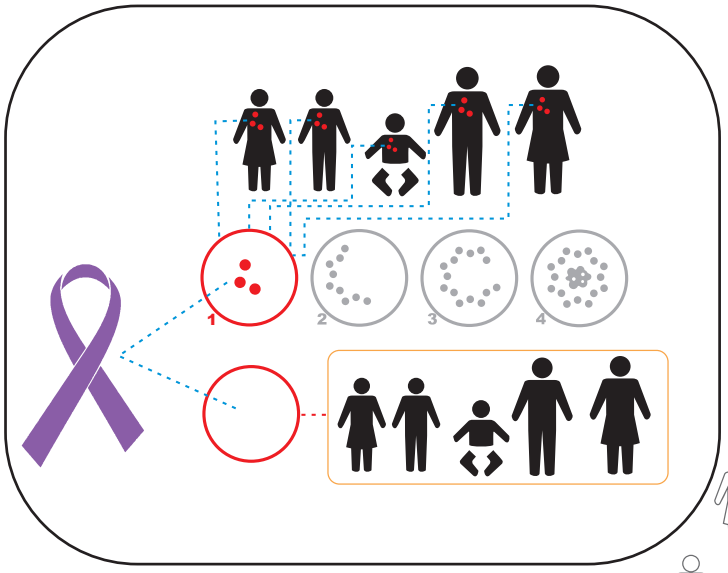
CANCER IN SOUTH AFRICA
(2008 – 2019)



Report 03-08-00

IMPROVING LIVES THROUGH DATA ECOSYSTEMS

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Cancer in South Africa
(2008 – 2019)

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Statistician-General

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Preface

The thematic report on cancer in South Africa was compiled by the Health component of the Health and Vital Statistics division within Stats SA.

Information used to compile this report was obtained from the National Cancer Registry of the National Department of Health and the Stats-SA's Mortality and causes of death: Findings from death notifications. These are the primary sources of data on cancer incidence and mortality.

The thematic report on cancer in South Africa covers number of people diagnosed with, as well as those who died from cancer between 2008 and 2019. Their distribution by age group, sex, province of residence and population group, as well as the site of cancer as identified by histology is described. Age-standardised cancer incidence and mortality rates have been included for a clearer understanding of the risk of cancer on the various population groups and associated risk factors.

The information will inform health planning programmes to address the increasing burden of cancer, allocate resources appropriately and implement programs aimed at provision of screening, case detection, treatment and preventive services such as Human Papillomavirus (HPV) vaccination for adolescent females to reduce occurrence of cervical and other cancers in their adult years. The information will also enable awareness creation programs about the risk factors associated with cancer such as tobacco, harmful use of alcohol, sedentary lifestyles, consumption of high fatty and sugary foods, inadequate intake of fibre, fruit and vegetables, unsafe sexual practices, exposure to high levels of Ultra Violet (UV) radiation, pollution and comorbidities such as TB and HIV, which increase the risk of cancer.

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Summary and key findings

- In 2018, neoplasms, which include cancer and benign tumours - accounted for 9,7% of all mortality and were the fourth leading cause of mortality. The leading causes of mortality were diseases of the circulatory system such as stroke, hypertension and heart disease, which accounted for 18,5%, followed by certain infectious and parasitic diseases like pulmonary tuberculosis and HIV, which accounted for 16,4%, and external causes of mortality like accidents, assault and firearm-related deaths, which accounted for 12% of all mortality.
- While overall mortality dropped by 24,1% between 2008 and 2018, cancer-related deaths increased by 29,3% over the same period.
- In 2018, females accounted for 51,3% of cancers diagnosed while males accounted for 48,6%. Sex was not stated in 71 (0,1%) cases.
- The median age in years at diagnosis of cancer was 59 for females and 64 for males.
- The median age at death due to cancer was 62 for females and 64 for males. This suggests that cancer in males may be diagnosed at more advanced stages than in females, thus the shorter survival period.

Cancer morbidity:

- Among males, the most diagnosed cancers were those of the prostate, colorectal and lung. These jointly accounted for one-third of all cancers diagnosed among males. Prostate cancer accounted for 25,3% of cancers diagnosed among males, while colorectal cancer accounted for 5,6% and lung cancer accounted for 4,0%.
- Among females, the most diagnosed cancers were breast cancer, which accounted for 23,2% of all cancers diagnosed in women, followed by cervical cancer at 15,9%, and colorectal cancer at 4,5%. These leading cancers accounted for 43,5% of cancers diagnosed among females.
- Basal cell carcinoma, the most common form of skin cancer accounted for 15,3% of cancers diagnosed among females, and 20,7% of cancers diagnosed among males.
- Squamous cell carcinoma, also a common form of skin cancer, accounted for 6,8% of cancers diagnosed among females and 10,4% among males. According to the American cancer society squamous cell carcinoma is more serious because it is likely to spread if not treated early.

Age-standardised cancer incidence rates per 100,000:

- In 2019, the age-standardised prostate cancer incidence rate, was 59,27 cases per 100,000 males, White males had the highest incidence at 79,03, followed by Coloured males at 64,47, Black African males at 51,52 and Indian/Asian males at 36,43.

- The age-standardised colorectal cancer incidence rate among males was 12,51 in 2019. White males had the highest incidence of 26,5, followed by Indian/Asian males at 18,68, Coloured males at 16,89 and Black African males at 5,49.

- Lung cancer age-standardised incidence rate for all males was 8,95 in 2019. Coloured males had the highest incidence between 2008 and 2018, which peaked at 21,7 in 2016 and dropped rapidly thereafter to 13,72 in 2019. White males had the second highest incidence rates, lowest in 2009 at 11,46 and highest in 2015 at 17,77. Indian/Asian males had lower incidence rates than White males at 12,67 in 2019 while Black African males had the lowest lung cancer incidence rate at 4,93 in 2019, but in 2015 was as high as 6,91.

- Among females, the breast cancer age-standardised incidence rate was 37,37 in 2019. Breast cancer incidence was highest among White females at 92,02 in 2019, followed by Indian/Asian females at 53,39 and Coloured females at 50,01. Black African females had the lowest breast cancer incidence rate at 21,56 per 100,000 females.

- The age-standardised cervical cancer incidence rate was 24,89 in 2019. Black African women had the highest cervical cancer incidence rates over all years, 2008 to 2019. Their age-standardised incidence rate was 29,14 in 2019. They were followed by White females at 17,37, Coloured females at 14,31 and Indian/Asian females at 8,69.

- The age-standardised colorectal incidence rate among females was 7,28 in 2019. White females had the highest incidence rate of 18,48 in 2019. They were followed by Indian/Asian females at 10,92 and Coloured females at 10,47. Black African females had the lowest colorectal incidence rate at 3,39 in 2019.

- Among females, the age-standardised lung cancer incidence rate was 3,58 in 2019. The lung cancer incidence rate was highest among White females at 9,22. Coloured females had the second highest at 6,75, Indian/Asian females at 3,07 and 1,39 for Black African females.

Cancer mortality:

- Among females, in 2018, cancers of the cervix, breast, bronchus and lung, and colorectal accounted for 50,2% of cancer-related deaths. Cervical cancer accounted for 17,9%, breast cancer, 17,0%, bronchus and lung, 9,2% and colorectal, 6,1%.

- Between 2008 and 2018 deaths due to cervical cancer increased by 50,5% (from 2 653 in 2008 to 3 994 in 2018). Those due to breast cancer increased by 42,4% (from 2 665 in 2008 to 3 796 in 2018), while those due to bronchus and lung cancer increased by 38,2% (from 1 491 in 2008 to 2 060 in 2018), and colorectal by vbn45,1% (from 945 in 2008 to 1 371 in 2018).

- Among males, bronchus and lung cancer accounted for 18,7% of cancer-related deaths, prostate cancer contributed 16,7%, oesophagus, 7,5%, colorectal, 6,8% and liver and intrahepatic bile ducts, 5,2%. These leading cancers accounted for 54,8% of cancer-related deaths among men.

- Between 2008 and 2018, deaths due bronchus and lung cancer increased by 29,1% (from 3 071 in 2008 to 3 964 in 2018). Those due to prostate cancer increased by 51,5% (from 2 332 in 2008 to 3 534 in 2018), while cancer of the oesophagus dropped by 11,0% (from 1 783 in 2008 to 1 587 in 2018). Colorectal cancer-related deaths increased by 38,2% (from 1 044 in 2008 to 1 443 in 2018) and liver and intrahepatic bile ducts increased by 11,2% (from 989 in 2008 to 1 100 in 2018).

Age standardised cancer mortality rates

As was the case with incidence rates, there are considerable racial disparities in mortality rates.

- In 2018, the age-standardised breast cancer mortality rate was 13,83 per 100,000. Coloured females had the highest mortality rate at 21,83 followed by White females at 19,34, Indian/Asian females at 14,54 and Black African females at 10,36. In 2018, while White females had a higher breast cancer incidence rate of 10,86 compared to Coloured females at 8,2, Coloured females had a higher mortality rate. This is likely due to diagnosis of breast cancer at advanced stages among Coloured compared to White females, as well as risk factors such as smoking. Lack of access to cancer treatment, including medical aid also plays a major role in the outcome of treatment for cancer, as the private health care sector is better resourced and patients are more likely to be diagnosed with early-staged cancer and to receive timely cancer treatments (Tin Tin S. et al. , 2016). The Coloured population group has been reported to have the second lowest coverage of medical aid after Black Africans. According to the Stats SA General Household Survey (GHS) of 2019 (Statistical release. P0318), 9,3% of Black African and 19,9% of Coloured individuals were members of a medical aid scheme, compared to 77,7% of White and 45,1% of Indian/Asian individuals.

- The age-standardised cervical cancer mortality rate was 15,0 in 2018. Black African females had the highest mortality rate at 17,92, followed by Coloured females at 9,57. White and Indian/Asian females had much lower mortality rates at 4,11 and 4,42 respectively. As women living with HIV are more likely to develop cervical cancer (Ghebre R. et al. 2017) and Black African females aged 20-34 years were reported to have the highest incidence (Zuma K. et al. 2017), it may be assumed that the high cervical cancer mortality rate among Black African females is driven by HIV, as well as poor access to treatment for timely diagnosis and treatment.

- The age standardised lung cancer mortality rate among females was 8,01 per 100,000. Coloured females had the highest mortality rate at 20,84, followed by White females at 11,81, Indian/Asian females at 4,95 and Black Africans at 3,58.

- The age-standardised colorectal cancer mortality rate was 5,32 among females in 2018, increasing from 4,76 in 2008. White females had the highest mortality rate at 8,48, followed by Coloured females at 7,41, Indian/Asians at 6,81 and Black Africans at 2,98.

- The age-standardised prostate cancer mortality rate rose from 20,9 in 2008 to 23,83. In 2018, Coloured males had the highest mortality rates at 35,81, followed by Black African males at 25,58 and White males at 14,85. Indian/Asian males had the lowest mortality rates at 11,69 in 2018.

- The lung cancer age-standardised mortality rate in males was 22,12 in 2018, a small increase from 22,08 in 2008, although it went up as high as 55,84 in 2016. Coloured males had the highest mortality rates, from 43,61 in 2008 to 49,21 in 2018. Other population groups had much lower mortality rates, from 20,02 in 2008 to 17,49 in 2018 for White males, 17,39 in 2008 to 18,56 for Indian/Asian males, and 10,72 in 2008 to 15,09 in 2018 for Black African males.

- The colorectal cancer age-standardised mortality rate among males was 8,2 in 2018, a low increase from 7,85 in 2008. White males had the highest mortality rates, between 12,54 in 2008 and 12,42 in 2018. Indian/Asian males had lower, but fluctuating mortality rates, at 9,67 in 2008 and 9,29 in 2018, but peaking in 2010 and 2013 at 12,24 and 12,63 respectively. Mortality rates for Coloured males increased from 7,48 in 2008 to 10,9 in 2018, while Black Africans had the lowest at 3,1 in 2008, increasing to 4,35 in 2018.

Abbreviations

ART	Antiretroviral therapy
CANSA	Cancer South Africa
CDC	Centres for Disease Control and Prevention (USA)
DHA	Department of Home Affairs
GHS	General Household Survey (Statistics South Africa)
GATS	Global Adult Tobacco Survey
HAART	Highly active antiretroviral therapy
HIV/Aids	Human Immunodeficiency Virus / Acquired immunodeficiency syndrome
HPV	Human papillomavirus
ICD-10	International Classification of Diseases (Version 10)
KFF	Kaiser Family Foundation
KSHV	Kaposi sarcoma-associated herpesvirus
NCD	Non-Communicable Diseases
NCI	National Cancer Institute (USA)
NCI (SEER)	National Cancer Institute (Surveillance, Epidemiology and End Results) Program
NCR	National Cancer Registry (South Africa)
NDoH	National Department of Health (South Africa)
NHS/UK	National Health Service / UK
PAP (smear)	Papanicolaou test
PEPFAR	U.S. President's Emergency Plan for AIDS Relief
PLHIV	People living with HIV
SAMRC	South African Medical Research Council
StatsSA	Statistics South Africa
TB	Tuberculosis
UV	Ultraviolet (rays)
UN	United Nations
UNAIDS	The Joint United Nations Programme on HIV/AIDS
WHO	World Health Organisation

1. Background

Non-communicable diseases (NCDs), also known as chronic diseases, tend to be of long duration and are a result of a combination of genetic, physiological, environmental and behavioural factors. In 2000, the World Health Organisation (WHO) recognised Non-communicable diseases as the greatest cause of premature death and morbidity and called for comprehensive and integrated action to stop this global epidemic. ((WHO. 2000).

Non-communicable diseases are not a new problem, having long been of concern in developed countries; they are however, of increasing concern in developing countries because of their transition from low-income to middle-income status, the influence of globalization on consumption patterns and the aging of populations (KFF. 2019).

According to the World Health Organisation (WHO. 2021), Non-communicable diseases are comprised of four main types, namely: cardiovascular diseases (like heart attacks and stroke), cancer, chronic respiratory diseases (such as chronic obstructive pulmonary disease and asthma) and diabetes. Together these diseases kill an estimated 41 million people between the ages of 30 and 69 years each year and account for 80% of all premature deaths, 85% of which occur in low and middle income countries. NCDs threaten progress towards the 2030 Agenda for Sustainable Development Goals, which includes a target of reducing premature deaths from NCDs by one-third by 2030 (WHO. 2021). Tobacco use, sedentary lifestyles, the harmful use of alcohol and unhealthy diets such as excess salt, high sugar intake and fatty foods all increase the risk of dying from NCDs. Detection, screening and treatment of NCDs are key components of the response to NCDs (WHO. 2022). The South Africa Demographic and Health Survey of 2016 reported that 61% of men and 26% of women had ever consumed alcohol, and 26% of men and 5% of women exhibited risky drinking (SADHS. 2016).

South Africa faces a quadruple burden of disease resulting from maternal and child mortality; communicable diseases such as HIV/AIDS and TB; NCDs such as hypertension and cardiovascular diseases, diabetes, cancer, mental illnesses and chronic lung diseases like asthma; as well as injury and trauma. (WHO. 2018)

However, chronic diseases have not received priority attention in public health policies and programs in line with their disease burden. There are cost-effective interventions available to prevent premature deaths from chronic disease and action is required to prevent further loss of lives. A strategy is required to address the increasing prevalence of chronic diseases, with the majority occurring in developing countries. Significant socioeconomic inequities in South Africa result in a higher chronic disease burden and mortality among poorer people (NDoH. 2020).

The specific focus of this report is on cancer occurrences and their contribution to morbidity and mortality in South Africa, trends over time, and their burden on each population and age group. The World Health Organisation (WHO. 2020), describes cancer as a generic term for a large group of diseases that can affect any part of the body. Other terms used are malignant tumours and neoplasms. One defining feature of cancer is the rapid creation of abnormal cells that grow beyond their usual boundaries, and which can then invade adjoining parts of the body and spread to other organs; the latter process is referred to as metastasis. Widespread metastasis is the primary cause of death from cancer (WHO. 2022)

According to the World Health Organization (WHO. 2020), cancer is a leading cause of death worldwide, accounting for nearly 10 million deaths in 2020. More than 70% of all cancer deaths occur in low and middle – income countries, where resources required for prevention, diagnosis and treatment of cancer are limited or non-existent. (WHO. 2006). Yet cancer is to a large extent avoidable. Over 40% of all cancers can be prevented. Some of the most common cancers are curable if detected early and treated. (WHO. 2006)

According to WHO (2020), the most common cancers diagnosed globally were:

- Breast cancer (2,26 million cases)
- Lung cancer (2,21 million cases)
- Prostate cancer (1,41 million cases)
- Skin cancer (non-melanoma) (1,2 million cases)
- Stomach cancer (1,09 million cases)

Also according to the WHO, globally, the most common causes of cancer deaths in 2020 were:

- Lung cancer (1,8 million deaths)
- Colon and rectum cancer (916 000 deaths)
- Liver cancer (830 000 deaths)
- Stomach cancer (769 000 deaths)
- Breast cancer (685 000 deaths).

1.1 Skin cancer

Skin cancer is reported as the most common type of malignancy in the Caucasian population (Apalla. Z Dermatol. 2017). According to Cancer South Africa (CANSA. 2010) skin cancer ranks amongst the highest in South Africa, and people with a lighter natural skin tone are at greater risk. Reducing exposure to ultraviolet (UV) rays can lower the chances of developing skin cancer. Basal and squamous cell carcinomas are the two most common types of skin cancer. Melanoma is the third most common type of skin cancer and causes the most deaths because of its tendency to spread to other parts of the body, including vital organs. (Centres for Disease Control (CDC. 2022)).

Basal-cell carcinoma grows slowly and can damage the tissue around it, causing cosmetic disfigurement if not treated early, but it is unlikely to spread to distant areas or result in death (McDaniel B. et al. 2022). Squamous cell carcinoma of the skin is usually not life-threatening. However, if left untreated it can grow large or spread to other parts of the body causing serious complications (Mayoclinic. 2021). While anyone can get skin cancer, it's more common among people with a light skin tone (NCI. 2011). Skin cancer is rare among black Africans; but it is a common malignancy among Caucasians. It represents 20 - 30% of all neoplasms in Caucasians and 1-2% in those with darker pigmentation (Bradford. 2009). It is a major risk for people living with albinism and according to the United Nations (UN. 2019), 98% of people with albinism do not live beyond the age of 40 because of sun exposure, with skin cancers responsible for at least 80% of deaths (UN. 2019). Albinism affects one in every 20,000 people worldwide and it is most common in sub-Saharan Africa. A study on 111 Black African people with albinism in South Africa reported that 23,4% developed skin cancer. (Kromberg et al. 1989).

1.2 Breast cancer

Breast cancer is the most invasive cancer in females and it is also one of the leading causes of cancer deaths in females. (Hagan T. et al. 2021). It can also affect males in rare cases (CDC. 2022). Risk factors which cannot be changed include age, genetic mutations, family history of breast or ovarian cancer, dense breast, and reproductive history: Females starting menstrual periods before age 12 and starting menopause after age 55 are exposed to hormones for a longer time, raising their risk of getting breast cancer. (CDC. 2021)

As with other cancers, lifestyle factors such as obesity and harmful use of alcohol increase the risk of developing breast cancer. Awareness of the symptoms and the need for screening is the main intervention in reducing the risk of mortality. (NHS/UK. 2019).

1.3 Lung cancer

Worldwide, lung cancer is the second most commonly diagnosed cancer, and is the leading cause of cancer death for men and women (Cancer.Net. 2022). The leading cause of lung cancer is smoking or exposure to second-hand smoking (Asomaning K. 2022). Tobacco use is a risk factor to a range of disability and diseases such as lung cancer, stroke, heart diseases and chronic respiratory disease. (Moore S. et al. 2014). A study on the age at the onset of tobacco smoking in South Africa (Fagbamigbe. et al. 2020) found that the onset of smoking peaked at ages 15 to 22 years and varied by province, sex, location, race and socio-economic status. The lifetime prevalence of smoking, that is, having ever smoked tobacco was 20,5%. A recent household survey of persons aged 15 years or older, the Global Adult Tobacco Survey (GATS) undertaken in 2021 by the South African Medical Research Council (SAMRC) under the coordination of the National Department of Health (NDoH), reported a higher percentage, 29,4% of current tobacco users. Tobacco use among males was much higher than that reported among females, at 41,7% and 17,9% respectively (MRC South Africa. 2021).

1.4 Prostate cancer

The prostate is a gland found in males and makes some of the fluid that is part of semen (American Cancer Society. 2019). Prostate cancer affects mainly older men, over 65 years of age and very few under 50. Diet has been identified as a risk factor that contributes to the risk of developing prostate cancer. Men who consume large amounts of fat, particularly from red meat and other sources of animal fat cooked at high heat are more likely to develop advanced prostate cancer. Men who eat a lot of dairy products appear to have a slightly higher chance of getting prostate cancer (American Cancer society. 2020). Other factors that influence prostate cancer risk include low fruit and vegetable consumption, obesity, smoking, excessive alcohol use and sexually transmitted infections. (WHO. 2022).

1.5 Cervical cancer

The cervix is the lowermost part of the uterus or womb. In 2005, the WHO regional office for Africa reported that cervical cancer is the second most common cancer among women. In 2018 there were 111 632 new cases in Sub-Saharan Africa and in the same year, 68% of women died from cervical cancer. (WHO. Regional Office for Africa. 2018)

A 2018 worldwide analysis of the incidence and mortality of cervical cancer (Arbyn M. et al. 2020) reported that 570 000 cases of cervical cancer and 311 000 deaths from the disease occurred in 2018. Cervical cancer was the fourth most common cancer in women, ranking after breast cancer (2,1 million cases), colorectal cancer (0,8 million) and lung cancer (2,1 million). The estimated age-standardised incidence of cervical cancer was 13,1 per 100 000 women globally and varied widely among countries, with rates ranging from less than 2 to 75 per 100 000 women.

Cancer of the cervix is also a disease that reflects global inequity. Its burden is greatest in low- and middle – income countries, where access to public health services is limited and screening and treatment for the disease have not been widely implemented. (WHO 2020). Incidence of cervical cancer in southern, central and east Africa is reported among the highest in the world and is a leading cause of cancer mortality for women in these regions. In South Africa, it is estimated that 1 in 26 women were likely to develop cervical cancer (Van Schalkwyk S.L. et al. 2008).

The majority of cervical cancer is due to the human papillomavirus (HPV) (WHO. 2022). HPV is the most common viral infection of the reproductive tract and is transmitted through sexual contact. All women are at risk for cervical cancer and it occurs most often in women over age 30. Cancer of the cervix can be prevented by Papanicolaou (PAP) smear screening to detect precancerous processes in the cervix and HPV vaccination.

The vaccine is effective at stopping people getting the high-risk types of HPV that cause cancer, including most cervical cancers and some anal, genital, mouth and throat cancers. (WHO. 2022).

A national school-based HPV vaccination programme was rolled out in South Africa in 2014, targeting Grade 4 girls aged over 9 years to reduce the risk of developing cancers caused by HPV. (Delany-Moretlwe et al. 2014). As of 2020, the proportion of adolescent girls aged 15 years who had received at least one dose of the HPV vaccine at any time between the ages of 9 and 14 years was 75%, while 61% had completed the full recommended two-dose schedule. Of concern, dose completion rates have followed a downward trend due to weakening social mobilization (Amponsah-Dacosta et al. 2022).

The World Health Assembly adopted a global strategy to accelerate the elimination of cervical cancer as a public health problem (WHO. 2020). WHO's strategy of elimination rests on three main pillars:

- Prevention through vaccination
- Screening and treatment of precancerous lesions
- Treatment and palliative care for invasive cervical cancer

Without urgent action, deaths due to cervical cancer are projected to rise by almost 25% over the next 10 years. (WHO. 2020).

1.6 HIV infection and cancer risk

According to UNAIDS (2020), globally, there were 690 000 AIDS-related deaths in 2019 and 1,7 million new infections. People infected with HIV have a substantially higher risk of some types of cancer compared with uninfected people of the same age. (National Cancer Institute. 2017; Park B et al. 2022). According to a study on the association of HIV and cancer in the South African public health sector about 50% (30 486) of all the female cancer cases with a known status were HIV-positive (Dhokotera T. et. al. 2014). People living with HIV (PLHIV) were at higher risk of AIDS-defining cancers. Three of HIV-associated cancers known as AIDS-defining malignancies are Kaposi sarcoma, aggressive B-cell Non-Hodgkin lymphoma, and cervical cancer. (Park B et al. 2022; Cancer.NET 2021). Kaposi sarcoma is always caused by an infection with a virus called the human herpesvirus 8 (HHV-8), which Is also known as Kaposi sarcoma-associated herpesvirus (KSHV) (Ablashi D.V. et al. 2002; JOHNS HOPKINS Medicine. 2022). The virus is thought to be spread during sex, through blood or saliva, or from a mother to her baby during birth. (NHS. 2020). People infected with HIV are at higher risk of several other types of cancer collectively called "non-AIDS defining cancers". These other malignancies include cancers of the anus, liver, oral cavity/pharynx, and lung, and Hodgkin lymphoma (NCI. 2014; Mahale P. et al. 2018). AIDS-Kaposi sarcoma has become the most frequently diagnosed tumour in several African countries (Wabinga et al. 2000; Chalya P et al. 2015).

1.7 Colorectal cancer

Colorectal cancer (CRC) starts in the colon or the rectum. These cancers can also be called colon or rectal cancer, depending on where they start. Colon cancer begins in the large intestine (colon), the final part of the digestive tract (American Cancer Society. 2020). According to GLOBOCAN 2018 data, colorectal cancer is the third most commonly diagnosed cancer in the world. CRC incidence has been steadily rising worldwide, especially in developing countries that are adopting the "western" way of life. (Rawla. P. et al. 2019). Risk factors associated with colorectal cancer include, family history, inflammatory bowel disease, having a diet low in fibre, fruit and vegetables and high in animal protein, having a diet high in red or processed meats, heavy alcohol use, smoking and having low levels of physical activity. (Thanikachalam K et al. 2019; CDC. 2022)

1.8 Cancer in children

According to the National Cancer Registry (NCR) of South Africa (2021), the five most common childhood cancers in South Africa include lymphomas, brain and spinal cord tumours, nephroblastoma (or Wilms tumours) and soft tissue sarcomas, with leukemia classified the most prevalent among the youth. It is estimated that less than half of children with cancer in South Africa are never diagnosed, with the majority of cases only diagnosed during the advanced stages of the illness. This is partly due to a lack of awareness regarding the early warning signs of childhood cancer. (CANSA. 2021)

Leukaemia, also called blood cancer, is a malignant progressive disease in which the bone marrow and other blood-forming organs produce increased numbers of abnormal white blood cells or leukocytes. These suppress production of normal blood cells, leading to anaemia and other symptoms. It is one of the most common cancers in children younger than 15 years. (National Cancer Institute. 2021). Lymphoma is also a type of blood cancer. The two main types are Hodgkin lymphoma and Non-Hodgkin lymphoma, the more common type. The main differences between leukaemia and lymphoma is that leukaemia affects the blood and bone marrow, while lymphomas affect the lymph nodes, the tissues and organs that produce, store, and carry white blood cells that fight infections. (CDC. 2018).

1.9 National Cancer Strategic Framework 2017 − 2022

The National Cancer Strategic Framework of South Africa was approved by the National Health Council (NHC) in 2017. It provided a detailed assessment of the need, and outlined a strategy for dealing with the increasing numbers of cancer patients in South Africa. The Minister of Health observed that the country is committed to reduce the burden of cancer among all South Africans. He cautioned that the commitment is made amidst many competing demands from both health and developmental contexts, including the quadruple burden of disease and the high impact of social determinants of health, health professionals who are faced daily with the challenges of diagnosing and treating patients, and government officials who must plan and be accountable for effective and cost- efficient service delivery. Since 2017 the National Department of Health has partnered with various organisations in an attempt to quantify the problem, and in some provinces allocated additional resources to cancer care for equipment and staffing. Cancer guidelines including Breast and Cervical Cancer Control Policies and Palliative Care Management Guidelines have been developed.

2. Objectives of the report

In line with the mandate of the Statistics Act, 1999 (Act No. 6 of 1999), the purpose of this report is to describe trends in morbidity and mortality attributable to cancer, based on data extracted from the NCR as well the national death register. This statistical report forms part of a regular series of publications by Stats SA on the health of the population. The aim of the publication is two-fold:

- To present statistics, including age-standardised incidence and mortality rates on diagnosed and registered deaths due to cancer that occurred in 2008 – 2019 by selected socio-demographic and geographic characteristics; and to outline trends over a 10-year period (2008 – 2018); and

- To provide information on the primary sites for cancer-related morbidity and deaths that occurred over the eleven-year period, 2008 – 2019, based on the underlying cause of death due to cancer.

Data sources

The source of the data for this analysis is the Mortality and Causes of Death data from StatsSA (2008 – 2018), as well as the National Cancer Registry (NCR) of the National Department of Health (NDoH) (2008 – 2019).

The NCR is mandated to establish Population-Based Cancer Registries for South Africa. Its specific responsibilities are the systematic collection, storage, analysis, interpretation and reporting of cancer cases known as cancer surveillance (National Institute of Communicable Diseases. 2022). Since 1986, the NCR has conducted pathology-based cancer surveillance, where data on cancer cases diagnosed by histology, cytology and bone marrow aspirate and trephine are collected, analysed and reported annually. Data sources that are included in the NCR's research are among public hospitals, private health facilities, the South African Oncology Consortium, Hospice, paediatric oncology, Childhood Cancer Foundation (CHOC), and the National Health Laboratory Service (NHLS). (NCR. 2022)

The DHA's primary mandate revolves around a complete and accurate national death register (Republic of South Africa, 1992**).** Form DHA-1663 (Notification of death/still-birth) is completed when reporting a death and captured in the death register. The death notification forms are forwarded to StatsSA where they are processed and causes of deaths classified using the International classification of deaths (ICD-10) and the underlying cause of death determined. A report on mortality and causes of death is published annually and describes causes of deaths as well as trends. The datasets on deaths are published on the StatsSA website for public use.

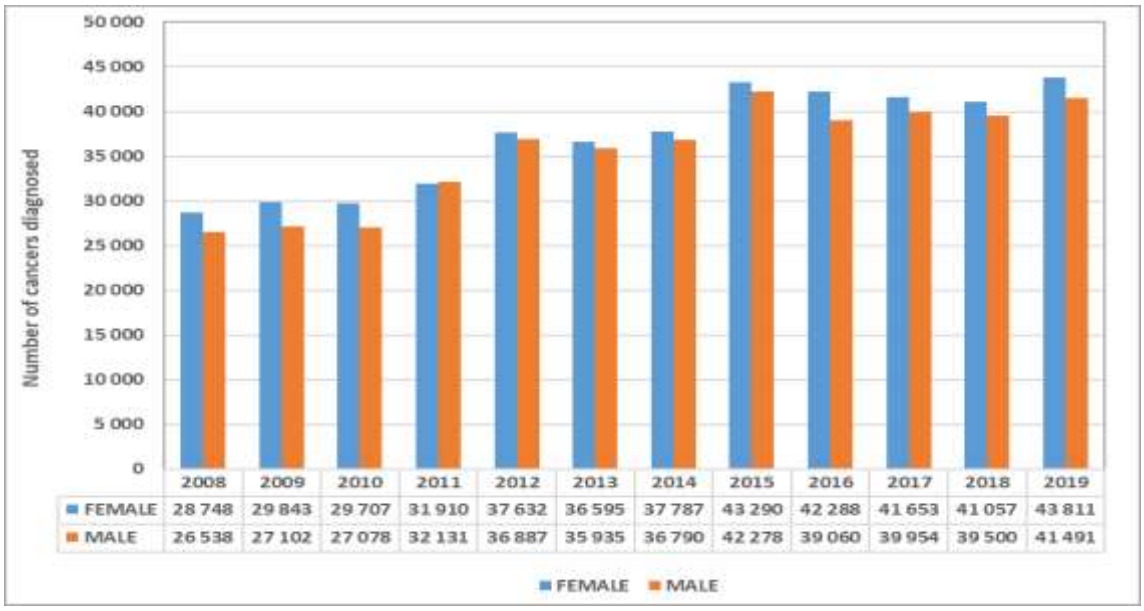
According to Statistics South Africa's *Mortality and causes of death* (Statistical release P0309.3. June 2021), about 97,9% of these deaths were registered using the new form DHA-1663, and 2,1% were registered using the old form BI-1663.

3. Cancer Incidence

Based on incident data from the national cancer registry (NCR), this chapter describes the most diagnosed cancers by age group, sex and population group. Cancer occurrences are presented as absolute numbers to show the leading cancers and trends over time. Subsequent sections show cancer incidence, to measure the risk of cancer for each population group.

3.1 Cancers diagnosed by year of occurrence, site of cancer and age group

Figure 3.1.1: Number of cancers diagnosed among males and females, 2008–2019

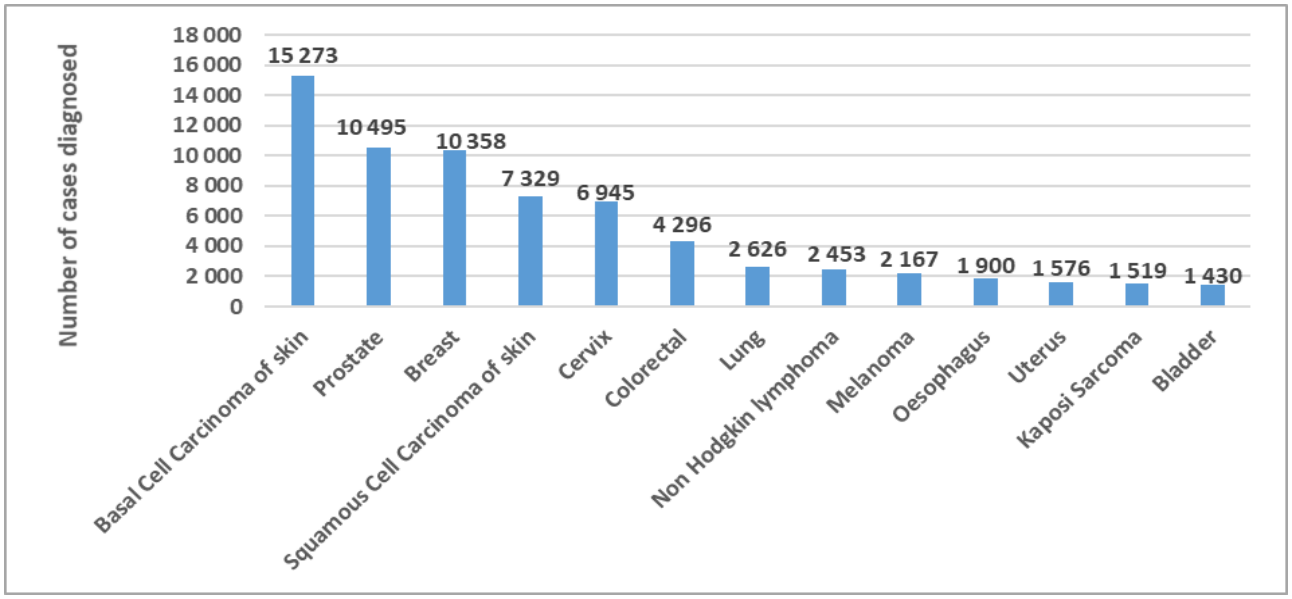


	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
FEMALE	28 748	29 843	29 707	31 910	37 632	36 595	37 787	43 290	42 288	41 653	41 057	43 811
MALE	26 538	27 102	27 078	32 131	36 887	35 935	36 790	42 278	39 060	39 954	39 500	41 491

Figure 3.1.1 shows number of cancers diagnosed between 2008 and 2019, for males and for females. In 2019, 85 373 cases of cancer were diagnosed, of whom 51,3% (43 811) were female and 48,6% (41 491) were male. Sex was not specified for 71 cases. While cancers diagnosed among females are higher than those diagnosed

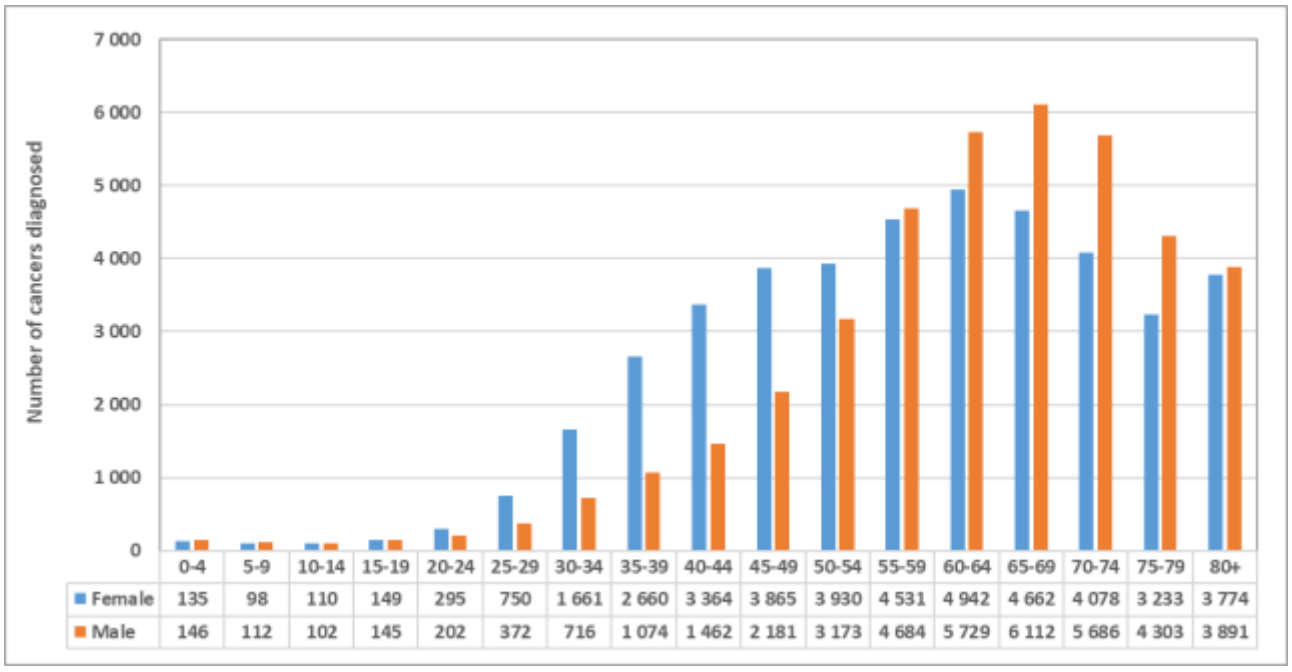
among males, by 5% on average, cancers in males increased by a slightly higher percentage, 56,3% compared to those diagnosed in females, which increased by 52,3% between 2008 and 2019.

Figure 3.1.2: Number of cancers diagnosed among males and females, by site, 2019



Basal cell carcinoma accounted for the majority of cancers at 17,9% (15 273). It was followed by cancer of the prostate at 12,3% (10 495), breast, 12,1% (10 358), squamous cell carcinoma of skin, 8,6% (7 329), cervix, 8,1% (6 945), colorectal, 5,0% (4 296) and lung, 3,1% (2 626). These leading cancers accounted for two-thirds of cancers diagnosed in 2019. The non-melanoma skin cancers, basal cell carcinoma and squamous cell carcinoma of skin, accounted for 26,5% (22 602) of all cancers diagnosed.

Figure 3.1.3: Cancer occurrence and age, 2019



	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	75-79	80+
Female	135	98	110	149	295	750	1 661	2 660	3 364	3 865	3 930	4 531	4 942	4 662	4 078	3 233	3 774
Male	146	112	102	145	202	372	716	1 074	1 462	2 181	3 173	4 684	5 729	6 112	5 686	4 303	3 891

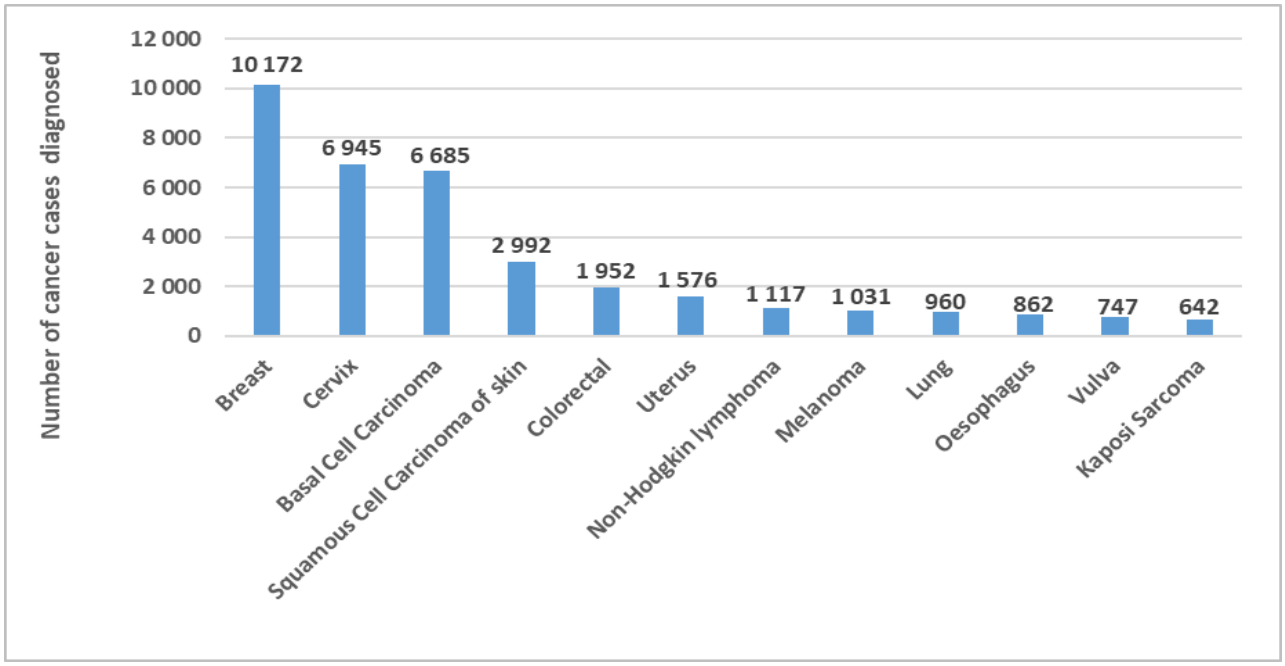
In 2019, the prevalence of cancer increased notably after 20 for both sexes. Below 20 years of age cancer occurrences in each five-year age cohort for males and females were under 200.

Between ages 25 to 54 years, cancers diagnosed among females were almost twice as high as those diagnosed among males, with no observable differences at ages 55 to 59 years. Between ages 60 to 79 years, cancers diagnosed among males were 30% higher than those among females, levelling from ages 80 years and older where the difference was marginal at 3%.

3.2 Cancer sites 2019: Females

This section discusses the most common sites in which cancer develops for females using the 2019 NCR data

Figure 3.2: Cancers diagnosed among females by site of cancer, 2019

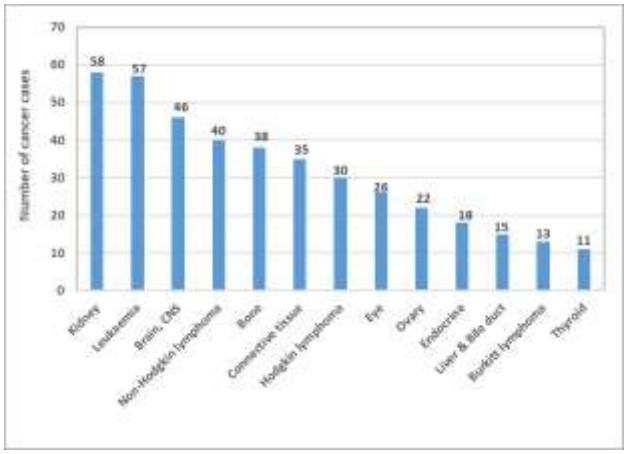


Of the 43 811 cancers diagnosed in women in 2019, breast cancer was the most diagnosed and accounted for 23,2% (10 172) of all cancers among females. The top six cancer sites, breast, cervix, basal carcinoma of skin, squamous cell carcinoma of skin, colorectal and uterus accounted for just over two-thirds, 69,2% (30 322) of all cancers diagnosed among females.

While age, weight, exposure to carcinogens and genetics can increase the risk of developing cancer. The strongest risk factor for breast cancer is age. The disease is rare in women younger than 25 years and the incidence increases with increasing age, reaching a plateau in women aged 50 to 69 years. (WHO. 2022)

3.3 Cancer sites by age group: Females, 2019

Figure 3.3.1: Females 0–19 years diagnosed with cancer



In 2019, 498 females below age 20 years were diagnosed with cancer, comprising 1,1% of all female-related cancer. The leading cancers diagnosed were that of the kidney, accounting for 11,6% (58) of cancers, leukaemia, 11,4% (57), brain and other central nervous system, 9,2% (46), Non-Hodgkin lymphoma, 8,0% (40), bone, 7,6% (38), and connective tissue, 7,0% (38). These leading cancer sites accounted for slightly over half of all cancers diagnosed among females aged below 20 years. Two-thirds of ovarian cancer in this age group were among adolescents, aged 10 to 19 years.

Figure 3.3.2: Females 20–29 years

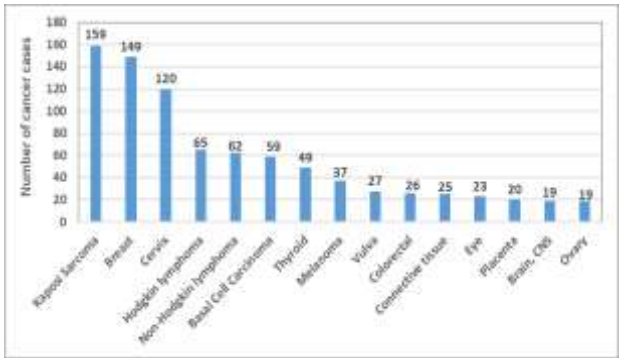
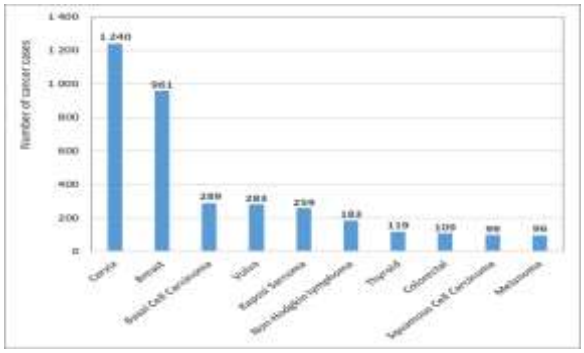


Figure 3.3.3: Females 30–39 years



In 2019, 2,4% (1 054) of females aged 20 to 29 years were diagnosed with cancer. The leading cancer was Kaposi sarcoma, which accounted for 15,1% (159) of cancers in this age-cohort. Breast cancer was the second most diagnosed, accounting for 14,1% (149). It was followed by cancer of the cervix, 11,4% (120), Hodgkin lymphoma, 6,2% (65), Non-Hodgkin lymphoma, 5,9% (62), basal cell carcinoma, 5,6% (59), thyroid, 4,6% (49), melanoma, 3,5% (37), vulva, 2,6% (27) and colorectal, 2,5% (26). These ten leading cancers accounted for 71,4% of cancers diagnosed in females aged 20 to 29 years.

Females aged 30 to 39 years accounted for 10,0% (4 377) of all cancers diagnosed in women. Cervical cancer accounted for almost one-third (1 240) of cancers diagnosed, followed by breast cancer at 22,0% (961), basal cell carcinoma, 6,6% (289), vulva, 6,5% (283), Kaposi sarcoma, 5,9% (259), Non-Hodgkin lymphoma, 4,2% (183), thyroid, 2,7% (119), colorectal, 2,5% (109), and squamous cell carcinoma, 2,3% (99). These leading cancer sites accounted for 80% of cancers diagnosed in this group.

Figure 3.3.4: Females 40–49 years

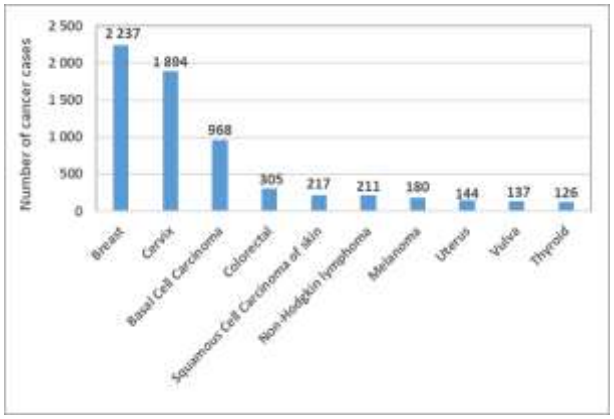
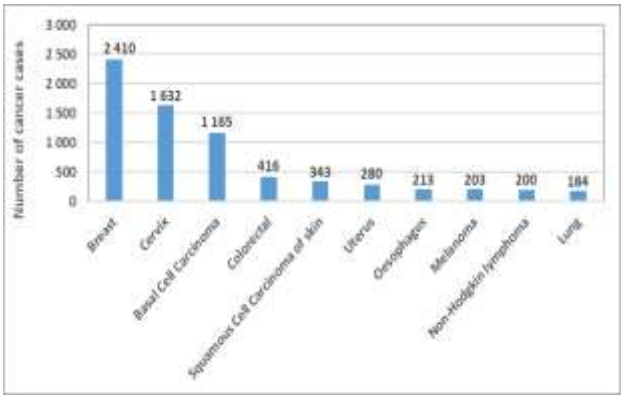


Figure 3.3.5: Females 50–59 years



Women aged 40 to 49 years accounted for 17,9% (7 869) of all cancers diagnosed among females, Cancers of the breast and cervix were the most diagnosed, jointly accounting for half of all malignancies in this group. Breast cancer contributed 28,4% (2 237), while cervical cancer accounted for 24,1% (1 894). These were followed by basal cell carcinoma, which accounted for 12,3% (968), colorectal cancer, 3,9% (305) and squamous cell carcinoma of skin, 2,8% (217). The five leading cancers accounted for 70% of malignancies diagnosed in this group.

Females aged 50 to 59 years contributed 20% (8 751) to cancers diagnosed in females. Cancers of the breast and cervix were also the most diagnosed malignancies, contributing 46,2% to cancers in this group. Breast cancer accounted for 27,5% (2 410) while cervical cancer contributed 18,6% (1 632). They were followed by Basal cell carcinoma at 13,3% (1 165), colorectal, 4,8% (416) and squamous cell carcinoma of skin, 3,9% (343). The five leading cancer sites accounted for slightly over two-thirds of malignancies in this group of women.

Figure 3.3.6: Females 60–69 years

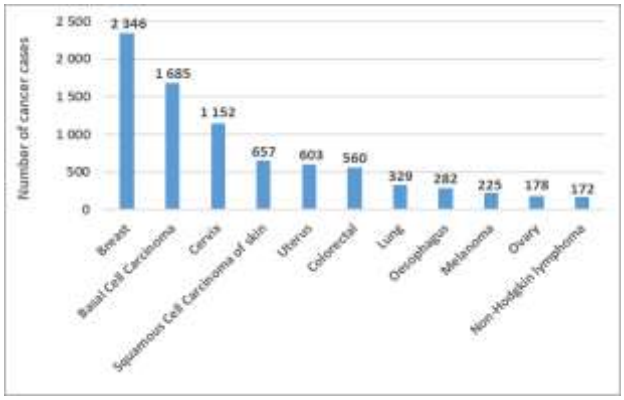
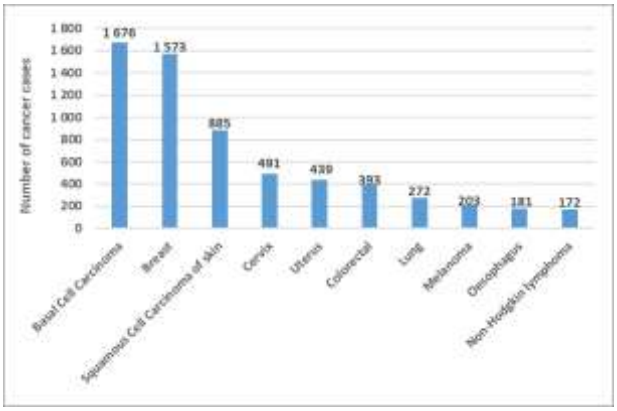


Figure 3.3.7: Females 70–79 years

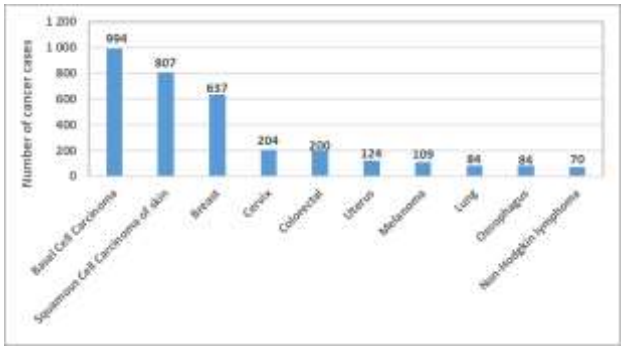


Women aged 60 to 69 years accounted for the highest percentage of cancers diagnosed among females at 22,7% (9 959). Breast cancer contributed 23,6% (2 346), followed by basal cell carcinoma at 16,9% (1 685), cervix, 11,6% (1 152), squamous cell carcinoma of skin, 6,6% (657), uterus, 6,1% (603) and colorectal, 5,6% (560). These leading cancer sites accounted for about 70% of cancers diagnosed in this group.

Cancer diagnosed in females aged 70 to 79 years old contributed 17,4% (7 627) to all cancers among women. Basal cell carcinoma led with 22,0% (1 676), followed by breast cancer at 20,6% (1 573), squamous cell carcinoma of skin 11,6% (885), cervix, 6,4% (491) and uterine cancer, 5,8% (439). These cancer sites accounted for about two-thirds of all malignancies diagnosed in this group.

In comparison to women aged 40 to 59 years, where cervical cancer accounted for more than 15% of cancers diagnosed (24,1% for those aged 40 to 49 years and 18,6% for those aged 50 to 59 years), among older women 60 to 79 years, cervical cancer accounted for a lower percentage, 11,6% of cancers diagnosed.

Figure 3.3.8: Females 80 years and above



Among women aged 80 years and above, cancers of the skin were the most diagnosed and accounted for slightly less than half of all cancers diagnosed. Basal cell carcinoma and squamous cell carcinoma contributed respectively, 25,4% (994) and 20,6% (807), while breast and cervical cancers contributed 16,3% (637) and 5,2% (204) respectively, to cancers diagnosed in this group. These four leading cancers contributed two-thirds of cancers diagnosed among women 80 years and older.

Basal cell carcinoma and squamous cell carcinoma of skin appear to increase with age. Basal cell carcinoma accounted for 2,2% of cancers among females aged below 20 years, increasing to 5,6% (20 to 30 years), 6,6% (30 to 39 years), 12,3% (40 to 49 years), 13,3% (50 to 59 years), 16,9% (60 to 69 years) and 22,0% (70 to 79 years. Squamous cell carcinoma of skin contributed 0,6% to malignancies in females below 20 years of age, increasing to 1,8% (20 to 29 years), 2,3% (30 to 39 years), 2,8% (40 to 49 years), 3,9% (50 to 59 years), 6,6% (60 to 69 years) and 11,6% (70 to 79 years). The two skin-related malignancies accounted for about half of cancers diagnosed in women aged 80 years and above.

3.4 Cancer site by population group

The following set of charts show a breakdown of diagnosed cancer cases by population group among females in 2019.

Figure 3.4.1: Cancer among Black African women

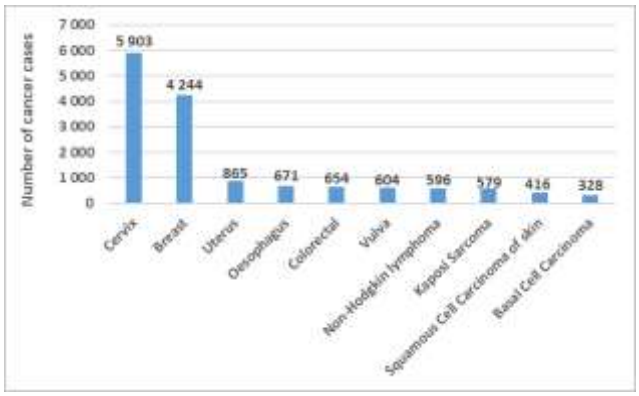
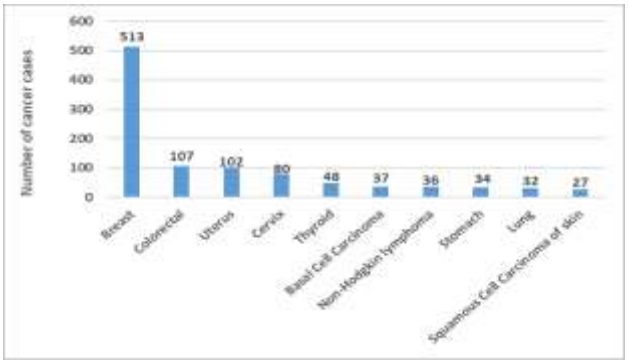


Figure 3.4.2: Cancer among Indian/Asian women



Black African women contributed 44,2% (19 376) to cancers diagnosed among women in 2019. Cervical cancer was the most diagnosed malignancy at 30,5% (5 903), followed by breast cancer at 21,9% (4 244). The two leading cancer sites accounted for half of all cancers diagnosed in this group of women. These were followed by cancers of the uterus at 4,5% (865), oesophagus, 3,5% (671), colorectal, 3,4% (654), vulva, 3,1% (604), Non-Hodgkin lymphoma, 3,1% (596) and Kaposi sarcoma, 3,0% (579). These leading cancer sites accounted for slightly over 70% of all cancers diagnosed among Black African women.

Cancers diagnosed in Indian/Asian women accounted for 3,0% (1 328) of cancers diagnosed among women. Breast cancer was the most diagnosed at 38,6% (513). It was followed by colorectal cancer, 8,1% (107) and uterus, 7,7% (102). These three leading cancer sites accounted for half of all cancers diagnosed among Indian/Asian women. They were followed by cervical cancer at 6,0% (80), thyroid, 3,6% (48) and basal cell carcinoma, 2,8% (37). The six leading cancer sites contributed two-thirds of all cancers diagnosed among Indian/Asian women.

Figure 3.4.3: Cancer among White women

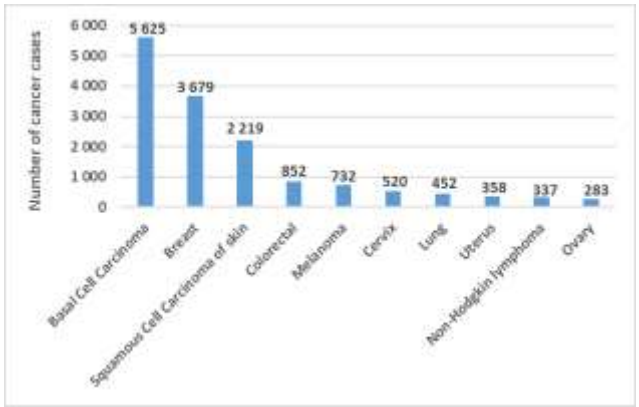
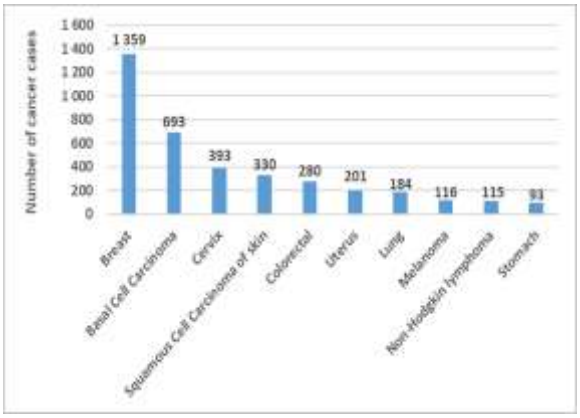


Figure 3.4.4: Cancer among Coloured women

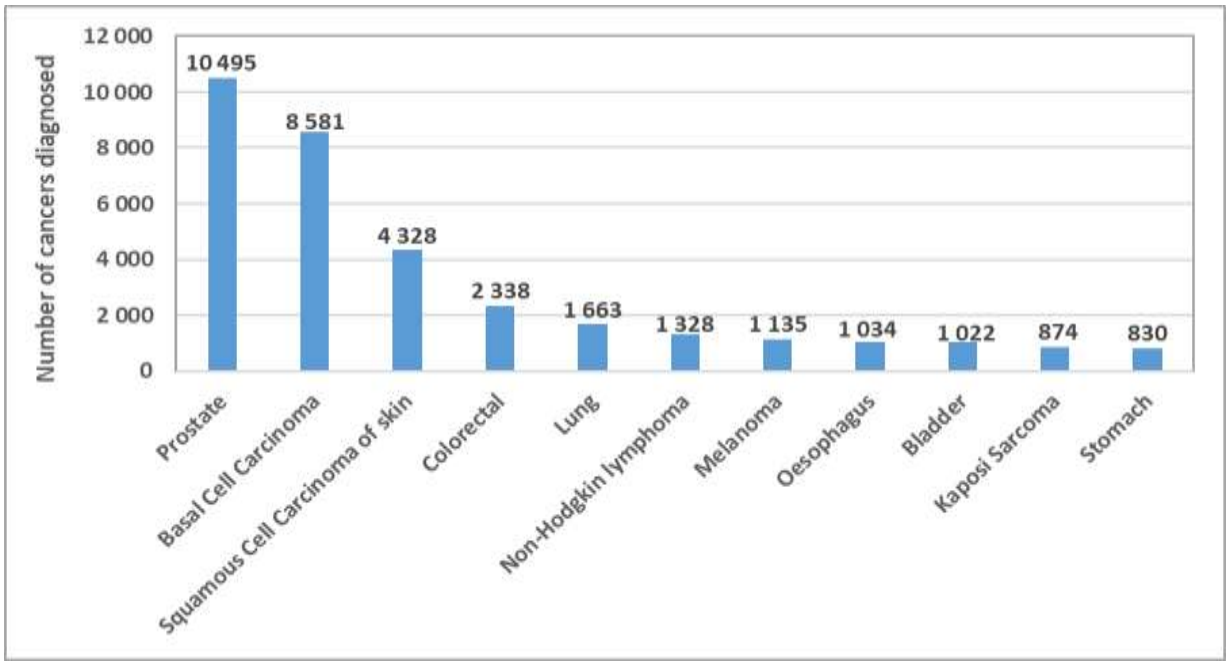


Cancer among White women accounted for 39,7% (17 405) of cancers diagnosed among women. The leading malignancy was basal cell carcinoma, which contributed almost a third of all cancers diagnosed in this group of women. It was followed by breast cancer at 21,1% (3 679), which, jointly with basal cell carcinoma accounted for half of all cancers diagnosed among White women. These were followed by squamous cell carcinoma of skin at 12,7% (2 219) and colorectal cancer at 4,9% (852). The four leading cancer sites accounted for 70% of all cancers diagnosed in this group.

Coloured women contributed 10,9% (4 781) to cancers diagnosed among women. Breast cancer was the most diagnosed and accounted for slightly under a third of all cancers diagnosed. It was followed by basal cell carcinoma at 14,5% (693) and cervical cancer, 8,2% (393). The three leading cancer sites contributed half of all cancers diagnosed in this group. They were followed by squamous cell carcinoma of the skin at 6,9% (330), colorectal, 5,9% (280), uterine cancer, 4,2% (201) and lung, 3,8% (184). The seven cancer sites contributed slightly over 70% of all cancers diagnosed among Coloured women.

3.5 Cancer among Males, 2019

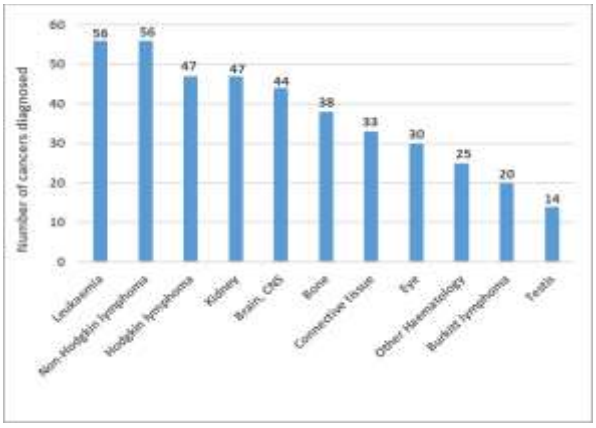
Figure 3.5.1: Cancers diagnosed by site: Males, 2019



In 2019, prostate cancer accounted for most cancers diagnosed among males at 25,3% (10 495), followed by basal carcinoma, 20,7% (8 581), squamous cell carcinoma, 10,4% (4 328), colorectal, 5,6% (2 338), lung, 4,0% (1 663) and Non-Hodgkin lymphoma, 3,2% (1 328). These leading sites accounted for slightly more than two-thirds of cancers among males.

3.6 Cancer site by Age groups: Males, 2019

Figure 3.6.1: Males aged 0–19 years diagnosed with cancer



Young males aged 20 years and under accounted for the lowest number of cancers diagnosed among males at 1,2% (509). Leukaemia and Non-Hodgkin lymphoma were the most diagnosed cancers, each contributing 11% (56). These were followed by Hodgkin lymphoma and kidney, each contributing 9,2% (47), brain and other central nervous system, 8,6% (44) and bone, 7,5% (38). These leading cancers contributed slightly over half of malignancies diagnosed among males younger than 20 years.

Figure 3.6.2: Males 20–29 years

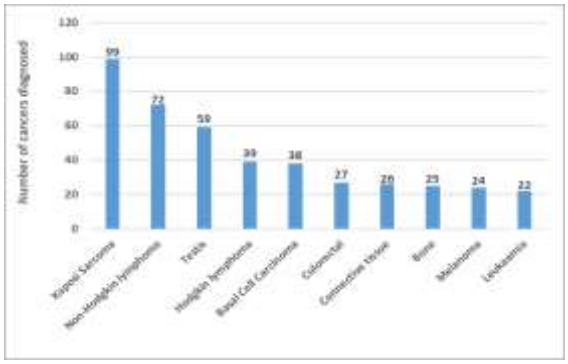
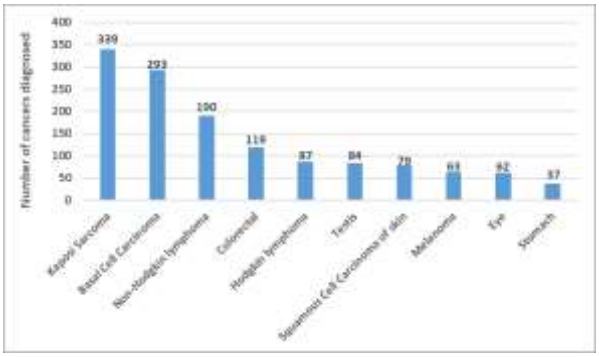


Figure 3.6.3: Males 30–39 years



Males aged 20 to 29 years contributed 1,4% (592) to cancers diagnosed among males. Kaposi sarcoma was the most diagnosed malignancy, accounting for 16,7% (99) of cancers in the group. It was followed by Non-Hodgkin lymphoma, 12,2% (72), testicular cancer, 10,0% (59), Hodgkin lymphoma, 6,6% (39) and basal cell carcinoma, 6,4% (38). The five leading cancer sites comprised half of all cancers diagnosed in the group.

With 1 840 (4,4%), males aged 30 to 39 years contributed a slightly higher percentage of cancers than younger males. Kaposi sarcoma accounted for the highest number of malignancies, contributing 18,4% (339), followed by basal cell carcinoma, 15,9% (293), Non-Hodgkin lymphoma, 10,3% (190), colorectal cancer, 6,5% (119), Hodgkin lymphoma, 4,7% (87), and testicular cancer, 4,6% (84). These leading cancer sites accounted for 60% of malignancies in this group.

Testicular cancer was among the most diagnosed in the two age groups compared to other males. This finding is in line with that reported by Johns Hopkins, that testicular cancer is most common in men in their late 20s and early 30s. The cure rate is reported excellent however, with one in 400 (0,25%) men dying from cancer of the testis each year in the USA. (Johns Hopkins Medicine. 2022)

Figure 3.6.4: Males 40–49 years

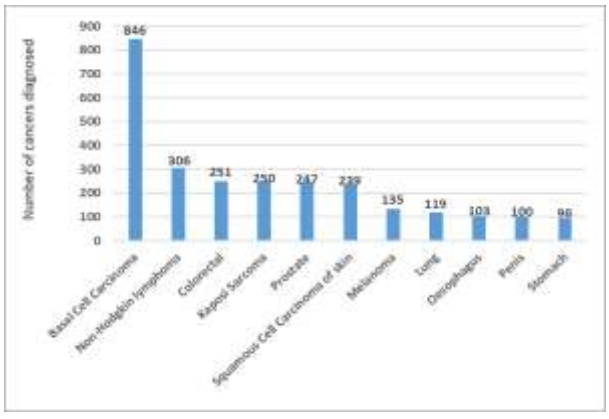
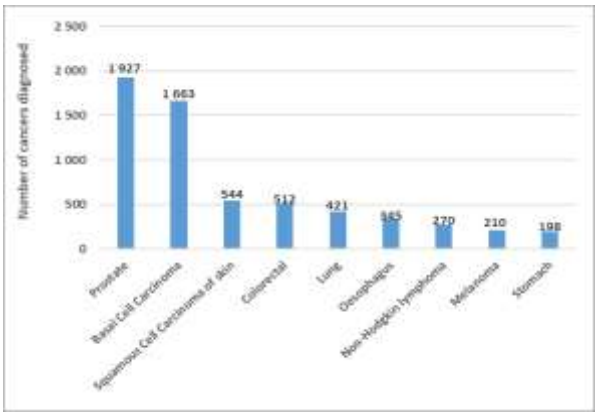


Figure 3.6.5: Males 50–59 years



Cancers in males aged 40 to 49 years accounted for 9,1% (3 786) of all malignancies diagnosed in males. Basal cell carcinoma was the highest and contributed 22,3% (846), followed by Non-Hodgkin lymphoma, 8,1% (306), colorectal cancer, 6,6% (251), Kaposi sarcoma, 6,6% (250), prostate, 6,5% (247) and squamous cell carcinoma of skin, 6,3% (239). The six leading cancer sites accounted for slightly more than half of all cancers in this group.

Males aged 50 to 59 years contributed 19,7% (8 177) to cancers diagnosed in males. Prostate cancer was the most diagnosed, contributing 23,6% (1 927) of cancers in this group, while it's occurrence was much lower, 6,5% (247) among younger males 40-49 years old. The median age of prostate cancer onset has been reported as 55 years but the American Cancer Society journal (2019) reported an increase in prostate cancer

among young adult men, although the contributing factors have yet to be determined. Among males aged 50 to 59 years the second most diagnosed cancer was basal cell carcinoma at 20,3% (1 663), followed by squamous cell carcinoma of skin, 6,7% (544), colorectal, 6,3% (512), lung cancer, 5,1% (421) and oesophagus, 4,2% (345). These leading cancer sites accounted for about two-thirds of cancers among males in this age group.

Figure 3.6.6: Males 60–69 years

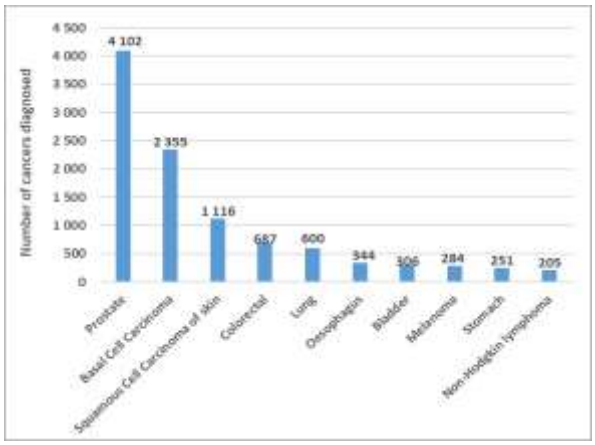
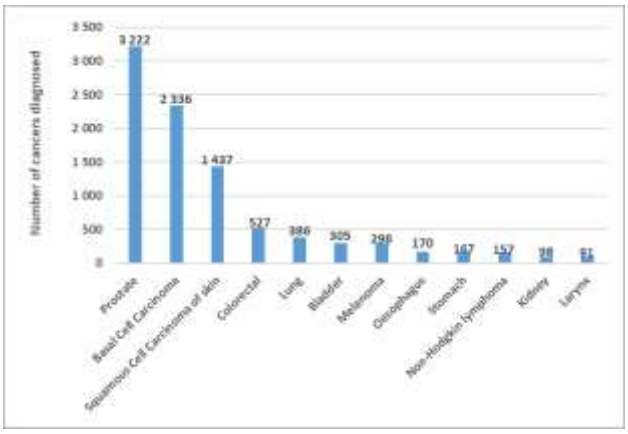
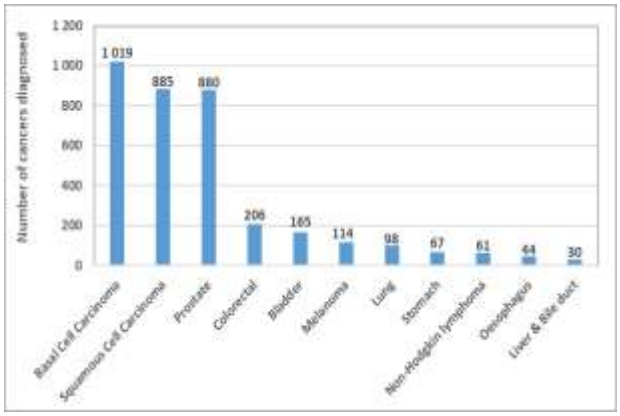


Figure 3.6.7: Males 70–79 years



Cancer occurrence was highest among males aged 60 to 69 years, who accounted for slightly under a third (12 218) of all cancers diagnosed among males while those aged 70 to 79 years contributed 24,5% (10 161). For both groups of males prostate cancer was the leading malignancy, accounting for, respectively, 33,6% (4 102) and 31,7% (3 222) to cancers among males aged 60 to 69 and 70 to 79 years. Prostate cancer was followed by basal cell carcinoma and squamous cell carcinoma of skin. The two skin-related cancers contributed respectively, 28,4% (3 471) and 37,1% (3 773) to cancers in these groups of males in 2019. The three leading cancers accounted for about two-thirds of cancers in each group.

Figure 3.6.8: Males 80 years and above



Basal cell carcinoma contributed 25,8% (1 019) to cancers diagnosed among males aged 80 years and above, followed by squamous cell carcinoma of skin at 22,4% (885). The two cancer sites accounted for slightly under half of all cancers diagnosed in this group of males. These were followed by prostate cancer, which accounted for 22,3% (880). The three cancer sites accounted for the majority, 70% of cancers diagnosed in this older group.

Non-Hodgkin lymphoma contributed less than 4% to cancers among older males 50 years and above, compared to younger ones aged under 40 years where it contributed up to 12% of cancers diagnosed. According to the Centers for Disease Control (CDC. 2018), Non-Hodgkin lymphoma becomes more common as people get older, but in South Africa its occurrence was much higher among younger cohorts, which may explain its association with HIV, where the prevalence rate for all adults aged 15 to 49 years is 19.5% (Statistics South Africa. 2020), while prevalence among older adults aged 50 years and above is 7,6%. (Butler. et al. 2018).

3.7 Cancer site by population group: Males, 2019

Figure 3.7.1: Cancer site: Black African males

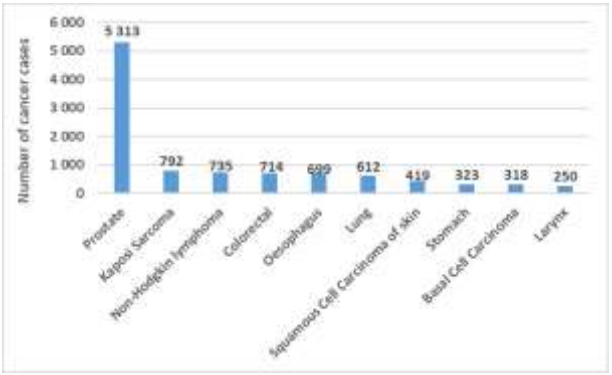
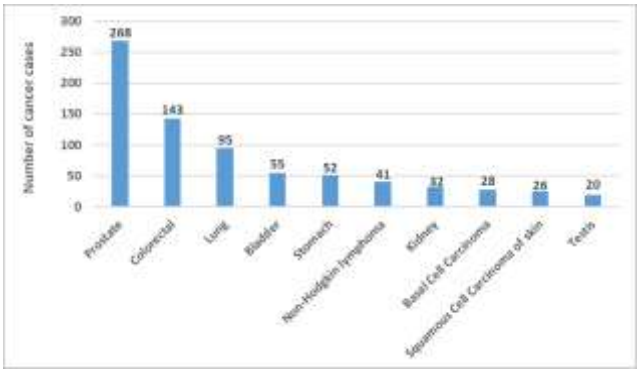


Figure 3.7.2: Cancer site: Indian/Asian males



Cancer among Black African males accounted for 34,1% (14 130) of all cancers diagnosed among males. The most diagnosed cancer in this group was that of the prostate at 37,6% (5 313). This was followed by Kaposi sarcoma, 5,6% (792), Non-Hodgkin lymphoma, 5,2% (735) and colorectal cancer, 5,1% (714). The four leading cancer sites accounted for slightly more than half of all cancers diagnosed among Black African males. These were followed by cancer of the oesophagus, 4,9% (699), lung, 4,3% (612), squamous cell carcinoma of skin, 3,0% (419), stomach, 2,3% (323), and basal cell carcinoma, 2,3% (318). The nine leading cancer sites accounted for 70% of cancers diagnosed in this group of males.

Cancers diagnosed among Indian/Asian males accounted for 2,5% (1 026) of all cancers diagnosed among males in 2019. With 268 cases, prostate cancer accounted for slightly more than a quarter of cancers diagnosed in this group, followed by colorectal cancer, 13,9% (143), lung, 9,3% (95), bladder, 5,4% (55), stomach, 5,1% (52) and Non-Hodgkin lymphoma, 4,0% (41). The seven leading cancer sites contributed two-thirds of cancers diagnosed in this group of males.

Figure 3.7.3: Cancer site: White males

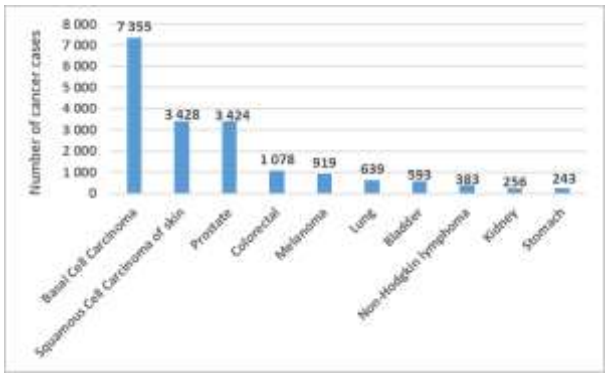
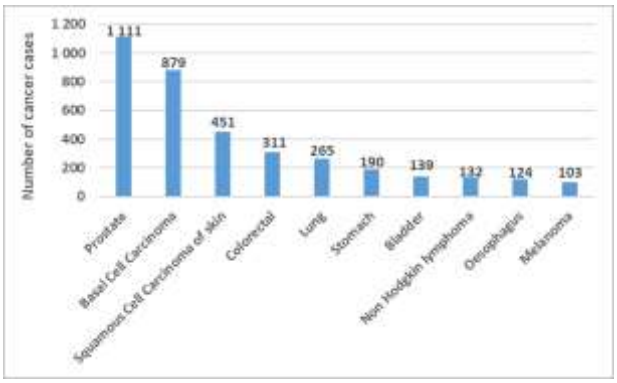


Figure 3.7.4: Cancer site: Coloured males



At 20 743, White males contributed 50,0% to all cancers diagnosed among males in 2019. The most diagnosed cancer was basal cell carcinoma which accounted for 35,5% (7 355) of cancers diagnosed in this group. This was followed by squamous cell carcinoma of skin, which accounted for 16,5% (3 428) of cancers in the group. The two skin-related cancers accounted for about half of all cancers diagnosed among White males. These were followed by prostate cancer, 16,5% (3 424), colorectal, 5,2% (1 078), melanoma 4,4% (919) and lung, 3,1% (639). These six leading cancer sites accounted for 80% of cancers diagnosed among White males in 2019.

Cancers diagnosed among Coloured males accounted for 11,4% (4 716) of all cancers diagnosed among males. The leading cause of cancer was the prostate, contributing 23,6% (1 111), this was followed by basal cell carcinoma, 18,6% (879) and squamous cell carcinoma of skin, 9,6% (451). The three leading cancer sites

contributed half of all cancers diagnosed in this group of males. These were followed by colorectal cancer, 6,6% (311), lung, 5,6% (265), stomach, 4,0% (190) and bladder, 2,9% (139). The seven leading cancer sites accounted for 70% of all cancers among Coloured males.

Appendix 3 shows a detailed breakdown of cancer site by population group.

4. Age-standardised cancer incidence rates (per 100 000 people)

The previous tables and charts show the absolute number of cases of cancer diagnosed for each age and population group, without taking into account the size of the population. According to StatsSA Mid-year population estimates (Statistical release, P0302, 2018), in 2018 the overall population of South Africa was 57 673 251, of which 80,9% was the Black African population group, the Coloured population group comprised 8,8%, White, 7,8%, and Indian/Asian, 2,5%. Therefore, to gain a clear understanding of the risk of cancer on the South African population, population group size and age distribution have to be taken into account. The age-specific incidence rate is a reliable measure of cancer risk and equals the total number of diagnosed cancer cases during a specific year in the population category of interest, divided by the at-risk population for that category and multiplied by 100 000 (United States Cancer Statistics (USCS), 2022). The age-specific rates are further adjusted by multiplying by a “standard population” to obtain age standardised rates that enable comparisons among populations with different age structures. (World Health Organisation (WHO).; Age standardization. Bray/ Ferlay. 2022); (National Cancer Institute (NCI). Surveillance, Epidemiology and End Results Program, 2022). The population at risk, or denominators used to calculate the incidence and mortality rates were obtained from StatsSA Mid-year population estimates in 2018. Cancer cases with age or population group information missing were not included.

The following charts show trends in age-standardised cancer incidence and mortality rates between 2008 and 2019 for leading cancers and those with the highest mortality rates. The World Standard Population (WHO 2000-2025) was used to create the age-adjusted incidence rates. (NCI. SEER datasets. 2013).

4.1 Age-standardised cancer incidence rates: Females

Figure 4.1.1: Breast cancer incidence rate

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
White	48,57	48,65	48,34	75,91	83,32	84,91	86,23	95,21	85,04	92,17	90,43	92,02
Indian/Asian	45,14	49,99	43,26	36,57	50,56	44,99	53,84	55,31	50,97	55,40	54,56	53,39
Coloured	38,37	38,67	35,73	46,03	52,51	46,97	48,73	49,72	52,90	52,88	51,77	50,01
Black African	17,49	18,92	18,80	18,24	20,53	19,21	17,99	21,91	22,49	20,99	20,88	21,56
All Females	27,64	28,41	27,30	32,15	35,44	34,30	33,72	38,25	37,33	36,86	36,07	37,37

The age-standardised breast cancer incidence rates per 100 000 females between 2008 and 2019 ranged from 27,64 in 2008 to 37,37 in 2019. White females had the highest age-standardised breast cancer incidence

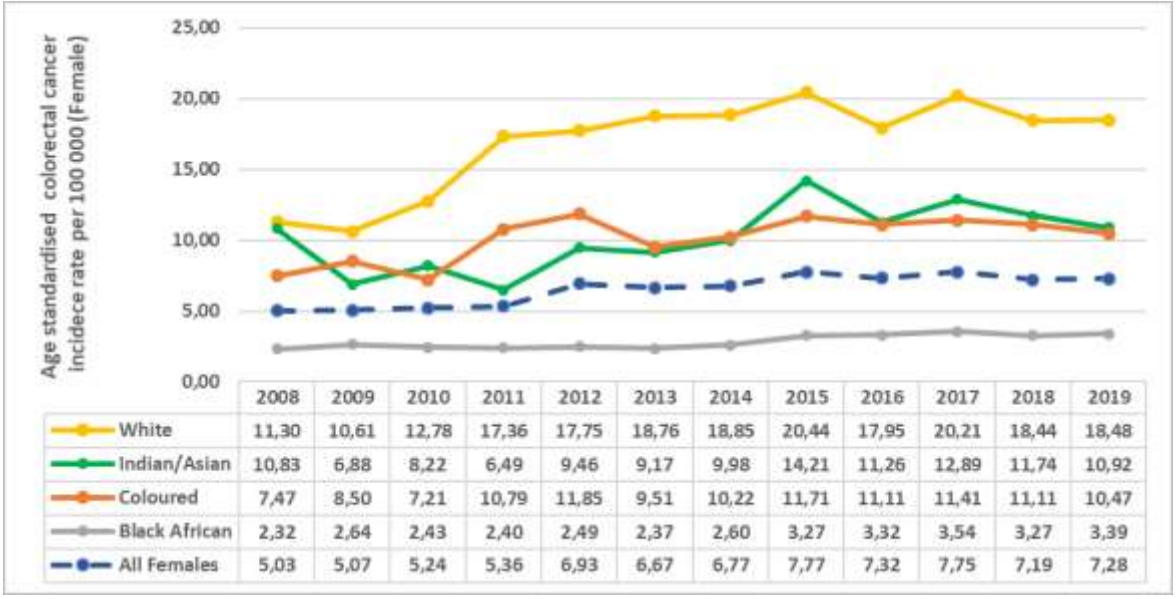
rate, increasing rapidly from 48,57 in 2008 to 92,02 in 2019. They were followed by Indian/Asian and Coloured females with overall incidence in 2008 above 30 and slightly under 40,00 for Coloured women and below 50,00 for Indian/Asian. Incidence increased to just above 50,00 in 2019 for both population groups. Black African females had the lowest incidence, ranging from 17 to 21,56 cases per 100 000 women between 2008 and 2019, respectively.

Figure 4.1.2: Cervical cancer incidence rate

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Black African	26,05	27,13	27,07	25,97	28,01	27,29	26,65	30,83	32,71	29,15	25,80	29,14
Coloured	15,57	16,76	17,42	15,04	16,92	13,95	14,10	14,89	17,56	14,85	14,83	14,31
White	12,37	11,47	11,86	13,92	14,05	14,90	13,48	14,74	17,41	15,83	15,46	17,37
Indian/Asian	8,48	10,36	8,76	6,57	8,65	7,80	8,02	9,31	10,53	8,25	9,62	8,69
All females	23,28	23,38	23,48	22,48	23,77	23,11	22,41	25,90	27,87	23,58	22,37	24,89

The age-standardised cervical cancer incidence rate was 24,89 in 2019, an increase from 23,28 in 2008. Black African females had the highest cervical cancer incidence rate over the whole period, ranging between 25,00 and 30,00 cases per 100 000 women, with the exception of 2016 when incidence went up to 32,71. They were followed by the White and Coloured population groups, with incidence rates between 10,00 and below 20,00. Indian/Asian females had the lowest incidence rate of cervical cancer, between 5,00 and 10,00 cases per 100 000 women. Incidence rates appear relatively stable for all population groups.

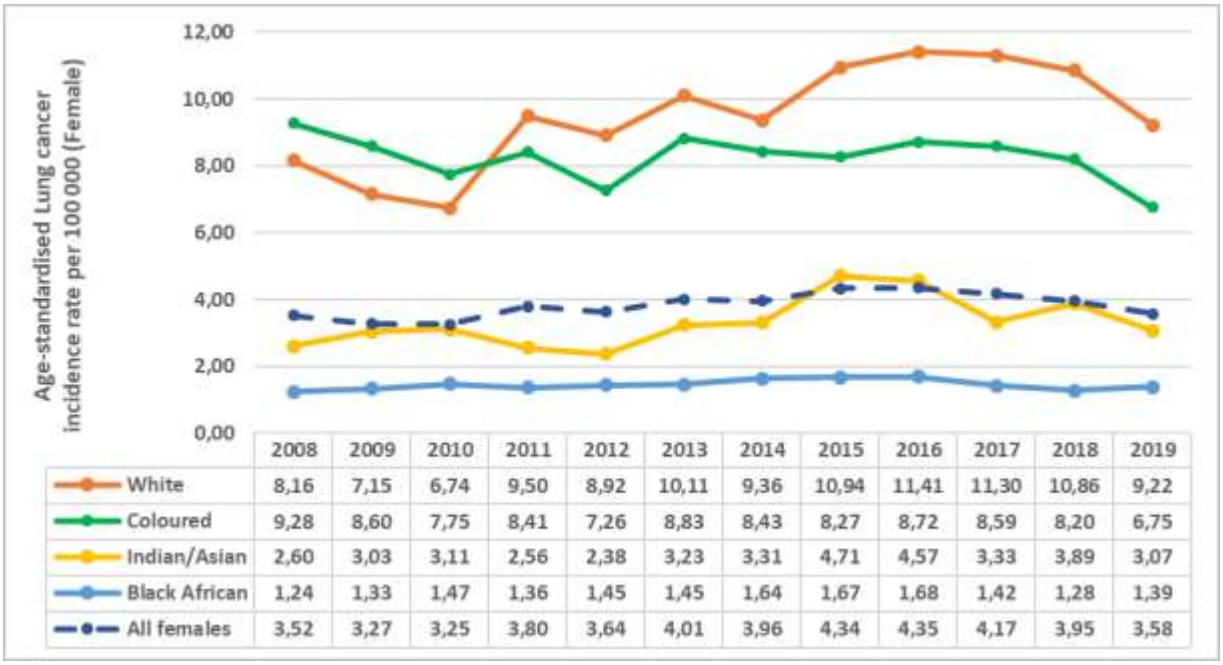
Figure 4.1.3: Colorectal cancer incidence rate (Females)



	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
White	11,30	10,61	12,78	17,36	17,75	18,76	18,85	20,44	17,95	20,21	18,44	18,48
Indian/Asian	10,83	6,88	8,22	6,49	9,46	9,17	9,98	14,21	11,26	12,89	11,74	10,92
Coloured	7,47	8,50	7,21	10,79	11,85	9,51	10,22	11,71	11,11	11,41	11,11	10,47
Black African	2,32	2,64	2,43	2,40	2,49	2,37	2,60	3,27	3,32	3,54	3,27	3,39
All Females	5,03	5,07	5,24	5,36	6,93	6,67	6,77	7,77	7,32	7,75	7,19	7,28

The age-standardised colorectal cancer incidence rate for females was 7,28 in 2019, a small increase from 5,03 in 2008. White females had the highest incidence of colorectal cancer, increasing steadily from 11,30 in 2008 to 20,44 in 2015 and remaining relatively stable thereafter. Incidence among Coloured and Indian/Asian women fluctuated a lot between 2008 and 2019, with a low of 6,49 in 2011 and a high of 14,21 in 2015 for Indian/Asian women. The lowest incidence for Coloured females was 7,21 in 2010 and the highest, 11,71 in 2015. Black African women had the lowest incidence overall, with 2,32 in 2008 and slowly increasing to 3,39 in 2019.

Figure 4.1.4: Lung cancer incidence rate: Females

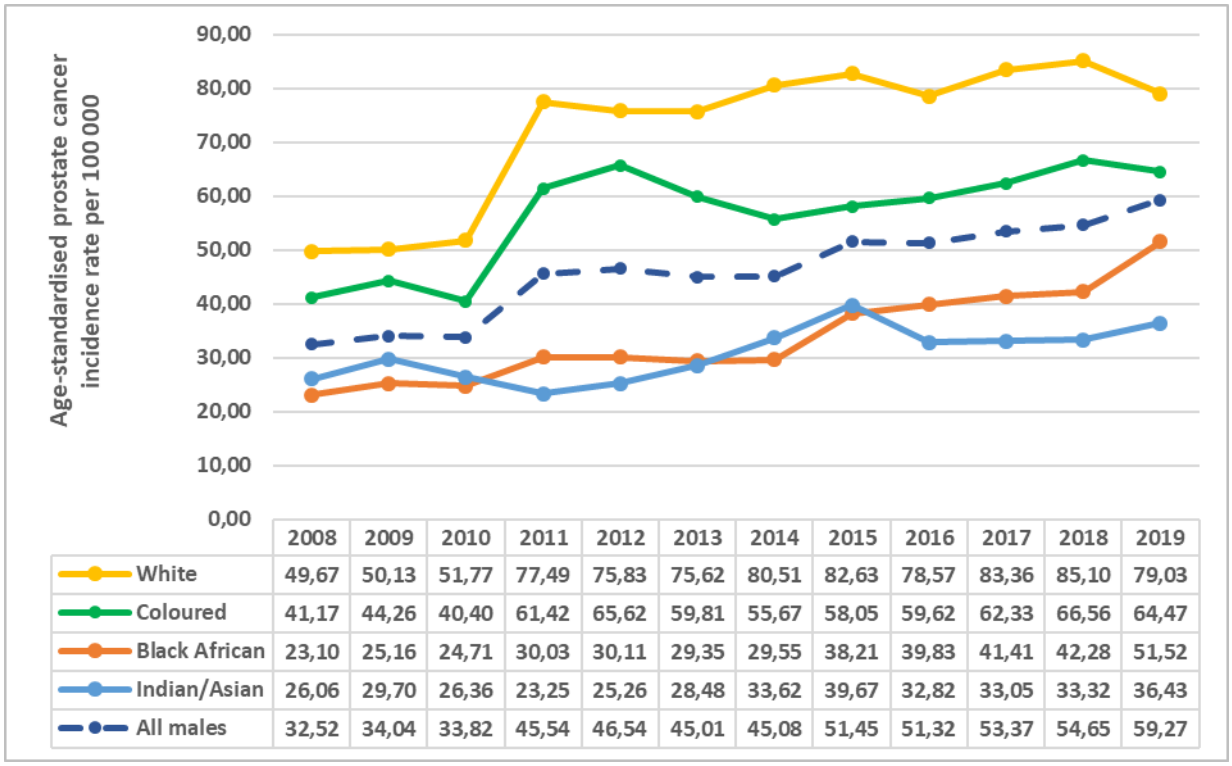


	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
White	8,16	7,15	6,74	9,50	8,92	10,11	9,36	10,94	11,41	11,30	10,86	9,22
Coloured	9,28	8,60	7,75	8,41	7,26	8,83	8,43	8,27	8,72	8,59	8,20	6,75
Indian/Asian	2,60	3,03	3,11	2,56	2,38	3,23	3,31	4,71	4,57	3,33	3,89	3,07
Black African	1,24	1,33	1,47	1,36	1,45	1,45	1,64	1,67	1,68	1,42	1,28	1,39
All females	3,52	3,27	3,25	3,80	3,64	4,01	3,96	4,34	4,35	4,17	3,95	3,58

The age-standardised lung cancer incidence rate for females was 3,58 in 2019, a small change from 3,52 in 2008. Between 2008 and 2010 Coloured females had the highest female-related lung cancer incidence rate, but incidence rate increased rapidly among White females during subsequent years. For both population groups, the incidence rate reached a peak in 2016 and appeared to decline thereafter, reaching a low of 9,22 and 6,75 in 2019 for White and Coloured females respectively. Among Indian/Asian and Black African women lung cancer appeared fairly stable for all years although it exceeded 4,00 in 2015 and 2016 for Indian/Asian women. Incidences ranged between 2,60 and 3,07 for Indian/Asian women, and between 1,24 and 1,39 for Black African women between 2008 and 2019.

4.2 Age-standardised cancer incidence rates: Males

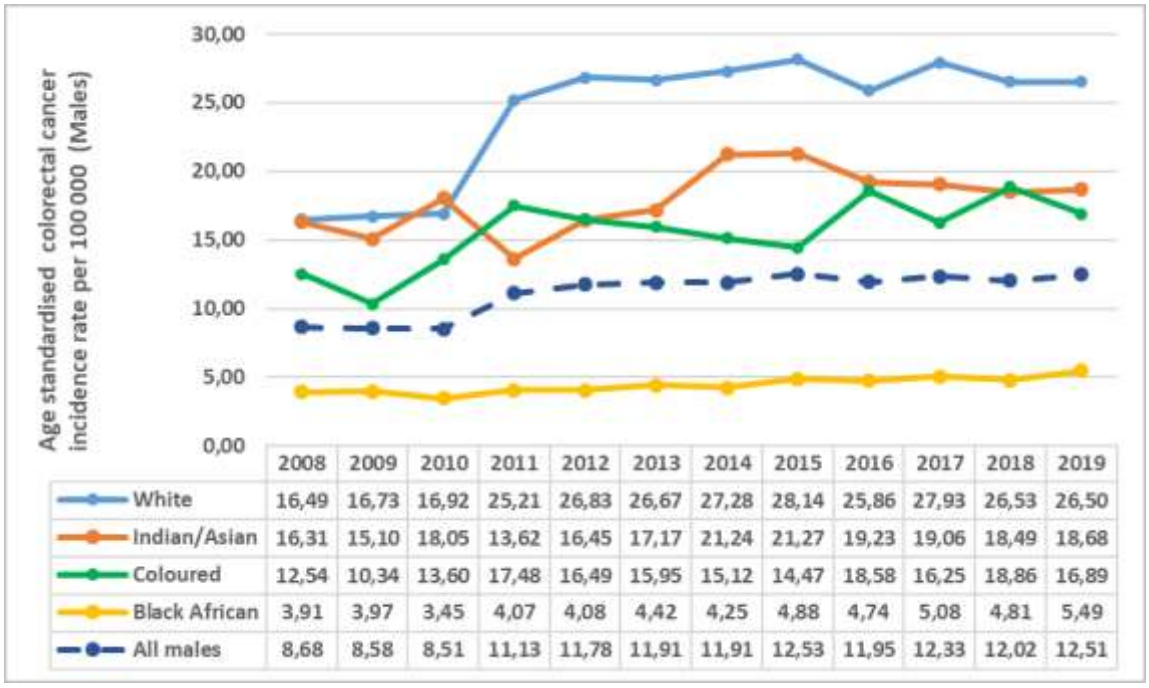
Figure 4.2.1: Prostate cancer incidence rate



	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
White	49,67	50,13	51,77	77,49	75,83	75,62	80,51	82,63	78,57	83,36	85,10	79,03
Coloured	41,17	44,26	40,40	61,42	65,62	59,81	55,67	58,05	59,62	62,33	66,56	64,47
Black African	23,10	25,16	24,71	30,03	30,11	29,35	29,55	38,21	39,83	41,41	42,28	51,52
Indian/Asian	26,06	29,70	26,36	23,25	25,26	28,48	33,62	39,67	32,82	33,05	33,32	36,43
All males	32,52	34,04	33,82	45,54	46,54	45,01	45,08	51,45	51,32	53,37	54,65	59,27

The age-standardised prostate cancer incidence rate was 59,27 per 100 000 males in 2019. White males had the highest prostate cancer incidence rate followed by Indian/Asian males. Between 2008 and 2019 cancer incidence rates ranged from 49,67 to 79,03 for White males and between 41,17 and 64,47 for Coloured males. Black African and Indian/Asian males had lower incidence rates, however, for Black African males, incidence rates increased quite rapidly between 2018 and 2019, from 42,28 to 51,52, while for Indian/Asian males, appeared to remain stable after 2015, between 32,82 and under 36,43.

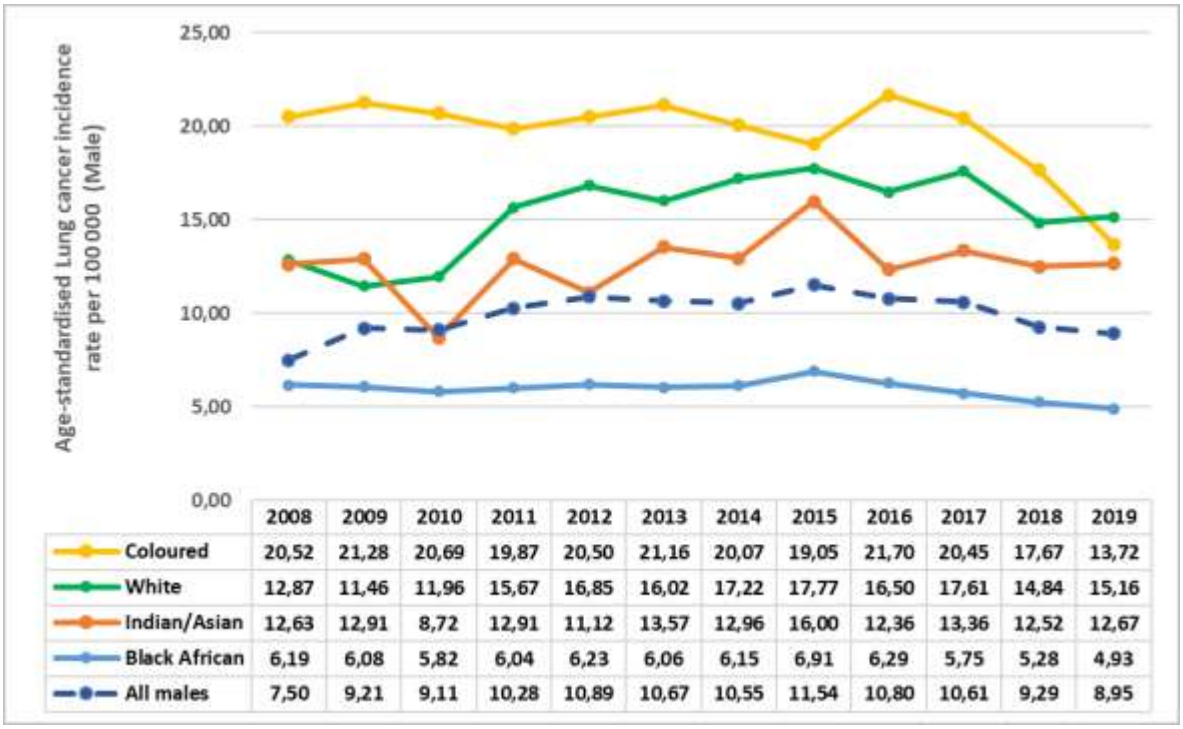
Figure 4.2.2: Colorectal cancer incidence rate: Male



	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
White	16,49	16,73	16,92	25,21	26,83	26,67	27,28	28,14	25,86	27,93	26,53	26,50
Indian/Asian	16,31	15,10	18,05	13,62	16,45	17,17	21,24	21,27	19,23	19,06	18,49	18,68
Coloured	12,54	10,34	13,60	17,48	16,49	15,95	15,12	14,47	18,58	16,25	18,86	16,89
Black African	3,91	3,97	3,45	4,07	4,08	4,42	4,25	4,88	4,74	5,08	4,81	5,49
All males	8,68	8,58	8,51	11,13	11,78	11,91	11,91	12,53	11,95	12,33	12,02	12,51

The age-standardised colorectal cancer incidence rate for males was 12,51 in 2019. Between 2008 and 2019 colorectal cancer incidence among White males was the highest, but remained stable after 2010 where it ranged between 25,21 and 26,5. The second highest colorectal cancer incidence rates were recorded for Indian/Asian and Coloured males, with fluctuations between 2008 and 2019. For Indian/Asian males incidence was lowest in 2011 at 13,62 and highest in 2015 at 21,27. Among Coloured males, incidence was lowest in 2009 at 10,34 and highest in 2018 at 18,86. Black African males had the lowest, but slowly increasing incidence, from 3,91 in 2008 to 5,49 in 2019.

Figure 4.2.3: Lung cancer incidence rate: Male



	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Coloured	20,52	21,28	20,69	19,87	20,50	21,16	20,07	19,05	21,70	20,45	17,67	13,72
White	12,87	11,46	11,96	15,67	16,85	16,02	17,22	17,77	16,50	17,61	14,84	15,16
Indian/Asian	12,63	12,91	8,72	12,91	11,12	13,57	12,96	16,00	12,36	13,36	12,52	12,67
Black African	6,19	6,08	5,82	6,04	6,23	6,06	6,15	6,91	6,29	5,75	5,28	4,93
All males	7,50	9,21	9,11	10,28	10,89	10,67	10,55	11,54	10,80	10,61	9,29	8,95

The age-standardised lung cancer incidence rate was 8,95 for males in 2019. Coloured males had the highest age-standardised lung cancer incidence rates at 20,52 in 2008, although it dropped rapidly from 21,70 in 2016 to 13,72 in 2019. White males had the second highest incidence rates, which increased rapidly from 11,46 in 2009 to 17,61 in 2017, and dropped to 15,16 by 2019. Lung cancer incidence among Indian/Asian males fluctuated a lot but remained between 10,00 and 15,00, with the exception of 2010 when it dropped to 8,72 and 2015 when it went up to 16,00. Black African males had the lowest lung cancer incidence rates, varying between a low of 4,93 in 2019 and a high of 6,91 in 2015.

5. Cancer-related Mortality

Cancer-related mortality is based on a total of 43 613 deaths due to cancer that occurred in 2018 and all late death registrations that reached Stats SA in time for the 2018 processing phase. Cancer cases included in this report were those coded ICD-10 C00-C97 (malignant neoplasms), which comprised 96,73% of all neoplasms contributing to death. Malignant neoplasms, without specification of site, ICD-10 code C80, were also left out in the discussion of cancers contributing to death. They accounted for 8,04% (3 626) of all neoplasms in 2018.

This chapter describes cancer-related deaths by site of cancer, selected background characteristics of the deceased such as age, sex, population group, and geographic information at provincial levels. Deaths due to cancer are presented as absolute numbers and percentages to show the leading causes and trends over time. Subsequent sections show age-standardised mortality rates for those cancers that contributed the highest number of deaths, broken down by population group.

The total number of cancer-related deaths by age group is not always equal to the breakdown by population group as age at death due to missing ages in for some cases. Similarly, population group was missing in some cases.

5.1 Levels and trends of mortality attributable to cancer

Figure 5.1.1: Number of registered deaths due to cancer, by year of death occurrence, 2008–2018

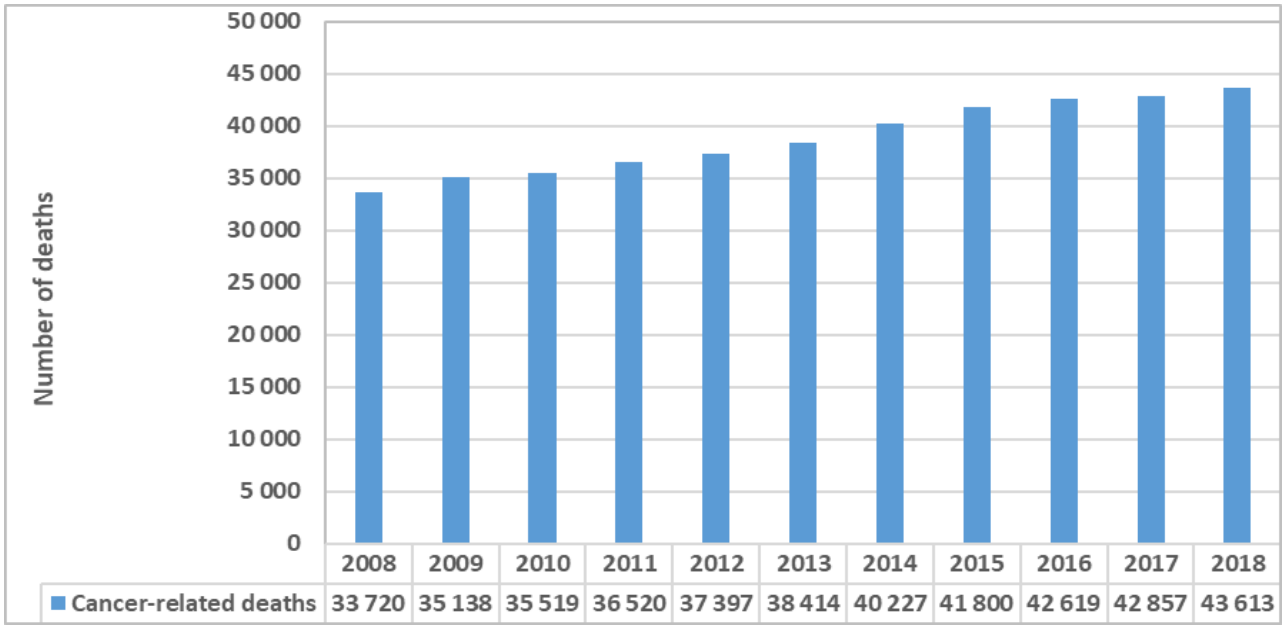
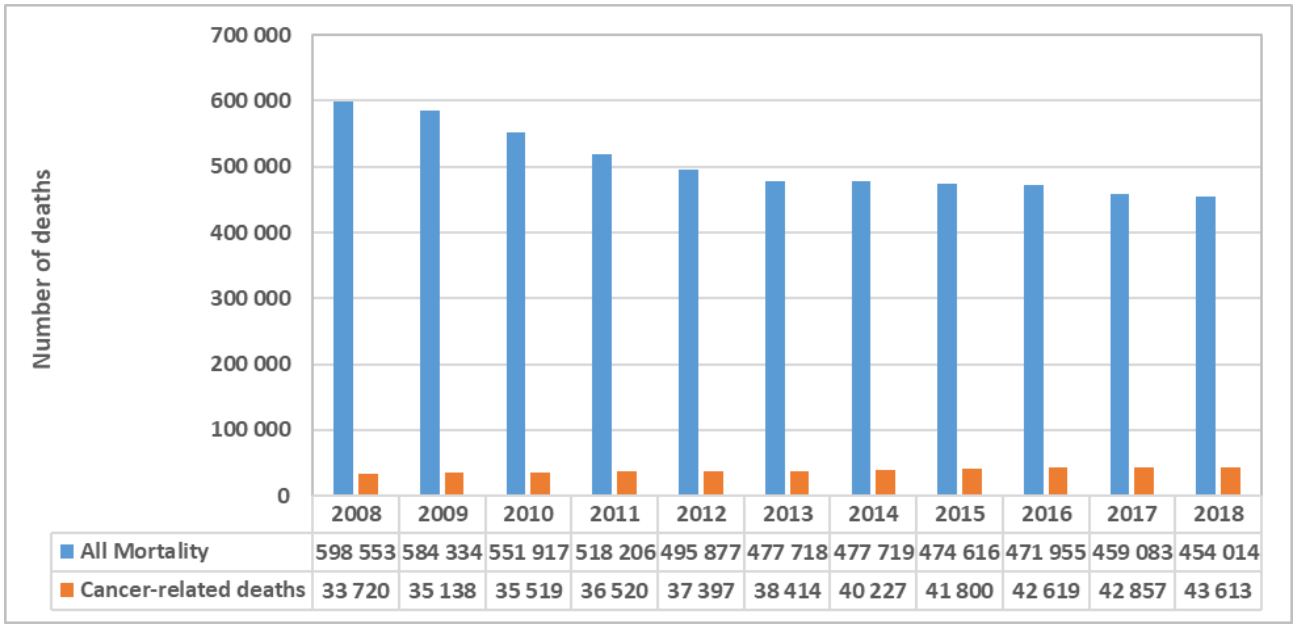


Figure 5.1.1 above shows that the number of registered deaths due to cancers increased yearly from 33 720 in 2008 to 43 613 in 2018. This represents a 29,3% increase over the period.

Figure 5.1.2: Number of registered deaths (except still-births) compared to cancer-related deaths by year of death occurrence, 2008–2018

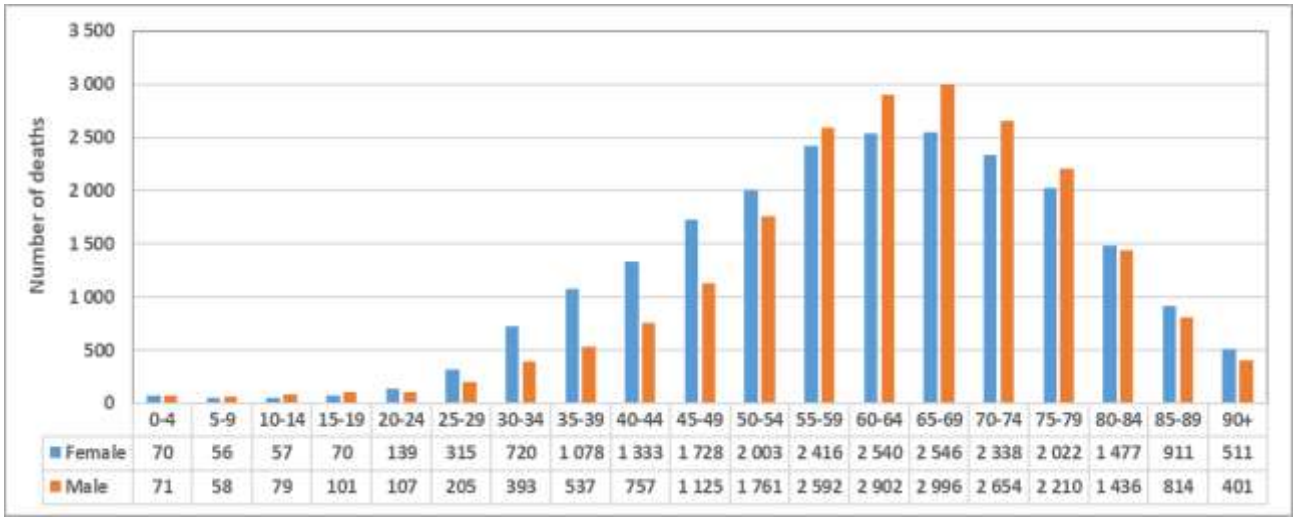


	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
All Mortality	598 553	584 334	551 917	518 206	495 877	477 718	477 719	474 616	471 955	459 083	454 014
Cancer-related deaths	33 720	35 138	35 519	36 520	37 397	38 414	40 227	41 800	42 619	42 857	43 613

Figure 5.1.2 shows that overall, mortality has decreased from 598 553 to 454 014 over the ten-year period, a 24,1% drop, but the proportion of deaths attributable to cancer has steadily increased, from 5,6% in 2008 to 9,6% in 2018.

5.2 Demographic and geographic differentials of mortality due to cancer

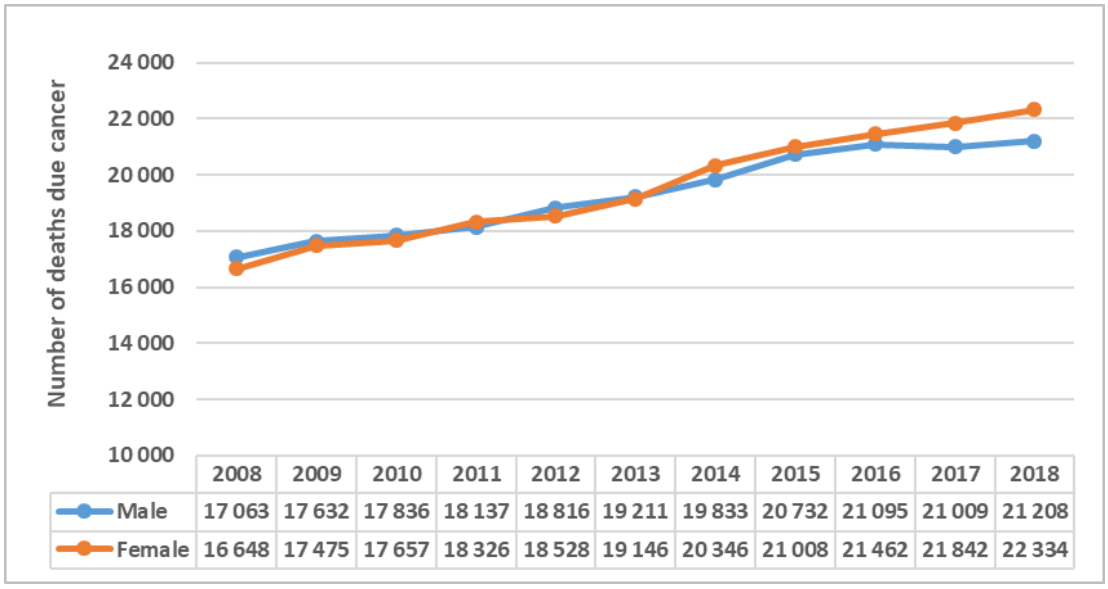
Figure 5.2.1: Deaths due to cancer by sex and age-group, 2018



	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	75-79	80-84	85-89	90+
Female	70	56	57	70	139	315	720	1 078	1 333	1 728	2 003	2 416	2 540	2 546	2 338	2 022	1 477	911	511
Male	71	58	79	101	107	205	393	537	757	1 125	1 761	2 592	2 902	2 996	2 654	2 210	1 436	814	401

Figure 5.2.1 shows that in 2018, deaths due to cancer increased rapidly from age 30, when cancer-related deaths among females were more than twice the previous cohort's, age 25 to 29 years. The highest death occurrences were among those aged between 50 and 79 years, who accounted for two-thirds of all cancers, while the broader age group, 40 to 89 years accounted for 88,6% of all cancer-related mortality. The median age at death due to cancer was 64 years for males and 62 years for females.

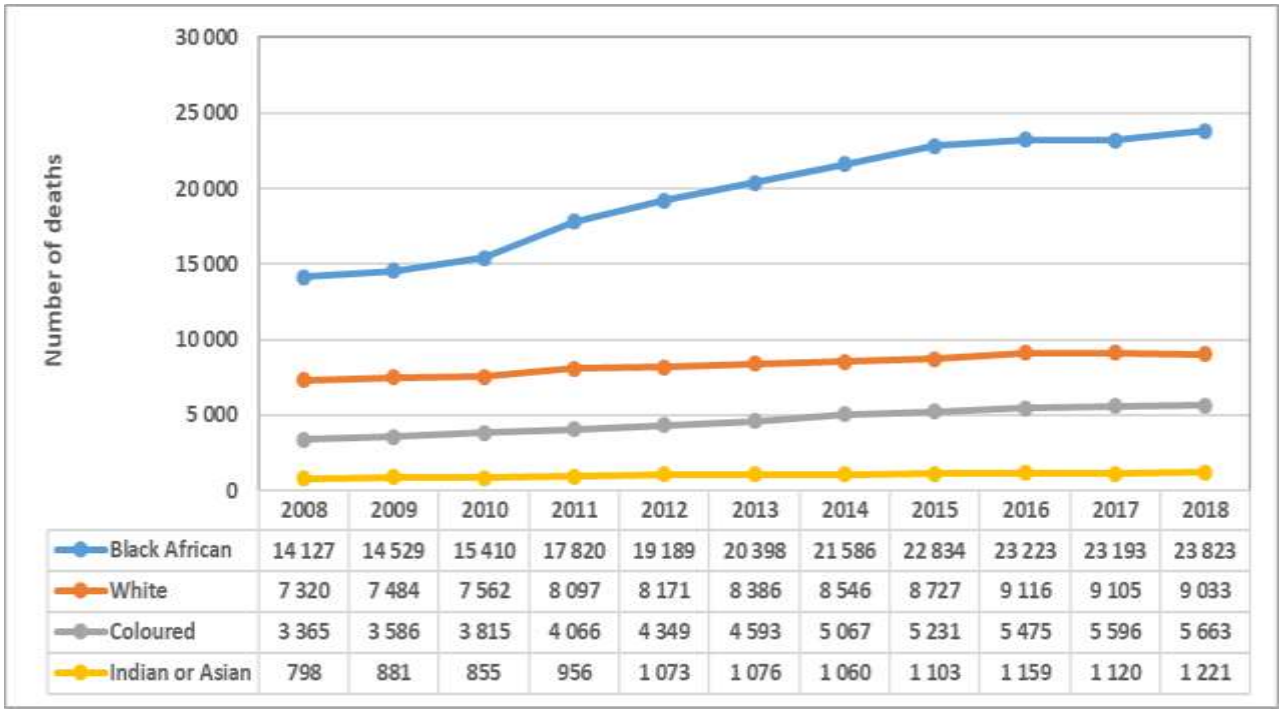
Figure 5.2.2: Deaths due to cancer by sex, 2008–2018



	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Male	17 063	17 632	17 836	18 137	18 816	19 211	19 833	20 732	21 095	21 009	21 208
Female	16 648	17 475	17 657	18 326	18 528	19 146	20 346	21 008	21 462	21 842	22 334

Figure 5.2.2 shows number of deaths due to cancer broken down by sex. Cancer-related deaths among both males and females have steadily gone up between 2008 and 2018, with females experiencing faster growth, 34,2% (from 16 648 in 2008 to 22 334 in 2018) compared to males at 24,3% (from 17 063 in 2008 to 21 208 in 2018).

Figure 5.2.3: Deaths due to cancer by population group, 2008–2018



	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Black African	14 127	14 529	15 410	17 820	19 189	20 398	21 586	22 834	23 223	23 193	23 823
White	7 320	7 484	7 562	8 097	8 171	8 386	8 546	8 727	9 116	9 105	9 033
Coloured	3 365	3 586	3 815	4 066	4 349	4 593	5 067	5 231	5 475	5 596	5 663
Indian or Asian	798	881	855	956	1 073	1 076	1 060	1 103	1 159	1 120	1 221

Figure 5.2.3 shows that the Black African population group had the highest number of cancer-related deaths in all years, 2008 to 2018. In terms of frequency of cancer-related deaths, it was followed by, respectively, the White population group, Coloured and Indian/Asian population groups over the same period. The Black African and Coloured population groups experienced the highest increase in cancer-related deaths, 68,6% (from 14 127 in 2008 to 23 823 in 2018) and 68,3% (from 3 365 in 2008 to 5 663 in 2018) respectively. Cancer-related deaths for the Indian/Asian population group increased by 53,0% (from 798 in 2008 to 1 221 in 2018) while those for the White population group increased by 23,4% (from 7 320 in 2008 to 9 033 in 2018). It's important to note that these are absolute numbers and don't necessarily reflect the risk of cancer-related mortality in each population group. The age-standardised mortality rate, described in a later section, is the measure used to determine the risk of mortality due to cancer as it takes into account the size of the population at risk.

Appendices 3 and 4 show a breakdown of cancers contributing to mortality by sex and population group in 2018.

Figure 5.2.4: Deaths due to cancer by province of death occurrence, 2008–2018

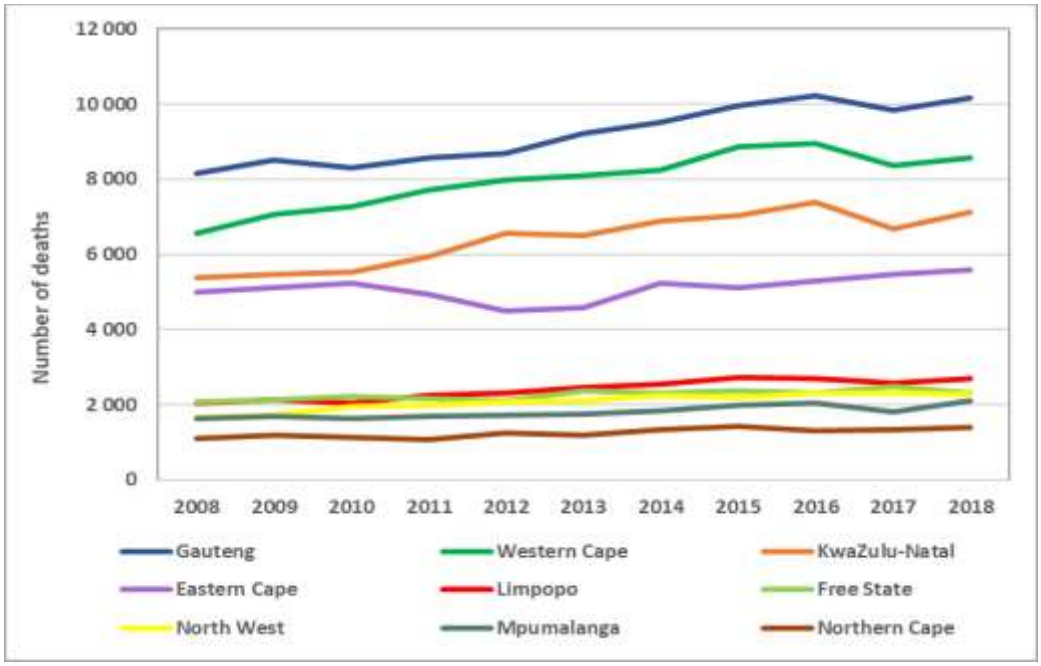


Figure 5.2.4 and table 1 below show that the four leading provinces in terms of death due to cancer in 2018 were Gauteng (10 165), Western Cape (8 587), KwaZulu-Natal (7 123) and Eastern Cape (5 577). Cancer-related deaths were below 3 000 for the rest of the provinces and the Northern Cape had the lowest at 1 382. The leading provinces are also the most heavily populated and therefore the higher number of cancer-related deaths may be a reflection of this, rather than risk, which is measured by the mortality rate. In the case of Gauteng and Western Cape, the provinces are better resourced and associated with more affluent lifestyles comparable to those of more economically-advanced countries, which in most cases experience higher burden of non-communicable diseases including cancer.

Table 1: Number of cancer-related deaths by province

	Total	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Grand Total	**427 824**	**33 720**	**35 138**	**35 519**	**36 520**	**37 397**	**38 414**	**40 227**	**41 800**	**42 619**	**42 857**	**43 613**
Gauteng	**101 191**	8 155	8 520	8 304	8 581	8 703	9 217	9 508	9 958	10 231	9 849	10 165
Western Cape	**87 721**	6 556	7 080	7 268	7 728	7 969	8 095	8 246	8 876	8 949	8 367	8 587
KwaZulu-Natal	**70 471**	5 377	5 457	5 526	5 939	6 558	6 495	6 879	7 035	7 389	6 693	7 123
Eastern Cape	**56 040**	5 011	5 118	5 243	4 937	4 489	4 577	5 221	5 121	5 286	5 460	5 577
Limpopo	**26 482**	2 055	2 130	2 050	2 250	2 310	2 463	2 535	2 729	2 708	2 567	2 685
Free State	**24 835**	2 066	2 123	2 219	2 167	2 103	2 374	2 302	2 375	2 308	2 482	2 316
North West	**22 833**	1 670	1 723	1 945	1 979	2 082	2 117	2 253	2 178	2 302	2 302	2 282
Mpumalanga	**19 879**	1 615	1 697	1 624	1 678	1 728	1 736	1 844	1 986	2 057	1 805	2 109
Northern Cape	**13 706**	1 104	1 193	1 130	1 066	1 252	1 191	1 336	1 421	1 307	1 324	1 382

In terms of growth however, the North West experienced the highest increase, 36,6%, in deaths due to cancer, (from 1 670 in 2008 to 2 282 in 2018). Other provinces that experienced increases in cancer deaths higher than 30% between 2008 and 2018 were KwaZulu-Natal, 32,5% (from 5 377 in 2008 to 7 123 in 2018), Western Cape, 31,0% (from 6 556 in 2008 to 8 587 in 2018), Limpopo, 30,7% (from 2 055 in 2008 to 2 685 in 2018), Mpumalanga, 30,6% (from 1 615 in 2008 to 2 109 in 2018). In Northern Cape cancer-related deaths increased by 25,2% (from 1 104 in 2008 to 1 382 in 2018) and Gauteng, 24,6% (from 8 155 in 2008 to 10 165 in 2018). Provinces with the lowest increase in cancer-related deaths were the Free State, 12,1% (from 2 066 in 2008 to 2 316 in 2018) and Eastern cape 11,3% (from 5 011 in 2008 to 5 577 in 2018).

5.3 Cancer-related mortality by site, 2018

Figure 5.3.1: Cancer sites grouped in broad categories, 2018

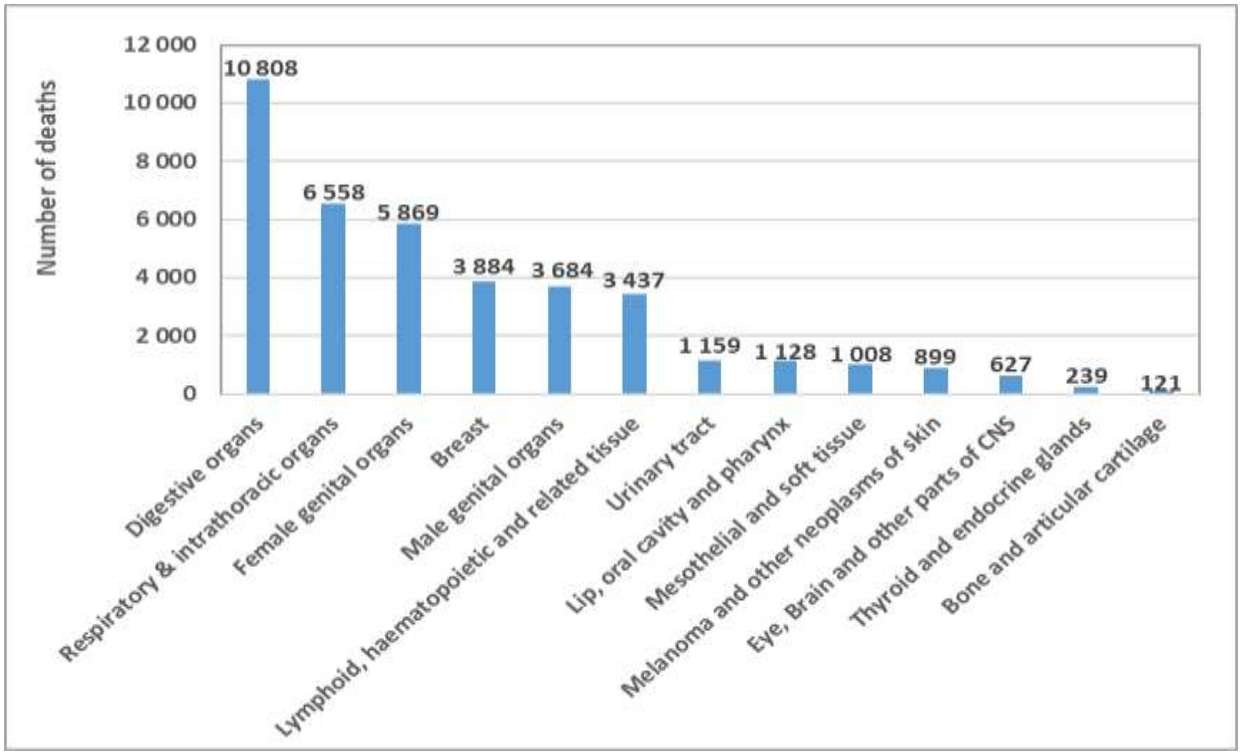


Figure 5.3.1 shows that in 2018, as a group, the digestive system organs, respiratory and intrathoracic organs, female genital organs, breast and male genital organs accounted for 70,6% (30 803) of all malignancies contributing to cancer-related deaths.

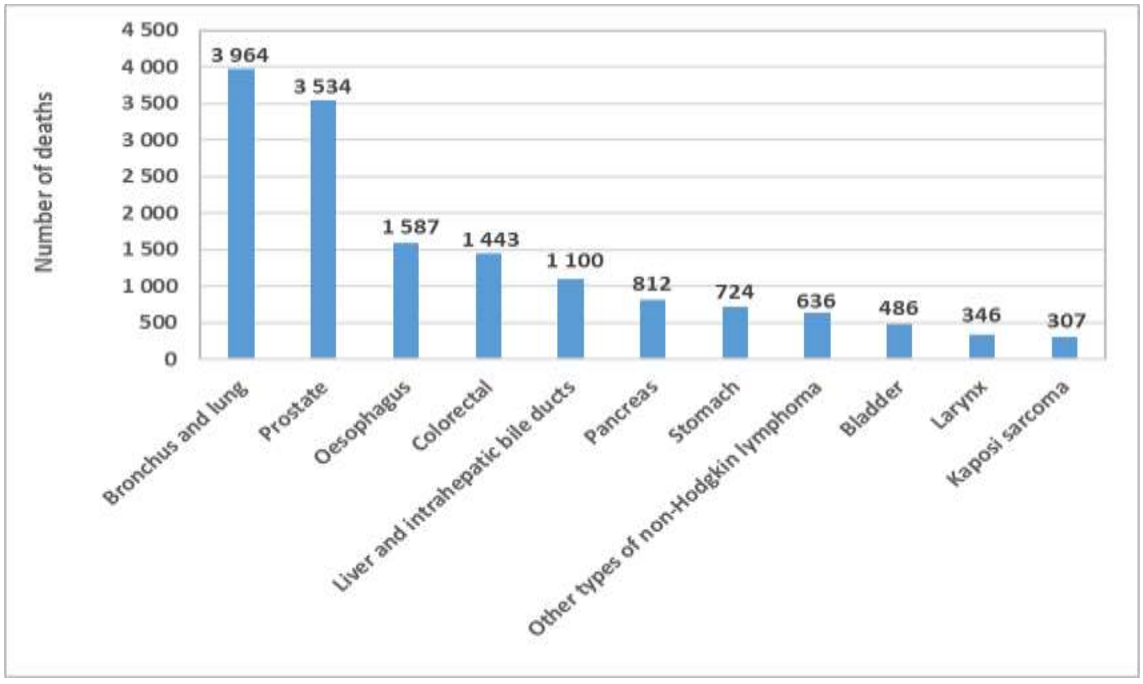
Cancers of the digestive system accounted for 24,8% (10 808) of all malignancies, and included the oesophagus, colon, liver, pancreas, stomach and rectum, which jointly accounted for about 90% of cancers of the digestive system.

At 6 558, cancers of the respiratory and intrathoracic organs accounted for 15,0% of all malignant neoplasms, with the lung accounting for 92% of cancers of the respiratory system. Female genital organs accounted for 13,5% (5 869), breast 8,9% (3 884), male genital organs, 8,4% (3 684), lymphoid, haematopoietic and related tissue, 7,9% (3 437), urinary tract, 2,7% (1 159), lip, oral cavity and pharynx, 2,6% (1 128), mesothelial and soft tissue, 2,3% (1 008), melanoma and other neoplasms of skin, 2,1% (899), eye, brain and other parts of the central nervous system, 1,4% (627), thyroid and endocrine glands, 0,5% (239).

Malignant neoplasms of cervix uteri or cervical cancer, ovary and uterus accounted for 95% of cancers of the female genital organs, while prostate cancer accounted for 96% of male genital organs malignancies.

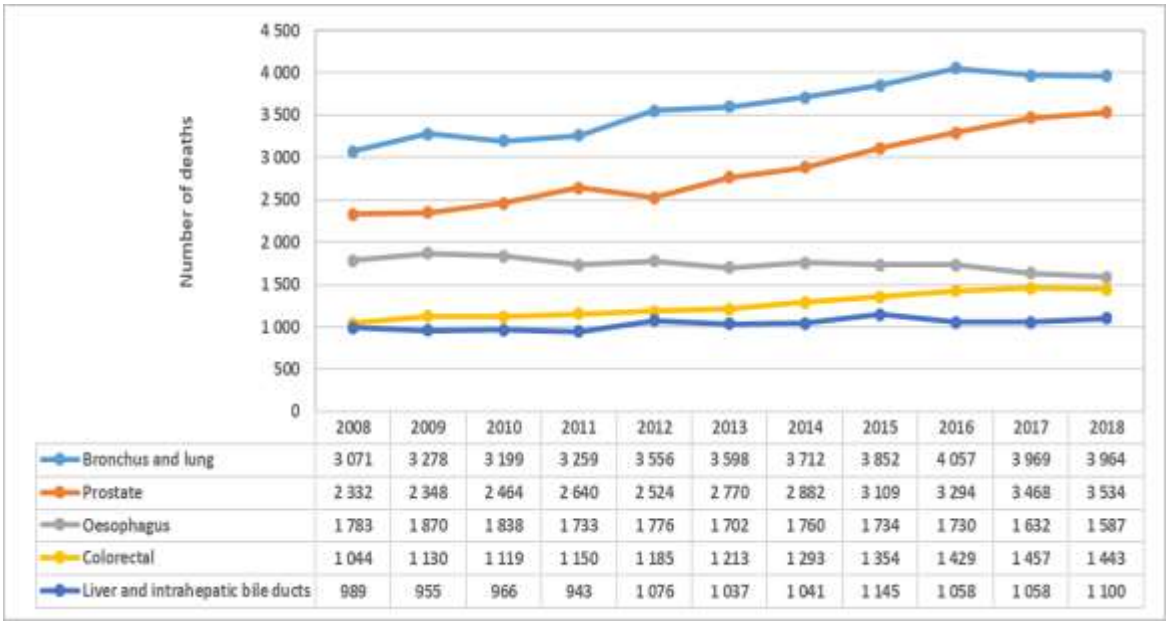
5.4 Cancer-related mortality by site, population group and sex: Males, 2018

Figure 5.4.1: Cancer-related sites that contributed to death: Males, 2018



In 2018, bronchus and lung cancer was the most common cause of cancer-related death among males, accounting for 18,7% (3 964) cases, it was followed by cancers of the prostate at 16,7% (3 534), oesophagus, 7,5% (1 587), colorectal, 6,8% (1 443), liver and intrahepatic bile ducts, 5,2% (1 100), pancreas, 3,8% (812), stomach, 3,4% (724), other types of Non-Hodgkin lymphoma, 3,0% (636), and bladder, 2,3% (486). These leading cancer sites accounted for two-thirds of cancer-related death among males in 2018.

Figure 5.4.2 Trends in main cancer-related mortality by site: Males, 2008 – 2018



	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Bronchus and lung	3 071	3 278	3 199	3 259	3 556	3 598	3 712	3 852	4 057	3 969	3 964
Prostate	2 332	2 348	2 464	2 640	2 524	2 770	2 882	3 109	3 294	3 468	3 534
Oesophagus	1 783	1 870	1 838	1 733	1 776	1 702	1 760	1 734	1 730	1 632	1 587
Colorectal	1 044	1 130	1 119	1 150	1 185	1 213	1 293	1 354	1 429	1 457	1 443
Liver and intrahepatic bile ducts	989	955	966	943	1 076	1 037	1 041	1 145	1 058	1 058	1 100

Figure 5.4.2 shows that while deaths due to cancer of the bronchus and lung were the highest among male-related cancers, those due to prostate cancer increased by a much higher rate, 51,5% (from 2 332 in 2008 to 3 534 in 2018), compared to bronchus and lung cancer deaths which increased by 29,1% (from 3 071 in 2008 to 3 964 in 2018). Cancer of the oesophagus deaths dropped by 11,0% (from 1 783 in 2008 to 1 587 in 2018), while colorectal and liver cancer-related deaths increased by 38,2% (from 1 044 in 2008 to 1 443 in 2018) and 11,2% (from 989 in 2008 to 1 100 in 2018), respectively.

5.5 Cancer-related mortality by population group and site of cancer: Males, 2018

Figure 5.5.1: Black African

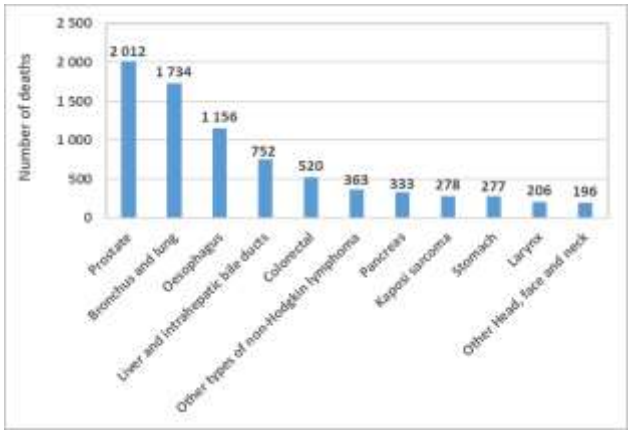
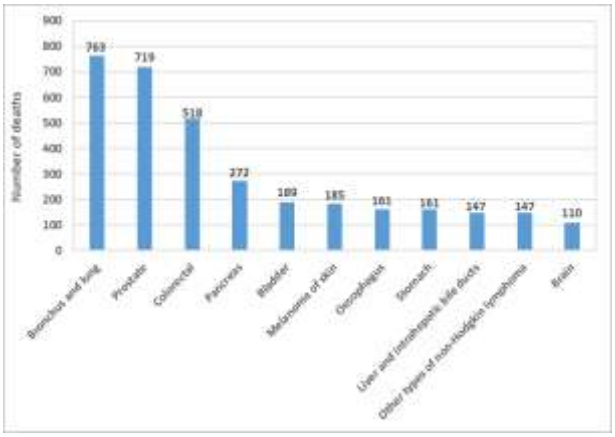


Figure 5.5.2: White



Black African males contributed 52,2% (11 077) of cancer-related deaths among males. The leading cancer contributing to death was the prostate, accounting for 18,2% (2 012) cases, followed by the bronchus and lung, 15,7% (1 734), oesophagus, 10,4% (1 156), liver and intrahepatic bile ducts, 6,8% (752), colorectal, 4,7% (520), other types of Non-Hodgkin lymphoma, 3,3% (363) and pancreas, 3,0% (333). The leading cancers accounted for 62% of cancers contributing to cancer-related death.

White males accounted for 22,0% (4 660) of male cancer-related death. The leading malignancies were the bronchus and lung, contributing 16,4% (763) cases, prostate, 15,4% (719), colorectal, 11,1% (518), pancreas, 5,8% (272), bladder, 4,1% (189), melanoma, 4,0% (185) and oesophagus, 3,5% (161). These leading cancers accounted for 60,2% of cancer-related death in this group of males.

Figure 5.5.3: Indian/Asian

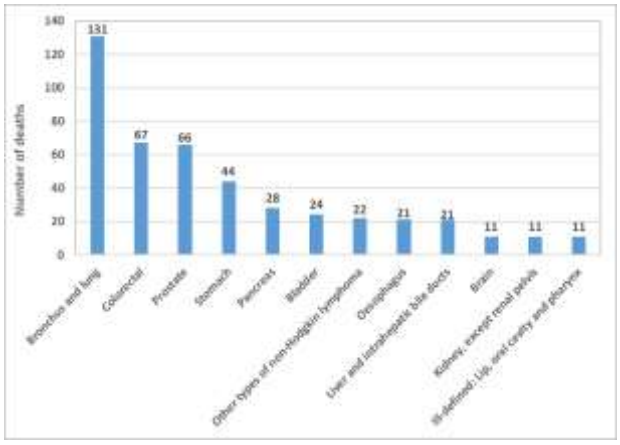
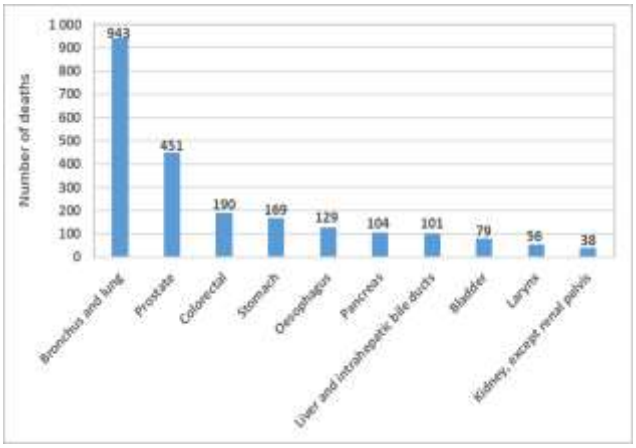


Figure 5.5.4: Coloured

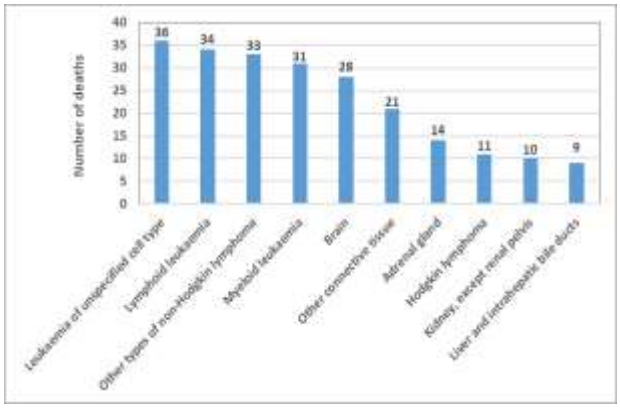


Indian/Asian males accounted for 2,9% (606) of cancer-related deaths among males. The leading cancer contributing to death was the bronchus and lung, accounting for 21,6% (131) cases, colorectal, 11,1% (67), prostate, 10,9% (66), stomach, 7,3% (44), pancreas, 4,6% (28), bladder, 4,0% (24), and other types of Non-Hodgkin lymphoma, 3,6% (22). These leading cancers accounted for 63% of cancer-related death in this group. Coloured males contributed 14,0% (2 959) to cancer-related deaths among males in 2018. The leading cancer was the bronchus and lung with 31,9% (943) cases, prostate, 15,2% (451), colorectal, 6,4% (190), stomach, 5,7% (169), and oesophagus, 4,4% (129). These leading cancer sites accounted for 63,6% of cancer-related deaths in this group.

Appendix 5 shows a breakdown of cancer-related death by population group among males.

5.6 Cancer-related mortality by age group and cancer site: Males, 2018

Figure 5.6.1: Males 0 – 19 years



Deaths due to cancer among males aged below 20 years constituted 1,5% (309) of all male cancer-related deaths. Leukaemia of unspecified cell type was the leading cause of cancer-related death and accounted for 11,7% (36) of all cancer-related deaths in this group. It was followed by lymphoid leukaemia at 11,0% (34), other types of Non-Hodgkin lymphoma, 10,7% (33), myeloid leukaemia, 10,0% (31), and brain, 9,1% (28). These five leading cancer sites constituted half of all cancer-related deaths in this group.

Figure 5.6.2: Males 20 – 29 years

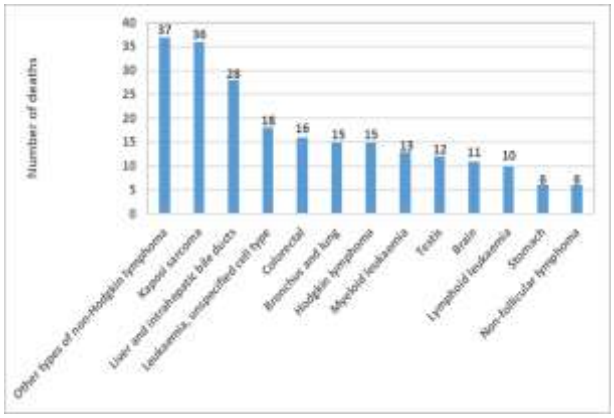
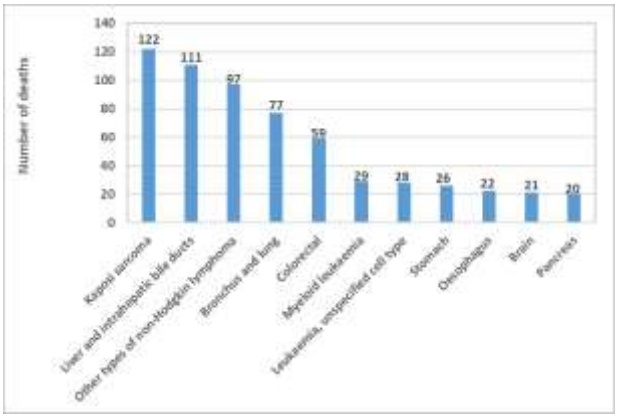


Figure 5.6.3: Males 30 – 39 years



Deaths due to cancer among males aged 20 to 29 years constituted 1,5% (312) of all male cancer-related deaths. The leading causes were other types of Non-Hodgkin lymphoma, which contributed 11,9% (37) of deaths to this group. This was followed by Kaposi sarcoma at 11,5% (36), liver and intrahepatic bile ducts, 9,0% (28), leukaemia of unspecified cell type, 5,8% (18), colorectal, 5,1% (16), bronchus and lung and Hodgkin lymphoma, each contributing 4,8% (15). These leading cancer sites contributed about half of all cancer-related deaths in this age group.

Cancer-related deaths among males aged 30 to 39 years comprised 4,4% (930) of all cancer-related deaths among males. The leading causes were Kaposi sarcoma at 13,1% (122), followed by liver and intrahepatic bile ducts, 11,9% (111), other types of Non-Hodgkin lymphoma, 10,4% (97), bronchus and lung, 8,3%, (77) and colorectal, 6,3% (59). These leading cancer sites accounted for half of all cancer-related deaths in this group.

Figure 5.6.4: Males 40 – 49 years

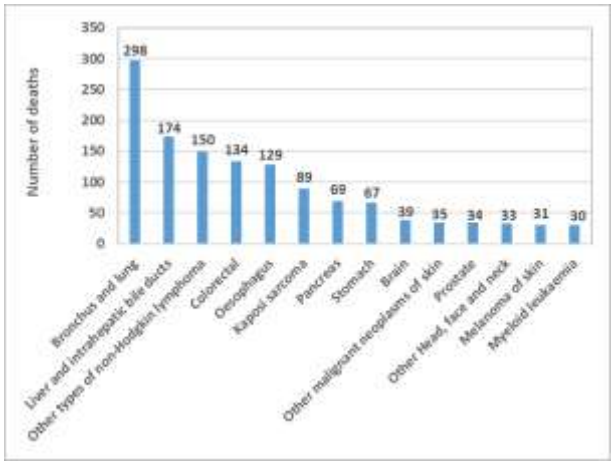
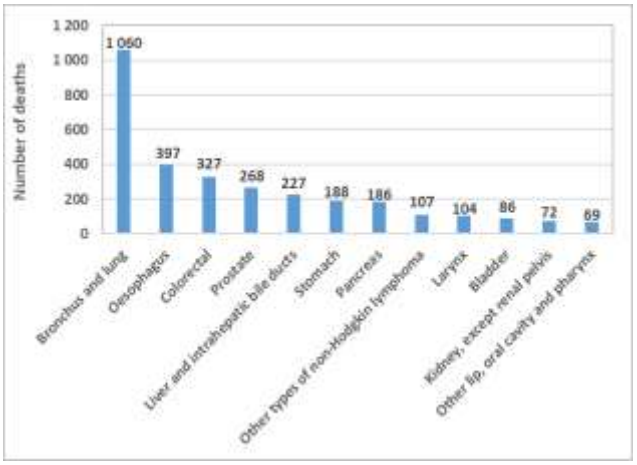


Figure 5.6.5: Males 50 – 59 years



Cancer-related deaths among males aged 40 to 49 years constituted 8,9% (1 882) of all male cancer-related deaths. The leading cancer was that of the bronchus and lung, 15,8% (298), followed by liver and intrahepatic bile ducts, 9,2% (174), other types of Non-Hodgkin lymphoma, 8,0% (150), colorectal, 7,1% (134), oesophagus, 6,9% (129), and Kaposi sarcoma, 4,7% (89). These leading cancer sites contributed half of all cancer-related death to this group.

Among males aged 50 to 59 years, cancer-related deaths contributed 20,5% (4 353) to all male cancer-related mortality. The leading cancer sites were that of the bronchus and lung, 24,4% (1 060), oesophagus, 9,1% (397), colorectal, 7,5% (327), prostate, 6,2% (268), liver and intrahepatic bile ducts, 5,2% (227). The five leading cancer sites constituted slightly more than half of all cancer-related deaths to this group.

Figure 5.6.6: Males 60 – 69 years

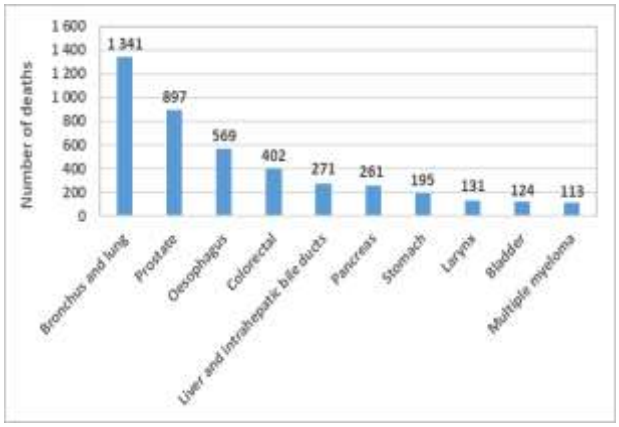
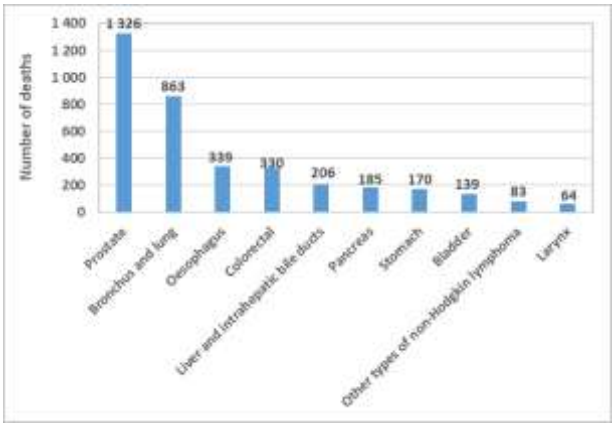


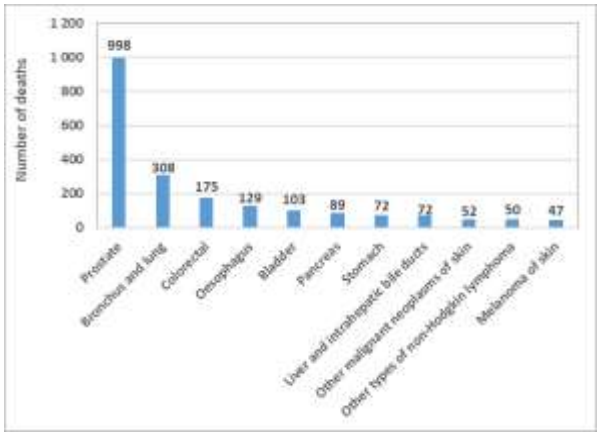
Figure 5.6.7: Males 70 – 79 years



At 5 898, (27,8%), males aged 60 to 69 years contributed the largest number of cancer-related deaths among males. The leading cause of cancer was the bronchus and lung, accounting for 22,7% (1 341) cases, followed by the prostate, 15,2% (897), oesophagus, 9,6% (569) and colorectal, 6,8% (402). These leading cancer sites constituted slightly more than half of cancer-related mortality in this group of males in 2018.

Cancer-related deaths among males aged 70 to 79 years comprised 22,9% (4 864) of all cancer-related deaths among males. The leading cancers which contributed slightly less than 60% of cancer-related mortality for the group were the prostate, contributing 27,3% (1 326), bronchus and lung, 17,7% (863), oesophagus, 7,0% (339) and colorectal, 6,8% (330).

Figure 5.6.8: Males 80 years and above

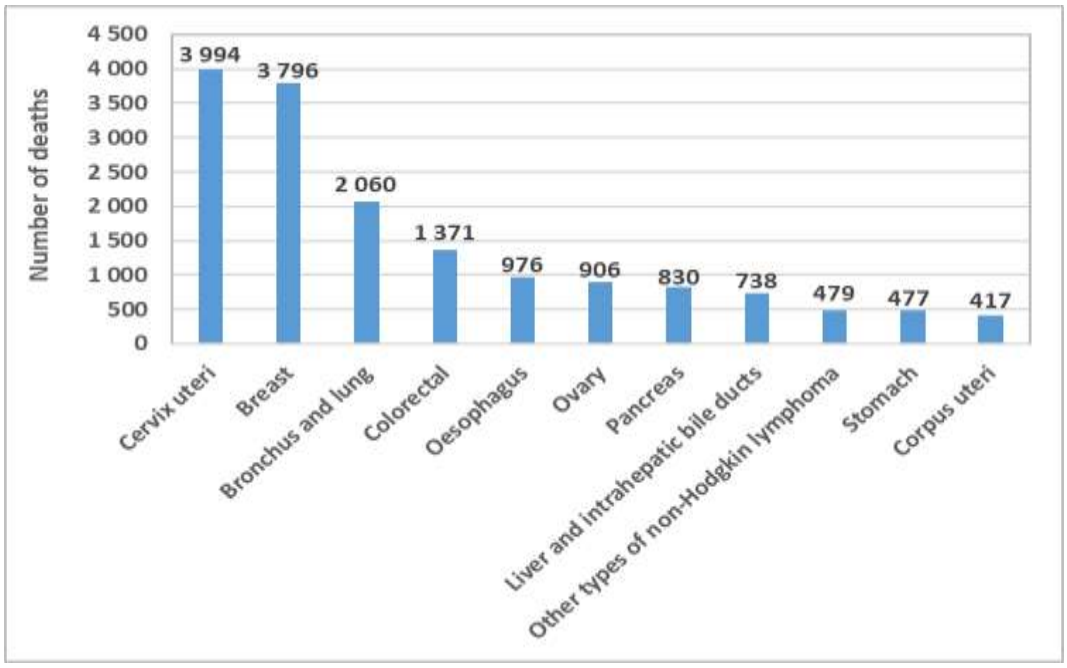


Males aged 80 years and above contributed 12,5% (2 651) to cancer-related mortality among males. At 37,6% (998), prostate cancer contributed the highest number of cases, followed by bronchus and lung, 11,6% (308) and colorectal, 6,6% (175). These leading cancers accounted for slightly more than half of all cancer-related deaths in this group. These were followed by cancers of the oesophagus, 4,9% (129), bladder, 3,9% (103) and pancreas, 3,4% (89). The six leading cancer sites accounted for two-thirds of all cancer-related mortality in this group.

Appendix 8 shows a breakdown of cancers contributing to mortality by agegroup in males, in 2018.

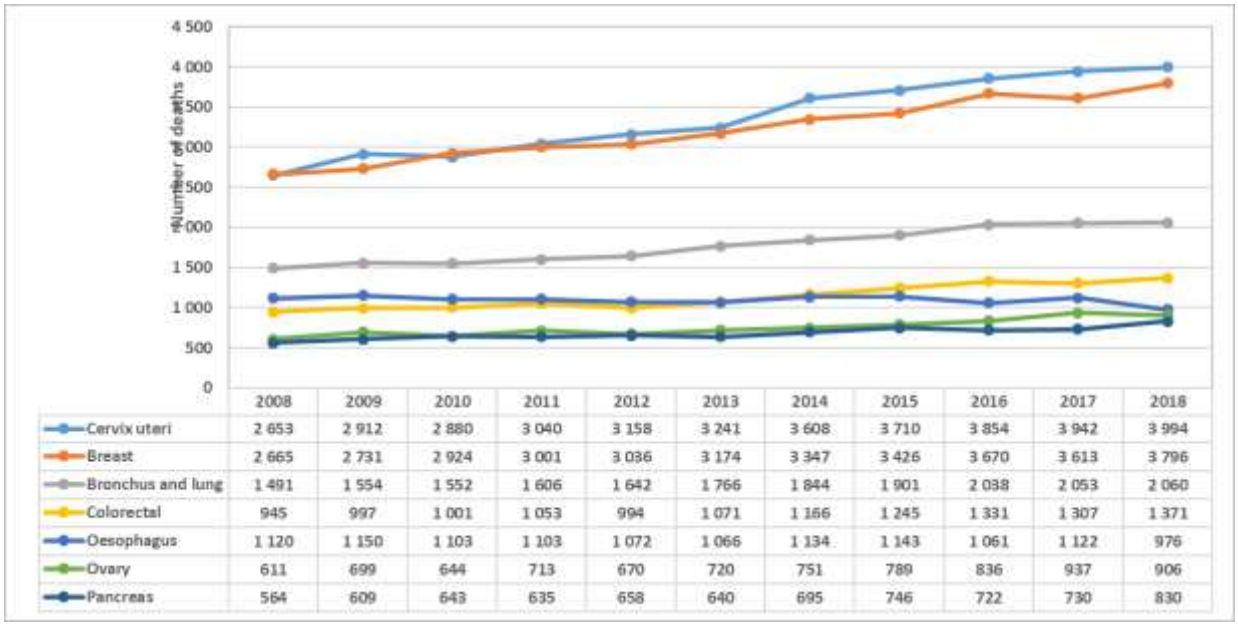
5.7 Cancer-related mortality by site and population group: Females, 2018

Figure 5.7.1: Cancer-related deaths by site: Females, 2018



Cervical cancer was the leading cause of cancer-related death among females in 2018, accounting for 17,9% (3 994) of cancer-related deaths. It was closely followed by breast cancer at 17,0% (3 796), bronchus and lung, 9,2% (2 060), colorectal, 6,1% (1 371), oesophagus, 4,4% (976), ovary 4,1% (906), pancreas, 3,7% (830), liver and intrahepatic bile ducts 3,3% (738), other Non-Hodgkin lymphoma, 2,1% (479) and stomach, 2,1% (477). These leading malignancies accounted for 70% of all cancer-related death among females.

Figure 5.7.2: Trends in main female-related cancer sites, 2008 – 2018



	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Cervix uteri	2 653	2 912	2 880	3 040	3 158	3 241	3 608	3 710	3 854	3 942	3 994
Breast	2 665	2 731	2 924	3 001	3 036	3 174	3 347	3 426	3 670	3 613	3 796
Bronchus and lung	1 491	1 554	1 552	1 606	1 642	1 766	1 844	1 901	2 038	2 053	2 060
Colorectal	945	997	1 001	1 053	994	1 071	1 166	1 245	1 331	1 307	1 371
Oesophagus	1 120	1 150	1 103	1 103	1 072	1 066	1 134	1 143	1 061	1 122	976
Ovary	611	699	644	713	670	720	751	789	836	937	906
Pancreas	564	609	643	635	658	640	695	746	722	730	830

Figure 5.7.2 shows that between 2008 and 2018 deaths due to cervical and breast cancers increased by 50,5% and 42,4% respectively. These were followed by cancers of the lung and colorectal, which increased by 38,2% and 45,1% respectively. Cancer of the oesophagus decreased by 12,9% while those of the ovary and pancreas increased respectively, by 48,3% and 47,2%.

5.8 Cancer-related mortality by population group: Female, 2018

Figure 5.8.1: Black African

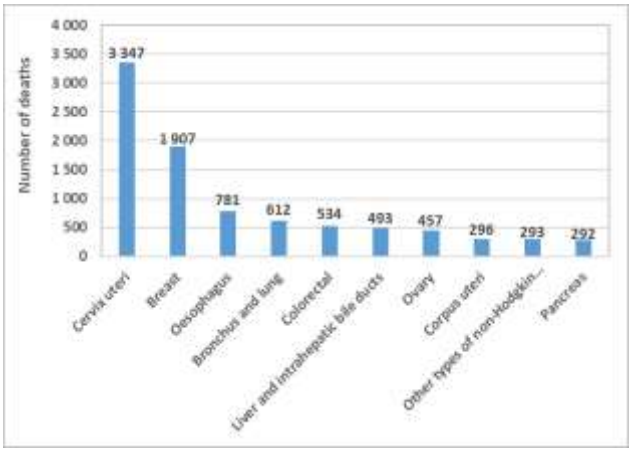
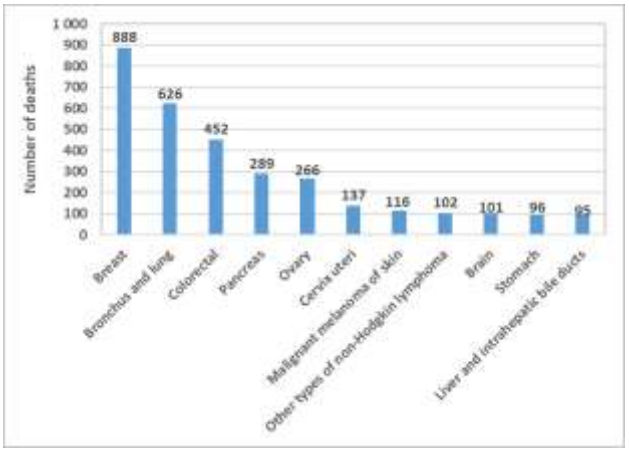


Figure 5.8.2: White



Black African females contributed 56,9% (12 698) of cancer-related deaths in females. Cervical cancer accounted for slightly more than one-quarter (3 347) of cancer-related death in this group. It was followed by cancers of the breast at 15,0% (1 907), oesophagus, 6,2% (781), bronchus and lung, 4,8% (612), colorectal, 4,2% (534), liver and intrahepatic bile ducts, 3,9% (493), ovary, 3,6% (457), uterus, 2,3% (296) and other types of Non-Hodgkin lymphoma, 2,3% (293). These leading cancer sites accounted for slightly more than two-thirds of all malignancies that contributed to cancer-related death in this group.

White females accounted for 19,6% (4 368) of cancer-related deaths among females. Breast cancer led with 20,3% (888), followed by cancers of the bronchus and lung, 14,3% (626), colorectal, 10,3% (452), pancreas, 6,6% (289), ovary, 6,1% (266), cervical, 3,1% (137), melanoma of skin, 2,7% (116), other types of Non-Hodgkin lymphoma, 2,3% (102), and brain, 2,3% (101). These leading malignancies accounted for two-thirds of cancer-related death in this group.

Figure 5.8.3: Indian/Asian

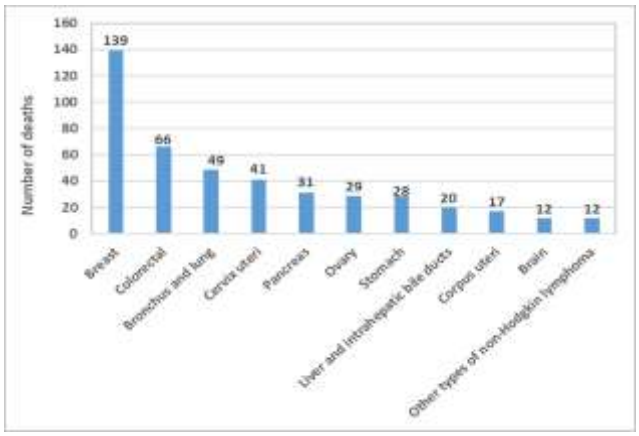
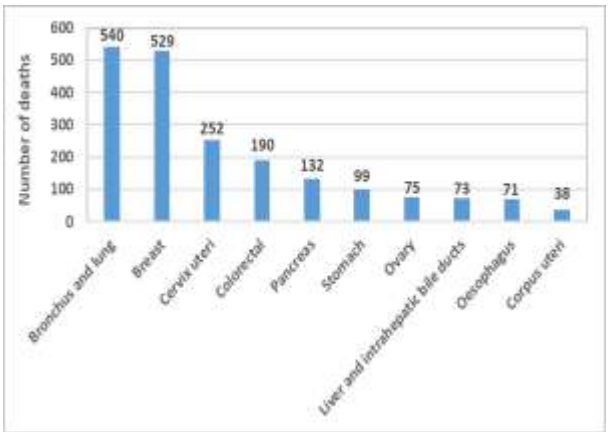


Figure 5.8.4: Coloured



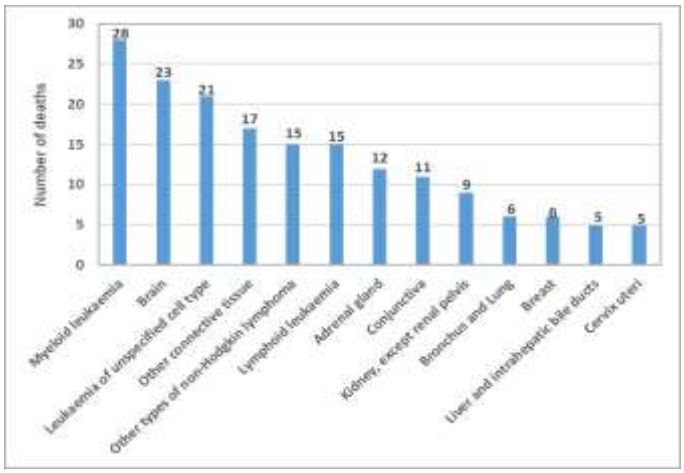
Indian/Asian females accounted for 2,7% (614) of all cancer-related deaths in females. Breast cancer accounted for the most cases, contributing 22,6% (139) deaths, followed by colorectal cancer, 10,7% (66), bronchus and lung, 8,0% (49), cervical cancer, 6,7% (41), pancreas, 5,0% (31), ovary, 4,7% (29), stomach, 4,6% (28), liver and intrahepatic bile ducts, 3,3% (20), uterus, 2,8% (17) and other types of Non-Hodgkin lymphoma, 2,0% (12). The ten leading malignancies contributed 70% to cancer-related deaths in this group.

Coloured females contributed 12,1% (2 699) to cancer-related deaths among females. Bronchus and lung cancer accounted for 20,0% (540) of deaths, closely followed by breast cancer with 19,6% (529). These were followed by cancers of the cervix with 9,3% (252), colorectal, 7,0% (190), pancreas, 4,9% (132), stomach, 3,7% (99), ovary, 2,8% (75) and liver and intrahepatic bile ducts, 2,7% (73). These leading cancer sites accounted for 70% of all malignancies contributing to death in this group of females.

Appendix 6 shows a detailed distribution of cancer-related deaths by population group among women.

5.9 Cancer-related mortality by age group and cancer site: Female

Figure 5.9.1: Females 0–19 years



Females aged 0-19 years contributed 1,1% (253) to all cancer-related mortality among females. The leading cause of death was myeloid leukaemia, which accounted for 11,1% (28) of cancer-related deaths in this group. This was followed by cancer of the brain, 9,1% (23), leukaemia of unspecified cell type, 8,3% (21), other connective tissue, 6,7% (17), other types of Non-Hodgkin lymphoma and lymphoid leukaemia, each contributing 5,9% (15), and adrenal gland, 4,7% (12). The leading cancer sites accounted for half of cancer-related deaths in this group.

Figure 5.9.2: Females 20–29 years

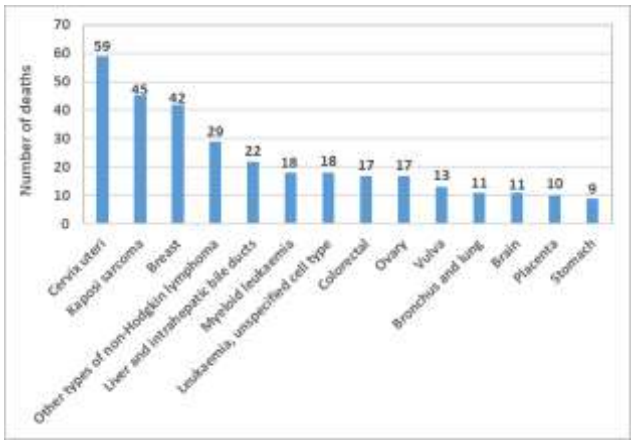
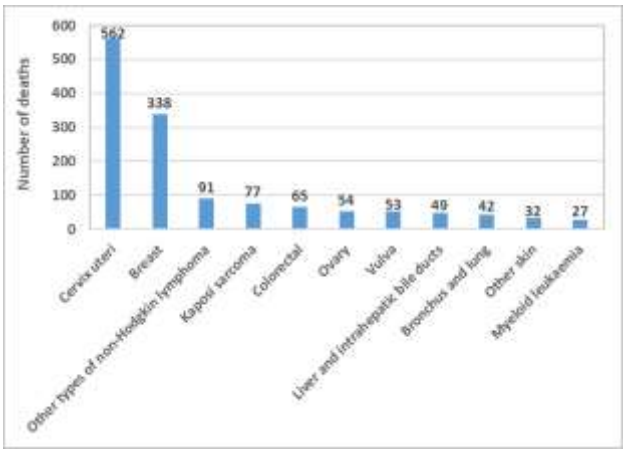


Figure 5.9.3: Females 30–39 years



Females aged 20 to 29 years contributed 2,0% (454) to cancer-related mortality among females. The leading cancers were cervical and Kaposi sarcoma, which accounted for, respectively, 13,0% (59) and 9,9% (45) of cancer-related deaths in this group. These were followed by cancers of the breast at 9,3% (42), other types of Non-Hodgkin lymphoma, 6,4% (29), liver and intrahepatic bile ducts, 4,8% (22), myeloid leukaemia and leukaemia of unspecified cell type, each contributing 4,0% (18). These leading cancer sites comprised half of all cancer-related mortality in this group.

Cancers in females aged 30 to 39 years accounted for 8,1% (1 798) of all cancer-related deaths among females. At 31,3% (562) and 18,3% (338) respectively, cancers of the cervix and breast accounted for half of cancer-related mortality in this group. These were followed by other types of Non-Hodgkin lymphoma, 5,1%, (91), Kaposi sarcoma, 4,3% (77), colorectal, 3,6% (65) and vulva, 2,9% (53). These leading malignancies accounted for two-thirds of cancer-related deaths in this group.

Figure 5.9.4: Females 40–49 years

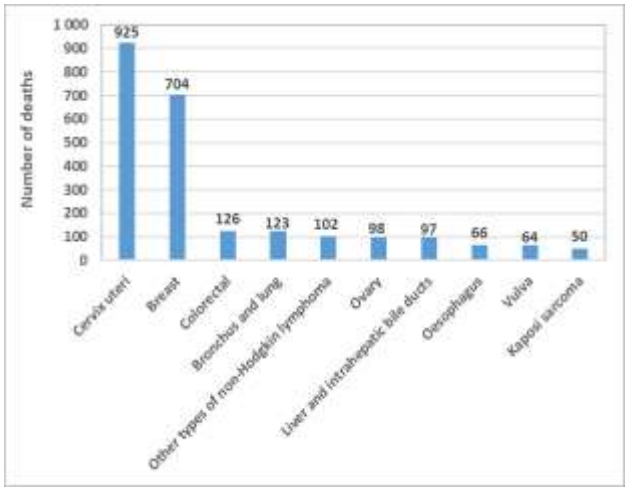
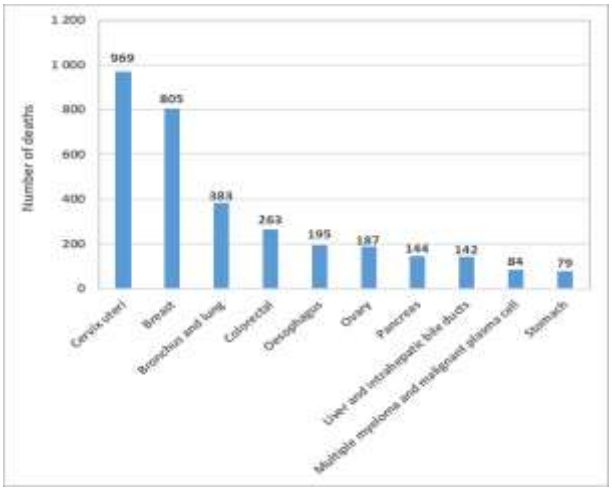


Figure 5.9.5: Females 50–59 years



Females aged 40 to 49 years contributed 13,7% (3 061) to cancer-related deaths among all females in 2018. Cervical and breast cancers accounted for half of the deaths, each contributing, respectively, 30,2% (925) and 23,0% (704) to cancer-related deaths in this group. These were followed by colorectal cancer, contributing 4,1%, (126), bronchus and lung, 4,0%, (123), other types of Non-Hodgkin lymphoma, 3,3%, (102), ovary, 3,2%, (98) and liver and intrahepatic bile ducts 3,2%, (97). These leading cancer sites accounted for 70% of cancer-related mortality in this group of women.

Women aged 50 to 59 years accounted for 19,8% (4 419) of cancer-related deaths among females. The leading cancer sites contributing to mortality were the cervix, accounting for 21,9% (969) of deaths, and breast, 18,2% (805), bronchus and lung, 8,7% (383), colorectal, 6,0% (263), oesophagus 4,4% (195), ovary, 4,2% (187) and pancreas, 3,3% (144). These leading cancer sites comprised two-thirds of cancer-related death in this group.

Figure 5.9.6: Females 60 – 69 years

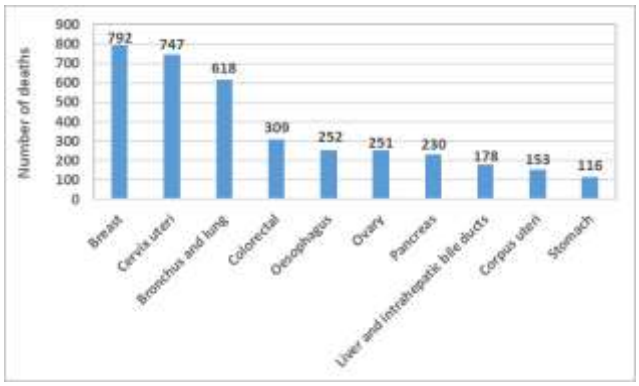
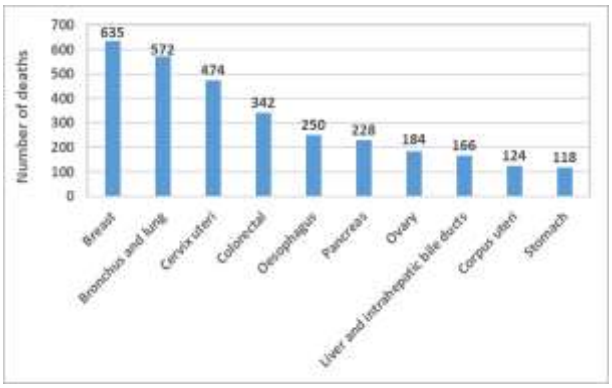


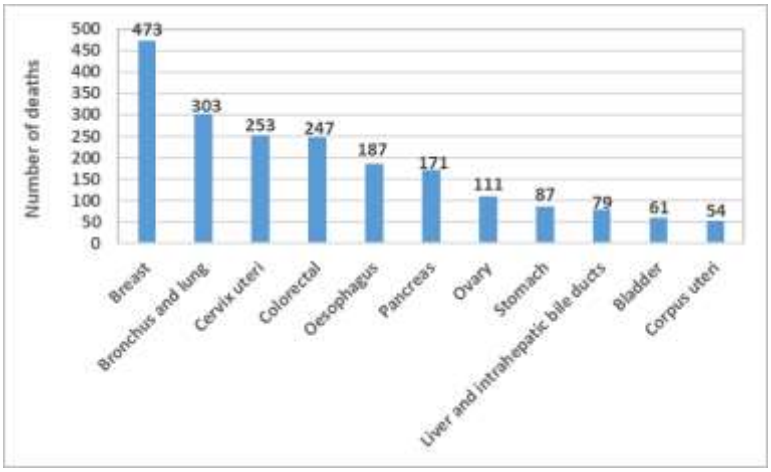
Figure 5.9.7: Females 70 – 79 years



Women aged 60 to 69 comprised the largest group contributing to cancer-related deaths among females with 22,8% (5 086) cases. Cancer of the breast was highest at 15,6% (792), followed by the cervix, 14,7% (747), bronchus and lung, 12,2% (618), colorectal, 6,1% (309), oesophagus, 5,0% (252), ovary, 4,9% (251), pancreas, 4,5% (230), and liver and intrahepatic bile ducts, 3,5% (178). These leading cancers accounted for almost two-thirds of cancer-related mortality in the group.

Cancers in females aged 70 to 79 years comprised 19,5% (4 360) of all cancers among females contributing to mortality. Breast cancer accounted for the highest deaths at 14,6% (635), followed by bronchus and lung, 13,1% (572), cervix, 10,9% (474), colorectal, 7,8% (342), oesophagus, 5,7% (250) and pancreas, 5,2% (228). The leading cancer sites comprised slightly more than half of all cancer-related deaths in this group.

Figure 5.9.8: Females 80 years and above



Among adult women aged 40 years and older, the age group 80 years and above contributed the lowest percentage, 13,0% (2 899) of cancer-related deaths. Breast cancer accounted for the highest number cases at 16,3% (473), followed by bronchus and lung, 10,5% (303), cervix, 8,7% (253), oesophagus, 6,5% (187), pancreas, 5,9% (171), ovary, 3,8% (111), stomach, 3,0% (87), liver and intrahepatic bile ducts, 2,7% (79) and bladder, 2,1% (61). These cancer sites comprised about two-thirds of cancer-related mortality in this group.

Appendix 4 shows a breakdown of cancers contributing to mortality by sex and population group in females, in 2018.

6. Age-standardised cancer mortality rates (per 100 000 people)

This section describes the age-standardised cancer mortality rates by population group and sex for leading cancers contributing to death. The age-standardised mortality rate is a weighted average of the age-specific mortality rates per 100 000 persons, where the weights are the proportions of persons in the corresponding age groups of the WHO standard population (WHO. 2022).

6.1 Age-standardised cancer mortality rates: Females

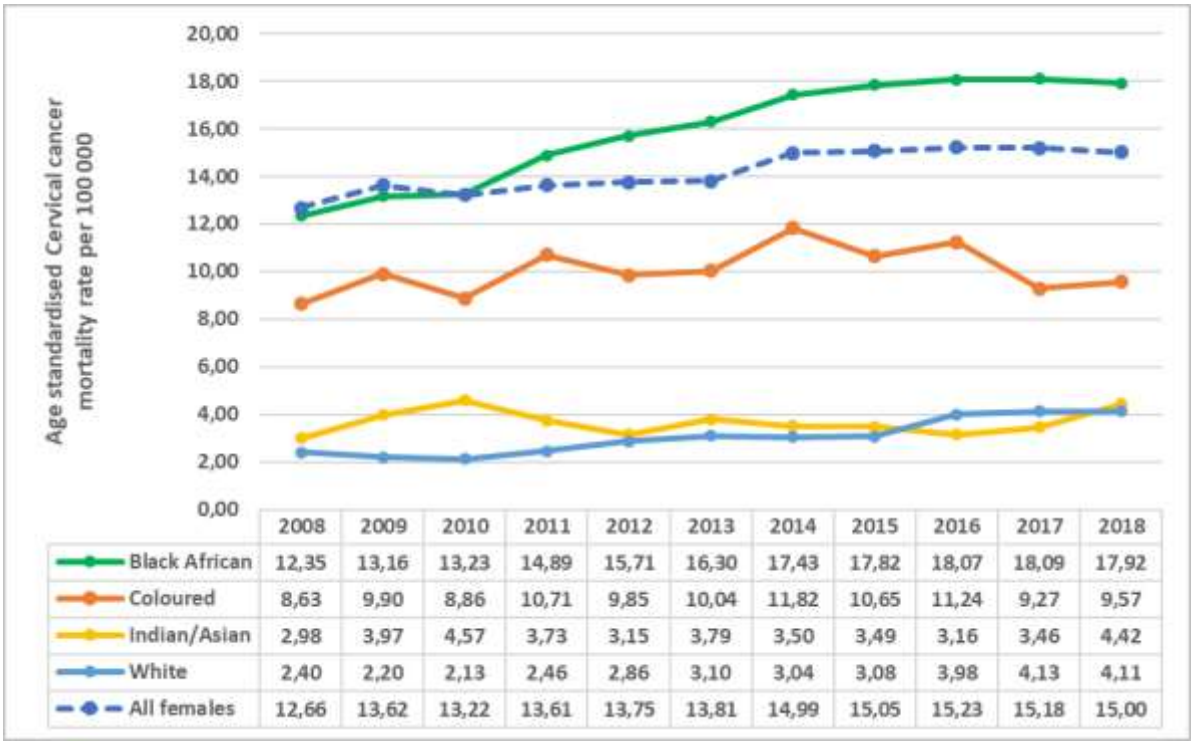
Figure 6.1.1 Age-standardised breast cancer mortality rate

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Coloured	15,86	14,44	15,45	18,09	18,09	17,99	18,86	20,13	19,97	20,94	21,83
White	17,64	17,57	17,28	17,60	19,07	18,45	18,65	18,22	19,85	19,26	19,34
Indian/Asian	14,62	11,84	12,77	14,71	16,16	15,35	14,38	15,90	16,83	12,56	14,54
Black African	6,73	6,78	7,56	8,40	8,61	9,25	9,65	9,88	10,26	9,71	10,36
All females	12,95	13,02	13,66	13,73	13,53	13,83	14,20	14,18	14,81	14,19	13,83

The age-standardised breast cancer mortality rate for all females was 13,83 in 2018. Coloured and White females had the highest mortality rates at 21,83 and 19,34 respectively. However, with a range of 15,86 in 2008 to 21,83 in 2018, mortality rates among Coloured females increased at a faster rate than those for White females, whose mortality rates ranged from 17,64 in 2008 to 19,34 in 2018 and appear to have stabilised after 2016. Indian/Asian females were the third highest population group in terms of breast cancer mortality rates, which fluctuated between a low of 11,84 in 2009, to a high of 16,83 in 2016. Black African females had the lowest age-standardised mortality rates over the study period, ranging from 6,73 in 2008 to 10,36 in 2018, and seem to have stabilised after 2015.

Coloured females had much lower breast cancer incidence rates than White females (Figure 4.1.2), but almost the same mortality rates. The high breast cancer mortality rates for Coloured females in comparison to their relatively lower incidence rates is a cause for concern and may be due to late diagnosis of cancer and risk factors such as smoking prevalence. Poor access to cancer treatment facilities may be a contributing factor as this population group also has the second lowest coverage of medical aid. (Stats SA General Household Survey (GHS) of 2019 (Statistical release. P0318). According to the survey, 9,3% of Black African and 19,9% of Coloured individuals were members of a medical aid scheme, compared to 77,7% of White and 45,1% of Indian/Asian individuals. A study in Ghana showed that access to health insurance is a strong predictor of survival from breast cancer, with a higher survival for those on a health insurance scheme. (Kwabeng M. et al. 2020). An earlier study in the USA also showed that women without private health insurance are less likely than privately insured women to be screened for breast cancer, and their treatment may differ after cancer is diagnosed. The study also showed poor survival rates for uninsured patients compared to insured ones (Ayanian J.Z. et al. 1993).

Figure 6.1.2 Age standardised cervical cancer mortality rate: Females



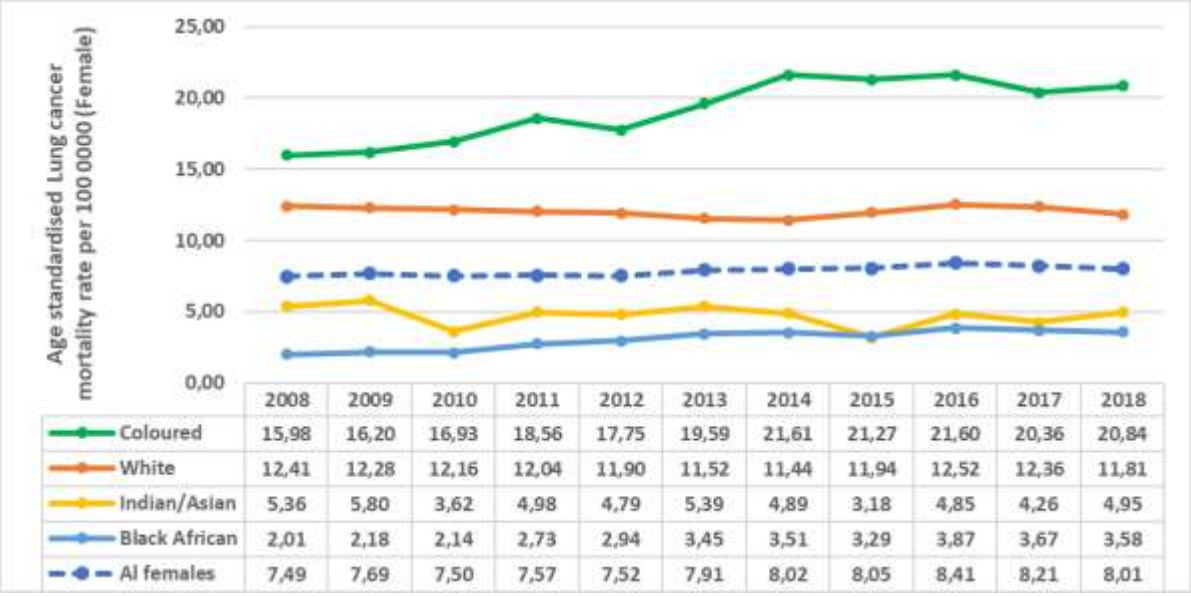
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Black African	12,35	13,16	13,23	14,89	15,71	16,30	17,43	17,82	18,07	18,09	17,92
Coloured	8,63	9,90	8,86	10,71	9,85	10,04	11,82	10,65	11,24	9,27	9,57
Indian/Asian	2,98	3,97	4,57	3,73	3,15	3,79	3,50	3,49	3,16	3,46	4,42
White	2,40	2,20	2,13	2,46	2,86	3,10	3,04	3,08	3,98	4,13	4,11
All females	12,66	13,62	13,22	13,61	13,75	13,81	14,99	15,05	15,23	15,18	15,00

The age-standardised cervical cancer mortality rate was 15,0 in 2018. As with the cervical cancer incidence rate, figure 4.1.2, where Black African females had the highest rates, Black African females also have the highest mortality rates, ranging from 12,35 in 2008 to 17,92 in 2018, although mortality rates appeared to be steady after 2015. Coloured females had the second highest mortality rates, ranging from 8,63 in 2008 and 9,57 in 2018, but with fluctuations above 10 and as high as 11,82 between 2011 and 2016. White and Indian/Asian females had the lowest mortality rates, ranging from 2,4 in 2008 to 4,11 in 2018 for White females and 2,98 in 2008 to 4,42 in 2018 for Indian/Asian females.

The high age-standardised cervical cancer mortality rate among Black African females is most likely driven by HIV, as this group of females has the highest HIV burden compared to other population groups. A South African population-based national housed survey undertaken in 2012 reported HIV prevalence as 24,1% for Black African women, much higher compared to Coloured females at 4,7%, Indian/Asian, 1,0% and White females, 0,5% (Mabaso M. et al. 2019). Women living with HIV have a significantly increased risk of cervical cancer as HIV enhances human papillomavirus (HPV)-induced carcinogenesis (Stelzle D. et al. 2020).

As with breast cancer, access to care, which includes awareness of cervical cancer risk factors, availability of screening and affordability of cancer treatment play a role in determining the outcome from cervical cancer diagnosis. Studies in the USA have shown that individual medical insurance is an important predictor of survival (Cherston C. et al. 2022) and uninsured women have increased risk of presenting with advanced stage cervical cancer (Davis M et al. 2018).

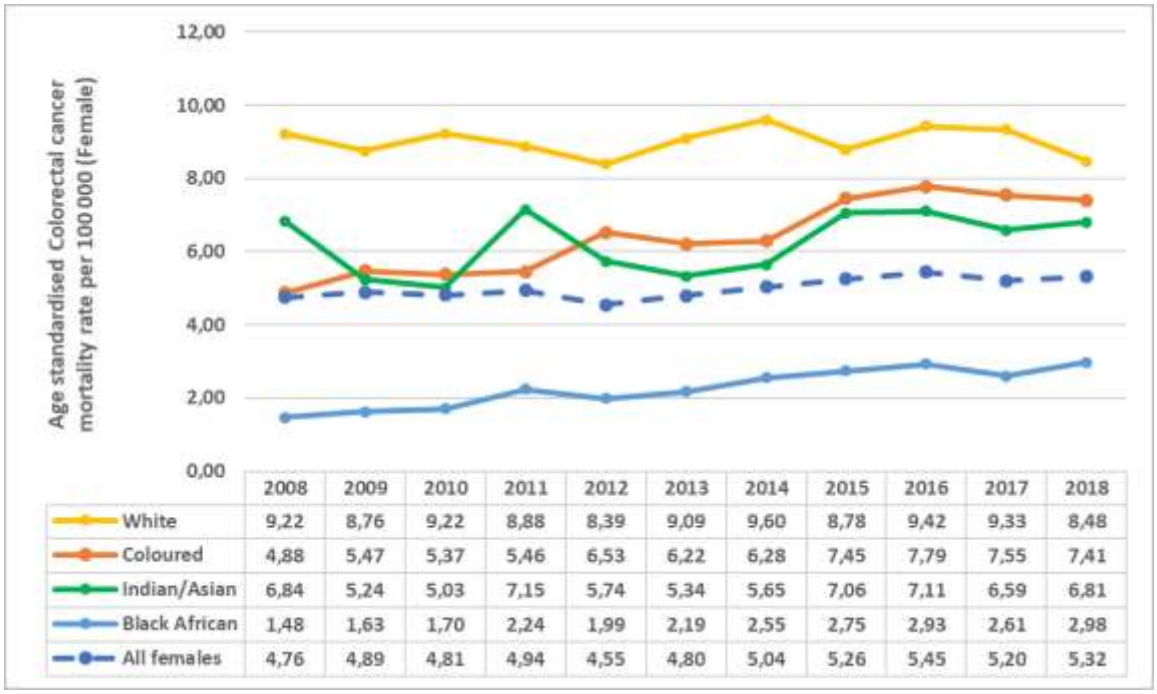
Figure 6.1.3: Age-standardised lung cancer mortality rate: Females



	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Coloured	15,98	16,20	16,93	18,56	17,75	19,59	21,61	21,27	21,60	20,36	20,84
White	12,41	12,28	12,16	12,04	11,90	11,52	11,44	11,94	12,52	12,36	11,81
Indian/Asian	5,36	5,80	3,62	4,98	4,79	5,39	4,89	3,18	4,85	4,26	4,95
Black African	2,01	2,18	2,14	2,73	2,94	3,45	3,51	3,29	3,87	3,67	3,58
Al females	7,49	7,69	7,50	7,57	7,52	7,91	8,02	8,05	8,41	8,21	8,01

The age-standardised lung cancer mortality rate for females was 8,01 in 2018. Coloured women had the highest lung cancer mortality rate, an increase from 15,98 in 2008 to 20,84 in 2018, although it seems to have stabilised after 2014. White females had the second highest mortality rate from 12,41 in 2008 to 11,81 in 2018. Indian/Asian females had slightly higher mortality rates than the Black African population group, fluctuating between a high of 5,8 in 2009 and a low of 3,18 in 2015. Mortality rates among Black African females increased slowly from 2,01 in 2008 up to 3,58 in 2018, with a slight peak of 3,87 in 2016. The median age at death due to lung cancer varied considerably between the population groups, with Black African females having the lowest median age of 60 years at death, followed by Coloured females at 61, Indian/Asian at 64 and White females at 70.

Figure 6.1.4: Age-standardised colorectal cancer mortality rate: Females

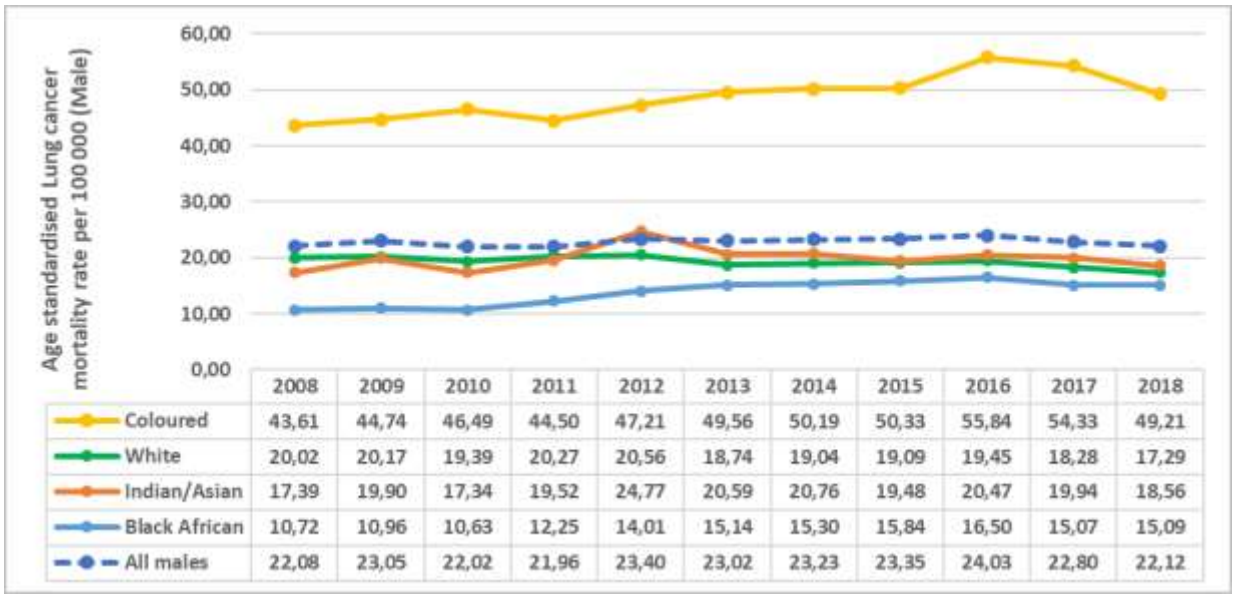


	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
White	9,22	8,76	9,22	8,88	8,39	9,09	9,60	8,78	9,42	9,33	8,48
Coloured	4,88	5,47	5,37	5,46	6,53	6,22	6,28	7,45	7,79	7,55	7,41
Indian/Asian	6,84	5,24	5,03	7,15	5,74	5,34	5,65	7,06	7,11	6,59	6,81
Black African	1,48	1,63	1,70	2,24	1,99	2,19	2,55	2,75	2,93	2,61	2,98
All females	4,76	4,89	4,81	4,94	4,55	4,80	5,04	5,26	5,45	5,20	5,32

The age-standardised colorectal cancer mortality rate for females was 5,32 in 2018. White females had the highest but relatively stable colorectal cancer mortality rates, fluctuating between a low of 8,39 in 2012 and a high of 9,60 in 2014. Colorectal mortality rates among Indian/Asian and Coloured females are lower than those of White females, as was the case with incidence rates. The rates for the two population groups of females are almost equal and follow similar trends, ranging between 4,88 in 2008 and 7,41 in 2018 for Coloured females, and from 6,84 in 2008 to 6,81 in 2018 for Indian/Asian females, with some stability after 2015 for both groups. Black African females had the lowest, but steadily increasing mortality rates, from 1,48 in 2008 to 2,98 in 2018.

6.2 Age-standardised cancer mortality rates (per 100 000 people): Males

Figure 6.2.1: Age-standardised lung cancer mortality rates: Males



	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Coloured	43,61	44,74	46,49	44,50	47,21	49,56	50,19	50,33	55,84	54,33	49,21
White	20,02	20,17	19,39	20,27	20,56	18,74	19,04	19,09	19,45	18,28	17,29
Indian/Asian	17,39	19,90	17,34	19,52	24,77	20,59	20,76	19,48	20,47	19,94	18,56
Black African	10,72	10,96	10,63	12,25	14,01	15,14	15,30	15,84	16,50	15,07	15,09
All males	22,08	23,05	22,02	21,96	23,40	23,02	23,23	23,35	24,03	22,80	22,12

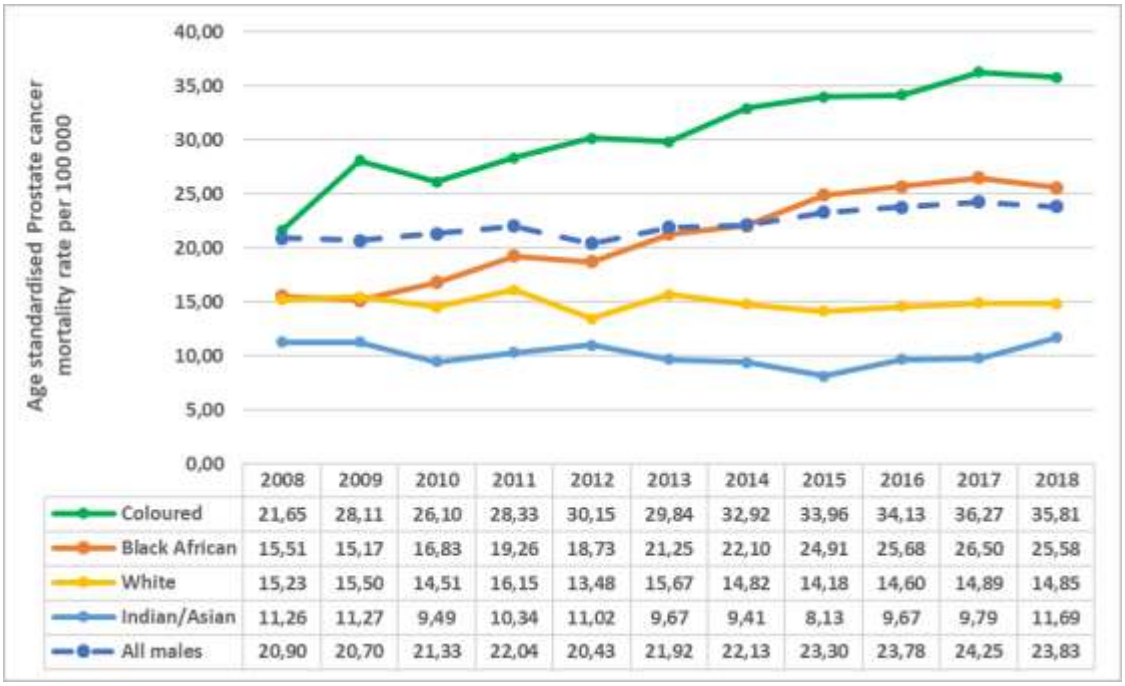
The age-standardised lung cancer mortality rate among males was 22,12 in 2018. Coloured males had the highest mortality rates, which increased from 43,61 in 2008 to a high of 55,84 in 2016 and dropping to 49,21 by 2018. White and Indian/Asian males had almost equal lung cancer mortality rates, with White males slightly higher at 20,02 in 2008, compared to 17,39 for Indian/Asian males. In 2018 Indian/Asian males were marginally higher with 18,56 compared to White males with 17,29. Black African males had the lowest lung cancer mortality rate in 2008 at 10,72, which increased rapidly to 15,09 by 2018, only slightly lower than that of White and Indian/Asian males.

The high age-standardised lung cancer mortality rates among male and female Coloured population groups are a cause for concern and further investigation is required to establish the underlying risk factors and formulate targeted interventions. A study on smoking in South Africa found the highest prevalence in the Western Cape and among males who classified themselves as Coloured (Fagbamigbe A. et al. (2020)). An earlier study in 1977 that looked at differences among the Coloured, White, Black and Indian/Asian population groups in smoking-attributed mortality at ages 35 to 74 years established that smoking prevalence was higher in the Coloured than in other population groups (Sitas F. 2013). Cigarette smoking has been reported the number one risk factor for lung cancer due to the toxic mix of chemicals in tobacco smoke, which can cause cancer almost anywhere in the body (CDC. 2022).

The high burden of tuberculosis (TB) in the Coloured population group could also be a contributing factor to the high lung cancer incidence and mortality rates in this population group. South Africa is amongst countries with the highest burden of TB, with an estimated incidence of over 500 cases per 100 000 population (WHO. Global Tuberculosis report 2022). In 2016, the Western Cape had the fourth highest TB incidence rate (drug sensitive and drug resistant) in South Africa, at 739.1 per 100 000 population. (Western Cape Government. World TB report. 2016). Districts that were reported to have the highest incidence rate were the West Coast (1 112/ 100 000), followed by Central Karoo (1 012/100 000), Cape Winelands (935/100 000), Overberg (848/100 000), Eden (825/100 000) and Cape Town metropolitan municipality (646/100 000). (Western Cape Government. World TB report. 2016). The Coloured population group comprises the majority in all these districts as well as the metro, (Census 2011 Municipal report – Western Cape / Statistics South Africa). This suggests a high burden of tuberculosis in the Coloured population group, among whom TB is also reported a leading cause of mortality (Statistics South Africa. Mortality and causes of death report. 2018).

A study undertaken in South Africa in 2017 established an association between pulmonary scarring (lung damage) as a result of tuberculosis infection and predisposition to lung cancer. (Jenkins N. et al. 2017). Studies in South East Asia, which hosts 45% of global TB cases (WHO. 2021), also suggested a statistically significant association between a history of pulmonary TB and lung cancer. (Hwang S. Y. et al. 2022; Chang-Mo Oh. et al. 2020; and Guang-Liang Chen. et al. 2021).

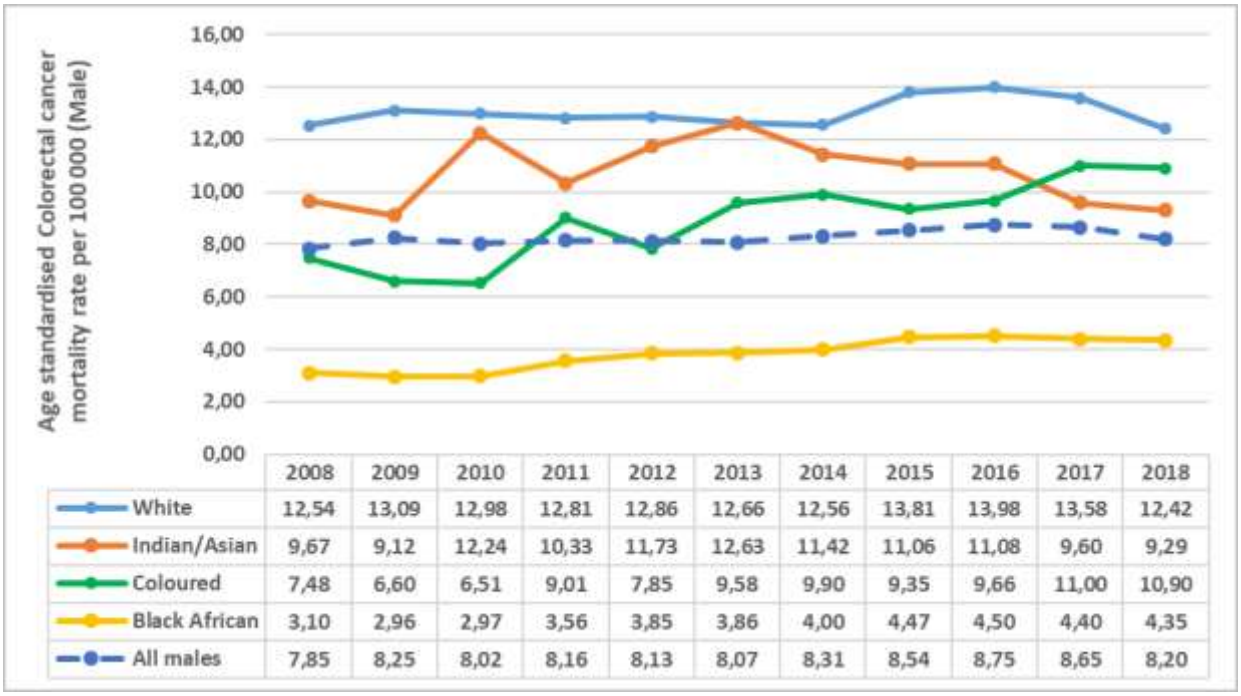
Figure 6.2.2: Age-standardised prostate cancer mortality rate



	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Coloured	21,65	28,11	26,10	28,33	30,15	29,84	32,92	33,96	34,13	36,27	35,81
Black African	15,51	15,17	16,83	19,26	18,73	21,25	22,10	24,91	25,68	26,50	25,58
White	15,23	15,50	14,51	16,15	13,48	15,67	14,82	14,18	14,60	14,89	14,85
Indian/Asian	11,26	11,27	9,49	10,34	11,02	9,67	9,41	8,13	9,67	9,79	11,69
All males	20,90	20,70	21,33	22,04	20,43	21,92	22,13	23,30	23,78	24,25	23,83

The age-standardised prostate cancer mortality rate was 23,83 in 2018. An increase from 20,9 in 2008. Coloured males had the highest prostate cancer mortality rates over all years, 2008 to 2018, followed by Black African males. The mortality rate for Coloured males ranged from 21,65 cases per 100 000 men in 2008 to 35,81 in 2018, while that for Black Africans ranged from 15,51 per 100,1000 men in 2008 to 25,58 in 2018. White males had the third highest prostate cancer mortality rate ranging from 15,23 cases per 100 000 men in 2008 and dropping to 14,85 in 2018. The mortality rate for White males seems to have stabilised after 2013. The prostate cancer mortality rate among Indian/Asian males was lowest in 2015 at 8,13, and highest in 2018 with 11,69 and appears stable.

Figure 6.2.3: Age-standardised colorectal cancer mortality rate



	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
White	12,54	13,09	12,98	12,81	12,86	12,66	12,56	13,81	13,98	13,58	12,42
Indian/Asian	9,67	9,12	12,24	10,33	11,73	12,63	11,42	11,06	11,08	9,60	9,29
Coloured	7,48	6,60	6,51	9,01	7,85	9,58	9,90	9,35	9,66	11,00	10,90
Black African	3,10	2,96	2,97	3,56	3,85	3,86	4,00	4,47	4,50	4,40	4,35
All males	7,85	8,25	8,02	8,16	8,13	8,07	8,31	8,54	8,75	8,65	8,20

The age-standardised colorectal cancer mortality rate for males was 8,2 in 2018. White males had the highest, but relatively stable colorectal cancer mortality rate, ranging from 12,54 in 2008 to 12,42 in 2018. Indian/Asian males had the second highest but fluctuating mortality rates, which were almost as high as those of White males in 2010 and in 2013. Colorectal cancer mortality rates among Coloured males were the third highest at 7,48 in 2008, but increased rapidly and exceeded those of Indian/Asian males in 2017, reaching a high of 11,00 and in 2018, 10,90. Black African males had the lowest colorectal cancer mortality rates over all years in the study period, increasing from 3,10 in 2008 to 4,35 in 2018.

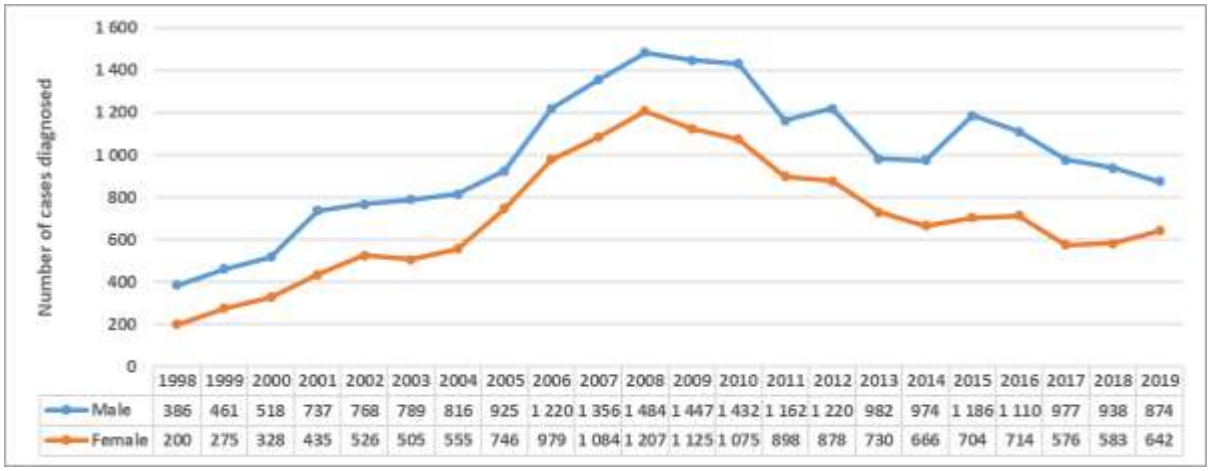
7. HIV and cancer: Kaposi sarcoma

The prevalence of Kaposi sarcoma increased steadily worldwide with the emergence of HIV infection, which in turn decreased substantially with widespread use of highly active antiretroviral therapy in high income countries. (Engels et al. 2006). A study done in South Africa in 2014 showed that antiretroviral therapy (ART) was associated with reductions in the risk of developing Kaposi Sarcoma of 70% to 80% (Bohlius J. et al. 2014). Sustaining the reduction in Kaposi sarcoma will require continuous effort to increase HIV testing, ART initiation and adherence to treatment in line with the UNAIDS 90 – 90 – 90 targets that, by 2020, 90% of all people living with HIV (PLHIV) will know their HIV status; 90% of all people with diagnosed HIV infection will receive sustained antiretroviral therapy; and 90% of all people receiving ART will have viral suppression.

A study done in the North West province, South Africa in 2016 showed that among those HIV-positive, fewer men were aware of their serostatus (48,4% men versus 75,7% women), receiving treatment and care (44,0% men versus 75,7% women) and retained in care (33,1% men versus 58,4% women). Improved detection, ART uptake and treatment adherence is critically needed, particularly among men. (Lippman S.A. et al. 2016). While women are still disproportionately more affected by HIV than men, and they continue to bear the brunt of the epidemic, men are more likely than women to die of AIDS-related causes because they are less likely than women to seek health care, to take an HIV test or to initiate and adhere to HIV treatment (UNAIDS. 2017).

While ART can bring about remission in early-stage Kaposi Sarcoma, advanced disease requires systemic chemotherapy (Chu K.M. et al. 2010). A review of electronic and paper records of Kaposi Sarcoma patients who accessed treatment at the Steve Biko Academic Hospital medical oncology unit showed that risk factors for mortality included late diagnosis of HIV, advanced Kaposi sarcoma disease and lack of chemotherapy use. (Sengayi M. et al. 2017).

Figure 7.1 Kaposi sarcoma diagnosed cases: 1998 – 2019



	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Male	386	461	518	737	768	789	816	925	1 220	1 356	1 484	1 447	1 432	1 162	1 220	982	974	1 186	1 110	977	938	874
Female	200	275	328	435	526	505	555	746	979	1 084	1 207	1 125	1 075	898	878	730	666	704	714	576	583	642

Figure 7.1 shows that in 1998, a total of 595 cases of Kaposi sarcoma were diagnosed. Of these, one-third (200) were females, 386 were males while 9 had a missing code for sex. Kaposi sarcoma cases almost quadrupled between 1998 and 2008, when a total of 2 696 were diagnosed. Between 2008 and 2019 there was a significant drop in diagnosed cases by 46,8% for females, (from 1 207 in 2008 to 642 in 2019), and 41,1% for males (from 1 484 in 2008 to 874 in 2019). The median age in years of people diagnosed with Kaposi sarcoma was 33 for females and 38 for males.

Figure 7.2 Kaposi sarcoma deaths: 1997– 2018

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Male	67	121	119	171	261	324	355	393	396	459	507	463	506	488	492	515	463	429	429	413	302	311
Female	57	68	104	117	204	228	299	345	392	401	436	444	422	358	430	394	361	357	283	273	246	215

Figure 7.2 shows number of deaths due to Kaposi sarcoma between 1997 and 2018. The totals shown on the chart do not correspond precisely with the numbers in the discussion due to a few cases with a missing code for sex. A total of 124 deaths were reported in 1997, which rose rapidly to 926 (4 missing) by 2011, a 647% increase. The peak in 2011 was followed by a 42,8% drop in reported deaths, down to 526 in 2018. The drop in number of deaths was bigger for females at 50% (from 430 in 2011 to 215 in 2018), compared to males at 36,9% (from 515 in 2012 to 311 in 2018). The median age at death in years was 39 for males and 36 for females. The low survival of three years or less suggests that the disease is diagnosed at advanced stages for both groups of patients. It's important to note that information about the HIV status or viral load of patients at diagnosis or death was not recorded or available.

8. Summary and concluding remarks

Early diagnosis of cancer improves cancer outcomes by providing care at the earliest possible stage (WHO. 2023). Information on the stage at which cancer was detected was not available or recorded, which would have enabled a better understanding of cancer survival and factors that contribute to higher mortality rates between the different population groups. Comorbidities at diagnosis are an additional piece of information that would have enabled understanding of the different age-standardised incidence and mortality rates and why the risk of cancer is higher in one group of individuals compared to others.

Although mortality due to cancer is lower compared to TB/HIV and other major communicable diseases, it is increasing. More focus needs to be put on prevention, screening and treatment of cancer, and increasing awareness of associated risk factors such as tobacco use, harmful use of alcohol, unhealthy dietary practices and sedentary lifestyles.

Breast cancer

Breast cancer was among the three leading cancers diagnosed for all women aged 20 years and older, and had the highest age-standardised incidence rate for all females. It was also one of the two leading causes of cancer-related deaths for all women.

Early detection followed by appropriate treatment is currently the most effective strategy to reduce breast cancer mortality. (NDoH. 2017). Mammography is the most commonly used screening test in developed

countries. It is, however, expensive and complex, requiring substantial financial and manpower resources. Inequitable access to appropriate services perpetuates disparity in diagnosis and breast cancer care. Ultimately this impacts on delay to treatment and patient outcomes. However, offering clinical breast examination in a community setting for the convenience of health care users is an area where the health care sector can add measurable value. (NDoH. 2017)

The requirements for this provision are:

- Primary healthcare nurses trained in breast healthcare.
- Protocols facilitating seamless transfer to the designated institution at the regional hospital.
- Breast referral forms with all relevant data.
- Patient transport for patients in need to ensure ease of access and to minimise delays (NDoH. 2017).

Women need to be empowered with knowledge regarding lowering their cancer and health risk and recognising warning signs. Research has shown that a regular 'Breast Self-Examination (BSE)', plays an important role in discovering breast cancer, compared to finding a breast lump by chance. (CANSA. 2016)

Cancers of the skin

Basal cell carcinoma, squamous cell carcinoma of the skin and melanoma accounted for one-third of all cancers diagnosed. Their prevention requires a comprehensive approach to protection against harmful UV radiation such as wearing sun-protective clothing, using sun-screen agents and avoiding sun exposure when UV rays are at their peak. It's important that people at risk, including those living with albinism who may not have the financial resources to undergo radiotherapy or complete treatment, receive education to prevent the damaging effect of the sun. Encouraging indoor occupations and providing free annual skin check-ups would improve early detection and treatment, and reduce the morbidity and mortality of skin cancers in people living with this condition. (BMC. Mabula JB. 2012).

Kaposi sarcoma

Patients on antiretroviral therapy present with less aggressive disease which is associated with less morbidity and mortality (Chalya P. et al. 2015). Maintaining the decline of Kaposi sarcoma requires concerted efforts to encourage people to know their HIV status, initiate ART and adhere to treatment. Referral of patients with advanced Kaposi sarcoma disease for chemotherapy and radiation therapy has also been shown to improve their survival (Sengayi M. 2017).

Lung cancer prevention

Lung cancer had the highest age-standardised cancer mortality rate. The leading cause of lung cancer is smoking or exposure to second-hand smoking and according to the South Africa Global Adult Tobacco Survey (GATS-SA. 2021), 29,4% of South Africa's adult population, aged 15 years and older, used tobacco. Based on the mortality dataset used for this report, it was not possible to establish a clear association between occurrence of cancer and smoking due to the high number of mortality cases where history of smoking was not specified or unknown.

Various pieces of legislation are in place to control tobacco use and exposure. These range from bans on tobacco advertising, designated smoking areas in indoor public places, health warnings and taxes on tobacco products and substances that contain nicotine. The legislation needs to be reinforced however, as 22,3% of adults in the 2021 GATS survey reported that they noticed tobacco products advertisements, promotions, or

sporting event sponsorships on various media. The survey also reported that 11,2% of adults were exposed to tobacco smoke in enclosed areas at their workplace and in restaurants.

The significantly higher lung cancer mortality rates in the Coloured population group, for both males and females, is of concern and the possible confounding effect of TB needs to be investigated. Understanding the risk of development of lung cancer after TB diagnosis in a highly TB endemic area such as South Africa can improve the prevention and diagnosis of cancer.

Cervical cancer prevention

Cervical cancer prevention and control is part of a broad based Sexual and Reproductive Health (SRH) programme implemented by the National Department of Health (NDoH). However, detection, treatment and follow-up of pre-invasive lesions place a huge burden on already overloaded primary and district health facilities. Its treatment requires radiation, which is expensive and is mostly done at tertiary and quaternary hospitals, Costs for staffing, facilities and direct treatment are also exorbitant. In addition, most patients have to travel long distances for treatment and follow-up, and they incur additional costs towards accommodation and other living expenses for the duration of treatment. (NDoH. 2017)

The impact of cervical cancer on communities is complex and is aligned with high levels of poverty, cultural factors, social justice, gender, race, ethnicity and geography. Women living in low socio-economic circumstances present advanced disease, have less access to diagnosis and treatment and have a much higher case fatality rate than women in high income countries. (NDoH. 2017)

Strategies for primary prevention of cervical cancer include Human Papillomavirus vaccination (HPV), voluntary medical male circumcision and promoting a healthy lifestyle among sexually active women. HPV vaccination, offered to all pre-pubertal girls aged 9 to 12 years, in order to protect them against the two high risk HPV types 16 and 18, which cause about 70% of cervical cancers, has been shown to be the most cost-effective strategy in the prevention of cervical cancer. (NDoH. 2017)

Prostate cancer

Risk factors for prostate cancer include age, family history, being overweight or obese. Screening for early detection of the disease remains the critical factor that increases awareness of this disease and improves the quality of life and survival (Ramaliba T. et al. 2022). The risk of getting prostate cancer increases after 50 years of age (Cancer.Net. 2021). Prostate cancer screening is recommended across all men from age 45 onwards. (Mofolo N. et al. 2015; South African Prostate Cancer Foundation, 2013).

Healthy lifestyles

Incorrect dietary practices including consumption of low fibre, low fruit and vegetables, high consumption of sugar and fatty foods, accompanied by physical inactivity are some of the risk factors associated with cancer (CDC. 2022). Obesity is a risk factor for cancer and an established problem in high-income countries, and is escalating rapidly in low- and middle-income countries, contributing significantly to the Non-communicable disease (NCD) burden. (Wallace M. Pentz-Kluyts M. 2022). The World Obesity Atlas, 2022 has revealed that one in three South African adults are predicted to be obese by 2030. This has been attributed to the adoption of Western lifestyles including diet, and an increasingly sedentary lifestyle as a result of a growing economy, increased earnings and rapid urbanisation. It has been established that obesity contributes to these cancers. WHO (2022) has affirmed that after tobacco, overweight and obesity are the most important known avoidable causes of cancer. With limited resources to access and implement the costly treatments available for cancer, the focus for cancer control needs to be on the key risk factors for cancer, and obesity is one of the most significant. (CANSA. 2016)

South Africa has established a National Healthy Lifestyles Awareness Day to tackle the dangers of obesity, an unhealthy diet and physical inactivity by promoting health and well-being among individuals and communities. The elements of the campaign are:

- promotion of good nutrition;
- regular physical activity
- tobacco control
- interventions against alcohol and substance abuse; and
- promotion of safe sexual behaviour (NDoH. - 2019).

The policy framework and strategy on cancer in South Africa aims to provide additional guidance on:

- strengthening support of the National Cancer Registry in order to monitor the burden and outcomes of the disease;
- provision of overall structural organisation of the cancer service within health facilities at all levels of service provision;
- regulation of the pharmaceutical and non-pharmaceutical requirements of the medical management of cancer treatment; and
- establishment of a planned patient transport system that ensures access to high level services.

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10. Appendices

Appendix 1: Frequency of histologically diagnosed cancer in South Africa, by age. Female, 2019

SITE	Total	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	75–79	80+	UNK
Total	**42 483**	**135**	**98**	**110**	**149**	**295**	**750**	**1 661**	**2 660**	**3 364**	**3 865**	**3 930**	**4 531**	**4 942**	**4 662**	**4 078**	**3 233**	**3 774**	**246**
Breast	**10 232**	-	-	-	1	25	129	346	619	944	1 111	1 176	1 244	1 290	1 068	868	711	642	58
Cervix	**7 001**	1	-	-	1	15	106	448	797	1 023	1 036	843	80	651	518	293	202	206	56
Basal-cell carcinoma	**6 711**	-	1	3	7	16	44	90	203	309	477	542	630	822	870	916	763	997	21
Squamous Cell Carcinoma of skin	**3 007**	-	-	1	2	5	14	40	61	75	100	132	212	306	357	451	436	807	8
Colorectal	**1 957**	-	-	1	2	9	17	43	67	91	151	162	255	281	281	219	175	200	3
Uterus	**1 581**	-	-	-	-	3	2	8	20	34	61	102	178	284	321	273	166	124	5
Non Hodgkin lymphoma	**1 132**	2	7	11	20	29	34	89	98	113	100	99	104	87	87	99	74	70	9
Melanoma	**1 039**	1	-	-	1	10	27	40	57	62	87	99	106	122	106	119	85	110	7
Lung	**968**	-	-	-	-	-	1	11	17	23	35	64	121	143	188	160	115	84	6
Oesophagus	**882**	-	-	-	-	-	10	8	7	24	44	83	134	142	145	95	89	85	16
Vulva	**750**	-	-	-	-	5	23	89	161	137	95	63	43	34	35	24	16	22	3
Kaposi Sarcoma	**647**	-	-	3	7	40	119	126	136	84	44	27	17	16	6	3	9	7	3
Ovary	**568**	2	4	4	12	12	7	18	16	22	49	53	71	95	83	57	29	33	1
Thyroid	**563**	-	1	2	8	19	30	40	79	57	76	58	62	48	25	32	13	10	3
Stomach	**524**	-	-	-	2	3	6	7	15	30	28	52	60	73	71	67	45	61	4
Kidney	**310**	32	16	5	5	3	2	8	14	16	28	26	29	35	30	25	20	15	1

Appendix 1 Ctnt.: Frequency of histologically diagnosed cancer in South Africa, by age. Female, 2019

SITE	Total	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	75–79	80+	UNK
Total	**162 419**	**584**	**432**	**419**	**574**	**814**	**1 563**	**2 943**	**4 348**	**5 881**	**8 726**	**12 635**	**18 729**	**23 077**	**24 588**	**22 944**	**17 339**	**15 813**	**1 010**
Connective tissue	**301**	16	9	7	4	14	11	11	17	14	13	12	30	41	36	25	20	8	3
Anus	**297**	-	-	-	-	-	14	28	48	44	32	25	24	21	21	17	7	12	4
Hodgkin lymphoma	**291**	1	5	9	15	30	35	42	30	28	24	17	15	11	14	7	3	3	2
Leukaemia	**276**	18	12	16	11	10	7	13	13	23	16	15	24	20	28	19	17	13	1
Brain, CNS	**249**	11	12	12	11	5	14	10	15	11	12	14	36	32	22	16	7	9	-
Vagina	**247**	2	1	-	-	2	7	11	25	22	24	21	31	36	24	23	9	7	2
Eye	**246**	20	5	1	-	4	19	38	37	38	25	27	7	8	6	4	1	4	2
Liver & Bile duct	**230**	10	3	1	1	4	7	5	11	11	14	10	32	31	22	28	24	13	3
Other specified	**230**	3	3	1	1	1	2	13	11	11	24	17	23	33	35	20	21	11	-
Pancreas	**220**	-	-	-	1	-	1	4	3	11	17	14	25	36	32	28	27	20	1
Mouth	**212**	1	-	-	3	-	7	3	3	9	13	35	21	34	20	19	19	23	2
Myeloma	**199**	-	-	-	-	-	-	3	2	4	13	17	27	31	29	30	20	23	-
Skin other	**176**	2	-	1	1	8	8	17	17	16	13	12	15	15	11	6	10	22	2
Tongue	**157**	-	-	-	2	-	-	2	-	8	14	14	24	29	22	15	16	10	1
Naso-Oropharynx	**153**	1	-	2	3	3	6	5	8	15	9	10	16	19	25	17	3	9	2
Salivary gland	**112**	-	2	3	5	2	5	6	6	6	9	14	5	14	3	8	12	11	1
Bone	**109**	-	5	19	14	5	7	4	11	4	8	8	7	3	7	3	2	2	-

Appendix 1 Ctnt.: Frequency of Histologically diagnosed cancer in South Africa, Female. 2019

SITE	Total	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	75–79	80+	UNK
Total	**162 419**	**584**	**432**	**419**	**574**	**814**	**1 563**	**2 943**	**4 348**	**5 881**	**8 726**	**12 635**	**18 729**	**23 077**	**24 588**	**22 944**	**17 339**	**15 813**	**1 010**
Larynx	**101**	-	-	-	-	-	1	2	2	4	8	9	18	19	18	9	4	5	2
Small intestine	**99**	-	-	-	--	-	-	1	4	5	15	5	12	18	15	9	6	7	2
Mesothelioma	**68**	-	-	-	-	-	-	-	-	1	1	6	8	11	15	10	9	7	-
Placenta	**50**	-	-	-	1	10	10	11	4	6	6	1	-	-	-	-	-	-	1
Burkitt lymphoma	**46**	3	5	3	2	1	4	8	7	3	2	2	3	3	-	-	-	-	-
Endocrine	**38**	8	6	3	1	1	6	1	1	2	3	-	2	2	-	1	1	-	-
Gum	**33**	-	-	-	-	-	1	1	1	1	1	1	1	6	5	6	1	8	-
Haematology other	**33**	1	1	2	5	-	4	2	-	1	2	3	2	-	3	2	-	5	-
Lip	**18**	-	-	-	-	1	-	-	2	2	-	1	2	-	2	2	2	4	-
Ill defined	**1**	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-
Primary site unknown	**1 658**	2	3	1	3	10	18	37	55	94	98	162	198	240	196	207	146	153	35

Appendix 2: Frequency of Histologically diagnosed cancer in South Africa, Male. 2019

SITE	Total	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	75–79	80+	UNK
Total	**40 326**	**146**	**112**	**102**	**145**	**202**	**372**	**716**	**1 074**	**1 462**	**2 181**	**3 173**	**4 684**	**5 729**	**6 112**	**5 686**	**4 303**	**3 891**	**236**
Prostate	**10 598**	1	-	-	1	1	6	8	14	53	205	645	1 304	1 926	2 205	1 929	1 310	887	103
Basal-cell carcinoma	**8 607**	-	-	2	5	16	22	104	190	298	549	694	974	1 108	1 251	1 322	1 024	1 024	24
Squamous Cell Carcinoma of skin	**4 339**	-	-	-	6	5	8	36	43	95	145	208	337	477	642	752	689	886	9
Colorectal	**2 350**	-	-	-	1	9	19	39	82	99	154	205	308	364	325	305	224	208	8
Lung	**1 671**	-	-	2	-	1	2	10	19	36	84	158	264	311	290	222	166	99	7
Non Hodgkin lymphoma	**1 341**	9	8	16	23	26	47	75	117	141	166	151	123	100	106	89	71	62	11
Melanoma	**1 141**	-	1	-	2	4	20	24	39	54	82	86	125	144	140	158	140	116	6
Oesophagus	**1 045**	-	-	-	-	-	3	7	9	35	69	130	216	175	173	114	58	45	11
Bladder	**1 029**	2	3	-	-	1	3	5	9	13	39	69	99	153	156	157	148	165	7
Kaposi Sarcoma	**881**	1	1	4	6	18	81	152	187	146	106	72	34	26	14	12	6	9	6
Stomach	**836**	-	1	-	-	4	5	15	23	43	55	78	121	127	126	96	71	67	4
Kidney	**510**	35	9	2	1	3	4	7	9	30	42	43	56	71	83	58	40	13	4
Larynx	**461**	-	-	-	1	-	1	2	6	13	25	58	85	89	68	59	32	20	2
Mouth	**383**	1	-			2	2	6	6	11	29	53	76	68	53	35	21	17	3
Naso-Oropharynx	**379**	1	-	6	6	2	3	7	15	17	26	48	71	72	39	33	18	14	1

Appendix 2 Ctnt.: Frequency of Histologically diagnosed cancer in South Africa, Male. 2019

SITE	Total	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	75–79	80+	UNK
Total	**40 326**	**146**	**112**	**102**	**145**	**202**	**372**	**716**	**1 074**	**1 462**	**2 181**	**3 173**	**4 684**	**5 729**	**6 112**	**5 686**	**4 303**	**3 891**	**236**
Liver & Bile duct	**352**	8	2	1	-	4	3	9	24	18	23	28	43	44	51	38	26	30	-
Tongue	**351**	1	-	-	-	-	1	1	5	10	27	50	67	71	47	33	23	13	2
Penis	**328**	-	-	-	-	-	1	10	22	41	61	57	22	39	27	13	8	16	11
Hodgkin lymphoma	**310**	1	17	12	17	19	20	41	46	46	32	21	15	7	7	4	2	2	1
Connective tissue	**301**	14	5	7	7	14	12	11	12	22	28	33	27	31	26	19	20	11	2
Leukaemia	**300**	11	16	12	17	7	15	12	13	18	18	22	19	26	26	18	26	23	1
Eye	**287**	24	3	-	3	4	8	19	43	58	35	28	16	16	12	7	6	5	-
Brain, CNS	**250**	17	16	6	5	8	6	5	15	17	18	34	27	28	20	11	9	7	1
Testis	**236**	4	-	1	9	22	37	38	47	28	16	10	4	7	3	4	3	1	2
Pancreas	**228**	-	-	1	-	-	-	2	2	9	19	17	34	45	32	20	31	16	-
Myeloma	**216**	-	-	-	-	-	-	5	5	7	16	24	33	35	25	25	19	21	1
Skin other	**208**	1	-	-	4	7	8	6	21	12	17	15	21	8	19	20	23	23	3
Breast	**185**	-	1			2		5	2	4	9	19	28	30	23	27	15	19	1
Anus	**182**	-	-	-	1	1	-	8	12	26	20	29	22	21	21	11	6	3	1
Other specified	**177**	3	-	-	2	-	2	3	5	10	13	18	27	27	27	15	10	13	2
Thyroid	**169**	-	1	1	2	-	7	13	7	13	22	13	20	23	15	15	15	2	-
Salivary gland	**132**	1	1	3	-	3	4	6	2	6	7	15	12	14	18	14	14	12	-

Appendix 2 Ctnt.: Frequency of Histologically diagnosed cancer in South Africa. Male. 2019

SITE	Total	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	75–79	80+	UNK
Total	**40 326**	**146**	**112**	**102**	**145**	**202**	**372**	**716**	**1 074**	**1 462**	**2 181**	**3 173**	**4 684**	**5 729**	**6 112**	**5 686**	**4 303**	**3 891**	**236**
Mesothelioma	**116**	-	-	-	-	-	-	1	-	2	2	7	14	10	16	27	17	20	-
Bone	**112**	1	7	13	17	14	11	5	8	6	5	4	8	8	2	2	-	1	-
Small intestine	**88**	-	-	-	-	-	2	2	7	4	6	12	14	13	11	6	7	4	-
Burkitt lymphoma	**74**	3	10	4	3	3	6	12	7	11	4	6	2	1	-	1	-	1	-
Haematology other	**63**	4	6	9	6	2	1	4	-	-	1	2	2	4	6	4	3	8	1
Lip	**40**	-	-	-	-	-	1	-	1	7	3	5	5	3	5	4	-	5	1
Gum	**27**	-	-	-	-	-	-	-	-	2	1	4	6	3	1	7	1	2	-
Endocrine	**23**	3	3	-	-	-	1	1	-	1	2	2	3	4	1	-	1	1	-
Primary site unknown	**1 446**	-	4	-	2	7	21	31	43	63	117	153	225	248	198	138	88	85	23

Appendix 3: Frequency of Histologically diagnosed cancer in South Africa, Population group.

Year of diagnoses: 2018						
Sex: Male						
Cancer site	**Total**	**Black African**	**Coloured**	**Indian/Asian**	**White**	**Unspecified**
Total	**41 491**	**14 130**	**4 716**	**1 026**	**20 743**	**876**
Prostate	**10 495**	5 313	1 111	268	3 424	379
Basal-cell carcinoma	**8 581**	318	879	28	7 355	1
Squamous Cell Carcinoma of skin	**4 328**	419	451	26	3 428	4
Colorectal	**2 338**	714	311	143	1 078	92
Lung	**1 663**	612	265	95	639	52
Non-Hodgkin lymphoma	**1 328**	735	132	41	383	37
Melanoma	**1 135**	104	103	8	919	1
Oesophagus	**1 034**	699	124	14	163	34
Bladder	**1 022**	201	139	55	593	34
Kaposi Sarcoma	**874**	792	41	5	30	6
Stomach	**830**	323	190	52	243	22
Kidney	**506**	150	58	32	256	10
Larynx	**459**	250	64	10	123	12
Mouth	**380**	198	53	18	100	11
Naso-Oropharynx	**376**	185	60	10	106	15
Liver & Bile duct	**352**	161	40	14	124	13
Tongue	**348**	152	65	20	106	5
Penis	**317**	240	32	7	36	2
Hodgkin lymphoma	**309**	205	25	4	64	11
Connective tissue	**299**	163	34	9	86	7
Leukaemia	**299**	171	26	4	90	8
Eye	**287**	235	18	3	29	2
Brain, CNS	**249**	87	27	13	122	-
Testis	**234**	42	30	20	131	11
Pancreas	**228**	60	31	9	125	3
Myeloma	**215**	94	23	6	88	4
Skin other	**205**	83	19	4	91	8
Breast	**184**	99	24	-	52	9

Appendix 3 Ctnt.: Frequency of Histologically diagnosed cancer in South Africa, Population group.

Year of diagnoses: 2018						
Sex: Male						
Cancer site	**Total**	**Black African**	**Coloured**	**Indian/Asian**	**White**	**Unspecified**
Total	**41 491**	**14 130**	**4 716**	**1 026**	**20 743**	**876**
Anus	**181**	112	26	8	35	-
Other, specified	**175**	76	26	10	54	9
Thyroid	**168**	43	13	14	95	3
Salivary gland	**132**	56	14	3	51	8
Mesothelioma	**116**	43	12	6	55	-
Bone	**112**	67	9	9	26	1
Small intestine	**88**	41	15	6	24	2
Burkitt lymphoma	**74**	49	11	1	12	1
Haematology, other	**62**	32	6	1	21	2
Lip	**39**	7	11	-	20	1
Gum	**27**	15	2	-	10	-
Endocrine	**23**	11	3	1	8	-
Primary site unknown	**1 419**	773	193	49	348	56

Appendix 4: Frequency of Histologically diagnosed cancer in South Africa, Population group.

Year of diagnoses: 2018						
Sex: Female						
Cancer site	**Total**	**Black African**	**Coloured**	**Indian/Asian**	**White**	**Unspecified**
Total	**43 811**	**19 376**	**4 781**	**1 328**	**17 405**	**921**
Anus	**10 172**	4 244	1 359	513	3 679	377
Basal-cell carcinoma	**6 945**	5 903	393	80	520	49
Bladder	**6 685**	328	693	37	5 625	2
Bone	**2 992**	416	330	27	2 219	-
Brain, CNS	**1 952**	654	280	107	852	59
Breast	**1 618**	948	200	60	348	62
Burkitt lymphoma	**1 576**	865	201	102	358	50
Cervix	**1 117**	596	115	36	337	33
Colorectal	**1 031**	170	116	11	732	2
Connective tissue	**960**	256	184	32	452	36
Endocrine	**862**	671	78	11	78	24
Eye	**747**	604	48	12	72	11
Gum	**642**	579	28	5	23	7
Haematology, other	**567**	194	55	18	283	17
Hodgkin lymphoma	**560**	191	61	48	235	25
Kaposi Sarcoma	**408**	154	42	17	176	19
Kidney	**309**	140	33	17	116	3
Larynx	**297**	158	36	10	87	6
Leukaemia	**291**	217	26	1	47	-
Lip	**289**	176	35	13	56	9
Liver & Bile duct	**275**	163	15	7	75	15
Lung	**249**	79	32	14	123	1
Melanoma	**245**	174	19	8	35	9
Mesothelioma	**240**	218	8	2	9	3
Mouth	**230**	111	33	10	68	8
Myeloma	**226**	118	26	9	63	10
Naso-Oropharynx	**219**	64	27	7	113	8
Non-Hodgkin lymphoma	**208**	85	30	19	66	8
Oesophagus	**199**	101	23	5	60	10

Appendix 4 Ctnt.: Frequency of Histologically diagnosed cancer in South Africa, Population group.

Year of diagnoses: 2018						
Sex: Female						
Cancer site	**Total**	**Black African**	**Coloured**	**Indian/Asian**	**White**	**Unspecified**
Total	**43 811**	**19 376**	**4 781**	**1 328**	**17 405**	**921**
Other, specified	**173**	91	17	8	47	10
Ovary	**156**	41	30	11	69	5
Pancreas	**149**	78	23	6	36	6
Placenta	**111**	59	8	11	31	2
Squamous Cell Carcinoma of skin	**99**	42	27	3	26	1
Salivary gland	**97**	47	18	1	27	4
Skin other	**68**	18	14	3	33	-
Small intestine	**49**	46	1	-	1	1
Stomach	**46**	39	3	-	4	-
Thyroid	**38**	22	4	2	10	-
Tongue	**33**	11	2	2	15	3
Uterus	**33**	13	2	3	14	1
Vagina	**18**	9	3	-	6	-
Vulva	**1**	-	1	-	-	-
Primary site unknown	**109**	61	9	6	33	-
Ill defined	**520**	222	93	34	146	25

Appendix 5: Cancers contributing to mortality by Sex and Population group: Male

Death occurrence year: 2018								
Sex: Male								
Cancer site		**Total**	**Black African**	**Coloured**	**Indian/ Asian**	**White**	**Other**	**Unspecified**
ICD-10 code label	**ICD-10 code**	**21 208**	**11 077**	**2 959**	**606**	**4 660**	**44**	**1 862**
Bronchus and Lung	C34	**3 964**	1 734	943	131	763	7	386
Prostate	C61	**3 534**	2 012	451	66	719	8	278
Malignant neoplasm, without specification of site	C80	**1 767**	938	222	65	322	5	215
Oesophagus	C15	**1 587**	1 156	129	21	161	1	119
Colorectal (C18, C19, C20)		**1 443**	520	190	67	518	5	143
Liver and intrahepatic bile ducts	C22	**1 100**	752	101	21	147	2	77
Pancreas	C25	**812**	333	104	28	272	6	69
Stomach	C16	**724**	277	169	44	161	2	71
Other and unspecified types of Non-Hodgkin lymphoma	C85	**636**	363	36	22	147	-	68
Bladder	C67	**486**	140	79	24	189	2	52
Larynx	C32	**346**	206	56	7	44	-	33
Kaposi sarcoma	C46	**307**	278	9	1	5	1	13
Multiple myeloma	C90	**300**	171	21	7	82	-	19
Other malignant neoplasms of skin	C44	**290**	146	21	5	106	-	12
Brain	C71	**290**	114	26	11	110	1	28
Leukaemia of unspecified cell type	C95	**276**	154	19	8	76	-	19
Other and ill-defined sites	C76	**254**	196	25	2	16	-	15
Kidney, except renal pelvis	C64	**253**	88	38	11	91	-	25
Myeloid leukaemia	C92	**245**	131	12	7	69	-	26
Melanoma of skin	C43	**243**	36	7	-	185	-	15
Ill-defined sites in the lip, oral cavity & pharynx	C14	**198**	117	37	11	19	-	14
Other and unspecified parts of tongue	C02	**148**	66	36	2	29	1	14
Mesothelioma of pleura	C45	**143**	43	13	-	75	-	12
Other and unspecified parts of mouth	C06	**140**	80	28	3	16	-	13
Lymphoid leukaemia	C91	**136**	69	16	8	37	-	6

Source: StatsSA. Mortality and causes of death, 2018

Appendix 5 Ctnt.: Cancers contributing to mortality by Sex and Population group: Male

Death occurrence year: 2018								
Sex: Male								
Cancer site		**Total**	**Black African**	**Coloured**	**Indian or Asian**	**White**	**Other**	**Unspecified**
ICD-10 code label	**ICD-10 code**	**21 208**	**11 077**	**2 959**	**606**	**4 660**	**44**	**1 862**
Other and ill-defined digestive organs	C26	**129**	84	16	2	17	-	10
Non-follicular lymphoma	C83	**119**	67	7	2	29	-	14
Other connective tissue	C49	**118**	66	5	3	33	-	11
Hodgkin lymphoma	C81	**90**	63	7	5	8	1	6
Breast	C50	**86**	53	13	-	12	-	8
Oropharynx	C10	**77**	46	10	2	11	-	8
Other and unspecified parts of biliary duct	C24	**72**	40	12	-	15	-	5
Bone and articular cartilage of other and unspecified sites	C41	**72**	49	8	2	11	-	2
Foreskin	C60	**72**	56	9	-	4	-	3
Testes	C62	**63**	33	10	5	12	1	2
Anus	C21	**59**	44	6	-	6	-	3
Gallbladder	C23	**51**	34	6	-	7	-	4
Conjunctiva	C69	**42**	38	1	-	2	-	1
Floor of mouth	C04	**39**	17	6	-	14	-	2
Nasopharynx	C11	**36**	27	2	-	3	1	3
Thyroid gland	C73	**36**	22	2	3	7	-	2
Parathyroid gland	C75	**31**	16	2	3	8	-	2
Mature T/NK-cell lymphomas	C84	**31**	23	4	1	2	-	1
Parotid gland	C07	**30**	13	-	-	12	-	5
Hypopharynx	C13	**30**	14	5	1	7	-	3
Small intestine	C17	**29**	17	1	-	7	-	4
Tonsil	C09	**27**	11	6	-	7	-	3
Adrenal gland	C74	**26**	12	4	1	7	-	2
Heart, mediastinum and pleura	C38	**24**	12	2	-	6	-	4
Accessory sinuses	C31	**23**	17	1	-	5	-	-
Palate	C05	**22**	18	4	-	-	-	-
Follicular lymphoma	C82	**17**	2	2	1	11	-	1
Base of tongue	C01	**12**	2	4	-	6	-	-

Source: StatsSA. Mortality and causes of death, 2018

Appendix 5 Ctnt.: Cancers contributing to mortality by Sex and Population group: Male

Death occurrence year: 2018								
Sex: Male								
Cancer site		**Total**	**Black African**	**Coloured**	**Indian/Asian**	**White**	**Other**	**Unspecified**
ICD-10 code label	**ICD-10 code**	**21 208**	**11 077**	**2 959**	**606**	**4 660**	**44**	**1 862**
Other and unspecified major salivary glands	C08	**12**	7	3	-	2	-	-
Other and unspecified male genital organs	C63	**12**	11	1	-	-	-	-
Other and unspecified urinary organs	C68	**8**	4	2	-	1	-	1
Other and unspecified malignant neoplasm of lymphoid, haematopoietic and related tissue	C96	**8**	4	1	-	3	-	-
Lip	C00	**7**	2	2	-	3	-	-
Retro-peritoneum and peritoneum	C48	**7**	4	1	-	2	-	-
Meninges	C70	**7**	3	1	-	2	-	1
Monocytic leukaemia	C93	**7**	1	-	-	5	-	1
Gum	C03	**6**	5	1	-	-	-	-
Secondary malignant neoplasm of other and unspecified sites	C79	**6**	1	-	1	2	-	2
Immuno-proliferative diseases	C88	**6**	1	-	1	4	-	-
Nasal cavity and middle ear	C30	**5**	1	1	-	1	.	2
Trachea	C33	**5**	4	-	-	1	-	-
Peripheral nerves and autonomic nervous system	C47	**5**	2	1	1	1	-	-
Thymus	C37	**4**	2	1	-	-	-	1
Other and ill-defined sites in the respiratory system and intrathoracic organs	C39	**3**	2	1	-	-	-	-
Ureter	C66	**3**	-	-	-	3	-	-
Spinal cord, cranial nerves and other parts of central nervous system	C72	**3**	2	-	-	-	-	1
Secondary malignant neoplasm of respiratory and digestive organs	C78	**3**	2	-	-	-	-	1
Other specified types of T/NK-cell lymphoma	C86	**2**	1	-	-	-	-	1
Other leukaemias of specified cell type	C94	**2**	1	-	-	1	-	-
Bone and articular cartilage of limbs	C40	**1**	1	-	-	-	-	-
Renal pelvis	C65	**1**	-	-	-	1	-	-

Source: StatsSA. Mortality and causes of death, 2018

Appendix 6: Cancers contributing to mortality by Sex and Population group: Female

Death occurrence year: 2018								
Sex: Female								
Cancer site		**Total**	**Black African**	**Coloured**	**Indian/Asian**	**White**	**Other**	**Unspecified**
ICD-10 code label	**ICD-10 code**	**22 334**	**12 698**	**2 699**	**614**	**4 368**	**34**	**1 921**
Cervix uteri	C53	**3 994**	3 347	252	41	137	3	214
Breast	C50	**3 796**	1 907	529	139	888	6	327
Bronchus and Lung	C34		612	540	49	626	5	228
Malignant neoplasm, without specification of site	C80	**1 853**	1 013	206	61	343	1	229
Colorectal (C18, C19, C20)		**1 371**	534	190	66	452	5	124
Oesophagus	C15	**976**	781	71	8	49	2	65
Ovary	C56	**906**	457	75	29	266	1	78
Pancreas	C25	**830**	292	132	31	289	2	84
Liver and intrahepatic bile ducts	C22	**738**	493	73	20	95	1	56
Other and unspecified types of Non-Hodgkin lymphoma	C85	**479**	293	30	12	102	-	42
Stomach	C16	**477**	203	99	28	96	-	51
Corpus uteri	C54	**417**	296	38	17	38	-	28
Multiple myeloma	C90	**354**	197	31	11	82	-	33
Other and ill-defined sites	C76	**286**	219	24	3	21	-	19
Uterus, part unspecified	C55	**249**	160	26	11	26	-	26
Bladder	C67	**240**	110	22	4	74	1	29
Brain	C71	**239**	78	29	12	101	-	19
Myeloid leukaemia	C92	**236**	105	22	9	76	-	24
Vulva	C51	**229**	165	21	9	22	-	12
Leukaemia of unspecified cell type	C95	**215**	116	21	6	55	1	16
Kaposi sarcoma	C46	**212**	186	13	-	4	-	9
Melanoma of skin	C43	**186**	44	12	1	116	-	13
Other malignant neoplasms of skin	C44	**178**	112	11	-	37	-	18
Kidney, except renal pelvis	C64	**158**	45	23	3	63	-	24
Other connective tissue	C49	**136**	77	13	5	30	-	11
Other and ill-defined digestive organs	C26	**118**	69	18	1	17	-	13

Source: StatsSA. Mortality and causes of death, 2018

Appendix 6 Ctnt.: Cancers contributing to mortality by Sex and Population group: Female

Death occurrence year: 2018								
Sex: Female								
Cancer site		**Total**	**Black African**	**Coloured**	**Indian/Asian**	**White**	**Other**	**Unspecified**
ICD-10 code label	**ICD-10 code**	**22 334**	**12 698**	**2 699**	**614**	**4 368**	**34**	**1 921**
Gallbladder	C23	**102**	72	8	2	14	2	4
Lymphoid leukaemia	C91	**93**	52	7	4	26	-	4
Anus	C21	**91**	75	4	1	6	1	4
Thyroid gland	C73	**91**	57	9	2	16	-	7
Ill-defined sites in the lip, oral cavity and pharynx	C14	**89**	56	17	1	5	-	10
Non-follicular lymphoma	C83	**88**	50	6	1	20	-	11
Other and unspecified parts of mouth	C06	**80**	34	14	8	14	-	10
Larynx	C32	**73**	37	19	-	6	2	9
Mesothelioma of pleura	C45	**58**	14	5	1	33	-	5
Other and unspecified parts of biliary duct	C24	**57**	32	5	2	13	-	5
Other and unspecified parts of tongue	C02	**49**	15	17	2	9	-	6
Bone and articular cartilage of other and unspecified sites	C41	**46**	31	5	3	3	-	4
Hodgkin lymphoma	C81	**43**	31	2	1	7	-	2
Conjunctiva	C69	**37**	31	3	-	3	-	-
Parathyroid gland	C75	**34**	17	3	1	12	-	1
Vagina	C52	**29**	17	3	1	6	-	2
Oropharynx	C10	**26**	10	4	1	5	-	6
Placenta	C58	**23**	15	6	-	1	-	1
Small intestine	C17	**22**	9	4	-	7	-	2
Nasopharynx	C11	**21**	17	1	-	-	1	2
Adrenal gland	C74	**20**	11	2	2	3	-	2
Accessory sinuses	C31	**17**	10	1	-	5	-	1
Mature T/NK-cell lymphomas	C84	**16**	8	2	-	3	-	3
Retro-peritoneum and peritoneum	C48	**15**	7	1	-	5	-	2
Other and unspecified female genital organs	C57	**15**	11	1	-	2	-	1
Parotid gland	C07	**14**	6	2	-	4	-	2
Heart, mediastinum and pleura	C38	**14**	8	1	1	2	-	2
Floor of mouth	C04	**13**	3	4	-	4	-	2

Source: StatsSA. Mortality and causes of death, 2018

Appendix 6 Ctnt.: Cancers contributing to mortality by Sex and Population group: Female

Death occurrence year: 2018								
Sex: Female								
Cancer site		**Total**	**Black African**	**Coloured**	**Indian/Asian**	**White**	**Other**	**Unspecified**
ICD-10 code label	**ICD-10 code**	**22 334**	**12 698**	**2 699**	**614**	**4 368**	**34**	**1 921**
Other and unspecified major salivary glands	C08	**12**	6	2	-	2	-	2
Secondary malignant neoplasm of other and unspecified sites	C79	**10**	5	1	1	2	-	1
Follicular lymphoma	C82	**10**	3	1	-	5	-	1
Monocytic leukaemia	C93	**8**	3	-	1	3	-	1
Palate	C05	**7**	3	4	-	-	-	-
Secondary malignant neoplasm of respiratory and digestive organs	C78	**7**	4	-	-	3	-	-
Other and unspecified urinary organs	C68	**6**	2	1	-	1	-	2
Other and unspecified malignant neoplasm of lymphoid, haematopoietic and related tissue	C96	**6**	1	-	1	2	-	2
Gum	C03	**5**	3	1	-	-	-	1
Hypopharynx	C13	**5**	1	2	-	-	-	2
Meninges	C70	**5**	2	1	-	2	-	-
Lip	C00	**4**	2	2	-	-	-	-
Peripheral nerves and autonomic nervous system	C47	**4**	1	2	-	1	-	-
Base of tongue	C01	**3**	-	-	-	-	-	3
Trachea	C33	**3**	2	-	-	-	-	1
Ureter	C66	**3**	-	-	1	2	-	-
Immuno-proliferative diseases	C88	**3**	1	-	-	1	-	1
Other leukaemias of specified cell type	C94	**3**	2	1	-	-	-	-
Nasal cavity and middle ear	C30	**2**	1	1	-	-	-	-
Bone and articular cartilage of limbs	C40	**2**	2	-	-	-	-	-
Spinal cord, cranial nerves and other parts of central nervous system	C72	**2**	2	-	-	-	-	-
Thymus	C37	**1**	-	1	-	-	-	-
Renal pelvis	C65	**1**	-	-	-	1	-	-
Other specified types of T/NK-cell lymphoma	C86	**1**	-	1	-	-	-	-

Source: StatsSA. Mortality and causes of death, 2018

Appendix 7: Cancers contributing to mortality by Province, 2018

		Province of death occurrence										
Cancer site		**Total**	**Western Cape**	**Eastern Cape**	**Northern Cape**	**Free State**	**KwaZulu-Natal**	**North West**	**Gauteng**	**Mpumalanga**	**Limpopo**	**Unspecified**
ICD-10 code label	**ICD-10 code**	**43 613**	**8 587**	**5 577**	**1 382**	**2 316**	**7 123**	**2 282**	**10 165**	**2 109**	**2 685**	**1 387**
Bronchus and Lung	C34	**6 037**	2 052	781	239	218	732	261	1 181	162	228	183
Cervix uteri	C53	**3 998**	285	455	106	301	921	270	784	323	428	125
Breast	C50	**3 884**	815	446	113	219	535	251	950	153	280	122
Malignant neoplasm, without specification of site	C80	**3 626**	613	490	125	174	661	177	892	196	189	109
Prostate	C61	**3 537**	596	467	150	217	476	224	799	210	294	104
Colorectal (C18, C19, C20)	-	**2 816**	663	279								
Oesophagus	C15	**2 570**	355	667	57	137	459	169	386	113	139	88
Liver and intrahepatic bile ducts	C22	**1 841**	253	305	43	101	375	94	362	103	140	65
Pancreas	C25	**1 644**	404	192	53	100	192	81	427	74	80	41
Stomach	C16	**1 204**	371	141	28	51	176	41	271	39	41	45
Other and unspecified types of Non-Hodgkin lymphoma	C85	**1 119**	146	75	28	70	225	51	350	53	74	47
Ovary	C56	**906**	147	97	23	56	144	43	250	41	73	32
Bladder	C67	**726**	187	85	12	19	121	29	197	34	27	15
Multiple myeloma	C90	**654**	113	57	9	21	124	31	222	25	22	30
Other and ill-defined sites	C76	**540**	57	81	21	34	80	32	74	59	83	19
Brain	C71	**531**	126	48	18	30	75	22	159	16	26	11
Kaposi sarcoma	C46	**522**	33	74	14	24	130	47	105	45	35	15

Source: StatsSA. Mortality and causes of death, 2018

Appendix 7 Ctnt.: Cancers contributing to mortality by Province, 2018

		Province of death occurrence										
Cancer site		**Total**	**Western Cape**	**Eastern Cape**	**Northern Cape**	**Free State**	**KwaZulu-Natal**	**North West**	**Gauteng**	**Mpumalanga**	**Limpopo**	**Unspecified**
ICD-10 code label	**ICD-10 code**	**43 613**	**8 587**	**5 577**	**1 382**	**2 316**	**7 123**	**2 282**	**10 165**	**2 109**	**2 685**	**1 387**
Leukaemia of unspecified cell type	C95	**491**	81	43	12	23	101	26	134	32	24	15
Myeloid leukaemia	C92	**482**	89	51	3	20	60	7	197	13	27	15
Other malignant neoplasms of skin	C44	**470**	54	63	19	21	82	24	116	31	42	18
Melanoma of skin	C43	429	108	37	5	20	67	16	127	17	15	17
Larynx	C32	419	86	45	22	25	69	32	82	23	22	13
Corpus uteri	C54	418	54	55	9	27	84	21	109	16	29	14
Kidney, except renal pelvis	C64	411	106	40	16	17	62	21	99	16	21	13
Ill-defined sites in the lip, oral cavity and pharynx	C14	287	48	57	16	14	62	17	49	2	17	5
Other connective tissue	C49	254	37	25	6	14	37	13	82	12	17	11
Uterus, part unspecified	C55	250	38	35	10	22	59	15	48	7	8	8
Other and ill-defined digestive organs	C26	247	52	44	8	8	34	16	44	15	19	7
Lymphoid leukaemia	C91	230	40	23	3	14	33	6	80	13	14	4
Vulva	C51	229	27	19	7	20	68	12	45	12	11	8
Other and unspecified parts of mouth	C06	221	59	18	15	10	42	11	33	12	13	8
Non-follicular lymphoma	C83	207	46	22	1	15	17	7	70	14	7	8
Mesothelioma of pleura	C45	201	34	17	29	8	12	10	63	15	6	7

Source: StatsSA. Mortality and causes of death, 2018

Appendix 7 Ctnt.: Cancers contributing to mortality by Province, 2018

		Province of death occurrence										
Cancer site		**Total**	**Western Cape**	**Eastern Cape**	**Northern Cape**	**Free State**	**KwaZulu-Natal**	**North West**	**Gauteng**	**Mpumalanga**	**Limpopo**	**Unspecified**
ICD-10 code label	**ICD-10 code**	**43 613**	**8 587**	**5 577**	**1 382**	**2 316**	**7 123**	**2 282**	**10 165**	**2 109**	**2 685**	**1 387**
Other and unspecified parts of tongue	C02	**198**	60	30	13	19	20	12	22	7	6	9
Gallbladder	C23	**153**	25	19	5	6	27	8	47	4	1	11
Anus	C21	**150**	12	12	2	6	39	11	48	9	7	4
Hodgkin lymphoma	C81	**134**	19	5	4	6	22	9	50	9	2	8
Other and unspecified parts of biliary duct	C24	**132**	27	13	6	9	29	3	31	3	7	4
Thyroid gland	C73	**128**	15	14	3	8	23	4	39	10	6	6
Bone and articular cartilage of other and unspecified sites	C41	**118**	10	24	6	8	23	5	24	8	8	2
Oropharynx	C10	**103**	25	9	5	6	20	3	18	4	8	5
Conjunctiva	C69	**79**	5	7	2	7	12	5	16	10	10	5
Foreskin	C60	**72**	6	1	6	2	30	3	9	9	2	4
Parathyroid gland	C75	**65**	10	8	2	4	11	2	20	1	5	2
Palate	C05	**29**	9	1	3	1	3	3	4	2	2	1
Vagina	C52	**29**	6	1	1	3	6	.	6	1	4	1
Follicular lymphoma	C82	**27**	9	3	1	1	3	.	9	.	.	1
Other and unspecified major salivary glands	C08	**24**	9	2	3	1	4	2	3	.	.	-
Placenta	C58	**24**	4	3	1	1	1	2	8	1	3	.
Retro-peritoneum and peritoneum	C48	**22**	5	2	.	.	5	1	5	3	.	1

Source: StatsSA. Mortality and causes of death, 2018

Appendix 7 Ctnt.: Cancers contributing to mortality by Province, 2018

		Province of death occurrence										
Cancer site		**Total**	**Western Cape**	**Eastern Cape**	**Northern Cape**	**Free State**	**KwaZulu-Natal**	**North West**	**Gauteng**	**Mpumalanga**	**Limpopo**	**Unspecified**
ICD-10 code label	**ICD-10 code**	**43 613**	**8 587**	**5 577**	**1 382**	**2 316**	**7 123**	**2 282**	**10 165**	**2 109**	**2 685**	**1 387**
Secondary malignant neoplasm of other and unspecified sites	C79	**16**	3	3	.	1	.	2	4	1	.	2
Base of tongue	C01	**15**	7	.	.	1	.	.	6	.	.	1
Other and unspecified female genital organs	C57	**15**	3	.	1	2	4	1	4	.	.	.
Monocytic leukaemia	C93	**15**	5	.	.	.	1	.	8	.	.	1
Other and unspecified urinary organs	C68	**14**	4	4	1	2	.	.	3	.	.	.
Other and unspecified malignant neoplasm of lymphoid, haematopoietic and related tissue	C96	**14**	1	1	1	1	1	.	5	1	2	1
Other and unspecified male genital organs	C63	**12**	.	1	2	.	3	.	1	3	.	2
Meninges	C70	**12**	3	2	.	1	2	.	2	.	1	1
Lip	C00	**11**	2	2	.	1	1	.	3	1	1	.
Gum	C03	**11**	1	3	1	1	.	2	1	1	1	.
Secondary malignant neoplasm of respiratory and digestive organs	C78	**10**	1	1	.	.	.	2	4	.	1	1
Peripheral nerves and autonomic nervous system	C47	**9**	2	.	2	.	.	.	4	.	1	.
Immuno-proliferative diseases	C88	**9**	3	1	.	.	.	.	5	.	.	.

Source: StatsSA. Mortality and causes of death, 2018

Appendix 7 Ctnt.: Cancers contributing to mortality by Province, 2018

		Province of death occurrence										
Cancer site		**Total**	**Western Cape**	**Eastern Cape**	**Northern Cape**	**Free State**	**KwaZulu-Natal**	**North West**	**Gauteng**	**Mpumalanga**	**Limpopo**	**Unspecified**
ICD-10 code label	**ICD-10 code**	**43 613**	**8 587**	**5 577**	**1 382**	**2 316**	**7 123**	**2 282**	**10 165**	**2 109**	**2 685**	**1 387**
Trachea	C33	**8**	2	2	1	.	1	.	1	1	.	.
Nasal cavity and middle ear	C30	**7**	2	3	.	.	.	.	1	.	.	1
Ureter	C66	**6**	2	.	.	.	.	.	4	.	.	.
Thymus	C37	**5**	3	.	.	.	1	1	.	.	.	.
Spinal cord, cranial nerves and other parts of central nervous system	C72	**5**	.	1	.	1	.	.	2	.	1	.
Other leukaemias of specified cell type	C94	**5**	1	.	.	.	3	.	1	.	.	.
Other and ill-defined sites in the respiratory system and intrathoracic organs	C39	**3**	1	2	.	.	.	.	.	.	.	.
Bone and articular cartilage of limbs	C40	**3**	.	.	.	1	.	.	1	1	.	.
Other specified types of T/NK-cell lymphoma	C86	**3**	.	1	.	.	.	.	2	.	.	.
Renal pelvis	C65	**2**	.	.	.	.	1	1	.	.	.	.

Source: StatsSA. Mortality and causes of death, 2018

Appendix 8: Cancers contributing to mortality by Sex and Age group, Male: 2018

Death occurrence year: 2018											
Sex: Male											
Cancer site		**Grand Total**	**0–19**	**20–29**	**30–39**	**40–49**	**50–59**	**60–69**	**70–79**	**80 and above**	**Unspecified**
ICD-10 code label	**ICD-10 code**	**21 189**	**309**	**311**	**930**	**1 881**	**4 348**	**5 891**	**4 860**	**2 650**	**9**
Bronchus and Lung	C34	**3 964**	1	15	77	298	1060	1341	863	308	1
Prostate	C61	**3 534**	2	3	4	34	268	897	1326	998	2
Malignant neoplasm, without specification of site	C80	**1 767**	35	40	99	175	395	452	379	191	1
Oesophagus	C15	**1 587**	1	-	22	129	397	569	339	129	1
Colorectal (C18, C19, C20)	-	**1 443**	-	16	59	134	327	402	330	175	-
Liver and intrahepatic bile ducts	C22	**1 100**	9	28	111	174	227	271	206	72	2
Pancreas	C25	**812**	-	1	20	69	186	261	185	89	1
Stomach	C16	**724**	-	6	26	67	188	195	170	72	-
Other and unspecified types of Non-Hodgkin lymphoma	C85	**636**	33	37	97	150	107	79	83	50	-
Bladder	C67	**486**	-	1	5	27	86	124	139	103	1
Larynx	C32	**346**	1	1	3	24	104	131	64	18	-
Kaposi sarcoma	C46	**307**	1	36	122	89	34	18	4	3	-
Multiple myeloma	C90	**300**	1	1	15	21	68	113	48	33	-
Other malignant neoplasms of skin	C44	**290**	6	2	20	35	50	76	49	52	-
Brain	C71	**290**	28	11	21	39	65	69	38	19	-
Leukaemia of unspecified cell type	C95	**276**	36	18	28	29	27	45	52	41	-

Source: StatsSA. Mortality and causes of death, 2018

Appendix 8 Ctnt: Cancers contributing to mortality by Sex and Age group: Male

Death occurrence year: 2018											
Sex: Male											
Cancer site		**Grand Total**	**0–19**	**20–29**	**30–39**	**40–49**	**50–59**	**60–69**	**70–79**	**80 and above**	**Unspecified**
ICD-10 code label	**ICD-10 code**	**21 189**	**309**	**311**	**930**	**1 881**	**4 348**	**5 891**	**4 860**	**2 650**	**9**
Other and ill-defined sites	C76	**254**	2	3	9	33	62	74	48	23	-
Kidney, except renal pelvis	C64	**253**	10	1	7	15	72	69	47	32	-
Myeloid leukaemia	C92	**245**	31	13	29	30	38	46	42	16	-
Melanoma of skin	C43	**243**	1	3	10	31	49	53	49	47	-
Ill-defined sites in the lip, oral cavity and pharynx	C14	**198**	2	2	6	12	69	59	34	14	-
Other and unspecified parts of tongue	C02	**148**	1	-	3	8	53	53	22	8	-
Mesothelioma of pleura	C45	**143**	-	1	2	2	29	31	55	23	-
Other and unspecified parts of mouth	C06	**140**	-	1	4	15	41	65	8	6	-
Lymphoid leukaemia	C91	**136**	34	10	6	4	11	26	24	21	-
Other and ill-defined digestive organs	C26	**129**	-	3	4	11	29	44	25	13	-
Small cell B-cell lymphoma Immunocytoma	C83	**119**	6	6	20	19	25	18	20	5	-
Other connective tissue	C49	**118**	21	5	16	17	17	17	21	4	-
Hodgkin lymphoma	C81	**90**	11	15	14	18	18	9	4	1	-
Breast	C50	**86**	1	-	4	13	10	27	21	10	-
Oropharynx	C10	**77**	-	1	3	8	26	22	14	3	-

Source: StatsSA. Mortality and causes of death, 2018

Appendix 8 Ctnt.: Cancers contributing to mortality by Sex and Age group: Male

Death occurrence year: 2018											
Sex: Male											
Cancer site		**Grand Total**	**0–19**	**20–29**	**30–39**	**40–49**	**50–59**	**60–69**	**70–79**	**80 and above**	**Unspecified**
ICD-10 code label	**ICD-10 code**	**21 189**	**309**	**311**	**930**	**1 881**	**4 348**	**5 891**	**4 860**	**2 650**	**9**
Other and unspecified parts of biliary duct	C24	**72**	-	1	1	10	15	24	14	7	-
Bone and articular cartilage of other and unspecified sites	C41	**72**	5	1	6	11	14	21	11	3	-
Foreskin	C60	**72**	-	2	7	23	18	8	10	4	-
Testes	C62	**63**	1	12	6	12	9	12	8	3	-
Anus	C21	**59**	-	2	9	16	18	11	2	1	-
Gallbladder	C23	**51**	-	-	2	5	12	12	13	7	-
Conjunctiva	C69	**42**	4	1	11	10	11	3	2	-	-
Floor of mouth	C04	**39**	-	-	-	-	14	15	10	-	-
Nasopharynx	C11	**36**	2	5	5	9	10	4	1	-	-
Thyroid gland	C73	**36**	-	-	1	4	5	10	8	8	-
Parathyroid gland	C75	**31**	3	-	1	2	8	9	4	4	-
Mature T/NK-cell lymphomas	C84	**31**	2	1	6	7	6	7	2	-	-
Parotid gland	C07	**30**	-	-	-	4	5	8	9	4	-
Hypopharynx	C13	**30**	-	-	-	1	11	12	5	1	-
Small intestine	C17	**29**	-	1	-	4	13	7	4	-	-
Tonsil	C09	**27**	1	-	-	3	5	10	6	2	-

Source: StatsSA. Mortality and causes of death, 2018

Appendix 8 Ctnt.: Cancers contributing to mortality by Sex and Age group: Male

Death occurrence year: 2018											
Sex: Male											
Cancer site		**Grand Total**	**0–19**	**20–29**	**30–39**	**40–49**	**50–59**	**60–69**	**70–79**	**80 and above**	**Unspecified**
ICD-10 code label	**ICD-10 code**	**21 189**	**309**	**311**	**930**	**1 881**	**4 348**	**5 891**	**4 860**	**2 650**	**9**
Adrenal gland	C74	**26**	14	-	-	3	3	3	2	1	-
Heart, mediastinum and pleura	C38	**24**	2	-	1	3	3	7	5	3	-
Accessory sinuses	C31	**23**	-	1	2	2	9	3	3	3	-
Palate	C05	**22**	-	-	-	4	4	11	3	-	-
Follicular lymphoma	C82	**17**	-	-	1	2	2	3	4	5	-
Base of tongue	C01	**12**	-	-	-	1	3	6	2	-	-
Other and unspecified major salivary glands	C08	**12**	-	-	-	1	1	5	5	-	-
Other and unspecified male genital organs	C63	**12**	-	-	1	4	1	-	4	2	-
Other and unspecified urinary organs	C68	**8**	-	-	-	2	1	3	-	2	-
Other and unspecified malignant neoplasm of lymphoid, haematopoietic and related tissue	C96	**8**	-	-	-	1	1	3	-	3	-
Lip	C00	**7**	-	1	-	-	2	1	2	1	-
Retro-peritoneum and peritoneum	C48	**7**	-	1	1	1	1	3	-	-	-
Meninges	C70	**7**	-	-	1	-	1	2	2	1	-
Monocytic leukaemia	C93	**7**	-	-	-	1	-	-	4	2	-
Gum	C03	**6**	-	-	-	2	-	4	-	-	-

Source: StatsSA. Mortality and causes of death, 2018

Appendix 8 Ctnt.: Cancers contributing to mortality by Sex and Age group: Male

Death occurrence year: 2018											
Sex: Male											
Cancer site		**Grand Total**	**0–19**	**20–29**	**30–39**	**40–49**	**50–59**	**60–69**	**70–79**	**80 and above**	**Unspecified**
ICD-10 code label	**ICD-10 code**	**21 189**	**309**	**311**	**930**	**1 881**	**4 348**	**5 891**	**4 860**	**2 650**	**9**
Secondary malignant neoplasm of other and unspecified sites	C79	**6**	1	1	1	-	-	-	3	-	-
Immuno-proliferative diseases	C88	**6**	-	-	-	-	1	1	2	2	-
Nasal cavity and middle ear	C30	**5**	-	-	-	-	1	3	1	-	-
Trachea	C33	**5**	-	-	-	1	2	-	1	1	-
Peripheral nerves and autonomic nervous system	C47	**5**	-	1	1	1	-	1	1	-	-
Thymus	C37	**4**	-	-	-	1	1	2	-	-	-
Other and ill-defined sites in the respiratory system and intrathoracic organs	C39	**3**	-	-	-	-	-	3	-	-	-
Ureter	C66	**3**	-	-	-	-	-	-	1	2	-
Spinal cord, cranial nerves and other parts of central nervous system	C72	**3**	-	1	-	-	2	-	-	-	-
Secondary malignant neoplasm of respiratory and digestive organs	C78	**3**	-	-	-	-	1	2	-	-	-
Other specified types of T/NK-cell lymphoma	C86	**2**	-	-	-	1	-	1	-	-	-
Other leukaemias of specified cell type	C94	**2**	-	-	-	-	1	-	1	-	-
Bone and articular cartilage of limbs	C40	**1**	-	-	-	-	-	1	-	-	-
Renal pelvis	C65	**1**	-	-	-	-	-	1	-	-	-

Source: StatsSA. Mortality and causes of death, 2018

Appendix 9: Cancers contributing to mortality by Sex and Age group: Female

Death occurrence year: 2018											
Sex: Female											
Cancer site		**Grand Total**	**0–19**	**20–29**	**30–39**	**40–49**	**50–59**	**60–69**	**70–79**	**80 and above**	**Unspecified**
ICD-10 code label	**ICD-10 code**	**22 334**	**253**	**454**	**1 798**	**3 061**	**4 419**	**5 086**	**4 360**	**2 899**	**4**
Cervix uteri	C53	**3 994**	5	59	562	925	969	747	474	253	-
Breast	C50	**3 796**	6	42	338	704	805	792	635	473	1
Bronchus and Lung	C34	**2 060**	6	11	42	123	383	618	572	303	2
Malignant neoplasm, without specification of site	C80	**1 853**	38	44	106	175	313	442	436	299	-
Colorectal (C18, C19, C20)	-	**1 371**	2	17	65	126	263	309	342	247	-
Oesophagus	C15	**976**	-	5	21	66	195	252	250	187	-
Ovary	C56	**906**	4	17	54	98	187	251	184	111	-
Pancreas	C25	**830**	2	1	11	42	144	230	228	171	1
Liver and intrahepatic bile ducts	C22	**738**	5	22	49	97	142	178	166	79	-
Other and unspecified types of Non-Hodgkin lymphoma	C85	**479**	15	29	91	102	69	67	66	40	-
Stomach	C16	**477**	-	9	23	45	79	116	118	87	-
Corpus uteri	C54	**417**	1	-	6	18	61	153	124	54	-
Multiple myeloma	C90	**354**	-	2	5	30	84	112	78	43	-
Other and ill-defined sites	C76	**286**	2	4	14	31	54	81	54	46	-
Uterus, part unspecified	C55	**249**	1	2	15	28	44	73	60	26	-
Bladder	C67	**240**	-	4	14	17	43	56	45	61	-

Source: StatsSA. Mortality and causes of death, 2018

Appendix 9 Ctnt.: Cancers contributing to mortality by Sex and Age group: Female

Death occurrence year: 2018											
Sex: Female											
Cancer site		**Grand Total**	**0–19**	**20–29**	**30–39**	**40–49**	**50–59**	**60–69**	**70–79**	**80 and above**	**Unspecified**
ICD-10 code label	**ICD-10 code**	**22 334**	**253**	**454**	**1 798**	**3 061**	**4 419**	**5 086**	**4 360**	**2 899**	**4**
Brain	C71	**239**	23	11	12	25	45	49	46	28	-
Myeloid leukaemia	C92	**236**	28	18	27	21	38	38	36	30	-
Vulva	C51	**229**	1	13	53	64	30	29	20	19	-
Leukaemia of unspecified cell type	C95	**215**	21	18	20	16	36	28	31	45	-
Kaposi sarcoma	C46	**212**	3	45	77	50	24	9	-	4	-
Melanoma of skin	C43	**186**	-	4	13	21	31	42	38	37	-
Other malignant neoplasms of skin	C44	**178**	2	9	32	29	26	21	19	40	-
Kidney, except renal pelvis	C64	**158**	9	3	8	13	33	30	37	25	-
Other connective tissue	C49	**136**	17	7	15	20	25	27	15	10	-
Other and ill-defined digestive organs	C26	**118**	-	1	6	13	16	31	37	14	-
Gallbladder	C23	**102**	-	-	2	6	30	28	23	13	-
Lymphoid leukaemia	C91	**93**	15	7	13	4	10	14	12	18	-
Anus	C21	**91**	-	4	26	22	13	13	9	4	-
Thyroid gland	C73	**91**	-	2	-	8	19	18	27	17	-
Ill-defined sites in the lip, oral cavity and pharynx	C14	**89**	-	3	3	9	24	24	19	7	-
Small cell B-cell lymphoma Immunocytoma	C83	**88**	4	7	20	20	12	10	10	5	-

Source: StatsSA. Mortality and causes of death, 2018

Appendix 9 Ctnt.: Cancers contributing to mortality by Sex and Age group: Female

Death occurrence year: 2018											
Sex: Female											
Cancer site		**Grand Total**	**0–19**	**20–29**	**30–39**	**40–49**	**50–59**	**60–69**	**70–79**	**80 and above**	**Unspecified**
ICD-10 code label	**ICD-10 code**	**22 334**	**253**	**454**	**1 798**	**3 061**	**4 419**	**5 086**	**4 360**	**2 899**	**4**
Other and unspecified parts of mouth	C06	**80**	2	1	2	5	20	18	18	14	-
Larynx	C32	**73**	-	-	2	7	13	28	17	6	-
Mesothelioma of pleura	C45	**58**	-	-	1	1	12	21	15	8	-
Other and unspecified parts of biliary duct	C24	**57**	-	-	1	5	9	14	16	12	-
Other and unspecified parts of tongue	C02	**49**	-	-	2	7	14	17	5	4	-
Bone and articular cartilage of other and unspecified sites	C41	**46**	3	2	5	5	10	11	5	5	-
Hodgkin lymphoma	C81	**43**	4	7	9	10	5	3	4	1	-
Conjunctiva	C69	**37**	11	1	4	4	7	2	4	4	-
Parathyroid gland	C75	**34**	3	3	3	5	3	9	4	4	-
Vagina	C52	**29**	-	-	2	2	7	7	7	4	-
Oropharynx	C10	**26**	-	-	1	5	9	5	4	2	-
Placenta	C58	**23**	1	10	5	2	2	-	2	1	-
Small intestine	C17	**22**	-	-	-	3	6	5	5	3	-
Nasopharynx	C11	**21**	-	2	1	3	7	6	1	1	-
Adrenal gland	C74	**20**	12	1	2	-	4	-	-	1	-
Accessory sinuses	C31	**17**	-	1	-	2	6	2	3	3	-
Mature T/NK-cell lymphomas	C84	**16**	2	2	1	3	3	2	2	1	-

Source: StatsSA. Mortality and causes of death, 2018

Appendix 9 Ctnt.: Cancers contributing to mortality by Sex and Age group: Female

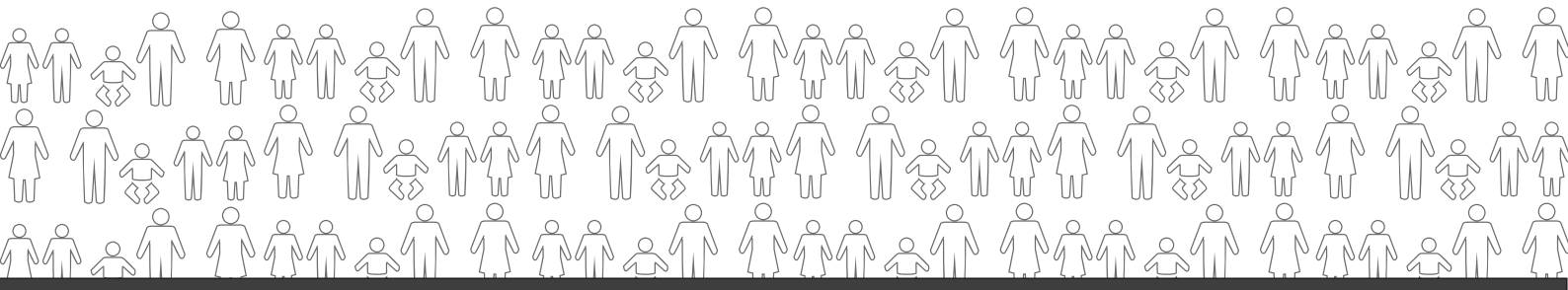
Death occurrence year: 2018											
Sex: Female											
Cancer site		**Grand Total**	**0–19**	**20–29**	**30–39**	**40–49**	**50–59**	**60–69**	**70–79**	**80 and above**	**Unspecified**
ICD-10 code label	**ICD-10 code**	**22 334**	**253**	**454**	**1 798**	**3 061**	**4 419**	**5 086**	**4 360**	**2 899**	**4**
Retro-peritoneum and peritoneum	C48	**15**	-	-	2	3	4	3	1	2	-
Other and unspecified female genital organs	C57	**15**	-	-	1	3	4	2	4	1	-
Parotid gland	C07	**14**	-	1	-	4	3	3	1	2	-
Heart, mediastinum and pleura	C38	**14**	1	-	-	-	2	4	7	-	-
Floor of mouth	C04	**13**	-	-	-	1	1	7	1	3	-
Other and unspecified major salivary glands	C08	**12**	-	-	-	1	5	3	3	-	-
Tonsil	C09	**12**	-	1	1	2	4	4	-	-	-
Secondary malignant neoplasm of other and unspecified sites	C79	**10**	-	-	1	1	1	4	2	1	-
Follicular lymphoma	C82	**10**	-	-	-	-	-	4	3	3	-
Monocytic leukaemia	C93	**8**	1	-	-	1	1	3	1	1	-
Palate	C05	**7**	-	-	-	1	2	2	-	2	-
Secondary malignant neoplasm of respiratory and digestive organs	C78	**7**	-	-	-	1	-	2	2	2	-
Other and unspecified urinary organs	C68	**6**	-	1	1	1	1	1	1	-	-
Other and unspecified malignant neoplasm of lymphoid, haematopoietic and related tissue	C96	**6**	-	-	-	1	-	-	4	1	-
Gum	C03	**5**	1	-	1	1	-	-	1	1	-
Hypopharynx	C13	**5**	-	-	3	1	-	1	-	-	-
Meninges	C70	**5**	-	-	1	-	-	2	1	1	-

Source: StatsSA. Mortality and causes of death, 2018

Appendix 9 Ctnt.: Cancers contributing to mortality by Sex and Age group: Female

Death occurrence year: 2018											
Sex: Female											
Cancer site		**Grand Total**	**0–19**	**20–29**	**30–39**	**40–49**	**50–59**	**60–69**	**70–79**	**80 and above**	**Unspecified**
ICD-10 code label	**ICD-10 code**	**22 334**	**253**	**454**	**1 798**	**3 061**	**4 419**	**5 086**	**4 360**	**2 899**	**4**
Lip	C00	**4**	-	-	1	1	-	-	1	1	-
Peripheral nerves and autonomic nervous system	C47	**4**	-	1	-	-	2	-	1	-	-
Base of tongue	C01	**3**	-	-	1	-	-	1	1	-	-
Trachea	C33	**3**	-	-	-	-	1	1	1	-	-
Ureter	C66	**3**	-	-	-	-	-	-	-	3	-
Immuno-proliferative diseases	C88	**3**	-	-	-	-	-	-	1	2	-
Other leukaemias of specified cell type	C94	**3**	1	-	-	-	-	-	-	2	-
Nasal cavity and middle ear	C30	**2**	-	-	-	-	1	1	-	-	-
Bone and articular cartilage of limbs	C40	**2**	1	-	-	-	1	-	-	-	-
Spinal cord, cranial nerves and other parts of central nervous system	C72	**2**	-	-	1	1	-	-	-	-	-
Thymus	C37	**1**	-	-	-	-	1	-	-	-	-
Renal pelvis	C65	**1**	-	-	-	-	-	-	-	1	-
Other specified types of T/NK-cell lymphoma	C86	**1**	-	-	-	-	1	-	-	-	-

Source: StatsSA, Mortality and causes of death, 2018



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