Ministry of Health
Sultanate of Oman

# 20 YEARS CANCER INCIDENCE IN OMAN REPORT 1996-2015

السجل العماني للسرطان
Oman Cancer Registry

دائرة الأمراض غير المعدية
Department of Non-Communicable Diseases

Department of Non-Communicable Diseases
Directorate General of Primary Health Care

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This report is printed for the first time. Comments and suggestions concerning its contents are encouraged and could be sent to

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# ACKNOWLEDGMENTS

The Oman National Cancer Registry would like to acknowledge and appreciate all those who were involved in contributing to this report. The Report idea and conceptualization was by Dr. Bassim Al-Bahrani, senior consultant oncologist, from the National Oncology Center, whom we thank and are grateful for his guidance and support.

The Report was prepared by and formatted by Dr. Najla A. Al-Lawati, Head of Non-communicable Diseases Surveillance (NCD) Section, and contribution from the Registry staff namely Mr. Nabil Al-Siyabi, Mr. Dhahi Al- Gharbi and Mr. Salim Al Wehaibi.

We greatly appreciate the contribution of the Report reviewers, mainly by Dr. Shadha Al-Raisi, Director of NCD and Dr. Jawad Al-Lawati, Senior Consultant at Ministry of Health.

# FORWORD

The Oman National Cancer Registry was established as a hospital-based registry in 1985. In 1996, the registry began functioning as a population-based registry and since then, cancer incidence reports have been published annually. The latest report, the 2015 cancer incidence report was published in October 2018.

The registry continues to play an important role for policy makers in setting priorities for the prevention and control of cancer in Oman and it does so by providing a database that monitors cancer patterns in the country as well as evaluating trends in incidence of all types of cancer overtime.

The “20 Year of Cancer Incidence in Oman 1996-2015.” marks the 20th anniversary since the first cancer incidence report was published in Oman in 1996 and it is yet another product of the hard work and dedication by the cancer registry team in the department of Non-communicable disease under the Directorate General of Primary Health Care. It presents the overall incidence of cancer in Oman over a 20-year period and describes the most common types of cancer diagnosed between 1996 and 2015. Coinciding with this report, the Oman Medical Journal also published an editorial and a supplement which mirrors similar data succinctly.

Dr. Said Al-Lamki  MD, MPH, MTQM, FFPH
Director General of Primary Healthcare

# PREFACE

Cancer is a significant public health problem in both developed and developing countries. The global burden of cancer is estimated in 2018 to be 18.1 million new cancer cases. It is the second leading cause of death globally and was responsible for an estimated 1 in 6 deaths (9.6 million deaths in 2018) is due to cancer.

The Department of Non-Communicable Diseases is delighted to introduce this comprehensive report of cancer incidence in Oman over twenty years of data. It is the first report on trends of cancer in Oman its release coincides with the 20th anniversary since the release of the first incidence report in Oman.

This report presents cancer trends over 20 years and the five most common cancer among Omanis during that period as well as in two different periods of ten years. Over 20 years breast cancer was the leading cancer among Omanis followed by Non-Hodgkin lymphoma (NHL), leukemia, colorectal and thyroid cancers. Also, tables were added to demonstrate the distribution of cancer cases by gender for each governorate in Oman and the five most common cancer among them.

We hope that the information delivered in this report will help to provide insights and serve as a reference to all those working in reducing the burden of cancer in oman. Above all, we hope it will serve as a guide for researchers and academics interested in conducting more epidemiological studies on cancer. I should not miss the opportunity to express my gratitude to all colleagues working in all Ministry of Health facilities and other governmental institutions who have contributed to this report during the past years. We fully appreciate their contributions and without their cooperation the publication of this report would have not been possible .

Dr. Bassim Al Bahrani, MD, FRACP, FRCP(Glasg),PhD
Deputy Chairperson, National Cancer Control Committee
Sr. Consultant Oncologist, National Oncology Center

# MINISTERIAL DECISION NO. 222/ 2017 ON REGISTRATION OF CANCER CASES

Based on the Royal Decree No. 36/ 2014 on determining the terms of reference of the Ministry of Health and the approval of its organizational structure, and The Ministerial Decision No. 4/ 2001 on Notification of Cancer Cases, and for the public interest, the following have been decided:

**Article (1):** The following neoplasms are considered cancerous diseases or carcinoma in-situ numbered as per the 10th revision of the International Statistical Classification of Diseases & Related Health Problems (ICD-10):

- Malignant Neoplasms (C00-C79)
- In Situ Neoplasms (D00-D09)
- Neoplasms of Uncertain or Unknown Behaviour (D37- D48)

**Article (2):** If a person is clinically or surgically or laboratory diagnosed with cancer or suspected of having cancer or carcinoma in-situ, it should be reported to the Oman National Cancer Registry at the Non-communicable Diseases Department in the Directorate General of Primary Health Care on the attached form within (30) days from the date of diagnosis.

**Article (3):** Reporting of cancer cases mentioned in the aforesaid Article shall be the responsibility of the following:-

a. The doctor who has examined the patient
b. The technician of the laboratory where the sample was confirmed positive
c. The Director or Head of the government health institution (Civil or Military) or private health institutions, in which the case was diagnosed.

**Article (4):** Recording of persons with cancer or suspected cases in the Oman National Cancer Registry shall be according to the disease classification and shall include their trinomial name, tribe name, surname, age, sex, nationality and addresses.

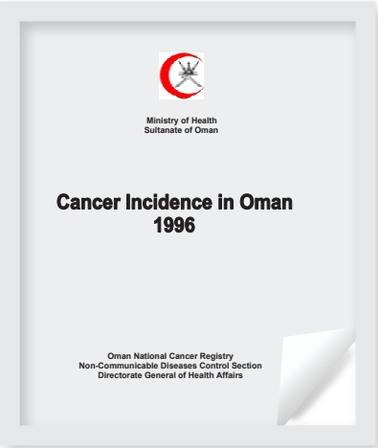
**Article (5):** The Oman National Cancer Registry records are confidential, no persons other than the Registry workers are allowed to view or disclose them except on the grounds of the public interest.

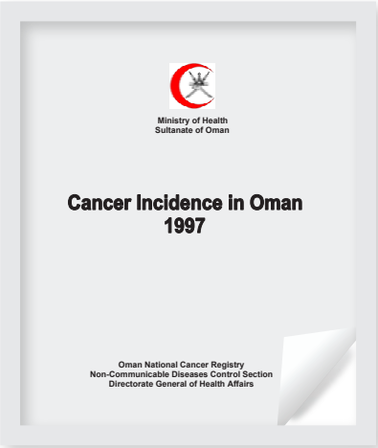
**Article (6):** The Ministerial Decision No. 4/2001 shall be cancelled and all that contravenes with this Decision or contradicts with its provision shall be cancelled.

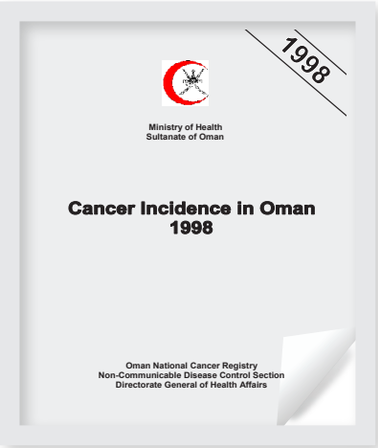
**Article (7):** This Decision shall come into effect from the date of its issue, and shall be implemented by the competent each in his respective field of specialization.
Issued on: 21/03/1439H
Corresponding to: 10/12/2017

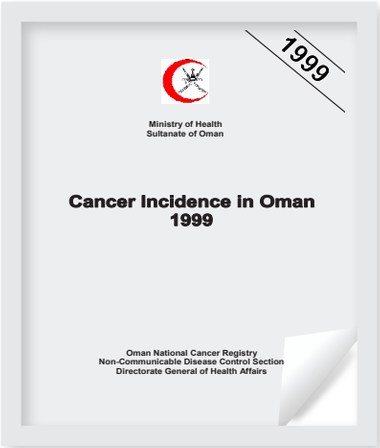
Dr. Ahmed bin Mohammed bin Obaid Al Saidi
Minister of Health

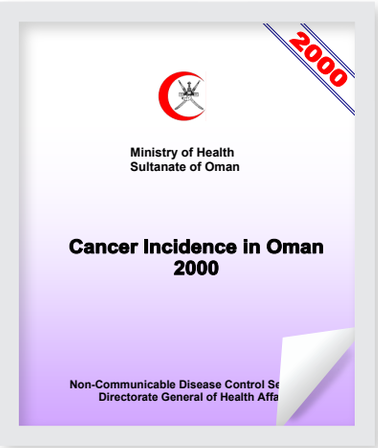
# PUBLICATION 1996 - 2005

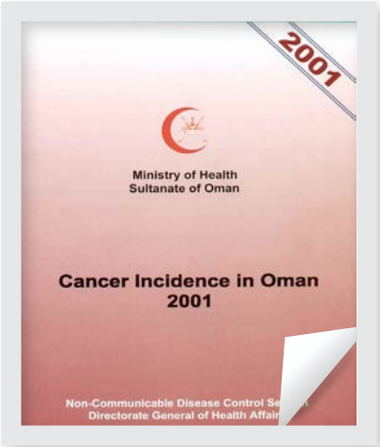


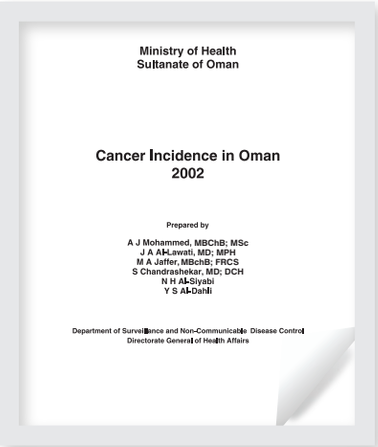



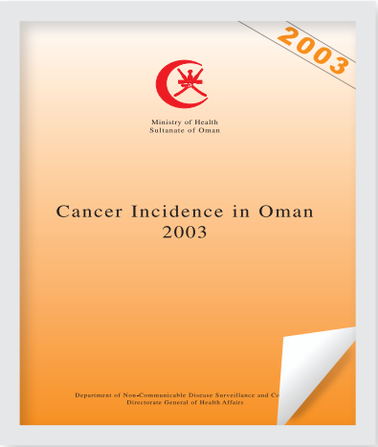



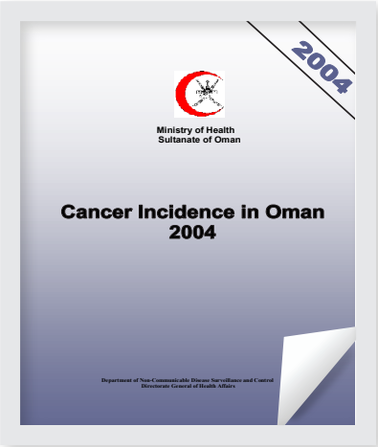



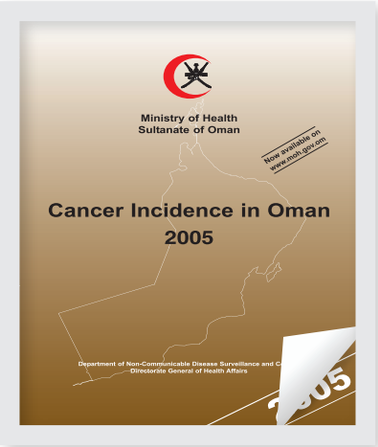



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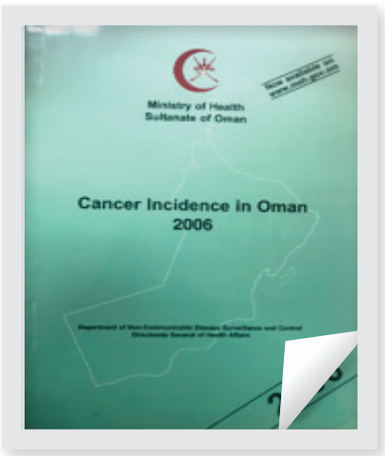
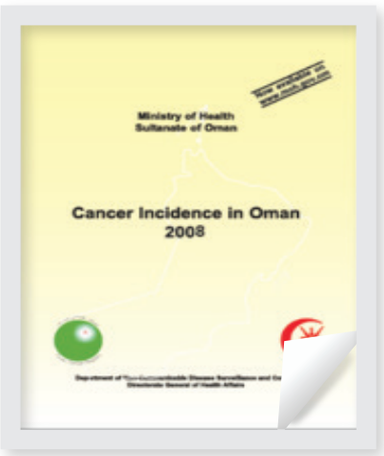
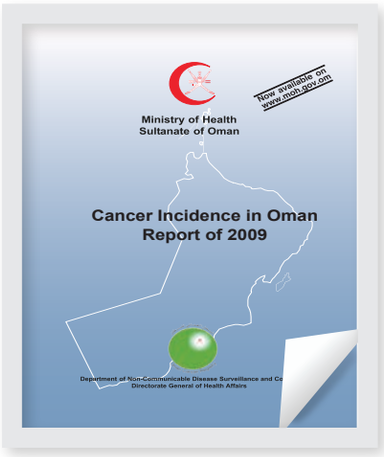
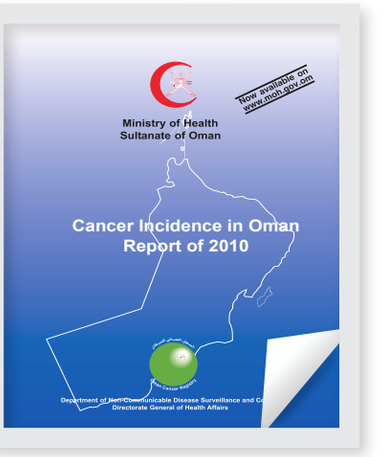
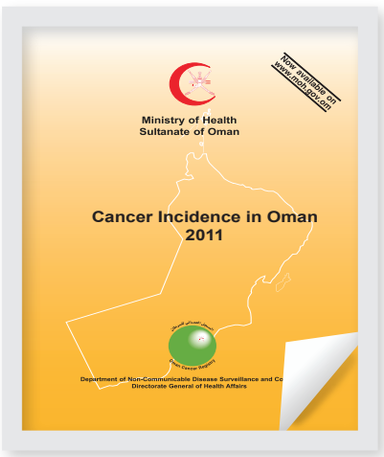


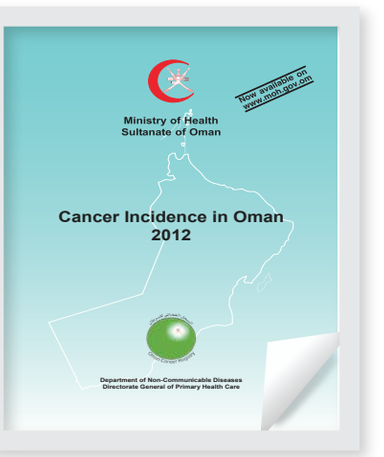


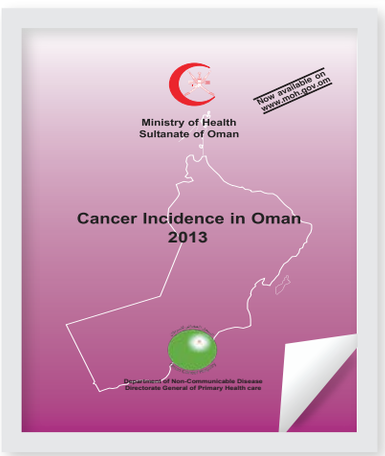


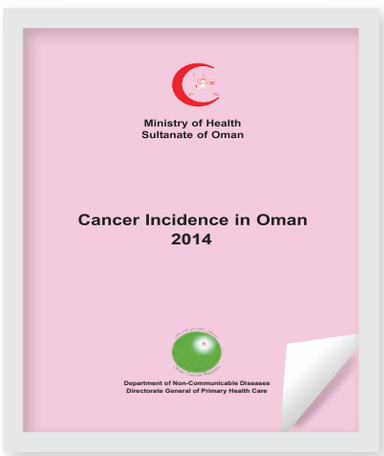



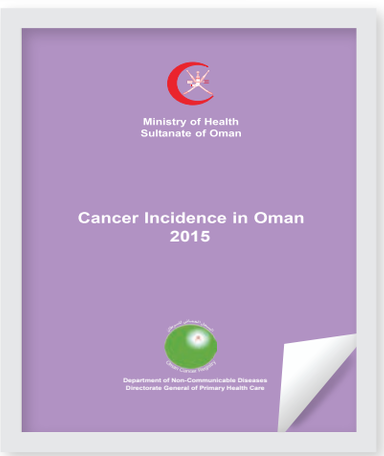



# CONTENTS

# BACKGROUND

## Geographical Features

The Sultanate of Oman is located in the southeastern corner of the Arabian Peninsula. It has a coastal line extending almost 1,700 kilometers from the Strait of Hormuz in the north to the borders of the Republic of Yemen, overlooking three seas; the Arabian Gulf, The Sea of Oman and the Arabian Sea. The country borders Saudi Arabia and United Arab Emirates (UAE) in the West, the Republic of Yemen in the South, the Strait of Hormuz in the North and the Arabian Sea in the East. There are a number of scattered Omani islands in the Arabian Sea; the most important are Masirah and Al-Halaniyat.

The total area of the Sultanate of Oman is approximately 309,500 square kilometers and it is the second largest country in the Arabian Peninsula. The Sultanate is composed of varying topographic areas consisting of plains, wadis (dry river beds) and mountains. The most important area is the plain overlooking the Sea of Oman and the Arabian Sea with an area of about 3% of the total area. The mountain ranges occupy almost 15% of the total land of Oman and are inhabited by about 5% of the population. The remaining area is mainly sand, wadis and desert (about 82% of the total area). The climate differs from one area to another; it is hot and humid in the coastal areas in summer, hot and dry in the interior with the exception of higher mountains and Dhofar Governorate, which enjoy a moderate climate throughout the year.

The Sultanate of Oman is administratively divided into 11 Governorates with 62 Wilayats. These are: Muscat, Dhofar, Musandam Ad Dakhliyah, Al Buraymi, Ash Sharqiyah, Al Batinah, Adh Dhahirah, and Al Wusta. The Governorates of Ash Sharqiyah and Batinah have each been further subdivided into two, giving a total of eleven governorates (Figure 1).

## Population Structure

The estimated mid-year population in1996 was 2,135,853 of which 1,593,769 were Omanis and 542,084 were Non-Omanis (Table 1). The Omani population shows a sex ratio of 963 females per 1000 males. About 16% of the population was under-5 years and 45% is under-15 years. Only 3.0% of the total Omani population were above the age of 65 years (Figure 2).

In contrast, the estimated mid-year population in 2015 was 4,159,102 of which 2,344,946 were Omanis and 1,814,156 were Non-Omanis (Table 2). The Omani population showed a sex ratio of 979 females per 1000 males. About 14.8% of the population were under-5 years and 35.7% were under-15 years. Only 4.3% of the total Omani population were above the age of 65 years (Figure 3).

Figure 1: Diagrammatic Presentation of the Sulthanate of Oman

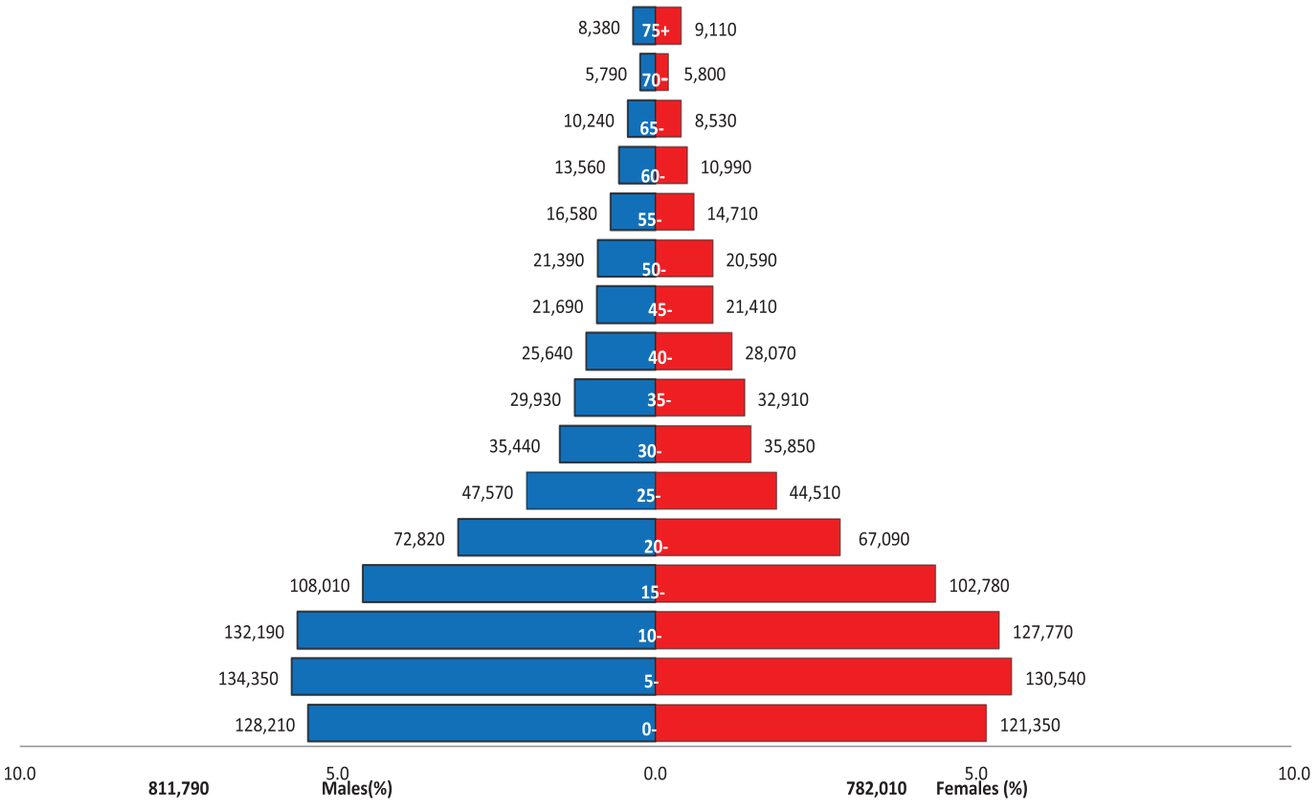
Table 1 : Age structure of the Omani Population, 1996

| Age | Male | | Female | | Total | |
|---|---|---|---|---|---|---|
| Group | Number | % | Number | % | Number | % |
| 0 - 4 | 128,210 | 15.8 | 121,350 | 15.5 | 249,560 | 15.7 |
| 5 - 9 | 134,350 | 16.5 | 130,540 | 16.7 | 264,890 | 16.6 |
| 10 - 14 | 132,190 | 16.2 | 127,770 | 16.3 | 259,960 | 16.3 |
| 15 - 19 | 108,010 | 13.3 | 102,780 | 13.1 | 210,790 | 13.2 |
| 20 – 24 | 72,820 | 9 | 67,090 | 8.6 | 139,910 | 8.8 |
| 25 – 29 | 47,570 | 5.9 | 44,510 | 5.7 | 92,080 | 5.8 |
| 30 – 34 | 35,440 | 4.4 | 35,850 | 4.6 | 71,290 | 4.5 |
| 35 – 39 | 29,930 | 3.7 | 32,910 | 4.2 | 62,840 | 3.9 |
| 40 – 44 | 25,640 | 3.2 | 28,070 | 3.6 | 53,710 | 3.4 |
| 45 – 49 | 21,690 | 2.7 | 21,410 | 2.7 | 43,100 | 2.7 |
| 50 – 54 | 21,390 | 2.6 | 20,590 | 2.6 | 41,980 | 2.6 |
| 55 – 59 | 16,580 | 2.0 | 14,710 | 1.9 | 31,290 | 2.0 |
| 60 – 64 | 13,560 | 1.7 | 10,990 | 1.4 | 24,550 | 1.5 |
| 65 – 69 | 10,240 | 1.3 | 8,530 | 1.1 | 18,770 | 1.2 |
| 70 – 74 | 5,790 | 0.7 | 5,800 | 0.7 | 11,590 | 0.7 |
| 75 + | 8,380 | 1.0 | 9,110 | 1.2 | 17,490 | 1.1 |
| Total | 811,790 | 100.00 | 782,010 | 100.00 | 1,593,800 | 100.00 |

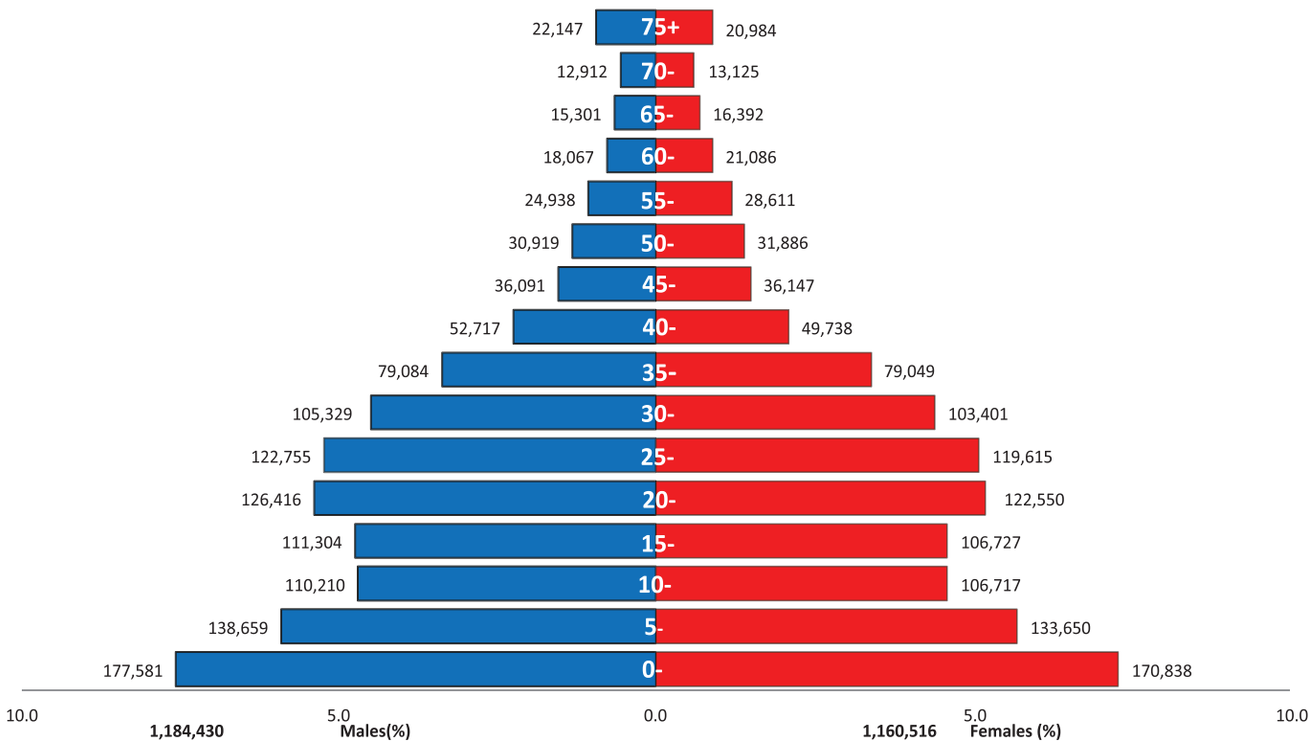
Table 2 : Age structure of the Omani Population, 2015

| Age | Male | | Female | | Total | |
|---|---|---|---|---|---|---|
| Group | Number | % | Number | % | Number | % |
| 0 - 4 | 177,581 | 15.0 | 170,838 | 14.7 | 348,419 | 14.9 |
| 5 - 9 | 138,659 | 11.7 | 133,650 | 11.5 | 272,309 | 11.6 |
| 10 - 14 | 110,210 | 9.3 | 106,717 | 9.2 | 216,927 | 9.3 |
| 15 - 19 | 111,304 | 9.4 | 106,727 | 9.2 | 218,031 | 9.3 |
| 20 – 24 | 126,416 | 10.7 | 122,550 | 10.5 | 248,966 | 10.6 |
| 25 – 29 | 122,755 | 10.4 | 119,615 | 10.3 | 242,370 | 10.3 |
| 30 – 34 | 105,329 | 8.9 | 103,401 | 8.9 | 208,730 | 8.9 |
| 35 – 39 | 79,084 | 6.7 | 79,049 | 6.8 | 158,133 | 6.7 |
| 40 – 44 | 52,717 | 4.5 | 49,738 | 4.3 | 102,455 | 4.4 |
| 45 – 49 | 36,091 | 3.0 | 36,147 | 3.1 | 72,238 | 3.1 |
| 50 – 54 | 30,919 | 2.6 | 31,886 | 2.7 | 62,805 | 2.7 |
| 55 – 59 | 24,938 | 2.1 | 28,611 | 2.5 | 53,549 | 2.2 |
| 60 – 64 | 18,067 | 1.5 | 21,086 | 1.8 | 39,153 | 1.7 |
| 65 – 69 | 15,301 | 1.3 | 16,392 | 1.4 | 31,693 | 1.4 |
| 70 – 74 | 12,912 | 1.1 | 13,125 | 1.1 | 26,037 | 1.1 |
| 75 + | 22,147 | 1.9 | 20,984 | 1.8 | 43,131 | 1.8 |
| Total | 1,184,430 | 100.00 | 1,160,516 | 100.00 | 2,344,946 | 100.00 |

## Figure 2: Population pyramid, Oman, 1996




## Figure 3: Population pyramid, Oman, 2015



# REGISTRY METHODS

## Oman National Cancer Registry

The Oman National Cancer Registry was established in 1985 as a hospital-based registry. Only cases treated in tertiary hospitals were registered. In 1996, with the establishment of the Department of Non-Communicable Diseases Surveillance and Control, the registry was transferred and started functioning under the under Directorate General of Health Affairs and later the Directorate General of Primary Health Care . New cancer notification forms were developed and distributed to all regional hospitals and sister institutions. In the year 2000, the registration form was simplified, printed and distributed to all institutions that could potentially report cancer cases. Three trained cancer registrars are responsible for data collection, coding and data entry.

## Objectives and Functions of the Cancer Registry

1. To compile an accurate database on the incident cases of cancer in The Sultanate of Oman.
2. To monitor trends of cancer which can guide policy makers in setting priorities for control and management of cancer.
3. To provide researchers and clinicians with population–based information on the number and types of cancer cases and their geographical distribution within the Sultanate of Oman.

## Methods

### 1. Data Collection

#### a) Active Collection

Active data collection involves the registry personnel visiting different sources where cancer is diagnosed and abstracting data on Cancer Registry Forms. Being the largest tertiary center for diagnosis and treatment of cancer, registrars visit the Royal Hospital twice a week and abstract data on the notification forms. Similarly, other tertiary hospitals like Khoula Hospital and Al-Nahhda Hospital are visited once a month.

Data of patients undergoing chemotherapy and radiotherapy treatments are also collected from the National Oncology Centre which was established within the Royal Hospital in November 2004. Data of patients diagnosed with cancer abroad are traced through oncology out-patient registers at the National Oncology Centre and subsequently, data are extracted from their case notes. Detailed list of patients sent abroad for cancer treatment through the Ministry of Health system are obtained from the Department of Treatment Abroad.

### b) Passive Reporting

Cancer notification was made mandatory in the year 2001 through a Ministerial Decision (4/2001). When a case of cancer is diagnosed, the attending physician of the relevant specialty or the medical records department at the regional hospital completes the notification forms and sends them to the registry. Other institutions like the Armed Forces Hospital and Sultan Qaboos University Hospital have similar passive reporting. In 2017, a Ministerial Decision updated to (222/2017) include all the health institution (civil or military) and private health facilities. These institutions are frequently visited by the cancer registrars for data extraction of patients diagnosed in them.

## 2. Data-Coding, Entry and Validity Checks

Until 2001 all cancer cases were coded using the second edition of the International Classification of Diseases for Oncology (ICDO-2) with topography 'C' and morphology 'M' codes. Data were entered in CanReg 3 programme, supplied by the International Agency for Research on Cancer (IARC), Lyon, France. CanReg 4 software programme and International Classification of Diseases for Oncology ICDO-3 were used from 2003. This programme has a duplicate entry checking facility, which prevents the same case being registered more than once. In 2016, registration software was upgraded to CanReg 5.00.40. For this report we used CanReg 5.00. Validity checks are performed for consistency between items: site/histology, gender/site and age/site/histology combinations by CanReg 5.00.

## 3. Completeness of Data Reporting

Data were obtained from all hospitals with histopathology/cytology and hematology laboratories (The Royal, Al-Nahdha, Khoula, Sultan Qaboos and Sohar Hospitals) from copies of reports of patients diagnosed with cancer to the registry. Since the mid of 2001, the Sultan Qaboos University and Armed Forces Hospitals histopathology laboratories have also started sending reports of cancer cases diagnosed in their laboratories.

Since the establishment of the new National Oncology Center in November 2004, the chemotherapy and radiotherapy lists are also obtained once a week from the relevant departments.

Monthly hospital "admission–discharge" lists were sent from the tertiary hospitals. From 2003, similar lists were sent by all the regional hospitals as well. These lists help in updating the registry and in updating the status of the patient (deceased or alive). The list of patients with cancer on chemotherapy are obtained from tertiary hospitals. Details of missing data are sought from all of the above sources so that the registry can be updated.

## 4. Data Analysis

Data is first checked for consistency and validity using (Canreg-5.00.40 build1566), the International Agency for Research on Cancer (IARC), 2008 software. Frequency distribution and incidence tables are generated for Omanis only. Data for individual cancers are then exported in csv form to Stata software (version 14.2, Stata Corporation, TX, USA) for analysis of incidence by region, gender and morphological types. Bar diagrams and graphs are made using Microsoft excel version 2013 (Microsoft Corporation).

Population denominators used for the calculations of incidence rates (by 5- year age group, gender and region) were obtained from Ministry of Health's Annual Health Reports. Since the 2003 report, we have included four comprehensive tables showing the frequency as well as the incidence of cancers by site, from the year 1996 onwards.

## 5. Definitions : The following definitions have been used for the calculation of frequency and incidence rate of cancer presented in this report

### Incidence

The number of new cancer cases in a defined population within a specific time period.

### Date of Diagnosis

The date documented on the histopathology report. For clinical cases, the date of diagnosis is the date stated in patient's case notes to have cancer.

### Population at Risk

Individuals who are susceptible to specific cancers.

### Crude incidence rate(CR)

The number of new cancer cases in the population occurring within a Gregorian calendar (1st January to 31st December) divided by the population at risk in the same period expressed per 100,000 population.

### Age-specific incidence rate

Incidence rate in a specific age group.

### Multiple primaries

Two or more abnormal growths of tissue occurring simultaneously. The neoplasms are histologically different and may be found in the same or different sites.

### Metastasis

Metastasis is the distant spread of cancer from its original site to other organs of the body, including lymph nodes, skeletal and/or visceral organs.

### Carcinoma in situ

A group of abnormal cells that remain in the place where they first formed. They have not spread.

### Age-standardized rate (ASR)

Age standardization is necessary when comparing several populations that differ with respect to age. Hence the World Standard Population of Segi, (Table 2) (Segi M.Cancer mortality for selected sites in 24 countries (1950-57). Sendai: Tohuku University, School of Medicine, 1960) was used to adjust the crude incidence rates and to remove the confounding effect of age. Therefore, the age-adjusted rates (ASR) could be used for comparison purposes with other rates where the same world standard population was used, especially those issued by the World Health Organization's agency, the International Agency for Research on Cancer (IARC), in its periodic publication, Cancer Incidence in Five Continents.

Table 3: Age Structure of the World Standard Population of Segi, used for Age -adjustment

| Age Structure | Population |
|---|---|
| 00-04 | 12,000 |
| 05-09 | 10,000 |
| 10-14 | 9,000 |
| 15-19 | 9,000 |
| 20-24 | 8,000 |
| 25-29 | 8,000 |
| 30-34 | 6,000 |
| 35-39 | 6,000 |
| 40-44 | 6,000 |
| 45-49 | 6,000 |
| 50-54 | 5,000 |
| 55-59 | 4,000 |
| 60-64 | 4,000 |
| 65-69 | 3,000 |
| 70-74 | 2,000 |
| 75+ | 2,000 |
| Total | 100,000 |

# COMPARISON

## Comparison between the cancer incidence of 1996 and 2015

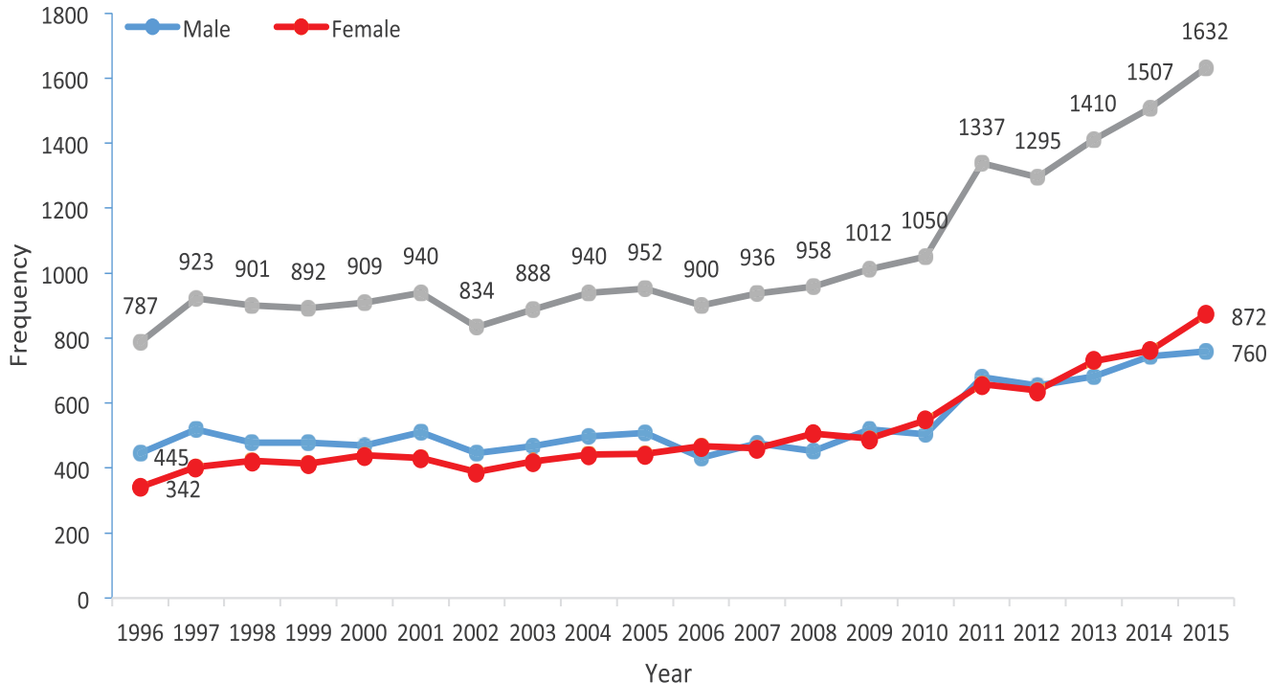
In 1996, the total registered cases among Omanis were 787(445 males, 342 females), and the crude incidence rates for all cancer among Omanis was 49.4 per 100,000 (54.8 per 100,000 for males and 43.7 per 100,000 for females). The age standardized rate, adjusted to the world standard population, was 95 per 100,000 (106.1 per 100,000 for males and 82.8 per 100,000 for females).

While, in 2015, the total registered cases among Omanis were 1,632 (760 males, 872 females) and the crude incidence rates for all cancer among Omanis was 69.7 per 100,000 (64.2 per 100,000 for males and 75.1 per 100,000 for females). The age standardized rate, adjusted to the world standard population, was 105 per 100,000 (101 per 100,000 for males and 109 per 100,000 for females).

Table 4: Distribution of Cancer Cases among Omanis by Gender (1996 & 2015)

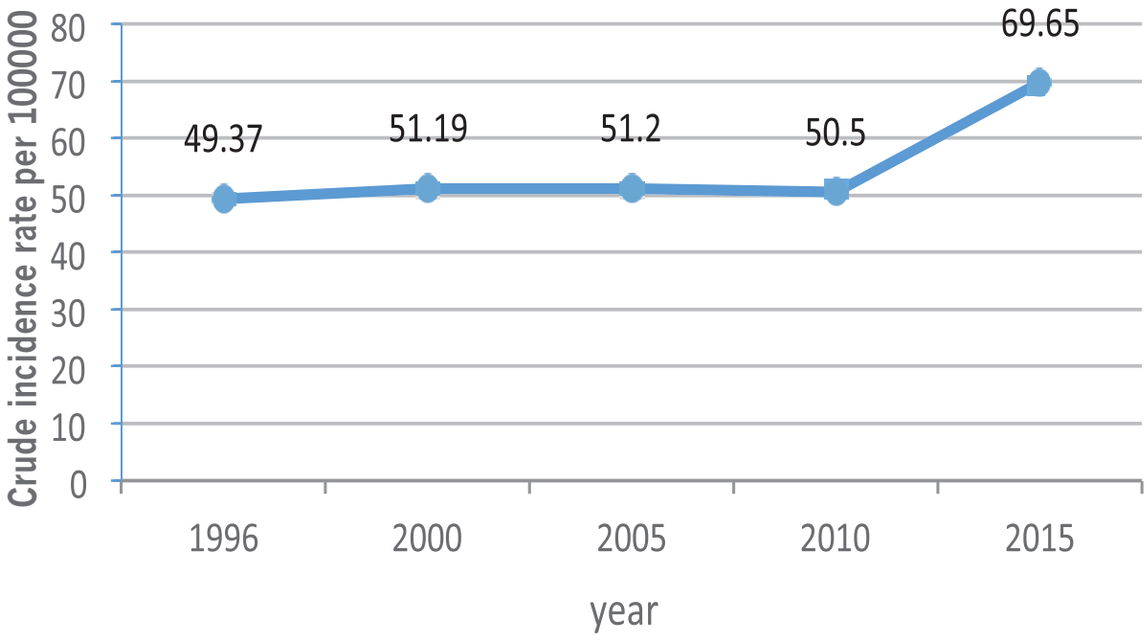
| Gender | Frequency | Percentage (%) | CR | ASR |
|---|---|---|---|---|
| **1996** | | | | |
| Male | 445 | 56.5 | 54.8 | 106.1 |
| Female | 342 | 43.5 | 43.7 | 82.8 |
| Total | 787 | 100 | 49.4 | 95.0 |
| **2015** | | | | |
| Male | 760 | 46.6 | 46.2 | 101 |
| Female | 872 | 53.4 | 75.1 | 109 |
| Total | 1,632 | 100 | 69.7 | 105 |

Figure 4: Trends of cancer cases 1996-2015




If we consider the crude rate of 49.37 per 100,000 people for 1996 to continue at same rate then it would be expected the total cases in 2015 would be 1,158 cases. However, the total cases were 1,632 cases which means that the incidence rate has increased. There was a rise in the crude incidence rate by 41% between 1996 and 2015. But this increase was the highest in the last 5 years. Between 2010 and 2015 the crude incidence has increased by 37.9% compared to 2.3% increase in the period 1996-2010 (figure 5).

Figure 5: Crude incidence rate 1996-2015



# COMPARISON

There is a true increase in the incidence of cancer in Oman which may be due to the following reasons. The population size has increased and the population pyramid in Oman has shown concentration at the base with more population at younger age groups. However, the picture is changing. For example, in 1996 about 16% of the population were under-5 years and 45% were under-15 years and only 3.0 % of the total Omani population were above the age of 65 years. While in 2015 about 14.9% of the population were under-5 years and 35.7% were under-15 years. Only 4.3% of the total Omani population are above the age of 65 years.

As the population ages and because cancer is a disease of older people, the risk of cancer will rise rapidly. The life expectancy in Oman has increased from 72 in 1996 to 76.4 in 2015. This rise in cancer incidence cases may be attributed to a number of factors, mainly the advancement of health care services, with the introduction of an early detection program for breast cancer and the advancement in diagnostic and treatment modalities. Public awareness of the disease has increased due to efforts of the Oman Cancer Association and the introduction of the mammogram mobile unit. Other factors that might explain the increase in the incidence rates are the rapid socioeconomic changes resulting in an increase in unhealthy habits of tobacco use, sedentary life styles and increase uptake of unhealthy food habits.

# TRENDS OF CANCER INCIDENCE IN OMAN
# 1996 – 2015

## Cancer incidence in Oman, 1996-2015

Between January 1996 and December 2015, there were 21,002 newly diagnosed cases of cancer among the Omani population with an average of 1,050 cases per year, of which 10,723 (55.1%) were males and 10,279 (48.9%) were females.

The average annual crude rate for all cancer among Omanis was 56.4 per 100,000 (55.1 per 100,000 for males and 54.2 per 100,000 for females). The average ASR was 125.7 per 100,000 (105.2 per 100,000 for males and 96.3 per 100,000 for females). The frequencies and incidence rates of cancers in Omani male and female are presented in Table 5.

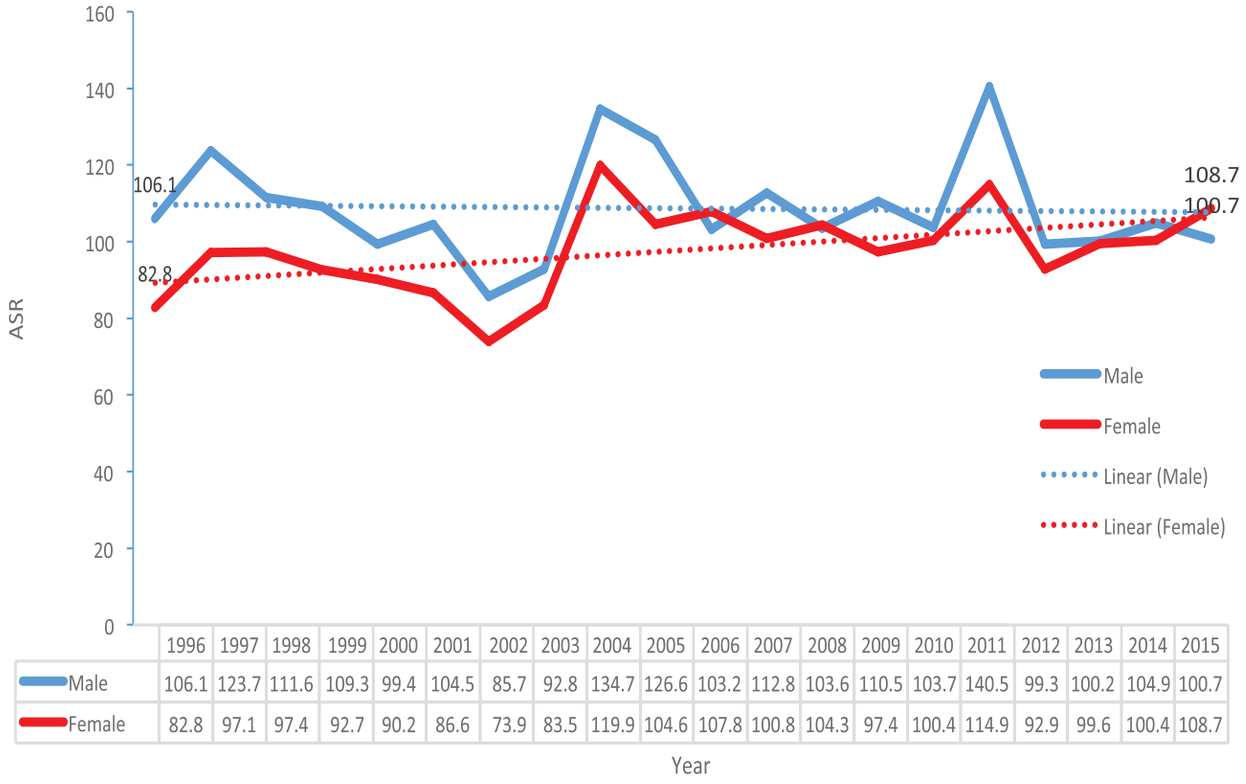
Overall, there was an observed gradual decline in the trend of average annual ASRs for Omani male over the 20-year period. On the other hand, the trend of average annual ASRs for Omani females increased gradually over the same period (Figure 6).

The average annual age-specific incidence rates were observed to increase dramatically with advancing age in both sexes (Figure 7).

Table 5: Distribution of Cancer Cases among Omanis by Gender, 1996-2015

| Gender | Frequency | Percentage (%) | Average annual crude rate | Average annual ASR |
|---|---|---|---|---|
| Male | 10,723 | 51.1 | 55.1 | 105.2 |
| Female | 10,279 | 48.9 | 54.2 | 96.3 |
| Total | 21,002 | 100 | 56.4 | 125.7 |

Figure : 6 Age-adjusted Incidence Rates of Cancers among Omanis by Year, 1996-2015




| | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Male | 106.1 | 123.7 | 111.6 | 109.3 | 99.4 | 104.5 | 85.7 | 92.8 | 134.7 | 126.6 | 103.2 | 112.8 | 103.6 | 110.5 | 103.7 | 140.5 | 99.3 | 100.2 | 104.9 | 100.7 |
| Female | 82.8 | 97.1 | 97.4 | 92.7 | 90.2 | 86.6 | 73.9 | 83.5 | 119.9 | 104.6 | 107.8 | 100.8 | 104.3 | 97.4 | 100.4 | 114.9 | 92.9 | 99.6 | 100.4 | 108.7 |

Year

Figure : 7 Average Annual Age-Specific Incidence Rates of Cancers by gender, 1996-2015

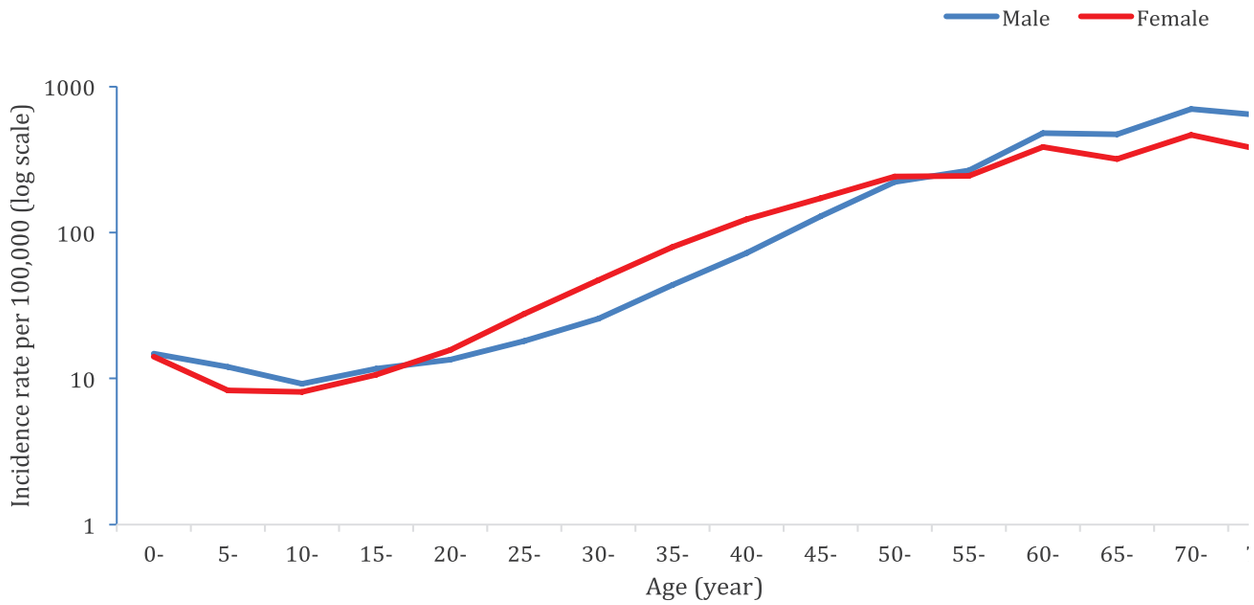



Table 6 and 7 illustrate the frequency of incidence cases per age group in Omani male and female for the period 1996-2015. While table 8 and 9 demonstrate Age – Adjusted incidence Rates in Omani males and females for the same period. Additionally, table 10 and 11 show the frequency of Incident Cases in Omanis by years, from 1996 to 2015 for males and females respectively. Whereas, table 12 and 13 display the Age – Adjusted incidence Rates in Omani nationals by year, from 1996 to 2015 male and female respectively.

# OVERALL RESULTS

## Table 6: Frequency of Incident Cases in Omani Males, 1996-2015

| SITE | ALL AGES | AGE UNK | 0- | 5- | 10- | 15- | 20- | 25- | 30- | 35- | 40- | 45- | 50- | 55- | 60- | 65- | 70- | 75+ | (%) | ICD (10th) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lip | 24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 2 | 3 | 2 | 2 | 5 | 6 | 0.2 | C00 |
| Tongue | 101 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 5 | 2 | 10 | 19 | 20 | 12 | 15 | 3 | 3 | 9 | 1 | C01-02 |
| Mouth | 114 | 0 | 0 | 0 | 0 | 1 | 3 | 2 | 4 | 9 | 12 | 12 | 13 | 11 | 17 | 10 | 10 | 10 | 1.1 | C03-06 |
| Salivary glands | 36 | 0 | 0 | 0 | 2 | 0 | 4 | 1 | 1 | 4 | 2 | 1 | 3 | 3 | 8 | 1 | 3 | 3 | 0.3 | C07-08 |
| Tonsil | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 1 | 2 | 2 | 3 | 0 | 0 | 1 | 0.1 | C09 |
| Other oropharynx | 22 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 3 | 1 | 3 | 4 | 2 | 3 | 2 | 2 | 0.2 | C10 |
| Nasopharynx | 101 | 0 | 0 | 2 | 2 | 7 | 9 | 7 | 3 | 7 | 11 | 18 | 8 | 10 | 5 | 8 | 3 | 1 | 1 | C11 |
| Hypopharynx | 28 | 0 | 2 | 1 | 0 | 1 | 0 | 2 | 1 | 1 | 0 | 4 | 4 | 4 | 4 | 2 | 1 | 1 | 0.3 | C12-13 |
| Pharynx unspecified | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 2 | 1 | 0 | 1 | 2 | 1 | 0.1 | C14 |
| Oesophagus | 209 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 1 | 7 | 13 | 19 | 15 | 43 | 32 | 35 | 42 | 2 | C15 |
| Stomach | 960 | 0 | 0 | 0 | 0 | 2 | 4 | 2 | 18 | 21 | 37 | 52 | 84 | 100 | 190 | 126 | 156 | 168 | 9.3 | C16 |
| Small intestine | 43 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 4 | 1 | 4 | 5 | 11 | 4 | 7 | 3 | 0.4 | C17 |
| Colon | 473 | 0 | 0 | 1 | 1 | 3 | 7 | 18 | 25 | 36 | 42 | 53 | 65 | 51 | 58 | 49 | 28 | 36 | 4.6 | C18 |
| Rectum | 301 | 0 | 0 | 0 | 0 | 1 | 10 | 9 | 15 | 12 | 18 | 24 | 40 | 32 | 48 | 36 | 27 | 29 | 2.9 | C19-20 |
| Anus | 45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 4 | 7 | 5 | 7 | 7 | 1 | 4 | 8 | 0.4 | C21 |
| Liver | 544 | 0 | 10 | 3 | 2 | 1 | 4 | 6 | 6 | 10 | 26 | 32 | 60 | 85 | 102 | 69 | 66 | 62 | 5.3 | C22 |
| Gallbladder etc. | 76 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 3 | 7 | 9 | 12 | 10 | 8 | 11 | 12 | 0.7 | C23-24 |
| Pancreas | 209 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 4 | 11 | 14 | 30 | 24 | 34 | 33 | 24 | 32 | 2 | C25 |
| Nose, sinuses etc. | 31 | 0 | 0 | 0 | 1 | 2 | 2 | 0 | 2 | 0 | 2 | 4 | 6 | 1 | 2 | 3 | 2 | 4 | 0.3 | C30-31 |
| Larynx | 130 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 5 | 11 | 14 | 22 | 12 | 19 | 14 | 13 | 17 | 1.3 | C32 |
| Trachea, bronchus and lung | 720 | 0 | 0 | 0 | 2 | 0 | 3 | 7 | 5 | 14 | 28 | 44 | 81 | 81 | 149 | 101 | 108 | 97 | 7 | C33-34 |
| Other thoracic organs | 39 | 0 | 1 | 1 | 0 | 1 | 3 | 3 | 0 | 4 | 0 | 1 | 4 | 2 | 6 | 1 | 4 | 8 | 0.4 | C37-38 |
| Bone | 147 | 0 | 5 | 14 | 27 | 26 | 18 | 12 | 7 | 9 | 3 | 3 | 5 | 2 | 9 | 3 | 2 | 2 | 1.4 | C40-41 |
| Melanoma of skin | 42 | 0 | 0 | 2 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 4 | 5 | 4 | 7 | 5 | 5 | 5 | 0.4 | C43 |
| Other skin | 434 | 0 | 3 | 4 | 4 | 3 | 8 | 12 | 10 | 12 | 15 | 23 | 31 | 43 | 63 | 60 | 66 | 77 | 4.2 | C44 |
| Mesothelioma | 18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 3 | 3 | 1 | 3 | 3 | 4 | 0.2 | C45 |
| Kaposi sarcoma | 57 | 0 | 0 | 1 | 0 | 2 | 3 | 5 | 5 | 6 | 2 | 4 | 6 | 5 | 6 | 4 | 5 | 3 | 0.6 | C46 |
| Connective and soft tissue | 175 | 0 | 17 | 14 | 12 | 18 | 20 | 14 | 7 | 10 | 7 | 8 | 12 | 11 | 8 | 6 | 2 | 9 | 1.7 | C47,C49 |
| Breast | 99 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 7 | 7 | 13 | 12 | 15 | 15 | 7 | 7 | 13 | 1 | C50 |
| Penis | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 2 | 0.1 | C60 |
| Prostate | 998 | 0 | 1 | 0 | 2 | 2 | 0 | 0 | 1 | 4 | 7 | 17 | 52 | 94 | 196 | 182 | 199 | 241 | 9.7 | C61 |
| Testis | 120 | 0 | 13 | 2 | 0 | 10 | 25 | 23 | 15 | 11 | 9 | 3 | 2 | 3 | 0 | 1 | 1 | 2 | 1.2 | C62 |
| Other male genital organs | 5 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | C63 |
| Kidney | 236 | 0 | 27 | 6 | 3 | 1 | 3 | 9 | 7 | 14 | 18 | 20 | 30 | 15 | 25 | 23 | 15 | 20 | 2.3 | C64 |
| Renal pelvis | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 2 | 0 | 1 | 0 | C65 |
| Ureter | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 1 | 0 | 0 | 0 | C66 |
| Bladder | 590 | 0 | 3 | 1 | 1 | 1 | 2 | 6 | 10 | 24 | 19 | 35 | 62 | 61 | 89 | 83 | 79 | 114 | 5.7 | C67 |
| Other urinary organs | 6 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 1 | 1 | 1 | 0 | 0.1 | C68 |
| Eye | 52 | 0 | 15 | 1 | 0 | 2 | 2 | 0 | 1 | 2 | 2 | 1 | 2 | 5 | 7 | 2 | 7 | 3 | 0.5 | C69 |
| Brain, nervous system | 404 | 0 | 51 | 42 | 31 | 26 | 21 | 19 | 23 | 24 | 18 | 26 | 32 | 25 | 21 | 18 | 17 | 10 | 3.9 | C70-72 |
| Thyroid | 242 | 0 | 0 | 0 | 2 | 9 | 21 | 29 | 30 | 20 | 22 | 22 | 18 | 17 | 25 | 12 | 7 | 8 | 2.4 | C73 |
| Adrenal gland | 46 | 0 | 30 | 3 | 3 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 3 | 2 | 0 | 1 | 1 | 0 | 0.4 | C74 |
| Other endocrine | 10 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 2 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 0.1 | C75 |
| Hodgkin disease | 384 | 0 | 11 | 43 | 39 | 39 | 42 | 30 | 34 | 28 | 14 | 27 | 26 | 14 | 11 | 10 | 4 | 12 | 3.7 | C81 |
| Non-Hodgkin lymphoma | 932 | 0 | 28 | 42 | 25 | 48 | 37 | 53 | 44 | 52 | 64 | 67 | 80 | 78 | 87 | 74 | 80 | 73 | 9.1 | C82-85,C96 |
| Immunoproliferative diseases | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | C88 |
| Multiple myeloma | 177 | 0 | 0 | 0 | 0 | 1 | 1 | 4 | 2 | 0 | 6 | 12 | 23 | 28 | 33 | 22 | 20 | 25 | 1.7 | C90 |
| Lymphoid leukaemia | 443 | 0 | 104 | 88 | 49 | 52 | 24 | 9 | 12 | 4 | 10 | 13 | 17 | 5 | 19 | 13 | 13 | 11 | 4.3 | C91 |
| Myeloid leukaemia | 320 | 0 | 38 | 13 | 10 | 18 | 19 | 24 | 19 | 25 | 18 | 18 | 21 | 12 | 23 | 20 | 16 | 26 | 3.1 | C92-94 |
| Leukaemia unspecified | 80 | 0 | 9 | 7 | 9 | 12 | 8 | 2 | 5 | 2 | 2 | 2 | 5 | 8 | 4 | 2 | 2 | 1 | 0.8 | C95 |
| Myeloproliferative disorders | 15 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 2 | 1 | 3 | 1 | 1 | 1 | 2 | 0.1 | MPD |
| Myelodysplastic syndromes | 5 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 1 | 0 | MDS |
| Other and unspecified | 438 | 0 | 16 | 3 | 3 | 6 | 2 | 12 | 9 | 14 | 22 | 26 | 46 | 49 | 73 | 47 | 63 | 47 | 4.3 | O&U |
| All sites | 10723 | 0 | 388 | 296 | 231 | 296 | 312 | 331 | 339 | 413 | 502 | 674 | 986 | 982 | 1465 | 1110 | 1131 | 1267 | 104 | ALL |
| All sites but C44 | 10289 | 0 | 385 | 292 | 227 | 293 | 304 | 319 | 329 | 401 | 487 | 651 | 955 | 939 | 1402 | 1050 | 1065 | 1190 | 100 | ALLbC44 |

## Table 7: Frequency of Incident Cases in Omani Females, 1996-2015

| SITE | ALL AGES | AGE UNK | 0- | 5- | 10- | 15- | 20- | 25- | 30- | 35- | 40- | 45- | 50- | 55- | 60- | 65- | 70- | 75+ | (%) | ICD (10th) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lip | 12 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 0.1 | C00 |
| Tongue | 50 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 3 | 4 | 4 | 9 | 6 | 7 | 5 | 4 | 3 | 2 | 0.5 | C01-02 |
| Mouth | 64 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 2 | 3 | 3 | 3 | 13 | 5 | 14 | 7 | 4 | 8 | 0.6 | C03-06 |
| Salivary glands | 43 | 0 | 1 | 1 | 0 | 3 | 6 | 3 | 3 | 4 | 4 | 2 | 8 | 3 | 2 | 1 | 1 | 1 | 0.4 | C07-08 |
| Tonsil | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | C09 |
| Other oropharynx | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 2 | 0 | 1 | 0.1 | C10 |
| Nasopharynx | 48 | 0 | 0 | 0 | 0 | 5 | 4 | 2 | 4 | 7 | 8 | 6 | 5 | 2 | 1 | 1 | 2 | 1 | 0.5 | C11 |
| Hypopharynx | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 4 | 1 | 0 | 1 | 3 | 0 | 4 | 2 | 0.2 | C12-13 |
| Pharynx unspecified | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0.1 | C14 |
| Oesophagus | 134 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 3 | 4 | 13 | 11 | 30 | 16 | 23 | 30 | 1.3 | C15 |
| Stomach | 512 | 0 | 0 | 1 | 1 | 1 | 10 | 3 | 13 | 20 | 37 | 40 | 71 | 62 | 88 | 50 | 62 | 53 | 5.1 | C16 |
| Small intestine | 28 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 3 | 4 | 2 | 2 | 3 | 2 | 7 | 4 | 0.3 | C17 |
| Colon | 376 | 0 | 0 | 0 | 3 | 4 | 8 | 12 | 19 | 23 | 28 | 38 | 51 | 40 | 57 | 28 | 24 | 41 | 3.8 | C18 |
| Rectum | 232 | 0 | 0 | 0 | 0 | 1 | 3 | 5 | 12 | 21 | 27 | 15 | 31 | 34 | 25 | 21 | 23 | 14 | 2.3 | C19-20 |
| Anus | 23 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 1 | 0 | 5 | 3 | 2 | 1 | 5 | 3 | 0.2 | C21 |
| Liver | 245 | 0 | 8 | 0 | 1 | 1 | 4 | 3 | 5 | 7 | 9 | 18 | 39 | 32 | 41 | 29 | 25 | 23 | 2.5 | C22 |
| Gallbladder etc. | 90 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 4 | 11 | 8 | 9 | 10 | 17 | 11 | 10 | 8 | 0.9 | C23-24 |
| Pancreas | 126 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 3 | 6 | 10 | 19 | 18 | 31 | 8 | 13 | 14 | 1.3 | C25 |
| Nose, sinuses etc. | 23 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 2 | 1 | 0 | 4 | 1 | 3 | 3 | 1 | 3 | 2 | 0.2 | C30-31 |
| Larynx | 29 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 6 | 0 | 2 | 5 | 3 | 4 | 3 | 3 | 0.3 | C32 |
| Trachea, bronchus and lung | 229 | 0 | 1 | 0 | 0 | 1 | 1 | 3 | 4 | 9 | 8 | 13 | 32 | 29 | 39 | 29 | 27 | 33 | 2.3 | C33-34 |
| Other thoracic organs | 18 | 0 | 8 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 2 | 0 | 1 | 1 | 1 | 0 | 0 | 2 | 0.2 | C37-38 |
| Bone | 94 | 0 | 2 | 7 | 23 | 18 | 10 | 10 | 3 | 3 | 3 | 2 | 8 | 1 | 1 | 0 | 0 | 3 | 0.9 | C40-41 |
| Melanoma of skin | 34 | 0 | 0 | 0 | 1 | 0 | 0 | 4 | 2 | 1 | 3 | 4 | 6 | 1 | 3 | 2 | 4 | 3 | 0.3 | C43 |
| Other skin | 332 | 0 | 1 | 3 | 1 | 6 | 2 | 10 | 7 | 11 | 20 | 29 | 32 | 40 | 42 | 36 | 38 | 54 | 3.3 | C44 |
| Mesothelioma | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | C45 |
| Kaposi sarcoma | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 6 | 0 | 0 | 3 | 3 | 2 | 1 | 1 | 0.2 | C46 |
| Connective and soft tissue | 120 | 0 | 27 | 4 | 9 | 7 | 7 | 10 | 7 | 6 | 9 | 12 | 4 | 5 | 2 | 1 | 3 | 7 | 1.2 | |
| Breast | 2181 | 0 | 0 | 0 | 0 | 2 | 25 | 95 | 184 | 275 | 290 | 297 | 309 | 229 | 175 | 109 | 89 | 102 | 21.9 | C50 |
| Vulva | 24 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 2 | 2 | 1 | 3 | 4 | 1 | 5 | 4 | 0.2 | C51 |
| Vagina | 30 | 0 | 1 | 0 | 0 | 1 | 0 | 2 | 0 | 1 | 1 | 2 | 5 | 1 | 5 | 7 | 1 | 3 | 0.3 | C52 |
| Cervix uteri | 550 | 0 | 0 | 0 | 0 | 0 | 1 | 10 | 28 | 53 | 68 | 71 | 73 | 61 | 64 | 32 | 52 | 37 | 5.5 | C53 |
| Corpus uteri | 206 | 0 | 0 | 0 | 1 | 0 | 1 | 3 | 7 | 9 | 15 | 18 | 24 | 27 | 45 | 24 | 18 | 14 | 2.1 | C54 |
| Uterus unspecified | 86 | 0 | 1 | 0 | 0 | 0 | 0 | 2 | 4 | 8 | 8 | 13 | 10 | 8 | 11 | 6 | 8 | 7 | 0.9 | C55 |
| Ovary | 463 | 0 | 1 | 4 | 15 | 27 | 35 | 33 | 27 | 15 | 36 | 40 | 44 | 37 | 48 | 28 | 40 | 33 | 4.7 | C56 |
| Other female genital organs | 10 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 1 | 3 | 0 | 1 | 0 | 1 | 1 | 0 | 0.1 | C57 |
| Placenta | 23 | 0 | 0 | 0 | 0 | 1 | 2 | 6 | 3 | 1 | 3 | 4 | 2 | 1 | 0 | 0 | 0 | 0 | 0.2 | C58 |
| Kidney | 204 | 0 | 40 | 7 | 3 | 2 | 4 | 7 | 10 | 11 | 9 | 12 | 28 | 16 | 20 | 18 | 8 | 9 | 2.1 | C64 |
| Renal pelvis | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | C65 |
| Ureter | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | C66 |
| Bladder | 204 | 0 | 2 | 0 | 0 | 1 | 2 | 6 | 6 | 1 | 11 | 16 | 12 | 21 | 27 | 28 | 24 | 47 | 2.1 | C67 |
| Other urinary organs | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | C68 |
| Eye | 45 | 0 | 20 | 4 | 1 | 2 | 0 | 0 | 1 | 1 | 2 | 1 | 2 | 0 | 4 | 0 | 3 | 4 | 0.5 | C69 |
| Brain, nervous system | 281 | 0 | 36 | 34 | 28 | 24 | 18 | 16 | 14 | 14 | 16 | 19 | 17 | 13 | 16 | 6 | 4 | 6 | 2.8 | C70-72 |
| Thyroid | 1035 | 0 | 0 | 3 | 7 | 47 | 106 | 145 | 150 | 133 | 113 | 108 | 74 | 40 | 45 | 19 | 30 | 15 | 10.4 | C73 |
| Adrenal gland | 42 | 0 | 24 | 5 | 0 | 1 | 2 | 2 | 1 | 2 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 0.4 | C74 |
| Other endocrine | 3 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | C75 |
| Hodgkin disease | 225 | 0 | 4 | 17 | 21 | 22 | 30 | 23 | 15 | 7 | 13 | 16 | 7 | 18 | 13 | 7 | 7 | 5 | 2.3 | C81 |
| Non-Hodgkin lymphoma | 601 | 0 | 27 | 27 | 16 | 23 | 32 | 40 | 28 | 29 | 33 | 43 | 64 | 48 | 83 | 35 | 30 | 43 | 6 | C82-85,C96 |
| Immunoproliferative diseases | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | C88 |
| Multiple myeloma | 123 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 4 | 6 | 22 | 14 | 25 | 18 | 13 | 17 | 1.2 | C90 |
| Lymphoid leukaemia | 275 | 0 | 101 | 53 | 27 | 13 | 9 | 9 | 7 | 1 | 6 | 7 | 6 | 4 | 10 | 6 | 9 | 7 | 2.8 | C91 |
| Myeloid leukaemia | 244 | 0 | 16 | 11 | 18 | 24 | 17 | 15 | 18 | 16 | 16 | 15 | 16 | 12 | 18 | 10 | 13 | 9 | 2.5 | C92-94 |
| Leukaemia unspecified | 77 | 0 | 14 | 10 | 14 | 5 | 4 | 2 | 1 | 2 | 4 | 1 | 1 | 3 | 5 | 4 | 2 | 5 | 0.8 | C95 |
| Myeloproliferative disorders | 7 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 4 | 0 | 0.1 | MPD |
| Myelodysplastic syndromes | 5 | 0 | 0 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0.1 | MDS |
| Other and unspecified | 410 | 0 | 17 | 3 | 2 | 9 | 4 | 9 | 13 | 22 | 30 | 32 | 50 | 29 | 53 | 42 | 54 | 41 | 4.1 | O&U |
| All sites | 10279 | 0 | 354 | 196 | 195 | 258 | 350 | 500 | 613 | 745 | 890 | 956 | 1130 | 907 | 1090 | 662 | 703 | 730 | 103 | ALL |
| All sites but C44 | 9947 | 0 | 353 | 193 | 194 | 252 | 348 | 490 | 606 | 734 | 870 | 927 | 1098 | 867 | 1048 | 626 | 665 | 676 | 100 | ALLbC44 |

## Table 8: Age – Adjusted incidence Rates in Omani Males, 1996-2015

| SITE | ALL AGES | AGE UNK | 0- | 5- | 10- | 15- | 20- | 25- | 30- | 35- | 40- | 45- | 50- | 55- | 60- | 65- | 70- | 75+ | CRUDE RATE | (%) | CUM 0-64 | CUM 0-74 | ASR | ICD (10th) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lip | 24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.2 | 0 | 0.4 | 0.4 | 0.8 | 0.7 | 0.9 | 3.1 | 3 | 0.12 | 0.2 | 0.01 | 0.03 | 0.3 | C00 |
| Tongue | 101 | 0 | 0 | 0 | 0 | 0 | 0.1 | 0 | 0.4 | 0.2 | 1.4 | 3.6 | 4.5 | 3.2 | 4.9 | 1.3 | 1.9 | 4.5 | 0.52 | 1 | 0.09 | 0.11 | 1.1 | C01-02 |
| Mouth | 114 | 0 | 0 | 0 | 0 | 0 | 0.1 | 0.1 | 0.3 | 1 | 1.7 | 2.3 | 2.9 | 3 | 5.5 | 4.3 | 6.2 | 5 | 0.59 | 1.1 | 0.09 | 0.14 | 1.2 | C03-06 |
| Salivary glands | 36 | 0 | 0 | 0 | 0.1 | 0 | 0.2 | 0.1 | 0.1 | 0.4 | 0.3 | 0.2 | 0.7 | 0.8 | 2.6 | 0.4 | 1.9 | 1.5 | 0.19 | 0.3 | 0.03 | 0.04 | 0.3 | C07-08 |
| Tonsil | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.1 | 0.1 | 0.3 | 0.2 | 0.4 | 0.5 | 1 | 0 | 0 | 0.5 | 0.07 | 0.1 | 0.01 | 0.01 | 0.1 | C09 |
| Other oropharynx | 22 | 0 | 0 | 0 | 0 | 0 | 0 | 0.1 | 0 | 0 | 0.4 | 0.2 | 0.7 | 1.1 | 0.7 | 1.3 | 1.2 | 1 | 0.11 | 0.2 | 0.02 | 0.03 | 0.2 | C10 |
| Nasopharynx | 101 | 0 | 0 | 0.1 | 0.1 | 0.3 | 0.4 | 0.4 | 0.2 | 0.7 | 1.6 | 3.4 | 1.8 | 2.7 | 1.6 | 3.4 | 1.9 | 0.5 | 0.52 | 1 | 0.07 | 0.09 | 0.9 | C11 |
| Hypopharynx | 28 | 0 | 0.1 | 0 | 0 | 0 | 0 | 0.1 | 0.1 | 0.1 | 0 | 0.8 | 0.9 | 1.1 | 1.3 | 0.9 | 0.6 | 0.5 | 0.14 | 0.3 | 0.02 | 0.03 | 0.3 | C12-13 |
| Pharynx unspecified | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.1 | 0.4 | 0.4 | 0.3 | 0 | 0.4 | 1.2 | 0.5 | 0.05 | 0.1 | 0.01 | 0.01 | 0.1 | C14 |
| Oesophagus | 209 | 0 | 0 | 0 | 0 | 0 | 0 | 0.1 | 0 | 0.1 | 1 | 2.5 | 4.3 | 4.1 | 14 | 13.6 | 21.6 | 20.9 | 1.07 | 2 | 0.13 | 0.31 | 2.4 | C15 |
| Stomach | 960 | 0 | 0 | 0 | 0 | 0.1 | 0.2 | 0.1 | 1.4 | 2.2 | 5.3 | 10 | 18.9 | 27 | 61.9 | 53.7 | 96.3 | 83.6 | 4.93 | 9.3 | 0.64 | 1.39 | 10.9 | C16 |
| Small intestine | 43 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.2 | 0.2 | 0.6 | 0.2 | 0.9 | 1.4 | 3.6 | 1.7 | 4.3 | 1.5 | 0.22 | 0.4 | 0.03 | 0.06 | 0.5 | C17 |
| Colon | 473 | 0 | 0 | 0 | 0 | 0.1 | 0.3 | 1 | 1.9 | 3.8 | 6.1 | 10.2 | 14.6 | 13.8 | 18.9 | 20.9 | 17.3 | 17.9 | 2.43 | 4.6 | 0.35 | 0.54 | 4.8 | C18 |
| Rectum | 301 | 0 | 0 | 0 | 0 | 0 | 0.4 | 0.5 | 1.1 | 1.3 | 2.6 | 4.6 | 9 | 8.7 | 15.6 | 15.3 | 16.7 | 14.4 | 1.55 | 2.9 | 0.22 | 0.38 | 3.2 | C19-20 |
| Anus | 45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.1 | 0.1 | 0.6 | 1.3 | 1.1 | 1.9 | 2.3 | 0.4 | 2.5 | 4 | 0.23 | 0.4 | 0.04 | 0.05 | 0.5 | C21 |
| Liver | 544 | 0 | 0.4 | 0.1 | 0.1 | 0 | 0.2 | 0.3 | 0.5 | 1.1 | 3.8 | 6.1 | 13.5 | 23 | 33.2 | 29.4 | 40.8 | 30.9 | 2.8 | 5.3 | 0.41 | 0.76 | 6 | C22 |
| Gallbladder etc. | 76 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.1 | 0.3 | 0.4 | 1.3 | 2 | 3.2 | 3.3 | 3.4 | 6.8 | 6 | 0.39 | 0.7 | 0.05 | 0.1 | 0.8 | C23-24 |
| Pancreas | 209 | 0 | 0 | 0 | 0 | 0 | 0 | 0.1 | 0.1 | 0.4 | 1.6 | 2.7 | 6.7 | 6.5 | 11.1 | 14.1 | 14.8 | 15.9 | 1.07 | 2 | 0.15 | 0.29 | 2.4 | C25 |
| Nose, sinuses etc. | 31 | 0 | 0 | 0 | 0 | 0.1 | 0.1 | 0 | 0.2 | 0 | 0.3 | 0.8 | 1.3 | 0.3 | 0.7 | 1.3 | 1.2 | 2 | 0.16 | 0.3 | 0.02 | 0.03 | 0.3 | C30-31 |
| Larynx | 130 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.2 | 0.5 | 1.6 | 2.7 | 4.9 | 3.2 | 6.2 | 6 | 8 | 8.5 | 0.67 | 1.3 | 0.1 | 0.17 | 1.4 | C32 |
| Trachea, bronchus and lung | 720 | 0 | 0 | 0 | 0.1 | 0 | 0.1 | 0.4 | 0.4 | 1.5 | 4 | 8.4 | 18.2 | 21.9 | 48.5 | 43 | 66.7 | 48.3 | 3.7 | 7 | 0.52 | 1.07 | 8.2 | C33-34 |
| Other thoracic organs | 39 | 0 | 0 | 0 | 0 | 0 | 0.1 | 0.2 | 0 | 0.4 | 0 | 0.2 | 0.9 | 0.5 | 2 | 0.4 | 2.5 | 4 | 0.2 | 0.4 | 0.02 | 0.04 | 0.4 | C37-38 |
| Bone | 147 | 0 | 0.2 | 0.6 | 1.1 | 1 | 0.8 | 0.7 | 0.5 | 1 | 0.4 | 0.6 | 1.1 | 0.5 | 2.9 | 1.3 | 1.2 | 1 | 0.76 | 1.4 | 0.06 | 0.07 | 0.8 | C40-41 |
| Melanoma of skin | 42 | 0 | 0 | 0.1 | 0 | 0 | 0 | 0.1 | 0.1 | 0.1 | 0.1 | 0.8 | 1.1 | 1.1 | 2.3 | 2.1 | 3.1 | 2.5 | 0.22 | 0.4 | 0.03 | 0.05 | 0.4 | C43 |
| Other skin | 434 | 0 | 0.1 | 0.2 | 0.2 | 0.1 | 0.3 | 0.7 | 0.8 | 1.3 | 2.2 | 4.4 | 7 | 11.6 | 20.5 | 25.6 | 40.8 | 38.3 | 2.23 | 4.2 | 0.25 | 0.58 | 4.6 | C44 |
| Mesothelioma | 18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.1 | 0 | 0.7 | 0.8 | 0.3 | 1.3 | 1.9 | 2 | 0.09 | 0.2 | 0.01 | 0.03 | 0.2 | C45 |
| Kaposi sarcoma | 57 | 0 | 0 | 0 | 0 | 0.1 | 0.1 | 0.3 | 0.4 | 0.6 | 0.3 | 0.8 | 1.3 | 1.4 | 2 | 1.7 | 3.1 | 1.5 | 0.29 | 0.6 | 0.04 | 0.06 | 0.5 | C46 |
| Connective and soft tissue | 175 | 0 | 0.6 | 0.6 | 0.5 | 0.7 | 0.9 | 0.8 | 0.5 | 1.1 | 1 | 1.5 | 2.7 | 3 | 2.6 | 2.6 | 1.2 | 4.5 | 0.9 | 1.7 | 0.08 | 0.1 | 1.2 | C47,C49 |
| Breast | 99 | 0 | 0 | 0 | 0 | 0 | 0 | 0.1 | 0.1 | 0.7 | 1 | 2.5 | 2.7 | 4.1 | 4.9 | 3 | 4.3 | 6.5 | 0.51 | 1 | 0.08 | 0.12 | 1.1 | C50 |
| Penis | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.2 | 0.2 | 0.3 | 0.3 | 0 | 0 | 1 | 0.03 | 0.1 | 0.01 | 0.01 | 0.1 | C60 |
| Prostate | 998 | 0 | 0 | 0 | 0.1 | 0.1 | 0 | 0 | 0.1 | 0.4 | 1 | 3.3 | 11.7 | 25.4 | 63.8 | 77.5 | 123 | 120 | 5.13 | 9.7 | 0.53 | 1.53 | 11.6 | C61 |
| Testis | 120 | 0 | 0.5 | 0.1 | 0 | 0.4 | 1.1 | 1.2 | 1.1 | 1.2 | 1.3 | 0.6 | 0.4 | 0.8 | 0 | 0.4 | 0.6 | 1 | 0.62 | 1.2 | 0.04 | 0.05 | 0.6 | C62 |
| Other male genital organs | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.1 | 0.1 | 0 | 0 | 0 | 0 | 0.3 | 0 | 0 | 0.5 | 0.03 | 0 | 0 | 0 | 0 | C63 |
| Kidney | 236 | 0 | 1 | 0.2 | 0.1 | 0 | 0.1 | 0.5 | 0.5 | 1.5 | 2.6 | 3.8 | 6.7 | 4.1 | 8.1 | 9.8 | 9.3 | 10 | 1.21 | 2.3 | 0.15 | 0.24 | 2.2 | C64 |
| Renal pelvis | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.2 | 0 | 0 | 0.9 | 0 | 0.5 | 0.02 | 0 | 0 | 0.01 | 0 | C65 |
| Ureter | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.2 | 0 | 0.7 | 0.4 | 0 | 0 | 0.02 | 0 | 0 | 0.01 | 0.1 | C66 |
| Bladder | 590 | 0 | 0.1 | 0 | 0 | 0 | 0.1 | 0.3 | 0.8 | 2.6 | 2.7 | 6.7 | 13.9 | 16.5 | 29 | 35.4 | 48.8 | 56.8 | 3.03 | 5.7 | 0.36 | 0.78 | 6.5 | C67 |
| Other urinary organs | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.4 | 0 | 0.3 | 0.4 | 0.6 | 0 | 0.03 | 0.1 | 0 | 0.01 | 0.1 | C68 |
| Eye | 52 | 0 | 0.6 | 0 | 0 | 0.1 | 0.1 | 0 | 0.1 | 0.2 | 0.3 | 0.2 | 0.4 | 1.4 | 2.3 | 0.9 | 4.3 | 1.5 | 0.27 | 0.5 | 0.03 | 0.05 | 0.4 | C69 |
| Brain, nervous system | 404 | 0 | 1.9 | 1.7 | 1.2 | 1 | 0.9 | 1 | 1.7 | 2.6 | 2.6 | 5 | 7.2 | 6.8 | 6.8 | 7.7 | 10.5 | 5 | 2.08 | 3.9 | 0.2 | 0.29 | 2.9 | C70-72 |
| Thyroid | 242 | 0 | 0 | 0 | 0.1 | 0.4 | 0.9 | 1.6 | 2.3 | 2.1 | 3.2 | 4.2 | 4 | 4.6 | 8.1 | 5.1 | 4.3 | 4 | 1.24 | 2.4 | 0.16 | 0.2 | 2 | C73 |
| Adrenal gland | 46 | 0 | 1.1 | 0.1 | 0.1 | 0 | 0 | 0.1 | 0 | 0 | 0 | 0 | 0.7 | 0.5 | 0 | 0.4 | 0.6 | 0 | 0.24 | 0.4 | 0.01 | 0.02 | 0.3 | C74 |
| Other endocrine | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.2 | 0.1 | 0.2 | 0.2 | 0 | 0 | 0 | 0.6 | 0 | 0.05 | 0.1 | 0 | 0.01 | 0.1 | C75 |
| Hodgkin disease | 384 | 0 | 0.4 | 1.8 | 1.6 | 1.5 | 1.8 | 1.6 | 2.6 | 3 | 2 | 5.2 | 5.8 | 3.8 | 3.6 | 4.3 | 2.5 | 6 | 1.97 | 3.7 | 0.17 | 0.21 | 2.4 | C81 |
| Non-Hodgkin lymphoma | 932 | 0 | 1.1 | 1.7 | 1 | 1.9 | 1.6 | 2.9 | 3.3 | 5.5 | 9.2 | 12.8 | 18 | 21.1 | 28.3 | 31.5 | 49.4 | 36.3 | 4.79 | 9.1 | 0.54 | 0.95 | 8.3 | C82-85,C96 |
| Immunoproliferative diseases | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.1 | 0 | 0 | 0 | 0.5 | 0 | 0 | 0 | 1 | 0.03 | 0 | 0 | 0 | 0 | C88 |
| Multiple myeloma | 177 | 0 | 0 | 0 | 0 | 0 | 0 | 0.2 | 0.2 | 0 | 0.9 | 2.3 | 5.2 | 7.6 | 10.7 | 9.4 | 12.4 | 12.4 | 0.91 | 1.7 | 0.14 | 0.24 | 2 | C90 |
| Lymphoid leukaemia | 443 | 0 | 4 | 3.6 | 2 | 2.1 | 1 | 0.5 | 0.9 | 0.4 | 1.4 | 2.5 | 3.8 | 1.4 | 6.2 | 5.5 | 8 | 5.5 | 2.28 | 4.3 | 0.15 | 0.22 | 2.6 | C91 |
| Myeloid leukaemia | 320 | 0 | 1.5 | 0.5 | 0.4 | 0.7 | 0.8 | 1.3 | 1.4 | 2.7 | 2.6 | 3.4 | 4.7 | 3.2 | 7.5 | 8.5 | 9.9 | 12.9 | 1.64 | 3.1 | 0.15 | 0.25 | 2.5 | C92-94 |
| Leukaemia unspecified | 80 | 0 | 0.3 | 0.3 | 0.4 | 0.5 | 0.3 | 0.1 | 0.4 | 0.2 | 0.3 | 0.4 | 1.1 | 2.2 | 1.3 | 0.9 | 1.2 | 0.5 | 0.41 | 0.8 | 0.04 | 0.05 | 0.5 | C95 |
| Myeloproliferative disorders | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0.1 | 0.1 | 0.1 | 0 | 0.4 | 0.2 | 0.8 | 0.3 | 0.4 | 0.6 | 1 | 0.08 | 0.1 | 0.01 | 0.02 | 0.1 | MPD |
| Myelodysplastic syndromes | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.7 | 0 | 0 | 0.5 | 0.03 | 0 | 0 | 0 | 0 | MDS |
| Other and unspecified | 438 | 0 | 0.6 | 0.1 | 0.1 | 0.2 | 0.1 | 0.7 | 0.7 | 1.5 | 3.2 | 5 | 10.3 | 13.3 | 23.8 | 20 | 38.9 | 23.4 | 2.25 | 4.3 | 0.3 | 0.59 | 4.6 | O&U |
| All sites | 10723 | 0 | 14.8 | 12 | 9.2 | 11.7 | 13.5 | 18 | 25.7 | 43.9 | 72.5 | 129 | 222 | 266 | 477 | 473 | 699 | 631 | 55.1 | 104 | 6.57 | 12.43 | 105 | ALL |
| All sites but C44 | 10289 | 0 | 14.7 | 11.9 | 9.1 | 11.6 | 13.1 | 17.3 | 24.9 | 42.6 | 70.3 | 125 | 215 | 254 | 457 | 447 | 658 | 593 | 52.9 | 100 | 6.33 | 11.85 | 101 | ALLbC44 |

## Table 9: Age – Adjusted Incidence Rates in Omani Females, 1996-2015

| SITE | ALL AGES | AGE UNK | 0- | 5- | 10- | 15- | 20- | 25- | 30- | 35- | 40- | 45- | 50- | 55- | 60- | 65- | 70- | 75+ | CRUDE RATE | (%) | CUM 0-64 | CUM 0-74 | ASR | ICD (10th) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lip | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.1 | 0.1 | 0.2 | 0.2 | 0.3 | 0.4 | 0.5 | 0.7 | 1 | 0.06 | 0.1 | 0.01 | 0.01 | 0.1 | C00 |
| Tongue | 50 | 0 | 0 | 0 | 0 | 0 | 0 | 0.1 | 0.2 | 0.4 | 0.6 | 1.6 | 1.3 | 1.9 | 1.8 | 1.9 | 2 | 1 | 0.26 | 0.5 | 0.04 | 0.06 | 0.5 | C01-02 |
| Mouth | 64 | 0 | 0 | 0 | 0 | 0 | 0 | 0.1 | 0.2 | 0.3 | 0.4 | 0.5 | 2.8 | 1.4 | 4.9 | 3.4 | 2.7 | 4 | 0.34 | 0.6 | 0.05 | 0.08 | 0.7 | C03-06 |
| Salivary glands | 43 | 0 | 0 | 0 | 0 | 0.1 | 0.3 | 0.2 | 0.2 | 0.4 | 0.6 | 0.4 | 1.7 | 0.8 | 0.7 | 0.5 | 0.7 | 0.5 | 0.23 | 0.4 | 0.03 | 0.03 | 0.3 | C07-08 |
| Tonsil | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | C09 |
| Other oropharynx | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.1 | 0 | 0 | 0.2 | 0.2 | 0.3 | 0 | 1 | 0 | 0.5 | 0.04 | 0.1 | 0 | 0.01 | 0.1 | C10 |
| Nasopharynx | 48 | 0 | 0 | 0 | 0 | 0.2 | 0.2 | 0.1 | 0.3 | 0.7 | 1.1 | 1.1 | 1.1 | 0.5 | 0.4 | 0.5 | 1.3 | 0.5 | 0.25 | 0.5 | 0.03 | 0.04 | 0.4 | C11 |
| Hypopharynx | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.2 | 0.6 | 0.2 | 0 | 0.3 | 1.1 | 0 | 2.7 | 1 | 0.09 | 0.2 | 0.01 | 0.02 | 0.2 | C12-13 |
| Pharynx unspecified | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.2 | 0 | 0.2 | 0 | 0 | 0.4 | 0 | 0 | 0.5 | 0.03 | 0.1 | 0 | 0 | 0 | C14 |
| Oesophagus | 134 | 0 | 0 | 0 | 0 | 0 | 0 | 0.1 | 0.1 | 0.2 | 0.4 | 0.7 | 2.8 | 3 | 10.6 | 7.7 | 15.2 | 14.9 | 0.71 | 1.3 | 0.09 | 0.2 | 1.6 | C15 |
| Stomach | 512 | 0 | 0 | 0 | 0 | 0 | 0.4 | 0.2 | 1 | 2.1 | 5.1 | 7.2 | 15.2 | 16.7 | 31 | 24 | 41.1 | 26.3 | 2.7 | 5.1 | 0.4 | 0.72 | 5.7 | C16 |
| Small intestine | 28 | 0 | 0 | 0 | 0 | 0 | 0 | 0.1 | 0 | 0 | 0.4 | 0.7 | 0.4 | 0.5 | 1.1 | 1 | 4.6 | 2 | 0.15 | 0.3 | 0.02 | 0.04 | 0.3 | C17 |
| Colon | 376 | 0 | 0 | 0 | 0.1 | 0.2 | 0.4 | 0.7 | 1.5 | 2.4 | 3.9 | 6.8 | 10.9 | 10.8 | 20.1 | 13.5 | 15.9 | 20.4 | 1.98 | 3.8 | 0.29 | 0.44 | 3.9 | C18 |
| Rectum | 232 | 0 | 0 | 0 | 0 | 0 | 0.1 | 0.3 | 0.9 | 2.2 | 3.7 | 2.7 | 6.6 | 9.2 | 8.8 | 10.1 | 15.2 | 7 | 1.22 | 2.3 | 0.17 | 0.3 | 2.4 | C19-20 |
| Anus | 23 | 0 | 0 | 0 | 0 | 0 | 0 | 0.1 | 0 | 0.2 | 0.1 | 0 | 1.1 | 0.8 | 0.7 | 0.5 | 3.3 | 1.5 | 0.12 | 0.2 | 0.01 | 0.03 | 0.3 | C21 |
| Liver | 245 | 0 | 0.3 | 0 | 0 | 0 | 0.2 | 0.2 | 0.4 | 0.7 | 1.2 | 3.2 | 8.4 | 8.6 | 14.5 | 13.9 | 16.6 | 11.4 | 1.29 | 2.5 | 0.19 | 0.34 | 2.7 | C22 |
| Gallbladder etc. | 90 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.2 | 0.4 | 1.5 | 1.4 | 1.9 | 2.7 | 6 | 5.3 | 6.6 | 4 | 0.47 | 0.9 | 0.07 | 0.13 | 1 | C23-24 |
| Pancreas | 126 | 0 | 0 | 0 | 0 | 0 | 0 | 0.1 | 0.2 | 0.3 | 0.8 | 1.8 | 4.1 | 4.9 | 10.9 | 3.8 | 8.6 | 7 | 0.66 | 1.3 | 0.12 | 0.18 | 1.5 | C25 |
| Nose, sinuses etc. | 23 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.2 | 0.1 | 0 | 0.7 | 0.2 | 0.8 | 1.1 | 0.5 | 2 | 1 | 0.12 | 0.2 | 0.02 | 0.03 | 0.2 | C30-31 |
| Larynx | 29 | 0 | 0 | 0 | 0 | 0 | 0 | 0.1 | 0.1 | 0.1 | 0.8 | 0 | 0.4 | 1.4 | 1.1 | 1.9 | 2 | 1.5 | 0.15 | 0.3 | 0.02 | 0.04 | 0.3 | C32 |
| Trachea, bronchus and lung | 229 | 0 | 0 | 0 | 0 | 0 | 0 | 0.2 | 0.3 | 1 | 1.1 | 2.3 | 6.9 | 7.8 | 13.7 | 13.9 | 17.9 | 16.4 | 1.21 | 2.3 | 0.17 | 0.33 | 2.6 | C33-34 |
| Other thoracic organs | 18 | 0 | 0.3 | 0 | 0 | 0 | 0 | 0.1 | 0.1 | 0 | 0.3 | 0 | 0.2 | 0.3 | 0.4 | 0 | 0 | 1 | 0.09 | 0.2 | 0.01 | 0.01 | 0.1 | C37-38 |
| Bone | 94 | 0 | 0.1 | 0.3 | 1 | 0.7 | 0.4 | 0.6 | 0.2 | 0.3 | 0.4 | 0.4 | 1.7 | 0.3 | 0.4 | 0 | 0 | 1.5 | 0.5 | 0.9 | 0.03 | 0.03 | 0.5 | C40-41 |
| Melanoma of skin | 34 | 0 | 0 | 0 | 0 | 0 | 0 | 0.2 | 0.2 | 0.1 | 0.4 | 0.7 | 1.3 | 0.3 | 1.1 | 1 | 2.7 | 1.5 | 0.18 | 0.3 | 0.02 | 0.04 | 0.3 | C43 |
| Other skin | 332 | 0 | 0 | 0.1 | 0 | 0.2 | 0.1 | 0.6 | 0.5 | 1.2 | 2.8 | 5.2 | 6.9 | 10.8 | 14.8 | 17.3 | 25.2 | 26.8 | 1.75 | 3.3 | 0.22 | 0.43 | 3.6 | C44 |
| Mesothelioma | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.2 | 0 | 0 | 0 | 0.5 | 0 | 0.5 | 0.02 | 0 | 0 | 0 | 0 | C45 |
| Kaposi sarcoma | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.1 | 0.8 | 0 | 0 | 0.8 | 1.1 | 1 | 0.7 | 0.5 | 0.09 | 0.2 | 0.01 | 0.02 | 0.2 | C46 |
| Connective and soft tissue | 120 | 0 | 1.1 | 0.2 | 0.4 | 0.3 | 0.3 | 0.6 | 0.5 | 0.6 | 1.2 | 2.2 | 0.9 | 1.4 | 0.7 | 0.5 | 2 | 3.5 | 0.63 | 1.2 | 0.05 | 0.06 | 0.8 | C47,C49 |
| Breast | 2181 | 0 | 0 | 0 | 0 | 0.1 | 1.1 | 5.3 | 14.1 | 29.3 | 40.2 | 53.3 | 66.2 | 61.8 | 61.7 | 52.4 | 59 | 50.7 | 11.5 | 21.9 | 1.67 | 2.22 | 20.8 | C50 |
| Vulva | 24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.1 | 0.3 | 0.4 | 0.2 | 0.8 | 1.4 | 0.5 | 3.3 | 2 | 0.13 | 0.2 | 0.02 | 0.04 | 0.3 | C51 |
| Vagina | 30 | 0 | 0 | 0 | 0 | 0 | 0 | 0.1 | 0 | 0.1 | 0.1 | 0.4 | 1.1 | 0.3 | 1.8 | 3.4 | 0.7 | 1.5 | 0.16 | 0.3 | 0.02 | 0.04 | 0.3 | C52 |
| Cervix uteri | 550 | 0 | 0 | 0 | 0 | 0 | 0 | 0.6 | 2.2 | 5.6 | 9.4 | 12.7 | 15.6 | 16.5 | 22.6 | 15.4 | 34.5 | 18.4 | 2.9 | 5.5 | 0.43 | 0.68 | 5.7 | C53 |
| Corpus uteri | 206 | 0 | 0 | 0 | 0 | 0 | 0 | 0.2 | 0.5 | 1 | 2.1 | 3.2 | 5.1 | 7.3 | 15.9 | 11.5 | 11.9 | 7 | 1.09 | 2.1 | 0.18 | 0.29 | 2.3 | C54 |
| Uterus unspecified | 86 | 0 | 0 | 0 | 0 | 0 | 0 | 0.1 | 0.3 | 0.9 | 1.1 | 2.3 | 2.1 | 2.2 | 3.9 | 2.9 | 5.3 | 3.5 | 0.45 | 0.9 | 0.06 | 0.11 | 0.9 | C55 |
| Ovary | 463 | 0 | 0 | 0.2 | 0.6 | 1.1 | 1.6 | 1.8 | 2.1 | 1.6 | 5 | 7.2 | 9.4 | 10 | 16.9 | 13.5 | 26.5 | 16.4 | 2.44 | 4.7 | 0.29 | 0.49 | 4.2 | C56 |
| Other female genital organs | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0.1 | 0 | 0.1 | 0.1 | 0.5 | 0 | 0.3 | 0 | 0.5 | 0.7 | 0 | 0.05 | 0.1 | 0.01 | 0.01 | 0.1 | C57 |
| Placenta | 23 | 0 | 0 | 0 | 0 | 0 | 0.1 | 0.3 | 0.2 | 0.1 | 0.4 | 0.7 | 0.4 | 0.3 | 0 | 0 | 0 | 0 | 0.12 | 0.2 | 0.01 | 0.01 | 0.2 | C58 |
| Kidney | 204 | 0 | 1.6 | 0.3 | 0.1 | 0.1 | 0.2 | 0.4 | 0.8 | 1.2 | 1.2 | 2.2 | 6 | 4.3 | 7 | 8.6 | 5.3 | 4.5 | 1.08 | 2.1 | 0.13 | 0.2 | 1.8 | C64 |
| Renal pelvis | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.5 | 0.01 | 0 | 0 | 0 | 0 | C65 |
| Ureter | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.1 | 0 | 0.2 | 0 | 0 | 0 | 0.7 | 0.5 | 0.02 | 0 | 0 | 0.01 | 0 | C66 |
| Bladder | 204 | 0 | 0.1 | 0 | 0 | 0 | 0.1 | 0.3 | 0.5 | 0.1 | 1.5 | 2.9 | 2.6 | 5.7 | 9.5 | 13.5 | 15.9 | 23.3 | 1.08 | 2.1 | 0.12 | 0.26 | 2.3 | C67 |
| Other urinary organs | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.2 | 0 | 0 | 0 | 0.7 | 0 | 0.01 | 0 | 0 | 0 | 0 | C68 |
| Eye | 45 | 0 | 0.8 | 0.2 | 0 | 0.1 | 0 | 0 | 0.1 | 0.1 | 0.3 | 0.2 | 0.4 | 0 | 1.4 | 0 | 2 | 2 | 0.24 | 0.5 | 0.02 | 0.03 | 0.3 | C69 |
| Brain, nervous system | 281 | 0 | 1.4 | 1.4 | 1.2 | 1 | 0.8 | 0.9 | 1.1 | 1.5 | 2.2 | 3.4 | 3.6 | 3.5 | 5.6 | 2.9 | 2.7 | 3 | 1.48 | 2.8 | 0.14 | 0.17 | 1.9 | C70-72 |
| Thyroid | 1035 | 0 | 0 | 0.1 | 0.3 | 1.9 | 4.8 | 8.1 | 11.5 | 14.2 | 15.7 | 19.4 | 15.9 | 10.8 | 15.9 | 9.1 | 19.9 | 7.5 | 5.46 | 10.4 | 0.59 | 0.74 | 7.6 | C73 |
| Adrenal gland | 42 | 0 | 1 | 0.2 | 0 | 0 | 0.1 | 0.1 | 0.1 | 0.2 | 0.1 | 0.2 | 0.2 | 0.3 | 0 | 0.5 | 0 | 0 | 0.22 | 0.4 | 0.01 | 0.01 | 0.2 | C74 |
| Other endocrine | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.1 | 0 | 0.1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.02 | 0 | 0 | 0 | 0 | C75 |
| Hodgkin disease | 225 | 0 | 0.2 | 0.7 | 0.9 | 0.9 | 1.3 | 1.3 | 1.2 | 0.7 | 1.8 | 2.9 | 1.5 | 4.9 | 4.6 | 3.4 | 4.6 | 2.5 | 1.19 | 2.3 | 0.11 | 0.15 | 1.6 | C81 |
| Non-Hodgkin lymphoma | 601 | 0 | 1.1 | 1.1 | 0.7 | 0.9 | 1.4 | 2.2 | 2.2 | 3.1 | 4.6 | 7.7 | 13.7 | 13 | 29.3 | 16.8 | 19.9 | 21.4 | 3.17 | 6 | 0.4 | 0.59 | 5.4 | C82-5,C96 |
| Immunoproliferative diseases | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.1 | 0.2 | 0 | 0 | 0 | 0 | 0 | 0.5 | 0.02 | 0 | 0 | 0 | 0 | C88 |
| Multiple myeloma | 123 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.1 | 0.3 | 0.6 | 1.1 | 4.7 | 3.8 | 8.8 | 8.6 | 8.6 | 8.4 | 0.65 | 1.2 | 0.1 | 0.18 | 1.5 | C90 |
| Lymphoid leukaemia | 275 | 0 | 4 | 2.2 | 1.1 | 0.5 | 0.4 | 0.5 | 0.5 | 0.1 | 0.8 | 1.3 | 1.3 | 1.1 | 3.5 | 2.9 | 6 | 3.5 | 1.45 | 2.8 | 0.09 | 0.13 | 1.6 | C91 |
| Myeloid leukaemia | 244 | 0 | 0.6 | 0.5 | 0.7 | 1 | 0.8 | 0.8 | 1.4 | 1.7 | 2.2 | 2.7 | 3.4 | 3.2 | 6.3 | 4.8 | 8.6 | 4.5 | 1.29 | 2.5 | 0.13 | 0.19 | 1.8 | C92-94 |
| Leukaemia unspecified | 77 | 0 | 0.6 | 0.4 | 0.6 | 0.2 | 0.2 | 0.1 | 0.1 | 0.2 | 0.6 | 0.2 | 0.2 | 0.8 | 1.8 | 1.9 | 1.3 | 2.5 | 0.41 | 0.8 | 0.03 | 0.05 | 0.5 | C95 |
| Myeloproliferative disorders | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.4 | 0.5 | 2.7 | 0 | 0.04 | 0.1 | 0 | 0.02 | 0.1 | MPD |
| Myelodysplastic syndromes | 5 | 0 | 0 | 0 | 0 | 0.1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0.03 | 0.1 | 0 | 0 | 0 | MDS |
| Other and unspecified | 410 | 0 | 0.7 | 0.1 | 0.1 | 0.4 | 0.2 | 0.5 | 1 | 2.3 | 4.2 | 5.7 | 10.7 | 7.8 | 18.7 | 20.2 | 35.8 | 20.4 | 2.16 | 4.1 | 0.26 | 0.54 | 4.3 | O&U |
| All sites | 10279 | 0 | 14.1 | 8.3 | 8.1 | 10.6 | 15.7 | 27.8 | 47.1 | 79.3 | 124 | 172 | 242 | 245 | 384 | 318 | 466 | 363 | 54.2 | 103 | 6.89 | 10.8 | 96.3 | ALL |
| All sites but C44 | 9947 | 0 | 14 | 8.1 | 8 | 10.4 | 15.6 | 27.3 | 46.5 | 78.1 | 121 | 166 | 235 | 234 | 369 | 301 | 441 | 336 | 52.5 | 100 | 6.67 | 10.4 | 92.7 | ALLbC44 |

## Table 10: Frequency of Incident Cases in Omani Males by year, 1996-2015

| SITE | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | ICD (10th) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lip | 1 | 2 | 2 | 2 | 2 | 2 | 1 | 0 | 2 | 1 | 2 | 0 | 1 | 0 | 1 | 2 | 1 | 2 | 0 | 0 | C00 |
| Tongue | 5 | 4 | 1 | 5 | 6 | 3 | 3 | 4 | 4 | 4 | 6 | 5 | 4 | 3 | 4 | 4 | 4 | 12 | 6 | 14 | C01-02 |
| Mouth | 6 | 4 | 6 | 5 | 3 | 3 | 7 | 4 | 10 | 7 | 2 | 5 | 6 | 8 | 3 | 8 | 7 | 5 | 10 | 5 | C03-06 |
| Salivary glands | 2 | 1 | 6 | 0 | 1 | 1 | 2 | 1 | 5 | 0 | 0 | 1 | 2 | 1 | 2 | 0 | 2 | 2 | 2 | 5 | C07-08 |
| Tonsil | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 1 | 2 | 2 | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | C09 |
| Other oropharynx | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 3 | 3 | 3 | 2 | 0 | 1 | 1 | 1 | 2 | 0 | 1 | 1 | 2 | C10 |
| Nasopharynx | 5 | 8 | 4 | 2 | 7 | 7 | 3 | 3 | 7 | 4 | 2 | 4 | 6 | 6 | 5 | 4 | 2 | 3 | 9 | 10 | C11 |
| Hypopharynx | 2 | 1 | 1 | 2 | 1 | 1 | 4 | 1 | 8 | 0 | 0 | 0 | 1 | 3 | 0 | 0 | 0 | 0 | 1 | 2 | C12-13 |
| Pharynx unspecified | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | C14 |
| Oesophagus | 13 | 11 | 10 | 10 | 10 | 11 | 12 | 9 | 9 | 12 | 11 | 9 | 5 | 8 | 15 | 10 | 10 | 10 | 15 | 9 | C15 |
| Stomach | 43 | 53 | 50 | 56 | 56 | 57 | 54 | 35 | 34 | 54 | 43 | 36 | 33 | 50 | 32 | 58 | 64 | 55 | 54 | 43 | C16 |
| Small intestine | 1 | 1 | 1 | 1 | 1 | 2 | 3 | 0 | 0 | 2 | 0 | 2 | 0 | 2 | 2 | 5 | 3 | 3 | 4 | 10 | C17 |
| Colon | 11 | 11 | 15 | 6 | 14 | 12 | 14 | 15 | 17 | 23 | 23 | 21 | 19 | 22 | 32 | 36 | 45 | 45 | 43 | 49 | C18 |
| Rectum | 6 | 13 | 9 | 9 | 6 | 13 | 8 | 15 | 6 | 17 | 14 | 11 | 10 | 19 | 10 | 26 | 26 | 26 | 24 | 33 | C19-20 |
| Anus | 3 | 0 | 1 | 3 | 1 | 5 | 4 | 3 | 2 | 1 | 1 | 2 | 2 | 1 | 1 | 3 | 4 | 4 | 2 | 2 | C21 |
| Liver | 22 | 16 | 31 | 35 | 28 | 30 | 13 | 20 | 26 | 34 | 18 | 20 | 30 | 18 | 19 | 29 | 34 | 29 | 51 | 41 | C22 |
| Gallbladder etc. | 0 | 3 | 2 | 4 | 5 | 2 | 3 | 3 | 3 | 7 | 2 | 7 | 3 | 4 | 5 | 7 | 2 | 5 | 3 | 6 | C23-24 |
| Pancreas | 9 | 11 | 5 | 6 | 10 | 13 | 2 | 6 | 12 | 7 | 6 | 5 | 8 | 10 | 14 | 16 | 16 | 22 | 13 | 18 | C25 |
| Nose, sinuses etc. | 1 | 2 | 1 | 3 | 2 | 0 | 0 | 2 | 5 | 2 | 3 | 3 | 1 | 1 | 1 | 3 | 0 | 0 | 0 | 1 | C30-31 |
| Larynx | 7 | 5 | 10 | 4 | 5 | 2 | 2 | 7 | 8 | 10 | 10 | 6 | 4 | 4 | 12 | 7 | 7 | 8 | 5 | 7 | C32 |
| Trachea, bronchus and lung | 28 | 49 | 32 | 50 | 37 | 44 | 30 | 29 | 31 | 30 | 30 | 40 | 28 | 30 | 25 | 44 | 31 | 42 | 48 | 42 | C33-34 |
| Other thoracic organs | 4 | 3 | 1 | 1 | 3 | 3 | 1 | 1 | 2 | 1 | 3 | 1 | 1 | 3 | 0 | 5 | 0 | 2 | 3 | 1 | C37-38 |
| Bone | 4 | 8 | 6 | 5 | 4 | 3 | 6 | 7 | 10 | 10 | 1 | 5 | 4 | 11 | 13 | 16 | 9 | 8 | 9 | 8 | C40-41 |
| Melanoma of skin | 2 | 3 | 1 | 0 | 1 | 4 | 2 | 1 | 4 | 1 | 0 | 2 | 2 | 4 | 2 | 3 | 2 | 4 | 2 | 2 | C43 |
| Other skin | 29 | 27 | 22 | 13 | 15 | 17 | 27 | 19 | 18 | 17 | 17 | 22 | 23 | 25 | 20 | 22 | 25 | 32 | 22 | 22 | C44 |
| Mesothelioma | 0 | 0 | 1 | 2 | 1 | 1 | 0 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 4 | 1 | 1 | 2 | 1 | C45 |
| Kaposi sarcoma | 3 | 8 | 0 | 5 | 1 | 2 | 5 | 4 | 0 | 2 | 4 | 3 | 2 | 2 | 2 | 7 | 1 | 4 | 0 | 2 | C46 |
| Connective and soft tissue | 10 | 11 | 11 | 6 | 14 | 8 | 7 | 8 | 13 | 6 | 4 | 3 | 8 | 4 | 10 | 6 | 9 | 8 | 11 | 18 | C47,C49 |
| Breast | 2 | 4 | 3 | 3 | 3 | 6 | 5 | 5 | 3 | 7 | 6 | 4 | 1 | 5 | 8 | 6 | 8 | 5 | 10 | 5 | C50 |
| Penis | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | C60 |
| Prostate | 39 | 47 | 41 | 45 | 37 | 45 | 32 | 30 | 26 | 40 | 29 | 54 | 41 | 48 | 48 | 66 | 82 | 82 | 81 | 85 | C61 |
| Testis | 4 | 3 | 4 | 3 | 2 | 5 | 6 | 5 | 7 | 3 | 6 | 6 | 7 | 6 | 7 | 10 | 6 | 7 | 10 | 13 | C62 |
| Other male genital organs | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | C63 |
| Kidney | 7 | 8 | 5 | 8 | 13 | 6 | 7 | 16 | 6 | 12 | 6 | 5 | 7 | 18 | 21 | 14 | 15 | 16 | 26 | 20 | C64 |
| Renal pelvis | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | C65 |
| Ureter | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | C66 |
| Bladder | 32 | 28 | 23 | 26 | 17 | 19 | 19 | 21 | 19 | 28 | 27 | 33 | 25 | 26 | 35 | 35 | 35 | 48 | 53 | 42 | C67 |
| Other urinary organs | 0 | 0 | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | C68 |
| Eye | 7 | 3 | 5 | 3 | 2 | 2 | 0 | 4 | 5 | 4 | 2 | 5 | 2 | 1 | 0 | 3 | 1 | 1 | 0 | 2 | C69 |
| Brain, nervous system | 17 | 22 | 26 | 16 | 18 | 29 | 17 | 21 | 27 | 17 | 10 | 14 | 14 | 23 | 18 | 20 | 28 | 18 | 28 | 21 | C70-72 |
| Thyroid | 8 | 10 | 5 | 8 | 5 | 14 | 11 | 15 | 8 | 10 | 6 | 6 | 12 | 13 | 3 | 12 | 17 | 19 | 31 | 29 | C73 |
| Adrenal gland | 0 | 1 | 0 | 1 | 1 | 1 | 0 | 3 | 2 | 2 | 3 | 1 | 0 | 3 | 6 | 4 | 6 | 4 | 3 | 5 | C74 |
| Other endocrine | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 2 | 0 | C75 |
| Hodgkin disease | 11 | 15 | 20 | 18 | 18 | 21 | 18 | 19 | 22 | 14 | 20 | 11 | 18 | 17 | 17 | 23 | 27 | 21 | 25 | 29 | C81 |
| Non-Hodgkin lymphoma | 45 | 43 | 40 | 43 | 42 | 38 | 37 | 51 | 49 | 43 | 41 | 43 | 44 | 41 | 41 | 57 | 53 | 54 | 61 | 66 | C82-85,C96 |
| Immunoproliferative diseases | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | C88 |
| Multiple myeloma | 5 | 14 | 8 | 7 | 10 | 9 | 6 | 4 | 9 | 12 | 4 | 10 | 9 | 8 | 9 | 7 | 13 | 13 | 10 | 10 | C90 |
| Lymphoid leukaemia | 12 | 19 | 19 | 19 | 18 | 20 | 22 | 23 | 28 | 22 | 17 | 12 | 26 | 31 | 24 | 37 | 15 | 18 | 34 | 27 | C91 |
| Myeloid leukaemia | 6 | 9 | 15 | 10 | 14 | 14 | 12 | 21 | 10 | 14 | 20 | 20 | 17 | 14 | 14 | 27 | 18 | 17 | 19 | 29 | C92-94 |
| Leukaemia unspecified | 7 | 3 | 5 | 5 | 4 | 7 | 12 | 6 | 6 | 3 | 1 | 5 | 2 | 1 | 3 | 2 | 2 | 5 | 1 | 0 | C95 |
| Myeloproliferative disorders | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 3 | 1 | 1 | 2 | 1 | 0 | 0 | 0 | 1 | MPD |
| Myelodysplastic syndromes | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 1 | 1 | MDS |
| Other and unspecified | 23 | 32 | 28 | 24 | 29 | 25 | 27 | 20 | 27 | 19 | 21 | 23 | 17 | 21 | 13 | 26 | 23 | 17 | 8 | 15 | O&U |
| All sites | 445 | 520 | 479 | 478 | 470 | 510 | 446 | 467 | 498 | 508 | 432 | 475 | 452 | 520 | 504 | 679 | 655 | 681 | 745 | 760 | ALL |
| All sites but C44 | 416 | 493 | 457 | 465 | 455 | 493 | 419 | 448 | 480 | 491 | 415 | 453 | 429 | 495 | 484 | 657 | 630 | 649 | 723 | 738 | ALLbC44 |

## Table 11: Frequency of Incident Cases in Omani Females by year, 1996-2015

| SITE | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | ICD (10th) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lip | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 1 | 1 | 2 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | C00 |
| Tongue | 6 | 1 | 0 | 4 | 2 | 0 | 1 | 2 | 2 | 1 | 1 | 2 | 2 | 2 | 4 | 4 | 3 | 1 | 6 | 6 | C01-02 |
| Mouth | 1 | 7 | 1 | 4 | 2 | 2 | 1 | 3 | 2 | 2 | 1 | 5 | 3 | 5 | 4 | 3 | 3 | 5 | 7 | 3 | C03-06 |
| Salivary glands | 0 | 1 | 2 | 2 | 1 | 2 | 0 | 7 | 4 | 1 | 4 | 2 | 2 | 2 | 2 | 3 | 1 | 1 | 2 | 4 | C07-08 |
| Tonsil | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | C09 |
| Other oropharynx | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | C10 |
| Nasopharynx | 1 | 2 | 1 | 4 | 2 | 0 | 5 | 4 | 2 | 0 | 1 | 1 | 4 | 3 | 5 | 3 | 2 | 1 | 2 | 5 | C11 |
| Hypopharynx | 0 | 1 | 2 | 1 | 1 | 2 | 1 | 2 | 1 | 0 | 3 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | C12-13 |
| Pharynx unspecified | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | C14 |
| Oesophagus | 8 | 9 | 13 | 12 | 9 | 7 | 5 | 4 | 4 | 5 | 6 | 10 | 6 | 8 | 5 | 4 | 9 | 2 | 3 | 5 | C15 |
| Stomach | 25 | 26 | 30 | 26 | 22 | 20 | 30 | 20 | 31 | 33 | 28 | 18 | 15 | 24 | 23 | 25 | 29 | 31 | 34 | 22 | C16 |
| Small intestine | 2 | 1 | 1 | 0 | 0 | 3 | 2 | 0 | 2 | 1 | 1 | 0 | 2 | 1 | 1 | 2 | 3 | 4 | 0 | 2 | C17 |
| Colon | 7 | 6 | 13 | 3 | 11 | 10 | 9 | 13 | 12 | 15 | 13 | 20 | 21 | 23 | 16 | 23 | 42 | 28 | 48 | 43 | C18 |
| Rectum | 4 | 6 | 9 | 0 | 8 | 7 | 9 | 11 | 7 | 6 | 12 | 11 | 9 | 12 | 19 | 16 | 16 | 24 | 23 | 23 | C19-20 |
| Anus | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 2 | 1 | 2 | 2 | 3 | 1 | 1 | 2 | 3 | 0 | 0 | 2 | 2 | C21 |
| Liver | 2 | 12 | 12 | 16 | 13 | 11 | 8 | 8 | 6 | 9 | 11 | 4 | 5 | 16 | 15 | 10 | 14 | 17 | 31 | 25 | C22 |
| Gallbladder etc. | 4 | 4 | 4 | 5 | 3 | 6 | 2 | 2 | 3 | 4 | 6 | 4 | 6 | 6 | 2 | 6 | 8 | 4 | 6 | 5 | C23-24 |
| Pancreas | 3 | 3 | 8 | 5 | 5 | 7 | 3 | 3 | 7 | 8 | 4 | 1 | 7 | 4 | 5 | 8 | 9 | 15 | 11 | 10 | C25 |
| Nose, sinuses etc. | 0 | 1 | 2 | 0 | 1 | 1 | 4 | 1 | 0 | 2 | 0 | 2 | 0 | 4 | 1 | 1 | 0 | 0 | 1 | 2 | C30-31 |
| Larynx | 2 | 1 | 2 | 0 | 2 | 2 | 2 | 1 | 1 | 1 | 2 | 1 | 0 | 3 | 1 | 0 | 1 | 2 | 1 | 4 | C32 |
| Trachea, bronchus and lung | 13 | 11 | 7 | 8 | 8 | 13 | 5 | 9 | 10 | 9 | 13 | 6 | 11 | 14 | 7 | 14 | 20 | 17 | 16 | 18 | C33-34 |
| Other thoracic organs | 0 | 2 | 0 | 1 | 0 | 0 | 0 | 2 | 0 | 1 | 0 | 2 | 2 | 0 | 1 | 1 | 3 | 0 | 1 | 2 | C37-38 |
| Bone | 2 | 8 | 3 | 7 | 4 | 2 | 3 | 5 | 5 | 4 | 7 | 2 | 2 | 1 | 3 | 8 | 10 | 12 | 6 | 0 | C40-41 |
| Melanoma of skin | 2 | 3 | 1 | 1 | 4 | 0 | 1 | 1 | 2 | 0 | 1 | 3 | 2 | 2 | 2 | 4 | 1 | 1 | 0 | 3 | C43 |
| Other skin | 12 | 9 | 11 | 24 | 20 | 14 | 7 | 11 | 10 | 17 | 14 | 8 | 16 | 19 | 24 | 20 | 20 | 24 | 20 | 32 | C44 |
| Mesothelioma | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | C45 |
| Kaposi sarcoma | 0 | 0 | 1 | 4 | 2 | 0 | 1 | 3 | 0 | 0 | 0 | 1 | 2 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | C46 |
| Connective and soft tissue | 6 | 10 | 4 | 5 | 10 | 4 | 7 | 2 | 10 | 6 | 6 | 5 | 5 | 2 | 4 | 3 | 10 | 6 | 4 | 11 | C47,C49 |
| Breast | 51 | 58 | 57 | 59 | 73 | 77 | 75 | 64 | 95 | 97 | 101 | 109 | 121 | 123 | 139 | 162 | 157 | 178 | 173 | 212 | C50 |
| Vulva | 1 | 2 | 0 | 1 | 1 | 1 | 1 | 4 | 3 | 0 | 3 | 2 | 0 | 0 | 1 | 0 | 2 | 2 | 0 | 0 | C51 |
| Vagina | 0 | 1 | 2 | 0 | 3 | 1 | 2 | 0 | 2 | 1 | 4 | 0 | 2 | 0 | 0 | 2 | 4 | 1 | 4 | 1 | C52 |
| Cervix uteri | 26 | 25 | 29 | 25 | 32 | 24 | 17 | 34 | 30 | 25 | 30 | 25 | 30 | 13 | 36 | 31 | 26 | 26 | 32 | 34 | C53 |
| Corpus uteri | 2 | 1 | 4 | 1 | 3 | 6 | 7 | 8 | 10 | 7 | 9 | 10 | 13 | 13 | 14 | 24 | 14 | 17 | 19 | 24 | C54 |
| Uterus unspecified | 10 | 8 | 4 | 3 | 0 | 6 | 3 | 2 | 3 | 1 | 2 | 3 | 6 | 2 | 3 | 6 | 5 | 5 | 7 | 7 | C55 |
| Ovary | 9 | 17 | 31 | 31 | 26 | 23 | 19 | 17 | 13 | 25 | 23 | 24 | 20 | 16 | 22 | 23 | 22 | 30 | 38 | 34 | C56 |
| Other female genital organs | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 2 | 3 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 1 | C57 |
| Placenta | 0 | 1 | 2 | 3 | 5 | 2 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 0 | 3 | 1 | 0 | 0 | 1 | C58 |
| Kidney | 11 | 6 | 8 | 4 | 11 | 12 | 6 | 10 | 3 | 11 | 4 | 6 | 17 | 8 | 9 | 21 | 10 | 15 | 15 | 17 | C64 |
| Renal pelvis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | C65 |
| Ureter | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | C66 |
| Bladder | 9 | 10 | 8 | 12 | 6 | 10 | 12 | 8 | 11 | 9 | 15 | 10 | 10 | 10 | 9 | 8 | 11 | 9 | 15 | 12 | C67 |
| Other urinary organs | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | C68 |
| Eye | 5 | 3 | 4 | 5 | 2 | 1 | 2 | 2 | 2 | 3 | 1 | 3 | 1 | 1 | 2 | 3 | 2 | 2 | 1 | 0 | C69 |
| Brain, nervous system | 10 | 15 | 18 | 17 | 13 | 19 | 9 | 8 | 21 | 10 | 13 | 11 | 14 | 12 | 20 | 14 | 7 | 13 | 18 | 19 | C70-72 |
| Thyroid | 31 | 32 | 36 | 35 | 26 | 41 | 36 | 36 | 30 | 36 | 40 | 38 | 40 | 52 | 40 | 73 | 73 | 109 | 96 | 135 | C73 |
| Adrenal gland | 0 | 5 | 2 | 1 | 3 | 3 | 1 | 3 | 1 | 0 | 3 | 0 | 4 | 1 | 0 | 4 | 3 | 3 | 2 | 3 | C74 |
| Other endocrine | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | C75 |
| Hodgkin disease | 12 | 5 | 5 | 9 | 14 | 6 | 10 | 11 | 5 | 8 | 5 | 9 | 15 | 11 | 14 | 23 | 10 | 21 | 15 | 17 | C81 |
| Non-Hodgkin lymphoma | 17 | 29 | 20 | 19 | 29 | 27 | 23 | 32 | 33 | 26 | 22 | 27 | 30 | 30 | 41 | 42 | 30 | 35 | 33 | 56 | C82-85,C96 |
| Immunoproliferative diseases | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | C88 |
| Multiple myeloma | 4 | 9 | 6 | 9 | 10 | 2 | 1 | 6 | 5 | 5 | 7 | 3 | 3 | 6 | 6 | 5 | 10 | 9 | 6 | 11 | C90 |
| Lymphoid leukaemia | 9 | 8 | 12 | 9 | 11 | 14 | 11 | 12 | 12 | 14 | 12 | 11 | 21 | 10 | 15 | 13 | 19 | 18 | 22 | 22 | C91 |
| Myeloid leukaemia | 6 | 8 | 7 | 9 | 15 | 12 | 7 | 11 | 10 | 7 | 9 | 12 | 14 | 13 | 18 | 16 | 15 | 17 | 19 | 19 | C92-94 |
| Leukaemia unspecified | 3 | 1 | 3 | 5 | 4 | 8 | 11 | 11 | 4 | 2 | 2 | 7 | 3 | 3 | 0 | 3 | 0 | 2 | 5 | 0 | C95 |
| Myeloproliferative disorders | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | MPD |
| Myelodysplastic syndromes | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | MDS |
| Other and unspecified | 25 | 35 | 34 | 25 | 19 | 18 | 27 | 21 | 22 | 25 | 23 | 28 | 11 | 14 | 9 | 19 | 10 | 16 | 14 | 15 | O&U |
| All sites | 342 | 403 | 422 | 414 | 439 | 430 | 388 | 421 | 442 | 444 | 468 | 461 | 506 | 492 | 546 | 658 | 640 | 729 | 762 | 872 | ALL |
| All sites but C44 | 330 | 394 | 411 | 390 | 419 | 416 | 381 | 410 | 432 | 427 | 454 | 453 | 490 | 473 | 522 | 638 | 620 | 705 | 742 | 840 | ALLbC44 |

## Table 12: Age – Adjusted Incidence Rates in Omani Males by year, 1996-2015

| SITE | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | ICD (10th) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lip | 0.2 | 0.5 | 0.7 | 0.7 | 0.5 | 0.4 | 0.2 | 0 | 0.8 | 0.3 | 0.5 | 0 | 0.1 | 0 | 0.3 | 0.4 | 0.1 | 0.2 | 0 | 0 | C00 |
| Tongue | 1.3 | 0.9 | 0.3 | 1.2 | 1.3 | 0.7 | 0.7 | 0.9 | 0.8 | 1 | 1.5 | 1.3 | 1.2 | 0.7 | 0.8 | 0.9 | 0.7 | 2.1 | 0.8 | 2.1 | C01-02 |
| Mouth | 1.6 | 1.1 | 1.6 | 1 | 0.8 | 0.6 | 1.5 | 0.9 | 3 | 1.9 | 0.3 | 1.1 | 1.3 | 1.7 | 0.7 | 1.7 | 1.2 | 0.6 | 1.3 | 0.6 | C03-06 |
| Salivary glands | 0.3 | 0.3 | 1.3 | 0 | 0.2 | 0.3 | 0.5 | 0.1 | 1.8 | 0 | 0 | 0.1 | 0.3 | 0.2 | 0.5 | 0 | 0.3 | 0.4 | 0.2 | 0.5 | C07-08 |
| Tonsil | 0 | 0.2 | 0 | 0.2 | 0 | 0.3 | 0 | 0 | 0.3 | 0.2 | 0.5 | 0.6 | 0.2 | 0 | 0.2 | 0 | 0 | 0.1 | 0 | 0.2 | C09 |
| Other oropharynx | 0 | 0 | 0 | 0 | 0.5 | 0 | 0 | 0.7 | 0.8 | 0.8 | 0.4 | 0 | 0.3 | 0.2 | 0.2 | 0.4 | 0 | 0.2 | 0.2 | 0.4 | C10 |
| Nasopharynx | 0.9 | 1.7 | 0.8 | 0.4 | 1.5 | 1.3 | 0.3 | 0.4 | 0.7 | 1 | 0.6 | 0.9 | 1.5 | 1.1 | 0.8 | 0.8 | 0.3 | 0.3 | 1.3 | 1.4 | C11 |
| Hypopharynx | 0.6 | 0.3 | 0.2 | 0.4 | 0.2 | 0.1 | 0.7 | 0.2 | 2.3 | 0 | 0 | 0 | 0.3 | 0.7 | 0 | 0 | 0 | 0 | 0.1 | 0.3 | C12-13 |
| Pharynx unspecified | 0.2 | 0.2 | 0 | 0 | 0 | 0 | 0 | 0.3 | 0.3 | 0 | 0 | 0.3 | 0 | 0.2 | 0 | 0.2 | 0 | 0.1 | 0.1 | 0.2 | C14 |
| Oesophagus | 3.7 | 2.9 | 2.6 | 2.6 | 2.4 | 2.6 | 2.8 | 2.1 | 3.7 | 3.5 | 3.2 | 2.6 | 1.3 | 2.1 | 4 | 2.3 | 1.8 | 1.5 | 2.2 | 1.3 | C15 |
| Stomach | 11.7 | 14.6 | 13.5 | 13.9 | 13 | 13.4 | 11.9 | 7.8 | 11.9 | 16.2 | 13 | 10.1 | 8.8 | 13.1 | 7.5 | 13.9 | 11.3 | 8.1 | 9 | 5.7 | C16 |
| Small intestine | 0.2 | 0.2 | 0.2 | 0.3 | 0.2 | 0.4 | 0.6 | 0 | 0 | 0.4 | 0 | 0.5 | 0 | 0.5 | 0.4 | 1.1 | 0.4 | 0.6 | 0.7 | 1.6 | C17 |
| Colon | 2.7 | 2.8 | 3.5 | 1.5 | 3 | 2.4 | 3.1 | 3.2 | 4.7 | 5.8 | 5.8 | 5.1 | 4.4 | 4.9 | 6.3 | 6.8 | 7.3 | 6.7 | 6.3 | 7 | C18 |
| Rectum | 1.5 | 3.4 | 2.5 | 1.8 | 1.1 | 3 | 1.6 | 3.1 | 1.6 | 4.5 | 3.7 | 3 | 2.4 | 4.8 | 2.1 | 5.5 | 4.1 | 4.4 | 3.1 | 5 | C19-20 |
| Anus | 0.8 | 0 | 0.2 | 0.6 | 0.3 | 1.2 | 0.8 | 0.7 | 0.9 | 0.3 | 0.3 | 0.5 | 0.5 | 0.2 | 0.3 | 0.7 | 0.6 | 0.6 | 0.3 | 0.3 | C21 |
| Liver | 5.9 | 4.1 | 7.8 | 9.5 | 6.1 | 6.8 | 3 | 5 | 8.4 | 9.8 | 4.6 | 4.7 | 8 | 4.3 | 4.2 | 6.4 | 5.5 | 4.5 | 8 | 5.9 | C22 |
| Gallbladder etc. | 0 | 0.9 | 0.5 | 1 | 1.2 | 0.5 | 0.7 | 0.7 | 1.7 | 2.3 | 0.5 | 1.8 | 0.9 | 1 | 1.3 | 1.9 | 0.3 | 0.8 | 0.5 | 0.9 | C23-24 |
| Pancreas | 2.3 | 2.8 | 1.3 | 1.7 | 2.3 | 3 | 0.5 | 1.4 | 4.1 | 2.3 | 1.9 | 1.2 | 2.3 | 2.4 | 3.4 | 3.7 | 2.7 | 3.7 | 2.2 | 2.7 | C25 |
| Nose, sinuses etc. | 0.2 | 0.6 | 0.2 | 0.7 | 0.5 | 0 | 0 | 0.3 | 0.8 | 0.6 | 0.4 | 0.9 | 0.1 | 0.2 | 0.2 | 0.7 | 0 | 0 | 0 | 0.2 | C30-31 |
| Larynx | 1.9 | 1.1 | 2.7 | 1 | 1.2 | 0.4 | 0.4 | 1.7 | 3.3 | 2.9 | 2.5 | 1.3 | 1.1 | 0.8 | 2.7 | 1.6 | 1.1 | 1.2 | 1 | 1.1 | C32 |
| Trachea, bronchus and lung | 7.5 | 13 | 8.4 | 13.1 | 8.8 | 9.9 | 6.8 | 6.9 | 10.6 | 8.3 | 8.2 | 11.2 | 7.6 | 7.8 | 6.3 | 11.2 | 5 | 7.3 | 8 | 6.9 | C33-34 |
| Other thoracic organs | 1 | 0.8 | 0.2 | 0.2 | 0.6 | 0.5 | 0.2 | 0.1 | 0.7 | 0.1 | 0.6 | 0.3 | 0.1 | 0.7 | 0 | 1.2 | 0 | 0.2 | 0.4 | 0.1 | C37-38 |
| Bone | 0.7 | 1.3 | 1.1 | 0.8 | 0.7 | 0.2 | 0.7 | 0.9 | 1.6 | 0.9 | 0.3 | 0.5 | 0.3 | 1 | 1.4 | 1.8 | 0.7 | 0.7 | 0.8 | 0.6 | C40-41 |
| Melanoma of skin | 0.5 | 0.9 | 0.3 | 0 | 0.2 | 1 | 0.4 | 0.3 | 1.1 | 0.3 | 0 | 0.3 | 0.5 | 0.8 | 0.6 | 0.7 | 0.4 | 0.7 | 0.2 | 0.3 | C43 |
| Other skin | 7.7 | 6.9 | 5.8 | 3.1 | 3.4 | 3.8 | 5.4 | 4.1 | 5 | 5.4 | 5.1 | 5.9 | 5.7 | 6.2 | 5.2 | 4.8 | 3.7 | 4.5 | 3.2 | 3.1 | C44 |
| Mesothelioma | 0 | 0 | 0.4 | 0.4 | 0.2 | 0.2 | 0 | 0.3 | 0 | 0 | 0.3 | 0.3 | 0.3 | 0 | 0 | 0.9 | 0.1 | 0.2 | 0.3 | 0.2 | C45 |
| Kaposi sarcoma | 0.6 | 1.7 | 0 | 1.3 | 0.2 | 0.5 | 0.8 | 0.7 | 0 | 0.5 | 0.7 | 0.5 | 0.5 | 0.5 | 0.3 | 1.4 | 0.1 | 0.6 | 0 | 0.1 | C46 |
| Connective and soft tissue | 1.4 | 2 | 1.6 | 1 | 2 | 1.3 | 0.9 | 1.5 | 2 | 0.8 | 0.6 | 0.4 | 1.2 | 0.5 | 1.4 | 0.9 | 0.7 | 0.9 | 1 | 1.9 | C47,C49 |
| Breast | 0.5 | 1 | 0.6 | 0.7 | 0.7 | 1.4 | 0.8 | 1.1 | 1 | 1.7 | 1.8 | 0.9 | 0.1 | 1.4 | 2 | 1.3 | 1.4 | 0.8 | 1.8 | 0.9 | C50 |
| Penis | 0 | 0.2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.2 | 0 | 0 | 0.3 | 0 | 0.3 | 0 | 0 | 0 | 0.1 | 0.1 | C60 |
| Prostate | 10.8 | 12.9 | 11.4 | 12 | 9 | 10.6 | 7.3 | 6.9 | 11.2 | 12.3 | 8.7 | 16.1 | 12.3 | 13.1 | 12.8 | 17 | 13.5 | 13.7 | 12.7 | 13.3 | C61 |
| Testis | 0.6 | 0.5 | 0.5 | 0.5 | 0.2 | 0.7 | 0.9 | 0.7 | 1 | 0.5 | 0.7 | 0.5 | 0.7 | 0.5 | 0.5 | 0.7 | 0.4 | 0.6 | 0.8 | 0.9 | C62 |
| Other male genital organs | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.5 | 0 | 0 | 0 | 0.1 | 0.1 | 0 | 0 | 0 | 0 | 0 | 0.1 | C63 |
| Kidney | 1.6 | 1.9 | 1.3 | 1.6 | 2.6 | 1.2 | 1.2 | 2.9 | 1.7 | 2.5 | 1.2 | 1.4 | 2 | 3.9 | 4.1 | 2.6 | 2.2 | 2.2 | 3.6 | 2.7 | C64 |
| Renal pelvis | 0.3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.2 | C65 |
| Ureter | 0 | 0 | 0 | 0 | 0 | 0.3 | 0 | 0 | 0 | 0 | 0.3 | 0 | 0 | 0 | 0 | 0 | 0.2 | 0 | 0 | 0.2 | C66 |
| Bladder | 8.3 | 7.5 | 5.8 | 6.6 | 3.8 | 4.4 | 4.1 | 4.8 | 5.9 | 7.7 | 7.5 | 8.8 | 6.9 | 6.7 | 8.9 | 8.7 | 6 | 7.8 | 8.3 | 6.6 | C67 |
| Other urinary organs | 0 | 0 | 0.2 | 0.3 | 0.1 | 0 | 0.2 | 0 | 0 | 0 | 0.6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | C68 |
| Eye | 1.5 | 1 | 0.8 | 0.6 | 0.3 | 0.3 | 0 | 0.8 | 0.9 | 1.1 | 0.5 | 1.1 | 0.3 | 0.1 | 0 | 0.2 | 0.1 | 0.2 | 0 | 0.2 | C69 |
| Brain, nervous system | 2.4 | 4 | 3.8 | 2.9 | 3 | 4.4 | 3.2 | 3.2 | 4.1 | 2.8 | 1.5 | 2.4 | 1.8 | 3.4 | 2.6 | 2.8 | 3.5 | 2.3 | 3.2 | 2.1 | C70-72 |
| Thyroid | 1.9 | 2.2 | 1.3 | 1.7 | 1.1 | 2.8 | 1.6 | 3.2 | 1.6 | 2 | 0.9 | 1.1 | 2 | 1.7 | 0.6 | 2.4 | 2 | 2.4 | 3.2 | 2.7 | C73 |
| Adrenal gland | 0 | 0.1 | 0 | 0.1 | 0.2 | 0.1 | 0 | 0.3 | 0.2 | 0.2 | 0.4 | 0.1 | 0 | 0.3 | 0.7 | 0.3 | 0.7 | 0.3 | 0.4 | 0.3 | C74 |
| Other endocrine | 0 | 0.2 | 0 | 0.1 | 0 | 0.2 | 0 | 0 | 0.3 | 0 | 0.1 | 0.1 | 0 | 0.1 | 0 | 0 | 0 | 0.1 | 0.2 | 0 | C75 |
| Hodgkin disease | 1.9 | 2.2 | 3.4 | 2.2 | 2.7 | 3 | 2.4 | 2.4 | 3.5 | 2.3 | 2.2 | 1.6 | 3 | 1.7 | 1.8 | 3.5 | 3 | 2.2 | 2.6 | 2.3 | C81 |
| Non-Hodgkin lymphoma | 8.9 | 8.6 | 9.5 | 9 | 7.9 | 7.3 | 7.1 | 9.9 | 11.3 | 9.4 | 7.8 | 7.4 | 9.7 | 7.5 | 7.6 | 10.9 | 7.5 | 7.2 | 8.3 | 8.6 | C82-85,C96 |
| Immunoproliferative diseases | 0.2 | 0 | 0.2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.3 | 0 | 0 | 0.3 | 0 | 0 | 0 | 0.1 | C88 |
| Multiple myeloma | 1.3 | 3.8 | 2 | 1.6 | 2.4 | 2.1 | 1.4 | 0.8 | 3.1 | 3.5 | 1.2 | 2.9 | 2.5 | 2.2 | 1.8 | 1.8 | 2.2 | 2.1 | 1.5 | 1.4 | C90 |
| Lymphoid leukaemia | 1.6 | 2.4 | 1.9 | 2.5 | 2.5 | 2.6 | 2.4 | 3.3 | 3.8 | 2.3 | 2.5 | 1.7 | 2.5 | 3.6 | 2.6 | 5.3 | 1.7 | 1.6 | 3.3 | 2.3 | C91 |
| Myeloid leukaemia | 1 | 2 | 2.9 | 1.9 | 2.9 | 1.8 | 1.9 | 3.1 | 1.9 | 2.6 | 3.5 | 3.8 | 3.3 | 1.9 | 2 | 4.3 | 2.4 | 2 | 2.4 | 2.7 | C92-94 |
| Leukaemia unspecified | 1.3 | 0.5 | 0.6 | 0.8 | 0.6 | 1.2 | 1.2 | 1.1 | 0.6 | 0.4 | 0.1 | 0.4 | 0.2 | 0.3 | 0.2 | 0.3 | 0.2 | 0.7 | 0.1 | 0 | C95 |
| Myeloproliferative disorders | 0 | 0 | 0.3 | 0.2 | 0 | 0 | 0.2 | 0.1 | 0 | 0.1 | 0.2 | 0.7 | 0.3 | 0.3 | 0.5 | 0.1 | 0 | 0 | 0 | 0.1 | MPD |
| Myelodysplastic syndromes | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.3 | 0 | 0 | 0 | 0.6 | 0 | 0 | 0 | 0.1 | 0.1 | MDS |
| Other and unspecified | 6.3 | 7.4 | 7.2 | 5.2 | 6.8 | 5.3 | 5.3 | 4.1 | 9 | 4.6 | 5.8 | 5.4 | 4.1 | 5 | 3.1 | 5.9 | 4 | 2.7 | 1.1 | 2.2 | O&U |
| All sites | 106 | 124 | 112 | 109 | 99.4 | 105 | 85.7 | 92.8 | 135 | 127 | 103 | 113 | 104 | 111 | 104 | 141 | 99.3 | 100 | 105 | 101 | ALL |
| All sites but C44 | 98.4 | 117 | 106 | 106 | 96 | 101 | 80.3 | 88.7 | 130 | 121 | 98 | 107 | 97.9 | 104 | 98.5 | 136 | 95.6 | 95.7 | 102 | 97.7 | ALLbC44 |

## Table 13: Age – Adjusted Incidence Rates in Omani Females by year, 1996-2015

| SITE | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | ICD (10th) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lip | 0 | 0 | 0.4 | 0 | 0 | 0 | 0 | 0.2 | 0.2 | 0 | 0.3 | 0.4 | 0.5 | 0 | 0 | 0 | 0.3 | 0 | 0 | 0.2 | C00 |
| Tongue | 1.7 | 0.2 | 0 | 0.9 | 0.5 | 0 | 0.1 | 0.4 | 0.3 | 0.2 | 0.4 | 0.5 | 0.3 | 0.3 | 0.8 | 1 | 0.5 | 0.2 | 1 | 0.7 | C01-02 |
| Mouth | 0.4 | 2 | 0.2 | 1 | 0.4 | 0.4 | 0.1 | 0.7 | 0.6 | 0.6 | 0.3 | 1.3 | 0.8 | 1.5 | 0.9 | 0.7 | 0.5 | 0.9 | 1.1 | 0.4 | C03-06 |
| Salivary glands | 0 | 0.1 | 0.5 | 0.4 | 0.2 | 0.3 | 0 | 1.2 | 0.8 | 0.4 | 0.7 | 0.4 | 0.2 | 0.3 | 0.2 | 0.6 | 0.1 | 0.2 | 0.2 | 0.4 | C07-08 |
| Tonsil | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | C09 |
| Other oropharynx | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.6 | 0.3 | 0.7 | 0 | 0.3 | 0 | 0 | 0 | 0 | 0 | 0.1 | 0 | 0 | C10 |
| Nasopharynx | 0.3 | 0.4 | 0.2 | 0.8 | 0.2 | 0 | 0.6 | 0.7 | 0.1 | 0 | 0.2 | 0.2 | 1 | 0.6 | 0.4 | 0.6 | 0.3 | 0.1 | 0.3 | 0.6 | C11 |
| Hypopharynx | 0 | 0.4 | 0.4 | 0.4 | 0.2 | 0.4 | 0.2 | 0.5 | 0.5 | 0 | 0.7 | 0.3 | 0.3 | 0 | 0 | 0 | 0 | 0 | 0.1 | 0 | C12-13 |
| Pharynx unspecified | 0 | 0 | 0 | 0 | 0 | 0.3 | 0 | 0 | 0 | 0 | 0 | 0.1 | 0.3 | 0 | 0 | 0.2 | 0 | 0.1 | 0 | 0 | C14 |
| Oesophagus | 2.2 | 3 | 4.4 | 3.3 | 2.1 | 1.7 | 1.1 | 0.9 | 2.1 | 1.9 | 2 | 3.1 | 1.7 | 2.4 | 1.1 | 1.2 | 1.6 | 0.4 | 0.5 | 0.6 | C15 |
| Stomach | 7.2 | 7.1 | 8.2 | 7 | 5.7 | 4.4 | 6.8 | 4.3 | 10.6 | 10.1 | 7.1 | 5.1 | 4.1 | 6 | 5.5 | 5.1 | 4.8 | 4.5 | 5.5 | 2.9 | C16 |
| Small intestine | 0.5 | 0.3 | 0.3 | 0 | 0 | 0.7 | 0.5 | 0 | 0.6 | 0.4 | 0.3 | 0 | 0.6 | 0.3 | 0.2 | 0.5 | 0.5 | 0.5 | 0 | 0.2 | C17 |
| Colon | 2.1 | 1.6 | 3.1 | 1 | 2.4 | 2.4 | 2.1 | 2.4 | 4 | 3.5 | 3 | 4.6 | 4.3 | 4.8 | 2.8 | 4.6 | 7.2 | 4.1 | 7 | 6.2 | C18 |
| Rectum | 1.1 | 1.6 | 2.1 | 0 | 2 | 1.5 | 2.2 | 2.6 | 2 | 1.2 | 2.7 | 2.5 | 1.9 | 2.6 | 4.1 | 3.2 | 2.5 | 3.7 | 3.4 | 3 | C19-20 |
| Anus | 0 | 0 | 0 | 0 | 0.2 | 0 | 0.1 | 0.5 | 0.4 | 0.7 | 0.5 | 0.6 | 0.3 | 0.3 | 0.6 | 0.6 | 0 | 0 | 0.3 | 0.2 | C21 |
| Liver | 0.6 | 3.6 | 3.2 | 4.1 | 3.1 | 2.5 | 1.7 | 1.9 | 1.9 | 2.2 | 2.5 | 1.2 | 1.7 | 3.8 | 3.6 | 2 | 2.2 | 2.7 | 4.8 | 3.7 | C22 |
| Gallbladder etc. | 1.3 | 1.2 | 1.1 | 1.4 | 0.8 | 1.4 | 0.3 | 0.5 | 1.2 | 1.1 | 1.8 | 1.3 | 1.5 | 1.4 | 0.6 | 1.1 | 1.3 | 0.7 | 1 | 0.7 | C23-24 |
| Pancreas | 0.8 | 0.8 | 2.4 | 1.2 | 1.3 | 1.8 | 0.7 | 0.8 | 3 | 2 | 1 | 0.3 | 1.6 | 1 | 1.3 | 1.9 | 1.5 | 2.6 | 1.8 | 1.5 | C25 |
| Nose, sinuses etc. | 0 | 0.2 | 0.5 | 0 | 0.3 | 0.1 | 0.8 | 0.3 | 0 | 0.4 | 0 | 0.3 | 0 | 1.1 | 0.3 | 0.2 | 0 | 0 | 0.1 | 0.3 | C30-31 |
| Larynx | 0.5 | 0.2 | 0.4 | 0 | 0.4 | 0.5 | 0.4 | 0.3 | 0.2 | 0.2 | 0.8 | 0.3 | 0 | 0.8 | 0.1 | 0 | 0.2 | 0.4 | 0.2 | 0.5 | C32 |
| Trachea, bronchus and lung | 4.1 | 2.8 | 1.6 | 2.1 | 2 | 3.2 | 1 | 2.2 | 3.5 | 2.4 | 3.6 | 1.6 | 3 | 3.4 | 1.8 | 3.6 | 3.6 | 2.7 | 2.5 | 2.7 | C33-34 |
| Other thoracic organs | 0 | 0.4 | 0 | 0.1 | 0 | 0 | 0 | 0.3 | 0 | 0.1 | 0 | 0.4 | 0.5 | 0 | 0.1 | 0.1 | 0.4 | 0 | 0.1 | 0.1 | C37-38 |
| Bone | 0.4 | 1.1 | 0.2 | 0.6 | 0.4 | 0.4 | 0.2 | 0.3 | 0.8 | 0.7 | 0.8 | 0.1 | 0.1 | 0.1 | 0.3 | 0.9 | 1 | 1.3 | 0.5 | 0 | C40-41 |
| Melanoma of skin | 0.4 | 1.2 | 0.2 | 0.1 | 0.9 | 0 | 0.1 | 0.2 | 0.5 | 0 | 0.1 | 0.5 | 0.5 | 0.4 | 0.4 | 0.6 | 0.2 | 0.2 | 0 | 0.5 | C43 |
| Other skin | 3.4 | 2.6 | 2.9 | 5.4 | 4.8 | 3.3 | 1.5 | 2.5 | 4 | 4 | 4.1 | 2.1 | 5 | 4.8 | 5.2 | 3.9 | 3.4 | 3.9 | 3 | 4.3 | C44 |
| Mesothelioma | 0 | 0 | 0 | 0 | 0.2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.1 | 0.2 | C45 |
| Kaposi sarcoma | 0 | 0 | 0.2 | 0.9 | 0.4 | 0 | 0.2 | 0.6 | 0 | 0 | 0 | 0.2 | 0.7 | 0.4 | 0.3 | 0 | 0 | 0.2 | 0 | 0 | C46 |
| Connective and soft tissue | 1 | 1.9 | 0.3 | 1.1 | 1.5 | 0.6 | 1 | 0.3 | 1.9 | 0.7 | 0.8 | 0.7 | 0.7 | 0.2 | 0.3 | 0.2 | 1.2 | 0.7 | 0.5 | 1.1 | C47,C49 |
| Breast | 13.6 | 13.8 | 13.2 | 13.9 | 15.4 | 16 | 15 | 13.6 | 25.6 | 22.3 | 23.5 | 23.2 | 25 | 23.3 | 25 | 28.1 | 24.2 | 25.1 | 22.2 | 26.9 | C50 |
| Vulva | 0.2 | 0.7 | 0 | 0.4 | 0.3 | 0.3 | 0.2 | 0.8 | 1 | 0 | 1 | 0.3 | 0 | 0 | 0.2 | 0 | 0.3 | 0.3 | 0 | 0 | C51 |
| Vagina | 0 | 0.4 | 0.6 | 0 | 0.6 | 0.2 | 0.5 | 0 | 0.4 | 0.1 | 1.5 | 0 | 0.8 | 0 | 0 | 0.1 | 0.7 | 0.1 | 0.7 | 0.2 | C52 |
| Cervix uteri | 6.6 | 6.6 | 7.2 | 6.3 | 7.3 | 5.7 | 3.8 | 7.5 | 8 | 7.4 | 6.8 | 6 | 7.1 | 2.8 | 7.4 | 6.1 | 4.2 | 4 | 4.8 | 4.7 | C53 |
| Corpus uteri | 0.5 | 0.2 | 0.9 | 0.2 | 0.8 | 1.5 | 1.8 | 1.7 | 3.4 | 2.2 | 2.3 | 2.8 | 3.2 | 3.5 | 3.2 | 6 | 2.2 | 2.8 | 2.9 | 3.6 | C54 |
| Uterus unspecified | 2.3 | 1.8 | 1 | 1.1 | 0 | 1.4 | 0.7 | 0.6 | 0.6 | 0.4 | 0.5 | 0.8 | 1.4 | 0.4 | 0.7 | 1.2 | 0.7 | 0.7 | 1.1 | 1.1 | C55 |
| Ovary | 1.9 | 3.8 | 7.8 | 7 | 5.8 | 4.5 | 3.7 | 3.6 | 3.1 | 5.3 | 5 | 5.6 | 3.4 | 2.6 | 3.7 | 3.7 | 3 | 3.7 | 4.6 | 4.3 | C56 |
| Other female genital organs | 0 | 0 | 0 | 0 | 0 | 0 | 0.2 | 0 | 0.1 | 0 | 0.5 | 0.8 | 0 | 0 | 0 | 0 | 0 | 0.3 | 0 | 0.2 | C57 |
| Placenta | 0 | 0.1 | 0.3 | 0.6 | 0.8 | 0.3 | 0 | 0.1 | 0.1 | 0 | 0.2 | 0.1 | 0 | 0.2 | 0 | 0.4 | 0.1 | 0 | 0 | 0.2 | C58 |
| Kidney | 2.3 | 1.2 | 1.7 | 1 | 1.8 | 2.2 | 0.7 | 2.2 | 0.6 | 2 | 0.8 | 1.2 | 4 | 1.7 | 1.5 | 3.1 | 1.2 | 2.3 | 2 | 2.3 | C64 |
| Renal pelvis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | C65 |
| Ureter | 0 | 0 | 0 | 0 | 0 | 0.2 | 0 | 0 | 0 | 0.3 | 0 | 0 | 0 | 0 | 0.2 | 0 | 0.2 | 0 | 0 | 0 | C66 |
| Bladder | 2.4 | 2.9 | 1.6 | 3.4 | 1.5 | 2.3 | 2.8 | 2 | 4.8 | 2.9 | 4.8 | 2.7 | 2.8 | 2 | 1.8 | 2 | 1.5 | 1.4 | 2 | 1.6 | C67 |
| Other urinary organs | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.2 | 0 | 0 | 0 | 0 | 0.2 | 0 | 0 | 0 | C68 |
| Eye | 0.7 | 0.4 | 0.7 | 0.9 | 0.2 | 0.2 | 0.3 | 0.2 | 0.7 | 0.5 | 0.3 | 0.4 | 0.2 | 0.3 | 0.4 | 0.4 | 0.2 | 0.2 | 0.1 | 0 | C69 |
| Brain, nervous system | 1.3 | 2.7 | 3 | 2.4 | 1.9 | 3.2 | 1.1 | 1.2 | 2.5 | 1.4 | 2.2 | 1.7 | 1.9 | 1.4 | 3 | 2.2 | 0.9 | 1.2 | 2 | 1.8 | C70-72 |
| Thyroid | 7 | 7.4 | 6.8 | 5.9 | 4.3 | 7 | 6.3 | 5.9 | 4.8 | 6.6 | 6.9 | 5.7 | 5 | 6.7 | 5.2 | 9.1 | 7.7 | 12.2 | 10.3 | 14.3 | C73 |
| Adrenal gland | 0 | 0.7 | 0.3 | 0.2 | 0.5 | 0.3 | 0.1 | 0.3 | 0.1 | 0 | 0.3 | 0 | 0.4 | 0.1 | 0 | 0.4 | 0.3 | 0.2 | 0.1 | 0.3 | C74 |
| Other endocrine | 0 | 0 | 0 | 0 | 0 | 0.1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.1 | 0 | 0.1 | 0 | C75 |
| Hodgkin disease | 2.1 | 0.7 | 0.5 | 2 | 1.9 | 0.8 | 1.2 | 1.6 | 0.6 | 1.7 | 0.7 | 1.5 | 2.6 | 1.8 | 1.4 | 3.3 | 1 | 2.2 | 1.5 | 1.6 | C81 |
| Non-Hodgkin lymphoma | 3.1 | 6.4 | 3.9 | 3.3 | 5.4 | 5.1 | 4.5 | 5.4 | 10 | 6 | 4.5 | 6 | 5.8 | 5.7 | 7.9 | 7.4 | 4.5 | 5.4 | 4 | 7.1 | C82-85,C96 |
| Immunoproliferative diseases | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.2 | 0.2 | C88 |
| Multiple myeloma | 1.2 | 2.7 | 1.9 | 2.5 | 2.7 | 0.5 | 0.2 | 1.5 | 1.7 | 1.5 | 2.3 | 0.8 | 0.9 | 1.6 | 1.5 | 1 | 1.6 | 1.4 | 1 | 1.5 | C90 |
| Lymphoid leukaemia | 1 | 1.3 | 2 | 1 | 1.3 | 1.7 | 1.3 | 1.7 | 2.3 | 1.8 | 2 | 1.5 | 2.4 | 1.1 | 1.7 | 1.5 | 1.9 | 1.6 | 2.1 | 1.9 | C91 |
| Myeloid leukaemia | 1.5 | 1.9 | 1 | 1.9 | 2.5 | 1.8 | 0.9 | 2.1 | 2.1 | 1.3 | 1.3 | 1.7 | 2.1 | 2.1 | 2.9 | 2 | 1.7 | 1.7 | 2.3 | 2.2 | C92-94 |
| Leukaemia unspecified | 0.3 | 0.1 | 0.6 | 0.4 | 0.7 | 1.2 | 1.6 | 1.8 | 0.7 | 0.1 | 0.2 | 1.2 | 0.5 | 0.5 | 0 | 0.3 | 0 | 0.2 | 0.5 | 0 | C95 |
| Myeloproliferative disorders | 0.4 | 0 | 0.5 | 0 | 0 | 0 | 0 | 0.3 | 0 | 0.4 | 0 | 0.4 | 0.3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | MPD |
| Myelodysplastic syndromes | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.4 | 0.5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | MDS |
| Other and unspecified | 6.7 | 8.7 | 8.9 | 6.6 | 4.5 | 3.8 | 5.4 | 4.4 | 7.1 | 6.5 | 6.6 | 7.3 | 2.6 | 2.9 | 2 | 3.7 | 1.5 | 2.6 | 2.2 | 2 | O&U |
| All sites | 82.8 | 97.1 | 97.4 | 92.7 | 90.2 | 86.6 | 73.9 | 83.5 | 120 | 105 | 108 | 101 | 104 | 97.4 | 100 | 115 | 92.9 | 99.6 | 100 | 109 | ALL |
| All sites but C44 | 79.4 | 94.5 | 94.6 | 87.3 | 85.4 | 83.3 | 72.4 | 81.1 | 116 | 101 | 104 | 98.8 | 99.4 | 92.6 | 95.2 | 111 | 89.5 | 95.7 | 97.4 | 104 | ALLbC44 |

# REGIONAL DISTRIBUTION

## Regional Distribution of Cancer Cases 1996-2015

The high frequency of cancers reported in Muscat (5,289 cases) could be biased since the majority of cancer cases are referred to the National Oncology Center in Muscat and patients or their relatives may provide a local address in Muscat rather than their original place of residence. (Table 14)

Table 14: Regional distribution of incident cases

| Governorate | Frequency | Percentage (%) |
|---|---|---|
| Muscat | 5,289 | 25.2 |
| Al - Batinah North | 3,552 | 16.9 |
| Ad - Dakhliyah | 2,256 | 10.7 |
| Dhofar | 2,132 | 10.2 |
| Al - Batinah South | 2,093 | 10 |
| Ash- Sharqiah South | 1,471 | 7.0 |
| Adh -Dhahirah | 1,208 | 5.8 |
| Ash - Sharqiyah North | 1,168 | 5.6 |
| Al- Buraymi | 302 | 1.4 |
| Musandam | 205 | 1 |
| Al - Wusta | 118 | 0.6 |
| Unknown | 1,208 | 5.8 |
| Total | 21,002 | |

## Common Cancer in Oman

Over the 20 year period (1996-2015), breast cancer was the leading cancer among Omanis followed by Non-Hodgkin lymphoma, leukemia, colorectal and thyroid (Table 15).

Table 15: Five most common Cancer among Omanis (Males & Females) 1996-2015.

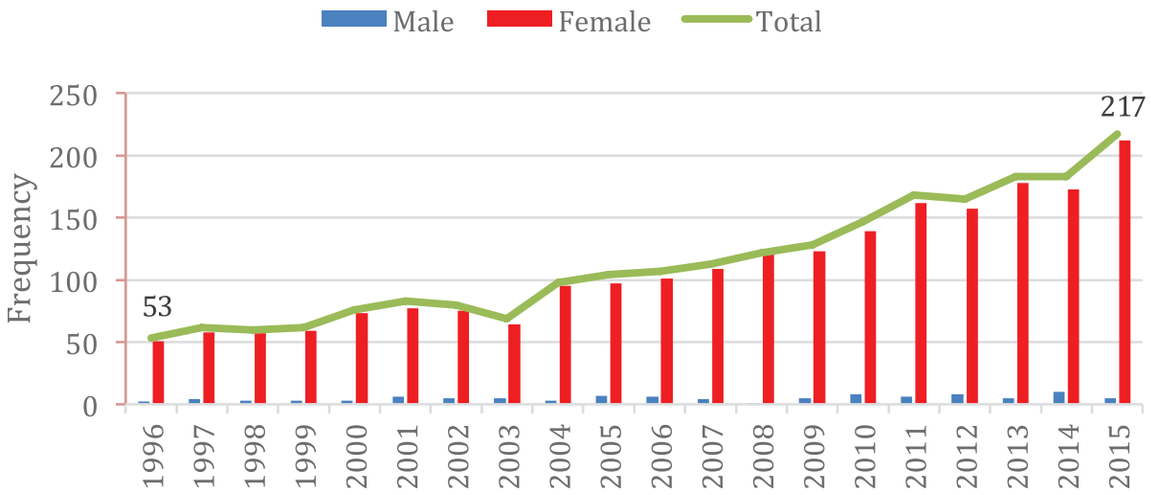
| Topograghy | Frequency | Percentage (%) |
|---|---|---|
| Breast | 2,280 | 10.9 |
| Non-Hodgkin lymphoma | 1,533 | 7.3 |
| Leukemia | 1,439 | 6.9 |
| Colorectal | 1,382 | 6.6 |
| Thyroid | 1,277 | 6.1 |

# COMMON CANCER IN OMANIS 1996-2015

# 1.BREAST

Breast cancer is the leading cancer among males and females in Oman and accounted for 10.9% of total malignancies among Omanis. This malignancy has quadrupled in Oman in 2015 (n=217) compared to 1996 (n=53) (Figure 8).

Figure 8: Trends of breast cancer 1996-2015




Between 1996 and 2015, there were 2,280 cases of breast cancer reported in Oman: 2181 in women and only 99 in men. The world ASR for breast cancer in Omani women was 20.8 per 100,000 females (Table 16).

Table 16: Gender distribution of breast cancer

| Gender | Frequency | CR | ASR |
|---|---|---|---|
| Male | 99 | 0.5 | 1.1 |
| Female | 2,181 | 11.5 | 20.8 |

CR= Crude rate

ASR= Age-standarized rate

# 1.BREAST

Infiltrating ductal carcinoma was the most frequent histopathological type accounting for 73.9% of all breast cancer (Figure 9).

Figure 9: Morphology of breast cancer 1996-2015

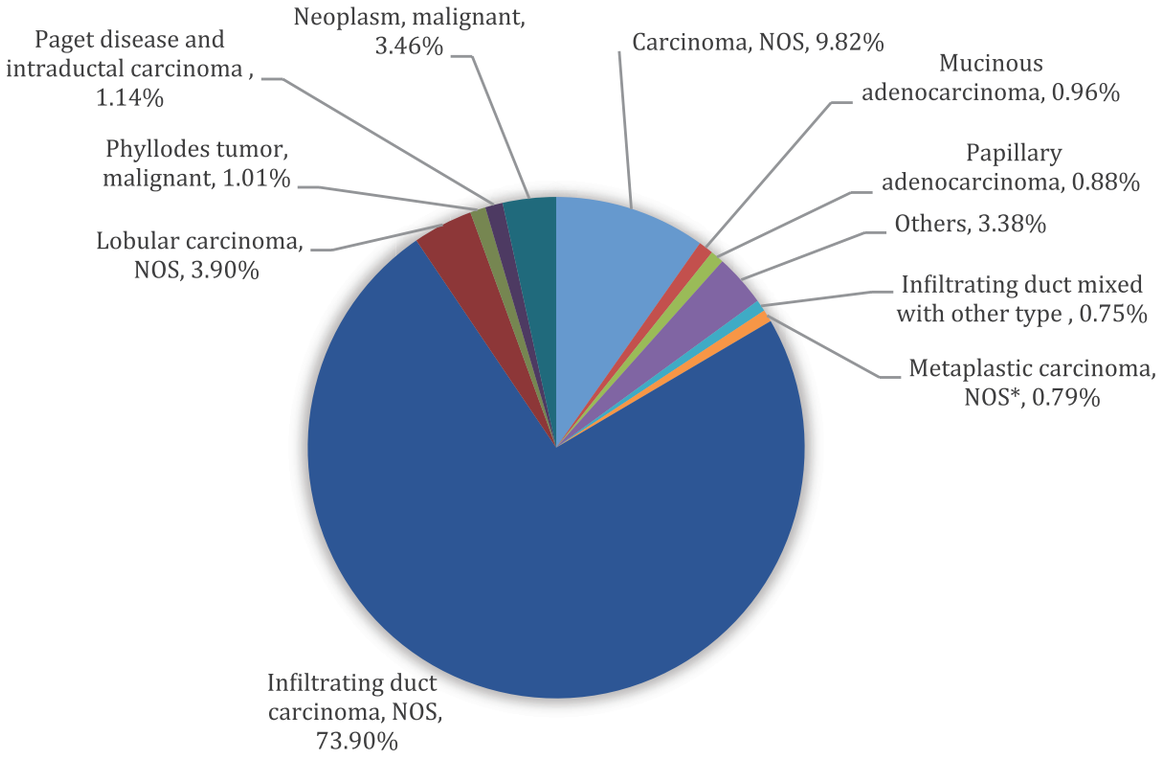
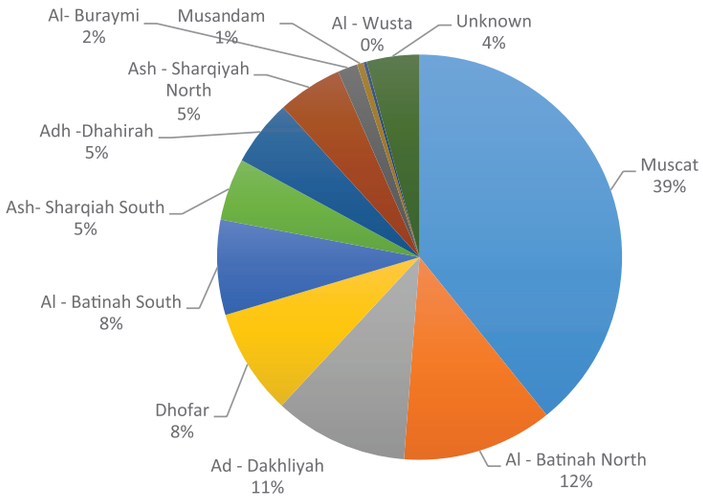



Table 17: Regional distribution of breast cancer

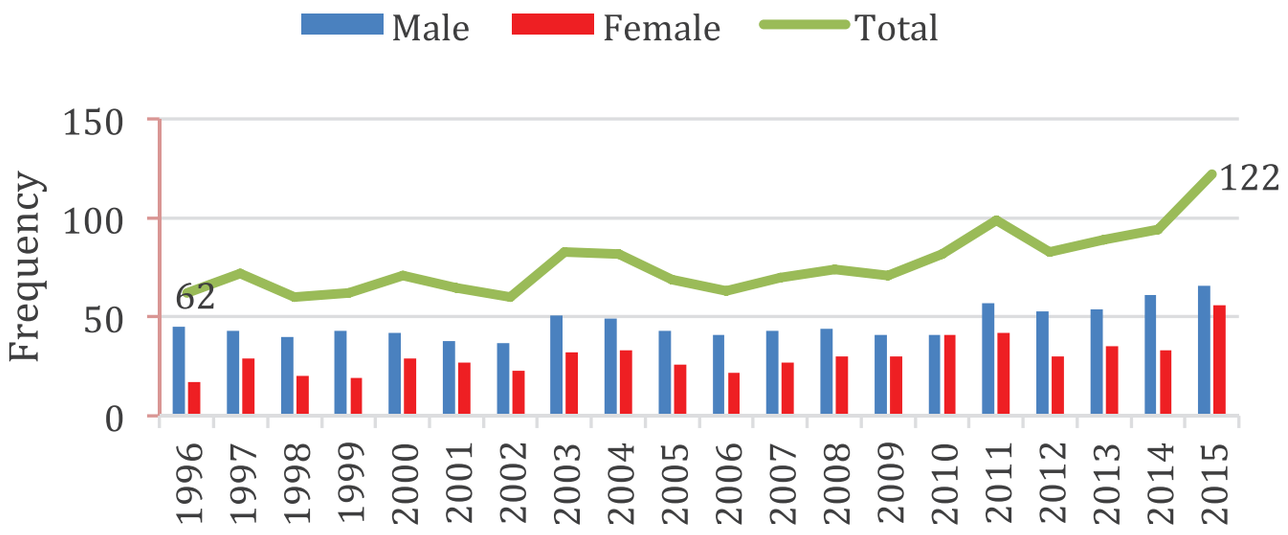
| Governorate | Frequency |
|---|---|
| Muscat | 894 |
| Al - Batinah North | 274 |
| Ad - Dakhliyah | 244 |
| Dhofar | 193 |
| Al - Batinah South | 173 |
| Ash- Sharqiah South | 113 |
| Adh -Dhahirah | 121 |
| Ash - Sharqiyah North | 118 |
| Al- Buraymi | 36 |
| Musandam | 12 |
| Al - Wusta | 6 |
| Unknown | 96 |



# 2.NON-HODGKIN LYMPHOMA (NHL)

Non-Hodgkin lymphoma is the second most common malignancy among Omanis and accounted for 7.3% of total malignancies. NHL cases reported in Oman doubled in 2015 (n=122) compared to 1996 (n=62) (Figure 10).

Figure 10: Trends of Non-Hodgkin lymphoma 1996-2015




Between 1996 and 2015, there were 1533 cases of NHL reported in Oman: 932 in men and 601 in women. The world ASR by gender were 8.3 cases per 100,000 Omani males and 5.4 cases per 100,000 females (Table 18).

Table 18 : Gender distribution of NHL

| Gender | Frequency | CR | ASR |
|---|---|---|---|
| Male | 932 | 4.8 | 8.3 |
| Female | 601 | 3.2 | 5.4 |

CR= Crude rate

ASR= Age-standarized rate

# 2.NON-HODGKIN LYMPHOMA (NHL)

Figure 11: Morphology of NHL 1996-2015

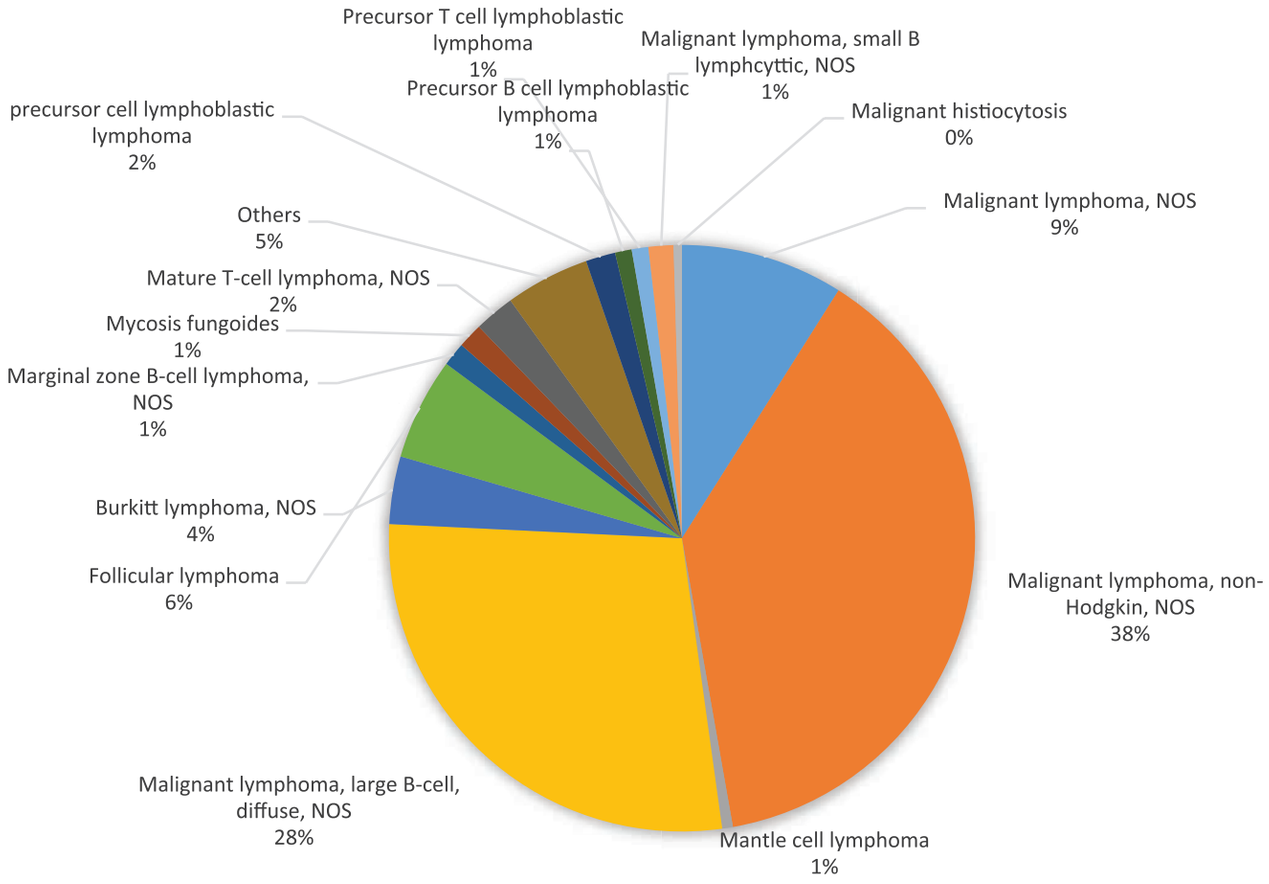
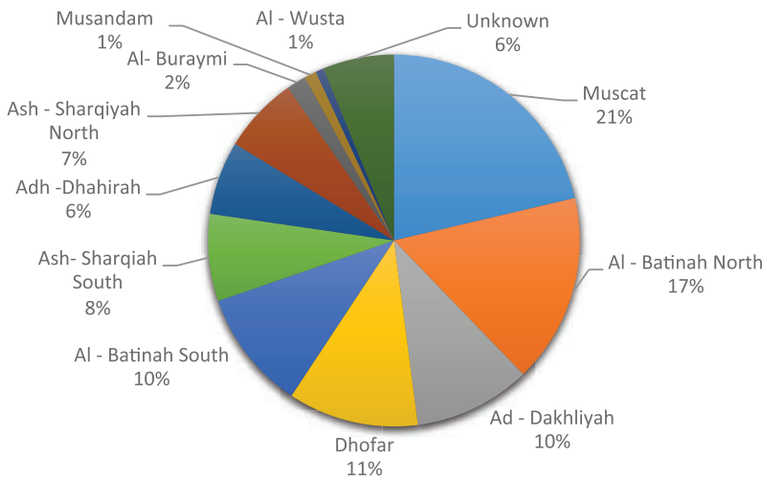



Table 19 : Regional distribution of NHL

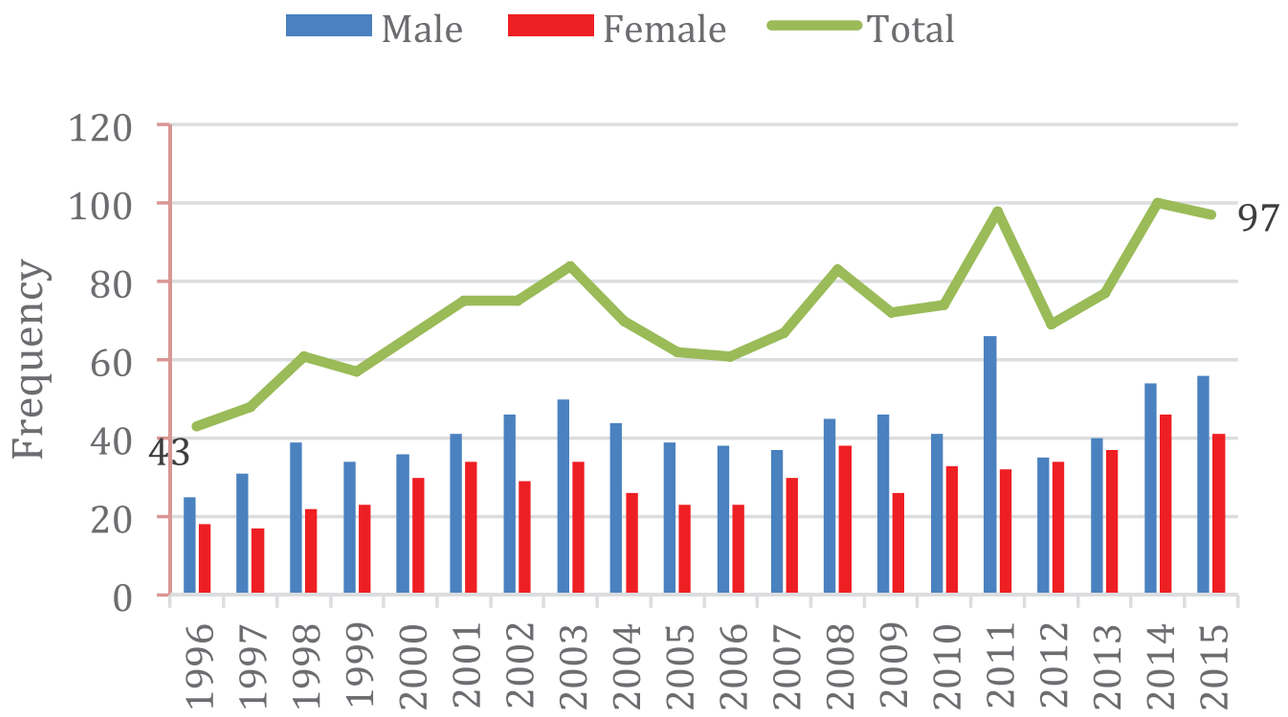
| Governorate | Frequency |
|---|---|
| Muscat | 327 |
| Al - Batinah North | 252 |
| Ad - Dakhliyah | 156 |
| Dhofar | 174 |
| Al - Batin ah South | 160 |
| Ash- Sharqiah South | 116 |
| Adh -Dhahirah | 98 |
| Ash - Sharqiyah North | 102 |
| Al- Buraymi | 26 |
| Musandam | 16 |
| Al - Wusta | 11 |
| Unknown | 95 |



# 3.LEUKEMIA

Leukemia is the third most common malignancy among Omanis and accounted for 6.85% of total malignancies. The total number of leukaemia cases reported in Oman more than doubled in 2015 (n=97) compared to 1996 (n=43) (Figure 12).

Figure 12: Trends of leukemia 1996-2015




Between 1996 and 2015, there were 1,439 cases of leukemia reported in Oman: 843 in men and 596 in women. The world ASR by gender were 5.6 cases per 100,000 Omani males and 3.9 cases per 100,000 females (Table 20).

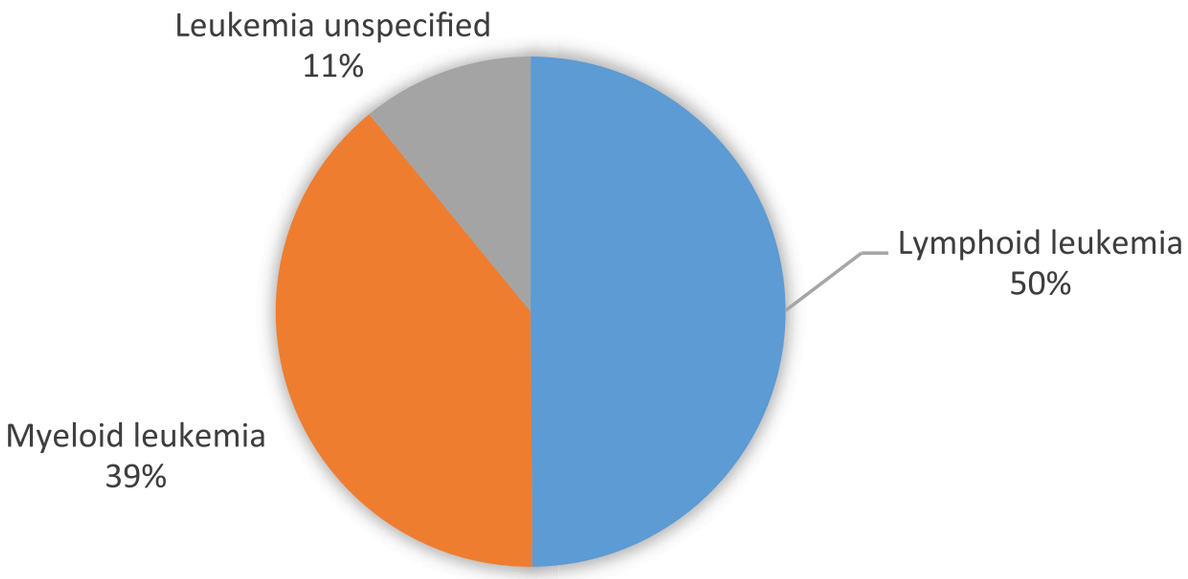
Table 20 : Gender distribution of Leukemia

| Gender | Frequency | CR | ASR |
|---|---|---|---|
| Male | 843 | 4.33 | 5.6 |
| Female | 596 | 3.15 | 3.9 |

CR= Crude rate

ASR= Age-standarized rate

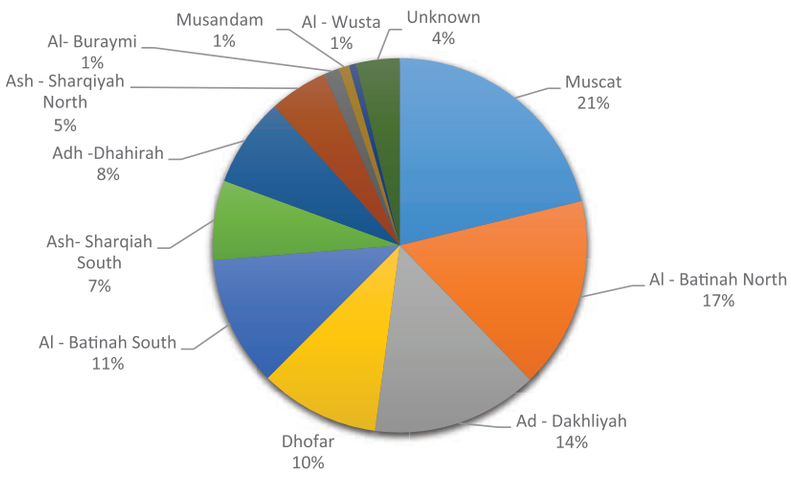
Figure 13: Morphology of leukemia 1996-2015




Lymphoid leukemia accounted for 50% of all leukemia following by myeloid leukemia 39% (Figure 13).

Table 21 : Regional distribution of leukemia

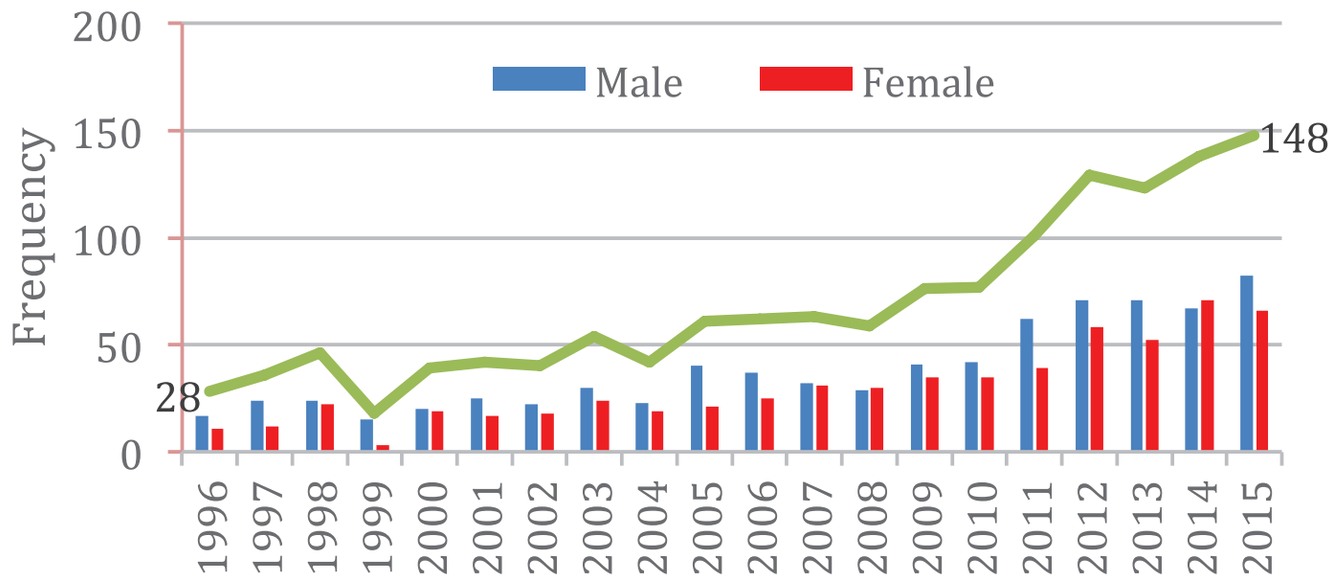
| Governorate | Frequency |
|---|---|
| Muscat | 305 |
| Al - Batinah North | 238 |
| Ad - Dakhliyah | 207 |
| Dhofar | 149 |
| Al - Batinah South | 162 |
| Ash- Sharqiah South | 99 |
| Adh -Dhahirah | 111 |
| Ash - Sharqiyah North | 73 |
| Al- Buraymi | 19 |
| Musandam | 13 |
| Al - Wusta | 9 |
| Unknown | 54 |



# 4.COLORECTAL

Colorectal is the fourth most common malignancy among Omanis and accounted for 6.58% of total malignancies. There was an increase of more than four folds in the total number of cases in Oman in 2015 (n=148) compared to 1996 (n=28), (Figure 14).

Figure 14: Trends of colorectal 1996-2015




Between 1996 and 2015, there were 1,382 cases of colorectal cancer reported in Oman: 774 in men and 608 in women. The world ASR by gender were 8 cases per 100,000 Omani males and 6.3 cases per 100,000 females (Table 22).

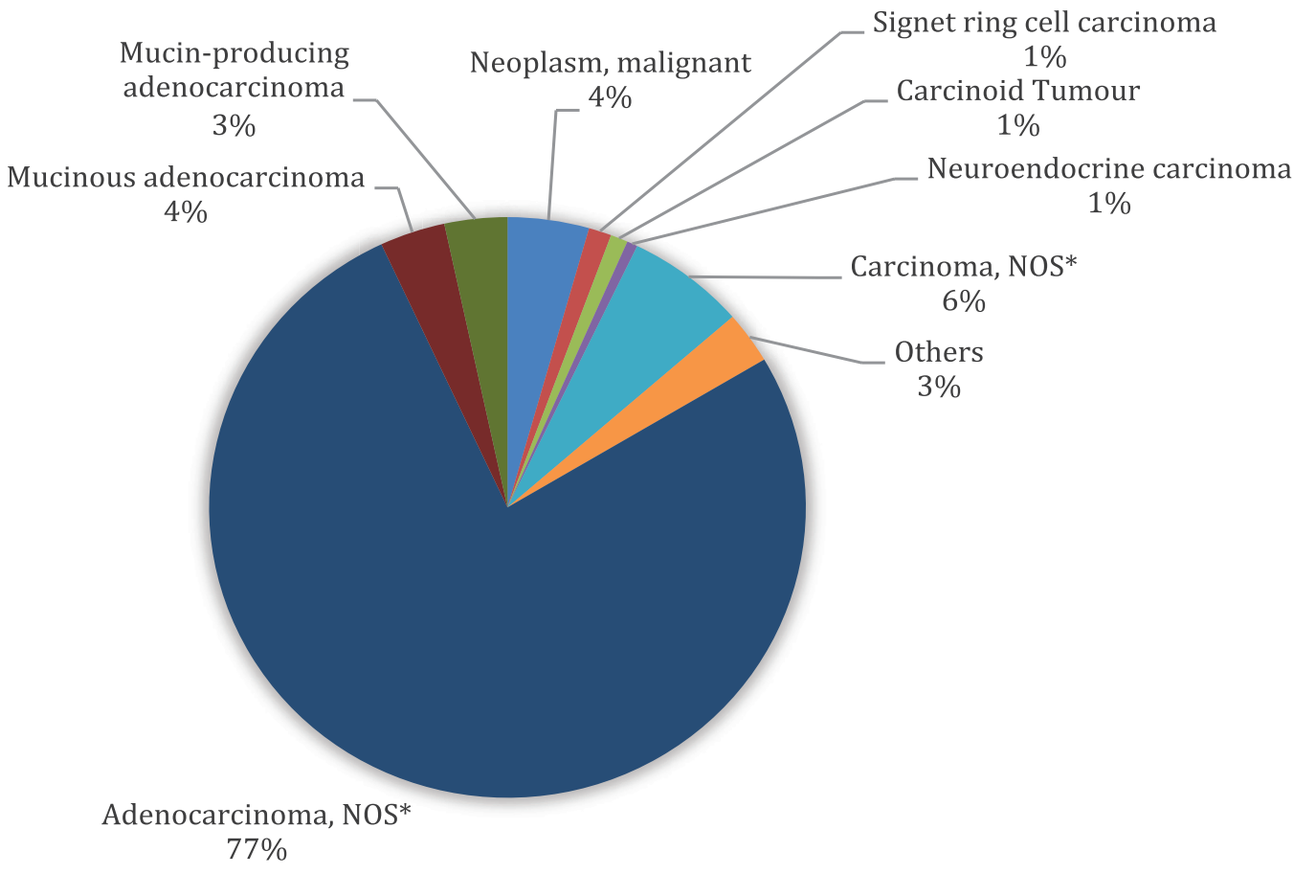
Table 22 : Gender distribution of colorectal cancer

| Gender | Frequency | CR | ASR |
|---|---|---|---|
| Male | 774 | 3.9 | 8 |
| Female | 608 | 3.2 | 6.3 |

CR= Crude rate

ASR= Age-standarized rate

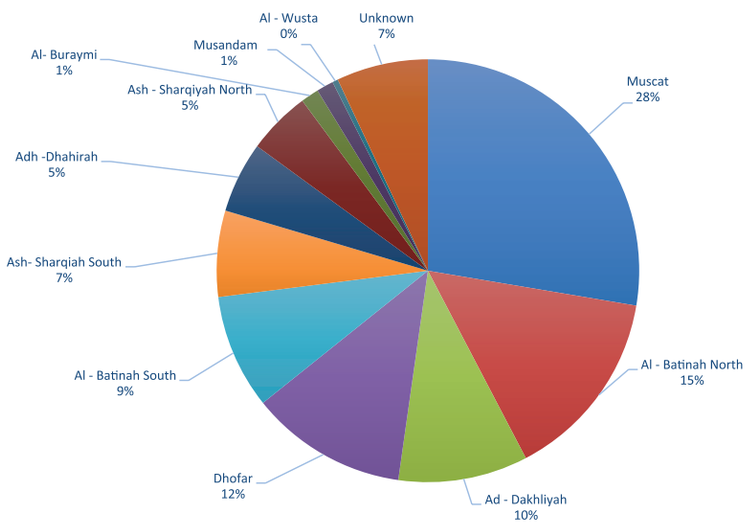
Figure 15: Morphology of colorectal cancer 1996-2015




Adenocarcinoma was the most frequent histopathological type accounting for 77% of all colorectal cancer (Figure 15).

Table 23 : Regional distribution of colorectal

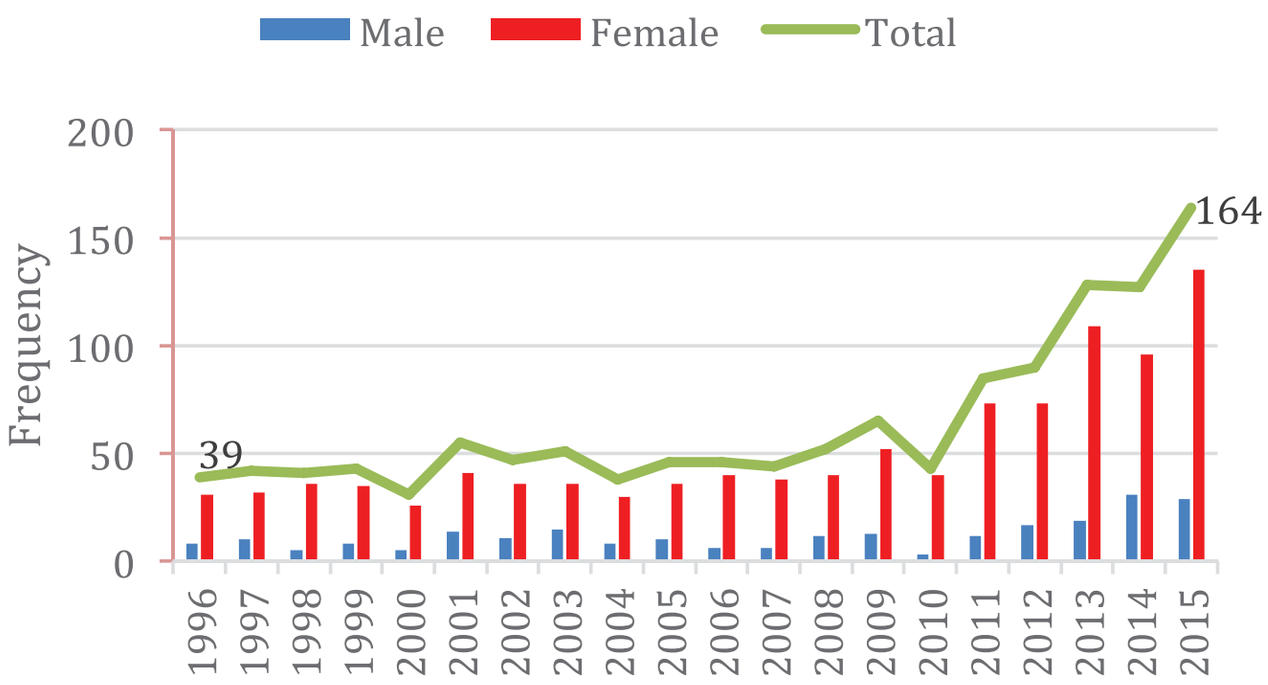
| Governorate | Frequency |
|---|---|
| Muscat | 382 |
| Al - Batinah North | 203 |
| Ad - Dakhliyah | 137 |
| Dhofar | 166 |
| Al - Batinah South | 121 |
| Ash- Sharqiah South | 91 |
| Adh -Dhahirah | 75 |
| Ash - Sharqiyah North | 67 |
| Al- Buraymi | 19 |
| Musandam | 18 |
| Al - Wusta | 6 |
| Unknown | 97 |



# 5.THYROID

Thyroid is the fifth most common malignancy among Omanis and accounted for 6.08% of total malignancies. There was a four-fold increase in the total cases of thyroid cancer reported in Oman in 2015 (n=164) compared to 1996 (n=39), (Figure 16).

Figure 16: Trends of thyroid cancer 1996-2015




Between 1996 and 2015, there were 1,277 cases of thyroid cancer reported in Oman: 242 in men and 1,035 in women. The world ASR by gender were 2 cases per 100,000 Omani males and 7.6 cases per 100,000 females (Table 24).

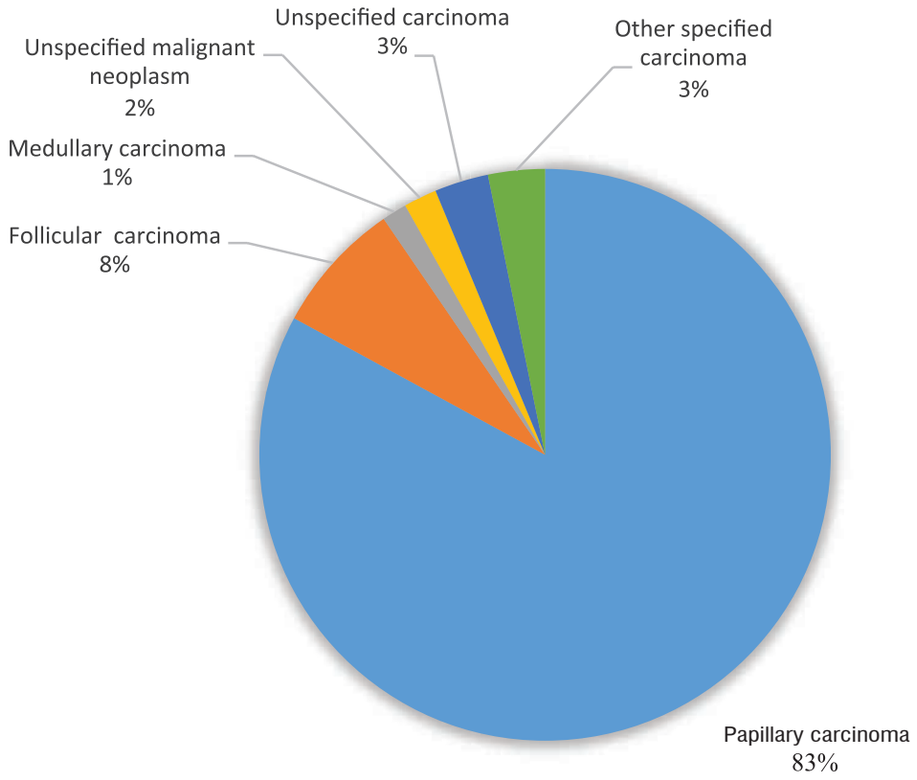
Table 24: Gender distribution of thyroid cancer

| Gender | Frequency | CR | ASR |
|---|---|---|---|
| Male | 242 | 1.2 | 2 |
| Female | 1,035 | 5.5 | 7.6 |

CR= Crude rate

ASR= Age-standarized rate

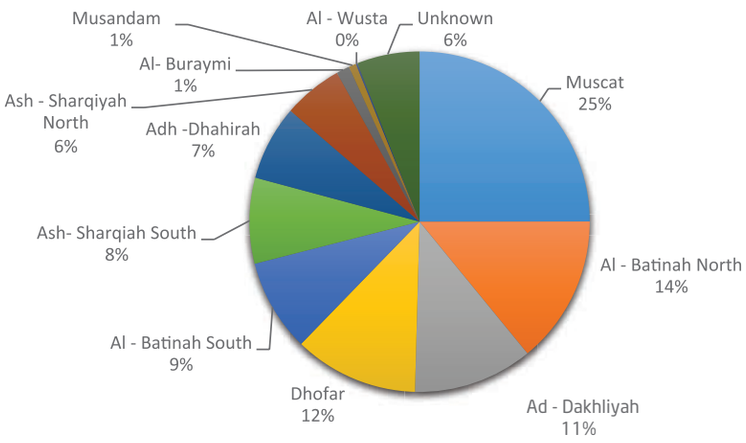
Figure 17: Morphology of thyroid cancer 1996-2015




Papillary carcinoma was the most frequent histopathological type accounting for 83% of all thyroid cancer (Figure 17).

Table 25 : Regional distribution of thyroid cancer

| Governorate | Frequency |
|---|---|
| Muscat | 319 |
| Al - Batinah North | 180 |
| Ad - Dakhliyah | 145 |
| Dhofar | 151 |
| Al - Batinah South | 112 |
| Ash- Sharqiah South | 104 |
| Adh -Dhahirah | 91 |
| Ash - Sharqiyah North | 72 |
| Al- Buraymi | 16 |
| Musandam | 9 |
| Al - Wusta | 2 |
| Unknown | 76 |



# FIVE MOST COMMON CANCER AMONG FEMALES AND MALES IN OMAN

# COMMON CANCER IN MALES

Between 1996 and 2015, prostate cancer was observed to be the leading malignancy in Omani males (998 new cases), followed by cancers of the stomach, NHL, leukemia, and colorectal. Table 26 summarizes the five most common cancers in Omani male in three different periods 1996-2005, 2006-2015 and finally over 20 years 1996-2015.

Table 26 : Five most common cancer among males in Oman

| Years 1996-2005 | |
|---|---|
| **Topography** | **Frequency** |
| Stomach | 492 |
| Non-Hodgkin lymphoma | 431 |
| Leukemia | 385 |
| Prostate | 382 |
| Lung | 360 |
| **Years 2006-2015** | |
| **Topography** | **Frequency** |
| Prostate | 616 |
| Colorectal | 534 |
| Non-Hodgkin lymphoma | 501 |
| Stomach | 468 |
| Leukemia | 458 |
| **Years 1996-2015** | |
| **Topography** | **Frequency** |
| Prostate | 998 |
| Stomach | 960 |
| Non-Hodgkin lymphoma | 932 |
| Leukemia | 843 |
| Colorectal | 774 |

# 1.PROSTATE

Prostate cancer was the leading cancer in Omani males between 1996 and 2015 and accounting for 9.3% of all incident cancers in males with an average annual ASR of 11.6 /100,000 people. The trend of prostate cancer incidence continued to rise slowly over the years; the lowest ASR (6.9/100,000) was reported in 2003 and the highest (17/100,000) in 2011. Age-specific incidence among males begins in the 40-45 year age group and steadily rises to peak in the 70-74 year age group (Figure 18 and Figure 19).

Figure 18: Age specific incidence rate for prostate cancer among Omani male 1996-2015

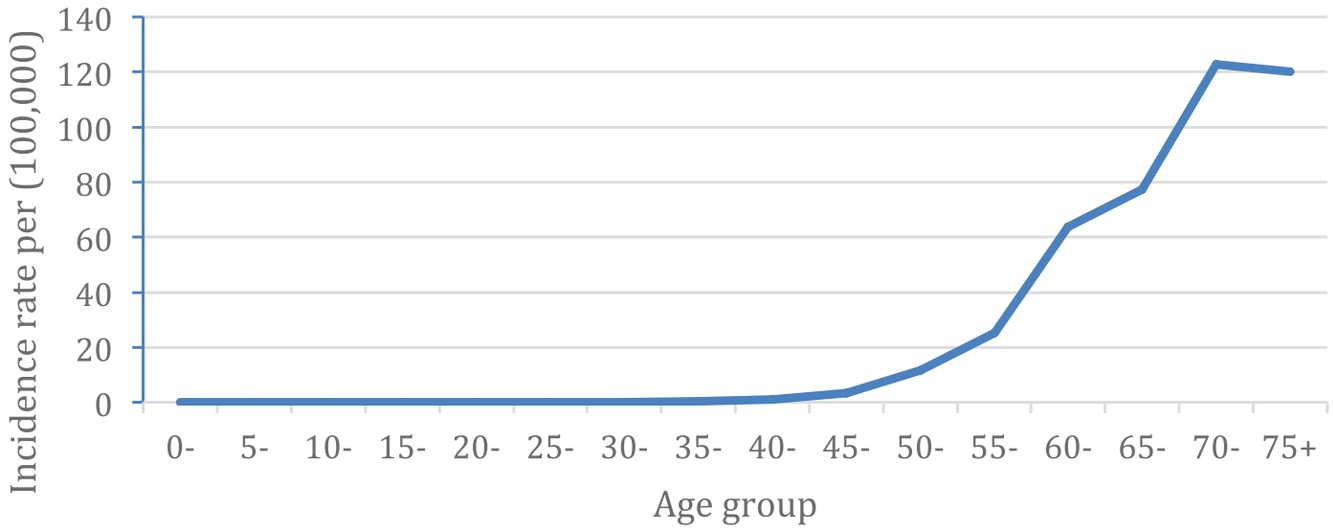
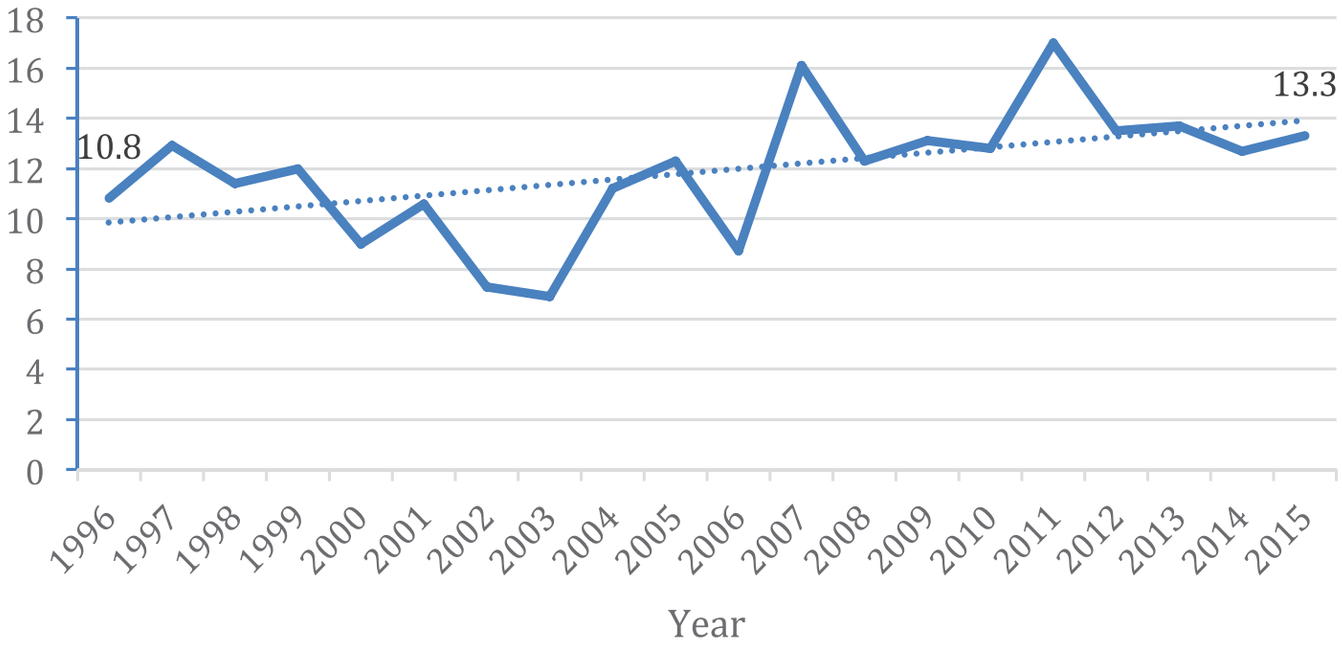



Figure 19: Age-Standardized Incidence Rates for Prostate Cancer in Omani Males



# 2.STOMACH

Stomach cancer was the second most common cancer in Omani males between 1996 and 2015 and accounting for 8.95% of all incident cancers in males with an average annual ASR of 10.9 /100,000 male. The trend of stomach cancer incidence had declined over the years; the lowest ASR (5.7/100,000) was reported in 2015 and the highest (16.2/100,000) in 2005. Age-specific incidence among males begins in the 40-45 year age group and steadily rises to peak in the 55-70 year age group (Figure 20 and Figure 21).

Figure 20: Age specific incidence rate for stomach cancer among Omani male 1996-2015

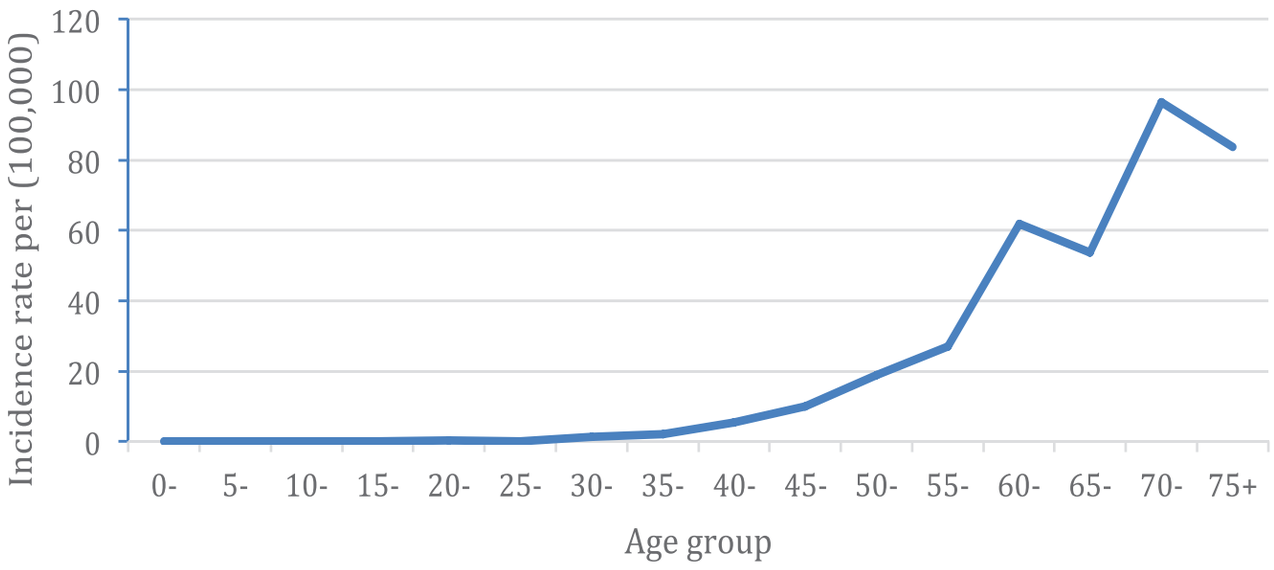
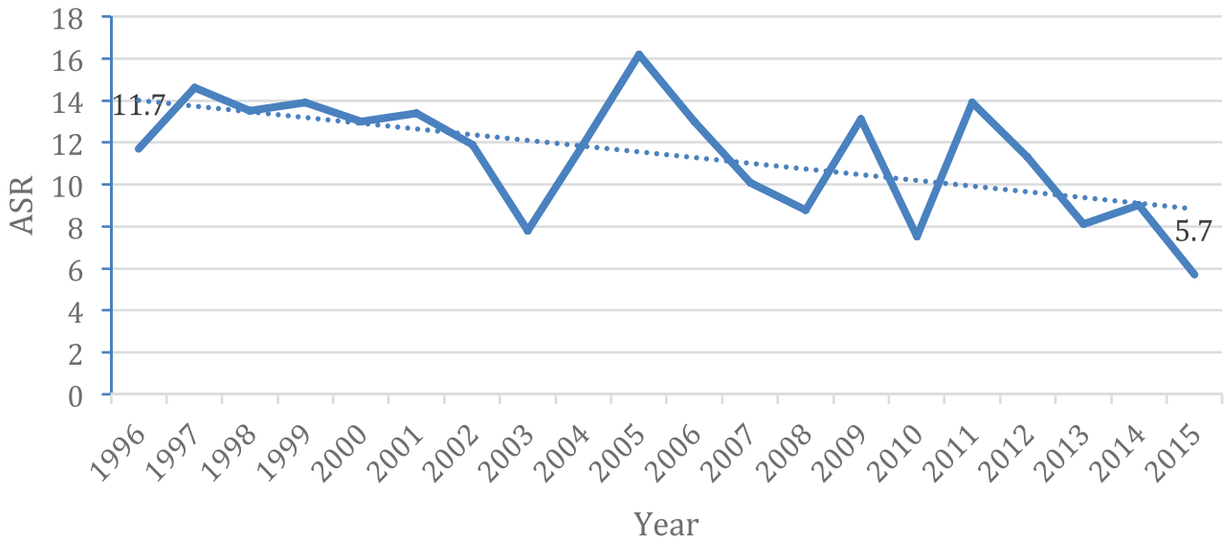



Figure 21: Age-Standardized Incidence Rates for Stomach Cancer in Omani Males



# 3.NON-HODGKIN LYMPHOMA

Non Hodgkin lymphoma was the third most common male cancer and accounted for 8.7% of all incident cancer cases in Omani males. The average annual ASR was 8.3/100,000 male. There was a minor decrease in the ASR trend observed from 1996 to 2015; the lowest ASR (7.1/100,000) was reported in 2002 and the highest (11.3/100,000) in 2004. Age-specific incidence among males begins in the 30-35 year age group and gradually rises to peak in the 65-70 year age group (Figure 22 and Figure 23).

Figure 22: Age specific incidence rate for NHL among Omani male 1996-2015

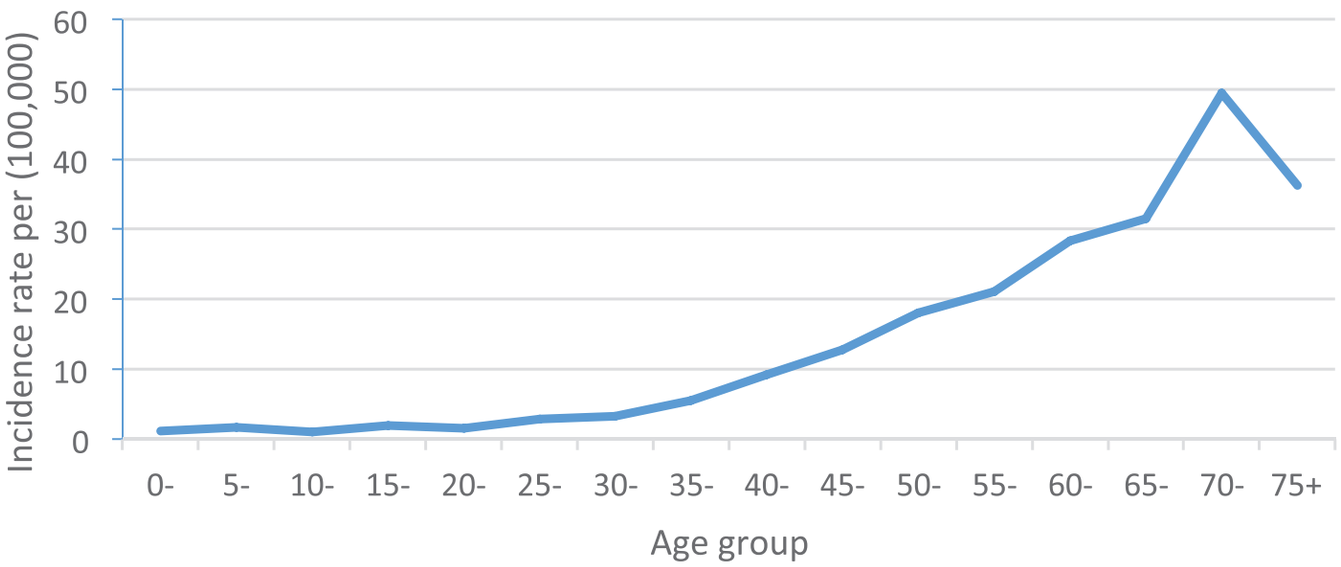
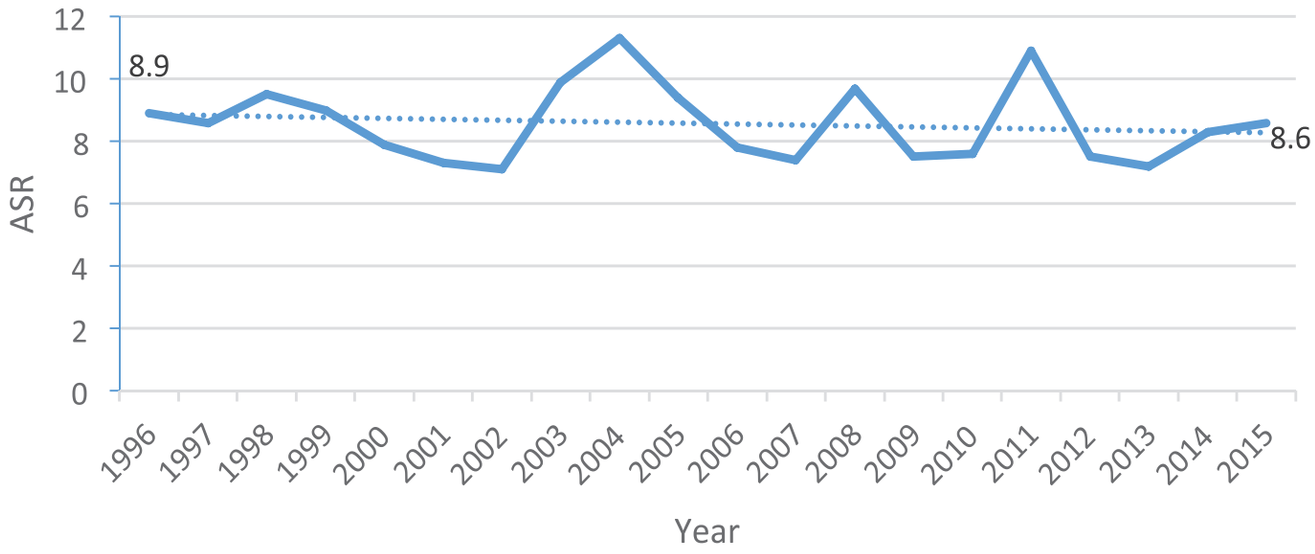



Figure 23: Age-Standardized Incidence Rates for NHL in Omani Males



# 4.LEUKEMIA

Leukemia is the fourth most common cancer in males and accounted for 7.86% of all incident cancers in males with an average annual ASR of 5.6/100,000 male. The trend of leukemia incidence has slowly increased over the years; the lowest ASR (3.9/100,000) was reported in 1996 and the highest (9.9/100,000) in 2011. Age-specific incidence among males begins in the 0-10 year age group and gradually rises to peak in the 55-60 year age group (Figure 24 and Figure 25).

Figure 24: Age specific incidence rate for leukemia among Omani male 1996-2015

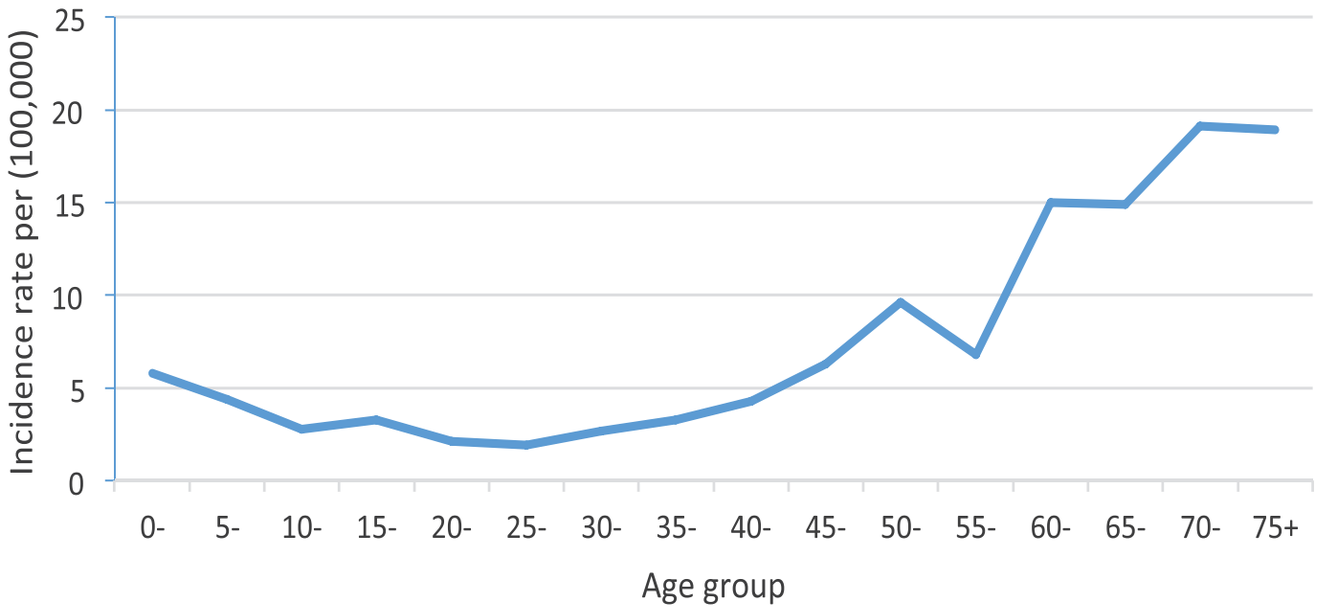
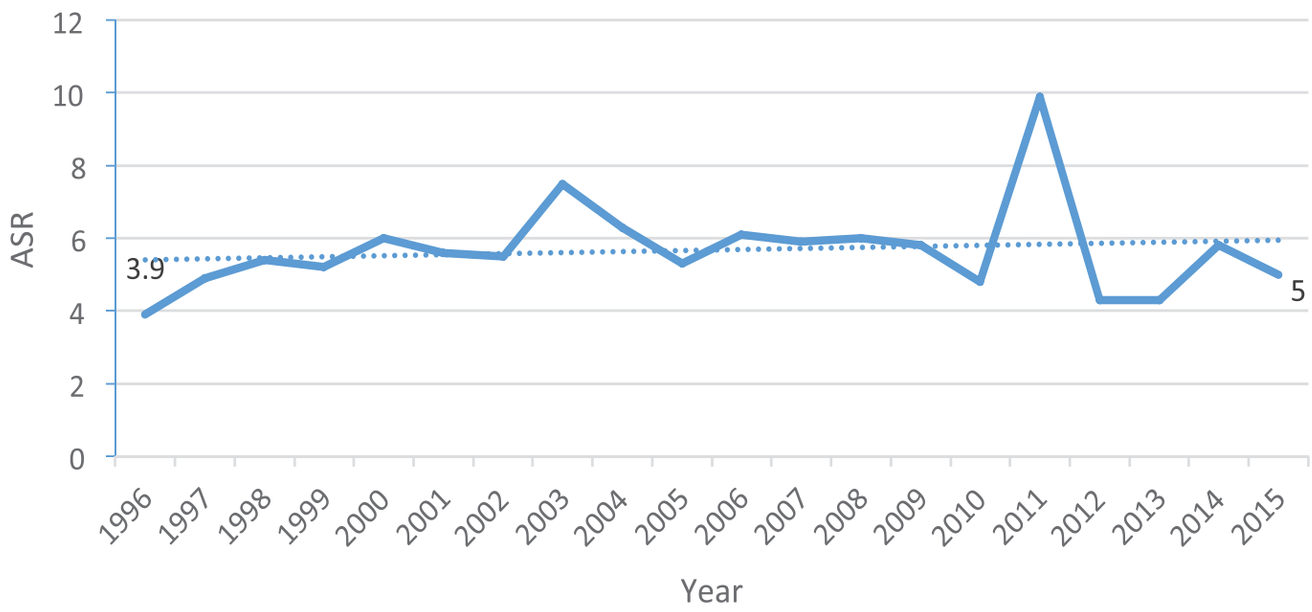



Figure 25: Age-Standardized Incidence Rates for leukemia in Omani Males



# 5.COLORECTAL

Colorectal cancer is the fifth most common cancer in males and accounted for 7.2% of all incident cancers in males with an average annual ASR of 8/100,000 male. The trend of colorectal cancer incidence continued to rise steadily over the years; the lowest ASR (3.3/100,000) was reported in 1999 and the highest (12/100,000) in 2015. Age-specific incidence among males begins in the 25- 30 year age group and steadily rises to peak in the 60-65 year age group (Figure 26 and Figure 27).

Figure 26: Age specific incidence rate for colorectal cancer among Omani male 1996-2015

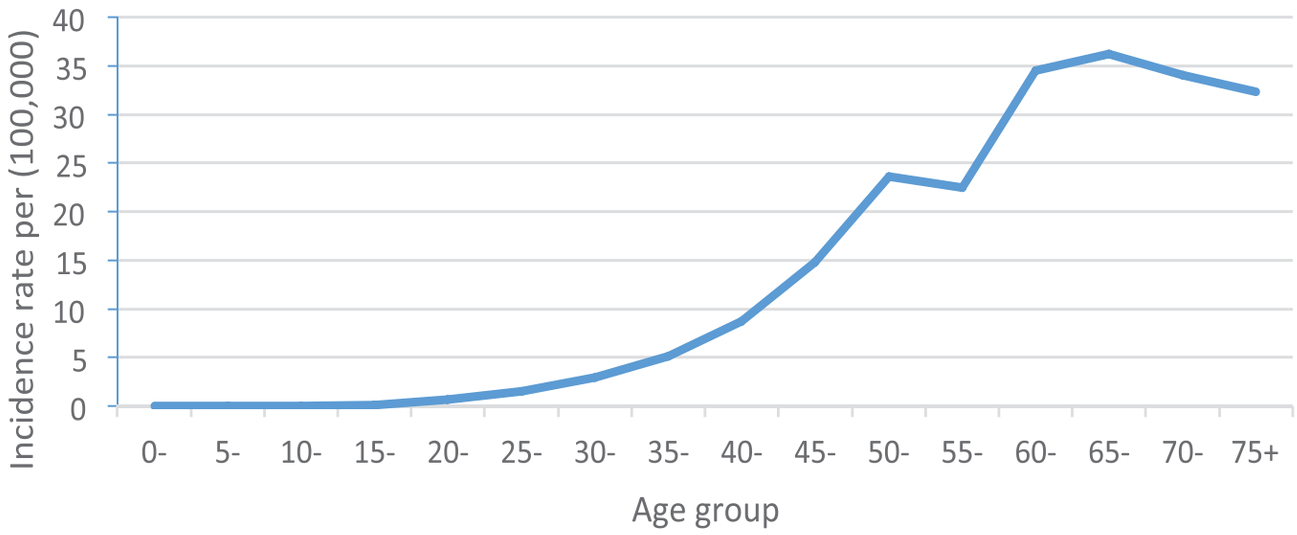
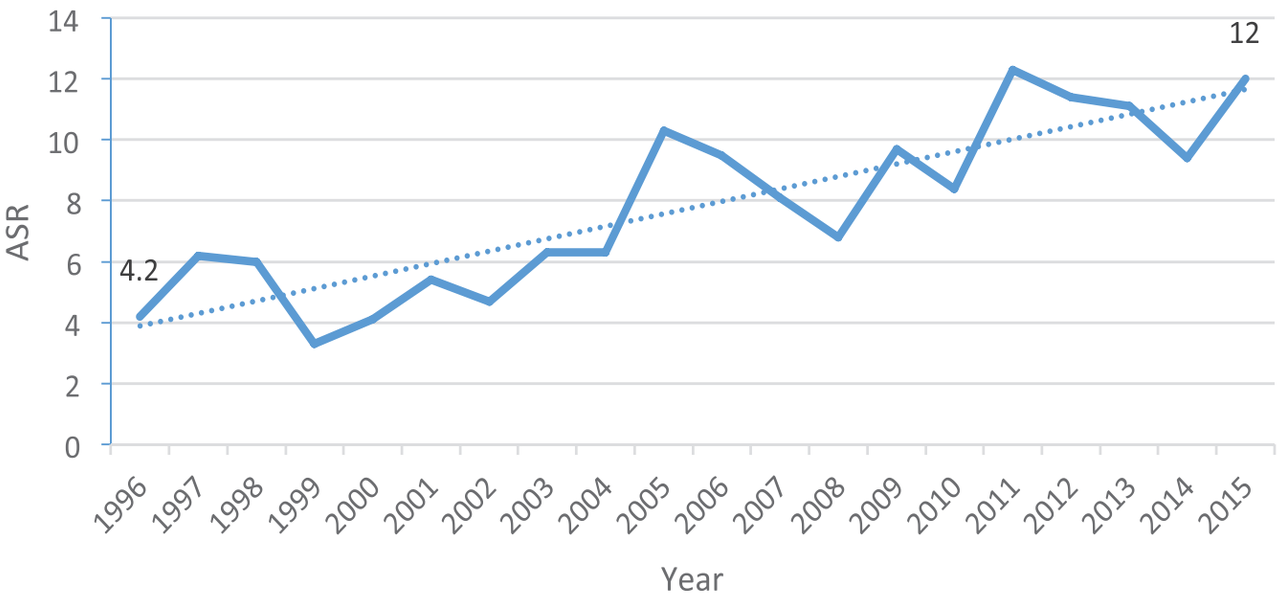



Figure 27: Age-Standardized Incidence Rates for Colorectal in Omani Males



# COMMON CANCER IN FEMALES

Between 1996 and 2015, breast cancer was the leading malignancy in Omani females with 2,181 new cases, followed by cancers of the, thyroid, colorectal, NHL and leukemia. Table 27 summarizes the five most common cancers among Omani female in three different periods 1996-2005, 2006-2015 and finally over 20 years 1996-2015.

Table 27: Five most cancer among females

| Years 1996-2005 | |
|---|---|
| **Topography** | **Frequency** |
| Breast | 706 |
| Thyroid | 339 |
| Cervix | 267 |
| Stomach | 263 |
| Leukemia | 256 |
| **Years 2006-2015** | |
| **Topography** | **Frequency** |
| Breast | 1,475 |
| Thyroid | 696 |
| Colorectal | 442 |
| Non-Hodgkin lymphoma | 346 |
| Leukemia | 340 |
| **Years 1996-2015** | |
| **Topography** | **Frequency** |
| Breast | 2,181 |
| Thyroid | 1,035 |
| Colorectal | 608 |
| Non-Hodgkin lymphoma | 601 |
| Leukemia | 596 |

# 1.BREAST

Breast cancer is by far the most common female cancer and accounted for 21.2% of all incident cancer cases in Omani female between 1996 and 2015, with an average annual ASR of 20.8/100,000 people. Breast cancer incidence was observed to have an increasing trend over the 20-year period, the lowest ASR (13.2/100,000) was noted in 1998 and the highest (26.9/100,000) in 2015. The age-specific incidence rates among females begins in the 25- 30 year age group and steadily rises to peak in the 50-60 year (Figure 28 and Figure 29).

Figure 28: Age specific incidence rate for breast cancer among Omani female 1996-2015

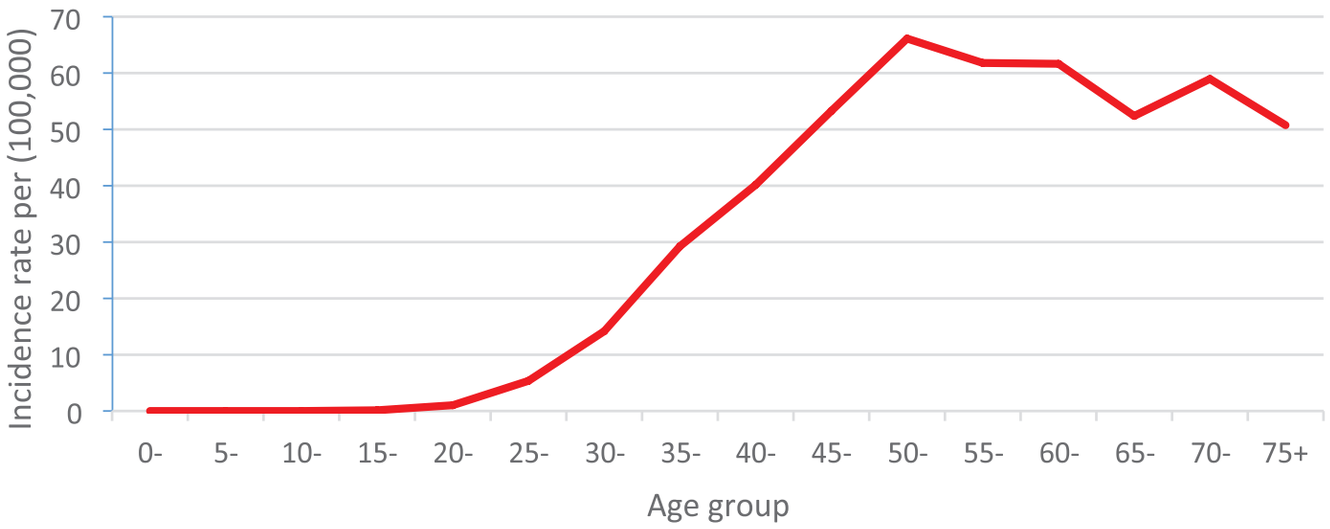
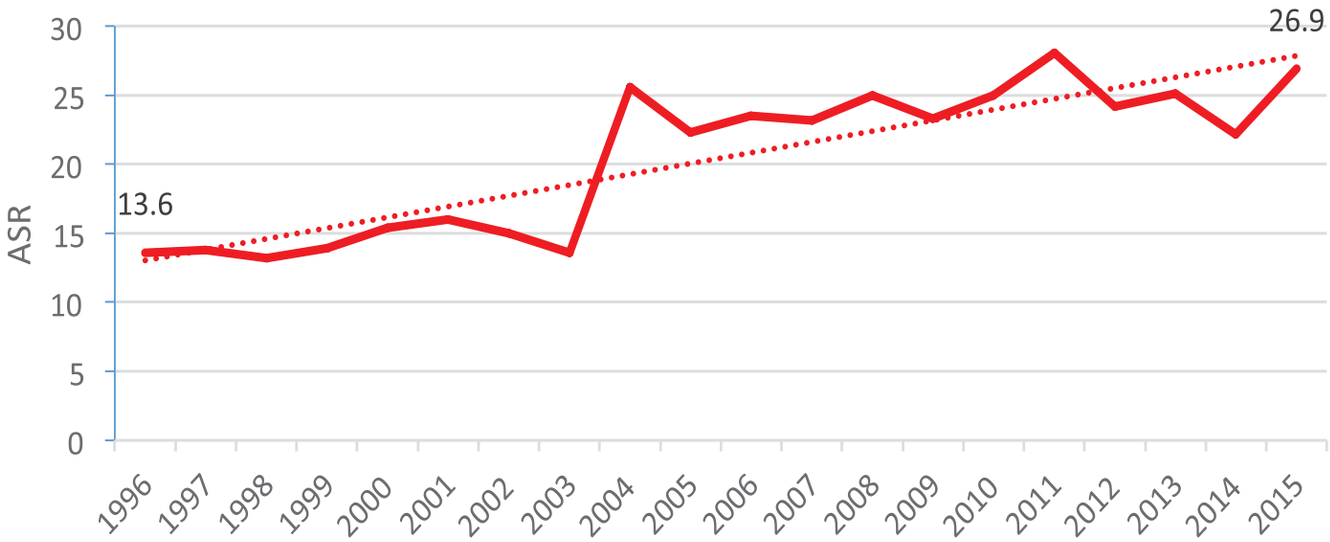



Figure 29: Age-Standardized Incidence Rates for Breast cancer in Omani Females



# 2.THYROID

Thyroid cancer was the second most common female cancer between 1996 and 2015 and accounted for 10% of all incident cancer cases in Omani female , with an average annual ASR of 7.6/100,000 people. The trend of thyroid cancer incidence continued to rise steadily over the years; the ASR was lowest (4.3/100,000) in 2000 and highest (14.3/100,000) in 2015. Cases were seen in females as young as 15 years of age, and incidence was found to increase with age, with peaks at 30-45 years and at 65-70 years (Figure 30 and Figure 31).

Figure 30: Age specific incidence rate for thyroid cancer among Omani female 1996-2015

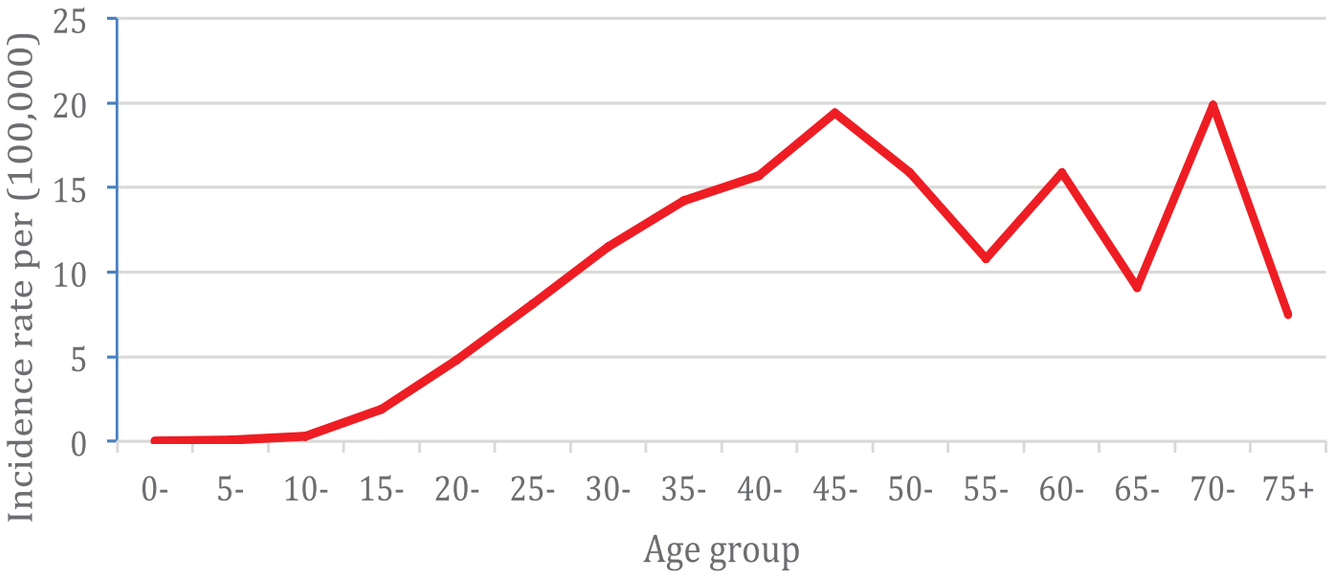
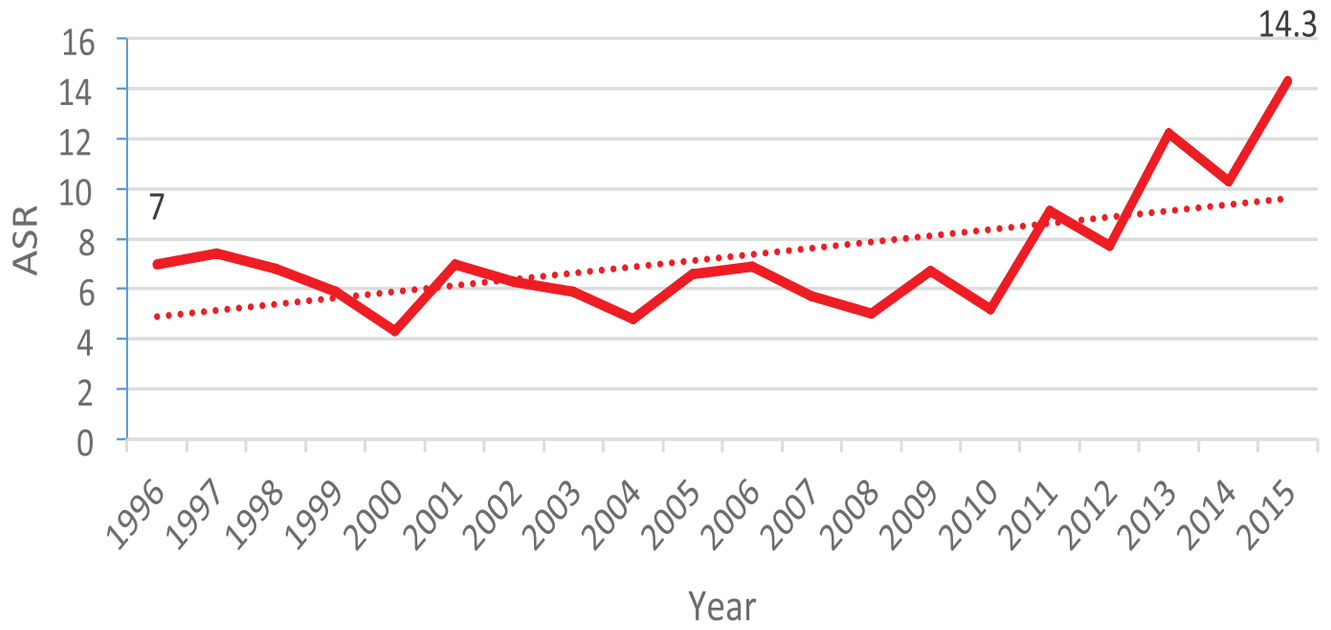



Figure 31: Age-Standardized Incidence Rates for Thyroid cancer in Omani Females



# 3.COLORECTAL

Colorectal cancer is the third most common cancer in females and accounted for 5.9% of all incident cancers in females with an average annual ASR of 7.3/100,000 female. The trend of colorectal cancer incidence continued to rise steadily over the years; the lowest ASR (1/100,000) was reported in 1999 and the highest (10/100,000) in 2014. Age-specific incidence among females begins in the 30- 35 year age group and steadily rises to peak in the 50-60 year age group (Figure 32 and Figure 33).

Figure 32: Age specific incidence rate for colorectal cancer among Omani female 1996-2015

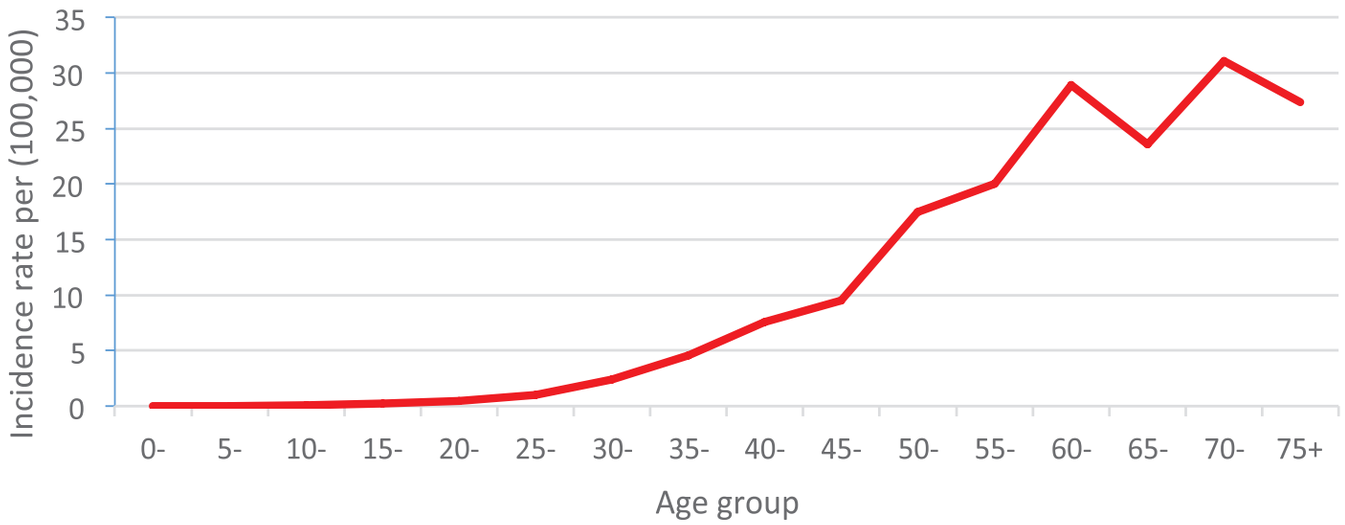
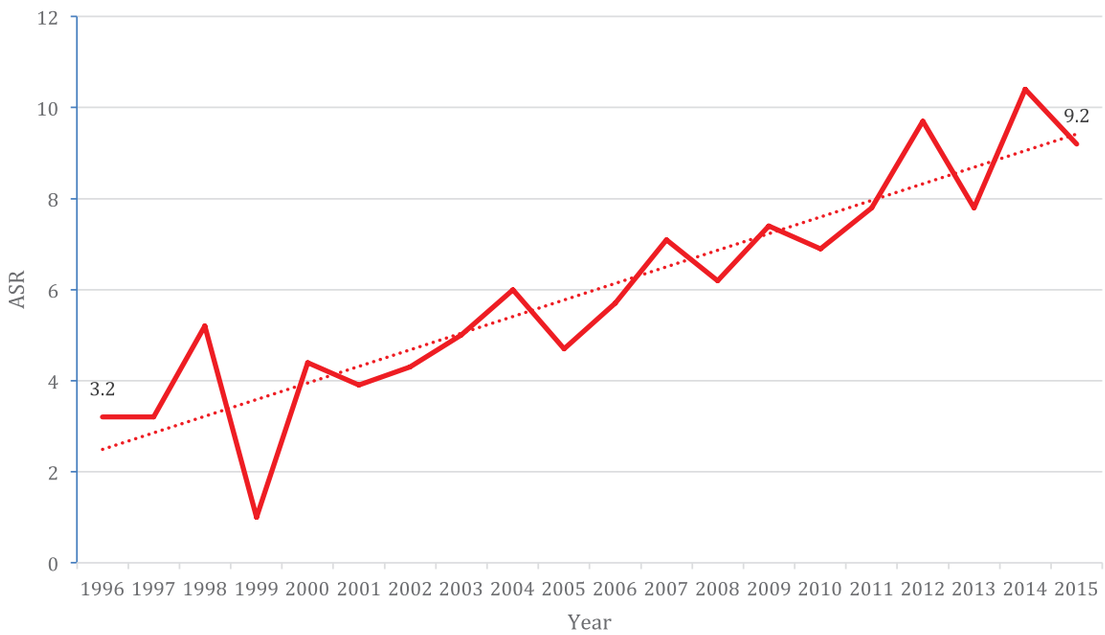



Figure 33: Age-Standardized Incidence Rates for Colorectal in Omani Females



# 4.NON-HODGKIN LYMPHOMA

Non Hodgkin lymphoma was the fourth most common female cancer and accounted for 5.84% of all incident cancer cases in Omani females. The average annual ASR was 5.4/100,000 female. There was a gradual increase in the ASR trend observed from 1996 to 2015; the lowest ASR (3.1/100,000) was reported in 1996 and the highest (7.1/100,000) in 2015. Age-specific incidence among females begins in the 30-35 year age group and gradually rises to peak in the 55-60 year age group (Figure 34 and Figure 35).

Figure 34: Age specific incidence rate for NHL among Omani female 1996-2015

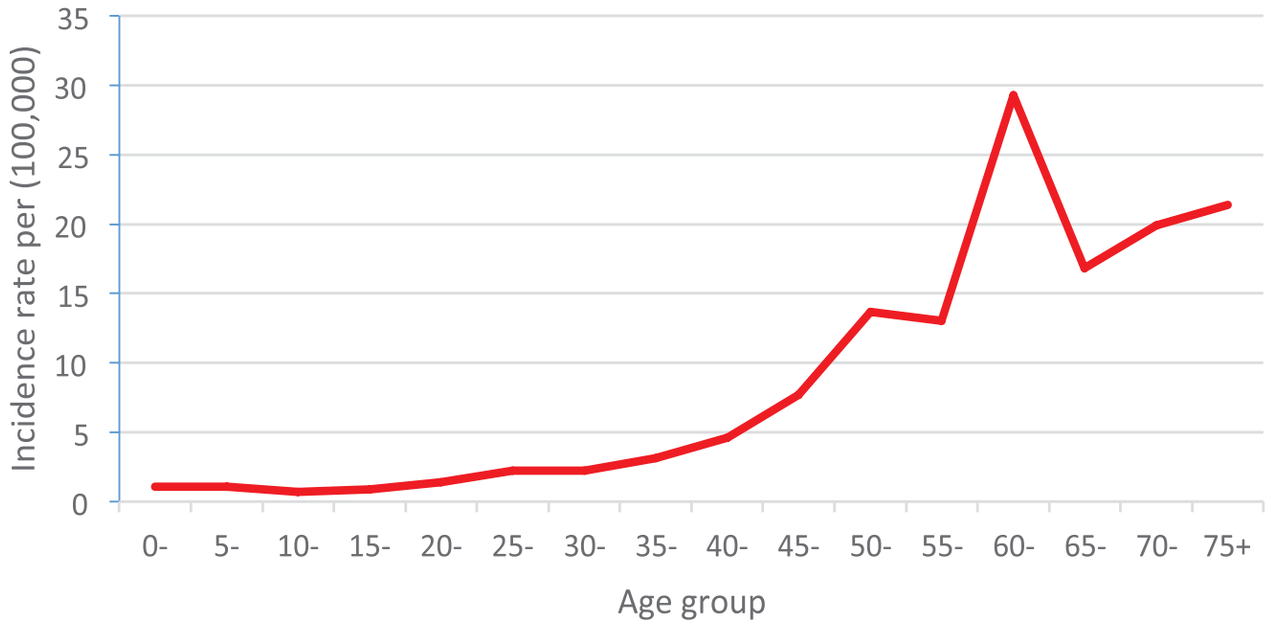
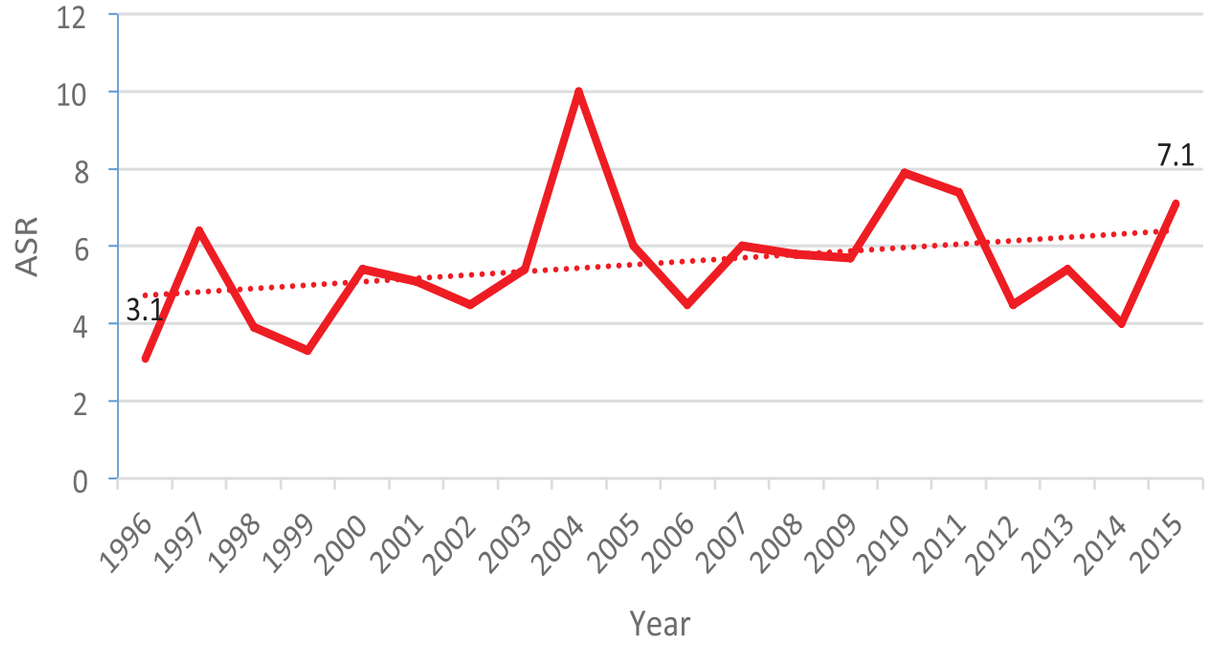



Figure 35: Age-Standardized Incidence Rates for NHL in Omani Females



# 5.LEUKEMIA

Leukemia is the fifth most common cancer in females and accounted for 5.79% of all incident cancers in females with an average annual ASR of 3.9/100,000 female. The trend of leukemia incidence has slowly increased over the years; the lowest ASR (2.8/100,000) was reported in 1996 and the highest (5.6/100,000) in 2003. Age-specific incidence among females begins in the 0-10 year age group and gradually rises to peak in the 55-60 year and 70-75 age group (Figure 36 and Figure 37).

Figure 36: Age specific incidence rate for leukemia among Omani female 1996-2015

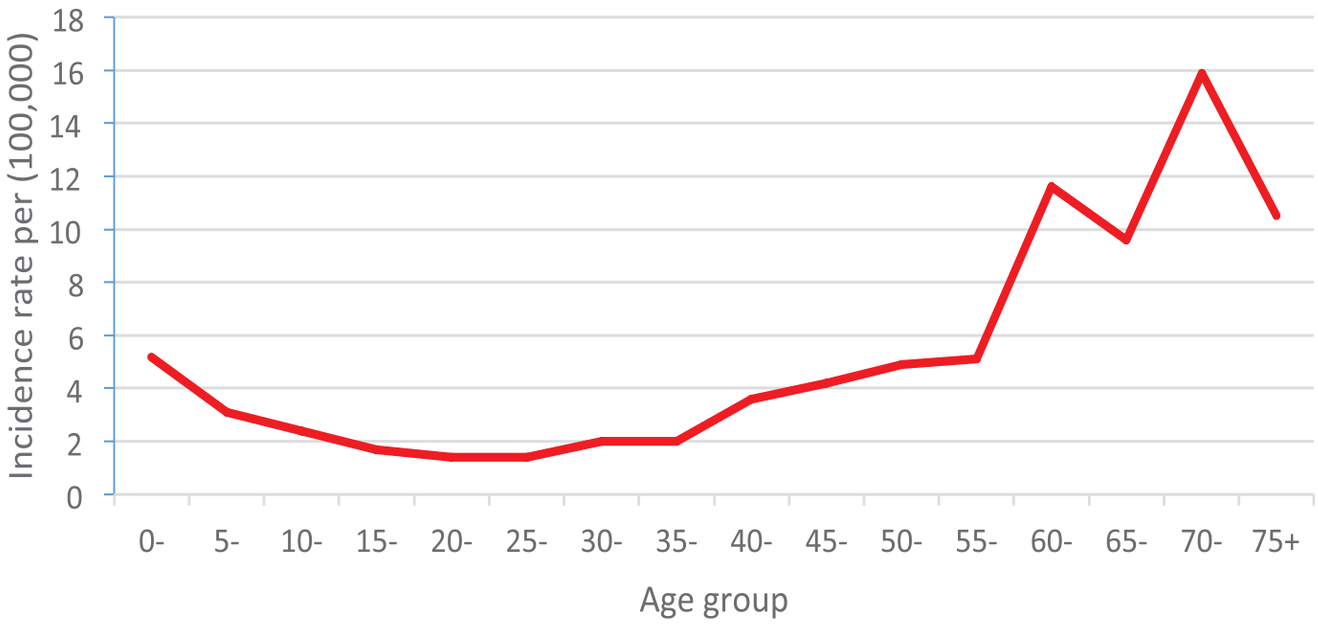
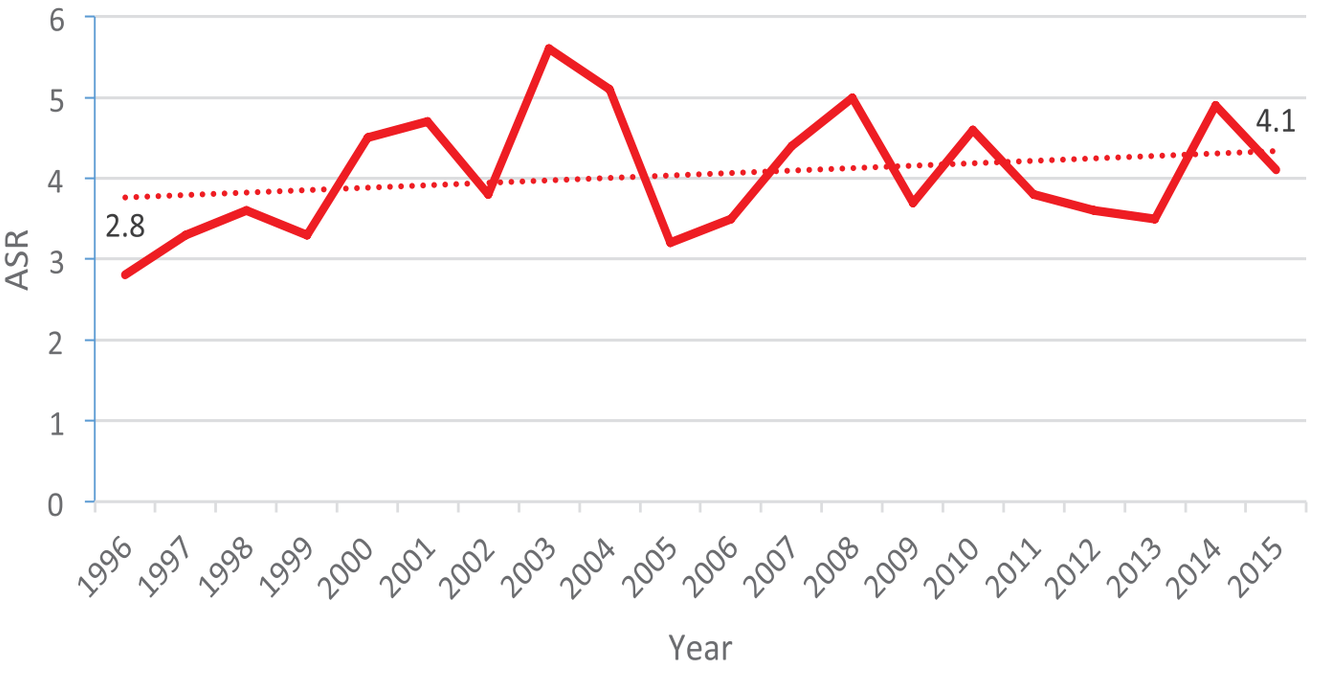



Figure 37: Age-Standardized Incidence Rates for Leukemia in Omani Females



# DISTRIBUTION OF CANCER BY GOVERNORATES

## Table 28: Distribution of cancer cases by governorates and gender 1996-2015

| | 1996-2005 | | | | 2006-2015 | | | | 1996-2015 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Governorate** | Male | % | Female | % | Male | % | Female | % | Male | % | Female | % |
| **Muscat** | 1,013 | 21.0 | 1,031 | 24.9 | 1,373 | 23.3 | 1,872 | 30.5 | 2,386 | 22.3 | 2,903 | 28.2 |
| **Al - Batinah North** | 905 | 18.8 | 724 | 17.5 | 1,035 | 17.5 | 888 | 14.5 | 1,940 | 18.1 | 1,612 | 15.7 |
| **Ad - Dakhliyah** | 509 | 10.6 | 461 | 11.1 | 615 | 10.4 | 671 | 10.9 | 1,124 | 10.5 | 1,132 | 11.1 |
| **Dhofar** | 480 | 10.0 | 406 | 9.8 | 637 | 10.8 | 609 | 9.9 | 1,117 | 10.4 | 1,015 | 9.9 |
| **Al - Batinah South** | 522 | 10.8 | 467 | 11.3 | 562 | 9.5 | 542 | 8.8 | 1,084 | 10.1 | 1,009 | 9.8 |
| **Ash- Sharqiah South** | 406 | 8.4 | 319 | 7.7 | 413 | 7.0 | 333 | 5.4 | 819 | 7.6 | 652 | 6.4 |
| **Adh -Dhahirah** | 305 | 6.3 | 224 | 5.4 | 322 | 5.5 | 357 | 5.8 | 627 | 5.8 | 581 | 5.7 |
| **Ash - Sharqiyah North** | 298 | 6.2 | 227 | 5.5 | 311 | 5.3 | 332 | 5.4 | 609 | 5.7 | 559 | 5.4 |
| **Al- Buraymi** | 57 | 1.2 | 58 | 1.4 | 98 | 1.7 | 89 | 1.5 | 155 | 1.4 | 147 | 1.4 |
| **Musandam** | 72 | 1.5 | 33 | 0.8 | 65 | 1.1 | 35 | 0.6 | 137 | 1.3 | 68 | 0.7 |
| **Al - Wusta** | 21 | 0.4 | 16 | 0.4 | 46 | 0.8 | 35 | 0.6 | 67 | 0.6 | 51 | 0.5 |
| **Unknown** | 233 | 4.8 | 177 | 4.3 | 425 | 7.2 | 373 | 6.1 | 658 | 6.1 | 550 | 5.4 |
| **Total** | 4,821 | 100.00 | 4,143 | 100.00 | 5,902 | 100 | 6,136 | 100.0 | 10,723 | 100.0 | 10,279 | 100.00 |

## Muscat

**Table 29: Five most common cancer among females and males in Muscat Governorate**

| Years 1996-2005 | | | | | |
|---|---|---|---|---|---|
| **Site** | Breast | Stomach | NHL | Leukemia | Lung |
| **Frequency** | 266 | 162 | 139 | 127 | 106 |
| **Years 2006-2015** | | | | | |
| **Site** | Breast | Colorectal | Thyroid | NHL | Leukemia |
| **Frequency** | 628 | 280 | 246 | 188 | 178 |
| **Years 1996-2015** | | | | | |
| **Site** | Breast | Colorectal | NHL | Stomach | Thyroid |
| **Frequency** | 894 | 382 | 327 | 322 | 319 |

## Al Batinah North

**Table 30: Five most common cancer among females and males in Al Batinah North Governorate**

| Years 1996-2005 | | | | | |
|---|---|---|---|---|---|
| **Site** | Stomach | NHL | Breast | Leukemia | Lung |
| **Frequency** | 196 | 129 | 106 | 98 | 91 |
| **Years 2006-2015** | | | | | |
| **Site** | Breast | Stomach | Colorectal | Leukemia | NHL |
| **Frequency** | 168 | 147 | 148 | 140 | 123 |
| **Years 1996-2015** | | | | | |
| **Site** | Stomach | Breast | NHL | Leukemia | Colorectal |
| **Frequency** | 343 | 274 | 252 | 238 | 203 |

## Ad- Dakhliyah

**Table 31: Five most common cancer among females and males in Ad-Dhakhyliyah Governorate**

| Years 1996-2005 | | | | | |
|---|---|---|---|---|---|
| **Site** | Leukemia | NHL | Breast | Stomach | Liver |
| **Frequency** | 104 | 73 | 69 | 63 | 50 |
| **Years 2006-2015** | | | | | |
| **Site** | Breast | Leukemia | Thyroid | Colorectal | NHL |
| **Frequency** | 175 | 103 | 101 | 96 | 83 |
| **Years 1996-2015** | | | | | |
| **Site** | Breast | Leukemia | NHL | Thyroid | Colorectal |
| **Frequency** | 244 | 207 | 156 | 145 | 137 |

## Al Batinah South

**Table 32: Five most common cancer among females and males in Al Batinah South Governorate**

| Years 1996-2005 | | | | | |
|---|---|---|---|---|---|
| **Site** | Stomach | NHL | Leukemia | Breast | Lung |
| **Frequency** | 87 | 77 | 76 | 60 | 57 |
| **Years 2006-2015** | | | | | |
| **Site** | Breast | Leukemia | NHL | Colorectal | Stomach |
| **Frequency** | 113 | 86 | 83 | 80 | 69 |
| **Years 1996-2015** | | | | | |
| **Site** | Breast | Leukemia | NHL | Stomach | Colorectal |
| **Frequency** | 173 | 162 | 160 | 156 | 121 |

## Dhofar

**Table 33: Five most common cancer among females and males in Dhofar Governorate**

| Years 1996-2005 | | | | | |
|---|---|---|---|---|---|
| **Site** | NHL | Breast | Stomach | Leukemia | Thyroid |
| **Frequency** | 72 | 68 | 68 | 67 | 56 |
| **Years 2006-2015** | | | | | |
| **Site** | Breast | Colorectal | NHL | Thyroid | Leukemia |
| **Frequency** | 125 | 111 | 102 | 95 | 82 |
| **Years 1996-2015** | | | | | |
| **Site** | Breast | NHL | Colorectal | Thyroid | Leukemia |
| **Frequency** | 193 | 174 | 166 | 151 | 149 |

## Ash Sharqiah North

**Table 34: Five most common cancer among females and males in Ash Sharqiah North Governorate**

| Years 1996-2005 | | | | | |
|---|---|---|---|---|---|
| **Site** | NHL | Stomach | Skin | Breast | Lung |
| **Frequency** | 58 | 38 | 37 | 36 | 36 |
| **Years 2006-2015** | | | | | |
| **Site** | Breast | Thyroid | NHL | Colorectal | Stomach |
| **Frequency** | 82 | 50 | 44 | 42 | 40 |
| **Years 1996-2015** | | | | | |
| **Site** | Breast | NHL | Stomach | Leukemia | Thyroid |
| **Frequency** | 118 | 102 | 78 | 73 | 72 |

## Ash Sharqiah South

**Table 35: Five most common cancer among females and males in Ash Sharqiah South Governorate**

| Years 1996-2005 | | | | | |
|---|---|---|---|---|---|
| **Site** | Stomach | Thyroid | Leukemia | Breast | NHL |
| **Frequency** | 80 | 53 | 52 | 46 | 46 |
| **Years 2006-2015** | | | | | |
| **Site** | NHL | Breast | Stomach | Colorectal | Thyroid |
| **Frequency** | 70 | 67 | 66 | 53 | 51 |
| **Years 1996-2015** | | | | | |
| **Site** | Stomach | NHL | Breast | Thyroid | Leukemia |
| **Frequency** | 146 | 116 | 113 | 104 | 99 |

## Adh Dhahirah

**Table 36: Five most common cancer among females and males in Adh Dhariah Governorate**

| Years 1996-2005 | | | | | |
|---|---|---|---|---|---|
| **Site** | NHL | Leukemia | Breast | Prostate | Colorectal |
| **Frequency** | 50 | 45 | 41 | 33 | 30 |
| **Years 2006-2015** | | | | | |
| **Site** | Breast | Leukemia | Thyroid | NHL | Colorectal |
| **Frequency** | 80 | 66 | 66 | 48 | 45 |
| **Years 1996-2015** | | | | | |
| **Site** | Breast | Leukemia | NHL | Thyroid | Colorectal |
| **Frequency** | 121 | 111 | 98 | 91 | 75 |

## Al-Buraymi

**Table 37: Five most common cancer among females and males in Al Buraymi Governorate**

| Years 1996-2005 | | | | | |
|---|---|---|---|---|---|
| **Site** | Breast | NHL | Skin | Thyroid | Colorectal |
| **Frequency** | 11 | 10 | 9 | 8 | 6 |
| **Years 2006-2015** | | | | | |
| **Site** | Breast | Skin | NHL | Colorectal | Leukemia |
| **Frequency** | 25 | 18 | 16 | 13 | 13 |
| **Years 1996-2015** | | | | | |
| **Site** | Breast | Skin | NHL | Colorectal | Leukemia |
| **Frequency** | 36 | 27 | 26 | 19 | 19 |

## Musandam

**Table 38: Five most common cancer among females and males in Musandam Governorate**

| Years 1996-2005 | | | | | |
|---|---|---|---|---|---|
| **Site** | Stomach | Leukemia | Esophagus | Colorectal | Breast |
| **Frequency** | 24 | 8 | 7 | 6 | 5 |
| **Years 2006-2015** | | | | | |
| **Site** | Stomach | Colorectal | NHL | Breast | Prostate |
| **Frequency** | 23 | 12 | 10 | 7 | 7 |
| **Years 1996-2015** | | | | | |
| **Site** | Stomach | Colorectal | NHL | Leukemia | Breast |
| **Frequency** | 47 | 18 | 16 | 13 | 12 |

# Al- Wusta

**Table 39: Five most common cancer among females and males in Al Wusta Governorate**

| Years 1996-2005 | | | | | |
|---|---|---|---|---|---|
| **Site** | Liver | Bladder | NHL | Breast | Leukemia |
| **Frequency** | 5 | 4 | 4 | 3 | 3 |
| **Years 2006-2015** | | | | | |
| **Site** | Stomach | Bladder | NHL | Colorectal | Leukemia |
| **Frequency** | 10 | 8 | 7 | 6 | 6 |
| **Years 1996-2015** | | | | | |
| **Site** | Bladder | Stomach | NHL | Leukemia | Liver |
| **Frequency** | 12 | 12 | 11 | 9 | 8 |

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1. Bonner JA et al. N Engl J Med 2006; 354:567–578.
2. Curran D et al. J Clin Oncol 2007; 25:2191–2197.


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