

NATIONAL CANCER INCIDENCE AND MORTALITY DATA SRI LANKA 2012



NATIONAL CANCER CONTROL PROGRAMME
MINISTRY OF HEALTH AND INDIGENOUS MEDICAL SERVICES

National Cancer Incidence and Mortality Data
Sri Lanka 2012



National Cancer Control Programme
Ministry of Health and Indigenous Medical Services
555/5 Public Health Complex
Elvitigala Mawatha,
Narahenpita, Colombo 05
Sri Lanka

14th Publication – National Cancer Incidence and Mortality Data in Sri Lanka: 2012

Published date – May 2020

Compiled by

Strategic Information and Management (SIM) Unit
National Cancer Control Programme
Sri Lanka

Published by



National Cancer Control Programme
Ministry of Health and Indigenous Medical Services
555/5 Public Health Complex
Elvitigala Mawatha,
Narahenpita,
Colombo 05
Sri Lanka

Contact No +94 112368627, Fax +94 112368627

Email- nccpsl@yahoo.com

Web – www.nccp.health.gov.lk



National Cancer Control Programme, Sri Lanka

Acknowledgement

Ministry of Health Officials

Secretary – Ministry of Health & Indigenous Medical Services

Additional Secretary (Public Health Services)

Additional Secretary (Medical Services)

Director General of Health Services

Deputy Director General (NCD)

Deputy Director Generals (MS I, MSII, PHS I, PHS II, LS, DS, ET &R)

Directors- Medical Services, Tertiary Care Services, Laboratory Services, Dental Services, Planning, Health Information, Private Health Sector Development

Legal Officer – Ministry of Health

Members of the National Advisory Committee on Prevention & Control of Cancers

Members of the Technical Advisory Committee on Cancer Registration & Research

Administrators of the Hospitals

DDG - National Hospital of Sri Lanka

Director- Apeksha Hospital, Maharagama

Director – National Hospital, Kandy

Directors of Teaching, Provincial General, District General Hospitals

Medical Superintendents of Base Hospitals

Medical Directors of Armed Services & Police

Professional Colleges & Associations

Sri Lanka College of Oncologists

The College of Pathologists of Sri Lanka

The Sri Lanka College of Haematologists

The College of Surgeons of Sri Lanka

Sri Lanka Association of the Oral & Maxillofacial Surgeons

Association of Oral Pathology and Oral Medicine Sri Lanka

Sri Lanka College Of Obstetricians & Gynecologists

Sri Lanka College of Radiologists

College of Community Physicians of Sri Lanka

College Of Medical Administrators of Sri Lanka

Sri Lanka Medical Association

Consultants & Hospital staff

Consultants- Oncologists, Oncosurgeons, Gynaecologists, Histopathologists, Haematologists, Oral Pathologists, OMF Surgeons, General Surgery & sub specialties

Medical officers in Oncology, Pathology,

Dental Surgeons in OMF Units

Medical Officers – Public Health, Planning, NCD, Health Informatics in hospitals

Chief Nursing Officers in hospitals with cancer treatment units

Nursing Sisters & Nursing Officers in Charge of Oncology Clinics

Officers in charge of Medical Record Departments in Government & Private hospitals

Medical Laboratory Technologists at Pathology Laboratories

Development Officers at Pathology Laboratories

Private Sector

Members of the Private Health Sector Regulatory Council

Directors of Private Hospitals

Universities

Professors of Pathology /Haematology / Oral Pathology

Senior Lecturers at the Faculties of Medicine & Dentistry

Department of Census & Statistics

Registrar General Department

District Secretariat – Colombo

Divisional Secretariat Offices- Colombo District

Divisional Death Registrars of Colombo District

Cancer Care Association – Sri Lanka

World Health Organization (WHO)

WHO Country Office – Sri Lanka

WHO SEARO Office – New Delhi, India

International Organizations for Cancer Registry

International Agency for Research on Cancer (IARC), Lyon, France

- Dr. Freddie Bray - Head, Section of Cancer Surveillance
- Mr. Leslie Mery - Global Programme Manager, Section of Cancer Surveillance

IARC Regional Hub, Centre for Cancer Epidemiology, Advanced Centre for Treatment, Research and Education in Cancer, Tata Memorial Centre, Mumbai, India

- Dr. Rajesh Dixit – Professor of Epidemiology
- Dr. Atul Budukh – Assistant Professor of Epidemiology

International Association for Cancer Registries (IACR)

WIA Cancer Institute, Adyar, Chennai, India

- Prof. R. Swaminathan- Head, Department of Epidemiology, Bio statistics and Cancer Registry

National Cancer Control Programme – Sri Lanka

Past Directors, Deputy Directors and Staff of National Cancer Control Programme

Current Director, Deputy Director & Staff of National Cancer Control Programme

Table of Content

Contents	Page
Acknowledgement	III
Table of Content	VI
List of Tables	VIII
List of Figures	IX
Abbreviations	X
Executive Summary	1
1. Introduction.....	3
2. Methodology.....	4
2.1. Collection of cancer incidence data	4
2.1.1. Newly registered cancer patients at the cancer treatment centres	4
2.1.2 Newly detected cancers at the pathology laboratories	5
2.1.3. Newly diagnosed cancers at the Oral & Maxillo - Facial (OMF) Surgery Units.....	7
2.1.4. Incorporation of additional data sources used for Population Based Cancer Registry – Colombo district.....	7
2.2. Coding of cancer incidence data	8
2.3. Entering of cancer incidence data to the database	8
2.4. Duplicate checking & verification of data	9
2.5. Analysis of cancer incidence data & dissemination of Information	9
3. Cancer Incidence and Mortality Data	10
3.1. Cancer Incidence	10
3.2. Cancer Mortality	29
3.3. Leading Cancer Sites – Based on cancer incidence & mortality data: Year 2012.....	33
3.3.1. Oral cancer	33
3.3.2. Oesophagus (C15).....	35
3.3.4. Stomach (C 16)	35
3.3.5. Colon, Rectum & Anus.....	36
3.3.6. Liver (C22).....	37
3.3.7. Larynx (C32).....	37
3.3.8. Trachea, bronchus & lung (C33-C34).....	38
3.3.9. Breast (C 50)	38
3.3.10. Cervix (C 53)	39
3.3.11. Uterus (C54-C55).....	39

3.3.12. Ovary (C56)	40
3.3.13. Prostate (C 61)	40
3.3.14. Bladder (C67).....	41
3.3.15. Thyroid Cancer (C73)	41
3.3.16. Lymphoma	42
3.3.17. Leukaemia (C91-C95).....	43
3.4. Cancer cases by age group	44
3.5. Age specific mortality rate, Crude mortality rate (CR) and Age standardized mortality	62
4. List of References	68
5. Appendix - Statistical Terminology	69
5.1. Population at risk	69
5.2. Incidence	69
5.3. Mortality	69
5.4. Crude rate.....	69
5.5. Age-Specific Rate	70
5.6. ASR (Age Standardized Rate)	70
5.7. life time risk (Cumulative Risk).....	71

List of Tables

Table 1: General Population : Sex distribution	10
Table 2: Denominators used for calculations in the cancer registry	10
Table 3: Statistics on doctors, hospitals and hospitals beds	11
Table 4: Cancer incidence by sex, 2006-2012	11
Table 5: Overall cancer incidence, by age and sex - 2012.....	13
Table 6: Leading cancer sites – 2012.....	14
Table 7: Childhood cancer incidence data (0-19 years) – 2012.....	21
Table 8: Deaths due to neoplasms at the hospitals 2005-2012	29
Table 9: Deaths due to neoplasms out of all registered deaths (hospital & field) 2001 – 2012.....	29
Table 10: Deaths due to neoplasms by sex out of all registered deaths (hospital & field) 2001 – 2012	30
Table 11: Leading sites (ICD-10) of cancer mortality – Male Sri Lanka 2012	31
Table 12: Leading sites (ICD-10) of cancer mortality – Female Sri Lanka 2012.....	32
Table 13: Cancer cases by age group – Male 2012.....	44
Table 14: Cancer cases by age group – Female 2012	49
Table 15: Cases By age group(period)-Male	54
Table 16: Cases By age group(period)-Female.....	55
Table 17: Incidence per100000 by age group(period) – Male	56
Table 18: Incidence per100000 by age group(period) – Female	57
Table 19: Number of cancer deaths by five year age group and site (ICD-10) – Male Sri Lanka 2012	58
Table 20: Number of cancer deaths by five year age group and site (ICD-10) – Female Sri Lanka 2012	60
Table 21: Age specific , Crude (CR) and Age standardized mortality rate per 100,000 population– Male Sri Lanka - 2012	62
Table 22: Age specific, Crude (CR) and Age standardized mortality rate per 100,000 population– Female Sri Lanka 2012	64
Table 23: Cancer incidence by geographical area - 2012	67

List of Figures

Figure 1: General population in Sri Lanka by 5 -year age groups	10
Figure 2: Crude Incidence Rates – Sri Lanka, 2006 - 2012	12
Figure 3: Age Standardized Incidence Rates – Sri Lanka, 2006 - 2012	12
Figure 4: Crude Incidence Rate & Age Standardized Incidence Rates – Sri Lanka 2012	13
Figure 5: Age specific cancer incidence rates – 2012.....	14
Figure 6: Proportion of leading cancers, male – 2012	15
Figure 7: Proportion of leading cancers, Female - 2012.....	15
Figure 8: Leading cancers by age group: Male, 0-14 years– 2012	16
Figure 9: Leading cancers by age group: Female, 0-14 years– 2012.....	16
Figure 10: Leading cancers by age group: Male, 15-34 years– 2012	17
Figure 11: Leading cancers by age group: Female, 15-34 years– 2012.....	17
Figure 12: Leading cancers by age group: Male, 35-49 years– 2012	18
Figure 13: Leading cancers by age group: Female, 35-49 years– 2012.....	18
Figure 14: Leading cancers by age group: Male, 50-64 years– 2012	19
Figure 15: Leading cancers by age group: Female, 50-64 years– 2012.....	19
Figure 16: Leading cancers by age group: Male, 65 years and above– 2012	20
Figure 17: Leading cancers by age group: Female, 65 years and above– 2012.....	20
Figure 18: Age standardized mortality rates due to cancer 2001 -2012.....	30
Figure 19: Age specific mortality rates due to cancer – 2012.....	31
Figure 20: Age specific incidence rate – Lip, tongue and mouth– 2012	33
Figure 21: Age specific incidence and mortality rate – Lip, oral cavity and pharynx– 2012	33
Figure 22: Age specific incidence rate – Male, Different sites of lip, oral cavity & pharynx– 2012	34
Figure 23: Age specific incidence rate – Female, Different sites of lip, oral cavity & pharynx – 2012	34
Figure 24: Age specific incidence and mortality rates - Oesophagus– 2012.....	35
Figure 25: Age specific incidence and mortality rates - Stomach – 2012.....	35
Figure 26: Age specific incidence and mortality rates - Colon, rectum and anus – 2012.....	36
Figure 27: Age specific incidence rate - Colon and rectum – 2012.....	36
Figure 28: Age specific incidence and mortality rates - Liver – 2012.....	37
Figure 29: Age specific incidence and mortality rates - Larynx – 2012.....	37
Figure 30: Age specific incidence & mortality rates - Trachea, bronchus and lung– 2012.....	38
Figure 31: Age specific incidence & mortality rates – Breast – 2012	38
Figure 32: Age specific incidence & mortality rates – Cervix – 2012.....	39
Figure 33: Age specific incidence & mortality rates – Uterus– 2012.....	39
Figure 34: Age specific incidence & mortality rates – Ovary – 2012.....	40
Figure 35: Age specific incidence & mortality rates – Prostate – 2012.....	40
Figure 36: Age specific incidence & mortality rates –Bladder – 2012.....	41
Figure 37: Age specific incidence rate – . Thyroid cancer – 2012.....	41
Figure 38: Age specific incidence rate – . Hodgkin Lymphoma – 2012	42
Figure 39: Age specific incidence & mortality rates – . Non Hodgkins Lymphoma – 2012.....	42
Figure 40: Age specific incidence & mortality rates – . Leukaemia – 2012.....	43

Abbreviations

ASR Age Standardized Rate

CR Crude Rate

IACR International Association of Cancer Registries

IARC International Agency for Research on Cancer

ICD 0-3 International Classification of Diseases for Oncology – 3rd Version

ICD -10 International Classification of Diseases – 10th Edition

NCCP National Cancer Control Programme

PBCR Population Based Cancer Registry

WHO World Health Organization

Executive Summary

‘Cancer Incidence Data Sri Lanka – 2012’ is the 14th volume of the series of publication on cancer surveillance data of Sri Lanka. This is the output report of National Cancer Registry / Sri Lanka Cancer Registry (SLCR) based on newly reported cancers in the year 2012. The newly detected cancers through the government cancer treatment centres, pathology laboratories, Oral and Maxillo-Facial (OMF) surgery units in the country were considered for this publication. As a new initiative of cancer surveillance from year 2012, the Population Based Cancer Registry (PBCR) of Colombo district was also commenced. The additional data sources considered for the Population Based Cancer Registry initiative in Colombo district were also incorporated to the national cancer registry database. All the data were entered into the CANREG 5 database. When processing the data, quality checks were conducted and duplicate entries were eliminated. Analysis was conducted using Can REG 5 software and SPSS software.

In the year 2012, a total of 23,136 new patients with cancers were reported, giving a crude incidence rate (CR) of 113.6 per 100,000. Crude incidence rates of males and females were 115.3 /100,000 (n=11,363) and 112.1/100,000 (n=11,773). The highest 5-year age specific incidence rates were reported among males of 70-74 age group (745. 1/100,000) and females of 70-74 (442.0/100,000) age group. When age standardized rates (ASR) were considered, the overall ASR was 100.1 /100,000 and the ASR for males and females were 107.3/100,000 and 95.2 /100,000 respectively. The absolute numbers, crude rates and age standardized rates were increased in relation to the similar figures of year 2011. The percentage increase of total number of cases diagnosed from 2011 to 2012 is 32%. The increase of ASRs among males and females in relation to year 2011 is 16/100,000 and 6/100,000 respectively. The interventions conducted in year 2011/2012 period to expand cancer surveillance activities including commencement of Population Based Cancer Registry Colombo district contributed to improve the coverage of cancer incidence data collection.

Lip, tongue & mouth (n=1792, ASR=16.6/100,000), Lung (n=1072, ASR = 10.0/100,000), Colon & rectum (n=866, CR=8.1/100,000) and Oesophagus (n=829, CR = 7.7/100,000) were the highest incident cancer among males. First time Colorectal cancers became the third highest incident cancer among males in comparison to previous years. The absolute number (>65%) and the ASR (>2.4/100,000) is increased among males with colorectal cancer

Breast (n=3016, ASR =24.3/100,000), thyroid (n=1089, ASR = 9.1 /100,000), cervix (n=905, ASR =7.2 /100,000), ovary (n=848, CR=6.9/100,000) were the highest incident cancers among females. Thyroid cancer became the second commonest cancer among females pushing cervical cancer into

third position. Even though ASRs were increased in most of the leading female cancers, downward trend is observed for ASR of cervical cancers happening in the most of the countries. Out of all female incident cancers, nearly 25 % were breast cancers as happened in previous years.

Cumulative risk of developing cancer between the age group of 0-74 for males and females were 13.18% & 10.84% respectively. It means that among males one in eight males and one in nine females have a risk of developing cancer during their life time. When sites of cancers were considered, highest cumulative risk of developing cancer between the age group of 0-74 males were reported for cancer of trachea, bronchus & lung (1.38 %, 1 in 80), mouth cancer (1.25%, 1 in 80) and oesophagus cancer (0.99%, 1 in 101). Similarly, highest cumulative risk of developing cancer between the age group of 0-74 females were reported for breast cancer (2.68 %, 1 in 37), cervical cancer (0.85 %, 1 in 118) and thyroid cancer (0.84%, 1 in 119).

National cause of death data is published by the Department of Census & Statistics based on the mortality data received through the vital registration system of Registrar General's Department. A total of 6908 (Crude death rate 70.1 /100,000) and 5673 (Crude death rate 54.0 /100,000) cancer related deaths were reported among males and females respectively in the year 2012. Age specific death rates among females were lower than the males and death rates were increasing over the advanced age. Cancer of lip, oral cavity and pharynx is the leading cause of death among males and cancer of the breast is the leading cause of death among females.

Cancer Incidence Data Sri Lanka - 2012

1. Introduction

Cancer surveillance (Cancer registration) is a process of systematic, continuous collection, storage, analysis, interpretation and dissemination of epidemiological information on cancers occurring in a country or a specific geographic area. Information generated from the cancer registration is essential for planning, implementation, monitoring and evaluation of cancer control activities of the country

The National Cancer Control Programme (NCCP) of the Ministry of Health coordinates surveillance of cancers in Sri Lanka. The information based on surveillance of cancers is published as a publication named ‘Cancer Incidence Data Sri Lanka’. Up to now 13 volumes have been published as shown in table I.

Table I Summary details of previous publications of ‘Cancer Incidence Data Sri Lanka’

Year of cancer incidence data	Data Generating Centres					Publication		
	Cancer Treatment Centres	Pathology laboratories	OMF Units	Medical Record Rooms	Death Registrar s	Total no. Centres	Volume	Year published
1985	3	–	–	–	–	3	1	1990
1986	3	–	–	–	–	3	2	1991
1987	3	–	–	–	–	3	3	1993
1990	3	–	–	–	–	3	4	1996
1995	3	–	–	–	–	3	5	2002
2000	4	–	–	–	–	4	6	2006
2001-2005	5	–	–	–	–	5	7	2009
2006	6	–	4	–	–	10	8	2012
2007	6	–	4	–	–	10	9	2013
2008	7	16	17	–	–	40	10	2014
2009	9	15	17	–	–	41	11	2015
2010	9	13	17	–	–	39	12	2016
2011	9	13	12	-	-	34	13	2018

This publication is the 14th volume of Cancer Incidence Data Sri Lanka.

2. Methodology

The National Cancer Control Programme of Ministry of Health coordinates surveillance of cancers with the active participation of other stakeholders for cancer surveillance including cancer treatment centres, pathology laboratories, Oral and Maxillo Facial (OMF) units, professional colleges, WHO country office etc. The surveillance of cancers is technically guided by the International Agency for Research on Cancer (IARC) of WHO and WHO IARC Regional Hub for Cancer Registration, Mumbai India. In addition, technical help is received from Department of Epidemiology, Biostatistics and Cancer Registry, WIA Cancer Institute, Chennai India.

The methodology of surveillance of cancers includes (i) collection of cancer incidence data from the point of diagnosis /from the point of treatment, (ii) coding of cancer incidence data, (iii) entering of cancer incidence data to the database, (iv) duplicate checking & verification of data, (v) analysis of data and (vi) dissemination of information through the publication of 'Cancer Incidence Data Sri Lanka' and other modes.

The methodology of each step of cancer surveillance is described below.

2.1. Collection of cancer incidence data

Cancer incidence data were collected from cancer treatment centres, pathology laboratories and Oral & Maxillo-Facial (OMF) units throughout the country. In addition, the process of establishing Population Based Cancer Registry (PBCR) for Colombo district was commenced in the year 2012, incorporating additional data sources to obtain cancer incidence and mortality data from the district of Colombo. Therefore, those additional data sources (cancer incidence data from medical record department of secondary /tertiary care hospitals of Colombo district and cancer mortality data obtained through divisional death registrars of Colombo district) were also incorporated for generating the national cancer incidence data too.

2.1.1. Newly registered cancer patients at the cancer treatment centres

In the year 2012, there were nine government cancer treatment centres as shown in table II. The relevant data were extracted from the Cancer patients' clinic records using 'National Cancer Surveillance Form – H 1256'. Data were extracted by the medical officers, nursing

officers or development officers attached to the cancer units, trained pre-intern medical graduates temporarily recruited through WHO Biennium funds or by the cancer registry staff of NCCP.

Table II Distribution of government cancer treatment centres

Category of hospital	Name of the hospital
National Cancer Hospital	Apeksha Hospital-Maharagama (National Cancer Institute)
Teaching Hospitals	Kandy, Karapitiya, Anuradhapura, Batticaloa, Rathnapura
Provincial General Hospitals	Badulla, Kurunegala
Base Hospital	Telippalai (Jaffna)

2.1.2 Newly detected cancers at the pathology laboratories

The information on newly detected cancers at the pathology laboratories were received monthly through the ‘Cancer Return Form - 1’ (H-1290). A total of 43 Histopathology laboratories (11,862 diagnosed patients), 5 Haematology laboratories (166 diagnosed patients) and 1 Oral Pathology laboratory (425 diagnosed patients) have passively sent the relevant data for the year 2012 as shown in table III

Table III Distribution of Pathology laboratories which have sent the details of newly diagnosed patients with cancers

Category of hospital	Type of Pathology laboratory		
	Histopathology	Haematology	Oral Pathology
National Hospital	National Hospital of Sri Lanka De Soysa Hospital for Women, Castle Street Hospital for Women, Lady Ridgeway		
Teaching Hospitals	Hospital for Children, National Eye Hospital, Colombo South, Colombo North, Karapitiya, Kandy, Rathnapura,		
Provincial General Hospitals	Kurunegala, Badulla	Kurunegala , Badulla	
District General Hospitals	Gampaha, Negombo, Kalutara, Nawalapitiya, Matale, Monaragala	Kalutara, Monaragala	
Base Hospitals	Telippalai (Jaffna), Homagama, Mulleriyawa, Wathupitiwala, Balapitiya, Embilipitiya, Balangoda, Chilaw, Gampola , Kethumathi Maternity Hospital	Chilaw	
University Units	Faculty of Medicine – Colombo, Ruhuna	Faculty of Dental Sciences – Peradeniya	
Private sector	09 hospitals from Colombo District		
Armed services hospitals	04 hospitals from Colombo District		

2.1.3. Newly diagnosed cancers at the Oral & Maxillo - Facial (OMF) Surgery Units

The data on newly confirmed cancer patients at the Oral & Maxillo-Facial (OMF surgery units were received annually through the Annual Notification Form of Oral Cancer (H - 1294). Sixteen OMF units shown in table IV have sent the relevant data for year 2012.

Table IV Distribution of OMF Units which have sent the details of newly diagnosed cancer patients

Category of hospital	Name of the hospital
National Hospital	National Dental Hospital of Sri Lanka National Hospital Kandy
Teaching Hospitals	Colombo South, Colombo North, Karapitiya, Kuliyapitiya, Rathnapura
Provincial General Hospitals	Badulla, Kurunegala
District General Hospitals	Gampaha, Kalutara, Chilaw, Kegalle, Polonnaruwa
Base Hospital	Panadura
University Units	Faculty of Dental Sciences – Peradeniya

2.1.4. Incorporation of additional data sources used for Population Based Cancer Registry – Colombo district.

Two additional data sources were identified for capturing additional cancer incidence data from Colombo district when commencing the Population Based Cancer Registry and those data sources were also incorporated as data generating centres for national cancer registry too.

Details from Medical Record Departments of Colombo district & adjacent districts

The information on cancer patients treated at the secondary and tertiary care hospitals in the government sector, private sector and armed services in the Colombo district and selected hospitals in the adjacent districts were collected through the ‘Cancer Return Form -2’ (H-1291). Twenty five Medical Record Departments shown in table V have sent the details.

Table V Distribution of Medical Record Departments which have sent the details of newly diagnosed cancer patients for year 2012.

Category of hospital	Name of the hospital
National Hospital	National Hospital of Sri Lanka, National Dental Hospital of Sri Lanka, National Hospital For Respiratory Diseases
Teaching Hospitals	Colombo South, Colombo North
District General Hospitals	Avissawella, Gampaha
Base Hospitals	Panadura, Horana
Private sector hospitals	12 hospitals from Colombo district
Armed services hospitals	04 hospitals from Colombo District

Details from Divisional Death Registrars of the Colombo district

Details of all cancer related deaths registered by the Divisional Death Registrars of the Colombo district were received through the Cancer Return Form – 3. A total of 40 divisional death registrars have sent relevant details for the year 2012.

2.2. Coding of cancer incidence data

According to the instructions of International Classification of Disease for Oncology 3rd edition (ICD-O 3), cancer incidence data were coded according to the site of cancer (Topography) and histology (Morphology) of cancer. The cancer registry staff at the NCCP coded the cancer incidence data.

2.3. Entering of cancer incidence data to the database

Coded cancer incidence data were entered into the CanReg5 database by the trained data entry operators attached to the NCCP. The data entering activities were closely supervised by the registry staff and regular feedback was given to ensure optimum quality.

2.4. Duplicate checking & verification of data

While entering and confirming the data to the CanReg5 data base, quality checks were carried out. In addition, Excel sheets and SPSS sheets were used to identify duplicates. The data sources up to the patient clinic files were rechecked in the instances where errors were noted by the cancer registry staff of the NCCP. After identifying errors or misclassifications, necessary corrections were done before finalizing the data for analysis.

2.5. Analysis of cancer incidence data & dissemination of Information

Analysis section of the CanReg 5 package, MS Excel, SPSS software was used to analyze cancer incidence data. The standard cancer registry tables described at the CI 5 were generated through CanReg 5 database. The final report is disseminated as ‘Cancer Incidence Data Sri Lanka 2012.

3. Cancer Incidence and Mortality Data

3.1. Cancer Incidence

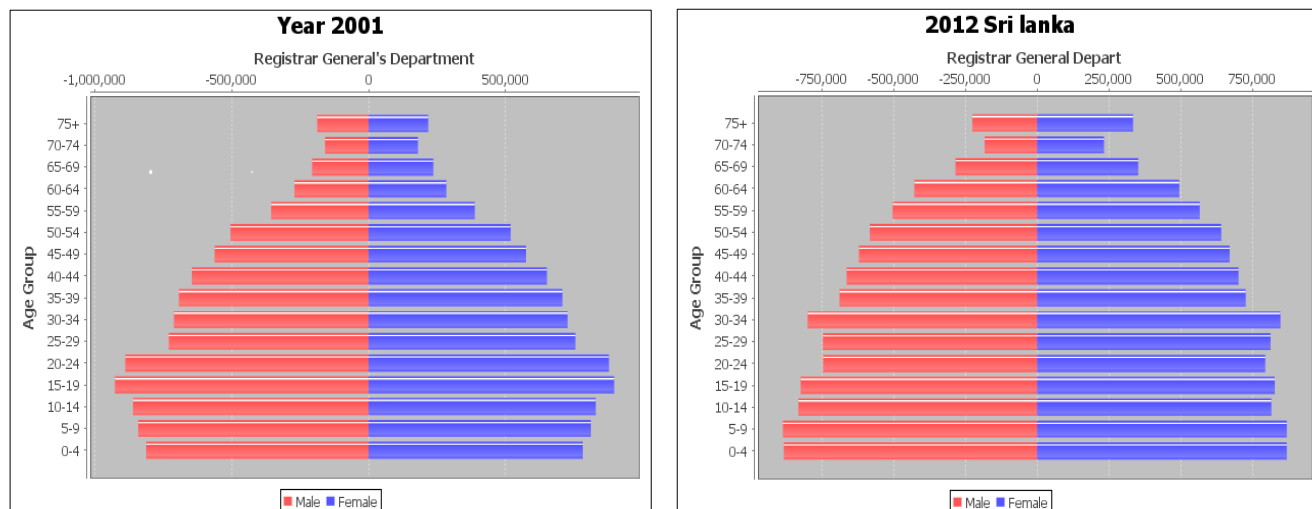


Figure 1: General population in Sri Lanka by 5 -year age groups

Table 1: General Population : Sex distribution

Population ('000)	Year										
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Male	9,350	9,475	9,678	9,782	9,889	9,956	10,060	10,148	10,249	10,381	9,856
Female	9,571	9,698	9,757	9,862	9,969	10,083	10,186	10,302	10,404	10,511	10,502
Sex Ratio ¹	97.7	97.7	99.2	99.2	99.2	98.7	98.8	98.5	98.5	98.8	93.8

¹ Number of males per 100 females

Sources: Department of Census and Statistics

Table 2: Denominators used for calculations in the cancer registry

Population	Year 2012
Male	9,856,634
Female	10,502,805
Total	20,359,439

Sources: Department of Census and Statistics

National Cancer Incidence and Mortality Data -2012

Table 3: Statistics on doctors, hospitals and hospitals beds (Government Institutions)

	Year										
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Doctors	10,157	NA		11,152	11,460	12,337	13,337	14,783	15,807	15,273	15,910
Population per MO	1,863	NA		1,764	1,733	1,625	1,518	1,491	1,410	1,366	1,278
Hospitals	576	607		608	614	615	647	642	636	638	621
Beds	59,144	59,262		61,594	67,021	68,694	67,942	70,842	72,506	73,939	76,087
Beds per 1000 population	3.1	3.1		3.2	3.4	3.4	3.4	3.5	3.5	3.5	3.8

NA-Not available

Source: Medical statistics Unit, Ministry of Health

Table 4: Cancer incidence by sex, 2006-2012

Year	Sex	Number	%	CR	ASR
2006	Male	6,205	44.1	62.7	69.2
	Female	7,875	55.9	79.0	79.5
	Total	14,080		70.9	74.2
2007	Male	6,356	46.6	63.8	70.9
	Female	7,279	53.4	72.2	72.8
	Total	13,635		68.0	71.6
2008	Male	7,695	46.6	76.5	85.5
	Female	8,816	53.4	86.6	88.0
	Total	16,511		81.6	86.4
2009	Male	7,858	46.5	77.4	86.4
	Female	9,030	53.5	87.7	89.1
	Total	16,888		82.6	87.5
2010	Male	7,993	47.1	78.0	87.4
	Female	8,970	52.9	86.2	87.7
	Total	16,963		82.1	87.3
2011	Male	8,370	47.9	80.6	90.4
	Female	9,112	52.1	86.7	88.7
	Total	17,482		83.7	89.2
2012	Male	11,363	49.1	115.3	107.8
	Female	11,773	50.9	112.1	95.5
	Total	23,136		113.6	100.1

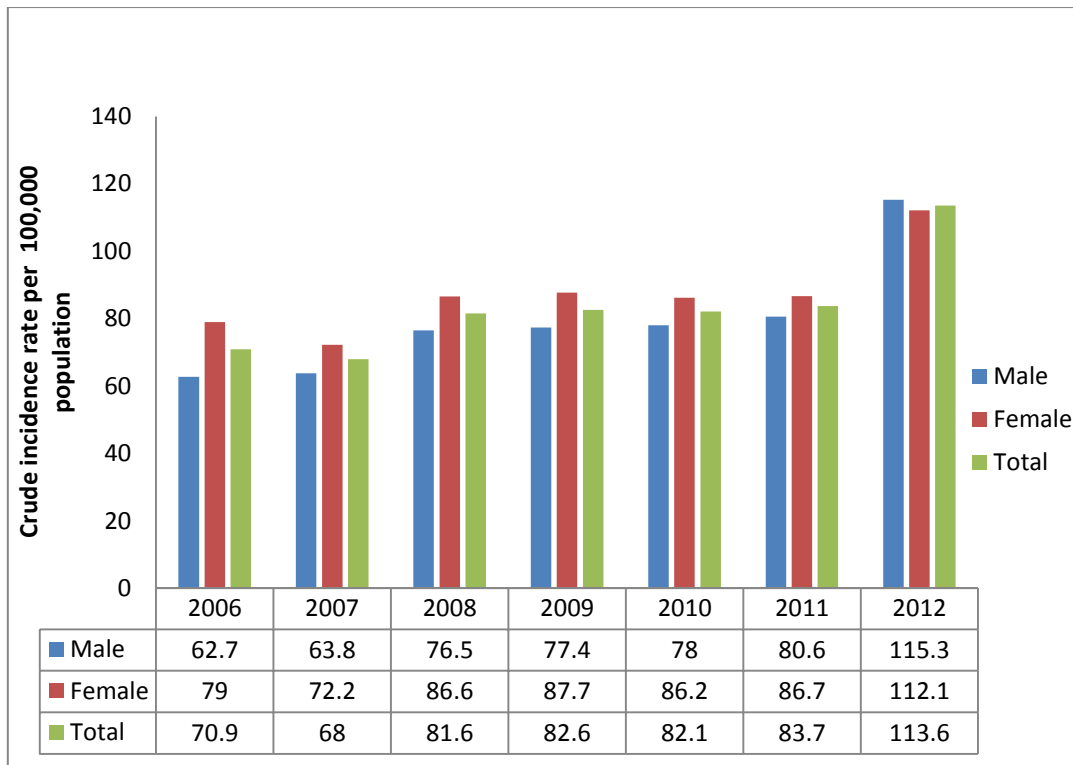


Figure 2: Crude Incidence Rates – Sri Lanka, 2006 - 2012

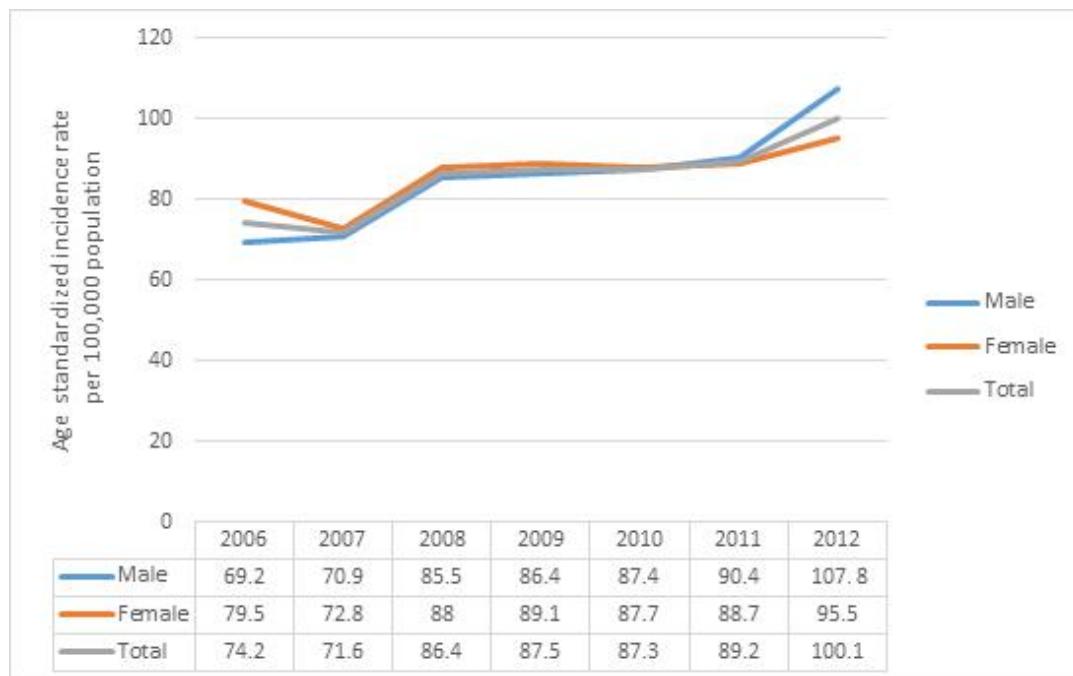


Figure 3: Age Standardized Incidence Rates – Sri Lanka, 2006 - 2012

National Cancer Incidence and Mortality Data -2012

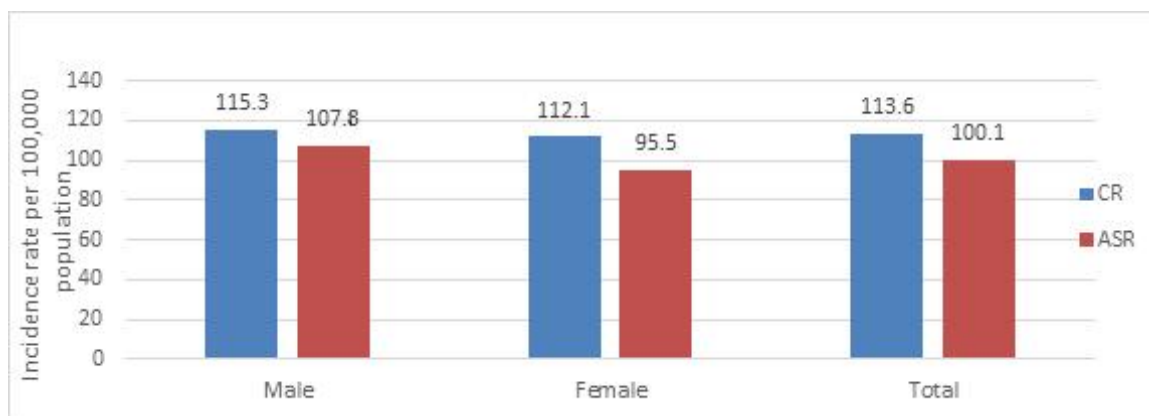


Figure 4: Crude Incidence Rate & Age Standardized Incidence Rates – Sri Lanka 2012

Table 5: Overall cancer incidence, by age and sex - 2012

Age Group	Male			Female			Total		
	Cases	Population	Incidence	Cases	Population	Incidence	Cases	Population	Incidence
0-4	136	879223	15.5	99	864639	11.5	235	1743862	13.5
5-9	84	882108	9.5	65	865644	7.5	149	1747752	8.5
10-14	72	829069	8.7	56	810983	6.9	128	1640052	7.8
15-19	84	819927	10.2	91	824322	11.0	175	1644249	10.6
20-24	116	742316	15.6	143	790567	18.1	259	1532883	16.9
25-29	113	743510	15.2	213	809338	26.3	326	1552848	21.0
30-34	183	796866	23.0	395	842549	46.9	578	1639415	35.3
35-39	242	686037	35.3	607	723040	84.0	849	1409077	60.3
40-44	482	661623	72.9	856	697586	122.7	1338	1359209	98.4
45-49	795	618140	128.6	1133	667690	169.7	1928	1285830	149.9
50-54	1276	581293	219.5	1497	638167	234.6	2773	1219460	227.4
55-59	1614	500871	322.2	1538	563358	273.0	3152	1064229	296.2
60-64	1789	425428	420.5	1586	492482	322.0	3375	917910	367.7
65-69	1649	283764	581.1	1340	349525	383.4	2989	633289	472.0
70-74	1355	181846	745.1	1021	230568	442.8	2376	412414	576.1
75+	1318	224613	586.8	1095	332347	329.5	2413	556960	433.2
Unknown	55			38			93		
Total	11,363	9,856,634	115.3	11,773	10,502,805	112.1	23,136	20,359,439	113.6

National Cancer Incidence and Mortality Data -2012

Table 6: Leading cancer sites – 2012

Rank	Site	Male			Female			Total				
		No.	CR	ASR	Site	No.	CR	ASR	Site	No.	CR	ASR
1	Lip, tongue and mouth	1792	18.1	16.6	Breast	3016	28.7	24.3	Breast	3097	15.2	13.2
2	Trachea, bronchus and lung	1072	10.9	10.1	Thyroid	1089	10.4	9.1	Lip, tongue and mouth	2255	11.1	9.6
3	Colon and rectum	866	8.8	8.1	Cervix uteri	905	8.6	7.2	Cervix uteri	905	8.6	7.2
4	Other and unspecified	848	8.6	8.0	Ovary	848	8.1	6.9	Ovary	848	8.1	6.9
5	Oesophagus	829	8.4	7.8	Oesophagus	714	6.8	5.6	Colon and rectum	1565	7.7	6.7
6	Prostate	655	6.6	6.4	Colon and rectum	699	6.6	5.5	Oesophagus	1543	7.6	6.6
7	Lymphoma	559	5.7	5.3	Other and unspecified	547	5.2	4.3	Other and unspecified	1395	6.8	5.9
8	Larynx	541	5.5	5.1	Uterus	546	5.2	4.4	Trachea, bronchus and lung	1384	6.8	5.9
9	Leukaemia	464	4.7	4.8	Lip, tongue and mouth	463	4.4	3.6	Prostate	655	6.6	6.4
10	Bladder	398	4.0	3.8	Leukaemia	398	3.8	3.6	Thyroid	1324	6.5	5.8
	All sites	11,363	115.3	107.8	All sites	11,773	112.1	95.5	All sites	23136	113.6	100.1

CR – Crude rate per 100,000 population
ASR – Age standardized rate per 100,000 population

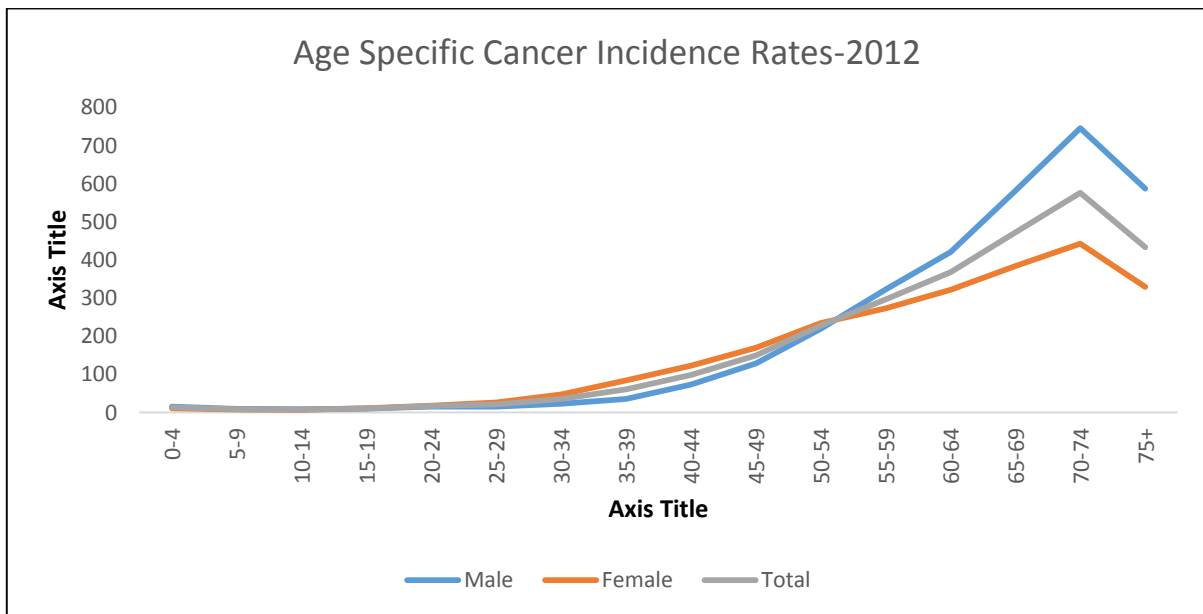


Figure 5: Age specific cancer incidence rates – 2012

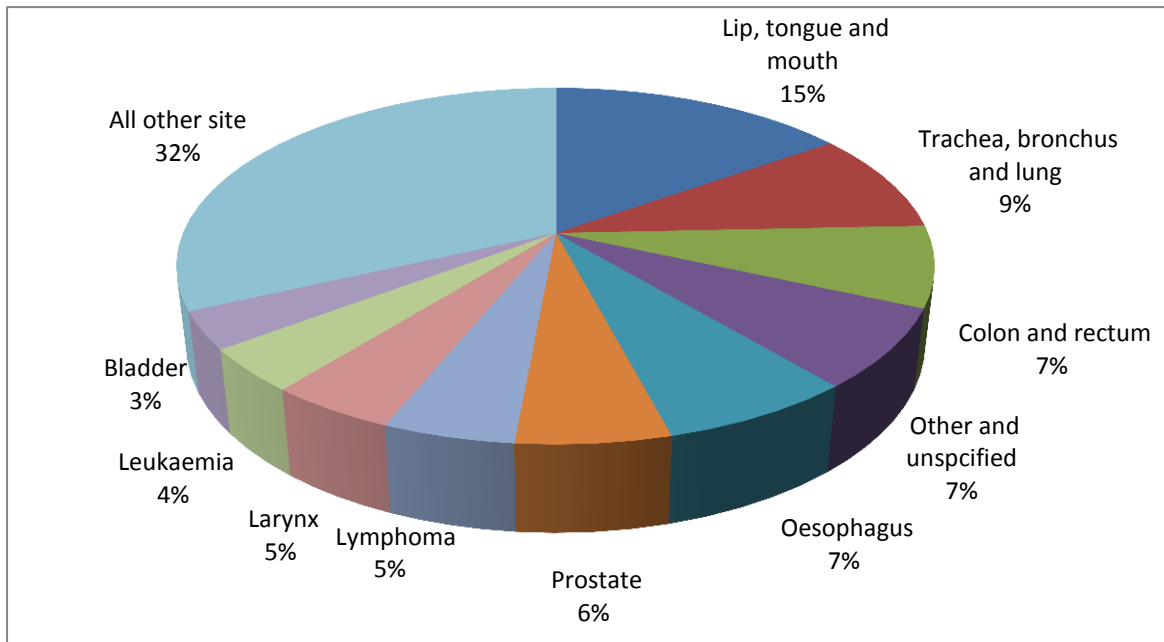


Figure 6: Proportion of leading cancers, male – 2012

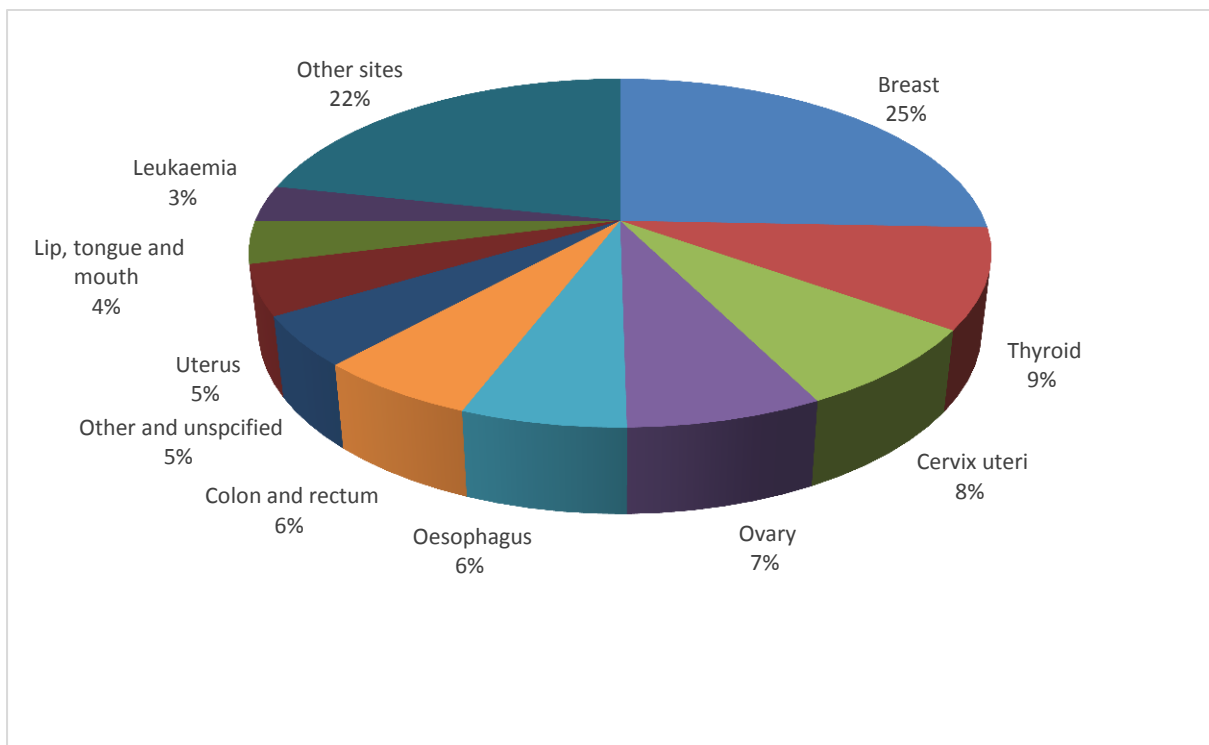


Figure 7: Proportion of leading cancers, Female - 2012

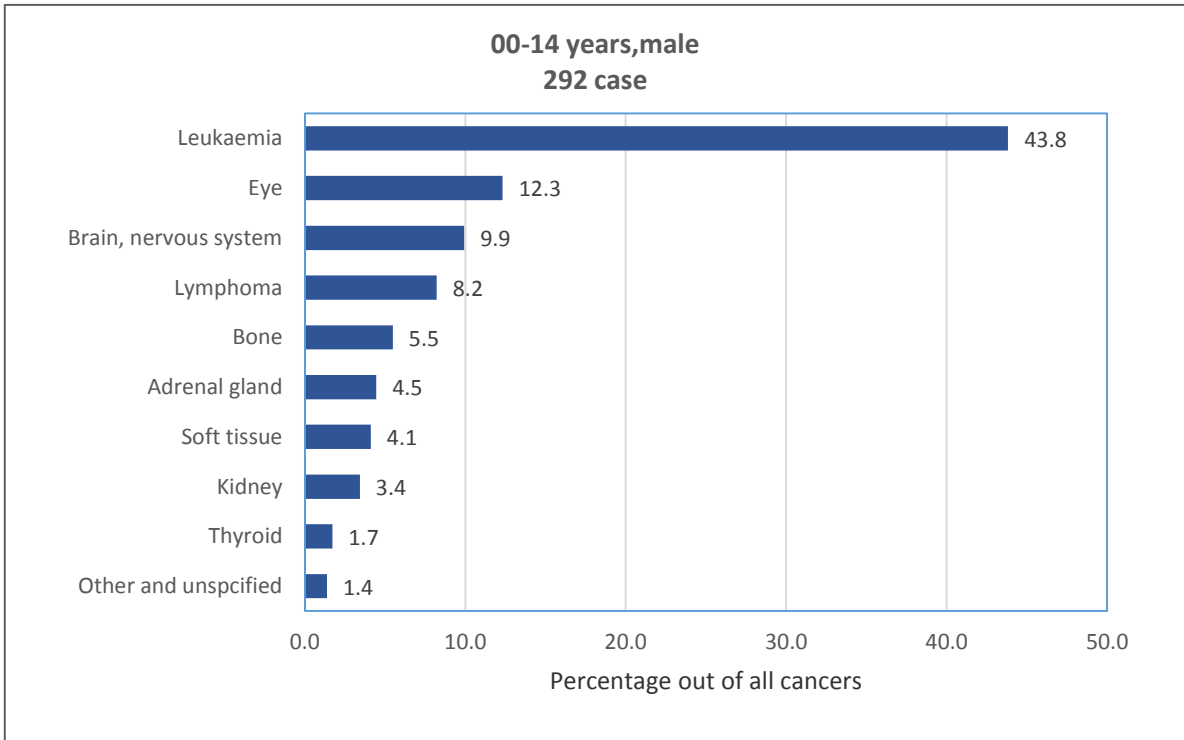


Figure 8: Leading cancers by age group: Male, 0-14 years– 2012

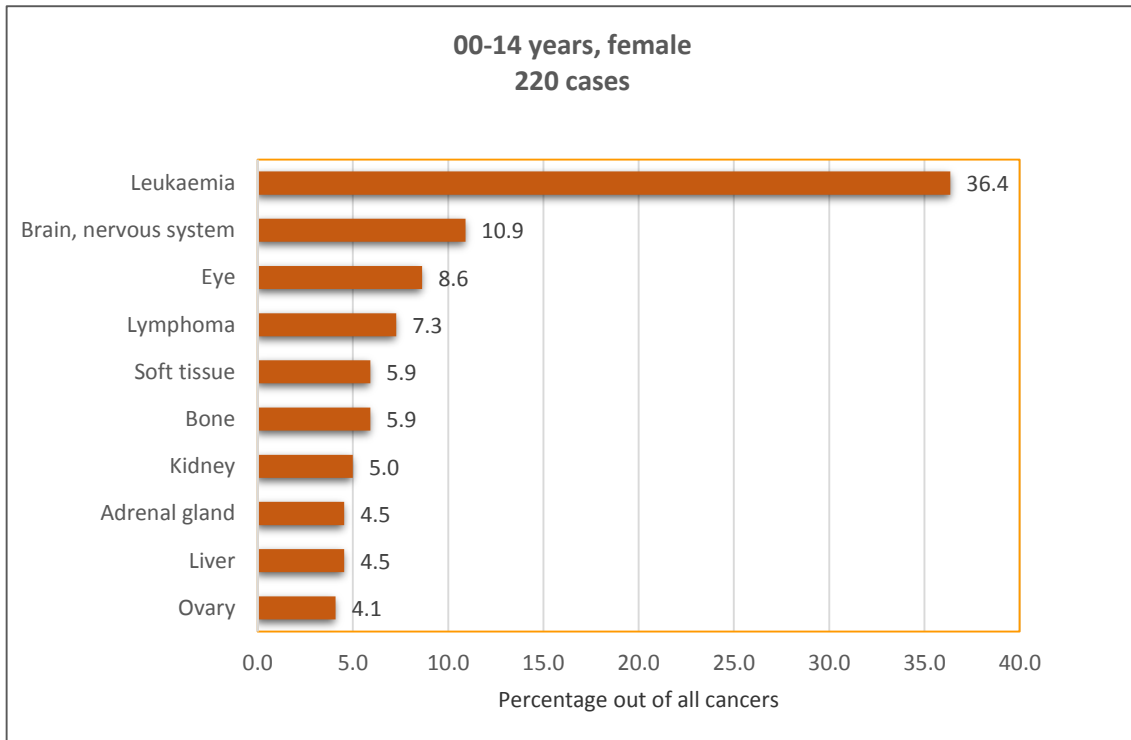


Figure 9: Leading cancers by age group: Female, 0-14 years– 2012

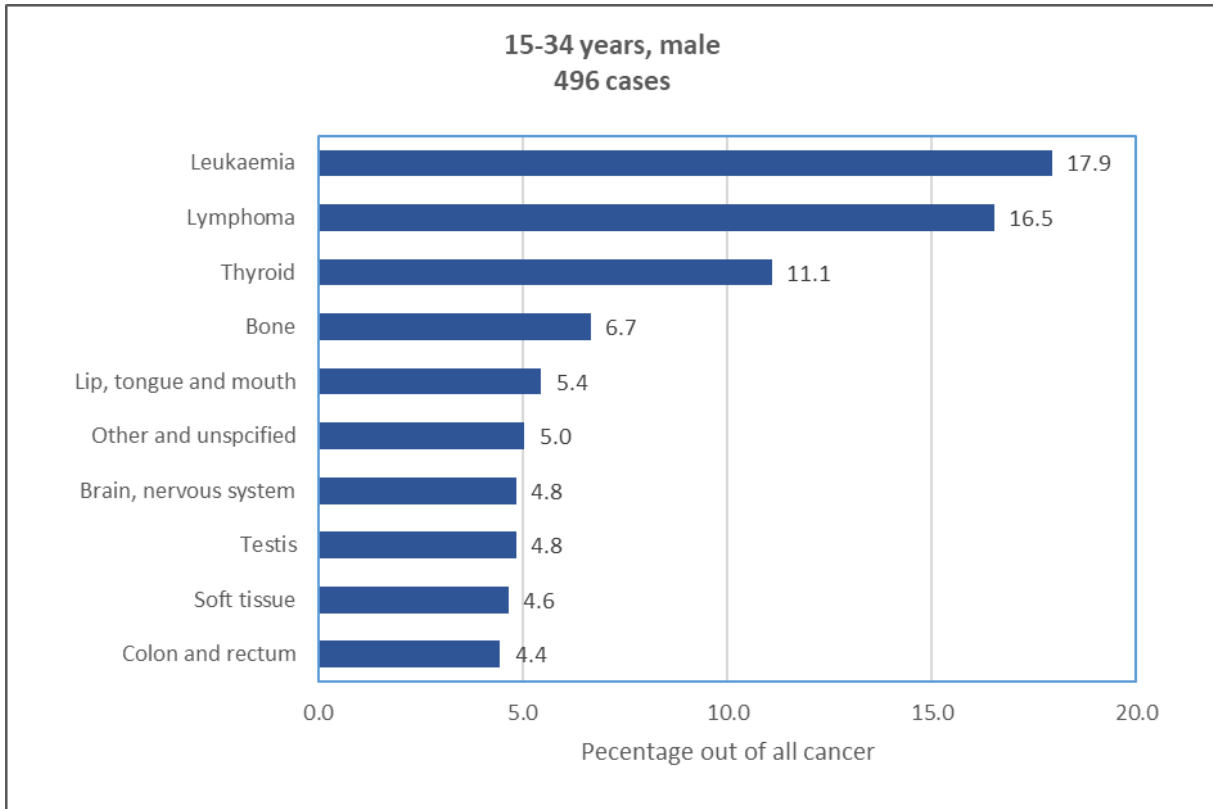


Figure 10: Leading cancers by age group: Male, 15-34 years– 2012

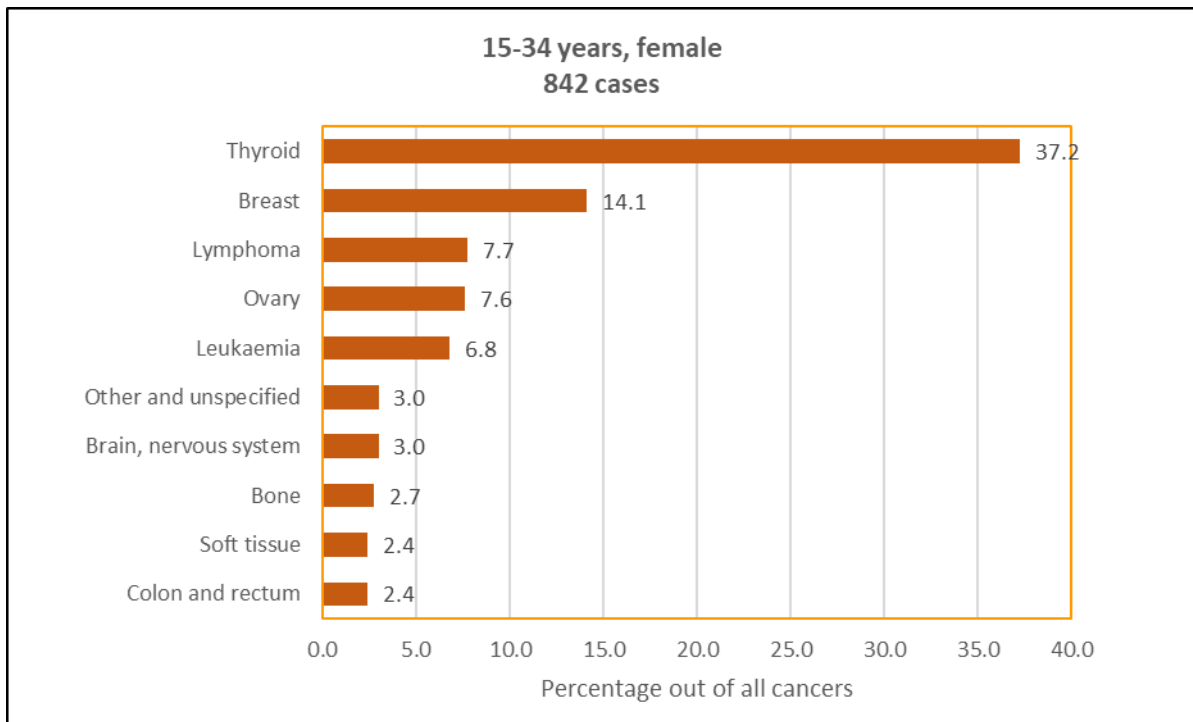


Figure 11: Leading cancers by age group: Female, 15-34 years– 2012

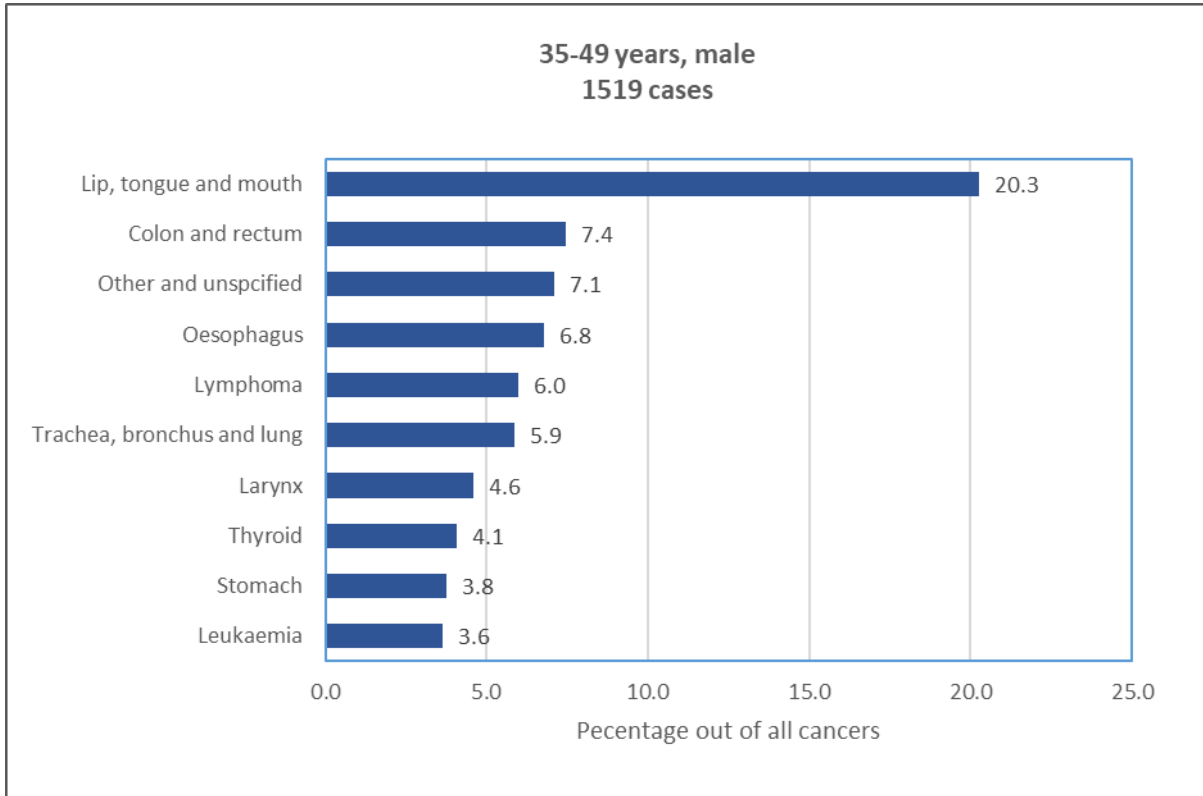


Figure 12: Leading cancers by age group: Male, 35-49 years– 2012

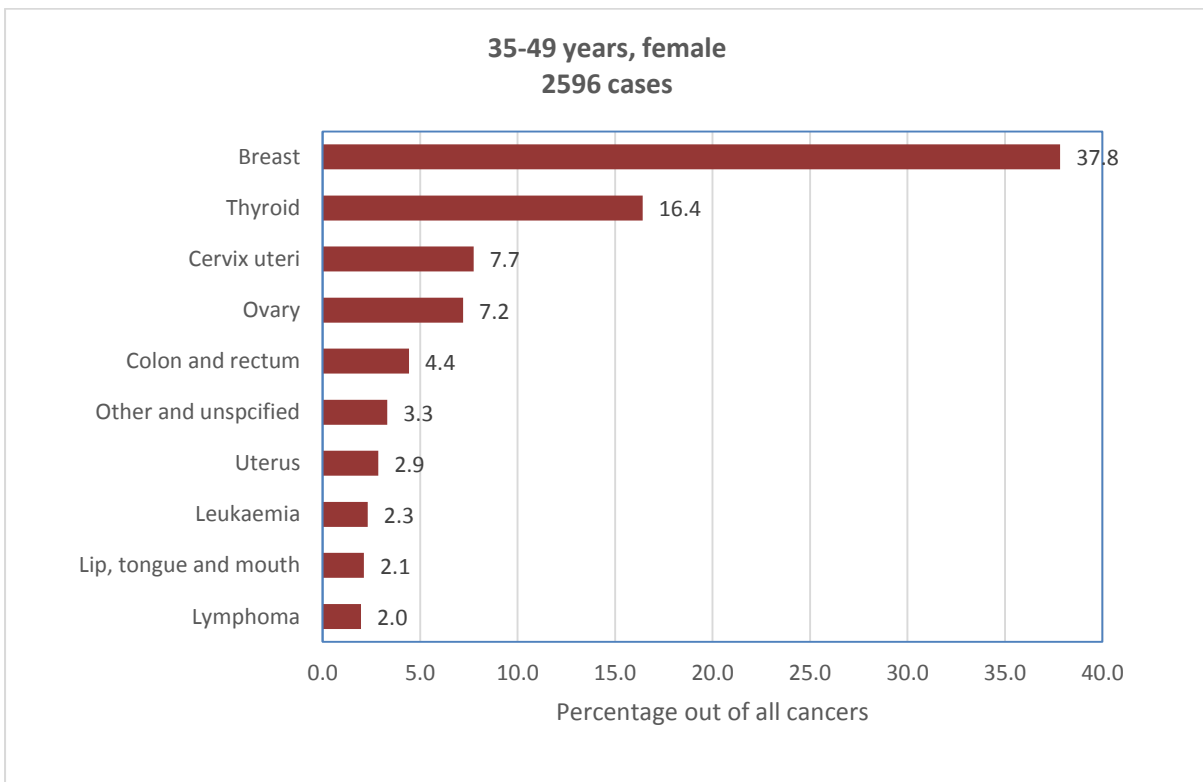


Figure 13: Leading cancers by age group: Female, 35-49 years– 2012

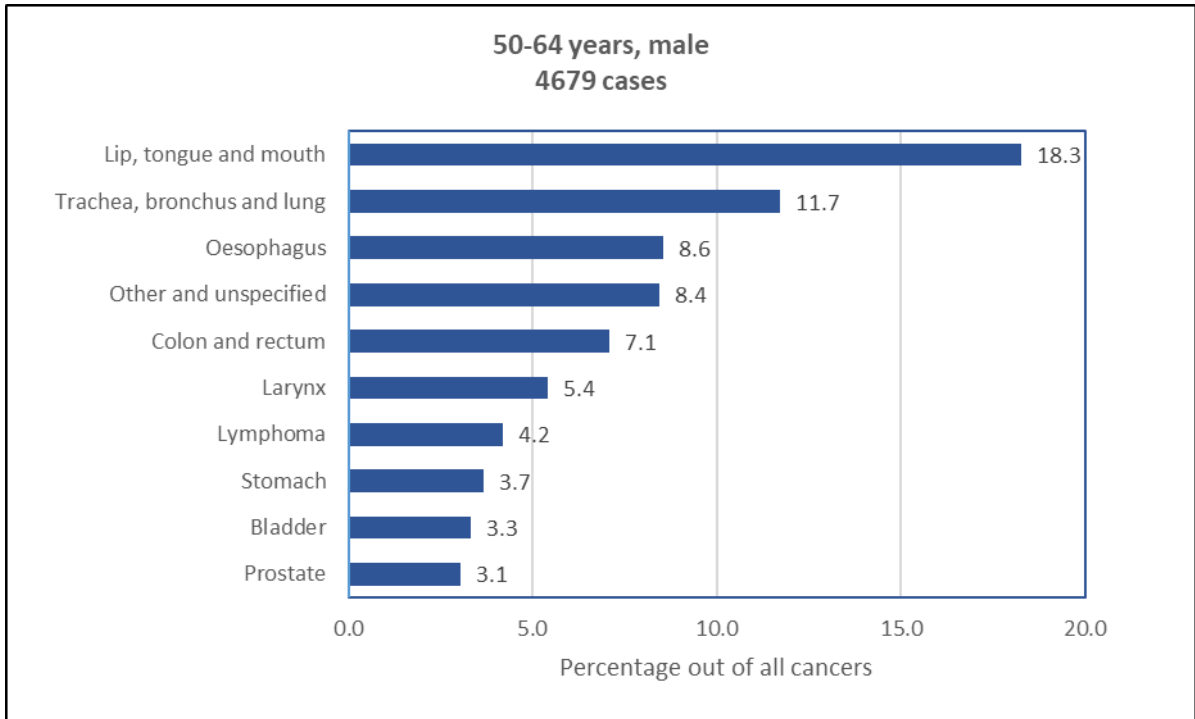


Figure 14: Leading cancers by age group: Male, 50-64 years– 2012

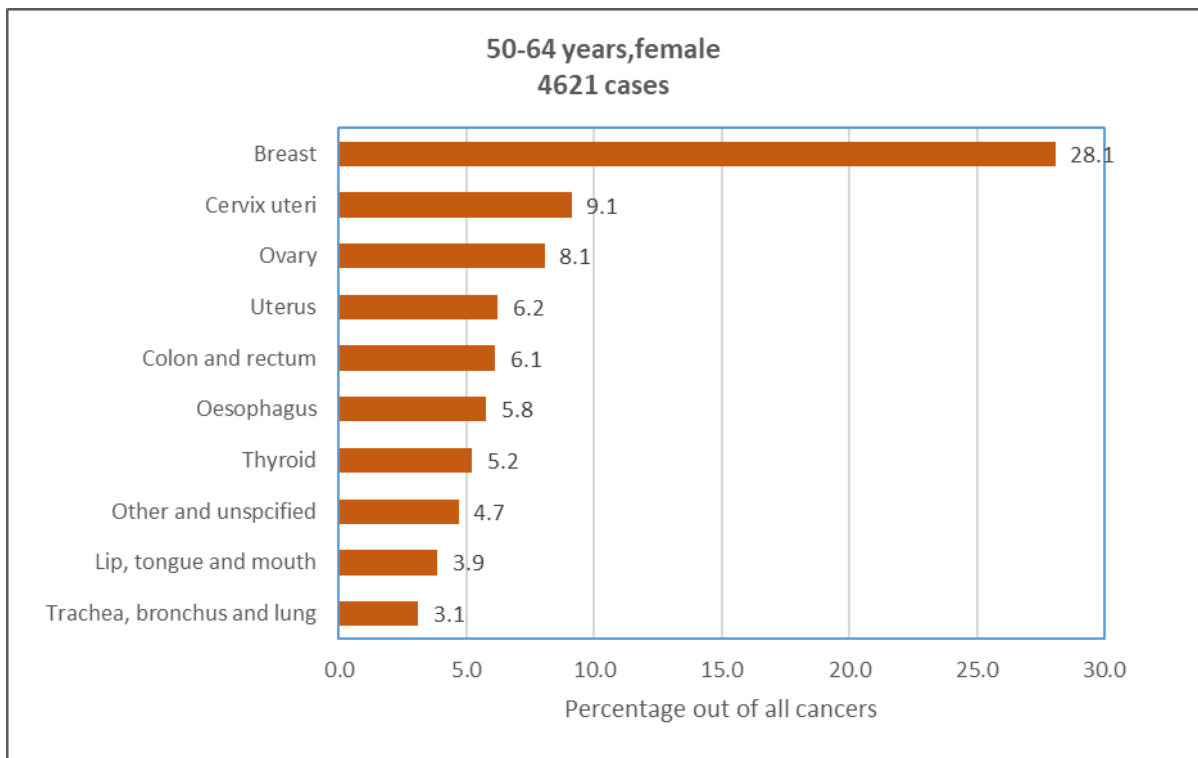


Figure 15: Leading cancers by age group: Female, 50-64 years– 2012

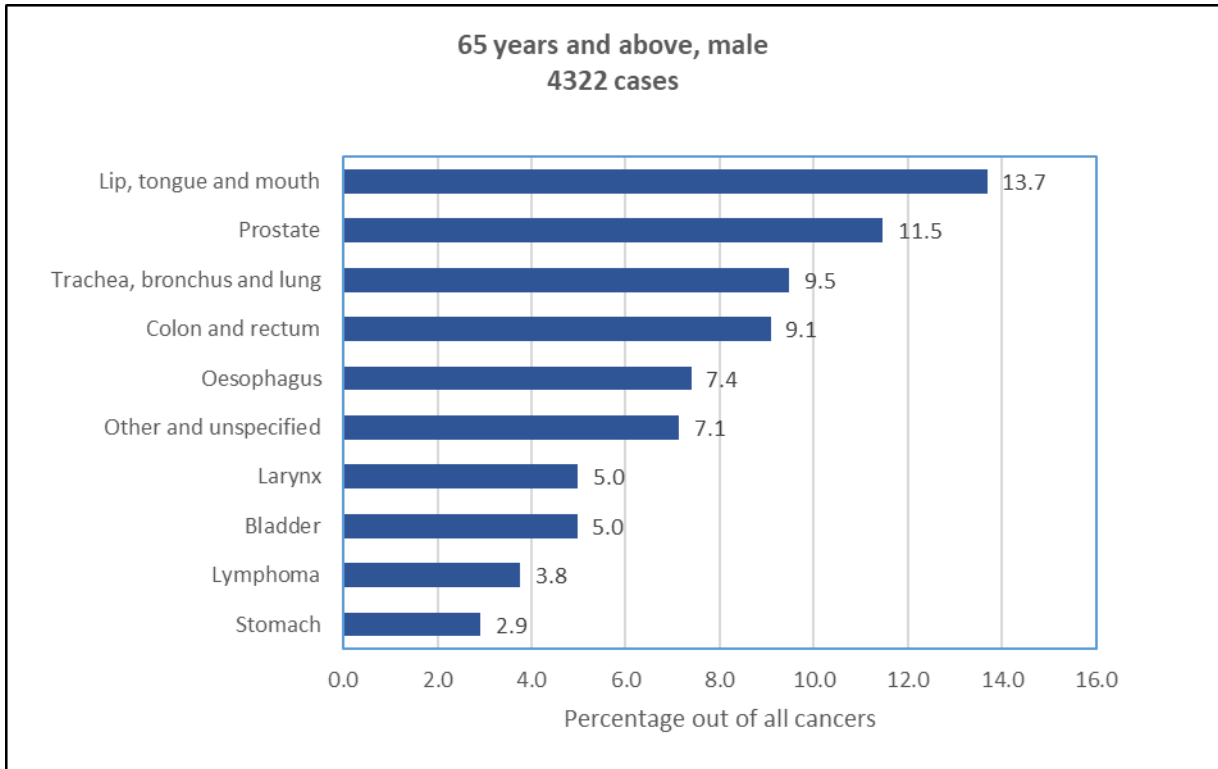


Figure 16: Leading cancers by age group: Male, 65 years and above– 2012

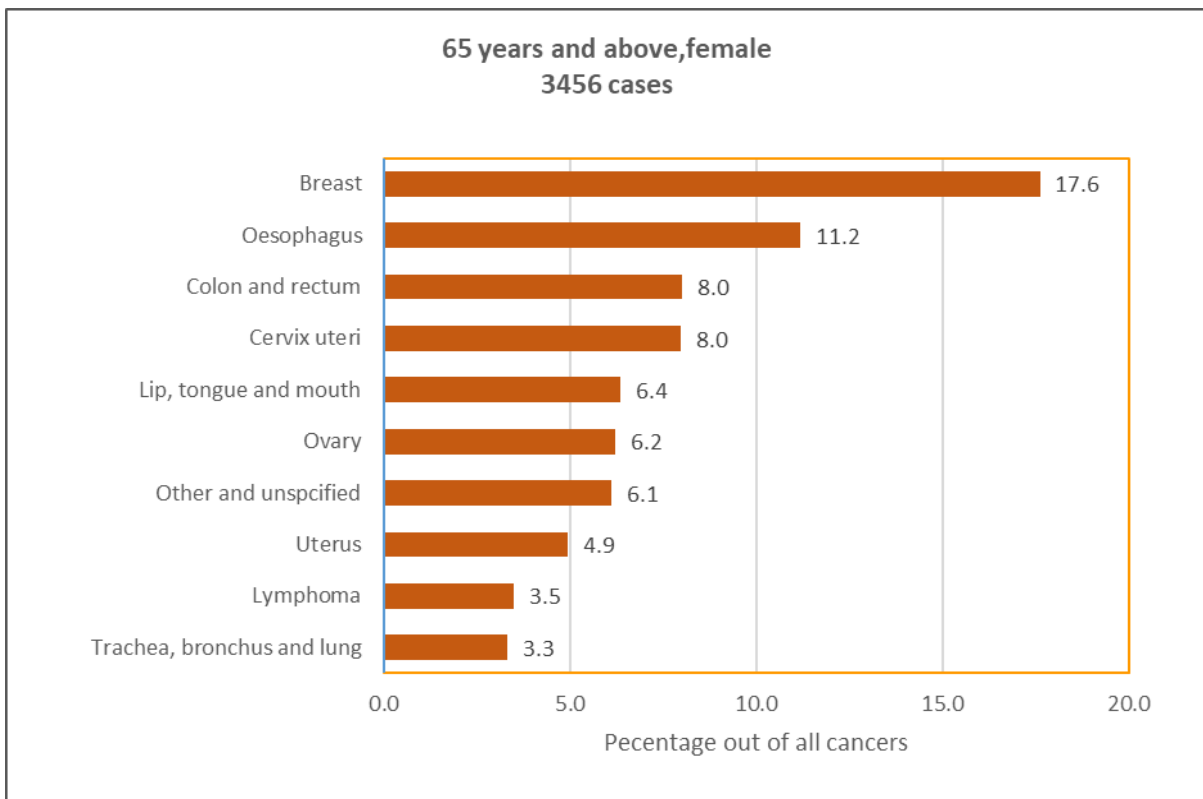


Figure 17: Leading cancers by age group: Female, 65 years and above– 2012

National Cancer Incidence and Mortality Data -2012

Table 7: Childhood cancer incidence data (0-19 years) – 2012

	Site Group	ICD O-3 Histology	Male	Female	Total	
I	Leukaemia, myeloproliferative diseases and myelodysplastic syndrome					
	a Lymphoid leukaemias	9826	Burkitt cell leukemia	1	0	1
		9835	Precursor cell lymphoblastic leukemia, NOS	88	56	144
		9836	Precursor B-cell lymphoblastic leukemia	20	10	30
		9837	Precursor T-cell lymphoblastic leukemia	6	3	9
	b Acute myeloid leukaemia	9840	Acute myeloid leukemia, M6 type	2	0	2
		9866	Acute promyelocytic leukemia, t(15;17)(q22;q11)	1	0	1
		9867	Acute myelomonocytic leukemia	2	1	3
		9874	Acute myeloid leukemia with maturation	1	4	5
		9861	Acute myeloid leukemia, NOS	24	14	38
		9891	Acute monocytic leukemia	2	2	4
		9910	Acute megakaryoblastic leukemia	1	1	2
	c Chronic myeloproliferative disease	9863	Chronic myeloid leukemia, NOS	5	3	8
	d Myelodysplastic syndrome and other myeloproliferative disorders	9989	Myelodysplastic syndrome, NOS	1	0	1
	e Unspecified and other specified leukaemia	9800	Leukemia, NOS	1	0	1
		9801	Acute leukemia, NOS	1	0	1
	Total			156	94	250

National Cancer Incidence and Mortality Data -2012

Site Group		ICD O-3	Histology	Male	Female	Total
II	Lymphoma and reticuloendothelial system					
a	Hodgkin lymphomas	9650	Hodgkin lymphoma, NOS	19	4	23
		9652	Hodgkin lymphoma, mixed cellularity, NOS	1	1	2
		9663	Hodgkin lymphoma, nodular sclerosis, NOS	2	0	2
b	Non-Hodgkin lymphomas	9591	Malignant lymphoma, non-Hodgkin, NOS	5	10	15
		9680	Malignant lymphoma, large B-cell, diffuse, NOS	1	2	3
		9690	Follicular lymphoma, NOS	1	0	1
		9699	Marginal zone B-cell lymphoma, NOS	1	0	1
		9700	Mycosis fungoides	0	1	1
		9702	Mature T-cell lymphoma, NOS	0	1	1
		9709	Cutaneous T-cell lymphoma, NOS	1	0	1
		9714	Anaplastic large cell lymphoma, T cell and	0	1	1
		9727	Precursor cell lymphoblastic lymphoma, NOS	1	1	2
		9728	Precursor B-cell lymphoblastic lymphoma	3	1	4
		9729	Precursor T-cell lymphoblastic lymphoma	1	0	1
c	Burkitt lymphoma	9687	Burkitt lymphoma, NOS	1	1	2
d	Miscellaneous lymphoreticular neoplasm	9750	Malignant histiocytosis	1	0	1
		9754	Langerhans cell histiocytosis, disseminated	2	2	4
e	Unspecified lymphomas	9590	Malignant lymphoma, NOS	1	3	4
Total				41	28	69

National Cancer Incidence and Mortality Data -2012

	Site Group		ICD O-3 Histology	Male	Female	Total
III	CNS and miscellaneous intracranial and intraspinal neoplasms					
	b Astrocytomas	9400	Astrocytoma, NOS	3	4	7
		9401	Astrocytoma, anaplastic	0	1	1
		9440	Glioblastoma, NOS	3	1	4
	c Intracranial and intraspinal embryonal tumour	9470	Medulloblastoma, NOS	8	7	15
	d Other gliomas	9380	Glioma, malignant	10	8	18
		9451	Oligodendroglioma, anaplastic	1	0	1
	e Other specified intracranial and intraspinal neoplasms	9505	Ganglioglioma, anaplastic	1	0	1
		9362	Pineoblastoma	1	0	1
	f Unspecified intracranial and intraspinal neoplasms	8000	Neoplasm, malignant	0	1	1
	Total			30	26	56

National Cancer Incidence and Mortality Data -2012

	Site Group	ICD O-3	Histology	Male	Female	Total
IV	Neuroblastoma and other peripheral nervous cell tumour					
	a Neuroblastoma and ganglioneuroblastoma	9490	Ganglioneuroblastoma	3	0	3
		9500	Neuroblastoma, NOS	18	13	31
	Total			21	13	34
V	Retinoblastoma	9510	Retinoblastoma	36	18	54
	Total			36	18	54
VI	Renal tumours					
	a Nephroblastoma and other nonepithelial renal tumours	8960	Nephroblastoma, NOS	8	8	16
	b Renal carcinoma	8312	Renal cell carcinoma, NOS	1	0	1
	Total			9	8	17
VII	Hepatic tumours					
	a Hepatoblastoma	8970	Hepatoblastoma	4	10	14
	Total			4	10	14

National Cancer Incidence and Mortality Data -2012

	Site Group	ICD O-3	Histology	Male	Female	Total
VIII	Malignant bone tumour					
a	Osteosarcomas	9180	Osteosarcoma, NOS	20	15	35
		9181	Chondroblastic osteosarcoma	2	1	3
c	Ewing tumour and related sarcoma of bone	9260	Ewing sarcoma	0	1	1
d	Other specified malignant bone tumour	9250	Giant cell tumor of bone, malignant	9	6	15
	Total			31	23	54
IX	Soft tissue and other extraosseous sarcoma					
a	Rhabdomyosarcoma	8900	Rhabdomyosarcoma, NOS	4	7	11
		8910	Embryonal rhabdomyosarcoma, NOS	4	4	8
		8920	Alveolar rhabdomyosarcoma	1	1	2
b	Fibrosarcomas, peripheral nerve sheath tumours, and other fibrous neoplasms	9540	Malignant peripheral nerve sheath tumor	1	0	1
d	Other specified soft tissue sarcoma	8806	Desmoplastic small round cell tumor	4	4	8
		8832	Dermatofibrosarcoma, NOS	1	1	2
		9040	Synovial sarcoma, NOS	1	2	3
		9581	Alveolar soft part sarcoma	2	2	4
		8963	Malignant rhabdoid tumor	1	1	2
		9260	Ewing sarcoma	0	1	1
		9365	Askin tumor	1	0	1
e	Unspecified soft tissue sarcoma	8800	Sarcoma, NOS	0	2	2

National Cancer Incidence and Mortality Data -2012

Site Group	ICD O-3	Histology	Male	Female	Total	
Total			20	25	45	
X	Germ cell tumours, trophoblastic tumours, and neoplasms of gonads					
a	Intracranial and intraspinal germ cell tumours	9071	Yolk sac tumor	1	0	1
b	Malignant extracranial and extragonadal germ cell tumours	9071	Yolk sac tumor	0	2	2
		9080	Teratoma, malignant, NOS	1	0	1
		9085	Mixed germ cell tumor	2	0	2
c	Malignant gonadal germ cell tumours	9060	Dysgerminoma	0	5	5
		9064	Germinoma	1	2	3
		9071	Yolk sac tumor	3	5	8
		9080	Teratoma, malignant, NOS	0	1	1
		9081	Teratocarcinoma	0	1	1
		9085	Mixed germ cell tumor	1	5	6
d	Gonadal carcinomas	8480	Mucinous adenocarcinoma	0	1	1
e	Other and unspecified malignant gonadal tumours	8000	Neoplasm, malignant	0	1	1
		8650	Leydig cell tumor, malignant	1	0	1
Total				10	23	33

National Cancer Incidence and Mortality Data -2012

	Site Group	ICD O-3	Histology	Male	Female	Total	
XI	Other malignant epithelial neoplasms and malignant melanomas						
	a	Adrenocortical carcinomas	8370	Adrenal cortical carcinoma	0	2	2
	b	Thyroid carcinomas	8050	Papillary carcinoma, NOS	0	1	1
			8260	Papillary adenocarcinoma, NOS	5	17	22
			8290	Oxyphilic adenocarcinoma	0	2	2
			8330	Follicular adenocarcinoma, NOS	1	0	1
			8335	Follicular carcinoma, minimally invasive	0	2	2
			8340	Papillary carcinoma, follicular variant	1	4	5
			8341	Papillary microcarcinoma	1	0	1
			8510	Medullary carcinoma, NOS	0	1	1
	c	Nasopharyngeal carcinomas	8041	Small cell carcinoma, NOS	1	0	1
	d	Malignant melanoma	8720	Malignant melanoma, NOS (except juvenile melan	1	0	1
			8730	Amelanotic melanoma	0	1	1
	e	Skin carcinomas	8070	Squamous cell carcinoma, NOS	0	1	1
	f	Other and unspecified carcinomas	8010	Carcinoma, NOS	0	1	1
			8032	Spindle cell carcinoma, NOS	1	0	1
			8200	Adenoid cystic carcinoma	0	1	1
			8240	Carcinoid tumor, NOS	1	0	1
			8430	Mucoepidermoid carcinoma	2	2	4
			8481	Mucin-producing adenocarcinoma	1	0	1
	Total				15	35	50

National Cancer Incidence and Mortality Data -2012

	Site Group	ICD O-3	Histology	Male	Female	Total
XII	Other and unspecified malignant neoplasms					
	a Other specified malignant tumours	8936	Gastrointestinal stromal sarcoma	0	1	1
	b Other unspecified malignant tumours	8000	Neoplasm, malignant	4	6	10
	Total			4	7	11

3.2. Cancer Mortality

Mortality data due to cancers were obtained through the (i) Annual Health Bulletin based on Indoor morbidity mortality return (IMMR) from the hospital statistics and (ii) Department of Census & Statistics website based on data derived from the vital registration system of Sri Lanka.

Table 8: Deaths due to neoplasms at the hospitals 2005-2012

Year	No. of hospital deaths due to cancers	Crude hospital annual death rate due to cancers per 100,000population	Proportionate Mortality Ratio (PMR) out of all hospital deaths
2005	2753	14.0	8.3
2006	3241	16.3	9.9
2007	3498	17.5	10.1
2008	3485	17.2	9.8
2009	3774	18.5	10
2010	4449	21.5	11.1
2011	4631	22.2	11.8
2012	4519	22.2	11.6

Sources: Annual Health Bulletin 2005 to 2012.

Table 9: Deaths due to neoplasms out of all registered deaths (hospital & field) 2001 – 2012

Year	Population '000	Cancer deaths		
		No.	CR	PMR (%)
2001	18,797	8,063	42.9	7.1
2002	18,921	7,986	42.2	7.1
2003	19,173	8,396	43.8	7.3
2004	19,435	9,127	47.0	7.9
2005	19,644	9,403	47.9	7.1
2006	19,958	10,386	52.3	8.8
2007	20,039	10,631	53.1	8.9
2008*				
2009	20,450	11,286	55.2	8.8
2010	20,653	11,836	57.3	9.1
2011	20,892	12,267	58.7	10.0
2012	20,359,439	12,581	61.8	10.2

* Not published

CR-Crude annual death rate due to cancers per 100,000 population

PMR – Proportionate Mortality Ratio out of total deaths

Table 10: Deaths due to neoplasms by sex out of all registered deaths (hospital & field) 2001 – 2012

Year	Male			Female		
	No.	CR	ASR	No.	CR	ASR
2001	4375	46.7	52.1	3688	39.1	39.9
2002	4350	46.5	51.2	3636	37.9	38.6
2003	4614	48.7	53.6	3782	38.9	39.6
2004	4942	57.1	57.3	4185	42.9	44.0
2005	4983	50.9	57.0	4420	44.8	45.8
2006	5644	57.1	63.6	4742	47.6	48.7
2007	5827	58.5	65.4	4804	47.6	48.8
2008*						
2009	6105	60.2	67.6	5181	50.3	52.0
2010	6438	62.8	70.9	5398	51.9	53.5
2011	6641	64.0	72.5	5626	53.5	55.3
2012	6908	70.1	65.5	5673	54.0	44.4

Sources: Department of Census & Statistics

* Not published

CR-Crude annual death rate due to cancers per 100,000 population

ASR – Age standardized annual death rate due to cancers per 100,000 population

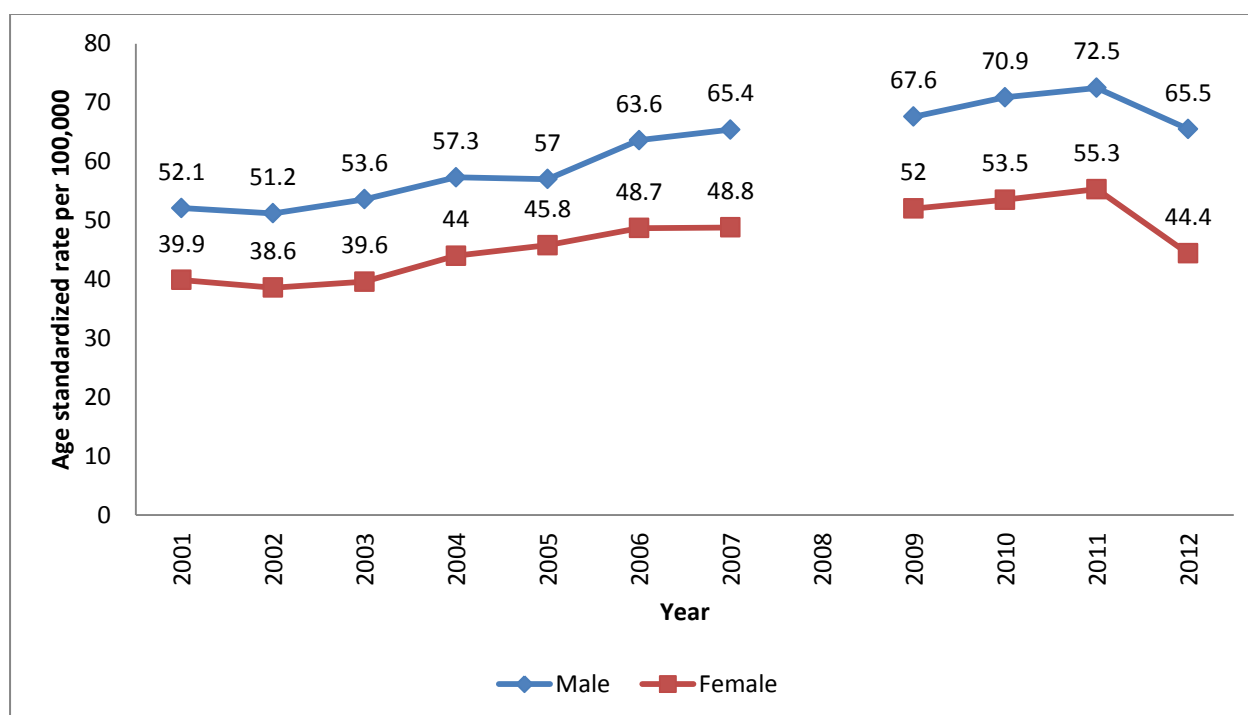


Figure 18: Age standardized mortality rates due to cancer 2001 -2012

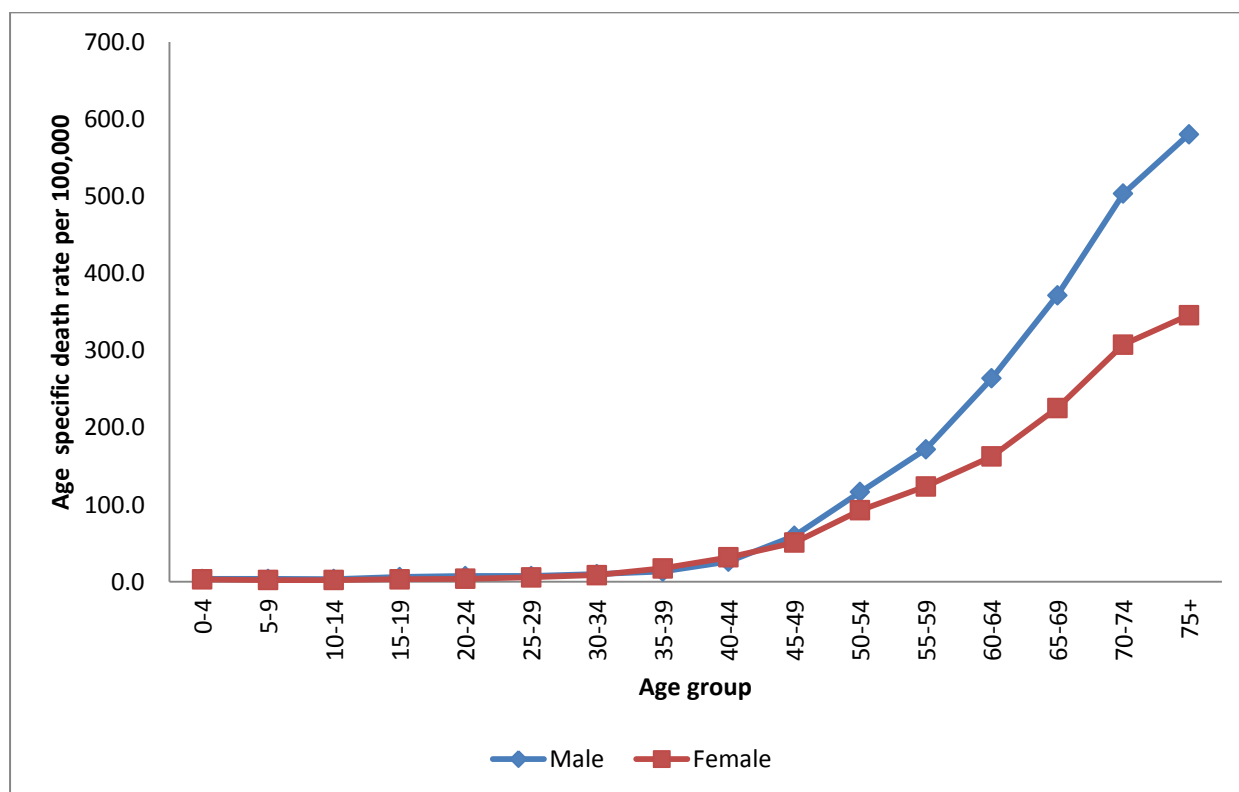


Figure 19: Age specific mortality rates due to cancer – 2012

Table 11: Leading sites (ICD-10) of cancer mortality – Male Sri Lanka 2012

ICD-10 Cancer Site	No.	CR	ASR
1-027 Malignant neoplasm of lip,oral cavity and pharynx	801	8.1	7.5
1-034 Malignant neoplasm of trachea, bronchus and lung	786	8.0	7.4
1-031 Malignant neoplasm of liver and intrahepatic bile ducts	449	4.6	4.3
1-028 Malignant neoplasm of oesophagus C15	395	4.0	3.7
1-045 Leukaemia C91-C95	306	3.1	3.0
1-029 Malignant neoplasm of stomach C16	281	2.9	2.7
1-042 Malignant neoplasm of meninges , brain and other parts of central nervous system	261	2.6	2.5
1-030 Malignant neoplasm of colon,rectum and anus C18-C21	188	1.9	1.8
1-040 Malignant neoplasm of prostate C61	154	1.6	1.5
1-043 Non-Hodgkin s lymphoma C82-C85	148	1.5	1.4
1-026 All Neoplasms C00-D48	6908	70.1	65.5

Table 12: Leading sites (ICD-10) of cancer mortality – Female Sri Lanka 2012

ICD-10 Cancer Site	No.	CR	ASR
1-036 Malignant neoplasm of breast	619	5.9	4.8
1-034 Malignant neoplasm of trachea, bronchus and lung	333	3.2	2.6
1-027 Malignant neoplasm of lip,oral cavity and pharynx	270	2.6	2.0
1-031 Malignant neoplasm of liver and intrahepatic bile ducts	268	2.6	2.1
1-038 Malignant neoplasm of other and unspecified parts of uterus	267	2.5	2.1
1-045 Leukaemia C91-C95	254	2.4	2.2
1-029 Malignant neoplasm of stomach C16	252	2.4	1.9
1-028 Malignant neoplasm of oesophagus C15	242	2.3	1.9
1-042 Malignant neoplasm of meninges , brain and other parts of central nervous system	237	2.3	2.0
1-039 Malignant neoplasm of ovary C56	184	1.8	1.5
1-026 All Neoplasms C00-D48	5673	54.0	44.4

3.3. Leading Cancer Sites – Based on cancer incidence & mortality data: Year 2012

3.3.1. Oral cancer

1. Lip, tongue & mouth (C00, C01-C02, C03-C06)

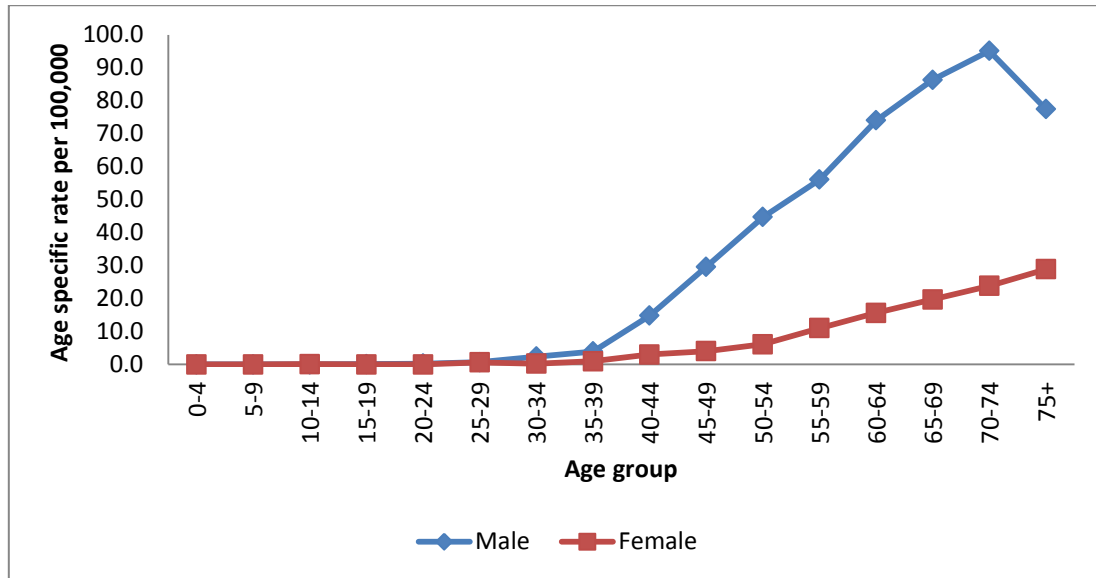


Figure 20: Age specific incidence rate – Lip, tongue and mouth– 2012

2. Lip, Oral Cavity & Pharynx (C00-C14)

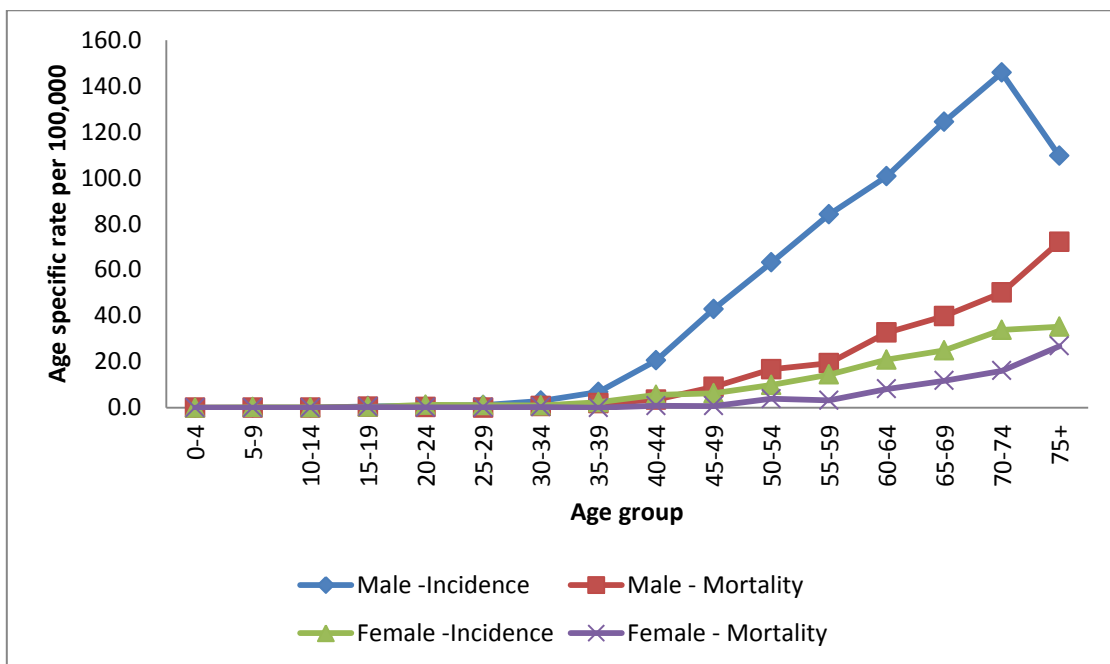


Figure 21: Age specific incidence and mortality rate – Lip, oral cavity and pharynx– 2012

3. Different sites of Lip, Oral Cavity & Pharynx (C00-C14)

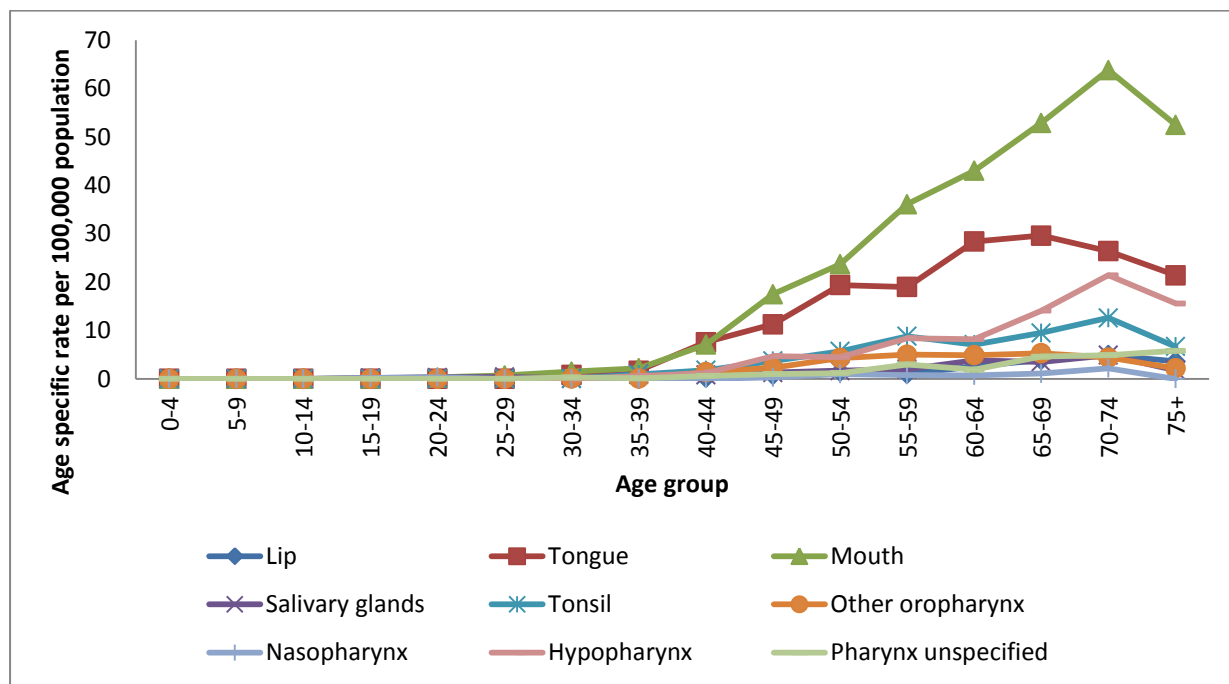


Figure 22: Age specific incidence rate – Male, Different sites of lip, oral cavity & pharynx– 2012

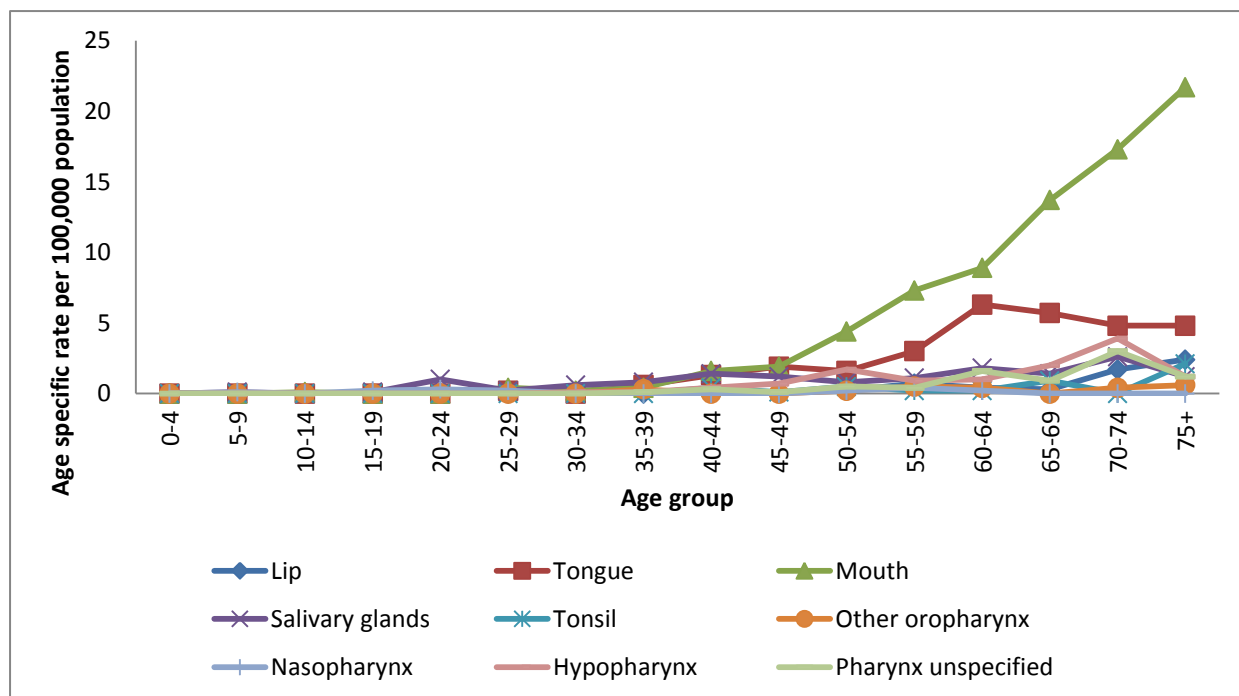


Figure 23: Age specific incidence rate – Female, Different sites of lip, oral cavity & pharynx – 2012

3.3.2. Oesophagus (C15)

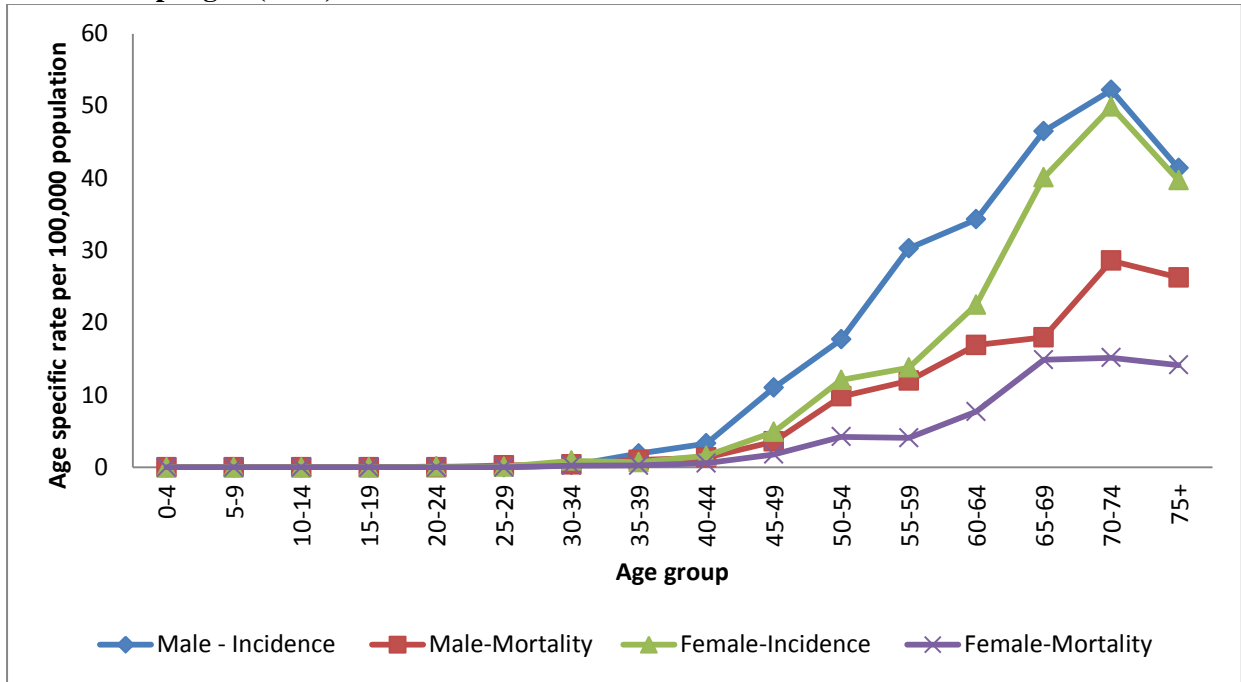


Figure 24: Age specific incidence and mortality rates - Oesophagus– 2012

3.3.4. Stomach (C 16)

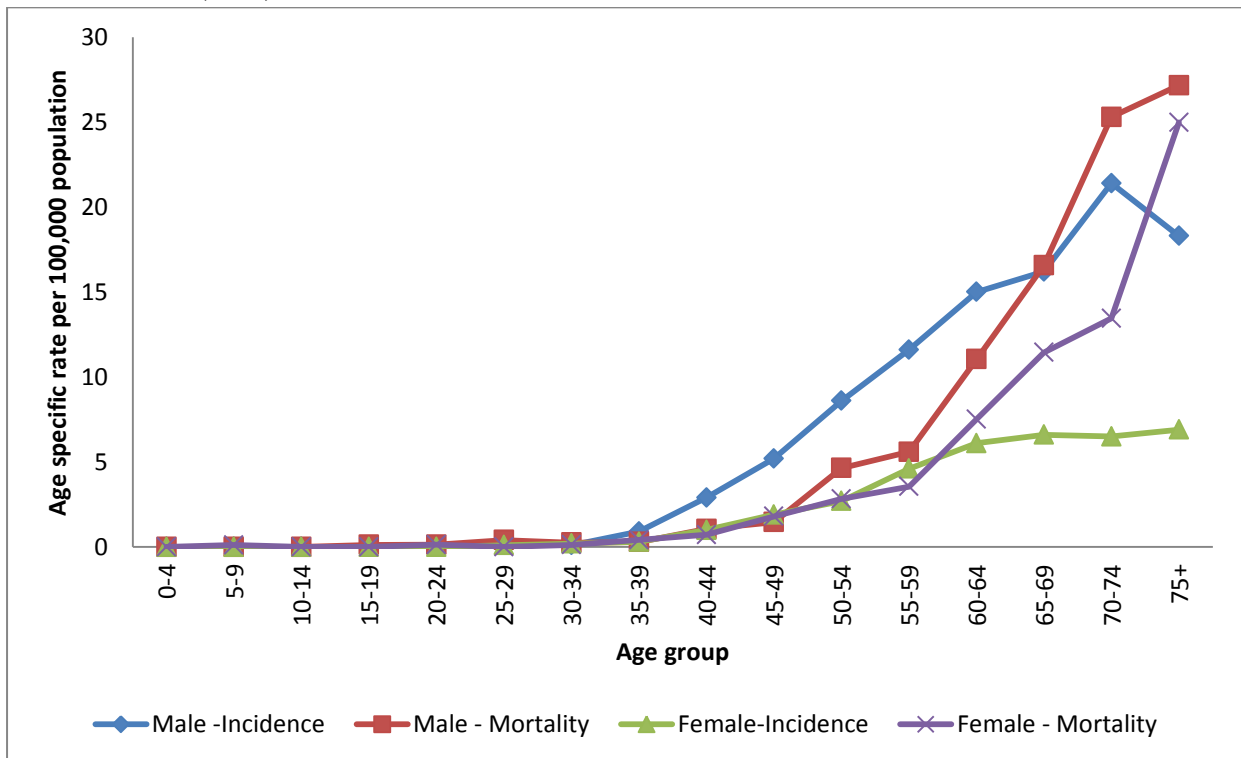


Figure 25: Age specific incidence and mortality rates - Stomach – 2012

3.3.5. Colon, Rectum & Anus

1. Colon, Rectum & Anus (C18, C19-C20, C 21)

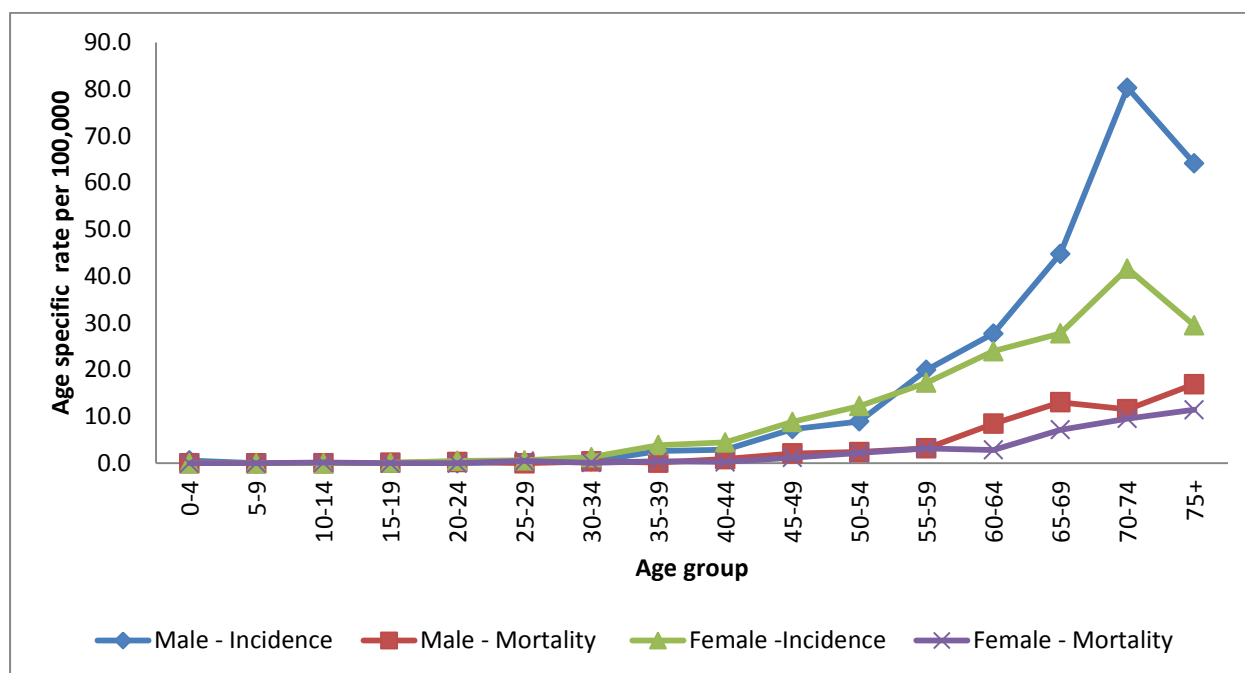


Figure 26: Age specific incidence and mortality rates - Colon, rectum and anus – 2012

2. Colon & Rectum (C18, C19-C20)

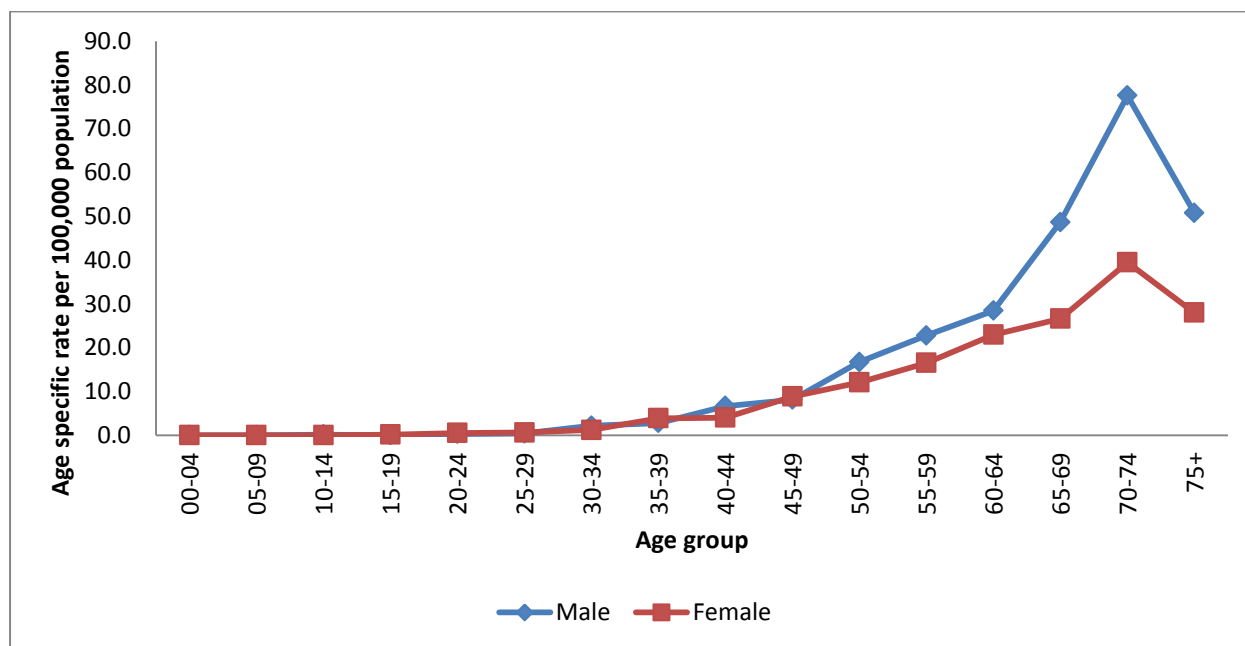


Figure 27: Age specific incidence rate - Colon and rectum – 2012

3.3.6. Liver (C22)

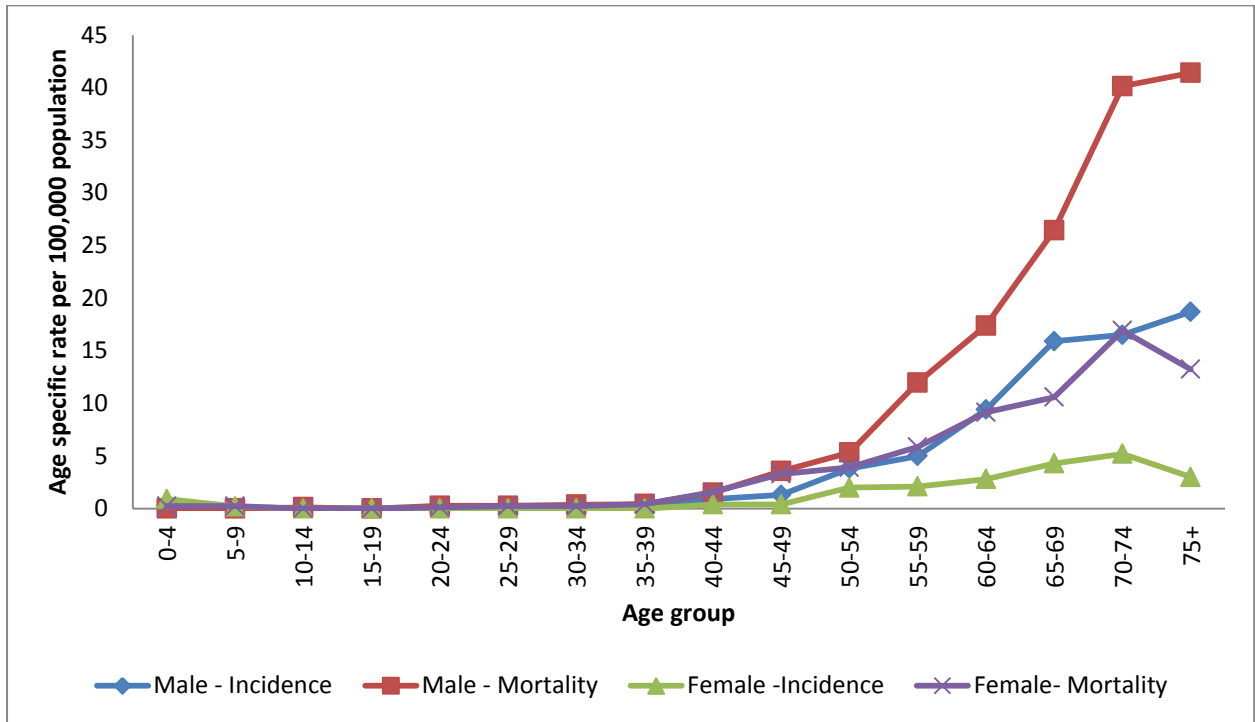


Figure 28: Age specific incidence and mortality rates - Liver – 2012

3.3.7. Larynx (C32)

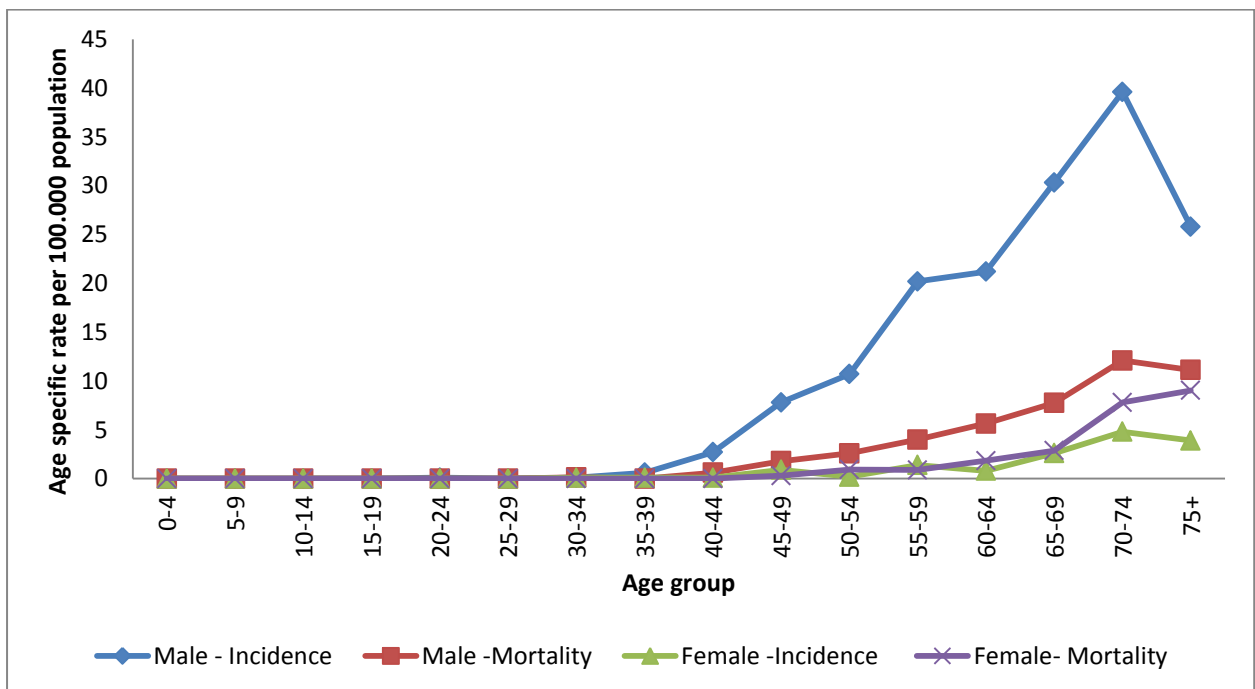


Figure 29: Age specific incidence and mortality rates - Larynx – 2012

3.3.8. Trachea, bronchus & lung (C33-C34)

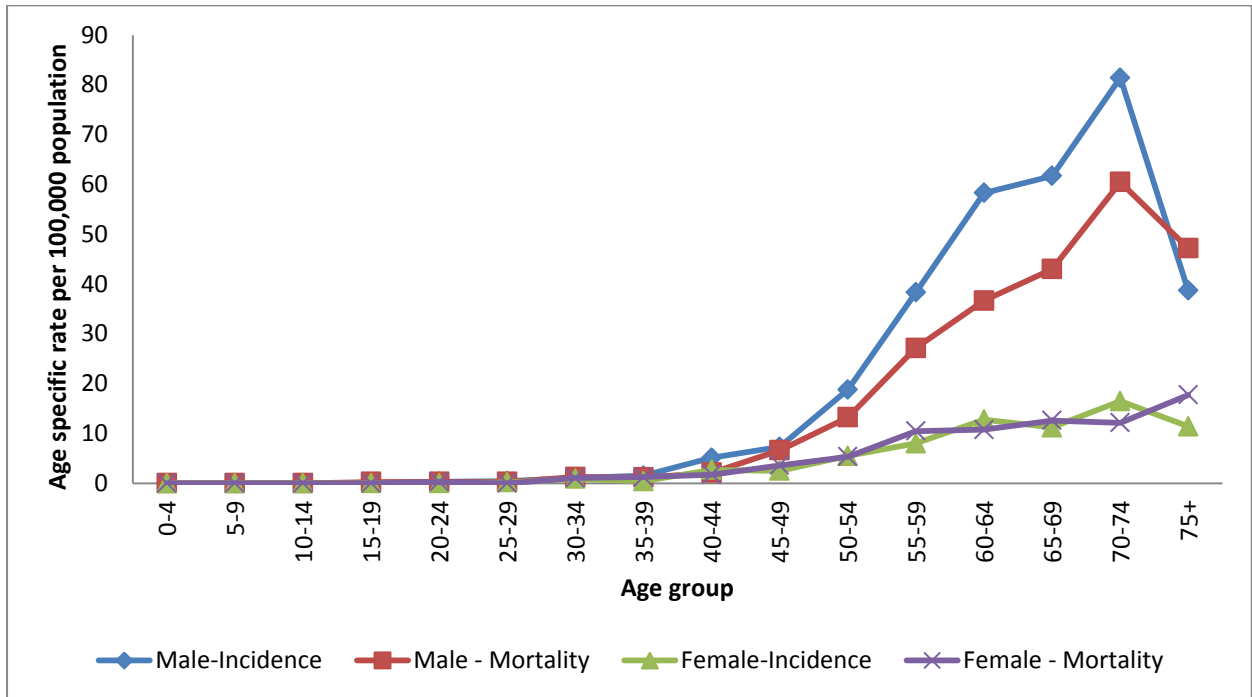


Figure 30: Age specific incidence & mortality rates - Trachea, bronchus and lung– 2012

3.3.9. Breast (C 50)

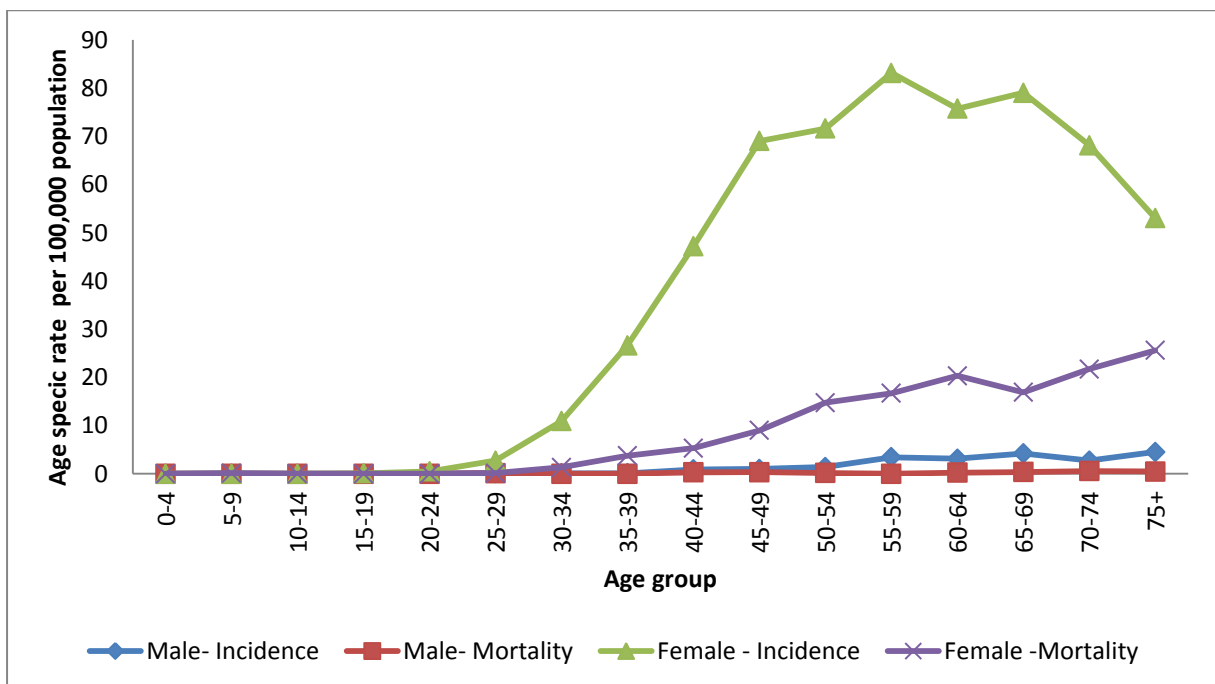


Figure 31: Age specific incidence & mortality rates – Breast – 2012

3.3.10. Cervix (C 53)

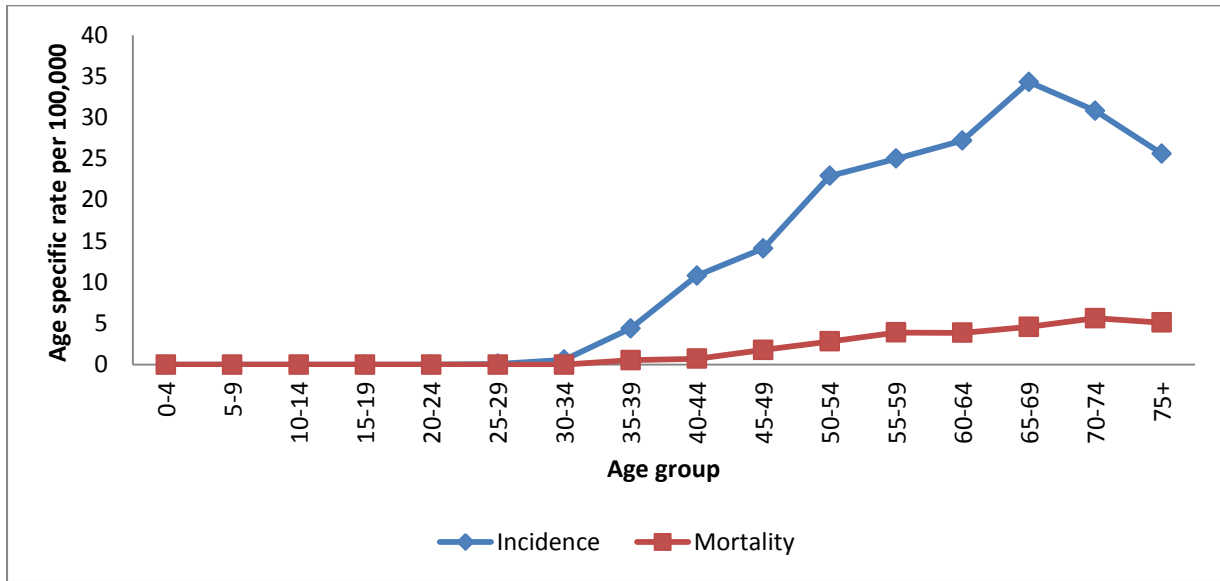


Figure 32: Age specific incidence & mortality rates – Cervix – 2012

3.3.11. Uterus (C54-C55)

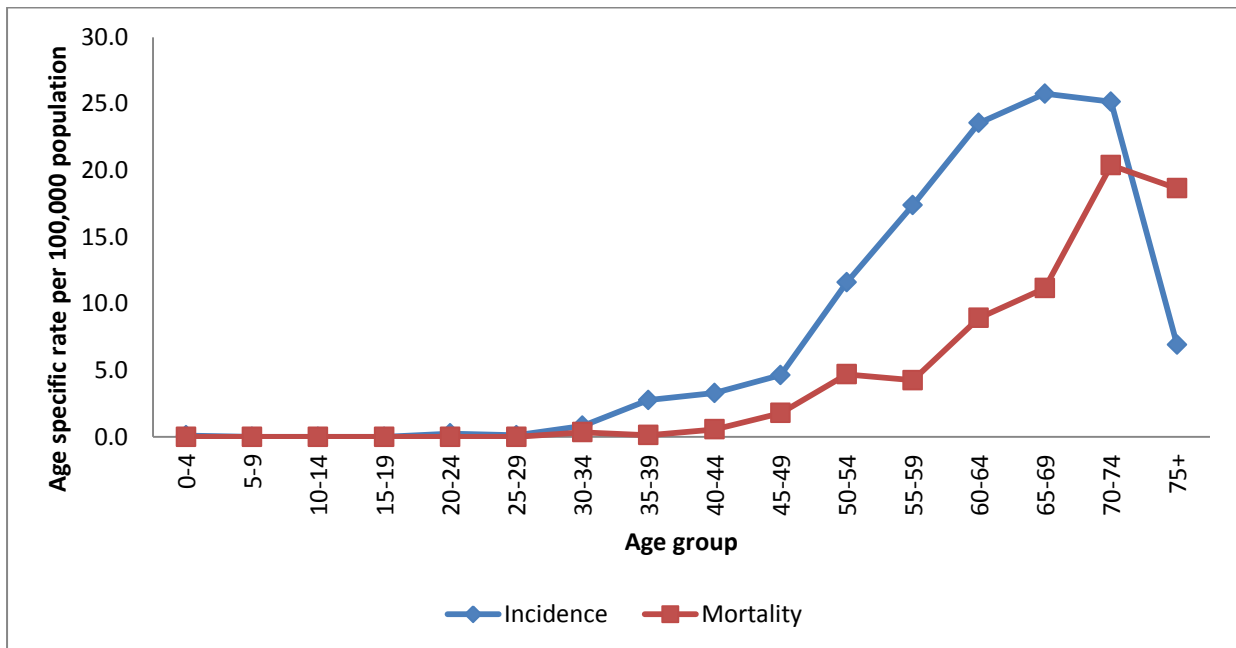


Figure 33: Age specific incidence & mortality rates – Uterus– 2012

3.3.12. Ovary (C56)

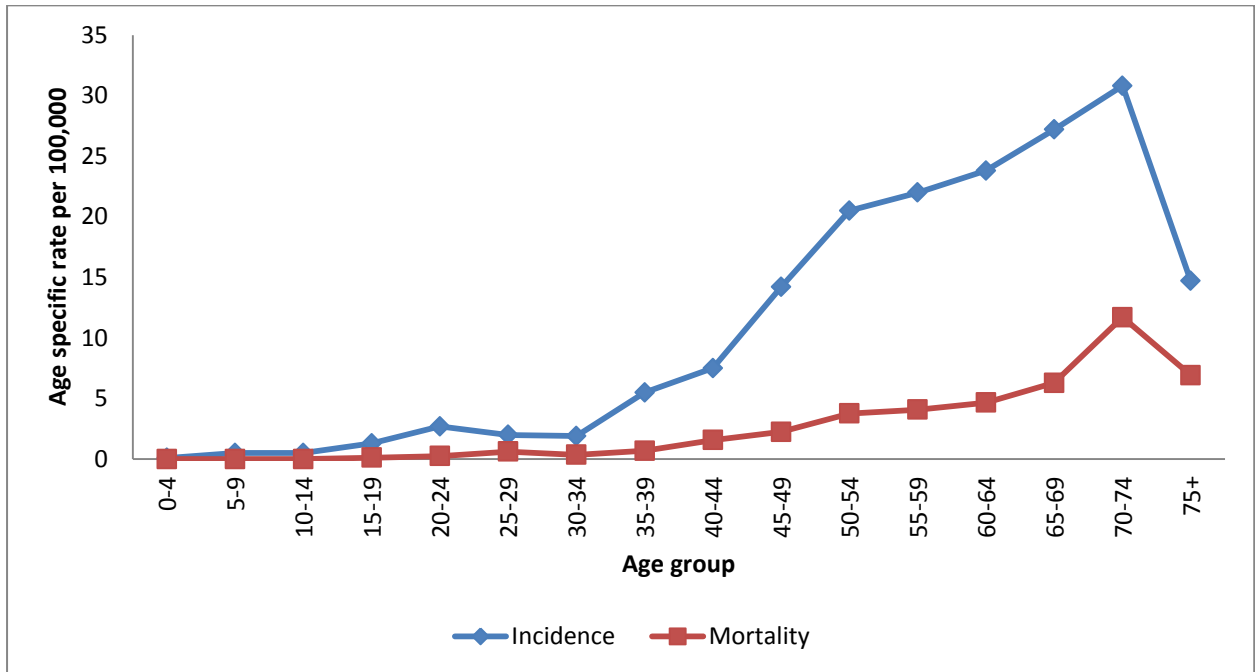


Figure 34: Age specific incidence & mortality rates – Ovary – 2012

3.3.13. Prostate (C 61)

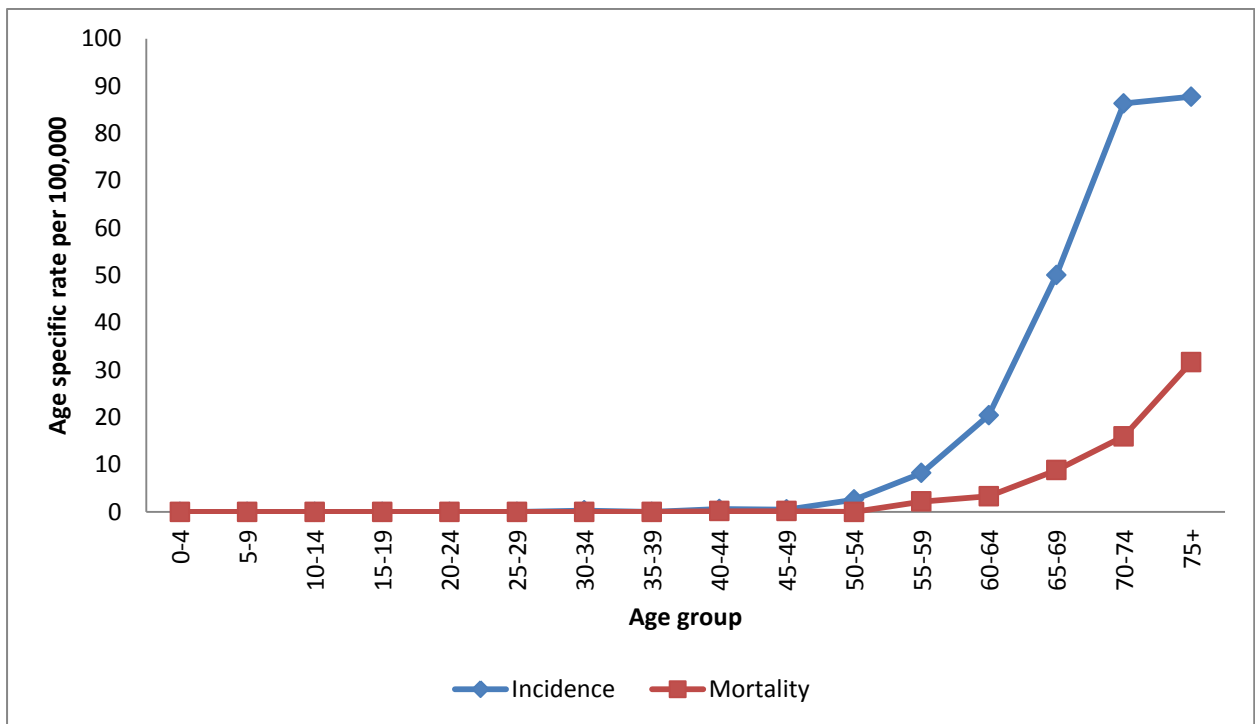


Figure 35: Age specific incidence & mortality rates – Prostate – 2012

3.3.14. Bladder (C67)

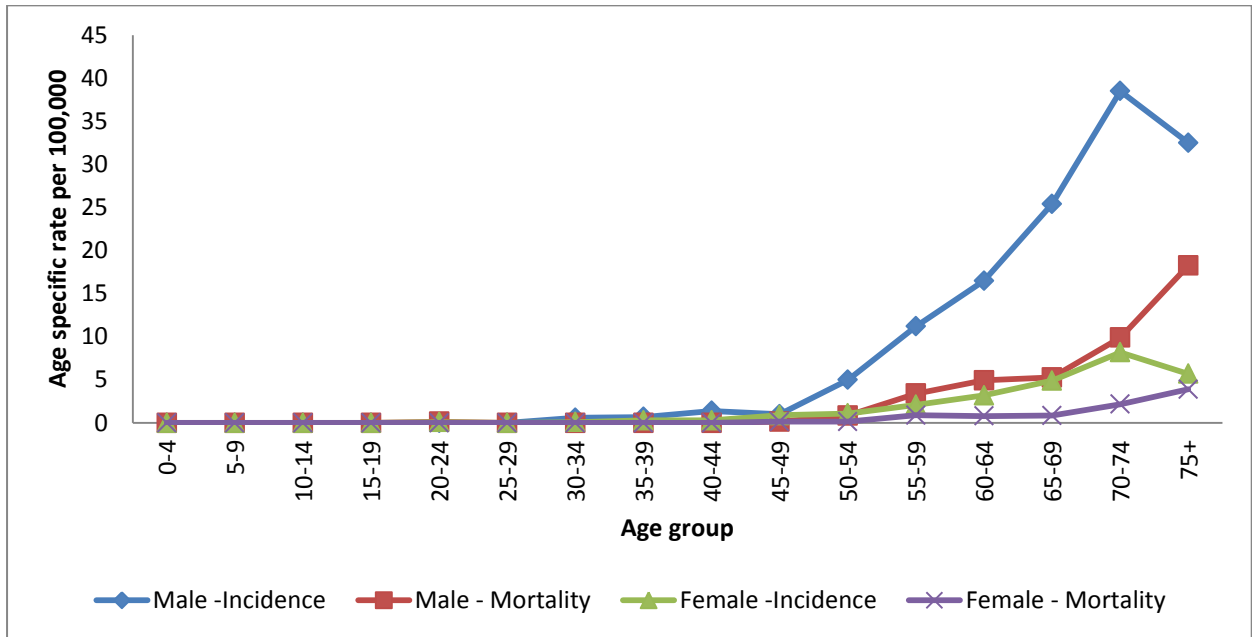


Figure 36: Age specific incidence & mortality rates –Bladder – 2012

3.3.15. Thyroid Cancer (C73)

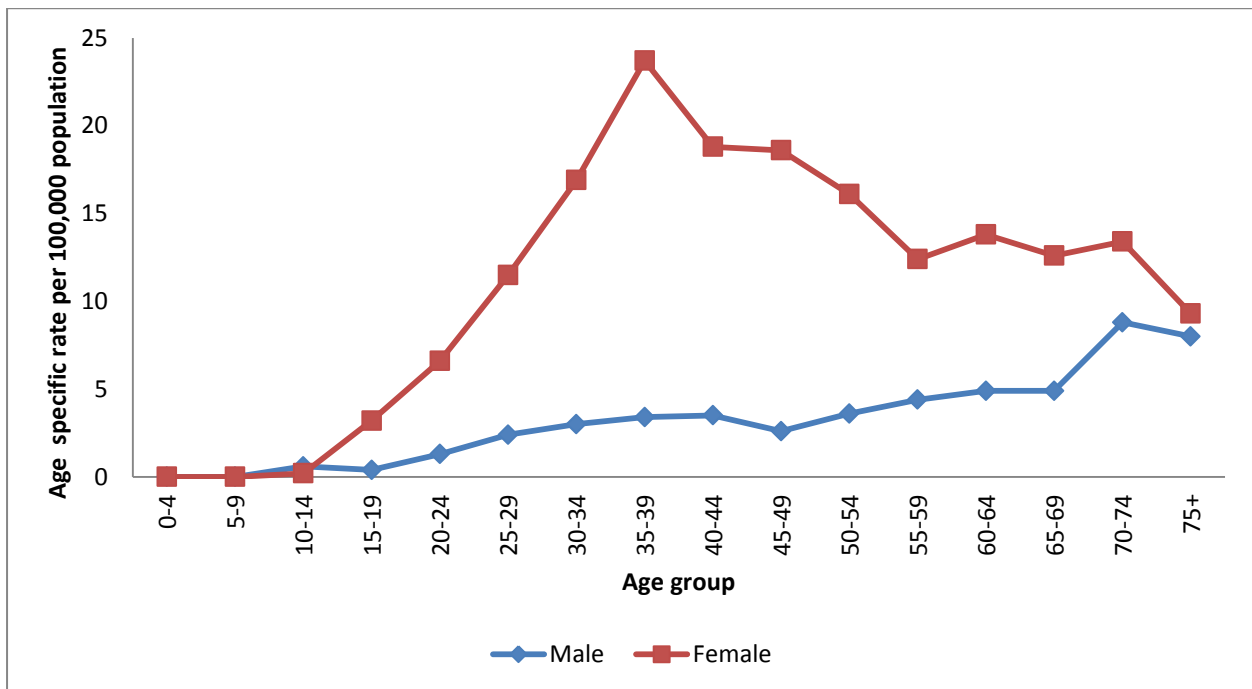


Figure 37: Age specific incidence rate – . Thyroid cancer – 2012

3.3.16. Lymphoma

1. Hodgkin Lymphoma (C81)

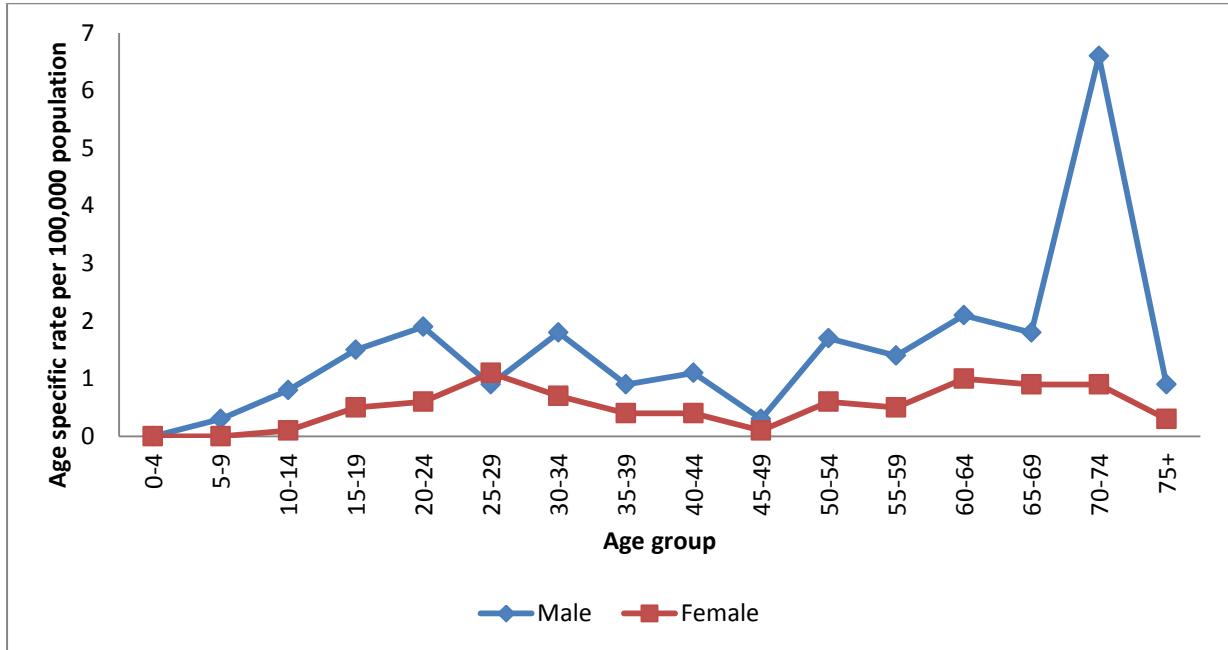


Figure 38: Age specific incidence rate – . Hodgkin Lymphoma – 2012

2. Non Hodgkin Lymphoma (C82-C85)

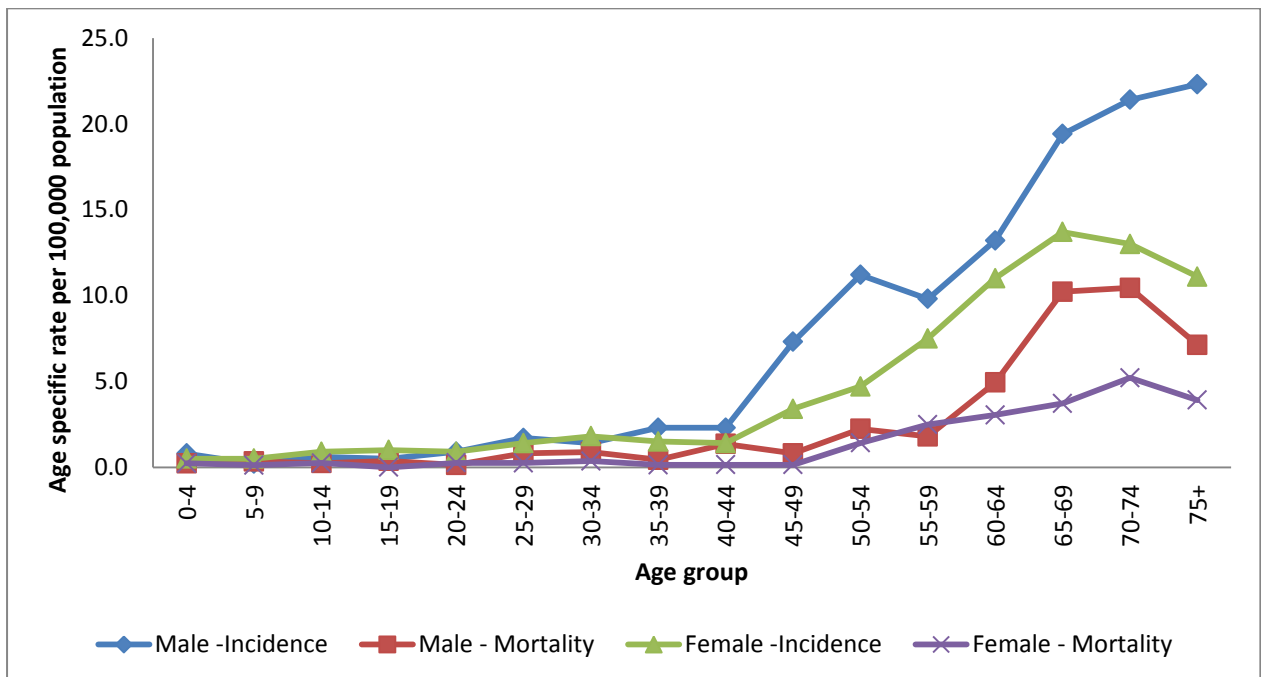


Figure 39: Age specific incidence & mortality rates – . Non Hodgkins Lymphoma – 2012

3.3.17. Leukaemia (C91-C95)

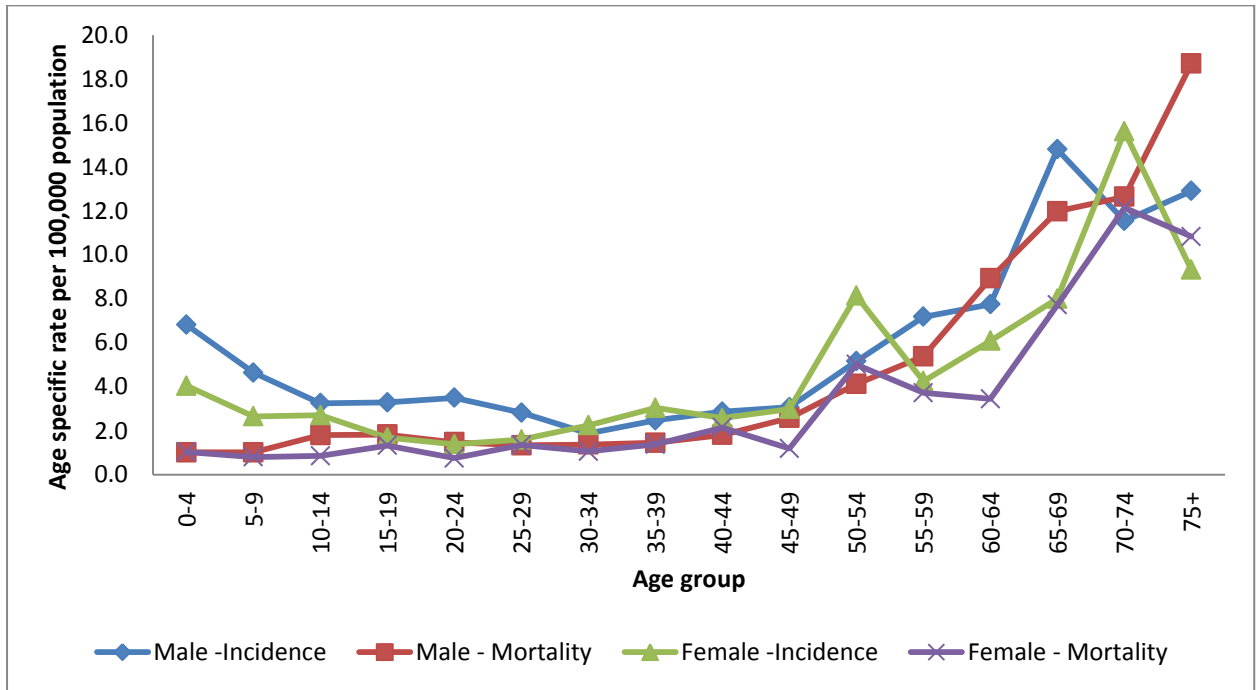


Figure 40: Age specific incidence & mortality rates – . Leukaemia – 2012

3.4. Cancer cases by age group

Table 13: Cancer cases by age group – Male 2012

ICD 10 code and site	Age Group																	Total
	NK	00-04	05-09	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	
C00 Lip	0	0	0	0	0	0	0	1	0	1	5	9	5	11	11	9	8	60
C01 Base of tongue	0	0	0	0	0	0	0	1	3	14	16	35	16	26	23	14	18	166
C02 Other and unspecified parts of tongue	2	0	0	0	0	0	0	5	9	36	54	78	79	95	61	34	30	483
C03 Gum	1	0	0	0	0	1	3	1	0	5	6	18	21	26	17	15	19	133
C04 Floor of mouth	2	0	0	0	0	0	0	2	2	5	30	17	29	15	21	11	5	139
C05 Palate	0	0	0	0	1	0	1	2	3	10	22	31	29	33	22	18	11	183
C06 Other and unspecified parts of mouth	4	0	0	0	0	1	1	7	10	27	50	72	102	109	90	72	83	628
C07 Parotid gland	0	0	0	0	2	2	2	1	5	2	5	5	8	13	7	7	3	62
C08 Other and unspecified major salivary gland	0	0	0	0	0	0	1	0	2	3	3	5	2	3	3	2	1	25
C09 Tonsil	0	0	0	0	0	0	0	0	6	12	23	33	44	30	27	23	15	213
C10 Oropharynx	0	0	0	0	0	0	0	1	1	9	14	25	25	21	15	8	5	124
C11 Nasopharynx	0	0	0	0	2	2	0	1	1	0	2	6	4	3	3	4	0	28
C12 Pyriform sinus	1	0	0	0	0	0	0	0	3	6	26	17	27	34	32	30	26	202
C13 Hypopharynx	0	0	0	0	0	0	0	0	1	2	3	9	15	1	8	9	9	57
C14 Other and ill-defined sites	0	0	0	0	0	0	0	2	1	4	6	7	15	8	13	9	13	78
C15 Oesophagus	2	0	0	0	0	1	0	2	13	22	68	103	152	146	132	95	93	829
C16 Stomach	1	0	0	0	0	0	2	1	6	19	32	50	58	64	46	39	41	359
C17 Small intestine	0	0	0	0	0	0	0	0	0	5	4	7	5	7	6	1	1	36
C18 Colon	3	0	0	1	0	1	1	7	10	19	20	47	42	46	60	55	43	355
C19 Rectosigmoid junction	0	0	0	0	0	0	0	2	0	3	4	5	6	12	10	13	4	59
C20 Rectum	2	0	0	0	0	1	2	8	9	22	26	45	66	63	68	73	67	452
C21 Anus and anal canal	0	0	0	0	0	0	0	1	0	1	2	3	4	6	8	3	6	34
C22 Liver and intrahepatic bile duct	2	3	0	1	0	0	1	2	2	6	8	22	25	40	45	30	42	229
C23 Gallbladder	0	0	0	0	0	0	0	0	1	0	2	1	3	1	3	2	3	16

National Cancer Incidence and Mortality Data -2012

ICD 10 code and site	Age Group																		
	NK	00-04	05-09	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	Total	
C24	Other and unspecified parts of biliary tract	0	0	0	0	0	0	1	0	1	3	8	6	5	8	7	6	9	54
C25	Pancreas	0	0	0	0	0	1	1	0	4	4	4	8	10	19	11	9	7	78
C26	Other and ill-defined digestive organs	0	0	0	0	1	0	0	0	0	0	3	1	2	2	2	1	2	14
C30	Nasal cavity and middle ear	0	0	0	0	0	1	0	2	1	2	5	10	7	4	3	6	0	41
C31	Accessory sinuses	0	0	0	0	0	1	1	1	0	5	3	1	5	2	2	2	5	28
C32	Larynx	0	0	0	0	0	1	0	1	4	18	48	62	101	90	86	72	58	541
C33	Trachea	0	0	0	0	0	0	0	0	0	0	0	2	2	1	1	2	0	8
C34	Bronchus and lung	9	0	0	0	1	2	3	9	10	34	45	107	190	247	174	146	87	1064
C37	Thymus	0	0	0	0	0	1	0	2	1	0	3	2	1	7	3	2	0	22
C38	Heart, mediastinum and pleura	0	2	0	0	1	3	2	1	0	0	0	3	1	2	1	0	1	17
C40	Bone and articular cartilage of limbs	0	2	4	7	8	5	3	1	1	2	1	3	0	1	1	1	0	40
C41	Bone and articular cartilage of other and unspecified sites	0	0	1	2	7	5	4	0	2	0	2	1	1	1	1	0	0	27
C43	Melanoma of skin	1	0	1	0	0	0	0	1	0	3	3	4	6	6	10	8	10	53
C44	Other malignant neoplasms of skin	2	0	0	1	0	3	2	4	2	8	16	28	33	28	40	21	34	222
C45	Mesothelioma	0	0	0	0	0	0	0	0	0	0	0	1	1	2	0	2	0	6
C47	Peripheral nerves and autonomic nervous system	0	1	0	1	0	1	0	0	0	1	1	1	0	1	3	1	1	12

National Cancer Incidence and Mortality Data -2012

ICD 10 code and site	Age Group																		
	NK	00-04	05-09	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	Total	
C48	Retro peritoneum and peritoneum	0	0	1	0	0	0	0	0	2	1	0	3	2	6	2	1	0	18
C49	Connective, subcutaneous and other soft tissue	0	3	3	4	4	8	2	8	10	11	9	11	7	13	8	10	13	124
C50	Breast	1	0	0	0	0	0	1	1	1	6	6	8	17	13	12	5	10	81
C60	Penis	0	0	0	0	0	0	0	0	2	2	9	10	18	11	13	4	18	87
C61	Prostate gland	7	0	0	0	0	0	0	2	0	4	3	15	41	87	142	157	197	655
C62	Testis	0	2	1	0	4	7	8	5	7	4	6	5	2	2	2	1	0	56
C63	Other and unspecified male genital organs	0	0	0	0	1	0	0	0	1	0	0	0	2	1	2	1	0	8
C64	Kidney	0	9	1	0	0	1	1	4	7	10	10	27	21	30	24	13	10	168
C65	Renal pelvis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
C66	Ureter	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	2	1	6
C67	Bladder	3	0	0	0	0	0	0	5	5	9	6	29	56	70	72	70	73	398
C68	Other and unspecified urinary organs	0	0	0	0	0	0	0	0	0	0	0	1	4	1	4	1	0	11
C69	Eye and adnexa	0	25	10	1	0	0	0	1	0	3	0	1	1	1	2	1	3	49
C70	Meninges	0	0	0	0	0	0	2	0	0	0	2	1	1	0	0	1	0	7
C71	Brain	0	11	7	7	3	3	5	10	15	17	21	24	23	13	9	11	6	185
C72	Spinal cord, cranial nerves and other parts of central nervous system	0	1	3	0	0	0	1	0	0	0	0	0	0	1	0	0	0	6
C73	Thyroid gland	1	0	0	5	3	10	18	24	23	23	16	21	22	21	14	16	18	235
C74	Adrenal gland	0	10	2	1	0	0	0	0	1	0	1	2	1	0	2	3	1	24
C75	Other endocrine glands and related structures	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	2

National Cancer Incidence and Mortality Data -2012

ICD 10 code and site	Age Group																	
	NK	00-04	05-09	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	Total
C76 Other and ill-defined sites	0	0	1	2	1	1	1	1	4	4	9	12	12	12	9	2	10	81
C80 Unknown primary	7	0	0	0	2	6	2	10	9	23	53	85	121	137	113	88	79	735
C81 Hodgkin disease	2	0	3	7	12	14	7	14	6	7	2	10	7	9	5	12	2	119
C82 Follicular (nodular) non-Hodgkin lymphoma	1	0	0	1	0	0	0	1	0	3	6	7	5	6	5	1	1	37
C83 Diffuse non-Hodgkin lymphoma	0	2	2	2	1	0	1	2	4	1	10	10	6	9	10	3	10	73
C84 Peripheral and cutaneous T-cell lymphoma	0	0	0	1	0	0	1	0	1	1	1	2	3	3	0	2	1	16
C85 Other and unspecified types of non-Hodgkin lymphoma	0	3	0	1	2	7	11	8	11	9	28	46	35	38	40	33	38	310
C88 Immunoproliferative diseases	0	0	1	0	0	0	0	0	0	0	0	1	0	0	1	0	0	3
C90 Multiple myeloma and malignant plasma cell neoplasms	0	0	0	0	0	0	0	3	2	9	2	21	20	32	35	31	32	187
C91 Lymphoid leukaemia	1	43	35	24	13	16	9	6	7	5	3	13	9	5	11	1	9	210
C92 Myeloid leukaemia	0	11	6	3	13	8	12	7	9	13	15	13	23	22	29	14	13	211
C93 Monocytic leukaemia	0	2	0	0	0	0	0	0	0	1	0	2	2	1	0	2	1	11
C94 Other leukaemia of specified cell type	0	2	0	0	1	0	0	0	0	0	1	0	0	3	0	2	0	9
C95 Leukaemia of unspecified cell type	0	2	0	0	0	2	0	2	1	0	0	2	2	2	2	2	6	23

National Cancer Incidence and Mortality Data -2012

ICD 10 code and site	Age Group																Total	
	NK	00-04	05-09	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74		75+
C96 Other and unspecified malignant neoplasms of lymphoid, hematopoietic and related tissue	0	2	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	4
D45 Polycythaemia vera	0	0	0	0	0	0	0	0	0	1	1	2	0	1	1	1	0	7
D46 Myelodysplastic syndromes	0	0	1	0	0	0	0	0	0	1	1	1	2	2	2	7	3	20
Other neoplasms of uncertain behavior of lymphoid, haematopoietic and related tissue	0	0	0	0	0	0	0	0	0	0	0	1	2	2	2	2	2	9
Total	55	136	84	72	84	116	113	183	242	482	795	1276	1614	1789	1649	1355	1318	11363

National Cancer Incidence and Mortality Data -2012

Table 14: Cancer cases by age group – Female 2012

ICD 10 code and site	Age Group																	Total
	NK	00-04	05-09	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	
C00 Lip	0	0	0	0	0	0	0	0	0	1	1	1	4	2	1	4	8	22
C01 Base of tongue	0	0	0	0	0	0	0	0	0	0	1	1	3	2	6	1	4	18
C02 Other and unspecified parts of tongue	1	0	0	0	0	0	2	0	4	9	12	9	14	29	14	10	12	116
C03 Gum	0	0	0	0	0	0	1	0	0	2	4	5	11	4	7	9	6	49
C04 Floor of mouth	0	0	0	0	0	0	0	1	0	0	0	2	2	2	3	4	4	18
C05 Palate	0	0	0	0	0	0	2	1	1	2	2	1	3	4	5	8	7	36
C06 Other and unspecified parts of mouth	1	0	0	1	0	0	0	0	2	7	7	20	25	34	33	19	55	204
C07 Parotid gland	0	0	1	0	1	8	2	5	5	8	5	5	5	8	4	5	4	66
C08 Other and unspecified major salivary gland	0	0	0	0	0	0	0	0	1	2	3	0	1	1	1	1	0	10
C09 Tonsil	0	0	0	0	0	0	0	0	0	3	1	3	1	1	3	0	7	19
C10 Oropharynx	0	0	0	0	0	0	0	0	2	0	0	1	3	2	0	1	2	11
C11 Nasopharynx	0	0	1	0	2	2	2	0	0	0	0	1	2	1	0	0	0	11
C12 Pyriform sinus	0	0	0	0	0	0	0	0	0	1	0	4	2	3	3	5	4	22
C13 Hypopharynx	0	0	0	0	0	0	0	1	1	2	5	7	3	2	4	4	0	29
C14 Other and ill-defined sites	1	0	0	0	0	0	0	0	1	2	1	3	2	8	3	7	4	32
C15 Oesophagus	2	0	0	0	0	1	1	8	5	11	33	77	78	111	140	115	13 2	714
C16 Stomach	0	0	0	0	0	0	1	2	2	7	13	17	26	30	23	15	23	159
C17 Small intestine	1	0	0	0	0	0	0	0	1	2	2	3	6	4	2	2	4	27
C18 Colon	1	0	0	0	1	2	4	5	9	14	28	38	42	52	34	38	42	310
C19 Recto sigmoid junction	0	0	0	0	0	0	1	1	0	1	3	4	8	13	11	8	4	54
C20 Rectum	3	0	0	0	0	2	0	4	19	13	28	35	43	48	48	45	47	335

National Cancer Incidence and Mortality Data -2012

ICD 10 code and site	Age Group																	Total
	NK	00-04	05-09	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	
C21 Anus and anal canal	0	0	0	0	0	0	0	1	0	3	0	1	4	5	4	5	5	28
C22 Liver and intrahepatic bile duct	0	8	2	0	0	0	0	0	0	3	3	13	12	14	15	12	10	92
C23 Gallbladder	0	0	0	0	0	0	0	1	0	2	5	5	5	5	2	3	6	34
C24 Other and unspecified parts of biliary tract	0	0	0	0	0	0	1	0	1	1	1	9	9	8	13	5	4	52
C25 Pancreas	0	0	0	0	1	2	1	0	0	8	3	5	13	8	11	6	4	62
C26 Other and ill-defined digestive organs	0	0	0	0	0	0	0	1	1	0	1	1	2	2	4	3	4	19
C30 Nasal cavity and middle ear	0	0	0	0	0	1	0	1	0	0	4	2	0	5	1	3	1	18
C31 Accessory sinuses	0	0	0	0	0	0	0	0	1	1	3	0	4	3	1	0	4	17
C32 Larynx	0	0	0	0	0	0	0	1	1	1	6	1	8	4	9	11	13	55
C33 Trachea	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
C34 Bronchus and lung	5	0	0	0	0	0	2	8	3	19	17	34	45	63	39	38	38	311
C37 Thymus	0	0	0	0	0	0	1	1	0	0	0	4	2	1	0	0	0	9
C38 Heart, mediastinum and pleura	0	1	0	0	0	1	0	0	0	0	0	0	0	0	1	2	1	6
C40 Bone and articular cartilage of limbs	0	1	0	7	7	5	1	3	3	2	1	2	1	0	1	0	0	34
C41 Bone and articular cartilage of other and unspecified sites	0	1	2	2	4	1	2	0	0	1	0	3	2	0	1	1	0	20
C43 Melanoma of skin	1	0	0	0	0	1	1	0	1	4	2	4	1	1	6	4	8	34
C44 Other malignant neoplasms of skin	2	0	0	2	0	1	3	2	2	3	10	15	11	15	13	20	32	131
C45 Mesothelioma	0	0	0	0	0	0	0	0	0	1	0	0	0	1	2	1	1	6

National Cancer Incidence and Mortality Data -2012

ICD 10 code and site	Age Group																	Total
	NK	00-04	05-09	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	
C47 Peripheral nerves and autonomic nervous system	0	1	0	0	0	0	0	0	1	2	1	1	0	2	1	0	0	9
C48 Retro peritoneum and peritoneum	0	0	0	0	0	1	0	1	0	2	0	1	2	1	2	1	2	13
C49 Connective, subcutaneous and other soft tissue	1	8	2	2	5	3	2	10	8	11	4	8	5	16	6	7	8	106
C50 Breast	8	0	0	0	1	4	22	92	192	329	461	457	468	373	276	157	176	3016
C51 Vulva	0	1	0	0	0	0	0	0	2	0	0	2	1	5	6	7	13	37
C52 Vagina	1	0	0	0	0	0	1	0	1	1	1	4	6	6	4	3	8	36
C53 Cervix uteri	1	0	0	0	0	0	1	5	32	75	94	146	141	134	120	71	85	905
C54 Corpus uteri	2	0	0	0	0	2	1	6	16	17	24	62	92	110	78	46	21	477
C55 Uterus not specified	0	1	0	0	0	0	0	1	4	6	7	12	6	6	12	12	2	69
C56 Ovary	1	1	4	4	11	21	16	16	40	52	95	131	124	117	95	71	49	848
C57 Other and unspecified female genital organs	1	0	0	0	0	0	0	0	0	0	1	3	6	11	7	4	0	33
C58 Placenta	0	0	0	0	1	1	2	3	4	3	0	0	0	0	0	0	0	14
C64 Kidney	0	7	4	0	0	1	2	5	1	4	6	12	7	10	9	7	3	78
C65 Renal pelvis	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
C66 Ureter	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	2	0	3
C67 Bladder	0	0	0	0	0	1	0	1	2	2	6	7	12	16	17	19	19	102
C68 Other and unspecified urinary organs	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2	1	4
C69 Eye and adnexa	0	16	3	0	0	0	0	0	0	4	0	2	0	0	0	1	0	26
C70 Meninges	0	0	0	0	0	0	1	2	1	1	3	1	2	1	0	0	0	12

National Cancer Incidence and Mortality Data -2012

ICD 10 code and site		Age Group																Total	
		NK	00-04	05-09	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74		75+
C71	Brain	0	4	14	6	1	3	5	12	9	10	8	13	20	11	9	10	5	140
C72	Spinal cord, cranial nerves and other parts of central nervous system	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	2
C73	Thyroid gland	1	0	0	2	26	52	93	142	171	131	124	103	70	68	44	31	31	1089
C74	Adrenal gland	0	6	4	0	0	0	1	0	2	0	2	1	1	2	0	1	0	20
C75	Other endocrine glands and related structures	0	0	1	0	1	0	0	0	0	0	0	0	0	1	0	1	0	4
C76	Other and ill- defined sites	1	4	0	0	1	0	2	0	4	2	1	4	5	4	3	8	6	45
C80	Unknown primary	3	0	0	0	2	3	3	11	11	28	35	62	68	65	70	45	63	469
C81	Hodgkin disease	0	0	0	1	4	5	9	6	3	3	1	4	3	5	3	2	1	50
C82	Follicular (nodular) non- Hodgkin lymphoma	0	0	0	0	0	1	0	1	0	3	1	5	2	6	3	2	3	27
C83	Diffuse non- Hodgkin lymphoma	0	2	2	1	0	2	1	0	0	1	4	8	5	12	7	2	9	56
C84	Peripheral and cutaneous T-cell lymphoma	0	0	0	1	2	2	0	0	0	0	2	1	1	1	0	1	0	11
C85	Other and unspecified types of non-Hodgkin lymphoma	0	1	1	5	6	2	10	14	11	6	16	16	34	35	38	25	25	245
C86	Other lymphoma	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
C88	Immunoproliferati ve diseases	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	1	0	3
C90	Multiple myeloma and malignant plasma cell	0	0	0	0	0	1	0	0	3	7	7	34	23	36	29	22	31	193

National Cancer Incidence and Mortality Data -2012

ICD 10 code and site	Age Group																	Total	
	NK	00-04	05-09	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+		
neoplasms																			
C91	Lymphoid leukaemia	0	29	20	14	6	2	6	5	5	4	2	8	7	12	4	3	4	131
C92	Myeloid leukaemia	0	5	3	6	8	8	6	12	16	13	16	43	16	16	23	27	24	242
C93	Monocytic leukaemia	0	0	0	2	0	0	1	0	0	0	1	0	0	0	0	2	0	6
C94	Other leukaemia of specified cell type	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	3
C95	Leukaemia of unspecified cell type	0	0	0	0	0	1	0	2	1	1	1	1	1	1	0	4	3	16
C96	Other and unspecified malignant neoplasms of lymphoid, hematopoietic and related tissue	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
D45	Polycythaemia vera	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
D46	Myelodysplastic syndromes	0	0	0	0	0	0	0	0	0	1	1	6	4	4	5	7	3	31
D47	Other neoplasms of uncertain behaviour of lymphoid, haematopoietic and related tissue	0	0	0	0	0	0	0	0	1	0	0	0	2	1	0	2	0	6
Total		38	99	65	56	91	143	213	395	607	856	1133	1497	1538	1586	1340	1021	1095	11773

National Cancer Incidence and Mortality Data -2012

Table 19: Number of cancer deaths by five year age group and site (ICD-10) – Male Sri Lanka 2012

ICD -10 Category	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	other	(%)	Total
1-026 Neoplasms C00-D48	34	33	30	52	56	56	80	91	173	369	677	861	1122	1054	915	1303	2	100.0	6908
1-027 Malignant neoplasm of lip,oral cavity and pharynx	-	-	-	3	2	-	5	13	23	56	97	97	139	113	91	162	-	11.6	801
1-028 Malignant neoplasm of oesophagus C15	-	-	-	-	-	2	3	7	9	22	57	60	72	51	52	59	1	5.7	395
1-029 Malignant neoplasm of stomach C16	-	-	-	1	1	3	2	2	7	9	27	28	47	47	46	61	-	4.1	281
1-030 Malignant neoplasm of colon,rectum and anus C18-C21	-	-	-	1	2	-	3	1	6	13	14	16	36	37	21	38	-	2.7	188
1-031 Malignant neoplasm of liver and intrahepatic bile ducts	-	-	1	-	2	2	3	3	10	22	31	60	74	75	73	93	-	6.5	449
1-032 Malignant neoplasm of pancreas C25	-	-	-	-	-	1	-	1	2	6	6	11	15	12	9	13	-	1.1	76
1-033 Malignant neoplasm of larynx C32	-	-	-	-	-	-	1	-	4	11	15	20	24	22	22	25	-	2.1	144
1-034 Malignant neoplasm of trachea, bronchus and lung	-	-	-	2	2	2	10	8	14	41	77	136	156	122	110	106	-	11.4	786
1-035 Malignant melanoma of skin C34	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	0.0	1
1-036 Malignant neoplasm of breast	-	-	-	-	-	1	-	-	2	2	1	-	1	1	1	1	-	0.1	10
1-037 Malignant neoplasm of cervix uteri C53	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

National Cancer Incidence and Mortality Data -2012

ICD -10 Category	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	other	(%)	Total
1-040 Malignant neoplasm of prostate C61	-	-	-	-	-	-	-	-	1	1	2	11	14	25	29	71	-	2.2	154
1-041 Malignant neoplasm of bladder C67	-	-	-	-	1	-	-	-	-	1	5	17	21	15	18	41	-	1.7	119
1-042 Malignant neoplasm of meninges , brain and other parts of central nervous system	7	7	3	5	4	6	9	4	16	20	29	40	38	38	19	16	-	3.8	261
1-043 Non-Hodgkin s lymphoma C82-C85	2	3	2	3	1	6	7	3	9	5	13	9	21	29	19	16	-	2.1	148
1-044 Multiple myeloma and malignant plasma cell neoplasms	1	1	-	-	-	1	1	2	1	1	4	13	10	12	11	19	-	1.1	77
1-045 Leukaemia C91-C95	9	9	15	15	11	10	11	10	12	16	24	27	38	34	23	42	-	4.4	306
1-046 Remainder of malignant neoplasm	11	13	9	22	30	21	25	36	55	141	274	314	414	417	364	533	1	38.8	2680
1-047 Remainder of neoplasms D00-D48	4	-	-	-	-	1	-	1	2	2	-	2	2	4	7	7	-	0.5	32

(%)* Relative proportion of cancers of all sites

National Cancer Incidence and Mortality Data -2012

Table 20: Number of cancer deaths by five year age group and site (ICD-10) – Female Sri Lanka 2012

ICD 10 Category	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	Other	(%)*	Total
1-026 Neoplasms C00-D48	27	20	19	27	31	48	74	127	222	340	592	697	800	788	709	1149	3	100.0	5673
1-027 Malignant neoplasm of lip,oral cavity and pharynx	-	-	-	3	1	1	3	-	6	5	25	18	40	41	37	89	1	4.8	270
1-028 Malignant neoplasm of oesophagus C15	-	-	-	-	-	-	2	2	4	12	27	23	38	52	35	47	-	4.3	242
1-029 Malignant neoplasm of stomach C16	-	1	-	-	1	-	1	3	5	12	18	20	37	40	31	83	-	4.4	252
1-030 Malignant neoplasm of colon,rectum and anus C18-C21	-	-	1	-	-	4	1	3	2	8	14	18	14	25	22	38	-	2.6	150
1-031 Malignant neoplasm of liver and intrahepatic bile ducts	2	2	-	-	1	2	2	3	11	22	25	33	45	37	39	44	-	4.7	268
1-032 Malignant neoplasm of pancreas C25	-	-	-	-	-	-	1	1	4	1	8	13	6	6	11	13	-	1.1	64
1-033 Malignant neoplasm of larynx C32	-	-	-	-	-	-	-	-	-	2	6	5	9	10	18	30	-	1.4	80
1-034 Malignant neoplasm of trachea, bronchus and lung	-	-	-	-	2	-	9	9	12	24	34	59	53	44	28	59	-	5.9	333
1-035 Malignant melanoma of skin C34	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	0.0	1
1-036 Malignant neoplasm of breast	-	1	-	-	-	1	11	27	37	60	94	94	100	59	50	85	-	10.9	619
1-037 Malignant neoplasm of cervix uteri C53	-	-	-	-	-	-	-	4	5	12	18	22	19	16	13	17	-	2.2	126
1-038 Malignant neoplasm of other and unspecified parts of uterus	-	-	-	-	-	-	3	1	4	12	30	24	44	39	47	62	1	4.7	267
1-039 Malignant neoplasm of ovary C56	-	-	-	1	2	5	3	5	11	15	24	23	23	22	27	23	-	3.2	184
1-041 Malignant neoplasm of bladder C67	-	-	-	-	-	-	-	-	-	1	1	5	4	3	5	13	-	0.6	32

National Cancer Incidence and Mortality Data -2012

ICD 10 Category	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	Other	(%)*	Total
1-042 Malignant neoplasm of meninges , brain and other parts of central nervous system	5	4	3	3	3	5	10	17	14	23	20	30	33	34	19	14	-	4.2	237
1-043 Non-Hodgkin s lymphoma C82-C85	2	1	2	-	2	2	3	1	1	1	9	14	15	13	12	13	-	1.6	91
1-044 Multiple myeloma and malignant plasma cell neoplasms		-	-	-	-	-	1	-	7	3	2	9	16	16	4	13	-	1.3	71
1-045 Leukaemia C91-C95	9	7	7	11	6	11	9	10	15	8	32	21	17	27	28	36	-	4.5	254
1-046 Remainder of malignant neoplasm	9	4	5	9	13	13	14	37	82	118	202	260	282	301	279	466	1	36.9	2095
1-047 Remainder of neoplasms D00-D48	-	-	1	-	-	4	-	4	2	1	3	6	5	3	4	4	-	0.7	37

(%)* Relative proportion of cancers of all sites

National Cancer Incidence and Mortality Data -2012

3.5. Age specific mortality rate, Crude mortality rate (CR) and Age standardized mortality

Table 21: Age specific , Crude (CR) and Age Standardized Mortality Rate per 100,000 population– Male Sri Lanka - 2012

ICD 10 Category	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	CR	ASR
1-026 Neoplasms C00-D48	3.9	3.7	3.6	6.3	7.5	7.5	10.0	13.3	26.1	59.7	116.5	171.9	263.7	371.4	503.2	580.1	70.1	65.5
1-027 Malignant neoplasm of lip, oral cavity and pharynx	0.0	0.0	0.0	0.4	0.3	0.0	0.6	1.9	3.5	9.1	16.7	19.4	32.7	39.8	50.0	72.1	8.1	7.5
1-028 Malignant neoplasm of oesophagus C15	0.0	0.0	0.0	0.0	0.0	0.3	0.4	1.0	1.4	3.6	9.8	12.0	16.9	18.0	28.6	26.3	4.0	3.7
1-029 Malignant neoplasm of stomach C16	0.0	0.0	0.0	0.1	0.1	0.4	0.3	0.3	1.1	1.5	4.6	5.6	11.0	16.6	25.3	27.2	2.9	2.7
1-030 Malignant neoplasm of colon,rectum and anus C18-C21	0.0	0.0	0.0	0.1	0.3	0.0	0.4	0.1	0.9	2.1	2.4	3.2	8.5	13.0	11.5	16.9	1.9	1.8
1-031 Malignant neoplasm of liver and intrahepatic bile ducts	0.0	0.0	0.1	0.0	0.3	0.3	0.4	0.4	1.5	3.6	5.3	12.0	17.4	26.4	40.1	41.4	4.6	4.3
1-032 Malignant neoplasm of pancreas C25	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.3	1.0	1.0	2.2	3.5	4.2	4.9	5.8	0.8	0.7
1-033 Malignant neoplasm of larynx C32	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.6	1.8	2.6	4.0	5.6	7.8	12.1	11.1	1.5	1.4
1-034 Malignant neoplasm of trachea, bronchus and lung	0.0	0.0	0.0	0.2	0.3	0.3	1.3	1.2	2.1	6.6	13.2	27.2	36.7	43.0	60.5	47.2	8.0	7.4
1-035 Malignant melanoma of skin C34	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1-036 Malignant neoplasm of breast	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.3	0.3	0.2	0.0	0.2	0.4	0.5	0.4	0.1	0.1

National Cancer Incidence and Mortality Data -2012

ICD 10 Category	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	CR	ASR
1-040 Malignant neoplasm of prostate C61	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.0	2.2	3.3	8.8	15.9	31.6	1.6	1.5
1-041 Malignant neoplasm of bladder C67	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.2	0.9	3.4	4.9	5.3	9.9	18.3	1.2	1.1
1-042 Malignant neoplasm of meninges, brain and other parts of central nervous system	0.8	0.8	0.4	0.6	0.5	0.8	1.1	0.6	2.4	3.2	5.0	8.0	8.9	13.4	10.4	7.1	2.6	2.5
1-043 Non-Hodgkin s lymphoma C82-C85	0.2	0.3	0.2	0.4	0.1	0.8	0.9	0.4	1.4	0.8	2.2	1.8	4.9	10.2	10.4	7.1	1.5	1.4
1-044 Multiple myeloma and malignant plasma cell neoplasms	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.3	0.2	0.2	0.7	2.6	2.4	4.2	6.0	8.5	0.8	0.7
1-045 Leukaemia C91-C95	1.0	1.0	1.8	1.8	1.5	1.3	1.4	1.5	1.8	2.6	4.1	5.4	8.9	12.0	12.6	18.7	3.1	3.0
1-046 Remainder of malignant neoplasm	1.3	1.5	1.1	2.7	4.0	2.8	3.1	5.2	8.3	22.8	47.1	62.7	97.3	147.0	200.2	237.3	27.2	25.5
1-047 Remainder of neoplasms D00-D48	0.5	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.3	0.3	0.0	0.4	0.5	1.4	3.8	3.1	0.3	0.3

National Cancer Incidence and Mortality Data -2012

Table 22: Age specific, Crude (CR) and Age Standardized Mortality Rate per 100,000 population– Female Sri Lanka 2012

ICD 10 Category	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	Other	CR	AS R
1-026 Neoplasms C00-D48	3.1	2.3	2.3	3.3	3.9	5.9	8.8	17.6	31.8	50.9	92.8	123.7	162.4	225.4	307.5	345.7		54.0	44.4
1-027 Malignant neoplasm of lip, oral cavity and pharynx	0.0	0.0	0.0	0.4	0.1	0.1	0.4	0.0	0.9	0.7	3.9	3.2	8.1	11.7	16.0	26.8		2.6	2.0
1-028 Malignant neoplasm of oesophagus C15	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.3	0.6	1.8	4.2	4.1	7.7	14.9	15.2	14.1		2.3	1.9
1-029 Malignant neoplasm of stomach C16	0.0	0.1	0.0	0.0	0.1	0.0	0.1	0.4	0.7	1.8	2.8	3.6	7.5	11.4	13.4	25.0		2.4	1.9
1-030 Malignant neoplasm of colon, rectum and anus C18-C21	0.0	0.0	0.1	0.0	0.0	0.5	0.1	0.4	0.3	1.2	2.2	3.2	2.8	7.2	9.5	11.4		1.4	1.2
1-031 Malignant neoplasm of liver and intrahepatic bile ducts	0.2	0.2	0.0	0.0	0.1	0.2	0.2	0.4	1.6	3.3	3.9	5.9	9.1	10.6	16.9	13.2		2.6	2.1
1-032 Malignant neoplasm of pancreas C25	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.6	0.1	1.3	2.3	1.2	1.7	4.8	3.9		0.6	0.5
1-033 Malignant neoplasm of larynx C32	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.9	0.9	1.8	2.9	7.8	9.0		0.8	0.6

National Cancer Incidence and Mortality Data -2012

ICD 10 Category																	Other	CR	ASR
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+			
1-034 Malignant neoplasm of trachea, bronchus and lung	0.0	0.0	0.0	0.0	0.3	0.0	1.1	1.2	1.7	3.6	5.3	10.5	10.8	12.6	12.1	17.8		3.2	2.6
1-035 Malignant melanoma of skin C34	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
1-036 Malignant neoplasm of breast	0.0	0.1	0.0	0.0	0.0	0.1	1.3	3.7	5.3	9.0	14.7	16.7	20.3	16.9	21.7	25.6		5.9	4.8
1-037 Malignant neoplasm of cervix uteri C53	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.7	1.8	2.8	3.9	3.9	4.6	5.6	5.1		1.2	1.0
1-038 Malignant neoplasm of other and unspecified parts of uterus	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.1	0.6	1.8	4.7	4.3	8.9	11.2	20.4	18.7		2.5	2.1
1-039 Malignant neoplasm of ovary C56	0.0	0.0	0.0	0.1	0.3	0.6	0.4	0.7	1.6	2.2	3.8	4.1	4.7	6.3	11.7	6.9		1.8	1.5
1-040 Malignant neoplasm of prostate C61																			
1-041 Malignant neoplasm of bladder C67	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.9	0.8	0.9	2.2	3.9		0.3	0.2
1-042 Malignant neoplasm of meninges, brain and other parts of central nervous system	0.6	0.5	0.4	0.4	0.4	0.6	1.2	2.4	2.0	3.4	3.1	5.3	6.7	9.7	8.2	4.2		2.3	2.0

National Cancer Incidence and Mortality Data -2012

ICD 10 Category																	Other	CR	ASR
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+			
1-043 Non-Hodgkin s lymphoma C82-C85	0.2	0.1	0.2	0.0	0.3	0.2	0.4	0.1	0.1	0.1	1.4	2.5	3.0	3.7	5.2	3.9		0.9	0.7
1-044 Multiple myeloma and malignant plasma cell neoplasms	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	1.0	0.4	0.3	1.6	3.2	4.6	1.7	3.9		0.7	0.6
1-045 Leukaemia C91-C95	1.0	0.8	0.9	1.3	0.8	1.4	1.1	1.4	2.2	1.2	5.0	3.7	3.5	7.7	12.1	10.8		2.4	2.2
1-046 Remainder of malignant neoplasm	1.0	0.5	0.6	1.1	1.6	1.6	1.7	5.1	11.8	17.7	31.7	46.2	57.3	86.1	121.0	140.2		19.9	16.3
1-047 Remainder of neoplasms D00-D48	0.0	0.0	0.1	0.0	0.0	0.5	0.0	0.6	0.3	0.1	0.5	1.1	1.0	0.9	1.7	1.2		0.4	0.3

National Cancer Incidence and Mortality Data -2012

Table 23: Cancer incidence by geographical area - 2012

Province	District	Male		Female		Total	
		No	(%)	No	(%)	No	(%)
	Not known	2497	22.0	2003	17.0	4500	19.5
Western		3077	27.1	3384	28.7	6461	28
	Colombo	1366	12.0	1530	13.0	2896	12.5
	Gampaha	1199	10.6	1289	10.9	2488	10.8
	Kalutara	512	4.5	565	4.8	1077	4.7
Central		1084	9.5	1260	10.7	2344	10.2
	Kandy	621	5.5	712	6	1333	5.8
	Matale	266	2.3	257	2.2	523	2.3
	Nuwara Eliya	197	1.7	291	2.5	488	2.1
Southern		1218	10.8	1305	11.1	2523	10.9
	Galle	599	5.3	650	5.5	1249	5.4
	Hambantota	214	1.9	243	2.1	457	2
	Matara	405	3.6	412	3.5	817	3.5
Northern		115	1.0	323	2.8	438	1.9
	Jaffna	64	0.6	210	1.8	274	1.2
	Kilinochchi	14	0.1	19	0.2	33	0.1
	Mannar	10	0.1	25	0.2	35	0.2
	Mullativu	3	0	19	0.2	22	0.1
	Vavuniya	24	0.2	50	0.4	74	0.3
Eastern		428	3.8	524	4.4	952	4.0
	Ampara	195	1.7	251	2.1	446	1.9
	Batticaloa	134	1.2	176	1.5	310	1.3
	Trincomalee	99	0.9	97	0.8	196	0.8
North western		1079	9.5	1095	9.3	2174	9.4
	Kurunegala	764	6.7	777	6.6	1541	6.7
	Puttalam	315	2.8	318	2.7	633	2.7
North central		451	4.0	446	3.8	897	3.9
	Anuradhapura	325	2.9	324	2.8	649	2.8
	Polonnaruwa	126	1.1	122	1	248	1.1
Uva		503	4.4	537	4.6	1040	4.5
	Badulla	354	3.1	395	3.4	749	3.2
	Moneragala	149	1.3	142	1.2	291	1.3
Sabaragamuwa		911	8.0	896	7.6	1807	7.9
	Kegalle	437	3.8	386	3.3	823	3.6
	Ratnapura	474	4.2	510	4.3	984	4.3
Total		11363	100	11773	100	23136	100

4. List of References

- Annual Health Bulletin – 2012, Medical Statistics Unit, Ministry of Health, Sri Lanka
http://www.health.gov.lk/moh_final/english/public/elfinder/files/publications/AHB/Annual%20Health%20Bulletin%20-%202012.pdf [27 April 2020]
- Cancer Registry, National Cancer Control Programme (2018), Cancer Incidence Data, Sri Lanka, 2011 <https://www.nccp.health.gov.lk/en> [27 April 2020]
- Department of Census & Statistics,
<http://www.statistics.gov.lk/PopHouSat/VitalStatistics/Tables.asp?Year=2012> [27 April 2020]
- Fritz, A. Percy. C. Jack, A. Shanmugaratnam, K. Sobin, L. Parkin, D.M. Whelan s. (ed) (2009) International Classification of Diseases of Oncology, 3rd Edition WHO, Geneva
- Glossary of statistical terms; <http://www-dep.iarc.fr/WHOdb/glossary.htm> [27 April 2020]
ICD 10-10th revision, Fifth edition 2016, World Health Organization
- <https://www.who.int/classifications/icd/icdonlineversions/en/> [27 April 2020]
- International Classification of Childhood Cancer, Third Edition, *Cancer 2005; 103: 1457-67*
- Population Tables, Census of Population and Housing- 2012 Sri Lanka Department of Census and Statistics

5. Appendix - Statistical Terminology

5.1. Population at risk

The population at risk includes all individuals susceptible to a specific cancer. It is defined on the basis of demographic variables, such as place of residence, sex, age group. Years of risk duration are counted in person-years.

5.2. Incidence

Incidence quantifies the number of new cases that develop in a population of individuals at risk during a specified time interval. Usually it is given as per 100,000 populations per year.

5.3. 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.

5.4. 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 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.

$$\text{Crude incidence rate} = \frac{\text{Total number of cases in the year}}{\text{Total midyear population at risk}} \times 100,000$$

$$\text{Crude death rate} = \frac{\text{Total number of deaths in the year}}{\text{Total midyear population at risk}} \times 100,000$$

5.5. Age-Specific Rate

The age-specific rate is calculated simply by dividing the number of new cancers or cancer deaths observed in a given age category during a given time period by the corresponding number of person years in the population at risk in the same age category and time period. The result is usually expressed as an annual rate per 100,000 person-years. In this publication, five- year age categories are used

$$\text{Age-specific incidence rate} = \frac{\text{Number of cases in the five-year age group}}{\text{Population at risk in the corresponding age group}} \times 100,000$$

$$\text{Age-specific death rate} = \frac{\text{Number of deaths in the five-year age group}}{\text{Population at risk in the corresponding age group}} \times 100,000$$

5.6. ASR (Age Standardized Rate)

An age-standardized 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 dying from 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 mortality rate is then called age-standardised mortality rate (world). The world standard population used within the application is as proposed by Segi (1960) and modified by Doll and *al.* (1966). The ASR is also expressed per 100,000.

Age distribution of the world standard population	
Age group	w _i
0-4	12000
5-9	10000
10-14	9000
15-19	9000
20-24	8000
25-29	8000
30-34	6000
35-39	6000
40-44	6000
45-49	6000
50-54	5000
55-59	4000
60-64	4000
65-69	3000
70-74	2000
75-79	1000
80-84	500
85+	500
Total	100000

5.7. life time risk (Cumulative Risk)

Cumulative incidence/mortality is the probability or risk of individuals getting/dying from the disease within a specified age interval within a time period.

(The cumulative risk is the risk which an individual would have of developing the cancer under study during a certain age span if no other causes of death were in operation