Human Papillomavirus and Related Diseases Report

OCEANIA

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ICO Institut Català d'Oncologia

Abbreviations

Table 1: Abbreviations

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

Executive summary

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

This report provides key information for Oceania 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.

Oceania has a population of 17.33 million women aged 15 years and older who are at risk of developing cervical cancer. Current estimates indicate that every year 2,512 women are diagnosed with cervical cancer and 1,270 die from the disease. Cervical cancer ranks* as the 8th most frequent cancer among women in Oceania.

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

Table 2: Key statistics

Population	Oceania	Australia & New Zealand	Melanesia	Micronesia	Polynesia
Women at risk for cervical cancer (Female population aged >=15 yrs) in millions	17.3	12.9	4.0	0.2	0.3
Burden of cervical cancer and other HPV-related cancer					
Annual number of new cervical cancer cases	2,512	1,094	1,330	53	35
Annual number of cervical cancer deaths	1,270	409	818	24	19
Standardized incidence rates per 100,000 population:					
Cervical cancer	10.1	5.63	28.3	18.7	9.70
Anal cancer					
Men	1.01	1.03	1.72	0	0
Women	1.55	1.60	1.72	0	0
Vulva cancer	1.55	1.75	0.40	0	0
Vaginal cancer	0.43	0.39	0.55	0	0
Penile cancer	0.64	0.54	1.45	0	0
Oropharyngeal cancer					
Men	3.63	3.95	3.50	1.14	1.71
Women	0.63	0.73	0.23	0	0
Oral cavity cancer					
Men	10.0	8.52	22.2	4.74	4.36
Women	4.97	3.64	11.9	1.27	1.05
Laryngeal cancer					
Men	2.31	2.17	3.40	1.93	3.08
Women	0.37	0.28	0.81	0	0.20
Burden of cervical HPV infection					
Prevalence (%) of HPV 16 and/or HPV 18 among women with:					
Normal cytology	8.3	8.5	7.7	-	-
Low-grade cervical lesions (LSIL/CIN-1)	27.1	27.1	-	-	-
High-grade cervical lesions (HSIL/ CIN-2 / CIN-3 / CIS)	59.1	58.4	68.8	-	-
Cervical cancer	76.6	76.1	82.9	-	-

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

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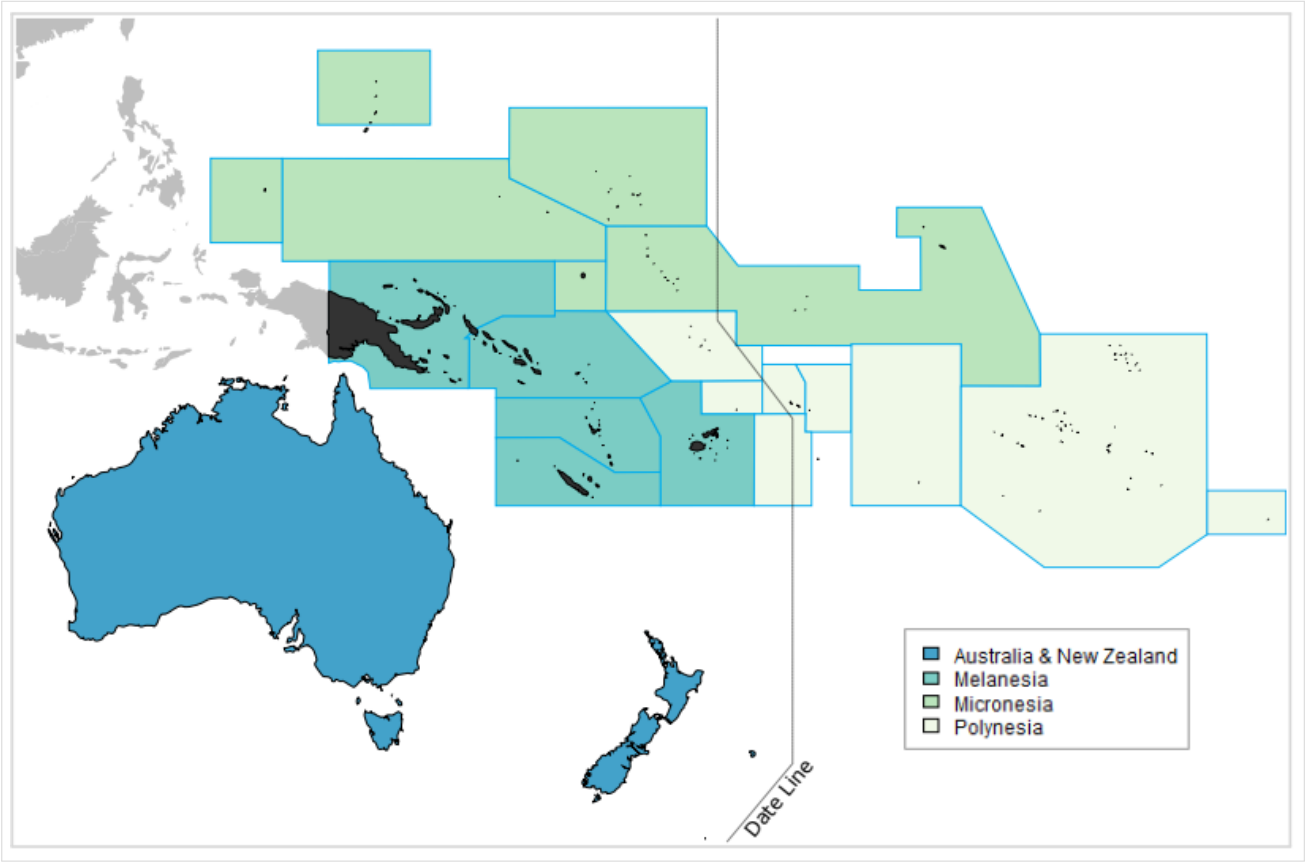


The HPV Information Centre aims to compile and centralize updated data and statistics on HPV and HPV-related cancers. This report aims to summarize the data available to fully evaluate the burden of disease in Oceania and to facilitate stakeholders and relevant bodies of decision makers to formulate 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 Oceania. For analytical purposes, Oceania is divided in these regions: Australia and New Zealand, Melanesia, Micronesia, and Polynesia

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

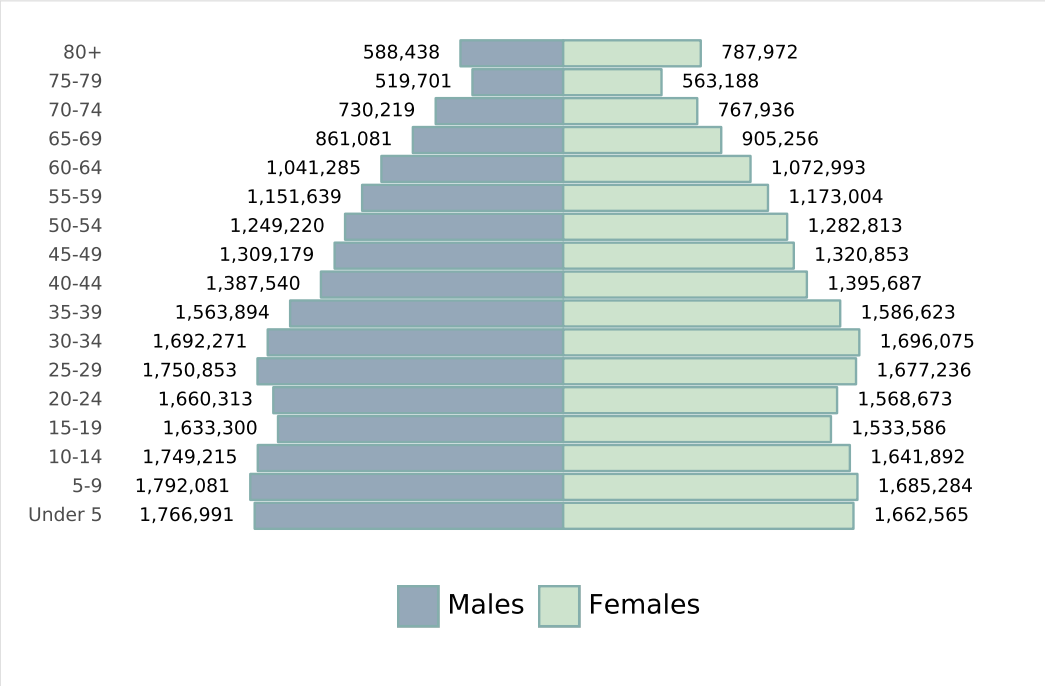
Section 6, Sexual and reproductive health behaviour indicators. This section presents sexual and reproductive behaviour indicators that may be used as proxy measures of risk for HPV infection and anogenital cancers, such as age at first sexual intercourse, average number of sexual partners, and anal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

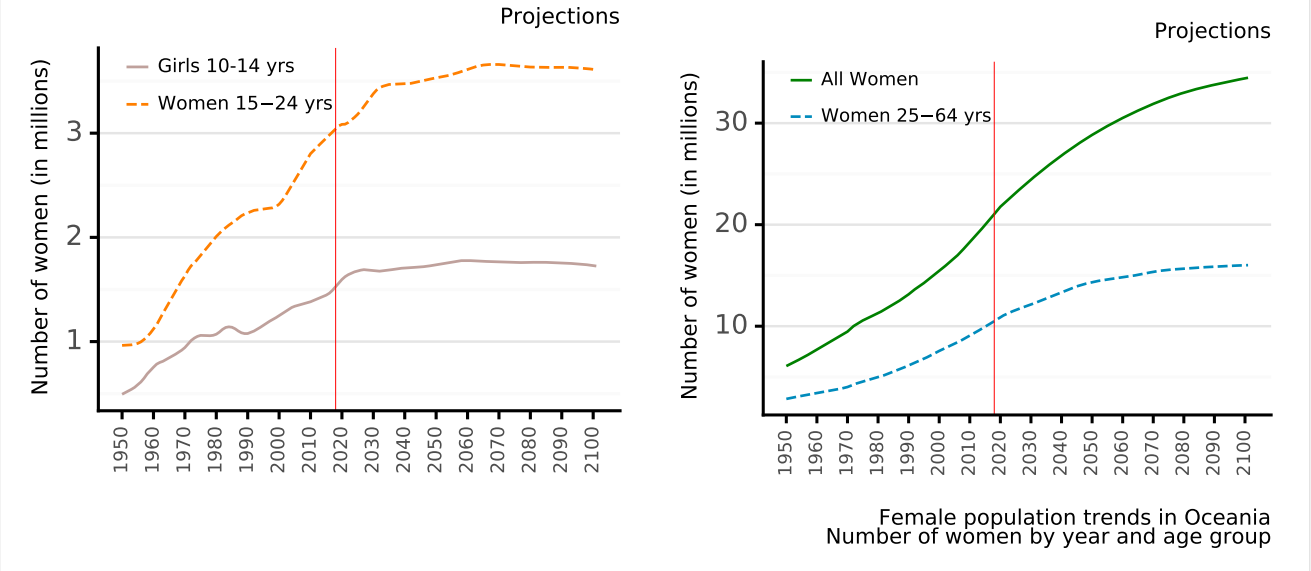
2 Demographic and socioeconomic factors

Figure 2: Population pyramid of Oceania 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 Oceania



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

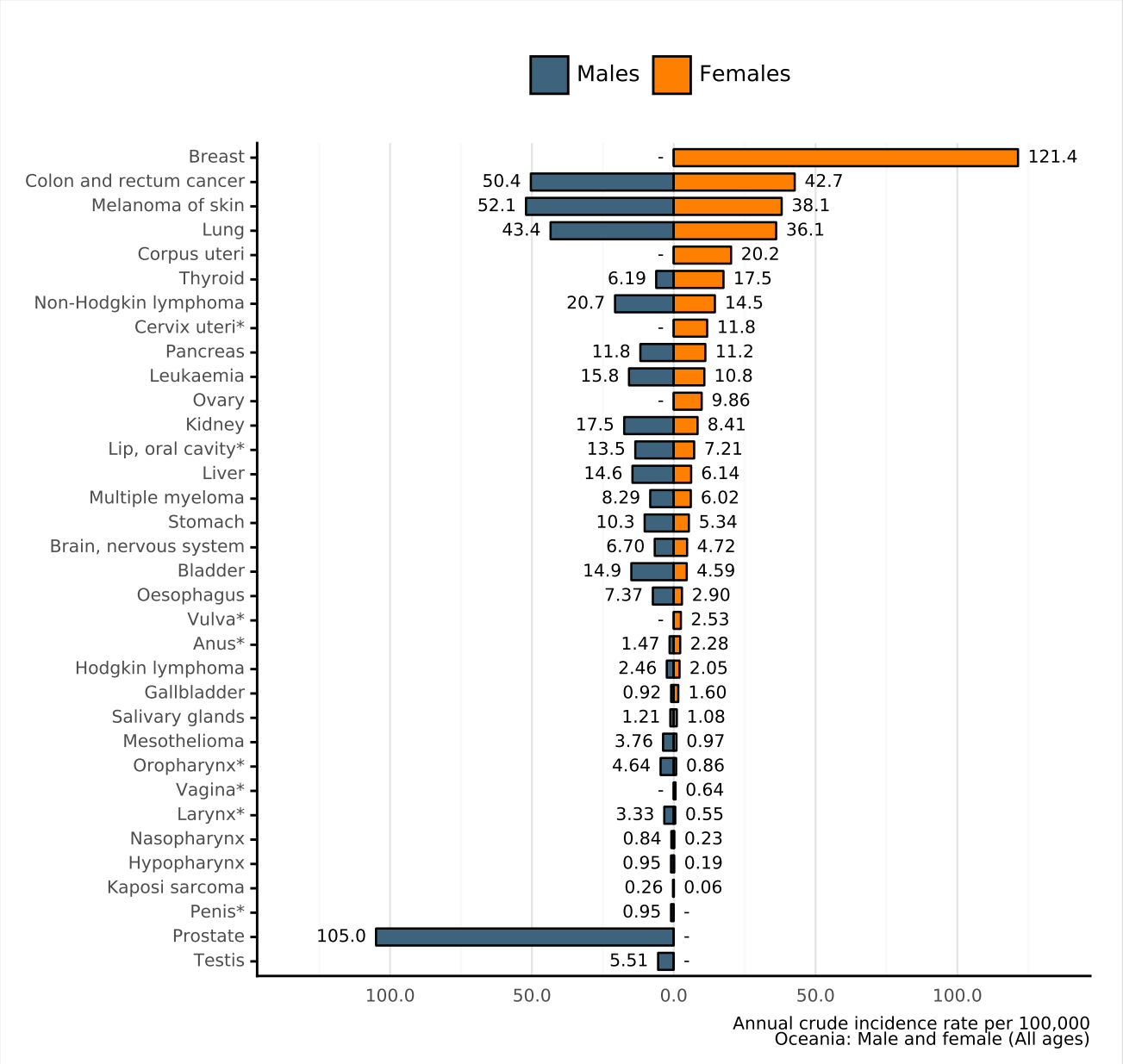
	Males			Females		
Region Country	**10-14 years**	**15+ years**	**Total**	**10-14 years**	**15+ years**	**Total**
Oceania	1.75	17.14	22.45	1.64	17.33	22.32
Australia & New Zealand	1.0	12.55	15.49	0.95	12.93	15.72
Australia	0.83	10.49	12.93	0.78	10.8	13.11
New Zealand	0.17	2.06	2.56	0.16	2.13	2.6
Melanesia	0.69	4.15	6.32	0.63	3.96	5.98
Fiji	0.04	0.33	0.46	0.04	0.33	0.46
Papua New Guinea	0.57	3.39	5.19	0.52	3.2	4.86
Solomon Islands	0.04	0.22	0.37	0.04	0.22	0.35
Vanuatu	0.02	0.1	0.16	0.02	0.1	0.16
Micronesia	0.03	0.19	0.27	0.03	0.19	0.27
Kiribati	0.01	0.04	0.06	0.01	0.04	0.07
Marshall Islands	0.0	0.01	0.02	0.0	0.01	0.02
FS Micronesia	0.01	0.04	0.06	0.01	0.04	0.06
Nauru	0.0	0.0	0.01	0.0	0.0	0.01
Polynesia	0.04	0.23	0.34	0.03	0.23	0.33
Samoa	0.01	0.07	0.11	0.01	0.07	0.11
Tonga	0.01	0.03	0.05	0.01	0.04	0.05
Tuvalu	0.0	0.0	0.01	0.0	0.0	0.01
Palau	0.0	0.01	0.01	0.0	0.01	0.01

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 Oceania (estimates for 2020)



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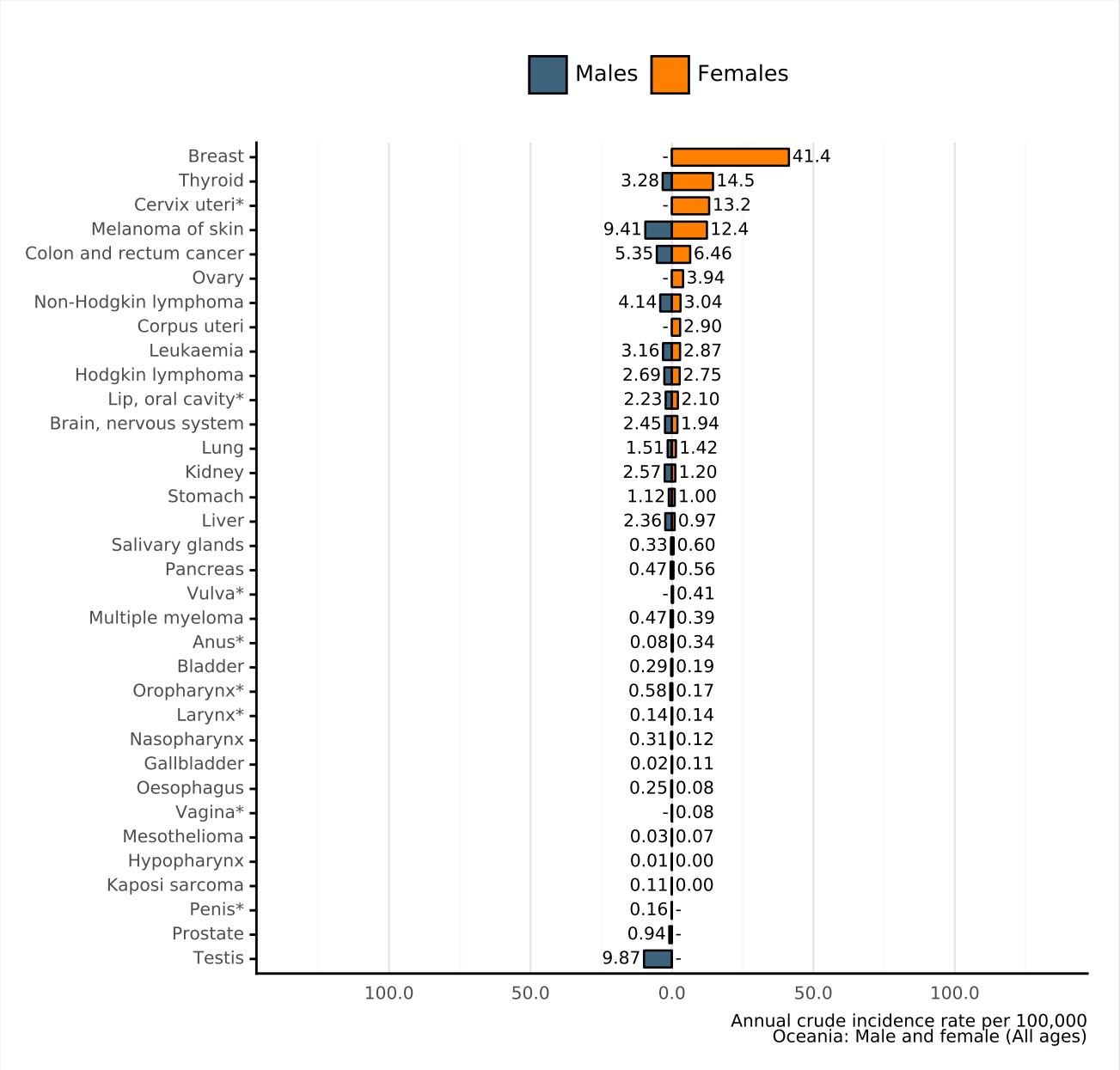
For more detailed methods of estimation please refer to http://gco.iarc.fr/today/data-sources-methods
Non-melanoma skin cancer is not included
Rates per 100,000 men per year.
Rates per 100,000 women per year.
Data Sources:
Ferlay J, Ervik M, Lam F, Colombet M, Mery L, Piñeros M, Znaor A, Soerjomataram 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 Oceania (estimates for 2020)



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3.2 HPV related cancers mortality

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

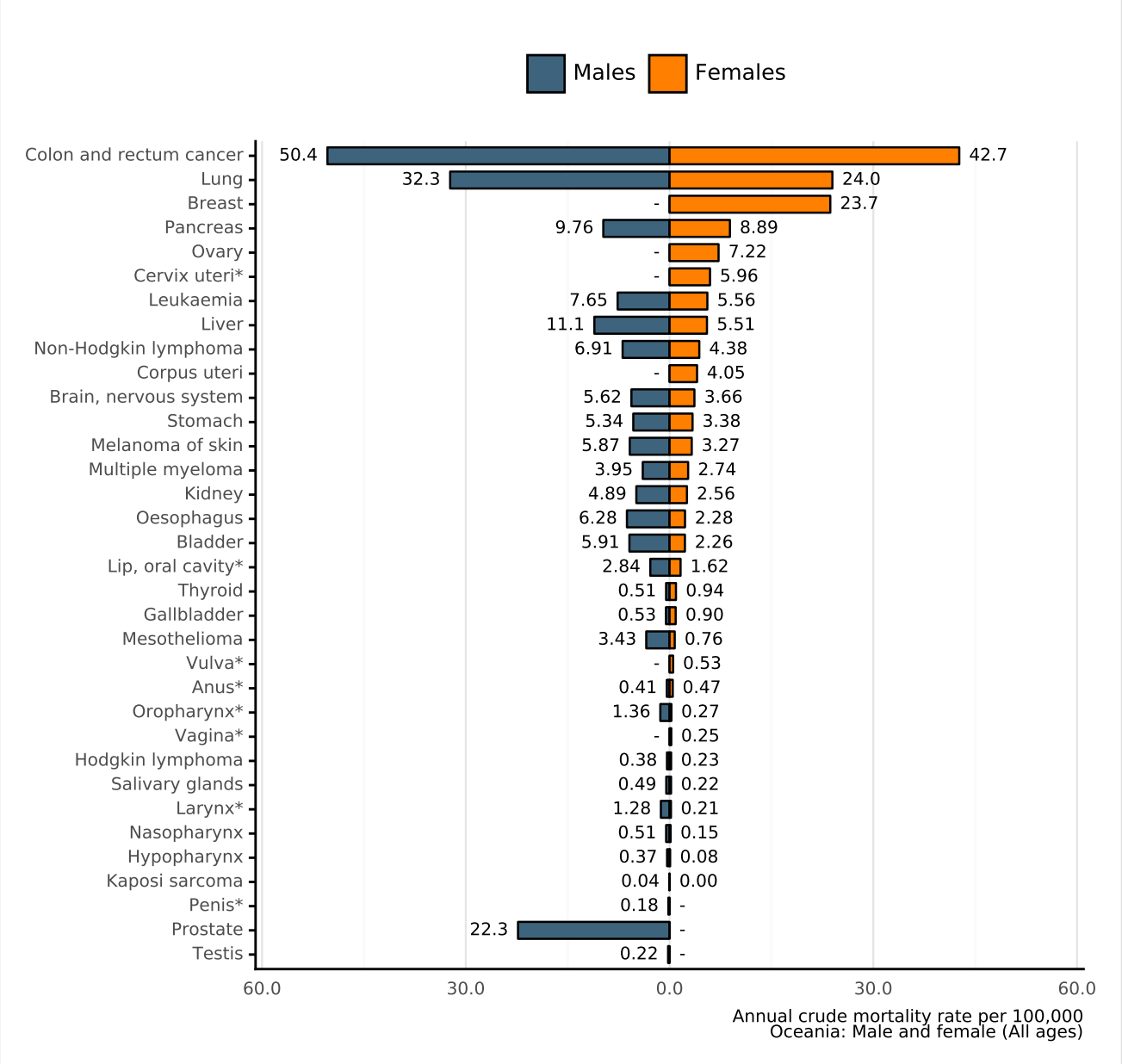

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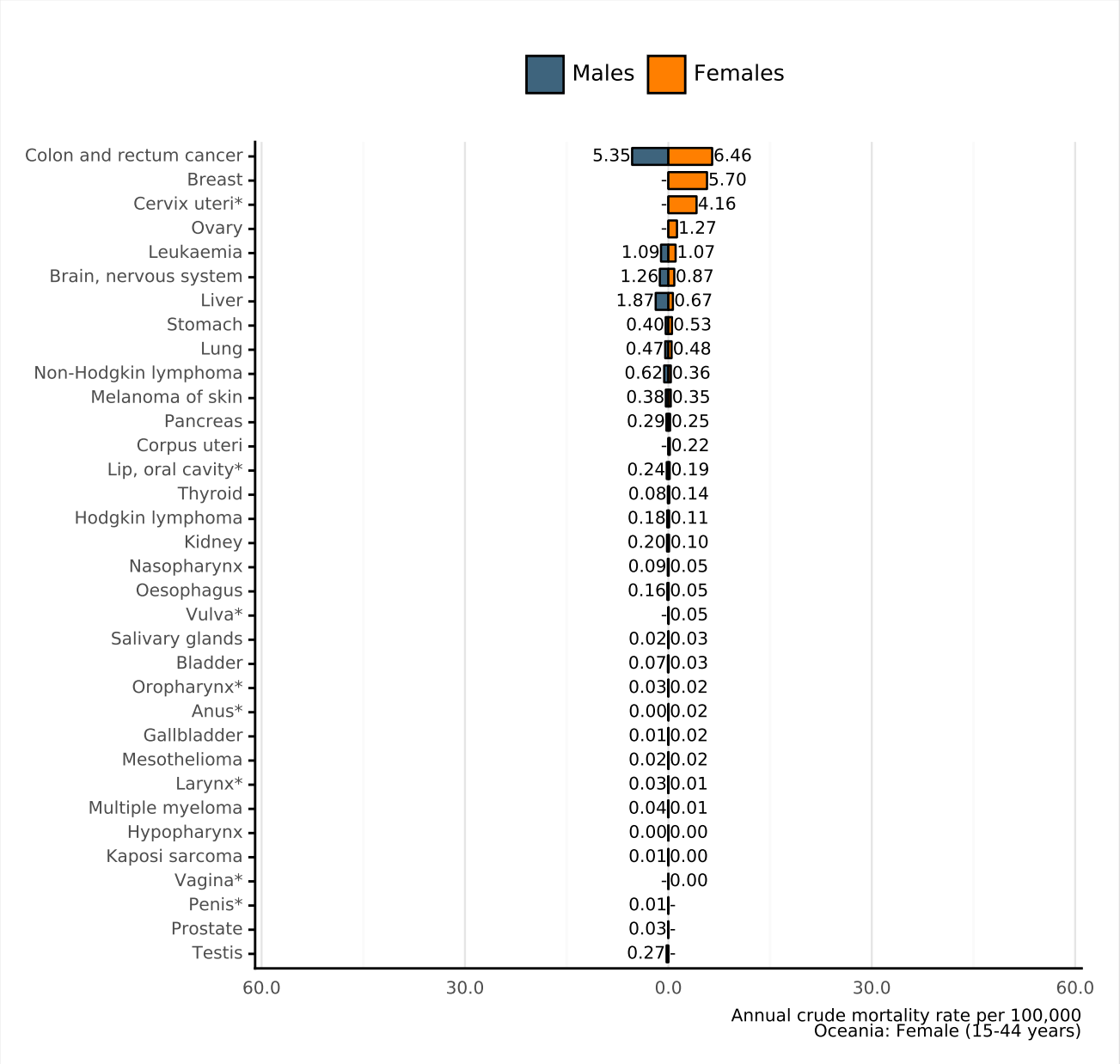
Figure 7: Comparison of HPV related cancers mortality to other cancers among men and women 15-44 years of age in Oceania (estimates for 2020)



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3.3 Cervical cancer

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

This section describes the current burden of invasive cervical cancer in Oceania 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.

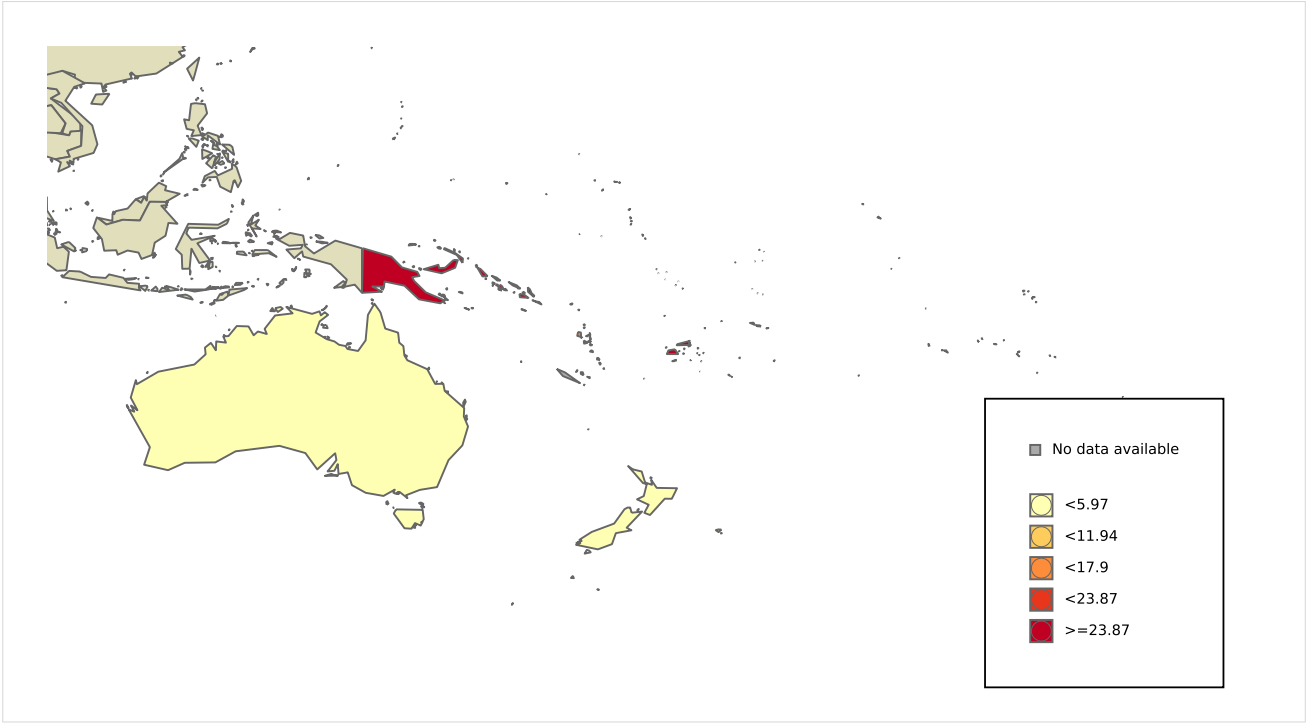
About **2,512 new cervical cancer cases** are diagnosed **annually** in **Oceania** (estimations for 2020).

Cervical cancer **ranks* as the 8th leading cause** of female cancer in **Oceania**.

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

* 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 Oceania (estimates for 2020)



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For more detailed methods of estimation please refer to http://gco.iarc.fr/today/data-sources-methods
[a] Rates per 100,000 women per year.
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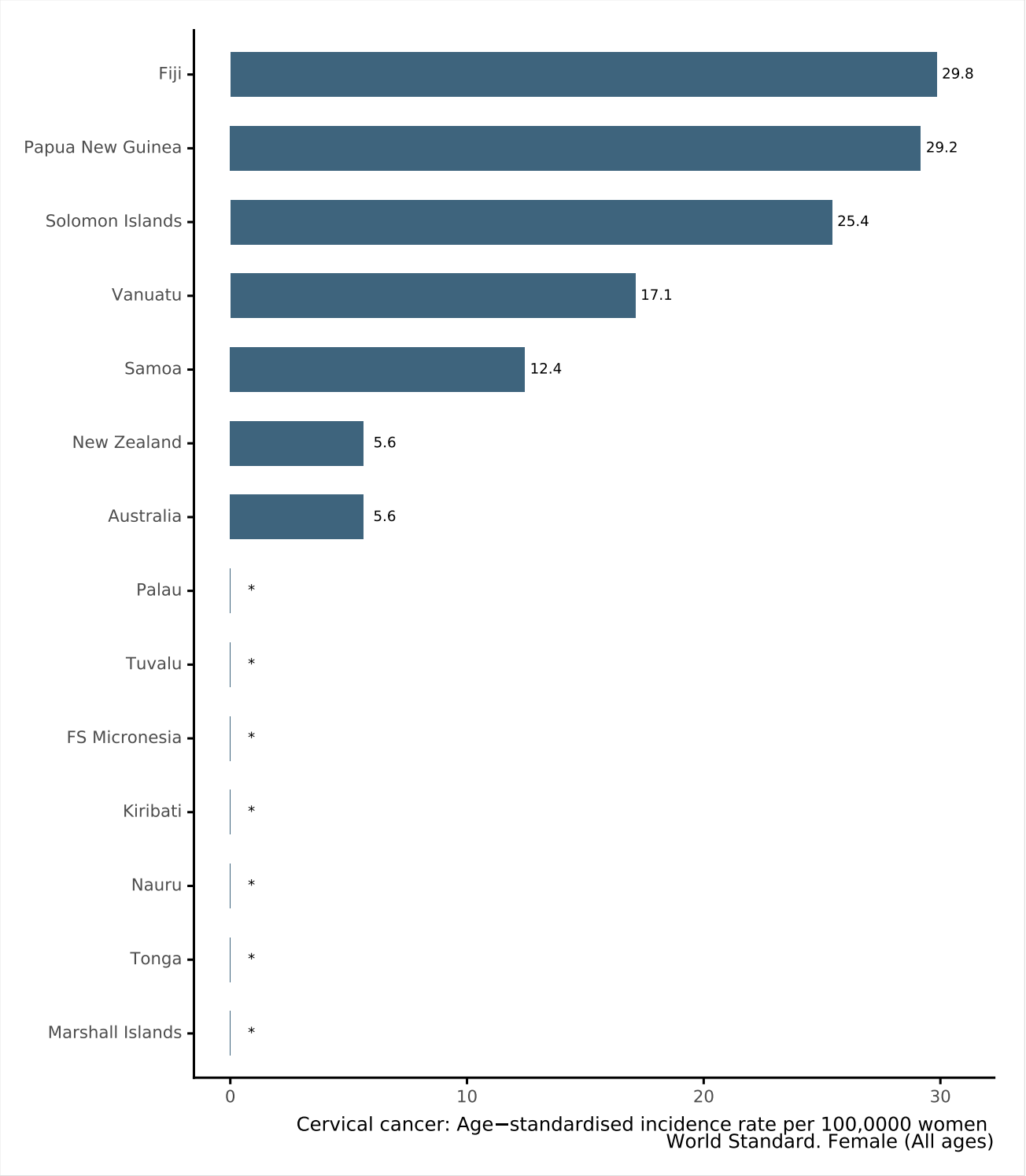
Figure 9: Age-standardised incidence rate of cervical cancer cases attributable to HPV by country in Oceania (estimates for 2020)



Data accessed on 27 Jan 2021
For more detailed methods of estimation please refer to http://gco.iarc.fr/today/data-sources-methods
[a] Rates per 100,000 women per year.
* No rates are available
Data Sources:
Ferlay J, Ervik M, Lam F, Colombet M, Mery L, Piñeros M, Znaor A, Soerjomataram I, Bray F (2020). Global Cancer Observatory: Cancer Today. Lyon, France: International Agency for Research on Cancer. Available from: https://gco.iarc.fr/today, accessed [27 January 2021].

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

Area	N Cases	Uncertainty intervals of new cancer cases [95% UI]	Crude rate[b]	ASR[b]	Cumulative risk (%) ages 0-74 years[a]	Ranking	
						All women	Women 15-44 years
Oceania	2,512	[2,299.4-2,744.2]	11.8	10.1	0.94	8	3
Australia & New Zealand	1,094	[1,021.2-1,172]	7.17	5.63	0.52	13	5
Australia	920	[834.2-1,014.6]	7.19	5.63	0.53	14	5
New Zealand	174	[123.6-244.9]	7.10	5.63	0.51	12	4
Melanesia	1,330	[975.5-1,813.4]	24.4	28.3	2.64	2	2
Solomon Islands	65	[18.8-225.3]	19.3	25.4	2.48	2	2
Vanuatu	22	[7.20-67.2]	14.5	17.1	1.67	2	2
Papua New Guinea	1,077	[310.7-3,733.3]	24.6	29.2	2.69	2	2
Fiji	136	[111.8-165.4]	30.7	29.8	2.89	2	2
Micronesia	53	[33.3-84.4]	19.5	18.7	1.97	3	2
Polynesia	35	[20.2-60.7]	10.4	9.70	1.06	6	3
Samoa	10	[5-19.9]	10.4	12.4	1.48	7	4

Data accessed on 27 Jan 2021

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

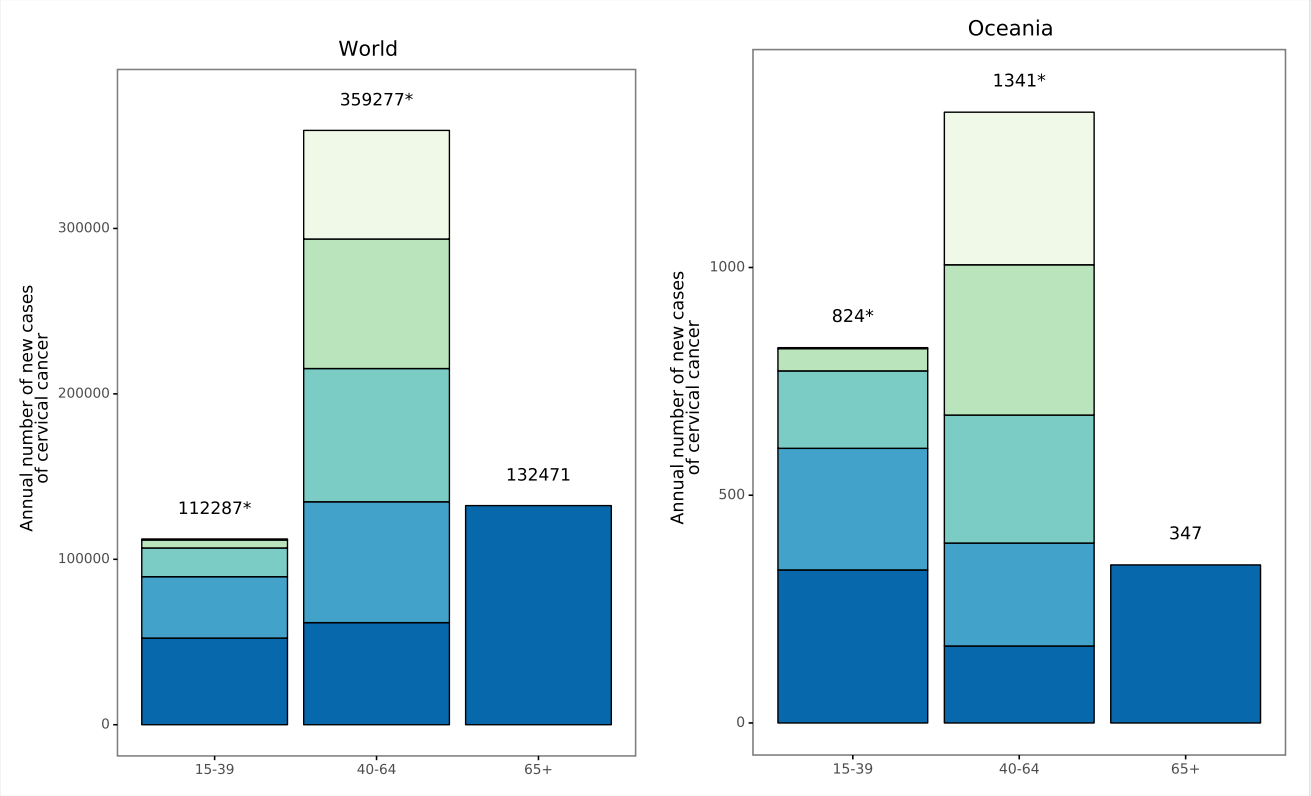
[a] Cumulative risk (incidence) is the probability or risk of individuals getting from the disease during ages 0-74 years. For cancer, it is expressed as the % of new born children who would be expected to develop from a particular cancer before the age of 75 if they had the rates of cancer observed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

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

Data Sources:

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

Figure 10: Annual number of new cases of cervical cancer in the World and Oceania (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

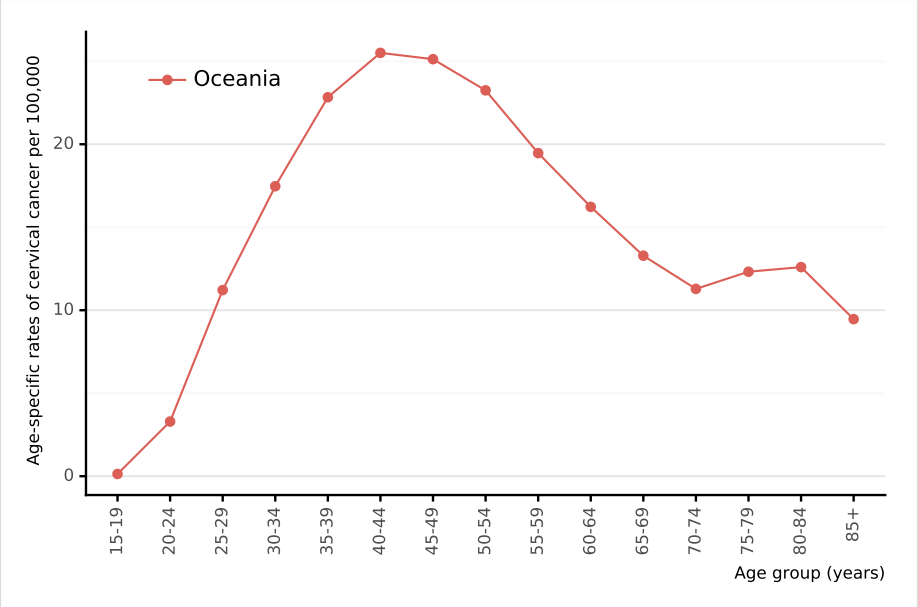
* World: 15-19 yrs: 616 cases. 20-24 yrs: 4819 cases. 25-29 yrs: 17357 cases. 30-34 yrs: 37106 cases. 35-39 yrs: 52389 cases. 40-44 yrs: 65657 cases. 45-49 yrs: 78299 cases. 50-54 yrs: 80544 cases. 55-59 yrs: 73053 cases. 60-64 yrs: 61724 cases.

* Oceania: 15-19 yrs: 2 cases. 20-24 yrs: 49 cases. 25-29 yrs: 170 cases. 30-34 yrs: 267 cases. 35-39 yrs: 336 cases. 40-44 yrs: 335 cases. 45-49 yrs: 330 cases. 50-54 yrs: 281 cases. 55-59 yrs: 226 cases. 60-64 yrs: 169 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 Oceania (estimates for 2020)



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

Data Sources:

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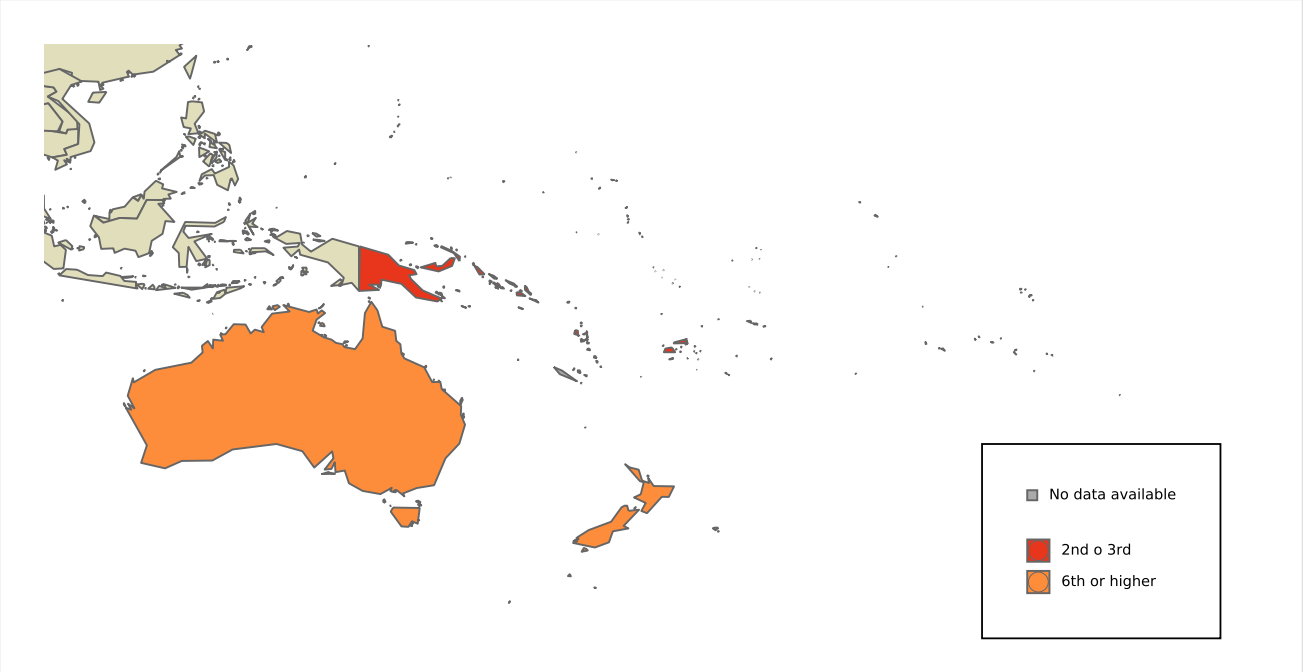
Figure 12: Ranking of cervical cancer versus other cancers among all women, according to incidence rates in Oceania (estimates for 2020)



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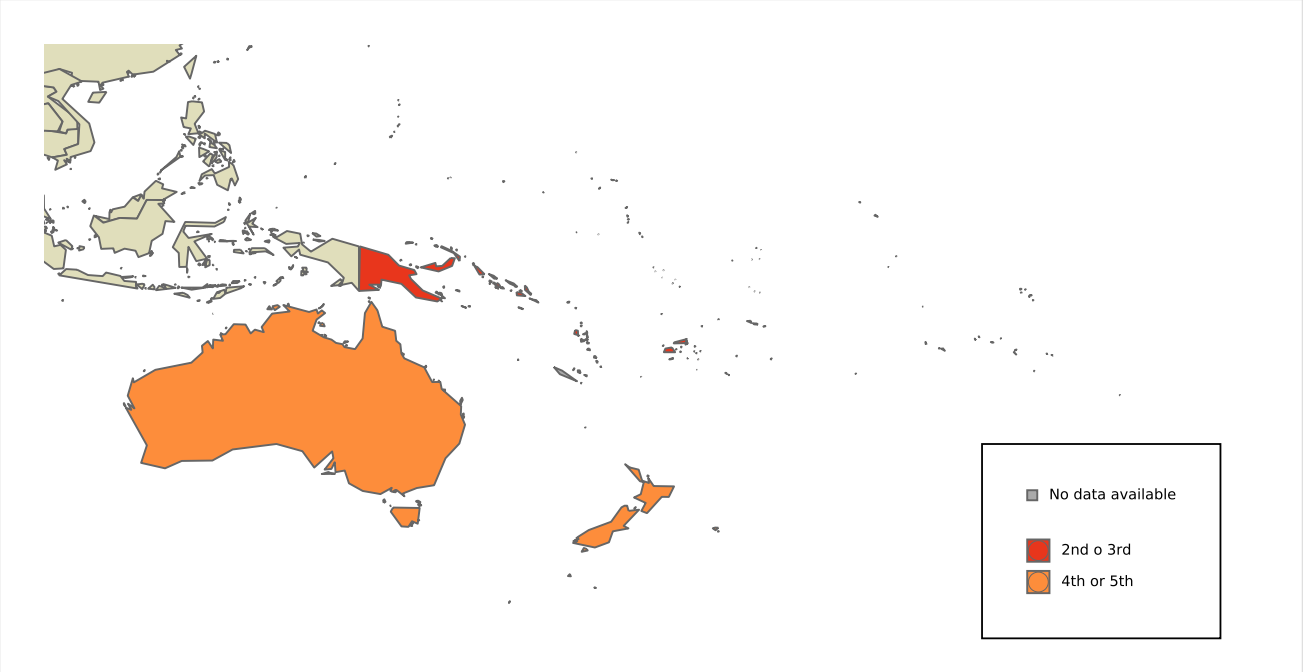
For more detailed methods of estimation please refer to http://gco.iarc.fr/today/data-sources-methods
[a] Non-melanoma skin cancer is not included
Data Sources:
Ferlay J, Ervik M, Lam F, Colombet M, Mery L, Piñeros M, Znaor A, Soerjomataram I, Bray F (2020). Global Cancer Observatory: Cancer Today. Lyon,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

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



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3.3.2 Cervical cancer mortality

Key Stats.

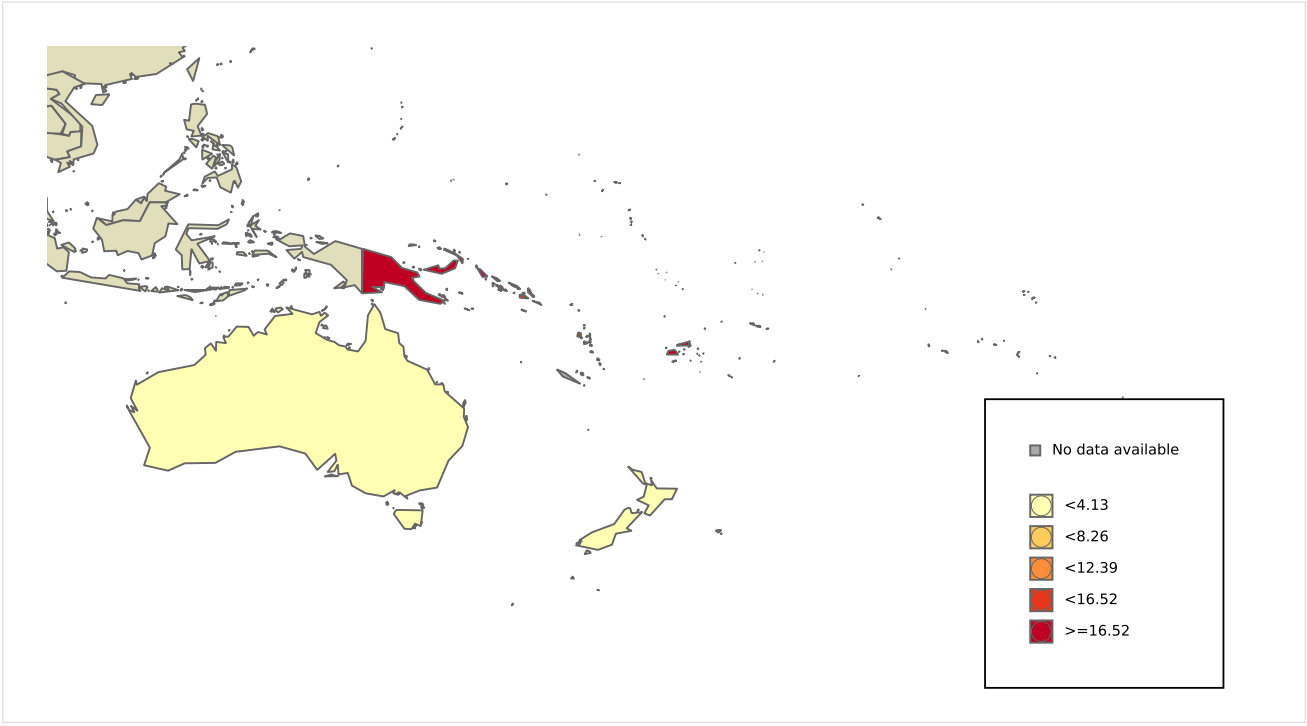
About **1,270 new cervical cancer cases** are diagnosed **annually** in **Oceania** (estimations for 2020).

Cervical cancer **ranks* as the 6th leading cause** of female cancer in **Oceania**.

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

* 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 Oceania (estimates for 2020)



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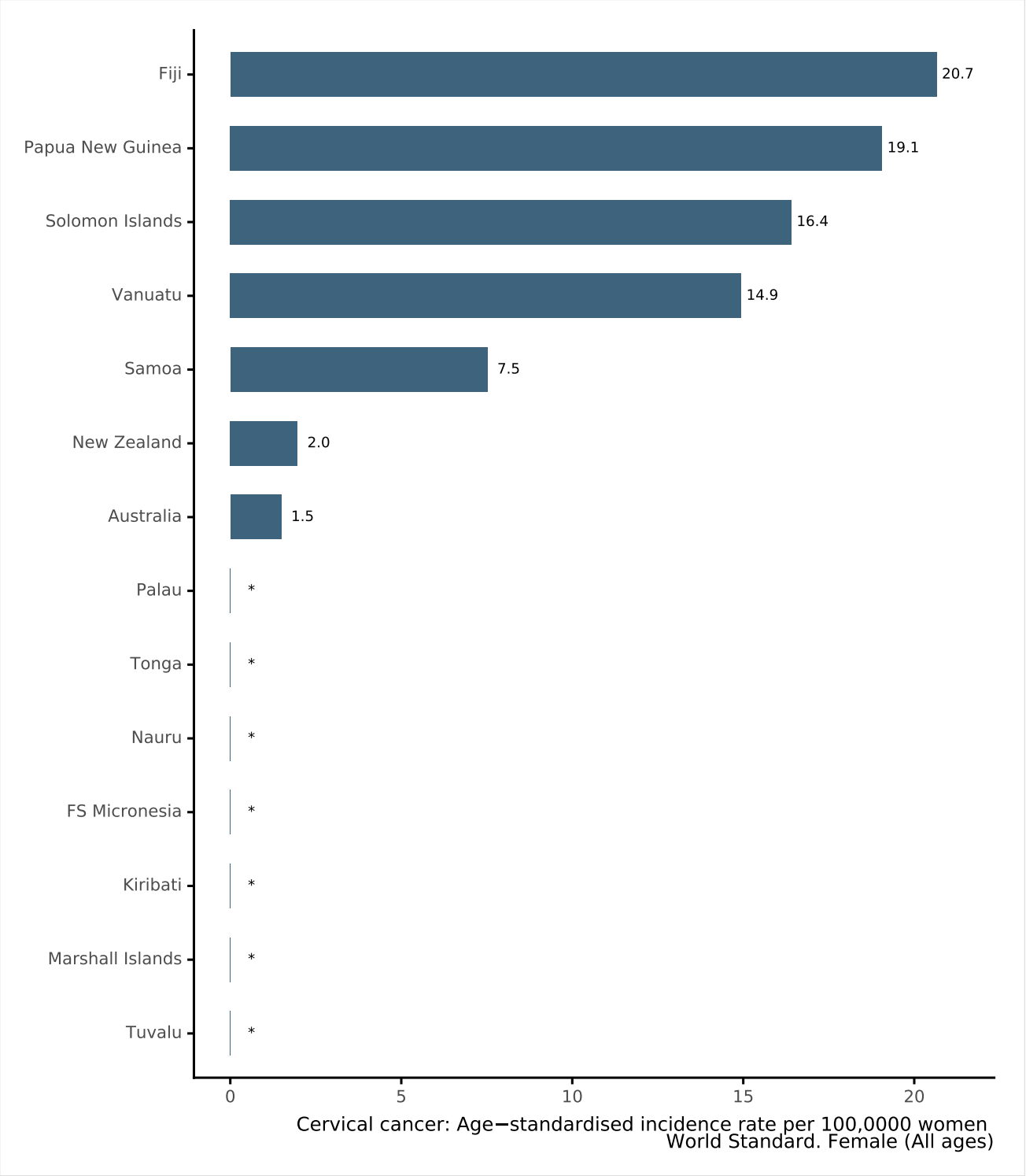
[a] Rates per 100,000 women per year.
Data Sources:
Ferlay J, Ervik M, Lam F, Colombet M, Mery L, Piñeros M, Znaor A, Soerjomataram I, Bray F (2020). Global Cancer Observatory: Cancer Today. Lyon, France: International Agency for Research on Cancer. Available from: https://gco.iarc.fr/today, accessed [27 January 2021].

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



Data accessed on 27 Jan 2021

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

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

* No rates are available

Data Sources:

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

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

Area	N Cases	Uncertainty intervals of new cancer cases [95% UI]	Crude rate[b]	ASR[b]	Cumulative risk (%) ages 0-74 years[a]	Ranking	
						All women	Women 15-44 years
Oceania	1,270	[1,088.5-1,481.8]	5.96	4.62	0.46	6	3
Australia & New Zealand	409	[362.2-461.9]	2.68	1.57	0.16	16	4
New Zealand	81	[60.6-108.3]	3.30	1.97	0.20	15	3
Australia	328	[274.3-392.3]	2.56	1.49	0.16	17	4
Melanesia	818	[601.5-1,112.5]	15.0	18.6	1.84	2	1
Solomon Islands	40	[13-122.8]	11.8	16.4	1.64	2	1
Vanuatu	19	[5.50-65.9]	12.5	14.9	1.49	1	1
Papua New Guinea	650	[211.8-1,995.2]	14.8	19.1	1.87	2	1
Fiji	92	[45.5-186.1]	20.8	20.7	2.18	2	2
Micronesia	24	[8.90-64.8]	8.83	8.16	0.97	4	13
Polynesia	19	[5.10-71.2]	5.64	5.32	0.58	6	2
Samoa	6	[0.90-42.3]	6.27	7.52	0.96	7	4

Data accessed on 27 Jan 2021

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

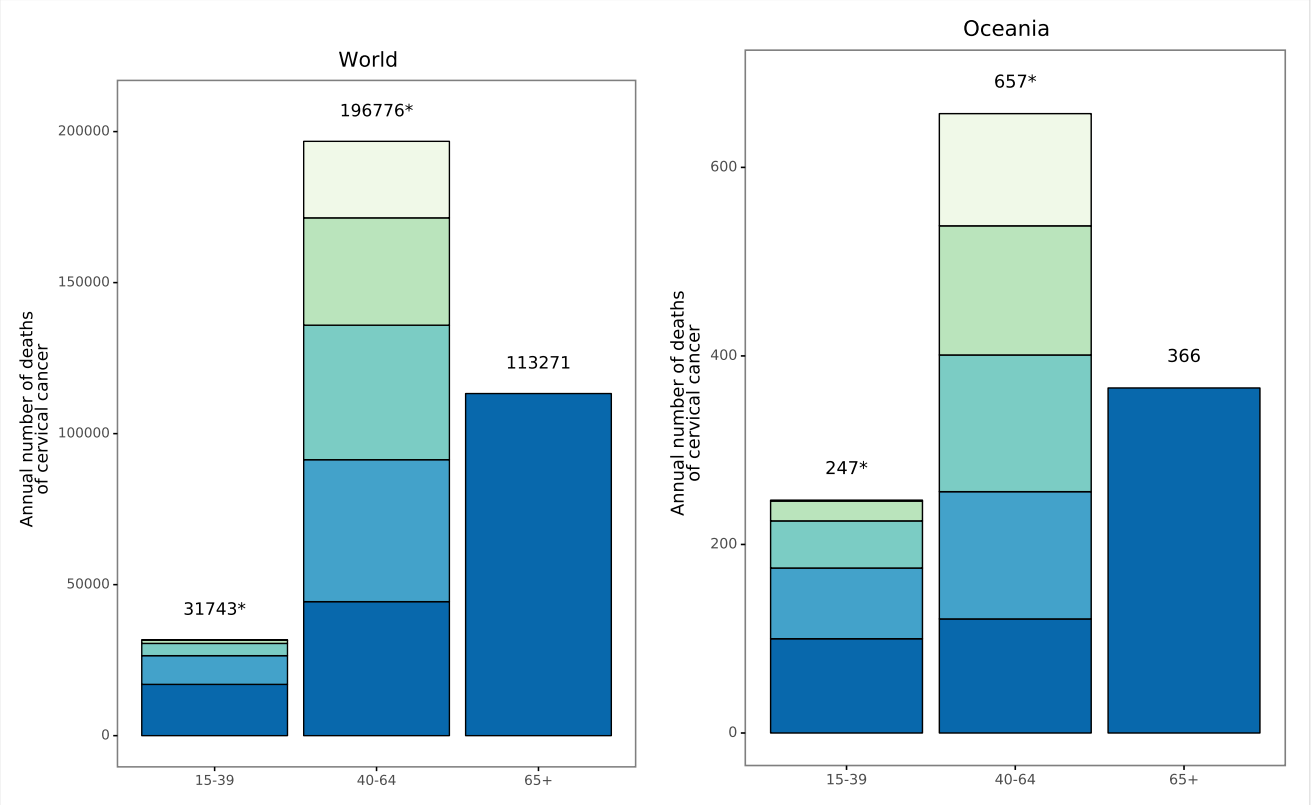
[a] Cumulative risk (mortality) is the probability or risk of individuals dying from the disease during ages 0-74 years. For cancer, it is expressed as the % of new born children who would be expected to die from a particular cancer before the age of 75 if they had the rates of cancer observed in the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

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

Data Sources:

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

Figure 16: Annual number of deaths of cervical cancer in the World and Oceania (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

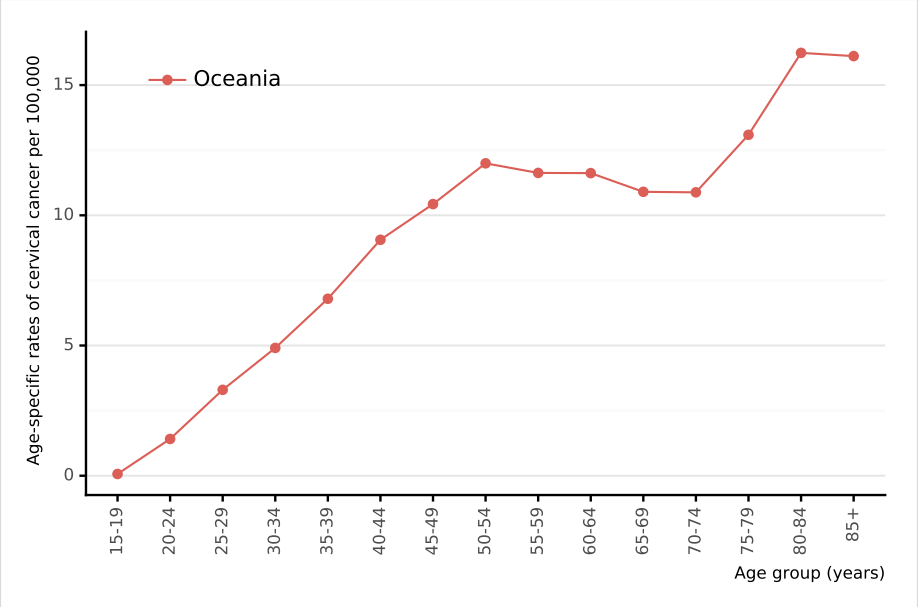
* World: 15-19 yrs: 144 cases. 20-24 yrs: 1055 cases. 25-29 yrs: 4057 cases. 30-34 yrs: 9506 cases. 35-39 yrs: 16981 cases. 40-44 yrs: 25334 cases. 45-49 yrs: 35535 cases. 50-54 yrs: 44540 cases. 55-59 yrs: 46997 cases. 60-64 yrs: 44370 cases.

* Oceania: 15-19 yrs: 1 cases. 20-24 yrs: 21 cases. 25-29 yrs: 50 cases. 30-34 yrs: 75 cases. 35-39 yrs: 100 cases. 40-44 yrs: 119 cases. 45-49 yrs: 137 cases. 50-54 yrs: 145 cases. 55-59 yrs: 135 cases. 60-64 yrs: 121 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 Oceania (estimates for 2020)



Data accessed on 27 Jan 2021

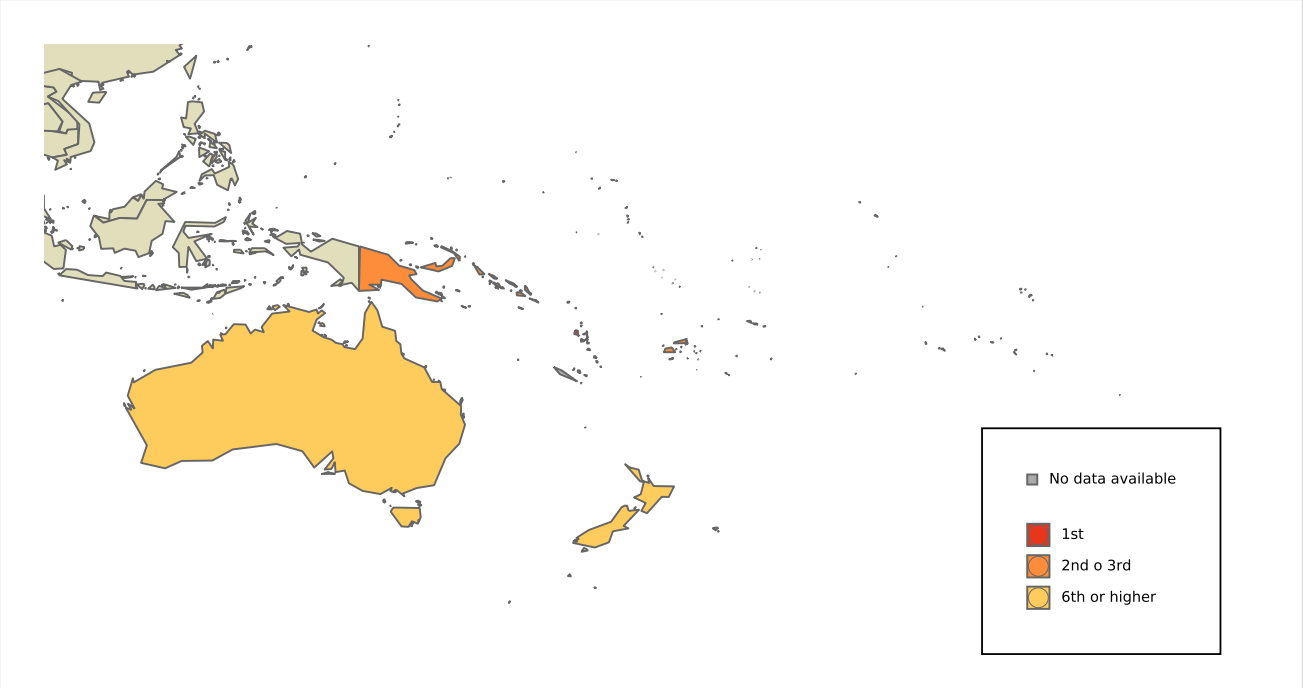
For more detailed methods of estimation please refer to http://gco.iarc.fr/today/data-sources-methods

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

Data Sources:

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

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



Data accessed on 27 Jan 2021

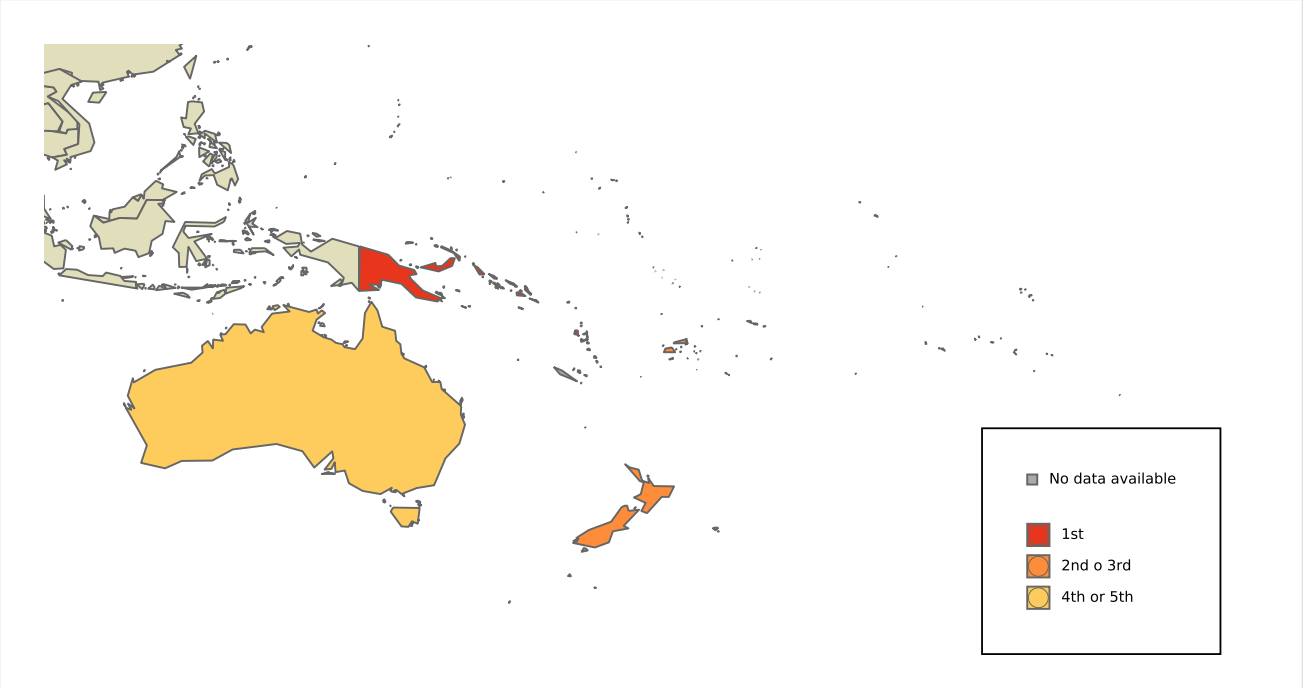
For more detailed methods of estimation please refer to http://gco.iarc.fr/today/data-sources-methods

[a] Non-melanoma skin cancer is not included

Data Sources:

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

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



Data accessed on 27 Jan 2021

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

[a] Non-melanoma skin cancer is not included

Data Sources:

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

3.4 Anogenital cancers other than the cervix

3.4.1 Anal cancer

3.4.1.1 Anal cancer incidence

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

Area	N Cases	Uncertainty intervals of new cancer cases [95% UI]	Crude rate[b]	ASR[b]	Cumulative risk (%) ages 0-74 years[a]	Ranking	
						All women	Women 15-44 years
Oceania	486	[420.6-561.6]	2.28	1.55	0.19	21	21
Australia & New Zealand	421	[376.2-471.1]	2.76	1.60	0.19	21	21
New Zealand	45	[32.2-63]	1.84	1.06	0.13	23	23
Australia	376	[317.3-445.6]	2.94	1.70	0.21	21	21
Melanesia	65	[19.3-218.7]	1.19	1.72	0.21	15	19
Solomon Islands	1	[0.10-8.80]	0.30	0.31	0.03	20	11
Vanuatu	0	[0-13.7]	0	0	0	27	14
Papua New Guinea	57	[6.50-500.7]	1.30	2.08	0.25	15	20
Fiji	5	[3.20-7.70]	1.13	1.11	0.11	19	11
Micronesia	0	[0-15.6]	0	0	0	23	25
Polynesia	0	[0-12.8]	0	0	0	26	19
Samoa	0	[0-14.7]	0	0	0	24	13

Data accessed on 27 Jan 2021

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

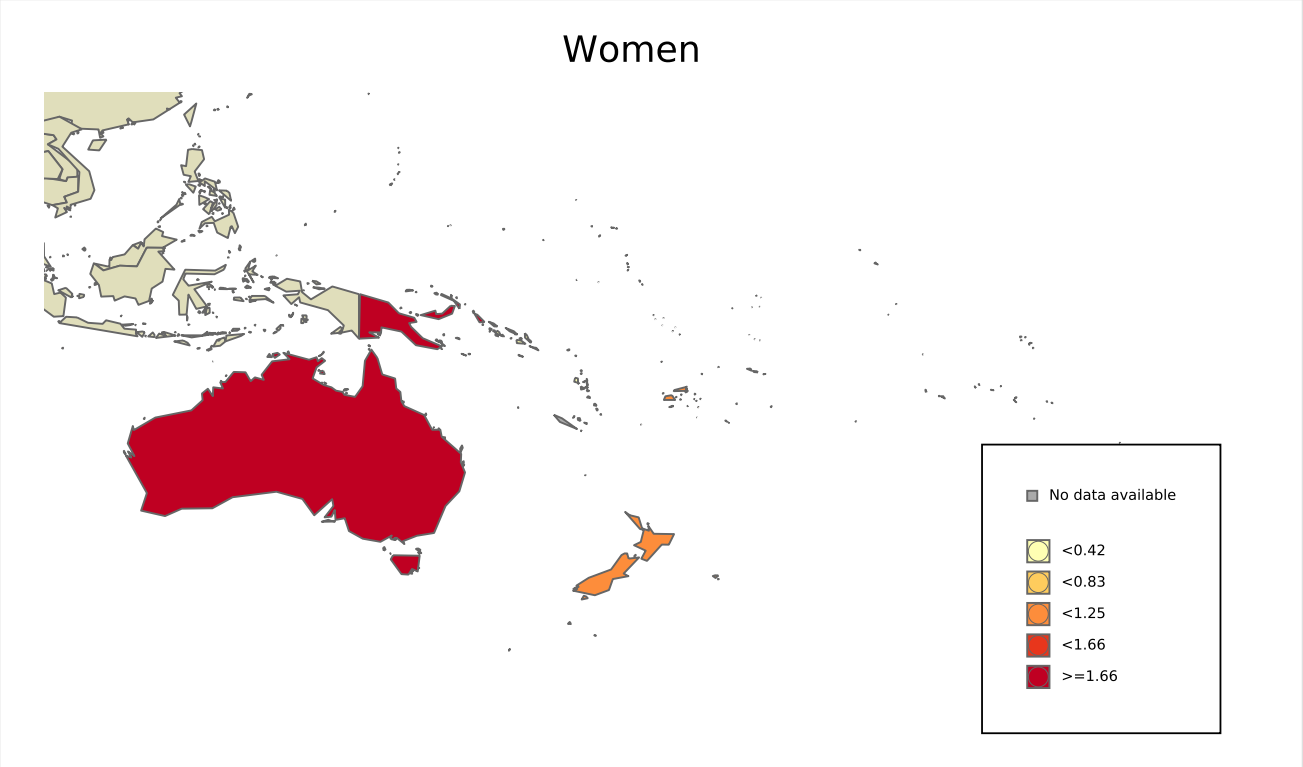
[a] Cumulative risk (incidence) is the probability or risk of individuals getting from the disease during ages 0-74 years. For cancer, it is expressed as the % of new born children who would be expected to develop from a particular cancer before the age of 75 if they had the rates of cancer observed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

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

Data Sources:

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

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



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

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

Area	N Cases	Uncertainty intervals of new cancer cases [95% UI]	Crude rate[b]	ASR[b]	Cumulative risk (%) ages 0-74 years[a]	Ranking	
						All men	Men 15-44 years
Oceania	314	[261.4-377.2]	1.47	1.01	0.12	22	25
Australia & New Zealand	266	[230.9-306.4]	1.77	1.03	0.13	22	24
Australia	239	[190.7-299.5]	1.88	1.11	0.14	22	24
New Zealand	27	[16.8-43.4]	1.14	0.62	0.07	22	23
Melanesia	48	[13.2-175]	0.85	1.72	0.18	20	26
Solomon Islands	1	[0.50-1.90]	0.29	0.38	0.03	21	10
Vanuatu	1	[0.10-13.7]	0.64	0.91	0.08	18	14
Papua New Guinea	46	[24.2-87.3]	1.01	2.36	0.24	17	27
Fiji	0	[0-1.80]	0	0	0	26	21
Micronesia	0	[0-15.6]	0	0	0	23	22
Polynesia	0	[0-12.8]	0	0	0	27	16
Samoa	0	[0-14.7]	0	0	0	26	9

Data accessed on 27 Jan 2021

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

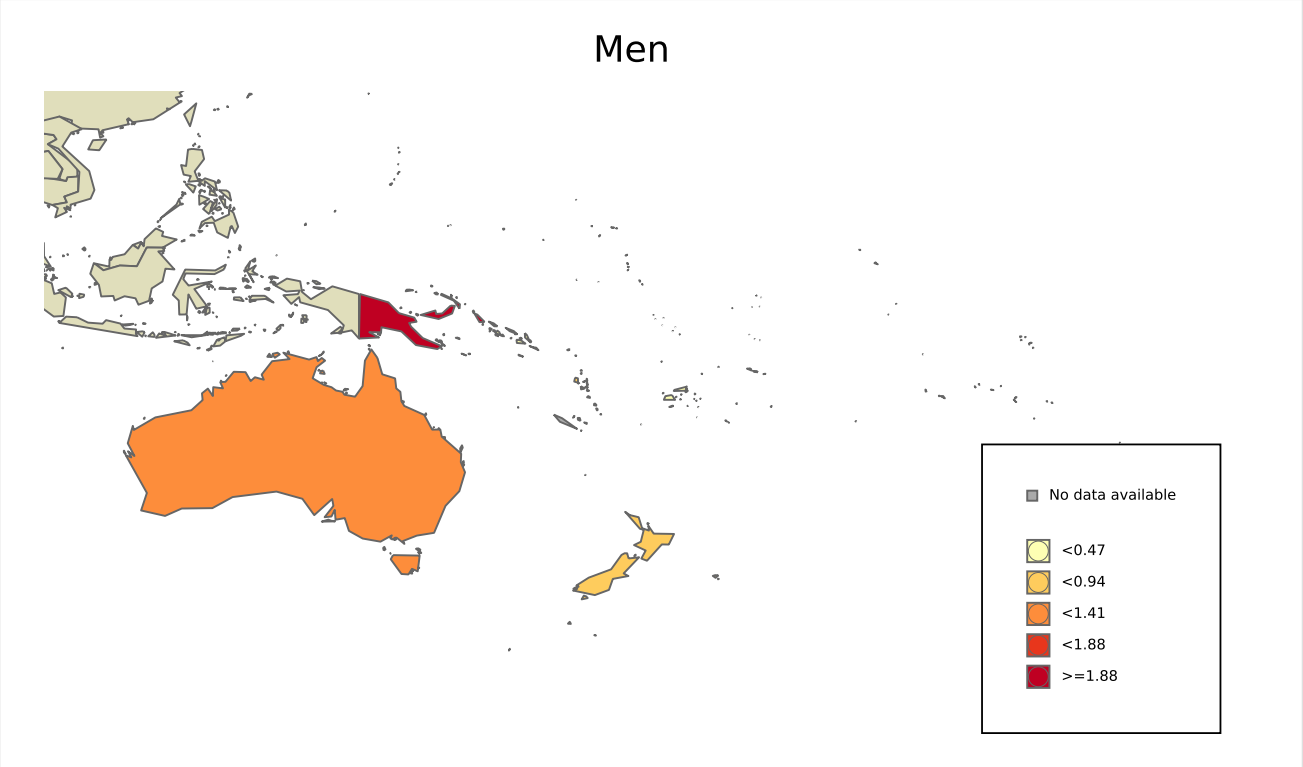
[a] Cumulative risk (incidence) is the probability or risk of individuals getting from the disease during ages 0-74 years. For cancer, it is expressed as the % of new born children who would be expected to develop from a particular cancer before the age of 75 if they had the rates of cancer observed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

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

Data Sources:

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

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



Data accessed on 27 Jan 2021

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

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

Data Sources:

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

3.4.1.2 Anal cancer mortality

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

Area	N Cases	Uncertainty intervals of new cancer cases [95% UI]	Crude rate[b]	ASR[b]	Cumulative risk (%) ages 0-74 years[a]	Ranking	
						All women	Women 15-44 years
Oceania	100	[69.1-144.7]	0.47	0.27	0.03	23	24
Australia & New Zealand	79	[59.3-105.2]	0.52	0.23	0.03	23	26
Australia	66	[50.5-86.2]	0.52	0.23	0.03	23	22
New Zealand	13	[7.30-23.1]	0.53	0.24	0.03	23	23
Melanesia	21	[10.5-42.2]	0.39	0.60	0.07	18	21
Solomon Islands	0	[0-17.2]	0	0	0	30	22
Vanuatu	0	[0-18.5]	0	0	0	16	24
Fiji	0	[0-16.1]	0	0	0	23	13
Papua New Guinea	21	[1.50-291.4]	0.48	0.83	0.09	18	19
Micronesia	0	[0-9.20]	0	0	0	25	29
Polynesia	0	[0-11.3]	0	0	0	24	23
Samoa	0	[0-10.1]	0	0	0	28	23

Data accessed on 27 Jan 2021

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

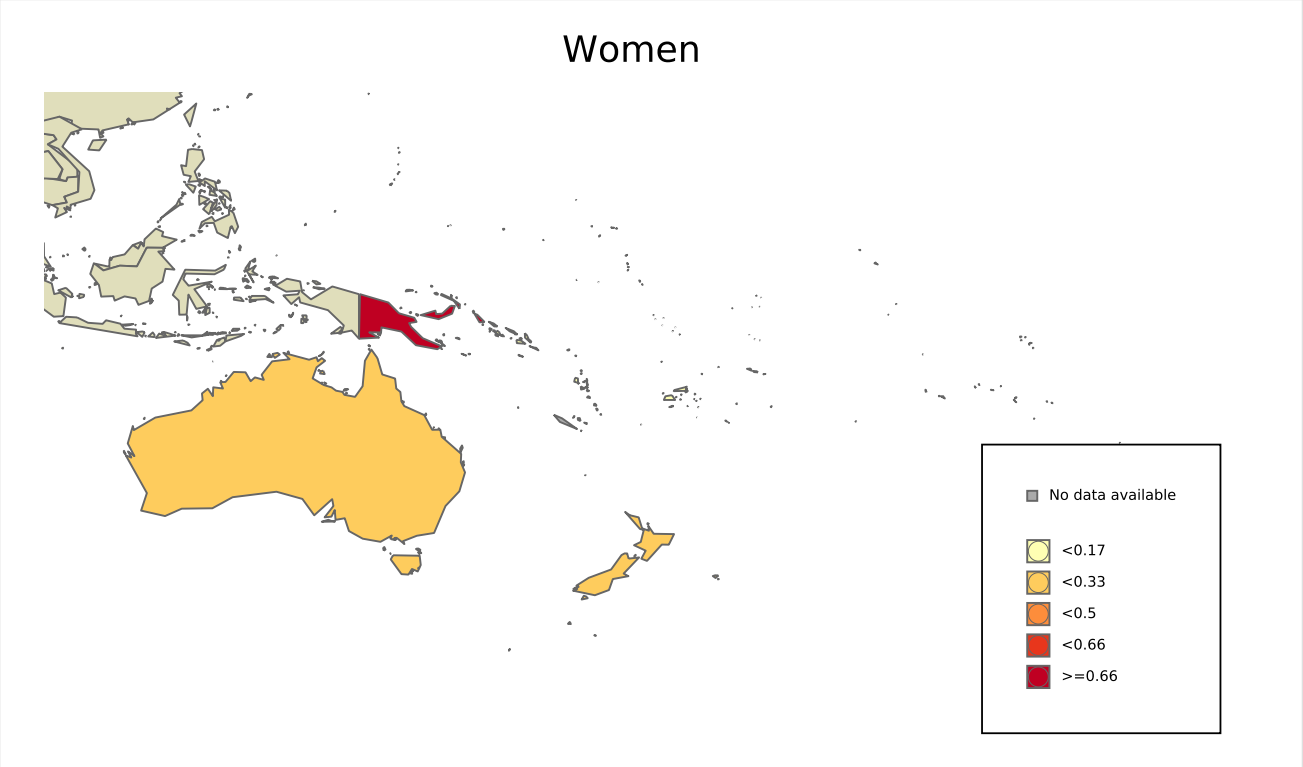
[a] Cumulative risk (mortality) is the probability or risk of individuals dying from the disease during ages 0-74 years. For cancer, it is expressed as the % of new born children who would be expected to die from a particular cancer before the age of 75 if they had the rates of cancer observed in the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

[b] Rates per 100,000 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 Oceania (estimates for 2020)



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

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

Area	N Cases	Uncertainty intervals of new cancer cases [95% UI]	Crude rate[b]	ASR[b]	Cumulative risk (%) ages 0-74 years[a]	Ranking	
						All men	Men 15-44 years
Oceania	87	[56.4-134.3]	0.41	0.25	0.03	23	28
Australia & New Zealand	60	[42.8-84.1]	0.40	0.20	0.02	25	27
Australia	47	[34.2-64.5]	0.37	0.19	0.02	25	26
New Zealand	13	[7.10-23.8]	0.55	0.27	0.03	22	22
Melanesia	27	[12.6-58]	0.48	0.98	0.10	19	28
Solomon Islands	0	[0-17.2]	0	0	0	22	28
Vanuatu	1	[0.10-18.5]	0.64	0.91	0.08	10	26
Fiji	0	[0-16.1]	0	0	0	27	15
Papua New Guinea	26	[1.90-360.8]	0.57	1.36	0.13	18	23
Micronesia	0	[0-9.20]	0	0	0	27	11
Polynesia	0	[0-11.3]	0	0	0	28	23
Samoa	0	[0-10.1]	0	0	0	22	11

Data accessed on 27 Jan 2021

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

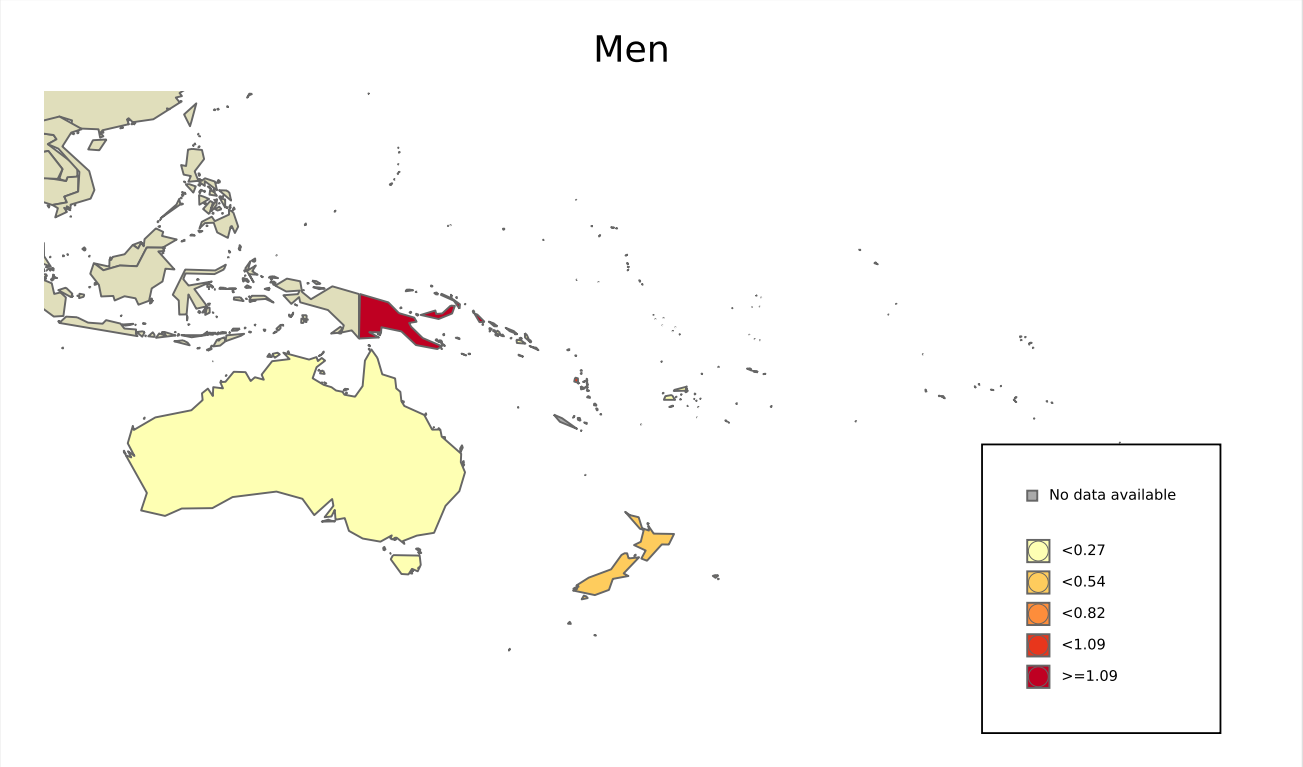
[a] Cumulative risk (mortality) is the probability or risk of individuals dying from the disease during ages 0-74 years. For cancer, it is expressed as the % of new born children who would be expected to die from a particular cancer before the age of 75 if they had the rates of cancer observed in the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

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

Data Sources:

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

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



Data accessed on 27 Jan 2021

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

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

Data Sources:

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

3.4.2 Vulvar cancer

3.4.2.1 Vulvar cancer incidence

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

Area	N Cases	Uncertainty intervals of new cancer cases [95% UI]	Crude rate[b]	ASR[b]	Cumulative risk (%) ages 0-74 years[a]	Ranking	
						All women	Women 15-44 years
Oceania	539	[473-614.2]	2.53	1.55	0.17	20	19
Australia & New Zealand	521	[470.7-576.7]	3.42	1.75	0.20	20	19
Australia	456	[382.9-543]	3.56	1.83	0.21	19	19
New Zealand	65	[48.3-87.5]	2.65	1.34	0.15	20	18
Melanesia	18	[6.60-48.8]	0.33	0.40	0.04	26	20
Solomon Islands	0	[0-1.50]	0	0	0	24	20
Vanuatu	0	[0-13.7]	0	0	0	21	29
Papua New Guinea	17	[11.5-25.2]	0.39	0.47	0.05	24	19
Fiji	0	[0-1.40]	0	0	0	29	28
Micronesia	0	[0-15.6]	0	0	0	26	15
Polynesia	0	[0-12.8]	0	0	0	29	25
Samoa	0	[0-14.7]	0	0	0	18	15

Data accessed on 27 Jan 2021

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

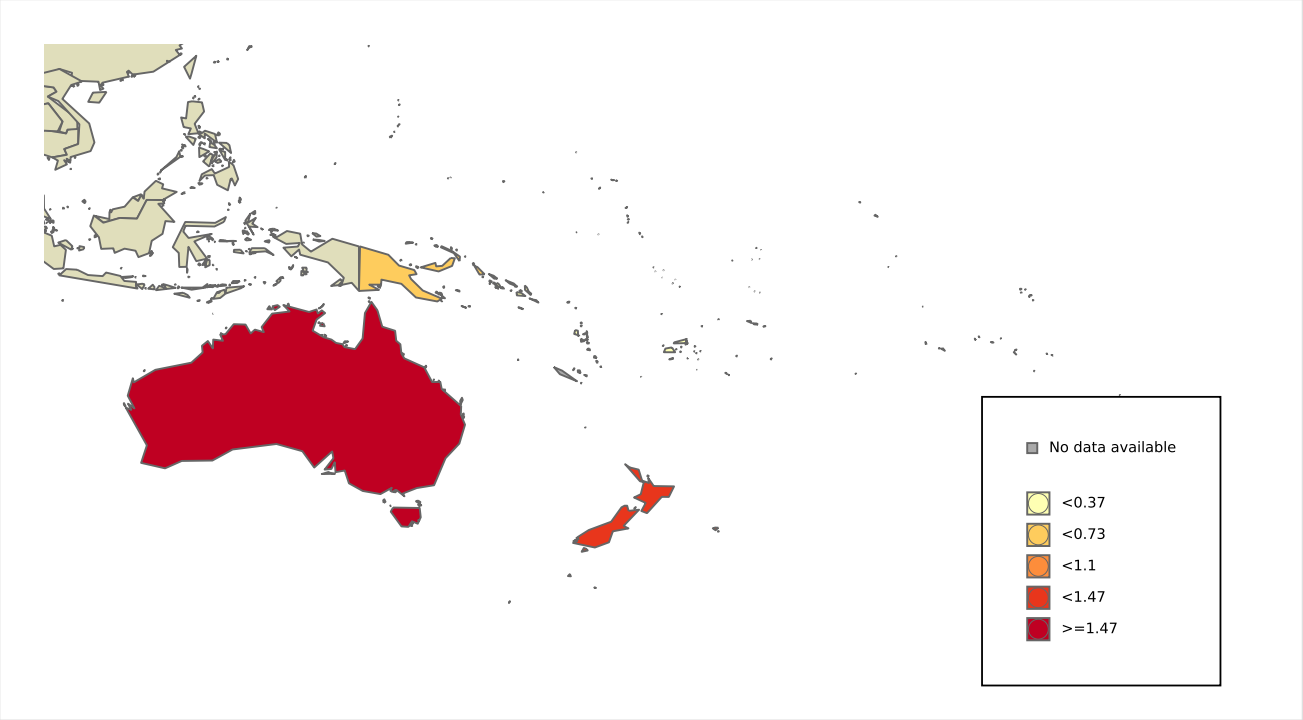
[a] Cumulative risk (incidence) is the probability or risk of individuals getting from the disease during ages 0-74 years. For cancer, it is expressed as the % of new born children who would be expected to develop from a particular cancer before the age of 75 if they had the rates of cancer observed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

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

Data Sources:

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

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



Data accessed on 27 Jan 2021

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

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

Data Sources:

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

3.4.2.2 Vulvar cancer mortality

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

Area	N Cases	Uncertainty intervals of new cancer cases [95% UI]	Crude rate[b]	ASR[b]	Cumulative risk (%) ages 0-74 years[a]	Ranking	
						All women	Women 15-44 years
Oceania	113	[83.5-153]	0.53	0.26	0.02	22	18
Australia & New Zealand	107	[84.8-135.1]	0.70	0.27	0.02	21	19
Australia	86	[60.3-122.7]	0.67	0.25	0.02	21	19
New Zealand	21	[12.8-34.4]	0.86	0.36	0.03	20	19
Melanesia	6	[3.40-10.7]	0.11	0.15	0.02	25	22
Solomon Islands	0	[0-17.2]	0	0	0	22	30
Vanuatu	0	[0-18.5]	0	0	0	24	16
Fiji	0	[0-16.1]	0	0	0	27	17
Papua New Guinea	6	[0.40-83.3]	0.14	0.19	0.02	25	18
Micronesia	0	[0-9.20]	0	0	0	20	20
Polynesia	0	[0-11.3]	0	0	0	29	31
Samoa	0	[0-10.1]	0	0	0	26	19

Data accessed on 27 Jan 2021

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

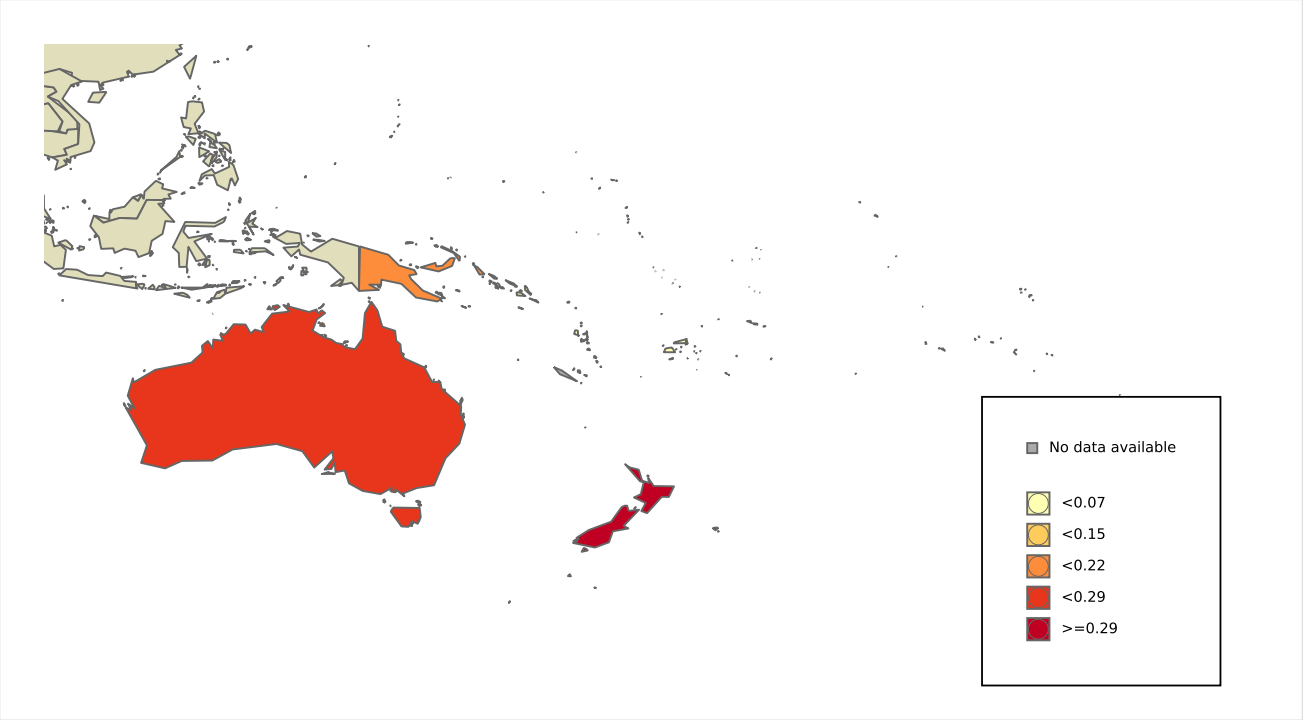
[a] Cumulative risk (mortality) is the probability or risk of individuals dying from the disease during ages 0-74 years. For cancer, it is expressed as the % of new born children who would be expected to die from a particular cancer before the age of 75 if they had the rates of cancer observed in the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

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

Data Sources:

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

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



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

3.4.3 Vaginal cancer

3.4.3.1 Vaginal cancer incidence

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

Area	N Cases	Uncertainty intervals of new cancer cases [95% UI]	Crude rate[b]	ASR[b]	Cumulative risk (%) ages 0-74 years[a]	Ranking	
						All women	Women 15-44 years
Oceania	137	[103.2-181.9]	0.64	0.43	0.05	27	27
Australia & New Zealand	113	[90.6-140.9]	0.74	0.39	0.04	27	25
New Zealand	18	[10.1-32.1]	0.73	0.41	0.05	27	25
Australia	95	[66.2-136.4]	0.74	0.38	0.04	27	26
Melanesia	24	[4.40-132.3]	0.44	0.55	0.05	23	31
Solomon Islands	1	[0.50-2]	0.30	0.44	0.04	15	19
Vanuatu	1	[0.10-13.7]	0.66	0.89	0.09	13	30
Fiji	2	[1-3.90]	0.45	0.48	0.05	24	27
Papua New Guinea	19	[9.30-38.8]	0.43	0.55	0.05	23	29
Micronesia	0	[0-15.6]	0	0	0	28	14
Polynesia	0	[0-12.8]	0	0	0	30	26
Samoa	0	[0-14.7]	0	0	0	28	17

Data accessed on 27 Jan 2021

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

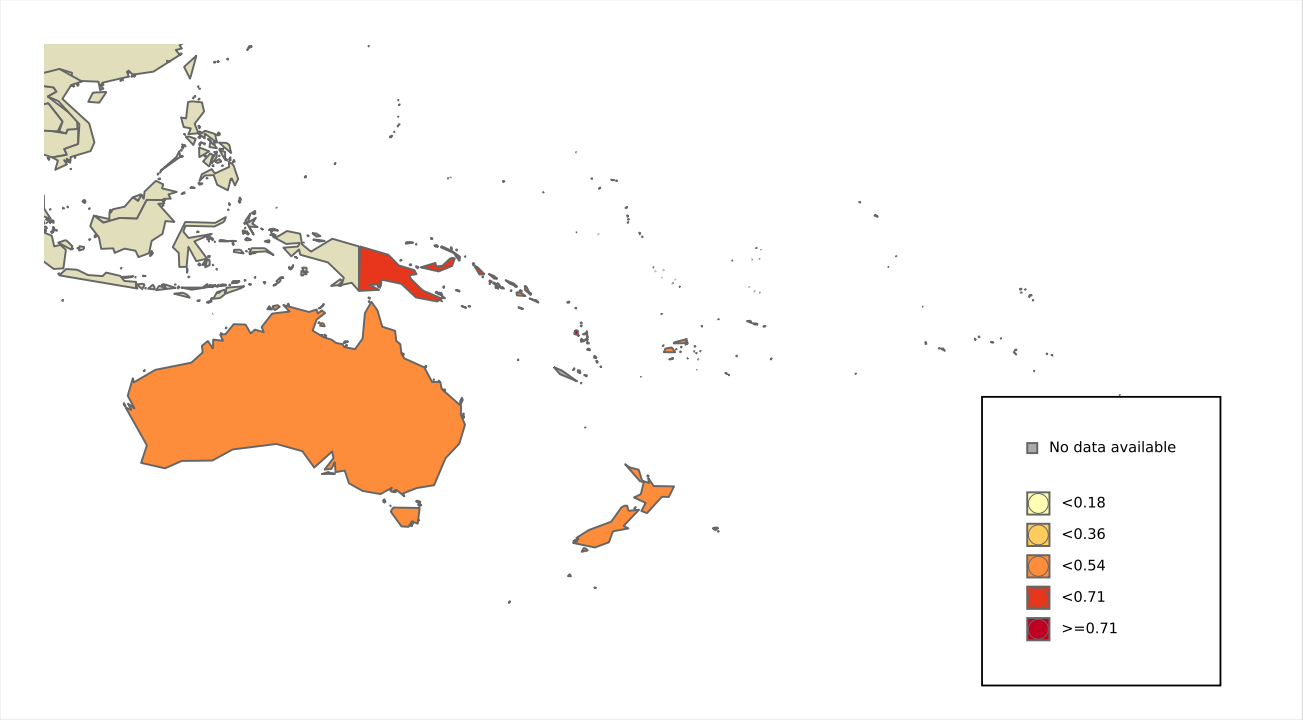
[a] Cumulative risk (incidence) is the probability or risk of individuals getting from the disease during ages 0-74 years. For cancer, it is expressed as the % of new born children who would be expected to develop from a particular cancer before the age of 75 if they had the rates of cancer observed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

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

Data Sources:

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

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



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

3.4.3.2 Vaginal cancer mortality

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

Area	N Cases	Uncertainty intervals of new cancer cases [95% UI]	Crude rate[b]	ASR[b]	Cumulative risk (%) ages 0-74 years[a]	Ranking	
						All women	Women 15-44 years
Oceania	54	[31.1-93.7]	0.25	0.17	0.02	25	29
Australia & New Zealand	37	[23.7-57.7]	0.24	0.11	0.01	26	30
Australia	28	[18.4-42.6]	0.22	0.10	0.01	27	31
New Zealand	9	[4.40-18.5]	0.37	0.13	0.01	24	27
Melanesia	17	[7.70-37.4]	0.31	0.39	0.04	21	29
Solomon Islands	0	[0-17.2]	0	0	0	19	31
Vanuatu	1	[0.10-18.5]	0.66	0.89	0.09	13	15
Papua New Guinea	15	[1.10-208.1]	0.34	0.44	0.04	19	30
Fiji	1	[0.10-12.7]	0.23	0.23	0.03	19	16
Micronesia	0	[0-9.20]	0	0	0	19	21
Polynesia	0	[0-11.3]	0	0	0	27	26
Samoa	0	[0-10.1]	0	0	0	27	20

Data accessed on 27 Jan 2021

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

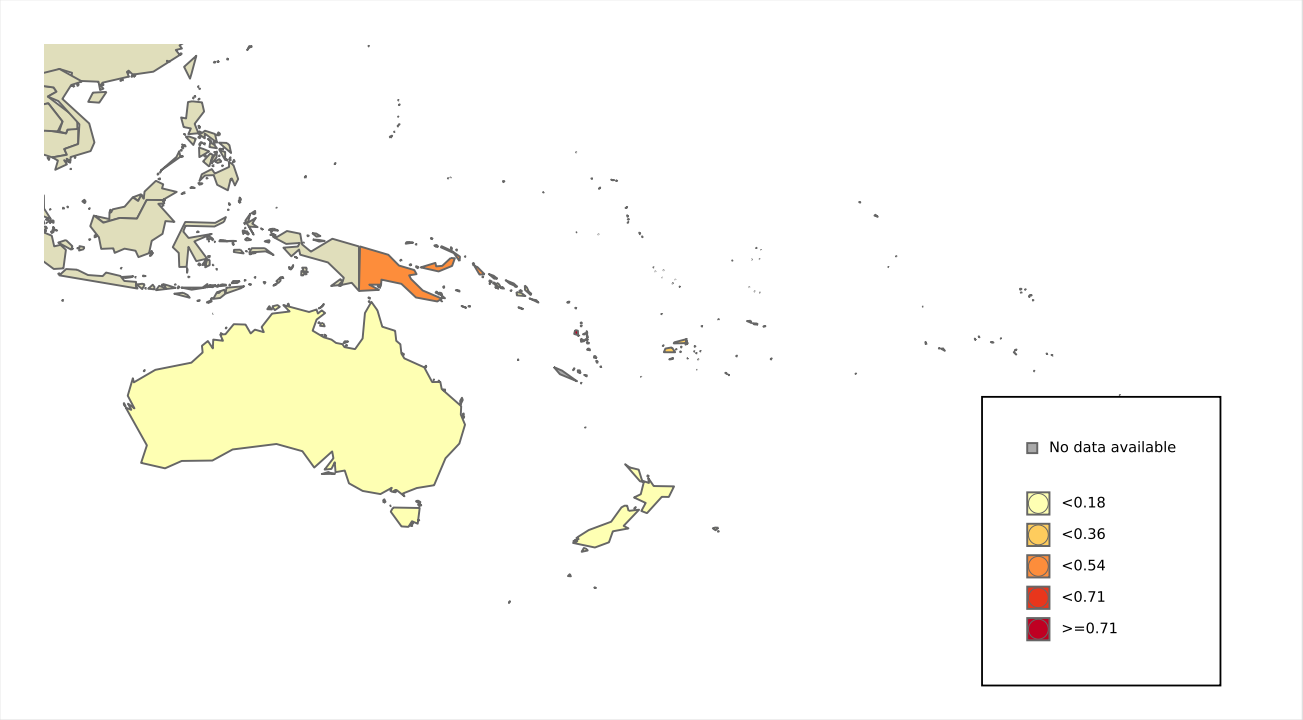
[a] Cumulative risk (mortality) is the probability or risk of individuals dying from the disease during ages 0-74 years. For cancer, it is expressed as the % of new born children who would be expected to die from a particular cancer before the age of 75 if they had the rates of cancer observed in the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

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

Data Sources:

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

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



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

3.4.4 Penile cancer

3.4.4.1 Penile cancer incidence

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

Area	N Cases	Uncertainty intervals of new cancer cases [95% UI]	Crude rate[b]	ASR[b]	Cumulative risk (%) ages 0-74 years[a]	Ranking	
						All men	Men 15-44 years
Oceania	202	[158.1-258.1]	0.95	0.64	0.07	25	22
Australia & New Zealand	152	[125.7-183.8]	1.01	0.54	0.06	25	23
Australia	131	[100.2-171.2]	1.03	0.56	0.06	25	22
New Zealand	21	[12-36.7]	0.89	0.48	0.06	26	24
Melanesia	50	[15.1-165.9]	0.88	1.45	0.12	19	17
Solomon Islands	2	[0.90-4.50]	0.57	0.89	0	16	23
Vanuatu	0	[0-13.7]	0	0	0	21	21
Papua New Guinea	43	[19.3-95.9]	0.94	1.64	0.15	19	18
Fiji	5	[2.40-10.5]	1.10	1.44	0.02	17	12
Micronesia	0	[0-15.6]	0	0	0	18	7
Polynesia	0	[0-12.8]	0	0	0	24	26
Samoa	0	[0-14.7]	0	0	0	25	27

Data accessed on 27 Jan 2021

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

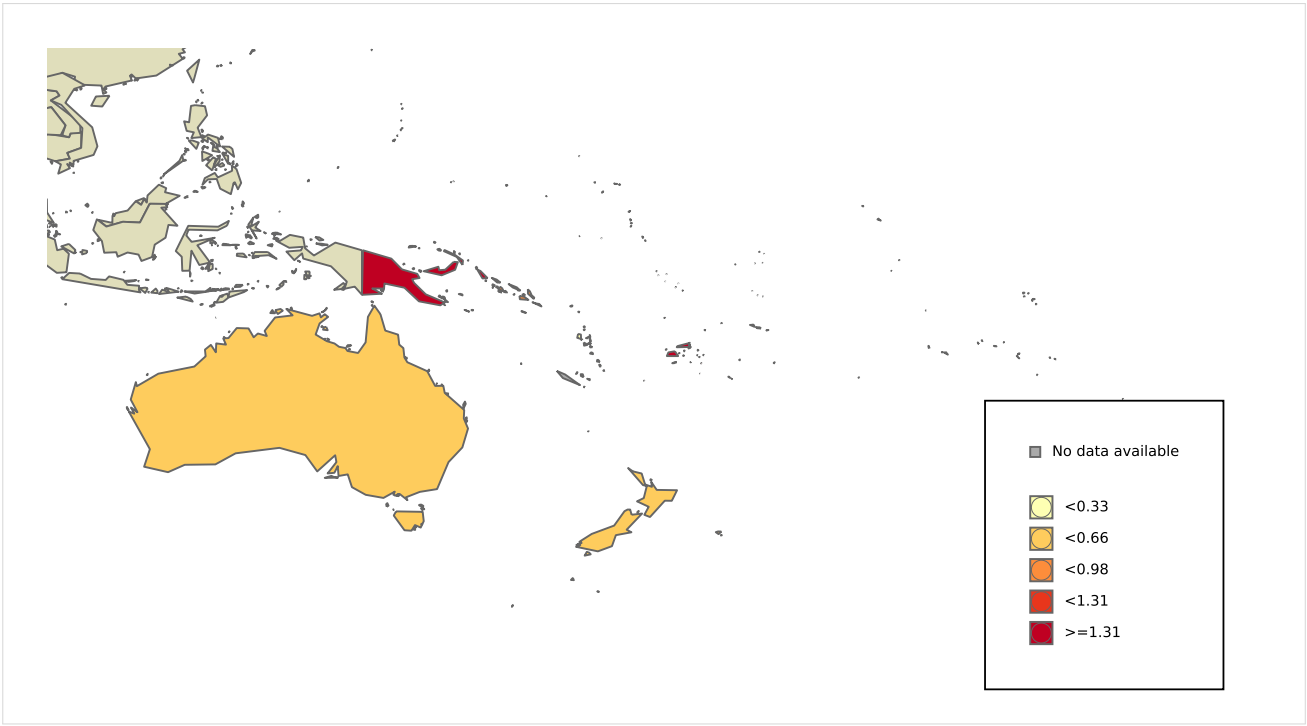
[a] Cumulative risk (incidence) is the probability or risk of individuals getting from the disease during ages 0-74 years. For cancer, it is expressed as the % of new born children who would be expected to develop from a particular cancer before the age of 75 if they had the rates of cancer observed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

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

Data Sources:

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

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



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

3.4.4.2 Penile cancer mortality

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

Area	N Cases	Uncertainty intervals of new cancer cases [95% UI]	Crude rate[b]	ASR[b]	Cumulative risk (%) ages 0-74 years[a]	Ranking	
						All men	Men 15-44 years
Oceania	38	[18.8-76.7]	0.18	0.12	0.01	27	24
Australia & New Zealand	25	[14.7-42.6]	0.17	0.08	0.01	27	25
Australia	21	[12.9-34.2]	0.17	0.07	0.01	27	25
New Zealand	4	[0.80-18.9]	0.17	0.08	0.01	27	28
Melanesia	13	[2.40-70.5]	0.23	0.36	0.05	23	21
Solomon Islands	0	[0-17.2]	0	0	0	26	8
Vanuatu	0	[0-18.5]	0	0	0	19	21
Fiji	0	[0-16.1]	0	0	0	22	26
Papua New Guinea	13	[0.90-180.4]	0.28	0.47	0.06	21	26
Micronesia	0	[0-9.20]	0	0	0	20	17
Polynesia	0	[0-11.3]	0	0	0	23	16
Samoa	0	[0-10.1]	0	0	0	28	24

Data accessed on 27 Jan 2021

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

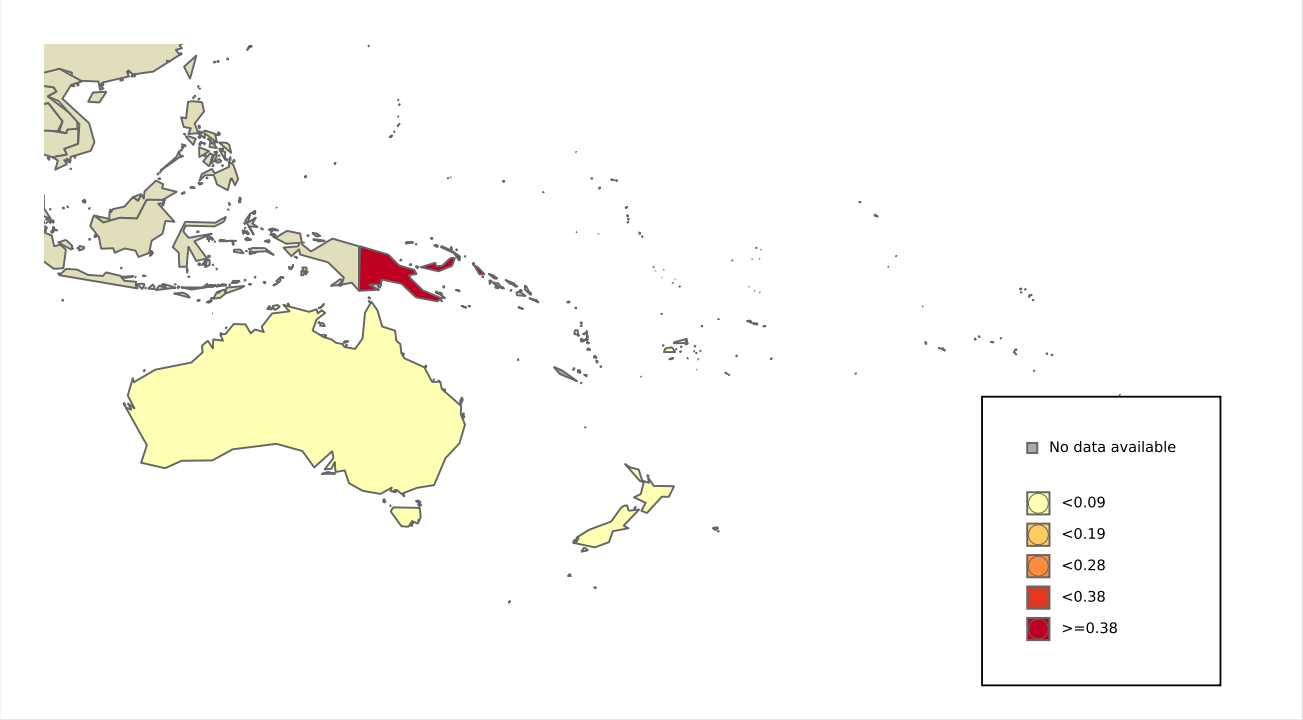
[a] Cumulative risk (mortality) is the probability or risk of individuals dying from the disease during ages 0-74 years. For cancer, it is expressed as the % of new born children who would be expected to die from a particular cancer before the age of 75 if they had the rates of cancer observed in the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

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

Data Sources:

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

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



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

3.5 Head and neck cancers

3.5.1 Oropharyngeal cancer

3.5.1.1 Oropharyngeal cancer incidence

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

Area	N Cases	Uncertainty intervals of new cancer cases [95% UI]	Crude rate[b]	ASR[b]	Cumulative risk (%) ages 0-74 years[a]	Ranking	
						All women	Women 15-44 years
Oceania	183	[145.8-229.7]	0.86	0.63	0.08	26	23
Australia & New Zealand	173	[145-206.5]	1.13	0.73	0.09	26	23
New Zealand	19	[10.9-33]	0.77	0.50	0.06	25	21
Australia	154	[119.4-198.7]	1.20	0.77	0.09	26	23
Melanesia	10	[1.80-56.3]	0.18	0.23	0.04	27	23
Solomon Islands	0	[0-2.10]	0	0	0	31	30
Vanuatu	0	[0-13.7]	0	0	0	31	31
Fiji	1	[0.50-2]	0.23	0.18	0.02	26	20
Papua New Guinea	8	[3.90-16.6]	0.18	0.24	0.03	27	24
Micronesia	0	[0-15.6]	0	0	0	20	29
Polynesia	0	[0-12.8]	0	0	0	23	22
Samoa	0	[0-14.7]	0	0	0	26	11

Data accessed on 27 Jan 2021

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

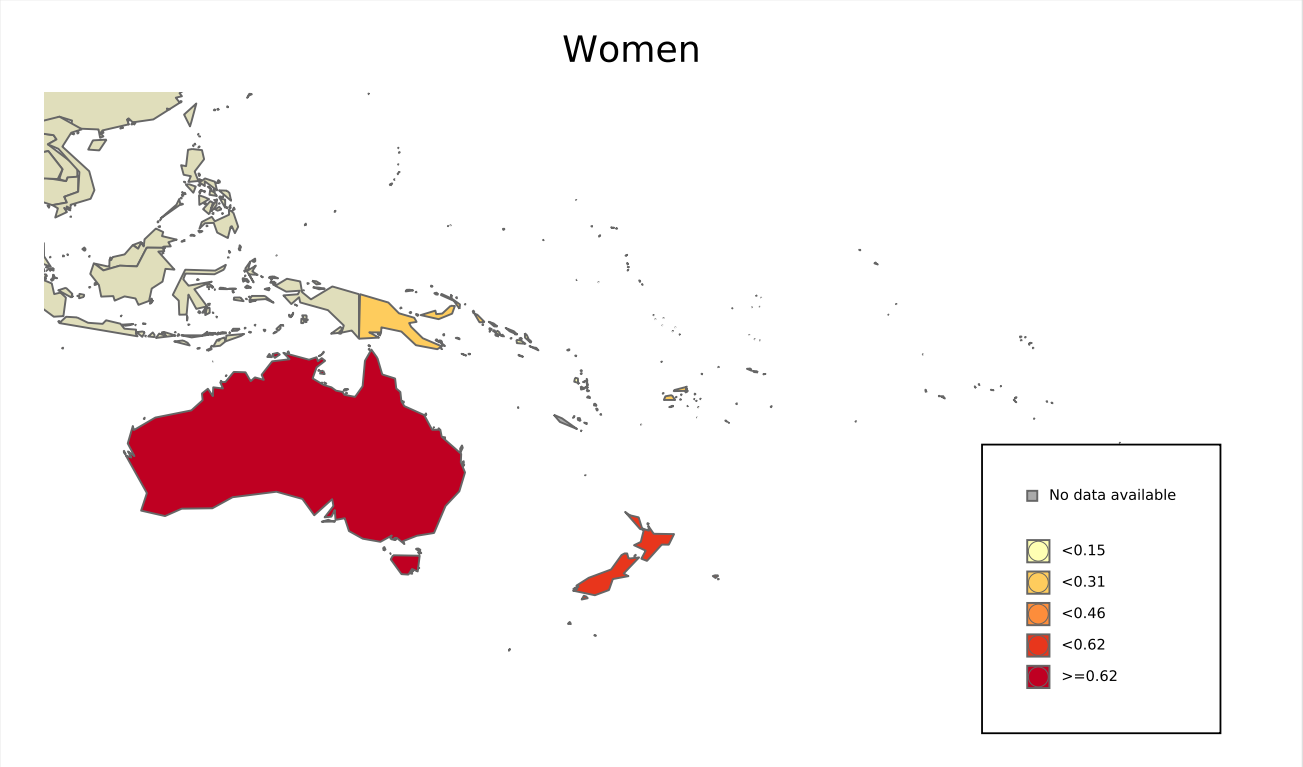
[a] Cumulative risk (incidence) is the probability or risk of individuals getting from the disease during ages 0-74 years. For cancer, it is expressed as the % of new born children who would be expected to develop from a particular cancer before the age of 75 if they had the rates of cancer observed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

[b] Rates per 100,000 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 Oceania (estimates for 2020)



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

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

Area	N Cases	Uncertainty intervals of new cancer cases [95% UI]	Crude rate[b]	ASR[b]	Cumulative risk (%) ages 0-74 years[a]	Ranking	
						All men	Men 15-44 years
Oceania	991	[895.6-1,096.6]	4.64	3.63	0.45	18	15
Australia & New Zealand	868	[802.9-938.4]	5.76	3.95	0.47	18	14
Australia	795	[682.7-925.7]	6.26	4.30	0.51	18	14
New Zealand	73	[55.7-95.7]	3.08	2.13	0.24	20	15
Melanesia	114	[44.7-290.7]	2.01	3.50	0.55	11	23
Solomon Islands	0	[0-3]	0	0	0	28	14
Vanuatu	0	[0-13.7]	0	0	0	25	18
Papua New Guinea	103	[34.2-310]	2.25	4.34	0.69	11	21
Fiji	2	[1.40-2.80]	0.44	0.39	0.04	21	20
Micronesia	3	[0.80-11.9]	1.08	1.14	0.19	15	27
Polynesia	6	[1.70-21.5]	1.73	1.71	0.25	19	19
Samoa	0	[0-14.7]	0	0	0	23	12

Data accessed on 27 Jan 2021

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

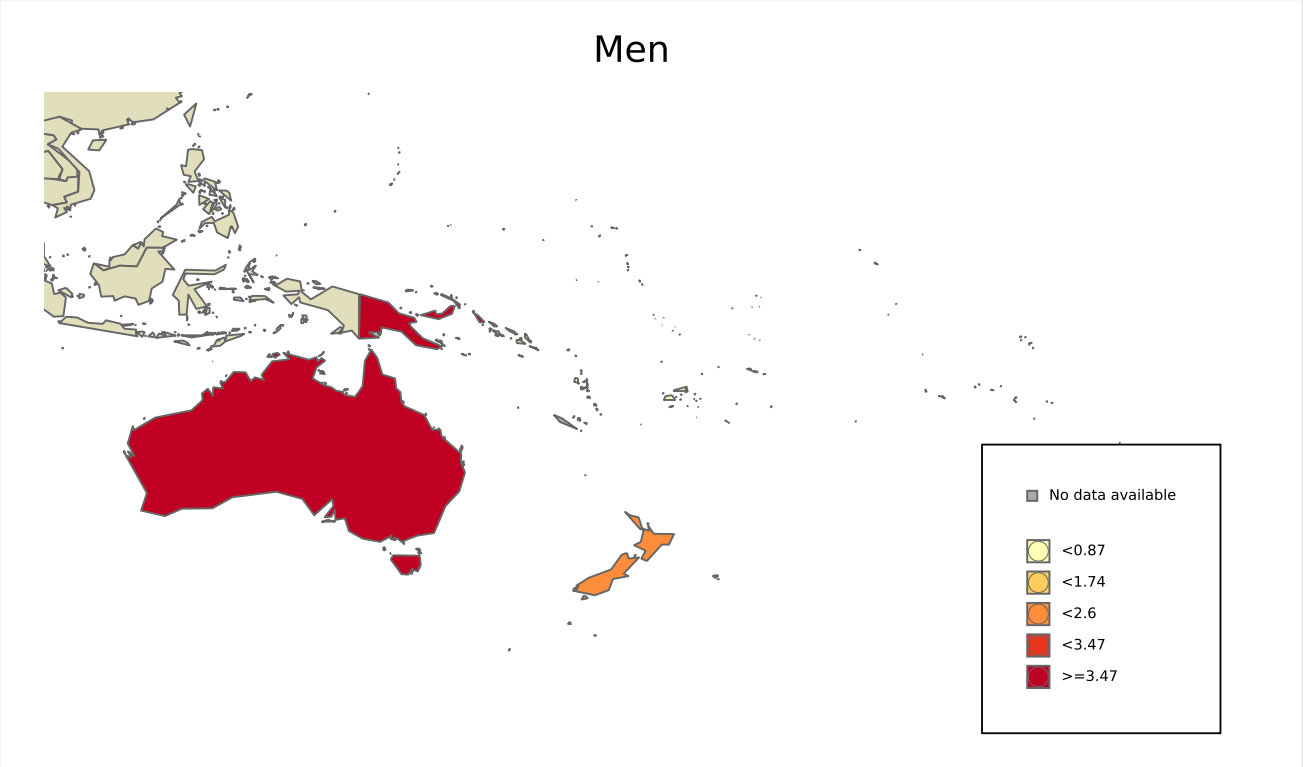
[a] Cumulative risk (incidence) is the probability or risk of individuals getting from the disease during ages 0-74 years. For cancer, it is expressed as the % of new born children who would be expected to develop from a particular cancer before the age of 75 if they had the rates of cancer observed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

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

Data Sources:

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

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



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

3.5.1.2 Oropharyngeal cancer mortality

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

Area	N Cases	Uncertainty intervals of new cancer cases [95% UI]	Crude rate[b]	ASR[b]	Cumulative risk (%) ages 0-74 years[a]	Ranking	
						All women	Women 15-44 years
Oceania	58	[36.8-91.3]	0.27	0.16	0.02	24	26
Australia & New Zealand	54	[38.2-76.3]	0.35	0.17	0.02	24	22
New Zealand	8	[3.60-17.8]	0.33	0.18	0.02	26	16
Australia	46	[33.4-63.4]	0.36	0.17	0.02	24	26
Melanesia	4	[1.30-12.3]	0.07	0.10	0.02	29	24
Solomon Islands	0	[0-17.2]	0	0	0	28	19
Vanuatu	0	[0-18.5]	0	0	0	19	28
Fiji	0	[0-16.1]	0	0	0	24	25
Papua New Guinea	4	[0.30-55.5]	0.09	0.14	0.03	29	25
Micronesia	0	[0-9.20]	0	0	0	30	24
Polynesia	0	[0-11.3]	0	0	0	26	12
Samoa	0	[0-10.1]	0	0	0	21	27

Data accessed on 27 Jan 2021

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

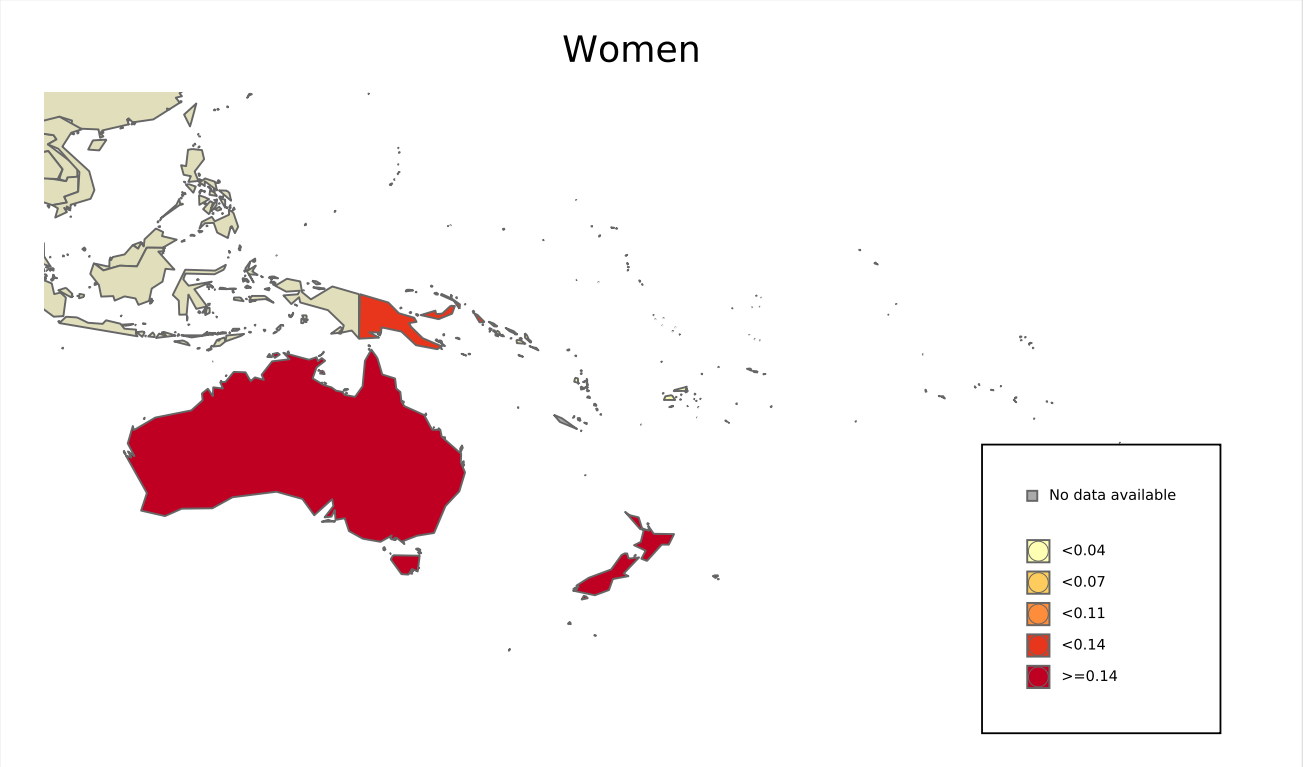
[a] Cumulative risk (mortality) is the probability or risk of individuals dying from the disease during ages 0-74 years. For cancer, it is expressed as the % of new born children who would be expected to die from a particular cancer before the age of 75 if they had the rates of cancer observed in the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

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

Data Sources:

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

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



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

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

Area	N Cases	Uncertainty intervals of new cancer cases [95% UI]	Crude rate[b]	ASR[b]	Cumulative risk (%) ages 0-74 years[a]	Ranking	
						All men	Men 15-44 years
Oceania	291	[237.2-357]	1.36	0.94	0.12	17	20
Australia & New Zealand	224	[192.3-260.9]	1.49	0.86	0.11	17	18
Australia	206	[169.2-250.7]	1.62	0.94	0.12	17	16
New Zealand	18	[10.7-30.4]	0.76	0.45	0.05	19	25
Melanesia	65	[37.5-112.6]	1.15	2.04	0.30	13	25
Solomon Islands	0	[0-17.2]	0	0	0	19	24
Vanuatu	0	[0-18.5]	0	0	0	26	12
Papua New Guinea	62	[4.50-860.3]	1.36	2.66	0.40	11	20
Fiji	0	[0-16.1]	0	0	0	28	18
Micronesia	0	[0-9.20]	0	0	0	25	28
Polynesia	2	[0.20-22.5]	0.58	0.54	0.08	19	17
Samoa	0	[0-10.1]	0	0	0	24	14

Data accessed on 27 Jan 2021

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

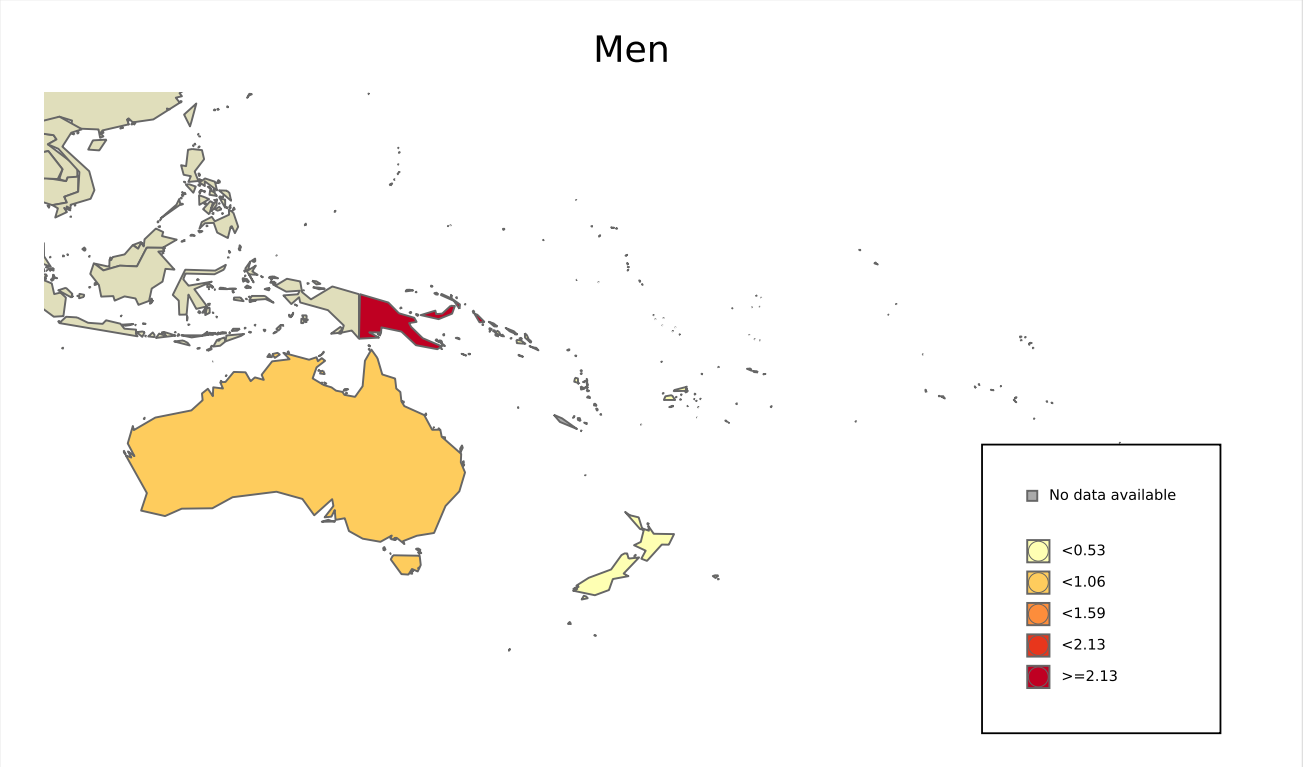
[a] Cumulative risk (mortality) is the probability or risk of individuals dying from the disease during ages 0-74 years. For cancer, it is expressed as the % of new born children who would be expected to die from a particular cancer before the age of 75 if they had the rates of cancer observed in the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

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

Data Sources:

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

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



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

3.5.2 Oral cavity cancer

3.5.2.1 Oral cavity cancer incidence

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

Area	N Cases	Uncertainty intervals of new cancer cases [95% UI]	Crude rate[b]	ASR[b]	Cumulative risk (%) ages 0-74 years[a]	Ranking	
						All women	Women 15-44 years
Oceania	1,537	[1,404.3-1,682.3]	7.21	4.97	0.55	13	11
Australia & New Zealand	1,026	[957-1,100]	6.73	3.64	0.41	14	14
Australia	926	[832.8-1,029.6]	7.23	3.92	0.44	13	14
New Zealand	100	[60.4-165.6]	4.08	2.19	0.24	19	14
Melanesia	503	[319-793.2]	9.23	11.9	1.35	4	5
Solomon Islands	4	[0.70-21.5]	1.18	1.82	0.33	11	31
Vanuatu	2	[0.10-27.4]	1.32	2.58	0.64	10	12
Papua New Guinea	480	[89.2-2,583.7]	11.0	14.8	1.67	3	5
Fiji	11	[8.20-14.8]	2.49	2.47	0.21	12	13
Micronesia	4	[1-15.8]	1.47	1.27	0.12	14	31
Polynesia	4	[1-15.2]	1.19	1.05	0.12	18	24
Samoa	1	[0.20-5.70]	1.04	0.87	0	17	9

Data accessed on 27 Jan 2021

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

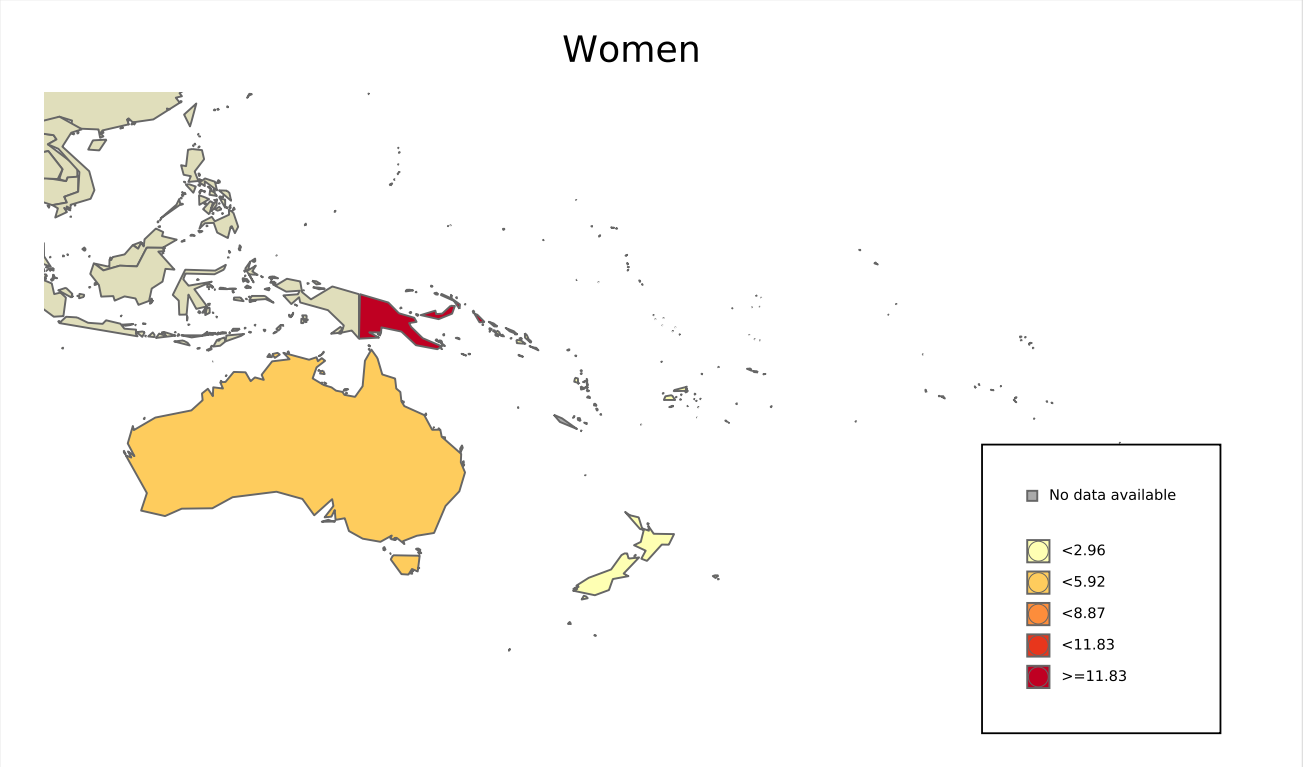
[a] Cumulative risk (incidence) is the probability or risk of individuals getting from the disease during ages 0-74 years. For cancer, it is expressed as the % of new born children who would be expected to develop from a particular cancer before the age of 75 if they had the rates of cancer observed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

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

Data Sources:

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

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



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

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

Area	N Cases	Uncertainty intervals of new cancer cases [95% UI]	Crude rate[b]	ASR[b]	Cumulative risk (%) ages 0-74 years[a]	Ranking	
						All men	Men 15-44 years
Oceania	2,894	[2,714.7-3,085.1]	13.5	10.0	1.22	10	11
Australia & New Zealand	2,070	[1,971.3-2,173.7]	13.7	8.52	1.01	11	10
New Zealand	208	[152.4-283.9]	8.78	5.49	0.64	14	11
Australia	1,862	[1,713.3-2,023.6]	14.7	9.10	1.08	11	10
Melanesia	796	[577.1-1,097.8]	14.0	22.2	2.82	2	4
Solomon Islands	7	[2.70-17.9]	2.00	2.91	0.21	7	5
Vanuatu	3	[0.20-41.1]	1.93	2.49	0.10	6	2
Papua New Guinea	758	[296.8-1,936]	16.6	28.4	3.62	1	2
Fiji	15	[12-18.7]	3.30	3.47	0.39	10	15
Micronesia	12	[5.80-25]	4.33	4.74	0.64	10	18
Polynesia	16	[6.80-37.5]	4.61	4.36	0.52	13	23
Samoa	4	[1.30-12.6]	3.89	4.98	0.66	10	14

Data accessed on 27 Jan 2021

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

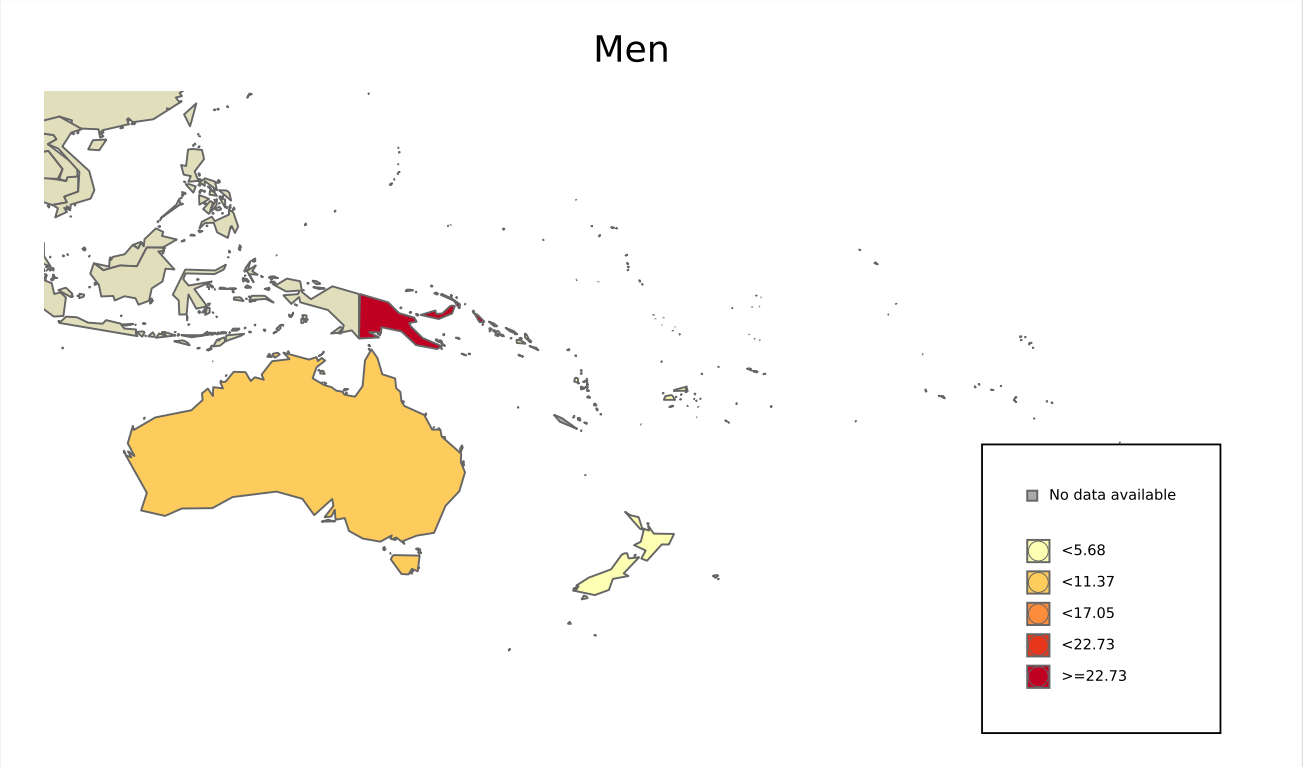
[a] Cumulative risk (incidence) is the probability or risk of individuals getting from the disease during ages 0-74 years. For cancer, it is expressed as the % of new born children who would be expected to develop from a particular cancer before the age of 75 if they had the rates of cancer observed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

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

Data Sources:

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

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



Data accessed on 27 Jan 2021

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

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

Data Sources:

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

3.5.2.2 Oral cavity cancer mortality

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

Area	N Cases	Uncertainty intervals of new cancer cases [95% UI]	Crude rate[b]	ASR[b]	Cumulative risk (%) ages 0-74 years[a]	Ranking	
						All women	Women 15-44 years
Oceania	345	[273.9-434.6]	1.62	0.99	0.11	18	14
Australia & New Zealand	188	[157.6-224.3]	1.23	0.50	0.05	18	16
Australia	151	[120.4-189.4]	1.18	0.49	0.05	18	15
New Zealand	37	[25.6-53.5]	1.51	0.58	0.05	19	18
Melanesia	155	[96.1-249.9]	2.84	3.96	0.48	8	10
Solomon Islands	2	[0.10-33.3]	0.59	0.91	0.16	12	17
Vanuatu	1	[0.10-18.5]	0.66	1.29	0.32	12	10
Papua New Guinea	148	[10.7-2,053.7]	3.38	5.05	0.60	8	8
Fiji	4	[0.80-19.4]	0.90	0.86	0.09	15	27
Micronesia	1	[0.20-4.80]	0.37	0.34	0	17	31
Polynesia	1	[0.10-11.3]	0.30	0.18	0	18	10
Samoa	1	[0.10-10.1]	1.04	0.87	0	17	29

Data accessed on 27 Jan 2021

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

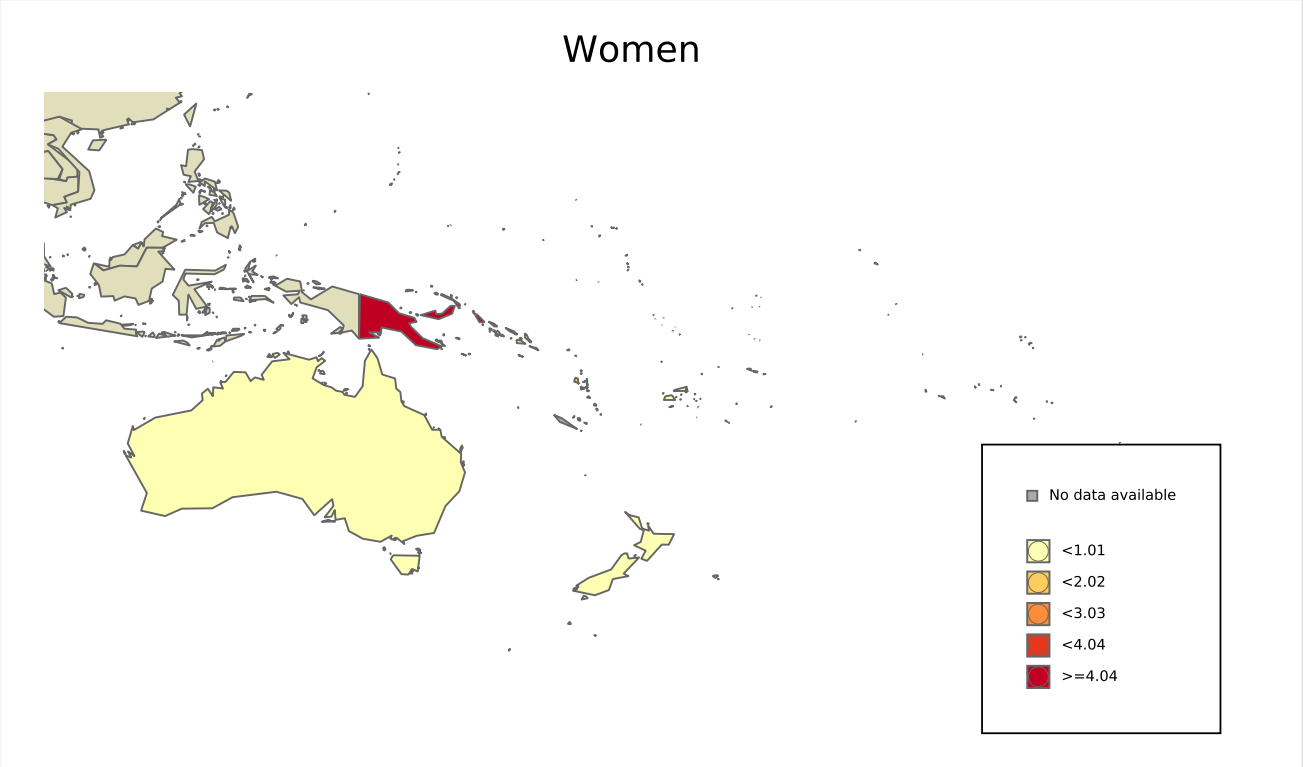
[a] Cumulative risk (mortality) is the probability or risk of individuals dying from the disease during ages 0-74 years. For cancer, it is expressed as the % of new born children who would be expected to die from a particular cancer before the age of 75 if they had the rates of cancer observed in the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

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

Data Sources:

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

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



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

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

Area	N Cases	Uncertainty intervals of new cancer cases [95% UI]	Crude rate[b]	ASR[b]	Cumulative risk (%) ages 0-74 years[a]	Ranking	
						All men	Men 15-44 years
Oceania	606	[501.8-731.9]	2.84	1.99	0.26	16	11
Australia & New Zealand	281	[243.3-324.5]	1.86	1.03	0.13	16	15
Australia	225	[181.9-278.3]	1.77	0.99	0.12	16	14
New Zealand	56	[41.3-76]	2.36	1.22	0.14	16	18
Melanesia	313	[214.9-455.8]	5.52	9.27	1.19	5	5
Solomon Islands	5	[0.90-27.3]	1.43	2.29	0.16	6	26
Vanuatu	0	[0-5.80]	0	0	0	28	15
Papua New Guinea	297	[60.8-1,450.7]	6.50	11.9	1.53	5	5
Fiji	8	[2.50-25.9]	1.76	2.02	0.21	10	8
Micronesia	5	[1-24]	1.80	1.94	0.34	13	26
Polynesia	7	[1.10-43.9]	2.02	1.94	0.22	16	18
Samoa	1	[0.10-10.1]	0.97	1.35	0.17	17	25

Data accessed on 27 Jan 2021

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

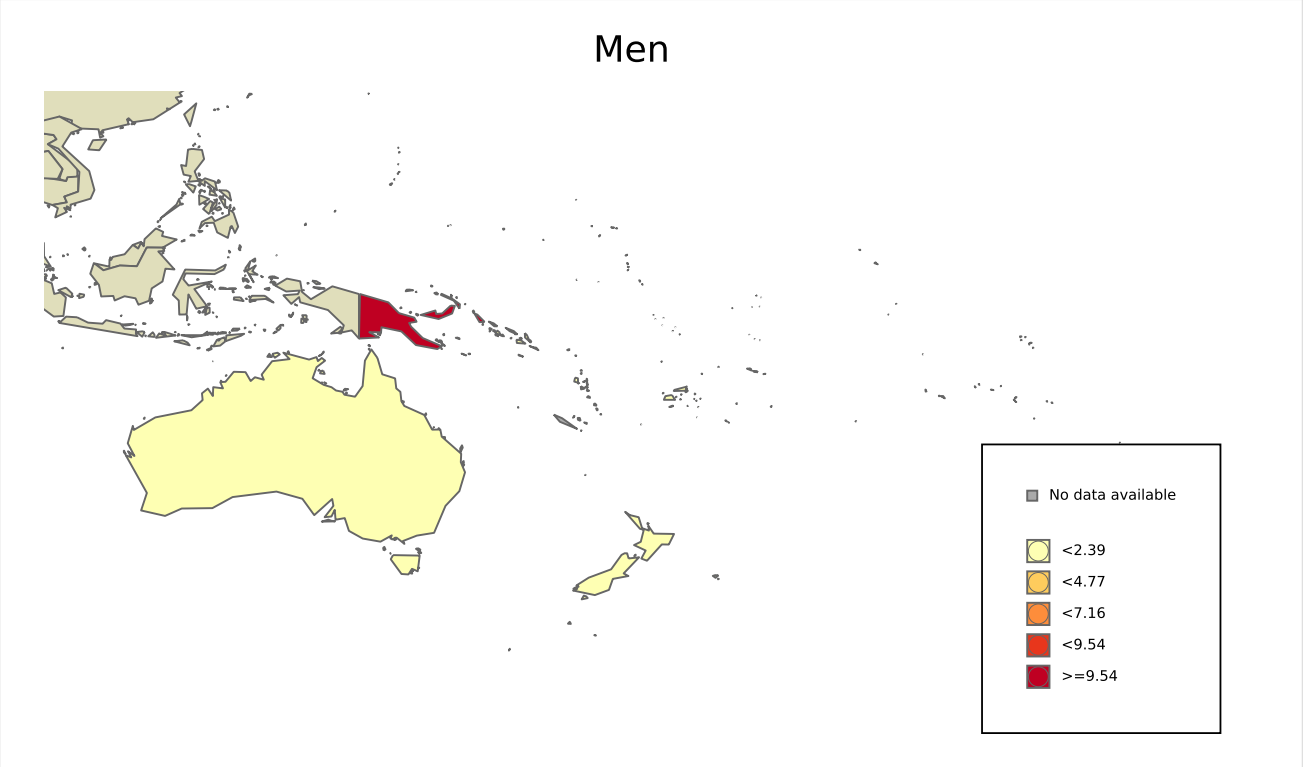
[a] Cumulative risk (mortality) is the probability or risk of individuals dying from the disease during ages 0-74 years. For cancer, it is expressed as the % of new born children who would be expected to die from a particular cancer before the age of 75 if they had the rates of cancer observed in the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

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

Data Sources:

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

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



Data accessed on 27 Jan 2021

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

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

Data Sources:

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

3.5.3 Laryngeal cancer

3.5.3.1 Laryngeal cancer incidence

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

Area	N Cases	Uncertainty intervals of new cancer cases [95% UI]	Crude rate[b]	ASR[b]	Cumulative risk (%) ages 0-74 years[a]	Ranking	
						All women	Women 15-44 years
Oceania	117	[83.1-164.8]	0.55	0.37	0.04	28	24
Australia & New Zealand	80	[61.2-104.5]	0.52	0.28	0.03	28	29
Australia	64	[45.8-89.4]	0.50	0.27	0.03	28	29
New Zealand	16	[8.60-29.8]	0.65	0.34	0.04	28	28
Melanesia	36	[5.60-230.5]	0.66	0.81	0.07	21	17
Solomon Islands	2	[0.90-4.50]	0.59	0.69	0.06	14	10
Vanuatu	0	[0-13.7]	0	0	0	24	18
Fiji	6	[2.80-12.7]	1.36	1.32	0.10	17	14
Papua New Guinea	27	[12-60.6]	0.62	0.80	0.08	21	18
Micronesia	0	[0-15.6]	0	0	0	24	21
Polynesia	1	[0.10-12.8]	0.30	0.20	0	20	16
Samoa	0	[0-14.7]	0	0	0	22	22

Data accessed on 27 Jan 2021

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

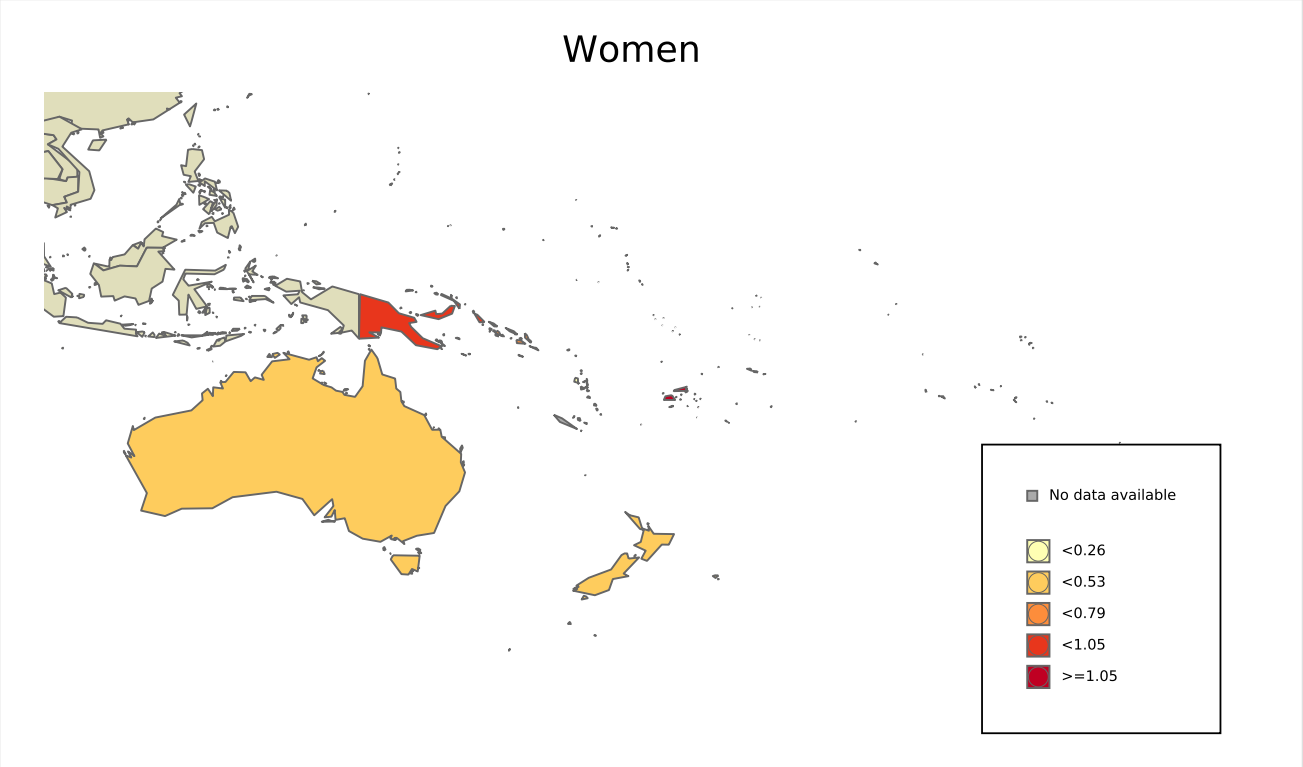
[a] Cumulative risk (incidence) is the probability or risk of individuals getting from the disease during ages 0-74 years. For cancer, it is expressed as the % of new born children who would be expected to develop from a particular cancer before the age of 75 if they had the rates of cancer observed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

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

Data Sources:

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

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



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

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

Area	N Cases	Uncertainty intervals of new cancer cases [95% UI]	Crude rate[b]	ASR[b]	Cumulative risk (%) ages 0-74 years[a]	Ranking	
						All men	Men 15-44 years
Oceania	712	[628.8-806.2]	3.33	2.31	0.29	20	23
Australia & New Zealand	582	[529.4-639.8]	3.86	2.17	0.27	20	25
Australia	494	[408-598.1]	3.89	2.19	0.28	20	25
New Zealand	88	[63.1-122.6]	3.71	2.09	0.25	19	25
Melanesia	114	[53.5-243]	2.01	3.40	0.42	12	14
Solomon Islands	2	[0.70-6]	0.57	1.26	0.21	14	28
Vanuatu	2	[0.10-27.4]	1.28	2.47	0.41	12	11
Papua New Guinea	91	[30.2-273.9]	1.99	3.57	0.44	13	14
Fiji	8	[5.90-10.8]	1.76	1.98	0.24	15	14
Micronesia	5	[1.50-17.1]	1.80	1.93	0.39	14	19
Polynesia	11	[3.70-32.9]	3.17	3.08	0.34	16	13
Samoa	1	[0.30-3.20]	0.97	1.35	0	20	15

Data accessed on 27 Jan 2021

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

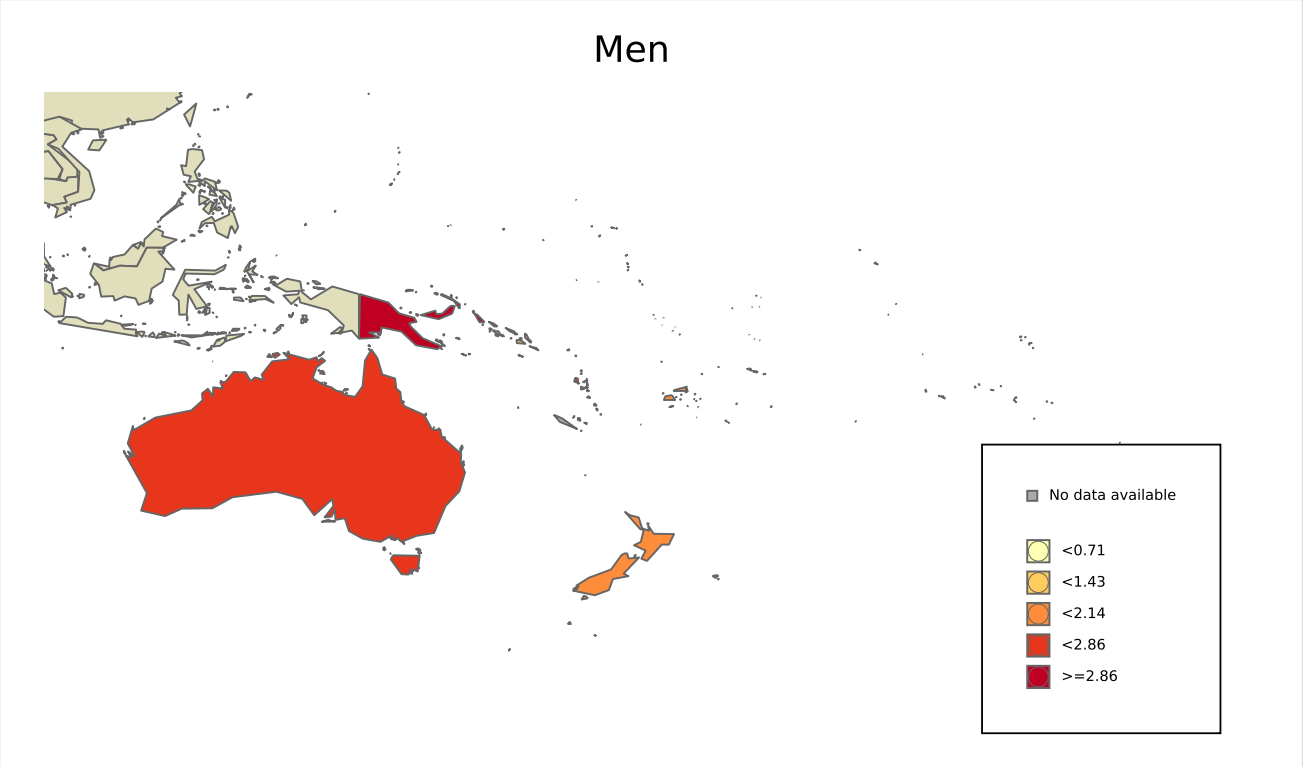
[a] Cumulative risk (incidence) is the probability or risk of individuals getting from the disease during ages 0-74 years. For cancer, it is expressed as the % of new born children who would be expected to develop from a particular cancer before the age of 75 if they had the rates of cancer observed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

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

Data Sources:

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

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



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

3.5.3.2 Laryngeal cancer mortality

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

Area	N Cases	Uncertainty intervals of new cancer cases [95% UI]	Crude rate[b]	ASR[b]	Cumulative risk (%) ages 0-74 years[a]	Ranking	
						All women	Women 15-44 years
Oceania	44	[24.4-79.5]	0.21	0.13	0.01	28	28
Australia & New Zealand	33	[20.9-52.1]	0.22	0.10	0.01	27	28
New Zealand	6	[2.30-15.5]	0.24	0.10	0.01	27	25
Australia	27	[17.7-41.3]	0.21	0.10	0.01	28	29
Melanesia	10	[3-33.3]	0.18	0.24	0.03	24	20
Solomon Islands	0	[0-17.2]	0	0	0	17	26
Vanuatu	0	[0-18.5]	0	0	0	27	30
Papua New Guinea	10	[0.70-138.8]	0.23	0.32	0.03	24	20
Fiji	0	[0-16.1]	0	0	0	26	21
Micronesia	0	[0-9.20]	0	0	0	24	16
Polynesia	1	[0.10-11.3]	0.30	0.20	0	19	27
Samoa	0	[0-10.1]	0	0	0	30	26

Data accessed on 27 Jan 2021

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

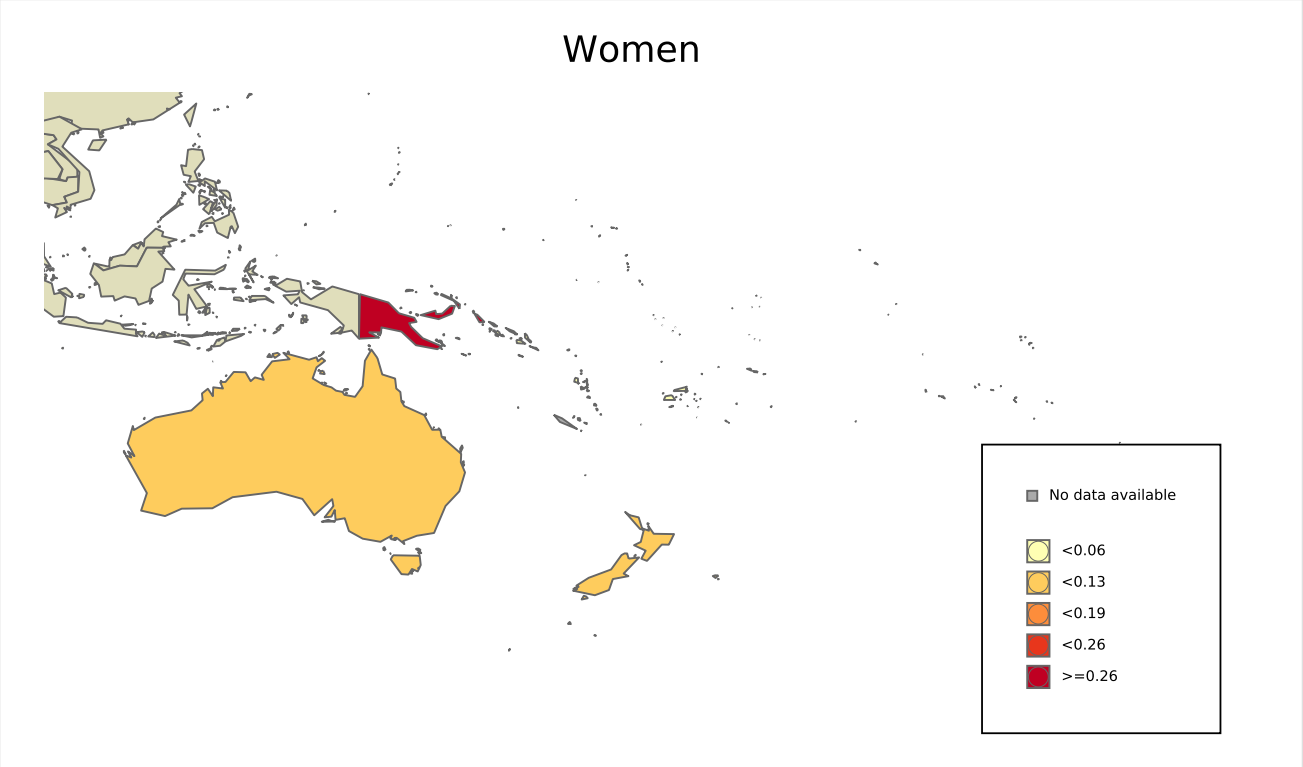
[a] Cumulative risk (mortality) is the probability or risk of individuals dying from the disease during ages 0-74 years. For cancer, it is expressed as the % of new born children who would be expected to die from a particular cancer before the age of 75 if they had the rates of cancer observed in the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

[b] Rates per 100,000 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 Oceania (estimates for 2020)



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

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

Area	N Cases	Uncertainty intervals of new cancer cases [95% UI]	Crude rate[b]	ASR[b]	Cumulative risk (%) ages 0-74 years[a]	Ranking	
						All men	Men 15-44 years
Oceania	273	[219.3-339.8]	1.28	0.81	0.10	18	21
Australia & New Zealand	193	[163.2-228.2]	1.28	0.61	0.07	18	22
Australia	168	[135-209.1]	1.32	0.63	0.07	18	22
New Zealand	25	[16-39.1]	1.05	0.51	0.07	17	20
Melanesia	70	[46.2-106.1]	1.23	2.19	0.29	12	15
Solomon Islands	1	[0.20-5.10]	0.29	0.63	0.11	14	18
Vanuatu	1	[0.20-5.40]	0.64	1.24	0.21	12	18
Fiji	5	[1-24.2]	1.10	1.32	0.17	12	11
Papua New Guinea	58	[12.7-264.8]	1.27	2.48	0.32	13	17
Micronesia	3	[0.30-27.6]	1.08	0.86	0.11	14	14
Polynesia	7	[1.10-43.9]	2.02	1.88	0.20	15	26
Samoa	1	[0.10-10.1]	0.97	1.35	0	14	7

Data accessed on 27 Jan 2021

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

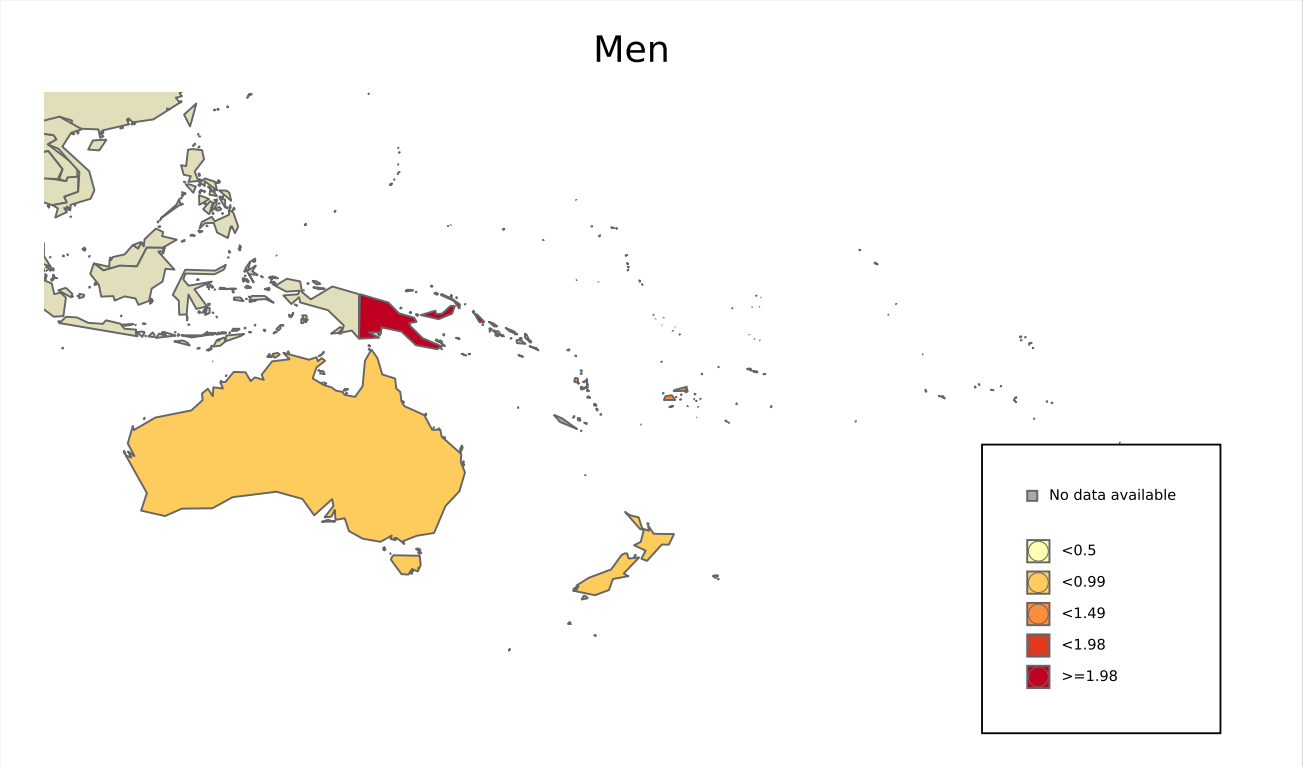
[a] Cumulative risk (mortality) is the probability or risk of individuals dying from the disease during ages 0-74 years. For cancer, it is expressed as the % of new born children who would be expected to die from a particular cancer before the age of 75 if they had the rates of cancer observed in the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

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

Data Sources:

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

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



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

4 HPV related statistics

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

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

The statistics shown in this section focus on HPV infection in the cervix uteri. HPV cervical infection results in cervical morphological lesions ranging from normalcy (cytologically normal women) to different stages of precancerous lesions (CIN-1, CIN-2, CIN-3/CIS) and invasive cervical cancer. HPV infection is measured by means of HPV DNA detection in cervical cells (fresh tissue, paraffin embedded or exfoliated cells).

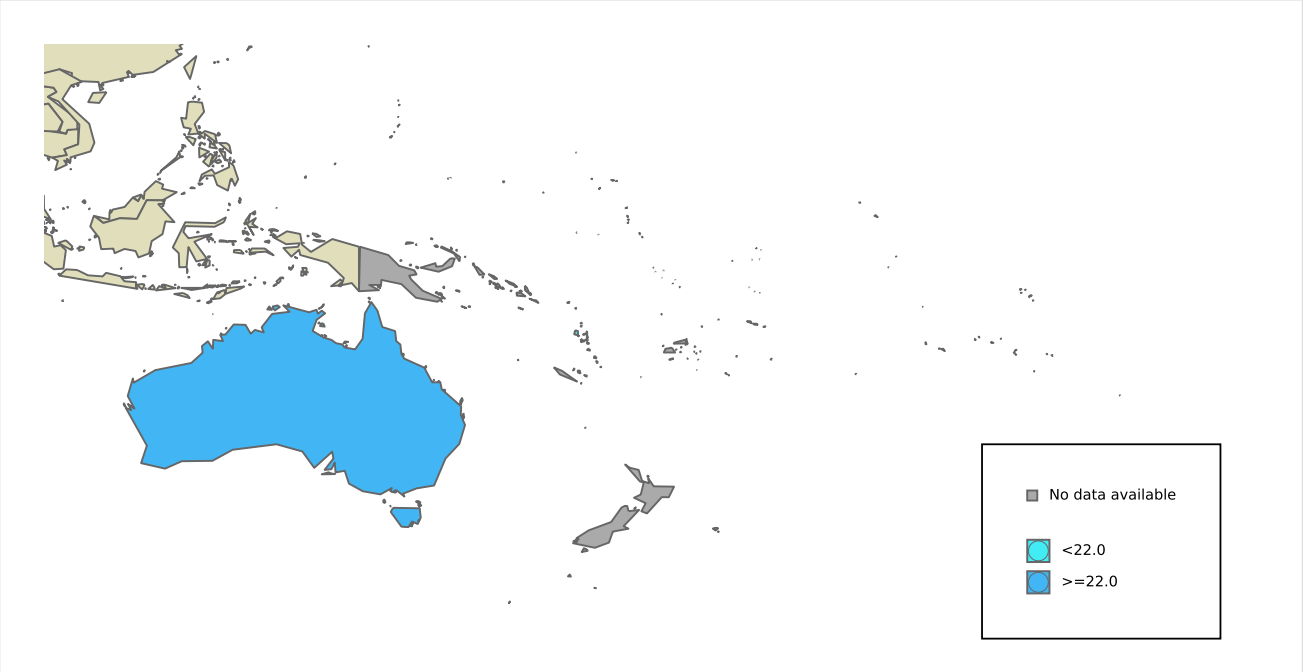
The prevalence of HPV increases with severity of the lesion. HPV causes virtually 100cervical cancer, and an underestimation of HPV prevalence in cervical cancer is most likely due to the limitations of study methodologies. Worldwide, HPV-16 and 18, the two vaccine-preventable types. contribute to over 7016-32% of low-grade cervical lesions. After HPV-16/18, the six most common HPV types are the same in all world regions, namely 31, 33, 35, 45, 52 and 58; these account for an additional 20cancers worldwide (Clifford G et al. Vaccine 2006;24(S3):26-34).

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

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

4.1.1 HPV prevalence in women with normal cervical cytology

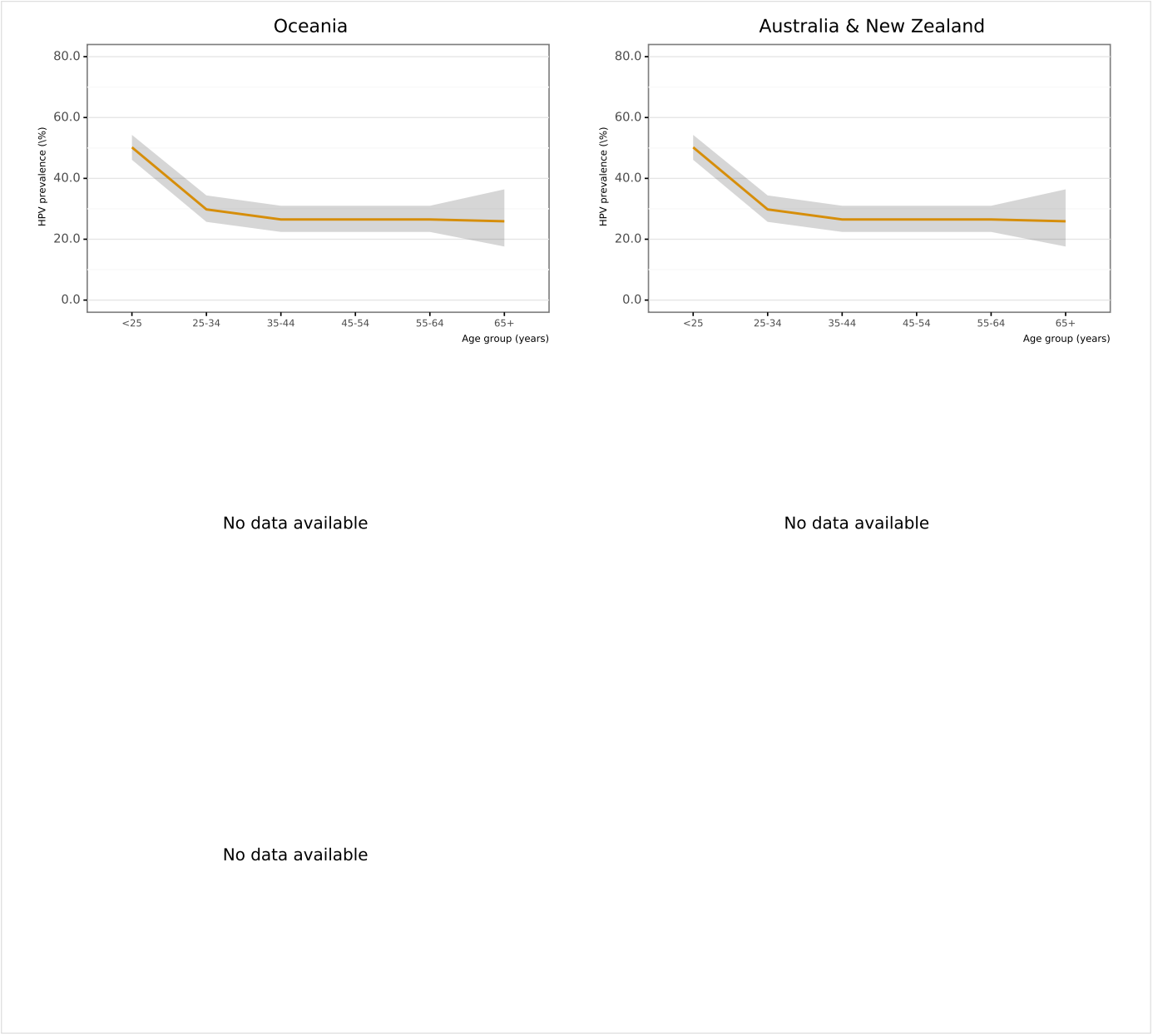
Figure 42: Prevalence of HPV among women with normal cervical cytology in Oceania



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

Data Sources: See references in Section 9 References.

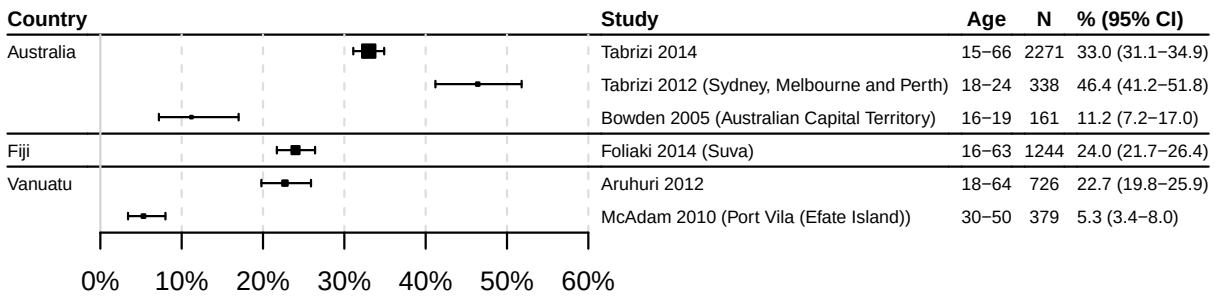
Figure 43: Crude age-specific HPV prevalence (%) and 95% confidence interval in women with normal cervical cytology in Oceania and its regions



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 Oceania, by country and study



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

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

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

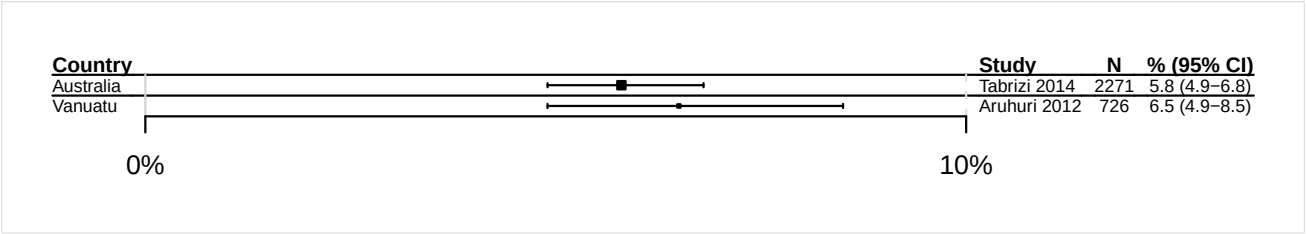
Table 28: Prevalence of HPV16 and HPV18 by cytology in Oceania

	No. tested[a]	HPV 16/18 Prevalence % (95% CI)[b]
Normal cytology[1,2]	2997	8.3 (7.4-9.4)
Low-grade lesions[3,4]	473	27.1 (23.3-31.2)
High-grade lesions[5,6]	1629	59.1 (56.7-61.5)
Cervical cancer[7,8]	855	76.6 (73.7-79.3)

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

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

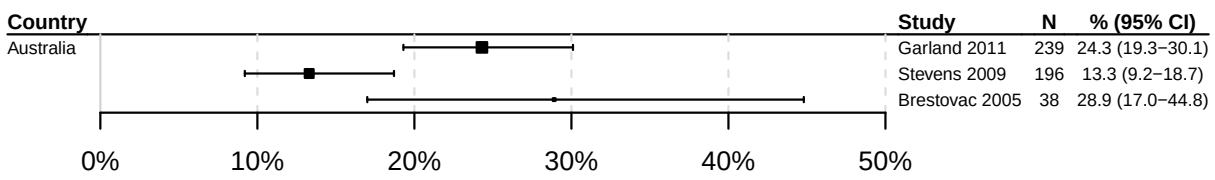
Figure 45: Prevalence of HPV 16 among women with normal cervical cytology in Oceania, by country and study



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

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

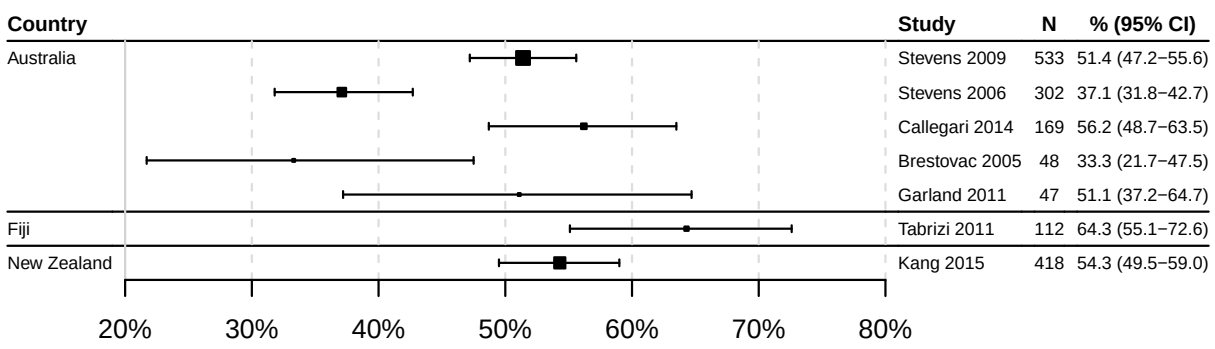
Figure 46: Prevalence of HPV 16 among women with low-grade cervical lesions in Oceania, by country and study



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

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

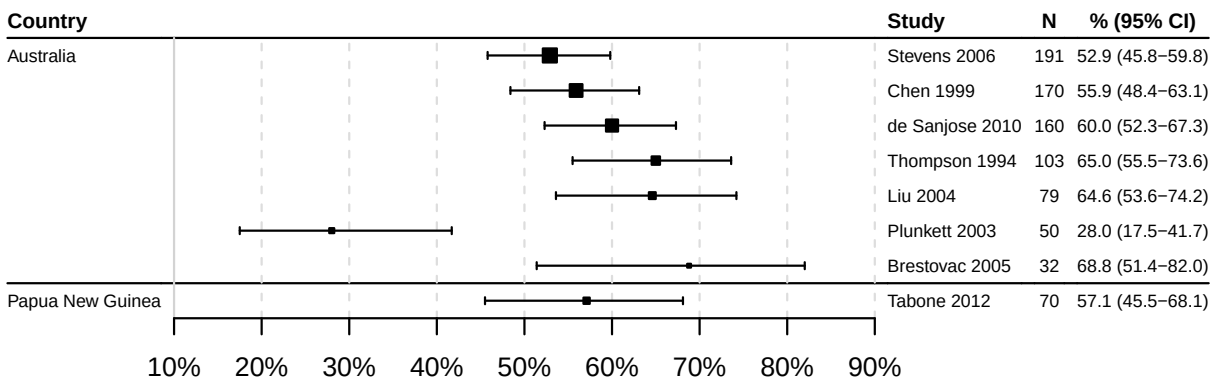
Figure 47: Prevalence of HPV 16 among women with high-grade cervical lesions in Oceania, by country and study



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

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

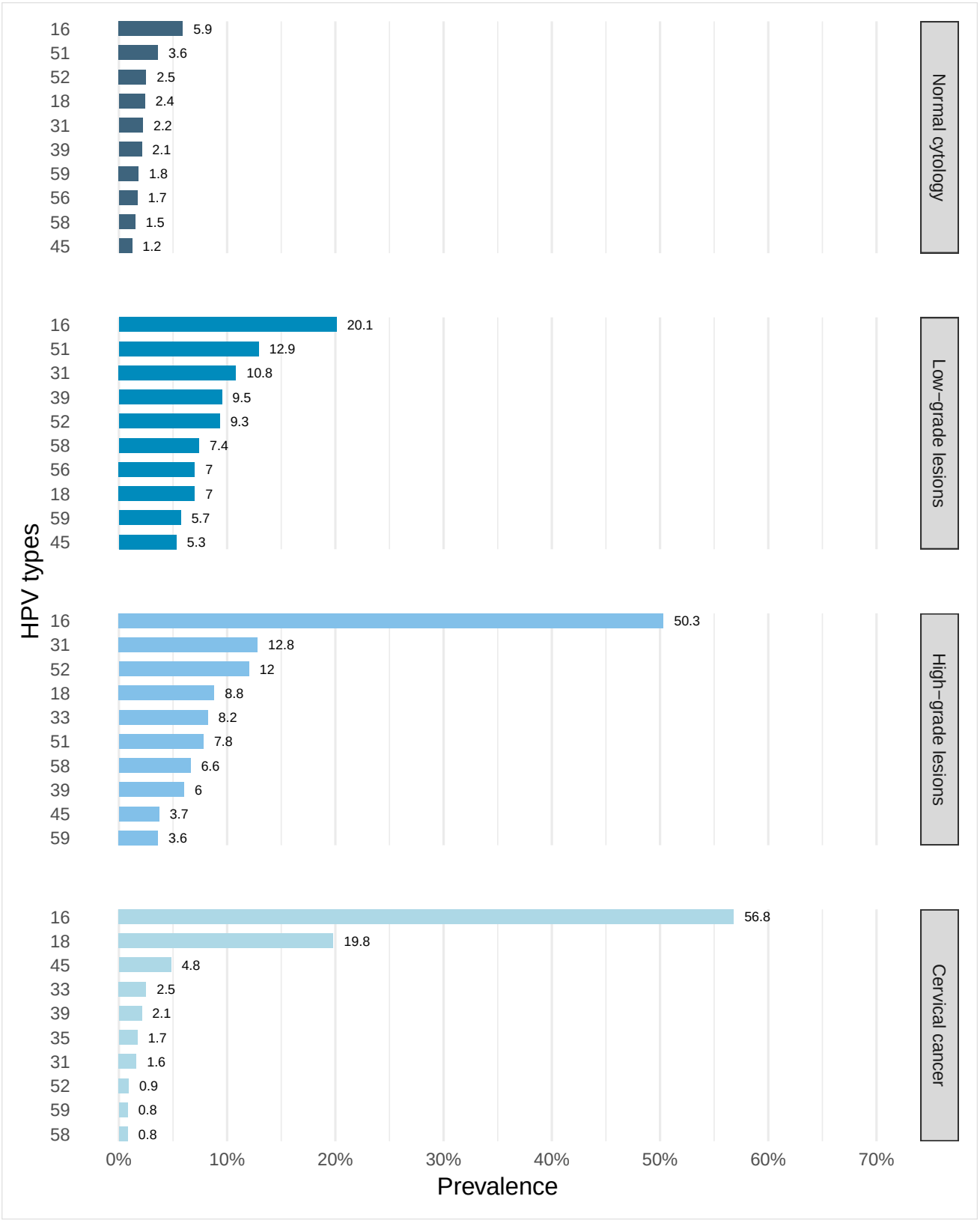
Figure 48: Prevalence of HPV 16 among women with invasive cervical cancer in Oceania, by country and study



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

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

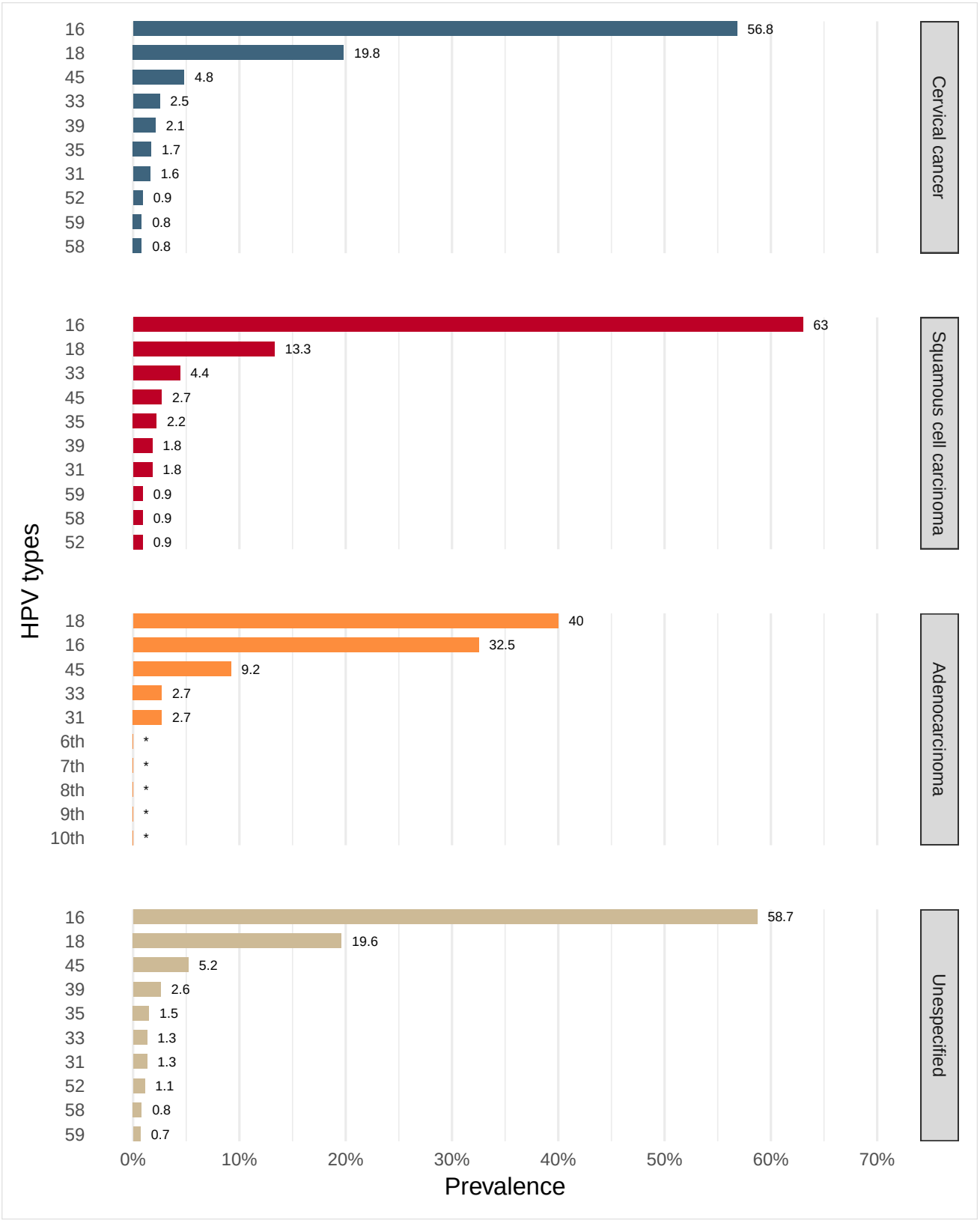
Figure 49: Comparison of the ten most frequent HPV oncogenic types in Oceania among women with and without cervical lesions



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 Oceania 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 Oceania

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)
ONCOGENIC HPV TYPES								
High-risk HPV types								
16	2,997	5.9 (5.1-6.8)	473	20.1 (16.7-23.9)	1,629	50.3 (47.9-52.8)	855	56.8 (53.5-60.1)
18	2,997	2.4 (1.9-3.0)	473	7.0 (5.0-9.6)	1,629	8.8 (7.5-10.3)	855	19.8 (17.2-22.6)
31	2,997	2.2 (1.7-2.8)	473	10.8 (8.3-13.9)	1,629	12.8 (11.2-14.5)	635	1.6 (0.9-2.9)
33	2,997	1.1 (0.8-1.5)	473	4.7 (3.1-6.9)	1,629	8.2 (6.9-9.6)	635	2.5 (1.6-4.1)
35	2,997	0.9 (0.6-1.3)	473	2.5 (1.5-4.4)	1,629	3.3 (2.5-4.3)	532	1.7 (0.9-3.2)
39	2,997	2.1 (1.6-2.7)	473	9.5 (7.2-12.5)	1,629	6.0 (5.0-7.3)	532	2.1 (1.2-3.7)
45	2,997	1.2 (0.9-1.7)	473	5.3 (3.6-7.7)	1,629	3.7 (2.9-4.7)	582	4.8 (3.3-6.9)
51	2,997	3.6 (3.0-4.3)	473	12.9 (10.2-16.2)	1,629	7.8 (6.6-9.2)	532	0.4 (0.1-1.4)
52	2,997	2.5 (2.0-3.2)	473	9.3 (7.0-12.3)	1,629	12.0 (10.5-13.7)	635	0.9 (0.4-2.0)
56	2,997	1.7 (1.3-2.2)	473	7.0 (5.0-9.6)	1,629	3.0 (2.3-4.0)	532	0.0 (0.0-0.7)
58	2,997	1.5 (1.2-2.0)	473	7.4 (5.4-10.1)	1,629	6.6 (5.5-7.9)	635	0.8 (0.3-1.8)
59	2,997	1.8 (1.4-2.3)	473	5.7 (4.0-8.2)	1,629	3.6 (2.8-4.6)	532	0.8 (0.3-1.9)
Probable/possible carcinogen								
26	2,271	0.0 (0.0-0.2)	239	0.0 (0.0-1.6)	461	0.0 (0.0-0.8)	351	0.3 (0.1-1.6)
30	-	-	-	-	-	-	160	0.0 (0.0-2.3)
34	2,271	0.0 (0.0-0.2)	-	-	169	0.0 (0.0-2.2)	160	0.0 (0.0-2.3)
53	2,271	3.7 (3.0-4.6)	473	12.1 (9.4-15.3)	1,211	3.9 (2.9-5.1)	383	1.6 (0.7-3.4)
66	2,271	2.5 (1.9-3.2)	473	9.7 (7.4-12.7)	1,211	3.6 (2.6-4.7)	532	0.0 (0.0-0.7)
67	2,271	0.9 (0.6-1.4)	277	3.6 (2.0-6.5)	95	3.2 (1.1-8.9)	192	0.0 (0.0-2.0)
68	2,997	1.3 (1.0-1.8)	473	2.7 (1.6-4.6)	1,629	2.0 (1.4-2.8)	532	0.0 (0.0-0.7)
69	2,271	0.0 (0.0-0.2)	239	0.8 (0.2-3.0)	159	1.3 (0.3-4.5)	160	0.0 (0.0-2.3)
70	2,271	1.8 (1.4-2.5)	277	3.2 (1.7-6.1)	376	1.1 (0.4-2.7)	271	0.0 (0.0-1.4)
73	2,271	2.1 (1.6-2.7)	473	5.1 (3.4-7.4)	1,211	3.5 (2.6-4.7)	462	1.5 (0.7-3.1)
82	2,271	1.0 (0.7-1.5)	277	2.2 (1.0-4.6)	509	1.4 (0.7-2.8)	462	0.2 (0.0-1.2)
85	-	-	-	-	-	-	-	-
97	-	-	-	-	-	-	-	-
LOW RISK HPV TYPES								
6	2,997	1.6 (1.2-2.1)	473	4.4 (2.9-6.7)	1,211	2.1 (1.5-3.1)	532	0.6 (0.2-1.6)
11	2,997	0.5 (0.3-0.8)	473	0.6 (0.2-1.8)	1,211	0.5 (0.2-1.1)	532	0.2 (0.0-1.1)
32	-	-	-	-	-	-	-	-
40	2,271	0.7 (0.4-1.1)	-	-	169	0.0 (0.0-2.2)	383	0.0 (0.0-1.0)
42	2,271	2.6 (2.1-3.4)	-	-	169	0.0 (0.0-2.2)	351	0.0 (0.0-1.1)
43	-	-	-	-	169	0.0 (0.0-2.2)	160	0.0 (0.0-2.3)
44	2,271	1.5 (1.0-2.0)	-	-	169	0.0 (0.0-2.2)	192	0.0 (0.0-2.0)
54	2,271	2.4 (1.9-3.1)	-	-	169	0.0 (0.0-2.2)	351	0.3 (0.1-1.6)
55	-	-	-	-	-	-	-	-
57	-	-	-	-	-	-	191	0.0 (0.0-2.0)
61	2,271	3.1 (2.4-3.9)	-	-	-	-	192	0.0 (0.0-2.0)
62	2,271	4.1 (3.3-4.9)	-	-	-	-	-	-
64	-	-	-	-	-	-	-	-
71	2,271	0.4 (0.2-0.8)	-	-	-	-	32	0.0 (0.0-10.7)
72	2,271	0.4 (0.2-0.8)	-	-	-	-	-	-
74	-	-	-	-	169	0.0 (0.0-2.2)	160	0.0 (0.0-2.3)
81	2,271	1.7 (1.2-2.3)	-	-	-	-	-	-
83	2,271	1.3 (0.9-1.8)	-	-	-	-	32	0.0 (0.0-10.7)
84	2,271	2.8 (2.2-3.5)	-	-	-	-	223	0.0 (0.0-1.7)
86	-	-	-	-	-	-	-	-
87	-	-	-	-	-	-	-	-
89	2,271	3.4 (2.8-4.3)	-	-	-	-	-	-
90	-	-	-	-	-	-	-	-
91	-	-	-	-	-	-	160	0.0 (0.0-2.3)

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 Oceania by histology

HPV Type	Any Histology		Squamous cell carcinoma		Adenocarcinoma		Unespecified	
	No. tested	HPV Prev % (95% CI)	No. tested	HPV Prev % (95% CI)	No. tested	HPV Prev % (95% CI)	No. tested	HPV Prev % (95% CI)
ONCOGENIC HPV TYPES								
High-risk HPV types								
16	855	56.8 (53.5-60.1)	362	63.0 (57.9-67.8)	120	32.5 (24.8-41.3)	373	58.7 (53.7-63.6)
18	855	19.8 (17.2-22.6)	362	13.3 (10.1-17.1)	120	40.0 (31.7-48.9)	373	19.6 (15.9-23.9)
31	635	1.6 (0.9-2.9)	225	1.8 (0.7-4.5)	37	2.7 (0.5-13.8)	373	1.3 (0.6-3.1)
33	635	2.5 (1.6-4.1)	225	4.4 (2.4-8.0)	37	2.7 (0.5-13.8)	373	1.3 (0.6-3.1)
35	532	1.7 (0.9-3.2)	225	2.2 (1.0-5.1)	37	0.0 (0.0-9.4)	270	1.5 (0.6-3.7)
39	532	2.1 (1.2-3.7)	225	1.8 (0.7-4.5)	37	0.0 (0.0-9.4)	270	2.6 (1.3-5.3)
45	582	4.8 (3.3-6.9)	225	2.7 (1.2-5.7)	87	9.2 (4.7-17.1)	270	5.2 (3.1-8.5)
51	532	0.4 (0.1-1.4)	225	0.4 (0.1-2.5)	37	0.0 (0.0-9.4)	270	0.4 (0.1-2.1)
52	635	0.9 (0.4-2.0)	225	0.9 (0.2-3.2)	37	0.0 (0.0-9.4)	373	1.1 (0.4-2.7)
56	532	0.0 (0.0-0.7)	225	0.0 (0.0-1.7)	37	0.0 (0.0-9.4)	270	0.0 (0.0-1.4)
58	635	0.8 (0.3-1.8)	225	0.9 (0.2-3.2)	37	0.0 (0.0-9.4)	373	0.8 (0.3-2.3)
59	532	0.8 (0.3-1.9)	225	0.9 (0.2-3.2)	37	0.0 (0.0-9.4)	270	0.7 (0.2-2.7)
Probable/possible carcinogen								
26	351	0.3 (0.1-1.6)	-	-	-	-	-	-
30	160	0.0 (0.0-2.3)	138	0.0 (0.0-2.7)	22	0.0 (0.0-14.9)	-	-
34	160	0.0 (0.0-2.3)	138	0.0 (0.0-2.7)	22	0.0 (0.0-14.9)	-	-
53	383	1.6 (0.7-3.4)	-	-	-	-	-	-
66	532	0.0 (0.0-0.7)	225	0.0 (0.0-1.7)	37	0.0 (0.0-9.4)	270	0.0 (0.0-1.4)
67	192	0.0 (0.0-2.0)	170	0.0 (0.0-2.2)	22	0.0 (0.0-14.9)	-	-
68	532	0.0 (0.0-0.7)	225	0.0 (0.0-1.7)	37	0.0 (0.0-9.4)	270	0.0 (0.0-1.4)
69	160	0.0 (0.0-2.3)	-	-	-	-	-	-
70	271	0.0 (0.0-1.4)	-	-	-	-	-	-
73	462	1.5 (0.7-3.1)	-	-	-	-	-	-
82	462	0.2 (0.0-1.2)	170	0.0 (0.0-2.2)	22	0.0 (0.0-14.9)	270	0.4 (0.1-2.1)
85	-	-	-	-	-	-	-	-
97	-	-	-	-	-	-	-	-
LOW RISK HPV TYPES								
6	532	0.6 (0.2-1.6)	-	-	-	-	-	-
11	532	0.2 (0.0-1.1)	-	-	-	-	-	-
32	-	-	-	-	-	-	-	-
40	383	0.0 (0.0-1.0)	-	-	-	-	-	-
42	351	0.0 (0.0-1.1)	138	0.0 (0.0-2.7)	22	0.0 (0.0-14.9)	191	0.0 (0.0-2.0)
43	160	0.0 (0.0-2.3)	-	-	-	-	-	-
44	192	0.0 (0.0-2.0)	170	0.0 (0.0-2.2)	22	0.0 (0.0-14.9)	-	-
54	351	0.3 (0.1-1.6)	138	0.0 (0.0-2.7)	22	0.0 (0.0-14.9)	191	0.5 (0.1-2.9)
55	-	-	-	-	-	-	-	-
57	191	0.0 (0.0-2.0)	-	-	-	-	-	-
61	192	0.0 (0.0-2.0)	-	-	-	-	-	-
62	-	-	-	-	-	-	-	-
64	-	-	-	-	-	-	-	-
71	32	0.0 (0.0-10.7)	-	-	-	-	-	-
72	-	-	-	-	-	-	-	-
74	160	0.0 (0.0-2.3)	-	-	-	-	-	-
81	-	-	-	-	-	-	-	-
83	32	0.0 (0.0-10.7)	-	-	-	-	-	-
84	223	0.0 (0.0-1.7)	-	-	-	-	-	-
86	-	-	-	-	-	-	-	-
87	-	-	-	-	-	-	-	-
89	-	-	-	-	-	-	-	-
90	-	-	-	-	-	-	-	-
91	160	0.0 (0.0-2.3)	-	-	-	-	-	-

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

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

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

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

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

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

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

4.1.4 Terminology

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

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

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

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

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

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

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

Adenocarcinoma
Invasive tumour with glandular and squamous elements intermingled.

4.2 HPV burden in anogenital cancers other than cervix

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

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

4.2.1 Anal cancer and precancerous anal lesions

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

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

Country	Study	HPV detection method and targeted HPV types	No. Tested	HPV Prevalence		Prevalence of 5 most frequent HPVs, HPV type (%)
				%	(95% CI)[a]	
Australia	Hillman 2014	PCR L1-Consensus primer, (HPV 6, 11, 16, 18, 26, 31, 33, 35, 39, 40, 43, 44, 45, 51, 52, 53, 54, 56, 58, 59, 66, 68, 69, 70, 71, 73, 74, 82)	105	97.1	(91.9-99.0)	HPV 16 (77.1), HPV 52 (13.3), HPV 6 (10.5), HPV 54 (9.5), HPV 11 (5.7)

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

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

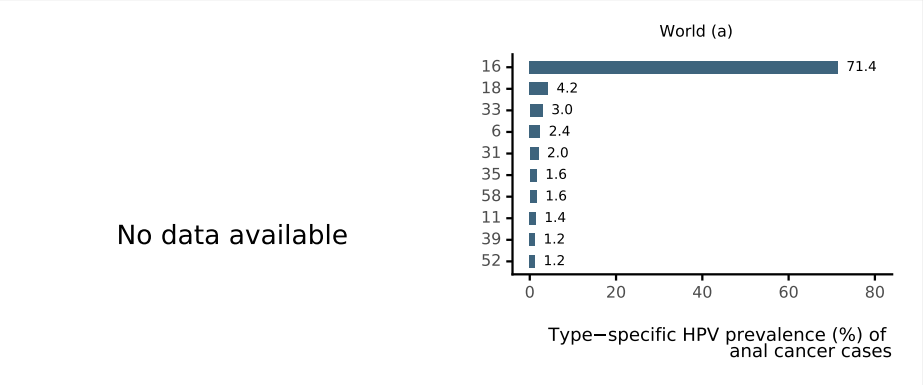
Table 33: Studies on HPV prevalence among cases of AIN2/3 in Oceania

Country	Study	HPV detection method and targeted HPV types	No. Tested	HPV Prevalence		Prevalence of 5 most frequent HPVs, HPV type (%)
				%	(95% CI)[a]	
Australia	Hillman 2012	HC2, LBA (HPV 16, 18, 31, 33)	21	95.2	(77.3-99.2)	HPV 16 (33.3), HPV 31 (19.0), HPV 18 (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;
AIN 2/3: Anal intraepithelial neoplasia of grade 2/3
[a] 95% Confidence Interval
Data Sources: See references in Section 9 References.

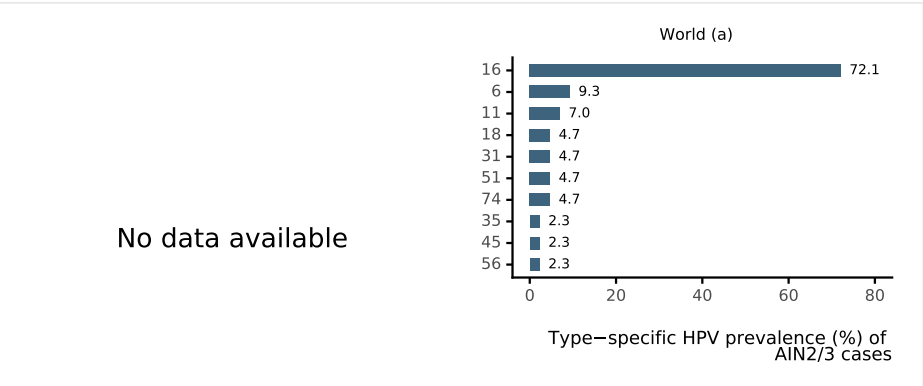
Figure 51: Comparison of the ten most frequent HPV types in anal cancer cases in Oceania and the World



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

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

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



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

AIN 2/3: Anal intraepithelial neoplasia of grade 2/3
[a] Includes cases from 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 Oceania are presented.

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

Country	Study	HPV detection method and targeted HPV types	No. Tested	HPV Prevalence		
				%	(95% CI)[a]	Prevalence of 5 most frequent HPVs, HPV type (%)
Australia	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)	220	40	(33.8-46.6)	HPV 16 (27.3), HPV 33 (3.6), HPV 18 (2.7), HPV 39 (1.4), HPV 6 (1.4)
New Zealand	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)	220	40	(33.8-46.6)	HPV 16 (27.3), HPV 33 (3.6), HPV 18 (2.7), HPV 39 (1.4), HPV 6 (1.4)
Australia	Tan 2013	PCR L1-Consensus primer, (HPV 6, 11, 16, 18, 26, 31, 33, 35, 39, 40, 42, 44, 45, 51, 52, 53, 54, 56, 58, 59, 66, 68, 69, 70, 71, 73, 74, 82)	20	90	(69.9-97.2)	HPV 16 (80.0), HPV 33 (5.0), HPV 35 (5.0), HPV 52 (5.0), HPV 54 (5.0)

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

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

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

Country	Study	HPV detection method and targeted HPV types	No. Tested	HPV Prevalence		
				%	(95% CI)[a]	Prevalence of 5 most frequent HPVs, HPV type (%)
Australia	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)	125	94.4	(88.9-97.3)	HPV 16 (71.2), HPV 33 (10.4), HPV 18 (4.0), HPV 31 (3.2), HPV 51 (1.6)
New Zealand	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)	125	94.4	(88.9-97.3)	HPV 16 (71.2), HPV 33 (10.4), HPV 18 (4.0), HPV 31 (3.2), HPV 51 (1.6)

Continued on next page

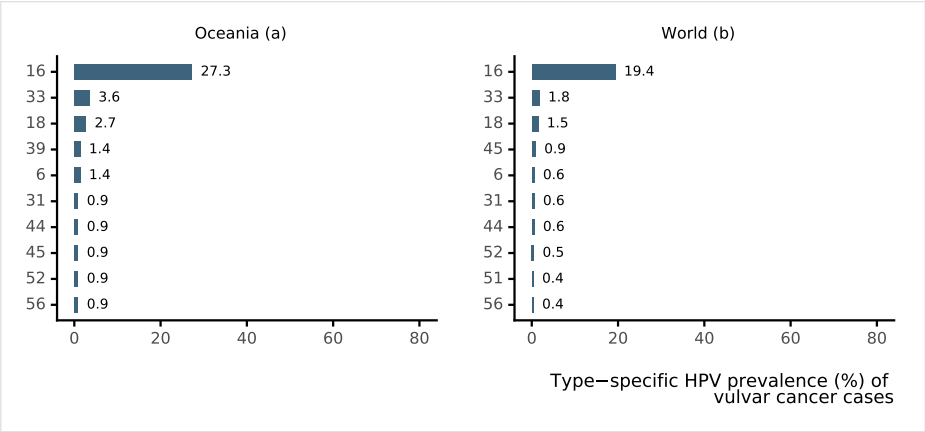
Table 35 – continued from previous page

Country	Study	HPV detection method and targeted HPV types	No. Tested	HPV Prevalence		Prevalence of 5 most frequent HPVs, HPV type (%)
				%	(95% CI)[a]	
Australia	Tan 2013	PCR L1-Consensus primer, (HPV 6, 11, 16, 18, 26, 31, 33, 35, 39, 40, 42, 44, 45, 51, 52, 53, 54, 56, 58, 59, 66, 68, 69, 70, 71, 73, 74, 82)	44	90.9	(78.8-96.4)	HPV 16 (68.2), HPV 26 (4.5), HPV 33 (4.5), HPV 52 (4.5), HPV 82 (4.5)

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

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

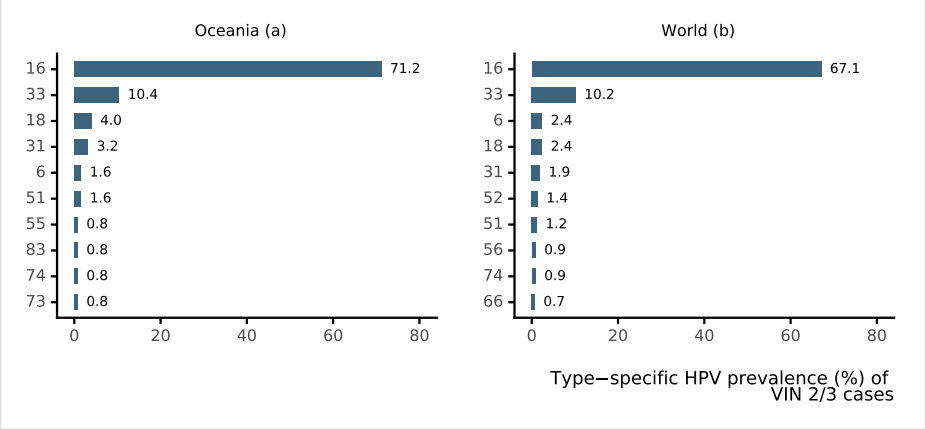
Figure 53: Comparison of the ten most frequent HPV types in cases of vulvar cancer in Oceania and the World



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

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

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



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

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

4.2.3 Vaginal cancer and precancerous vaginal lesions

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

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

Country	Study	HPV detection method and targeted HPV types	No. Tested	HPV Prevalence		Prevalence of 5 most frequent HPVs, HPV type (%)
				%	(95% CI)[a]	
Australia	Alemany 2014	PCR-SPF10, EIA, (HPV 6, 11, 16, 18, 26, 30, 31, 33, 35, 39, 42, 45, 51, 52, 53, 56, 58, 59, 66, 67, 68, 69, 73, 82)	46	71.7	(57.5-82.7)	HPV 16 (41.3), HPV 33 (4.3), HPV 68 (4.3), HPV 18 (2.2), HPV 26 (2.2)

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

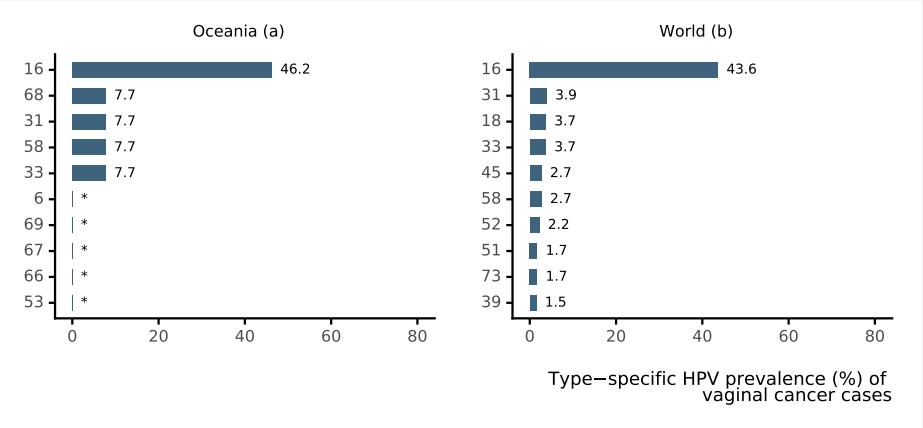
Table 37: Studies on HPV prevalence among VaIN 2/3 cases in Oceania

Country	Study	HPV detection method and targeted HPV types	No. Tested	HPV Prevalence		Prevalence of 5 most frequent HPVs, HPV type (%)
				%	(95% CI)[a]	
Australia	Alemany 2014	PCR-SPF10, EIA, (HPV 6, 11, 16, 18, 26, 30, 31, 33, 35, 39, 42, 45, 51, 52, 53, 56, 58, 59, 66, 67, 68, 69, 73, 82, 89)	13	100	(77.2-100.0)	HPV 16 (53.8), HPV 52 (15.4), HPV 59 (15.4), HPV 45 (7.7), HPV 73 (7.7)

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

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

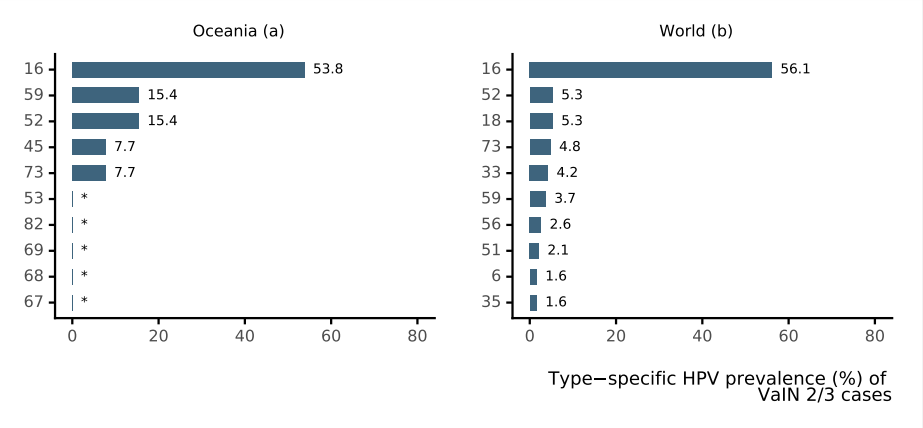
Figure 55: Comparison of the ten most frequent HPV types in cases of vaginal cancer in Oceania and the World



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

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



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

VAIN 2/3: Vaginal intraepithelial neoplasia of grade 2/3
[a] Includes cases from Australia, Bangladesh, India, Israel, South Korea, Kuwait, Philippines, Taiwan and Turkey.
[b] Includes cases from Europe (Austria, Belarus, Czech Republic, France, Germany, Greece, Poland, Spain and United Kingdom); America (Argentina, Brazil, Chile, Colombia, Ecuador, Guatemala, Mexico, Paraguay, Uruguay, United states of America and Venezuela); Asia (Bangladesh, India, Israel, South Korea, Kuwait, Philippines, Taiwan and Turkey); and Oceania (Australia)
* No data available. No more types than shown were tested or were positive.
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 Oceania are presented.

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

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

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

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

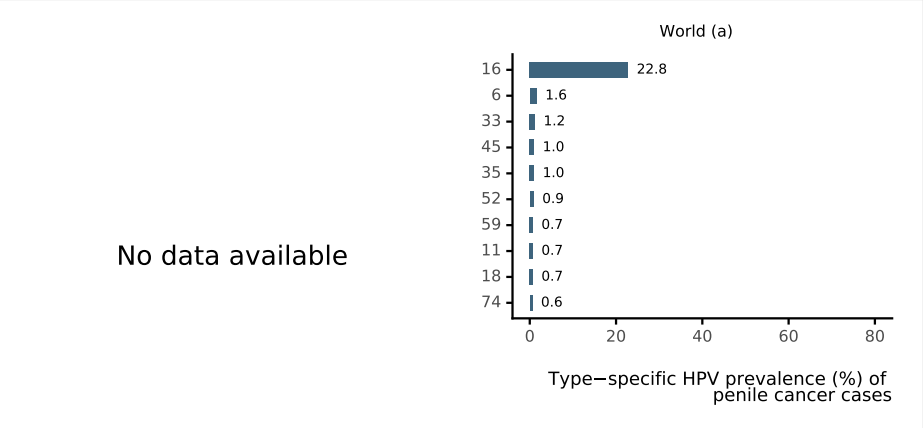
Table 39: Studies on HPV prevalence among PeIN 2/3 cases in Oceania

Country	Study	HPV detection method and targeted HPV types	No. Tested	HPV Prevalence		Prevalence of 5 most frequent HPVs, HPV type (%)
				%	(95% CI)[a]	
-	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;
[a] 95% Confidence Interval
Data Sources: See references in Section 9 References.

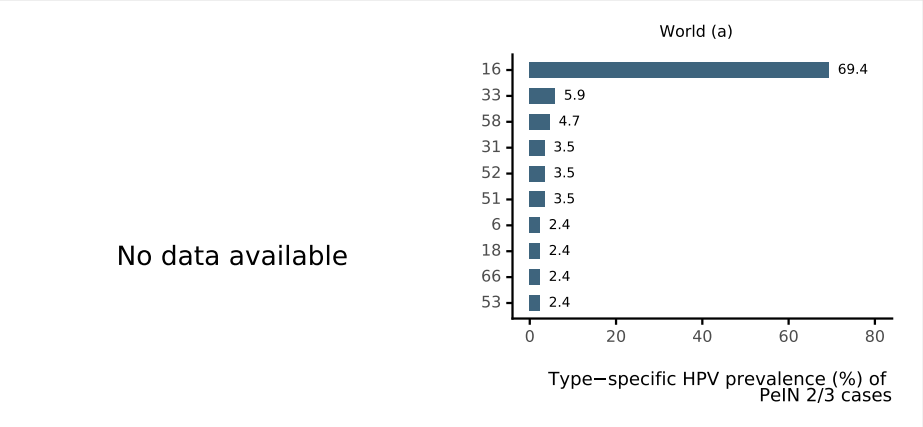
Figure 57: Comparison of the ten most frequent HPV types in cases of penile cancer in Oceania and the World



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

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

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



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

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

4.3 HPV burden in men

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

Country	Study[b]	Anatomic sites samples	HPV detection method	Population	Age (years)	No. Tested	HPV Prevalence	
							%	(95% CI)[a]
Australia	Vardas 2011	Penis	RT-PCR-Multiplex or Biplex	Heterosexual men enrolled in a HPV vaccine trial	Median 20 (15-24)	3132	21.2	(19.8-22.7)

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

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

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

Country	Study	Anatomic sites samples	HPV detection method	Population	Age (years)	No. Tested	HPV Prevalence	
							%	(95% CI)[a]
Australia	Anderson 2008	Anal canal	HC2 HR	HIV+ MSM	Median 45 (28-59)	123	86.2	(78.8-91.7)
	Goldstone 2011[b]	Penis	RT-PCR-Multiplex or Biplex	HIV- MSM	Median 22 (16-27)	602	18.4	(15.4-21.8)
	Goldstone 2011[b]	Anus	RT-PCR-Multiplex or Biplex	HIV- MSM	Median 22 (16-27)	602	42.4	(38.4-46.4)
	Ong 2016	Anus	PCR-Linear Array	HIV+ MSM	Mean 51 (35-82)	281	79.7	(74.5-84.3)
	Vajdic 2009	Anal canal	HC2	HIV- MSM	IQR=36-48	193	69.9	(62.9-76.3)
	Vajdic 2009	Anal canal	HC2	HIV+ MSM	IQR=37-49	123	94.3	(88.6-97.7)

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

DBH: Dot Blot Hybridization; EIA: Enzyme ImmunoAssay; HC2: Hybrid Capture 2; LiPA: Line Probe Assay; PCR: Polymerase Chain Reaction; RFLP: Restriction Fragment Length Polymorphism; RLH: Reverse Line Hybridisation; RT-PCR: Real Time Polymerase Chain Reaction; SPF: Short Primer Fragment; TS: Type Specific; MSM: Men who have sex with men; MSW:Men who have sex with women; STD: sexually transmitted diseases
[a] 95% Confidence Interval

[b] Includes cases from Australia, Brazil, Canada, Croatia, Germany, Mexico, Spain, and USA.
Data Sources: See references in Section 9 References.

4.4 HPV burden in the head and neck

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

4.4.1 Burden of oral HPV infection in healthy population

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

Study	Specimen collection method / anatomic site	HPV detection method[a]	Population	% males	Age (years)[b]	No. tested[c]	HPV prevalence % (95% CI)	High-Risk HPV prevalence % (95% CI)	5 most frequent HPVs, HPV type (n)[d]
Rose 2006	Brush/swab / Oral mucosa	PCR-MY09/11 FAP59/64	Age-matched controls	44	22-85	88	1.1 (0.2-6.2)	-	-
Antonsson 2014	Oral rinse / Oral mucosa	PCR-GP5+/6+	Convenient samples from general population	-	18-35	199	3.5 (1.7-7.1)	-	-

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

(95% CI): 95% Confidence Interval
[a] TS: type-specific; RT-PCR: real-time PCR; qPCR: quantitative PCR
[b] NS: not specified
[c] number of cases tested for HPV DNA
[d] number of cases positive for the specific HPV-type
Data Sources:
Antonsson A, PLoS One 2014;9(3):e91761 | Rose B, Transplantation 2006;82(4):570-3
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 Oceania

Country	Study	HPV detection method and targeted HPV types	No. Tested	HPV Prevalence		Prevalence of 5 most frequent HPVs, HPV type (%)
				%	(95% CI)[a]	
MEN						
-	No data available	-	-	-	-	-
WOMEN						
-	No data available	-	-	-	-	-
BOTH OR UNSPECIFIED						
-	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
[a] 95% Confidence Interval
Data Sources: See references in Section 9 References.

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

Country	Study	HPV detection method and targeted HPV types	No. Tested	HPV Prevalence		Prevalence of 5 most frequent HPVs, HPV type (%)
				%	(95% CI)[a]	
MEN						
-	No data available	-	-	-	-	-
WOMEN						
-	No data available	-	-	-	-	-
BOTH OR UNSPECIFIED						
Australia	Hong 2010	E6-based MT-PCR Amplification with MT-PCR kit (6. 11. 16. 18. 26. 31. 33. 35. 39. 45. 51. 52. 53. 56. 58. 59. 66. 68. 70. 73. 82)	302	47.7	(42.1-53.3)	HPV 16 (42.1) HPV 18 (1.7) HPV 35 (1.7) HPV 39 (1.0) HPV 33 (0.7)

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

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

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

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

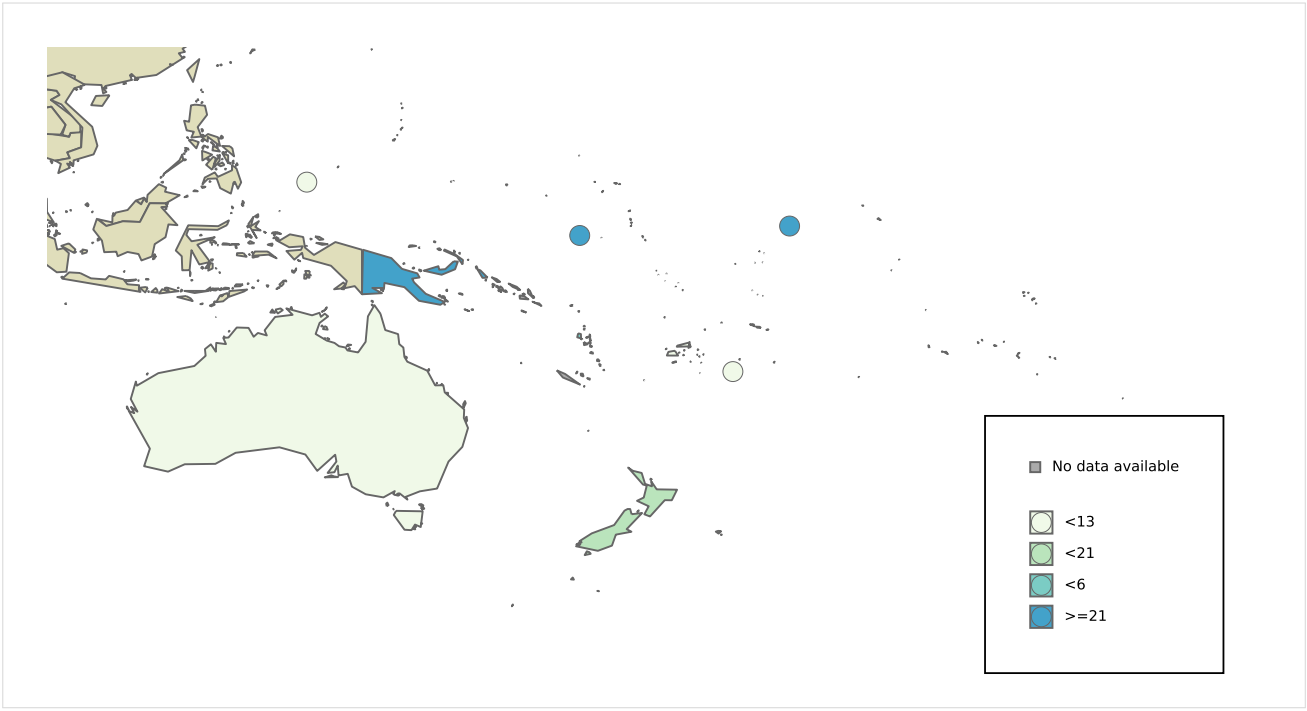
Data updated on 22 May 2023 (data as of 31 Dec 2015)

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

5 Factors contributing to cervical cancer

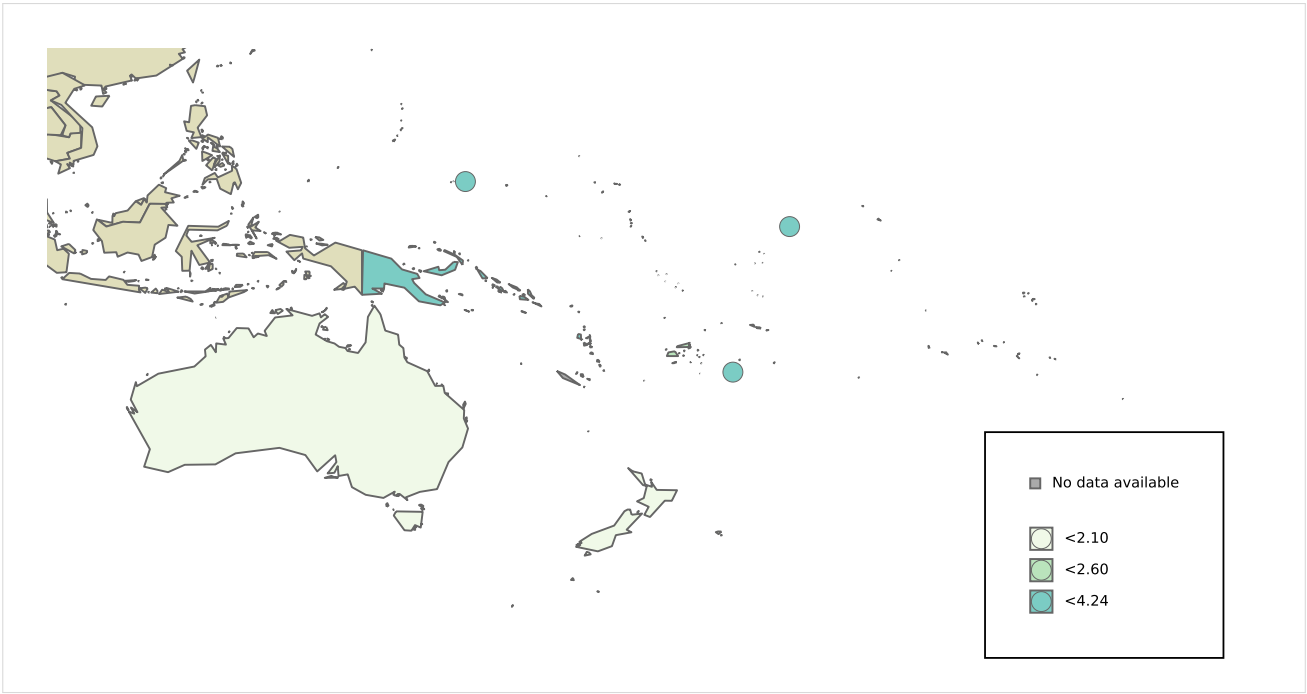
HPV is a necessary cause of cervical cancer, but it is not a sufficient cause. Other cofactors are necessary for progression from cervical HPV infection to cancer. Tobacco smoking, high parity, long-term hormonal contraceptive use, and co-infection with HIV have been identified as established cofactors.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

Figure 59: Prevalence of female tobacco smoking in Oceania



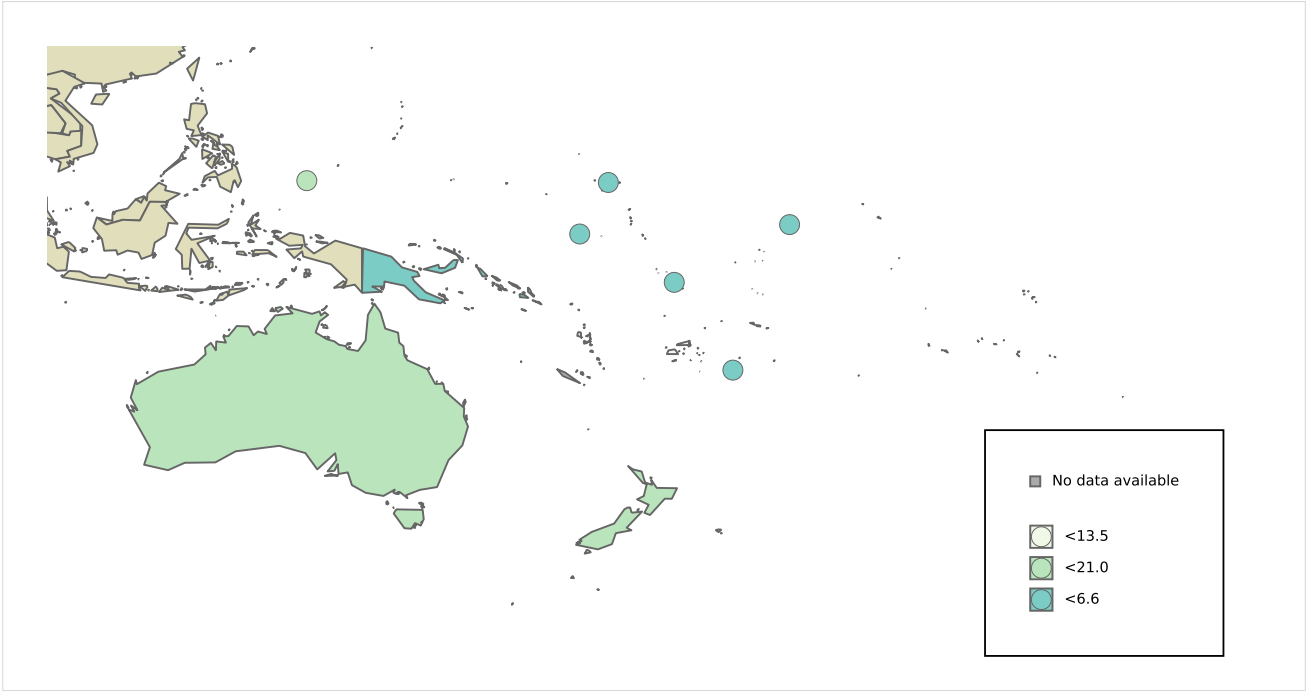
Data accessed on 12 Nov 2019
Crude adjusted prevalence (%) estimates of tabacco use among people aged >= 15 years by country, for the year 2016.
Data Sources:
WHO global report on trends in prevalence of tobacco use 2000–2025, third edition. Geneva: World Health Organization; 2019. Available at https://www.who.int/publications/i/item/who-global-report-on-trends-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

Figure 60: Total fertility rates in Oceania



Data accessed on 13 Nov 2019
Year of estimate: 2017

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

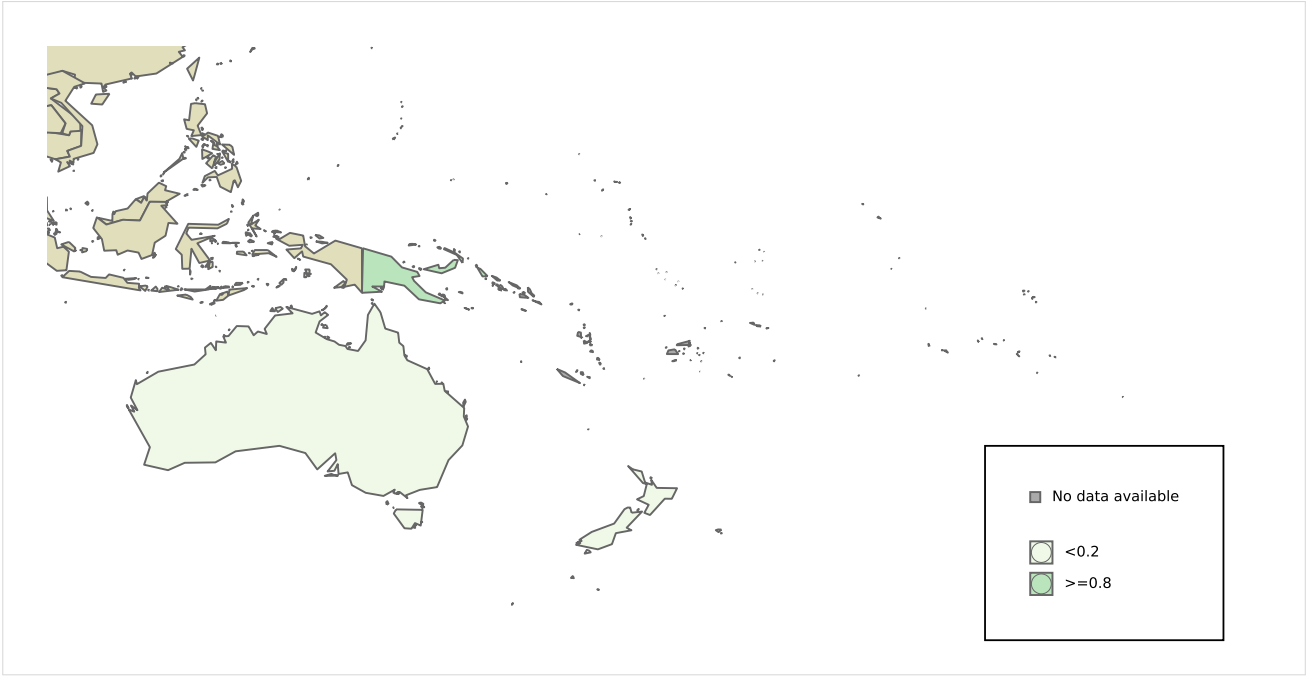


Data accessed on 18 Nov 2019

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 Oceania



Data accessed on 21 Nov 2019

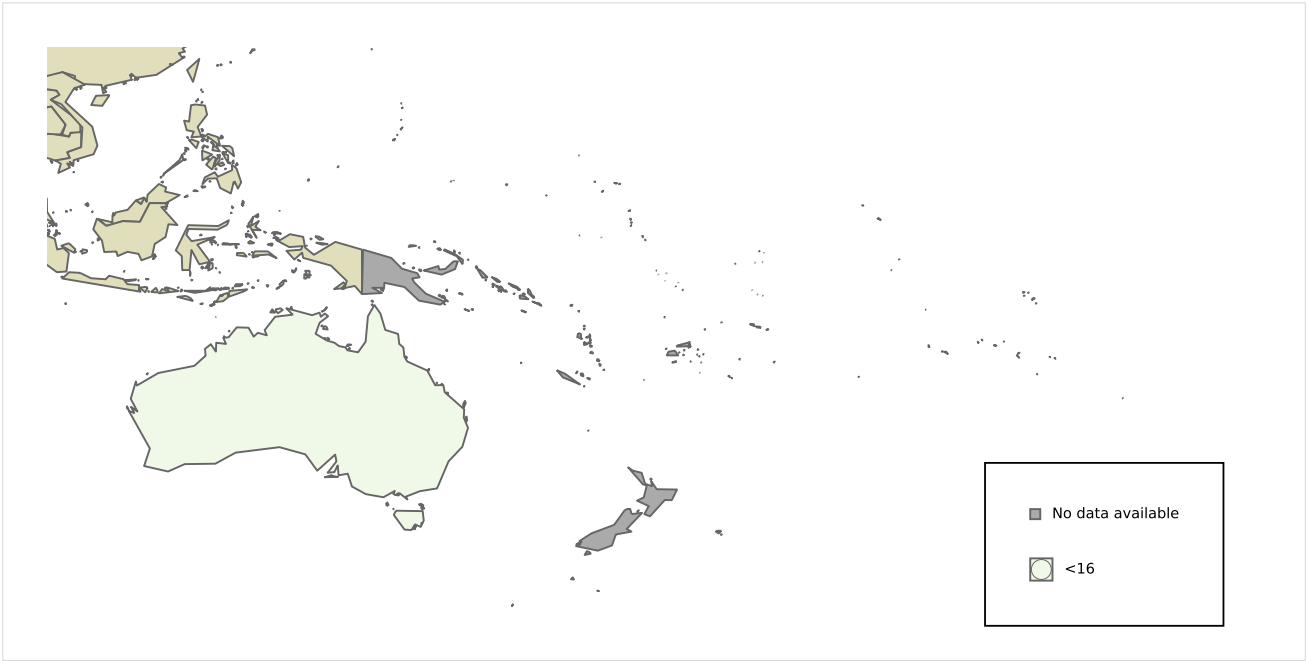
Data Sources:

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

6 Sexual and reproductive health behaviour indicators

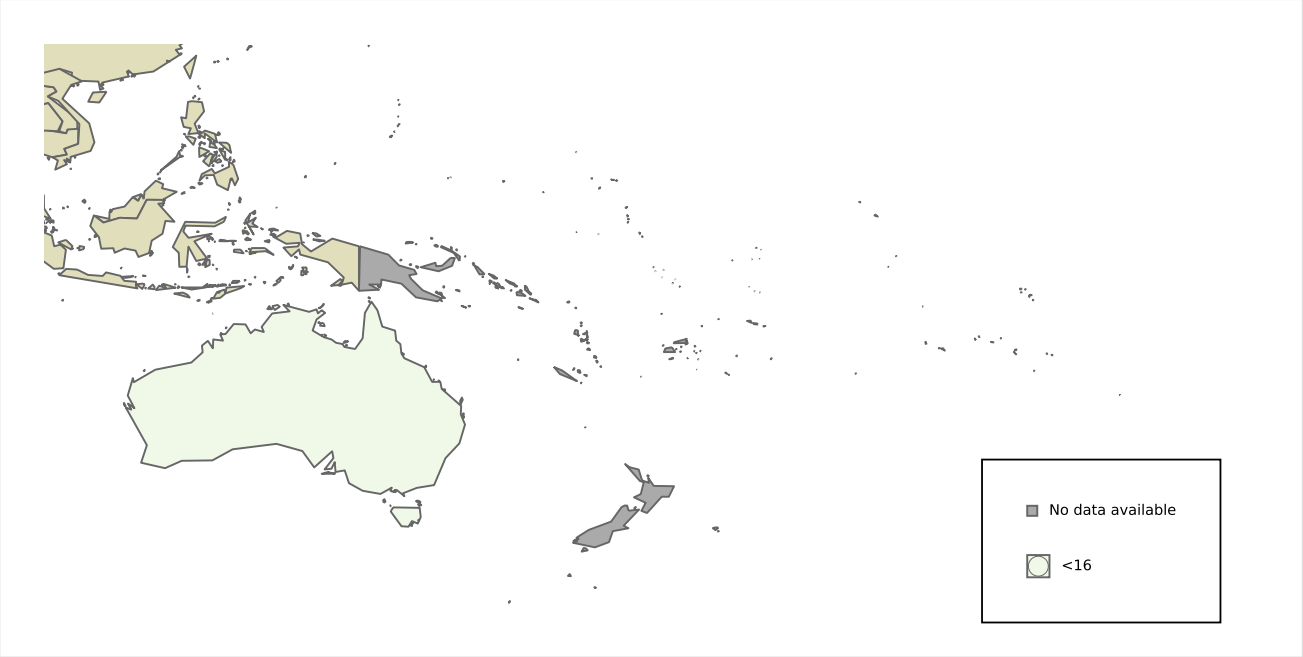
Sexual intercourse is the primary route of transmission of genital HPV infection. Information about sexual and reproductive health behaviours is essential to the design of effective preventive strategies against anogenital cancers. In this section, we describe sexual and reproductive health indicators 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 Oceaniaare presented.

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



Data accessed on 16 Mar 2017
Please refer to original source for methods of estimation
[a] Year of estimation: not reported
[b] The main sources of data were surveys by the MEASURE DHS (Demographic and Health Surveys) project and published estimates from Reproductive National Health Surveys.
Data Sources:
1 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.

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



Data accessed on 16 Mar 2017
Please refer to original source for methods of estimation
[a] Year of estimation: not reported
[b] The main sources of data were surveys by the MEASURE DHS (Demographic and Health Surveys) project and published estimates from Reproductive National Health Surveys.
Data Sources:
1 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 Oceania

Country	Study[1]	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
Australia	2nd Australian Study of Health and Relation-ships (ASHR)	2012-2013	1943-1996	-	-	-	-	17.0	-

Data accessed on 16 Mar 2017
Please refer to original source for methods of estimation
Data Sources:
1 The Second Australian Study of Health and Relationships, National Health and Medical Research Council.

Table 47: Average number of sexual partners in Oceania

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 Oceania

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

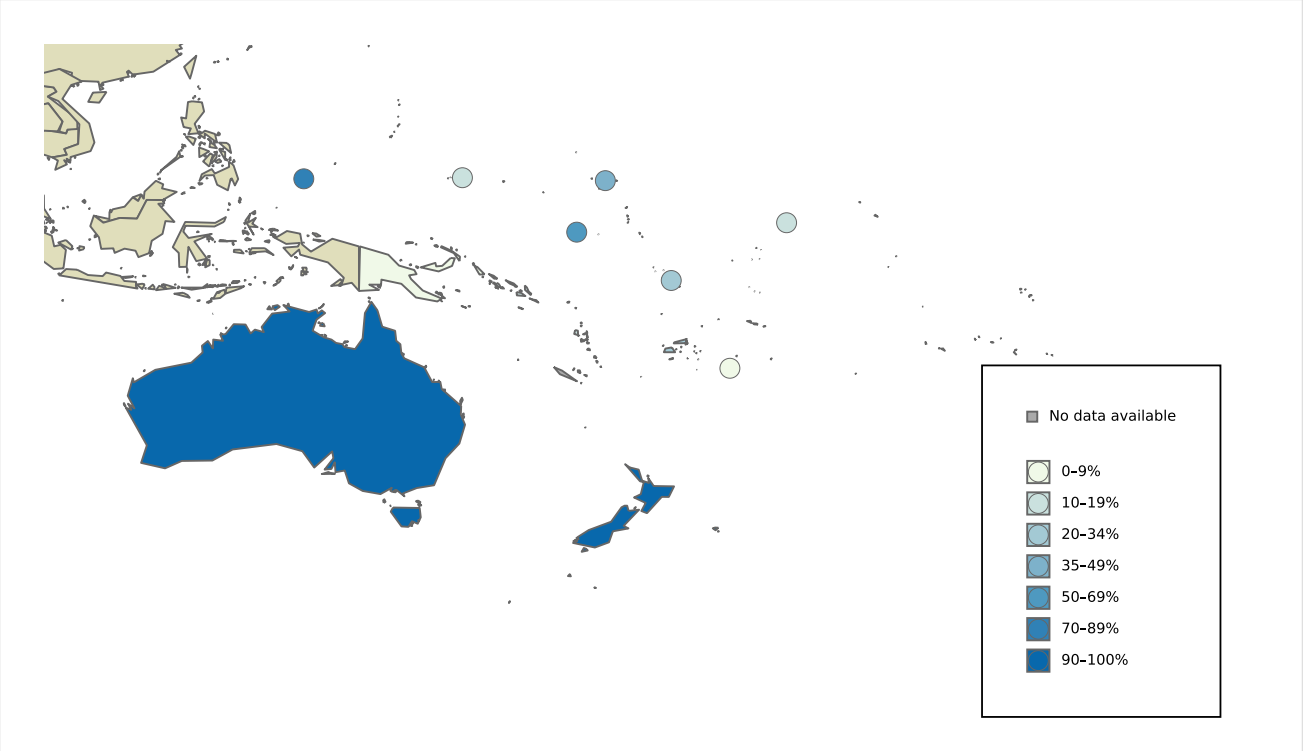
7 HPV preventive strategies

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 Oceania.

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 Oceania

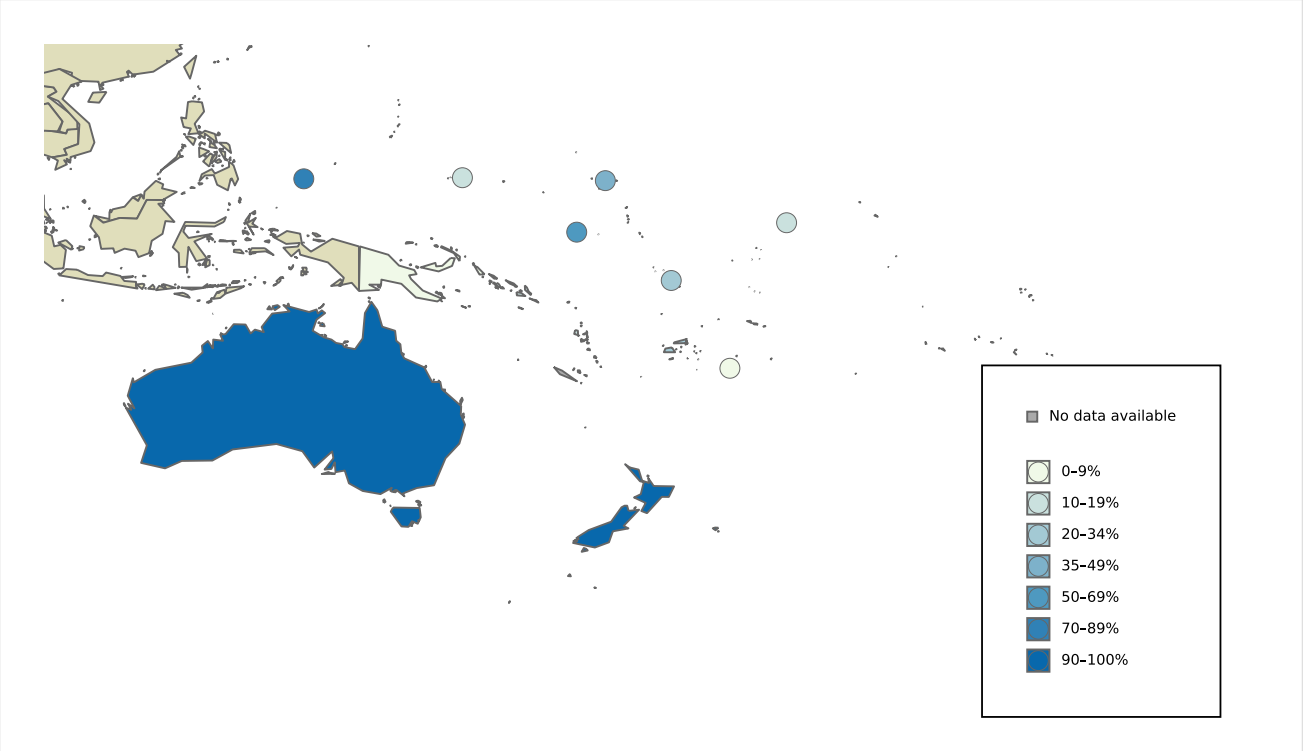


Data accessed on 31 Aug 2022

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 Oceania



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 Oceania

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
Australia	Australia	Yes	2018	Yes	25-74 (HPV test, 5 years)
Fiji	Fiji	Yes	2015	No	30-49 (VIA, 3 years)
Kiribati	Kiribati	Yes	2017	No	25-65 (cytology, 3 years)
Marshall Islands	Marshall Islands	Yes	2014	No	21-49 (VIA, 2 years); 50-60 (cytology, 2 years)
Micronesia (Federated States of)	Micronesia, FS	Yes	2010	No	25-45 (cytology, 10 years); 25-45 (VIA, 10 years)
Nauru	Nauru	No	-	-	-
New Zealand	New Zealand	Yes	2019	Yes	25-69 (cytology, 3 years)
Palau	Palau	Yes	2012	No	21-64 (cytology, 3 years)
Papua New Guinea	Papua New Guinea	No	-	-	-
Samoa	Samoa	No	-	-	-
Solomon Islands	Solomon Islands	No	-	-	-
Tonga	Tonga	No	-	-	-
Tuvalu	Tuvalu	No	-	-	-
Vanuatu	Vanuatu	Yes	Unk	No	30-65 (cytology, Unk years)

Data accessed on 31 Aug 2022

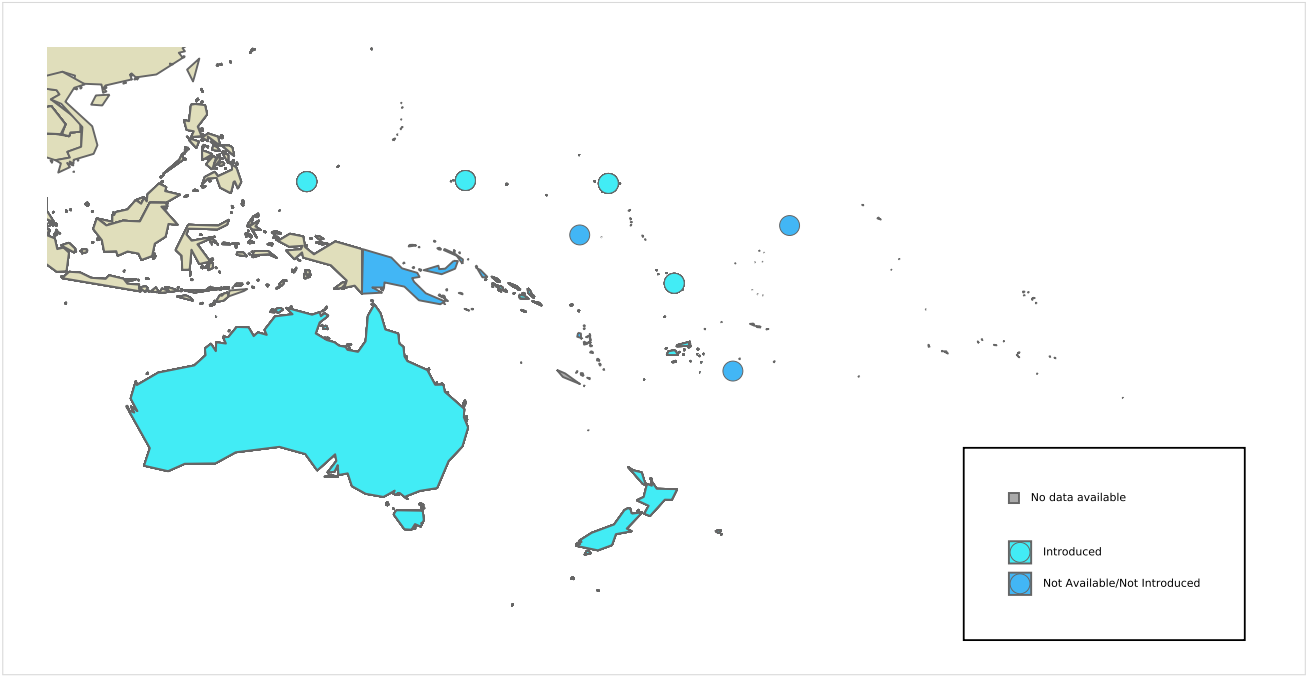
Data Sources:

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

7.2 HPV vaccination

7.2.1 HPV vaccine licensure and introduction

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



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 Oceania

Country	Sex	Programme	Introduction year	Year of estimation of HPV vaccination coverage	HPV coverage – first dose (%)	HPV coverage – last dose (%)
Australia	Female	Introduced	2007	2021	66	74
Australia	Male	Introduced	2013	2021	62	73
Cook Islands	Female	Introduced	2011	2021	-	-
Fiji	Female	Introduced	2013	2021	-	-
Marshall Islands	Female	Introduced	2009	2021	27	-
Micronesia (Federated States of)	Female	Introduced	2010	2021	32	-
New Zealand	Female	Introduced	2008	2021	48	68
New Zealand	Male	Introduced	2017	2021	46	68
Niue	Female	Introduced	2021	2021	76	76
Niue	Male	Introduced	2021	2021	76	76
Palau	Female	Introduced	2008	2021	21	36
Solomon Islands	Female	Introduced	2019	2021	-	15
Tuvalu	Female	Introduced	2021	2021	27	79

Data accessed on 24 Oct 2022

Data Sources:

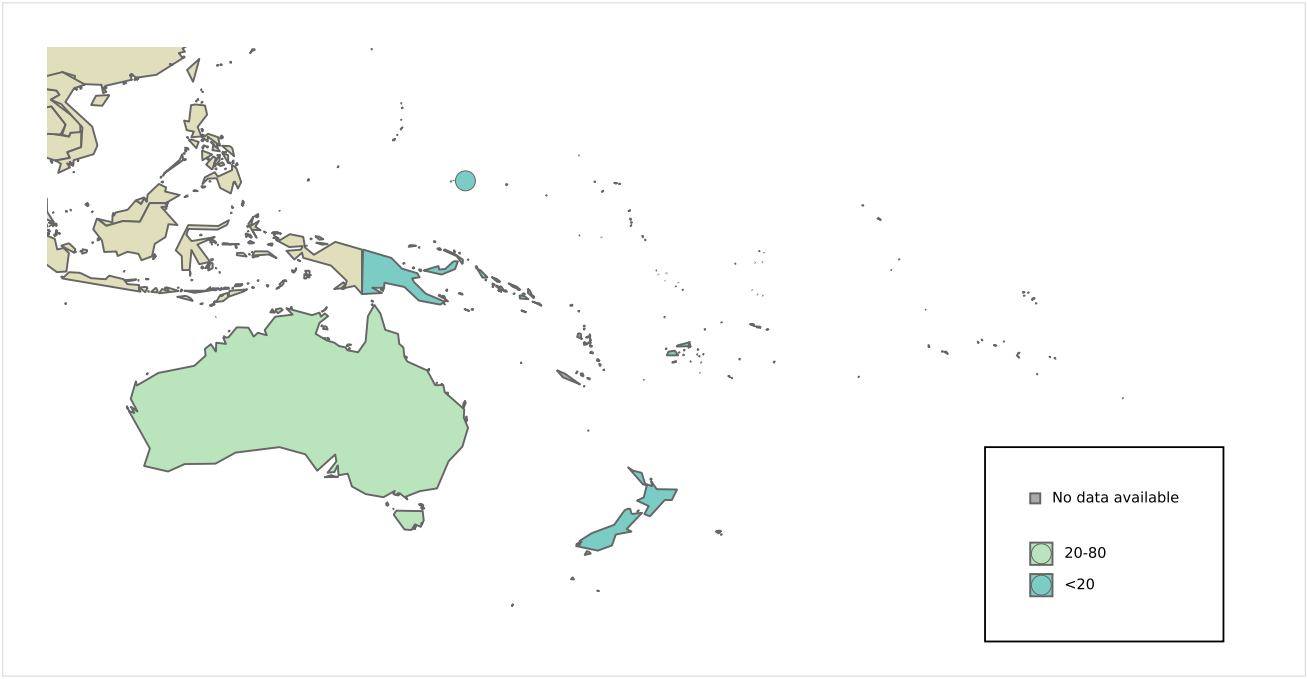
Human papillomavirus (HPV) vaccination coverage. World Health Organization. 2022. Available from: https://immunizationdata.who.int/pages/coverage/hpv.html, accessed [24 Oct 2022]

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

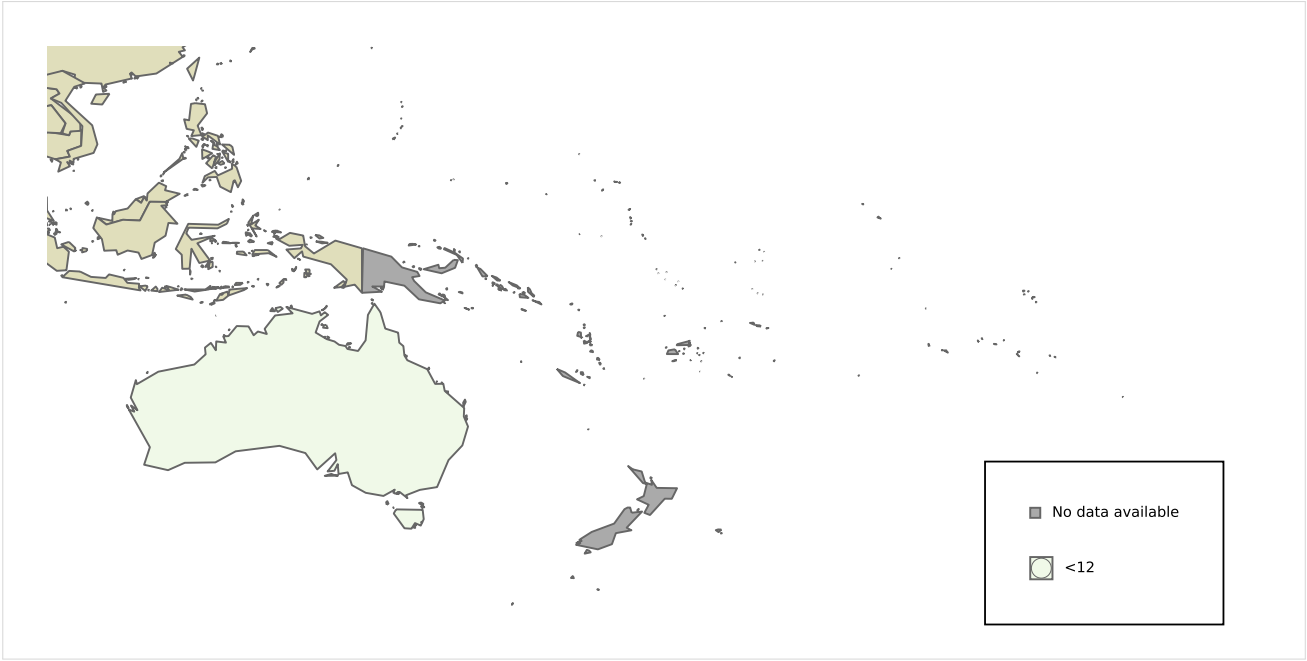
Male circumcision and the use of condoms have shown a significant protective effect against HPV transmission.

Figure 68: Prevalence of male circumcision in Oceania



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 Oceania



Data accessed on 16 Mar 2017

Please refer to original source for methods of estimation

[a] Year of estimation: not reported

[b] The main sources of data were surveys by the MEASURE DHS (Demographic and Health Surveys) project and published estimates from Reproductive National Health Surveys.

Data Sources:

1 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
HPV prevalence and HPV type distribution for cytologically normal women	
General sources	Based on systematic reviews and meta-analysis performed by ICO. The ICO HPV Information Centre has updated data until June 2014. Reference publications: 1) Bruni L, J Infect Dis 2010; 202: 1789. 2) De Sanjosé S, Lancet Infect Dis 2007; 7: 453
Australia	Bowden FJ, Sex Health 2005; 2: 229 ǀ Tabrizi SN, J Clin Virol 2014; 60: 250 ǀ Tabrizi SN, J Infect Dis 2012; 206: 1645, Tabrizi SN, J Clin Virol 2014; 60: 250
Fiji	Foliaki S, Infect Agents Cancer 2014; 9: 14
HPV type distribution for invasive cervical cancer (ICC)	
General sources	Based on meta-analysis performed by IARC's Infections and Cancer Epidemiology Group up to November 2011, the ICO HPV Information Centre has updated data until June 2014. Reference publications: 1) Guan P, Int J Cancer 2012;131:2349 2) Li N, Int J Cancer 2011;128:927 3) Smith JS, Int J Cancer 2007;121:621 4) Clifford GM, Br J Cancer 2003;88:63 5) Clifford GM, Br J Cancer 2003;89:101.
Australia	Brestovac B, J Med Virol 2005; 76: 106 ǀ Chen S, Int J Gynaecol Obstet 1999; 67: 163 ǀ de Sanjose S, Lancet Oncol 2010; 11: 1048 ǀ Liu J, Gynecol Oncol 2004; 94: 803 ǀ Plunkett M, Pathology 2003; 35: 397 ǀ Stevens MP, Int J Gynecol Cancer 2006; 16: 1017 ǀ Thompson CH, Gynecol Oncol 1994; 54: 40, Contributing studies: Brestovac B, J Med Virol 2005; 76: 106 ǀ Chen S, Int J Gynaecol Obstet 1999; 67: 163 ǀ de Sanjose S, Lancet Oncol 2010; 11: 1048 ǀ Liu J, Gynecol Oncol 2004; 94: 803 ǀ Plunkett M, Pathology 2003; 35: 397 ǀ Stevens MP, Int J Gynecol Cancer 2006; 16: 1017 ǀ Thompson CH, Gynecol Oncol 1994; 54: 40
HPV type distribution for cervical high grade squamous intraepithelial lesions	
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.
Australia	Contributing studies: Brestovac B, J Med Virol 2005; 76: 106 ǀ Callegari ET, Vaccine 2014; 32: 4082 ǀ Garland SM, BMC Med 2011; 9: 104 ǀ Stevens MP, Int J Gynecol Cancer 2006; 16: 1017 ǀ Stevens MP, J Med Virol 2009; 81: 1283, Brestovac B, J Med Virol 2005; 76: 106 ǀ Callegari ET, Vaccine 2014; 32: 4082 ǀ Garland SM, BMC Med 2011; 9: 104 ǀ Stevens MP, Int J Gynecol Cancer 2006; 16: 1017 ǀ Stevens MP, J Med Virol 2009; 81: 1283
Fiji	Contributing studies: Tabrizi SN, Sex Health 2011; 8: 338, Tabrizi SN, Sex Health 2011; 8: 338
HPV type distribution for cervical low grade squamous intraepithelial lesions	
General sources	Based on meta-analysis performed by IARC's Infections and Cancer Epidemiology Group up to November 2011, the ICO HPV Information Centre has updated data until June 2015. Reference publications: 1) Guan P, Int J Cancer 2012;131:2349 2) Clifford GM, Cancer Epidemiol Biomarkers Prev 2005;14:1157
HPV type distribution for invasive anal cancer	
General sources	Based on systematic reviews (up to 2008) performed by ICO for the IARC Monograph on the Evaluation of Carcinogenic Risks to Humans volume 100B and IARC's Infections and Cancer Epidemiology Group. The ICO HPV Information Centre has updated data until June 2015. Reference publications: 1) Bouvard V, Lancet Oncol 2009;10:321 2) De Vuyst H, Int J Cancer 2009;124:1626
HPV type distribution for anal intraepithelial neoplasia (AIN)	
General sources	Based on systematic reviews (up to 2008) performed by ICO for the IARC Monograph on the Evaluation of Carcinogenic Risks to Humans volume 100B and IARC's Infections and Cancer Epidemiology Group. The ICO HPV Information Centre has updated data until June 2015. Reference publications: 1) Bouvard V, Lancet Oncol 2009;10:321 2) De Vuyst H, Int J Cancer 2009;124:1626
HPV type distribution for invasive vulvar cancer	
General sources	Based on systematic reviews (up to 2008) performed by ICO for the IARC Monograph on the Evaluation of Carcinogenic Risks to Humans volume 100B and IARC's Infections and Cancer Epidemiology Group. The ICO HPV Information Centre has updated data until June 2015. Reference publications: 1) Bouvard V, Lancet Oncol 2009;10:321 2) De Vuyst H, Int J Cancer 2009;124:1626
Australia	de Sanjosé S, Eur J Cancer 2013; 49: 3450 ǀ Tan SE, Sex Health 2013; 10: 18
HPV type distribution for vulvar intraepithelial neoplasia (VIN)	
General sources	Based on systematic reviews (up to 2008) performed by ICO for the IARC Monograph on the Evaluation of Carcinogenic Risks to Humans volume 100B and IARC's Infections and Cancer Epidemiology Group. The ICO HPV Information Centre has updated data until June 2015. Reference publications: 1) Bouvard V, Lancet Oncol 2009;10:321 2) De Vuyst H, Int J Cancer 2009;124:1626
Australia	de Sanjosé S, Eur J Cancer 2013; 49: 3450 ǀ Tan SE, Sex Health 2013; 10: 18
HPV type distribution for invasive vaginal cancer	

Continued on next page

Table 51 – continued from previous page

Country	Study
General sources	Based on systematic reviews (up to 2008) performed by ICO for the IARC Monograph on the Evaluation of Carcinogenic Risks to Humans volume 100B and IARC's Infections and Cancer Epidemiology Group. The ICO HPV Information Centre has updated data until June 2015. Reference publications: 1) Bouvard V, Lancet Oncol 2009;10:321 2) De Vuyst H, Int J Cancer 2009;124:1626
HPV type distribution for vaginal intraepithelial neoplasia (VAIN)	
General sources	Based on systematic reviews (up to 2008) performed by ICO for the IARC Monograph on the Evaluation of Carcinogenic Risks to Humans volume 100B and IARC's Infections and Cancer Epidemiology Group. The ICO HPV Information Centre has updated data until June 2015. Reference publications: 1) Bouvard V, Lancet Oncol 2009;10:321 2) De Vuyst H, Int J Cancer 2009;124:1626
HPV type distribution for invasive penile cancer	
General sources	The ICO HPV Information Centre has updated data until June 2015. Reference publications (up to 2008): 1) Bouvard V, Lancet Oncol 2009;10:321 2) Miralles-Guri C,J Clin Pathol 2009;62:870
HPV type distribution for penile intraepithelial neoplasia (PEIN)	
General sources	The ICO HPV Information Centre has updated data until June 2014. Reference publication (up to 2008): Bouvard V, Lancet Oncol 2009;10:321
The anogenital prevalence of HPV-DNA in men: HPV in men	
General sources	Based on published systematic reviews, the ICO HPV Information Centre has updated data until October 2015. Reference publications: 1) Dunne EF, J Infect Dis 2006; 194: 1044 2) Smith JS, J Adolesc Health 2011; 48: 540 3) Olesen TB, Sex Transm Infect 2014; 90: 455 4) Hebnes JB, J Sex Med 2014; 11: 2630.
The anogenital prevalence of HPV-DNA in men: HPV in special subgroups (HIV, MSM, etc)	
General sources	Based on published systematic reviews, the ICO HPV Information Centre has updated data until October 2015. Reference publications: 1) Dunne EF, J Infect Dis 2006; 194: 1044 2) Smith JS, J Adolesc Health 2011; 48: 540 3) Olesen TB, Sex Transm Infect 2014; 90: 455 4) Hebnes JB, J Sex Med 2014; 11: 2630.
HPV prevalence and type distribution in oral specimens collected from healthy population	
General sources	Systematic review and meta-analysis was performed by ICO HPV Information Centre until July 2012. Pubmed was searched using the keywords oral and papillomavirus. Inclusion criteria: studies reporting oral HPV prevalence in healthy population in Europe; n > 50. Exclusion criteria: focused only in children or immunosuppressed population; not written in English; case-control studies; commentaries and systematic reviews and studies that did not use HPV DNA detection methods.
HPV prevalence and type distribution in invasive oral cavity squamous cell carcinoma	
General sources	Based on systematic reviews and meta-analysis performed by ICO. Reference publications: 1) Ndiaye C, Lancet Oncol 2014; 15: 1319 2) Kreimer AR, Cancer Epidemiol Biomarkers Prev 2005; 14: 467
HPV prevalence and type distribution in invasive oropharyngeal squamous cell carcinoma	
General sources	Based on systematic reviews and meta-analysis performed by ICO. Reference publications: 1) Ndiaye C, Lancet Oncol 2014; 15: 1319 2) Kreimer AR, Cancer Epidemiol Biomarkers Prev 2005; 14: 467
HPV prevalence and type distribution in invasive hypopharyngeal squamous cell carcinoma	
General sources	Based on systematic reviews and meta-analysis performed by ICO. Reference publications: 1) Ndiaye C, Lancet Oncol 2014; 15: 1319 2) Kreimer AR, Cancer Epidemiol Biomarkers Prev 2005; 14: 467

10 Glossary

Table 52: Glossary

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

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Albero G, Amarilla S, Bosch FX, Bruni L, Collado JJ, de Sanjosé S, Gómez D, Mena M, Muñoz J, Ruiz FJ, Serrano B.
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.
Although efforts have been made by the HPV Information Centre to prepare and include as accurately as possible the data presented, mistakes may occur. Readers are requested to communicate any errors to the HPV Information Centre, so that corrections can be made in future volumes.

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