وزارة الصحة
Ministry of Health

المجلس الصحي السعودي
Saudi Health Council

KINGDOM OF SAUDI ARABIA
SAUDI HEALTH COUNCIL
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CANCER MORTALITY REPORT SAUDI ARABIA 2022


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In the Name of Allah, the Most Gracious, the Most Merciful

The National Cancer Center (NCC) of the Saudi Health Council presents the First Annual Cancer Mortality Report of the year 2022. The Saudi Cancer Registry (SCR) mortality report support the efforts made in the fight against cancer, and provide those in-charge of cancer healthcare and educational projects with the accurate cancer death information that reflect the situational analysis of cancer in the Kingdom of Saudi Arabia. This report offers a comprehensive analysis of cancer mortality in the kingdom and presents mortality rates for the most common cancer types based on gender, age, and geographical location.

The mortality reports, produced by the SCR, allow decision-makers to assess trends in cancer mortality, plan the development of cancer healthcare services and health promotion programs, and ensuring alignment with national strategies and healthcare objectives. Inspired by Vision 2030 to achieve the goals of the ambitious leadership, and meet the expectations of beneficiaries, the Saudi Health Council prioritizes healthcare coordination and integration to strengthen cancer care and reduce cancer mortality.

In conclusion, the witnessed progress in our beloved country's healthcare sector is a blessing from Allah the Almighty and then, the result of the support of the ambitious leadership of the Custodian of the Two Holy Mosques, and the Royal Highness, the Crown Prince, May Allah protect them, and the close follow-up by his Excellency the Chairman, and the members of the Saudi Health Council.

I would like to express my sincere gratitude to my colleagues at the Saudi Health Council, represented by the National Cancer Center, for their diligent work and continuous efforts in preparing this report and achieving the mission and objectives of the Saudi Cancer Registry. I would also like to extend my appreciations to all healthcare staff, organizations, institutions, and charity that involved in healthcare provision and raising awareness to alleviate cancer burden in Saudi Arabia.

Dr. Nahar M. Al-Azemi
Secretary General of
the Saudi Health Council

Praise be to Allah, the Lord of the Worlds, and blessings and peace be upon His prophet and messenger Mohammad.

Cancer survival is the most accurate indicator for the quality of cancer care at all levels. It reflects the outcomes of easy health care access, early detection programs and well-established screening programs, and it will highlight the successful interventions for patients with cancer.
We knew for a long time, in Saudi Arabia that we had excellent tertiary care services, but that feeling was not supported with an evidence-based measurement.

The National Cancer Center (NCC) at the Saudi Health Council plays a crucial role in compiling and analyzing incidence data for the last thirty years. However, we failed to analyze the survival data in the Kingdom of Saudi Arabia for several reasons that became enjoyable short stories to tell young scientists. It took us around twenty years of failure until we reached this achievement.

Currently, I am extremely happy to witness the release of the 1st national cancer Mortality report.
This initiative ensures the validity of survival statistics through the collaborative efforts of both government and private health sector in the Kingdom. By gathering comprehensive data on cancer patient outcomes, the NCC aims to enhance understanding of patterns and trends in cancer survival and improve future cancer care and treatment strategies in Saudi Arabia.

This Mortality report aims to highlight the progress made in cancer treatment and the effectiveness of our national programs. It provides insights that will further enhance the quality of cancer care in the future.
We extend our sincere gratitude to the consultants who helped us to review this report, to the data managers in national health information center, to the data mangers in the Data office of ministry of health, to the technical team responsible for the preparation and implementation of this report, as well as to our colleagues at the NCC and cancer registrars across all health sectors for their invaluable contributions.
Special thanks are also due to the members of the Scientific Committee and the reviewers of this report for their unwavering commitment to the Saudi Cancer Registry.

Professor Mushabbab Ali Al-Asiri
General Director of The National
Cancer Center, Saudi Health Council

In the Name of Allah, the Most Gracious, the Most Merciful

The year 2022 has been an important milestone in our journey to strengthen cancer care in the Kingdom. Building on the foundations laid in previous years, we continued to enhance the quality and depth of cancer data, with a stronger focus on understanding mortality trends and their impact on patient outcomes.

Saudi Health Council and Ministry of Health expanded the national cancer registry and advanced its capabilities. These efforts have allowed us to capture more accurate, comprehensive, and timely data—an essential resource for guiding treatment strategies, evaluating survival outcomes, and shaping healthcare policies that improve lives.

Artificial intelligence and advanced analytics have played an increasingly central role in this progress. By applying these technologies, we are uncovering new insights into cancer patterns, enabling more precise decision-making and accelerating our ability to respond with evidence-based strategies. This integration of AI and data continues to transform how we plan, deliver, and evaluate cancer care across Saudi Arabia.

The results of 2022 reflect a growing maturity in our national approach: stronger collaboration, higher data quality, and deeper insights into the challenges and opportunities of cancer care. As we look forward, these achievements reaffirm our commitment to building a healthcare system where innovation and evidence work hand in hand to reduce mortality and improve the quality of life for every patient and their families.

Eng. Saad Abdulatif Alhezami
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INTRODUCTION

This is the first Cancer Mortality Report, published by the Saudi Cancer Registry (SCR), presents statistical data on cancer-related deaths registered within a defined population and time period. The report includes detailed figures on the number of deaths attributed to cancer, offering a basis for evaluating patterns by demographic and geographic factors, as well as mortality trends.

THE STRUCTURE OF THIS REPORT CAN BE OUTLINED AS FOLLOWS:

PART I - MATERIALS AND METHODS

This part presents the background and methodology of the Saudi Cancer Registry used in collecting and analyzing cancer mortality data. It outlines the principles of coding and classification for tumor topography, morphology, and disease extent at the time of diagnosis. Additionally, it describes the software programs used for data analysis.

The most common cancer types are also presented in tables. Mortality tables include data on the total Number of cases, Age-Standardized Mortality Rate (ASMR), Crude Mortality Rate (CMR), and Cumulative Rates (per 1000 individuals) by gender for each primary cancer site. The distributions of deaths for the most common cancer types by gender across the 13 administrative regions of Saudi Arabia are presented by bar charts.

PART II - OVERVIEW OF CANCER MORTALITY

This part is an overview of cancer mortality in Saudi Arabia between January 1 and December 31, 2022. Figures, tables, and line/bar charts are used to illustrate cancer mortality distribution by gender and age groups, along with morphology distributions. The corresponding cancer ranking for each gender is presented to highlight the most prevalent cancers causing death among males and females.

PART III – CANCER MORTALITY FOR THE MOST COMMON SITES AMONG SAUDI NATIONALS, 2022

This part outlines Mortality statistics for the most common cancers among Saudi males and females. For each cancer site, the total number of cancer deaths, their proportions, and the Age-Standardized Mortality Rates (ASMR) are reported. In addition to these national figures, a regional comparison of ASMR distribution within Saudi Arabia is presented to identify geographical variations in cancer mortality rates across different regions. Furthermore, international comparisons are used to evaluate ASMRs for the most common cancers among Saudis against those reported in selected developed and developing countries.

PART IV - CANCER MORTALITY FOR THE MOST COMMON SITES AMONG NON-SAUDIS

This part presents the number of cancer deaths among Non-Saudis, including data on the most common types of cancer. The analysis of non-Saudis cancer mortality is performed separately due to the demographic characteristics of the expatriate population, where a significant proportion of males fall within the 25-44 age group.

PART V - MORTALITY TABLES

This part contains detailed mortality tables covering all cancer types in 2022 for both Saudis and non-Saudis. The tables provide data on:

- Distribution of cancer cases among Saudis by age group and gender.
- Distribution of cancer cases among non-Saudis by age group and gender.
- Cancer Mortality Rates (per 100,000 population) among Saudis by age group and gender.
- Cancer Mortality Rates (per 100,000 population) among non-Saudis by age group and gender.
- Age-standardized Mortality Rate (ASMR) and relative frequencies by cancer site, gender, and administrative regions among Saudis population.

PART VI- ARABIC SUMMARY

This part provides an Arabic summary of Cancer Mortality Statistics in Saudi Arabia for the Year 2022

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PART I
MATERIALS AND METHODS

BACKGROUND ON SAUDI ARABIA

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

Figure 1.1: Administrative regions of Saudi Arabia

The estimated population of Saudi Arabia in 2022 was 32,175,224. Saudi nationals were estimated to be 18,792,262 of these 9,434,131 (50.2%) were males and 9,358,131 (49.8%) were females (General Authority of Statistics, 2023).

The non-Saudi population totaled 13,382,962 with 10,244,464 males (76.5%) and 3,138,498 females (23.5%). Figures 1.2 and 1.3 illustrate the population pyramids for both Saudi and non-Saudi individuals, categorized by gender and age group, respectively.

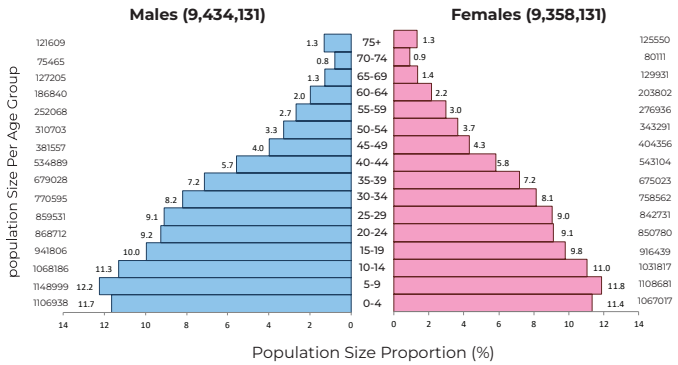


Figure 1.2: Population pyramid of Saudis (%) by gender and age group, 2022

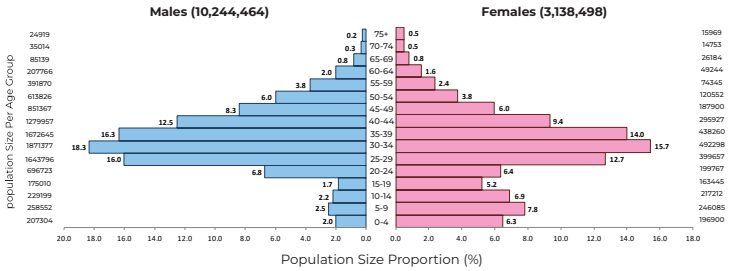


Figure 1.3: Population pyramid of non-Saudis (%) by gender and age group, 2022

SAUDI CANCER REGISTRY

National cancer registries are the cornerstone of national cancer control and prevention programs; to achieve the accurate knowledge of the numbers and rates of cancer cases and associated deaths, in addition to the knowledge of the geographical distribution of cancer cases, prediction of the financial and social burden of cancer-related health care activities , monitoring the results of risk factors associated with cancer (food, carcinogens and behaviors), monitoring the performance of preventive and therapeutic programs, analyzing the obstacles facing these programs, directing the local product of financial and human resources and investments, and supporting community health research and clinical studies. The Saudi Cancer Registry is one of the first national registries in the Kingdom of Saudi Arabia, if not the first, as it was established in 1412 AH / 1992 AD. The statistical information provided by the Saudi Cancer Registry has been extremely important for developing cancer preventive and treatment services in the Kingdom over the past thirty years.

Reports have been published annually since 1994 to date. These reports are circulated as a tool to assist in making national decisions regarding cancer health services and the optimal distribution of resources. They are viewed and used by national bodies to develop and maintain cancer care across different regions in Saudi Arabia, as well as by international agencies to help measure the global burden of cancer.

DATA COLLECTION AND PROCESSING

The Saudi Cancer Registry collects data through oncology centers cancer registrars, most of all cancer cases are registered and their data is entered using a certified software. Data is processed and quality is managed, reviewed, and analyzed to generate the annual Saudi Cancer Registry reports.

The mortality data used in this report includes all cancer-related deaths that occurred between January and December 2022, with cases registered since 1994 serving as the reference population. Mortality rates are calculated based on age at death (five-year age groups) and are presented separately for males and females.

To enhance accuracy and minimize late reporting, cancer death registration has been automated through a web-based reporting system, allowing hospitals and oncology centers to submit real-time mortality data. Cases identified after the reporting period will be included in subsequent mortality reports.

ORGANIZATIONAL STRUCTURE

The scientific committee provides scientific guidance to the SCR, reviews cancer statistics reports, processes data requests, and assists in the dissemination of mortality data to healthcare professionals and policymakers. The committee also ensures compliance with national and international data confidentiality guidelines.

REGIONAL OFFICES

The SCR operates regional offices across all regions in Saudi Arabia, ensuring data accuracy through quality control processes, including verification of tumor site, morphology, staging, case linkage (tumor and patient), and data consolidation. The main office prepares annual reports for dissemination to the medical community, government departments, international organizations, and the public.

DATA MANAGEMENT

A royal decree has classified cancer incidence and death as a mandatory notifiable disease, ensuring comprehensive data collection across all healthcare sectors in the Kingdom. The SCR strives for full access to cancer data from all governmental and private hospitals, clinics, and laboratories nationwide.

Cancer data are abstracted from patient medical records based on clinical and/or histopathological diagnoses by SCR-trained cancer registrars. The collected data includes personal identifications details (name, ID number, gender, age), demographic information (address, telephone number, nationality), tumor characteristics (diagnosis date, primary site, histology, behavior, grade, stage, basis of diagnosis), and mortality information (date and cause of death). If a death occurs outside hospital settings or is not captured in a patient's hospital follow-up, registrars cross-reference additional data sources. These may include national civil registration systems, death certificates issued by relevant Saudi authorities, and Ministry of Health (MOH) vital statistics to confirm death status and ascertain the cause of death. This multi-source approach helps ensure all relevant mortality events are accurately documented for patients, even if they have been lost to regular hospital follow-up.

The primary site (topography) and histology (morphology) of the malignancies are identified and coded according to the International Classification of Diseases for Oncology, 3rd Edition (ICD-O-3), published by the World Health Organization (WHO), 2000. Since 2001, updates in cancer type classification, behavior coding, and staging criteria have followed the SEER Summary Stage Manual 2000 to improve accuracy and consistency in mortality reporting.

MORTALITY INDICATORS AND STATISTICAL DEFINITIONS

Crude Mortality Rate (CMR)

The Crude Mortality Rate (CMR) represents the total number of cancer deaths as a proportion of the total population within a given period. It is expressed as the number of cancer deaths occurring in every 100,000 individuals per year. All rates are thus expressed as per 100,000 population. Because cancer mortality varies significantly with age, crude rates can be influenced by demographic changes and may not be suitable for comparing mortality rates across regions with different population structures. Therefore, to assess time trends in mortality data or compare them across geographical areas or between countries, it is necessary to first standardize the rates with respect to age.

Cumulative Mortality rate

The Cumulative Mortality Rate estimates the probability or risk of individuals dying from cancer within a specified period. It is expressed as the number of newborns (out of 100, or 1000) expected to die from a particular cancer type before the age of 65 or 75, assuming current mortality rates remain unchanged. Similar to the Age-Standardized Mortality Rate (ASMR), this measure allows for comparisons between populations with different age distributions. In this report, cumulative mortality rates are calculated for individuals aged 0–64 and 0–74 years.

Age-Specific Mortality Rate (AMR)

The Age-Specific Mortality Rate (AMR) is the number of cancer-related deaths occurring in a specific age group during a defined period, divided by the mid-year population of that age group. This measure allows for age-group-specific mortality analysis.

Age-Standardized Mortality Rate (ASMR)

The Age-Standardized Mortality Rate (ASMR) adjusts for differences in age distribution across populations, allowing for

fair comparisons between regions and overtime. It is calculated using the World Standard Population as a reference and expressed per 100,000 population (Table 1).

Table 1: World Standard Population for Age Standardization

Age group (Years)	Standard Population Weight
0 - 4	12,000
5 - 9	10,000
10 - 14	9,000
15 - 19	9,000
20 - 24	8,000
25 - 29	8,000
30 - 34	6,000
35 - 39	6,000
40 - 44	6,000
45 - 49	6,000
50 - 54	5,000
55 - 59	4,000
60 - 64	4,000
66 - 69	3,000
70 - 74	2,000
75 +	2,000
Total	**100,000**

*Doll R. Payne P. Waterhouse J. Cancer Incidence in Five Continents Vol. I. International Union against Cancer. 1966

INTERNATIONAL CLASSIFICATION SYSTEMS FOR MORTALITY DATA:

ICD-10

The World Health Organization's International Classification of Diseases, 10th edition, is used for coding causes of death in mortality statistics.

ICD-O-3

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

KEY DEFINITION AND STATISTICAL TERMS USED IN THIS REPORT:

Metastasis

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

Summary Stage

A broad classification of cancer cases based on the extent of disease progression at diagnosis, which is critical for mortality analysis.

Mean

The simple mathematical average of two or more numbers.

Median

The middle value in a ranked dataset, or values.

Range

This measure reflects the relative importance of a specific cancer site compared to others in terms of mortality. Ranking illustrates the mortality of the most and least frequent cancer sites in a population according to their frequency.

Ratio

It is the relation between two quantities. The first quantity is a numerator and the second is a denominator.

Relative frequency

The percentage of cancer deaths attributed to a specific cancer type relative to the total number of cancer deaths.

PART II

OVERVIEW OF CANCER MORTALITY 2022

CANCER MORTALITY IN SAUDI ARABIA, 2022

Between January 1 and December 31, 2022, the Saudi Cancer Registry (SCR) registered a total of 8,541 cancer-related deaths. These included 4,290 males (50.2%) and 4,251 females (49.7%). Among the reported deaths, 7,458 were Saudi nationals, 1,046 were non-Saudis, and 37 were of unknown nationality.

In total, 8,384 cancer-related deaths were included in the final analysis. Of these, 7,352 (87.7%) were Saudi nationals, while 1,032 (12.3%) were non-Saudis (Table 2.1.1). A total of 157 deaths were excluded from the analysis due to incomplete information: 37 cases had unknown nationality, and 120 deaths could not be coded to ICD-10 classification. In situ cases were not included in the statistical analysis (Table 2.1.2).

The overall Age-Standardized Mortality Rate (ASMR) was 65.8 per 100,000 in males and 62.7 per 100,000 in females.

Table 2.1.1: Number of Analyzed Cancer Mortality Cases by Nationality and Sex, 2022

Nationality	Sex		Total
	Male	Female	
Saudi	3661	3691	7352
Non-Saudi	537	495	1032
Total	4198	4186	8384

Table 2.1.2: Number of Non-Analyzed Cancer Mortality Cases by Nationality and Sex, 2022*

Nationality	Sex		Total
	Male	Female	
Saudi	65	41	106
Non-Saudi	6	8	14
Unknown Nationality	21	16	37
Total	92	65	157

* Unknown nationality cases, in situ cases, and deaths that could not be coded to ICD-10 are excluded from the analysis.

The Age-Specific Mortality Rate (AMR) increased with advancing age in both genders. The median age at death was 66 years for males (range: 0-108 years) and 63 years for females (range: 0-109 years) (Figure 2.2).

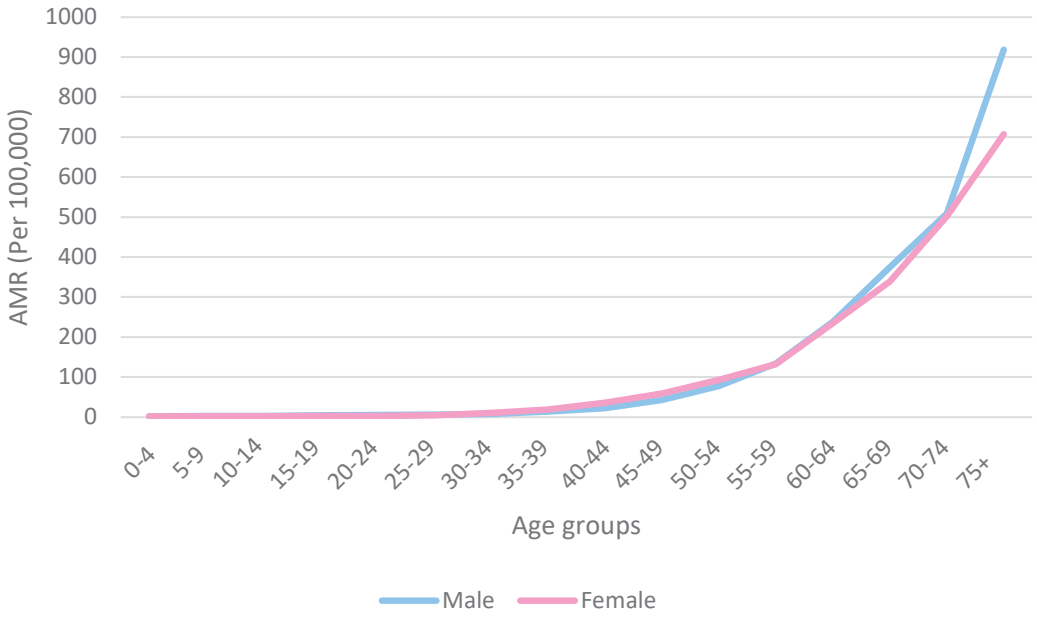


Figure 2.2: Age-Specific Mortality Rates (AMR per 100,000) for All Cancer Sites Among Saudis by Age Group, 2022

CANCER MORTALITY DISTRIBUTION AMONG SAUDI NATIONALS, 2022

In females, the highest number of cancer-related deaths occurred in the 60-74 years age group, totaling 1,322 deaths, which represents 35.8% of all cancer deaths (Figure 2.3). Similarly, in males, the highest number of deaths was also reported in the 60-74 years age group, with a total of 1,303 deaths, accounting for 35.6% of cancer deaths (Figure 2.3). The most common cancer types leading to mortality among Saudi nationals varied by gender and age group, where breast and colorectal cancer were the most leading cause of cancer mortality among all age groups in Saudi nationals (Figure 2.4).

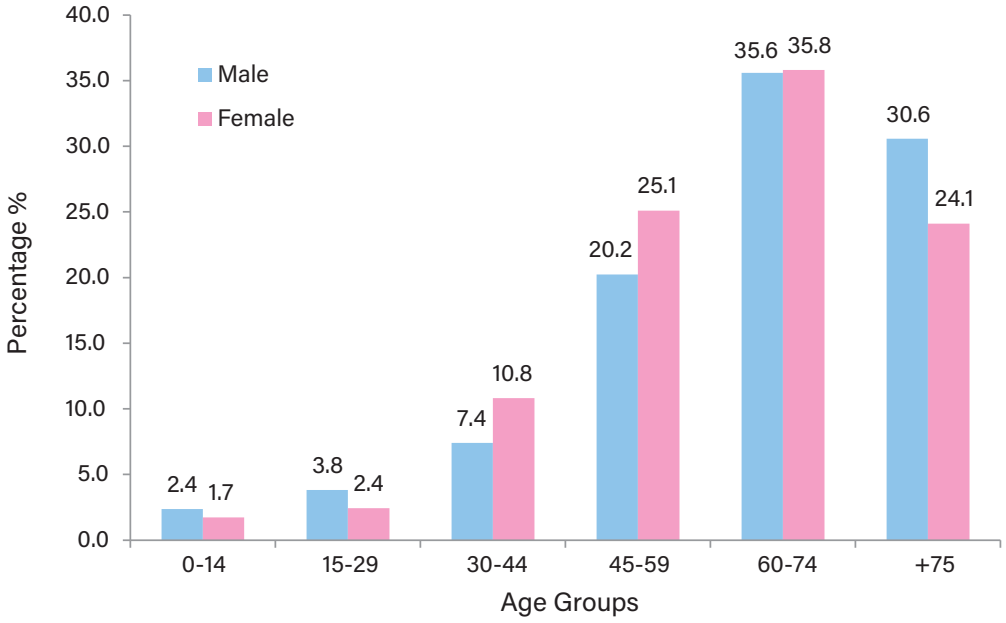
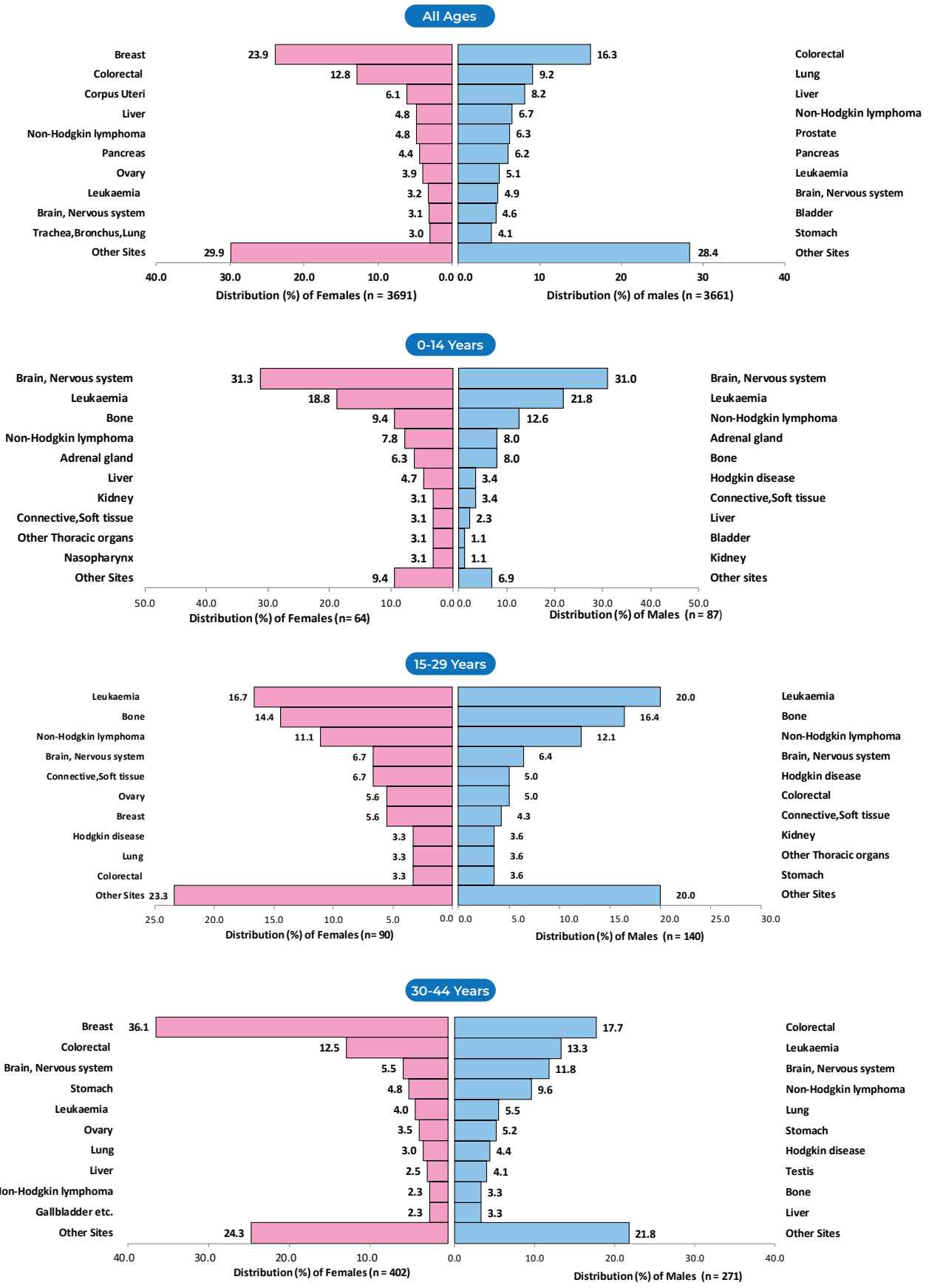
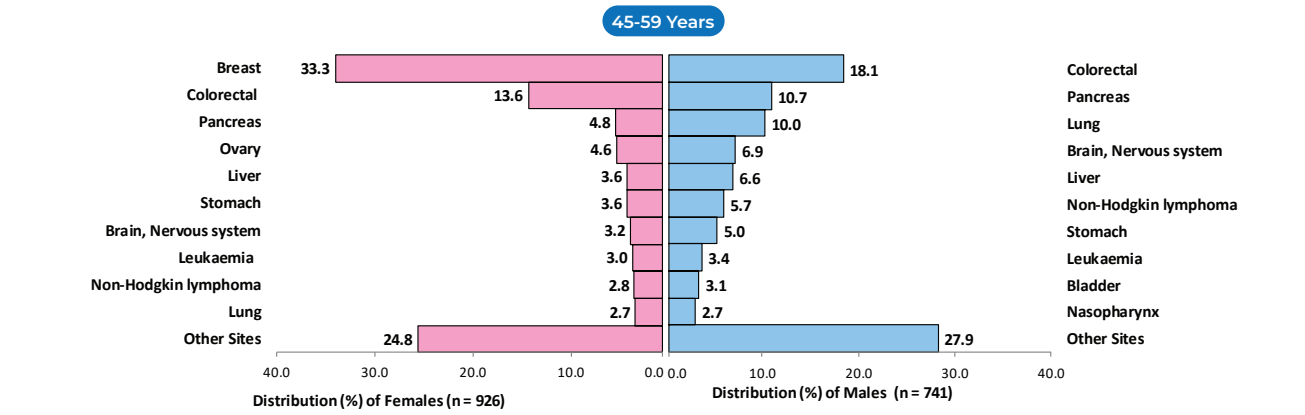
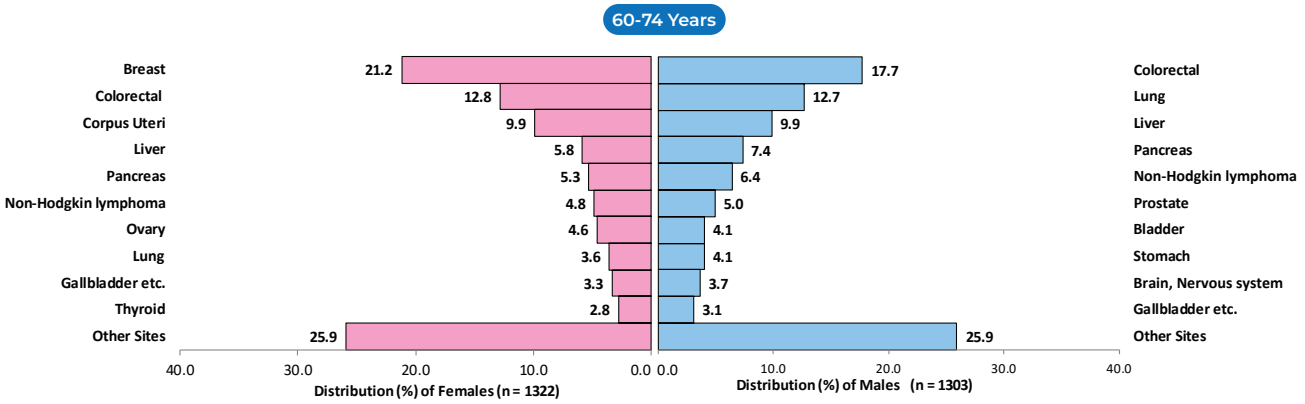


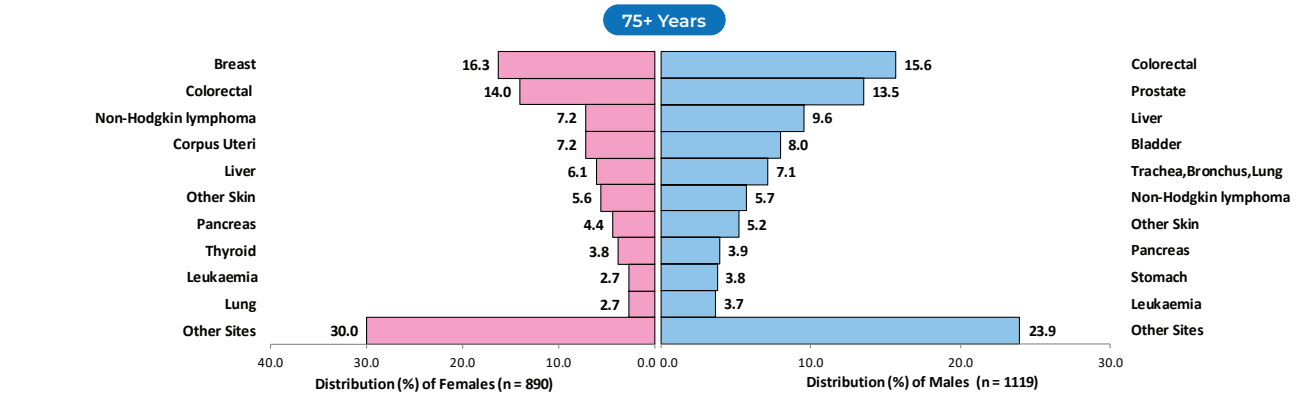
Figure 2.3: Distribution (%) of Cancer Mortality Among Saudi Nationals by Gender and Age Groups, 2022

Figure 2.4: Distribution (%) of the Most Common Cancer Types Leading to Mortality Among Saudi Nationals by Gender and Age Groups, 2022









LEADING CAUSES OF CANCER MORTALITY

According to 2022 data, the top ten most common causes of cancer-related mortality among Saudi nationals were colorectal and breast cancers. Colorectal cancer ranked first, accounting for 1,068 deaths (14.5%), while breast cancer was the second most frequent, with 894 deaths (12.2%) (Table 2.4). Other leading sites included liver (479 deaths, 6.5%), lung (447, 6.1%), and non-Hodgkin lymphoma (422, 5.7%). Together, these five cancer types represented nearly half (approximately 45%) of all registered cancer deaths in the Kingdom.

Table 2.4: Leading Causes of Cancer Mortality by Cancer Site Among Saudi Nationals in 2022

Cancer Sites	Number of Deaths	% of Total Cancer Deaths
Colorectal	1068	14.5
Breast	894	12.2
Liver	479	6.5
Lung	447	6.1
NHL	422	5.7
Pancreas	388	5.3
Leukemia	306	4.2
Brain, CNS	294	4.0
Stomach	257	3.5
Prostate	232	3.2
Total	**4787**	**65.2**

Gender-Specific Mortality Patterns

Gender differences were observed in the leading causes of cancer mortality (Table 2.5). Among Saudi males, the highest mortality was reported from colorectal (595 deaths, 16.3%), lung (336, 9.2%), and liver cancers (300, 8.2%). In females, breast cancer was the leading cause of death (882 deaths, 23.9%), followed by colorectal (473, 12.8%) and corpus uteri cancers (226, 6.1%). Notably, several cancers such as bladder, stomach, and brain & CNS had higher mortality frequencies in males, while ovarian and corpus uteri cancers were exclusive to females.

Table 2.5: Top 10 Leading Cancer Mortality Site by Gender Among Saudi Nationals, 2022

Cancer Site (Males)	Number of Deaths	%	Cancer Site (Females)	Number of Deaths	%
Colorectal	595	16.3	Breast	882	23.9
Lung	336	9.2	Colorectal	473	12.8
Liver	300	8.2	Corpus Uteri	226	6.1
NHL	244	6.7	Liver	179	4.8
Prostate	232	6.3	NHL	178	4.8
Pancreas	226	6.2	Pancreas	162	4.4
Leukemia	187	5.1	Ovary	145	3.9
Brain & CNS	180	4.9	Leukemia	119	3.2
Bladder	170	4.6	Brain & CNS	114	3.1
Stomach	151	4.1	Lung	111	3.0
Total	**2621**	**71.6**	**Total**	**2589**	**70.0**

Cancer Mortality Indicators by Site

As shown in Table 2.6, the overall age-standardized mortality rate (ASMR) for all cancers combined was 65.8 per 100,000 among males and 62.7 per 100,000 among females. The crude mortality rates were 38.8 and 39.5 per 100,000 for males and females, respectively. The cumulative mortality rate before age 75 were similar in both sexes, with an estimated 72 out of 1000 individuals expected to die from cancer before reaching the age of 75.

Among individual sites, the highest ASMRs were reported for breast cancer in females (14.5 per 100,000), and for colon and lung cancer in males (6.6 per 100,000 each). Breast cancer also showed a notably high cumulative mortality risk among females under the age of 75 (16.80), followed by colorectal cancer (12.28 in males and 9.29 in females), and lung cancer (8.35 in males and 2.48 in females).

Table 2.6: Cancer Mortality Indicators (Per 100,000) Among Saudi Nationals by Primary Cancer Site and Gender, 2022

ICD-10 Code	Cancer Site	Male						Female					
		Number of Deaths	%	Crude Mortality Rate	ASMR	Cumulative Rate (Per 1000)		Number of Deaths	%	Crude Mortality Rate	ASMR	Cumulative Rate (Per 1000)	
						0 - 64	0 - 74					0 - 64	0 - 74
All	All Sites Total	3661	%100.00	38.8	65.8	28.00	72.10	3691	%100.00	39.5	62.7	29.95	72.10
Not C44	All Sites but C44	3574	%97.60	37.9	64.3	27.60	70.95	3618	%98.00	38.7	61.5	29.75	71.45
C00	Lip	4	%0.10	0	0.1	0.03	0.03	5	%0.10	0.1	0.1	0.00	0.00
C01-C02	Tongue	39	%1.10	0.4	0.7	0.29	0.84	41	%1.10	0.4	0.7	0.38	0.75
C03-C06	Mouth	33	%0.90	0.4	0.6	0.21	0.67	22	%0.60	0.2	0.4	0.22	0.50
C07-C08	Salivary Glands	8	%0.20	0.1	0.1	0.08	0.14	9	%0.20	0.1	0.1	0.03	0.07
C09	Tonsil	1	%0.00	0	0	0.00	0.00	0	%0.00	0	0	0.00	0.00
C10	Other Oropharynx	3	%0.10	0	0	0.01	0.08	1	%0.00	0	0	0.00	0.00
C11	Nasopharynx	62	%1.70	0.7	1.2	0.54	1.57	22	%0.60	0.2	0.4	0.20	0.46
C12-C13	Hypopharynx	5	%0.10	0.1	0.1	0.05	0.05	5	%0.10	0.1	0.1	0.02	0.06
C14	Pharynx Unspecified	2	%0.10	0	0	0.02	0.02	0	%0.00	0	0	0.00	0.00
C15	Oesophagus	63	%1.70	0.7	1.1	0.56	0.98	39	%1.10	0.4	0.7	0.20	0.61
C16	Stomach	151	%4.10	1.6	2.7	1.39	3.06	106	%2.90	1.1	1.7	0.97	1.96
C17	Small Intestine	27	%0.70	0.3	0.5	0.24	0.65	19	%0.50	0.2	0.3	0.12	0.47
C18	Colon	362	%9.90	3.8	6.6	3.09	7.00	305	%8.30	3.3	5.3	2.49	6.15
C19-C20	Rectum	233	%6.40	2.5	4.4	1.96	5.28	168	%4.60	1.8	2.9	1.38	3.14
C21	Anus	23	%0.60	0.2	0.4	0.22	0.46	10	%0.30	0.1	0.2	0.09	0.22
C22	Liver	300	%8.20	3.2	5.7	2.19	6.49	179	%4.80	1.9	3.2	1.16	3.83
C23-C24	Gallbladder Etc.	70	%1.90	0.7	1.4	0.54	2.07	92	%2.50	1	1.7	0.80	2.08
C25	Pancreas	226	%6.20	2.4	4.3	2.32	5.36	162	%4.40	1.7	2.9	1.23	3.61
C30-C31	Nose, Sinuses Etc.	6	%0.20	0.1	0.1	0.00	0.19	2	%0.10	0	0	0.03	0.03
C32	Larynx	41	%1.10	0.4	0.8	0.24	0.89	12	%0.30	0.1	0.2	0.11	0.35
C33-C34	Trachea, Bronchus, Lung	336	%9.20	3.6	6.6	3.12	8.35	111	%3.00	1.2	2	0.93	2.48
C37-C38	Other Thoracic Organs	15	%0.40	0.2	0.2	0.12	0.19	7	%0.20	0.1	0.1	0.06	0.10
C40-C41	Bone	47	%1.30	0.5	0.5	0.28	0.54	43	%1.20	0.5	0.6	0.32	0.56
C43	Melanoma of Skin	13	%0.40	0.1	0.3	0.06	0.28	5	%0.10	0.1	0.1	0.03	0.03
C44	Other Skin	87	%2.40	0.9	1.6	0.31	1.10	73	%2.00	0.8	1.3	0.28	0.77
C45	Mesothelioma	8	%0.20	0.1	0.1	0.06	0.10	3	%0.10	0	0.1	0.04	0.04
C46	Kaposi Sarcoma	18	%0.50	0.2	0.3	0.09	0.39	3	%0.10	0	0	0.01	0.01
C47;C49	Connective, Soft Tissue	44	%1.20	0.5	0.7	0.37	0.70	42	%1.10	0.4	0.6	0.37	0.61
C50	Breast	12	%0.30	0.1	0.2	0.04	0.11	882	%23.90	9.4	14.5	8.66	16.80
C51	Vulva	-	-	-	-	-	-	11	%0.30	0.1	0.2	0.09	0.22
C52	Vagina	-	-	-	-	-	-	6	%0.20	0.1	0.1	0.03	0.07
C53	Cervix Uteri	-	-	-	-	-	-	72	%2.00	0.8	1.2	0.69	1.34
C54	Corpus Uteri	-	-	-	-	-	-	226	%6.10	2.4	4.4	1.48	6.14
C55	Uterus Unspecified	-	-	-	-	-	-	57	%1.50	0.6	1	0.53	1.19
C56	Ovary	-	-	-	-	-	-	145	%3.90	1.6	2.5	1.34	3.24
C57	Other Female Genital	-	-	-	-	-	-	19	%0.50	0.2	0.3	0.18	0.38
C58	Placenta	-	-	-	-	-	-	1	%0.00	0	0	0.01	0.01
C60	Penis	3	%0.10	0	0.1	0.00	0.07	-	-	-	-	-	-
C61	Prostate	232	%6.30	2.5	4.3	0.61	3.45	-	-	-	-	-	-
C62	Testis	17	%0.50	0.2	0.2	0.14	0.14	-	-	-	-	-	-
C63	Other Male Genital	2	%0.10	0	0	0.00	0.07	-	-	-	-	-	-
C64	Kidney	89	%2.40	0.9	1.7	0.73	1.97	55	0.015	0.6	1	0.44	1.11
C65	Renal Pelvis	4	%0.10	0	0.1	0.06	0.12	0	0	0	0	0.00	0.00
C66	Ureter	2	%0.10	0	0	0.03	0.03	1	0	0	0	0.00	0.00
C67	Bladder	170	%4.60	1.8	3.1	0.91	2.68	42	0.011	0.4	0.7	0.23	0.57
C68	Other Urinary Organs	11	%0.30	0.1	0.2	0.07	0.25	2	%0.10	0	0	0.00	0.04
C69	Eye	7	%0.20	0.1	0.1	0.04	0.04	3	%0.10	0	0	0.01	0.01
C70-C72	Brain, Nervous System	180	%4.90	1.9	2.8	1.81	3.21	114	0.031	1.2	1.6	1.14	1.56
C73	Thyroid	49	%1.30	0.5	0.9	0.39	0.93	95	0.026	1	1.7	0.57	2.00
C74	Adrenal Gland	11	%0.30	0.1	0.1	0.06	0.13	6	0.002	0.1	0.1	0.04	0.04
C75	Other Endocrine	2	%0.10	0	0	0.02	0.02	7	0.002	0.1	0.1	0.02	0.08
C81	Hodgkin Disease	65	%1.80	0.7	1	0.62	1.04	32	%0.90	0.3	0.5	0.28	0.53
C82-C85;C96	Non-Hodgkin Lymphoma	244	%6.70	2.6	4.2	1.76	4.73	178	%4.80	1.9	3.1	0.92	3.31
C88	Immunoproliferative Dis.	0	%0.00	0	0	0.00	0.00	0	%0.00	0	0	0.00	0.00
C90	Multiple Myeloma	62	%1.70	0.7	1.2	0.37	1.47	37	%1.00	0.4	0.7	0.29	0.83
C91	Lymphoid Leukemia	62	%1.70	0.7	0.9	0.34	0.75	23	%0.60	0.2	0.4	0.10	0.36
C92-C94	Myeloid Leukemia	93	%2.50	1	1.4	0.71	1.40	69	%1.90	0.7	1	0.56	1.07
C95	Leukemia Unspecified	32	%0.90	0.3	0.4	0.25	0.36	27	%0.70	0.3	0.4	0.20	0.35
Other	Other & Unspecified	85	%2.30	0.9	1.5	0.70	1.74	95	%2.60	1	1.6	0.79	2.10

CANCER MORTALITY AMONG ADULTS (>14 YEARS), 2022

Between January and December 2022, the Saudi Cancer Registry reported a total of 8,352 cancer-related deaths among adults aged 14 years and older. Of these, 7,305 deaths occurred among Saudi nationals, while 1,018 deaths were among non-Saudis, with the nationality of 29 cases remaining unidentified. The data also indicated that 4,187 deaths (59.9%) were among males and 4,165 deaths (49.8%) were among females, resulting in a male-to-female ratio of 100:99.8 (Table 2.7.1.1 and 2.7.1.2).

Table 2.7.1.1: Number of Analyzed Cancer Mortality Among Adults by Nationality and Gender, 2022^

Nationality	Sex		Total
	Male	Female	
Saudi	3574	3627	7201
Non-Saudi	522	483	1005
Total	4096	4110	8206

Table 2.7.1.2: Number of Non-analyzed Cancer Mortality Among Adults by Nationality and Gender, 2022^

Nationality	Sex		Total
	Male	Female	
Saudi	64	40	104
Non-Saudi	6	7	13
Unknown Nationality	21	8	29
Total	91	55	146

^ Unknown nationality cases, in situ cases, and deaths that could not be coded to ICD-10 are excluded from the analysis.

The most common causes of cancer-related mortality among Saudi adults are listed in Table 2.7.2. Colorectal cancer was the leading cause of cancer mortality among Saudi adults, accounting for 16.6% of male and 13.0% of female cancer deaths (1,068 total deaths) (Table 2.7.2 and 2.7.3). Among males, lung cancer (9.4%), liver cancer (8.3%), and Non-Hodgkin Lymphoma (NHL) (6.5%) followed, while prostate and pancreatic cancers each accounted for 6.5% and 6.3%, respectively.

Among females, breast cancer was the most common cause of cancer death (24.3%), followed by colorectal (13.0%), corpus uteri (6.2%), and liver cancer (4.9%). NHL (4.8%), pancreatic (4.5%), and ovarian cancer (4.0%) were also significant contributors.

The age-specific mortality rate (AMR) increased with age, with a median age at death of 66 years in males and 63 years in females.

Table 2.7.2: Top Ten Leading Causes of Cancer Mortality by Cancer Site Among Saudi Adults Aged 14 years and Older, 2022

Cancer Site	Number of Deaths	% of Total Cancer Deaths
Colorectal	1068	14.8
Breast	894	12.4
Liver	474	6.6
Lung	447	6.2
NHL	406	5.6
Pancreas	388	5.4
Leukemia	275	3.8
Stomach	257	3.6
Brain & CNS	247	3.4
Prostate	232	3.2
Total	**4688**	**65.0**

Table 2.7.3: Top Ten Cancer Mortality by Cancer Site Among Saudi National Adults (Aged 14 years and Older) by Gender, 2022

Cancer Site (Males)	Number of Deaths	%	Cancer Site (Females)	Number of Deaths	%
Colorectal	595	16.6	Breast	882	24.3
Lung	336	9.4	Colorectal	473	13.0
Liver	298	8.3	Corpus Uteri	226	6.2
NHL	233	6.5	Liver	176	4.9
Prostate	232	6.5	NHL	173	4.8
Pancreas	226	6.3	Pancreas	162	4.5
Bladder	169	4.7	Ovary	145	4.0
Leukemia	168	4.7	Lung	111	3.1
Brain & CNS	153	4.3	Leukemia	107	3.0
Stomach	151	4.2	Stomach	106	2.9
Total (Top Ten)	**2561**	**71.5**	**Total (Top Ten)**	**2561**	**70.7**
Total (All Cases)	**3574**	**100.0**	**Total (All Cases)**	**3627**	**100.0**

CANCER MORTALITY AMONG CHILDREN (≤ 14 YEARS), 2022

A total of 181 cancer-related deaths among children aged 0 and 14 years were reported to the SCR in 2022. The data show that mortality was more common among boys than girls, with 103 deaths (56.9 %) among boys and 78 deaths (43.0%) among girls. Among Saudi children, 153 deaths were reported, while 28 deaths occurred among non-Saudi children (Table 2.8.1.1 and 2.8.1.2).

Table 2.8.1.1: Number of Analyzed Cancer Mortality Among Children by nationality and gender, 2022^

Nationality	Sex		Total
	Male	Female	
Saudi	87	64	151
Non-Saudi	15	12	27
Total	102	76	178

Table 2.8.1.2: Number of Non-Analyzed Cancer Mortality Among Children by nationality and gender, 2022^

Nationality	Sex		Total
	Male	Female	
Saudi	1	1	2
Non-Saudi	0	1	1
Unknown Nationality	0	0	0
Total	1	2	3

^ Unknown nationality cases, in situ cases, and deaths that could not be coded to ICD-10 are excluded from the analysis.

Table 2.8.2: Top Ten Leading Causes of Cancer Mortality by Cancer Site

Cancer Site	Number of Deaths	% of Total Cancer Deaths
Brain, CNS	47	31.1
Leukemia	31	20.5
NHL	16	10.6
Bone	13	8.6
Adrenal gland	11	7.3
Liver	5	3.3
Connective, Soft tissue	5	3.3
Hodgkin lymphoma	5	3.3
Kidney	3	2.0
Nasopharynx	2	1.3
Total	**138**	**91.3**

Brain and central nervous system (CNS) cancers were the leading cause of childhood cancer mortality in both boys (31.0%) and girls (31.3%) (Table 2.8.3). Leukemia ranked second, accounting for 21.8% of deaths in boys and 18.8% in girls. Among other leading causes, non-Hodgkin lymphoma (NHL) was more common in boys (12.6%), while bone cancer ranked third in girls (9.4%). Adrenal gland tumors contributed to 8.0% of deaths in boys and 6.3% in girls (Table 2.8.3).

Table 2.8.3: Top Ten Leading Cancer Mortality Site by Gender Among Saudi Children, 2022

Cancer Site (Males)	Number of Deaths	%	Cancer Site (Females)	Number of Deaths	%
Brain, CNS	27	31.0	Brain, CNS	20	31.3
Leukemia	19	21.8	Leukemia	12	18.8
NHL	11	12.6	Bone	6	9.4
Bone	7	8.0	NHL	5	7.8
Adrenal gland	7	8.0	Adrenal gland	4	6.3
Connective, Soft tissue	3	3.4	Liver	3	4.7
Hodgkin lymphoma	3	3.4	Nasopharynx	2	3.1
Liver	2	2.3	Hodgkin lymphoma	2	3.1
Kidney	1	1.1	Connective, Soft tissue	2	3.1
Bladder	1	1.1	Kidney	2	3.1
Total (Top Ten)	**81**	**92.7**	**Total (Top Ten)**	**58**	**90.7**
Total (All Cases)	**87**	**100.0**	**Total (All Cases)**	**64**	**100.0**

Table 2.8.4: Distribution of Morphological Types for The Most Common Cancers Deaths Reported Among Saudi Children by Gender, 2022

			Number of Deaths			
Primary Site	Code	Morphology	Male	%	Female	%
Brain, Nervous system	93803	Glioma, malignant	9	33.3	9	45.0
	94703	Medulloblastoma, NOS	6	22.2	2	10.0
	80003	Neoplasm, malignant	2	7.4	2	10.0
	93923	Ependymoma, anaplastic	2	7.4	-	0.0
	94743	Large cell medulloblastoma	2	7.4	-	0.0
	87283	Meningeal melanomatosis	1	3.7	-	0.0
	89633	Malignant rhabdoid tumor	1	3.7	-	0.0
	93703	Chordoma, NOS	1	3.7	-	0.0
		others	3	11.1	7	35.0
		Total	27	100.0	20	100.0
Leukemia	98003	Leukemia, NOS	7	36.8	3	25.0
	98013	Acute leukemia, NOS	3	15.8	2	16.7
	98263	Burkitt cell leukemia	1	5.3	-	0.0
	98353	Precursor cell lymphoblastic leukemia, NOS	-	0.0	1	8.3
	98363	Precursor B-cell lymphoblastic leukemia	4	21	-	0
	98373	Precursor T-cell lymphoblastic leukemia	1	5	1	8
	98613	Acute myeloid leukemia, NOS	2	11	4	33
	98723	Acute myeloid leukemia, minimal differentiation	0	0	1	8
	99463	Juvenile myelomonocytic leukemia	1	5	-	0
		Total	19	100	12	100
Non-Hodgkin lymphoma	96803	Malignant lymphoma, large B-cell, diffuse, NOS	3	27	1	20
	97293	Precursor T-cell lymphoblastic lymphoma	2	18	-	0
	95903	Malignant lymphoma, NOS	1	9	1	20
	96713	Malignant lymphoma, lymphoplasmacytic	1	9	-	0
	96873	Burkitt lymphoma, NOS	1	9	1	20
	97003	Mycosis fungoides	1	9	-	0
	97023	Mature T-cell lymphoma, NOS	1	9	-	0
	97543	Langerhans cell histiocytosis, disseminated	1	9	-	0
	95913	Malignant lymphoma, non-Hodgkin, NOS	-	0	1	20
	97273	Precursor cell lymphoblastic lymphoma, NOS	-	0	1	20
		Total	11	100	5	100
Bone	92603	Ewing sarcoma	4	57	2	33
	80003	Neoplasm, malignant	1	14	-	0
	91803	Osteosarcoma, NOS	1	14	1	17
	91863	Central osteosarcoma	1	14	-	0
	88033	Small cell sarcoma	-	0	2	33
	91853	Small cell osteosarcoma	-	0	1	17
		Total	7	100	6	100

			Number of Deaths			
Primary Site	Code	Morphology	Male	%	Female	%
Adrenal gland	95003	Neuroblastoma, NOS	4	57	4	100
	83703	Adrenal cortical carcinoma	2	29	-	0
	94903	Ganglioneuroblastoma	1	14	-	0
		Total	7	100	4	100
Liver	81703	Hepatocellular carcinoma, NOS	1	50	2	67
	89703	Hepatoblastoma	-	0	1	33
	91333	Epithelioid hemangioendothelioma, malignant	1	50	-	0
		Total	2	100	3	100
Connective,	80003	Neoplasm, malignant	1	33	-	0
Soft tissue	88003	Sarcoma, NOS	1	33	-	0
	94733	Primitive neuroectodermal tumor, NOS	1	33.33	-	0
	89003	Rhabdomyosarcoma, NOS	-	0	1	50
	89203	Alveolar rhabdomyosarcoma	-	0	1	50
		Total	3	100.0	2	100
Hodgkin disease	96503	Hodgkin lymphoma, NOS	2	66.7	1	50.0
	96523	Hodgkin lymphoma, mixed cellularity, NOS	1	33	-	0
	96633	Hodgkin lymphoma, nodular sclerosis, NOS	-	0	1	50
		Total	3	100	2	100
Kidney	89603	Nephroblastoma, NOS	1	100	2	100
Nasopharynx	89003	Rhabdomyosarcoma, NOS	-	-	2	100

International Comparison of Age-Standardized Mortality Rates (ASMR)

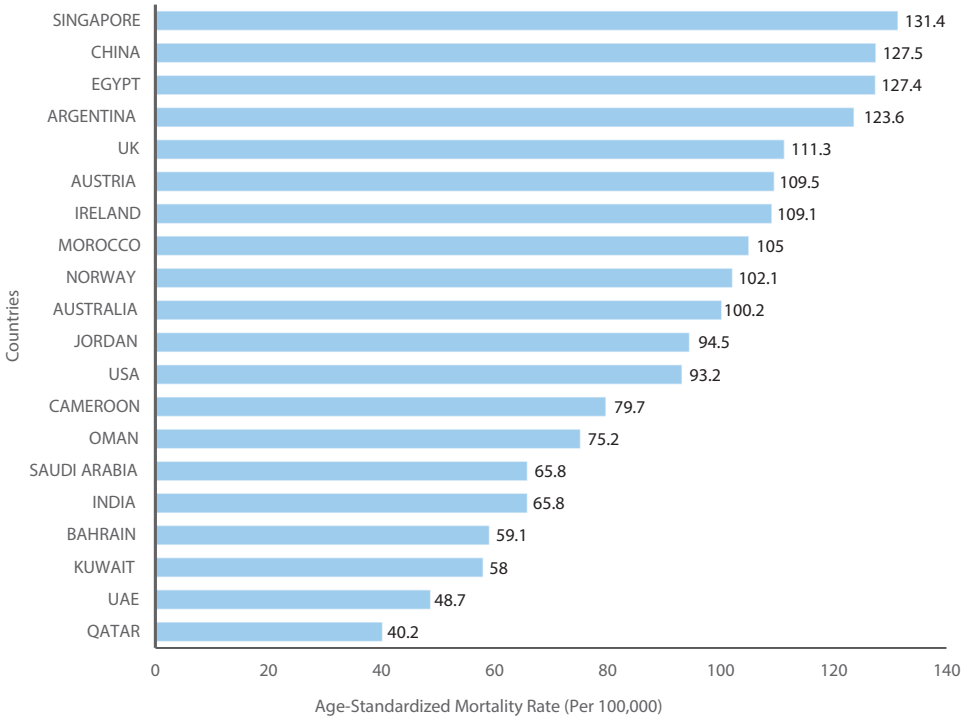


Figure 2.6.1: Comparison of Age-Standardized Mortality Rates (ASMR per 100,000) for All Cancer Sites Mortality Among Saudis Males with Selected Countries, 2022 (Bray et al., 2024)

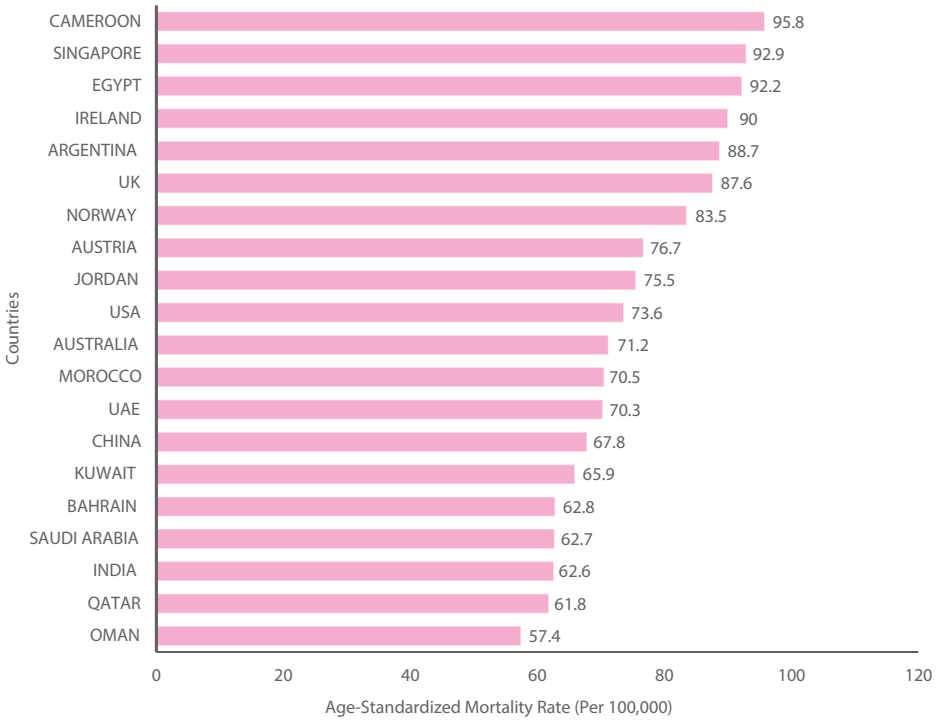


Figure 2.6.2: Comparison of Age-Standardized Mortality Rates (ASMR per 100,000) for All Cancer Sites Mortality Among Saudis Females with Selected Countries, 2022 (Bray et al., 2024)

PART III

MOST COMMON CANCERS-RELATED DEATHS AMONG SAUDI NATIONALS, 2022

CANCER MORTALITY FOR MOST COMMON SITES AMONG SAUDI NATIONALS, 2022

This part represents cancer mortality trends for the most common cancer-related deaths among Saudi nationals in 2022. It includes absolute numbers, relative frequencies, and mortality rates, along with a regional distribution of mortality rates. Additionally, international comparisons of age-standardized mortality rates (ASMR) are provided for selected cancer sites, comparing ASMRs in Saudi Arabia with those in selected developed and developing countries.

In 2022, colorectal cancer was the leading cause of cancer mortality among Saudi nationals, responsible for 1,068 deaths (14.5%), followed by breast cancer with 894 deaths (12.2%), the majority of which occurred in females (Table 3.1). Together, these two cancers accounted for over a quarter of all cancer-related deaths in the Saudi population.

Liver cancer (6.5%), lung cancer (6.1%), and non-Hodgkin lymphoma (5.7%) also contributed substantially to the cancer mortality burden. Pancreatic cancer, leukemia, brain and CNS cancers, stomach cancer, and prostate cancer rounded out the top ten causes of cancer-related deaths. A clear male predominance was observed in mortality for several sites, including colorectal, liver, lung, pancreas, brain & CNS, and stomach cancers, suggesting possible gender-related differences in exposure to risk factors, behavior, or disease progression. In contrast, breast cancer was the leading cause of death among females (Table 3.1).

Table 3.1: Leading Causes of Cancer Mortality Among Saudi Nationals by Gender, 2022

	Number of Deaths			
Sites	**Male**	**Female**	**All**	**%**
Colorectal	595	473	1068	14.5
Breast	12	882	894	12.2
Liver	300	179	479	6.5
Lung	336	111	447	6.1
Non-Hodgkin Lymphoma (NHL)	244	178	422	5.7
Pancreas	226	162	388	5.3
Leukemia	187	119	306	4.2
Brain & Central Nervous System (CNS)	180	114	294	4.0
Stomach	151	106	257	3.5
Prostate	232	-	232	3.2
Total (Top Ten)	2463	2324	4787	65.2

COLORECTAL CANCER (C18-C20)

Colorectal cancer was the leading cause of cancer-related mortality among Saudi males and the second leading cause among Saudi females in 2022. There were 1,068 colorectal cancer deaths, accounting for 14.5% of all cancer deaths among Saudi nationals. Of these, 595 deaths (16.3%) occurred in males and 473 (12.8%) in females (Table 3.1).

The Age-Specific Mortality Rate (AMR) increased sharply with age, particularly after the age of 50, with higher mortality observed among males across all age groups (Figure 3.1.1). The AMR was 11.0 per 100,000 in males and 8.2 per 100,000 in females.

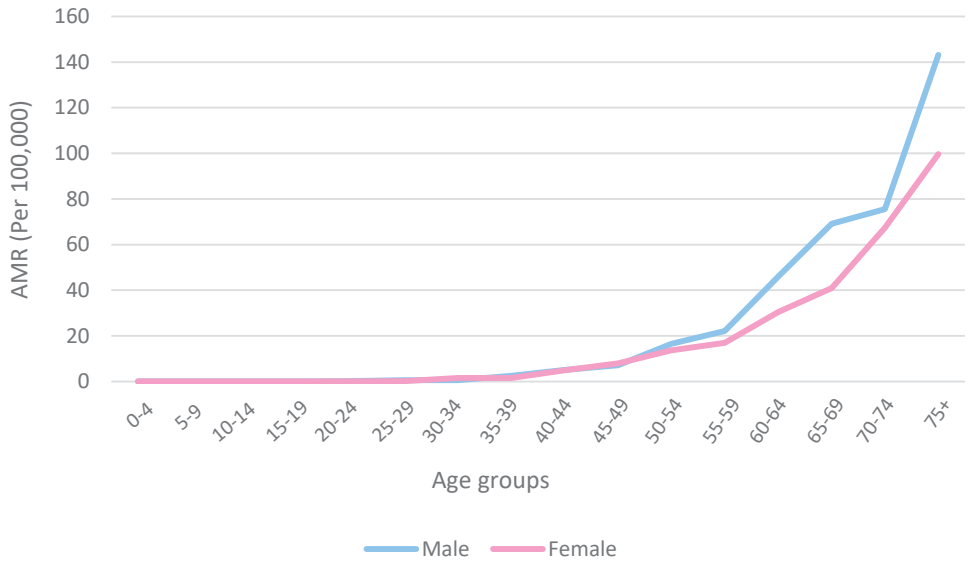


Figure 3.1.1: Age-Specific Mortality Rates (AMR per 100,000) for Colorectal Cancer Among Saudi Nationals, 2022.

Morphologically, adenocarcinoma not otherwise specified (NOS) was the predominant subtype, accounting for 86.7% of colorectal cancer deaths in males and 88.8% in females. Mucinous and signet ring cell carcinomas were less frequent but notable (Table 3.1.1).

Regarding stage at diagnosis, the majority of cases were diagnosed at an advanced stage. Distant metastasis was registered in 39.3% of males and 42.7% of females. Localized disease accounted for 29.7% and 26.0% in males and females, respectively, with only a small proportion of in situ cases (Figure 3.1.2).

Table 3.1.1: Morphological Distribution of Colorectal Cancer Mortality Among Saudi Nationals, 2022

		Number of Deaths			
ICD-O-3	Morphology	Male	%	Female	%
81403	Adenocarcinoma, NOS	516	86.7	420	88.8
84803	Mucinous adenocarcinoma	26	4.4	28	5.9
80103	Carcinoma, NOS	16	2.7	6	1.3
80003	Neoplasm, malignant	8	1.3	6	1.3
84903	Signet ring cell carcinoma	8	1.3	2	0.4
	Others	21	3.5	11	2.3
	Total	595	100.0	473	100.0

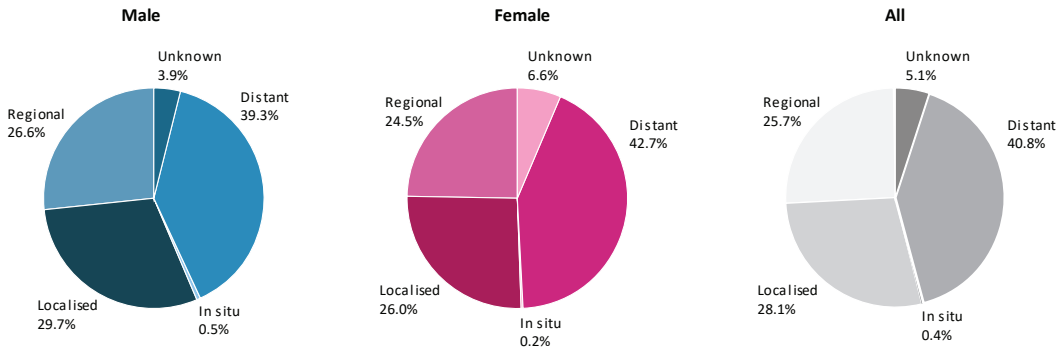


Figure 3.1.2: At diagnosis Stage Distribution of Colorectal Cancer related death Among Saudi Nationals, 2022

Internationally, Saudi Arabia's ASMR for colorectal cancer (11 per 100,000 in males and 8.2 per 100,000 in females) was comparable to countries such as China and the USA, but remained lower than rates reported in countries like Ireland, Norway, and the UK (Figure 3.1.4).

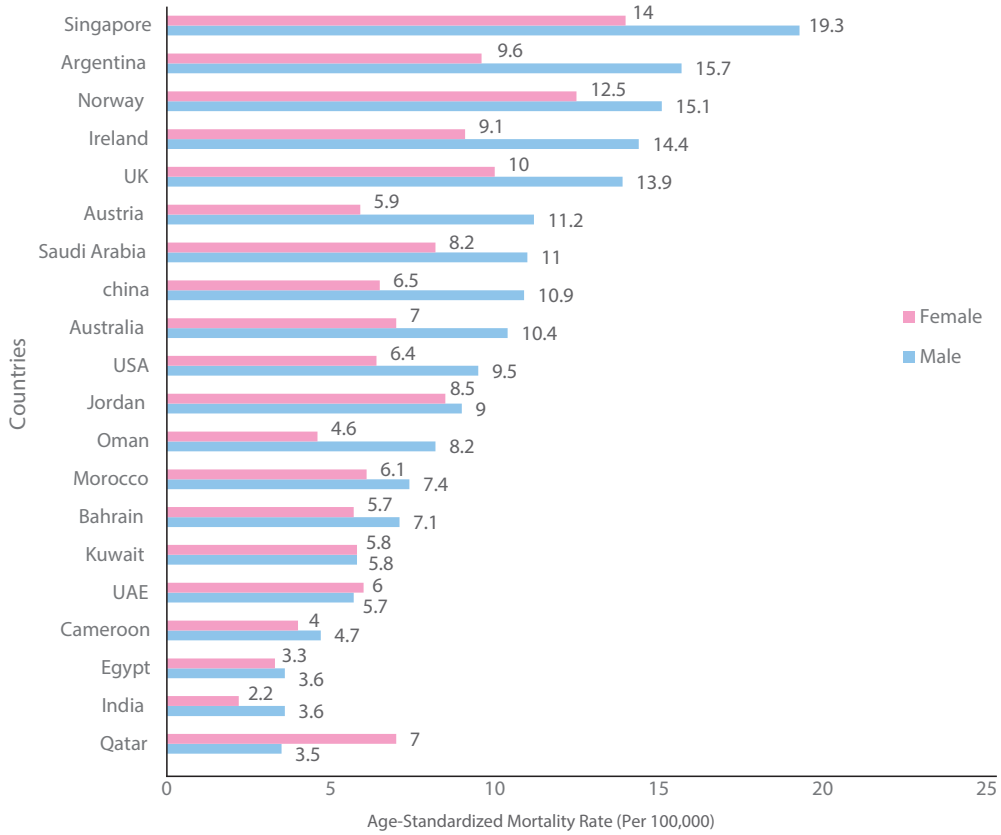


Figure 3.1.4: Comparison of Age-Standardized Mortality Rates (ASMR per 100,000) for Colorectal Cancer Mortality Among Saudis with Selected Countries, 2022 (Bray et al., 2024)

FEMALE BREAST CANCER (C50)

Breast cancer is the leading cause of cancer-related deaths among women in Saudi Arabia. A total of 882 breast cancer deaths were reported among females, representing 12.2% of all cancer deaths among Saudi nationals and 23.9% of all female cancer deaths. The Age-Standardized Mortality Rate (ASMR) was 14.5 per 100,000 females.

Breast cancer mortality increased sharply with age, with minimal rates in those under 35, followed by a steady rise from the age of 40 onwards. The mortality burden was highest among women aged 75 years and older, exceeding 110 deaths per 100,000 (Figure 3.2.1).

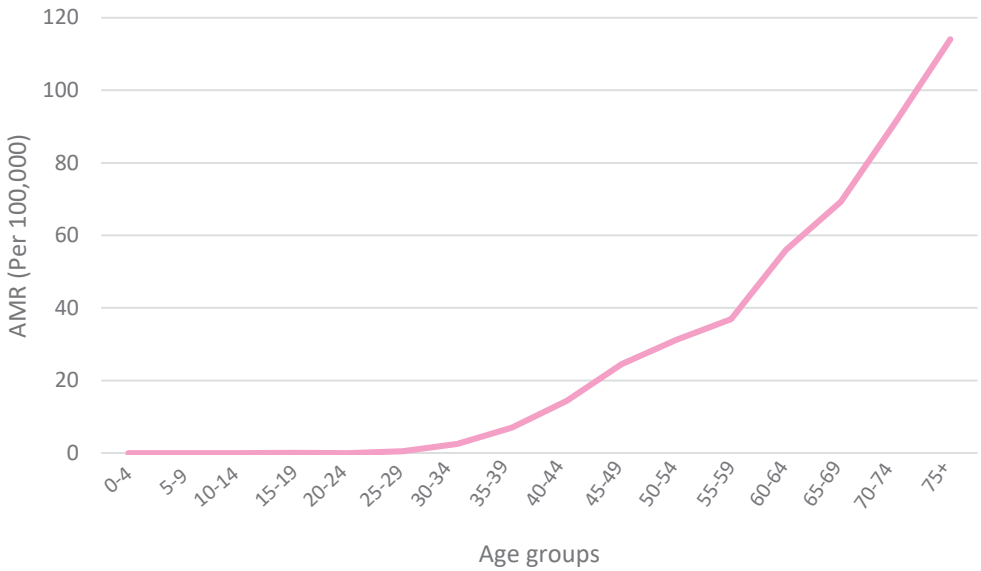


Figure 3.2.1: Age-Specific Mortality Rates (AMR Per 100,000) for Breast Cancer Among Saudi Females, 2022.

The most common histological subtype was infiltrating duct carcinoma, not otherwise specified (NOS), accounting for 76.3% of all breast cancer deaths. This was followed by lobular carcinoma (7.8%) and carcinoma NOS (3.7%). Less common types included mixed duct and lobular carcinoma and other rare forms (Table 3.2.1).

Table 3.2.1: Morphological Distribution of Breast Cancer Mortality Among Saudi Females, 2022

ICD-O-3	Morphology	Number of Deaths	%
85003	Infiltrating duct carcinoma, NOS	673	76.3
85203	Lobular carcinoma, NOS	69	7.8
80103	Carcinoma, NOS	33	3.7
80003	Neoplasm, malignant	20	2.3
85223	Infiltrating duct and lobular carcinoma	13	1.5
	Others	74	8.4
	Total	882	100.0

More than 30% of breast cancer deaths were attributed to patients diagnosed and presented initially with distant metastasis, while 30.0% were localized at diagnosis and 33.6% regional. Only 0.9% were reported as in situ at diagnosis, and 4.9% of cases had unknown stage at the time of diagnosis, reflecting a substantial proportion of late-stage diagnosis that eventually cause treatment failure and subsequent death(Figure 3.2.2).

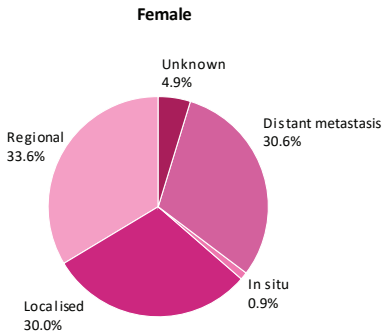


Figure 3.2.2: At diagnosis, Stage Distribution of Breast Cancer related death Among Saudi Females, 2022

When compared internationally, Saudi Arabia's female breast cancer mortality rate (14.5 per 100,000) was moderate. It was higher than rates in countries like the UK (14.0), Australia (12.3), and the USA (12.2), but lower than those observed in Egypt (19.9), Bahrain (19.7), and Jordan (19.3) (Figure 3.2.4).

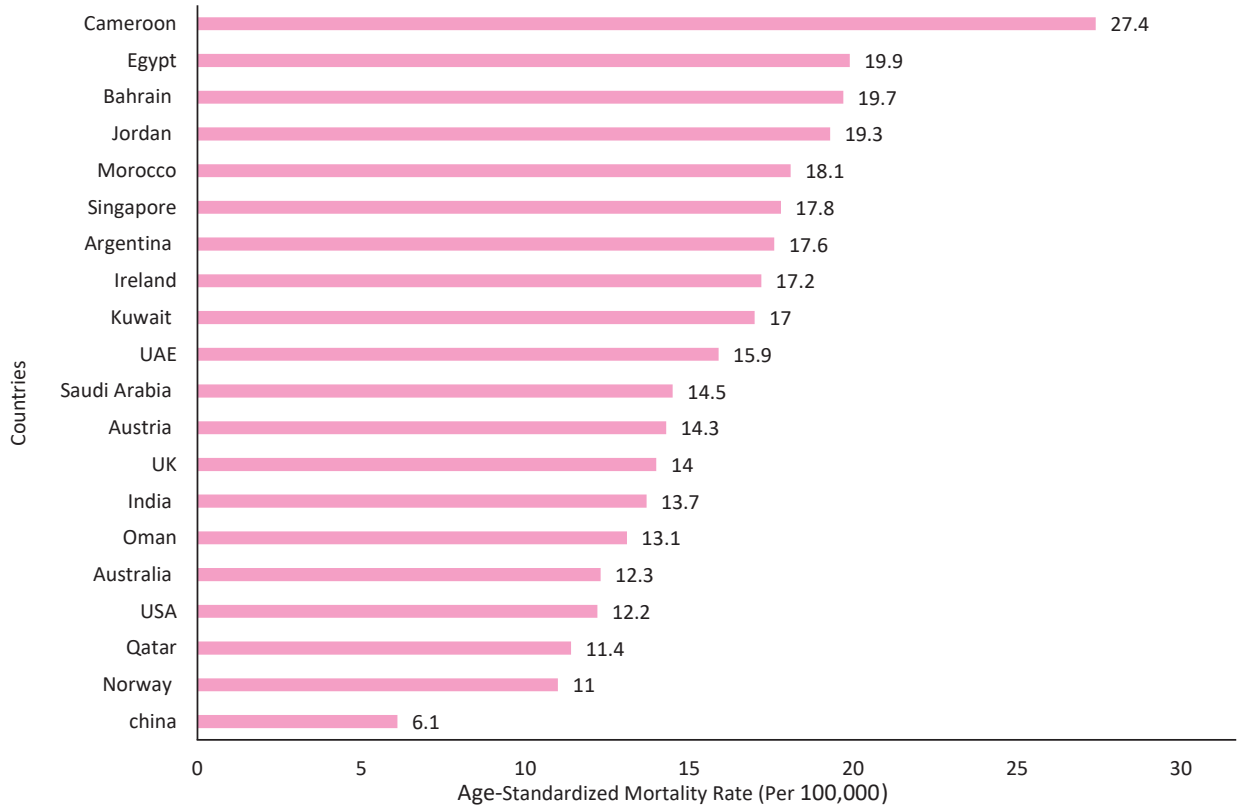


Figure 3.2.4: Comparison of Age-Standardized Mortality Rates (ASMR per 100,000) for Breast Cancer Among Saudi Females with Selected Countries, 2022 (Bray et al., 2024)

Liver Cancer (C22)

Liver cancer ranked as the third leading cause of cancer mortality in Saudi Arabia in 2022, contributing to 6.5% of all cancer-related deaths among Saudi nationals. A total of 479 deaths were attributed to liver cancer, including 300 males (8.2%) and 179 females (4.8%).

Age-Specific Mortality Rates (AMR) increased sharply with age in both sexes, particularly after the age of 50. Among males, the AMR reached nearly 90 per 100,000 in those aged 75 and above, while in females it peaked at over 40 per 100,000 in the same age group (Figure 3.3.1). This reflects a clear age-related increase in mortality risk. Overall, the AMR was 5.7 and 3.2 per 100,000 for males and females across all age groups, respectively.

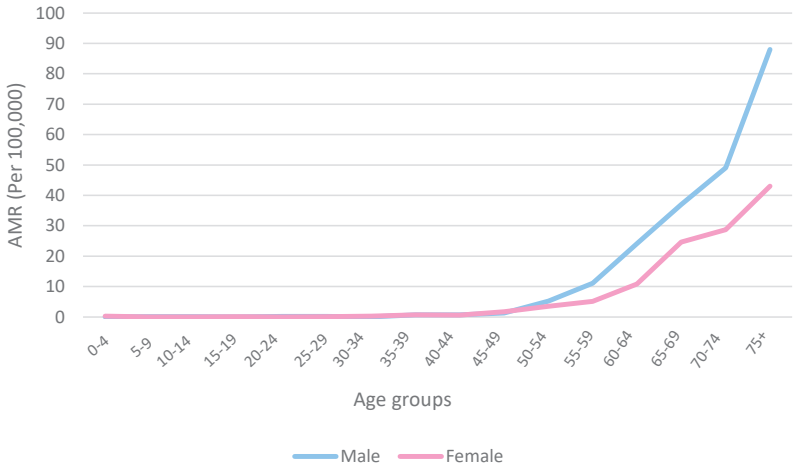


Figure 3.3.1: Age-Specific Mortality Rates (AMR per 100,000) for Liver Cancer Among Saudi Nationals, 2022

The most common morphological type was hepatocellular carcinoma, comprising 76.3% of male liver cancer deaths and 60.3% of female deaths. Adenocarcinoma, NOS, and cholangiocarcinoma were the second and third most common types in both sexes (Table 3.7.1).

Analysis of Stage distribution at diagnosis revealed that a significant proportion of deaths occurred in patients with localized disease 42.7% and 44.7% in males and females, respectively. Distant metastasis accounted for 33.7% and 34.1% of male and female cases. However, about 9% of male and 8.4% of female cases had unknown stage at death (Figure 3.3.2).

Table 3.7.1: Morphological Distribution of Liver Cancer Mortality Among Saudi Nationals, 2022

		Number of Deaths			
Code	Morphology	Male	%	Female	%
81703	Hepatocellular carcinoma, NOS	229	76.3	108	60.3
81403	Adenocarcinoma, NOS	35	11.7	35	19.6
81603	Cholangiocarcinoma	15	5.0	19	10.6
80103	Carcinoma, NOS	5	1.7	7	3.9
81803	Combined hepatocellular carcinoma and cholangiocarcinoma	4	1.3	1	0.6
	Others	12	4.0	9	5.0
	Total	300	100.0	179	100.0

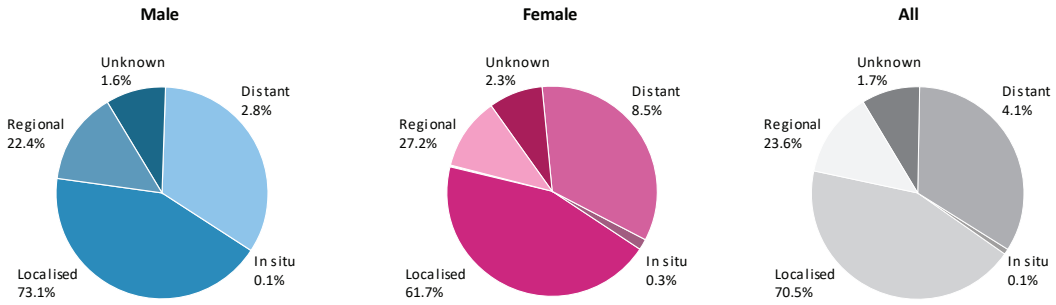


Figure 3.3.2: Initial Stage Distribution of Liver Cancer related death Among Saudi Nationals, 2022

Compared to selected countries, Saudi Arabia's male liver cancer ASMR (5.7 per 100,000) was moderate—lower than Egypt (41.5) and China (19.1), but higher than the UK (5.4) and Kuwait (4.7). For females, Saudi Arabia reported an ASMR of 3.2, which was considerably lower than Egypt (21.1), China (6.2), and Singapore (5.3), but comparable to other GCC countries like Oman and Kuwait (Figure 3.3.4).

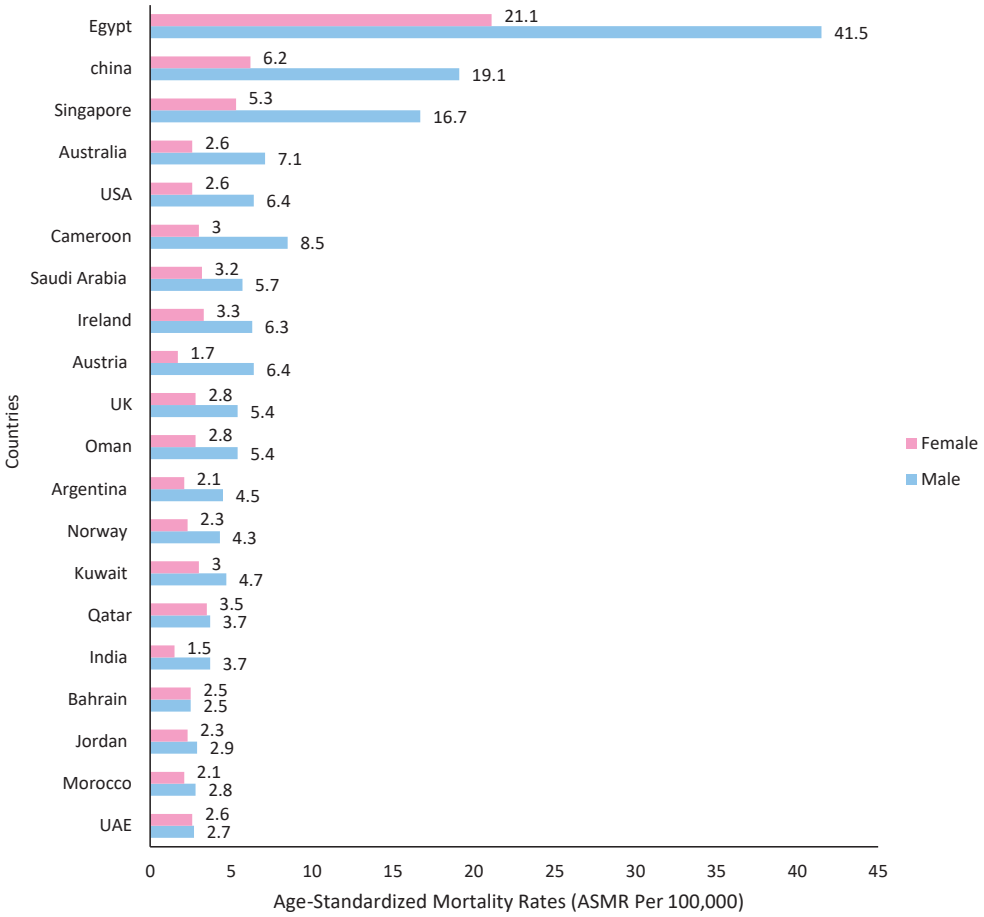


Figure 3.3.4: Comparison of Age-Standardized Mortality Rates (ASMR per 100,000) for Liver Cancer Among Saudis with Selected Countries, 2022 (Bray et al., 2024)

Lung cancer (C33-C34)

In 2022, lung cancer was the fourth leading cause of cancer mortality among Saudi nationals, ranking second among males and tenth among females. A total of 447 deaths were attributed to lung cancer, comprising 336 male deaths (9.2%) and 111 female deaths (3.0%), accounting for 6.1% of all cancer deaths.

The age-specific mortality rate (AMR) showed a marked increase with age, especially in males aged 55 and above (Figure 3.4.1). The age-standardized mortality rate (ASMR) was 6.6 per 100,000 for males and 2.0 per 100,000 for females, highlighting a notable sex disparity.

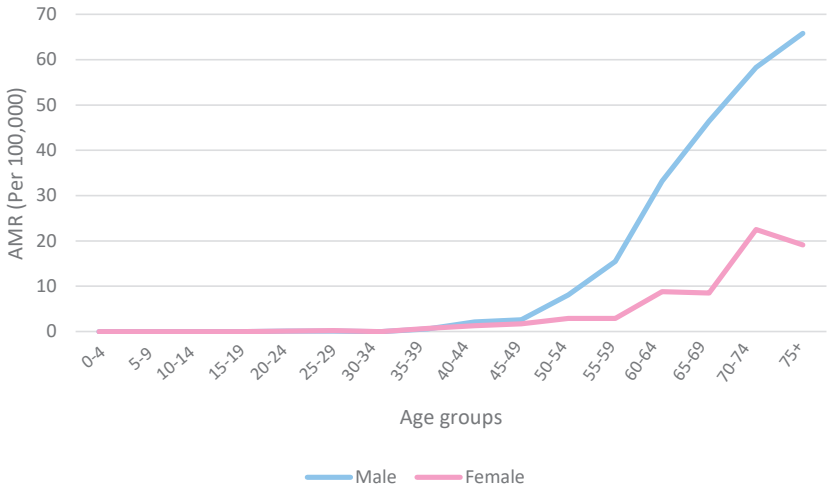


Figure 3.4.1: Age-Specific Mortality Rates (AMR per 100,000) for Lung Cancer Among Saudi Nationals, 2022

The most common histological subtype was adenocarcinoma, representing 39.3% of male and 47.7% of female lung cancer deaths. Other notable subtypes included small cell carcinoma, squamous cell carcinoma, and non-small cell carcinoma NOS (Table 3.4.1).

At diagnosis, stage distribution indicated that the majority of lung cancer deaths were diagnosed at an advanced stage. Distant metastasis accounted for 67.6% of male and 73.9% of female deaths, with localized and regional stages representing a smaller proportion (Figure 3.4.2).

Table 3.4.1: Morphological Distribution of Lung Cancer Mortality Among Saudi Nationals, 2022

		Number of Deaths			
Code	Morphology	Male	%	Female	%
81403	Adenocarcinoma, NOS	132	39.3	53	47.7
80413	Small cell carcinoma, NOS	49	14.6	10	9.0
80703	Squamous cell carcinoma, NOS	45	13.4	7	6.3
80463	Non-small cell carcinoma	41	12.2	9	8.1
80103	Carcinoma, NOS	14	4.2	7	6.3
	Others	55	16.4	25	22.5
	Total	336	100.0	111	100.0

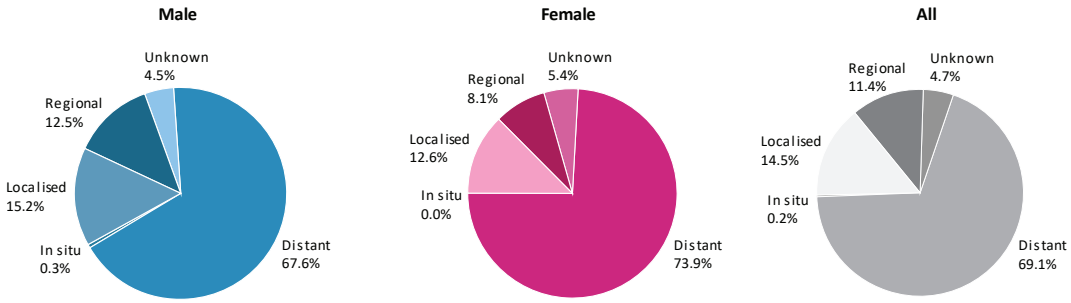


Figure 3.4.2: At diagnosis Stage Distribution of Lung Cancer related death Among Saudi Nationals, 2022

In comparison with selected countries, Saudi Arabia's ASMR for lung cancer was lower than in high-income countries. The male ASMR (6.6) was substantially below that of countries such as China (39.5), Morocco (34.8), and Singapore (31.9). The female ASMR (2.0) was also low, ranking near the bottom among countries shown (Figure 3.4.4).

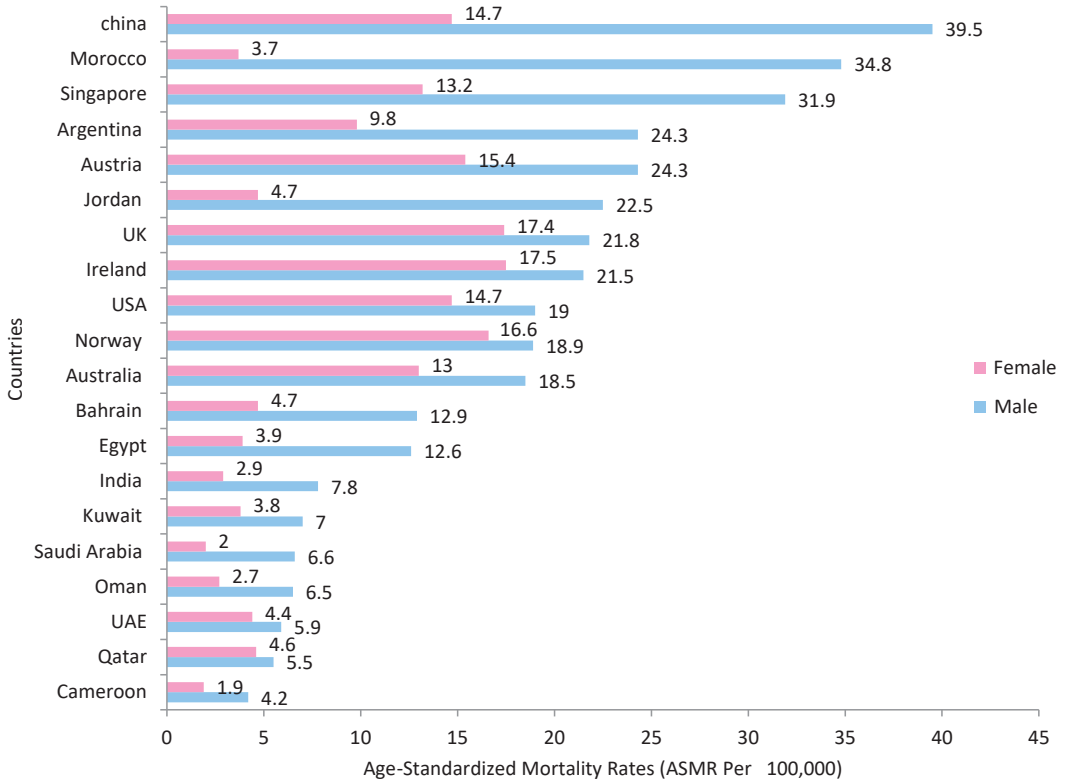


Figure 3.4.4: Comparison of Age-Specific Mortality Rates (ASMR per 100,000) for Lung Cancer Among Saudis with Selected Countries, 2022 (Bray et al., 2024)

Non-Hodgkin Lymphoma (C82-C85; C96)

Non-Hodgkin Lymphoma (NHL) was the fourth leading cause of cancer mortality among Saudi males and the fifth among females in 2022, with a total of 422 deaths, including 244 (6.0%) in males and 178 (4.8%) in females, and accounting for 5.7% of all cancer deaths among Saudi nationals.

As illustrated in Figure 3.5.1, the age-specific mortality rate (AMR) for NHL increased sharply after the age of 55 in both sexes. The AMR was 4.2 per 100,000 for males and 3.1 per 100,000 for females, with mortality peaking in the 75 and above age group.

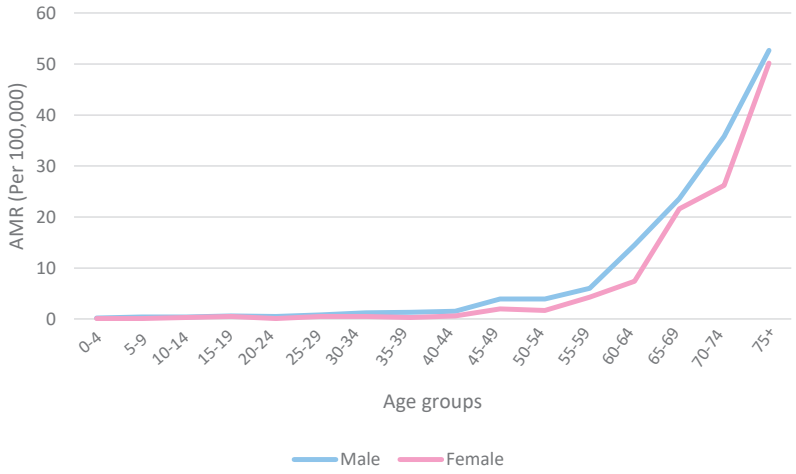


Figure 3.5.1: Age-Specific Mortality Rates (AMR per 100,000) for NHL Mortality Among Saudi Nationals, 2022

Diffuse large B-cell lymphoma (ICD-O-3 code 96803) was the most common subtype in both sexes, comprising 52.0% of male and 57.9% of female NHL deaths. Other frequent subtypes included "Malignant lymphoma, NOS" (11.9% males, 10.1% females) and "Malignant lymphoma, Non-Hodgkin, NOS" (4.5% males, 10.1% females) (Table 3.5.1).

Table 3.5.1: Morphological Distribution of NHL Mortality Among Saudi Nationals, 2022

		Number of Deaths			
Code	**Morphology**	**Male**	**%**	**Female**	**%**
96803	Malignant lymphoma, large B-cell, diffuse, NOS	127	52.0	103	57.9
95903	Malignant lymphoma, NOS	29	11.9	18	10.1
97023	Mature T-cell lymphoma, NOS	15	6.1	5	2.8
95913	Malignant lymphoma, non-Hodgkin, NOS	11	4.5	18	10.1
97003	Mycosis fungoides	8	3.3	1	0.6
	Others	54	22.1	33	18.5
	Total	244	100.0	178	100.0

Compared to selected countries, Saudi Arabia's ASMR for NHL was higher than most high-income countries. The male ASMR (4.2 per 100,000) ranked below Egypt (5.9) and Cameroon (4.8), but higher than China and India (2.0). Similarly, the female ASMR (3.1) was higher than most regional counterparts, except Egypt (4.6), Cameroon (4.7), Oman (3.5), and Jordan (3.3) (Figure 3.5.3).

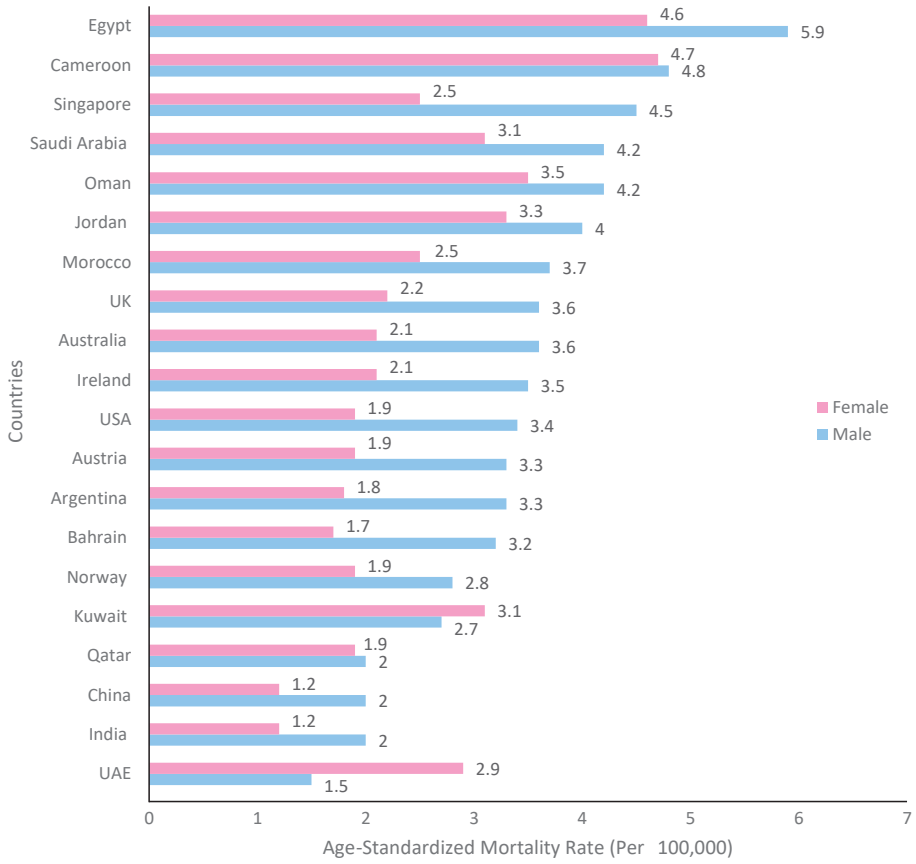


Figure 3.5.3: Comparison of Age-Standardized Mortality Rates (ASMR per 100,000) for NHL Cancer Among Saudis with Selected Countries, 2022 (Bray et al., 2024)

Pancreas cancer (C25)

Pancreatic cancer was the sixth leading cause of cancer-related mortality among Saudi nationals in 2022, affecting both genders significantly. A total of 388 deaths were attributed to this cancer, representing 5.3% of all cancer deaths. These included 226 deaths in males (6.2%) and 162 in females (4.4%).

As shown in Figure 3.6.1, the age-specific mortality rate (AMR) increased progressively with age, with sharp rises observed after the age of 60. The AMR for males reached 6.8 per 100,000, slightly higher than the female AMR of 4.9 per 100,000. The mortality burden was more pronounced in older age groups, particularly those aged 75 and above.

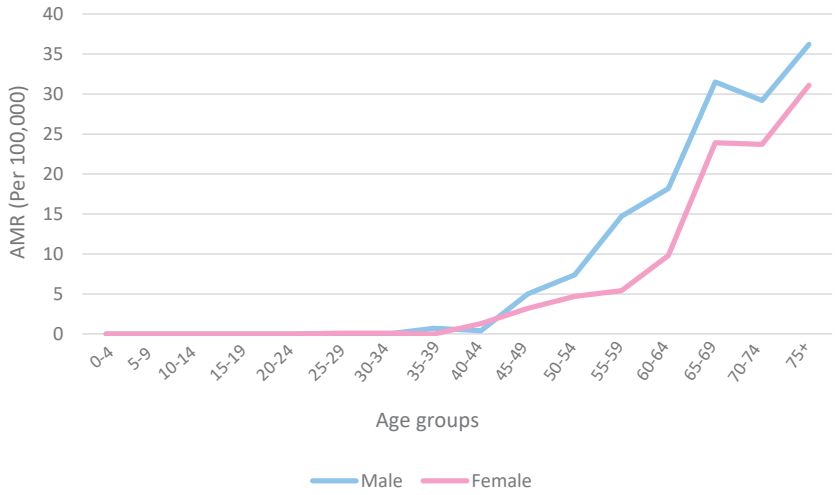


Figure 3.6.1: Age-Specific Mortality Rates (AMR per 100,000) for Pancreas Cancer Among Saudi Nationals, 2022

Table 3.6.1 illustrates that adenocarcinoma, NOS was the most frequently reported morphology, comprising 82.3% of male and 80.2% of female pancreatic cancer deaths. This was followed by infiltrating duct carcinoma and carcinoma NOS. Other less common morphologies included neuroendocrine carcinoma and malignant neoplasms.

At diagnosis, stage distribution (Figure 3.6.2) revealed that distant metastases accounted for the majority of pancreatic cancer deaths, comprising 57.5% overall (58.8% in males and 55.6% in females). Only about 19.3% of deaths occurred in cases with localized disease, while regional spread accounted for 17.3%. In situ cases were extremely rare, and a small proportion remained un-staged.

Table 3.6.1: Morphological Distribution of Pancreas Cancer Mortality Among Saudi Nationals, 2022

		Number of Deaths			
ICD O-3	Morphology	Male	%	Female	%
81403	Adenocarcinoma, NOS	186	82.3	130	80.2
85003	Infiltrating duct carcinoma, NOS	14	6.2	9	5.6
80103	Carcinoma, NOS	11	4.9	3	1.9
80003	Neoplasm, malignant	8	3.5	8	4.9
82463	Neuroendocrine carcinoma, NOS	3	1.3	3	1.9
	Others	4	1.8	9	5.6
	Total	226	100.0	162	100.0

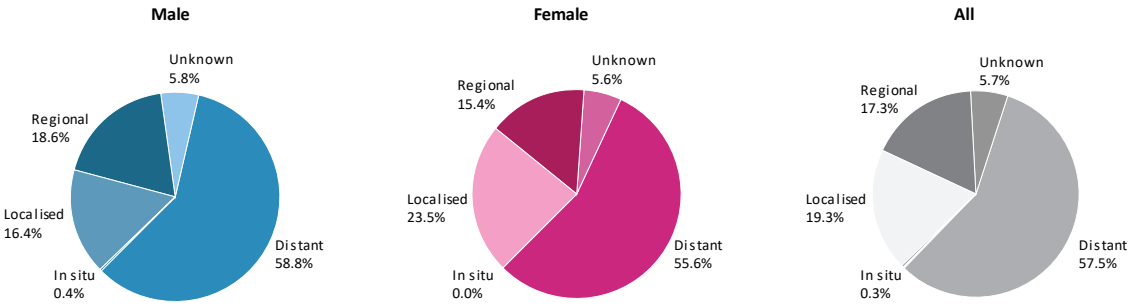


Figure 3.6.2: Initial Stage Distribution of Pancreas Cancer related death Among Saudi Nationals, 2022

Compared to other countries (Figure 3.6.4), Saudi Arabia's ASMR for pancreatic cancer was moderate among females (2.9 per 100,000) and somewhat higher for males (4.3 per 100,000). These figures were lower than those reported in Austria and Singapore, and USA but slightly higher than in several neighboring or regional countries such as UAE and India.

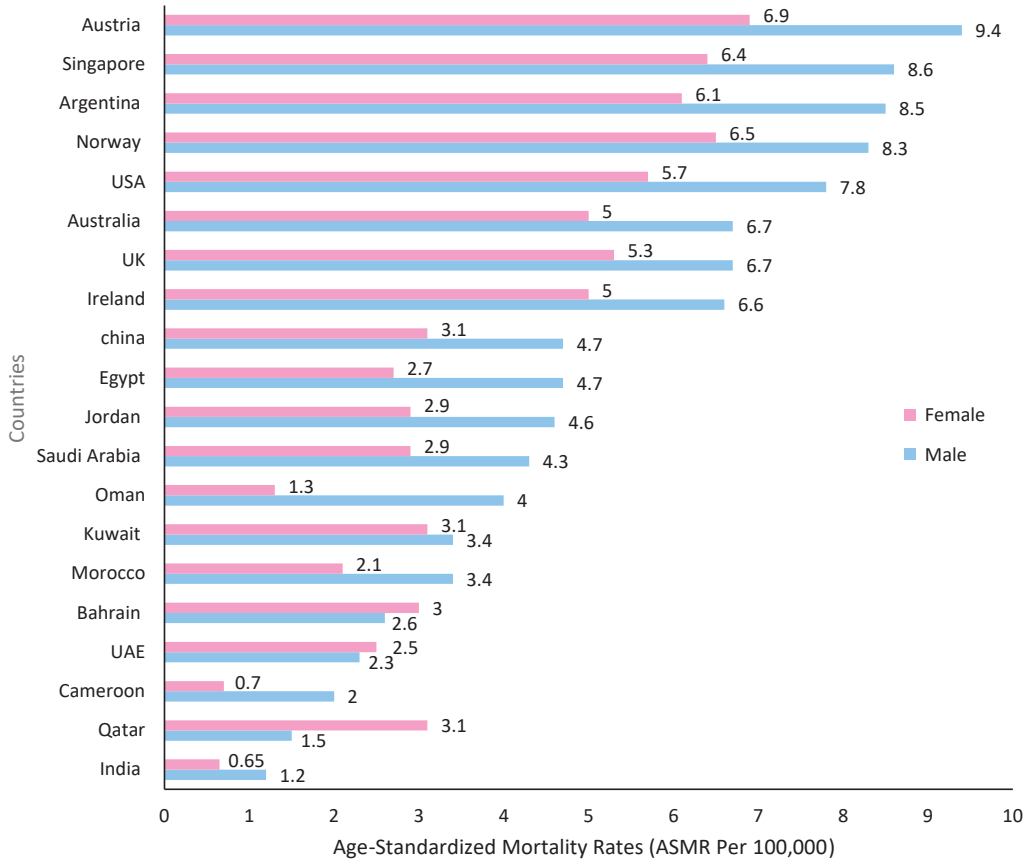


Figure 3.5.3: Comparison of Age-Standardized Mortality Rates (ASMR per 100,000) for Pancreas Cancer Among Saudis with Selected Countries, 2022 (Bray et al., 2024)

Leukemia (C91-C95)

Leukemia ranked as the seventh most common cause of cancer-related mortality among Saudi males and the eighth among females in 2022. A total of 306 deaths were attributed to leukemia, accounting for 4.2% of all cancer-related deaths among Saudi nationals. Of these, 187 deaths (5.1%) occurred in males and 119 deaths (3.2%) in females.

The age-specific mortality rate (AMR) for leukemia steadily increased with age, particularly among males, peaking in the 75+ age group at over 30 per 100,000. The AMR was 2.8 per 100,000 in males and 1.8 per 100,000 in females. Notably, male mortality rates began to diverge significantly from female rates starting in the 55–59 age group (Figure 3.7.1).

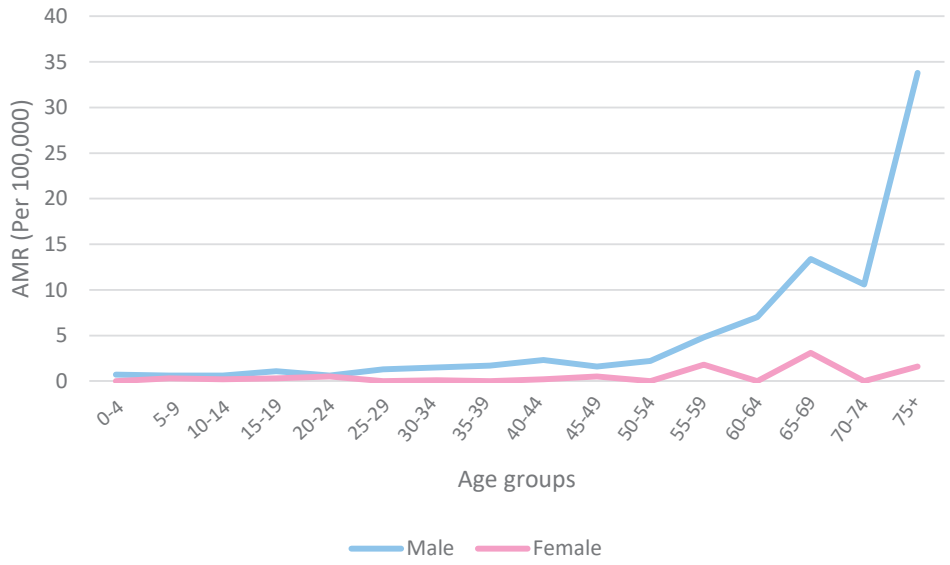


Figure 3.7.1: Age-Specific Mortality Rates (AMR per 100,000) for Leukemia Among Saudi Nationals, 2022

The predominant morphology registered was unspecified leukemia (NOS), accounting for 12.3% in males and 16.8% in females. B-cell chronic lymphocytic leukemia made up a considerable share as well (12.8% in males and 8.4% in females), while the remaining cases were distributed across a range of subtypes including acute leukemia and lymphoid forms (Table 3.7.1).

Table 3.7.1: Morphological Distribution of Leukemia Mortality Among Saudi Nationals, 2022

		Number of Deaths			
Code	Morphology	Male	%	Female	%
98003	Leukemia, NOS	23	12.3	20	16.8
98013	Acute leukemia, NOS	8	4.3	7	5.9
98053	Acute biphenotypic leukemia	1	0.5	-	0.0
98203	Lymphoid leukemia, NOS	1	0.5	-	0.0
98233	B-cell chronic lymphocytic leukemia/small lymphocytic lymphoma	24	12.8	10	8.4
	Others	130	69.5	82	68.9
	Total	187	100.0	119	100

When compared internationally (Figure 3.7.3), Saudi Arabia reported a moderate ASMR for leukemia, 2.7 per 100,000 in males and 1.8 in females. This places the Kingdom below countries like Egypt, Jordan, and Australia, yet slightly above nations such as Cameroon.

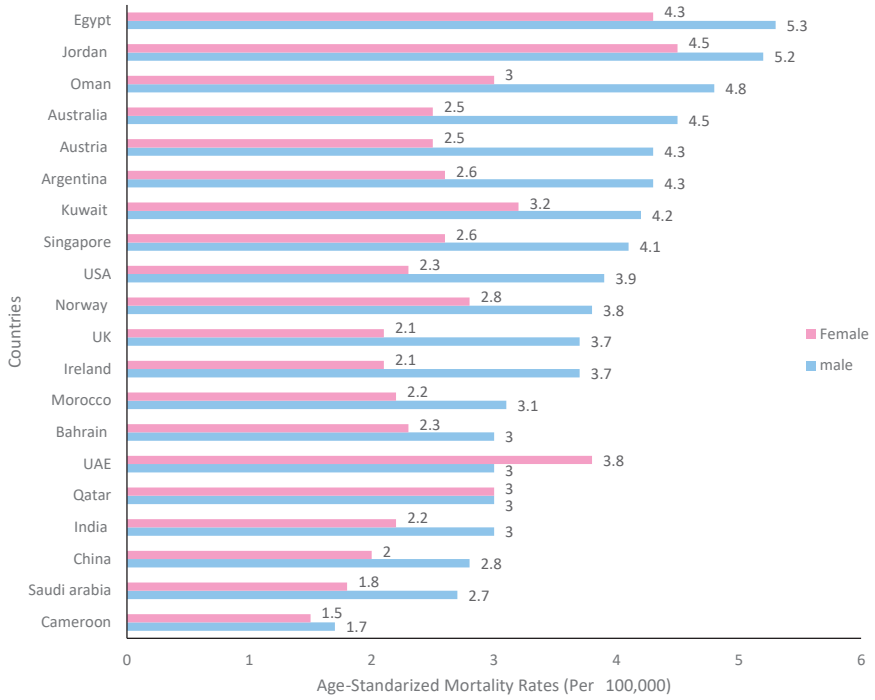


Figure 3.7.3: Comparison of Age-Standardized Mortality Rates (ASMR per 100,000) for Leukemia Among Saudis with Selected Countries, 2022 (Bray et al., 2024)

Brain, Central nervous system cancer (C70-C72)

Brain and CNS cancers ranked as the eighth most common cause of cancer-related deaths among Saudi males and ninth among females in 2022. A total of 294 deaths were attributed to these cancers, of these, 180 (4.9%) in males and 114 (3.1%) in females.

Age-specific mortality rates (Figure 3.8.1) showed a gradual increase with advancing age for both sexes, with a notable rise after age 55. Male mortality rates were consistently higher than those of females, particularly in older age groups. The overall AMR for brain and CNS cancers was 2.8 per 100,000 in males and 1.6 per 100,000 in females, indicating a significant sex disparity that persisted across most age categories.

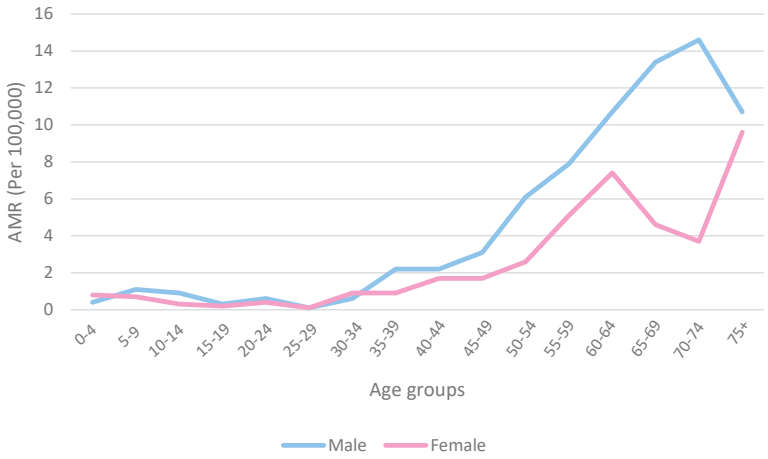


Figure 3.8.1: Age-Specific Mortality Rates (AMR per 100,000) for Brain, CNS Cancer Among Saudi Nationals, 2022

Glioblastoma, NOS, was the most prevalent subtype, accounting for 46.1% of male deaths and 39.5% of female deaths. Malignant gliomas followed, comprising 21.7% and 24.6% of male and female deaths, respectively. Other morphologies included astrocytoma, medulloblastoma, and unspecified malignant neoplasms (Table 3.8.1). The predominance of high-grade gliomas is consistent with their known aggressiveness and poor survival outcomes.

Table 3.8.1: Morphological distribution of Brain and CNS cancer mortality among Saudi nationals, 2022

		Number of Deaths			
Code	Morphology	Male	%	Female	%
94403	Glioblastoma, NOS	83	46.1	45	39.5
93803	Glioma, malignant	39	21.7	28	24.6
94003	Astrocytoma, NOS	9	5.0	5	4.4
80003	Neoplasm, malignant	7	3.9	5	4.4
94703	Medulloblastoma, NOS	6	3.3	3	2.6
	Others	36	20.0	28	24.6
	Total	180	100.0	114	100.0

Globally, Saudi Arabia's ASMRs for brain and CNS cancers were relatively moderate. Male ASMRs (2.8 per 100,000) were lower than those reported in Ireland (5.2), Jordan (5.1), and Norway (4.9). Likewise, Saudi females had an ASMR of 1.6, below figures observed in Egypt (3.3), the USA (2.6), and China (2.2) (Figure 3.8.4).

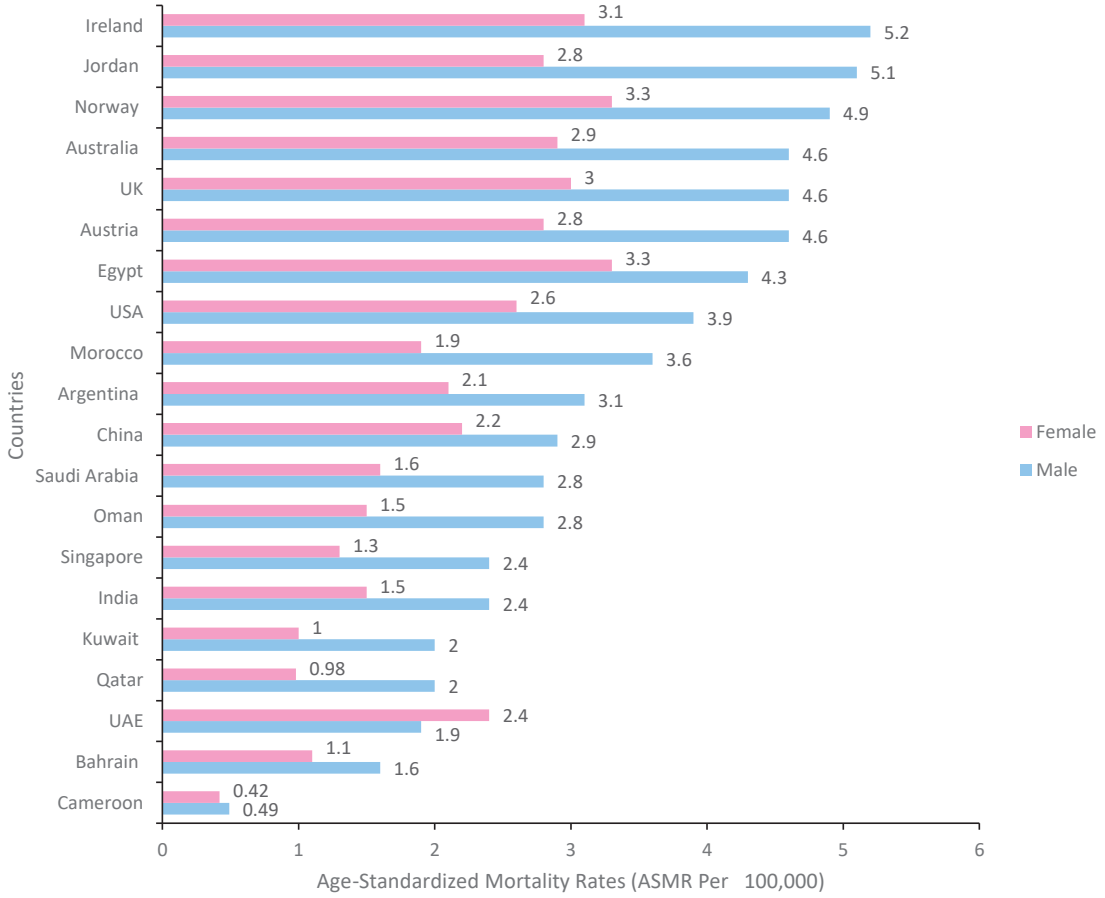


Figure 3.8.4: Comparison of Age-Standardized Mortality Rates (ASMR per 100,000) for Brain and CNS Cancer Among Saudis Nationals with Selected Countries, 2022 (Bray et al., 2024)

Stomach cancer (C16)

Stomach cancer ranked as the ninth most common cause of cancer-related mortality among both Saudi males and females in 2022. A total of 257 deaths were attributed to stomach cancer, comprising 3.5% of all cancer-related deaths among Saudi nationals. Of these, 151 deaths (4.1%) occurred in males and 106 deaths (2.9%) in females.

As shown in Figure 3.9.1, age-specific mortality rates (AMRs) increased significantly with age for both sexes, with male AMR climbing steeply beyond age 65 and peaking in the 75 and above age group at approximately 35 per 100,000. Males consistently exhibited higher mortality rates than females across nearly all age categories. The overall AMR was 2.7 per 100,000 in males and 1.7 per 100,000 in females, reflecting a persistent sex disparity in mortality.

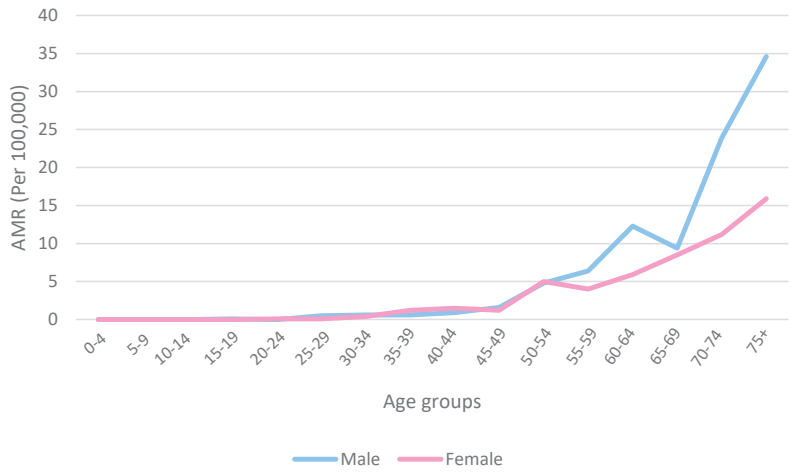


Figure 3.9.1: Age-Specific Mortality Rates (AMR per 100,000) for Stomach Cancer Among Saudi Nationals, 2022

Adenocarcinoma, NOS, was the most frequently reported histological type, accounting for 57.6% of male deaths and 54.7% of female deaths. Signet ring cell carcinoma was the second most common, observed in 13.9% of males and 20.8% of females. Other morphologies included carcinoma NOS, intestinal-type adenocarcinoma, and neoplasm NOS (Table 3.9.1).

A large proportion of stomach cancer deaths occurred at a distant stage at diagnosis, with 46.4% of male and 47.2% of female deaths being diagnosed at this late stage. The proportion of localized cases was slightly higher in males (32.5%) than females (33.0%), while regional stage deaths represented 16.6% and 14.2%, respectively. A small percentage of deaths were of unknown stage.

Table 3.9.1: Morphological Distribution of Stomach Cancer Mortality Among Saudi Nationals, 2022

		Number of Deaths			
Code	Morphology	Male	%	Female	%
81403	Adenocarcinoma, NOS	87	57.6	58	54.7
84903	Signet ring cell carcinoma	21	13.9	22	20.8
80103	Carcinoma, NOS	13	8.6	2	1.9
81443	Adenocarcinoma, intestinal type	12	7.9	7	6.6
80003	Neoplasm, malignant	4	2.6	3	2.8
	Others	14	9.3	14	13.2
	Total	151	100.0	106	100.0

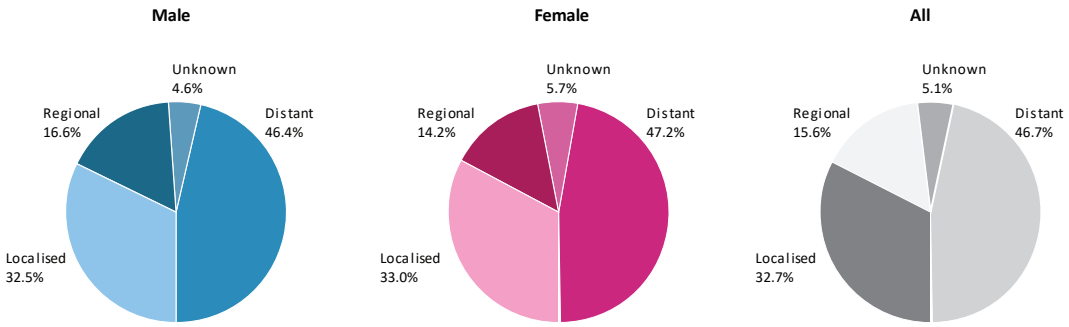


Figure 3.9.2: Initial Stage Distribution of Stomach Cancer related death Among Saudi Nationals, 2022

In comparison with international figures (Figure 3.9.4), Saudi Arabia's ASMRs for stomach cancer remain low. Males reported an ASMR of 2.7 per 100,000, considerably lower than in China (13.8), Oman (9.6), and Argentina (7.5). Similarly, the ASMR for Saudi females was 1.7, well below countries such as China (5.3), Oman (4.2), and Morocco (3.7).

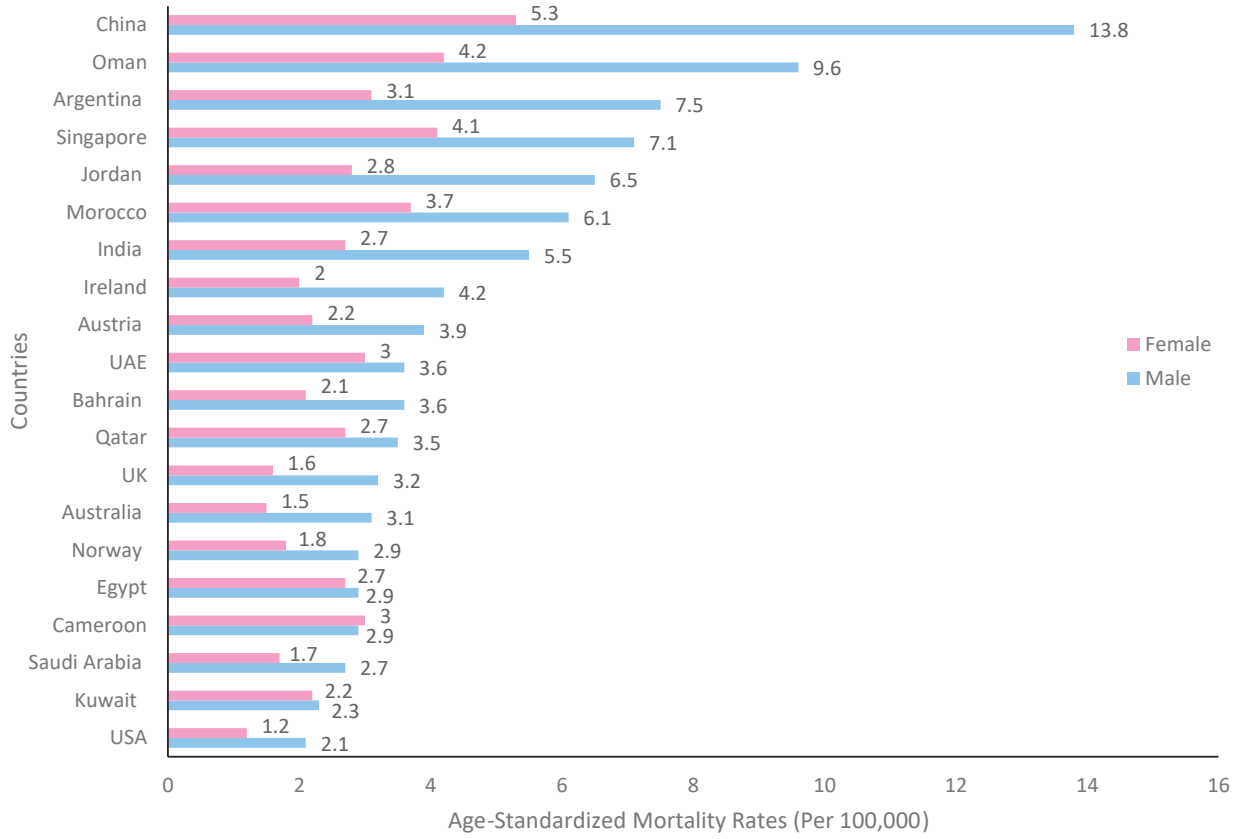


Figure 3.9.4: Comparison of Age-Standardized Mortality Rates (ASMR per 100,000) for Stomach Cancer Among Saudis with Selected Countries, 2022 (Bray et al., 2024)

Prostate Cancer (C61)

Prostate cancer was the tenth leading cause of cancer-related mortality among Saudi males in 2022, with a total of 232 deaths, representing 3.2% of all cancer-related deaths among Saudi nationals. This cancer exclusively affects males, and the age-specific mortality rate (AMR) was 4.3 per 100,000. As shown in Figure 3.10.1, prostate cancer mortality rates increased sharply with age, especially after the age of 65, peaking in the 75 and above age group at over 120 deaths per 100,000.

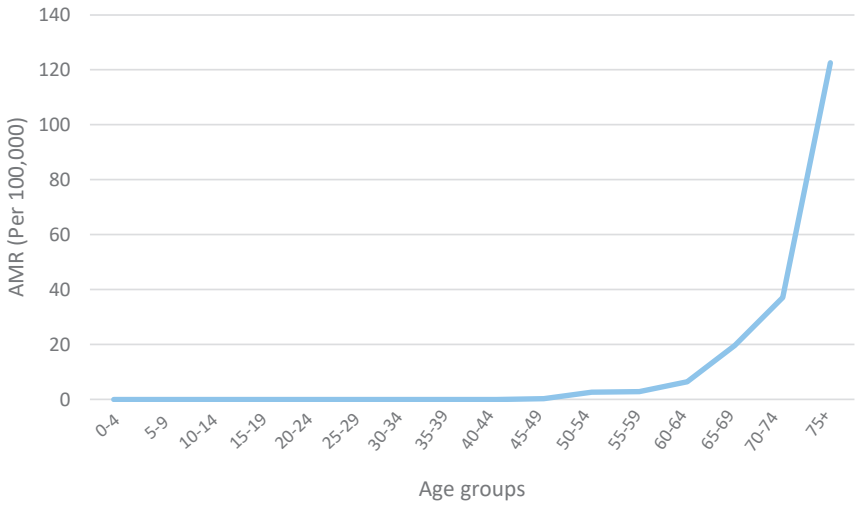


Figure: 3.10.1 Age-Specific Mortality Rate (AMR per 100,000) for Prostate Cancer Among Saudi Males, 2022

Adenocarcinoma, not otherwise specified (NOS), was the predominant histological subtype, accounting for 87.1% of prostate cancer deaths (Table 3.10.1). Other morphologies included acinar cell carcinoma (7.3%) and a small proportion of unspecified malignant neoplasms.

In terms of disease stage at initial diagnosis, 43.1% of prostate cancer deaths were attributed to cases diagnosed at the localized stage, while 40.9% were in the distant stage, and 9.5% had regional spread (Figure 3.10.2).

Table 3.10.1: Morphological Distribution of Prostate Cancer Among Saudi Males, 2022

ICD-O-3	Morphology	Number of Deaths	%
81403	Adenocarcinoma, NOS	202	87.1
85503	Acinar cell carcinoma	17	7.3
80003	Neoplasm, malignant	8	3.4
80103	Carcinoma, NOS	3	1.3
82013	Cribriform carcinoma, NOS	1	0.4
85003	Infiltrating duct carcinoma, NOS	1	0.4
	Total	232	100.0

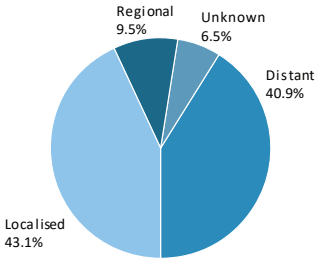


Figure 3.10.2: Distribution of Presented Stage at Diagnosis of Prostate Cancer related death Among Saudi Males, 2022

In global comparison, Saudi Arabia's ASMR for prostate cancer (4.3 per 100,000) was relatively moderate. It was notably lower than rates reported in countries such as Cameroon (23.3), Norway (13.9), and Argentina (12.8), but higher than Qatar (2.4), India (2.7), and China (3.3) (Figure 3.10.4).

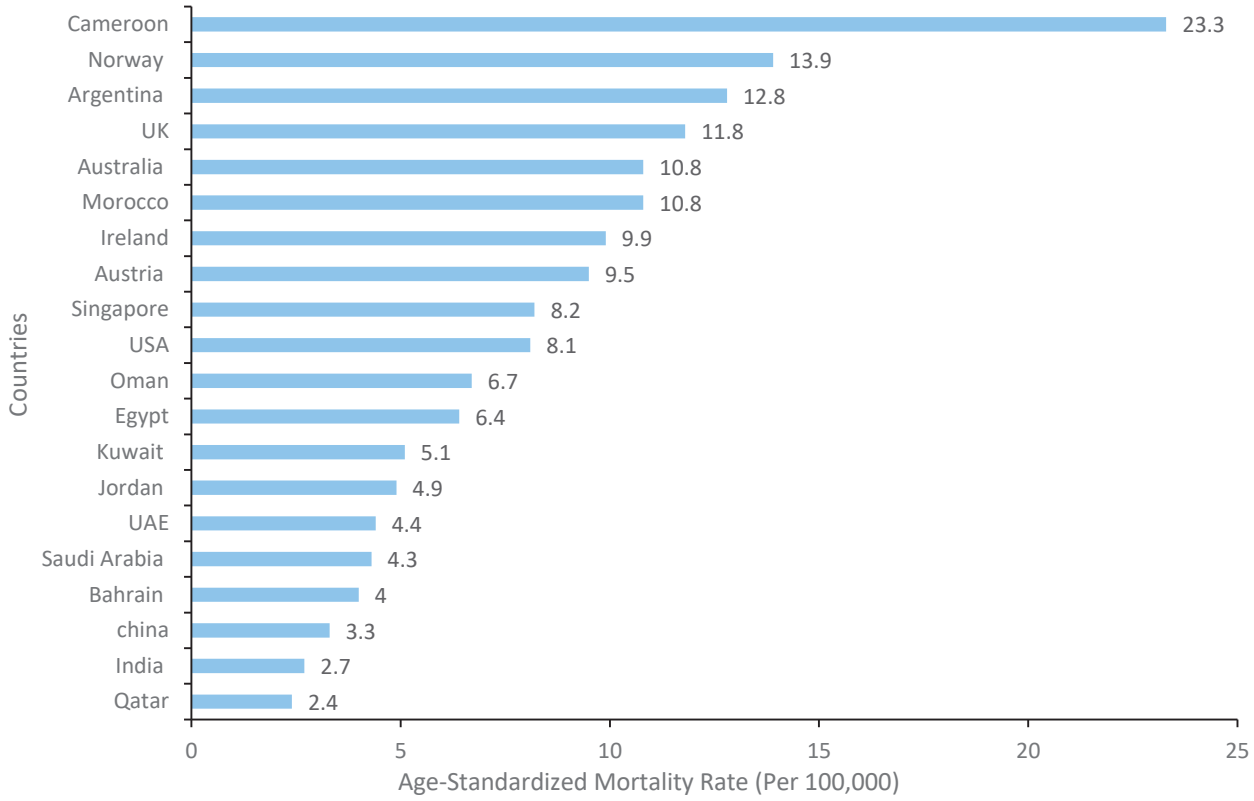


Figure 3.6.4: Comparison of Age-Standardized Mortality Rates (ASMR per 100,000) for Prostate Cancer Among Saudis with Selected Countries, 2022 (Bray et al., 2024)

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1. Bray, F. et al. (2024) 'Global cancer statistics 2022: Globocan estimates of incidence and mortality worldwide for 36 cancers in 185 countries', CA: A Cancer Journal for Clinicians, 74(3), pp. 229–263. doi:10.3322/caac.21834.

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PART IV

CANCER MORTALITY AMONG NON-SAUDIS 2022

Cancer Mortality Among Non-Saudi Population, 2022

Between January and December 2022, a total of 1046 cancer-related deaths were reported among the non-Saudi population in the Kingdom of Saudi Arabia. After the exclusion of 14 cases from the analysis due to classification discrepancies (in situ tumors or mismatched ICD-O-3 and ICD-10 codes), 1,032 deaths were included in the final analysis (Table 4.1). Of these, 537 deaths (52.0%) occurred in males and 495 (47.9%) in females (Table 4.2).

Demographic and Age Distribution

The age structure of the non-Saudi population differed significantly from the Saudi National population, with 81% aged 15 to 59 years, 15.2% aged below 15, and only 3.8% aged 60 and above. Despite this younger population profile, cancer deaths were more prevalent among older population, especially those aged 40 years and older. In 2022, approximately 2.6% of cancer deaths occurred before the age of 15, 12.4% between ages 15 and 39, 49.0% between 40 and 64, and 11.8% among those aged 65 and older.

Table 4.1: Leading Causes of Cancer Mortality among Non-Saudi Residents in Saudi Arabia, 2022

Cancer Sites	Number of Deaths	Percentage (%)
Breast	157	15.2
Colorectal	144	14.0
Trachea, Bronchus, Lung	65	6.3
Leukemia	65	6.3
Non-Hodgkin lymphoma	55	5.3
Liver	49	4.7
Pancreas	44	4.3
Brain, Nervous system	42	4.1
Other & unspecified	36	3.5
Stomach	35	3.4
Other Sites	340	32.9
Total	**1032**	**100.0**

Table 4.2: Distribution of Cancer Deaths Among Non-Saudis by Nationality and Gender, 2022

	Number of Deaths					
Nationality	**Male**	**%**	**Female**	**%**	**Total**	**%**
Yemen	139	25.9	136	27.5	275	26.6
Sudan	69	12.8	48	9.7	117	11.3
Syrian	55	10.2	57	11.5	112	10.9
Egypt	39	7.3	26	5.3	65	6.3
Pakistan	32	6.0	18	3.6	50	4.8
Palestine	21	3.9	23	4.6	44	4.3
Philippines	23	4.3	19	3.8	42	4.1
Myanmar	25	4.7	13	2.6	38	3.7
Non-Saudi, NOS	14	2.6	15	3.0	29	2.8
Jordan	17	3.2	10	2.0	27	2.6
Eritrea	5	0.9	15	3.0	20	1.9
India	10	1.9	8	1.6	18	1.7
Lebanon	8	1.5	6	1.2	14	1.4
Nigeria	2	0.4	11	2.2	13	1.3
Chad	2	0.4	9	1.8	11	1.1
Indonesia	1	0.2	10	2.0	11	1.1
Other Nationalities	75	14.0	71	14.3	146	14.1
Total	537	100.0	495	100.0	1032	100.0
Gender %	52.0	-	48.0	-	100.0	-

Leading Causes of Cancer Mortality

The leading cause of cancer death among non-Saudi residents was breast cancer, responsible for 15.2% of all cases, followed by colorectal cancer (14.0%), lung cancer (6.3%), and leukemia (6.3%) (Table 4.1). These top four causes collectively accounted for more than 40% of total cancer mortality among non-Saudis.

When stratified by gender (Table 4.3), colorectal cancer was the most common cause of cancer death in non-Saudi males (17.3%), followed by lung cancer (8.9%), leukemia (8.2%), and non-Hodgkin lymphoma (6.5%). Among females, breast cancer alone accounted for 30.9% of all cancer deaths, followed by colorectal cancer (10.3%), leukemia (4.2%), and ovarian cancer (4.0%). These distributions highlight notable gender-specific cancer burdens, with breast cancer being an overwhelming contributor to female mortality.

Nationality Distribution

As illustrated in Table 4.2, the top three nationalities affected were Yemenis (26.6%), Sudanese (11.3%), and Syrians (10.9%), comprising nearly half of all non-Saudi cancer deaths in 2022. Other nationalities with notable proportions included Egyptians (6.3%), Pakistanis (4.8%), and Palestinians (4.3%). Gender proportions within these groups were generally balanced, though subtle differences existed across specific nationalities, such as a higher male-to-female ratio in the Sudanese group and the reverse among Eritreans and Indonesians.

Table 4.3: Most common sites for cancer deaths among the non-Saudi population by gender, 2022

	Number of Deaths			Number of Deaths	
Cancer Site	**Male**	**%**	**Cancer Site**	**Females**	**%**
Colorectal	93	17.3	Breast	153	30.9
Trachea, Bronchus, Lung	48	8.9	Colorectal	51	10.3
Leukemia	44	8.2	Leukemia	21	4.2
Non-Hodgkin lymphoma	35	6.5	Ovary	20	4.0
Liver	34	6.3	Non-Hodgkin lymphoma	20	4.0
Pancreas	31	5.8	Other & unspecified	20	4.0
Prostate	31	5.8	Trachea, Bronchus, Lung	17	3.4
Brain, Nervous system	27	5.0	Corpus Uteri	17	3.4
Bladder	23	4.3	Stomach	16	3.2
Stomach	19	3.5	Liver	15	3.0
Other Sites	152	28.3	Other Sites	145	29.3
Total	537	100.0	Total	495	100.0

Age-Specific Mortality Patterns

As shown in Figure 4.1, the age-specific mortality rate (AMR) for all cancer sites among the non-Saudi population rose sharply with increasing age, with distinct sex-specific patterns. Female non-Saudis experienced consistently higher mortality rates than their male counterparts across most age groups.

Among males, the AMR remained relatively stable at low levels from age 0–39, ranging between 1 and 3 per 100,000 individuals. A gradual increase began in the 40–44 age group, with a marked rise observed from the 45-49 age group onwards. The AMR peaked in the 75+ age group at 281 per 100,000.

Among females, the AMR also remained low in early age groups, ranging between 1 and 4 per 100,000 individuals up to age 30–34, followed by a progressive increase beginning in the 35–39 age group. The rate continued to rise across subsequent age categories, reaching 395 per 100,000 individuals in the 75+ age group. From age 25–29 onwards, female AMRs were consistently higher than male rates in each corresponding age group.

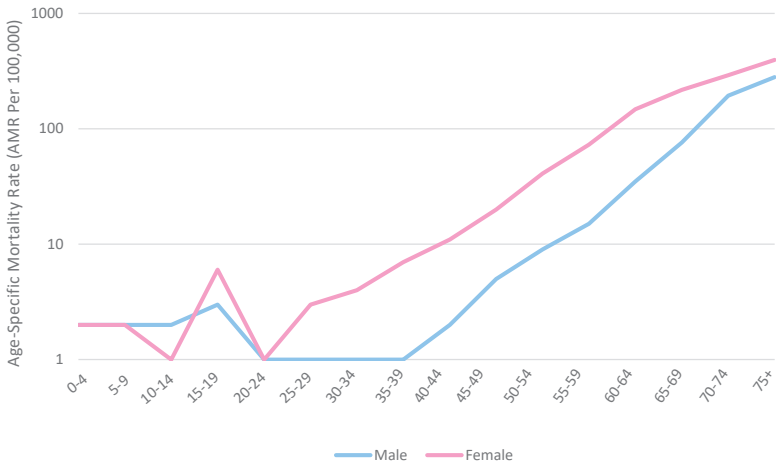

Figure 4.1: Age-Specific Mortality Rates (AMR per 100,000) for All Cancer Sites Among Non-Saudis Nationals by Age Group, 2022

PART V
MORTALITY T ABLES

Table 5.1.1: Number Of Mortality Cases Among Saudi Males by Primary Site And Age Groups, 2022

ICD (10th)	Cancer Primary Site	All Ages	Unknown Age	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	Total (%)
C00	Lip	4	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	3	%0.10
C01-C02	Tongue	39	0	0	0	0	0	0	0	1	2	1	2	2	6	3	4	6	12	%1.10
C03-C06	Mouth	33	0	0	0	0	0	0	0	0	0	1	5	2	4	1	5	4	11	%0.90
C07-C08	Salivary glands	8	0	0	0	0	0	0	1	0	0	1	0	1	1	1	0	1	2	%0.20
C09	Tonsil	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	%0.00
C10	Other Oropharynx	3	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	%0.10
C11	Nasopharynx	62	0	0	0	0	1	1	1	1	0	0	7	5	8	7	6	12	13	%1.70
C12-C13	Hypopharynx	5	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	3	%0.10
C14	Pharynx unspec.	2	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	%0.10
C15	Oesophagus	63	0	0	0	0	0	0	2	2	0	2	3	5	9	8	4	4	24	%1.70
C16	Stomach	151	0	0	0	0	1	0	4	5	4	5	6	15	16	23	12	18	42	%4.10
C17	Small intestine	27	0	0	0	0	0	0	0	0	0	2	1	4	3	3	2	5	7	%0.70
C18	Colon	362	1	0	0	0	0	1	4	2	10	18	17	35	39	46	49	30	110	%9.90
C19-C20	Rectum	233	0	0	0	0	0	1	1	2	7	9	10	16	17	40	39	27	64	%6.40
C21	Anus	23	0	0	0	0	0	0	0	0	0	0	2	1	2	5	1	3	9	%0.60
C22	Liver	300	0	0	1	1	0	2	2	0	5	4	5	16	28	45	47	37	107	%8.20
C23-C24	Gallbladder etc.	70	0	0	0	0	0	0	0	2	1	3	4	4	4	11	17	13	11	%1.90
C25	Pancreas	226	0	0	0	0	0	0	0	0	5	2	19	23	37	34	40	22	44	%6.20
C30-C31	Nose, sinuses etc.	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	1	2	%0.20
C32	Larynx	41	0	0	0	0	0	0	0	0	0	0	1	2	3	5	8	5	17	%1.10
C33-C34	Trachea,Bronchus,Lung	336	0	0	0	0	0	1	1	0	4	11	10	25	39	62	59	44	80	%9.20
C37-C38	Other Thoracic organs	15	0	0	0	0	0	2	3	0	3	0	0	1	3	0	0	1	2	%0.40
C40-C41	Bone	47	0	1	0	6	10	8	5	4	3	2	0	3	0	0	3	2	0	%1.30
C43	Melanoma of Skin	13	0	0	0	0	0	0	0	0	0	0	0	0	0	2	4	1	6	%0.40
C44	Other Skin	87	0	0	0	0	0	0	0	0	1	3	1	0	5	6	3	10	58	%2.40
C45	Mesothelioma	8	0	0	0	0	0	0	0	0	1	0	1	0	2	0	1	0	3	%0.20
C46	Kaposi sarcoma	18	0	0	0	0	0	0	2	1	1	0	0	0	2	1	1	4	6	%0.50
C47;C49	Connective,Soft tissue	44	0	0	1	2	1	4	1	3	0	0	3	4	7	2	5	2	9	%1.20
C50	Breast	12	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1	9	%0.30
C60	Penis	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	%0.10
C61	Prostate	232	2	0	0	0	0	0	0	0	0	0	1	8	7	12	25	28	149	%6.30
C62	Testis	17	0	0	0	0	0	1	2	6	2	3	1	0	1	0	0	0	1	%0.50
C63	Other male genital	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	%0.10
C64	Kidney	89	0	0	1	0	2	2	1	1	0	2	4	5	7	15	18	8	23	%2.40
C65	Renal Pelvis	4	0	0	0	0	0	0	0	0	0	0	0	2	0	1	0	1	0	%0.10
C66	Ureter	2	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	%0.10
C67	Bladder	170	0	1	0	0	0	0	0	2	0	2	5	2	16	17	23	13	89	%4.60
C68	Other Urinary organs	11	0	0	0	0	0	1	0	0	0	0	0	0	2	1	1	2	4	%0.30
C69	Eye	7	0	0	0	0	0	0	1	0	1	0	2	0	0	0	0	0	3	%0.20
C70-C72	Brain, Nervous system	180	0	4	13	10	3	5	1	5	15	12	12	19	20	20	17	11	13	%4.90
C73	Thyroid	49	0	0	0	0	0	0	1	0	0	1	4	5	4	6	7	4	17	%1.30
C74	Adrenal gland	11	0	5	2	0	1	1	0	0	0	0	0	1	0	0	0	1	0	%0.30
C75	Other Endocrine	2	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	%0.10
C81	Hodgkin disease	65	0	0	1	2	1	3	3	6	1	5	4	7	2	10	4	4	12	%1.80
C82-C85;C96	Non-Hodgkin lymphoma	244	0	2	5	4	6	4	7	9	9	8	15	12	15	27	30	27	64	%6.70
C88	Immunoproliferative dis.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	%0.00
C90	Multiple Myeloma	62	0	0	0	0	0	0	0	0	1	2	3	3	6	5	6	13	23	%1.70
C91	Lymphoid Leukaemia	62	0	2	2	2	4	1	5	3	3	3	3	2	3	2	7	2	18	%1.70
C92-C94	Myeloid Leukaemia	93	0	2	1	0	5	3	6	8	6	7	2	4	5	10	9	5	20	%2.50
C95	Leukaemia unspec.	32	0	3	3	4	2	2	0	1	3	2	1	1	4	1	1	1	3	%0.90
Other	Other & unspecified	85	0	6	0	0	2	3	0	0	2	4	6	6	9	9	13	8	17	%2.30
All	All sites Total	3661	3	26	30	31	39	47	54	64	92	115	163	241	337	445	474	384	1116	%100.00
Not C44	All sites but C44	3574	3	26	30	31	39	47	54	64	91	112	162	241	332	439	471	374	1058	%97.60

Table 5.1.2: Number Of Mortality Cases Among Saudi Females by Primary Site And Age Groups, 2022

ICD (10th)	Cancer Primary Site	All Ages	Unknown Age	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	Total (%)
C00	Lip	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	%0.10
C01-C02	Tongue	41	0	0	0	0	0	0	1	0	1	1	2	6	3	8	3	4	12	%1.10
C03-C06	Mouth	22	0	0	0	0	0	0	0	0	0	1	1	4	2	4	4	2	4	%0.60
C07-C08	Salivary glands	9	0	0	0	0	0	0	0	0	1	1	1	0	0	0	1	0	5	%0.20
C09	Tonsil	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	%0.00
C10	Other Oropharynx	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	%0.00
C11	Nasopharynx	22	0	0	1	1	0	2	0	1	1	1	1	1	2	4	2	3	2	%0.60
C12-C13	Hypopharynx	5	0	0	0	0	0	0	0	1	1	0	1	0	0	0	1	0	1	%0.10
C14	Pharynx unspec.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	%0.00
C15	Oesophagus	39	0	0	0	0	0	0	0	2	0	3	0	1	5	2	4	4	18	%1.10
C16	Stomach	106	0	0	0	0	0	1	1	3	8	8	5	17	11	12	11	9	20	%2.90
C17	Small intestine	19	0	0	0	0	0	0	1	2	0	2	1	0	1	2	1	5	4	%0.50
C18	Colon	305	0	0	0	0	0	1	1	9	9	16	19	34	29	39	35	37	76	%8.30
C19-C20	Rectum	168	0	0	0	0	0	0	1	3	2	11	13	13	18	23	18	17	49	%4.60
C21	Anus	10	0	0	0	0	0	0	0	0	1	0	0	1	1	2	0	2	3	%0.30
C22	Liver	179	0	3	0	0	1	0	1	2	5	3	7	12	14	22	32	23	54	%4.80
C23-C24	Gallbladder etc.	92	0	0	0	0	0	0	0	1	2	6	4	3	12	17	17	10	20	%2.50
C25	Pancreas	162	0	0	0	0	0	0	1	1	0	7	13	16	15	20	31	19	39	%4.40
C30-C31	Nose, sinuses etc.	2	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	%0.10
C32	Larynx	12	0	0	0	0	0	0	0	0	0	0	0	0	3	2	3	2	2	%0.30
C33-C34	Trachea,Bronchus,Lung	111	0	0	0	0	0	1	2	0	5	7	7	10	8	18	11	18	24	%3.00
C37-C38	Other Thoracic organs	7	0	0	1	1	0	0	0	0	0	0	0	1	2	0	1	0	1	%0.20
C40-C41	Bone	43	0	0	2	4	6	2	5	4	2	0	0	1	2	5	3	2	5	%1.20
C43	Melanoma of Skin	5	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	4	%0.10
C44	Other Skin	73	0	0	0	0	0	0	0	0	0	1	2	1	3	7	3	6	50	%2.00
C45	Mesothelioma	3	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	1	%0.10
C46	Kaposi sarcoma	3	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	%0.10
C47;C49	Connective,Soft tissue	42	0	2	0	0	2	0	4	1	3	1	2	3	5	5	3	2	9	%1.10
C50	Breast	882	2	0	0	0	1	0	4	19	47	78	99	107	102	114	93	73	143	%23.90
C51	Vulva	11	0	0	0	0	0	0	0	0	0	1	0	1	2	1	2	1	3	%0.30
C52	Vagina	6	0	0	0	0	0	0	0	0	1	1	1	0	0	0	1	0	2	%0.20
C53	Cervix Uteri	72	0	0	0	0	0	0	1	0	4	4	3	11	11	9	9	5	15	%2.00
C54	Corpus Uteri	226	0	0	0	0	0	1	0	0	5	2	8	2	13	43	35	53	64	%6.10
C55	Uterus unspec.	57	0	0	0	0	1	0	0	2	2	1	3	7	7	9	6	7	12	%1.50
C56	Ovary	145	0	0	0	0	1	2	2	3	4	7	15	16	12	23	20	18	22	%3.90
C57	Other Female Genital	19	0	0	0	0	0	1	0	0	1	0	1	1	1	5	2	2	5	%0.50
C58	Placenta	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	%0.00
C64	Kidney	55	0	2	0	0	1	0	1	1	0	2	3	3	4	10	6	7	15	%1.50
C65	Renal Pelvis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	%0.00
C66	Ureter	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	%0.00
C67	Bladder	42	0	0	0	0	0	0	0	0	1	2	1	3	7	1	4	3	20	%1.10
C68	Other Urinary organs	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	%0.10
C69	Eye	3	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2	%0.10
C70-C72	Brain, Nervous system	114	0	9	8	3	2	3	1	7	6	9	7	9	14	15	6	3	12	%3.10
C73	Thyroid	95	0	0	0	0	0	0	0	0	4	2	4	7	7	10	11	16	34	%2.60
C74	Adrenal gland	6	0	1	3	0	0	0	0	0	1	0	0	1	0	0	0	0	0	%0.20
C75	Other Endocrine	7	0	0	0	1	0	1	1	0	1	0	0	0	0	0	0	1	2	%0.20
C81	Hodgkin disease	32	0	0	1	1	0	2	1	0	2	0	1	3	3	5	5	1	7	%0.90
C82-C85;C96	Non-Hodgkin lymphoma	178	1	1	1	3	5	1	4	4	2	3	8	6	12	15	28	21	63	%4.80
C88	Immunoproliferative dis.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	%0.00
C90	Multiple Myeloma	37	0	0	0	0	0	0	0	0	0	2	1	4	4	5	6	5	10	%1.00
C91	Lymphoid Leukaemia	23	0	0	1	1	2	1	0	1	0	1	0	2	0	1	2	3	8	%0.60
C92-C94	Myeloid Leukaemia	69	0	2	2	1	1	3	1	4	2	6	2	6	11	4	5	5	14	%1.90
C95	Leukaemia unspec.	27	0	0	3	2	3	4	0	1	0	1	2	0	5	0	4	0	2	%0.70
Other	Other & unspecified	95	0	1	0	0	1	1	0	2	6	4	2	6	15	12	13	13	19	%2.60
All	All sites Total	3691	3	22	24	18	27	29	34	74	130	195	240	320	366	477	443	402	887	%100.00
Not C44	All sites but C44	3618	3	22	24	18	27	29	34	74	130	194	238	319	363	470	440	396	837	%98.00

Table 5.1.3: Age-Spesific Mortality Rate (AMR) and Age Standardised Mortality Rate (ASMR) Among Saudi Males (per 100,000) by Primary Site and Age groups, 2022

ICD (10th)	Cancer Primary Site	All Ages	Unknown Age	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	Crude Rate	ASMR World
C00	Lip	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0	0	2.5	0	0.1
C01-C02	Tongue	39	0	0	0	0	0	0	0	0.1	0.3	0.2	0.5	0.6	2.4	1.6	3.1	8	9.9	0.4	0.7
C03-C06	Mouth	33	0	0	0	0	0	0	0	0	0	0.2	1.3	0.6	1.6	0.5	3.9	5.3	9.1	0.4	0.6
C07-C08	Salivary glands	8	0	0	0	0	0	0	0.1	0	0	0.2	0	0.3	0.4	0.5	0	1.3	1.6	0.1	0.1
C09	Tonsil	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.8	0	0
C10	Other Oropharynx	3	0	0	0	0	0	0.1	0	0	0.1	0	0	0	0	0	0	1.3	0	0	0
C11	Nasopharynx	62	0	0	0	0	0.1	0.1	0.1	0.1	0	0	1.8	1.6	3.2	3.7	4.7	15.9	10.7	0.7	1.2
C12-C13	Hypopharynx	5	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.5	0	0	2.5	0.1	0.1
C14	Pharynx unspec.	2	0	0	0	0	0	0	0	0	0.1	0	0.3	0	0	0	0	0	0	0	0
C15	Oesophagus	63	0	0	0	0	0	0	0.2	0.3	0	0.4	0.8	1.6	3.6	4.3	3.1	5.3	19.7	0.7	1.1
C16	Stomach	151	0	0	0	0	0.1	0	0.5	0.6	0.6	0.9	1.6	4.8	6.4	12.3	9.4	23.9	34.6	1.6	2.7
C17	Small intestine	27	0	0	0	0	0	0	0	0	0	0.4	0.3	1.3	1.2	1.6	1.6	6.6	5.8	0.3	0.5
C18	Colon	362	1	0	0	0	0	0.1	0.5	0.3	1.5	3.4	4.5	11.3	15.5	24.6	38.5	39.8	90.5	3.8	6.6
C19-C20	Rectum	233	0	0	0	0	0	0.1	0.1	0.3	1	1.7	2.6	5.2	6.7	21.4	30.7	35.8	52.7	2.5	4.4
C21	Anus	23	0	0	0	0	0	0	0	0	0	0	0.5	0.3	0.8	2.7	0.8	4	7.4	0.2	0.4
C22	Liver	300	0	0	0.1	0.1	0	0.2	0.2	0	0.7	0.7	1.3	5.2	11.1	24.1	37	49.1	88	3.2	5.7
C23-C24	Gallbladder etc.	70	0	0	0	0	0	0	0	0.3	0.1	0.6	1	1.3	1.6	5.9	13.4	17.2	9.1	0.7	1.4
C25	Pancreas	226	0	0	0	0	0	0	0	0	0.7	0.4	5	7.4	14.7	18.2	31.5	29.2	36.2	2.4	4.3
C30-C31	Nose, sinuses etc.	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2.4	1.3	1.6	0.1	0.1
C32	Larynx	41	0	0	0	0	0	0	0	0	0	0	0.3	0.6	1.2	2.7	6.3	6.6	14	0.4	0.8
C33-C34	Trachea,Bronchus,Lung	336	0	0	0	0	0	0.1	0.1	0	0.6	2.1	2.6	8.1	15.5	33.2	46.4	58.3	65.8	3.6	6.6
C37-C38	Other Thoracic organs	15	0	0	0	0	0	0.2	0.3	0	0.4	0	0	0.3	1.2	0	0	1.3	1.6	0.2	0.2
C40-C41	Bone	47	0	0.1	0	0.6	1.1	0.9	0.6	0.5	0.4	0.4	0	1	0	0	2.4	2.7	0	0.5	0.5
C43	Melanoma of Skin	13	0	0	0	0	0	0	0	0	0	0	0	0	0	1.1	3.1	1.3	4.9	0.1	0.3
C44	Other Skin	87	0	0	0	0	0	0	0	0	0.1	0.6	0.3	0	2	3.2	2.4	13.3	47.7	0.9	1.6
C45	Mesothelioma	8	0	0	0	0	0	0	0	0	0.1	0	0.3	0	0.8	0	0.8	0	2.5	0.1	0.1
C46	Kaposi sarcoma	18	0	0	0	0	0	0	0.2	0.1	0.1	0	0	0	0.8	0.5	0.8	5.3	4.9	0.2	0.3
C47;C49	Connective,Soft tissue	44	0	0	0.1	0.2	0.1	0.5	0.1	0.4	0	0	0.8	1.3	2.8	1.1	3.9	2.7	7.4	0.5	0.7
C50	Breast	12	0	0	0	0	0	0	0	0	0	0	0.3	0	0	0.5	0	1.3	7.4	0.1	0.2
C60	Penis	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.3	1.6	0	0.1
C61	Prostate	232	2	0	0	0	0	0	0	0	0	0	0.3	2.6	2.8	6.4	19.7	37.1	122.6	2.5	4.3
C62	Testis	17	0	0	0	0	0	0.1	0.2	0.8	0.3	0.6	0.3	0	0.4	0	0	0	0.8	0.2	0.2
C63	Other male genital	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.3	0.8	0	0
C64	Kidney	89	0	0	0.1	0	0.2	0.2	0.1	0.1	0	0.4	1	1.6	2.8	8	14.2	10.6	18.9	0.9	1.7
C65	Renal Pelvis	4	0	0	0	0	0	0	0	0	0	0	0	0.6	0	0.5	0	1.3	0	0	0.1
C66	Ureter	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0	0	0.8	0	0
C67	Bladder	170	0	0.1	0	0	0	0	0	0.3	0	0.4	1.3	0.6	6.4	9.1	18.1	17.2	73.2	1.8	3.1
C68	Other Urinary organs	11	0	0	0	0	0	0.1	0	0	0	0	0	0	0.8	0.5	0.8	2.7	3.3	0.1	0.2
C69	Eye	7	0	0	0	0	0	0	0.1	0	0.1	0	0.5	0	0	0	0	0	2.5	0.1	0.1
C70-C72	Brain, Nervous system	180	0	0.4	1.1	0.9	0.3	0.6	0.1	0.6	2.2	2.2	3.1	6.1	7.9	10.7	13.4	14.6	10.7	1.9	2.8
C73	Thyroid	49	0	0	0	0	0	0	0.1	0	0	0.2	1	1.6	1.6	3.2	5.5	5.3	14	0.5	0.9
C74	Adrenal gland	11	0	0.5	0.2	0	0.1	0.1	0	0	0	0	0	0.3	0	0	0	1.3	0	0.1	0.1
C75	Other Endocrine	2	0	0	0	0	0	0	0	0	0	0	0.3	0	0	0	0	0	0.8	0	0
C81	Hodgkin disease	65	0	0	0.1	0.2	0.1	0.3	0.3	0.8	0.1	0.9	1	2.3	0.8	5.4	3.1	5.3	9.9	0.7	1
C82-C85;C96	Non-Hodgkin lymphoma	244	0	0.2	0.4	0.4	0.6	0.5	0.8	1.2	1.3	1.5	3.9	3.9	6	14.5	23.6	35.8	52.7	2.6	4.2
C88	Immunoproliferative dis.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C90	Multiple Myeloma	62	0	0	0	0	0	0	0	0	0.1	0.4	0.8	1	2.4	2.7	4.7	17.2	18.9	0.7	1.2
C91	Lymphoid Leukaemia	62	0	0.2	0.2	0.2	0.4	0.1	0.6	0.4	0.4	0.6	0.8	0.6	1.2	1.1	5.5	2.7	14.8	0.7	0.9
C92-C94	Myeloid Leukaemia	93	0	0.2	0.1	0	0.5	0.3	0.7	1	0.9	1.3	0.5	1.3	2	5.4	7.1	6.6	16.5	1	1.4
C95	Leukaemia unspec.	32	0	0.3	0.3	0.4	0.2	0.2	0	0.1	0.4	0.4	0.3	0.3	1.6	0.5	0.8	1.3	2.5	0.3	0.4
Other	Other & unspecified	85	0	0.5	0	0	0.2	0.3	0	0	0.3	0.7	1.6	1.9	3.6	4.8	10.2	10.6	14	0.9	1.5
All	All sites Total	3661	3	2	3	3	4	5	6	8	14	22	43	78	134	238	373	509	918	38.8	65.8
Not C44	All sites but C44	3574	3	2	3	3	4	5	6	8	13	21	42	78	132	235	371	496	871	37.9	64.3

Table 5.1.4: Age-Spesific Mortality Rate (AMR) and Age Standardised Mortality Rate (ASMR) Among Saudi Females (per 100,000) by Primary Site and Age groups, 2022

ICD (10th)	Cancer Primary Site	All Ages	Unknown Age	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	Crude Rate	ASMR World
C00	Lip	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0.1	0.1
C01-C02	Tongue	41	0	0	0	0	0	0	0.1	0	0.1	0.2	0.5	1.7	1.1	3.9	2.3	5	9.6	0.4	0.7
C03-C06	Mouth	22	0	0	0	0	0	0	0	0	0	0.2	0.2	1.2	0.7	2	3.1	2.5	3.2	0.2	0.4
C07-C08	Salivary glands	9	0	0	0	0	0	0	0	0	0.1	0.2	0.2	0	0	0	0.8	0	4	0.1	0.1
C09	Tonsil	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C10	Other Oropharynx	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.8	0	0
C11	Nasopharynx	22	0	0	0.1	0.1	0	0.2	0	0.1	0.1	0.2	0.2	0.3	0.7	2	1.5	3.7	1.6	0.2	0.4
C12-C13	Hypopharynx	5	0	0	0	0	0	0	0	0.1	0.1	0	0.2	0	0	0	0.8	0	0.8	0.1	0.1
C14	Pharynx unspec.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C15	Oesophagus	39	0	0	0	0	0	0	0	0.3	0	0.6	0	0.3	1.8	1	3.1	5	14.3	0.4	0.7
C16	Stomach	106	0	0	0	0	0	0.1	0.1	0.4	1.2	1.5	1.2	5	4	5.9	8.5	11.2	15.9	1.1	1.7
C17	Small intestine	19	0	0	0	0	0	0	0.1	0.3	0	0.4	0.2	0	0.4	1	0.8	6.2	3.2	0.2	0.3
C18	Colon	305	0	0	0	0	0	0.1	0.1	1.2	1.3	2.9	4.7	9.9	10.5	19.1	27	46.2	60.6	3.3	5.3
C19-C20	Rectum	168	0	0	0	0	0	0	0.1	0.4	0.3	2	3.2	3.8	6.5	11.3	13.9	21.2	39.1	1.8	2.9
C21	Anus	10	0	0	0	0	0	0	0	0	0.1	0	0	0.3	0.4	1	0	2.5	2.4	0.1	0.2
C22	Liver	179	0	0.3	0	0	0.1	0	0.1	0.3	0.7	0.6	1.7	3.5	5.1	10.8	24.6	28.7	43	1.9	3.2
C23-C24	Gallbladder etc.	92	0	0	0	0	0	0	0	0.1	0.3	1.1	1	0.9	4.3	8.3	13.1	12.5	15.9	1	1.7
C25	Pancreas	162	0	0	0	0	0	0	0.1	0.1	0	1.3	3.2	4.7	5.4	9.8	23.9	23.7	31.1	1.7	2.9
C30-C31	Nose, sinuses etc.	2	0	0	0.1	0	0	0	0	0	0	0	0	0	0	0.5	0	0	0	0	0
C32	Larynx	12	0	0	0	0	0	0	0	0	0	0	0	0	1.1	1	2.3	2.5	1.6	0.1	0.2
C33-C34	Trachea,Bronchus,Lung	111	0	0	0	0	0	0.1	0.2	0	0.7	1.3	1.7	2.9	2.9	8.8	8.5	22.5	19.1	1.2	2
C37-C38	Other Thoracic organs	7	0	0	0.1	0.1	0	0	0	0	0	0	0	0.3	0.7	0	0.8	0	0.8	0.1	0.1
C40-C41	Bone	43	0	0	0.2	0.4	0.7	0.2	0.6	0.5	0.3	0	0	0.3	0.7	2.5	2.3	2.5	4	0.5	0.6
C43	Melanoma of Skin	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0	0	3.2	0.1	0.1
C44	Other Skin	73	0	0	0	0	0	0	0	0	0	0.2	0.5	0.3	1.1	3.4	2.3	7.5	39.9	0.8	1.3
C45	Mesothelioma	3	0	0	0	0	0	0	0	0	0	0	0	0.3	0	0.5	0	0	0.8	0	0.1
C46	Kaposi sarcoma	3	0	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.6	0	0
C47;C49	Connective,Soft tissue	42	0	0.2	0	0	0.2	0	0.5	0.1	0.4	0.2	0.5	0.9	1.8	2.5	2.3	2.5	7.2	0.4	0.6
C50	Breast	882	2	0	0	0	0.1	0	0.5	2.5	7	14.4	24.5	31.2	36.9	56	71.6	91.2	114	9.4	14.5
C51	Vulva	11	0	0	0	0	0	0	0	0	0	0.2	0	0.3	0.7	0.5	1.5	1.2	2.4	0.1	0.2
C52	Vagina	6	0	0	0	0	0	0	0	0	0.1	0.2	0.2	0	0	0	0.8	0	1.6	0.1	0.1
C53	Cervix Uteri	72	0	0	0	0	0	0	0.1	0	0.6	0.7	0.7	3.2	4	4.4	6.9	6.2	12	0.8	1.2
C54	Corpus Uteri	226	0	0	0	0	0	0.1	0	0	0.7	0.4	2	0.6	4.7	21.1	27	66.2	51	2.4	4.4
C55	Uterus unspec.	57	0	0	0	0	0.1	0	0	0.3	0.3	0.2	0.7	2	2.5	4.4	4.6	8.7	9.6	0.6	1
C56	Ovary	145	0	0	0	0	0.1	0.2	0.2	0.4	0.6	1.3	3.7	4.7	4.3	11.3	15.4	22.5	17.5	1.6	2.5
C57	Other Female Genital	19	0	0	0	0	0	0.1	0	0	0.1	0	0.2	0.3	0.4	2.5	1.5	2.5	4	0.2	0.3
C58	Placenta	1	0	0	0	0	0	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0
C64	Kidney	55	0	0.2	0	0	0.1	0	0.1	0.1	0	0.4	0.7	0.9	1.4	4.9	4.6	8.7	12	0.6	1
C65	Renal Pelvis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C66	Ureter	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.8	0	0
C67	Bladder	42	0	0	0	0	0	0	0	0	0.1	0.4	0.2	0.9	2.5	0.5	3.1	3.7	15.9	0.4	0.7
C68	Other Urinary organs	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.8	0	0.8	0	0
C69	Eye	3	0	0	0	0	0	0.1	0	0	0	0	0	0	0	0	0	0	1.6	0	0
C70-C72	Brain, Nervous system	114	0	0.8	0.7	0.3	0.2	0.4	0.1	0.9	0.9	1.7	1.7	2.6	5.1	7.4	4.6	3.7	9.6	1.2	1.6
C73	Thyroid	95	0	0	0	0	0	0	0	0	0.6	0.4	1	2	2.5	4.9	8.5	20	27.1	1	1.7
C74	Adrenal gland	6	0	0.1	0.3	0	0	0	0	0	0.1	0	0	0.3	0	0	0	0	0	0.1	0.1
C75	Other Endocrine	7	0	0	0	0.1	0	0.1	0.1	0	0.1	0	0	0	0	0	0	1.2	1.6	0.1	0.1
C81	Hodgkin disease	32	0	0	0.1	0.1	0	0.2	0.1	0	0.3	0	0.2	0.9	1.1	2.5	3.9	1.2	5.6	0.3	0.5
C82-C85;C96	Non-Hodgkin lymphoma	178	1	0.1	0.1	0.3	0.5	0.1	0.5	0.5	0.3	0.6	2	1.7	4.3	7.4	21.6	26.2	50.2	1.9	3.1
C88	Immunoproliferative dis.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C90	Multiple Myeloma	37	0	0	0	0	0	0	0	0	0	0.4	0.2	1.2	1.4	2.5	4.6	6.2	8	0.4	0.7
C91	Lymphoid Leukaemia	23	0	0	0.1	0.1	0.2	0.1	0	0.1	0	0.2	0	0.6	0	0.5	1.5	3.7	6.4	0.2	0.4
C92-C94	Myeloid Leukaemia	69	0	0.2	0.2	0.1	0.1	0.4	0.1	0.5	0.3	1.1	0.5	1.7	4	2	3.9	6.2	11.2	0.7	1
C95	Leukaemia unspec.	27	0	0	0.3	0.2	0.3	0.5	0	0.1	0	0.2	0.5	0	1.8	0	3.1	0	1.6	0.3	0.4
Other	Other & unspecified	95	0	0.1	0	0	0.1	0.1	0	0.3	0.9	0.7	0.5	1.7	5.4	5.9	10	16.2	15.1	1	1.6
All	All sites Total	3691	3	2	2	2	3	3	4	10	19	36	59	93	132	234	341	502	707	39.5	62.7
Not C44	All sites but C44	3618	3	2	2	2	3	3	4	10	19	36	59	93	131	231	339	495	667	38.7	61.5

Table 5.4.1: Number Of Mortality Among Non-Saudi Males by Primary Site And Age Groups, 2022

ICD (10th)	Cancer Primary Site	All Ages	Unknown Age	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	Total (%)
C00	Lip	4	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	1	0	%0.70
C01-C02	Tongue	7	0	0	0	0	0	0	0	0	1	1	0	2	1	1	0	1	0	%1.30
C03-C06	Mouth	3	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	%0.60
C07-C08	Salivary glands	2	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	%0.40
C09	Tonsil	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	%0.00
C10	Other Oropharynx	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	%0.00
C11	Nasopharynx	10	0	0	0	0	0	0	0	0	0	0	3	1	1	3	0	1	1	%1.90
C12-C13	Hypopharynx	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	%0.00
C14	Pharynx unspec.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	%0.00
C15	Oesophagus	7	0	0	0	0	0	0	0	0	0	1	1	0	0	2	1	1	1	%1.30
C16	Stomach	19	0	0	0	0	0	0	1	0	3	1	0	1	3	5	3	1	1	%3.50
C17	Small intestine	9	0	0	0	0	0	0	0	0	0	0	0	1	1	3	1	2	1	%1.70
C18	Colon	69	0	0	0	0	0	0	1	1	0	2	2	7	12	9	13	7	15	%12.80
C19-C20	Rectum	24	1	0	0	0	0	0	0	3	0	1	2	2	4	4	1	1	5	%4.50
C21	Anus	3	0	0	0	0	0	0	0	0	0	0	0	0	2	0	1	0	0	%0.60
C22	Liver	34	0	0	0	0	0	0	0	0	3	0	2	4	2	6	8	6	3	%6.30
C23-C24	Gallbladder etc.	5	0	0	0	0	0	0	0	0	1	0	1	0	2	0	0	1	0	%0.90
C25	Pancreas	31	0	0	0	0	0	0	1	1	1	0	4	4	4	2	4	7	3	%5.80
C30-C31	Nose, sinuses etc.	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	%0.20
C32	Larynx	4	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	1	%0.70
C33-C34	Trachea,Bronchus,Lung	48	0	0	0	0	0	0	0	0	2	1	2	9	2	8	9	11	4	%8.90
C37-C38	Other Thoracic organs	3	0	0	0	0	0	0	1	1	0	0	0	0	1	0	0	0	0	%0.60
C40-C41	Bone	11	0	0	1	2	2	1	0	0	0	1	0	1	2	1	0	0	0	%2.00
C43	Melanoma of Skin	2	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	%0.40
C44	Other Skin	15	1	0	0	0	0	0	1	0	0	1	1	0	0	0	3	1	7	%2.80
C45	Mesothelioma	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	%0.20
C46	Kaposi sarcoma	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	%0.00
C47;C49	Connective,Soft tissue	9	0	1	0	0	0	0	0	0	0	1	1	1	2	1	0	1	1	%1.70
C50	Breast	4	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	1	1	%0.70
C60	Penis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	%0.00
C61	Prostate	31	1	0	0	0	0	0	0	0	0	0	0	4	1	1	6	10	8	%5.80
C62	Testis	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	%0.20
C63	Other male genital	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	%0.00
C64	Kidney	12	0	0	0	0	0	0	1	0	0	0	3	2	2	1	2	0	1	%2.20
C65	Renal Pelvis	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	%0.20
C66	Ureter	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	%0.00
C67	Bladder	23	0	0	0	0	0	0	0	0	1	0	1	4	2	3	2	3	7	%4.30
C68	Other Urinary organs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	%0.00
C69	Eye	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	%0.00
C70-C72	Brain, Nervous system	27	0	0	1	1	0	0	0	2	2	1	4	4	4	5	1	1	1	%5.00
C73	Thyroid	6	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	2	1	%1.10
C74	Adrenal gland	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	%0.20
C75	Other Endocrine	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	%0.20
C81	Hodgkin disease	11	0	0	0	0	1	0	0	1	0	2	2	1	1	1	0	1	1	%2.00
C82-C85;C96	Non-Hodgkin lymphoma	35	0	1	1	1	0	1	1	2	3	4	5	2	3	3	1	1	6	%6.50
C88	Immunoproliferative dis.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	%0.00
C90	Multiple Myeloma	3	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1	0	%0.60
C91	Lymphoid Leukaemia	15	0	0	2	0	2	3	1	1	0	1	1	0	0	2	0	2	0	%2.80
C92-C94	Myeloid Leukaemia	11	0	0	0	0	0	0	0	0	1	1	3	0	3	2	0	1	0	%2.00
C95	Leukaemia unspec.	18	1	2	0	1	0	1	0	0	1	2	2	2	0	3	2	1	0	%3.40
Other	Other & unspecified	16	0	1	0	0	0	0	2	0	1	2	3	2	0	3	2	0	0	%3.00
All	All sites Total	537	4	5	5	5	6	6	11	13	21	25	46	55	59	73	65	68	70	%100.00
Not C44	All sites but C44	522	3	5	5	5	6	6	10	13	21	24	45	55	59	73	62	67	63	%97.20

Table 5.4.2: Number Of Mortality Among Non-Saudi Females by Primary Site And Age Groups, 2022

ICD (10th)	Cancer Primary Site	All Ages	Unknown Age	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	Total (%)
C00	Lip	3	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	1	%0.60
C01-C02	Tongue	8	0	0	0	0	0	0	0	1	0	0	1	3	1	1	0	0	1	%1.60
C03-C06	Mouth	4	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	0	%0.80
C07-C08	Salivary glands	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	%0.20
C09	Tonsil	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	%0.00
C10	Other Oropharynx	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	%0.00
C11	Nasopharynx	6	0	0	1	0	0	0	0	0	0	0	0	1	2	1	0	0	1	%1.20
C12-C13	Hypopharynx	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	%0.00
C14	Pharynx unspec.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	%0.00
C15	Oesophagus	9	0	0	0	0	0	0	0	0	0	2	1	2	0	1	1	1	1	%1.80
C16	Stomach	16	0	0	0	0	0	0	0	0	2	2	0	0	2	3	4	1	2	%3.20
C17	Small intestine	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	%0.20
C18	Colon	35	0	0	0	0	0	0	0	1	0	1	8	4	3	4	10	0	4	%7.10
C19-C20	Rectum	16	0	0	0	0	0	0	1	1	2	1	1	1	2	1	4	0	2	%3.20
C21	Anus	2	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	%0.40
C22	Liver	15	0	0	1	0	0	0	0	0	0	0	1	2	3	2	3	1	2	%3.00
C23-C24	Gallbladder etc.	4	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	2	%0.80
C25	Pancreas	13	0	0	0	0	0	0	0	0	1	0	0	0	2	2	5	1	2	%2.60
C30-C31	Nose, sinuses etc.	2	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	%0.40
C32	Larynx	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	%0.00
C33-C34	Trachea,Bronchus,Lung	17	0	0	0	0	0	0	0	0	0	0	1	1	2	2	1	3	7	%3.40
C37-C38	Other Thoracic organs	3	0	0	0	0	0	0	0	0	1	1	0	1	0	0	0	0	0	%0.60
C40-C41	Bone	11	0	2	2	1	1	0	1	2	0	0	0	1	0	1	0	0	0	%2.20
C43	Melanoma of Skin	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	%0.20
C44	Other Skin	8	0	0	0	0	1	0	0	1	0	1	0	0	0	0	0	1	4	%1.60
C45	Mesothelioma	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	%0.20
C46	Kaposi sarcoma	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	%0.00
C47;C49	Connective,Soft tissue	3	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	%0.60
C50	Breast	153	1	0	0	0	0	0	0	5	10	13	13	17	19	20	16	19	20	%30.90
C51	Vulva	2	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	%0.40
C52	Vagina	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	%0.00
C53	Cervix Uteri	14	0	0	0	0	0	0	1	0	0	1	0	2	3	5	1	0	1	%2.80
C54	Corpus Uteri	17	0	0	0	0	0	0	0	0	0	0	1	1	3	5	2	4	1	%3.40
C55	Uterus unspec.	4	0	0	0	0	0	0	0	0	1	0	1	0	0	2	0	0	0	%0.80
C56	Ovary	20	0	0	0	0	0	0	0	0	1	4	3	2	1	4	3	2	0	%4.00
C57	Other Female Genital	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	%0.00
C58	Placenta	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	%0.00
C64	Kidney	8	0	0	0	0	0	0	0	1	2	0	0	0	0	2	1	2	0	%1.60
C65	Renal Pelvis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	%0.00
C66	Ureter	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	%0.00
C67	Bladder	5	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	0	1	%1.00
C68	Other Urinary organs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	%0.00
C69	Eye	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	%0.00
C70-C72	Brain, Nervous system	15	0	1	0	0	3	0	2	2	0	1	1	0	1	2	0	2	0	%3.00
C73	Thyroid	4	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	1	1	%0.80
C74	Adrenal gland	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	%0.20
C75	Other Endocrine	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	%0.20
C81	Hodgkin disease	7	0	0	0	0	0	1	0	1	0	1	1	0	0	0	1	1	1	%1.40
C82-C85;C96	Non-Hodgkin lymphoma	20	0	0	0	0	0	0	3	3	0	2	4	2	0	4	0	0	2	%4.00
C88	Immunoproliferative dis.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	%0.00
C90	Multiple Myeloma	4	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	1	%0.80
C91	Lymphoid Leukaemia	8	0	0	1	0	2	0	0	0	2	1	0	0	0	1	0	0	1	%1.60
C92-C94	Myeloid Leukaemia	6	0	0	0	1	1	0	0	0	0	1	0	1	1	0	0	1	0	%1.20
C95	Leukaemia unspec.	7	0	1	0	0	0	1	2	0	0	0	0	1	0	1	0	0	1	%1.40
Other	Other & unspecified	20	0	0	0	0	1	0	0	1	3	2	0	4	3	4	0	0	2	%4.00
All	All sites Total	495	1	4	6	2	9	2	11	20	29	34	38	49	54	73	57	43	63	%100.00
Not C44	All sites but C44	487	1	4	6	2	8	2	11	19	29	33	38	49	54	73	57	42	59	%98.40

Table 5.4.3: Age-Spesific Mortality Rate (AMR), Age Standardised Mortality Rate (ASMR) Among Non-Saudi Males (per 100,000) by Primary Site and Age groups, 2022

ICD (10th)	Cancer Primary Site	All Ages	Unknown Age	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	Crude Rate	ASMR World
C00	Lip	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	2.4	2.9	0	0	0.1
C01-C02	Tongue	7	0	0	0	0	0	0	0	0	0.1	0.1	0	0.3	0.3	0.5	0	2.9	0	0.1	0.1
C03-C06	Mouth	3	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5	1.2	0	0	0	0.1
C07-C08	Salivary glands	2	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0	1.2	0	0	0	0
C09	Tonsil	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C10	Other Oropharynx	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C11	Nasopharynx	10	0	0	0	0	0	0	0	0	0	0	0.4	0.2	0.3	1.4	0	2.9	4	0.1	0.2
C12-C13	Hypopharynx	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C14	Pharynx unspec.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C15	Oesophagus	7	0	0	0	0	0	0	0	0	0	0.1	0.1	0	0	1	1.2	2.9	4	0.1	0.2
C16	Stomach	19	0	0	0	0	0	0	0.1	0	0.2	0.1	0	0.2	0.8	2.4	3.5	2.9	4	0.2	0.4
C17	Small intestine	9	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3	1.4	1.2	5.7	4	0.1	0.3
C18	Colon	69	0	0	0	0	0	0	0.1	0.1	0	0.2	0.2	1.1	3.1	4.3	15.3	20	60.2	0.7	2.4
C19-C20	Rectum	24	1	0	0	0	0	0	0	0.2	0	0.1	0.2	0.3	1	1.9	1.2	2.9	20.1	0.2	0.7
C21	Anus	3	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0	1.2	0	0	0	0.1
C22	Liver	34	0	0	0	0	0	0	0	0	0.2	0	0.2	0.7	0.5	2.9	9.4	17.1	12	0.3	1.1
C23-C24	Gallbladder etc.	5	0	0	0	0	0	0	0	0	0.1	0	0.1	0	0.5	0	0	2.9	0	0	0.1
C25	Pancreas	31	0	0	0	0	0	0	0.1	0.1	0.1	0	0.5	0.7	1	1	4.7	20	12	0.3	0.9
C30-C31	Nose, sinuses etc.	1	0	0	0	0	0	0	0	0	0	0.1	0	0	0	0	0	0	0	0	0
C32	Larynx	4	0	0	0	0	0	0	0	0	0	0	0	0.2	0	0.5	0	2.9	4	0	0.2
C33-C34	Trachea,Bronchus,Lung	48	0	0	0	0	0	0	0	0	0.1	0.1	0.2	1.5	0.5	3.9	10.6	31.4	16.1	0.5	1.5
C37-C38	Other Thoracic organs	3	0	0	0	0	0	0	0.1	0.1	0	0	0	0	0.3	0	0	0	0	0	0
C40-C41	Bone	11	0	0	0.4	0.9	1.1	0.1	0	0	0	0.1	0	0.2	0.5	0.5	0	0	0	0.1	0.3
C43	Melanoma of Skin	2	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0	0	2.9	0	0	0.1
C44	Other Skin	15	1	0	0	0	0	0	0.1	0	0	0.1	0.1	0	0	0	3.5	2.9	28.1	0.1	0.8
C45	Mesothelioma	1	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0	0	0	0	0	0
C46	Kaposi sarcoma	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C47;C49	Connective,Soft tissue	9	0	0.5	0	0	0	0	0	0	0	0.1	0.1	0.2	0.5	0.5	0	2.9	4	0.1	0.3
C50	Breast	4	0	0	0	0	0	0	0.1	0	0	0	0	0	0	0	1.2	2.9	4	0	0.2
C60	Penis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C61	Prostate	31	1	0	0	0	0	0	0	0	0	0	0	0.7	0.3	0.5	7.1	28.6	32.1	0.3	1.5
C62	Testis	1	0	0	0	0	0	0	0	0	0	0	0.1	0	0	0	0	0	0	0	0
C63	Other male genital	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C64	Kidney	12	0	0	0	0	0	0	0.1	0	0	0	0.4	0.3	0.5	0.5	2.4	0	4	0.1	0.2
C65	Renal Pelvis	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0.1
C66	Ureter	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C67	Bladder	23	0	0	0	0	0	0	0	0	0.1	0	0.1	0.7	0.5	1.4	2.4	8.6	28.1	0.2	0.9
C68	Other Urinary organs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C69	Eye	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C70-C72	Brain, Nervous system	27	0	0	0.4	0.4	0	0	0	0.1	0.1	0.1	0.5	0.7	1	2.4	1.2	2.9	4	0.3	0.5
C73	Thyroid	6	0	0	0	0	0	0	0	0	0.1	0.1	0.1	0	0	0	0	5.7	4	0.1	0.2
C74	Adrenal gland	1	0	0	0	0	0.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1
C75	Other Endocrine	1	0	0	0	0	0	0	0	0	0.1	0	0	0	0	0	0	0	0	0	0
C81	Hodgkin disease	11	0	0	0	0	0.6	0	0	0.1	0	0.2	0.2	0.2	0.3	0.5	0	2.9	4	0.1	0.3
C82-C85;C96	Non-Hodgkin lymphoma	35	0	0.5	0.4	0.4	0	0.1	0.1	0.1	0.2	0.3	0.6	0.3	0.8	1.4	1.2	2.9	24.1	0.3	0.9
C88	Immunoproliferative dis.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C90	Multiple Myeloma	3	0	0	0	0	0	0	0	0	0	0	0.1	0	0	0.5	0	2.9	0	0	0.1
C91	Lymphoid Leukaemia	15	0	0	0.8	0	1.1	0.4	0.1	0.1	0	0.1	0.1	0	0	1	0	5.7	0	0.1	0.4
C92-C94	Myeloid Leukaemia	11	0	0	0	0	0	0	0	0	0.1	0.1	0.4	0	0.8	1	0	2.9	0	0.1	0.2
C95	Leukaemia unspec.	18	1	1	0	0.4	0	0.1	0	0	0.1	0.2	0.2	0.3	0	1.4	2.4	2.9	0	0.2	0.4
Other	Other & unspecified	16	0	0.5	0	0	0	0	0.1	0	0.1	0.2	0.4	0.3	0	1.4	2.4	0	0	0.2	0.2
All	All sites Total	537	4	2	2	2	3	1	1	1	1	2	5	9	15	35	76	194	281	5.2	16
Not C44	All sites but C44	522	3	2	2	2	3	1	1	1	1	2	5	9	15	35	73	191	253	5.1	15.3

Table 5.4.4: Age-Spesific Mortality Rate (AMR), Age Standardised Mortality Rate (ASMR) Among Non-Saudi Females (per 100,000) by Primary Site and Age groups, 2022

ICD (10th)	Cancer Primary Site	All Ages	Unknown Age	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	Crude Rate	ASMR World
C00	Lip	3	0	0	0	0	0	0	0	0	0.2	0	0	0	0	2	0	0	6.3	0.1	0.2
C01-C02	Tongue	8	0	0	0	0	0	0	0	0.2	0	0	0.5	2.5	1.3	2	0	0	6.3	0.3	0.4
C03-C06	Mouth	4	0	0	0	0	0	0	0	0	0	0	0	0	0	2	3.8	13.6	0	0.1	0.5
C07-C08	Salivary glands	1	0	0	0	0	0	0	0	0	0	0	0	0	1.3	0	0	0	0	0	0.1
C09	Tonsil	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C10	Other Oropharynx	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C11	Nasopharynx	6	0	0	0.4	0	0	0	0	0	0	0	0	0.8	2.7	2	0	0	6.3	0.2	0.4
C12-C13	Hypopharynx	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C14	Pharynx unspec.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C15	Oesophagus	9	0	0	0	0	0	0	0	0	0	0.7	0.5	1.7	0	2	3.8	6.8	6.3	0.3	0.6
C16	Stomach	16	0	0	0	0	0	0	0	0	0.5	0.7	0	0	2.7	6.1	15.3	6.8	12.5	0.5	1.3
C17	Small intestine	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0.1
C18	Colon	35	0	0	0	0	0	0	0	0.2	0	0.3	4.3	3.3	4	8.1	38.2	0	25.1	1.1	2.6
C19-C20	Rectum	16	0	0	0	0	0	0	0.3	0.2	0.5	0.3	0.5	0.8	2.7	2	15.3	0	12.5	0.5	1.1
C21	Anus	2	0	0	0	0	0	0	0	0	0	0	0	0.8	0	0	0	0	6.3	0.1	0.2
C22	Liver	15	0	0	0.4	0	0	0	0	0	0	0	0.5	1.7	4	4.1	11.5	6.8	12.5	0.5	1.2
C23-C24	Gallbladder etc.	4	0	0	0	0	0	0	0	0	0.2	0	0	0	1.3	0	0	0	12.5	0.1	0.3
C25	Pancreas	13	0	0	0	0	0	0	0	0	0.2	0	0	0	2.7	4.1	19.1	6.8	12.5	0.4	1.2
C30-C31	Nose, sinuses etc.	2	0	0	0	0	0	0	0.3	0	0.2	0	0	0	0	0	0	0	0	0.1	0
C32	Larynx	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C33-C34	Trachea,Bronchus,Lung	17	0	0	0	0	0	0	0	0	0	0	0.5	0.8	2.7	4.1	3.8	20.3	43.9	0.5	1.7
C37-C38	Other Thoracic organs	3	0	0	0	0	0	0	0	0	0.2	0.3	0	0.8	0	0	0	0	0	0.1	0.1
C40-C41	Bone	11	0	1	0.8	0.5	0.6	0	0.3	0.4	0	0	0	0.8	0	2	0	0	0	0.4	0.5
C43	Melanoma of Skin	1	0	0	0	0	0	0	0	0	0	0	0	0	1.3	0	0	0	0	0	0.1
C44	Other Skin	8	0	0	0	0	0.6	0	0	0.2	0	0.3	0	0	0	0	0	6.8	25.1	0.3	0.7
C45	Mesothelioma	1	0	0	0	0	0	0	0	0	0	0	0	0.8	0	0	0	0	0	0	0
C46	Kaposi sarcoma	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C47;C49	Connective,Soft tissue	3	0	0	0	0	0	0	0	0	0	0	0.5	0	0	0	0	6.8	6.3	0.1	0.3
C50	Breast	153	1	0	0	0	0	0	0	1	2.3	4.4	6.9	14.1	25.6	40.6	61.1	128.9	125.3	4.9	11.2
C51	Vulva	2	0	0	0	0	0	0	0	0.2	0	0	0	0	0	0	3.8	0	0	0.1	0.1
C52	Vagina	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C53	Cervix Uteri	14	0	0	0	0	0	0	0.3	0	0	0.3	0	1.7	4	10.2	3.8	0	6.3	0.4	0.9
C54	Corpus Uteri	17	0	0	0	0	0	0	0	0	0	0	0.5	0.8	4	10.2	7.6	27.1	6.3	0.5	1.5
C55	Uterus unspec.	4	0	0	0	0	0	0	0	0	0.2	0	0.5	0	0	4.1	0	0	0	0.1	0.2
C56	Ovary	20	0	0	0	0	0	0	0	0	0.2	1.4	1.6	1.7	1.3	8.1	11.5	13.6	0	0.6	1.3
C57	Other Female Genital	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C58	Placenta	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C64	Kidney	8	0	0	0	0	0	0	0	0.2	0.5	0	0	0	0	4.1	3.8	13.6	0	0.3	0.6
C65	Renal Pelvis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C66	Ureter	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C67	Bladder	5	0	0	0	0	0	0	0	0	0	0	0	0.8	1.3	0	7.6	0	6.3	0.2	0.4
C68	Other Urinary organs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C69	Eye	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C70-C72	Brain, Nervous system	15	0	0.5	0	0	1.8	0	0.5	0.4	0	0.3	0.5	0	1.3	4.1	0	13.6	0	0.5	0.8
C73	Thyroid	4	0	0	0	0	0	0	0	0	0	0	0	0	2.7	0	0	6.8	6.3	0.1	0.4
C74	Adrenal gland	1	0	0	0	0	0	0	0	0	0.2	0	0	0	0	0	0	0	0	0	0
C75	Other Endocrine	1	0	0	0.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C81	Hodgkin disease	7	0	0	0	0	0	0.5	0	0.2	0	0.3	0.5	0	0	0	3.8	6.8	6.3	0.2	0.5
C82-C85;C96	Non-Hodgkin lymphoma	20	0	0	0	0	0	0	0.8	0.6	0	0.7	2.1	1.7	0	8.1	0	0	12.5	0.6	0.9
C88	Immunoproliferative dis.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C90	Multiple Myeloma	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4.1	3.8	0	6.3	0.1	0.4
C91	Lymphoid Leukaemia	8	0	0	0.4	0	1.2	0	0	0	0.5	0.3	0	0	0	2	0	0	6.3	0.3	0.4
C92-C94	Myeloid Leukaemia	6	0	0	0	0.5	0.6	0	0	0	0	0.3	0	0.8	1.3	0	0	6.8	0	0.2	0.3
C95	Leukaemia unspec.	7	0	0.5	0	0	0	0.5	0.5	0	0	0	0	0.8	0	2	0	0	6.3	0.2	0.4
Other	Other & unspecified	20	0	0	0	0	0.6	0	0	0.2	0.7	0.7	0	3.3	4	8.1	0	0	12.5	0.6	1.1
All	All sites Total	495	1	2	2	1	6	1	3	4	7	11	20	41	73	148	218	292	395	15.8	35.1
Not C44	All sites but C44	487	1	2	2	1	5	1	3	4	7	11	20	41	73	148	218	285	370	15.5	34.4

ARABIC SUMMARY

ملخص معدل وفيات أمراض السرطان في المملكة العربية السعودية لعام ٢٠٢٢

أولا: السجل السعودي للأورام:

تأسس السجل السعودي للأورام في عام ١٤١٢ هـ (١٩٩٢م) كجهة وطنية مسؤولة عن جمع وتوثيق بيانات السرطان من جميع أنحاء المملكة. وقد بدأ نشاطه في جمع المعلومات من شهر يناير في عام ١٩٩٤ م، حيث يتم تجميع وترميز وتحليل البيانات وفقاً لمعايير منظمة الصحة العالمية وتصنيفات ICD-O-٣ الخاصة بالأورام. بالإضافة، يقوم السجل بتزويد الجهات المختصة والباحثين بمعلومات إحصائية وفق نموذج خاص على صفحة السجل في الموقع الرسمي للمجلس الصحي السعودي.

ثانياً: نظرة عامة على وفيات السرطان في عام ٢٠٢٢:

بلغ إجمالي عدد وفيات حالات السرطان خلال عام ٢٠٢٢ والمسجلة من مختلف المرافق الصحية الحكومية والخاصة بالمملكة العربية السعودية ٨,٣٨٤ حالة وفاة، من بين هذه الحالات، كان عدد الوفيات بين المواطنين السعوديين ٧,٣٥٢ حالة، بنسبة ٨٧,٧ ٪، بينما بلغ عدد الوفيات بين المقيمين غير السعوديين ١,٠٣٢ حالة، بنسبة ١٢,٣ ٪. وكان عدد حالات الوفاة من السرطان لدى السعوديين الذكور ٣,٦٦١ حالة بنسبة أجمالية قدرها ٤٩,٧٪ بينما بلغ عدد حالات الوفاة لدى الإناث السعوديات ٣,٦٩١ حالة بنسبة إجمالية قدرها ٥٠,٣٪ (جدول ١).

جدول ١: عدد وفيات حالات السرطان بين الجنسين من المواطنين السعوديين والمقيمين غير السعوديين في المملكة العربية السعودية:

الجنسية	الجنس		المجموع
	ذكر	أنثى	
سعوديين	٣٦٦١	٣٦٩١	٧٣٥٢
غير سعوديين	٥٣٧	٤٩٥	١٠٣٢
المجموع	٤١٩٨	٤١٨٦	٨٣٨٤

ثالثاً: السرطانات العشرة الأعلى في معدلات الوفيات بين السعوديين لعام ٢٠٢٢:

احتل سرطان القولون والمستقيم المرتبة الأولى من حيث عدد الوفيات بين السعوديين، مسجلاً ١,٠٦٨ حالة وفاة (بنسبة ١٤,٥٪ من جميع وفيات السرطان)، تلاه سرطان الثدي بـ٨٩٤ حالة وفاة (١٢,٢٪)، ثم سرطان الكبد بـ٤٧٩ حالة (٦,٥٪)، وسرطان الرئة بـ٤٤٧ حالة (٦,١٪)، يليه سرطان الغدد اللمفاوية اللاهودجكن بـ٤٢٢ حالة (٥,٧٪)، ثم سرطان البنكرياس بـ٣٨٨ حالة (٥,٣٪)، وسرطان الدم (ابيضاض الدم) بـ٣٠٦ حالات (٤,٢٪)، وسرطان الدماغ والجهاز العصبي المركزي بـ٢٩٤ حالة (٤,٠٪)، وسرطان المعدة بـ٢٥٧ حالة (٣,٥٪)، وأخيراً سرطان البروستاتا بـ٢٣٢ حالة (٣,٢٪) (جدول ٢). حيث أن سرطان القولون والمستقيم مع سرطان الثدي يشكلون النصاب الأكبر بين باقي وفيات السرطان بنسبة ٢٦,٧٪.

جدول ٢: معدلات وفيات السرطانات العشرة الأعلى بين المواطنين السعوديين في المملكة العربية السعودية

موقع السرطان	عدد الوفيات	النسبة (٪)
القولون والمستقيم	١٠٦٨	١٤,٥
الثدي	٨٩٤	١٢,٢
الكبد	٤٧٩	٦,٥
الرئة	٤٤٧	٦,١
اللمفاوي اللاهودجكن	٤٢٢	٥,٧
البنكرياس	٣٨٨	٥,٣
ابيضاض الدم	٣٠٦	٤,٢
الجهاز العصبي والدماغ	٢٩٤	٤,٠
المعدة	٢٥٧	٣,٥
البروستاتا	٢٣٢	٣,٢
المجموع (أعلى عشرة)	**٤٧٨٧**	**٦٥,٢**

رابعاً: وفيات السرطانات العشرة الأكثر شيوعا بين السعوديين لكلا الجنسين

الإناث السعوديات:

أظهرت البيانات أن سرطان الثدي هو السبب الرئيس للوفاة المرتبطة بالسرطان بين الإناث السعوديات، حيث سُجلت ٨٨٢ حالة وفاة، ما يمثل ٢٣,٩٪ من إجمالي وفيات السرطان في هذا الجنس. يليه سرطان القولون والمستقيم بنسبة ١٢,٨٪، ثم الرحم بنسبة ٦,١٪، والكبد واللمفاوي اللاهودجكن بنسبة متساوية ٤,٨٪ لكل منهما. كذلك سجلت أنواع أخرى من السرطان نسبًا ملحوظة مثل سرطان البنكرياس (٤,٤٪)، المبيض (٣,٩٪)، ابيضاض الدم (٣,٢٪)، الدماغ والجهاز العصبي المركزي (٣,١٪)، وأخيرًا الرئة (٣,٠٪). تمثل هذه الأنواع العشرة ما مجموعه ٢,٥٨٩ حالة وفاة، أي ٧٠,٠٪ من إجمالي وفيات السرطان بين الإناث في المملكة خلال العام ذاته (جدول ٣).

الذكور السعوديون:

في المقابل، تصدّر سرطان القولون والمستقيم قائمة الوفيات بين الذكور السعوديين بـ٥٩٥ حالة وفاة، ما يعادل ١٦,٣٪ من إجمالي الوفيات. يليه سرطان الرئة (٩,٢٪)، ثم سرطان الكبد (٨,٢٪)، واللمفاوي اللاهودجكن (٦,٧٪). سُجل كذلك عدد كبير من الوفيات بسبب سرطان البروستاتا (٦,٣٪)، البنكرياس (٦,٢٪)، ابيضاض الدم (٥,١٪)، والدماغ والجهاز العصبي المركزي (٤,٩٪) كما ظهر سرطان المثانة (٤,٦٪) والمعدة (٤,١٪) ضمن العشرة الأعلى. بلغ مجموع وفيات السرطانات العشرة الأعلى بين الذكور السعوديين ٢,٦٢١ حالة، ما يعادل ٧١,٦٪ من إجمالي وفيات السرطان في هذه الفئة (جدول ٣) .

جدول ٣: أكثر عشرة سرطانات شيوعًا بين الإناث والذكور السعوديين:

موقع السرطان (الإناث)	عدد الوفيات	النسبة (٪)	موقع السرطان (الذكور)	عدد الوفيات	النسبة (٪)
الثدي	٨٨٢	٢٣,٩	القولون والمستقيم	٥٩٥	١٦,٣
القولون والمستقيم	٤٧٣	١٢,٨	الرئة	٣٣٦	٩,٢
الرحم	٢٢٦	٦,١	الكبد	٣٠٠	٨,٢
الكبد	١٧٩	٤,٨	اللمفاوي اللاهودجكن	٢٤٤	٦,٧
اللمفاوي اللاهودجكن	١٧٨	٤,٨	البروستاتا	٢٣٢	٦,٣
البنكرياس	١٦٢	٤,٤	البنكرياس	٢٢٦	٦,٢
المبيض	١٤٥	٣,٩	ابيضاض الدم	١٨٧	٥,١
ابيضاض الدم	١١٩	٣,٢	الجهاز العصبي والدماغ	١٨٠	٤,٩
الجهاز العصبي والدماغ	١١٤	٣,١	المثانة	١٧٠	٤,٦
الرئة	١١١	٣,٠	المعدة	١٥١	٤,١
المجموع (أعلى عشرة)	**٢٥٨٩**	**٧٠,٠**	**المجموع (أعلى عشرة)**	**٢٦٢١**	**٧١,٦**
الإجمالي (جميع الحالات)	**٣٦٩١**	**١٠٠,٠**	**الإجمالي (جميع الحالات)**	**٣٦٦١**	**١٠٠,٠**

خامساً: السرطانات العشرة الأعلى في معدلات الوفيات بين الأطفال السعوديين لكلا الجنسين (أقل من ١٤ عاماً):

سجل سرطان الدماغ والجهاز العصبي أعلى عدد من الوفيات بين الأطفال السعوديين في عام ٢٠٢٢، بـ٤٧ حالة وفاة من إجمالي الوفيات بين الجنسين (٣١,١٪)، تلاه سرطان الدم (ابيضاض الدم) بـ٣١ حالة (٢٠,٥٪)، ثم سرطان الغدد اللمفاوية اللاهودجكن بـ١٦ حالة (١٠,٦٪)، وسرطان العظام بـ١٣ حالة (٨,٦٪)، ثم سرطان الغدة الكظرية بـ١١ حالة (٧,٣٪)، يليها سرطان الكبد، وسرطان الأنسجة الضامة والرخوة، وسرطان الغدد اللمفاوية هودجكن، جميعها بـ٥ حالات لكل منها (٣,٣٪). كما سُجلت ٣ حالات وفاة بسرطان الكلى (٢,٠٪)، وحالتي وفاة بسرطان البلعوم الأنفي (١,٣٪) (جدول ٤).

جدول 4: وفيات السرطانات العشرة الأكثر شيوعا بين الأطفال السعوديين لكلا الجنسين:

موقع السرطان (الإناث)	عدد الوفيات	النسبة (٪)	موقع السرطان (الذكور)	عدد الوفيات	النسبة (٪)
الجهاز العصبي والدماغ	٢٠	٣١,٣	الجهاز العصبي والدماغ	٢٧	٣١,٠
ابيضاض الدم	١٢	١٨,٨	ابيضاض الدم	١٩	٢١,٨
العظام	٦	٩,٤	اللمفاوي اللاهودجكن	١١	١٢,٦
اللمفاوي اللاهودجكن	٥	٧,٨	العظام	٧	٨,٠
الغدة الكظرية	٤	٦,٣	الغدة الكظرية	٧	٨,٠
الكبد	٣	٤,٧	الأنسجة الضامة والرخوة	٣	٣,٤
البلعوم الأنفي	٢	٣,١	اللمفاوي هودجكن	٣	٣,٤
اللمفاوي هودجكن	٢	٣,١	الكبد	٢	٢,٣
الأنسجة الضامة والرخوة	٢	٣,١	الكلى	١	١,١
الكلى	٢	٣,١	المثانة	١	١,١
المجموع (أعلى عشرة)	**٥٨**	**٩٠,٧**	**المجموع (أعلى عشرة)**	**٨١**	**٩٢,٧**
الإجمالي (جميع الحالات)	**٦٤**	**١٠٠,٠**	**الإجمالي (جميع الحالات)**	**٨٧**	**١٠٠,٠**

سادساً: المعدل العمري المعياري لوفيات السرطان (ASMR):

بلغ المعدل العمري المعياري لوفيات السرطان في عام ٢٠٢٢ بين الذكـور في المملكة العـربية السـعودية ٦٥,٨ حالـة لكل ١٠٠,٠٠٠ نسمة، في حين بلغ بين الإناث ٦٢,٧ حالة لكل ١٠٠,٠٠٠ نسمة.

الملخص العربي
تقرير معدل الوفيات لمرض السرطان
المملكة العربية السعودية
٢٠٢٢

بسم الله الرحمن الرحيم

يعتبر عام ٢٠٢٢ محطة مهمة في مسيرة تطوير رعاية مرضى السرطان في المملكة. استكمالاً لجهود الأعوام السابقة، واصلنا تعزيز جودة وعمق بيانات السرطان مع تركيز أكبر على فهم اتجاهات الوفيات وآثارها على نتائج المرضى.

قاد المجلس الصحي السعودي هذه الجهود المميزة، وكان لنا شرف التعاون معهم، ومن خلال ذلك، عملنا على توسيع السجل الوطني للسرطان وتطوير ممكناته، مما أتاح لنا جمع بيانات أكثر دقة وشمولية وفي التوقيت المناسب. هذه البيانات تمثل ركيزة أساسية لتوجيه استراتيجيات العلاج، وتقييم نتائج السياسات الصحية، وصياغتها لكي ترتقي بجودة حياة المرضى.

لقد أصبح الذكاء الاصطناعي والتحليلات المتقدمة ركيزة أساسية في هذه الجهود، حيث ساعدتنا على استكشاف أنماط جديدة في بيانات السرطان، وأتاحت لنا اتخاذ قرارات أكثر دقة، وتسريع القدرة على تبني استراتيجيات مبنية على الأدلة. كما أن دمج هذه التقنيات في منظومة الرعاية الصحية الوطنية أسهم وبشكل فعّال في إحداث نقلة نوعية في كيفية التخطيط وتقديم وتقييم خدمات رعاية السرطان في المملكة.

تعكس نتائج عام ٢٠٢٢ مستوى متقدماً من النضج في النهج الوطني لمكافحة السرطان، من خلال تعزيز التعاون، ورفع جودة البيانات، وتوليد رؤى أعمق حول التحديات والفرص. ومع تطلعنا إلى المستقبل، فإن هذه المنجزات تؤكد التزامنا ببناء منظومة صحية يكون فيها الابتكار والأدلة العلمية معاً الأساس لتقليل معدلات الوفيات وتحسين جودة حياة المرضى وذويهم.

المشرف العام على مكتب إدارة البيانات
والذكاء الاصطناعي - وزارة الصحة
المهندس. سعد عبد اللطيف الحزّامي

الحمد لله والصلاة والسلام على رسول الله وعلى آله وصحبه ومن والاه، أما بعد:

تُعد معدلات النجاة من السرطان مؤشراً دقيقاً لقياس جودة الرعاية الصحية المقدّمة لمرضى السرطان على جميع المستويات، فهي تعكس نتائج سهولة الوصول إلى الخدمات الصحية، وبرامج الكشف المبكر، وبرامج الفحص المعتمدة، كما تسلط الضوء على فعالية التدخلات العلاجية المقدمة للمرضى المصابين بالسرطان.

يتميز النظام الصحي في المملكة العربية السعودية بخدمات رعاية تخصصية عالية المستوى، وعملنا أن يكون هذا التميز مدعومًا بقياسات قائمة على بيانات علمية واضحة.

ويؤدي المركز الوطني للسرطان بالمجلس الصحي السعودي دورًا محوريًا مهمًا في جمع وتحليل بيانات الإصابة بالسرطان خلال الثلاثين عامًا الماضية؛ بالرغم من وجود العديد من التحديات المختلفة المرتبطة بتحليل بيانات النجاة من السرطان داخل المملكة التي تم التغلب عليها حتى وصلنا -ولله الحمد- إلى هذا الإنجاز.

واليوم نشهد إصدار أول تقرير وطني عن معدل وفيات مرض السرطان، حيث تمثل هذه المبادرة خطوة مهمة نحو ضمان دقة بيانات النجاة من السرطان، بفضل التعاون المشترك بين القطاعين الحكومي والخاص في المملكة، ومن خلال جمع بيانات شاملة عن نتائج علاج مرضى السرطان.

المركز الوطني للسرطان يهدف إلى تعميق الفهم لأنماط وتوجهات النجاة من السرطان، والعمل على تحسين إستراتيجيات الرعاية والعلاج في المستقبل داخل المملكة، كما يهدف هذا التقرير إلى تسليط الضوء على التقدم الحاصل في علاج السرطان وفاعلية برامجنا الوطنية، وتوفير رؤى مهمة ستُسهم في رفع جودة الرعاية الصحية المقدمة لمرضى السرطان مستقبلًا.

نتقدم بخالص الشكر والتقدير إلى الاستشاريين الذين ساهموا في مراجعة هذا التقرير، وإلى الزملاء في المركز الوطني للمعلومات الصحية ومكتب البيانات بوزارة الصحة، والشكر موصول إلى الفريق الفني المسؤول عن إعداد وتنفيذ هذا التقرير، وكذلك الزملاء في المركز الوطني للسرطان ومسجلي السرطان في مختلف القطاعات الصحية، لما قدّموه من مساهمات قيّمة.

كما نخص بالشكر أعضاء اللجنة العلمية ومراجعي التقرير على ما بذلوه من جهود ودعم مستمر للسجل السعودي للسرطان.

مدير عام المركز الوطني للسرطان
أ.د. مشبب بن علي العسيري

بسم الله الرحمن الرحيم

الحمد لله رب العالمين، والصلاة والسلام على أشرف خلق الله محمد بن عبد الله وعلى آلة وصحبه ومن والاه إلى يوم الدين، وبعد:

يُعد تقرير معدل الوفيات لمرض السرطان في المملكة العربية السعودية ٢٠٢٢، الصادر عن السجل السعودي للسرطان داعمًا رئيسيًا للجهود الوطنية المبذولة في مكافحة السرطان، حيث يزوّد صنّاع القرار في النظام الصحي بالمعلومات الدقيقة عن حالات الوفاة الناتجة عن المرض والتي تعكس الوضع الراهن لحالات السرطان في المملكة العربية السعودية.

ويتضمن التقرير تحليلًا شاملًا للوفيات الناتجة من السرطان في المملكة؛ مع عرض معدلات الوفاة لأكثر أنواع السرطان شيوعًا، موزَّعة حسب الجنس والفئة العمرية والموقع الجغرافي. ويسهم التقرير في تمكين صنّاع القرار من تتبع اتجاهات الوفيات الناتجة عن السرطان، ووضع الخطط اللازمة لتطوير خدمات الرعاية الصحية المتعلقة بالمرض، بالإضافة إلى إعداد برامج التوعية الصحية بما يضمن انسجامها مع الإستراتيجيات الوطنية.

القطاع الصحي في المملكة يحظى باهتمام ودعم لا محدود من مقام خادم الحرمين الشريفين الملك سلمان بن عبدالعزيز آل سعود، وصاحب السمو الملكي الأمير محمد بن سلمان بن عبدالعزيز آل سعود ولي العهد رئيس مجلس الوزراء – حفظهما الله – لرفع مستوى جودة وكفاءة الخدمات الصحية المقدمة للمواطنين والمقيمين وتسهيل الحصول عليها.

والمجلس الصحي السعودي يولي أهمية بالغة لتنسيق وتكامل الرعاية الصحية، وتعزيز خدمات رعاية مرضى السرطان في المملكة، وتقليل معدلات الوفيات الناتجة عنه، بما يسهم في تحقيق مستهدفات برنامج تحول القطاع الصحي للوصول لمجتمع حيوي ونظام صحي شامل وفعال ومتكامل، يقوم على صحة الفرد والمجتمع، وفق رؤية المملكة ٢٠٣٠.

في الختام؛ يطيب لي أن أقدم الشكر الجزيل لمعالي رئيس المجلس الصحي السعودي وأصحاب المعالي والسعادة الأعضاء على دعمهم المستمر لأعمال المجلس، والشكر موصول للزملاء في المركز الوطني للسرطان على جهودهم الدؤوبة والمستمرة في إعداد هذا التقرير والإسهام في تحقيق مستهدفات السجل السعودي للسرطان.

كما أقدم خالص الشكر والتقدير إلى كافة العاملين في القطاع الصحي، والجهات والمنظمات والمؤسسات والجمعيات التي تسهم في تقديم الرعاية الصحية، وزيادة الوعي المجتمعي، والعمل على التخفيف من عبء السرطان في المملكة العربية السعودية.

الأمين العام للمجلس الصحي السعودي

د. نهار بن مزكي العازمي

المملكة العربية السعودية
المجلس الصحي السعودي
المركز الوطني للســـرطان
السجل الســـعودي للأورام

وزارة الصحة
Ministry of Health

المجلس الصحي السعودي
Saudi Health Council

رؤيـــة VISION 2030
المملكة العربية السعودية
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تقريـــــــــر
معدل الوفيات
لمرض السرطان
2022


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Ministry of Health
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المملكة العربية السعودية
المجلس الصحي السعودي
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السجل الســـعودي للأورام

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