



COALITION to STRENGTHEN
the HPV IMMUNIZATION
COMMUNITY



HPV Prevention
and Control Board



Overview of HPV related disease incidence, mortality, social and economic impact in Sri Lanka



Present by:
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Ministry of Health

South Asia Regional Meeting

HPV Prevention and Control Landscape and the way forward.

13th , 14th and 15th - Dec 2022– New Delhi, India.

Overview of HPV related disease incidence, mortality, social and economic impact in Sri Lanka

- Burden of Cancer in Sri Lanka
- Burden of HPV related cancers
 - Incidence & mortality with special emphasis for cervical cancer
- Other evidence of HPV burden in Sri Lanka
- Social & Economic impact

Sri Lanka – Basic Facts

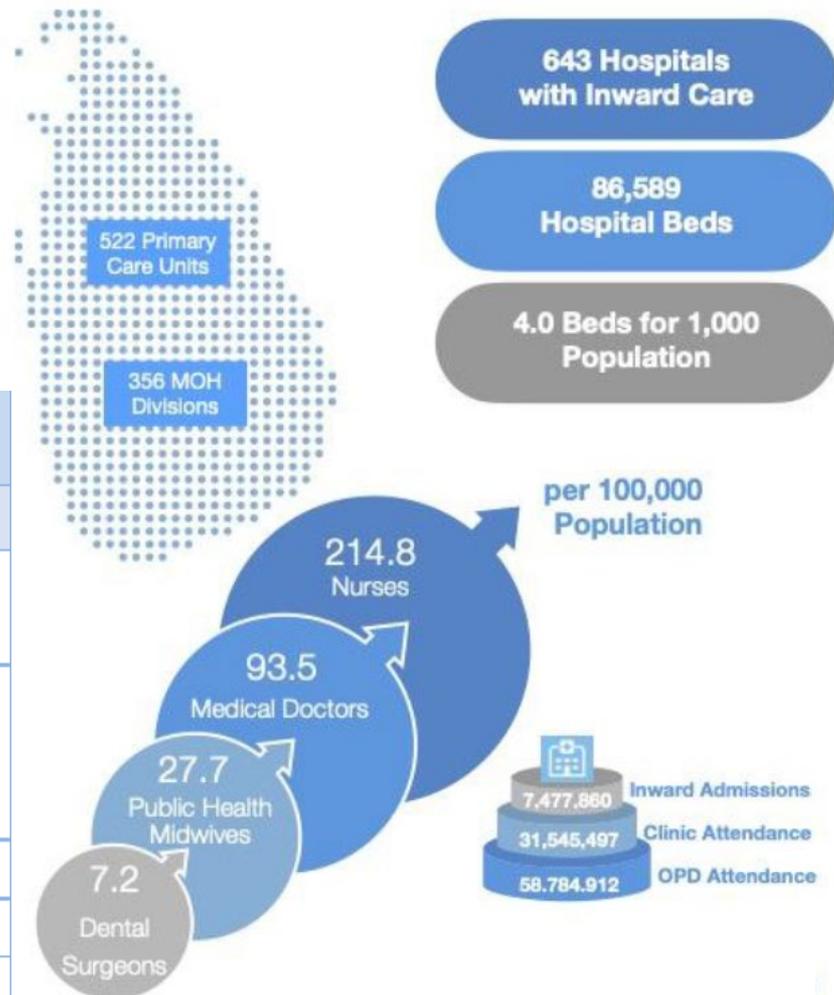
Estimated Mid Year Population (2021)

Total - 22,155,748

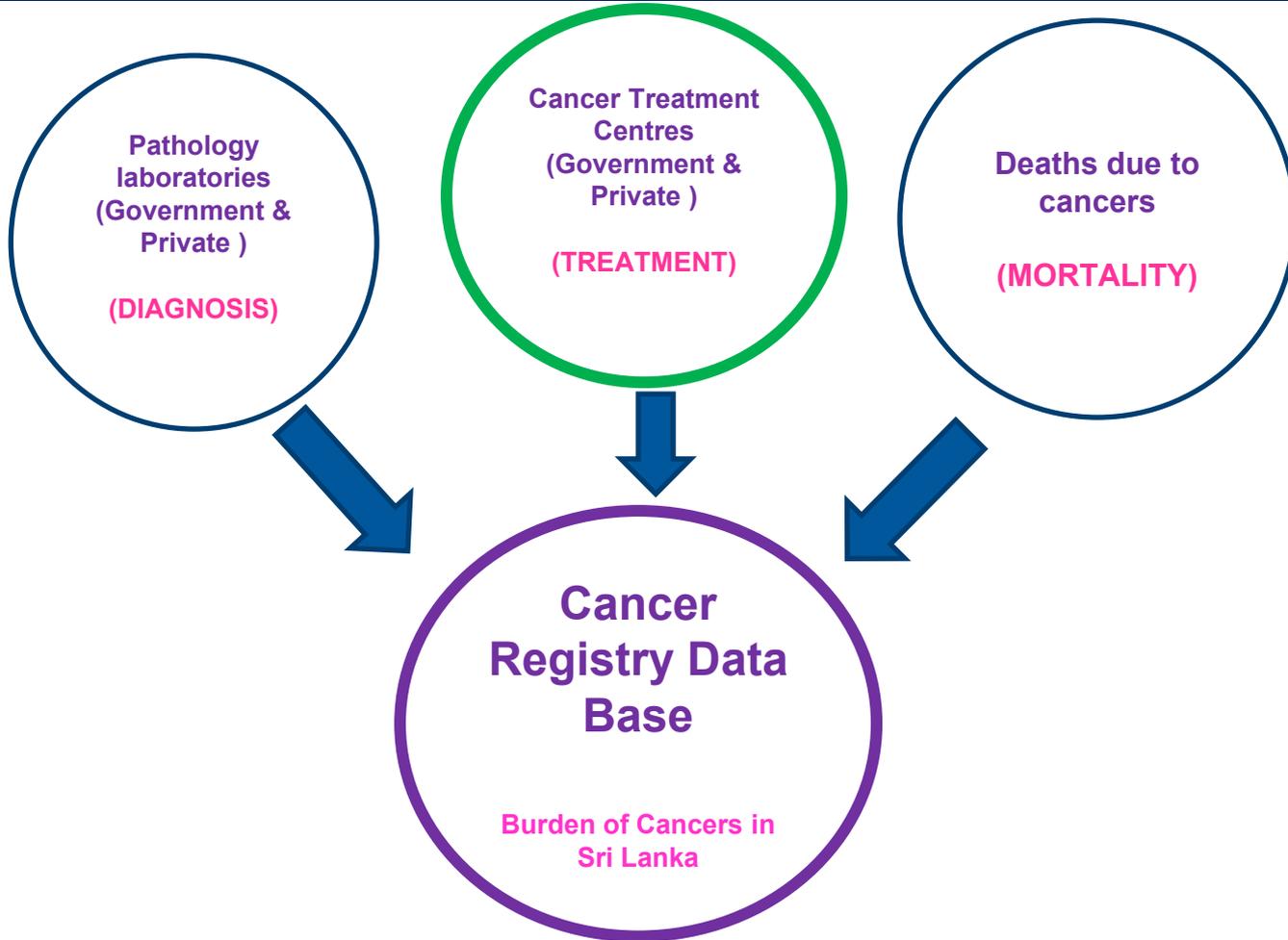
Male - 10,727,141

Female 11,428,607

Indicator	Year	Data	Source	
Health and Nutrition Indicators				
Life expectancy at birth (years)	Female	2011-2013	78.6	Department of Census and Statistics (Life Tables for Sri Lanka 2011-2013 by District and Sex)
	Male		72.0	
Neonatal mortality rate (per 1,000 live births)	2015*	6.0	Registrar General's Department	
Infant mortality rate (per 1,000 live births)	2015*	8.5		
Under-five mortality rate (per 1,000 live births)	2015*	10.1		
Average No. of children born to ever married women in Sri Lanka	2012	2.4	Census of Population & Housing, 2012	
Maternal mortality ratio (per 100,000 live births)	2014*	25.7	Registrar General's Department	
Low-birth-weight rate per 100 live births in government hospitals	2019	16.0	Medical Statistics Unit	



Evolving Model of Cancer Registration System in Sri Lanka



Sri Lankan Cancer Registry
16th Publication

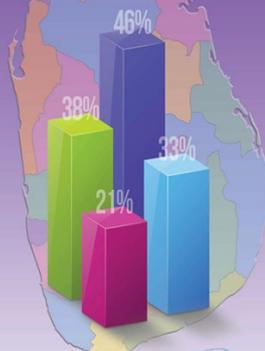
CANCER INCIDENCE & MORTALITY DATA SRI LANKA 2016



NATIONAL CANCER CONTROL PROGRAMME
MINISTRY OF HEALTH

Sri Lankan Cancer Registry
19th Publication

CANCER INCIDENCE & MORTALITY DATA SRI LANKA 2017



NATIONAL CANCER CONTROL PROGRAMME
MINISTRY OF HEALTH

Sri Lankan Cancer Registry
20th Publication

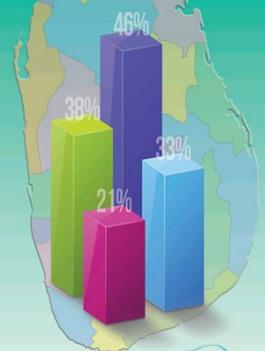
CANCER INCIDENCE & MORTALITY DATA SRI LANKA 2018



NATIONAL CANCER CONTROL PROGRAMME
MINISTRY OF HEALTH

Sri Lankan Cancer Registry
21st Publication

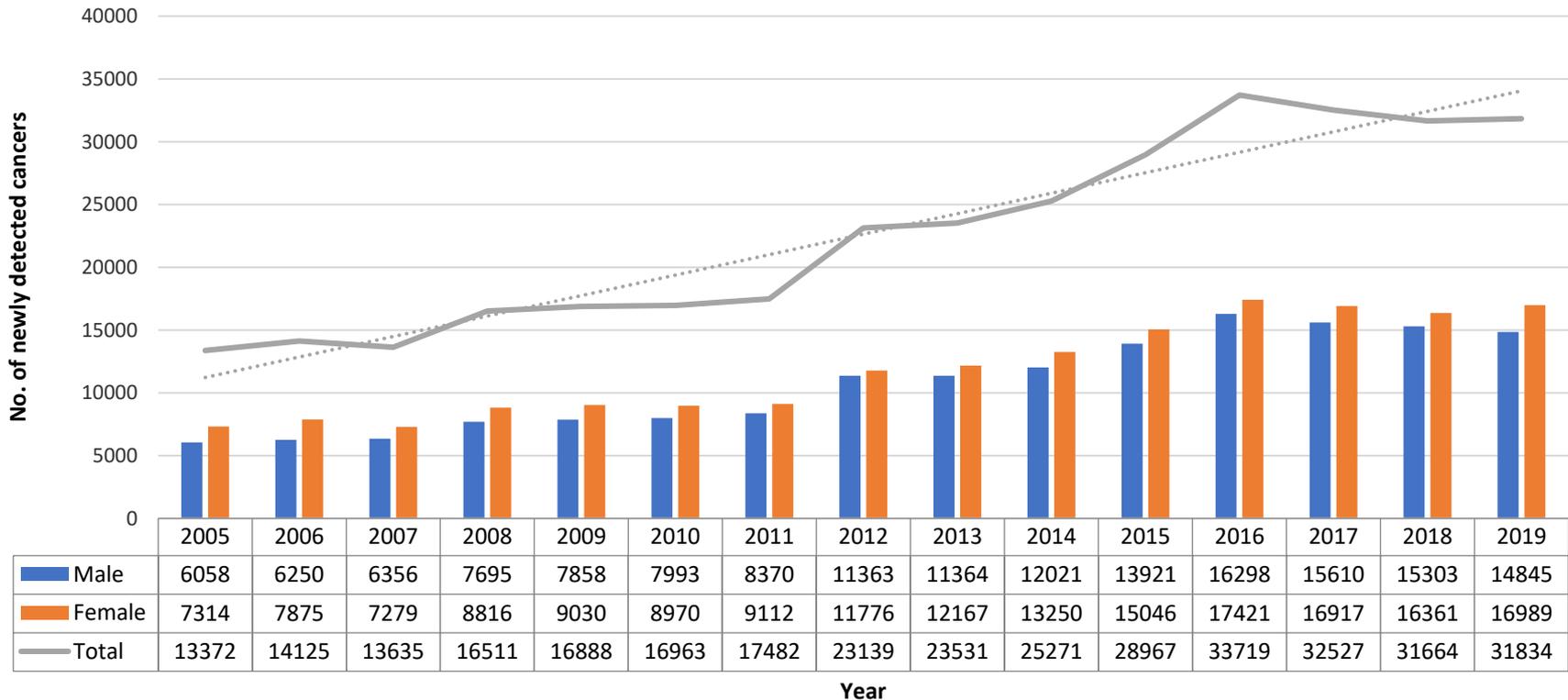
CANCER INCIDENCE & MORTALITY DATA SRI LANKA 2019



NATIONAL CANCER CONTROL PROGRAMME
MINISTRY OF HEALTH

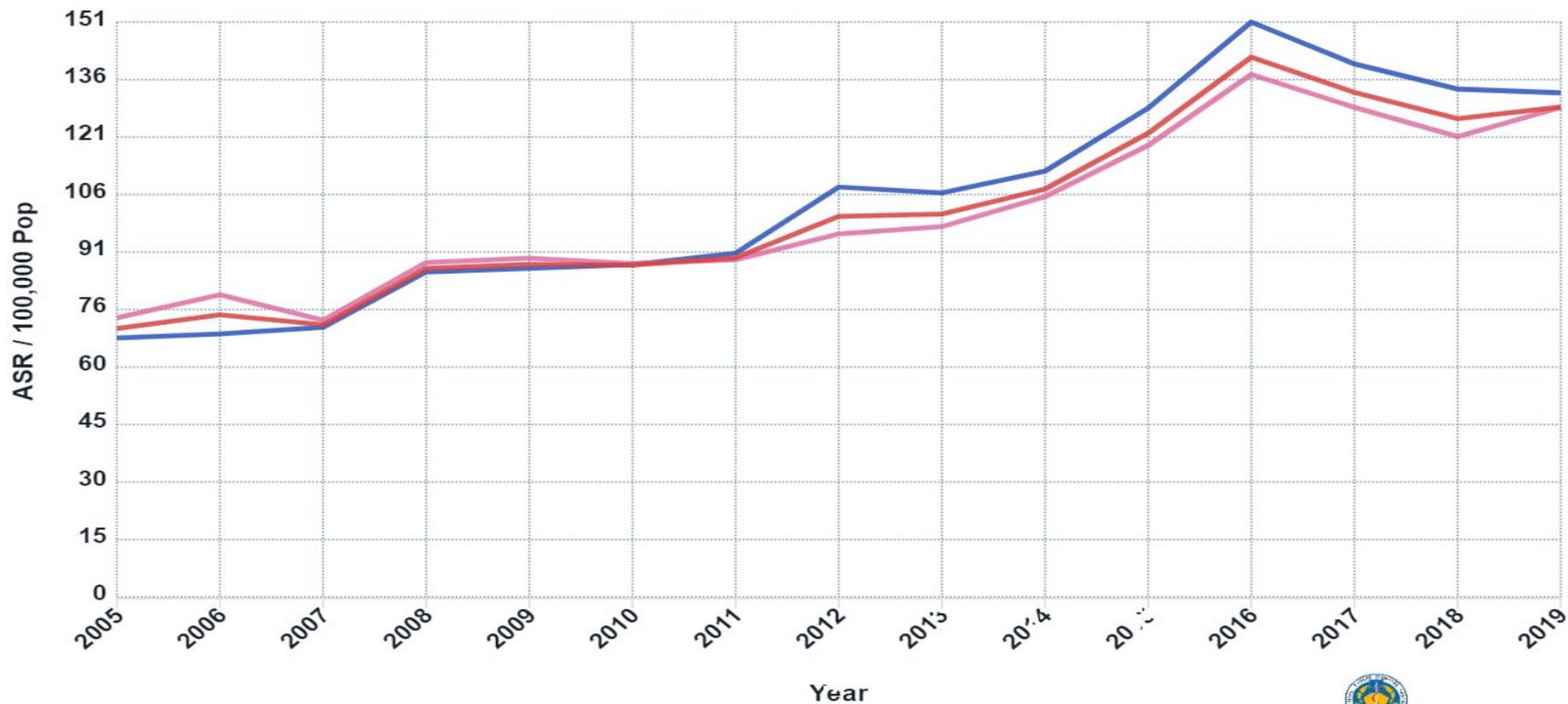
www.nccp.health.gov.lk

Number of newly detected cancers (Male, Female, Total) in Sri Lanka 2005-2019



■ Male
 ■ Female
 — Total
 ⋯ Linear (Total)
 Source : National Cancer Registry, Sri Lanka,

Age Standardized Incidence Rates (2005 - 2019) - Both



● Male ● Female ● Both

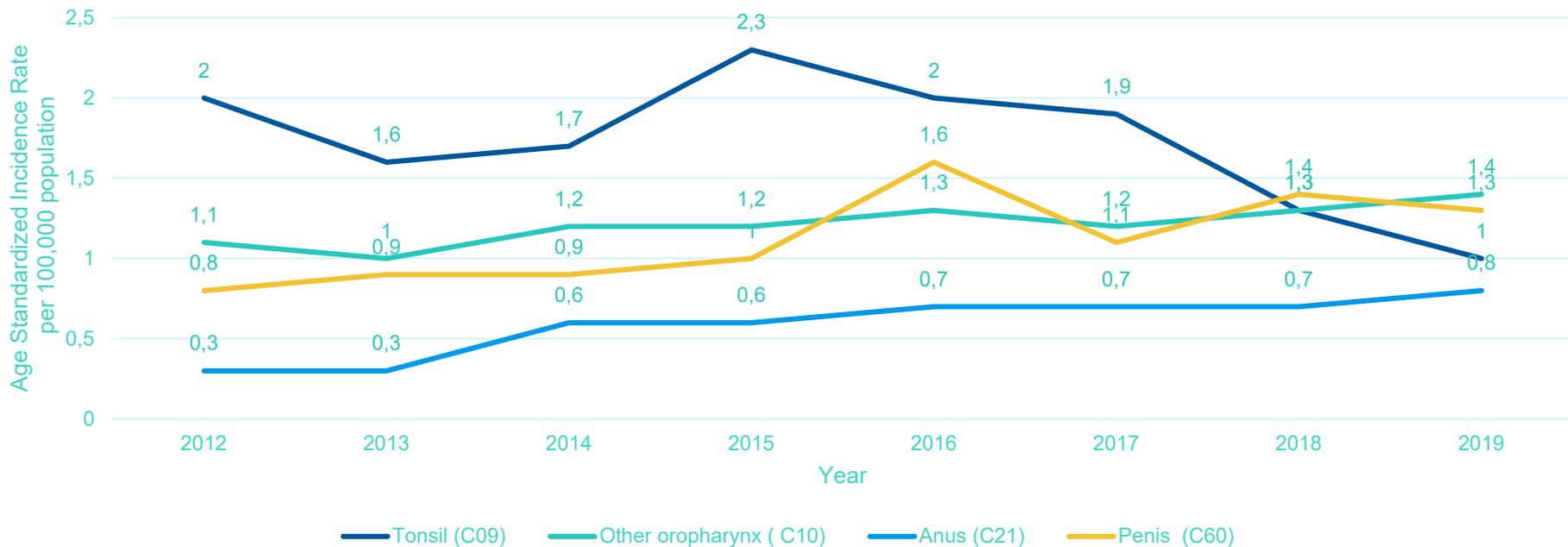


National Cancer Registry of Sri Lanka
NATIONAL CANCER CONTROL PROGRAMME

No. of HPV related cancers detected among males in Sri Lanka 2012-2019

Site of Cancer	2012	2013	2014	2015	2016	2017	2018	2019
Tonsil (C09)	213	168	182	254	228	221	152	116
Other oropharynx (C10)	124	109	132	129	145	136	150	165
Anus (C21)	34	35	60	64	71	74	79	93
Penis (C60)	87	98	97	110	172	121	145	151

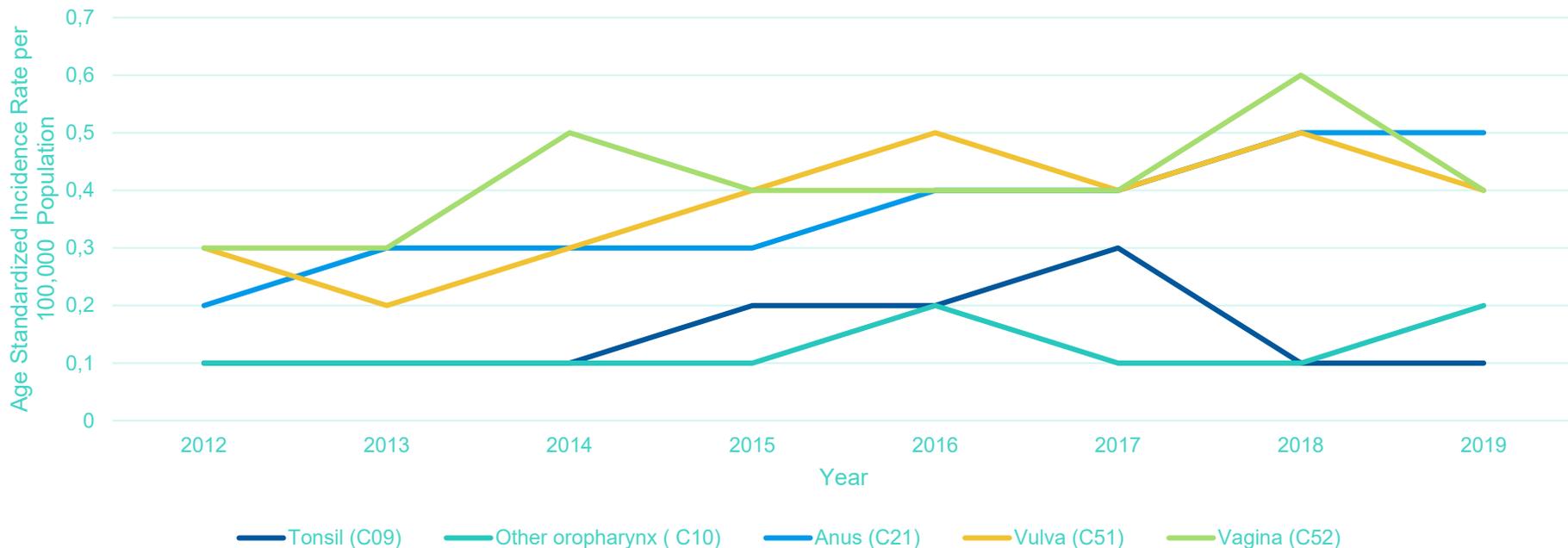
Age Standardized Incidence Rate of HPV Related Cancers among males in Sri Lanka-2019



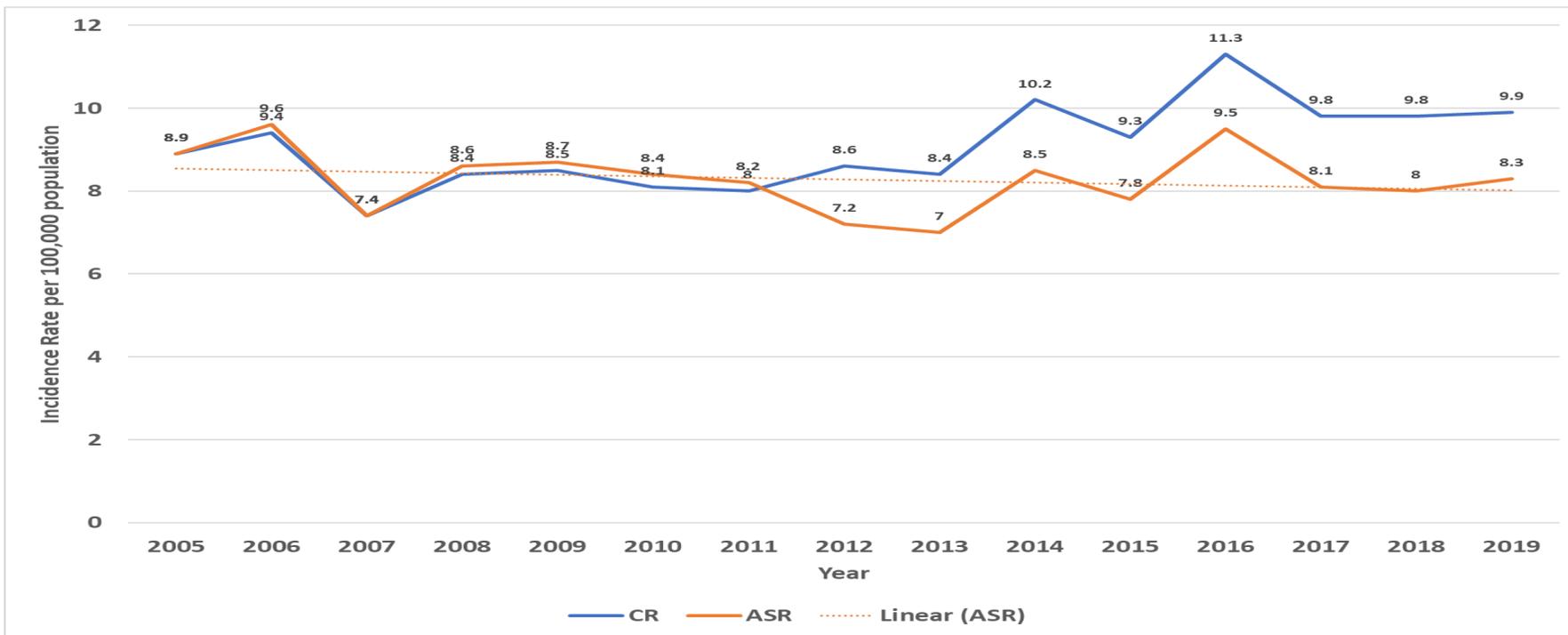
No. of HPV related cancers detected among females in Sri Lanka 2012-2019

Site of Cancer	2012	2013	2014	2015	2016	2017	2018	2019
Tonsil (C09)	19	16	14	30	29	35	17	17
Other oropharynx (C10)	11	14	16	11	33	12	14	24
Anus (C21)	28	37	39	39	57	49	74	63
Vulva (C51)	37	22	44	56	62	54	61	48
Vagina (C52)	36	45	62	51	54	57	83	59
Cervix (C53)	905	895	1090	1008	1246	1071	1073	1114

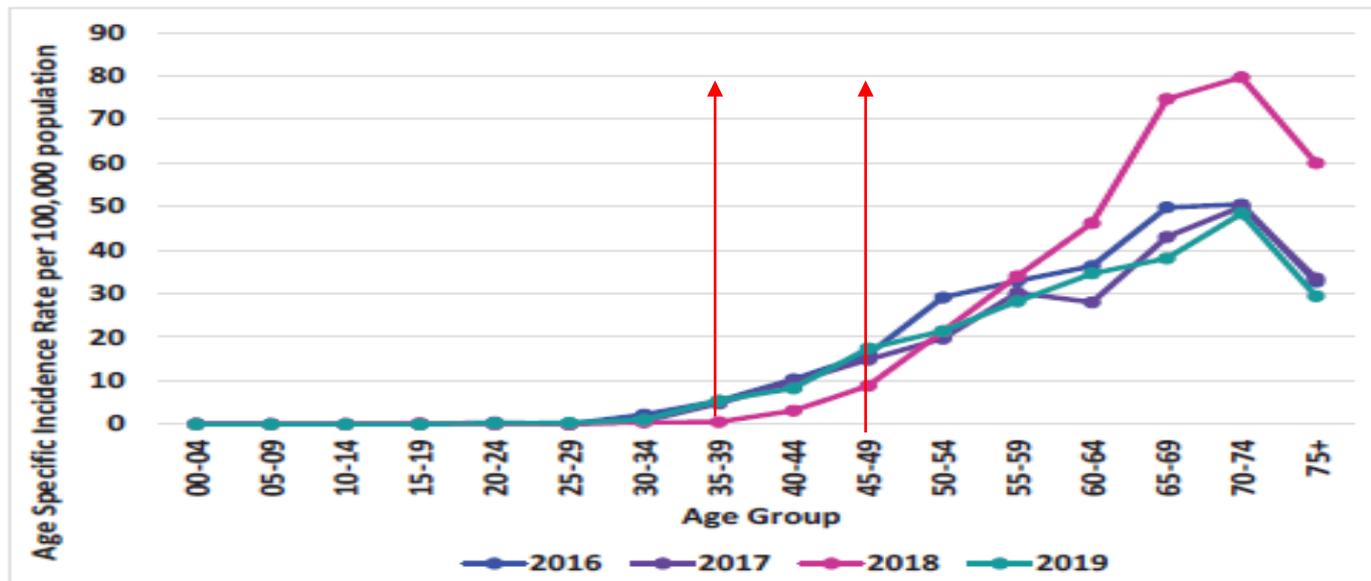
Age Standardized Incidence Rate of HPV Related Cancers among Females in Sri Lanka-2019 (Except cervical cancer)



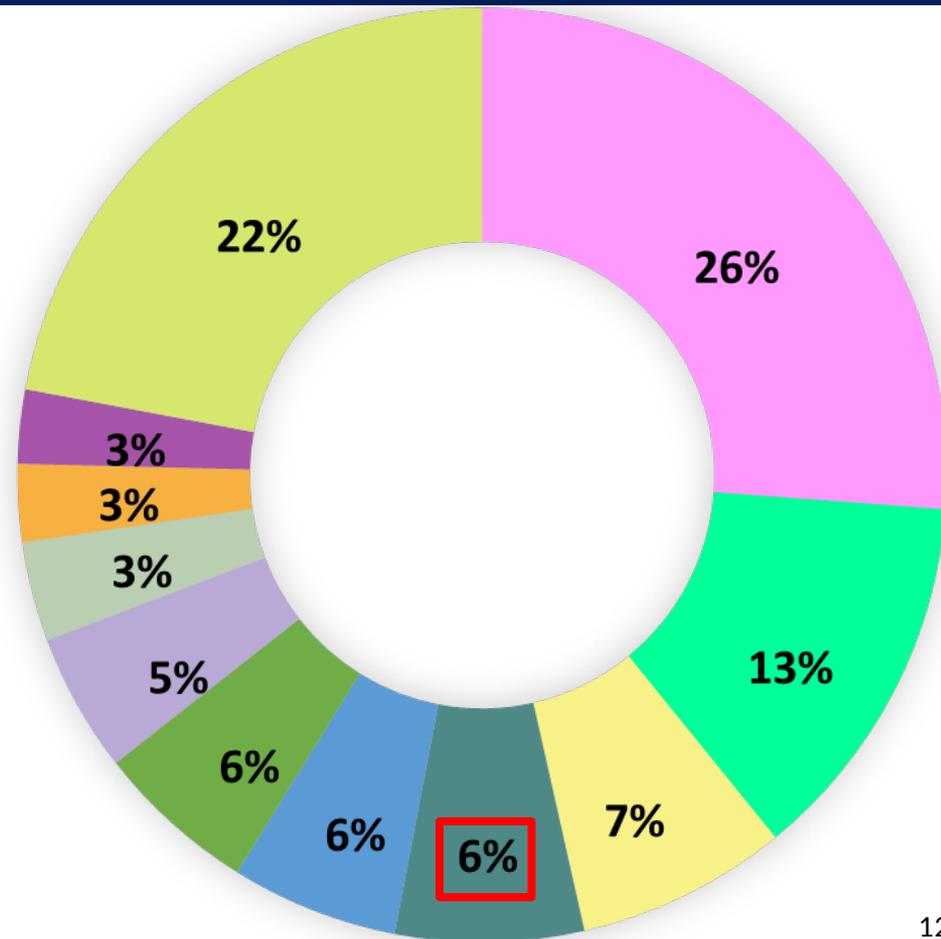
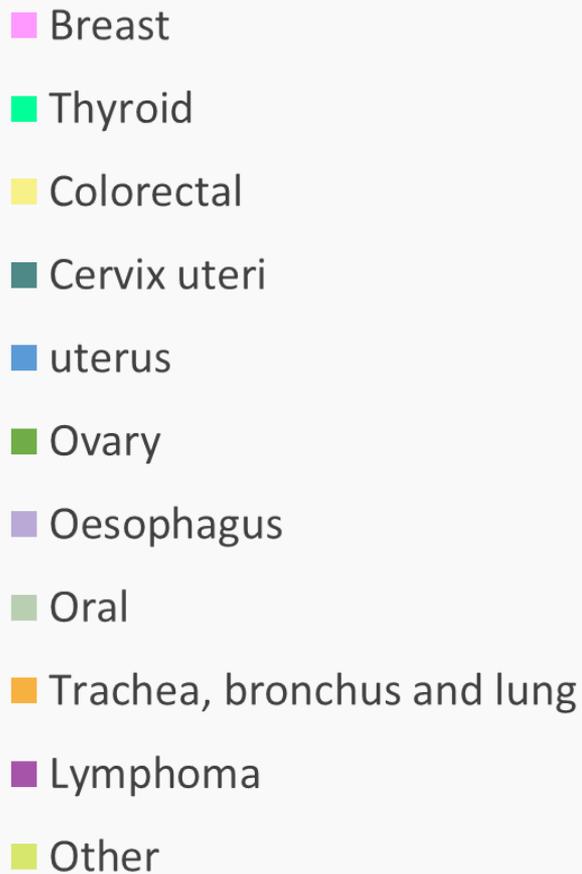
Crude & Age Standardized Incidence Rate of Cervical Cancer in Sri Lanka 2005-2019



Age Specific Incidence Rate of Cervical Cancer in Sri Lanka 2016-2019



Most common cancers among females in Sri Lanka 2019



Mortality due to Cancers in Sri Lanka 2015

1-026 Neoplasms C00-D48	13,825	7,726	6,099
1-027 Malignant neoplasm of lip,oral cavity and pharynx C00 - C14	1,022	799	223
1-028 Malignant neoplasm of oesophagus C15	641	379	262
1-029 Malignant neoplasm of stomach C16	475	279	196
1-030 Malignant neoplasm of colon,rectum and anus C18-C21	375	204	171
1-031 Malignant neoplasm of liver and intrahepatic bile ducts C22	791	528	263
1-032 Malignant neoplasm of pancreas C25	137	71	66
1-033 Malignant neoplasm of larynx C32	231	166	65
1-034 Malignant neoplasm of trachea, bronchus and lung C33-C34	1,155	847	308
1-035 Malignant melanoma of skin C43	2	2	-
1-036 Malignant neoplasm of breast C50	668	16	652
1-037 Malignant neoplasm of cervix uteri C53	144	-	144
1-038 Malignant neoplasm of other and unspecified parts of uterus C54 - C55	312	-	312
1-039 Malignant neoplasm of ovary C56	220	-	220
1-040 Malignant neoplasm of prostate C61	223	223	-
1-041 Malignant neoplasm of bladder C67	160	141	19
1-042 Malignant neoplasm of meninges , brain and other parts of central nervous system C70 - C72	517	295	222
1-043 Non-Hodgkin s lymphoma C82-C85	276	176	100
1-044 Multiple myeloma and malignant plasma cell neoplasms C90	157	96	61
1-045 Leukaemia C91-C95	589	317	272
1-046 Remainder of malignant neoplasm	5,622	3,131	2,491
1-047 Remainder of neoplasms D00-D48	108	56	52

HPV Prevalence in Sri Lanka Females

- In Sri Lanka, a population-based study conducted in the Gampaha district in 2008 showed an overall female HPV prevalence among clinically normal women was 3.3% (Gamage, 2017).
- Most prevalent high-risk genotypes in Sri Lankan women was 16 and 18 and their prevalence was 1.2% in 2008 (Gamage, 2017).
- Prevalence of HPV among normal cytology is 12.3% which is similar to the rates in other regions of Asia (China 15.4%; India 10.43%) (Shanaka et al., 2018)
- Study among 51 female STD attendees revealed 37 were HPV positive

HPV Prevalence in Sri Lanka Males

- No published data on male HPV Prevalence
- Ongoing research on ‘**Male HPV prevalence among men of 20-70 years in community and STD attendees**’ (during pilot study among Male STD attendees 3/5 were positive for HPV, gene sequencing results pending)

RESEARCH ARTICLE

Open Access

A shifting paradigm in the aetiology of oral and pharyngeal cancer in Sri Lanka: a case-control study providing serologic evidence for the role of oncogenic HPV types 16 and 18

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Abstract

Background: Oral and pharyngeal cancer (OPC) of multifactorial aetiology is a major health problem globally. Ranking first in all cancers, OPC poses a significant impact on the Sri Lankan male population. As Human Papillomavirus (HPV) high risk (HR) types are found to be significant risk factors for OPC globally, the current study was undertaken to examine the association between HR-HPV16 and 18 types with OPC in Sri Lanka.

Materials and methods: Serum samples of 78 OPC patients and 51 non-cancer controls were assayed for the presence of anti-HPV16 and anti-HPV18 IgG antibodies using in-house established Enzyme Linked Immunosorbent Assays (ELISAs). The association between OPC and its risk factors *i.e.* HPV, smoking, alcohol, betel quid, poor dentition, was established using Chi-square test. Logistic regression was used to calculate odds ratios (OR), adjusted for the influence of other risk factors.

Results: This prototype study in Sri Lanka showed a significant risk of 15 fold in developing OPC due to HPV16/18 seropositivity after removing variability due to other factors. Oncogenic HPV18 showed a higher rate of seropositivity being detected in 32% of OPC patients, and also in 2% of non-cancer control subjects. HR-HPV16 was detected in 23% of OPC patients and in 5.88% of controls. Moreover, seven OPC patients were detected with both anti-HPV16 and anti-HPV18 antibodies. According to the logistic regression models HPV18 seropositivity was associated with a 28 fold risk in developing OPC while that of HPV16 was associated with a 6 fold increase in risk for the development of OPC. A 5 fold risk of developing OPC was also pronounced among smokers while alcohol, betel and poor dentition was not significantly associated with OPC. Statistically significant differences with regard to age, gender, smoking, alcohol, betel use, poor dentition and site specificity of the tumour was not observed between HPV seropositive and seronegative OPC patients.

Conclusions: Both in-house developed ELISAs detected significant proportions of HPV seropositives within the OPC study population suggestive of HPV as a strong risk factor for oral and pharyngeal carcinogenesis in Sri Lanka.

Keywords: Sri Lanka, Oral and pharyngeal cancer, Human papillomavirus (HPV), HPV16, HPV18, Enzyme-linked Immunosorbent assay, Risk factors, Smoking

Social & Economic Impact due to HPV related Cancers

Missing Opportunity for Preventable cancer

Missing opportunity for Screening of Cervical Cancer

Affected females in reproductive age group

Productivity loss

Cost for treatment

Index patient suffering & societal suffering



National Cancer Registry of Sri Lanka

NATIONAL CANCER CONTROL PROGRAMME

🔍 Search statistics / Type the site of cancer



CANCER TODAY AT A
GLANCE



CANCER
OVER TIME



FACT SHEETS

<https://dashboard.nccp.health.gov.lk>



MALE

FEMALE