

CANCER INCIDENCE

IN SELECTED MUNICIPALITIES OF THE

EASTERN CAPE PROVINCE

2013-2017



CANCER INCIDENCE

CANCER CASES

CANCER TYPES

CANCER TRENDS



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Hospitals in the registration area

North-Eastern Region

Bizana St Patrick's & Greenville Hospitals
Lusikisiki St Elizabeth, Holy Cross and Bambisana Hospitals

South-Western Region

Butterworth Butterworth Hospital
Centane Tafalofefe Hospital
Nqamakwe Nqamakwe Health Day Centre
East London Oncology Radiation Unit, Paediatric Unit and Haematology Department, Frere Hospital

Referral hospitals outside the registration area

Eastern Cape Province Hospitals

Mthatha Oncology Unit, Nelson Mandela Academic Hospital, Nelson Mandela Pathology Laboratory, National Health Laboratory Service (NHLS), Mthatha General Hospital

KwaZulu-Natal Hospitals

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ECCR is a full member of both the International Association of Cancer Registries (IACR) and African Cancer Registry Network (AFCRN)

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ABBREVIATIONS AND ACRONYMS

ECCR Eastern Cape Cancer Registry

CANSA Cancer Association of South Africa

AFCRN African Cancer Registry Network

IARC International Agency for Research on Cancer

IACR International Association of Cancer Registries

CI5 Cancer Incidence in Five Continents

NGOs Non-Governmental Organisations

PBCR Population-based Cancer Registry

SAMRC South African Medical Research Council

NHLS National Health Laboratory Services

ICD-O International Coding for Diseases in Oncology

ICD-10 International Statistical Classification of Diseases and Related Problems
(10th Revision edition)

CanReg Cancer Registration Computer Software

Cum. Rate Cumulative Rate

LR Lifetime Risk

HPV Human Papilloma Virus

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SUMMARY

What does the Eastern Cape Cancer Registry do?

The Eastern Cape Cancer Registry (ECCR) is one of the oldest baseline projects of the South African Medical Research Council (SAMRC) and stability of data collection was achieved since 1998. The ECCR is a population-based cancer registry aiming to provide comprehensive, accurate and timely data on cancer incidence and distribution to inform cancer control and prevention programmes. Currently, cases are collected from 15 hospitals with which the registry collaborates; 8 in the cancer surveillance area and 7 referral hospitals including one regional pathology laboratory; the National Health Laboratory Services (NHLS).

Characteristics of data collected

We record all new invasive cancers diagnosed in each health facility within the demarcated cancer surveillance area. A minimum amount of information is collected for every new cancer incident case using a designed cancer collection tool to maximize data accuracy (see appendix 1). For each new incident cancer case, we record:

Mandatory information including;

- Demographics (includes patient name, address, date of birth (DOB/estimated age) and
- Tumour details (includes site, morphology, grade/stage, behaviour, date of diagnosis)

Optional information

- Treatment received
- Vital status
- Last date of contact

Each year, we process approximately 1 000 new cancer notifications and 500 notifications for old cases, the latter information is valuable because the registry is not just counting but generating and continuously updating a database of all cancer cases occurring in the surveillance area. The registry database has now just over 16 000 malignant tumours diagnosed in the surveillance area over more than 20 years.

How are new cancer incident cases registered?

Though cancer is a reportable disease in South Africa since 2011, the ECCR relies mainly on active case finding (80%) and passive at a very minimal scale (20%). Currently, in passive case finding, 90% of cancer notifications are received electronically. All data are processed and stored within the registry database using CanReg5 programme which is a software designed by the International Agency for Research on Cancer (IARC) and used widely especially by cancer registries in low-middle income countries (LMICs). All aspects of data processing involve quality checking to maximise data accuracy and reliability.

Who uses cancer registry data?

Researchers including students, clinicians, public health professionals and health planners can contact the registry to request cancer incidence information after meeting data sharing criteria and complying with the registry data control measures. Note well;

- *Identifiable data are never shared with outside people; only registry staff have access to this information*
- *We never share data with medical aid schemes*
- *Technical reports released are available in the public domain and are accessible to everybody with appropriate acknowledgement of the authors.*

How can the cancer registry data be used?

ECCR supports cancer control by releasing data for:

- Monitoring cancer in urban and rural population of the Eastern Cape Province incidence rates (new cases) and survival
- ECCR contributes to burden of disease and cause of death estimates in South Africa
- Cancer research (clinical, epidemiological and behavioural)
- National and international comparison and benchmarking
- Health services planning and research
- Evaluating clinical care (quality of clinical care)
- Population-based cancer screening planning and evaluation
- Jointly work with Cancer Association of South Africa (CANSA) on cancer prevention programmes especially cancer awareness campaigns
- Planning, execution and information sharing during cancer awareness programmes

ECCR participates in international collaborative research projects that include;

- CONCORD 2 and 3, the global cancer survival rates
- Cancer Incidence in Five Continents (CI5); Volumes X and XI
- AFCCRN regional studies including cancer incidence and survival in sub-Saharan Africa volumes I, II and III

BACKGROUND

The Eastern Cape Cancer Registry (ECCR) is one of the oldest projects established in 1998 by the South African Medical Research Council (SAMRC). It is one of the pre-dominant rural population-based cancer registries in the African continent and has developed as the only functional population-based cancer registry (PBCR) in South Africa. The main objective of this cancer registry is to provide timely, complete, comparable and high-quality cancer data that has a significant impact on decision making of policy makers, health professionals, researchers, non-governmental organisations (NGOs) and other stakeholders including communities. It has a critical role to play in providing information about the patterns and trends of cancers and direction of intervention programmes including evaluation thereof for the rural population in the Eastern Cape Province.

A series of reports have been produced over the years which include 2003, 2008, 2013 and 2015 technical reports (Somdyala, et al., 2003, 2008, 2010, 2015) and the current report provides the cancer incidence update for the period 2013-2017. The registry has survived challenges of fragile infrastructure that include imprecise means of keeping patients' information in collaborating health facilities. This has had a negative impact on case finding. However, the quality and standard of incidence data generated remains high. Because of continuous repeated visits to health facilities for continuous collection of new cases and correcting errors. Moreover, by complete information that found incomplete during data sorting or processing. The linkage of cancer patients to pathology reports and other documents available in secondary/tertiary hospitals, including strong work relations established between the registry and health professionals in the cancer surveillance area, also contributed a great deal to high data quality. Technical expertise and support from both the World Health Organisation (WHO)-International Agency for Research on Cancer (IARC) and the African Cancer Registry Network (AFCRN) need a special mention and are greatly appreciated.

POPULATION AT RISK

Geography

The Eastern Cape Province is in the South-Eastern part of South Africa. It shares its borders with KwaZulu-Natal, Lesotho, Free State, Northern Cape and Western Cape. The Province is made up of six districts: Amathole, Chris Hani, Joe Gqabi, Sarah Baartman, O.R. Tambo and Alfred Nzo as well as two Metro Municipalities – Nelson Mandela Bay and Buffalo City Metro. ECCR only covers two districts (Amathole, and OR Tambo) and one recently added metro (Buffalo City) (Figure 1).



Figure 1: Map showing the cancer registration area in the Eastern Cape Province

Population size and composition

The ECCR is population-based covering nine selected magisterial areas. The selected magisterial areas include eight rural areas Bizana, Flagstaff, Lusikisiki in the North-Eastern region; Butterworth, Centane, Idutywa, Nqamakwe, and Willowvale in the South-Western region and one urban area Buffalo City in the East Coast Region. These areas constitute a population of 1.8 million of which majority are black Africans with a variety of cultural diversity and work-related migration that is common. There is circulatory movement of people between an urban and a rural-based home and people also relocate from rural to urban areas due to poverty seeking for job opportunities (Mlambo, 2018).

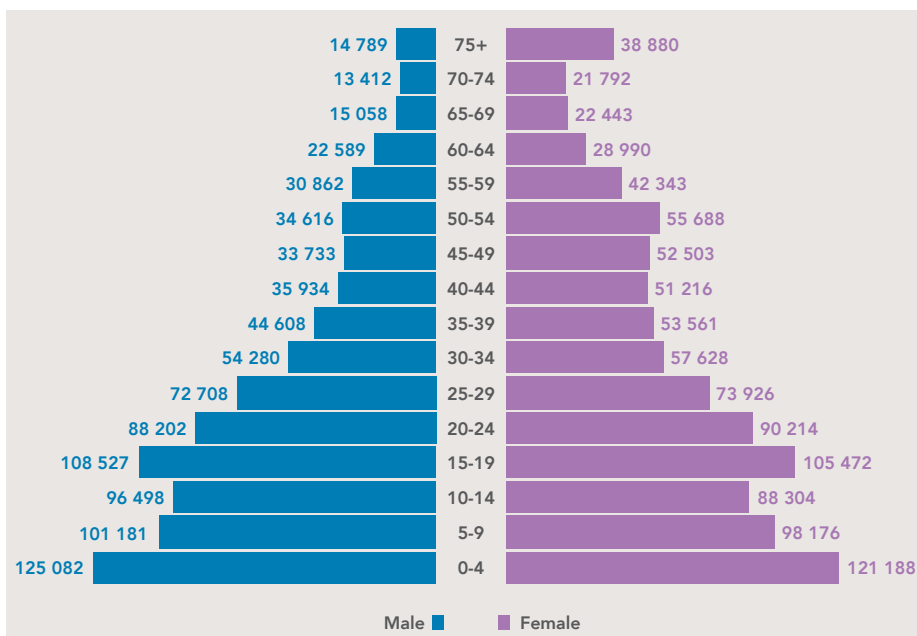


Figure 2. Estimated average annual population at risk for nine magisterial areas for the period 2013-2017

The population estimates were generated from 2011 population census in South Africa composed of 54% (1 894 403) female and 47% (892 079) male for all ages (Stats SA, 2011). The average annual population for the five-year period (2013-2017) was 1 894 000; the composition by sex and five-year age groups is shown in the population pyramid below (Figure 2).

METHODOLOGY

Case finding

The registry collaborates with these hospitals; Bambisana, Butterworth, Greenville, Holy Cross, Nqamakwe Health Day Centre, St. Elizabeth, St. Patrick's and Tafalofefe. Other hospitals outside the surveillance area with special cancer services to which patients are referred or refer themselves include in KwaZulu-Natal – Addington, Inkosi Albert Luthuli, King Dinu-Zulu, Usher Memorial and in the Eastern Cape Province – Frere Hospital Radiation-Oncology Unit and Nelson Mandela Academic Hospital. There is also one pathology laboratory, the National Health Laboratory Services (NHLS), where linkage with pathology reports of patients is done.

Cancer data are mainly collected by registry staff through visits to collaborating hospitals on annual basis. During hospital visits multiple sources are used for cancer data abstraction, these include medical records and admission books in outpatients' and inpatients' departments including oncology units, patients' treatment files and death registers in male and female wards including paediatric. Special records such as inter-hospital referral books doctors' treatment books, procedure books are also used. Linking information to multiple sources improves the quality of information collected by the registry. In a smaller scale data collectors who are oncology nurses working within the collaborating hospitals were trained to collect data for cancer registration. They send data to the cancer registry on a monthly basis.

Data Management

Collected cases are received in two form: electronic Microsoft Excel spreadsheet and hard notification forms. The received cases are sorted, cleaned for duplicates, and then coded for address using magisterial codes according to census. Thereafter, the cases are coded by primary site and morphology according to the International Classification of Diseases Oncology (ICD-O) version (third edition). Notification forms are printed and information captured into the computer using CanReg5 program; a statistical software widely used by cancer registries to capture, keep and manage cancer data. After capturing, forms are filed and locked away.

Cases for the period 2013-2017 were exported from the database into a Microsoft Excel and quality checks performed for quality, validity and reliability. Each case was checked for information mismatch; name/ethnicity, name/sex, topography/morphology as well as topography/age. Any inconsistencies were followed and corrected with the help of data collectors and during visits to collaborating hospitals. Annual trends were checked, discrepancies flagged and followed. Below is the summary schematic flow of data management.

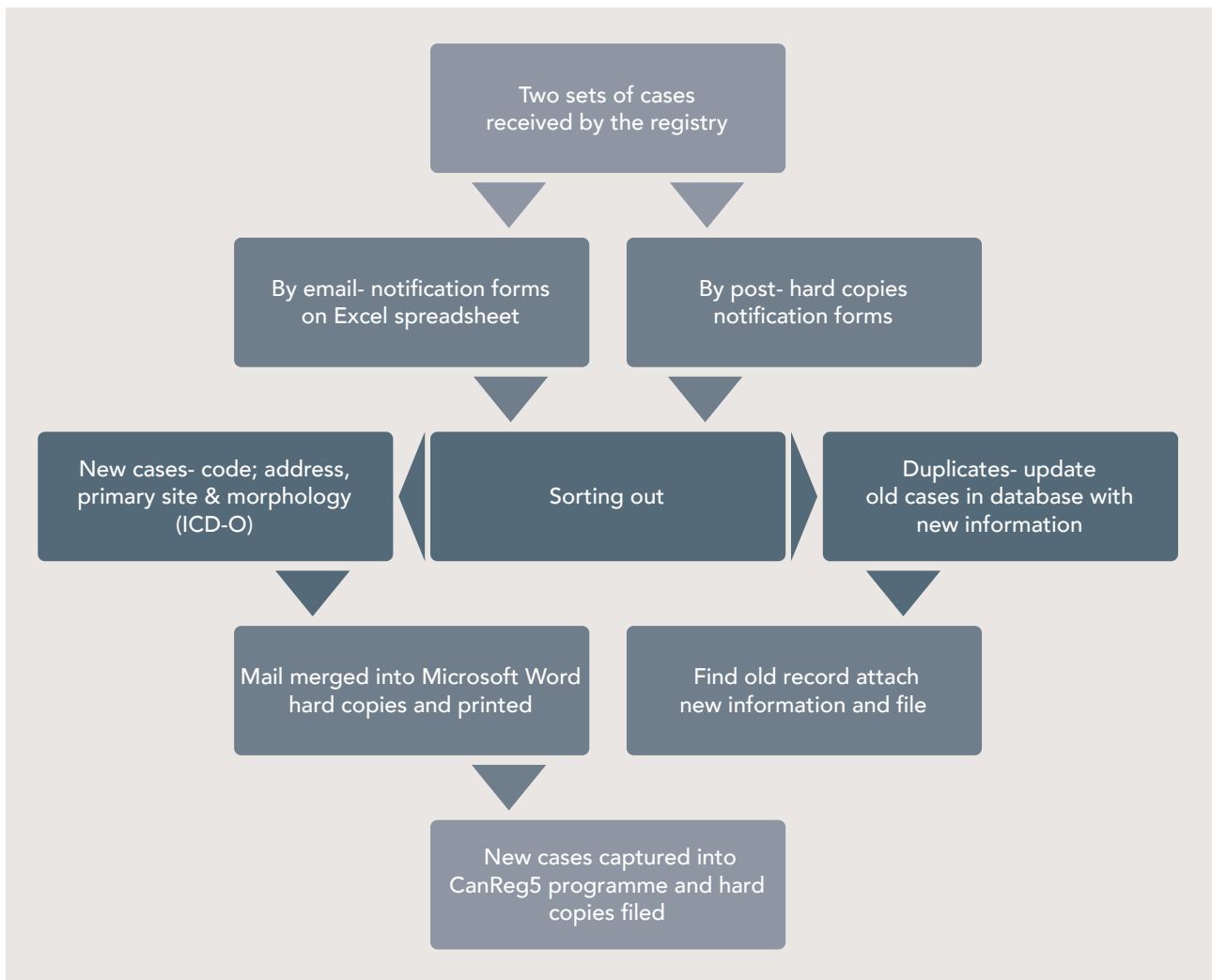


Figure 3. Data management process

Statistical methods

Basic descriptive statistics

Analysis for frequencies was done using CanReg5. This provided occurrences reported by age, sex, year and magisterial areas. Comparison of simple crude rates can give a false picture because of differences in the age structure of the populations to be compared (Boyle and Parkin, 1991). Since cancer is more common in older ages, crude rates are higher in older populations than younger ones. Thus, when comparing cancer levels between two or more areas, or when investigating the pattern of cancer over time for the same area, it is important to allow for the changing or differing population age structure. This is accomplished by age standardization. Direct standardization method (Parkin, et al., 1997) was used to calculate cancer age standardized incidence rates (ASRs) per 100 000 of population using world population standard (Doll & Smith, 1982). Age standardization is carried out by calculating Proportional Incidence Ratios (PIRs), which is the ratio of the expected and observed number of cases in the subgroup due to a specific cancer.

RESULTS

Basis of diagnosis

Pathologically verified cases accounted for 90%, while laboratory tests were 3.1% and clinical only 6.9% (Table 1). High percentage of cytology and histologically verified cases is a good sign because it reflects that most cases had a chance of referral for better diagnosis and management.

Table 1. Basis of diagnosis

Basis of diagnosis	2013-2017	Percentage (%)
*Clinical only	479	6.9
*Laboratory	219	3.1
**Cytology and Histology	6251	90
Death certificate only	–	–
Total	6949	100

* Non-microscopic

** Microscopic

Descriptive analysis

A total of 6 949 new cancer cases were observed for 2013-2017 period, of which 2013 contributed 17.1% (n= 1 193) to the total number of cases, 2014 contributed 18.3% (n= 1 273) which is only 1% increase, while 2015 contributed 20.9% (n= 1 449) of the total cases reported. However, 2016 contributed 19.7% (n= 1 368) a slight decline of 1% and year 2017 contributed 24.0% (n= 1 666) of the total cases reported for the period of 2013-2017. Results shown in Figure 4 below.

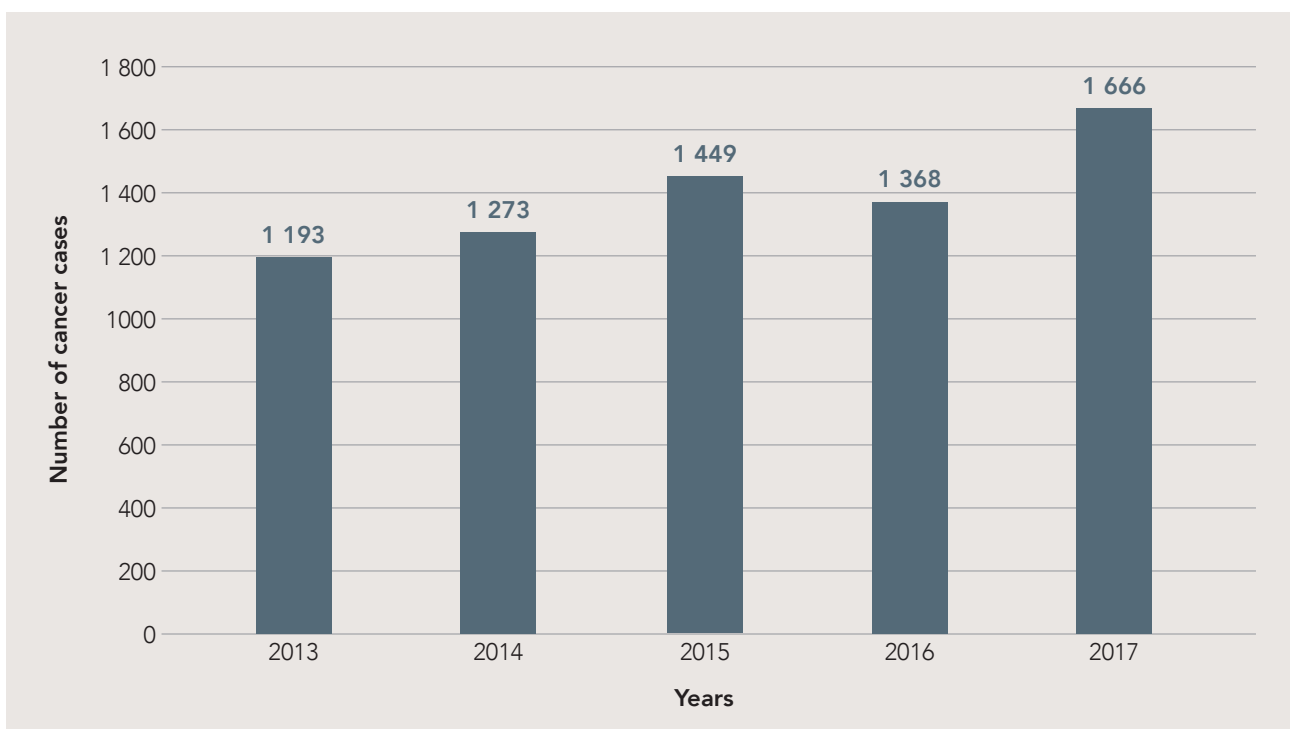


Figure 4. Number of cases recorded by year, 2013-2017

Females contributed 65% (n= 4 529) of the total cases of which 50-69 years age-group dominated with 25.4%, followed by 30-49 years age-group with 20.3%. Similarly, in males age group 50-69 year dominated and contributed 16.5%. In children age group 0-14 years, both boys and girls contributed just 1% as shown in figure 5 below.

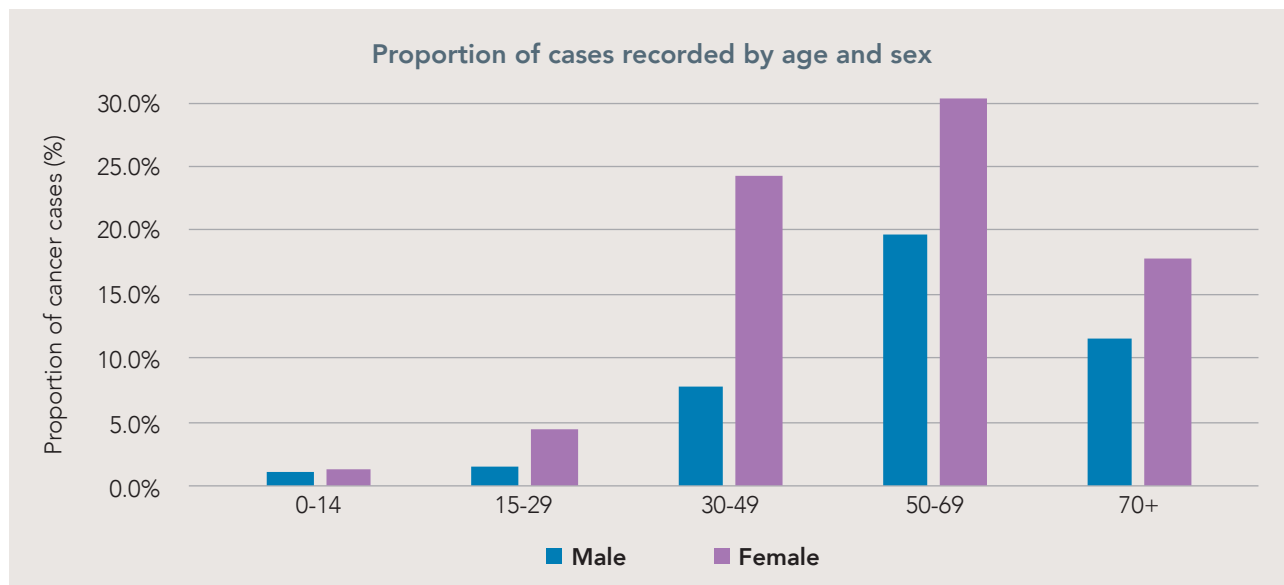


Figure 5. Proportion of cases recorded by age and sex

The southern part of the cancer surveillance composed of five rural and one urban magisterial area, while northern part has only three rural magisterial areas. It is important to highlight the fact that magisterial areas in the northern part contributed about 45% to the total number of new cases of which Lusikisiki contributed 26%, while Bizana 12% and Flagstaff 7%. In the southern part Buffalo City reported more cases with 33% of the total cases followed by Centane and Butterworth with 6% and 5%, respectively.

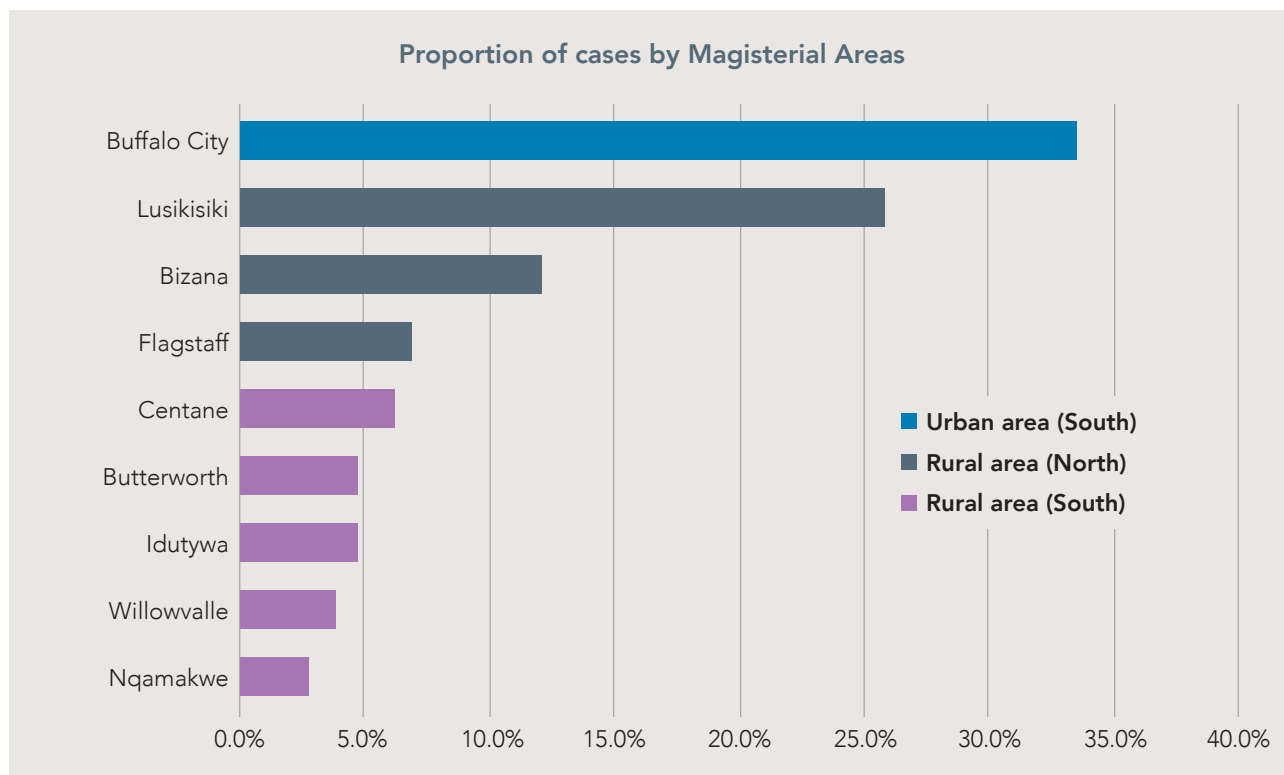


Figure 6. Proportion of cases by Magisterial Areas

Most common cancers by sex

Table 2a and 2b below shows most common cancers among males and females. In Table 2a, prostate cancer was the most commonly diagnosed malignancy amongst males with 21.3% cases followed by oesophagus 17.6%. Colon cancer was the least diagnosed in relation to top 10 in both males 2.3% and females 1.5%.

Table 2a. Number and frequency of top 10 cancers in males

Cancer site	N	%
Prostate (C61)	518	21.3%
Oesophagus (C15)	421	17.6%
Trachea, bronchus and lung (C33-34)	208	8.6%
Kaposi sarcoma (C46)	196	8.2%
Larynx (C32)	85	3.5%
Liver (C22)	74	3.1%
Non-Hodgkin lymphoma (C82-85, C96)	71	3.0%
Mouth (C03-06)	66	2.7%
Tongue (C01-02)	59	2.5%
Colon (C18)	54	2.3%
Other	668	27.3%
Total	2 420	100%

In Table 2b cervical cancer was the most commonly diagnosed (35%) malignancy in females and followed by breast cancer accounting for 17.6% of the total cases. Oesophagus was reported the third highest among females with 13.1%.

Table 2b. Number and frequency of top 10 cancers in females

Cancer site	N	%
Cervix uteri (C53)	1586	35.0%
Breast (C50)	796	17.6%
Oesophagus (C15)	590	13.1%
Kaposi sarcoma (C46)	165	3.6%
Corpus uteri (C54)	135	3.0%
Ovary (C56)	123	2.7%
Trachea, bronchus and lung (C33-34)	100	2.2%
Non-Hodgkin lymphoma (C82-85, C96)	84	1.9%
Vulva (C51)	78	1.7%
Colon (C18)	69	1.5%
Other	803	17.7%
Total	4 529	100%

Childhood cancers

There were 127 cases reported for children age 0-14 and the most common cancers among boys were leukemia unspecified, kidney (Wilm's tumour), non-Hodgkin lymphoma, connective and soft tissue (Table 3). In girls, the most common cancers were Wilms' tumour, leukaemia unspecified, brain and Kaposi sarcoma. Hodgkin disease was common among boys only and lymphoid leukaemia was common only in girls.

Table 3. Most common cancers age 0-14 years by gender

Boys	N	%	Girls	N	%
Leukaemia unspecified	8	12%	Kidney (Wilms' tumour)	14	20%
Kidney (Wilms' tumour)	6	9%	Leukaemia unspecified	12	17%
Non-Hodgkin lymphoma	6	9%	Brain, nervous system	8	11%
Connective and soft tissue	4	7%	Kaposi sarcoma	5	7%
Eye	4	5%	Non-Hodgkin lymphoma	5	7%
Brain, nervous system	3	5%	Connective and soft tissue	3	4%
Hodgkin disease	2	4%	Lymphoid leukaemia	3	4%
Other	22	54%	Other	23	29%
Total cases	55	100	Total cases	73	100

Epidemiological analysis

Overall Age Standardized Incidence rates (ASRs) by gender 2013-2017

Figure 7a shows the ASRs per 100 000 ranking of cases according to the top 10 cancers in males. Prostate cancer in males had high incidence rates (16.4) followed by oesophagus with (12.2). Lung cancer had an incidence rates of (6.1) and followed Kaposi sarcoma by (4.8) among males.

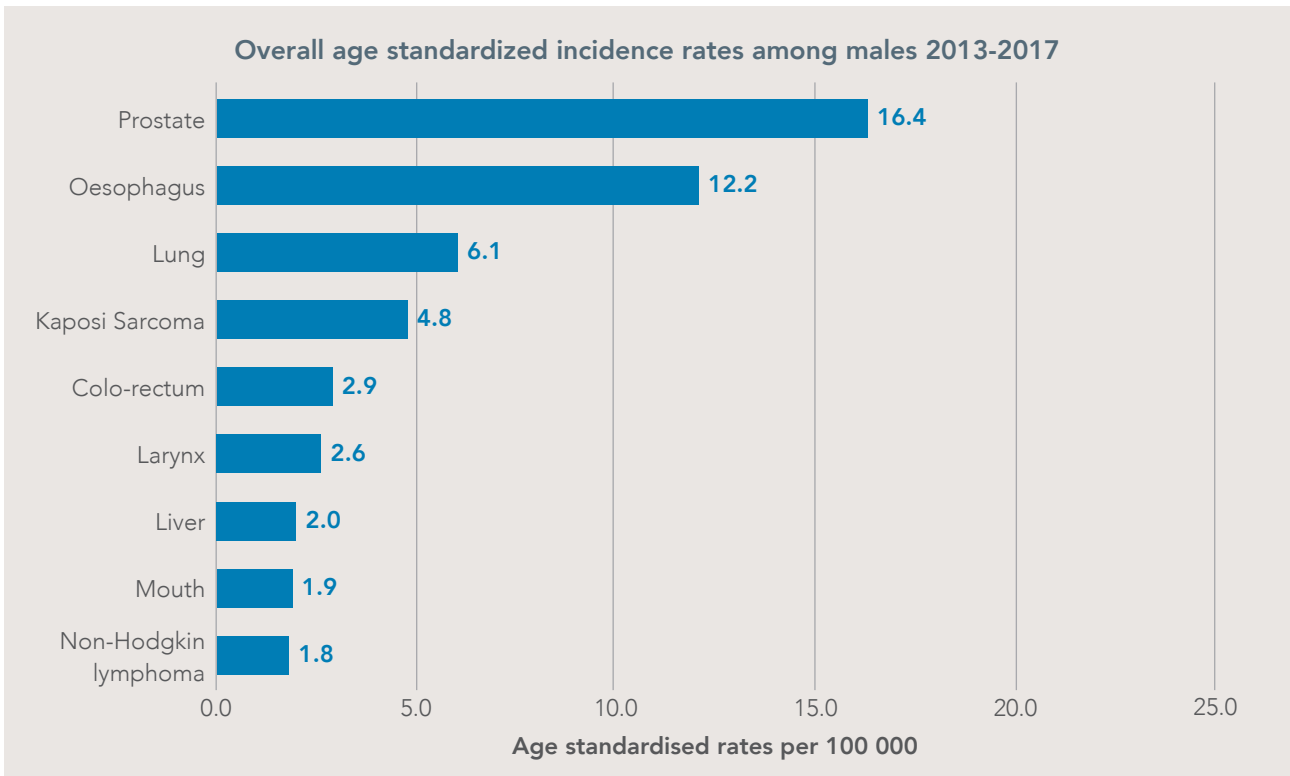


Figure 7a. Overall age standardized incidence rates among males 2013-2017

Figures 7b show the ranking of ASRs per 100 000 for cases according to the top 10 cancers among females. Cervical cancer had high incidence rates (33.1) followed by breast cancer at (16.5). Oesophagus cancer was rated third (11.2) among females and followed by Kaposi sarcoma with (3.4).

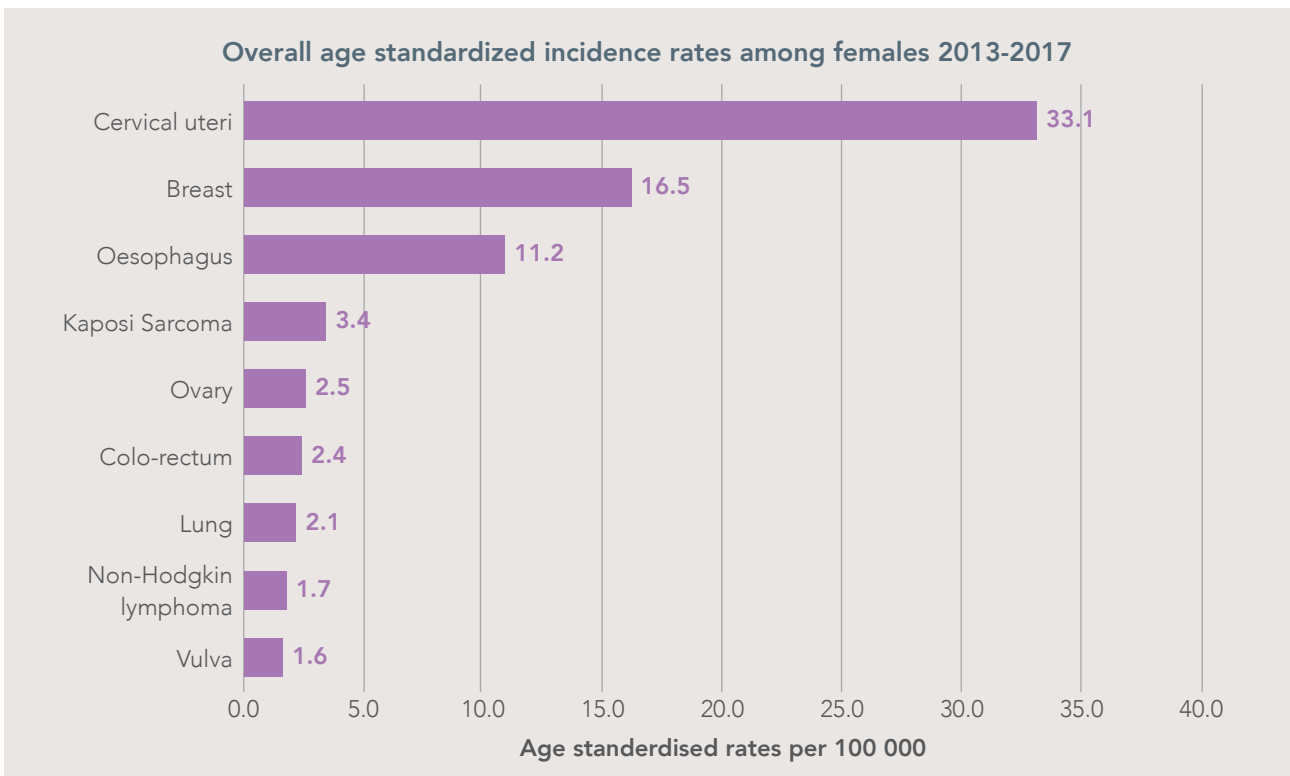


Figure 7b. Overall age standardized incidence rates among females 2013-2017

Age standardized incidence rates per 100 000 population by magisterial areas

Figure 8a below provides overall age standardized incidence rates (ASR) of top 5 cancers among males by magisterial areas. Oesophageal cancer incidence rates were high in Lusikisiki with ASR 33.9 per 100 000, followed by Centane with ASR 27.8. Lung cancer among males had high incidence rates in Buffalo City (8.6) followed by Lusikisiki (7.2), Centane and Butterworth with 6.9 and 6.4, respectively. Kaposi sarcoma incidence rates in males were high in Bizana with ASR 17.0 per 100 000 followed by Lusikisiki with ASR 14.7. Prostate cancer incidence rates were high in Lusikisiki with 53.1 followed by Centane and Flagstaff with 21.6 and 14.1, respectively.

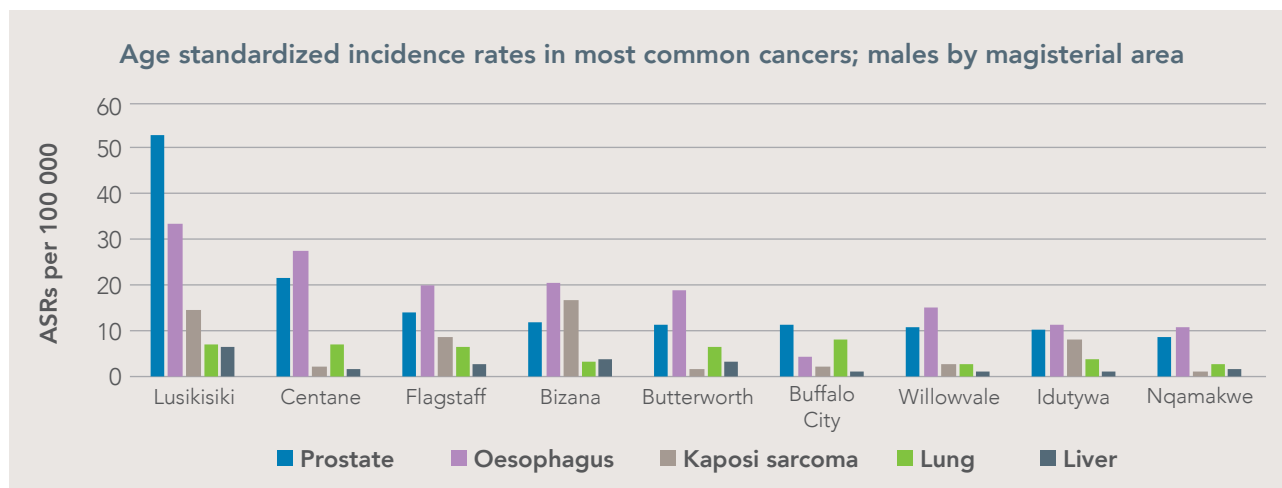


Figure 8a. Age standardized incidence rates in most common cancers; males by magisterial area

Table 8b below provides age standardized incidence rates (ASR) in most common cancers in females by magisterial area. Oesophageal cancer incidence rates were high in Lusikisiki (34.7) followed by Centane with 32.3. Breast cancer incidence rates were high in Lusikisiki (25.7) followed by Butterworth with 21.7. Willowvale had lowest incidence rates (6.3) of breast cancer. Incidence rates of lung cancer were high 4.5 in Butterworth followed by Centane with 2.8. Kaposi sarcoma had high incidence rates in Lusikisiki (8.3) followed by Willowvale with 6.3. Generally, the whole surveillance area experienced very high cervical cancer incidence rates. Highest incidence rates experienced were in Lusikisiki (102.2) followed by Flagstaff and Bizana with 49.6 and 48.8, respectively in the north region whereas in the south Butterworth had 36.5, followed by Idutywa 27.6, Centane 23.3, Nqamakwe 23.1, Willowvale 20.9 and lowest were in Buffalo City 14.5.

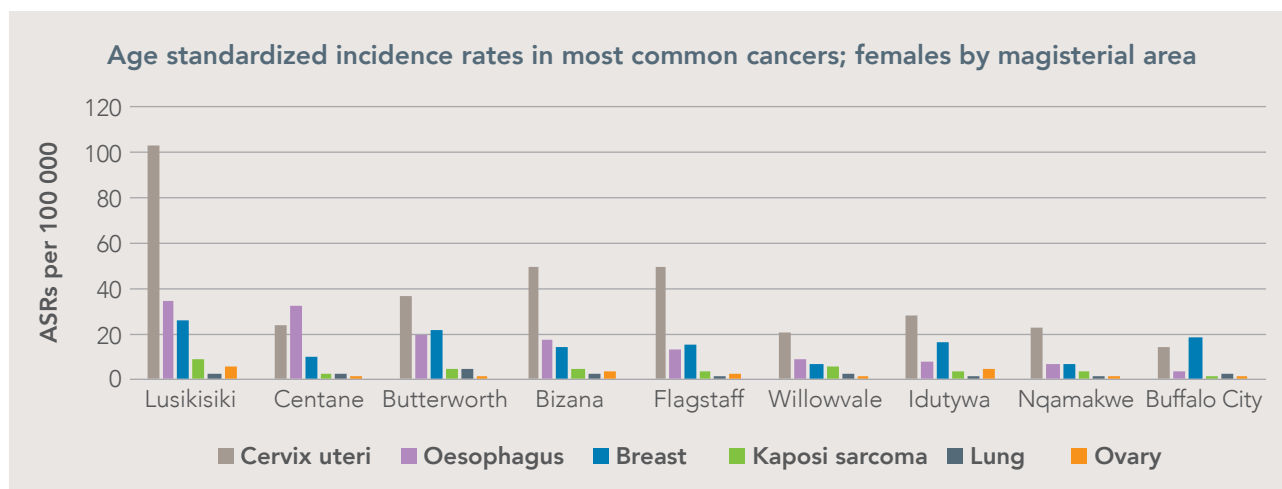


Figure 8b. Age standardized incidence rates in most common cancers; females by magisterial area

Trends in most common cancers; all areas excluding the urban

Figures 9a and 9b show a comparison and trends of cancer over 10 years; 2008-2012 and 2013-2017. Male's prostate cancer increased more than two-fold from 10.1 per 100 000 to 20.5 per 100 000 and followed by oesophagus with a decrease, from 23.6 to 21.1 whereas in female a two-fold increase in cervix cancer from 28.4 per 100 000 to 50.4 per 100 000 were observed followed by oesophagus from 14.4 per 100 000 to 17.2 per 100 000.

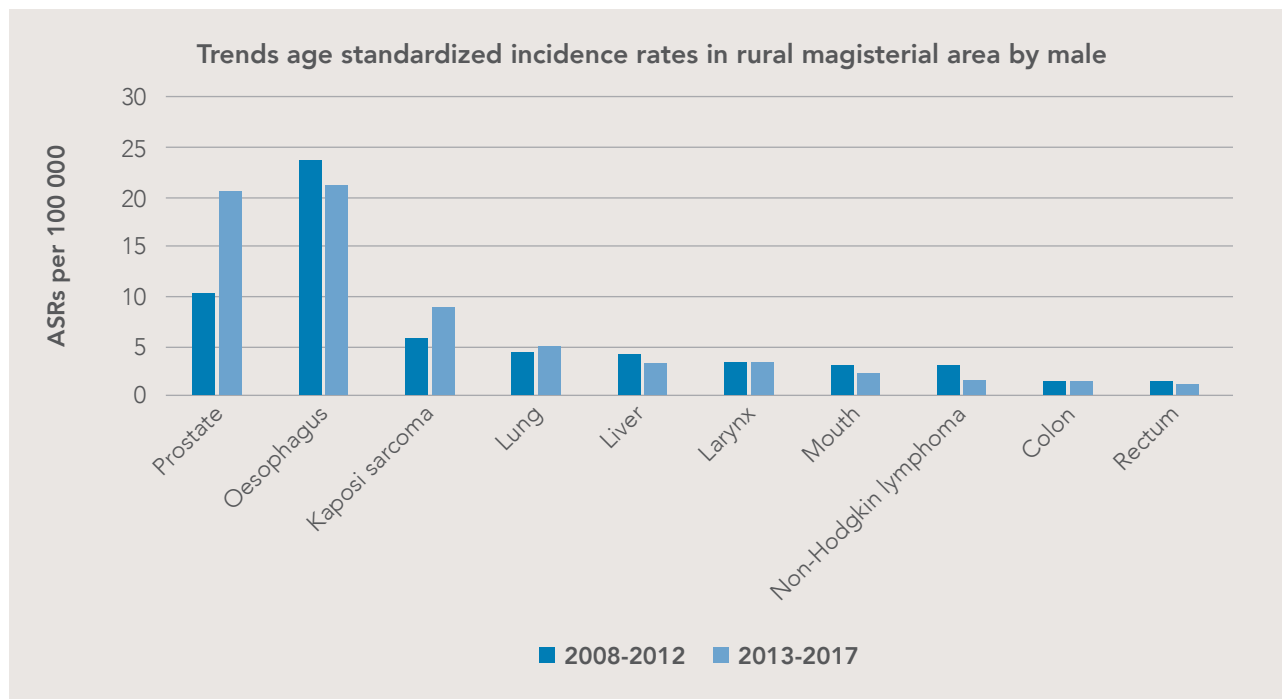


Figure 9a. Trends age standardized incidence rates in rural magisterial area by male

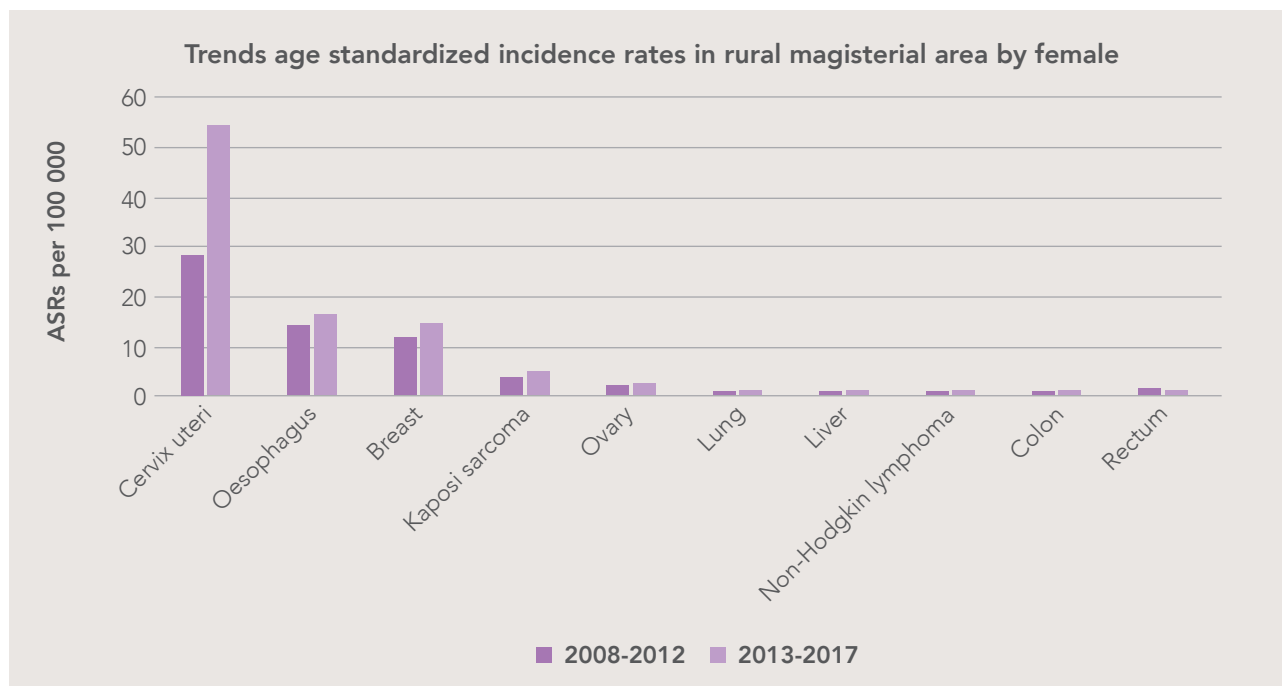


Figure 9b. Trends age standardized incidence rates in rural magisterial area by female

DISCUSSION

The majority of cases reported in cancer surveillance area during 2013-2017 period were from the northern area (Bizana, Flagstaff and Lusikisiki) with females dominating. 90 percent of cases had histologically verified diagnoses. This is a high proportion that meets required international standards and more than what is expected in Africa with limited diagnostic resources. For both males and females, oesophageal cancer remained dominant for more than two decades in all magisterial areas of this region (Somdyala, et al., 2010, Somdyala, et al., 2015). In males; oesophageal cancer incidence rates were 12.2 per 100 000 which is two times higher than in Sub-Saharan Africa with the ASR of 6.8 per 100 000 and higher than the global average rate of 9.3 per 100 000 population.

Prostate cancer incidence rates were 20.5 per 100 000 which is two-folds increase compared to the previous report by Somdyala, et al., (2015) and became the leading top cancer observed among males during this period. Contributing factors to this increase might be due to high prostate cancer screening in the surveillance area which as reported by Adonis, et al in their study (2013) was 33.8% above the national average of 31.9%. Lusikisiki recorded almost two times high global incidence with 53.1 per 100 000 compared to global rate of 29.3 per 100 000 (Bray, et al., 2018).

The overall lung cancer incidence rates in males during 2013-2017 were 6.1 per 100 000 below the South African national incidence rate of 10.2 per 100 000 population (NCR, 2016). Overall incidence rates of Kaposi sarcoma which were in males were 4.8 per 100 000 which were below the Sub-Saharan rates of 7.2 per 100 000 as reported by Bray, et al., (2018) in their study. The highest contributor to these high rates was Bizana with 17.0 per 100 000. This was way above NCR incidence rates of 3.9 per 100 000 (NCR, 2016). Kaposi sarcoma is considered the most common AIDS-associated malignancy (Haverkos, 2008), with an increased risk among HIV-positive individuals with lowered immune status (Silverberg et al., 2007). South Africa is in the throes of an HIV/AIDS pandemic that has affected this population. 31 600 people in the Mbizana Local Municipality were infected with HIV according to the Eastern Cape Municipality Report (2016). This number accounted for about 10.2 % of the total population of the Eastern Cape Province (Eastern Cape Socio-economic Consultative Council, 2017). This reflects an increase at an average annual rate of 2.8% since 2006.

During 2013-2017 period the most common observed in women was cervical cancer with ASR 33.1 per 100 000 of population. These high incidence rates experienced by the rural Eastern Cape population were consistently observed for the past 15 years (Somdyala, et al., 2010, Somdyala, et al., 2015 and Somdyala et al.,2020). They exceeded those observed in South Africa as reported by the NCR which were 28.6 per 100 000 (NCR Report, 2016). These rates are extremely high when compared regionally (sub-Saharan Africa) and globally (Bray, et al., 2018). They match high incidence rates observed in Malawi (30.0 per 100 000) and Swaziland with 43.1 per 100 000 (Bray, et al., 2018). Somdyala, et al., in their study (2020) observed high burden of HIV infection in this population which is strongly associated with these high incidence rates as cervical cancer is one of the AIDS-defining cancers (Stein et al., 2008 and Mpunga, et al., 2018).

The second most common cancer in females during this period was breast cancer with ASR of 16.5 per 100 000 population. Steady increase of this cancer in this population has been observed, however, these rates were relatively lower than those observed in South Africa (NCR, 2016). Lusikisiki was the highest contributor to both cervical and breast cancers. Both cancers incidence rates were doubled when compared with other magisterial areas. Butterworth was the second contributor to breast cancer (21.7 per 100 000) in the surveillance area.

Challenges regarding data collection

The ECCR was faced with a problem of finding a stable data collector from one of the referral hospitals, this resulted in the shortage of 2014 cases. This was discovered during data quality checking but rectified by visiting the hospital in question to collect data missing. In some instances, collecting data from multiple sources can cause duplicates, therefore, this needs proper data scrutinizing and proper data checking. Some cases received from data collectors had insufficient information. Data collectors in question are contacted and advised to check medical/patients' records for the missing information.

Challenges regarding data management

Understanding how CanReg5 program works has been an interesting journey that sometimes resulted in data crashes. Backing up the database was the major challenge. This was dealt with by finally having the database backed up in the SAMRC server network. The IT department manager together with support technicians and registry team members successfully mastered the program and secured the database into the server. Database back up is currently sound and done automatically every day in the server network. We also boast the ability of working remotely with the program.

The usefulness of the cancer registry is timeous availability of its data especially when planning intervention programmes. Technology hiccups also resulted in some cases omitted during mail merge and printing of cancer notification forms. This resulted in short falls in cases in the database versus hard copies filed. Available spreadsheets with 2013-2017 data were reviewed to recover the omitted cases. These challenges were a drawback and a delay to data analysis. Data manager has to exercise extra precautionary measures to prevent these delays in future. To this far what is recommended to address this problem is paying attention to detail. Frequent communication with data collectors regarding queries and concerns after capturing has been a fruitful measure/remedy to ensuring valid and credibility to data generated. The standard operational procedures (SOPs) are frequently reviewed which are useful documents used by data collectors as a reference during data collection process.

CONCLUSION

This technical report provides reliable and accurate data information for cancer incidence in nine magisterial areas of Eastern Cape Province. It is anticipated that these results will be useful in planning and guiding cancer control intervention programmes to particularly provincial Department of Health. Furthermore, hospitals will improve their methods in data recording and keeping thereby supporting research. The cancer registry in general contributes a great deal to the international and national collaborative studies such as cancer incidence in five continents (CI5) and global survival studies. Global survival studies are useful to public health through which cancer care disparities are identified to inform governments about shortcomings in cancer care.

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APPENDIX B:

PROPORTION TABLES

SITE	n	MALE														ICD (10th)			
		0-	5-	10-	15-	20-	25-	30-	35-	40-	45-	50-	55-	60-	65-		70-	75+	(%)
Lip	8	0	0	0	0	0	0	0	0	1	4	0	1	1	1	0	1	0.3	C00
Tongue	59	0	0	0	0	0	0	3	0	1	10	8	5	9	9	5	9	2.5	C01-02
Mouth	66	0	0	0	0	1	1	1	3	2	3	10	8	12	6	8	11	2.8	C03-06
Salivary glands	13	0	0	0	0	0	0	0	0	0	1	1	1	4	3	1	2	0.5	C07-08
Tonsil	16	0	0	0	0	0	0	0	0	0	1	2	3	4	3	1	2	0.7	C09
Other oropharynx	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	C10
Nasopharynx	10	1	0	0	1	1	1	0	1	0	0	0	0	2	1	1	1	0.4	C11
Hypopharynx	8	0	0	0	0	0	0	0	0	0	1	1	1	1	0	1	3	0.3	C12-13
Pharynx unspecified	7	0	0	0	0	0	0	0	0	0	1	1	2	1	0	1	1	0.3	C14
Oesophagus	421	0	1	0	0	3	8	7	6	11	21	45	71	70	51	57	70	17.7	C15
Stomach	31	0	0	0	0	0	0	0	0	2	4	5	4	5	3	3	5	1.3	C16
Small intestine	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	C17
Colon	54	0	0	0	1	0	2	5	1	4	1	10	8	6	2	12	2	2.3	C18
Rectum	42	0	0	0	0	1	0	1	1	1	3	10	3	4	11	1	6	1.8	C19-20
Anus	23	0	0	0	0	0	0	1	4	0	2	1	1	4	3	4	3	1	C21
Liver	74	0	0	0	1	1	2	4	10	6	6	6	14	9	4	5	6	3.1	C22
Gallbladder etc.	6	0	0	0	0	0	0	0	1	0	1	0	0	2	1	1	0	0.3	C23-24
Pancreas	18	0	0	0	0	0	0	0	0	0	3	4	4	5	0	1	1	0.8	C25
Nose, sinuses etc.	9	0	0	0	0	0	0	1	0	1	2	1	0	1	1	1	1	0.4	C30-31
Larynx	85	0	0	0	0	0	0	1	0	3	5	14	11	22	10	8	11	3.6	C32
Trachea, bronchus and lung	208	0	0	0	0	1	0	1	1	9	11	32	51	41	24	17	20	8.8	C33-34
Other thoracic organs	7	0	0	0	0	0	0	1	0	0	1	0	3	1	1	0	0	0.3	C37-38
Bone	13	0	1	0	2	0	0	2	0	1	0	2	1	0	1	3	0	0.5	C40-41
Melanoma of skin	19	0	0	0	1	0	0	2	1	0	0	2	4	2	1	3	3	0.8	C43
Other skin	41	0	0	0	0	1	1	0	1	3	1	5	5	11	6	4	3	1.7	C44
Mesothelioma	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	C45
Kaposi sarcoma	196	0	0	3	3	7	14	35	52	27	18	10	8	5	3	2	9	8.3	C46
Connective and soft tissue	28	2	2	0	0	1	3	0	4	1	2	2	3	4	1	1	2	1.2	C47,C49
Breast	37	0	0	0	1	0	0	0	1	2	1	3	2	4	6	9	8	1.6	C50
Penis	18	0	0	0	0	0	0	0	1	3	5	3	2	0	1	1	2	0.8	C60

MALE														ICD (10th)					
SITE	n	0-	5-	10-	15-	20-	25-	30-	35-	40-	45-	50-	55-	60-	65-	70-	75+	(%)	ICD (10th)
Prostate	519	0	0	0	0	1	0	2	3	5	3	18	43	94	102	97	151	21.9	C61
Testis	15	0	0	0	2	1	0	1	3	1	1	2	1	1	0	0	2	0.6	C62
Other male genital organs	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	C63
Kidney	18	2	4	2	1	1	0	1	0	0	0	1	1	3	1	0	1	0.8	C64
Renal pelvis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	C65
Ureter	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	C66
Bladder	34	0	0	0	0	1	0	1	1	2	2	5	5	5	2	4	6	1.4	C67
Other urinary organs	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	C68
Eye	36	3	1	3	1	1	0	0	7	6	3	2	4	3	0	1	1	1.5	C69
Brain, nervous system	16	1	2	1	2	1	0	1	1	2	1	2	1	1	0	0	0	0.7	C70-72
Thyroid	9	0	0	0	0	0	1	0	0	0	2	1	1	3	1	0	0	0.4	C73
Adrenal gland	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	C74
Other endocrine	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	C75
Hodgkin disease	16	1	1	1	1	2	1	1	3	2	1	0	0	1	1	0	0	0.7	C81
Non-Hodgkin lymphoma	71	1	5	3	2	1	1	6	7	7	7	5	7	8	6	4	1	3	C82-85,C96
Immunoproliferative diseases	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	C88
Multiple myeloma	32	0	0	0	0	0	0	1	3	2	4	5	5	6	1	5	0	1.3	C90
Lymphoid leukaemia	7	0	1	0	1	0	0	0	0	0	0	0	0	3	2	0	0	0.3	C91
Myeloid leukaemia	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	C92-94
Leukaemia unspecified	14	2	6	1	3	0	0	0	1	0	0	0	0	0	0	1	0	0.6	C95
Myeloproliferative disorders	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	MPD
Myelodysplastic syndromes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	MDS
Other and unspecified	103	3	1	4	1	2	2	2	4	3	8	10	12	15	8	15	13	4.3	O&U
All sites	2414	16	25	18	24	28	37	81	121	109	137	233	295	373	278	280	359	101.7	ALL
All sites but C44	2373	16	25	18	24	27	36	81	120	106	136	228	290	362	272	276	356	100	ALLbc44

FEMALE

SITE	N	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+	%	
Lip	13	0	0	0	0	1	0	0	1	2	0	0	0	2	2	2	3	0.1	C00
Tongue	13	0	0	0	0	1	0	1	0	0	2	1	1	1	2	4	0	0.4	C01-02
Mouth	41	0	1	0	0	1	1	0	2	2	1	0	5	2	6	5	16	1.3	C03-06
Salivary glands	10	0	0	0	0	0	0	1	0	2	0	0	1	1	1	3	1	0.1	C07-08
Tonsil	6	0	0	0	0	0	1	0	0	0	0	2	1	1	0	0	1	0.4	C09
Other oropharynx	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0.1	C10
Nasopharynx	9	1	0	1	1	0	0	1	1	1	0	0	2	0	1	0	0	0.5	C11
Hypopharynx	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	C12-13
Pharynx unspecified	3	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	2	0.1	C14
Oesophagus	590	0	0	0	0	1	1	2	3	17	32	43	78	85	67	114	147	5	C15
Stomach	29	0	0	0	0	0	0	1	0	0	2	6	6	4	2	3	5	0.6	C16
Small intestine	5	0	0	0	0	0	0	0	1	2	0	0	0	0	2	0	0	0.3	C17
Colon	69	0	0	0	0	2	1	2	4	5	8	11	9	6	5	8	8	2.9	C18
Rectum	50	0	0	0	0	2	0	4	3	1	3	5	4	8	7	7	6	1.7	C19-20
Anus	16	0	0	0	0	0	0	1	3	2	0	1	3	2	2	1	1	0.6	C21
Liver	40	0	0	0	1	0	1	2	0	2	1	3	7	7	6	2	8	0.4	C22
Gallbladder etc.	4	0	0	0	0	0	0	0	0	0	0	1	1	0	1	1	0	0.1	C23-24
Pancreas	17	0	0	0	0	0	0	0	1	1	2	0	7	0	2	3	1	0.4	C25
Nose, sinuses etc.	6	0	0	0	1	1	1	0	0	0	0	1	0	1	0	1	0	0.2	C30-31
Larynx	23	0	0	0	0	0	1	1	2	1	0	2	3	4	2	2	5	1.1	C32
Trachea, bronchus and lung	100	0	0	0	0	1	0	4	2	5	10	11	13	14	13	15	12	3.5	C33-34
Other thoracic organs	4	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0.1	C37-38
Bone	16	0	0	3	2	0	2	1	2	1	1	1	1	1	0	0	1	0.4	C40-41
Melanoma of skin	28	0	0	0	0	0	2	0	1	1	2	6	3	0	4	3	6	0.9	C43
Other skin	47	0	1	0	0	2	3	1	8	7	4	3	1	6	2	1	8	1.3	C44
Mesothelioma	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0.1	C45
Kaposi sarcoma	162	1	1	1	3	19	27	36	24	20	14	4	3	3	2	3	1	2.7	C46

FEMALE																			
SITE	N	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+	%	
Connective and soft tissue	28	1	1	1	0	1	0	3	4	1	1	2	6	2	0	3	2	0.8	C47,C49
Breast	796	0	0	0	2	8	16	44	63	76	104	84	103	77	70	66	83	29.4	C50
Vulva	78	0	0	0	1	5	7	20	12	7	3	9	5	2	1	2	4	1.4	C51
Vagina	24	0	0	0	0	1	0	4	3	3	3	2	0	0	3	2	3	0.7	C52
Cervix uteri	1586	0	0	0	0	12	55	105	142	208	176	190	169	157	117	106	149	22.7	C53
Corpus uteri	135	0	0	0	0	3	0	0	2	3	3	3	17	26	28	25	25	5.2	C54
Uterus unspecified	21	0	0	0	0	0	0	0	0	1	6	3	2	4	1	0	4	0.4	C55
Ovary	123	1	1	2	1	8	3	9	7	9	8	12	7	11	13	15	16	2.7	C56
Other female genital organs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	C57
Placenta	12	0	0	0	2	5	0	0	2	0	2	0	0	0	1	0	0	0.4	C58
Kidney	23	7	4	1	1	0	0	0	0	0	4	0	3	0	0	1	2	0.4	C64
Renal pelvis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	C65
Ureter	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	C66
Bladder	18	0	0	0	0	0	1	2	1	1	1	2	2	0	1	4	3	0.1	C67
Other urinary organs	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0.1	C68
Eye	43	5	1	0	1	2	1	2	5	11	2	5	1	2	1	1	3	0.8	C69
Brain, nervous system	22	3	6	1	2	1	1	1	1	0	2	1	2	1	0	0	0	0.8	C70-72
Thyroid	34	0	0	0	0	1	0	1	1	2	0	7	5	10	3	3	1	0.9	C73
Adrenal gland	2	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0.1	C74
Other endocrine	4	0	0	0	1	1	0	0	1	0	1	0	0	0	0	0	0	0.3	C75
Hodgkin disease	15	0	1	0	1	1	3	3	2	1	1	1	0	1	0	0	0	0.9	C81
Non-Hodgkin lymphoma	84	1	2	1	1	4	4	6	14	7	7	8	8	8	1	6	6	3.7	C82-85, C96
Immunoproliferative diseases	3	0	0	0	0	0	0	0	0	0	0	1	1	0	0	1	1	0.1	C88
Multiple myeloma	25	0	0	0	0	0	0	0	0	1	2	1	4	6	4	5	2	1	C90
Lymphoid leukaemia	11	2	0	0	0	0	0	1	0	0	0	0	1	0	1	3	3	0.5	C91

FEMALE																			
SITE	N	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+	%	
Myeloid leukaemia	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	C92-94
Leukaemia unspecified	17	2	3	5	2	2	0	1	0	1	0	0	0	0	0	1	0	0.2	C95
Myeloproliferative disorders	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	MPD
Myelodysplastic syndromes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	MDS
Other and unspecified	120	2	0	5	1	6	3	2	5	7	11	15	12	13	10	11	17	2.4	O&U
<i>All sites</i>	4529	27	23	21	24	91	135	262	323	411	419	449	499	471	385	433	556	101	ALL
<i>All sites but C44</i>	4482	27	22	21	24	89	132	261	315	404	415	446	498	465	383	432	548	100	ALLbC44

APPENDIX C:

INCIDENCE RATES (ASR) BY SEX, AGE, SITE

EASTERN CAPE PROVINCE REGISTER 2013-2017

SITE	N	MALE																ASR
		0-4	05_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+	
Lip	8	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,3
Tongue	59	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	1,6
Mouth	66	0,0	0,0	0,0	0,0	1,1	1,4	1,8	6,7	5,6	8,9	28,9	25,9	53,2	39,9	59,7	74,3	1,9
Salivary glands	13	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,4
Tonsil	16	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,5
Other oropharynx	1	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,1
Nasopharynx	10	0,8	0,0	0,0	0,9	1,1	1,4	0,0	2,2	0,0	0,0	0,0	0,0	8,9	6,6	7,5	6,8	0,3
Hypopharynx	8	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	4,4	0,0	7,5	20,3	0,2
Pharynx unspecified	7	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	4,4	0,0	7,5	6,8	0,2
Oesophagus	421	0,0	1,0	0,0	0,0	3,4	11,0	12,9	13,5	30,6	62,2	129,9	230,0	310,5	339,1	425,0	472,7	12,2
Stomach	31	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	5,6	11,9	14,4	13,0	22,2	19,9	22,4	33,8	0,9
Small intestine	0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Colon	54	0,0	0,0	0,0	0,9	0,0	0,0	2,8	9,2	11,1	3,0	28,9	25,9	26,6	13,3	89,5	13,5	1,6
Rectum	42	0,0	0,0	0,0	0,0	1,1	0,0	1,8	2,2	2,8	8,9	28,9	9,7	17,7	73,1	7,5	40,5	1,3
Anus	23	0,0	0,0	0,0	0,0	0,0	0,0	1,8	9,0	0,0	5,9	2,9	3,2	17,7	19,9	29,8	20,3	0,7
Liver	74	0,0	0,0	0,0	0,9	1,1	2,8	7,4	22,4	16,7	17,8	17,3	45,4	39,9	26,6	37,3	40,5	2,0
Gallbladder etc.	6	0,0	0,0	0,0	0,0	0,0	0,0	0,0	2,2	0,0	3,0	0,0	0,0	8,9	6,6	7,5	0,0	0,2
Pancreas	18	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	8,9	11,5	13,0	22,2	0,0	7,5	6,8	0,5
Nose, sinuses etc.	9	0,0	0,0	0,0	0,0	0,0	0,0	1,8	0,0	2,8	5,9	2,9	0,0	4,4	6,6	7,5	6,8	0,3
Larynx	85	0,0	0,0	0,0	0,0	0,0	0,0	1,8	0,0	8,3	14,8	40,4	35,6	97,6	66,5	59,7	74,3	2,6
Trachea, bronchus and lung	208	0,0	0,0	0,0	0,0	1,1	0,0	1,8	2,2	25,0	32,6	92,4	165,2	181,8	159,6	126,8	135,1	6,1
Other thoracic organs	7	0,0	0,0	0,0	0,0	0,0	0,0	1,8	0,0	0,0	3,0	0,0	9,7	4,4	6,6	0,0	0,0	0,2
Bone	13	0,0	1,0	0,0	1,8	0,0	0,0	3,7	0,0	2,8	0,0	5,8	3,2	0,0	6,6	22,4	0,0	0,4
Melanoma of skin	19	0,0	0,0	0,0	0,9	0,0	0,0	3,7	2,2	0,0	0,0	5,8	13,0	8,9	6,6	22,4	20,3	0,6
Other skin	41	0,0	0,0	0,0	0,0	1,1	1,4	0,0	2,2	8,3	3,0	14,4	16,2	48,8	39,9	29,8	20,3	1,3
Mesothelioma	1	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	6,6	0,0	0,0	0,1
Kaposi sarcoma	196	0,0	0,0	3,1	2,8	7,9	19,3	64,5	116,6	75,1	53,3	28,9	25,9	22,2	19,9	14,9	60,8	4,7
Connective and soft tissue	28	1,6	2,0	0,0	0,0	1,1	4,1	0,0	9,0	2,8	5,9	5,8	9,7	17,7	6,6	7,5	13,5	0,7
Breast	37	0,0	0,0	0,0	0,9	0,0	0,0	0,0	2,2	5,6	3,0	8,7	6,5	17,7	39,9	67,1	54,0	1,2
Penis	18	0,0	0,0	0,0	0,0	0,0	0,0	0,0	2,2	8,3	14,8	8,7	6,5	0,0	6,6	7,5	13,5	0,4

		MALE																
SITE	N	0-4	05_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+	ASR
Prostate	519	0,0	0,0	0,0	0,0	1,1	0,0	3,7	6,7	13,9	8,9	52,0	139,3	416,9	678,1	723,3	1019,6	16,4
Testis	15	0,0	0,0	0,0	1,8	1,1	0,0	1,8	6,7	2,8	3,0	5,8	3,2	4,4	0,0	0,0	13,5	0,4
Other male genital organs	1	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	7,5	0,0	0,1
Kidney	18	1,6	4,0	2,1	0,9	1,1	0,0	1,8	0,0	0,0	0,0	2,9	3,2	13,3	6,6	0,0	6,8	0,5
Renal pelvis	0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Ureter	0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Bladder	34	0,0	0,0	0,0	0,0	1,1	0,0	1,8	2,2	5,6	5,9	14,4	16,2	22,2	13,3	29,8	40,5	1,0
Other urinary organs	1	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	2,8	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,1
Eye	36	2,4	1,0	3,1	0,9	1,1	0,0	0,0	15,7	16,7	8,9	5,8	13,0	13,3	0,0	7,5	6,8	0,9
Brain, nervous system	16	0,8	2,0	1,0	1,8	1,1	0,0	1,8	2,2	5,6	3,0	5,8	3,2	4,4	0,0	0,0	0,0	0,4
Thyroid	9	0,0	0,0	0,0	0,0	0,0	1,4	0,0	0,0	0,0	5,9	2,9	3,2	13,3	6,6	0,0	0,0	0,3
Adrenal gland	1	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	6,8	0,1
Other endocrine	1	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	2,8	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,1
Hodgkin disease	16	0,8	1,0	1,0	0,9	2,3	1,4	1,8	6,7	5,6	3,0	0,0	0,0	4,4	6,6	0,0	0,0	0,4
Non-Hodgkin lymphoma	71	0,8	4,9	3,1	1,8	1,1	1,4	11,1	15,7	19,5	20,7	14,4	22,7	35,5	39,9	29,8	6,8	1,8
Immunoproliferative diseases	0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Multiple myeloma	32	0,0	0,0	0,0	0,0	0,0	0,0	1,8	6,7	5,6	11,9	14,4	16,2	26,6	6,6	37,3	0,0	0,9
Lymphoid leukaemia	7	0,0	1,0	0,0	0,9	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	13,3	13,3	0,0	0,0	0,3
Myeloid leukaemia	1	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	7,5	0,0	0,1
Leukaemia unspecified	14	1,6	5,9	1,0	2,8	0,0	0,0	0,0	2,2	0,0	0,0	0,0	0,0	0,0	0,0	7,5	0,0	0,3
Myeloproliferative disorders	0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Myelodysplastic syndromes	0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Other and unspecified	103	2,4	1,0	4,1	0,9	2,3	2,8	3,7	9,0	8,3	23,7	28,9	38,9	66,5	53,2	111,8	87,8	2,8
All sites	2414	12,8	24,7	18,7	22,1	31,8	50,9	149,4	271,4	303,3	406,0	672,8	955,6	1654,3	1848,2	2087,8	2424,2	68,3
All sites but C44	2373	12,8	24,7	18,7	22,1	30,6	49,5	149,4	269,2	295,0	403,1	658,3	939,4	1605,5	1808,3	2058,0	2403,9	67,1

FEMALE														ASR				
SITE	N	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+	ASR
Lip	13	0,0	0,0	0,0	0,0	1,1	0,0	0,0	1,9	3,9	0,0	0,0	0,0	6,8	8,9	9,2	7,9	0,3
Tongue	13	0,0	0,0	0,0	0,0	1,1	0,0	1,7	0,0	0,0	3,8	1,8	2,4	3,4	8,9	18,4	0,0	0,3
Mouth	41	0,0	1,0	0,0	0,0	0,0	1,3	0,0	3,7	3,9	1,9	0,0	11,8	6,8	26,6	23,0	41,9	0,7
Salivary glands	10	0,0	0,0	0,0	0,0	0,0	0,0	1,7	0,0	3,9	0,0	0,0	2,4	3,4	4,4	13,8	2,6	0,2
Tonsil	6	0,0	0,0	0,0	0,0	0,0	1,3	0,0	0,0	0,0	0,0	3,6	2,4	3,4	0,0	0,0	2,6	0,1
Other oropharynx	1	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	3,4	0,0	0,0	0,0	0,0
Nasopharynx	9	0,8	0,0	1,1	0,9	0,0	0,0	1,7	1,9	2,0	0,0	0,0	4,7	0,0	4,4	0,0	0,0	0,2
Hypopharynx	0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Pharynx unspecified	3	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	1,8	0,0	0,0	0,0	0,0	5,2	0,0
Oesophagus	590	0,0	0,0	0,0	0,0	1,1	1,3	3,4	5,6	33,4	61,6	77,7	183,7	286,9	297,2	523,6	384,9	11,2
Stomach	29	0,0	0,0	0,0	0,0	0,0	0,0	1,7	0,0	0,0	3,8	10,8	14,1	13,5	8,9	13,8	13,1	0,6
Small intestine	5	0,0	0,0	0,0	0,0	0,0	0,0	0,0	1,9	3,9	0,0	0,0	0,0	0,0	8,9	0,0	0,0	0,1
Colon	69	0,0	0,0	0,0	0,0	2,2	1,3	3,4	7,4	9,8	15,4	19,9	21,2	20,3	22,2	36,7	20,9	1,4
Rectum	50	0,0	0,0	0,0	0,0	2,2	0,0	6,8	5,6	2,0	5,8	9,0	9,4	27,0	31,1	32,1	15,7	1,0
Anus	16	0,0	0,0	0,0	0,0	0,0	0,0	1,7	5,6	3,9	0,0	1,8	7,1	6,8	8,9	4,6	2,6	0,3
Liver	40	0,0	0,0	0,0	0,9	0,0	1,3	3,4	0,0	3,9	1,9	5,4	16,5	23,6	26,6	9,2	20,9	0,8
Gallbladder etc.	4	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	1,8	2,4	0,0	4,4	4,6	0,0	0,1
Pancreas	17	0,0	0,0	0,0	0,0	0,0	0,0	0,0	1,9	2,0	3,8	0,0	16,5	0,0	8,9	13,8	2,6	0,3
Nose, sinuses etc.	6	0,0	0,0	0,0	0,9	1,1	1,3	0,0	0,0	0,0	0,0	1,8	0,0	3,4	0,0	4,6	0,0	0,1
Larynx	23	0,0	0,0	0,0	0,0	0,0	1,3	1,7	3,7	2,0	0,0	3,6	7,1	13,5	8,9	9,2	13,1	0,5
Trachea, bronchus and lung	100	0,0	0,0	0,0	0,0	1,1	0,0	6,8	3,7	9,8	19,2	19,9	30,6	47,3	57,7	68,9	31,4	2,1
Other thoracic organs	4	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	1,8	2,4	3,4	4,4	0,0	0,0	0,1
Bone	16	0,0	0,0	3,4	1,9	0,0	2,7	1,7	3,7	2,0	1,9	1,8	2,4	3,4	0,0	0,0	2,6	0,3
Melanoma of skin	28	0,0	0,0	0,0	0,0	0,0	2,7	0,0	1,9	2,0	3,8	10,8	7,1	0,0	17,7	13,8	15,7	0,5
Other skin	47	0,0	1,0	0,0	0,0	2,2	4,0	1,7	14,8	13,8	7,7	5,4	2,4	20,3	8,9	4,6	20,9	1,0
Mesothelioma	1	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	3,4	0,0	0,0	0,0	0,0
Kaposi sarcoma	162	0,8	1,0	1,1	2,8	21,0	36,0	61,5	44,5	39,3	26,9	7,2	7,1	10,1	8,9	13,8	2,6	3,4
Connective and soft tissue	28	0,8	1,0	1,1	0,0	1,1	0,0	5,1	7,4	2,0	1,9	3,6	14,1	6,8	0,0	13,8	5,2	0,6
Breast	796	0,0	0,0	0,0	1,9	8,8	21,3	75,2	116,8	149,4	200,2	151,8	242,6	259,9	310,5	303,1	217,3	16,5
Vulva	78	0,0	0,0	0,0	0,9	5,5	9,3	34,2	22,2	13,8	5,8	16,3	11,8	6,8	4,4	9,2	10,5	1,6
Vagina	24	0,0	0,0	0,0	0,0	1,1	0,0	6,8	5,6	5,9	5,8	3,6	0,0	0,0	13,3	9,2	7,9	0,5

		FEMALE																	
SITE	N	0-4	05_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+	ASR	
Cervix uteri	1586	0,0	0,0	0,0	0,0	13,2	73,4	179,4	263,2	408,9	338,8	343,4	398,0	529,9	519,0	486,8	390,2	33,1	
Corpus uteri	135	0,0	0,0	0,0	0,0	3,3	0,0	0,0	3,7	5,9	5,8	5,4	40,0	87,8	124,2	114,8	65,5	2,8	
Uterus unspecified	21	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	2,0	11,5	5,4	4,7	13,5	4,4	0,0	10,5	0,4	
Ovary	123	0,8	1,0	2,3	0,9	8,8	4,0	15,4	13,0	17,7	15,4	21,7	16,5	37,1	57,7	68,9	41,9	2,5	
Other female genital organs	0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	
Placenta	12	0,0	0,0	0,0	1,9	5,5	0,0	0,0	3,7	0,0	3,8	0,0	0,0	0,0	4,4	0,0	0,0	0,2	
Kidney	23	5,8	4,1	1,1	0,9	0,0	0,0	0,0	0,0	0,0	7,7	0,0	7,1	0,0	0,0	4,6	5,2	0,4	
Renal pelvis	0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	
Ureter	0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	
Bladder	18	0,0	0,0	0,0	0,0	0,0	1,3	3,4	1,9	2,0	1,9	3,6	4,7	0,0	4,4	18,4	7,9	0,3	
Other urinary organs	1	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	4,6	0,0	0,0	
Eye	43	4,1	1,0	0,0	0,9	2,2	1,3	3,4	9,3	21,6	3,8	9,0	2,4	6,8	4,4	4,6	7,9	0,9	
Brain, nervous system	22	2,5	6,1	1,1	1,9	1,1	1,3	1,7	1,9	0,0	3,8	1,8	4,7	3,4	0,0	0,0	0,0	0,4	
Thyroid	34	0,0	0,0	0,0	0,0	1,1	0,0	1,7	1,9	3,9	0,0	12,7	11,8	33,8	13,3	13,8	2,6	0,7	
Adrenal gland	2	0,8	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	2,4	0,0	0,0	0,0	0,0	0,0	
Other endocrine	4	0,0	0,0	0,0	0,9	1,1	0,0	0,0	1,9	0,0	1,9	0,0	0,0	0,0	0,0	0,0	0,0	0,1	
Hodgkin disease	15	0,0	1,0	0,0	0,9	1,1	4,0	5,1	3,7	2,0	1,9	1,8	0,0	3,4	0,0	0,0	0,0	0,3	
Non-Hodgkin lymphoma	84	0,8	2,0	1,1	0,9	4,4	5,3	10,3	25,9	13,8	13,5	14,5	18,8	27,0	4,4	27,6	15,7	1,7	
Immunoproliferative diseases	3	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	1,8	2,4	0,0	0,0	0,0	2,6	0,0	
Multiple myeloma	25	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	2,0	3,8	1,8	9,4	20,3	17,7	23,0	5,2	0,5	
Lymphoid leukaemia	11	1,6	0,0	0,0	0,0	0,0	0,0	1,7	0,0	0,0	0,0	0,0	2,4	0,0	4,4	13,8	7,9	0,2	
Myeloid leukaemia	1	0,0	1,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	
Leukaemia unspecified	17	1,6	3,1	5,6	1,9	2,2	0,0	1,7	0,0	2,0	0,0	0,0	0,0	0,0	0,0	4,6	0,0	0,3	
Myeloproliferative disorders	0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	
Myelodysplastic syndromes	0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	
Other and unspecified	120	1,6	0,0	5,6	0,9	6,6	4,0	3,4	9,3	13,8	21,2	27,1	28,3	43,9	44,4	50,5	44,5	2,4	
All sites	4529	22,3	23,4	23,6	22,5	100,4	180,1	447,6	598,7	807,9	806,5	811,5	1175,2	1589,7	1707,9	1988,6	1456,0	92,5	
All sites but C44	4482	22,3	22,4	23,6	22,5	98,2	176,1	445,9	583,9	794,1	798,8	806,0	1172,8	1569,5	1699,0	1984,0	1435,0	91,5	



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