in invasive oropharyngeal squamous cell carcinoma	
General sources	Based on systematic reviews and meta-analysis performed by ICO. Reference publications: 1) Ndiaye C, Lancet Oncol 2014; 15: 1319 2) Kreimer AR, Cancer Epidemiol Biomarkers Prev 2005; 14: 467
Czechia	Klozar J, Eur Arch Otorhinolaryngol 2008; 265 Suppl 1: S75 | Ribeiro KB, Int J Epidemiol 2011; 40: 489 | Rotnáglová E, Int J Cancer 2011; 129: 101
Finland	Jouhi L, Tumour Biol 2015; 36: 7755
France	Charfi L, Cancer Lett 2008; 260: 72 | Fouret P, Arch Otolaryngol Head Neck Surg 1997; 123: 513, Charfi L, Cancer Lett 2008; 260: 72 | Fonmarty D, Eur Ann Otorhinolaryngol Head Neck Dis 2015; 132: 135 | Fouret P, Arch Otolaryngol Head Neck Surg 1997; 123: 513
Germany	Andl T, Cancer Res 1998; 58: 5 | Hoffmann M, Acta Otolaryngol 1998; 118: 138 | Hoffmann M, Int J Cancer 2010; 127: 1595 | Klussmann JP, Cancer 2001; 92: 2875 | Reimers N, Int J Cancer 2007; 120: 1731 | Weiss D, Head Neck 2011; 33: 856 | Wittekindt C, Adv Otorhinolaryngol 2005; 62: 72, Andl T, Cancer Res 1998; 58: 5 | Hoffmann M, Acta Otolaryngol 1998; 118: 138 | Hoffmann M, Int J Cancer 2010; 127: 1595 | Holzinger D, Cancer Res 2012; 72: 4993 | Klussmann JP, Cancer 2001; 92: 2875 | Krupar R, Eur Arch Otorhinolaryngol 2014; 271: 1737 | Reimers N, Int J Cancer 2007; 120: 1731 | Weiss D, Head Neck 2011; 33: 856 | Wittekindt C, Adv Otorhinolaryngol 2005; 62: 72
Greece	Romanitan M, Anticancer Res 2008; 28: 2077
Italy	Boscolo-Rizzo P, J Cancer Res Clin Oncol 2009; 135: 559 | Herrero R, J Natl Cancer Inst 2003; 95: 1772 | Licitra L, J Clin Oncol 2006; 24: 5630 | Rittà M, Head Neck 2009; 31: 318
Netherlands	Braakhuis BJ, J Natl Cancer Inst 2004; 96: 998, Braakhuis BJ, J Natl Cancer Inst 2004; 96: 998 | Henneman R, Anticancer Res 2015; 35: 4015 | van Monsjou HS, Int J Cancer 2012; 130: 1806
Norway	Hannisdal K, Acta Otolaryngol 2010; 130: 293
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10 Glossary

Table 52: Glossary

Term	Definition
Incidence	Incidence is the number of new cases arising in a given period in a specified population. This information is collected routinely by cancer registries. It can be expressed as an absolute number of cases per year or as a rate per 100,000 persons per year (see Crude rate and ASR below). The rate provides an approximation of the average risk of developing a cancer.
Mortality	Mortality is the number of deaths occurring in a given period in a specified population. It can be expressed as an absolute number of deaths per year or as a rate per 100,000 persons per year.
Prevalence	The prevalence of a particular cancer can be defined as the number of persons in a defined population who have been diagnosed with that type of cancer, and who are still alive at the end of a given year, the survivors. Complete prevalence represents the number of persons alive at certain point in time who previously had a diagnosis of the disease, regardless of how long ago the diagnosis was, or if the patient is still under treatment or is considered cured. Partial prevalence , which limits the number of patients to those diagnosed during a fixed time in the past, is a particularly useful measure of cancer burden. Prevalence of cancers based on cases diagnosed within one, three and five are presented as they are likely to be of relevance to the different stages of cancer therapy, namely, initial treatment (one year), clinical follow-up (three years) and cure (five years). Patients who are still alive five years after diagnosis are usually considered cured since the death rates of such patients are similar to those in the general population. There are exceptions, particularly breast cancer. Prevalence is presented for the adult population only (ages 15 and over), and is available both as numbers and as proportions per 100,000 persons.
Crude rate	Data on incidence or mortality are often presented as rates. For a specific tumour and population, a crude rate is calculated simply by dividing the number of new cancers or cancer deaths observed during a given time period by the corresponding number of person years in the population at risk. For cancer, the result is usually expressed as an annual rate per 100,000 persons at risk.
ASR (age-standardised rate)	An age-standardised rate (ASR) is a summary measure of the rate that a population would have if it had a standard age structure. Standardization is necessary when comparing several populations that differ with respect to age because age has a powerful influence on the risk of cancer. The ASR is a weighted mean of the age-specific rates; the weights are taken from population distribution of the standard population. The most frequently used standard population is the World Standard Population. The calculated incidence or mortality rate is then called age-standardised incidence or mortality rate (world). It is also expressed per 100,000. The world standard population used in GLOBOCAN is as proposed by Segi [1] and modified by Doll and al. [2]. The age-standardised rate is calculated using 10 age-groups. The result may be slightly different from that computed using the same data categorised using the traditional 5 year age bands.
Cumulative risk	Cumulative incidence/mortality is the probability or risk of individuals getting/dying from the disease during a specified period. For cancer, it is expressed as the number of new born children (out of 100, or 1000) who would be expected to develop/die from a particular cancer before the age of 75 if they had the rates of cancer observed in the period in the absence of competing causes.
Cytologically normal women	No abnormal cells are observed on the surface of their cervix upon cytology.
Cervical Intraepithelial Neoplasia (CIN) / Squamous Intraepithelial Lesions (SIL)	SIL and CIN are two commonly used terms to describe precancerous lesions or the abnormal growth of squamous cells observed in the cervix. SIL is an abnormal result derived from cervical cytological screening or Pap smear testing. CIN is a histological diagnosis made upon analysis of cervical tissue obtained by biopsy or surgical excision. The condition is graded as CIN 1, 2 or 3, according to the thickness of the abnormal epithelium (1/3, 2/3 or the entire thickness).
Low-grade cervical lesions (LSIL/CIN-1)	Low-grade cervical lesions are defined by early changes in size, shape, and number of ab-normal cells formed on the surface of the cervix and may be referred to as mild dysplasia, LSIL, or CIN-1.
High-grade cervical lesions (HSIL / CIN-2 / CIN-3 / CIS)	High-grade cervical lesions are defined by a large number of precancerous cells on the sur-face of the cervix that are distinctly different from normal cells. They have the potential to become cancerous cells and invade deeper tissues of the cervix. These lesions may be referred to as moderate or severe dysplasia, HSIL, CIN-2, CIN-3 or cervical carcinoma in situ (CIS).
Carcinoma in situ (CIS)	Preinvasive malignancy limited to the epithelium without invasion of the basement membrane. CIN 3 encompasses the squamous carcinoma in situ.
Invasive cervical cancer (ICC) / Cervical cancer	If the high-grade precancerous cells invade the basement membrane is called ICC. ICC stages range from stage I (cancer is in the cervix or uterus only) to stage IV (the cancer has spread to distant organs, such as the liver).
Adenocarcinoma	Invasive tumour with glandular and squamous elements intermingled
Eastern Europe	Belarus, Bulgaria, Czechia, Hungary, Poland, Republic of Moldova, Romania, Russian Federation, Slovakia, Ukraine
Northern Europe	Channel Islands, Denmark, Estonia, Finland, Iceland, Ireland, Latvia, Lithuania, Norway, Sweden, United Kingdom
Southern Europe	Albania, Andorra, Bosnia and Herzegovina, Croatia, Cyprus, Greece, Italy, Malta, Montenegro, North Macedonia, Portugal, San Marino, Serbia, Slovenia, Spain
Western Europe	Austria, Belgium, France, Germany, Liechtenstein, Luxembourg, Monaco, Netherlands, Switzerland

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Note to the reader

Anyone who is aware of relevant published data that may not have been included in the present report is encouraged to contact the HPV Information Centre for potential contributions.
Although efforts have been made by the HPV Information Centre to prepare and include as accurately as possible the data presented, mistakes may occur. Readers are requested to communicate any errors to the HPV Information Centre, so that corrections can be made in future volumes.

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