



**Kingdom of Saudi Arabia  
Council of Health Services  
Saudi Cancer Registry**

**Cancer Incidence Report  
Saudi Arabia  
2010**

**April 2014**

**[www.scr.org.sa](http://www.scr.org.sa)**





Kingdom of Saudi Arabia  
Ministry of Health  
Saudi Cancer Registry

# **Cancer Incidence Report Saudi Arabia 2010**

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## مقدمة

الحمد لله رب العالمين والصلاة والسلام على أشرف الخلق أجمعين وعلى آله وصحبه أما بعد.

يسرني أن أضع بين أيديكم التقرير السنوي الموجز لأعمال السجل السعودي للأورام، والذي يتضمن مسيرة عام حافل بالإنجازات لتحقيق رسالته وأهدافه لتسجيل كل حالات السرطان في المملكة، والمساهمة في دعم الجهود التوعوية وبرامج التنقيف الصحي وذلك بتزويد القائمين على هذه البرامج بالبيانات التفصيلية للأورام، انطلاقاً من إتباع استراتيجيات حديثة باستخدام البرنامج الحاسوبي الموحد لتسجيل بيانات السرطان بين المكاتب الإقليمية في مختلف مناطق المملكة لاستقبال البيانات وتبادلها، والسعي لإنشاء تطبيق تفاعلي على موقع سجل السرطان، وكذلك فتح فروع إقليمية في بعض من مناطق المملكة، والاستمرار في توظيف وتدريب وتأهيل مسجلي الأورام لمواكبة النهضة الطبية والتوسع في فتح المستشفيات ومراكز الأورام.

يعمل السجل السعودي للأورام على تفعيل مشاريع مستقبلية للمساهمة في برامج الكشف المبكر عن السرطان ومشاريع البحث العلمي لتحقيق الأهداف والاستراتيجيات الصحية، وبفضل من الله شهد عام ٢٠١٠م إنجازات متميزة للسجل السعودي للأورام من دعم النشر العلمي والأطروحات الدراسية والمؤتمرات العلمية الخاصة بالسرطان والمقامة في مختلف مناطق المملكة، وقد ساعدت الإحصائيات الصادرة عن "السجل" أصحاب القرار في التخطيط لفتح مراكز لعلاج السرطان وبرامج الوقاية منه وذلك بتزويدهم بالبيانات الدقيقة عنه والتي تعكس الوضع الحقيقي للسرطان في المملكة وتحديد أكثر أنواع السرطان شيوعاً حسب النوع والعمر والموقع الجغرافي.

ولا يفوتني التنويه عن قبول بيانات السجل الوطني في المجلد العاشر للسرطان في القارات الخمس لعام ٢٠١٤ والصادر عن الوكالة الدولية للسرطان بفرنسا، كما أعدّ "السجل السعودي للأورام" أول دراسة في الشرق الأوسط تشير إلى البيانات الخاصة بمعدلات التعافي من السرطان. ويعتبر "السجل السعودي للأورام" مرجعاً في إنشاء مراكز تسجيل الأورام، وقد استفاد من السجل الكثير من مستشفيات المملكة الحكومية والخاصة، إضافة إلى مستشفيات في بعض الدول العربية.

وختاماً فإن ما نراه من إنجازات في بلدنا الحبيب تستوجب شكر الله سبحانه وتعالى على أن يسر لهذه البلاد حكومة رشيدة بقيادة خادم الحرمين الشريفين وسمو ولي عهده الأمين وسمو النائب الثاني - حفظهم الله -، الذين لم يدخروا جهداً في دعم القطاع الصحي لخدمة المواطن، والشكر موصول لكل من ساهم من أهل الخير والهيئات والمؤسسات والجمعيات الخيرية في دعم وعلاج مرضى السرطان، ولكافة منسوبي القطاع الصحي العاملين على برامج مكافحة السرطان على جهودهم الدؤوبة للعلاج والوقاية من السرطان في المملكة.

وزير الصحة

رئيس مجلس الخدمات الصحية



د. عبد الله بن عبد العزيز الربيعية



# Introduction

This is the fourteenth incidence report published by the Saudi Cancer Registry. Previous publications include the Incidence Report for the years 1994-1996, 1997-1998, 1999-2000 and yearly until 2010.

The structure of this report can be outlined as follows:

## Part I-Materials and Methods

This part of the report contains information about the background of the Saudi Cancer Registry and methods used in collecting and analyzing the data. We present the basics of coding and classification of tumor topography, morphology and extent of disease at the time of diagnosis. Also we describe the software programs we have used to analyze the data.

## Part II-Overview of Cancer Incidence

Part II contains figures and tables that show overall cancer incidence in Saudi Arabia for the year 2010. We present these figures and tables mainly by sex and in certain areas we have it analyzed by different age groups. There are bar charts representing the age distribution of cancer incidence for the year 2010 among Saudis by sex and age groups. We present incidence and morphology tables for the most common types of cancers among adults and children. In addition, tables, list the total number of cases, the Age-Standardized Incidence Rate (ASR) per 100,000 population, Crude Incidence Rate (CIR) and Cumulative rates by primary site and sex. Separate bar charts depict the most common types of cancer, by sex, in each of the 13 administrative regions of Saudi Arabia.

## Part III-Incidence of Selected-Sites

In this part the incidence of the most common cancers among Saudi males and females are outlined. A standardized layout presents data for all patients and for both sexes where applicable. For each selected site the number and the percentage of all newly diagnosed cases for the year 2010, the ASR for each sex and the specific cancer rank for both sexes is presented. In addition, ASR for the specified cancer among Saudis is compared with ASR among other populations from selected countries.

## Part IV-Cancer Incidence among Non-Saudis

This part presents the incidence of cancer cases among Non-Saudis including the most common types of cancer. The analysis of the Non-Saudis is performed separately due to the nature of the expatriate population in Saudi Arabia in which a large part of the population, particularly among males, falls in the 25-44 age group.

## Part V-Incidence Tables

Part V contains the following detailed tables for all newly diagnosed cancer types among Saudis and Non-Saudis for 2010.

- Distribution of cancer cases among Saudis by age group and sex
- Distribution of cancer cases among Non-Saudis by age group and sex
- Cancer Incidence (per 100,000 population) among Saudis by age group and sex
- Cancer Incidence (per 100,000 population) among Non-Saudis by age group and sex
- Age-standardized incidence rate and relative frequencies among Saudis by cancer site, sex and administrative regions
- Number of In Situ Cases, Myelodysplastic Syndrome and Myeloproliferative Disease among Saudis and Non-Saudis

## Part VI-Appendices

**Appendix A:** Regional listing of all health care facilities from which cancer cases have been reported. The objective is to receive feedback from facilities that have not been included in order to improve our case-finding and reporting processes.

**Appendix B:** Names of the members of the Board of Directors.

**Appendix C:** Cancer Registration Abstract Form.

**Appendix D:** Arabic Summary of Cancer Statistics in Saudi Arabia for the Year 2010.

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# **PART I**

## **MATERIALS AND METHODS**

## Background on Saudi Arabia

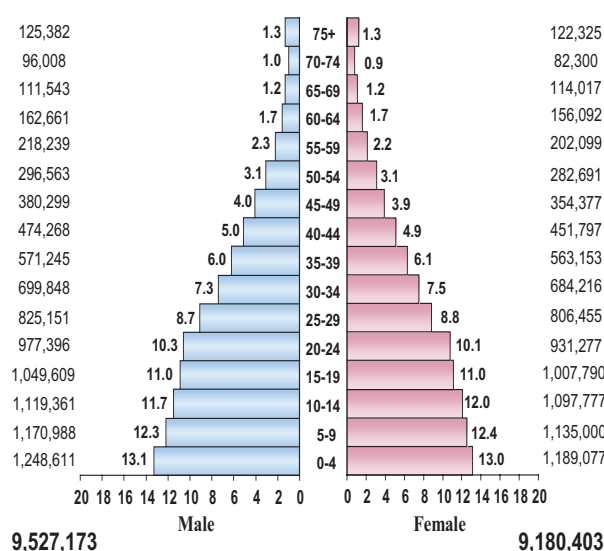
Saudi Arabia is a vast country extending over four-fifths of the Arabian Peninsula. It stretches from the Arabian Gulf in the east to the Red Sea in the west. It is approximately 2,149,700\* square kilometers in area and is divided into 13 administrative regions (Figure 1.1).



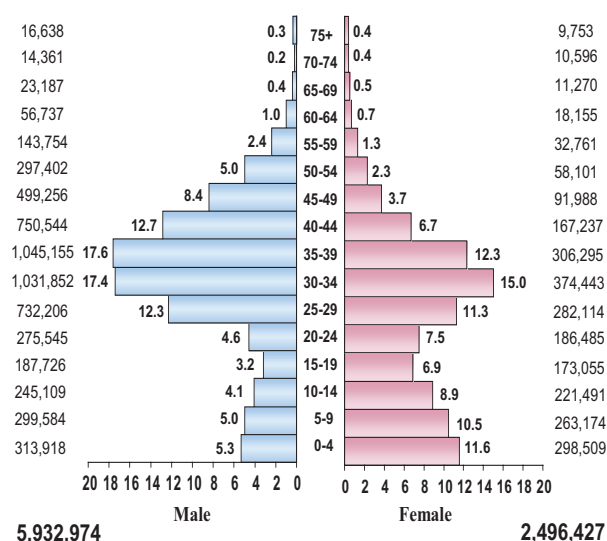
**Figure 1.1 Administrative Regions of Saudi Arabia**

The Saudi national population for year 2010 was 18,707,576\*\*. Of these 9,527,173 (50.4%) were males and 9,180,403 (49.6%) were females. The Non-Saudi population in 2010 was 8,429,401\*\*, of these 5,932,974 (70.4%) were males and 2,496,427 (29.6%) females

Figures 1.2 and 1.3 show the Saudi and Non-Saudi population pyramids by sex and age group respectively.



**Figure 1.2 Population Pyramid of Saudis (%) by Sex and Age Group, 2010**



**Figure 1.3 Population Pyramid of non-Saudis (%) by Sex and Age Group, 2010**

## Saudi Cancer Registry

The Saudi Cancer Registry (SCR) of Saudi Arabia is a population-based registry established in 1992 under the jurisdiction of the Ministry of Health (MOH) by the order of His Excellency the Minister of Health. The SCR commenced reporting cancer cases from 01 January 1994.

## Objectives:

The primary goal of the SCR is to define the population-based incidence of cancer in Saudi Arabia. Additional objectives include programs for early detection and cancer screening, as well as cancer research projects.

## Organizational Structure:

A Board of Directors was appointed to include representatives from the MOH, King Faisal Specialist Hospital and Research Center (KFSH&RC), and the Medical Services Departments of the Ministry of Defense and Aviation, Ministry of Interior, the National Guard, King Saud University, King Faisal University, King Abdul-Aziz University and King Khalid University. The Board is charged with the responsibility of overseeing the SCR's establishment, defining demographic and cancer-related data to be collected, approving research requests, and reporting findings, as well as disseminating information collected while ensuring the confidentiality of all data reported to the SCR.

\* Source: Demographic and Health Indicators for Countries of the East Mediterranean, WHO, Regional Office for the EM, 1999

\*\* Source: 2010 SCR Estimation with 3.2% Growth Rate among Saudis and 2.5% among non-Saudis based on 2010 Census, Central Department for Statistics (CDS) data, Ministry of Planning (Website <http://www.planning.gov.sa>).



The SCR Main Office, including administrative and technical staff, is located in the premises of the KFSH&RC in Riyadh. Additionally, five regional branches and four hospital-based offices were set up to ensure comprehensive data collection from all over the Kingdom (Figure 1.4).

#### Regional Offices:

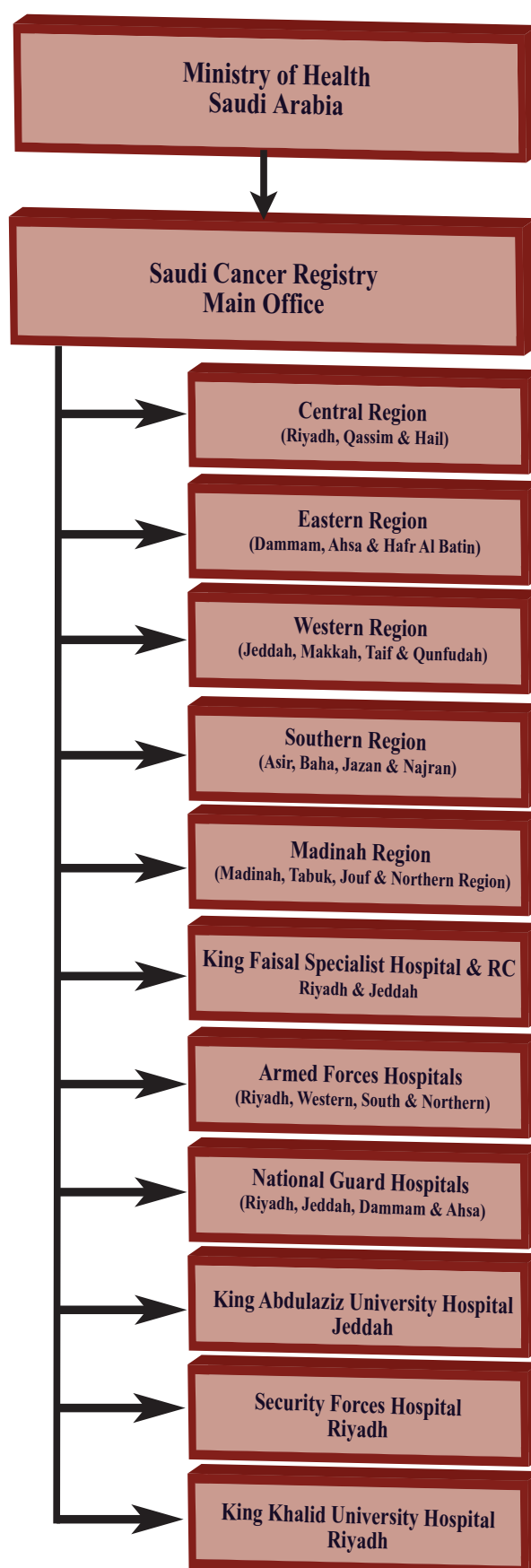
- 1 Central Region: King Fahad Medical City in Riyadh, covering Riyadh, Qassim, and Hail Health Regions.
- 2 Eastern Region: King Fahad Hospital of the University, Al Khobar, covering Dammam, Al Ahsa, and Hafr Al-Batin Health Regions.
- 3 Western Region: King Abdulaziz Hospital and Cancer Center, Jeddah, covering Jeddah, Makkah, Taif and Qunfudah Health Regions.
- 4 Southern Region: Asir Central Hospital, Abha, covering Asir, Baha, Najran, Jazan and Bisha Health Regions.
- 5 Madinah/Northern Region: Maternity and Children Hospital, Madinah, covering Madinah, Tabuk, Jouf and Northern Health Regions.

#### Offices at the Medical Service Division or Oncology Department of the following establishments:

- 6 King Faisal Specialist Hospital & Research Centre, Riyadh
- 7 Ministry of Defense and Aviation, Armed Forces Hospitals, Riyadh
- 8 National Guard Hospitals, King Abdulaziz Medical City, Princess Norah Oncology Center, Jeddah
- 9 King Abdul Aziz University Hospital, Jeddah
- 10 Ministry of Interior, Security Forces Hospital, Riyadh

Each of the SCR offices operates under the supervision of a member of the Board of Directors who is responsible for the daily management of that office. Staffing consists of tumor registrars and secretarial staff.

The SCR Main Office indirectly supervises the regional offices and is responsible for ensuring the accuracy and quality of data collected in all of the regions. Quality control processes include verification of site, morphology, and staging information as well as case linkage (tumor and patient), and consolidation of data. The Main Office also prepares periodic reports for dissemination of information to the medical community, government establishments, international organizations and the media.



**Figure 1.4 Organizational Chart of the Saudi Cancer Registry of Saudi Arabia**

#### Format

The format of the current report is similar to the previous reports.

## Data Management

A ministerial decree has categorized cancer as a mandatory notifiable disease. This ensures the opportunity for comprehensive data collection. The SCR strives for full access to cancer data from all Ministry of Health, governmental and private hospitals, as well as clinics and laboratories throughout the Kingdom. Cancer data are abstracted from patients' medical records, based on clinical and/or histopathological diagnosis, by SCR-trained cancer registrars.

The data abstract (see appendix D) includes personal identification (name, ID Number, sex, age), demographic information (address, telephone number, nationality), and tumor details (diagnosis date, primary site, histology, behavior, grade, stage, basis of diagnosis). The primary site (topography) and histology (morphology) of the malignancies are identified and coded according to the *International Classification of Diseases for Oncology 3rd Edition (ICD-O-3)*, published by the World Health Organization (WHO), 2000.

Effective from year 2001, changes were made in coding of cancer types and behaviors as well as staging according to International guidelines. The new SEER Summary Stage 2000 guidelines should result in increased accuracy and consistency in the coding of stage. There are some differences in the timing rules for determining stage and some sites are coded differently using the new guidelines. However, the new criteria and guidelines should improve the usefulness of staging as a predictor of prognosis and survival as the changes reflect a new understanding of the natural history of cancer. The new guidelines, [SEER Summary Stage Manual 2000](http://seer.cancer.gov/tools/ssm/), is available on the web at: <http://seer.cancer.gov/tools/ssm/>. Cases diagnosed on or after 01 January 2008 are classified according to the updated ICD-O-3. Improvements in the understanding of cancer pathology over the last decade are reflected in the changes to ICD-O-3. While there have not been any changes in the primary site codes, there are significant changes regarding histology (cell types). Leukemias and lymphomas, particularly are affected. Some cases that were previously considered benign are now counted as malignant. Also small number of cancers that were previously coded as borderline tumors are now considered benign.

Counts of ovarian cancers, lymphomas and leukemias as well as some hematopoietic diseases will change due to changes in either reportability or definition. However, as with the new staging guidelines, the ICD-O changes reflect advances in the understanding of the pathology and behavior of cancers.

It should be noted that ICD-O-3 codes are converted to ICD-10 for analysis purposes. Since the WHO has not yet converted the ICD-10 hematopoietic disease behavior changes, our software, CanReg 4.33, cannot include these cases for analysis and they have been excluded.

Every effort is made to accurately code patient and tumor information, to ensure that all data can be reviewed, linked, and consolidated, as appropriate, so that each malignancy is counted only once for statistical analysis. The computer software programs used for data entry and incidence tables output are CanReg 4.33, developed by the International Agency for Research on Cancer, (IARC) Lyon, France.

The second part of the report includes the overall cancer incidence in Saudi Arabia and the relevant epidemiological and clinicopathological details for the 15 most common cancers among Saudi nationals for the year 2010.

For each cancer site, the number and the percentage of all newly diagnosed cases for the year 2010, the age-standardized incidence rate (ASR) per 100,000 population for each sex, and the specific cancer rank in comparison to all cancers for both sexes are presented.

Useful international statistics for the specified cancer include the ranking of the cancer worldwide. The source for this information is summarized on page 66.

The relevant data incorporate details for all patients presented over the year 2010. For each cancer there are five figures:

1. An Arithmetic line graph represents the age-specific incidence rate (AIR) for all age groups at five-year intervals. The graph is plotted by sex, where applicable.
2. A Table lists the percentages of the most common histology sub-types for each specific cancer.
3. A Pie chart shows the distribution of the clinical stages of each cancer such as localized, regional, distant metastasis and unknown.
4. A Bar chart shows regional distribution of ASR for particular cancer across the administrative regions by males and females.
5. A Bar chart shows comparison of age-standardized incidence rate (ASR) for each cancer type in Saudi Arabia with ASR in selected countries.

In reviewing the data, its collection and analysis, two qualifying statements can be made:

- a. The number of patients presenting with malignant disease from Riyadh region exceeds the expected number per population. The reason for this is that Riyadh has many referral centers providing patients from outside the region with cancer-related care. Some of these patients don't provide their permanent address, but instead, provide a temporary Riyadh address. This situation is partially resolved through tumor and patient linkage of cases from all regions based on identifiers such as national ID.
- b. As previously noted, the software used in analyzing this report, CanReg 4.33, does not include in situ cases in the incidence tables. These cases were added to the total cancer cases in the overview.

## Notification

The data included in this report were abstracted up to June 2013. 2010 incident cases which are identified after this date (late reporting) will be noted in subsequent incidence reports. It is anticipated that the number of late-reported cases will decrease as case ascertainment processes are improved

Moreover we don't have up to date statistics because we have to wait until all of the data from the regional cancer branches in Saudi Arabia has been collected before we can publish the annual incidence report. Also, the process of registering a cancer is complicated and there are a number of processes in place to ensure the data is of a high quality. This means there is usually a delay of around 2-3 years before the data is complete enough to be published.

## Definitions of Statistical Terms

### Age-Specific Incidence Rate (AIR)

The number of cancer cases occurring during a specific period in a population of a specific age and sex group, divided by the number of midyear population of that age and sex group.

### Age-Standardized Rate (ASR)

The Age-standardized rate is a summary measure of a rate that a population would have if it had a standard age structure. Standardization is necessary when comparing several populations that differ with respect to age structure. The most frequently used standard population is the World Standard Population (see below). The calculated incidence is known as the World Standardized Incidence Rate. The rate is expressed per 100,000 populations.

Age Class	Population
0-4	12,000
5-9	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
<b>Total</b>	<b>100,000</b>

\* Doll R. Payne P. Waterhouse J. Cancer incidence in Five Continents Vol. I. International Union Against Cancer. 1966

## Crude Incidence Rate (CIR)

The crude incidence rate for a cancer site is the total number of cases registered as a proportion of the total population. It denotes the approximate number of cases occurring in each 100,000 individuals. All rates are thus, expressed as per 100,000 population.

Cancer rates vary greatly with age and the crude rate is strongly influenced by the demographic structure of the population. Hence, if the population structure changes over time the crude rate over that period may be artificially altered. It is not appropriate to compare crude rates across geographical areas of cancer registries with different population age structures. Therefore, in order to assess time trends in registration data or compare incidence across geographical areas or between registries it is necessary to first standardize the rates with respect to age.

## Cumulative Incidence rate

Cumulative incidence rate is the probability or risk of individuals developing the disease during a specified period. For cancer, it is expressed as the number of new born children (out of 100, or 1000) who would be expected to develop a particular cancer before the age of 65 (or 70, or 75) if they had the rates of cancers currently observed. Like the age standardized rate, it permits comparison between populations of different age structures. In this report the age ranges 0-64 and 0-74 years are used. The cumulative rate is the summation of the cancer age-specific rates; which are computed for five-year age intervals. The cumulative rate is five times the sum of the age-specific rates calculated over the five-year age groups.

## ICD-10

The World Health Organization's International Classification of Diseases, tenth edition.

## ICD-O-3

The World Health Organization's International Classification of Diseases for Oncology, 3rd Edition has been the standard coding system for neoplasms for over 25 years. The coding system includes a four character code for primary site, a four-digit numeric code for cell type, one-digit code for behavior and a one-digit code for tumor aggressiveness (grade).

## Incidence Rate

An incidence rate is defined as the rate at which a new event occurs in a population. It is calculated as the number of new cases of disease arising in a population over a defined time period, divided by the population at risk of developing that disease.

## Mean

The simple mathematical average of two or more numbers.

## Median

The midpoint of the range numbers that are arranged in order of value.

## 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.

## Range

Is the difference between the maximum and minimum values in a set of observations.

## Rank

This measure reflects the importance of a specific cancer site relative to other sites, in terms of the number of registrations. Ranking illustrates the most and least frequent cancer sites in a population according to their frequency.

## Ratio

The relation between two quantities. The first quantity as numerator and the second as denominator

## Relative Frequency

This statistic is defined as the number of specific cancer cases registered relative to the total number of all cancer. It is expressed as a percentage.

## Summary Stage

Staging is the grouping of cancer cases into broad categories based on the extent of disease.

**PART II**  
**OVERVIEW OF CANCER INCIDENCE**  
**2010**

## Reported Cancer Incidence Cases in Saudi Arabia, 2010

Between January 01 and December 31, 2010, the total number of cancer incident cases reported to the SCR was 13,706. Overall cancer was more among women than men. Cancers affected 6,579 (48%) males and 7,127 (52%) females, with a male to female ratio of 92:100. 10,230 cases were reported among Saudis, 3,265 among Non-Saudis and 211 of unknown nationality.

The total number of cases excluded from analysis include 211 cases of unknown nationalities, other exclusions were 268 in situ cases; the current software program CanReg-4 version 4.33, does not include in situ cases in the statistical analysis. Also, 80 were ICD-O-3 coded cases that failed to convert to ICD-10 codes as described in the Data Management (see page 12 and page 92). This puts the total number of exclusions from the analysis as 547 cases. Table 2.1 illustrates the distribution of the cases by sex, nationality and cancer behavior.

Diagnosis of malignancy was confirmed histologically in 87.2% of the cases, and haematological & cytologically in 6.9% of cases. Clinically confirmed cases were 0.3%, Tumor marker 0.2% radiologically confirmed cases were 2.7%, cases confirmed by Death Certificate were 2.3% and the method of diagnosis was unknown for 0.4% of the cases.

As shown on Table 2.1, 13,159 cases were analyzed, of which 9,971 (75.8%) were Saudis and 3,188 (24.2%) were Non-Saudis. Among the Saudis 4,593 (46%) were male and 5,378 (54%) were female. The male to female ratio was 86:100. The crude incidence rate (CIR) of all cancers among Saudi Population was 53.4/100,000 (48.2/100,000 among males and 58.6/100,000 among females). The overall age-standardized incidence rate (ASR) for all Saudis with a world standard population reference was 84/100,000 (76.7/100,000 in males and 91.2/100,000 in females).

For all sites, the age-specific incidence rate (AIR) increased with age for both males and females. After the age of 64 years, the increase was nearly one and one half fold for males compared to females; male to female ratio 137:100. The median age at diagnosis for men was 58 years; range (0-107) and 51 years for women; range (0-120).

The geographic regions with the highest ASR were Eastern Region at 116/100,000, Riyadh Region at 115/100,000, Tabuk Region at 92/100,000, Qassim Region at 81/100,000 and Jouf/Makkah Regions at 77/100,000 for each.

	Saudis			Non-Saudis			Unknown Nationality			All
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Total
Analyzed *	4593	5378	9971	1712	1476	3188	92	106	198	13159
Invasive	4642	5407	10049	1713	1478	3191	92	106	198	13240
In Situ	82	99	181	42	32	74	8	5	13	268
ICD-10 **	49	28	77	1	2	3	0	0	0	80
Total	4724	5506	10230	1755	1510	3265	100	111	211	13706

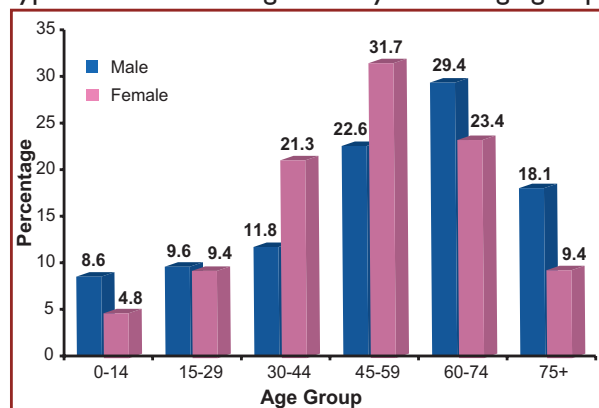
**Table 2.1 Distribution of Cancer Cases in Saudi Arabia by Nationality and Sex, 2010**

\* Unknown nationalities, in situ cases and ICD-10 conversion failures are excluded from analysis  
 \*\* ICD-10 conversion failure

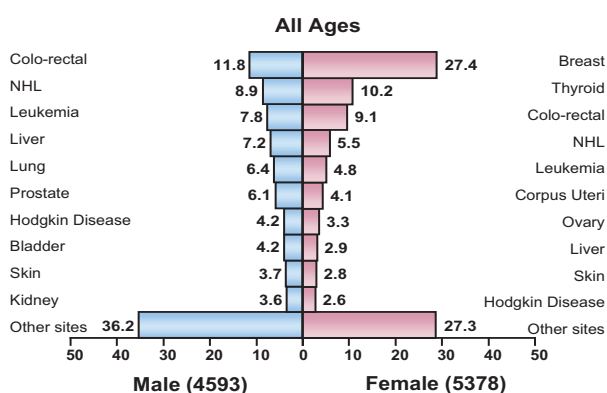


## Cancer among Saudis 2010

As explained earlier the total number of cancer cases analyzed among Saudis during the year 2010 were 9,971. Following are figures presenting the percentage distributions of cancer incidence and most frequent types of cancers among Saudis by sex and age-group.



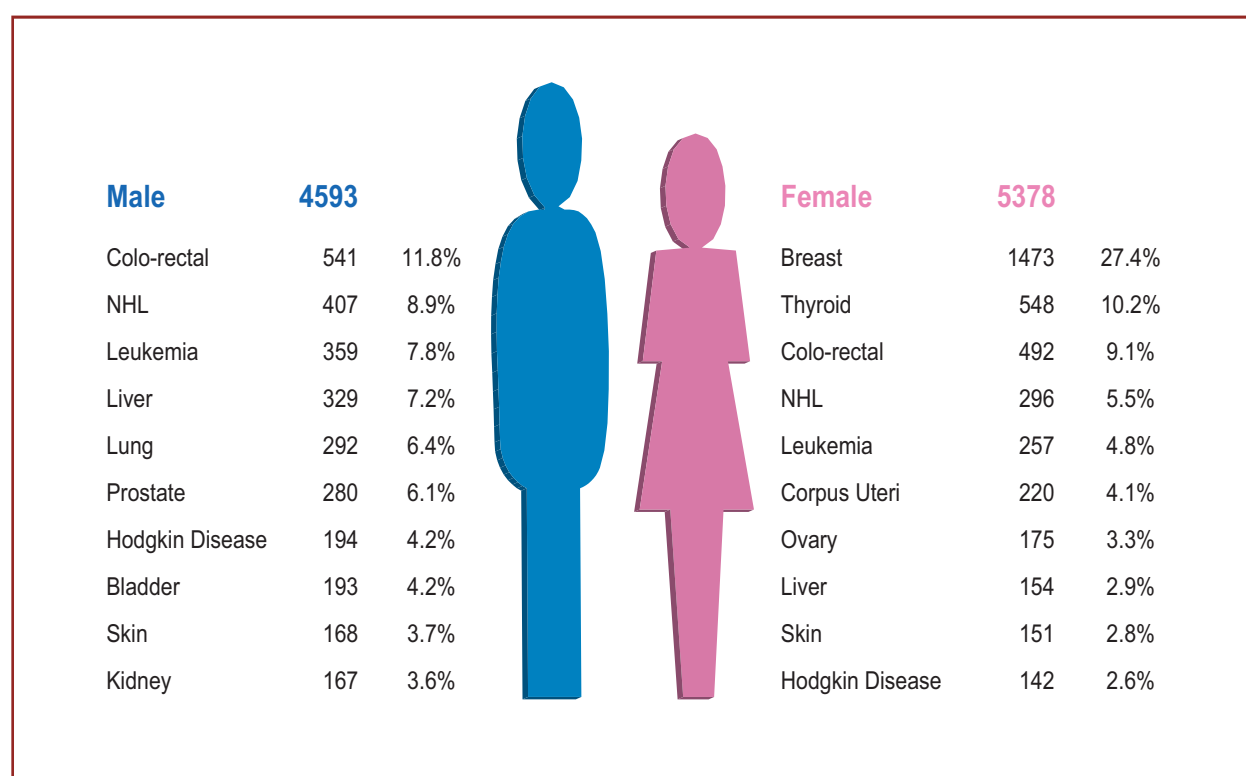
**Figure 2.1 Percentage Distribution of Cancer Incidence among Saudis by Sex according to Age Group, 2010**



**Figure 2.2 Percentage Distribution of Most Frequent Types of Cancer by Sex and age-groups among Saudis, 2010**

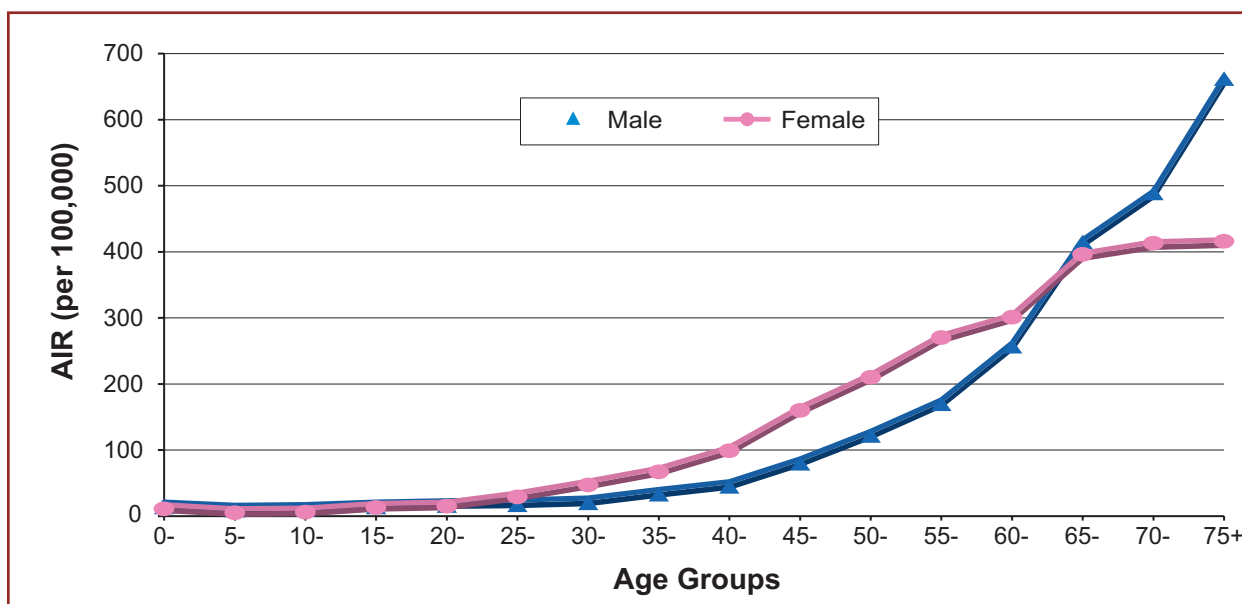
Cancer	No.	%
Breast	1497	15.0
Colo-rectal	1033	10.4
NHL	703	7.1
Thyroid	697	7.0
Leukemia	616	6.2
Liver	483	4.8
Lung	397	4.0
Hodgkin disease	336	3.4
Skin	319	3.2
Stomach	291	2.9

**Table 2.2 Ten Most Common Cancers among Saudis, 2010 (All Ages)**

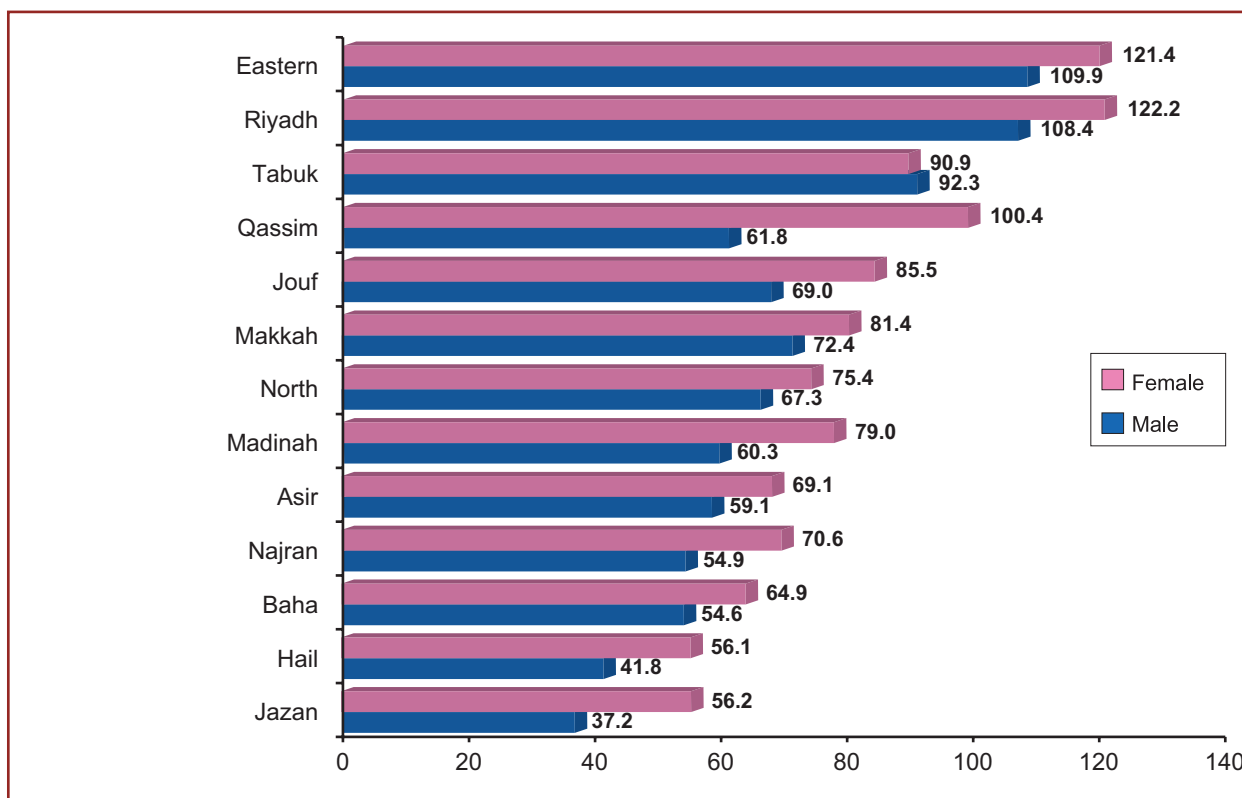


**Figure 2.3 Ten Most Common Cancers among Saudis by Sex, 2010**





**Figure 2.4 Age-Specific Incidence Rates (AIR) for All Cancers among Saudis, 2010**



**Figure 2.5 Age Standardized Rate (ASR\*) Regional Distribution (per 100,000) of All Sites of Cancer among Saudis, 2010**

\* ASR Per 100,000

ICD-10	Site	Male						Female					
		No.	%	Crude	ASR	Cumulative Rate		No.	%	Crude	ASR	Cumulative Rate	
				Rate	World	0-64	0-74			Rate	World	0-64	0-74
All	All sites Total	4593	100.0	48.2	76.7	40.4	85.6	5378	100.0	58.6	91.2	61.7	102.1
Not C44	All sites but C44	4425	96.3	46.5	73.6	39.0	82.0	5227	97.2	57	88.4	60.5	99.1
C00	Lip	8	0.2	0.1	0.1	0.1	0.1	5	0.1	0.1	0.1	0.1	0.1
C01-C02	Tongue	53	1.2	0.6	1	0.5	1.2	43	0.8	0.5	0.8	0.5	0.8
C03-C06	Mouth	45	1.0	0.5	0.9	0.5	1.0	48	0.9	0.5	0.8	0.5	0.9
C07-C08	Salivary glands	11	0.2	0.1	0.2	0.1	0.2	15	0.3	0.2	0.2	0.1	0.2
C09	Tonsil	2	0.0	0	0	0.0	0.0	0	0.0	0	0	0.0	0.0
C10	Other Oropharynx	2	0.0	0	0	0.0	0.1	1	0.0	0	0	0.0	0.0
C11	Nasopharynx	131	2.9	1.4	2	1.5	2.1	40	0.7	0.4	0.6	0.4	0.6
C12-C13	Hypopharynx	9	0.2	0.1	0.2	0.1	0.2	17	0.3	0.2	0.3	0.2	0.4
C14	Pharynx unspecified	3	0.1	0	0	0.0	0.0	2	0.0	0	0	0.0	0.0
C15	Oesophagus	73	1.6	0.8	1.4	0.5	1.6	50	0.9	0.5	1	0.5	1.1
C16	Stomach	165	3.6	1.7	3.1	1.4	3.7	126	2.3	1.4	2.3	1.3	2.5
C17	Small intestine	27	0.6	0.3	0.5	0.3	0.5	13	0.2	0.1	0.2	0.1	0.3
C18	Colon	303	6.6	3.2	5.5	3.2	6.6	306	5.7	3.3	5.8	4.0	6.9
C19-C20	Rectum	238	5.2	2.5	4.4	2.5	5.3	186	3.5	2	3.4	2.6	3.9
C21	Anus	18	0.4	0.2	0.3	0.2	0.4	9	0.2	0.1	0.2	0.1	0.2
C22	Liver	329	7.2	3.5	6.4	2.6	7.5	154	2.9	1.7	3.1	1.7	4.0
C23-C24	Gallbladder etc.	51	1.1	0.5	0.9	0.5	0.9	89	1.7	1	1.8	1.3	2.1
C25	Pancreas	114	2.5	1.2	2.2	1.2	2.7	81	1.5	0.9	1.6	0.7	2.3
C30-C31	Nose, sinuses etc.	9	0.2	0.1	0.2	0.1	0.2	4	0.1	0	0.1	0.0	0.1
C32	Larynx	48	1.0	0.5	0.9	0.6	1.3	5	0.1	0.1	0.1	0.1	0.1
C33-C34	Trachea, Bronchus, Lung	292	6.4	3.1	5.8	2.9	7.3	105	2.0	1.1	2.1	1.0	2.9
C37-C38	Other Thoracic organs	25	0.5	0.3	0.3	0.2	0.3	11	0.2	0.1	0.2	0.1	0.2
C40-C41	Bone	74	1.6	0.8	0.7	0.5	0.5	44	0.8	0.5	0.5	0.3	0.4
C43	Melanoma of Skin	12	0.3	0.1	0.2	0.1	0.1	12	0.2	0.1	0.2	0.1	0.3
C44	Other Skin	168	3.7	1.8	3.1	1.4	3.5	151	2.8	1.6	2.8	1.2	3.0
C45	Mesothelioma	9	0.2	0.1	0.2	0.1	0.3	4	0.1	0	0.1	0.0	0.1
C46	Kaposi sarcoma	21	0.5	0.2	0.4	0.3	0.4	6	0.1	0.1	0.1	0.1	0.1
C47;C49	Connective, Soft tissue	69	1.5	0.7	0.8	0.4	0.6	76	1.4	0.8	1.1	0.8	1.1
C50	Breast	24	0.5	0.3	0.4	0.3	0.4	1473	27.4	16.1	24.9	19.7	27.3
C51	Vulva	-	-	-	-	-	-	9	0.2	0.1	0.1	0.0	0.1
C52	Vagina	-	-	-	-	-	-	2	0.0	0	0	0.0	0.0
C53	Cervix Uteri	-	-	-	-	-	-	82	1.5	0.9	1.5	1.1	1.7
C54	Corpus Uteri	-	-	-	-	-	-	220	4.1	2.4	4.6	3.0	6.1
C55	Uterus unspecified.	-	-	-	-	-	-	29	0.5	0.3	0.6	0.4	0.8
C56	Ovary	-	-	-	-	-	-	175	3.3	1.9	3	2.1	3.4
C57	Other Female Genital	-	-	-	-	-	-	6	0.1	0.1	0.1	0.0	0.2
C58	Placenta	-	-	-	-	-	-	5	0.1	0.1	0.1	0.1	0.1
C60	Penis	1	0.0	0	0	0.0	0.1	-	-	-	-	-	-
C61	Prostate	280	6.1	2.9	5.5	1.3	6.8	-	-	-	-	-	-
C62	Testis	78	1.7	0.8	0.8	0.6	0.6	-	-	-	-	-	-
C63	Other male genital	2	0.0	0	0	0.0	0.0	-	-	-	-	-	-
C64	Kidney	167	3.6	1.8	2.9	1.8	3.5	117	2.2	1.3	2	1.4	2.1
C65	Renal Pelvis	5	0.1	0.1	0.1	0.0	0.1	5	0.1	0.1	0.1	0.1	0.1
C66	Ureter	1	0.0	0	0	0.0	0.0	4	0.1	0	0.1	0.0	0.1
C67	Bladder	193	4.2	2	3.6	2.0	4.1	50	0.9	0.5	1	0.5	1.0
C68	Other Urinary organs	3	0.1	0	0.1	0.1	0.1	2	0.0	0	0	0.1	0.1
C69	Eye	22	0.5	0.2	0.3	0.1	0.2	24	0.4	0.3	0.3	0.1	0.2
C70-C72	Brain, Nervous system	148	3.2	1.6	1.9	1.2	1.7	105	2.0	1.1	1.4	1.0	1.5
C73	Thyroid	149	3.2	1.6	2.3	1.6	2.5	548	10.2	6	7.5	5.8	7.5
C74	Adrenal gland	29	0.6	0.3	0.3	0.1	0.2	14	0.3	0.2	0.2	0.1	0.1
C75	Other Endocrine	0	0.0	0	0	0.0	0.0	1	0.0	0	0	0.0	0.0
C81	Hodgkin disease	194	4.2	2	2.1	1.4	1.7	142	2.6	1.5	1.6	1.0	1.3
C82-C85;C96	Non-Hodgkin lymphoma	407	8.9	4.3	6.2	3.4	6.6	296	5.5	3.2	5.2	3.2	6.2
C88	Immunoproliferative dis.	0	0.0	0	0	0.0	0.0	0	0.0	0	0	0.0	0.0
C90	Multiple Myeloma	61	1.3	0.6	1.2	0.7	1.3	42	0.8	0.5	0.9	0.5	1.2
C91	Lymphoid Leukaemia	187	4.1	2	2.1	1.1	1.6	113	2.1	1.2	1.4	0.7	1.0
C92-C94	Myeloid Leukaemia	156	3.4	1.6	2	1.2	2.1	128	2.4	1.4	1.8	1.3	1.9
C95	Leukaemia unspecified.	16	0.3	0.2	0.2	0.1	0.1	16	0.3	0.2	0.2	0.1	0.2
Other	Other & unspecified	161	3.5	1.7	2.9	1.5	3.3	167	3.1	1.8	3.1	1.6	3.4

**Table 2.3 Number, Percentage, ASR, CIR, and Cumulative Rates (per 1000) of New Cases by Primary Site and Sex among Saudis, 2010**

## Adult Cancers in Saudi Arabia, 2010 (>14 years)

Between January and December 2010, the total number of adult cancer incidence cases reported was 12,909. Overall cancer was slightly more in females than in males. Cancer affected 6,097 (47.2%) males and 6,812 (52.8%) female

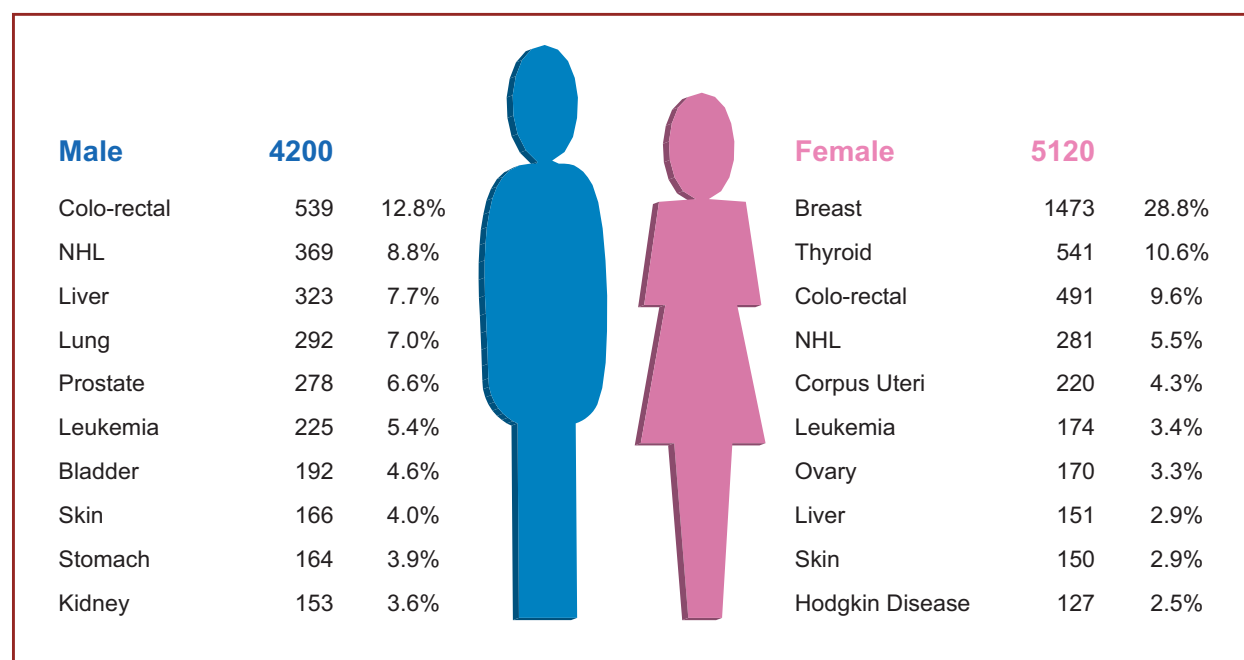
with male to female a ratio of 90:100. Of all cases, there were 9,572 Saudis, 3,133 of Non-Saudis and 204 of unknown nationalities. As shown on table 2.4.1, the total number of analyzed cases were 12,376.

	Saudis			Non-Saudis			Unknown Nationality			All
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Total
Analyzed *	4200	5120	9320	1630	1426	3056	89	102	191	12376
Invasive	4244	5147	9391	1631	1428	3059	89	102	191	12641
In Situ	82	98	180	42	32	74	8	5	13	267
ICD 10 **	45	27	72	1	2	3	0	0	0	75
Total	4327	5245	9572	1673	1460	3133	97	107	204	12909

**Table 2.4.1 Distribution of Reported Adult Cancer Cases in Saudi Arabia by Nationality and Sex, 2010**

Cancer	No.	%
Breast	1497	16.1
Colo-rectal	1030	11.1
Thyroid	688	7.4
NHL	650	7.0
Liver	474	5.1
Leukemia	399	4.3
Lung	397	4.3
Skin	316	3.4
Stomach	290	3.1
Prostate	278	3.0

**Table 2.4.2 Ten Most Common Cancers among Saudi Adults, 2010**



**Figure 2.6 Ten Most Common Cancers among Saudi Adults by sex, 2010**

\* Unknown nationalities, in situ cases and ICD-10 conversion failures are excluded from analysis  
 \*\* ICD-10 conversion failure

Primary Site	Code	Morphology	Male	%	Female	%
Breast	8500	Infiltrating Duct Carcinoma, NOS	14	58.3	1067	72.4
	8520	Lobular Carcinoma, NOS	2	8.3	88	6.0
	8522	Infiltrating Duct and Lobular Carcinoma	1	4.2	56	3.8
	8010	Carcinoma, NOS	1	4.2	49	3.3
	8523	Infiltrating Duct mixed with Other Types of Carcinoma	1	4.2	49	3.3
	8000	Neoplasm, Malignant	2	8.3	41	2.8
	8480	Mucinous Adenocarcinoma	1	4.2	19	1.3
	8510	Medullary Carcinoma, NOS	1	4.2	17	1.2
	8140	Adenocarcinoma, NOS	1	4.2	15	1.0
		Others	0	0.0	72	4.9
Colo-rectal	8480	Mucinous Adenocarcinoma	43	8.0	41	8.4
	8000	Neoplasm, Malignant	7	1.3	23	4.7
	8263	Adenocarcinoma in Tubulovillous adenoma	12	2.2	9	1.8
	8261	Adenocarcinoma in Villous Adenoma	8	1.5	11	2.2
	8490	Signet Ring Cell Carcinoma	11	2.0	8	1.6
	8210	Adenocarcinoma in Adenomatous Polyp	11	2.0	4	0.8
	8010	Carcinoma, NOS	8	1.5	2	0.4
	8481	Mucin-producing Adenocarcinoma	10	1.9	0	0.0
		Others	12	2.2	20	4.1
Thyroid	8260	Papillary Adenocarcinoma, NOS	80	54.4	273	50.5
	8340	Papillary Carcinoma, Follicular Variant	22	15.0	95	17.6
	8341	Papillary Microcarcinoma	8	5.4	67	12.4
	8330	Follicular Adenocarcinoma, NOS	4	2.7	17	3.1
	8344	Papillary Carcinoma, Columnar Cell	3	2.0	15	2.8
	8050	Papillary Carcinoma, NOS	3	2.0	14	2.6
	8290	Oxyphilic Adenocarcinoma	8	5.4	7	1.3
	8335	Follicular Carcinoma, Minimally Invasive	1	0.7	14	2.6
	8343	Papillary Carcinoma, Encapsulated	3	2.0	12	2.2
	8510	Medullary Carcinoma, NOS	7	4.8	6	1.1
	8021	Carcinoma, Anaplastic, NOS	6	4.1	4	0.7
		Others	2	1.4	17	3.1
NHL	9680	Malignant Lymphoma, Large B-Cell, Diffuse, NOS	201	54.5	151	53.7
	9591	Malignant Lymphoma, Non-Hodgkin, NOS	20	5.4	16	5.7
	9590	Malignant Lymphoma, NOS	19	5.1	14	5.0
	9699	Marginal Zone B-Cell Lymphoma, NOS	11	3.0	16	5.7
	9700	Mycosis Fungoides	9	2.4	16	5.7
	9690	Follicular Lymphoma, NOS	10	2.7	11	3.9
	9670	Malignant Lymphoma, Small B Lymphocytic, NOS	10	2.7	9	3.2
	9687	Burkitt Lymphoma, NOS	13	3.5	6	2.1
	9714	Anaplastic large Cell Lymphoma, T Cell and Null Cell type	11	3.0	8	2.8
	9691	Follicular Lymphoma, Grade 2	11	3.0	5	1.8
	9702	Mature T-Cell Lymphoma, NOS	9	2.4	7	2.5
	9698	Follicular Lymphoma, Grade 3	6	1.6	4	1.4
	9673	Mantle Cell Lymphoma	6	1.6	2	0.7
	9695	Follicular Lymphoma, Grade 1	5	1.4	3	1.1
	9729	Precursor T-Cell Lymphoblastic Lymphoma	7	1.9	1	0.4
		Others	21	5.7	12	4.3
Liver	8170	HepatoCellular Carcinoma, NOS	271	83.9	122	80.8
	8000	Neoplasm, Malignant	23	7.1	12	7.9
	8160	Cholangiocarcinoma	11	3.4	8	5.3
	8140	Adenocarcinoma, NOS	7	2.2	4	2.6
	8246	Neuroendocrine Carcinoma, NOS	3	0.9	2	1.3
		Others	8	2.5	3	2.0
Leukemia	9863	Chronic Myeloid Leukemia, NOS	43	19.1	39	22.3
	9823	B-Cell Chronic Lymphocytic Leukemia/Small Lymphocytic Lymphoma	35	15.6	25	14.3
	9861	Acute Myeloid Leukemia, NOS	30	13.3	29	16.6
	9836	Precursor B-Cell Lymphoblastic Leukemia	28	12.4	13	7.4
	9835	Precursor Cell Lymphoblastic Leukemia, NOS	11	4.9	10	5.7
	9866	Acute Promyelocytic Leukemia, t(15;17)(q22;q11-12)	9	4.0	11	6.3
	9837	Precursor T-Cell Lymphoblastic Leukemia	14	6.2	2	1.1
	9801	Acute Leukemia, NOS	6	2.7	5	2.9
	9867	Acute Myelomonocytic Leukemia	7	3.1	4	2.3
	9891	Acute Monocytic Leukemia	5	2.2	6	3.4
	9873	Acute Myeloid Leukemia without Maturation	2	0.9	6	3.4
	9800	Leukemia, NOS	2	0.9	5	2.9
	9874	Acute Myeloid Leukemia with Maturation	1	0.4	5	2.9
	9875	Chronic Myelogenous Leukemia, BCR/ABL Positive	5	2.2	1	0.6
	9896	Acute Myeloid Leukemia, t(8;21)(q22;q22)	5	2.2	1	0.6
	9826	Burkitt Cell Leukemia	2	0.9	3	1.7
	9940	Hairy Cell Leukemia	4	1.8	1	0.6
	9805	Acute Biphenotypic Leukemia	2	0.9	2	1.1
		Others	14	6.2	7	4.0
Lung	8140	Adenocarcinoma, NOS	82	28.1	37	35.2
	8070	Squamous Cell Carcinoma, NOS	42	14.4	11	10.5
	8046	Non-small Cell Carcinoma	35	12.0	9	8.6
	8041	Small Cell Carcinoma, NOS	38	13.0	4	3.8
	8000	Neoplasm, Malignant	18	6.2	11	10.5
	8010	Carcinoma, NOS	21	7.2	7	6.7
	8250	Bronchiolo-alveolar Adenocarcinoma, NOS	11	3.8	6	5.7
	8012	Large Cell Carcinoma, NOS	7	2.4	2	1.9
	8071	Squamous Cell Carcinoma, Keratinizing, NOS	5	1.7	2	1.9
	8240	Carcinoid tumor, NOS	2	0.7	5	4.8
	8246	Neuroendocrine Carcinoma, NOS	4	1.4	3	2.9
		Others	27	9.2	8	7.6

**Table 2.5 Number and Percentage of Morphological Types for the Most Common Types of Cancer among Saudi Adults, 2010**

Table 2.5 continued .....

Primary Site	Code	Morphology	Male	%	Female	%
Skin	8090	Basal Cell Carcinoma, NOS	89	53.0%	68	45.0%
	8070	Squamous Cell Carcinoma, NOS	33	19.6%	30	19.9%
	8832	Dermatofibrosarcoma, NOS	9	5.4%	16	10.6%
	8097	Basal Cell Carcinoma, Nodular	11	6.5%	7	4.6%
	8071	Squamous Cell Carcinoma, Keratinizing, NOS	6	3.6%	8	5.3%
	8410	Sebaceous Adenocarcinoma	7	4.2%	5	3.3%
	8094	Basosquamous Carcinoma	5	3.0%	3	2.0%
		Others	8	4.8%	14	9.3%
Stomach	8140	Adenocarcinoma, NOS	82	50.0%	40	31.7%
	8490	Signet ring Cell Carcinoma	39	23.8%	37	29.4%
	8144	Adenocarcinoma, Intestinal Type	15	9.1%	13	10.3%
	8145	Carcinoma, Diffuse Type	6	3.7%	6	4.8%
	8936	Gastrointestinal Stromal Sarcoma	4	2.4%	6	4.8%
	8000	Neoplasm, Malignant	5	3.0%	4	3.2%
	8010	Carcinoma, NOS	3	1.8%	5	4.0%
	8480	Mucinous Adenocarcinoma	2	1.2%	3	2.4%
	8246	Neuroendocrine Carcinoma, NOS	2	1.2%	2	1.6%
	8255	Adenocarcinoma with mixed subtypes	0	0.0%	3	2.4%
		Others	6	3.7%	7	5.6%
Prostate	8140	Adenocarcinoma, NOS	246	88.5%	-	-
	8000	Neoplasm, Malignant	21	7.6%	-	-
	8010	Carcinoma, NOS	6	2.2%	-	-
	8550	Acinar Cell Carcinoma	5	1.8%	-	-
Hodgkin Disease	9663	Hodgkin Lymphoma, Nodular Sclerosis, NOS	69	46.3%	71	55.9%
	9650	Hodgkin Lymphoma, NOS	27	18.1%	21	16.5%
	9652	Hodgkin Lymphoma, Mixed Cellularity, NOS	22	14.8%	21	16.5%
	9651	Hodgkin Lymphoma, Lymphocyte-rich	8	5.4%	2	1.6%
	9659	Hodgkin Lymphoma, Nodular Lymphocyte Predominance	7	4.7%	3	2.4%
	9667	Hodgkin Lymphoma, Nodular Sclerosis, Grade 2	7	4.7%	1	0.8%
	9665	Hodgkin Lymphoma, Nodular Sclerosis, Grade 1	3	2.0%	3	2.4%
	9653	Hodgkin Lymphoma, lymphocyte depletion, NOS	3	2.0%	2	1.6%
	9664	Hodgkin Lymphoma, Nodular Sclerosis, Cellular phase	2	1.3%	3	2.4%
	9655	Hodgkin Lymphoma, Lymphocyte Depletion, Reticular	1	0.7%	0	0.0%
Kidney	8312	Renal Cell Carcinoma, NOS	87	56.9%	60	65.9%
	8317	Renal Cell Carcinoma, Chromophobe type	15	9.8%	11	12.1%
	8260	Papillary Adenocarcinoma, NOS	18	11.8%	3	3.3%
	8310	Clear Cell Adenocarcinoma, NOS	12	7.8%	7	7.7%
	8318	Renal Cell Carcinoma, Sarcomatoid	6	3.9%	2	2.2%
	8000	Neoplasm, Malignant	2	1.3%	4	4.4%
	8010	Carcinoma, NOS	3	2.0%	0	0.0%
		Others	10	6.5%	4	4.4%
Bladder	8130	Papillary Transitional Cell Carcinoma	106	55.2%	17	34.0%
	8120	Transitional Cell Carcinoma, NOS	59	30.7%	19	38.0%
	8070	Squamous Cell Carcinoma, NOS	3	1.6%	6	12.0%
	8000	Neoplasm, Malignant	6	3.1%	0	0.0%
	8010	Carcinoma, NOS	2	1.0%	3	6.0%
	8071	Squamous Cell Carcinoma, Keratinizing, NOS	2	1.0%	1	2.0%
		Others	14	7.3%	4	8.0%
Corpus Uteri	8380	Endometrioid Adenocarcinoma, NOS	-	-	127	57.7%
	8140	Adenocarcinoma, NOS	-	-	26	11.8%
	8441	Serous Cystadenocarcinoma, NOS	-	-	10	4.5%
	8980	Carcinosarcoma, NOS	-	-	10	4.5%
	8010	Carcinoma, NOS	-	-	5	2.3%
	8310	Clear Cell Adenocarcinoma, NOS	-	-	5	2.3%
	8460	Papillary Serous Cystadenocarcinoma	-	-	4	1.8%
	8931	Endometrial Stromal Sarcoma, Low Grade	-	-	4	1.8%
	8255	Adenocarcinoma with Mixed Subtypes	-	-	3	1.4%
	8461	Serous Surface Papillary Carcinoma	-	-	3	1.4%
	8930	Endometrial Stromal Sarcoma, NOS	-	-	3	1.4%
	8950	Mullerian Mixed Tumor	-	-	3	1.4%
		Others	-	-	17	7.7%
Ovary	8441	Serous Cystadenocarcinoma, NOS	-	-	48	28.2%
	8460	Papillary Serous Cystadenocarcinoma	-	-	16	9.4%
	8140	Adenocarcinoma, NOS	-	-	15	8.8%
	8480	Mucinous Adenocarcinoma	-	-	15	8.8%
	8000	Neoplasm, Malignant	-	-	14	8.2%
	8380	Endometrioid Adenocarcinoma, NOS	-	-	10	5.9%
	8010	Carcinoma, NOS	-	-	9	5.3%
	8470	Mucinous Cystadenocarcinoma, NOS	-	-	8	4.7%
	8461	Serous surface papillary Carcinoma	-	-	6	3.5%
	8620	Granulosa Cell Tumor, Malignant	-	-	4	2.4%
	8980	Carcinosarcoma, NOS	-	-	4	2.4%
	9071	Yolk Sac Tumor	-	-	4	2.4%
	9060	Dysgerminoma	-	-	3	1.8%
	8260	Papillary Adenocarcinoma, NOS	-	-	2	1.2%
	9080	Teratoma, Malignant, NOS	-	-	2	1.2%
		Others	-	-	10	5.9%

## Childhood Cancers in Saudi Arabia, 2010 ( $\leq 14$ years)

The total incident cases reported among children (0-14 years) between January and December 2010 were 796. This represents 5.8% of the total number of cancers in Saudi Arabia. The reported incidents show that cancer was more common among boys than girls. 482 (60.6%) cases were reported among boys and 314 (39.4%) among girls, with a male to female ratio of 154:100. Of all the cases reported there were 658 Saudis, 132 non-Saudis and 6 of "unknown nationality". Based on Table 2.6.1, the total number of cases analyzed was 784 including 652 (83.3%) Saudis and 132 (16.7%) non-Saudis. Among Saudis, 393 (60.3%) were male and 259 (39.7%) were female. The male to female ratio among Saudis was 152:100

Childhood cancer is very important, not only because of the age of occurrence, but also because 41.7% of the Saudi population is under 15 years of age. In addition to this, recent years have shown a breakthrough for the cure of many childhood cancers. Childhood cancers accounted for 6.4% of all cancer among Saudis. The leading cancer among Saudi children was leukemia, which accounted for 33.3 %, followed by Brain, CNS 12.9% then Hodgkin Disease 9.2 % then NHL 8.1% and Kidney 6.1% Table 2.6.2. Figure 2.7 shows the top ten sites by sex and frequency, and Table 2.7 shows the number and proportion of the morphological types for the most common types of cancer.

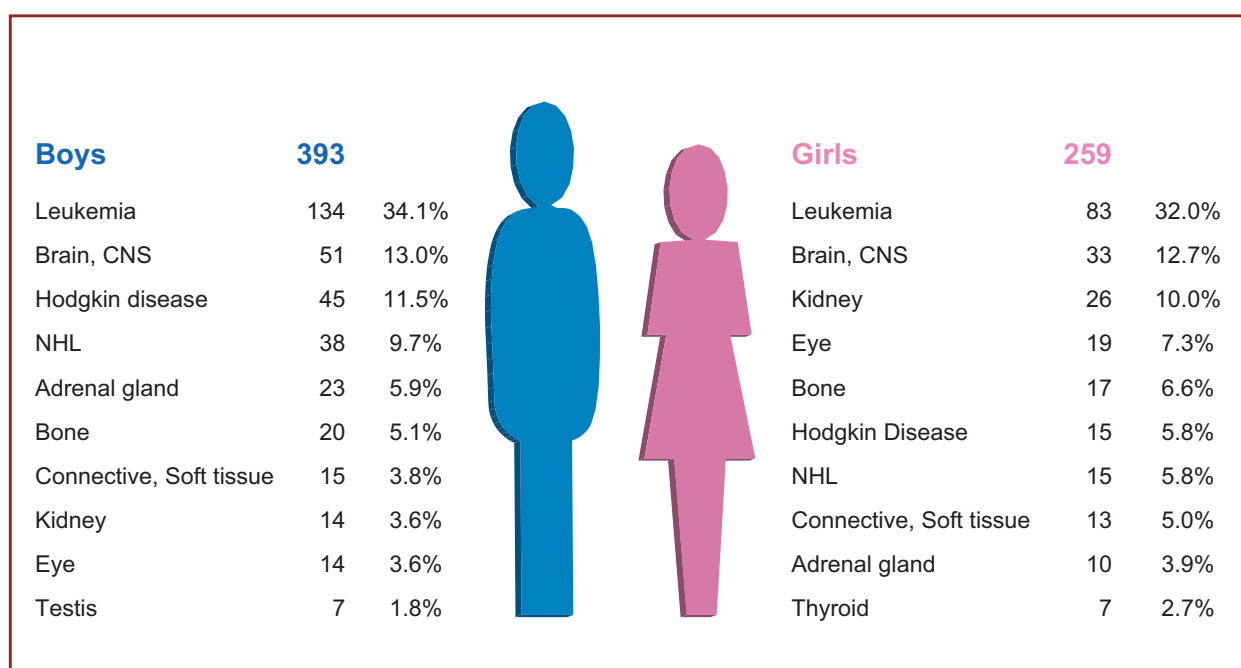
	Saudis			Non-Saudis			Unknown Nationality			All
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Total
Analyzed *	393	259	652	82	50	132	3	3	6	784
Invasive	397	260	657	82	50	132	3	3	6	795
In Situ	0	1	1	0	0	0	0	0	0	1
ICD-10 **	4	1	5	0	0	0	0	0	0	5
Total	397	261	658	82	50	132	3	3	6	796

**Table 2.6.1 Distribution of Reported Childhood Cancer Cases in Saudi Arabia by Nationality and Sex, 2010**

Cancer	No.	%
Leukemia	217	33.3
Brain, CNS	84	12.9
Hodgkin disease	60	9.2
NHL	53	8.1
Kidney	40	6.1
Bone	37	5.7
Eye	33	5.1
Adrenal gland	33	5.1
Connective, Soft tissue	28	4.3
Liver	9	1.4
Thyroid	9	1.4

**Table 2.6.2 Ten Most Common Cancers among Saudi Children, 2010**

\* Unknown nationalities, in situ cases and ICD-10 conversion failures are excluded from analysis  
 \*\* ICD-10 conversion failure



**Figure 2.7 Ten Most Common Cancers among Saudi Children by Sex, 2010**

Primary Site	Code	Morphology	Male	%	Female	%
Leukemia	9836	Precursor B-cell Lymphoblastic Leukemia	62	46.3	41	49.4
	9835	Precursor Cell Lymphoblastic Leukemia, NOS	15	11.2	14	16.9
	9861	Acute Myeloid leukemia, NOS	17	12.7	5	6.0
	9837	Precursor T-cell Lymphoblastic Leukemia	14	10.4	2	2.4
	9801	Acute Leukemia, NOS	4	3.0	2	2.4
	9867	Acute Myelomonocytic Leukemia	2	1.5	4	4.8
	9863	Chronic Myeloid Leukemia, NOS	3	2.2	2	2.4
	9866	Acute Promyelocytic Leukemia, t(15;17)(q22;q11-12)	5	3.7	0	0.0
	9805	Acute Biphenotypic Leukemia	2	1.5	2	2.4
	9891	Acute Monocytic Leukemia	1	0.7	3	3.6
	9896	Acute Myeloid Leukemia, t(8;21)(q22;q22)	3	2.2	1	1.2
	9910	Acute Megakaryoblastic Leukemia	2	1.5	1	1.2
	9946	Juvenile Myelomonocytic Leukemia	1	0.7	2	2.4
		Others	3	2.2	4	4.8
Brain, CNS	9470	Medulloblastoma, NOS	12	23.5	9	27.3
	9380	Glioma, Malignant	9	17.6	5	15.2
	9391	Ependymoma, NOS	7	13.7	2	6.1
	9471	Desmoplastic Nodular Medulloblastoma	4	7.8	2	6.1
	9440	Glioblastoma, NOS	2	3.9	3	9.1
	9392	Ependymoma, Anaplastic	0	0.0	4	12.1
	9400	Astrocytoma, NOS	3	5.9	1	3.0
	9473	Primitive Neuroectodermal Tumor, NOS	1	2.0	2	6.1
	8963	Malignant Rhabdoid Tumor	2	3.9	0	0.0
	9420	Fibrillary Astrocytoma	1	2.0	1	3.0
	9451	Oligodendroglioma, Anaplastic	2	3.9	0	0.0
	9508	Atypical Teratoid/Rhabdoid Tumor	1	2.0	1	3.0
		Others	7	13.7	3	9.1

**Table 2.7 Number and Percentage of Morphological Types for the Most Common Types of Cancer among Saudi Children, 2010**

Table 2.7 continued .....

Primary Site	Code	Morphology	Male	%	Female	%
<b>Hodgkin Disease</b>	9663	Hodgkin Lymphoma, Nodular Sclerosis, NOS	22	48.9	7	46.7
	9652	Hodgkin Lymphoma, Mixed Cellularity, NOS	11	24.4	3	20.0
	9651	Hodgkin Lymphoma, Lymphocyte-rich	3	6.7	3	20.0
	9650	Hodgkin Lymphoma, NOS	3	6.7	1	6.7
		Others	6	13.3	1	6.7
<b>NHL</b>	9687	Burkitt Lymphoma, NOS	18	47.4	6	40.0
	9590	Malignant Lymphoma, NOS	2	5.3	2	13.3
	9700	Mycosis Fungoides	2	5.3	2	13.3
	9591	Malignant Lymphoma, Non-Hodgkin, NOS	3	7.9	0	0.0
	9680	Malignant Lymphoma, Large B-cell, Diffuse, NOS	3	7.9	0	0.0
	9754	Langerhans Cell Histiocytosis, Disseminated	2	5.3	1	6.7
	9728	Precursor B-cell Lymphoblastic Lymphoma	1	2.6	1	6.7
	9729	Precursor T-cell Lymphoblastic Lymphoma	1	2.6	1	6.7
		Others	32	84.2	13	86.7
<b>Kidney</b>	8960	Nephroblastoma, NOS	13	92.9	21	80.8
	9500	Neuroblastoma, NOS	0	0.0	3	11.5
	8312	Renal Cell Carcinoma, NOS	0	0.0	1	3.8
	8963	Malignant Rhabdoid Tumor	1	7.1	0	0.0
	8964	Clear Cell Sarcoma of Kidney	0	0.0	1	3.8
<b>Bone</b>	9260	Ewing Sarcoma	13	65.0	9	52.9
	9180	Osteosarcoma, NOS	4	20.0	5	29.4
	8000	Neoplasm, Malignant	1	5.0	1	5.9
	9181	Chondroblastic Osteosarcoma	1	5.0	1	5.9
	9193	Periosteal Osteosarcoma	0	0.0	1	5.9
	9473	Primitive Neuroectodermal Tumor, NOS	1	5.0	0	0.0
<b>Eye</b>	9510	Retinoblastoma, NOS	8	57.1	17	89.5
	8910	Embryonal Rhabdomyosarcoma, NOS	3	21.4	0	0.0
	9512	Retinoblastoma, Undifferentiated	2	14.3	1	5.3
	9511	Retinoblastoma, Differentiated	1	7.1	1	5.3
<b>Adrenal Gland</b>	9500	Neuroblastoma, NOS	23	100.0	8	80.0
	8000	Neoplasm, Malignant	0	0.0	1	10.0
	9490	Ganglioneuroblastoma	0	0.0	1	10.0
<b>Connective Tissue</b>	9500	Neuroblastoma, NOS	4	26.7	3	23.1
	8910	Embryonal Rhabdomyosarcoma, NOS	1	6.7	2	15.4
	8900	Rhabdomyosarcoma, NOS	1	6.7	1	7.7
	9040	Synovial Sarcoma, NOS	0	0.0	2	15.4
	9473	Primitive Neuroectodermal Tumor, NOS	2	13.3	0	0.0
	9490	Ganglioneuroblastoma	2	13.3	0	0.0
	8801	Spindle Cell Sarcoma	0	0.0	1	7.7
	8803	Small Cell Sarcoma	0	0.0	1	7.7
		Others	5	33.3	3	23.1
<b>Thyroid</b>	8260	Papillary Adenocarcinoma, NOS	1	50.0	5	71.4
	8340	Papillary Carcinoma, Follicular Variant	1	50.0	2	28.6
<b>Testes</b>	9071	Yolk Sac Tumor	2	28.6	-	-
	8910	Embryonal Rhabdomyosarcoma, NOS	1	14.3	-	-
	9061	Seminoma, NOS	1	14.3	-	-
	9065	Germ Cell Tumor, Nonseminomatous	1	14.3	-	-
	9080	Teratoma, Malignant, NOS	1	14.3	-	-
	9085	Mixed Germ Cell Tumor	1	14.3	-	-



## Cancer in the 13 Administrative Regions of the Kingdom, 2010

The following bar charts list the most common cancer sites in the 13 administrative regions of Saudi Arabia by sex. These sites are listed on the basis of the total number of cases for each site reported by permanent address (region) of the patient at the time of diagnosis. In most regions breast and thyroid cancers were the leading cancer among women, while among men Colo-rectal and NHL

It is worth noting that the major regions such as Riyadh, Makkah and Eastern Province represent the majority of cases. This can be attributed to the increasing number of people seeking medical attention in these urbanized cities with modern hospital facilities where permanent addresses may not be documented in source record

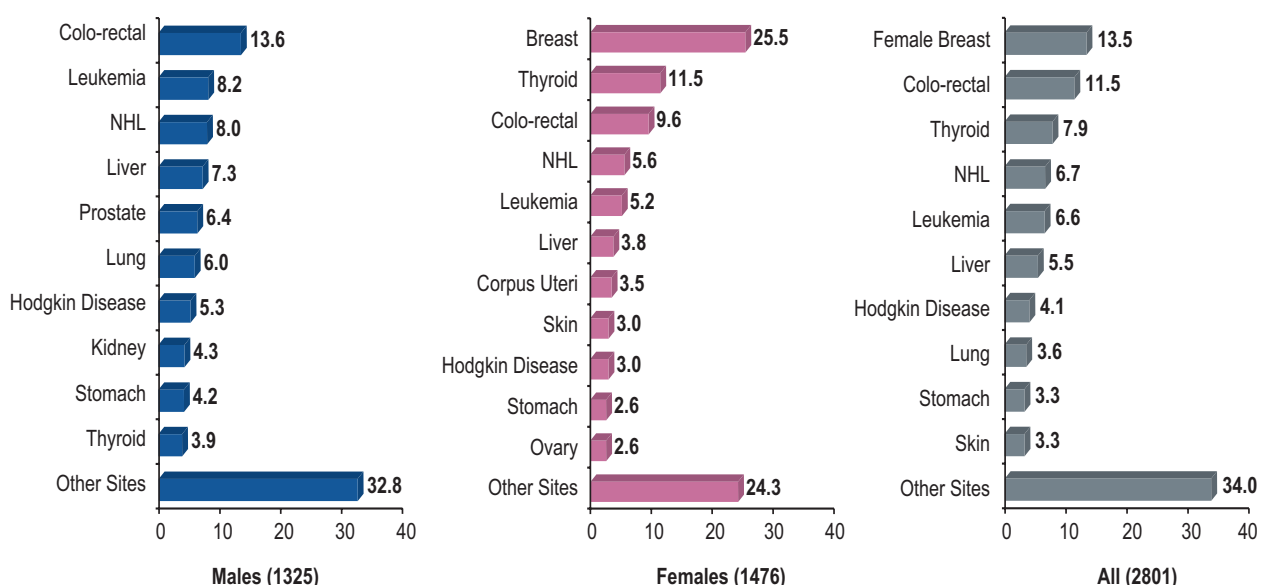


Figure 2.8.1 Riyadh Region, 2010 (Relative Frequency Distribution)

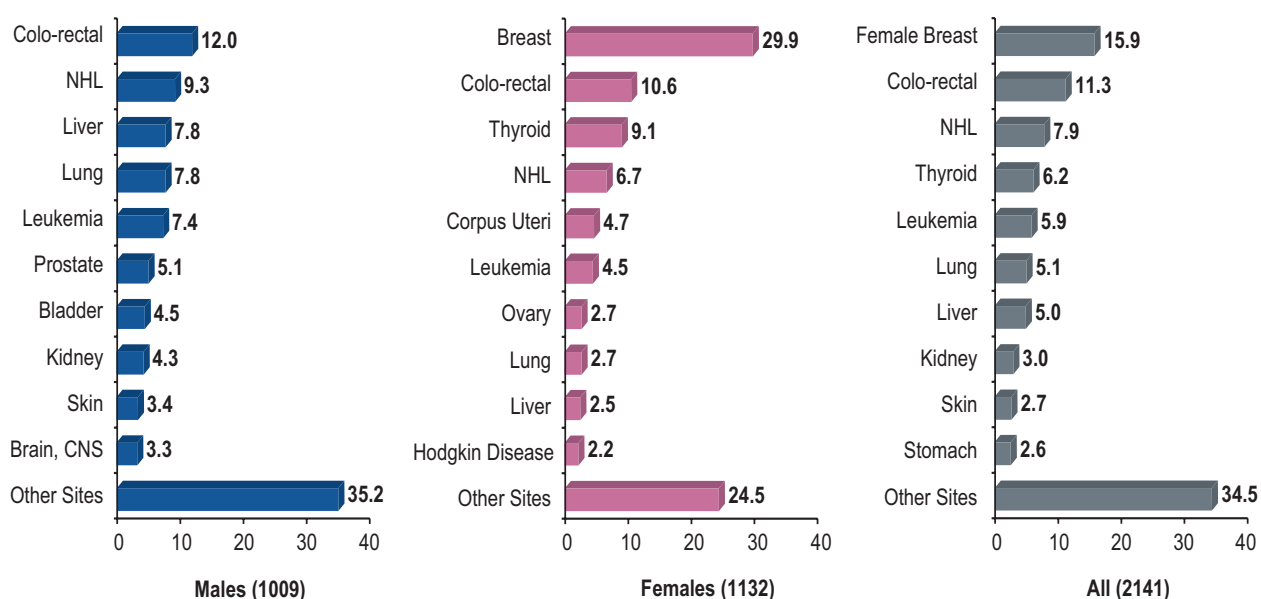


Figure 2.8.2 Makkah Region, 2010 (Relative Frequency Distribution)

## Cancer in the 13 Administrative Regions of the Kingdom, 2010

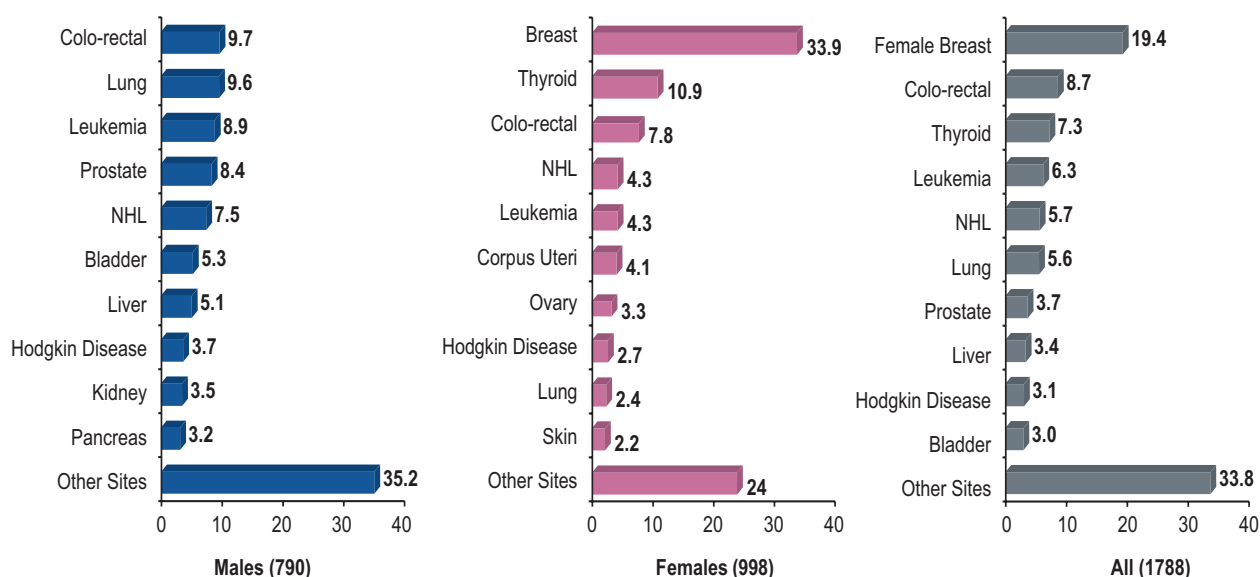


Figure 2.8.3 Eastern Region, 2010 (Relative Frequency Distribution)

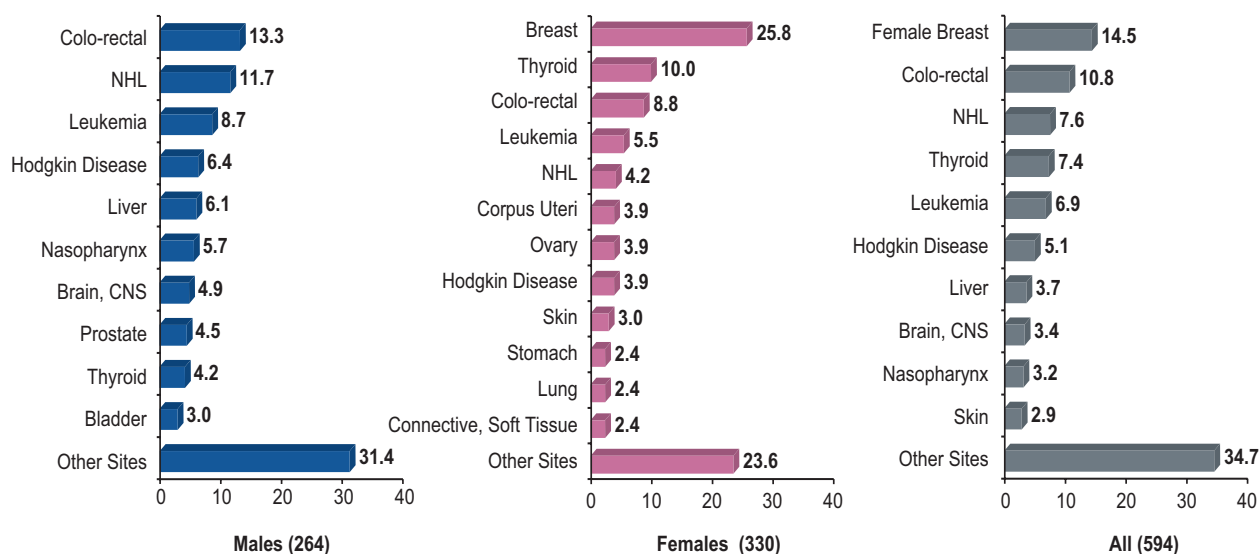


Figure 2.8.4 Madinah Region, 2010 (Relative Frequency Distribution)

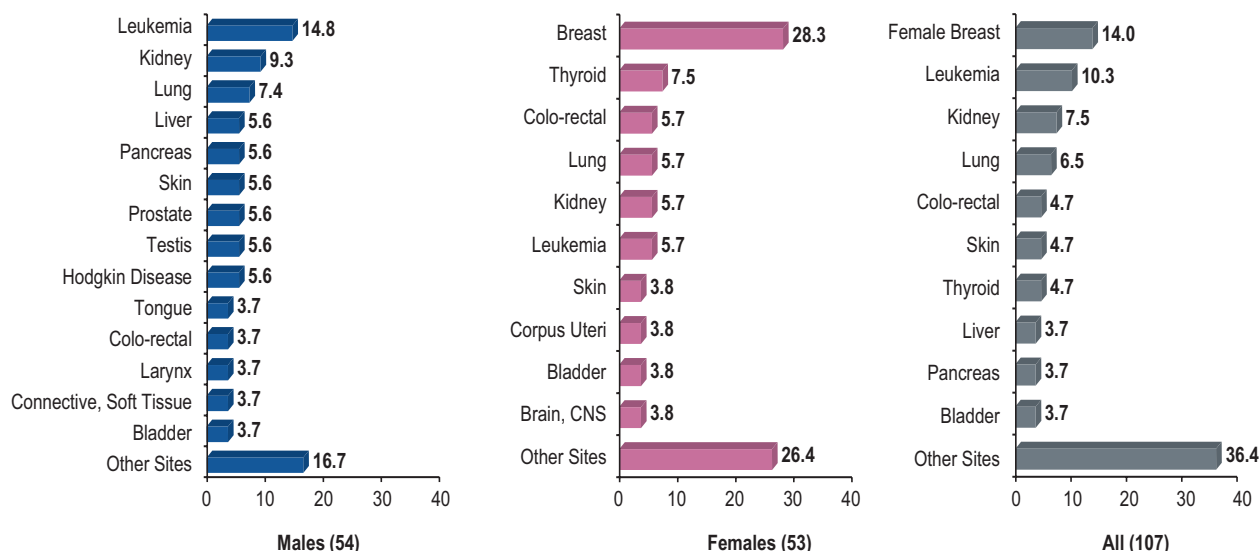
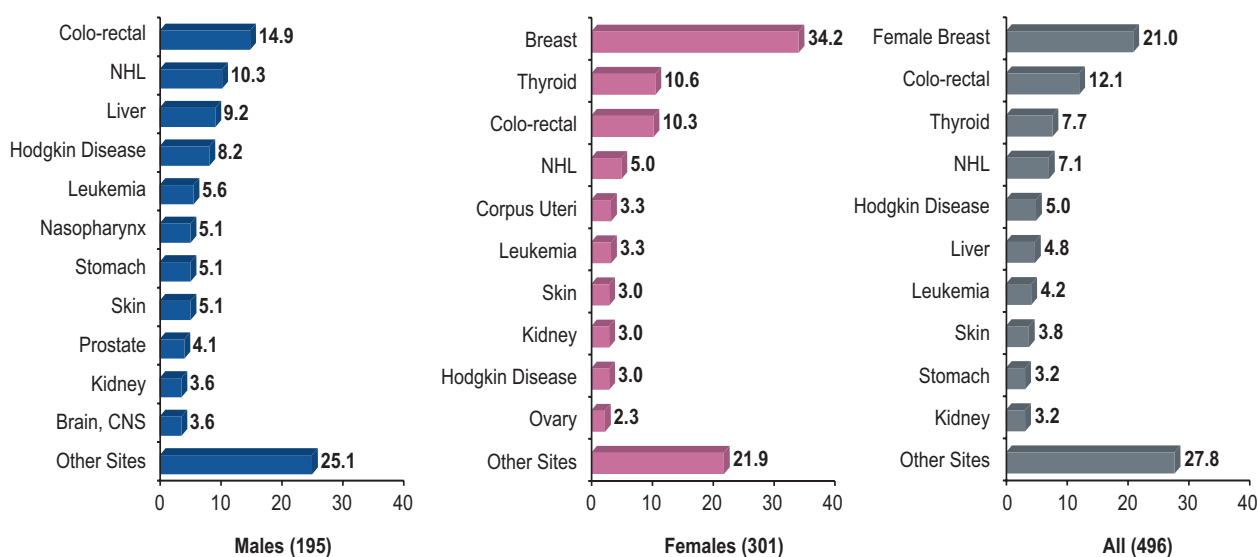
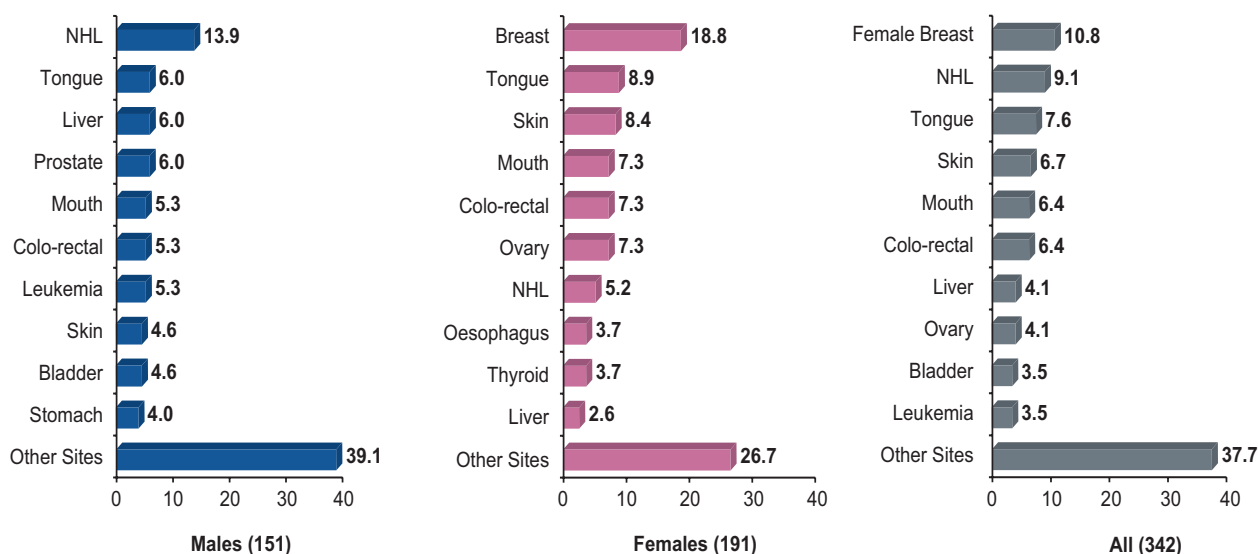


Figure 2.8.5 Northern Region, 2010 (Relative Frequency Distribution)

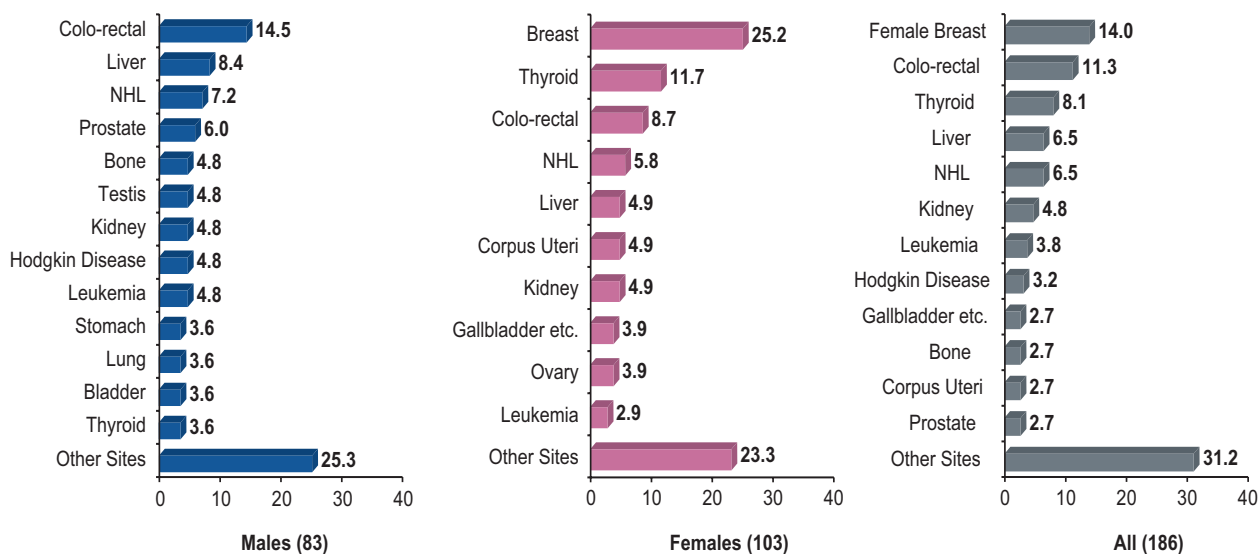
## Cancer in the 13 Administrative Regions of the Kingdom, 2010



**Figure 2.8.6 Qassim Region, 2010 (Relative Frequency Distribution)**



**Figure 2.8.7 Jazan Region, 2010 (Relative Frequency Distribution)**



**Figure 2.8.8 Hail Region, 2010 (Relative Frequency Distribution)**

## Cancer in the 13 Administrative Regions of the Kingdom, 2010

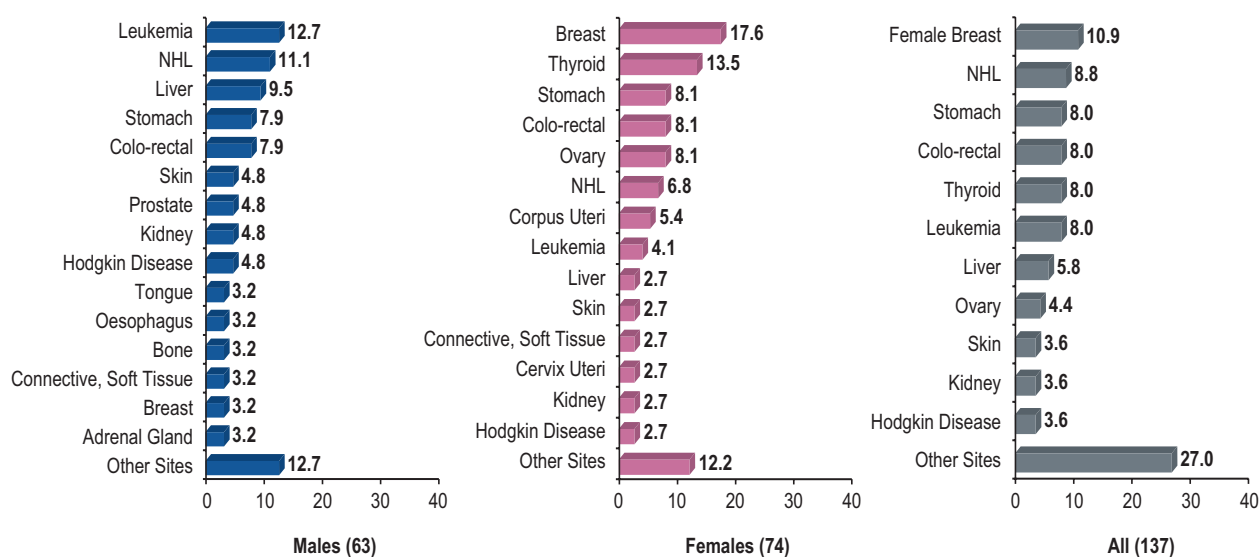


Figure 2.8.9 Najran Region, 2010 (Relative Frequency Distribution)

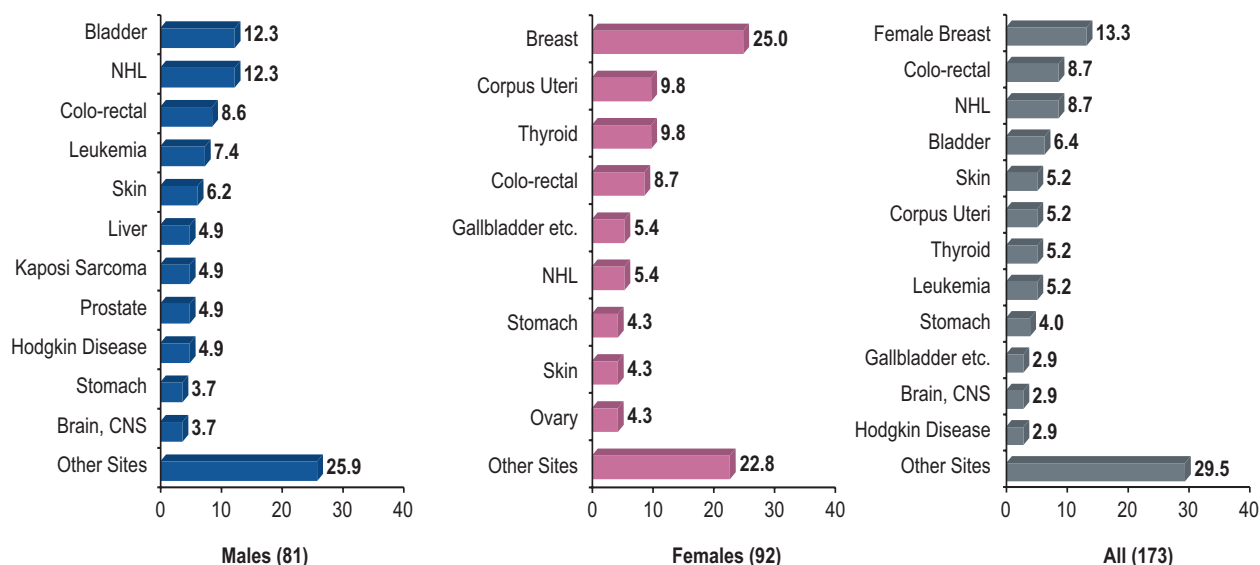


Figure 2.8.10 Baha Region, 2010 (Relative Frequency Distribution)

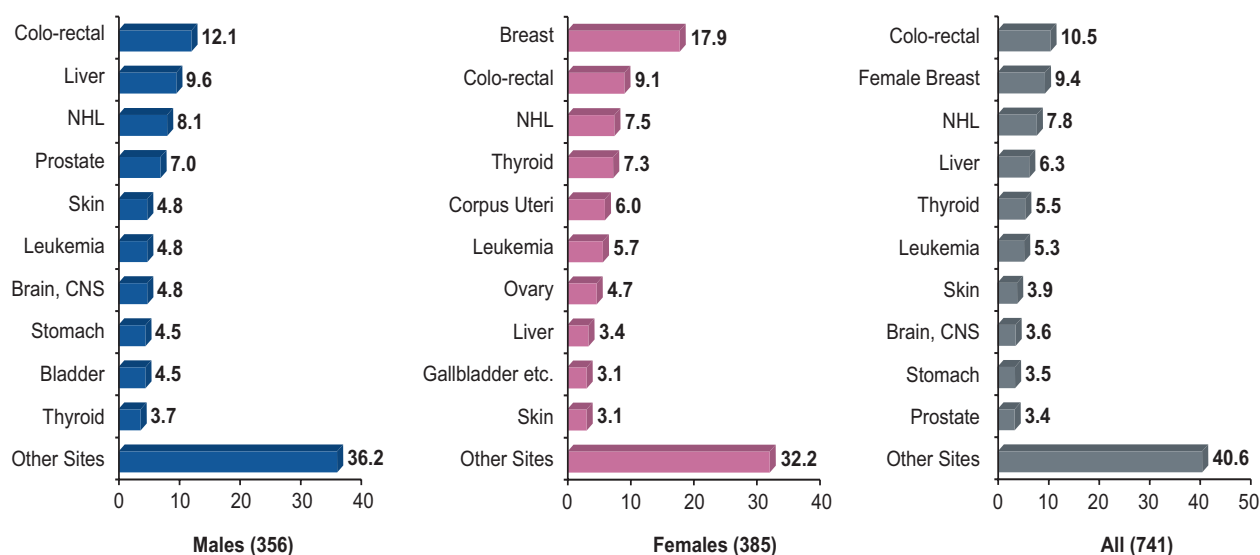
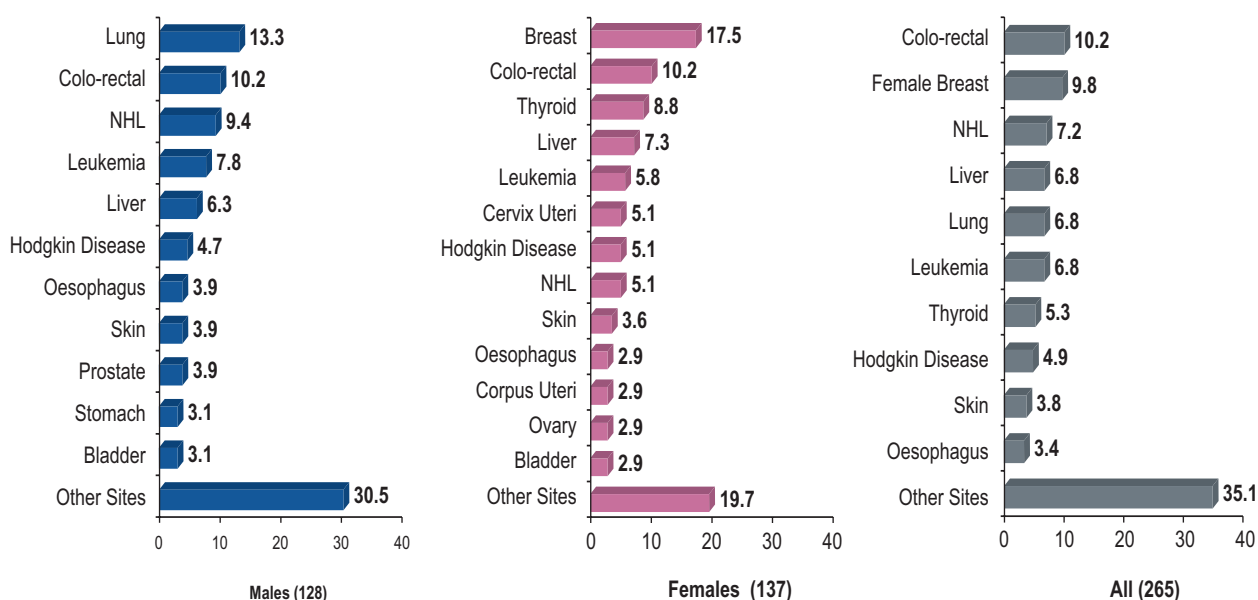
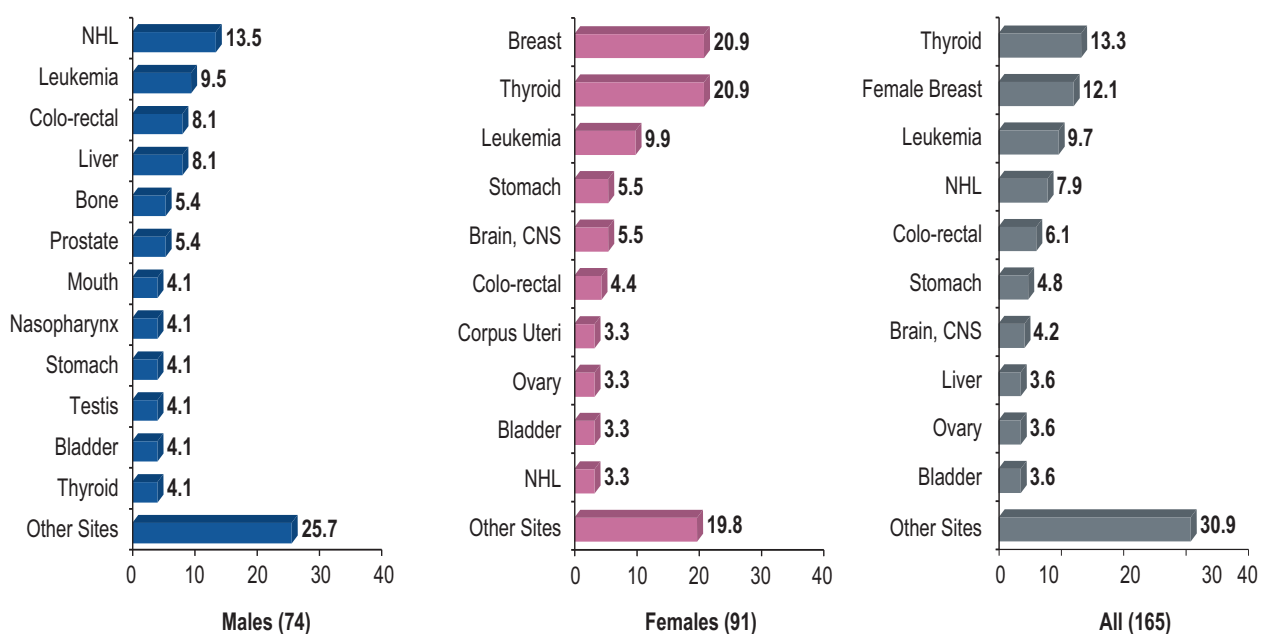


Figure 2.8.11 Asir Region, 2010 (Relative Frequency Distribution)

## Cancer in the 13 Administrative Regions of the Kingdom, 2010



**Figure 2.8.12 Tabuk Region, 2010 (Relative Frequency Distribution)**

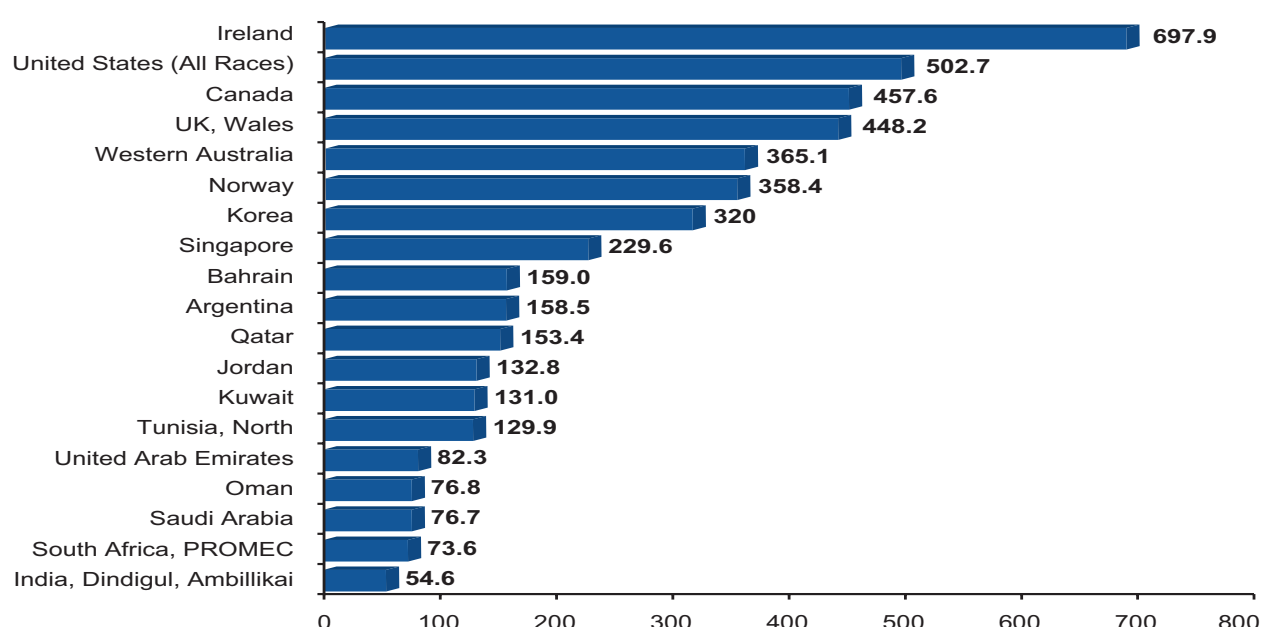


**Figure 2.8.13 Jouf Region, 2010 (Relative Frequency Distribution)**

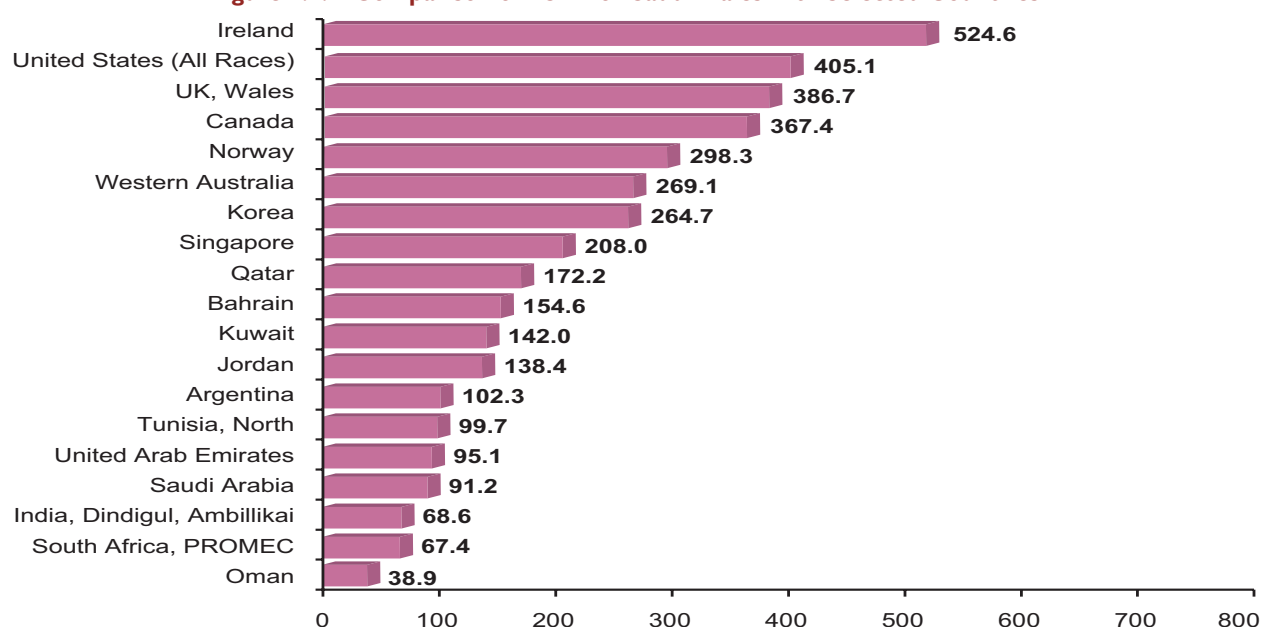
## International Comparison of Age-Standardized Incidence Rates

Worldwide, GLOBOCAN, 2012 estimated that 14,090,149 people developed cancer in 2012. Of these, 80,142,73 (56.9%) were in developing countries and 60,758,76 (43.1%) in developed countries. In men, ASR is high in Northern America, Europe, and Australia/New Zealand while the lowest ASR is in Western/ Middle Africa and South-Central Asia. As in males, the regions with the highest ASR in females are Northern America, Europe, and Australia/New Zealand while the lowest ASR in Middle/Northern/Western Africa and in South-Eastern Asia and South-Central Asia. According to 2012 estimates, the most common cancer site worldwide among men was lung cancer,

followed by prostate, colo-rectal, stomach then liver. However in developed countries prostate was the leading cancer followed by lung, colo-rectal, then bladder followed by stomach, while in developing countries lung cancer was first followed by liver, stomach, prostate and NHL cancers. In women, the most common cancer site was breast followed by colo-rectal, lung, cervix uteri cancers and corpus uteri. In developing countries among women, breast cancer was the most common followed by cervix uteri, lung, then colo-rectal, and stomach. While in the developed countries breast cancer was the leading cancer followed by cancers of the colo-rectum, corpus uteri then hodgkin disease.



**Figure 2.9.A Comparison of ASR\* for Saudi Males with Selected Countries\*\***



**Figure 2.9.B Comparison of ASR\* for Saudi Females with Selected Countries\*\***

\* ASR Per 100,000

\*\* Source for this information is summarized on page 66

**PART III**  
**CANCER INCIDENCE FOR MOST COMMON SITES**  
**2010**





## Cancer Incidence for Most Common Sites, 2010

In this section, the incidence of the most common cancers among Saudi males and females are outlined in accordance to their relative

frequencies. The relevant data incorporate details for all patients presented over the period of January through December 2010

Cancer	Male	Female	All	%
Breast	24	1473	1497	15.0
Colo-rectal	541	492	1033	10.4
NHL	407	296	703	7.1
Thyroid	149	548	697	7.0
Leukemia	359	257	616	6.2
Liver	329	154	483	4.8
Lung	292	105	397	4.0
Hodgkin Disease	194	142	336	3.4
Skin	168	151	319	3.2
Stomach	165	126	291	2.9
Kidney	167	117	284	2.8
Prostate	280	-	280	2.8
Bladder	193	50	243	2.4
Corpus Uteri	-	220	220	2.2
Ovary	-	175	175	1.8

Table 3.1 Most Common Cancers among Saudis by sex, 2010

## Female Breast (C 50)

There were 1473 female breast cancer cases for year 2010. Breast cancer ranked first among females accounting for 27.4% of all newly diagnosed female cancers (5,378) in year 2010. The ASR was 24.9/100,000 for female population. The five regions with

the highest ASR were Eastern region at 39.5/100,000, Qassim region at 32.8/100,000, Riyadh Region at 30.6/100,000, Makkah Region at 24.2/100,000 and Madinah Region at 21.3/100,000. The median age at diagnosis was 49 years (Range 21-120 years)

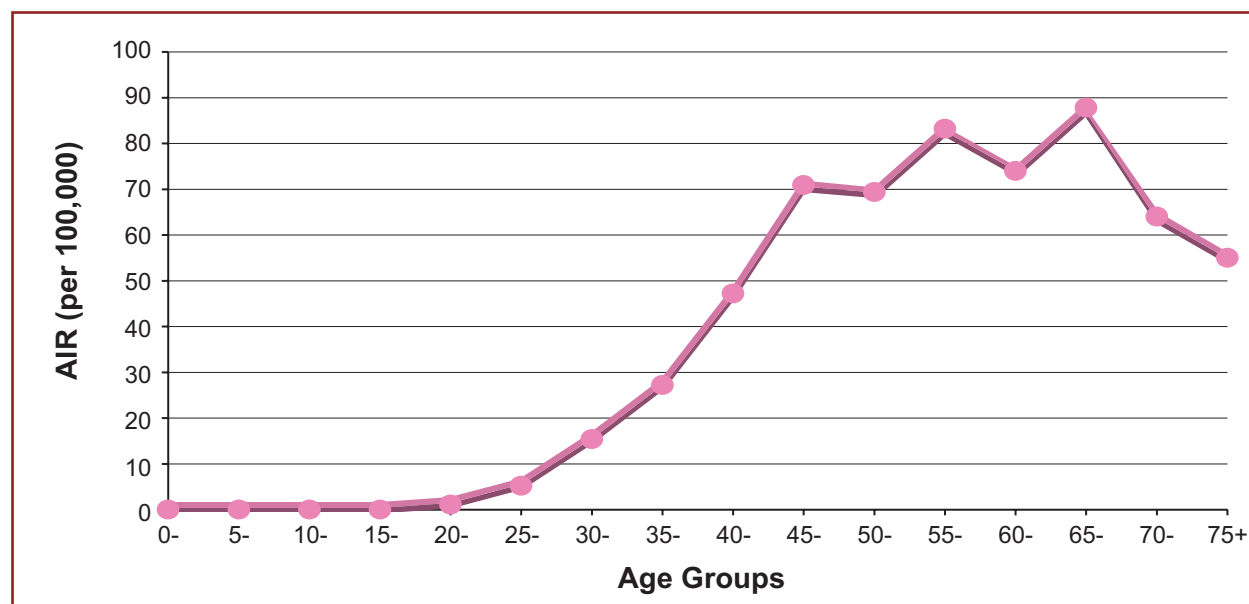


Figure 3.1.1 Age-Specific Incidence Rate (AIR) for Female Breast Cancer in Saudi Arabia, 2010

ICD-O-3	Morphology	Female	%
8500	Infiltrating duct carcinoma, NOS	1067	72.4
8520	Lobular carcinoma, NOS	88	6.0
8522	Infiltrating duct and lobular carcinoma	56	3.8
8010	Carcinoma, NOS	49	3.3
8523	Infiltrating duct mixed with other types of carcinoma	49	3.3
8000	Neoplasm, malignant	41	2.8
8480	Mucinous adenocarcinoma	19	1.3
8510	Medullary carcinoma, NOS	17	1.2
8140	Adenocarcinoma, NOS	15	1.0
	Others	72	4.9

Table 3.1.1 Morphological Distribution of Female Breast Cancer in Saudi Arabia, 2010

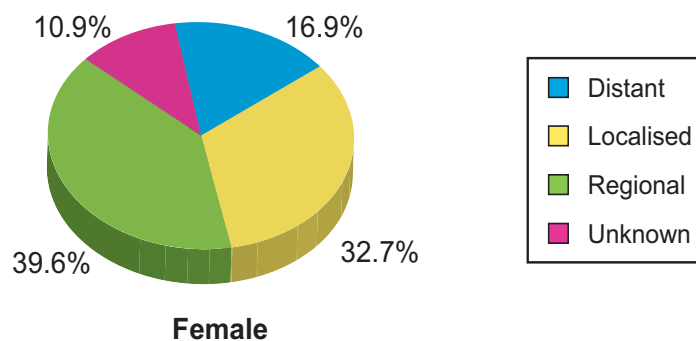
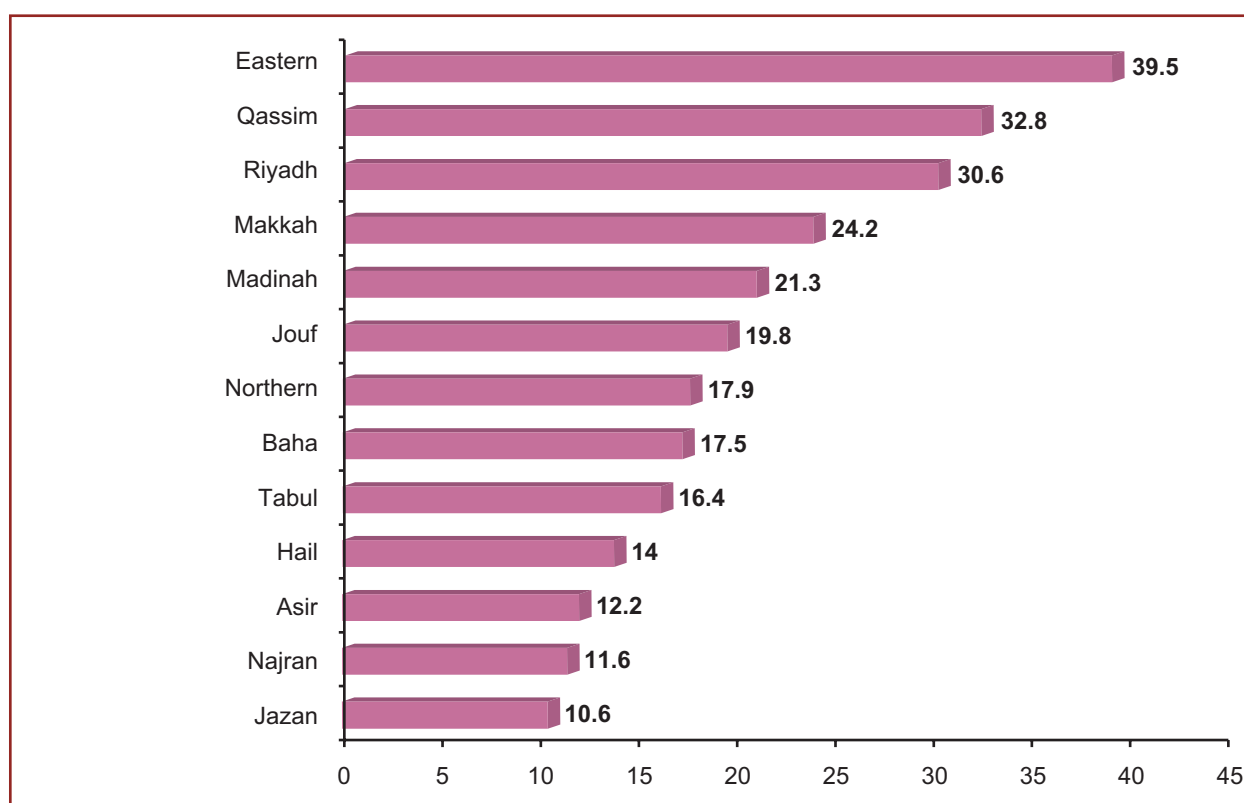
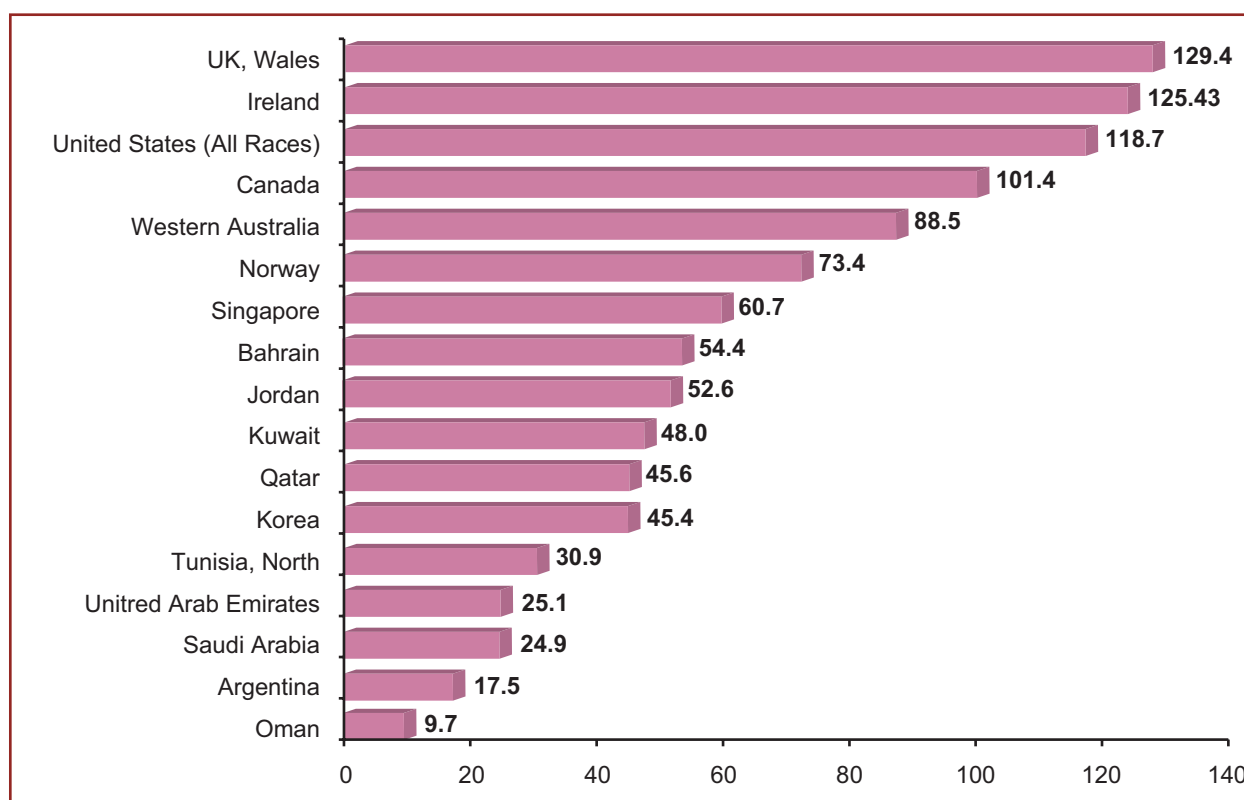


Figure 3.1.2 Stage Distribution of Female Breast Cancer in Saudi Arabia, 2010



**Figure 3.1.3 ASR\* Regional Distribution of Female Breast Cancer in Saudi Arabia, 2010**



**Figure 3.1.4 Comparison of ASR\* for Female Breast Cancer among Saudi Females with ASR in Selected Countries\*\***

\* ASR Per 100,000

\*\* Source for this information is summarized on page 66

## Colo-rectal (C18-C20)

There were 1033 cases of colo-rectal cancer accounting for 10.4% of all newly diagnosed cases in year 2010. This cancer ranked first among male population and third among female population. It affected 541 (52.4%) males and 492 (47.6 %) females with a male to female ratio of 110:100. The overall ASR was 9.6/100,000. ASR for males was 9.9/100,000 and for females 9.2/100,000

The five regions with the highest ASR were Riyadh region at 14.5/100,000, Eastern region at 12/100,000, Tabuk region at 10.8/100,000, Qassim region at 10.1/100,000 and Makkah region at 9.3/100,000. The median age at diagnosis was 60 years among males (range 2-100 years) and 55 years among females (range 13-100 years).

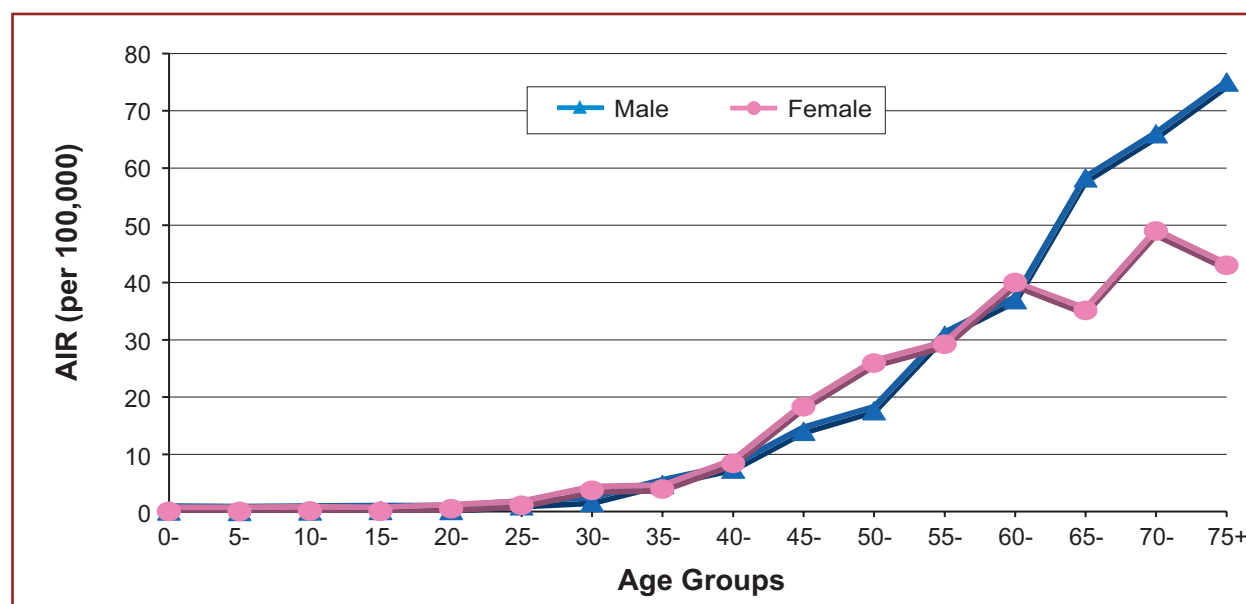


Figure 3.2.1 Age-Specific Incidence Rate (AIR) for Colo-rectal Cancer in Saudi Arabia, 2010

ICD-0-3	Morphology	Male	%	Female	%
8140	Adenocarcinoma, NOS	427	78.9	364	74.0
8480	Mucinous adenocarcinoma	38	7.0	47	9.6
8000	Neoplasm, malignant	13	2.4	17	3.5
8263	Adenocarcinoma in tubulovillous adenoma	13	2.4	8	1.6
8261	Adenocarcinoma in villous adenoma	8	1.5	11	2.2
8490	Signet ring cell carcinoma	6	1.1	13	2.6
8210	Adenocarcinoma in adenomatous polyp	7	1.3	8	1.6
8010	Carcinoma, NOS	4	0.7	6	1.2
8481	Mucin-producing adenocarcinoma	8	1.5	2	0.4
	Others	17	3.1	16	3.3

Table 3.2.1 Morphological Distribution of Colo-rectal Cancer in Saudi Arabia, 2010

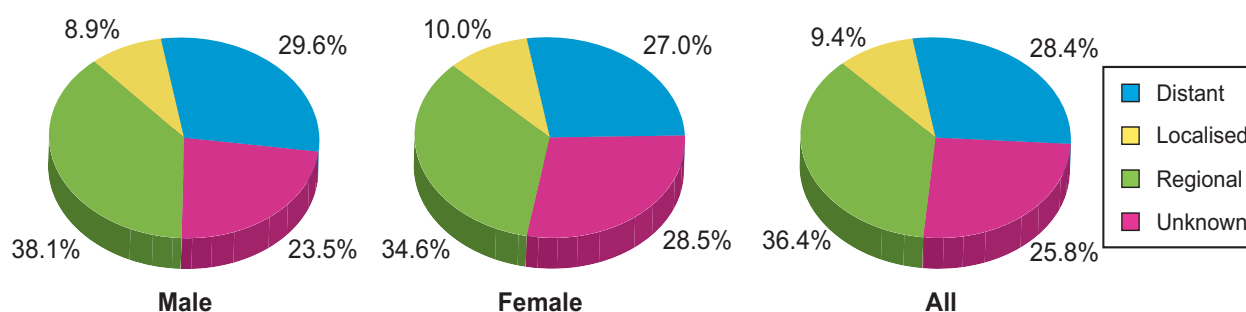
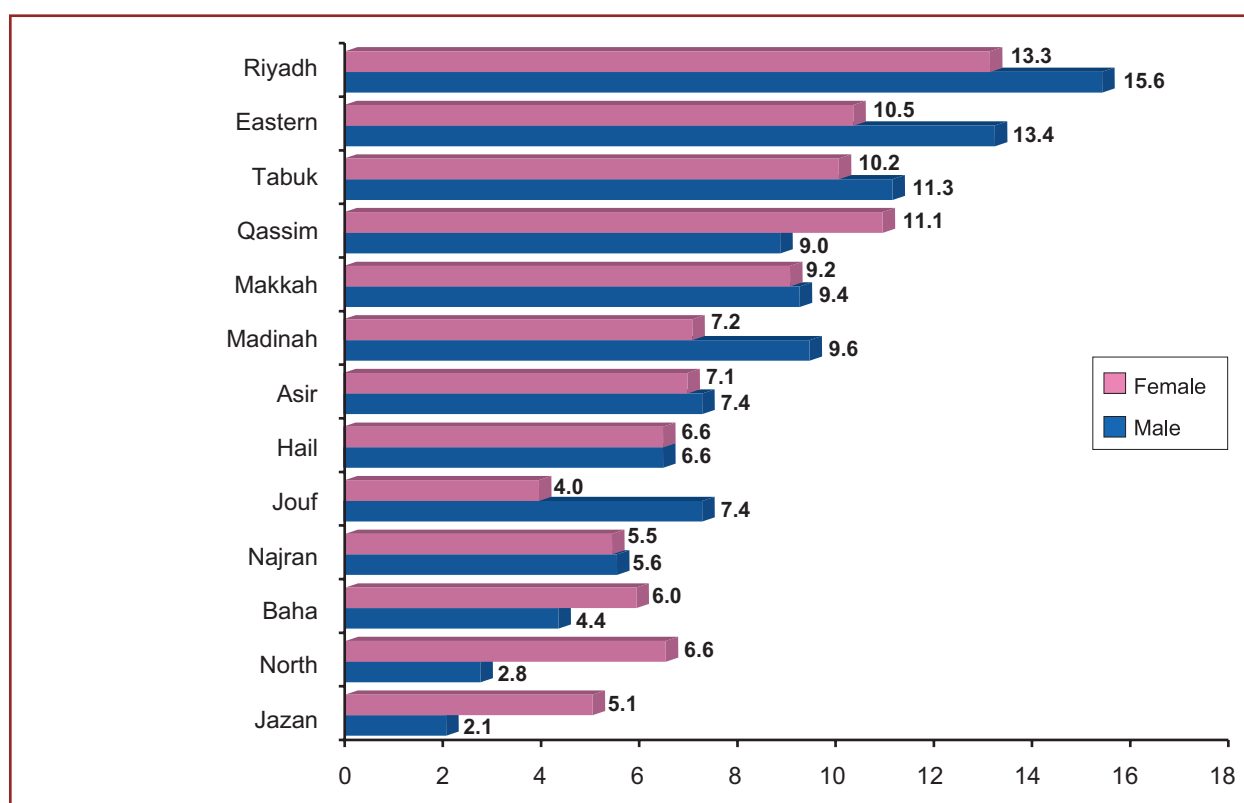
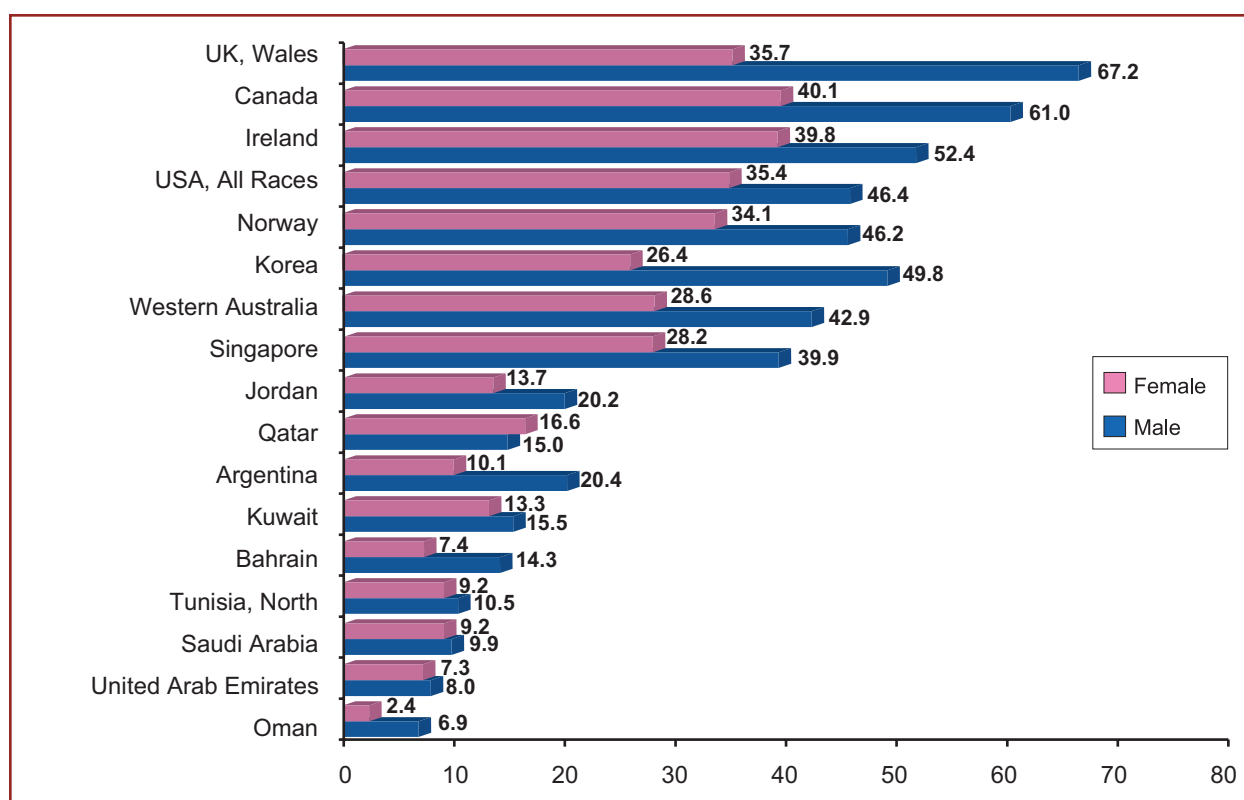


Figure 3.2.2 Stage Distribution of Colo-rectal Cancer in Saudi Arabia, 2010



**Figure 3.2.3 ASR\* Regional Distribution of Colo-rectal Cancer in Saudi Arabia, 2010**



**Figure 3.2.4 Comparison of ASR\* for Colo-rectal Cancer among Saudis with ASR in Selected Countries\*\***

\* ASR Per 100,000

\*\* Source for this information is summarized on page 66

## Non-Hodgkin Lymphoma (C82-C85; C96)

There were 703 cases of Non-Hodgkin Lymphoma accounting for 7.1 % of all newly diagnosed cancers in year 2010. This cancer ranked second among male population and fourth among female population. It affected 407 (57.9%) males and 296 (42.1%) females with a male to female ratio of 138:100. The overall ASR was 5.7/100,000. ASR for males was 6.2/100,000

and 5.2/100,000 for females. The five regions with the highest ASR were Tabuk region at 7.5/100,000, Riyadh region at 7.3/100,000, Makkah region at 6.2/100,000, Qassim region at 6.1/100,000 and Eastern regions at 5.7/100,000. The median age at diagnosis was 49 years among males (range 0-101 years) and 55 years among females (range 2-92 years).

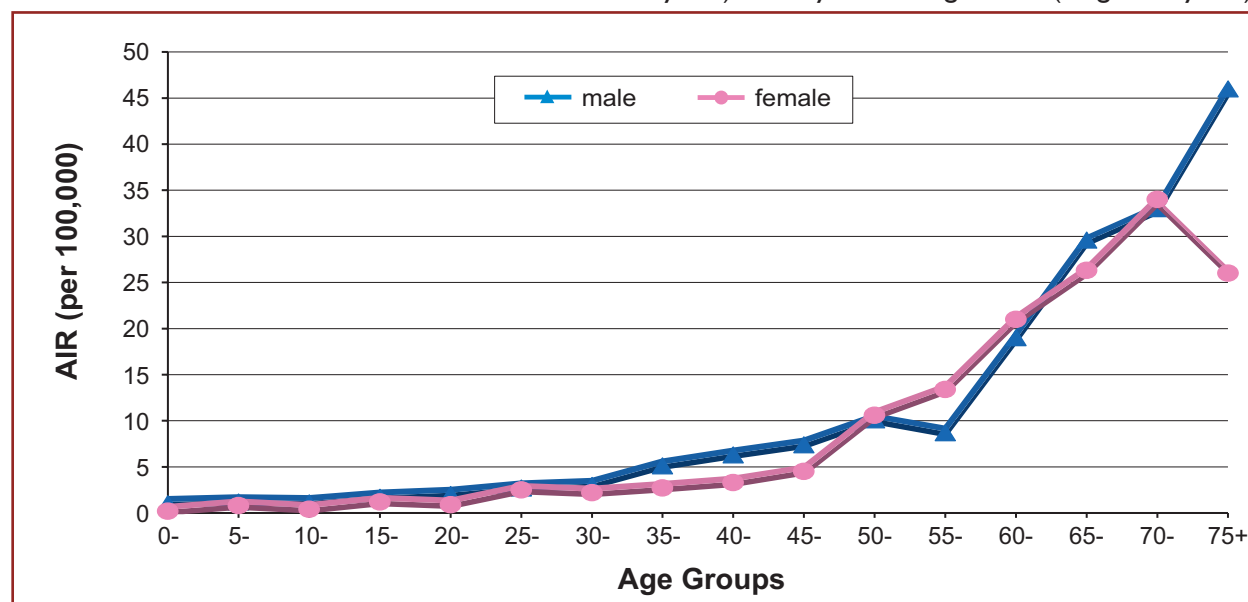


Figure 3.3.1 Age-Specific Incidence Rate (AIR) for NHL in Saudi Arabia, 2010

ICD-0-3	Morphology	Male	%	Female	%
9680	Malignant lymphoma, large B-cell, diffuse, NOS	199	48.9	156	52.7
9687	Burkitt lymphoma, NOS	24	5.9	19	6.4
9591	Malignant lymphoma, non-Hodgkin, NOS	26	6.4	13	4.4
9590	Malignant lymphoma, NOS	22	5.4	15	5.1
9700	Mycosis fungoides	12	2.9	17	5.7
9699	Marginal zone B-cell lymphoma, NOS	16	3.9	12	4.1
9690	Follicular lymphoma, NOS	11	2.7	11	3.7
9670	Malignant lymphoma, small B lymphocytic, NOS	16	3.9	4	1.4
9714	Anaplastic large cell lymphoma, T cell and Null cell type	15	3.7	5	1.7
9691	Follicular lymphoma, grade 2	9	2.2	7	2.4
9702	Mature T-cell lymphoma, NOS	11	2.7	5	1.7
9698	Follicular lymphoma, grade 3	7	1.7	3	1.0
9729	Precursor T-cell lymphoblastic lymphoma	6	1.5	4	1.4
9673	Mantle cell lymphoma	4	1.0	4	1.4
9695	Follicular lymphoma, grade 1	5	1.2	3	1.0
9679	Mediastinal large B-cell lymphoma	3	0.7	4	1.4
	Others	21	5.2	14	4.7

Table 3.3.1 Morphological Distribution of NHL in Saudi Arabia, 2010

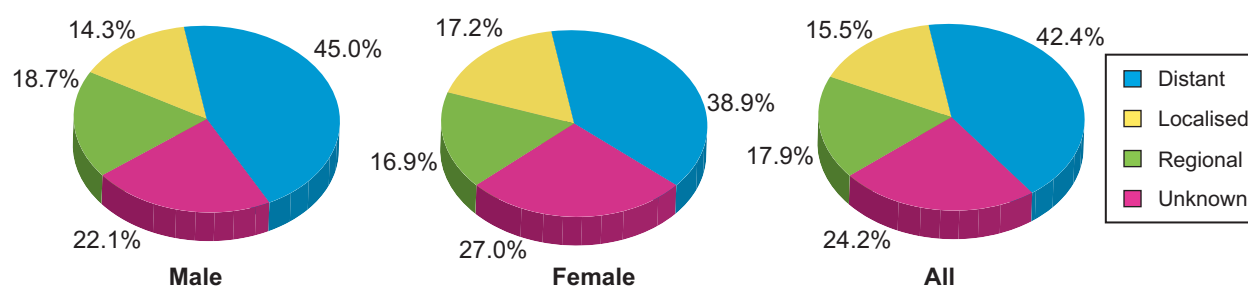
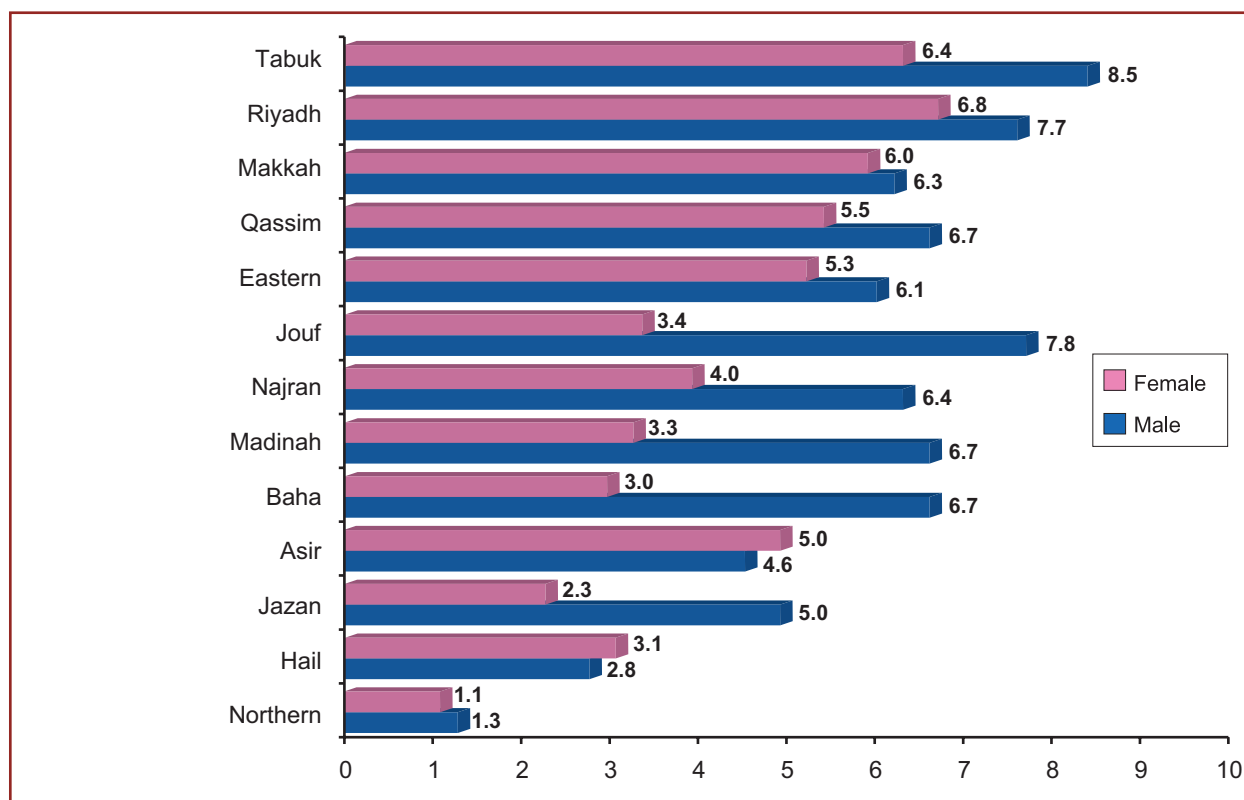
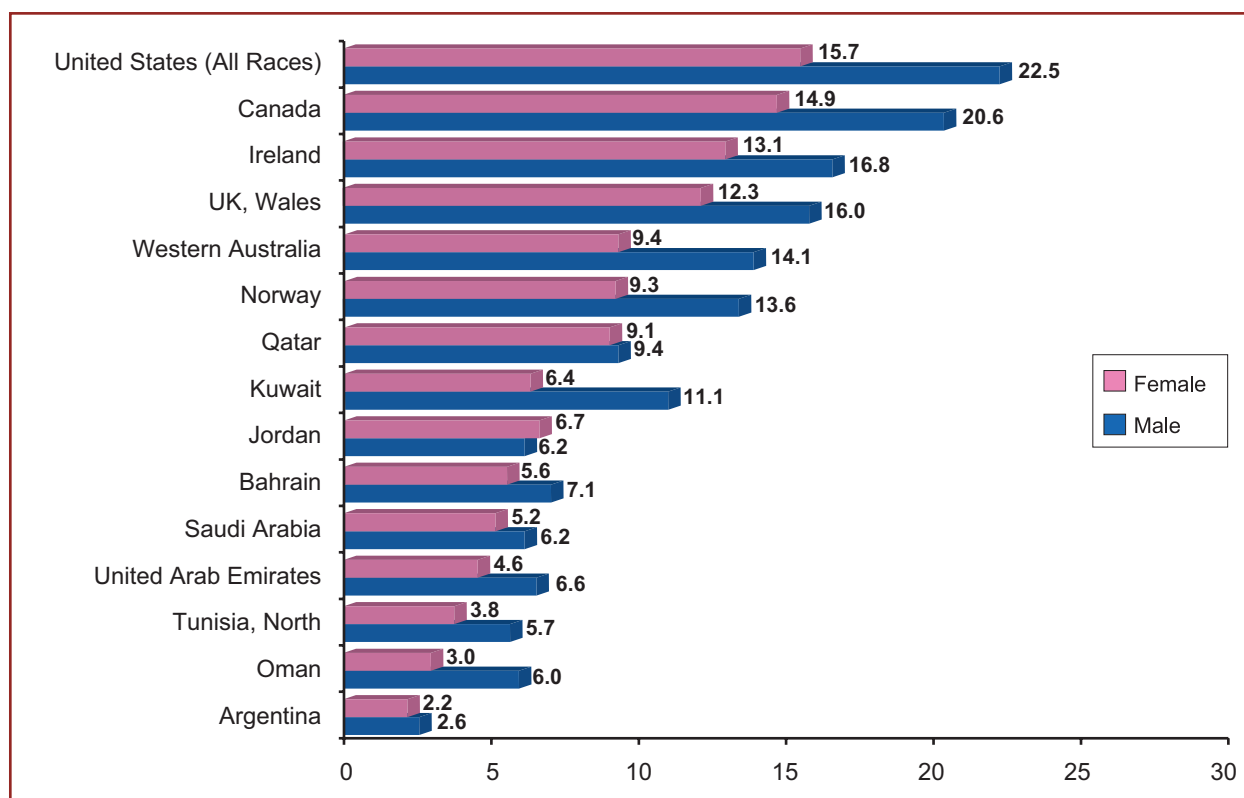


Figure 3.3.2 Stage Distribution of NHL in Saudi Arabia, 2010



**Figure 3.3.3 ASR\* Regional Distribution of NHL in Saudi Arabia, 2010**



**Figure 3.3.4 Comparison of ASR\* for NHL among Saudis with ASR in Selected Countries\*\***

\* ASR Per 100,000

\*\* Source for this information is summarized on page 66

## Thyroid (C 73)

There were 697 cases of thyroid cancer accounting for 7.0% of all newly diagnosed cases for the year 2010. This cancer ranked second among female population and twelfth among male population. It affected 149 (21.4%) males and 548 (78.6%) females with a male to female ratio of 27:100. The overall ASR was 4.9/100,000. ASR was 2.3/100,000 for male

and 7.5 /100,000 for females. The five regions with the highest ASR were Jouf region at 8.4/100,000, Eastern region at 7/100,000, Riyadh region at 6.9/100,000, Qassim region at 5.1/100,000 and Najran region at 4.8/100,000. The median age at diagnosis was 47 years among males (range 9-96 years) and 38 years among females (range 10-90 years).

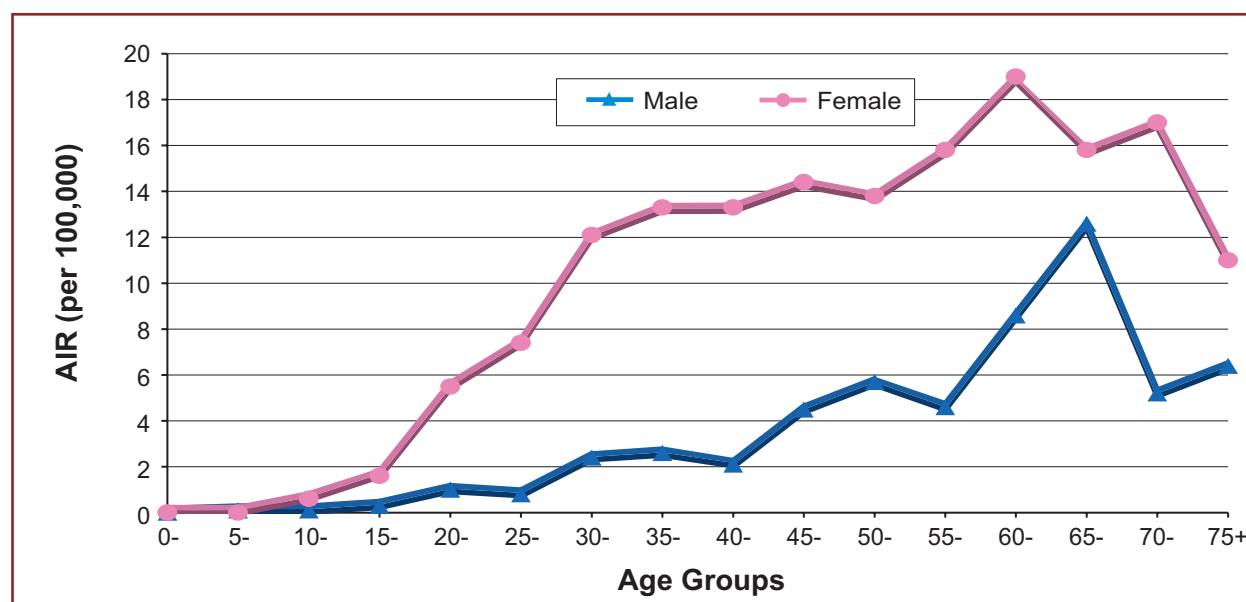


Figure 3.4.1 Age-Specific Incidence Rate (AIR) for Thyroid Cancer in Saudi Arabia, 2010

ICD-0-3	Morphology	Male	%	Female	%
8260	Papillary adenocarcinoma, NOS	81	54.4	278	50.7
8340	Papillary carcinoma, follicular variant	23	15.4	97	17.7
8341	Papillary microcarcinoma	8	5.4	67	12.2
8330	Follicular adenocarcinoma, NOS	4	2.7	17	3.1
8344	Papillary carcinoma, columnar cell	3	2.0	15	2.7
8050	Papillary carcinoma, NOS	3	2.0	14	2.6
8290	Oxyphilic adenocarcinoma	8	5.4	7	1.3
8335	Follicular carcinoma, minimally invasive	1	0.7	14	2.6
8343	Papillary carcinoma, encapsulated	3	2.0	12	2.2
8510	Medullary carcinoma, NOS	7	4.7	6	1.1
8021	Carcinoma, anaplastic, NOS	6	4.0	4	0.7
	Others	2	1.3	17	3.1

Table 3.4.1 Morphological Distribution of Thyroid Cancer in Saudi Arabia, 2010

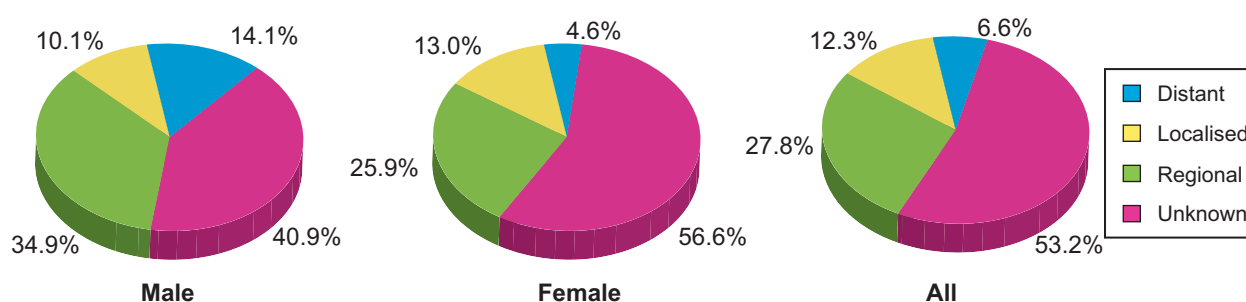
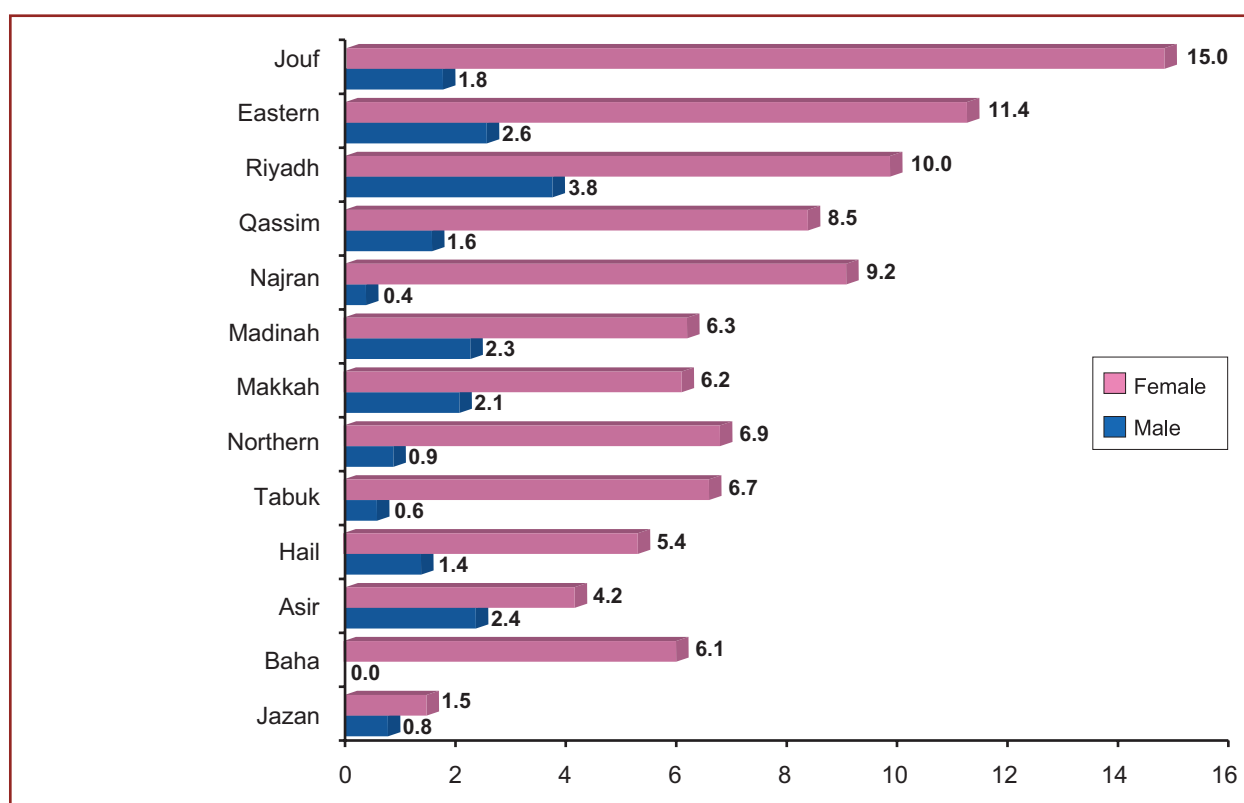
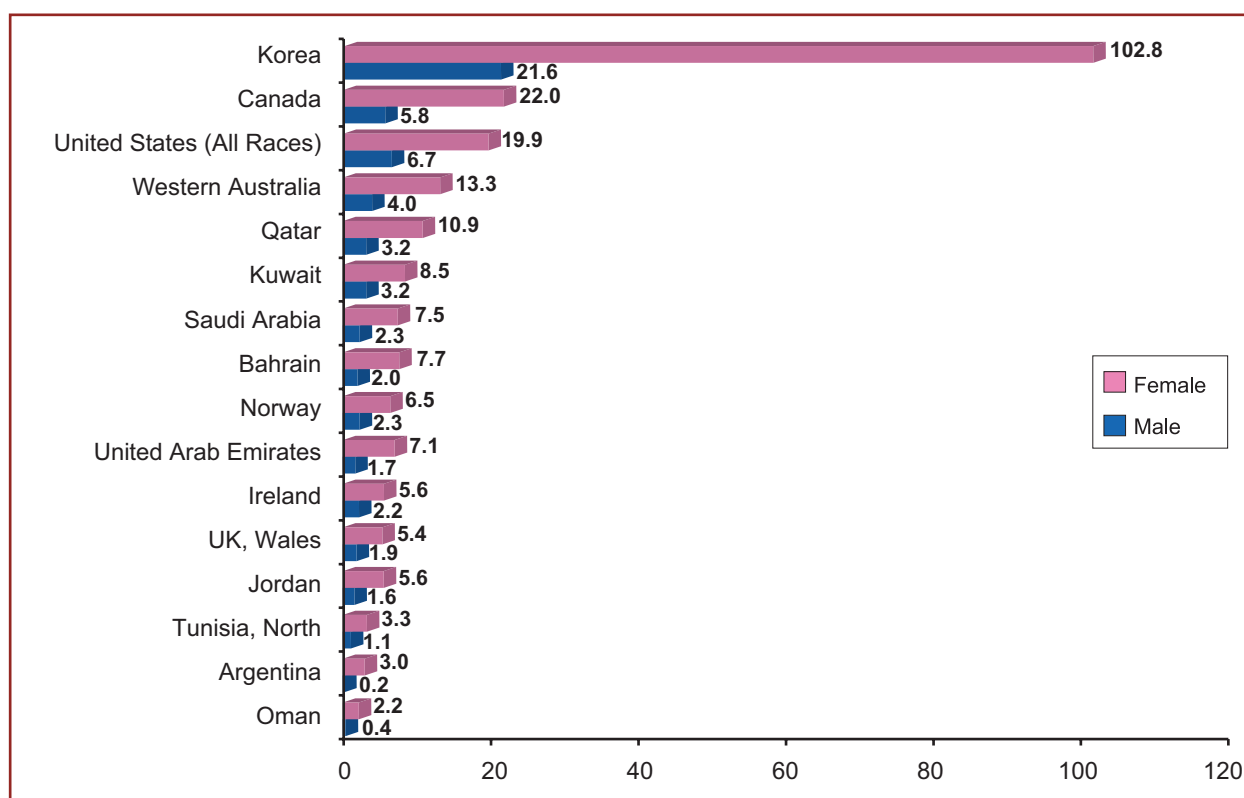


Figure 3.4.2 Stage Distribution of Thyroid Cancer in Saudi Arabia, 2010





**Figure 3.4.3 ASR\* Regional Distribution of Thyroid Cancer in Saudi Arabia, 2010**



**Figure 3.4.4 Comparison of ASR\* for Thyroid Cancer among Saudis with ASR in Selected Countries\*\***

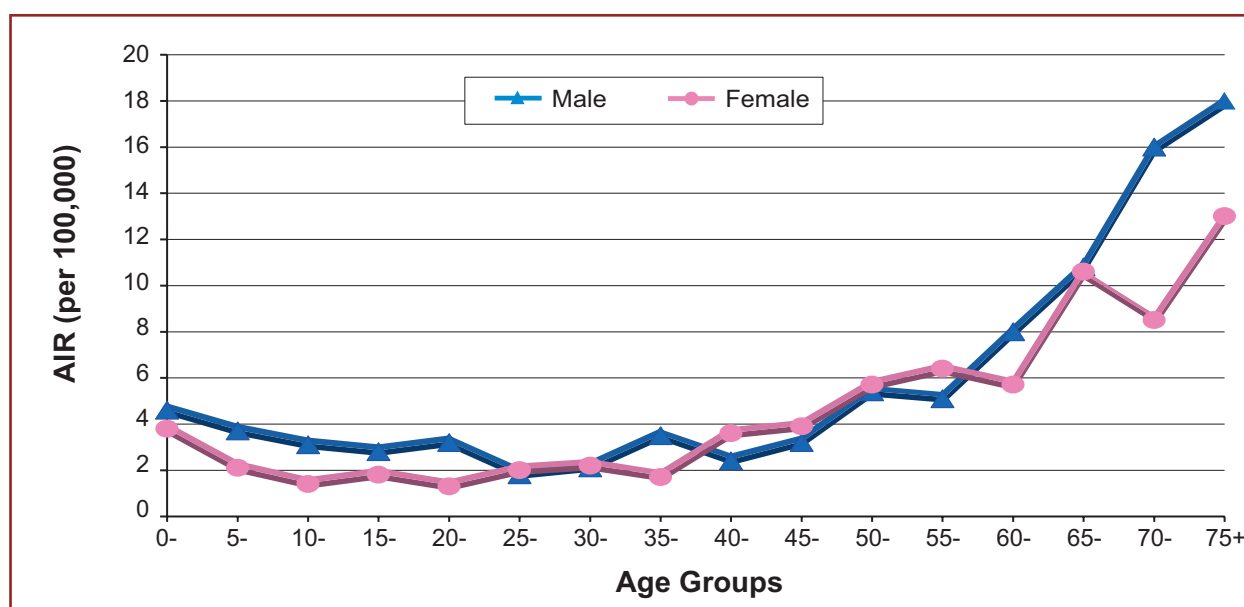
\* ASR Per 100,000

\*\* Source for this information is summarized on page 66

## Leukemia (C91-C95)

There were 616 cases of leukemia accounting for 6.2% of all newly diagnosed cancers in year 2010. This cancer ranked third for males and fifth for females and affected 359 (58.2%) males and 257 (41.8%) females with a male to female ratio of 139:100. The overall ASR was 3.9/100,000. ASR for males was 4.3/100,000 and

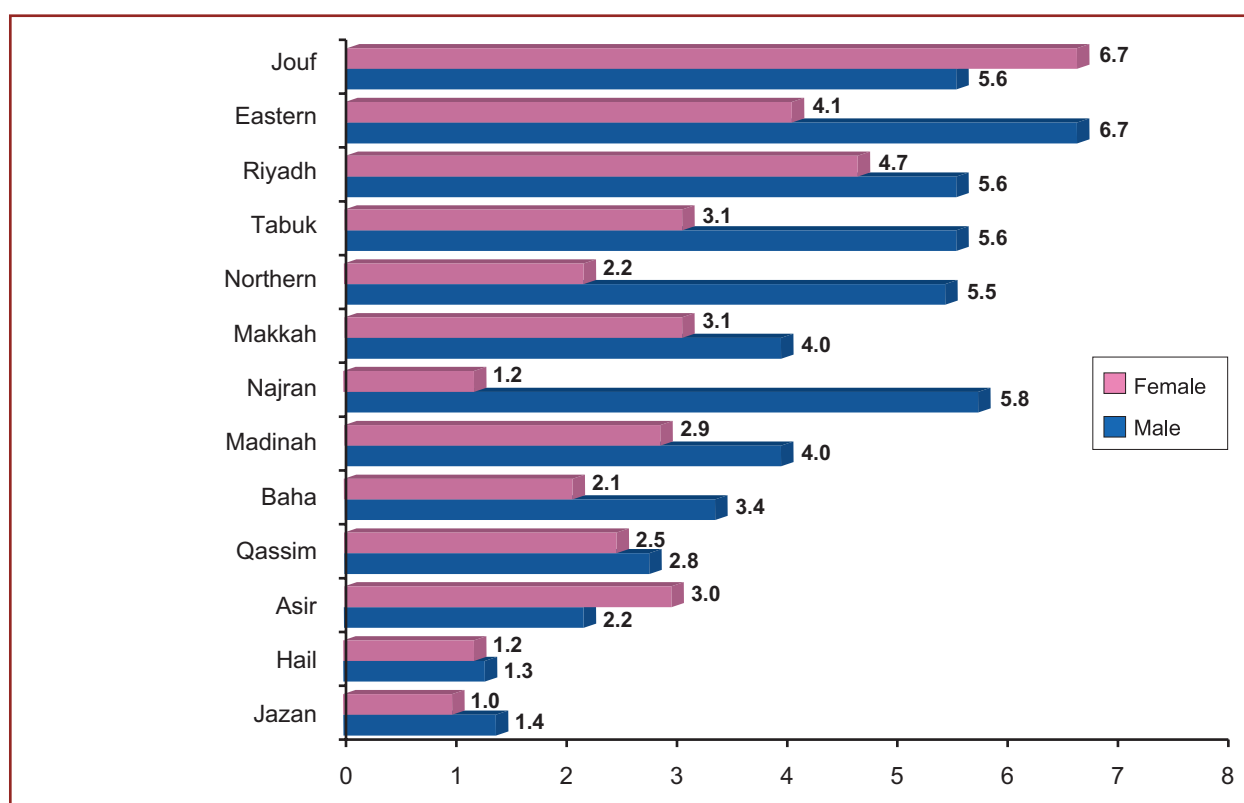
3.4/100,000 for females. The five regions with the highest ASR were Jouf region at 6.2/100,000, Eastern region at 5.4/100,000, Riyadh region at 5.2/100,000, Tabuk region at 4.4/100,000 and Northern region at 3.9/100,000. The median age at diagnosis is 21 years among males (range 0-96 years) and 29 years among females (range 0-120 years).



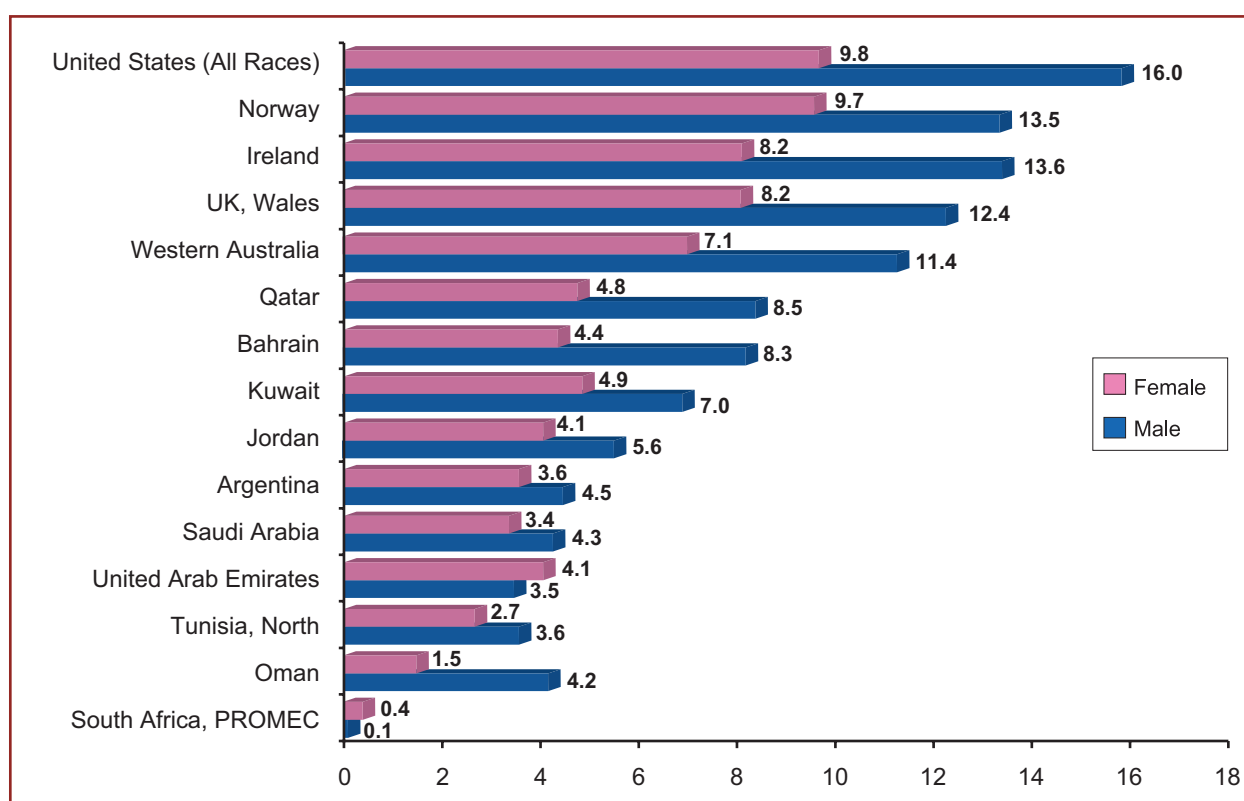
**Figure 3.5.1 Age-Specific Incidence Rate (AIR) for Leukemia in Saudi Arabia, 2010**

ICD-0-3	Morphology	Male	%	Female	%
9836	Precursor B-cell lymphoblastic leukemia	90	25.1	54	20.9
9863	Chronic myeloid leukemia, NOS	46	12.8	41	15.9
9861	Acute myeloid leukemia, NOS	47	13.1	34	13.2
9823	B-cell chronic lymphocytic leukemia/small lymphocytic lymphom	35	9.7	25	9.7
9835	Precursor cell lymphoblastic leukemia, NOS	26	7.2	24	9.3
9837	Precursor T-cell lymphoblastic leukemia	28	7.8	4	1.6
9866	Acute promyelocytic leukemia, t(15;17) (q22;q11-12)	14	3.9	11	4.3
9801	Acute leukemia, NOS	10	2.8	7	2.7
9867	Acute myelomonocytic leukemia	9	2.5	8	3.1
9891	Acute monocytic leukemia	6	1.7	9	3.5
9896	Acute myeloid leukemia, t(8;21)(q22;q22)	8	2.2	2	0.8
9805	Acute biphenotypic leukemia	4	1.1	4	1.6
9873	Acute myeloid leukemia without maturation	2	0.6	6	2.3
9800	Leukemia, NOS	2	0.6	5	1.9
9874	Acute myeloid leukemia with maturation	1	0.3	6	2.3
9875	Chronic myelogenous leukemia, BCR/ABL positive	6	1.7	1	0.4
9826	Burkitt cell leukemia	2	0.6	4	1.6
	Others	23	6.4	13	5.0

**Table 3.5.1 Morphological Distribution of Leukemia in Saudi Arabia, 2010**



**Figure 3.5.3 ASR\* Regional Distribution of Leukemia in Saudi Arabia, 2010**



**Figure 3.5.4 Comparison of ASR\* for Leukemia among Saudis with ASR in Selected Countries\*\***

\* ASR Per 100,000

\*\* Source for this information is summarized on page 66

## Liver (C 22)

There were 483 cases of liver cancer accounting for 4.8% of all newly diagnosed cases in year 2010. This cancer ranked fourth in males, and eighth in females and affected 329 (68.1 %) males and 154 (31.9%) females with a male to female ratio of 213:100. The overall ASR was 4.8/100,000. ASR was 6.4/100,000 for males and

3.1/100,000 for females. The five regions with the highest ASR were Riyadh region at 8.3/100,000, Tabuk region at 7.2/100,000, Eastern region at 4.5/100,000, Asir region at 4.4/100,000 and Makkah region at 4.3/100,000. The median age at diagnosis was 69 years in males (range 0-99 years) and 64 years in female (range 1-97 years).

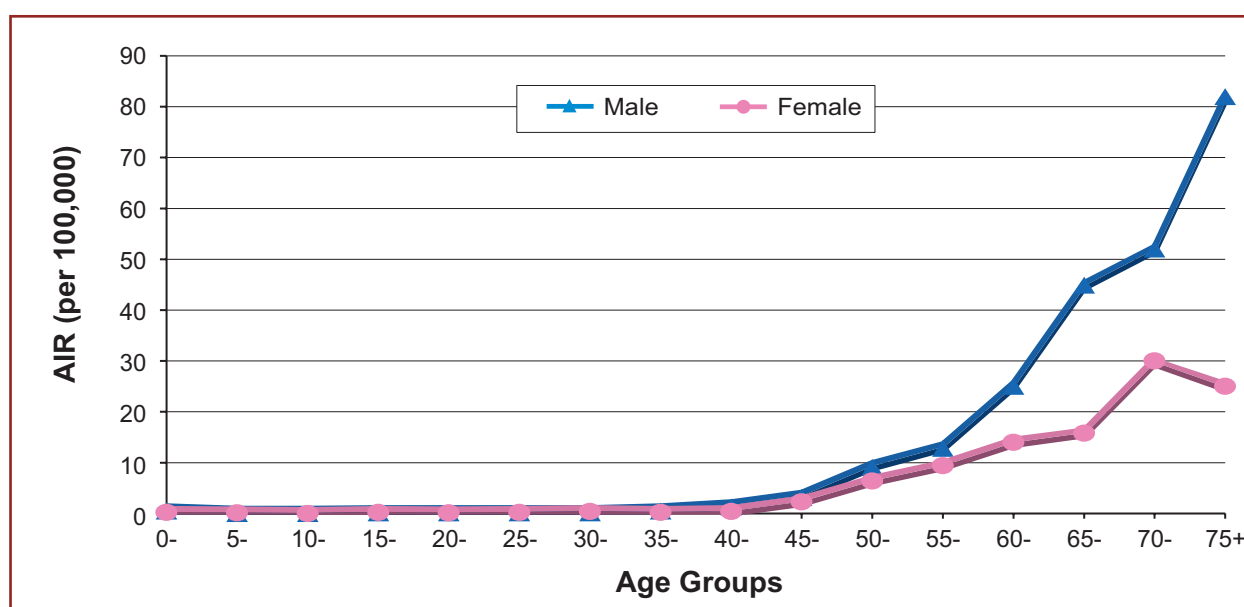


Figure 3.6.1 Age-Specific Incidence Rate (AIR) for Liver Cancer in Saudi Arabia, 2010

ICD-0-3	Morphology	Male	%	Female	%
8170	Hepatocellular carcinoma, NOS	272	82.7	123	79.9
8000	Neoplasm, malignant	23	7.0	12	7.8
8160	Cholangiocarcinoma	11	3.3	8	5.2
8140	Adenocarcinoma, NOS	7	2.1	4	2.6
8970	Hepatoblastoma	5	1.5	2	1.3
8246	Neuroendocrine carcinoma, NOS	3	0.9	2	1.3
	Others	8	2.4	3	1.9

Table 3.6.1 Morphological Distribution of Liver Cancer in Saudi Arabia, 2010

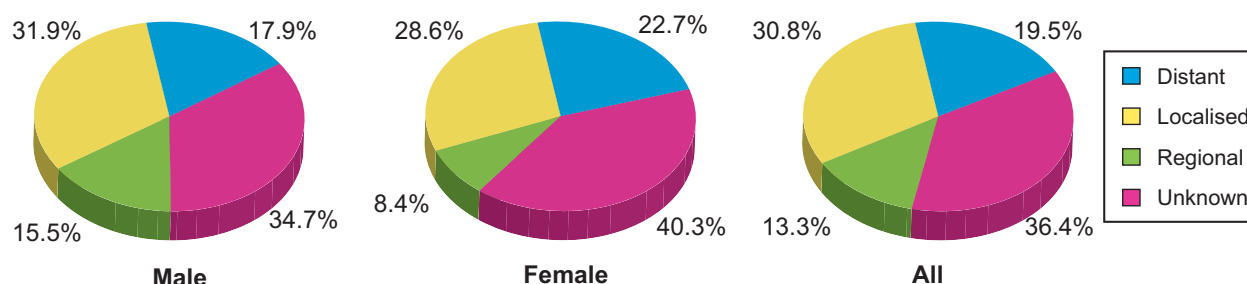
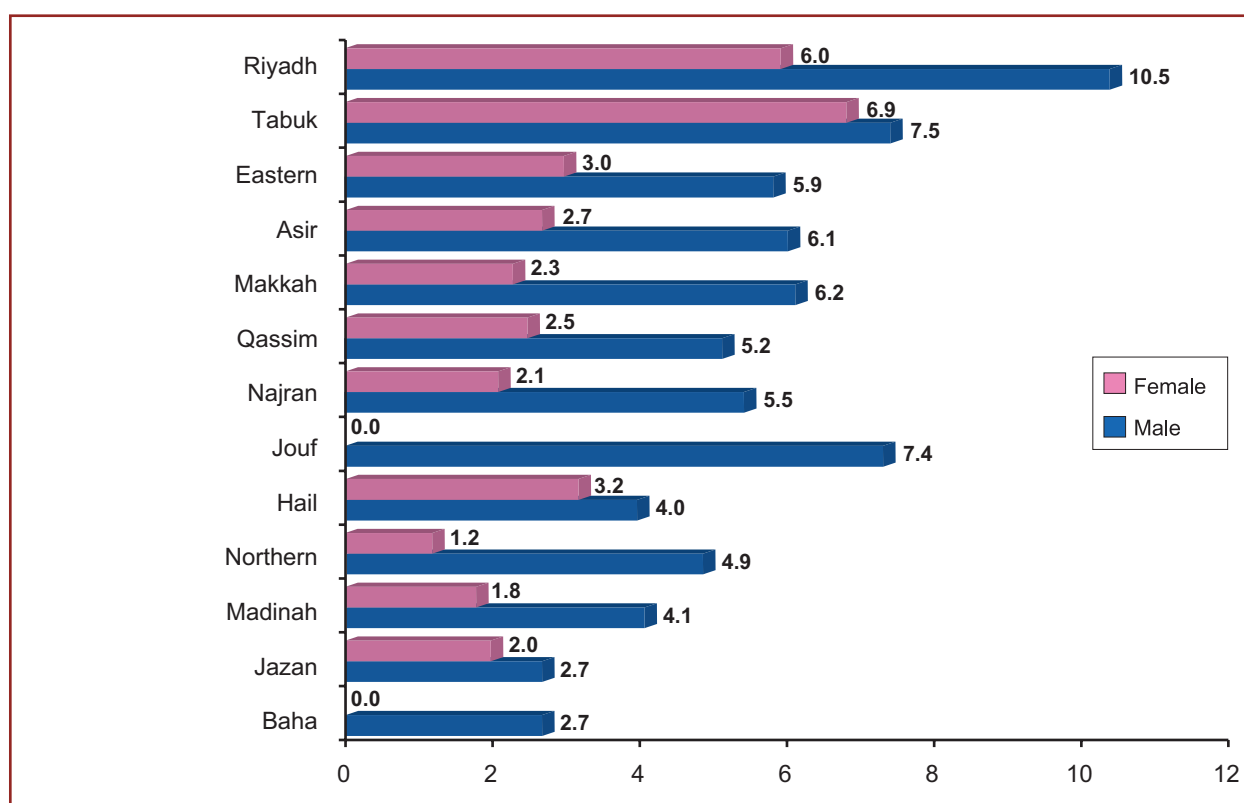
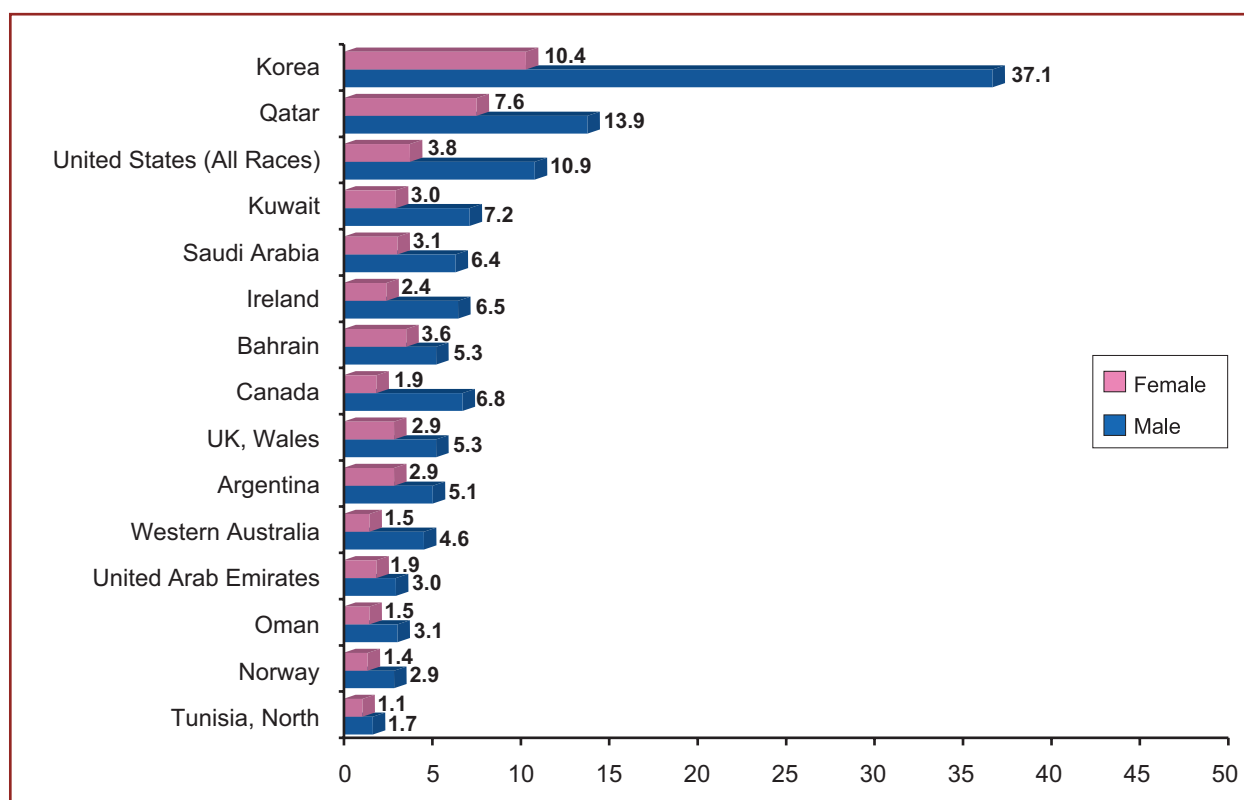


Figure 3.6.2 Stage Distribution of Liver Cancer in Saudi Arabia, 2010



**Figure 3.6.3 ASR\* Regional Distribution of Liver Cancer in Saudi Arabia, 2010**



**Figure 3.6.4 Comparison of ASR\* for Liver Cancer among Saudis with ASR in Selected Countries\*\***

\* ASR Per 100,000

\*\* Source for this information is summarized on page 66

## Lung (C33-C34)

There were 397 cases of lung cancer accounting for 4% of all diagnosed cases in year 2010. Lung cancer ranked fifth among male population and thirteenth among female population. It affected 292 (73.6%) males and 105 (26.4%) females with a male to female ratio of 279:100. The overall ASR was 4/100,000. ASR was 5.8/100,000 for males and

2.1/100,000 for females. The five regions with the highest ASR were Tabuk region at 8.4/100,000, Eastern region at 8/100,000, Northern region at 5.6/100,000, Riyadh region at 5/100,000, and Makkah region at 4.7/100,000. The median age at diagnosis was 65 years among males (range 21-98 years) and 64 years among females (range 15-100 years).

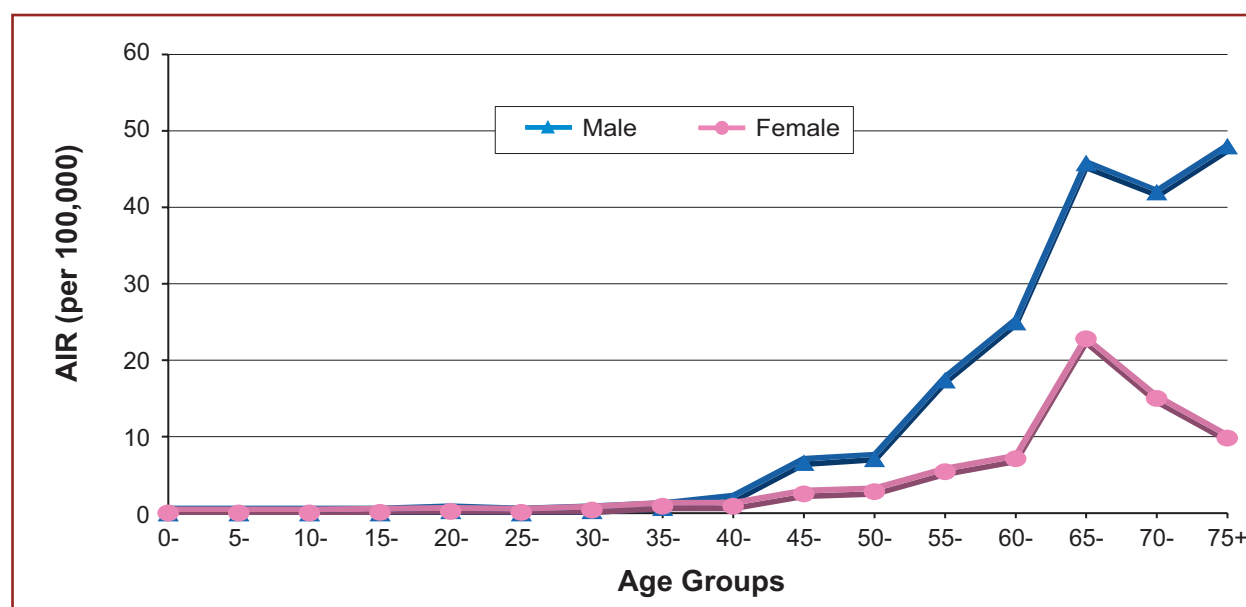


Figure 3.7.1 Age-Specific Incidence Rate (AIR) for Lung Cancer in Saudi Arabia, 2010

ICD-0-3	Morphology	Male	%	Female	%
8140	Adenocarcinoma, NOS	82	28.1	37	35.2
8070	Squamous cell carcinoma, NOS	42	14.4	11	10.5
8046	Non-small cell carcinoma	35	12.0	9	8.6
8041	Small cell carcinoma, NOS	38	13.0	4	3.8
8000	Neoplasm, malignant	18	6.2	11	10.5
8010	Carcinoma, NOS	21	7.2	7	6.7
8250	Bronchiolo-alveolar adenocarcinoma, NOS	11	3.8	6	5.7
8012	Large cell carcinoma, NOS	7	2.4	2	1.9
8071	Squamous cell carcinoma, keratinizing, NOS	5	1.7	2	1.9
8240	Carcinoid tumor, NOS	2	0.7	5	4.8
8246	Neuroendocrine carcinoma, NOS	4	1.4	3	2.9
	Others	27	9.2	8	7.6

Table 3.7.1 Morphological Distribution of Lung Cancer in Saudi Arabia, 2010

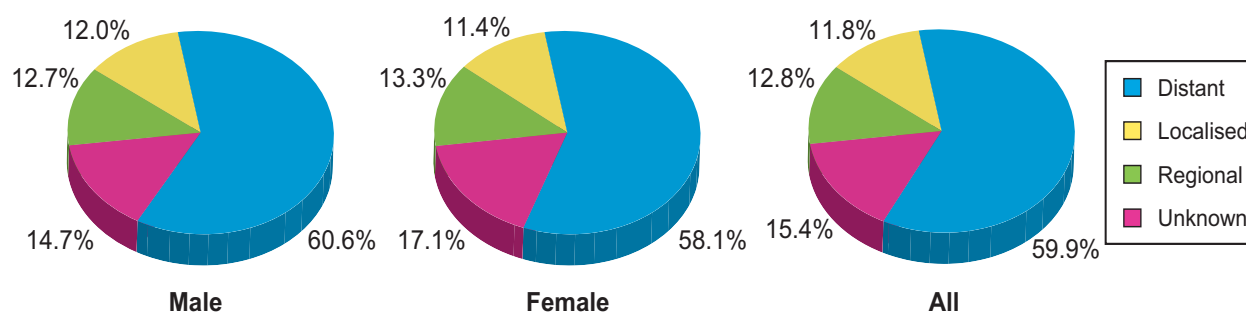
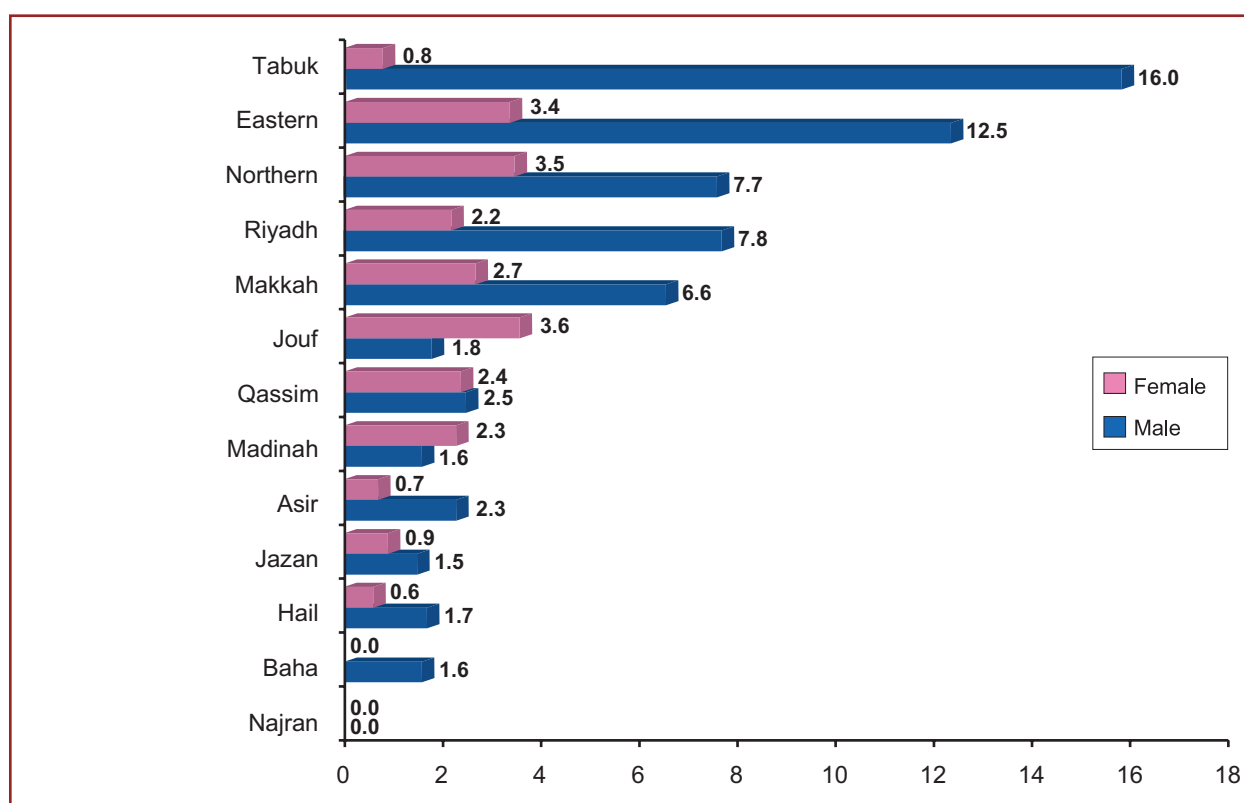
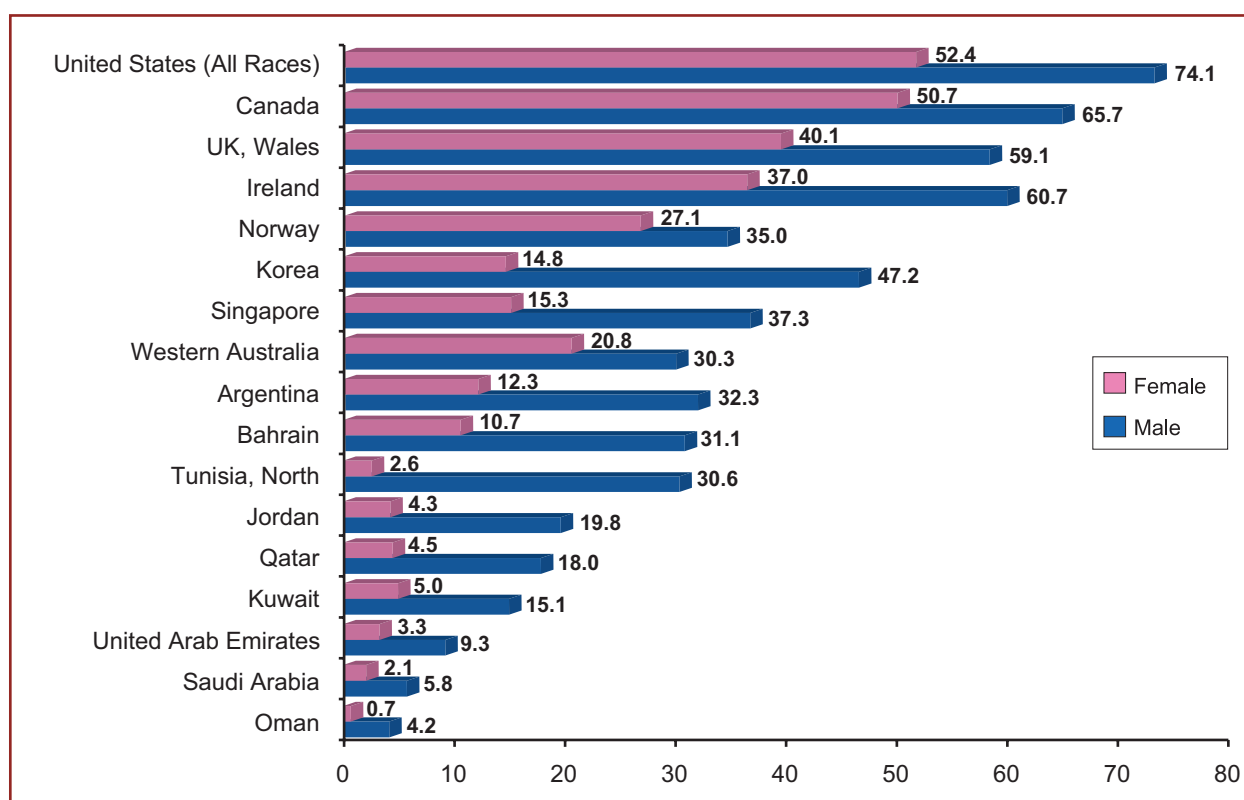


Figure 3.7.2 Stage Distribution of Lung Cancer in Saudi Arabia, 2010



**Figure 3.7.3 ASR\* Regional Distribution of Lung Cancer in Saudi Arabia, 2010**



**Figure 3.7.4 Comparison of ASR\* for Lung Cancer among Saudis with ASR in Selected Countries\*\***

\* ASR Per 100,000

\*\* Source for this information is summarized on page 66

## Hodgkin Disease (C 81)

There were 336 cases of Hodgkin disease cancer accounting for 3.4% of all newly diagnosed cases in year 2010. This cancer ranked seventh among male and tenth in female population. It affected 194 (57.7%) males and 142 (42.3%) females with a male to female ratio of 136:100. The overall ASR was 1.9/100,000. ASR was 2.1/100,000 for males

and 1.6/100,000 for females. The five regions with highest ASR were Qassim region at 3.3/100,000, Riyadh region at 2.7/100,000, Madinah region at 2.5/100,000, Eastern at 2/100,000 then Tabuk and Baha regions at 1.7/100,000 for each. The median age at diagnosis was 24 years (range 3-88 years) in males and 24 year in females (range 3-85).

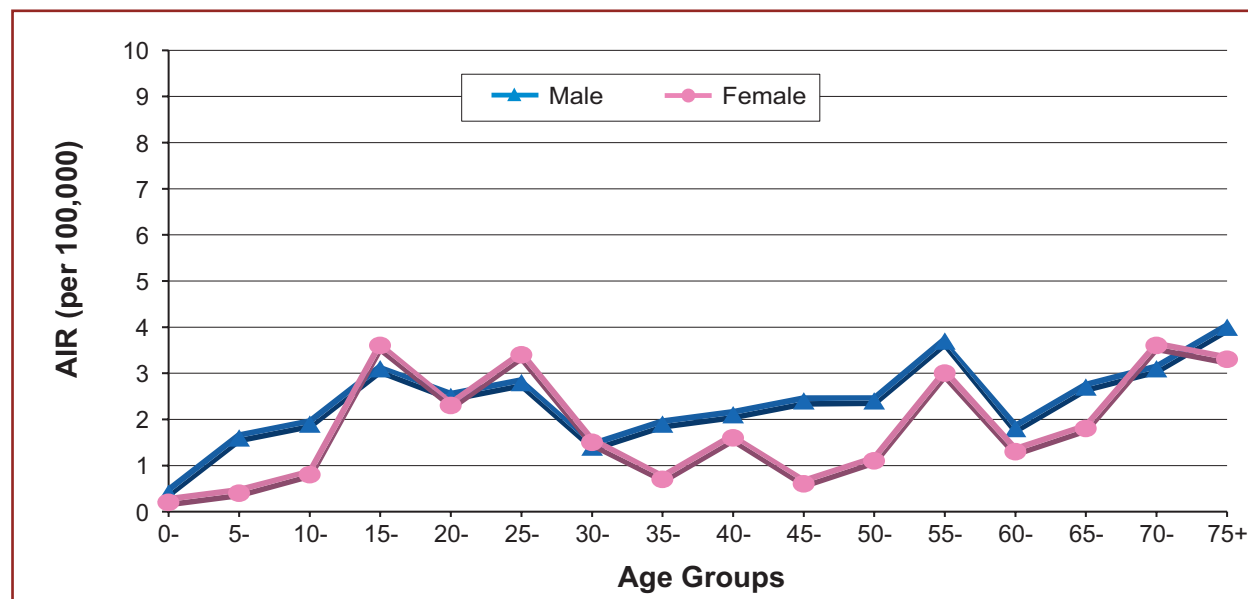


Figure 3.8.1 Age-Specific Incidence Rate (AIR) for Hodgkin Disease in Saudi Arabia, 2010

ICD-0-3	Morphology	Male	%	Female	%
9663	Hodgkin lymphoma, nodular sclerosis, NOS	91	46.9	78	54.9
9652	Hodgkin lymphoma, mixed cellularity, NOS	33	17.0	24	16.9
9650	Hodgkin lymphoma, NOS	30	15.5	22	15.5
9651	Hodgkin lymphoma, lymphocyte-rich	11	5.7	5	3.5
9659	Hodgkin lymphoma, nodular lymphocyte predominance	10	5.2	3	2.1
9667	Hodgkin lymphoma, nodular sclerosis, grade 2	8	4.1	1	0.7
9665	Hodgkin lymphoma, nodular sclerosis, grade 1	4	2.1	4	2.8
9664	Hodgkin lymphoma, nodular sclerosis, cellular phase	3	1.5	3	2.1
9653	Hodgkin lymphoma, lymphocyte depletion, NOS	3	1.5	2	1.4
9655	Hodgkin lymphoma, lymphocyte depletion, reticular	1	0.5	0	0.0

Table 3.8.1 Morphological Distribution of Hodgkin Disease in Saudi Arabia, 2010

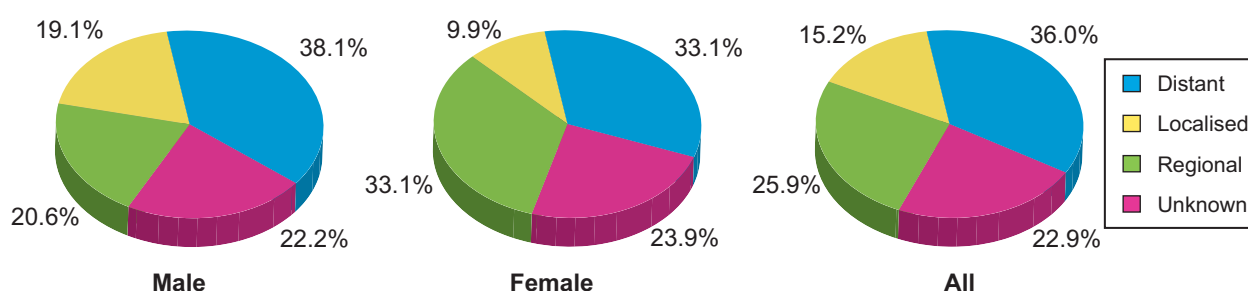
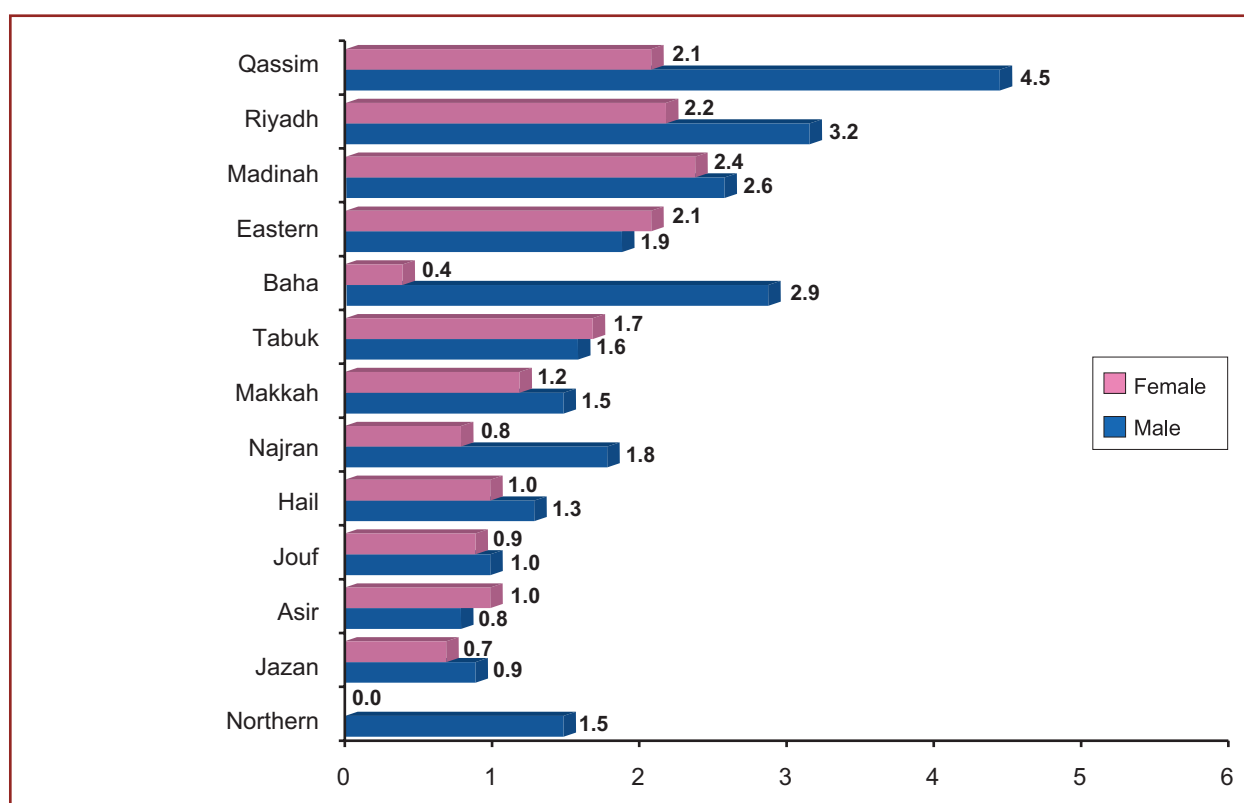
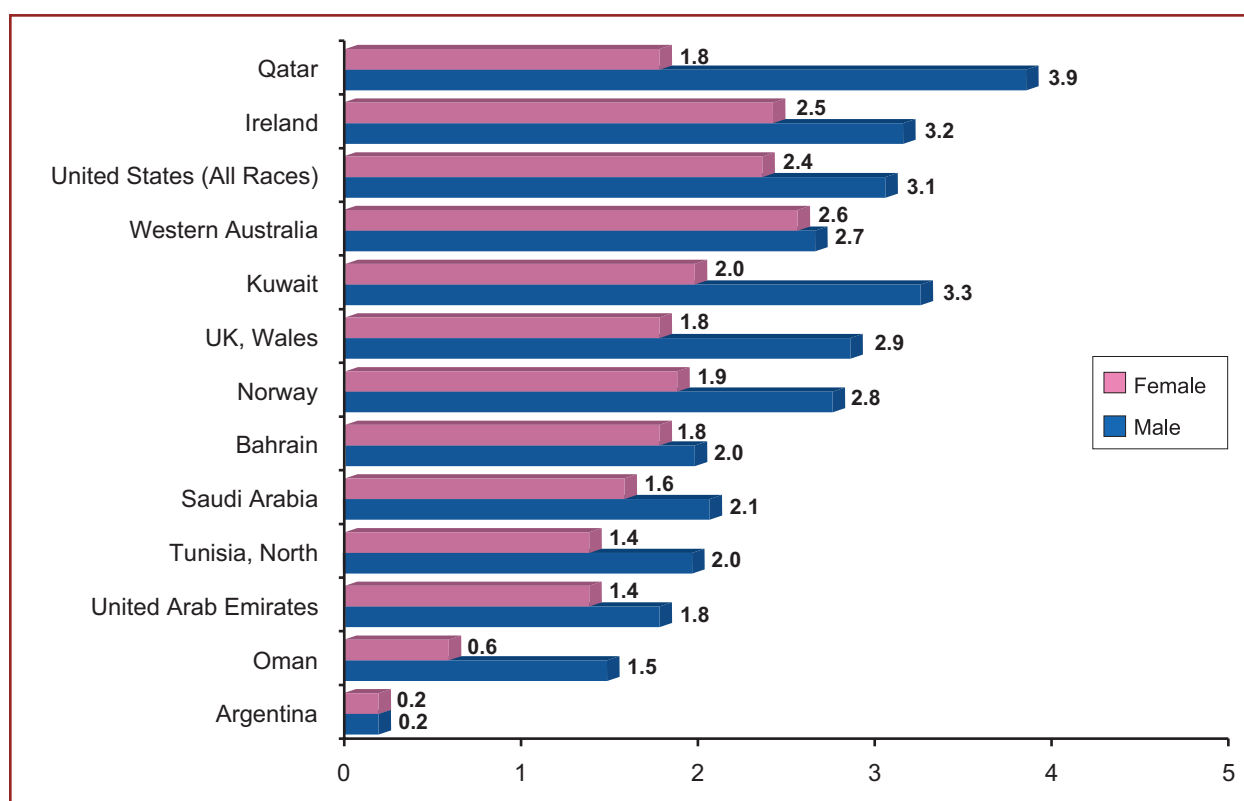


Figure 3.8.2 Stage Distribution of Hodgkin Disease in Saudi Arabia, 2010





**Figure 3.8.3 ASR\* Regional Distribution of Hodgkin Disease in Saudi Arabia, 2010**



**Figure 3.8.4 Comparison of ASR\* for Hodgkin Disease among Saudis with ASR in Selected Countries\*\***

\* ASR Per 100,000

\*\* Source for this information is summarized on page 66

## Skin (Non-Melanoma) (C 44)

There were 319 cases of skin cancer accounting for 3.2% of all newly diagnosed cases in year 2010. This cancer ranked ninth for males and females. It affected 168 (52.7%) males and 151 (47.3%) females with a male to female ratio of 111:100. The overall ASR was 3/100,000. ASR was 3.1/100,000 for males and 2.8/100,000 for females.

The five regions with the highest ASR were Riyadh region at 4.4/100,000, Tabuk region at 4.3/100,000, Jazan region at 3.8/100,000, Eastern region at 3.6/100,000 then Northern and Qassim regions at 3.4/100,000 for each. The median age at diagnosis was 68 years among males (range 9-94 years) and 68 years among female (range 14-110 years).

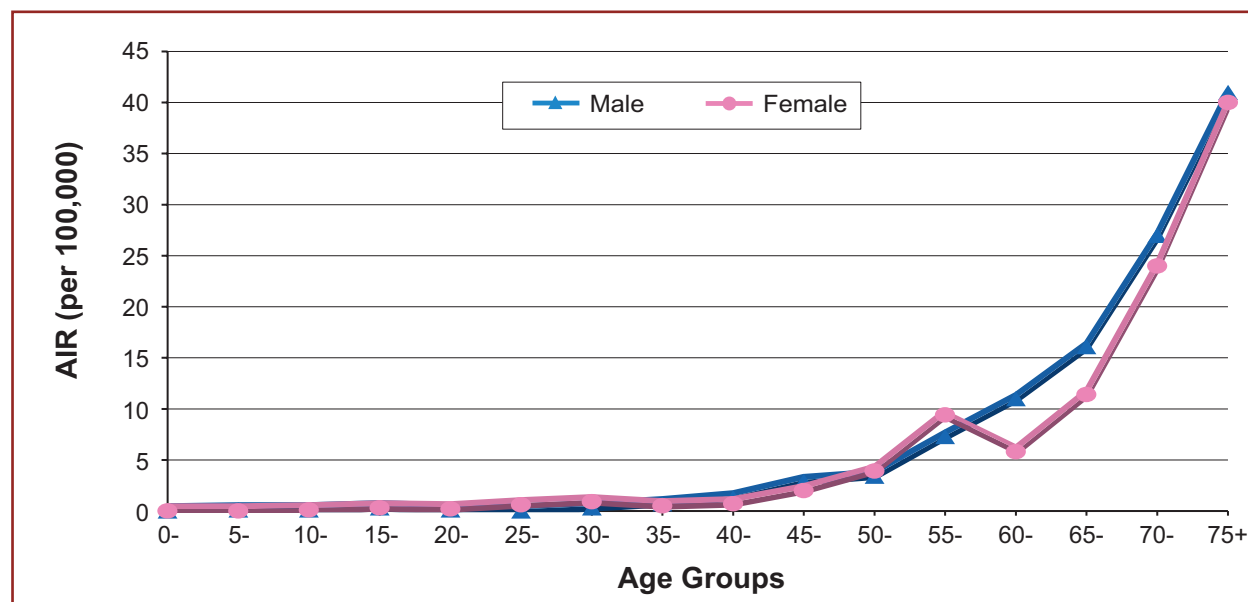


Figure 3.9.1 Age-Specific Incidence Rate (AIR) for Skin Cancer in Saudi Arabia, 2010

ICD-0-3	Morphology	Male	%	Female	%
8090	Basal cell carcinoma, NOS	89	53.0	68	45.0
8070	Squamous cell carcinoma, NOS	33	19.6	30	19.9
8832	Dermatofibrosarcoma, NOS	9	5.4	16	10.6
8097	Basal cell carcinoma, nodular	11	6.5	7	4.6
8071	Squamous cell carcinoma, keratinizing, NOS	6	3.6	8	5.3
8410	Sebaceous adenocarcinoma	7	4.2	5	3.3
8094	Basosquamous carcinoma	5	3.0	3	2.0
	Others	8	4.8	14	9.3

Table 3.9.1 Morphological Distribution of Skin Cancer in Saudi Arabia, 2010

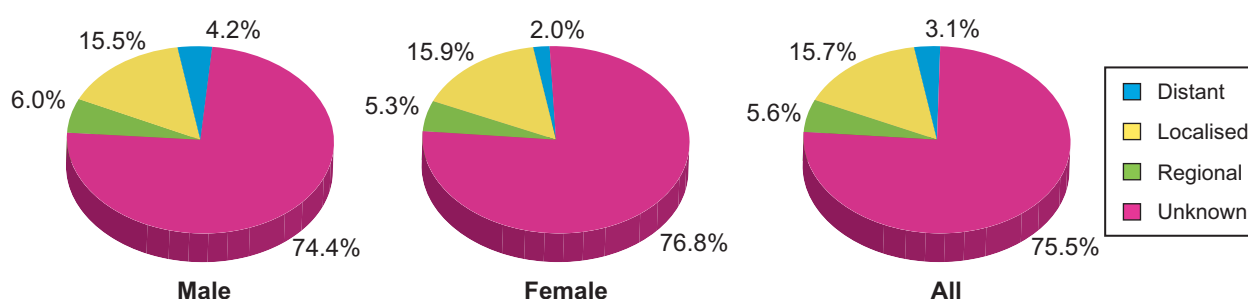
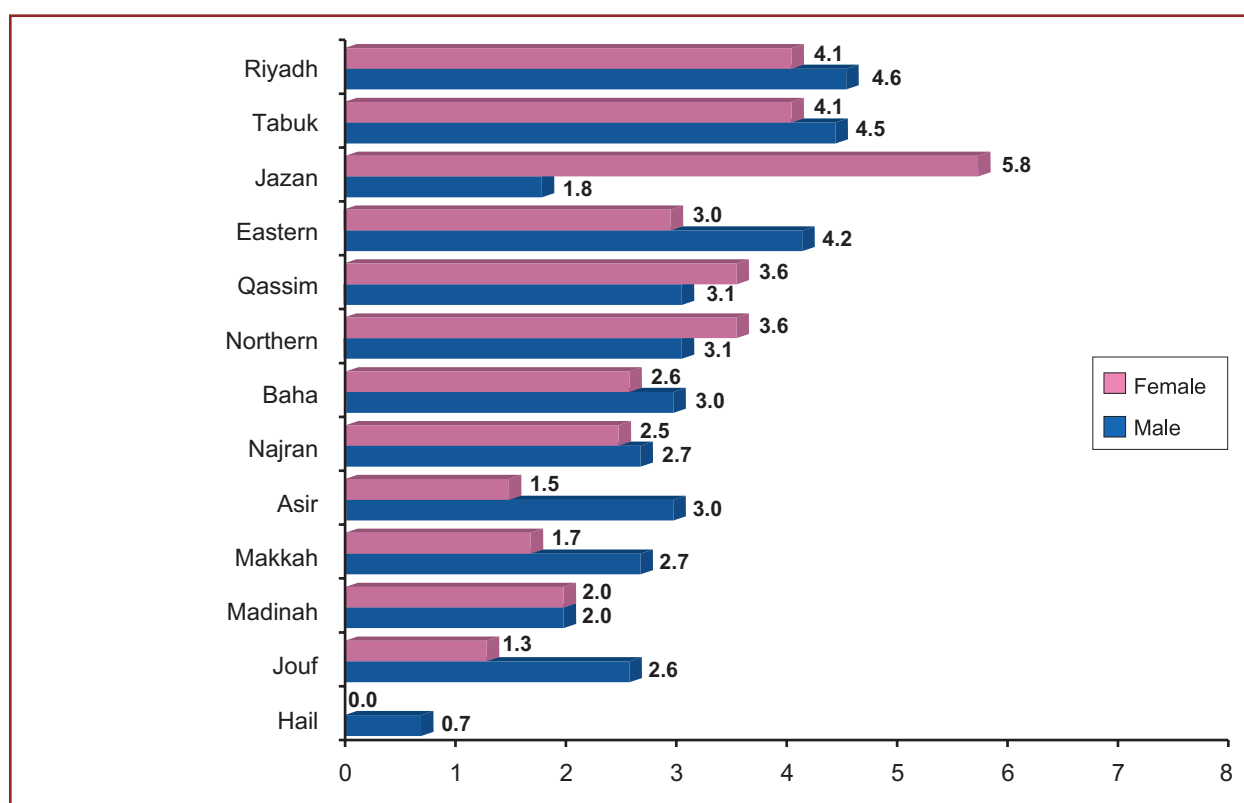
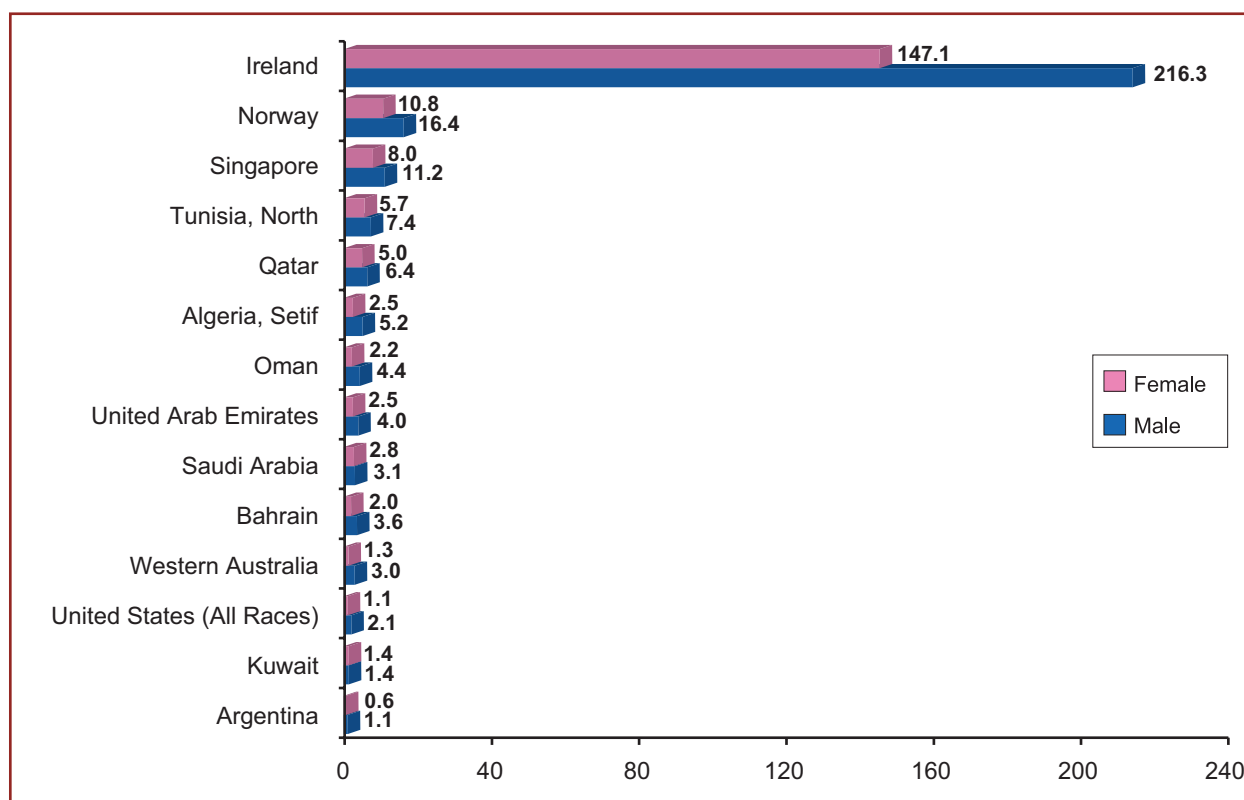


Figure 3.9.2 Stage Distribution of Skin Cancer in Saudi Arabia, 2010



**Figure 3.9.3 ASR\* Regional Distribution of Skin Cancer in Saudi Arabia, 2010**



**Figure 3.9.4 Comparison of ASR\* for Skin Cancer among Saudis with ASR in Selected Countries\*\***

\* ASR Per 100,000

\*\* Source for this information is summarized on page 66

## Stomach (C 16)

There were 291 cases of stomach cancer accounting for 2.9% of all newly diagnosed cases in year 2010. This cancer ranked eleventh among males and females population. It affected 165 (56.7%) males and 126 (43.3%) females with a male to female ratio of 131:100. The overall ASR was 2.7/100,000. ASR was 3.1/100,000 for male and

2.3/100,000 for females. The five regions with the highest ASR were Najran region at 5.2/100,000, Jof region at 4.7/100,000, Riyadh region at 4.2/100,000, Eastern and Qassim regions at 3.2/100,000 for each. The median age at diagnosis was 65 years among males (range 4-94 years) and 60 years among female (range 23-100 years).

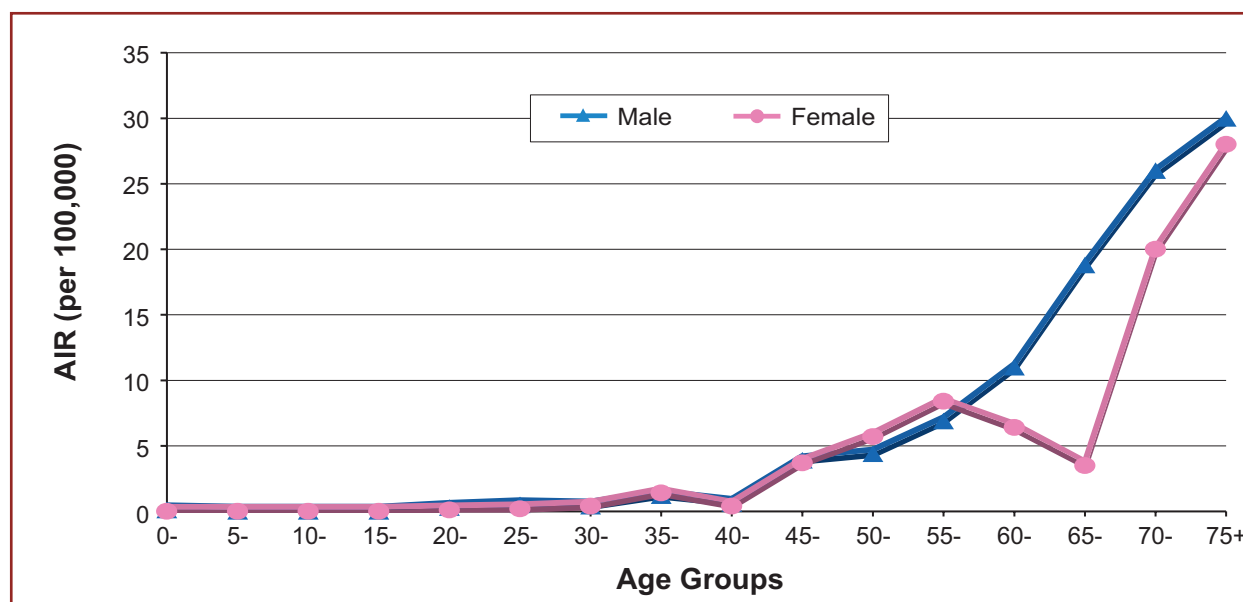


Figure 3.10.1 Age-Specific Incidence Rate (AIR) for Stomach Cancer in Saudi Arabia, 2010

ICD-0-3	Morphology	Male	%	Female	%
8140	Adenocarcinoma, NOS	82	49.7	40	31.7
8490	Signet ring cell carcinoma	40	24.2	37	29.4
8144	Adenocarcinoma, intestinal type	15	9.1	13	10.3
8145	Carcinoma, diffuse type	6	3.6	6	4.8
8936	Gastrointestinal stromal sarcoma	4	2.4	6	4.8
8000	Neoplasm, malignant	5	3.0	4	3.2
8010	Carcinoma, NOS	3	1.8	5	4.0
8480	Mucinous adenocarcinoma	2	1.2	3	2.4
8246	Neuroendocrine carcinoma, NOS	2	1.2	2	1.6
8255	Adenocarcinoma with mixed subtypes	0	0.0	3	2.4
	Others	6	3.6	7	5.6

Table 3.10.1 Morphological Distribution of Stomach Cancer in Saudi Arabia, 2010

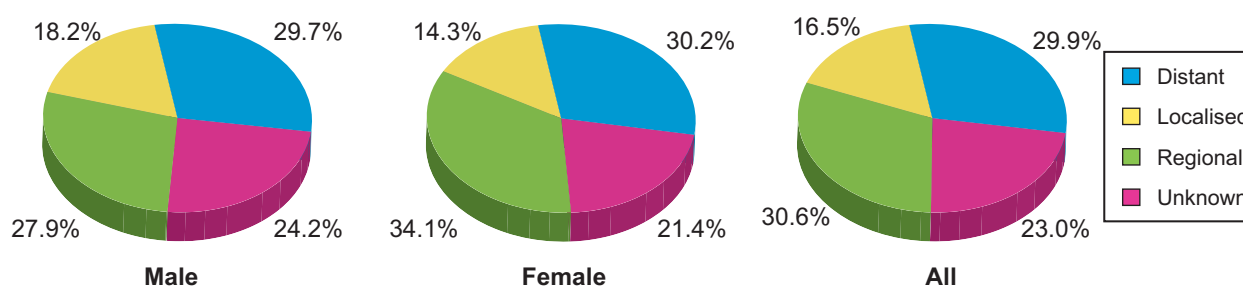
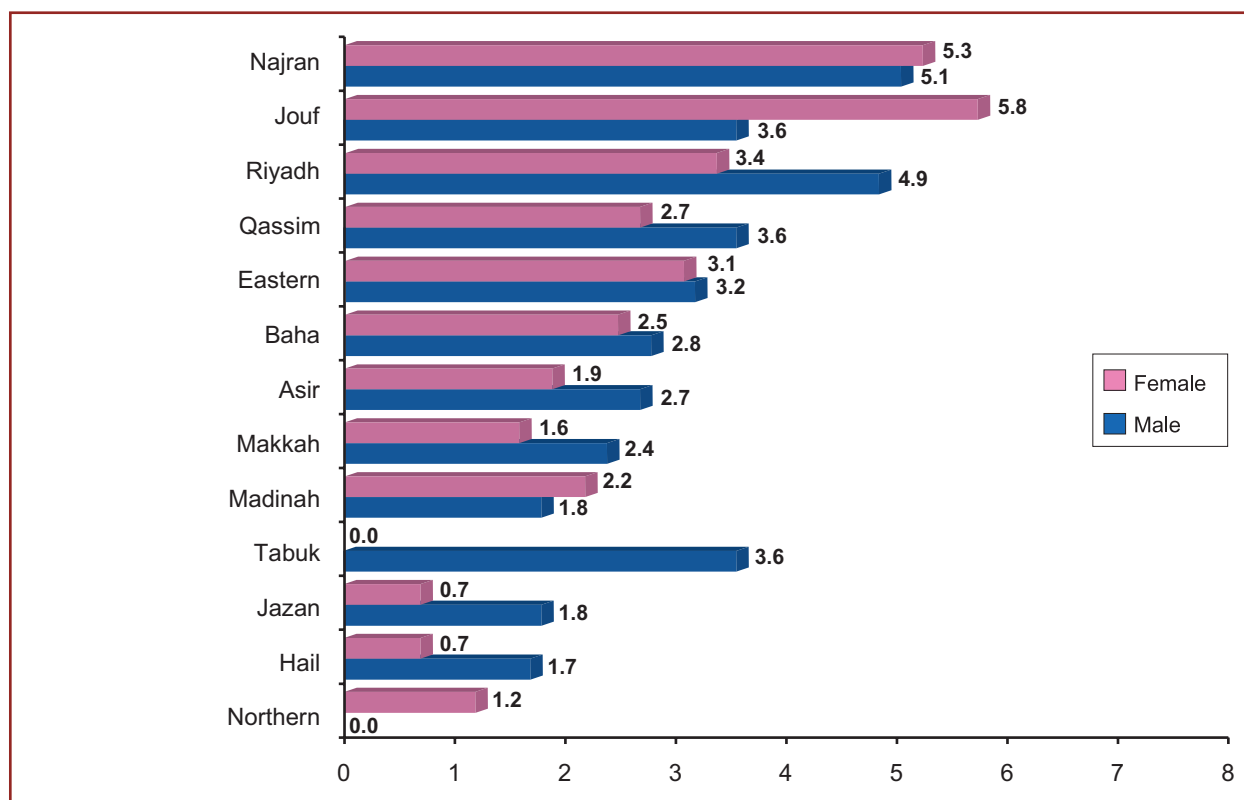
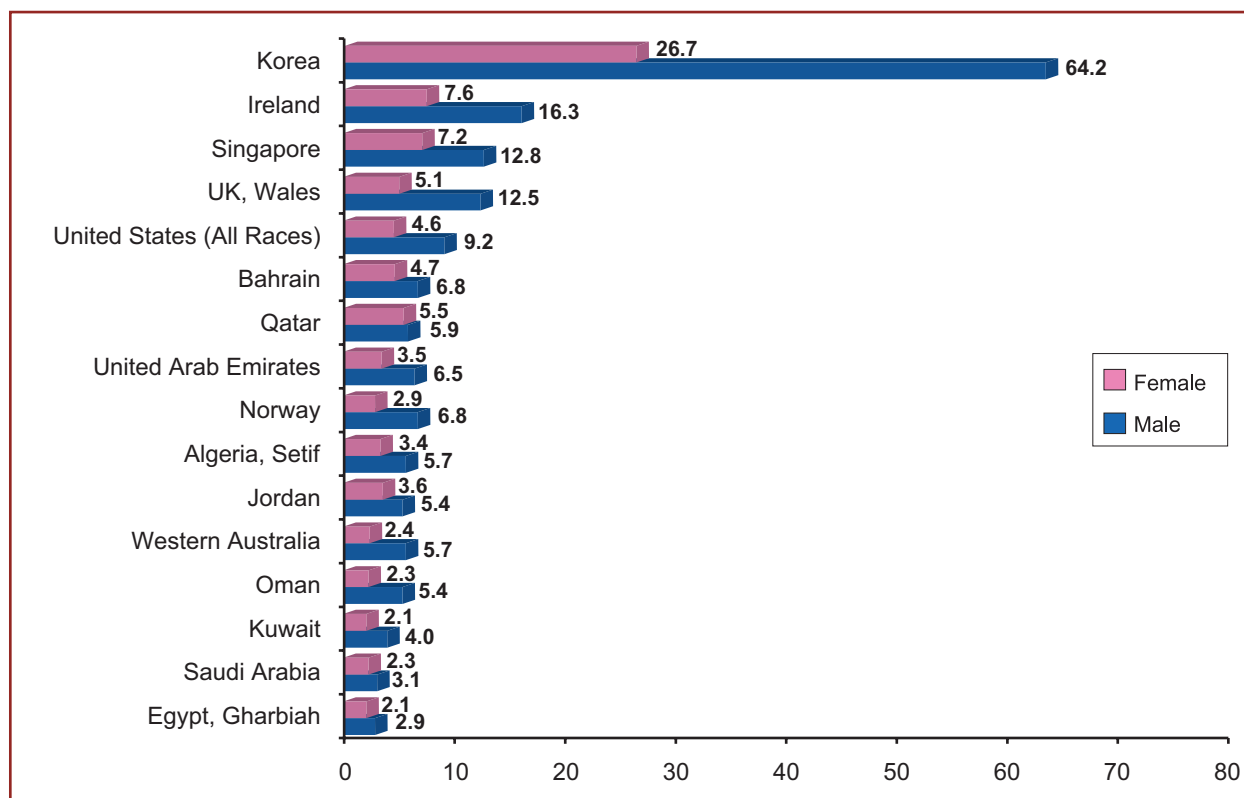


Figure 3.10.2 Stage Distribution of Stomach Cancer in Saudi Arabia, 2010



**Figure 3.10.3 ASR\* Regional Distribution of Stomach Cancer in Saudi Arabia, 2010**



**Figure 3.10.4 Comparison of ASR\* for Stomach Cancer among Saudis with ASR in Selected Countries\*\***

\* ASR Per 100,000

\*\* Source for this information is summarized on page 66

## Kidney (C 64)

There were 284 cases of Kidney cancer accounting for 2.8% of all newly diagnosed cases in year 2010. This cancer ranked tenth among male population and twelfth among female population. It affected 167 (58.8%) males and 117 (41.2%) females with a male to female ratio of 143:100. The overall ASR was 2.5/100,000. ASR was 2.9/100,000 for male and

2/100,000 for females. The five regions with the highest ASR were Northern region at 5.1/100,000, Riyadh region at 3.8/100,000, Eastern region at 3.6/100,000, Qassim region at 2.8/100,000 then Jouf region at 2.5/100,000. The median age at diagnosis was 55 years among males (range 0-100 years) and 51 years among female (range 0-83 years)

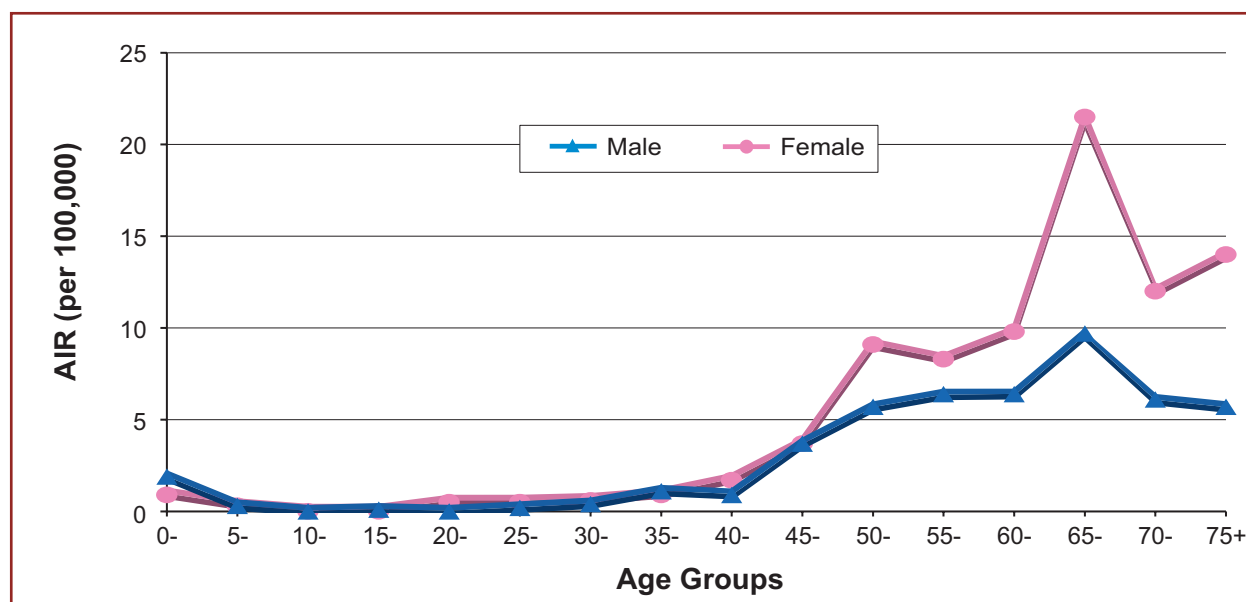


Figure 3.11.1 Age-Specific Incidence Rate (AIR) for Kidney Cancer in Saudi Arabia, 2010

ICD-0-3	Morphology	Male	%	Female	%
8312	Renal cell carcinoma, NOS	87	52.1	61	52.1
8960	Nephroblastoma, NOS	13	7.8	21	17.9
8317	Renal cell carcinoma, chromophobe type	15	9.0	11	9.4
8260	Papillary adenocarcinoma, NOS	18	10.8	3	2.6
8310	Clear cell adenocarcinoma, NOS	12	7.2	7	6.0
8318	Renal cell carcinoma, sarcomatoid	6	3.6	2	1.7
8000	Neoplasm, malignant	2	1.2	4	3.4
8010	Carcinoma, NOS	3	1.8	0	0.0
9500	Neuroblastoma, NOS	0	0.0	3	2.6
	Others	11	6.6	5	4.3

Table 3.11.1 Morphological Distribution of Kidney Cancer in Saudi Arabia, 2010

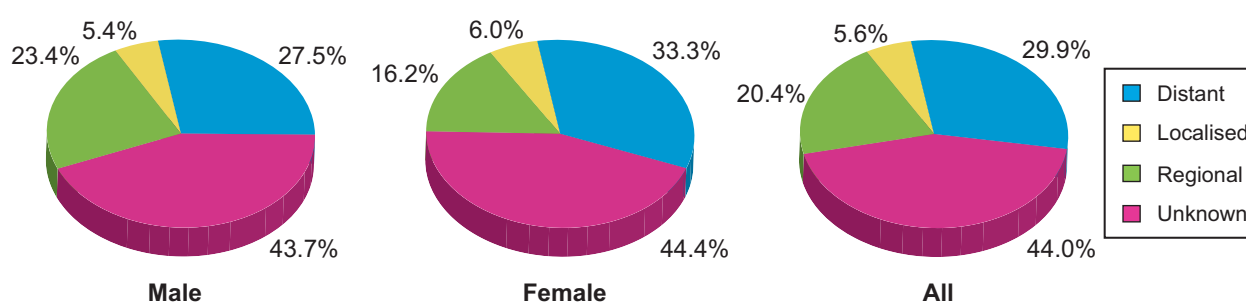
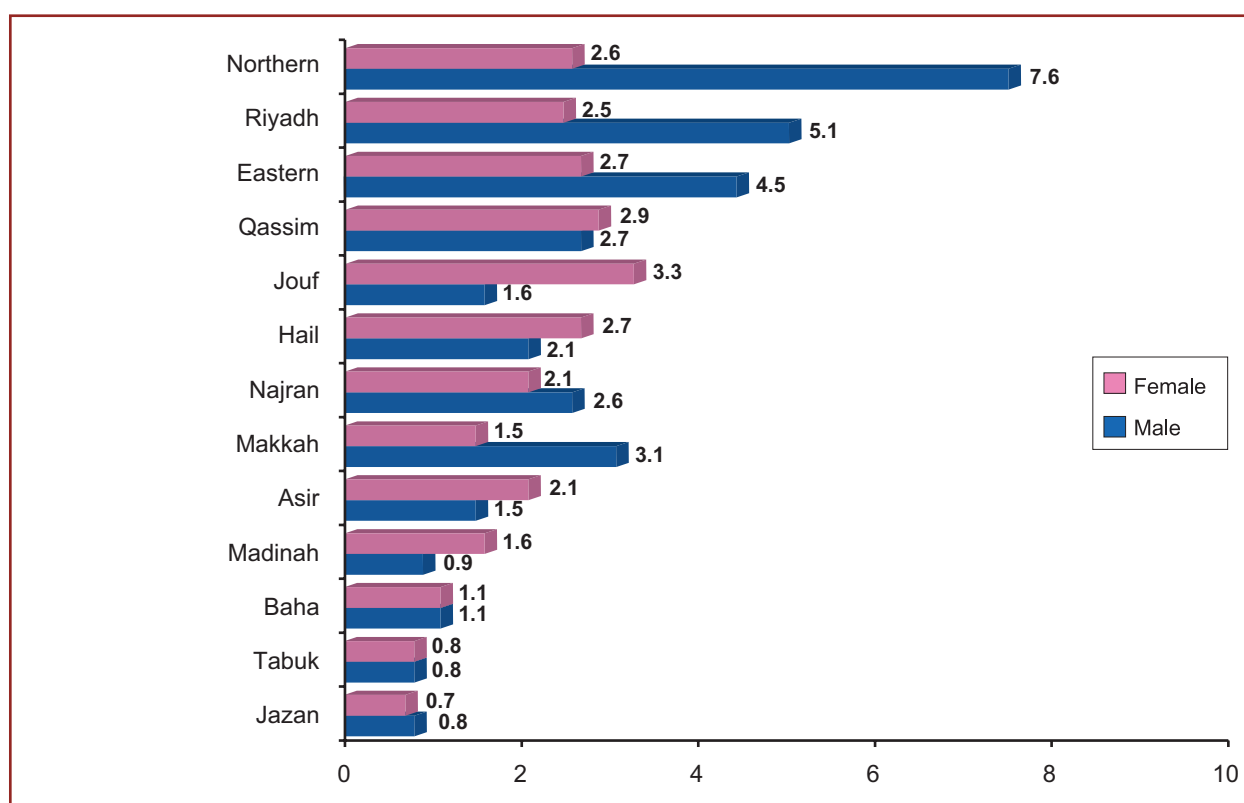
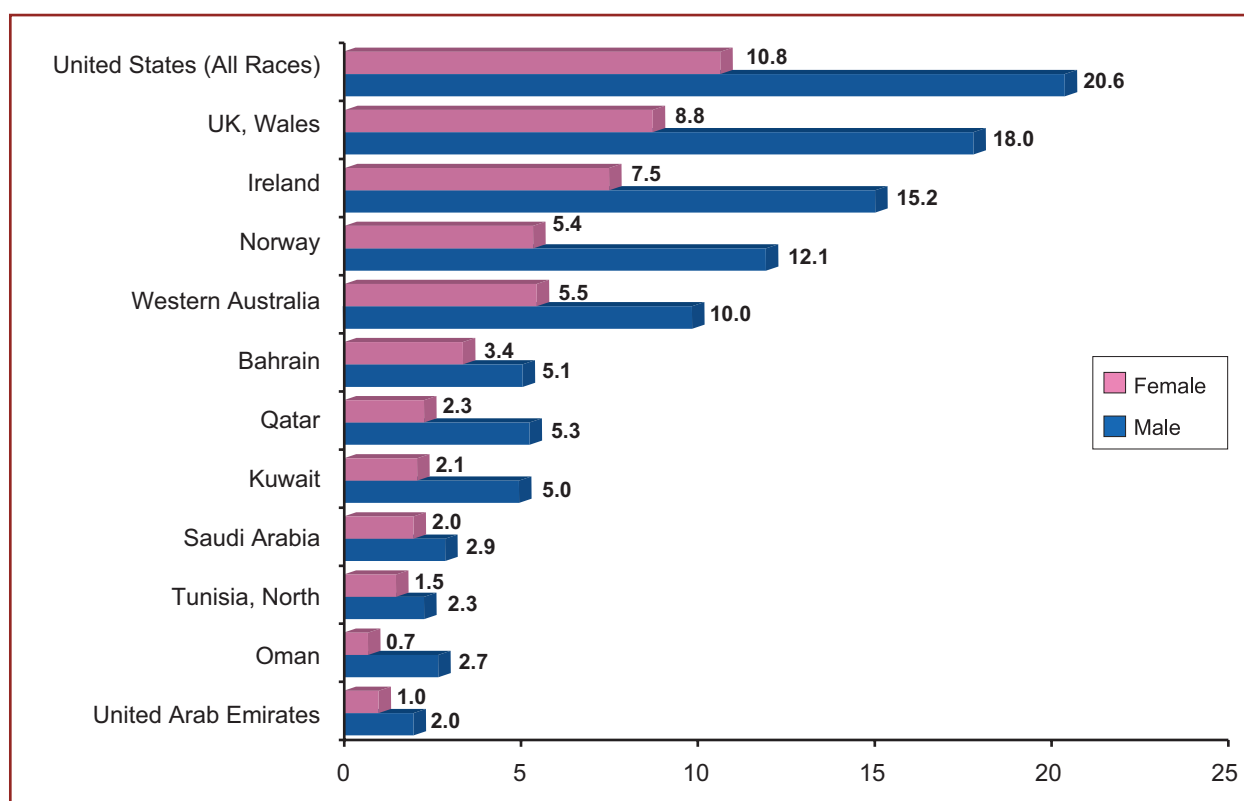


Figure 3.11.2 Stage Distribution of Kidney Cancer in Saudi Arabia, 2010



**Figure 3.11.3 ASR\* Regional Distribution of Kidney Cancer in Saudi Arabia, 2010**



**Figure 3.11.4 Comparison of ASR\* for Kidney Cancer among Saudis with ASR in Selected Countries\*\***

\* ASR Per 100,000

\*\* Source for this information is summarized on page 66

## Prostate (C 61)

There were 280 cases of prostate cancer accounting for 6.1% of all newly diagnosed cases among males in year 2010. This cancer ranked sixth among males. The ASR was 5.5/100,000 among male population. The five regions with the highest ASR

were Eastern region at 12.6/100,000, Riyadh region at 9.5/100,000, Tabuk region at 4.6/100,000, Jof region at 4.6/100,000 and Northern region at 4.2/100,000. The median age at diagnosis was 73 years (range 2-105 years).

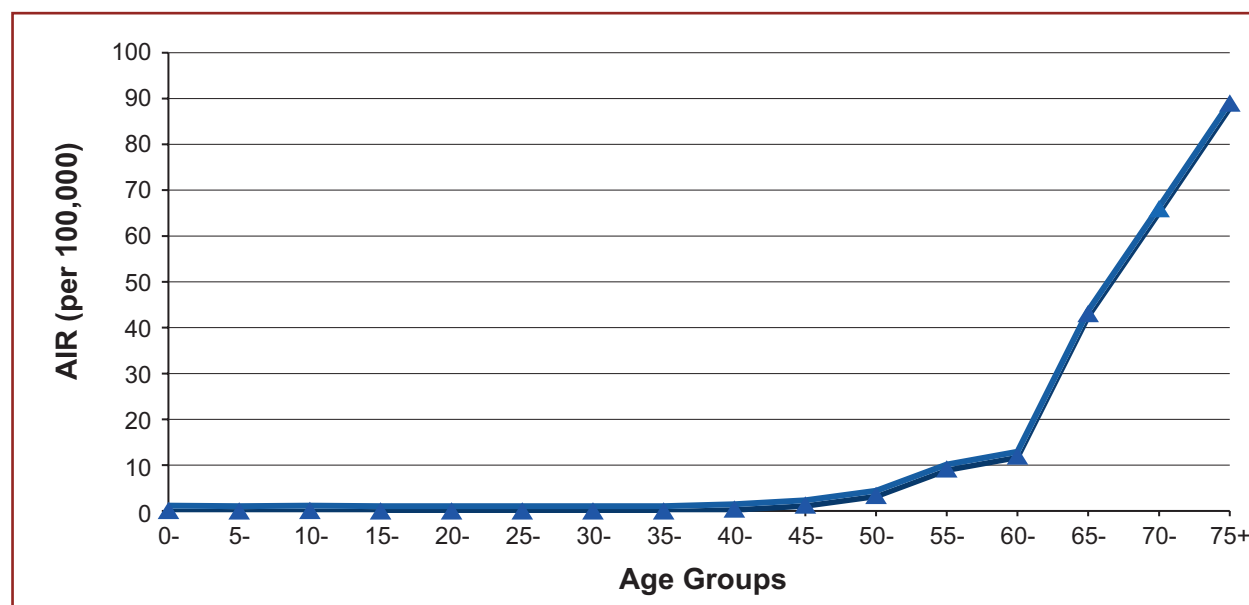


Figure 3.12.1 Age-Specific Incidence Rate (AIR) for Prostate Cancer in Saudi Arabia, 2010

ICD-O-3	Morphology	Male	%
8140	Adenocarcinoma, NOS	246	87.9
8000	Neoplasm, malignant	21	7.5
8010	Carcinoma, NOS	6	2.1
8550	Acinar cell carcinoma	5	1.8
8910	Embryonal rhabdomyosarcoma, NOS	2	0.7

Table 3.12.1 Morphological Distribution of Prostate Cancer in Saudi Arabia, 2010

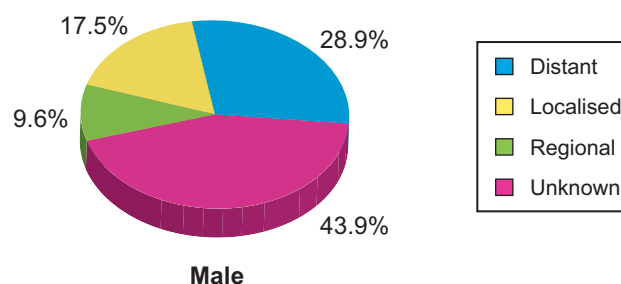
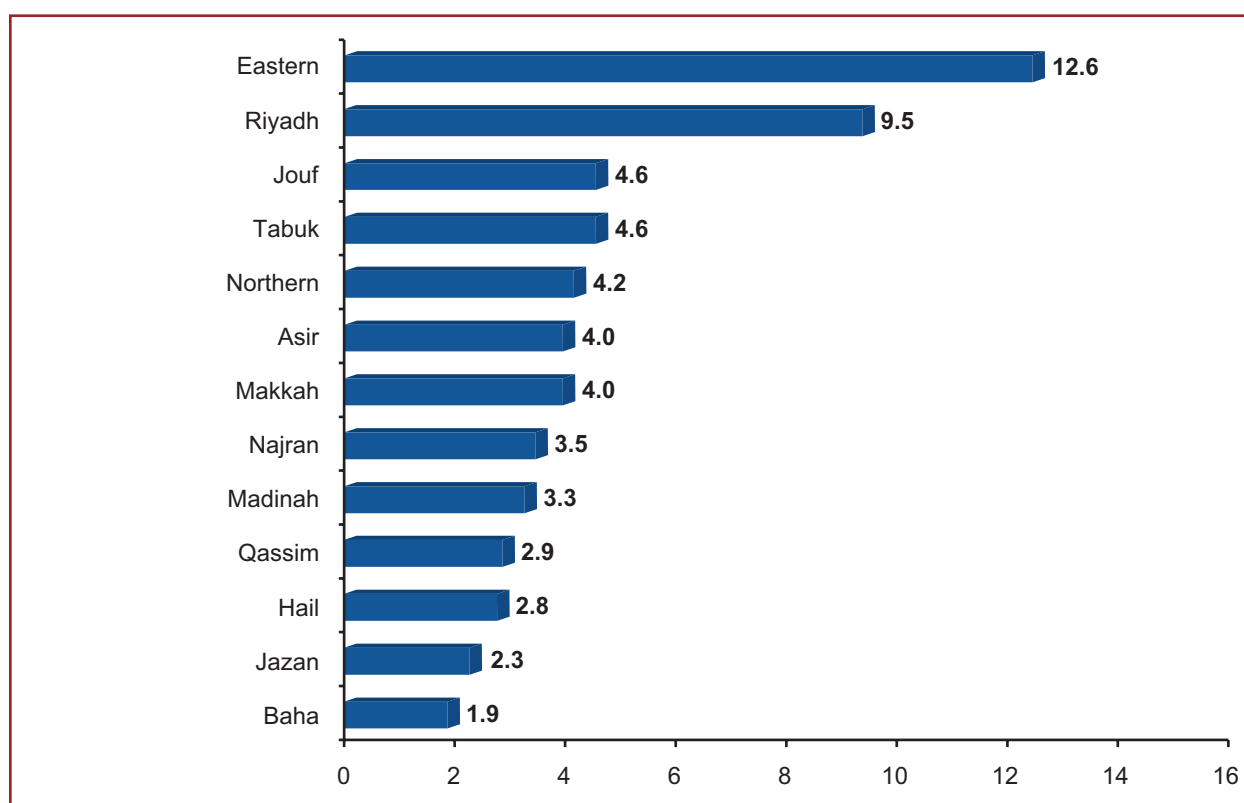
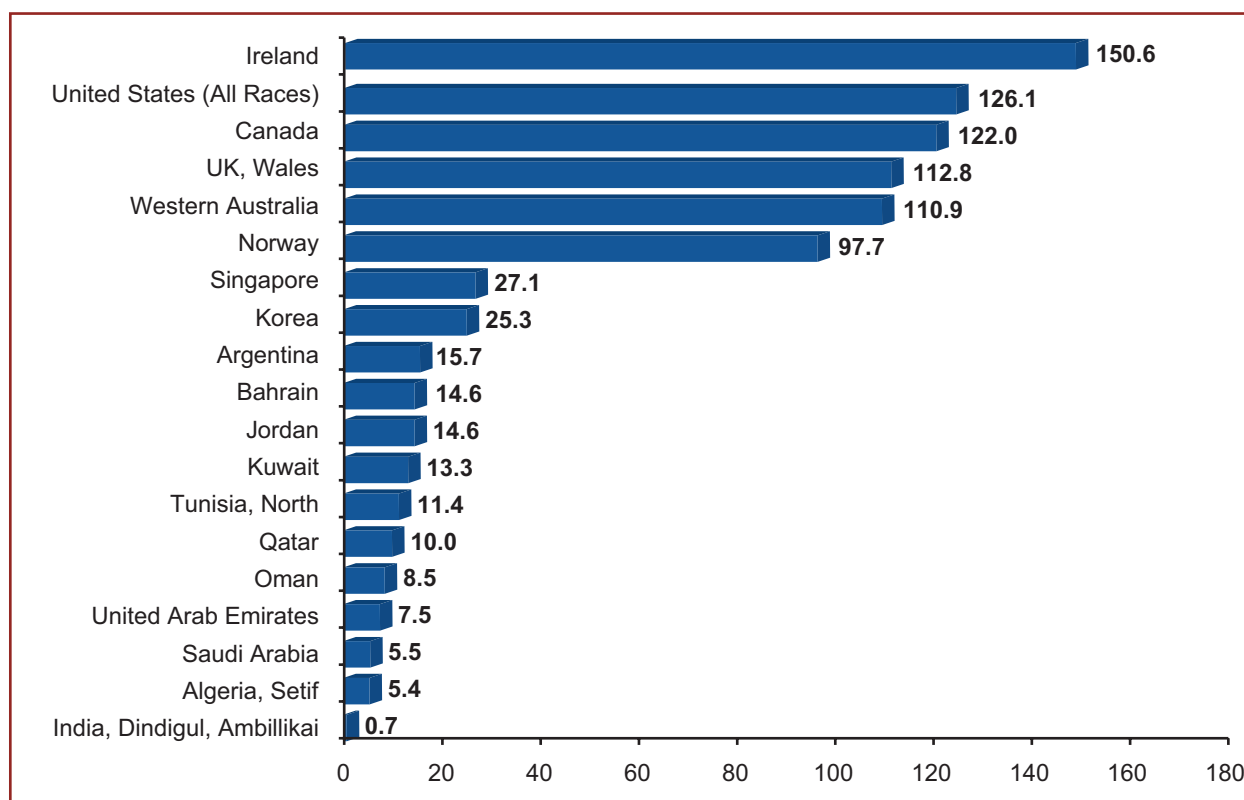


Figure 3.12.2 Stage Distribution of Prostate Cancer in Saudi Arabia, 2010





**Figure 3.12.3 ASR\* Regional Distribution of Prostate Cancer in Saudi Arabia, 2010**



**Figure 3.12.4 Comparison of ASR\* for Prostate Cancer among Saudi males with ASR in Selected Countries\*\***

\* ASR Per 100,000

\*\* Source for this information is summarized on page 66

## Bladder (C 67)

There were 243 cases of bladder cancer accounting for 2.4% of all newly diagnosed cases in year 2010. This cancer ranked eighth among male population and twentieth among female population. It affected 193 (78.4%) males and 50 (20.6%) females with a male to female ratio of 385:100. The overall ASR was 2.3/100,000. ASR was 3.6/100,000 for males

and 1/100,000 for females. The five regions with the highest ASR were Eastern region at 3.8/100,000, Baha region at 3.7/100,000, Jouf region at 3.6/100,000, then Riyadh/Tabuk/Northern regions at 2.7/100,000 for each. The median age at diagnosis was 63 among males (range 11-101 years) and 64 among females (range 28-97 years).

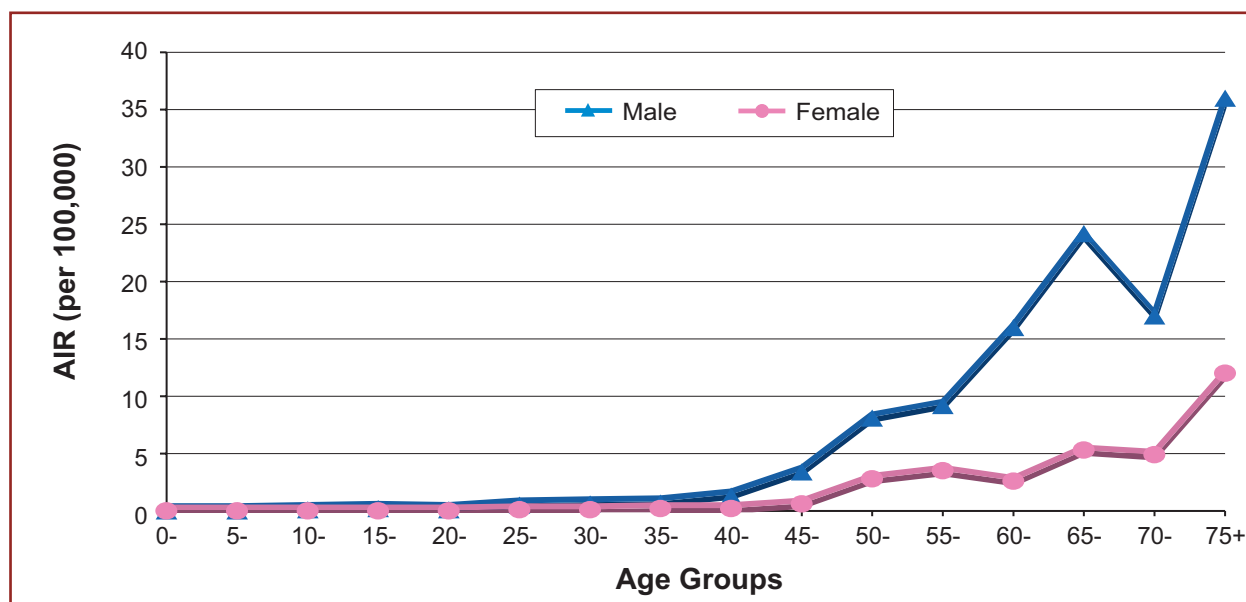


Figure 3.13.1 Age-Specific Incidence Rate (AIR) for Bladder Cancer in Saudi Arabia, 2010

ICD-O-3	Morphology	Male	%	Female	%
8130	Papillary transitional cell carcinoma	106	54.9	17	34.0
8120	Transitional cell carcinoma, NOS	59	30.6	19	38.0
8070	Squamous cell carcinoma, NOS	3	1.6	6	12.0
8000	Neoplasm, malignant	7	3.6	0	0.0
8010	Carcinoma, NOS	2	1.0	3	6.0
8071	Squamous cell carcinoma, keratinizing, NOS	2	1.0	1	2.0
	Others	14	7.3	4	8.0

Table 3.13.1 Morphological Distribution of Bladder Cancer in Saudi Arabia, 2010

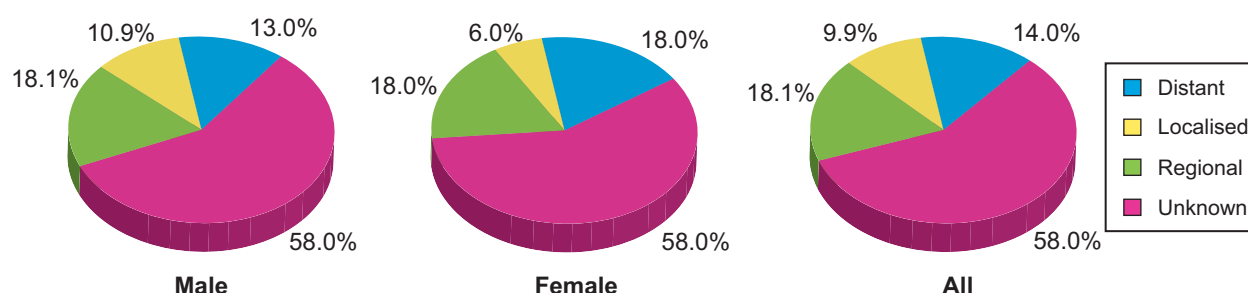
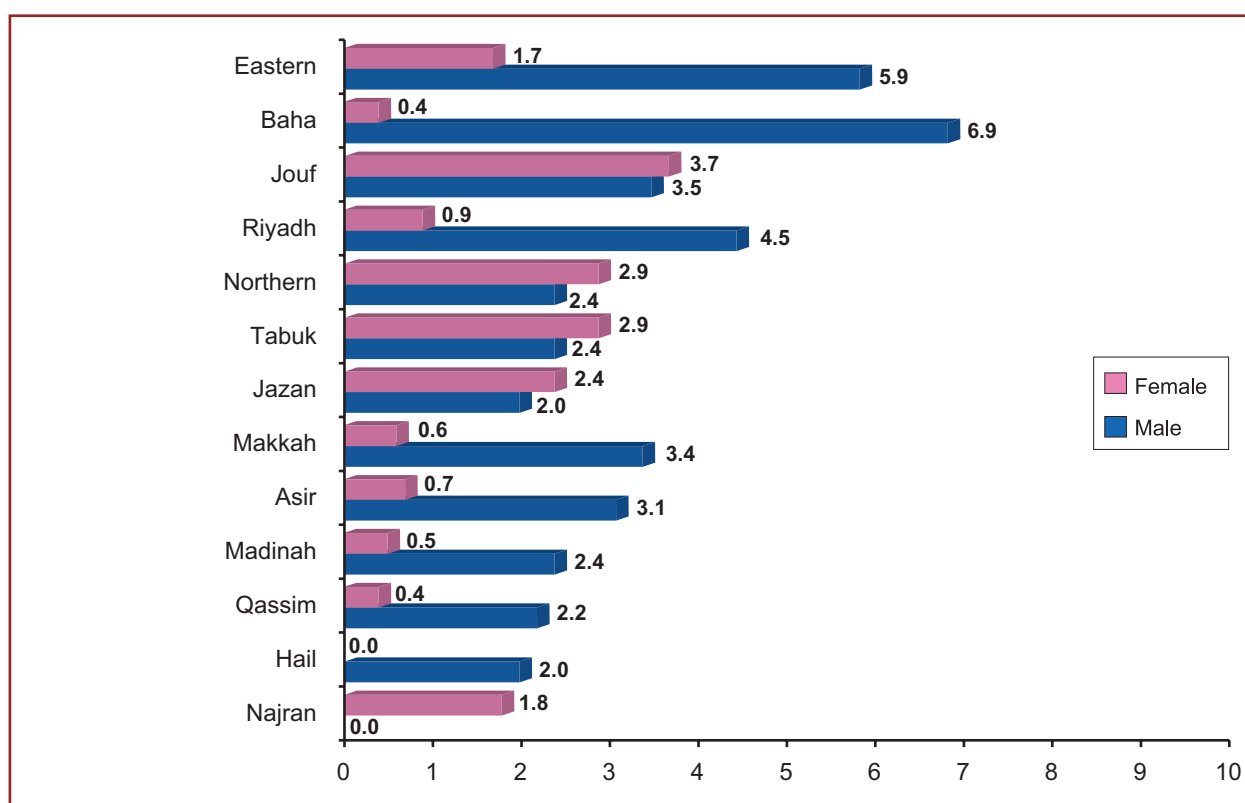
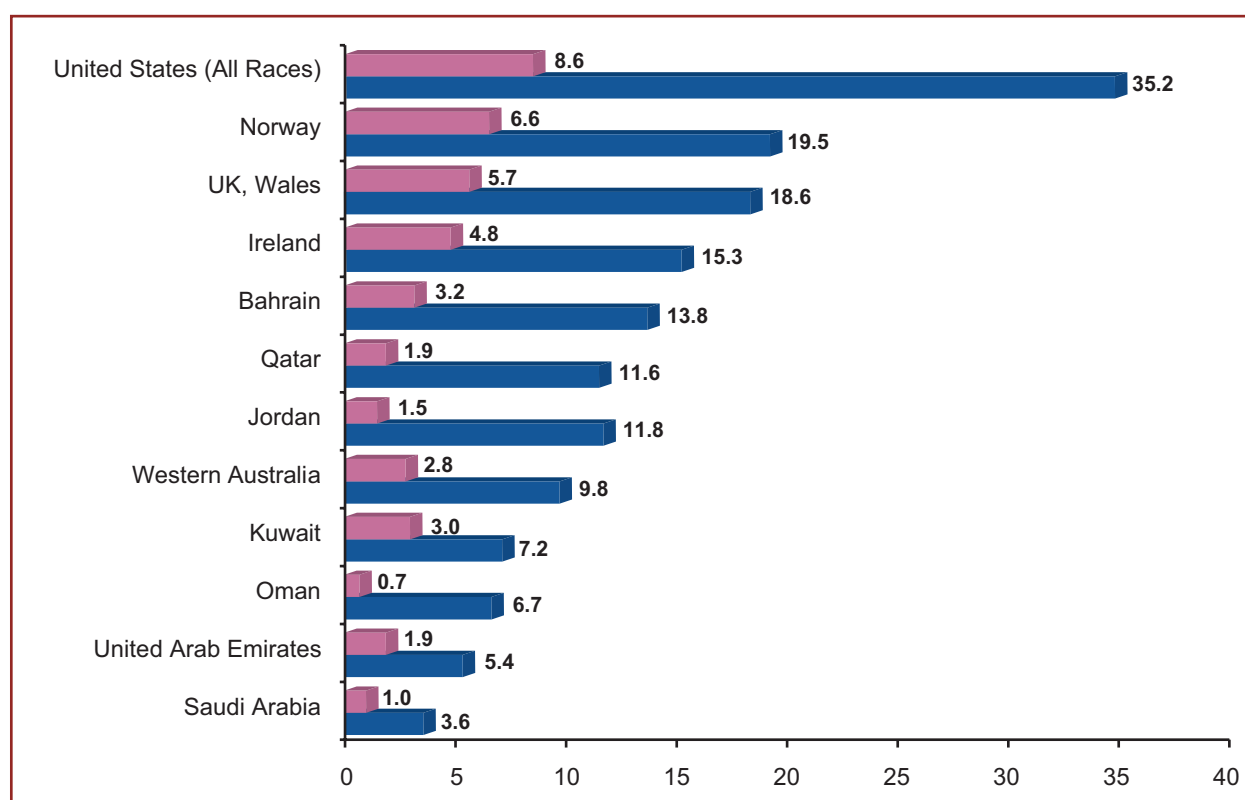


Figure 3.13.2 Stage Distribution of Bladder Cancer in Saudi Arabia, 2010



**Figure 3.13.3 ASR\* Regional Distribution of Bladder Cancer in Saudi Arabia, 2010**



**Figure 3.13.4 Comparison of ASR\* for Bladder Cancer among Saudis with ASR in Selected Countries\*\***

\* ASR Per 100,000

\*\* Source for this information is summarized on page 66

## Corpus Uteri (C 54)

There were 220 cases of corpus uteri cancer among females accounting for 4.1% of all newly diagnosed cases for females (5,378) in year 2010. This cancer ranked sixth among female population. The ASR was 4.6/100,000 for female population. The five regions

with the highest ASR were Baha region at 7.5/100,000, Eastern region at 6.4/100,000, Riyadh region at 5.8/100,000, Najran region at 5.1/100,000 and Asir region at 5 at 100,000. The median age at diagnosis was 60 years (range 28-85 years).

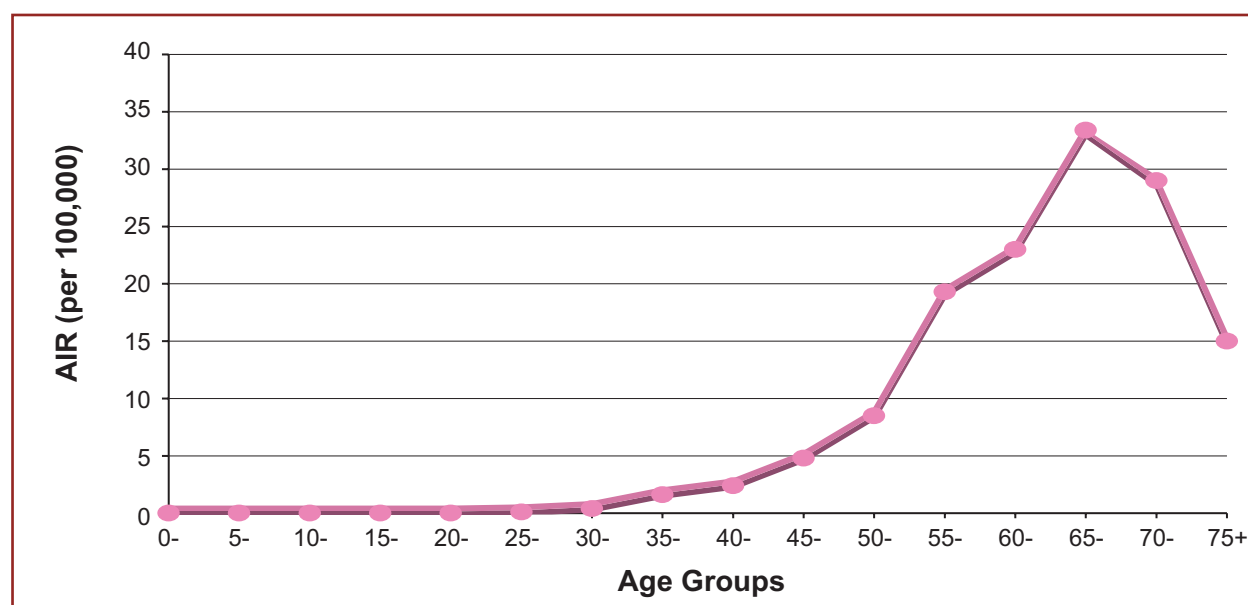


Figure 3.14.1 Age-Specific Incidence Rate (AIR) for Corpus Uteri Cancer in Saudi Arabia, 2010

ICD-O-3	Morphology	Female	%
8380	Endometrioid adenocarcinoma, NOS	127	57.7
8140	Adenocarcinoma, NOS	26	11.8
8441	Serous cystadenocarcinoma, NOS	10	4.5
8980	Carcinosarcoma, NOS	10	4.5
8010	Carcinoma, NOS	5	2.3
8310	Clear cell adenocarcinoma, NOS	5	2.3
8460	Papillary serous cystadenocarcinoma	4	1.8
8931	Endometrial stromal sarcoma, low grade	4	1.8
8255	Adenocarcinoma with mixed subtypes	3	1.4
8461	Serous surface papillary carcinoma	3	1.4
8930	Endometrial stromal sarcoma, NOS	3	1.4
8950	Mullerian mixed tumor	3	1.4
	Others	17	7.7

Table 3.14.1 Morphological Distribution of Corpus Uteri Cancer in Saudi Arabia, 2010

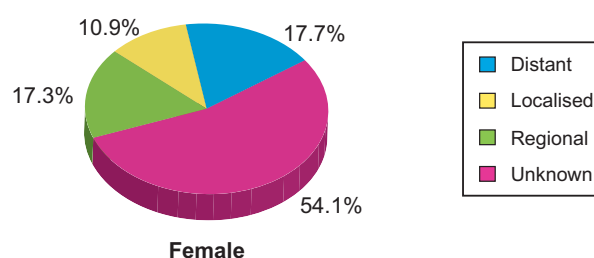
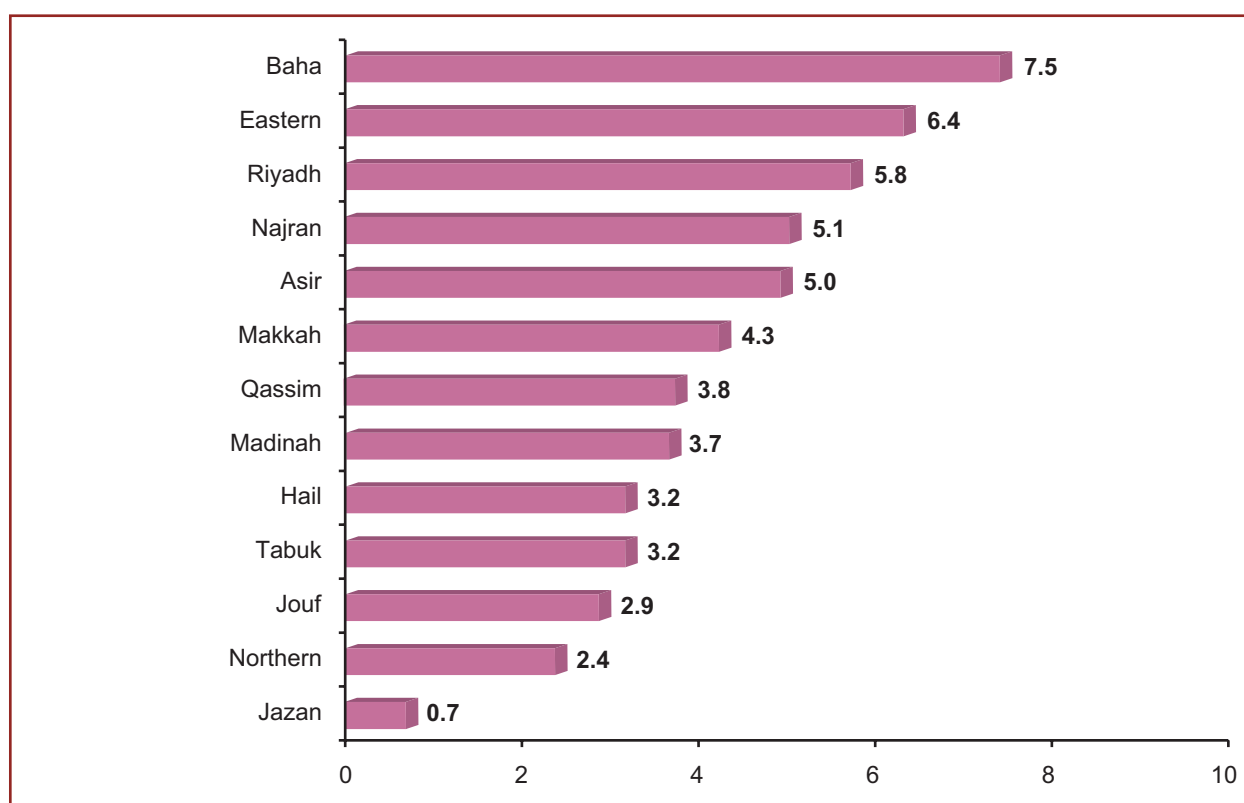
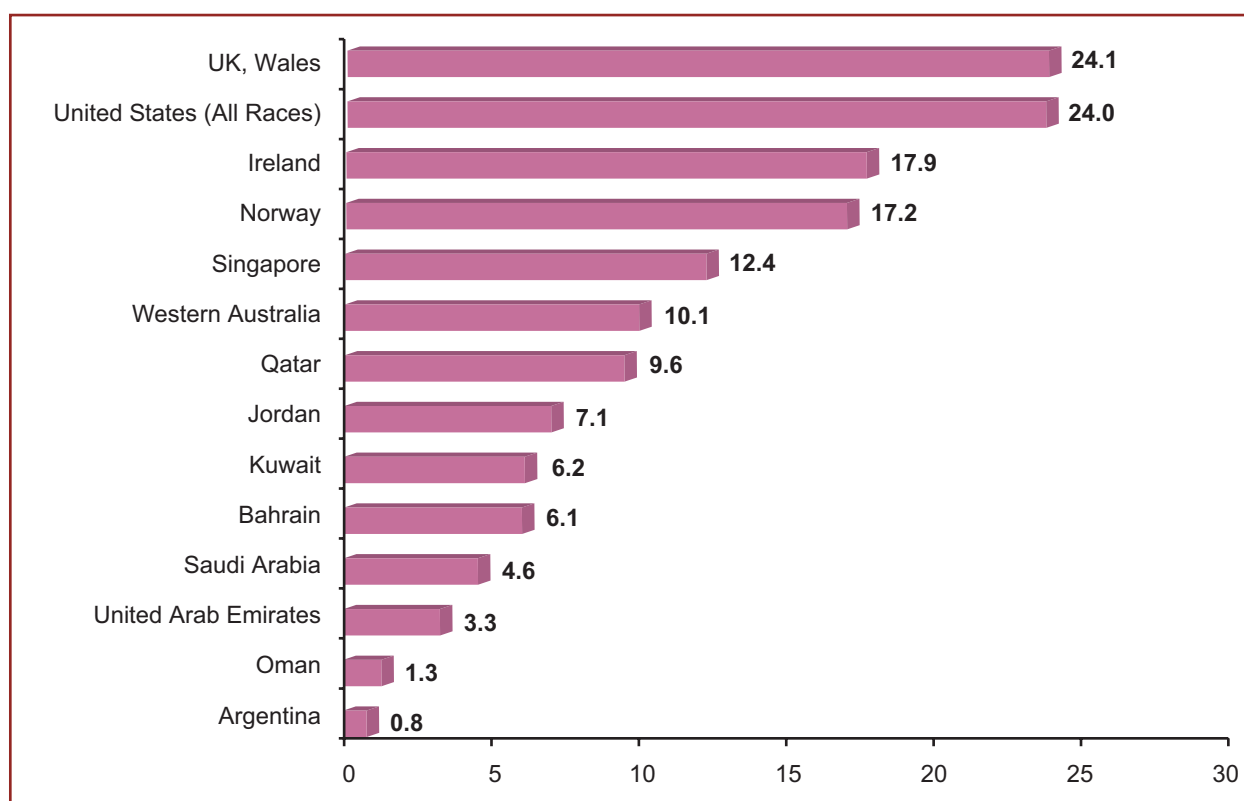


Figure 3.14.2 Stage Distribution of Corpus Uteri Cancer in Saudi Arabia, 2010



**Figure 3.14.3 ASR\* Regional Distribution of Corpus uteri Cancer in Saudi Arabia, 2010**



**Figure 3.14.4 Comparison of ASR\* for Corpus uteri Cancer among Saudi females with ASR in Selected Countries\*\***

\* ASR Per 100,000

\*\* Source for this information is summarized on page 66

## Ovarian Cancer (C 56)

There were 175 cases of ovarian cancer among females accounting for 3.3% of all newly diagnosed cases among females (5,378) in year 2010. This cancer ranked seventh among female population. The ASR was 3 /100,000 for females. The five regions

with the highest ASR were Najran region at 8.1/100,000, Eastern region at 4.3/100,000, Riyadh region at 3.6/100,000, Jazan region at 3.5/100,000, and Asir region at 3.1/100,000. The median age at diagnosis was 51 years (range 9-85 years)

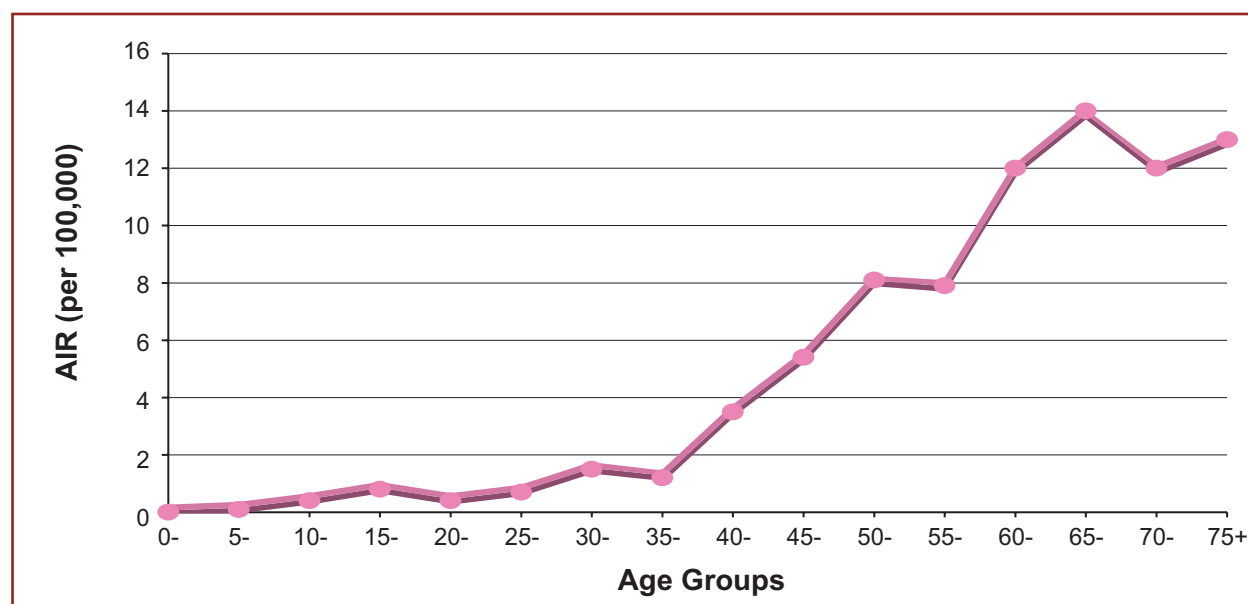


Figure 3.15.1 Age-Specific Incidence Rate (AIR) for Ovarian Cancer in Saudi Arabia, 2010

ICD-O-3	Morphology	Female	%
8441	Serous cystadenocarcinoma, NOS	48	27.4
8000	Neoplasm, malignant	16	9.1
8460	Papillary serous cystadenocarcinoma	16	9.1
8140	Adenocarcinoma, NOS	15	8.6
8480	Mucinous adenocarcinoma	15	8.6
8380	Endometrioid adenocarcinoma, NOS	10	5.7
8010	Carcinoma, NOS	9	5.1
8470	Mucinous cystadenocarcinoma, NOS	8	4.6
8461	Serous surface papillary carcinoma	6	3.4
9071	Yolk sac tumor	5	2.9
8620	Granulosa cell tumor, malignant	4	2.3
8980	Carcinosarcoma, NOS	4	2.3
9060	Dysgerminoma	3	1.7
9085	Mixed germ cell tumor	3	1.7
	Others	13	7.4

Table 3.15.1 Morphological Distribution of Ovarian Cancer in Saudi Arabia, 2010

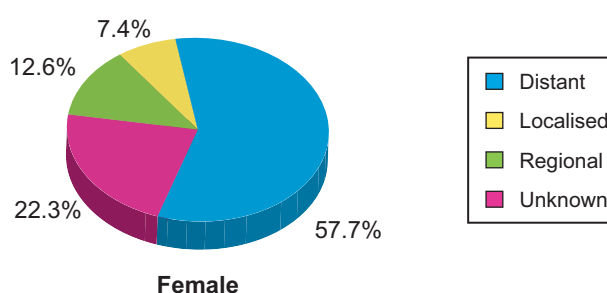
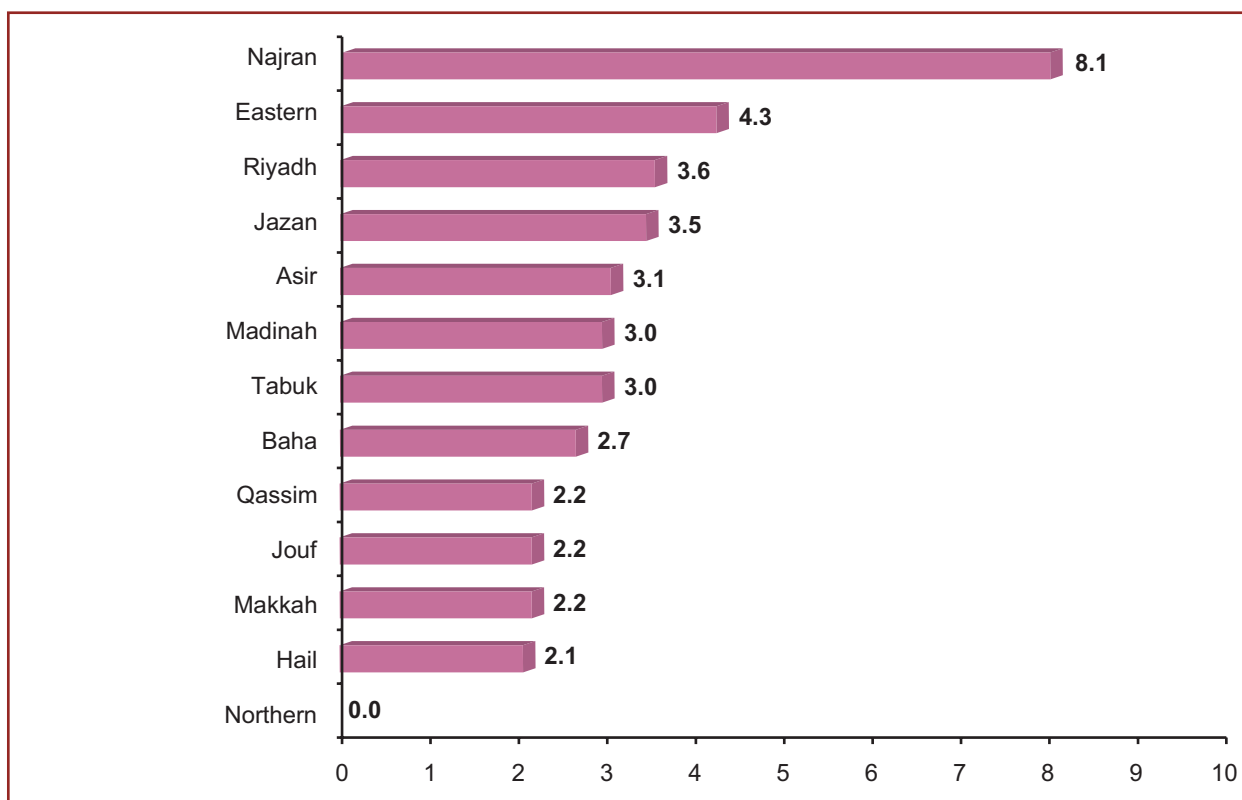
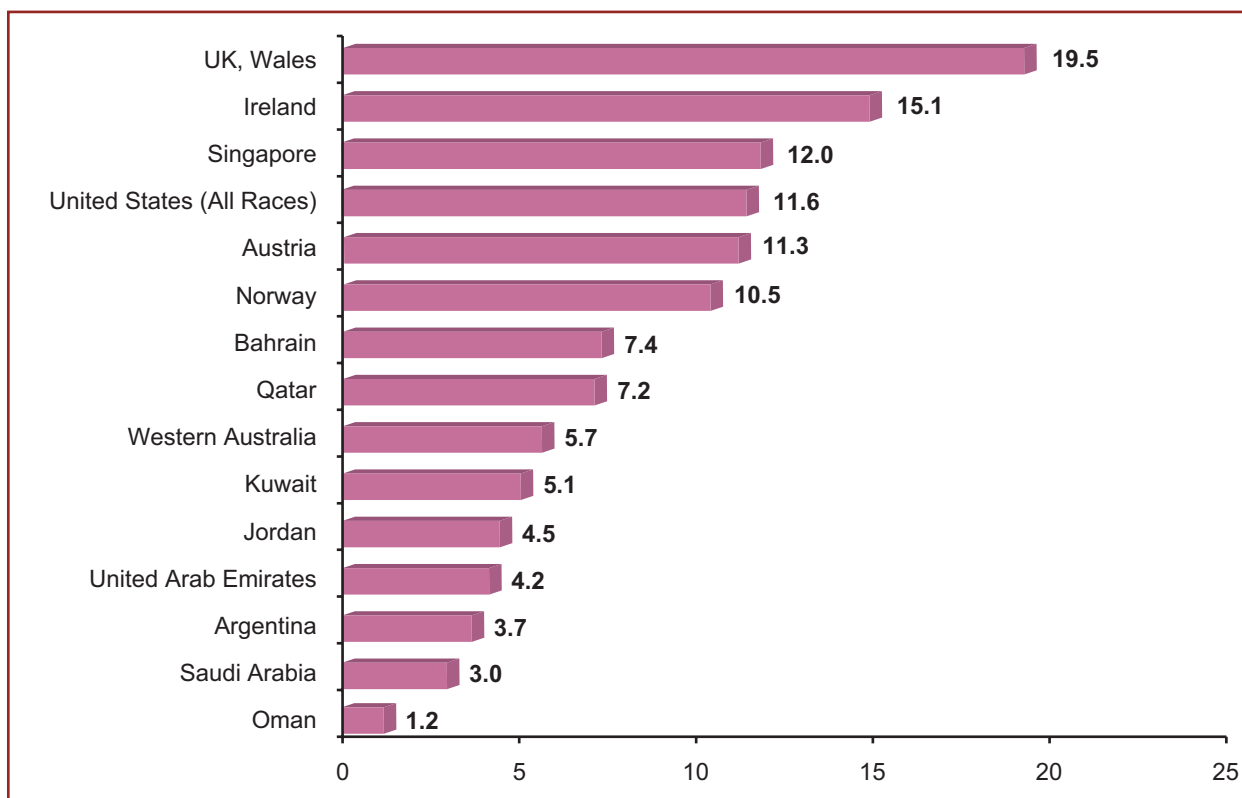


Figure 3.15.2 Stage Distribution of Ovarian Cancer in Saudi Arabia, 2010



**Figure 3.15.3 ASR\* Regional Distribution of Ovarian Cancer in Saudi Arabia, 2010**



**Figure 3.15.4 Comparison of ASR\* for Ovarian Cancer among Saudi Females with ASR in Selected Countries\*\***

\* ASR Per 100,000

\*\* Source for this information is summarized on page 66

**\*\* Sources:**

- 1 Cancer Incidence in Oman 2011. Oman Cancer Registry, Department of non communicable Disease Surveillance and Control. Directorate General of Health Affairs, Ministry of Health.
- 2 Canadian Cancer Statistics 2011. Canadian Cancer Society, Statistics Canada, Provincials/Territorial Cancer Registries, Public Health Agency of Canada.
- 3 Cancer in Ireland 2013: Annual report of the National Cancer Registry. National Cancer Registry Ireland.
- 4 Cancer Incidence and Mortality in Western Australia, 2010. A Report of the Western Australian Cancer Registry.
- 5 CDC. Center for Disease Control and Prevention. Department of Health and Human Services. National Program of Cancer Registries (NPCR). 2010 Cancer Types Grouped by Race and Ethnicity. Available from:  
<http://apps.nccd.cdc.gov/uscs/cancersbyraceandethnicity.aspx?printfriendly=1>
- 6 National Cancer Registration and Statistics in Korea. Cancer Incidence in Korea 2010.
- 7 Cancer in Norway 2011. Cancer incidence, mortality, survival and prevalence in Norway.
- 8 Singapore Cancer Registry. Interim Annual Registry Report. Trends in Cancer Incidence in Singapore 2006-2010. National Registry of Diseases Office (NRDO). Available from:  
[https://www.nrdo.gov.sg/uploadedFiles/NRDO/Cancer\\_Trends\\_Report\\_06-10\\_final2.pdf](https://www.nrdo.gov.sg/uploadedFiles/NRDO/Cancer_Trends_Report_06-10_final2.pdf)
- 9 The Hashemite Kingdom of Jordan Ministry of Health. Non-Communicable Diseases Directorate. Jordan Cancer Registry Cancer Incidence in Jordan 2009. Available from:  
<http://www.moh.gov.jo/AR/Documents/Annual%20Incidence%20of%20cancer%20in%20Jordan%202010.pdf>
- 10 Atlas De Mortalidad Por Cáncer. Argentina, 2007-2011.
- 11 Welsh Cancer Intelligence & Surveillance Unit. Annual Publication No. SA12/01 Cancer Incidence in Wales 2006-2010. Available from: <http://www.wales.nhs.uk/sites3/Documents/242/incpub2012.pdf>
- 12 Ten Years Cancer Incidence among Nationals of the GCC States, 1998-2007.
- 13 GLOBOCAN 2012, Cancer Incidence and Mortality Worldwide, IARC, Lyon: International Agency for Research on Cancer. Available from: [http://www-dep.iarc.fr/globocan/im\\_sel.HTM](http://www-dep.iarc.fr/globocan/im_sel.HTM)
- 14 Cancer Incidence in Five Continents Vol. X, IARC. Scientific Publication, Lyon, France, 2013. Available from: <http://ci5.iarc.fr/CI5-X/ci5-X.htm>



**PART IV**  
**CANCER AMONG NON-SAUDIS**  
**2010**



## Cancer Among Non- Saudi Population 2010

Between January and December 2010, a total of 3,265 cancer cases were reported among the Non-Saudi population. Seventy four In Situ cases and 3 cases were ICD-O-3 coded that failed to convert to ICD-10 codes as described in the data management (see page 12 and page 92). This puts the total number of exclusions from the analysis as 77 cases. As a result, the total number of cases analyzed were 3,188. Out of this 1712 (53.7%) were males and 1,476 (46.3%) were females. The male to female ratio was 116:100. Taking into consideration the population structure of non-Saudis and the

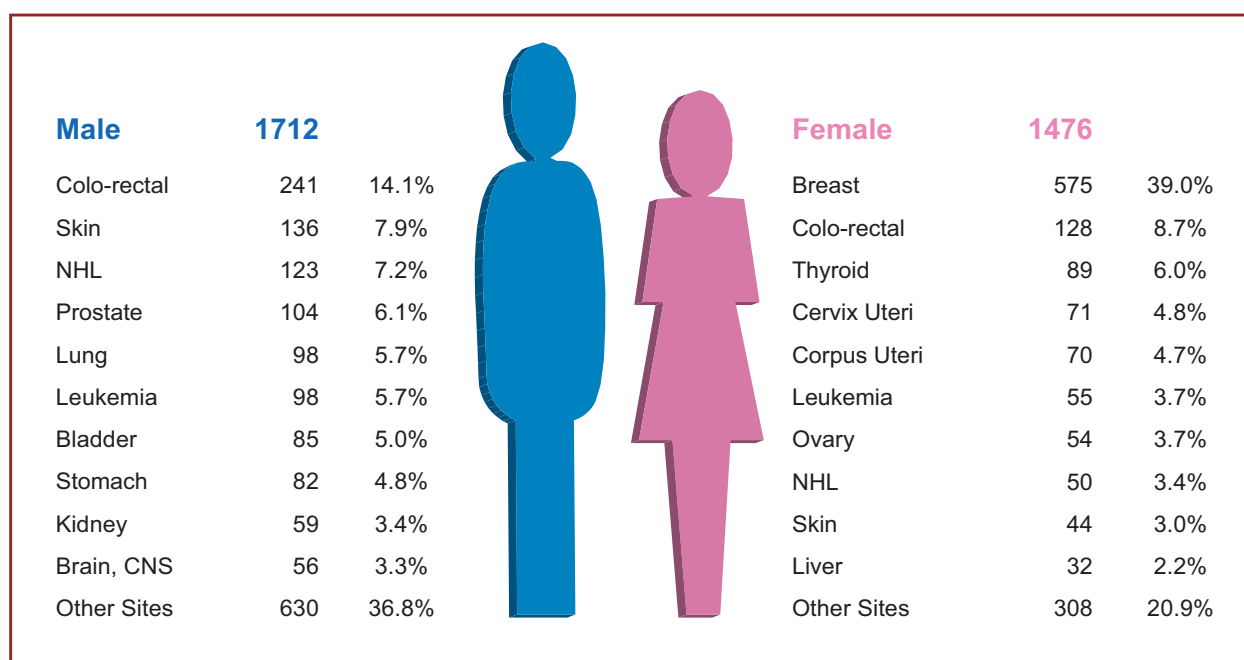
fact that cancer is primarily a disease of the elderly, the pattern of cancer had some significant differences. Those under 15 represented 19.2% of the population, those 60 years and over represented 1.8% and the 15 to 59 age-group represented 79% of non-Saudi population. During 2010, approximately 4% of all cancers occurred before the age of 15, 22.3% occurred between the ages 15 to 39 years, 59.6% were between the ages 40-64, and 14.1% occurred after the age of 64. The median age at diagnosis was 51 years in males (range 0-94 years) and 47 years in females (range 0-95 years).

Cancer	No.	%
Breast	588	18.4
Colo-Rectal	369	11.6
Skin	180	5.6
NHL	173	5.4
Leukemia	153	4.8
Thyroid	140	4.4
Lung	123	3.9
Stomach	113	3.5
Prostate	104	3.3
Bladder	96	3.0
Other Sites	1149	36.0

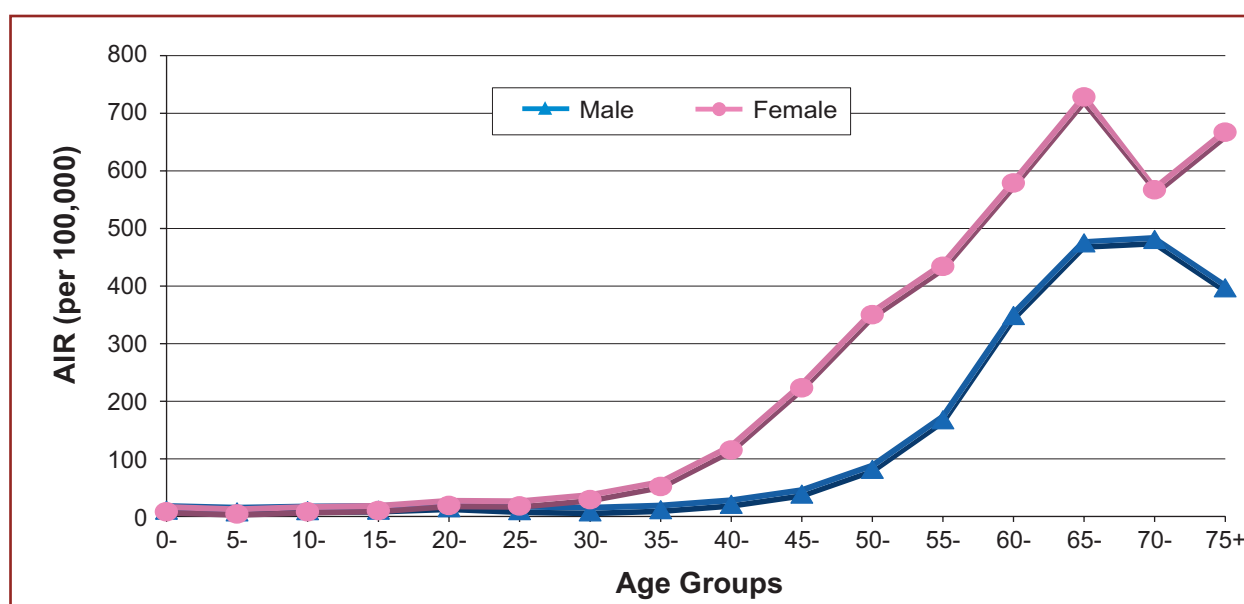
**Table 4.1 Ten Most common Cancers among Non-Saudis, 2010**

Nationality	Male	%	Female	%	All	%
Yemen	317	18.1	235	15.6	552	16.9
Egypt	231	13.2	170	11.3	401	12.3
Sudan	166	9.5	128	8.5	294	9.0
Philippines	126	7.2	163	10.8	289	8.9
Pakistan	142	8.1	94	6.2	236	7.2
Syrian Arab Republic	87	5.0	69	4.6	156	4.8
India	85	4.8	54	3.6	139	4.3
Palestine	61	3.5	76	5.0	137	4.2
Jordan	71	4.0	54	3.6	125	3.8
Bangladesh	82	4.7	15	1.0	97	3.0
Indonesia	11	0.6	78	5.2	89	2.7
Somalia	24	1.4	34	2.3	58	1.8
United States of America	43	2.5	14	0.9	57	1.7
Ethiopia	10	0.6	43	2.8	53	1.6
United Kingdom	32	1.8	21	1.4	53	1.6
Bahrain	17	1.0	35	2.3	52	1.6
Eritrea	20	1.1	24	1.6	44	1.3
Lebanon	24	1.4	17	1.1	41	1.3
Nigeria	20	1.1	18	1.2	38	1.2
Myanmar (Formerly Burma)	11	0.6	21	1.4	32	1.0
Chad	8	0.5	17	1.1	25	0.8
Afghanistan	10	0.6	14	0.9	24	0.7
Canada	16	0.9	4	0.3	20	0.6
Kuwait	7	0.4	8	0.5	15	0.5
Iraq	4	0.2	3	0.2	7	0.2
Oman	4	0.2	1	0.1	5	0.2
United Arab Emirates	0	0.0	2	0.1	2	0.1
Qatar	0	0.0	3	0.2	3	0.1
Other Nationalities	126	7.2	95	6.3	221	6.8

**Table 4.2 Distribution of Cancer Cases among Different Nationalities in Order of Relative Frequency, 2010**



**Figure 4.1 Ten Most Common Cancer among Non-Saudis by Sex, 2010**



**Figure 4.2 Age-Specific Incidence Rate (AIR) for All Cancers among Non-Saudis in Saudi Arabia, 2010**

# **PART V**

# **TABLES**

Table 5.1.1 Number of Cancer Cases among Saudi Males by Primary Site and Age Groups, 2010

ICD (10th)	Site	All Ages	Age Unk	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	Total (%)
C00	Lip	8	0	2	0	0	0	0	0	2	0	0	0	0	1	0	0	1	2	0.2
C01-C02	Tongue	53	0	0	0	0	0	4	0	0	1	4	4	7	3	5	7	8	10	1.2
C03-C06	Mouth	45	0	0	0	0	0	0	1	0	3	4	2	4	4	7	8	4	8	1.0
C07-C08	Salivary Glands	11	0	0	0	0	0	0	1	0	2	1	2	1	1	2	0	1	0	0.2
C09	Tonsil	2	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0
C10	Other Oropharynx	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0
C11	Nasopharynx	131	0	1	1	3	5	7	6	8	13	16	17	13	11	12	7	5	6	2.9
C12-C13	Hypopharynx	9	0	0	0	0	0	0	0	0	0	1	0	1	0	2	0	3	2	0.2
C14	Pharynx Unspecified	3	0	0	1	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0.1
C15	Oesophagus	73	0	0	0	0	0	0	1	2	1	2	2	4	5	8	10	13	25	1.6
C16	Stomach	165	0	1	0	0	0	3	4	3	7	3	15	13	15	17	21	25	38	3.6
C17	Small Intestine	27	0	0	0	0	0	1	0	1	1	0	3	1	6	4	1	2	7	0.6
C18	Colon	303	0	1	0	1	2	2	3	7	12	23	31	26	37	34	34	36	54	6.6
C19-C20	Rectum	238	0	0	0	0	0	0	5	4	15	12	22	26	30	26	31	27	40	5.2
C21	Anus	18	0	0	0	0	0	0	1	2	0	0	3	1	3	2	3	1	2	0.4
C22	Liver	329	0	6	0	0	1	1	1	1	3	6	12	27	28	40	50	103	7.2	3.7
C23-C24	Gallbladder etc.	51	0	0	0	0	0	0	0	1	0	5	2	5	7	4	6	3	18	1.1
C25	Pancreas	114	0	0	0	0	0	1	0	3	2	7	5	16	6	18	13	19	24	2.5
C30-C31	Nose, Sinuses etc.	9	0	0	0	0	0	0	0	0	0	0	1	2	2	0	2	1	0	0.2
C32	Larynx	48	0	0	0	0	0	0	0	0	0	2	3	8	8	6	5	9	7	1.0
C33-C34	Trachea, Bronchus, Lung	292	0	0	0	0	0	3	0	2	4	8	25	21	38	40	51	40	60	6.4
C37-C38	Other Thoracic Organs	25	0	3	0	0	1	2	2	2	2	1	1	3	1	0	0	3	4	0.5
C40-C41	Bone	74	0	1	4	15	19	10	8	2	4	2	1	1	2	2	1	0	2	1.6
C43	Melanoma of Skin	12	0	0	0	0	0	0	1	0	0	0	0	0	0	2	1	0	1	0.3
C44	Other Skin	168	0	0	1	1	3	1	0	2	4	6	11	10	16	18	18	26	51	3.7
C45	Mesothelioma	9	0	0	0	0	0	0	0	0	0	0	1	1	1	0	2	2	1	0.2
C46	Kaposi Sarcoma	21	0	0	0	0	0	0	1	0	0	1	3	1	5	3	0	3	4	0.5
C47,C49	Connective, Soft Tissue	69	0	12	2	1	3	6	8	6	8	0	5	3	2	0	1	3	9	1.5
C50	Breast	24	0	0	0	0	0	0	1	0	2	3	1	1	4	5	2	0	5	0.5
C60	Penis	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0.0
C61	Prostate	280	0	1	0	1	0	0	0	0	0	2	5	10	20	19	48	63	111	6.1
C62	Testis	78	0	4	0	3	10	14	11	11	3	7	6	2	3	0	0	1	3	1.7
C63	Other Male Genital	2	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0.0
C64	Kidney	167	0	11	3	0	0	5	4	4	5	8	14	27	18	16	24	11	17	3.6
C65	Renal Pelvis	5	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	1	1	0.1
C66	Ureter	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
C67	Bladder	193	0	0	0	1	2	1	4	4	4	6	13	24	20	26	27	16	45	4.2
C68	Other Urinary Organs	3	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	1	0	0.1
C69	Eye	22	0	12	0	2	0	0	0	1	1	0	0	0	0	0	0	1	4	0.5
C70-C72	Brain, Nervous System	148	0	19	16	16	10	6	10	6	4	7	13	5	9	7	8	3	9	3.2
C73	Thyroid	149	0	0	1	1	3	10	7	17	15	10	17	17	10	14	14	5	8	3.2
C74	Adrenal Gland	29	0	21	2	0	0	0	1	0	1	1	0	1	1	0	0	1	1	0.6
C75	Other Endocrine	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
C81	Hodgkin Disease	194	0	5	19	21	33	24	23	10	11	10	9	7	8	3	3	5	5	4.2
C82-C85;C96	Non-Hodgkin Lymphoma	407	0	12	14	12	18	20	22	21	29	30	28	30	19	30	33	32	57	8.9
C88	Immunoproliferative Disease	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
C90	Multiple Myeloma	61	0	0	0	0	1	0	0	1	2	3	5	10	4	10	8	5	12	1.3
C91	Lymphoid Leukemia	187	0	44	30	17	19	13	5	3	7	6	4	2	6	5	5	5	16	4.1
C92-C94	Myeloid Leukemia	156	0	13	10	14	11	18	9	10	11	5	7	14	5	7	7	10	5	3.4
C95	Leukemia Unspecified	16	0	1	2	3	0	1	1	2	2	0	0	1	0	1	0	0	2	0.3
Other	Other & Unspecified	161	0	3	0	0	0	3	1	2	7	9	10	17	13	19	11	25	41	3.5
All	All Sites Total	4593	0	173	106	114	143	158	141	141	186	213	305	363	370	418	463	469	830	100.0
Not C44	All Sites but C44	4425	0	173	105	113	140	157	141	139	182	207	294	353	354	400	445	443	779	96.3

Table 5.1.2 Number of Cancer Cases among Saudi Females by Primary Site and Age Groups, 2010

ICD (10th)	Site	All Ages	Age Unk	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	Total (%)
C00	Lip	5	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	2	0.1
C01-C02	Tongue	43	0	0	0	0	0	0	1	0	3	1	4	5	7	3	3	4	12	0.8
C03-C06	Mouth	48	0	0	0	0	0	3	2	2	4	1	2	8	4	4	5	3	9	0.9
C07-C08	Salivary Glands	15	0	0	0	2	3	0	0	0	4	0	0	0	0	1	1	1	0	0.3
C09	Tonsil	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
C10	Other Oropharynx	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0.0
C11	Nasopharynx	40	0	0	0	0	7	3	1	1	6	3	8	1	3	4	3	1	2	0.7
C12-C13	Hypopharynx	17	0	0	0	0	0	0	2	0	1	2	1	3	2	1	3	2	0	0.3
C14	Pharynx Unspecified	2	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0.0
C15	Oesophagus	50	0	0	0	0	0	0	0	1	2	0	2	5	6	4	7	3	13	0.9
C16	Stomach	126	0	0	0	0	0	1	2	3	8	2	13	16	17	10	4	16	34	2.3
C17	Small Intestine	13	0	0	0	0	0	0	1	0	1	0	0	3	0	1	2	1	4	0.2
C18	Colon	306	0	0	0	1	0	4	4	13	16	24	38	40	39	31	25	32	57	3.5
C19-C20	Rectum	186	0	0	0	0	0	1	5	12	6	14	27	33	20	24	9	15	20	3.5
C21	Anus	9	0	0	0	0	0	0	0	1	0	0	1	2	1	0	2	1	1	0.2
C22	Liver	154	0	2	1	0	2	1	2	3	1	2	8	18	19	21	18	25	31	2.9
C23-C24	Gallbladder etc.	89	0	0	0	0	0	0	0	1	2	7	5	13	13	18	6	8	16	1.7
C25	Pancreas	81	0	0	1	0	1	1	1	0	3	3	4	8	10	6	15	15	13	1.5
C30-C31	Nose, Sinuses etc.	4	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0.1
C32	Larynx	5	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	1	0.1
C33-C34	Trachea, Bronchus, Lung	105	0	0	0	1	1	2	1	3	5	4	9	8	11	11	26	12	12	2.0
C37-C38	Other Thoracic Organs	11	0	3	1	0	1	0	0	0	0	1	0	1	1	0	1	1	1	0.2
C40-C41	Bone	44	0	4	2	11	4	6	3	2	0	2	3	2	1	1	1	1	1	0.8
C43	Melanoma of Skin	12	0	0	0	1	3	0	0	0	1	0	0	0	0	1	4	1	1	0.2
C44	Other Skin	151	0	0	0	1	3	2	5	6	3	3	7	11	19	9	13	20	49	2.8
C45	Mesothelioma	4	0	0	0	0	0	0	0	0	0	0	1	0	0	0	3	0	0	0.1
C46	Kaposi Sarcoma	6	0	0	0	0	0	0	0	0	0	0	1	2	0	0	0	1	2	0.1
C47,C49	Connective, Soft Tissue	76	0	9	2	2	5	1	11	5	2	5	5	6	11	2	4	2	4	1.4
C50	Breast	1473	0	0	0	0	0	10	42	105	153	213	251	196	168	115	100	53	67	27.4
C51	Vulva	9	0	0	0	0	1	1	1	1	0	0	0	0	0	0	1	1	4	0.2
C52	Vagina	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
C53	Cervix Uteri	82	0	0	0	0	0	0	0	2	12	9	13	11	12	7	12	1	3	1.5
C54	Corpus Uteri	220	0	0	0	0	0	0	1	3	9	11	17	24	39	36	38	24	18	4.1
C55	Uterus Unspecified	29	0	0	0	0	0	1	0	1	3	1	0	1	3	9	4	3	3	0.5
C56	Ovary	175	0	0	1	4	8	4	6	10	7	16	19	23	16	19	16	10	16	3.3
C57	Other Female Genital	6	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	1	2	0.1
C58	Placenta	5	0	0	0	0	0	2	0	0	0	0	0	3	0	0	0	0	0	0.1
C64	Kidney	117	0	23	3	0	1	0	2	3	6	4	13	16	13	10	11	5	7	2.2
C65	Renal Pelvis	5	0	0	0	0	0	0	0	0	0	0	0	3	0	0	1	0	1	0.1
C66	Ureter	4	0	0	0	0	0	0	0	0	1	0	0	0	0	1	2	0	0	0.1
C67	Bladder	50	0	0	0	0	0	0	1	1	1	1	2	8	7	4	6	4	15	0.9
C68	Other Urinary Organs	2	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0.0
C69	Eye	24	0	15	2	2	0	0	0	0	1	1	0	1	0	0	0	1	2	0.4
C70-C72	Brain, Nervous System	105	0	15	11	7	4	2	7	10	7	7	2	9	7	6	7	3	1	2.0
C73	Thyroid	548	0	0	0	7	16	51	60	83	75	60	51	39	32	29	18	14	13	10.2
C74	Adrenal Gland	14	0	8	1	0	0	0	0	0	0	1	1	2	0	0	0	0	0	0.3
C75	Other Endocrine	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0.0
C81	Hodgkin Disease	142	0	2	4	9	36	21	27	10	4	7	2	3	6	2	2	3	4	2.6
C82-C85;C96	Non-Hodgkin Lymphoma	296	0	2	9	4	12	8	20	15	15	15	16	30	27	33	30	28	32	5.5
C88	Immunoproliferative Disease	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
C90	Multiple Myeloma	42	0	0	0	0	1	0	0	0	0	0	0	8	4	5	6	5	8	0.8
C91	Lymphoid Leukemia	113	0	35	20	4	9	4	3	4	3	4	3	3	2	3	4	2	10	2.1
C92-C94	Myeloid Leukemia	128	0	9	2	9	6	7	12	10	7	12	9	13	11	6	6	5	4	2.4
C95	Leukemia Unspecified	16	0	1	1	2	3	1	1	1	1	0	2	0	0	0	0	2	0	0.3
Other	Other & Unspecified	167	0	3	0	0	1	1	7	5	6	7	12	16	15	17	27	10	40	3.1
All	All Sites Total	5378	0	132	61	66	127	141	236	318	379	446	565	593	546	469	451	340	508	100.0
Not C44	All Sites but C44	5227	0	132	61	65	124	139	231	312	376	443	558	582	527	460	438	320	459	97.2

Table 5.1.3 Age-Specific Incidence Rate (AIR), Age-Standardized Incidence Rate (ASR) among Saudi Males (per 100,000) by Primary Site and Age Groups, 2010

ICD (10th)	Site	All Ages	Age Unk	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	Crude Rate	ASR World
C00	Lip	8	0	0.2	0	0	0	0	0	0.3	0	0	0	0	0.5	0	0	1	1.6	0.1	0.1
C01-C02	Tongue	53	0	0	0	0	0	0.4	0	0	0.2	0.8	1.1	2.4	1.4	3.1	6.3	8.3	8	0.6	1
C03-C06	Mouth	45	0	0	0	0	0	0.1	0	0	0.5	0.8	0.5	1.3	1.8	4.3	7.2	4.2	6.4	0.5	0.9
C07-C08	Salivary Glands	11	0	0	0	0	0	0	0.1	0	0.4	0.2	0.5	0.3	0	0.6	1.8	0	0.8	0.1	0.2
C09	Tonsil	2	0	0	0	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0.8	0	0
C10	Other Oropharynx	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.8	0	0
C11	Nasopharynx	131	0	0.1	0.1	0.3	0.5	0.7	0.7	1.1	2.3	3.4	4.5	4.4	5	7.4	6.3	5.2	4.8	1.4	2
C12-C13	Hypopharynx	9	0	0	0	0	0	0	0	0	0	0.2	0	0.3	0	1.2	0	3.1	1.6	0.1	0.2
C14	Pharynx Unspecified	3	0	0	0.1	0	0.1	0	0	0	0	0	0	0.3	0	0	0	0	0	0	0
C15	Oesophagus	73	0	0	0	0	0	0	0.1	0.3	0.2	0.4	0.5	1.3	2.3	4.9	9	13.5	20	0.8	1.4
C16	Stomach	165	0	0.1	0	0	0	0.3	0.5	0.4	1.2	0.6	3.9	4.4	6.9	10.5	18.8	26.1	30.3	1.7	3.1
C17	Small Intestine	27	0	0	0	0	0	0.1	0	0.1	0.2	0	0.8	0.3	2.8	2.5	0.9	2.1	5.6	0.3	0.5
C18	Colon	303	0	0.1	0	0.1	0.2	0.2	0.4	1	2.1	4.9	8.2	8.8	17	20.9	30.5	37.5	43.1	3.2	5.5
C19-C20	Rectum	238	0	0	0	0	0	0	0.6	0.6	2.6	2.5	5.8	8.8	13.8	16	27.8	28.1	31.9	2.5	4.4
C21	Anus	18	0	0	0	0	0	0	0.1	0.3	0	0	0.8	0.3	1.4	1.2	2.7	1	1.6	0.2	0.3
C22	Liver	329	0	0.5	0	0	0.1	0.1	0.1	0.1	0.5	1.3	3.2	9.1	12.8	24.6	44.9	52.1	82.2	3.5	6.4
C23-C24	Gallbladder etc.	51	0	0	0	0	0	0	0	0.1	0	1.1	0.5	1.7	3.2	2.5	5.4	3.1	14.4	0.5	0.9
C25	Pancreas	114	0	0	0	0	0	0.1	0	0.4	0.4	1.5	1.3	5.4	2.8	11.1	11.7	19.8	19.2	1.2	2.2
C30-C31	Nose, Sinuses etc.	9	0	0	0	0	0	0	0	0	0	0.2	0.5	0.7	0	1.2	0.9	0	0.8	0.1	0.2
C32	Larynx	48	0	0	0	0	0	0	0	0	0	0.4	0.8	2.7	3.7	3.7	4.5	9.4	5.6	0.5	0.9
C33-C34	Trachea, Bronchus, Lung	292	0	0	0	0	0	0.3	0	0.3	0.7	1.7	6.6	7.1	17.4	24.6	45.8	41.7	47.9	3.1	5.8
C37-C38	Other Thoracic Organs	25	0	0.2	0	0	0.1	0.2	0.2	0.3	0.4	0.2	0.3	1	0.5	0	0	3.1	3.2	0.3	0.3
C40-C41	Bone	74	0	0.1	0.3	1.3	1.8	1	1	0.3	0.7	0.4	0.3	0.3	0.9	1.2	0.9	0	1.6	0.8	0.7
C43	Melanoma of Skin	12	0	0	0	0	0	0	0.1	0	0	0	0	0	0	0.9	0.6	0	5.6	0.1	0.2
C44	Other Skin	168	0	0	0.1	0.1	0.3	0.1	0	0.3	0.7	1.3	2.9	3.4	7.3	11.1	16.1	27.1	40.7	1.8	3.1
C45	Mesothelioma	9	0	0	0	0	0	0	0	0	0	0.2	0.3	0.3	0.5	0	1.8	2.1	0.8	0.1	0.2
C46	Kaposi Sarcoma	21	0	0	0	0	0	0	0.1	0	0	0.2	0.8	0.3	2.3	1.8	0	3.1	3.2	0.2	0.4
C47; C49	Connective, Soft Tissue	69	0	1	0.2	0.1	0.3	0.6	1	0.9	1.4	0	1.3	1	0.9	0	0.9	3.1	7.2	0.7	0.8
C50	Breast	24	0	0	0	0	0	0	0.1	0	0.4	0.6	0.3	0.3	1.8	3.1	1.8	0	4	0.3	0.4
C60	Penis	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
C61	Prostate	280	0	0.1	0	0.1	0	0	0	0	0	0.4	1.3	3.4	9.2	11.7	43.1	65.7	88.6	2.9	5.5
C62	Testis	78	0	0.3	0	0.3	1	1.4	1.3	1.6	0.5	1.5	1.6	0.7	1.4	0	0	1	2.4	0.8	0.8
C63	Other Male Genital	2	0	0	0	0.1	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C64	Kidney	167	0	0.9	0.3	0	0	0.5	0.5	0.6	0.9	1.7	3.7	9.1	8.3	9.8	21.5	11.5	13.6	1.8	2.9
C65	Renal Pelvis	5	0	0	0	0.1	0	0	0	0	0.2	0	0	0	0	0	0	0.9	1	0.8	0.1
C66	Ureter	1	0	0	0	0	0	0	0	0.1	0	0	0	0	0	0	0	0	0	0	0
C67	Bladder	193	0	0	0	0.1	0.2	0.1	0.5	0.6	0.7	1.3	3.4	8.1	9.2	16	24.2	16.7	35.9	2	3.6
C68	Other Urinary Organs	3	0	0	0	0	0	0	0	0.1	0	0	0	0	0	1.2	0	1	0	0	0.1
C69	Eye	22	0	1	0	0.2	0	0	0	0.1	0	0	0	0	0	0	1	3.2	0	0.2	0.3
C70-C72	Brain, Nervous System	148	0	1.5	1.4	1.4	1	0.6	1.2	0.9	0.7	1.5	3.4	1.7	4.1	4.3	7.2	3.1	7.2	1.6	1.9
C73	Thyroid	149	0	0	0.1	0.1	0.3	1	0.8	2.4	2.6	2.1	4.5	5.7	4.6	8.6	12.6	5.2	6.4	1.6	2.3
C74	Adrenal Gland	29	0	1.7	0.2	0	0	0	0.1	0	0.2	0.2	0	0.3	0	0	0	1	0.8	0.3	0.3
C75	Other Endocrine	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C81	Hodgkin Disease	194	0	0.4	1.6	1.9	3.1	2.5	2.8	1.4	1.9	2.1	2.4	2.4	3.7	1.8	2.7	3.1	4	2	2.1
C82-C85; C96	Non-Hodgkin Lymphoma	407	0	1	1.2	1.1	1.7	2	2.7	3	5.1	6.3	7.4	10.1	8.7	18.5	29.6	33.4	45.5	4.3	6.2
C88	Immunoproliferative Disease	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C90	Multiple Myeloma	61	0	0	0	0	0.1	0	0	0.1	0.4	0.6	1.3	3.4	1.8	6.2	7.2	5.2	9.6	0.6	1.2
C91	Lymphoid Leukemia	187	0	3.5	2.6	1.5	1.8	1.3	0.6	0.4	1.2	1.3	1.1	0.7	2.8	3.1	4.5	5.2	12.8	2	2.1
C92-C94	Myeloid Leukemia	156	0	1	0.9	1.3	1	1.8	1.1	1.4	1.9	1.1	1.8	4.7	2.3	4.3	6.3	10.4	4	1.6	2
C95	Leukemia Unspecified	16	0	0.1	0.2	0.3	0	0.1	0.1	0.3	0.4	0	0.3	0	0	0.6	0	0	1.6	0.2	0.2
Other	Other & Unspecified	161	0	0.2	0	0	0	0.3	0.1	0.3	1.2	1.9	2.6	5.7	6	11.7	9.9	26.1	32.7	1.7	2.9
All	All Sites Total	4593	0	14	9	10	14	16	17	20	33	45	80	122	170	257	415	489	662	48.2	76.7
Not C44	All Sites but C44	4425	0	14	9	10	13	16	17	20	32	44	77	119	162	246	399	462	622	46.5	73.6



**Table 5.1.4 Age-Specific Incidence Rate (AIR), Age-Standardized Incidence Rate (ASR) among Saudi Females (per 100,000) by Primary Site and Age Groups, 2010**

ICD (10th)	Site	All Ages	Age Unk	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	Crude Rate	ASR World
C00	Lip	5	0	0	0	0	0	0	0	0	0	0	0	0	0.5	1.3	0	0	1.6	0.1	0.1
C01-C02	Tongue	43	0	0	0	0	0	0	0	0.1	0.5	0.2	1.1	1.8	3.5	1.9	2.6	4.9	9.8	0.5	0.8
C03-C06	Mouth	48	0	0	0	0.1	0.3	0.2	0.3	0.2	0.7	0.2	0.6	2.8	2	2.6	4.4	3.6	7.4	0.5	0.8
C07-C08	Salivary Glands	15	0	0	0.2	0.3	0	0	0.4	0	0.7	0	0	0	0	0.6	0.9	1.2	0	0.2	0.2
C09	Tonsil	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C10	Other Oropharynx	1	0	0	0	0	0	0	0	0	0.2	0	0	0	0	0	0	0	0	0	0
C11	Nasopharynx	40	0	0	0	0.7	0.3	0.1	0.1	0.1	1.1	0.7	2.3	0.4	1.1	2.6	2.6	1.2	1.6	0.4	0.6
C12-C13	Hypopharynx	17	0	0	0	0	0	0	0.2	0	0.2	0.4	0.3	1.1	1	0.6	2.6	2.4	0	0.2	0.3
C14	Pharynx Unspecified	2	0	0	0	0	0	0	0	0	0	0	0	0.4	0	0	0	0	0.8	0	0
C15	Oesophagus	50	0	0	0	0	0	0	0.1	0.3	0.3	0.4	1.4	2.1	2	4.5	2.6	8.5	10.6	0.5	1
C16	Stomach	126	0	0	0	0	0	0.1	0.2	0.4	1.4	0.4	3.7	5.7	8.4	6.4	3.5	19.5	27.8	1.4	2.3
C17	Small Intestine	13	0	0	0	0	0	0	0.1	0	0.2	0	0	1.1	0	0.6	1.8	1.2	3.3	0.1	0.2
C18	Colon	306	0	0	0.1	0.4	0.5	1.9	2.8	5.3	10.7	14.2	19.3	25	27.2	27.2	30.4	26.2	3.3	5.8	5.8
C19-C20	Rectum	186	0	0	0	0.1	0.6	1.8	1.1	3.1	7.6	11.7	9.9	15.4	7.9	18.2	16.4	2	3.4	2	3.4
C21	Anus	9	0	0	0	0	0	0	0	0.1	0	0.3	0.7	0.5	0	1.8	1.2	0.8	0.1	0.1	0.2
C22	Liver	154	0	0.2	0.1	0.2	0.1	0.2	0.4	0.2	0.4	2.3	6.4	9.4	13.5	15.8	30.4	25.4	1.7	3.1	1.8
C23-C24	Gallbladder etc.	89	0	0	0	0	0	0	0.1	0.4	1.6	1.4	4.6	6.4	11.5	5.3	9.7	13.1	1	1.8	1.8
C25	Pancreas	81	0	0.1	0.1	0.1	0.1	0.1	0.1	0	0.5	0.7	1.1	2.8	5	3.8	13.2	18.2	10.6	0.9	1.6
C30-C31	Nose, Sinuses etc.	4	0	0	0	0	0	0	0	0	0	0	0	0.4	0	0	0.9	0	1.6	0	0.1
C32	Larynx	5	0	0	0	0	0	0	0	0	0	0.3	0	0	1	0	0	1.2	0.8	0.1	0.1
C33-C34	Trachea, Bronchus, Lung	105	0	0	0	0.1	0.2	0.1	0.4	0.9	0.9	2.5	2.8	5.4	7.1	22.8	14.6	9.8	1.1	2.1	2.1
C37-C38	Other Thoracic Organs	11	0	0.3	0.1	0	0	0	0	0	0	0.2	0	0.4	0.5	0	0.9	1.2	0.8	0.1	0.2
C40-C41	Bone	44	0	0.3	0.2	1	0.4	0.6	0.4	0.3	0	0.4	0.8	0.7	0.5	0.6	0.9	1.2	0.8	0.5	0.5
C43	Melanoma of Skin	12	0	0	0	0.1	0.3	0	0	0.2	0	0	0	0	0	0.6	3.5	1.2	0.8	0.1	0.2
C44	Other Skin	151	0	0	0.1	0.3	0.2	0.6	0.9	0.5	0.7	2	3.9	9.4	5.8	11.4	24.3	40.1	1.6	2.8	2.8
C45	Mesothelioma	4	0	0	0	0	0	0	0	0	0	0.2	0	0	0	0	2.6	0	0	0	0.1
C46	Kaposi Sarcoma	6	0	0	0	0	0	0	0	0	0	0.3	0.7	0	0	0	0	1.2	1.6	0.1	0.1
C47,C49	Connective, Soft Tissue	76	0	0.8	0.2	0.2	0.5	0.1	1.4	0.7	0.4	1.1	1.4	2.1	5.4	1.3	3.5	2.4	3.3	0.8	1.1
C50	Breast	1473	0	0	0	0	0	0.1	5.2	15.4	27.2	47.2	70.9	69.4	83.2	73.7	87.8	64.4	54.8	16.1	24.9
C51	Vulva	9	0	0	0	0	0	0.1	0.1	0.1	0	0	0	0	0	0	0.9	1.2	3.3	0.1	0.1
C52	Vagina	2	0	0.1	0	0	0	0	0	0	0	0	0.3	0	0	0	0	0	0	0	0
C53	Cervix Uteri	82	0	0	0	0	0	0	0	0.3	2.1	2	3.7	3.9	5.9	4.5	10.5	1.2	2.5	0.9	1.5
C54	Corpus Uteri	220	0	0	0	0	0	0	0.1	0.4	1.6	2.4	4.8	8.5	19.3	23.1	33.4	29.2	14.7	2.4	4.6
C55	Uterus Unspecified	29	0	0	0	0	0	0.1	0.1	0.5	0.2	0	0.4	1.5	5.8	3.5	3.6	2.5	0.3	0.6	0.6
C56	Ovary	175	0	0	0.1	0.4	0.8	0.4	0.7	1.5	1.2	3.5	5.4	8.1	7.9	12.2	14	12.2	13.1	1.9	3
C57	Other Female Genital	6	0	0	0	0	0.1	0	0	0	0	0.2	0	0.4	0	0	0.9	2.4	0	0.1	0.1
C58	Placenta	5	0	0	0	0	0	0.2	0	0	0	0	0	1.1	0	0	0	0	0	0.1	0.1
C64	Kidney	117	0	1.9	0.3	0	0.1	0	0.2	0.4	1.1	0.9	3.7	5.7	6.4	6.4	9.7	6.1	5.7	1.3	2
C65	Renal Pelvis	5	0	0	0	0	0	0	0	0	0	0	0	1.1	0	0	0.9	0	0.8	0.1	0.1
C66	Ureter	4	0	0	0	0	0	0	0	0	0.2	0	0	0	0	0.6	1.8	0	0	0	0.1
C67	Bladder	50	0	0	0	0	0	0	0.1	0.1	0.2	0.2	0.6	2.8	3.5	2.6	5.3	4.9	12.3	0.5	1
C68	Other Urinary Organs	2	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0.6	0	0	0	0	0
C69	Eye	24	0	1.3	0.2	0.2	0	0	0	0	0.2	0	0.3	0	0	0	0	1.2	1.6	0.3	0.3
C70-C72	Brain, Nervous System	105	0	1.3	1	0.6	0.4	0.2	0.9	1.5	1.2	1.6	0.6	3.2	3.5	3.8	6.1	3.6	0.8	1.1	1.4
C73	Thyroid	548	0	0	0	0.6	1.6	5.5	7.4	12.1	13.3	13.3	14.4	13.8	15.8	18.6	15.8	17	10.6	6	7.5
C74	Adrenal Gland	14	0	0.7	0.1	0.1	0	0	0	0	0	0.2	0.3	0.7	0	0	0	0	0	0.2	0.2
C75	Other Endocrine	1	0	0	0	0	0	0	0	0	0.2	0	0	0	0	0	0	0	0	0	0
C81	Hodgkin Disease	142	0	0.2	0.4	0.8	3.6	2.3	3.4	1.5	0.7	1.6	0.6	1.1	3	1.3	1.8	3.6	3.3	1.5	1.6
C82-C85,C96	Non-Hodgkin Lymphoma	296	0	0.2	0.8	0.4	1.2	0.9	2.5	2.2	2.7	3.3	4.5	10.6	13.4	21.2	26.3	34	26.2	3.2	5.2
C88	Immunoproliferative Disease	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C90	Multiple Myeloma	42	0	0	0	0	0.1	0	0.1	0	0.2	0	2.3	1.4	2.5	3.8	4.4	9.7	2.5	0.5	0.9
C91	Lymphoid Leukemia	113	0	2.9	1.8	0.4	0.9	0.4	0.4	0.6	0.5	0.9	0.8	1.1	1	1.9	3.5	2.4	8.2	1.2	1.4
C92-C94	Myeloid Leukemia	128	0	0.8	0.2	0.8	0.6	0.8	1.5	1.5	1.2	2.7	2.5	4.6	5.4	3.8	5.3	6.1	3.3	1.4	1.8
C95	Leukemia Unspecified	16	0	0.1	0.1	0.2	0.3	0.1	0	0	0	0.6	0	0	0	0	1.8	0	1.6	0.2	0.2
Other	Other & Unspecified	167	0	0.3	0	0	0.1	0.1	0.9	0.7	1.1	1.6	3.4	5.7	7.4	10.9	23.7	12.2	32.7	1.8	3.1
All	All sites Total	5378	0	11	5	6	13	15	29	47	67	99	160	210	270	301	396	413	416	58.6	91.2
Not C44	All sites but C44	5227	0	11	5	6	12	15	29	46	67	98	158	206	261	295	384	389	375	57	88.4

**Table 5.2.1 Number of Cases, Relative Frequency, Crude Incidence Rate (CIR) Age-Standardized Incidence Rate (ASR) among Saudi Males (per 100,000) by Primary Site, Age Groups and Region, 2010**

ICD (10th)	Site	Asir			Baha			Jazan					
		All Ages	Total (%)	Crude Rate	ASR World	All Ages	Total (%)	Crude Rate	ASR World	All Ages	Total (%)	Crude Rate	ASR World
C00	Lip	1	0.3	0.1	0.2	1	1.2	0.6	0.5	0	0.0	0	0
C01-C02	Tongue	9	2.5	1.1	1.6	0	0.0	0	0	9	6.0	1.6	2.5
C03-C06	Mouth	4	1.1	0.5	0.7	1	1.2	0.6	1.1	8	5.3	1.4	2.2
C07-C08	Salivary Glands	1	0.3	0.1	0.1	0	0.0	0	0	0	0.0	0	0
C09	Tonsil	0	0.0	0	0	0	0.0	0	0	1	0.7	0.2	0.1
C10	Other Oropharynx	1	0.3	0.1	0.2	0	0.0	0	0	0	0.0	0	0
C11	Nasopharynx	11	3.1	1.4	1.9	1	1.2	0.6	1.1	5	3.3	0.9	1
C12-C13	Hypopharynx	0	0.0	0	0	0	0.0	0	0	1	0.7	0.2	0.2
C14	Pharynx Unspecified	1	0.3	0.1	0.1	0	0.0	0	0	0	0.0	0	0
C15	Oesophagus	1	0.3	0.1	0.1	1	1.2	0.6	0.8	3	2.0	0.5	0.7
C16	Stomach	16	4.5	2	2.7	3	3.7	1.8	2.8	6	4.0	1.1	1.8
C17	Small Intestine	2	0.6	0.3	0.5	0	0.0	0	0	0	0.0	0	0
C18	Colon	26	7.3	3.3	4.5	6	7.4	3.5	3.8	5	3.3	0.9	1.3
C19-C20	Rectum	17	4.8	2.2	2.9	1	1.2	0.6	0.6	3	2.0	0.5	0.8
C21	Anus	1	0.3	0.1	0.3	0	0.0	0	0	0	0.0	0	0
C22	Liver	34	9.6	4.3	6.1	4	4.9	2.4	2.7	9	6.0	1.6	2.7
C23-C24	Gallbladder etc.	2	0.6	0.3	0.4	0	0.0	0	0	3	2.0	0.5	0.8
C25	Pancreas	11	3.1	1.4	2.1	1	1.2	0.6	0.5	4	2.6	0.7	1.2
C30-C31	Nose, Sinuses etc.	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0
C32	Larynx	4	1.1	0.5	0.8	0	0.0	0	0	1	0.7	0.2	0.3
C33-C34	Trachea, Bronchus, Lung	12	3.4	1.5	2.3	2	2.5	1.2	1.6	6	4.0	1.1	1.5
C37-C38	Other Thoracic Organs	2	0.6	0.3	0.3	1	1.2	0.6	0.6	1	0.7	0.2	0.3
C40-C41	Bone	11	3.1	1.4	1.2	1	1.2	0.6	0.5	4	2.6	0.7	0.7
C43	Melanoma of Skin	1	0.3	0.1	0.1	0	0.0	0	0	0	0.0	0	0
C44	Other Skin	17	4.8	2.2	3	5	6.2	3	3	7	4.6	1.3	1.8
C45	Mesothelioma	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0
C46	Kaposi Sarcoma	3	0.8	0.4	0.5	4	4.9	2.4	3.3	1	0.7	0.2	0.3
C47-C49	Connective, Soft Tissue	10	2.8	1.3	1.4	1	1.2	0.6	0.5	1	0.7	0.2	0.2
C50	Breast	1	0.3	0.1	0.1	0	0.0	0	0	1	0.7	0.2	0.4
C60	Penis	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0
C61	Prostate	25	7.0	3.2	4	4	4.9	2.4	1.9	9	6.0	1.6	2.3
C62	Testis	6	1.7	0.8	0.7	0	0.0	0	0	1	0.7	0.2	0.2
C63	Other Male Genital	0	0.0	0	0	0	0.0	0	0	1	0.7	0.2	0.2
C64	Kidney	8	2.2	1	1.5	2	2.5	1.2	1.1	3	2.0	0.5	0.8
C65	Renal Pelvis	1	0.3	0.1	0.1	0	0.0	0	0	0	0.0	0	0
C66	Ureter	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0
C67	Bladder	16	4.5	2	3.1	10	12.3	5.9	6.9	7	4.6	1.3	2
C68	Other Urinary Organs	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0
C69	Eye	2	0.6	0.3	0.2	2	2.5	1.2	1.6	2	1.3	0.4	0.3
C70-C72	Brain, Nervous System	17	4.8	2.2	2.5	3	3.7	1.8	1.6	5	3.3	0.9	0.9
C73	Thyroid	13	3.7	1.6	2.4	0	0.0	0	0	4	2.6	0.7	0.8
C74	Adrenal Gland	1	0.3	0.1	0.1	1	1.2	0.6	0.6	1	0.7	0.2	0.2
C75	Other Endocrine	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0
C81	Hodgkin disease	7	2.0	0.9	0.8	4	4.9	2.4	2.9	4	2.6	0.7	0.9
C82-C85;C96	Non-Hodgkin Lymphoma	29	8.1	3.7	4.6	10	12.3	5.9	6.7	21	13.9	3.8	5
C88	Immunoproliferative Disease	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0
C90	Multiple Myeloma	5	1.4	0.6	0.9	1	1.2	0.6	0.9	2	1.3	0.4	0.6
C91	Lymphoid Leukemia	10	2.8	1.3	1.3	4	4.9	2.4	2.1	4	2.6	0.7	0.6
C92-C94	Myeloid Leukemia	6	1.7	0.8	0.8	2	2.5	1.2	1.3	3	2.0	0.5	0.6
C95	Leukemia Unspecified	1	0.3	0.1	0.1	0	0.0	0	0	1	0.7	0.2	0.2
Other	Other & Unspecified	10	2.8	1.3	1.6	5	6.2	3	3.6	4	2.6	0.7	1
All	All Sites Total	356	100.0	45.1	59.1	81	100.0	47.9	54.6	151	100.0	27	37.2
Not C44	All Sites but C44	339	95.2	42.9	56.2	76	93.8	44.9	51.5	144	95.4	25.7	35.4

**Table 5.2.2 Number of Cases, Relative Frequency, Crude Incidence Rate (CIR) Age-Standardized Incidence Rate (ASR) among Saudi Males (per 100,000) by Primary Site, Age Groups and Region, 2010**

ICD (10th)	Site	Madinah			Hail			Qassim					
		All Ages	Total (%)	Crude Rate	ASR World	All Ages	Total (%)	Crude Rate	ASR World	All Ages	Total (%)	Crude Rate	ASR World
C00	Lip	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0
C01-C02	Tongue	0	0.0	0	0	0	0.0	0	0	2	1.0	0.4	1
C03-C06	Mouth	1	0.4	0.2	0.2	1	1.2	0.4	0.7	0	0.0	0	0
C07-C08	Salivary Glands	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0
C09	Tonsil	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0
C10	Other Oropharynx	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0
C11	Nasopharynx	15	5.7	2.4	3	2	2.4	0.8	1	10	5.1	2.1	3.1
C12-C13	Hypopharynx	0	0.0	0	0	1	1.2	0.4	0.6	1	0.5	0.2	0.5
C14	Pharynx Unspecified	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0
C15	Oesophagus	7	2.7	1.1	1.8	2	2.4	0.8	1.1	5	2.6	1.1	1.7
C16	Stomach	6	2.3	0.9	1.8	3	3.6	1.2	1.7	10	5.1	2.1	3.6
C17	Small Intestine	4	1.5	0.6	1.1	0	0.0	0	0	1	0.5	0.2	0.5
C18	Colon	17	6.4	2.7	4.7	8	9.6	3.3	4.4	14	7.2	3	3.8
C19-C20	Rectum	18	6.8	2.8	4.9	4	4.8	1.7	2.2	15	7.7	3.2	5.2
C21	Anus	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0
C22	Liver	16	6.1	2.5	4.1	7	8.4	2.9	4	18	9.2	3.8	5.2
C23-C24	Gallbladder etc.	4	1.5	0.6	1.2	1	1.2	0.4	0.4	2	1.0	0.4	0.6
C25	Pancreas	4	1.5	0.6	0.8	1	1.2	0.4	0.4	3	1.5	0.6	1.1
C30-C31	Nose, Sinuses etc.	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0
C32	Larynx	0	0.0	0	0	1	1.2	0.4	0.5	1	0.5	0.2	0.3
C33-C34	Trachea, Bronchus, Lung	6	2.3	0.9	1.6	3	3.6	1.2	1.7	6	3.1	1.3	2.5
C37-C38	Other Thoracic Organs	2	0.8	0.3	0.5	1	1.2	0.4	0.5	0	0.0	0	0
C40-C41	Bone	3	1.1	0.5	0.4	4	4.8	1.7	1.4	2	1.0	0.4	0.7
C43	Melanoma of Skin	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0
C44	Other Skin	7	2.7	1.1	2	2	2.4	0.8	0.7	10	5.1	2.1	3.1
C45	Mesothelioma	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0
C46	Kaposi Sarcoma	1	0.4	0.2	0.2	0	0.0	0	0	0	0.0	0	0
C47-C49	Connective, Soft Tissue	7	2.7	1.1	1.3	2	2.4	0.8	1.2	0	0.0	0	0
C50	Breast	1	0.4	0.2	0.2	0	0.0	0	0	1	0.5	0.2	0.2
C60	Penis	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0
C61	Prostate	12	4.5	1.9	3.3	5	6.0	2.1	2.8	8	4.1	1.7	2.9
C62	Testis	1	0.4	0.2	0.2	4	4.8	1.7	1.9	1	0.5	0.2	0.2
C63	Other Male Genital	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0
C64	Kidney	4	1.5	0.6	0.9	4	4.8	1.7	2.1	7	3.6	1.5	2.7
C65	Renal Pelvis	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0
C66	Ureter	0	0.0	0	0	0	0.0	0	0	1	0.5	0.2	0.2
C67	Bladder	8	3.0	1.3	2.4	3	3.6	1.2	2	6	3.1	1.3	2.2
C68	Other Urinary Organs	0	0.0	0	0	0	0.0	0	0	1	0.5	0.2	0.5
C69	Eye	2	0.8	0.3	0.4	0	0.0	0	0	0	0.0	0	0
C70-C72	Brain, Nervous System	13	4.9	2	2.5	2	2.4	0.8	1.2	7	3.6	1.5	1.6
C73	Thyroid	11	4.2	1.7	2.3	3	3.6	1.2	1.4	6	3.1	1.3	1.6
C74	Adrenal Gland	4	1.5	0.6	0.6	2	2.4	0.8	0.7	1	0.5	0.2	0.2
C75	Other Endocrine	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0
C81	Hodgkin Disease	17	6.4	2.7	2.6	4	4.8	1.7	1.3	16	8.2	3.4	4.5
C82-C85;C96	Non-Hodgkin Lymphoma	31	11.7	4.9	6.7	6	7.2	2.5	2.8	20	10.3	4.3	6.7
C88	Immunoproliferative Disease	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0
C90	Multiple Myeloma	5	1.9	0.8	1.2	0	0.0	0	0	1	0.5	0.2	0.3
C91	Lymphoid Leukemia	12	4.5	1.9	1.8	1	1.2	0.4	0.3	5	2.6	1.1	1.4
C92-C94	Myeloid Leukemia	10	3.8	1.6	2.1	2	2.4	0.8	0.7	5	2.6	1.1	1.1
C95	Leukemia Unspecified	1	0.4	0.2	0.1	1	1.2	0.4	0.3	1	0.5	0.2	0.3
Other	Other & Unspecified	14	5.3	2.2	3.6	3	3.6	1.2	1.7	8	4.1	1.7	2.7
All	All Sites Total	264	100.0	41.6	60.3	83	100.0	34.3	41.8	195	100.0	41.5	61.8
Not C44	All Sites but C44	257	97.3	40.5	58.4	81	97.6	33.5	41	185	94.9	39.3	58.7

**Table 5.2.3 Number of Cases, Relative Frequency, Crude Incidence Rate (CIR) Age-Standardized Incidence Rate (ASR) among Saudi Males (per 100,000) by Primary Site, Age Groups and Region, 2010**

ICD (10th)	Site	Nairan				Jouf				Tabuk				Northern Region			
		All Ages	Total (%)	Crude Rate (%)	ASR World	All Ages	Total (%)	Crude Rate (%)	ASR World	All Ages	Total (%)	Crude Rate (%)	ASR World	All Ages	Total (%)	Crude Rate (%)	ASR World
C00	Lip	0	0.0	0	0	0	0.0	0	0	1	0.8	0.3	0.2	0	0.0	0	0
C01-C02	Tongue	2	3.2	1	2.1	0	0.0	0	0	0	0.0	0	0	2	3.7	1.5	3.2
C03-C06	Mouth	0	0.0	0	0	3	4.1	1.7	4.2	1	0.8	0.3	0.6	0	0.0	0	0
C07-C08	Salivary Glands	0	0.0	0	0	0	0.0	0	0	2	1.6	0.6	1.6	0	0.0	0	0
C09	Tonsil	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0
C10	Other Oropharynx	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0
C11	Nasopharynx	1	1.6	0.5	1.2	3	4.1	1.7	2.1	3	2.3	0.9	1.7	0	0.0	0	0
C12-C13	Hypopharynx	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0
C14	Pharynx Unspecified	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0
C15	Oesophagus	2	3.2	1	2.1	1	1.4	0.6	1	5	3.9	1.5	3.8	1	1.9	0.7	1.3
C16	Stomach	5	7.9	2.5	5.1	3	4.1	1.7	3.6	4	3.1	1.2	3.6	0	0.0	0	0
C17	Small Intestine	0	0.0	0	0	0	0.0	0	0	2	1.6	0.6	1.8	0	0.0	0	0
C18	Colon	2	3.2	1	2.3	4	5.4	2.3	4.8	7	5.5	2.1	5.7	2	3.7	1.5	2.8
C19-C20	Rectum	3	4.8	1.5	3.3	2	2.7	1.1	2.6	6	4.7	1.8	5.6	0	0.0	0	0
C21	Anus	0	0.0	0	0	0	0.0	0	0	1	0.8	0.3	0.2	0	0.0	0	0
C22	Liver	6	9.5	3	5.5	6	8.1	3.4	7.4	8	6.2	2.4	7.5	3	5.6	2.2	4.9
C23-C24	Gallbladder etc.	1	1.6	0.5	0.7	0	0.0	0	0	2	1.6	0.6	1.5	1	1.9	0.7	1.3
C25	Pancreas	0	0.0	0	0	0	0.0	0	0	2	1.6	0.6	1.8	3	5.6	2.2	4.9
C30-C31	Nose, Sinuses etc.	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0	1	1.9	0.7	1.5
C32	Larynx	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0	2	3.7	1.5	3.2
C33-C34	Trachea, Bronchus, Lung	0	0.0	0	0	2	2.7	1.1	1.8	17	13.3	5	16	4	7.4	3	7.7
C37-C38	Other Thoracic Organs	0	0.0	0	0	0	0.0	0	0	1	0.8	0.3	0.2	0	0.0	0	0
C40-C41	Bone	2	3.2	1	0.8	4	5.4	2.3	1.9	2	1.6	0.6	0.5	1	1.9	0.7	0.5
C43	Melanoma of Skin	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0
C44	Other Skin	3	4.8	1.5	2.7	2	2.7	1.1	2.6	5	3.9	1.5	4.5	3	5.6	2.2	3.1
C45	Mesothelioma	0	0.0	0	0	0	0.0	0	0	1	0.8	0.3	0.8	0	0.0	0	0
C46	Kaposi Sarcoma	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0
C47-C49	Connective, Soft Tissue	2	3.2	1	1.5	1	1.4	0.6	0.5	1	0.8	0.3	0.2	2	3.7	1.5	2.2
C50	Breast	2	3.2	1	1.4	1	1.4	0.6	1.5	2	1.6	0.6	1.9	0	0.0	0	0
C60	Penis	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0
C61	Prostate	3	4.8	1.5	3.5	4	5.4	2.3	4.6	5	3.9	1.5	4.6	3	5.6	2.2	4.2
C62	Testis	0	0.0	0	0	3	4.1	1.7	1.7	3	2.3	0.9	1.1	3	5.6	2.2	2.4
C63	Other Male Genital	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0
C64	Kidney	3	4.8	1.5	2.6	2	2.7	1.1	1.6	1	0.8	0.3	0.8	5	9.3	3.7	7.6
C65	Renal Pelvis	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0
C66	Ureter	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0
C67	Bladder	0	0.0	0	0	3	4.1	1.7	3.5	4	3.1	1.2	2.4	2	3.7	1.5	2.4
C68	Other Urinary Organs	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0
C69	Eye	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0	1	1.9	0.7	0.6
C70-C72	Brain, Nervous System	1	1.6	0.5	0.9	2	2.7	1.1	1	3	2.3	0.9	0.7	1	1.9	0.7	3
C73	Thyroid	1	1.6	0.5	0.4	3	4.1	1.7	1.8	2	1.6	0.6	0.6	1	1.9	0.7	0.9
C74	Adrenal Gland	2	3.2	1	0.8	1	1.4	0.6	0.5	1	0.8	0.3	0.2	0	0.0	0	0
C75	Other Endocrine	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0
C81	Hodgkin Disease	3	4.8	1.5	1.8	2	2.7	1.1	1	6	4.7	1.8	1.6	3	5.6	2.2	1.5
C82-C85; C96	Non-Hodgkin Lymphoma	7	11.1	3.5	6.4	10	13.5	5.6	7.8	12	9.4	3.5	8.5	1	1.9	0.7	1.3
C88	Immunoproliferative Disease	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0
C90	Multiple Myeloma	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0	1	1.9	0.7	1.2
C91	Lymphoid Leukemia	4	6.3	2	3.2	4	5.4	2.3	2.3	8	6.2	2.4	4.7	5	9.3	3.7	3.7
C92-C94	Myeloid Leukemia	4	6.3	2	2.6	3	4.1	1.7	3.3	2	1.6	0.6	0.9	3	5.6	2.2	1.8
C95	Leukemia Unspecified	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0
Other	Other & Unspecified	4	6.3	2	3.9	3	4.1	1.7	3.9	7	5.5	2.1	6.3	0	0.0	0	0
All	All Sites Total	63	100.0	31.1	54.9	74	100.0	41.7	69	128	100.0	37.7	92.3	54	100.0	40.1	67.3
Not C44	All Sites but C44	60	95.2	29.6	52.2	72	97.3	40.6	66.4	123	96.1	36.3	87.8	51	94.4	37.9	64.1

**Table 5.2.4 Number of Cases, Relative Frequency, Crude Incidence Rate (CIR) Age-Standardized Incidence Rate (ASR) among Saudi Males (per 100,000) by Primary Site, Age Groups and Region, 2010**

ICD (10th)	Site	Riyadh				Makkah				Eastern Province			
		All Ages	Total (%)	Crude Rate	ASR World	All Ages	Total (%)	Crude Rate	ASR World	All Ages	Total (%)	Crude Rate	ASR World
C00	Lip	2	0.2	0.1	0.1	2	0.2	0.1	0.1	1	0.1	0.1	0.1
C01-C02	Tongue	11	0.8	0.5	0.9	11	1.1	0.5	0.7	6	0.8	0.4	0.8
C03-C06	Mouth	10	0.8	0.5	0.9	5	0.5	0.2	0.4	11	1.4	0.7	1.8
C07-C08	Salivary Glands	1	0.1	0	0.1	5	0.5	0.2	0.4	2	0.3	0.1	0.4
C09	Tonsil	0	0.0	0	0	1	0.1	0	0.1	0	0.0	0	0
C10	Other Oropharynx	0	0.0	0	0	0	0.0	0	0	1	0.1	0.1	0.1
C11	Nasopharynx	44	3.3	2	3.2	20	2.0	1	1.3	16	2.0	1.1	2
C12-C13	Hypopharynx	3	0.2	0.1	0.3	2	0.2	0.1	0.2	1	0.1	0.1	0.1
C14	Pharynx Unspecified	1	0.1	0	0	1	0.1	0	0.1	0	0.0	0	0
C15	Oesophagus	14	1.1	0.6	1.5	19	1.9	0.9	1.6	11	1.4	0.7	1.6
C16	Stomach	55	4.2	2.5	4.9	32	3.2	1.5	2.4	21	2.7	1.4	3.2
C17	Small Intestine	7	0.5	0.3	0.6	8	0.8	0.4	0.6	3	0.4	0.2	0.3
C18	Colon	89	6.7	4	7.7	79	7.8	3.8	6.3	43	5.4	2.9	7.1
C19-C20	Rectum	91	6.9	4.1	7.9	42	4.2	2	3.1	34	4.3	2.3	6.3
C21	Anus	4	0.3	0.2	0.3	9	0.9	0.4	0.6	3	0.4	0.2	0.8
C22	Liver	97	7.3	4.4	10.5	79	7.8	3.8	6.2	40	5.1	2.7	5.9
C23-C24	Gallbladder etc.	8	0.6	0.4	0.6	18	1.8	0.9	1.4	9	1.1	0.6	1.7
C25	Pancreas	31	2.3	1.4	3.2	26	2.6	1.2	2.1	25	3.2	1.7	3.6
C30-C31	Nose, Sinuses etc.	4	0.3	0.2	0.3	4	0.4	0.2	0.3	0	0.0	0	0
C32	Larynx	10	0.8	0.5	0.9	23	2.3	1.1	1.8	6	0.8	0.4	1
C33-C34	Trachea, Bronchus, Lung	79	6.0	3.6	7.8	79	7.8	3.8	6.6	76	9.6	5.1	12.5
C37-C38	Other Thoracic Organs	7	0.5	0.3	0.4	7	0.7	0.3	0.5	3	0.4	0.2	0.3
C40-C41	Bone	18	1.4	0.8	0.8	10	1.0	0.5	0.5	12	1.5	0.8	0.9
C43	Melanoma of Skin	4	0.3	0.2	0.4	4	0.4	0.2	0.3	2	0.3	0.1	0.2
C44	Other Skin	48	3.6	2.2	4.6	34	3.4	1.6	2.7	24	3.0	1.6	4.2
C45	Mesothelioma	1	0.1	0	0.1	2	0.2	0.1	0.2	5	0.6	0.3	0.9
C46	Kaposi Sarcoma	5	0.4	0.2	0.4	4	0.4	0.2	0.3	3	0.4	0.2	0.4
C47-C49	Connective, Soft Tissue	13	1.0	0.6	0.6	9	0.9	0.4	0.4	19	2.4	1.3	1.4
C50	Breast	3	0.2	0.1	0.3	3	0.3	0.1	0.2	9	1.1	0.6	1.4
C60	Penis	0	0.0	0	0	1	0.1	0	0.1	0	0.0	0	0
C61	Prostate	85	6.4	3.8	9.5	51	5.1	2.4	4	66	8.4	4.4	12.6
C62	Testis	27	2.0	1.2	1.3	13	1.3	0.6	0.6	16	2.0	1.1	1.2
C63	Other Male Genital	1	0.1	0	0	0	0.0	0	0	0	0.0	0	0
C64	Kidney	57	4.3	2.6	5.1	43	4.3	2.1	3.1	28	3.5	1.9	4.5
C65	Renal Pelvis	2	0.2	0.1	0.1	2	0.2	0.1	0.1	0	0.0	0	0
C66	Ureter	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0
C67	Bladder	47	3.5	2.1	4.5	45	4.5	2.2	3.4	42	5.3	2.8	5.9
C68	Other Urinary Organs	1	0.1	0	0.1	0	0.0	0	0	1	0.1	0.1	0.2
C69	Eye	5	0.4	0.2	0.2	5	0.5	0.2	0.4	3	0.4	0.2	0.2
C70-C72	Brain, Nervous System	42	3.2	1.9	2.8	33	3.3	1.6	1.7	18	2.3	1.2	2
C73	Thyroid	52	3.9	2.3	3.8	30	3.0	1.4	2.1	21	2.7	1.4	2.6
C74	Adrenal Gland	7	0.5	0.3	0.4	4	0.4	0.2	0.2	4	0.5	0.3	0.3
C75	Other Endocrine	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0
C81	Hodgkin Disease	70	5.3	3.2	3.2	28	2.8	1.3	1.5	29	3.7	1.9	1.9
C82-C85;C96	Non-Hodgkin Lymphoma	106	8.0	4.8	7.7	94	9.3	4.5	6.3	59	7.5	3.9	6.1
C88	Immunoproliferative Disease	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0
C90	Multiple Myeloma	19	1.4	0.9	1.8	17	1.7	0.8	1.4	9	1.1	0.6	1.6
C91	Lymphoid Leukemia	60	4.5	2.7	3	35	3.5	1.7	1.7	35	4.4	2.3	3
C92-C94	Myeloid Leukemia	47	3.5	2.1	2.5	32	3.2	1.5	1.9	34	4.3	2.3	3.6
C95	Leukemia Unspecified	2	0.2	0.1	0.1	8	0.8	0.4	0.4	1	0.1	0.1	0.1
Other	Other & Unspecified	35	2.6	1.6	3.2	30	3.0	1.4	2.2	38	4.8	2.5	5.3
All	All Sites Total	1325	100.0	59.7	108.4	1009	100.0	48.4	72.4	790	100.0	52.7	109.9
Not C44	All Sites but C44	1277	96.4	57.5	103.8	975	96.6	46.8	69.7	766	97.0	51.1	105.8

**Table 5.3.1 Number of Cases, Relative Frequency, Crude Incidence Rate (CIR) Age-Standardized Incidence Rate (ASR) among Saudi Females (per 100,000) by Primary Site, Age Groups and Region, 2010**

ICD (10th)	Site	Asir			Baha			Jazan					
		All Ages	Total (%)	Crude Rate	ASR World	All Ages	Total (%)	Crude Rate	ASR World	All Ages	Total (%)	Crude Rate	ASR World
C00	Lip	0	0.0	0	0	0	0.0	0	0	2	1.0	0.4	0.7
C01-C02	Tongue	2	0.5	0.2	0.4	0	0.0	0	0	17	8.9	3.1	5.8
C03-C06	Mouth	3	0.8	0.4	0.6	0	0.0	0	0	14	7.3	2.6	3.9
C07-C08	Salivary Glands	3	0.8	0.4	0.5	1	1.1	0.6	0.4	0	0.0	0	0
C09	Tonsil	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0
C10	Other Oropharynx	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0
C11	Nasopharynx	7	1.8	0.9	1.1	0	0.0	0	0	1	0.5	0.2	0.2
C12-C13	Hypopharynx	2	0.5	0.2	0.4	0	0.0	0	0	4	2.1	0.7	0.9
C14	Pharynx Unspecified	0	0.0	0	0	0	0.0	0	0	1	0.5	0.2	0.3
C15	Oesophagus	4	1.0	0.5	0.7	1	1.1	0.6	0.4	7	3.7	1.3	2
C16	Stomach	10	2.6	1.2	1.9	4	4.3	2.2	2.5	3	1.6	0.6	0.7
C17	Small Intestine	2	0.5	0.2	0.5	1	1.1	0.6	0.6	1	0.5	0.2	0.3
C18	Colon	19	4.9	2.4	3.9	8	8.7	4.5	6	10	5.2	1.8	3.2
C19-C20	Rectum	16	4.2	2	3.2	0	0.0	0	0	4	2.1	0.7	1.9
C21	Anus	1	0.3	0.1	0.1	0	0.0	0	0	0	0.0	0	0
C22	Liver	13	3.4	1.6	2.7	0	0.0	0	0	5	2.6	0.9	2
C23-C24	Gallbladder etc.	12	3.1	1.5	2.2	5	5.4	2.8	3.5	1	0.5	0.2	0.3
C25	Pancreas	10	2.6	1.2	1.8	1	1.1	0.6	1	0	0.0	0	0
C30-C31	Nose, Sinuses etc.	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0
C32	Larynx	0	0.0	0	0	1	1.1	0.6	0.9	0	0.0	0	0
C33-C34	Trachea, Bronchus, Lung	5	1.3	0.6	0.7	0	0.0	0	0	3	1.6	0.6	0.9
C37-C38	Other Thoracic Organs	2	0.5	0.2	0.3	0	0.0	0	0	0	0.0	0	0
C40-C41	Bone	6	1.6	0.7	1	0	0.0	0	0	0	0.0	0	0
C43	Melanoma of Skin	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0
C44	Other Skin	12	3.1	1.5	1.5	4	4.3	2.2	2.6	16	8.4	2.9	5.8
C45	Mesothelioma	0	0.0	0	0	1	1.1	0.6	1	0	0.0	0	0
C46	Kaposi Sarcoma	1	0.3	0.1	0.2	0	0.0	0	0	0	0.0	0	0
C47,C49	Connective, Soft Tissue	2	0.5	0.2	0.3	0	0.0	0	0	0	0.0	0	0
C50	Breast	69	17.9	8.6	12.2	23	25.0	12.8	17.5	36	18.8	6.6	10.6
C51	Vulva	1	0.3	0.1	0.1	0	0.0	0	0	0	0.0	0	0
C52	Vagina	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0
C53	Cervix Uteri	7	1.8	0.9	1.5	0	0.0	0	0	3	1.6	0.6	0.7
C54	Corpus Uteri	23	6.0	2.9	5	9	9.8	5	7.5	2	1.0	0.4	0.7
C55	Uterus Unspecified	2	0.5	0.2	0.5	1	1.1	0.6	1	2	1.0	0.4	0.6
C56	Ovary	18	4.7	2.2	3.1	4	4.3	2.2	2.7	14	7.3	2.6	3.5
C57	Other Female Genital	0	0.0	0	0	0	0.0	0	0	1	0.5	0.2	0.3
C58	Placenta	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0
C64	Kidney	11	2.9	1.4	2.1	2	2.2	1.1	1.1	3	1.6	0.6	0.7
C65	Renal Pelvis	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0
C66	Ureter	1	0.3	0.1	0.1	0	0.0	0	0	0	0.0	0	0
C67	Bladder	3	0.8	0.4	0.7	1	1.1	0.6	0.4	5	2.6	0.9	2.4
C68	Other Urinary Organs	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0
C69	Eye	2	0.5	0.2	0.3	0	0.0	0	0	1	0.5	0.2	0.2
C70-C72	Brain, Nervous System	10	2.6	1.2	1.6	2	2.2	1.1	1.5	3	1.6	0.6	0.7
C73	Thyroid	28	7.3	3.5	4.2	9	9.8	5	6.1	7	3.7	1.3	1.5
C74	Adrenal Gland	1	0.3	0.1	0.1	0	0.0	0	0	0	0.0	0	0
C75	Other Endocrine	1	0.3	0.1	0.1	0	0.0	0	0	0	0.0	0	0
C81	Hodgkin Disease	6	1.6	0.7	1	1	1.1	0.6	0.4	4	2.1	0.7	0.7
C82-C85;C96	Non-Hodgkin Lymphoma	29	7.5	3.6	5	5	5.4	2.8	3	10	5.2	1.8	2.3
C88	Immunoproliferative Disease	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0
C90	Multiple Myeloma	3	0.8	0.4	0.7	0	0.0	0	0	3	1.6	0.6	0.9
C91	Lymphoid Leukemia	11	2.9	1.4	1.2	0	0.0	0	0	1	0.5	0.2	0.1
C92-C94	Myeloid Leukemia	11	2.9	1.4	1.8	3	3.3	1.7	2.1	3	1.6	0.6	0.9
C95	Leukemia Unspecified	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0
Other	Other & Unspecified	16	4.2	2	3.5	5	5.4	2.8	2.5	4	2.1	0.7	0.8
All	All Sites Total	385	100.0	48.1	69.1	92	100.0	51.3	64.9	191	100.0	35.1	56.2
Not C44	All Sites but C44	373	96.9	46.6	67.6	88	95.7	49.1	62.3	175	91.6	32.1	50.5



**Table 5.3.2 Number of Cases, Relative Frequency, Crude Incidence Rate (CIR) Age-Standardized Incidence Rate (ASR) among Saudi Females (per 100,000) by Primary Site, Age Groups and Region, 2010**

ICD (10th)	Site	Madinah			Hail			Qassim					
		All Ages	Total (%)	Crude Rate	ASR World	All Ages	Total (%)	Crude Rate	ASR World	All Ages	Total (%)	Crude Rate	ASR World
C00	Lip	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0
C01-C02	Tongue	2	0.6	0.3	0.6	0	0.0	0	0	0	0.0	0	0
C03-C06	Mouth	2	0.6	0.3	0.3	0	0.0	0	0	3	1.0	0.7	1.4
C07-C08	Salivary Glands	1	0.3	0.2	0.1	0	0.0	0	0	0	0.0	0	0
C09	Tonsil	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0
C10	Other Oropharynx	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0
C11	Nasopharynx	4	1.2	0.6	0.8	0	0.0	0	0	2	0.7	0.4	0.3
C12-C13	Hypopharynx	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0
C14	Pharynx Unspecified	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0
C15	Oesophagus	5	1.5	0.8	1.3	1	1.0	0.4	0.6	4	1.3	0.9	2
C16	Stomach	8	2.4	1.3	2.2	1	1.0	0.4	0.7	6	2.0	1.3	2.7
C17	Small Intestine	0	0.0	0	0	0	0.0	0	0	2	0.7	0.4	1.1
C18	Colon	17	5.2	2.7	4.2	5	4.9	2	2.9	18	6.0	3.9	6.1
C19-C20	Rectum	12	3.6	1.9	3	4	3.9	1.6	2.4	13	4.3	2.8	5
C21	Anus	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0
C22	Liver	6	1.8	1	1.8	5	4.9	2	3.2	6	2.0	1.3	2.5
C23-C24	Gallbladder etc.	5	1.5	0.8	1.6	4	3.9	1.6	2.6	5	1.7	1.1	2.1
C25	Pancreas	6	1.8	1	1.8	2	1.9	0.8	1.2	1	0.3	0.2	0.4
C30-C31	Nose, Sinuses etc.	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0
C32	Larynx	0	0.0	0	0	1	1.0	0.4	0.6	1	0.3	0.2	0.4
C33-C34	Trachea, Bronchus, Lung	8	2.4	1.3	2.3	1	1.0	0.4	0.6	6	2.0	1.3	2.4
C37-C38	Other Thoracic Organs	1	0.3	0.2	0.3	0	0.0	0	0	1	0.3	0.2	0.5
C40-C41	Bone	2	0.6	0.3	0.2	1	1.0	0.4	0.3	0	0.0	0	0
C43	Melanoma of Skin	1	0.3	0.2	0.3	1	1.0	0.4	0.6	0	0.0	0	0
C44	Other Skin	10	3.0	1.6	2.8	0	0.0	0	0	9	3.0	2	3.6
C45	Mesothelioma	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0
C46	Kaposi Sarcoma	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0
C47-C49	Connective, Soft Tissue	8	2.4	1.3	1.5	1	1.0	0.4	0.6	5	1.7	1.1	1.2
C50	Breast	85	25.8	13.6	21.3	26	25.2	10.6	14	103	34.2	22.5	32.8
C51	Vulva	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0
C52	Vagina	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0
C53	Cervix Uteri	7	2.1	1.1	1.8	2	1.9	0.8	1.1	3	1.0	0.7	1.1
C54	Corpus Uteri	13	3.9	2.1	3.7	5	4.9	2	3.2	10	3.3	2.2	3.8
C55	Uterus Unspecified	2	0.6	0.3	0.6	2	1.9	0.8	1	1	0.3	0.2	0.4
C56	Ovary	13	3.9	2.1	3	4	3.9	1.6	2.1	7	2.3	1.5	2.2
C57	Other Female Genital	0	0.0	0	0	1	1.0	0.4	0.3	0	0.0	0	0
C58	Placenta	2	0.6	0.3	0.3	0	0.0	0	0	0	0.0	0	0
C64	Kidney	7	2.1	1.1	1.6	5	4.9	2	2.7	9	3.0	2	2.9
C65	Renal Pelvis	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0
C66	Ureter	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0
C67	Bladder	2	0.6	0.3	0.5	0	0.0	0	0	1	0.3	0.2	0.4
C68	Other Urinary Organs	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0
C69	Eye	1	0.3	0.2	0.1	1	1.0	0.4	0.4	2	0.7	0.4	0.4
C70-C72	Brain, Nervous System	7	2.1	1.1	1.7	2	1.9	0.8	1	8	2.7	1.7	2.6
C73	Thyroid	33	10.0	5.3	6.3	12	11.7	4.9	5.4	32	10.6	7	8.5
C74	Adrenal Gland	0	0.0	0	0	0	0.0	0	0	1	0.3	0.2	0.2
C75	Other Endocrine	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0
C81	Hodgkin Disease	13	3.9	2.1	2.4	2	1.9	0.8	1	9	3.0	2	2.1
C82-C85;C96	Non-Hodgkin Lymphoma	14	4.2	2.2	3.3	6	5.8	2.5	3.1	15	5.0	3.3	5.5
C88	Immunoproliferative Disease	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0
C90	Multiple Myeloma	1	0.3	0.2	0.2	2	1.9	0.8	1.3	0	0.0	0	0
C91	Lymphoid Leukemia	6	1.8	1	0.9	1	1.0	0.4	0.3	1	0.3	0.2	0.5
C92-C94	Myeloid Leukemia	9	2.7	1.4	1.4	2	1.9	0.8	0.9	7	2.3	1.5	1.5
C95	Leukemia Unspecified	3	0.9	0.5	0.6	0	0.0	0	0	2	0.7	0.4	0.5
Other	Other & Unspecified	14	4.2	2.2	3.8	3	2.9	1.2	1.7	8	2.7	1.7	3.4
All	All Sites Total	330	100.0	52.6	79	103	100.0	42.1	56.1	301	100.0	65.8	100.4
Not C44	All Sites but C44	320	97.0	51	76.2	103	100.0	42.1	56.1	292	97.0	63.8	96.8

**Table 5.3.3 Number of Cases, Relative Frequency, Crude Incidence Rate (CIR) Age-Standardized Incidence Rate (ASR) among Saudi Females (per 100,000) by Primary Site, Age Groups and Region, 2010**

ICD (10th)	Site	Nairan				Jouf				Tabuk				Northern Region			
		All Ages	Total (%)	Crude Rate	ASR World	All Ages	Total (%)	Crude Rate	ASR World	All Ages	Total (%)	Crude Rate	ASR World	All Ages	Total (%)	Crude Rate	ASR World
C00	Lip	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0
C01-C02	Tongue	0	0.0	0	0	0	0.0	0	0	2	1.5	0.6	0.9	1	1.9	0.7	3
C03-C06	Mouth	0	0.0	0	0	0	0.0	0	0	0	0.7	0.3	0.3	0	0.0	0	0
C07-C08	Salivary Glands	0	0.0	0	0	0	0.0	0	0	1	0.7	0.3	0.3	0	0.0	0	0
C09	Tonsil	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0
C10	Other Oropharynx	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0
C11	Nasopharynx	0	0.0	0	0	0	0.0	0	0	1	0.7	0.3	0.5	1	1.9	0.7	1.4
C12-C13	Hypopharynx	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0
C14	Pharynx Unspecified	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0
C15	Oesophagus	1	1.4	0.5	1.3	0	0.0	0	0	4	2.9	1.2	3	0	0.0	0	0
C16	Stomach	6	8.1	3	5.3	5	5.5	2.9	5.8	0	0.0	0	0	1	1.9	0.7	1.2
C17	Small Intestine	0	0.0	0	0	0	0.0	0	0	1	0.7	0.3	1.3	0	0.0	0	0
C18	Colon	6	8.1	3	5.5	1	1.1	0.6	1	7	5.1	2.2	5.9	1	1.9	0.7	2
C19-C20	Rectum	0	0.0	0	0	3	3.3	1.7	3	7	5.1	2.2	4.3	2	3.8	1.5	4.6
C21	Anus	0	0.0	0	0	0	0.0	0	0	2	1.5	0.6	1.2	0	0.0	0	0
C22	Liver	2	2.7	1	2.1	0	0.0	0	0	10	7.3	3.1	6.9	1	1.9	0.7	1.2
C23-C24	Gallbladder etc.	1	1.4	0.5	0.7	0	0.0	0	0	2	1.5	0.6	1.5	1	1.9	0.7	1.6
C25	Pancreas	0	0.0	0	0	2	2.2	1.2	1.6	3	2.2	0.9	2.6	1	1.9	0.7	3
C30-C31	Nose, Sinuses etc.	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0
C32	Larynx	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0
C33-C34	Trachea, Bronchus, Lung	0	0.0	0	0	2	2.2	1.2	3.6	1	0.7	0.3	0.8	3	5.7	2.2	3.5
C37-C38	Other Thoracic Organs	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0
C40-C41	Bone	1	1.4	0.5	0.4	0	0.0	0	0	1	0.7	0.3	0.2	0	0.0	0	0
C43	Melanoma of Skin	0	0.0	0	0	0	0.0	0	0	1	0.7	0.3	0.3	1	1.9	0.7	0.6
C44	Other Skin	2	2.7	1	2.5	1	1.1	0.6	1.3	5	3.6	1.6	4.1	2	3.8	1.5	3.6
C45	Mesothelioma	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0
C46	Kaposi Sarcoma	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0
C47-C49	Connective, Soft Tissue	2	2.7	1	0.8	2	2.2	1.2	2.4	1	0.7	0.3	0.8	1	1.9	0.7	3
C50	Breast	13	17.6	6.5	11.6	19	20.9	11.1	19.8	24	17.5	7.5	16.4	15	28.3	11.2	17.9
C51	Vulva	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0
C52	Vagina	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0
C53	Cervix Uteri	2	2.7	1	2.7	0	0.0	0	0	7	5.1	2.2	5.4	1	1.9	0.7	3
C54	Corpus Uteri	4	5.4	2	5.1	3	3.3	1.7	2.9	4	2.9	1.2	3.2	2	3.8	1.5	2.4
C55	Uterus Unspecified	0	0.0	0	0	1	1.1	0.6	1.2	0	0.0	0	0	0	0.0	0	0
C56	Ovary	6	8.1	3	8.1	3	3.3	1.7	2.2	4	2.9	1.2	3	0	0.0	0	0
C57	Other Female Genital	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0
C58	Placenta	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0
C64	Kidney	2	2.7	1	2.1	2	2.2	1.2	3.3	1	0.7	0.3	0.8	3	5.7	2.2	2.6
C65	Renal Pelvis	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0
C66	Ureter	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0
C67	Bladder	1	1.4	0.5	1.8	3	3.3	1.7	3.7	4	2.9	1.2	2.9	2	3.8	1.5	2.9
C68	Other Urinary Organs	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0
C69	Eye	0	0.0	0	0	1	1.1	0.6	0.5	0	0.0	0	0	0	0.0	0	0
C70-C72	Brain, Nervous System	0	0.0	0	0	5	5.5	2.9	2.5	0	0.0	0	0	0	0.0	0	0
C73	Thyroid	10	13.5	5	9.2	19	20.9	11.1	15	12	8.8	3.7	6.7	4	7.5	3	6.9
C74	Adrenal Gland	0	0.0	0	0	0	0.0	0	0	2	1.5	0.6	0.5	1	1.9	0.7	0.6
C75	Other Endocrine	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0
C81	Hodgkin Disease	2	2.7	1	0.8	2	2.2	1.2	0.9	7	5.1	2.2	1.7	1	1.9	0.7	1.1
C82-C85:C96	Non-Hodgkin Lymphoma	5	6.8	2.5	4	3	3.3	1.7	3.4	7	5.1	2.2	6.4	1	1.9	0.7	1.1
C88	Immunoproliferative Disease	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0
C90	Multiple Myeloma	1	1.4	0.5	1.8	2	2.2	1.2	2.5	1	0.7	0.3	0.7	0	0.0	0	0
C91	Lymphoid Leukemia	0	0.0	0	0	3	3.3	1.7	1.3	4	2.9	1.2	1.4	2	3.8	1.5	1.6
C92-C94	Myeloid Leukemia	2	2.7	1	0.8	4	4.4	2.3	3.3	4	2.9	1.2	1.7	1	1.9	0.7	0.6
C95	Leukemia Unspecified	1	1.4	0.5	0.4	2	2.2	1.2	2.1	0	0.0	0	0	0	0.0	0	0
Other	Other & Unspecified	4	5.4	2	3.7	3	3.3	1.7	2.3	6	4.4	1.9	5.3	3	5.7	2.2	3.9
All	All Sites Total	74	100.0	37.1	70.6	91	100.0	53	85.5	137	100.0	42.6	90.9	53	100.0	39.7	75.4
Not C44	All Sites but C44	72	97.3	36.1	68.1	90	98.9	52.4	84.2	132	96.4	41.1	86.8	51	96.2	38.2	71.9



**Table 5.3.4 Number of Cases, Relative Frequency, Crude Incidence Rate (CIR) Age-Standardized Incidence Rate (ASR) among Saudi Females (per 100,000) by Primary Site, Age Groups and Region, 2010**

ICD (10th)	Site	Riyadh			Makkah			Eastern Province					
		All Ages	Total (%)	Crude Rate	ASR World	All Ages	Total (%)	Crude Rate	ASR World	All Ages	Total (%)	Crude Rate	ASR World
C00	Lip	1	0.1	0	0.1	2	0.2	0.1	0.2	0	0.0	0	0
C01-C02	Tongue	8	0.5	0.4	0.8	5	0.4	0.2	0.4	6	0.6	0.4	0.7
C03-C06	Mouth	8	0.5	0.4	0.8	8	0.7	0.4	0.5	9	0.9	0.6	0.9
C07-C08	Salivary Glands	4	0.3	0.2	0.3	0	0.0	0	0	5	0.5	0.4	0.4
C09	Tonsil	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0
C10	Other Oropharynx	1	0.1	0	0	0	0.0	0	0	0	0.0	0	0
C11	Nasopharynx	17	1.2	0.8	1.5	6	0.5	0.3	0.4	1	0.1	0.1	0.1
C12-C13	Hypopharynx	9	0.6	0.4	0.9	1	0.1	0	0.1	1	0.1	0.1	0.2
C14	Pharynx Unspecified	1	0.1	0	0.1	0	0.0	0	0	0	0.0	0	0
C15	Oesophagus	10	0.7	0.5	0.8	8	0.7	0.4	0.6	5	0.5	0.4	0.9
C16	Stomach	38	2.6	1.8	3.4	23	2.0	1.1	1.6	21	2.1	1.5	3.1
C17	Small Intestine	5	0.3	0.2	0.4	1	0.1	0	0.1	0	0.0	0	0
C18	Colon	90	6.1	4.3	8.8	73	6.4	3.6	5.6	51	5.1	3.7	7.1
C19-C20	Rectum	51	3.5	2.5	4.5	47	4.2	2.3	3.6	27	2.7	1.9	3.4
C21	Anus	1	0.1	0	0.1	4	0.4	0.2	0.3	1	0.1	0.1	0.2
C22	Liver	56	3.8	2.7	6	28	2.5	1.4	2.3	20	2.0	1.4	3
C23-C24	Gallbladder etc.	25	1.7	1.2	2.6	20	1.8	1	1.6	8	0.8	0.6	1.1
C25	Pancreas	26	1.8	1.3	2.6	15	1.3	0.7	1.3	14	1.4	1	2.4
C30-C31	Nose, Sinuses etc.	1	0.1	0	0.1	2	0.2	0.1	0.2	1	0.1	0.1	0.1
C32	Larynx	0	0.0	0	0	1	0.1	0	0.1	1	0.1	0.1	0.1
C33-C34	Trachea, Bronchus, Lung	22	1.5	1.1	2.2	30	2.7	1.5	2.7	24	2.4	1.7	3.4
C37-C38	Other Thoracic Organs	3	0.2	0.1	0.3	3	0.3	0.1	0.1	1	0.1	0.1	0.1
C40-C41	Bone	11	0.7	0.5	0.7	11	1.0	0.5	0.5	10	1.0	0.7	0.8
C43	Melanoma of Skin	5	0.3	0.2	0.4	1	0.1	0	0.1	2	0.2	0.1	0.4
C44	Other Skin	45	3.0	2.2	4.1	23	2.0	1.1	1.7	22	2.2	1.6	3
C45	Mesothelioma	2	0.1	0.1	0.3	1	0.1	0	0.1	0	0.0	0	0
C46	Kaposi Sarcoma	4	0.3	0.2	0.4	0	0.0	0	0	1	0.1	0.1	0.1
C47-C49	Connective, Soft Tissue	25	1.7	1.2	1.8	15	1.3	0.7	0.8	14	1.4	1	1.7
C50	Breast	376	25.5	18.1	30.6	338	29.9	16.7	24.2	338	33.9	24.3	39.5
C51	Vulva	3	0.2	0.1	0.3	3	0.3	0.1	0.2	2	0.2	0.1	0.1
C52	Vagina	1	0.1	0	0	1	0.1	0	0.1	0	0.0	0	0
C53	Cervix Uteri	19	1.3	0.9	1.7	20	1.8	1	1.4	11	1.1	0.8	1.2
C54	Corpus Uteri	51	3.5	2.5	5.8	53	4.7	2.6	4.3	41	4.1	2.9	6.4
C55	Uterus Unspecified	9	0.6	0.4	0.8	6	0.5	0.3	0.5	3	0.3	0.2	0.5
C56	Ovary	38	2.6	1.8	3.6	31	2.7	1.5	2.2	33	3.3	2.4	4.3
C57	Other Female Genital	2	0.1	0.1	0.3	2	0.2	0.1	0.1	0	0.0	0	0
C58	Placenta	0	0.0	0	0	2	0.2	0.1	0.1	1	0.1	0.1	0.1
C64	Kidney	30	2.0	1.4	2.5	21	1.9	1	1.5	21	2.1	1.5	2.7
C65	Renal Pelvis	0	0.0	0	0	3	0.3	0.1	0.3	1	0.1	0.1	0.1
C66	Ureter	1	0.1	0	0.2	1	0.1	0	0.1	1	0.1	0.1	0.2
C67	Bladder	9	0.6	0.4	0.9	7	0.6	0.3	0.6	12	1.2	0.9	1.7
C68	Other Urinary Organs	0	0.0	0	0	2	0.2	0.1	0.2	0	0.0	0	0
C69	Eye	10	0.7	0.5	0.4	4	0.4	0.2	0.2	2	0.2	0.1	0.2
C70-C72	Brain, Nervous System	26	1.8	1.3	1.4	19	1.7	0.9	1.2	21	2.1	1.5	2.1
C73	Thyroid	170	11.5	8.2	10	103	9.1	5.1	6.2	109	10.9	7.8	11.4
C74	Adrenal Gland	4	0.3	0.2	0.3	1	0.1	0	0.1	4	0.4	0.3	0.3
C75	Other Endocrine	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0
C81	Hodgkin Disease	44	3.0	2.1	2.2	25	2.2	1.2	1.2	27	2.7	1.9	2.1
C82-C85;C96	Non-Hodgkin Lymphoma	82	5.6	4	6.8	76	6.7	3.7	6	43	4.3	3.1	5.3
C88	Immunoproliferative Disease	0	0.0	0	0	0	0.0	0	0	0	0.0	0	0
C90	Multiple Myeloma	14	0.9	0.7	1.7	9	0.8	0.4	0.7	6	0.6	0.4	0.9
C91	Lymphoid Leukemia	39	2.6	1.9	2.3	25	2.2	1.2	1.3	19	1.9	1.4	1.9
C92-C94	Myeloid Leukemia	38	2.6	1.8	2.4	20	1.8	1	1.5	22	2.2	1.6	2.1
C95	Leukemia Unspecified	0	0.0	0	0	6	0.5	0.3	0.3	2	0.2	0.1	0.1
Other	Other & Unspecified	41	2.8	2	3.8	26	2.3	1.3	2	34	3.4	2.4	4.8
All	All Sites Total	1476	100.0	71.1	122.2	1132	100.0	55.8	81.4	998	100.0	71.7	121.4
Not C44	All Sites but C44	1431	97.0	69	118.1	1109	98.0	54.7	79.6	976	97.8	70.2	118.4

**Table 5.4.1 Number of Cancer Cases among Non-Saudi Males by Primary Site and Age Groups, 2010**

ICD (10th)	Site	All Ages	Age Unk	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	Total (%)
C00	Lip	4	0	0	0	0	0	0	0	1	0	0	1	1	0	0	0	0	0	0.2
C01-C02	Tongue	24	0	0	0	0	0	3	1	2	3	0	3	2	4	3	2	1	0	1.4
C03-C06	Mouth	10	0	0	0	0	0	0	0	1	0	1	2	1	2	1	0	0	0	0.6
C07-C08	Salivary Glands	13	0	0	0	0	0	0	0	2	1	3	0	2	3	1	0	0	0	0.8
C09	Tonsil	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
C10	Other Oropharynx	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
C11	Nasopharynx	39	0	0	1	0	1	2	2	2	4	6	5	11	2	2	0	0	1	2.3
C12-C13	Hypopharynx	5	0	0	0	0	0	0	0	0	0	0	0	2	0	1	1	0	0	0.3
C14	Pharynx Unspecified	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0.1
C15	Oesophagus	24	0	0	0	0	0	0	0	2	2	3	1	3	3	5	0	3	2	1.4
C16	Stomach	82	0	0	0	0	0	0	1	4	4	7	11	17	9	12	6	7	4	4.8
C17	Small Intestine	5	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	2	0.3
C18	Colon	137	0	0	0	1	1	3	6	6	7	14	19	22	21	21	9	4	4	8.0
C19-C20	Rectum	104	0	0	0	0	0	1	5	6	5	10	13	18	15	21	3	5	2	6.1
C21	Anus	16	0	0	0	0	0	1	0	1	3	2	3	1	3	1	1	0	0	0.9
C22	Liver	49	0	0	0	1	0	1	0	1	2	2	7	3	11	10	5	3	3	2.9
C23-C24	Gallbladder etc.	23	0	0	0	0	0	0	1	1	0	1	2	4	8	2	3	0	1	1.3
C25	Pancreas	31	0	0	0	0	0	0	0	1	1	3	4	5	4	4	3	5	1	1.8
C30-C31	Nose, Sinuses etc.	4	0	0	0	0	0	0	0	0	0	1	0	1	2	0	0	0	0	0.2
C32	Larynx	30	0	0	0	0	0	0	1	1	1	3	3	6	8	2	1	2	2	1.8
C33-C34	Trachea, Bronchus, Lung	98	0	0	0	0	1	1	0	4	6	8	17	16	14	10	9	4	8	5.7
C37-C38	Other Thoracic Organs	6	0	0	0	0	0	0	0	2	0	0	0	1	1	2	0	0	0	0.4
C40-C41	Bone	23	0	2	4	2	3	0	1	2	2	3	1	2	1	0	0	0	0	1.3
C43	Melanoma of Skin	11	0	0	0	0	0	0	1	1	1	1	1	2	1	2	1	0	0	0.6
C44	Other Skin	136	0	0	0	0	0	0	2	7	9	11	22	27	23	18	7	3	7	7.9
C45	Mesothelioma	4	0	0	0	0	0	0	0	0	0	0	0	1	0	2	1	0	0	0.2
C46	Kaposi Sarcoma	8	0	0	0	0	0	0	1	0	0	1	0	0	3	0	3	0	0	0.5
C47,C49	Connective, Soft Tissue	43	0	2	0	0	0	6	6	5	4	6	4	3	4	3	0	0	0	2.5
C50	Breast	13	0	0	0	0	0	0	1	1	0	3	3	0	5	1	0	0	0	0.8
C60	Penis	3	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1	0	0	0.2
C61	Prostate	104	0	0	0	0	0	0	1	0	0	1	1	8	20	28	23	11	11	6.1
C62	Testis	25	0	1	0	0	3	1	7	4	5	0	3	1	0	0	0	0	0	1.5
C63	Other Male Genital	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
C64	Kidney	59	0	4	1	0	0	0	1	1	4	7	5	9	12	6	4	1	4	3.4
C65	Renal Pelvis	3	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	1	0	0.2
C66	Ureter	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
C67	Bladder	85	0	0	0	0	0	1	1	3	3	10	10	19	12	7	7	11	1	5.0
C68	Other Urinary Organs	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0.1
C69	Eye	5	0	1	0	0	0	1	0	0	1	1	0	0	1	0	0	0	0	0.3
C70-C72	Brain, Nervous System	56	0	7	5	1	0	4	4	2	7	6	7	5	3	1	0	1	3	3.3
C73	Thyroid	51	0	0	0	0	0	0	4	5	11	6	4	9	4	4	1	1	2	3.0
C74	Adrenal Gland	3	0	0	0	1	0	0	0	0	0	0	0	0	2	0	0	0	0	0.2
C75	Other Endocrine	3	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2
C81	Hodgkin Disease	50	0	2	3	7	8	6	6	1	0	6	2	5	3	0	1	0	0	2.9
C82-C85;C96	Non-Hodgkin Lymphoma	123	0	1	3	2	1	3	10	12	19	12	14	14	13	11	7	1	0	7.2
C88	Immunoproliferative Disease	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
C90	Multiple Myeloma	17	0	0	0	0	0	0	0	0	0	3	3	2	3	5	1	0	0	1.0
C91	Lymphoid Leukemia	45	0	10	3	4	2	1	2	2	4	3	3	1	5	1	1	2	1	2.6
C92-C94	Myeloid Leukemia	37	0	2	1	2	1	3	4	3	5	2	3	2	3	2	3	1	0	2.2
C95	Leukemia Unspecified	16	0	1	1	1	1	0	3	0	0	2	0	1	2	2	1	0	1	0.9
Other	Other & Unspecified	83	1	1	1	0	0	0	2	2	7	10	13	15	11	8	6	1	6	4.8
All	All Sites Total	1712	1	35	23	24	20	41	74	86	125	160	195	245	241	198	110	69	66	100.0
Not C44	All Sites but C44	1576	1	35	23	24	20	41	72	79	116	149	173	218	218	180	103	66	59	92.1

Table 5.4.2 Number of Cancer Cases among Non-Saudi Females by Primary Site and Age Groups, 2010

ICD (10th)	Site	All Ages	Age Unk	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	Total (%)
C00	Lip	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
C01-C02	Tongue	9	0	0	0	0	0	0	0	0	0	2	1	1	1	1	0	1	2	0.6
C03-C06	Mouth	3	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0.2
C07-C08	Salivary Glands	7	0	0	0	0	0	2	0	1	0	2	1	0	1	0	0	0	0	0.5
C09	Tonsil	2	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0.1
C10	Other Oropharynx	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0.1
C11	Nasopharynx	6	0	0	0	0	0	0	0	4	1	1	0	0	0	0	0	0	0	0.4
C12-C13	Hypopharynx	2	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0.1
C14	Pharynx Unspecified	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
C15	Oesophagus	12	0	0	0	0	0	1	0	0	0	1	0	2	0	1	2	3	1	0.8
C16	Stomach	31	0	0	0	0	0	0	0	3	2	5	3	5	2	5	5	1	0	2.1
C17	Small Intestine	8	0	0	0	0	0	0	0	1	1	1	2	0	0	2	0	0	1	0.5
C18	Colon	75	0	0	0	0	0	2	3	4	5	8	9	11	10	6	5	5	6	5.1
C19-C20	Rectum	53	0	0	0	0	1	1	1	1	5	6	6	9	5	3	6	4	6	3.6
C21	Anus	5	0	0	0	0	0	0	0	0	0	1	0	0	1	0	2	0	1	0.3
C22	Liver	32	0	0	0	0	0	0	1	0	0	3	4	1	6	6	7	4	0	2.2
C23-C24	Gallbladder etc.	11	0	0	0	0	0	0	0	0	0	2	2	2	2	1	1	0	1	0.7
C25	Pancreas	19	0	0	0	0	0	0	0	1	0	3	1	5	3	1	4	1	0	1.3
C30-C31	Nose, Sinuses etc.	3	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0.2
C32	Larynx	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
C33-C34	Trachea, Bronchus, Lung	25	0	0	0	0	0	0	1	1	2	2	6	1	0	3	4	1	4	1.7
C37-C38	Other Thoracic Organs	3	0	1	0	0	0	1	0	0	2	1	0	0	0	0	0	0	0	0.2
C40-C41	Bone	13	0	1	0	5	0	2	0	2	2	1	0	0	0	0	0	0	0	0.9
C43	Melanoma of Skin	2	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0.1
C44	Other Skin	44	0	0	0	1	0	1	2	2	2	4	1	6	6	7	5	4	3	3.0
C45	Mesothelioma	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0.1
C46	Kaposi Sarcoma	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0.1
C47;C49	Connective, Soft Tissue	8	0	0	0	0	0	1	0	3	0	1	1	1	1	0	0	0	0	0.5
C50	Breast	575	0	0	0	0	0	5	20	49	73	94	113	89	60	30	14	17	11	39.0
C51	Vulva	2	0	0	0	0	0	1	0	1	0	0	0	1	0	0	0	0	0	0.1
C52	Vagina	7	0	0	0	1	0	1	0	1	2	0	0	0	0	2	0	0	0	0.5
C53	Cervix Uteri	71	0	0	0	0	0	0	1	3	11	14	9	11	5	4	8	1	4	4.8
C54	Corpus Uteri	70	0	0	0	0	0	2	0	3	6	7	2	16	10	11	3	5	5	4.7
C55	Uterus Unspecified	5	0	0	0	0	0	0	0	0	0	0	0	3	1	0	1	0	0	0.3
C56	Ovary	54	0	0	0	0	1	1	1	1	9	13	12	1	4	4	2	3	2	3.7
C57	Other Female Genital	3	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	0	0.2
C58	Placenta	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0.1
C64	Kidney	17	0	2	1	0	0	0	0	1	1	0	4	3	0	1	1	2	1	1.2
C65	Renal Pelvis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
C66	Ureter	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
C67	Bladder	11	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0	1	5	0.7
C68	Other Urinary Organs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
C69	Eye	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1
C70-C72	Brain, Nervous System	16	0	2	1	0	1	1	1	1	1	1	2	2	0	0	2	0	1	1.1
C73	Thyroid	89	0	0	0	1	4	9	6	10	21	7	10	10	7	1	2	0	1	6.0
C74	Adrenal Gland	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
C75	Other Endocrine	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0.0
C81	Hodgkin Disease	19	0	1	0	0	4	6	0	1	2	0	1	1	2	0	0	1	0	1.3
C82-C85;C96	Non-Hodgkin Lymphoma	50	0	0	2	1	0	2	3	5	3	3	4	8	5	5	3	2	4	3.4
C88	Immunoproliferative Disease	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
C90	Multiple Myeloma	11	0	0	0	0	0	0	0	0	0	1	0	4	2	2	2	0	0	0.7
C91	Lymphoid Leukemia	31	0	11	5	4	3	0	1	1	1	2	1	0	0	1	0	0	1	2.1
C92-C94	Myeloid Leukemia	21	0	2	2	2	1	0	6	1	1	2	1	1	0	2	0	0	1	1.4
C95	Leukemia Unspecified	3	0	1	0	0	0	0	0	0	0	1	0	1	0	1	0	0	0	0.2
Other	Other & Unspecified	43	0	1	0	2	1	0	2	3	3	5	3	9	2	3	2	3	4	2.9
All	All Sites Total	1476	0	22	11	17	17	35	52	108	159	193	205	203	142	105	82	60	65	100.0
Not C44	All Sites but C44	1432	0	22	11	16	17	34	50	106	157	189	204	197	136	98	77	56	62	97.0

**Table 5.4.3 Age-Specific Incidence Rate (AIR), Age-Standardized Incidence Rate (ASR) among Non-Saudi Males (per 100,000) by Primary Site and Age Groups, 2010**

ICD (10th)	Site	All Ages	Age Unk	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	Crude Rate	ASR World
C00	Lip	4	0	0	0	0	0	0	0	0.1	0	0.1	0.2	0.3	0	0	0	0	0	0.1	0
C01-C02	Tongue	24	0	0	0	0	0	1.1	0.1	0.2	0.3	0	0.6	0.7	2.8	5.3	8.6	7	0	0.4	0.9
C03-C06	Mouth	10	0	0	0	0	0	0	0.1	0	0.1	0.3	0.2	0.7	0.7	0	8.6	0	0	0.2	0.4
C07-C08	Salivary Glands	13	0	0	0	0	0	0	0.3	0.1	0	0.4	0	0.7	2.1	1.8	0	0	0	0.2	0.2
C09	Tonsil	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C10	Other Oropharynx	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C11	Nasopharynx	39	0	0.3	0	0	0.5	0.7	0.3	0.2	0.4	0.8	1	3.7	1.4	3.5	0	0	6	0.7	0.8
C12-C13	Hypopharynx	5	0	0	0	0	0	0	0	0	0	0	0.4	0	0.7	1.8	0	7	0	0.1	0.3
C14	Pharynx Unspecified	1	0	0	0	0	0	0	0	0	0	0.1	0	0	0	0	0	0	0	0	0
C15	Oesophagus	24	0	0	0	0	0	0	0	0.2	0.2	0.4	0.2	1	2.1	8.8	0	20.9	12	0.4	1.2
C16	Stomach	82	0	0	0	0	0	0	0.1	0.4	0.4	0.9	2.2	5.7	6.3	21.2	25.9	48.8	24.1	1.4	3.9
C17	Small Intestine	5	0	0	0	0	0	0	0	0	0	0	0.1	0	0.3	0	1.8	0	12	0.1	0.3
C18	Colon	137	0	0	0	0.4	0	1.1	0.8	0.6	0.7	1.9	3.8	7.4	14.6	37	38.8	27.9	24.1	2.3	5.2
C19-C20	Rectum	104	0	0	0	0	0	0.4	0.7	0.6	0.5	1.3	2.6	6.1	10.4	37	12.9	34.8	12	1.8	3.9
C21	Anus	16	0	0	0	0	0	0.4	0	0.1	0.3	0.3	0.6	0.3	2.1	1.8	4.3	0	0	0.3	0.4
C22	Liver	49	0	0	0	0.4	0	0.4	0	0.1	0.2	0.3	1.4	1	7.7	17.6	21.6	20.9	18	0.8	2.7
C23-C24	Gallbladder etc.	23	0	0	0	0	0	0	0.1	0.1	0	0.1	0.4	1.3	5.6	3.5	12.9	0	6	0.4	1
C25	Pancreas	31	0	0	0	0	0	0	0	0.1	0.1	0.4	0.8	1.7	2.8	7.1	12.9	34.8	6	0.5	1.8
C30-C31	Nose, Sinuses etc.	4	0	0	0	0	0	0	0	0	0	0.1	0.2	0.7	0	0	0	0	0	0.1	0.1
C32	Larynx	30	0	0	0	0	0	0	0.1	0.1	0.1	0.4	0.6	2	5.6	3.5	4.3	13.9	12	0.5	1.2
C33-C34	Trachea, Bronchus, Lung	98	0	0	0	0.5	0.4	0	0.4	0.4	0.6	1.1	3.4	5.4	9.7	17.6	38.8	27.9	48.1	1.7	4.5
C37-C38	Other Thoracic Organs	6	0	0	0	0	0	0	0	0.2	0	0	0	0.3	0.7	3.5	0	0	0	0.1	0.2
C40-C41	Bone	23	0	0.6	1.3	0.8	1.6	0	0.1	0.2	0.2	0.4	0.2	0.7	0.7	0	0	0	0	0.4	0.6
C43	Melanoma of Skin	11	0	0	0	0	0	0	0.1	0.1	0.1	0.1	0.2	0.7	0.7	3.5	4.3	0	0	0.2	0.4
C44	Other Skin	136	0	0	0	0	0	0	0.3	0.7	0.9	1.5	4.4	9.1	16	31.7	30.2	20.9	42.1	2.3	5
C45	Mesothelioma	4	0	0	0	0	0	0	0	0	0	0	0.2	0	1.4	1.8	0	0	0	0.1	0.1
C46	Kaposi Sarcoma	8	0	0	0	0	0	0	0.1	0	0	0.1	0	0	2.1	0	12.9	0	0	0.1	0.5
C47;C49	Connective, Soft Tissue	43	0	0.6	0	0	0	2.2	0.8	0.5	0.4	0.8	0.8	1	2.8	5.3	0	0	0	0.7	0.8
C50	Breast	13	0	0	0	0	0	0	0	0.1	0	0.4	0.6	0	3.5	1.8	0	0	0	0.2	0.3
C60	Penis	3	0	0	0	0	0	0	0.1	0	0	0.1	0	0	0	1.8	0	0	0	0.1	0.1
C61	Prostate	104	0	0	0	0	0	0	0.1	0	0	0.1	0.2	2.7	13.9	49.4	99.3	76.6	66.2	1.8	8.5
C62	Testis	25	0	0.3	0	0	1.6	0.4	1	0.4	0.5	0	0.6	0.3	0	0	0	0	0	0.4	0.4
C63	Other Male Genital	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C64	Kidney	59	0	1.3	0.3	0	0	0	0.1	0.1	0.4	0.9	1	3	8.4	10.6	17.3	7	24.1	1	2.4
C65	Renal Pelvis	3	0	0	0	0	0	0	0	0	0	0	0	0	1.4	0	4.3	0	0	0.1	0.2
C66	Ureter	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C67	Bladder	85	0	0	0	0	0	0.4	0.1	0.3	0.3	1.3	2	6.4	8.4	12.3	30.2	76.6	6	1.4	4
C68	Other Urinary Organs	1	0	0	0	0	0	0	0	0	0	0	0.2	0	0	0	0	0	0	0	0
C69	Eye	5	0	0.3	0	0	0	0.4	0	0	0.1	0.1	0	0	0.7	0	0	0	0	0.1	0.1
C70-C72	Brain, Nervous System	56	0	2.2	1.7	0.4	0	1.5	0.5	0.2	0.7	0.8	1.4	1.7	2.1	1.8	0	0	0	0.9	1.6
C73	Thyroid	51	0	0	0	0	0	0	0.5	0.5	1.1	0.8	0.8	3	2.8	7.1	4.3	7	12	0.9	1.3
C74	Adrenal Gland	3	0	0	0	0.4	0	0	0	0	0	0	0	0.7	0	0	0	0	0	0.1	0.1
C75	Other Endocrine	3	0	0.3	0	0	0.8	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.1
C81	Hodgkin Disease	50	0	0.6	1	2.9	4.3	2.2	0.8	0.1	0	0.8	0.4	1.7	2.1	0	4.3	0	0	0.8	1.4
C82-C85;C96	Non-Hodgkin Lymphoma	123	0	0.3	1	0.8	0.5	1.1	1.4	1.2	1.8	1.6	2.8	4.7	9	19.4	30.2	7	0	2.1	3.3
C88	Immunoproliferative Disease	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C90	Multiple Myeloma	17	0	0	0	0	0	0	0	0	0	0.4	0.6	0.7	2.1	8.8	4.3	0	0	0.3	0.7
C91	Lymphoid Leukemia	45	0	3.2	1	1.6	1.1	0.4	0.3	0.2	0.4	0.4	0.6	0.3	3.5	1.8	4.3	13.9	6	0.8	1.6
C92-C94	Myeloid Leukemia	37	0	0.6	0.3	0.8	0.5	1.1	0.5	0.3	0.5	0.3	0.6	0.7	2.1	3.5	12.9	7	0	0.6	1.2
C95	Leukemia Unspecified	16	0	0.3	0.3	0.4	0	1.1	0	0	0.2	0	0.2	0.7	1.4	1.8	0	7	6	0.3	0.6
Other	Other & Unspecified	83	0	0.3	0.3	0	0	0	0.3	0.2	0.7	1.3	2.6	5	7.7	14.1	25.9	7	36.1	1.4	3.1
All	All Sites Total	1712	0	11	8	10	11	15	10	8	12	21	39	82	168	349	475	481	397	28.9	67.4
Not C44	All Sites but C44	1576	0	11	8	10	11	15	10	8	11	20	35	73	152	317	445	460	355	26.6	62.4

**Table 5.4.4Age-Specific Incidence Rate (AIR), Age-Standardized Incidence Rate (ASR) among Non-Saudi Females (per 100,000) by Primary Site and Age Groups, 2010**

ICD (10th)	Site	All Ages	Age Unk	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	Crude Rate	ASR World
C00	Lip	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C01-C02	Tongue	9	0	0	0	0	0	0	0	0	0	1.2	1.1	1.7	3.1	0	8.9	9.4	20.5	0.4	1.2
C03-C06	Mouth	3	0	0	0	0	0	0	0	0.8	0	0	0	0	0	0	0	0	0	0.1	0
C07-C08	Salivary Glands	7	0	0	0	0	1.1	0	0	0.3	0	1.2	1.1	0	3.1	0	0	0	0	0.3	0.4
C09	Tonsil	2	0	0	0	0	0	0	0	0	0	0	1.1	1.7	0	0	0	0	0	0.1	0.2
C10	Other Oropharynx	1	0	0	0	0	0	0	0	0.3	0	0	0	0	0	0	0	0	0	0	0
C11	Nasopharynx	6	0	0	0	0	0	0	0	1.1	0.3	0.6	0	0	0	0	0	0	0	0.2	0.1
C12-C13	Pharynx Unspecified	2	0	0	0	0	0	0	0	0	0.3	0	0	0	0	5.5	0	0	0	0.1	0.2
C14	Oesophagus	12	0	0	0	0	0.5	0	0	0	0.3	0	2.2	0	3.1	5.5	17.8	28.3	10.3	0.5	1.8
C15	Stomach	31	0	0	0	0	0	0	0	0.8	0.7	3	3.3	8.6	6.1	27.6	44.4	9.4	0	1.2	3.8
C17	Small Intestine	8	0	0	0	0	0	0	0	0.3	0.3	0.6	2.2	0	0	11	0	0	10.3	0.3	0.8
C18	Colon	75	0	0	0	0	0.6	1.1	1.1	1.1	1.6	4.8	9.8	18.9	30.5	33.1	44.4	47.2	61.6	3	8.3
C19-C20	Rectum	53	0	0	0	0	0.6	0	0.4	0.3	1.6	3.6	6.5	15.5	15.3	16.5	53.3	37.8	61.6	2.1	6.4
C21	Anus	5	0	0	0	0	0	0	0	0	0.3	0	0	1.7	0	11	0	9.4	0	0.2	0.7
C22	Liver	32	0	0	0	0	0	0	0.4	0	0	1.8	4.4	1.7	18.3	33.1	62.2	37.8	0	1.3	5.2
C23-C24	Gallbladder etc.	11	0	0	0	0	0	0	0	0	0	1.2	2.2	3.4	6.1	5.5	8.9	0	10.3	0.4	1.3
C25	Pancreas	19	0	0	0	0	0	0	0	0.3	0	1.8	1.1	8.6	9.2	5.5	35.5	9.4	0	0.8	2.5
C30-C31	Nose, Sinuses etc.	3	0	0	0	0	0	0	0.4	0	0.3	0	0	0	0	0	8.9	0	0	0.1	0.3
C32	Larynx	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C33-C34	Trachea, Bronchus, Lung	25	0	0	0	0	0	0.4	0.3	0.7	1.2	6.5	1.7	0	0	16.5	35.5	9.4	41	1	3.4
C37-C38	Other Thoracic Organs	3	0	0.3	0	0	0.5	0	0	0	0	0.6	0	0	0	0	0	0	0	0.1	0.1
C40-C41	Bone	13	0	0.3	0	2.3	0	1.1	0	0.5	0.7	0.6	0	0	0	0	0	0	0	0.4	0.4
C43	Melanoma of Skin	2	0	0	0	0	0	0	0	0	0	0.6	0	0	0	0	8.9	0	30.8	0.1	0.3
C44	Other Skin	44	0	0	0	0.5	0	0.5	0.7	0.5	0.7	2.4	1.1	10.3	18.3	38.6	44.4	37.8	0	1.8	5.9
C45	Mesothelioma	1	0	0	0	0	0	0	0	0	0	0	0	0	0	5.5	0	0	0	0	0.2
C46	Kaposi Sarcoma	1	0	0	0	0	0	0	0	0	0.3	0	0	0	0	0	0	0	0	0	0
C47,C49	Connective, Soft Tissue	8	0	0	0	0	0	0.5	0	0.8	0	0.6	1.1	1.7	3.1	0	0	0	0	0.3	0.4
C50	Breast	575	0	0	0	0	2.7	7.1	13.1	23.8	56.2	123	153	183	165	124	161	113	0	23	44.6
C51	Vulva	2	0	0	0	0	0	0	0	0.3	0	0	1.1	0	0	0	0	0	0	0.1	0.1
C52	Vagina	7	0	0	0	0.5	0	0.5	0	0.3	0.7	0	0	0	0	11	0	0	0	0.3	0.6
C53	Cervix Uteri	71	0	0	0	0	0	0.4	0.8	3.6	8.4	9.8	18.9	15.3	22	71	9.4	41	0	2.8	7
C54	Corpus Uteri	70	0	0	0	0	0	0.7	0.8	2	4.2	2.2	27.6	30.5	60.6	26.6	47.2	51.3	0	2.8	8.4
C55	Uterus Unspecified	5	0	0	0	0	0	0	0	0	0	0	0	5.2	3.1	0	8.9	0	0	0.2	0.6
C56	Ovary	54	0	0	0	0	0.6	0.5	0.4	0.3	2.9	7.8	13.1	1.7	12.2	22	17.8	28.3	20.5	2.2	4.5
C57	Other Female Genital	3	0	0	0	0	0	0	0	0	0	0	0	6.1	5.5	0	0	0	0	0.1	0.5
C58	Placenta	1	0	0	0	0	0	0	0	0	0	0	0	1.7	0	0	0	0	0	0	0.1
C64	Kidney	17	0	0.7	0.4	0	0	0	0	0.3	0.3	0	4.4	5.2	0	5.5	8.9	18.9	10.3	0.7	1.7
C65	Renal Pelvis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C66	Ureter	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C67	Bladder	11	0	0	0	0	0	0	0	0	0	0.6	1.1	1.7	3.1	5.5	0	9.4	51.3	0.4	1.7
C68	Other Urinary Organs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C69	Eye	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C70-C72	Brain, Nervous System	16	0	0.7	0.4	0	0.6	0.5	0.4	0.3	0.3	0.6	2.2	3.4	0	0	17.8	0	10.3	0	0.2
C73	Thyroid	89	0	0	0	0.5	2.3	4.8	2.1	2.7	6.9	4.2	10.9	17.2	21.4	5.5	17.8	0	10.3	0.6	1.4
C74	Adrenal Glands	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3.6	5
C75	Other Endocrine	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C81	Hodgkin Disease	19	0	0.3	0	0	2.3	3.2	0	0.3	0.7	0	1.1	1.7	6.1	0	0	9.4	0	0.8	1.1
C82-C85;C96	Non-Hodgkin Lymphoma	50	0	0	0.8	0.5	0	1.1	1.1	1.3	1	1.8	4.4	13.8	15.3	27.6	26.6	18.9	41	2	5.2
C88	Immunoproliferative Disease	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C90	Multiple Myeloma	11	0	0	0	0	0	0	0	0	0	0.6	0	6.9	6.1	11	17.8	0	0	0.4	1.6
C91	Lymphoid Leukemia	31	0	3.8	1.9	1.8	1.7	0	0.4	0.3	0.3	1.2	1.1	0	0	5.5	0	0	10.3	1.2	1.6
C92-C94	Myeloid Leukemia	21	0	0.7	0.8	0.9	0.6	0	2.1	0.3	0.3	1.2	1.1	0	6.1	0	0	0	10.3	0.8	1.1
C95	Leukemia Unspecified	3	0	0.3	0	0	0	0	0	0	0	0	0	1.1	3.1	0	0	0	0	0.1	0.2
Other	Other & Unspecified	43	0	0.3	0	0.9	0.6	0	0.7	0.8	1	3	3.3	15.5	6.1	16.5	17.8	28.3	41	1.7	4.3
All	All Sites Total	1476	0	8	4	8	10	19	18	29	52	115	223	350	434	579	728	567	667	59.2	135.5
Not C44	All Sites but C44	1432	0	8	4	7	10	18	18	28	51	113	222	339	415	540	684	529	636	57.4	129.6

**Table 5.5.1 Number of New Cases by Primary Site and Years among Saudi Males, 1994 - 2010**

ICD (10th)	Site	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
C00	Lip	7	2	5	5	4	2	6	1	5	5	8	6	6	12	9	5	8
C01-C02	Tongue	32	15	21	24	13	25	29	14	23	29	33	38	38	40	32	42	53
C03-C06	Mouth	24	23	30	25	24	27	24	27	26	26	38	29	29	39	39	42	45
C07-C08	Salivary Glands	4	10	6	11	7	12	8	16	14	10	14	15	17	20	17	19	11
C09	Tonsil	4	9	2	4	6	2	1	4	5	5	2	3	0	4	2	0	2
C10	Other Oropharynx	2	3	3	1	1	3	0	3	3	0	2	3	0	2	2	1	2
C11	Nasopharynx	78	59	86	99	109	96	88	121	84	88	101	114	97	93	121	93	131
C12-C13	Hypopharynx	10	10	18	7	6	6	5	8	6	7	7	10	9	14	5	6	9
C14	Pharynx Unspecified	0	2	0	0	1	1	0	2	2	4	4	4	3	3	3	2	3
C15	Oesophagus	77	71	68	60	81	53	67	62	70	68	54	57	58	70	52	69	73
C16	Stomach	130	129	133	108	122	103	124	126	146	182	150	160	169	169	165	205	165
C17	Small Intestine	10	8	11	11	15	13	15	13	17	15	22	23	22	28	31	30	27
C18	Colon	61	87	72	85	104	101	115	120	152	177	202	260	231	270	292	344	303
C19-C20	Rectum	83	66	66	66	64	89	82	108	123	143	173	192	181	203	195	274	238
C21	Anus	10	9	7	8	6	5	10	12	14	11	17	16	8	12	12	22	18
C22	Liver	299	298	276	268	326	296	290	274	292	283	277	289	319	333	338	328	329
C23-C24	Gallbladder etc.	24	32	25	22	28	25	27	39	41	39	26	37	48	54	54	58	51
C25	Pancreas	50	49	53	44	60	58	68	53	75	85	82	97	101	128	102	130	114
C30-C31	Nose, Sinuses etc.	5	6	10	4	10	13	5	9	14	10	10	14	9	10	14	5	9
C32	Larynx	49	48	43	40	46	43	44	53	32	60	55	51	64	55	61	58	48
C33-C34	Trachea, Bronchus, Lung	188	183	184	162	223	203	197	189	194	201	253	280	237	325	294	287	292
C37-C38	Other Thoracic Organs	7	11	12	13	8	17	7	7	5	12	12	22	15	19	11	17	25
C40-C41	Bone	47	50	34	46	51	53	51	67	51	44	66	56	65	69	78	65	74
C43	Melanoma of Skin	21	8	8	8	6	7	11	9	12	10	13	14	12	17	13	13	12
C44	Other Skin	104	117	112	107	97	120	112	154	149	166	140	156	189	168	161	184	168
C45	Mesothelioma	5	4	5	5	7	2	7	5	3	6	6	9	8	12	18	5	9
C46	Kaposi Sarcoma	15	10	14	14	12	11	19	19	21	26	26	22	22	18	17	33	21
C47;C49	Connective,Soft Tissue	85	68	51	60	50	67	55	48	63	69	59	75	64	72	72	72	69
C50	Breast	11	15	6	12	19	12	15	12	16	16	13	15	17	20	18	24	24
C60	Penis	3	4	1	8	0	1	1	1	3	1	3	5	1	0	3	2	1
C61	Prostate	150	148	154	123	159	150	184	170	194	192	247	272	236	259	279	305	280
C62	Testis	32	21	25	29	38	31	35	35	45	38	46	44	40	63	74	78	78
C63	Other Male Genital	1	2	0	3	1	2	3	3	3	4	3	2	4	0	0	2	2
C64	Kidney	69	78	56	63	71	81	73	87	91	84	124	104	120	146	158	185	167
C65	Renal Pelvis	5	5	0	0	10	2	6	2	1	7	8	4	5	4	5	5	5
C66	Ureter	1	3	1	0	3	0	4	1	0	6	3	3	1	2	3	1	1
C67	Bladder	165	154	127	126	152	152	155	143	160	176	175	170	174	173	178	208	193
C68	Other Urinary Organs	1	1	1	0	1	1	0	0	1	1	1	1	0	1	1	1	3
C69	Eye	21	12	18	34	16	24	26	22	24	21	21	17	28	23	27	29	22
C70-C72	Brain, Nervous system	131	99	126	122	101	120	139	120	120	148	155	141	155	139	162	156	148
C73	Thyroid	73	61	58	73	84	84	77	74	91	87	95	93	121	122	136	150	149
C74	Adrenal Gland	8	9	8	8	4	9	10	7	6	15	6	10	21	16	16	20	29
C75	Other Endocrine	2	3	5	1	2	2	1	4	1	5	3	6	5	4	9	6	0
C81	Hodgkin Disease	104	105	105	97	133	118	125	136	122	145	176	167	178	179	187	199	194
C82-C85;C96	Non-Hodgkin Lymphoma	272	214	231	226	283	268	265	246	272	329	351	351	363	425	381	436	407
C88	Immunoproliferative Disease	0	0	0	1	0	1	0	0	0	1	2	0	0	0	0	1	0
C90	Multiple Myeloma	59	41	30	36	48	37	46	36	30	39	46	60	53	46	40	62	61
C91	Lymphoid Leukemia	151	118	146	139	150	137	152	158	146	165	155	166	163	195	167	194	187
C92-C94	Myeloid Leukemia	94	90	84	103	94	109	90	129	115	90	119	109	130	119	144	147	156
C95	Leukemia Unspecified	10	5	5	5	8	6	14	13	12	14	13	15	26	27	37	16	16
Other	Other & Unspecified	147	122	98	131	140	138	126	133	153	140	149	179	181	169	155	162	161
All	All sites Total	2941	2697	2640	2647	3004	2938	3014	3095	3248	3505	3766	3986	4043	4391	4390	4798	4593
Not C44	All sites but C44	2837	2580	2528	2540	2907	2818	2902	2941	3099	3339	3626	3830	3854	4223	4229	4614	4425



**Table 5.5.2 Number of New Cases by Primary Site and Years among Saudi Females, 1994-2010**

ICD (10th)	Site	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
C00	Lip	3	3	4	2	1	5	4	3	6	5	8	6	4	5	6	8	5
C01-C02	Tongue	21	20	28	28	29	31	23	19	30	30	29	23	25	38	30	39	43
C03-C06	Mouth	23	38	37	22	32	39	25	27	29	30	21	43	36	51	46	37	48
C07-C08	Salivary Glands	8	7	6	3	11	8	14	8	6	10	12	13	14	18	17	21	15
C09	Tonsil	0	3	3	3	1	1	3	1	5	4	1	1	1	3	3	3	0
C10	Other Oropharynx	0	1	0	0	1	0	0	0	2	0	2	2	0	1	0	0	1
C11	Nasopharynx	38	27	39	31	37	36	23	41	41	39	45	35	44	56	50	42	40
C12-C13	Hypopharynx	19	10	14	15	19	16	10	12	12	2	16	16	10	9	17	12	17
C14	Pharynx Unspecified	2	3	1	1	1	1	2	0	3	1	3	0	1	3	1	3	2
C15	Oesophagus	75	54	68	52	44	46	55	37	58	50	51	65	62	55	56	47	50
C16	Stomach	67	71	64	58	66	71	62	72	77	75	76	74	115	126	103	116	126
C17	Small Intestine	9	11	9	10	16	8	10	14	8	11	13	13	13	14	14	25	13
C18	Colon	65	80	85	78	72	105	108	143	134	147	179	197	222	246	277	308	306
C19-C20	Rectum	44	49	52	59	57	86	72	87	104	106	118	144	142	149	163	197	186
C21	Anus	6	3	1	3	5	2	4	2	5	9	7	8	8	12	7	16	9
C22	Liver	110	88	101	86	123	93	121	101	116	129	120	114	137	130	126	150	154
C23-C24	Gallbladder etc.	51	37	25	31	50	59	46	55	41	60	53	68	72	85	83	90	89
C25	Pancreas	28	30	24	25	50	41	35	35	54	41	35	52	78	53	70	87	81
C30-C31	Nose, Sinuses etc.	6	9	5	4	9	8	6	5	8	2	6	10	12	13	7	7	4
C32	Larynx	10	2	7	10	8	10	9	2	7	4	6	6	9	10	5	18	5
C33-C34	Trachea, Bronchus, Lung	51	55	48	53	50	47	52	57	52	64	69	87	81	91	84	106	105
C37-C38	Other Thoracic Organs	7	6	5	6	5	5	8	5	3	10	9	11	11	7	12	10	11
C40-C41	Bone	26	38	38	25	44	37	38	43	35	39	40	41	40	30	49	46	44
C43	Melanoma of Skin	11	7	7	2	8	8	6	8	7	9	12	9	15	18	11	8	12
C44	Other Skin	78	55	87	57	83	77	80	102	95	124	131	131	134	119	126	144	151
C45	Mesothelioma	1	0	1	1	0	4	1	1	3	7	5	6	4	3	2	10	4
C46	Kaposi Sarcoma	0	3	0	8	7	8	4	5	3	6	5	8	15	6	5	4	6
C47;C49	Connective,Soft Tissue	42	55	42	46	61	50	48	43	39	54	75	52	41	65	55	66	76
C50	Breast	429	434	463	464	516	514	602	565	672	713	815	952	988	1173	1215	1353	1473
C51	Vulva	8	6	7	3	3	3	8	7	5	6	11	1	3	4	5	6	9
C52	Vagina	5	6	2	4	2	3	1	5	5	1	5	7	1	4	0	3	2
C53	Cervix Uteri	78	73	83	75	94	79	81	84	85	91	89	98	74	102	95	101	82
C54	Corpus Uteri	57	47	39	48	60	58	92	78	88	111	125	149	151	185	194	257	220
C55	Uterus Unspecified	3	2	9	10	16	12	5	13	14	15	13	18	24	29	22	31	29
C56	Ovary	96	100	96	114	107	101	104	111	108	123	119	147	139	147	172	179	175
C57	Other Female Genital	1	1	0	2	2	4	3	5	4	5	10	6	9	8	6	7	6
C58	Placenta	17	10	13	7	10	13	8	15	16	5	8	14	22	12	13	12	5
C64	Kidney	60	37	49	57	52	64	49	70	69	68	84	65	79	84	98	124	117
C65	Renal Pelvis	0	1	0	2	3	3	2	1	1	2	2	4	4	1	1	3	5
C66	Ureter	0	1	1	0	1	1	0	1	1	1	2	4	2	0	0	1	4
C67	Bladder	28	39	23	29	39	37	39	51	41	42	43	39	42	36	40	40	50
C68	Other Urinary Organs	0	0	0	0	0	1	1	0	0	0	1	1	0	0	1	0	2
C69	Eye	15	16	18	13	12	24	24	17	20	16	18	20	19	20	17	24	24
C70-C72	Brain, Nervous System	80	73	76	94	85	78	84	84	85	95	108	103	108	117	95	115	105
C73	Thyroid	207	218	198	210	264	282	259	258	279	368	346	391	432	459	496	576	548
C74	Adrenal Gland	10	6	10	11	9	10	14	8	10	14	17	9	10	9	13	11	14
C75	Other Endocrine	2	1	2	1	2	3	1	0	0	1	2	5	5	4	2	2	1
C81	Hodgkin Disease	59	69	59	57	74	76	87	78	76	114	105	104	119	135	136	154	142
C82-C85;C96	Non-Hodgkin Lymphoma	143	149	142	146	186	176	186	202	203	238	244	259	246	285	313	287	296
C88	Immunoproliferative Disease	0	0	0	1	0	1	1	1	0	1	0	0	0	0	0	1	0
C90	Multiple Myeloma	20	33	20	13	24	27	25	19	19	16	26	26	33	49	29	39	42
C91	Lymphoid Leukemia	76	89	80	82	73	95	112	86	101	93	85	86	92	117	118	137	113
C92-C94	Myeloid Leukemia	77	78	75	90	83	89	93	102	100	103	125	100	122	108	110	127	128
C95	Leukemia Unspecified	6	6	1	5	6	11	9	4	5	11	11	17	9	19	30	23	16
Other	Other & Unspecified	103	95	93	95	137	127	122	116	117	161	175	147	170	152	166	164	167
All	All sites Total	2381	2355	2360	2352	2750	2794	2881	2909	3107	3482	3736	4007	4249	4675	4812	5397	5378
Not C44	All sites but C44	2303	2300	2273	2295	2667	2717	2801	2807	3012	3358	3605	3876	4115	4556	4686	5253	5227

**Table 5.5.3 Age Standardized Incidence Rate by Primary Site and Years among Saudi Males, 1994-2010**

ICD (10th)	Site	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
C00	Lip	0.2	0.1	0.1	0.1	0.1	0	0.1	0	0.1	0.1	0.2	0.1	0.1	0.2	0.2	0.1	0.1
C01-C02	Tongue	0.9	0.5	0.6	0.6	0.3	0.6	0.8	0.3	0.5	0.6	0.8	0.9	0.8	0.8	0.6	0.8	1
C03-C06	Mouth	0.7	0.7	0.9	0.6	0.6	0.6	0.5	0.7	0.6	0.6	0.8	0.7	0.7	0.8	0.7	0.8	0.9
C07-C08	Salivary Glands	0.1	0.3	0.2	0.3	0.1	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.3	0.4	0.3	0.3	0.2
C09	Tonsil	0.1	0.2	0.1	0.1	0.1	0.1	0	0.1	0.1	0.1	0.1	0.1	0	0.1	0	0	0
C10	Other Oropharynx	0.1	0.1	0.1	0	0	0.1	0	0.1	0.1	0	0	0.1	0	0	0	0	0
C11	Nasopharynx	2.1	1.5	2.3	2.5	2.6	2.2	2	2.5	1.8	1.7	2	2.2	1.7	1.5	2	1.5	2
C12-C13	Hypopharynx	0.3	0.2	0.4	0.2	0.2	0.1	0.1	0.2	0.1	0.1	0.2	0.2	0.2	0.3	0.1	0.1	0.2
C14	Pharynx Unspecified	0	0	0	0	0	0	0	0	0	0.1	0.1	0.1	0.1	0.1	0.1	0	0
C15	Oesophagus	2.2	1.9	1.7	1.5	2	1.2	1.5	1.6	1.6	1.6	1.2	1.3	1.4	1.4	1	1.4	1.4
C16	Stomach	3.7	3.6	3.5	2.7	3	2.4	3	2.9	3.2	4.2	3.4	3.5	4.1	3.5	3.2	4	3.1
C17	Small Intestine	0.3	0.2	0.3	0.3	0.4	0.3	0.4	0.3	0.4	0.3	0.5	0.5	0.5	0.5	0.6	0.6	0.5
C18	Colon	1.8	2.4	1.9	2.1	2.5	2.5	2.9	2.9	3.4	4	4.4	5.8	5.3	5.4	5.4	6.5	5.5
C19-C20	Rectum	2.4	1.9	1.6	1.7	1.6	2.3	2	2.4	2.6	3.3	3.9	4.4	4.3	4	3.8	5.1	4.4
C21	Anus	0.3	0.2	0.2	0.2	0.2	0.1	0.3	0.3	0.3	0.3	0.4	0.3	0.2	0.2	0.2	0.4	0.3
C22	Liver	8.7	8.6	7.5	7.1	8.4	7.5	7.3	7.3	7.1	7.1	6.6	6.8	8.3	7.2	6.9	6.6	6.4
C23-C24	Gallbladder etc.	0.7	0.9	0.7	0.6	0.7	0.6	0.7	1.1	0.9	1	0.6	0.9	1.3	1.1	1	1.1	0.9
C25	Pancreas	1.4	1.3	1.5	1.2	1.5	1.4	1.6	1.3	1.7	2	2	2.2	2.6	2.7	2	2.6	2.2
C30-C31	Nose, Sinuses etc.	0.1	0.2	0.3	0.1	0.2	0.3	0.1	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2
C32	Larynx	1.5	1.4	1.2	1	1.2	1.1	1.1	1.5	0.8	1.5	1.3	1.3	1.6	1.2	1.2	1.2	0.9
C33-C34	Trachea, Bronchus, Lung	5.6	5.3	4.9	4.4	5.8	5.2	5	4.8	5	5.1	5.9	6.5	6.2	6.9	6	6	5.8
C37-C38	Other Thoracic Organs	0.2	0.2	0.2	0.2	0.2	0.3	0.1	0.1	0.1	0.3	0.2	0.4	0.2	0.3	0.2	0.3	0.3
C40-C41	Bone	0.7	0.7	0.5	0.7	0.7	0.7	0.7	0.8	0.6	0.6	0.7	0.6	0.7	0.7	0.9	0.7	0.7
C43	Melanoma of Skin	0.6	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.3	0.2	0.3	0.3	0.3	0.4	0.3	0.2	0.2
C44	Other Skin	2.7	3	2.8	2.8	2.4	2.7	2.5	3.5	3.2	3.7	3	3.4	4.5	3.3	3	3.5	3.1
C45	Mesothelioma	0.1	0.1	0.2	0.1	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.4	0.1	0.2
C46	Kaposi Sarcoma	0.5	0.3	0.3	0.3	0.3	0.2	0.4	0.5	0.5	0.6	0.6	0.4	0.5	0.3	0.3	0.6	0.4
C47;C49	Connective,Soft Tissue	1.8	1.4	1	1.2	0.8	1.2	0.9	0.9	1.1	1.2	0.8	1	1	1	1	0.9	0.8
C50	Breast	0.3	0.4	0.1	0.3	0.5	0.3	0.4	0.3	0.4	0.4	0.3	0.3	0.4	0.4	0.3	0.4	0.4
C60	Penis	0.1	0.1	0	0.2	0	0	0	0	0.1	0	0.1	0.1	0	0	0.1	0	0
C61	Prostate	4	3.9	3.8	2.9	3.9	3.5	4	4.4	4.3	4.5	5.7	6.4	6.3	5.7	5.9	6.3	5.5
C62	Testis	0.7	0.4	0.5	0.5	0.7	0.6	0.6	0.5	0.7	0.5	0.6	0.5	0.5	0.7	0.8	0.8	0.8
C63	Other Male Genital	0	0	0	0.1	0	0	0.1	0.1	0.1	0.1	0.1	0	0.1	0	0	0	0
C64	Kidney	1.8	2	1.4	1.5	1.7	1.7	1.7	1.9	1.8	1.8	2.5	2.1	2.7	2.7	2.8	3.2	2.9
C65	Renal Pelvis	0.1	0.1	0	0	0.3	0.1	0.1	0	0	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1
C66	Ureter	0	0.1	0	0	0.1	0	0.1	0	0	0.2	0.1	0.1	0	0	0.1	0	0
C67	Bladder	4.6	4.3	3.4	3.2	3.8	3.7	3.9	3.4	3.5	4.1	4	3.7	4.2	3.5	3.7	4.1	3.6
C68	Other Urinary Organs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1
C69	Eye	0.5	0.2	0.3	0.5	0.2	0.4	0.3	0.5	0.4	0.3	0.4	0.3	0.4	0.3	0.3	0.4	0.3
C70-C72	Brain, Nervous System	2.9	1.8	2.4	2.2	1.6	2.1	2.3	2.1	1.9	2.5	2.5	2.2	2.6	2	2.2	2.2	1.9
C73	Thyroid	2	1.5	1.5	1.8	1.9	1.7	1.6	1.6	1.9	1.7	1.8	1.6	2.1	1.9	2.1	2.2	2.3
C74	Adrenal Gland	0.1	0.1	0.2	0.1	0	0.1	0.2	0.1	0.1	0.2	0.1	0.1	0.3	0.2	0.2	0.2	0.3
C75	Other Endocrine	0.1	0.1	0.1	0	0	0	0	0	0	0.1	0	0.1	0.1	0	0.1	0.1	0
C81	Hodgkin Disease	2.1	1.9	1.7	1.5	2.2	1.9	1.8	2.1	1.9	2	2.4	2.1	2.1	2.1	2.1	2.4	2.1
C82-C85;C96	Non-Hodgkin Lymphoma	6.6	5	5.5	5	6.2	6.1	5.4	5	5.2	6.4	6.2	6.5	6.7	7.1	6.2	7	6.2
C88	Immunoproliferative Disease	0	0	0	0	0	0	0	0	0	0	0.1	0	0	0	0	0	0
C90	Multiple Myeloma	1.8	1.1	0.8	1	1.3	1	1.1	0.9	0.6	0.9	1.1	1.3	1.3	1	0.8	1.2	1.2
C91	Lymphoid Leukemia	2.2	1.8	2.1	2.1	2.3	2	2.1	2.4	2.1	2.2	2.1	2	2.5	2.4	2.1	2.4	2.1
C92-C94	Myeloid Leukemia	1.9	1.7	1.7	2	2	1.9	1.7	2.1	2	1.5	1.9	1.6	2	1.6	2	2	2
C95	Leukemia Unspecified	0.2	0.1	0.1	0.1	0.2	0.1	0.3	0.3	0.2	0.3	0.2	0.2	0.5	0.4	0.6	0.3	0.2
Other	Other & Unspecified	4	3.1	2.6	3.3	3.4	3.4	2.8	3.4	3.5	3.2	3.3	3.9	4.3	3.3	3	3	2.9
All	All sites Total	75.9	67.1	63.1	61	68.7	65	65.1	67.9	67.4	73.9	76.3	80	86.6	80.6	77	84	76.7
Not C44	All sites but C44	73.1	64.1	60.3	58.3	66.4	62.3	62.7	64.4	64.2	70.2	73.3	76.6	82.1	77.4	74	80.4	73.6



**Table 5.5.4 Age Standardized Incidence Rate by Primary Site and Years among Saudi Females, 1994-2010**

ICD (10th)	Site	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
C00	Lip	0.1	0.1	0.1	0	0	0.1	0.1	0.1	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.2	0.1
C01-C02	Tongue	0.7	0.7	0.9	0.8	0.9	0.9	0.6	0.5	0.7	0.7	0.7	0.5	0.6	0.8	0.6	0.7	0.8
C03-C06	Mouth	0.7	1.2	1.1	0.7	1	1.1	0.7	0.6	0.7	0.7	0.5	0.9	0.8	1	0.9	0.7	0.8
C07-C08	Salivary Glands	0.2	0.2	0.2	0.1	0.3	0.2	0.2	0.2	0.1	0.2	0.3	0.2	0.2	0.3	0.2	0.3	0.2
C09	Tonsil	0	0.1	0.1	0.1	0	0	0.1	0	0.1	0.1	0	0	0	0	0.1	0	0
C10	Other Oropharynx	0	0	0	0	0	0	0	0	0.1	0	0.1	0.1	0	0	0	0	0
C11	Nasopharynx	0.9	0.6	1	0.7	0.9	0.8	0.4	0.7	0.8	0.7	0.9	0.7	0.8	0.9	0.8	0.7	0.6
C12-C13	Hypopharynx	0.6	0.3	0.5	0.5	0.6	0.4	0.3	0.3	0.2	0	0.4	0.4	0.2	0.2	0.3	0.2	0.3
C14	Pharynx Unspecified	0	0.1	0	0	0	0	0.1	0	0.1	0	0.1	0	0	0	0	0.1	0
C15	Oesophagus	2.7	1.8	2.2	1.7	1.4	1.4	1.5	1	1.5	1.2	1.2	1.5	1.6	1.2	1.1	0.9	1
C16	Stomach	2.4	2.3	2.1	1.7	1.9	2	1.6	1.7	1.8	1.8	1.7	1.7	2.7	2.5	1.9	2.2	2.3
C17	Small Intestine	0.3	0.4	0.3	0.3	0.5	0.2	0.2	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.2
C18	Colon	2.3	2.7	2.6	2.3	2.2	2.8	2.6	3.4	3	3.4	4.1	4.2	5.1	4.7	5.3	5.9	5.8
C19-C20	Rectum	1.6	1.7	1.6	1.9	1.7	2.2	1.8	2	2.3	2.5	2.6	3.1	3.2	2.9	3.2	3.8	3.4
C21	Anus	0.2	0.1	0	0.1	0.2	0	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.1	0.3	0.2
C22	Liver	3.9	3	3.3	2.9	3.8	2.7	3.2	2.7	2.8	3.3	2.9	2.6	3.3	2.8	2.6	3	3.1
C23-C24	Gallbladder etc.	1.8	1.3	0.8	1	1.6	1.7	1.3	1.4	1.1	1.5	1.2	1.6	1.7	1.9	1.7	1.9	1.8
C25	Pancreas	1.1	1.1	0.8	0.9	1.6	1.2	0.9	0.9	1.4	1	0.9	1.2	1.9	1.2	1.5	1.8	1.6
C30-C31	Nose, Sinuses etc.	0.2	0.2	0.1	0.1	0.2	0.2	0.1	0.1	0.2	0	0.1	0.2	0.3	0.2	0.1	0.1	0.1
C32	Larynx	0.3	0.1	0.2	0.3	0.2	0.3	0.2	0	0.2	0.1	0.1	0.1	0.2	0.2	0.1	0.4	0.1
C33-C34	Trachea, Bronchus, Lung	1.9	2	1.5	1.6	1.5	1.4	1.5	1.5	1.2	1.5	1.6	1.9	2	1.9	1.8	2.1	2.1
C37-C38	Other Thoracic Organs	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0	0.1	0.2	0.2	0.2	0.1	0.2	0.1	0.2
C40-C41	Bone	0.4	0.7	0.7	0.4	0.6	0.5	0.4	0.5	0.4	0.5	0.5	0.4	0.4	0.3	0.6	0.5	0.5
C43	Melanoma of Skin	0.3	0.2	0.2	0.1	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.2	0.1	0.2
C44	Other Skin	2.7	1.7	2.7	1.8	2.4	2.1	2	2.5	2.2	2.9	3.1	2.9	3	2.5	2.4	2.8	2.8
C45	Mesothelioma	0	0	0	0	0	0.1	0	0	0.1	0.2	0.1	0.1	0.1	0.1	0	0.2	0.1
C46	Kaposi Sarcoma	0	0.1	0	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.4	0.1	0.1	0.1	0.1
C47;C49	Connective,Soft tissue	0.9	1.3	1	1	1.1	1	0.8	0.6	0.6	0.8	1.3	0.7	0.6	0.8	0.8	0.8	1.1
C50	Breast	13.3	13	13.2	12.5	13.8	12.4	13.5	12	13.9	14.6	16.1	18.4	18.1	20.5	20.3	23.4	24.9
C51	Vulva	0.3	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.2	0	0.1	0.1	0.1	0.1	0.1
C52	Vagina	0.2	0.2	0	0.2	0	0.1	0	0.1	0.1	0	0.1	0.2	0	0.1	0	0.1	0
C53	Cervix Uteri	2.4	2.2	2.5	2.2	2.8	2	1.9	2	1.8	1.9	1.8	2.1	1.5	1.8	1.7	1.8	1.5
C54	Corpus Uteri	2.1	1.4	1.4	1.5	2	1.6	2.5	2	2.2	2.7	3	3.5	3.8	4	4	5.4	4.6
C55	Uterus Unspecified	0.1	0.1	0.3	0.3	0.5	0.3	0.1	0.3	0.3	0.4	0.3	0.4	0.6	0.7	0.4	0.6	0.6
C56	Ovary	2.9	3	2.7	3.1	3.1	2.3	2.2	2.4	2.2	2.4	2.4	3	2.9	2.6	3.2	3.1	3
C57	Other Female Genital	0	0	0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.1	0.1	0.1
C58	Placenta	0.4	0.2	0.3	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.3	0.2	0.1	0.1	0.1
C64	Kidney	1.4	1	1.1	1.3	1.4	1.4	0.9	1.4	1.4	1.4	1.8	1.2	1.5	1.4	1.6	2	2
C65	Renal Pelvis	0	0	0	0.1	0.1	0.1	0.1	0	0	0.1	0.1	0.1	0.1	0	0	0.1	0.1
C66	Ureter	0	0	0	0	0	0	0	0	0	0	0	0.1	0	0	0	0	0.1
C67	Bladder	0.9	1.1	0.7	0.9	1.2	1	1	1.3	1	1	1	0.8	1	0.7	0.8	0.8	1
C68	Other Urinary Organs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C69	Eye	0.3	0.3	0.4	0.2	0.2	0.4	0.4	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.3
C70-C72	Brain, Nervous System	1.4	1.5	1.4	1.9	1.5	1.4	1.5	1.5	1.3	1.6	1.7	1.4	1.7	1.7	1.4	1.7	1.4
C73	Thyroid	5.5	5.2	4.7	4.9	5.8	5.6	4.8	4.7	4.8	6.3	5.7	6.2	6.6	6.4	7	8.1	7.5
C74	Adrenal Gland	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2
C75	Other Endocrine	0.1	0	0	0	0	0	0	0	0	0	0	0.1	0.1	0.1	0	0	0
C81	Hodgkin Disease	1.4	1.3	1	1.1	1.3	1.2	1.3	1.2	1.1	1.6	1.4	1.3	1.6	1.6	1.6	1.8	1.6
C82-C85;C96	Non-Hodgkin Lymphoma	4.2	4.2	4.1	3.9	5	4.1	4.1	4.4	4.4	5	4.8	5.2	5.1	5.1	5.6	5.1	5.2
C88	Immunoproliferative Disease	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C90	Multiple Myeloma	0.8	1.2	0.7	0.4	0.7	0.8	0.7	0.5	0.5	0.4	0.6	0.6	0.8	1	0.6	0.8	0.9
C91	Lymphoid Leukemia	1	1.6	1.2	1.1	1	1.3	1.7	1.3	1.3	1.2	1.1	1.1	1.3	1.5	1.4	1.6	1.4
C92-C94	Myeloid Leukemia	1.7	1.6	1.6	1.6	1.5	1.6	1.7	1.7	1.8	1.7	1.9	1.6	2.2	1.6	1.5	1.8	1.8
C95	Leukemia Unspecified	0.1	0.1	0	0.1	0.1	0.3	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.3	0.4	0.4	0.2
Other	Other & Unspecified	3.5	3.1	2.8	2.8	4.1	3.3	3.1	3	2.7	3.8	4	3.2	4	3.1	3.3	3.1	3.1
All	All sites Total	70.6	66.9	64.4	62.2	72	65.6	63.4	62.3	64.1	71.2	74.6	77.8	84.4	82.6	82.7	93.1	91.2
Not C44	All sites but C44	67.9	65.1	61.7	60.3	69.6	63.6	61.4	59.8	61.9	68.3	71.6	74.9	81.4	80.2	80.3	90.4	88.4

**Table 6.1 Number of In situ Cases among Saudis and Non-Saudis, 2010**

ICD-10	Topography	Saudis			Non-Saudis			All
		Male	Female	Total	Male	Female	Total	Total
D000	Gum	1	0	1	0	0	0	1
D000	Hypopharynx	1	0	1	0	0	0	1
D000	Tongue-Other	1	0	1	0	0	0	1
D010;D010;D012	Colo-rectal	3	6	9	3	1	4	13
D001	Esophagus	0	0	0	1	0	1	1
D013	Anus	2	0	2	2	0	2	4
D015	Bile Tract	2	0	2	0	0	0	2
D019	Gastrointestinal	0	1	1	0	0	0	1
D020	Glottis	0	1	1	2	0	2	3
D031;D036;D037;D039;D041;D043;D045;D046;D047;D049	Skin	6	7	13	5	2	7	20
D050;D051;D057;D059	Breast	0	47	47	1	19	20	67
D069	Cervix	0	13	13	0	8	8	21
D070	Uteri	0	3	3	0	0	0	3
D071	Vulva	0	2	2	0	1	1	3
D073	Ovary	0	1	1	0	1	1	2
D074	Penis	3	0	3	0	0	0	3
D075	Prostate	3	0	3	0	0	0	3
D090	Bladder	57	14	71	35	4	39	110
D091	Ureter	0	1	1	0	0	0	1
D091	Urethra	1	1	2	0	0	0	2
D092	Eye	2	2	4	1	0	1	5
D097	Pancreas	0	0	0	0	1	1	1
Total		82	99	181	50	37	87	268

**Table 6.2 Number of Myelodysplastic syndromes and chronic Myeloproliferative disorders among Saudis and Non-Saudis, 2010**

ICD-0-3	Morphology	Saudis			Non-Saudis			All
		Male	Female	Total	Male	Female	Total	Total
9950	Polycythemia Vera	8	7	15	0	0	0	15
9960	Chronic Myeloproliferative Disease, NOS	1	3	4	0	0	0	4
9961	Myelosclerosis with Myeloid Metaplasia	2	1	3	0	0	0	3
9962	Essential Thrombocythemia	10	9	19	0	0	0	19
9963	Chronic Neutrophilic Leukemia	0	0	0	0	1	1	1
9964	Hypereosinophilic Syndrome	1	0	1	1	0	1	2
9980	Refractory Anemia	2	0	2	0	0	0	2
9982	Refractory Anemia with Sideroblasts	0	1	1	0	0	0	1
9983	Refractory Anemia with Excess Blasts	11	1	12	0	0	0	12
9985	Refractory Cytopenia with Multilineage Dysplasia	1	0	1	0	0	0	1
9989	Myelodysplastic Syndrome, NOS	13	6	19	0	1	1	20
	<b>Total</b>	<b>49</b>	<b>28</b>	<b>77</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>80</b>

# **PART VI**

## **APPENDICES**

## APPENDIX: A Reporting Health Care Facilities

Asir Region	
Abha General Hospital (Maternity)	King Fahad Hospital (Bishah)
Abha Private Hospital	King Fahad Hospital, AFH
AFS Military South Hospital	Mahael General Hospital
Ahli Hospital (Abha)	Majaridah General Hospital
Al-Borg Laboratory (Khamis Mushait)	Namas General Hospital
Asir Central Hospital (Abha)	Prince Abd Bin Abd Aziz
Bashayer Hospital	Psychiatric Hospital (Asir)
Bisha General Hospital	Rijal Al Maa Hospital
Dhahran Janoob Hospital	Sabt Alaya Hospital
Ghassan Nagib Pharaon	Sarat Obeidah General
Hayat Hospital (KhM)	Saudi German Hospital (Abha)
Khamis Mushayt Civil Hospital	Themal Hospital
Khamis Mushayt General	Zafer Hospital
Baha Region	
Baljurashi General Hospital	Mikhwah Hospital
Ghodran Hospital	Qilwah Hospital
King Fahd Hospital (Baha)	
Eastern Province	
Abqaiq Health Center	King Fahad Specialist
Ahsa Hospital (Hofuf)	King Khalid General Hospital
Al-Borg Laboratory (Khobar)	King Khalid Military
ARAMCO Clinic	Mana General Hospital (DM)
Armed Forces Hospital (Hofuf)	Mana General Hospital (Hofuf)
Astoon Hospital (Thomairy)	Mana General Hospital (Jubail)
Badr Rubaie Dispensary	Mana General Hospital (Khobar)
Dammam Central Hospital	Maternity & Children's Hospital
Dammam Medical Dispensary	Mousa Hospital (Hofuf)
Dossary Hospital (Khobar)	Mouwasat Disp (DM)
Dr Fakhry & Mouhawis Hospital	Mouwasat Hospital (Ahsa)
Dr Noor Khan Hospital (Hofuf)	Mouwasat Hospital (DM)
Eastern Province Hospital	Mouwasat Hospital (Jubail)
Fanateer Hospital	Mouwasat Hospital (Qatif)
Hafr Batin Hospital	Naim Clinic (Hofuf)
Harbeesh General Hospital	Naireia General Hospital
Imam Abd Rahman Bin Fahad	Obeid Hospital (Hofuf)
Jabir Eye & ENT Hospital	Prince Saud Bin Jalawi Hospital
Jubail General Hospital	Psychiatric Hospital (DM)
Jubail Military Hospital	Qatif Central Hospital
Jufer Hospital (Hofuf)	Qatif General Hospital
Khafji General Hospital	Ras Tanura Center (ARAMCO)
Khafji Joint Operation	Rowdha Dispensary
Khafji National Hospital	Royal Commission Hospital
King Abd Aziz Airbase	Saad Specialist Medical
King Abdul Aziz Navy Base	Saddiq Hospital
King Abdulaziz NGH Hospital	Salama Hospital
King Fahad Hospital (Hofuf)	Saudi ARAMCO Medical Services
King Fahad Hospital of the University	Tadawy General Hospital
King Fahad Military Medical	
Hail Region	
Ahli Polyclinic	Maternity & Children's Hospital
Al-Borg Laboratory (Hail)	Rashid Hospital
Bagsa General Hospital	Safa Polyclinic
Hail General Hospital	Salamat Private Hospital
King Khaled General Hospital	Zamzam Private Hospital

## APPENDIX: A (continued...)

Jazan Region	
Abu Arish General Hospital	Farasan General Hospital
Ahad Masarha Hospital	Jazan General Hospital
Al-Borg Laboratory	King Fahd Central Hospital
Aridah Hospital	King Fahd Specialist Hospital
Baysh General Hospital	Sabia General Hospital
Darb Hospital	Samtah General Hospital
Emeis National Hospital	
Jouf Region	
Dawamat Jandal Hospital	Qurayat General Hospital
Maternity & Children's Hospital	Tabarjal General Hospital
Pr Abd Rahman Sudairi Hospital	
Madinah Region	
Adwani General Hospital	Meeqat Hospital
Al-Borg Laboratory (Madinah)	Mouwasat Hospital (Madinah)
Ansar Hospital (MD)	Ohoud Hospital
Ansary Specialist Hospital	Prince Abd Mohsen Ola Hospital
Badr General Hospital (Yanboa)	Rahmah Hospital
Dar Hospital	Royal Commission Medical
Dr Erfan Saadi Hospital (Yanboa)	Safa Madinah Hospital
Dr Hamed Al Ahmadi Hospital	Saudi German Hospital (MD)
Ees General Hospital (Yanboa)	Taiba Diagnostic Center
Hanakyah General Hospital	Yanboa General Hospital
King Fahad Hospital (MD)	Yanboa National Hospital
Madina National Hospital	Zahra Private Hospital
Madinah Maternity & Children	Zen Laboratory
Mahd General Hospital	
Makkah Region	
Abd Rahman Qari Center	King Fahad General Hospital
Abdullah Saeim Daher	King Fahad, AFH(JD)
Abeer Polyclinic (JD)	King Fahd Air Base Hospital
Abuzinada Hospital	King Faisal (Al Shesha)
Adwani General Hospital (Taif)	King Faisal Hospital (Taif)
Alawi Tunsi & Bros Hospital	King Faisal Specialist Hospital
Al-Borg Laboratory (JD)	Maghraby Eye Hospital (JD)
Al-Borg Laboratory (MK)	Maternity & Children's Hospital
Amen Hospital (Taif)	Medical Consultation Clinic
Ansar Hospital (JD)	Mohammad Saleh Bashrahil Hospital
Assahil Medical Clinic	Mustaqbal Hospital (Dhagastani)
Bugshan General Hospital	Nahda National Hospital (Taif)
Chest Disease Hospital (Taif)	New Jeddah Clinic
Dr Abd Rahman Bakhsh Hospital	New Jeddah Hospital
Dr Erfan & Bagedo Hospital	Noor Specialist Hospital
Dr Ghassan Pharaon Hospital	Nourah Oncology Center
Dr Halla Bin Laden Hospital	Pioneers Laboratory
Dr Khalid Idriss Hospital	Qunfudah General Hospital
Dr Solaiman Fakeeh Hospital	Rabegh General Hospital
Eye Hospital (JD)	Rafie Hospital (MK)
Gulf Medical Center	Royal Commission Medical
Hada Military Hospital (AF)	Saedy Medical Clinic
Hai Jamea Hospital	Salam Hospital

## APPENDIX: A (continued...)

Makkah Region (continued...)	
Hamra Hospital	Saudi German Hospital (JD)
Hayat Hospital (JD)	Saudi Hospital
Hera General Hospital (MK)	Shefaa Medical Center
Ibn Sina Hospital(MK)	Sheffaa Hospital
International Medical	Taif Children's Hospital
Jedaani (Safa) Hospital	Taj Polyclinic & Diagnosis
Jeddah Clinic Hospital	Thagher Hospital
Jeddah National Hospital	Torbah Hospital
Khalid Idriss Hospital (JD)	Umm Qura General private
King Abd Aziz Hospital	Umm Qura Poly Clinic
King Abd Aziz Hospital & Oncology Center	United Doctors Hospital
King Abd Aziz Specialist Hospital	Unknown Makkah Hospital
King Abd Aziz University	Zahra Hospital (JD)
Najran Region	
King Khaled Hospital	Najran General Hospital
Maternity & Children's Hospital	Sharourah Armed Forces Hospital
Najran Armed Forces Hospital	Sharourah General Hospital
Northern Region	
Arar Central Hospital	Rafha General Hospital
Prince Abduaziz Bin Musaad Hospital (Arar)	Turayf General Hospital
Qassim Region	
Badaya Hospital	Maternity & Children's Hospital
Bukairiya General Hospital	Midhnab General Hospital
Buraidah Central Hospital	Oyoun Jawaah Hospital
Dr Suliman Al Habib Medical Center	Rass General Hospital
King Fahd Specialist Hospital	Wafa Hospital
King Saud University Hospital	
Riyadh Region	
Adama Hospital	King Abd Aziz Medical City
Advance Cell Laboratory	King Abdul Aziz University Hospital
Advanced Medicine Center	King Fahad Medical City
AFH Military (RKH Program)	King Faisal Specialist Hospital & Research Centre
Afif General Hospital	King Khaled Eye Specialist Hospital
Aflaj General Hospital	King Khaled General Hospital
Ahmed Aba Nami Hospital	King Khaled International
Alam Medical Center	King Khaled University Hospital
Al-Borg Laboratory (RY)	King Saud Medical City
Amal Psychiatric Hospital	Maghraby Eye Hospital (RY)
Anda Medical Laboratory	Mamlaka Hospital(Kingdom)
Armed Forces Wadi Dawaser	Mansoura Medical Clinic
Badri Medical Center	Maternity & Children's Hospital
Bustan Clinic	Medical Care Polyclinic
Chest Diseases Hospital	Mobarak Hospital
College of Dentistry KSU	Moewed Medical Center
Consultative Medical Center	Mouwasat Hospital (Ry)
Consulting Clinics	Muzhamiyah General Hospital
Consulting Radiologist Center	Obeid Hospital(RY)
Dallah Hospital	Olaya Medical Center
Dar Shifa Hospital	Osrah Clinic

## APPENDIX: A (continued....)

Riyadh Region (continued...)	
Dawadmi General Hospital	Prince Salman Bin Abdulaziz
Delta Medical Laboratory	Quwayiyah General Hospital
Derma Hospital	Rathawiah Medical Specialist
Digits Clinic	Rawdhah National Clinic
Dr Abdl Rahman Mishari Hospital	Riyadh Care Hospital (Social)
Dr AbuBaker Yousif Medical Center	Riyadh Medical Center
Dr Fahd Sheduokhy Polyclinic	Romah Hospital
Dr Moagel's Polyclinic	Safa Makkah Polyclinic
Dr Mofarreh Polyclinic	Saudi German Hospital
Dr Mohamed Anazi Med Center	Saudi Medical Services
Dr Salem Mohd Assairi	Security Forces Hospital
Dr Suleiman Habib Med Center	Shaqra General Hospital
Elite Medical&Surgical	Shifa Jazeera Polyclinics
Eman General Hospital	Shmael Female Polyclinics
ENT Medical Center	Specialized Medical Center
Faiha Medical Center	Sports Medicine Hospital
Faleh International Hospital	Sulemaniya Children's
Finger Print Laboratory	Taawin Polyclinic
Green Crescent Hospital	Thadeq General Hospital
Hammadi Hospital	The Eye Consultants
Hotta Bani Tammim Hospital	Thuriah Medical Center
Howtat Sudair Hospital	Transad Clinic
Huraymila General Hospital	United Medical Laboratory
Husainy Hospital (Dawadmi)	Unknown Riyadh Hospital
Jafel International Hospital	Wadi Dawasser Hospital
Jazeera Laboratories	Watan Clinic
Jazeera Medical Clinic	Watani Hospital (Ry National)
Jazeerah Hospital	Wroud Medical Clinic
Khaleejy Medical Clinic	Yamamah Hospital
Khalifa Polyclinic	Zulfi General Hospital
Kharef Clinic	
Tabuk Region	
Badaa Hospital (Tabuk)	King Khalid General Hospital
Dhuba General Hospital	North West Armed Forces Hospital
King Abd Aziz Military Hospital	Prince Fahad Bin Sultan Hospital
King Fahad Hospital (Tabuk)	Umlujj General Hospital (H)
King Khalid Civil	Wajh General Hospital
International Hospitals in the following Countries:	
Australia	Morocco
Bahrain	Nepal
Belgium	New Zealand
Canada	Oman
China	Pakistan
Egypt	Philippines
Eritrea	Qatar
France	Sudan
Germany	Syrian Arab Republic
India	Thailand
Indonesia	United Arab Emirates
Jordan	United Kingdom
Kenya	United States of America
Kuwait	Yemen
Lebanon	

## APPENDIX: B SCR Board Member Contact Information

### SCR Main Office

MBC 64  
PO Box 3354, Riyadh 11211  
Saudi Arabia  
Tel: 011 442 3929  
Fax: 011 448 3924  
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[haleid@kfshrc.edu.sa](mailto:haleid@kfshrc.edu.sa)  
Website: [www.scr.org.sa](http://www.scr.org.sa)

### Chairman:

**Shouki Bazarbashi, MD**

Admin. Director:  
Tumor Registrar:  
Tumor Registrar:  
Tumor Registrar:  
Secretary:

Haya Al Eid, BDS, DFE, CTR  
Mohamed Hayder, CTR  
Maisoun Khaled  
Abeer Mohamed Hayder  
Manuel A. Quindo

### Armed Forces Hospitals

Riyadh Military Hospital  
PO Box 7897, Riyadh 11159  
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Fax: 011 477 7714 x26743  
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### Director:

**Col. Dr. Ali Matar Al Zahrani**

### Central Region

King Fahad Medical City  
PO Box 59046, Riyadh 11525  
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### Director:

**Mushabab Ali Al Asiri, MD**

### Eastern Region

King Fahd Hospital of the University  
PO Box 40004, Al Khobar 31952  
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Fax: 013 896 6741  
Email: [halidrisi@yahoo.com](mailto:halidrisi@yahoo.com)

### Director:

**Prof. Hassan Al Idrissi, MD, PhD**

### King Abdulaziz University Hospital

Faculty of Medicine  
PO Box 80215, Jeddah 21589  
Tel: 02 624 0000 x18244/18253  
Fax: 02 617 1412  
Email: [mahwal@kau.edu.sa](mailto:mahwal@kau.edu.sa)

### Director:

**Prof. Mahmoud Shaheen Al Awal, MD**

### King Faisal Specialist Hospital & Research Center

MBC-64  
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Fax: 011 442 4542  
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### Representative:

**Ali Al-Zahrani, MD, PhD**

### Madinah & Northern Region

Maternity & Children Hospital  
Madinah Al Monawarah  
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Email: [tarawah@yahoo.com](mailto:tarawah@yahoo.com)

### Director:

**Ahmed Tarawah, MD**



## APPENDIX: B (continued...)

### National Guard Hospitals

King Abdulaziz Medical City  
PO Box 9515, Jeddah 21423  
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Fax: 012 624 7242  
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Director:

Amer Naeem Radwi, MD

### Security Forces Hospital

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Fax: 011 802 3814  
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Director:

Abdulaziz Saleh Aba Hussein, MD

### Southern Region

Assir Central Hospital  
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### Western Region

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Oncology Center  
PO Box 31467, Jeddah 21497  
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Hasnah Al Ghamdi, MD

### King Saud University King Khalid University Hospital College of Medicine

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Director:

Khalid Al Saleh, MD

### Ministry of Health

Kingdom of Saudi Arabia  
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Fax: 011 475 0428  
Email: [mysa88@yahoo.com](mailto:mysa88@yahoo.com)

Representative:

Mohammad Y. Saeedi, MD

## APPENDIX C: Cancer Registration Abstract Form

### SAUDI CANCER REGISTRY Ministry of Health Kingdom of Saudi Arabia

### CANCER REGISTRATION ABSTRACT

Revised September 2012

1. ACCESSION DATE

d	d	m	m	y	y

2. CanReg-4 No.  
(Accession Number)

--	--	--	--	--	--	--	--	--	--

(Computer Assigned)

#### PATIENT

3. الأول (Must be filled in Arabic)	4. الأب (Must be filled in Arabic)	5. الجد	6. العتلة (Must be filled in Arabic)

3. First (Must be filled)	4. FATHER (Must be filled)	5. GRANDFATHER	6. FAMILY (Must be filled)

Use SCR standardized name spellings

7. Saudi ID/Passport/ Iqama Number

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

8. Sex

1-Male 2-Female 9-Unknown

9. Date of Birth

d	d	m	m	y	y

(if only year is known, use 01/07/\_\_\_\_)

10. Age at Diagnosis

--	--	--	--

11. Nationality Code

--	--	--

12. Nationality Text (Must be filled)

--

13. Marital Status

1. Single  
2. Married  
3. Divorced  
4. Widowed  
9. Unknown

--

14. Address Code (Must be filled)

--	--	--	--	--	--	--	--

15. Address Details (Must be filled)

City:	Suburb / District	P.O. Box	Zip Code:
-------	-------------------	----------	-----------

16. Mobile Number (Must be filled)

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

17. Telephone Number 1 (Must be filled)

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

18. Extension 1

--	--	--	--	--	--

19. Telephone Number 2

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

20. Extension 2

--	--	--	--	--	--

#### TUMOR

21. Date of Diagnosis

(First time physician states that patient has a malignancy clinically or pathologically)  
(if only year is known, use 01/07/\_\_\_\_)

d	d	m	m	y	y	y	y		

22. Topography Code

C				
---	--	--	--	--

23. Topography Text (Must be filled)

--

24. Morphology Code

--	--	--	--	--

/ (behavior)

25. Morphology Text (Must be filled)

--

26. Behavior

--

2. In situ  
3. Malignant/Invasive

27. Grade

--

1. Well differentiated / Differentiated, NOS  
2. Moderately / Moderately well differentiated  
3. Poorly Differentiated  
4. Undifferentiated / Anaplastic  
5. T-Cell\*  
6. B-Cell/Pre-B/B-cursor\*  
7. Null Cell/Non-T-Non-B\*  
8. Natural Killer cell\*  
9. Unknown\*

\* for leukemias & lymphomas only

28. SEER Summary Stage (Extent)

--

1. In situ  
2. Localized  
3. Regional by direct extent  
4. Regional by lymph node  
5. Regional (both 3 and 4)  
6. Regional, NOS  
7. Distant Metastasis / Systemic disease  
9. Unknown

29. Laterality

--

0. Not paired (unknown, ill defined)  
1. Right  
2. Left  
3. One side, but unknown  
4. Bilateral involvement, laterality origin unknown  
9. Paired site, laterality not stated

30. Basis of Diagnosis

--

0. DCO (death certificate only)  
1. Clinical  
2. Medical Imaging (Radiology)  
3. Surgery (Visualization without Biopsy)  
4. Lab test (tumor marker)  
5. Cytology / Hematology  
6. Histology of Metastasis  
7. Histology of Primary  
8. Autopsy  
9. Unknown

## APPENDIX C: Cancer Registration Abstract Form

### HOSPITAL

31. Date first seen at Source1 for this cancer

(Must be filled)

--	--

d d

--	--

m m

--	--	--	--

y y y y

32. Source 1

--	--	--	--	--	--

33. Reporting Hospital Text

--	--	--	--	--	--	--	--	--	--

34. MRN 1

--	--	--	--	--	--	--	--	--	--

35. Path 1

--	--	--	--	--	--	--	--	--	--

36. Source 2

--	--	--	--	--	--

37. Referral Hospital Text

--	--	--	--	--	--	--	--	--	--

38. MRN 2

--	--	--	--	--	--	--	--	--	--

39. Path 2

--	--	--	--	--	--	--	--	--	--

40. Source 3

--	--	--	--	--	--

41. Referral Hospital Text

--	--	--	--	--	--	--	--	--	--

42. MRN 3

--	--	--	--	--	--	--	--	--	--

43. Path 3

--	--	--	--	--	--	--	--	--	--

44. Source 4

--	--	--	--	--	--

45. Referral Hospital Text

--	--	--	--	--	--	--	--	--	--

46. MRN 4

--	--	--	--	--	--	--	--	--	--

47. Path 4

--	--	--	--	--	--	--	--	--	--

48. Source 5

--	--	--	--	--	--

49. Referral Hospital Text

--	--	--	--	--	--	--	--	--	--

50. MRN 5

--	--	--	--	--	--	--	--	--	--

51. Path 5

--	--	--	--	--	--	--	--	--	--

52. Source 6

--	--	--	--	--	--

53. Referral Hospital Text

--	--	--	--	--	--	--	--	--	--

54. MRN 6

--	--	--	--	--	--	--	--	--	--

55. Path 6

--	--	--	--	--	--	--	--	--	--

### FOLLOW-UP

56. Last Contact

--	--

d d

--	--

m m

--	--	--	--

y y y y

57. Status

--

- 1. Dead
- 2. Alive
- 9. Unknown

58. Cause of Death

--

- 1. Cancer
- 2. Other
- 3. Not Applicable
- 9. Unknown

59. Coder ID #

--	--	--

60. Data Entry ID #

--	--	--

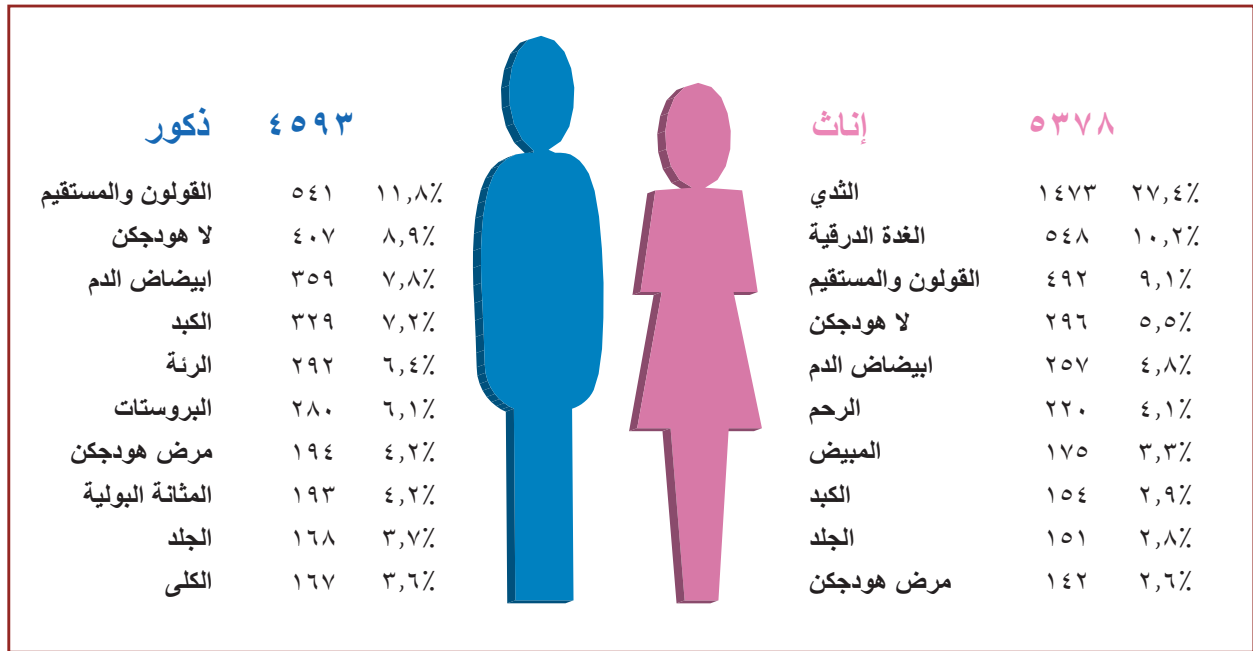
Signature: \_\_\_\_\_

Signature: \_\_\_\_\_

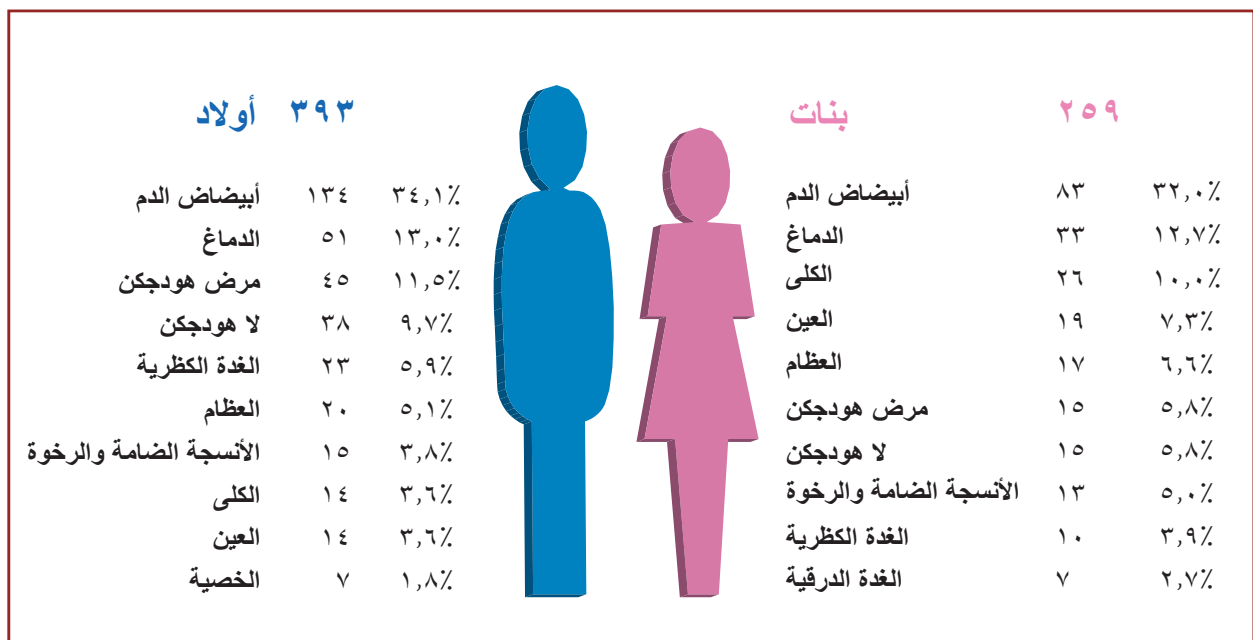
QUESTIONS / QUERIES / PROBLEMS

## السرطانات العشرة الأكثر شيوعاً بين الأطفال السعوديين في كلا الجنسين

يحتل سرطان ابيضاض الدم المرتبة الأولى (٢١٧) حالة بنسبة ٣٣,٣ ٪ يليه سرطان المخ (٨٤) حالة بنسبة ١٢,٩ ٪ ثم السرطان اللمفاوي هودجكن (٦٠) حالة بنسبة ٩,٢ ٪ ثم السرطان اللمفاوي لاهودجكن (٥٣) حالة بنسبة ٨,١ ٪ يليه سرطان الكلى (٤٠) حالة بنسبة ٦,١ ٪ ثم سرطان العظام (٣٧) حالة بنسبة ٥,٧ ٪ ثم العين وسرطان الغدة الكظرية (٣٣) حالة بنسبة ٥,١ ٪ لكل منهما يليهم سرطان الأنسجة الضامة والرخوة (٢٨) حالة ونسبة ٤,٣ ٪ وأخيراً سرطان الكبد والغدة الدرقية (٩) حالات بنسبة ١,٤ ٪ لكل منهما.



## السرطانات العشرة الأكثر إنتشاراً بين السعوديين حسب الجنس, ٢٠١٠



## السرطانات العشرة الأكثر إنتشاراً بين الأطفال السعوديين حسب الجنس, ٢٠١٠

## APPENDIX D: Summary of Cancer Statistics in Saudi Arabia for the Year 2010

### ملخص

#### إحصائيات السرطان في المملكة العربية السعودية لعام ٢٠١٠ م

أنشئ السجل السعودي للأورام في عام ١٤١٢هـ (١٩٩٢ م) بمستشفى الملك فيصل التخصصي ومركز الأبحاث تحت إشراف وزارة الصحة وبمشاركة من القطاعات الصحية الحكومية. يضم السجل خمسة فروع في مناطق المملكة بالإضافة إلى وجود مكاتب في كل من مستشفيات الملك فيصل التخصصي ومركز الأبحاث والقوات المسلحة بالرياض ومدينة الملك عبد العزيز الطبية بجدة وقوى الأمن بالرياض ومستشفى الملك خالد الجامعي بالرياض وجامعة الملك عبد العزيز بجدة.

بدأ السجل نشاطه في جمع المعلومات من شهر يناير في عام ١٩٩٤م. تدون المعلومات عن كل حالة سرطان وفق نموذج خاص بالسجل وترمز البيانات وتدخل حسب النظام المعتمد من منظمة الصحة العالمية وتحلل بشكل دوري. كما أن السجل يقوم بتزويد الجهات المختصة والباحثين بمعلومات إحصائية مفصلة بناءً على طلبهم وفق نموذج خاص على الموقع الرسمي الإلكتروني للسجل (<http://www.scr.org.sa>)

بلغ إجمالي عدد حالات السرطان المسجلة في عام ٢٠١٠ ما مجموعه ١٣,١٥٩\* حالة. من بين هذه الحالات ٩,٩٧١ سعوديين بنسبة ٧٥,٨٪ و ٣,١٨٨ غير سعوديين بنسبة ٢٤,٢٪.

من بين السعوديين ٤,٥٩٣ حالة رجال بنسبة ٤٦٪ والنساء ٥,٣٧٨ حالة بنسبة ٥٤٪.

سعوديين			غير سعوديين			جنسيات غير محددة			الكل
المجموع	انثى	ذكر	المجموع	انثى	ذكر	المجموع	انثى	ذكر	المجموع
١٣١٥٩	١٠٦	٩٢	٣١٨٨	١٤٧٦	١٧١٢	٩٩٧١	٥٣٧٨	٤٥٩٣	

بلغ المعدل العمري المعياري للإصابة بالسرطان ٨٤ في كل ١٠٠,٠٠٠ من السكان (٧٦,٧ بين الرجال و ٩١,٢ بين النساء). سجلت المنطقة الشرقية أعلى معدل لحدوث حالات السرطان ١١٦ في كل ١٠٠,٠٠٠ من السكان تليها منطقة الرياض بمعدل ١١٥ في كل ١٠٠,٠٠٠ من السكان ثم منطقة تبوك بمعدل ٩٢ في كل ١٠٠,٠٠٠ من السكان ثم منطقة القصيم بمعدل ٨١ في كل ١٠٠,٠٠٠ من السكان وأخيراً منطقتي الجوف ومكة بمعدل ٧٧ في كل ١٠٠,٠٠٠ من السكان.

#### السرطانات العشرة الأكثر شيوعاً بين السعوديين في كلا الجنسين

يحتل سرطان الثدي المرتبة الأولى (١٤٩٧) حالة بنسبة ١٥٪ ثم سرطان القولون والمستقيم (١٠٣٣) حالة بنسبة ١٠,٤٪ يليه السرطان اللمفاوي لا هودجكن (٧٠٣) بنسبة ٧,١٪ ثم سرطان الغدة الدرقية (٦٩٧) بنسبة ٧٪ ثم سرطان ابيضاض الدم (٦١٦) بنسبة ٦,٢٪ يليه سرطان الكبد (٤٨٣) بنسبة ٤,٨٪ يليه سرطان الرئة (٣٩٧) بنسبة ٤٪ يليه سرطان هودجكن (٣٣٦) بنسبة ٣,٤٪ ثم سرطان الجلد (٣١٩) بنسبة ٣,٢٪ وأخيراً سرطان المعدة (٢٩١) بنسبة ٢,٩٪.

\* العدد يمثل حالات السرطان بعد استثناء ١٩٨ حالة من جنسيات غير محددة و ٢٦٨ حالة سرطان موضعي (In Situ) و ٨٠ حالة سرطان اجتياحي (Invasive) لم يتم لها تصنيف بعد في ICD-١٠، (جدول ٦,١ و ٦,٢) صفحة ٩٢.







**ISSN: 1658-0559**

