Ten-Year Cancer Incidence

among nationals of the GCC states

1998-2007

Shawwal 1432 H / September 2011

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المركز الخليجي لمكافحة السرطان
GULF CENTRE FOR CANCER CONTROL & PREVENTION

Ten-Year Cancer Incidence

AMONG NATIONALS OF THE GCC STATES

1998-2007

1998-2007
Cancer Incidence Report of the
Cooperation Council States

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10-Year Cancer Incidence Among Nationals of the GCC States 1998-2007

Under the supervision of the

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In collaboration with the

The Research Centre
King Faisal Specialist Hospital and
Research Center –Riyadh

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FOREWORD

In the name of Allah, the most gracious most merciful.

With genuine humility, we acknowledge your aid, O' Allah. Without your guidance, love, and cause this humble contribution would never become a reality.

The Health Ministers' Council for GCC States has a long and proud history. It was settled well as GCC corporation body before other organizations and has the oldest recorded name in the GCC. GCC Health Ministers' Council fosters strong links between ministries of health at GCC States, and worldwide health organizations and institutions including international U.N. health/ health-related organizations. Commitment and Leadership are the key factors towards continuous quality improvement and development, which is manifested by the quality of the council resolutions and Executive Board recommendations and this publication.

Cancer registration is the primary step of any strategic plan aiming at fighting against cancer through effective and targeted implementation of preventive measures and cancer control programs. For this reason, the Health Ministers' Council in its 43 conference (Muharam 1418 – May 1997, Geneva) emphasized the importance of preparing national programs for cancer prevention and control in each member states. Accordingly, the Executive Office of Health Ministers' Council for GCC States has established the Gulf Center for Cancer Registration (GCCR) in 1998 to provide a consistent and reliable database for cancer incidence in the GCC States. Since then, the GCCR main office receives its technical and scientific support from the Research Center at the King Faisal Specialist Hospital and Research Center (KFSH&RC) in Riyadh. This initiative was followed by the development of the first 5-year Strategic plan (2004-2009), then a 10-year strategy (2010-2020) for Cancer Prevention and Control to provide a foundation for the development of a comprehensive coordinated national approach to cancer activities and services.

In February 2011, their Excellencies Health Ministers approved another strategic collaboration and partnership initiative with KFSH&RC through establishment of the Gulf Centre for Cancer Control and Prevention (GCCCP) in order to oversee the implementation of cancer control and prevention strategies in the GCC States. The GCCCP scope is to support services provided and comprises cancer control and prevention measures at all healthcare facilities in the GCC States as well as to implement high quality of care through prevention and control of cancer using research, training, education, collaborations, and public participation.

Today and once again, I am delighted to introduce this comprehensive report on cancer incidence in the GCC States which will provide clarity through the evidence gathered in a collective way over a decade to help to address and design integrated health policies and evidence-based decisions to fight cancer in the Gulf region.

Prof. Tawfik A M Khoja, MBBS, DPHC, FRCGP, FFPH (UK)
Family Physician Consultant
Director General, Executive Board
Council of Health Ministers for GCC States

PREFACE

According to the World Health Organization's most recent figures, the global incidence of cancer was nearly 13 million in 2008. Projected incidence rates are calculated at over 21 million by 2030.

In 2008 over 7.6 million people died from cancer, and projected mortality rates exceed 11 million by 2030; however, WHO reports future mortality rates could be reduced with regular screenings, timely diagnosis and early treatment of cancers.

Cancer registry plays a significant role in providing essential data to ascertain the incidence and prevalence of cancers within a population. Consequently, healthcare providers may well improve cancer mortality rates through data-sharing partnerships with such registry programs.

KFSH&RC hosts a variety of cancer registry programs including the Saudi Cancer Registry, The Gulf Centre for Cancer Registration, and KFSH&RC's local registry that has tracked all diagnosed cancer incidences within the Organization since 1975.
In conjunction with its cancer registry programs, KFSH&RC utilizes state-of-the-art research facilities and progressive educational programs to offer patients the highest level of specialized Oncology care.

I would like to offer my appreciation to the Saudi Cancer Registry, The Gulf Centre for Cancer Registration, and KFSH&RC's Cancer Registry for their dedication in providing valuable information to our researchers, educators, and clinicians alike. Together our initiatives positively impact Cancer Prevention and Care in the region.

Prof. Qasim Al Qasabi, MD, FRCSI, FACS
Chief Executive Officer
King Faisal Specialist Hospital and Research Centre

PREAMBLE AND ACKNOWLEDGEMENTS

Cancer registries are a unique source of information for any cancer control program. These data helps to allocate financial and manpower resources in cost-effective health care planning as well as in the design of early detection and prevention programs. This report provides health authorities in the GCC States with important statistics on cancer incidence and trends that can be used for a better planning and implementation of effective measures on early diagnosis and management of cancer.

This report consists of three sections; Section 1 presents an overall cancer incidence in the GCC States, cancer incidence for 15-year age cohorts, and description on the most common cancers diagnosed between 1998 and 2007. In order to get better understanding of cancer incidence in the Gulf region, cancer incidence for the most common cancers in the GCC States were compared to the cancer incidence in selected countries from all over the world. Section 2 presents cancer incidence by country. For each country, a brief description of overall cancer incidence followed by incidence and trend of the most common cancers in males and females. Section 3 is an overall Arabic summary for cancer incidence in the GCC States.

We welcome your constructive feedback to undertake the appropriate improvements to cancer registration in the GCC States, and to achieve our goal of better understanding of cancer occurrence in order to provide health policy makers with reliable information for assessing and controlling impact of cancer on people of the GCC States.

Cancer registration is a continuous work and commitments of all staff of the National Cancer Registries in the GCC States. Without their desire to achieve a distinguished standard, it would not be able to produce this report. We therefore, would like to thank all those who have contributed and supported cancer registration in the GCC States.

We would like to acknowledge Professor Tawfik Khoja and GCC States' representatives for the Executive Board of Health Ministers' Council for the relentless support for the Gulf Centre for Cancer Control and Prevention (GCCCP).

We would also like to thank H.E. Professor Qasim Al-Qasabi, the CEO of King Faisal Specialist Hospital and Research Centre (KFSHRC) and Dr. Sultan Al-Sedairy the Executive Director of the Research Centre for hosting the GCCCP and for providing necessary scientific and technical supports for the Gulf Center for Cancer Registration (GCCR) since its establishment in 1997.

Ali Al-Zahrani, MD, PhD
Executive Director, GCCCP
Deputy Executive Director, Research Centre
King Faisal Specialist Hospital and Research Centre

INTRODUCTION

Cancer is a major health problem in both developed and developing countries. The estimated number of new cases of cancer each year is expected to rise from 10 million in 2000 to 16 million by 2020. The estimated number of new cases of cancer each year is expected to continue rising every year by 3 to 4 %. Nearly 60% of the increase will occur in developing countries where healthcare facilities and patients care are limited. In the Eastern Mediterranean Region (EMR) cancer incidence is predicted to rise by 1.8 folds during next decade.

Rapid improvement in the healthcare together with the control of communicable diseases, increased life expectancy at birth, and with rapid socioeconomic changes resulting in modified lifestyles such as increased prevalence of tobacco use, decrease in physical activity and rapid uptake of unhealthy food habits has resulted in an increased incidence of cancer in the developing countries.

Every year cancer kills more than 6 million people worldwide. Cancer is the second most frequent cause of death in majority of the developed countries and 4th leading cause of death in the EMR after cardiovascular diseases, infectious diseases and injuries. Causes and types of cancer vary in different regions of the world but in most countries there is hardly a family without a cancer victim.

Cancer involves more than 100 diseases with different etiologic factors, preventive approaches, and treatment modalities. However, 40% of all cancers are preventable, another 40% are curable if diagnosed early and treated promptly, and the remaining 20% can be treated with palliative therapy to reduce suffering of cancer patients. Therefore, fighting against cancer necessitates integration between primary, secondary, and tertiary medical care in any country.

In the Gulf Region, the Gulf Center for Cancer Registration (GCCR) was established in 1997 to provide reliable cancer incidence for the Nationals of the GCC States. GCCR works under the jurisdiction of the Executive Office of the Health Ministers' Council for GCC States. The main office is located in the premises of the Research Center, King Faisal Specialist Hospital and Research Center. The aggregated data from the six national cancer registries representing the six Gulf countries: United Arab Emirates (UAE), Kingdom of Bahrain, Kingdom of Saudi Arabia (KSA), Sultanate of Oman, State of Qatar, and State of Kuwait is considered to be the largest in Asia. The primary objective of the GCCR is to collect and classify information on all cancer cases in order to produce statistics on the occurrence of cancer in a define population, to provide technical support for early detection and screening programs and to facilitate

epidemiological studies on cancer in order to provide a framework for assessing and controlling the impact of cancer on the GCC States communities. This initiative was the groundwork for the strategic plans (2004-2009 and 2010-2020) for Cancer Prevention and Control in the GCC States. Furthermore, a framework comprising seven approaches and strategic actions has been developed to support member States in developing national action plans and in implementation of cancer control activities. These strategies are in line with the WHO Global Strategy for the Prevention and Control of Non communicable Diseases (2008-2013) and the WHO strategy against cancer through effective integration between primary, secondary, and tertiary prevention programs aiming to prevent preventable cancers, to cure curable cancers through early detection and management, and to relieve pain and improve quality of life through palliative care services.

This report covers all cancer diagnosed between January 1998 and December 2007 among Nationals of the GCC States. Data on cancer site, histology, stage, behavior and extent of the disease, basis of diagnosis and methods of treatment are collected from patients' medical records, histopathology and radiology reports, clinical notes, and death certificates at National Cancer Registries (NCRs) in each member state. These data are verified at main office of the Gulf Center for Cancer Registration for ensuring before they can be merged and subsequently analyzed.

In this report, data were analyzed using the Statistical Analysis System (SAS version 9.2, SAS Institute Inc., Cary, NC, USA), powerful and professional software, to perform statistical analyses that range from simple counts, averages and percentages to detailed classification by cancer sites, gender, age groups and incidence rates. Regression analysis was used to test the trend of ASR of the top ten cancers over the years (1998-2007). Crude Incidence Rates (CIR) and Age Standardized Rates (ASR) were calculated using the corresponding GCC States mid-point population for the year 2002 and 2003. ASR is a summary measure that a population would have if it had a standard age structure. We used the world standard population for developing countries to calculate the world standardized incidence rate per 100,000 populations.

Population estimates provided by each National Cancer Registry were used to calculate ASR to compare cancer incidence between different countries. These rates are sensitive to changes in the number of reported cases due to underreporting and changes in the population structure. Therefore, there is a potential for some changes in cancer incidence rates in the GCC countries that did not have recent population census available for this report or those depend on fewer sources for cancer case identification.

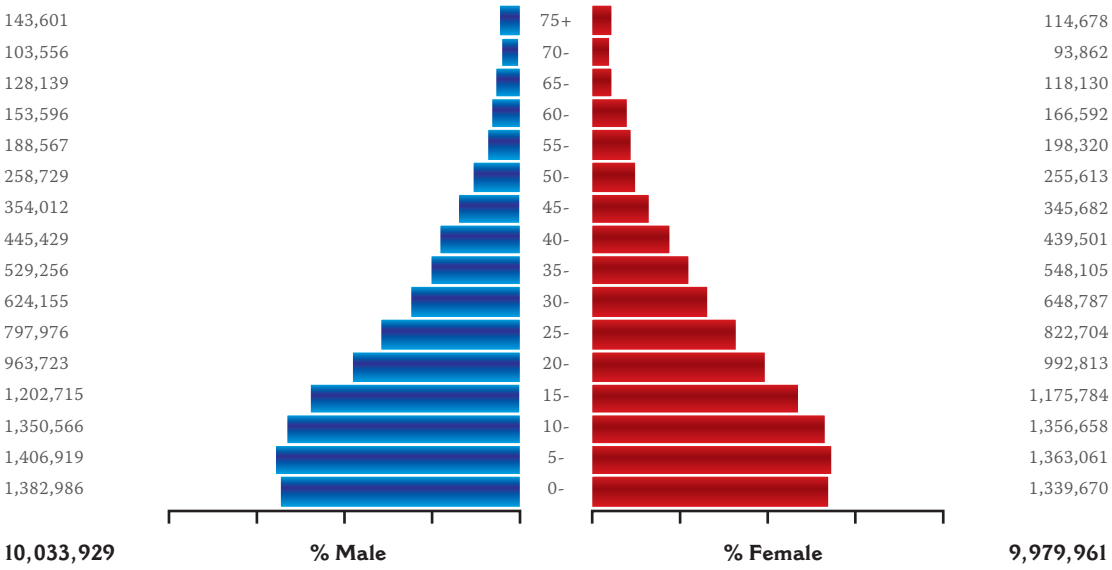


Figure 1.1 ▲
Estimated Mid-point 1998-2007 Population for GCC States' Nationals by Gender.

Section I

CANCER INCIDENCE IN THE GCC STATES

Overall Incidence

From January 1998 to December 2007 there were 95,183 newly diagnosed cancer cases among GCC States' nationals reported by the six National Cancer Registries (UAE, Bahrain, SA, Oman, Qatar, and Kuwait), 47,250 cases (49.6%) were males and 47,933 (50.4%) were females. Majority of cases (73.5%) reported from KSA, followed by Oman (9.3%), Kuwait (7.3%), Bahrain (4.4%), UAE (3.8%), and Qatar (1.7%), Table 1.1.

Diagnosis of cancer based on histopathological confirmation was present in 84.2% of cases (83.1% in males and 85.3% in females), followed by cytological confirmation in 8.8% of cases. Radiological reports were used in 2.9% and Death Certificates Only (DCO) was used in 2.7% as independent source for cancer registration, other sources such as clinical, surgical, cancer biomarkers were used in less than 1% indicating high degree of certainty of cancer diagnosis in the GCC States, Table 1.2.

Overall, 47% of cancer cases presented with advanced tumors (either regional or distant metastasis) at the time of diagnosis (46% in males and 49% in females). Only 22% of patients presented with localized tumors and 1% with in situ. Unknown extent of cancer was reported in almost 30% of patients (32% in males and 27% in females), Figure 1.2.

The average annual cancer incidences for the 10-year period from 1998 to 2007 found to be similar for GCC males and females (79.3 per 100,000). In males, the highest average Age Standardized cancer incidence Rate (ASR) per 100,000 population was reported among Bahraini nationals with 158.5, followed by Qataris with 153.4, then Kuwaitis with 130.5, Omanis with 92.5, UAE males with ASR of 82.3 and Saudi males with 72.5. Whereas in females, the highest average ASR was among Qatari women with 172.2 per 100,000 populations, followed by Bahraini women with ASR of 154.6, then Kuwaiti women with 142.0, UAE women with 95.1, Omani women with 82.6, and the lowest incidence was among Saudi women with ASR of 71.2 per 100,000 population, Figure 1.3.

The average annual ages specific incidence rates increase dramatically with advancing age in both genders, Figures: 1.4 and 1.5.

Table 1.1 ▼
Number of Cancer Cases Reported to GCCR by Nationality and Gender, 1998-2007.

NATIONALITIES	MALE	%	FEMALE	%	TOTAL	%
United Arab Emirates	1733	3.7	1863	3.9	3596	3.8
Kingdom of Bahrain	2029	4.3	2183	4.6	4212	4.4
Kingdom of Saudi Arabia	35046	74.2	34895	72.8	69941	73.5
Sultanate of Oman	4672	9.9	4218	8.8	8890	9.3
State of Qatar	772	1.6	859	1.8	1631	1.7
State of Kuwait	2998	6.3	3915	8.2	6913	7.3
TOTAL	**47250**	**100**	**47933**	**100**	**95183**	**100**

Table 1.2 ▼
Distribution of Basis of Diagnosis for Males, Females and All in the GCC states, 1998-2007.

BASIS OF DIAGNOSIS	MALE	%	FEMALE	%	ALL	%
Histolopathology	39275	83.1	40891	85.3	80166	84.2
Cytology/Hematology	3929	8.3	4453	9.3	8382	8.8
Radiology	1744	3.7	976	2.0	2720	2.9
Death Certificate Only	1532	3.2	1072	2.2	2604	2.7
Unknown	368	0.8	277	0.6	645	0.7
Clinical/Surgical	268	0.6	184	0.4	452	0.5
Other laboratory tests (Biomarker)	134	0.3	80	0.2	214	0.2
TOTAL	**47250**	**100.0**	**47933**	**100.0**	**95183**	**100.0**

Figure 1.2 ▼
Distribution of cancer extent at time of diagnosis (male, female, all) 1998-2007.

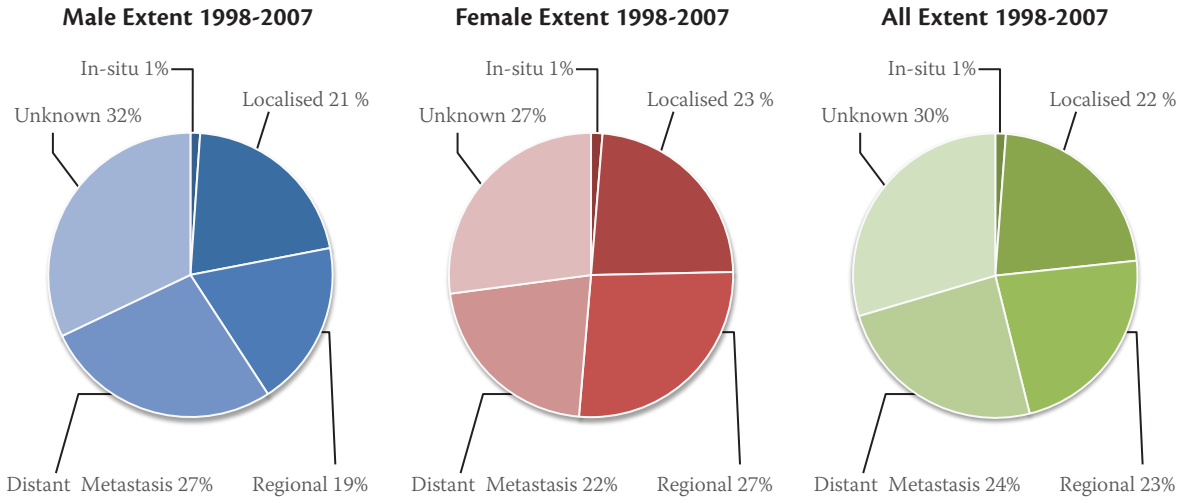


Figure 1.3 ▼
Average annual Age Standardized incidence Rate (ASR) of all Cancers in the GCC States, 1998– 2007: Male and Female.

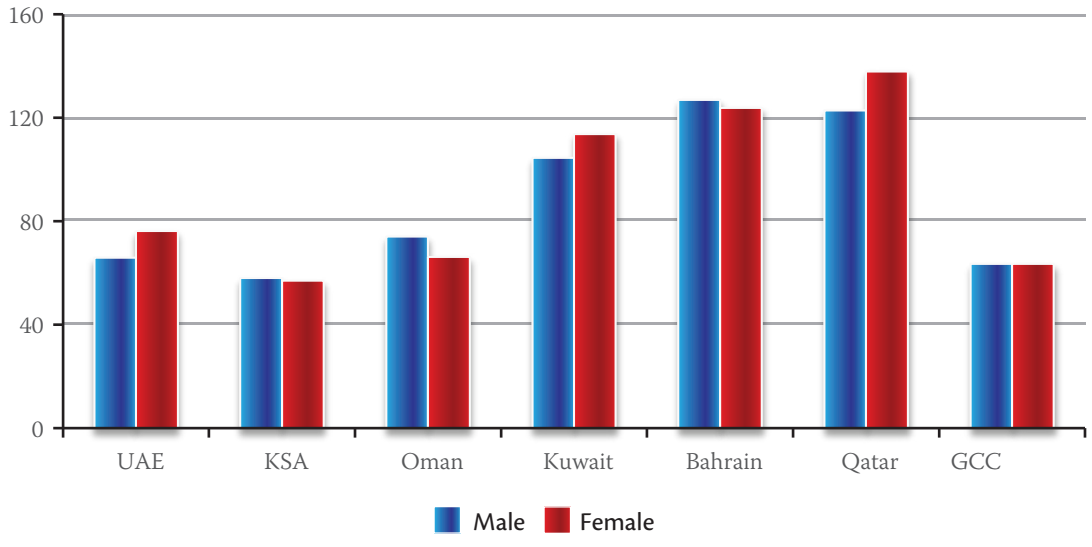
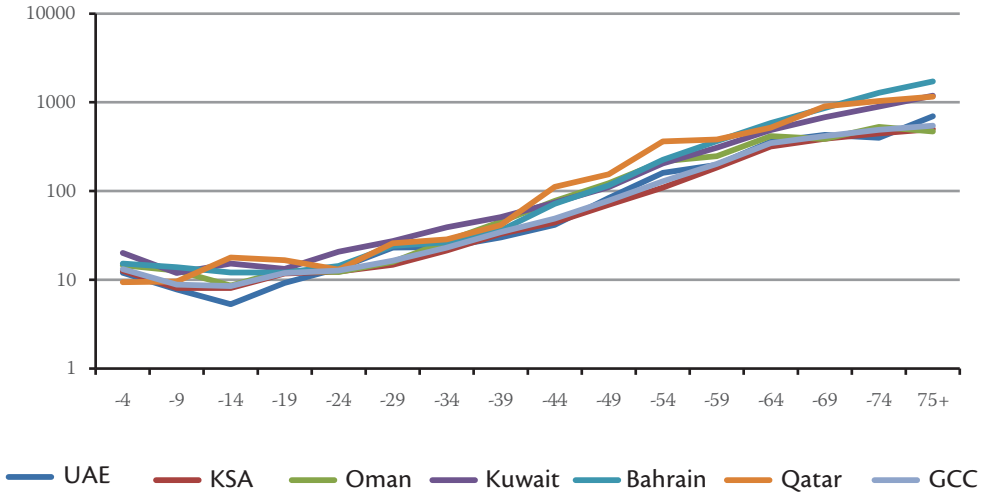
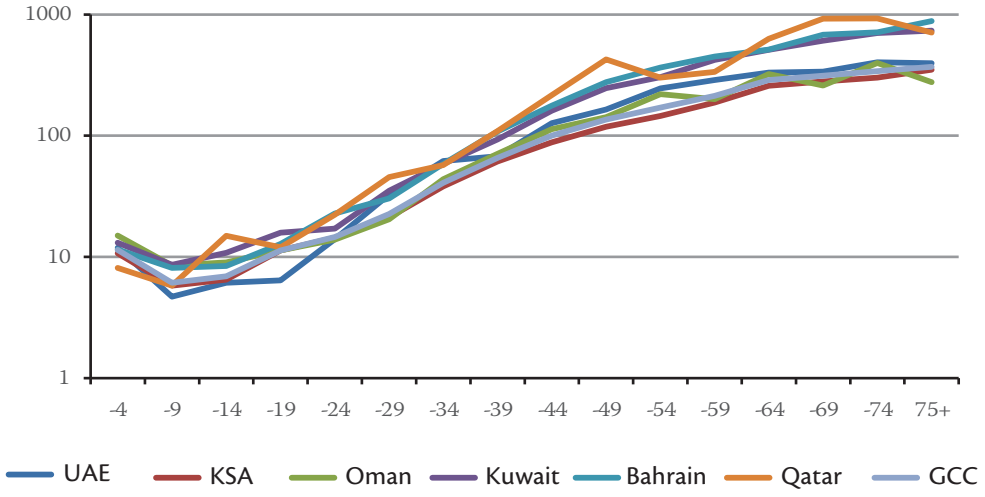


Figure 1.4 ▼
Average annual Age Specific Incidence Rates of all Cancers in the GCC States, 1998-2007: Male.



▲ Figure 1.5
Average annual Age Specific Incidence Rates of all Cancers in the GCC States, 1998-2007: Female.



MOST COMMON CANCERS IN THE GCC STATES, 1998-2007

This section shows the most common cancers reported among nationals of the GCC States in different age cohorts followed by highlights on the most common cancers diagnosed between January 1998 and December 2007.

A. Common Cancers in Different Age Cohorts

Total of 95,183 cancer cases (47,250 males and 47,933 females) were diagnosed among Nationals of the GCC States between January 1998 and December 2007. In males, NHL was the commonest tumor contributed to 8.8% from the total cancers, followed by colorectal cancer, leukemia, lung, and liver cancers, whereas in females, breast cancer was the commonest cancer accounted for 23.5. % from total cancers followed by thyroid cancer, colorectal, NHL, and leukemia Figure 1.6.

Total of 87,902 (92.3%) newly diagnosed cancer cases reported among GCC States' nationals aged above 15 (43,046 males and 44,856 females). In males, colorectal cancer was the most common cancer accounted for 9.6% followed by NHL in 8.7%, lung cancer in 8.3%, and liver cancer in 8.1%. In females, breast cancer remains the most common cancer accounted for 25.2% followed by thyroid cancer (9.7%), colorectal (7.9%), NHL (5.9%), and ovary cancer (3.8%) of all female cancers in this age group, Figure 1.7.

In children below 15 years, total of 7,673 (8.1%) cancer cases were reported (4,290 among boys and 3,383 among girls). leukemia, brain, Hodgkin's disease, and NHL were the most common cancers in boys and girls, Figure 1.8.

Total of 8,712 (9.1%) cases were diagnosed among GCC States' Nationals aged between 15 and 29 years (4,003 males and 4,709 females). Leukemia, Hodgkin's disease, and NHL were the most common cancers accounted for about 50.3% of all cancers in this age group in males. Whereas, thyroid cancer was the most common cancer in females accounted for about one fourth of all cancers in this age group, followed by Hodgkin's disease and breast cancer, Figure 1.9.

Total of 16,118 cancer cases were diagnosed among GCC States' Nationals aged between 30 and 44 years. Females were almost twice males in this age group (5,477 were males, and 10,641 were females). Colorectal cancer was the second most common malignancy reported after NHL in males and third in females. Breast and thyroid cancer represented nearly 55% from total number of cancers in females, whereas cervix uteri cancer ranked 4th and ovarian cancer ranked 7th in this age group, Figure 1.10.

Total of 23,177 (24.3%) cancer cases were diagnosed among GCC States' nationals aged between 45 and 59 years (9,902 were males and 13,275 were females). Colorectal cancer was the most common cancer in males and second in females. Lung cancer ranked second in males followed by NHL. Liver cancer ranked 4th in males and 7th in females. Breast cancer was the most common cancer accounted 32.4% of all female cancers in this age group. Thyroid cancer ranked third with 6.9% followed by NHL, cervical and uterine cancer. Stomach cancer ranked 6th in males and 10th in females. Prostate cancer starts to appear among the top ten cancers in this age group, Figure 1.11.

Total of 27,443 (28.8%) cancer cases were diagnosed among those aged 60 to 74 years (15,751 males and 11,692 females). This age cohort reported the highest number of cancer cases (28.2% from the total number of cases diagnosed between 1998 and 2007). Lung cancer was the commonest among males accounted for 11.1% followed by liver cancer (10.8%), prostate cancer (10.1%), colorectal cancer (9.6%) and pancreas starts to appear in this age group.

Breast cancer was the commonest cancer among females accounted for 16.9%, followed by colorectal (9.1%), NHL (6.8%) and liver cancer (5.5%) of all cancer cases in this age group, Figure 1.12.

Total of 12,094 (12.7%) newly diagnosed cancer cases were among GCC States' nationals aged 75 years or older (7,844 males and 4,250 females). Prostate cancer was the most common cancer accounted for 13.4% followed by liver cancer (10%), lung cancer (8.7%), and urinary stomach cancer (7.4%). In females, breast cancer remains the most common cancer accounted for 10.6% followed by colorectal cancer (9.9%), NHL (7.2%), and esophagus starts to appear in this age group, Figure 1.13.

Figure 1.6 ▼
Most common cancers among nationals of the GCC States, 1998-2007.

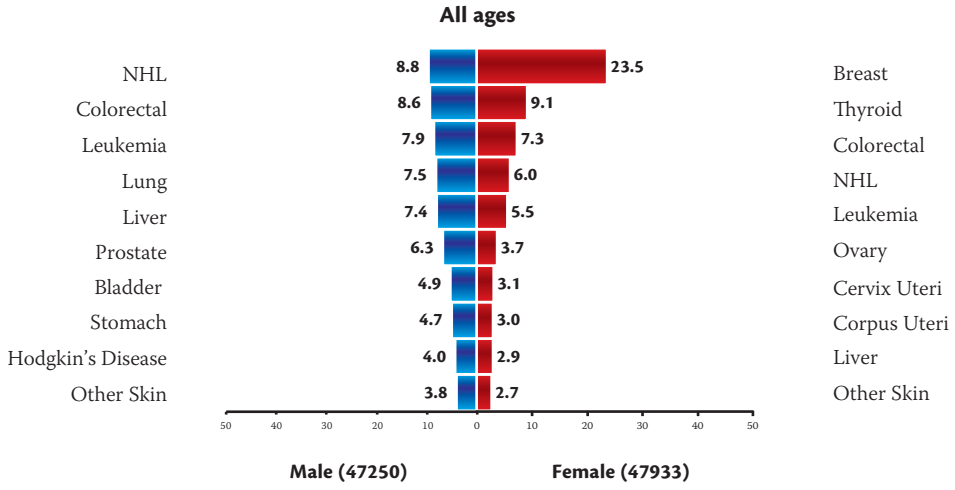


Figure 1.7 ▼
Most common cancers among nationals of the GCC States aged ≥ 15 years, 1998-2007.

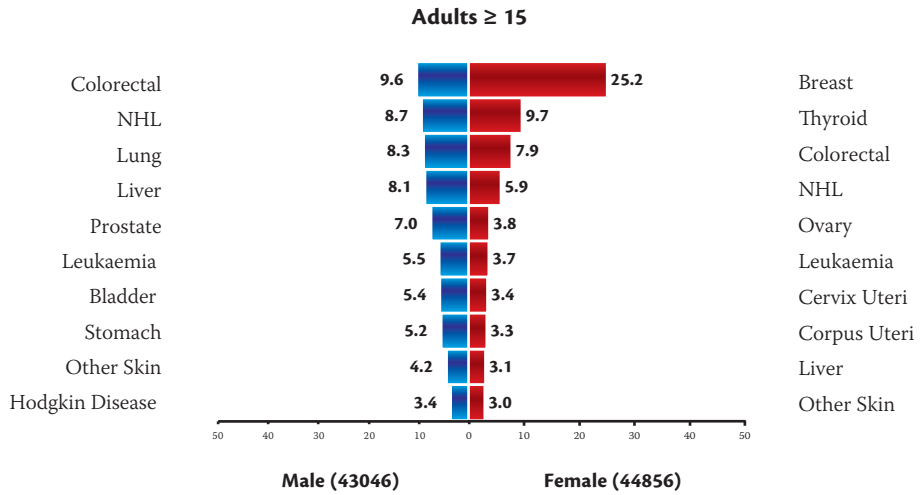


Figure 1.8 ▼
Most common cancers among nationals of the GCC States aged between 0-14 years, 1998-2007.

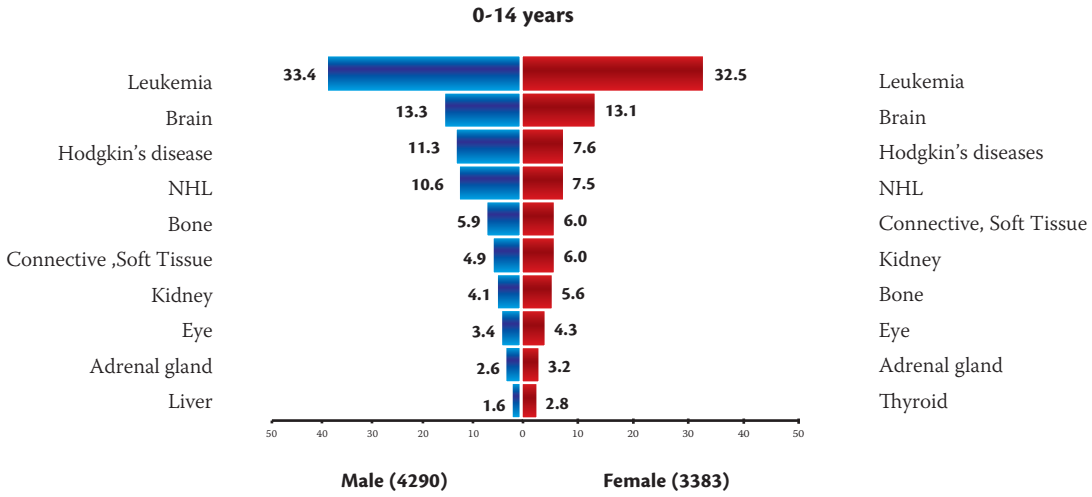


Figure 1.9 ▼
Most common cancers among nationals of the GCC States aged between 15-29 years, 1998-2007.

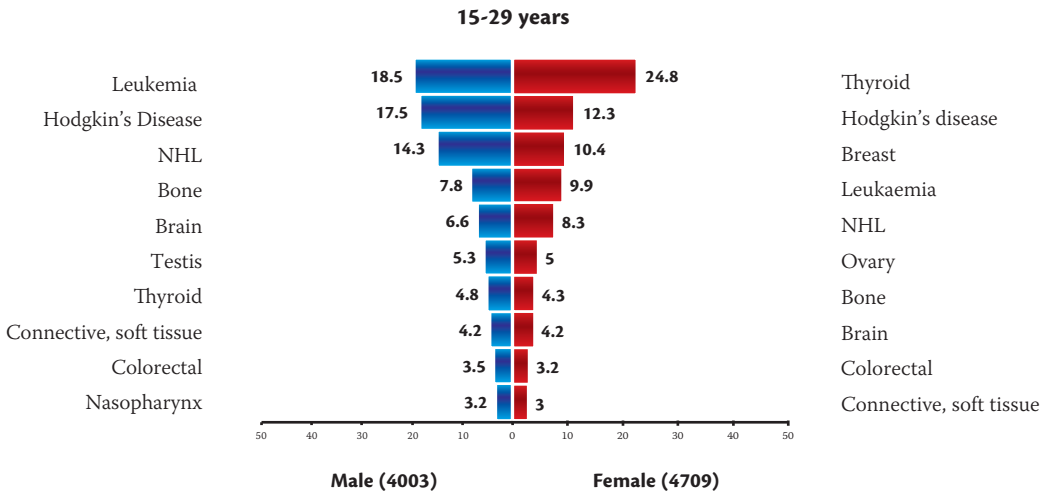


Figure 1.10 ▼
Most common cancers among nationals of the GCC States aged between 30-44 years, 1998-2007.

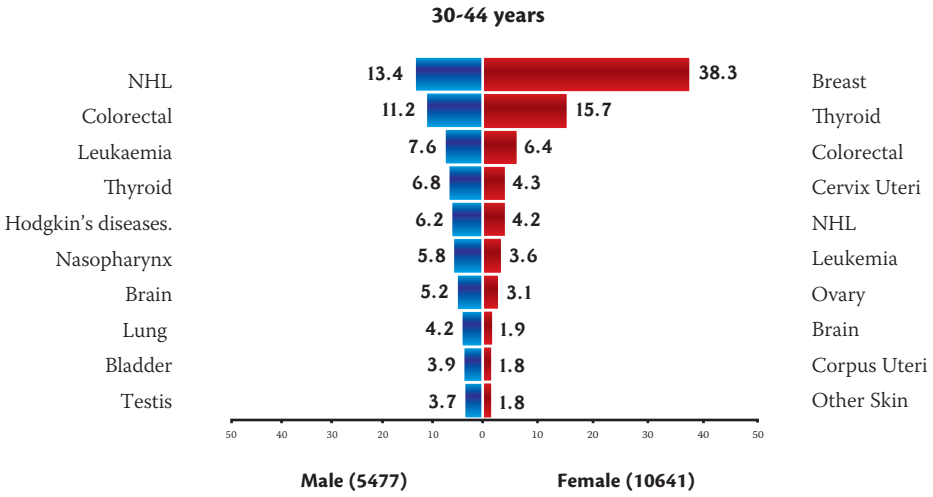


Figure 1.11 ▼
Most common cancers among nationals of the GCC States aged between 45-59 years, 1998-2007.

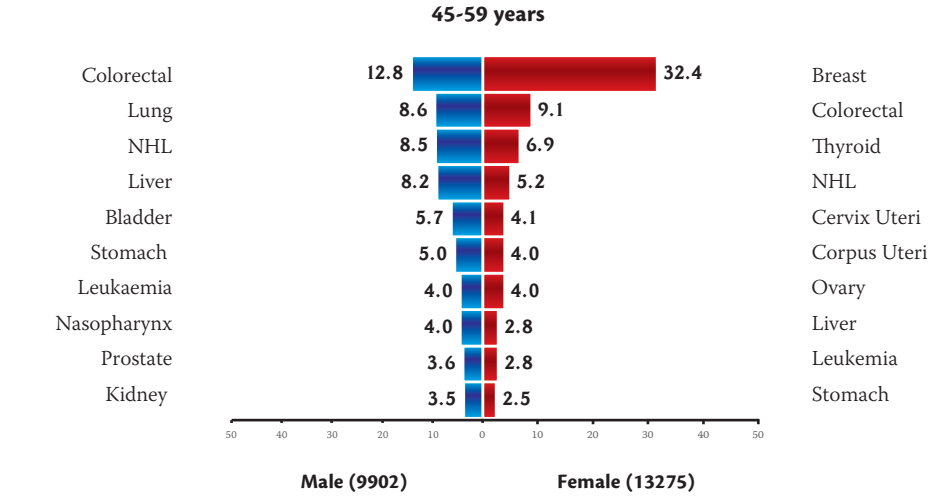


Figure 1.12 ▼
Most common cancers among nationals of the GCC States aged between 60-74 years, 1998-2007.

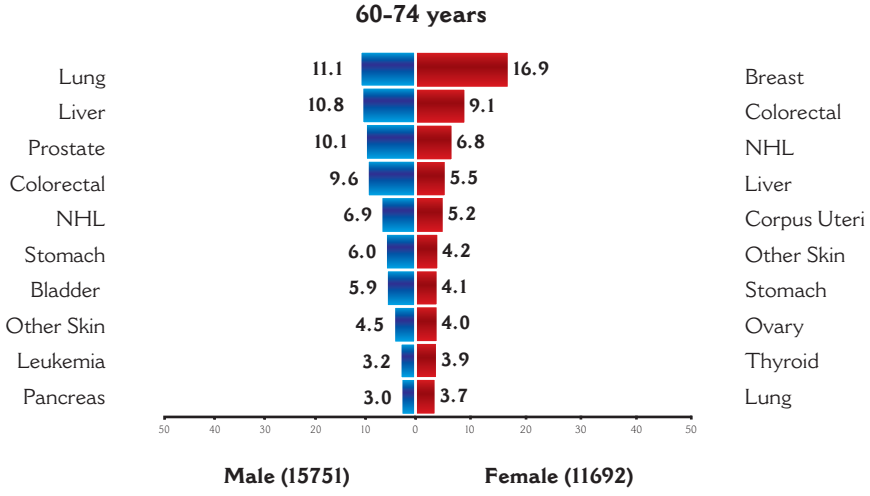
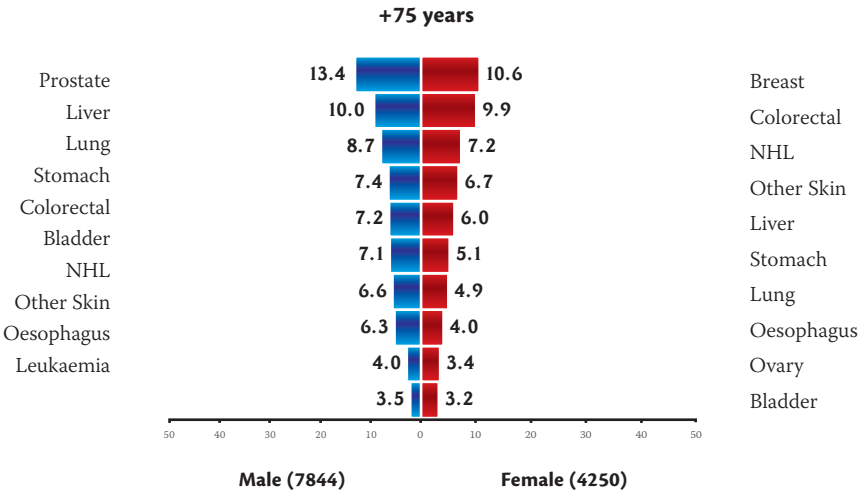


Figure 1.13 ▼
Most common cancers among nationals of the GCC States aged between ≥ 75 years, 1998-2007.



BREAST CANCER

Breast cancer is the most common cancer in the GCC States. Between January 1998 and December 2007, there were 11,396 breast cancer cases reported. It accounted to 11.8% from all cancers and 23.5% from cancers among females.

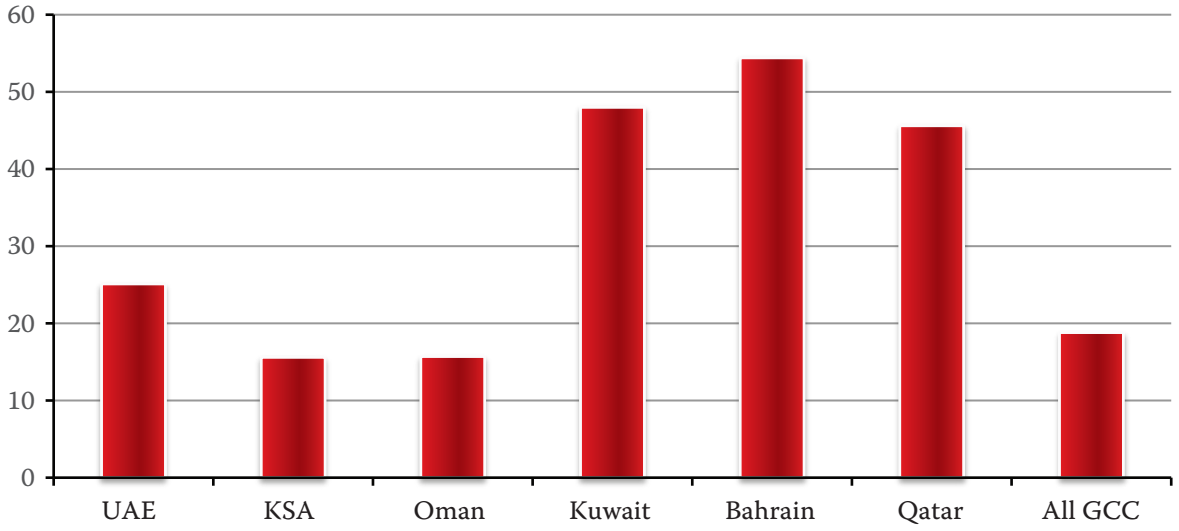
The overall ASR for all GCC States women was 18.8 per 100,000 populations. Bahrain reported the highest incidence of breast cancer with ASR per 100,000 women of 54.4 followed by Kuwaiti women (48.0), Qatari (45.6), UAE (25.1), Oman (15.7), and the lowest ASR was reported in KSA women (15.6), Figure 1.14.

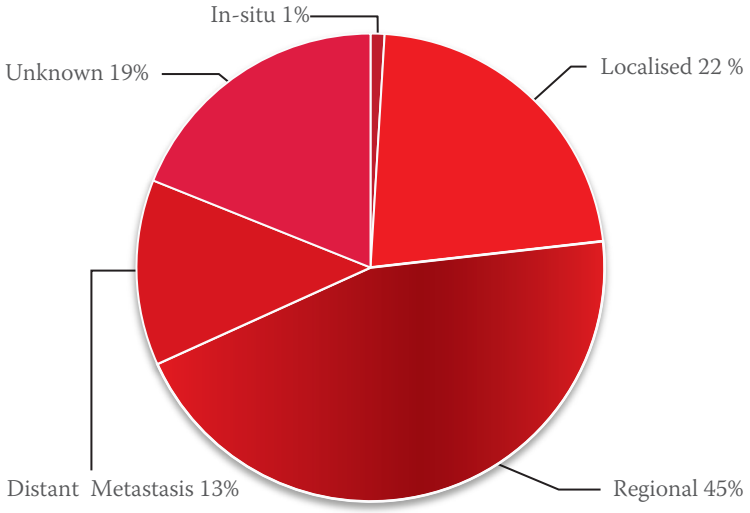
Advanced breast cancer was present in 57.8% of cases (45% with regional metastasis and 12.8% with distant metastasis). Localized tumors were present in 22.2% and unknown extent of cancer was present in about 19.0%.

Infiltrating ductal carcinoma was the most frequent histopathology type accounted to 76.8% from all breast cancers, Table 1.3 and figure 1.15.

Breast cancer incidence continues to increase over the ten-year period among GCC women. The total number of newly diagnosed female breast cancer increased by 20% between 1998 and 2007. The trend of age standardized incidence rate was significantly increased during the same period (p-value = 0.0008), Figure 1.16.

Figure 1.14 ▼
Age Standardized incidence Rate (ASR) of Female Breast cancer in the GCC States, 1998-2007.



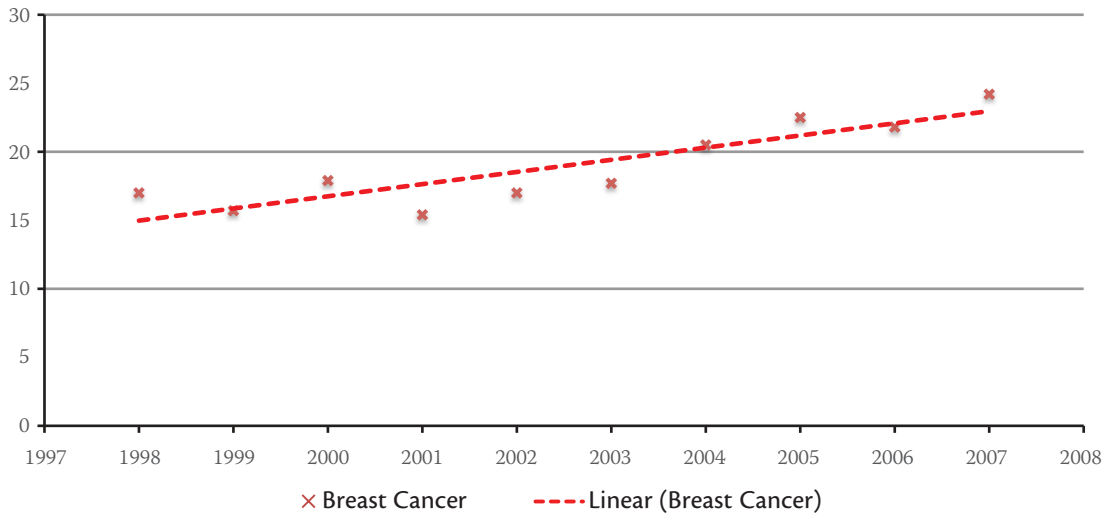


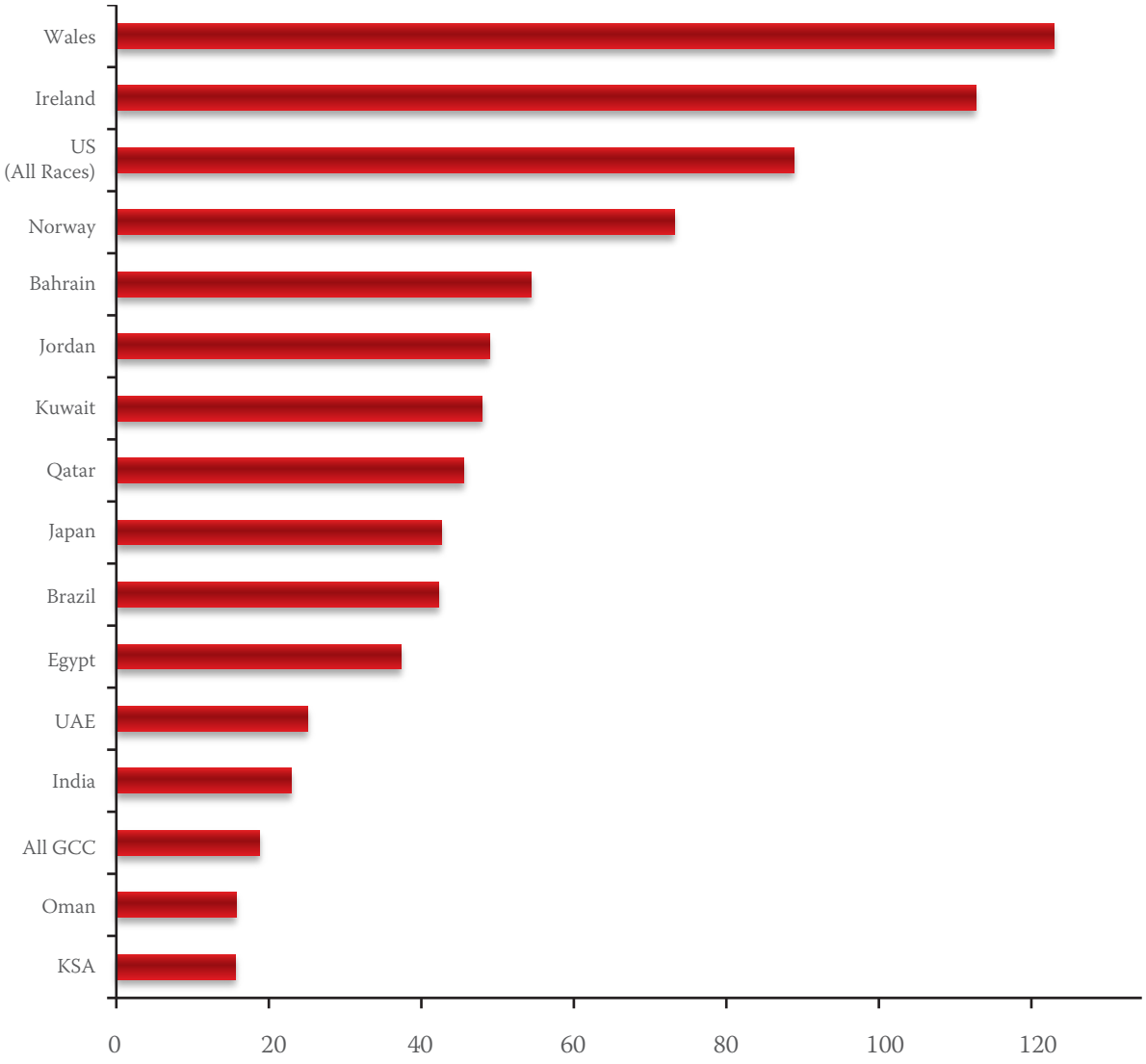
◄ Figure 1.15
Extent of Breast Cancer at diagnosis.

Table 1.3 ▼
Morphological Distribution of Breast Cancer in GCC states, 1998-2007.

MORPHOLOGY	ICD 10	N	%
Infiltrating duct carcinoma, NOS	8500	8672	76.8
Lobular carcinoma, NOS	8520	580	5.1
Carcinoma, NOS	8010	547	4.8
Neoplasm, malignant	8000	227	2.0
Medullary carcinoma, NOS	8522	189	1.7
Infiltrating duct and lobular carcinoma	8510	176	1.6
Adenocarcinoma, NOS	8140	119	1.1
Infiltrating duct mixed with other types of carcinoma	8523	85	0.8
Paget disease and infiltrating duct carcinoma	8541	83	0.7
Phyllodes tumor, malignant	9020	82	0.7
Others		536	4.7
TOTAL		11296	100.0

▼ Figure 1.16
Trend of breast cancer among nationals of the GCC States, 1998-2007.





▲ Figure 1.17
Comparison of the Female Breast cancer in the GCC States with Selected countries.

COLORECTAL CANCER

Colorectal cancer is the second most common cancer in the GCC States. During the 10-year period, 7,641 colorectal cancer cases (8.0% from all cancers) were reported from all GCC States. The overall ASRs for all GCC States were 7.6 and 6.5 per 100,000 populations for males and females respectively. Kuwait reported the highest incidence of colorectal cancer (15.5) among males followed by Qatar and Bahrain. Oman reported the lowest ASR in males (5.5). Qatari women had the highest incidence of colorectal cancer (ASR per 100,000 population) (16.6) followed by Kuwait and Bahrain whereas Oman reported the lowest incidence (4.1), Figure 1.18.

Advanced colorectal cancer was present in 60% of cases (22% with regional metastasis and 38% with distant metastasis). Localized tumors were present in 20% and unknown extent of cancer was present in about 19.0%.

Adenocarcinoma was the most frequent histopathological type accounted to 74.4% from all colorectal cancers, Figure 1.19 and Table 1.4.

Colorectal cancer incidence continues to increase during the ten-year period in both genders. Between 1998 and 2007, the total number of newly diagnosed colorectal cancer increased by 2.3 folds in males and 2.7 folds in females. There was observed increased in the trend of the age standardized incidence rate, it was significantly increased for both genders (p-value=0.0008 in males, and p-value <.0001 in females), Figure 1.20.

Figure 1.18 ▼
Age Standardized incidence Rate (ASR) of colorectal cancer in the GCC States, 1998-2007.

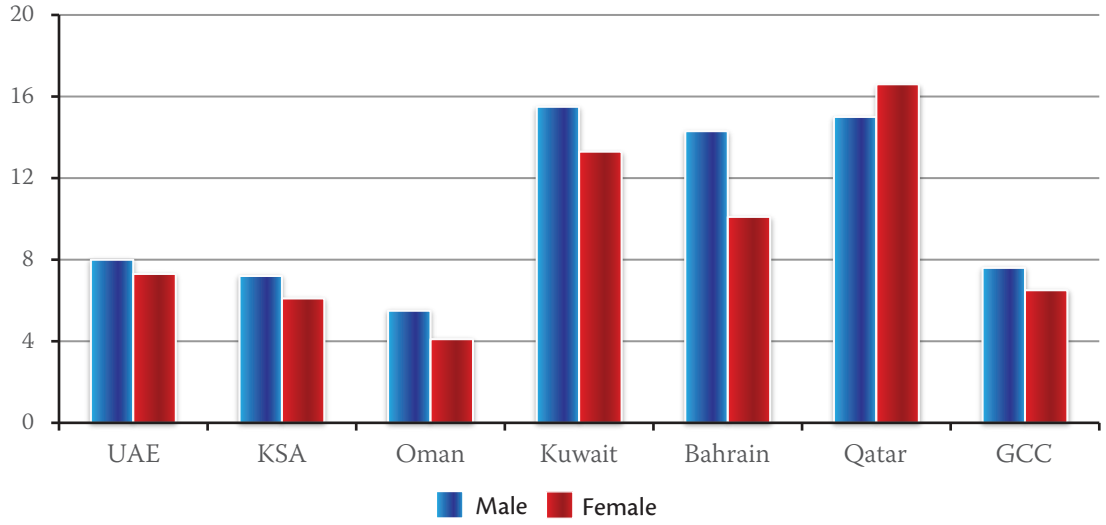


Figure 1.19 ▼
Extent of Colorectal cancer at diagnosis.

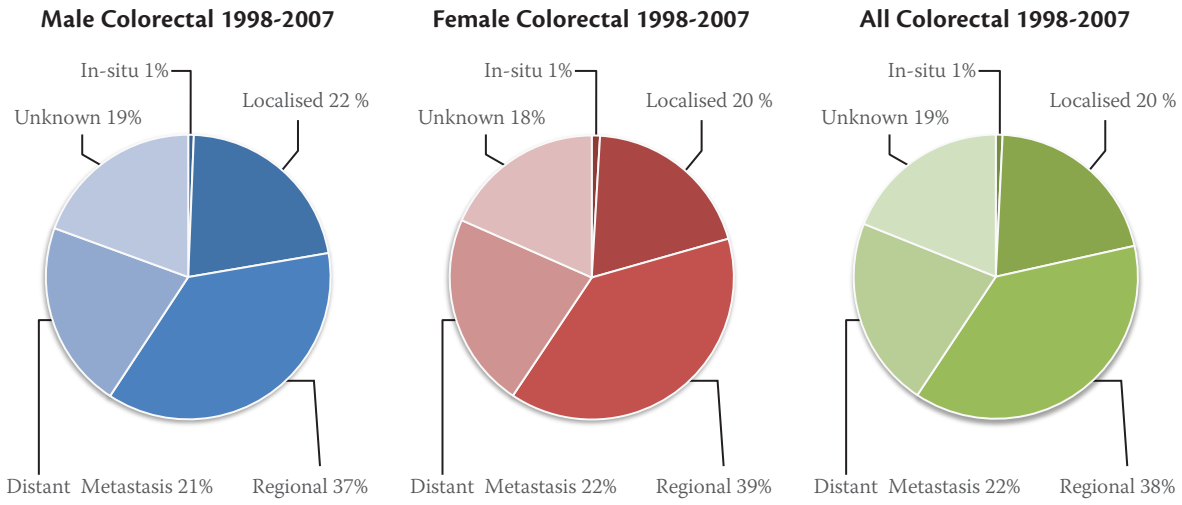
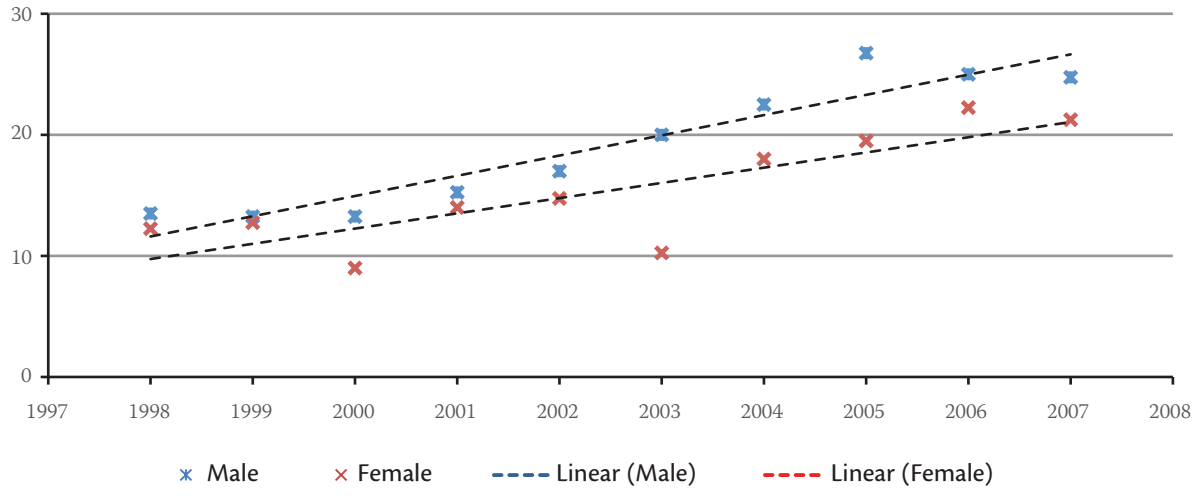
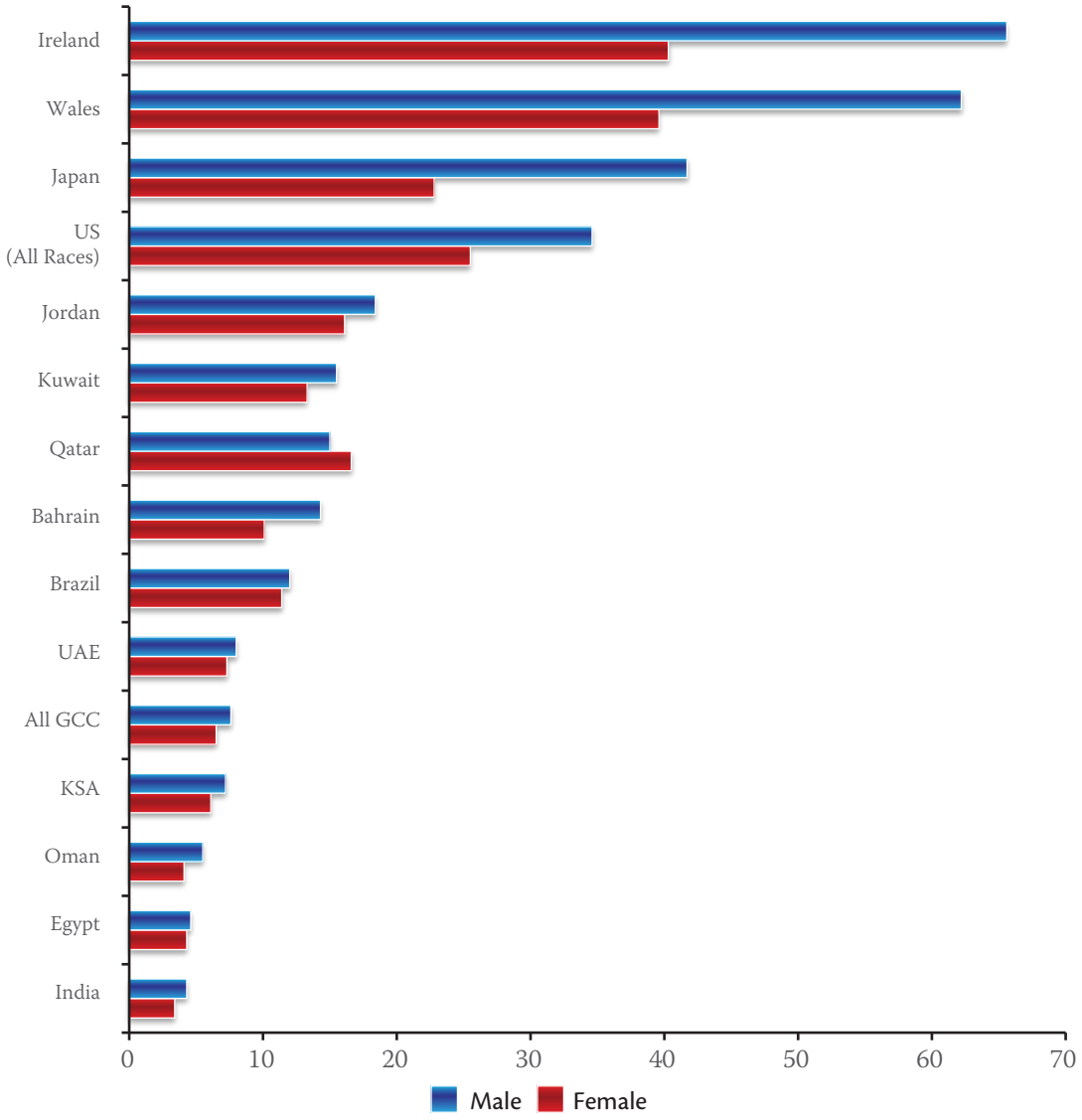


Table 1.4 ▼
Morphological Distribution of Colorectal Cancer in GCC states, 1998-2007.

COLORECTAL MORPHOLOGY	ICD-10	MALE	%	FEMALE	%	TOTAL	%
Adenocarcinoma, NOS	8140	2984	72.7	2699	76.3	5683	74.4
Mucinous adenocarcinoma	8480	332	8.1	243	6.9	575	7.5
Neoplasm, malignant	8000	136	3.3	111	3.1	247	3.2
Carcinoma, NOS	8010	111	2.7	105	3.0	216	2.8
Mucin-producing adenocarcinoma	8481	123	3.0	73	2.1	196	2.6
Signet ring cell carcinoma	8490	72	1.8	53	1.5	125	1.6
Adenocarcinoma in villous adenoma	8261	68	1.7	55	1.6	123	1.6
Adenocarcinoma in tubulovillous adenoma	8263	57	1.4	34	1.0	91	1.2
Papillary adenoma	8260	39	1.0	29	0.8	68	0.9
Adenocarcinoma, intestine type	8144	38	0.9	25	0.7	63	0.8
Other		143	3.5	111	3.2	254	3.3
TOTAL		**4103**	**100**	**3538**	**100**	**7641**	**100.0**

▼ Figure 1.20
Trend of Colorectal cancer among nationals of the GCC States, 1998-2007.





▲ **Figure 1.21**
Comparison of ASR of Colorectal cancer in the GCC States with selected countries.

NON-HODGKIN'S LYMPHOMA (NHL)

NHL is the third most common cancer in the GCC States. There were 7,087 NHL cases reported from all GCC States accounted to 7.4% from all cancers diagnosed during the period from 1998 to 2007. The overall ASRs for all GCC States were 6.5 and 4.8 per 100,000 populations for males and females respectively.

Kuwait had the highest incidence of NHL among males with ASR of 11.1 per 100,000 population followed by Qatar and Oman. Qatar had the highest incidence in females with ASR of 9.1 per 100,000 followed by Kuwait and Bahrain. KSA reported the lowest ASR in males, whereas Oman and UAE reported the lowest ASR in females, Figure 1.22.

Advanced NHL was present in 49% of cases (32% with regional metastasis and 17% with distant metastasis). Localized tumors were present in 16% and unknown extent of cancer was present in about 34%.

Large B-cell malignant lymphoma was the most frequent histopathological type accounted to 40.2% from all NHL, Figure 1.23 and Table 1.5.

NHL incidence continues to increase over the ten-year period among GCC States. The total number of newly diagnosed in both males and females are increased by 40% between 1998 and 2007. The trend of age standardized incidence rate was increased during the same period, however it was not statistically significant (p-values were 0.1796 in male and 0.2781 in female), Figure 1.24.

Figure 1.22 ▼
Age Standardized incidence Rate (ASR) of NHL in the GCC States, 1998-2007.

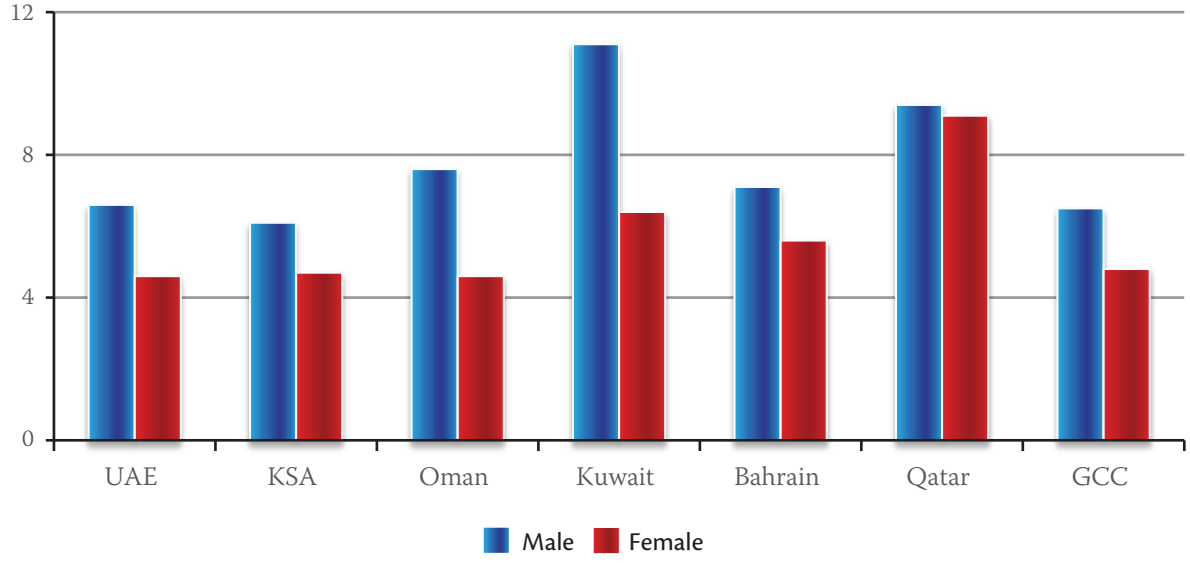


Figure 1.23 ▼
Extent of NHL at diagnosis.

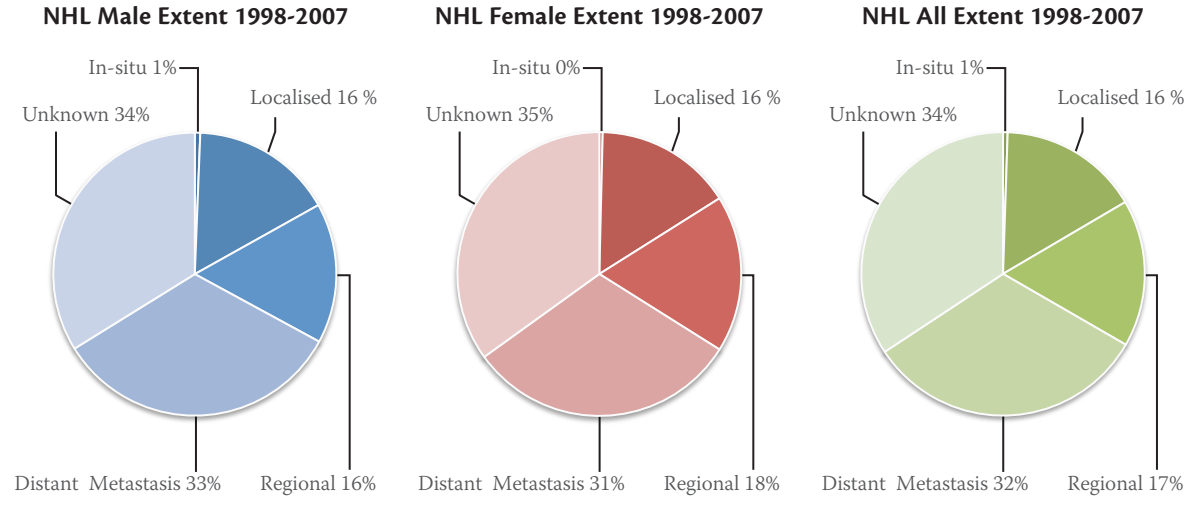
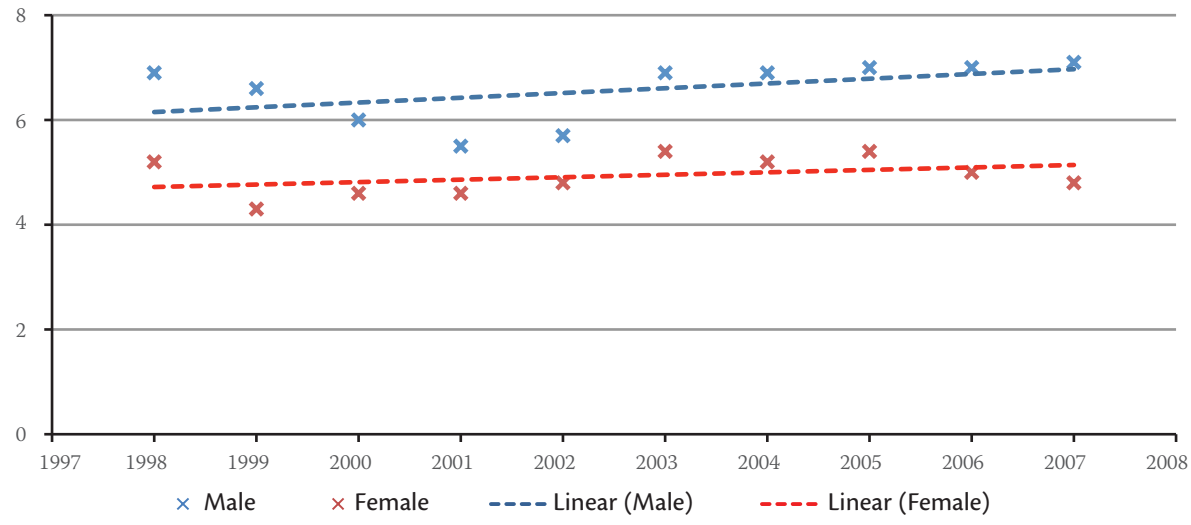
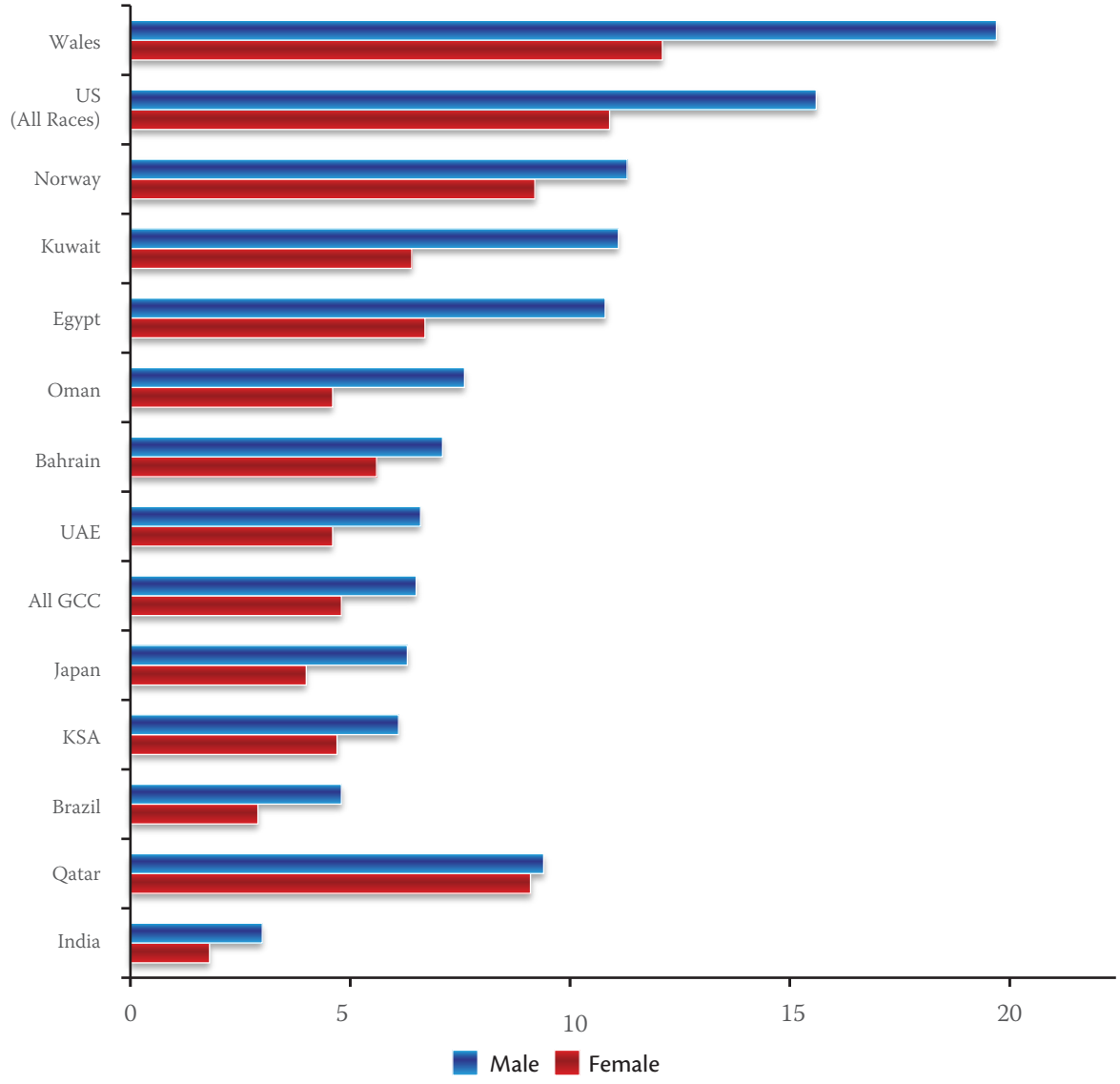


Table 1.5 ▼
Morphological Distribution of NHL in GCC states, 1998-2007.

NHL MORPHOLOGY	ICD-10	MALE	%	FEMALE	%	TOTAL	%
Malignant lymphoma, large B-cell, diffuse, NOS	9680	1623	38.7	1228	42.5	2851	40.2
Malignant Lymphoma, non-Hodgkin, NOS	9591	562	13.4	406	14.0	968	13.7
Malignant lymphoma, NOS	9590	344	8.2	255	8.8	599	8.4
Burkitt lymphoma, NOS	9687	268	6.4	124	4.3	392	5.5
Mycosis fungoides	9700	149	3.5	95	3.3	244	3.4
Marginal zone B-cell lymphoma, NOS	9699	122	2.9	78	2.7	200	2.8
Anaplastic large cell lymphoma, Tcell and Null cell type	9714	115	2.7	78	2.7	193	2.7
Follicular lymphoma, NOS	9690	112	2.7	75	2.6	187	2.6
Malignant lymphoma, small B lymphocytic, NOS	9670	103	2.5	81	2.8	184	2.6
Follicular lymphoma, grade 2	9698	80	1.9	69	2.4	149	2.1
Other		719	17.2	401	13.9	1120	15.8
TOTAL		**4197**	**100**	**2890**	**100**	**7087**	**100.0**

▼ Figure 1.24
Trend of NHL among nationals of the GCC States, 1998-2007.





▲ Figure 1.25
Comparison of ASR of NHL in the GCC States with selected countries.

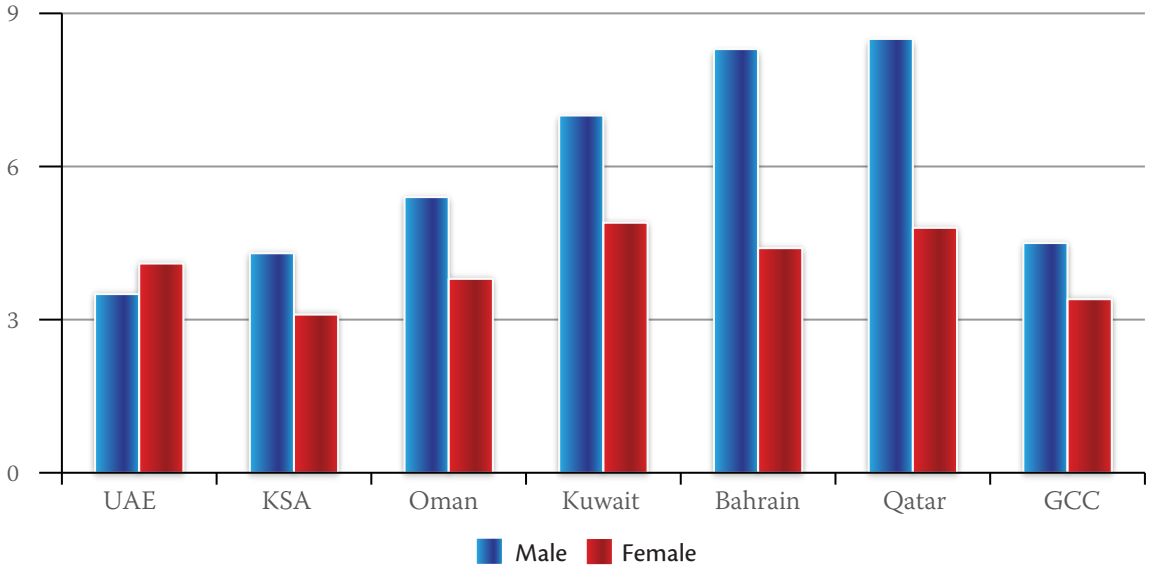
LEUKEMIA

Leukemia is the fourth most common cancer among GCC nationals. In 1998-2007 there were 6,486 cases of leukemia accounted to 6.8% from all cancers. The overall ASRs were 4.5 and 3.4 per 100,000 population for males and females respectively.

Leukemia incidence appeared to be slightly higher in males than females. Qatar had the highest incidence among men with ASR of 8.5 followed by Bahrain and Kuwait. The lowest incidence was in UAE men (ASR was 3.5 per 100,000). In women, Kuwait had the highest incidence (ASR was 4.9 per 100,000) followed by Qatar and Bahrain with 4.8 and 4.4 per 100,000 population each respectively. The lowest incidence was among KSA women (ASR 3.1/100,000), Figure 1.26.

Precursor cell lymphoblastic leukemia was the most frequent leukemia in both genders accounted to 26.2% (27% in males and 25% in females) followed by acute myeloid leukemia accounted to 14.1% and chronic myeloid leukemia with 12.8% of all leukemias, Table 1.6.

Leukemia incidence continues to increase over the ten-year period (1998-2007) among GCC States. Total number of newly diagnosed leukemias increased by 29% in males and 30% in females. There was no observed change in the ASR trend during the same period (p-values were 0.888 in male and 0.4759 in female), Figure 1.27.

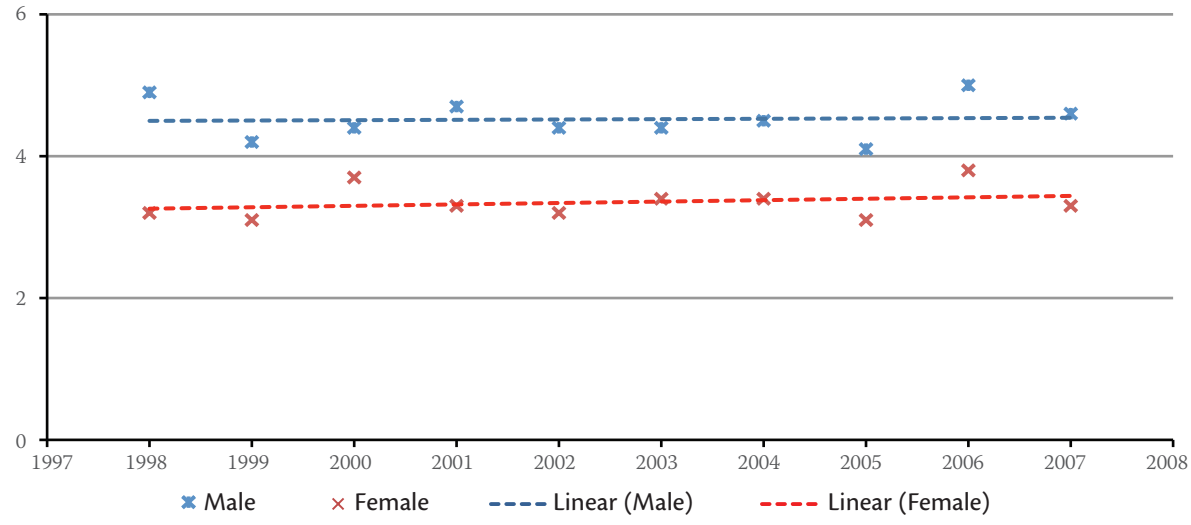


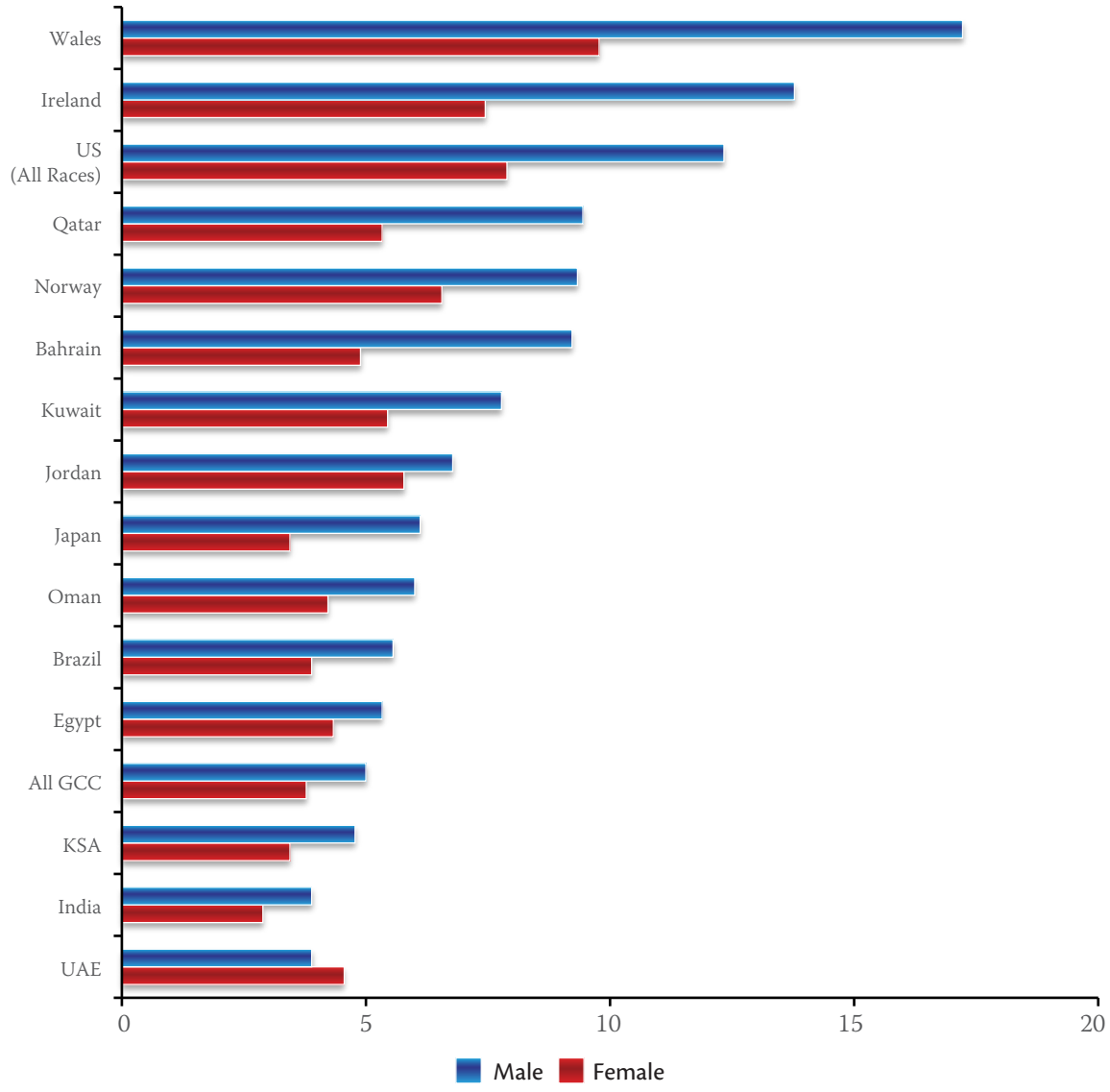
▲ Figure 1.26
Age Standardized incidence Rate (ASR) of Leukemia in the GCC States, 1998-2007.

Table 1.6 ▼
Morphological Distribution of Leukemia in GCC states, 1998-2007.

LEUKEMIA MORPHOLOGY	ICD-10	MALE	%	FEMALE	%	TOTAL	%
Precursor cell lymphoblastic leukemia, NOS	9835	1014	27	684	25	1698	26.2
Acute myeloid leukemia, NOS	9861	503	13	409	15	912	14.1
Chronic myeloid leukemia, NOS	9863	424	11	404	15	828	12.8
Precursor B-cell lymphoblastic leukemia	9836	437	12	316	12	753	11.6
B-cell chronic lymphocytic leukemia/ small lymphocytic lymphoma	9823	344	9	146	5	490	7.6
Leukemia, NOS	9800	126	3	86	3	212	3.3
Acute promyelocytic leukemia, t(15;17) (q22; q11-12)	9866	92	2	112	4	204	3.1
Acute monoyelocytic leukemia	9891	93	2	72	3	165	2.5
Acute leukemia, NOS	9801	87	2	76	3	163	2.5
Precursor T-cell lymphoblastic leukemia	9837	117	3	36	1	153	2.4
Other		522	14	386	14	908	14.0
TOTAL		**3759**	**100**	**2727**	**100**	**6486**	**100.0**

▼ Figure 1.27
Trend of Leukemia among nationals of the GCC States, 1998-2007.





▲ Figure 1.28
Comparison of ASR of Leukemia in the GCC States with selected countries.

THYROID CANCER

Thyroid cancer is the fifth most common cancer in the GCC States. 5,587 thyroid cancer cases (5.9% from all cancers) were reported from GCC States between 1998 and 2007. The overall ASR was 1.8 and 5.9 per 100,000 populations for males and females respectively.

Thyroid cancer incidence is significantly higher among women compared to men in all GCC States (female to male ratio is 3.3 to 1). It ranked second most common cancer in women next to breast cancer. Qatari women reported the highest incidence of thyroid cancer with ASR of 10.9 followed by Kuwait, Bahrain, UAE, KSA, and Oman 5.6, Figure 1.29.

Advanced thyroid cancer was present in 36% of cases (29% with regional metastasis and 7% with distant metastasis). Localized tumors were present in 41% and unknown extent of cancer was present in about 21%. Papillary adenocarcinoma was the most frequent histopathology type accounted to37.7% from all thyroid, Figure 1.30 and Table 1.7.

Thyroid incidence continues to increase over the ten-year period among GCC States. The total number of newly diagnosed thyroid cancer increased by 24% in males by 63% in females, with no observed change in the ASR trend during the same period (p-values were 0.7534 in males and 0.0852 in females), Figure 1.31.

Figure 1.29 ▼
Age Standardized incidence Rate (ASR) of Thyroid cancer in the GCC States, 1998-2007.

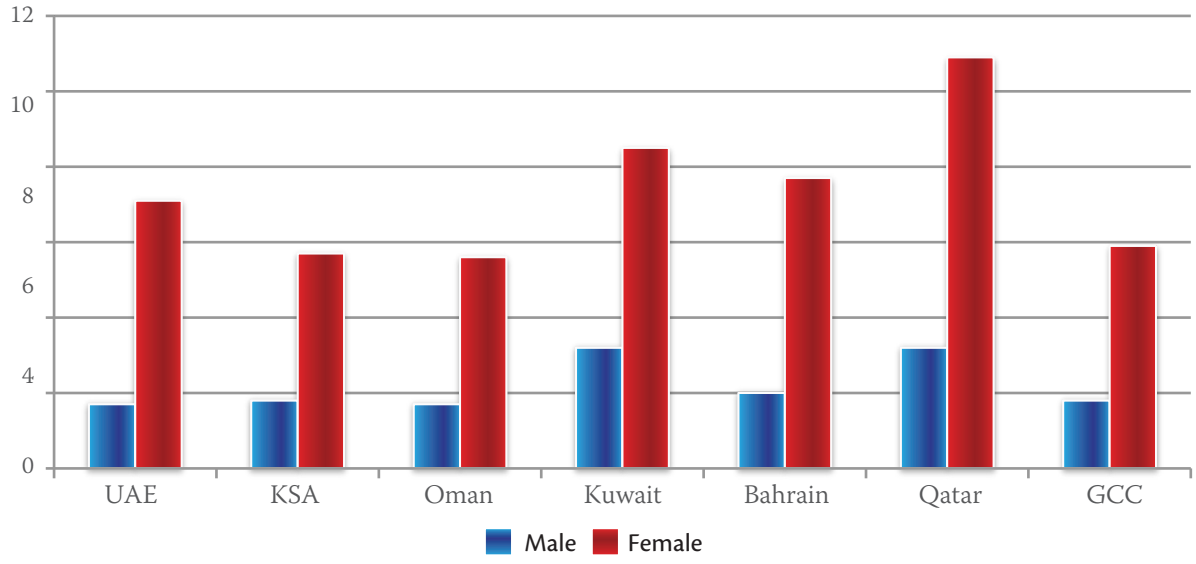


Figure 1.30 ▼
Extent of Thyroid at diagnosis.

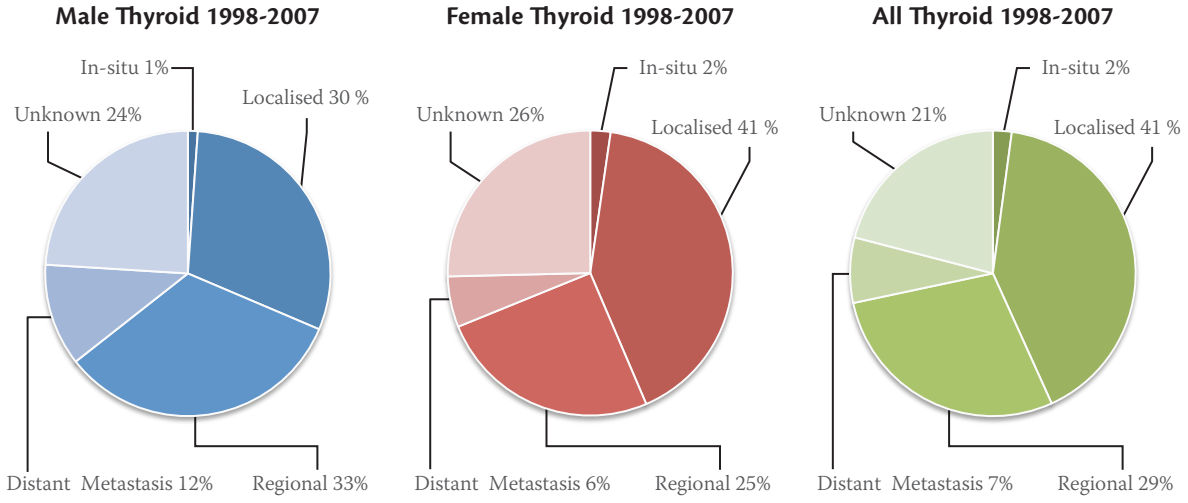
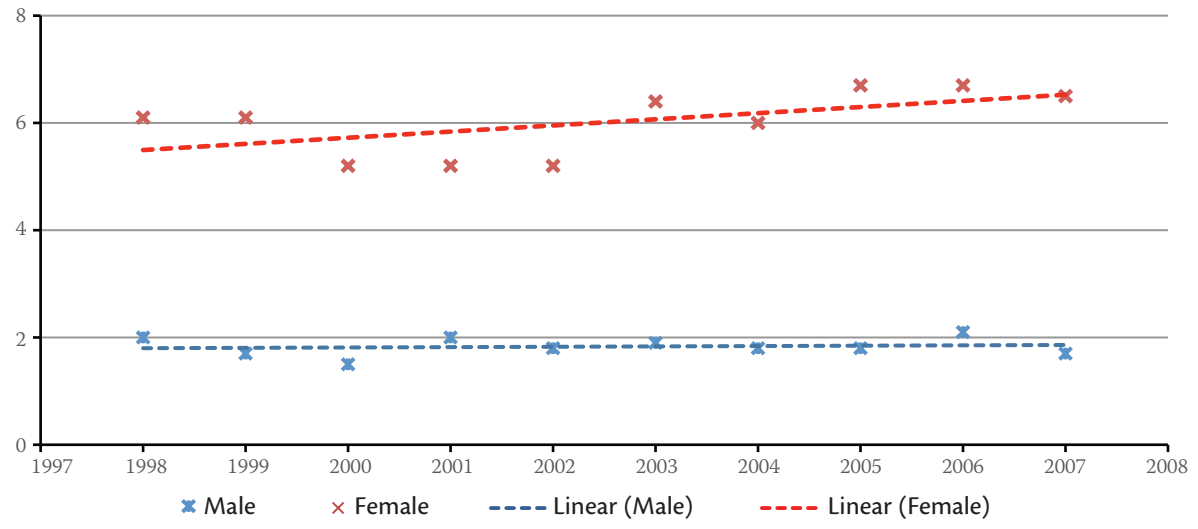
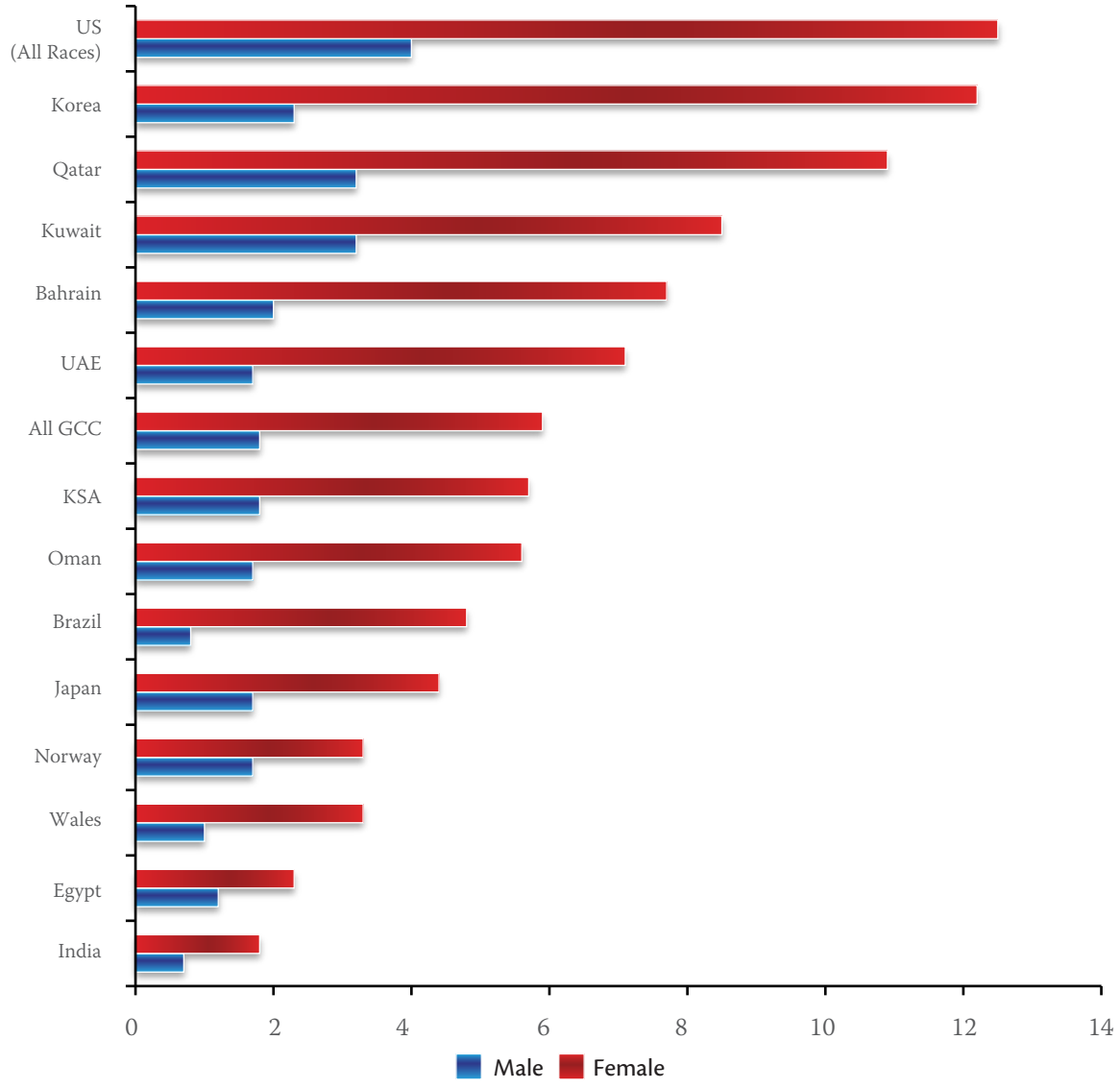


Table 1.7 ▼
Morphological Distribution of Thyroid cancer in GCC states, 1998-2007.

THYROID MORPHOLOGY	ICD-10	MALE	%	FEMALE	%	TOTAL	%
Papillary adenocarcinoma, NOS	8260	468	39	1636	37	2104	37.7
Papillary carcinoma, NOS	8050	340	29	1183	27	1523	27.3
Papillary carcinoma, follicular variant	8340	114	10	656	15	770	13.8
Papillary microcarcinoma	8341	25	2	233	5	258	4.6
Follicular adenocarcinoma, NOS	8330	43	4	187	4	230	4.1
Neoplasm, malignant	8510	45	4	65	1	110	2.0
Carcinoma, anaplastic, NOS	8021	29	2	55	1	84	1.5
Papillary carcinoma, encapsulated	8343	15	1	65	1	80	1.4
Oxyphilic adenocarcinoma	8290	21	2	55	1	76	1.4
Follicular carcinoma, minimally invasive	8335	10	1	65	1	75	1.3
Other		81	7	196	4	277	5.0
TOTAL		**1191**	**100**	**4396**	**100**	**5587**	**100.0**

▼ Figure 1.31
Trend of thyroid cancer among nationals of the GCC States, 1998-2007.





▲ **Figure 1.32**
Comparison of ASR of Thyroid cancer in the GCC States with selected countries.

LIVER CANCER

Liver cancer is the sixth most common cancer in the GCC States. 4,965 liver cancer cases (5.2% from all cancers) were reported from all GCC States in 1998-2007. The overall ASR for all GCC States was 6.9 and 2.9 per 100,000 populations for males and females respectively.

Liver cancer incidence was significantly higher among men compared to women in all GCC States. Qatar reported the highest incidence among men and women with ASR of 13.9 and 7.6 for males and females respectively. Kuwaiti men ranked second and KSA men ranked third. UAE reported the lowest ASR in both genders (ASR of 3.0 and 1.9 for males and females respectively), Figure 1.33.

Advanced liver cancers were present in 28% of cases (11% with regional metastasis and 17% with distant metastasis). Localized tumors were present in 20% and unknown extent of cancer was present in more than 50% of the cases. Hepatocellular carcinoma was the most frequent histopathology type accounted to 75.7% from all liver cancers, Figure 1.34 and Table 1.8.

Liver cancer incidence continues to decline in the past ten-year period in all GCC States. Between 1998 and 2007, the total number of newly diagnosed liver cancer decreased by 7.7% in males and 1.4% in females. However, the ASR trend was statistically significant in males only (p-values were 0.0320 in male and 0.0873 in female), Figure 1.35.

Figure 1.33 ▼
Age Standardized incidence Rate (ASR) of Liver cancer in the GCC States, 1998-2007.

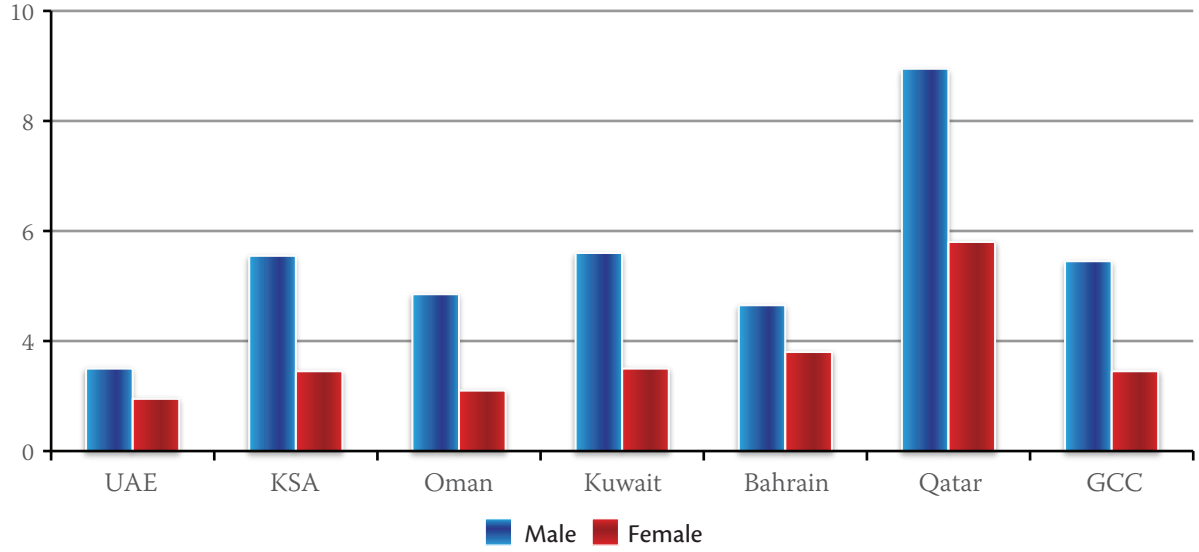


Figure 1.34 ▼
Extent of Liver at diagnosis.

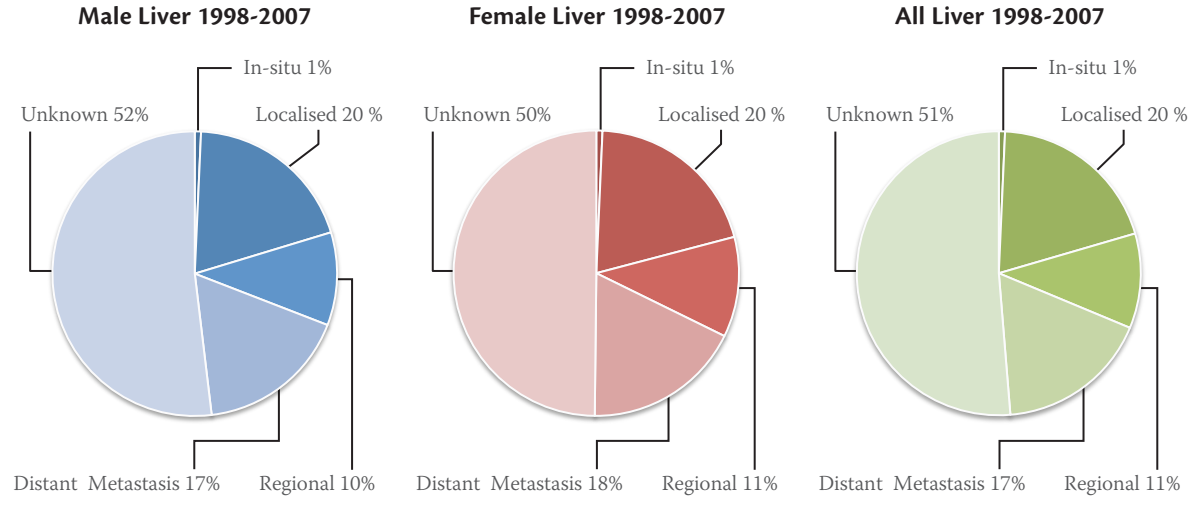
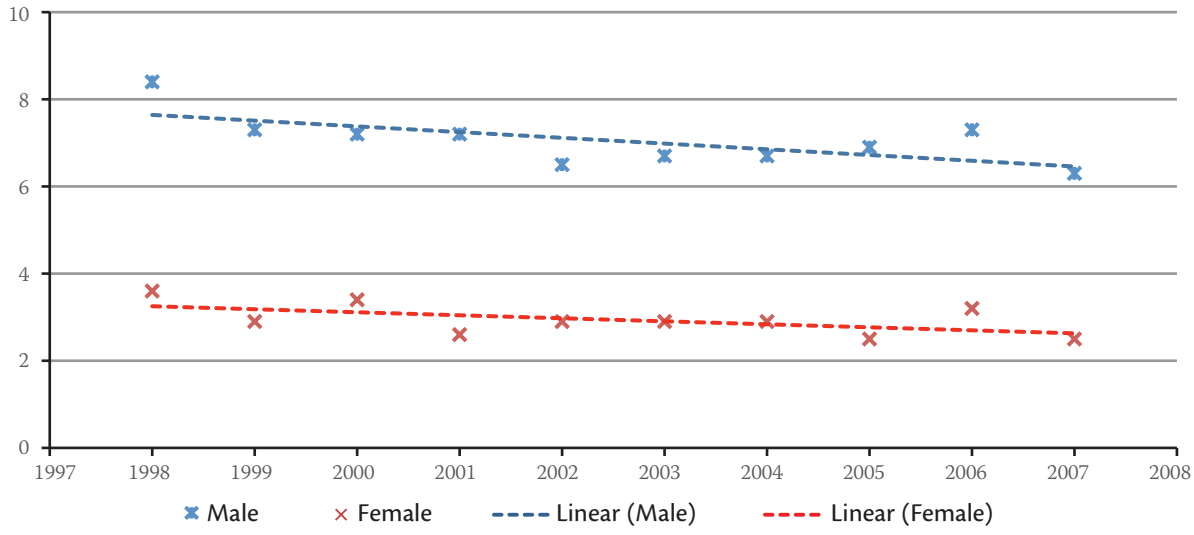
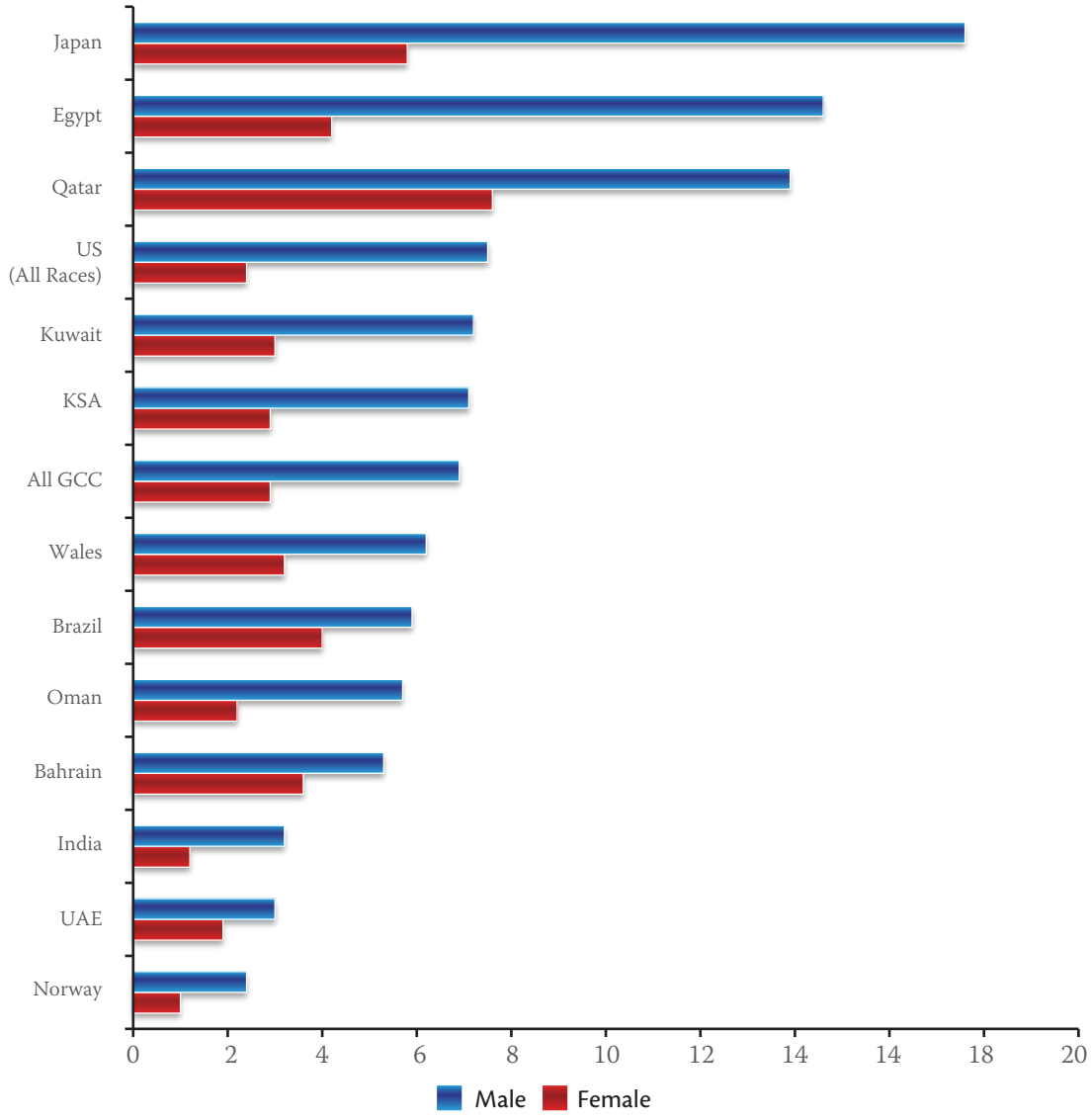


Table 1.8 ▼
Morphological Distribution of Liver cancer in GCC states, 1998-2007.

MORPHOLOGY	ICD-10	MALE	%	FEMALE	%	TOTAL	%
Hepatocellular carcinoma, NOS	8170	2803	79.4	957	66.7	3760	75.7
Neoplasm, malignant	8000	338	9.6	156	10.9	494	9.9
Cholangiocarcinoma	8160	108	3.1	109	7.6	217	4.4
Adenocarcinoma. NOS	8140	50	1.4	55	3.8	105	2.1
carcinoma, NOS	8010	61	1.7	43	3.0	104	2.1
Hepatoblastoma	8970	45	1.3	33	2.3	78	1.6
Klatskin tumor	8162	14	0.4	12	0.8	26	0.5
Hepatocellular carcinoma, fibrolamellar	8171	10	0.3	11	0.8	21	0.4
Combined hepatocellular carcinoma and cholangiocarcinoma	8180	14	0.4	7	0.5	21	0.4
Hepatocellular carcinoma, clear cell type	8174	6	0.2	6	0.4	12	0.2
Other		81	2.3	46	3.2	127	2.6
TOTAL	**3530**	**100.0**	**1435**	**100.0**	**4965**	**100.0**	**100.0**

▼ Figure 1.35
Trend of liver cancer among nationals of the GCC States, 1998-2007.





▲ **Figure 1.36**
Comparison of ASR of Liver cancer in the GCC States with selected countries.

LUNG CANCER

Lung cancer is the seventh most common cancer in the GCC States. 4,588 lung cancer cases (4.8% from all cancers) were reported from all GCC States in 1998-2007. The overall ASR was 7.0 and 2.1 per 100,000 populations for GCC males and females respectively.

Lung cancer incidence was significantly higher among men compared to women in all GCC States. Bahrain had the highest incidence among men and women with ASR of 31.1 and 10.7 per 100,000 population for males and females respectively. Kuwait ranked second followed by Qatar in males and females. KSA reported the lowest incidence in both genders (5.6 and 1.6 per 100,000 population for males and females respectively), Figure 1.37.

Advanced lung cancer was present in 57% of cases (40% with regional metastasis and 17% with distant metastasis). Localized tumors were present in 8.0% and unknown extent of cancer was present in about 35%. Adenocarcinoma was the most frequent histopathology type accounted to 21.8% from all lung cancers, Figure 1.38 and Table 1.9.

Lung cancer incidence continues to increase over the ten-year period among GCC States. Between 1998 and 2007, the total number of newly diagnosed lung cancer increased by 1.3 folds in males and 1.1 folds in females. Trend of lung cancer incidence was increased during the same period however it was not statistically significant (p-values 0.1463 in male, and 0.7274 in female), Figure 1.39.

Figure 1.37 ▼
Age Standardized incidence Rate (ASR) of Lung cancer in the GCC States, 1998-2007.

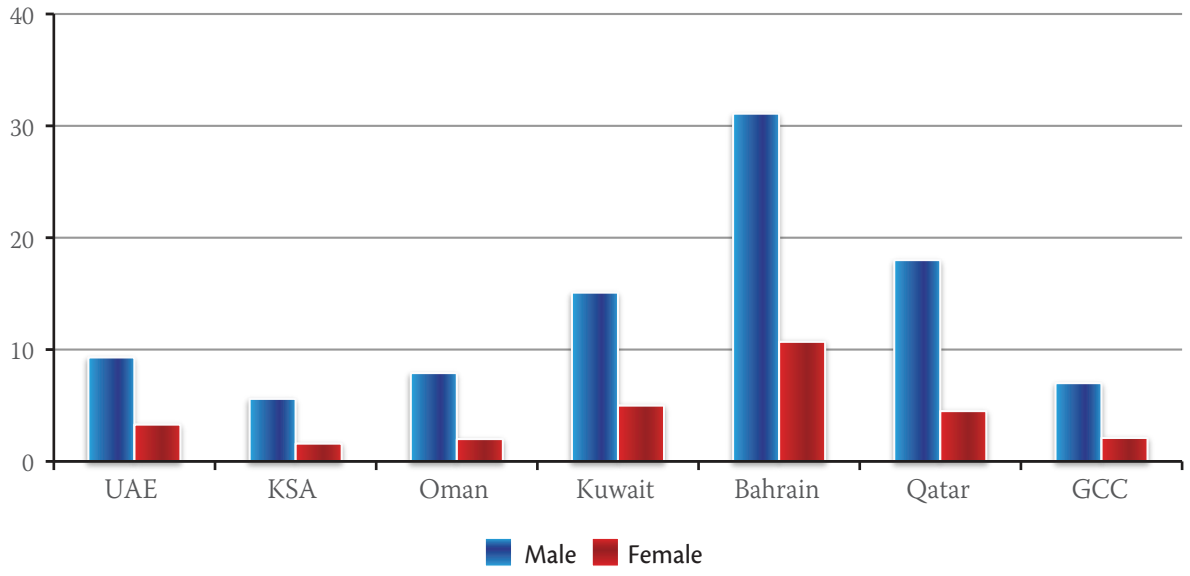


Figure 1.38 ▼
Extent of Lung at diagnosis.

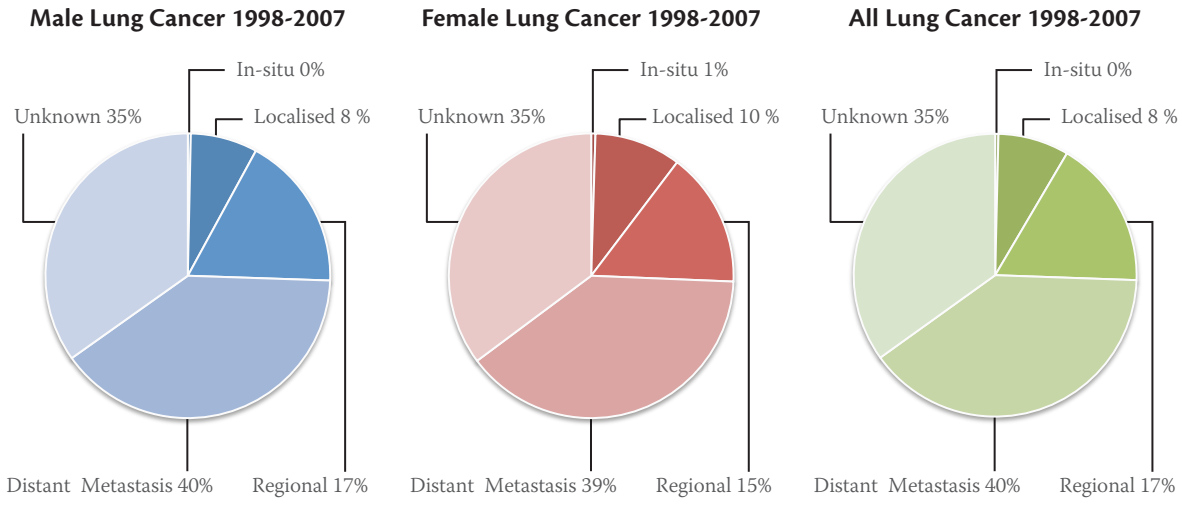
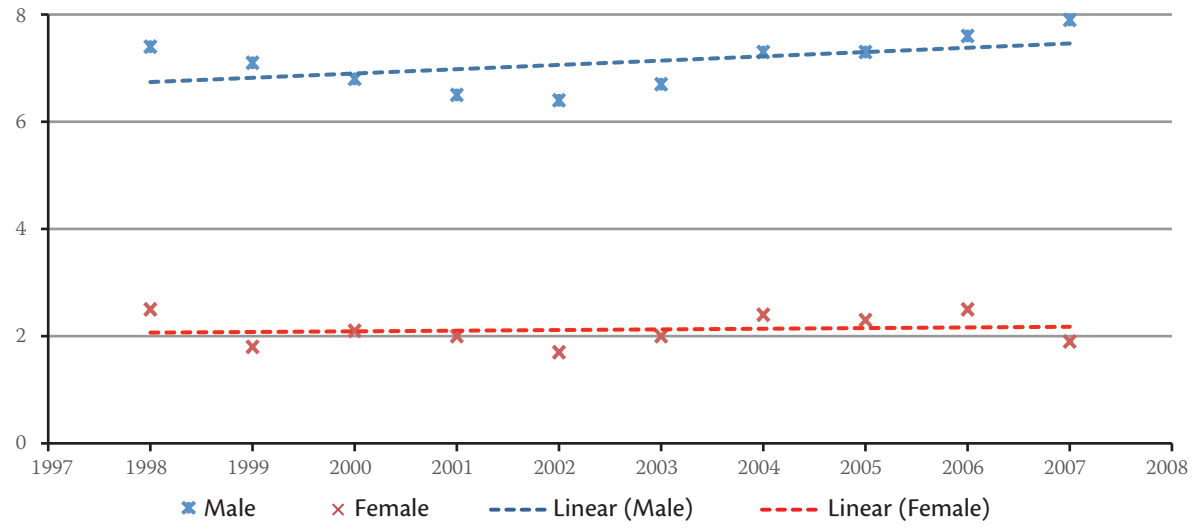
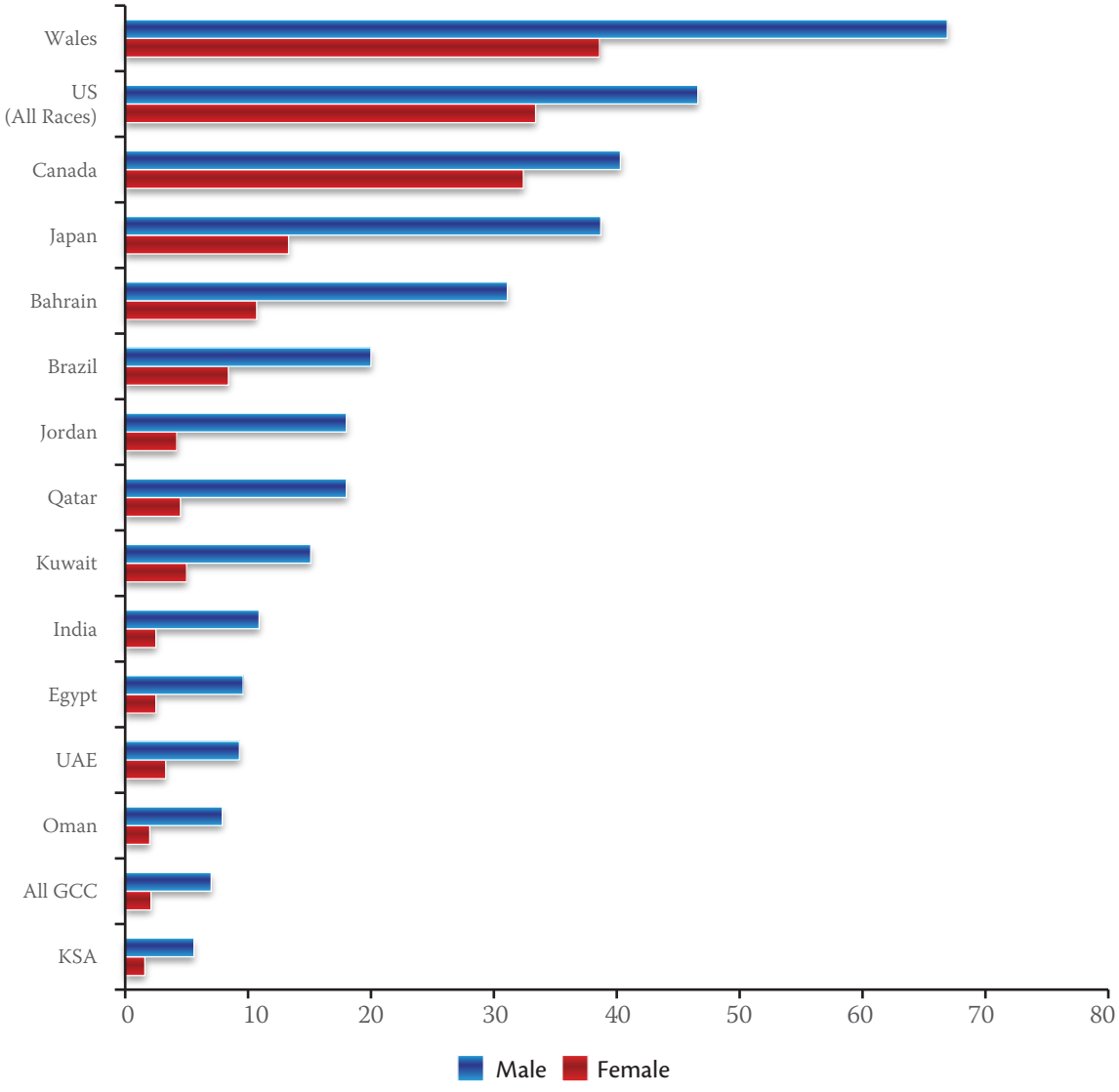


Table 1.9 ▼
Morphological Distribution of Lung cancer in GCC states, 1998-2007.

MORPHOLOGY	ICD-10	MALE	%	FEMALE	%	TOTAL	%
Adenocarcinoma, NOS	8140	707	19.9	294	28.4	1001	21.8
Squamous cell carcinoma, NOS	8070	801	22.6	152	14.7	953	20.8
Carcinoma, NOS	8010	371	10.4	105	10.1	476	10.4
Non-small cell carcinoma, NOS	8046	360	10.1	91	8.8	451	9.8
Small cell carcinoma, NOS	8041	343	9.7	79	7.6	422	9.2
Neoplasm, malignant	8000	312	8.8	98	9.5	410	8.9
Large cell neuroendocrine carcinoma	8012	137	3.9	21	2.0	158	3.4
Bronchiolo-alveolar adenocarcinoma, NOS	8250	92	2.6	56	5.4	148	3.2
Squamous carcinoma, keratinizing, NOS	8071	77	2.2	10	1.0	87	1.9
Carcinoid tumor, NOS	8240	33	0.9	27	2.6	60	1.3
Other		318	9.0	104	10.0	421	9.2
TOTAL	**3551**	**100.0**	**1037**	**100.0**	**4588**	**100.0**	**100.0**

▼ Figure 1.39
Trend of Lung cancer among nationals of the GCC States, 1998-2007.





▲ Figure 1.40
Comparison of ASR of Lung cancer in the GCC States with selected countries.

STOMACH CANCER

Stomach cancer is the eighth most common cancer in the GCC States. 3,504 stomach cancer cases (3.7% from all cancers) were reported from all GCC States during the period between 1998 and 2007. The overall ASR was 4.2 and 2.4 per 100,000 populations for males and females respectively.

Stomach cancer incidence was more common in men compared to women in all of the GCC States. Oman had the highest incidence among men and women with ASR of 10.5 and 5.8 per 100,000 population for males and females respectively. Bahrain ranked second, followed by UAE, Qatar and Kuwait. KSA reported the lowest incidence in both genders with ASR of 3.3 and 1.9 per 100,000 population for males and females respectively, Figure 1.41.

Advanced stomach cancer was present in 49% of cases (22% with regional metastasis and 27% with distant metastasis). Localized tumors were present in 17% and unknown extent of cancer was present in about 32%. Adenocarcinoma was the most frequent histopathology type accounted to 52.4% from all stomach cancers, Figure 1.42 and Table 1.10.

Stomach cancer incidence continues to increase over the ten-year period among GCC States' nationals. The total number of newly diagnosed stomach cancer increased by 21% in males and 34% in females between 1998 and 2007. During the same period, stomach cancer incidence trend increased among males and decreased among females however none was statistically significant (p-values 0.1881 in males, and 0.5073 in females), Figure 1.43.

Figure 1.41 ▼
Age Standardized incidence Rate (ASR) of Stomach cancer in the GCC States, 1998-2007.

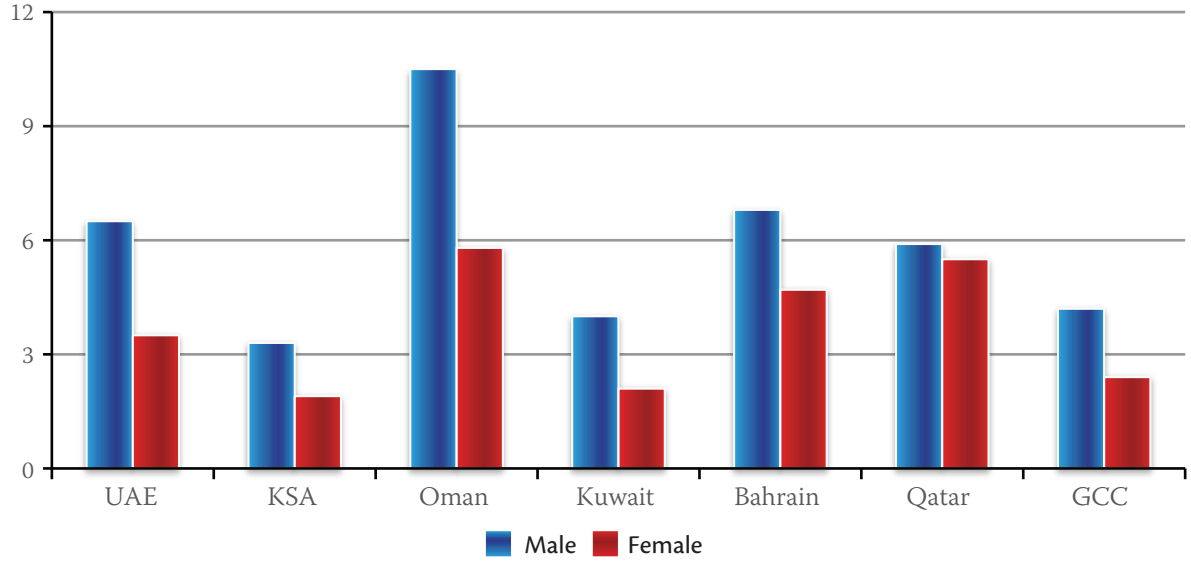


Figure 1.42 ▼
Extent of Stomach at diagnosis.

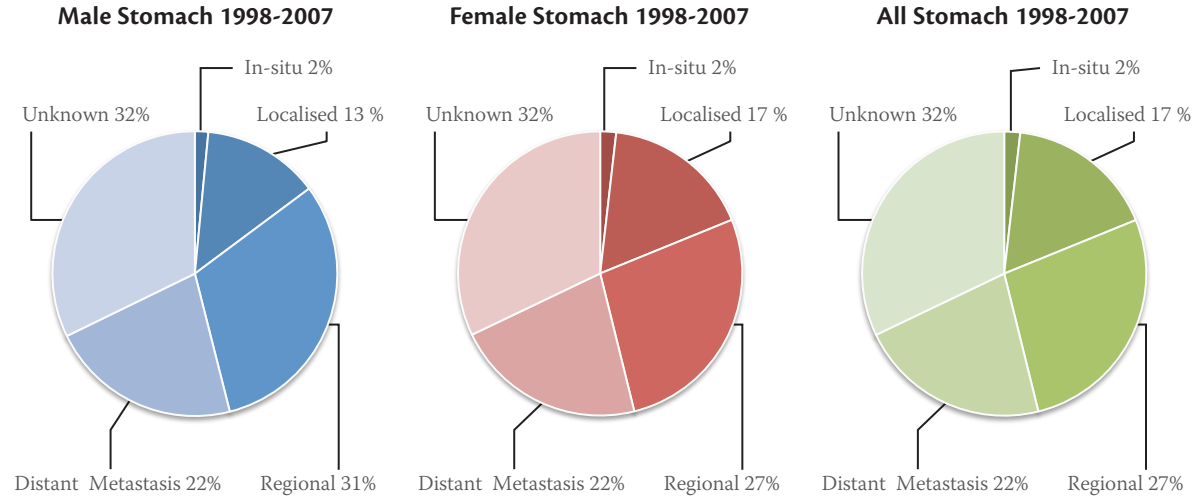
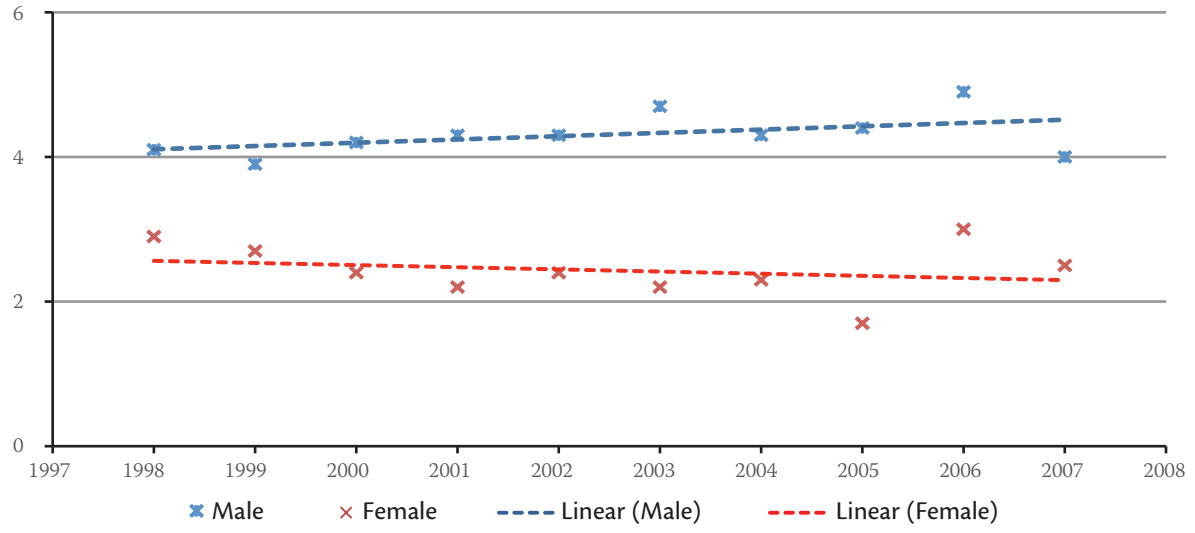
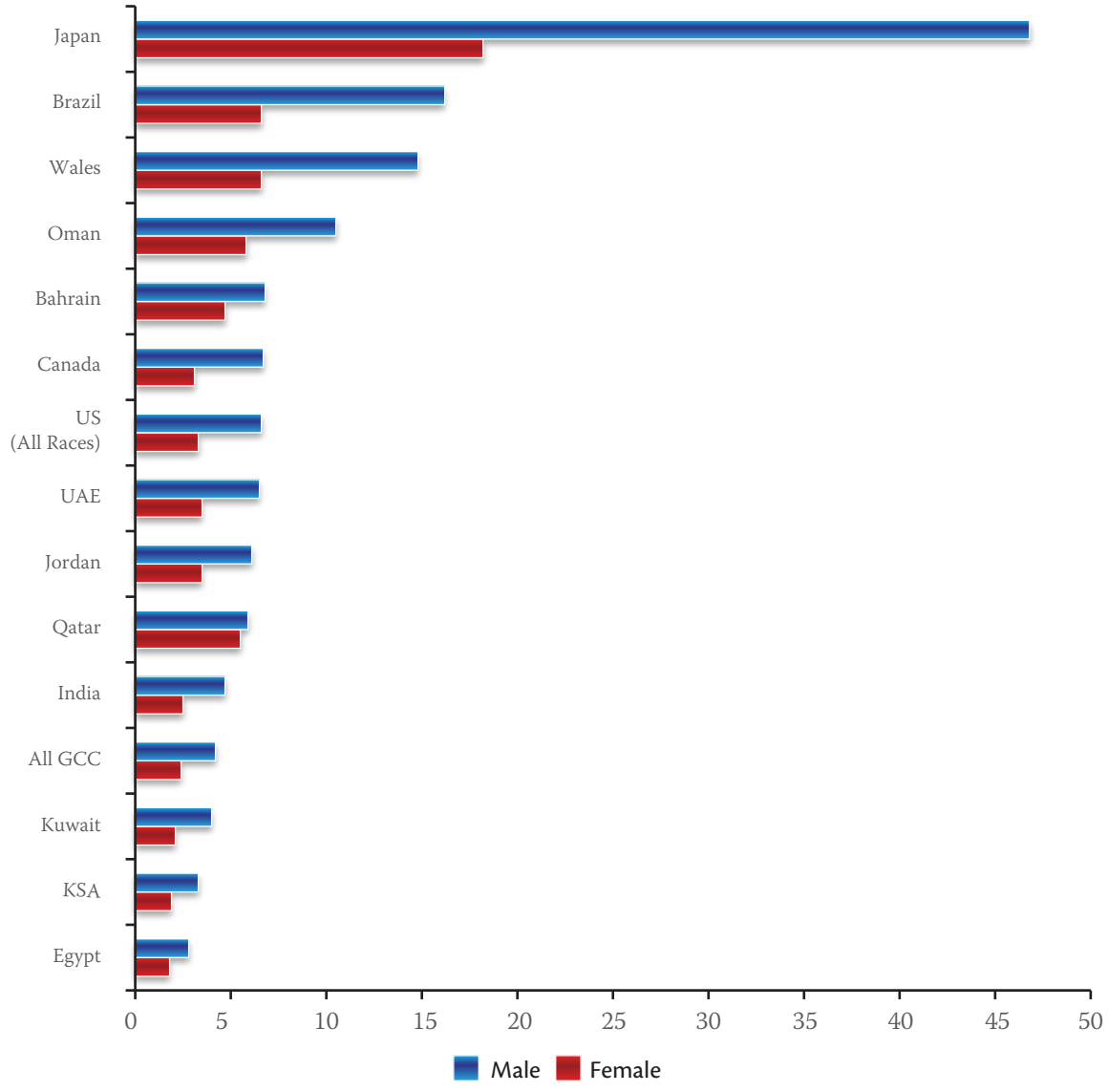


Table 1.10 ▼
Morphological Distribution of Stomach cancer in GCC states, 1998-2007.

STOMACH MORPHOLOGY	ICD-10	MALE	%	FEMALE	%	TOTAL	%
Adenocarcinoma, NOS	8140	1216	54.3	622	49.1	1838	52.4
Signet ring cell carcinoma	8490	324	14.5	271	21.4	595	17.0
Adenocarcinoma, intestinal type	8144	160	7.1	56	4.4	216	6.2
Carcinoma, NOS	8010	117	5.2	65	5.1	182	5.2
Neoplasm, Malignant	8000	119	5.3	61	4.8	180	5.1
Mucin-producing adenocarcinoma	8481	62	2.8	35	2.8	97	2.8
Carcinoma, diffuse type	8145	41	1.8	25	2.0	66	1.9
Mucinous adenocarcinoma	8480	44	2.0	22	1.7	66	1.9
Gastrointestinal stromal sarcoma	8936	29	1.3	22	1.7	51	1.5
Squamous cell carcinoma	8070	25	1.1	18	1.4	43	1.2
Other		101	4.6	69	5.6	170	5.0
TOTAL	**2238**	**100.0**	**1266**	**100.0**	**3504**	**100.0**	**100.0**

▼ Figure 1.43
Trend of stomach cancer among nationals of the GCC States, 1998-2007.





▲ Figure 1.44
Comparison of ASR of Stomach cancer in the GCC States with selected countries.

HODGKIN'S DISEASE

Hodgkin's disease is the ninth most common cancer in the GCC States. 3,146 HD cases (3.3% from all cancers) were reported from all GCC States during the ten-year period (1998-2007). The overall ASRs were 2.1 and 1.3 per 100,000 populations for males and females respectively.

HD incidence was more common in men compared to women in all of the GCC States. Qatar had the highest incidence among men and Kuwait ranked second followed by Oman. UAE reported the lowest incidence among males (1.8 per 100,000). Whereas in women, Kuwait reported the highest incidence followed by Bahrain and Qatar. The lowest incidence was reported among Omani women (1.2 per 100,000), Figure 1.45.

Advanced Hodgkin's disease was present in 54% of cases (26% with regional metastasis and 28% with distant metastasis). Localized tumors were present in 14% and unknown extent of cancer was present in about 31%. Hodgkin lymphoma nodular sclerosis - cellular phase, was the most frequent histopathology type accounted to 44.2% from all HD, Table 1.11 and Figures 1.46.

Hodgkin's disease incidence continues to increase over the ten-year period among GCC States' nationals. Between 1998 and 2007, the total number of newly diagnosed Hodgkin's disease increased by 20% in males and 75% in females. The ten year incidence trends slightly increased but did not reach significant levels (p-values 0.6146 and 0.1079 for males and females respectively), Figure 1.47.

Figure 1.45 ▼
Age Standardized incidence Rate (ASR) of Hodgkin's disease in the GCC States, 1998-2007.

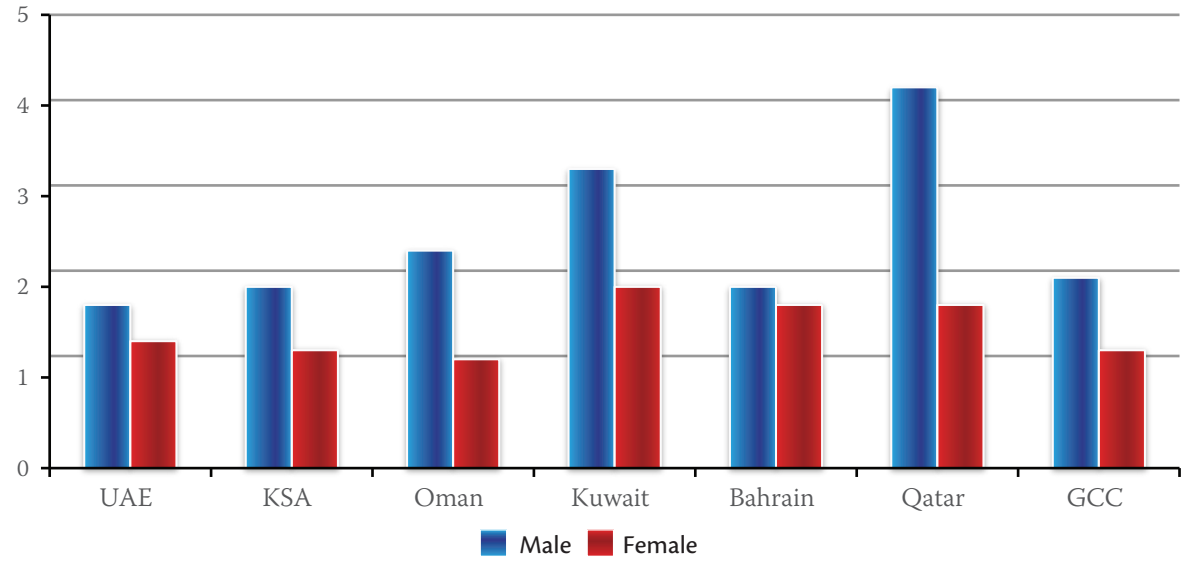


Figure 1.46 ▼
Extent of Hodgkin's at diagnosis.

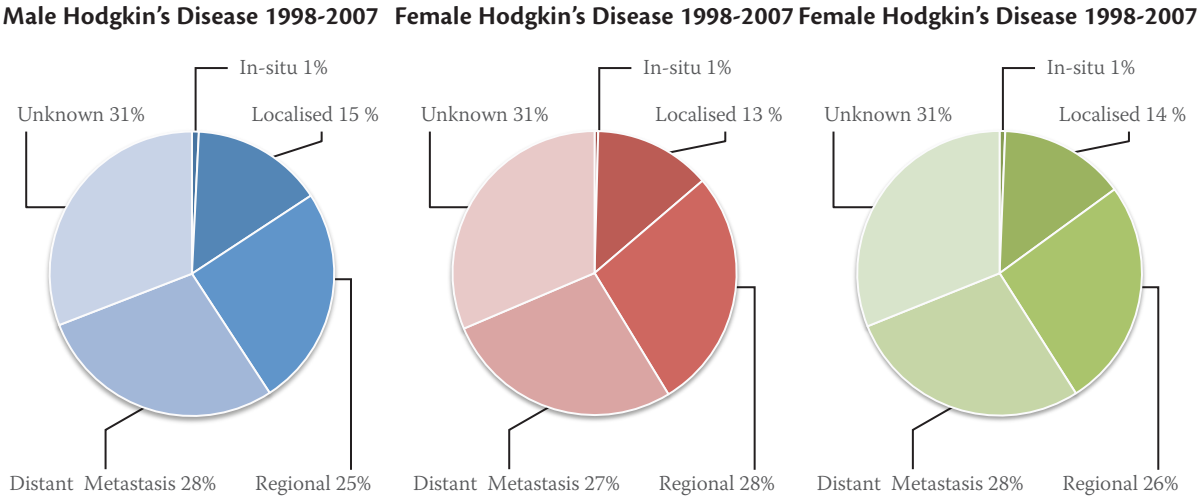
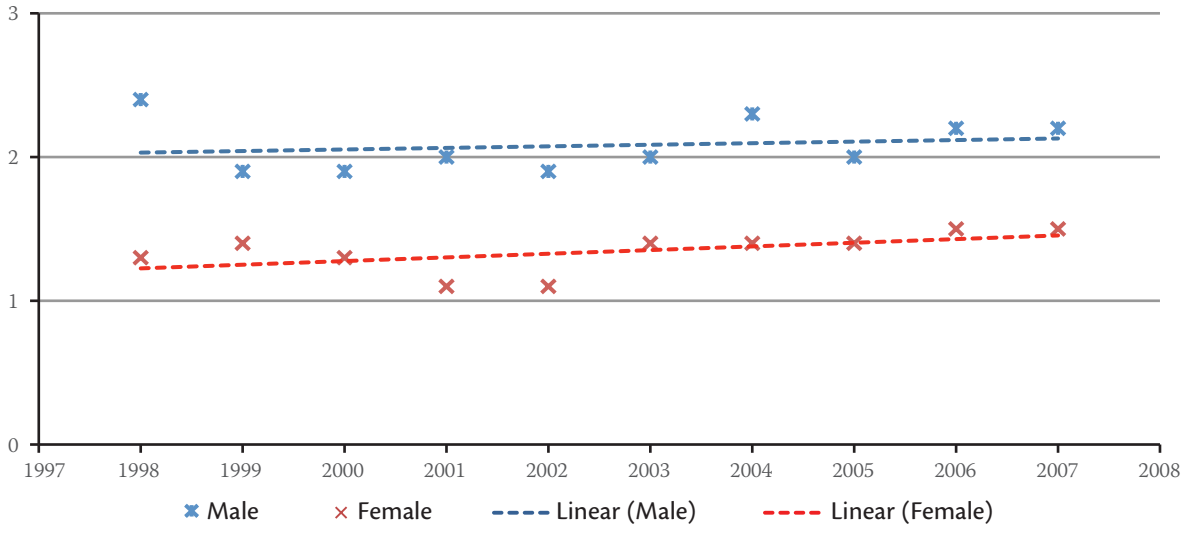
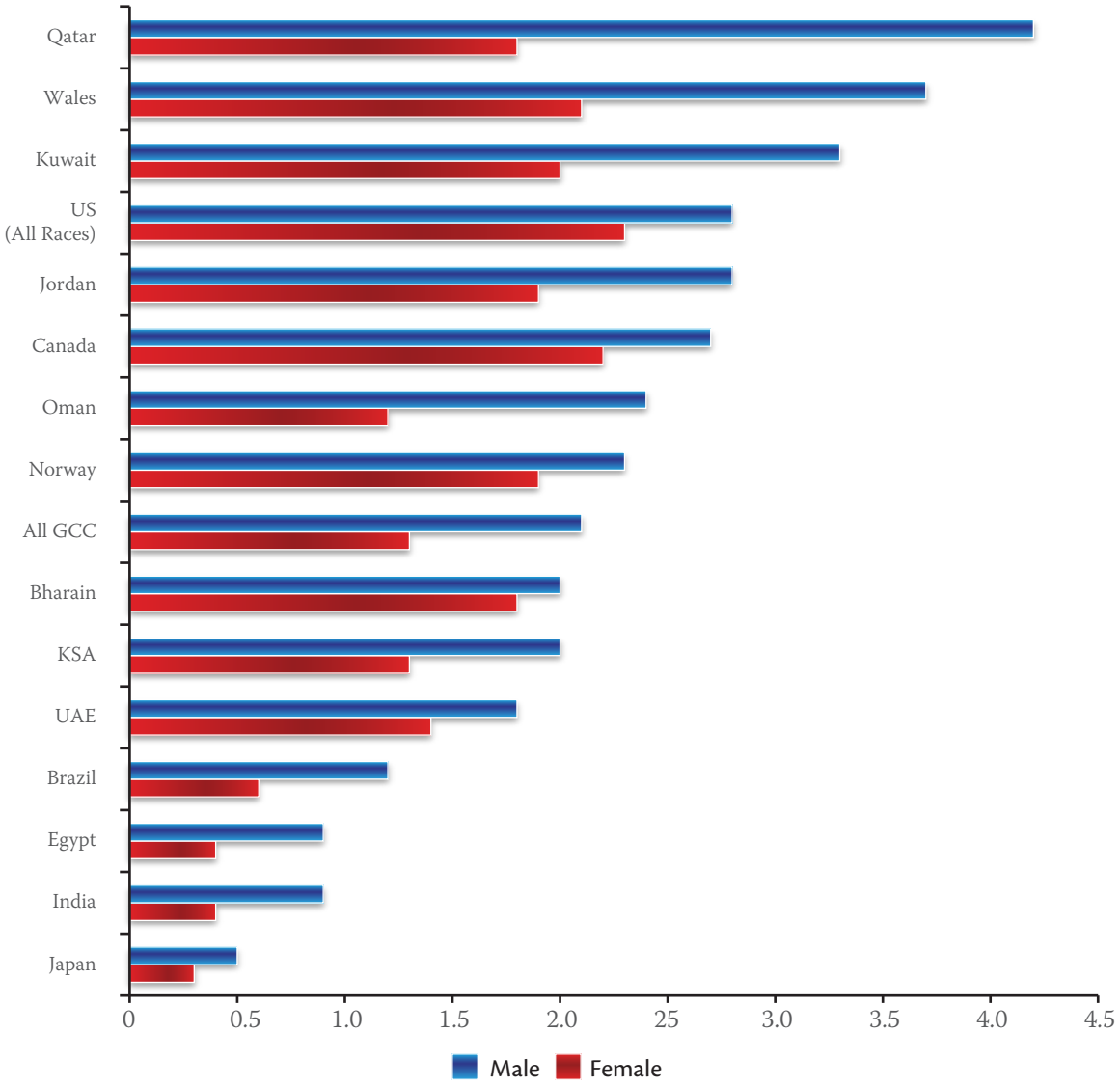


Table 1.11 ▼
Morphological Distribution of Hodgkin's disease GCC states, 1998-2007.

HODGKIN DISEASE MORPHOLOGY	ICD-10	MALE	%	FEMALE	%	TOTAL	%
Hodgkin lymphoma , nodular sclerosis, cellular phase	9663	771	40.1	619	50.6	1390	44.2
Hodgkin lymphoma, mixed cellularity, NOS	9652	362	18.8	187	15.3	549	17.4
Hodgkin lymphoma, NOS	9650	312	16.2	174	14.2	486	15.4
Hodgkin lymphoma, lymphocyte-rich	9651	105	5.5	58	4.7	163	5.2
Hodgkin lymphoma, nodular lymphocyte predominance	9659	118	6.1	36	2.9	154	4.9
Hodgkin lymphoma, lymphocyte depletion, NOS	9653	34	1.8	10	0.8	44	1.4
Hodgkin lymphoma, lymphocyte depletion, reticular	9655	3	0.2	2	0.2	5	0.2
Hodgkin lymphoma, lymphocyte depletion diffuse fibrosis	9654	2	0.1	2	0.2	4	0.1
Hodgkin granuloma	9661	0	0.0	2	0.2	2	0.1
Hodgkin sarcoma	9662	0	0.0	1	0.1	1	0.0
Other		216	11.3	132	10.8	348	11.1
TOTAL		**1923**	**100.0**	**1223**	**100.0**	**3146**	**100.0**

▼ Figure 1.47
Trend of Hodgkin's disease among nationals of the GCC States, 1998-2007.





▲ **Figure 1.48**
Comparison of ASR of Hodgkin's disease in the GCC States with selected countries.

BRAIN CANCER

Brain cancer ranked as the tenth most common cancer in the GCC States. 3,083Brain cancer cases (3.2% from all cancers) were reported from all GCC States in 1998-2007. The overall ASRs were 2.4 and 1.6 per 100,000 populations for males and females respectively.

Brain cancer incidence was more common in men compared to women in all GCC States. Qatar had the highest incidence among men and women with ASR of 5.0 and 3.2 per 100,000 population for males and females respectively. Kuwait ranked second, followed by Bahrain, Oman, and UAE. KSA reported the lowest incidence among males and UAE reported the lowest incidence in females, Figure 1.49.

Advanced brain cancer was present in 18% of cases (13% with regional metastasis and 4.0% with distant metastasis). Localized tumors were present in 45% and unknown extent of cancer was present in about 37%. Glioblastoma was the most frequent histopathology type accounted to 24.4% from all brain cancers, Table 1.12 and Figures 1.50.

Brain cancer incidence continues to increase over the ten-year period among GCC States' nationals. Between 1998 and 2007, the total number of newly diagnosed brain cancer increased by 17% in males and 25% in females. However, there was no significant change in the ASR trends during the same period (p-values 0.5924 in male and 0.8606 in female), Figure 1.51.

Figure 1.49 ▼
Age Standardized incidence Rate (ASR) of Brain cancer in the GCC States, 1998-2007.

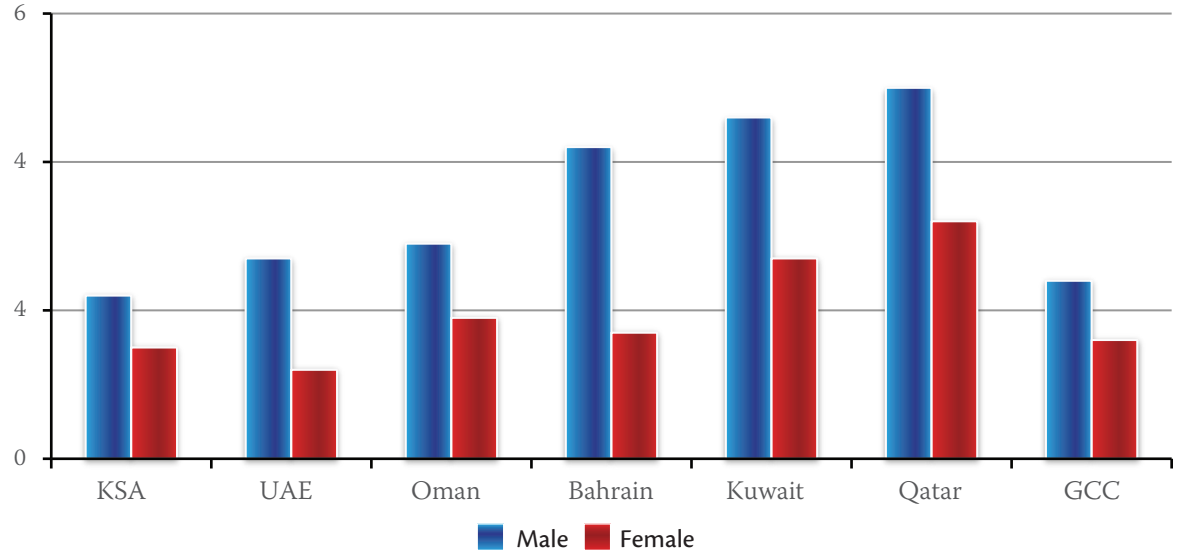


Figure 1.50 ▼
Extent of Brain at diagnosis.

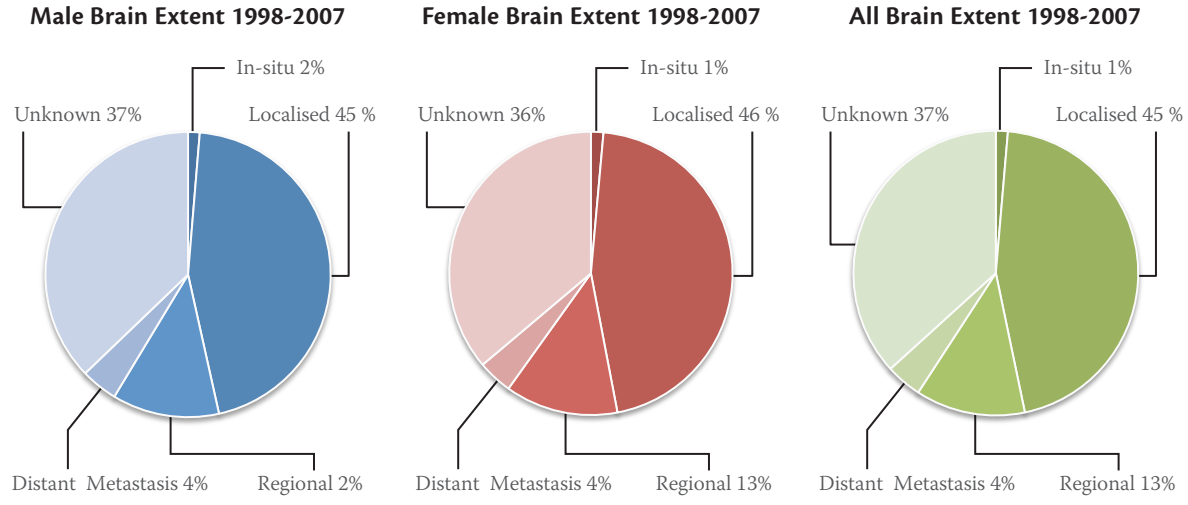
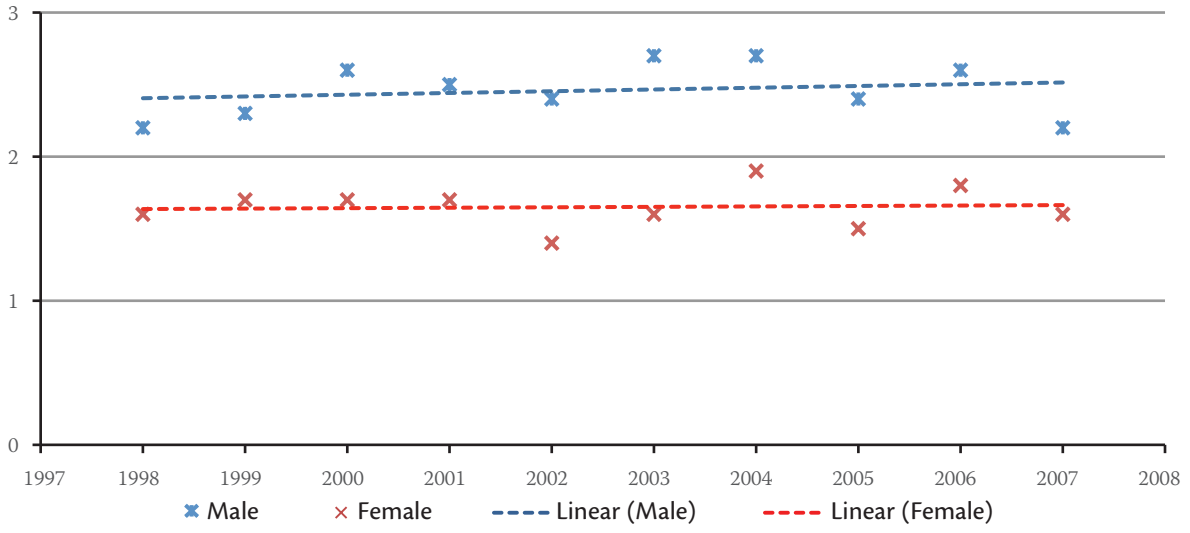
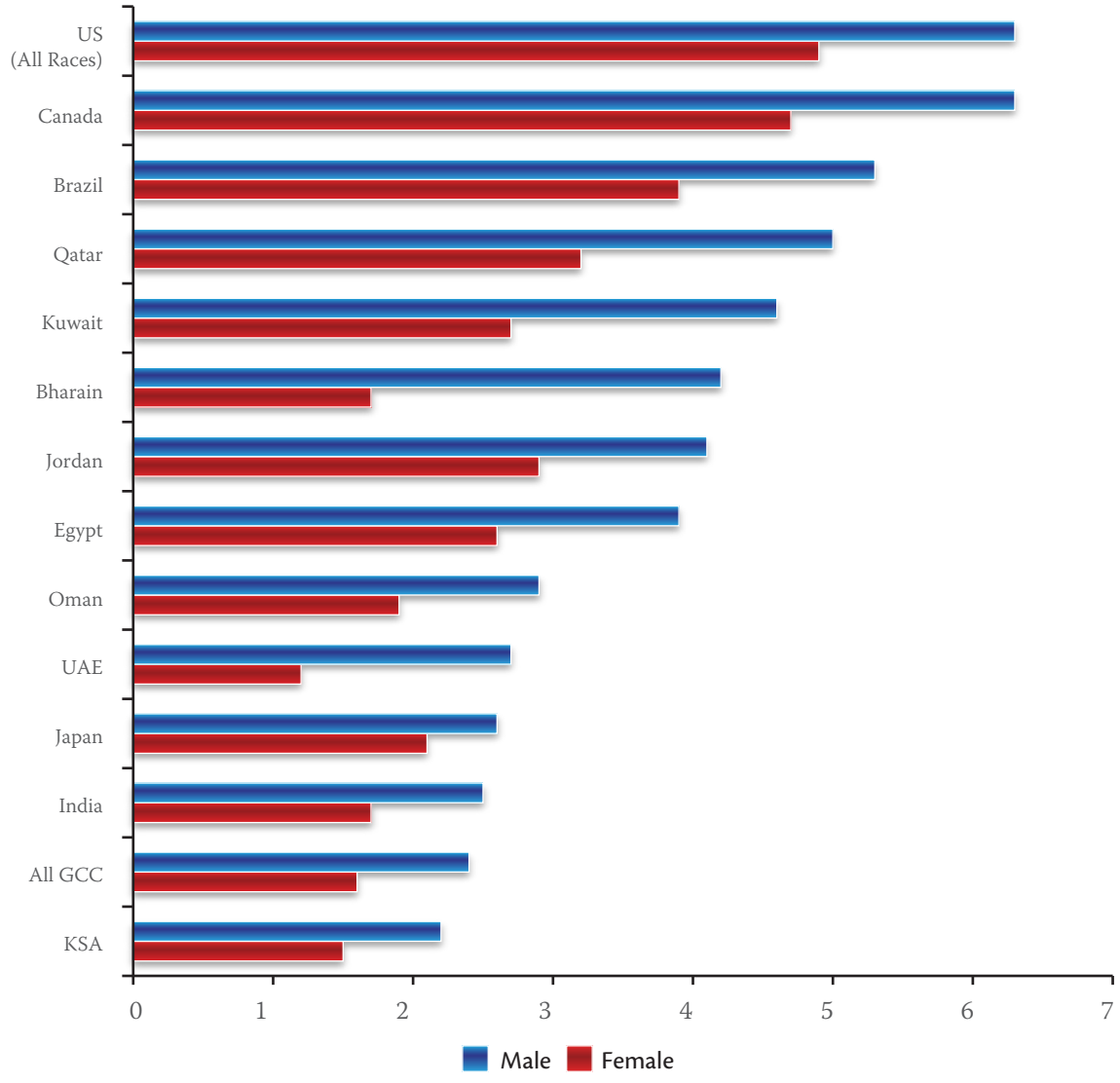


Table 1.12 ▼
Morphological Distribution of Brain cancer
GCC states, 1998-2007.

BRAIN MORPHOLOGY	ICD-10	MALE	%	FEMALE	%	TOTAL	%
Glioblastoma, NOS	9440	480	26.4	272	21.5	752	24.4
Medullobastoma, NOS	9470	223	12.2	141	11.2	364	11.8
Astrocytoma, NOS	9400	188	10.3	167	13.2	355	11.5
Glioma, malignant	9380	183	10.0	132	10.4	315	10.2
Neoplasm, malignant	8000	103	5.7	106	8.4	209	6.8
Ependymoma, NOS	9391	102	5.6	72	5.7	174	5.6
Astrocytoma, anaplastic	9401	82	4.5	37	2.9	119	3.9
Oligodendroglioma, NOS	9450	60	3.3	47	3.7	107	3.5
Meningiomatosis, NOS	9530	29	1.6	44	3.5	73	2.4
Mixed glioma	9382	39	2.1	23	1.8	62	2.0
		329	18.2	223	17.6	552	18.0
TOTAL	**1819**	**100.0**	**1264**	**100.0**	**3083**	**100.0**	**100.0**

▼ Figure 1.51
Trend of Brain cancer among nationals of the
GCC States, 1998-2007.





▲ **Figure 1.52**
Comparison of ASR of Brain cancer in the GCC States with selected countries.

TABLE 1.13: DISTRIBUTION OF SITE SPECIFIC CANCERS AND AGE STANDARDIZED RATES (ASR) PER 100,000 POPULATION, GCC STATES' MALES: 1998-2007

	UAE			BAHRAIN			KSA			OMAN			QATAR			KUWAIT			ALL GCC		
SITE	N	%	ASR	N	%	ASR	N	%	ASR	N	%	ASR	N	%	ASR	N	%	ASR	N	%	ASR
LIP	2	0.1	0.1	7	0.3	0.7	53	0.1	0.1	14	0.2	0.3	0	0.0	0	4	0.1	0.2	80	0.10	0.1
TONGUE	13	0.7	0.6	14	0.6	1.2	282	0.8	0.7	41	0.8	0.9	5	0.6	0.9	14	0.4	0.7	369	0.70	0.7
MOUTH	22	1.2	1.1	15	0.7	1.2	295	0.8	0.7	49	1.0	1	2	0.2	0.5	15	0.5	0.7	398	0.80	0.7
SALIVARY GLANDS	5	0.2	0.2	10	0.4	0.7	135	0.3	0.2	17	0.3	0.3	2	0.2	0.3	10	0.3	0.4	179	0.30	0.3
TONSIL	5	0.2	0.3	3	0.1	0.2	33	0.0	0.1	8	0.1	0.2	0	0.0	0	3	0.1	0.2	52	0.10	0.1
OTHER OROPHARYNX	3	0.1	0.2	1	0.0	0.1	17	0.0	0.0	13	0.2	0.3	0	0.0	0	0	0.0	0	34	0.00	0.1
NASOPHARYNX	15	0.8	0.6	23	1.1	1.7	1005	2.8	2.0	43	0.9	0.8	13	1.6	2.4	48	1.6	1.9	1147	2.40	1.9
HYPOPHARYNX	11	0.6	0.6	7	0.3	0.6	82	0.2	0.2	18	0.3	0.3	2	0.2	0.5	3	0.1	0.1	123	0.20	0.2
PHARYNX UNSPEC	2	0.1	0.1	1	0.0	0.1	23	0.0	0.1	3	0.0	0.1	1	0.1	0.3	0	0.0	0	30	0.00	0.1
OESOPHAGUS	39	2.2	2.1	46	2.2	3.9	649	1.8	1.5	102	2.1	2.3	19	2.4	4	36	1.2	1.9	891	1.80	1.7
STOMACH	120	6.9	6.5	81	3.9	6.8	1462	4.1	3.3	466	9.9	10.5	28	3.6	5.9	81	2.7	4	2238	4.70	4.2
SMALL INTESTINE	7	0.4	0.4	6	0.2	0.5	181	0.5	0.4	12	0.2	0.3	4	0.5	0.9	11	0.3	0.5	221	0.40	0.4
COLON	99	5.7	5.0	113	5.5	9.0	1750	4.9	4.0	151	3.2	3.2	45	5.8	10	207	6.9	10.2	2365	5.00	4.4
RECTUM	60	3.4	3.0	68	3.3	5.3	1371	3.9	3.2	107	2.2	2.3	23	2.9	5	109	3.6	5.3	1738	3.60	3.2
ANUS	21	1.2	1.1	13	0.6	1.0	111	0.3	0.3	23	0.4	0.5	0	0.0	0	5	0.1	0.2	173	0.30	0.3
LIVER	57	3.2	3.0	66	3.2	5.3	2946	8.4	7.1	254	5.4	5.7	63	8.1	13.9	144	4.8	7.2	3530	7.40	6.9
GALL BLADDER ETC	16	0.9	0.9	10	0.4	0.9	362	1.0	0.9	38	0.8	0.9	6	0.7	1.4	38	1.2	2.1	470	0.90	0.9
PANCREAS	34	1.9	1.9	66	3.2	5.5	805	2.2	1.9	72	1.5	1.7	16	2.0	3.8	77	2.5	3.9	1070	2.20	2.1
OTHER DIGESTIVE ORGANS	1	0.0	0.1	2	0.0	0.2	80	0.2	0.2	17	0.3	0.4	0	0.0	0	3	0.1	0.1	103	0.20	0.2
NOSE-SINUSES, ETC.	4	0.2	0.2	7	0.3	0.4	107	0.3	0.2	21	0.4	0.4	1	0.1	0.3	5	0.1	0.2	145	0.30	0.2
LARYNX	40	2.3	2.2	49	2.4	4.3	503	1.4	1.2	61	1.3	1.4	26	3.3	5.7	49	1.6	2.6	728	1.50	1.4
TRACHEA, BROUCHAUS, LUNG	169	9.7	9.3	358	17.6	31.1	2303	6.5	5.6	352	7.5	7.9	82	10.6	18	287	9.5	15.1	3551	7.50	6.9
OTHER, THORACIC ORGANS	3	0.1	0.1	13	0.6	0.9	129	0.3	0.2	18	0.3	0.3	3	0.3	0.6	18	0.6	0.6	184	0.30	0.3
BONE	35	2.0	0.8	32	1.5	1.6	570	1.6	0.7	57	1.2	0.7	13	1.6	1.2	38	1.2	0.8	745	1.50	0.7
MELANOM OF SKIN	7	0.4	0.4	3	0.1	0.2	108	0.3	0.2	16	0.3	0.4	1	0.1	0.2	4	0.1	0.2	139	0.20	0.2
OTHER SKIN	73	4.2	4.0	43	2.1	3.6	1458	4.1	3.2	186	3.9	4	29	3.7	6.4	31	1.0	1.4	1820	3.80	3.2

MESOTHELIOMA	3	0.1	0.2	13	0.6	1.2	64	0.1	0.1	8	0.1	0.2	2	0.2	0.4	7	0.2	0.4	97	0.20	0.2
KAPOSISARCOMA	5	0.2	0.3	4	0.1	0.4	198	0.5	0.4	27	0.5	0.5	8	1.0	1.5	6	0.2	0.3	248	0.50	0.4
CONNECTIVE, SOFT TISSUE	27	1.5	0.8	26	1.2	1.7	628	1.7	1.0	79	1.6	1.1	12	1.5	1.6	42	1.4	1.4	814	1.70	1.1
RETROPERITONEUM & PERITONEUM	0	0.0	0.0	5	0.2	0.3	69	0.1	0.1	7	0.1	0.1	2	0.2	0.5	5	0.1	0.1	88	0.10	0.1
BREAST	6	0.3	0.3	10	0.4	0.8	157	0.4	0.4	44	0.9	0.9	4	0.5	0.8	12	0.4	0.6	233	0.40	0.4
PENIS	1	0.0	0.0	1	0.0	0.1	17	0.0	0.0	1	0.0	0	0	0.0	0	0	0.0	0	20	0.00	0.0
PROSTATE	135	7.7	7.5	168	8.2	14.6	2073	5.9	4.8	366	7.8	8.4	45	5.8	10	234	7.8	13.1	3021	6.30	5.8
TESTIS	13	0.7	0.3	28	1.3	1.5	411	1.1	0.6	46	0.9	0.6	8	1.0	1.1	54	1.8	1.3	560	1.10	0.6
OTHER MALE GENITAL	0	0.0	0.0	1	0.0	0.0	26	0.0	0.0	1	0.0	0	0	0.0	0	0	0.0	0	28	0.00	0.0
KIDNEY	41	2.3	2.0	66	3.2	5.1	976	2.7	2.0	80	1.7	1.5	26	3.3	5.3	108	3.6	5	1297	2.70	2.2
RENAL PELVIS	2	0.1	0.1	0	0.0	0.0	49	0.1	0.1	2	0.0	0	2	0.2	0.4	6	0.2	0.3	61	0.10	0.1
URETER	1	0.0	0.1	0	0.0	0.0	23	0.0	0.1	2	0.0	0	1	0.1	0.3	1	0.0	0.1	28	0.00	0.1
BLADDER	105	6.0	5.4	161	7.9	13.8	1639	4.6	3.7	220	4.7	4.8	54	6.9	11.6	144	4.8	7.2	2323	4.90	4.3
OTHER URINARY ORGANS	1	0.0	0.0	0	0.0	0.0	6	0.0	0.0	6	0.1	0.1	0	0.0	0	2	0.0	0.1	15	0.00	0.0
EYE	6	0.3	0.1	4	0.1	0.3	219	0.6	0.4	32	0.6	0.5	2	0.2	0.1	7	0.2	0.2	270	0.50	0.3
BRAIN, NERVOUS SYSTEM	69	3.9	2.7	69	3.4	4.2	1328	3.7	2.2	192	4.1	2.9	28	3.6	5	133	4.4	4.6	1819	3.80	2.4
THYROID	40	2.3	1.7	30	1.4	2.0	923	2.6	1.8	87	1.8	1.7	20	2.5	3.2	91	3.0	3.2	1191	2.50	1.8
ADRENAL GLAND	6	0.3	0.1	7	0.3	0.3	104	0.2	0.1	14	0.2	0.2	4	0.5	0.6	9	0.3	0.2	144	0.30	0.1
OTHER ENDOCRINE	2	0.1	0.0	1	0.0	0.0	32	0.0	0.0	5	0.1	0.1	0	0.0	0	3	0.1	0.1	43	0.00	0.0
OTHER & ILL-DEFINED SITES	2	0.1	0.1	7	0.3	0.5	101	0.2	0.2	45	0.9	0.8	0	0.0	0	10	0.3	0.4	165	0.30	0.2
HODGKIN DIS.	55	3.1	1.8	42	2.0	2.0	1495	4.2	2.0	179	3.8	2.4	30	3.8	3.9	122	4.0	3.3	1923	4.00	2.1
NON HODGKIN LYMPHOMA	153	8.8	6.6	107	5.2	7.1	3163	9.0	6.1	419	8.9	7.6	51	6.6	9.4	304	10.1	11.1	4197	8.80	6.5
IMMUNOPROLIFERATIVE DIS.	1	0.0	0.0	1	0.0	0.1	4	0.0	0.0	1	0.0	0	1	0.1	0.3	2	0.0	0.1	10	0.00	0.0
MULTIPLE MYELOMA	28	1.6	1.5	22	1.0	1.8	433	1.2	1.0	77	1.6	1.8	11	1.4	2.4	31	1.0	1.6	602	1.20	1.2
LYMPHOID LEUKAEMIA	65	3.7	1.5	44	2.1	2.8	1576	4.4	2.2	195	4.1	2.3	29	3.7	3.4	134	4.4	3	2043	4.30	2.2
MYELOID LEUKAEMIA	57	3.2	2.0	56	2.7	3.9	1082	3.0	1.8	150	3.2	2.4	27	3.4	4.8	106	3.5	3.7	1478	3.10	2.0
LEUKAEMIA UNSPEC	1	0.0	0.0	27	1.3	1.6	149	0.4	0.3	53	1.1	0.7	2	0.2	0.3	6	0.2	0.3	238	0.50	0.3
UNKNOWN PRIMARY SITE	45	2.5	2.4	72	3.5	5.8	1281	3.6	2.9	175	3.7	3.8	19	2.4	4.2	179	5.9	8.4	1771	3.70	3.3
ALL SITES TOTAL	**1733**	**100**	**82.3**	**2029**	**100.0**	**158.5**	**35046**	**100**	**72.5**	**4672**	**100**	**92.5**	**772**	**100**	**153.4**	**2998**	**100**	**130.5**	**47250**	**100**	**79.3**

TABLE 1.14: DISTRIBUTION OF SITE SPECIFIC CANCERS AND AGE STANDARDIZED RATES (ASR) PER 100,000 POPULATION, GCC STATES' FEMALES: 1998-2007

	UAE			BAHRAIN			KSA			OMAN			QATAR			KUWAIT			ALL GCC		
SITE	N	%	ASR	N	%	ASR	N	%	ASR	N	%	ASR	N	%	ASR	N	%	ASR	N	%	ASR
LIP	0	0.0	0	0	0.0	0	49	0.1	0.1	6	0.1	0.1	0	0.0	0	4	0.1	0.2	59	0.10	0.1
TONGUE	10	0.5	0.6	8	0.3	0.6	276	0.7	0.7	14	0.3	0.3	5	0.5	1.2	18	0.4	0.7	331	0.60	0.6
MOUTH	9	0.4	0.5	8	0.3	0.6	338	0.9	0.8	23	0.5	0.5	4	0.4	0.9	10	0.2	0.5	392	0.80	0.7
SALIVARY GLANDS	12	0.6	0.5	6	0.2	0.3	114	0.3	0.2	25	0.5	0.4	0	0.0	0	14	0.3	0.4	171	0.30	0.3
TONSIL	1	0.0	0	1	0.0	0.1	22	0.0	0	0	0.0	0	0	0.0	0	1	0.0	0	25	0.00	0.0
OTHER OROPHARYNX	0	0.0	0	0	0.0	0	8	0.0	0	6	0.1	0.2	1	0.1	0.3	1	0.0	0	16	0.00	0.0
NASOPHARYNX	6	0.3	0.3	8	0.3	0.6	399	1.1	0.8	20	0.4	0.3	7	0.8	1.5	26	0.6	0.9	466	0.90	0.7
HYPOPHARYNX	4	0.2	0.3	2	0.0	0.2	123	0.3	0.3	14	0.3	0.3	0	0.0	0	3	0.0	0.2	146	0.30	0.3
PHARYNX UNSPEC	2	0.1	0.1	0	0.0	0	15	0.0	0	2	0.0	0	0	0.0	0	0	0.0	0	19	0.00	0.0
OESOPHAGUS	31	1.6	2	20	0.9	1.7	538	1.5	1.3	73	1.7	1.8	24	0.0	6.7	27	0.6	1.4	713	1.40	1.4
STOMACH	57	3.0	3.5	61	2.7	4.7	819	2.3	1.9	252	5.9	5.8	23	2.7	5.5	54	1.3	2.1	1266	2.60	2.4
SMALL INTESTINE	2	0.1	0.1	4	0.1	0.3	122	0.3	0.3	10	0.2	0.2	2	2.6	0.5	10	0.2	0.4	150	0.30	0.3
COLON	86	4.6	5	96	4.3	7.1	1573	4.5	3.6	118	2.7	2.4	44	0.2	9.6	226	5.7	8.8	2143	4.40	3.9
RECTUM	40	2.1	2.3	40	1.8	3	1090	3.1	2.5	80	1.8	1.7	29	5.1	7	116	2.9	4.5	1395	2.90	2.6
ANUS	5	0.2	0.3	2	0.0	0.2	62	0.1	0.1	11	0.2	0.3	0	0.0	0	13	0.3	0.5	93	0.10	0.2
LIVER	33	1.7	1.9	42	1.9	3.6	1171	3.3	2.9	98	2.3	2.2	27	0.0	7.6	64	1.6	3	1435	2.90	2.9
GALL BLADDER ETC.	24	1.2	1.7	12	0.5	0.9	589	1.6	1.5	39	0.9	0.9	18	3.1	4.8	38	0.9	1.7	720	1.50	1.4
PANCREAS	19	1.0	1.2	41	1.8	3.3	475	1.3	1.2	51	1.2	1.2	13	2.0	3.2	71	1.8	3.2	670	1.30	1.3
OTHER DIGESTIVE ORGANS	3	0.1	0.2	0	0.0	0	58	0.1	0.1	9	0.2	0.2	1	1.5	0.3	0	0.0	0	71	0.10	0.1
NOSE-SINUSES, ETC.	1	0.0	0.1	3	0.1	0.2	79	0.2	0.2	13	0.3	0.3	1	0.1	0.1	6	0.1	0.2	103	0.20	0.2
LARYNX	8	0.4	0.5	6	0.2	0.5	75	0.2	0.2	14	0.3	0.3	1	0.1	0.3	7	0.1	0.4	111	0.20	0.2
TRACHEA, BROUCHAUS, LUNG	50	2.6	3.3	126	5.7	10.7	653	1.8	1.6	87	2.0	2	16	0.1	4.5	105	2.6	5	1037	2.10	2.1
OTHER, THORACIC ORGANS	1	0.0	0	3	0.1	0.3	80	0.2	0.1	7	0.1	0.1	1	1.8	0.2	8	0.2	0.3	100	0.20	0.1
BONE	18	0.9	0.4	10	0.4	0.5	390	1.1	0.5	42	0.9	0.4	9	0.1	0.7	32	0.8	0.8	501	1.00	0.5
MELANOM OF SKIN	5	0.2	0.2	3	0.1	0.2	97	0.2	0.2	14	0.3	0.3	0	1.0	0	8	0.2	0.3	127	0.20	0.2
OTHER SKIN	40	2.1	2.5	26	1.1	2	1082	3.1	2.5	135	3.2	3	22	2.5	5	35	0.8	1.4	1340	2.70	2.5
MESOTHELIOMA	5	0.2	0.3	3	0.1	0.2	35	0.1	0.1	1	0.0	0	0	0.0	0	3	0.0	0.1	47	0.00	0.1
KAPOSISARCOMA	3	0.1	0.2	3	0.1	0.2	67	0.1	0.2	12	0.2	0.2	2	0.2	0.4	2	0.0	0.1	89	0.10	0.2
CONNECTIVE, SOFT TISSUE	30	1.6	1.1	10	0.4	0.5	518	1.4	0.8	58	1.3	0.8	14	1.6	2.2	31	0.7	0.9	661	1.30	0.8

RETROPERITONEUM & PERITONEUM	2	0.1	0.1	7	0.3	0.4	86	0.2	0.2	7	0.1	0.1	0	0.0	0	9	0.2	0.3	111	0.20	0.2
BREAST	487	26.1	25.1	810	37.1	54.4	7637	21.8	15.6	771	18.2	15.7	241	28.0	45.6	1350	34.4	48	11296	23.50	18.8
VULVA	4	0.2	0.3	1	0.0	0.1	53	0.1	0.1	16	0.3	0.4	0	0.0	0	9	0.2	0.4	83	0.10	0.2
VAGINA	3	0.1	0.1	2	0.0	0.2	34	0.0	0.1	15	0.3	0.3	1	0.1	0.2	4	0.1	0.2	59	0.10	0.1
CERVIX UTERI	117	6.2	6.3	83	3.8	6.1	897	2.5	1.9	267	6.3	5.8	34	3.9	6.8	117	2.9	4.3	1515	3.10	2.6
CORPUS UTERI	49	2.6	3.3	78	3.5	6.1	1105	3.1	2.7	61	1.4	1.5	42	4.8	9.6	145	3.7	6.2	1480	3.00	2.9
UTERUS UNSPEC	8	0.4	0.4	28	1.2	2.3	154	0.4	0.4	27	0.6	0.6	6	0.6	1	27	0.6	1.1	250	0.50	0.5
OVARY	81	4.3	4.2	105	4.8	7.4	1215	3.4	2.5	227	5.3	4.5	38	4.4	7.2	136	3.4	5.1	1802	3.70	3.0
OTTHER FEMALE GENITAL	3	0.1	0.2	3	0.1	0.3	57	0.1	0.1	6	0.1	0.1	1	0.1	0.2	2	0.0	0.1	72	0.10	0.1
PLACENTA	3	0.1	0.1	7	0.3	0.3	121	0.3	0.2	16	0.3	0.2	2	0.2	0.2	4	0.1	0.1	153	0.30	0.2
KIDNEY	24	1.2	1	49	2.2	3.4	685	1.9	1.4	73	1.7	1.3	12	1.3	2.3	56	1.4	2.1	899	1.80	1.4
RENALPELIVS	0	0.0	0	0	0.0	0	23	0.0	0.1	1	0.0	0	0	0.0	0	0	0.0	0	24	0.00	0.0
URETER	1	0.0	0.1	0	0.0	0	13	0.0	0	2	0.0	0	1	0.1	0.3	1	0.0	0.1	18	0.00	0.0
BLADDER	30	1.6	1.9	40	1.8	3.2	416	1.1	1	95	2.2	2.2	7	0.8	1.9	62	1.5	3	650	1.30	1.3
OTHER URINARY ORGANS	1	0.0	0.1	0	0.0	0	4	0.0	0	1	0.0	0	0	0.0	0	0	0.0	0	6	0.00	0.0
EYE	4	0.2	0.1	2	0.0	0.1	194	0.5	0.3	25	0.5	0.4	1	0.1	0.3	2	0.0	0	228	0.40	0.3
BRAIN, NERVOUS SYSTEM	34	1.8	1.2	28	1.2	1.7	955	2.7	1.5	139	3.2	1.9	20	2.3	3.2	88	2.2	2.7	1264	2.60	1.6
THYROID	177	9.5	7.1	125	5.7	7.7	3369	9.6	5.7	348	8.2	5.6	74	8.6	10.9	303	7.7	8.5	4396	9.10	5.9
ADRENAL GLAND	4	0.2	0.1	2	0.0	0.1	106	0.3	0.1	17	0.4	0.2	3	0.3	0.6	12	0.3	0.3	144	0.30	0.1
OTHER ENDOCRINE	1	0.0	0	3	0.1	0.1	23	0.0	0	1	0.0	0	2	0.2	0.3	1	0.0	0.1	31	0.00	0.0
OTHER & ILL-DEFINED SITES	7	0.3	0.4	6	0.2	0.4	76	0.2	0.2	39	0.9	0.7	0	0.0	0	15	0.3	0.7	143	0.20	0.2
HODGKIN DIS.	44	2.3	1.4	32	1.4	1.8	964	2.7	1.3	82	1.9	1.2	18	2.0	1.8	83	2.1	2	1223	2.50	1.3
NON HODGKIN LYMPHOMA	87	4.6	4.6	79	3.6	5.6	2240	6.4	4.7	252	5.9	4.6	44	5.1	9.1	188	4.8	6.4	2890	6.00	4.8
IMMUNOPROLIFERATIVE DIS.	1	0.0	0.1	0	0.0	0	4	0.0	0	0	0.0	0	0	0.0	0	1	0.0	0	6	0.00	0.0
MULTIPLE MYELOMA	21	1.1	1.4	20	0.9	1.7	258	0.7	0.6	53	1.2	1.3	4	0.4	1	35	0.8	1.4	391	0.80	0.8
LYMPHOID LEUKAEMIA	60	3.2	1.4	27	1.2	1.3	930	2.6	1.2	114	2.7	1.5	12	1.3	1.2	87	2.2	2.2	1230	2.50	1.3
MYELOID LEUKAEMIA	64	3.4	2.5	35	1.6	2.1	1006	2.8	1.7	95	2.2	1.5	20	2.3	3.3	93	2.3	2.7	1313	2.70	1.8
LEUKAEMIA UNSPEC	3	0.1	0.2	18	0.8	1	104	0.2	0.2	54	1.2	0.8	4	0.4	0.3	1	0.0	0	184	0.30	0.2
UNKNOWN PRIMARY SITE	38	2.0	2.5	49	2.2	4.2	1249	3.5	3	180	4.2	4.1	8	0.9	2.4	151	3.8	6.4	1675	3.40	3.2
ALL SITES TOTAL	**1863**	**100.0**	**95.1**	**2183**	**100.0**	**154.6**	**34895**	**100.0**	**71.2**	**4218**	**100**	**82.6**	**859**	**100.0**	**172.2**	**3915**	**100.0**	**142**	**47933**	**100**	**79.3**

TABLE 1.15: DISTRIBUTION OF SITE SPECIFIC CANCERS AND AGE STANDARDIZED RATES (ASR) PER 100,000 POPULATION, GCC STATES' MALES: DURING 1998-2002 AND 2003-2007

	UAE 1998-2002			UAE 2003-2007			BAHRAIN 1998-2002			BAHRAIN 2003-2007			KSA 1998-2002			KSA 2003-2007		
SITE	N	%	ASR	N	%	ASR	N	%	ASR	N	%	ASR	N	%	ASR	N	%	ASR
LIP	1	0.1	0.1	1	0.1	0.1	3	0.2	0.6	4	0.3	0.7	17	0.1	0.1	36	0.1	0.2
TONGUE	6	0.7	0.6	7	0.7	0.6	9	0.8	1.6	5	0.4	0.8	106	0.6	0.5	176	0.8	0.8
MOUTH	6	0.7	0.6	16	1.6	1.7	8	0.7	1.5	7	0.6	1	131	0.8	0.6	164	0.8	0.7
SALIVARY GLANDS	2	0.2	0.2	3	0.3	0.1	4	0.3	0.6	6	0.5	0.8	57	0.3	0.2	78	0.3	0.3
TONSIL	1	0.1	0.1	4	0.4	0.4	0	0.0	0	3	0.2	0.5	19	0.1	0.1	14	0.0	0.1
OTHER OROPHARYNX	1	0.1	0.1	2	0.2	0.2	1	0.0	0.2	0	0.0	0	10	0.0	0.1	7	0.0	0
NASOPHARYNX	10	1.2	0.9	5	0.5	0.5	13	1.2	1.9	10	0.9	1.4	503	3.2	2.3	502	2.5	1.9
HYPOPHARYNX	4	0.5	0.4	7	0.7	0.8	3	0.2	0.6	4	0.3	0.6	31	0.2	0.1	51	0.2	0.2
PHARYNX UNSPEC	2	0.2	0.2	0	0.0	0	0	0.0	0	1	0.0	0.2	6	0.0	0	17	0.0	0.1
OESOPHAGUS	24	3.0	2.7	15	1.5	1.6	24	2.3	4.4	22	2.1	3.5	338	2.1	1.5	311	1.5	1.4
STOMACH	67	8.6	7.9	53	5.5	5.6	48	4.7	8.7	33	3.2	5.1	624	4.0	2.9	838	4.2	3.8
SMALL INTESTINE	3	0.3	0.4	4	0.4	0.3	2	0.1	0.3	4	0.3	0.6	74	0.4	0.3	107	0.5	0.4
COLON	39	5.0	4.5	60	6.2	5.7	53	5.2	8.7	60	5.8	9.2	596	3.8	2.8	1154	5.8	5.1
RECTUM	26	3.3	2.9	34	3.5	3.3	27	2.6	4.6	41	3.9	5.9	470	3.0	2.3	901	4.5	4
ANUS	14	1.7	1.6	7	0.7	0.7	7	0.6	1.1	6	0.5	0.8	47	0.3	0.2	64	0.3	0.3
LIVER	31	3.9	3.6	26	2.7	2.6	31	3.0	5.5	35	3.4	5.1	1475	9.5	7.3	1471	7.4	6.9
GALL BLADDER ETC.	8	1.0	1	8	0.8	0.8	4	0.3	0.8	6	0.5	0.9	161	1.0	0.8	201	1.0	0.9
PANCREAS	13	1.6	1.6	21	2.2	2.3	31	3.0	5.5	35	3.4	5.5	314	2.0	1.5	491	2.4	2.3
OTHER DIGESTIVE ORGANS	1	0.1	0.1	0	0.0	0	1	0.0	0.2	1	0.0	0.2	24	0.1	0.1	56	0.2	0.2
NOSE-SINUSES, ETC.	0	0.0	0	4	0.4	0.4	3	0.2	0.4	4	0.3	0.4	51	0.3	0.2	56	0.2	0.2
LARYNX	13	1.6	1.5	27	2.8	3	27	2.6	5	22	2.1	3.6	217	1.4	1.1	286	1.4	1.4
TRACHEA, BROUCHAUS, LUNG	71	9.1	8.6	98	10.2	10.5	197	19.6	36.3	161	15.6	26.3	1008	6.5	5.1	1295	6.5	6.1
OTHER, THORACIC ORGANS	0	0.0	0	3	0.3	0.2	6	0.5	0.8	7	0.6	0.9	45	0.2	0.2	84	0.4	0.3
BONE	14	1.7	0.8	21	2.2	0.9	13	1.2	1.6	19	1.8	1.7	276	1.7	0.7	294	1.4	0.7
MELANOM OF SKIN	4	0.5	0.5	3	0.3	0.3	2	0.1	0.4	1	0.0	0.1	45	0.2	0.2	63	0.3	0.3
OTHER SKIN	27	3.4	3.3	46	4.8	4.8	23	2.2	4.2	20	1.9	3	640	4.1	2.9	818	4.1	3.5

MESOTHELIOMA	0	0.0	0	3	0.3	0.3	2	0.1	0.4	11	1.0	1.8	24	0.1	0.1	40	0.2	0.2
KAPOSISARCOMA	2	0.2	0.2	3	0.3	0.3	2	0.1	0.4	2	0.1	0.3	83	0.5	0.4	115	0.5	0.5
CONNECTIVE, SOFT TISSUE	12	1.5	0.8	15	1.5	0.8	12	1.1	1.6	14	1.3	1.7	285	1.8	1	343	1.7	1
RETROPERITONEUM & PERITONEUM	0	0.0	0	0	0.0	0	4	0.3	0.4	1	0.0	0.2	31	0.2	0.1	38	0.1	0.1
BREAST	4	0.5	0.5	2	0.2	0.2	1	0.0	0.2	9	0.8	1.4	73	0.4	0.3	84	0.4	0.4
PENIS	1	0.1	0.1	0	0.0	0	1	0.0	0.2	0	0.0	0	6	0.0	0	11	0.0	0.1
PROSTATE	59	7.5	7.1	76	7.9	8.5	83	8.2	15.3	85	8.2	13.9	869	5.6	3.9	1204	6.1	5.6
TESTIS	7	0.8	0.4	6	0.6	0.2	11	1.0	1	17	1.6	1.9	185	1.2	0.6	226	1.1	0.6
OTHER MALE GENITAL	0	0.0	0	0	0.0	0	1	0.0	0.1	0	0.0	0	12	0.0	0	14	0.0	0.1
KIDNEY	15	1.9	1.5	26	2.7	2.5	32	3.1	5.4	34	3.3	4.7	401	2.6	1.7	575	2.9	2.3
RENAL PELVIS	1	0.1	0.1	1	0.1	0.1	0	0.0	0	0	0.0	0	21	0.1	0.1	28	0.1	0.1
URETER	0	0.0	0	1	0.1	0.1	0	0.0	0	0	0.0	0	8	0.0	0	15	0.0	0.1
BLADDER	52	6.6	5.9	53	5.5	5.4	85	8.4	15.5	76	7.4	12.1	770	5.0	3.7	869	4.4	3.9
OTHER URINARY ORGANS	1	0.1	0.1	0	0.0	0	0	0.0	0	0	0.0	0	3	0.0	0	3	0.0	0
EYE	3	0.3	0.1	3	0.3	0.2	1	0.0	0.1	3	0.2	0.4	112	0.7	0.4	107	0.5	0.3
BRAIN, NERVOUS SYSTEM	28	3.5	2.3	41	4.2	3.2	29	2.8	3.7	40	3.8	4.7	604	3.9	2	724	3.6	2.3
THYROID	16	2.0	1.6	24	2.5	1.6	9	0.8	1.2	21	2.0	2.6	412	2.6	1.7	511	2.5	1.8
ADRENAL GLAND	2	0.2	0.1	4	0.4	0.2	4	0.3	0.4	3	0.2	0.3	38	0.2	0.1	66	0.3	0.2
OTHER ENDOCRINE	2	0.2	0.1	0	0.0	0	0	0.0	0	1	0.0	0.1	10	0.0	0	22	0.1	0
OTHER & ILL-DEFINED SITES	1	0.1	0	1	0.1	0.1	4	0.3	0.7	3	0.2	0.3	42	0.2	0.2	59	0.3	0.2
HODGKIN DIS.	28	3.5	1.7	27	2.8	1.9	17	1.6	1.7	25	2.4	2.3	642	4.1	1.9	853	4.3	2.1
NON HODGKIN LYMPHOMA	64	8.2	6	89	9.3	7.5	48	4.7	7.2	59	5.7	6.9	1341	8.7	5.6	1822	9.2	6.6
IMMUNOPROLIFERATIVE DIS.	1	0.1	0	0	0.0	0	0	0.0	0	1	0.0	0.1	1	0.0	0	3	0.0	0
MULTIPLE MYELOMA	10	1.2	1.2	18	1.8	1.8	14	1.3	2.5	8	0.7	1.2	194	1.2	1	239	1.2	1.1
LYMPHOID LEUKAEMIA	32	4.1	1.6	33	3.4	1.7	25	2.4	3.2	19	1.8	2.3	747	4.8	2.1	829	4.2	2.1
MYELOID LEUKAEMIA	24	3.0	1.8	33	3.4	2.1	36	3.5	5.2	20	1.9	2.6	536	3.4	1.9	546	2.7	1.7
LEUKAEMIA UNSPEC	1	0.1	0.1	0	0.0	0	7	0.6	1.1	20	1.9	2	54	0.3	0.2	95	0.4	0.3
UNKNOWN PRIMARY SITE	25	3.2	3.1	20	2.0	2	35	3.4	6	37	3.6	5.6	601	3.9	2.9	680	3.4	3
ALL SITES TOTAL	**779**	**100.0**	**80.6**	**954**	**100.0**	**88.2**	**1003**	**100.0**	**169**	**1026**	**100.0**	**148.3**	**15390**	**100.0**	**66.4**	**19656**	**100.0**	**78.7**

TABLE 1.16: DISTRIBUTION OF SITE SPECIFIC CANCERS AND AGE STANDARDIZED RATES (ASR) PER 100,000 POPULATION, GCC STATES' MALES: DURING 1998-2002 AND 2003-2007

	OMAN 1998-2002			OMAN 2003-2007			QATAR 1998-2002			QATAR 2003-2007			KUWAIT 1998-2002			KUWAIT 200320-07			ALL GCC 1998-2002			ALL GCC 2003-2007		
SITE	N	%	ASR	N	%	ASR	N	%	ASR	N	%	ASR	N	%	ASR	N	%	ASR	N	%	ASR	N	%	ASR
LIP	9	0.3	0.4	5	0.2	0.3	0	0.0	0	0	0	0	3	0.2	0.2	1	0.0	0.1	33	0.1	0.1	47	0.1	0.2
TONGUE	18	0.7	0.8	23	0.9	1.1	2	0.5	1	3	0.7	0.8	5	0.3	0.6	9	0.5	0.7	146	0.6	0.6	223	0.8	0.8
MOUTH	23	0.9	1	26	1.1	1.4	1	0.2	0.6	1	0.2	0.5	10	0.7	1.2	5	0.3	0.4	179	0.8	0.7	219	0.8	0.8
SALIVARY GLANDS	10	0.4	0.4	7	0.3	0.3	0	0.0	0	2	0.5	0.6	6	0.4	0.6	4	0.2	0.4	79	0.3	0.3	100	0.3	0.3
TONSIL	2	0.0	0.1	6	0.2	0.3	0	0.0	0	0	0.0	0	1	0.0	0.1	2	0.1	0.2	23	0.1	0.1	29	0.1	0.1
OTHER OROPHARYNX	2	0.0	0.1	11	0.4	0.6	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	14	0.0	0.1	20	0.0	0.1
NASOPHARYNX	23	0.9	0.9	20	0.8	0.7	8	2.1	2.9	5	1.2	2.1	18	1.2	1.8	30	1.8	1.8	575	2.6	2.1	572	2.2	1.7
HYPOPHARYNX	9	0.3	0.3	9	0.3	0.4	1	0.2	0.6	1	0.2	0.5	3	0.2	0.3	0	0.0	0	51	0.2	0.2	72	0.2	0.3
PHARYNX UNSPEC	0	0.0	0	3	0.1	0.2	0	0.0	0	1	0.2	0.5	0	0.0	0	0	0.0	0	8	0.0	0	22	0.0	0.1
OESOPHAGUS	52	2.2	2.5	50	2.1	3	11	2.9	5.1	8	2.0	3.3	24	1.7	2.9	12	0.7	1.2	473	2.2	1.8	418	1.6	1.5
STOMACH	268	11.3	12.7	198	8.5	11.6	12	3.2	5.8	16	4.0	6	33	2.3	4.2	48	3.0	4.2	1055	4.9	4.1	1186	4.5	4.4
SMALL INTESTINE	8	0.3	0.4	4	0.1	0.2	1	0.2	0.6	3	0.7	1.2	4	0.2	0.5	7	0.4	0.6	92	0.4	0.3	129	0.4	0.4
COLON	58	2.4	2.5	93	4.0	4.7	14	3.7	6.9	31	7.7	12.9	84	5.9	9.7	123	7.7	10.9	844	3.9	3.2	1521	5.8	5.5
RECTUM	45	1.9	2	62	2.6	3.3	10	2.6	4.2	13	3.2	5.8	55	3.9	6.1	54	3.3	4.8	633	2.9	2.5	1105	4.2	4
ANUS	14	0.5	0.6	9	0.3	0.5	0	0.0	0	0	0.0	0	1	0.0	0.1	4	0.2	0.3	83	0.3	0.3	90	0.3	0.3
LIVER	137	5.8	6.4	117	5.0	6.5	29	7.7	13.3	34	8.5	15	80	5.6	9.5	64	4.0	5.9	1783	8.3	7.1	1747	6.7	6.7
GALL BLADDER ETC.	16	0.6	0.8	22	0.9	1.3	3	0.8	1.7	3	0.7	1.2	17	1.2	2.3	21	1.3	2.1	209	0.9	0.9	261	1.0	1
PANCREAS	36	1.5	1.7	36	1.5	2.2	9	2.4	4.5	7	1.7	3.2	35	2.4	4.1	42	2.6	3.9	438	2.0	1.7	632	2.4	2.4
OTHER DIGESTIVE ORGANS	7	0.2	0.3	10	0.4	0.5	0	0.0	0	0	0.0	0	2	0.1	0.2	1	0.0	0	35	0.1	0.1	68	0.2	0.2
NOSE-SINUSES, ETC.	6	0.2	0.3	15	0.6	0.6	0	0.0	0	1	0.2	0.5	3	0.2	0.3	2	0.1	0.1	63	0.2	0.2	82	0.3	0.2
LARYNX	22	0.9	1	39	1.6	2.2	10	2.6	4.8	16	4.0	6.6	25	1.7	3.2	24	1.5	2.3	315	1.4	1.3	414	1.5	1.6
TRACHEA, BROUCHAUS, LUNG	192	8.1	9.1	160	6.9	9.3	36	9.6	17.7	46	11.5	18.8	147	10.4	17.5	140	8.8	13.8	1652	7.7	6.7	1900	7.3	7.3
OTHER, THORACIC ORGANS	9	0.3	0.4	9	0.3	0.3	2	0.5	0.9	1	0.2	0.3	7	0.4	0.5	11	0.6	0.8	69	0.3	0.2	115	0.4	0.3
BONE	24	1.0	0.7	33	1.4	0.8	8	2.1	1.5	5	1.2	1	18	1.2	0.8	20	1.2	0.9	353	1.6	0.7	392	1.5	0.7
MELANOM OF SKIN	8	0.3	0.4	8	0.3	0.4	0	0.0	0	1	0.2	0.5	2	0.1	0.3	2	0.1	0.1	61	0.2	0.2	78	0.3	0.3
OTHER SKIN	93	3.9	4.1	93	4.0	5.4	12	3.2	5.4	17	4.2	7.3	14	0.9	1.5	17	1.0	1.3	809	3.7	3	1011	3.8	3.6
MESOTHELIOMA	5	0.2	0.2	3	0.1	0.2	2	0.5	0.9	0	0.0	0	4	0.2	0.5	3	0.1	0.2	37	0.1	0.2	60	0.2	0.2

KAPOSISARCOMA	14	0.5	0.6	13	0.5	0.5	3	0.8	1.6	5	1.2	1.4	2	0.1	0.2	4	0.2	0.3	106	0.4	0.4	142	0.5	0.5
CONNECTIVE, SOFT TISSUE	46	1.9	1.3	33	1.4	1	5	1.3	1.1	7	1.7	2.1	20	1.4	1.4	22	1.3	1.3	380	1.7	1	434	1.6	1.1
RETROPERITONEUM & PERITONEUM	5	0.2	0.2	2	0.0	0	1	0.2	0.6	1	0.2	0.4	2	0.1	0.1	3	0.1	0.1	43	0.2	0.1	45	0.1	0.1
BREAST	19	0.8	0.8	25	1.0	1.3	3	0.8	1.2	1	0.2	0.5	6	0.4	0.7	6	0.3	0.6	106	0.4	0.4	127	0.4	0.4
PENIS	0	0.0	0	1	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	8	0.0	0	12	0.0	0
PROSTATE	199	8.4	9.6	167	7.2	10.5	20	5.3	9.9	25	6.2	10.4	93	6.6	12.7	141	8.8	14.7	1323	6.2	5	1698	6.5	6.6
TESTIS	20	0.8	0.6	26	1.1	0.7	4	1.0	0.8	4	1.0	1.4	25	1.7	1.3	29	1.8	1.2	252	1.1	0.7	308	1.1	0.6
OTHER MALE GENITAL	0	0.0	0	1	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	13	0.0	0	15	0.0	0
KIDNEY	38	1.6	1.6	42	1.8	1.8	10	2.6	4.7	16	4.0	6	59	4.1	6.2	49	3.0	4	555	2.6	2	742	2.8	2.5
RENAL PELVIS	0	0.0	0	2	0.0	0.1	1	0.2	0.2	1	0.2	0.5	4	0.2	0.5	2	0.1	0.1	27	0.1	0.1	34	0.1	0.1
URETER	1	0.0	0.1	1	0.0	0.1	0	0.0	0	1	0.2	0.5	0	0.0	0	1	0.0	0.1	9	0.0	0	19	0.0	0.1
BLADDER	102	4.3	4.7	118	5.0	6.5	35	9.4	16	19	4.7	8.1	59	4.1	7.2	85	5.3	7.7	1105	5.1	4.3	1220	4.7	4.5
OTHER URINARY ORGANS	4	0.1	0.2	2	0.0	0.1	0	0.0	0	0	0.0	0	1	0.0	0.1	1	0.0	0.1	9	0.0	0	6	0.0	0
EYE	12	0.5	0.4	20	0.8	0.9	2	0.5	0.3	0	0.0	0	7	0.4	0.4	0	0.0	0	137	0.6	0.3	133	0.5	0.3
BRAIN, NERVOUS SYSTEM	104	4.4	3.4	88	3.7	2.8	14	3.7	5.3	14	3.5	4.8	72	5.1	5.6	61	3.8	3.8	853	4.0	2.4	968	3.7	2.5
THYROID	42	1.7	1.7	45	1.9	1.9	12	3.2	3.8	8	2.0	2.7	47	3.3	3.8	44	2.7	2.8	538	2.5	1.8	653	2.5	1.9
ADRENAL GLAND	3	0.1	0.1	11	0.4	0.2	4	1.0	1.4	0	0.0	0	5	0.3	0.2	4	0.2	0.1	56	0.2	0.1	88	0.3	0.2
OTHER ENDOCRINE	2	0.0	0.1	3	0.1	0.1	0	0.0	0	0	0.0	0	2	0.1	0.1	1	0.0	0	16	0.0	0	27	0.1	0
OTHER & ILL-DEFINED SITES	21	0.8	0.9	24	1.0	1	0	0.0	0	0	0.0	0	4	0.2	0.5	6	0.3	0.5	72	0.3	0.3	93	0.3	0.3
HODGKIN DIS.	94	3.9	2.7	85	3.6	2.3	15	4.0	3.7	15	3.7	4.2	56	3.9	3.5	66	4.1	3.1	853	4.0	2	1071	4.1	2.2
NON HODGKIN LYMPHOMA	198	8.4	7.8	221	9.5	9	29	7.7	11.9	22	5.5	7.4	142	10.0	11.5	162	10.1	11	1823	8.5	6.1	2375	9.1	7
IMMUNOPROLIFERATIVE DIS.	1	0.0	0	0	0.0	0	1	0.2	0.6	0	0.0	0	0	0.0	0	2	0.1	0.2	4	0.0	0	6	0.0	0
MULTIPLE MYELOMA	40	1.6	1.9	37	1.5	2.2	6	1.6	2.7	5	1.2	2.2	13	0.9	1.6	18	1.1	1.7	277	1.2	1.1	325	1.2	1.2
LYMPHOID LEUKAEMIA	97	4.1	2.3	98	4.2	2.6	12	3.2	3.1	17	4.2	3.7	51	3.6	2.6	83	5.2	3.4	964	4.5	2.1	1079	4.1	2.2
MYELOID LEUKAEMIA	65	2.7	2.3	85	3.6	3.1	14	3.7	6	13	3.2	3.9	36	2.5	2.8	70	4.4	4.5	711	3.3	2.1	767	2.9	1.9
LEUKAEMIA UNSPEC	32	1.3	0.8	21	0.9	0.6	1	0.2	0.2	1	0.2	0.5	4	0.2	0.5	2	0.1	0.2	99	0.4	0.3	139	0.5	0.3
UNKNOWN PRIMARY SITE	99	4.2	4.4	76	3.2	4.2	9	2.4	4.2	10	2.5	4.3	97	6.8	10.5	82	5.1	7.7	866	4.0	3.3	905	3.4	3.3
ALL SITES TOTAL	**2354**	**100.0**	**98.6**	**2318**	**100.0**	**112.1**	**372**	**100.0**	**157.6**	**400**	**100.0**	**153.5**	**1408**	**100.0**	**142.8**	**1590**	**100.0**	**126.4**	**21317**	**100.0**	**74.8**	**25944**	**100.0**	**85.2**

TABLE 1.17: DISTRIBUTION OF SITE SPECIFIC CANCERS AND AGE STANDARDIZED RATES (ASR) PER 100,000 POPULATION, GCC STATES' FEMALES: DURING 1998-2002 AND 2003-2007

	UAE 1998-2002			UAE 2003-2007			BAHRAIN 1998-2002			BAHRAIN 2003-2007			KSA 1998-2002			KSA 2003-2007			KSA 2003-2007			OMAN 20 03-2007		
SITE	N	%	ASR	N	%	ASR	N	%	ASR	N	%	ASR	N	%	ASR	N	%	ASR	N	%	ASR	N	%	ASR
LIP	0	0	0	0	0.0	0	0	0.0	0	0	0.0	0	20	0.1	0.1	29	0.1	0.1	1	0.0	0.1	5	0.2	0.2
TONGUE	4	0.4	0.5	6	0.5	0.7	7	0.6	1.1	1	0.0	0.2	133	0.9	0.7	143	0.7	0.7	7	0.3	0.3	7	0.3	0.3
MOUTH	6	0.7	0.7	3	0.2	0.4	5	0.4	0.8	3	0.2	0.4	154	1.0	0.8	184	0.9	0.8	10	0.4	0.4	13	0.6	0.8
SALIVARY GLANDS	4	0.4	0.3	8	0.7	0.7	2	0.1	0.2	4	0.3	0.4	48	0.3	0.2	66	0.3	0.3	7	0.3	0.3	18	0.8	0.7
TONSIL	1	0.1	0.1	0	0.0	0	1	0.0	0.2	0	0.0	0	11	0.0	0.1	11	0.0	0	0	0.0	0	0	0.0	0
OTHER OROPHARYNX	0	0	0	0	0.0	0	0	0.0	0	0	0.0	0	3	0.0	0	5	0.0	0	0	0.0	0	6	0.2	0.4
NASOPHARYNX	5	0.5	0.5	1	0.0	0.1	2	0.1	0.3	6	0.5	0.8	178	1.2	0.8	221	1.0	0.8	12	0.5	0.4	8	0.3	0.3
HYPOPHARYNX	1	0.1	0.1	3	0.2	0.4	2	0.1	0.4	0	0.0	0	69	0.4	0.3	54	0.2	0.2	7	0.3	0.3	7	0.3	0.4
PHARYNX UNSPEC	1	0.1	0.2	1	0.0	0	0	0.0	0	0	0.0	0	7	0.0	0	8	0.0	0	1	0.0	0.1	1	0.0	0
OESOPHAGUS	14	1.6	1.9	17	1.6	2.4	10	0.9	1.8	10	0.8	1.6	245	1.6	1.4	293	1.4	1.3	45	2.1	2.3	28	1.2	2
STOMACH	32	3.7	4.6	25	2.4	2.8	32	3.1	5.5	29	2.4	4.1	350	2.4	1.8	469	2.3	2.1	126	6.1	6.1	126	5.8	7.3
SMALL INTESTINE	1	0.1	0.2	1	0.0	0.1	2	0.1	0.4	2	0.1	0.3	57	0.3	0.3	65	0.3	0.3	6	0.2	0.3	4	0.1	0.3
COLON	31	3.6	4.1	55	5.4	6	34	3.3	5.5	62	5.2	8.5	566	3.8	2.9	1007	4.9	4.4	45	2.1	2.1	73	3.3	3.5
RECTUM	16	1.8	2	24	2.3	2.9	16	1.5	2.3	24	2.0	3.5	408	2.8	2.1	682	3.3	3	32	1.5	1.5	48	2.2	2.3
ANUS	2	0.2	0.3	3	0.2	0.4	0	0.0	0	2	0.1	0.3	18	0.1	0.1	44	0.2	0.2	1	0.0	0.1	10	0.4	0.6
LIVER	15	1.7	1.7	18	1.7	2.1	19	1.8	3.4	23	1.9	3.7	555	3.8	3.1	616	3.0	2.9	60	2.9	2.8	38	1.7	2
GALL BLADDER ETC.	15	1.7	2.3	9	0.8	1.4	5	0.4	0.9	7	0.5	1	252	1.7	1.4	337	1.6	1.6	20	0.9	1	19	0.8	1.2
PANCREAS	9	1	1.3	10	0.9	1.2	19	1.8	3.2	22	1.8	3.4	216	1.4	1.2	259	1.2	1.2	28	1.3	1.4	23	1.0	1.3
OTHER DIGESTIVE ORGANS	2	0.2	0.3	1	0.0	0.1	0	0.0	0	0	0.0	0	17	0.1	0.1	41	0.2	0.2	5	0.2	0.2	4	0.1	0.2
NOSE-SINUSES, ETC.	1	0.1	0.1	0	0.0	0	2	0.1	0.3	1	0.0	0.1	36	0.2	0.2	43	0.2	0.2	8	0.3	0.3	5	0.2	0.2
LARYNX	3	0.3	0.5	5	0.4	0.5	4	0.3	0.7	2	0.1	0.3	39	0.2	0.2	36	0.1	0.1	8	0.3	0.3	6	0.2	0.4
TRACHEA, BROUCHAUS, LUNG	31	3.6	4.4	19	1.8	2.7	66	6.5	12.1	60	5.0	9.5	261	1.7	1.4	392	1.9	1.8	41	1.9	2	46	2.1	2.6
OTHER, THORACIC ORGANS	0	0	0	1	0.0	0	1	0.0	0.2	2	0.1	0.3	26	0.1	0.1	54	0.2	0.2	1	0.0	0	6	0.2	0.2
BONE	6	0.7	0.3	12	1.1	0.7	5	0.4	0.6	5	0.4	0.4	198	1.3	0.5	192	0.9	0.4	19	0.9	0.4	23	1.0	0.5
MELANOM OF SKIN	2	0.2	0.2	3	0.2	0.2	1	0.0	0.2	2	0.1	0.3	37	0.2	0.2	60	0.2	0.3	7	0.3	0.3	7	0.3	0.3
OTHER SKIN	24	2.8	3.5	16	1.5	1.8	12	1.1	2	14	1.1	1.9	439	3.0	2.3	643	3.1	2.8	75	3.6	3.5	60	2.7	3.3
MESOTHELIOMA	2	0.2	0.2	3	0.2	0.3	1	0.0	0.2	2	0.1	0.3	9	0.0	0.1	26	0.1	0.1	1	0.0	0	0	0.0	0
KAPOSISARCOMA	0	0	0	3	0.2	0.4	1	0.0	0.2	2	0.1	0.2	27	0.1	0.1	40	0.1	0.2	8	0.3	0.3	4	0.1	0.2

CONNECTIVE, SOFT TISSUE	18	2.1	1.5	12	0.0	0.8	3	0.2	0.4	7	0.5	0.7	240	1.6	0.8	278	1.3	0.8	29	1.4	0.9	29	1.3	0.8
RETROPERITONEUM & PERITONEUM	1	0.1	0.1	1	1.1	0	3	0.2	0.5	4	0.3	0.4	37	0.2	0.1	49	0.2	0.2	3	0.1	0.1	4	0.1	0.2
BREAST	194	22.8	21.6	293	28.9	28.2	358	35.6	49.4	452	38.3	58.7	2903	19.9	13.6	4734	23.2	18.5	332	16.1	14.3	439	20.3	20.6
VULVA	0	0	0	4	0.3	0.6	1	0.0	0.2	0	0.0	0	27	0.1	0.1	26	0.1	0.1	4	0.1	0.2	12	0.5	0.6
VAGINA	1	0.1	0	2	0.1	0.2	2	0.1	0.4	0	0.0	0	16	0.1	0.1	18	0.0	0.1	8	0.3	0.4	7	0.3	0.4
CERVIX UTERI	53	6.2	5.8	64	6.3	7.1	39	3.8	6.1	44	3.7	6.1	431	2.9	2.2	466	2.2	1.9	127	6.1	5.9	140	6.4	7.3
CORPUS UTERI	20	2.3	3.1	29	2.8	3.8	34	3.3	5.4	44	3.7	6.7	379	2.6	2.1	726	3.5	3.5	21	1.0	1.1	40	1.8	2.4
UTERUS UNSPEC	2	0.2	0.2	6	0.5	0.5	9	0.8	1.5	19	1.6	3	65	0.4	0.3	89	0.4	0.4	16	0.7	0.8	11	0.5	0.6
OVARY	43	5	5.1	38	3.7	3.7	53	5.2	7.9	52	4.4	6.9	537	3.6	2.5	678	3.3	2.7	128	6.2	5.4	99	4.5	4.5
OTTHER FEMALE GENITAL	1	0.1	0.1	2	0.1	0.3	2	0.1	0.4	1	0.0	0.2	18	0.1	0.1	39	0.1	0.2	1	0.0	0	5	0.2	0.2
PLACENTA	1	0.1	0.1	2	0.1	0.1	2	0.1	0.2	5	0.4	0.5	59	0.4	0.2	62	0.3	0.2	12	0.5	0.4	4	0.1	0.1
KIDNEY	11	1.2	1.2	13	1.2	0.9	26	2.5	3.7	23	1.9	3.1	304	2.0	1.3	381	1.8	1.5	40	1.9	1.4	33	1.5	1.4
RENALPELIVS	0	0	0	0	0.0	0	0	0.0	0	0	0.0	0	10	0.0	0.1	13	0.0	0.1	0	0.0	0	1	0.0	0.1
URETER	0	0	0	1	0.0	0.2	0	0.0	0	0	0.0	0	4	0.0	0	9	0.0	0	1	0.0	0	1	0.0	0.1
BLADDER	17	2	2.5	13	1.2	1.6	22	2.1	3.9	18	1.5	2.6	210	1.4	1.2	206	1.0	0.9	45	2.1	2.2	50	2.3	3.2
OTHER URINARY ORGANS	1	0.1	0.1	0	0.0	0	0	0.0	0	0	0.0	0	2	0.0	0	2	0.0	0	0	0.0	0	1	0.0	0.1
EYE	2	0.2	0.1	2	0.1	0.2	1	0.0	0.1	1	0.0	0.1	99	0.6	0.3	95	0.4	0.3	14	0.6	0.4	11	0.5	0.4
BRAIN, NERVOUS SYSTEM	14	1.6	1.1	20	1.9	1.4	9	0.8	1	19	1.6	2.3	421	2.8	1.4	534	2.6	1.6	76	3.6	2.3	63	2.9	1.8
THYROID	78	9.1	6.3	99	9.7	7.8	61	6.0	8.3	64	5.4	7.2	1352	9.2	5.1	2017	9.9	6.4	173	8.4	6	175	8.0	6.1
ADRENAL GLAND	1	0.1	0	3	0.2	0.1	0	0.0	0	2	0.1	0.2	48	0.3	0.1	58	0.2	0.1	10	0.4	0.3	7	0.3	0.1
OTHER ENDOCRINE	0	0	0	1	0.0	0	2	0.1	0.2	1	0.0	0.1	6	0.0	0	17	0.0	0	1	0.0	0	0	0.0	0
OTHER & ILL-DEFINED SITES	4	0.4	0.4	3	0.2	0.4	2	0.1	0.4	4	0.3	0.5	25	0.1	0.1	51	0.2	0.2	20	0.9	0.8	19	0.8	0.8
HODGKIN DIS.	20	2.3	1.4	24	2.3	1.3	17	1.6	2	15	1.2	1.6	391	2.6	1.1	573	2.8	1.4	44	2.1	1.2	38	1.7	1.3
NON HODGKIN LYMPHOMA	46	5.4	5	41	4.0	4.4	36	3.5	5.6	43	3.6	5.5	962	6.6	4.5	1278	6.2	5.1	116	5.6	4.4	136	6.2	6.1
IMMUNOPROLIFERATIVE DIS.	0	0	0	1	0.0	0.1	0	0.0	0	0	0.0	0	3	0.0	0	1	0.0	0	0	0.0	0	0	0.0	0
MULTIPLE MYELOMA	6	0.7	0.8	15	1.4	2.1	10	0.9	1.8	10	0.8	1.6	115	0.7	0.6	143	0.7	0.7	28	1.3	1.4	25	1.1	1.6
LYMPHOID LEUKAEMIA	35	4.1	1.7	25	2.4	1.3	16	1.5	1.4	11	0.9	1.2	468	3.2	1.2	462	2.2	1.2	55	2.6	1.4	59	2.7	1.8
MYELOID LEUKAEMIA	30	3.5	2.3	34	3.3	2.8	22	2.1	2.5	13	1.1	1.7	471	3.2	1.7	535	2.6	1.7	49	2.3	1.6	46	2.1	1.6
LEUKAEMIA UNSPEC	2	0.2	0.2	1	0.0	0.1	5	0.4	0.8	13	1.1	1.3	37	0.2	0.1	67	0.3	0.2	28	1.3	0.9	26	1.2	0.9
UNKNOWN PRIMARY SITE	21	2.4	3	17	1.6	2.4	21	2.0	3.7	28	2.3	4.6	552	3.7	3	697	3.4	3.1	94	4.5	4.5	86	3.9	5.1
ALL SITES TOTAL	**850**	**100.0**	**94.2**	**1013**	**100.0**	**101**	**1005**	**100.0**	**150**	**1178**	**100.0**	**158**	**14571**	**100.0**	**66.8**	**20324**	**100.0**	**79.7**	**2056**	**100.0**	**85**	**2162**	**100.0**	**102**

TABLE 1.18: DISTRIBUTION OF SITE SPECIFIC CANCERS AND AGE STANDARDIZED RATES (ASR) PER 100,000 POPULATION, GCC STATES' FEMALES: DURING 1998-2002 AND 2003-2007

	QATAR 1998-2002			QATAR 2003-2007			KUWAIT 1998-2002			KUWAIT 03-07			ALL GCC 1998-2002			ALL GCC 2003-2007		
SITE	N	%	ASR	N	%	ASR	N	%	ASR	N	%	ASR	N	%	ASR	N	%	ASR
LIP	0	0.0	0	0	0.0	0	2	0.1	0.3	2	0.0	0.2	23	0.1	0.1	36	0.1	0.1
TONGUE	2	0.5	1.4	3	0.6	1.1	10	0.5	1	8	0.3	0.5	163	0.7	0.7	168	0.6	0.6
MOUTH	2	0.5	1	2	0.4	0.8	4	0.2	0.4	6	0.2	0.5	181	0.8	0.8	211	0.7	0.8
SALIVARY GLANDS	0	0.0	0	0	0.0	0	9	0.5	0.6	5	0.2	0.2	70	0.3	0.2	101	0.3	0.3
TONSIL	0	0.0	0	0	0.0	0	0	0.0	0	1	0.0	0.1	13	0.0	0.1	12	0.0	0
OTHER OROPHARYNX	1	0.2	0.7	0	0.0	0	0	0.0	0	1	0.0	0	4	0.0	0	12	0.0	0.1
NASOPHARYNX	3	0.7	0.7	4	0.8	2.2	11	0.6	0.9	15	0.6	0.9	211	1.0	0.7	255	0.9	0.8
HYPOPHARYNX	0	0.0	0	0	0.0	0	2	0.1	0.2	1	0.0	0.1	81	0.3	0.3	65	0.2	0.2
PHARYNX UNSPEC	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	9	0.0	0	10	0.0	0
OESOPHAGUS	13	3.2	8.3	11	2.3	5.4	18	1.0	1.9	9	0.4	0.9	345	1.6	1.6	368	1.3	1.4
STOMACH	11	2.7	4.8	12	2.6	6.1	32	1.8	2.9	22	1.0	1.4	583	2.8	2.5	683	2.5	2.5
SMALL INTESTINE	2	0.5	1	0	0.0	0	8	0.4	0.7	2	0.0	0.2	76	0.3	0.3	74	0.2	0.3
COLON	19	4.7	9	25	5.4	10	97	5.5	8.3	129	5.9	9.1	792	3.8	3.3	1351	4.9	4.8
RECTUM	9	2.2	5.1	20	4.3	8.8	52	2.9	4.6	64	2.9	4.5	533	2.5	2.2	862	3.1	3.1
ANUS	0	0.0	0	0	0.0	0	7	0.4	0.6	6	0.2	0.5	28	0.1	0.1	65	0.2	0.2
LIVER	15	3.7	9.8	12	2.6	6	38	2.1	3.9	26	1.1	2.3	702	3.4	3.1	733	2.6	2.8
GALL BLADDER ETC.	10	2.5	5.5	8	1.7	4.2	20	1.1	2	18	0.8	1.5	322	1.5	1.5	398	1.4	1.5
PANCREAS	7	1.7	4	6	1.3	2.6	33	1.8	3.3	38	1.7	3	312	1.5	1.4	358	1.3	1.4
OTHER DIGESTIVE ORGANS	1	0.2	0.8	0	0.0	0	0	0.0	0	0	0.0	0	25	0.1	0.1	46	0.1	0.2
NOSE-SINUSES, ETC.	1	0.2	0.2	0	0.0	0	3	0.1	0.2	3	0.1	0.1	51	0.2	0.2	52	0.1	0.2
LARYNX	0	0.0	0	1	0.2	0.6	4	0.2	0.5	3	0.1	0.3	58	0.2	0.3	53	0.1	0.2
TRACHEA, BROUCHAUS, LUNG	6	1.5	3.5	10	2.1	5.4	46	2.6	4.8	59	2.7	5	451	2.1	2	586	2.1	2.2
OTHER, THORACIC ORGANS	1	0.2	0.5	0	0.0	0	3	0.1	0.2	5	0.2	0.3	32	0.1	0.1	68	0.2	0.2
BONE	7	1.7	1.2	2	0.4	0.3	16	0.9	1	16	0.7	0.6	251	1.2	0.5	250	0.9	0.4
MELANOM OF SKIN	0	0.0	0	0	0.0	0	5	0.2	0.5	3	0.1	0.2	52	0.2	0.2	75	0.2	0.2
OTHER SKIN	11	2.7	5.9	11	2.3	4.4	16	0.9	1.5	19	0.8	1.2	577	2.7	2.4	763	2.7	2.7
MESOTHELIOMA	0	0.0	0	0	0.0	0	2	0.1	0.2	1	0.0	0.1	15	0.0	0.1	32	0.1	0.1

KAPOSISARCOMA	0	0.0	0	2	0.4	0.8	0	0.0	0	2	0.0	0.2	36	0.1	0.1	53	0.1	0.2
CONNECTIVE, SOFT TISSUE	5	1.2	1.7	9	1.9	2.6	20	1.1	1.4	11	0.5	0.5	315	1.5	0.8	346	1.2	0.8
RETROPERITONEUM & PERITONEUM	0	0.0	0	0	0.0	0	4	0.2	0.3	5	0.2	0.3	48	0.2	0.1	63	0.2	0.2
BREAST	92	23.1	36.6	149	32.3	53.3	562	32.1	45.3	788	36.3	50	4441	21.5	16.7	6855	25.1	22.1
VULVA	0	0.0	0	0	0.0	0	3	0.1	0.3	6	0.2	0.4	35	0.1	0.2	48	0.1	0.2
VAGINA	1	0.2	0.4	0	0.0	0	3	0.1	0.4	1	0.0	0.1	31	0.1	0.1	28	0.1	0.1
CERVIX UTERI	17	4.2	7.3	17	3.6	6.4	59	3.3	4.9	58	2.6	3.9	726	3.5	2.9	789	2.8	2.7
CORPUS UTERI	21	5.2	10.9	21	4.5	8.5	44	2.5	4	101	4.6	7.7	519	2.5	2.3	961	3.5	3.7
UTERUS UNSPEC	4	1.0	1.4	2	0.4	0.7	9	0.5	0.8	18	0.8	1.3	105	0.5	0.4	145	0.5	0.5
OVARY	17	4.2	7.1	21	4.5	7.3	67	3.8	6	69	3.1	4.4	845	4.0	3.2	957	3.5	3.1
OTTHER FEMALE GENITAL	0	0.0	0	1	0.2	0.4	2	0.1	0.2	0	0.0	0	24	0.1	0.1	48	0.1	0.2
PLACENTA	0	0.0	0	2	0.4	0.3	3	0.1	0.2	1	0.0	0	77	0.3	0.2	76	0.2	0.2
KIDNEY	5	1.2	1.7	7	1.5	2.7	30	1.7	2.4	26	0.0	1.8	416	2.0	1.4	483	1.7	1.5
RENALPELIVS	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	10	0.0	0.1	14	0.0	0
URETER	1	0.2	0.8	0	0.0	0	0	0.0	0	1	0.0	0.1	6	0.0	0	12	0.0	0
BLADDER	3	0.7	1.3	4	0.8	2.4	30	1.7	3.4	32	1.4	2.6	327	1.5	1.5	323	1.1	1.2
OTHER URINARY ORGANS	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	3	0.0	0	3	0.0	0
EYE	1	0.2	0.7	0	0.0	0	1	0.0	0	1	0.0	0	118	0.5	0.3	110	0.4	0.3
BRAIN, NERVOUS SYSTEM	9	2.2	2.5	11	2.3	3.9	47	2.6	3.4	41	1.8	2.2	576	2.7	1.6	688	2.5	1.7
THYROID	42	10.5	13	32	6.9	9.2	122	6.9	7.8	181	8.3	9	1828	8.8	5.6	2568	9.4	6.6
ADRENAL GLAND	1	0.2	0.3	2	0.4	0.8	4	0.2	0.2	8	0.3	0.4	64	0.3	0.1	80	0.2	0.1
OTHER ENDOCRINE	2	0.5	0.7	0	0.0	0	0	0.0	0	1	0.0	0.1	11	0.0	0	20	0.0	0
OTHER & ILL-DEFINED SITES	0	0.0	0	0	0.0	0	10	0.5	1.2	5	0.2	0.4	61	0.2	0.2	82	0.3	0.2
HODGKIN DIS.	9	2.2	2.3	9	1.9	1.5	35	2.0	2	48	2.2	1.9	516	2.5	1.2	707	2.5	1.4
NON HODGKIN LYMPHOMA	21	5.2	9.5	23	4.9	8.8	94	5.3	7.1	94	4.3	5.8	1275	6.1	4.7	1615	5.9	5.2
IMMUNOPROLIFERATIVE DIS.	0	0.0	0	0	0.0	0	1	0.0	0.1	0	0.0	0	4	0.0	0	2	0.0	0
MULTIPLE MYELOMA	2	0.5	1	2	0.4	0.9	15	0.8	1.5	20	0.9	1.4	176	0.8	0.8	215	0.7	0.8
LYMPHOID LEUKAEMIA	7	1.7	1.4	5	1.0	1.1	34	1.9	1.7	53	2.4	2.5	615	2.9	1.3	615	2.2	1.3
MYELOID LEUKAEMIA	11	2.7	4	9	1.9	2.7	40	2.2	2.5	53	2.4	2.7	623	3.0	1.8	690	2.5	1.8
LEUKAEMIA UNSPEC	0	0.0	0	4	0.8	0.7	0	0.0	0	1	0.0	0	72	0.3	0.2	112	0.4	0.3
UNKNOWN PRIMARY SITE	6	1.5	4	2	0.4	1.2	71	4.0	6.6	80	3.6	6.2	765	3.7	3.3	910	3.3	3.4
ALL SITES TOTAL	**398**	**100.0**	**171.8**	**461**	**100.0**	**174.2**	**1748**	**100.0**	**144**	**2167**	**100.0**	**139.3**	**20628**	**100.0**	**76.1**	**27305**	**100.0**	**87.4**

Section II


Kuwait
Kingdom of Saudi Arabia
RED SEA


ARABIAN GULF
Bahrain
Qatar
United Arab Emirates
GULF OF OMAN
Sultanate of Oman
Republic of Yemen
ARABIAN SEA

UNITED ARAB EMIRATES

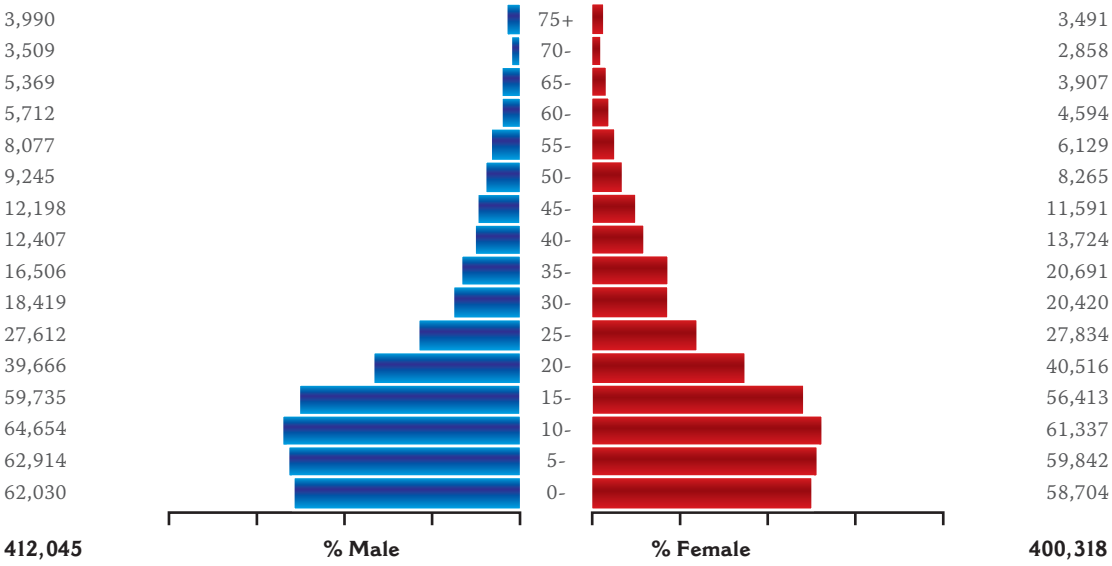
Cancer Incidence in the United Arab Emirates

This report was prepared based on the data received from the UAE National Cancer Registry as of January 2011. Average annual incidence rates were calculated based on the mid-point population structure for Emirati nationals estimated from the population pyramid that was prepared by the Information and Statistical Data Center, UAE Ministry of Planning in 2006. Population estimates based on the annual growth rates published by the United Nations in 2001. Figure 2.1 shows the mid-point population structure for both genders by age group.

From January 1998 to December 2007 there were 3,596 Emirati nationals diagnosed with cancer, out of which 1,733 (48.2%) were males and 1,863 (51.8%) were females. Almost 90% of cases had histopathology confirmation. Cytology/hematology and radiological modalities were used as the base of diagnosis in 9.4% and death certificate in 0.5% of all cancer cases, Table 2.1.

About two thirds of UAE patients presented with advanced cancers (35% of males and 25% of females presented with distant metastasis, and 28% of males and 39% of females presented with regional metastasis). Localized tumors were present in 26% and unknown extent of cancer was present in about 10.0%, Figure 2.2.

Cancer incidence declined after the first five years of live before it started to increase with advanced age in both genders. During early to mid adulthood UAE females showed higher incidence of cancer compared to males, while after the age of 60 males had a tendency of higher incidence, Figure 2.3.



▲ **Figure 2.1**
Estimated Population for United Arab Emirates by Gender and Age Group, 1998-2007.

Table 2.1 ▼
Basis of diagnosis, 1998-2007.

BASIS OF DIAGNOSIS	MALE	%	FEMALE	%	ALL	%
Histopathology	1539	89	1674	90	3213	89.3
Cytology/Hematological	84	5	108	6	192	5.3
Radiology	90	5	59	3	149	4.1
Death Certificate Only	8	0	9	0	17	0.5
Other laboratory test, Biomarker	8	0	6	0	14	0.4
Clinical/ Surgical	4	0	6	0	10	0.3
Unknown	0	0	1	0	1	0
TOTAL	**1733**	**100**	**1863**	**100**	**3596**	**100**

Figure 2.2 ▼
Cancer extent among UAE nationals.

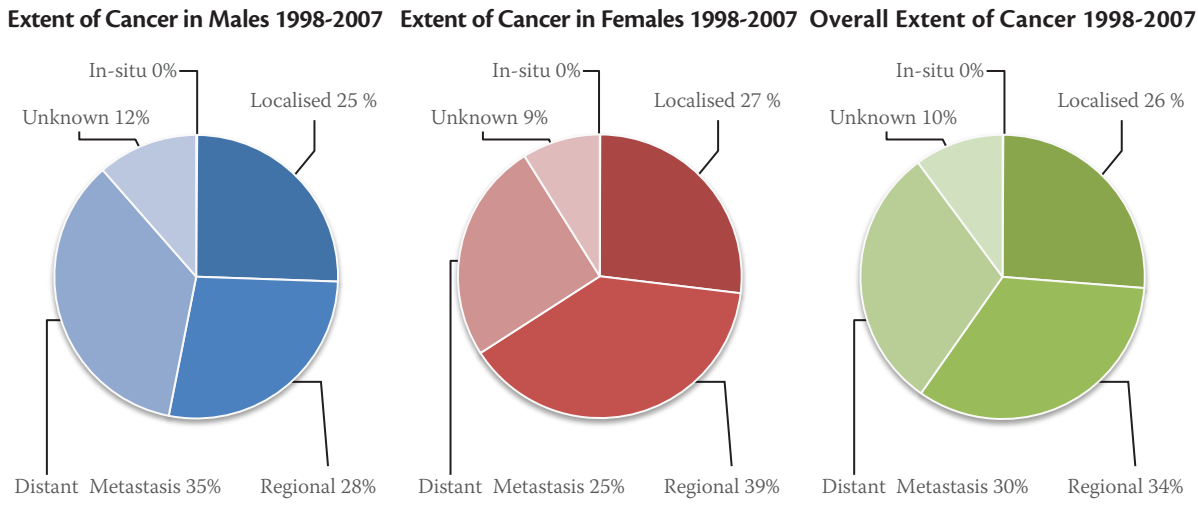
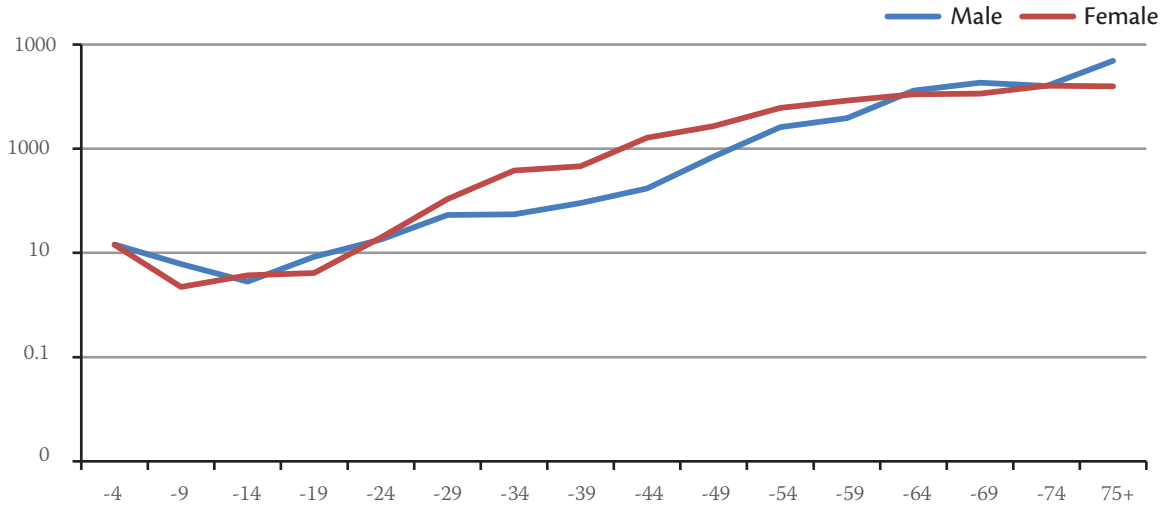


Figure 2.3 ▼
Age Specific Incidence Rates of all Cancers in UAE by gender, 1998-2007.



▼ Table 2.2
The Most Common Cancers by Gender in the UAE, 1998-2007.

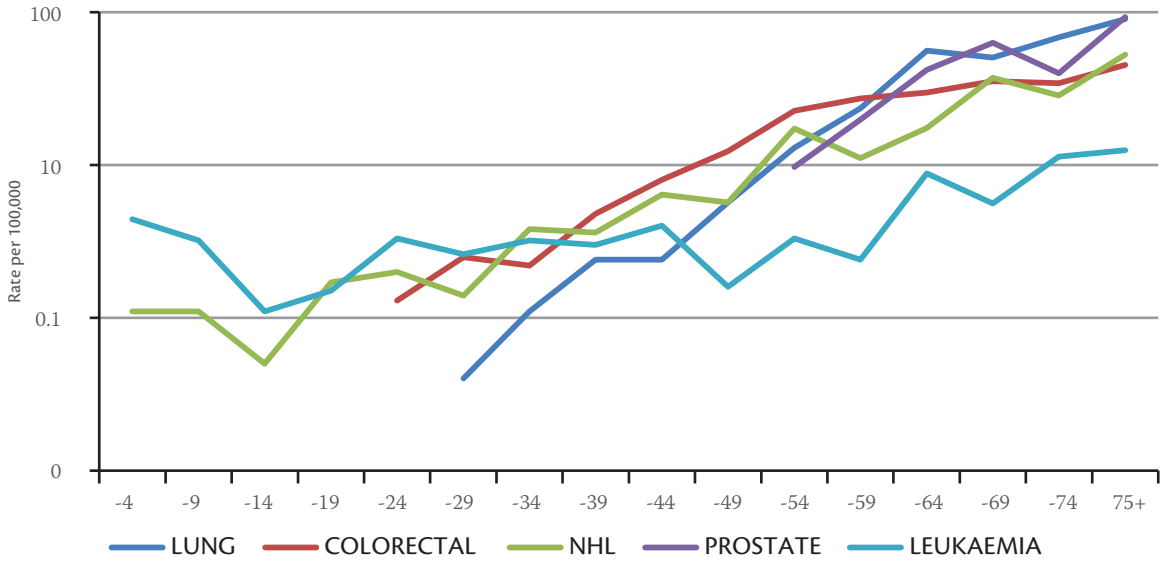
MALE				FEMALE			
Site	*NO*	*%*	*ASR*	*Site*	*NO*	*%*	*ASR*
LUNG	169	9.7	9.3	BREAST	487	26.1	25.1
COLORECTAL	159	9.1	8	THYROID	177	9.5	7.1
NHL	153	8.8	6.6	LEUKAEMIA	127	6.7	4.1
PROSTATE	135	7.7	7.5	COLORECTAL	126	6.7	7.3
LEUKAEMIA	123	6.9	3.5	CERVIX UTERI	117	6.2	6.3

** Average annual age standardized incidence rate per 100,000 populations*

Lung cancer in Emirati males was the leading malignancy followed by colorectal, NHL, prostate and leukaemia. While breast cancer was the leading malignancy in females followed by thyroid, leukaemia, colorectal and cervix uteri, Table 2.2.

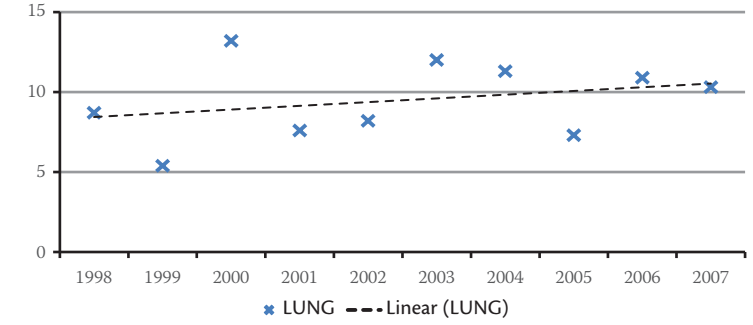
Most Common Cancers in Males:

1. Lung cancer was the most common cancer in UAE males accounted to 9.7% of all cancers in men with average annual ASR of 9.3/100,000 population. Lung cancer started to appear after the age of 25 years in UAE males. The incidence increases with advancing age to reach its maximum in males aged between 60 and 65 years, Figure 2.4. The lowest ASR (5.4/100,000) was reported in 1999 and the highest ASR (13.2/100,000) was reported in 2000. There is a tendency for increased trend of age standardized incidence however it was not found to be statistically significant (p-value = 0.4187), Figure 2.5.
2. Colorectal cancer ranked second among UAE males, the average annual ASR was 8/100,000. It started as early as 20 years of age in UAE males. The incidence increases with increased age to reach its peak between the ages of 50 to 70 years, Figure 2.4. The lowest ASR (5.4/100,000) was reported in 1999 while the highest ASR (11.1/100,000) was reported in 2005. There is a tendency for increased trend of age standardized incidence however it was not found to be statistically significant (p-value = 0.1180), Figure 2.5.
3. NHL is the third most common cancer among UAE males accounted to 8.8% of all cancers with average annual ASR was 6.6/100,000. NHL appeared with low incidence during childhood. The incidence increases dramatically after age of 35 years to reach its maximum peak at age 60 years, Figure 2.4. The lowest ASR (2.8/100,000) was reported in 2007 and the highest (8.3/100,000) was reported in 2003. There is a tendency for decreased trend of age standardized incidence however it was not found to be statistically significant (p-value = 0.4032), Figure 2.5.
4. Prostate cancer is the fourth most common cancer in UAE males accounted to 7.7% of all cancers reported in men with average annual ASR of 7.5/100,000 population. Prostate cancer appeared among those aged 55 years and above, Figure 2.4. It is lowest ASR (4.7/100,000) was reported in 1999 and the highest (9.2/100,000) was reported in 2006. There is a tendency for increased trend of age standardized incidence however it was not found to be statistically significant (p-value = 0.1986), Figure 2.5.
5. Leukemia is the fifth most common cancer in UAE males accounted to 6.9% of all cancers in men with average annual ASR of 3.5/100,000 population. Leukemia has first peak incidence during the first five years among UAE males and the second peak of Leukemia appeared at ages above 70 years, Figure 2.4. It is lowest ASR (2.3/100,000) was reported in 2004 and the highest (7.3/100,000) was reported in 1999. There is a tendency for decreased trend of age standardized incidence however it was not found to be statistically significant (p-value = 0.7648), Figure 2.5.

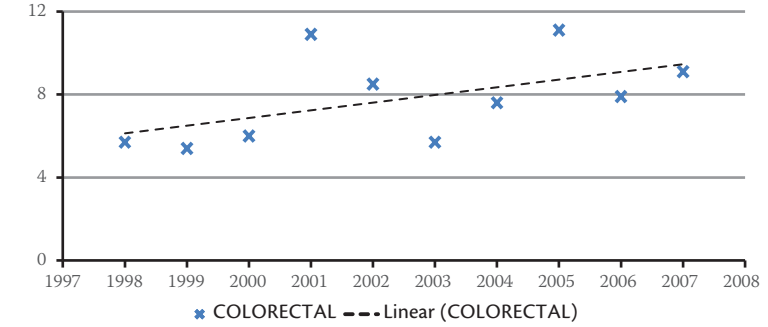


▲ Figure 2.4
Average Annual Age Specific Incidence Rates of Most Common Cancers in UAE, 1998-2007: Male.

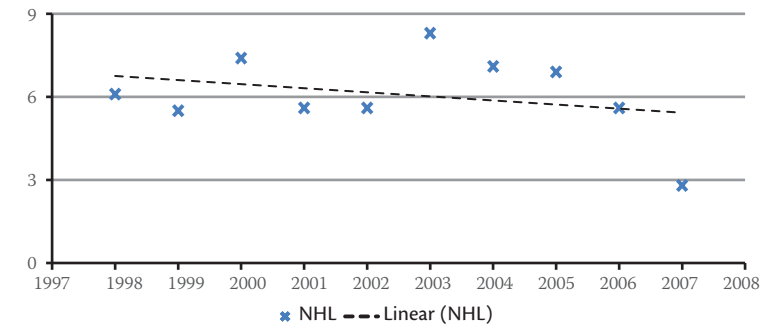
LUNG

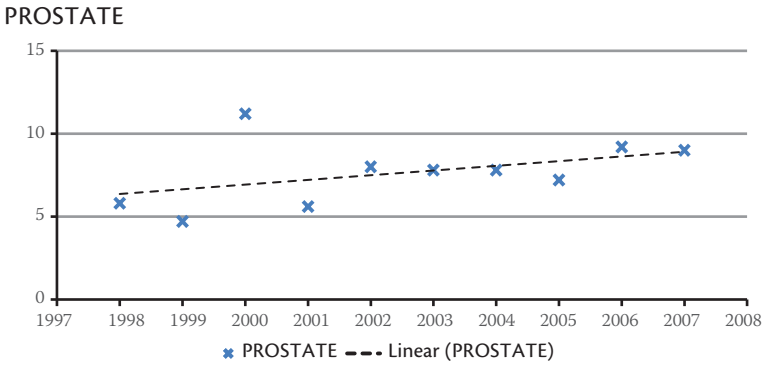


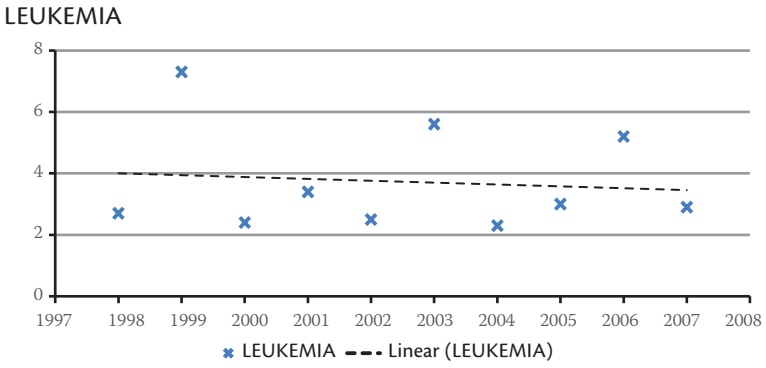
COLORECTAL



NHL



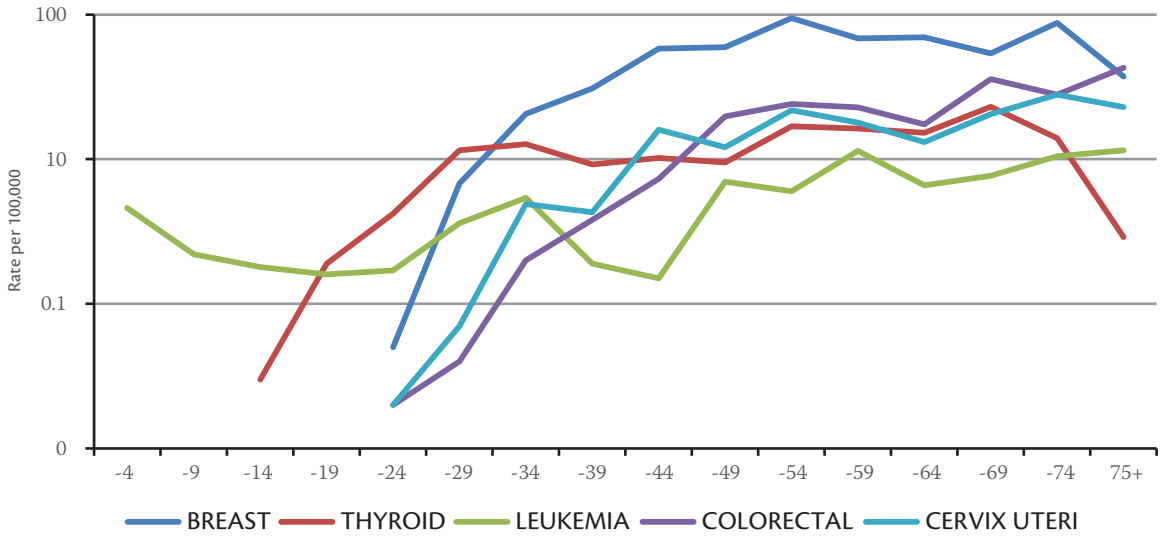




◀▲ Figure 2.5
Trend of Age Standardized Incidence Rates for the Most Common Cancers in UAE, 1998-2007: Male.

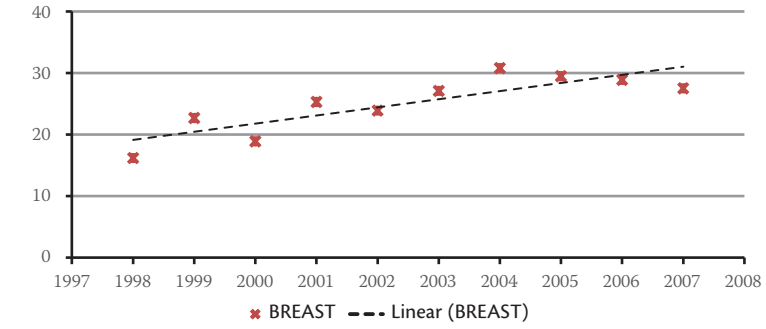
Most Common Cancers in Females:

1. Breast cancer is the most common cancer among UAE females accounted to 26.1% of all cancers with average annual ASR of 25.1/100,000 population. Breast cancer appeared after age of 20 years in UAE females. The incidence increases with advancing age to reach its maximum in females aged between 50 to 55 and 70 to 75 years, Figure 2.6. The lowest ASR (18.9/100,000) was reported in 2000 and the highest ASR (30.8/100,000) was reported in 2004. There is a tendency for increased trend of age standardized incidence which found to be statistically significant (p-value = 0.0020), Figure 2.7.
2. Thyroid cancer ranked second among UAE females accounted to 9.5% of all cancers with average annual ASR of 7.1/100,000. Thyroid cancer started at age 20 years in UAE females. The incidence increases with increased age to reach its peak between 50 and 70 years, Figure 2.6. The lowest incidence (3.9/100,000) was reported in 1999 while the highest incidence (10.7/100,000) was reported in 2006. There is a tendency for increased trend of age standardized incidence which found to be statistically significant (p-value = 0.0199), Figure 2.7.
3. Leukemia was the third most common cancer among UAE females accounted to 6.7% of all cancers with average annual ASR of 4.1/100,000. Early onset leukemia has its highest incidence during the first five years of live then the incidence declines for almost four decades before it rises again to reach its late onset peak at the age of 70 to 75 years, Figure 2.6. The lowest ASR (2.6/100,000) was reported in 2007 and the highest (7.2/100,000) was reported in 2003. The trend showed minimal decline between 1998 and 2007 which was not statistically significant (p-value = 0.8456), Figure 2.7.
4. Colorectal was the fourth most common cancer in UAE females accounted to 6.7% of all cancers in women with average annual ASR of 7.3/100,000 population. Colorectal cancer appeared at the age of 20 years and increases gradually with increased age to reach its peak at ages above 70 years, Figure 2.6. The lowest ASR (3.2 /100,000) was reported in 2002 and the highest (11.3/100,000) was reported in 2005. There was a tendency for increased trend of age standardized incidence which found not to be significant (p-value = 0.3886), Figure 2.7.
5. Cervix uteri was the fifth most common cancer among UAE females accounted to 6.2% of all cancers with average annual ASR of 6.3/100,000 population. Cervix uteri started as early as 20 years of age, the incidence increased to reach its peak between the ages 40 to 60 years and 70 to 75 years, Figure 2.6. The lowest ASR (3.9/100,000) was reported in 1999 and the highest (8.9/100,000) was reported in 2007. There was a tendency for slight increase in the ASR trend, however it found not to be statistically significant (p-value = 0.3757), Figure 2.7.

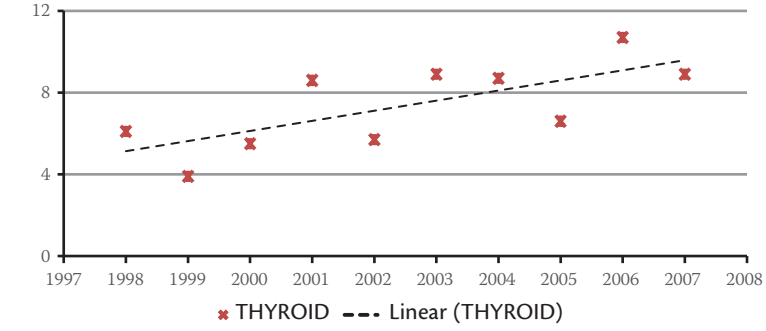


▲ Figure 2.6
Average Annual Age Specific Incidence Rates of Most Common Cancers in UAE, 1998-2007: Female.

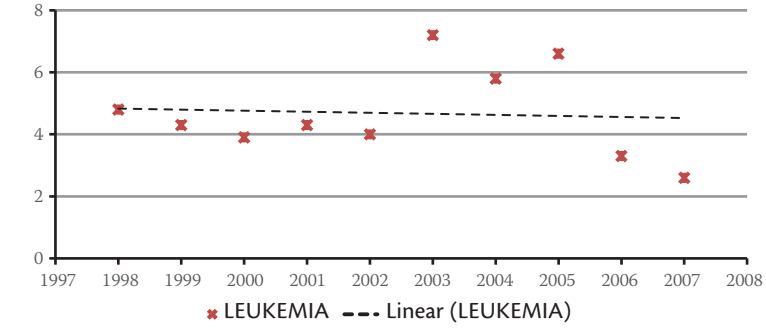
BREAST

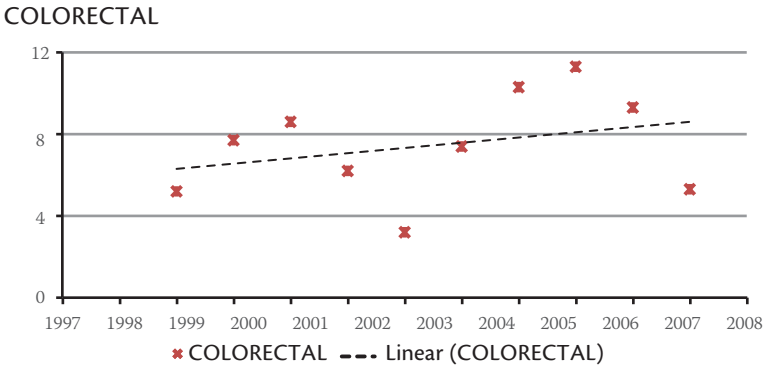


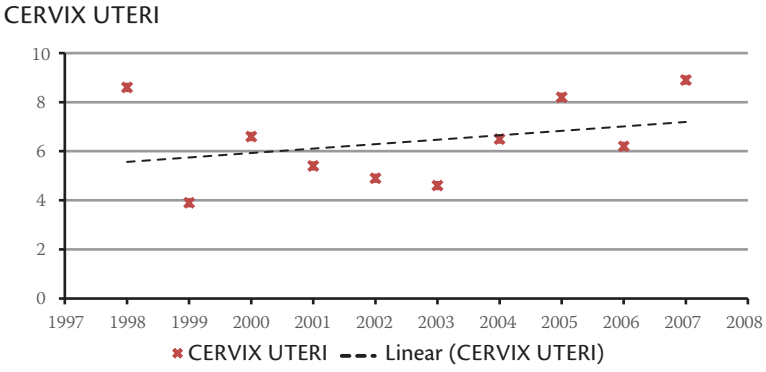
THYROID



LEUKEMIA







◀▲ Figure 2.7
Trend of Age Standardized Incidence Rates for the Most Common Cancers in UAE, 1998-2007: Female.

TABLE 2.3: INCIDENCE RATE (PER 100,000) OF CANCER CASES BY AGE GROUP AND SITE, 1998-2007, UAE: MALE.

SITE	ICD-10	-4	-9	-14	-19	-24	-29	-34	-39	-44	-49	-54	-59	-64	-69	-74	75+	Crude	ASR	CumRt 0-64	All Ages
LIP	C00	.	.	.	.	.	.	.	0.6	.	.	.	.	.	.	2.8	.	0	0.1	0	2
TONGUE	C01-C02	.	.	.	.	.	0.4	1.1	.	0.8	0.8	.	3.7	.	7.5	.	2.5	0.3	0.6	0	13
MOUTH	C03-C06	.	.	.	0.2	0.3	.	0.5	.	0.8	2.5	3.2	3.7	8.8	3.7	.	5	0.5	1.1	0.1	22
SALIVARY GLANDS	C07-C08	.	.	0.3	.	.	.	0.5	.	.	0.8	.	.	.	1.9	.	.	0.1	0.2	0	5
TONSIL	C09	.	.	.	.	.	.	.	.	.	0.8	2.2	.	1.8	.	.	2.5	0.1	0.3	0	5
OTHER OROPHARYNX	C10	.	.	.	.	.	.	.	.	.	2.5	.	.	.	.	.	.	0.1	0.2	0	3
NASOPHARYNX	C11	.	.	.	0.3	0.5	0.4	.	0.6	0.8	.	1.1	2.5	3.5	5.6	.	.	0.4	0.6	0	15
HYPOPHARYNX	C12-C13	.	.	.	.	.	0.4	.	.	0.8	.	.	1.2	1.8	5.6	2.8	7.5	0.3	0.6	0	11
PHARYNX UNSPEC	C14	.	.	.	.	.	.	.	.	.	0.8	.	.	.	.	.	2.5	0	0.1	0	2
OESOPHAGUS	C15	.	.	.	.	.	.	.	.	0.8	2.5	6.5	5	3.5	5.6	11.4	40.1	0.9	2.1	0.1	39
STOMACH	C16	0.2	.	.	.	.	0.4	0.5	3.6	0.8	4.1	11.9	18.6	36.8	29.8	37	72.7	2.9	6.5	0.4	120
SMALL INTESTINE	C17	.	.	.	.	0.3	.	.	.	.	.	1.1	1.2	1.8	3.7	.	2.5	0.2	0.4	0	7
COLON	C18	.	.	0.2	.	0.5	1.4	1.1	4.2	6.4	5.7	10.8	17.3	17.5	24.2	28.5	27.6	2.4	5	0.3	99
RECTUM	C19-C20	.	.	.	.	0.8	1.1	1.1	0.6	1.6	6.6	11.9	9.9	12.3	11.2	5.7	17.5	1.5	3	0.2	60
ANUS	C21	.	.	.	.	0.3	.	.	.	.	2.5	2.2	2.5	1.8	11.2	5.7	10	0.5	1.1	0	21
LIVER	C22	0.3	0.2	.	.	.	0.4	0.5	0.6	0.8	2.5	7.6	5	10.5	22.4	22.8	25.1	1.4	3	0.1	57
GALL BLADDER ETC.	C23-C24	.	.	.	.	.	.	.	0.6	.	1.6	1.1	1.2	5.3	9.3	5.7	2.5	0.4	0.9	0	16
PANCREAS	C25	.	.	.	.	.	.	.	.	.	0.8	4.3	7.4	10.5	11.2	11.4	17.5	0.8	1.9	0.1	34
OTHER DIGESTIVE ORGANS	C26	.	.	.	.	.	.	.	.	.	.	.	.	.	1.9	.	.	0	0.1	0	1
NOSE-SINUSES, ETC.	C30-C31	.	.	.	.	.	.	.	.	.	0.8	.	1.2	.	.	2.8	2.5	0.1	0.2	0	4
LARYNX	C32	.	.	.	.	.	.	.	.	1.6	3.3	5.4	8.7	14	11.2	14.2	7.5	1	2.2	0.2	40
TRACHEA, BROUCHAUS, LUNG	C33-C34	.	.	0.3	.	.	0.4	1.1	2.4	2.4	5.7	13	23.5	56	50.3	68.4	90.2	4.1	9.3	0.5	169
OTHER, THORACIC ORGANS	C37-C39	0.2	.	0.2	.	.	.	.	.	0.8	.	.	.	.	.	.	.	0.1	0.1	0	3
BONE	C40-C41	0.5	0.8	0.9	1.7	0.3	0.7	1.1	.	0.8	0.8	2.2	.	.	1.9	2.8	.	0.8	0.8	0	35
MELANOM OF SKIN	C43	.	.	.	.	.	.	.	.	0.8	.	.	.	3.5	.	.	10	0.2	0.4	0	7
OTHER SKIN	C44	.	.	.	.	.	.	1.1	1.8	1.6	3.3	7.6	3.7	21	24.2	19.9	50.1	1.8	4	0.2	73
MESOTHELIOMA	C45	.	.	.	.	.	.	.	.	.	.	.	.	.	1.9	.	5	0.1	0.2	0	3

KAPOSISARCOMA	C46	.	.	.	.	.	0.4	.	.	0.8	.	.	.	1.8	.	2.8	2.5	0.1	0.3	0	5
CONNECTIVE, SOFT TISSUE	C47;C49	1.3	0.2	0.2	0.3	0.8	1.1	0.5	.	0.8	.	.	5	.	.	2.8	5	0.7	0.8	0.1	27
BREAST	C50	.	.	.	.	.	.	0.5	.	.	0.8	.	.	1.8	1.9	2.8	2.5	0.1	0.3	0	6
PENIS	C60	.	.	.	.	.	.	.	.	.	.	.	1.2	.	.	.	.	0	0	0	1
PROSTATE	C61	.	.	0.2	.	.	.	.	.	.	.	9.7	19.8	42	63.3	39.9	92.7	3.3	7.5	0.4	135
TESTIS	C62	.	.	0.2	0.7	0.5	1.4	.	0.6	.	.	.	1.2	.	.	.	.	0.3	0.3	0	13
OTHER MALE GENITAL	C63	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
KIDNEY	C64	0.8	.	.	.	.	1.1	0.5	0.6	0.8	2.5	2.2	7.4	12.3	5.6	14.2	10	1	2	0.1	41
RENAL PELVIS	C65	.	.	.	.	.	.	.	.	.	.	1.1	.	.	.	.	2.5	0	0.1	0	2
URETER	C66	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2.5	0	0.1	0	1
BLADDER	C67	0.2	.	.	0.3	.	0.7	1.6	1.2	2.4	9	7.6	13.6	19.3	33.5	28.5	60.1	2.5	5.4	0.3	105
OTHER URINARY ORGANS	C68	.	.	.	.	.	.	.	.	.	0.8	.	.	.	.	.	.	0	0	0	1
EYE	C69	0.6	0.2	.	.	.	.	.	.	.	.	.	.	.	.	.	2.5	0.1	0.1	0	6
BRAIN, NERVOUS SYSTEM	C70-C72	1.1	1.4	0.3	0.3	0.8	2.9	1.6	0.6	2.4	3.3	8.7	5	17.5	5.6	2.8	2.5	1.7	2.7	0.2	69
THYROID	C73	.	.	0.2	0.2	0.3	3.6	1.6	2.4	0.8	4.1	3.2	2.5	3.5	7.5	5.7	2.5	1	1.7	0.1	40
ADRENAL GLAND	C74	0.8	.	.	.	.	.	.	0.6	.	.	.	.	.	.	.	.	0.1	0.1	0	6
OTHER ENDOCRINE	C75	.	0.2	.	.	0.3	.	.	.	.	.	.	.	.	.	.	.	0	0	0	2
OTHER & ILL-DEFINED SITES	C76-C79	0.2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2.5	0	0.1	0	2
HODGKIN DIS.	C81	0.3	0.5	0.3	2	1.8	2.2	1.6	0.6	0.8	3.3	4.3	5	7	1.9	.	2.5	1.3	1.8	0.1	55
NON HODGKIN LYMPHOMA	C82-C85;C96	1.1	1.1	0.5	1.7	2	1.4	3.8	3.6	6.4	5.7	17.3	11.1	17.5	37.3	28.5	52.6	3.7	6.6	0.4	153
IMMUNOPROLIFERATIVE DIS.	C88	.	.	0.2	.	.	.	.	.	.	.	.	.	.	.	.	.	0	0	0	1
MULTIPLE MYELOMA	C90	.	.	.	.	0.3	.	.	1.2	0.8	0.8	6.5	2.5	7	9.3	2.8	12.5	0.7	1.5	0.1	28
LYMPHOID LEUKAEMIA	C91	3.1	3	0.8	1	1	0.4	0.5	.	0.8	0.8	2.2	1.2	1.8	1.9	2.8	5	1.6	1.5	0.1	65
MYELOID LEUKAEMIA	C92-C94	1.3	0.2	0.3	0.5	2.3	2.2	2.2	3	3.2	0.8	1.1	1.2	7	3.7	8.5	7.5	1.4	2	0.1	57
LEUKAEMIA UNSPEC	C95	.	.	.	.	.	.	0.5	.	.	.	.	.	.	.	.	.	0	0	0	1
UNKNOWN PRIMARY SITE	80	.	.	0.2	.	0.3	.	.	0.6	.	3.3	4.3	3.7	12.3	14.9	14.2	27.6	1.1	2.4	0.1	45
ALL SITES		12	7.8	5.3	9.2	13.4	23	23.5	30	41.6	83.6	160.3	196.7	361.2	430.7	398.2	696.3	42.1	82.3	4.8	1733
ALL SITES EXCEPT C44	366	12	7.8	5.3	9.2	13.4	23	22.4	28.2	40	80.3	152.7	193	340.2	406.5	378.3	646.2	40.3	78.3	4.6	1660

TABLE 2.4: INCIDENCE RATE (PER 100,000) OF CANCER CASES BY AGE GROUP AND SITE, 1998-2007, UAE: FEMALE.

SITE	ICD-10	-4	-9	-14	-19	-24	-29	-34	-39	-44	-49	-54	-59	-64	-69	-74	75+	Crude	ASR	CumRt 0-64	All Ages
LIP	C00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TONGUE	C01-C02	.	.	.	.	.	.	.	0.5	0.7	1.7	2.4	1.6	2.2	2.6	3.5	.	0.2	0.6	0	10
MOUTH	C03-C06	.	.	.	.	.	.	.	0.5	1.5	.	.	1.6	.	.	10.5	5.7	0.2	0.5	0	9
SALIVARY GLANDS	C07-C08	.	.	0.2	.	0.5	0.7	.	0.5	1.5	.	.	1.6	2.2	2.6	.	2.9	0.3	0.5	0	12
TONSIL	C09	.	.	.	.	.	.	0.5	.	.	.	.	.	.	.	.	.	0	0	0	1
OTHER OROPHARYNX	C10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NASOPHARYNX	C11	.	.	0.2	.	0.2	.	.	.	0.7	0.9	.	.	.	2.6	.	2.9	0.1	0.3	0	6
HYPOPHARYNX	C12-C13	.	.	.	.	.	.	.	.	.	.	1.2	3.3	.	.	.	2.9	0.1	0.3	0	4
PHARYNX UNSPEC	C14	0.2	.	.	.	.	.	.	.	.	.	.	.	.	2.6	.	.	0	0.1	0	2
OESOPHAGUS	C15	.	.	.	.	.	.	.	0.5	.	3.5	1.2	3.3	10.9	10.2	10.5	31.5	0.8	2	0.1	31
STOMACH	C16	.	.	.	.	.	0.4	1	1.4	2.9	3.5	10.9	9.8	21.8	7.7	17.5	28.6	1.4	3.5	0.3	57
SMALL INTESTINE	C17	.	.	.	.	.	.	.	.	0.7	.	.	.	2.2	.	.	.	0	0.1	0	2
COLON	C18	.	.	.	.	0.2	0.4	0.5	2.4	6.6	13.8	18.1	16.3	10.9	23	21	22.9	2.1	5	0.3	86
RECTUM	C19-C20	.	.	.	.	.	.	1.5	1.4	0.7	6	6	6.5	6.5	12.8	7	20	1	2.3	0.1	40
ANUS	C21	.	.	.	.	.	.	.	.	.	0.9	1.2	.	.	2.6	.	5.7	0.1	0.3	0	5
LIVER	C22	0.7	0.2	0.2	.	.	.	.	.	.	4.3	6	3.3	10.9	2.6	10.5	17.2	0.8	1.9	0.1	33
GALL BLADDER ETC.	C23-C24	.	.	.	.	.	.	.	.	.	2.6	.	4.9	15.2	5.1	21	8.6	0.6	1.7	0.1	24
PANCREAS	C25	.	.	.	.	.	.	.	.	.	1.7	4.8	9.8	.	7.7	10.5	2.9	0.5	1.2	0.1	19
OTHER DIGESTIVE ORGANS	C26	.	.	.	.	.	.	.	.	.	.	.	.	.	2.6	3.5	2.9	0.1	0.2	0	3
NOSE-SINUSES, ETC.	C30-C31	.	.	.	.	.	.	.	.	.	.	1.2	.	.	.	.	.	0	0.1	0	1
LARYNX	C32	.	.	.	.	.	0.4	0.5	.	.	.	.	1.6	2.2	2.6	3.5	5.7	0.2	0.5	0	8
TRACHEA, BROUCHAUS, LUNG	C33-C34	.	.	.	.	.	0.4	0.5	1	0.7	1.7	6	14.7	17.4	23	14	22.9	1.2	3.3	0.2	50
OTHER, THORACIC ORGANS	C37-C39	0.2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0	0	0	1
BONE	C40-C41	.	0.2	1.1	0.5	0.2	0.4	.	1.4	.	.	.	.	.	.	7	.	0.4	0.4	0	18
MELANOM OF SKIN	C43	.	.	.	0.2	.	.	1	.	.	0.9	.	.	.	.	.	2.9	0.1	0.2	0	5
OTHER SKIN	C44	.	0.2	.	.	.	0.4	0.5	0.5	1.5	5.2	4.8	6.5	13.1	10.2	21	11.5	1	2.5	0.2	40
MESOTHELIOMA	C45	.	.	.	.	.	.	.	0.5	0.7	0.9	1.2	.	2.2	.	.	.	0.1	0.3	0	5
KAPOSISARCOMA	C46	.	.	.	.	.	.	.	.	.	0.9	.	1.6	.	2.6	.	.	0.1	0.2	0	3
CONNECTIVE, SOFT TISSUE	C47;C49	1	0.3	0.2	.	1	.	0.5	1	2.9	3.5	1.2	6.5	.	.	3.5	.	0.7	1.1	0.1	30
RETROPERITONEUM & PERITONEUM	C48	0.2	.	.	.	.	.	.	.	.	.	.	1.6	.	.	.	.	0	0.1	0	2

BREAST	C50	.	.	.	.	0.5	6.8	20.6	30.9	58.3	59.5	94.4	68.5	69.7	53.8	87.5	37.2	12.2	25.1	2	487
VULVA	C51	.	.	.	.	.	.	.	.	.	.	.	1.6	.	5.1	.	2.9	0.1	0.3	0	4
VAGINA	C52	0.2	.	.	.	.	.	.	.	0.7	.	.	.	.	.	.	2.9	0.1	0.1	0	3
CERVIX UTERI	C53	.	.	.	.	0.2	0.7	4.9	4.3	16	12.1	21.8	17.9	13.1	20.5	28	22.9	2.9	6.3	0.5	117
CORPUS UTERI	C54	.	.	.	.	.	.	1	0.5	1.5	1.7	7.3	13.1	23.9	17.9	28	5.7	1.2	3.3	0.2	49
UTERUS UNSPEC	C55	.	.	.	.	0.2	.	0.5	0.5	.	1.7	1.2	.	2.2	.	.	2.9	0.2	0.4	0	8
OVARY	C56	.	.	0.5	0.4	1	1.4	2.4	3.9	3.6	6.9	7.3	17.9	13.1	20.5	10.5	22.9	2	4.2	0.3	81
OTTHER FEMALE GENITAL	C57	.	.	.	.	.	.	.	.	.	.	.	3.3	.	.	.	2.9	0.1	0.2	0	3
PLACENTA	C58	.	.	.	.	.	0.4	.	.	1.5	.	.	.	.	.	.	.	0.1	0.1	0	3
KIDNEY	C64	1.9	.	.	.	.	.	.	1	1.5	1.7	2.4	.	6.5	.	3.5	2.9	0.6	1	0.1	24
RENAL PELVIS	C65	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
URETER	C66	.	.	.	.	.	.	.	.	.	.	.	.	.	2.6	.	.	0	0.1	0	1
BLADDER	C67	.	.	0.2	0.2	.	.	.	0.5	.	.	2.4	16.3	8.7	12.8	3.5	14.3	0.7	1.9	0.1	30
OTHER URINARY ORGANS	C68	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2.9	0	0.1	0	1
EYE	C69	0.2	0.3	.	.	.	.	.	.	.	.	.	.	.	.	.	2.9	0.1	0.1	0	4
BRAIN, NERVOUS SYSTEM	C70-C72	1.2	0.7	0.5	0.2	0.7	0.4	1	0.5	2.9	.	1.2	.	.	10.2	3.5	5.7	0.8	1.2	0	34
THYROID	C73	.	.	0.3	1.9	4.2	11.5	12.7	9.2	10.2	9.5	16.9	16.3	15.2	23	14	2.9	4.4	7.1	0.5	177
ADRENAL GLAND	C74	0.5	.	.	.	0.2	.	.	.	.	.	.	.	.	.	.	.	0.1	0.1	0	4
OTHER ENDOCRINE	C75	.	.	.	.	.	0.4	.	.	.	.	.	.	.	.	.	.	0	0	0	1
OTHER & ILL-DEFINED SITES	C76-C79	0.3	0.2	.	.	.	.	.	.	.	.	.	.	2.2	2.6	3.5	2.9	0.2	0.4	0	7
HODGKIN DIS.	C81	0.5	0.2	0.7	0.7	2.7	1.8	2.9	.	1.5	0.9	1.2	1.6	6.5	.	.	5.7	1.1	1.4	0.1	44
NON HODGKIN LYMPHOMA	C82-C85;C96	0.2	0.2	0.2	0.5	0.5	2.2	3.9	2.9	4.4	7.8	7.3	14.7	23.9	15.4	14	22.9	2.2	4.6	0.3	87
IMMUNOPROLIFERATIVE DIS.	C88	.	.	.	.	.	.	.	.	.	.	1.2	.	.	.	.	.	0	0.1	0	1
MULTIPLE MYELOMA	C90	.	.	.	.	.	.	.	.	.	1.7	3.6	6.5	6.5	5.1	14	8.6	0.5	1.4	0.1	21
LYMPHOID LEUKAEMIA	C91	3.6	2	1.5	0.9	0.7	1.4	0.5	.	.	0.9	1.2	.	4.4	2.6	.	.	1.5	1.4	0.1	60
MYELOID LEUKAEMIA	C92-C94	1	0.2	0.3	0.7	1	2.2	4.9	1.9	1.5	5.2	3.6	9.8	2.2	5.1	10.5	11.5	1.6	2.5	0.2	64
LEUKAEMIA UNSPEC	C95	.	.	.	.	.	.	.	.	.	0.9	1.2	1.6	.	.	.	.	0.1	0.2	0	3
UNKNOWN PRIMARY SITE	80	.	.	.	0.2	.	0.4	.	.	2.2	1.7	4.8	4.9	15.2	17.9	17.5	14.3	0.9	2.5	0.1	38
ALL SITES		11.9	4.7	6.1	6.4	14	32.7	61.8	67.7	126.9	164.2	245.2	288.5	331	338.2	402.5	395.5	46.5	95.1	6.8	1863
ALL SITES EXCEPT C44	358	11.9	4.5	6.1	6.4	14	32.3	61.3	67.2	125.4	159	240.4	282	317.9	328	381.5	384	45.5	92.6	6.6	1823

TABLE 2.5: DISTRIBUTION OF CANCER CASES BY AGE GROUP AND SITE, 1998-2007, UAE: MALE.

SITE	ICD-10	-4	-9	-14	-19	-24	-29	-34	-39	-44	-49	-54	-59	-64	-69	-74	75+	Age Unk	All Ages	% of Total
LIP	C00	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	2	0.10%
TONGUE	C01-C02	0	0	0	0	0	1	2	0	1	1	0	3	0	4	0	1	0	13	0.70%
MOUTH	C03-C06	0	0	0	1	1	0	1	0	1	3	3	3	5	2	0	2	0	22	1.20%
SALIVARY GLANDS	C07-C08	0	0	2	0	0	0	1	0	0	1	0	0	0	1	0	0	0	5	0.20%
TONSIL	C09	0	0	0	0	0	0	0	0	0	1	2	0	1	0	0	1	0	5	0.20%
OTHER OROPHARYNX	C10	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	3	0.10%
NASOPHARYNX	C11	0	0	0	2	2	1	0	1	1	0	1	2	2	3	0	0	0	15	0.80%
HYPOPHARYNX	C12-C13	0	0	0	0	0	1	0	0	1	0	0	1	1	3	1	3	0	11	0.60%
PHARYNX UNSPEC	C14	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	2	0.10%
OESOPHAGUS	C15	0	0	0	0	0	0	0	0	1	3	6	4	2	3	4	16	0	39	2.20%
STOMACH	C16	0	0	0	0	0	1	1	6	1	5	11	15	21	16	13	29	1	120	6.90%
SMALL INTESTINE	C17	0	0	0	0	1	0	0	0	0	0	1	1	1	2	0	1	0	7	0.40%
COLON	C18	0	0	1	0	2	4	2	7	8	7	10	14	10	13	10	11	0	99	5.70%
RECTUM	C19-C20	0	0	0	0	3	3	2	1	2	8	11	8	7	6	2	7	0	60	3.40%
ANUS	C21	0	0	0	0	1	0	0	0	0	3	2	2	1	6	2	4	0	21	1.20%
LIVER	C22	2	1	0	0	0	1	1	1	1	3	7	4	6	12	8	10	0	57	3.20%
GALL BLADDER ETC.	C23-C24	0	0	0	0	0	0	0	1	0	2	1	1	3	5	2	1	0	16	0.90%
PANCREAS	C25	0	0	0	0	0	0	0	0	0	1	4	6	6	6	4	7	0	34	1.90%
OTHER DIGESTIVE ORGANS	C26	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0.00%
NOSE-SINUSES, ETC.	C30-C31	0	0	0	0	0	0	0	0	0	1	0	1	0	0	1	1	0	4	0.20%
LARYNX	C32	0	0	0	0	0	0	0	0	2	4	5	7	8	6	5	3	0	40	2.30%
TRACHEA, BROUCHAUS, LUNG	C33-C34	0	0	2	0	0	1	2	4	3	7	12	19	32	27	24	36	0	169	9.70%
OTHER, THORACIC ORGANS	C37-C39	1	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	3	0.10%
BONE	C40-C41	3	5	6	10	1	2	2	0	1	1	2	0	0	1	1	0	0	35	2.00%
MELANOM OF SKIN	C43	0	0	0	0	0	0	0	0	1	0	0	0	2	0	0	4	0	7	0.40%

OTHER SKIN	C44	0	0	0	0	0	0	2	3	2	4	7	3	12	13	7	20	0	73	4.20%
MESOTHELIOMA	C45	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2	0	3	0.10%
KAPOSISARCOMA	C46	0	0	0	0	0	1	0	0	1	0	0	0	1	0	1	1	0	5	0.20%
CONNECTIVE, SOFT TISSUE	C47;C49	8	1	1	2	3	3	1	0	1	0	0	4	0	0	1	2	0	27	1.50%
BREAST	C50	0	0	0	0	0	0	1	0	0	1	0	0	1	1	1	1	0	6	0.30%
PENIS	C60	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0.00%
PROSTATE	C61	0	0	1	0	0	0	0	0	0	0	9	16	24	34	14	37	0	135	7.70%
TESTIS	C62	0	0	1	4	2	4	0	1	0	0	0	1	0	0	0	0	0	13	0.70%
KIDNEY	C64	5	0	0	0	0	3	1	1	1	3	2	6	7	3	5	4	0	41	2.30%
RENAL PELVIS	C65	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	2	0.10%
URETER	C66	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0.00%
BLADDER	C67	1	0	0	2	0	2	3	2	3	11	7	11	11	18	10	24	0	105	6.00%
OTHER URINARY ORGANS	C68	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.00%
EYE	C69	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	6	0.30%
BRAIN, NERVOUS SYSTEM	C70-C72	7	9	2	2	3	8	3	1	3	4	8	4	10	3	1	1	0	69	3.90%
THYROID	C73	0	0	1	1	1	10	3	4	1	5	3	2	2	4	2	1	0	40	2.30%
ADRENAL GLAND	C74	5	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	6	0.30%
OTHER ENDOCRINE	C75	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2	0.10%
OTHER & ILL-DEFINED SITES	C76-C79	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2	0.10%
UNKNOWN PRIMARY SITE	80	0	0	1	0	1	0	0	1	0	4	4	3	7	8	5	11	0	45	2.50%
HODGKIN DIS.	C81	2	3	2	12	7	6	3	1	1	4	4	4	4	1	0	1	0	55	3.10%
NON HODGKIN LYMPHOMA	C82-C85;C96	7	7	3	10	8	4	7	6	8	7	16	9	10	20	10	21	0	153	8.80%
IMMUNOPROLIFERATIVE DIS.	C88	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.00%
MULTIPLE MYELOMA	C90	0	0	0	0	1	0	0	2	1	1	6	2	4	5	1	5	0	28	1.60%
LYMPHOID LEUKAEMIA	C91	19	19	5	6	4	1	1	0	1	1	2	1	1	1	1	2	0	65	3.70%
MYELOID LEUKAEMIA	C92-C94	8	1	2	3	9	6	4	5	4	1	1	1	4	2	3	3	0	57	3.20%
LEUKAEMIA UNSPEC	C95	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0.00%
ALL SITES		73	48	32	55	51	63	44	50	52	102	148	159	206	231	140	278	1	1733	100%

TABLE 2.6: DISTRIBUTION OF CANCER CASES BY AGE GROUP AND SITE, 1998-2007, UAE: FEMALE.

SITE	ICD-10	-4	-9	-14	-19	-24	-29	-34	-39	-44	-49	-54	-59	-64	-69	-74	75+	Age Unk	All Ages	% of Total
TONGUE	C01-C02	0	0	0	0	0	0	0	1	1	2	2	1	1	1	1	0	0	10	0.50%
MOUTH	C03-C06	0	0	0	0	0	0	0	1	2	0	0	1	0	0	3	2	0	9	0.40%
SALIVARY GLANDS	C07-C08	0	0	1	0	2	2	0	1	2	0	0	1	1	1	0	1	0	12	0.60%
TONSIL	C09	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0.00%
NASOPHARYNX	C11	0	0	1	0	1	0	0	0	1	1	0	0	0	1	0	1	0	6	0.30%
HYPOPHARYNX	C12-C13	0	0	0	0	0	0	0	0	0	0	1	2	0	0	0	1	0	4	0.20%
PHARYNX UNSPEC	C14	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	2	0.10%
OESOPHAGUS	C15	0	0	0	0	0	0	0	1	0	4	1	2	5	4	3	11	0	31	1.60%
STOMACH	C16	0	0	0	0	0	1	2	3	4	4	9	6	10	3	5	10	0	57	3.00%
SMALL INTESTINE	C17	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	2	0.10%
COLON	C18	0	0	0	0	1	1	1	5	9	16	15	10	5	9	6	8	0	86	4.60%
RECTUM	C19-C20	0	0	0	0	0	0	3	3	1	7	5	4	3	5	2	7	0	40	2.10%
ANUS	C21	0	0	0	0	0	0	0	0	0	1	1	0	0	1	0	2	0	5	0.20%
LIVER	C22	4	1	1	0	0	0	0	0	0	5	5	2	5	1	3	6	0	33	1.70%
GALL BLADDER ETC.	C23-C24	0	0	0	0	0	0	0	0	0	3	0	3	7	2	6	3	0	24	1.20%
PANCREAS	C25	0	0	0	0	0	0	0	0	0	2	4	6	0	3	3	1	0	19	1.00%
OTHER DIGESTIVE ORGANS	C26	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	3	0.10%
NOSE-SINUSES, ETC.	C30-C31	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0.00%
LARYNX	C32	0	0	0	0	0	1	1	0	0	0	0	1	1	1	1	2	0	8	0.40%
TRACHEA, BROUCHAUS, LUNG	C33-C34	0	0	0	0	0	1	1	2	1	2	5	9	8	9	4	8	0	50	2.60%
OTHER, THORACIC ORGANS	C37-C39	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.00%
BONE	C40-C41	0	1	7	3	1	1	0	3	0	0	0	0	0	0	2	0	0	18	0.90%
MELANOM OF SKIN	C43	0	0	0	1	0	0	2	0	0	1	0	0	0	0	0	1	0	5	0.20%
OTHER SKIN	C44	0	1	0	0	0	1	1	1	2	6	4	4	6	4	6	4	0	40	2.10%
MESOTHELIOMA	C45	0	0	0	0	0	0	0	1	1	1	1	0	1	0	0	0	0	5	0.20%
KAPOSISARCOMA	C46	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	0	0	3	0.10%
CONNECTIVE, SOFT TISSUE	C47;C49	6	2	1	0	4	0	1	2	4	4	1	4	0	0	1	0	0	30	1.60%

RETROPERITONEUM & PERITONEUM	C48	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2	0.10%
BREAST	C50	0	0	0	0	2	19	42	64	80	69	78	42	32	21	25	13	0	487	26.10%
VULVA	C51	0	0	0	0	0	0	0	0	0	0	0	1	0	2	0	1	0	4	0.20%
VAGINA	C52	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	3	0.10%
CERVIX UTERI	C53	0	0	0	0	1	2	10	9	22	14	18	11	6	8	8	8	0	117	6.20%
CORPUS UTERI	C54	0	0	0	0	0	0	2	1	2	2	6	8	11	7	8	2	0	49	2.60%
UTERUS UNSPEC	C55	0	0	0	0	1	0	1	1	0	2	1	0	1	0	0	1	0	8	0.40%
OVARY	C56	0	0	3	2	4	4	5	8	5	8	6	11	6	8	3	8	0	81	4.30%
OTTHER FEMALE GENITAL	C57	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	1	0	3	0.10%
PLACENTA	C58	0	0	0	0	0	1	0	0	2	0	0	0	0	0	0	0	0	3	0.10%
KIDNEY	C64	11	0	0	0	0	0	0	2	2	2	2	0	3	0	1	1	0	24	1.20%
URETER	C66	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0.00%
BLADDER	C67	0	0	1	1	0	0	0	1	0	0	2	10	4	5	1	5	0	30	1.60%
OTHER URINARY ORGANS	C68	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0.00%
EYE	C69	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	4	0.20%
BRAIN, NERVOUS SYSTEM	C70-C72	7	4	3	1	3	1	2	1	4	0	1	0	0	4	1	2	0	34	1.80%
THYROID	C73	0	0	2	11	17	32	26	19	14	11	14	10	7	9	4	1	0	177	9.50%
ADRENAL GLAND	C74	3	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	4	0.20%
OTHER ENDOCRINE	C75	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0.00%
OTHER & ILL-DEFINED SITES	C76-C79	2	1	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	7	0.30%
UNKNOWN PRIMARY SITE	80	0	0	0	1	0	1	0	0	3	2	4	3	7	7	5	5	0	38	2.00%
HODGKIN DIS.	C81	3	1	4	4	11	5	6	0	2	1	1	1	3	0	0	2	0	44	2.30%
NON HODGKIN LYMPHOMA	C82-C85;C96	1	1	1	3	2	6	8	6	6	9	6	9	11	6	4	8	0	87	4.60%
IMMUNOPROLIFERATIVE DIS.	C88	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0.00%
MULTIPLE MYELOMA	C90	0	0	0	0	0	0	0	0	0	2	3	4	3	2	4	3	0	21	1.10%
LYMPHOID LEUKAEMIA	C91	21	12	9	5	3	4	1	0	0	1	1	0	2	1	0	0	0	60	3.20%
MYELOID LEUKAEMIA	C92-C94	6	1	2	4	4	6	10	4	2	6	3	6	1	2	3	4	0	64	3.40%
LEUKAEMIA UNSPEC	C95	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	3	0.10%
ALL SITES		69	27	36	36	58	90	126	140	174	190	203	177	152	132	115	138	0	1863	100%


ARABIAN
BAHRAIN
Qatar
Kingdom of Saudi Arabia


G U L F
United Arab Emirates
Sultanate of Oman

KINGDOM OF BAHRAIN

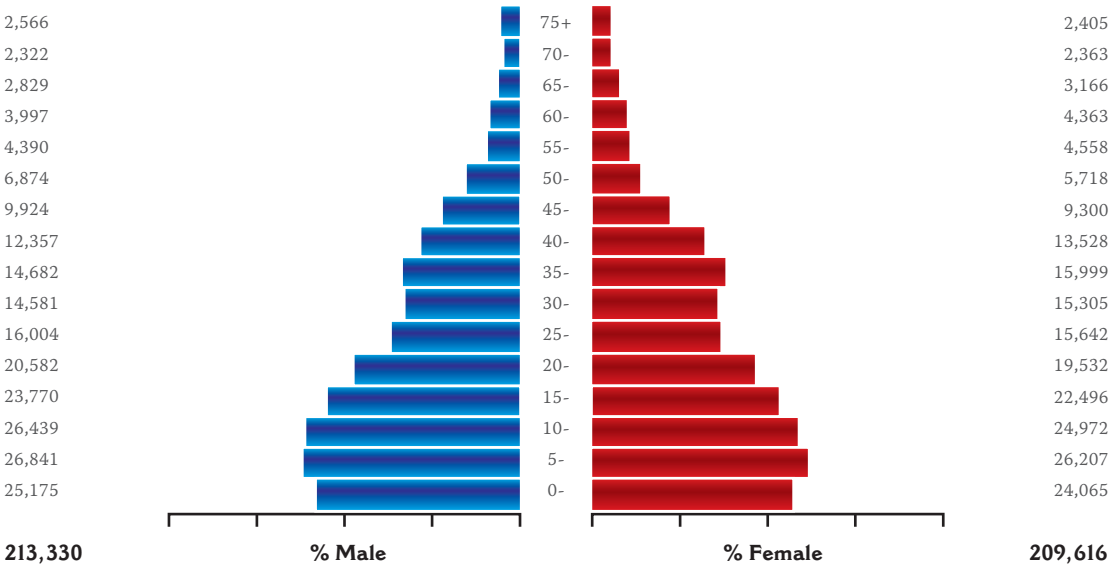
Cancer Incidence in the Kingdom of Bahrain

This report was prepared based on the data received from the Kingdom of Bahrain National Cancer Registry as of December 2010. Average annual incidence rates were calculated based on the mid-point population structure for Bahraini nationals reported by the Bahrain National Cancer Registry and the Central Statistics Organization in the Kingdom of Bahrain for 2007, Figure 2.8.

From January 1998 to December 2007 there were 4,212 Bahraini nationals were diagnosed as cancer patients, out of which 2,029 (48.2%) were males and 2,183 (51.8%) were females. Almost 60% of cases had histopathology confirmation. Cytology/hematology and radiological modalities were used as the base of diagnosis in 30% and death certificate in 5.0% of all cancer cases, Tables 2.7.

Patients presented with advanced cancers (13% of males and 12% of females presented with distant metastasis, and 6% of males and 11% of females presented with regional metastasis). Localized tumors were present in 6% and unknown extent was present in 73% of cancer patients (77% in males and 70% of females), Figure 2.9.

Cancer incidence declined after the first five years of live before it started to increase with advanced age in both genders. During early to mid adulthood Bahraini females showed higher incidence of cancer compared to males, while after the age of 60 males had higher incidence of cancer compared to female, Figure 2.10.



▲ Figure 2.8
Estimated Population for Kingdom of Bahrain
by Gender and Age Group, 1998-2007.

Table 2.7 ▼
Basis of diagnosis, 1998-2007.

BASIS OF DIAGNOSIS	MALE	%	FEMALE	%	ALL	%
Histology of primary	1217	60.0	1285	58.9	2502	59
Cytology/Hematological	409	20.2	607	27.8	1016	24
Radiology	177	8.7	89	4.1	266	6
Death Certificate Only	120	5.9	89	4.1	209	5
Histopathology	73	3.6	92	4.2	165	4
Unknown	15	0.7	11	0.5	26	1
Other laboratory test, Biomarker	9	0.4	4	0.2	13	0
Clinical/ Surgical	9	0.4	6	0.3	15	0
TOTAL	**2029**	**100.0**	**2183**	**100.0**	**4212**	**100**

Figure 2.9 ▼
Extent among Bahraini nationals.

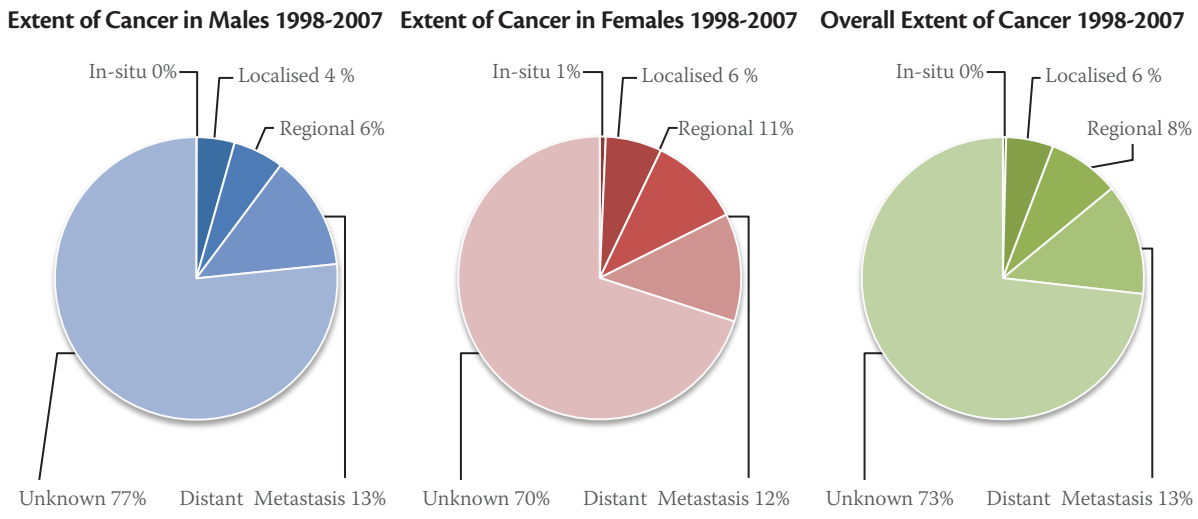
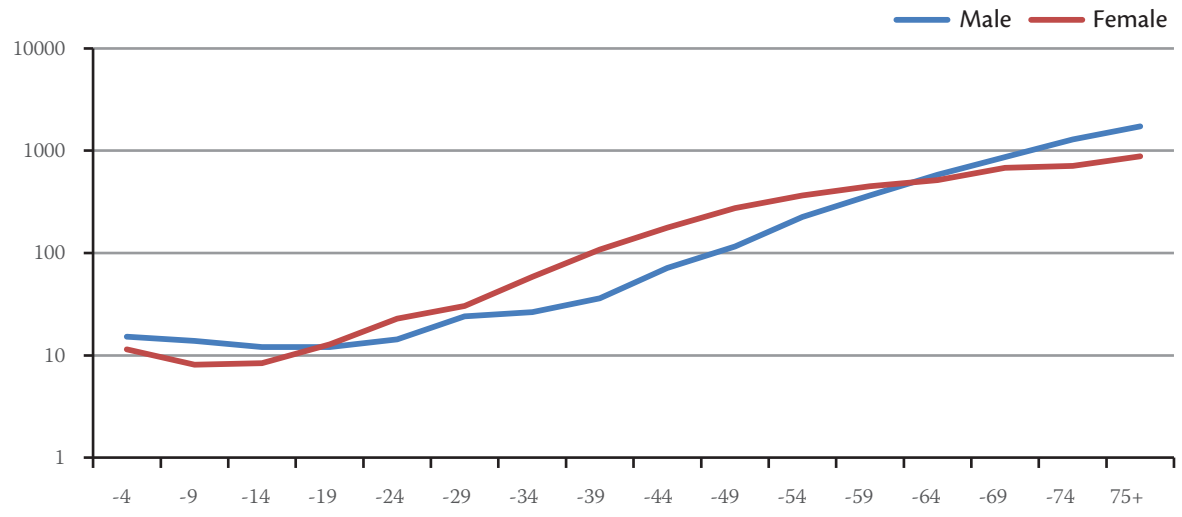


Figure 2.10 ▼
Age Specific Incidence Rates of all Cancers in Bahrain by gender, 1998-2007.



▼ Table 2.8
The Most Common Cancers by Gender in Bahrain, 1998-2007.

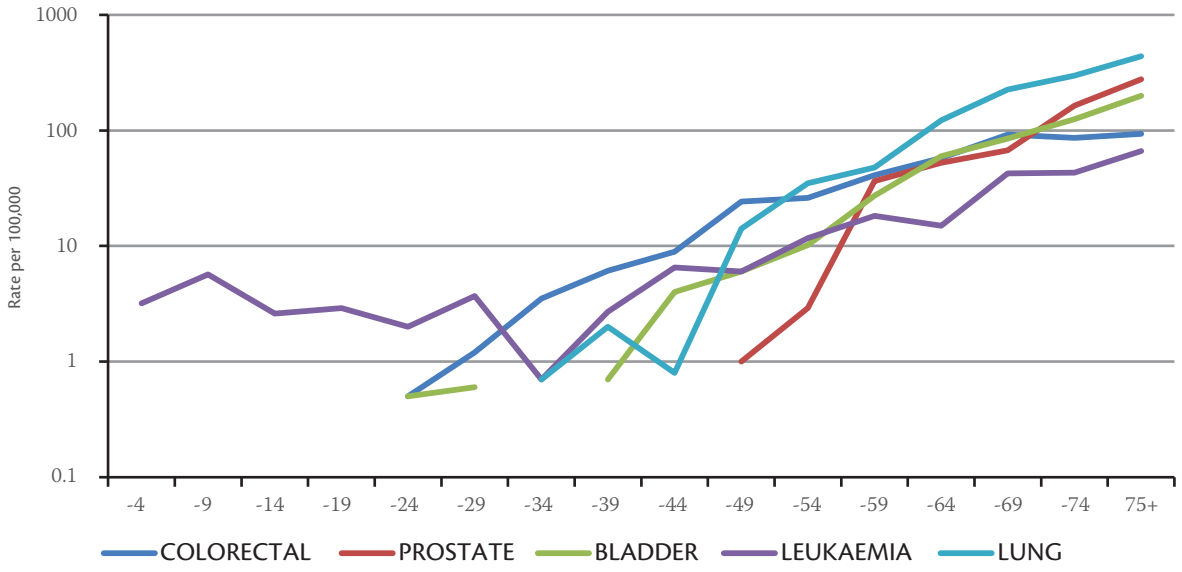
MALE				FEMALE			
Site	*NO*	*%*	*ASR*	*Site*	*NO*	*%*	*ASR*
LUNG	358	17.6	31.1	BREAST	810	37.1	54.4
COLORECTAL	181	8.8	14.3	COLORECTAL	136	6.1	10.1
PROSTATE	168	8.2	14.6	LUNG	126	5.7	10.7
BLADDER	161	7.9	13.8	THYROID	125	5.7	7.7
LEUKAEMIA	127	6.1	8.3	OVARY	105	4.8	7.4

** Average annual age standardized incidence rate per 100,000 populations*

Among Bahraini males lung cancer was the leading malignancy followed by colorectal, prostate, bladder and leukemia. While in females, breast cancer was the leading malignancy followed by colorectal, lung, thyroid and ovary, Table 2.8.

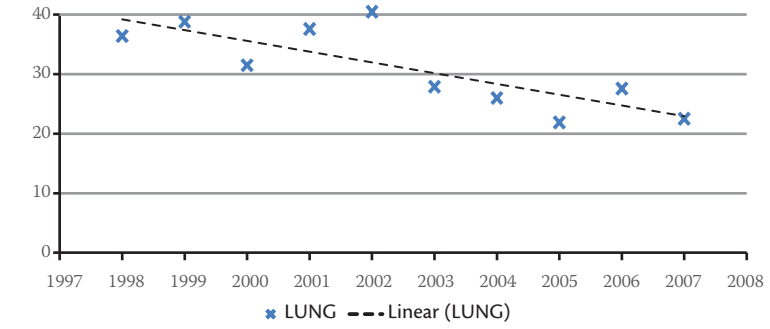
Most Common Cancer in Males:

1. Lung cancer was the most common cancer in Bahraini males accounted to 17.6% of all cancers in men with average annual ASR of 31.1/100,000 population. Lung cancer started to appear after age of 30 years in Bahraini males. The incidence increases with advancing age to reach its peak after the age of 60 years, Figure 2.11. The lowest ASR (21.9/100,000) was reported in 2005 and the highest (40.5/100,000) was reported in 2002. There is a tendency for decreased trend of age standardized incidence during the period between 1998 and 2007 which found to be highly significant (P=0.0057), Figure 2.12.
2. Colorectal cancer ranked second among Bahraini males accounted to 8.8% of all cancers in men with average annual ASR of 14.3/100,000. Colorectal cancer started as early as 20 years of age and gradually increases with advancing age. The highest peak incidence observed after the age of 70 years, Figure 2.11. The lowest ASR (9.5/100,000) was reported in 2007, while the highest (19.2/100,000) was reported in 2004. There is a tendency for decreased ASR trend however it was not statistically significant (p-value = 0.7398), Figure 2.12.
3. Prostate cancer is the third most common cancer among males in Bahrain accounted to 8.2% of all cancers in males with average annual ASR of 14.6/100,000. Prostate cancer started to appear in Bahraini males during late adulthood. The incidence dramatically increases with advancing age. The highest incidence observed after the age of 70 years, Figure 2.11. The lowest ASR (10.2/100,000) was reported in 1998 and the highest (21.3/100,000) was reported in 1999. There is a tendency for decreased ASR trend however it was not statistically significant (p-value = 0.3393), Figure 2.12.
4. Cancer of urinary bladder is the fourth most common cancer in Bahraini males accounted to 7.9% of all cancers in men with average annual ASR of 13.8/100,000 population. Bladder cancer started to appear during early adulthood and the incidence increases with advancing age to reach its maximum in men aged above 75 years, Figures 2.11. The lowest ASR (8.0/100,000) was reported in 2005 and the highest (24.5/100,000) was reported in 1999. There is a tendency for decreased ASR trend however it was not statistically significant (p-value = 0.0965), Figure 2.12.
5. Leukemia is the fifth most common cancer in Bahraini males accounted to 6.1% of all cancers in men with average annual ASR of 8.3/100,000 population. The incidence of leukemia shows two peaks: the first one appeared before the age of 30 years then the incidence increases gradually with advancing age to reach its maximum in men aged above 75 years, Figures 2.11. The lowest ASR (4.6/100,000) was reported in 2006 and the highest (14.5/100,000) was reported in 1998. There is a tendency for decreased ASR trend however it was not statistically significant (p-value = 0.0630), Figure 2.12.

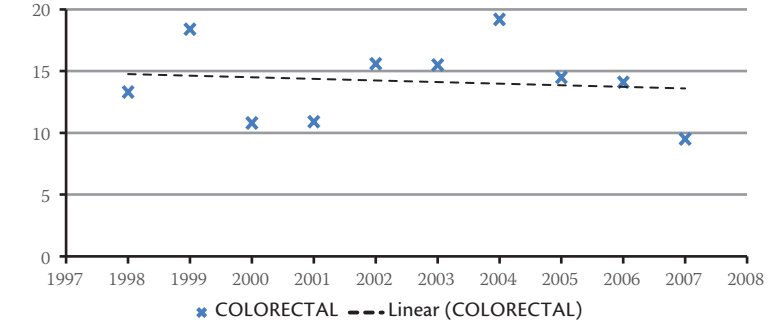


▲ Figure 2.11
Average annual Age Specific Incidence Rates of Most Common Cancers in Bahrain, 1998-2007: Male.

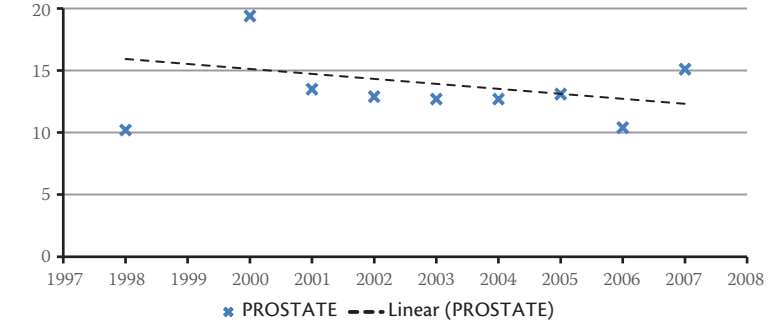
LUNG

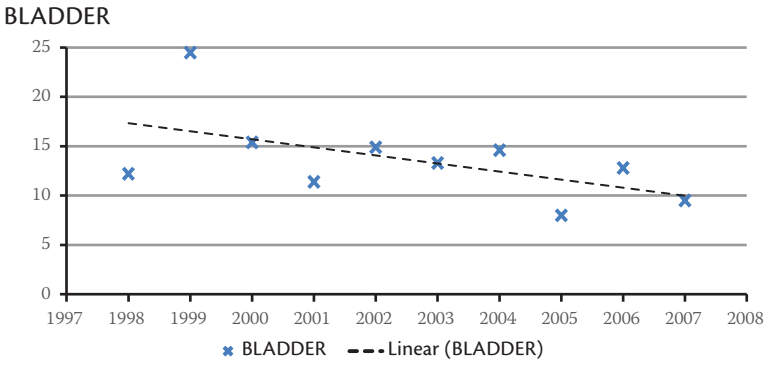


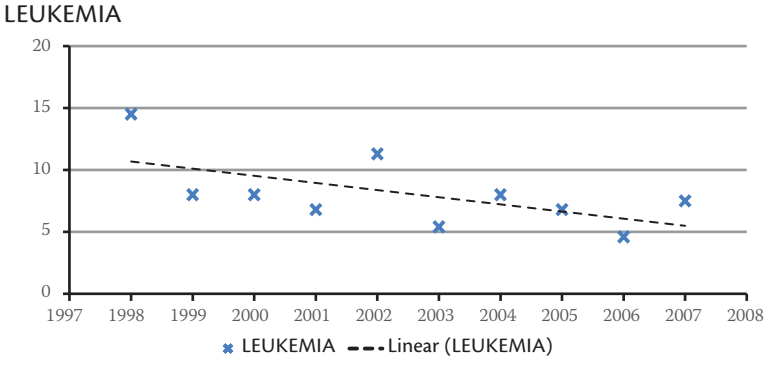
COLORECTAL



PROSTATE



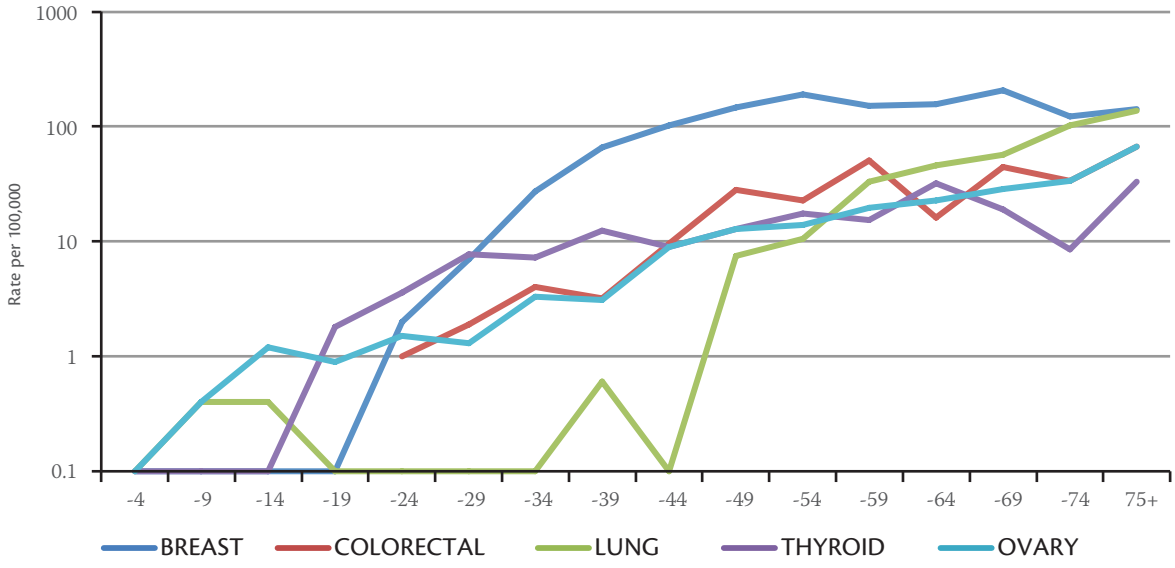




◄▲ Figure 2.12
Trend of Age Standardized Incident Rates for the Most Common Cancers in Bahrain, 1998-2007: Male.

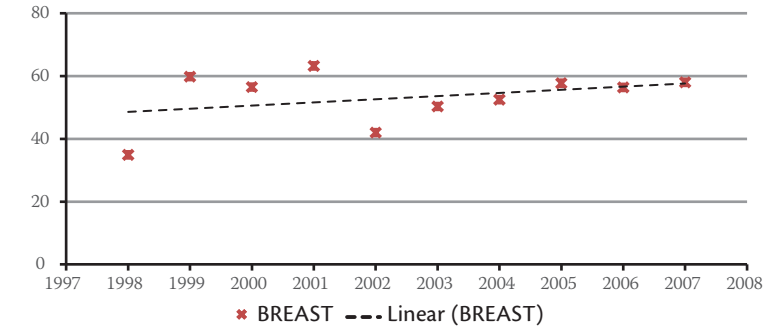
Most Common Cancer in Females:

1. Breast cancer was the most common cancer among Bahraini females accounted to 37.1% of all cancers in women with average annual ASR of 54.4/100,000 population. Breast cancer started to appear after age of 20 years then the incidence increases gradually with increased age. The highest incidence was observed in women aged between 65 and 70 years, Figure 2.13. The lowest ASR (34.9/100,000) was reported in 1998 and the highest (63.2/100,000) was reported in 2001. There is a tendency for increased ASR trend however it was not statistically significant (p-value = 0.3188) Figure 2.14,
2. Colorectal is the second most common cancer in Bahraini females accounted to 6.1% of all cancers in women with average annual ASR of 10.1/100,000 population. Colorectal cancer started to appear at the age of 20 years and increases gradually with advancing age. The highest peak incidence observed after the age of 70 years, Figure 2.13. The lowest ASR (5.3/100,000) was reported in 2001 and the highest (14.2/100,000) was reported in 2006. There is a tendency for increased trend of age standardized incidence which was statistically significant (p-value = 0.0220), Figure 2.14.
3. Lung cancer is the third most common cancer in Bahraini females accounted to 6.4% with average annual ASR of 10.7/100.000 population. Lung cancer started to appear during early childhood and increases dramatically after the age of 55 years to reach its maximum in women aged above 70 years, Figure 2.13. The lowest ASR (3.4/100,000) was reported in 2007 and the highest (18.4/100,000) was reported in 1998. There is a tendency for decreased trend of age standardized incidence during the period between 1998 and 2007 which found to be statistically significant (p-value = 0.0268) Figure 2.14.
4. Thyroid cancer ranked fourth among Bahraini females accounted to 5.7% and with average annual ASR of 7.7/100,000. Thyroid cancer started as early as 20 years of age in Bahraini females and the incidence increases with increased age to reach its peak between the ages of 50 to 60 years, then the incidence decline afterwards, Figure 2.13. The lowest ASR (3.5/100,000) was reported in 2006 while the highest (18.4/100,000) was reported in 1998. There is a tendency for decreased trend of age standardized incidence during the period between 1998 and 2007 which was not statistically significant (p-value = 0.3934), Figure 2.14.
5. Ovarian cancer is the fifth most common cancer in Bahraini females accounted to 4.8% of all cancers in women with average annual ASR of 7.4/100,000 population. Ovarian cancer starts at as early as 10 years of age. The incidence increases gradually to reach its peak in patients above 70 years, Figure 2.13. The lowest ASR (3.0/100,000) was reported in 2007 and the highest (9.7/100,000) was reported in 1998. There is a tendency for decreased ASR trend with borderline significance (p-value = 0.0726), Figure 2.14.

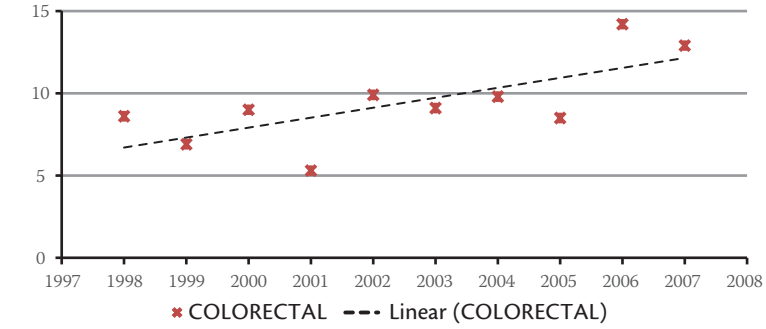


▲ Figure 2.13
Average annual Age Specific Incidence Rates of Most Common Cancers in Bahrain, 1998-2007: Female.

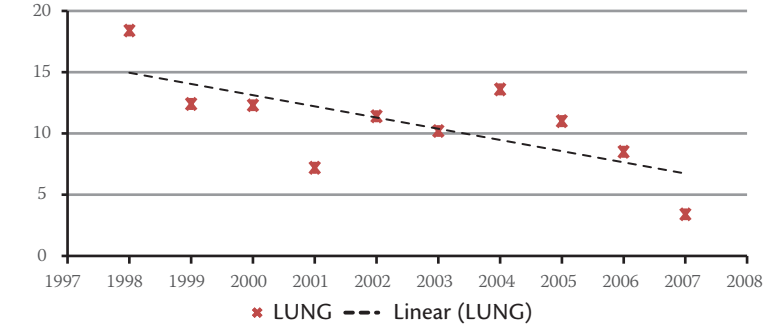
BREAST

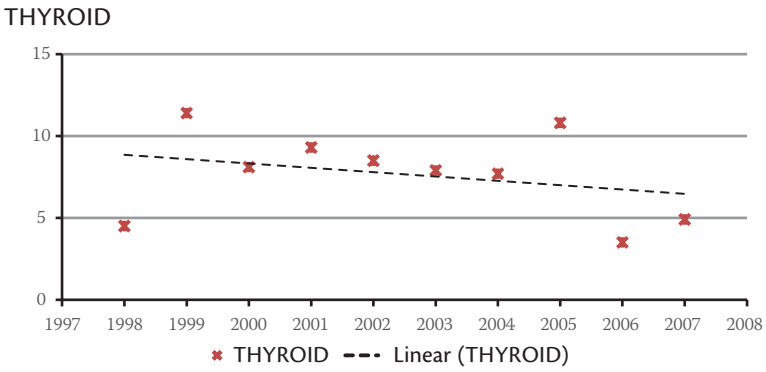


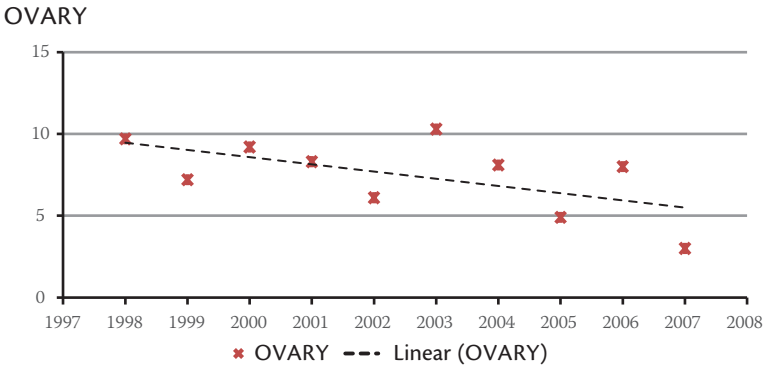
COLORECTAL



LUNG







◄▲ Figure 2.14
Trend of Age Standardized incidence Rates for the Most Common Cancers in Bahrain, 1998-2007: Female.

TABLE 2.9: INCIDENCE RATE (PER100, 000) OF CANCER CASES BY AGE GROUP AND SITE, 1998-2007: BAHRAIN MALE.

SITE	ICD 10	-4	-9	-14	-19	-24	-29	-34	-39	-44	-49	-54	-59	-64	-69	-74	75+	Crude	ASR	CumRt 0-64	ALL Ages
LIP	C00	.	.	.	.	.	.	.	.	.	.	.	.	7.5	7.1	.	7.8	0.3	0.7	0	7
TONGUE	C01-C02	.	.	.	.	.	.	.	.	.	.	1.5	4.6	5	3.5	8.6	23.4	0.7	1.2	0.1	14
MOUTH	C03-C06	.	.	.	.	.	.	.	.	0.8	1	4.4	9.1	2.5	3.5	12.9	3.9	0.7	1.2	0.1	15
SALIVARY GLANDS	C07-C08	.	.	.	.	.	1.2	.	.	0.8	.	1.5	2.3	2.5	.	4.3	11.7	0.5	0.7	0	10
TONSIL	C09	.	.	.	.	.	.	.	.	.	1	.	4.6	.	.	.	.	0.1	0.2	0	3
OTHER OROPHARYNX	C10	.	.	.	.	.	.	.	.	.	.	.	.	2.5	.	.	.	0	0.1	0	1
NASOPHARYNX	C11	.	.	.	.	0.5	0.6	0.7	2	0.8	1	4.4	4.6	5	7.1	8.6	15.6	1.1	1.7	0.1	23
HYPOPHARYNX	C12-C13	.	.	.	.	.	.	.	.	.	.	1.5	.	2.5	3.5	4.3	11.7	0.3	0.6	0	7
PHARYNX UNSPEC	C14	.	.	.	.	.	.	.	.	.	.	.	.	.	3.5	.	.	0	0.1	0	1
OESOPHAGUS	C15	.	.	.	.	.	0.6	.	.	0.8	2	7.3	4.6	22.5	21.2	34.5	46.8	2.2	3.9	0.2	46
STOMACH	C16	.	.	.	.	0.5	.	0.7	0.7	3.2	3	8.7	18.2	37.5	31.8	56	77.9	3.8	6.8	0.4	81
SMALL INTESTINE	C17	.	.	.	.	.	.	.	.	.	.	2.9	.	.	3.5	.	11.7	0.3	0.5	0	6
COLON	C18	.	.	.	.	0.5	.	2.1	4.1	4	16.1	14.5	27.3	25	63.6	64.6	66.3	5.3	9	0.5	113
RECTUM	C19-C20	.	.	.	.	.	1.2	1.4	2	4.9	8.1	11.6	13.7	32.5	28.3	21.5	27.3	3.2	5.3	0.4	68
ANUS	C21	.	.	.	.	.	.	.	0.7	0.8	2	5.8	.	2.5	3.5	8.6	3.9	0.6	1	0.1	13
LIVER	C22	0.4	.	.	.	.	.	1.4	.	2.4	7.1	11.6	15.9	22.5	21.2	34.5	58.5	3.1	5.3	0.3	66
GALL BLADDER ETC.	C23-C24	.	.	.	.	.	.	.	.	0.8	1	1.5	2.3	10	3.5	.	3.9	0.5	0.9	0.1	10
PANCREAS	C25	.	.	.	.	.	.	1.4	0.7	3.2	6	2.9	18.2	20	38.9	47.4	50.7	3.1	5.5	0.3	66
OTHER DIGESTIVE ORGANS	C26	.	.	.	.	.	.	.	.	.	.	.	4.6	.	.	.	.	0.1	0.2	0	2
NOSE-SINUSES, ETC.	C30-C31	0.4	0.4	.	.	.	.	0.7	.	.	2	2.9	.	.	.	.	.	0.3	0.4	0	7
LARYNX	C32	.	.	.	.	.	.	.	.	0.8	1	7.3	15.9	12.5	24.7	64.6	31.2	2.3	4.3	0.2	49
TRACHEA, BROUCHAUS, LUNG	C33-C34	.	.	.	.	.	.	0.7	2	0.8	14.1	34.9	47.8	123	226	297	437	16.8	31.1	1.1	358
OTHER, THORACIC ORGANS	C37-C39	.	.	.	0.4	0.5	.	1.4	.	0.8	1	1.5	2.3	2.5	.	8.6	7.8	0.6	0.9	0.1	13
BONE	C40-C41	0.8	0.7	2.3	2.1	1.5	1.9	1.4	.	0.8	2	.	.	2.5	3.5	12.9	3.9	1.5	1.6	0.1	32
MELANOM OF SKIN	C43	.	.	.	.	.	.	.	.	.	.	1.5	.	.	.	4.3	3.9	0.1	0.2	0	3
OTHER SKIN	C44	.	.	.	0.4	.	.	0.7	.	2.4	2	2.9	6.8	12.5	31.8	25.8	42.9	2	3.6	0.1	43
MESOTHELIOMA	C45	.	.	.	.	.	.	.	.	.	.	.	2.3	5	3.5	30.2	7.8	0.6	1.2	0	13
KAPOSISARCOMA	C46	0.4	.	.	.	.	.	.	1.4	0.8	.	.	.	2.5	.	.	.	0.2	0.3	0	5

CONNECTIVE, SOFT TISSUE	C47;C49	.	.	.	.	.	.	.	.	.	1	.	.	2.5	7.1	.	.	0.2	0.4	0	4
RETROPERITONEUM & PERITONEUM	C48	0.8	.	.	0.4	1.5	0.6	0.7	0.7	4	.	2.9	4.6	2.5	7.1	4.3	15.6	1.2	1.7	0.1	26
BREAST	C50	.	.	.	.	.	.	.	.	.	2.0	4.4	.	.	7.1	8.6	3.9	0.5	0.8	0.0	10
PENIS	C60	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	3.9	0	0.1	0	1
PROSTATE	C61	.	.	.	.	.	.	.	.	.	1	2.9	36.4	52.5	67.2	164	277	7.9	14.6	0.5	168
TESTIS	C62	0.8	.	0.8	.	1.5	1.9	1.4	2.7	3.2	1	5.8	.	2.5	3.5	.	3.9	1.3	1.5	0.1	28
OTHER MALE GENITAL	C63	.	.	.	.	.	.	.	.	0.8	.	.	.	.	.	.	.	0	0	0	1
KIDNEY	C64	2.4	0.7	0.4	.	.	0.6	0.7	.	4.9	2	7.3	22.8	22.5	14.1	43.1	35.1	3.1	5.1	0.3	66
RENAL PELVIS	C65	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
URETER	C66	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BLADDER	C67	.	.	.	.	0.5	0.6	.	0.7	4	6	10.2	27.3	60	84.8	125	199	7.5	13.8	0.5	161
OTHER URINARY ORGANS	C68	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EYE	C69	0.8	.	.	.	.	.	.	.	.	1	.	.	2.5	.	.	.	0.2	0.3	0	4
BRAIN, NERVOUS SYSTEM	C70-C72	2.4	1.9	3	1.7	0.5	1.2	2.1	1.4	6.5	2	13.1	11.4	10	21.2	12.9	3.9	3.2	4.2	0.3	69
THYROID	C73	.	.	.	.	.	1.9	3.4	0.7	4	4	4.4	6.8	2.5	10.6	8.6	.	1.4	2	0.1	30
ADRENAL GLAND	C74	1.6	0.4	.	.	.	0.6	.	.	.	1	.	.	.	.	.	.	0.3	0.3	0	7
OTHER ENDOCRINE	C75	.	.	.	.	.	.	.	0.7	.	.	.	.	.	.	.	.	0	0	0	1
OTHER & ILL-DEFINED SITES	C76-C79	0.4	0.7	.	.	.	.	.	.	.	1	.	2.3	.	3.5	4.3	.	0.3	0.5	0	7
HODGKIN DIS.	C81	0.8	1.5	1.9	2.5	1.9	4.4	0.7	3.4	1.6	1	1.5	2.3	.	7.1	.	3.9	2	2	0.1	42
NON HODGKIN LYMPHOMA	C82-C85;C96	.	1.5	1.1	1.7	2.4	2.5	3.4	6.8	6.5	12.1	16	4.6	25	28.3	34.5	50.7	5	7.1	0.4	107
IMMUNOPROLIFERATIVE DIS.	C88	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	3.9	0	0.1	0	1
MULTIPLE MYELOMA	C90	.	.	.	.	.	0.6	.	0.7	.	.	2.9	9.1	5	3.5	17.2	27.3	1	1.8	0.1	22
LYMPHOID LEUKAEMIA	C91	2.4	3.4	1.5	0.8	0.5	0.6	.	.	0.8	1	1.5	2.3	5	21.2	12.9	23.4	2.1	2.8	0.1	44
MYELOID LEUKAEMIA	C92-C94	0.8	0.4	1.1	0.8	0.5	3.1	0.7	0.7	4.9	2	7.3	13.7	7.5	14.1	21.5	35.1	2.6	3.9	0.2	56
LEUKAEMIA UNSPEC	C95	.	1.9	.	1.3	1	.	.	2	0.8	3	2.9	2.3	2.5	7.1	8.6	7.8	1.3	1.6	0.1	27
UNKNOWN PRIMARY SITE	80	.	0.4	.	.	0.5	.	0.7	2	0.8	4	10.2	13.7	20	21.2	68.9	70.1	3.4	5.8	0.3	72
ALL SITES		15.2	13.9	12.1	12.1	14.3	24.1	26.4	36.1	71.7	116	224	365	583	862	1283	1719	95.1	159	7.6	2029
ALL SITES EXCEPT C44	382	15.2	13.9	12.1	11.7	14.3	24.1	25.7	36.1	69.3	114	222	358	570	830	1258	1676	93.1	155	7.4	1986

TABLE 2.10: INCIDENCE RATE (PER100, 000)OF CANCER CASES BY AGE GROUP AND SITE,1998-2007: BAHRAIN FEMALE

SITE	ICD 10	-4	-9	-14	-19	-24	-29	-34	-39	-44	-49	-54	-59	-64	-69	-74	75+	Crude	ASR	CumRt 0-64	ALL Ages
LIP	C00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TONGUE	C01-C02	.	.	.	.	.	.	0.7	0.6	.	.	3.5	2.2	4.6	.	.	4.2	0.4	0.6	0.1	8
MOUTH	C03-C06	.	.	.	.	.	.	.	.	1.5	.	1.7	2.2	.	.	12.7	4.2	0.4	0.6	0	8
SALIVARY GLANDS	C07-C08	.	.	.	.	0.5	0.6	0.7	.	1.5	.	.	.	.	.	.	4.2	0.3	0.3	0	6
TONSIL	C09	.	.	.	.	.	.	.	.	.	.	1.7	.	.	.	.	.	0	0.1	0	1
OTHER OROPHARYNX	C10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NASOPHARYNX	C11	.	.	.	.	.	.	.	.	2.2	.	.	.	2.3	3.2	12.7	.	0.4	0.6	0	8
HYPOPHARYNX	C12-C13	.	.	.	.	.	.	.	.	.	.	1.7	.	2.3	.	.	.	0.1	0.2	0	2
PHARYNX UNSPEC	C14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
OESOPHAGUS	C15	.	.	.	.	.	.	.	0.6	0.7	.	.	2.2	6.9	19	21.2	12.5	1	1.7	0.1	20
STOMACH	C16	.	.	.	.	0.5	.	1.3	1.3	3.7	6.5	5.2	8.8	16	22.1	59.3	41.6	2.9	4.7	0.2	61
SMALL INTESTINE	C17	.	.	.	.	.	.	.	.	.	1.1	.	.	6.9	.	.	.	0.2	0.3	0	4
COLON	C18	.	.	.	.	0.5	1.3	3.3	1.9	7.4	18.3	19.2	35.1	9.2	31.6	25.4	45.7	4.6	7.1	0.5	96
RECTUM	C19-C20	.	.	.	.	0.5	0.6	0.7	1.3	2.2	9.7	3.5	15.4	6.9	12.6	8.5	20.8	1.9	3	0.2	40
ANUS	C21	.	.	.	.	.	.	.	.	.	.	.	.	.	3.2	.	4.2	0.1	0.2	0	2
LIVER	C22	.	.	.	.	.	0.6	.	.	.	3.2	1.7	8.8	16	28.4	38.1	33.3	2	3.6	0.2	42
GALL BLADDER ETC.	C23-C24	.	.	.	.	.	.	.	0.6	0.7	2.2	.	4.4	4.6	6.3	.	8.3	0.6	0.9	0.1	12
PANCREAS	C25	.	.	.	.	0.5	.	.	0.6	2.2	2.2	5.2	19.7	9.2	15.8	25.4	29.1	2	3.3	0.2	41
NOSE-SINUSES, ETC.	C30-C31	.	.	.	.	.	1.3	.	.	.	.	.	.	.	3.2	.	.	0.1	0.2	0	3
LARYNX	C32	.	.	.	.	.	.	.	.	0.7	1.1	.	.	4.6	3.2	4.2	.	0.3	0.5	0	6
TRACHEA, BROUCHAUS, LUNG	C33-C34	.	0.4	0.4	.	.	.	.	0.6	.	7.5	10.5	32.9	45.8	56.9	101.6	137.2	6	10.7	0.5	126
OTHER, THORACIC ORGANS	C37-C39	.	.	.	.	.	.	.	.	.	.	3.5	.	.	3.2	.	.	0.1	0.3	0	3
BONE	C40-C41	.	.	1.2	0.9	0.5	.	.	0.6	0.7	.	1.7	.	2.3	.	.	.	0.5	0.5	0	10
MELANOM OF SKIN	C43	.	.	.	.	.	0.6	.	.	.	.	.	.	2.3	.	4.2	.	0.1	0.2	0	3
OTHER SKIN	C44	.	.	.	.	0.5	.	0.7	1.3	1.5	2.2	5.2	4.4	9.2	9.5	16.9	8.3	1.2	2	0.1	26
MESOTHELIOMA	C45	.	.	.	.	.	.	.	.	.	1.1	.	.	.	.	.	8.3	0.1	0.2	0	3
KAPOSISARCOMA	C46	.	.	.	.	.	.	.	0.6	.	.	1.7	2.2	.	.	.	.	0.1	0.2	0	3
CONNECTIVE, SOFT TISSUE	C47;C49	1.2	.	0.8	.	.	.	0.7	0.6	0.7	.	1.7	.	.	.	.	4.2	0.5	0.5	0	10
RETROPERITONEUM & PERITONEUM	C48	.	.	.	0.4	.	0.6	0.7	.	0.7	.	3.5	.	.	3.2	.	.	0.3	0.4	0	7

BREAST	C50	.	.	.	.	2	7	27.4	65.6	102	147.3	188.9	151.4	155.9	205.3	122.8	141.4	38.6	54.4	4.2	810
VULVA	C51	.	.	.	.	.	.	.	.	.	.	.	2.2	.	.	.	.	0	0.1	0	1
VAGINA	C52	.	.	.	.	.	.	.	.	.	.	.	.	.	.	8.5	.	0.1	0.2	0	2
CERVIX UTERI	C53	.	.	.	.	1	0.6	0.7	4.4	8.1	9.7	14	30.7	20.6	31.6	12.7	33.3	4	6.1	0.4	83
CORPUS UTERI	C54	.	.	.	.	.	1.3	1.3	1.9	3.7	12.9	12.2	28.5	27.5	34.7	25.4	20.8	3.7	6.1	0.4	78
UTERUS UNSPEC	C55	.	.	.	.	.	.	.	0.6	0.7	4.3	5.2	4.4	16	15.8	12.7	8.3	1.3	2.3	0.2	28
OVARY	C56	.	0.4	1.2	0.9	1.5	1.3	3.3	3.1	8.9	12.9	14	19.7	22.9	28.4	33.9	66.5	5	7.4	0.5	105
OTTHER FEMALE GENITAL	C57	.	.	.	.	.	.	.	.	.	.	.	.	.	.	8.5	4.2	0.1	0.3	0	3
PLACENTA	C58	.	.	.	.	1	.	0.7	0.6	1.5	.	.	2.2	.	.	.	.	0.3	0.3	0	7
KIDNEY	C64	2.5	0.4	.	.	.	0.6	2	1.3	5.2	4.3	1.7	6.6	13.8	15.8	12.7	29.1	2.3	3.4	0.2	49
RENAL PELVIS	C65	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
URETER	C66	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BLADDER	C67	0.4	.	.	.	.	0.6	.	0.6	1.5	.	3.5	6.6	9.2	9.5	12.7	83.2	1.9	3.2	0.1	40
OTHER URINARY ORGANS	C68	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EYE	C69	.	0.4	.	0.4	.	.	.	.	.	.	.	.	.	.	.	.	0.1	0.1	0	2
BRAIN, NERVOUS SYSTEM	C70-C72	1.7	1.1	.	.	0.5	.	3.3	.	3	1.1	1.7	2.2	6.9	6.3	12.7	.	1.3	1.7	0.1	28
THYROID	C73	.	.	.	1.8	3.6	7.7	7.2	12.5	8.9	12.9	17.5	15.4	32.1	19	8.5	33.3	6	7.7	0.6	125
ADRENAL GLAND	C74	0.8	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0.1	0.1	0	2
OTHER ENDOCRINE	C75	0.4	.	.	.	.	.	.	1.3	.	.	.	.	.	.	.	.	0.1	0.1	0	3
OTHER & ILL-DEFINED SITES	C76-C79	0.4	.	0.4	.	.	.	.	.	.	.	.	2.2	2.3	3.2	.	4.2	0.3	0.4	0	6
HODGKIN DIS.	C81	.	1.1	.	2.7	4.6	1.3	.	0.6	1.5	.	3.5	2.2	9.2	6.3	.	.	1.5	1.8	0.1	32
NON HODGKIN LYMPHOMA	C82-C85;C96	0.8	0.8	0.8	2.2	3.1	1.9	.	2.5	3.7	5.4	8.7	11	16	41.1	42.3	20.8	3.8	5.6	0.3	79
IMMUNOPROLIFERATIVE DIS.	C88	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MULTIPLE MYELOMA	C90	.	.	.	.	.	.	.	0.6	.	1.1	7	8.8	13.8	3.2	4.2	8.3	1	1.7	0.2	20
LYMPHOID LEUKAEMIA	C91	2.1	2.3	2	1.8	.	.	.	.	0.7	2.2	3.5	2.2	.	.	4.2	.	1.3	1.3	0.1	27
MYELOID LEUKAEMIA	C92-C94	0.4	0.8	.	1.3	1.5	1.9	3.9	1.9	.	1.1	7	4.4	.	6.3	16.9	4.2	1.7	2.1	0.1	35
LEUKAEMIA UNSPEC	C95	0.8	0.4	1.6	0.4	0.5	0.6	.	.	0.7	1.1	.	2.2	2.3	.	12.7	4.2	0.9	1	0.1	18
UNKNOWN PRIMARY SITE	80	.	.	.	.	.	.	.	.	0.7	4.3	5.2	8.8	16	31.6	29.6	54.1	2.3	4.2	0.2	49
ALL SITES		11.5	8.1	8.4	12.8	22.8	30.4	58.6	108.1	177.2	275.7	364.8	450	513.6	679.5	711.2	882	104.1	154.6	10.2	2183
ALL SITES EXCEPT C44	342	11.5	8.1	8.4	12.8	22.3	30.4	57.9	106.8	175.7	273.5	359.6	445.6	504.4	670	694.3	873.7	102.9	152.6	10.1	2157

TABLE 2.11: DISTRIBUTION OF CANCER CASES BY AGE GROUP AND SITE, 1998-2007, BAHRAIN: MALE

SITE	ICD-10	-4	-9	-14	-19	-24	-29	-34	-39	-44	-49	-54	-59	-64	-69	-74	75+	Age Unk	All Ages	% of Total
LIP	C00	0	0	0	0	0	0	0	0	0	0	0	0	3	2	0	2	0	7	0.30%
TONGUE	C01-C02	0	0	0	0	0	0	0	0	0	0	1	2	2	1	2	5	1	14	0.60%
MOUTH	C03-C06	0	0	0	0	0	0	0	0	1	1	3	4	1	1	3	1	0	15	0.70%
SALIVARY GLANDS	C07-C08	0	0	0	0	0	2	0	0	1	0	1	1	1	0	1	3	0	10	0.40%
TONSIL	C09	0	0	0	0	0	0	0	0	0	1	0	2	0	0	0	0	0	3	0.10%
OTHER OROPHARYNX	C10	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0.00%
NASOPHARYNX	C11	0	0	0	0	1	1	1	3	1	1	3	2	2	2	2	4	0	23	1.10%
HYPOPHARYNX	C12-C13	0	0	0	0	0	0	0	0	0	0	1	0	1	1	1	3	0	7	0.30%
PHARYNX UNSPEC	C14	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0.00%
OESOPHAGUS	C15	0	0	0	0	0	1	0	0	1	2	5	2	9	6	8	12	0	46	2.20%
STOMACH	C16	0	0	0	0	1	0	1	1	4	3	6	8	15	9	13	20	0	81	3.90%
SMALL INTESTINE	C17	0	0	0	0	0	0	0	0	0	0	2	0	0	1	0	3	0	6	0.20%
COLON	C18	0	0	0	0	1	0	3	6	5	16	10	12	10	18	15	17	0	113	5.50%
RECTUM	C19-C20	0	0	0	0	0	2	2	3	6	8	8	6	13	8	5	7	0	68	3.30%
ANUS	C21	0	0	0	0	0	0	0	1	1	2	4	0	1	1	2	1	0	13	0.60%
LIVER	C22	1	0	0	0	0	0	2	0	3	7	8	7	9	6	8	15	0	66	3.20%
GALL BLADDER ETC.	C23-C24	0	0	0	0	0	0	0	0	1	1	1	1	4	1	0	1	0	10	0.40%
PANCREAS	C25	0	0	0	0	0	0	2	1	4	6	2	8	8	11	11	13	0	66	3.20%
OTHER DIGESTIVE ORGANS	C26	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2	0.00%
NOSE-SINUSES, ETC.	C30-C31	1	1	0	0	0	0	1	0	0	2	2	0	0	0	0	0	0	7	0.30%
LARYNX	C32	0	0	0	0	0	0	0	0	1	1	5	7	5	7	15	8	0	49	2.40%
TRACHEA, BROUCHAUS, LUNG	C33-C34	0	0	0	0	0	0	1	3	1	14	24	21	49	64	69	111	1	358	17.60%
OTHER, THORACIC ORGANS	C37-C39	0	0	0	1	1	0	2	0	1	1	1	1	1	0	2	2	0	13	0.60%
BONE	C40-C41	2	2	6	5	3	3	2	0	1	2	0	0	1	1	3	1	0	32	1.50%
MELANOM OF SKIN	C43	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0	3	0.10%

OTHER SKIN	C44	0	0	0	1	0	0	1	0	3	2	2	3	5	9	6	11	0	43	2.10%
MESOTHELIOMA	C45	0	0	0	0	0	0	0	0	0	0	0	1	2	1	7	2	0	13	0.60%
KAPOSISARCOMA	C46	0	0	0	0	0	0	0	0	0	1	0	0	1	2	0	0	0	4	0.10%
RETROPERITONEUM & PERITONEUM	C48	1	0	0	0	0	0	0	2	1	0	0	0	1	0	0	0	0	5	0.20%
CONNECTIVE, SOFT TISSUE	C47;C49	2	0	0	1	3	1	1	1	5	0	2	2	1	2	1	4	0	26	1.20%
BREAST	C50	0	0	0	0	0	0	0	0	0	2	3	0	0	2	2	1	0	10	0.40%
PENIS	C60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0.00%
PROSTATE	C61	0	0	0	0	0	0	0	0	0	1	2	16	21	19	38	71	0	168	8.20%
TESTIS	C62	2	0	2	0	3	3	2	4	4	1	4	0	1	1	0	1	0	28	1.30%
OTHER MALE GENITAL	C63	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0.00%
KIDNEY	C64	6	2	1	0	0	1	1	0	6	2	5	10	9	4	10	9	0	66	3.20%
BLADDER	C67	0	0	0	0	1	1	0	1	5	6	7	12	24	24	29	51	0	161	7.90%
EYE	C69	2	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	4	0.10%
BRAIN, NERVOUS SYSTEM	C70-C72	6	5	8	4	1	2	3	2	8	2	9	5	4	6	3	1	0	69	3.40%
THYROID	C73	0	0	0	0	0	3	5	1	5	4	3	3	1	3	2	0	0	30	1.40%
ADRENAL GLAND	C74	4	1	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	7	0.30%
OTHER ENDOCRINE	C75	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0.00%
OTHER & ILL-DEFINED SITES	C76-C79	1	2	0	0	0	0	0	0	0	1	0	1	0	1	1	0	0	7	0.30%
UNKNOWN PRIMARY SITE	80	0	1	0	0	1	0	1	3	1	4	7	6	8	6	16	18	0	72	3.50%
HODGKIN DIS.	C81	2	4	5	6	4	7	1	5	2	1	1	1	0	2	0	1	0	42	2.00%
NON HODGKIN LYMPHOMA	C82-C85;C96	0	4	3	4	5	4	5	10	8	12	11	2	10	8	8	13	0	107	5.20%
IMMUNOPROLIFERATIVE DIS.	C88	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0.00%
MULTIPLE MYELOMA	C90	0	0	0	0	0	1	0	1	0	0	2	4	2	1	4	7	0	22	1.00%
LYMPHOID LEUKAEMIA	C91	6	9	4	2	1	1	0	0	1	1	1	1	2	6	3	6	0	44	2.10%
MYELOID LEUKAEMIA	C92-C94	2	1	3	2	1	5	1	1	6	2	5	6	3	4	5	9	0	56	2.70%
LEUKAEMIA UNSPEC	C95	0	5	0	3	2	0	0	3	1	3	2	1	1	2	2	2	0	27	1.30%
ALL SITES		38	37	32	29	29	39	38	53	89	115	154	160	233	244	298	439	2	2029	100%
ALL SITES EXCEPT C44	384	38	37	32	28	29	39	37	53	86	113	152	157	228	235	292	428	2	1986	100%

TABLE 2.12: DISTRIBUTION OF CANCER CASES BY AGE GROUP AND SITE, 1998-2007, BAHRAIN: FEMALE

SITE	ICD 10	-4	-9	-14	-19	-24	-29	-34	-39	-44	-49	-54	-59	-64	-69	-74	75+	Age. Unk.	All Ages	% of Total
LIP	C00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TONGUE	C01-C02	0	0	0	0	0	0	1	1	0	0	2	1	2	0	0	1	0	8	0.30%
MOUTH	C03-C06	0	0	0	0	0	0	0	0	2	0	1	1	0	0	3	1	0	8	0.30%
SALIVARY GLANDS	C07-C08	0	0	0	0	1	1	1	0	2	0	0	0	0	0	0	1	0	6	0.20%
TONSIL	C09	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0.00%
OTHER OROPHARYNX	C10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
NASOPHARYNX	C11	0	0	0	0	0	0	0	0	3	0	0	0	1	1	3	0	0	8	0.30%
HYPOPHARYNX	C12-C13	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	2	0.00%
PHARYNX UNSPEC.	C14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
OESOPHAGUS	C15	0	0	0	0	0	0	0	1	1	0	0	1	3	6	5	3	0	20	0.90%
STOMACH	C16	0	0	0	0	1	0	2	2	5	6	3	4	7	7	14	10	0	61	2.70%
SMALL INTESTINE	C17	0	0	0	0	0	0	0	0	0	1	0	0	3	0	0	0	0	4	0.10%
COLON	C18	0	0	0	0	1	2	5	3	10	17	11	16	4	10	6	11	0	96	4.30%
RECTUM	C19-C20	0	0	0	0	1	1	1	2	3	9	2	7	3	4	2	5	0	40	1.80%
ANUS	C21	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	2	0.00%
LIVER	C22	0	0	0	0	0	1	0	0	0	3	1	4	7	9	9	8	0	42	1.90%
GALL BLADDER ETC.	C23-C24	0	0	0	0	0	0	0	1	1	2	0	2	2	2	0	2	0	12	0.50%
PANCREAS	C25	0	0	0	0	1	0	0	1	3	2	3	9	4	5	6	7	0	41	1.80%
NOSE-SINUSES, ETC.	C30-C31	0	0	0	0	0	2	0	0	0	0	0	0	0	1	0	0	0	3	0.10%
LARYNX	C32	0	0	0	0	0	0	0	0	1	1	0	0	2	1	1	0	0	6	0.20%
TRACHEA, BROUCHAUS, LUNG	C33-C34	0	1	1	0	0	0	0	1	0	7	6	15	20	18	24	33	0	126	5.70%
OTHER, THORACIC ORGANS	C37-C39	0	0	0	0	0	0	0	0	0	0	2	0	0	1	0	0	0	3	0.10%
BONE	C40-C41	0	0	3	2	1	0	0	1	1	0	1	0	1	0	0	0	0	10	0.40%
MELANOM OF SKIN	C43	0	0	0	0	0	1	0	0	0	0	0	0	1	0	1	0	0	3	0.10%
OTHER SKIN	C44	0	0	0	0	1	0	1	2	2	2	3	2	4	3	4	2	0	26	1.10%
MESOTHELIOMA	C45	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2	0	3	0.10%
KAPOSISARCOMA	C46	0	0	0	0	0	0	0	1	0	0	1	1	0	0	0	0	0	3	0.10%
RETROPERITONEUM & PERITONEUM	C48	0	0	0	1	0	1	1	0	1	0	2	0	0	1	0	0	0	7	0.30%
CONNECTIVE, SOFT TISSUE	C47;C49	3	0	2	0	0	0	1	1	1	0	1	0	0	0	0	1	0	10	0.40%

BREAST	C50	0	0	0	0	4	11	42	105	138	137	108	69	68	65	29	34	0	810	37.10%
VULVA	C51	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0.00%
VAGINA	C52	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0.00%
CERVIX UTERI	C53	0	0	0	0	2	1	1	7	11	9	8	14	9	10	3	8	0	83	3.80%
CORPUS UTERI	C54	0	0	0	0	0	2	2	3	5	12	7	13	12	11	6	5	0	78	3.50%
UTERUS UNSPEC	C55	0	0	0	0	0	0	0	1	1	4	3	2	7	5	3	2	0	28	1.20%
OVARY	C56	0	1	3	2	3	2	5	5	12	12	8	9	10	9	8	16	0	105	4.80%
OTTHER FEMALE GENITAL	C57	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	3	0.10%
PLACENTA	C58	0	0	0	0	2	0	1	1	2	0	0	1	0	0	0	0	0	7	0.30%
KIDNEY	C64	6	1	0	0	0	1	3	2	7	4	1	3	6	5	3	7	0	49	2.20%
RENAL PELVIS	C65	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
URETER	C66	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
BLADDER	C67	1	0	0	0	0	1	0	1	2	0	2	3	4	3	3	20	0	40	1.80%
OTHER URINARY ORGANS	C68	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
EYE	C69	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0.00%
BRAIN, NERVOUS SYSTEM	C70-C72	4	3	0	0	1	0	5	0	4	1	1	1	3	2	3	0	0	28	1.20%
THYROID	C73	0	0	0	4	7	12	11	20	12	12	10	7	14	6	2	8	0	125	5.70%
ADRENAL GLAND	C74	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0.00%
OTHER ENDOCRINE	C75	1	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	3	0.10%
OTHER & ILL-DEFINED SITES	C76-C79	1	0	1	0	0	0	0	0	0	0	0	1	1	1	0	1	0	6	0.20%
HODGKIN DIS.	C81	0	3	0	6	9	2	0	1	2	0	2	1	4	2	0	0	0	32	1.40%
NON HODGKIN LYMPHOMA	C82-C85;C96	2	2	2	5	6	3	0	4	5	5	5	5	7	13	10	5	0	79	3.60%
IMMUNOPROLIFERATIVE DIS.	C88	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
MULTIPLE MYELOMA	C90	0	0	0	0	0	0	0	1	0	1	4	4	6	1	1	2	0	20	0.90%
LYMPHOID LEUKAEMIA	C91	5	6	5	4	0	0	0	0	1	2	2	1	0	0	1	0	0	27	1.20%
MYELOID LEUKAEMIA	C92-C94	1	2	0	3	3	3	6	3	0	1	4	2	0	2	4	1	0	35	1.60%
LEUKAEMIA UNSPEC	C95	2	1	4	1	1	1	0	0	1	1	0	1	1	0	3	1	0	18	0.80%
UNKNOWN PRIMARY SITE	80	0	0	0	0	0	0	0	0	1	4	3	4	7	10	7	13	0	49	2.20%
ALL SITES		28	21	21	29	45	48	89	173	240	256	209	205	224	215	168	212	0	2183	100%
ALL SITES EXCEPT C44	342	28	21	21	29	44	48	88	171	238	254	206	203	220	212	164	210	0	2157	100%


Jordan
Iraq
RED SEA


Kuwait
ARABIAN GULF
Bahrain
Qatar
GULF OF OMAN
United Arab Emirates
KINGDOM OF
SAUDI ARABIA
Sultanate of Oman
ARABIAN SEA
Republic of Yemen

KINGDOM OF SAUDI ARABIA

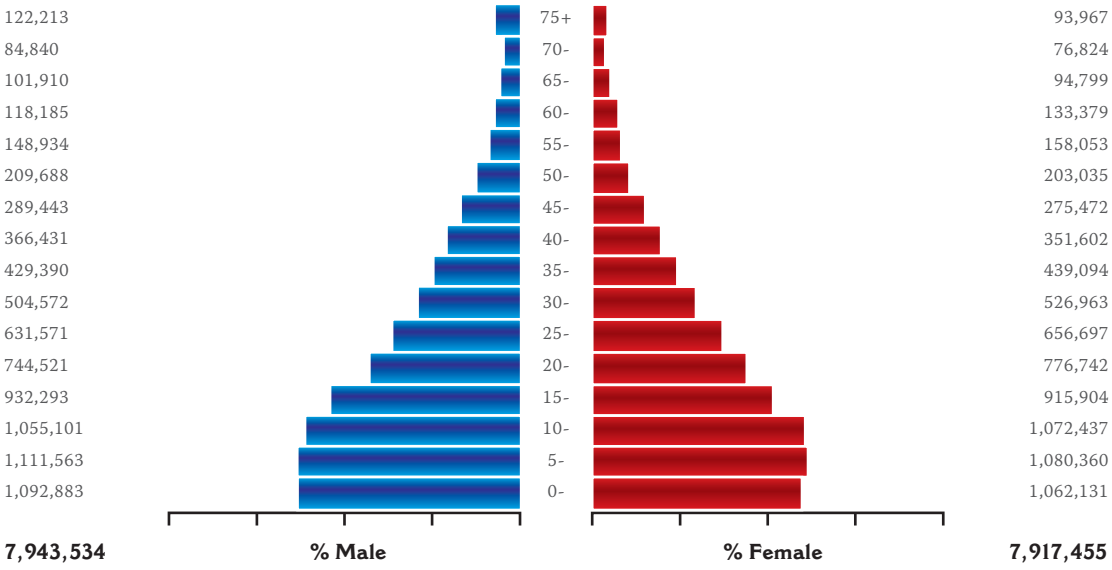
Cancer Incidence in the Kingdom of Saudi Arabia

This report was prepared based on the data received from the KSA National Cancer Registry as of February 2011. The annual incidence rates were calculated based on the mid-point population structure for Saudi nationals estimated for the population pyramid reported by the Central Statistics Department, Ministry of Planning for the year 2007. Figure 2.15 shows the mi-point population structure for both genders by age group.

From January 1998 to December 2007 there were 69,941 Saudi nationals diagnosed with cancer, 35,046 (50.1%) were males and 34,895 (49.9%) were females. Almost 87% of cases had histopathology confirmation. Cytology/hematology and radiological modalities were used as the base of diagnosis in 9.7% and death certificate in 2.3% of all cancer cases, Tables 2.13.

More than 50% of cases presented with advanced cancer (31% of males and 24% of females presented with distant metastasis, and regional metastases were present in 20% of males and 28% of females). Localized tumors were present in 25% and unknown extent in about 23%, Figure 2.16.

Cancer incidence declined after the first five years of live before it started to increase with advanced age in both genders. During early to mid adulthood Saudi females showed higher incidence of cancer compared to males, while after the age of 55 males appeared to have higher incidence of cancer than females, Figure 2.17.



▲ Figure 2.15
Estimated Population for Kingdom of Saudi Arabia by Gender and Age Group, 1999-2007.

Table 2.13 ▼
Basis of diagnosis, 1998-2007.

BASIS OF DIAGNOSIS	MALE	%	FEMALE	%	ALL	%
Histopathology	30004	86	30698	88	60702	86.8
Cytology/Hematological	2395	7	2579	7	4974	7.1
Death Certificate Only	1100	3	742	2	1842	2.6
Radiology	1044	3	531	2	1575	2.3
Unknown	301	1	215	1	516	0.7
Clinical/Surgical	128	0	79	0	207	0.3
Other laboratory test, Biomarker	74	0	51	0	125	0.2
TOTAL	**35046**	**100**	**34895**	**100**	**69941**	**100.0**

Figure 2.16 ▼
Extent among Saudi nationals.

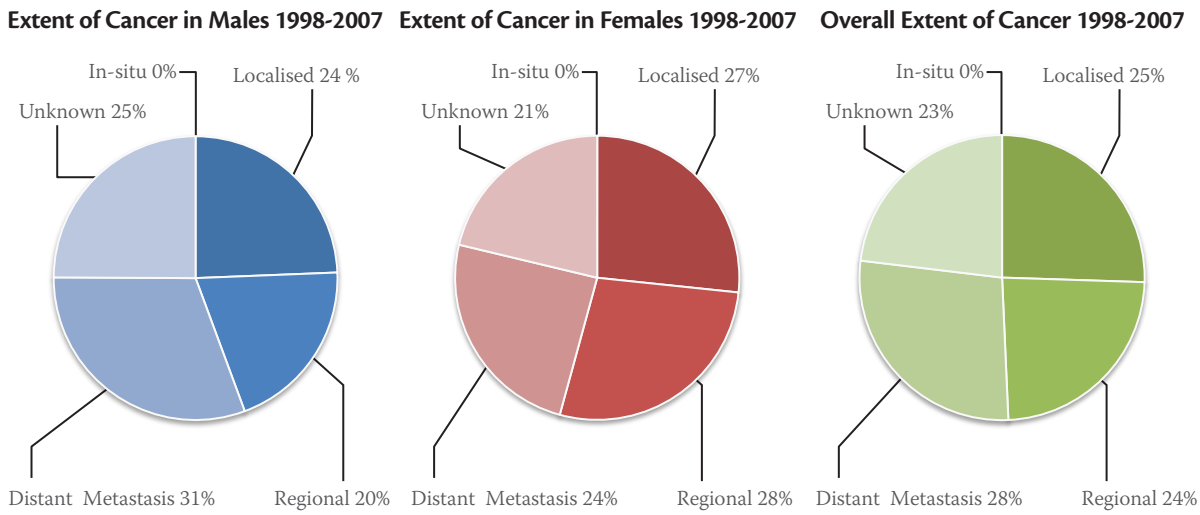
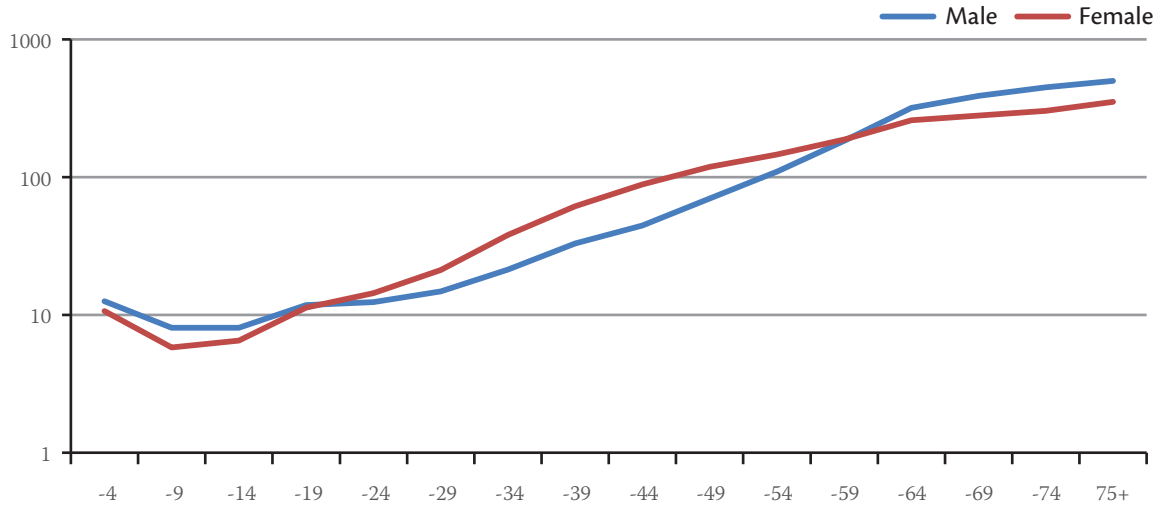


Figure 2.17▼
Age Specific Incidence Rates of all Cancers in Saudi Arabia by gender, 1998-2007.



▼ Table 2.14
The Most Common Cancers by Gender in Saudi Arabia, 1998-2007.

MALE				FEMALE			
Site	*NO*	*%*	*ASR*	*Site*	*NO*	*%*	*ASR*
NHL	3163	9.0	6.1	BREAST	7637	21.8	15.6
COLORECTAL	3121	8.8	7.2	THYROID	3369	9.6	5.7
LIVER	2946	8.4	7.1	COLORECTAL	2663	7.6	6.1
LEUKAEMIA	2807	7.8	4.3	NHL	2240	6.4	4.7
LUNG	2303	6.5	5.6	LEUKAEMIA	2040	5.6	3.1

** Average annual age standardized incidence rate per 100,000 populations*

NHL cancer in Saudi males was the leading malignancy followed by colorectal, liver, leukaemia and lung. While breast cancer was leading malignancy in females followed by thyroid, colorectal, NHL and leukaemia, Table 2.14

Most Common Cancer in Males:

1. NHL was the most common cancer among Saudi males accounted to 9.0% with average annual ASR of 6.1/100,000 population. NHL started to appear with low incidence during childhood. Then the incidence increased gradually to reach its maximum among males aged above 75 years, Figures 2.18. The lowest ASR (4.9/100,000) was reported in 2001 and the highest incidence (6.9/100,000) reported in 2007. There was a slight increase in the ASR trend during the period from 1998 to 2007 which appeared not to be statistically significant (p-value = 0.1205), Figure 2.19.
2. Colorectal cancer ranked second among Saudi males accounted to 8.8% of all male cancers with average annual ASR of 7.2/100,000 population. Colorectal cancer started to appear after the age of 15 years in Saudi males. Then the incidence increased dramatically with increased age to reach its maximum peak among men aged between 60-65 years after which the incidence remained steady, Figure 2.18. The lowest ASR (3.0/100,000) was reported in 2000 and the highest (10.2/100,000) reported in 2005. There is a highly significant increased trend of colorectal cancer incidence during the period from 1998 to 2007 (p-value = 0.0002), Figure 2.19.
3. Liver cancer is the third most common cancer among Saudi males accounted 8.4% with average annual ASR of 7.1/100,000 population. Liver cancer started with low incidence rates during early childhood and adulthood, the incidence increased dramatically after the age of 50 years to reach its peak in men aged above 60 years, Figure 2.18. The lowest ASR (6.6/100,000) was reported in 2004 and the highest (8.8/100,000) reported in 1998. There was a decreased trend of age standardized incidence during the period 1998 to 2007, which was not statistically significant (p-value = 0.1146), Figure 2.19.
4. Leukemia is the fourth most common cancer in Saudi males accounted to 7.8% with average annual ASR of 4.3/100,000 population. Early onset leukemia had its highest incidence during the first five years of live among Saudi males, and then the incidence decreased during early adulthood before it rose again to reach its late onset peak after the age of 60 years, Figure 2.18. The lowest ASR (3.1/100,000) was reported in 2004 and the highest incidence (8.3/100,000) was reported in 1999. There was a decreased trend of age standardized incidence during the period 1998 to 2007, which was not statistically significant (p-value = 0.1546), Figure 2.19.
5. Lung cancer is the fifth most common cancer in Saudi males accounted to 6.5% with average annual ASR of 5.6/100,000. Lung cancer started with low incidence in men aged between 20 and 45 years then the incidence dramatically increased with advancing age to reach its maximum peak incidence in men aged between 60 and 75 years, Figure 2.18. The lowest ASR (4.8/100,000) was reported in 2004 and the highest incidence (7.2/100,000) was reported in 2000. No significant trend of age standardized incidence noticed during the ten year period (p-value = 0.3777), Figure 2.19.

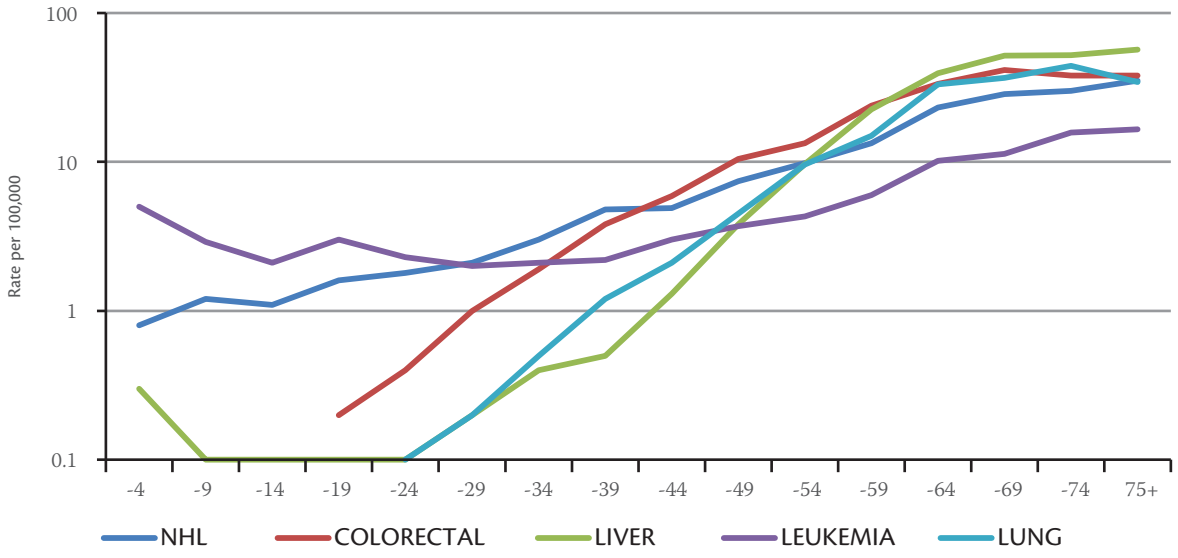
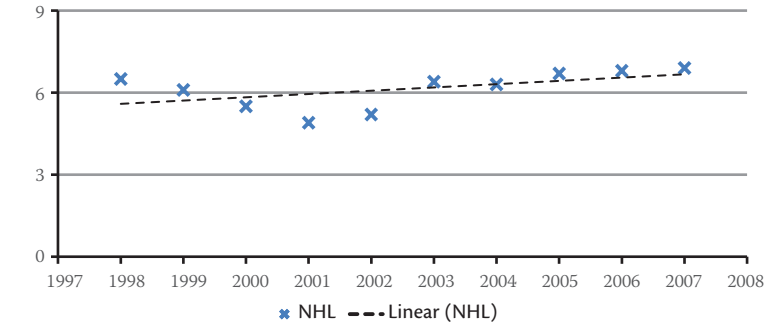
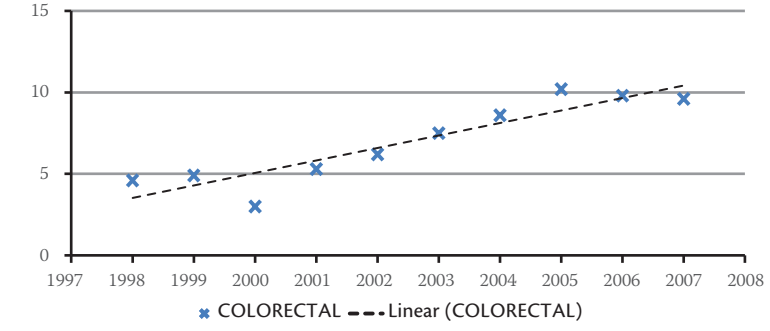


Figure 2.18 ▼
Average annual Age Specific Incidence Rates of Most Common Cancers in Saudi Arabia, 1998-2007: Male.

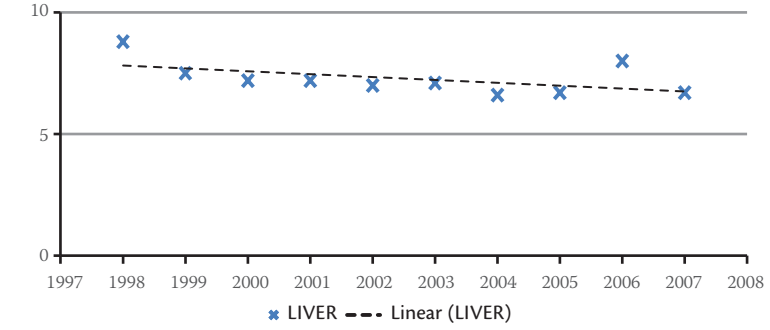
NHL

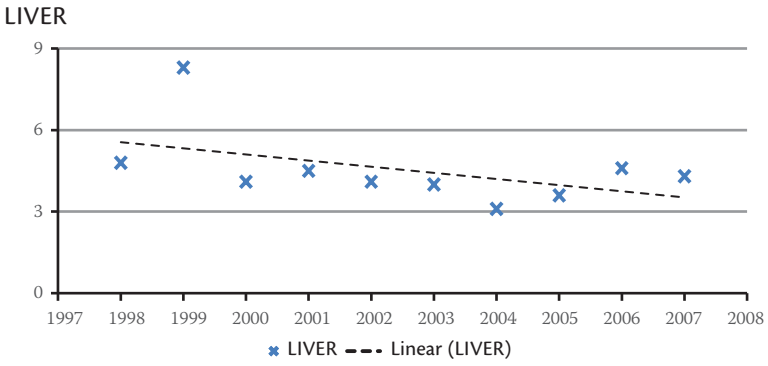


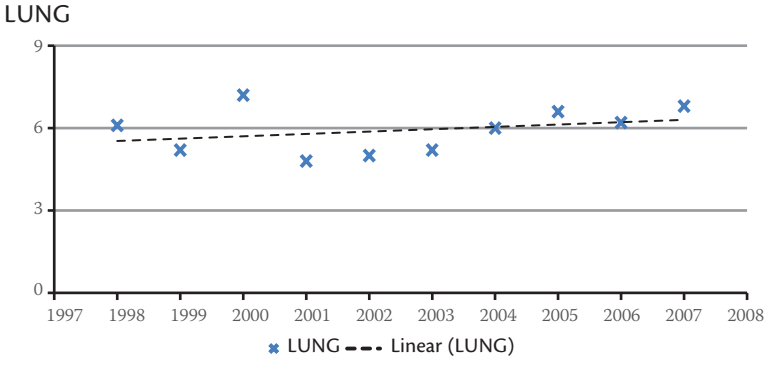
COLORECTAL



LIVER



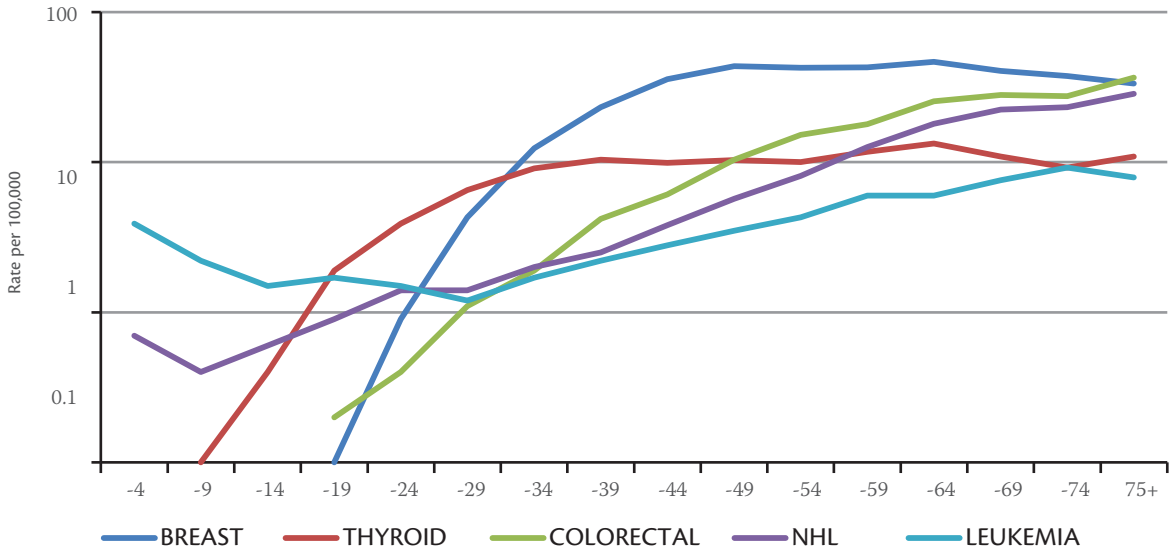




◄▲ Figure 2.19
Trend of Age Standardized Incidence Rates for the Most Common Cancers in Saudi Arabia, 1998-2007: Male.

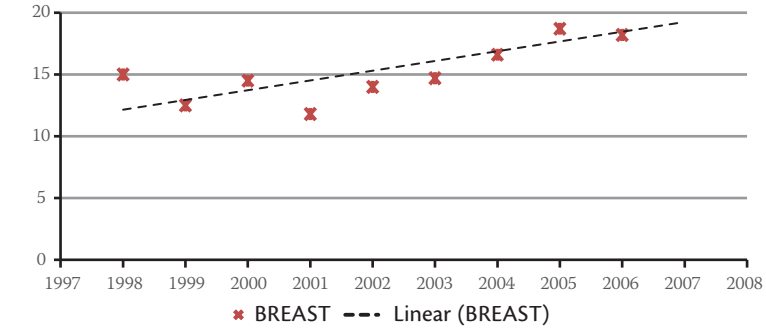
Most Common Cancer in Females:

1. Among Saudi females, breast cancer is the leading malignancy accounted to 21.8% with average annual ASR of 15.6/100,000 population. Breast cancer started during early adulthood and the incidence increased dramatically with advanced age. The highest incidence was observed in women aged above 40 years, Figure 2.20. The lowest ASR (11.8/100,000) was reported in 2001 and the highest (21.0/100,000) was reported in 2007. Highly significant increased trend of breast cancer incidence was observed during the period from 1998 to 2007 (p-value = 0.0034), Figure 2.21.
2. Thyroid cancer is the second most common cancer in Saudi women accounted to 9.6% with average annual ASR of 5.7/100,000 population. Thyroid cancer started with low incidence during childhood then the incidence increased gradually until age of 30 years then the incidence started to plateau, Figure 2.20. The lowest ASR (4.5/100,000) was reported in 2001 and the highest (6.7/100,000) was reported in 2006. There is a tendency of increased ASR trend with borderline significance noticed during the ten year period (p-value = 0.0622), Figure 2.21.
3. Colorectal cancer ranked third among Saudi females accounted to 7.6% with average annual ASR of 6.1/100,000 population. Colorectal cancer started after age of 15 years in Saudi females. Then the incidence increased with advanced age with a maximum incidence between 60 and 65 years, Figure 2.20. The lowest ASR (4.6/100,000) was reported in 2000 and the highest (8.6/100,000) was reported in 2006. There is a highly significant increased trend of colorectal cancer incidence during the period from 1998 to 2007 (p-value = 0.0064), Figure 2.21.
4. NHL is the fourth most common cancer among Saudi females accounted to 6.4% with average annual ASR of 4.7/100,000 population. NHL started to appear with low incidence during childhood, and then the incidence increased gradually to reach its maximum peak between ages 65 and 70 years, Figure 2.20. The lowest ASR (4.3/100,000) reported in 1999, 2000, 2001 and 2002 and the highest (5.2/100,000) was reported in 2005. No significant trend of age standardized incidence observed during the ten year period (p-value = 0.1460), Figure 2.21.
5. Leukemia is the fifth most common cancer in Saudi females accounted 5.6% with average annual ASR of 3.1/100,000 population. Early onset leukemia had its highest incidence during the first five years of live. The incidence declined during early adulthood before it resumed gradual increase after the age of 30 years to reach its late onset peak incidence at age over 70 years, Figure 2.20. The lowest ASR (2.1/100,000) was reported in 1999, and the highest (3.5/100,000) was reported in 2006. There is a tendency for increased ASR trend with borderline significance noticed during the ten year period (p-value = 0.0535), Figure 2.21.

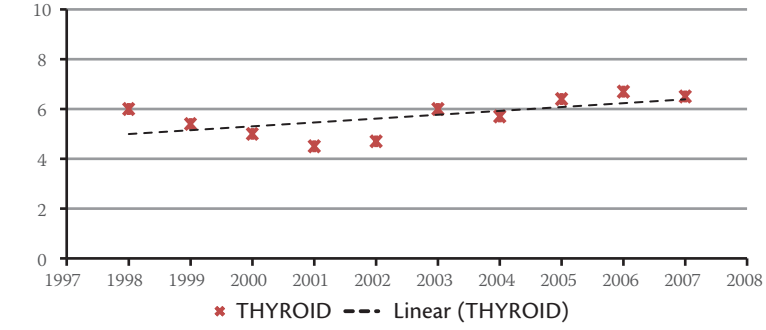


▲ Figure 2.20
Average annual Age Specific Incidence Rates of Most Common Cancers in Saudi Arabia, 1998-2007: Female.

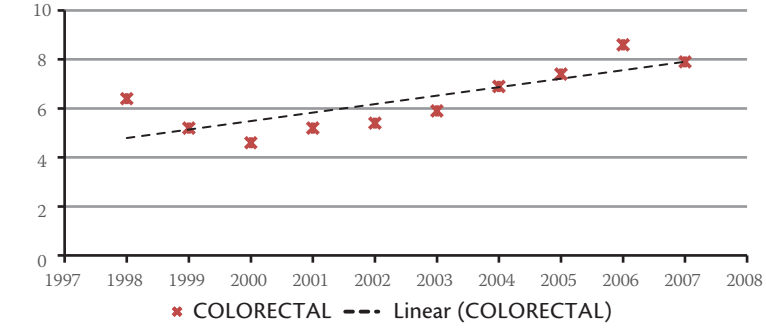
BREAST

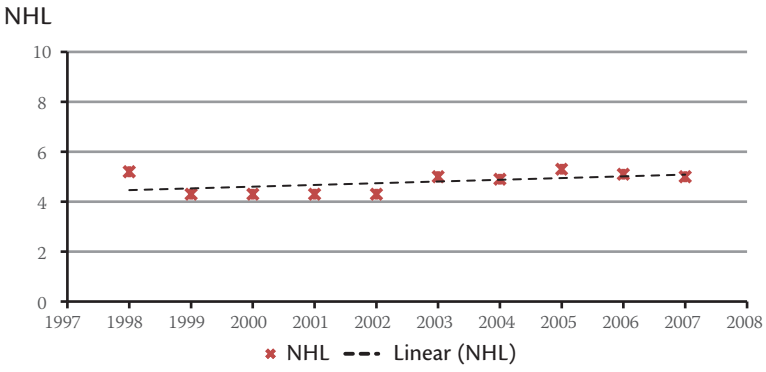


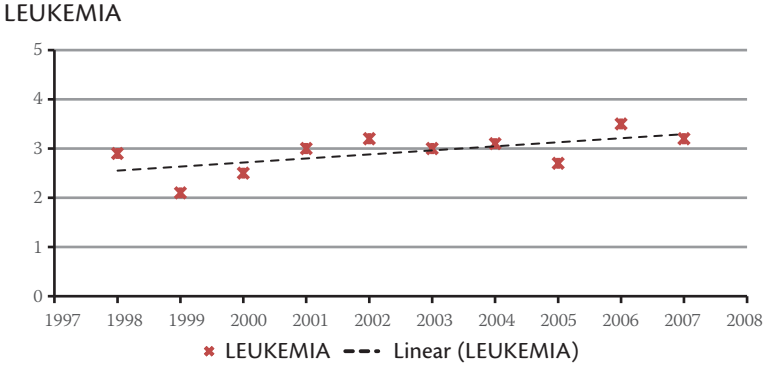
THYROID



COLORECTAL







◄▲ Figure 2.21
Trend of Age Standardized Incidence Rates for the Most Common Cancers in Saudi Arabia, 1998-2007: Female.

TABLE 2.15 INCIDENCE RATE OF CANCER CASES BY AGE GROUP AND SITE 1998-2007: KSA MALE.

SITE	ICD10	-4	-9	-14	-19	-24	-29	-34	-39	-44	-49	-54	-59	-64	-69	-74	75+	Crude	ASR	CumRt 0-64	All Ages
LIP	C00	.	.	.	.	.	.	0	0.1	0	0.1	0.2	0.4	0.5	0.7	0.8	1.2	0.1	0.1	0	53
TONGUE	C01-C02	0	.	.	0	0	0	0.2	0.3	0.4	0.7	1.2	2.4	3.9	3.1	3.3	4.2	0.4	0.7	0	282
MOUTH	C03-C06	.	.	0	0.1	0.1	0.1	0.1	0.2	0.2	0.6	1	1.5	3.4	4.5	5.4	4.9	0.4	0.7	0	295
SALIVARY GLANDS	C07-C08	0	0	0	0	0.1	0.1	0.2	0.3	0.4	0.1	0.3	1	1	0.8	1.4	1.3	0.2	0.2	0	135
TONSIL	C09	.	.	.	.	.	.	.	0	.	0.1	0.1	0.3	0.5	0.3	0.2	0.9	0	0.1	0	33
OTHER OROPHARYNX	C10	.	.	.	.	.	.	.	0	0.1	0.1	.	0.1	0.3	.	0.4	0.3	0	0	0	17
NASOPHARYNX	C11	0	0	0.2	0.5	0.3	0.5	1	2.4	3.7	4.9	5.4	6	7.7	6.2	5.5	3.4	1.3	2	0.2	1005
HYPOPHARYNX	C12-C13	0	.	.	0	.	0	0	0	0.1	0.2	0.4	0.5	0.8	1.2	0.9	1.7	0.1	0.2	0	82
PHARYNX UNSPEC	C14	.	.	.	.	.	.	.	0	0.1	0	0.1	0.1	0.2	0.3	0.5	0.5	0	0.1	0	23
OESOPHAGUS	C15	.	.	.	.	0	0	0.1	0.1	0.4	0.9	1.5	3.8	6.9	7.8	11.8	20.3	0.8	1.5	0.1	649
STOMACH	C16	0	.	.	0	0.1	0.3	0.5	0.9	1.3	2.2	4.4	8.8	14.6	18.9	27.2	36.2	1.8	3.3	0.2	1462
SMALL INTESTINE	C17	.	.	.	0	0	0.1	0.2	0.3	0.3	0.3	0.8	1.2	1.6	2.4	2.2	2.6	0.2	0.4	0	181
COLON	C18	0	.	0	0.1	0.3	0.6	0.8	2.2	3.3	5.9	6.9	12.9	19.4	23.2	21.2	22.7	2.2	4	0.3	1750
RECTUM	C19-C20	0	.	0	0.1	0.1	0.4	1.1	1.6	2.6	4.6	6.5	10.9	14	18.3	16.7	15.3	1.7	3.2	0.2	1371
ANUS	C21	.	.	.	.	.	0	0	0.2	0.1	0.4	0.6	0.7	1.8	1.2	1.3	1.5	0.1	0.3	0	111
LIVER	C22	0.3	0.1	0.1	0.1	0.1	0.2	0.4	0.5	1.3	3.8	9.7	22.6	39.5	51.7	52	56.8	3.7	7.1	0.4	2946
GALL BLADDER ETC.	C23-C24	0	.	.	.	.	0	0.1	0	0.4	0.5	1.5	2.4	5.7	5.4	5.3	7.2	0.5	0.9	0.1	362
PANCREAS	C25	.	0	.	0	0	0.1	0.3	0.4	1	1.9	2.9	6.2	9.6	12.8	13.4	13.2	1	1.9	0.1	805
OTHER DIGESTIVE ORGANS	C26	0	.	.	0	0	.	0	0.1	0.1	0.1	0.4	0.5	0.8	0.9	0.9	1.9	0.1	0.2	0	80
NOSE-SINUSES, ETC.	C30-C31	0	0	0	0.1	0	0.1	0	0.1	0.2	0.2	0.3	0.5	0.9	1.2	0.6	2	0.1	0.2	0	107
LARYNX	C32	.	0	0	0	0	0	0.1	0.3	0.6	1.4	2.9	4	7.4	7.8	8	5.5	0.6	1.2	0.1	503
TRACHEA, BROUCHAUS, LUNG	C33-C34	0.1	.	0	0	0.1	0.2	0.5	1.2	2.1	4.5	9.6	15	33.2	36.6	44.3	34.4	2.9	5.6	0.3	2303
OTHER, THORACIC ORGANS	C37-C39	0.1	0	0	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.6	0.9	1.1	0.8	1.4	0.2	0.2	0	129
BONE	C40-C41	0.2	0.5	1.1	1.6	0.9	0.4	0.4	0.6	0.5	0.2	0.6	0.5	0.7	1	1.1	1	0.7	0.7	0	570
MELANOM OF SKIN	C43	0	.	.	0	0	0	0	0	0.1	0.5	0.1	0.3	1.4	1.3	1.5	2.6	0.1	0.2	0	108
OTHER SKIN	C44	0.1	0.1	0.1	0.1	0.3	0.5	0.8	1.1	1.7	2.4	3.5	6	14.3	17	25.6	35	1.8	3.2	0.2	1458
MESOTHELIOMA	C45	.	.	.	.	0	.	0	0	0.1	0.2	0.2	0.5	0.6	1.1	1.2	0.9	0.1	0.1	0	64

KAPOSISARCOMA	C46	.	.	0	.	0	0	0.2	0.3	0.4	0.5	0.9	1.3	1.2	2.8	2.4	3.4	0.2	0.4	0	198
CONNECTIVE, SOFT TISSUE	C47;C49	0.8	0.3	0.3	0.4	0.6	0.5	0.7	0.8	1	1.1	1.1	1.8	3	2.6	4.7	4.4	0.8	1	0.1	628
RETROPERITONEUM & PERITONEUM	C48	0.1	0	.	0	0	0	0.1	0.1	0.1	0.2	0.1	0.3	0.8	0.5	0.8	0.2	0.1	0.1	0	69
BREAST	C50	0	.	.	.	.	.	0.1	0.3	0.3	0.7	0.9	1.1	1.5	1.3	2	2	0.2	0.4	0	157
PENIS	C60	.	.	.	.	.	.	.	.	.	.	0.2	0.2	.	0.2	0.5	0.3	0	0	0	17
PROSTATE	C61	0	0	0	0	.	0	.	0.1	0.3	0.9	2.9	8.9	19.9	38.1	52.2	62.7	2.6	4.8	0.2	2073
TESTIS	C62	0.2	0	0	0.2	0.6	1.3	1.1	1.3	1.2	1.2	0.5	0.4	0.7	0.2	0.2	0.4	0.5	0.6	0	411
OTHER MALE GENITAL	C63	0	.	.	0	0	.	0	0	.	0.1	0	0.1	0.2	0.6	0.1	0.3	0	0	0	26
KIDNEY	C64	0.9	0.2	0.1	0.1	0.2	0.2	0.8	0.9	1.5	3	4.3	5.5	9	10.9	9.1	9.6	1.2	2	0.1	976
RENAL PELVIS	C65	.	.	.	.	.	0	.	0	.	0.1	0.1	0.4	1	0.7	0.8	0.7	0.1	0.1	0	49
URETER	C66	.	.	.	.	.	.	.	.	.	0	0.1	0.1	0.3	0.3	0.7	0.3	0	0.1	0	23
BLADDER	C67	0.1	0	0	0	0.1	0.2	0.5	1.4	2.1	4.1	6.7	9.7	18.2	20.9	24.3	33.1	2.1	3.7	0.2	1639
OTHER URINARY ORGANS	C68	.	.	.	.	.	.	.	0	0	.	0.1	.	0.1	.	.	0.1	0	0	0	6
EYE	C69	1	0.1	0	0	0	0	0.1	0.1	0.1	0.1	0.3	0.5	1.3	1	1.9	2.1	0.3	0.4	0	219
BRAIN, NERVOUS SYSTEM	C70-C72	1.6	1.4	1	0.7	0.8	1	1.3	1.8	1.8	1.9	3	5.8	6.3	7.7	8.4	5.1	1.7	2.2	0.1	1328
THYROID	C73	0	0	0.1	0.3	0.7	1.1	1.8	2.6	2.2	2.4	3.5	4.5	6.2	7.1	6.2	5.2	1.2	1.8	0.1	923
ADRENAL GLAND	C74	0.6	0.1	0	0	0	0.1	0	0	0.1	0.1	0	0.1	0.1	0.2	.	0.1	0.1	0.1	0	104
OTHER ENDOCRINE	C75	0	0	0.1	0	0.1	0.1	0	0	.	0	.	.	0.1	.	.	.	0	0	0	32
OTHER & ILL-DEFINED SITES	C76-C79	0.1	0	0	0	0	0	0	0	0.1	0.2	0.3	0.5	0.6	0.8	1.3	1.8	0.1	0.2	0	101
HODGKIN DIS.	C81	0.5	1.2	1.8	2.6	2.5	2.1	2	2	2	2	2.8	2	3.1	2.3	3.7	4.3	1.9	2	0.1	1495
NON HODGKIN LYMPHOMA	C82-C85;C96	0.8	1.2	1.1	1.6	1.8	2.1	3	4.8	4.9	7.4	9.8	13.4	23.2	28.5	30.1	35.2	4	6.1	0.4	3163
IMMUNOPROLIFERATIVE DIS.	C88	.	.	.	.	.	.	.	.	.	.	0	0.1	0.1	.	.	.	0	0	0	4
MULTIPLE MYELOMA	C90	.	.	.	0	.	0.1	0.2	0.2	0.6	1.1	1.3	2.8	5.7	6.2	8.5	6.9	0.5	1	0.1	433
LYMPHOID LEUKAEMIA	C91	3.8	2.2	1.5	1.8	0.9	0.8	0.6	0.7	0.9	1.2	1.7	2.6	4.4	6.2	7.4	7.6	2	2.2	0.1	1576
MYELOID LEUKAEMIA	C92-C94	1	0.5	0.5	1	1.3	1.1	1.4	1.4	2	2.4	2.4	3.1	5.1	4.2	7	6.9	1.4	1.8	0.1	1082
LEUKAEMIA UNSPEC	C95	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.7	0.9	1.4	2	0.2	0.3	0	149
UNKNOWN PRIMARY SITE	80	0.1	0	0	0.1	0.2	0.3	0.5	1	1.4	2.1	4.9	8.5	14.3	17	19.3	25	1.6	2.9	0.2	1281
ALL SITES		12.6	8.1	8.1	11.8	12.4	14.8	21.4	32.9	44.4	69.9	109.4	183.7	318.7	388	446.5	498.6	44.1	72.5	4.2	35046
ALL SITES EXCEPT C44	700	12.5	8	8	11.7	12.1	14.3	20.6	31.8	42.7	67.5	106	178	304	371	421	464	42.3	69.3	4.1	33588

TABLE 2.16: INCIDENCE RATE(PER10,000)OF CANCER CASES BY AGE GROUP AND SITE,1998-2007: KSA FEMALE

SITE	ICD 10	-4	-9	-14	-19	-24	-29	-34	-39	-44	-49	-54	-59	-64	-69	-74	75+	Crude	ASR	CumRt 0-64	All Ages
LIP	C00	.	.	.	.	.	.	0	0	.	0.1	0.2	0.4	0.4	0.5	1.2	1.5	0.1	0.1	0	49
TONGUE	C01-C02	0	.	0	0	0	0.1	0.1	0.3	0.4	0.8	1.5	2.6	3.7	3.9	2.6	3.5	0.3	0.7	0	276
MOUTH	C03-C06	0	.	0	0	0.1	0.1	0.2	0.3	0.6	0.7	1.7	2	3.1	4.5	4.3	7.6	0.4	0.8	0	338
SALIVARY GLANDS	C07-C08	.	0.1	0	0	0.1	0.2	0.1	0.1	0.3	0.4	0.5	0.5	0.7	0.7	0.5	1.5	0.1	0.2	0	114
TONSIL	C09	.	.	.	.	.	.	0	0	0	0.1	0.1	0.2	0.1	0.3	0.4	0.3	0	0	0	22
OTHER OROPHARYNX	C10	.	.	.	.	.	.	.	.	.	0	0	.	0.1	0.3	0.3	.	0	0	0	8
NASOPHARYNX	C11	0	0	0.1	0.3	0.2	0.4	0.7	1.2	1.2	1.5	1.7	1.8	3.1	2.1	1.3	1.5	0.5	0.8	0.1	399
HYPOPHARYNX	C12-C13	.	.	.	0	0	0.1	0.1	0.2	0.3	0.5	0.7	1.2	0.7	1.2	0.8	1.6	0.2	0.3	0	123
PHARYNX UNSPEC	C14	.	0	.	.	.	0	.	0	0	0	0	0.1	0.2	0.4	.	0.1	0	0	0	15
OESOPHAGUS	C15	0	.	.	.	0	0	0.2	0.5	0.5	0.9	1.7	3	6.4	7.6	11.6	13.8	0.7	1.3	0.1	538
STOMACH	C16	0	0	.	0	0.2	0.3	0.4	0.9	1.3	2.6	2.9	3.9	7.3	10.5	14.7	17.3	1	1.9	0.1	819
SMALL INTESTINE	C17	.	.	.	.	0	0	0.2	0.2	0.1	0.3	0.6	1.4	0.9	1.7	1.2	2.1	0.2	0.3	0	122
COLON	C18	0	.	0	0.1	0.3	0.7	1.3	2.4	3.7	5.7	8.7	11.1	15.4	16.9	16	20.5	2	3.6	0.2	1573
RECTUM	C19-C20	0	.	0	0.1	0.1	0.4	0.6	1.8	2.4	4.7	6.5	6.8	10	11.1	11.5	16.1	1.4	2.5	0.2	1090
ANUS	C21	.	.	.	.	0	.	0.1	0.1	0	0.3	0.1	0.5	0.8	0.7	0.8	0.9	0.1	0.1	0	62
LIVER	C22	0.2	0	0.1	0.1	0.1	0.2	0.2	0.5	1	2.6	4.6	8.4	16.9	14.8	21.5	22.7	1.5	2.9	0.2	1171
GALL BLADDER ETC.	C23-C24	0	.	.	.	0	0	0.2	0.4	0.9	1.8	2.7	4.1	6.4	9	10	12	0.7	1.5	0.1	589
PANCREAS	C25	.	.	0	0	0	0	0.1	0.3	0.7	1	2.8	3	4.7	5.7	10.5	9.8	0.6	1.2	0.1	475
OTHER DIGESTIVE ORGANS	C26	.	.	.	0	0	0	.	0.2	0.2	0	0.2	0.2	0.6	0.6	0.8	1.1	0.1	0.1	0	58
NOSE-SINUSES, ETC.	C30-C31	.	.	0	0	0	0	0.1	0.2	0.2	0.2	0.4	0.1	0.5	1.1	0.7	1.7	0.1	0.2	0	79
LARYNX	C32	.	.	.	0	0	0	0	0.1	0.1	0.3	0.5	0.6	0.7	0.9	0.5	1.1	0.1	0.2	0	75
TRACHEA, BROUCHAUS, LUNG	C33-C34	.	.	0	0.1	0.1	0.2	0.2	0.5	1	2.1	2.7	4.2	7	8.9	10.2	13.8	0.8	1.6	0.1	653
OTHER, THORACIC ORGANS	C37-C39	0.2	0	0	0	0	0	0.1	0.1	0.1	0.1	0.5	0.2	0.7	0.4	0.4	0.7	0.1	0.1	0	80
BONE	C40-C41	0.1	0.4	0.9	1	0.5	0.5	0.2	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.3	0.4	0.5	0.5	0	390
MELANOM OF SKIN	C43	0	0	.	0	0	0	0.1	0.1	0.2	0.2	0.4	0.3	1.1	0.5	0.9	3.2	0.1	0.2	0	97
OTHER SKIN	C44	0.1	0	0.1	0.2	0.2	0.3	0.8	1.3	1.5	2.1	3.3	5.5	10.2	13.4	17.6	26.9	1.4	2.5	0.1	1082
MESOTHELIOMA	C45	.	.	.	.	.	.	0	.	0.1	0.2	0.3	0.3	0.3	0.4	0.5	0.2	0	0.1	0	35
KAPOSISARCOMA	C46	0	.	.	.	.	0.1	0.1	0.1	0.1	0.3	0.2	0.2	1	0.5	0.4	1.3	0.1	0.2	0	67
CONNECTIVE, SOFT TISSUE	C47;C49	0.8	0.3	0.4	0.6	0.4	0.5	0.6	0.7	1.1	0.8	1.1	1.6	1.9	2.2	0.8	2.7	0.7	0.8	0.1	518

RETROPERITONEUM & PERITONEUM	C48	0.2	0	0	0	0	0	0.1	0.1	0.1	0.2	0.1	0.5	0.5	0.7	1.2	0.5	0.1	0.2	0	86
BREAST	C50	0	.	0	0.1	0.9	4.3	12.4	23.2	35.7	43.6	42.5	42.7	46.5	40.4	37.5	33.3	9.6	15.6	1.3	7637
VULVA	C51	0	.	.	0	.	0	0	0	0.1	0.2	0.1	0.4	0.8	0.6	0.4	0.9	0.1	0.1	0	53
VAGINA	C52	0	.	0	.	.	0	.	0	0.1	0.1	0	0.3	0.4	0.2	0.3	0.9	0	0.1	0	34
CERVIX UTERI	C53	0	.	0	0	0.1	0.3	0.9	2.2	4	4.7	5.8	5.1	6.1	6.6	7	6.5	1.1	1.9	0.1	897
CORPUS UTERI	C54	0	.	.	0	0.1	0.2	0.5	0.8	2.4	3.6	6.4	10.5	14.8	15.6	13.8	10.2	1.4	2.7	0.2	1105
UTERUS UNSPEC	C55	.	.	.	.	0	0	0	0.3	0.3	0.4	1	1.9	1.8	1.3	2.1	1.7	0.2	0.4	0	154
OVARY	C56	0	0.2	0.4	0.7	0.7	0.7	1.2	1.6	2.6	4.1	5.7	8	9.8	10	10.5	9.8	1.5	2.5	0.2	1215
OTTHER FEMALE GENITAL	C57	.	.	0	.	0	0	0	0	0.2	0.2	0.3	0.4	0.9	0.2	0.8	0.4	0.1	0.1	0	57
PLACENTA	C58	.	.	0	0.1	0.2	0.2	0.3	0.4	0.5	0.8	0.3	0.1	.	0.1	.	0.1	0.2	0.2	0	121
KIDNEY	C64	1.1	0.2	0.1	0.1	0.2	0.2	0.4	0.8	1.6	2.1	3.1	3.9	5	5.1	6.5	4	0.9	1.4	0.1	685
RENAL PELVIS	C65	.	.	.	.	0	.	.	.	0.1	0.1	.	0.2	0.3	0.3	0.1	0.5	0	0.1	0	23
URETER	C66	.	.	.	.	0	.	.	0	0.1	.	.	0.1	0.1	.	0.4	0.3	0	0	0	13
BLADDER	C67	0	.	0	0	0	0.1	0.1	0.4	0.5	1.1	1.6	2.8	3.9	5.9	7.4	8.7	0.5	1	0.1	416
OTHER URINARY ORGANS	C68	.	.	.	.	.	.	.	.	.	.	.	.	.	0.1	0.1	0.2	0	0	0	4
EYE	C69	1.1	0	0	0	0	0	0.1	.	0.1	0.1	0	0.3	0.6	1.5	1.4	1.4	0.2	0.3	0	194
BRAIN, NERVOUS SYSTEM	C70-C72	1.3	1.2	0.7	0.7	0.6	0.5	1	1.2	1.3	1.7	2.5	3.3	3.7	4.5	5.5	3.2	1.2	1.5	0.1	955
THYROID	C73	0	0.1	0.4	1.9	3.9	6.5	9.1	10.4	9.9	10.3	10	11.7	13.3	10.9	9.2	10.9	4.3	5.7	0.4	3369
ADRENAL GLAND	C74	0.6	0.1	0	0	0	0	0	0.1	0.1	0.1	.	.	.	0.1	.	0.1	0.1	0.1	0	106
OTHER ENDOCRINE	C75	0	0	0	0	0	0	0	0	.	.	0.1	.	0.1	0.4	.	.	0	0	0	23
OTHER & ILL-DEFINED SITES	C76-C79	0.1	0	0	0	.	0	0.1	0.1	0	0.4	0.2	0.5	0.6	0.8	0.5	0.9	0.1	0.2	0	76
HODGKIN DIS.	C81	0.2	0.5	1.2	2.5	2.2	1.2	0.9	0.8	0.8	1.1	1	1.8	2	3.2	1.7	2.9	1.2	1.3	0.1	964
NON HODGKIN LYMPHOMA	C82-C85;C96	0.7	0.4	0.6	0.9	1.4	1.4	2	2.5	3.8	5.7	8.1	12.6	18	22.4	23.2	28.6	2.8	4.7	0.3	2240
IMMUNOPROLIFERATIVE DIS.	C88	.	.	.	.	.	.	.	.	.	.	.	0.1	0.1	0.1	0.1	.	0	0	0	4
MULTIPLE MYELOMA	C90	.	.	.	.	0.1	0	0.1	0.3	0.2	0.8	1.4	2.5	3.5	2.8	3	4.2	0.3	0.6	0	258
LYMPHOID LEUKAEMIA	C91	3.2	1.7	0.9	0.7	0.3	0.2	0.2	0.3	0.3	0.5	0.8	2	1.3	3.5	2.7	3.8	1.2	1.2	0.1	930
MYELOID LEUKAEMIA	C92-C94	0.6	0.4	0.5	0.9	1.1	1	1.4	1.9	2.3	2.7	3.2	3.6	4.3	3.4	5.7	3.4	1.3	1.7	0.1	1006
LEUKAEMIA UNSPEC	C95	0.1	0.1	0.1	0.1	0.1	0	0.1	0	0.2	0.3	0.3	0.4	0.4	0.7	0.8	0.7	0.1	0.2	0	104
UNKNOWN PRIMARY SITE	80	0.1	0.1	0	0.1	0.2	0.3	0.6	1.1	2.6	3.1	4.2	7.6	13.5	17.7	17.2	26.2	1.6	3	0.2	1249
ALL SITES	10.7	5.8	6.5	11.3	14.4	21.2	38.2	61.3	88.2	118.7	145.7	187.9	257.6	280.3	301.4	350.2	44.1	71.2	4.8	34895	
ALL SITE EXCEPT C44	10.6	5.8	6.4	11.1	14.2	20.9	37.4	60	86.7	116.6	142.4	182.4	247.4	266.9	283.8	323.3	42.7	68.7	4.7	33813	

TABLE 2.17: DISTRIBUTION OF CANCER CASES BY AGE GROUP AND SITE, 1998-2007: KSA MALE

SITE	ICD-10	-4	-9	-14	-19	-24	-29	-34	-39	-44	-49	-54	-59	-64	-69	-74	75+	Age Unk	All Ages	% of Total
LIP	C00	0	0	0	0	0	0	1	3	1	3	4	6	6	7	7	15	0	53	0.10%
TONGUE	C01-C02	1	0	0	1	3	3	8	12	13	21	26	36	46	32	28	51	1	282	0.80%
MOUTH	C03-C06	0	0	2	5	5	6	6	10	8	18	21	22	40	46	46	60	0	295	0.80%
SALIVARY GLANDS	C07-C08	1	3	3	4	9	8	9	11	14	4	6	15	12	8	12	16	0	135	0.30%
TONSIL	C09	0	0	0	0	0	0	0	1	0	3	3	4	6	3	2	11	0	33	0.00%
OTHER OROPHARYNX	C10	0	0	0	0	0	0	0	1	2	2	0	1	4	0	3	4	0	17	0.00%
NASOPHARYNX	C11	2	5	19	51	24	32	49	101	135	142	113	90	91	63	47	41	0	1005	2.80%
HYPOPHARYNX	C12-C13	1	0	0	1	0	2	1	1	3	5	9	8	10	12	8	21	0	82	0.20%
PHARYNX UNSPEC	C14	0	0	0	0	0	0	0	1	2	1	3	1	2	3	4	6	0	23	0.00%
OESOPHAGUS	C15	0	0	0	0	1	3	5	5	14	25	32	56	81	79	100	248	0	649	1.80%
STOMACH	C16	1	0	0	1	9	16	23	38	48	64	92	131	172	193	231	442	1	1462	4.10%
SMALL INTESTINE	C17	0	0	0	2	2	6	10	12	11	10	16	18	19	24	19	32	0	181	0.50%
COLON	C18	1	0	3	5	19	35	39	95	122	172	144	192	229	236	180	278	0	1750	4.90%
RECTUM	C19-C20	0	0	1	6	7	26	53	68	95	132	136	163	166	187	142	187	2	1371	3.90%
ANUS	C21	0	0	0	0	0	3	1	7	3	12	12	11	21	12	11	18	0	111	0.30%
LIVER	C22	29	6	9	11	6	15	22	20	46	111	204	336	467	527	441	694	2	2946	8.40%
GALL BLADDER ETC.	C23-C24	1	0	0	0	0	3	4	2	14	15	32	36	67	55	45	88	0	362	1.00%
PANCREAS	C25	0	2	0	1	3	6	13	17	35	56	60	93	114	130	114	161	0	805	2.20%
OTHER DIGESTIVE ORGANS	C26	0	0	0	1	1	0	1	3	4	4	8	7	10	9	8	23	1	80	0.20%
NOSE-SINUSES, ETC.	C30-C31	5	2	3	5	2	5	2	5	6	6	7	7	11	12	5	24	0	107	0.30%
LARYNX	C32	0	1	2	1	1	1	3	12	21	40	60	60	87	79	68	67	0	503	1.40%
TRACHEA, BROUCHAUS, LUNG	C33-C34	6	0	2	2	7	12	26	53	78	129	202	224	392	373	376	421	0	2303	6.50%
OTHER, THORACIC ORGANS	C37-C39	14	2	2	11	9	8	6	4	8	6	4	9	11	11	7	17	0	129	0.30%
BONE	C40-C41	20	60	116	152	69	24	22	25	17	6	12	8	8	10	9	12	0	570	1.60%
MELANOM OF SKIN	C43	1	0	0	1	2	2	1	1	5	14	3	4	16	13	13	32	0	108	0.30%
OTHER SKIN	C44	5	8	14	9	22	29	41	47	64	69	73	89	169	173	217	428	1	1458	4.10%
MESOTHELIOMA	C45	0	0	0	0	1	0	2	1	5	5	4	7	7	11	10	11	0	64	0.10%

KAPOSISARCOMA	C46	0	0	1	0	1	1	10	13	16	14	18	20	14	29	20	41	0	198	0.50%
CONNECTIVE, SOFT TISSUE	C47;C49	89	36	36	40	48	33	36	35	37	31	23	27	35	26	40	54	2	628	1.70%
RETROPERITONEUM & PERITONEUM	C48	12	3	0	3	1	1	4	3	5	7	2	5	9	5	7	2	0	69	0.10%
BREAST	C50	0	0	0	0	0	0	4	12	11	20	19	17	18	13	17	25	1	157	0.40%
PENIS	C60	0	0	0	0	0	0	0	0	0	0	4	3	0	2	4	4	0	17	0.00%
PROSTATE	C61	1	2	1	1	0	2	0	5	10	25	61	132	235	388	443	766	1	2073	5.90%
TESTIS	C62	27	4	4	22	46	82	57	57	43	36	10	6	8	2	2	5	0	411	1.10%
OTHER MALE GENITAL	C63	2	0	0	1	2	0	1	2	0	3	1	1	2	6	1	4	0	26	0.00%
KIDNEY	C64	100	27	11	7	12	15	39	38	56	87	91	82	106	111	77	117	0	976	2.70%
RENAL PELVIS	C65	0	0	0	0	0	1	0	1	0	3	3	6	12	7	7	9	0	49	0.10%
URETER	C66	0	0	0	0	0	0	0	0	0	1	3	2	4	3	6	4	0	23	0.00%
BLADDER	C67	5	1	1	3	9	14	27	59	77	119	141	144	215	213	206	404	1	1639	4.60%
OTHER URINARY ORGANS	C68	0	0	0	0	0	0	0	1	1	0	2	0	1	0	0	1	0	6	0.00%
EYE	C69	107	9	3	1	2	2	4	4	2	2	7	8	15	10	16	26	1	219	0.60%
BRAIN, NERVOUS SYSTEM	C70-C72	173	154	104	69	61	64	68	78	67	55	63	86	74	78	71	62	1	1328	3.70%
THYROID	C73	1	2	15	28	51	67	93	112	81	70	73	67	73	72	53	64	1	923	2.60%
ADRENAL GLAND	C74	66	11	3	2	2	5	2	1	3	2	1	2	1	2	0	1	0	104	0.20%
OTHER ENDOCRINE	C75	1	2	12	4	4	5	1	1	0	1	0	0	1	0	0	0	0	32	0.00%
OTHER & ILL-DEFINED SITES	C76-C79	15	2	2	3	1	2	1	2	5	6	6	8	7	8	11	22	0	101	0.20%
UNKNOWN PRIMARY SITE	80	10	4	2	9	13	20	25	42	53	61	102	127	169	173	164	306	1	1281	3.60%
HODGKIN DIS.	C81	59	133	187	244	188	130	103	85	73	59	59	30	37	23	31	53	1	1495	4.20%
NON HODGKIN LYMPHOMA	C82-C85;C96	92	136	121	145	133	134	153	204	178	214	205	199	274	290	255	430	0	3163	9.00%
IMMUNOPROLIFERATIVE DIS.	C88	0	0	0	0	0	0	0	0	0	0	1	2	1	0	0	0	0	4	0.00%
MULTIPLE MYELOMA	C90	0	0	0	2	0	4	9	7	22	33	28	42	67	63	72	84	0	433	1.20%
LYMPHOID LEUKAEMIA	C91	419	247	157	166	67	49	29	31	32	34	36	38	52	63	63	93	0	1576	4.40%
MYELOID LEUKAEMIA	C92-C94	106	52	50	93	94	70	72	59	74	69	50	46	60	43	59	84	1	1082	3.00%
LEUKAEMIA UNSPEC	C95	18	17	6	15	9	5	4	3	4	3	5	5	8	9	12	25	1	149	0.40%
ALL SITES		1391	931	892	1128	946	951	1090	1411	1624	2030	2300	2739	3762	3947	3790	6094	20	35046	100%

TABLE 2.18: DISTRIBUTION OF CANCER CASES BY AGE GROUP AND SITE, 1998-2007: KSA FEMALE

SITE	ICD-10	-4	-9	-14	-19	-24	-29	-34	-39	-44	-49	-54	-59	-64	-69	-74	75+	Age Unk	All Ages	% of Total
LIP	C00	0	0	0	0	0	0	1	1	0	3	4	6	6	5	9	14	0	49	0.10%
TONGUE	C01-C02	1	0	1	2	2	7	6	11	13	22	30	41	50	37	20	33	0	276	0.70%
MOUTH	C03-C06	3	0	2	4	4	5	10	14	22	19	34	31	42	43	33	71	1	338	0.90%
SALIVARY GLANDS	C07-C08	0	6	1	3	7	10	7	6	12	10	10	8	9	7	4	14	0	114	0.30%
TONSIL	C09	0	0	0	0	0	0	2	1	1	2	3	3	1	3	3	3	0	22	0.00%
OTHER OROPHARYNX	C10	0	0	0	0	0	0	0	0	0	1	1	0	1	3	2	0	0	8	0.00%
NASOPHARYNX	C11	2	2	7	23	17	28	36	52	43	42	34	28	41	20	10	14	0	399	1.10%
HYPOPHARYNX	C12-C13	0	0	0	1	3	4	4	10	10	15	15	19	10	11	6	15	0	123	0.30%
PHARYNX UNSPEC	C14	0	1	0	0	0	1	0	1	1	1	1	1	3	4	0	1	0	15	0.00%
OESOPHAGUS	C15	0	0	0	0	3	2	8	22	18	26	34	47	86	72	89	130	1	538	1.50%
STOMACH	C16	1	1	0	2	17	21	23	41	47	71	58	62	97	100	113	163	2	819	2.30%
SMALL INTESTINE	C17	0	0	0	0	1	2	9	7	4	7	13	22	12	16	9	20	0	122	0.30%
COLON	C18	0	0	2	6	24	47	67	107	129	156	177	176	205	160	123	193	1	1573	4.50%
RECTUM	C19-C20	0	0	2	6	11	27	34	78	86	130	131	107	133	105	88	151	1	1090	3.10%
ANUS	C21	0	0	0	0	2	0	5	3	1	9	2	8	11	7	6	8	0	62	0.10%
LIVER	C22	26	3	6	8	5	10	11	24	36	72	94	133	225	140	165	213	0	1171	3.30%
GALL BLADDER ETC.	C23-C24	1	0	0	0	1	2	9	16	31	50	54	65	85	85	77	113	0	589	1.60%
PANCREAS	C25	0	0	1	1	2	3	6	14	26	28	56	48	63	54	81	92	0	475	1.30%
OTHER DIGESTIVE ORGANS	C26	0	0	0	1	1	3	0	7	7	1	5	3	8	6	6	10	0	58	0.10%
NOSE-SINUSES, ETC.	C30-C31	0	0	2	2	2	1	3	10	7	5	8	1	7	10	5	16	0	79	0.20%
LARYNX	C32	0	0	0	1	1	2	1	5	5	7	10	10	10	9	4	10	0	75	0.20%
TRACHEA, BROUCHAUS, LUNG	C33-C34	0	0	1	5	6	12	8	20	36	57	55	67	94	84	78	130	0	653	1.80%
OTHER, THORACIC ORGANS	C37-C39	17	3	2	3	2	2	3	6	4	2	10	3	9	4	3	7	0	80	0.20%
BONE	C40-C41	13	40	97	90	39	34	13	11	11	11	9	7	5	4	2	4	0	390	1.10%
MELANOM OF SKIN	C43	1	1	0	3	1	1	4	3	8	5	8	5	15	5	7	30	0	97	0.20%
OTHER SKIN	C44	3	5	10	16	16	19	40	55	53	57	66	87	136	127	135	253	4	1082	3.10%
MESOTHELIOMA	C45	0	0	0	0	0	0	1	0	3	6	7	4	4	4	4	2	0	35	0.10%
KAPOSISARCOMA	C46	1	0	0	0	0	5	4	3	5	7	5	3	14	5	3	12	0	67	0.10%
CONNECTIVE, SOFT TISSUE	C47;C49	88	29	39	53	32	34	29	30	37	21	22	26	26	21	6	25	0	518	1.40%

RETROPERITONEUM & PERITONEUM	C48	18	5	2	1	2	1	3	6	3	6	3	8	7	7	9	5	0	86	0.20%
BREAST	C50	0	0	2	8	71	282	653	1020	1255	1201	862	675	620	383	288	313	4	7637	21.80%
VULVA	C51	1	0	0	2	0	3	1	2	2	5	2	7	11	6	3	8	0	53	0.10%
VAGINA	C52	3	0	1	0	0	1	0	1	2	3	1	5	5	2	2	8	0	34	0.00%
CERVIX UTERI	C53	3	0	1	1	5	17	48	95	140	130	117	81	81	63	54	61	0	897	2.50%
CORPUS UTERI	C54	0	0	0	2	6	10	25	33	85	99	130	166	198	148	106	96	1	1105	3.10%
UTERUS UNSPEC	C55	0	0	0	0	1	2	2	11	9	11	20	30	24	12	16	16	0	154	0.40%
OVARY	C56	4	19	43	64	56	47	63	72	90	114	116	127	131	95	81	92	1	1215	3.40%
OTTHER FEMALE GENITAL	C57	0	0	1	0	3	1	1	2	7	6	6	6	12	2	6	4	0	57	0.10%
PLACENTA	C58	0	0	2	6	18	15	15	16	16	22	7	2	0	1	0	1	0	121	0.30%
KIDNEY	C64	121	24	6	8	13	14	22	36	56	57	63	62	67	48	50	38	0	685	1.90%
RENAL PELVIS	C65	0	0	0	0	1	0	0	0	3	3	0	3	4	3	1	5	0	23	0.00%
URETER	C66	0	0	0	0	1	0	0	1	2	0	0	1	2	0	3	3	0	13	0.00%
BLADDER	C67	2	0	2	3	2	6	7	19	19	30	33	45	52	56	57	82	1	416	1.10%
OTHER URINARY ORGANS	C68	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	0	4	0.00%
EYE	C69	121	5	2	1	2	1	3	0	4	4	1	4	8	14	11	13	0	194	0.50%
BRAIN, NERVOUS SYSTEM	C70-C72	139	125	80	67	47	35	51	51	47	46	50	52	50	43	42	30	0	955	2.70%
THYROID	C73	1	11	41	171	301	429	479	458	349	285	203	185	177	103	71	102	3	3369	9.60%
ADRENAL GLAND	C74	67	13	5	2	3	1	2	5	3	3	0	0	0	1	0	1	0	106	0.30%
OTHER ENDOCRINE	C75	5	2	1	2	2	1	2	1	0	0	2	0	1	4	0	0	0	23	0.00%
OTHER & ILL-DEFINED SITES	C76-C79	11	1	2	1	0	2	4	3	1	11	4	8	8	8	4	8	0	76	0.20%
UNKNOWN PRIMARY SITE	80	5	6	2	12	13	17	34	50	91	86	85	120	180	168	132	246	2	1249	3.50%
HODGKIN DIS.	C81	23	57	125	225	167	81	47	34	28	29	21	29	27	30	13	27	1	964	2.70%
NON HODGKIN LYMPHOMA	C82-C85;C96	73	47	67	80	112	91	107	109	134	156	165	199	240	212	178	269	1	2240	6.40%
IMMUNOPROLIFERATIVE DIS.	C88	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0	4	0.00%
MULTIPLE MYELOMA	C90	0	0	0	0	4	2	5	12	7	23	29	40	47	27	23	39	0	258	0.70%
LYMPHOID LEUKAEMIA	C91	340	179	96	67	26	16	11	14	12	15	16	31	17	33	21	36	0	930	2.60%
MYELOID LEUKAEMIA	C92-C94	66	45	57	80	86	68	75	84	82	74	65	57	58	32	44	32	1	1006	2.80%
LEUKAEMIA UNSPEC	C95	15	10	11	6	4	2	3	1	7	7	6	6	6	7	6	7	0	104	0.20%
ALL SITES		1175	640	722	1039	1145	1427	2007	2694	3110	3269	2963	2971	3442	2661	2314	3291	25	34895	100%


Kingdom of Saudi Arabia
R E D S E A
Republic of Yemen


ARABIAN GULF
Bahrain
Qatar
United Arab Emirates
GULF OF OMAN
SULTANATE OF OMAN
ARABIAN SEA

SULTANATE OF OMAN

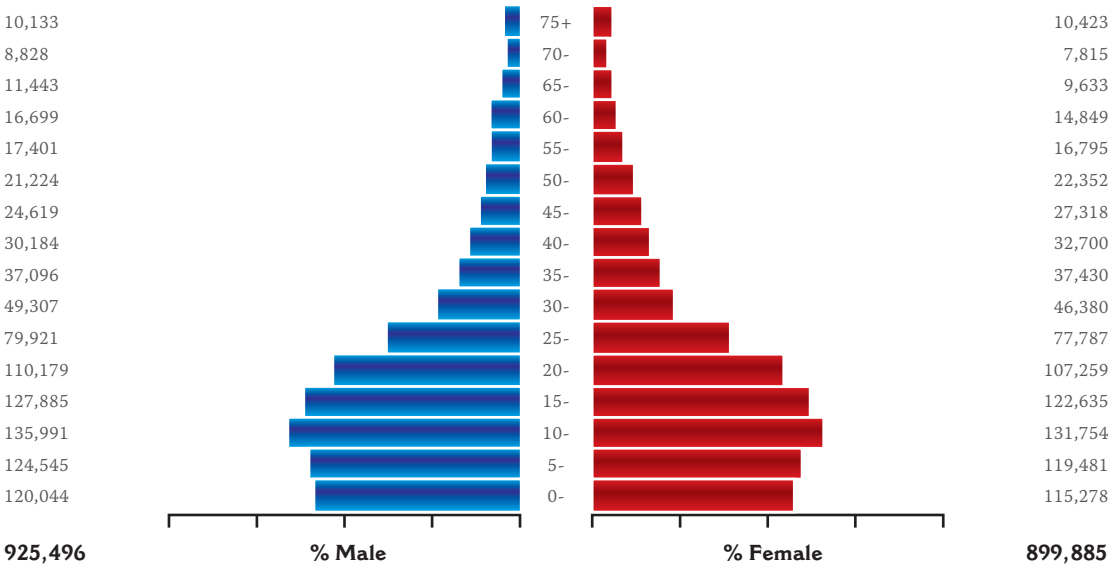
Cancer Incidence in the Sultanate of Oman

This report was prepared based on the data received from the Sultanate of Oman National Cancer Registry as of December 2010. Average annual incidence rates were calculated based on the mid-point population structure for Omani nationals estimated from the population pyramid published by Omani Ministry of National Economy. Figure 2.22 shows the mi-point population structure for both genders by age group.

From January 1998 to December 2007 there were 8,890 Omani nationals diagnosed with cancer, 4,672 (52.6%) were males and 4,218 (47.4%) were females. Almost 84% of cases had histopathology confirmation. Cytology/hematology and radiological modalities were used as the base of diagnosis in 12.9% and death certificate in 0.7% from all cancer cases, Table 2.19.

Nearly 20% of Omani patients presented with advanced cancers (12% of males and 11% of females presented with distant metastasis, and 7% of males and 9% of females presented with regional metastasis). Localized tumors were present in 6% and unknown extent of cancer was present in about 63%, Figure 2.23

Cancer incidence declined after the first five years of live before it started to increase with advanced age in both genders. During early to mid adulthood Omani females showed slightly higher incidence of cancer until age of 55 years when males started to have slightly higher incidence of cancer, Figure 2.24.



▲ Figure 2.22
Estimated Population for Sultanate of Oman by Gender and Age group.

Table 2.19 ▼
Basis of diagnosis, 1998-2007.

BASIS OF DIAGNOSIS	MALE	%	FEMALE	%	ALL	%
Histopathology	3862	82.7	3572	84.7	7434	83.6
Cytology/Hematological	410	8.8	372	8.8	782	8.8
Radiology	224	4.8	144	3.4	368	4.1
Clinical/ Surgical	95	2.0	75	1.8	170	1.9
Unknown	31	0.7	33	0.8	64	0.7
Other laboratory test, Biomarker	25	0.5	12	0.3	37	0.4
Death Certificate Only	25	0.5	10	0.2	35	0.4
TOTAL	**4672**	**100.0**	**4218**	**100.0**	**8890**	**100.0**

Figure 2.23 ▼
Extent among Oman nationals.

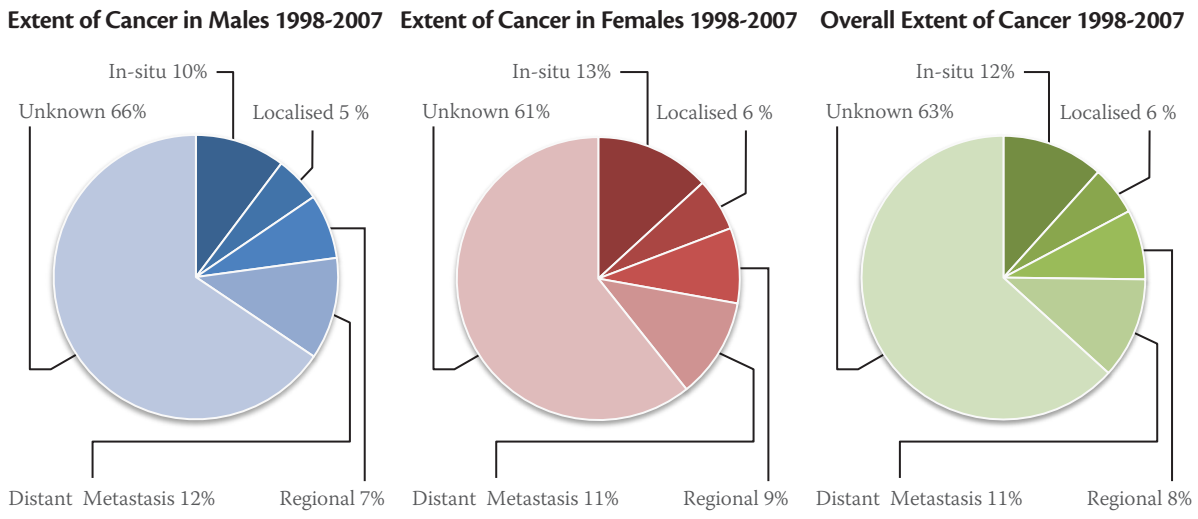
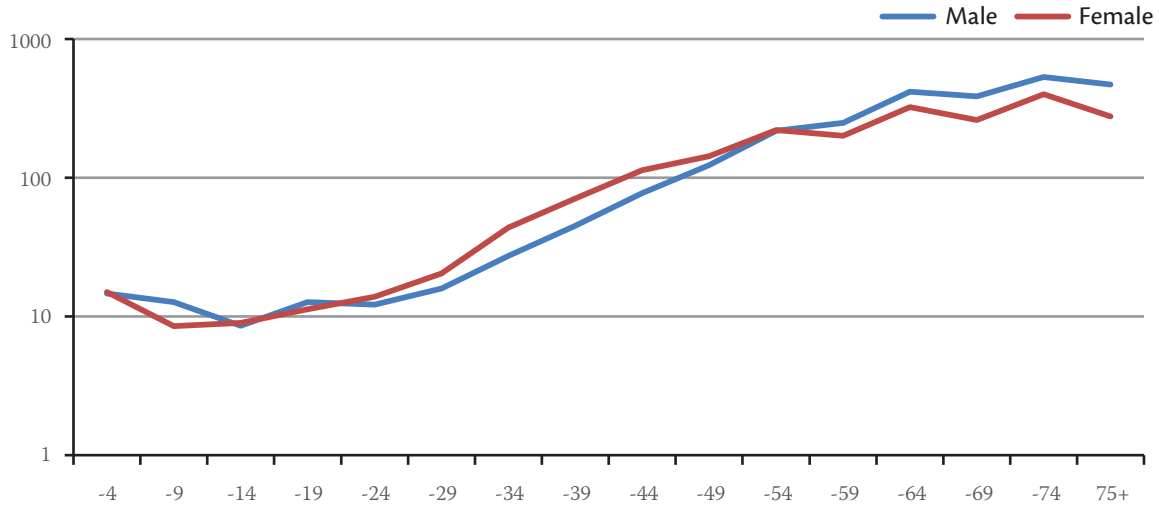


Figure 2.24▼
Age Specific Incidence Rates of all Cancers in Oman by gender, 1998-2007.



▼ Table 2.20
The Most Common Cancers by Gender in Oman, 1998-2007.

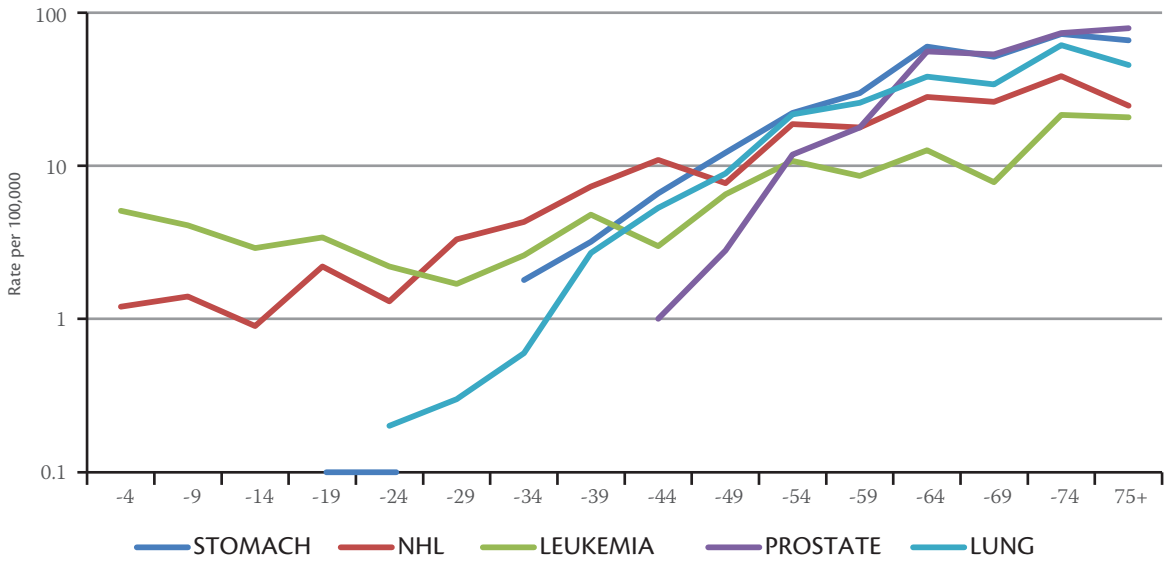
MALE				FEMALE			
Site	*NO.*	*%*	*ASR*	*Site*	*NO.*	*%*	*ASR*
STOMACH	466	9.9	10.5	BREAST	771	18.2	15.7
NHL	419	8.9	7.6	THYROID	348	8.2	5.6
LEUKAEMIA	398	8.4	5.4	CERVIX UTERI	267	6.3	5.8
PROSTATE	366	7.8	8.4	LEUKAEMIA	263	6.1	3.8
LUNG	352	7.5	7.9	STOMACH	252	5.9	5.8

** Average annual age standardized incidence rate per 100,000 populations*

Stomach cancer was the leading malignancy in Omani males followed by NHL, leukaemia, prostate and lung. While in females, breast cancer was the leading malignancy followed by thyroid, cervix uteri, leukaemia and stomach, Table 2.20.

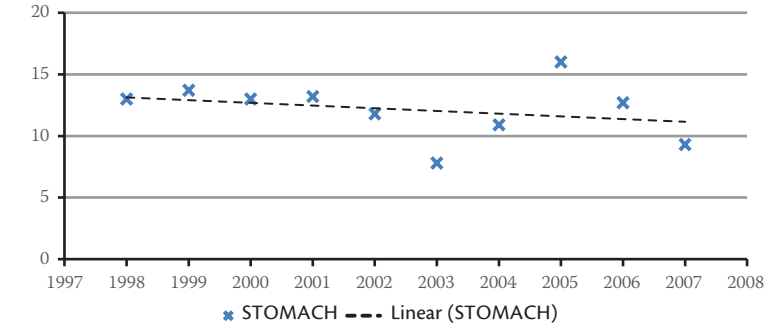
Most Common Cancer in Males:

1. Stomach cancer was the first most common cancer in Omani males accounted to 9.9% with average annual ASR of 10.5/100,000 population. Stomach cancer started to appear with very low incidence during childhood and early adulthood. Then the incidence increased dramatically after the age of 30 years to reach its maximum peak incidence in men aged between70 and 75 years, Figure 2.25. The lowest ASR (9.3/100,000) was reported in 2007, while the highest rate (16.0/100,000) was reported in 2005. Stomach cancer trend declined during the period from 1998 and 2007, however it was not statistically significant (p-value = 0.4244), Figure 2.26.
2. NHL ranked second to stomach cancer in Omani males accounted to 8.9% from the total number of cancers diagnosed in males with average annual ASR of 7.6/100,000 population. NHL started to appear with low incidence during childhood. The incidence increased gradually till it reached its maximum peak in men at the age of 70 years, Figure 2.25. The Lowest ASR (6.6/100,000) was reported in 2007, while the highest rate (11.0/100,000) was reported in 2004. There was a tendency of declined trend of age standardized incidence of NHL which was not statistically significant (p-value = 0.6134), Figure 2.26.
3. Leukemia was the third most common cancer in Omani males accounted to 8.4% from the total caners diagnosed in males with average annual ASR of 5.4/100,000 population. Early onset leukemia had its highest incidence during the first five years of live and then the incidence declined during early adulthood before it rose again to reach its late onset peak incidence after the age of 70 years, Figure 2.25. The lowest ASR (5.0/100,000) was reported in 1999, while the highest rate (7.4/100,000) was reported in 2003. No obvious changes observed on leukemia trends over the ten year period (p-value = 0.4452), Figure 2.26.
4. Prostate cancer was the fourth most common cancer in Omani males accounted to 7.8% from the total cancer in males with average annual ASR of 8.4/100,000 population. Prostate cancer started to appear with very low incidence after the age of 40 years. Then the incidence dramatically increased to reach its maximum peak incidence in men aged above 70 years, Figure 2.25. The lowest ASR (6.9/100,000) was reported in 2003 and the highest rate (14.3/100,000) was reported in 2007. No significant changes observed on the incidence of prostate cancer during the period from 1998 and 2007 (p-value = 0.7829), Figure 2.26.
5. Lung was the fifth most common cancer in Omani males accounted to 7.5% with average annual ASR of 7.9/100,000 population. Lung cancer started with very low incidence during early adulthood, and then the incidence gradually increased with advancing age to reach its maximum peak incidence in men aged 70 years, Figure 2.25. The lowest ASR (6.8/100,000) was reported in 2002, while the highest rate (13.1/100,000) was reported in 1999. There was a slight decline in the ASR of lung cancer however it was not statistically significant (p-value = 0.7890), Figure 2.26.

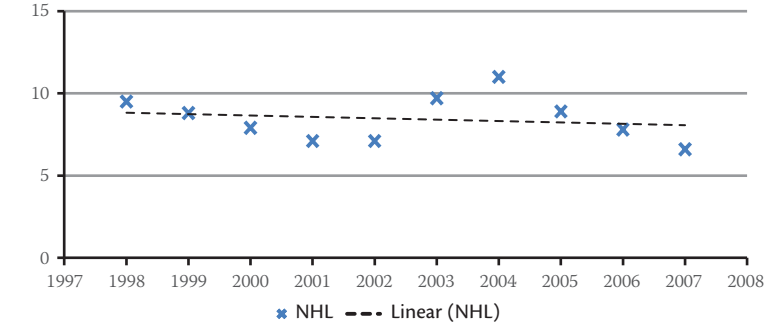


▲ Figure 2.25
Average annual Age Specific Incidence Rates of Most Common Cancers in Oman, 1998-2007: Male.

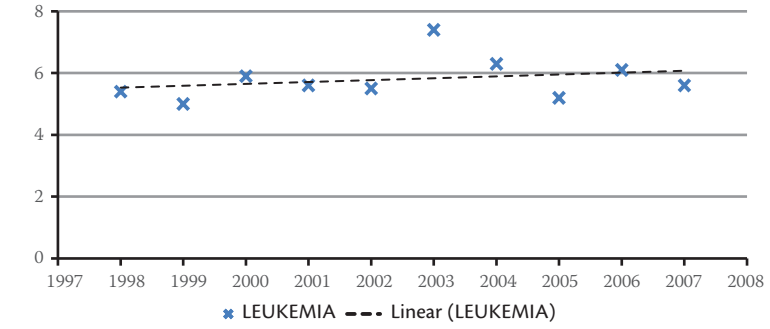
STOMACH

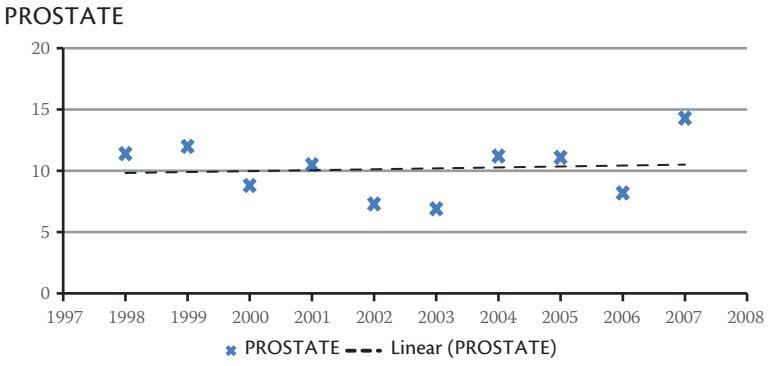


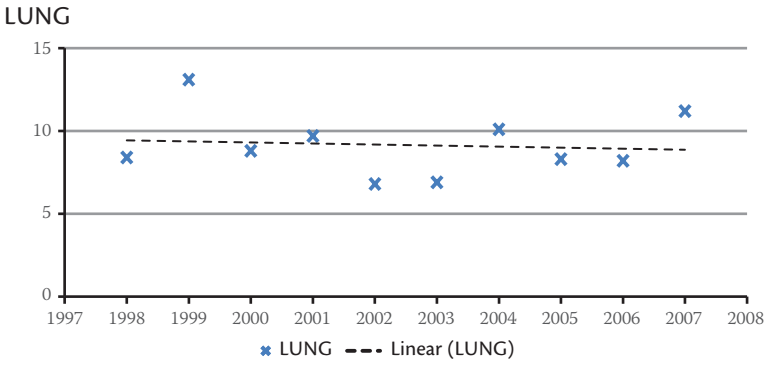
NHL



LEUKEMIA



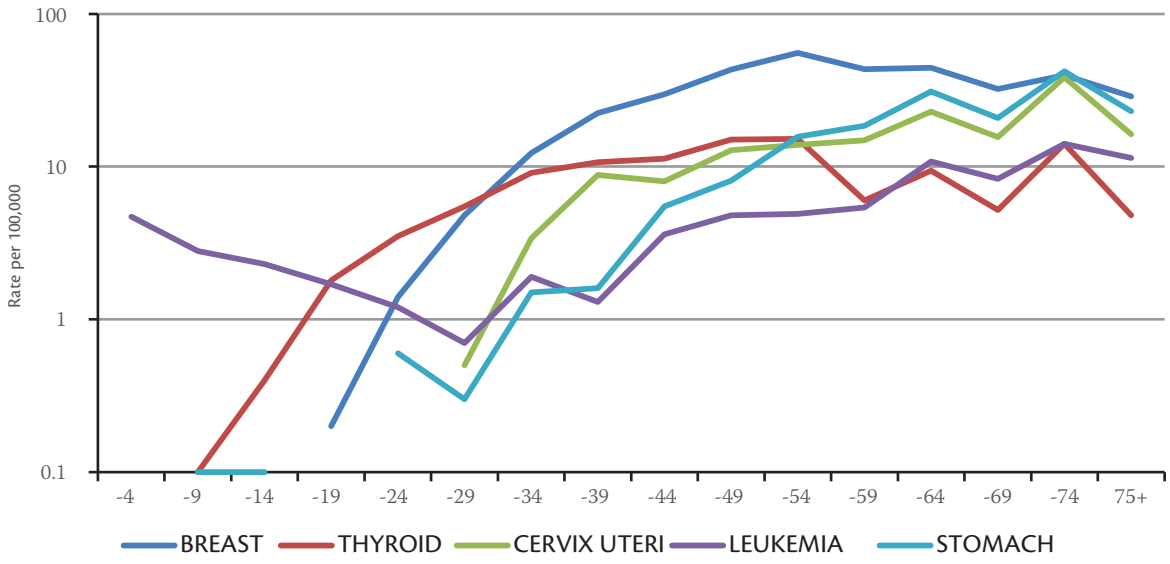




◄▲ Figure 2.26
Trend of Age Standardized Incidence Rates for the Most Common Cancers in Oman, 1998-2007: Male.

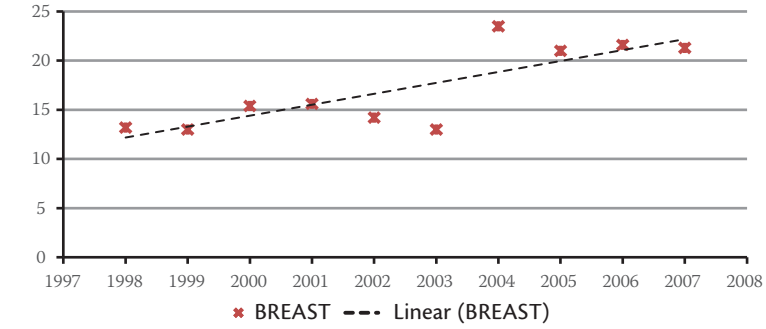
Most Common Cancer in Females:

1. Among Omani females, breast cancer was the leading malignancy between 1998 and 2007 which accounted to 18.2% from the total number of cancers with average annual ASR of 15.7/100,000 population. Breast cancer started with low incidence in females aged 20 to 30 years after which the incidence increased dramatically with advanced age. The peak incidence was observed in women aged between 70 and 75 years, Figure 2.27 The lowest ASR (13.0/100,000) was reported in 1999 and 2003, and the highest (23.5/100,000) was reported in 2004. Highly significant increased trend of breast cancer incidence was observed during the period from 1998 to 2007 among Omani women (p-value = 0.0047), Figure 2.28.
2. Thyroid cancer was the second most common cancer in Omani women accounted to 8.2% with average annual ASR of 5.6/100,000 population. Thyroid cancer started with very low incidence during childhood and then the incidence increased gradually to reach its peak in women aged between 45 and 50 years after which the incidence started to fluctuate, Figure 2.27. The lowest ASR (4.3/100,000) was reported in 2000 and the highest incidence (7.0/100,000) was reported in 2001. No significant changes observed on the incidence of thyroid cancer during the period from 1998 and 2007 (p-value = 0.8320), Figure 2.28.
3. Cervical cancer was the second most common cancer accounted to 6.3% from the total number of cancer diagnosed among Omani females with average annual ASR of 5.8/100,000 population. Cervical cancer started after the age of 25 years then the incidence increased gradually to reach its peak between the age of 70 and 75 years, Figure 2.27. The lowest ASR (3.8/100,000) was reported in 2002, while the highest rate (7.4/100,000) was reported in 2003and 2005. No significant changes observed on the incidence of cervical cancer during the ten year period (p-value = 0.8844, Figure 2.28.
4. Leukemia was the fourth most common cancer in Omani females accounted to 6.1% with average annual ASR of 3.8/100,000 population. Early onset leukemia had its highest incidence during the first five years of live then the incidence declined during early adulthood before it rose again to reach its late onset peak at the age of 70 years, Figure2.27. The lowest ASR (3.2/100,000) was reported in 2005 and the highest (4.8/100,000) was reported in 2004. Leukemia had steady trend of age standardized incidence during the ten year period (p-value = 1.0000), Figure 2.28.
5. Stomach cancer was the fifth most common cancer in Omani females accounted to 5.9% with average annual ASR of 5.8/100,000 population. Stomach cancer started to appear with very low incidence during childhood and early adulthood. The incidence increased gradually to reach its maximum peak among women aged between 70 and 75 after which the incidence started to fluctuate, Figure 2.27. The lowest ASR (4.0/100,000) was reported in 2003 and the highest rate (10.4/100,000) was reported in 2004. Stomach cancer had steady trend of age standardized incidence during the ten year period (p-value = 0.8432), Figure 2.28.

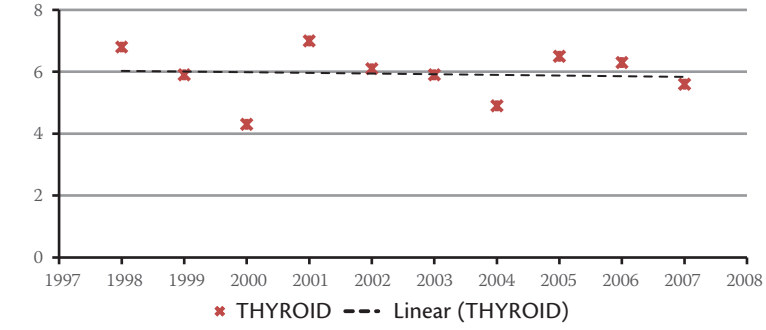


▲ Figure 2.27
Average Annual Age Specific Incidence Rates of Most Common Cancers in Oman, 1998-2007: Female.

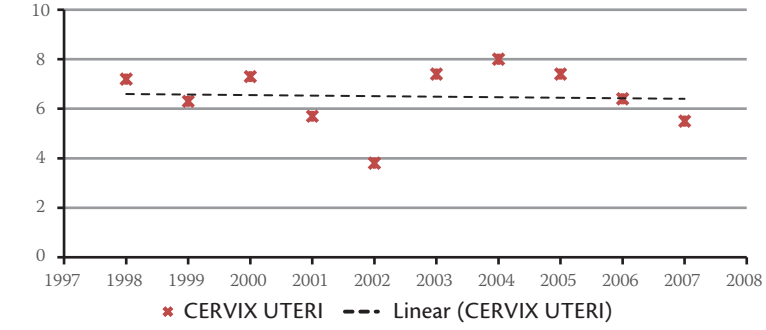
BREAST

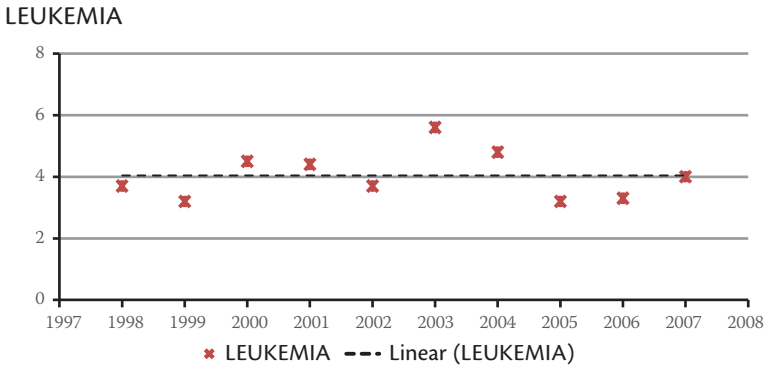


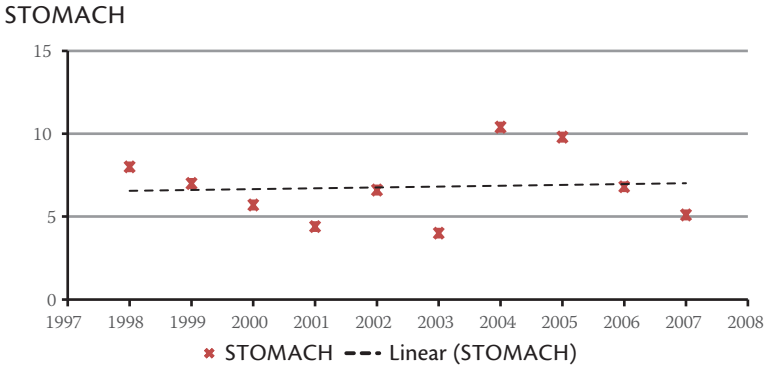
THYROID



CERVIX UTERI







◄▲ Figure 2.28
Trend of Age Standardized Incidence Rates for the Most Common Cancers in Oman, 1998-2007: Female.

TABLE 2.21: INCIDENCE RATE (PER100,000) OF CANCER CASES BY AGE GROUP AND SITE,1998-2007: OMAN MALE

SITE	ICD10	-4	-9	-14	-19	-24	-29	-34	-39	-44	-49	-54	-59	-64	-69	-74	75+	Crude	ASR	CumRt 0-64	All Ages
LIP	C00	.	.	.	.	.	.	.	.	.	0.4	0.9	1.1	1.2	0.9	5.7	1	0.2	0.3	0	14
TONGUE	C01-C02	.	.	.	.	0.1	.	0.4	0.3	2	3.7	3.8	3.4	2.4	.	2.3	2	0.4	0.9	0.1	41
MOUTH	C03-C06	.	.	.	0.1	0.2	.	0.6	0.3	1.7	2.4	4.7	1.7	4.8	2.6	4.5	3	0.5	1	0.1	49
SALIVARY GLANDS	C07-C08	.	.	0.1	.	0.2	.	0.2	0.3	0.3	.	1.4	.	2.4	.	2.3	2	0.2	0.3	0	17
TONSIL	C09	.	.	.	.	.	.	.	0.3	0.3	.	0.9	0.6	1.2	.	.	1	0.1	0.2	0	8
OTHER OROPHARYNX	C10	0.1	.	.	.	.	0.1	.	.	0.7	.	0.9	0.6	.	1.7	2.3	2	0.1	0.3	0	13
NASOPHARYNX	C11	.	0.2	0.1	0.4	0.3	0.4	0.2	0.5	2.3	2.4	0.5	2.9	1.2	3.5	1.1	.	0.5	0.8	0.1	43
HYPOPHARYNX	C12-C13	0.2	0.1	.	0.1	.	0.1	0.2	0.3	.	0.4	1.4	1.1	1.2	0.9	1.1	1	0.2	0.3	0	18
PHARYNX UNSPEC	C14	.	.	.	.	.	.	.	.	.	0.4	0.5	.	.	.	1.1	.	0	0.1	0	3
OESOPHAGUS	C15	.	.	.	.	.	.	.	0.3	1	2.4	6.1	4	14.4	12.2	18.1	17.8	1.1	2.3	0.1	102
STOMACH	C16	0.3	.	.	0.1	0.1	.	1.8	3.2	6.6	12.2	22.1	29.9	59.9	51.6	72.5	66.1	5	10.5	0.7	466
SMALL INTESTINE	C17	.	.	.	.	.	.	0.4	0.3	.	.	0.9	1.1	1.2	0.9	2.3	.	0.1	0.3	0	12
COLON	C18	0.1	.	.	0.1	0.1	0.9	2	2.4	4.3	10.2	9	9.2	10.8	13.1	11.3	5.9	1.6	3.2	0.2	151
RECTUM	C19-C20	.	.	.	0.1	0.5	0.6	1	0.3	2.3	5.3	6.6	3.4	13.8	8.7	10.2	7.9	1.2	2.3	0.2	107
ANUS	C21	.	.	.	.	.	.	0.2	.	1	1.2	2.4	1.1	2.4	.	1.1	3.9	0.2	0.5	0	23
LIVER	C22	0.3	0.1	0.1	0.1	0.1	0.5	0.4	0.5	4	6.9	13.2	25.9	34.1	28	31.7	18.8	2.7	5.7	0.4	254
GALL BLADDER ETC.	C23-C24	.	.	.	.	.	.	.	0.5	0.3	2	1.9	1.7	3.6	4.4	6.8	5.9	0.4	0.9	0.1	38
PANCREAS	C25	.	.	.	.	.	.	.	.	1	1.6	3.8	5.7	7.8	10.5	12.5	10.9	0.8	1.7	0.1	72
OTHER DIGESTIVE ORGANS	C26	.	.	.	.	0.1	.	0.4	0.3	.	0.8	0.9	0.6	1.8	0.9	3.4	1	0.2	0.4	0	17
NOSE-SINUSES, ETC.	C30-C31	0.1	.	0.1	0.2	0.2	.	0.2	.	0.7	0.4	1.9	0.6	1.2	0.9	1.1	2	0.2	0.4	0	21
LARYNX	C32	.	.	.	.	.	.	0.2	0.8	1.7	3.2	5.7	1.7	6.6	4.4	4.5	8.9	0.7	1.4	0.1	61
TRACHEA, BROUCHAUS, LUNG	C33-C34	0.1	.	0.1	.	0.2	0.3	0.6	2.7	5.3	8.9	21.7	25.9	38.3	34.1	61.2	45.4	3.8	7.9	0.5	352
OTHER, THORACIC ORGANS	C37-C39	.	0.1	.	0.1	0.2	0.4	.	0.5	.	.	0.5	0.6	1.2	.	1.1	3.9	0.2	0.3	0	18
BONE	C40-C41	0.3	0.2	0.7	0.6	1	0.4	0.6	0.5	0.3	0.8	0.9	.	3	0.9	1.1	2	0.6	0.7	0	57
MELANOM OF SKIN	C43	.	0.1	.	.	.	.	0.2	.	.	0.8	0.9	1.1	2.4	2.6	.	1	0.2	0.4	0	16
OTHER SKIN	C44	0.2	0.2	0.1	.	0.2	0.6	0.4	1.9	1.3	4.1	9	11.5	15	22.7	37.4	25.7	2	4	0.2	186
MESOTHELIOMA	C45	.	.	.	.	.	.	.	.	.	.	0.9	1.1	.	1.7	1.1	1	0.1	0.2	0	8
KAPOSISARCOMA	C46	.	0.1	.	.	0.2	0.1	0.4	1.1	0.3	.	1.9	1.1	1.8	1.7	3.4	2	0.3	0.5	0	27

CONNECTIVE, SOFT TISSUE	C47;C49	0.6	0.9	0.4	0.7	0.8	0.5	0.4	1.1	1.3	1.2	2.4	4	2.4	0.9	1.1	3	0.9	1.1	0.1	79
RETROPERITONEUM & PERITONEUM	C48	0.2	0.1	.	.	.	.	0.2	.	0.3	.	.	0.6	.	.	.	1	0.1	0.1	0	7
BREAST	C50	.	.	.	.	.	0.3	0.2	0.8	1.7	1.6	1.4	4.6	4.2	1.7	1.1	7.9	0.5	0.9	0.1	44
PENIS	C60	.	.	.	.	.	.	.	.	.	.	.	0.6	.	.	.	.	0	0	0	1
PROSTATE	C61	.	.	.	.	.	.	0.2	.	1	2.8	11.8	17.8	55.7	53.3	73.6	79	4	8.4	0.4	366
TESTIS	C62	0.2	0.1	.	0.5	0.8	0.9	0.4	1.1	1.7	0.8	0.9	1.7	.	0.9	.	1	0.5	0.6	0	46
OTHER MALE GENITAL	C63	.	.	.	.	.	.	.	0.3	.	.	.	.	.	.	.	.	0	0	0	1
KIDNEY	C64	1	0.3	.	.	0.1	0.3	0.6	1.3	2	2.4	4.7	4.6	4.8	6.1	3.4	4.9	0.9	1.5	0.1	80
RENAL PELVIS	C65	.	.	.	.	.	.	.	.	.	.	.	.	.	0.9	.	1	0	0	0	2
URETER	C66	.	.	.	.	.	.	.	.	.	.	0.5	.	0.6	.	.	.	0	0	0	2
BLADDER	C67	0.2	0.1	0.1	.	0.1	0.4	1	2.4	3	6.5	9.9	14.9	20.4	26.2	24.9	39.5	2.4	4.8	0.3	220
OTHER URINARY ORGANS	C68	0.1	.	.	.	.	.	.	.	.	.	0.9	.	0.6	0.9	1.1	.	0.1	0.1	0	6
EYE	C69	0.9	0.1	.	0.1	0.1	.	.	.	0.3	0.4	0.9	1.7	1.8	1.7	4.5	2	0.3	0.5	0	32
BRAIN, NERVOUS SYSTEM	C70-C72	1.7	1.8	1.4	1.3	0.6	0.9	1.8	3	3.6	5.3	5.7	5.2	6.6	10.5	7.9	5.9	2.1	2.9	0.2	192
THYROID	C73	.	.	0.1	0.3	0.6	0.5	1.6	0.5	3.3	4.1	3.3	5.7	8.4	4.4	2.3	3	0.9	1.7	0.1	87
ADRENAL GLAND	C74	0.7	0.2	0.1	.	.	.	.	.	.	.	.	0.6	.	.	1.1	.	0.2	0.2	0	14
OTHER ENDOCRINE	C75	0.1	0.1	.	0.1	.	.	.	.	.	.	0.5	.	.	.	1.1	.	0.1	0.1	0	5
OTHER & ILL-DEFINED SITES	C76-C79	0.4	0.1	0.1	0.2	.	0.6	0.2	0.3	1	0.4	1.4	1.7	3	6.1	4.5	3	0.5	0.8	0	45
HODGKIN DIS.	C81	0.3	2.3	1.3	1.7	1.8	1.3	3	1.9	2	5.7	5.7	2.3	2.4	5.2	2.3	6.9	1.9	2.4	0.2	179
NON HODGKIN LYMPHOMA	C82-C85;C96	1.2	1.4	0.9	2.2	1.3	3.3	4.3	7.3	10.9	7.7	18.8	17.8	28.1	26.2	38.5	24.7	4.5	7.6	0.5	419
IMMUNOPROLIFERATIVE DIS.	C88	.	.	.	.	.	.	.	.	.	.	.	0.6	.	.	.	.	0	0	0	1
MULTIPLE MYELOMA	C90	.	.	.	0.1	.	.	0.2	.	1.3	2	4.7	5.7	9.6	9.6	12.5	7.9	0.8	1.8	0.1	77
LYMPHOID LEUKAEMIA	C91	3.2	3.5	1.9	1.9	0.8	0.3	0.6	0.5	0.7	2.4	4.2	2.3	5.4	3.5	7.9	5.9	2.1	2.3	0.1	195
MYELOID LEUKAEMIA	C92-C94	1.3	0.2	0.4	1	0.9	1.3	1.6	3.8	2.3	3.7	5.2	3.4	6.6	2.6	11.3	13.8	1.6	2.4	0.2	150
LEUKAEMIA UNSPEC	C95	0.6	0.4	0.6	0.5	0.5	0.1	0.4	0.5	.	0.4	1.4	2.9	0.6	1.7	2.3	1	0.6	0.7	0	53
UNKNOWN PRIMARY SITE	80	0.2	.	.	0.2	0.1	0.8	0.2	3	3.6	4.9	7.5	11.5	21	14	27.2	15.8	1.9	3.8	0.3	175
ALL SITES		14.6	12.7	8.6	12.7	12.2	15.9	27.3	45.1	77.4	122.8	217.1	247.8	415.9	385.3	529.8	469.3	50.5	92.5	6.2	4672
ALL SITES EXCEPT C44	542	14.4	12.5	8.5	12.7	12	15.3	26.9	43.2	76.1	118.7	208.1	236.3	400.9	362.6	492.4	443.6	48.5	88.5	5.9	4486

TABLE 2.22: INCIDENCE RATE (PER100,000) OF CANCER CASES BY AGE GROUP AND SITE,1998-2007 OMAN: FEMALE

SITE	ICD 10	-4	-9	-14	-19	-24	-29	-34	-39	-44	-49	-54	-59	-64	-69	-74	75+	Crude	ASR	CumRt 0-64	All Ages
LIP	C00	.	.	0.1	.	.	.	.	0.3	.	.	.	0.6	0.7	1	.	1	0.1	0.1	0	6
TONGUE	C01-C02	.	0.1	.	.	0.1	.	.	0.5	0.9	.	0.4	1.2	0.7	2.1	.	1	0.2	0.3	0	14
MOUTH	C03-C06	.	.	.	.	.	0.1	0.4	0.5	0.3	.	2.2	1.8	4	2.1	.	1	0.3	0.5	0	23
SALIVARY GLANDS	C07-C08	0.1	0.1	.	0.2	0.3	0.3	0.2	0.3	0.9	0.4	1.8	1.8	0.7	1	1.3	.	0.3	0.4	0	25
TONSIL	C09	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
OTHER OROPHARYNX	C10	.	.	.	.	.	.	.	.	.	0.4	0.4	0.6	.	2.1	.	1	0.1	0.2	0	6
NASOPHARYNX	C11	.	.	.	0.3	0.2	0.1	0.4	0.5	1.5	0.7	.	0.6	.	.	1.3	.	0.2	0.3	0	20
HYPOPHARYNX	C12-C13	.	.	.	.	.	.	.	0.3	1.2	0.4	.	0.6	2	.	3.8	1	0.2	0.3	0	14
PHARYNX UNSPEC	C14	.	.	.	.	.	.	.	0.3	.	.	.	.	0.7	.	.	.	0	0	0	2
OESOPHAGUS	C15	.	.	.	.	.	0.1	.	.	0.6	0.4	3.6	0.6	12.8	11.4	15.4	17.3	0.8	1.8	0.1	73
STOMACH	C16	.	0.1	0.1	.	0.6	0.3	1.5	1.6	5.5	8.1	15.7	18.5	31	20.8	42.2	23	2.8	5.8	0.4	252
SMALL INTESTINE	C17	.	.	.	.	.	.	.	.	0.3	0.4	0.4	.	1.3	1	3.8	1	0.1	0.2	0	10
COLON	C18	0.1	.	0.2	0.2	0.3	0.5	1.1	2.1	1.8	3.3	8.9	6.5	13.5	4.2	7.7	14.4	1.3	2.4	0.2	118
RECTUM	C19-C20	.	.	.	0.1	0.2	0.3	0.6	1.9	3.1	2.2	5.8	5.4	6.1	7.3	7.7	4.8	0.9	1.7	0.1	80
ANUS	C21	.	.	.	.	.	.	.	0.3	0.3	.	0.9	0.6	1.3	.	3.8	1	0.1	0.3	0	11
LIVER	C22	0.5	.	.	0.1	0.3	.	0.6	0.3	1.5	1.8	9.4	6.5	11.4	8.3	10.2	8.6	1.1	2.2	0.2	98
GALL BLADDER ETC.	C23-C24	.	.	.	.	.	.	.	0.3	1.8	0.7	1.8	2.4	4.7	7.3	6.4	2.9	0.4	0.9	0.1	39
PANCREAS	C25	.	.	.	.	0.1	0.1	.	0.3	1.5	1.8	2.2	3	10.1	3.1	6.4	4.8	0.6	1.2	0.1	51
OTHER DIGESTIVE ORGANS	C26	.	.	.	.	.	0.1	.	.	0.6	0.4	0.9	.	.	3.1	.	.	0.1	0.2	0	9
NOSE-SINUSES, ETC.	C30-C31	.	.	0.1	0.1	.	.	0.4	.	.	0.4	0.4	1.2	0.7	.	2.6	1.9	0.1	0.3	0	13
LARYNX	C32	.	.	.	.	.	.	.	.	1.8	.	0.4	0.6	.	2.1	2.6	1.9	0.2	0.3	0	14
TRACHEA, BROUCHAUS, LUNG	C33-C34	.	.	.	0.1	.	.	0.6	1.3	1.2	2.6	8.1	4.8	8.1	8.3	11.5	11.5	1	2	0.1	87
OTHER, THORACIC ORGANS	C37-C39	0.2	.	.	0.1	.	.	.	.	0.6	.	.	0.6	.	.	.	1	0.1	0.1	0	7
BONE	C40-C41	0.1	0.3	1.1	0.7	0.4	0.1	0.6	.	.	0.7	1.3	.	.	.	.	1	0.5	0.4	0	42
MELANOM OF SKIN	C43	.	.	0.1	.	.	0.4	0.2	.	0.6	1.1	.	0.6	1.3	.	1.3	.	0.2	0.3	0	14
OTHER SKIN	C44	0.1	0.2	0.1	0.2	0.2	.	1.1	1.6	3.7	5.1	6.7	5.4	10.1	12.5	24.3	19.2	1.5	3	0.2	135
MESOTHELIOMA	C45	.	.	.	.	.	.	.	.	.	0.4	.	.	.	.	.	.	0	0	0	1
KAPOSISARCOMA	C46	.	.	.	.	.	.	.	0.3	1.8	.	.	1.2	1.3	.	.	1	0.1	0.2	0	12
CONNECTIVE, SOFT TISSUE	C47;C49	1.3	0.3	0.2	0.4	0.2	0.9	0.6	0.5	0.9	0.7	1.3	2.4	.	.	2.6	3.8	0.6	0.8	0	58

RETROPERITONEUM & PERITONEUM	C48	0.1	0.1	.	.	.	.	.	0.3	.	.	0.4	0.6	0.7	1	.	.	0.1	0.1	0	7
BREAST	C50	0.5	.	.	0.2	1.4	4.8	12.3	22.4	29.7	43.2	55.5	43.5	44.4	32.2	39.7	28.8	8.6	15.7	1.3	771
VULVA	C51	.	.	.	.	0.1	.	.	0.3	0.3	0.7	0.4	1.2	2	.	5.1	1	0.2	0.4	0	16
VAGINA	C52	0.1	.	.	.	.	.	.	0.3	0.3	.	1.8	.	1.3	3.1	1.3	1.9	0.2	0.3	0	15
CERVIX UTERI	C53	0.1	.	.	.	.	0.5	3.4	8.8	8	12.8	13.9	14.9	22.9	15.6	38.4	16.3	3	5.8	0.4	267
CORPUS UTERI	C54	.	.	.	.	.	.	0.2	0.8	2.4	1.5	1.8	4.2	9.4	10.4	6.4	4.8	0.7	1.5	0.1	61
UTERUS UNSPEC	C55	.	.	.	.	.	0.1	0.2	0.8	.	1.1	1.8	1.8	2.7	1	6.4	1.9	0.3	0.6	0	27
OVARY	C56	0.1	0.1	0.9	1.1	1	0.9	1.7	1.9	6.4	7.7	11.2	13.1	19.5	14.5	19.2	18.2	2.5	4.5	0.3	227
OTTHER FEMALE GENITAL	C57	.	.	.	0.1	.	.	.	0.3	.	0.7	.	0.6	.	1	.	.	0.1	0.1	0	6
PLACENTA	C58	.	.	.	0.1	0.1	0.6	0.4	.	0.9	1.1	0.4	.	.	.	.	.	0.2	0.2	0	16
KIDNEY	C64	1.7	0.3	0.1	0.2	0.1	0.1	0.6	1.1	1.5	1.1	4	2.4	2.7	9.3	1.3	2.9	0.8	1.3	0.1	73
RENAL PELVIS	C65	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	0	0	0	1
URETER	C66	.	.	.	.	.	.	.	.	0.3	.	0.4	.	.	.	.	.	0	0	0	2
BLADDER	C67	0.2	.	.	0.1	0.1	.	.	0.3	1.5	3.7	2.2	5.4	9.4	15.6	16.6	18.2	1.1	2.2	0.1	95
OTHER URINARY ORGANS	C68	.	.	.	.	.	.	.	.	.	.	0.4	.	.	.	.	.	0	0	0	1
EYE	C69	1	0.3	.	0.1	.	.	0.2	0.3	0.6	0.4	.	.	2	.	1.3	1	0.3	0.4	0	25
BRAIN, NERVOUS SYSTEM	C70-C72	1.2	1.7	1.4	1.1	0.9	0.6	0.9	1.6	2.8	2.6	3.6	4.2	6.7	3.1	2.6	1.9	1.5	1.9	0.1	139
THYROID	C73	.	0.1	0.4	1.8	3.5	5.5	9.1	10.7	11.3	15	15.2	6	9.4	5.2	14.1	4.8	3.9	5.6	0.4	348
ADRENAL GLAND	C74	0.7	0.1	.	0.1	0.1	0.3	0.2	0.3	.	0.4	.	.	.	1	.	.	0.2	0.2	0	17
OTHER ENDOCRINE	C75	.	.	0.1	.	.	.	.	.	.	.	.	.	.	.	.	.	0	0	0	1
OTHER & ILL-DEFINED SITES	C76-C79	0.7	0.1	.	0.2	0.2	0.1	0.2	.	1.5	0.7	1.8	1.2	2.7	2.1	1.3	3.8	0.4	0.7	0	39
HODGKIN DIS.	C81	.	0.4	1.1	0.7	0.9	0.6	0.4	0.8	2.1	2.6	0.9	4.8	3.4	1	2.6	1	0.9	1.2	0.1	82
NON HODGKIN LYMPHOMA	C82-C85;C96	1.3	1.3	0.6	1.1	1.3	1.5	2.4	2.7	5.2	3.7	13.4	11.3	24.2	11.4	23	10.6	2.8	4.6	0.4	252
IMMUNOPROLIFERATIVE	C88	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MULTIPLE MYELOMA	C90	.	.	.	.	.	.	.	0.5	0.6	0.7	4	4.8	8.1	5.2	10.2	4.8	0.6	1.3	0.1	53
LYMPHOID LEUKAEMIA	C91	3.3	2	0.9	0.6	0.2	0.3	0.2	.	0.9	1.5	0.9	0.6	4	3.1	6.4	3.8	1.3	1.5	0.1	114
MYELOID LEUKAEMIA	C92-C94	0.6	0.4	0.6	0.9	0.6	0.4	1.7	0.8	1.8	2.9	4	3.6	3.4	2.1	5.1	3.8	1.1	1.5	0.1	95
LEUKAEMIA UNSPEC	C95	0.8	0.4	0.8	0.2	0.4	.	.	0.5	0.9	0.4	.	1.2	3.4	3.1	2.6	3.8	0.6	0.8	0	54
UNKNOWN PRIMARY SITE	80	0.2	0.1	0.1	0.2	0.1	0.8	1.3	2.1	1.8	5.9	9.4	7.1	18.2	20.8	39.7	18.2	2	4.1	0.2	180
ALL SITES		15	8.5	9	11.3	13.9	20.4	43.7	70.8	113.2	142.4	220	200	323	259.5	398.2	276.6	46.9	82.6	6	4218
ALL SITES EXCEPT C44	528	14.9	8.3	8.9	11.1	13.7	20.4	42.6	69.2	109.5	137.3	213.3	194.6	312.9	247	373.9	257.4	45.4	79.7	5.8	4083

TABLE 2.23: INCIDENCE RATE (PER100,000) OF CANCER CASES BY AGE GROUP AND SITE,1998-2007 OMAN: MALE

SITE	ICD-10	-4	-9	-14	-19	-24	-29	-34	-39	-44	-49	-54	-59	-64	-69	-74	75+	Age Unk	All Ages	% of Total
LIP	C00	0	0	0	0	0	0	0	0	0	1	2	2	2	1	5	1	0	14	0.20%
TONGUE	C01-C02	0	0	0	0	1	0	2	1	6	9	8	6	4	0	2	2	0	41	0.80%
MOUTH	C03-C06	0	0	0	1	2	0	3	1	5	6	10	3	8	3	4	3	0	49	1.00%
SALIVARY GLANDS	C07-C08	0	0	1	0	2	0	1	1	1	0	3	0	4	0	2	2	0	17	0.30%
TONSIL	C09	0	0	0	0	0	0	0	1	1	0	2	1	2	0	0	1	0	8	0.10%
OTHER OROPHARYNX	C10	1	0	0	0	0	1	0	0	2	0	2	1	0	2	2	2	0	13	0.20%
NASOPHARYNX	C11	0	2	1	5	3	3	1	2	7	6	1	5	2	4	1	0	0	43	0.90%
HYPOPHARYNX	C12-C13	2	1	0	1	0	1	1	1	0	1	3	2	2	1	1	1	0	18	0.30%
PHARYNX UNSPEC	C14	0	0	0	0	0	0	0	0	0	1	1	0	0	0	1	0	0	3	0.00%
OESOPHAGUS	C15	0	0	0	0	0	0	0	1	3	6	13	7	24	14	16	18	0	102	2.10%
STOMACH	C16	0	0	0	1	1	0	9	12	20	30	47	52	100	59	64	67	4	466	9.90%
SMALL INTESTINE	C17	0	0	0	0	0	0	2	1	0	0	2	2	2	1	2	0	0	12	0.20%
COLON	C18	0	0	0	1	1	7	10	9	13	25	19	16	18	15	10	6	1	151	3.20%
RECTUM	C19-C20	0	0	0	1	5	5	5	1	7	13	14	6	23	10	9	8	0	107	2.20%
ANUS	C21	0	0	0	0	0	0	1	0	3	3	5	2	4	0	1	4	0	23	0.40%
LIVER	C22	3	1	1	1	1	4	2	2	12	17	28	45	57	32	28	19	1	254	5.40%
GALL BLADDER ETC.	C23-C24	0	0	0	0	0	0	0	2	1	5	4	3	6	5	6	6	0	38	0.80%
PANCREAS	C25	0	0	0	0	0	0	0	0	3	4	8	10	13	12	11	11	0	72	1.50%
OTHER DIGESTIVE ORGANS	C26	0	0	0	0	1	0	2	1	0	2	2	1	3	1	3	1	0	17	0.30%
NOSE-SINUSES, ETC.	C30-C31	0	0	1	2	2	0	1	0	2	1	4	1	2	1	1	2	1	21	0.40%
LARYNX	C32	0	0	0	0	0	0	1	3	5	8	12	3	11	5	4	9	0	61	1.30%
TRACHEA, BROUCHAUS, LUNG	C33-C34	0	0	2	0	2	2	3	10	16	22	46	45	64	39	54	46	1	352	7.50%
OTHER, THORACIC ORGANS	C37-C39	0	1	0	1	2	3	0	2	0	0	1	1	2	0	1	4	0	18	0.30%
BONE	C40-C41	4	2	10	8	11	3	3	2	1	2	2	0	5	1	1	2	0	57	1.20%
MELANOM OF SKIN	C43	0	1	0	0	0	0	1	0	0	2	2	2	4	3	0	1	0	16	0.30%
OTHER SKIN	C44	2	2	2	0	2	5	2	7	4	10	19	20	25	26	33	26	1	186	3.90%
MESOTHELIOMA	C45	0	0	0	0	0	0	0	0	0	0	2	2	0	2	1	1	0	8	0.10%

KAPOSISARCOMA	C46	0	1	0	0	2	1	2	4	1	0	4	2	3	2	3	2	0	27	0.50%
CONNECTIVE, SOFT TISSUE	C47;C49	7	11	5	9	9	4	2	4	4	3	5	7	4	1	1	3	0	79	1.60%
RETROPERITONEUM & PERITONEUM	C48	2	1	0	0	0	0	1	0	1	0	0	1	0	0	0	1	0	7	0.10%
BREAST	C50	0	0	0	0	0	2	1	3	5	4	3	8	7	2	1	8	0	44	0.90%
PENIS	C60	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0.00%
PROSTATE	C61	0	0	0	0	0	0	1	0	3	7	25	31	93	61	65	80	0	366	7.80%
TESTIS	C62	3	1	0	6	9	7	2	4	5	2	2	3	0	1	0	1	0	46	0.90%
OTHER MALE GENITAL	C63	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0.00%
KIDNEY	C64	11	4	0	0	1	2	3	5	6	6	10	8	8	7	3	5	1	80	1.70%
RENAL PELVIS	C65	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	2	0.00%
URETER	C66	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	2	0.00%
BLADDER	C67	1	1	1	0	1	3	5	9	9	16	21	26	34	30	22	40	1	220	4.70%
OTHER URINARY ORGANS	C68	1	0	0	0	0	0	0	0	0	0	2	0	1	1	1	0	0	6	0.10%
EYE	C69	10	1	0	1	1	0	0	0	1	1	2	3	3	2	4	2	1	32	0.60%
BRAIN, NERVOUS SYSTEM	C70-C72	20	22	19	16	7	7	9	11	11	13	12	9	11	12	7	6	0	192	4.10%
THYROID	C73	0	0	1	4	7	4	8	2	10	10	7	10	14	5	2	3	0	87	1.80%
ADRENAL GLAND	C74	9	2	1	0	0	0	0	0	0	0	0	1	0	0	1	0	0	14	0.20%
OTHER ENDOCRINE	C75	1	1	0	1	0	0	0	0	0	0	1	0	0	0	1	0	0	5	0.10%
OTHER & ILL-DEFINED SITES	C76-C79	5	1	1	2	0	5	1	1	3	1	3	3	5	7	4	3	0	45	0.90%
UNKNOWN PRIMARY SITE	80	0	0	0	3	1	6	1	11	11	12	16	20	35	16	24	16	3	175	3.70%
HODGKIN DIS.	C81	4	29	17	22	20	10	15	7	6	14	12	4	4	6	2	7	0	179	3.80%
NON HODGKIN LYMPHOMA	C82-C85;C96	13	18	12	28	14	26	21	27	33	19	40	31	47	30	34	25	1	419	8.90%
IMMUNOPROLIFERATIVE DIS.	C88	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0.00%
MULTIPLE MYELOMA	C90	0	0	0	1	0	0	1	0	4	5	10	10	16	11	11	8	0	77	1.60%
LYMPHOID LEUKAEMIA	C91	39	43	26	24	9	2	3	2	2	6	9	4	9	4	7	6	0	195	4.10%
MYELOID LEUKAEMIA	C92-C94	16	2	6	13	10	10	8	14	7	9	11	6	11	3	10	14	0	150	3.20%
LEUKAEMIA UNSPEC	C95	7	5	8	7	6	1	2	2	0	1	3	5	1	2	2	1	0	53	1.10%
ALL SITES		161	153	115	159	133	124	136	167	234	303	461	432	694	441	468	475	16	4672	100%

TABLE 2.24: DISTRIBUTION OF CANCER CASES BY AGE GROUP AND SITE, 1998-2007: OMAN FEMALE

SITE	ICD-10	-4	-9	-14	-19	-24	-29	-34	-39	-44	-49	-54	-59	-64	-69	-74	75+	Age Unk	All Ages	% of Total
LIP	C00	0	0	1	0	0	0	0	1	0	0	0	1	1	1	0	1	0	6	0.10%
TONGUE	C01-C02	0	1	0	0	1	0	0	2	3	0	1	2	1	2	0	1	0	14	0.30%
MOUTH	C03-C06	0	0	0	0	0	1	2	2	1	0	5	3	6	2	0	1	0	23	0.50%
SALIVARY GLANDS	C07-C08	1	1	0	2	3	2	1	1	3	1	4	3	1	1	1	0	0	25	0.50%
OTHER OROPHARYNX	C10	0	0	0	0	0	0	0	0	0	1	1	1	0	2	0	1	0	6	0.10%
NASOPHARYNX	C11	0	0	0	4	2	1	2	2	5	2	0	1	0	0	1	0	0	20	0.40%
HYPOPHARYNX	C12-C13	0	0	0	0	0	0	0	1	4	1	0	1	3	0	3	1	0	14	0.30%
PHARYNX UNSPEC	C14	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	2	0.00%
OESOPHAGUS	C15	0	0	0	0	0	1	0	0	2	1	8	1	19	11	12	18	0	73	1.70%
STOMACH	C16	0	1	1	0	6	2	7	6	18	22	35	31	46	20	33	24	0	252	5.90%
SMALL INTESTINE	C17	0	0	0	0	0	0	0	0	1	1	1	0	2	1	3	1	0	10	0.20%
COLON	C18	0	0	3	3	3	4	5	8	6	9	20	11	20	4	6	15	1	118	2.70%
RECTUM	C19-C20	0	0	0	1	2	2	3	7	10	6	13	9	9	7	6	5	0	80	1.80%
ANUS	C21	0	0	0	0	0	0	0	1	1	0	2	1	2	0	3	1	0	11	0.20%
LIVER	C22	5	0	0	1	3	0	3	1	5	5	21	11	17	8	8	9	1	98	2.30%
GALL BLADDER ETC.	C23-C24	0	0	0	0	0	0	0	1	6	2	4	4	7	7	5	3	0	39	0.90%
PANCREAS	C25	0	0	0	0	1	1	0	1	5	5	5	5	15	3	5	5	0	51	1.20%
OTHER DIGESTIVE ORGANS	C26	0	0	0	0	0	1	0	0	2	1	2	0	0	3	0	0	0	9	0.20%
NOSE-SINUSES, ETC.	C30-C31	0	0	1	1	0	0	2	0	0	1	1	2	1	0	2	2	0	13	0.30%
LARYNX	C32	0	0	0	0	0	0	0	0	6	0	1	1	0	2	2	2	0	14	0.30%
TRACHEA, BROUCHAUS, LUNG	C33-C34	0	0	0	1	0	0	3	5	4	7	18	8	12	8	9	12	0	87	2.00%
OTHER, THORACIC ORGANS	C37-C39	2	0	0	1	0	0	0	0	2	0	0	1	0	0	0	1	0	7	0.10%
BONE	C40-C41	1	3	15	9	4	1	3	0	0	2	3	0	0	0	0	1	0	42	0.90%
MELANOM OF SKIN	C43	0	0	1	0	0	3	1	0	2	3	0	1	2	0	1	0	0	14	0.30%
OTHER SKIN	C44	1	2	1	2	2	0	5	6	12	14	15	9	15	12	19	20	0	135	3.20%
MESOTHELIOMA	C45	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.00%
KAPOSISARCOMA	C46	0	0	0	0	0	0	0	1	6	0	0	2	2	0	0	1	0	12	0.20%
CONNECTIVE, SOFT TISSUE	C47;C49	14	3	3	5	2	7	3	2	3	2	3	4	0	0	2	4	1	58	1.30%

RETROPERITONEUM & PERITONEUM	C48	1	1	0	0	0	0	0	1	0	0	1	1	1	1	0	0	0	7	0.10%
BREAST	C50	0	0	0	2	15	37	57	84	97	118	124	73	66	31	31	30	6	771	18.20%
VULVA	C51	0	0	0	0	1	0	0	1	1	2	1	2	3	0	4	1	0	16	0.30%
VAGINA	C52	1	0	0	0	0	0	0	1	1	0	4	0	2	3	1	2	0	15	0.30%
CERVIX UTERI	C53	0	0	0	0	0	4	16	33	26	35	31	25	34	15	30	17	1	267	6.30%
CORPUS UTERI	C54	0	0	0	0	0	0	1	3	8	4	4	7	14	10	5	5	0	61	1.40%
UTERUS UNSPEC	C55	0	0	0	0	0	1	1	3	0	3	4	3	4	1	5	2	0	27	0.60%
OVARY	C56	0	1	12	14	11	7	8	7	21	21	25	22	29	14	15	19	1	227	5.30%
OTTHER FEMALE GENITAL	C57	0	0	0	1	0	0	0	1	0	2	0	1	0	1	0	0	0	6	0.10%
PLACENTA	C58	0	0	0	1	1	5	2	0	3	3	1	0	0	0	0	0	0	16	0.30%
KIDNEY	C64	19	3	1	2	1	1	3	4	5	3	9	4	4	9	1	3	1	73	1.70%
RENAL PELVIS	C65	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0.00%
URETER	C66	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	2	0.00%
BLADDER	C67	2	0	0	1	1	0	0	1	5	10	5	9	14	15	13	19	0	95	2.20%
OTHER URINARY ORGANS	C68	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0.00%
EYE	C69	10	3	0	1	0	0	1	1	2	1	0	0	3	0	1	1	1	25	0.50%
BRAIN, NERVOUS SYSTEM	C70-C72	14	20	18	14	10	5	4	6	9	7	8	7	10	3	2	2	0	139	3.20%
THYROID	C73	0	1	5	22	38	43	42	40	37	41	34	10	14	5	11	5	0	348	8.20%
ADRENAL GLAND	C74	8	1	0	1	1	2	1	1	0	1	0	0	0	1	0	0	0	17	0.40%
OTHER ENDOCRINE	C75	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.00%
OTHER & ILL-DEFINED SITES	C76-C79	8	1	0	2	2	1	1	0	5	2	4	2	4	2	1	4	0	39	0.90%
UNKNOWN PRIMARY SITE	80	1	1	1	3	1	6	6	8	6	16	21	12	27	20	31	19	1	180	4.20%
HODGKIN DIS.	C81	0	5	15	9	10	5	2	3	7	7	2	8	5	1	2	1	0	82	1.90%
NON HODGKIN LYMPHOMA	C82-C85;C96	14	16	8	14	14	12	11	10	17	10	30	19	36	11	18	11	1	252	5.90%
MULTIPLE MYELOMA	C90	0	0	0	0	0	0	0	2	2	2	9	8	12	5	8	5	0	53	1.20%
LYMPHOID LEUKAEMIA	C91	38	24	12	7	2	2	1	0	3	4	2	1	6	3	5	4	0	114	2.70%
MYELOID LEUKAEMIA	C92-C94	7	5	8	11	6	3	8	3	6	8	9	6	5	2	4	4	0	95	2.20%
LEUKAEMIA UNSPEC	C95	9	5	11	3	4	0	0	2	3	1	0	2	5	3	2	4	0	54	1.20%
ALL SITES		156	98	118	138	147	160	205	264	372	388	493	335	480	250	311	288	15	4218	100%


ARABIAN
Bahrain
QATAR
Kingdom of Saudi Arabia


GULF
GULF OF OMAN
United Arab Emirates
Sultanate of Oman

STATE OF QATAR

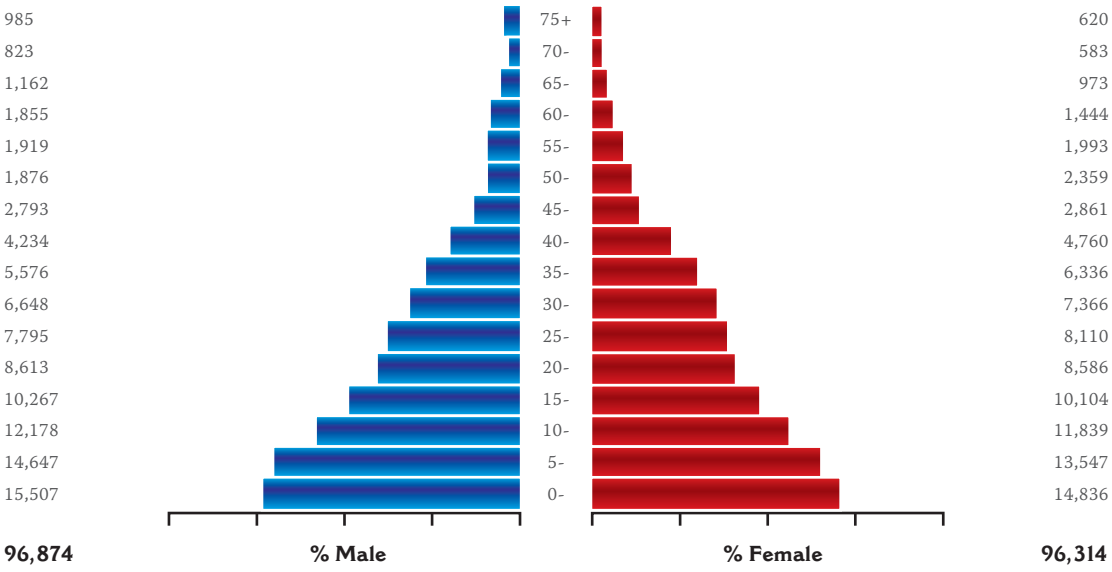
Cancer Incidence in the State of Qatar

This report was prepared based on the data received from the State of Qatar National Cancer Registry as of January 2011. Average annual incidence rates were calculated based on the mid-point population structure for Qatari nationals estimated from the population pyramids and annual growth rates published by the United Nations in 2001. Figure 2.29 shows the mi-point population structure for both genders by age group.

Between January 1998 and December 2007 there were 1,631 Qatari nationals diagnosed with cancer, 772 (47.3%) were males and 859 (56.7%) were females. Almost three fourth of cancer cases had histopathology confirmation. Cytology/hematology and radiological modalities were used in 21.2% and death certificate were used in 2.1% as the base of diagnosis of cancer cases reported by the Qatari National Cancer Registry, Table 2.25.

More than one third of Qatari cancer patients presented with advanced cancer (21% of males and 14% of females presented with distant metastasis, and 13% of males and 23% of females presented with regional metastasis). Localized tumors were present in 31% and unknown extent of cancer was present in 33% of all cancer cases diagnosed between 1998 and 2007, Figure2.30

Cancer incidence declined after the first five years of live before it started to increase with advanced age in both genders. During early to mid adulthood Qatari females showed slightly higher incidence of cancer. During the age group 55 to 59 years and above 70 years, males appeared to have slightly higher incidence of cancer compared to females, Figure 2.31.



▲ Figure 2.29
Estimated Population for State of Qatar by Gender and Age Group, 1998-2007.

Table 2.25 ▼
Basis of diagnosis, 1998-2007.

BASIS OF DIAGNOSIS	MALE	%	FEMALE	%	ALL	%
Histopathology	531	68.8	681	79.3	1212	74.3
Cytology/Hematological	128	16.6	111	12.9	239	14.7
Radiology	65	8.4	41	4.8	106	6.5
Death Certificate Only	23	3	11	1.3	34	2.1
Unknown	14	1.8	12	1.4	26	1.6
Clinical/ Surgical	6	0.8	2	0.2	8	0.5
Other laboratory test Biomarker	5	0.6	1	0.1	6	0.4
TOTAL	772	100	859	100	1631	100

Figure 2.30 ▼
Extent among Qatar nationals.

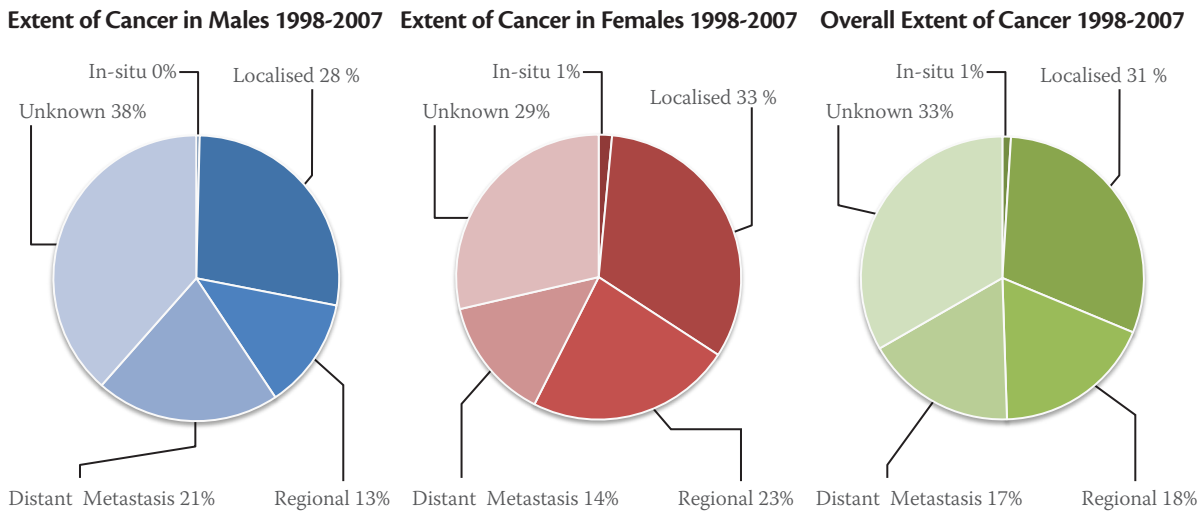
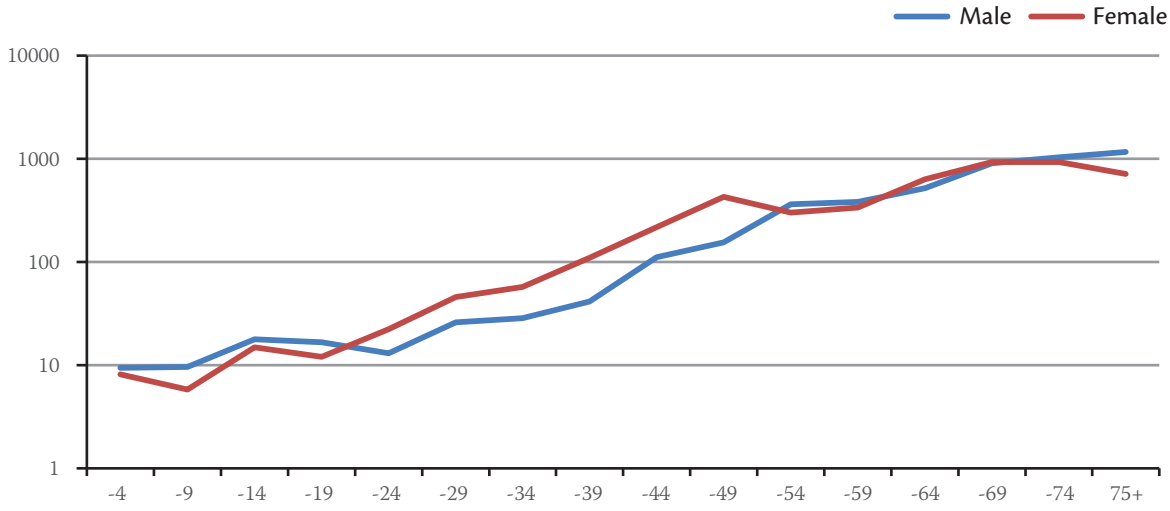


Figure 2.31▼
Age Specific Incidence Rates of all Cancers in Qatar by gender, 1998-2007.



▼ Table 2.26
The Most Common Cancers by Gender in Qatar, 1998-2007.

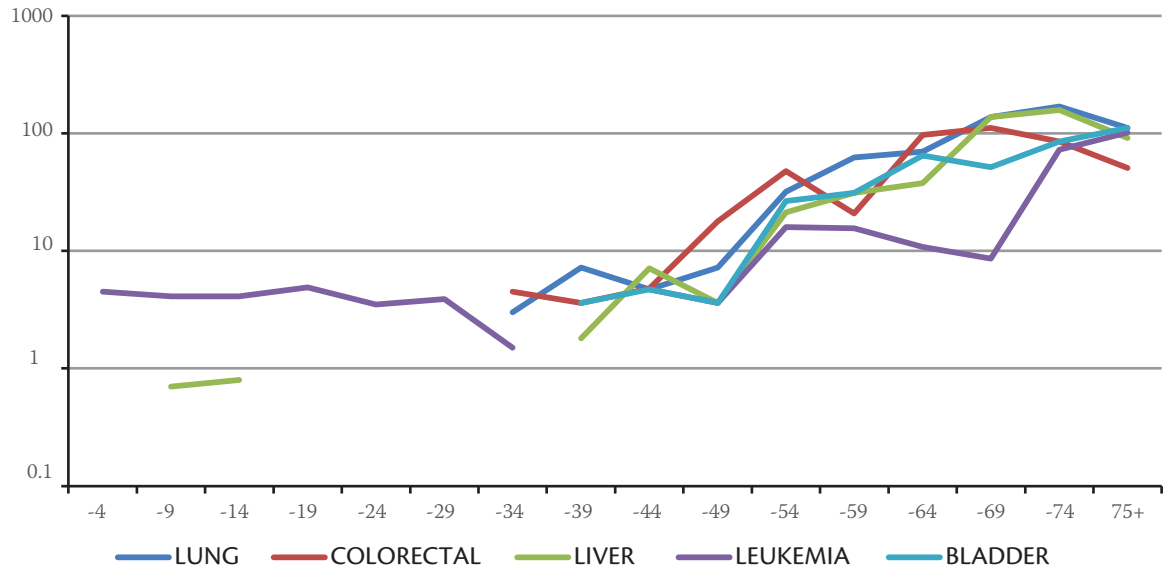
MALE				FEMALE			
Site	*NO.*	*%*	*ASR*	*Site*	*NO.*	*%*	*ASR*
LUNG	82	10.6	18	BREAST	241	28	45.6
COLORECTAL	68	8.7	15	THYROID	74	8.6	10.9
LIVER	63	8.1	13.9	COLORECTAL	73	8.4	16.6
LEUKAEMIA	58	7.3	8.5	NHL	44	5.1	9.1
BLADDER	54	6.9	11.6	CORPUS UTERI	42	4.8	9.6

** Average annual age standardized incidence rate per 100,000 populations*

Lung cancer was the leading malignancy among Qatari males followed by colorectal, liver, leukemia, and bladder cancers. While in females, breast cancer was the leading malignancy followed by thyroid, colorectal, NHL and corpus uteri cancers, Table 2.26.

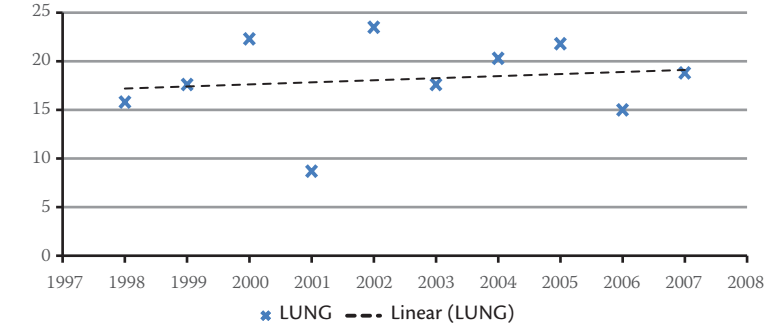
Most Common Cancer in Males:

1. Lung cancer was the most common cancer in Qatari males accounted to 10.6% with average annual ASR of 18/100,000 population. Lung cancer started to appear after the age of 30 years. Then the incidence increased dramatically with advancing age till it reached its maximum peak among men aged between 70 and 75 years, Figure 2.32. The lowest ASR (8.7/100,000) was reported in 2001 and the highest (23.5/100,000) was reported in 2002. There was a slight increase in the ASR trend which was not statistically significant (p-value = 0.6816), Figure 2.33.
2. Colorectal cancer ranked second among Qatari males accounted to 8.7% with average annual ASR of 15/100,000 population. Colorectal started after the age of 30 years with low incidence and then the incidence increased gradually to reach its maximum peak in men aged between 65 and 70 years, Figure 2.32. The lowest ASR (3.6/100,000) was reported in 2002 and the highest rate (28.6/100,000) was reported in 2003. There was a slight increase in the ASR trend of colorectal cancer which found not to be statistically significant (p-value = 0.6431), Figure 2.33.
3. Liver cancer was the third most common cancer in Qatari males accounted to 8.1% with average ASR of 13.9/100,000 population. Liver cancer appeared with very low incidence in childhood then the incidence increased dramatically to reach its maximum peak in men aged between 70 and 75 years, Figure 2.32. The lowest ASR (9.0/100,000) was reported in 2002, while the highest rate (21.9/100,000) was reported in 2005. Liver cancer had steady trend of age standardized incidence during the ten year period (p-value = 0.9046), Figure 2.33.
4. Leukemia ranked fourth among Qatari males accounted to 7.3% with average annual ASR of 8.5/100,000 populations. Incidence of leukemia showed two broken up curves; first one represented early onset leukemia that appeared before the age of 35 years, while the second curve started at the age of 45 years and reached its peak in males aged above 75 years, figure 2.32. The lowest ASR (6.1/100.000) was reported in 2006 and the highest (11.6/100,000) was reported in 1998. The trend of age standardized incidence decreased during the ten year period however it was not statistically significant (p-value = 0.1515), Figure 2.33.
5. Urinary bladder cancer was the fifth common cancer in Qatari males accounted to 6.9% with average annual ASR of 11.6/100,000 populations. Bladder cancer started to appear in Qatari males after the age of 35 years. The incidence gradually increased with advancing age to reach its maximum peak in men aged above 75 years, Figures 2.32. The lowest ASR (2.3/100,000) was reported in 2006 while the highest rate (19.7/100,000) was reported in 2000. The trend of ASR of urinary bladder cancer decreased during the ten year period but was not statistically significant (p-value = 0.2620), Figure 2.33.

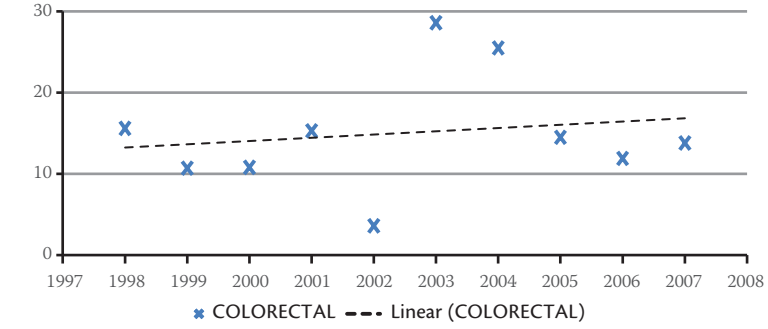


▲ Figure 2.32
Average annual Age Specific Incidence Rates of Most Common Cancers in Qatar, 1998-2007 Male.

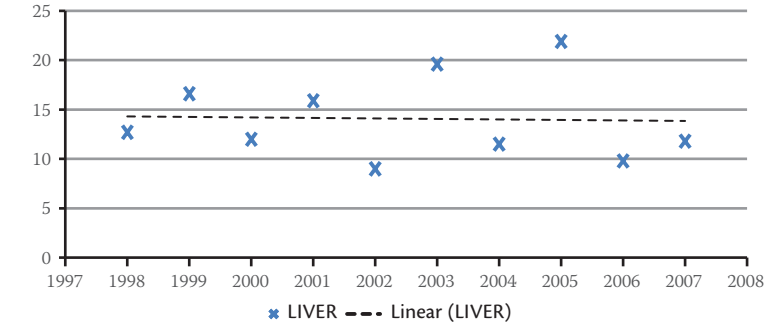
LUNG

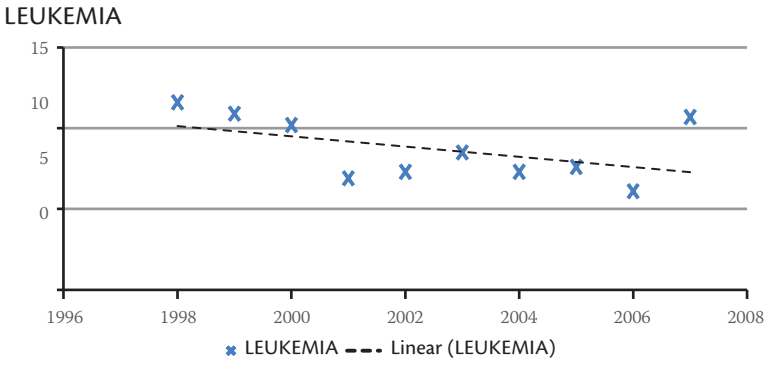


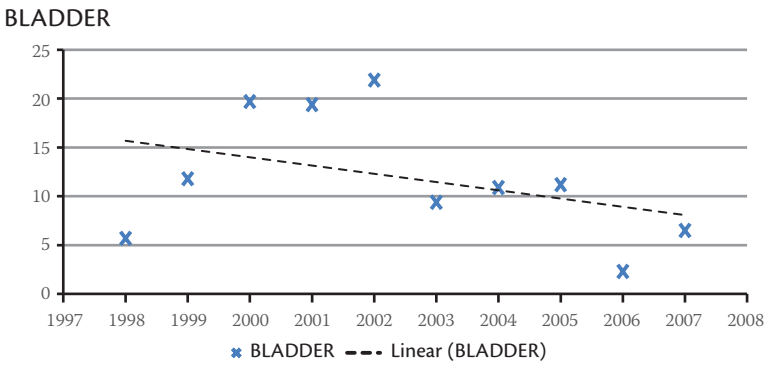
COLORECTAL



LIVER



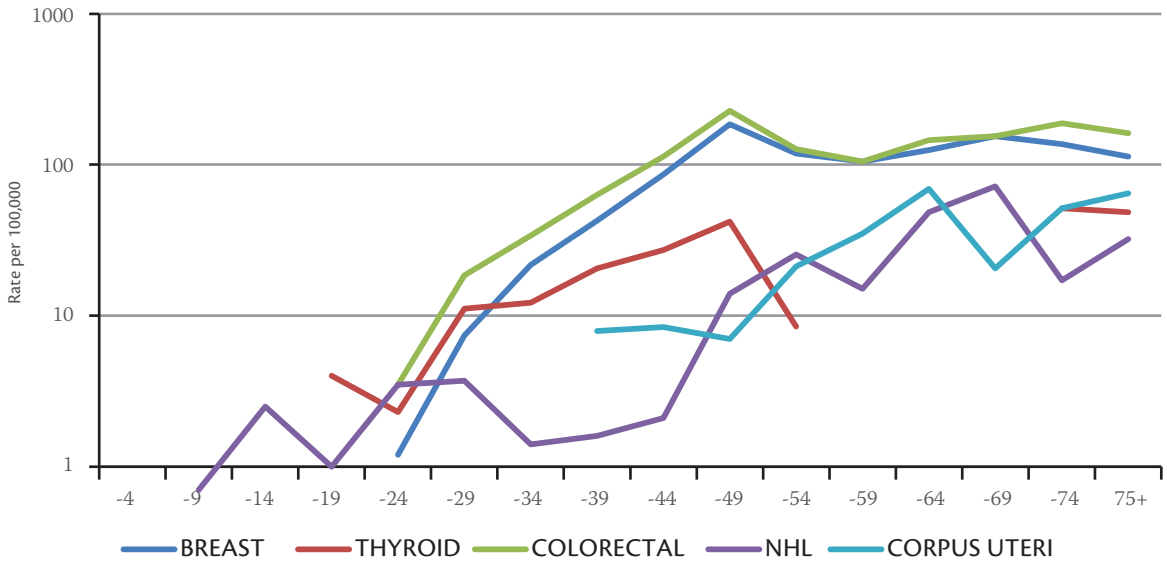




◄▲ Figure 2.33
Trend of Age Standardized Incidence Rates for the Most Common Cancers in Qatar, 1998-2007: Male.

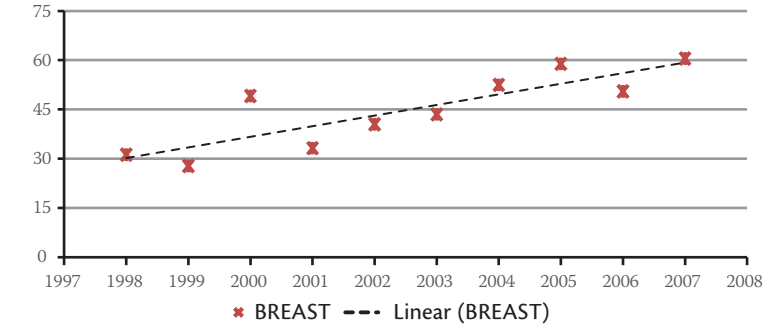
Most Common Cancer in Females:

1. Among Qatari females, breast cancer is the leading malignancy accounted to 28% with average annual ASR of 45.6/100,000 populations. Breast cancer started after the age of 25 years, the incidence then increased gradually with advanced age. The peak incidence appeared in women aged between 45 and 50 years after which the incidence fluctuate, Figure 2.34. The lowest ASR (27.8/100,000) was reported in 1999 and the highest (60.5/100,000) was reported in 2007. Highly significant increased trend of breast cancer incidence was observed during the period from 1998 to 2007 (p-value = 0.0018), Figure 2.35.
2. Thyroid cancer was the second most common cancer in Qatari females accounted to 8.6% with average annual ASR was 10.9/100,000 populations. Thyroid cancer started to appear with moderate incidence after the age of 20 years. The incidence increased with increased age, however due to low number of cases the incidence curve is broken up for women aged between 55 and 75 years. The peak incidence observed in women aged above 75 years, Figure 2.34. The lowest ASR (4.6/100,000) was reported in 2007 and the highest (19.8/100,000) was reported in 1999. A decreased trend of age standardized incidence of thyroid cancer was observed, however it was not statistically significant (p-value = 0.1822), Figure 2.35
3. Colorectal cancer was the third most common cancer in Qatari females accounting to 8.4% with average annual ASR of 16.6 populations. Colorectal cancer started to appear after the age of 25 years. The incidence then increased dramatically to reach its maximum peak in men aged between 45 and 50 years, Figure 2.34. The lowest ASR (7.7/100,000) was reported in 2003 and the highest (25.2/100,000) was reported in 2007. There was a tendency for increased trend of age standardized incidence, however it was not statistically significant (p-value = 0.2763), Figure 2.35.
4. NHL ranked in the fourth position among Qatari females accounted to 5.1% with average annual ASR of 9.1/100,000 population. NHL cancer started to appear after the age of 5 years. Then the incidence fluctuated with advanced age. The peak incidence was observed in women aged between 60 and 70 years, Figure 2.34. The lowest ASR (3.5/100,000) was reported in 2004 and the highest (17.7/100,000) was reported in 2007. A decreased trend of age standardized incidence of NHL was observed, however it was not statistically significant (p-value = 0.7886), Figure 2.35.
5. Corpus uteri cancer was the fifth most common cancer accounted to 4.8% of cancer cases diagnosed among Qatari females with average annual ASR of 9.6/100,000 population. Corpus uteri cancer started to appear after the age of 35years. Then the incidence increased gradually with increased age to reach the maximum peak in women aged between 65 and 70 years, Figure 2.34. The lowest ASR (4.0/100,000) was reported in 2003 and the highest (18.7/100,000) was reported in 2001. Slight increase in the ASR trend was observed during the ten year period but was not statistically significant (p-value = 0.7060), Figure 2.35.

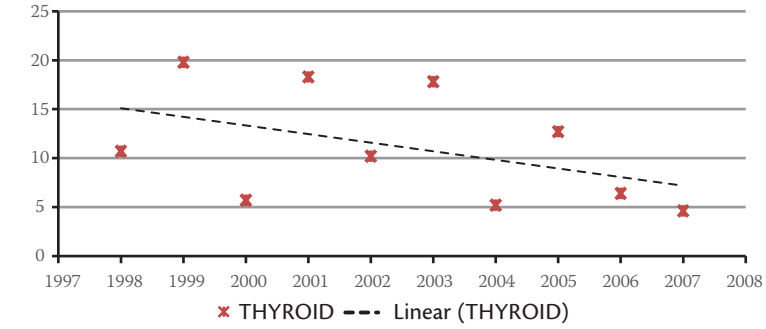


▲ Figure 2.34
Average annual Age Specific Incidence Rates of Most Common Cancers in Qatar, 1998-2007: Female.

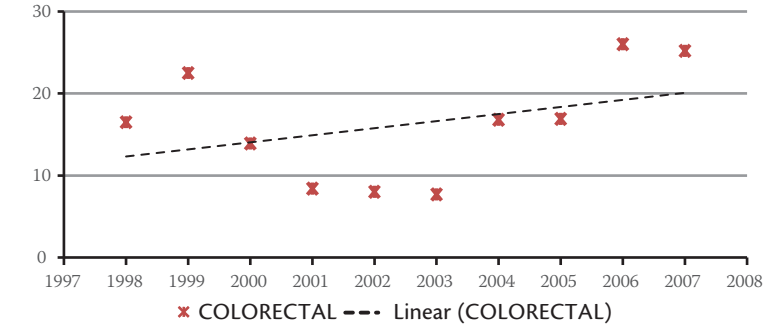
BREAST

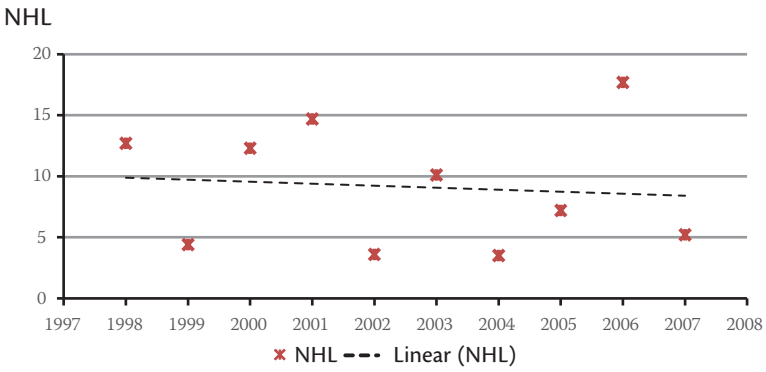


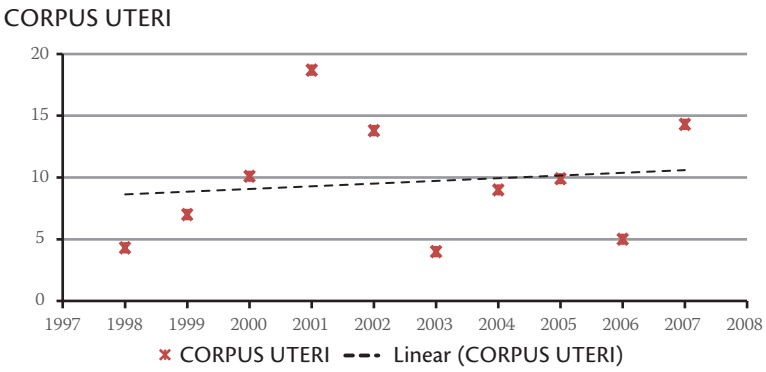
THYROID



COLORECTAL







◄▲ Figure 2.35
Trend of Age Standardized Incidence Rates for the Most Common Cancers in Qatar, 1998-2007: Female.

TABLE 2.27: INCIDENCE RATE (PER 100,000) OF CANCER AGE GROUP AND SITE,1998-2007:QATAR MALE

SITE	ICD-10	-4	-9	-14	-19	-24	-29	-34	-39	-44	-49	-54	-59	-64	-69	-74	75+	Crude	ASR	CumRt 0-64	All Ages
LIP	C00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TONGUE	C01-C02	.	.	.	.	.	.	.	1.8	2.4	.	5.3	5.2	.	.	.	10.2	0.5	0.9	0.1	5
MOUTH	C03-C06	.	.	.	.	.	.	.	.	.	.	5.3	.	.	8.6	.	.	0.2	0.5	0	2
SALIVARY GLANDS	C07-C08	.	.	.	.	.	.	1.5	.	.	.	.	.	.	.	.	10.2	0.2	0.3	0	2
TONSIL	C09	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
OTHER OROPHARYNX	C10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NASOPHARYNX	C11	.	.	0.8	.	.	1.3	.	1.8	2.4	17.9	.	5.2	.	.	36.5	.	1.3	2.4	0.1	13
HYPOPHARYNX	C12-C13	.	.	.	.	.	.	.	.	.	.	5.3	.	.	8.6	.	.	0.2	0.5	0	2
PHARYNX UNSPEC	C14	.	.	.	.	.	.	.	.	.	.	.	.	.	8.6	.	.	0.1	0.3	0	1
OESOPHAGUS	C15	.	.	.	.	.	.	.	.	4.7	.	10.7	10.4	10.8	.	36.5	81.3	2	4	0.2	19
STOMACH	C16	.	.	.	.	1.2	.	1.5	.	7.1	.	16	31.3	27	25.8	36.5	30.5	2.9	5.9	0.4	28
SMALL INTESTINE	C17	.	.	.	.	.	.	.	.	.	3.6	5.3	5.2	.	.	.	10.2	0.4	0.9	0.1	4
COLON	C18	.	.	.	.	.	.	3	1.8	2.4	14.3	32	10.4	53.9	86.1	48.6	50.8	4.6	10	0.6	45
RECTUM	C19-C20	.	.	.	.	.	.	1.5	1.8	2.4	3.6	16	10.4	43.1	25.8	36.5	.	2.4	5	0.4	23
ANUS	C21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LIVER	C22	.	0.7	0.8	.	.	1.3	.	1.8	7.1	3.6	21.3	31.3	37.7	137.8	158	91.4	6.5	13.9	0.5	63
GALL BLADDER ETC.	C23-C24	.	.	.	.	.	.	.	.	.	.	.	.	.	25.8	.	30.5	0.6	1.4	0	6
PANCREAS	C25	.	.	.	.	.	.	.	.	.	7.2	21.3	10.4	5.4	25.8	12.2	30.5	1.7	3.8	0.2	16
NOSE-SINUSES, ETC.	C30-C31	.	.	.	.	.	.	.	.	.	.	5.3	.	.	.	.	.	0.1	0.3	0	1
LARYNX	C32	.	.	.	.	.	.	.	1.8	2.4	10.7	16	26.1	21.6	43	12.2	30.5	2.7	5.7	0.4	26
TRACHEA, BROUCHAUS, LUNG	C33-C34	.	.	.	.	.	.	3	7.2	4.7	7.2	32	62.5	70.1	137.8	170.1	111.7	8.5	18	0.9	82
OTHER, THORACIC ORGANS	C37-C39	.	.	.	.	.	.	.	.	2.4	.	.	.	10.8	.	.	.	0.3	0.6	0.1	3
BONE	C40-C41	.	2	1.6	2.9	1.2	1.3	.	1.8	4.7	.	.	.	.	.	.	.	1.3	1.2	0.1	13
MELANOM OF SKIN	C43	.	.	.	.	.	.	.	.	.	.	.	.	.	.	12.2	.	0.1	0.2	0	1
OTHER SKIN	C44	.	.	0.8	.	.	.	.	3.6	.	7.2	10.7	15.6	5.4	68.9	48.6	60.9	3	6.4	0.2	29
MESOTHELIOMA	C45	.	.	.	.	.	.	.	.	.	.	.	5.2	5.4	.	.	.	0.2	0.4	0.1	2

KAPOSISARCOMA	C46	.	.	.	.	.	1.3	1.5	.	2.4	.	5.3	5.2	5.4	8.6	.	10.2	0.8	1.5	0.1	8
CONNECTIVE, SOFT TISSUE	C47;C49	0.6	1.4	.	1	1.2	1.3	1.5	.	2.4	7.2	.	.	.	8.6	.	10.2	1.2	1.6	0.1	12
RETROPERITONEUM & PERITONEUM	C48	.	.	.	.	.	.	.	.	.	3.6	.	.	.	.	12.2	.	0.2	0.5	0	2
BREAST	C50	.	.	.	.	.	.	1.5	.	.	.	10.7	.	.	.	.	10.2	0.4	0.8	0.1	4
PENIS	C60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PROSTATE	C61	.	.	.	.	.	.	.	.	.	.	10.7	26.1	37.7	68.9	60.8	182.8	4.6	10	0.4	45
TESTIS	C62	0.6	.	0.8	1	.	1.3	.	.	2.4	10.7	.	.	.	.	.	.	0.8	1.1	0.1	8
OTHER MALE GENITAL	C63	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
KIDNEY	C64	.	.	.	.	.	.	.	3.6	9.4	17.9	16	10.4	5.4	17.2	36.5	40.6	2.7	5.3	0.3	26
RENAL PELVIS	C65	.	.	.	.	.	.	.	1.8	.	.	5.3	.	.	.	.	.	0.2	0.4	0	2
URETER	C66	.	.	.	.	.	.	.	.	.	.	.	.	.	8.6	.	.	0.1	0.3	0	1
BLADDER	C67	.	.	.	.	.	2.6	.	3.6	4.7	3.6	26.7	31.3	64.7	51.7	85.1	111.7	5.6	11.6	0.7	54
OTHER URINARY ORGANS	C68	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EYE	C69	.	.	1.6	.	.	.	.	.	.	.	.	.	.	.	.	.	0.2	0.1	0	2
BRAIN, NERVOUS SYSTEM	C70-C72	0.6	.	0.8	.	2.3	5.1	.	.	11.8	.	16	15.6	10.8	34.4	12.2	20.3	2.9	5	0.3	28
THYROID	C73	0.6	.	.	.	1.2	2.6	3	3.6	9.4	7.2	5.3	.	10.8	.	24.3	10.2	2.1	3.2	0.2	20
ADRENAL GLAND	C74	0.6	.	.	1	.	.	.	.	.	.	.	.	5.4	8.6	.	.	0.4	0.6	0	4
OTHER ENDOCRINE	C75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HODGKIN DIS.	C81	0.6	1.4	4.9	2.9	1.2	1.3	4.5	.	11.8	3.6	16	15.6	5.4	.	.	.	3.1	3.9	0.3	30
NON HODGKIN LYMPHOMA	C82-C85;C96	1.3	.	1.6	2.9	1.2	2.6	4.5	3.6	7.1	17.9	21.3	10.4	37.7	43	60.8	50.8	5.3	9.4	0.6	51
IMMUNOPROLIFERATIVE DIS.	C88	.	.	.	.	.	.	.	.	.	.	.	.	.	8.6	.	.	0.1	0.3	0	1
MULTIPLE MYELOMA	C90	.	.	.	.	.	.	.	1.8	.	3.6	.	10.4	5.4	25.8	24.3	10.2	1.1	2.4	0.1	11
LYMPHOID LEUKAEMIA	C91	3.9	3.4	4.1	1	2.3	1.3	.	.	4.7	.	5.3	5.2	5.4	.	24.3	20.3	3	3.4	0.2	29
MYELOID LEUKAEMIA	C92-C94	0.6	0.7	.	2.9	1.2	2.6	1.5	.	.	3.6	10.7	10.4	5.4	8.6	36.5	81.3	2.8	4.8	0.2	27
LEUKAEMIA UNSPEC	C95	.	.	.	1	.	.	.	.	.	.	.	.	.	.	12.2	.	0.2	0.3	0	2
UNKOWN PRIMARY SITE	80	.	.	.	.	.	.	.	.	2.4	.	10.7	10.4	27	8.6	36.5	50.8	2	4.2	0.3	19
ALL SITES		9.4	9.6	17.8	16.6	13	25.9	28.5	41.4	111.2	154.2	362.5	380.2	517.7	903.8	1034	1158	79.7	153.4	8.4	772
ALL SITES EXCEPT C44	263	9.4	9.6	17	16.6	13	25.9	28.5	37.8	111.2	147	351.8	364.6	512.3	834.9	985	1097	76.7	147.1	8.2	743

TABLE 2.28: INCIDENCE RATE(PER 100,000)OF CANCER AGE GROUP AND SITE,1998-2007:QATAR FEMALE

SITE	ICD-10	-4	-9	-14	-19	-24	-29	-34	-39	-44	-49	-54	-59	-64	-69	-74	75+	Crude	ASR	Cumrt 0-64	All Ages
LIP	C00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TONGUE	C01-C02	.	.	.	.	.	.	.	1.6	.	3.5	.	.	6.9	10.3	.	16.1	0.5	1.2	0.1	5
MOUTH	C03-C06	.	.	0.8	.	.	.	.	.	.	.	.	5	6.9	.	.	16.1	0.4	0.9	0.1	4
SALIVARY GLANDS	C07-C08	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TONSIL	C09	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
OTHER OROPHARYNX	C10	.	.	.	.	.	.	.	.	.	.	.	.	.	10.3	.	.	0.1	0.3	0	1
NASOPHARYNX	C11	.	.	.	.	.	1.2	1.4	.	2.1	3.5	.	.	.	20.6	17.2	.	0.7	1.5	0	7
HYPOPHARYNX	C12-13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PHARYNX UNSPEC	C14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
OESOPHAGUS	C15	.	.	.	.	.	1.2	.	1.6	.	3.5	4.2	10	20.8	82.3	85.8	32.3	2.5	6.7	0.2	24
STOMACH	C16	.	.	.	.	.	.	1.4	1.6	6.3	10.5	4.2	15.1	13.9	41.1	51.5	32.3	2.4	5.5	0.3	23
SMALL INTESTINE	C17	.	.	.	.	.	.	.	.	2.1	.	.	.	.	.	17.2	.	0.2	0.5	0	2
COLON	C18	.	.	.	.	1.2	.	2.7	3.2	12.6	31.5	21.2	15.1	34.6	102.8	17.2	.	4.6	9.6	0.6	44
RECTUM	C19-C20	.	.	.	.	.	1.2	.	3.2	8.4	10.5	.	10	48.5	41.1	51.5	48.4	3	7	0.4	29
ANUS	C21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LIVER	C22	0.7	.	.	.	.	1.2	.	.	.	3.5	4.2	10	20.8	92.5	85.8	64.5	2.8	7.6	0.2	27
GALL BLADDER ETC.	C23-C24	.	.	.	.	.	.	.	.	.	10.5	4.2	20.1	13.9	51.4	34.3	16.1	1.9	4.8	0.2	18
PANCREAS	C25	.	.	.	.	.	.	.	1.6	.	3.5	12.7	5	20.8	30.8	17.2	.	1.3	3.2	0.2	13
OTHER & ILL- DEFIND DIGESTIVE ORGANS	C26	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	16.1	0.1	0.3	0	1
NOSE-SINUSES, ETC.	C30-C31	.	.	.	.	.	.	.	1.6	.	.	.	.	.	.	.	.	0.1	0.1	0	1
LARYNX	C32	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	16.1	0.1	0.3	0	1
TRACHEA, BROUCHAUS, LUNG	C33-C34	.	.	.	.	.	.	.	.	.	7	.	15.1	20.8	20.6	34.3	64.5	1.7	4.5	0.2	16
OTHER, THORACIC ORGANS	C37-C39	.	.	.	.	.	.	.	.	.	3.5	.	.	.	.	.	.	0.1	0.2	0	1
BONE	C40-C41	.	0.7	2.5	1	1.2	1.2	2.7	.	.	.	.	.	.	.	.	.	0.9	0.7	0	9
MELANOMA OF SKIN	C43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
OTHER SKIN	C44	.	.	.	.	.	1.2	.	1.6	6.3	21	4.2	5	20.8	20.6	51.5	16.1	2.3	5	0.3	22
MESOTHELIOMA	C45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

KAPOSISARCOMA	C46	.	.	.	.	.	.	1.4	.	.	.	.	.	.	.	17.2	.	0.2	0.4	0	2
CONNECTIVE, SOFT TISSUE	C47;C49	1.3	.	0.8	.	.	2.5	.	3.2	2.1	7	4.2	5	6.9	10.3	.	.	1.5	2.2	0.2	14
BREAST	C50	.	.	.	.	1.2	7.4	21.7	42.6	86.1	185.2	118.7	105.4	124.7	154.2	137.2	112.9	25	45.6	3.5	241
VULVA	C51	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VAGINA	C52	.	.	.	.	.	.	.	.	.	.	.	5	.	.	.	.	0.1	0.2	0	1
CERVIX UTERI	C53	.	.	.	.	.	1.2	.	4.7	18.9	14	17	15.1	34.6	20.6	17.2	32.3	3.5	6.8	0.5	34
CORPUS UTERI	C54	.	.	.	.	.	.	.	7.9	8.4	7	21.2	35.1	69.3	20.6	51.5	64.5	4.4	9.6	0.7	42
UTERUS UNSPEC	C55	.	.	.	.	.	.	2.7	1.6	.	3.5	.	.	13.9	.	.	.	0.6	1	0.1	6
OVARY	C56	.	.	1.7	3	.	2.5	.	4.7	6.3	24.5	12.7	30.1	41.6	20.6	17.2	.	3.9	7.2	0.6	38
OTTHER FEMALE GENITAL	C57	.	.	.	.	.	.	.	.	.	3.5	.	.	.	.	.	.	0.1	0.2	0	1
PLACENTA	C58	.	.	.	.	1.2	.	1.4	.	.	.	.	.	.	.	.	.	0.2	0.2	0	2
KIDNEY	C64	.	.	.	.	.	.	2.7	1.6	2.1	7	17	.	.	20.6	.	.	1.2	2.3	0.2	12
KIDNEY	C65	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
URETER	C66	.	.	.	.	.	.	.	.	.	.	.	.	.	.	17.2	.	0.1	0.3	0	1
BLADDER	C67	.	.	.	.	.	.	.	.	4.2	.	.	.	6.9	.	51.5	16.1	0.7	1.9	0.1	7
OTHER URINARY ORGANS	C68	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EYE	C69	.	.	.	.	.	.	.	.	.	.	.	.	.	10.3	.	.	0.1	0.3	0	1
BRAIN, NERVOUS SYSTEM	C70-C72	2	.	0.8	1	1.2	2.5	1.4	1.6	6.3	3.5	.	5	13.9	.	17.2	32.3	2.1	3.2	0.2	20
THYROID	C73	0.7	.	.	4	2.3	11.1	12.2	20.5	27.3	41.9	8.5	.	20.8	.	51.5	48.4	7.7	10.9	0.7	74
ADRENAL GLAND	C74	.	.	.	.	.	.	.	.	4.2	.	.	.	.	10.3	.	.	0.3	0.6	0	3
OTHER ENDOCRINE	C75	.	.	.	.	.	.	.	.	2.1	.	.	5	.	.	.	.	0.2	0.3	0	2
HODGKIN DIS.	C81	0.7	.	2.5	1	7	2.5	2.7	1.6	.	.	8.5	.	.	.	.	.	1.9	1.8	0.1	18
NON HODGKIN LYMPHOMA	C82-C85;C96	.	0.7	2.5	1	3.5	3.7	1.4	1.6	2.1	14	25.4	15.1	48.5	72	17.2	32.3	4.6	9.1	0.6	44
MULTIPLE MYELOMA	C90	.	.	.	.	.	.	.	.	2.1	.	4.2	.	6.9	.	17.2	.	0.4	1	0.1	4
LYMPHOID LEUKAEMIA	C91	0.7	3.7	2.5	1	.	.	.	.	.	.	.	5	6.9	.	.	.	1.2	1.2	0.1	12
MYELOID LEUKAEMIA	C92-C94	1.3	.	0.8	.	2.3	3.7	1.4	1.6	6.3	3.5	4.2	.	.	41.1	17.2	.	2.1	3.3	0.1	20
LEUKAEMIA UNSPEC	C95	0.7	0.7	.	.	1.2	1.2	.	.	.	.	.	.	.	.	.	.	0.4	0.3	0	4
UNKOWN PRIMARY SITE	80	.	.	.	.	.	.	.	.	.	.	4.2	.	6.9	20.6	34.3	32.3	0.8	2.4	0.1	8
ALL SITES		8.1	5.8	14.9	12	22.3	45.5	57.2	109.2	216.3	426.6	300.7	336.2	630.5	925.6	927.1	709.7	89.2	172.2	10.9	859
ALL SITES EXCEPT C44	251	8.1	5.8	14.9	12	22.3	44.3	57.2	107.6	210	405.6	296.5	331.2	609.7	905	875.6	693.6	86.9	167.1	10.6	837

TABLE 2.29: DISTRIBUTION OF CANCER CASES BY AGE GROUP AND SITE, 1998-2007, QATAR: MALE

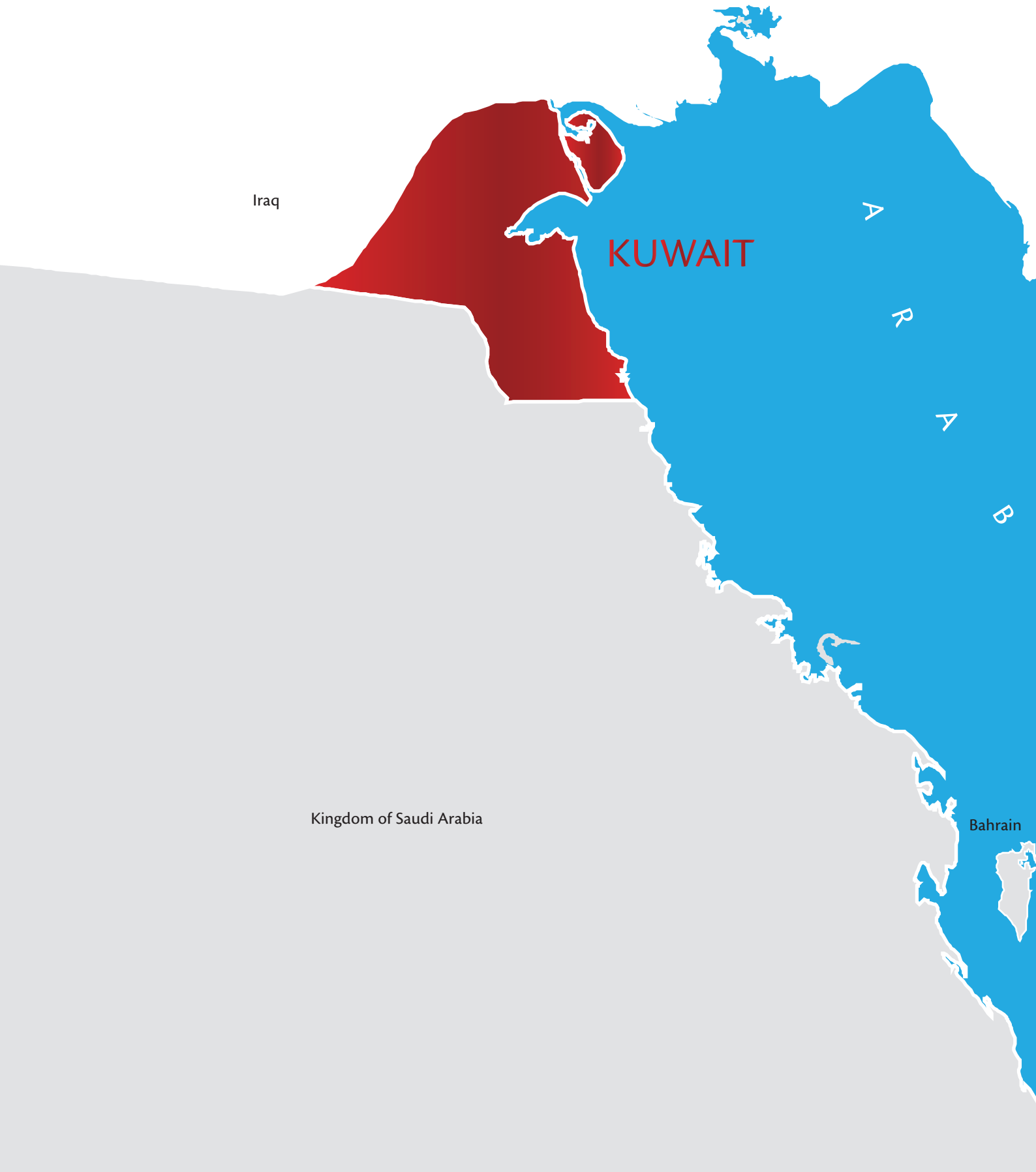
SITE	ICD 10	-4	-9	-14	-19	-24	-29	-34	-39	-44	-49	-54	-59	-64	-69	-74	75+	Age Unk	All Ages	% of Total
LIP	C00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TONGUE	C01-C02	0	0	0	0	0	0	0	1	1	0	1	1	0	0	0	1	0	5	0.60%
MOUTH	C03-C06	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	2	0.20%
SALIVARY GLANDS	C07-C08	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	2	0.20%
TONSIL	C09	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
OTHER OROPHARYNX	C10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NASOPHARYNX	C11	0	0	1	0	0	1	0	1	1	5	0	1	0	0	3	0	0	13	1.60%
HYPOPHARYNX	C12-C13	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	2	0.20%
PHARYNX UNSPEC	C14	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0.10%
OESOPHAGUS	C15	0	0	0	0	0	0	0	0	2	0	2	2	2	0	3	8	0	19	2.40%
STOMACH	C16	0	0	0	0	1	0	1	0	3	0	3	6	5	3	3	3	0	28	3.60%
SMALL INTESTINE	C17	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	1	0	4	0.50%
COLON	C18	0	0	0	0	0	0	2	1	1	4	6	2	10	10	4	5	0	45	5.80%
RECTUM	C19-C20	0	0	0	0	0	0	1	1	1	1	3	2	8	3	3	0	0	23	2.90%
ANUS	C21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LIVER	C22	0	1	1	0	0	1	0	1	3	1	4	6	7	16	13	9	0	63	8.10%
GALL BLADDER ETC.	C23-C24	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	0	6	0.70%
PANCREAS	C25	0	0	0	0	0	0	0	0	0	2	4	2	1	3	1	3	0	16	2.00%
NOSE-SINUSES, ETC.	C30-C31	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0.10%
LARYNX	C32	0	0	0	0	0	0	0	1	1	3	3	5	4	5	1	3	0	26	3.30%
TRACHEA, BROUCHAUS, LUNG	C33-C34	0	0	0	0	0	0	2	4	2	2	6	12	13	16	14	11	0	82	10.60%
OTHER, THORACIC ORGANS	C37-C39	0	0	0	0	0	0	0	0	1	0	0	0	2	0	0	0	0	3	0.30%
BONE	C40-C41	0	3	2	3	1	1	0	1	2	0	0	0	0	0	0	0	0	13	1.60%
MELANOM OF SKIN	C43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0.10%
OTHER SKIN	C44	0	0	1	0	0	0	0	2	0	2	2	3	1	8	4	6	0	29	3.70%
MESOTHELIOMA	C45	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	2	0.20%

KAPOSISARCOMA	C46	0	0	0	0	0	1	1	0	1	0	1	1	1	1	0	1	0	8	1.00%
CONNECTIVE, SOFT TISSUE	C47;C49	1	2	0	1	1	1	1	0	1	2	0	0	0	1	0	1	0	12	1.50%
RETROPERITONEUM & PERITONEUM	C48	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	2	0.20%
BREAST	C50	0	0	0	0	0	0	1	0	0	0	2	0	0	0	0	1	0	4	0.50%
PENIS	C60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PROSTATE	C61	0	0	0	0	0	0	0	0	0	0	2	5	7	8	5	18	0	45	5.80%
TESTIS	C62	1	0	1	1	0	1	0	0	1	3	0	0	0	0	0	0	0	8	1.00%
OTHER MALE GENITAL	C63	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
KIDNEY	C64	0	0	0	0	0	0	0	2	4	5	3	2	1	2	3	4	0	26	3.30%
RENAL PELVIS	C65	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	0.20%
URETER	C66	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0.10%
BLADDER	C67	0	0	0	0	0	2	0	2	2	1	5	6	12	6	7	11	0	54	6.90%
OTHER URINARY ORGANS	C68	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EYE	C69	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0.20%
BRAIN, NERVOUS SYSTEM	C70-C72	1	0	1	0	2	4	0	0	5	0	3	3	2	4	1	2	0	28	3.60%
THYROID	C73	1	0	0	0	1	2	2	2	4	2	1	0	2	0	2	1	0	20	2.50%
ADRENAL GLAND	C74	1	0	0	1	0	0	0	0	0	0	0	0	1	1	0	0	0	4	0.50%
OTHER ENDOCRINE	C75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HODGKIN DIS.	C81	1	2	6	3	1	1	3	0	5	1	3	3	1	0	0	0	0	30	3.80%
NON HODGKIN LYMPHOMA	C82-C85;C96	2	0	2	3	1	2	3	2	3	5	4	2	7	5	5	5	0	51	6.60%
IMMUNOPROLIFERATIVE DIS.	C88	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0.10%
MULTIPLE MYELOMA	C90	0	0	0	0	0	0	0	1	0	1	0	2	1	3	2	1	0	11	1.40%
LYMPHOID LEUKAEMIA	C91	6	5	5	1	2	1	0	0	2	0	1	1	1	0	2	2	0	29	3.70%
MYELOID LEUKAEMIA	C92-C94	1	1	0	3	1	2	1	0	0	1	2	2	1	1	3	8	0	27	3.40%
LEUKAEMIA UNSPEC	C95	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	2	0.20%
UNKOWN PRIMARY SITE	80	0	0	0	0	0	0	0	0	1	0	2	2	5	1	3	5	0	19	2.40%
ALL SITES		15	14	22	17	11	20	19	23	47	43	68	73	96	105	85	114	0	772	100%
ALL SITES EXCEPT C44	263	15	14	21	17	11	20	19	21	47	41	66	70	95	97	81	108	0	743	100%

TABLE 2.30: DISTRIBUTION OF CANCER CASES BY AGE GROUP AND SITE, 1998-2007, QATAR: FEMALE

SITE	ICD 10	-4	-9	-14	-19	-24	-29	-34	-39	-44	-49	-54	-59	-64	-69	-74	75+	Age Unk	All Ages	% of Total
LIP	C00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TONGUE	C01-C02	0	0	0	0	0	0	0	1	0	1	0	0	1	1	0	1	0	5	0.50%
MOUTH	C03-C06	0	0	1	0	0	0	0	0	0	0	0	1	1	0	0	1	0	4	0.40%
SALIVARY GLANDS	C07-C08	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TONSIL	C09	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
OTHER OROPHARYNX	C10	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0.10%
NASOPHARYNX	C11	0	0	0	0	0	1	1	0	1	1	0	0	0	2	1	0	0	7	0.80%
HYPOPHARYNX	C12-C13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PHARYNX UNSPEC.	C14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
OESOPHAGUS	C15	0	0	0	0	0	1	0	1	0	1	1	2	3	8	5	2	0	24	2.70%
STOMACH	C16	0	0	0	0	0	0	1	1	3	3	1	3	2	4	3	2	0	23	2.60%
SMALL INTESTINE	C17	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	2	0.20%
COLON	C18	0	0	0	0	1	0	2	2	6	9	5	3	5	10	1	0	0	44	5.10%
RECTUM	C19-C20	0	0	0	0	0	1	0	2	4	3	0	2	7	4	3	3	0	29	3.30%
ANUS	C21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LIVER	C22	1	0	0	0	0	1	0	0	0	1	1	2	3	9	5	4	0	27	3.10%
GALL BLADDER ETC.	C23-C24	0	0	0	0	0	0	0	0	0	3	1	4	2	5	2	1	0	18	2.00%
PANCREAS	C25	0	0	0	0	0	0	0	1	0	1	3	1	3	3	1	0	0	13	1.50%
OTHER DIGESTIVE ORGANS	C26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0.10%
NOSE-SINUSES, ETC.	C30-C31	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0.10%
LARYNX	C32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0.10%
TRACHEA, BROUCHAUS, LUNG	C33-C34	0	0	0	0	0	0	0	0	0	2	0	3	3	2	2	4	0	16	1.80%
OTHER, THORACIC ORGANS	C37-C39	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.10%
BONE	C40-C41	0	1	3	1	1	1	2	0	0	0	0	0	0	0	0	0	0	9	1.00%
MELANOMA OF SKIN	C43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
OTHER SKIN	C44	0	0	0	0	0	1	0	1	3	6	1	1	3	2	3	1	0	22	2.50%
MESOTHELIOMA	C45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
KAPOSISARCOMA	C46	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	2	0.20%

CONNECTIVE, SOFT TISSUE	C47;C49	2	0	1	0	0	2	0	2	1	2	1	1	1	1	0	0	0	14	1.60%
BREAST	C50	0	0	0	0	1	6	16	27	41	53	28	21	18	15	8	7	0	241	28.00%
VULVA	C51	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VAGINA	C52	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0.10%
CERVIX UTERI	C53	0	0	0	0	0	1	0	3	9	4	4	3	5	2	1	2	0	34	3.90%
CORPUS UTERI	C54	0	0	0	0	0	0	0	5	4	2	5	7	10	2	3	4	0	42	4.80%
UTERUS UNSPEC	C55	0	0	0	0	0	0	2	1	0	1	0	0	2	0	0	0	0	6	0.60%
OVARY	C56	0	0	2	3	0	2	0	3	3	7	3	6	6	2	1	0	0	38	4.40%
OTTHER FEMALE GENITAL	C57	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.10%
PLACENTA	C58	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	2	0.20%
KIDNEY	C64	0	0	0	0	0	0	2	1	1	2	4	0	0	2	0	0	0	12	1.30%
RENAL PELVIS	C65	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
URETER	C66	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0.10%
BLADDER	C67	0	0	0	0	0	0	0	0	2	0	0	0	1	0	3	1	0	7	0.80%
OTHER URINARY ORGANS	C68	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EYE	C69	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0.10%
BRAIN, NERVOUS SYSTEM	C70-C72	3	0	1	1	1	2	1	1	3	1	0	1	2	0	1	2	0	20	2.30%
THYROID	C73	1	0	0	4	2	9	9	13	13	12	2	0	3	0	3	3	0	74	8.60%
ADRENAL GLAND	C74	0	0	0	0	0	0	0	0	2	0	0	0	0	1	0	0	0	3	0.30%
OTHER ENDOCRINE	C75	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2	0.20%
HODGKIN DIS.	C81	1	0	3	1	6	2	2	1	0	0	2	0	0	0	0	0	0	18	2.00%
NON HODGKIN LYMPHOMA	C82-C85;C96	0	1	3	1	3	3	1	1	1	4	6	3	7	7	1	2	0	44	5.10%
IMMINOPROLIFERATIVE	C88	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MULTIPLE MYELOMA	C90	0	0	0	0	0	0	0	0	1	0	1	0	1	0	1	0	0	4	0.40%
LYMPHOID LEUKAEMIA	C91	1	5	3	1	0	0	0	0	0	0	0	1	1	0	0	0	0	12	1.30%
MYELOID LEUKAEMIA	C92-C94	2	0	1	0	2	3	1	1	3	1	1	0	0	4	1	0	0	20	2.30%
LEUKAEMIA UNSPEC	C95	1	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	4	0.40%
UNKOWN PRIMARY SITE	80	0	0	0	0	0	0	0	0	0	0	1	0	1	2	2	2	0	8	0.90%
ALL SITES		12	8	18	12	19	37	42	69	103	122	71	67	91	90	54	44	0	859	100%
ALL SITES EXCEPT C44	251	12	8	18	12	19	36	42	68	100	116	70	66	88	88	51	43	0	837	100%


Iraq
KUWAIT
A
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Kingdom of Saudi Arabia
Bahrain


A N
G U L F
Qatar
United Arab Emirates

STATE OF KUWAIT

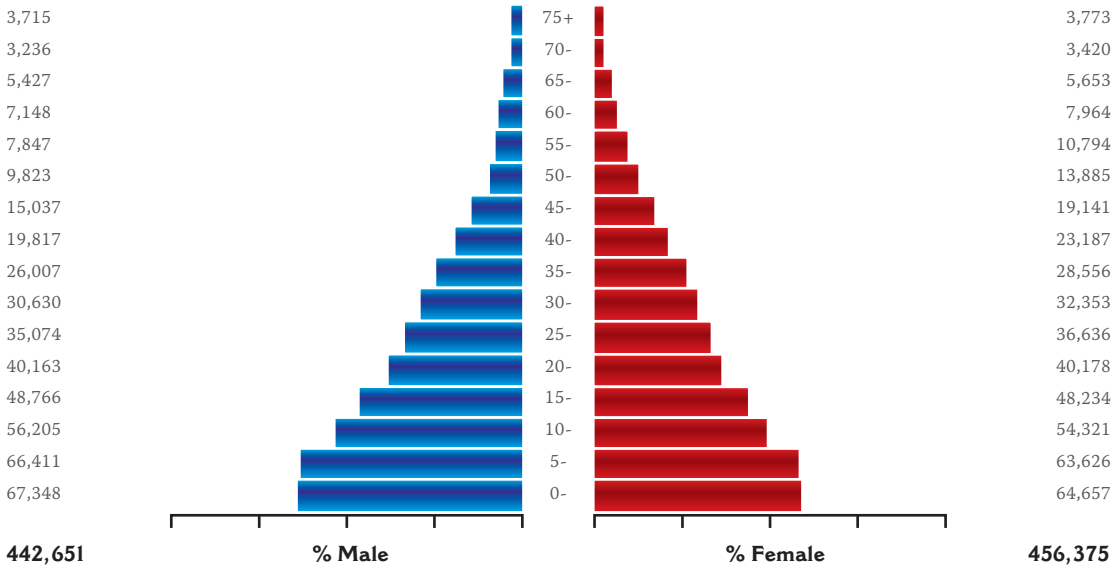
Cancer Incidence in the State of Kuwait

This report was prepared based on the data received from the Kuwait National Cancer Registry (NCR) as of January 2011. Average annual incidence rates were calculated based on the mid-point population structure for Kuwaiti nationals estimated from the population pyramid that was reported by the Kuwaiti NCR in 2007. Figure 2.36 shows the mi-point population structure for both genders by age group.

From January 1998 to December 2007 there were 6,931 Kuwait nationals diagnosed with cancer, 2,998 (43.3%) were males and 3,915 (56.5%) were females. More than 70% of cases had histopathology confirmation. Cytology/hematology and radiological modalities were the base of diagnosis in 20.8% of cases and death certificate was the source in about 7% of cases during the 10 year period, Table 2.31.

Half of the cancer patients presented with advanced cancers (16% of males and 11% of females presented with distant metastasis, and 29% of males and 42% of females presented with regional metastasis). Localized tumors were present in 37% and unknown extent was present in about 34% of cancer cases, Figure 2.37.

Cancer incidence declined after the first five years of live before it started to increase with advanced age in both genders. During early to mid adulthood Kuwaiti females showed slightly higher incidence of cancer. While after the age of 64 years, males appeared to have slightly higher incidence compared to females, Figure 2.38.



▲ **Figure 2.36**
Estimated Population for State of Kuwait by Gender and Age Group, 2000.

Table 2.31 ▼
Basis of diagnosis, 1998-2007.

HISTOPATHOLOGY	2049	68.3	2889	73.8	4938	71.4
Cytology/Hematological	503	16.8	676	17.3	1179	17.1
Death Certificate Only	256	8.5	212	5.4	468	6.8
Radiology	144	4.8	112	2.9	256	3.7
Clinical/ surgical	26	0.9	15	0.4	41	0.6
Other laboratory test , Biomarker	13	0.4	6	0.2	19	0.3
Unknown	7	0.2	5	0.1	12	0.2
TOTAL	2998	100.0	3915	100.0	6913	100.0

Figure 2.37 ▼
Extent of cancer among Kuwait nationals.

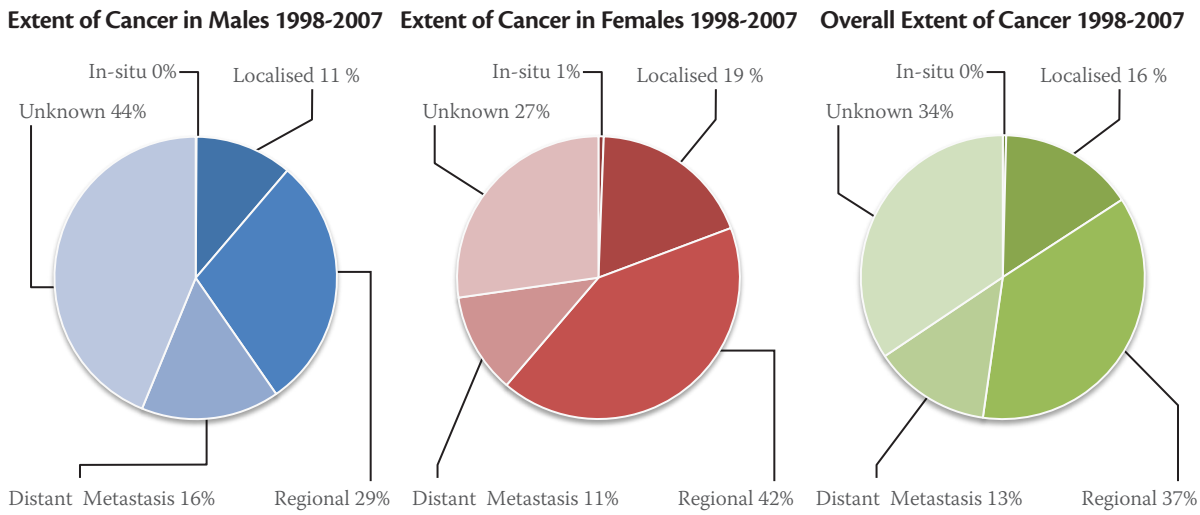
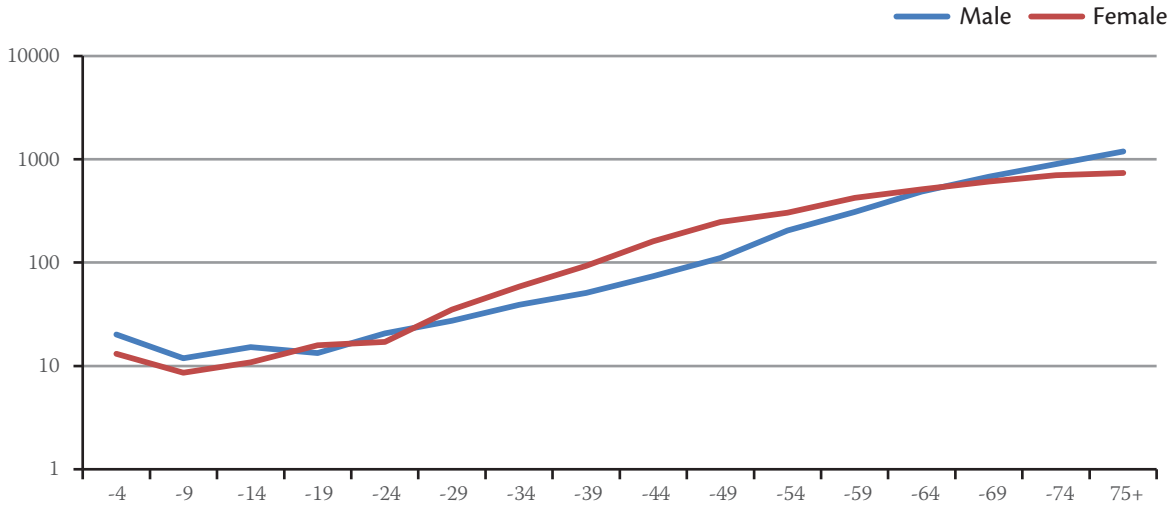


Figure 2.38▼
Age Specific Incidence Rates of all Cancers in Kuwait by gender, 1998-2007.



▼ Table 2.32
The Most Common Cancers by Gender in Kuwait, 1998-2007.

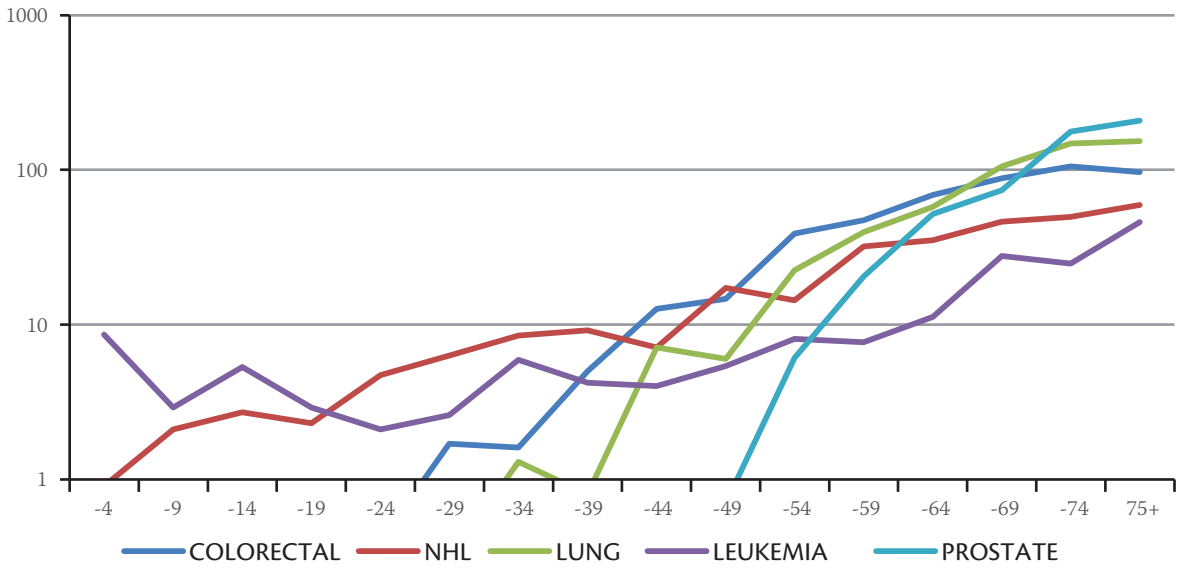
MALE				FEMALE			
Site	*NO.*	*%*	*ASR*	*Site*	*NO.*	*%*	*ASR*
COLORECTAL	316	10	15.5	BREAST	1350	34.4	48
NHL	304	10.1	11.1	COLORECTAL	342	8.6	13.3
LUNG	287	9.5	15.1	THYROID	303	7.7	8.5
LEUKAEMIA	246	8.1	7	NHL	188	4.8	6.4
PROSTATE	234	7.8	13.1	LEUKAEMIA	181	4.5	4.9

** Average annual age standardized incidence rate per 100,000 populations*

Colorectal cancer was the leading malignancy among Kuwaiti males followed by NHL, lung, leukemia and prostate cancers. While in females, breast cancer was the leading malignancy followed by colorectal, thyroid, NHL and leukemia, Table 2.32.

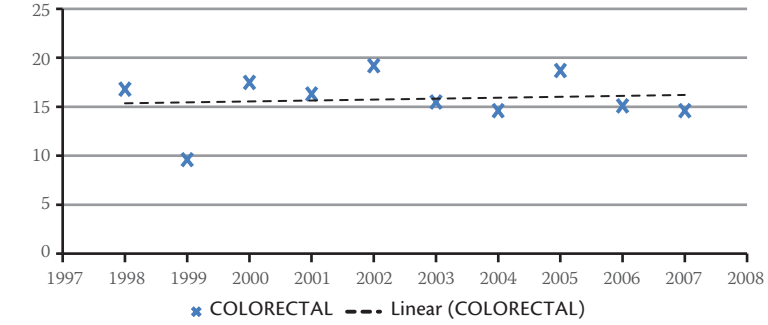
Most Common Cancer in Males:

1. Colorectal cancer was the most common cancer among Kuwait males accounted to 10.0% from all male cancer with average annual ASR of 15.5/100,000 populations. Colorectal cancer started to appear with low incidence after the age of 25 years, and then the incidence increased gradually with advanced age to reach its maximum peak in men aged above 75 years, Figure 2.39. The lowest ASR (9.6/100,000) was reported in 1999 and the highest rate (19.2/100,000) was reported in 2002. No trend of age standardized incidence was observed for colorectal cancer between 1998 and 2007 (p-value = 0.7671), Figure 2.40.
2. NHL is the second most common cancer reported among Kuwait males accounted to 10.1% with average annual ASR of 11.1/100,000 populations. NHL started to appear with low incidence during early childhood. The incidence increased gradually to reach its maximum peak in men aged between 70 and 75 years, Figure 2.39. The lowest ASR (5.3/100,000) was reported in 2000 and the highest rate (13.2/100,000) was reported in 1999. The trend of age standardized incidence of NHL was not statistically significant (p-value = 0.7548), Figure 2.40.
3. Lung cancer was the third most cancer among Kuwait males accounted to 9.5% from the total number of cancer reported in males with average annual of 15.1/100,000 population. Lung cancer started to appear after the age of 30 years then the incidence increased gradually to reach the highest peak at age 70 years and above, figure 2.39. The lowest ASR (5.6/100,000) was reported in 2000 and the highest rate (19.0/100,000) was reported in 2003. A declined trend of age standardized incidence was observed, however it was not statistically significant (p-value = 0.5070), Figure 2.40.
4. Leukemia ranked in the fourth position in Kuwaiti males accounted to 8.1% with average annual ASR of 7.0/100,000 population. Early onset leukemia has its highest incidence during the first five years of live then the incidence declined during early adulthood before it rose again to reach its late onset peak incidence in men aged between 65 and 70 and above 75years, Figure 2.39. The lowest ASR (4.9/100,000) was reported in 1999, while the highest rate (11.2/100,000) was reported in 2006. A slight declined trend of age standardized incidence was observed, however it was not statistically significant (p-value = 0.4811), Figure 2.40.
5. Prostate cancer was the fifth most common cancer among Kuwaiti males accounted to 7.8% from the total cancer in males with average annual ASR of 13.1/100,000 population. Prostate cancer started to appear after the age of 45 years then the incidence dramatically increased to reach its maximum peak at age of 75 years and above, Figure 2.39. The lowest ASR (9.1/100,000) was reported in 1999 and the highest rate (16.6/100,000) was reported in 2003. There was a tendency for increased trend of age standardized incidence, however it was not statistically significant (p-value = 0.1222), Figure 2.40.

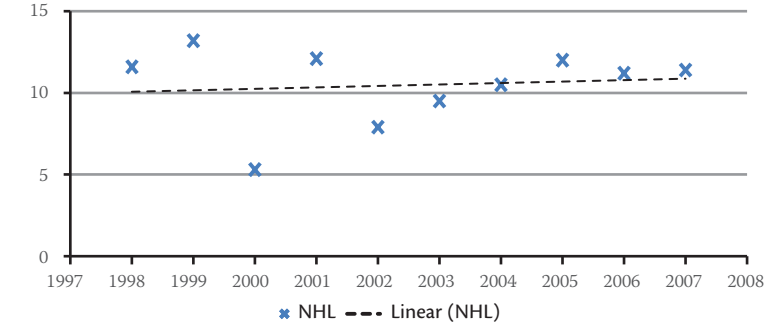


▲ Figure 2.39
Average Annual Age Specific Incidence Rates of Most Common Cancers in Kuwait, 1998-2007: Male.

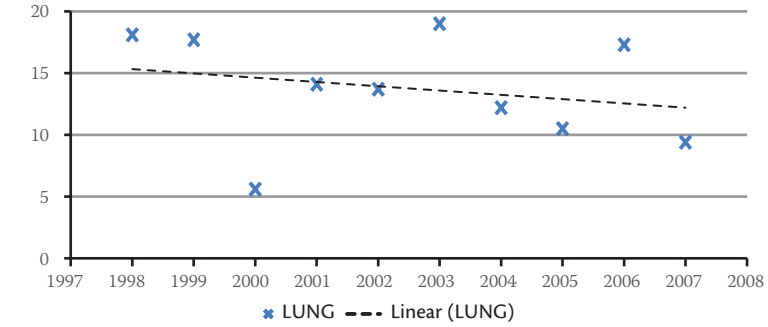
COLORECTAL

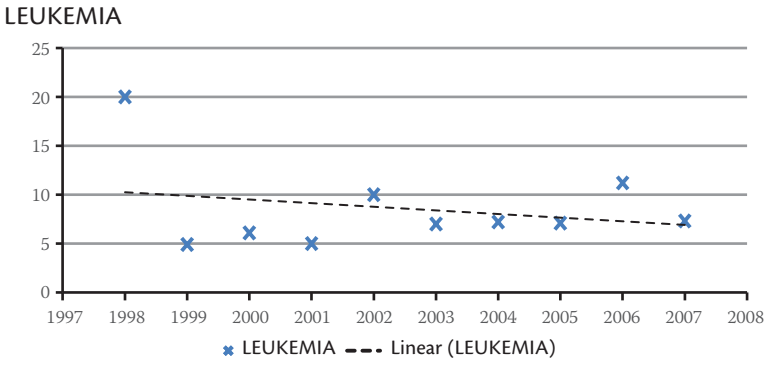


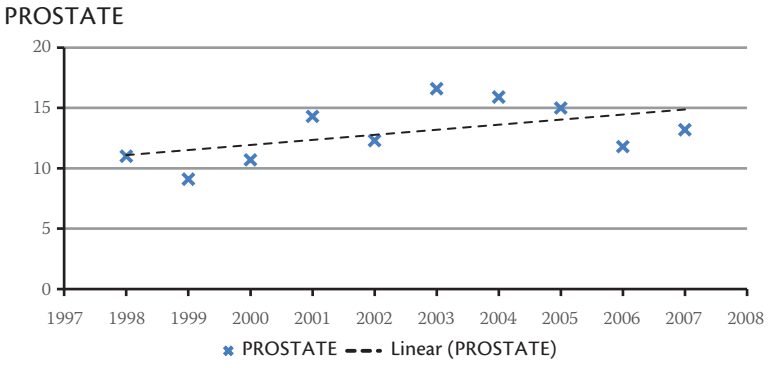
NHL



LUNG



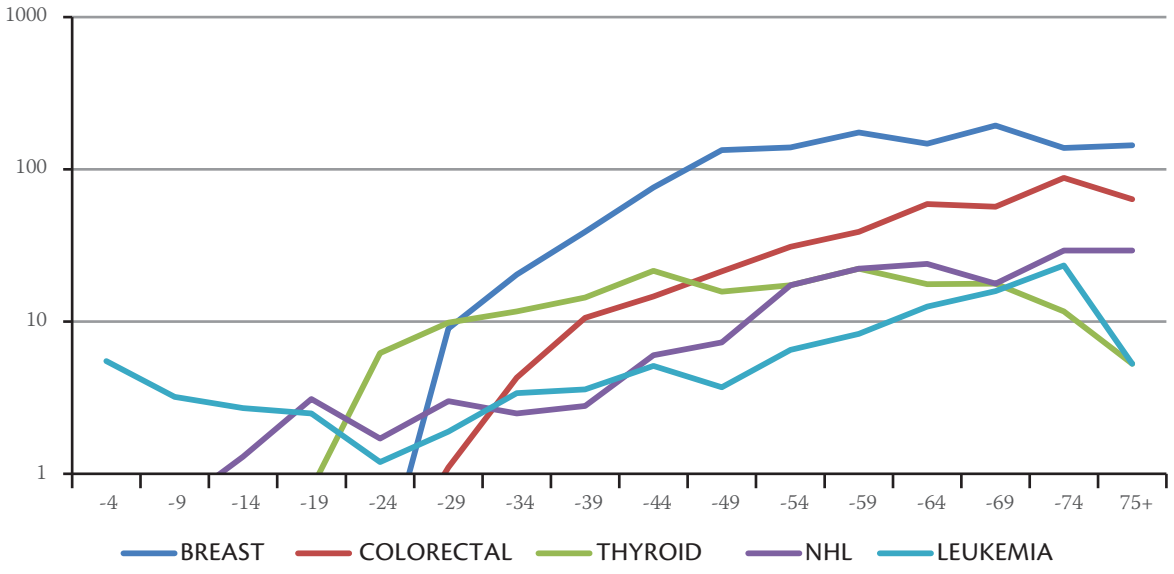




◄▲ Figure 2.40
Trend of Age Standardized Incidence Rates for the Most Common Cancers in Kuwait, 1998-2007: Male.

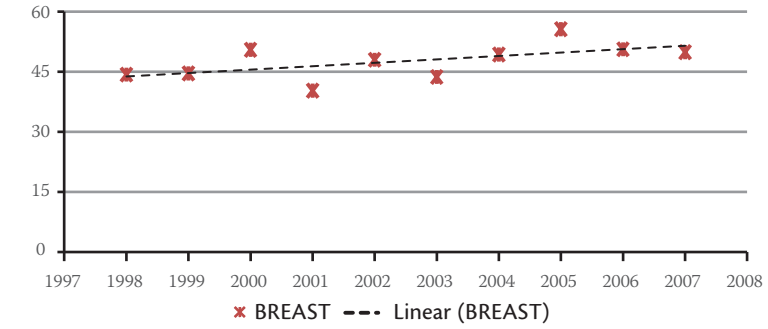
Most Common Cancer in Females:

1. Among Kuwaiti females, breast cancer was the leading malignancy accounted to 34.3% from the total cancers in females and with average annual ASR of 48/100,000 population. Breast cancer started to appear after the age of 20 years. The incidence increased dramatically with increased age to reach its peak among women aged between 65 and 70 years, Figure 2.41. The lowest ASR (40.3/100,000) was reported in 2001 and the highest (55.6/100,000) was reported in 2005. There was a borderline significant increased trend of age standardized incidence of breast cancer during the period between 1998 and 2007 (p-value = 0.0788), Figure 2.42.
2. Colorectal cancer was the second most common cancer among Kuwait females accounted to 8.6% from the total cancer in females and with average annual ASR of 13.3/100,000 population. Colorectal cancer started after the age of 25 years then the incidence increased as age increases to reach its peak incidence in women aged between 55 and 70 years, Figure 2.41. The lowest ASR (5.1/100,000) was reported in 1999 and the highest rate (17.5/100,000) was reported in 2000. There is a tendency for increased trend of age standardized incidence which was not statistically significant (p-value = 0.4291), Figure 2.42.
3. Thyroid cancer was the third most common cancer in Kuwaiti women accounted to 7.7% and with average annual ASR of 8.5/100,000 populations. Thyroid cancer started with very low incidence during childhood then the incidence increased gradually to reach its first peak in women aged between 45 to 50 years and a second peak between ages of 60 and 65 years. The incidence declined after age 65, Figure 2.41. The lowest ASR (6.2/100,000) was reported in 2000 and the highest (12.7/100,000) was reported in 1999. A slight increased trend of age standardized incidence was observed, however it was not statistically significant (p-value = 0.7650), Figure 2.42.
4. NHL was the fourth most common cancer among Kuwaiti females accounted to 4.8% from the total cancer in females and with average annual ASR of 6.4/100,000 population. NHL started to appear with low incidence during early childhood then the incidence increased gradually to reach its maximum peak in women aged above 75 years, Figure 2.41. The lowest ASR (3.3/100,000) was reported in 2007 while the highest (14.1/100,000) was reported in 2005. A declined trend of age standardized incidence was observed however it was not statistically significant (p-value = 0.8165), Figure 2.42.
5. Leukemia ranked in the fifth position and accounted to 4.5% from the total cancer in females with average annual ASR of 4.9/100,000 population. Early onset leukemia had its highest incidence during the first five years of live. The incidence declined during early adulthood before it rose again to reach its late onset peak in women aged above 75 years, Figure 2.41. The lowest ASR (3.3/100,000) was reported in 2001 and the highest (10.0/100,000) rate was reported in 1999. A declined trend of age standardized incidence was observed however it was not statistically significant (p-value = 0.2682), Figure 2.42.

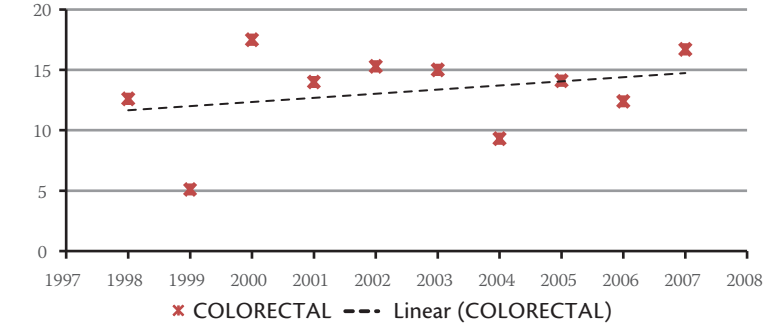


▲ Figure 2.41
Average Annual Age Specific Incidence Rates of Most Common Cancers in Kuwait, 1998-2007 Female.

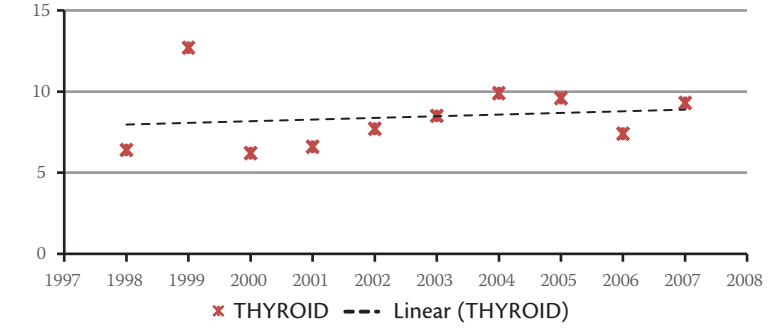
BREAST

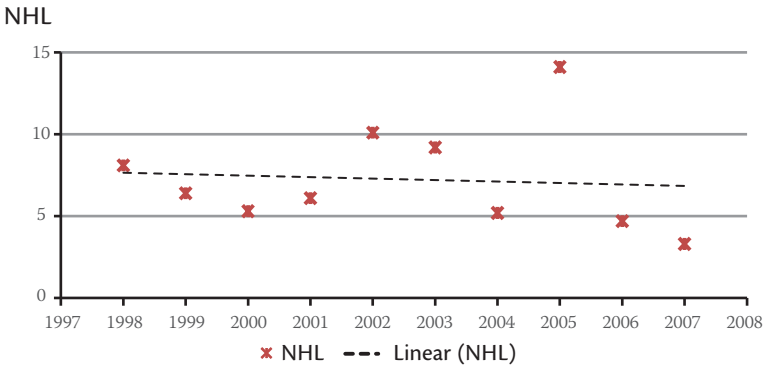


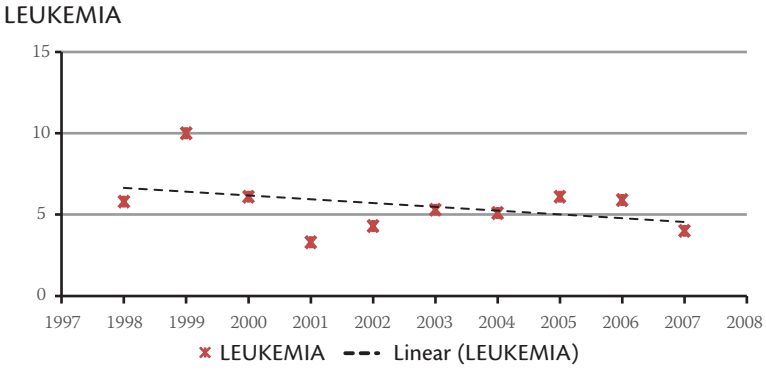
COLORECTAL



THYROID







◄▲ Figure 2.42
Trend of Age Standardized Incidence Rates for the Most Common Cancers in Kuwait, 1998-2007: Female.

TABLE 2.33: INCIDENCE RATE (PER100.000) OF CANCER CASE BY GROUP AND SITE, 1998-2007, KUWAIT MALE

SITE	ICD10	-4	-9	-14	-19	-24	-29	-34	-39	-44	-49	-54	-59	-64	-69	-74	75+	Crude	ASR	CumRt 0-64	All Ages
LIP	C00	.	.	.	.	.	.	0.3	0.4	.	.	.	.	.	1.8	3.1	.	0.1	0.2	0	4
TONGUE	C01-C02	.	.	.	.	0.2	.	0.3	0.4	.	.	1	2.5	2.8	9.2	.	2.7	0.3	0.7	0	14
MOUTH	C03-C06	.	.	.	.	0.2	.	.	0.4	0.5	1.3	1	3.8	.	3.7	.	10.8	0.3	0.7	0	15
SALIVARY GLANDS	C07-C08	.	.	.	.	.	0.3	.	0.4	1	.	.	1.3	.	3.7	.	8.1	0.2	0.4	0	10
TONSIL	C09	.	.	.	.	.	.	.	.	.	.	2	.	1.4	.	.	.	0.1	0.2	0	3
OTHER OROPHARYNX	C10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NASOPHARYNX	C11	0.1	0.2	0.2	0.2	0.2	0.6	0.7	1.9	3	4.7	7.1	7.6	4.2	5.5	6.2	.	1.1	1.9	0.2	48
HYPOPHARYNX	C12-C13	.	.	.	.	.	.	.	.	0.5	.	.	.	.	1.8	3.1	.	0.1	0.1	0	3
PHARYNX UNSPEC	C14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
OESOPHAGUS	C15	.	.	.	.	.	0.3	.	0.8	.	.	2	5.1	11.2	7.4	12.4	29.6	0.8	1.9	0.1	36
STOMACH	C16	.	.	.	.	.	0.6	0.3	1.5	2	4.7	10.2	5.1	21	16.6	18.5	51.1	1.8	4	0.2	81
SMALL INTESTINE	C17	0.1	.	.	.	.	0.3	.	.	.	.	1	1.3	2.8	1.8	9.3	2.7	0.2	0.5	0	11
COLON	C18	0.1	.	.	.	0.2	0.6	1.6	1.9	9.1	10	29.5	30.6	46.2	47.9	71.1	67.3	4.7	10.2	0.6	207
RECTUM	C19-C20	.	.	.	.	0.2	1.1	.	3.1	3.5	4.7	9.2	16.6	22.4	40.5	34	29.6	2.5	5.3	0.3	109
ANUS	C21	.	.	.	.	.	.	.	.	0.5	.	1	2.5	1.4	.	.	.	0.1	0.2	0	5
LIVER	C22	1.3	.	0.2	0.2	0.5	.	0.3	0.8	1	4.7	3.1	15.3	32.2	59	46.4	91.5	3.3	7.2	0.3	144
GALL BLADDER ETC.	C23-C24	.	.	.	.	.	.	.	.	.	.	9.2	2.5	14	5.5	21.6	18.8	0.9	2.1	0.1	38
PANCREAS	C25	.	.	.	.	0.2	.	0.3	1.2	2	4	5.1	8.9	14	25.8	30.9	43.1	1.7	3.9	0.2	77
OTHER DIGESTIVE ORGANS	C26	.	.	.	.	.	.	.	0.4	.	.	.	1.3	.	.	3.1	.	0.1	0.1	0	3
NOSE-SINUSES, ETC.	C30-C31	.	.	.	.	.	.	0.3	0.4	.	.	1	.	1.4	.	.	2.7	0.1	0.2	0	5
LARYNX	C32	.	.	.	.	.	.	.	0.4	0.5	1.3	5.1	7.6	11.2	18.4	21.6	24.2	1.1	2.6	0.1	49
TRACHEA, BROUCHAUS, LUNG	C33-C34	.	.	.	.	0.2	0.3	1.3	0.8	7.1	6	22.4	39.5	57.4	105	148	153	6.5	15.1	0.7	287
OTHER, THORACIC ORGANS	C37-C39	0.4	.	0.2	.	0.7	0.3	.	.	1	1.3	.	2.5	.	.	9.3	2.7	0.4	0.6	0	18
BONE	C40-C41	.	0.8	1.4	2.1	1.7	0.3	0.7	0.4	.	.	.	1.3	2.8	.	.	2.7	0.9	0.8	0.1	38
MELANOM OF SKIN	C43	.	.	.	.	.	.	.	0.4	.	.	.	.	.	3.7	.	2.7	0.1	0.2	0	4
OTHER SKIN	C44	.	.	0.2	0.2	0.2	0.3	0.7	0.4	1.5	1.3	3.1	2.5	2.8	3.7	9.3	18.8	0.7	1.4	0.1	31
MESOTHELIOMA	C45	.	.	.	.	.	.	.	.	0.5	.	2	1.3	.	.	3.1	5.4	0.2	0.4	0	7

KAPOSISARCOMA	C46	.	.	.	.	.	.	.	0.4	.	1.3	1	.	1.4	1.8	.	.	0.1	0.3	0	6
CONNECTIVE, SOFT TISSUE	C47;C49	0.7	0.2	0.7	0.4	0.5	1.1	0.3	0.8	1.5	2	4.1	5.1	1.4	9.2	3.1	.	0.9	1.4	0.1	42
RETROPERITONEUM & PERITONEUM	C48	0.3	.	.	.	.	0.3	.	0.4	0.5	.	.	.	.	.	.	.	0.1	0.1	0	5
BREAST	C50	.	.	.	.	.	.	.	.	.	2	3.1	1.3	4.2	1.8	3.1	.	0.3	0.6	0.1	12
PENIS	C60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PROSTATE	C61	.	.	.	.	.	.	.	.	.	0.7	6.1	20.4	51.8	73.7	176	207	5.3	13.1	0.4	234
TESTIS	C62	0.3	0.2	0.2	1.2	2.5	2.3	3.6	3.1	0.5	2.7	.	2.5	.	.	.	.	1.2	1.3	0.1	54
OTHER MALE GENITAL	C63	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
KIDNEY	C64	1	0.2	.	.	.	0.6	1.3	1.9	3.5	4	5.1	16.6	26.6	35	24.7	32.3	2.4	5	0.3	108
RENAL PELVIS	C65	.	.	.	.	.	.	0.7	.	.	.	.	.	.	1.8	3.1	5.4	0.1	0.3	0	6
URETER	C66	.	.	.	.	.	.	.	.	.	.	.	.	.	1.8	.	.	0	0.1	0	1
BLADDER	C67	0.1	.	.	0.2	0.5	0.6	1.6	1.2	2	5.3	12.2	16.6	35	38.7	55.6	78.1	3.3	7.2	0.4	144
OTHER URINARY ORGANS	C68	.	.	.	.	.	.	.	.	0.5	.	.	.	.	.	.	2.7	0	0.1	0	2
EYE	C69	0.7	0.2	.	.	.	.	.	.	.	.	.	.	.	.	.	2.7	0.2	0.2	0	7
BRAIN, NERVOUS SYSTEM	C70-C72	3	2.3	0.7	1	1.2	1.7	1.3	1.9	4	6	11.2	10.2	18.2	20.3	12.4	13.5	3	4.6	0.3	133
THYROID	C73	.	0.2	.	0.6	0.5	2	4.9	4.2	6.1	5.3	8.1	7.6	11.2	3.7	12.4	10.8	2.1	3.2	0.3	91
ADRENAL GLAND	C74	0.9	0.2	0.2	.	.	.	.	0.4	.	.	.	.	.	.	.	.	0.2	0.2	0	9
OTHER ENDOCRINE	C75	.	.	0.4	0.2	.	.	.	.	.	.	.	.	.	.	.	.	0.1	0.1	0	3
OTHER & ILL-DEFINED SITES	C76-C79	0.3	.	.	.	.	.	0.3	.	.	0.7	.	.	1.4	.	3.1	10.8	0.2	0.4	0	10
HODGKIN DIS.	C81	0.7	1.8	2.1	1.8	3.2	4.3	2.6	3.5	6.6	3.3	9.2	5.1	5.6	.	6.2	5.4	2.8	3.3	0.2	122
NON HODGKIN LYMPHOMA	C82-C85;C96	0.9	2.1	2.7	2.3	4.7	6.3	8.5	9.2	7.1	17.3	14.3	31.9	35	46.1	49.5	59.2	6.9	11.1	0.7	304
IMMUNOPROLIFERATIVE DIS.	C88	.	.	.	.	.	.	.	.	.	.	1	.	.	.	3.1	.	0	0.1	0	2
MULTIPLE MYELOMA	C90	.	.	.	.	.	.	.	0.4	.	2	3.1	6.4	8.4	5.5	18.5	10.8	0.7	1.6	0.1	31
LYMPHOID LEUKAEMIA	C91	7.6	2	4.8	2.3	0.7	0.3	1.3	1.5	1	0.7	1	1.3	1.4	11.1	6.2	16.2	3	3	0.1	134
MYELOID LEUKAEMIA	C92-C94	1	0.9	0.5	0.6	1.2	2.3	4.6	2.7	3	4	7.1	6.4	9.8	16.6	18.5	18.8	2.4	3.7	0.2	106
LEUKAEMIA UNSPEC	C95	.	.	.	.	0.2	.	.	.	.	0.7	.	.	.	.	.	10.8	0.1	0.3	0	6
UNKNOWN PRIMARY SITE	80	0.6	0.6	0.7	.	1	0.6	1.3	3.1	4	8.6	3.1	17.8	25.2	51.6	49.5	132	4	8.4	0.3	179
ALL SITES		20.1	11.9	15.2	13.3	20.7	27.4	39.1	50.7	74	111	205	308	486	680	897	1185	67.7	131	6.9	2998
ALL SITES EXCEPT C44	406	20.1	11.9	15	13.1	20.5	27.1	38.4	50.3	72.5	109	202	306	483	676	887	1166	67	129	6.8	2967

TABLE 2.34: INCIDENCE RATE (PER100,000)OF CANCER CASES BY AGE GROUP AND SIT,1998-2007,KUWAIT:FEMALE

SITE	ICD 10	-4	-9	-14	-19	-24	-29	-34	-39	-44	-49	-54	-59	-64	-69	-74	75+	Crude	ASR	CumRt 0-64	All Ages
LIP	C00	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	10.6	0.1	0.2	0	4
TONGUE	C01-C02	.	.	.	.	.	0.3	0.3	.	0.4	.	1.4	6.5	1.3	3.5	2.9	5.3	0.4	0.7	0.1	18
MOUTH	C03-C06	.	.	.	.	.	0.3	.	.	.	.	1.4	.	1.3	3.5	8.8	2.7	0.2	0.5	0	10
SALIVARY GLANDS	C07-C08	.	0.2	.	0.2	0.5	0.3	0.6	0.7	.	1	0.7	.	1.3	.	2.9	.	0.3	0.4	0	14
TONSIL	C09	.	.	.	.	.	.	.	.	.	.	.	0.9	.	.	.	.	0	0	0	1
OTHER OROPHARYNX	C10	.	.	.	.	.	.	0.3	.	.	.	.	.	.	.	.	.	0	0	0	1
NASOPHARYNX	C11	.	.	.	0.6	.	0.3	.	0.4	2.2	1.6	0.7	3.7	3.8	5.3	5.8	.	0.6	0.9	0.1	26
HYPOPHARYNX	C12-C13	.	.	.	.	.	.	.	.	.	.	.	.	.	1.8	2.9	2.7	0.1	0.2	0	3
PHARYNX UNSPEC	C14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
OESOPHAGUS	C15	.	.	.	.	.	.	.	.	.	0.5	2.2	1.9	7.5	7.1	20.5	10.6	0.6	1.4	0.1	27
STOMACH	C16	.	0.2	.	.	.	0.5	1.5	2.8	0.9	2.6	2.9	3.7	5	10.6	20.5	15.9	1.2	2.1	0.1	54
SMALL INTESTINE	C17	.	.	.	.	.	0.3	.	.	0.4	0.5	0.7	1.9	.	1.8	.	8	0.2	0.4	0	10
COLON	C18	.	.	.	.	0.2	1.1	3.1	7.4	8.6	14.6	23	21.3	36.4	31.8	73.1	39.8	5	8.8	0.6	226
RECTUM	C19-C20	.	.	.	.	.	.	1.2	3.2	6	6.8	7.9	17.6	22.6	24.8	14.6	23.9	2.5	4.5	0.3	116
ANUS	C21	.	.	.	0.2	.	.	.	.	0.4	2.1	.	0.9	1.3	.	11.7	2.7	0.3	0.5	0	13
LIVER	C22	0.2	.	0.6	.	.	0.5	.	0.4	.	3.1	2.2	2.8	10	21.2	26.3	42.4	1.4	3	0.1	64
GALL BLADDER ETC.	C23-C24	.	.	.	.	.	.	0.3	.	1.7	1.6	3.6	2.8	5	8.8	11.7	23.9	0.8	1.7	0.1	38
PANCREAS	C25	.	.	.	.	.	.	0.6	.	1.7	2.6	6.5	9.3	17.6	21.2	17.5	23.9	1.6	3.2	0.2	71
NOSE-SINUSES, ETC.	C30-C31	0.2	.	.	.	.	0.3	.	.	.	1	1.4	.	.	.	.	.	0.1	0.2	0	6
LARYNX	C32	.	.	.	.	.	.	.	.	.	.	.	0.9	.	5.3	.	8	0.2	0.4	0	7
TRACHEA, BROUCHAUS, LUNG	C33-C34	.	0.2	.	0.2	.	.	.	1.4	0.9	3.1	4.3	8.3	26.4	26.5	55.6	55.7	2.3	5	0.2	105
OTHER, THORACIC ORGANS	C37-C39	0.5	.	0.2	.	.	.	.	0.4	.	.	.	.	2.5	1.8	.	.	0.2	0.3	0	8
BONE	C40-C41	0.3	0.2	0.6	1.7	1.2	0.5	.	0.4	1.3	.	0.7	2.8	3.8	.	.	.	0.7	0.8	0.1	32
MELANOM OF SKIN	C43	.	.	.	.	.	0.5	.	.	0.4	0.5	.	.	.	5.3	.	2.7	0.2	0.3	0	8
OTHER SKIN	C44	.	.	0.4	.	0.2	.	0.6	1.1	0.4	0.5	2.9	6.5	3.8	7.1	5.8	13.3	0.8	1.4	0.1	35
MESOTHELIOMA	C45	.	.	.	.	.	.	.	.	.	1	.	.	.	.	2.9	.	0.1	0.1	0	3
KAPOSISARCOMA	C46	.	.	.	.	.	.	.	.	.	.	.	.	.	1.8	.	2.7	0	0.1	0	2
CONNECTIVE, SOFT TISSUE	C47;C49	0.6	0.2	0.9	0.4	0.2	0.3	0.6	0.4	.	1	2.9	1.9	2.5	.	5.8	5.3	0.7	0.9	0.1	31
RETROPERITONEUM & PERITONEUM	C48	0.3	.	.	.	.	.	0.3	.	0.9	1	0.7	.	1.3	.	.	.	0.2	0.3	0	9

BREAST	C50	.	.	.	.	0.2	9	20.4	38.9	75.9	133.2	139	174.2	146.9	192.8	137.4	143.1	29.6	48	3.7	1350
VULVA	C51	.	.	.	.	.	.	0.3	.	0.4	0.5	.	0.9	1.3	1.8	2.9	5.3	0.2	0.4	0	9
VAGINA	C52	.	.	.	.	.	.	.	.	.	.	.	0.9	.	3.5	.	2.7	0.1	0.2	0	4
CERVIX UTERI	C53	.	.	.	0.2	0.2	0.5	1.9	4.9	4.7	5.7	10.1	17.6	16.3	24.8	8.8	21.2	2.6	4.3	0.3	117
CORPUS UTERI	C54	0.2	.	.	.	.	0.5	0.3	1.4	3	8.4	10.8	28.7	23.9	37.2	40.9	37.1	3.2	6.2	0.4	145
UTERUS UNSPEC	C55	.	.	.	.	.	0.3	0.3	0.7	0.9	1.6	2.2	3.7	5	3.5	5.8	8	0.6	1.1	0.1	27
OVARY	C56	.	0.2	0.7	1	1.2	1.4	1.5	2.1	5.6	7.3	10.8	7.4	26.4	26.5	23.4	29.2	3	5.1	0.3	136
OTTHER FEMALE GENITAL	C57	.	.	.	.	.	.	.	.	.	.	.	1.9	.	.	.	.	0	0.1	0	2
PLACENTA	C58	.	.	.	.	.	.	0.3	0.7	.	0.5	.	.	.	.	.	.	0.1	0.1	0	4
KIDNEY	C64	1.1	0.2	0.2	0.2	.	0.3	1.2	0.4	1.3	1.6	1.4	8.3	15.1	5.3	17.5	5.3	1.2	2.1	0.2	56
RENAL PELVIS	C65	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
URETER	C66	.	.	.	.	.	.	.	.	.	.	.	.	1.3	.	.	.	0	0.1	0	1
BLADDER	C67	0.5	.	.	.	.	.	0.3	.	0.4	.	3.6	5.6	16.3	24.8	26.3	26.5	1.4	3	0.1	62
OTHER URINARY ORGANS	C68	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EYE	C69	0.2	.	.	.	.	.	0.3	.	.	.	.	.	.	.	.	.	0	0	0	2
BRAIN, NERVOUS SYSTEM	C70-C72	1.2	1.6	0.6	0.4	0.5	1.4	2.2	1.1	3	4.2	7.2	2.8	6.3	10.6	5.8	18.6	1.9	2.7	0.2	88
THYROID	C73	.	0.2	.	0.8	6.2	9.8	11.7	14.4	21.6	15.7	17.3	22.2	17.6	17.7	11.7	5.3	6.6	8.5	0.7	303
ADRENAL GLAND	C74	1.1	0.2	.	.	0.2	.	.	.	.	0.5	.	.	1.3	1.8	.	.	0.3	0.3	0	12
OTHER ENDOCRINE	C75	.	.	.	.	.	.	.	.	.	.	.	.	.	1.8	.	.	0	0.1	0	1
OTHER & ILL-DEFINED SITES	C76-C79	.	.	.	.	.	.	0.3	.	0.4	.	0.7	0.9	5	3.5	2.9	10.6	0.3	0.7	0	15
HODGKIN DIS.	C81	0.3	1.1	1.5	3.7	2.7	1.9	1.9	2.1	1.3	0.5	2.9	2.8	2.5	3.5	5.8	2.7	1.8	2	0.1	83
NON HODGKIN LYMPHOMA	C82-C85;C96	0.3	0.6	1.3	3.1	1.7	3	2.5	2.8	6	7.3	17.3	22.2	23.9	17.7	29.2	29.2	4.1	6.4	0.5	188
IMMUNOPROLIFERATIVE DIS.	C88	.	.	.	.	.	.	.	.	.	.	.	0.9	.	.	.	.	0	0	0	1
MULTIPLE MYELOMA	C90	.	.	.	.	0.2	.	.	.	1.7	3.1	2.2	5.6	8.8	7.1	5.8	5.3	0.8	1.4	0.1	35
LYMPHOID LEUKAEMIA	C91	3.9	2.7	1.8	1.9	0.2	.	0.6	0.4	0.4	2.1	.	3.7	2.5	7.1	14.6	5.3	1.9	2.2	0.1	87
MYELOID LEUKAEMIA	C92-C94	1.4	0.5	0.9	0.6	1	1.9	2.8	3.2	4.7	1.6	6.5	4.6	10	8.8	8.8	.	2	2.7	0.2	93
LEUKAEMIA UNSPEC	C95	0.2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0	0	0	1
UNKNOWN PRIMARY SITE	80	0.6	0.3	1.1	0.6	0.5	.	0.3	1.4	3.5	7.3	6.5	13	27.6	17.7	64.3	79.5	3.3	6.4	0.3	151
ALL SITES		13.1	8.6	10.8	15.8	17.1	35.2	58.5	93.1	161	246.2	304.6	421.6	511.4	606.7	701.2	735	85.8	142	9.5	3915
ALL SITES EXCEPT C44	425	13.1	8.6	10.4	15.8	16.9	35.2	57.9	92	160.6	245.7	301.7	415.1	507.6	599.6	695.4	721.7	85	140.7	9.4	3880

TABLE 2.35: DISTRIBUTION OF CANCER CASES BY AGE GROUP AND SITE, 1998-2007, KUWAIT: MALE

SITE	ICD-10	-4	-9	-14	-19	-24	-29	-34	-39	-44	-49	-54	-59	-64	-69	-74	75+	100%	All Ages	% of Total
LIP	C00	0	0	0	0	0	0	1	1	0	0	0	0	0	1	1	0	0	4	0.10%
TONGUE	C01-C02	0	0	0	0	1	0	1	1	0	0	1	2	2	5	0	1	0	14	0.40%
MOUTH	C03-C06	0	0	0	0	1	0	0	1	1	2	1	3	0	2	0	4	0	15	0.50%
SALIVARY GLANDS	C07-C08	0	0	0	0	0	1	0	1	2	0	0	1	0	2	0	3	0	10	0.30%
TONSIL	C09	0	0	0	0	0	0	0	0	0	0	2	0	1	0	0	0	0	3	0.10%
NASOPHARYNX	C11	1	1	1	1	1	2	2	5	6	7	7	6	3	3	2	0	0	48	1.60%
HYPOPHARYNX	C12-C13	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	3	0.10%
OESOPHAGUS	C15	0	0	0	0	0	1	0	2	0	0	2	4	8	4	4	11	0	36	1.20%
STOMACH	C16	0	0	0	0	0	2	1	4	4	7	10	4	15	9	6	19	0	81	2.70%
SMALL INTESTINE	C17	1	0	0	0	0	1	0	0	0	0	1	1	2	1	3	1	0	11	0.30%
COLON	C18	1	0	0	0	1	2	5	5	18	15	29	24	33	26	23	25	0	207	6.90%
RECTUM	C19-C20	0	0	0	0	1	4	0	8	7	7	9	13	16	22	11	11	0	109	3.60%
ANUS	C21	0	0	0	0	0	0	0	0	1	0	1	2	1	0	0	0	0	5	0.10%
LIVER	C22	9	0	1	1	2	0	1	2	2	7	3	12	23	32	15	33	1	144	4.80%
GALL BLADDER ETC.	C23-C24	0	0	0	0	0	0	0	0	0	0	9	2	10	3	7	7	0	38	1.20%
PANCREAS	C25	0	0	0	0	1	0	1	3	4	6	5	7	10	14	10	16	0	77	2.50%
OTHER DIGESTIVE ORGANS	C26	0	0	0	0	0	0	0	1	0	0	0	1	0	0	1	0	0	3	0.10%
NOSE-SINUSES, ETC.	C30-C31	0	0	0	0	0	0	1	1	0	0	1	0	1	0	0	1	0	5	0.10%
LARYNX	C32	0	0	0	0	0	0	0	1	1	2	5	6	8	10	7	9	0	49	1.60%
TRACHEA, BROUCHAUS, LUNG	C33-C34	0	0	0	0	1	1	4	2	14	9	22	31	41	57	48	56	1	287	9.50%
OTHER, THORACIC ORGANS	C37-C39	3	0	1	0	3	1	0	0	2	2	0	2	0	0	3	1	0	18	0.60%
BONE	C40-C41	0	5	8	10	7	1	2	1	0	0	0	1	2	0	0	1	0	38	1.20%
MELANOM OF SKIN	C43	0	0	0	0	0	0	0	1	0	0	0	0	0	2	0	1	0	4	0.10%
OTHER SKIN	C44	0	0	1	1	1	1	2	1	3	2	3	2	2	2	3	7	0	31	1.00%
MESOTHELIOMA	C45	0	0	0	0	0	0	0	0	1	0	2	1	0	0	1	2	0	7	0.20%

KAPOSISARCOMA	C46	0	0	0	0	0	0	0	1	0	2	1	0	1	1	0	0	0	6	0.20%
CONNECTIVE, SOFT TISSUE	C47;C49	5	1	4	2	2	4	1	2	3	3	4	4	1	5	1	0	0	42	1.40%
RETROPERITONEUM & PERITONEUM	C48	2	0	0	0	0	1	0	1	1	0	0	0	0	0	0	0	0	5	0.10%
BREAST	C50	0	0	0	0	0	0	0	0	0	3	3	1	3	1	1	0	0	12	0.40%
PROSTATE	C61	0	0	0	0	0	0	0	0	0	1	6	16	37	40	57	77	0	234	7.80%
TESTIS	C62	2	1	1	6	10	8	11	8	1	4	0	2	0	0	0	0	0	54	1.80%
KIDNEY	C64	7	1	0	0	0	2	4	5	7	6	5	13	19	19	8	12	0	108	3.60%
RENAL PELVIS	C65	0	0	0	0	0	0	2	0	0	0	0	0	0	1	1	2	0	6	0.20%
URETER	C66	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0.00%
BLADDER	C67	1	0	0	1	2	2	5	3	4	8	12	13	25	21	18	29	0	144	4.80%
OTHER URINARY ORGANS	C68	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	2	0.00%
EYE	C69	5	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	7	0.20%
BRAIN, NERVOUS SYSTEM	C70-C72	20	15	4	5	5	6	4	5	8	9	11	8	13	11	4	5	0	133	4.40%
THYROID	C73	0	1	0	3	2	7	15	11	12	8	8	6	8	2	4	4	0	91	3.00%
ADRENAL GLAND	C74	6	1	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	9	0.30%
OTHER ENDOCRINE	C75	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0.10%
OTHER & ILL-DEFINED SITES	C76-C79	2	0	0	0	0	0	1	0	0	1	0	0	1	0	1	3	1	10	0.30%
HODGKIN DIS.	C81	5	12	12	9	13	15	8	9	13	5	9	4	4	0	2	2	0	122	4.00%
NON HODGKIN LYMPHOMA	C82-C85;C96	6	14	15	11	19	22	26	24	14	26	14	25	25	25	16	22	0	304	10.10%
IMMUNOPROLIFERATIVE DIS.	C88	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	2	0.00%
MULTIPLE MYELOMA	C90	0	0	0	0	0	0	0	1	0	3	3	5	6	3	6	4	0	31	1.00%
LYMPHOID LEUKAEMIA	C91	51	13	27	11	3	1	4	4	2	1	1	1	1	6	2	6	0	134	4.40%
MYELOID LEUKAEMIA	C92-C94	7	6	3	3	5	8	14	7	6	6	7	5	7	9	6	7	0	106	3.50%
LEUKAEMIA UNSPEC	C95	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	4	0	6	0.20%
UNKNOWN PRIMARY SITE	80	4	4	4	0	4	2	4	8	8	13	3	14	18	28	16	45	4	179	5.90%
ALL SITES		138	76	85	65	86	95	120	131	147	166	201	242	347	369	290	433	7	2998	100%
ALL SITES EXCEPT C44	410	138	76	84	64	85	94	118	130	144	164	198	240	345	367	287	426	7	2967	100%

TABLE 2.36: DISTRIBUTION OF CANCER CASES BY AGE GROUP AND SITE, 1998-2007, KUWAIT: FEMALE

SITE	ICD-10	-4	-9	-14	-19	-24	-29	-34	-39	-44	-49	-54	-59	-64	-69	-74	75+	Age Unk	All Ages	% of Total
LIP	C00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	4	0.10%
TONGUE	C01-C02	0	0	0	0	0	1	1	0	1	0	2	7	1	2	1	2	0	18	0.40%
MOUTH	C03-C06	0	0	0	0	0	1	0	0	0	0	2	0	1	2	3	1	0	10	0.20%
SALIVARY GLANDS	C07-C08	0	1	0	1	2	1	2	2	0	2	1	0	1	0	1	0	0	14	0.30%
TONSIL	C09	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0.00%
OTHER OROPHARYNX	C10	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0.00%
NASOPHARYNX	C11	0	0	0	3	0	1	0	1	5	3	1	4	3	3	2	0	0	26	0.60%
HYPOPHARYNX	C12-C13	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	3	0.00%
OESOPHAGUS	C15	0	0	0	0	0	0	0	0	0	1	3	2	6	4	7	4	0	27	0.60%
STOMACH	C16	0	1	0	0	0	2	5	8	2	5	4	4	4	6	7	6	0	54	1.30%
SMALL INTESTINE	C17	0	0	0	0	0	1	0	0	1	1	1	2	0	1	0	1	2	10	0.20%
COLON	C18	0	0	0	0	1	4	10	21	20	28	32	23	29	18	25	15	0	226	5.70%
RECTUM	C19-C20	0	0	0	0	0	0	4	9	14	13	11	19	18	14	5	9	0	116	2.90%
ANUS	C21	0	0	0	1	0	0	0	0	1	4	0	1	1	0	4	1	0	13	0.30%
LIVER	C22	1	0	3	0	0	2	0	1	0	6	3	3	8	12	9	16	0	64	1.60%
GALL BLADDER ETC.	C23-C24	0	0	0	0	0	0	1	0	4	3	5	3	4	5	4	9	0	38	0.90%
PANCREAS	C25	0	0	0	0	0	0	2	0	4	5	9	10	14	12	6	9	0	71	1.80%
NOSE-SINUSES, ETC.	C30-C31	1	0	0	0	0	1	0	0	0	2	2	0	0	0	0	0	0	6	0.10%
LARYNX	C32	0	0	0	0	0	0	0	0	0	0	0	1	0	3	0	3	0	7	0.10%
TRACHEA, BROUCHAUS, LUNG	C33-C34	0	1	0	1	0	0	0	4	2	6	6	9	21	15	19	20	1	105	2.60%
OTHER, THORACIC ORGANS	C37-C39	3	0	1	0	0	0	0	1	0	0	0	0	2	1	0	0	0	8	0.20%
BONE	C40-C41	2	1	3	8	5	2	0	1	3	0	1	3	3	0	0	0	0	32	0.80%
MELANOM OF SKIN	C43	0	0	0	0	0	2	0	0	1	1	0	0	0	3	0	1	0	8	0.20%
OTHER SKIN	C44	0	0	2	0	1	0	2	3	1	1	4	7	3	4	2	5	0	35	0.80%
MESOTHELIOMA	C45	0	0	0	0	0	0	0	0	0	2	0	0	0	0	1	0	0	3	0.00%
KAPOSISARCOMA	C46	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	2	0.00%
CONNECTIVE, SOFT TISSUE	C47;C49	4	1	5	2	1	1	2	1	0	2	4	2	2	0	2	2	0	31	0.70%

RETROPERITONEUM & PERITONEUM	C48	2	0	0	0	0	0	1	0	2	2	1	0	1	0	0	0	0	9	0.20%
BREAST	C50	0	0	0	0	1	33	66	111	176	255	193	188	117	109	47	53	1	1350	34.40%
VULVA	C51	0	0	0	0	0	0	1	0	1	1	0	1	1	1	1	2	0	9	0.20%
VAGINA	C52	0	0	0	0	0	0	0	0	0	0	0	1	0	2	0	1	0	4	0.10%
CERVIX UTERI	C53	0	0	0	1	1	2	6	14	11	11	14	19	13	14	3	8	0	117	2.90%
CORPUS UTERI	C54	1	0	0	0	0	2	1	4	7	16	15	31	19	21	14	14	0	145	3.70%
UTERUS UNSPEC	C55	0	0	0	0	0	1	1	2	2	3	3	4	4	2	2	3	0	27	0.60%
OVARY	C56	0	1	4	5	5	5	5	6	13	14	15	8	21	15	8	11	0	136	3.40%
OTTHER FEMALE GENITAL	C57	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2	0.00%
PLACENTA	C58	0	0	0	0	0	0	1	2	0	1	0	0	0	0	0	0	0	4	0.10%
KIDNEY	C64	7	1	1	1	0	1	4	1	3	3	2	9	12	3	6	2	0	56	1.40%
URETER	C66	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0.00%
BLADDER	C67	3	0	0	0	0	0	1	0	1	0	5	6	13	14	9	10	0	62	1.50%
EYE	C69	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2	0.00%
BRAIN, NERVOUS SYSTEM	C70-C72	8	10	3	2	2	5	7	3	7	8	10	3	5	6	2	7	0	88	2.20%
THYROID	C73	0	1	0	4	25	36	38	41	50	30	24	24	14	10	4	2	0	303	7.70%
ADRENAL GLAND	C74	7	1	0	0	1	0	0	0	0	1	0	0	1	1	0	0	0	12	0.30%
OTHER ENDOCRINE	C75	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0.00%
OTHER & ILL-DEFINED SITES	C76-C79	0	0	0	0	0	0	1	0	1	0	1	1	4	2	1	4	0	15	0.30%
UNKNOWN PRIMARY SITE	80	4	2	6	3	2	0	1	4	8	14	9	14	22	10	22	30	0	151	3.80%
HODGKIN DIS.	C81	2	7	8	18	11	7	6	6	3	1	4	3	2	2	2	1	0	83	2.10%
NON HODGKIN LYMPHOMA	C82-C85;C96	2	4	7	15	7	11	8	8	14	14	24	24	19	10	10	11	0	188	4.80%
IMMUNOPROLIFERATIVE DIS.	C88	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0.00%
MULTIPLE MYELOMA	C90	0	0	0	0	1	0	0	0	4	6	3	6	7	4	2	2	0	35	0.80%
LYMPHOID LEUKAEMIA	C91	25	17	10	9	1	0	2	1	1	4	0	4	2	4	5	2	0	87	2.20%
MYELOID LEUKAEMIA	C92-C94	9	3	5	3	4	7	9	9	11	3	9	5	8	5	3	0	0	93	2.30%
LEUKAEMIA UNSPEC	C95	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.00%
ALL SITES		83	52	58	77	71	129	190	264	374	472	423	455	407	343	240	273	4	3915	100%
ALL SITES EXCEPT C44	428	83	52	56	77	70	129	188	261	373	471	419	448	404	339	238	268	4	3880	100%

Arabic Summary

سلطنة عمان							
الذكور				الإناث			
مكان الإصابة	العدد	النسبة	المعد العمر المعياري	مكان الإصابة	العدد	النسبة	المعد العمر المعياري
سرطان المعدة	466	9.9	10.5	سرطان الثدي	771	18.2	15.7
سرطان اللمفاوي غير هودجكين	419	8.9	7.6	سرطان الغدة الدرقية	348	8.2	5.6
سرطان إبيضاض الدم	398	8.4	5.4	سرطان عنق الرحم	267	6.3	5.8
سرطان البروستاتا	366	7.8	8.4	سرطان إبيضاض الدم	263	6.1	3.8
سرطان الرئة	352	7.5	7.9	سرطان المعدة	252	5.9	5.8

دولة قطر							
الذكور				الإناث			
مكان الإصابة	العدد	النسبة	المعد العمر المعياري	مكان الإصابة	العدد	النسبة	المعد العمر المعياري
سرطان الرئة	82	10.6	18	سرطان الثدي	241	28	45.6
سرطان القولون والمستقيم	68	8.7	15	سرطان الغدة الدرقية	74	8.6	10.9
سرطان الكبد	63	8.1	13.9	سرطان القولون و المستقيم	73	8.4	16.6
سرطان إبيضاض الدم	58	7.3	8.5	سرطان اللمفاوي غير هودجكين	44	5.1	9.1
سرطان المثانة	54	6.9	11.6	سرطان جسم الرحم	42	4.8	9.6

دولة الكويت							
الذكور				الإناث			
مكان الإصابة	العدد	النسبة	المعد العمر المعياري	مكان الإصابة	العدد	النسبة	المعد العمر المعياري
سرطان القولون و المستقيم	316	10	15.5	سرطان الثدي	1350	34.4	48
سرطان اللمفاوي غير هودجكين	304	10.1	11.1	سرطان القولون و المستقيم	342	8.6	13.3
سرطان الرئة	287	9.5	15.1	سرطان الغدة الدرقية	303	7.7	8.5
سرطان إبيضاض الدم	246	8.1	7.0	سرطان اللمفاوي غير هودجكين	188	4.8	6.4
سرطان البروستاتا	234	7.8	13.1	سرطان إبيضاض الدم	181	4.5	4.9

جدول (5): توزيع حالات السرطان الأكثر انشاراً حسب الجنسية في دول مجلس التعاون الخليجي خلال الفترة من يناير 1998 إلى ديسمبر 2007م

الإمارات العربية المتحدة							
الذكور				الإناث			
مكان الإصابة	العدد	النسبة	المعدل العمر المعياري	مكان الإصابة	العدد	النسبة	المعد العمر المعياري
سرطان الرئة	169	9.7	9.3	سرطان الثدي	487	26.1	25.1
سرطان القولون و المستقيم	159	9.1	8	سرطان الغدة الدرقية	177	9.5	7.1
سرطان اللمفاوي غير هودجكين	153	8.8	6.6	سرطان إبيضاض الدم	127	6.7	4.1
سرطان البروستاتا	135	7.7	7.5	سرطان القولون و المستقيم	126	6.7	7.3
سرطان إبيضاض الدم	123	6.9	3.5	سرطان عنق الرحم	117	6.2	6.3

مملكة البحرين							
الذكور				الإناث			
مكان الإصابة	العدد	النسبة	المعد العمر المعياري	مكان الإصابة	العدد	النسبة	المعد العمر المعياري
سرطان الرئة	358	17.6	31.1	سرطان الثدي	810	37.1	54.4
سرطان القولون و المستقيم	181	8.8	14.3	سرطان القولون و المستقيم	136	6.1	10.1
سرطان البروستاتا	168	8.2	14.6	سرطان الرئة	126	5.7	10.7
سرطان المثانة	161	7.9	13.8	سرطان الغدة الدرقية	125	5.7	7.7
سرطان إبيضاض الدم	127	6.1	8.3	سرطان المبيض	105	4.8	7.4

المملكة العربية السعودية							
الذكور				الإناث			
مكان الإصابة	العدد	النسبة	المعد العمر المعياري	مكان الإصابة	العدد	النسبة	المعد العمر المعياري
سرطان اللمفاوي غير هودجكين	3163	9	6.1	سرطان الثدي	7637	21.8	15.6
سرطان القولون و المستقيم	3121	8.8	7.2	سرطان الغدة الدرقية	3369	9.6	5.7
سرطان الكبد	2946	8.4	7.1	سرطان القولون و المستقيم	2663	7.6	6.1
سرطان إبيضاض الدم	2807	7.8	4.3	سرطان اللمفاوي غير هودجكين	2240	6.4	4.7
سرطان الرئة	2303	6.5	5.6	سرطان إبيضاض الدم	2040	5.6	3.1

جدول (3): أكثر أنواع السرطان شيوعاً بين البالغين في دول مجلس التعاون الخليجي خلال الفترة من يناير 1998 إلى ديسمبر 2007م.

الذكور البالغين (≥15)	عدد الحالات	%	الإناث البالغين (≥15)	عدد الحالات	%
القولون المستقيم	4121	9.6	سرطان الثدي	11303	25.2
الجهاز اللمفاوي (غير هودجكن)	3757	8.7	سرطان الغدة الدرقية	4345	9.7
سرطان الرئة	3553	8.3	سرطان القولون و المستقيم	3557	7.9
سرطان الكبد	3477	8.1	الجهاز اللمفاوي (غير هودجكن)	2653	5.9
سرطان البروستاتا	3031	7.0	سرطان المبيض	1723	3.8
ابيضاض الدم	2354	5.5	ابيضاض الدم	1643	3.7
سرطان المثانة	2326	5.4	سرطان عنق الرحم	1524	3.4
سرطان المعدة	2247	5.2	سرطان جسم الرحم	1494	3.3
سرطان الجلد	1799	4.2	سرطان الكبد	1398	3.1
مرض هودجكن	1453	3.4	سرطان الجلد	1326	3.0

جدول (4): أكثر أنواع السرطان شيوعاً بين الأطفال في دول مجلس التعاون الخليجي خلال الفترة من يناير 1998 إلى ديسمبر 2007م.

بنين (0-14)	عدد الحالات	%	بنات (0-14)	عدد الحالات	%
سرطان ابيضاض الدم	1435	33.4	سرطان ابيضاض الدم	1101	32.5
سرطان الدماغ	571	13.3	سرطان الدماغ	442	13.1
مرض هودجكن	486	11.3	مرض هودجكن	258	7.6
سرطان الجهاز اللمفاوي (غير هودجكن)	456	10.6	سرطان الجهاز اللمفاوي (غير هودجكن)	253	7.5
سرطان العظم	254	5.9	سرطان النسيج الضام	204	6.0
سرطان النسيج الضام	211	4.9	سرطان الكلى	202	6.0
سرطان الكلى	176	4.1	سرطان العظام	190	5.6
سرطان العيون	147	3.4	سرطان العيون	147	4.3
سرطان الغدة الكظرية	111	2.6	سرطان الغدة الكظرية	107	3.2
سرطان الكبد	68	1.6	سرطان المبيض	95	2.8

8- سرطان المعدة:

يعد سرطان المعدة من الأمراض الأكثر شيوعاً عند الذكور مقارنة بالإناث. وقد جاء سرطان المعدة في المرتبة الثامنة بين مواطني دول مجلس التعاون خلال الفترة 1998-2007م .حيث بلغ إجمالي الحالات 3504 حالة بنسبة قدرها 3.7% من إجمالي حالات السرطان المسجلة.

سجلت سلطنة عمان أعلى معدل إصابة عند الذكور والإناث بمعدل عمري معياري بلغ 10.5 و 5.8 لكل 100,000 نسمة للذكور والإناث على التوالي يليها الذكور في البحرين بمعدل 6.8 ثم الإمارات العربية المتحدة بمعدل 6.5 وقطر بمعدل 5.9 فالكويت بمعدل 4.0. وقد سجلت أقل المعدلات لسرطان المعدة للذكور والإناث في السعودية بمعدل 3.3 للذكور بينما كان معدل الإصابة لدى الإناث 1.9 لكل 100,000 نسمة.

9- سرطان الجهاز اللمفاوي (هودجكن)

يعتبر سرطان الجهاز اللمفاوي (هودجكن) من الأمراض الأكثر شيوعاً عند الذكور مقارنة بالإناث في دول مجلس التعاون. وقد احتل سرطان الجهاز اللمفاوي (هودجكن) المرتبة التاسعة بين مواطني دول مجلس التعاون خلال الفترة 1998-2007م، حيث بلغ عدد حالات الإصابة 3146 حالة وذلك بنسبة قدرها 3.3% من إجمالي حالات السرطان المسجلة وبنسبة 4.0% لدى ذكور و 2.5% لدى الإناث.

سجلت قطر والكويت أعلى معدل للإصابة في الذكور حيث بلغ المعدل العمري المعياري لكل100,000 نسمة 4.2 و 3.3 للذكور على التوالي ، تلتها سلطنة عمان بمعدل 2.4 ثم البحرين والسعودية بمعدل 2.0 ، وسجلت دولة الإمارات العربية المتحدة أقل المعدلات (1.8 لكل 100,000 نسمة). أما بالنسبة للإناث فقد سجلت دولة الكويت أعلى معدلات إصابة وذلك بمعدل عمري معياري بلغ 2.0 لكل 100,000 نسمة ، بينما سجلت سلطنة عمان أقل المعدلات (1.2 لكل 100,000 نسمة).

10- سرطان الدماغ:

يعد سرطان الدماغ أكثر شيوعاً عند الذكور مقارنة بالإناث حيث بلغت نسبة الإصابة لدى الذكور 3.8% و للإناث 2.6%. وقد جاء سرطان الدماغ في المرتبة العاشرة بين مواطني دول مجلس التعاون حيث بلغ عدد حالات الإصابة 3083 خلال الفترة 1998-2007مم وبنسبة قدرها 3.2% من إجمالي حالات السرطان المشخصة في دول المجلس.

سجلت دولة قطر أعلى معدل إصابة للذكور والإناث معاً بمعدل عمري معياري بلغ 5.0 و 3.2 لكل 100,000 نسمة للذكور و الإناث على التوالي. تلتها دولة الكويت بمعدل 4.6 للذكور ثم البحرين بمعدل 4.2 وعمان بمعدل 2.9 ، ثم الإمارات العربية المتحدة بمعدل 2.7 وأخيراً السعودية بمعدل 2.2 لكل 100,000 نسمة. بينما كان معدل الإصابة الأقل لدى الإناث في دولة الإمارات العربية المتحدة وذلك بمعدل 1.2 لكل 100,000 نسمة.

التعاون. وجاء سرطان ابيضاض الدم في المرتبة الثالثة للذكور بنسبة 7.9% وفي المرتبة الخامسة للإناث بنسبة 5.5%. وسجل أعلى معدل عمري معياري للإصابة بين الذكور في دولة قطر حيث بلغ المعدل 8.5 لكل 100,000 نسمة، يليها البحرين و الكويت وسجل أقل المعدلات في الإمارات العربية المتحدة بمعدل 3.5. أما بالنسبة للإناث فقد سجلت أعلى المعدلات في دولة الكويت بمعدل 4.9 يليها قطر و البحرين (4.8 و 4.4 على التوالي). كما جاءت أقل المعدلات المسجلة في السعودية بمعدل 3.1 لكل 100,000 نسمة.

5- سرطان الغدة الدرقية:

جاء سرطان الغدة الدرقية المرتبة الخامسة بين مواطني دول مجلس التعاون خلال الفترة من عام 1998 إلى 2007م ، حيث بلغ عدد حالات الإصابة بسرطان الغدة الدرقية 5587 حالة وذلك بنسبة قدرها 5.9%من إجمالي حالات السرطان المسجلة. وفقد جاء سرطان الغدة الدرقية في المرتبة الثانية بين النساء بعد سرطان الثدي بعدد 4396 حالة (9.1%). كما سجلت دولة قطر أعلى معدل للإصابة لدى النساء، حيث بلغ المعدل العمري المعياري 10.9 لكل 100,000 نسمة تلتها دولة الكويت بمعدل 8.5 ثم البحرين بمعدل 7.7 والإمارات العربية المتحدة بمعدل 7.1 ثم المملكة العربية السعودية بمعدل 5.7 وأخيراً سلطنة عمان بمعدل 5.6 لكل 100,000 نسمة.

6- سرطان الكبد:

جاء سرطان الكبد في المرتبة السادسة بين مواطني دول مجلس التعاون حيث بلغ عدد الحالات 4965 حالة، وشكل هذا المرض 5.2%من إجمالي حالات السرطان المشخصة خلال الفترة 1998-2007م. احتل سرطان الكبد المرتبة الخامسة عند الذكور بنسبة 7.4%. وقد سجلت دولة قطر أعلى معدل للإصابة بسرطان الكبد حيث بلغ المعدل العمري المعياري 13.9 لكل 100,000 نسمة عند الذكور وتلتها دولة الكويت بمعدل 7.2 للذكور ثم المملكة العربية السعودية بمعدل 7.1 وعمان بمعدل 5.7 ثم البحرين بمعدل 5.3 واخيراً الإمارات العربية المتحدة بمعدل 3.0 ، أما بالنسبة للإناث فقد سجلت قطر المرتبة الاولى بمعدل عمري معياري بلغ 7.6 لكل 100,000 نسمة تلتها البحرين بمعدل 3.6 ثم الكويت بمعدل 3.0 ثم السعودية بمعدل 2.9 و عمان 2.2 واخيراً الإمارات العربية المتحدة بمعدل 1.9 لكل 100,000نسمة.

7- سرطان الرئة:

جاء سرطان الرئة في المرتبة السابعة حيث بلغ عدد حالات الإصابة بسرطان الرئة 4588 حالة بين مواطني دول مجلس التعاون خلال الفترة ما بين 1998-2007م. ويعتبر هذا النوع من السرطان الأكثر شيوعاً بين الذكور مقارنة بالإناث في دول المجلس، حيث احتل المرتبة الرابعة للذكور وبلغ عدد الحالات المسجلة للذكور 3551 وبنسبة 7.5% من إجمالي حالات الإصابة بالسرطان عند الذكور . وقد سجلت البحرين أعلى معدلات الإصابة بسرطان الرئة للذكور والإناث معاً حيث بلغ المعدل العمري المعياري 31.1 لكل 100,000 نسمة عند الذكور و 10.7 لكل 100,000نسمة عند الإناث، يليها قطر و الكويت وعمان في المرتبة الثانية والثالثة والرابعة على التوالي ثم الإمارات العربية المتحدة في المرتبة الخامسة للذكور ، بينما سجلت السعودية أقل معدلات الإصابة بسرطان الرئة للذكور والإناث حيث بلغ معدل الإصابة 5.6 عند الذكور و 1.6 عند الإناث لكل 100,000 نسمة.

أمراض السرطان الأكثر شيوعاً في دول مجلس التعاون المسجلة خلال الفترة من يناير 1998إلى ديسمبر 2007م

1- سرطان الثدي:

يعد سرطان الثدي من أكثر السرطانات شيوعاً في دول مجلس التعاون. ففي الفترة من يناير1998 إلى ديسمبر 2007م، سجلت 11396 حالة إصابة بسرطان الثدي في دول المجلس بنسبة 11.8% من إجمالي عدد حالات السرطان المشخصة، وبنسبة 23.5% من إجمالي عدد حالات السرطان المشخصة في الإناث. وكان معدل الإصابة العمري المعياري الأعلى في مملكة البحرين بمعدل 54.4 لكل 100,000 نسمة يليها الكويت بمعدل 48.0 ثم قطر بمعدل 45.6 فالإمارات العربية المتحدة بمعدل 25.1 ثم سلطنة عمان 15.7 واخيراً السعودية بمعدل 15.6 حالة سرطان ثدي لكل 100,000 نسمة.

2- سرطان القولون والمستقيم:

إحتل سرطان القولون والمستقيم المرتبة الثانية في دول مجلس التعاون حيث بلغ عدد الإصابة 7641 حالة و بنسبة 8.0% من الحالات المشخصة من أمراض السرطان في الفترة ما بين يناير 1998 إلى ديسمبر 2007م. يعد سرطان القولون والمستقيم من أكثر السرطانات شيوعاً عند الذكور حيث جاء في المرتبة الثانية لدى الذكور والثالثة لدى الإناث (بنسبة إصابة 8.6% و 7.3% للذكور والإناث على التوالي).

وقد سجلت أعلى معدلات الإصابة بين الذكور في الكويت حيث بلغ معدل الإصابة العمري المعياري 15.5 حالة لكل 100,000نسمة، يليها قطر بمعدل 15.0 والبحرين بمعدل 14.3 والإمارات العربية المتحدة بمعدل8.0 ثم المملكة العربية السعودية بمعدل 7.2 وعمان بمعدل 5.5 ، بينما سجلت قطر أعلى معدلات الإصابة بين الإناث بمعدل عمري معياري 16.6 لكل 100,000 نسمة يليها الكويت بمعدل 13.3 ثم البحرين بمعدل 10.1 فالإمارات العربية المتحدة بمعدل 7.3 ثم المملكة العربية السعودية 6.1 وأخيراً سلطنة عمان بمعدل عمري معياري 4.1 لكل 100,000 نسمة.

3- السرطان الليمفاوي غير هودجيكن (NHL)

جاء سرطان الليمفاوي من النوع غير هودجيكن في المرتبة الثالثة بين مواطني دول مجلس التعاون. حيث تم تسجيل 7087 حالة في الفترة من يناير1998 إلى ديسمبر 2007م بنسبة 7.4% من إجمالي حالات السرطان المشخصة في الذكور. ويحتل هذا النوع المرتبة الأولى لدى الذكور بينما يأتي في المرتبة الرابعة لدى الإناث (بنسبة 8.8%لدى الذكور و 6.0% لدى الإناث).

وسجل أعلى معدل عمري معياري للإصابة لكل 100,000نسمة بين الذكور في الكويت 11.1 يليها قطر بمعدل 9.4 ثم عمان بمعدل 7.6 ثم البحرين بمعدل 7.1 ثم دولة الإمارات العربية المتحدة 6.6 وأخيراً المملكة العربية السعودية بمعدل 6.1 لكل 100,000 نسمة. بينما جاء أعلى معدل عمري معياري للإصابة لكل 100,000 بين الإناث في دولة قطر بمعدل 9.1 تلتها دولة الكويت بمعدل 6.4 ثم البحرين حيث بلغ المعدل 5.6 ثم السعودية بمعدل 4.7 وأخيراً الإمارات العربية المتحدة وعمان بمعدل 4.6 لكل 100,000 نسمة.

4- سرطان ابيضاض الدم Leukemia

احتل سرطان ابيضاض الدم المرتبة الرابعة في دول مجلس التعاون خلا الفترة من يناير 1998 إلى 2007م. فقد تم تسجيل 6486 حالة وذلك بنسبة 6.8% من إجمالي حالات السرطان المشخصة بين مواطني دول مجلس

بينما في الإناث كان أعلى معدل إصابة لدى النساء القطريات بمعدل 172.2 لكل 100,000 نسمة، ثم البحرينيات بمعدل 154.6 ، ثم الكويتيات بمعدل 142.0 فالإمارتيات بمعدل 95.1، والعمانيات بمعدل 82.6، وأخيراً السعوديات بمعدل 71.2 حالة سرطان لكل 100,000 نسمة. وكان سرطان الثدي أكثر السرطانات شيوعاً عند الإناث حيث صنف في المرتبة الأولى في جميع دول الخليج، يلي ذلك سرطان الغدة الدرقية حيث صنف في المرتبة الثانية ، ثم سرطان القولون و المستقيم ، وسرطان الجهاز اللمفاوي (غير هودجيكن) وأخيراً سرطان ابيضاض الدم في المرتبة الخامسة. جدول (2).

جدول (2): توزيع حالات السرطان الأكثر انشاراً حسب الجنس لدول مجلس التعاون والمسجلة من عام 1998-2007م

الذكور			الإناث		
مكان الإصابة	العدد	النسبة	مكان الإصابة	العدد	النسبة
السرطان اللمفاوي غير هودجيكن	4197	8.8	سرطان الثدي	11296	23.5
سرطان القولون والمستقيم	4103	8.6	سرطان الغدة الدرقية	4396	9.1
سرطان ابيضاض الدم	3759	7.9	سرطان القولون والمستقيم	3538	7.3
الرئة	3551	7.5	السرطان اللمفاوي غير هودجيكن	2890	6
سرطان الكبد	3530	7.4	سرطان ابيضاض الدم	2727	5.5

إحصائيات السرطان في دول مجلس التعاون الخليجي

للفترة 1998-2007م

تم تشخيص 95183 حالة سرطان بين مواطني دول مجلس التعاون الخليجي في الفترة من يناير1998م إلى ديسمبر 2007 م ، حيث بلغ عدد الحالات بين الذكور 47250 حالةً و بين الإناث 47933 حالة موزعة على النحو التالي :

جاءت أعلى نسبة من حالات السرطان (73.5%) بين المواطنين السعوديين ، بينما كانت النسبة في سلطنة عمان (9.3%)، وفي دولة الكويت (7.3%)، وفي مملكة البحرين (4.4%)، وفي دولة الإمارات العربية المتحدة (3.8%)، وفي دولة قطر (1.7%).

جدول (1) : توزيع حالات السرطان المسجلة لدول مجلس التعاون خلال الفتره 1998-2007م

الدولة	الذكور	%	الإناث	%	الإجمالي	%
دولة الإمارات العربية المتحدة	1733	3.7	1863	3.9	3596	3.8
مملكة البحرين	2029	4.3	2183	4.6	4212	4.4
المملكة العربية السعودية	35046	74.2	34895	72.8	69941	73.5
سلطنة عمان	4672	9.9	4218	8.8	8890	9.3
دولة قطر	772	1.6	859	1.8	1631	1.7
دولة الكويت	2998	6.3	3915	8.2	6913	7.3
	47250	100	47933	100	95183	100

بلغ أعلى معدل للإصابة بالسرطان بين الذكور لدى المواطنين البحرينيين بمعدل 158.5 ثم القطريين بمعدل 153.4 حالة سرطان لكل 100,000 نسمة. ثم الكويتيين بمعدل إصابة 130.5 ، تلاهم العمانيين بمعدل92.5 ثم الإمارتيين بمعدل 82.3 ، و السعوديين بمعدل 72.5 حالة سرطان لكل 100,000 نسمة. وكان أكثر أنواع السرطانات شيوعاً عند الذكور سرطان الجهاز اللمفاوي غير هودجيكن ، يليه سرطان القولون والمستقيم في المرتبة الثانية ، ثم سرطان ابيضاض الدم ، ثم سرطان الرئة في المرتبة الرابعة وسرطان الكبد في المرتبة الخامسة.

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Back cover

معدلات الإصابة بمرض السرطان في دول مجلس التعاون ١٩٩٨-٢٠٠٧

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