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# **Human Papillomavirus and Related Diseases Report**

## **AFRICA**

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### Recommended citation:

*Bruni L, Albero G, Serrano B, Mena M, Collado JJ, Gómez D, Muñoz J, Bosch FX, de Sanjosé S. ICO/IARC Information Centre on HPV and Cancer (HPV Information Centre). Human Papillomavirus and Related Diseases in Africa. Summary Report 10 March 2023. [Date Accessed]*

## 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 Africa 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.

Africa has a population of 425.68 million women aged 15 years and older who are at risk of developing cervical cancer. Current estimates indicate that every year 117,316 women are diagnosed with cervical cancer and 76,745 die from the disease. Cervical cancer ranks\* as the 2nd most frequent cancer among women in Africa.

\* 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

	Africa	Eastern Africa	Middle Africa	Northern Africa	Southern Africa	Western Africa
<b>Population</b>						
Women at risk for cervical cancer (Female population aged ≥15 yrs) in millions	425.7	139.4	53.4	86.7	25.1	121.1
<b>Burden of cervical cancer and other HPV-related cancer</b>						
Annual number of new cervical cancer cases	117,316	54,560	15,646	6,971	12,333	12,333
Annual number of cervical cancer deaths	76,745	36,497	10,572	4,033	6,867	6,867
Standardized incidence rates per 100,000 population:						
Cervical cancer	25.6	40.1	31.6	6.25	36.4	22.9
Anal cancer						
Men	0.84	0.93	1.23	0.46	0.78	0.98
Women	0.68	0.91	1.01	0.33	0.85	0.60
Vulva cancer	1.11	1.39	1.31	0.66	1.39	0.99
Vaginal cancer	0.45	0.59	0.55	0.25	0.66	0.37
Penile cancer	0.53	1.18	0.75	0.05	1.12	0.10
Oropharyngeal cancer						
Men	0.57	0.69	0.80	0.31	1.59	0.34
Women	0.17	0.11	0.16	0.16	0.39	0.20
Oral cavity cancer						
Men	2.13	2.36	2.02	1.68	5.30	1.55
Women	1.43	1.53	1.14	1.31	2.59	1.15
Laryngeal cancer						
Men	2.43	1.89	1.38	4.05	3.28	1.37
Women	0.33	0.31	0.22	0.39	0.54	0.28
<b>Burden of cervical HPV infection</b>						
Prevalence (%) of HPV 16 and/or HPV 18 among women with:						
Normal cytology	3.8	4.7	-	3.0	3.2	3.2
Low-grade cervical lesions (LSIL/CIN-1)	24.9	30.0	12.5	20.8	21.1	21.1
High-grade cervical lesions (HSIL/ CIN-2 / CIN-3 / CIS)	38.6	45.7	-	-	33.7	33.7
Cervical cancer	67.2	67.9	-	78.9	62.5	62.5

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

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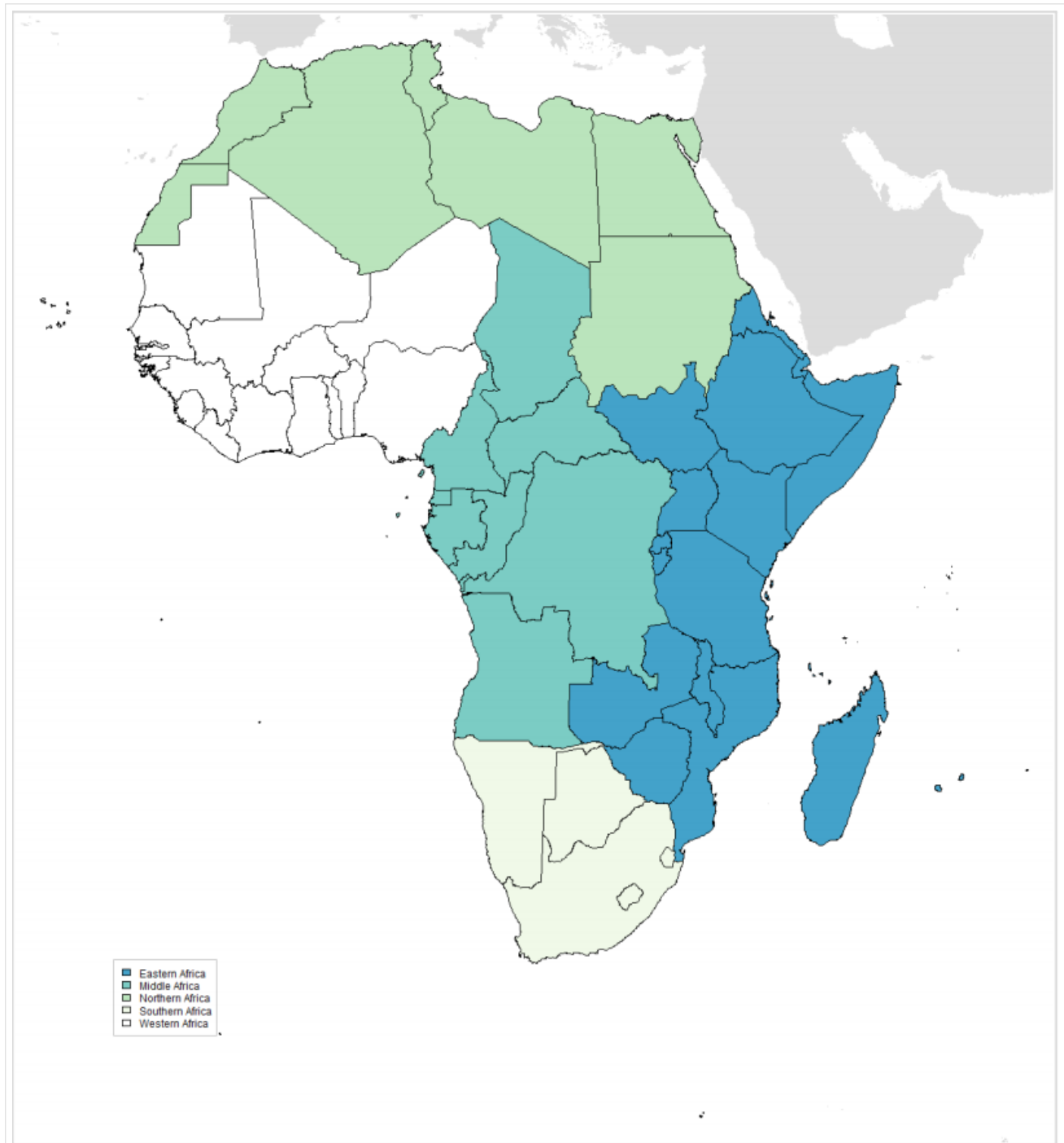
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# 1 Introduction

Figure 1: African 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 Africa 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 Africa. For analytical purposes, Africa is divided in these regions: Eastern Africa,

Middle Africa, Northern Africa, Southern Africa, and Western Africa

**Section 3, Burden of HPV related cancers.** This section describes the current burden of invasive cervical cancer and other HPV-related cancers in Africa 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 Africa, 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.

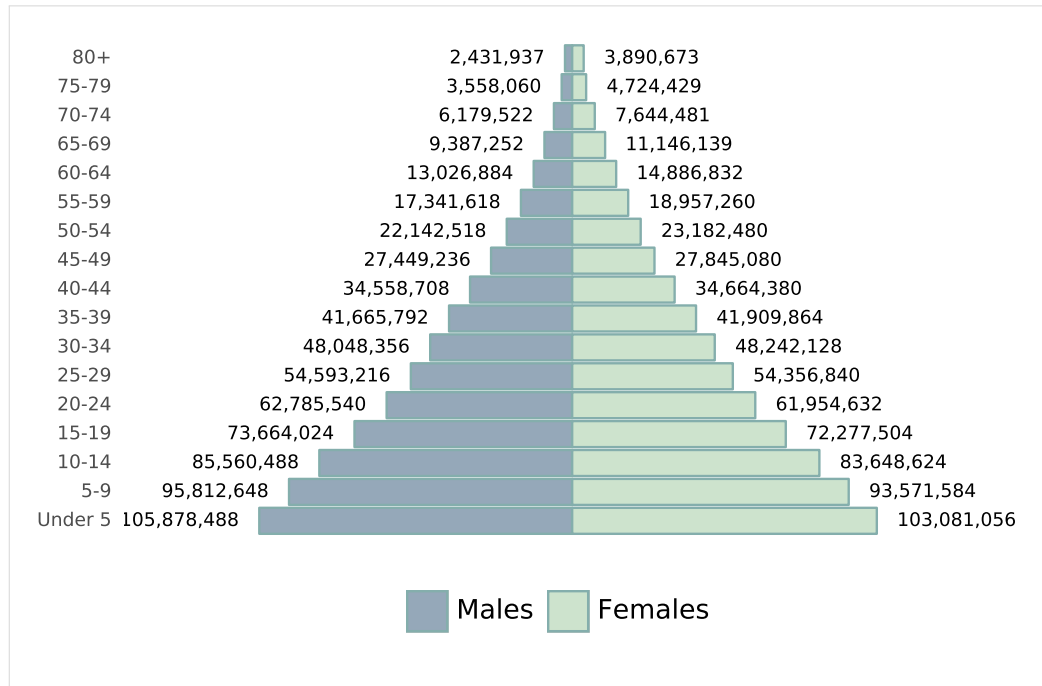
**Section 6, Sexual and reproductive health behaviour indicators.** This section presents sexual and reproductive behaviour indicators that may be used as proxy measures of risk for HPV infection and anogenital cancers, such as age at first sexual intercourse, average number of sexual partners, and anal 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 Africa for 2022



Data accessed on 30 Jul 2022

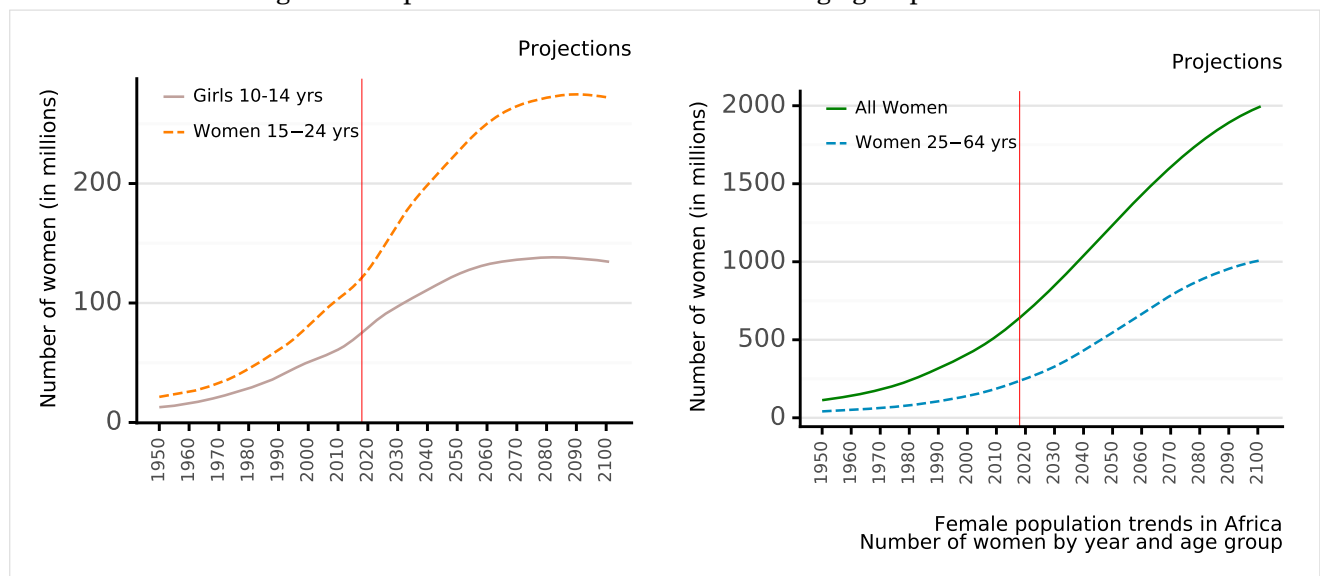
Please refer to original source for methods of estimation.

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 Africa



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].

Table 3: Population estimates in Africa for 2022 (in millions)

Region Country	Males			Females		
	10-14 years	15+ years	Total	10-14 years	15+ years	Total
<b>Africa</b>	85.56	416.83	704.08	83.65	425.68	705.98
<b>Eastern Africa</b>	29.71	133.57	231.58	29.3	139.42	235.48
Burundi	0.9	3.37	6.31	0.89	3.49	6.4
Comoros	0.05	0.26	0.42	0.05	0.26	0.41
Djibouti	0.06	0.38	0.55	0.06	0.39	0.56
Eritrea	0.24	1.07	1.8	0.24	1.14	1.85
Ethiopia	7.49	36.49	61.21	7.24	36.85	60.62
Kenya	3.39	16.29	26.52	3.38	16.82	26.98
Madagascar	1.78	8.85	14.66	1.75	8.93	14.6
Malawi	1.35	5.48	9.8	1.37	6.03	10.35
Mauritius	0.04	0.53	0.64	0.04	0.55	0.66
Mozambique	2.08	8.84	15.95	2.07	9.5	16.56
Rwanda	0.82	4.0	6.66	0.81	4.35	6.96
Seychelles	0.0	0.04	0.06	0.0	0.04	0.05
Somalia	1.13	4.54	8.69	1.1	4.61	8.64
South Sudan	0.8	2.93	5.36	0.78	3.1	5.47
Uganda	3.13	12.52	23.07	3.12	13.12	23.52
Tanzania	4.1	17.72	31.89	4.04	18.76	32.65
Zambia	1.28	5.49	9.74	1.29	5.75	10.0
Zimbabwe	1.01	4.33	7.62	1.03	5.24	8.53
<b>Middle Africa</b>	12.35	51.92	96.04	12.29	53.4	97.08
Angola	2.25	9.38	17.32	2.24	9.86	17.73
Cameroon	1.72	7.87	13.74	1.71	8.02	13.81
Central African Republic	0.4	1.41	2.75	0.39	1.44	2.75
Chad	1.17	4.55	8.76	1.13	4.6	8.69
Congo	0.38	1.72	2.95	0.38	1.75	2.95
DR Congo	6.19	25.61	48.33	6.2	26.46	49.09
Equatorial Guinea	0.1	0.55	0.87	0.1	0.46	0.78
Gabon	0.13	0.77	1.2	0.13	0.73	1.16
Sao Tome & Principe	0.01	0.07	0.11	0.01	0.07	0.11
<b>Northern Africa</b>	13.11	87.13	130.07	12.55	86.65	127.79
Algeria	2.08	15.69	22.68	1.99	15.17	21.86
Egypt	5.67	37.1	55.7	5.4	36.72	54.44
Libya	0.35	2.43	3.43	0.33	2.4	3.35
Morocco	1.68	13.66	18.76	1.6	13.65	18.51
Sudan	2.81	13.5	23.12	2.75	13.79	23.15
Tunisia	0.49	4.5	6.08	0.46	4.74	6.23
Western Sahara	0.02	0.24	0.31	0.02	0.19	0.26
<b>Southern Africa</b>	3.29	23.09	33.28	3.19	25.15	35.02
Botswana	0.14	0.85	1.29	0.13	0.9	1.32
Eswatini	0.07	0.38	0.59	0.07	0.39	0.6
Lesotho	0.12	0.74	1.13	0.12	0.77	1.16
Namibia	0.14	0.77	1.23	0.14	0.86	1.32
South Africa	2.83	20.34	29.03	2.73	22.23	30.62
<b>Western Africa</b>	27.11	121.11	213.12	26.32	121.07	210.62
Benin	0.8	3.76	6.59	0.78	3.8	6.56
Burkina Faso	1.49	6.16	11.16	1.45	6.39	11.23
Cabo Verde	0.03	0.21	0.29	0.03	0.22	0.3
Côte d'Ivoire	1.77	8.21	14.04	1.75	8.01	13.77
Gambia	0.18	0.74	1.33	0.17	0.77	1.34
Ghana	1.91	10.31	16.53	1.87	10.54	16.62
Guinea	0.86	3.87	6.77	0.84	4.12	6.93
Guinea-Bissau	0.13	0.6	1.03	0.13	0.64	1.05
Liberia	0.34	1.53	2.61	0.33	1.58	2.63
Mali	1.51	5.91	11.23	1.48	5.81	11.01
Mauritania	0.31	1.3	2.29	0.3	1.42	2.38
Niger	1.73	6.66	13.05	1.68	6.49	12.67
Nigeria	13.9	61.82	109.11	13.42	60.87	106.81
Senegal	1.08	4.81	8.41	1.06	5.18	8.69
Sierra Leone	0.52	2.58	4.27	0.51	2.6	4.25
Togo	0.54	2.63	4.4	0.53	2.61	4.35

**Data accessed on 30 Jul 2022**

Please refer to original source for methods of estimation.

Year of estimate: 2022

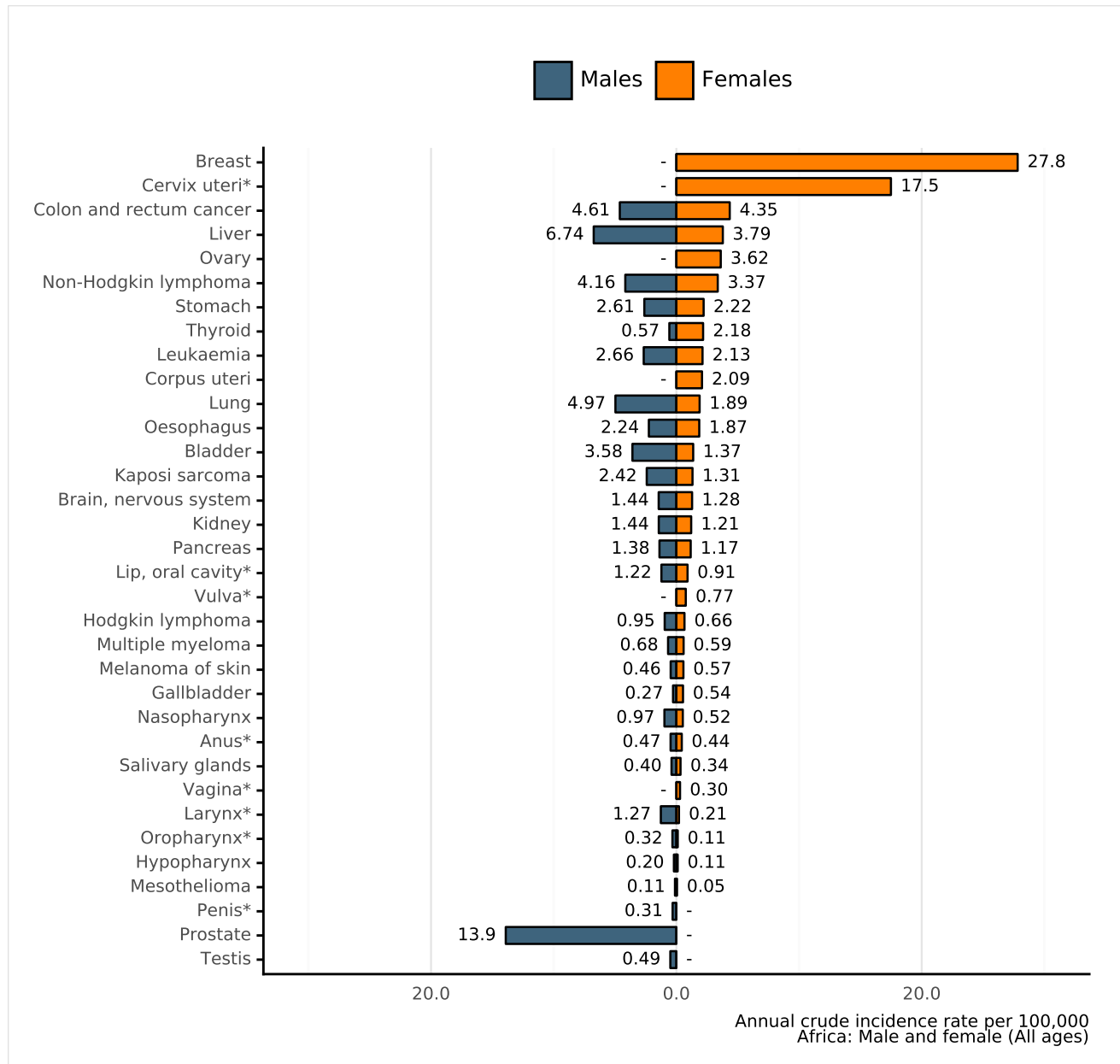
Data Sources:

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

### 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 Africa (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

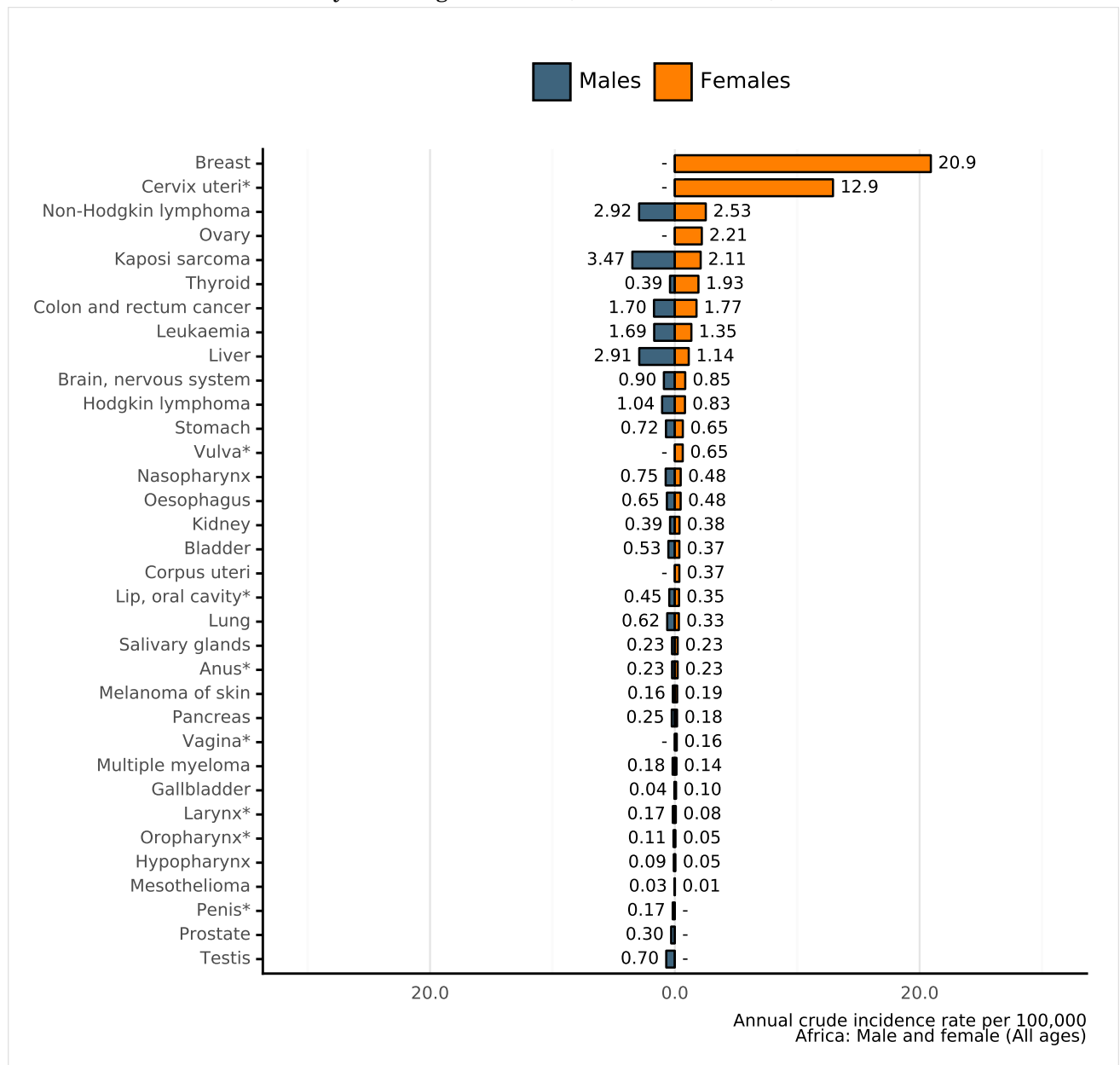
Rates per 100,000 men per year.

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 Africa (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.

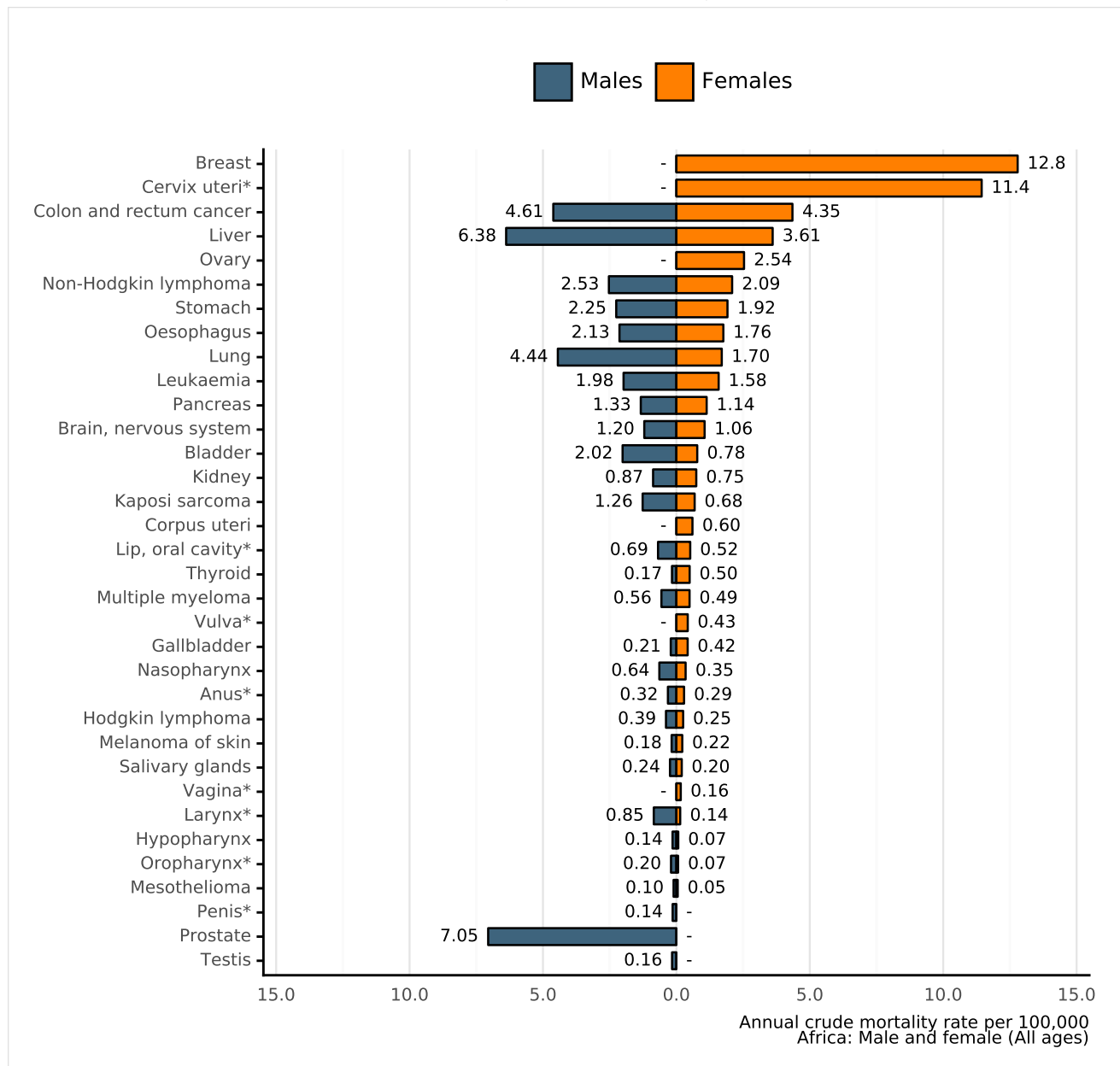
Data Sources:

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].



### 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 Africa (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

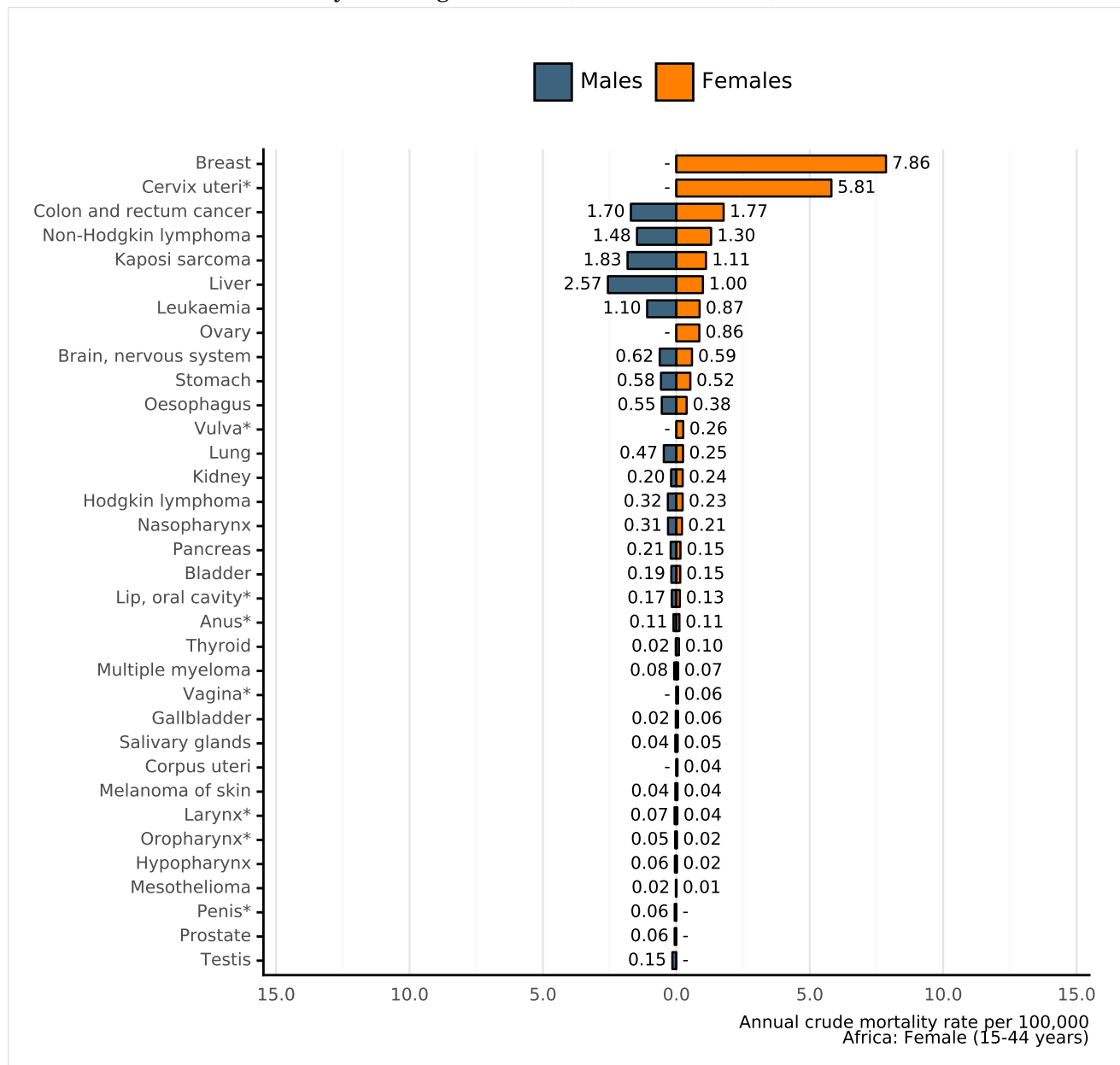
Rates per 100,000 men per year.

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 7: Comparison of HPV related cancers mortality to other cancers among men and women 15-44 years of age in Africa (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].

### 3.3 Cervical cancer

Cancer of the cervix uteri is the 4<sup>th</sup> 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 Africa 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.

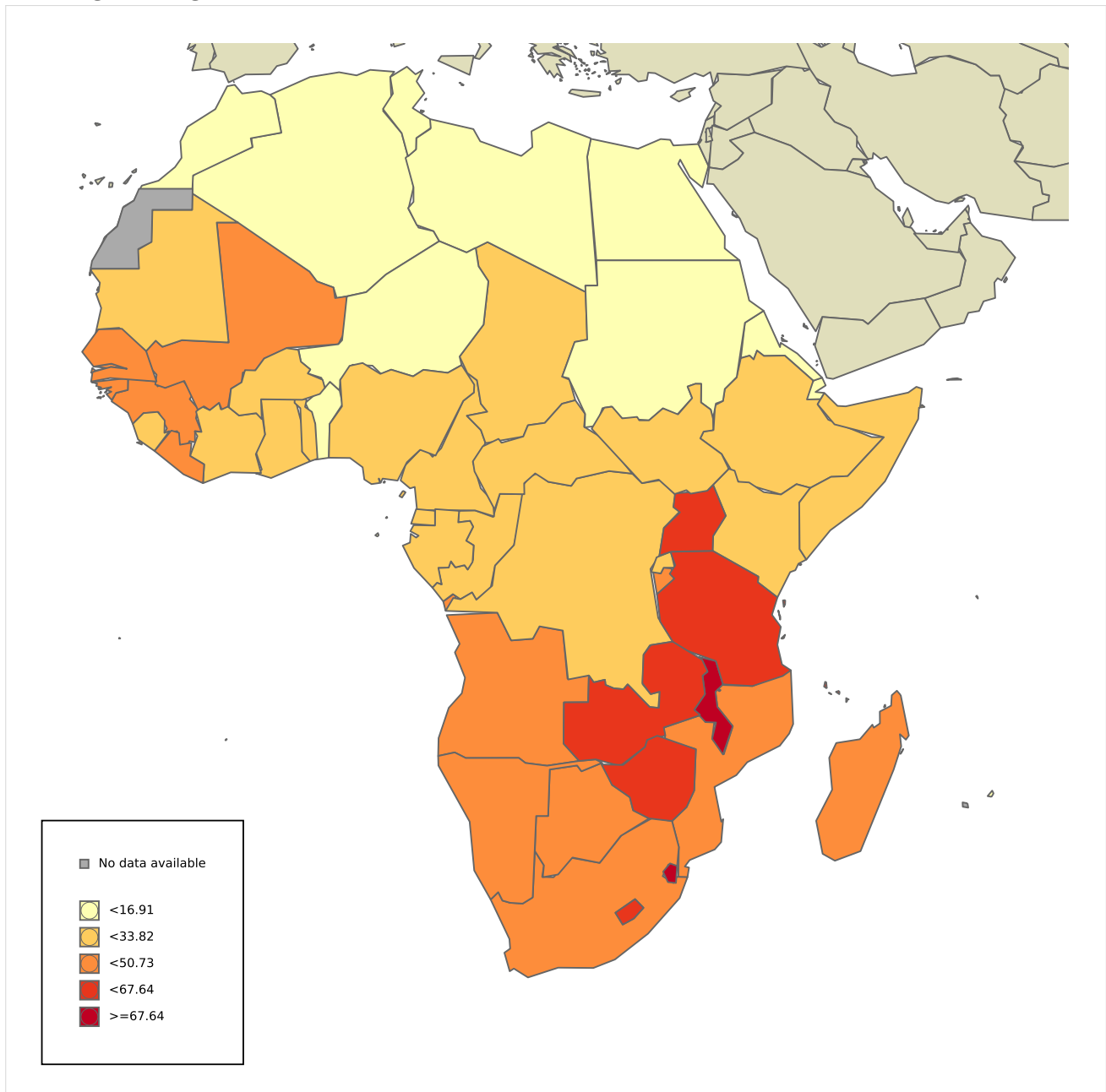
About **117,316 new cervical cancer cases** are diagnosed **annually in Africa** (estimations for 2020).

Cervical cancer **ranks\* as the 2<sup>nd</sup> leading cause** of female cancer in **Africa**.

Cervical cancer is the **2<sup>nd</sup> most common** female cancer in **women aged 15 to 44 years in Africa**.

\* 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 Africa (estimates for 2020)

**Data accessed on 27 Jan 2021**

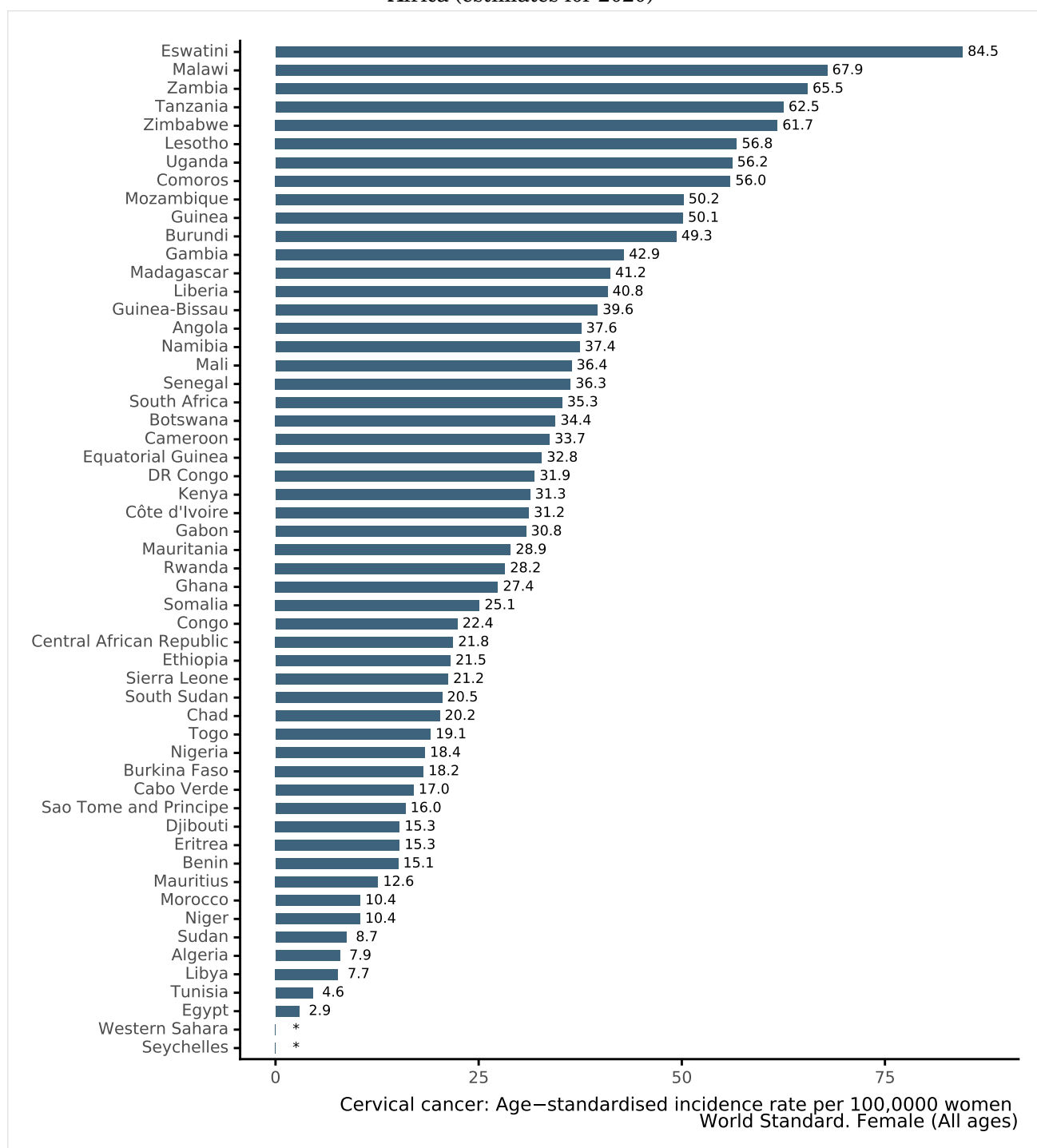
For more detailed methods of estimation please refer to <http://gco.iarc.fr/today/data-sources-methods>

<sup>a</sup> 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 Africa (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>

<sup>a</sup> 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 Africa (estimates for 2020)

Area	N Cases	Uncertainty intervals of new cancer cases [95% UI]	Crude rate <sup>b</sup>	ASR <sup>b</sup>	Cumulative risk (%) ages 0-74 years <sup>a</sup>	Ranking	
						All women	Women 15-44 years
<b>Africa</b>	117,316	[105,998.6-129,841.8]	17.5	25.6	2.82	2	2
<b>Eastern Africa</b>	54,560	[48,276.6-61,661.3]	24.3	40.1	4.46	1	1
Burundi	1,581	[921.5-2,712.4]	26.4	49.3	5.49	1	1
Comoros	167	[97.3-286.5]	38.8	56.0	6.12	1	1
Djibouti	63	[36.7-108.1]	13.4	15.3	1.77	2	2
Eritrea	178	[103.8-305.4]	10.1	15.3	1.75	2	2
Ethiopia	7,445	[6,425.3-8,626.5]	13.0	21.5	2.46	2	2
Kenya	5,236	[4,591.6-5,970.9]	19.4	31.3	3.60	2	2
Madagascar	3,763	[2,193.4-6,455.9]	27.1	41.2	4.55	1	1
Mozambique	5,325	[4,630.3-6,124]	33.1	50.2	5.04	1	1
Mauritius	123	[82-184.6]	19.1	12.6	1.32	3	2
Malawi	4,145	[3,476.4-4,942.2]	42.7	67.9	6.95	1	1
Rwanda	1,229	[929.5-1,625.1]	18.7	28.2	3.04	2	1
Somalia	1,055	[614.9-1,810]	13.2	25.1	2.84	2	2
South Sudan	711	[414.4-1,219.8]	12.7	20.5	2.30	2	2
Tanzania	10,241	[9,352-11,214.5]	34.3	62.5	7.43	1	1
Uganda	6,959	[6,312.5-7,671.7]	30.0	56.2	5.98	1	1
Zambia	3,161	[2,778.7-3,595.9]	34.1	65.5	7.39	1	1
Zimbabwe	3,043	[2,747.7-3,370]	39.2	61.7	6.66	1	1
<b>Middle Africa</b>	15,646	[13,437.4-18,217.6]	17.4	31.6	3.56	2	2
Angola	3,195	[2,660-3,837.6]	19.2	37.6	4.22	1	2
Central African Republic	297	[192.2-458.9]	12.2	21.8	2.46	2	2
Cameroon	2,770	[2,237.8-3,428.8]	20.9	33.7	3.61	2	2
DR Congo	7,772	[5,029.7-12,009.4]	17.3	31.9	3.66	1	2
Congo	350	[270-453.7]	12.7	22.4	2.63	2	2
Gabon	236	[163.9-339.9]	21.6	30.8	3.41	2	2
Equatorial Guinea	123	[79.6-190.1]	19.8	32.8	3.59	2	2
Sao Tome & Principe	13	[12.5-13.6]	11.9	16.0	0.92	2	1
Chad	890	[576-1,375.2]	10.8	20.2	2.16	2	2
<b>Northern Africa</b>	6,971	[6,061.2-8,017.3]	5.69	6.25	0.72	4	5
Algeria	1,663	[1,437.7-1,923.6]	7.66	7.90	0.93	4	7
Egypt	1,320	[1,013.5-1,719.1]	2.61	2.92	0.31	13	9
Libya	240	[165.5-348]	7.05	7.70	0.89	3	7
Morocco	2,165	[1,917-2,445]	11.6	10.4	1.22	2	3
Sudan	1,227	[1,124.4-1,339]	5.59	8.71	1.02	2	3
Tunisia	342	[263.5-443.9]	5.74	4.56	0.53	5	7
<b>Southern Africa</b>	12,333	[11,952-12,726.2]	36.0	36.4	3.70	2	1
Botswana	374	[281.7-496.6]	30.8	34.4	3.51	1	1
Lesotho	541	[381.3-767.7]	49.8	56.8	5.74	1	1
Namibia	375	[332.5-422.9]	28.6	37.4	3.84	2	2
Eswatini	341	[302.8-384]	57.8	84.5	8.59	1	1
South Africa	10,702	[10,390.6-11,022.8]	35.6	35.3	3.58	2	1
<b>Western Africa</b>	27,806	[23,307.1-33,173.3]	13.9	22.9	2.48	2	2
Benin	560	[391.4-801.2]	9.23	15.1	1.81	2	2
Burkina Faso	1,132	[636.9-2,012.1]	10.8	18.2	2.02	2	2
Côte d'Ivoire	2,067	[1,800.2-2,373.3]	15.8	31.2	3.60	2	2
Cabo Verde	46	[26.4-80.1]	16.6	17.0	1.83	3	1
Ghana	2,797	[2,174.1-3,598.3]	18.3	27.4	2.98	2	2
Guinea	2,068	[1,750.4-2,443.3]	30.5	50.1	5.49	1	1
Gambia	286	[213.4-383.4]	23.5	42.9	3.90	1	1
Guinea-Bissau	239	[105.6-540.7]	23.8	39.6	4.44	1	1
Liberia	656	[290-1,484]	26.1	40.8	4.54	1	2
Mali	1,934	[1,648.8-2,268.5]	19.1	36.4	4.15	2	2
Mauritania	428	[189.2-968.2]	18.5	28.9	3.36	2	2
Niger	622	[311.8-1,240.9]	5.17	10.4	1.21	2	2
Nigeria	12,075	[10,035.7-14,528.6]	11.9	18.4	1.86	2	2
Senegal	1,937	[856.2-4,382]	22.6	36.3	4.09	1	2
Sierra Leone	504	[468.5-542.2]	12.6	21.2	2.48	2	2
Togo	455	[320.7-645.6]	10.9	19.1	2.17	2	2

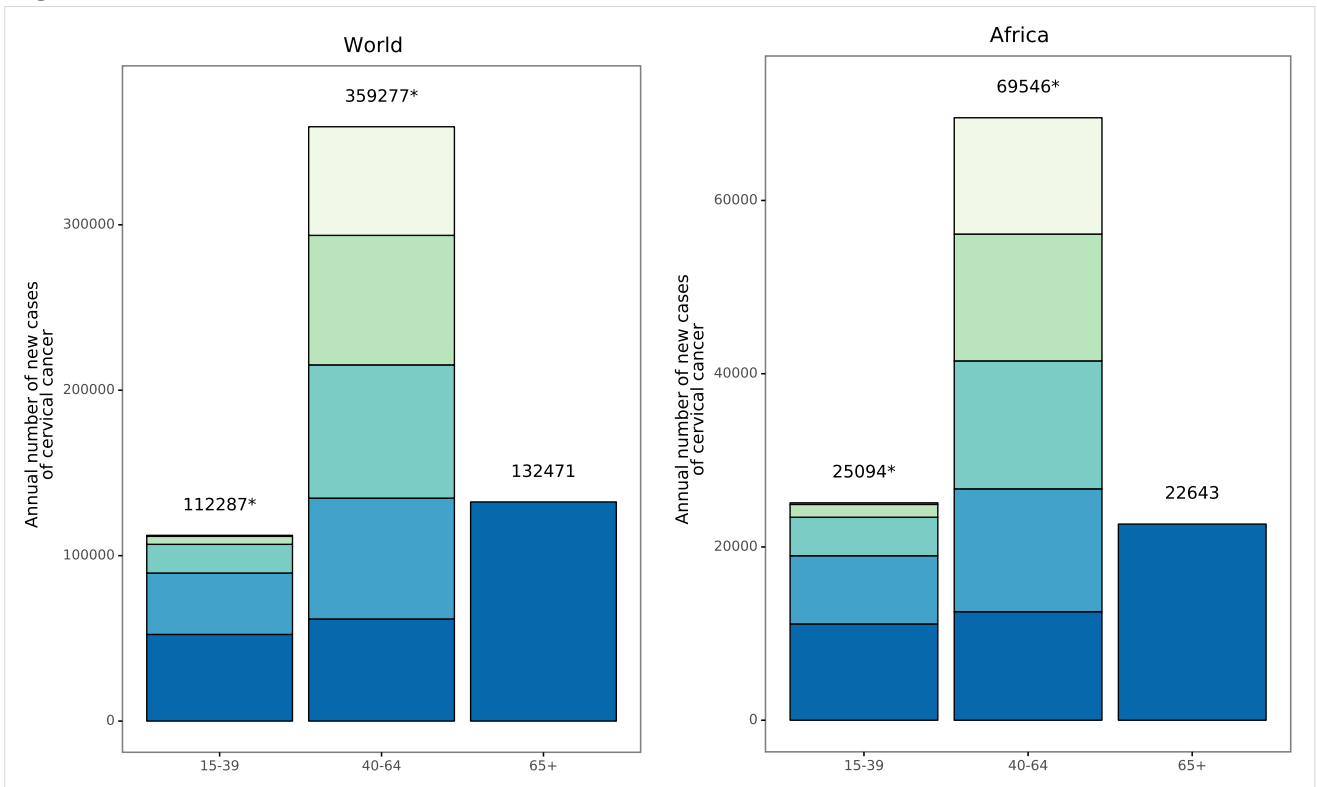
Data accessed on 27 Jan 2021

For more detailed methods of estimation please refer to <http://gco.iarc.fr/today/data-sources-methods><sup>a</sup> 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.<sup>b</sup> 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 Africa (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.

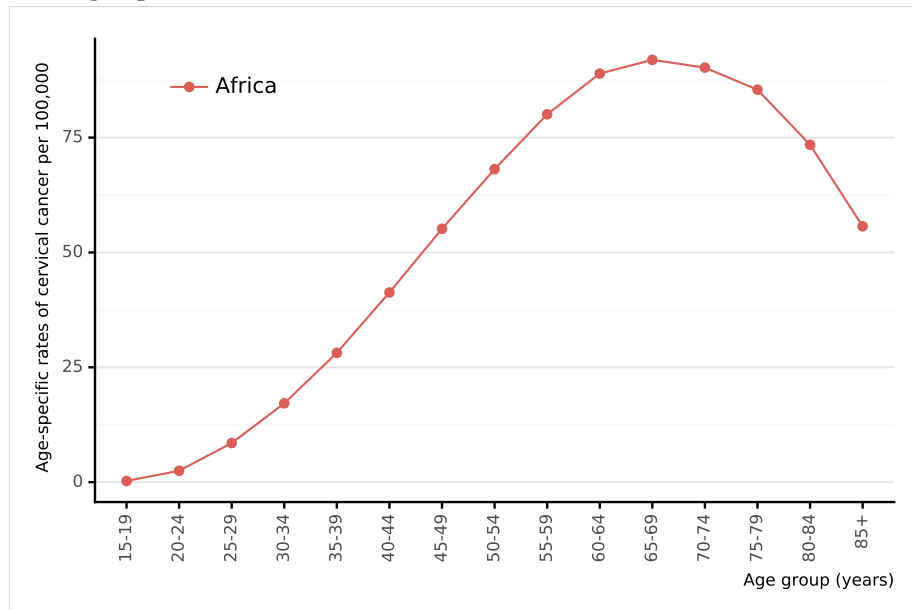
\* Africa: 15-19 yrs: 180 cases. 20-24 yrs: 1483 cases. 25-29 yrs: 4444 cases. 30-34 yrs: 7873 cases. 35-39 yrs: 11114 cases. 40-44 yrs: 13428 cases. 45-49 yrs: 14640 cases. 50-54 yrs: 14771 cases. 55-59 yrs: 14178 cases. 60-64 yrs: 12529 cases.

**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 Africa (estimates for 2020)

**Data accessed on 27 Jan 2021**

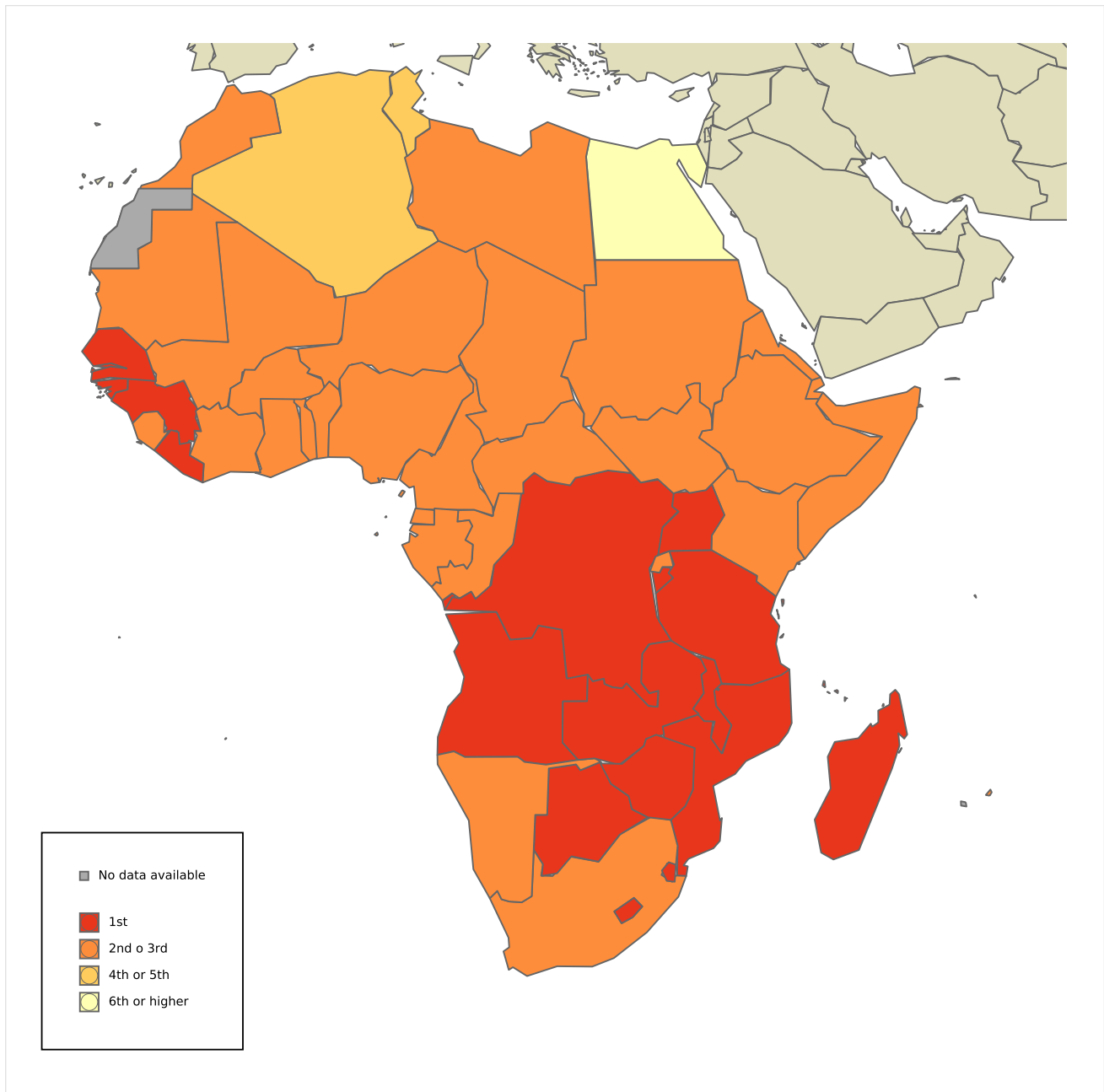
For more detailed methods of estimation please refer to <http://gco.iarc.fr/today/data-sources-methods>

<sup>a</sup> 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 Africa (estimates for 2020)



**Data accessed on 27 Jan 2021**

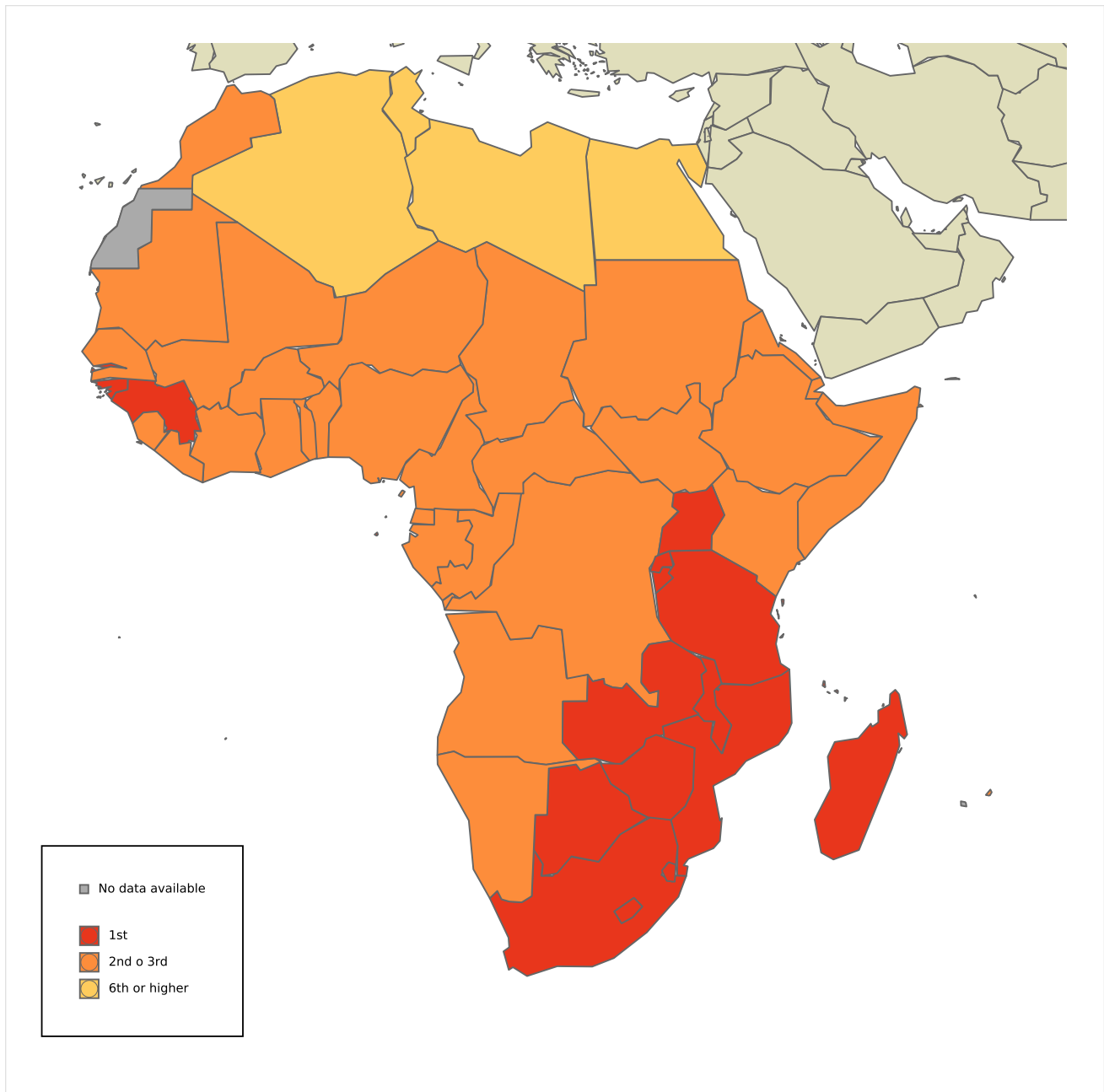
For more detailed methods of estimation please refer to <http://gco.iarc.fr/today/data-sources-methods>

<sup>a</sup> 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 Africa (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>

<sup>a</sup> 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.

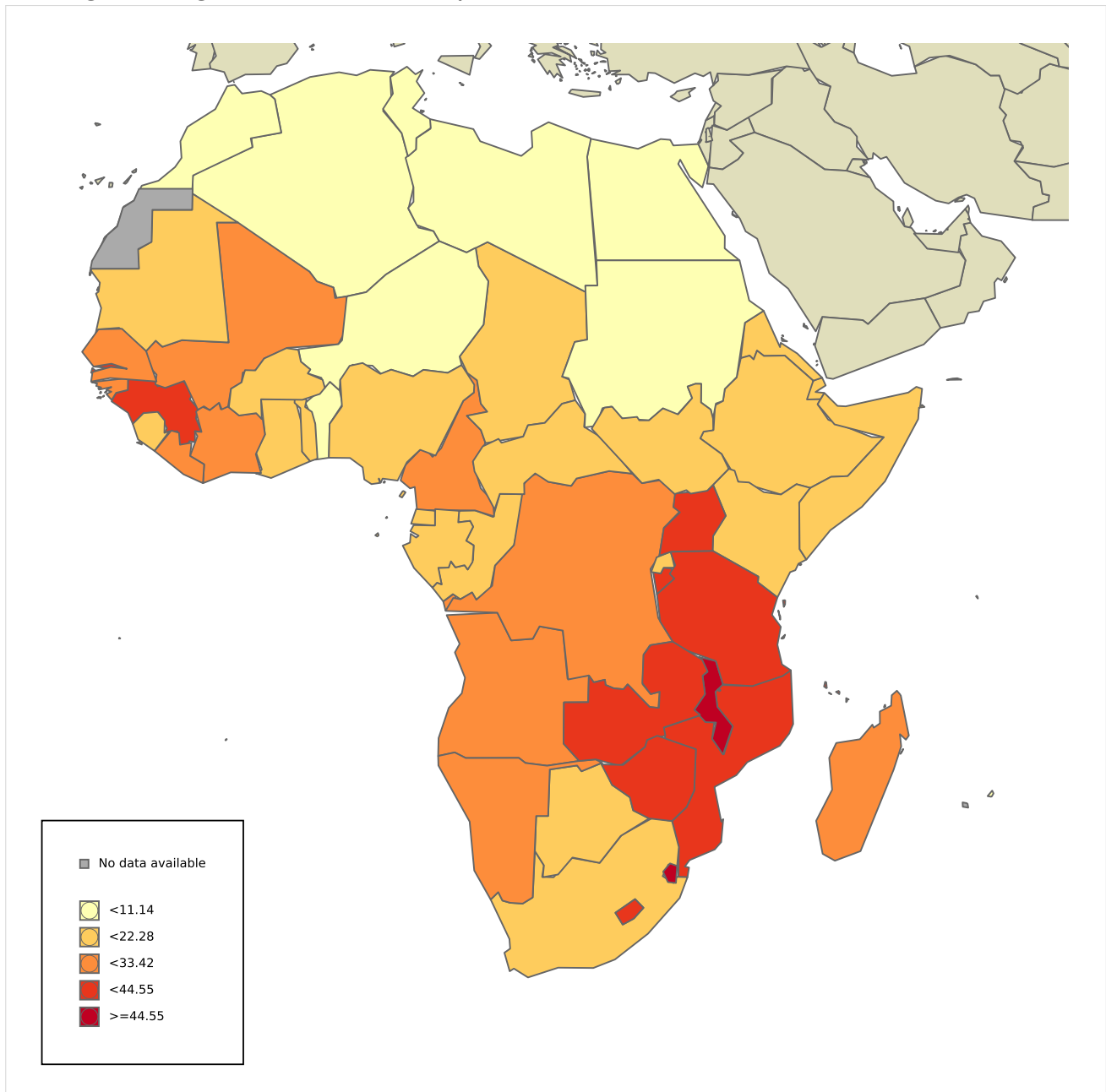
About **76,745 new cervical cancer cases** are diagnosed **annually** in **Africa** (estimations for 2020).

Cervical cancer **ranks\*** as the **2<sup>nd</sup> leading cause** of female cancer in **Africa**.

Cervical cancer is the **2<sup>nd</sup> most common** female cancer in **women aged 15 to 44 years in Africa**.

\* 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 Africa (estimates for 2020)

**Data accessed on 27 Jan 2021**

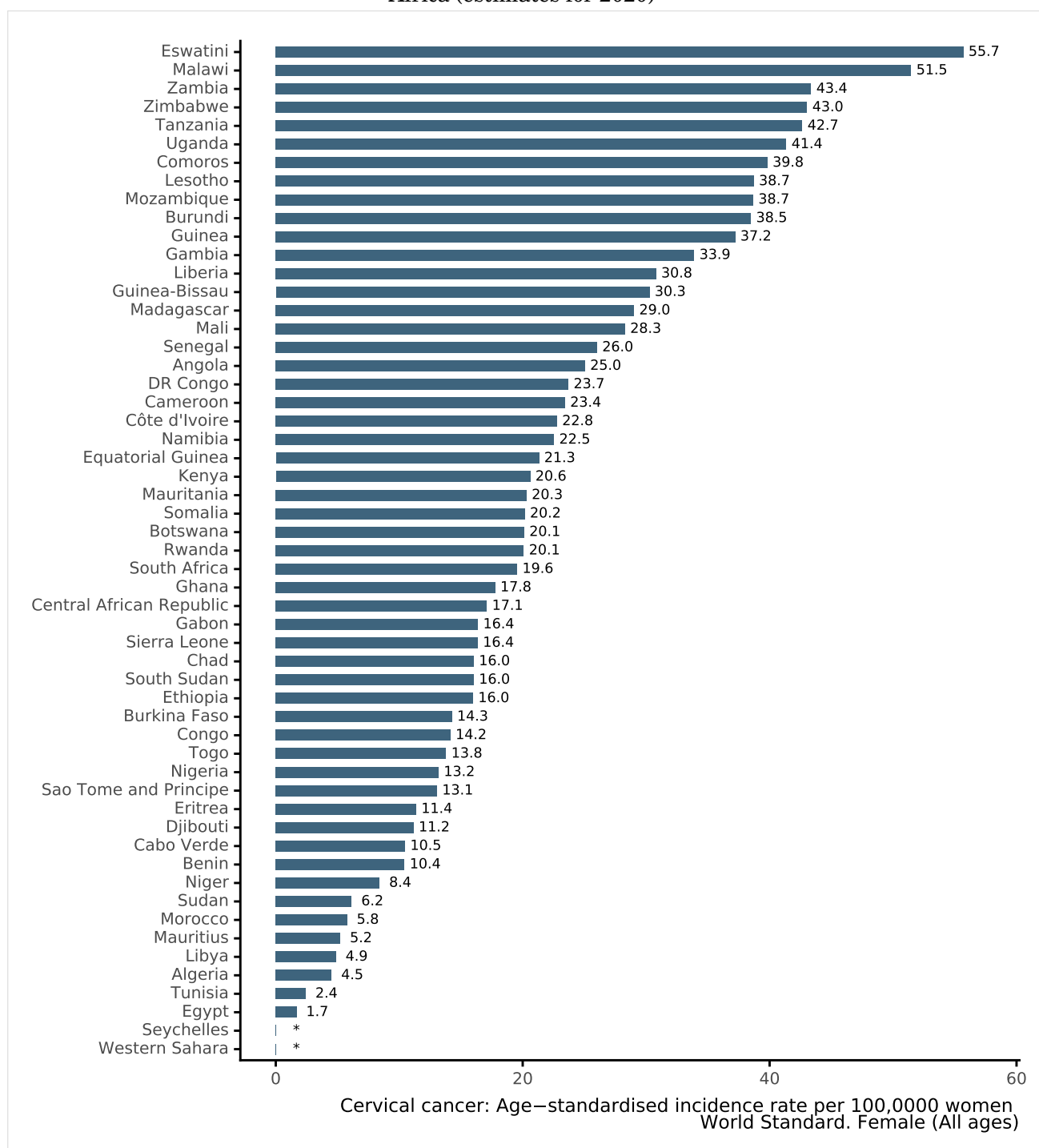
For more detailed methods of estimation please refer to <http://gco.iarc.fr/today/data-sources-methods>

<sup>a</sup> 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 Africa (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>

<sup>a</sup> 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 Africa (estimates for 2020)

Area	N Cases	Uncertainty intervals of new cancer cases [95% UI]	Crude rate <sup>b</sup>	ASR <sup>b</sup>	Cumulative risk (%) ages 0-74 years <sup>a</sup>	Ranking	
						All women	Women 15-44 years
<b>Africa</b>	76,745	[68,380.2-86,133.1]	11.4	17.7	2.05	2	2
<b>Eastern Africa</b>	36,497	[31,705.6-42,012.5]	16.3	28.6	3.36	1	1
Burundi	1,126	[652.4-1,943.4]	18.8	38.5	4.55	1	1
Comoros	109	[63.2-188.1]	25.3	39.8	4.73	1	1
Djibouti	44	[25.5-75.9]	9.38	11.2	1.39	2	2
Eritrea	130	[75.3-224.4]	7.35	11.4	1.37	2	3
Ethiopia	5,338	[4,497.6-6,335.5]	9.29	16.0	1.91	2	3
Kenya	3,211	[2,747-3,753.3]	11.9	20.6	2.50	1	2
Madagascar	2,460	[1,425.3-4,245.9]	17.7	29.0	3.42	1	1
Mozambique	3,850	[3,272.1-4,530]	24.0	38.7	4.14	1	1
Mauritius	61	[36.7-101.5]	9.47	5.23	0.57	3	3
Malawi	2,905	[2,392.7-3,527]	30.0	51.5	5.63	1	1
Rwanda	829	[596.9-1,151.4]	12.6	20.1	2.27	1	1
Somalia	812	[470.5-1,401.5]	10.2	20.2	2.40	2	2
South Sudan	529	[306.5-913]	9.46	16.0	1.89	2	2
Tanzania	6,525	[5,857.9-7,268.1]	21.8	42.7	5.36	1	1
Uganda	4,607	[4,113.1-5,160.3]	19.9	41.4	4.70	1	1
Zambia	1,904	[1,633.6-2,219.1]	20.5	43.4	5.20	1	1
Zimbabwe	1,976	[1,752.6-2,227.9]	25.4	43.0	4.88	1	1
<b>Middle Africa</b>	10,572	[9,081-12,307.8]	11.8	22.7	2.66	1	2
Angola	1,949	[1,602.6-2,370.2]	11.7	25.0	2.94	1	2
Central African Republic	223	[147.8-336.4]	9.16	17.1	2.01	2	2
Cameroon	1,787	[1,421.4-2,246.6]	13.5	23.4	2.67	2	2
DR Congo	5,548	[3,678.3-8,368.1]	12.4	23.7	2.83	1	2
Congo	214	[158.7-288.5]	7.75	14.2	1.64	1	3
Gabon	118	[78.2-178]	10.8	16.4	1.88	1	2
Equatorial Guinea	73	[48.4-110.1]	11.7	21.3	2.52	2	2
Sao Tome & Principe	10	[0.20-413.8]	9.13	13.1	0.70	1	1
Chad	650	[430.9-980.4]	7.90	16.0	1.81	2	2
<b>Northern Africa</b>	4,033	[3,453-4,710.4]	3.29	3.71	0.46	5	8
Algeria	930	[786.6-1,099.5]	4.29	4.52	0.57	3	7
Egypt	744	[552.5-1,001.8]	1.47	1.69	0.19	12	11
Libya	141	[95.8-207.5]	4.14	4.88	0.58	3	10
Morocco	1,199	[1,045.6-1,374.9]	6.45	5.78	0.74	2	7
Sudan	828	[754.3-908.9]	3.77	6.15	0.76	2	5
Tunisia	185	[138.8-246.5]	3.11	2.43	0.30	7	10
<b>Southern Africa</b>	6,867	[6,638.4-7,103.5]	20.0	20.6	2.21	1	1
Botswana	207	[144.2-297.2]	17.1	20.1	2.15	1	1
Lesotho	362	[252.2-519.7]	33.4	38.7	4.18	1	1
Namibia	214	[183.8-249.1]	16.3	22.5	2.40	2	2
Eswatini	214	[184.1-248.7]	36.3	55.7	5.95	1	1
South Africa	5,870	[5,492.2-6,273.8]	19.5	19.6	2.10	1	1
<b>Western Africa</b>	18,776	[15,429-22,849.1]	9.41	16.6	1.88	2	2
Benin	368	[241.5-560.7]	6.06	10.4	1.32	2	2
Burkina Faso	839	[445.2-1,581.2]	8.02	14.3	1.67	2	2
Côte d'Ivoire	1,417	[1,208.5-1,661.4]	10.8	22.8	2.71	2	2
Cabo Verde	27	[15.5-47]	9.75	10.5	1.23	1	1
Ghana	1,699	[1,282.9-2,250]	11.1	17.8	1.95	2	3
Guinea	1,463	[1,232.3-1,736.9]	21.6	37.2	4.27	1	1
Gambia	199	[143.6-275.7]	16.3	33.9	3.21	1	1
Guinea-Bissau	172	[80.3-368.5]	17.1	30.3	3.54	1	1
Liberia	469	[218.9-1,004.8]	18.6	30.8	3.59	1	2
Mali	1,406	[1,172.4-1,686.2]	13.9	28.3	3.40	2	2
Mauritania	286	[133.5-612.7]	12.4	20.3	2.45	1	2
Niger	475	[221.7-1,017.6]	3.95	8.41	1.03	2	2
Nigeria	7,968	[6,468.9-9,814.5]	7.84	13.2	1.42	2	2
Senegal	1,312	[612.4-2,810.8]	15.3	26.0	3.09	1	2
Sierra Leone	367	[336.9-399.8]	9.18	16.4	1.99	2	2
Togo	309	[218.6-436.7]	7.43	13.8	1.59	2	2

Data accessed on 27 Jan 2021

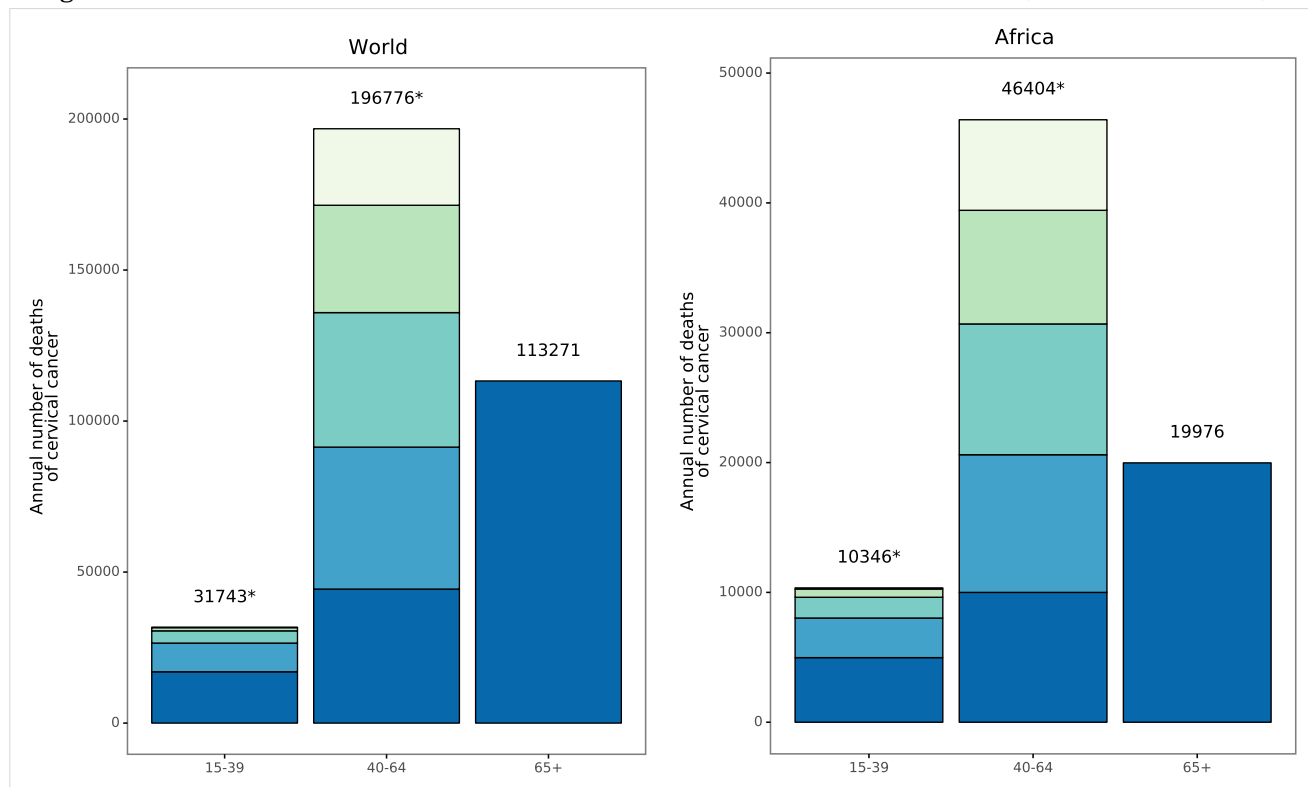
For more detailed methods of estimation please refer to <http://gco.iarc.fr/today/data-sources-methods><sup>a</sup> Cumulative risk (mortality) is the probability or risk of individuals dying from the disease during ages 0-74 years. For cancer, it is expressed as the % of new born children who would 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.<sup>b</sup> 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 Africa (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>

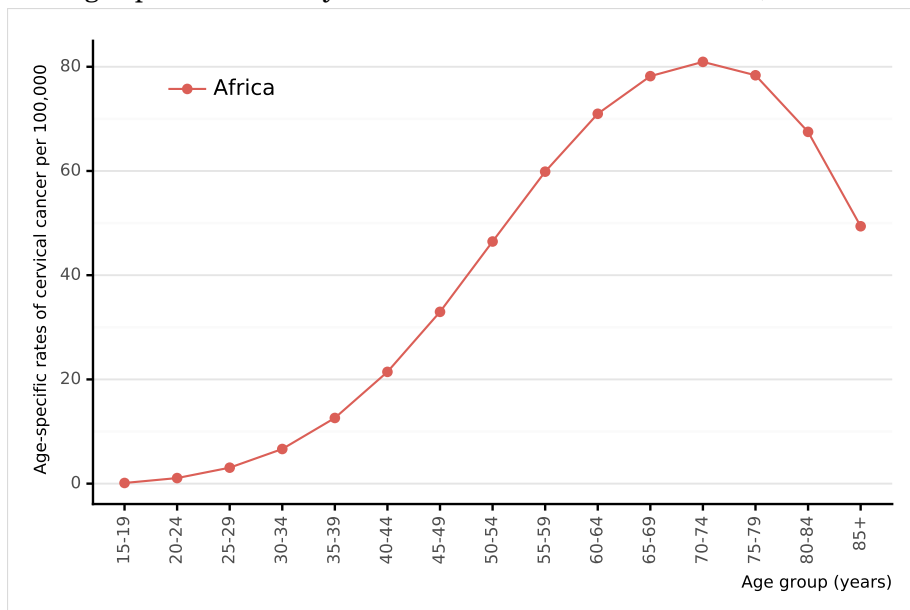
\* World: 15-19 yrs: 144 cases. 20-24 yrs: 1055 cases. 25-29 yrs: 4057 cases. 30-34 yrs: 9506 cases. 35-39 yrs: 16981 cases. 40-44 yrs: 25334 cases. 45-49 yrs: 35535 cases. 50-54 yrs: 44540 cases. 55-59 yrs: 46997 cases. 60-64 yrs: 44370 cases.

\* Africa: 15-19 yrs: 86 cases. 20-24 yrs: 636 cases. 25-29 yrs: 1599 cases. 30-34 yrs: 3049 cases. 35-39 yrs: 4976 cases. 40-44 yrs: 6975 cases. 45-49 yrs: 8752 cases. 50-54 yrs: 10074 cases. 55-59 yrs: 10603 cases. 60-64 yrs: 10000 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 17: Age-specific mortality rates of cervical cancer in Africa (estimates for 2020)

**Data accessed on 27 Jan 2021**

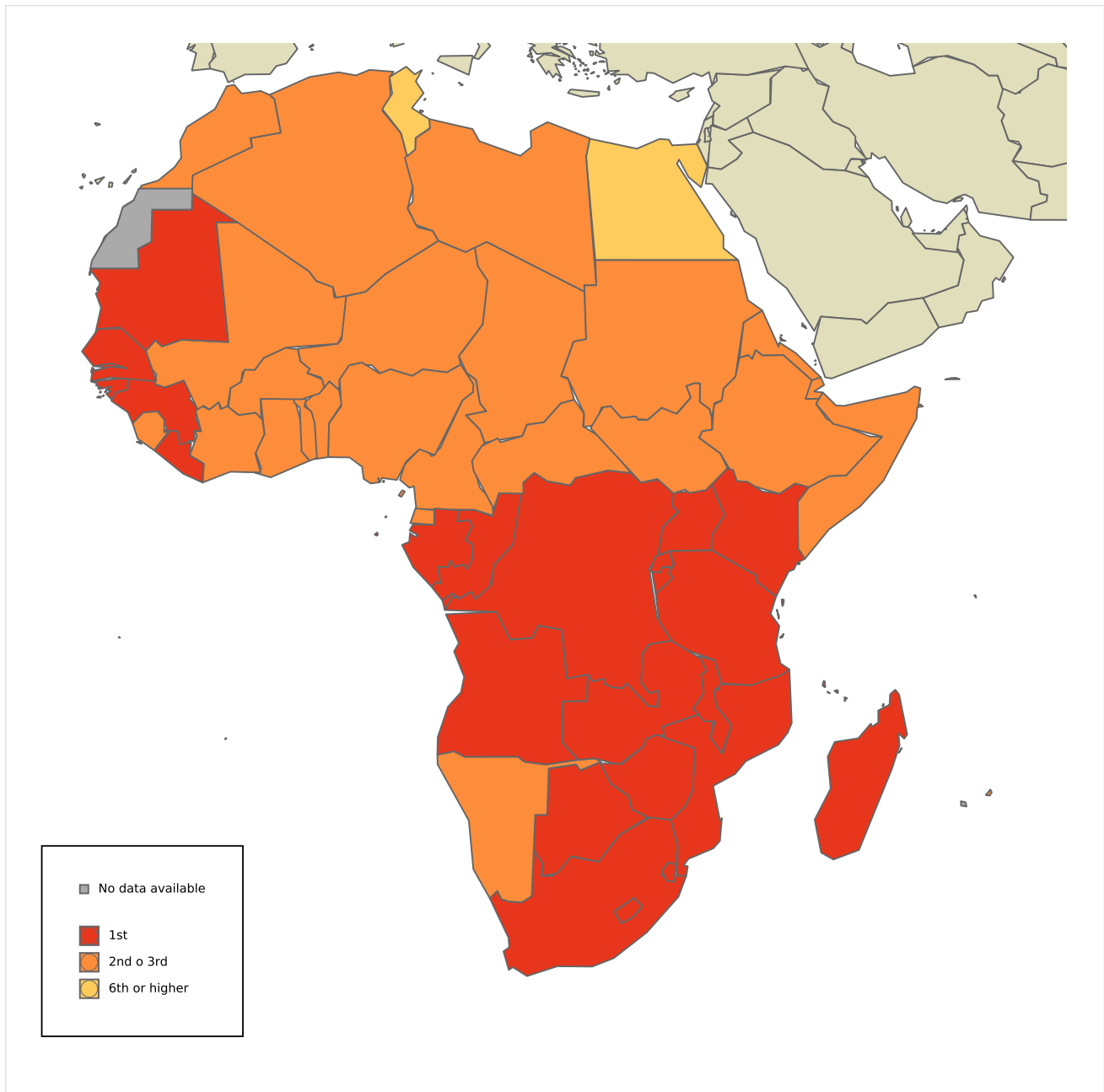
For more detailed methods of estimation please refer to <http://gco.iarc.fr/today/data-sources-methods>

<sup>a</sup> 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 Africa (estimates for 2020)



**Data accessed on 27 Jan 2021**

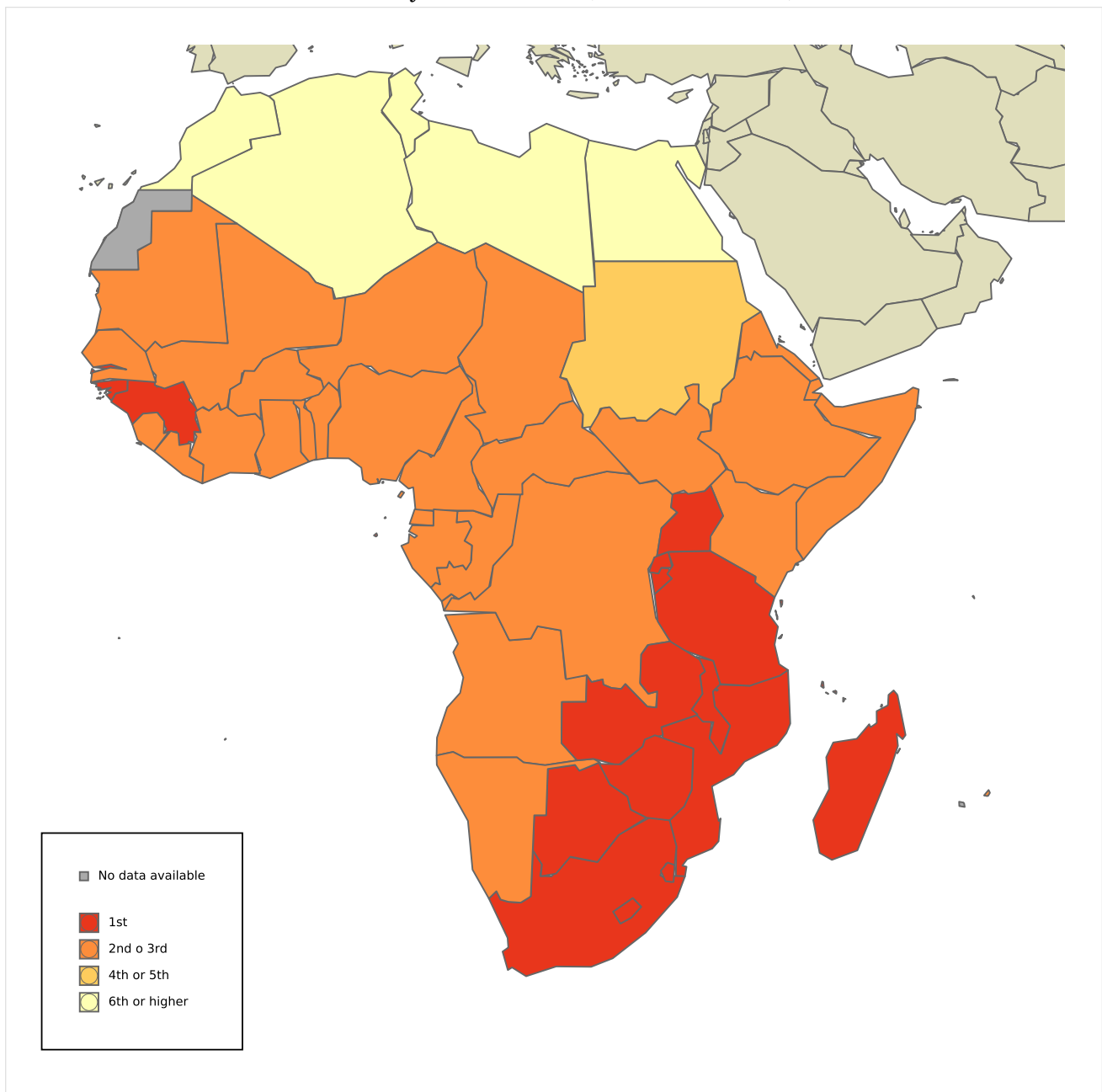
For more detailed methods of estimation please refer to <http://gco.iarc.fr/today/data-sources-methods>

<sup>a</sup> 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 Africa (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>

<sup>a</sup> 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 Africa and sub regions (estimates for 2020)

Area	N Cases	Uncertainty intervals of new cancer cases [95% UI]	Crude rate <sup>b</sup>	ASR <sup>b</sup>	Cumulative risk (%) ages 0-74 years <sup>a</sup>	Ranking	
						All women	Women 15-44 years
<b>Africa</b>	2,959	[1,554.6-5,632.2]	0.44	0.68	0.08	25	22
<b>Eastern Africa</b>	1,162	[503.5-2,681.4]	0.52	0.91	0.10	22	21
Burundi	27	[2-369.3]	0.45	1.02	0.11	23	25
Comoros	2	[0.10-27.4]	0.46	0.91	0.13	15	19
Djibouti	0	[0-13.7]	0	0	0	23	16
Eritrea	3	[0.20-41]	0.17	0.23	0.02	26	19
Ethiopia	156	[63.8-381.6]	0.27	0.43	0.05	25	21
Kenya	146	[66.5-320.4]	0.54	0.96	0.10	25	24
Madagascar	129	[9.40-1,764.5]	0.93	1.58	0.18	17	15
Mozambique	104	[40.6-266.5]	0.65	1.02	0.11	15	10
Mauritius	1	[0.30-3.90]	0.16	0.08	0.02	27	23
Malawi	79	[19.4-322.3]	0.81	1.24	0.13	17	11
Rwanda	17	[1.80-161.1]	0.26	0.44	0.04	25	23
Somalia	23	[1.70-314.6]	0.29	0.56	0.06	26	22
South Sudan	16	[1.20-218.9]	0.29	0.49	0.06	25	24
Tanzania	321	[179.8-573.2]	1.07	2.16	0.26	13	19
Uganda	43	[14.6-126.7]	0.19	0.43	0.04	25	27
Zambia	46	[17.1-123.5]	0.50	0.79	0.07	19	13
Zimbabwe	40	[16.9-94.9]	0.51	0.80	0.08	23	15
<b>Middle Africa</b>	440	[150.6-1,285.4]	0.49	1.01	0.13	21	26
Angola	66	[10.1-431.2]	0.40	0.91	0.12	22	25
Central African Republic	9	[1.10-75.1]	0.37	0.72	0.10	23	27
Cameroon	48	[12.2-189.4]	0.36	0.70	0.10	24	26
DR Congo	269	[32.2-2,245.2]	0.60	1.19	0.15	15	24
Congo	18	[4.10-78.8]	0.65	1.32	0.17	12	23
Gabon	9	[1.50-53.3]	0.82	1.01	0.09	17	11
Equatorial Guinea	1	[0.10-8.30]	0.16	0.30	0.03	21	21
Sao Tome & Principe	0	[0-1.30]	0	0	0	26	11
Chad	20	[2.40-166.9]	0.24	0.54	0.05	25	23
<b>Northern Africa</b>	367	[197.2-683.1]	0.30	0.33	0.04	26	27
Algeria	62	[27.7-138.9]	0.29	0.29	0.03	25	26
Egypt	97	[53.4-176.2]	0.19	0.22	0.02	26	22
Libya	6	[0.50-79.6]	0.18	0.18	0.02	27	25
Morocco	121	[65.6-223]	0.65	0.56	0.06	24	26
Sudan	41	[24.5-68.5]	0.19	0.28	0.03	26	22
Tunisia	40	[12.2-130.8]	0.67	0.49	0.06	24	26
<b>Southern Africa</b>	294	[237-364.7]	0.86	0.85	0.09	23	13
Botswana	13	[5.60-30.3]	1.07	1.17	0.13	14	9
Lesotho	3	[0.70-12.7]	0.28	0.30	0.03	22	15
Namibia	5	[2.10-11.9]	0.38	0.60	0.09	28	26
Eswatini	2	[0.60-6.40]	0.34	0.58	0.06	22	13
South Africa	271	[221.5-331.5]	0.90	0.87	0.09	23	13
<b>Western Africa</b>	696	[244.3-1,982.9]	0.35	0.60	0.07	23	20
Benin	11	[1.10-108.3]	0.18	0.34	0.04	24	26
Burkina Faso	20	[4.30-92.1]	0.19	0.34	0.03	26	28
Côte d'Ivoire	48	[19.2-119.9]	0.37	0.74	0.07	23	19
Cabo Verde	0	[0-11.3]	0	0	0	26	31
Ghana	103	[29.2-362.9]	0.67	0.93	0.11	16	19
Guinea	15	[2.90-76.9]	0.22	0.35	0.05	22	14
Gambia	1	[0.10-11.2]	0.08	0.07	0.01	20	16
Guinea-Bissau	1	[0.20-6.10]	0.10	0.21	0.05	27	23
Liberia	6	[1-36.4]	0.24	0.37	0.05	24	19
Mali	28	[7-111.3]	0.28	0.45	0.05	24	20
Mauritania	11	[1.80-66.7]	0.48	0.73	0.09	23	18
Niger	24	[2.10-274.5]	0.20	0.42	0.02	17	20

Continued on next page

Table 6 – continued from previous page

Area	N Cases	Uncertainty intervals of new cancer cases [95% UI]	Crude rate <sup>b</sup>	ASR <sup>b</sup>	Cumulative risk (%) ages 0-74 years <sup>a</sup>	Ranking	
						All women	Women 15-44 years
Nigeria	377	[154.4-920.5]	0.37	0.65	0.07	22	18
Senegal	32	[5.30-194]	0.37	0.57	0.07	21	18
Sierra Leone	11	[6-20.1]	0.28	0.43	0.04	24	19
Togo	8	[1.50-43.9]	0.19	0.27	0.02	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>

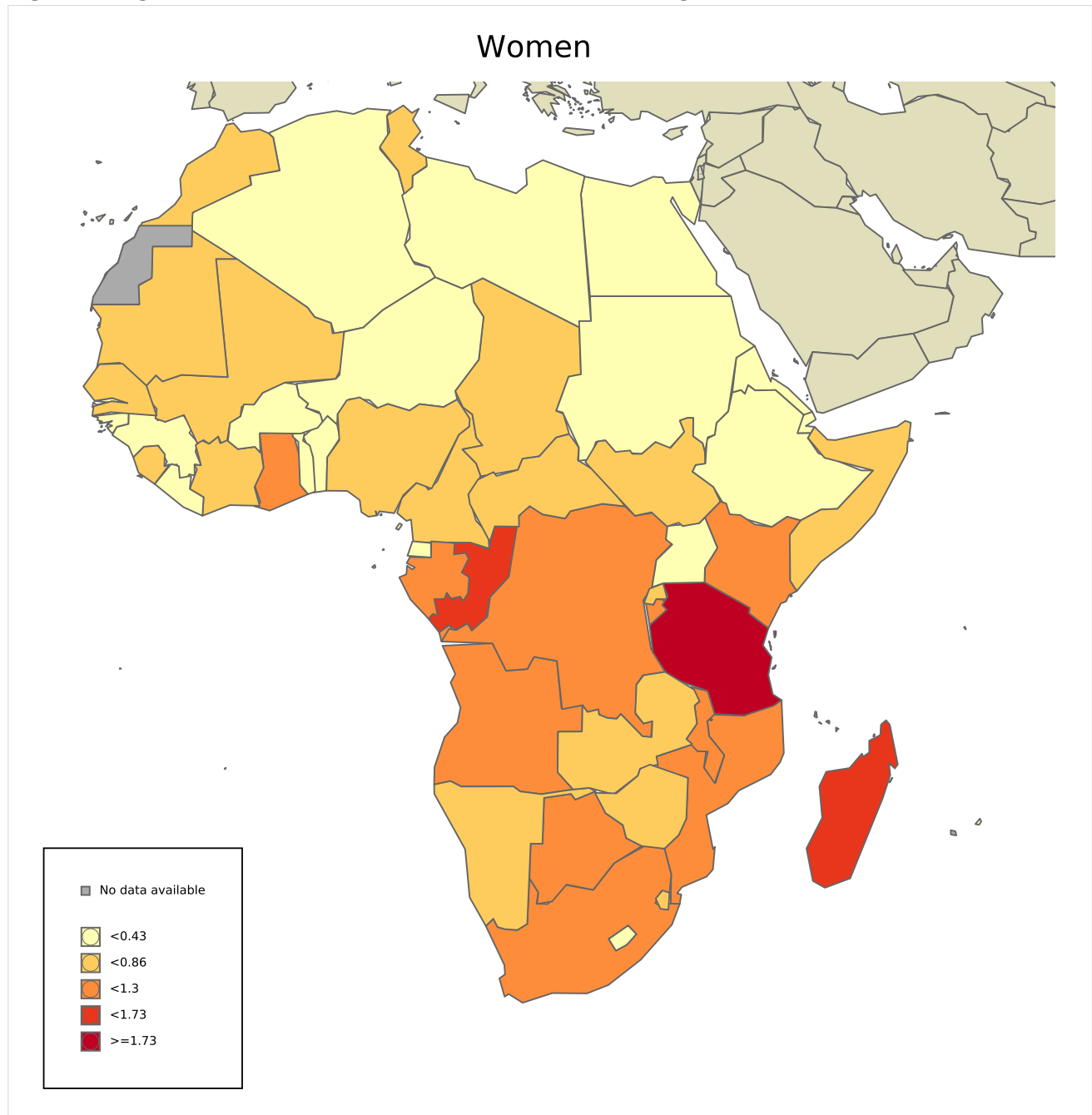
<sup>a</sup> Cumulative risk (incidence) is the probability or risk of individuals getting from the disease during ages 0-74 years. For cancer, it is expressed as the % of new born children who would be expected to develop from a particular cancer before the age of 75 if they had the rates of cancer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

<sup>b</sup> 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 Africa (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>

<sup>a</sup> 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 Africa and sub regions (estimates for 2020)

Area	N Cases	Uncertainty intervals of new cancer cases [95% UI]	Crude rate <sup>b</sup>	ASR <sup>b</sup>	Cumulative risk (%) ages 0-74 years <sup>a</sup>	Ranking	
						All men	Men 15-44 years
<b>Africa</b>	3,161	[1,598.8-6,249.5]	0.47	0.84	0.10	21	20
<b>Eastern Africa</b>	907	[321.2-2,561.5]	0.41	0.93	0.11	21	23
Burundi	32	[3-342.4]	0.54	1.49	0.16	19	20
Comoros	3	[0.30-32.1]	0.68	1.60	0.30	12	13
Djibouti	0	[0-10.7]	0	0	0	25	25
Eritrea	2	[0.20-21.4]	0.11	0.21	0.03	24	28
Ethiopia	143	[52.8-387.4]	0.25	0.46	0.06	21	21
Kenya	59	[19-182.8]	0.22	0.69	0.04	23	25
Madagascar	109	[10.2-1,166.4]	0.79	1.74	0.21	16	23
Mozambique	17	[2.30-125.8]	0.11	0.23	0.03	24	25
Mauritius	5	[1.80-14.3]	0.80	0.50	0.07	25	23
Malawi	24	[2.70-210.9]	0.25	0.43	0.07	20	15
Rwanda	10	[1-98.4]	0.16	0.36	0.02	25	24
Somalia	17	[1.60-181.9]	0.21	0.45	0.05	24	22
South Sudan	15	[1.40-160.5]	0.27	0.51	0.06	24	23
Tanzania	348	[170.3-710.9]	1.17	3.27	0.39	12	21
Uganda	70	[25.1-195.5]	0.31	0.63	0.07	22	16
Zambia	11	[1.50-82.1]	0.12	0.26	0.03	26	24
Zimbabwe	41	[17-98.9]	0.58	1.39	0.21	20	13
<b>Middle Africa</b>	490	[153.9-1,560.3]	0.55	1.23	0.15	18	20
Angola	110	[23.1-524.4]	0.68	1.80	0.23	15	17
Central African Republic	7	[1.20-40.9]	0.29	0.72	0.09	23	28
Cameroon	50	[10.8-232]	0.38	0.62	0.07	22	19
DR Congo	256	[43.8-1,496.2]	0.57	1.28	0.16	16	20
Congo	17	[4.20-69.5]	0.62	1.43	0.18	11	13
Gabon	15	[3.40-65.9]	1.32	1.87	0.22	13	8
Equatorial Guinea	5	[0.90-29.2]	0.64	1.09	0.14	16	14
Sao Tome & Principe	0	[0-1.30]	0	0	0	23	23
Chad	30	[5.10-175.3]	0.37	0.81	0.10	20	18
<b>Northern Africa</b>	476	[261.5-866.4]	0.38	0.46	0.05	23	22
Algeria	78	[37.5-162.2]	0.35	0.36	0.04	23	25
Egypt	192	[108.8-338.9]	0.37	0.47	0.05	22	19
Libya	10	[1.30-74.1]	0.29	0.33	0.01	21	15
Morocco	113	[59.2-215.8]	0.62	0.59	0.07	22	25
Sudan	33	[19.3-56.4]	0.15	0.27	0.03	25	23
Tunisia	50	[25.4-98.4]	0.85	0.72	0.08	20	22
<b>Southern Africa</b>	208	[163.5-264.6]	0.63	0.78	0.09	23	21
Botswana	3	[0.90-10.5]	0.26	0.29	0.03	24	13
Lesotho	2	[0.50-8.40]	0.19	0.22	0.02	18	12
Namibia	8	[3.50-18.3]	0.65	1.06	0.12	23	17
Eswatini	1	[0.10-8.40]	0.18	0.30	0.03	20	22
South Africa	194	[154.9-243]	0.66	0.81	0.09	24	21
<b>Western Africa</b>	1,080	[443.4-2,630.6]	0.53	0.98	0.11	19	12
Benin	44	[10.8-178.5]	0.73	1.43	0.21	14	12
Burkina Faso	10	[1.30-74.6]	0.10	0.19	0.02	24	24
Côte d'Ivoire	37	[14.3-95.8]	0.28	0.47	0.07	20	13
Cabo Verde	1	[0.10-11.3]	0.36	0.38	0.05	24	26
Ghana	72	[13.1-396.1]	0.46	0.59	0.06	17	19
Guinea	17	[4.10-70.3]	0.27	0.63	0.09	17	13
Gambia	0	[0-11.2]	0	0	0	27	21
Guinea-Bissau	2	[0.20-21.4]	0.21	0.49	0.06	18	22
Liberia	7	[0.70-75]	0.28	0.54	0.08	19	18
Mali	33	[10.5-104]	0.33	0.69	0.08	18	17
Mauritania	16	[1.50-171.4]	0.69	1.41	0.13	15	17
Niger	71	[9.50-527.9]	0.58	1.35	0.17	14	15
Nigeria	674	[314.3-1,445.3]	0.65	1.12	0.12	17	9
Senegal	39	[3.60-417.8]	0.48	1.02	0.11	18	16
Sierra Leone	23	[14.4-36.8]	0.58	1.31	0.12	15	17
Togo	34	[3.60-319]	0.83	1.72	0.16	17	13

Data accessed on 27 Jan 2021

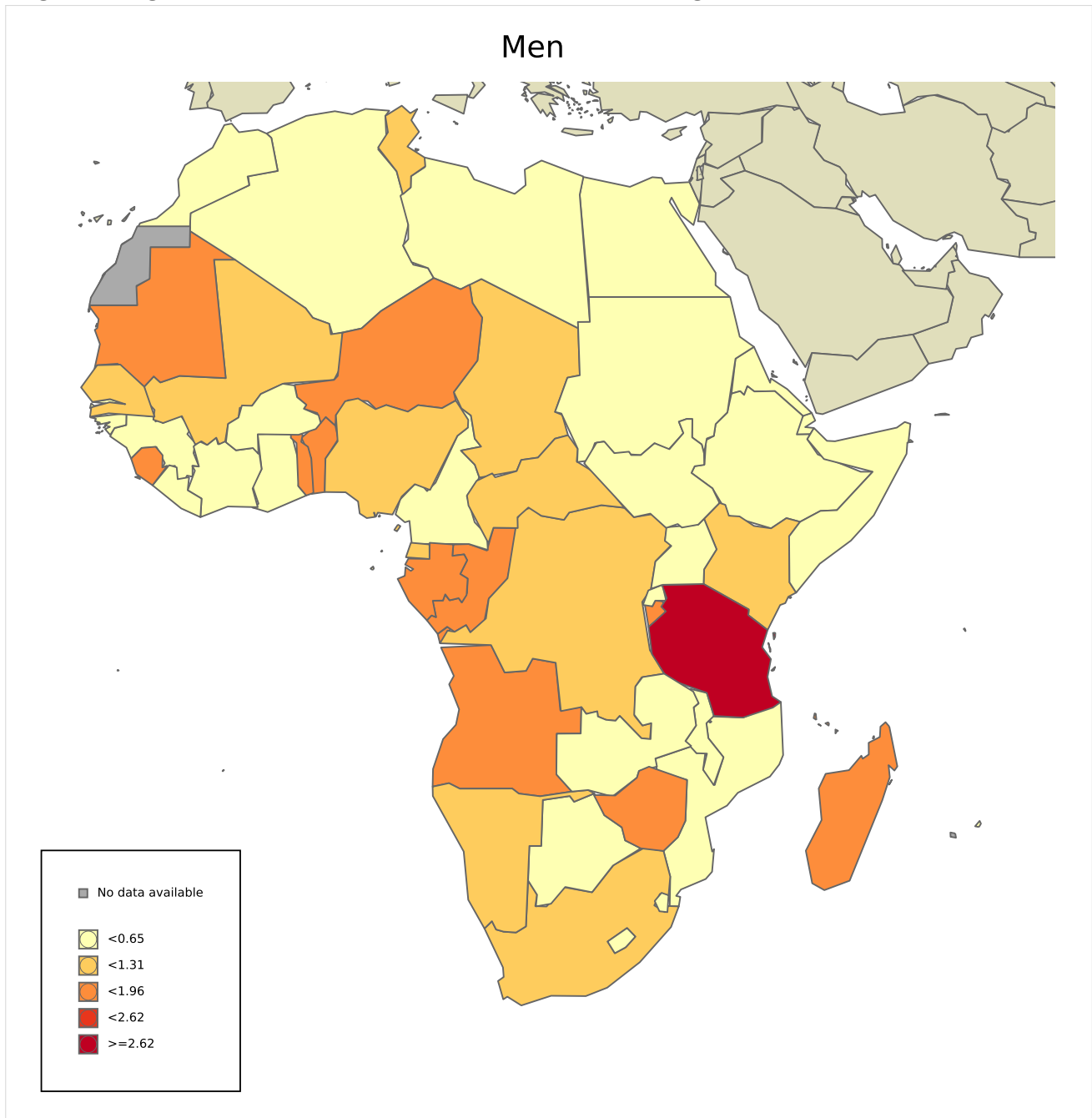
For more detailed methods of estimation please refer to <http://gco.iarc.fr/today/data-sources-methods><sup>a</sup> Cumulative risk (incidence) is the probability or risk of individuals getting from the disease during ages 0-74 years. For cancer, it is expressed as the % of new born children who would 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.<sup>b</sup> 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 Africa (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>

<sup>a</sup> 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 Africa and sub regions (estimates for 2020)

Area	N Cases	Uncertainty intervals of new cancer cases [95% UI]	Crude rate <sup>b</sup>	ASR <sup>b</sup>	Cumulative risk (%) ages 0-74 years <sup>a</sup>	Ranking	
						All women	Women 15-44 years
<b>Africa</b>	1,937	[931.6-4,027.6]	0.29	0.46	0.05	23	20
<b>Eastern Africa</b>	846	[323.3-2,213.6]	0.38	0.68	0.08	21	18
Burundi	21	[1.50-295.7]	0.35	0.80	0.09	19	20
Comoros	1	[0.10-14.1]	0.23	0.47	0.08	13	20
Djibouti	0	[0-14.1]	0	0	0	29	23
Eritrea	2	[0.10-28.2]	0.11	0.17	0.01	25	18
Ethiopia	122	[43.1-345.3]	0.21	0.35	0.04	25	19
Kenya	101	[39.7-257]	0.37	0.71	0.07	21	20
Madagascar	93	[6.60-1,309.6]	0.67	1.20	0.14	15	15
Mozambique	78	[26.1-233.1]	0.49	0.82	0.10	14	11
Mauritius	0	[0-13.5]	0	0	0	29	24
Malawi	61	[12.9-287.6]	0.63	0.98	0.10	12	11
Rwanda	12	[0.90-169]	0.18	0.35	0.03	24	29
Somalia	18	[1.30-253.5]	0.23	0.43	0.05	24	20
South Sudan	10	[0.70-140.8]	0.18	0.30	0.03	26	21
Tanzania	232	[116.5-461.9]	0.78	1.60	0.19	13	18
Uganda	31	[8.80-109]	0.13	0.31	0.03	25	26
Zambia	32	[9.90-103.5]	0.34	0.58	0.06	17	13
Zimbabwe	29	[10.5-80.1]	0.37	0.58	0.06	22	11
<b>Middle Africa</b>	327	[110.7-965.6]	0.36	0.76	0.10	19	24
Angola	46	[6.20-341.3]	0.28	0.67	0.09	21	24
Central African Republic	7	[0.90-51.9]	0.29	0.55	0.06	22	28
Cameroon	34	[7.80-148.3]	0.26	0.49	0.07	21	23
DR Congo	206	[27.8-1,528.2]	0.46	0.91	0.11	14	22
Congo	12	[2.20-65.7]	0.43	0.89	0.11	11	20
Gabon	5	[0.70-37.1]	0.46	0.42	0.03	18	9
Equatorial Guinea	1	[0.10-7.40]	0.16	0.30	0.03	19	20
Sao Tome & Principe	0	[0-41.4]	0	0	0	12	20
Chad	16	[2.20-118.7]	0.19	0.48	0.05	23	28
<b>Northern Africa</b>	179	[89.8-356.8]	0.15	0.16	0.02	26	24
Algeria	21	[8.30-53.1]	0.10	0.09	0.01	25	31
Egypt	46	[23.5-90.1]	0.09	0.10	0.01	26	21
Libya	4	[0.30-58.8]	0.12	0.13	0.01	27	18
Morocco	68	[34.2-135.3]	0.37	0.31	0.03	23	25
Sudan	23	[13.3-39.8]	0.10	0.17	0.01	26	23
Tunisia	17	[4.60-62.6]	0.29	0.20	0.02	24	25
<b>Southern Africa</b>	80	[55.3-115.6]	0.23	0.23	0.02	25	17
Botswana	8	[3-21.6]	0.66	0.63	0.06	14	7
Lesotho	2	[0.50-8.70]	0.18	0.21	0.02	22	15
Namibia	3	[1-9]	0.23	0.40	0.07	28	23
Eswatini	1	[0.20-4.40]	0.17	0.40	0.05	21	17
South Africa	66	[46.3-94.1]	0.22	0.22	0.02	25	19
<b>Western Africa</b>	505	[191.2-1,334]	0.25	0.45	0.05	22	17
Benin	8	[0.50-117.7]	0.13	0.25	0.03	24	26
Burkina Faso	16	[3-86]	0.15	0.27	0.03	26	31
Côte d'Ivoire	36	[12.5-103.3]	0.28	0.60	0.06	20	17
Cabo Verde	0	[0-14.3]	0	0	0	27	20
Ghana	67	[16.5-272.8]	0.44	0.64	0.08	16	19
Guinea	11	[2-59.1]	0.16	0.26	0.04	21	12
Gambia	1	[0.60-1.60]	0.08	0.07	0.01	20	11
Guinea-Bissau	1	[0.20-5.40]	0.10	0.21	0.05	27	13
Liberia	5	[0.90-26.9]	0.20	0.34	0.05	24	15
Mali	22	[4.60-106]	0.22	0.33	0.03	22	15
Mauritania	8	[1.50-43]	0.35	0.57	0.06	20	20
Niger	19	[11.9-30.4]	0.16	0.36	0.02	17	19
Nigeria	272	[99.5-743.6]	0.27	0.48	0.06	20	15
Senegal	24	[4.50-129]	0.28	0.44	0.06	20	15
Sierra Leone	9	[4.70-17.4]	0.23	0.39	0.04	21	22
Togo	6	[1.10-32.3]	0.14	0.21	0.02	28	19

Data accessed on 27 Jan 2021

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

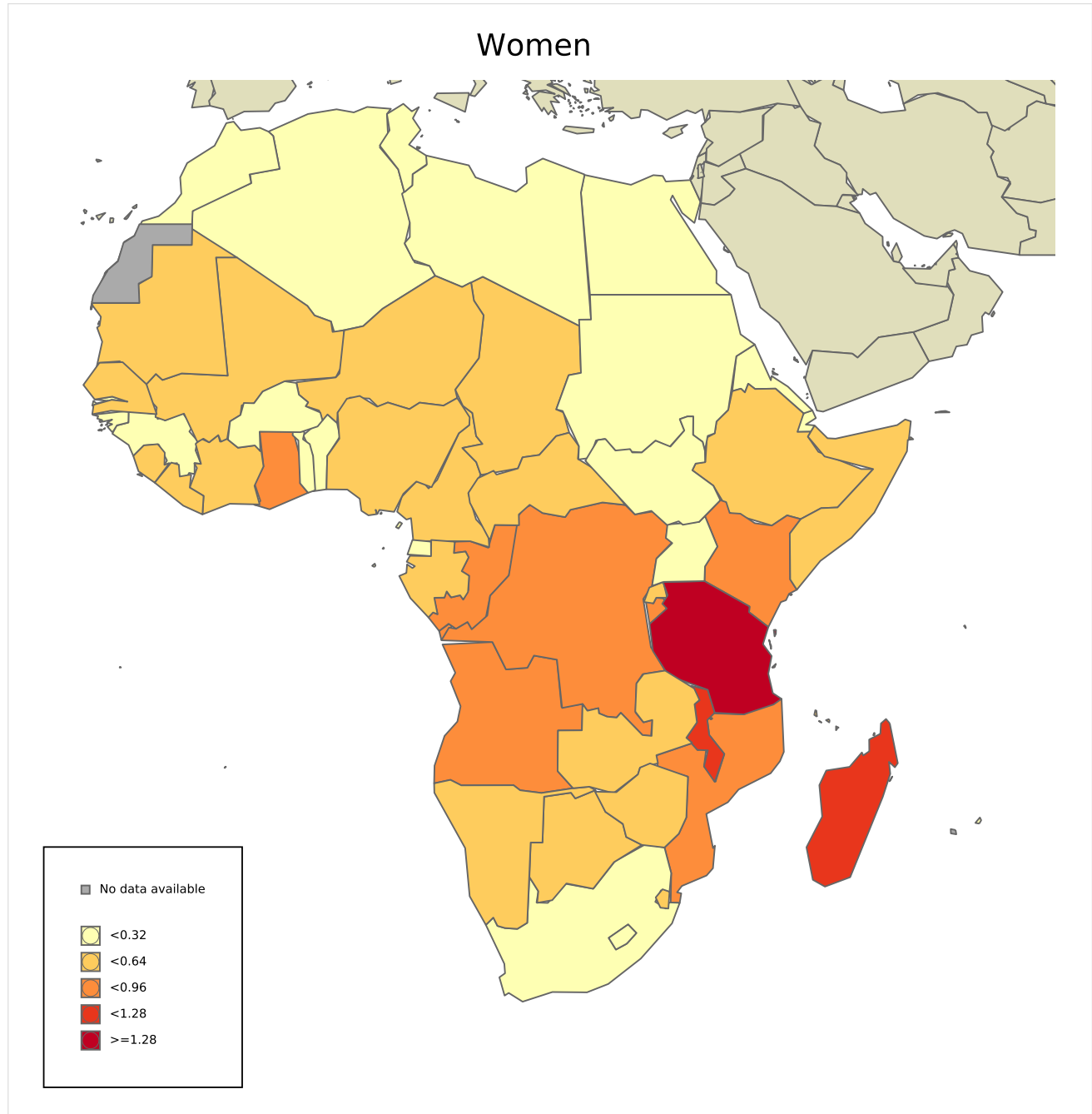
<sup>a</sup> Cumulative risk (mortality) is the probability or risk of individuals dying from the disease during ages 0-74 years. For cancer, it is expressed as the % of new born children who would be expected to die from a particular cancer before the age of 75 if they had the rates of cancer observed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

<sup>b</sup> 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 Africa (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>

<sup>a</sup> 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 Africa and sub regions (estimates for 2020)

Area	N Cases	Uncertainty intervals of new cancer cases [95% UI]	Crude rate <sup>b</sup>	ASR <sup>b</sup>	Cumulative risk (%) ages 0-74 years <sup>a</sup>	Ranking	
						All men	Men 15-44 years
<b>Africa</b>	2,124	[978.3-4,611.5]	0.32	0.59	0.07	19	17
<b>Eastern Africa</b>	657	[201.7-2,139.7]	0.30	0.70	0.08	19	20
Burundi	25	[2.30-274.7]	0.42	1.22	0.14	18	13
Comoros	2	[0.20-22]	0.46	1.13	0.24	11	11
Djibouti	0	[0-11]	0	0	0	21	23
Eritrea	2	[0.20-22]	0.11	0.21	0.03	22	28
Ethiopia	109	[34.2-347.4]	0.19	0.37	0.05	21	20
Kenya	40	[10.4-153.4]	0.15	0.53	0.02	22	20
Madagascar	79	[7.20-868]	0.57	1.30	0.15	16	20
Mozambique	13	[1.30-133.4]	0.09	0.18	0.02	24	22
Mauritius	0	[0-12]	0	0	0	23	23
Malawi	18	[1.60-197.8]	0.19	0.35	0.06	20	17
Rwanda	7	[0.50-103]	0.11	0.28	0.01	25	24
Somalia	13	[1.20-142.8]	0.16	0.33	0.03	23	16
South Sudan	11	[1-120.9]	0.20	0.36	0.03	22	17
Tanzania	249	[106.6-581.7]	0.83	2.46	0.27	12	20
Uganda	51	[15.4-168.4]	0.23	0.49	0.06	21	15
Zambia	8	[0.70-87.2]	0.09	0.21	0.02	24	19
Zimbabwe	30	[10.7-84.4]	0.42	1.13	0.19	18	13
<b>Middle Africa</b>	359	[111.3-1,157.8]	0.40	0.95	0.12	18	19
Angola	75	[14.2-397.4]	0.46	1.35	0.17	16	16
Central African Republic	6	[1.10-31.8]	0.25	0.64	0.09	22	24
Cameroon	35	[6.70-181.6]	0.26	0.46	0.05	20	17
DR Congo	196	[37-1,038.5]	0.44	1.01	0.12	14	19
Congo	11	[2.20-55.7]	0.40	1.06	0.16	10	26
Gabon	9	[1.70-47.7]	0.79	1.03	0.12	13	7
Equatorial Guinea	3	[0.60-15.9]	0.38	0.93	0.12	16	17
Sao Tome & Principe	0	[0-41.4]	0	0	0	13	20
Chad	24	[4.50-127.2]	0.29	0.69	0.08	20	20
<b>Northern Africa</b>	235	[120.9-456.9]	0.19	0.24	0.02	21	26
Algeria	38	[16.4-88.2]	0.17	0.18	0.02	23	22
Egypt	89	[46.9-168.7]	0.17	0.25	0.03	21	24
Libya	6	[0.70-48.2]	0.17	0.27	0.01	20	19
Morocco	57	[27.5-118.1]	0.31	0.30	0.03	20	26
Sudan	18	[10.1-31.9]	0.08	0.16	0.02	25	22
Tunisia	27	[12.8-56.9]	0.46	0.38	0.04	19	17
<b>Southern Africa</b>	73	[49.8-107]	0.22	0.30	0.03	24	21
Botswana	2	[0.50-8.40]	0.18	0.22	0.02	24	15
Lesotho	1	[0.20-4.20]	0.09	0.15	0.01	20	28
Namibia	5	[1.80-14.2]	0.41	0.82	0.10	21	21
Eswatini	1	[0.10-14.7]	0.18	0.30	0.03	19	23
South Africa	64	[44.3-92.4]	0.22	0.29	0.03	24	21
<b>Western Africa</b>	800	[303-2,112.3]	0.40	0.77	0.09	16	11
Benin	32	[6.20-166]	0.53	1.09	0.17	13	12
Burkina Faso	8	[0.90-73.2]	0.08	0.15	0.02	22	23
Côte d'Ivoire	28	[9.40-83.7]	0.21	0.37	0.06	20	9
Cabo Verde	0	[0-14.3]	0	0	0	26	28
Ghana	50	[7.50-334.7]	0.32	0.41	0.04	16	19
Guinea	13	[3-56]	0.20	0.46	0.06	17	10
Gambia	0	[0-1.60]	0	0	0	28	17
Guinea-Bissau	2	[0.20-18.3]	0.21	0.49	0.06	15	28
Liberia	5	[0.50-45.7]	0.20	0.41	0.06	18	24
Mali	26	[7-96.1]	0.26	0.59	0.07	17	15
Mauritania	12	[1.30-109.8]	0.51	1.09	0.08	15	11
Niger	59	[6.50-539.6]	0.48	1.14	0.15	13	13
Nigeria	493	[208.7-1,164.5]	0.47	0.86	0.10	13	10
Senegal	29	[3.20-265.2]	0.35	0.84	0.09	15	16
Sierra Leone	18	[10.8-30]	0.45	1.06	0.09	14	13
Togo	25	[2.70-228.7]	0.61	1.42	0.13	14	16

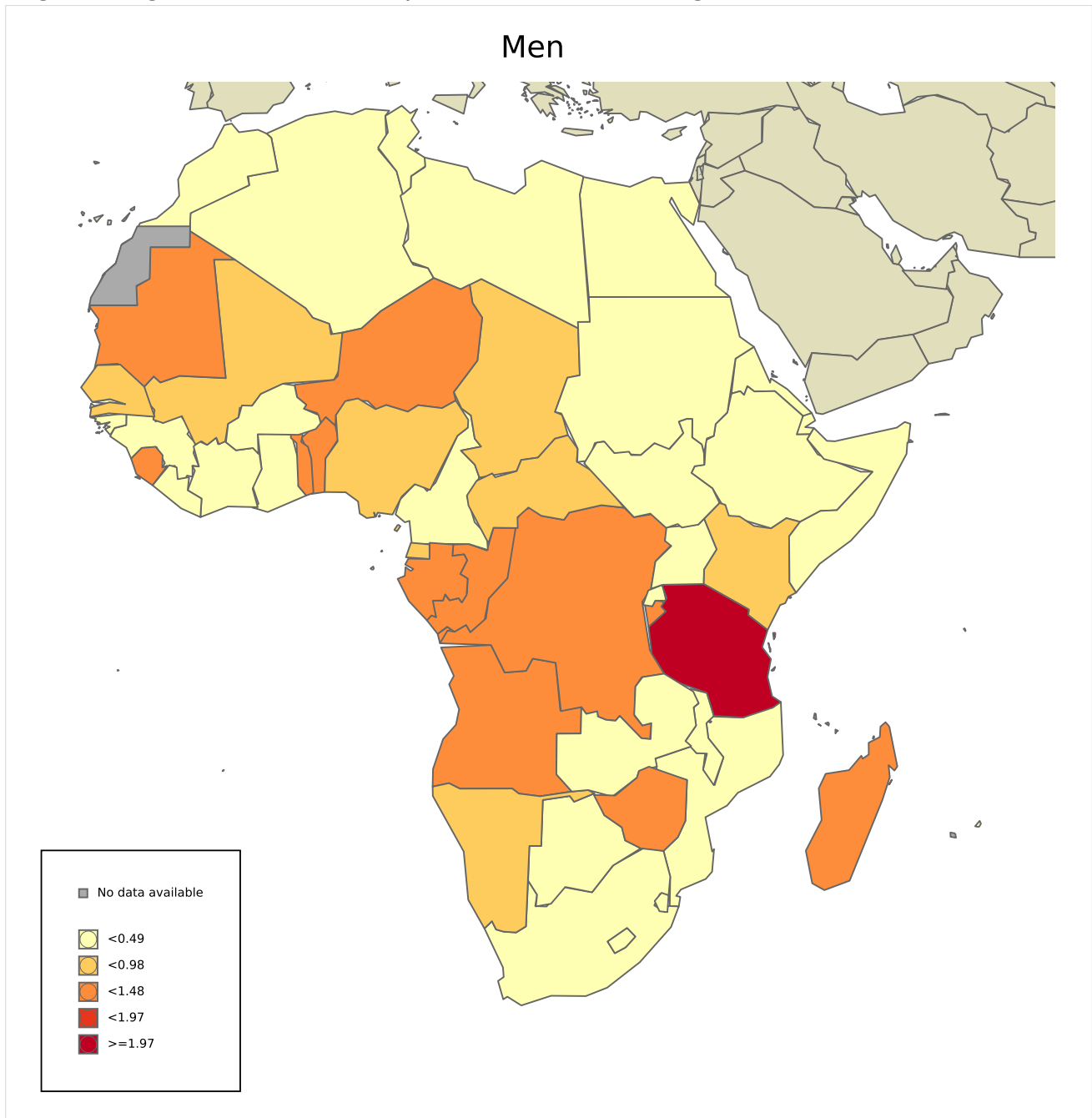
Data accessed on 27 Jan 2021

For more detailed methods of estimation please refer to <http://gco.iarc.fr/today/data-sources-methods><sup>a</sup> 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.<sup>b</sup> 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 Africa (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>

<sup>a</sup> 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 Africa and sub regions (estimates for 2020)

Area	N Cases	Uncertainty intervals of new cancer cases [95% UI]	Crude rate <sup>b</sup>	ASR <sup>b</sup>	Cumulative risk (%) ages 0-74 years <sup>a</sup>	Ranking	
						All women	Women 15-44 years
<b>Africa</b>	5,144	[3,330-7,946.2]	0.77	1.11	0.12	19	13
<b>Eastern Africa</b>	2,025	[1,113.9-3,681.4]	0.90	1.39	0.14	17	11
Burundi	49	[11.9-202.1]	0.82	1.47	0.15	16	8
Comoros	6	[1.50-24.7]	1.39	1.75	0.17	9	6
Djibouti	1	[0.20-4.10]	0.21	0.31	0.04	20	22
Eritrea	15	[3.60-61.9]	0.85	1.19	0.12	17	10
Ethiopia	422	[245-726.9]	0.73	1.02	0.08	18	9
Kenya	157	[77.4-318.3]	0.58	1.07	0.12	23	16
Madagascar	191	[46.3-787.7]	1.38	1.96	0.20	11	6
Mozambique	222	[115-428.7]	1.38	2.09	0.21	10	7
Mauritius	11	[4.80-25.2]	1.71	0.89	0.10	20	26
Malawi	97	[28.8-326.6]	1.00	1.30	0.11	14	9
Rwanda	68	[20.1-229.9]	1.03	1.51	0.14	14	8
Somalia	47	[11.4-193.8]	0.59	1.06	0.10	19	9
South Sudan	27	[6.50-111.4]	0.48	0.83	0.10	22	17
Tanzania	319	[192.3-529.2]	1.07	1.72	0.17	14	7
Uganda	122	[65.8-226.2]	0.53	1.09	0.13	21	17
Zambia	134	[73.6-244]	1.44	2.29	0.21	11	5
Zimbabwe	128	[79-207.3]	1.65	2.30	0.20	14	5
<b>Middle Africa</b>	612	[300.5-1,246.6]	0.68	1.31	0.15	14	11
Angola	182	[48.9-678]	1.10	1.96	0.19	11	5
Central African Republic	14	[3.20-61.9]	0.57	1.09	0.13	17	19
Cameroon	52	[14-192.5]	0.39	0.67	0.08	20	17
DR Congo	310	[70.1-1,370.9]	0.69	1.37	0.16	13	12
Congo	19	[5.90-61.1]	0.69	1.52	0.21	11	16
Gabon	1	[0.10-10.9]	0.09	0.13	0.01	31	27
Equatorial Guinea	0	[0-4.40]	0	0	0	29	27
Sao Tome & Principe	0	[0-1.20]	0	0	0	12	25
Chad	34	[7.70-150.4]	0.41	0.80	0.09	20	13
<b>Northern Africa</b>	747	[469.5-1,188.4]	0.61	0.66	0.08	22	25
Algeria	89	[47.3-167.5]	0.41	0.40	0.05	23	24
Egypt	219	[126-380.6]	0.43	0.50	0.06	21	28
Libya	13	[1.80-96.3]	0.38	0.45	0.03	23	30
Morocco	240	[145.5-395.8]	1.29	1.10	0.12	20	29
Sudan	145	[106.9-196.8]	0.66	1.05	0.13	19	17
Tunisia	41	[18.6-90.4]	0.69	0.48	0.04	22	24
<b>Southern Africa</b>	487	[427.5-554.7]	1.42	1.39	0.14	20	8
Botswana	28	[16.9-46.3]	2.31	2.28	0.24	8	5
Lesotho	28	[15.3-51.2]	2.58	2.67	0.23	7	4
Namibia	22	[13.5-35.8]	1.68	2.12	0.17	15	9
Eswatini	21	[13-34]	3.56	4.26	0.39	4	4
South Africa	388	[343.4-438.4]	1.29	1.25	0.12	20	11
<b>Western Africa</b>	1,273	[497.5-3,257.4]	0.64	0.99	0.11	17	11
Benin	28	[5.60-141.1]	0.46	0.78	0.09	20	16
Burkina Faso	60	[7.20-496.6]	0.57	0.90	0.10	18	10
Côte d'Ivoire	30	[10.6-85.2]	0.23	0.39	0.04	27	22
Cabo Verde	1	[0.10-11.3]	0.36	0.19	0	23	25
Ghana	56	[10.2-308.1]	0.37	0.54	0.06	22	16
Guinea	14	[3.50-56.4]	0.21	0.27	0.03	23	12
Gambia	0	[0-11.2]	0	0	0	24	25
Guinea-Bissau	3	[0.40-23]	0.30	0.41	0.04	20	10
Liberia	4	[0.50-30.7]	0.16	0.25	0.03	25	25
Mali	41	[12.8-131.5]	0.41	0.73	0.10	21	17
Mauritania	14	[1.80-107.3]	0.60	0.89	0.11	19	13
Niger	16	[1.40-183]	0.13	0.20	0.02	19	15
Nigeria	930	[425.9-2,031]	0.91	1.44	0.15	11	7
Senegal	39	[5.10-299]	0.45	0.69	0.09	19	16

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Table 10 – continued from previous page

Area	N Cases	Uncertainty intervals of new cancer cases [95% UI]	Crude rate <sup>b</sup>	ASR <sup>b</sup>	Cumulative risk (%) ages 0-74 years <sup>a</sup>	Ranking	
						All women	Women 15-44 years
Sierra Leone	19	[11.2-32.3]	0.48	0.71	0.09	18	12
Togo	18	[4.60-70.1]	0.43	0.69	0.08	22	17

**Data accessed on 27 Jan 2021**

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

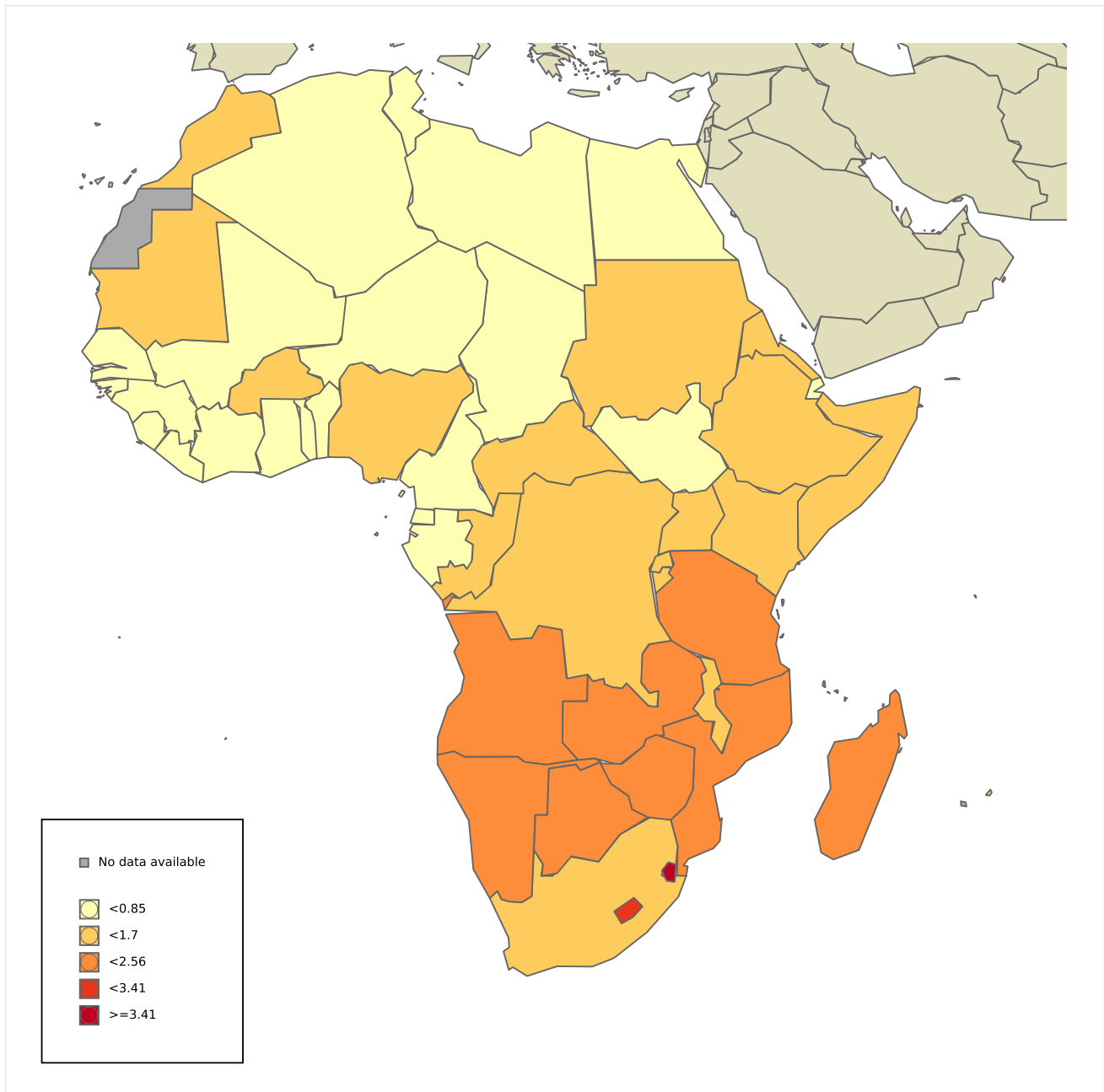
<sup>a</sup> Cumulative risk (incidence) is the probability or risk of individuals getting from the disease during ages 0-74 years. For cancer, it is expressed as the % of new born children who would be expected to develop from a particular cancer before the age of 75 if they had the rates of cancer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

<sup>b</sup> 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 Africa (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>

<sup>a</sup> 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 Africa and sub regions (estimates for 2020)

Area	N Cases	Uncertainty intervals of new cancer cases [95% UI]	Crude rate <sup>b</sup>	ASR <sup>b</sup>	Cumulative risk (%) ages 0-74 years <sup>a</sup>	Ranking	
						All women	Women 15-44 years
<b>Africa</b>	2,858	[1,742.9-4,686.6]	0.43	0.66	0.07	20	12
<b>Eastern Africa</b>	1,176	[591.7-2,337.4]	0.52	0.89	0.09	18	12
Burundi	31	[7.40-129.9]	0.52	1.08	0.12	15	15
Comoros	4	[1-16.8]	0.93	1.33	0.13	10	7
Djibouti	1	[0.20-4.20]	0.21	0.31	0.04	20	22
Eritrea	9	[2.10-37.7]	0.51	0.75	0.08	20	17
Ethiopia	231	[122.7-434.8]	0.40	0.62	0.05	19	12
Kenya	88	[38-203.8]	0.33	0.68	0.08	23	19
Madagascar	113	[27-473.4]	0.81	1.26	0.14	13	9
Mozambique	140	[65.1-301]	0.87	1.41	0.15	10	7
Mauritius	7	[2.40-20.5]	1.09	0.53	0.07	19	17
Malawi	60	[15.7-228.9]	0.62	0.85	0.08	13	10
Rwanda	40	[9.50-167.6]	0.61	1.04	0.10	13	13
Somalia	31	[7.40-129.9]	0.39	0.78	0.07	21	17
South Sudan	17	[4.10-71.2]	0.30	0.57	0.07	22	18
Tanzania	176	[96.5-321.1]	0.59	1.05	0.11	16	8
Uganda	73	[35.6-149.7]	0.31	0.75	0.10	20	17
Zambia	76	[37.3-154.9]	0.82	1.44	0.14	12	7
Zimbabwe	75	[42.6-132.2]	0.97	1.50	0.14	16	9
<b>Middle Africa</b>	367	[182.8-736.7]	0.41	0.85	0.09	14	15
Angola	100	[24.6-407.2]	0.60	1.23	0.12	13	10
Central African Republic	9	[2.20-36.6]	0.37	0.74	0.10	19	20
Cameroon	30	[7.40-122.2]	0.23	0.44	0.06	24	21
DR Congo	196	[48.1-798.1]	0.44	0.90	0.10	15	17
Congo	10	[2.60-38.4]	0.36	0.89	0.11	14	22
Gabon	0	[0-1.40]	0	0	0	31	31
Equatorial Guinea	0	[0-4.10]	0	0	0	30	26
Sao Tome & Principe	0	[0-41.4]	0	0	0	28	31
Chad	22	[5.40-89.6]	0.27	0.57	0.07	20	16
<b>Northern Africa</b>	357	[213.2-597.8]	0.29	0.32	0.03	22	23
Algeria	32	[15.5-66.2]	0.15	0.14	0.01	24	28
Egypt	111	[59.6-206.8]	0.22	0.26	0.03	23	28
Libya	8	[1-64.2]	0.24	0.28	0.02	22	28
Morocco	108	[61.5-189.7]	0.58	0.48	0.04	22	26
Sudan	79	[57-109.5]	0.36	0.61	0.07	21	15
Tunisia	19	[8-45.4]	0.32	0.20	0.01	22	30
<b>Southern Africa</b>	221	[177.5-275.1]	0.64	0.62	0.06	20	9
Botswana	14	[7.70-25.3]	1.15	1.25	0.15	9	5
Lesotho	17	[9.20-31.5]	1.57	1.43	0.11	9	4
Namibia	12	[6.50-22.2]	0.92	1.25	0.10	16	14
Eswatini	12	[6.50-22.1]	2.03	1.81	0.15	6	3
South Africa	166	[134.4-205]	0.55	0.53	0.05	21	10
<b>Western Africa</b>	737	[334.1-1,625.6]	0.37	0.64	0.07	17	12
Benin	17	[2.50-113.8]	0.28	0.52	0.07	20	20
Burkina Faso	38	[3.70-389.9]	0.36	0.62	0.08	19	10
Côte d'Ivoire	18	[5.40-59.9]	0.14	0.25	0.03	26	21
Cabo Verde	1	[0.10-14.3]	0.36	0.19	0	22	12
Ghana	31	[4.60-207.5]	0.20	0.33	0.04	22	22
Guinea	9	[2.10-37.8]	0.13	0.19	0.02	23	15
Gambia	0	[0-1.40]	0	0	0	29	17
Guinea-Bissau	2	[0.30-13.4]	0.20	0.31	0.03	17	10
Liberia	3	[0.40-20.1]	0.12	0.20	0.02	27	29
Mali	26	[6.90-98]	0.26	0.54	0.08	19	20
Mauritania	8	[1.20-53.5]	0.35	0.45	0.05	19	10
Niger	11	[8-15.1]	0.09	0.15	0.02	19	13
Nigeria	527	[218.6-1,270.6]	0.52	0.92	0.10	13	10
Senegal	23	[3.40-154]	0.27	0.45	0.06	21	19
Sierra Leone	12	[6.70-21.4]	0.30	0.50	0.07	20	23
Togo	11	[2.90-42.2]	0.26	0.43	0.05	21	13

Data accessed on 27 Jan 2021

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

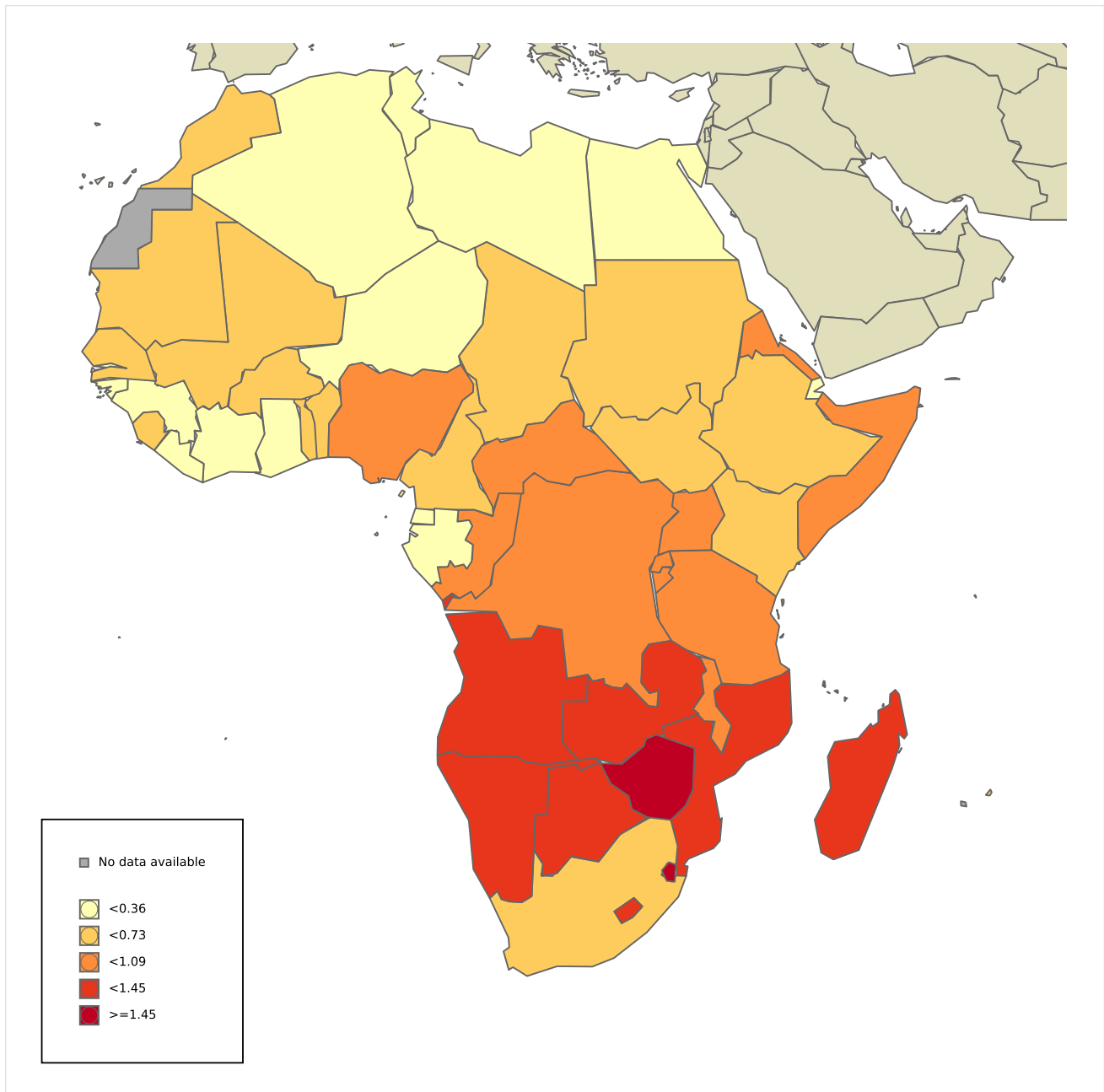
<sup>a</sup> Cumulative risk (mortality) is the probability or risk of individuals dying from the disease during ages 0-74 years. For cancer, it is expressed as the % of new born children who would be expected to die from a particular cancer before the age of 75 if they had the rates of cancer observed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

<sup>b</sup> 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 Africa (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>

<sup>a</sup> 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 Africa and sub regions (estimates for 2020)

Area	N Cases	Uncertainty intervals of new cancer cases [95% UI]	Crude rate <sup>b</sup>	ASR <sup>b</sup>	Cumulative risk (%) ages 0-74 years <sup>a</sup>	Ranking	
						All women	Women 15-44 years
<b>Africa</b>	2,001	[1,031-3,883.5]	0.30	0.45	0.05	27	25
<b>Eastern Africa</b>	790	[299.4-2,084.6]	0.35	0.59	0.07	25	23
Burundi	13	[1.30-130]	0.22	0.42	0.05	26	24
Comoros	0	[0-10]	0	0	0	28	12
Djibouti	0	[0-10]	0	0	0	28	21
Eritrea	5	[0.50-50]	0.28	0.48	0.07	24	26
Ethiopia	224	[93.8-535.1]	0.39	0.63	0.08	23	22
Kenya	65	[19.4-217.9]	0.24	0.41	0.06	29	25
Madagascar	52	[5.20-520.1]	0.37	0.56	0.06	21	17
Mozambique	45	[10.9-185.3]	0.28	0.40	0.03	23	16
Mauritius	7	[2.70-17.9]	1.09	0.57	0.06	23	24
Malawi	85	[24.6-293.4]	0.88	1.58	0.20	15	15
Rwanda	12	[1.20-118.1]	0.18	0.34	0.02	28	31
Somalia	25	[2.50-250.1]	0.31	0.59	0.08	25	23
South Sudan	9	[0.90-90]	0.16	0.27	0.04	27	26
Tanzania	130	[62.4-271]	0.44	0.75	0.09	23	20
Uganda	38	[9.20-156.5]	0.16	0.33	0.04	26	24
Zambia	43	[13.9-133.3]	0.46	0.92	0.09	20	23
Zimbabwe	37	[15.1-90.7]	0.48	0.74	0.06	24	21
<b>Middle Africa</b>	278	[91.6-844.1]	0.31	0.55	0.06	24	22
Angola	88	[9.30-836.9]	0.53	1.00	0.11	20	17
Central African Republic	5	[0.40-63.8]	0.21	0.38	0.04	27	24
Cameroon	49	[11.5-208.3]	0.37	0.63	0.08	21	24
DR Congo	106	[8.30-1,352.5]	0.24	0.43	0.05	24	25
Congo	5	[0.60-40.4]	0.18	0.29	0.03	21	30
Gabon	6	[0.60-65.2]	0.55	0.73	0.07	22	15
Equatorial Guinea	2	[0.20-25.5]	0.32	0.53	0.04	16	13
Sao Tome & Principe	0	[0-1.20]	0	0	0	17	24
Chad	17	[1.30-216.9]	0.21	0.40	0.05	27	21
<b>Northern Africa</b>	275	[128.3-589.5]	0.22	0.25	0.03	28	28
Algeria	38	[14.6-98.6]	0.18	0.18	0.02	27	27
Egypt	80	[32.4-197.2]	0.16	0.19	0.02	29	31
Libya	8	[0.60-106.2]	0.24	0.29	0.02	25	23
Morocco	86	[39.1-188.9]	0.46	0.41	0.05	26	22
Sudan	50	[29.9-83.6]	0.23	0.35	0.04	25	23
Tunisia	13	[3.50-47.7]	0.22	0.18	0.03	29	28
<b>Southern Africa</b>	218	[180.2-263.8]	0.64	0.66	0.07	25	22
Botswana	10	[3.50-28.2]	0.82	0.93	0.08	20	11
Lesotho	4	[0.60-26.2]	0.37	0.39	0.03	21	12
Namibia	16	[9.20-28]	1.22	1.62	0.19	19	17
Eswatini	1	[0.20-4.50]	0.17	0.27	0.02	24	26
South Africa	187	[156.4-223.6]	0.62	0.63	0.07	25	22
<b>Western Africa</b>	440	[104.6-1,850.7]	0.22	0.37	0.04	26	22
Benin	11	[1.10-108.3]	0.18	0.34	0.04	25	27
Burkina Faso	42	[3.70-482]	0.40	0.60	0.07	22	14
Côte d'Ivoire	48	[19.2-119.9]	0.37	0.79	0.07	22	23
Cabo Verde	0	[0-11.3]	0	0	0	27	24
Ghana	18	[1.60-200.7]	0.12	0.20	0.01	28	27
Guinea	18	[3.50-93.6]	0.27	0.43	0.05	19	21
Gambia	0	[0-11.2]	0	0	0	25	27
Guinea-Bissau	3	[0.30-27.9]	0.30	0.53	0.06	18	17
Liberia	11	[1.20-102.4]	0.44	0.67	0.07	17	16
Mali	32	[8.70-117.3]	0.32	0.52	0.06	23	22
Mauritania	8	[0.90-74.5]	0.35	0.50	0.05	25	22
Niger	32	[2.80-366]	0.27	0.55	0.06	15	16
Nigeria	158	[24.9-1,003.2]	0.16	0.26	0.03	26	23
Senegal	28	[3-260.7]	0.33	0.49	0.05	25	20

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Table 12 – continued from previous page

Area	N Cases	Uncertainty intervals of new cancer cases [95% UI]	Crude rate <sup>b</sup>	ASR <sup>b</sup>	Cumulative risk (%) ages 0-74 years <sup>a</sup>	Ranking	
						All women	Women 15-44 years
Sierra Leone	13	[7.30-23.1]	0.33	0.55	0.07	22	22
Togo	18	[5.60-58]	0.43	0.69	0.07	20	19

**Data accessed on 27 Jan 2021**

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

<sup>a</sup> 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.

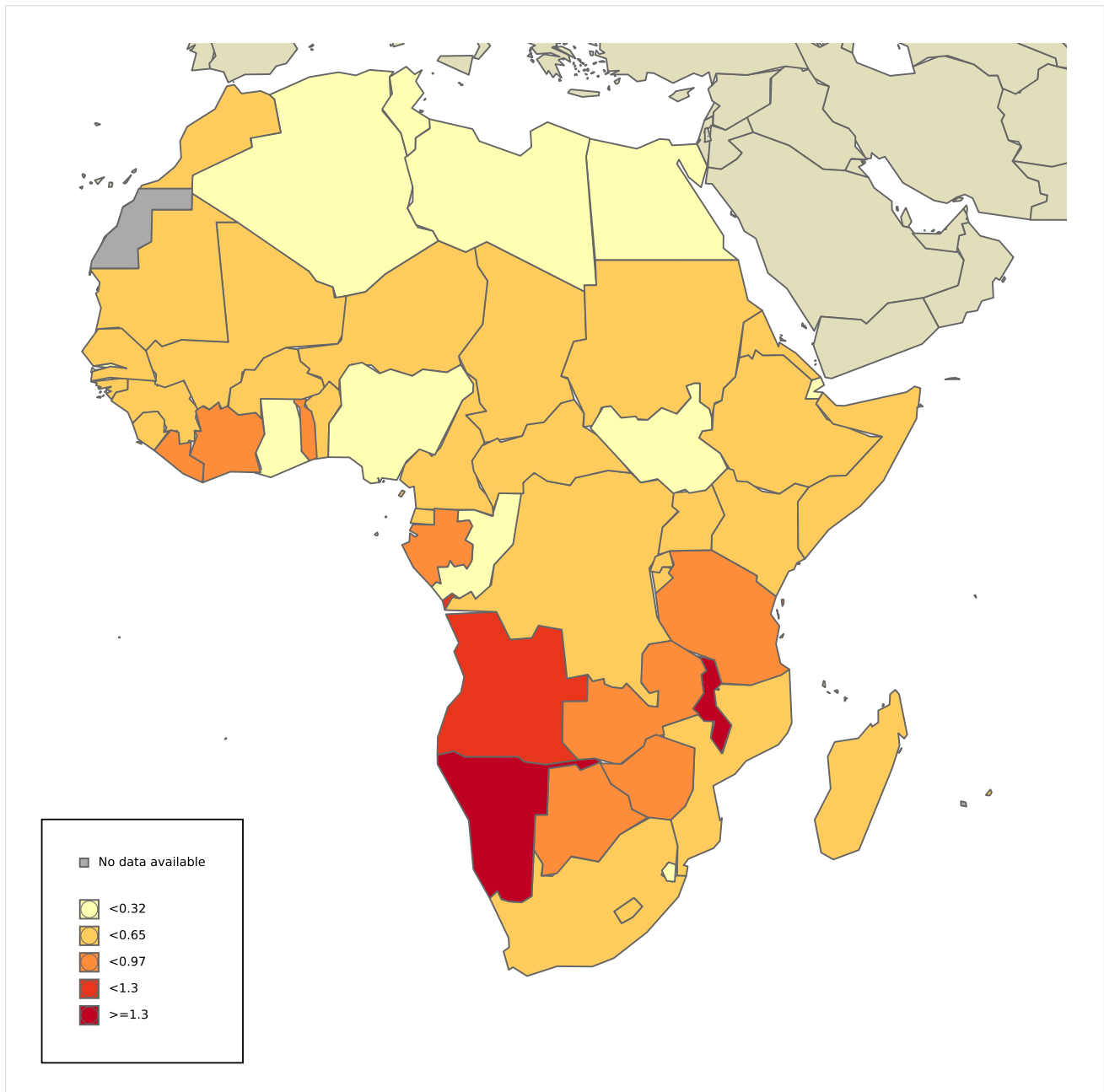
<sup>b</sup> Rates per 100,000 women per year.

**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 Africa (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>

<sup>a</sup> 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 Africa and sub regions (estimates for 2020)

Area	N Cases	Uncertainty intervals of new cancer cases [95% UI]	Crude rate <sup>b</sup>	ASR <sup>b</sup>	Cumulative risk (%) ages 0-74 years <sup>a</sup>	Ranking	
						All women	Women 15-44 years
<b>Africa</b>	1,102	[518.4-2,342.6]	0.16	0.26	0.03	27	23
<b>Eastern Africa</b>	473	[154.9-1,444]	0.21	0.38	0.05	27	22
Burundi	8	[0.80-82.1]	0.13	0.24	0.03	26	19
Comoros	0	[0-10.3]	0	0	0	20	17
Djibouti	0	[0-10.3]	0	0	0	21	19
Eritrea	3	[0.30-30.8]	0.17	0.28	0.05	24	25
Ethiopia	138	[50.1-380]	0.24	0.41	0.05	23	22
Kenya	36	[8.60-151.5]	0.13	0.26	0.04	29	23
Madagascar	31	[3-318.1]	0.22	0.36	0.04	21	17
Mozambique	28	[5.40-145.3]	0.17	0.27	0.02	23	19
Mauritius	0	[0-13.5]	0	0	0	25	18
Malawi	52	[13.3-203.9]	0.54	1.01	0.13	16	17
Rwanda	7	[0.50-103]	0.11	0.21	0.01	28	25
Somalia	17	[1.70-174.4]	0.21	0.42	0.06	26	22
South Sudan	6	[0.60-61.6]	0.11	0.20	0.03	28	27
Tanzania	78	[32.6-186.6]	0.26	0.49	0.06	23	22
Uganda	23	[4.40-119.3]	0.10	0.22	0.03	26	25
Zambia	24	[6.30-92.1]	0.26	0.54	0.04	20	20
Zimbabwe	22	[7.70-63.2]	0.28	0.46	0.04	24	23
<b>Middle Africa</b>	162	[51.9-505.4]	0.18	0.34	0.04	24	22
Angola	49	[4.40-542.7]	0.30	0.62	0.06	20	16
Central African Republic	3	[0.30-33.2]	0.12	0.24	0.03	26	19
Cameroon	28	[5.90-132.2]	0.21	0.38	0.05	25	22
DR Congo	64	[5.80-708.8]	0.14	0.27	0.03	23	24
Congo	3	[0.30-33.2]	0.11	0.19	0.02	21	24
Gabon	3	[0.20-44.1]	0.27	0.28	0.02	21	12
Equatorial Guinea	1	[0.10-11.1]	0.16	0.31	0.03	21	25
Sao Tome & Principe	0	[0-41.4]	0	0	0	29	21
Chad	11	[1-121.8]	0.13	0.26	0.03	27	21
<b>Northern Africa</b>	125	[53.6-291.5]	0.10	0.11	0.01	29	27
Algeria	18	[6-53.9]	0.08	0.08	0.01	26	23
Egypt	35	[12.7-96.7]	0.07	0.08	0.01	28	27
Libya	5	[0.30-73.6]	0.15	0.18	0.01	26	19
Morocco	39	[16.1-94.6]	0.21	0.18	0.02	28	21
Sudan	22	[12.7-38.1]	0.10	0.16	0.02	28	21
Tunisia	6	[1.40-25.1]	0.10	0.08	0.01	28	31
<b>Southern Africa</b>	74	[45.7-119.7]	0.22	0.22	0.02	26	22
Botswana	5	[1.50-16.6]	0.41	0.38	0.02	21	9
Lesotho	2	[0.30-13.4]	0.18	0.19	0.02	20	12
Namibia	8	[4-16.2]	0.61	0.79	0.09	20	12
Eswatini	1	[0.10-6.70]	0.17	0.27	0.02	24	31
South Africa	58	[36.1-93.3]	0.19	0.19	0.02	26	23
<b>Western Africa</b>	268	[60-1,196.7]	0.13	0.24	0.03	27	24
Benin	7	[0.50-103]	0.12	0.23	0.03	25	29
Burkina Faso	27	[1.80-397.2]	0.26	0.41	0.05	22	15
Côte d'Ivoire	29	[10.1-83.3]	0.22	0.53	0.04	24	23
Cabo Verde	0	[0-14.3]	0	0	0	31	13
Ghana	10	[0.70-147.1]	0.07	0.13	0.00	29	25
Guinea	11	[2-60]	0.16	0.27	0.03	19	20
Gambia	0	[0-1.40]	0	0	0	27	16
Guinea-Bissau	2	[0.20-16.1]	0.20	0.37	0.05	19	27
Liberia	7	[0.90-56.2]	0.28	0.46	0.05	21	30
Mali	20	[4.60-87.8]	0.20	0.37	0.04	23	19
Mauritania	5	[0.60-40.1]	0.22	0.35	0.04	23	23
Niger	21	[1.40-308.9]	0.17	0.37	0.04	15	14
Nigeria	93	[11.6-746.3]	0.09	0.17	0.02	28	24
Senegal	17	[2.10-136.4]	0.20	0.30	0.03	24	20
Sierra Leone	8	[4.30-15]	0.20	0.32	0.04	24	20
Togo	11	[3.50-35]	0.26	0.47	0.05	22	20

Data accessed on 27 Jan 2021

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

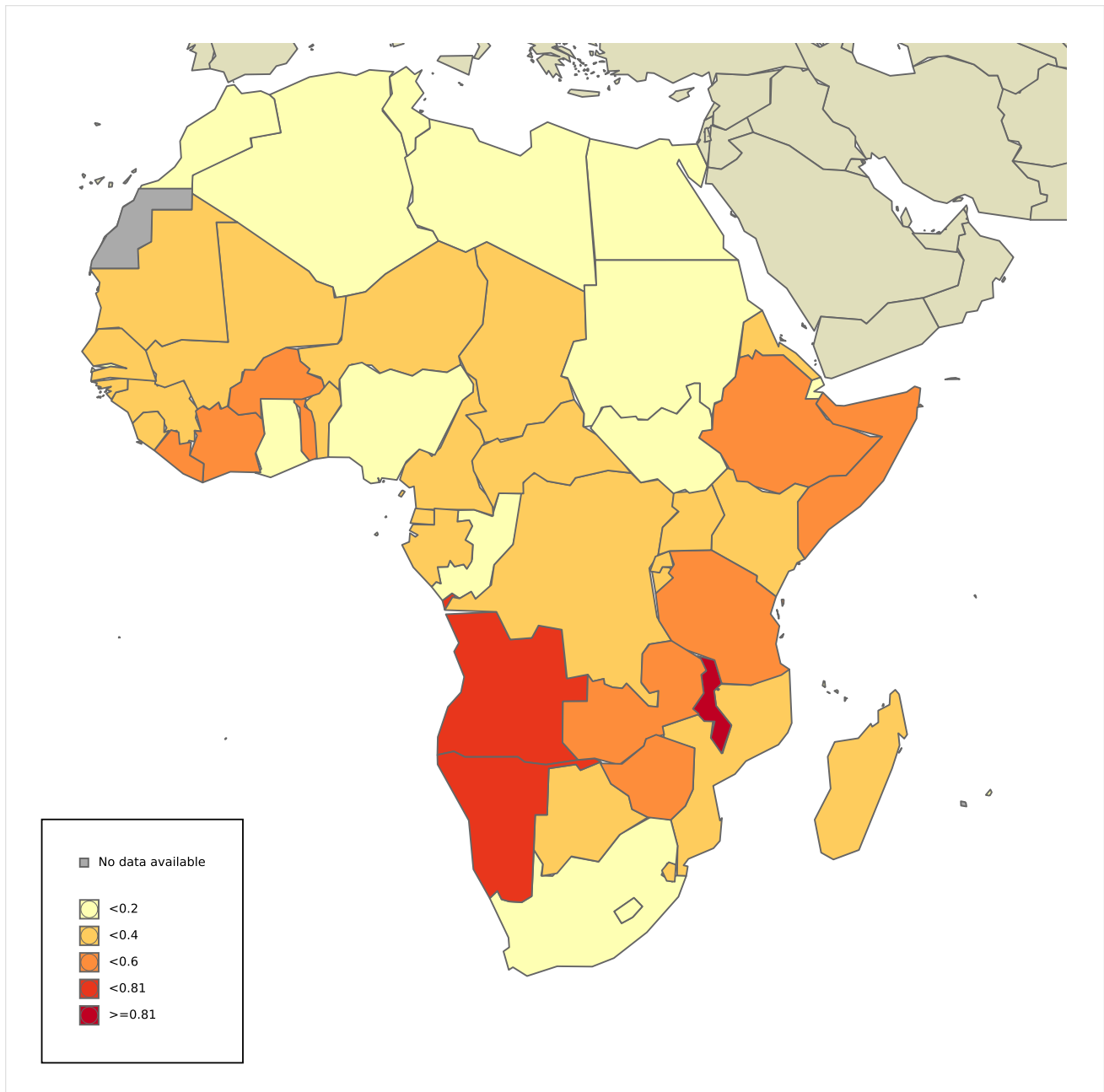
<sup>a</sup> Cumulative risk (mortality) is the probability or risk of individuals dying from the disease during ages 0-74 years. For cancer, it is expressed as the % of new born children who would be expected to die from a particular cancer before the age of 75 if they had the rates of cancer observed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

<sup>b</sup> 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 Africa (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>

<sup>a</sup> 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 Africa and sub regions (estimates for 2020)

Area	N Cases	Uncertainty intervals of new cancer cases [95% UI]	Crude rate <sup>b</sup>	ASR <sup>b</sup>	Cumulative risk (%) ages 0-74 years <sup>a</sup>	Ranking	
						All men	Men 15-44 years
<b>Africa</b>	2,060	[1,012.6-4,190.6]	0.31	0.53	0.05	25	22
<b>Eastern Africa</b>	1,271	[564.8-2,860.2]	0.58	1.18	0.12	18	18
Burundi	66	[6.60-660.2]	1.12	3.00	0.31	10	13
Comoros	1	[0.10-10]	0.23	0.36	0.04	15	28
Djibouti	0	[0-10]	0	0	0	21	21
Eritrea	1	[0.10-10]	0.06	0.08	0	26	20
Ethiopia	34	[3.40-343.1]	0.06	0.09	0.00	27	26
Kenya	47	[13.4-164.9]	0.18	0.45	0.05	26	27
Madagascar	10	[1-100]	0.07	0.21	0	26	28
Mozambique	137	[63.4-296]	0.90	1.81	0.18	10	10
Mauritius	4	[1.40-11.4]	0.64	0.42	0.05	26	28
Malawi	132	[53.1-328.1]	1.40	2.49	0.27	9	6
Rwanda	100	[37.2-269.1]	1.57	3.42	0.36	9	15
Somalia	5	[0.50-50]	0.06	0.15	0.01	27	27
South Sudan	29	[2.90-290.1]	0.52	1.02	0.10	19	20
Tanzania	131	[61.6-278.6]	0.44	1.05	0.13	18	20
Uganda	345	[222.3-535.5]	1.53	4.55	0.43	8	8
Zambia	126	[69.2-229.5]	1.38	3.01	0.29	10	7
Zimbabwe	101	[62.5-163.1]	1.42	3.30	0.33	10	7
<b>Middle Africa</b>	341	[100.6-1,155.5]	0.38	0.75	0.08	23	16
Angola	170	[133.4-216.6]	1.05	2.09	0.22	13	5
Central African Republic	1	[0.80-1.30]	0.04	0.08	0.01	26	23
Cameroon	10	[0.80-122.6]	0.08	0.14	0.01	27	28
DR Congo	156	[118.6-205.1]	0.35	0.71	0.07	21	16
Congo	0	[0-10.3]	0	0	0	28	28
Gabon	1	[0.10-10.9]	0.09	0.14	0.02	25	27
Equatorial Guinea	0	[0-1.30]	0	0	0	28	26
Sao Tome & Principe	0	[0-1.30]	0	0	0	14	25
Chad	3	[2.30-3.90]	0.04	0.08	0.01	27	26
<b>Northern Africa</b>	51	[8.30-315.1]	0.04	0.05	0.01	28	28
Algeria	4	[0.40-41.5]	0.02	0.02	0.00	28	28
Egypt	10	[0.90-108.9]	0.02	0.03	0.01	28	28
Libya	0	[0-13.3]	0	0	0	28	28
Morocco	12	[1.10-130.8]	0.07	0.07	0.01	28	28
Sudan	19	[6.20-58.6]	0.09	0.15	0.01	27	27
Tunisia	6	[1.10-33.7]	0.10	0.10	0.02	28	24
<b>Southern Africa</b>	311	[257.5-375.6]	0.94	1.12	0.12	21	13
Botswana	35	[22.4-54.7]	3.07	4.45	0.45	7	3
Lesotho	23	[12.5-42.4]	2.18	3.11	0.33	8	5
Namibia	19	[11.6-31.1]	1.54	2.43	0.26	15	8
Eswatini	23	[14.1-37.6]	4.03	7.03	0.75	3	4
South Africa	211	[176.6-252.2]	0.72	0.84	0.10	22	17
<b>Western Africa</b>	86	[7.70-955.9]	0.04	0.10	0.01	28	27
Benin	0	[0-9.80]	0	0	0	28	28
Burkina Faso	3	[0.50-16.8]	0.03	0.08	0.00	27	21
Côte d'Ivoire	4	[0.40-41.3]	0.03	0.06	0.01	28	26
Cabo Verde	3	[0.50-16.7]	1.07	1.90	0.37	19	13
Ghana	20	[1.80-223]	0.13	0.21	0.04	24	21
Guinea	8	[0.60-109.1]	0.13	0.39	0.01	21	22
Gambia	2	[0.20-22.4]	0.17	0.29	0.03	15	12
Guinea-Bissau	0	[0-7.70]	0	0	0	26	28
Liberia	2	[0.30-15.3]	0.08	0.15	0	25	21
Mali	8	[0.80-84.8]	0.08	0.16	0.02	26	25
Mauritania	0	[0-7.70]	0	0	0	28	28
Niger	0	[0-11.4]	0	0	0	28	27
Nigeria	20	[1.80-217.4]	0.02	0.04	0.00	28	25
Senegal	5	[0.70-38.3]	0.06	0.11	0.00	26	25

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Table 14 – continued from previous page

Area	N Cases	Uncertainty intervals of new cancer cases [95% UI]	Crude rate <sup>b</sup>	ASR <sup>b</sup>	Cumulative risk (%) ages 0-74 years <sup>a</sup>	Ranking	
						All men	Men 15-44 years
Sierra Leone	1	[0.30-3.60]	0.03	0.02	0.00	28	24
Togo	10	[1.90-54]	0.24	0.80	0.02	25	28

**Data accessed on 27 Jan 2021**

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

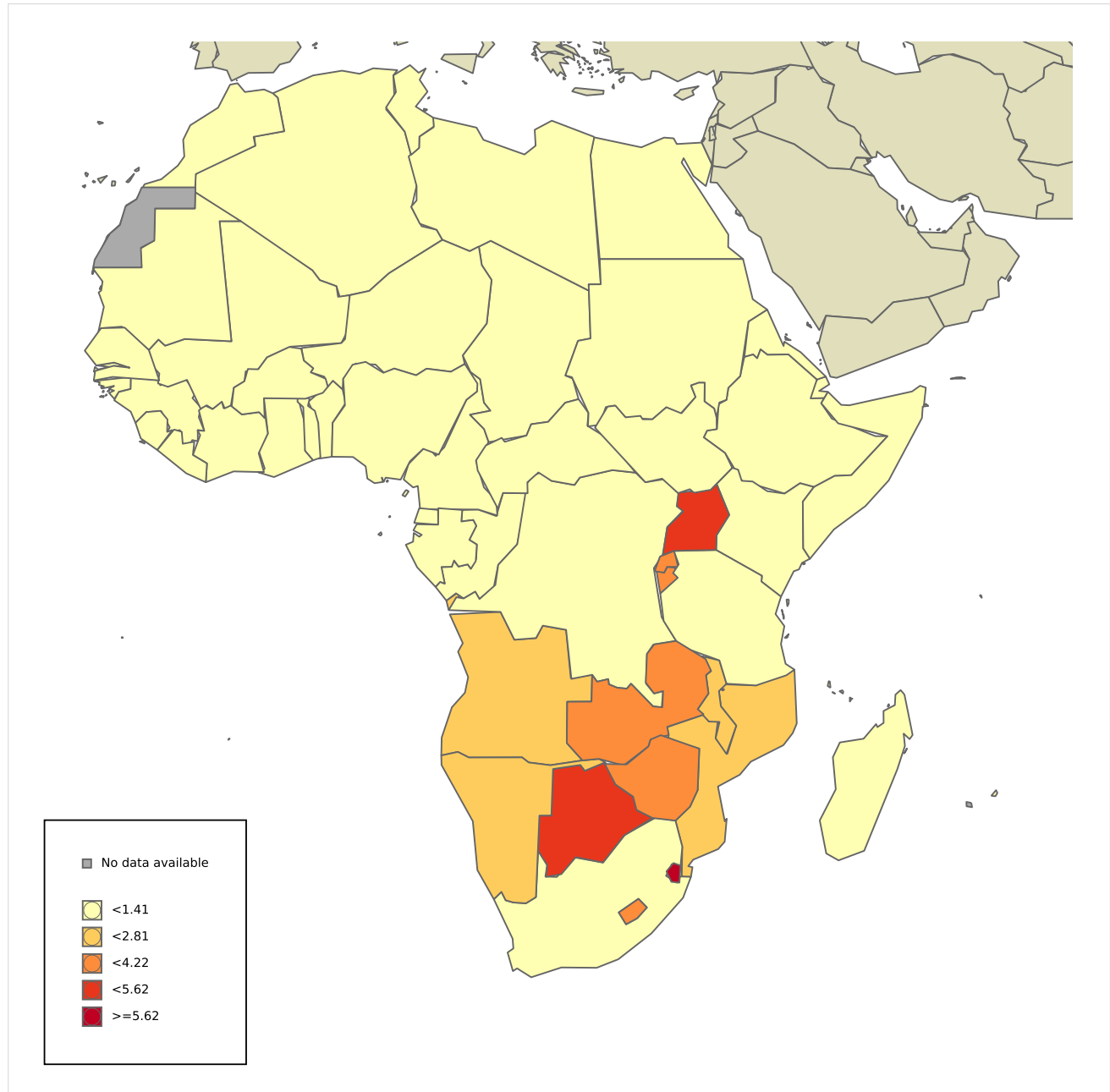
<sup>a</sup> Cumulative risk (incidence) is the probability or risk of individuals getting from the disease during ages 0-74 years. For cancer, it is expressed as the % of new born children who would be expected to develop from a particular cancer before the age of 75 if they had the rates of cancer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

<sup>b</sup> 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 Africa (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>

<sup>a</sup> 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 Africa and sub regions (estimates for 2020)

Area	N Cases	Uncertainty intervals of new cancer cases [95% UI]	Crude rate <sup>b</sup>	ASR <sup>b</sup>	Cumulative risk (%) ages 0-74 years <sup>a</sup>	Ranking	
						All men	Men 15-44 years
<b>Africa</b>	942	[420-2,112.7]	0.14	0.25	0.02	27	21
<b>Eastern Africa</b>	606	[241-1,523.7]	0.27	0.58	0.06	20	16
Burundi	34	[3.30-348.9]	0.58	1.67	0.18	17	16
Comoros	0	[0-10.3]	0	0	0	20	24
Djibouti	0	[0-10.3]	0	0	0	25	12
Eritrea	0	[0-10.3]	0	0	0	28	15
Ethiopia	17	[1.20-250.1]	0.03	0.05	0.00	27	27
Kenya	21	[4.70-93.3]	0.08	0.19	0.02	25	25
Madagascar	5	[0.50-51.3]	0.04	0.12	0	28	26
Mozambique	72	[29.4-176.4]	0.47	1.02	0.10	11	9
Mauritius	0	[0-7.80]	0	0	0	25	22
Malawi	62	[22.7-169.3]	0.66	1.23	0.14	11	7
Rwanda	46	[14.4-147.4]	0.72	1.72	0.15	12	20
Somalia	3	[0.30-30.8]	0.04	0.09	0.00	27	28
South Sudan	15	[1.50-153.9]	0.27	0.51	0.06	19	23
Tanzania	61	[24.9-149.5]	0.20	0.48	0.06	21	18
Uganda	165	[98.9-275.2]	0.73	2.36	0.20	14	11
Zambia	58	[28.5-118.2]	0.64	1.35	0.15	13	9
Zimbabwe	46	[26.2-80.8]	0.65	1.67	0.14	14	10
<b>Middle Africa</b>	156	[92.6-262.9]	0.17	0.36	0.04	24	17
Angola	73	[43.3-123.2]	0.45	0.92	0.10	17	8
Central African Republic	1	[0.60-1.70]	0.04	0.08	0.01	26	21
Cameroon	4	[2.40-6.80]	0.03	0.06	0.01	28	28
DR Congo	76	[45-128.3]	0.17	0.36	0.04	21	18
Congo	0	[0-1.70]	0	0	0	27	17
Gabon	0	[0-1.70]	0	0	0	28	28
Equatorial Guinea	0	[0-1.70]	0	0	0	25	28
Sao Tome & Principe	0	[0-41.4]	0	0	0	19	3
Chad	2	[1.20-3.40]	0.02	0.06	0.01	27	25
<b>Northern Africa</b>	29	[6.20-134.8]	0.02	0.03	0.00	28	28
Algeria	2	[0.10-29.4]	0.01	0.01	0.00	28	28
Egypt	4	[0.30-58.9]	0.01	0.01	0.00	28	28
Libya	0	[0-1.50]	0	0	0	28	25
Morocco	9	[0.60-132.4]	0.05	0.05	0.00	28	19
Sudan	12	[3.60-39.9]	0.05	0.10	0.01	26	26
Tunisia	2	[0.30-13.4]	0.03	0.04	0.01	28	26
<b>Southern Africa</b>	111	[78.7-156.5]	0.33	0.43	0.05	20	18
Botswana	12	[7.10-20.3]	1.05	1.52	0.19	10	5
Lesotho	11	[5.90-20.5]	1.04	1.71	0.21	10	6
Namibia	7	[3.70-13.1]	0.57	0.86	0.06	19	12
Eswatini	10	[5.40-18.6]	1.75	3.51	0.39	6	8
South Africa	71	[50.7-99.4]	0.24	0.31	0.03	23	19
<b>Western Africa</b>	40	[21.3-75]	0.02	0.04	0.00	28	28
Benin	0	[0-1.70]	0	0	0	28	25
Burkina Faso	2	[0.30-13.4]	0.02	0.07	0	27	28
Côte d'Ivoire	2	[1.20-3.40]	0.02	0.03	0.00	28	26
Cabo Verde	0	[0-14.3]	0	0	0	21	17
Ghana	8	[0.50-117.7]	0.05	0.09	0.02	26	22
Guinea	4	[0.30-58.8]	0.06	0.17	0	22	28
Gambia	1	[0.10-14.7]	0.08	0.16	0.02	15	21
Guinea-Bissau	0	[0-6.70]	0	0	0	27	27
Liberia	1	[0.10-6.70]	0.04	0.08	0	27	16
Mali	4	[0.30-58.8]	0.04	0.06	0.00	27	17
Mauritania	0	[0-6.70]	0	0	0	28	24
Niger	0	[0-1.70]	0	0	0	27	21
Nigeria	9	[5.30-15.2]	0.01	0.02	0.00	28	27
Senegal	2	[0.30-13.4]	0.02	0.05	0	28	26
Sierra Leone	1	[0.20-4.10]	0.03	0.02	0.00	28	18
Togo	6	[1.10-31.8]	0.15	0.37	0.01	25	26

Data accessed on 27 Jan 2021

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



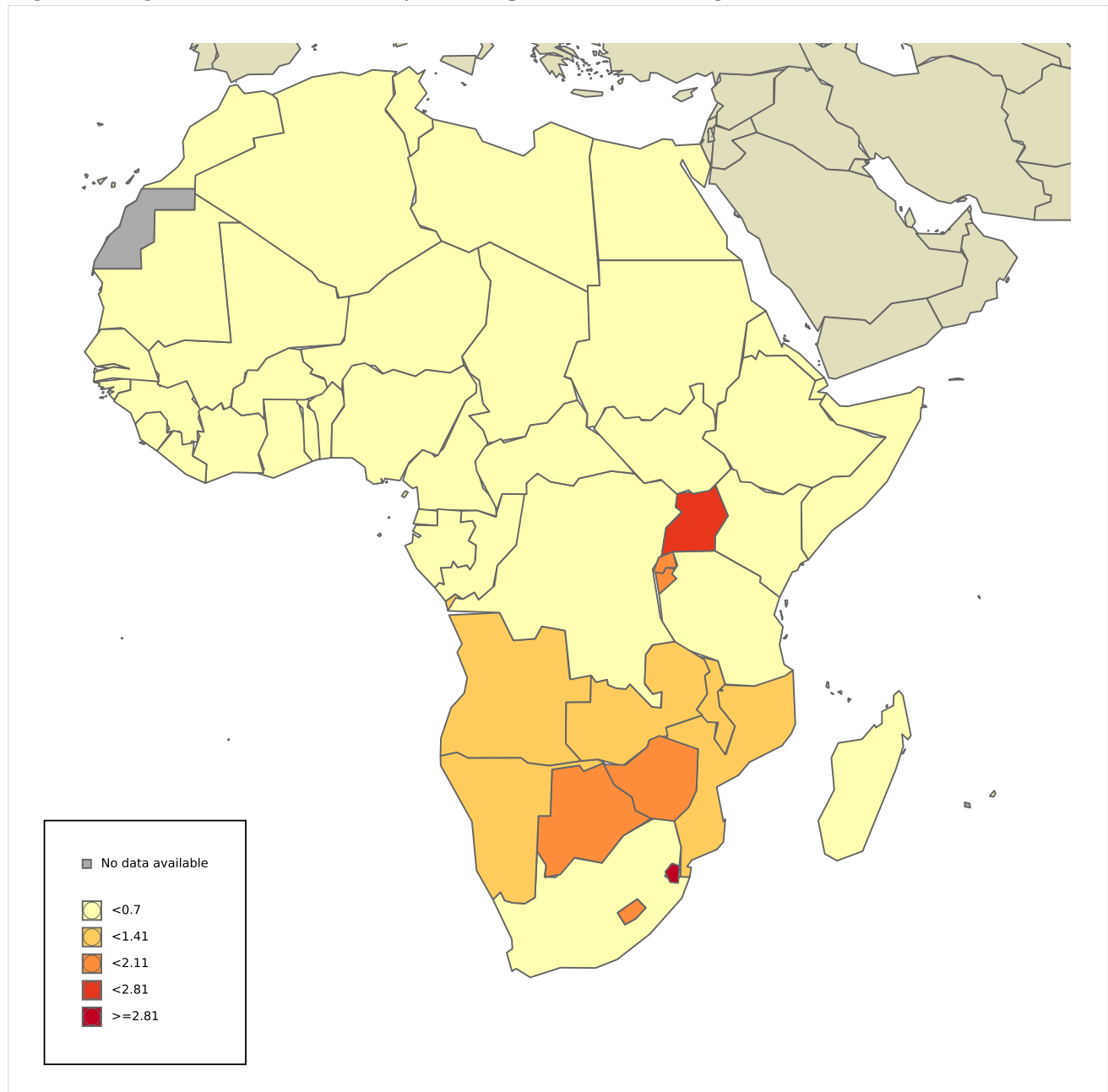
<sup>a</sup> Cumulative risk (mortality) is the probability or risk of individuals dying from the disease during ages 0-74 years. For cancer, it is expressed as the % of new born children who would be expected to die from a particular cancer before the age of 75 if they had the rates of cancer observed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

<sup>b</sup> 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 Africa (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>

<sup>a</sup> 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 Africa and sub regions (estimates for 2020)

Area	N Cases	Uncertainty intervals of new cancer cases [95% UI]	Crude rate <sup>b</sup>	ASR <sup>b</sup>	Cumulative risk (%) ages 0-74 years <sup>a</sup>	Ranking	
						All women	Women 15-44 years
<b>Africa</b>	749	[228.8-2,451.9]	0.11	0.17	0.02	29	29
<b>Eastern Africa</b>	143	[17-1,206.1]	0.06	0.11	0.01	30	29
Burundi	5	[0.40-60.2]	0.08	0.19	0.03	29	30
Comoros	0	[0-12]	0	0	0	18	29
Djibouti	0	[0-12]	0	0	0	30	28
Eritrea	0	[0-12]	0	0	0	29	31
Ethiopia	27	[3.10-235]	0.05	0.07	0.01	29	29
Kenya	18	[2.50-131.4]	0.07	0.10	0.00	30	29
Madagascar	14	[1.20-168.7]	0.10	0.16	0.02	28	29
Mozambique	4	[0.40-40.3]	0.02	0.03	0.00	30	28
Mauritius	1	[0.30-3.90]	0.16	0.07	0	26	19
Malawi	0	[0-11.4]	0	0	0	30	30
Rwanda	17	[1.70-167.3]	0.26	0.45	0.06	24	26
Somalia	4	[0.30-48.2]	0.05	0.08	0.01	30	28
South Sudan	0	[0-12]	0	0	0	30	31
Tanzania	26	[6.20-108.8]	0.09	0.17	0.01	30	31
Uganda	13	[2.60-65.4]	0.06	0.11	0.01	28	28
Zambia	2	[0.20-19.2]	0.02	0.02	0.00	30	29
Zimbabwe	10	[1.80-56.3]	0.13	0.22	0.02	28	30
<b>Middle Africa</b>	76	[10.3-561.7]	0.08	0.16	0.02	29	27
Angola	18	[2.60-126.6]	0.11	0.26	0.04	29	30
Central African Republic	2	[0.20-18.1]	0.08	0.15	0.03	28	25
Cameroon	28	[4-195.1]	0.21	0.38	0.07	27	22
DR Congo	16	[1.80-145.1]	0.04	0.06	0.01	30	30
Congo	0	[0-10.3]	0	0	0	31	26
Gabon	4	[0.40-43.5]	0.37	0.60	0.09	24	20
Equatorial Guinea	1	[0.10-9.10]	0.16	0.22	0.02	25	17
Sao Tome & Principe	0	[0-1.20]	0	0	0	29	8
Chad	7	[0.80-63.5]	0.09	0.16	0.02	30	25
<b>Northern Africa</b>	169	[44.1-647.4]	0.14	0.16	0.02	30	29
Algeria	15	[2.90-78.1]	0.07	0.08	0.01	31	31
Egypt	94	[21.8-405.5]	0.19	0.22	0.02	27	27
Libya	2	[0.20-26.5]	0.06	0.09	0.01	28	27
Morocco	35	[8.10-150.5]	0.19	0.17	0.02	29	28
Sudan	19	[6.80-53.1]	0.09	0.13	0.02	29	29
Tunisia	4	[0.50-35.5]	0.07	0.07	0.01	30	31
<b>Southern Africa</b>	120	[85.5-168.5]	0.35	0.39	0.05	27	29
Botswana	1	[0.10-8.90]	0.08	0.11	0.01	27	26
Lesotho	0	[0-12.3]	0	0	0	27	23
Namibia	6	[2.40-14.7]	0.46	0.75	0.11	26	27
Eswatini	0	[0-8.40]	0	0	0	31	20
South Africa	113	[82.4-155]	0.38	0.40	0.05	27	29
<b>Western Africa</b>	241	[31.9-1,819.8]	0.12	0.20	0.02	29	28
Benin	17	[2.30-123.2]	0.28	0.42	0.04	23	14
Burkina Faso	13	[1.50-109.4]	0.12	0.20	0.02	28	21
Côte d'Ivoire	16	[4.20-61.6]	0.12	0.20	0.02	28	24
Cabo Verde	4	[0.50-35.1]	1.44	1.11	0.08	19	15
Ghana	24	[2.20-267.6]	0.16	0.21	0.02	26	26
Guinea	3	[0.30-29.4]	0.04	0.07	0.01	28	28
Gambia	0	[0-11.2]	0	0	0	26	18
Guinea-Bissau	0	[0-12.4]	0	0	0	28	26
Liberia	1	[0.10-12.4]	0.04	0.06	0.01	29	27
Mali	18	[2.90-112.8]	0.18	0.35	0.03	25	29
Mauritania	2	[0.20-24.7]	0.09	0.12	0.01	28	24
Niger	9	[0.80-102.9]	0.07	0.08	0.01	24	25

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Table 16 – continued from previous page

Area	N Cases	Uncertainty intervals of new cancer cases [95% UI]	Crude rate <sup>b</sup>	ASR <sup>b</sup>	Cumulative risk (%) ages 0-74 years <sup>a</sup>	Ranking	
						All women	Women 15-44 years
Nigeria	110	[10.1-1,195.9]	0.11	0.19	0.02	29	26
Senegal	8	[0.60-98.9]	0.09	0.14	0.02	29	27
Sierra Leone	3	[1.30-7.20]	0.08	0.12	0.01	28	27
Togo	13	[3.60-47.5]	0.31	0.45	0.05	26	15

**Data accessed on 27 Jan 2021**

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

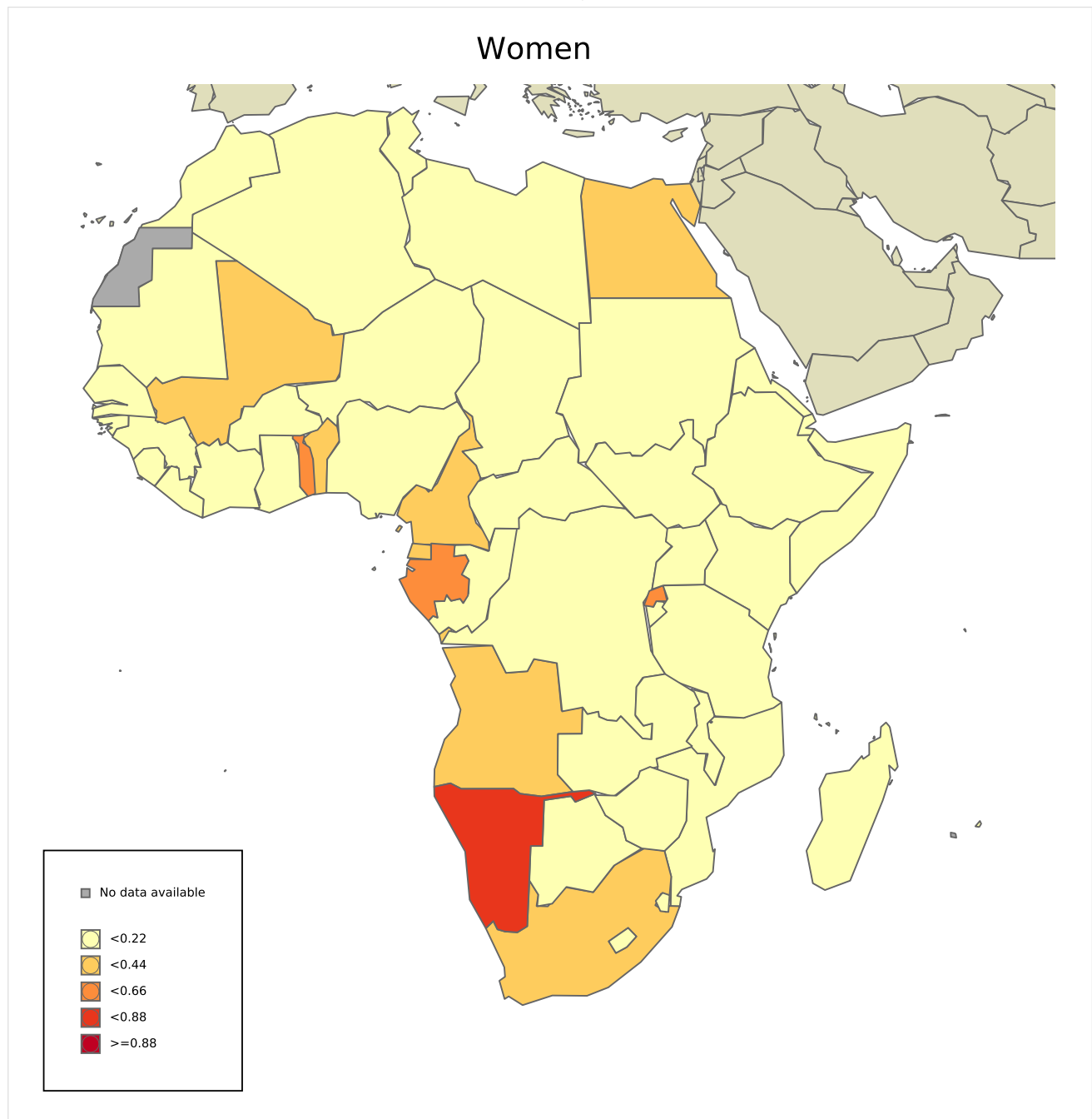
<sup>a</sup> Cumulative risk (incidence) is the probability or risk of individuals getting from the disease during ages 0-74 years. For cancer, it is expressed as the % of new born children who would be expected to develop from a particular cancer before the age of 75 if they had the rates of cancer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

<sup>b</sup> 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 Africa (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>

<sup>a</sup> 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 Africa and sub regions (estimates for 2020)

Area	N Cases	Uncertainty intervals of new cancer cases [95% UI]	Crude rate <sup>b</sup>	ASR <sup>b</sup>	Cumulative risk (%) ages 0-74 years <sup>a</sup>	Ranking	
						All men	Men 15-44 years
<b>Africa</b>	2,164	[1,093.9-4,280.9]	0.32	0.57	0.07	24	25
<b>Eastern Africa</b>	736	[216.3-2,504.5]	0.33	0.69	0.08	23	25
Burundi	20	[2.50-156.9]	0.34	0.83	0.11	21	25
Comoros	0	[0-7.80]	0	0	0	28	9
Djibouti	0	[0-7.80]	0	0	0	27	22
Eritrea	0	[0-7.80]	0	0	0	27	21
Ethiopia	107	[29-394.9]	0.19	0.33	0.04	25	24
Kenya	48	[13.9-165.7]	0.18	0.46	0.05	25	26
Madagascar	187	[23.8-1,466.8]	1.35	2.49	0.31	11	12
Mozambique	81	[27.8-236.1]	0.53	1.03	0.11	14	12
Mauritius	15	[8.30-27.1]	2.39	1.58	0.22	16	21
Malawi	4	[0.30-45.8]	0.04	0.13	0.03	25	25
Rwanda	34	[5.80-199.8]	0.53	1.12	0.15	18	28
Somalia	14	[1.80-109.8]	0.18	0.36	0.04	25	24
South Sudan	12	[1.50-94.1]	0.21	0.39	0.04	25	25
Tanzania	72	[24.8-209.3]	0.24	0.56	0.06	24	26
Uganda	79	[31.2-200.2]	0.35	0.96	0.10	20	20
Zambia	17	[3.40-84.2]	0.19	0.48	0.08	23	23
Zimbabwe	10	[2.70-37.4]	0.14	0.30	0.04	26	22
<b>Middle Africa</b>	351	[117.8-1,046.2]	0.39	0.80	0.09	22	21
Angola	58	[11.4-294.7]	0.36	0.94	0.13	24	24
Central African Republic	10	[1.60-62.8]	0.42	0.81	0.09	21	16
Cameroon	156	[69.7-349.3]	1.17	2.21	0.26	11	13
DR Congo	85	[13.5-533.9]	0.19	0.38	0.04	24	21
Congo	1	[0.10-10.3]	0.04	0.04	0.00	25	18
Gabon	11	[2.40-51.3]	0.97	2.11	0.16	15	26
Equatorial Guinea	5	[0.80-31.4]	0.64	1.32	0.14	17	15
Sao Tome & Principe	0	[0-1.10]	0	0	0	26	3
Chad	25	[4-157]	0.30	0.69	0.08	24	22
<b>Northern Africa</b>	312	[134.4-724.1]	0.25	0.31	0.04	25	26
Algeria	59	[26.1-133.4]	0.27	0.27	0.03	24	26
Egypt	108	[45.6-255.8]	0.21	0.26	0.04	25	22
Libya	4	[0.30-53.1]	0.12	0.20	0.03	27	25
Morocco	96	[38.7-238.4]	0.52	0.50	0.06	23	26
Sudan	19	[8.90-40.6]	0.09	0.14	0.02	26	24
Tunisia	26	[9.60-70.3]	0.44	0.39	0.05	24	26
<b>Southern Africa</b>	408	[340.2-489.3]	1.23	1.59	0.19	19	23
Botswana	7	[2.50-19.7]	0.61	0.98	0.12	19	19
Lesotho	3	[0.50-19.2]	0.28	0.49	0.09	16	27
Namibia	12	[6.40-22.3]	0.97	2.08	0.30	18	21
Eswatini	2	[0.50-8.80]	0.35	0.67	0.12	15	16
South Africa	384	[323.9-455.3]	1.31	1.64	0.19	19	23
<b>Western Africa</b>	357	[70.2-1,816.8]	0.18	0.34	0.04	23	23
Benin	20	[2.80-144.9]	0.33	0.53	0.05	21	13
Burkina Faso	17	[1.50-195.1]	0.16	0.20	0.01	21	15
Côte d'Ivoire	21	[5.60-78.7]	0.16	0.29	0.04	22	22
Cabo Verde	8	[1.20-52.4]	2.87	3.04	0.33	15	11
Ghana	47	[5.80-379.3]	0.30	0.49	0.07	22	26
Guinea	7	[1.10-46.2]	0.11	0.22	0.02	22	18
Gambia	1	[0.10-11.2]	0.08	0.23	0.03	18	18
Guinea-Bissau	0	[0-12.1]	0	0	0	21	15
Liberia	4	[0.30-48.5]	0.16	0.31	0.04	22	27
Mali	17	[2.80-101.8]	0.17	0.38	0.05	23	24
Mauritania	4	[0.30-48.5]	0.17	0.28	0.03	22	24
Niger	19	[1.70-217.3]	0.16	0.36	0.04	21	21
Nigeria	146	[23.8-897.2]	0.14	0.28	0.03	23	23
Senegal	10	[0.80-121.2]	0.12	0.26	0.03	23	24
Sierra Leone	6	[2.80-13.1]	0.15	0.29	0.04	24	25
Togo	30	[12.9-69.7]	0.73	1.23	0.15	19	12

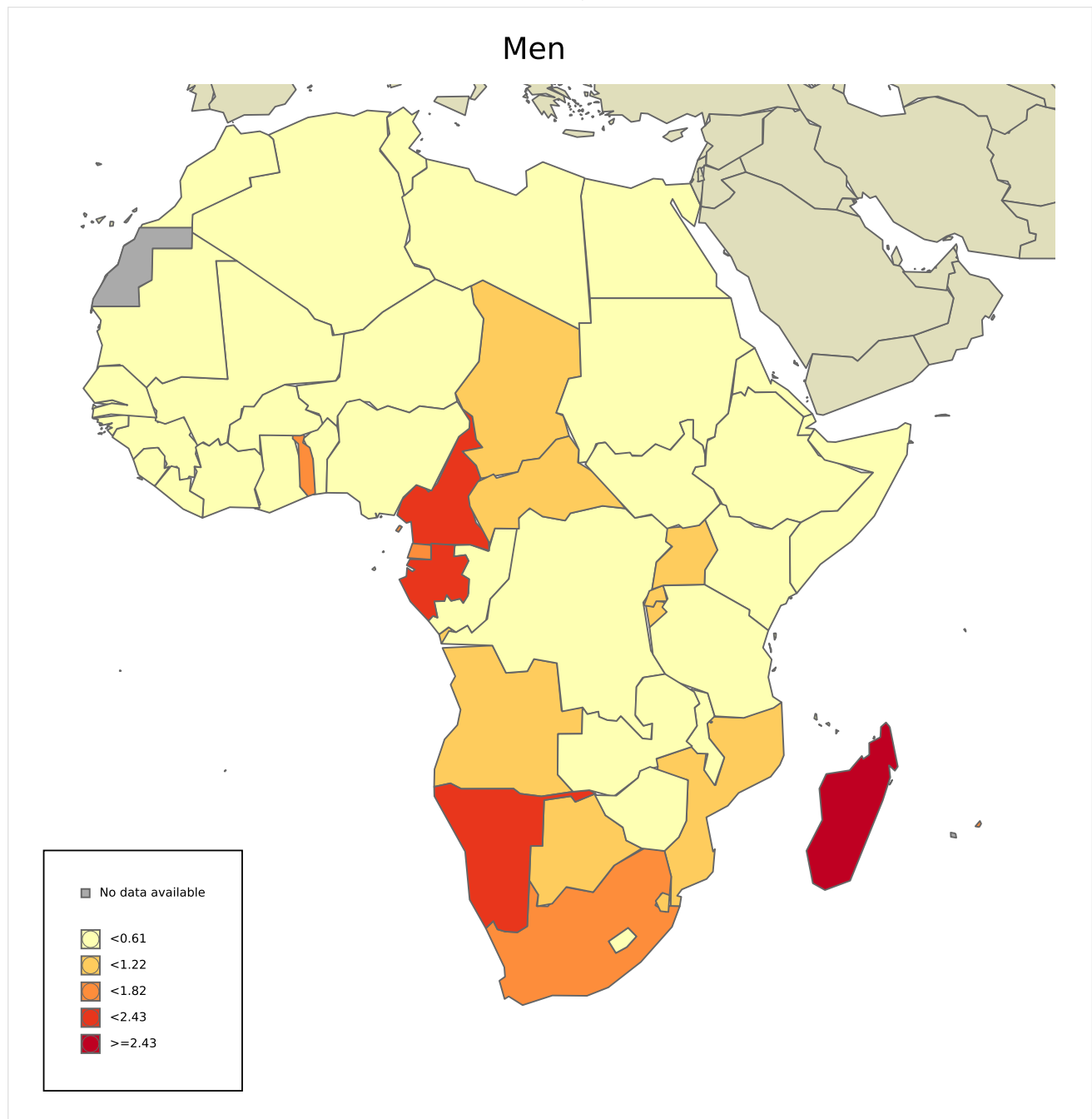
Data accessed on 27 Jan 2021

For more detailed methods of estimation please refer to <http://gco.iarc.fr/today/data-sources-methods><sup>a</sup> 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.<sup>b</sup> 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 Africa (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>

<sup>a</sup> 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 Africa and sub regions (estimates for 2020)

Area	N Cases	Uncertainty intervals of new cancer cases [95% UI]	Crude rate <sup>b</sup>	ASR <sup>b</sup>	Cumulative risk (%) ages 0-74 years <sup>a</sup>	Ranking	
						All women	Women 15-44 years
<b>Africa</b>	436	[113.2-1,679.5]	0.07	0.10	0.01	30	29
<b>Eastern Africa</b>	93	[40.4-213.9]	0.04	0.07	0.01	30	30
Burundi	3	[0.20-37.2]	0.05	0.12	0.02	30	29
Comoros	0	[0-12.4]	0	0	0	30	24
Djibouti	0	[0-12.4]	0	0	0	27	12
Eritrea	0	[0-12.4]	0	0	0	31	30
Ethiopia	18	[1.50-222.9]	0.03	0.05	0.01	29	29
Kenya	12	[1.10-127.4]	0.04	0.08	0.00	30	26
Madagascar	9	[0.70-111.5]	0.06	0.11	0.01	29	28
Mozambique	3	[2.10-4.30]	0.02	0.02	0.00	30	25
Mauritius	0	[0-10.8]	0	0	0	26	30
Malawi	0	[0-1.40]	0	0	0	30	27
Rwanda	11	[0.70-161.8]	0.17	0.30	0.05	25	21
Somalia	3	[0.20-37.2]	0.04	0.05	0.00	30	25
South Sudan	0	[0-12.4]	0	0	0	30	28
Tanzania	17	[3.10-93.1]	0.06	0.12	0.01	30	28
Uganda	9	[1.40-58.9]	0.04	0.09	0.00	30	28
Zambia	1	[0.70-1.40]	0.01	0.01	0.00	31	27
Zimbabwe	7	[0.90-53.4]	0.09	0.16	0.01	29	30
<b>Middle Africa</b>	51	[12-216]	0.06	0.12	0.02	29	28
Angola	12	[1.50-96.3]	0.07	0.19	0.03	29	31
Central African Republic	1	[0.10-8]	0.04	0.09	0.02	29	29
Cameroon	19	[2.40-152.5]	0.14	0.29	0.06	27	20
DR Congo	11	[1.40-88.3]	0.02	0.05	0.01	30	31
Congo	0	[0-1.40]	0	0	0	29	26
Gabon	2	[0.10-29.4]	0.18	0.36	0.07	25	21
Equatorial Guinea	1	[0.10-8]	0.16	0.22	0.02	23	10
Sao Tome & Principe	0	[0-41.4]	0	0	0	19	16
Chad	5	[0.60-40.1]	0.06	0.12	0.02	30	26
<b>Northern Africa</b>	72	[20.4-254.6]	0.06	0.07	0.01	30	29
Algeria	8	[1.20-53.3]	0.04	0.04	0.01	30	30
Egypt	35	[6.70-181.5]	0.07	0.08	0.01	29	24
Libya	1	[0.70-1.50]	0.03	0.05	0.01	29	21
Morocco	19	[3.70-98.2]	0.10	0.09	0.01	30	28
Sudan	7	[2.30-21]	0.03	0.05	0.01	29	29
Tunisia	2	[0.20-22.2]	0.03	0.03	0.01	31	27
<b>Southern Africa</b>	57	[39-83.4]	0.17	0.19	0.02	28	30
Botswana	1	[0.10-11.6]	0.08	0.11	0.01	28	28
Lesotho	0	[0-11.6]	0	0	0	28	24
Namibia	4	[1.30-12.4]	0.31	0.53	0.09	24	29
Eswatini	0	[0-1.40]	0	0	0	27	22
South Africa	52	[36.1-75]	0.17	0.19	0.02	28	30
<b>Western Africa</b>	163	[51.6-515.1]	0.08	0.14	0.02	29	27
Benin	12	[1.20-123.1]	0.20	0.30	0.03	22	14
Burkina Faso	9	[0.90-94.1]	0.09	0.14	0.02	28	21
Côte d'Ivoire	11	[2.30-51.9]	0.08	0.15	0.02	28	22
Cabo Verde	2	[0.20-17.5]	0.72	0.39	0	19	29
Ghana	16	[1.10-235.4]	0.10	0.14	0.01	26	31
Guinea	2	[0.20-20.9]	0.03	0.05	0.01	28	28
Gambia	0	[0-1.40]	0	0	0	22	27
Guinea-Bissau	0	[0-10.5]	0	0	0	28	17
Liberia	1	[0.10-10.5]	0.04	0.06	0.01	29	24
Mali	12	[1.50-97.1]	0.12	0.24	0.02	26	26
Mauritania	1	[0.10-10.5]	0.04	0.07	0.01	28	31
Niger	6	[4.20-8.50]	0.05	0.06	0.00	27	24
Nigeria	75	[5.10-1,103.4]	0.07	0.13	0.02	29	26
Senegal	5	[0.50-52.3]	0.06	0.09	0.01	29	21
Sierra Leone	2	[0.80-5.20]	0.05	0.08	0.01	29	27
Togo	9	[2.50-32.4]	0.22	0.36	0.04	26	22

Data accessed on 27 Jan 2021

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

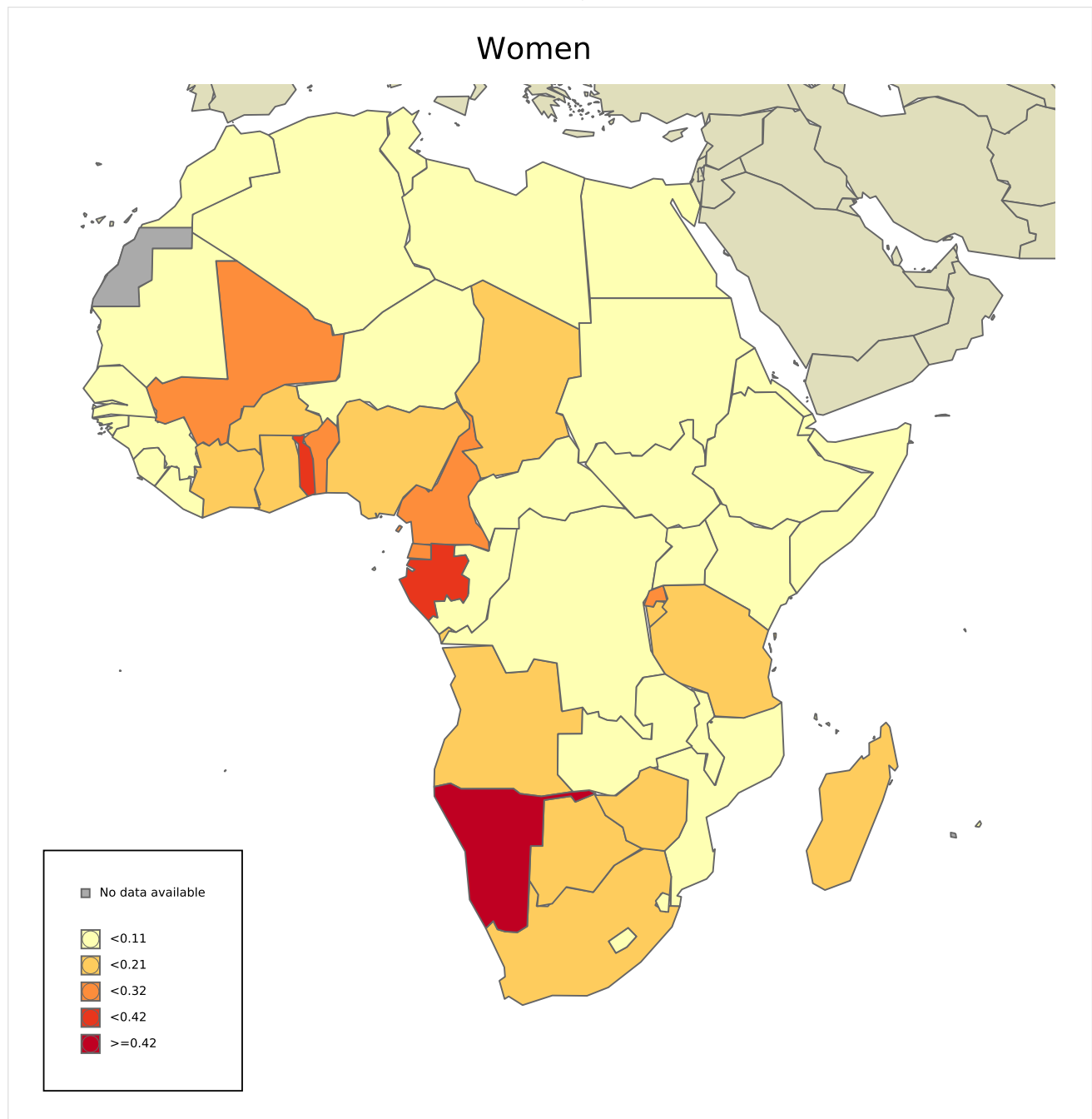
<sup>a</sup> Cumulative risk (mortality) is the probability or risk of individuals dying from the disease during ages 0-74 years. For cancer, it is expressed as the % of new born children who would be expected to die from a particular cancer before the age of 75 if they had the rates of cancer observed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

<sup>b</sup> 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 Africa (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>

<sup>a</sup> 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 Africa and sub regions (estimates for 2020)

Area	N Cases	Uncertainty intervals of new cancer cases [95% UI]	Crude rate <sup>b</sup>	ASR <sup>b</sup>	Cumulative risk (%) ages 0-74 years <sup>a</sup>	Ranking	
						All men	Men 15-44 years
<b>Africa</b>	1,346	[619.5-2,924.4]	0.20	0.37	0.05	22	23
<b>Eastern Africa</b>	493	[241.1-1,008.2]	0.22	0.49	0.06	21	23
Burundi	14	[1.70-112.4]	0.24	0.60	0.09	21	21
Comoros	0	[0-8]	0	0	0	28	25
Djibouti	0	[0-8]	0	0	0	19	20
Eritrea	0	[0-8]	0	0	0	26	21
Ethiopia	73	[16-333.4]	0.13	0.25	0.03	23	22
Kenya	31	[7.10-135.1]	0.12	0.32	0.03	24	26
Madagascar	126	[15.7-1,011.2]	0.91	1.76	0.23	12	13
Mozambique	59	[17-204.8]	0.39	0.80	0.09	15	13
Mauritius	12	[5.60-25.9]	1.91	1.29	0.19	16	15
Malawi	3	[2.50-3.60]	0.03	0.10	0.02	25	24
Rwanda	23	[2.90-184.6]	0.36	0.78	0.11	18	22
Somalia	10	[1.20-80.3]	0.13	0.27	0.04	25	22
South Sudan	8	[1-64.2]	0.14	0.28	0.03	25	21
Tanzania	48	[13.5-170.5]	0.16	0.41	0.05	23	27
Uganda	53	[18-156.3]	0.24	0.73	0.08	20	18
Zambia	11	[1.60-73.6]	0.12	0.37	0.07	20	22
Zimbabwe	7	[1.50-33.1]	0.10	0.22	0.03	25	19
<b>Middle Africa</b>	232	[109.8-490.1]	0.26	0.57	0.07	22	20
Angola	38	[6.70-215.5]	0.23	0.65	0.09	21	23
Central African Republic	7	[1.20-39.7]	0.29	0.62	0.07	19	15
Cameroon	101	[42.5-239.8]	0.76	1.55	0.19	12	15
DR Congo	58	[10.2-328.9]	0.13	0.27	0.03	25	16
Congo	1	[0.80-1.20]	0.04	0.04	0.00	25	10
Gabon	7	[1.20-39.7]	0.62	1.54	0.09	14	17
Equatorial Guinea	3	[0.50-17]	0.38	0.96	0.11	17	22
Sao Tome & Principe	0	[0-41.4]	0	0	0	27	24
Chad	17	[3-96.4]	0.21	0.50	0.07	22	24
<b>Northern Africa</b>	147	[57.7-374.3]	0.12	0.15	0.02	26	25
Algeria	36	[14.1-92]	0.16	0.16	0.01	24	26
Egypt	34	[12.9-89.8]	0.07	0.08	0.01	26	20
Libya	3	[0.20-44.1]	0.09	0.15	0.02	26	17
Morocco	56	[20.1-155.9]	0.31	0.30	0.03	21	21
Sudan	6	[2.70-13.5]	0.03	0.05	0.01	27	20
Tunisia	12	[4-35.9]	0.20	0.18	0.02	22	21
<b>Southern Africa</b>	235	[197.5-279.6]	0.71	0.98	0.12	18	20
Botswana	4	[1.20-13.3]	0.35	0.63	0.08	19	25
Lesotho	2	[0.30-13.1]	0.19	0.36	0.07	15	25
Namibia	8	[3.60-17.5]	0.65	1.60	0.25	17	28
Eswatini	1	[0.20-6.50]	0.18	0.39	0.10	20	19
South Africa	220	[133.7-361.9]	0.75	1.00	0.12	18	20
<b>Western Africa</b>	239	[127.7-447.4]	0.12	0.24	0.03	22	22
Benin	14	[1.40-143.7]	0.23	0.39	0.04	20	10
Burkina Faso	12	[0.80-176.5]	0.11	0.14	0.01	20	15
Côte d'Ivoire	14	[3.10-64.1]	0.11	0.20	0.03	22	21
Cabo Verde	3	[0.50-19.7]	1.07	1.17	0.14	15	20
Ghana	31	[3-318.1]	0.20	0.34	0.05	20	24
Guinea	5	[0.70-34.9]	0.08	0.19	0.02	20	18
Gambia	1	[0.80-1.20]	0.08	0.23	0.03	16	20
Guinea-Bissau	0	[0-10.3]	0	0	0	23	14
Liberia	3	[0.30-30.8]	0.12	0.25	0.03	22	20
Mali	12	[1.60-92.2]	0.12	0.32	0.04	23	26
Mauritania	3	[0.30-30.8]	0.13	0.23	0.03	22	20
Niger	13	[10.9-15.5]	0.11	0.25	0.03	22	23
Nigeria	97	[12.5-750.3]	0.09	0.20	0.03	22	23
Senegal	7	[0.70-71.8]	0.09	0.19	0.03	22	24
Sierra Leone	4	[1.70-9.40]	0.10	0.22	0.03	23	26
Togo	20	[8.70-46]	0.49	0.90	0.12	19	9

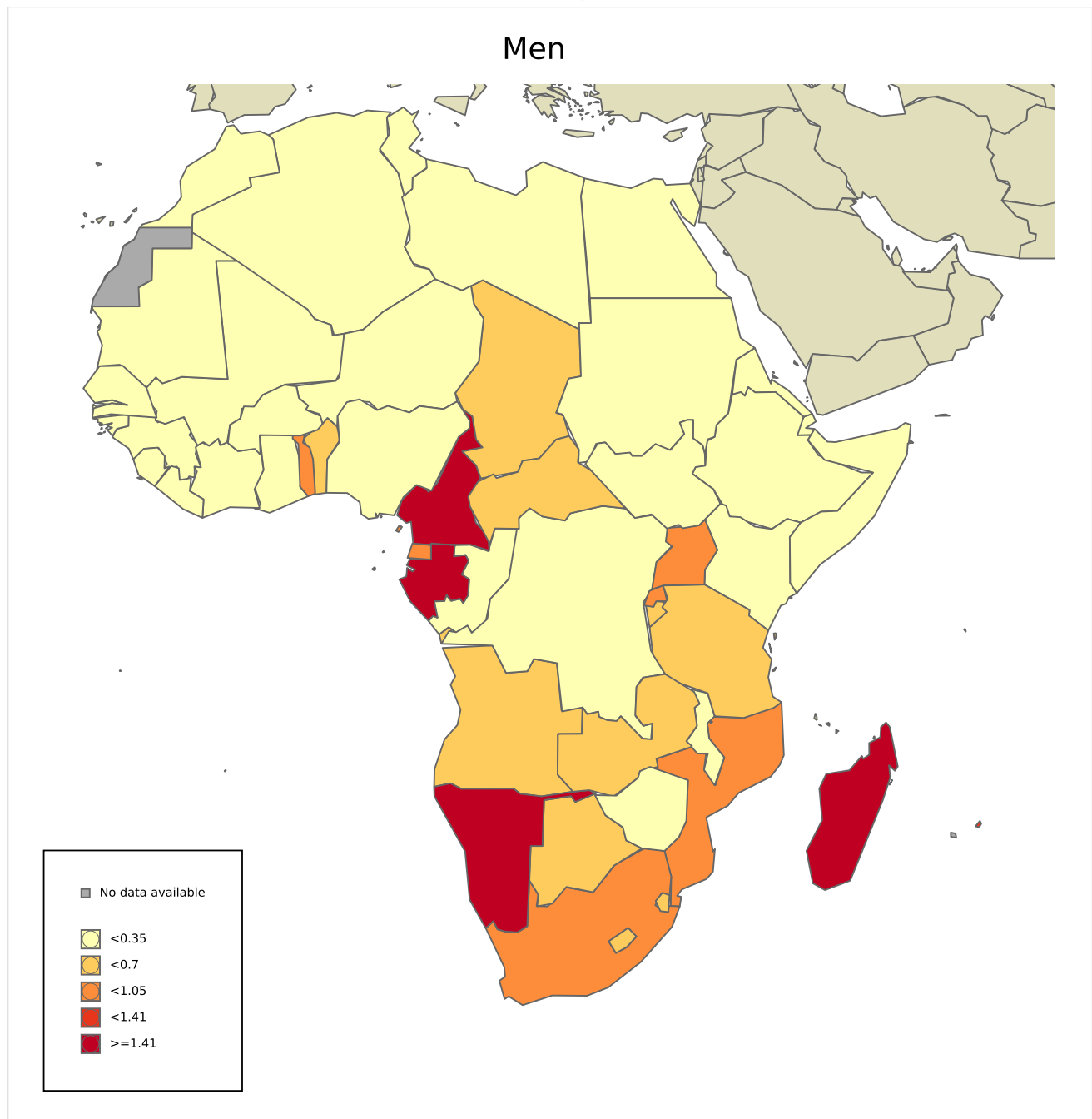
Data accessed on 27 Jan 2021

For more detailed methods of estimation please refer to <http://gco.iarc.fr/today/data-sources-methods><sup>a</sup> 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.<sup>b</sup> 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 Africa (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>

<sup>a</sup> 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 Africa and sub regions (estimates for 2020)

Area	N Cases	Uncertainty intervals of new cancer cases [95% UI]	Crude rate <sup>b</sup>	ASR <sup>b</sup>	Cumulative risk (%) ages 0-74 years <sup>a</sup>	Ranking	
						All women	Women 15-44 years
<b>Africa</b>	6,112	[4,125.2-9,055.7]	0.91	1.43	0.16	18	19
<b>Eastern Africa</b>	1,963	[1,063.1-3,624.5]	0.87	1.53	0.18	18	19
Burundi	30	[3.80-235.3]	0.50	0.96	0.10	21	19
Comoros	0	[0-7.80]	0	0	0	20	31
Djibouti	7	[0.90-54.9]	1.49	1.83	0.25	14	9
Eritrea	21	[2.70-164.7]	1.19	1.77	0.22	14	13
Ethiopia	660	[381.9-1,140.7]	1.15	1.84	0.22	14	12
Kenya	369	[222.5-612]	1.36	2.67	0.33	15	23
Madagascar	91	[11.6-713.8]	0.66	1.12	0.12	20	21
Mozambique	99	[36.4-269.3]	0.62	1.03	0.12	16	17
Mauritius	25	[15.7-39.9]	3.88	2.33	0.26	11	17
Malawi	83	[25.9-265.7]	0.86	1.49	0.19	16	19
Rwanda	32	[5.40-188]	0.49	0.76	0.07	21	19
Somalia	87	[11.1-682.4]	1.09	2.06	0.25	14	15
South Sudan	53	[6.80-415.7]	0.95	1.64	0.20	15	16
Tanzania	166	[94.3-292.3]	0.56	0.92	0.09	20	14
Uganda	122	[64.8-229.8]	0.53	1.28	0.14	20	19
Zambia	49	[17.4-138.4]	0.53	1.01	0.06	17	15
Zimbabwe	57	[28.4-114.5]	0.73	1.19	0.14	21	16
<b>Middle Africa</b>	552	[294.9-1,033.3]	0.61	1.14	0.13	15	14
Angola	166	[85.5-322.3]	1.00	2.07	0.22	13	12
Central African Republic	16	[1.90-133.5]	0.66	1.22	0.15	16	14
Cameroon	90	[32.3-250.4]	0.68	1.17	0.14	15	13
DR Congo	204	[24.4-1,702.7]	0.45	0.83	0.09	20	13
Congo	9	[1.90-42.7]	0.33	0.54	0.07	18	13
Gabon	11	[1.90-65.1]	1.01	1.84	0.26	14	26
Equatorial Guinea	3	[0.40-25]	0.48	1.13	0.16	14	25
Sao Tome & Principe	0	[0-1.10]	0	0	0	31	10
Chad	53	[6.30-442.4]	0.64	1.35	0.17	13	18
<b>Northern Africa</b>	1,489	[1,042.3-2,127.2]	1.22	1.31	0.14	19	17
Algeria	107	[62.8-182.3]	0.49	0.51	0.07	22	21
Egypt	714	[512.7-994.3]	1.41	1.58	0.14	17	17
Libya	30	[8.50-106.1]	0.88	1.04	0.14	20	26
Morocco	285	[171.5-473.5]	1.53	1.31	0.14	19	15
Sudan	257	[195.9-337.2]	1.17	1.83	0.22	13	13
Tunisia	96	[59.2-155.7]	1.61	1.19	0.13	19	17
<b>Southern Africa</b>	827	[731.5-935]	2.41	2.59	0.28	15	14
Botswana	8	[3.40-18.6]	0.66	0.80	0.08	22	19
Lesotho	10	[2.80-35.4]	0.92	0.99	0.12	14	9
Namibia	38	[26.7-54.1]	2.90	4.07	0.39	9	10
Eswatini	4	[1.40-11.1]	0.68	0.72	0.08	14	10
South Africa	767	[683.6-860.6]	2.55	2.68	0.29	15	14
<b>Western Africa</b>	1,281	[593.6-2,764.2]	0.64	1.15	0.14	16	19
Benin	42	[11.2-157.3]	0.69	1.11	0.13	13	11
Burkina Faso	55	[4.80-631.2]	0.53	1.23	0.24	19	27
Côte d'Ivoire	91	[47.4-174.6]	0.70	1.45	0.21	15	13
Cabo Verde	11	[2.70-45.6]	3.97	3.66	0.33	10	14
Ghana	58	[9.50-353.9]	0.38	0.51	0.04	21	14
Guinea	32	[16.3-62.7]	0.47	0.75	0.09	15	11
Gambia	2	[0.20-22.4]	0.16	0.38	0	16	26
Guinea-Bissau	6	[0.60-63]	0.60	1.08	0.16	12	12
Liberia	18	[1.70-189.1]	0.72	1.20	0.17	14	13
Mali	158	[86.5-288.6]	1.56	2.87	0.33	8	9
Mauritania	25	[2.40-262.7]	1.08	1.73	0.24	10	11
Niger	92	[15-565.8]	0.76	1.66	0.22	12	11
Nigeria	543	[234.2-1,258.7]	0.53	0.97	0.11	17	20
Senegal	95	[9-998.2]	1.11	1.79	0.23	11	10

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Table 20 – continued from previous page

Area	N Cases	Uncertainty intervals of new cancer cases [95% UI]	Crude rate <sup>b</sup>	ASR <sup>b</sup>	Cumulative risk (%) ages 0-74 years <sup>a</sup>	Ranking	
						All women	Women 15-44 years
Sierra Leone	26	[19.3-35]	0.65	0.99	0.11	14	10
Togo	27	[2.90-248.7]	0.65	1.15	0.18	14	12

**Data accessed on 27 Jan 2021**

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

<sup>a</sup> 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.

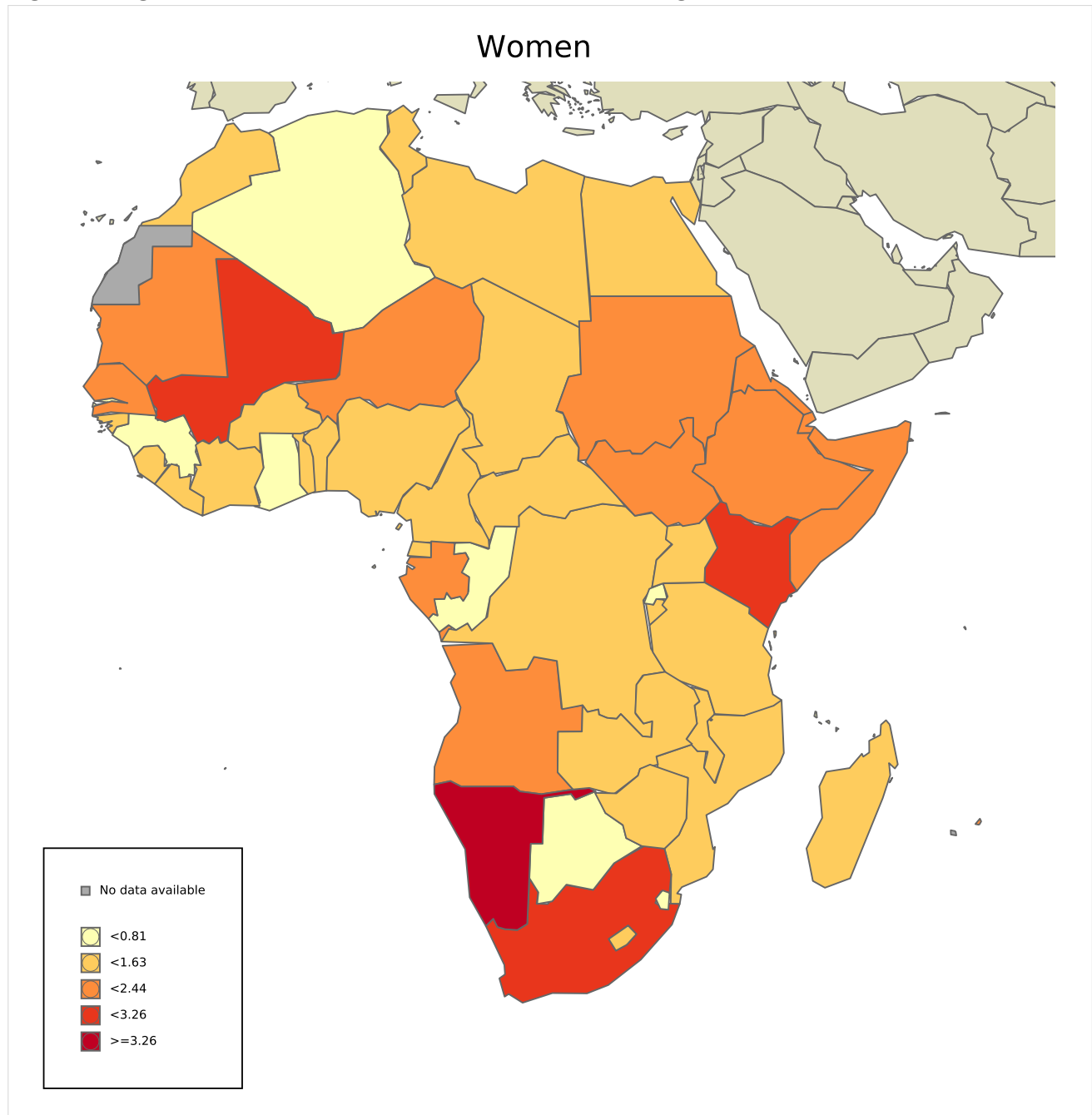
<sup>b</sup> Rates per 100,000 women per year.

**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 Africa (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>

<sup>a</sup> 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 Africa and sub regions (estimates for 2020)

Area	N Cases	Uncertainty intervals of new cancer cases [95% UI]	Crude rate <sup>b</sup>	ASR <sup>b</sup>	Cumulative risk (%) ages 0-74 years <sup>a</sup>	Ranking	
						All men	Men 15-44 years
<b>Africa</b>	8,174	[5,994.3-11,146.2]	1.22	2.13	0.25	15	14
<b>Eastern Africa</b>	2,690	[1,569.5-4,610.5]	1.22	2.36	0.28	12	11
Burundi	62	[17.9-214.7]	1.05	2.38	0.31	12	10
Comoros	5	[1.40-17.3]	1.14	2.06	0.26	9	7
Djibouti	7	[2-24.2]	1.35	1.75	0.25	11	10
Eritrea	22	[6.40-76.2]	1.24	2.04	0.24	11	12
Ethiopia	605	[346.3-1,057]	1.05	1.73	0.21	11	11
Kenya	390	[251.8-604]	1.46	2.89	0.30	10	11
Madagascar	319	[92.1-1,104.6]	2.31	4.23	0.51	8	8
Mozambique	162	[78.9-332.4]	1.07	2.18	0.25	9	11
Mauritius	36	[24.4-53.1]	5.74	3.77	0.45	10	10
Malawi	104	[37.1-291.8]	1.10	2.03	0.23	10	13
Rwanda	67	[23-194.9]	1.05	1.88	0.24	13	12
Somalia	88	[25.4-304.7]	1.11	2.03	0.24	12	9
South Sudan	65	[18.8-225.1]	1.16	2.09	0.23	12	11
Tanzania	315	[181.9-545.4]	1.06	2.40	0.28	13	10
Uganda	264	[174.1-400.3]	1.17	3.02	0.38	11	10
Zambia	74	[35.5-154.2]	0.81	1.97	0.25	13	11
Zimbabwe	53	[28.8-97.7]	0.75	2.00	0.20	18	23
<b>Middle Africa</b>	879	[507.6-1,522.2]	0.98	2.02	0.23	10	10
Angola	316	[181.4-550.4]	1.94	4.64	0.54	7	7
Central African Republic	19	[2.20-163.4]	0.79	1.58	0.18	12	9
Cameroon	138	[58.9-323.3]	1.04	1.93	0.21	12	12
DR Congo	281	[32.7-2,417.1]	0.63	1.27	0.15	15	11
Congo	7	[1.20-40.9]	0.25	0.52	0.05	19	24
Gabon	39	[15-101.7]	3.44	5.18	0.66	4	5
Equatorial Guinea	13	[1.50-111.8]	1.67	3.25	0.43	6	7
Sao Tome & Principe	0	[0-1.10]	0	0	0	24	2
Chad	66	[7.70-567.7]	0.80	1.88	0.21	13	13
<b>Northern Africa</b>	1,727	[1,267.6-2,352.8]	1.40	1.68	0.19	16	15
Algeria	186	[118.5-291.9]	0.84	0.85	0.09	18	15
Egypt	605	[460.1-795.6]	1.17	1.52	0.17	16	15
Libya	30	[9.30-96.5]	0.86	1.21	0.16	18	20
Morocco	446	[301.9-658.8]	2.43	2.31	0.27	14	11
Sudan	307	[234.7-401.5]	1.40	2.35	0.26	10	11
Tunisia	150	[103.5-217.4]	2.56	2.21	0.24	15	14
<b>Southern Africa</b>	1,305	[1,196.8-1,423]	3.93	5.30	0.66	9	12
Botswana	52	[35.9-75.3]	4.57	7.00	0.89	4	5
Lesotho	19	[5.10-70.7]	1.80	2.80	0.33	9	8
Namibia	64	[48.3-84.9]	5.20	10.3	1.10	5	6
Eswatini	4	[1.40-11.6]	0.70	1.25	0.19	12	11
South Africa	1,166	[1,075-1,264.7]	3.99	5.21	0.66	9	12
<b>Western Africa</b>	1,573	[743.8-3,326.7]	0.78	1.55	0.17	13	13
Benin	32	[7.20-143]	0.53	0.77	0.12	16	5
Burkina Faso	124	[38.4-400.5]	1.19	1.98	0.21	8	4
Côte d'Ivoire	90	[47.8-169.4]	0.68	1.19	0.10	12	11
Cabo Verde	20	[6.40-62.2]	7.17	8.00	0.64	6	5
Ghana	136	[42.7-433.1]	0.86	1.43	0.18	12	16
Guinea	35	[15.8-77.4]	0.55	1.27	0.10	9	8
Gambia	2	[0.20-22.4]	0.17	0.42	0	14	16
Guinea-Bissau	6	[0.60-62.1]	0.62	1.43	0.22	10	13
Liberia	18	[1.70-186.4]	0.71	1.31	0.10	12	10
Mali	107	[53.7-213.3]	1.05	2.36	0.22	11	8
Mauritania	28	[2.70-290]	1.20	2.36	0.28	12	8
Niger	74	[10.2-534.7]	0.61	1.57	0.15	13	16
Nigeria	749	[354.4-1,582.9]	0.72	1.45	0.18	16	15
Senegal	82	[7.90-849.3]	1.00	2.12	0.21	11	10
Sierra Leone	31	[22.5-42.8]	0.78	1.50	0.13	13	11
Togo	39	[4.30-354.4]	0.95	1.66	0.24	15	10

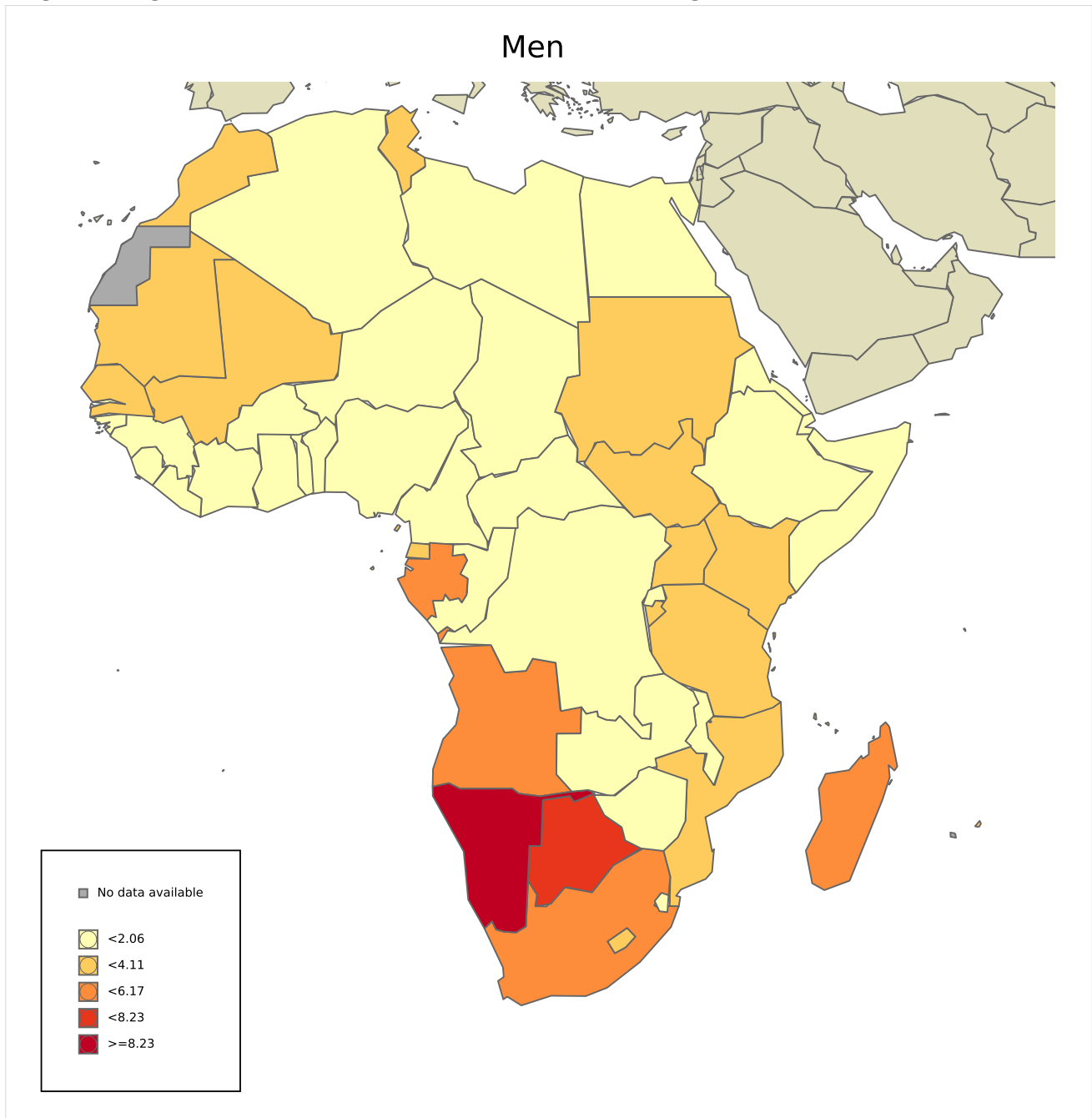
Data accessed on 27 Jan 2021

For more detailed methods of estimation please refer to <http://gco.iarc.fr/today/data-sources-methods><sup>a</sup> 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.<sup>b</sup> 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 Africa (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>

<sup>a</sup> 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 Africa and sub regions (estimates for 2020)

Area	N Cases	Uncertainty intervals of new cancer cases [95% UI]	Crude rate <sup>b</sup>	ASR <sup>b</sup>	Cumulative risk (%) ages 0-74 years <sup>a</sup>	Ranking	
						All women	Women 15-44 years
<b>Africa</b>	3,482	[2,226.6-5,445.3]	0.52	0.85	0.09	17	19
<b>Eastern Africa</b>	1,264	[624.1-2,560.1]	0.56	1.03	0.12	17	19
Burundi	21	[2.60-168.5]	0.35	0.78	0.08	20	25
Comoros	0	[0-8]	0	0	0	28	16
Djibouti	5	[0.60-40.1]	1.07	1.40	0.22	12	16
Eritrea	14	[1.70-112.4]	0.79	1.27	0.17	14	29
Ethiopia	450	[238.1-850.3]	0.78	1.31	0.16	13	13
Kenya	213	[116.8-388.6]	0.79	1.62	0.19	16	21
Madagascar	58	[7.20-465.5]	0.42	0.74	0.08	17	19
Mozambique	69	[21.5-221]	0.43	0.75	0.09	15	21
Mauritius	10	[4.40-22.7]	1.55	0.80	0.12	17	28
Malawi	56	[15.5-202.1]	0.58	1.06	0.14	14	20
Rwanda	20	[2.50-160.5]	0.30	0.52	0.05	18	20
Somalia	65	[8.10-521.6]	0.82	1.57	0.19	15	15
South Sudan	38	[4.70-305]	0.68	1.17	0.14	14	16
Tanzania	101	[51.6-197.8]	0.34	0.61	0.06	20	15
Uganda	78	[37.4-162.9]	0.34	0.89	0.09	18	19
Zambia	28	[8.20-96.1]	0.30	0.64	0.03	19	16
Zimbabwe	35	[15.4-79.5]	0.45	0.78	0.09	20	17
<b>Middle Africa</b>	352	[185.6-667.5]	0.39	0.77	0.09	17	16
Angola	96	[47.3-195]	0.58	1.30	0.13	14	13
Central African Republic	12	[1.60-89]	0.49	0.88	0.10	13	12
Cameroon	54	[18-161.8]	0.41	0.76	0.10	15	15
DR Congo	140	[18.9-1,038.6]	0.31	0.59	0.07	20	15
Congo	5	[0.80-30]	0.18	0.35	0.05	18	27
Gabon	5	[0.70-37.1]	0.46	0.90	0.13	17	20
Equatorial Guinea	2	[0.30-14.8]	0.32	0.80	0.12	15	31
Sao Tome & Principe	0	[0-41.4]	0	0	0	20	14
Chad	38	[5.10-281.9]	0.46	1.02	0.14	13	22
<b>Northern Africa</b>	727	[489.3-1,080.3]	0.59	0.64	0.06	19	17
Algeria	42	[22.8-77.5]	0.19	0.21	0.03	22	19
Egypt	343	[236.2-498]	0.68	0.76	0.05	18	17
Libya	15	[4-55.8]	0.44	0.53	0.07	19	20
Morocco	160	[90.3-283.4]	0.86	0.74	0.07	19	17
Sudan	121	[90.5-161.7]	0.55	0.89	0.10	16	16
Tunisia	46	[27-78.3]	0.77	0.54	0.06	20	16
<b>Southern Africa</b>	318	[273.3-370]	0.93	1.00	0.10	16	16
Botswana	3	[1.10-8.10]	0.25	0.32	0.02	24	29
Lesotho	6	[1.60-21.8]	0.55	0.56	0.06	15	9
Namibia	19	[12.2-29.7]	1.45	2.20	0.20	9	17
Eswatini	2	[0.50-7.30]	0.34	0.45	0.05	15	24
South Africa	288	[224.5-369.5]	0.96	1.01	0.11	16	18
<b>Western Africa</b>	821	[364.1-1,851.5]	0.41	0.78	0.10	16	18
Benin	26	[5.50-122.8]	0.43	0.74	0.09	16	12
Burkina Faso	39	[2.70-573.7]	0.37	0.86	0.17	17	29
Côte d'Ivoire	60	[28.3-127.1]	0.46	0.99	0.14	16	13
Cabo Verde	5	[1.20-20.7]	1.81	1.38	0.08	12	30
Ghana	33	[4.40-247.9]	0.22	0.32	0.03	21	15
Guinea	22	[11-43.9]	0.32	0.52	0.07	13	10
Gambia	1	[0.80-1.30]	0.08	0.21	0	19	28
Guinea-Bissau	4	[0.40-35.9]	0.40	0.78	0.13	13	19
Liberia	12	[1.30-107.8]	0.48	0.78	0.11	14	11
Mali	108	[54.4-214.5]	1.07	2.14	0.26	10	14
Mauritania	16	[1.80-143.7]	0.69	1.22	0.18	11	18
Niger	64	[8.60-474.8]	0.53	1.22	0.17	10	15
Nigeria	335	[129.9-863.9]	0.33	0.64	0.07	17	19
Senegal	61	[6.80-547.9]	0.71	1.18	0.15	13	14
Sierra Leone	18	[13-24.9]	0.45	0.71	0.09	16	13
Togo	17	[1.90-152.7]	0.41	0.82	0.15	17	18

Data accessed on 27 Jan 2021

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

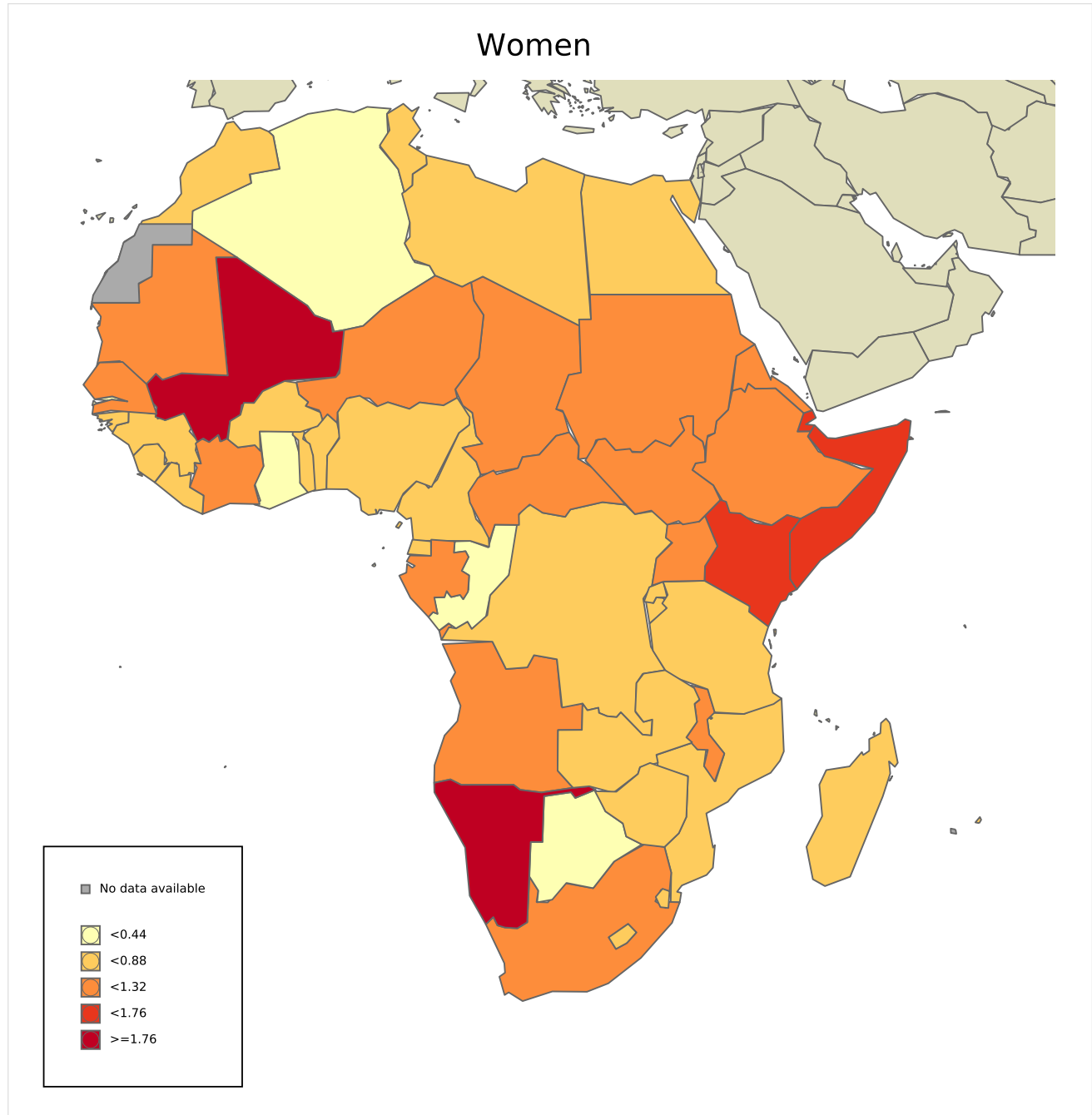
<sup>a</sup> Cumulative risk (mortality) is the probability or risk of individuals dying from the disease during ages 0-74 years. For cancer, it is expressed as the % of new born children who would be expected to die from a particular cancer before the age of 75 if they had the rates of cancer observed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

<sup>b</sup> 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 Africa (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>

<sup>a</sup> 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 Africa and sub regions (estimates for 2020)

Area	N Cases	Uncertainty intervals of new cancer cases [95% UI]	Crude rate <sup>b</sup>	ASR <sup>b</sup>	Cumulative risk (%) ages 0-74 years <sup>a</sup>	Ranking	
						All men	Men 15-44 years
<b>Africa</b>	4,606	[3,236.8-6,554.3]	0.69	1.26	0.15	15	15
<b>Eastern Africa</b>	1,716	[928.6-3,171.1]	0.78	1.61	0.20	13	12
Burundi	43	[12.2-151]	0.73	1.75	0.23	11	12
Comoros	3	[0.90-10.5]	0.68	1.35	0.19	10	26
Djibouti	5	[1.40-17.6]	0.96	1.37	0.22	11	22
Eritrea	15	[4.30-52.7]	0.84	1.45	0.18	12	20
Ethiopia	406	[212.2-776.9]	0.71	1.24	0.16	12	11
Kenya	222	[132-373.3]	0.83	1.88	0.19	14	11
Madagascar	201	[57.3-705.7]	1.45	2.82	0.35	9	6
Mozambique	113	[49-260.8]	0.74	1.62	0.20	10	10
Mauritius	24	[14.1-41]	3.82	2.48	0.27	10	7
Malawi	68	[21.8-212.2]	0.72	1.45	0.18	10	12
Rwanda	42	[12-147.5]	0.66	1.26	0.16	13	18
Somalia	67	[19.1-235.2]	0.85	1.63	0.20	12	9
South Sudan	47	[13.4-165]	0.84	1.59	0.18	14	11
Tanzania	198	[103.1-380.1]	0.66	1.63	0.19	14	14
Uganda	169	[104.1-274.2]	0.75	2.09	0.28	12	14
Zambia	42	[17.6-100.5]	0.46	1.26	0.16	15	13
Zimbabwe	33	[16.1-67.7]	0.47	1.34	0.12	17	22
<b>Middle Africa</b>	552	[311.8-977.2]	0.62	1.36	0.16	12	13
Angola	184	[101.8-332.7]	1.13	2.94	0.34	10	10
Central African Republic	14	[1.80-106.9]	0.58	1.35	0.16	12	19
Cameroon	86	[34.5-214.4]	0.65	1.32	0.15	13	14
DR Congo	192	[25.2-1,465.4]	0.43	0.90	0.11	15	13
Congo	4	[0.50-30.5]	0.15	0.36	0.03	18	22
Gabon	18	[6.10-53]	1.59	2.71	0.38	8	9
Equatorial Guinea	7	[0.90-53.4]	0.90	2.18	0.32	10	13
Sao Tome & Principe	0	[0-41.4]	0	0	0	28	26
Chad	47	[6.20-358.7]	0.57	1.46	0.17	14	18
<b>Northern Africa</b>	739	[524.2-1,041.7]	0.60	0.74	0.08	17	15
Algeria	84	[50-141]	0.38	0.39	0.04	18	15
Egypt	201	[147.7-273.6]	0.39	0.53	0.05	17	15
Libya	14	[4.20-47.2]	0.40	0.58	0.08	18	15
Morocco	231	[148.9-358.4]	1.26	1.22	0.14	16	15
Sudan	139	[104.4-185.1]	0.63	1.10	0.11	15	13
Tunisia	70	[46.5-105.3]	1.19	1.02	0.10	15	12
<b>Southern Africa</b>	596	[532.6-666.9]	1.79	2.56	0.33	11	22
Botswana	23	[14.9-35.5]	2.02	3.30	0.44	7	8
Lesotho	12	[3.10-46]	1.14	1.90	0.24	8	11
Namibia	33	[23.1-47.2]	2.68	5.93	0.60	7	17
Eswatini	2	[0.50-7.70]	0.35	0.79	0.15	12	28
South Africa	526	[424.9-651.2]	1.80	2.47	0.33	12	23
<b>Western Africa</b>	1,003	[438.7-2,293.3]	0.50	1.07	0.12	13	16
Benin	20	[3.40-116.3]	0.33	0.53	0.09	18	5
Burkina Faso	85	[23.4-309.3]	0.81	1.48	0.16	9	6
Côte d'Ivoire	58	[28-120.2]	0.44	0.85	0.06	14	10
Cabo Verde	7	[2.30-21.8]	2.51	2.99	0.23	8	9
Ghana	77	[21.2-280.2]	0.49	0.86	0.12	15	17
Guinea	24	[10.6-54.3]	0.38	1.00	0.08	11	11
Gambia	1	[0.10-14.7]	0.08	0.23	0	17	10
Guinea-Bissau	4	[0.50-35.4]	0.42	1.10	0.19	12	17
Liberia	12	[1.40-106.3]	0.47	1.00	0.07	12	12
Mali	75	[34.2-164.6]	0.74	1.87	0.17	12	12
Mauritania	18	[2-159.5]	0.77	1.80	0.21	12	18
Niger	56	[6.30-496.3]	0.46	1.26	0.12	14	16
Nigeria	466	[200.5-1,082.8]	0.45	0.95	0.12	16	15
Senegal	53	[6-469.7]	0.65	1.49	0.14	13	12
Sierra Leone	22	[15.5-31.3]	0.55	1.24	0.10	13	15
Togo	25	[2.80-221.6]	0.61	1.17	0.18	13	11

Data accessed on 27 Jan 2021

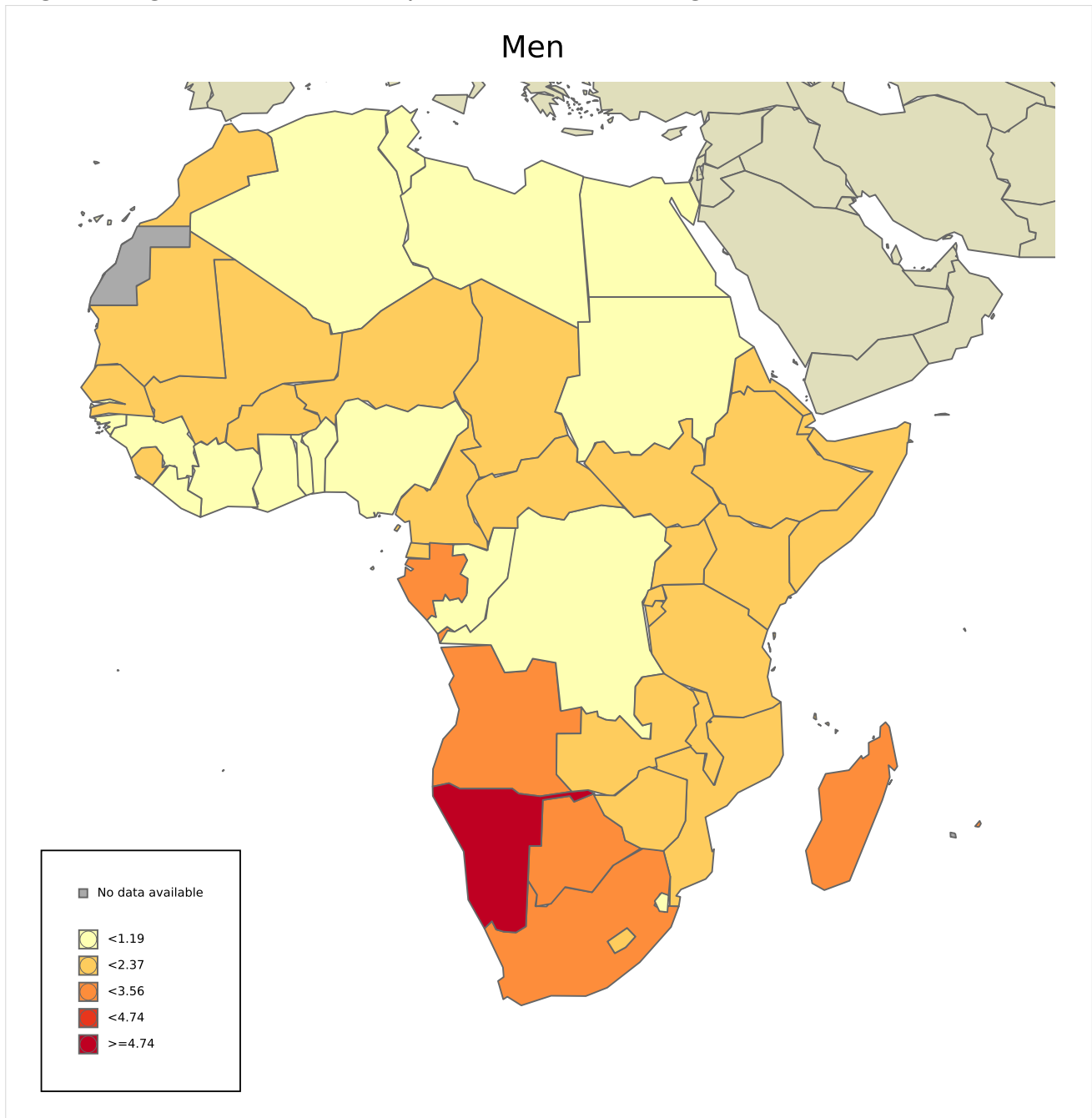
For more detailed methods of estimation please refer to <http://gco.iarc.fr/today/data-sources-methods><sup>a</sup> Cumulative risk (mortality) is the probability or risk of individuals dying from the disease during ages 0-74 years. For cancer, it is expressed as the % of new born children who would 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.<sup>b</sup> 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 Africa (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>

<sup>a</sup> 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 Africa and sub regions (estimates for 2020)

Area	N Cases	Uncertainty intervals of new cancer cases [95% UI]	Crude rate <sup>b</sup>	ASR <sup>b</sup>	Cumulative risk (%) ages 0-74 years <sup>a</sup>	Ranking	
						All women	Women 15-44 years
<b>Africa</b>	1,422	[608.2-3,324.9]	0.21	0.33	0.04	28	28
<b>Eastern Africa</b>	413	[98.9-1,723.8]	0.18	0.31	0.04	28	27
Burundi	15	[1.30-175.9]	0.25	0.43	0.05	25	21
Comoros	0	[0-11.7]	0	0	0	26	16
Djibouti	0	[0-11.7]	0	0	0	24	18
Eritrea	2	[0.20-23.5]	0.11	0.13	0.02	27	25
Ethiopia	78	[17.3-351.9]	0.14	0.21	0.03	27	27
Kenya	72	[22.4-231.6]	0.27	0.54	0.08	28	30
Madagascar	23	[2-269.7]	0.17	0.27	0.02	25	23
Mozambique	18	[2.40-133.2]	0.11	0.15	0.02	25	25
Mauritius	4	[1.20-13.3]	0.62	0.32	0.04	25	29
Malawi	13	[1.10-148.8]	0.13	0.27	0.03	27	25
Rwanda	25	[3-207.6]	0.38	0.53	0.06	22	18
Somalia	11	[0.90-129]	0.14	0.28	0.04	28	29
South Sudan	9	[0.80-105.5]	0.16	0.27	0.04	28	29
Tanzania	61	[18.2-204.6]	0.20	0.40	0.02	26	22
Uganda	50	[15-167.2]	0.22	0.35	0.04	24	20
Zambia	21	[4.20-104]	0.23	0.42	0.06	27	26
Zimbabwe	10	[1.80-56.3]	0.13	0.21	0.01	29	28
<b>Middle Africa</b>	102	[19.7-529.5]	0.11	0.22	0.03	28	28
Angola	25	[4.60-136.5]	0.15	0.32	0.04	28	28
Central African Republic	0	[0-1.20]	0	0	0	30	30
Cameroon	11	[0.90-134.9]	0.08	0.16	0.02	30	29
DR Congo	51	[43.4-59.9]	0.11	0.20	0.02	27	27
Congo	2	[0.20-20.7]	0.07	0.13	0.02	24	21
Gabon	5	[0.50-54.3]	0.46	0.78	0.04	23	30
Equatorial Guinea	0	[0-1.20]	0	0	0	27	23
Sao Tome & Principe	0	[0-1.20]	0	0	0	24	31
Chad	8	[6.80-9.40]	0.10	0.21	0.02	28	29
<b>Northern Africa</b>	438	[201.2-953.3]	0.36	0.39	0.05	24	26
Algeria	66	[32.6-133.7]	0.30	0.30	0.03	24	25
Egypt	210	[98.7-446.8]	0.41	0.48	0.06	22	21
Libya	16	[3.30-77.9]	0.47	0.59	0.08	21	21
Morocco	89	[39-202.9]	0.48	0.42	0.05	25	24
Sudan	31	[14-68.7]	0.14	0.22	0.02	28	28
Tunisia	26	[10-67.8]	0.44	0.35	0.04	25	27
<b>Southern Africa</b>	169	[131.4-217.3]	0.49	0.54	0.07	26	27
Botswana	3	[0.70-13.6]	0.25	0.34	0.06	26	29
Lesotho	0	[0-5.70]	0	0	0	30	27
Namibia	3	[1-9.40]	0.23	0.38	0.06	29	30
Eswatini	0	[0-8.40]	0	0	0	28	29
South Africa	163	[128.9-206.2]	0.54	0.57	0.07	26	27
<b>Western Africa</b>	300	[49.4-1,822.7]	0.15	0.28	0.04	28	29
Benin	4	[0.40-39.4]	0.07	0.07	0.00	30	21
Burkina Faso	8	[1.10-58.7]	0.08	0.14	0.01	29	23
Côte d'Ivoire	7	[0.70-72.3]	0.05	0.11	0.02	30	28
Cabo Verde	3	[0.30-34]	1.08	1.28	0.18	20	11
Ghana	54	[11.1-261.8]	0.35	0.62	0.09	24	24
Guinea	21	[2.70-163.1]	0.31	0.55	0.10	17	25
Gambia	1	[0.10-11.2]	0.08	0.09	0.01	18	13
Guinea-Bissau	1	[0.10-10.5]	0.10	0.21	0.05	25	25
Liberia	4	[0.40-42]	0.16	0.28	0.05	26	29
Mali	15	[2.20-103.1]	0.15	0.28	0.03	28	27
Mauritania	0	[0-10.5]	0	0	0	30	28
Niger	10	[0.90-114.4]	0.08	0.21	0.00	23	26
Nigeria	153	[28.3-827]	0.15	0.27	0.03	27	28
Senegal	9	[0.90-94.6]	0.10	0.18	0.03	28	29

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Table 24 – continued from previous page

Area	N Cases	Uncertainty intervals of new cancer cases [95% UI]	Crude rate <sup>b</sup>	ASR <sup>b</sup>	Cumulative risk (%) ages 0-74 years <sup>a</sup>	Ranking	
						All women	Women 15-44 years
Sierra Leone	3	[1.10-8.20]	0.08	0.15	0.03	29	30
Togo	7	[1.20-40.5]	0.17	0.30	0.05	29	26

**Data accessed on 27 Jan 2021**

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

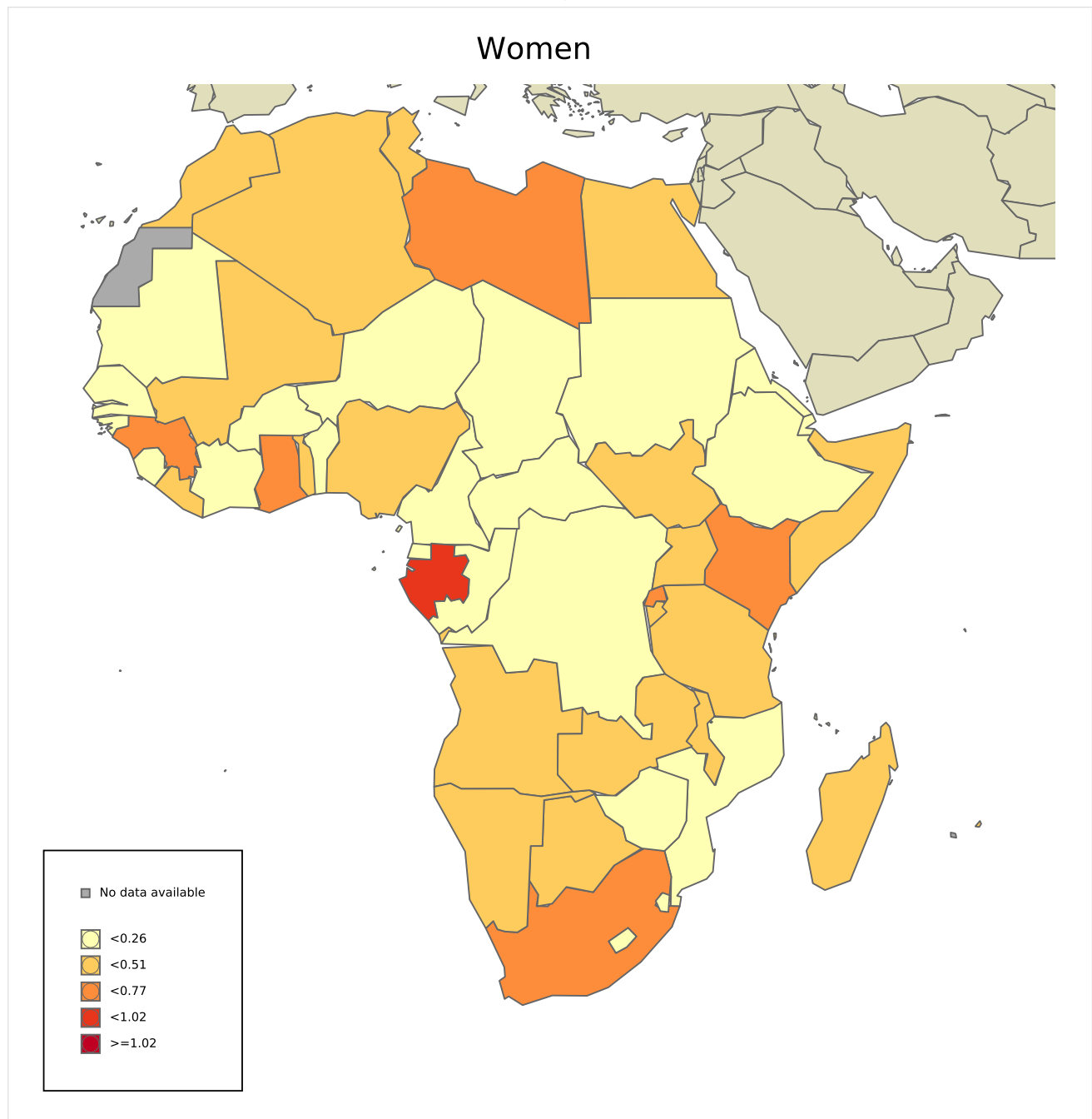
<sup>a</sup> Cumulative risk (incidence) is the probability or risk of individuals getting from the disease during ages 0-74 years. For cancer, it is expressed as the % of new born children who would be expected to develop from a particular cancer before the age of 75 if they had the rates of cancer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

<sup>b</sup> 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 Africa (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>

<sup>a</sup> 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 Africa and sub regions (estimates for 2020)

Area	N Cases	Uncertainty intervals of new cancer cases [95% UI]	Crude rate <sup>b</sup>	ASR <sup>b</sup>	Cumulative risk (%) ages 0-74 years <sup>a</sup>	Ranking	
						All men	Men 15-44 years
<b>Africa</b>	8,486	[6,079.3-11,845.5]	1.27	2.43	0.30	14	23
<b>Eastern Africa</b>	1,860	[1,013.1-3,414.9]	0.84	1.89	0.23	15	22
Burundi	49	[9.10-263.4]	0.83	2.28	0.25	14	23
Comoros	0	[0-5.40]	0	0	0	23	19
Djibouti	6	[1.10-32.2]	1.16	1.58	0.23	13	26
Eritrea	17	[3.20-91.4]	0.96	1.68	0.20	15	18
Ethiopia	446	[239.4-831]	0.78	1.44	0.18	14	17
Kenya	336	[206.3-547.4]	1.26	3.06	0.39	13	17
Madagascar	85	[15.8-456.9]	0.62	1.28	0.15	18	19
Mozambique	52	[18.5-146.2]	0.34	0.82	0.11	18	19
Mauritius	38	[25.9-55.7]	6.06	3.98	0.48	8	17
Malawi	51	[11.6-223.5]	0.54	1.37	0.15	17	20
Rwanda	73	[17.2-310]	1.15	2.36	0.25	12	23
Somalia	69	[12.8-370.9]	0.87	1.85	0.24	13	20
South Sudan	55	[10.2-295.6]	0.98	1.99	0.25	14	21
Tanzania	198	[117-335.1]	0.66	1.79	0.19	15	19
Uganda	186	[104.4-331.5]	0.82	2.69	0.33	16	24
Zambia	73	[32.8-162.5]	0.80	2.19	0.24	14	21
Zimbabwe	92	[54.4-155.5]	1.30	3.50	0.38	11	25
<b>Middle Africa</b>	537	[267.5-1,077.9]	0.60	1.38	0.18	16	25
Angola	193	[96-388]	1.19	3.15	0.41	12	23
Central African Republic	10	[1-102.2]	0.42	1.01	0.13	19	24
Cameroon	31	[2.50-380.1]	0.23	0.47	0.05	24	24
DR Congo	215	[21-2,197.3]	0.48	1.07	0.14	17	26
Congo	7	[1-47.1]	0.25	0.58	0.11	17	20
Gabon	31	[11.4-84.5]	2.74	4.85	0.62	7	10
Equatorial Guinea	8	[0.80-81.8]	1.03	2.37	0.29	12	22
Sao Tome & Principe	2	[1.80-2.20]	1.82	4.84	0.62	8	19
Chad	40	[3.90-408.8]	0.49	1.25	0.16	17	24
<b>Northern Africa</b>	4,042	[3,181.6-5,135.2]	3.27	4.05	0.50	10	17
Algeria	775	[625.7-960]	3.50	3.82	0.50	10	16
Egypt	1,342	[1,064.2-1,692.3]	2.60	3.52	0.42	11	16
Libya	144	[83-249.9]	4.15	5.84	0.64	8	16
Morocco	1,124	[888.7-1,421.6]	6.14	5.83	0.72	7	12
Sudan	262	[194.7-352.5]	1.20	2.15	0.24	13	20
Tunisia	387	[309.2-484.3]	6.60	5.64	0.69	6	15
<b>Southern Africa</b>	786	[705-876.3]	2.37	3.28	0.41	15	25
Botswana	26	[15.4-43.8]	2.28	4.19	0.48	9	24
Lesotho	12	[2.10-67.1]	1.14	1.88	0.24	11	16
Namibia	32	[21.6-47.4]	2.60	5.57	0.77	9	27
Eswatini	1	[0.20-4]	0.18	0.41	0.07	19	20
South Africa	715	[645.6-791.8]	2.45	3.26	0.41	16	24
<b>Western Africa</b>	1,261	[574-2,770.1]	0.62	1.37	0.17	16	21
Benin	21	[2.10-206.7]	0.35	0.81	0.03	20	25
Burkina Faso	42	[6.30-278.1]	0.40	0.97	0.15	13	18
Côte d'Ivoire	115	[62.9-210.1]	0.86	1.94	0.19	9	20
Cabo Verde	16	[3.90-66.3]	5.73	9.27	1.17	7	12
Ghana	126	[37.7-420.7]	0.80	1.27	0.16	14	15
Guinea	34	[12.3-93.8]	0.54	1.24	0.18	10	12
Gambia	4	[0.60-28.7]	0.33	0.71	0.06	13	13
Guinea-Bissau	4	[0.30-61.5]	0.42	0.98	0.13	14	25
Liberia	20	[1.30-307.5]	0.79	1.67	0.18	10	16
Mali	50	[19.4-128.8]	0.49	1.30	0.19	16	22
Mauritania	13	[0.80-199.9]	0.56	1.07	0.15	19	19
Niger	56	[5.50-565.3]	0.46	1.09	0.16	16	17
Nigeria	640	[297.1-1,378.8]	0.61	1.33	0.17	18	22
Senegal	43	[2.80-661.2]	0.53	1.17	0.17	15	19
Sierra Leone	21	[14.3-30.9]	0.53	1.18	0.17	17	21
Togo	56	[30-104.5]	1.36	3.34	0.33	8	20

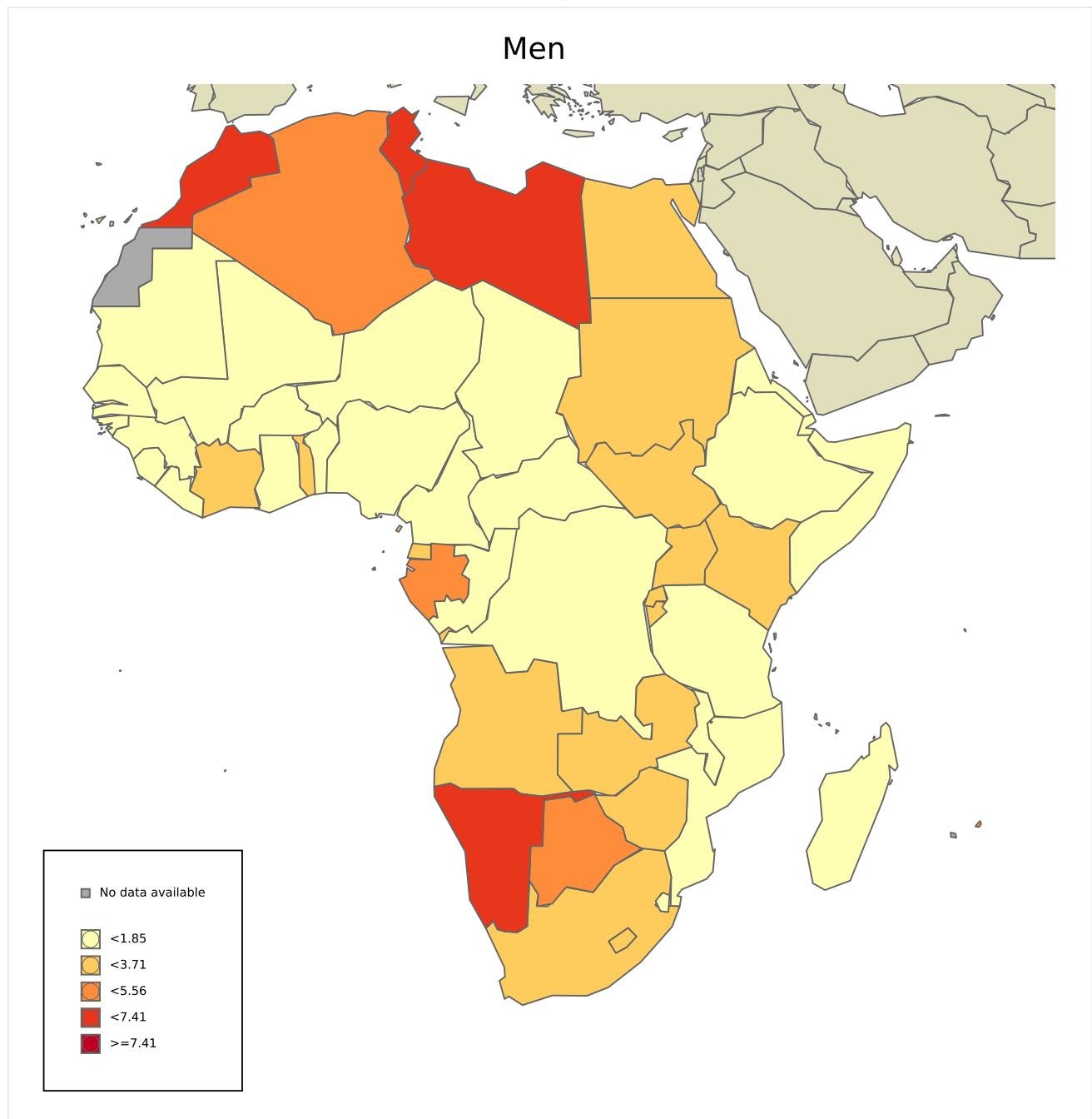
Data accessed on 27 Jan 2021

For more detailed methods of estimation please refer to <http://gco.iarc.fr/today/data-sources-methods><sup>a</sup> 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.<sup>b</sup> 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 Africa (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>

<sup>a</sup> 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 Africa and sub regions (estimates for 2020)

Area	N Cases	Uncertainty intervals of new cancer cases [95% UI]	Crude rate <sup>b</sup>	ASR <sup>b</sup>	Cumulative risk (%) ages 0-74 years <sup>a</sup>	Ranking	
						All women	Women 15-44 years
<b>Africa</b>	961	[365.8-2,524.9]	0.14	0.23	0.03	28	28
<b>Eastern Africa</b>	283	[112.4-712.8]	0.13	0.22	0.03	28	25
Burundi	11	[0.90-132.6]	0.18	0.31	0.03	25	16
Comoros	0	[0-12.1]	0	0	0	23	22
Djibouti	0	[0-12.1]	0	0	0	23	27
Eritrea	1	[0.10-12.1]	0.06	0.06	0	28	22
Ethiopia	56	[9.70-323]	0.10	0.15	0.02	27	26
Kenya	46	[11.5-184.4]	0.17	0.35	0.05	28	31
Madagascar	16	[1.30-192.8]	0.12	0.21	0.02	26	23
Mozambique	13	[1.30-133.4]	0.08	0.12	0.02	26	24
Mauritius	2	[0.30-15.6]	0.31	0.17	0.04	23	13
Malawi	9	[7.10-11.4]	0.09	0.20	0.03	27	24
Rwanda	18	[1.50-216.9]	0.27	0.39	0.05	21	16
Somalia	9	[0.70-108.5]	0.11	0.22	0.03	28	27
South Sudan	7	[0.60-84.4]	0.13	0.23	0.03	27	30
Tanzania	41	[9.70-172.6]	0.14	0.31	0.01	27	23
Uganda	34	[8.40-138.4]	0.15	0.25	0.03	24	16
Zambia	13	[1.90-87]	0.14	0.28	0.04	26	23
Zimbabwe	7	[0.90-53.4]	0.09	0.13	0.00	28	25
<b>Middle Africa</b>	70	[54.2-90.4]	0.08	0.16	0.02	28	30
Angola	16	[2.60-98]	0.10	0.24	0.03	28	28
Central African Republic	0	[0-1.30]	0	0	0	30	25
Cameroon	7	[5.50-8.80]	0.05	0.10	0.01	30	30
DR Congo	37	[29.3-46.7]	0.08	0.15	0.02	27	26
Congo	1	[0.80-1.30]	0.04	0.08	0.01	23	18
Gabon	3	[0.20-44.1]	0.27	0.45	0	19	22
Equatorial Guinea	0	[0-1.30]	0	0	0	28	29
Sao Tome & Principe	0	[0-41.4]	0	0	0	17	25
Chad	6	[4.80-7.60]	0.07	0.18	0.02	28	29
<b>Northern Africa</b>	295	[124.4-699.6]	0.24	0.27	0.03	23	22
Algeria	40	[17.8-90.1]	0.18	0.18	0.02	23	25
Egypt	142	[60.7-332.3]	0.28	0.32	0.04	21	18
Libya	11	[2.10-57.1]	0.32	0.44	0.07	21	24
Morocco	60	[23.7-151.7]	0.32	0.28	0.03	25	29
Sudan	23	[9.80-53.8]	0.10	0.17	0.01	27	25
Tunisia	19	[6.60-54.5]	0.32	0.25	0.03	23	23
<b>Southern Africa</b>	108	[83.9-139.1]	0.31	0.34	0.04	23	25
Botswana	2	[0.40-11.2]	0.16	0.23	0.04	25	30
Lesotho	0	[0-5.60]	0	0	0	26	28
Namibia	2	[0.50-8.40]	0.15	0.27	0.05	29	26
Eswatini	0	[0-14.7]	0	0	0	29	14
South Africa	104	[67.1-161.1]	0.35	0.37	0.05	22	25
<b>Western Africa</b>	205	[102.6-409.6]	0.10	0.20	0.03	28	29
Benin	3	[2.40-3.80]	0.05	0.05	0.00	29	19
Burkina Faso	6	[0.70-53.9]	0.06	0.10	0.01	29	22
Côte d'Ivoire	5	[0.30-73.6]	0.04	0.07	0.01	30	24
Cabo Verde	1	[0.10-14.3]	0.36	0.46	0.08	24	21
Ghana	34	[5.80-197.6]	0.22	0.40	0.06	20	24
Guinea	15	[1.80-123.6]	0.22	0.41	0.07	18	31
Gambia	1	[0.80-1.30]	0.08	0.09	0.01	18	8
Guinea-Bissau	1	[0.10-9]	0.10	0.21	0.05	24	23
Liberia	3	[0.30-26.9]	0.12	0.22	0.04	25	26
Mali	11	[1.20-98.8]	0.11	0.24	0.03	28	30
Mauritania	0	[0-9]	0	0	0	31	28
Niger	8	[6.30-10.1]	0.07	0.19	0.00	23	27
Nigeria	104	[15.5-696.1]	0.10	0.19	0.02	26	28
Senegal	6	[0.70-53.9]	0.07	0.13	0.02	28	30
Sierra Leone	2	[0.70-6]	0.05	0.11	0.02	28	29
Togo	5	[0.90-28.4]	0.12	0.20	0.03	29	16

Data accessed on 27 Jan 2021

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

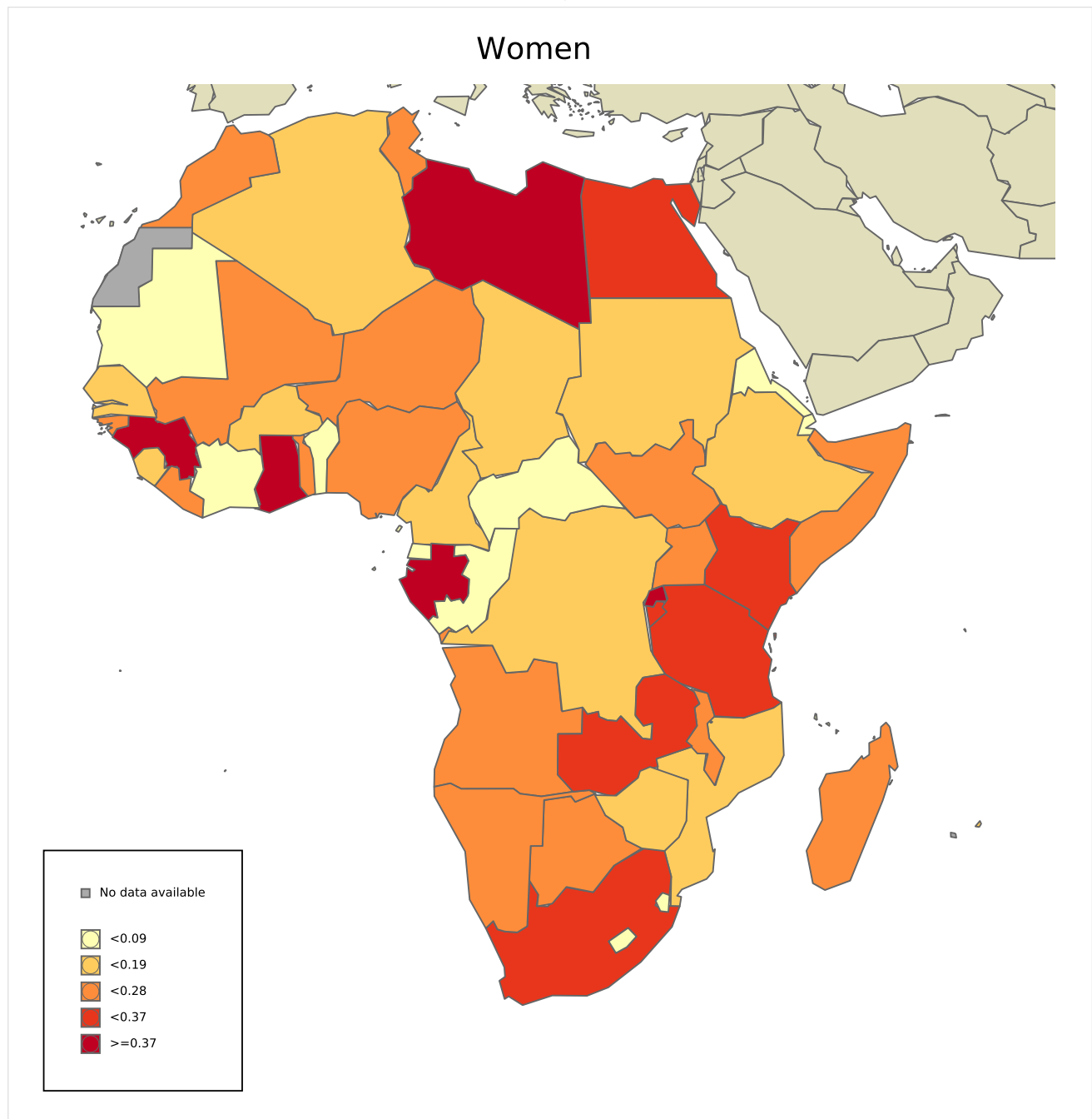
<sup>a</sup> Cumulative risk (mortality) is the probability or risk of individuals dying from the disease during ages 0-74 years. For cancer, it is expressed as the % of new born children who would be expected to die from a particular cancer before the age of 75 if they had the rates of cancer observed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

<sup>b</sup> 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 Africa (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>

<sup>a</sup> 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 Africa and sub regions (estimates for 2020)

Area	N Cases	Uncertainty intervals of new cancer cases [95% UI]	Crude rate <sup>b</sup>	ASR <sup>b</sup>	Cumulative risk (%) ages 0-74 years <sup>a</sup>	Ranking	
						All men	Men 15-44 years
<b>Africa</b>	5,675	[3,883.4-8,293.2]	0.85	1.71	0.20	14	19
<b>Eastern Africa</b>	1,279	[640-2,556.1]	0.58	1.36	0.16	16	19
Burundi	37	[6.80-202.6]	0.63	1.85	0.20	14	23
Comoros	0	[0-5.50]	0	0	0	24	8
Djibouti	4	[0.70-21.9]	0.77	1.15	0.19	14	26
Eritrea	12	[2.20-65.7]	0.68	1.17	0.14	15	26
Ethiopia	314	[152.3-647.6]	0.55	1.04	0.13	14	17
Kenya	221	[123.8-394.7]	0.83	2.11	0.26	15	18
Madagascar	60	[11-328.6]	0.43	0.96	0.10	17	21
Mozambique	38	[11.4-126.5]	0.25	0.63	0.09	17	21
Mauritius	20	[11.3-35.4]	3.19	2.13	0.25	11	25
Malawi	36	[7.10-183.7]	0.38	1.03	0.11	17	21
Rwanda	50	[9.10-273.8]	0.79	1.72	0.16	11	21
Somalia	54	[9.90-295.7]	0.68	1.50	0.20	15	21
South Sudan	42	[7.70-230]	0.75	1.56	0.19	16	22
Tanzania	134	[71.7-250.4]	0.45	1.32	0.12	15	16
Uganda	129	[65.9-252.6]	0.57	1.98	0.24	15	24
Zambia	47	[18.2-121.6]	0.52	1.54	0.16	14	17
Zimbabwe	63	[34-116.7]	0.89	2.48	0.24	13	27
<b>Middle Africa</b>	369	[282-482.9]	0.41	0.99	0.13	16	24
Angola	124	[58.8-261.4]	0.76	2.16	0.27	12	21
Central African Republic	8	[0.90-71.9]	0.33	0.82	0.11	17	27
Cameroon	21	[18.7-23.5]	0.16	0.33	0.04	23	23
DR Congo	159	[17.7-1,428.2]	0.36	0.81	0.10	18	23
Congo	4	[0.40-35.9]	0.15	0.41	0.09	20	24
Gabon	17	[5.50-52.6]	1.50	2.85	0.37	9	13
Equatorial Guinea	5	[0.60-44.9]	0.64	1.70	0.22	14	19
Sao Tome & Principe	1	[0-41.4]	0.91	2.36	0	9	9
Chad	30	[3.30-269.5]	0.37	0.96	0.13	16	23
<b>Northern Africa</b>	2,696	[2,066.8-3,516.7]	2.18	2.77	0.32	11	16
Algeria	509	[397.9-651.1]	2.30	2.50	0.33	11	19
Egypt	919	[707.8-1,193.2]	1.78	2.56	0.26	11	13
Libya	105	[59.2-186.3]	3.03	4.60	0.43	8	21
Morocco	710	[545-924.9]	3.88	3.71	0.46	9	25
Sudan	208	[151.5-285.5]	0.95	1.79	0.19	11	18
Tunisia	240	[187.5-307.2]	4.10	3.48	0.41	9	24
<b>Southern Africa</b>	462	[407.3-524.1]	1.39	1.98	0.25	14	23
Botswana	14	[7.60-25.8]	1.23	2.45	0.26	9	28
Lesotho	8	[1.40-46.5]	0.76	1.33	0.18	12	22
Namibia	19	[11.6-31.2]	1.54	3.42	0.48	10	23
Eswatini	1	[0.20-5.80]	0.18	0.41	0.07	21	21
South Africa	420	[313.8-562.1]	1.44	1.96	0.25	14	22
<b>Western Africa</b>	869	[364.4-2,072]	0.43	0.99	0.12	14	19
Benin	14	[1-206]	0.23	0.55	0.02	19	28
Burkina Faso	31	[3.90-248.8]	0.30	0.75	0.12	15	16
Côte d'Ivoire	81	[40.5-162.2]	0.61	1.46	0.13	9	20
Cabo Verde	6	[1.40-24.9]	2.15	3.46	0.39	11	26
Ghana	80	[20.9-306.8]	0.51	0.84	0.11	13	11
Guinea	25	[8.80-71.1]	0.39	0.99	0.15	10	21
Gambia	3	[0.30-26.9]	0.25	0.58	0.05	12	15
Guinea-Bissau	3	[0.20-38.4]	0.31	0.77	0.11	13	23
Liberia	15	[1.20-192.2]	0.59	1.32	0.14	10	13
Mali	37	[12.6-108.7]	0.36	1.02	0.15	15	22
Mauritania	9	[0.70-115.3]	0.39	0.77	0.11	17	14
Niger	44	[3.40-563.9]	0.36	0.88	0.13	15	14
Nigeria	435	[183.2-1,032.9]	0.42	0.94	0.12	17	20
Senegal	31	[2.40-397.3]	0.38	0.86	0.12	14	17
Sierra Leone	16	[10.5-24.4]	0.40	0.89	0.12	15	19
Togo	39	[21-72.3]	0.95	2.49	0.22	9	23

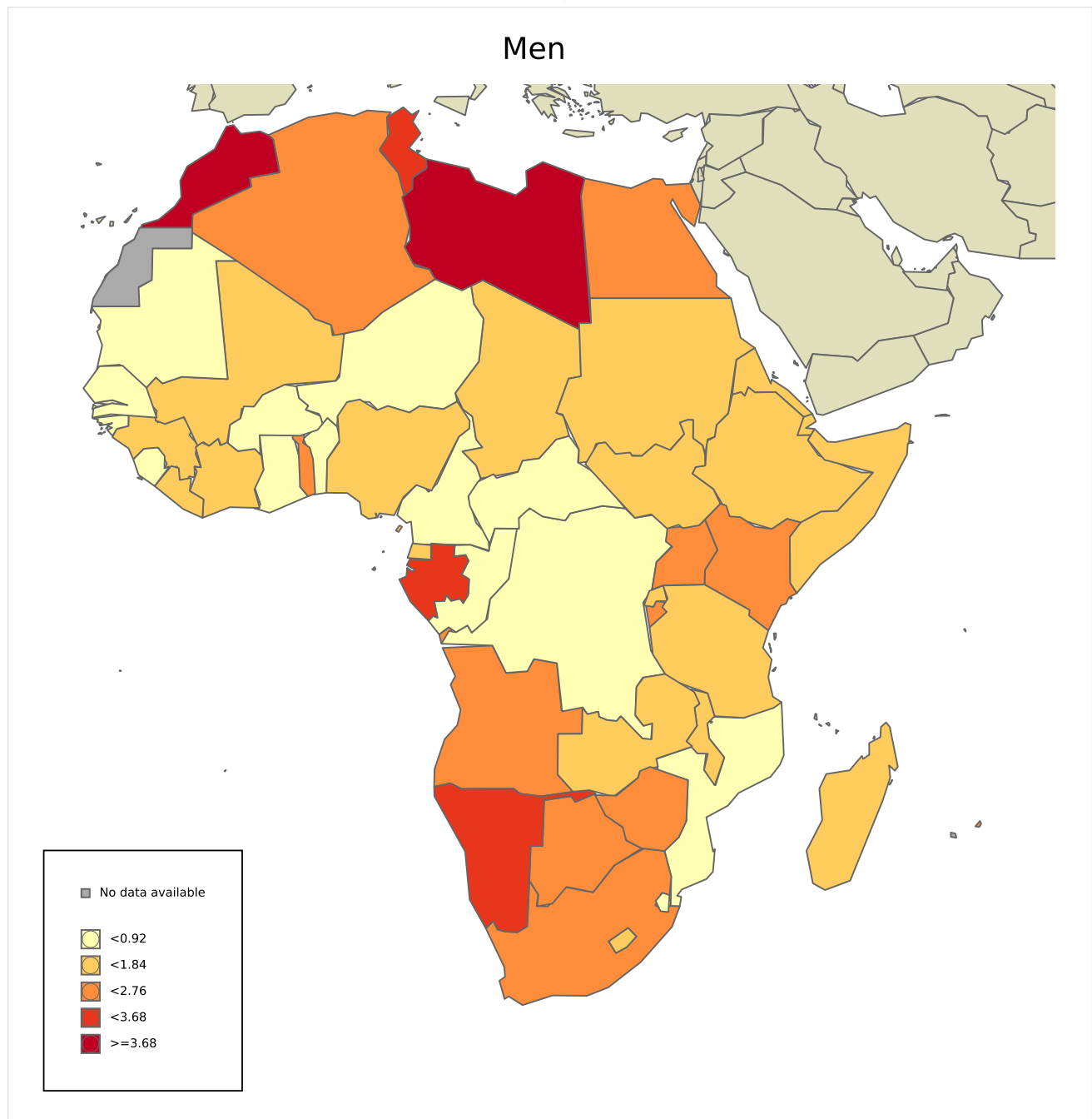
Data accessed on 27 Jan 2021

For more detailed methods of estimation please refer to <http://gco.iarc.fr/today/data-sources-methods><sup>a</sup> 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.<sup>b</sup> 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 Africa (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>

<sup>a</sup> 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).

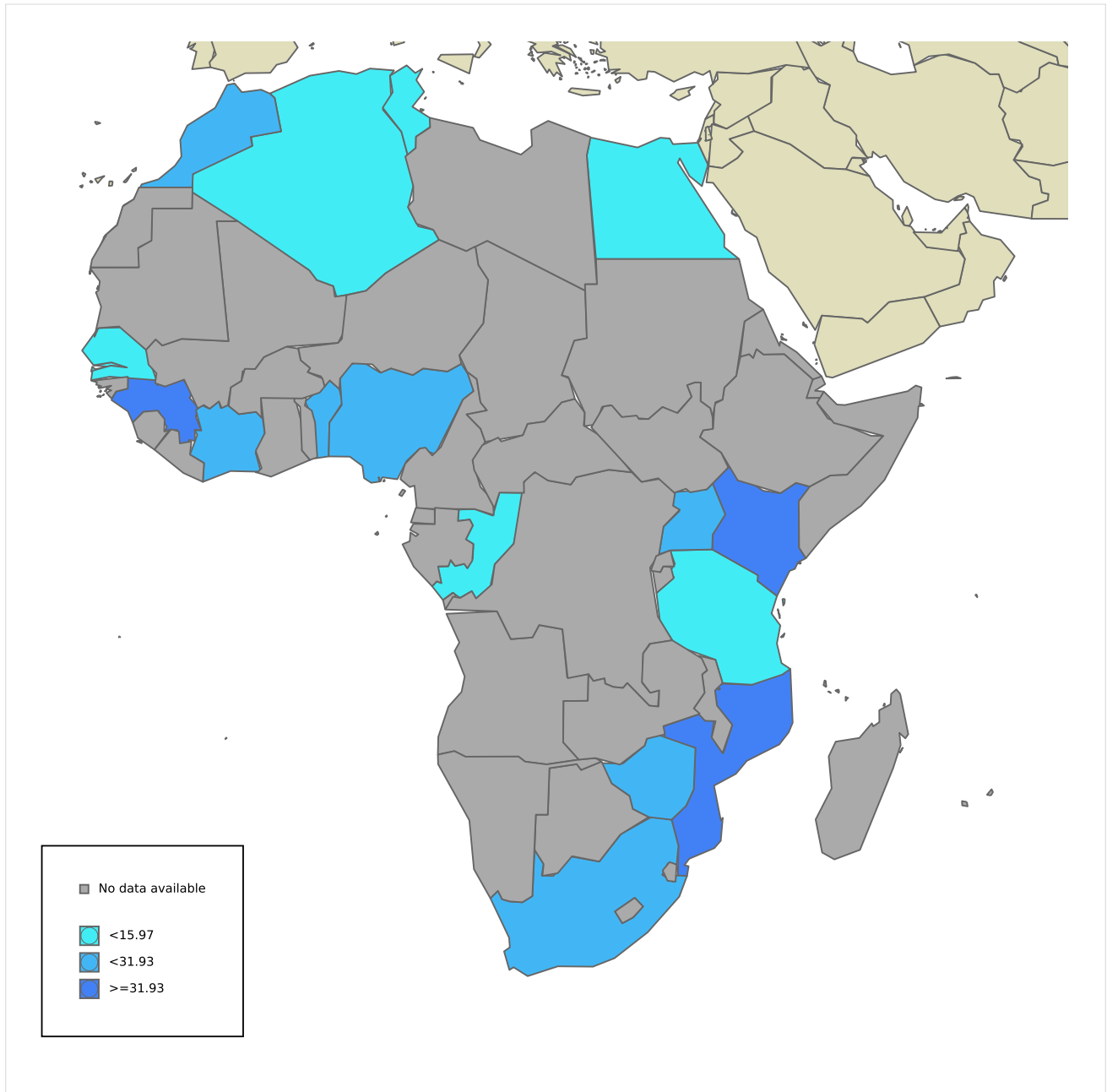
The prevalence of HPV increases with severity of the lesion. HPV causes virtually 100% cervical cancer, and an underestimation of HPV prevalence in cervical cancer is most likely due to the limitations of study methodologies. Worldwide, HPV-16 and 18, the two vaccine-preventable types, contribute to over 70-82% 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 20% of cervical cancers 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 high-grade 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 Africa

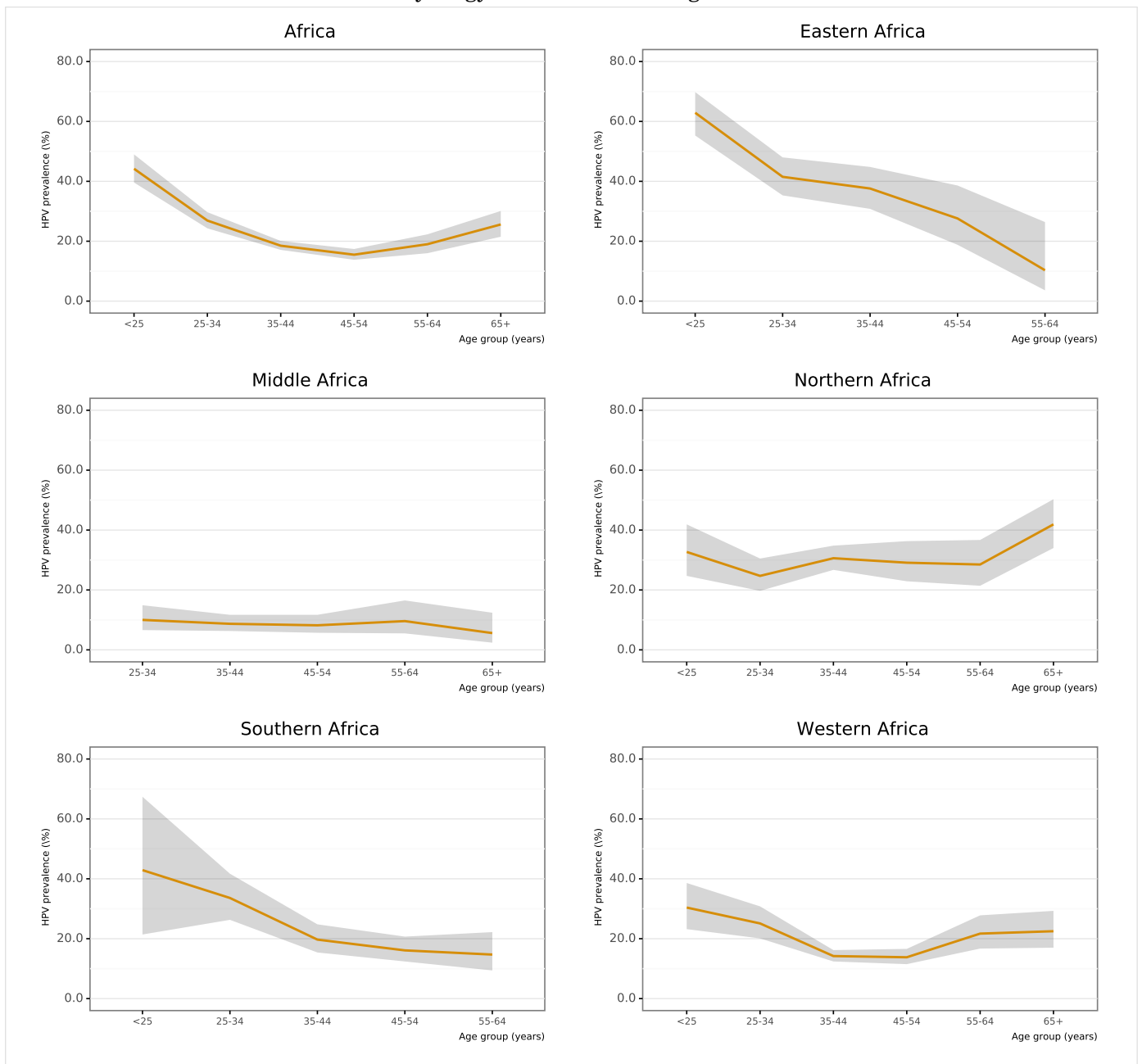


Data updated on 22 May 2023 (data as of 30 Jun 2015)

Data Sources: See references in Section 9 [References](#).



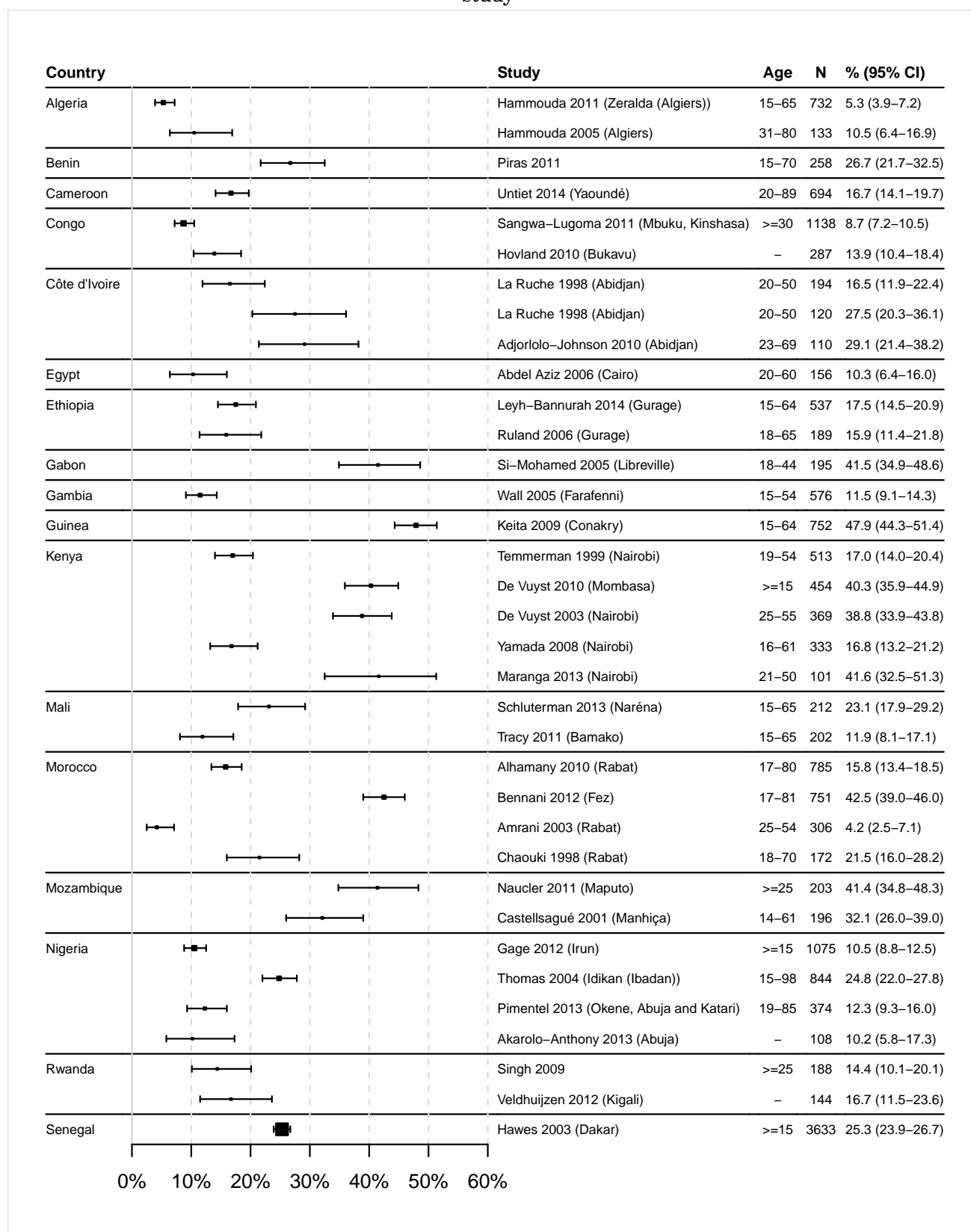
Figure 43: Crude age-specific HPV prevalence (%) and 95% confidence interval in women with normal cervical cytology in Africa and its regions



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 Africa, by country and study

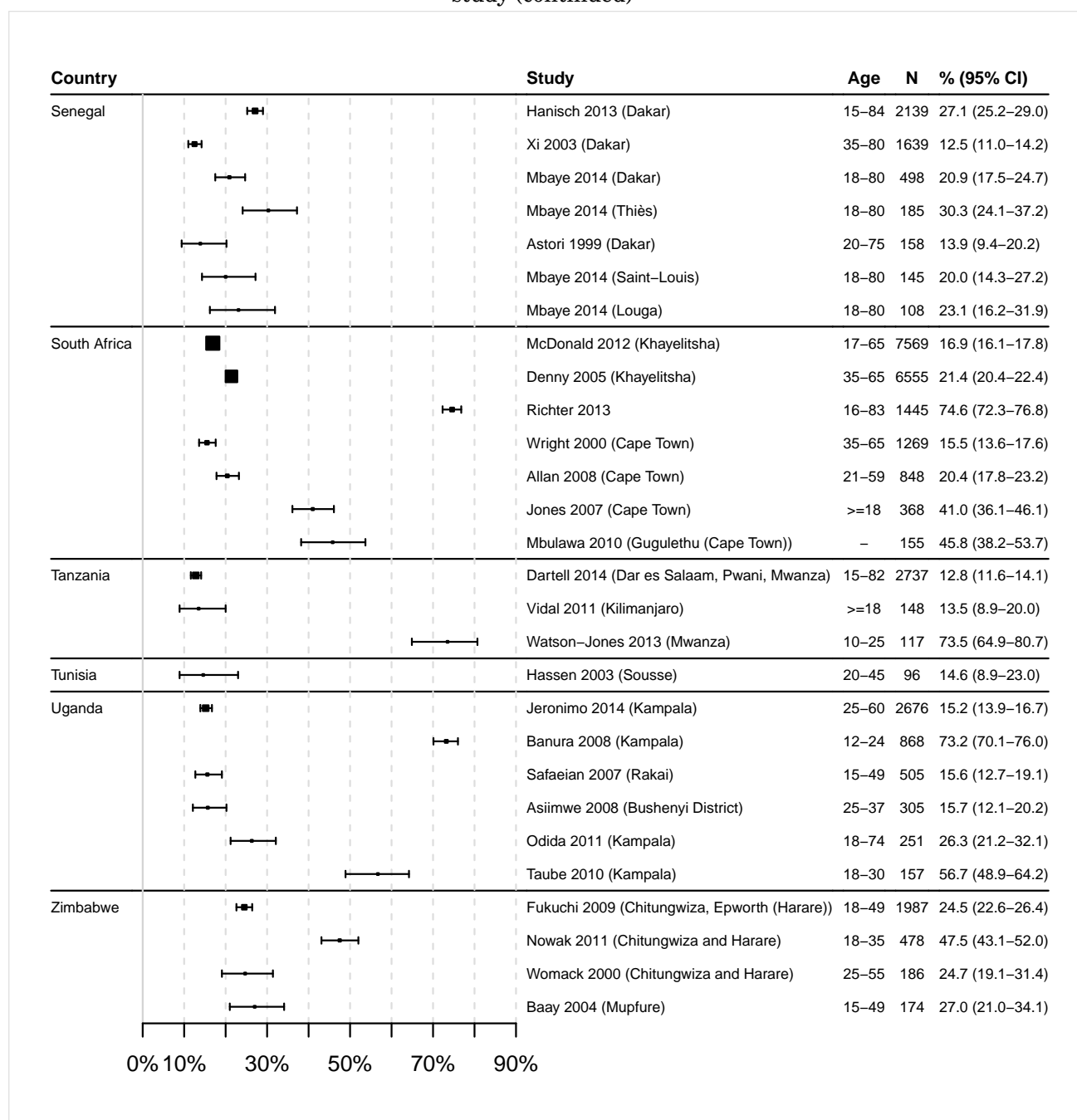


Data updated on 22 May 2023 (data as of 30 Jun 2014)

The samples for HPV testing come from cervical specimens (fresh/fixed biopsies or exfoliated cells)

<sup>a</sup> Number of women testedData Sources: See references in Section 9 [References](#).

Figure 44: Prevalence of HPV among women with normal cervical cytology in Africa, 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)

<sup>a</sup> Number of women testedData 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 Africa

	No. tested <sup>a</sup>	HPV 16/18 Prevalence % (95% CI) <sup>b</sup>
Normal cytology <sup>1,2</sup>	19726	3.8 (3.5-4.1)
Low-grade lesions <sup>3,4</sup>	465	24.9 (21.2-29.1)
High-grade lesions <sup>5,6</sup>	399	38.6 (34.0-43.5)
Cervical cancer <sup>7,8</sup>	3814	67.2 (65.7-68.7)

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

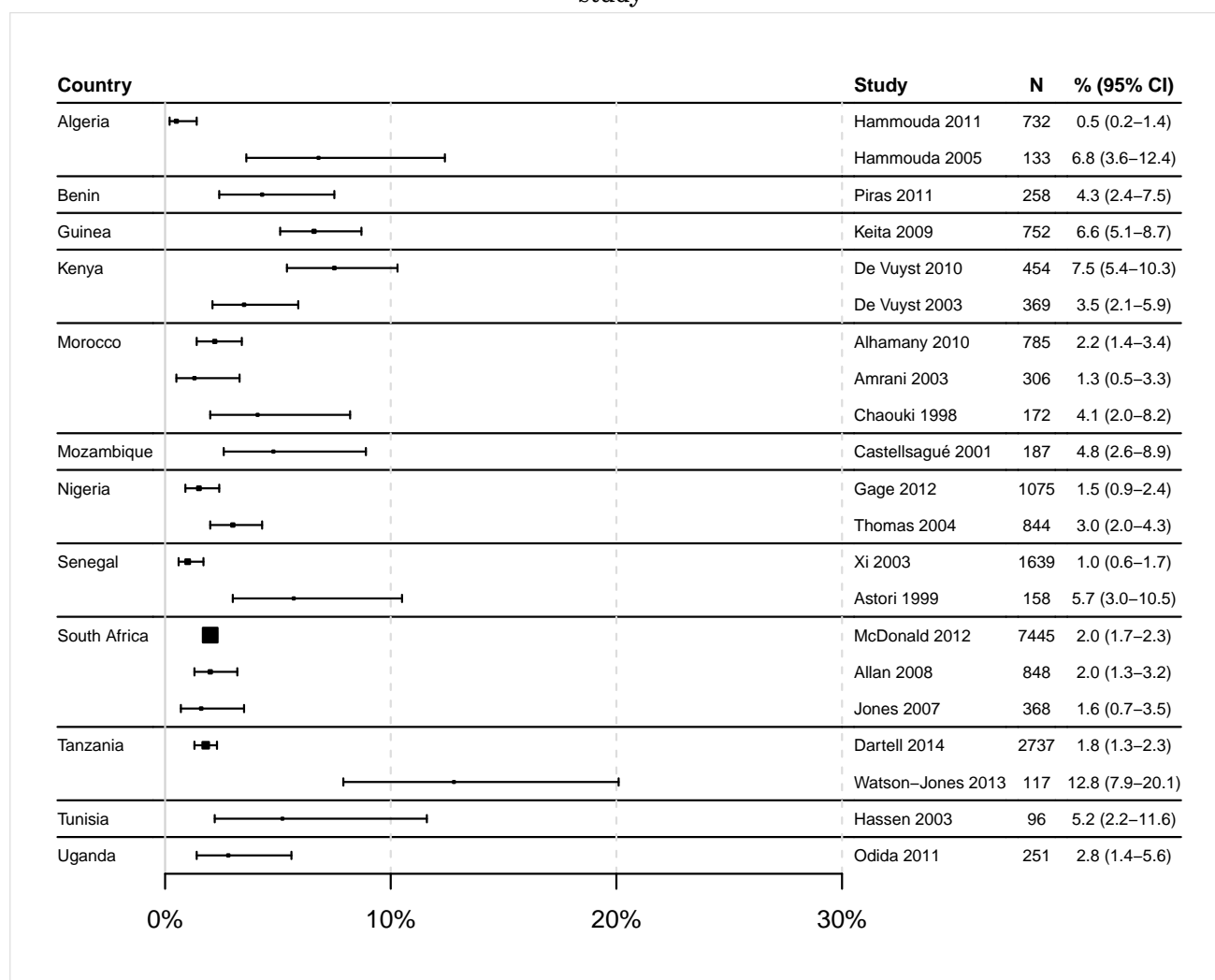
The samples for HPV testing come from cervical specimens (fresh/fixed biopsies or exfoliated cells)

<sup>a</sup> Number of women tested

<sup>b</sup> 95% Confidence Interval

Data Sources: See references in Section 9 [References](#).

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



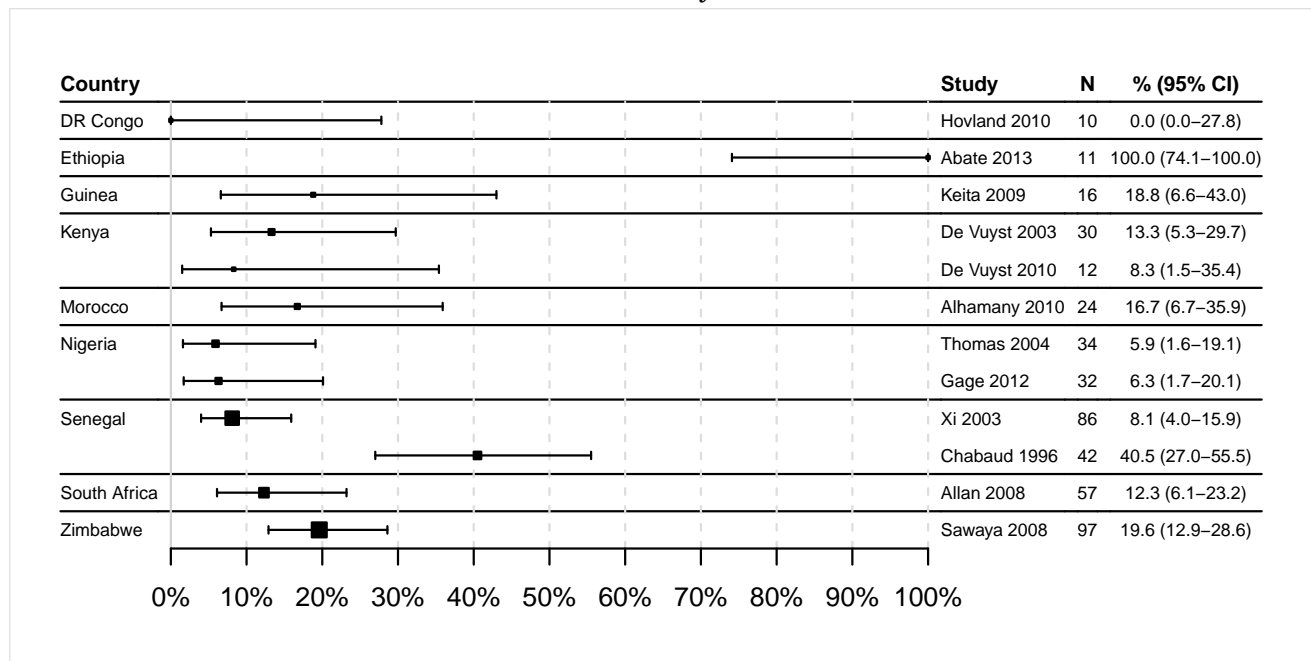
Data updated on 22 May 2023 (data as of 30 Jun 2014)

The samples for HPV testing come from cervical specimens (fresh/fixed biopsies or exfoliated cells)

<sup>a</sup> 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 Africa, by country and study



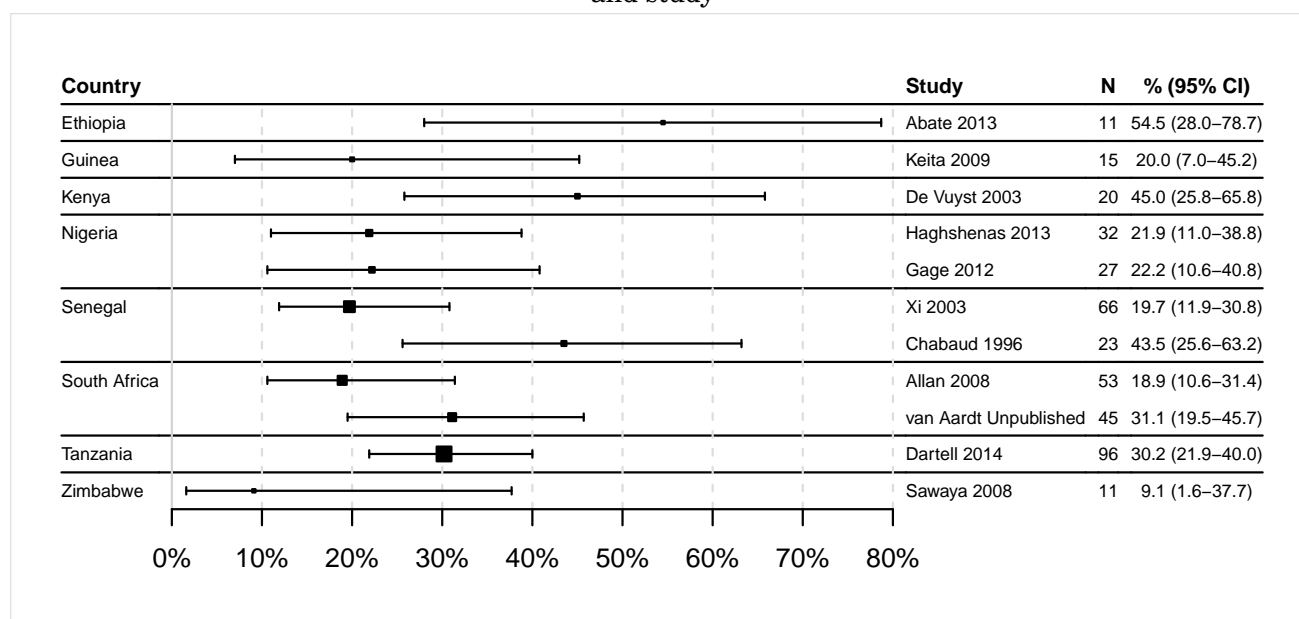
Data updated on 22 May 2023 (data as of 30 Jun 2015)

The samples for HPV testing come from cervical specimens (fresh/fixed biopsies or exfoliated cells)

<sup>a</sup> 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 Africa, by country and study



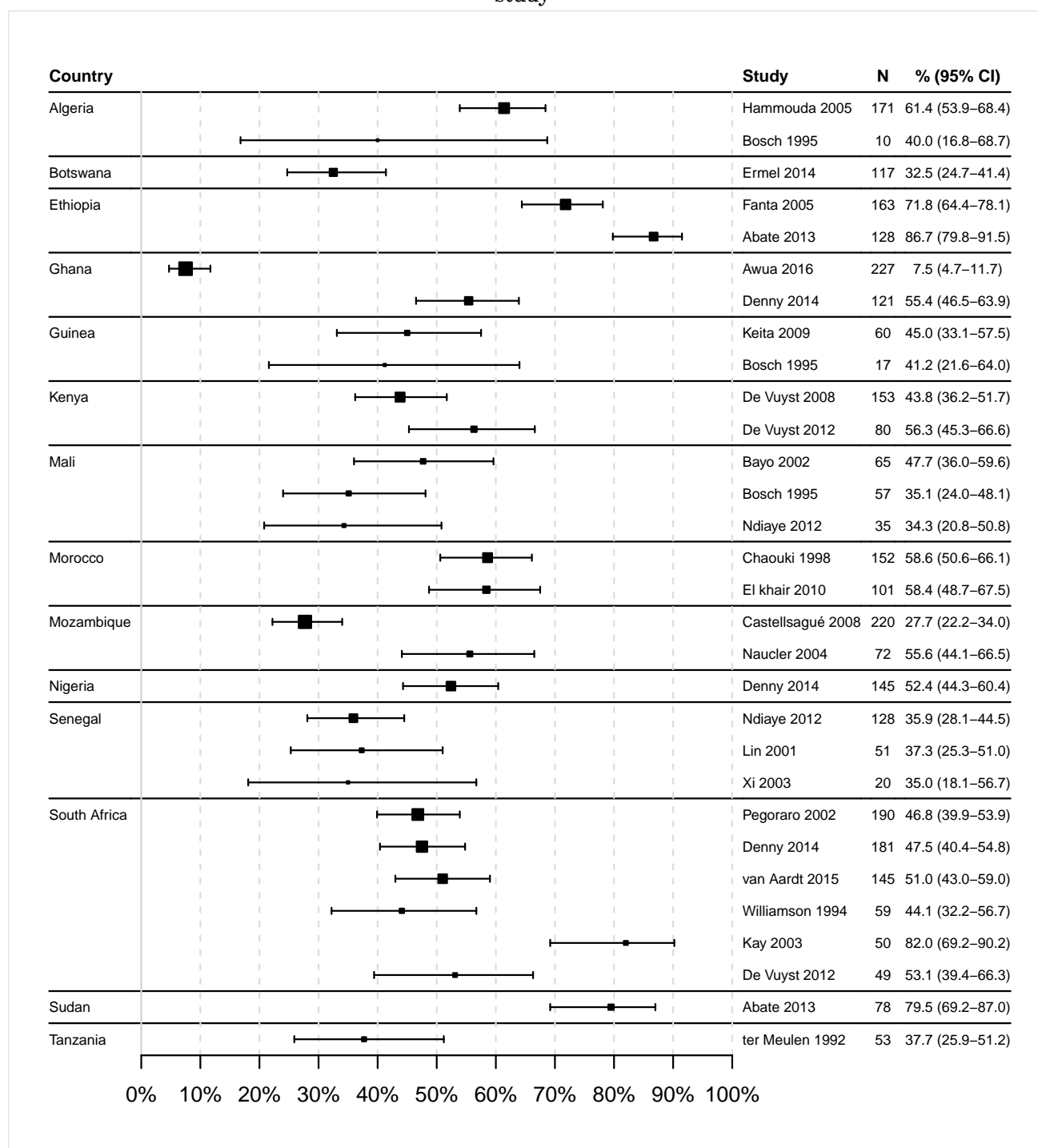
Data updated on 22 May 2023 (data as of 30 Jun 2015)

The samples for HPV testing come from cervical specimens (fresh/fixed biopsies or exfoliated cells)

<sup>a</sup> 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 Africa, by country and study



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

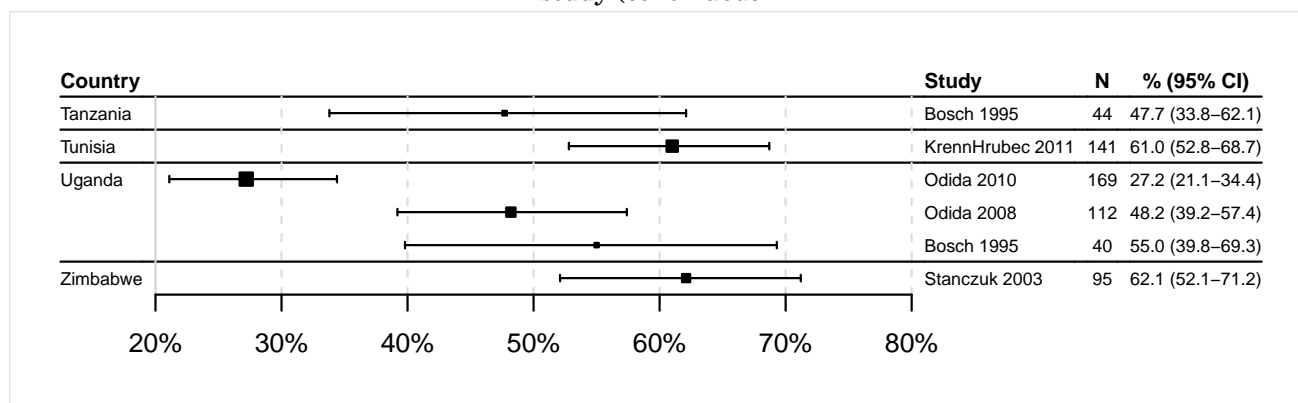
The samples for HPV testing come from cervical specimens (fresh/fixed biopsies or exfoliated cells)

<sup>a</sup> 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 Africa, by country and study (continued)



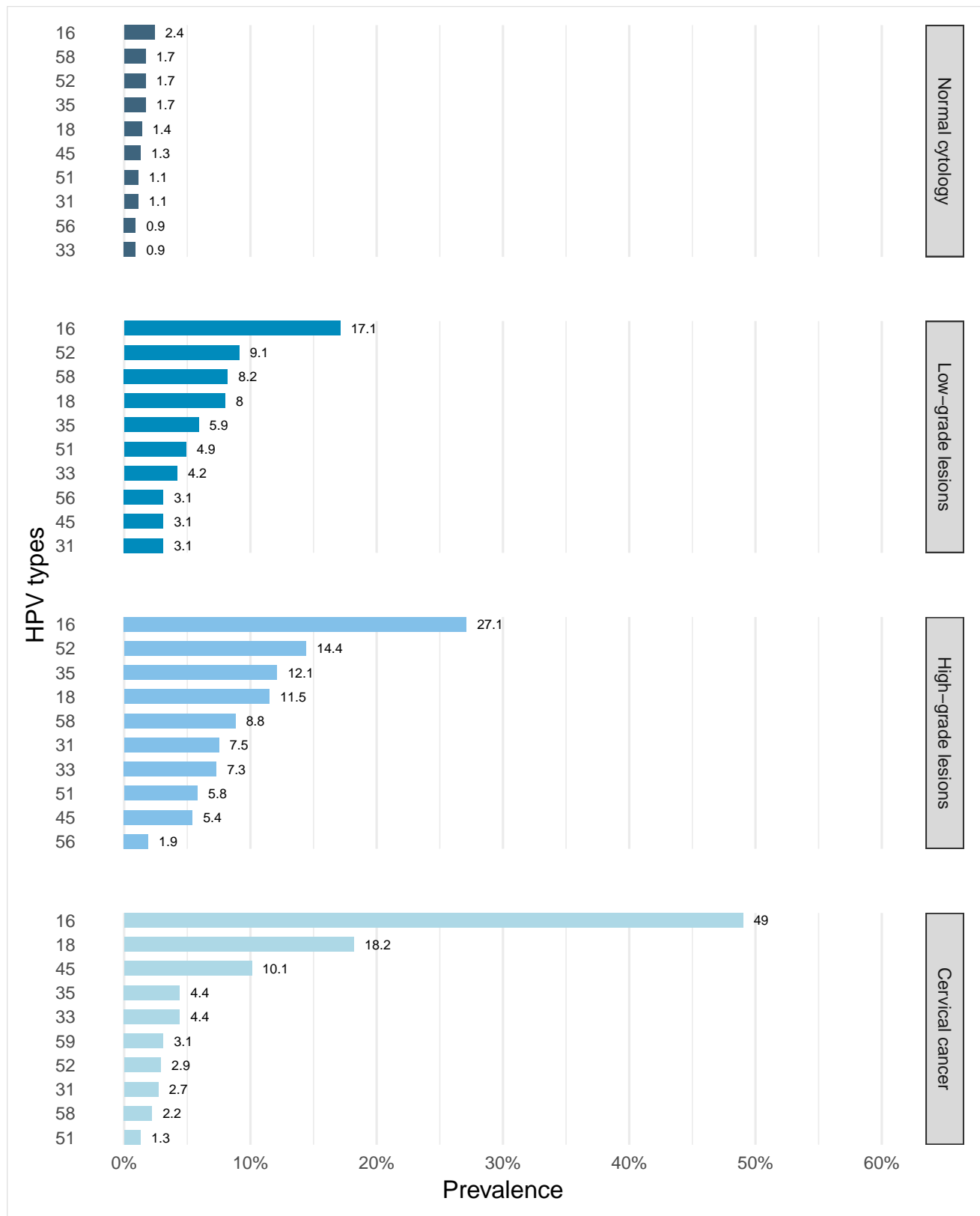
Data updated on 22 May 2023 (data as of 30 Jun 2015)

The samples for HPV testing come from cervical specimens (fresh/fixed biopsies or exfoliated cells)

<sup>a</sup> Number of women tested

Data Sources: See references in Section 9 [References](#).

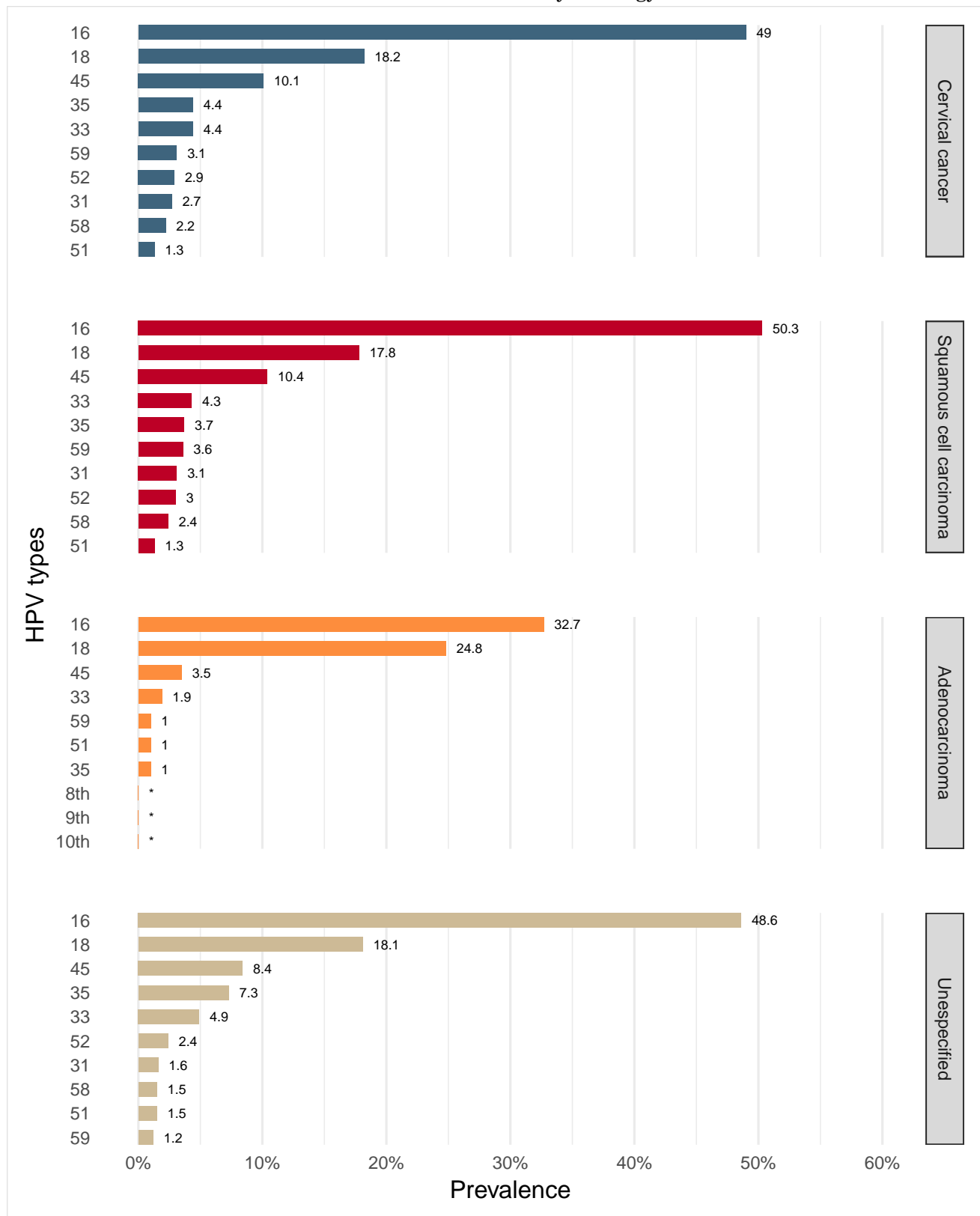
Figure 49: Comparison of the ten most frequent HPV oncogenic types in Africa among women with and without cervical lesions



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 Africa 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 Africa

HPV Type	Normal cytology		Low-grade lesions		High-grade lesions		Cervical cancer	
	No. tested	HPV Prev % (95% CI)	No. tested	HPV Prev % (95% CI)	No. tested	HPV Prev % (95% CI)	No. tested	HPV Prev % (95% CI)
<b>ONCOGENIC HPV TYPES</b>								
<b>High-risk HPV types</b>								
16	19,726	2.4 (2.2-2.6)	451	17.1 (13.9-20.8)	399	27.1 (22.9-31.6)	3,814	49.0 (47.4-50.6)
18	19,726	1.4 (1.2-1.5)	451	8.0 (5.8-10.9)	399	11.5 (8.8-15.0)	3,814	18.2 (17.0-19.5)
31	19,420	1.1 (0.9-1.2)	354	3.1 (1.7-5.5)	388	7.5 (5.3-10.5)	3,624	2.7 (2.2-3.3)
33	19,420	0.9 (0.8-1.0)	451	4.2 (2.7-6.5)	399	7.3 (5.1-10.2)	3,651	4.4 (3.8-5.2)
35	19,324	1.7 (1.5-1.9)	354	5.9 (3.9-8.9)	388	12.1 (9.2-15.7)	3,491	4.4 (3.8-5.2)
39	18,288	0.7 (0.6-0.8)	288	1.0 (0.4-3.0)	365	1.6 (0.8-3.5)	3,103	1.0 (0.7-1.4)
45	19,324	1.3 (1.2-1.5)	354	3.1 (1.7-5.5)	388	5.4 (3.6-8.1)	3,814	10.1 (9.2-11.1)
51	18,288	1.1 (1.0-1.3)	288	4.9 (2.9-8.0)	365	5.8 (3.8-8.6)	3,491	1.3 (1.0-1.7)
52	18,384	1.7 (1.6-1.9)	330	9.1 (6.4-12.7)	388	14.4 (11.3-18.3)	3,601	2.9 (2.4-3.5)
56	18,288	0.9 (0.7-1.0)	288	3.1 (1.7-5.8)	365	1.9 (0.9-3.9)	3,456	1.1 (0.8-1.5)
58	18,384	1.7 (1.5-1.9)	427	8.2 (6.0-11.2)	399	8.8 (6.4-12.0)	3,601	2.2 (1.8-2.8)
59	18,288	0.8 (0.6-0.9)	288	2.1 (1.0-4.5)	365	0.5 (0.2-2.0)	3,349	3.1 (2.6-3.7)
<b>Probable/possible carcinogen</b>								
26	8,409	0.2 (0.1-0.3)	205	1.0 (0.3-3.5)	179	1.1 (0.3-4.0)	1,680	0.4 (0.2-0.8)
30	752	1.1 (0.5-2.1)	26	0.0 (0.0-12.9)	15	0.0 (0.0-20.4)	997	0.5 (0.2-1.2)
34	2,387	0.2 (0.1-0.5)	103	0.0 (0.0-3.6)	91	0.0 (0.0-4.1)	1,642	0.0 (0.0-0.2)
53	9,338	1.3 (1.1-1.6)	256	6.3 (3.9-9.9)	240	2.9 (1.4-5.9)	2,426	0.7 (0.4-1.1)
66	9,510	1.3 (1.1-1.6)	288	2.4 (1.2-4.9)	333	6.6 (4.4-9.8)	3,266	0.9 (0.7-1.3)
67	2,213	1.0 (0.7-1.6)	26	0.0 (0.0-12.9)	60	0.0 (0.0-6.0)	1,259	0.2 (0.0-0.6)
68	17,556	1.0 (0.8-1.1)	330	0.6 (0.2-2.2)	388	2.3 (1.2-4.3)	2,801	0.9 (0.6-1.3)
69	1,364	1.1 (0.7-1.8)	38	0.0 (0.0-9.2)	60	1.7 (0.3-8.9)	1,259	0.5 (0.2-1.0)
70	2,999	0.9 (0.6-1.3)	113	1.8 (0.5-6.2)	91	1.1 (0.2-6.0)	2,668	0.2 (0.1-0.4)
73	9,212	0.4 (0.3-0.6)	215	1.4 (0.5-4.0)	179	2.2 (0.9-5.6)	2,143	0.5 (0.3-0.9)
82	8,409	0.3 (0.2-0.5)	215	3.7 (1.9-7.2)	275	3.6 (2.0-6.6)	1,770	0.3 (0.1-0.7)
85	752	0.0 (0.0-0.5)	-	-	-	-	-	-
97	-	-	-	-	-	-	141	0.0 (0.0-2.7)
<b>LOW RISK HPV TYPES</b>								
6	7,378	1.0 (0.8-1.3)	298	5.7 (3.6-8.9)	233	3.4 (1.7-6.6)	2,681	1.0 (0.7-1.4)
11	6,395	0.6 (0.5-0.9)	298	2.7 (1.4-5.2)	233	1.7 (0.7-4.3)	2,775	0.1 (0.0-0.3)
32	1,484	0.1 (0.0-0.4)	-	-	-	-	189	0.0 (0.0-2.0)
40	6,041	0.3 (0.2-0.5)	11	0.0 (0.0-25.9)	56	1.8 (0.3-9.4)	1,932	0.1 (0.0-0.4)
42	7,031	1.2 (1.0-1.5)	11	0.0 (0.0-25.9)	56	1.8 (0.3-9.4)	2,006	0.3 (0.2-0.7)
43	3,140	0.6 (0.4-1.0)	11	0.0 (0.0-25.9)	11	0.0 (0.0-25.9)	1,877	0.1 (0.0-0.3)
44	6,299	0.8 (0.6-1.0)	11	9.1 (1.6-37.7)	56	7.1 (2.8-17.0)	2,139	0.9 (0.6-1.4)
54	6,041	1.0 (0.8-1.3)	11	0.0 (0.0-25.9)	56	7.1 (2.8-17.0)	1,912	0.2 (0.1-0.5)
55	-	-	-	-	-	-	-	-
57	5,555	0.0 (0.0-0.1)	-	-	-	-	532	0.0 (0.0-0.7)
61	2,630	0.9 (0.6-1.4)	-	-	45	4.4 (1.2-14.8)	1,441	0.4 (0.2-0.9)
62	729	1.8 (1.0-3.0)	-	-	45	8.9 (3.5-20.7)	414	0.5 (0.1-1.7)
64	-	-	-	-	-	-	-	-
71	2,341	0.0 (0.0-0.2)	-	-	-	-	622	0.3 (0.1-1.2)
72	2,513	1.3 (0.9-1.8)	-	-	45	2.2 (0.4-11.6)	774	0.1 (0.0-0.7)
74	981	0.9 (0.5-1.7)	11	0.0 (0.0-25.9)	11	0.0 (0.0-25.9)	1,138	0.3 (0.1-0.8)
81	3,362	1.9 (1.5-2.5)	-	-	45	6.7 (2.3-17.9)	774	0.3 (0.1-0.9)
83	6,404	1.1 (0.9-1.4)	-	-	45	2.2 (0.4-11.6)	774	0.4 (0.1-1.1)
84	5,500	0.7 (0.5-0.9)	-	-	-	-	642	0.9 (0.4-2.0)
86	752	0.0 (0.0-0.5)	-	-	-	-	-	-
87	-	-	-	-	-	-	-	-
89	2,513	0.3 (0.1-0.6)	-	-	-	-	383	0.0 (0.0-1.0)
90	1,484	0.2 (0.1-0.6)	-	-	-	-	60	0.0 (0.0-6.0)
91	-	-	-	-	-	-	667	0.0 (0.0-0.6)

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)  
 Data Sources: See references in Section 9 [References](#).

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

HPV Type	Any Histology		Squamous cell carcinoma		Adenocarcinoma		Unspecified	
	No. tested	HPV Prev % (95% CI)	No. tested	HPV Prev % (95% CI)	No. tested	HPV Prev % (95% CI)	No. tested	HPV Prev % (95% CI)
<b>ONCOGENIC HPV TYPES</b>								
<b>High-risk HPV types</b>								
16	3,814	49.0 (47.4-50.6)	3,051	50.3 (48.6-52.1)	113	32.7 (24.8-41.8)	810	48.6 (45.2-52.1)
18	3,814	18.2 (17.0-19.5)	3,051	17.8 (16.5-19.2)	113	24.8 (17.7-33.5)	810	18.1 (15.6-21.0)
31	3,624	2.7 (2.2-3.3)	2,861	3.1 (2.6-3.9)	113	0.0 (0.0-3.3)	810	1.6 (0.9-2.7)
33	3,651	4.4 (3.8-5.2)	2,898	4.3 (3.7-5.2)	103	1.9 (0.5-6.8)	810	4.9 (3.6-6.7)
35	3,491	4.4 (3.8-5.2)	2,738	3.7 (3.0-4.5)	103	1.0 (0.2-5.3)	810	7.3 (5.7-9.3)
39	3,103	1.0 (0.7-1.4)	2,453	1.1 (0.8-1.6)	103	0.0 (0.0-3.6)	707	1.0 (0.5-2.0)
45	3,814	10.1 (9.2-11.1)	3,051	10.4 (9.4-11.6)	113	3.5 (1.4-8.7)	810	8.4 (6.7-10.5)
51	3,491	1.3 (1.0-1.7)	2,738	1.3 (0.9-1.8)	103	1.0 (0.2-5.3)	810	1.5 (0.8-2.6)
52	3,601	2.9 (2.4-3.5)	2,891	3.0 (2.4-3.7)	113	0.0 (0.0-3.3)	757	2.4 (1.5-3.7)
56	3,456	1.1 (0.8-1.5)	2,796	1.2 (0.9-1.7)	113	0.0 (0.0-3.3)	707	1.0 (0.5-2.0)
58	3,601	2.2 (1.8-2.8)	2,891	2.4 (1.9-3.0)	113	0.0 (0.0-3.3)	757	1.5 (0.8-2.6)
59	3,349	3.1 (2.6-3.7)	2,649	3.6 (2.9-4.4)	103	1.0 (0.2-5.3)	757	1.2 (0.6-2.2)
<b>Probable/possible carcinogen</b>								
26	1,680	0.4 (0.2-0.8)	-	-	-	-	-	-
30	997	0.5 (0.2-1.2)	939	0.4 (0.2-1.1)	58	1.7 (0.3-9.1)	-	-
34	1,642	0.0 (0.0-0.2)	1,539	0.0 (0.0-0.2)	103	0.0 (0.0-3.6)	-	-
53	2,426	0.7 (0.4-1.1)	-	-	-	-	-	-
66	3,266	0.9 (0.7-1.3)	2,606	1.2 (0.8-1.7)	113	0.0 (0.0-3.3)	707	0.7 (0.3-1.6)
67	1,259	0.2 (0.0-0.6)	1,084	0.1 (0.0-0.5)	58	0.0 (0.0-6.2)	117	0.9 (0.2-4.7)
68	2,801	0.9 (0.6-1.3)	2,453	0.8 (0.5-1.3)	103	0.0 (0.0-3.6)	405	1.0 (0.4-2.5)
69	1,259	0.5 (0.2-1.0)	-	-	-	-	-	-
70	2,668	0.2 (0.1-0.4)	-	-	-	-	-	-
73	2,143	0.5 (0.3-0.9)	-	-	-	-	-	-
82	1,770	0.3 (0.1-0.7)	1,550	0.2 (0.1-0.6)	83	0.0 (0.0-4.4)	137	1.5 (0.4-5.2)
85	-	-	-	-	-	-	-	-
97	141	0.0 (0.0-2.7)	141	0.0 (0.0-2.7)	-	-	-	-
<b>LOW RISK HPV TYPES</b>								
6	2,681	1.0 (0.7-1.4)	-	-	-	-	-	-
11	2,775	0.1 (0.0-0.3)	-	-	-	-	-	-
32	189	0.0 (0.0-2.0)	-	-	-	-	-	-
40	1,932	0.1 (0.0-0.4)	-	-	-	-	-	-
42	2,006	0.3 (0.2-0.7)	1,926	0.4 (0.2-0.7)	103	0.0 (0.0-3.6)	137	0.0 (0.0-2.7)
43	1,877	0.1 (0.0-0.3)	-	-	-	-	-	-
44	2,139	0.9 (0.6-1.4)	2,079	0.9 (0.6-1.4)	103	0.0 (0.0-3.6)	117	0.9 (0.2-4.7)
54	1,912	0.2 (0.1-0.5)	-	-	-	-	-	-
55	-	-	-	-	-	-	-	-
57	532	0.0 (0.0-0.7)	-	-	-	-	-	-
61	1,441	0.4 (0.2-0.9)	-	-	-	-	-	-
62	414	0.5 (0.1-1.7)	-	-	-	-	-	-
64	-	-	-	-	-	-	-	-
71	622	0.3 (0.1-1.2)	-	-	-	-	-	-
72	774	0.1 (0.0-0.7)	-	-	-	-	-	-
74	1,138	0.3 (0.1-0.8)	-	-	-	-	-	-
81	774	0.3 (0.1-0.9)	-	-	-	-	-	-
83	774	0.4 (0.1-1.1)	-	-	-	-	-	-
84	642	0.9 (0.4-2.0)	-	-	-	-	-	-
86	-	-	-	-	-	-	-	-
87	-	-	-	-	-	-	-	-
89	383	0.0 (0.0-1.0)	-	-	-	-	-	-
90	60	0.0 (0.0-6.0)	-	-	-	-	-	-
91	667	0.0 (0.0-0.6)	-	-	-	-	-	-

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)

<sup>a</sup> Number of women tested<sup>b</sup> 95% Confidence IntervalData 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 Africa

Study	HPV detection method and targeted HPV types	No. Tested <sup>a</sup>	HPV Prevalence		Prevalence of 5 most frequent HPVs, HPV type (%)
			%	(95% CI) <sup>b</sup>	
-	-	-	-	-	-

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

<sup>a</sup> Number of women tested

<sup>b</sup> 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 Africa are presented.

Table 32: Studies on HPV prevalence among anal cancer cases in Africa (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) <sup>a</sup>	
Senegal	Alemanly 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)	21	61.9	(40.9-79.2)	HPV 16 (28.6), HPV 18 (9.5), HPV 6 (9.5), HPV 31 (4.8), HPV 35 (4.8)
Nigeria	Alemanly 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)	21	61.9	(40.9-79.2)	HPV 16 (28.6), HPV 18 (9.5), HPV 6 (9.5), HPV 31 (4.8), HPV 35 (4.8)
Mali	Alemanly 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)	21	61.9	(40.9-79.2)	HPV 16 (28.6), HPV 18 (9.5), HPV 6 (9.5), HPV 31 (4.8), HPV 35 (4.8)

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;

<sup>a</sup> 95% Confidence Interval

Data Sources: See references in Section 9 [References](#).

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

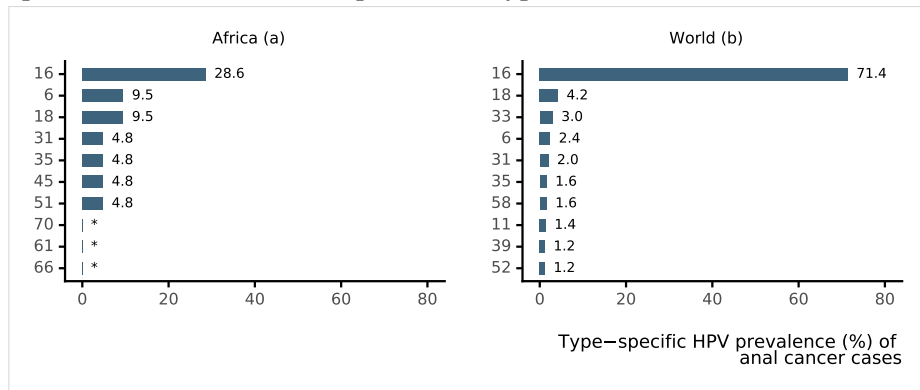
Country	Study	HPV detection method and targeted HPV types	No. Tested	HPV Prevalence		Prevalence of 5 most frequent HPVs, HPV type (%)
				%	(95% CI) <sup>a</sup>	
-	No data available	-	-	-	-	-

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  
<sup>a</sup> 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 Africa and the World



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

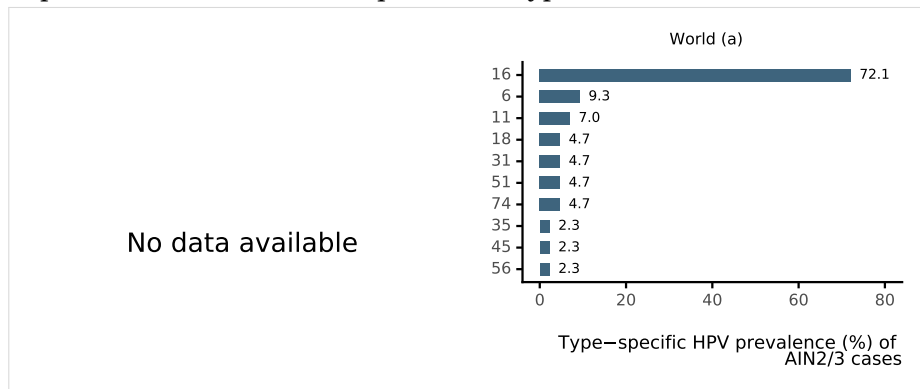
<sup>a</sup> Includes cases from Mali, Nigeria and Senegal

<sup>b</sup> 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)

\* No data available. No more types than shown were tested or were positive.

Data Sources: See references in Section 9 [References](#).

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

<sup>a</sup> 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 Africa are presented.

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

Country	Study	HPV detection method and targeted HPV types	No. Tested	HPV Prevalence		
				%	(95% CI) <sup>a</sup>	Prevalence of 5 most frequent HPV types, HPV type (%)
Senegal	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)	24	70.8	(50.8-85.1)	HPV 16 (58.3), HPV 18 (4.2), HPV 45 (4.2), HPV 52 (4.2)
Nigeria	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)	24	70.8	(50.8-85.1)	HPV 16 (58.3), HPV 18 (4.2), HPV 45 (4.2), HPV 52 (4.2)
Mozambique	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)	24	70.8	(50.8-85.1)	HPV 16 (58.3), HPV 18 (4.2), HPV 45 (4.2), HPV 52 (4.2)
Mali	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)	24	70.8	(50.8-85.1)	HPV 16 (58.3), HPV 18 (4.2), HPV 45 (4.2), HPV 52 (4.2)

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;

<sup>a</sup> 95% Confidence Interval

Data Sources: See references in Section 9 [References](#).

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

Country	Study	HPV detection method and targeted HPV types	No. Tested	HPV Prevalence		
				%	(95% CI) <sup>a</sup>	Prevalence of 5 most frequent HPV types, HPV type (%)
-	No data available	-	-	-	-	-

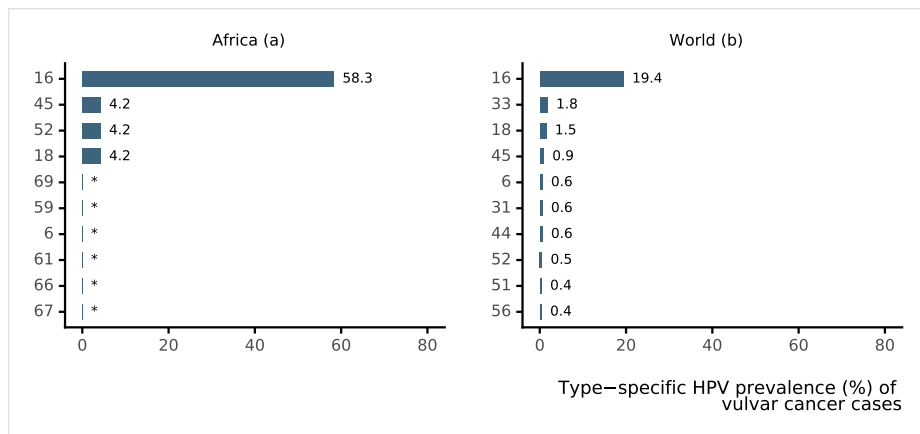
Data updated on 22 May 2023 (data as of 30 Jun 2015)

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; VIN 2/3: Vulvar intraepithelial neoplasia of grade 2/3

<sup>a</sup> 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 Africa and the World



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

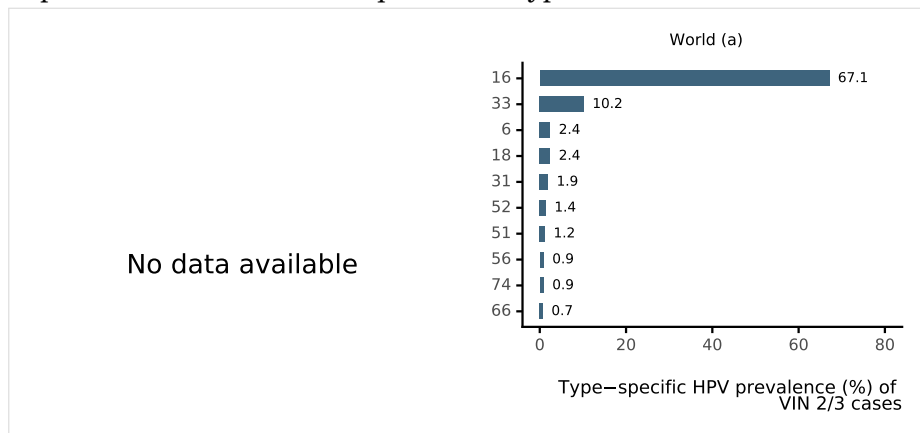
<sup>a</sup> Includes cases from Mali, Mozambique, Nigeria, and Senegal.

<sup>b</sup> 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)

\* No data available. No more types than shown were tested or were positive.

Data Sources: See references in Section 9 [References](#).

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

<sup>a</sup> 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 Africa are presented.

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

Country	Study	HPV detection method and targeted HPV types	No. Tested	HPV Prevalence		Prevalence of 5 most frequent HPV types, HPV type (%)
				%	(95% CI) <sup>a</sup>	
Nigeria	Alemanly 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)	19	68.4	(46.0-84.6)	HPV 16 (31.6), HPV 45 (10.5), HPV 18 (5.3), HPV 31 (5.3), HPV 33 (5.3)
Mozambique	Alemanly 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)	19	68.4	(46.0-84.6)	HPV 16 (31.6), HPV 45 (10.5), HPV 18 (5.3), HPV 31 (5.3), HPV 33 (5.3)

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;

<sup>a</sup> 95% Confidence Interval

Data Sources: See references in Section 9 [References](#).

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

Country	Study	HPV detection method and targeted HPV types	No. Tested	HPV Prevalence		Prevalence of 5 most frequent HPV types, HPV type (%)
				%	(95% CI) <sup>a</sup>	
-	No data available	-	-	-	-	-

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

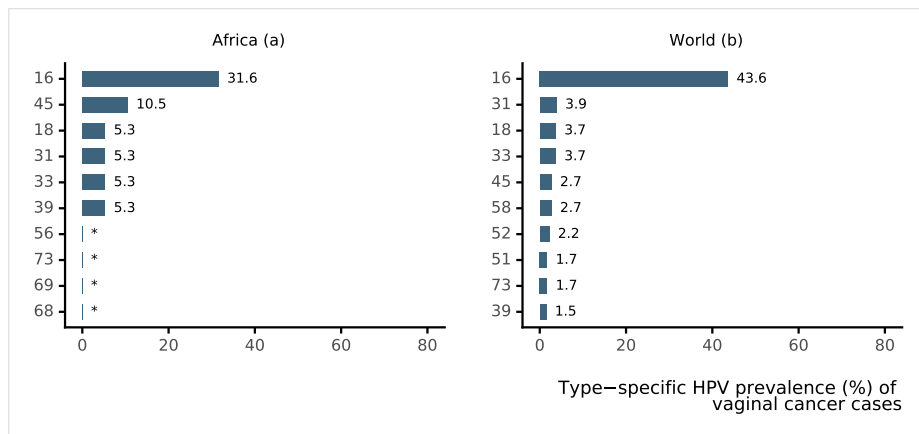
DBH: Dot Blot Hybridization; EIA: Enzyme ImmunoAssay; HC2: Hybrid Capture 2; ISH: In Situ Hybridization; LBA: Line-Blot Assay; LiPA: Line Probe Assay; PCR: Polymerase Chain Reaction; RFLP: Restriction Fragment Length Polymorphism; RLBH: Reverse Line Blot Hybridization; RT-PCR: Real Time Polymerase Chain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

VAIN 2/3: Vaginal intraepithelial neoplasia of grade 2/3

<sup>a</sup> 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 Africa and the World



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

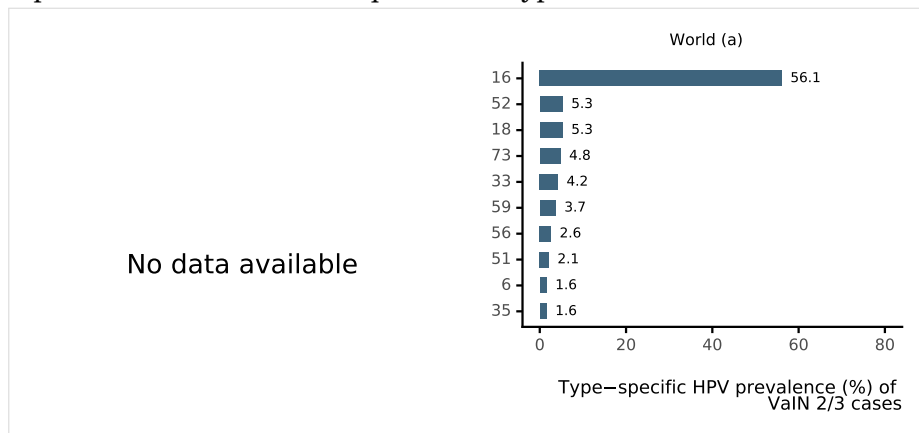
<sup>a</sup> Includes cases from Mozambique, Nigeria.

<sup>b</sup> 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)

\* No data available. No more types than shown were tested or were positive.

Data Sources: See references in Section 9 [References](#).

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

<sup>a</sup> 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 Africa are presented.

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

Country	Study	HPV detection method and targeted HPV types	No. Tested	HPV Prevalence		Prevalence of 5 most frequent HPVs, HPV type (%)
				%	(95% CI) <sup>a</sup>	
South Africa	Lebelo 2014	PCR L1-Consensus primer, PCR-E6, PCR-E7, qPCR (HPV 6, 11, 16, 18, 31, 33, 35, 39, 45, 51, 52, 53, 56, 58, 59, 66, 67, 68)	40	87.5	(73.9-94.5)	HPV 16 (55.0), HPV 11 (30.0), HPV 18 (10.0), HPV 45 (5.0), HPV 33 (2.5)
Uganda	Tornesello 2008	PCR-GP5+/6+, PCR-MY09/11, PCR-L1C1/C2, PCR-E6, PCR-E7, Sequencing (HPV 6, 16, 18, 33, 35)	17	64.7	(41.3-82.7)	HPV 16 (58.8), HPV 18 (11.8), HPV 6 (11.8), HPV 33 (5.9)

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;

<sup>a</sup> 95% Confidence Interval

Data Sources: See references in Section 9 [References](#).

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

Country	Study	HPV detection method and targeted HPV types	No. Tested	HPV Prevalence		Prevalence of 5 most frequent HPVs, HPV type (%)
				%	(95% CI) <sup>a</sup>	
-	No data available	-	-	-	-	-

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

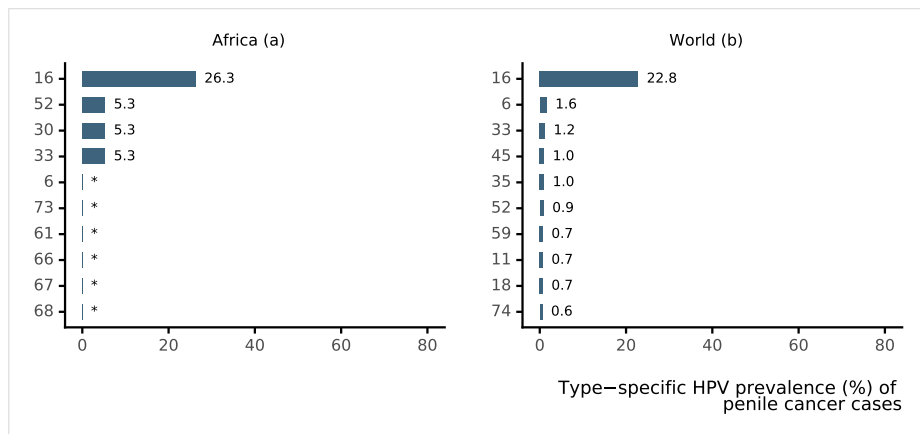
PeIN 2/3: Penile intraepithelial neoplasia of grade 2/3

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;

<sup>a</sup> 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 Africa and the World



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

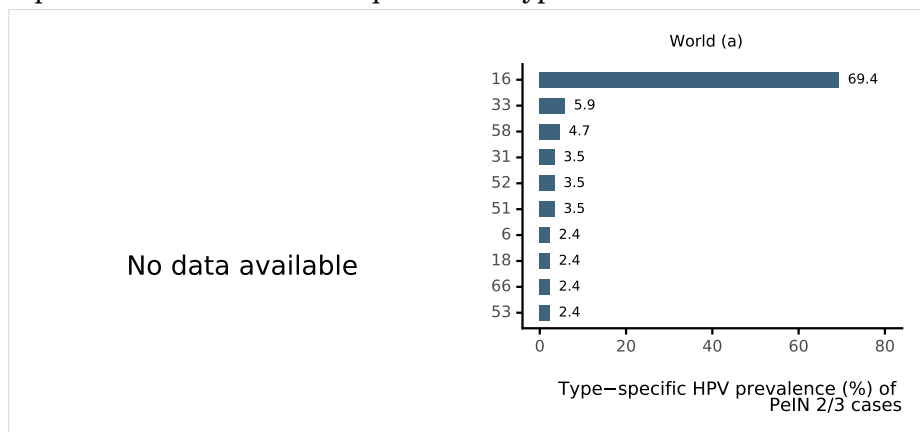
<sup>a</sup> Includes cases from Mozambique, Nigeria, Senegal

<sup>b</sup> 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.

\* No data available. No more types than shown were tested or were positive.

Data Sources: See references in Section 9 [References](#).

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

<sup>a</sup> 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 sub-groups 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 Africa 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 Africa

Country	Study	Anatomic sites samples	HPV detection method	Population	Age (years)	No. Tested	HPV Prevalence	
							%	(95% CI) <sup>a</sup>
Kenya	Ng'ayo 2008	Glans, corona sulcus, shaft of the penis, scrotum and the perianal region	PCR-PGMY09/MY1.1 and HMB01	Men working in the fishing industry	18-63	250	57.6	(51.2-63.8)
	Smith 2010	Shaft, glans, coronal sulcus, and inner and external foreskin tissue	PCR-GP5+/6+	Men screened to participate in an RCT of male circumcision	17-28	2705	51.1	(49.2-53.0)
Rwanda	Veldhuijzen 2012	Shaft, scrotum, glans/sulcus corona, and foreskin in uncircumcised men	PCR-Roche Linear Array HPV Genotyping test (HR-HPV types)	Men participating in a case-control study assessing risk factors for infertility	Median 31 (IQR=27-38)	166	26.5	(20.0-33.9)
	Veldhuijzen 2012	Shaft, scrotum, glans/sulcus corona, and foreskin in uncircumcised men	PCR-Roche Linear Array HPV Genotyping test (LR-HPV types)	Men participating in a case-control study assessing risk factors for infertility	Median 31 (IQR=27-38)	166	31.3	(24.4-39.0)

Continued on next page

Table 40 – continued from previous page

Country	Study	Anatomic sites samples	HPV detection method	Population	Age (years)	No. Tested	HPV Prevalence	
							%	(95% CI) <sup>a</sup>
South Africa	Auvert 2010	Urethra	PCR-Roche Amplicor HPV test	Men recruited from the general population for an RCT of male circumcision	IQR=19-22	1683	19.1	(17.2-21.0)
	Mbulawa 2010	Shaft and glans, and the foreskin in uncircumcised men	PCR-Roche Linear Array HPV Genotyping test	HIV- heterosexual men recruited for investigations of genital HPV transmission	18-66	313	50.8	(45.1-56.5)
Tanzania	Olesen 2013	Glans, preputial cavity (uncircumcised men), coronal sulcus (circumcised men), shaft, corpus	PCR-LIPA and HC2	Men from the general population	Mean 34.2	1813	20.5	(18.7-22.5)
Uganda	Tobian 2013	Coronal sulcus and glans	PCR-PGMY09/11	HIV- heterosexual men	15-49	978	60.9	(57.8-64.0)

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

<sup>a</sup> 95% Confidence Interval

Data Sources: See references in Section 9 [References](#).

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

Country	Study	Anatomic sites samples	HPV detection method	Population	Age (years)	No. Tested	HPV Prevalence	
							%	(95% CI) <sup>a</sup>
South Africa	Firnhaber 2011	Prepuce, penile shaft and genital wart areas of the penis	PCR-Roche Linear Array HPV Genotyping test	Men with penile warts attending a public sector antiretroviral treatment clinic	Mean 36.0	73	100.0	(95.1-100.0)
	Vogt 2013	Coronal sulcus, glans and shaft	PCR-PGMY09/11	Heterosexual men attending an HIV testing centre	IQR=29-37	34	58.8	(40.7-75.4)
	Mbulawa 2010	Shaft and glans, and the foreskin in uncircumcised men	PCR-Roche Linear Array HPV Genotyping test	HIV+ heterosexual men recruited for investigations of genital HPV transmission	19-67	158	77.2	(69.9-83.5)

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	
							%	(95% CI) <sup>a</sup>
	Müller 2010	Glans penis, coronal sulcus, penile shaft and anogenital warts	PCR-Roche Linear Array HPV Genotyping test	Men with anogenital wart attending a sexual health clinic	Mean 29.8	108	100.0	(96.6-100.0)
	Müller 2010	Glans penis, coronal sulcus and penile shaft	PCR-Roche Linear Array HPV Genotyping test	Men with urethritis syndrome attending a sexual health clinic	Mean 29.8	56	48.2	(34.7-62.0)
	Müller 2010	Glans penis, coronal sulcus and penile shaft	PCR-Roche Linear Array HPV Genotyping test	Asymptomatic men attending for HIV voluntary counselling and testing a sexual health clinic	Mean 29.8	50	62.0	(47.2-75.3)
Uganda	Tobian 2013	Coronal sulcus and glans	PCR-PGMY09/11	HIV+ heterosexual men	15-49	421	90.7	(87.6-93.3)

**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

<sup>a</sup> 95% Confidence Interval

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 Africa is presented.

### 4.4.1 Burden of oral HPV infection in healthy population

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

Study	Specimen collection method / anatomic site	HPV detection method <sup>a</sup>	Population	% males	Age (years) <sup>b</sup>	No. tested <sup>c</sup>	HPV prevalence % (95% CI)	High-Risk HPV prevalence % (95% CI)	5 most frequent HPVs, HPV type (n) <sup>d</sup>
Herrero 2003	Brush/swab & oral rinse & gargle / Oral & oropharyngeal mucosa	PCR-GP5+/6+	Age-matched controls	50	28-73	50	6 (2.1-16.2)	-	-
Marais 2006	Brush/swab / Oral mucosa	PCR-L1 consensus	Convenient samples from out-patients	45	1-61	307	4.6 (2.7-7.5)	0.7 (0.2-2.3)	HPV13 (6); 32 (4); 11 (2); 72 (2); 16 (1)
Davidson 2014	Oral rinse & gargle / Oral & oropharyngeal mucosa	PCR-PGMY09/11	Convenient samples from general population	100	15-65	125	3.2 (1.3-7.9)	0.8 (0.1-4.4)	HPV72 (2); 16 (1); 44 (1); 62 (1)

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

(95% CI): 95% Confidence Interval

<sup>a</sup> TS: type-specific; RT-PCR: real-time PCR; qPCR: quantitative PCR

<sup>b</sup> NS: not specified

<sup>c</sup> number of cases tested for HPV DNA

<sup>d</sup> number of cases positive for the specific HPV-type

Data Sources:

Davidson CL, S Afr Med J 2014;104(5):358-61 | Herrero R, J Natl Cancer Inst 2003;95(23):1772-83 | Marais DJ, BMC Infect Dis 2006;6:95

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 Africa

Country	Study	HPV detection method and targeted HPV types	No. Tested	HPV Prevalence		Prevalence of 5 most frequent HPVs, HPV type (%)
				%	(95% CI) <sup>a</sup>	
<b>MEN</b>						
South Africa	Boy 2006	TS-PCR E1 for 16 and E7 for 18 Hybridization with TS probes (16, 18)	22	9.1	(2.5-27.8)	HPV 18 (9.1)
Sudan	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)	28	3.6	(0.6-17.7)	HPV 16 (3.6)
<b>WOMEN</b>						
South Africa	Boy 2006	TS-PCR E1 for 16 and E7 for 18 Hybridization with TS probes (16, 18)	37	13.5	(5.9-28.0)	HPV 18 (13.5)
Sudan	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)	15	0	-	-
<b>BOTH OR UNSPECIFIED</b>						
South Africa	Boy 2006	TS-PCR E1 for 16 and E7 for 18 Hybridization with TS probes (16, 18)	59	11.9	(5.9-22.5)	HPV 18 (11.9)
South Africa	Van Rensburg 1996	TS-PCR E6 for 6/11/16/18 Hybridization with TS probes (4, 16, 18)	146	1.4	(0.4-4.9)	HPV 11 (0.7) HPV 16 (0.7)
Sudan	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)	43	2.3	(0.4-12.1)	HPV 16 (2.3)

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

<sup>a</sup> 95% Confidence IntervalData Sources: See references in Section 9 [References](#).

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

Country	Study	HPV detection method and targeted HPV types	No. Tested	HPV Prevalence		Prevalence of 5 most frequent HPVs, HPV type (%)
				%	(95% CI) <sup>a</sup>	
<b>MEN</b>						
-	No data available	-	-	-	-	-
<b>WOMEN</b>						
-	No data available	-	-	-	-	-
<b>BOTH OR UNSPECIFIED</b>						
-	No data available	-	-	-	-	-

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

<sup>a</sup> 95% Confidence IntervalData Sources: See references in Section 9 [References](#).

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

Country	Study	HPV detection method and targeted HPV types	No. Tested	HPV Prevalence		Prevalence of 5 most frequent HPVs, HPV type (%)
				%	(95% CI) <sup>a</sup>	
<b>MEN</b>						
-	No data available	-	-	-	-	-
<b>WOMEN</b>						
-	No data available	-	-	-	-	-
<b>BOTH OR UNSPECIFIED</b>						
-	No data available	-	-	-	-	-

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

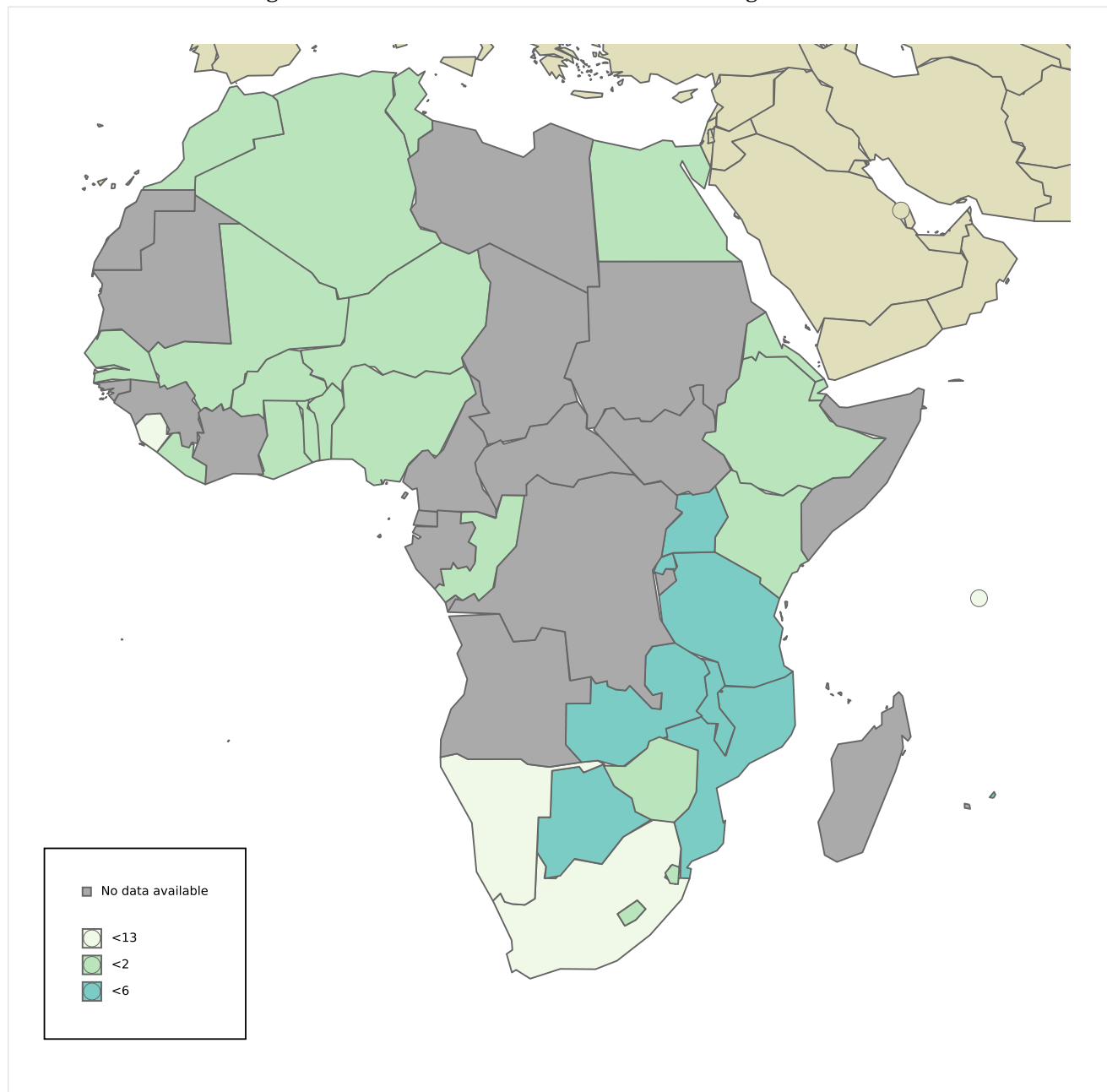
Only for European countries

<sup>a</sup> 95% Confidence IntervalData 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 Africa are presented.

Figure 59: Prevalence of female tobacco smoking in Africa



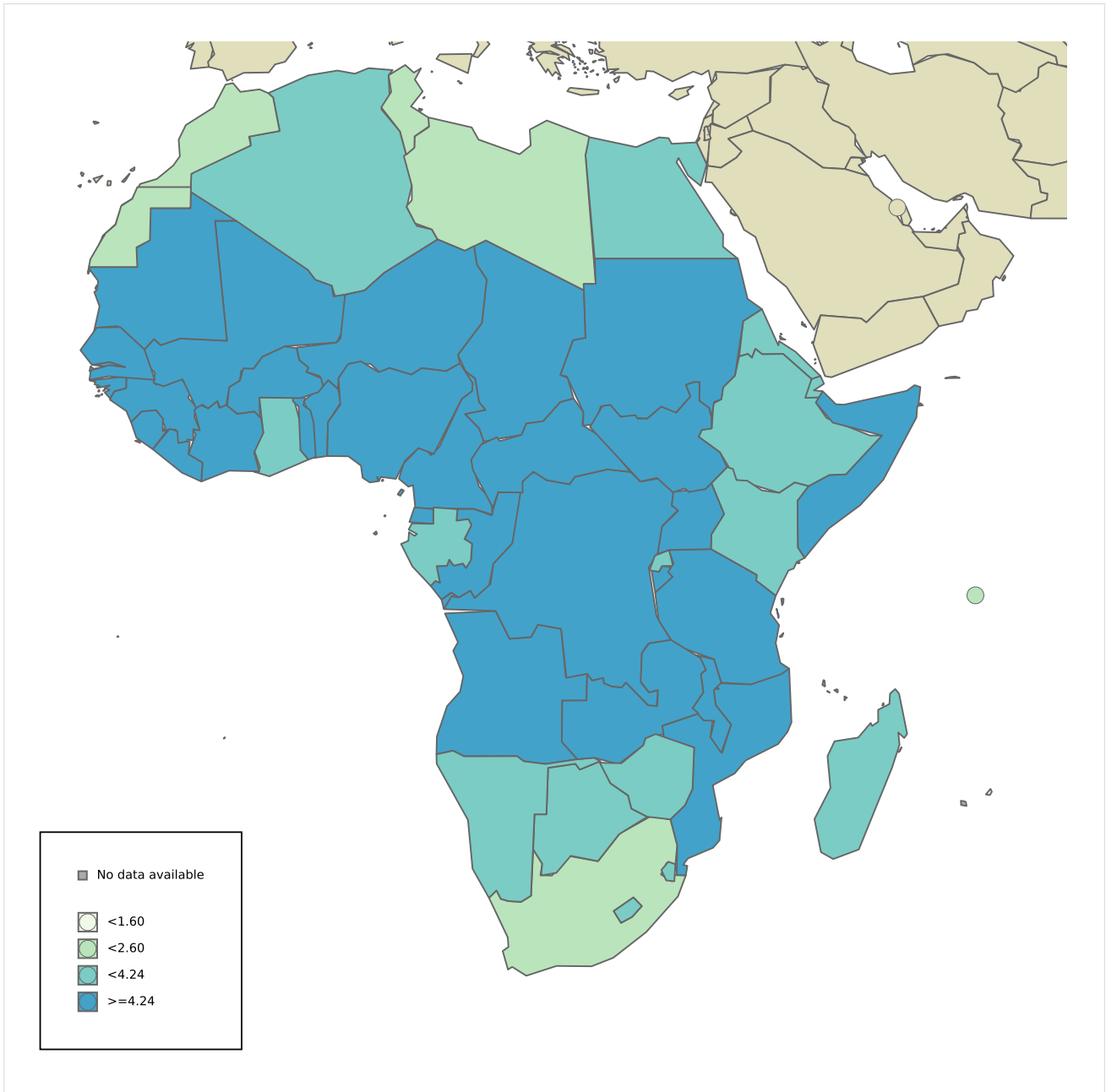
**Data accessed on 12 Nov 2019**

Crude adjusted prevalence (%) estimates of tobacco use among people aged  $\geq 15$  years by country, for the year 2016.

Data Sources:

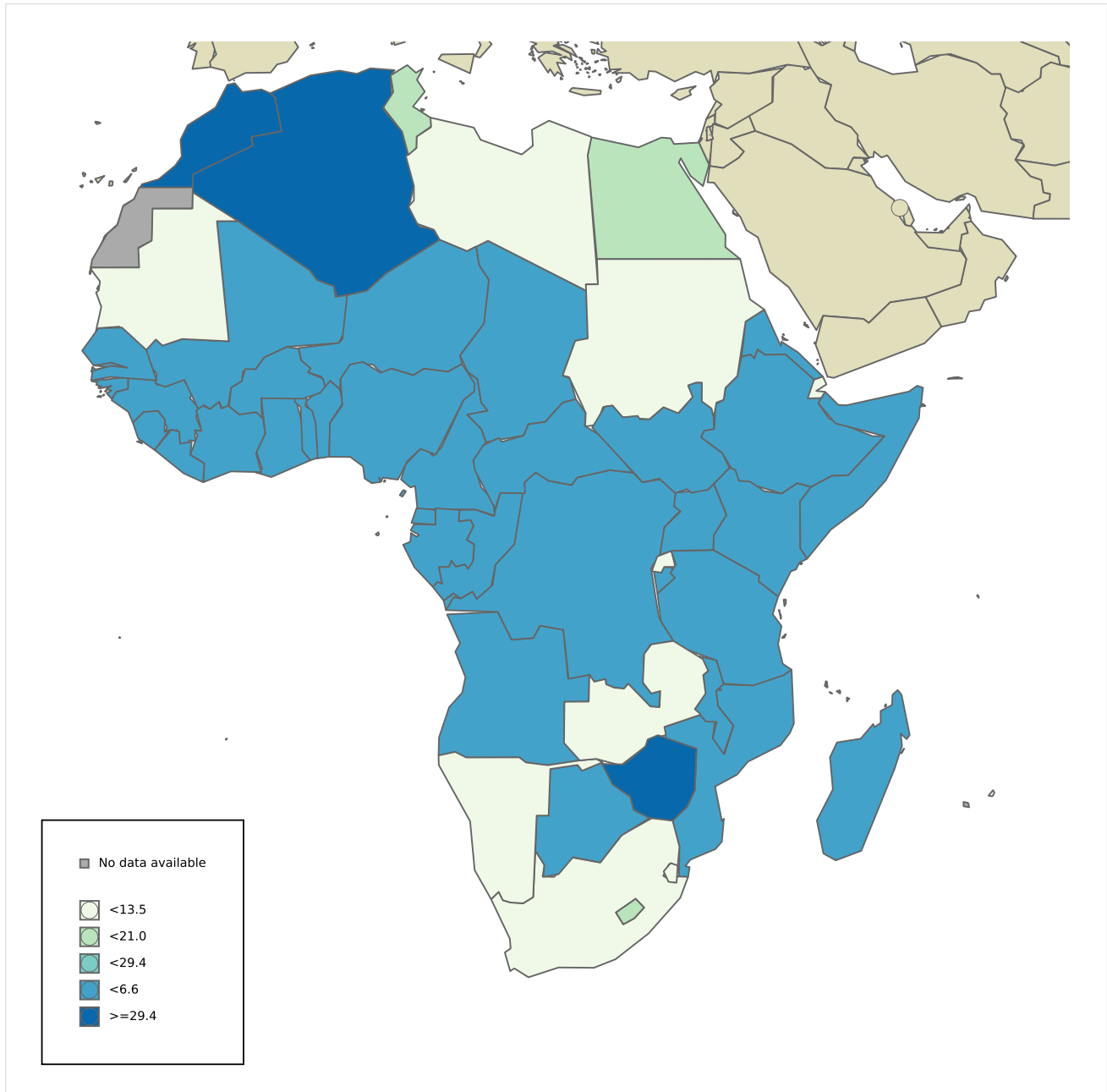
WHO global report on trends in prevalence of tobacco use 2000–2025, third edition. Geneva: World Health Organization; 2019. Available at <https://www.who.int/publications/i/item/who-global-report-on-trends-in-prevalence-of-tobacco-use-2000-2025-third-edition>

Figure 60: Total fertility rates in Africa



Data accessed on 13 Nov 2019  
Year of estimate: 2017

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



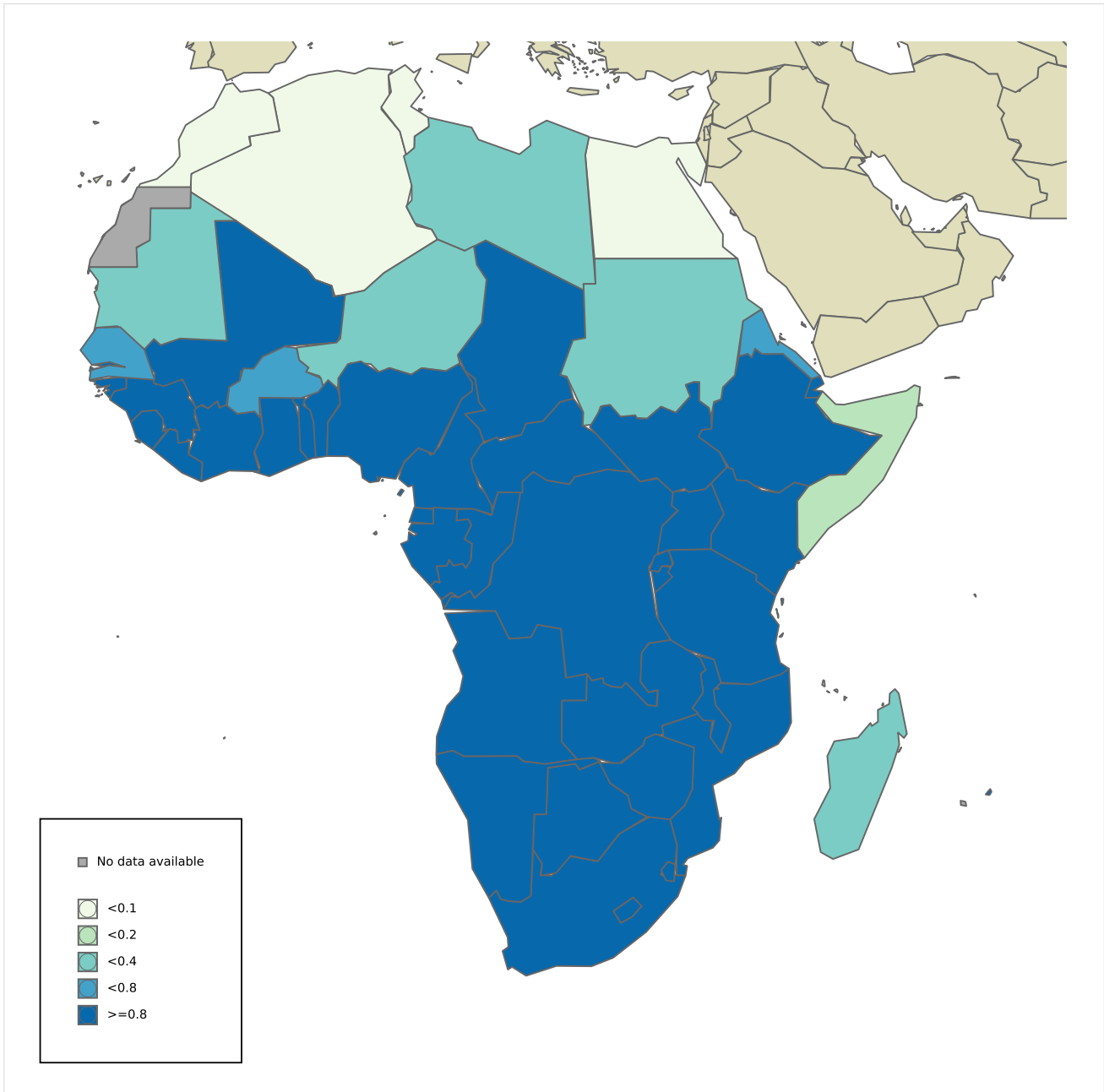
Data accessed on 18 Nov 2019

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 Africa



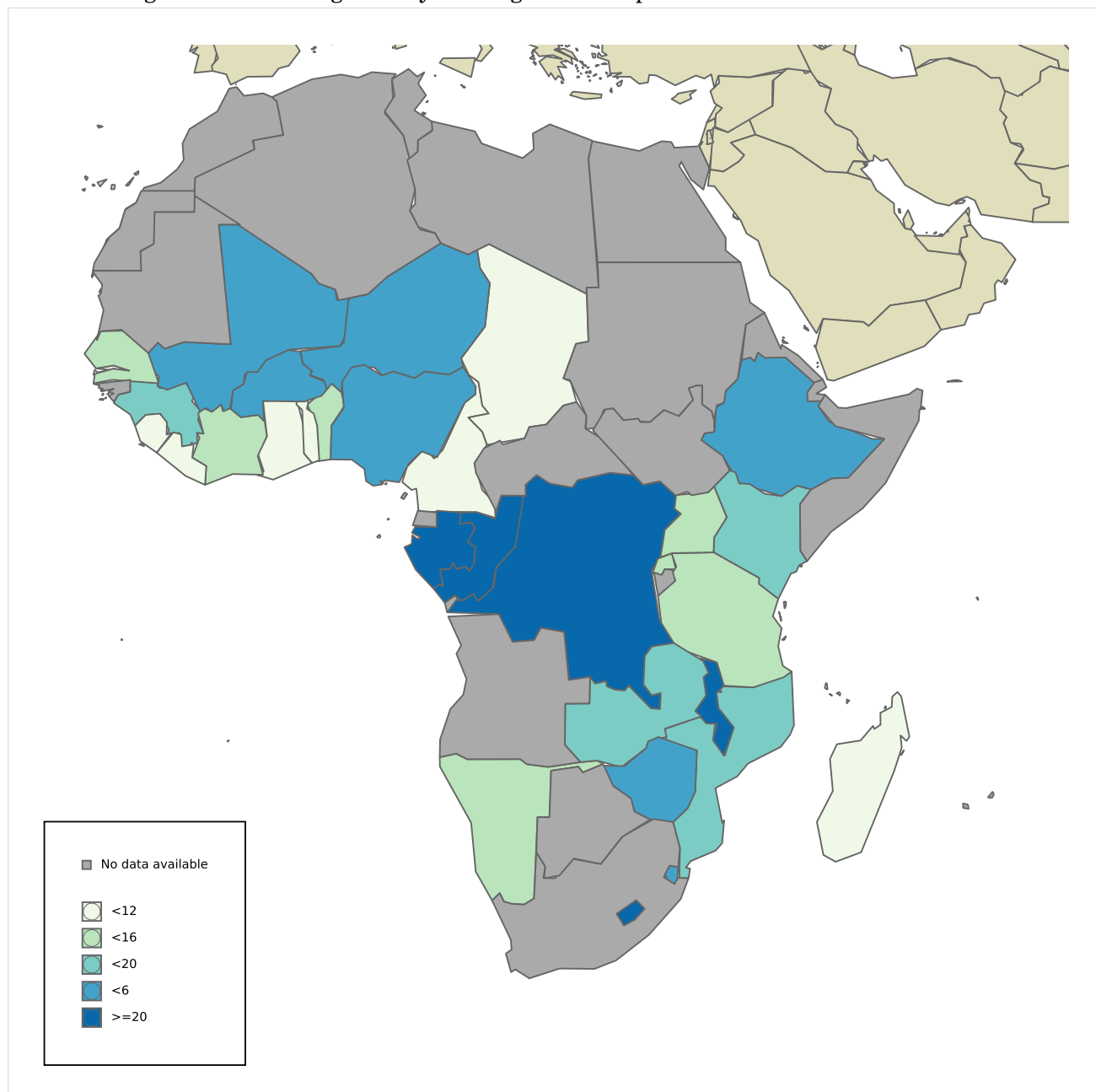
Data accessed on 21 Nov 2019

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 Africa are presented.

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



### Data accessed on 16 Mar 2017

Please refer to original source for methods of estimation

<sup>a</sup> Year of estimation: 2005-2010

<sup>b</sup> Percentage of all 15- to 19-year-olds who report having had sex before the age of 15 years in MEASURE DHS (Demographic and Health Surveys), STATcompiler (<http://www.statcompiler.com/>) or HIV/AIDS Survey Indicator database (<http://www.measuredhs.com/hivdata/>).

<sup>c</sup> Percentage of all 15- to 19-year-olds who report having had sex before the age of 15 years.

<sup>d</sup> Year of estimation: 2010

<sup>e</sup> The main sources of data were surveys by the MEASURE DHS (Demographic and Health Surveys) project and published estimates from Reproductive National Health Surveys.

<sup>f</sup> Year of estimation: not reported

<sup>g</sup> Year of estimation: 2011-2012

<sup>h</sup> Year of estimation: 2011

<sup>i</sup> Year of estimation: 2013-2014

<sup>j</sup> Year of estimation: 2012

<sup>k</sup> Year of estimation: 2014

<sup>l</sup> Year of estimation: 2013

<sup>m</sup> Year of estimation: 2012-2013

<sup>n</sup> Year of estimation: 2015-2016

<sup>o</sup> Year of estimation: 2014-2015

<sup>p</sup> Year of estimation: 2008-2009

**Data Sources:**

<sup>1</sup> The sexual behaviour of adolescents in sub-Saharan Africa: patterns and trends from national surveys. Doyle AM, Mavedzenge SN, Plummer ML, Ross DA. *Trop Med Int Health*. 2012 Jul;17(7):796-807. doi: 10.1111/j.1365-3156.2012.03005.x. Review. PMID:22594660.

<sup>2</sup> ICF International, 2015. The DHS (Demographic and Health Surveys) Program STATcompiler. Funded by USAID. <http://www.statcompiler.com>. Accessed on March 16 2017.

<sup>3</sup> Sexual behaviour in context: a global perspective. Wellings K, Collumbien M, Slaymaker E, et al. *Lancet*. 2006 Nov 11;368(9548):1706-28. Review. Erratum in: *Lancet*. 2007 Jan 27;369(9558):274. PMID:17098090.



Table 46: Median age at first sex in Africa

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
Benin	Benin DHS 2011/2012 <sup>1</sup>	2011-2012	1962-1991	18.6	3457	18.3	13692	-	-
	Benin DHS 2011/2012 <sup>1</sup>	2011-2012	1967-1971	19.3	489	18.5	1619	-	-
	Benin DHS 2011/2012 <sup>1</sup>	2011-2012	1977-1981	18.4	599	18.2	2693	-	-
	Benin DHS 2011/2012 <sup>1</sup>	2011-2012	1972-1976	18.9	649	18.5	2164	-	-
	Benin DHS 2011/2012 <sup>1</sup>	2011-2012	1947-1991	18.8	4204	-	-	-	-
	Benin DHS 2011/2012 <sup>1</sup>	2011-2012	1947-1986	19.0	3550	-	-	-	-
	Benin DHS 2011/2012 <sup>1</sup>	2011-2012	1982-1986	18.2	674	18.2	3201	-	-
	Benin DHS 2011/2012 <sup>1,a</sup>	2011-2012	1992-1996	-	976	-	2907	-	-
	Benin DHS 2011/2012 <sup>1</sup>	2011-2012	1987-1991	18.2	654	18.1	2893	-	-
	Benin DHS 2011/2012 <sup>1</sup>	2011-2012	1962-1986	18.7	2804	18.4	10799	-	-
	Benin DHS 2011/2012 <sup>1</sup>	2011-2012	1962-1966	19.7	392	18.9	1123	-	-
Botswana	Botswana DHS 1988 <sup>2</sup>	1988	1939-1968	-	-	17.3	3183	-	-
	Botswana DHS 1988 <sup>2,b</sup>	1988	1939-1968	-	-	17.3	-	-	-
	Botswana DHS 1988 <sup>2</sup>	1988	1954-1958	-	-	17.3	602	-	-
	Botswana DHS 1988 <sup>2,a</sup>	1988	1969-1973	-	-	-	605	-	-
	Botswana DHS 1988 <sup>2</sup>	1988	1964-1968	-	-	17.2	873	-	-
	Botswana DHS 1988 <sup>2</sup>	1988	1939-1943	-	-	18.1	229	-	-
	Botswana DHS 1988 <sup>2</sup>	1988	1949-1953	-	-	17.2	431	-	-
	Botswana DHS 1988 <sup>2</sup>	1988	1959-1963	-	-	17.1	778	-	-
	Botswana DHS 1988 <sup>2</sup>	1988	1944-1948	-	-	17.3	270	-	-
	Botswana DHS 1988 <sup>2,c</sup>	1988	1939-1968	-	-	17.3	-	-	-
Burkina Faso	Burkina Faso DHS 1993 <sup>3,d</sup>	1993	-	-	-	17.3	-	-	-
	Burkina Faso DHS 1998-99 <sup>3,d</sup>	1999	-	-	-	17.4	-	-	-
	Burkina Faso DHS 2003 <sup>3,d</sup>	2003	-	-	-	17.5	-	-	-
	Burkina Faso DHS 2010 <sup>3,d</sup>	2010	-	-	-	17.6	-	-	-
Burundi	Burundi DHS 2010 <sup>4,a</sup>	2010	1991-1995	-	162	-	382	-	-
	Burundi DHS 2010 <sup>4</sup>	2010	1951-1985	22.6	2501	-	-	-	-
	Burundi DHS 2010 <sup>4</sup>	2010	1966-1970	23.0	345	20.4	732	-	-
	Burundi DHS 2010 <sup>4</sup>	2010	1971-1975	23.3	381	20.1	1047	-	-
	Burundi DHS 2010 <sup>4</sup>	2010	1961-1985	22.8	1980	20.0	4959	-	-
	Burundi DHS 2010 <sup>4</sup>	2010	1961-1965	23.4	327	19.7	704	-	-

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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
	Burundi DHS 2010 <sup>4</sup>	2010	1981-1985	22.1	509	19.9	1449	-	-
	Burundi DHS 2010 <sup>4,a</sup>	2010	1986-1990	-	386	19.8	1306	-	-
	Burundi DHS 2010 <sup>4</sup>	2010	1976-1980	22.8	416	20.1	1026	-	-
Cabo Verde	Cape Verde DHS 2005 <sup>5</sup>	2005	1966-1970	17.3	260	17.9	683	-	-
	Cape Verde DHS 2005 <sup>5</sup>	2005	1981-1985	17.0	454	17.3	885	-	-
	Cape Verde DHS 2005 <sup>5,a</sup>	2005	1986-1990	-	542	-	659	-	-
	Cape Verde DHS 2005 <sup>5,c</sup>	2005	1956-1980	-	-	17.6	-	-	-
	Cape Verde DHS 2005 <sup>5,b</sup>	2005	1956-1985	-	-	18.1	-	-	-
	Cape Verde DHS 2005 <sup>5</sup>	2005	1956-1985	17.3	1697	17.7	3915	-	-
	Cape Verde DHS 2005 <sup>5</sup>	2005	1971-1975	16.9	271	17.4	575	-	-
	Cape Verde DHS 2005 <sup>5,c</sup>	2005	1946-1980	17.1	-	-	-	-	-
	Cape Verde DHS 2005 <sup>5</sup>	2005	1946-1985	17.5	1831	-	-	-	-
	Cape Verde DHS 2005 <sup>5</sup>	2005	1961-1965	18.7	229	18.8	593	-	-
	Cape Verde DHS 2005 <sup>5,c</sup>	2005	1956-1985	-	-	17.5	-	-	-
	Cape Verde DHS 2005 <sup>5</sup>	2005	1946-1980	17.6	1376	-	-	-	-
	Cape Verde DHS 2005 <sup>5</sup>	2005	1956-1960	18.8	162	19.1	458	-	-
	Cape Verde DHS 2005 <sup>5</sup>	2005	1976-1980	16.8	320	17.0	721	-	-
	Cape Verde DHS 2005 <sup>5</sup>	2005	1956-1980	17.5	1243	17.9	3032	-	-
	Cape Verde DHS 2005 <sup>5,b</sup>	2005	1956-1980	-	-	18.3	-	-	-
	Cape Verde DHS 2005 <sup>5,b</sup>	2005	1946-1980	18.1	-	-	-	-	-
Cameroon	Cameroon DHS 1991 <sup>3,d</sup>	1991	-	-	-	16.1	-	-	-
	Cameroon DHS 1998 <sup>3,d</sup>	1998	-	18.0	-	15.9	-	-	-
	Cameroon DHS 2004 <sup>3,d</sup>	2004	-	18.5	-	16.5	-	-	-
	Cameroon DHS 2011 <sup>3,d</sup>	2011	-	18.6	-	17.1	-	-	-
Central African Republic	Central African Republic DHS 1994/1995 <sup>6,c</sup>	1995	1946-1975	-	-	15.8	-	-	-
	Central African Republic DHS 1994/1995 <sup>6,c</sup>	1995	1946-1975	-	-	15.8	-	-	-
	Central African Republic DHS 1994/1995 <sup>6</sup>	1995	1951-1955	-	-	15.8	458	-	-

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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
	Central African Republic DHS 1994/1995 <sup>6</sup>	1995	1946-1975	-	-	15.9	4550	-	-
	Central African Republic DHS 1994/1995 <sup>6,b</sup>	1995	1946-1970	-	-	16.0	-	-	-
	Central African Republic DHS 1994/1995 <sup>6</sup>	1995	1936-1970	17.9	1121	-	-	-	-
	Central African Republic DHS 1994/1995 <sup>6</sup>	1995	1956-1960	-	-	16.0	703	-	-
	Central African Republic DHS 1994/1995 <sup>6</sup>	1995	1961-1965	-	-	16.0	848	-	-
	Central African Republic DHS 1994/1995 <sup>6,b</sup>	1995	1946-1970	-	-	16.0	-	-	-
	Central African Republic DHS 1994/1995 <sup>6,b</sup>	1995	1936-1970	17.6	-	-	-	-	-
	Central African Republic DHS 1994/1995 <sup>6</sup>	1995	1946-1950	-	-	15.9	426	-	-
	Central African Republic DHS 1994/1995 <sup>6</sup>	1995	1976-1980	-	-	16.6	799	-	-
	Central African Republic DHS 1994/1995 <sup>6</sup>	1995	1966-1970	-	-	15.9	1023	-	-
	Central African Republic DHS 1994/1995 <sup>6</sup>	1995	1946-1970	-	-	15.9	3457	-	-
	Central African Republic DHS 1994/1995 <sup>6,c</sup>	1995	1936-1970	18.3	-	-	-	-	-
	Central African Republic DHS 1994/1995 <sup>6</sup>	1995	1971-1975	-	-	16.0	994	-	-
Chad	Chad DHS 2004 <sup>7</sup>	2004	1950-1954	20.1	113	-	-	-	-
	Chad DHS 2004 <sup>7,b</sup>	2004	1945-1974	19.0	-	-	-	-	-

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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
	Chad DHS 2004 <sup>7</sup>	2004	1955-1959	18.7	151	15.8	547	-	-
	Chad DHS 2004 <sup>7</sup>	2004	1965-1969	18.9	181	15.6	657	-	-
	Chad DHS 2004 <sup>7</sup>	2004	1975-1979	18.1	284	15.8	1126	-	-
	Chad DHS 2004 <sup>7</sup>	2004	1960-1964	18.8	171	15.7	525	-	-
	Chad DHS 2004 <sup>7,c</sup>	2004	1945-1974	19.1	-	-	-	-	-
	Chad DHS 2004 <sup>7</sup>	2004	1945-1949	21.2	92	-	-	-	-
	Chad DHS 2004 <sup>7</sup>	2004	1955-1979	18.8	1198	15.7	3638	-	-
	Chad DHS 2004 <sup>7</sup>	2004	1945-1974	19.0	915	-	-	-	-
	Chad DHS 2004 <sup>7,a</sup>	2004	1985-1989	-	127	-	661	-	-
	Chad DHS 2004 <sup>7</sup>	2004	1980-1984	18.8	203	15.9	986	-	-
	Chad DHS 2004 <sup>7,b</sup>	2004	1955-1979	-	-	15.7	-	-	-
	Chad DHS 2004 <sup>7,c</sup>	2004	1955-1979	-	-	15.9	-	-	-
	Chad DHS 2004 <sup>7</sup>	2004	1955-1984	-	-	15.8	4626	-	-
	Chad DHS 2004 <sup>7</sup>	2004	1970-1974	18.3	207	15.7	781	-	-
Comoros	Comoros DHS 1996 <sup>3,d</sup>	1996	-	18.6	-	18.8	-	-	-
	Comoros DHS 2012 <sup>3,d</sup>	2012	-	19.7	-	-	-	-	-
Congo	Congo DHS 2011/2012 <sup>8</sup>	2011-2012	1962-1966	17.6	403	16.1	746	-	-
	Congo DHS 2011/2012 <sup>8</sup>	2011-2012	1952-1986	16.9	3395	-	-	-	-
	Congo DHS 2011/2012 <sup>8,c</sup>	2011-2012	1952-1991	16.8	-	-	-	-	-
	Congo DHS 2011/2012 <sup>8,a</sup>	2011-2012	1992-1996	-	636	-	1407	-	-
	Congo DHS 2011/2012 <sup>8,b</sup>	2011-2012	1952-1991	16.6	-	-	-	-	-
	Congo DHS 2011/2012 <sup>8</sup>	2011-2012	1987-1991	16.3	689	16.3	1990	-	-
	Congo DHS 2011/2012 <sup>8,b</sup>	2011-2012	1962-1991	-	-	15.6	-	-	-
	Congo DHS 2011/2012 <sup>8</sup>	2011-2012	1962-1991	-	-	16.3	8569	-	-
	Congo DHS 2011/2012 <sup>8,c</sup>	2011-2012	1962-1991	-	-	16.6	-	-	-
	Congo DHS 2011/2012 <sup>8</sup>	2011-2012	1972-1976	16.6	659	16.0	1358	-	-
	Congo DHS 2011/2012 <sup>8</sup>	2011-2012	1952-1991	16.8	4084	-	-	-	-
	Congo DHS 2011/2012 <sup>8</sup>	2011-2012	1962-1986	-	-	16.2	6579	-	-
	Congo DHS 2011/2012 <sup>8</sup>	2011-2012	1977-1981	16.6	680	16.3	1553	-	-
	Congo DHS 2011/2012 <sup>8</sup>	2011-2012	1967-1971	16.9	512	16.0	912	-	-
	Congo DHS 2011/2012 <sup>8</sup>	2011-2012	1982-1986	16.7	717	16.4	2009	-	-
Côte d'Ivoire	Côte d'Ivoire DHS 1994 <sup>3,d</sup>	1994	-	-	-	15.8	-	-	-

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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
	Côte d'Ivoire DHS 1998-99 <sup>3,d</sup>	1998	-	18.3	-	16.1	-	-	-
	Côte d'Ivoire AIS 2005 <sup>3,d</sup>	2005	-	18.0	-	16.4	-	-	-
	Côte d'Ivoire DHS 2011-12 <sup>3,d</sup>	2012	-	18.6	-	16.9	-	-	-
DR Congo	Congo Democratic Republic DHS 2007 <sup>3,d</sup>	2007	-	18.0	-	16.9	-	-	-
	Congo Democratic Republic DHS 2013-14 <sup>3,d</sup>	2013	-	17.7	-	16.8	-	-	-
Egypt	Egypt DHS 2014 <sup>3,d</sup>	2014	-	-	-	-	-	-	-
Equatorial Guinea	Equatorial Guinea DHS 2011 <sup>9</sup>	2011	1952-1986	18.0	1206	-	-	-	-
	Equatorial Guinea DHS 2011 <sup>9,b</sup>	2011	1952-1986	17.9	-	-	-	-	-
	Equatorial Guinea DHS 2011 <sup>9,b</sup>	2011	1962-1991	-	-	15.8	-	-	-
	Equatorial Guinea DHS 2011 <sup>9</sup>	2011	1962-1986	17.7	938	16.2	2144	-	-
	Equatorial Guinea DHS 2011 <sup>9</sup>	2011	1982-1986	16.7	244	16.4	598	-	-
	Equatorial Guinea DHS 2011 <sup>9,a</sup>	2011	1992-1996	-	246	-	582	-	-
	Equatorial Guinea DHS 2011 <sup>9,a</sup>	2011	1987-1996	-	528	-	1283	-	-
	Equatorial Guinea DHS 2011 <sup>9,c</sup>	2011	1962-1986	-	-	16.9	-	-	-
	Equatorial Guinea DHS 2011 <sup>9,c</sup>	2011	1952-1986	18.1	-	-	-	-	-
	Equatorial Guinea DHS 2011 <sup>9,c</sup>	2011	1952-1991	17.6	-	-	-	-	-
	Equatorial Guinea DHS 2011 <sup>9</sup>	2011	1987-1991	16.6	282	16.3	701	-	-
	Equatorial Guinea DHS 2011 <sup>9,b</sup>	2011	1952-1991	17.6	-	-	-	-	-
	Equatorial Guinea DHS 2011 <sup>9</sup>	2011	1967-1971	18.2	164	16.2	367	-	-
	Equatorial Guinea DHS 2011 <sup>9</sup>	2011	1962-1991	17.3	1220	16.3	2846	-	-
	Equatorial Guinea DHS 2011 <sup>9</sup>	2011	1977-1981	17.3	177	16.3	461	-	-
	Equatorial Guinea DHS 2011 <sup>9</sup>	2011	1972-1976	17.7	210	16.1	380	-	-

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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	
	Equatorial Guinea DHS 2011 <sup>9</sup>	2011	1952-1991	17.6	1487	-	-	-	-	
	Equatorial Guinea DHS 2011 <sup>9,c</sup>	2011	1962-1991	-	-	16.8	-	-	-	
	Equatorial Guinea DHS 2011 <sup>9</sup>	2011	1962-1966	18.6	144	16.0	338	-	-	
	Equatorial Guinea DHS 2011 <sup>9,b</sup>	2011	1962-1986	-	-	15.8	-	-	-	
Eritrea	Eritrea DHS 2002 <sup>10,c</sup>	2002	1953-1977	-	-	18.9	-	-	-	
	Eritrea DHS 2002 <sup>10,a</sup>	2002	1983-1987	-	-	-	648	-	-	
	Eritrea DHS 2002 <sup>10</sup>	2002	1953-1982	-	-	18.0	6165	-	-	
	Eritrea DHS 2002 <sup>10</sup>	2002	1953-1957	-	-	16.4	732	-	-	
	Eritrea DHS 2002 <sup>10</sup>	2002	1973-1977	-	-	18.3	1390	-	-	
	Eritrea DHS 2002 <sup>10</sup>	2002	1968-1972	-	-	17.7	1069	-	-	
	Eritrea DHS 2002 <sup>10</sup>	2002	1978-1982	-	-	18.3	1088	-	-	
	Eritrea DHS 2002 <sup>10</sup>	2002	1958-1962	-	-	18.1	821	-	-	
	Eritrea DHS 2002 <sup>10</sup>	2002	1953-1977	-	-	17.9	5081	-	-	
	Eritrea DHS 2002 <sup>10</sup>	2002	1963-1967	-	-	18.2	1069	-	-	
	Eritrea DHS 2002 <sup>10,b</sup>	2002	1953-1977	-	-	17.1	-	-	-	
	Eswatini	Swaziland DHS 2006/2007 <sup>11</sup>	2006-2007	1957-1961	19.8	255	17.6	381	-	-
		Swaziland DHS 2006/2007 <sup>11</sup>	2006-2007	1982-1986	18.8	697	18.2	941	-	-
Swaziland DHS 2006/2007 <sup>11</sup>		2006-2007	1972-1976	19.2	421	18.2	610	-	-	
Swaziland DHS 2006/2007 <sup>11,a</sup>		2006-2007	1982-1991	-	983	19.0	1469	-	-	
Swaziland DHS 2006/2007 <sup>11</sup>		2006-2007	<1947	22.1	249	18.6	390	-	-	
Swaziland DHS 2006/2007 <sup>11</sup>		2006-2007	1962-1966	20.0	269	17.9	437	-	-	
Swaziland DHS 2006/2007 <sup>11,c</sup>		2006-2007	1957-1981	19.4	-	18.6	-	-	-	
Swaziland DHS 2006/2007 <sup>11,b</sup>		2006-2007	1957-1981	19.5	-	17.7	-	-	-	
Swaziland DHS 2006/2007 <sup>11</sup>		2006-2007	1957-1981	19.5	1896	18.0	2638	-	-	
Swaziland DHS 2006/2007 <sup>11</sup>		2006-2007	1947-1951	21.3	80	18.5	112	-	-	
Swaziland DHS 2006/2007 <sup>11</sup>		2006-2007	1967-1971	19.5	363	17.8	502	-	-	

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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
	Swaziland DHS 2006/2007 <sup>11</sup>	2006-2007	<1957	21.2	444	18.3	667	-	-
	Swaziland DHS 2006/2007 <sup>11</sup>	2006-2007	1952-1956	20.4	116	17.6	164	-	-
	Swaziland DHS 2006/2007 <sup>11,a</sup>	2006-2007	1987-1991	-	286	-	527	-	-
	Swaziland DHS 2006/2007 <sup>11</sup>	2006-2007	1977-1981	19.3	589	18.1	712	-	-
	Swaziland DHS 2006/2007 <sup>11</sup>	2006-2007	1957-1986	19.2	2595	18.1	3579	-	-
Ethiopia	Ethiopia DHS 2011 <sup>12</sup>	2011	1967-1971	21.0	1203	15.9	1302	-	-
	Ethiopia DHS 2011 <sup>12,a</sup>	2011	1987-1996	-	1223	-	3058	-	-
	Ethiopia DHS 2011 <sup>12</sup>	2011	1982-1986	21.8	1844	17.4	2956	-	-
	Ethiopia DHS 2011 <sup>12,a</sup>	2011	1987-1991	-	1035	18.8	2194	-	-
	Ethiopia DHS 2011 <sup>12,a</sup>	2011	1962-1991	-	8179	17.1	11539	-	-
	Ethiopia DHS 2011 <sup>12,c</sup>	2011	1962-1991	-	-	18.7	-	-	-
	Ethiopia DHS 2011 <sup>12,a</sup>	2011	1992-1996	-	221	-	928	-	-
	Ethiopia DHS 2011 <sup>12,c</sup>	2011	1952-1986	20.9	-	-	-	-	-
	Ethiopia DHS 2011 <sup>12</sup>	2011	1977-1981	21.0	1610	16.7	2031	-	-
	Ethiopia DHS 2011 <sup>12,b</sup>	2011	1962-1991	-	-	16.7	-	-	-
	Ethiopia DHS 2011 <sup>12,b</sup>	2011	1952-1986	21.2	-	-	-	-	-
	Ethiopia DHS 2011 <sup>12</sup>	2011	1962-1966	20.9	959	15.6	1099	-	-
	Ethiopia DHS 2011 <sup>12,a</sup>	2011	1952-1991	-	9428	-	-	-	-
	Ethiopia DHS 2011 <sup>12</sup>	2011	1962-1986	21.2	7159	16.6	9330	-	-
	Ethiopia DHS 2011 <sup>12</sup>	2011	1952-1986	21.1	8402	-	-	-	-
	Ethiopia DHS 2011 <sup>12,b</sup>	2011	1962-1986	-	-	16.4	-	-	-
	Ethiopia DHS 2011 <sup>12</sup>	2011	1972-1976	20.9	1555	16.4	1938	-	-
	Ethiopia DHS 2011 <sup>12,c</sup>	2011	1962-1986	-	-	17.8	-	-	-
Gabon	Gabon DHS 2000 <sup>3,d</sup>	2000	-	16.6	-	16.2	-	-	-
	Gabon DHS 2012 <sup>3,d</sup>	2012	-	17.1	-	17	-	-	-
Gambia	Gambia DHS 2013 <sup>3,d</sup>	2013	-	-	-	18.9	-	-	-

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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
Ghana	Ghana DHS 1993 <sup>3,d</sup>	1993	-	19.1	-	17	-	-	-
	Ghana DHS 1998 <sup>3,d</sup>	1998	-	19.4	-	17.6	-	-	-
	Ghana DHS 2003 <sup>3,d</sup>	2003	-	-	-	18.2	-	-	-
	Ghana DHS 2008 <sup>3,d</sup>	2008	-	-	-	18.4	-	-	-
	Ghana DHS 2014 <sup>3,d</sup>	2014	-	19.8	-	18.4	-	-	-
Guinea	Guinea DHS 2012 <sup>13</sup>	2012	1973-1977	19.9	406	16.4	1120	-	-
	Guinea DHS 2012 <sup>13</sup>	2012	1963-1987	20.0	1970	16.4	5448	-	-
	Guinea DHS 2012 <sup>13</sup>	2012	1988-1992	18.6	493	16.6	1507	-	-
	Guinea DHS 2012 <sup>13,b</sup>	2012	1963-1987	-	-	16.0	-	-	-
	Guinea DHS 2012 <sup>13</sup>	2012	1963-1967	20.8	278	17.0	710	-	-
	Guinea DHS 2012 <sup>13,c</sup>	2012	1963-1992	-	-	17.5	-	-	-
	Guinea DHS 2012 <sup>13</sup>	2012	1953-1992	19.9	2894	-	-	-	-
	Guinea DHS 2012 <sup>13,c</sup>	2012	1953-1987	20.3	-	-	-	-	-
	Guinea DHS 2012 <sup>13</sup>	2012	1953-1987	20.2	2400	-	-	-	-
	Guinea DHS 2012 <sup>13,b</sup>	2012	1953-1987	20.2	-	-	-	-	-
	Guinea DHS 2012 <sup>13,c</sup>	2012	1953-1992	19.7	-	-	-	-	-
	Guinea DHS 2012 <sup>13</sup>	2012	1978-1982	20.0	403	16.1	1172	-	-
	Guinea DHS 2012 <sup>13,b</sup>	2012	1963-1992	-	-	15.9	-	-	-
	Guinea DHS 2012 <sup>13,b</sup>	2012	1953-1992	19.9	-	-	-	-	-
	Guinea DHS 2012 <sup>13,c</sup>	2012	1963-1987	-	-	17.3	-	-	-
	Guinea DHS 2012 <sup>13</sup>	2012	1963-1992	19.5	2464	16.5	6955	-	-
	Guinea DHS 2012 <sup>13,a</sup>	2012	1988-1997	-	770	-	2618	-	-
	Guinea DHS 2012 <sup>13</sup>	2012	1983-1987	18.9	493	16.3	1580	-	-
	Guinea DHS 2012 <sup>13,a</sup>	2012	1993-1997	-	277	-	1113	-	-
	Guinea DHS 2012 <sup>13</sup>	2012	1968-1972	20.7	390	16.6	868	-	-
Kenya	Kenya DHS 1993 <sup>3,d</sup>	1993	-	16.7	-	16.9	-	-	-
	Kenya DHS 1998 <sup>3,d</sup>	1998	-	16.8	-	16.7	-	-	-
	Kenya DHS 2003 <sup>3,d</sup>	2003	-	17.1	-	17.8	-	-	-
	Kenya DHS 2008-09 <sup>3,d</sup>	2008	-	17.6	-	18.2	-	-	-
	Kenya DHS 2014 <sup>3,d</sup>	2014	-	17.4	-	18	-	-	-
Lesotho	Lesotho DHS 2009 <sup>14,c</sup>	2009	1960-1989	-	-	18.9	-	-	-
	Lesotho DHS 2009 <sup>14</sup>	2009	1980-1984	17.9	448	18.5	1222	-	-
	Lesotho DHS 2009 <sup>14</sup>	2009	1985-1989	17.1	584	18.3	1429	-	-

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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
	Lesotho DHS 2009 <sup>14,c</sup>	2009	1950-1979	18.9	-	-	-	-	-
	Lesotho DHS 2009 <sup>14</sup>	2009	1950-1959	22.6	309	-	-	-	-
	Lesotho DHS 2009 <sup>14</sup>	2009	1965-1969	20.3	193	18.4	655	-	-
	Lesotho DHS 2009 <sup>14</sup>	2009	1975-1979	18.7	393	18.6	965	-	-
	Lesotho DHS 2009 <sup>14</sup>	2009	1950-1984	19.5	1823	-	-	-	-
	Lesotho DHS 2009 <sup>14,a</sup>	2009	1990-1994	-	498	-	830	-	-
	Lesotho DHS 2009 <sup>14,c</sup>	2009	1950-1984	18.6	-	-	-	-	-
	Lesotho DHS 2009 <sup>14,b</sup>	2009	1960-1989	-	-	18.2	-	-	-
	Lesotho DHS 2009 <sup>14</sup>	2009	1960-1989	-	-	18.4	5670	-	-
	Lesotho DHS 2009 <sup>14,b</sup>	2009	1950-1984	20.1	-	-	-	-	-
	Lesotho DHS 2009 <sup>14</sup>	2009	1960-1984	-	-	18.5	4240	-	-
	Lesotho DHS 2009 <sup>14</sup>	2009	1970-1974	18.8	289	18.3	761	-	-
	Lesotho DHS 2009 <sup>14</sup>	2009	1950-1979	20.2	1376	-	-	-	-
	Lesotho DHS 2009 <sup>14,b</sup>	2009	1960-1984	-	-	18.2	-	-	-
	Lesotho DHS 2009 <sup>14</sup>	2009	1960-1964	20.5	192	18.3	638	-	-
	Lesotho DHS 2009 <sup>14,c</sup>	2009	1960-1984	-	-	19.0	-	-	-
	Lesotho DHS 2009 <sup>14,b</sup>	2009	1950-1979	20.5	-	-	-	-	-
Liberia	Liberia DHS 2013 <sup>15</sup>	2013	1969-1973	18.4	478	16.1	48273	-	-
	Liberia DHS 2013 <sup>15</sup>	2013	1989-1993	17.7	652	16.2	65845	-	-
	Liberia DHS 2013 <sup>15</sup>	2013	1964-1988	18.3	2521	16.2	254596	-	-
	Liberia DHS 2013 <sup>15,a</sup>	2013	1989-1998	-	1019	-	102909	-	-
	Liberia DHS 2013 <sup>15,c</sup>	2013	1964-1988	18.3	-	16.4	-	-	-
	Liberia DHS 2013 <sup>15</sup>	2013	1979-1983	18.2	573	16.1	57867	-	-
	Liberia DHS 2013 <sup>15,b</sup>	2013	1964-1988	18.3	-	15.9	-	-	-
	Liberia DHS 2013 <sup>15</sup>	2013	1964-1968	18.7	332	16.0	33529	-	-
	Liberia DHS 2013 <sup>15,b</sup>	2013	1964-1993	18.2	-	15.9	-	-	-
	Liberia DHS 2013 <sup>15</sup>	2013	1984-1988	18.2	670	16.4	67663	-	-
	Liberia DHS 2013 <sup>15,a</sup>	2013	1994-1998	-	366	-	36962	-	-
	Liberia DHS 2013 <sup>15</sup>	2013	1974-1978	18.2	469	16.1	47364	-	-
	Liberia DHS 2013 <sup>15</sup>	2013	1964-1993	18.2	3173	16.2	320441	-	-
	Liberia DHS 2013 <sup>15,c</sup>	2013	1964-1993	18.1	-	16.4	-	-	-
Madagascar	Madagascar DHS 2008/2009 <sup>16,c</sup>	2008-2009	1949-1983	18.5	-	-	-	-	-
	Madagascar DHS 2008/2009 <sup>16</sup>	2008-2009	1974-1978	18.0	1057	17.3	2482	-	-

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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
	Madagascar DHS 2008/2009 <sup>16</sup>	2008-2009	1969-1973	18.1	913	17.5	2123	-	-
	Madagascar DHS 2008/2009 <sup>16</sup>	2008-2009	1959-1988	-	-	17.3	13177	-	-
	Madagascar DHS 2008/2009 <sup>16,b</sup>	2008-2009	1959-1983	-	-	17.1	-	-	-
	Madagascar DHS 2008/2009 <sup>16,a</sup>	2008-2009	1989-1993	-	732	-	2116	-	-
	Madagascar DHS 2008/2009 <sup>16</sup>	2008-2009	1979-1983	17.9	1164	17.2	2733	-	-
	Madagascar DHS 2008/2009 <sup>16</sup>	2008-2009	1949-1983	18.1	550	-	-	-	-
	Madagascar DHS 2008/2009 <sup>16</sup>	2008-2009	1984-1988	17.8	1181	17.1	2647	-	-
	Madagascar DHS 2008/2009 <sup>16</sup>	2008-2009	1964-1968	18.2	761	17.5	1725	-	-
	Madagascar DHS 2008/2009 <sup>16</sup>	2008-2009	1959-1963	18.3	689	17.3	1468	-	-
	Madagascar DHS 2008/2009 <sup>16</sup>	2008-2009	1959-1983	18.1	608	17.3	10535	-	-
	Madagascar DHS 2008/2009 <sup>16,c</sup>	2008-2009	1959-1983	-	-	18.3	-	-	-
	Madagascar DHS 2008/2009 <sup>16,b</sup>	2008-2009	1949-1983	18.1	-	-	-	-	-
Malawi	Malawi DHS 2000 <sup>3,d</sup>	2000	-	18.3	-	16.9	-	-	-
	Malawi DHS 2004 <sup>3,d</sup>	2004	-	18.5	-	17.3	-	-	-
	Malawi DHS 2010 <sup>3,d</sup>	2010	-	18.6	-	17.3	-	-	-
	Malawi DHS 2015-16 <sup>3,d</sup>	2015	-	18.4	-	17	-	-	-
Mali	Mali DHS 1995-96 <sup>3,d</sup>	1996	-	-	-	15.8	-	-	-
	Mali DHS 2001 <sup>3,d</sup>	2001	-	-	-	15.9	-	-	-
	Mali DHS 2006 <sup>3,d</sup>	2006	-	-	-	16.1	-	-	-
	Mali DHS 2012-13 <sup>3,d</sup>	2012	-	-	-	17	-	-	-
Mozambique	Mozambique DHS 1997 <sup>3,d</sup>	1997	-	18.2	-	16	-	-	-
	Mozambique DHS 2003 <sup>3,d</sup>	2003	-	17.8	-	16.1	-	-	-
	Mozambique AIS 2009 <sup>3,d</sup>	2009	-	18.0	-	16.5	-	-	-
	Mozambique DHS 2011 <sup>3,d</sup>	2011	-	17.3	-	16.1	-	-	-
Namibia	Namibia DHS 1992 <sup>3,d</sup>	1992	-	-	-	19	-	-	-

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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
	Namibia DHS 2000 <sup>3,d</sup>	2000	-	18.0	-	18.9	-	-	-
	Namibia DHS 2006-07 <sup>3,d</sup>	2006	-	18.0	-	18.9	-	-	-
	Namibia DHS 2013 <sup>3,d</sup>	2013	-	18.3	-	18.9	-	-	-
Niger	Niger DHS 2012 <sup>17,a</sup>	2012	1988-1992	-	181	16.2	1870	-	-
	Niger DHS 2012 <sup>17</sup>	2012	1963-1987	23.6	2194	15.9	7279	-	-
	Niger DHS 2012 <sup>17</sup>	2012	1983-1987	22.6	440	16.0	2240	-	-
	Niger DHS 2012 <sup>17</sup>	2012	1968-1972	24.4	433	15.8	986	-	-
	Niger DHS 2012 <sup>17,c</sup>	2012	1953-1982	25.6	-	-	-	-	-
	Niger DHS 2012 <sup>17,b</sup>	2012	1953-1982	23.8	-	-	-	-	-
	Niger DHS 2012 <sup>17,c</sup>	2012	1963-1987	-	-	18.0	-	-	-
	Niger DHS 2012 <sup>17</sup>	2012	1963-1992	-	-	15.9	9143	-	-
	Niger DHS 2012 <sup>17</sup>	2012	1978-1982	23.2	449	15.8	1838	-	-
	Niger DHS 2012 <sup>17,a</sup>	2012	1993-1997	-	40	-	1149	-	-
	Niger DHS 2012 <sup>17,c</sup>	2012	1963-1992	-	-	18.2	-	-	-
	Niger DHS 2012 <sup>17</sup>	2012	1953-1982	24.2	2293	-	-	-	-
	Niger DHS 2012 <sup>17</sup>	2012	1973-1977	24.1	485	15.8	1435	-	-
	Niger DHS 2012 <sup>17</sup>	2012	1963-1967	24.4	387	15.6	776	-	-
	Niger DHS 2012 <sup>17,b</sup>	2012	1953-1987	23.4	-	-	-	-	-
	Niger DHS 2012 <sup>17,b</sup>	2012	1963-1992	-	-	15.7	-	-	-
	Niger DHS 2012 <sup>17,b</sup>	2012	1963-1987	-	-	15.7	-	-	-
Niger DHS 2012 <sup>17</sup>	2012	1953-1987	23.8	2734	-	-	-	-	
Niger DHS 2012 <sup>17,c,a</sup>	2012	1953-1987	-	-	-	-	-	-	
Nigeria	Nigeria DHS 1990 <sup>3,d</sup>	1990	-	-	-	17	-	-	-
	Nigeria DHS 2003 <sup>3,d</sup>	2003	-	-	-	16.7	-	-	-
	Nigeria DHS 2008 <sup>3,d</sup>	2008	-	-	-	17.8	-	-	-
	Nigeria DHS 2013 <sup>3,d</sup>	2013	-	-	-	17.7	-	-	-
	Nigeria DHS 1999 <sup>3,d</sup>	1999	-	-	-	17.9	-	-	-
Rwanda	Rwanda DHS 2014-15 <sup>3,d</sup>	2015	-	-	-	-	-	-	-
	Rwanda DHS 2010 <sup>3,d</sup>	2010	-	-	-	-	-	-	-
	Rwanda DHS 2005 <sup>3,d</sup>	2005	-	-	-	-	-	-	-

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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
	Rwanda DHS 2000 <sup>3,d</sup>	2000	-	-	-	-	-	-	-
	Rwanda DHS 1992 <sup>3,d</sup>	1992	-	-	-	19.9	-	-	-
Sao Tome and Principe	Sao Tome and Principe DHS 2008-09 <sup>3,d</sup>	2008	-	17.9	-	17.8	-	-	-
Senegal	Senegal DHS 2005 <sup>18,b</sup>	2005	1985-1956	-	-	17.3	-	-	-
	Senegal DHS 2005 <sup>18,c</sup>	2005	1980-1956	-	-	20.0	-	-	-
	Senegal DHS 2005 <sup>18</sup>	2005	1980-1976	19.9	441	19.3	2063	-	-
	Senegal DHS 2005 <sup>18,a</sup>	2005	1986-1990	-	290	-	1035	-	-
	Senegal DHS 2005 <sup>18</sup>	2005	1980-1956	-	-	18.4	7726	-	-
	Senegal DHS 2005 <sup>18</sup>	2005	1960-1956	20.8	273	17.6	1005	-	-
	Senegal DHS 2005 <sup>18,a,c</sup>	2005	1985-1956	-	-	-	-	-	-
	Senegal DHS 2005 <sup>18,b</sup>	2005	1980-1956	-	-	17.0	-	-	-
	Senegal DHS 2005 <sup>18</sup>	2005	1970-1966	21.7	309	18.1	1558	-	-
	Senegal DHS 2005 <sup>18,b</sup>	2005	1980-1946	20.9	-	-	-	-	-
	Senegal DHS 2005 <sup>18</sup>	2005	1965-1961	20.9	314	17.7	1244	-	-
	Senegal DHS 2005 <sup>18</sup>	2005	1950-1946	23.9	130	-	-	-	-
	Senegal DHS 2005 <sup>18</sup>	2005	1985-1981	19.1	411	19.6	1954	-	-
	Senegal DHS 2005 <sup>18</sup>	2005	1975-1971	20.6	376	18.7	1857	-	-
	Senegal DHS 2005 <sup>18</sup>	2005	1985-1956	-	-	18.7	9687	-	-
	Senegal DHS 2005 <sup>18</sup>	2005	1980-1946	20.9	2059	-	-	-	-
	Senegal DHS 2005 <sup>18</sup>	2005	1955-1951	21.5	216	-	-	-	-
Senegal DHS 2005 <sup>18,c</sup>	2005	1980-1946	20.8	-	-	-	-	-	
Sierra Leone	Sierra Leone DHS 2008 <sup>3,d</sup>	2008	-	18.8	-	16.1	-	-	-
	Sierra Leone DHS 2013 <sup>3,d</sup>	2013	-	18.1	-	16.5	-	-	-
South Africa	South Africa DHS 2003 <sup>19,c</sup>	2003	1954-1983	-	-	18.6	-	-	-
	South Africa DHS 2003 <sup>19,c</sup>	2003	1954-1978	-	-	18.6	-	-	-
	South Africa DHS 2003 <sup>19</sup>	2003	1969-1973	-	-	18.2	912	-	-
	South Africa DHS 2003 <sup>19</sup>	2003	1959-1963	-	-	18.6	810	-	-
	South Africa DHS 2003 <sup>19</sup>	2003	1954-1978	-	-	18.5	4364	-	-
	South Africa DHS 2003 <sup>19</sup>	2003	1954-1983	-	-	18.4	5437	-	-

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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
	South Africa DHS 2003 <sup>19,b</sup>	2003	1954-1983	-	-	18.4	-	-	-
	South Africa DHS 2003 <sup>19</sup>	2003	1979-1983	-	-	18.4	1073	-	-
	South Africa DHS 2003 <sup>19,a</sup>	2003	1984-1988	-	-	-	600	-	-
	South Africa DHS 2003 <sup>19</sup>	2003	1964-1968	-	-	18.4	990	-	-
	South Africa DHS 2003 <sup>19</sup>	2003	1954-1958	-	-	19.2	667	-	-
	South Africa DHS 2003 <sup>19,b</sup>	2003	1954-1978	-	-	18.4	-	-	-
	South Africa DHS 2003 <sup>19</sup>	2003	1974-1978	-	-	18.3	987	-	-
Tanzania	Tanzania DHS 1991-92 <sub>3,d</sub>	1992	-	17.2	-	16.8	-	-	-
	Tanzania DHS 1996 <sub>3,d</sub>	1996	-	18.1	-	16.9	-	-	-
	Tanzania DHS 1999 <sub>3,d</sub>	1999	-	17.8	-	16.7	-	-	-
	Tanzania AIS 2003-04 <sub>3,d</sub>	2003	-	18.7	-	17.6	-	-	-
	Tanzania DHS 2004-05 <sub>3,d</sub>	2004	-	18.4	-	17	-	-	-
	Tanzania AIS 2007-08 <sub>3,d</sub>	2007	-	18.5	-	17.3	-	-	-
	Tanzania DHS 2010 <sub>3,d</sub>	2010	-	18.5	-	17.4	-	-	-
	Tanzania AIS 2011-12 <sub>3,d</sub>	2012	-	18.7	-	18	-	-	-
	Tanzania DHS 2015-16 <sub>3,d</sub>	2015	-	18.2	-	17.3	-	-	-
Togo	Togo DHS 2013/2014 <sup>20,b</sup>	2013-2014	1954-1988	19.6	-	-	-	-	-
	Togo DHS 2013/2014 <sup>20,a</sup>	2013-2014	1989-1998	-	817	-	2294	-	-
	Togo DHS 2013/2014 <sup>20</sup>	2013-2014	1984-1988	19.0	607	18.1	1660	-	-
	Togo DHS 2013/2014 <sup>20,b</sup>	2013-2014	1964-1988	-	-	17.7	-	-	-
	Togo DHS 2013/2014 <sup>20</sup>	2013-2014	1964-1988	19.4	2384	18.2	6085	-	-
	Togo DHS 2013/2014 <sup>20,b</sup>	2013-2014	1964-1988	-	-	17.7	-	-	-
	Togo DHS 2013/2014 <sup>20,c</sup>	2013-2014	1964-1993	-	-	18.6	-	-	-
	Togo DHS 2013/2014 <sup>20,c</sup>	2013-2014	1964-1993	-	-	18.6	-	-	-
	Togo DHS 2013/2014 <sup>20</sup>	2013-2014	1964-1993	19.3	2957	18.2	7593	-	-
	Togo DHS 2013/2014 <sup>20</sup>	2013-2014	1974-1978	19.5	492	18.3	1296	-	-
	Togo DHS 2013/2014 <sup>20</sup>	2013-2014	1954-1988	19.6	2843	-	-	-	-
	Togo DHS 2013/2014 <sup>20</sup>	2013-2014	1989-1993	18.9	572	18.2	1507	-	-

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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
	Togo DHS 2013/2014 <sup>20,a</sup>	2013-2014	1994-1998	-	246	-	787	-	-
	Togo DHS 2013/2014 <sup>20</sup>	2013-2014	1979-1983	19.1	519	18.1	1420	-	-
	Togo DHS 2013/2014 <sup>20</sup>	2013-2014	1964-1968	19.7	338	18.3	791	-	-
	Togo DHS 2013/2014 <sup>20</sup>	2013-2014	1954-1993	19.4	3414	-	-	-	-
	Togo DHS 2013/2014 <sup>20</sup>	2013-2014	1969-1973	19.7	428	18.2	920	-	-
	Togo DHS 2013/2014 <sup>20,c</sup>	2013-2014	1954-1988	19.5	-	-	-	-	-
Uganda	Uganda DHS 2011 <sup>21</sup>	2011	1987-1991	18.4	272	17.5	1495	-	-
	Uganda DHS 2011 <sup>21</sup>	2011	1977-1981	18.5	319	16.8	1077	-	-
	Uganda DHS 2011 <sup>21,c</sup>	2011	1962-1991	-	-	17.6	-	-	-
	Uganda DHS 2011 <sup>21,b</sup>	2011	1957-1986	18.5	-	-	-	-	-
	Uganda DHS 2011 <sup>21,c</sup>	2011	1962-1986	-	-	17.4	-	-	-
	Uganda DHS 2011 <sup>21</sup>	2011	1972-1976	18.5	267	16.7	1024	-	-
	Uganda DHS 2011 <sup>21,c</sup>	2011	1957-1991	18.4	-	-	-	-	-
	Uganda DHS 2011 <sup>21,a</sup>	2011	1987-1996	-	494	-	2419	-	-
	Uganda DHS 2011 <sup>21,b</sup>	2011	1957-1991	18.6	-	-	-	-	-
	Uganda DHS 2011 <sup>21,b</sup>	2011	1962-1991	-	-	16.8	-	-	-
	Uganda DHS 2011 <sup>21</sup>	2011	1962-1986	18.6	1284	16.8	4977	-	-
	Uganda DHS 2011 <sup>21</sup>	2011	1962-1991	18.5	1556	17.0	6467	-	-
	Uganda DHS 2011 <sup>21,a</sup>	2011	1992-1996	-	222	-	924	-	-
	Uganda DHS 2011 <sup>21,c</sup>	2011	1957-1986	18.6	-	-	-	-	-
	Uganda DHS 2011 <sup>21</sup>	2011	1982-1986	18.8	349	17.0	1556	-	-
	Uganda DHS 2011 <sup>21</sup>	2011	1957-1991	18.5	1678	-	-	-	-
	Uganda DHS 2011 <sup>21,b</sup>	2011	1962-1986	-	-	16.7	-	-	-
	Uganda DHS 2011 <sup>21</sup>	2011	1957-1986	18.6	1406	-	-	-	-
	Uganda DHS 2011 <sup>21</sup>	2011	1962-1966	18.5	157	16.8	587	-	-
	Uganda DHS 2011 <sup>21</sup>	2011	1967-1971	18.6	191	16.7	729	-	-
Zambia	Zambia DHS 2013/2014 <sup>22</sup>	2013-2014	1974-1978	18.3	1652	17.3	2003	-	-
	Zambia DHS 2013/2014 <sup>22,b</sup>	2013-2014	1954-1988	17.9	-	-	-	-	-
	Zambia DHS 2013/2014 <sup>22,c</sup>	2013-2014	1964-1988	-	-	17.9	-	-	-
	Zambia DHS 2013/2014 <sup>22,c</sup>	2013-2014	1964-1988	-	-	16.9	-	-	-
	Zambia DHS 2013/2014 <sup>22</sup>	2013-2014	1984-1988	18.3	1897	17.5	2768	-	-
	Zambia DHS 2013/2014 <sup>22</sup>	2013-2014	1964-1993	18.3	9825	17.4	12441	-	-
	Zambia DHS 2013/2014 <sup>22</sup>	2013-2014	1989-1993	18.2	2008	17.7	2717	-	-

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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
	Zambia DHS 2013/2014 <sup>22,b</sup>	2013-2014	1954-1993	17.8	-	-	-	-	-
	Zambia DHS 2013/2014 <sup>22,b</sup>	2013-2014	1954-1988	18.8	-	-	-	-	-
	Zambia DHS 2013/2014 <sup>22</sup>	2013-2014	1964-1988	18.3	7819	17.3	9721	-	-
	Zambia DHS 2013/2014 <sup>22</sup>	2013-2014	1954-1988	18.3	9028	-	-	-	-
	Zambia DHS 2013/2014 <sup>22,b</sup>	2013-2014	1954-1993	18.8	-	-	-	-	-
	Zambia DHS 2013/2014 <sup>22,a</sup>	2013-2014	1989-1998	-	3602	-	4496	-	-
	Zambia DHS 2013/2014 <sup>22</sup>	2013-2014	1979-1983	18.1	1917	17.2	2465	-	-
	Zambia DHS 2013/2014 <sup>22</sup>	2013-2014	1954-1993	18.3	11036	-	-	-	-
	Zambia DHS 2013/2014 <sup>22</sup>	2013-2014	1969-1973	18.3	1383	17.3	1464	-	-
	Zambia DHS 2013/2014 <sup>22</sup>	2013-2014	1964-1968	18.4	969	17.4	1017	-	-
	Zambia DHS 2013/2014 <sup>22,a</sup>	2013-2014	1994-1998	-	1592	-	1780	-	-
	Zambia DHS 2013/2014 <sup>22,c</sup>	2013-2014	1964-1993	-	-	18.1	-	-	-
	Zambia DHS 2013/2014 <sup>22,c</sup>	2013-2014	1964-1993	-	-	16.9	-	-	-
Zimbabwe	Zimbabwe DHS 2010/2011 <sup>23,b</sup>	2010-2011	1961-1990	-	-	18.3	-	-	-
	Zimbabwe DHS 2010/2011 <sup>23,a</sup>	2010-2011	1961-1990	-	-	-	-	-	-
	Zimbabwe DHS 2010/2011 <sup>23</sup>	2010-2011	1966-1970	20.9	583	18.7	730	-	-
	Zimbabwe DHS 2010/2011 <sup>23</sup>	2010-2011	1971-1975	20.7	821	18.9	1043	-	-
	Zimbabwe DHS 2010/2011 <sup>23,a</sup>	2010-2011	1961-1990	-	4886	18.9	6850	-	-
	Zimbabwe DHS 2010/2011 <sup>23,c</sup>	2010-2011	1956-1985	20.6	4255	-	-	-	-
	Zimbabwe DHS 2010/2011 <sup>23,b</sup>	2010-2011	1991-1995	-	429	-	661	-	-
	Zimbabwe DHS 2010/2011 <sup>23</sup>	2010-2011	1961-1965	20.5	378	18.1	618	-	-
	Zimbabwe DHS 2010/2011 <sup>23</sup>	2010-2011	1986-1995	-	1432	-	2226	-	-
	Zimbabwe DHS 2010/2011 <sup>23,a</sup>	2010-2011	1956-1990	-	5257	-	-	-	-
	Zimbabwe DHS 2010/2011 <sup>23,b</sup>	2010-2011	1981-1985	20.6	1153	19.3	1625	-	-
	Zimbabwe DHS 2010/2011 <sup>23,c</sup>	2010-2011	1956-1985	20.8	-	-	-	-	-
	Zimbabwe DHS 2010/2011 <sup>23</sup>	2010-2011	1961-1985	-	-	18.4	-	-	-
	Zimbabwe DHS 2010/2011 <sup>23,a</sup>	2010-2011	1986-1990	-	1003	18.9	1565	-	-

Continued on next page

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
	Zimbabwe DHS 2010/2011 <sup>23,a</sup>	2010-2011	1961-1985	20.6	3886	18.9	5283	-	-
	Zimbabwe DHS 2010/2011 <sup>23</sup>	2010-2011	1976-1980	20.6	949	19.1	1266	-	-
	Zimbabwe DHS 2010/2011 <sup>23,a</sup>	2010-2011	1956-1985	20.6	-	-	-	-	-
	Zimbabwe DHS 2010/2011 <sup>23</sup>	2010-2011	1961-1985	-	-	20.0	-	-	-

**Data accessed on 16 Mar 2017**

Please refer to original source for methods of estimation

<sup>a</sup> Data omitted because less than 50 percent of respondents had intercourse for the first time before reaching the beginning of the age group.<sup>b</sup> Rural.<sup>c</sup> Urban.<sup>d</sup> Median age at first sexual intercourse for women aged 20-49; Median age at first sexual intercourse for men aged 20-49(54,59).**Data Sources:**<sup>1</sup> Institut National de la Statistique et de l'Analyse Économique (INSAE) et ICF International, 2013. Enquête Démographique et de Santé du Bénin 2011-2012. Calverton, Maryland, USA : INSAE et ICF International.<sup>2</sup> Central Statistics Office [Botswana], Ministry of Finance and Development Planning [Botswana]. Family Health Survey 2 (1998). Institute for resource development. Macro Systems Inc. Columbia, Maryland USA<sup>3</sup> ICF International, 2015. The DHS (Demographic and Health Surveys) Program STATcompiler. Funded by USAID. <http://www.statcompiler.com>. Accessed on March 16 2017.<sup>4</sup> Institut de Statistiques et d'Études Économiques du Burundi (ISTEEBU), Ministère de la Santé Publique et de la Lutte contre le Sida [Burundi] (MSPLS), et ICF International. 2012. Enquête Démographique et de Santé Burundi 2010. Bujumbura, Burundi : ISTEEBU, MSPLS, et ICF International.<sup>5</sup> Instituto Nacional de Estatística (INE) [Cabo Verde], Ministério da Saúde, e Macro International. 2008. Segundo Inquérito Demográfico e de Saúde Reprodutiva, Cabo Verde, IDSR-II, 2005. Calverton, Maryland, USA: INE<sup>6</sup> Direction des Statistiques Démographiques et Sociales, Division des Statistiques et des Études Économiques, Ministère de l'Économie, du Plan et de la Coopération Internationale [Central African Republic]. Enquête Démographique et de Santé 1994-95, Central African Republic. Macro International Inc.<sup>7</sup> Ouagadji, Bandomal, Kostelngar Nodjimadji, Tchobkréo Bagamla, Riradjim Madnodji, Joël Sibaye Tokindang, Ningam Ngakoutou, Joël Nodjimbatem Ngoniri, Caman Bédaou, Donato Koyalta, Bernard Barrère, Monique Barrère. 2004. Enquête Démographique et de Santé Tchad 2004. Calverton, Maryland, U.S.A. : INSEED et ORC Macro.<sup>8</sup> Centre Nationale de la Statistique et des Études Économiques (CNSEE) [Congo] et ICF International. 2013 Enquête Démographique et de Santé du Congo (EDSC-II) 2011-2012. Calverton, Maryland, USA : CNSEE et ICF International.<sup>9</sup> Ministerio de Sanidad y Bienestar Social, Ministerio de Economía, Planificación e Inversiones Públicas, e ICF International. 2012. Encuesta Demográfica y de Salud (EDSGE-I) 2011. Calverton, Maryland, USA<sup>10</sup> National Statistics and Evaluation Office (NSEO) [Eritrea] and ORC Macro. 2003. Eritrea Demographic and Health Survey 2002. Calverton, Maryland, USA: National Statistics and Evaluation Office and ORC Macro.<sup>11</sup> Central Statistical Office (CSO) [Swaziland], and Macro International Inc. 2008. Swaziland Demographic and Health Survey 2006-07. Mbabane, Swaziland: Central Statistical Office and Macro International Inc.<sup>12</sup> Central Statistical Agency [Ethiopia] and ICF International. 2012. Ethiopia Demographic and Health Survey 2011. Addis Ababa, Ethiopia and Calverton, Maryland, USA: Central Statistical Agency and ICF International.<sup>13</sup> Institut National de la Statistique. Ministère de Plan, Conakry, Guinée. Enquête Démographique et de Santé et à Indicateurs Multiples (EDS-MICS) 2012, Guinea. ICF International, Calverton, Maryland, USA<sup>14</sup> Ministry of Health and Social Welfare (MOHSW) [Lesotho] and ICF Macro. 2010. Lesotho Demographic and Health Survey 2009. Maseru, Lesotho: MOHSW and ICF Macro.<sup>15</sup> Liberia Institute of Statistics and Geo-Information Services (LISGIS), Ministry of Health and Social Welfare [Liberia], National AIDS Control Program [Liberia], and ICF International. 2014. Liberia Demographic and Health Survey 2013. Monrovia, Liberia: Liberia Institute of Statistics and Geo-Information Services (LISGIS) and ICF International.<sup>16</sup> Institut National de la Statistique (INSTAT) et ICF Macro. 2010. Enquête Démographique et de Santé de Madagascar 2008-2009. Antananarivo, Madagascar : INSTAT et ICF Macro.<sup>17</sup> Institut National de la Statistique (INS) et ICF International, 2013. Enquête Démographique et de Santé et à Indicateurs Multiples du Niger 2012. Calverton, Maryland, USA : INS et ICF International.<sup>18</sup> Agence Nationale de la Statistique et de la Démographie (ANSD) [Sénégal], et ICF International. 2015. Sénégal : Enquête Démographique et de Santé Continue (EDS-Continue) 2014. Rockville, Maryland, USA : ANSD et ICF International.<sup>19</sup> Department of Health, Medical Research Council, OrcMacro. 2007. South Africa Demographic and Health Survey 2003. Pretoria: Department of Health.<sup>20</sup> Ministère de la Planification, du Développement et de l'Aménagement du Territoire (MPDAT), Ministère de la Santé (MS) et ICF International, 2015. Enquête Démographique et de Santé au Togo 2013-2014. Rockville, Maryland, USA : MPDAT, MS et ICF International.<sup>21</sup> Uganda Bureau of Statistics (UBOS) and ICF International Inc. 2012. Uganda Demographic and Health Survey 2011. Kampala, Uganda: UBOS and Calverton, Maryland: ICF International Inc.<sup>22</sup> Central Statistical Office (CSO) [Zambia], Ministry of Health (MOH) [Zambia], and ICF International. 2014. Zambia Demographic and Health Survey 2013-14. Rockville, Maryland, USA: Central Statistical Office, Ministry of Health, and ICF International.<sup>23</sup> Zimbabwe National Statistics Agency (ZIMSTAT) and ICF International. 2012. Zimbabwe Demographic and Health Survey 2010-11. Calverton, Maryland: ZIMSTAT and ICF International Inc.

Table 47: Average number of sexual partners in Africa

Country	Study	Period of estimate	Year/period	Birth cohort	Male Mean(N)	Female Mean(N)	Total Mean (N)
-	-	-	-	-	-	-	-

**Data accessed on 8 Aug 2013**

Please refer to original source for methods of estimation

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

Country	Study	Year/period	Birth cohort	N surveyed	N sexual active	% among sexually active
-	-	-	-	-	-	-

**Data accessed on 8 Aug 2013**

Please refer to original source for methods of estimation

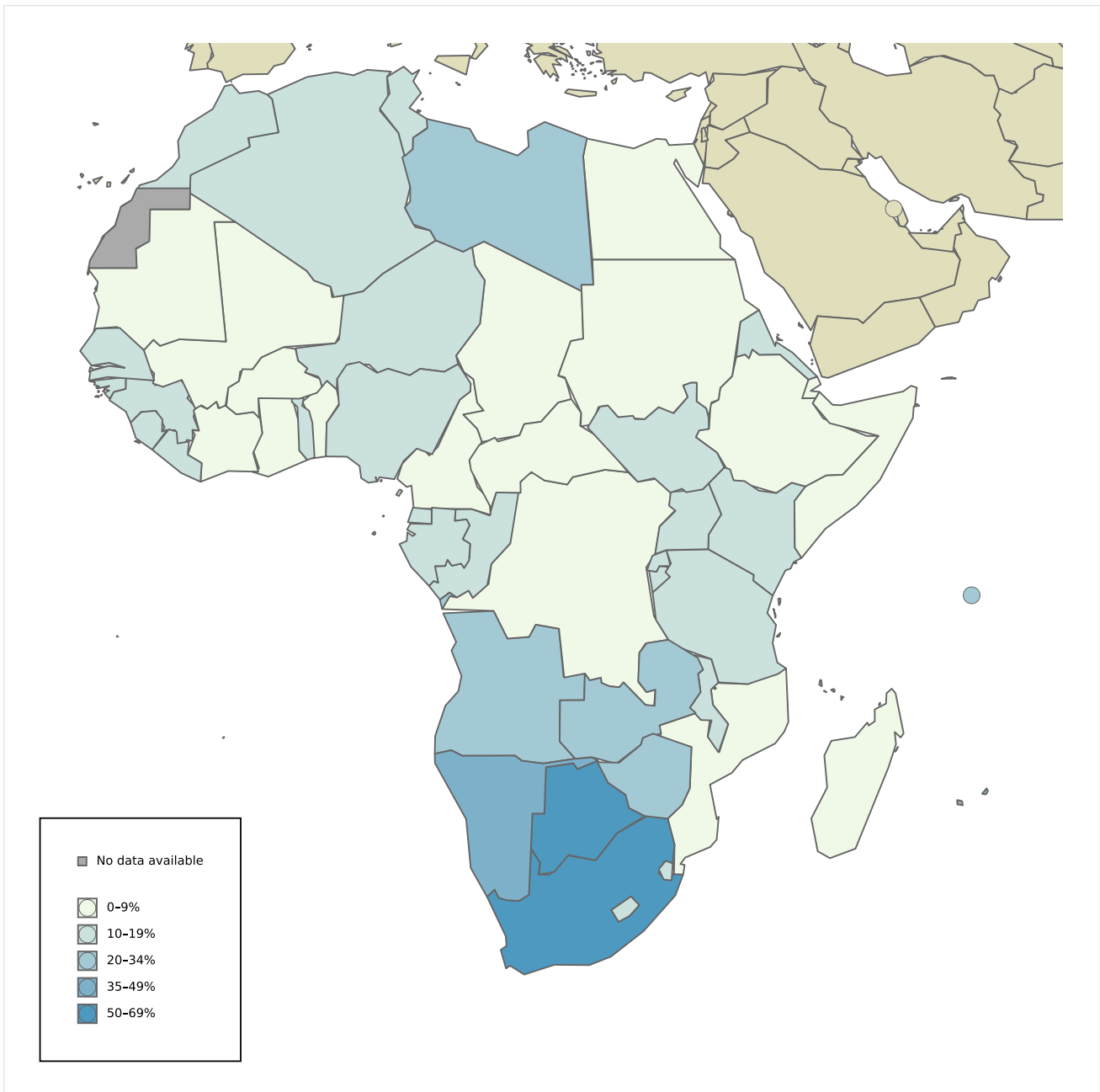
## **7 HPV preventive strategies**

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 Africa.

### **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 Africa

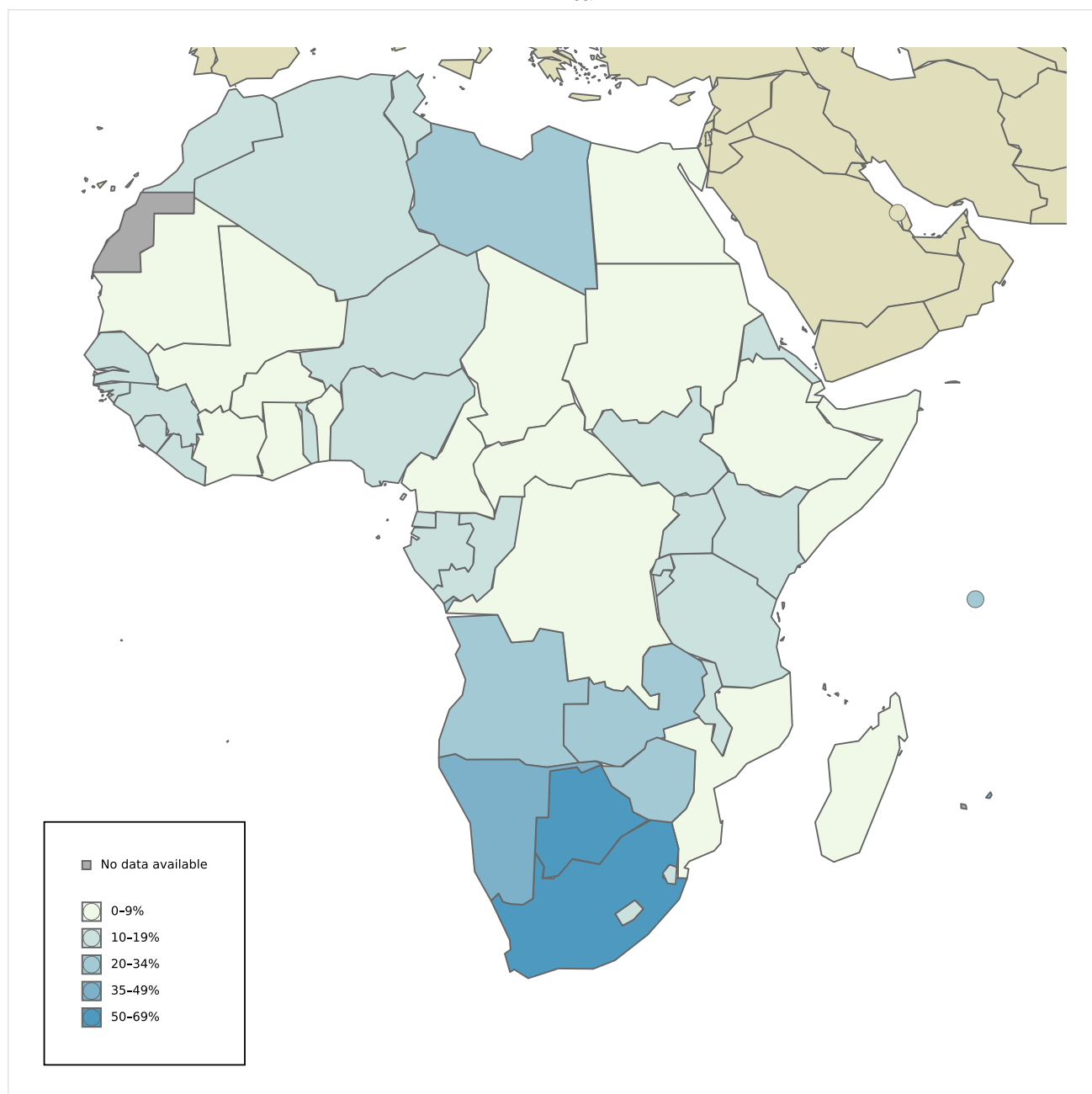


Data accessed on 31 Aug 2022

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 Africa



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 Africa

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
Algeria	Algeria	Yes	2003	No	25-65 (cytology, 3 years)
Angola	Angola	No	-	-	-
Benin	Benin	No	-	-	-
Botswana	Botswana	No	-	-	-
Burkina Faso	Burkina Faso	Yes	2016	No	25-55 (VIA, 3 years)
Burundi	Burundi	No	-	-	-
Cabo Verde	Cape Verde	No	-	-	-
Cameroon	Cameroon	No	-	-	-

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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
Central African Republic	Central African Republic	No	-	-	-
Chad	Chad	No	-	-	-
Comoros	Comoros	No	-	-	-
Congo	Congo	No	-	-	-
Côte d'Ivoire	Cote d'Ivoire	Yes	2010	No	25-55 (VIA, 3 years)
Democratic Republic of the Congo	Congo, DR	No	-	-	-
Djibouti	Djibouti	No	-	-	-
Egypt	Egypt	No	-	-	-
Equatorial Guinea	Equatorial Guinea	No	-	-	-
Eritrea	Eritrea	No	-	-	-
Eswatini	Swaziland	No	-	-	-
Ethiopia	Ethiopia	Yes	2015	No	30-49 (VIA, 5 years)
Gabon	Gabon	Yes	2014	No	25-65 (VIA, 3 years)
Gambia	Gambia	No	-	-	-
Ghana	Ghana	No	-	-	-
Guinea	Guinea	Yes	Unk	No	25-65 (VIA, Unk years)
Guinea-Bissau	Guinea-Bissau	No	-	-	-
Kenya	Kenya	Yes	2018	No	25-49 (VIA, 5 years); 25-30 (cytology, 5 years); 30-49 (HPV test, 5 years)
Lesotho	Lesotho	No	-	-	-
Liberia	Liberia	No	-	-	-
Libya	Libya	No	-	-	-
Madagascar	Madagascar	Yes	2007	No	25-49 (VIA, NA years)
Malawi	Malawi	Yes	2004	No	30-49 (VIA, 5 years)
Mali	Mali	No	-	-	-
Mauritania	Mauritania	No	-	-	-
Mauritius	Mauritius	Yes	2001	No	30-60 (VIA, 5 years)
Morocco	Morocco	Yes	2010	No	30-49 (VIA, 3 years)
Mozambique	Mozambique	Yes	2009	No	30-55 (VIA, NA years)
Namibia	Namibia	No	-	-	-
Niger	Niger	No	-	-	-
Nigeria	Nigeria	No	-	-	-
Rwanda	Rwanda	Yes	2013	No	35-45 (HPV test OR VIA, 7 years)
Sao Tome and Principe	Sao Tome and Principe	No	-	-	-
Senegal	Senegal	Yes	2018	No	30-69 (VIA, 3 years)
Seychelles	Seychelles	No	-	-	-
Sierra Leone	Sierra Leone	No	-	-	-
Somalia	Somalia	No	-	-	-
South Africa	South Africa	Yes	2017	No	25-55 (cytology, 5 years); 25-55 (HPV test, 10 years)
South Sudan	South Sudan	No	-	-	-
Sudan	Sudan	No	-	-	-
Togo	Togo	No	-	-	-
Tunisia	Tunisia	Yes	2006	No	35-59 (cytology, 5 years)
Uganda	Uganda	Yes	2020	No	25-49 (VIA, 3 years); 30-49 (HPV test, Unk years)
United Republic of Tanzania	Tanzania	No	-	-	-
Zambia	Zambia	Yes	2006	No	>=18 (VIA, 3 years)
Zimbabwe	Zimbabwe	No	-	-	-

Data accessed on 31 Aug 2022

Data Sources:

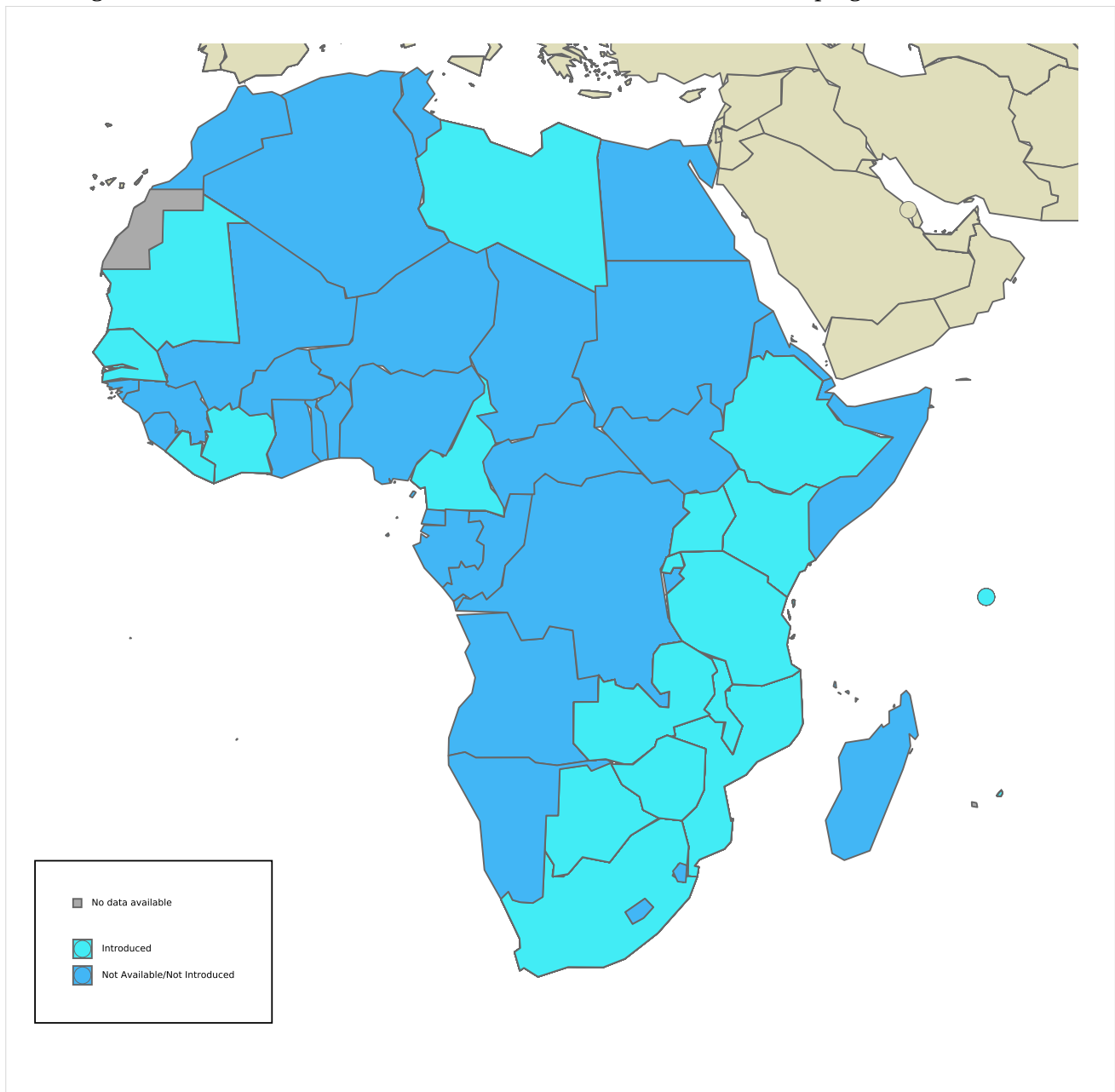
Bruni L, Serrano B, Roura E, Alemany L, Cowan M, Herrero R, et al. Cervical cancer screening programmes and age-specific coverage estimates for 202 countries and territories worldwide: a review and synthetic analysis. *Lancet Glob Health*. 2022;10(8):e1115.



## 7.2 HPV vaccination

### 7.2.1 HPV vaccine licensure and introduction

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



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 Africa

Country	Sex	Programme	Introduction year	Year of estimation of HPV vaccination coverage	HPV coverage – first dose (%)	HPV coverage – last dose (%)
Botswana	Female	Introduced	2015	2021	22	-
Cabo Verde	Female	Introduced	2021	2021	-	90
Cameroon	Female	Introduced	2020	2021	5	20
Cameroon	Male	Introduced	2020	2021	-	-
Côte d'Ivoire	Female	Introduced	2019	2021	41	34
Ethiopia	Female	Introduced	2018	2021	75	86
Gambia	Female	Introduced	2019	2021	30	34
Kenya	Female	Introduced	2019	2021	44	29
Liberia	Female	Introduced	2019	2021	30	43
Libya	Female	Introduced	2013	2021	-	-
Malawi	Female	Introduced	2019	2021	12	14
Mauritania	Female	Introduced	2021	2021	-	39
Mauritania	Male	Introduced	2021	2021	-	-
Mauritius	Female	Introduced	2016	2021	55	78
Mozambique	Female	Introduced	2021	2021	-	57
Rwanda	Female	Introduced	2011	2021	73	78
Senegal	Female	Introduced	2018	2021	21	39
Seychelles	Female	Introduced	2014	2021	39	84
South Africa	Female	Introduced	2014	2021	34	37
Uganda	Female	Introduced	2015	2021	44	75
United Republic of Tanzania	Female	Introduced	2018	2021	57	73
Zambia	Female	Introduced	2019	2021	33	45
Zimbabwe	Female	Introduced	2018	2021	40	67

**Data accessed on 24 Oct 2022****Data Sources:**

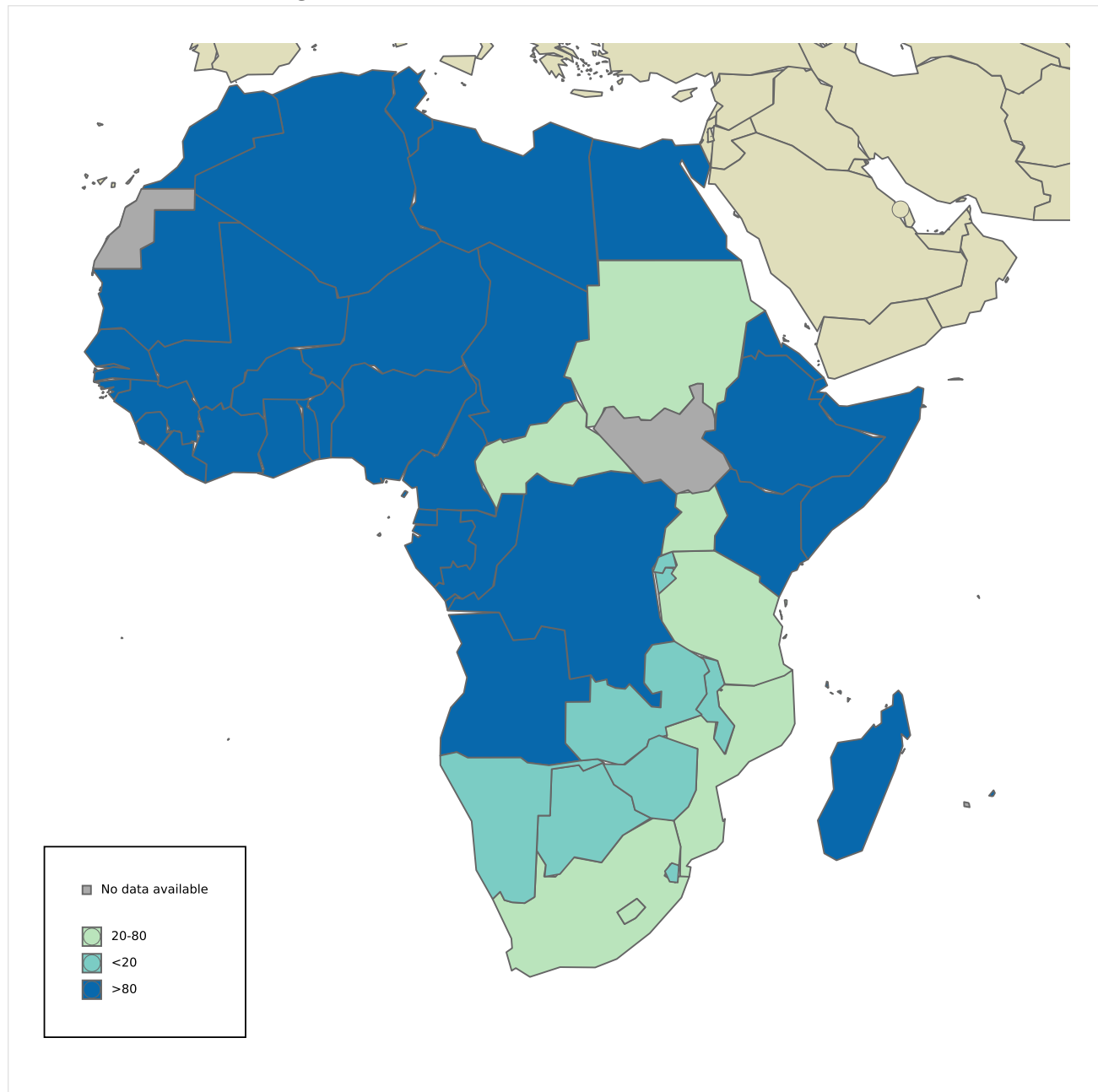
Human papillomavirus (HPV) vaccination coverage. World Health Organization. 2022. Available from: <https://immunizationdata.who.int/pages/coverage/hpv.html>, accessed [24 Oct 2022]

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 Africa



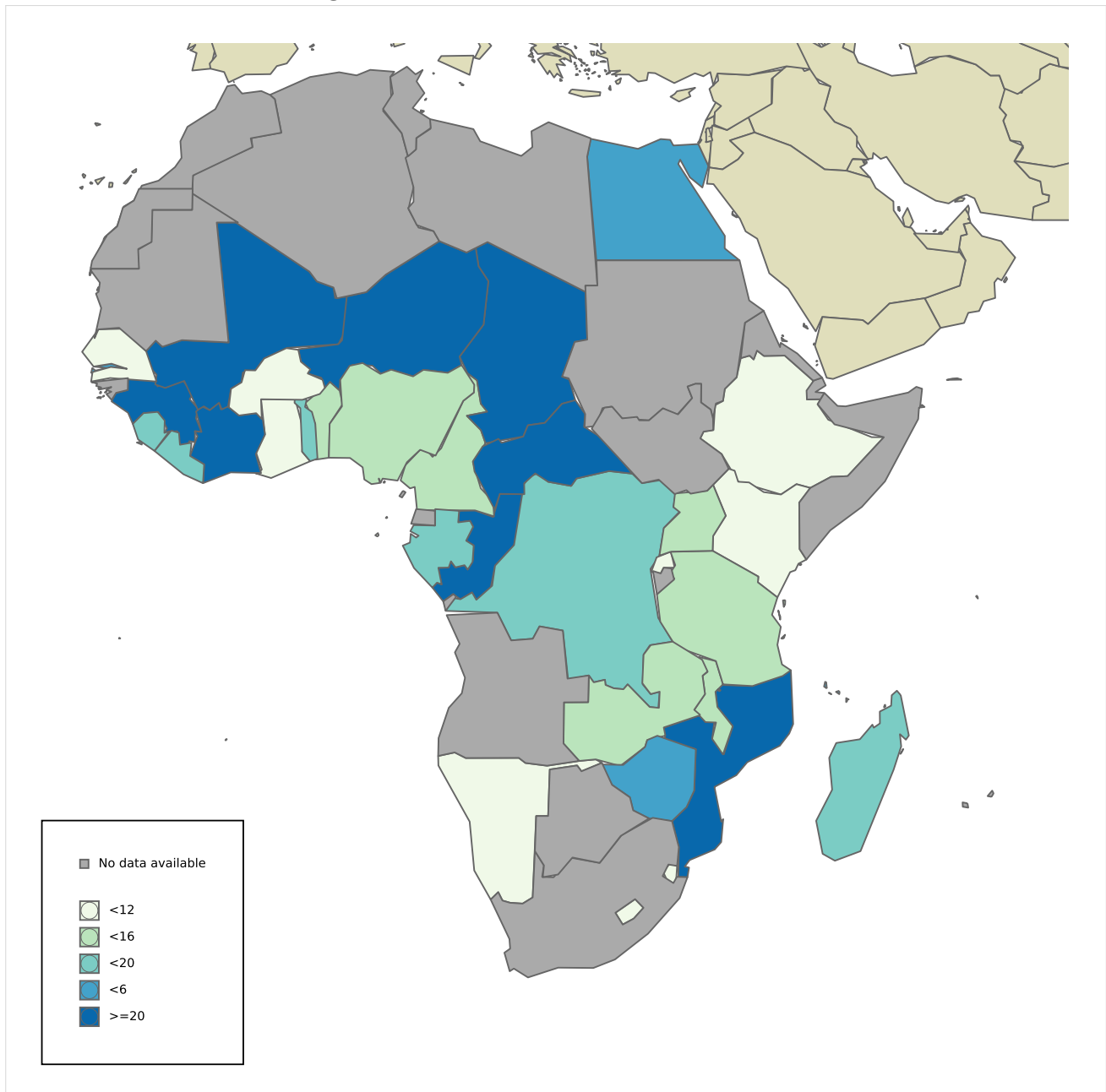
**Data accessed on 31 Aug 2015**

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 Africa

**Data accessed on 16 Mar 2017**

Please refer to original source for methods of estimation

<sup>a</sup> Year of estimation: 2005-2010<sup>b</sup> Percentage of all 15- to 19-year-olds who report having had sex before the age of 15 years in MEASURE DHS (Demographic and Health Surveys), STATcompiler (<http://www.statcompiler.com/>) or HIV/AIDS Survey Indicator database (<http://www.measuredhs.com/hivdata/>).<sup>c</sup> Percentage of all 15- to 19-year-olds who report having had sex before the age of 15 years.<sup>d</sup> Year of estimation: 2010<sup>e</sup> The main sources of data were surveys by the MEASURE DHS (Demographic and Health Surveys) project and published estimates from Reproductive National Health Surveys.<sup>f</sup> Year of estimation: not reported<sup>g</sup> Year of estimation: 2011-2012<sup>h</sup> Year of estimation: 2011<sup>i</sup> Year of estimation: 2013-2014<sup>j</sup> Year of estimation: 2012<sup>k</sup> Year of estimation: 2014<sup>l</sup> Year of estimation: 2013<sup>m</sup> Year of estimation: 2012-2013<sup>n</sup> Year of estimation: 2015-2016<sup>o</sup> Year of estimation: 2014-2015<sup>p</sup> Year of estimation: 2008-2009**Data Sources:**<sup>1</sup> The sexual behaviour of adolescents in sub-Saharan Africa: patterns and trends from national surveys. Doyle AM, Mavedzenge SN, Plummer ML, Ross DA. *Trop Med Int Health*. 2012 Jul;17(7):796-807. doi: 10.1111/j.1365-3156.2012.03005.x. Review. PMID:22594660.<sup>2</sup> ICF International, 2015. The DHS (Demographic and Health Surveys) Program STATcompiler. Funded by USAID. <http://www.statcompiler.com>. Accessed on March 16 2017.<sup>3</sup> Sexual behaviour in context: a global perspective. Wellings K, Collumbien M, Slaymaker E, et al. *Lancet*. 2006 Nov 11;368(9548):1706-28. Review. Erratum in: *Lancet*. 2007 Jan 27;369(9558):274. PMID:17098090.

## 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
<b>HPV prevalence and HPV type distribution for cytologically normal women</b>	
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, <i>J Infect Dis</i> 2010; 202: 1789. 2) De Sanjosé S, <i>Lancet Infect Dis</i> 2007; 7: 453
Algeria	Hammouda D, <i>Int J Cancer</i> 2005; 113: 483   Hammouda D, <i>Int J Cancer</i> 2011; 128: 2224, Hammouda D, <i>Int J Cancer</i> 2005; 113: 483
Benin	Piras F, <i>Viol J</i> 2011; 8: 514
Cameroon	Untiet S, <i>Int J Cancer</i> 2014; 135: 1911
Congo	Hovland S, <i>Br J Cancer</i> 2010; 102: 957   Sangwa-Lugoma G, <i>Sex Transm Dis</i> 2011; 38: 308, Sangwa-Lugoma G, <i>Sex Transm Dis</i> 2011; 38: 308
Côte d'Ivoire	Adjorlolo-Johnson G, <i>BMC Infect Dis</i> 2010; 10: 242, Adjorlolo-Johnson G, <i>BMC Infect Dis</i> 2010; 10: 242   La Ruche G, <i>Int J Cancer</i> 1998; 76: 480
Egypt	Abdel Aziz MT, <i>Med Sci Monit</i> 2006; 12: MT43
Ethiopia	Leyh-Bannurah SR, <i>Infect Agents Cancer</i> 2014; 9: 33   Ruland R, <i>Eur J Epidemiol</i> 2006; 21: 727
Gabon	Si-Mohamed A, <i>J Med Virol</i> 2005; 77: 430
Gambia	Wall SR, <i>Br J Cancer</i> 2005; 93: 1068
Guinea	Keita N, <i>Br J Cancer</i> 2009; 101: 202
Kenya	De Vuyst H, <i>Cancer Causes Control</i> 2010; 21: 2309   De Vuyst H, <i>Sex Transm Dis</i> 2003; 30: 137   Maranga IO, <i>Open Virol J</i> 2013; 7: 19   Temmerman M, <i>Int J Gynaecol Obstet</i> 1999; 65: 171   Yamada R, <i>J Med Virol</i> 2008; 80: 847, De Vuyst H, <i>Sex Transm Dis</i> 2003; 30: 137, De Vuyst H, <i>Cancer Causes Control</i> 2010; 21: 2309   De Vuyst H, <i>Sex Transm Dis</i> 2003; 30: 137, De Vuyst H, <i>Cancer Causes Control</i> 2010; 21: 2309   De Vuyst H, <i>Sex Transm Dis</i> 2003; 30: 137   Maranga IO, <i>Open Virol J</i> 2013; 7: 19
Mali	Schluteran NH, <i>BMC Womens Health</i> 2013; 13: 4   Tracy JK, <i>Trop Med Int Health</i> 2011; 16: 1432
Morocco	Alhamany Z, <i>J Infect Dev Ctries</i> 2010; 4: 732   Amrani M, <i>J Clin Virol</i> 2003; 27: 286   Chaouki N, <i>Int J Cancer</i> 1998; 75: 546, Alhamany Z, <i>J Infect Dev Ctries</i> 2010; 4: 732   Amrani M, <i>J Clin Virol</i> 2003; 27: 286   Bennani B, <i>J Infect Dev Ctries</i> 2012; 6: 543   Chaouki N, <i>Int J Cancer</i> 1998; 75: 546, Bennani B, <i>J Infect Dev Ctries</i> 2012; 6: 543   Chaouki N, <i>Int J Cancer</i> 1998; 75: 546
Mozambique	Castellsagué X, <i>Lancet</i> 2001; 358: 1429   Naucler P, <i>J Gen Virol</i> 2011; 92: 2784, Castellsagué X, <i>Lancet</i> 2001; 358: 1429
Nigeria	Akarolo-Anthony SN, <i>BMC Infect Dis</i> 2013; 13: 521   Gage JC, <i>Int J Cancer</i> 2012; 130: 2111   Pimentel VM, <i>J Low Genit Tract Dis</i> 2013; 17: 203   Thomas JO, <i>Br J Cancer</i> 2004; 90: 638, Thomas JO, <i>Br J Cancer</i> 2004; 90: 638, Gage JC, <i>Int J Cancer</i> 2012; 130: 2111   Pimentel VM, <i>J Low Genit Tract Dis</i> 2013; 17: 203   Thomas JO, <i>Br J Cancer</i> 2004; 90: 638
Rwanda	Singh DK, <i>J Infect Dis</i> 2009; 199: 1851   Veldhuijzen NJ, <i>Sex Transm Dis</i> 2012; 39: 128
Senegal	Astori G, <i>Intervirology</i> 1999; 42: 221   Hanisch RA, <i>J Clin Virol</i> 2013; 58: 696   Hawes SE, <i>J Infect Dis</i> 2003; 188: 555   Mbaye el HS, <i>J Med Virol</i> 2014; 86: 248   Xi LF, <i>Int J Cancer</i> 2003; 103: 803, Astori G, <i>Intervirology</i> 1999; 42: 221   Xi LF, <i>Int J Cancer</i> 2003; 103: 803
South Africa	Allan B, <i>J Clin Microbiol</i> 2008; 46: 740   Denny L, <i>JAMA</i> 2005; 294: 2173   Jones HE, <i>J Clin Microbiol</i> 2007; 45: 1679   Mbulawa ZZ, <i>J Gen Virol</i> 2010; 91: 3023   McDonald AC, <i>PLoS ONE</i> 2012; 7: e44332   Richter K, <i>S Afr Med J</i> 2013; 103: 313   Wright TC, <i>JAMA</i> 2000; 283: 81, Allan B, <i>J Clin Microbiol</i> 2008; 46: 740, Allan B, <i>J Clin Microbiol</i> 2008; 46: 740   Jones HE, <i>J Clin Microbiol</i> 2007; 45: 1679   McDonald AC, <i>PLoS ONE</i> 2012; 7: e44332, Allan B, <i>J Clin Microbiol</i> 2008; 46: 740   Jones HE, <i>J Clin Microbiol</i> 2007; 45: 1679   Mbulawa ZZ, <i>J Gen Virol</i> 2010; 91: 3023   McDonald AC, <i>PLoS ONE</i> 2012; 7: e44332   Wright TC, <i>JAMA</i> 2000; 283: 81
Tanzania	Watson-Jones D, <i>Sex Transm Infect</i> 2013; 89: 358, Dartell MA, <i>Int J Cancer</i> 2014; 135: 896   Watson-Jones D, <i>Sex Transm Infect</i> 2013; 89: 358, Dartell MA, <i>Int J Cancer</i> 2014; 135: 896   Vidal AC, <i>Infect Agents Cancer</i> 2011; 6: 20   Watson-Jones D, <i>Sex Transm Infect</i> 2013; 89: 358
Tunisia	Hassen E, <i>Infection</i> 2003; 31: 143
Uganda	Asiimwe S, <i>Int J STD AIDS</i> 2008; 19: 605   Banura C, <i>J Infect Dis</i> 2008; 197: 555   Jeronimo J, <i>Int J Gynecol Cancer</i> 2014; 24: 576   Odida M, <i>Infect Agents Cancer</i> 2011; 6: 8   Safaeian M, <i>Sex Transm Dis</i> 2007; 34: 429   Taube JM, <i>Diagn Cytopathol</i> 2010; 38: 555, Odida M, <i>Infect Agents Cancer</i> 2011; 6: 8, Jeronimo J, <i>Int J Gynecol Cancer</i> 2014; 24: 576   Odida M, <i>Infect Agents Cancer</i> 2011; 6: 8   Taube JM, <i>Diagn Cytopathol</i> 2010; 38: 555
<b>HPV type distribution for invasive cervical cancer (ICC)</b>	

Continued on next page

Table 51 – continued from previous page

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 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.
Algeria	Bosch FX, J Natl Cancer Inst 1995; 87: 796   Hammouda D, Int J Cancer 2005; 113: 483, Contributing studies: Bosch FX, J Natl Cancer Inst 1995; 87: 796   Hammouda D, Int J Cancer 2005; 113: 483
Botswana	Ermel A, Infect Agents Cancer 2014; 9: 22, Contributing studies: Ermel A, Infect Agents Cancer 2014; 9: 22
Ethiopia	Abate E, J Med Virol 2013; 85: 282   Fanta BE, Ethiop Med J 2005; 43: 151, Contributing studies: Abate E, J Med Virol 2013; 85: 282   Fanta BE, Ethiop Med J 2005; 43: 151
Ghana	Awua AK, Infect Agents Cancer 2016; 11: 4   Denny L, Int J Cancer 2014; 134: 1389, Contributing studies: Awua AK, Infect Agents Cancer 2016; 11: 4   Denny L, Int J Cancer 2014; 134: 1389
Guinea	Bosch FX, J Natl Cancer Inst 1995; 87: 796   Keita N, Br J Cancer 2009; 101: 202, Contributing studies: Bosch FX, J Natl Cancer Inst 1995; 87: 796   Keita N, Br J Cancer 2009; 101: 202
Kenya	De Vuyst H, Int J Cancer 2008; 122: 244   De Vuyst H, Int J Cancer 2012; 131: 949, Contributing studies: De Vuyst H, Int J Cancer 2008; 122: 244   De Vuyst H, Int J Cancer 2012; 131: 949
Mali	Bayo S, Int J Epidemiol 2002; 31: 202   Bosch FX, J Natl Cancer Inst 1995; 87: 796   Ndiaye C, Trop Med Int Health 2012; 17: 1432, Contributing studies: Bayo S, Int J Epidemiol 2002; 31: 202   Bosch FX, J Natl Cancer Inst 1995; 87: 796   Ndiaye C, Trop Med Int Health 2012; 17: 1432
Morocco	Chaouki N, Int J Cancer 1998; 75: 546   El khair MM, Med Oncol 2010; 27: 861, Contributing studies: Chaouki N, Int J Cancer 1998; 75: 546   El khair MM, Med Oncol 2010; 27: 861
Mozambique	Castellsagué X, Int J Cancer 2008; 122: 1901   Naucler P, J Gen Virol 2004; 85: 2189, Contributing studies: Castellsagué X, Int J Cancer 2008; 122: 1901   Naucler P, J Gen Virol 2004; 85: 2189
Nigeria	Denny L, Int J Cancer 2014; 134: 1389, Contributing studies: Denny L, Int J Cancer 2014; 134: 1389
Senegal	Lin P, Cancer Epidemiol Biomarkers Prev 2001; 10: 1037   Ndiaye C, Trop Med Int Health 2012; 17: 1432   Xi LF, Int J Cancer 2003; 103: 803, Contributing studies: Lin P, Cancer Epidemiol Biomarkers Prev 2001; 10: 1037   Ndiaye C, Trop Med Int Health 2012; 17: 1432   Xi LF, Int J Cancer 2003; 103: 803
South Africa	De Vuyst H, Int J Cancer 2012; 131: 949   Denny L, Int J Cancer 2014; 134: 1389   Kay P, J Med Virol 2003; 71: 265   Pegoraro RJ, Int J Gynecol Cancer 2002; 12: 383   van Aardt MC, Int J Gynecol Cancer 2015; 25: 919   Williamson AL, J Med Virol 1994; 43: 231, Contributing studies: De Vuyst H, Int J Cancer 2012; 131: 949   Denny L, Int J Cancer 2014; 134: 1389   Kay P, J Med Virol 2003; 71: 265   Pegoraro RJ, Int J Gynecol Cancer 2002; 12: 383   van Aardt MC, Int J Gynecol Cancer 2015; 25: 919   Williamson AL, J Med Virol 1994; 43: 231
Sudan	Abate E, J Med Virol 2013; 85: 282, Contributing studies: Abate E, J Med Virol 2013; 85: 282
Tanzania	Bosch FX, J Natl Cancer Inst 1995; 87: 796   ter Meulen J, Int J Cancer 1992; 51: 515, Contributing studies: Bosch FX, J Natl Cancer Inst 1995; 87: 796   ter Meulen J, Int J Cancer 1992; 51: 515
Tunisia	KrennHrubec K, J Med Virol 2011; 83: 651, Contributing studies: KrennHrubec K, J Med Virol 2011; 83: 651
Uganda	Bosch FX, J Natl Cancer Inst 1995; 87: 796   Odida M, BMC Infect Dis 2008; 8: 85   Odida M, Infect Agent Cancer 2010; 5: 15, Contributing studies: Bosch FX, J Natl Cancer Inst 1995; 87: 796   Odida M, BMC Infect Dis 2008; 8: 85   Odida M, Infect Agent Cancer 2010; 5: 15
<b>HPV type distribution for cervical high grade squamous intraepithelial lesions</b>	
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.
Algeria	Hammouda D, Int J Cancer 2011; 128: 2224, Contributing studies: Hammouda D, Int J Cancer 2011; 128: 2224
Cameroon	Untiet S, Int J Cancer 2014; 135: 1911, Contributing studies: Untiet S, Int J Cancer 2014; 135: 1911
Côte d'Ivoire	La Roche G, Int J Cancer 1998; 76: 480, Contributing studies: La Roche G, Int J Cancer 1998; 76: 480
DR Congo	Hovland S, Br J Cancer 2010; 102: 957, Contributing studies: Hovland S, Br J Cancer 2010; 102: 957
Equatorial Guinea	García-Espinosa B, Diagn Pathol 2009; 4: 31, Contributing studies: García-Espinosa B, Diagn Pathol 2009; 4: 31
Ethiopia	Abate E, J Med Virol 2013; 85: 282, Contributing studies: Abate E, J Med Virol 2013; 85: 282
Guinea	Keita N, Br J Cancer 2009; 101: 202, Contributing studies: Keita N, Br J Cancer 2009; 101: 202
Kenya	De Vuyst H, Cancer Causes Control 2010; 21: 2309   De Vuyst H, Int J Cancer 2012; 131: 949   De Vuyst H, Sex Transm Dis 2003; 30: 137, Contributing studies: De Vuyst H, Cancer Causes Control 2010; 21: 2309   De Vuyst H, Int J Cancer 2012; 131: 949   De Vuyst H, Sex Transm Dis 2003; 30: 137
Morocco	Alhamany Z, J Infect Dev Ctries 2010; 4: 732, Contributing studies: Alhamany Z, J Infect Dev Ctries 2010; 4: 732
Nigeria	Gage JC, Int J Cancer 2012; 131: 2903   Haghshenas M, Infect Agents Cancer 2013; 8: 20, Contributing studies: Gage JC, Int J Cancer 2012; 131: 2903   Haghshenas M, Infect Agents Cancer 2013; 8: 20
Rwanda	Singh DK, J Infect Dis 2009; 199: 1851, Contributing studies: Singh DK, J Infect Dis 2009; 199: 1851
Senegal	Chabaud M, J Med Virol 1996; 49: 259   Xi LF, Int J Cancer 2003; 103: 803, Contributing studies: Chabaud M, J Med Virol 1996; 49: 259   Xi LF, Int J Cancer 2003; 103: 803
South Africa	Allan B, J Clin Microbiol 2008; 46: 740   De Vuyst H, Int J Cancer 2012; 131: 949   Said HM, J Clin Virol 2009; 44: 318   van Aardt MC, Personal communication Unpublished, Contributing studies: Allan B, J Clin Microbiol 2008; 46: 740   De Vuyst H, Int J Cancer 2012; 131: 949   Said HM, J Clin Virol 2009; 44: 318   van Aardt MC, Personal communication Unpublished

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Table 51 – continued from previous page

Country	Study
Sudan	Abate E, <i>J Med Virol</i> 2013; 85: 282, Contributing studies: Abate E, <i>J Med Virol</i> 2013; 85: 282
Tanzania	Dartell MA, <i>Int J Cancer</i> 2014; 135: 896, Contributing studies: Dartell MA, <i>Int J Cancer</i> 2014; 135: 896
<b>HPV type distribution for cervical low grade squamous intraepithelial lesions</b>	
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, <i>Int J Cancer</i> 2012;131:2349 2) Clifford GM, <i>Cancer Epidemiol Biomarkers Prev</i> 2005;14:1157
Algeria	Hammouda D, <i>Int J Cancer</i> 2011; 128: 2224, Contributing studies: Hammouda D, <i>Int J Cancer</i> 2011; 128: 2224
Cameroon	Contributing studies: Untiet S, <i>Int J Cancer</i> 2014; 135: 1911
Côte d'Ivoire	La Roche G, <i>Int J Cancer</i> 1998; 76: 480, Contributing studies: La Roche G, <i>Int J Cancer</i> 1998; 76: 480
DR Congo	Hovland S, <i>Br J Cancer</i> 2010; 102: 957, Contributing studies: Hovland S, <i>Br J Cancer</i> 2010; 102: 957
Ethiopia	Abate E, <i>J Med Virol</i> 2013; 85: 282, Contributing studies: Abate E, <i>J Med Virol</i> 2013; 85: 282
Guinea	Keita N, <i>Br J Cancer</i> 2009; 101: 202, Contributing studies: Keita N, <i>Br J Cancer</i> 2009; 101: 202
Kenya	De Vuyst H, <i>Cancer Causes Control</i> 2010; 21: 2309   De Vuyst H, <i>Int J Cancer</i> 2012; 131: 949   De Vuyst H, <i>Sex Transm Dis</i> 2003; 30: 137, Contributing studies: De Vuyst H, <i>Cancer Causes Control</i> 2010; 21: 2309   De Vuyst H, <i>Int J Cancer</i> 2012; 131: 949   De Vuyst H, <i>Sex Transm Dis</i> 2003; 30: 137
Morocco	Alhamany Z, <i>J Infect Dev Ctries</i> 2010; 4: 732, Contributing studies: Alhamany Z, <i>J Infect Dev Ctries</i> 2010; 4: 732
Nigeria	Gage JC, <i>Int J Cancer</i> 2012; 131: 2903   Thomas JO, <i>Br J Cancer</i> 2004; 90: 638, Contributing studies: Gage JC, <i>Int J Cancer</i> 2012; 131: 2903   Thomas JO, <i>Br J Cancer</i> 2004; 90: 638
Senegal	Chabaud M, <i>J Med Virol</i> 1996; 49: 259   Xi LF, <i>Int J Cancer</i> 2003; 103: 803, Contributing studies: Chabaud M, <i>J Med Virol</i> 1996; 49: 259   Xi LF, <i>Int J Cancer</i> 2003; 103: 803
South Africa	Allan B, <i>J Clin Microbiol</i> 2008; 46: 740, Contributing studies: Allan B, <i>J Clin Microbiol</i> 2008; 46: 740   van Aardt MC, Personal communication Unpublished
<b>HPV type distribution for invasive anal cancer</b>	
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, <i>Lancet Oncol</i> 2009;10:321 2) De Vuyst H, <i>Int J Cancer</i> 2009;124:1626
Mali	Aleman L, <i>Int J Cancer</i> 2015; 136: 98
Nigeria	Aleman L, <i>Int J Cancer</i> 2015; 136: 98
<b>HPV type distribution for anal intraepithelial neoplasia (AIN)</b>	
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, <i>Lancet Oncol</i> 2009;10:321 2) De Vuyst H, <i>Int J Cancer</i> 2009;124:1626
<b>HPV type distribution for invasive vulvar cancer</b>	
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, <i>Lancet Oncol</i> 2009;10:321 2) De Vuyst H, <i>Int J Cancer</i> 2009;124:1626
Mali	de Sanjosé S, <i>Eur J Cancer</i> 2013; 49: 3450
Mozambique	de Sanjosé S, <i>Eur J Cancer</i> 2013; 49: 3450
Nigeria	de Sanjosé S, <i>Eur J Cancer</i> 2013; 49: 3450
<b>HPV type distribution for vulvar intraepithelial neoplasia (VIN)</b>	
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, <i>Lancet Oncol</i> 2009;10:321 2) De Vuyst H, <i>Int J Cancer</i> 2009;124:1626
<b>HPV type distribution for invasive vaginal cancer</b>	
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, <i>Lancet Oncol</i> 2009;10:321 2) De Vuyst H, <i>Int J Cancer</i> 2009;124:1626
Mozambique	Aleman L, <i>Eur J Cancer</i> 2014; 50: 2846
<b>HPV type distribution for vaginal intraepithelial neoplasia (VAIN)</b>	
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, <i>Lancet Oncol</i> 2009;10:321 2) De Vuyst H, <i>Int J Cancer</i> 2009;124:1626
<b>HPV type distribution for invasive penile cancer</b>	
General sources	The ICO HPV Information Centre has updated data until June 2015. Reference publications (up to 2008): 1) Bouvard V, <i>Lancet Oncol</i> 2009;10:321 2) Miralles-Guri C, <i>J Clin Pathol</i> 2009;62:870
South Africa	Lebelo RL, <i>J Med Virol</i> 2014; 86: 257
<b>HPV type distribution for penile intraepithelial neoplasia (PEIN)</b>	

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Country	Study
General sources	The ICO HPV Information Centre has updated data until June 2014. Reference publication (up to 2008): Bouvard V, <i>Lancet Oncol</i> 2009;10:321
South Africa	Boy S, <i>J Oral Pathol Med</i> 2006; 35: 86   Van Rensburg EJ, <i>Anticancer Res</i> 1996; 16: 969
<b>The anogenital prevalence of HPV-DNA in men: HPV in men</b>	
General sources	Based on published systematic reviews, the ICO HPV Information Centre has updated data until October 2015. Reference publications: 1) Dunne EF, <i>J Infect Dis</i> 2006; 194: 1044 2) Smith JS, <i>J Adolesc Health</i> 2011; 48: 540 3) Olesen TB, <i>Sex Transm Infect</i> 2014; 90: 455 4) Hebnes JB, <i>J Sex Med</i> 2014; 11: 2630.
Kenya	Ng'ayo MO, <i>Sex Transm Infect</i> 2008; 84: 62   Smith JS, <i>Int J Cancer</i> 2010; 126: 572
Rwanda	Veldhuijzen NJ, <i>Sex Transm Dis</i> 2012; 39: 128
South Africa	Auvert B, <i>J Acquir Immune Defic Syndr</i> 2010; 53: 111   Mbulawa ZZ, <i>J Gen Virol</i> 2010; 91: 3023
Tanzania	Olesen TB, <i>Sex Transm Dis</i> 2013; 40: 592
<b>The anogenital prevalence of HPV-DNA in men: HPV in special subgroups (HIV, MSM, etc)</b>	
General sources	Based on published systematic reviews, the ICO HPV Information Centre has updated data until October 2015. Reference publications: 1) Dunne EF, <i>J Infect Dis</i> 2006; 194: 1044 2) Smith JS, <i>J Adolesc Health</i> 2011; 48: 540 3) Olesen TB, <i>Sex Transm Infect</i> 2014; 90: 455 4) Hebnes JB, <i>J Sex Med</i> 2014; 11: 2630.
South Africa	Firnhaber C, <i>Int J STD AIDS</i> 2011; 22: 107   Mbulawa ZZ, <i>J Gen Virol</i> 2010; 91: 3023   Müller EE, <i>Sex Transm Infect</i> 2010; 86: 175   Vogt SL, <i>Front Oncol</i> 2013; 3: 68
<b>HPV prevalence and type distribution in oral specimens collected from healthy population</b>	
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.
South Africa	Davidson CL, <i>S Afr Med J</i> 2014;104(5):358-61   Marais DJ, <i>BMC Infect Dis</i> 2006;6:95
<b>HPV prevalence and type distribution in invasive oral cavity squamous cell carcinoma</b>	
General sources	Based on systematic reviews and meta-analysis performed by ICO. Reference publications: 1) Ndiaye C, <i>Lancet Oncol</i> 2014; 15: 1319 2) Kreimer AR, <i>Cancer Epidemiol Biomarkers Prev</i> 2005; 14: 467
South Africa	Boy S, <i>J Oral Pathol Med</i> 2006; 35: 86   Van Rensburg EJ, <i>Anticancer Res</i> 1996; 16: 969
<b>HPV prevalence and type distribution in invasive oropharyngeal squamous cell carcinoma</b>	
General sources	Based on systematic reviews and meta-analysis performed by ICO. Reference publications: 1) Ndiaye C, <i>Lancet Oncol</i> 2014; 15: 1319 2) Kreimer AR, <i>Cancer Epidemiol Biomarkers Prev</i> 2005; 14: 467
<b>HPV prevalence and type distribution in invasive hypopharyngeal squamous cell carcinoma</b>	
General sources	Based on systematic reviews and meta-analysis performed by ICO. Reference publications: 1) Ndiaye C, <i>Lancet Oncol</i> 2014; 15: 1319 2) Kreimer AR, <i>Cancer Epidemiol Biomarkers Prev</i> 2005; 14: 467



## 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 years 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 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).
Adenocarcinoma	Invasive tumour with glandular and squamous elements intermingled
Eastern Africa	Burundi, Comoros, Djibouti, Eritrea, Ethiopia, Kenya, Madagascar, Malawi, Mauritius, Mozambique, Rwanda, Seychelles, Somalia, South Sudan, Tanzania, Uganda, Zambia, Zimbabwe
Middle Africa	Angola, Cameroon, Central African Republic, Chad, Congo, DR Congo, Equatorial Guinea, Gabon, Sao Tome and Principe
Northern Africa	Algeria, Egypt, Libya, Morocco, Sudan, Tunisia, Western Sahara
Southern Africa	Botswana, Eswatini, Lesotho, Namibia, South Africa
Western Africa	Benin, Burkina Faso, Cabo Verde, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Mali, Mauritania, Niger, Nigeria, Senegal, Sierra Leone, Togo

## Acknowledgments

This report has been developed by the Unit of Infections and Cancer, Cancer Epidemiology Research Program, at the Institut Català d'Oncologia (ICO, Catalan Institute of Oncology). This report was supported by a grant from the Instituto de Salud Carlos III (Spanish Government) through the projects PI18/01137, PI21/00982, PI22/00219 and CIBERESP CB06/02/0073, and the Secretariat for Universities and Research of the Department of Business and knowledge of the Government of Catalonia grants to support the activities of research groups (SGR 2017–2021) (Grant number 2017SRG1718 and 2021SGR01029). The report has also received funding from the European Union's Horizon 2020 research and innovation program under grant agreement No. 847845. We thank the CERCA Program / Generalitat de Catalunya for institutional support. The HPV Information Centre is being developed by the ICO. The Centre was originally launched by ICO with the collaboration of WHO's Immunisation, Vaccines and Biologicals (IVB) department and support from the Bill and Melinda Gates Foundation.

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### **International Agency for Research on Cancer (IARC)**

## 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.

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