

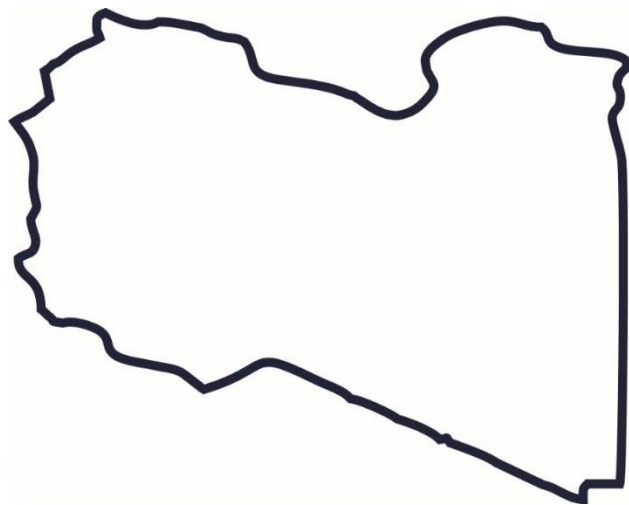
STATE OF LIBYA



**National Cancer Control Program
National Cancer Registry**

Cancer Incidence in Libya 2020

The First Comprehensive Report of the National Cancer Registry





**National Cancer
Control Program**



**National Cancer
Registry**

Cancer Incidence Report Libya, 2020

Cancer Incidence in Libya

2020

The First Comprehensive Report of the National Cancer Registry

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OUTLINE OF THE REPORT

The report is organized into five main parts as outlined below:

Part I-Materials and Methods

This part of the report presents the background and methods used by the National Cancer Registry in data collection, management, analysis and reporting of the results. Rules and guidelines followed by the registry are demonstrated including coding and classification of tumor topography, morphology, and extent of disease at the time of diagnosis. Also, we describe the software programs we have used to analyze the data, in addition to the statistical methods.

Part II-Overview of Cancer Incidence in Libya

This part presents the overall cancer incidence among Libyans diagnosed between the first of January and December 31, 2020. Tables, figures, and line/bar charts are used to present the age group and gender distribution of cancer, morphological types and geographic distribution.

Part III- Most Common Cancer Sites

In this part, the most common ten cancers reported among Libyan males and females and the ranking for each gender are presented.

Part IV- Cancer by Site

In this part, the statistics of selected cancers are outlined. For each cancer site, the age group distribution and age-specific incidence rates are presented. In addition, the age-standardized rate for each cancer is internationally compared with the age-standardized rates reported from neighboring and other selected countries worldwide. Furthermore, histological types are presented graphically.

Part V- Annexes

Part VI- Arabic summary

Part VII- References

FORWARD

The National Cancer Control Program appreciates the pressing need to understand the cancer care needs in Libya. The program's priority was the establishment of an all-Libya cancer registry in line with international standards. With persistence and hard work over the last three years, the National Cancer Registry of Libya was established. It is a population-based cancer registry that covers the whole country and operates through five regional registries (Eastern, Middle, Tripoli, Southern, and Western regional registries). Now and for the first time, we are reaping the fruit of our hard labour of the National Cancer Registry staff. The results on cancer status in Libya are now available.

I would like to express my gratitude to the professionals who established the registry. I would especially like to thank the cancer registration team for their hard work and dedication; you are making a difference in the lives of many people who are affected by cancer, as well as advancing the scientific knowledge and understanding of this disease in Libya. Your efforts are invaluable and appreciated. I am proud to be part of such a professional and compassionate team. Please keep up the good work and know that you have my full support and gratitude, I hope this report will close the gap and provide useful information on cancer incidence and prevalence.

This report will help us in mapping and planning our strategy in national cancer control. We continue to improve our national cancer services and community satisfaction.

Dr. Elhusain Kamoka

General Director of National Cancer Control Program

PREFACE

An essential element to understanding a community's cancer care needs is collecting good-quality data. This, in turn, will inform the development, implementation, and monitoring of different cancer care programs. The process of data collection and analysis is called cancer registry. The National Cancer Registry is a population-based cancer registry where data is collected from different sources in a well-defined population.

The Cancer Registry Team strongly believes that there is an urgent need for accurate all-Libya cancer statistics. The National Cancer Registry aims to provide an accurate reflection of the extent and the magnitude of the cancer problem as well as the community's cancer care needs. This, in turn, allows for higher-level strategic planning and implementation of services and projects to meet those needs. It will subsequently reflect positively on the provision of better cancer patient care.

The last few years in Libya have been difficult in particular due to the political unrest and all the negative consequences that follow. In addition, the negative impact of the COVID-19 pandemic has added to the challenges. Despite all that, the Cancer Registry Team appreciates the importance of keeping an up-to-date registry and will continue to maintain it. The Cancer Registry Team's priority plan is to produce and disseminate written reports for the year 2020 and the years after.

We are calling upon all Libyan cancer care centers, oncology private clinics, diagnostic centers and private histopathology laboratories to join hands with the National Cancer Registry to achieve a better understanding of the cancer problem in Libya.

The Cancer Registry Team has completed a major part of the data collection and analysis for the years 2020, 2021 and 2022. The work is still ongoing. This annual report is completed to communicate the findings of this project. This work is considered an important step in ensuring the delivery of quality cancer care.

Here, we present to you the first National report for the year 2020. We acknowledge that despite all our efforts and good intentions, mistakes may still occur. We encourage our readers to provide constructive feedback to us. We welcome feedback to improve this project in the future.

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ACRONYMS AND ABBREVIATIONS

- HBCR Hospital-based cancer registry
- PBCR Population-based cancer registry
- NCRL National Cancer Registry, Libya
- NCCP National Cancer Control Program
- ICD-O International Classification of Diseases for Oncology
- ICD-10 International Classification of Diseases and Related Health Problems, tenth edition
- ICC-3 International Classification of Childhood cancer
- TNM Tumor, Node and Metastasis
- IARC International Agency for Research on Cancer
- IACR International Association of Cancer Registries
- DCN Death-certificate-notified
- DCO Death certificate-only
- ASR Age-Standardized Rate
- AIR Age-Specific Incidence Rate
- CIR Crude Incidence Rate
- MV morphological verification



PART I

MATERIAL AND METHODS

This part of the report presents the background and methods used by the National Cancer Registry in data collection, management, analysis and reporting of the results. Rules and guidelines followed by the registry are demonstrated including coding and classification of tumor topography, morphology, and extent of disease at the time of diagnosis. Also, we describe the software programs we have used to analyze the data, in addition to the statistical methods.



INTRODUCTION

Cancer is a heterogeneous group of diseases that involve abnormal cell growth with the potential to invade or spread to other parts of the body. Over the years, cancer has been one of the leading causes of death worldwide. It affects millions of people every year, and because of its major impact on affected individuals and societies as a whole, it became a major global public health problem that required more study and research.

An essential element of cancer research is achieved through the establishment of a well-organized cancer registry. It facilitates the identification of emerging cancer trends and the determination of the magnitude of cancer. In addition, it provides a baseline and framework for further investigations.

A cancer registry is the systematic collection, management, and analysis of data on persons with a diagnosis of cancer. The data is collected by cancer registrars. They record all relevant information concerning the patient, including their diagnosis and survival status. There are two main types of cancer registries: hospital-based cancer registry (HBCR) and population-based cancer registry (PBCR). PBCR is the gold standard for obtaining accurate cancer incidence in any given population but they are more resource-intensive.

Hospital-based cancer registries

HBCRs collect information on patients with a diagnosis of cancer who avail to a particular medical facility for diagnosis or treatment. HBCRs focus primarily on improving patient care in hospitals and provide useful information that can be used to guide resource allocation, service development, and administrative purposes. HBCRs are essential sources of information for PBCRs. Despite their limitations in not being able to provide incidence statistics, HBCRs can deliver helpful information in resource-constrained areas where PBCRs are lacking. This information can be used to identify a hospital's catchment area, describe referral trends, formulate patient care policies, and fund cancer prevention activities.

Population-based cancer registries

PBCR systematically gathers data on all reportable neoplasms that occur in a population that is defined geographically from a variety of sources. In contrast to hospital-based registries, population-based registries are designed to determine cancer patterns among various populations or sub-populations. PBCRs monitor cancer trends over time, guide the planning and evaluation of cancer control efforts, help prioritize health resource allocations, and advance clinical, epidemiological, and health services research. PBCRs are a core component of the cancer control program.

BACKGROUND AND POPULATION

BACKGROUND

Libya

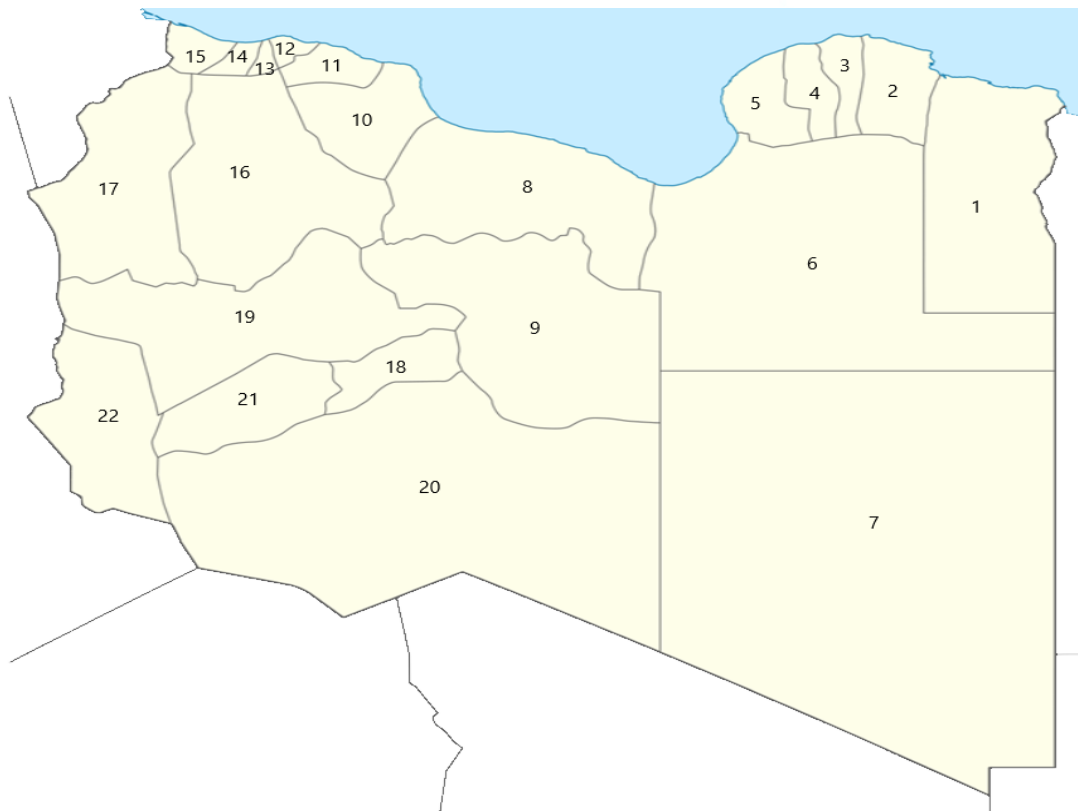
Libya is a vast country located on the Mediterranean coast in North Africa with an area of almost 1.8 million km² (700,000 sq. mi), it is the fourth-largest country in Africa and the Arab countries, and the 16th largest country in the world. It is characterized by a relatively small population (about 6.876635 million) concentrated very narrowly along the coast. Ninety percent of the population lives along the coast in less than ten percent of the land.

Administrative divide in Libya

In Libya, there are currently 143 municipalities and second-level administrative subdivisions. The first-level administrative divisions in Libya are currently the governorates, which have yet to be formally delineated.

Before 2013, there were twenty-two first-level administrative subdivisions known by the name Shabiyah which constituted the districts of Libya. These districts are shown in the figure below

Figure 1 Administrative divisions in Libya



1- Tobruk 2-Dema, 3- Aljabal al-Akhdar 4- Almarj 5- Benghazi 6- Ejdabia/Al-Wahat 7- Alkufra 8- Sirt 9- Aljufra 10- Misata 11- Almargeb 12- Tripoli 13- Jafara 14- zawiya 15- Nuqat al-Khams 16- Aljabal Al-Gharbi 17- Nalut 18- sebha 19- Wadi Ashati 20- Morzuq 21- Wadi al-Hayat 22- Ghat.

The Bureau of Statistics and Census debated whether the National Cancer Registry should adopt the municipality administrative system or the district system. The district system was eventually chosen. One of the main reasons for adopting this system is the availability of accurate and regularly published population figures by sex and five-year age group for the twenty-two districts.

CANCER SERVICES IN LIBYA

Cancer services are provided free of charge for all citizens in Libya through governmental medical facilities. These facilities are distributed throughout the country ranging from hospital departments to tertiary centers. These include cancer institutes that provide comprehensive oncological services, cancer centers with less comprehensive services, histopathology departments, medical oncology-hematology, pediatric oncology, and radiotherapy and nuclear medicine departments.

Figure 2 Distribution of cancer services in Libya



Because of the availability and the ease of accessibility of cancer services in different regions of the country, it is presumed that the great majority of cancer patients will come into contact with the healthcare system at some point in their treatment journey and consequently get captured by the registration process.

Although there is a percentage of cases that go for treatment abroad, this happens through the out-of-country treatment committee which requires a medical report from one of these facilities with evidence of registration.

In recent years, however, with the development of the private healthcare sector, some oncology services have been provided at private clinics and laboratories, especially in big cities such as Tripoli.

HISTORY OF CANCER REGISTRATION IN LIBYA

Cancer registration in Libya started in 1997 as a hospital-based cancer registry at the National Cancer Institute-Sabratha. A pro forma was developed with the help of the International Agency for Research on Cancer and systematic data collection was initiated.

The first regional population-based cancer registry in Libya was the Benghazi Cancer Registry, which was established in 2002. under the auspices of the University of Modena and the Italian Istituto Superiore di Sanità Covered. The registry covered the residents in a vast area of Eastern Libya. The first report was published in 2006. The registry succeeded in reporting the incidence and mortality for the years 2003-2005 and submitted its data to be published in Cancer Incidence in Five Continents Volume X (CI5).

The Secretary of the General Committee of Health and Environment decided to establish the National Cancer Registry Program-Libya in 2007. As a part of this program, the whole country was envisaged to be divided into five regional cancer registries as follows:

Benghazi cancer registry, Misrata Cancer registry, Tripoli Cancer registry, Sabratha Cancer Registry, and Sabha Cancer Registry.

Benghazi Cancer Registry, implements the cancer registry program in the following districts:

Tobruk, Derna, Aljabl Al-Akhdhar, Almarj, Alkufra, Ajdabiya and Al-Wahat.

Misrata Cancer Registry, implements the cancer registry program in the following districts:

Misurata, Sirte, Jufra.

Tripoli Cancer Registry, implements the cancer registry program in the following districts:

Tripoli, Jafara, Al-Mergeb, ALjabl Al-Gharbi.

Sabratha Cancer Registry, implements the cancer registry program in the following districts:

Neqat Al-Kkhams, Zawiya, Nalut.

Sabha Cancer Registry, implements the cancer registry program in the following districts:

Murzuq, Wadi Al-Hayat, Wadi Al-Shati, Ghat.

This subsequently led to the establishment of Sabratha Cancer Registry in 2007 which covered the residents in the area of Western Libya. The registry has reported the incidence of cancer in the covered area for the years 2006 and 2007.

THE REGISTRY ORGANIZATION

National Cancer Control Program, Libya

The National Cancer Control Program (NCCP) in Libya was established based on Presidential Decree No. (1626) of 2018 from the Presidential Council of the Government of National Accord. This program consists of the following basic activities: National Cancer Registry - Prevention and Health Education - Early Detection and Screening - Diagnosis and Evidence-Based Treatment - Palliative Care and Psychological Support - Cadre training - Cancer Research - Accreditation and Quality Control of cancer service centers. Based on this decision, the National Cancer Registry was activated.

The National Cancer Control Program is the legally authorized body to monitor/supervise the work of The National Cancer Registry. This program has been operating since 2020.

National Cancer Registry, Libya

The National Cancer Registry is a population-based cancer registry that collects information on all reportable neoplasms all over Libya from different data sources. The registry was first commenced in October 2020.

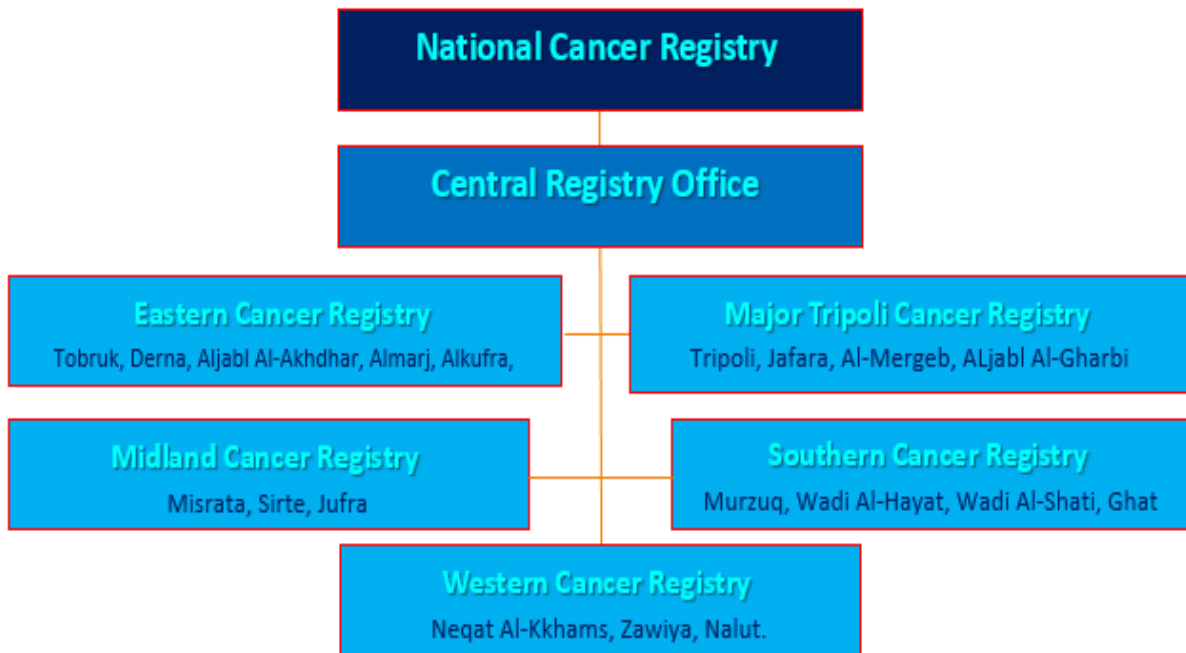
The reference date of the registry is 1/1/2020. Systematic collection of data was initiated in November 2020 after forming the cancer registry teams and after training workshops on the basics of cancer registration (Case-finding, data abstraction, international classification of disease for oncology, TNM Staging, Data entry and quality control procedures) were held at different regions. A cancer registry abstract form containing the minimum basic information was developed earlier with the help of the International Agency of Research on Cancer (IARC). The National Cancer Registry is further subdivided into five regional registries (Eastern, Middle, Tripoli, Southern, and Western regional registries).

Location and organizational structure

The National Cancer Registry, Libya developed to monitor the cancer burden in the whole Libyan population. The registry is an office of the National Cancer Control Program. The main office is located at the National Cancer Control Program headquarters in the capital city, Tripoli

The NCRL consists of the central office which oversees all registry operations all over the country through five regional offices to ensure full coverage of all healthcare facilities in different regions as illustrated in the figure below.

Figure 3 Organizational structure of the National Registry



The Central Office is also responsible for data management and consolidation besides supervising regional offices to ensure accuracy and quality of data collected from all regions. Each of the NCRL regional offices operates under a regional director who is responsible for the daily management.

Preparation of annual reports for publication and dissemination is done conjointly by the director of the national registry as well as the directors of the five regional registries.

The registry's advisory committee provides scientific guidance and provides help in disseminating reliable information. In addition, it ensures data confidentiality according to the national and international guidelines.

THE REGISTRY SOFTWARE

The NCRL utilizes two software:

The National Electronic Registry System

After an official sponsorship agreement between Al-Madar Al-Jadeed Company (A national Libyan mobile network operator) and the National Cancer Control Program, the electronic registry system was created according to international specifications and standards for cancer registration. and is hosted on the Al-Madar Cloud (a local cloud service with high-security standards).

This system connects all data sources within the catchment area with their respective regional registry. The five regional registries are in turn connected centrally to this system. This system is also linked to the national ID number inquiry system from the national database which is under the auspice of the General Information Authority. This system, in addition, enables us to inquire

about patients' conditions (mortality status) which will allow the study of death and survival rates for each type of cancer in the future.

The system enhances the matching of cases and the compiling of data. It uses the international classification of diseases for oncology (ICD-O) coding system along with other standardized coding schemes for behavior, basis of diagnosis and grade. It enables group staging of tumors given the tumor size, lymph node status and distant metastasis. In addition, it allows data to be exported in a ready-to-import format that is compatible with canreg5 software. See the electronic system in the annexes part. The system was launched in February 2022.

Canreg5 Software

CanReg5 is an open-source tool developed by the International Agency for Research on Cancer (IARC) specially designed to input, store, check and analyze cancer registry data. It has modules to do data entry, quality control, consistency checks and basic analysis of the data.

CONFIDENTIALITY AND SECURITY

Legal framework

As mentioned earlier, The National Cancer Control Program established the National Cancer Registry and has an oversight and supervision role over the registry. Official job positions are given by NCCP for all member staff at the National Cancer Registry office, including heads of the regional cancer registries, cancer registrars, and data entry personnel.

The NCRL recognizes the crucial significance of collaboration of the medical community and its critical importance to the registry's operational efficiency. The great majority of the high-yield data sources participated in the cancer registry team.

Because cancer is not yet a notifiable disease in Libya, the registration process has started voluntarily at most data sources, The National Cancer Control Program sends official written letters to all potential data sources in the country and most times that is all that is required for giving access to the data and allowing the registry team to register the data.

Confidentiality

Ensuring the quality of the data maintained by the registry requires the acquisition of identifying information on the data subject. For example, the ID number and names ensure accurate identification of patients, and the date of birth, diagnosis and death are needed for public health surveillance or research.

Confidentiality is the set of rules that govern private or sensitive health information that an individual has chosen to share with a treating physician or other healthcare provider but which should not be revealed to others.

At the NCRL, confidentiality is an issue of major importance, the registry follows the confidentiality guidelines of the IACR/IARC (2004) and upholds the same standards of confidentiality that are often applied to doctor-patient relationships. The cancer registry adheres to

these standards throughout all registry operations i.e. during collection, storage, use and transmission of identifying data

Members of the registry staff are aware of confidentiality and have signed a declaration that they will not release confidential information to unauthorized persons or bodies.

The dissemination of information describing cancer epidemiology is the responsibility of the director and the regional registries' directors. The release of identifiable data on individuals registered with cancer is restricted and as per the national legislation. It goes through a strict process to ensure that the relevant legal and professional aspects are followed and that confidentiality is preserved, requests for such disclosure require special permission and should be made in writing to the registry with clearly defined purposes.

Electronic system and data storage

The registry's electronic software is designed with different levels of function in hierarchical order. Data sources feed their collected data to the regional registries with electronic access limited to their respective regions. The central office has full access and oversight of all electronic records.

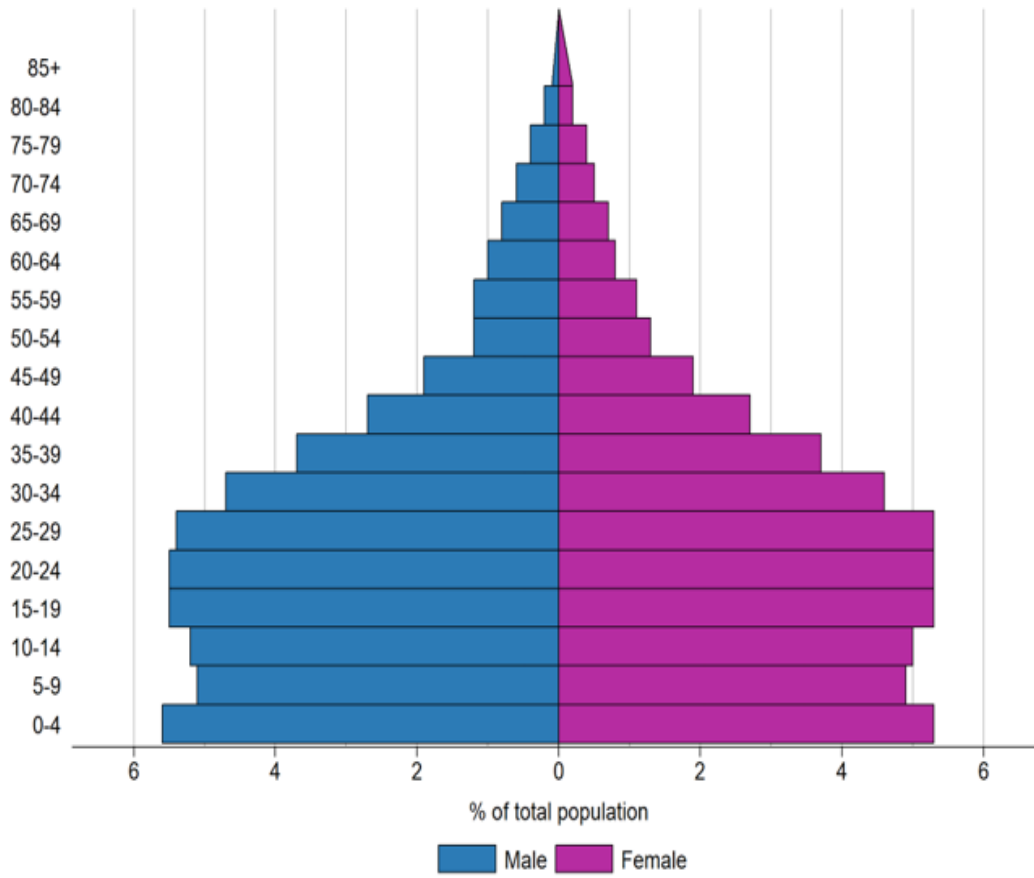
A high level of security is maintained by technical measures administered for system and data protection, in addition to the following measures: Access to the electronic system is restricted to the registry staff according to the specific task assigned to each staff member. The link to the software is given only to authorized staff members and passwords do not appear on the screen when typed.

For different levels of access to the database, the Director keeps an updated list of persons who are allowed each level of access. Sessions which have been inactive for more than 15 minutes are automatically closed and instructions are given to staff to close sessions immediately after use.

POPULATION

The last census conducted in Libya was in 2006 by the bureau of statistics and census, before which was conducted almost every ten years. According to the bureau of statistics and census the estimated population of Libya in 2020 was 6875635. of these 3388018 (49%) were females and 3487617 (51%) were males. Similar to other countries in the region, the Libyan population is young population; more than 31% of the population is under 15 years of age and only 4% are over 65 years.

Figure 4 Libyan population pyramid



METHODS

SOURCE OF DATA

The National Cancer Registry collects information from various data sources all over the country, they include:

- Cancer centers and oncology departments at governmental hospitals.
- Private clinics that provide oncological services.
- Governmental and private histopathology laboratories.
- Death certificate from civil registry.
- Out of the country treatment authority.
- General hospitals.

Table 1 Number of cases for each broad category data sources

Data source	Number of Cases
Cancer centers	3130
Tertiary centers and general hospitals	3031
Private clinics	253
Histopathology Labs (Governmental and private)	2617
Out of country treatment	1089
Civil registry (Death notifications)	1003
Total	11123

The filing system at data sources varies considerably from one facility to another. Subsequently, the completeness of registration of the items required by the registry varies from one source to another. For the sake of improving the quality of data registered it is worth mentioning some of the challenges at data sources and the suggested solutions here.

One of the most noticeable problems is the incomplete registration of personal information (esp. the patient's residence) at some diagnostic histopathology labs and the reason for that is most histopathology labs do not directly deal with the patient, instead, they receive samples with incompletely filled histopathology request forms from the surgical departments. The registry emphasizes the importance of proper and complete registration of this information at data sources as they are crucial in identifying cancer patients and checking for duplicate registrations as well as in preventing the accumulation of improperly identified cases at the registry database over the years, in addition, some personal data items e.g. dates of birth, diagnosis and death and patient's

residence are needed for purposes related to public health surveillance or research, and should be addressed properly in collaboration between surgical departments and histopathology labs.

As we can see from the table above, the number of registered cases from private clinics is low compared to other sources. This is believed to be due to a lack of familiarity and experience with the registration process as the provision of private oncological services is a relatively new endeavour in Libya. The registration system needs to be improved at these sources.

The Registry highly appreciates the full collaboration and participation of the administrators, healthcare professionals and employees at those facilities:

- Tripoli University Hospital
- Tripoli Central Hospital
- Tripoli Cancer Center
- National Cancer Institute-Sabratha
- National Cancer Institute-Misrata
- National Cancer Center Benghazi
- Abwab Alrahma Histopathology Laboratory
- Al-Safa Histopathology Laboratory
- Alweam Histopathology Laboratory
- Alnoon Histopathology Laboratory
- Tubrok Medical Center
- Alnoran Diagnostic Center
- Benghazi Medical Center
- Sirte Oncology Center
- Alhelal Altabi Abad Hospital
- Alrayan Hospital
- Onco-care Clinic
- Qurtoba Histopathology Laboratory
- Misarata Central Laboratory
- Al-Sendan Medical Center
- Medical Affairs Department (Out of country treatment committee) at the Ministry of Health
- Department of support and development of medical services
- Al-Zohor Hospital
- Alhadhba Alkhadra Hospital
- Emhemed Almagryaf Hospital
- Zletin Teaching Hospital
- Al-Yashfeen Clinic
- Burn and Plastic Surgery Hospital
- Sabha Oncology Center
- Almassara Clinic
- New Tripoli Clinic
- Aljesser Aljadeed Hospital
- Ain-Alhayat Hospital
- Albaraa Hospital
- Anwar Assalam Hospital
- Alfairoz histopathology laboratory
- Alandolus histopathology laboratory
- Benghazi Pediatric Hospital
- Albdha Medical Center
- Civil Registry Authority (Death Certificate)
- Nalut General Hospital
- Zentan General Hospital

REPORTABLE LIST

It is prudent to clarify the type of cases entered on the Cancer Registry database. In general, neoplasms can be categorized into four different categories according to their behavior:

0- Benign.

- 1- Uncertain whether benign or malignant, borderline malignancy, low malignant potential, uncertain malignant potential.
- 2- Carcinoma in situ, intraepithelial, non-infiltrating, non-invasive.
- 3- Malignant, primary site (invasive).

In addition to behavioral codes 2 and 3, the National Cancer Registry collects data on borderline malignancies and benign CNS neoplasms, these behavioral categories (i.e. 0 and 1) are not included in the registry database and are kept in separate files in the registry for utilization in future projects. The Registry reports data only on the last two categories: codes 2 and 3 (in situ and invasive).

METHODS OF DATA COLLECTION

The registry's method for data collection is an active method; which involves the registry staff retrieving and reviewing source documents and collecting data on newly diagnosed cases according to the reportable list. The advantages of this method are its thoroughness and accuracy. This is because the registry personnel know the criteria and terminology to recognize reportable cases.

The notification method was approved only in certain low-yield highly reliable data sources because there are no legislations obligating notification on cancer in Libya. The Registry is working on approving the notification for other selected sources. See the notification form in the Annexes part.

Data is abstracted by on-the-job-trained physicians in a Standardized format containing essential data items and other optional data (see the Cancer registry abstract form in the Annexes part). After abstracting the data, it is coded according to the International Classification of Disease for Oncology coding (ICD-O).

DEATH CERTIFICATES

Mortality data plays a crucial role in measuring progress in cancer control, as well as being an essential data source for cancer registration both in terms of estimating cancer incidence and survival, and evaluating registry data validity and completeness.

The NCRL received 1003 death-certificate-notified (DCN) cases (those cases which are first notified by a death certificate mentioning cancer as one of the causes of death.) from the civil registry authority in the year 2020. A trace-back process was initiated and some of these cases (275 cases) were successfully traced back and consequently registered from the appropriate sources. However, as mentioned earlier the reference date of our national cancer registry is 1/1/2020. The death certificates of the cancer death cases in 2020 did not include the year of diagnosis of cancer which means that there is a large probability that their date of incidence was in the years before the reference date of the registry. Therefore, they should not be considered as 2020 incident cases.

For this reason, the registry's advisory committee advised building up a hospital registry database for the years before the registry's reference date to follow back all of these cases. The remaining cases after the completion of this trace-back process will be registered as death certificate-only (DCO) cases. The Registry has started this process and the results will be included in the database and the report will be updated accordingly at a later date.

VARIABLES

The data collected by the cancer registry include demographic information, tumor information, source information, and follow-up information. Demographic data is the patient's personal information, such as the patient's name, ID number, age, gender, birthplace, residence, etc. This information individually identifies the cancer patient. These data are also used to check for duplicate registrations. Tumor information includes the primary site of the malignancy, incidence date, sequence, laterality, and histopathological characteristics which are coded using the nationally standardized guidelines for coding namely the World Health Organization (WHO) International Classification of Disease for Oncology (ICD-O). Information regarding the extent of the disease is also gathered, including the pathological tumor-node-metastasis (TNM) information and the clinical information which is used for determining the stage at diagnosis. Information regarding the date of last contact as well as the patient's survival status is recorded. See the abstract form in the annexes part.

CLASSIFICATION AND CODING

The National Cancer Registry ensures comparability by adopting a set of international standards and rules for cancer registration including the International Classification of Diseases for Oncology (ICD-O). ICD-O provides; a standard coding of topography, morphology, behavior and grade of neoplasms, and a standard coding scheme for recording the basis of diagnosis. In addition to the ICD-O, The National Cancer Registry uses the TNM staging system; the international standard for coding the anatomical extent of most solid tumors, which is developed and maintained by the American Joint Cancer Committee (AJCC) and the Union for International Cancer Control (UICC). Furthermore, the national registry strictly follows the International Agency for Research on Cancer (IARC) Rules for defining the date of incidence and IARC/IACR rules for reporting multiple primaries.

DATA MANAGEMENT AND QUALITY CONTROL

Data are entered into the registry online software, the filled abstract forms are delivered to the central office where data management, duplication checks and consolidation of data are done. The data are then exported from the system onto the Canreg5 software for further management and analysis.

To accomplish the PBCR goal(s), it is imperative to ensure the quality of data gathered and the results examined. Therefore, quality control measures are a vital component of the NCRL.

All four dimensions of quality control of the cancer registry are carefully considered during the establishment of the national cancer registry. Most procedures of quality control are implemented or planned to be implemented while work progresses.

- **Comparability;** A measure of adherence to international coding and best practice, was addressed above under classification and coding.
- **Validity (accuracy);** The proportion of cases in a dataset with a given characteristic that truly has the attribute. To ensure validity, the National Cancer Registry depends largely on; the staff's "skills" in abstracting and coding. The Registry focuses on capacity building and strengthening the Registry personnel's skills in abstracting and coding. Re-abstraction and recoding audits were used to assess accuracy and reproducibility at certain selected data sources. Diagnostic criteria methods such as microscopically verified percentages were compared against standards. The Registry uses both automated and manual methods for quality control. Before and during data entry, essential demographic data such as age or date of birth, sex and address are checked regularly for missing information to ensure completeness of registration. Providing feedback to data sources on the more frequently missed items would certainly improve quality in future. Cases with uncertain primary sites have also been assessed. In addition, the National Cancer Registry ensures the quality of data entry by conducting consistency checks. The consistency checks include comparing the values of certain variables against others. The registry program's validity and completeness have been enhanced by the use of consistency checks by the registry software and the linking of various data sources. A major part of consistency checks is carried out when importing data into the Canreg5.
- **Timeliness;** the minimum interval between registration of a case, and its availability for calculation of incidence or survival. There are no international standards or guidelines for the timeliness of cancer registry data, a period of 12-24 months after year-end represents a "standard" (before COVID pandemic). In a survey of European registries, Zanetti et al (2015) found that the median time to completion of the last year's incidence was 18 months, with wide variations (mean: 21 months).
- **Completeness of registration;** The degree to which all of the incident cases of cancer in the target population have been included in the registry database. Qualitative procedures of completeness are used, for example, Historic data methods; Shape of age-specific curves and Incidence rates of childhood cancers were used. International comparisons of age-standardized incidence rates among the Libyan population for different cancer sites with incidence rates of neighboring countries and countries in the same region as well as other countries with similar circumstances to Libya are presented in this report. Globocan cancer estimates for the year 2020 were used for international comparisons.

We would like to highlight the reciprocal relationship between the two data quality dimensions (timeliness and completeness). The Registry aims to achieve maximum coverage; therefore, the time needed to complete the process and publish the report will be prolonged. Despite the increasing pressure to publish the results at a prior date, the Registry preferred to delay the results to maximize coverage. The registry had to ensure the maximum achievable coverage of all potential data sources (completeness) so that the results would be a true representation of the real

cancer figures in the community. Consolidation of data from all sources into a single record containing the most accurate information available, is time-consuming and labor-intensive work. In addition, the Registry has two other main challenges namely: 1- The legislation obligating cancer notification and 2- The limited financial support. We hope that publishing this report will increase the visibility of the registry which will in turn make the process of data collection easier and less time-consuming.

STATISTICAL METHODS

Incidence.

Incidence is the number of new cases occurring in a given period in a specified population. It can be expressed as an absolute number of cases per year or as a rate per 100,000 persons per year (see different rates below).

Crude Incidence Rate (CIR).

The crude rate is the number of new cases occurring in a specified population per year, usually expressed as the number of cases per 100,000 population at risk. Crude rates are influenced by the underlying age distribution of the population which could change over time. Therefore, to assess time trends of cancer in the same population or to compare incidence between different populations, it is necessary to standardize the rates for age.

Age-specific rate

The age-specific rate is calculated by dividing the number of new cancer cases observed in a given age category during a given period by the corresponding number of person-years in the population at risk in the same age category and period. For cancer, the result is usually expressed as a rate per 100,000 person-years

Age-standardized rate

The age-standardized rate is the summary rate that would have been observed, given the schedule of age-specific rates, in a population with the age composition of a defined reference population, called the standard. The most widely used reference for global comparisons is the world standard, as proposed by Segi, and modified by Doll et al. Standardization is necessary when comparing several populations that differ concerning age because age has a powerful influence on the risk of developing cancer. The ASR is a weighted mean of the age-specific rates; the weights are taken from the population distribution of the standard population. The ASR is commonly expressed per 100,000 for all ages, and, given its relative rarity, per 1,000,000 for children and adolescents.

Cumulative risk

Cumulative incidence is the probability or risk of individuals developing the disease during a specified period. For cancer, it is expressed as the number of new born children (out of 100, or 1000) who would be expected to develop particular cancer before the age of 75 years (or 65 or 70), if they had the age-specific incidence rates of cancer observed in the defined period, in the absence of competing causes. As a measure of direct standardization, it permits comparisons between populations of different age structures, though it has some advantages over the ASR; it avoids the

use of an (arbitrary) standard population, and, as the measure is readily interpretable, it is easier to communicate to general audiences.





PART II

OVERVIEW OF CANCER INCIDENCE IN LIBYA

This part presents the overall cancer incidence among Libyans diagnosed between the first of January and December 31, 2020. Tables, figures, and line/bar charts are used to present the age group and gender distribution of cancer, morphological types and geographic distribution.



OVERVIEW OF CANCER INCIDENCE

SUMMARY OF RESULTS

This report includes all cancer cases with date of incidence in the year 2020 that have been collected and accessioned into the national cancer registry database. The data were gathered from November 2020 to December 2023 inclusive. The registry collected a sum of 11235 new abstract forms on tumor cases with tumor incidence dates from 1/1/2020 to 31/12/2020 from different data sources all over Libya.

As for the year 2020. The total number of new non-duplicated cancer cases for the year 2020 was (6830). Out of those cases, 153 (2.24%) were non-Libyans.

Among Libyans, a total of 6677 new cancer cases were registered; 2,920 (43.7%) among men and 3,757 (56.3%) among women with a male-to-female ratio of 0.78: 1. The overall median age at diagnosis was 55 years (60 years for males and 51 years for females). The crude incidence rate of all cancers among Libyans was 97.0 per 100,000 (83.7 for males and 110.8 for females). The Age Standardized Incidence Rate (ASR) adjusted to the world standard population is 150.1 per 100,000 population (130.2 for males and 170.2 for females).

The top five cancers among Libyans (males and females) were: breast 1547 (23.2%), colorectal 1089 (16.3%), Lung 435 (6.5%), lymphoma 360 (5.4%), and Prostate 325 (4.9%). Among Libyan males, the top five cancers were: colorectal 577 (19.8%), lung 386 (13.2%), prostate 325 (11.1%), lymphoma 198 (6.8%), and urinary bladder 177 (6.1%). While among Libyan females, the top five cancer types were: breast 1535 (40.9%), colorectal 512 (13.6%), uterus 274 (7.3%), ovary 168 (4.5%) and lymphoma 163 (4.3%).

The distribution of cancer cases by region showed that 31.9% of the cases live in Tripoli region (Tripoli city accounted for 17.7%), 24.3% in the eastern region, 10.8% in the western region, 10.3% in the middle region, 4.4% in the south region.

In the pediatric age group (0-14 years) the total number of cancer cases was 297 accounting for (4.45%) of all cancer cases in Libya with a male-to-female ratio of 1.4:1. The crude rate was 139.0 per 1000,000 and the age-standardized rate was 141.3 per 1000.000.

The top five cancer types in the pediatric age group were leukemia 42.1%, brain and CNS 15.5%, lymphoma 12.0%, neuroblastoma 8.7%, and soft tissue 6.1%.

Table 2 Summary of data

Male		Female	
Total number = 2920		Total number = 3757	
Cancer site	Percentage	Percentage	Cancer site
Colon-rectum	20%	41%	Breast
Lung	13%	14%	Colon-rectum
Prostate	11%	7%	Uterus
Lymphoma	7%	5%	Ovary
Bladder	6%	4%	Lymphoma
Leukemia	6%	4%	Thyroid
Brain & CNS	4%	3%	Leukemia
Mouth & Pharynx	4%	2%	Brain & CNS
Pancreas	3%	2%	Pancreas
Stomach	3%	2%	Cervix
Other sites	23%	16%	Other sites

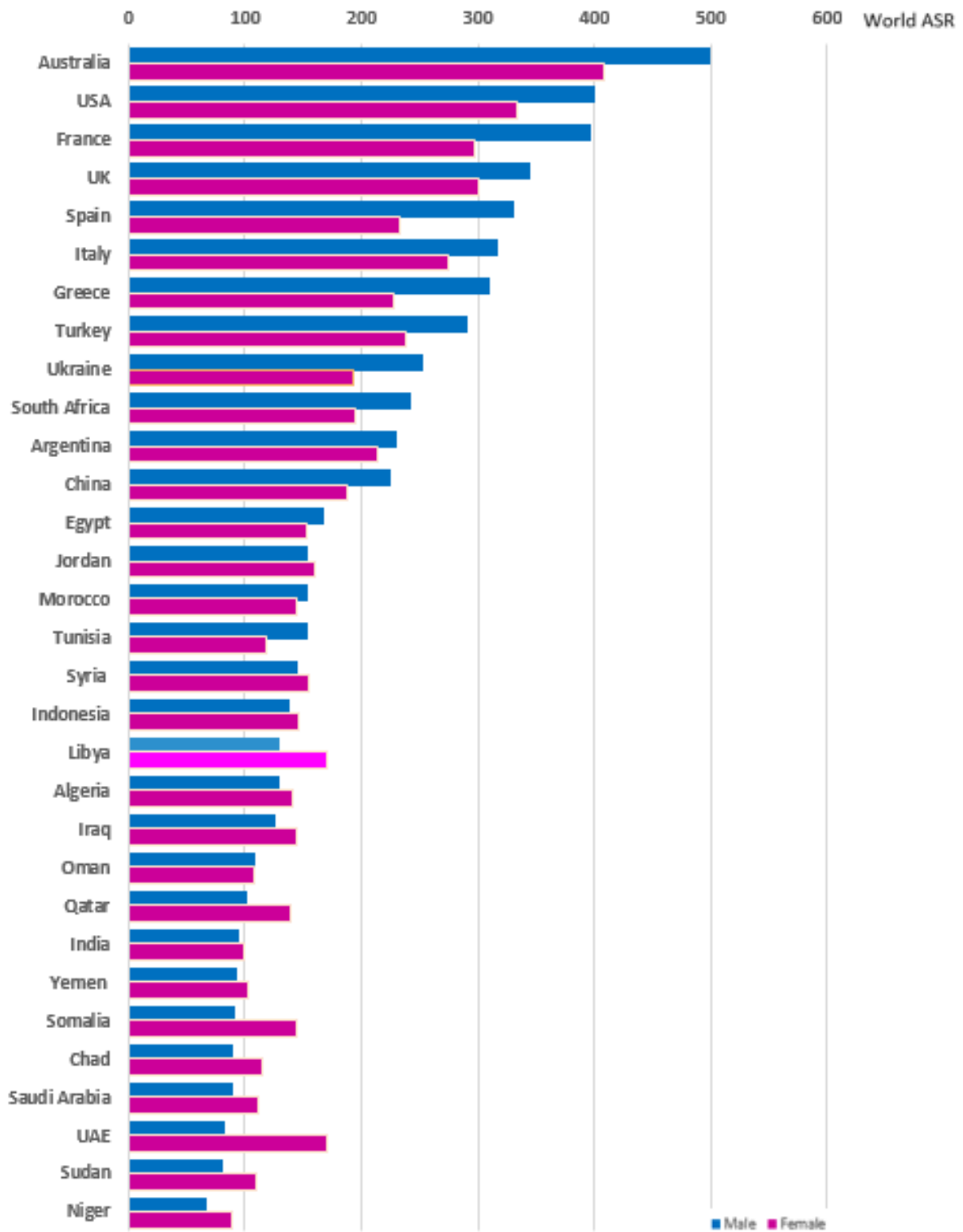
Table 3 Summary of statistics

Statistics	Males	Females
Number of cases	2920	3757
Percentage of all cancers	43.7	56.3
Crude rate (per 100,000)	83.7	110.8
World Age Standardized Rate (per 100,000)	130.2	170.2
Cumulative risk (0-74 years) %	13.6	17.1

COMPARISON OF SUMMARY RATES WITH OTHER COUNTRIES

Compared with neighboring North African countries, the incidence of cancer amongst Libyan males is the lowest along with the rate in Algeria. On the contrary, the incidence of cancer amongst Libyan females is higher than the average for neighboring countries. See the diagram below.

Figure 5 Comparison of age standardized incidence rate with incidence rates of other countries



NUMBER OF CASES IN 2020, BY AGE GROUP AND SEX

The highest number of cancer cases for both sexes was reported for the age group (50-69), with a total of 1209 (41.4%) cancer cases in males and 1544 (41.1%) in females. In males, the second highest number of cases observed in age 70 years and above while, in females, the younger age group (30-49) was the second most commonly affected.

Figure 6 Distribution of cases by age group and sex

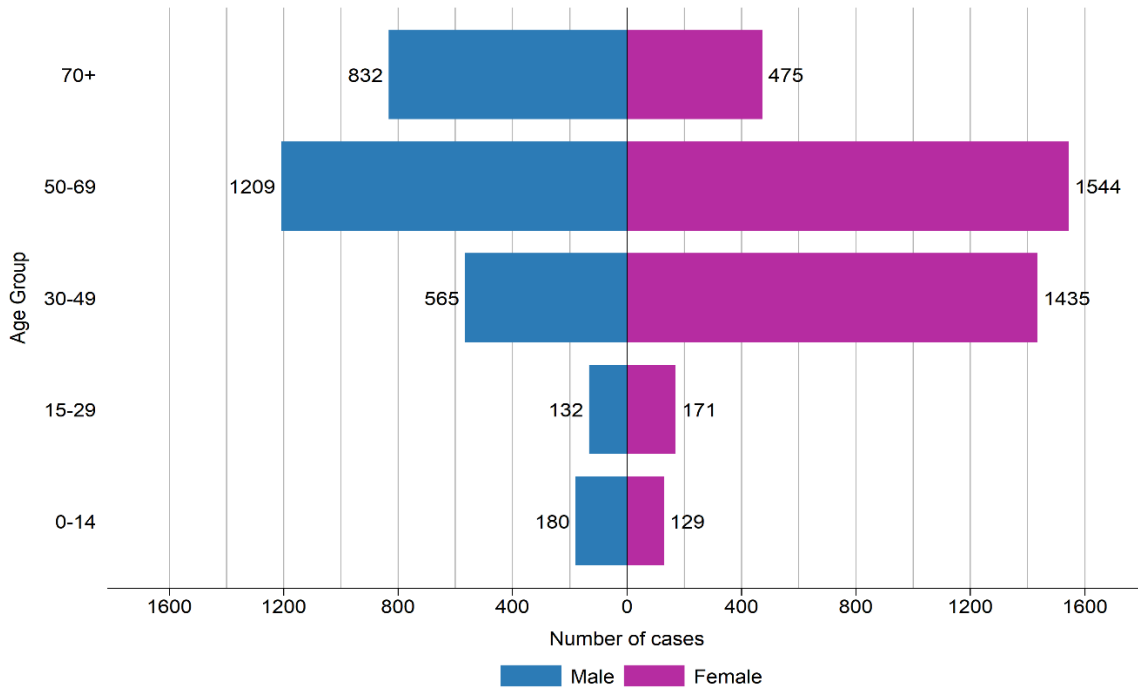
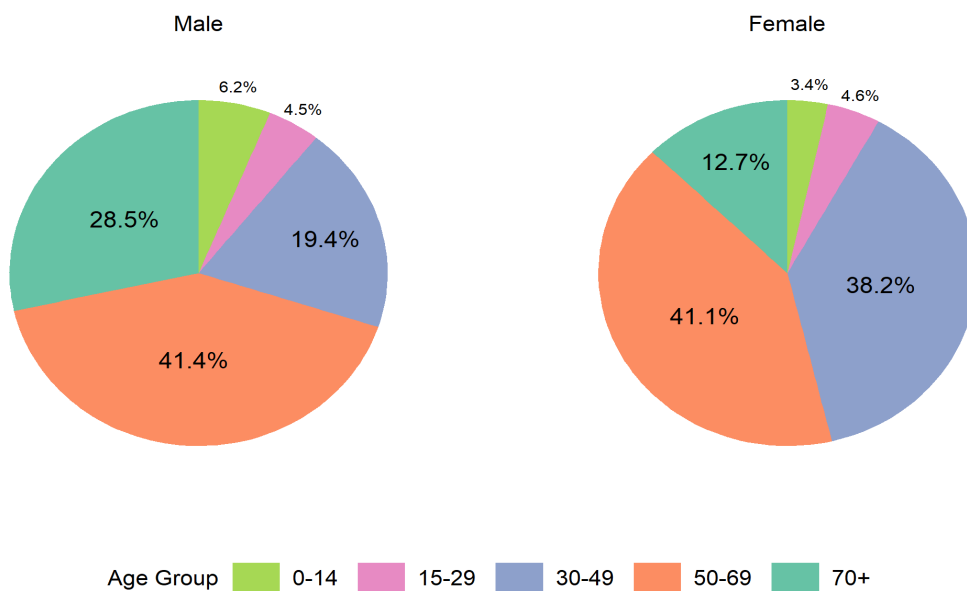


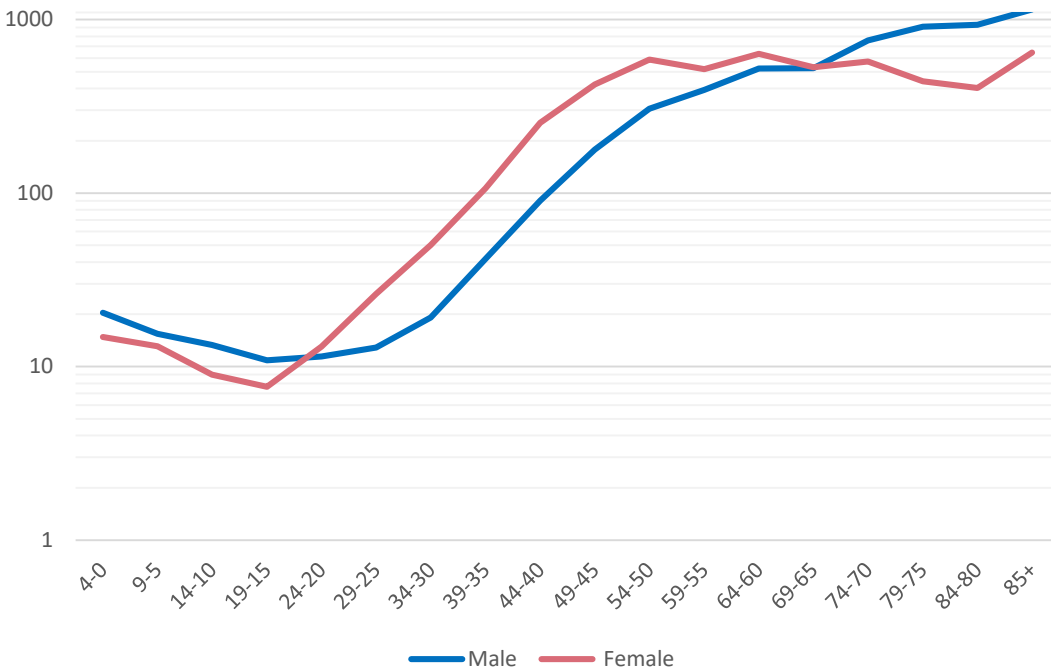
Figure 7 Distribution of all cancers but skin cancer by age group and sex



AGE-SPECIFIC INCIDENCE RATE

The age-specific incidence rate (AIR) decreased slowly in the late teens and early twenties then increased with advancing age in both genders. The median age at diagnosis was 60 years for males, and 51 years for females.

Figure 8 Age-specific incidence rate for all cancers, 2020



GEOGRAPHIC DISTRIBUTION OF CANCER CASES

In general, the geographic distribution of cancer is consistent with the area's population density; the more populated the area, the more cancer cases are recorded. For instance, the largest percentage of cases was registered in the Major Tripoli region (32%) where it constitutes about 40% of Libyan population. This was followed by the Eastern region with a percentage of (24%) (about 28% of Libyan population).

Figure 9 Distribution of cancer by regional areas

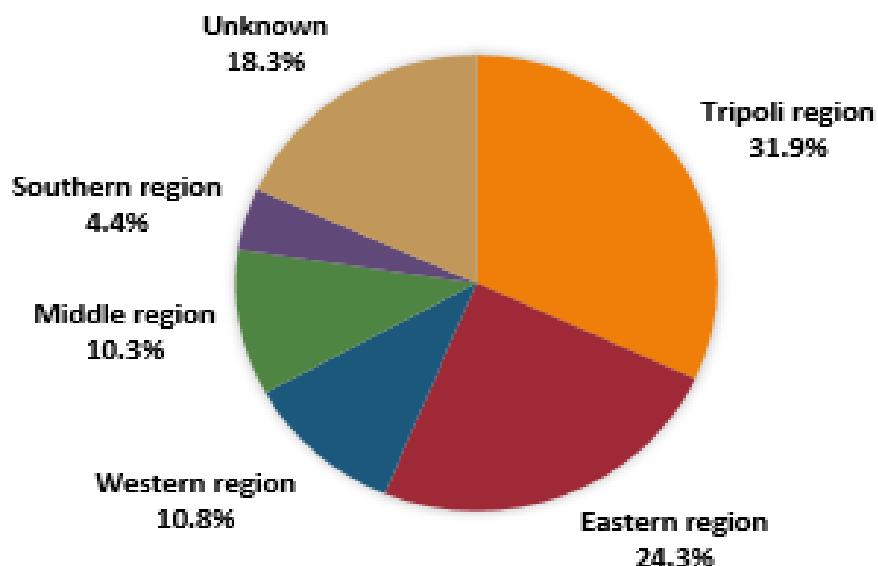
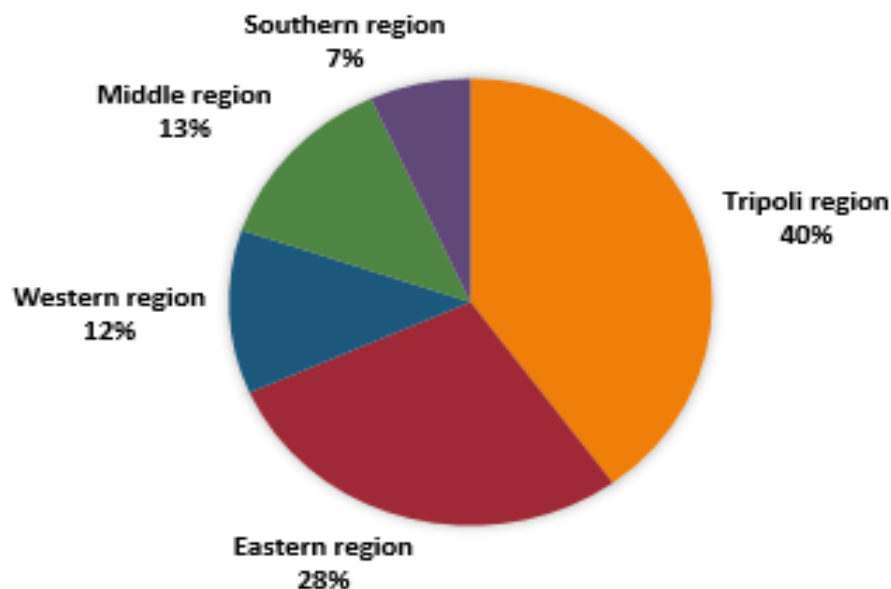


Figure 10 Population distribution according to the five regions



As mentioned previously, there was a considerable percentage of cases where the residence was not properly recorded at data sources, they constituted about 18% of all cases. The exact distribution of cancer according to the five regional areas to a large extent is affected by this percentage of cases with unknown residence, as patients travel across regions seeking diagnosis and treatment, and accordingly, the distribution of cancer could change significantly if the

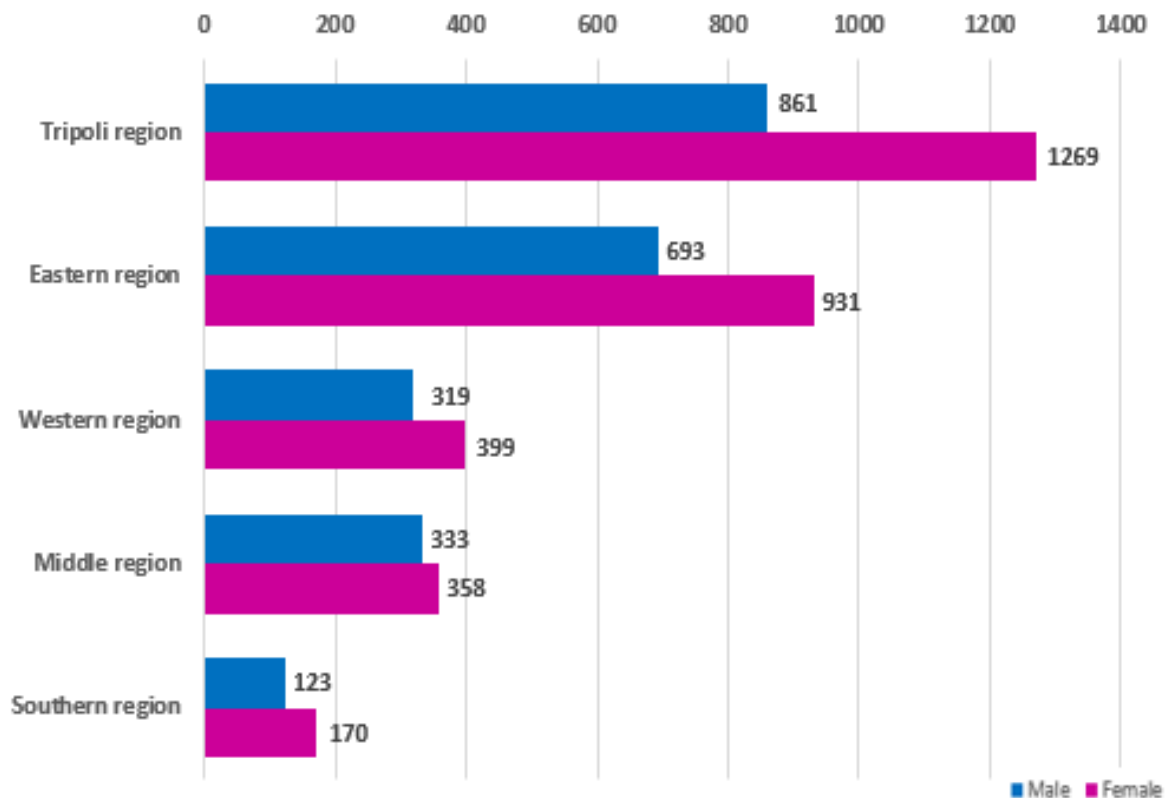
residence was recorded properly. One of the purposes of this report is to provide an evaluation of the filing systems at data sources and to give valuable feedback to these data sources to improve the registration process. The cases of unknown residence are divided as follows according to regional registries' catchment areas:

Table 4 Number of cases of unknown residence by region

Region	Number of cases
Tripoli	938
Middle region	211
Western region	38
Eastern region	34

In all regions, females are more commonly affected by cancer than males even cases with unknown residence females are more commonly affected. In all regions, Breast cancer was the most common cancer followed by cancer of the colon and rectum. While the subsequent ranking of cancer varied from one region to another.

Figure 11 Geographic distribution of cancer cases to gender

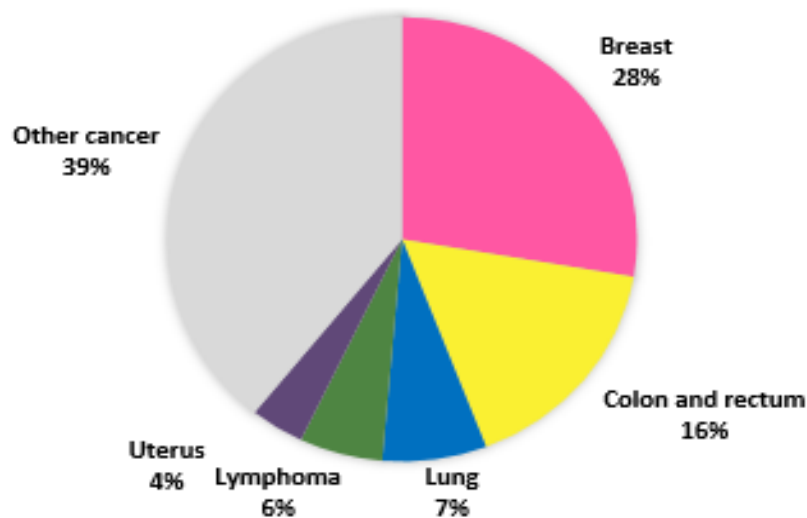


Tripoli region

Table 5 Distribution of Tripoli region cancer cases by district

District	Number of cases	Percentage of total	Male	Female
Almargeb	402	6.02%	194	208
Tripoli	1183	17.76%	448	735
Jafara	291	4.36%	112	179
Aljabal Al-Gharbi	255	3.82%	109	146
Total	2131	31.96%	863	1268

Figure 12 Most common five cancer sites in Tripoli region

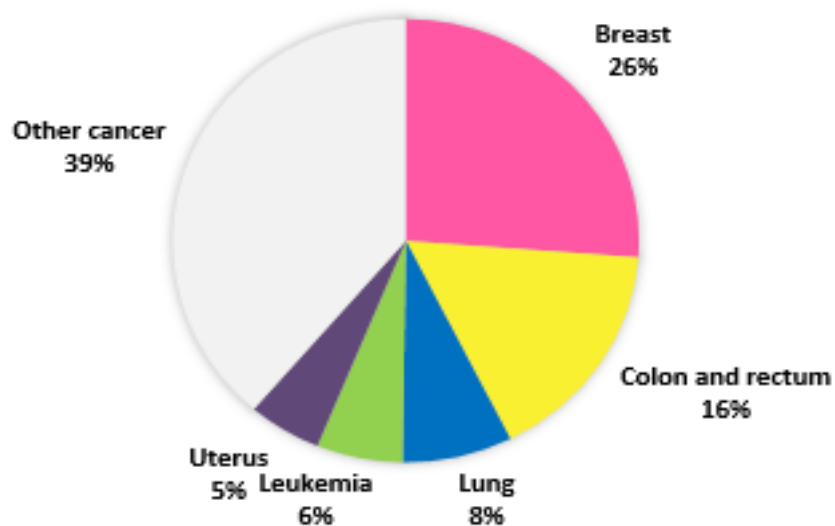


Eastern region

Table 6 Distribution of Eastern region cancer cases by district

District	Number of cases	Percentage	Male	Female
Tobruk	132	1.98%	62	70
Dema	114	1.71%	44	70
Aljabal al-Akhdar	197	2.93%	81	116
Almarj	144	2.16%	59	85
Benghazi	858	12.85%	382	476
Ejdabia/Al-Wahat	139	2.08%	52	87
Alkufra	40	0.60%	13	27
Total	1624	24.3%	693	931

Figure 13 Most common five cancer sites in Eastern region

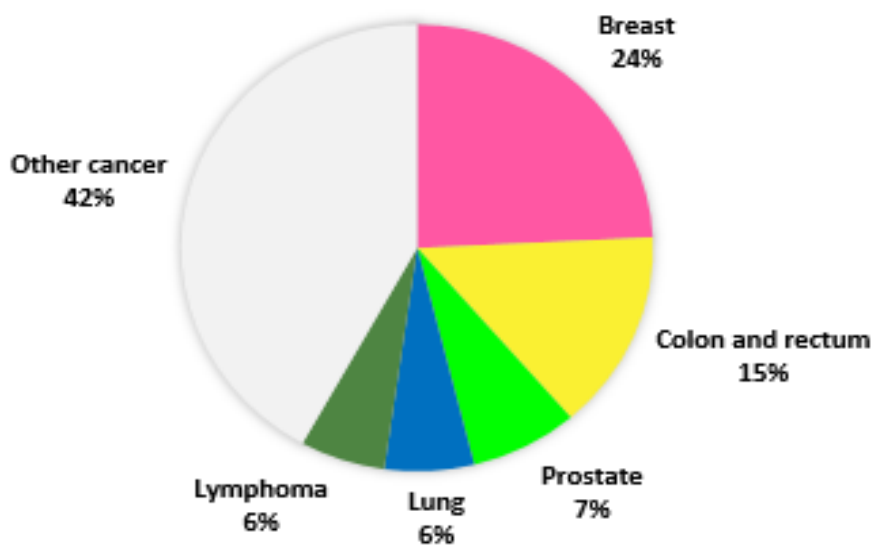


Western region

Table 7 Distribution of Western region cancer cases by district

District	Number of cases	Percentage	Male	Female
Zawiya	325	4.87%	141	184
Nuqat al-Khams	321	4.81%	144	177
Nalut	73	1.09%	36	37
Total	719	10.8%	321	398

Figure 14 Most common five cancer sites in Western region

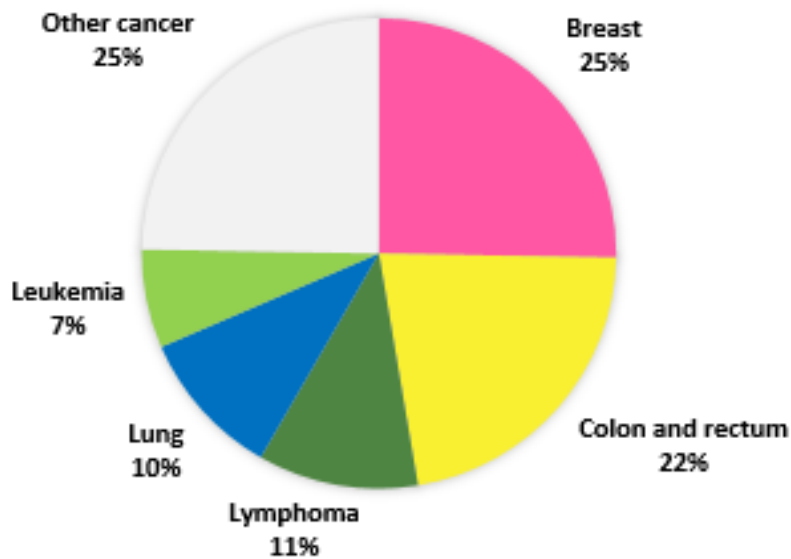


Middle region

Table 8 Distribution of Middle region cancer cases by district

District	Number of cases	Percentage	Male	Female
Sirte	108	1.62%	49	59
Aljufra	40	0.60%	16	24
Misrata	542	8.11%	268	274
Total	690	10.33%	333	357

Figure 15 Most common five cancers in Middle region

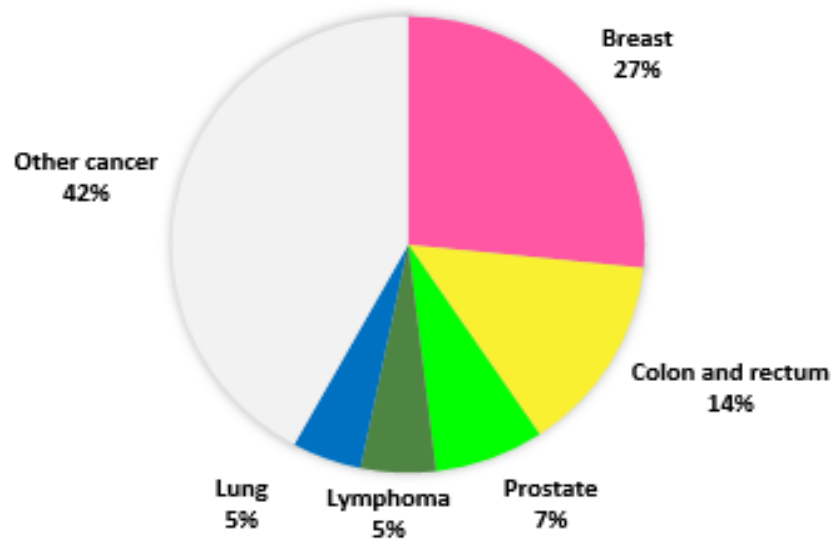


Southern region

Table 9 Distribution of Southern region cancer cases by district

District	Number of cases	Percentage	Male	Female
Sebha	142	2.13%	56	86
Wadi Ashati	41	0.61%	21	20
Morzuq	46	0.69%	23	23
Wadi al-Hayat	50	0.75%	17	33
Ghat	14	0.21%	6	8
Total	293	4.4%	2920	3757

Figure 16 Most common five cancer sites in Southern region



BASIS OF DIAGNOSIS

Basis of diagnosis indicates the nature of the best available evidence, i.e. whether at any time during the patient's medical history, there was a microscopic confirmation of the morphology of cancer. The vast majority of cancer cases (96.9%) have been morphologically verified, based on cytology or histology (of the primary tumor, or a metastasis). The issue of death certificate-only (DCO) cases has been discussed earlier in part I (material and methods).

Table 10 Percentage of cases according to basis of diagnosis (DCO/ Clinical/ MV) by major cancer sites

Cancer site	ICD-10	No. Cases	% total	Basis of diagnosis		
				% DCO	% Clinical	% M.V
Mouth & pharynx	C00-14	174	2.9	0.0	1.7	98.3
Oesophagus	C15	37	0.6	0.0	2.7	97.3
Stomach	C16	147	2.5	0.0	4.1	95.9
Colon, rectum, anus	C18-21	1,081	18.1	0.0	2.0	98.0
Liver	C22	66	1.1	0.0	18.2	81.8
Pancreas	C25	148	2.5	0.0	12.8	87.2
Larynx	C32	78	1.3	0.0	2.6	97.4
Trachea, bronchus, lung	C33-34	430	7.2	0.0	7.2	92.8
Melanoma of skin	C43	5	0.1	0.0	0.0	100.0
Breast	C50	1,539	25.8	0.0	0.7	99.3
Cervix	C53	66	1.1	0.0	0.0	100.0
Corpus & uterus NOS	C54-55	271	4.5	0.0	1.5	98.5
Ovary & adnexa	C56	165	2.8	0.0	3.0	97.0
Prostate	C61	312	5.2	0.0	5.1	94.9
Testis	C62	38	0.6	0.0	0.0	100.0
Kidney & urinary NOS	C64-66,68	122	2.0	0.0	6.6	93.4
Bladder	C67	211	3.5	0.0	2.8	97.2
Brain & central nervous system	C70-72	206	3.5	0.0	16.0	84.0
Thyroid	C73	165	2.8	0.0	0.6	99.4
Lymphoma	C81-85,90,88,96	411	6.9	0.0	0.7	99.3
Leukaemia	C91-95	290	4.9	0.0	0.0	100.0
All sites	All	5,962	100.0	0.0	3.1	96.9

QUALITY INDICATORS

Validity

Validity (accuracy): The proportion of cases in a dataset with a given characteristic which truly have the attribute.

Table 11 Quality indicators of data

Number	Indicator	Percentage
1	Morphologically verified (MV %)	96.9%
2	Primary site uncertain (PSU %)	1.4%
3	Age unknown (%)	0,07%
4	Gender unknown (0%)	0.0 %
5	Number of sources/notifications per case	1.54%
6	Childhood cancer percentage of all cancers	4.45%

Canreg5 quality indicator tables (Number of cases by major sites, basis of diagnosis and gender)

The tables below show the number and percentage of cancer cases according to major sites and the method of diagnosis (DCO/ Clinical/ MV) for males and females.

Table 12 Number of incident cancer cases, by major site and basis of diagnosis, males (Canreg table)

Cancer Site	Cases	% Total	ASR(se)	MV(%)	CLIN(%)	DCO(%)	ICD10
All sites but C44	2828	96.92	126.14 (2.47)	94.84	4.92	0	ALLbC44
Mouth & pharynx	116	3.98	5.27 (0.51)	96.55	3.45	0	C00–14
Oesophagus	27	0.93	1.19 (0.24)	96.30	3.70	0	C15
Stomach	84	2.88	3.92 (0.44)	94.05	5.95	0	C16
Colon, rectum, anus	577	19.77	27.44 (1.18)	97.57	2.25	0	C18–21
Liver	38	1.30	1.88 (0.31)	81.58	18.42	0	C22
Pancreas	84	2.88	4.08 (0.46)	89.29	10.71	0	C25
Larynx	76	2.60	3.79 (0.44)	96.05	3.95	0	C32
Trachea, bronchus, lung	386	13.23	18.88 (0.98)	91.45	8.03	0	C33–34
Pleura & other thoracic	7	0.24	0.24 (0.10)	100.00	0.00	0	C37–38
Melanoma of skin	3	0.10	0.14 (0.08)	100.00	0.00	0	C43
Breast	12	0.41	0.58 (0.17)	100.00	0.00	0	C50
Prostate	323	11.07	14.96 (0.85)	94.74	4.95	0	C61
Testis	38	1.30	0.98 (0.17)	100.00	0.00	0	C62
Kidney & urinary NOS	75	2.57	3.39 (0.40)	92.00	8.00	0	C64–66,68
Bladder	177	6.07	8.65 (0.67)	96.61	3.39	0	C67
Brain & central nervous system	128	4.39	5.04 (0.47)	84.38	15.62	0	C70–72
Thyroid	28	0.96	1.14 (0.23)	96.43	3.57	0	C73
Ill-defined	39	1.34	1.82 (0.30)	89.74	10.26	0	C76–80
Lymphoma	227	7.78	8.51 (0.60)	98.68	1.32	0	C81–85,90,88,96
Leukaemia	171	5.86	5.62 (0.45)	100.00	0.00	0	C91–95

Table 13 Number of incident cancer cases, by major sites and basis of diagnosis, females (Canreg table)

Cancer Site	Cases	% Total	ASR(se)	MV(%)	CLIN(%)	DCO(%)	ICD10
All sites but C44	3705	98.69	167.99 (2.91)	97.60	2.40	0	ALLbC44
Mouth & pharynx	62	1.65	2.65 (0.36)	98.39	1.61	0	C00–14
Oesophagus	10	0.27	0.42 (0.14)	100.00	0.00	0	C15
Stomach	65	1.73	3.10 (0.40)	96.92	3.08	0	C16
Colon, rectum, anus	512	13.64	24.85 (1.14)	97.46	2.54	0	C18–21
Liver	30	0.80	1.66 (0.31)	80.00	20.00	0	C22
Pancreas	67	1.78	3.35 (0.42)	85.07	14.93	0	C25
Larynx	3	0.08	0.13 (0.08)	100.00	0.00	0	C32
Trachea, bronchus, lung	49	1.31	2.45 (0.36)	97.96	2.04	0	C33–34
Pleura & other thoracic	6	0.16	0.22 (0.10)	100.00	0.00	0	C37–38
Melanoma of skin	3	0.08	0.14 (0.08)	100.00	0.00	0	C43
Breast	1534	40.86	68.62 (1.84)	99.09	0.91	0	C50
Cervix	66	1.76	3.49 (0.45)	100.00	0.00	0	C53
Corpus & uterus NOS	274	7.30	14.78 (0.91)	98.18	1.82	0	C54–55
Ovary & adnexa	168	4.48	7.96 (0.64)	97.02	2.98	0	C56
Kidney & urinary NOS	48	1.28	2.27 (0.34)	95.83	4.17	0	C64–66,68
Bladder	38	1.01	1.92 (0.32)	97.37	2.63	0	C67
Brain & central nervous system	88	2.34	3.64 (0.42)	79.55	20.45	0	C70–72
Thyroid	142	3.78	5.40 (0.49)	99.30	0.70	0	C73
Ill-defined	37	0.99	1.53 (0.27)	91.89	8.11	0	C76–80
Lymphoma & Myeloma	193	5.14	7.25 (0.57)	98.96	1.04		C81–85,90,88,96
Leukaemia	122	3.25	4.45 (0.43)	100.00	0.00	0	C91–95





PART III

MOST COMMON CANCERS

In this part, the most common ten cancers reported among Libyan males and females and the ranking for each gender are presented.



MOST COMMON CANCER SITES

THE MOST COMMON CANCERS, BY SEX

The most frequently diagnosed malignancies among Libyans were breast 23.2% and colorectal 16.3% cancers respectively; together accounted for 39.5% of all Cancers. These were followed by lung cancer 6.5%, lymphoma 5.4%, and prostate 4.8%. In females, the most frequent cancer sites were breast 40,8% followed by colon and rectum 13.6%, uterus 7.3%, ovary 4.4% and lymphoma 4.3%. In males, the most frequent cancer sites were colon and rectum 19.8% followed by lung 13.2%, prostate 11.1%, lymphoma 6.8% and urinary bladder 6.1%. The first ten cancer sites accounted for 74.7% of all cases, while all other sites accounted for 25.3%.

Figure 17 Top ten cancers, both sexes (Number of cases)

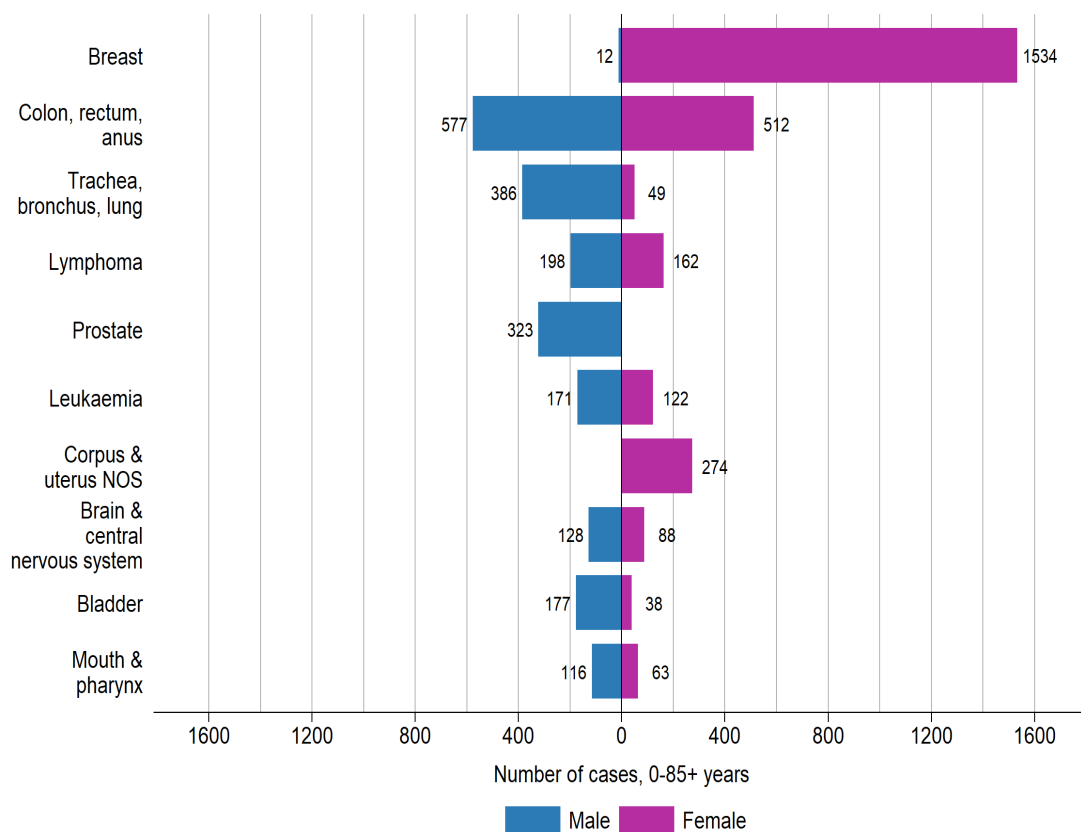


Figure 18 Top ten cancer, both sexes (Age-standardized rate per 100,000)

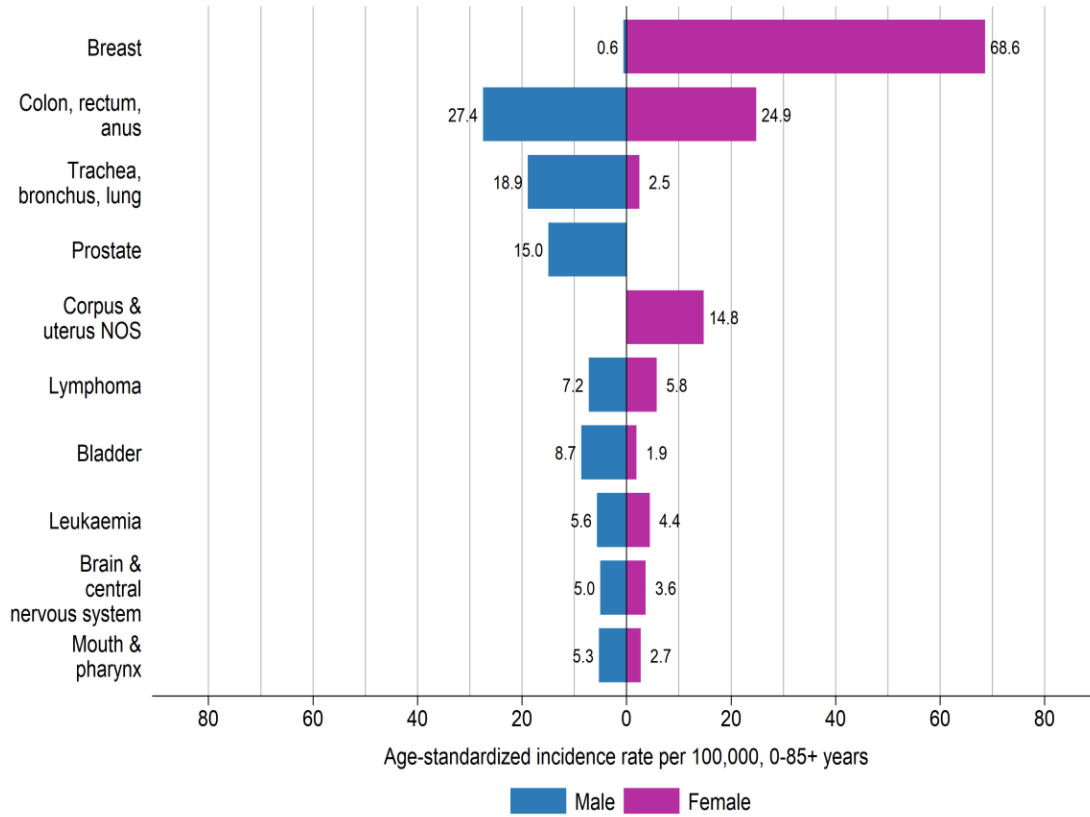


Figure 19 Top ten cancers in male (number of cases)

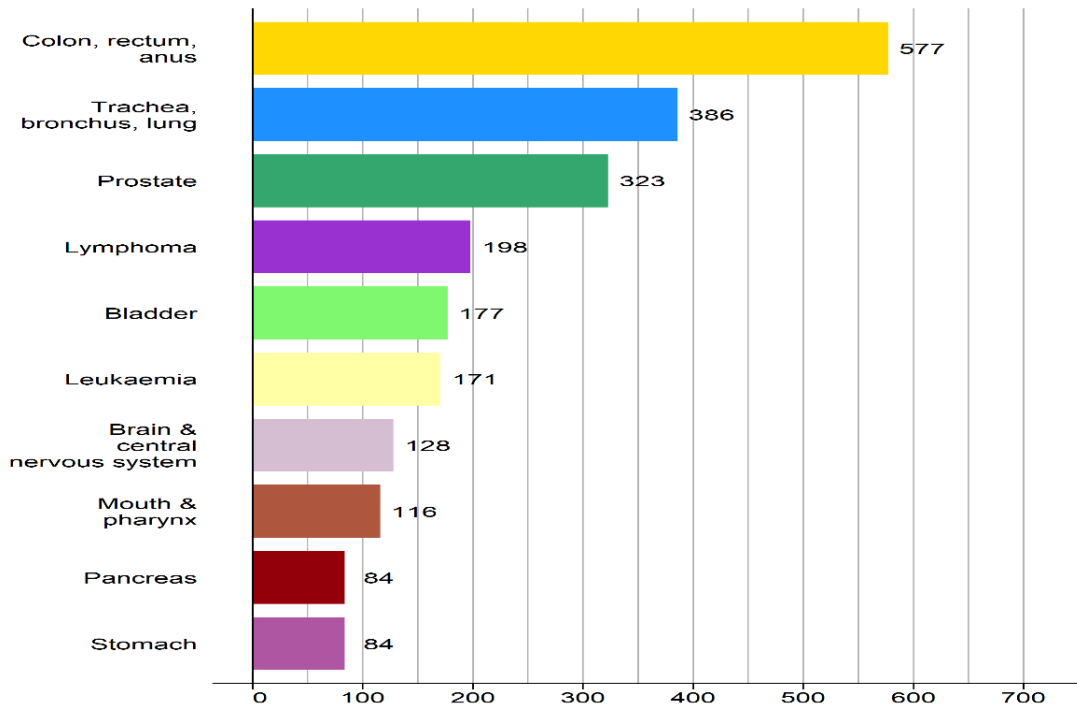


Figure 20 Top ten cancers in female (number of cases)

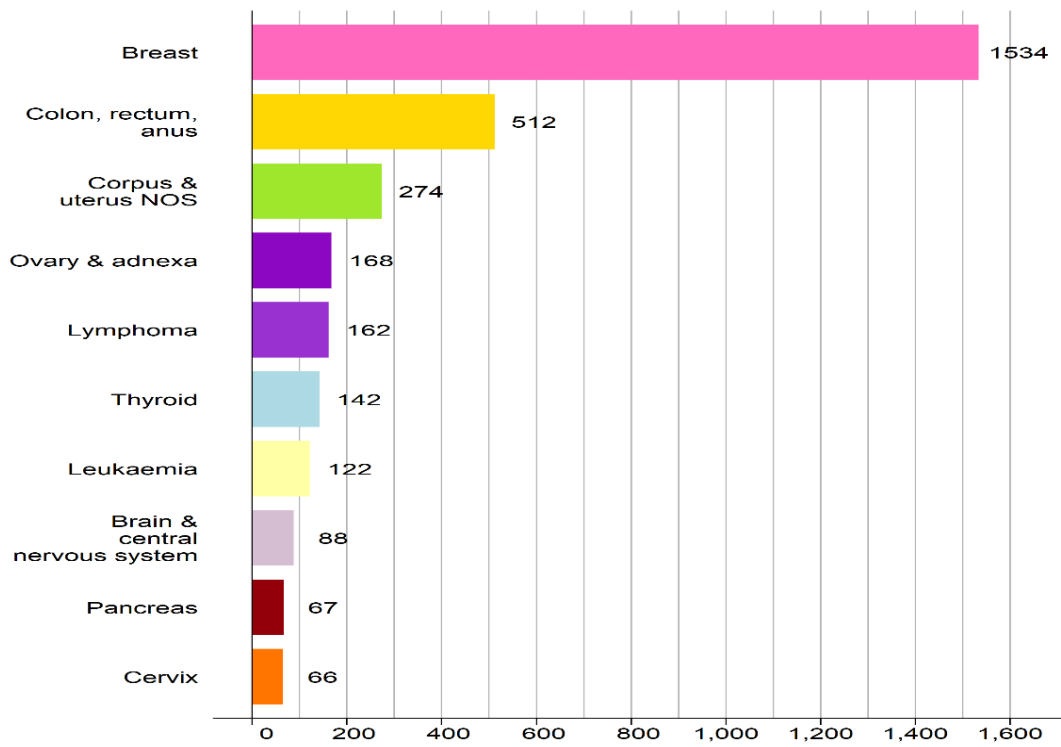


Figure 21 Top ten cancers, males (Age-standardized per 100,000)

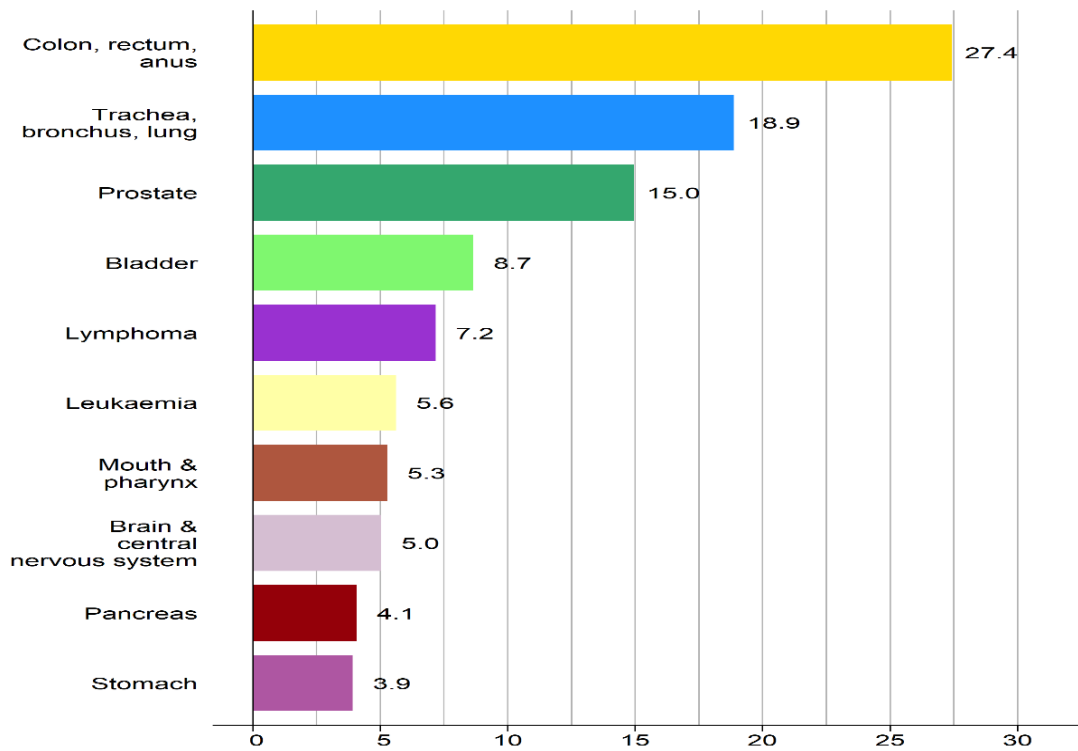


Figure 22 Top ten cancers, females (Age-standardized rate per 100,1000)

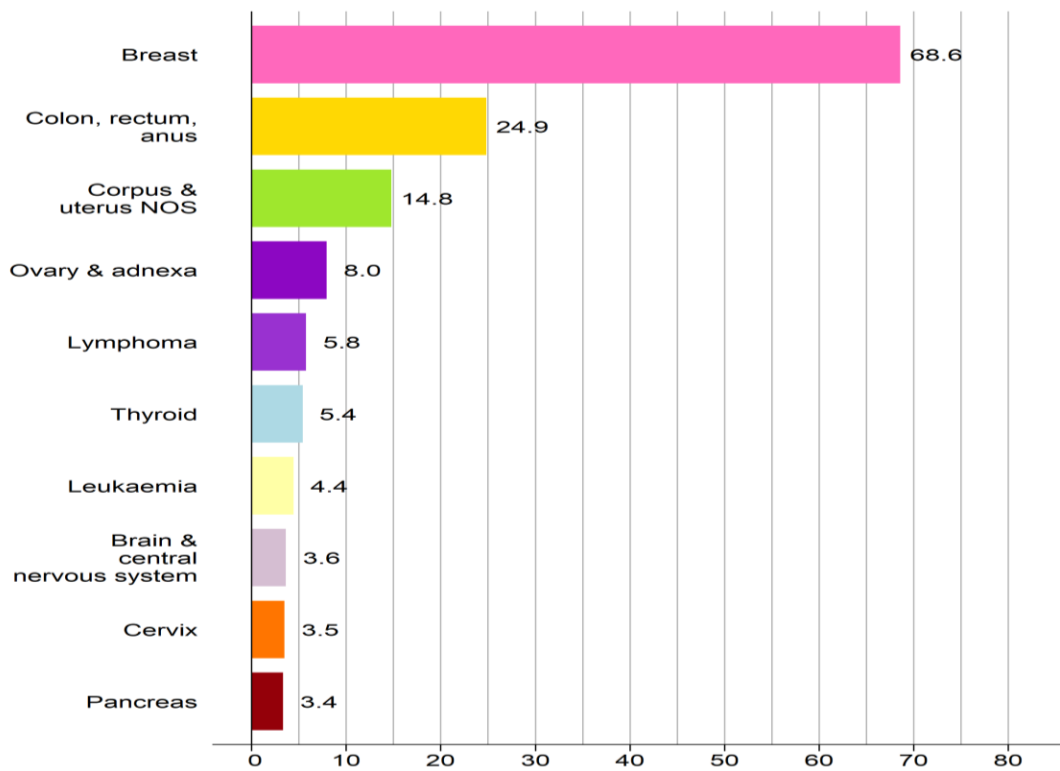


Figure 23 Top ten cancers, males (cumulative risk, 0-74 years)

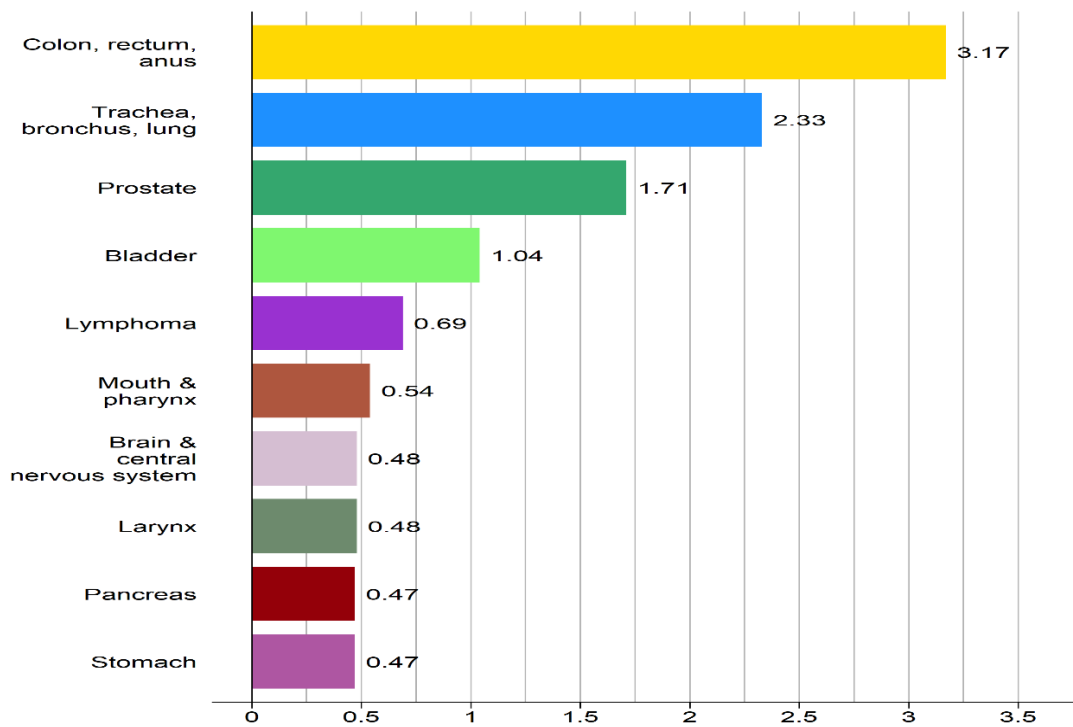
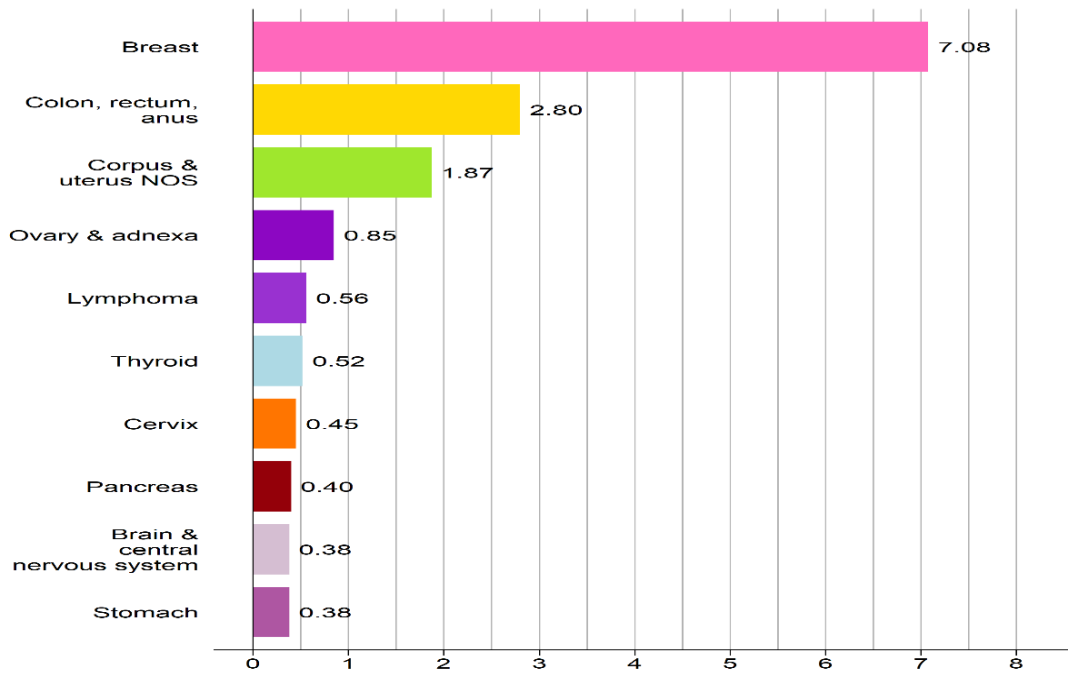


Figure 24 Top ten cancers, females (cumulative risk, 0-74 years)



AGE-SPECIFIC INCIDENCE RATES (MOST COMMON SITES) BY SEX

Figure 25 Age-specific incidence rates, males (Top five cancers)

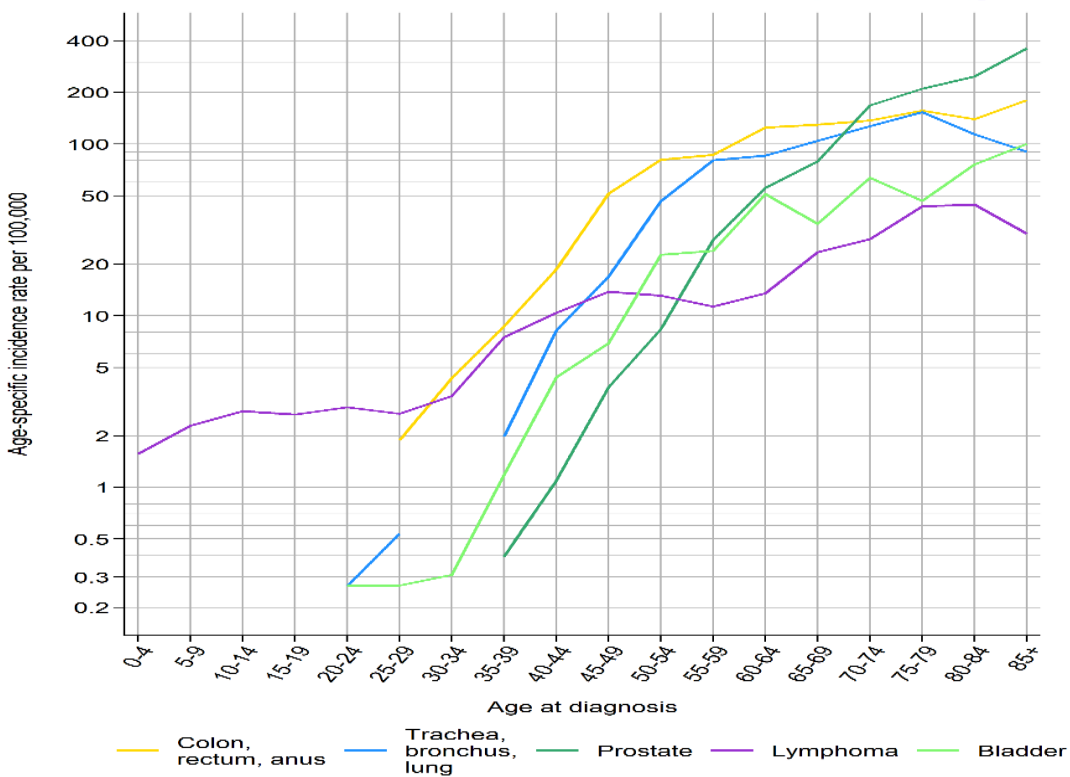
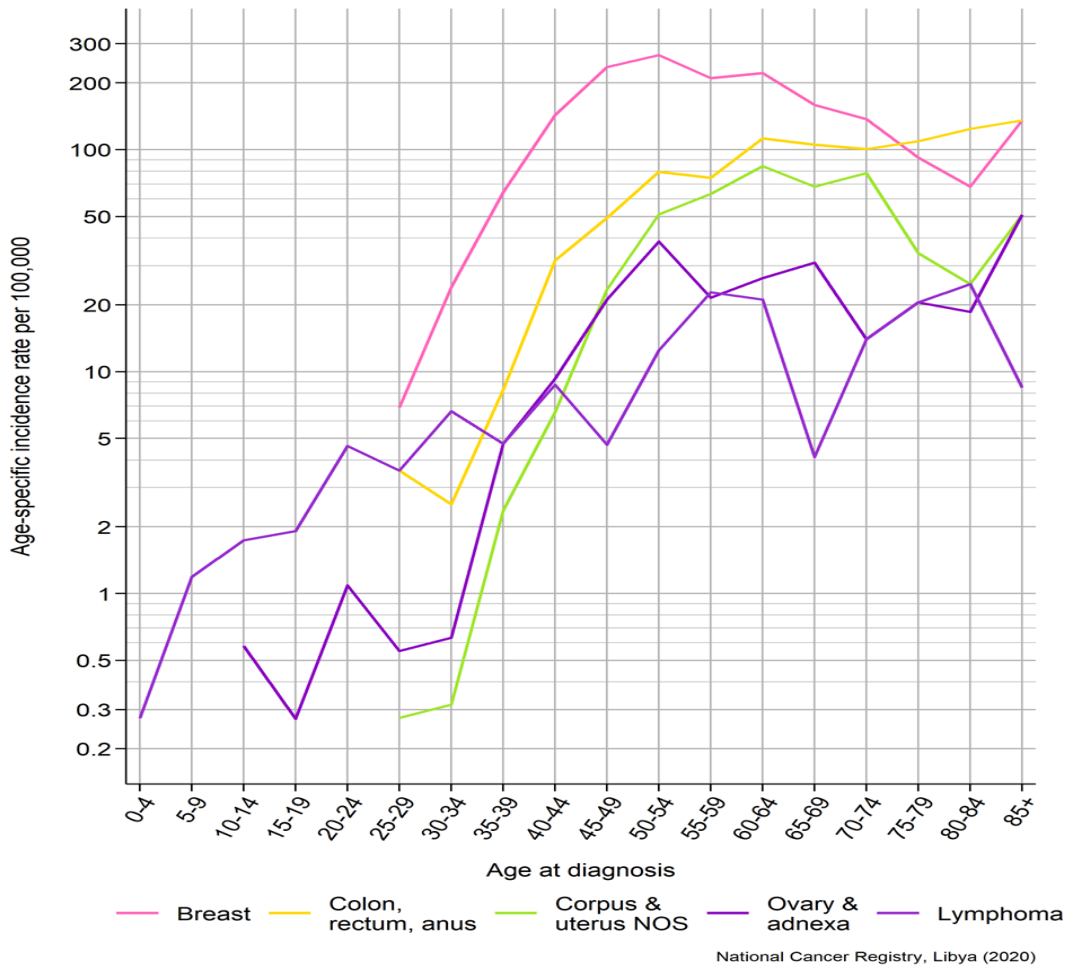


Figure 26 Age-specific incidence rates, females (top five cancers)





PART IV

CANCER BY SITE

In this part, the statistics of selected cancers are outlined. For each cancer site, the age group distribution and age-specific incidence rates are presented. In addition, the age-standardized rate for each cancer is internationally compared with the age-standardized rates reported from neighboring and other selected countries worldwide. Furthermore, histological types of are presented graphically.



INDIVIDUAL CANCER SITES

This part demonstrates selected cancers diagnosed during the period between January and December 2020 among Libyans. Cancers are arranged according to ICD-10 (International Classification of Diseases and Related Health Problems, tenth edition) in ascending order.

Nasopharynx (ICD-10 Code C11)

A total of 82 nasopharyngeal carcinomas were diagnosed in Libya during 2020. Nasopharyngeal carcinoma is more frequent in men (71%) than women (29%). International comparisons show that nasopharyngeal cancer incidence in Libya is lower than that observed in the neighboring Arab Maghreb countries (Morocco, Tunisia and Algeria) and higher than the rate observed in Egypt. The most common histological type was undifferentiated carcinoma (39%) followed by non-keratinizing squamous cell carcinoma (22%).

Table 14 Nasopharyngeal cancer statistics

Statistics	Males	Females
Number of cases	58	24
Percentage of all cancers (%)	2.0	0.6
Crude rate (per 100,000)	1.7	0.7
World Age Standardized Rate (per 100,000)	2.6	0.9
Cumulative risk (0-74 years) %	0.26	0.10

Figure 27 Age group distribution of nasopharyngeal cancer

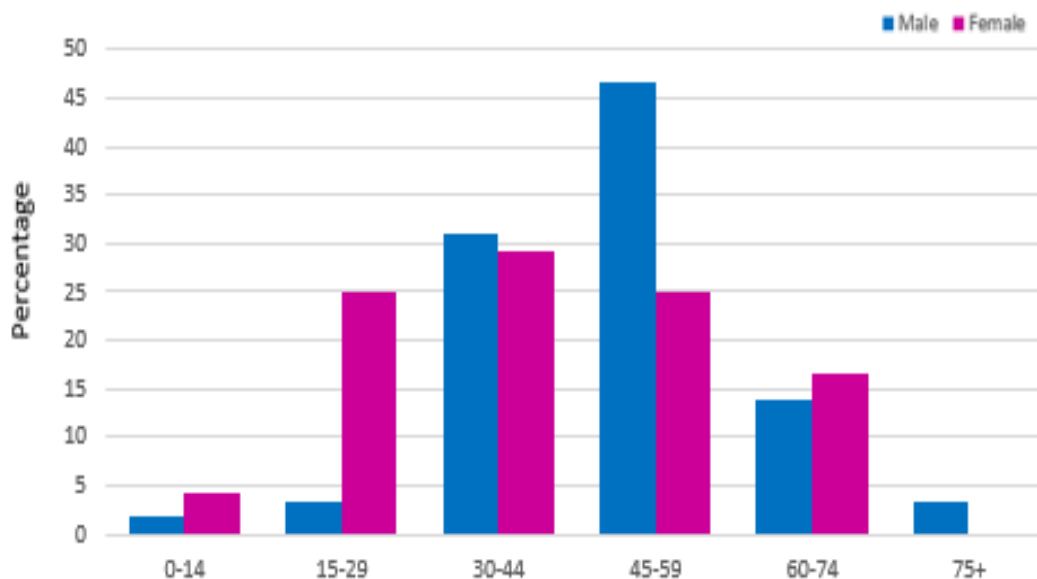


Figure 28 Nasopharyngeal cancer age-specific incidence rate per 100.00

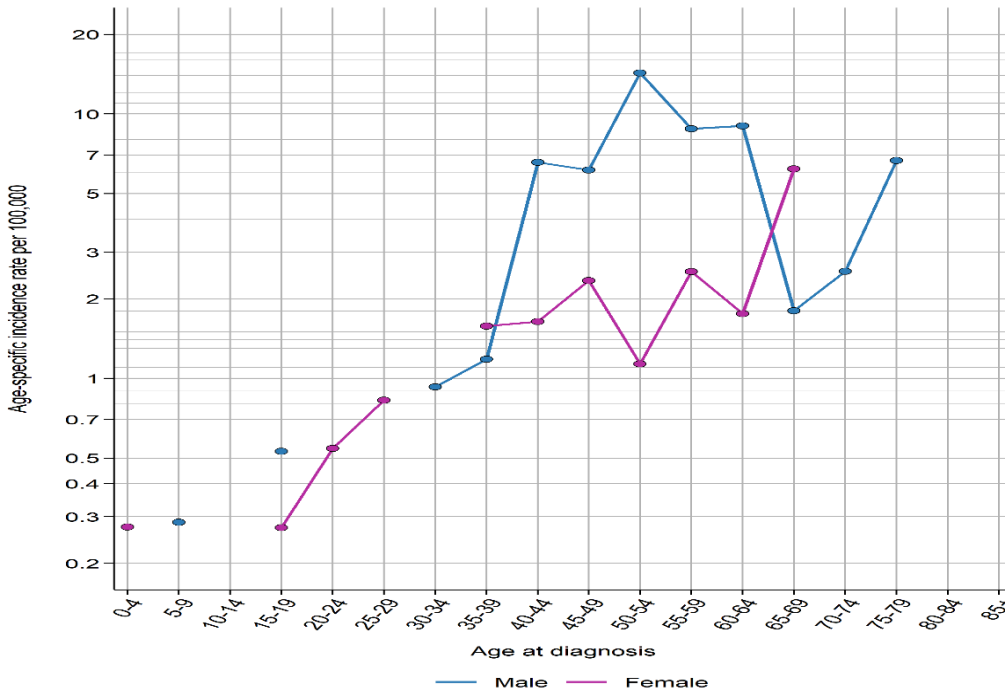


Figure 29 Comparison of nasopharyngeal cancer incidence rate with other countries

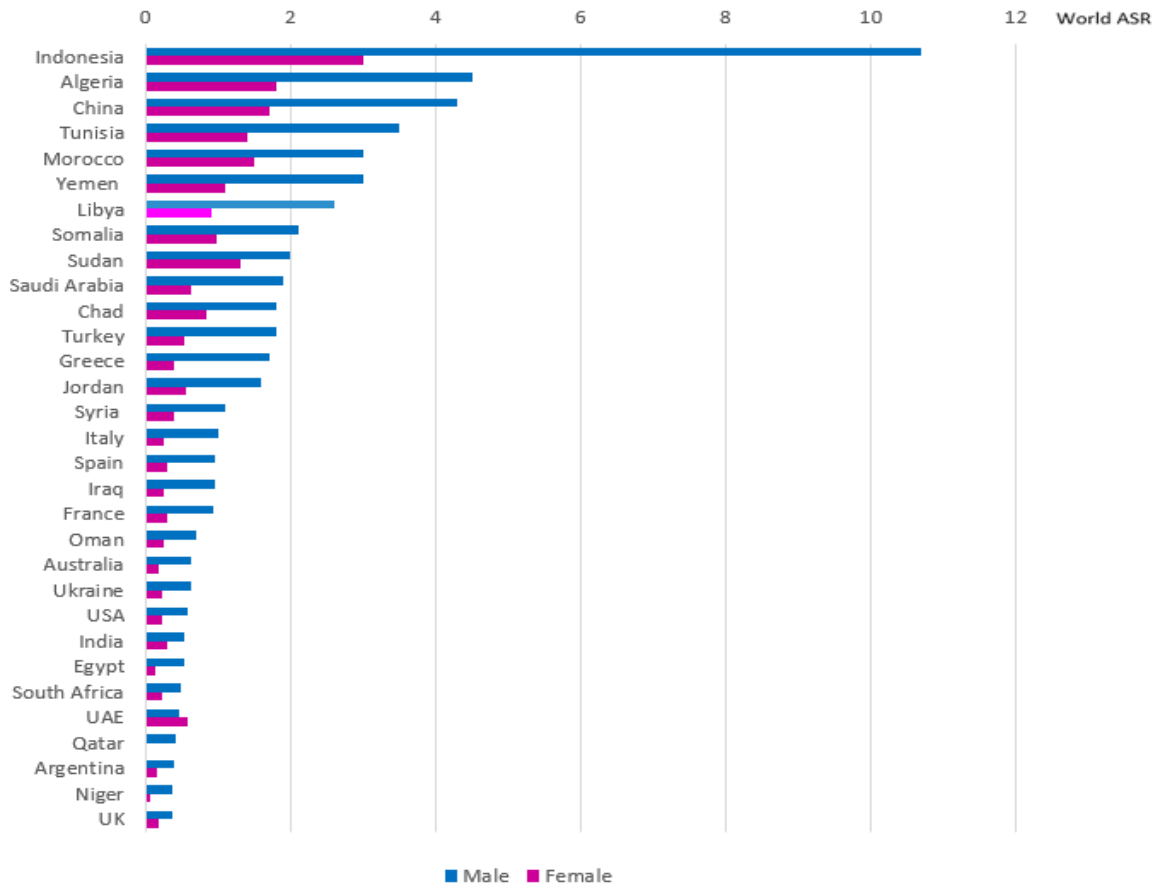
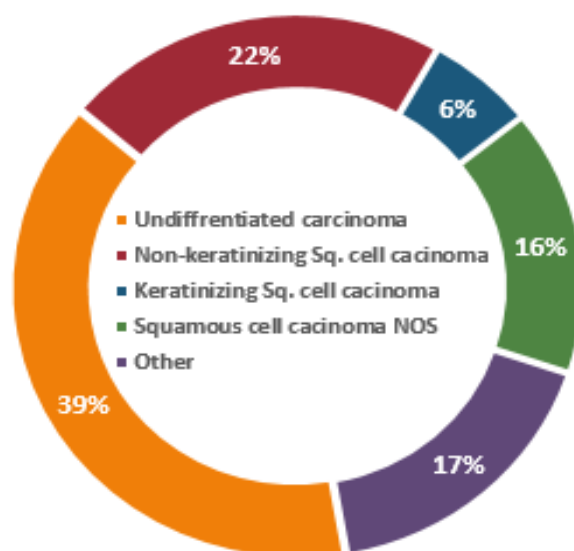


Figure 30 Histological types of nasopharyngeal cancer



Stomach (ICD-10 Code C16)

A total of 149 new stomach cancers were diagnosed among Libyan nationals in 2020, accounting for (2.2%) of all cancers. Males were slightly more affected (56%) than females (44%) by stomach cancer. International comparisons show that the incidence of stomach cancer in Libya is one of the lowest in the region and worldwide. The most common histological type was adenocarcinoma, NOS (43%) followed by signet ring cell carcinoma (25%).

Table 15 Stomach cancer statistics

Statistics	Males	Females
Number of cases	84	65
Percentage of all cancers (%)	2.9	1.7
Crude rate (per 100,000)	2.4	1.9
World Age Standardized Rate (per 100,000)	3.9	3.1
Cumulative risk (0-74 years) %	0.47	0.38

Figure 31 Age group distribution of stomach cancer

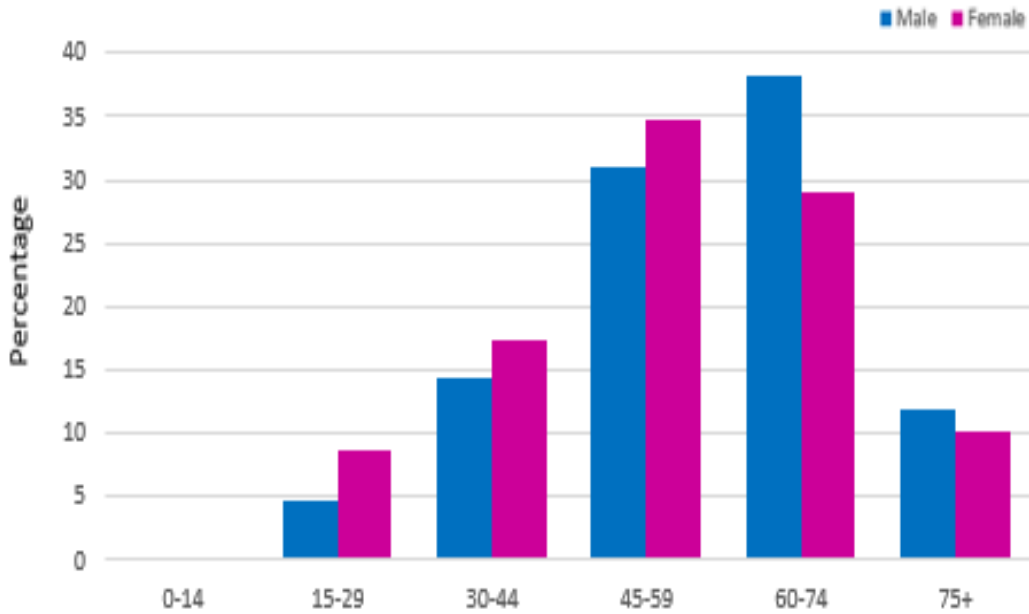


Figure 32 Stomach cancer age-specific incidence rate per 100,000

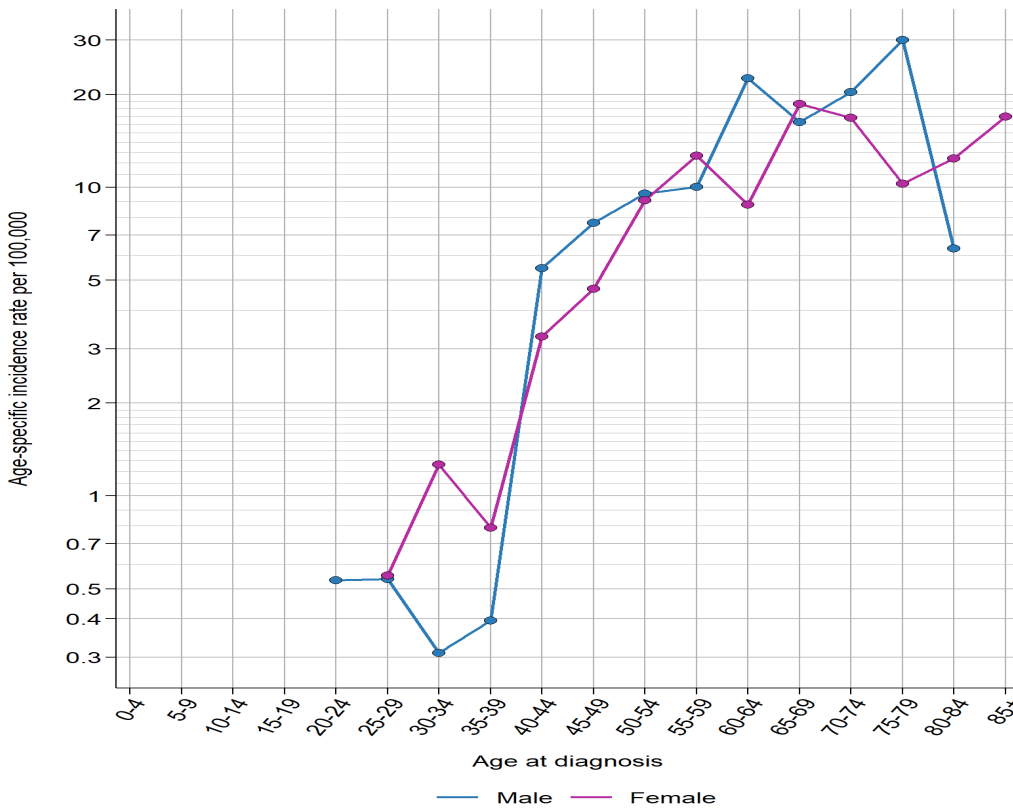


Figure 33 Comparison of stomach cancer incidence rate with incidence rates of other countries

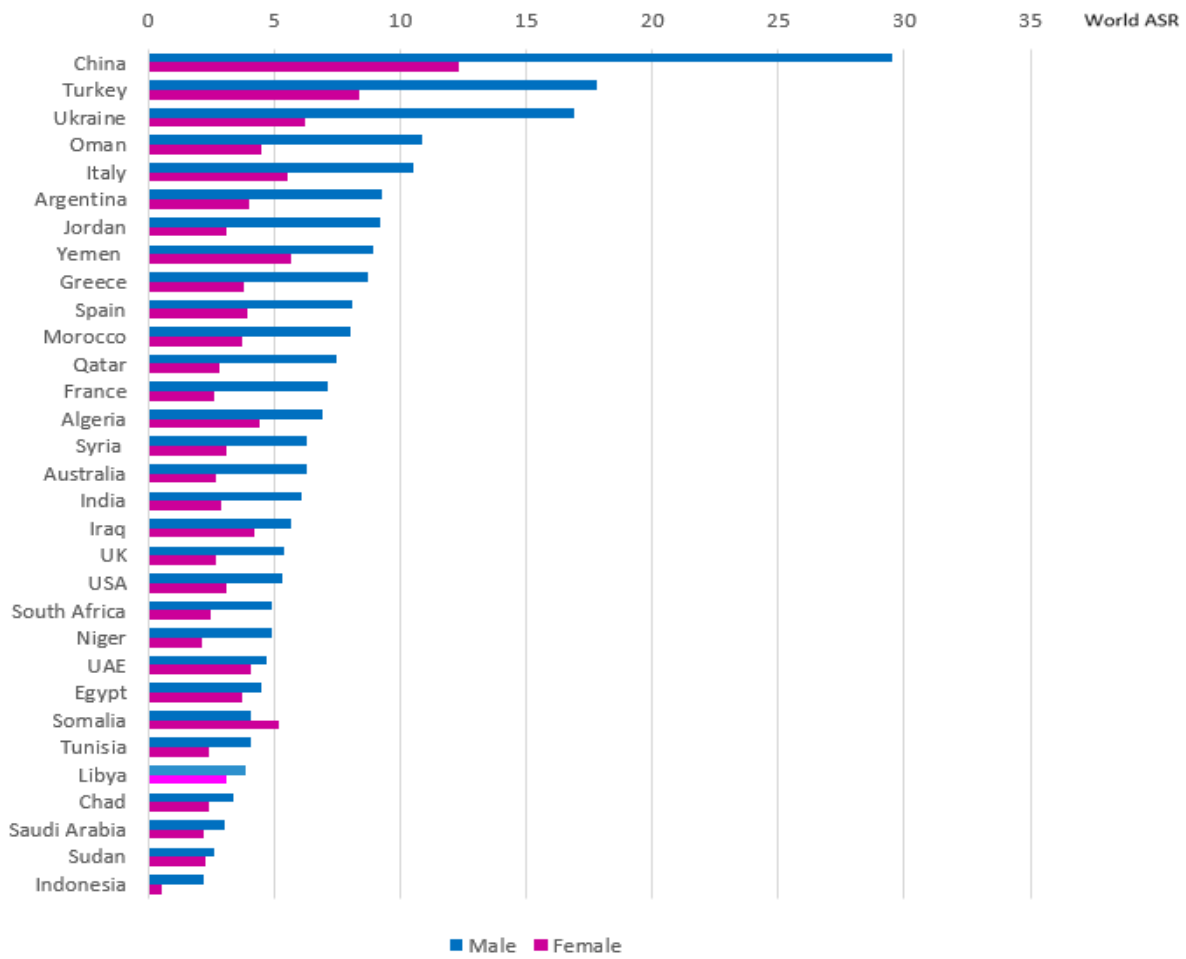
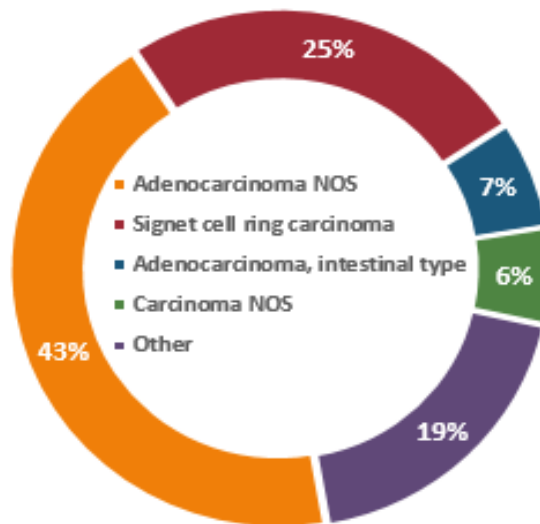


Figure 34 Histological types of cancer stomach



Colon, rectum and anus (ICD-10 Codes C18-C21)

A total of 1089 colon, rectum and anus cancer diagnoses were registered among Libyan citizens in 2020. Colorectal cancer was the second most common cancer in both sexes, accounting for 16.3% of all cancers. It was the most common cancer in males accounting for 19.8% of all male cancers, and the second most common cancer in females after cancer breast constituting 13.6% of all female cancers. International comparisons show that the incidence of colon and rectal cancer in Libya is the highest in the region (Northern Africa and the Middle East). The most common histological type was adenocarcinoma, NOS (82%).

Table 16 Colon, rectum and anal cancer statistics

Statistics	Males	Females
Number of cases	577	512
Percentage of all cancers (%)	19.8	13.6
Crude rate (per 100,000)	16.5	15.1
World Age Standardized Rate (per 100,000)	27.4	24.8
Cumulative risk (0-74 years) %	3.17	2.80

Figure 35 Age group distribution of cancer colon, rectum and anus

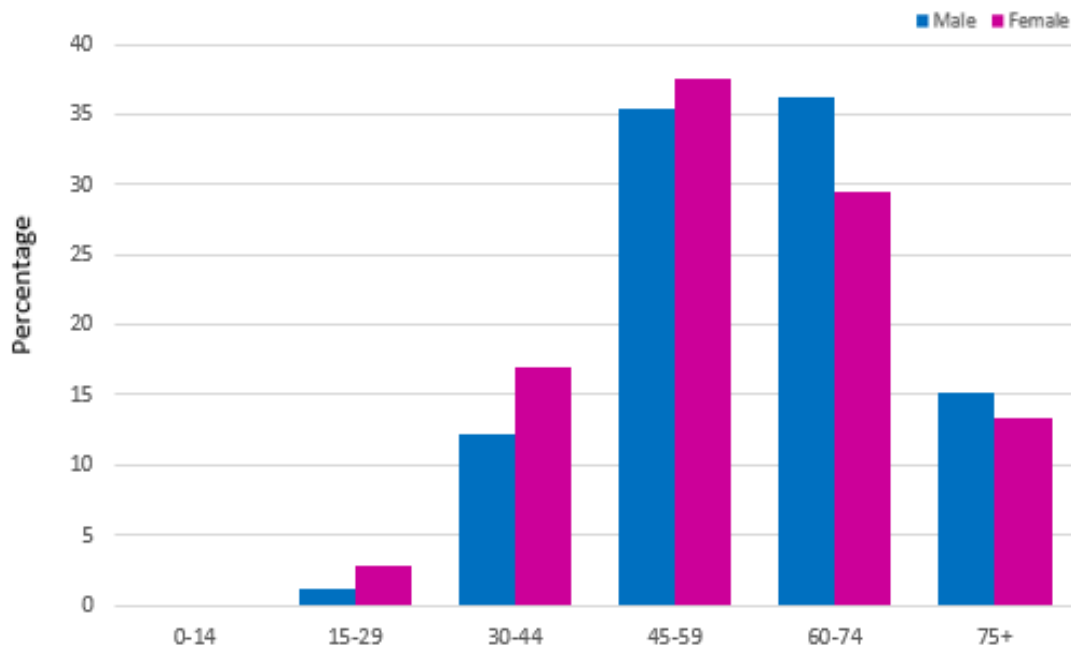


Figure 36 Age-specific rate of cancer colon, rectum and anus per 100,000

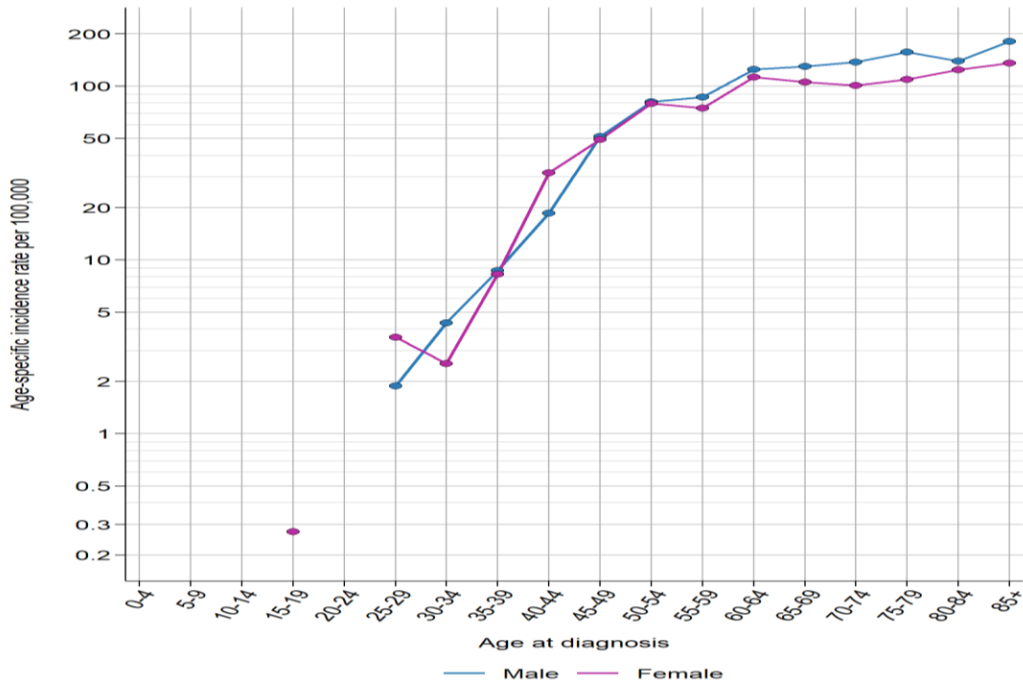


Figure 37 Comparison of colorectal cancer incidence rate with incidence rates of other countries

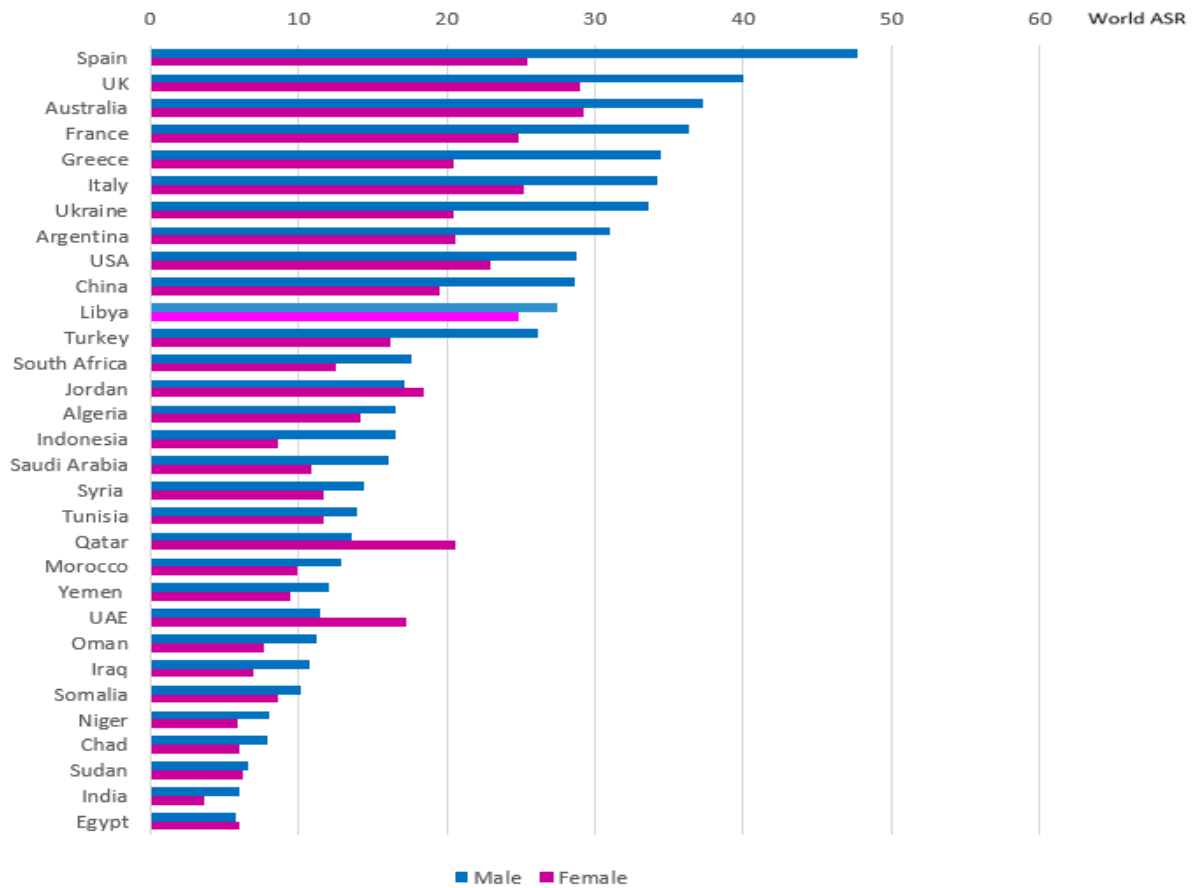
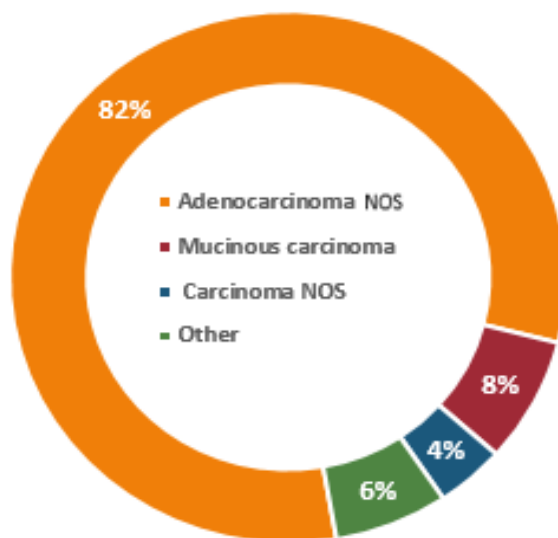


Figure 38 Histological types colorectal cancer



Liver (ICD-10 Code C22)

Between January and December 2020, a total of 68 new cancers of the liver were diagnosed among Libyan nationals. Liver malignancy is a relatively uncommon cancer in Libya, accounting for about (1%) of all cancers. Men are slightly more commonly (56%) affected than women (44%). Compared internationally, the incidence of liver cancer among Libyans is the lowest worldwide. The highest incidence was observed in Egypt. The most common histological type was hepatocellular carcinoma (63%) followed by cholangiocarcinoma (19%).

Table 17 Liver cancer statistics

Statistics	Males	Females
Number of cases	38	30
Percentage of all cancers (%)	1.3	0.8
Crude rate (per 100,000)	1.1	0.9
World Age Standardized Rate (per 100,000)	1.9	1.7
Cumulative risk (0-74 years) %	0.21	0.23

Figure 39 Age group distribution of liver cancer

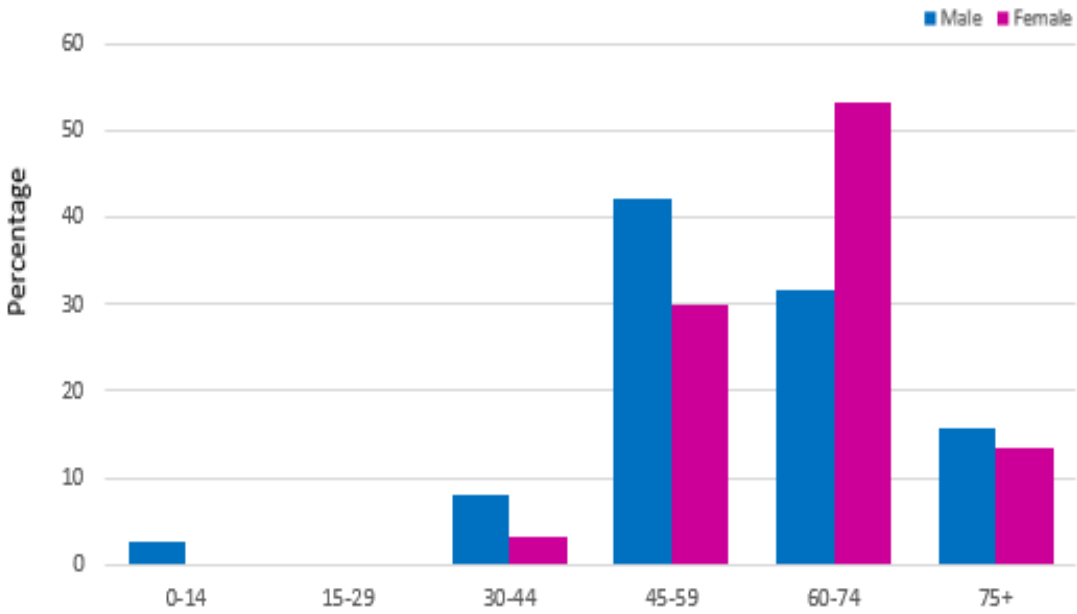


Figure 40 Liver cancer age specific incidence rate per 100,000

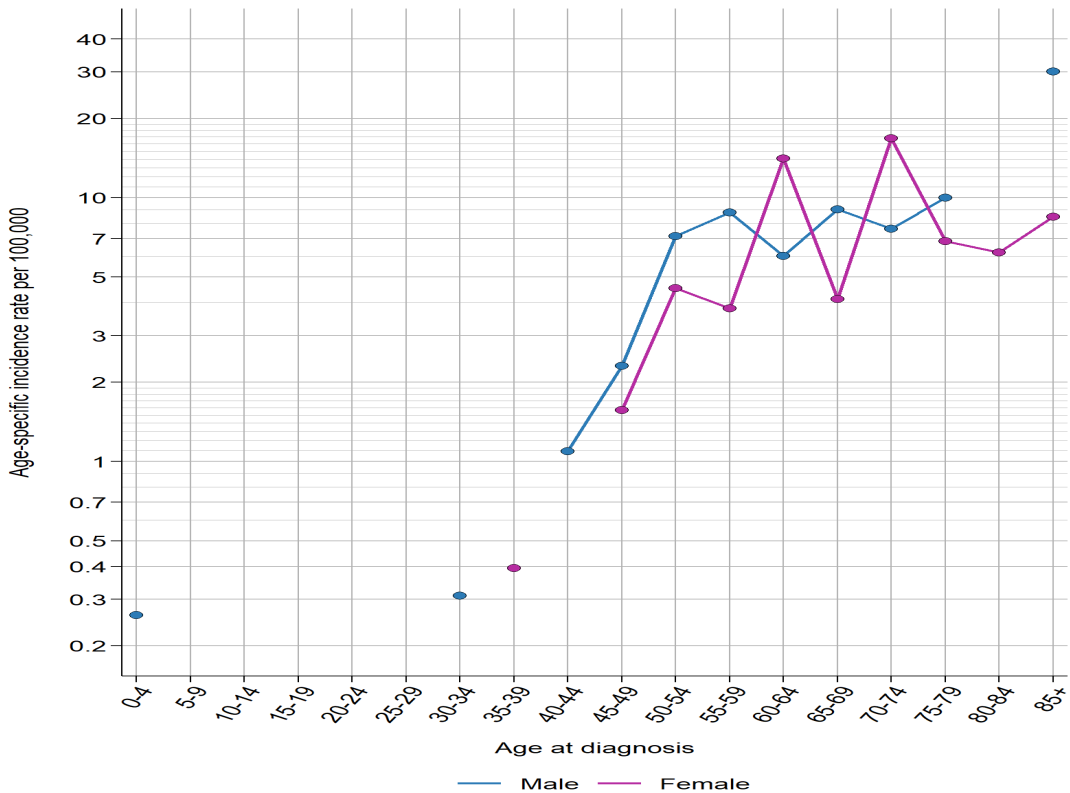


Figure 41 Comparison of liver cancer incidence rate with incidence rates of other countries

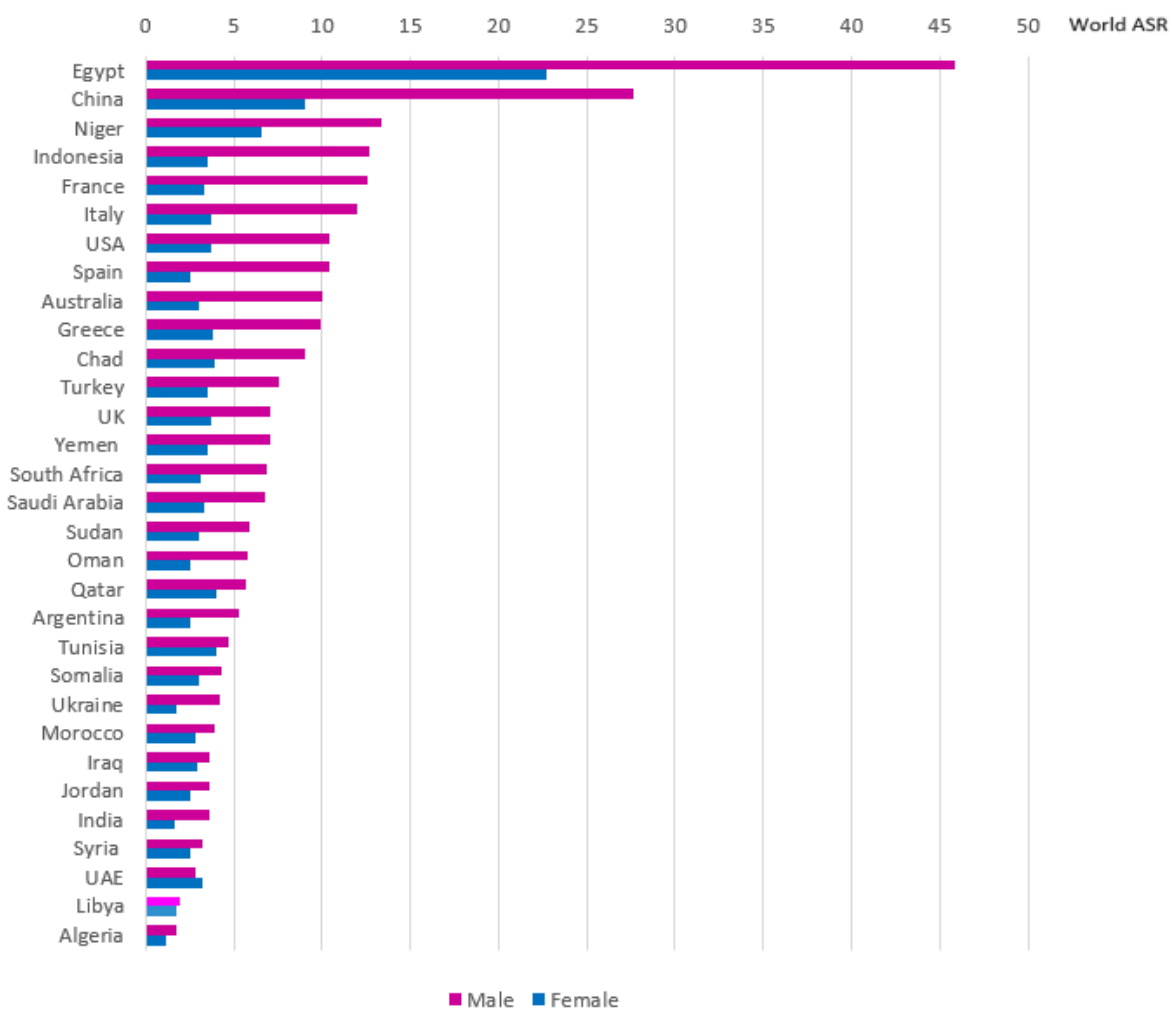
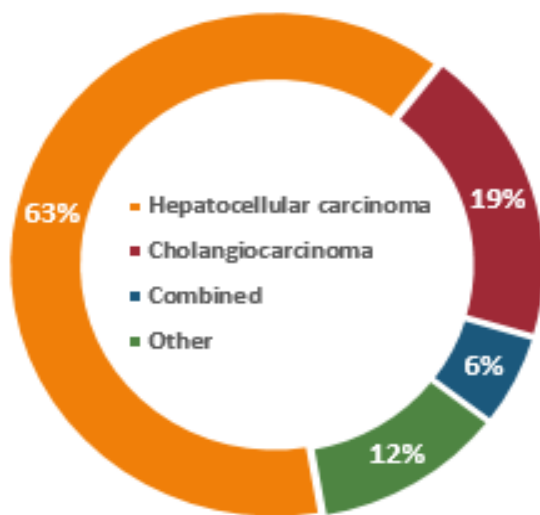


Figure 42 Histological types of liver cancer



Pancreas (ICD-10 Code C25)

Between January and December 2020, 151 new pancreatic cancer cases were diagnosed among residents in Libya. Cancer of pancreas is slightly more common in males (55% of cancer pancreas cases). The incidence of pancreatic cancer in Libya is within the average for North African countries. The most common histological type was adenocarcinoma, NOS accounting for (55%) of cases.

Table 18 Pancreatic cancer statistics

Statistics	Males	Females
Number of cases	84	67
Percentage of all cancers (%)	2.9	1.8
Crude rate (per 100,000)	2.4	2.0
World Age Standardized Rate (per 100,000)	4.1	3.4
Cumulative risk (0-74 years) %	0.47	0.40

Figure 43 Age group distribution of cancer pancreas

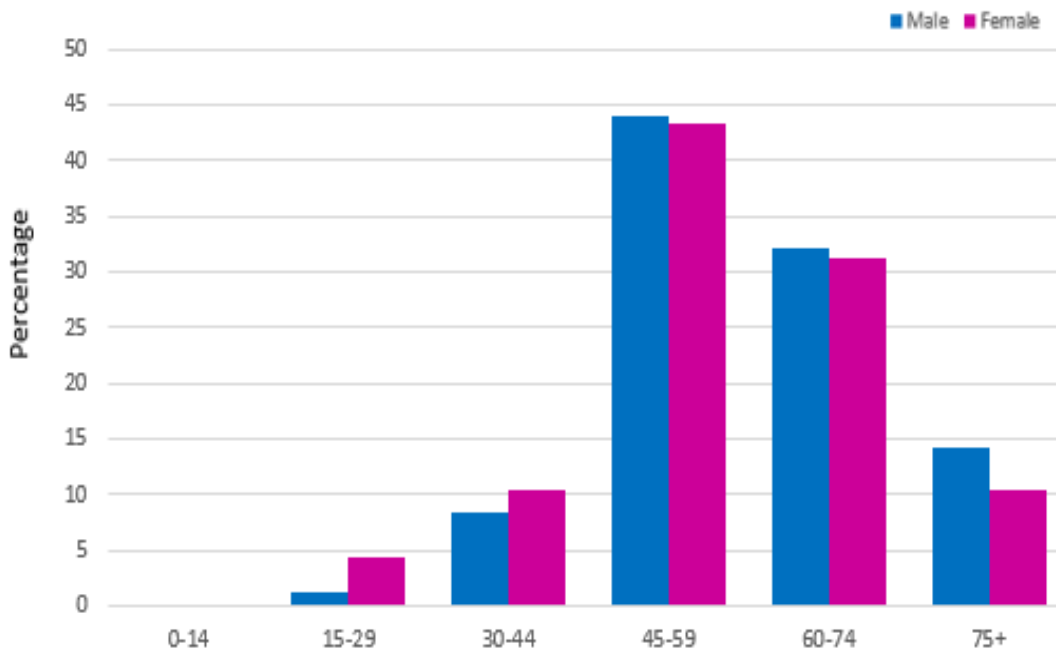


Figure 44 Pancreatic cancer age-specific incidence rate per 100,000

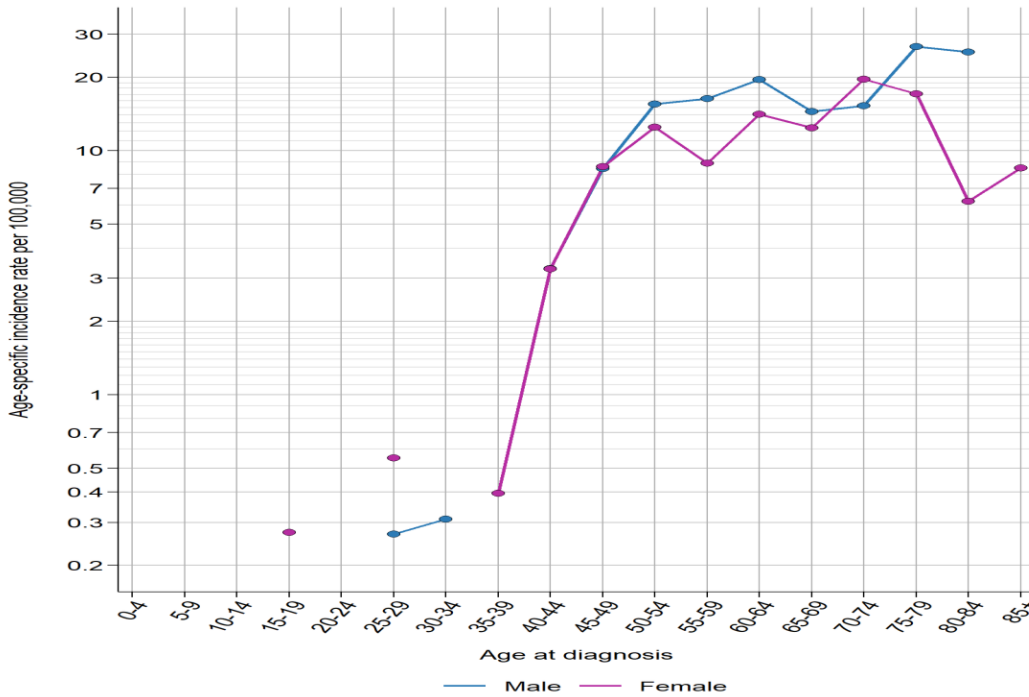


Figure 45 Comparison of pancreatic cancer incidence rate with incidence rates of other countries

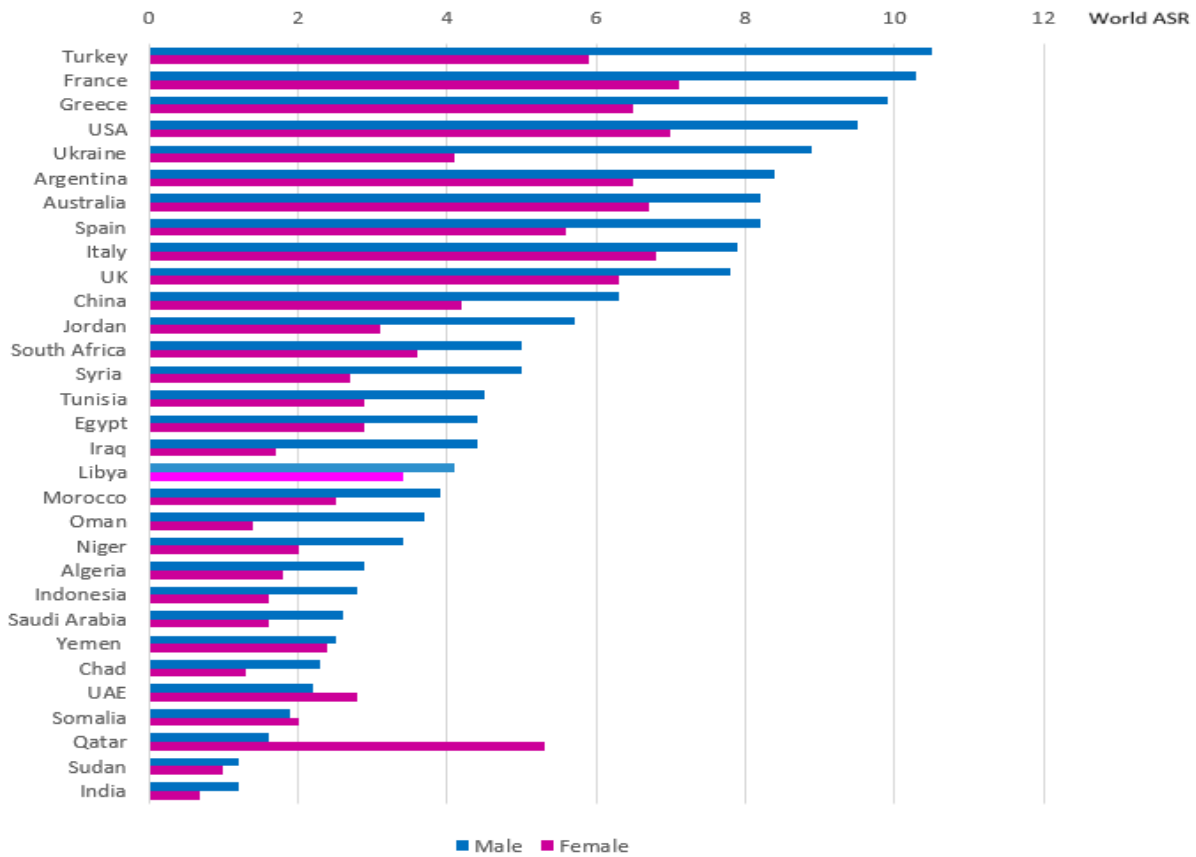
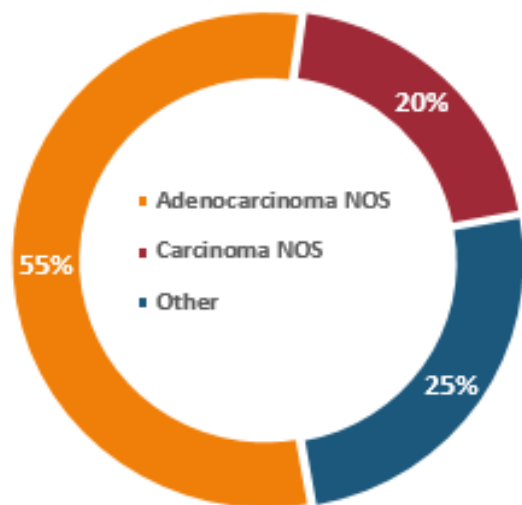


Figure 46 Histological types pancreatic cancer



Larynx (ICD-10 Code C32)

A total of 80 new laryngeal cancer cases were diagnosed among Libyans in 2020, with a huge predominance in males (95%). Overall, cancer of the larynx accounts for (1.2%) of all cancers registered in Libya. The age-standardized rate is (3.8) for males and (0.2) for females, which is similar to rates observed in Algeria and Egypt and less than those observed in Tunisia and Morocco. The vast majority of laryngeal cancers were squamous cell carcinomas (82%).

Table 19 Laryngeal cancer statistics

Statistics	Males	Females
Number of cases	76	4
Percentage of all cancers (%)	2.6	0.1
Crude rate (per 100,000)	2.2	0.1
World Age Standardized Rate (per 100,000)	3.8	0.2
Cumulative risk (0-74 years) %	0.48	0.02

Figure 47 Age group distribution of Laryngeal cancer

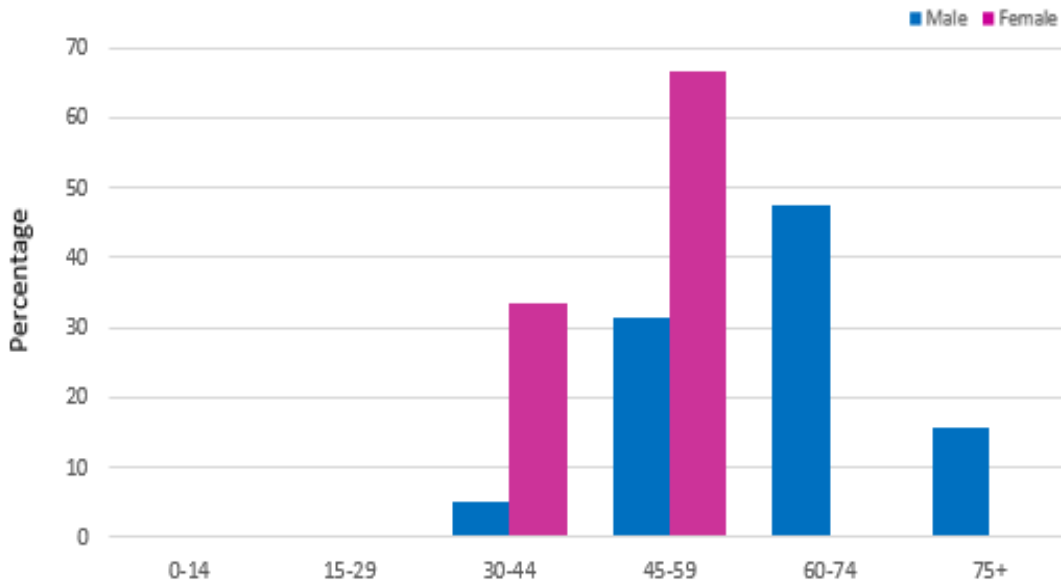


Figure 48 Laryngeal cancer age-specific incidence rate per 100,000

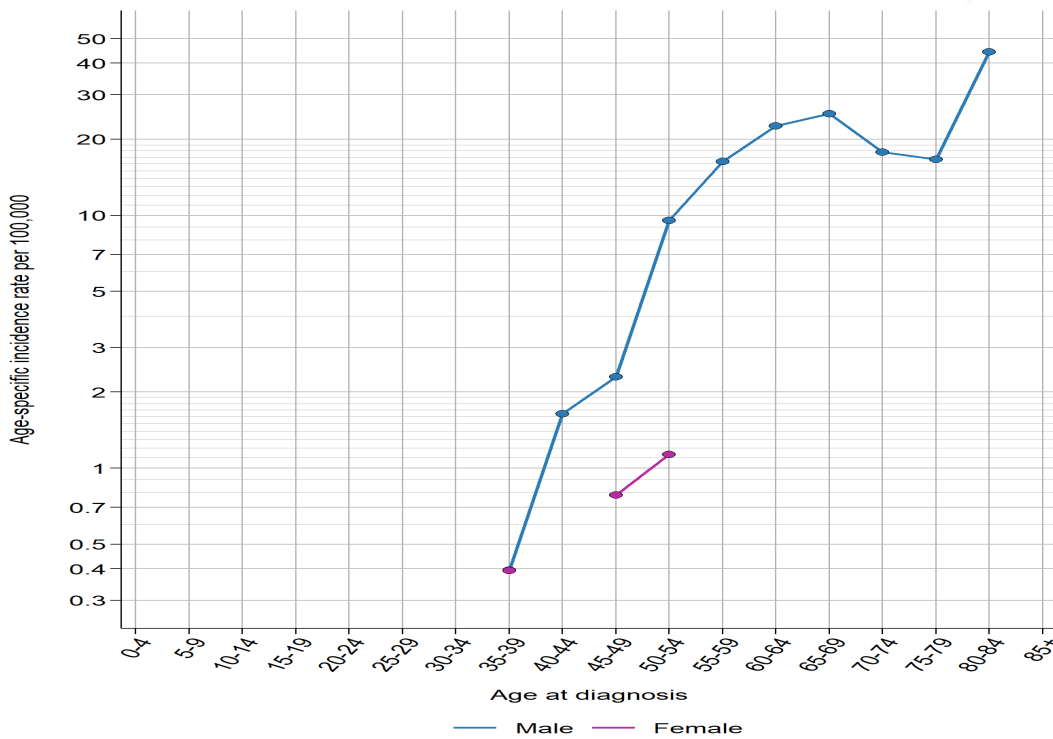


Figure 49 Comparison of laryngeal cancer incidence rate with incidence rates of other countries

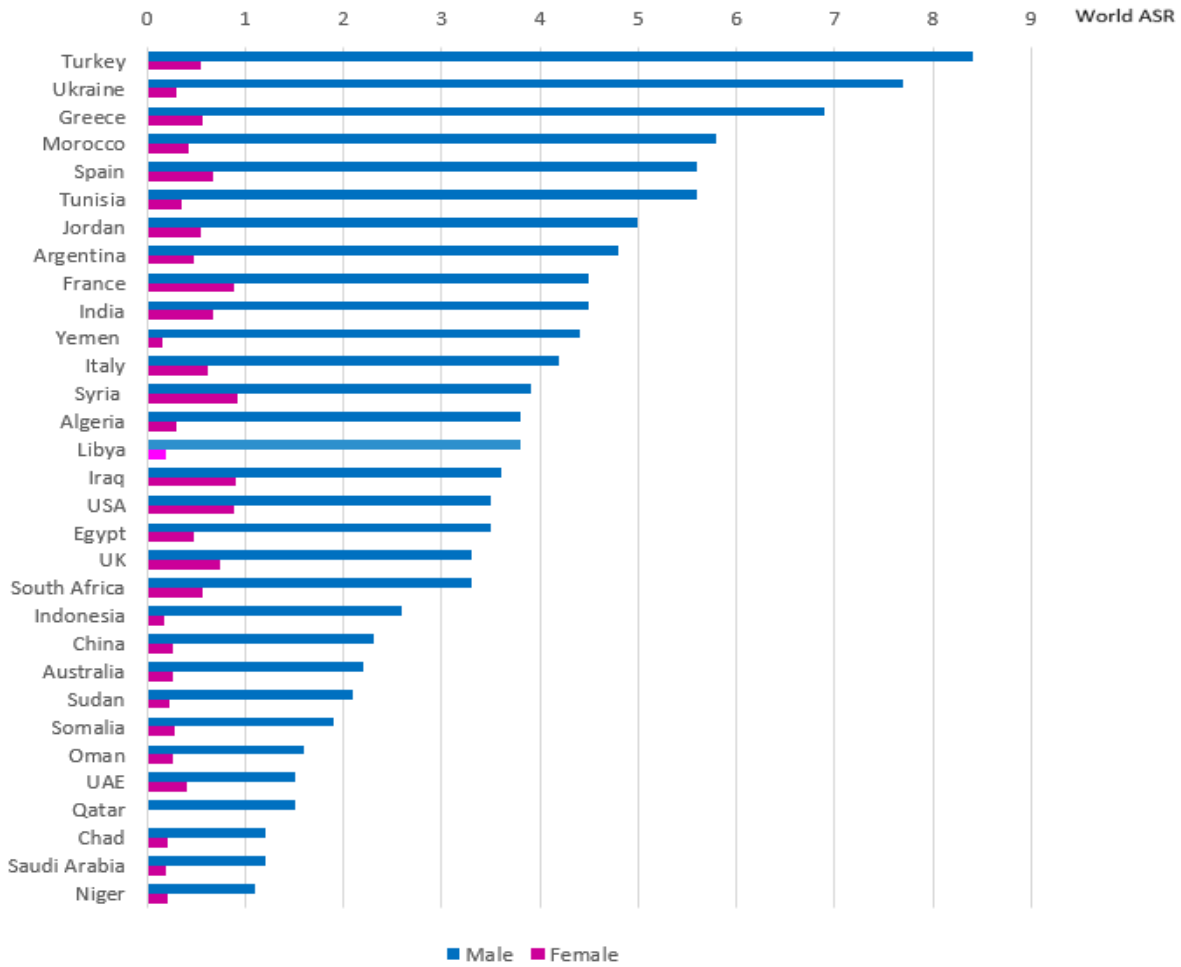
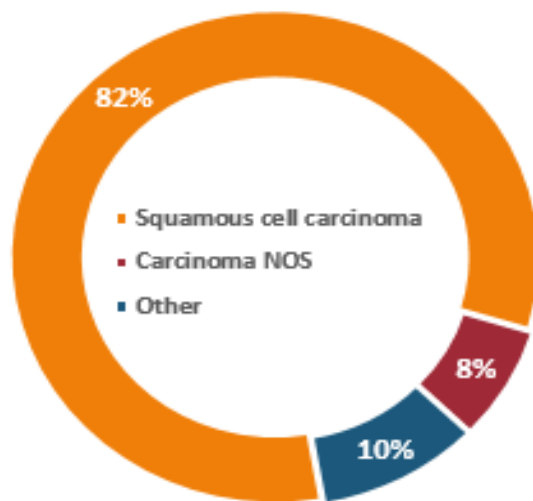


Figure 50 Histological types of cancer larynx



Lung (ICD-10 codes C33-C34)

During 2020, lung cancer was the third most common cancer registered in both sexes, accounting for 6.5% of all cancer cases. It was the second most frequent cancer in males accounting for 13.2% of male cancers. However, it was not frequent cancer in females. International comparisons show that Libya has lower incidence rates of lung cancer, compared to neighboring countries (Tunisia and Algeria) and higher than the rate observed in Egypt. The most common histological type of lung cancer was adenocarcinoma (41%) followed by squamous cell carcinoma (19%) then small cell carcinoma (9%).

Table 20 Lung cancer statistics

Statistics	Males	Females
Number of cases	386	49
Percentage of all cancers (%)	13.2	1.3
Crude rate (per 100,000)	11.1	1.4
World Age Standardized Rate (per 100,000)	18.9	2.4
Cumulative risk (0-74 years) %	2.33	0.31

Figure 51 Age group distribution of lung cancer

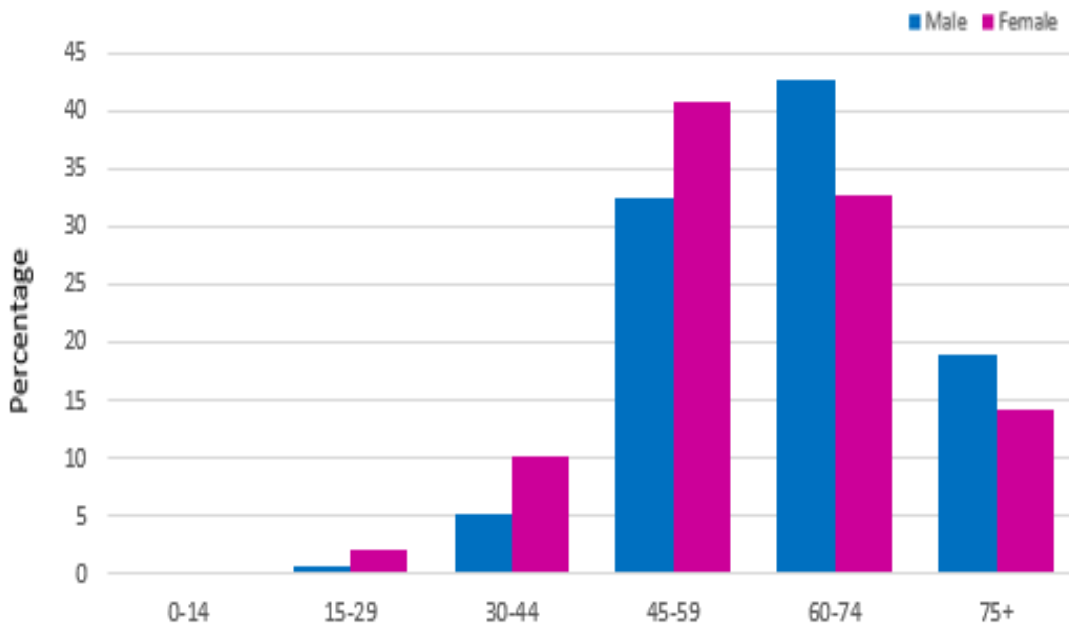


Figure 52 Lung cancer age-specific rate per 100,000

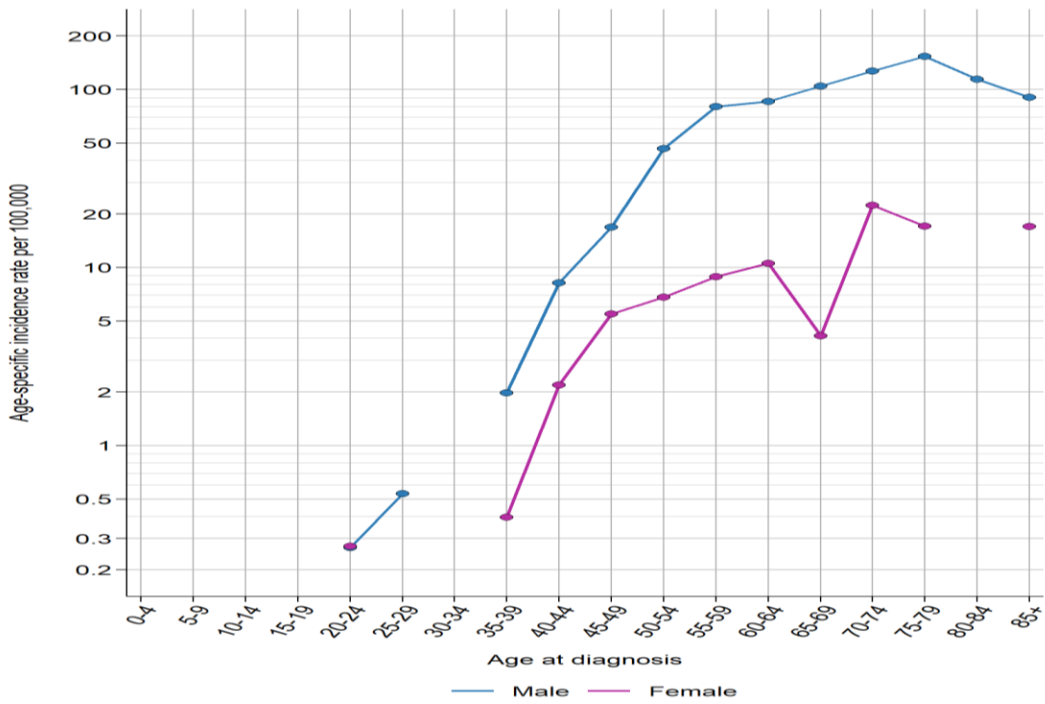


Figure 53 Comparison of lung cancer incidence rate with incidence rates of other countries

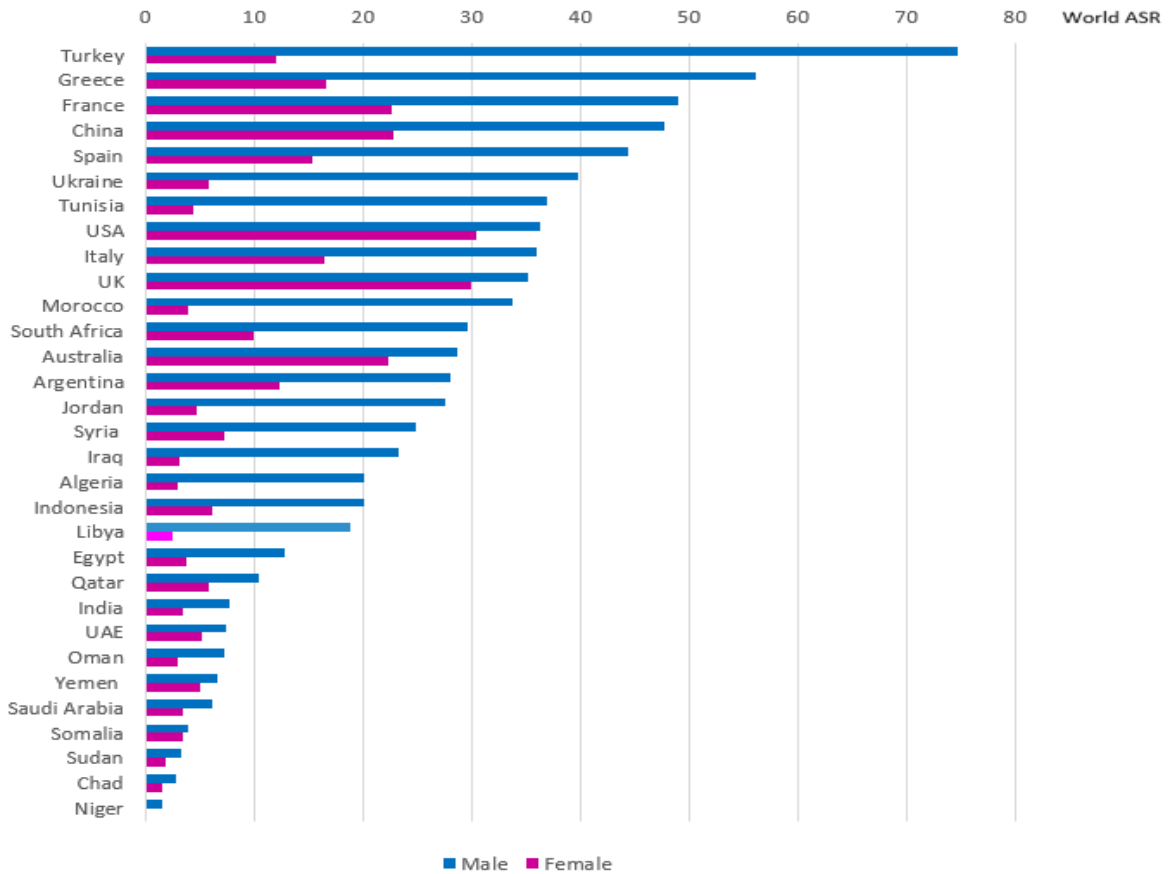
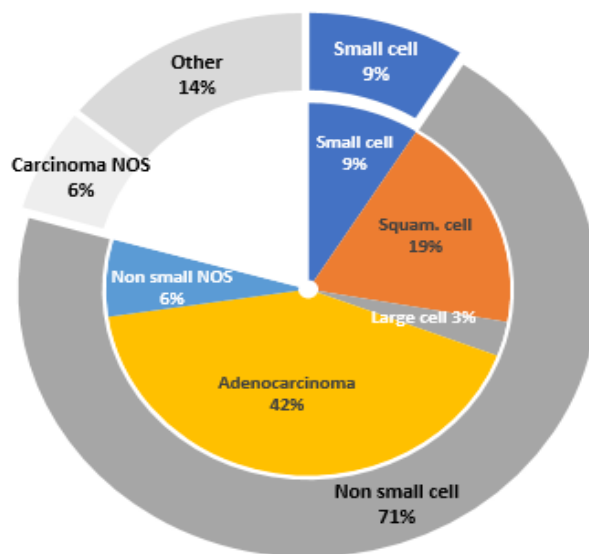


Figure 54 Histological types of lung cancer



Breast (ICD-10 Code C50)

Breast cancer was the most common cancer encountered in all registered cases, 1547 new cases were registered during 2020, accounting for about 23% of all cancer cases. Female breast cancer cases were 1535 constituting about 41% of all female cancers. Male breast cancer cases were 12 accounting for 0.8% of cancer breast.

Female breast cancer

International comparisons show that the age-standardized Incidence rate of breast cancer in Libya is the highest in the region. The increased awareness and the increased availability of early detection and diagnostic clinics in recent years could play a part. However, there are other factors, in particular, environmental and genetic ones that could have an effect on the increased incidence. This requires more attention and further research. The most common histological type of cancer breast was invasive duct carcinoma (83%) followed by lobular carcinoma (4%).

Table 21 Breast cancer statistics, female

Statistics	Females
Number of cases	1535
Percentage of all cancers (%)	40.9
Crude rate (per 100,000)	45.3
World Age Standardized Rate (per 100,000)	68.6
Cumulative risk (0-74 years) %	7.35

Figure 55 Age group distribution of breast cancer

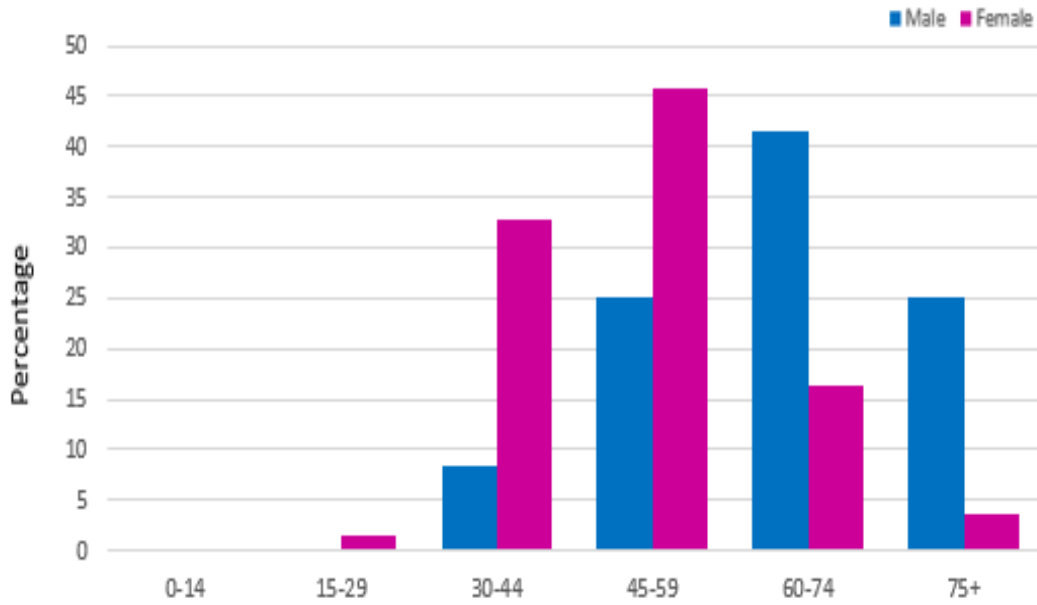


Figure 56 Breast cancer age-specific incidence rate per 100,000

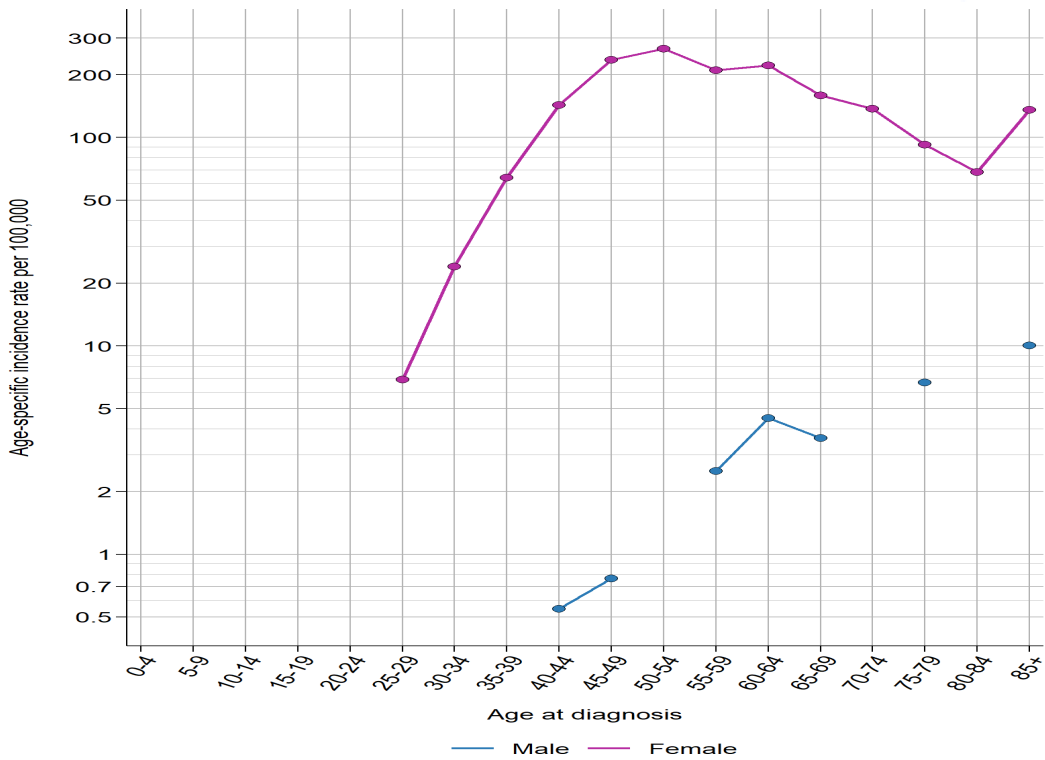


Figure 57 Comparison of breast cancer incidence rates with incidence rates of other countries

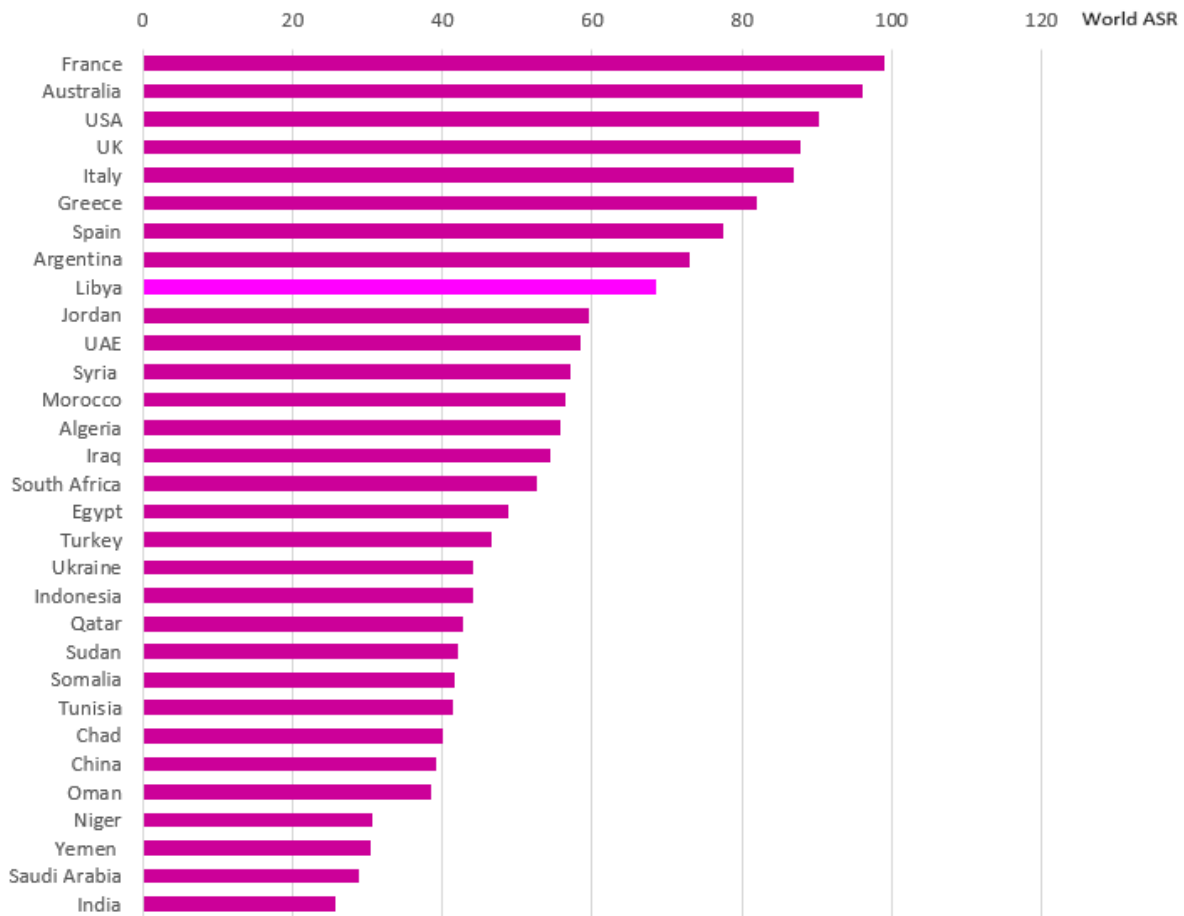
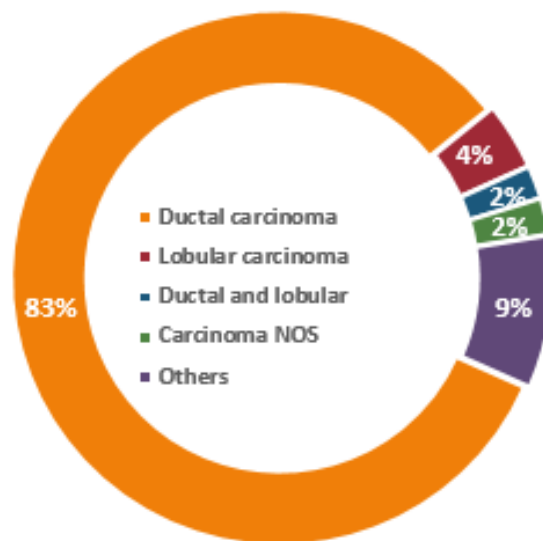


Figure 58 Histological types of breast cancer



Cervix (ICD-10 Code C53)

Cervical cancer was the 10th most common cancer among Libyan women. During 2020, 66 new cases were diagnosed with cancer cervix, accounting for 1.8% of female cancers. International comparisons show that the incidence of cervical cancer in Libya was one of the lowest worldwide. The most common histological type was squamous cell carcinomas (80%).

Table 22 Cervical cancer statistics

Statistics	Females
Number of cases	66
Percentage of all cancers (%)	1.8
Crude rate (per 100,000)	1.9
World Age Standardized Rate (per 100,000)	3.5
Cumulative risk (0-74 years) %	0.45

Figure 59 Age group distribution of cervical cancer

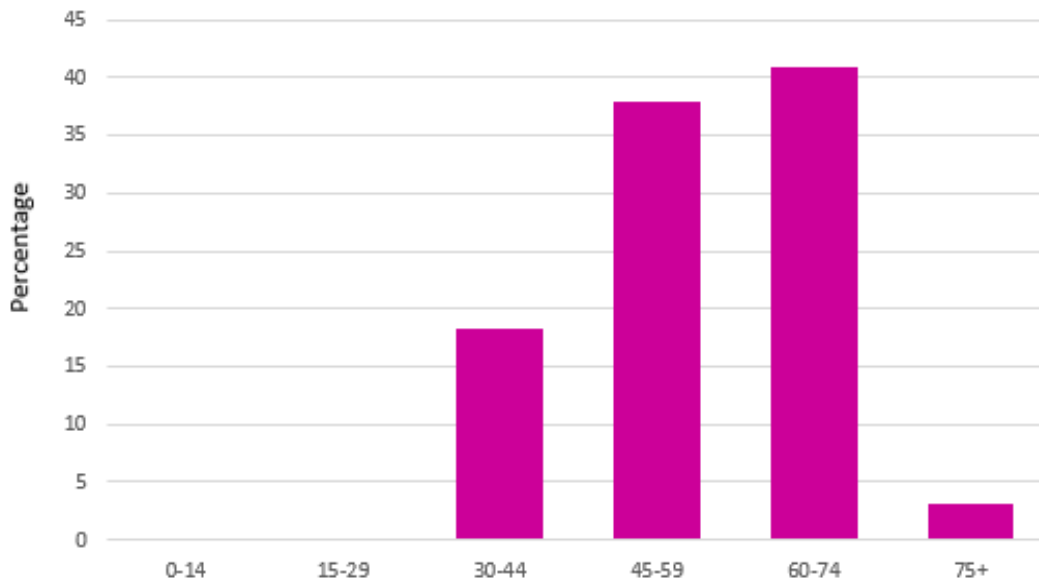


Figure 60 Cervical cancer age-specific incidence rate per 100,1000

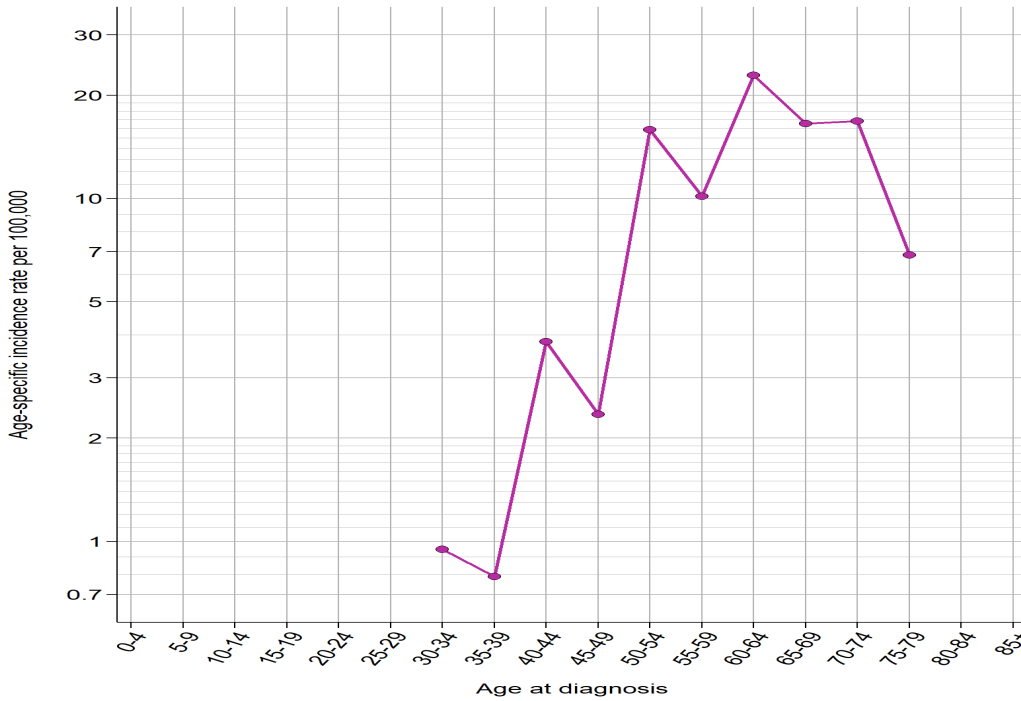


Figure 61 Comparison of cervical cancer incidence rate with incidence rates of other countries

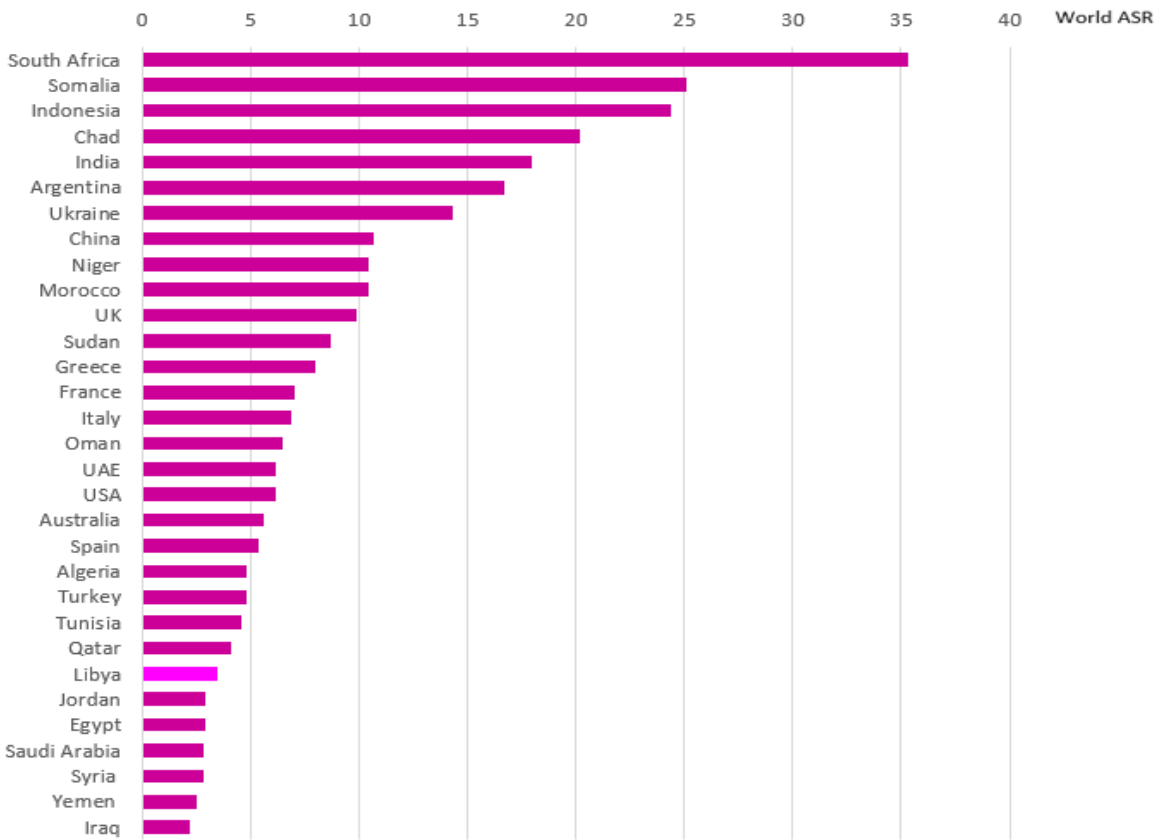
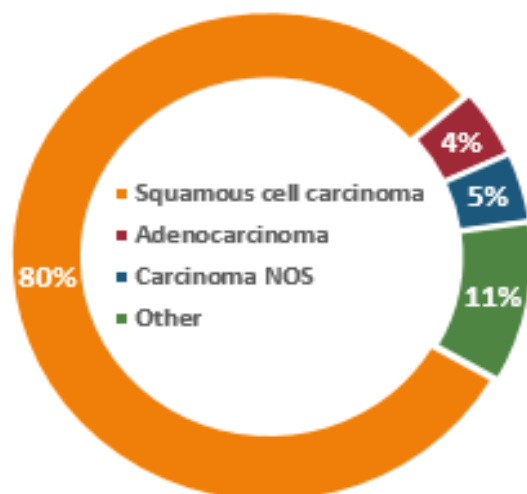


Figure 62 Histological types of cervical cancer



Uterus (ICD-10 Codes C54-55)

In the whole of Libya, a total of 274 cases of cancer uterus were recorded in 2020, accounting for 4.1% of all new cancers. Uterine cancer was the third most common cancer in females (7.23%) after breast and colorectal cancers and the seventh most common cancer in both sexes. Compared with countries in the same region, the incidence of uterine cancer amongst Libyan females is the highest in the region. The most common histological type was endometroid adenocarcinoma (63%).

Table 23 Uterine cancer statistics

Statistics	Females
Number of cases	274
Percentage of all cancers (%)	7.3
Crude rate (per 100,000)	8.1
World Age Standardized Rate (per 100,000)	14.7
Cumulative risk (0-74 years) %	1.89

Figure 63 Age group distribution of uterine cancer

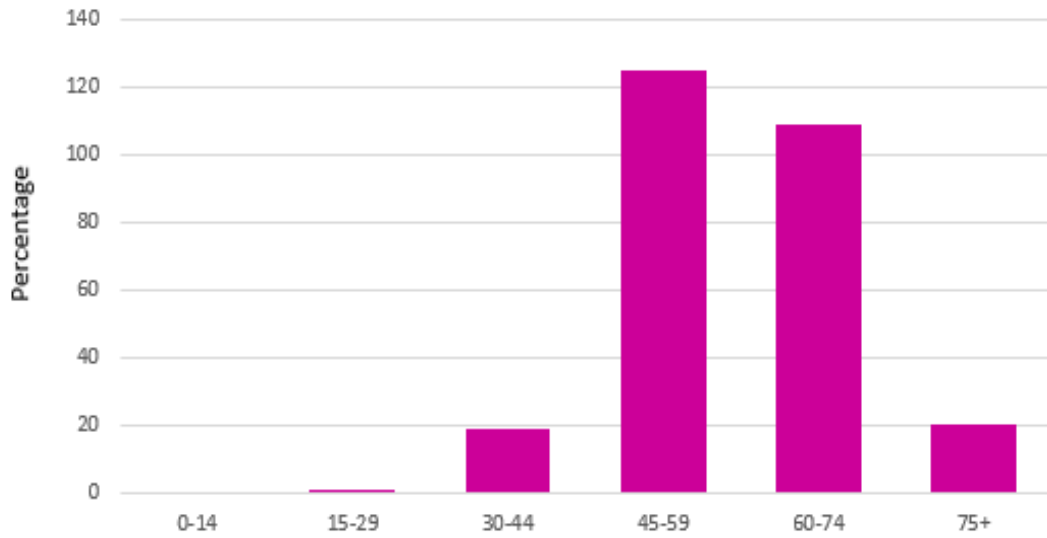


Figure 64 Uterine cancer age specific incidence rate per 100,000

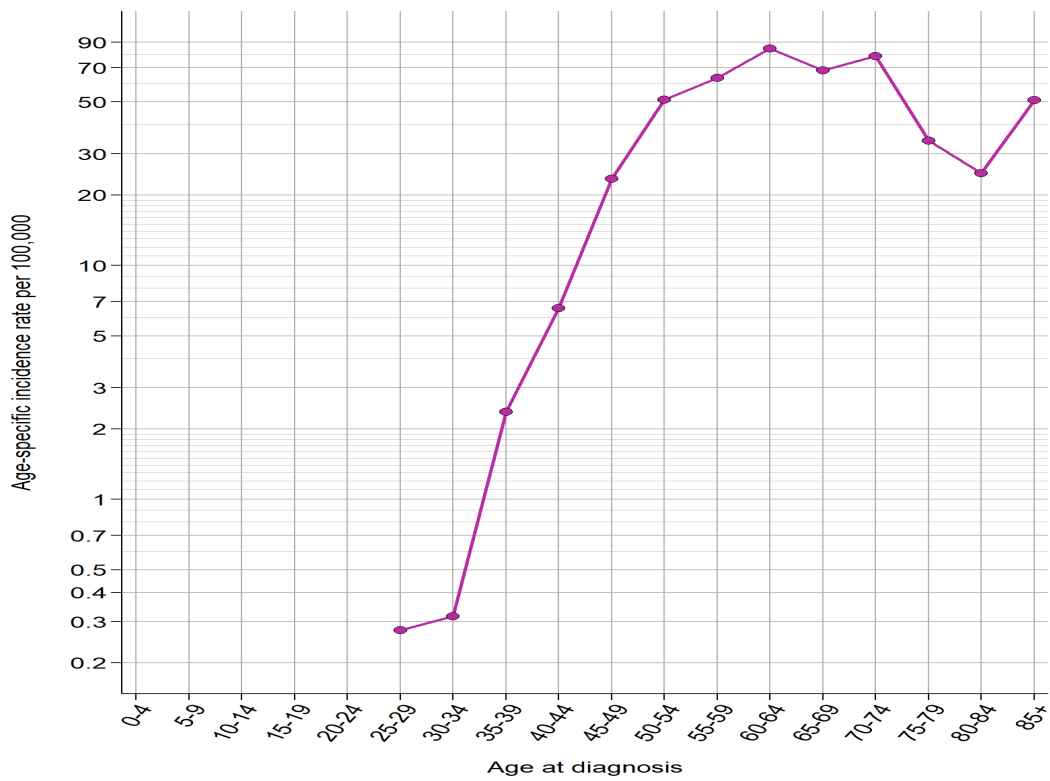


Figure 65 Comparison of uterine cancer incidence rate with incidence rates of other countries

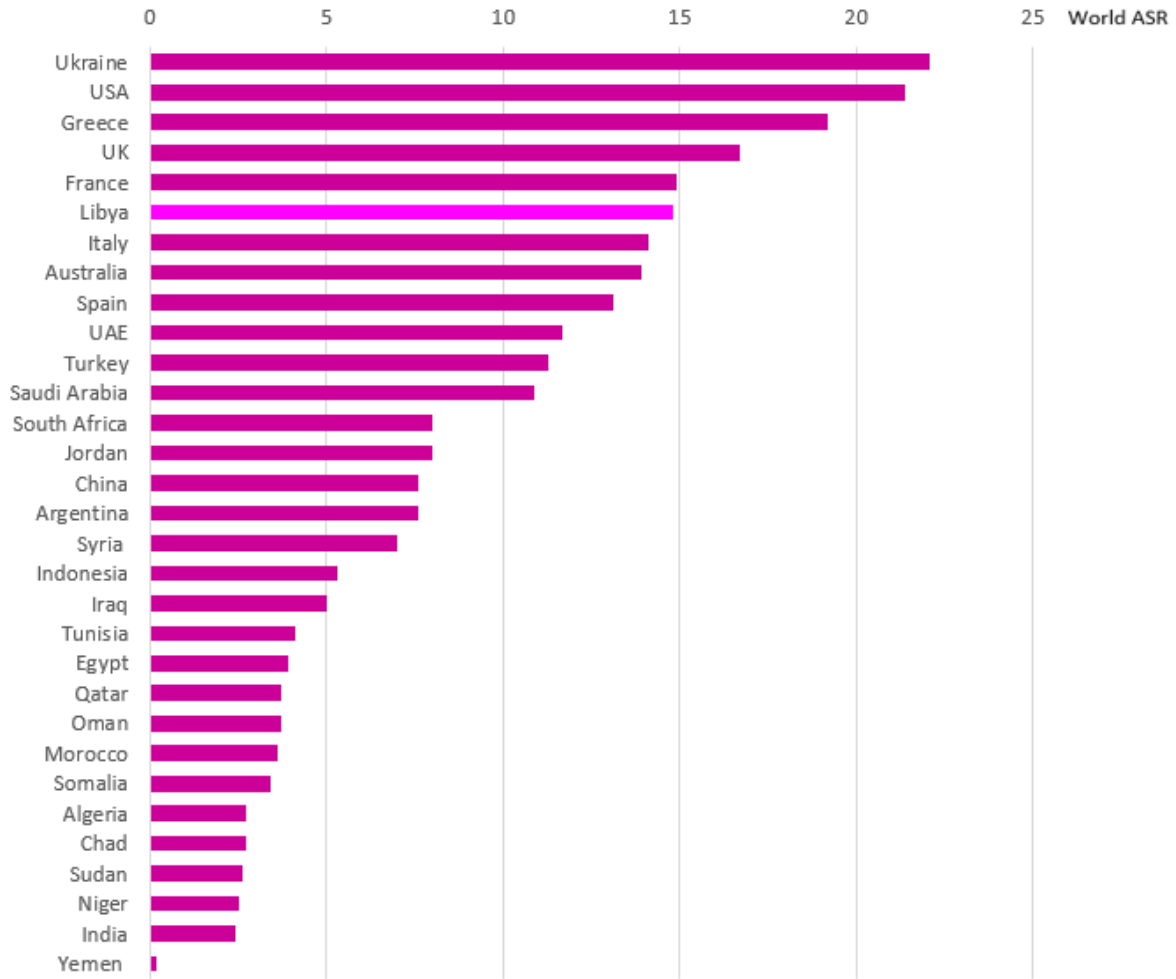
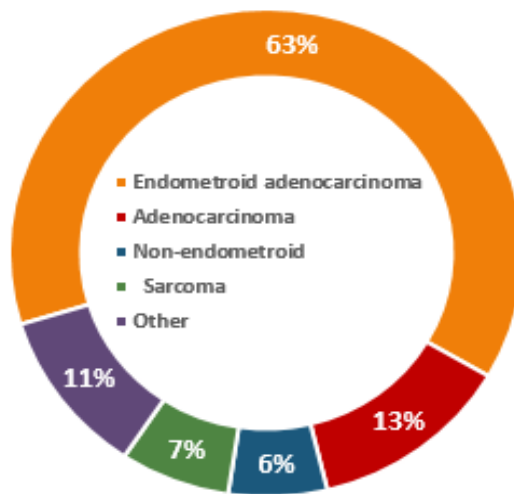


Figure 66 Histological types of uterine cancer



Ovary (ICD-10 Code C56)

A total of 168 ovarian cancers were diagnosed in Libya during 2020, accounting for 4.5% of all cancers in females. International comparisons show that the age-standardized incidence rate of ovarian cancer in Libya is higher than the average rates of countries in the same region. The most common histological type was serous adenocarcinoma (37%).

Table 24 Ovarian cancer statistics

Statistics	Females
Number of cases	168
Percentage of all cancers (%)	4.5
Crude rate (per 100,000)	5.0
World Age Standardized Rate (per 100,000)	8.0
Cumulative risk (0-74 years) %	0.85

Figure 67 Age group distribution of ovarian cancer

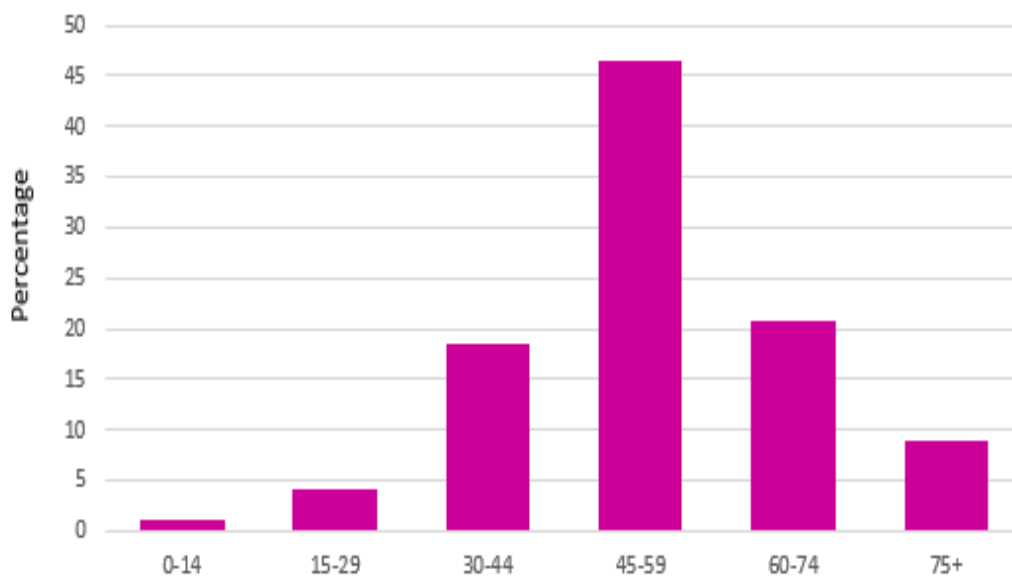


Figure 68 Ovarian cancer age-specific incidence rate per 100,000

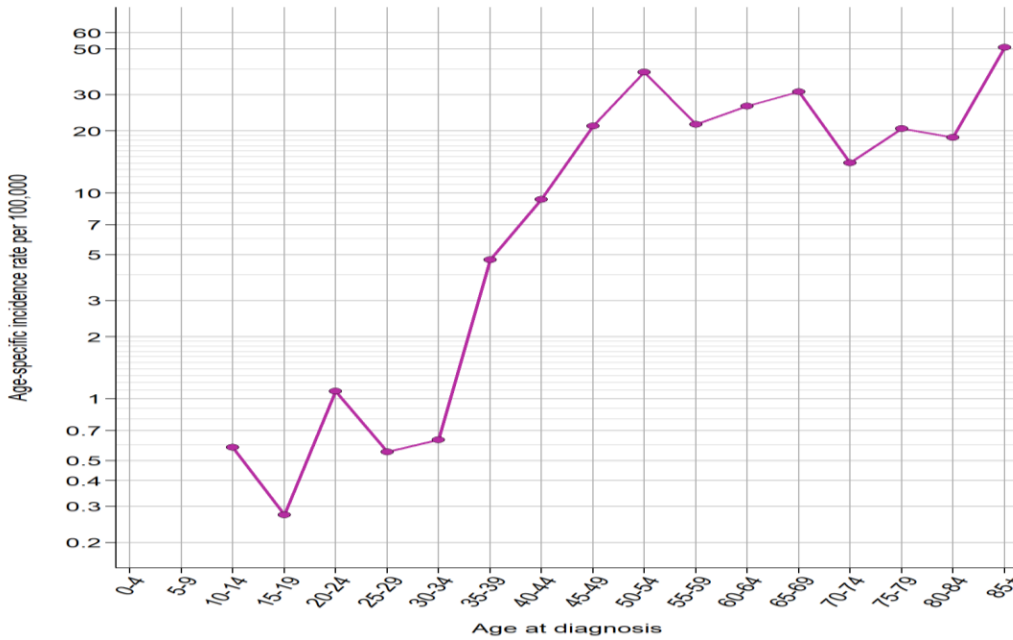


Figure 69 Comparison of ovarian cancer incidence rate with incidence rates of other countries

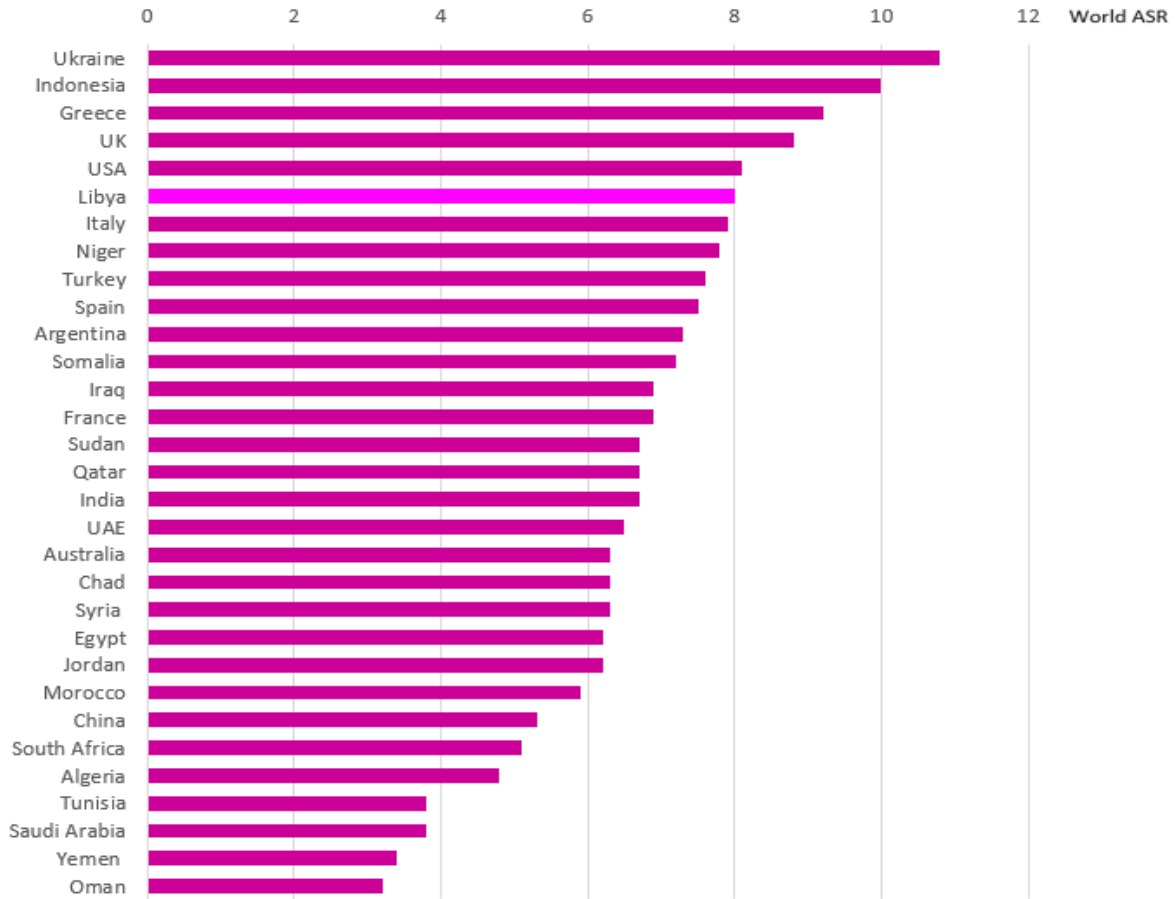
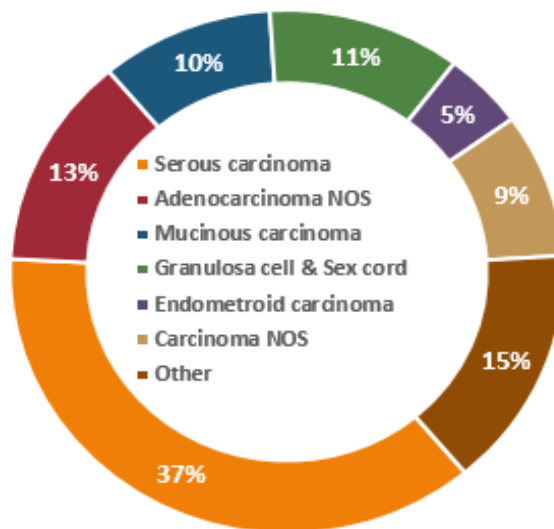


Figure 70 Histological types of ovarian cancer



Prostate (ICD-10 Code C61)

Prostate cancer was the fifth most common cancer with a total of 325 cases accounting for 4.9% of all cancer cases. It was the third most common cancer in males after colorectal and lung malignancies, accounting for 11.1% of all male cancers. Compared to other countries in the region, Libya showed lower incidence rate of prostatic cancer. The most frequent histopathological type was adenocarcinoma accounting for (90%).

Table 25 Cancer prostate statistics

Statistics	Males
Number of cases	325
Percentage of all cancers (%)	11.1
Crude rate (per 100,000)	9.3
World Age Standardized Rate (per 100,000)	15.1
Cumulative risk (0-74 years) %	1.73

Figure 71 Age group distribution of cancer prostate

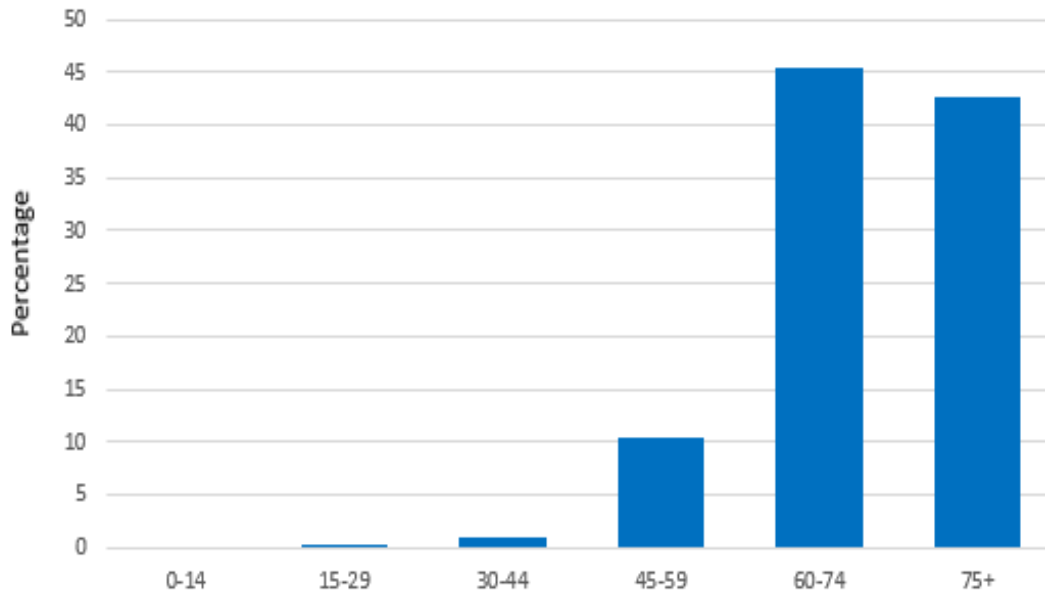


Figure 72 Prostatic cancer age-specific incidence rate per 100,000

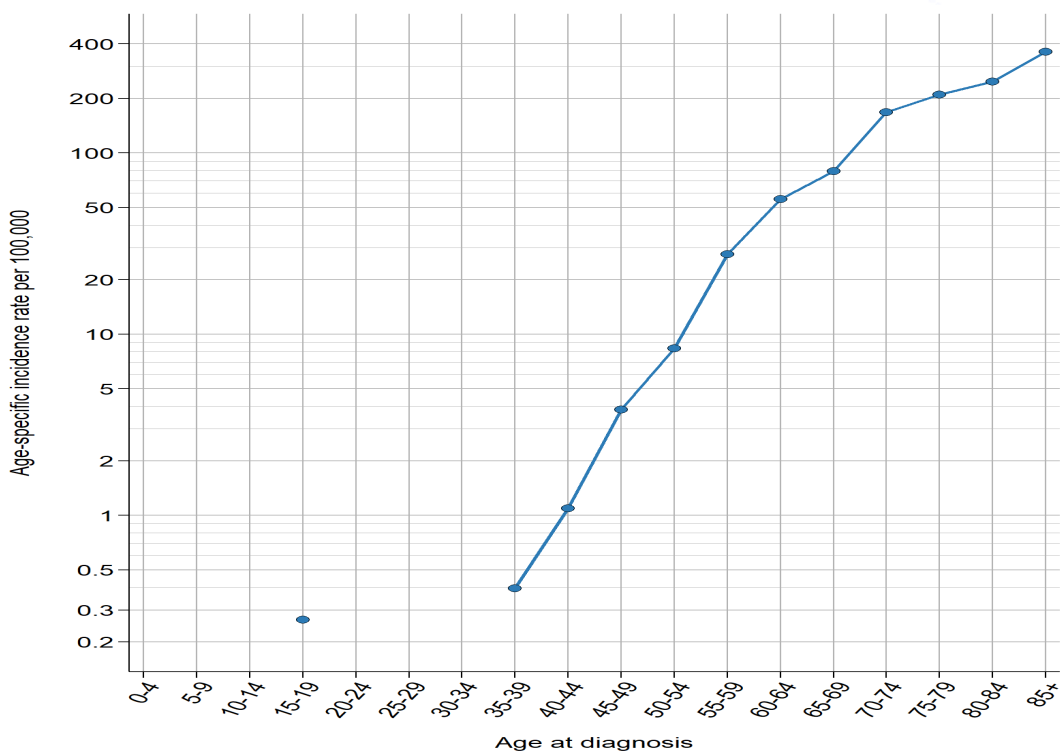


Figure 73 Comparison of prostate cancer incidence rate with incidence rates of other countries

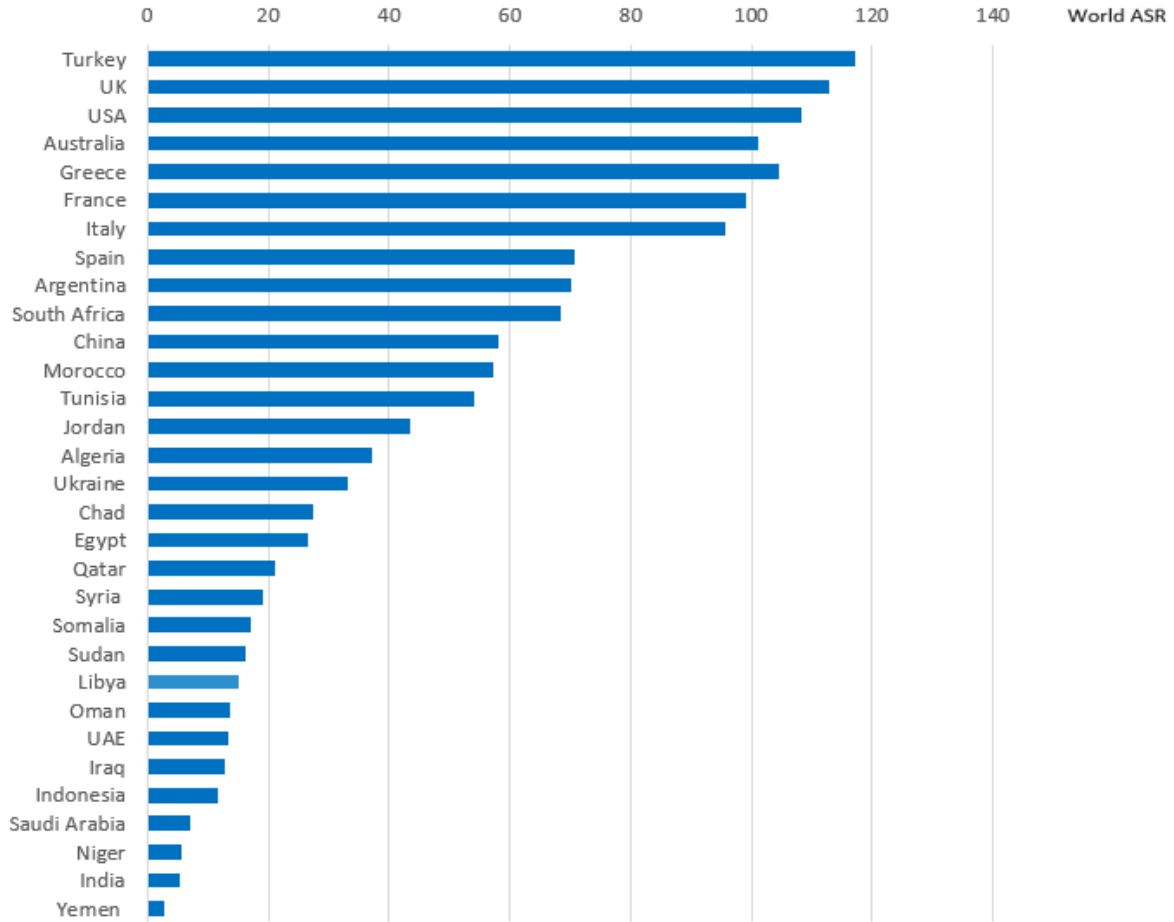
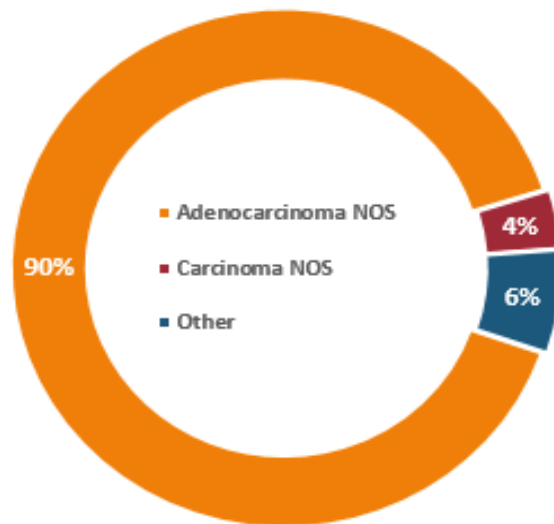


Figure 74 Histological types of cancer prostate



Kidney (kidney and urinary tract) (ICD-10 Codes C64-66, C68)

A total of 124 renal cancers were diagnosed in Libya in 2020, accounting for 1.8% of all cancer cases. Renal cancers are more common in males (60%) than females. International comparisons show that renal malignancy incidence in Libya is just less than the incidence estimated for Egypt but higher than that estimated for other neighboring countries namely, Tunisia, Morocco and Algeria. The most commonly encountered histological type was renal cell carcinoma (68%).

Table 26 Kidney cancer statistics

Statistics	Males	Females
Number of cases	75	49
Percentage of all cancers (%)	2.6	1.3
Crude rate (per 100,000)	2.2	1.4
World Age Standardized Rate (per 100,000)	3.4	2.4
Cumulative risk (0-74 years) %	0.39	0.28

Figure 75 Age group distribution of kidney cancer

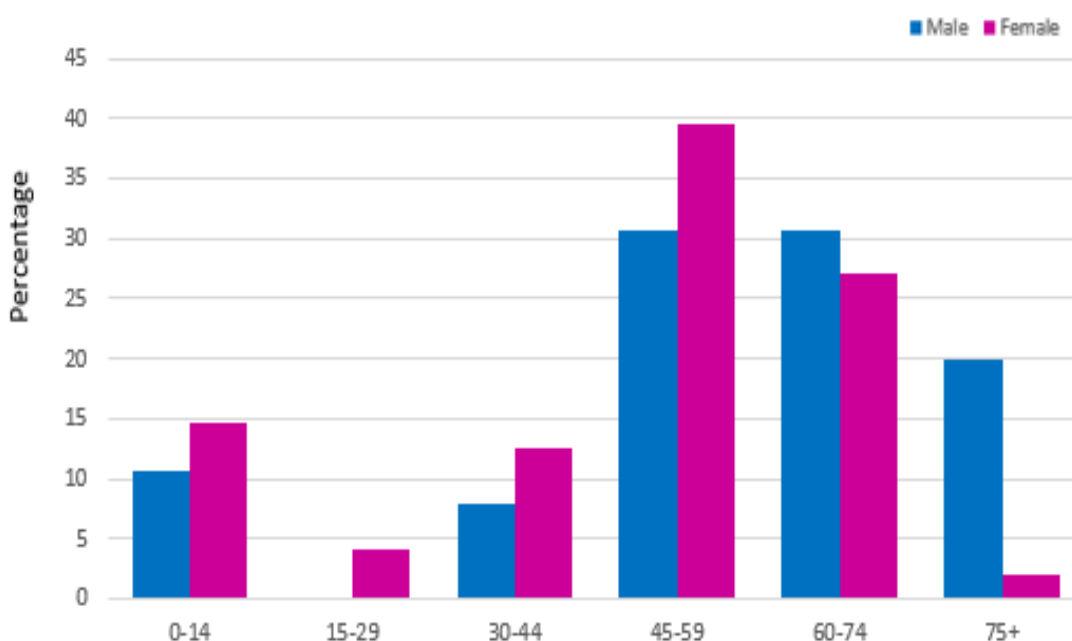


Figure 76 Kidney cancer age-specific incidence rate per 100,000

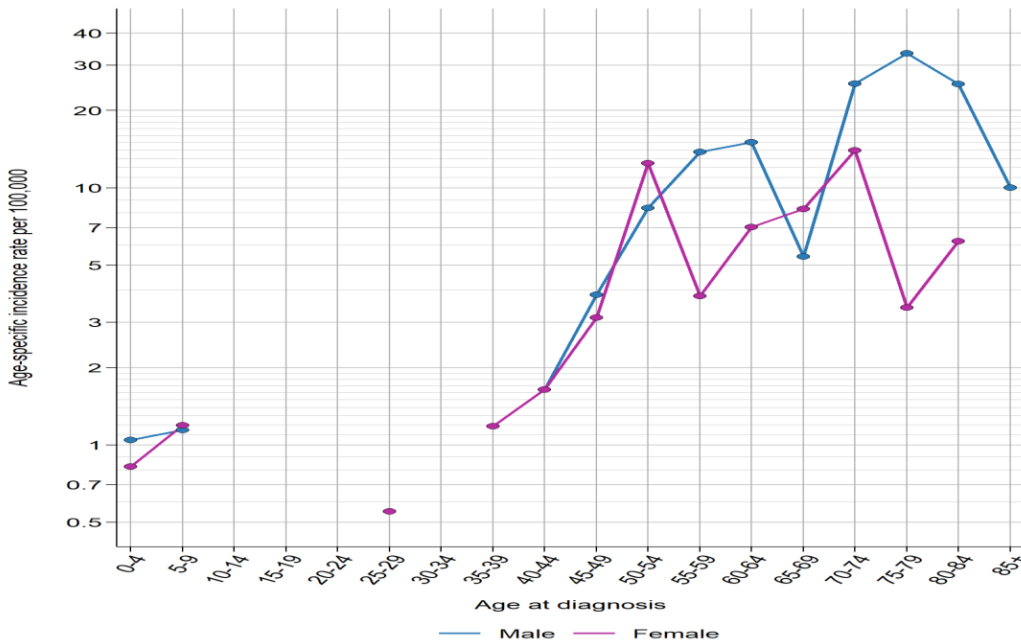


Figure 77 Comparison of kidney cancer incidence rate with incidence rates of other countries

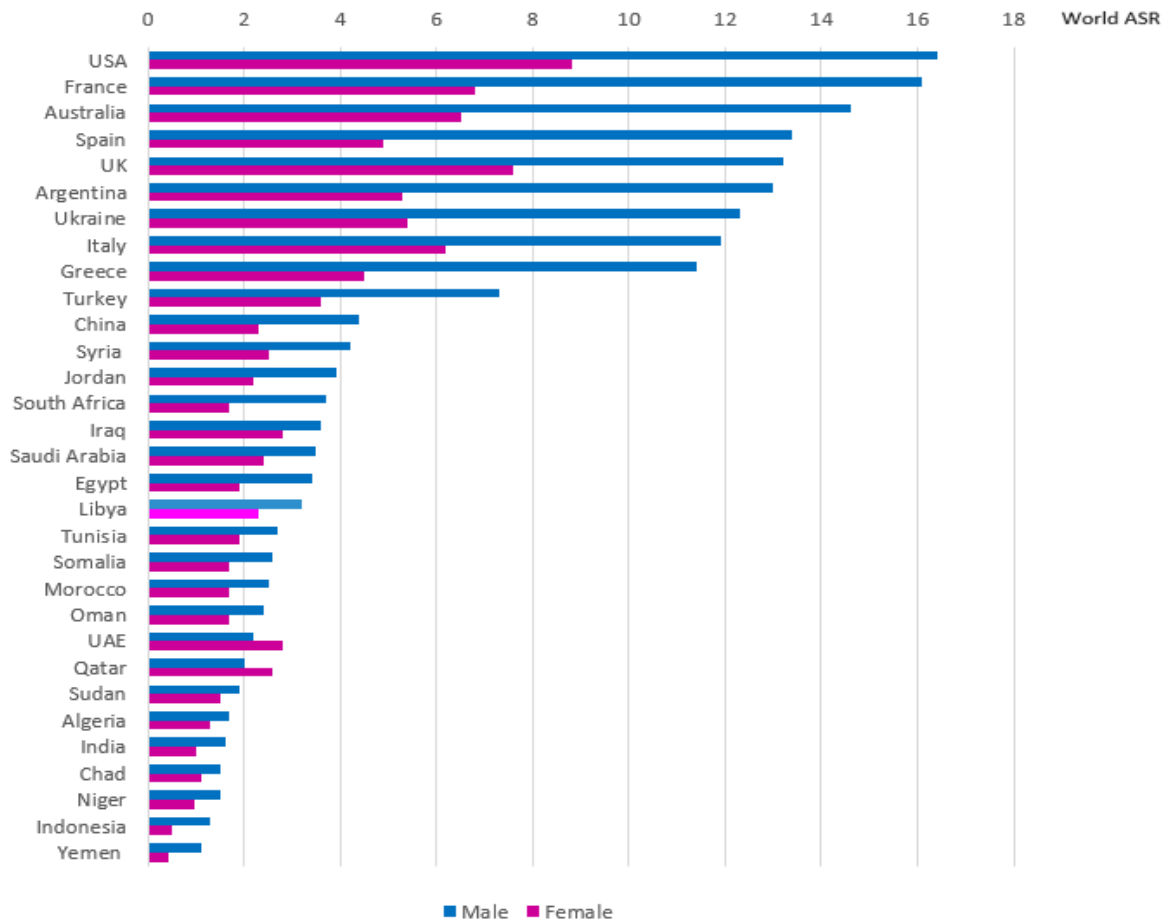
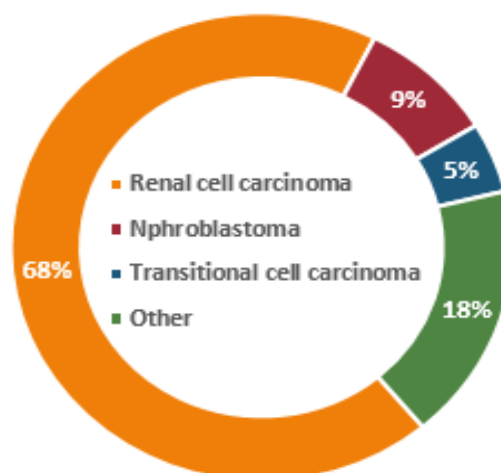


Figure 78 Histological types of kidney cancer



Bladder (ICD-10 Code C67)

Urinary bladder cancer was the ninth most commonly registered cancer with a total of 215 new patients in 2020, accounting for 3.22% of all cancers, with enormous predominance in males (82%). International comparisons show that the incidence of bladder cancer in Libya is the lowest in North Africa, the highest incidence rate in North Africa was observed in Egypt (more than 2.5 folds than that recorded in Libya). Transitional cell carcinoma was the most common histological type (79% of all microscopically verified cases). Whereas 5% of bladder cancers were squamous cell carcinoma.

Table 27 Bladder cancer statistics

Statistics	Males	Females
Number of cases	177	38
Percentage of all cancers (%)	6.1	1.0
Crude rate (per 100,000)	5.1	1.1
World Age Standardized Rate (per 100,000)	8.6	1.9
Cumulative risk (0-74 years) %	1.05	0.23

Figure 79 Age group distribution of bladder cancer

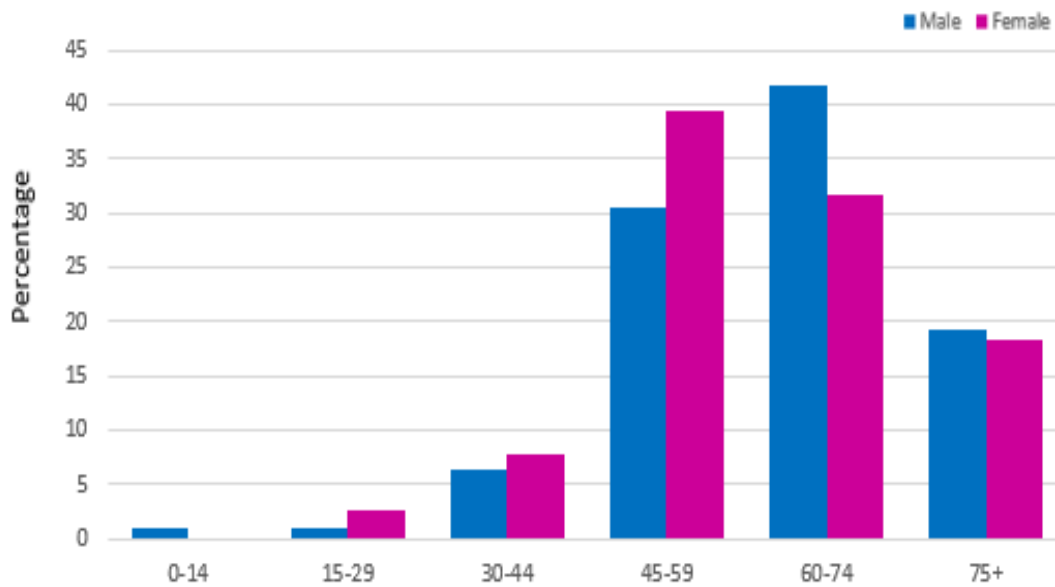


Figure 80 Bladder cancer age specific incidence rate per 100,000

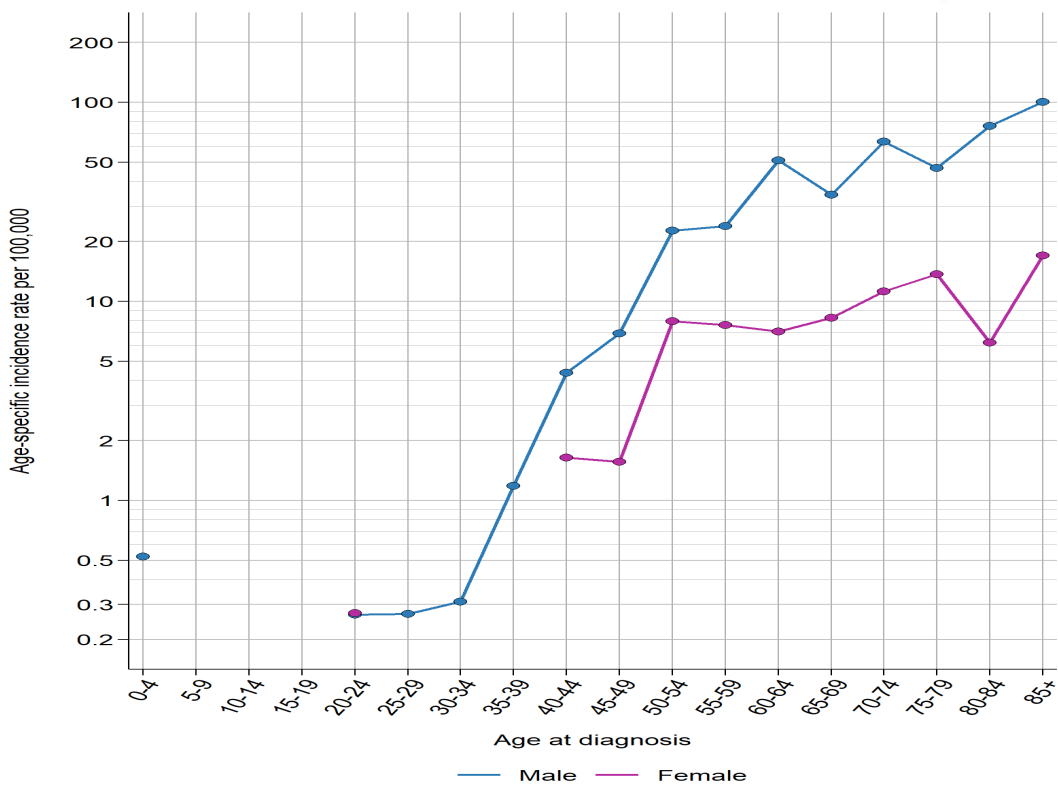


Figure 81 Comparison of bladder cancer incidence rate with incidence rates of other countries

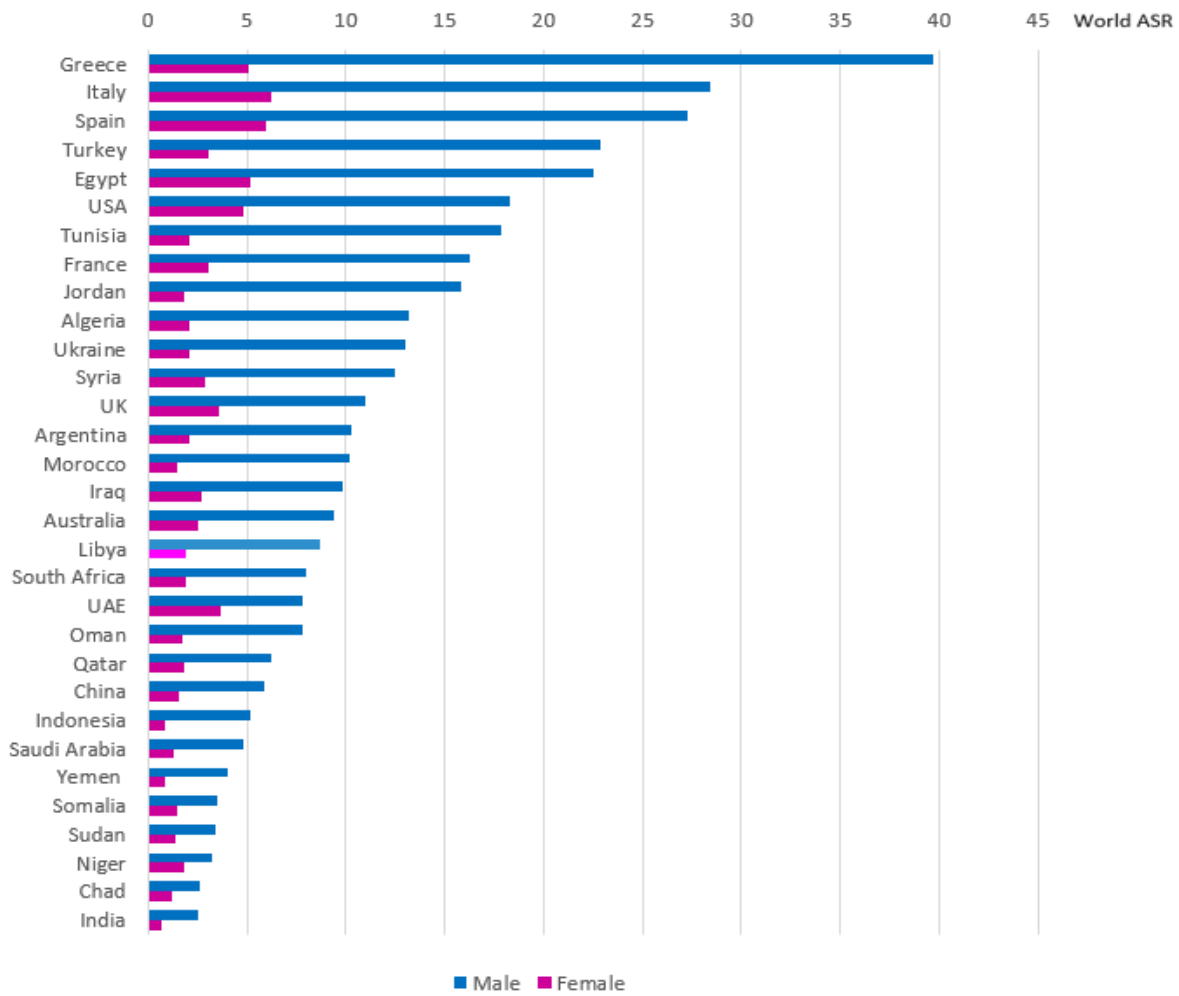
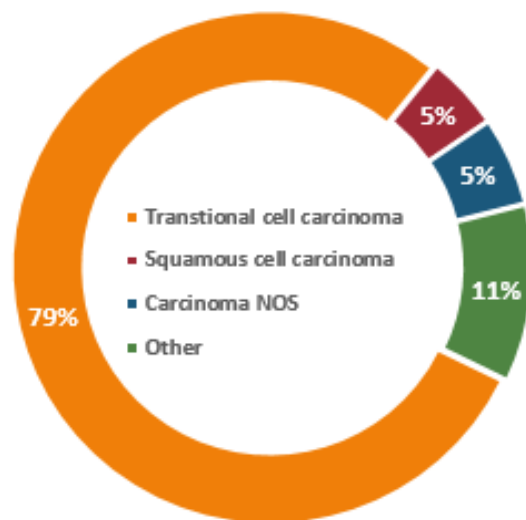


Figure 82 Histological types of bladder cancer



Brain and Central Nervous System (ICD-O Code C70-72)

A total of 216 brain and central nervous system cancer cases were added to the national cancer registry database accounting for (3.2%) of all cancer cases. Brain cancer was the eighth most common cancer in Libya. Most brain tumors were gliomas; glioblastoma was the most common type accounting for (41%) followed by astrocytoma and medulloblastoma, (13%) and (11%) respectively.

Table 28 Brain and central nervous system cancer statistics

Statistics	Males	Females
Number of cases	128	88
Percentage of all cancers (%)	4.4	2.3
Crude rate (per 100,000)	3.7	2.6
World Age Standardized Rate (per 100,000)	5.0	3.6
Cumulative risk (0-74 years) %	0.48	0.38

Figure 83 Age group distribution of brain and central nervous system malignancy

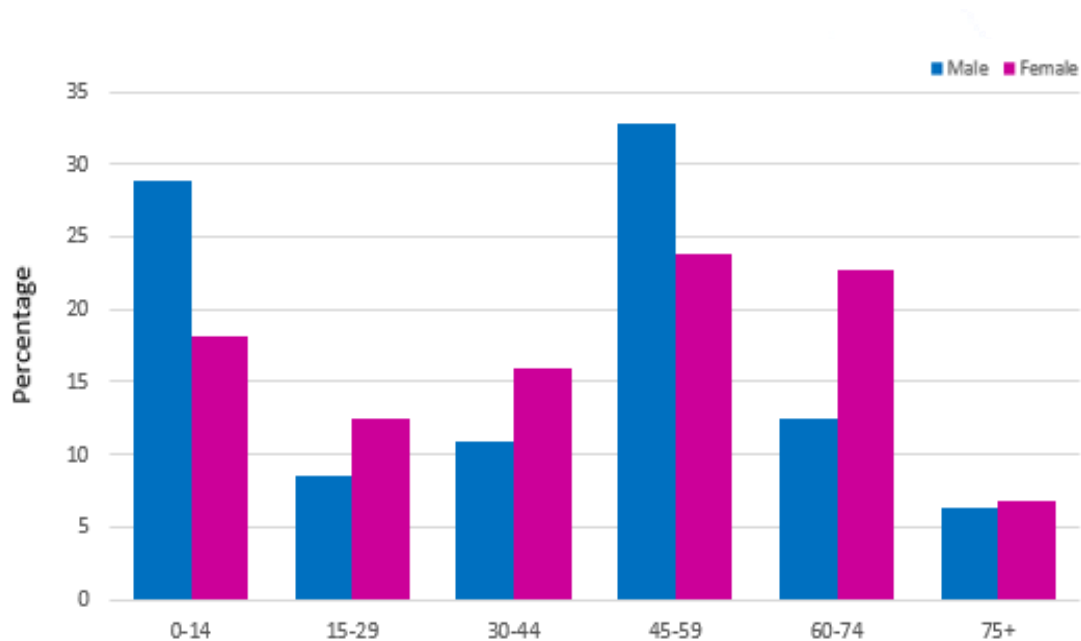


Figure 84 Brain and central nervous system cancer age-specific incidence rate per 100,000



Figure 85 Comparison of brain and nervous system cancer incidence rate with incidence rates of other countries

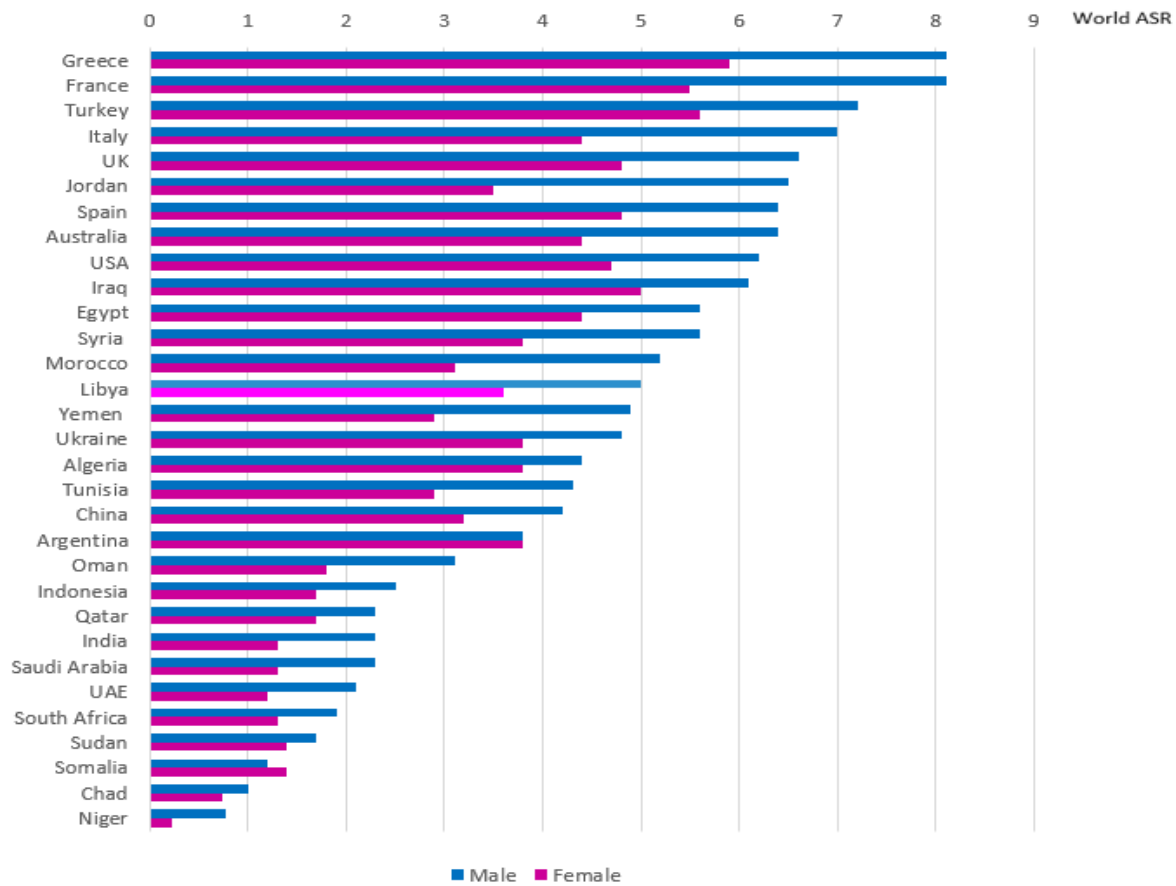
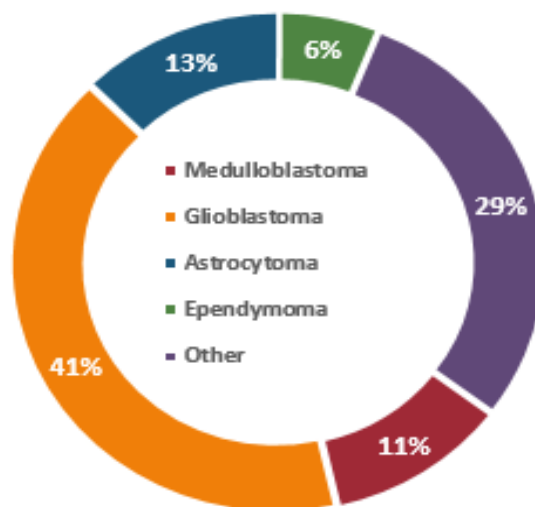


Figure 86 Histological types of brain and central nervous system cancer



Thyroid (ICD-O Code C73)

A total of 170 thyroid cancer cases were diagnosed in Libya during 2020 with an overwhelming predominance in females (83.5%). According to international comparisons, Libya's thyroid cancer rates are roughly comparable to those of other North African countries. The most common histological type was the papillary carcinoma (69%).

Table 29 Thyroid cancer statistics

Statistics	Males	Females
Number of cases	28	142
Percentage of all cancers (%)	1.0	3.8
Crude rate (per 100,000)	0.8	4.2
World Age Standardized Rate (per 100,000)	1.1	5.4
Cumulative risk (0-74 years) %	0.12	0.52

Figure 87 Age group distribution of thyroid cancer

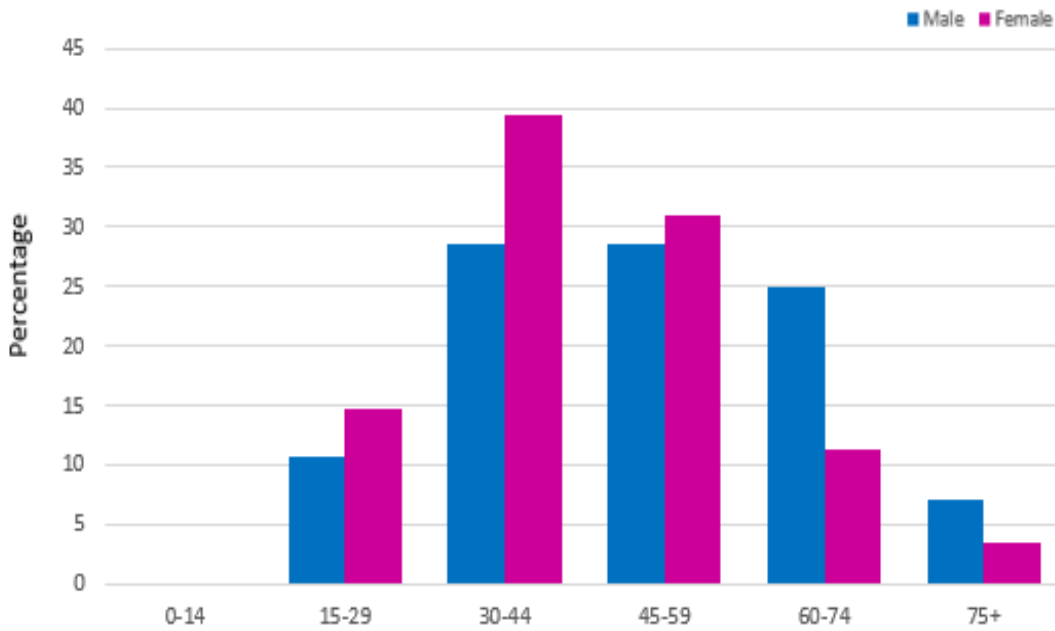


Figure 88 Thyroid cancer age-specific incidence rate per 100,000

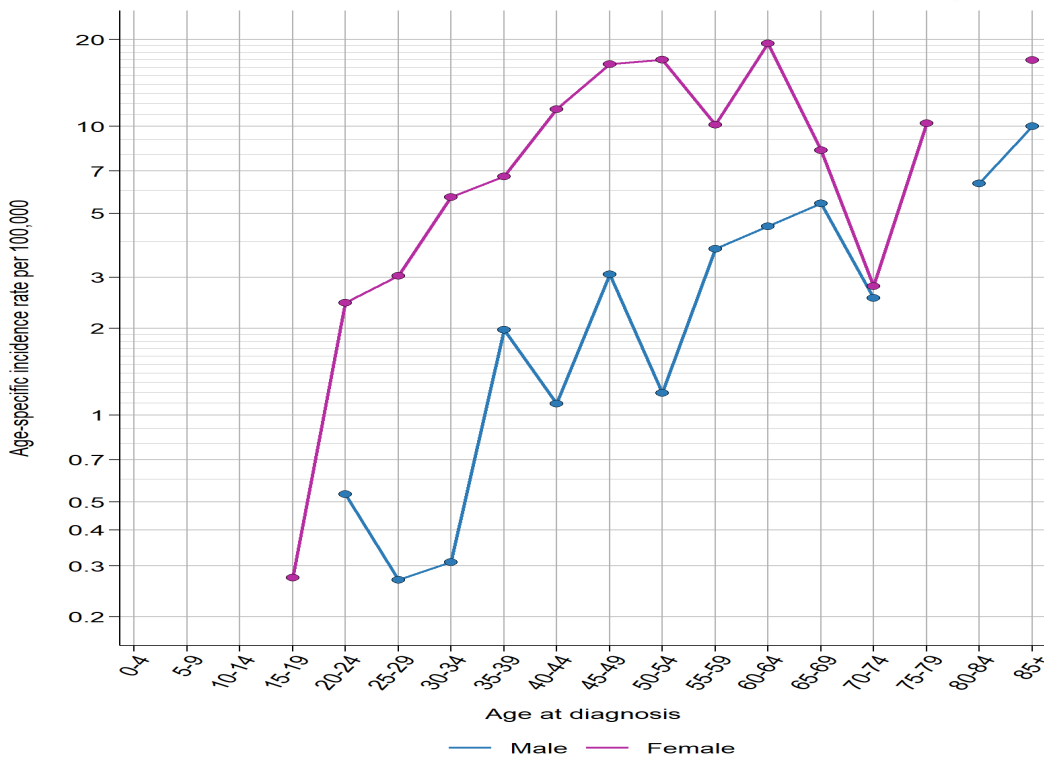


Figure 89 Comparison of thyroid cancer incidence rate with incidence rates of other countries

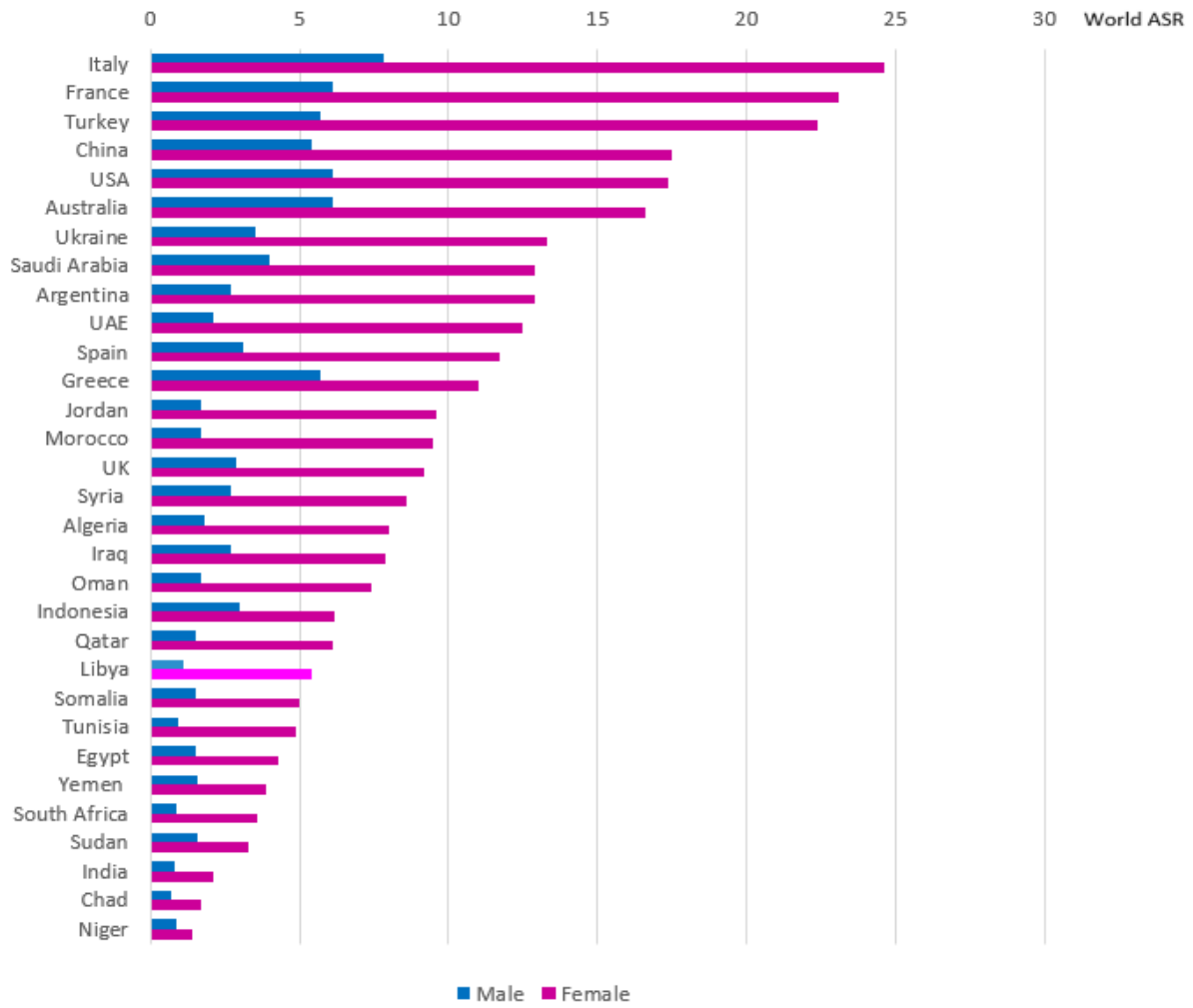
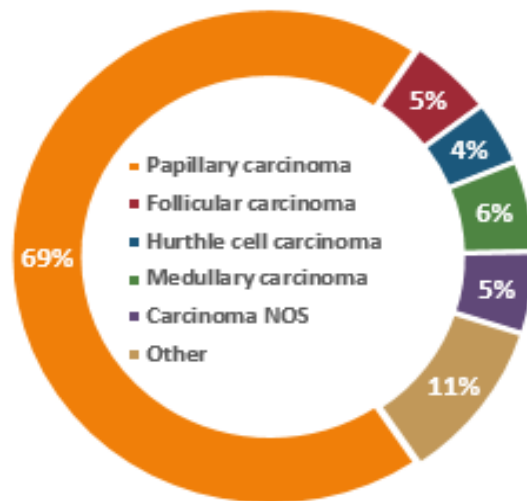


Figure 90 Histological types of thyroid cancer



Malignant Lymphoma (ICD-10 Codes C81-85, C96)

Lymphomas were the Fourth most commonly registered cancer in 2020, accounting for 5.41 % of all cancers. A total of 205 non-Hodgkin lymphomas were added to the registry database, constituting (56.78%) of all lymphomas, Compared to 124 Hodgkin lymphomas (34.35%).

Hodgkin Lymphoma (ICD-10 Code C81)

A total of 124 Hodgkin lymphoma cases were diagnosed in 2020 among Libyan residents, accounting for 1.9% of all cancers. Similar to Algeria, the incidence amongst Libyan females is slightly higher than the incidence among males and in contrast to other neighboring countries where the incidence rates are higher among males. Overall, the incidence of Hodgkin lymphoma in Libya is the lowest in Northern African countries. Apart from non-otherwise specified Hodgkin lymphoma, nodular sclerosis was the most common form (40%) followed by mixed cellularity (15%).

Table 30 Hodgkin lymphoma statistics

Statistics	Males	Females
Number of cases	59	65
Percentage of all cancers (%)	2.0	1.7
Crude rate (per 100,000)	1.7	1.9
World Age Standardized Rate (per 100,000)	1.7	1.8
Cumulative risk (0-74 years) %	0.13	0.15

Figure 91 Age group distribution of Hodgkin lymphoma

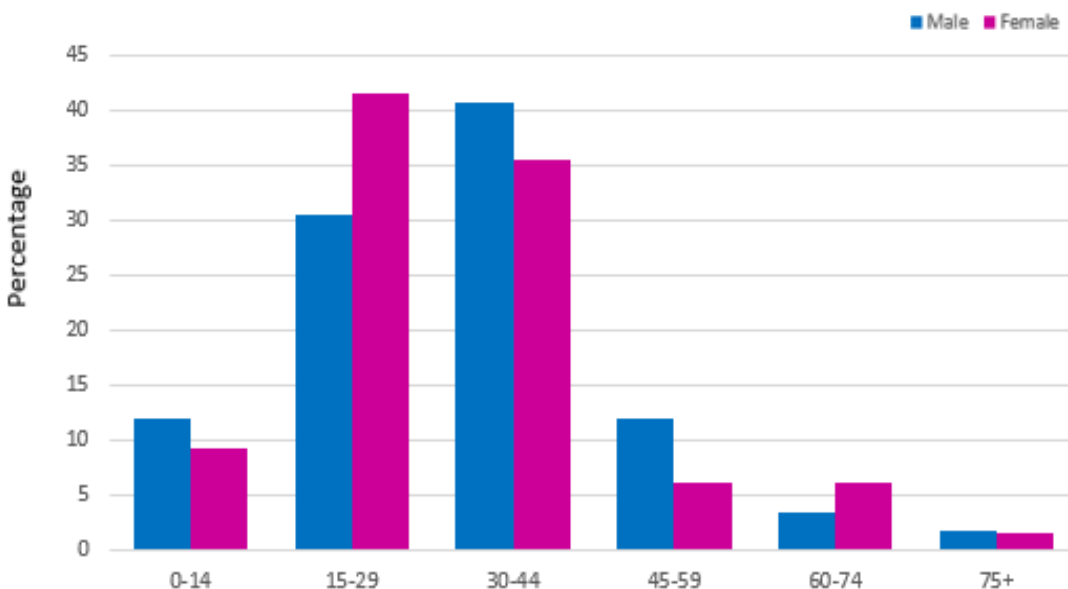


Figure 92 Hodgkin lymphoma age-specific incidence rate per 100,000

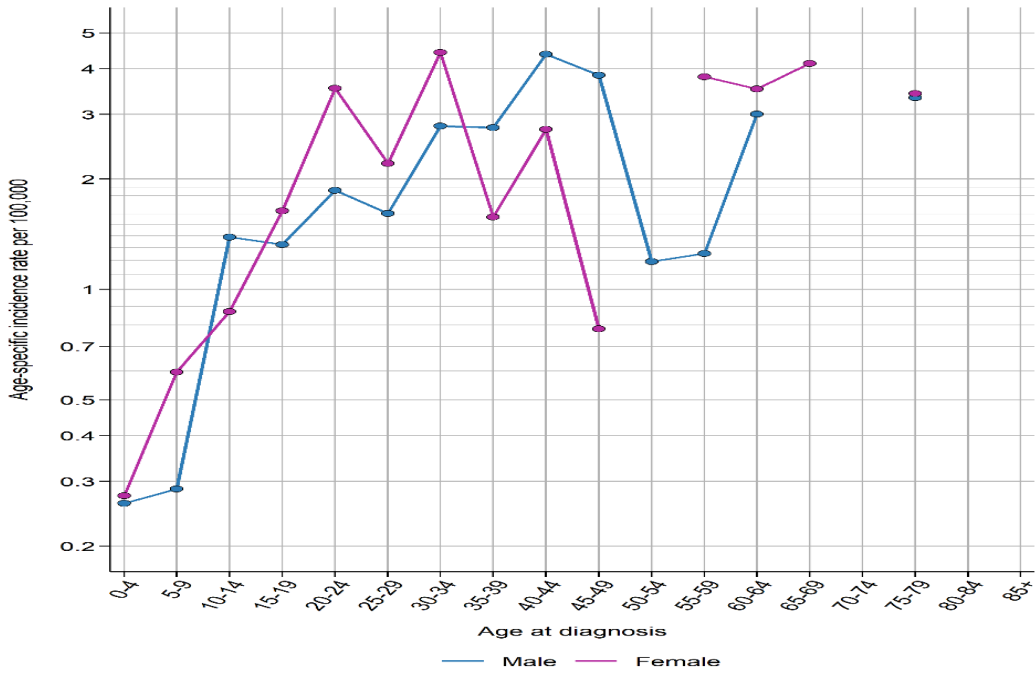


Figure 93 Comparison of Hodgkin lymphoma incidence rate with incidence rates of other countries

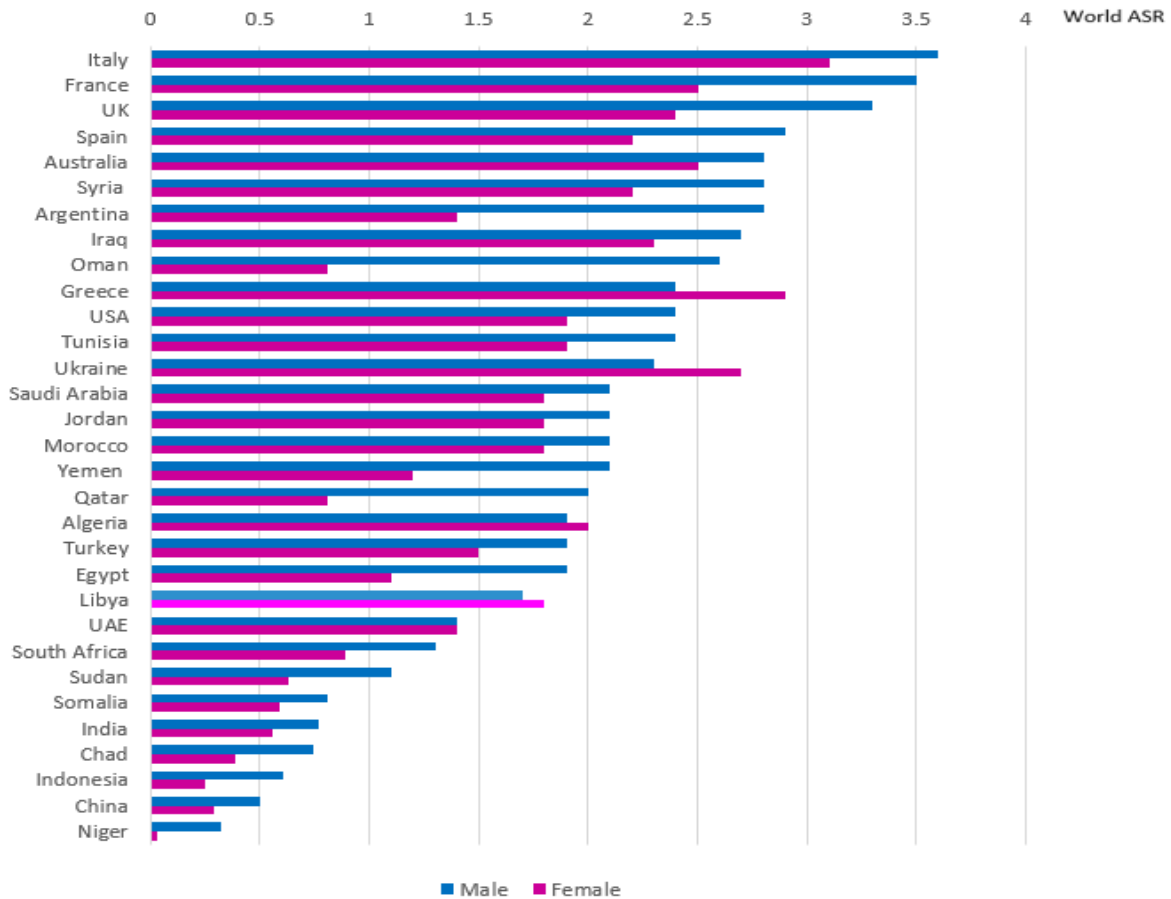
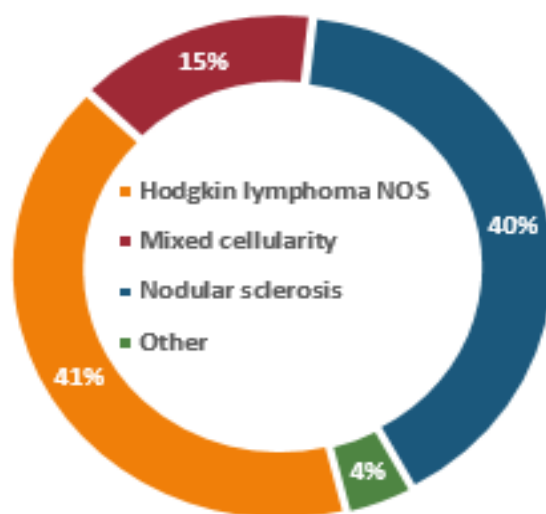


Figure 94 Histological types of Hodgkin lymphoma



Non-Hodgkin Lymphoma (ICD-10 Codes C82-85, C96)

A total of 205 non-Hodgkin lymphoma cases were diagnosed in 2020, accounting for 3.1% of all cancers. It is more common in males (59.5%). Compared with neighboring North African countries and similar to Algeria, Libya has a lower incidence rate of non-Hodgkin lymphoma. Apart from non-Hodgkin lymphomas NOS (non-otherwise specified), diffuse large B cell lymphoma was the most frequent non-Hodgkin lymphoma type (33%) followed by follicular lymphoma (6%).

Table 31 Non-Hodgkin lymphoma statistics

Statistics	Males	Females
Number of cases	122	83
Percentage of all cancers (%)	4.2	2.2
Crude rate (per 100,000)	3.5	2.4
World Age Standardized Rate (per 100,000)	4.8	3.5
Cumulative risk (0-74 years) %	0.49	0.36

Figure 95 Age group distribution of non-Hodgkin lymphoma

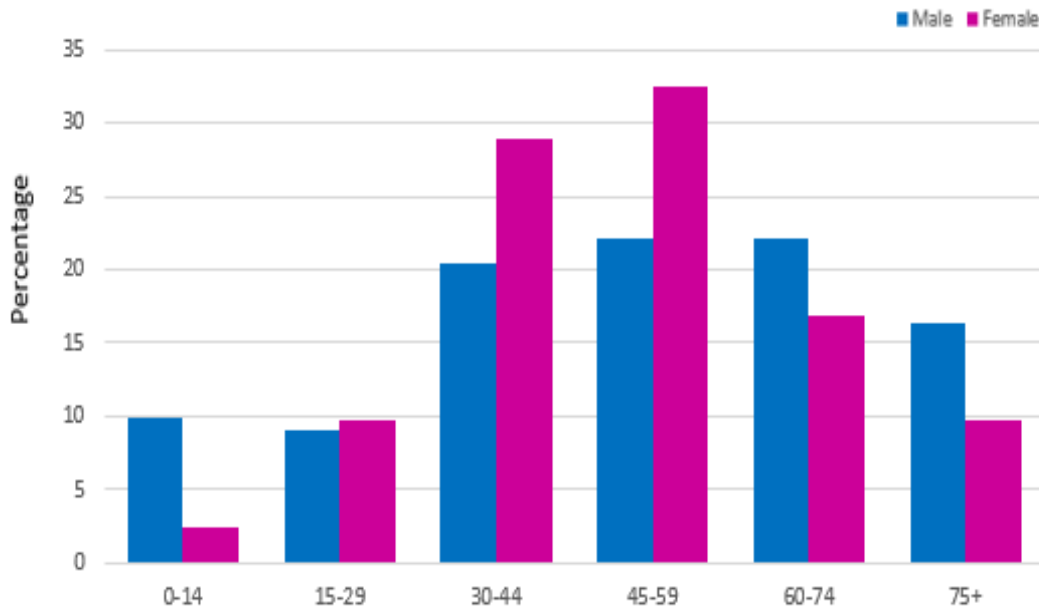


Figure 96 Non-Hodgkin lymphoma age-specific incidence rate per 100,000

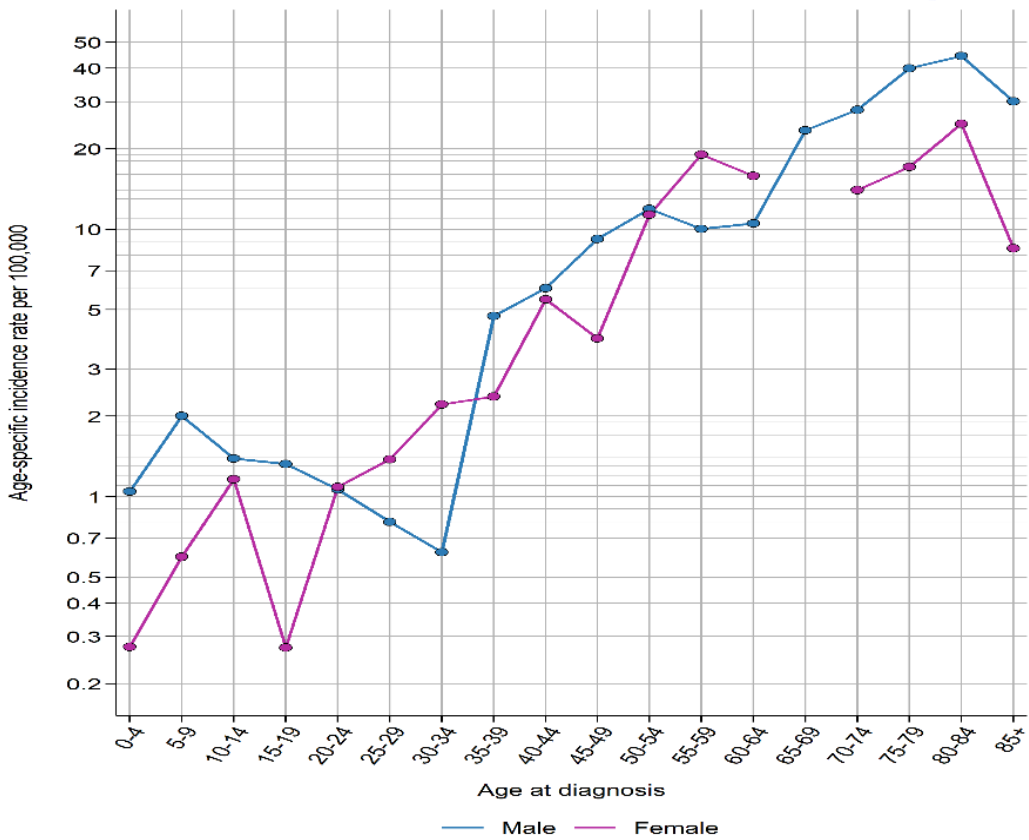


Figure 97 Comparison of non-Hodgkin lymphoma incidence rate with incidence rates of other countries

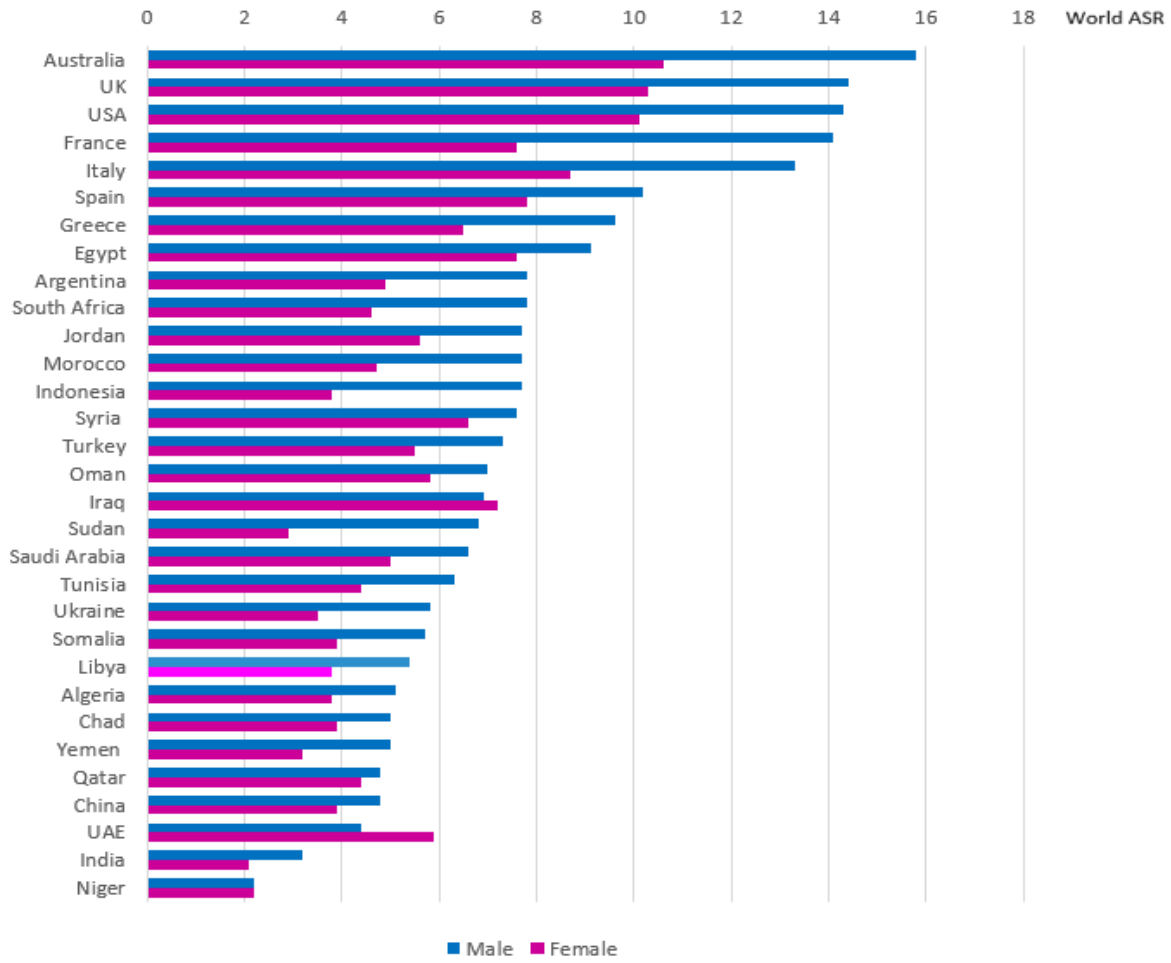
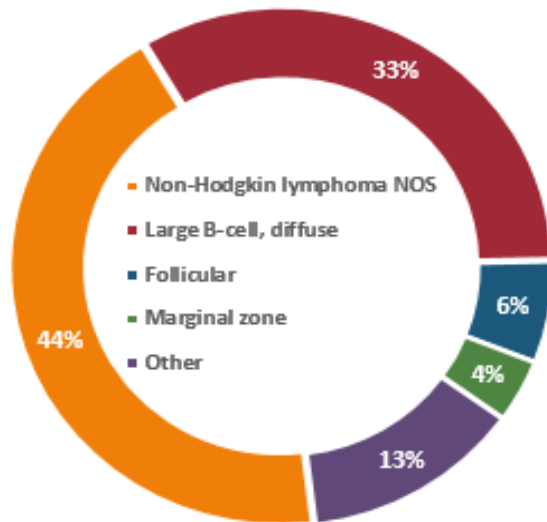


Figure 98 Histological types of non-Hodgkin lymphoma



Leukemia (ICD-10 Codes C91-95)

Between January and December 2020, 293 new leukemia cases were diagnosed in Libya. It was the sixth most commonly diagnosed cancer, accounting for 4.39 % of all new cancer diagnoses. About (42.7%) of leukemias affected children aged 0-14 years. The incidence of leukemias in Libya is similar to that of Tunisia. Acute leukemias were more frequent than chronic leukemias. Acute lymphoblastic leukemia (ALL) was the most common subtype (36% of cases) followed by acute myeloid leukemia (AML) (29%) then chronic myeloid leukemia (18%).

Table 32 Leukemia statistics

Statistics	Males	Females
Number of cases	171	122
Percentage of all cancers (%)	5.9	3.3
Crude rate (per 100,000)	5.0	3.6
World Age Standardized Rate (per 100,000)	5.6	4.4
Cumulative risk (0-74 years) %	0.42	0.36

Figure 99 Age group distribution of Leukemia

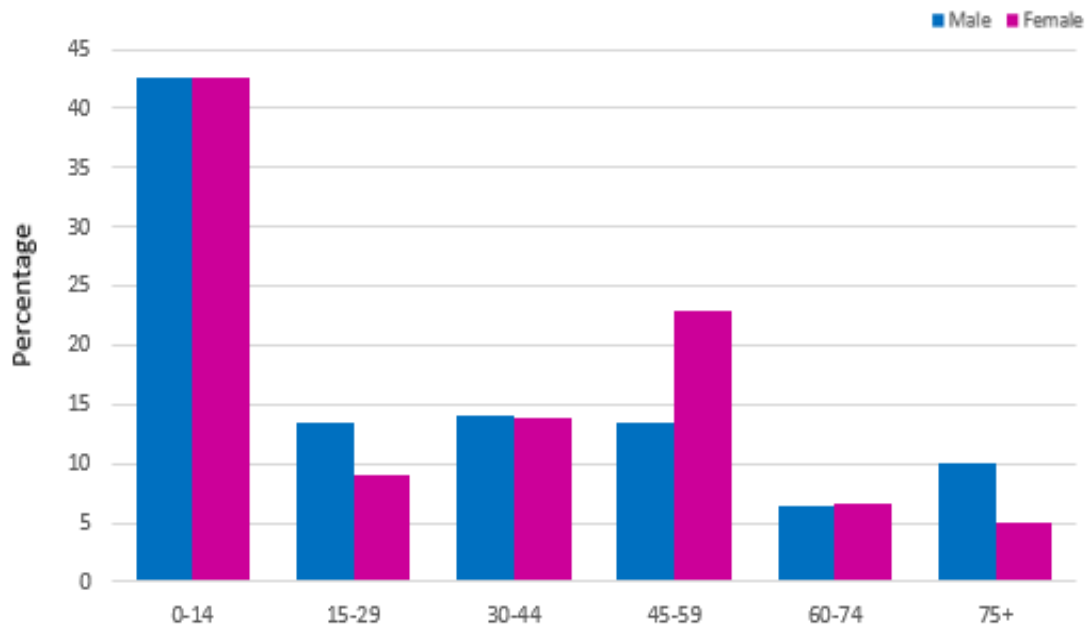


Figure 100 Leukemia age-specific incidence rate per 100,000

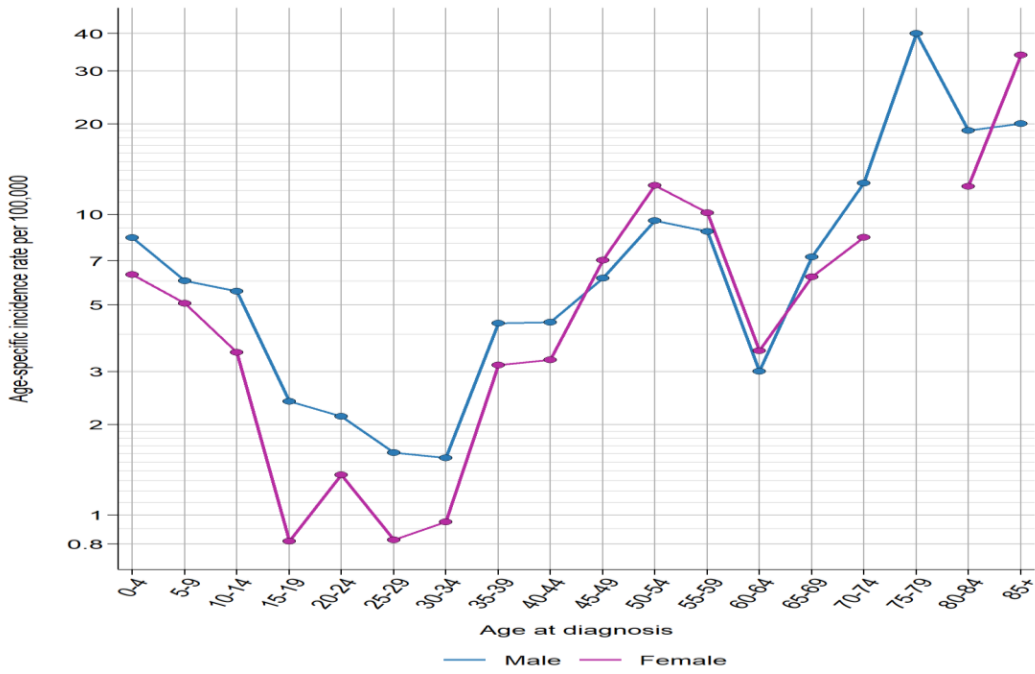


Figure 101 Comparison of leukemia incidence rate with incidence rates of other countries

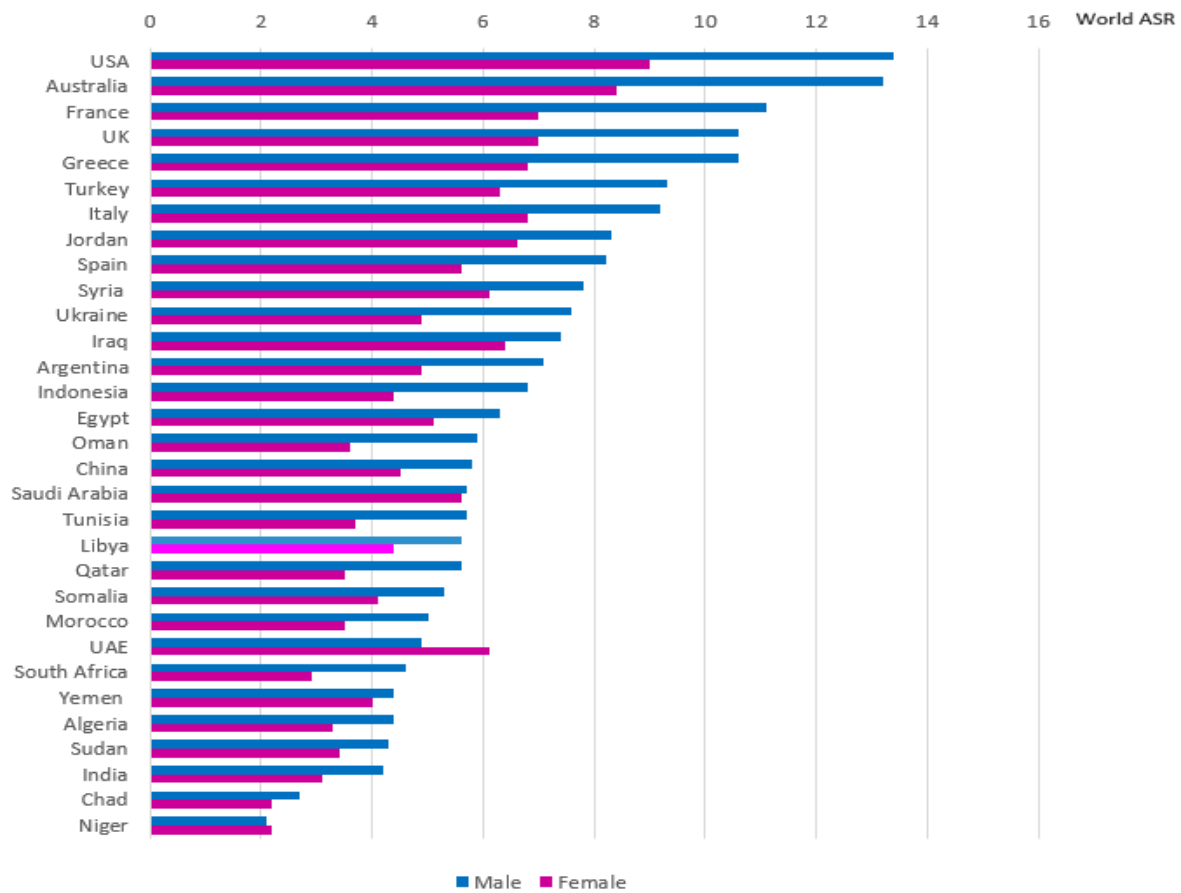
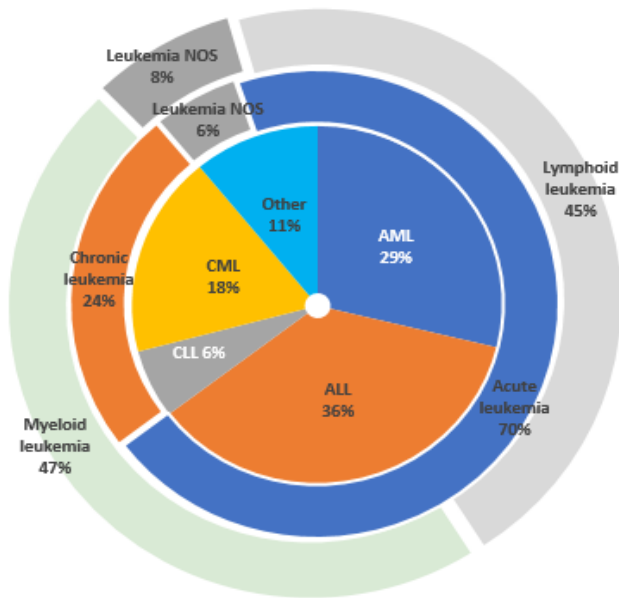


Figure 102 Histological types of leukemia



CHILDHOOD CANCERS (0 TO 14 YEARS)

Between January and December 2020, a total of 297 new cancer cases were diagnosed among children aged (0-14 years) in Libya, accounting for (4.45%) of all cancer cases. Boys were more commonly affected than girls with a male to female ratio 1.4:1. The crude rate was 139.0 per 1000,000 and the age-standardized rate was 141.3 per 1000.000.

The most common cancer types in the pediatric age group (0-14 years) were leukemia 42.1%, brain and nervous system cancer 15.5%, lymphoma 12.0%, neuroblastoma 8.7% and soft tissue malignancy 6.1%.

Table 33 shows incidence of childhood cancer, classified according to the international classification of childhood cancer (ICC-3) (Steliarova-Foucher et al, 2005).

ICCC3		Number of cases						Rates per million				
		0-4	5-9	10-14	All	M/F	% total	0-4	5-9	10-14	crude	ASR
	All	127	93	77	297	1.4	100.0	170.0	135.7	109.3	139.0	141.3
I	Leukaemias	57	39	34	130	1.4	43.8	76.3	56.9	48.3	60.8	61.9
II	Lymphomas	7	11	16	34	1.6	11.4	9.4	16.1	22.7	15.9	15.4
III	CNS neoplasms	20	14	11	45	2.5	15.2	26.8	20.4	15.6	21.1	21.5
IV	Neuroblastoma	15	4	4	23	1.1	7.7	20.1	5.8	5.7	10.8	11.3
IX	Soft tissue sarcomas	12	4	2	18	1.0	6.1	16.1	5.8	2.8	8.4	8.9
V	Retinoblastoma	6	1	0	7	0.4	2.4	8.0	1.5	0.0	3.3	3.6
VI	Renal tumors	7	8	0	15	1.1	5.1	9.4	11.7	0.0	7.0	7.4
VII	Hepatic tumors	1	0	0	1	0.0	0.3	1.3	0.0	0.0	0.5	0.5
VIII	Malignant bone tumors	1	7	4	12	1.4	4.0	1.3	10.2	5.7	5.6	5.5
X	Germ cell tumors	1	2	4	7	0.8	2.4	1.3	2.9	5.7	3.3	3.1
XI-XII	Other	0	3	2	5	0.7	1.7	0.0	4.4	2.8	2.3	2.2



The background features a large white circle on a dark green background. The circle is surrounded by various green geometric shapes, including rounded rectangles and paperclip-like forms. A central graphic shows a pencil tip pointing downwards, with a rainbow-colored gradient emanating from it. The text 'PART V' and 'ANNEXES' is centered within the white circle.

PART V
ANNEXES



NOTIFICATION FORM



البرنامج الوطني لمكافحة السرطان السجل الوطني للسرطان



Cancer Notification Form نموذج التبليغ عن حالات السرطان

بيانات المريض

الإسم*: إسم الأب*: إسم الجد: اللقب*:
اسم الام (ثلاثي)*: الجنس: 1. ذكر 2. انثى
الجنسية*: 1. ليبي 2. غير ليبي (تذكر الجنسية). 9. غير معلوم
الرقم الوطني / جواز السفر (لغير الليبيين)*:
تاريخ الميلاد*:
العنوان*: (المدينة) (المحلة)
العمر:

TUMOUR INFORMATION

Notifying Hospital / Center / Clinic*:

Date of Incidence*: (The date of first contact with the medical services for the cancer in question (if not available) then consider the date of first diagnosis).

Primary Site*:

(Please specify primary organ or site of cancer and exact location if possible) *

Laterality: (0 -Not paired) (1- Right) (2- Left) (3- Bilateral) (9-

Basis of diagnosis: (0.Death certificate only) (1.Clinical only) (2.Clinical investigation) (3.Specific tumour marker) (4.Cytology) (5. Histology of metastasis) (6. Histology of primary) (9.Unknown)

Morphology*:

Behaviour: (0.Benign) (1.Uncertain / Borderline) (2.Carcinoma in-situ) (3.Malignant, Primary site(Invasive))

Grade: (1.Well differentiated) (2.Moderately diff.) (3. Poorly diff.) (4. Undiff. or Anaplastic) (5. T cell, T-precursor) (6.B cell, pre B; B-precursor) (7.Null cell; non-T non-B) (8.Natural killer cell) (9.Unkown, Not

Stage: T N M

Date of last Status at last contact:

Cause of death: (1.This cancer) (1. Alive) (2.Died) (9.Unknown)
(2.Other cause)
(9.Unknown)

Form filled by:

Date of Notification:

Signature:

(*): MANDATORY DATA FIELDS; however, every effort should be made to complete the

REPORTABLE NEOPLASMS

Cancer is a heterogeneous group of diseases characterized by uncontrolled growth and spread of abnormal cells anywhere in the body.

CASES TO BE NOTIFIED* ARE:

- Malignant neoplasms such as carcinoma, sarcoma, leukemia, lymphoma and melanoma.
- In-situ neoplasms.
- Neoplasms with borderline or uncertain malignant potential.
- All tumours (malignant, in-situ, borderline and benign) of the brain and other parts of central nervous system.

توضيح العمل و تعليمات التسجيل

هذا النموذج خاص بالتبليغ عن و تسجيل حالات الأورام من أجل تكوين قاعدة بيانات لحالات الإصابة بالمرض والتي ستساهم في التعرف على معدلات الإصابة و مدى انتشار الأورام بالمجتمع و توزيعها حسب الجنس و الفئات العمرية و حسب المناطق، و التي ستساهم بشكل كبير في مكافحة السرطان، البحث في مسبباته و تحسين الرعاية الطبية للمرضى.

عملية التسجيل :

يتم تسجيل الشخص المصاب أو المشتبه إصابته بأي نوع من أنواع الأورام الواجب التبليغ عنها بغض النظر عن جنسيته والذي تردد على الطبيب أو على أي مرفق صحي : مثل (مستشفى، عيادة أو مختبر تحليل أنسجة) لغرض الكشف أو العلاج، حتى ولو اعتقد انه قد تم الاخطار عن الحالة من قبل طبيب اخر.

يقوم الطبيب للمكلف من قبل إدارته بملى استمارة التبليغ و يرجى الإبلاغ عن الحالات على الفور وفي موعد لا يتجاوز 3 أشهر بعد للتشخيص بالسرطان.

المستهدف بالتسجيل :

- كل مريض مقيم بلبيبا بغض النظر عن جنسيته اكتشفت إصابته (سواء بالداخل أو الخارج) ولأول مرة بأي نوع من أنواع الأورام المذكورة اعلاه (Reportable neoplasms) وذلك من تاريخ (2020/1/1).
- كل متوفي تأكد في شهادة الوفاة ان سبب وفاته نوع من الأورام ولا توجد معلومات أخرى تبين تاريخ اكتشاف الورم.
- كل متوفي (لأي سبب من الأسباب) اكتشف تشريحيا بأنه مصاب بأي نوع من أنواع الأورام.

تاريخ اكتشاف المرض :

- تسجل الحالة بتاريخ أول اتصال موق بالطبيب أو أحد المرافق الصحية لغرض تشخيص أو علاج الورم المبلغ عنه و ليس بالضرورة عند التشخيص النهائي.
- إذا لم يتوفر تاريخ أول تردد للمريض بالمرفق الصحي، فيؤخذ بتاريخ التشخيص النهائي.
- في حالة اكتشاف الورم من شهادة الوفاة، فيعد بتاريخ الوفاة.

لتعليمات :

لضمان صحة و دقة البيانات و إبقاء الغرض المعدة من أجله هذه الاستمارة على القائم بالتسجيل اتباع التعليمات التالية :

- يجب الكتابة بخط واضح قابل للقراءة.
- عدم اهمال أي بند وفي حال عدم التمكن من تحصيل البيانات المطلوبة يكتب غير معلوم في المكان الفارغ.
- استخدام التاريخ الميلادي لكتابة التاريخ.

NATIONAL ELECTRONIC REGISTRY SYSTEM



TABLES

Table 34 Cases by age group (period) -Male

SITE	ALL AGE AGES UNK	0-	5-	10-	15-	20-	25-	30-	35-	40-	45-	50-	55-	60-	65-	70-	75-	80-	85+	(%)	ICD (10th)
Lip	3	0	-	-	-	-	-	-	-	-	-	-	-	1	1	1	-	-	-	0.1	C00
Tongue	17	0	-	-	2	-	-	-	-	1	4	2	2	2	1	1	-	1	1	0.6	C01-02
Mouth	6	0	1	-	-	-	-	-	-	1	-	1	-	-	-	-	-	2	-	0.2	C03-06
Salivary glands	13	0	-	-	-	-	1	2	-	-	2	3	3	2	-	-	-	-	-	0.5	C07-08
Tonsil	3	0	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	0.1	C09
Other oropharynx	6	0	-	-	-	-	-	-	-	1	1	1	4	-	-	-	-	-	-	0.2	C10
Nasopharynx	58	0	1	-	2	-	3	3	12	8	12	7	6	1	1	2	-	-	-	2.0	C11
Hypopharynx	3	0	-	-	-	-	-	-	-	1	-	1	-	1	-	-	-	-	-	0.1	C12-13
Pharynx unspecified	7	0	-	-	-	-	-	-	-	-	1	-	1	-	1	-	-	-	-	0.2	C14
Oesophagus	27	0	-	-	-	-	1	-	1	1	5	3	3	2	1	1	5	2	2	1.0	C15
Stomach	84	0	-	-	-	-	2	1	1	10	10	8	8	15	9	8	9	1	-	3.0	C16
Small intestine	28	0	-	-	-	-	1	-	4	2	5	2	1	6	1	3	2	-	1	1.0	C17
Colon	350	0	-	-	-	-	4	13	12	20	33	42	40	54	48	38	24	13	9	12.4	C18
Rectum	210	0	-	-	-	-	3	1	8	14	31	24	26	28	21	15	22	8	9	7.4	C19-20
Anus	17	0	-	-	-	-	-	-	2	-	3	2	3	1	3	1	1	1	-	0.6	C21
Liver	38	0	1	-	-	-	-	1	-	2	3	6	7	4	5	3	3	-	3	1.3	C22
Gallbladder etc.	51	0	-	-	-	-	1	1	-	1	4	5	8	4	7	11	5	3	1	1.8	C23-24
Pancreas	84	0	-	-	-	-	1	1	-	6	11	13	13	13	8	6	8	4	-	3.0	C25
Nose, sinuses etc.	6	0	1	-	-	-	-	-	1	1	1	1	-	-	-	-	-	-	1	0.2	C30-31
Larynx	76	0	-	-	-	-	-	-	1	3	3	8	13	15	14	7	5	7	-	2.7	C32
Trachea, bronchus and lung	386	0	-	-	-	1	2	-	5	15	22	39	64	57	58	50	46	18	9	13.6	C33-34
Other thoracic organs	7	0	1	-	-	-	2	1	-	-	-	1	-	-	-	-	-	1	-	0.2	C37-38
Bone	34	0	1	3	4	6	3	1	2	3	1	1	1	4	-	-	-	1	-	1.2	C40-41
Melanoma of skin	3	0	-	-	-	-	-	-	-	1	-	-	-	1	-	-	-	-	1	0.1	C43
Other skin	90	0	-	-	-	2	-	2	5	5	4	7	5	8	7	12	11	7	15	3.2	C44
Mesothelioma	4	0	-	-	-	-	-	-	-	-	-	-	-	2	-	-	1	1	-	0.1	C45
Kaposi sarcoma	2	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	0.1	C46
Connective and soft tissue	36	0	3	1	-	1	6	-	1	6	6	1	3	3	1	3	-	1	-	1.3	C47,C49
Breast	12	0	-	-	-	-	-	-	-	1	1	-	2	3	2	-	2	-	1	0.4	C50
Penis	1	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	C60
Prostate	325	2	-	-	1	-	-	-	1	2	5	7	22	37	44	66	63	39	36	11.5	C61
Testis	38	0	2	-	4	3	7	9	4	6	1	1	1	-	-	-	-	-	-	1.3	C62
Other male genital organs	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	C63
Kidney	72	0	4	4	-	-	-	-	3	3	5	7	11	10	3	7	10	4	1	2.5	C64
Renal pelvis	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	C65
Ureter	1	0	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	0.0	C66
Bladder	177	0	2	-	-	1	1	3	8	9	19	19	34	19	25	14	12	10	-	6.3	C67
Other urinary organs	2	0	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	0.1	C68
Eye	7	0	3	-	-	-	-	-	-	1	1	-	1	1	1	1	-	-	-	0.2	C69
Brain, nervous system	128	0	18	10	9	5	2	4	3	5	6	14	13	15	5	6	5	1	2	4.5	C70-72
Thyroid	28	0	-	-	-	2	1	1	5	2	4	1	3	3	3	1	-	1	1	1.0	C73
Adrenal gland	10	0	4	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.4	C74
Other endocrine	4	0	-	1	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	0.1	C75
Hodgkin disease	59	0	1	1	5	5	7	6	9	7	8	5	1	1	2	-	-	-	-	2.1	C81
Non-Hodgkin lymphoma	136	0	4	7	5	5	4	3	2	12	11	12	10	8	7	13	11	12	7	4.8	C82-85,C96
Immunoproliferative diseases	2	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	C88
Multiple myeloma	30	0	1	-	-	-	-	-	1	4	-	4	3	4	4	3	2	1	1	1.1	C90
Lymphoid leukaemia	77	0	22	12	15	2	2	3	1	3	-	2	3	2	1	3	3	2	1	2.7	C91
Myeloid leukaemia	82	0	6	7	5	5	5	3	4	8	7	5	4	5	2	3	2	9	1	2.9	C92-94
Leukaemia unspecified	12	0	4	2	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	0.4	C95
Myceloproliferative disorders	5	0	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.2	MPD
Mycelodysplastic syndromes	13	0	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.5	MDS
Other and unspecified	50	0	1	-	1	-	2	-	-	3	3	3	9	3	5	10	3	2	2	1.8	O&U
All sites	2920	2	78	54	48	41	43	48	62	106	165	232	257	313	348	291	298	273	147	114	ALL
All sites but C44	2830	2	78	54	48	41	41	48	60	101	160	228	250	308	340	284	286	262	140	99	ALL&C44

Table 35 Cases by age group (period) -Female

SITE	ALL AGE AGES UNK	0-	5-	10-	15-	20-	25-	30-	35-	40-	45-	50-	55-	60-	65-	70-	75-	80-	85+	(%)	ICD (10th)	
Lip	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	C00
Tongue	17	0	-	-	-	-	-	1	-	3	2	3	1	2	2	1	-	1	1	-	0.5	C01-02
Mouth	9	0	-	-	-	-	-	1	-	2	1	1	1	1	1	2	-	-	-	-	0.2	C03-06
Salivary glands	6	0	-	-	-	-	-	1	-	-	1	1	1	1	-	-	-	-	-	-	0.2	C07-08
Tonsil	2	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	C09
Other oropharynx	2	0	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	0.1	C10
Nasopharynx	24	0	1	-	-	-	3	-	4	3	3	1	2	1	3	-	-	-	-	-	0.6	C11
Hypopharynx	2	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	C12-13
Pharynx unspecified	2	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	C14
Oesophagus	10	0	-	-	-	-	-	4	2	1	3	2	-	-	-	1	1	-	-	-	0.3	C15
Stomach	65	0	-	-	-	-	2	4	2	6	6	8	10	5	9	6	3	2	2	-	1.8	C16
Small intestine	13	0	-	-	-	-	1	1	-	-	-	1	3	1	2	1	1	2	-	-	0.4	C17
Colon	337	0	-	-	-	-	8	5	14	34	39	38	39	43	42	29	21	12	12	-	9.1	C18
Rectum	153	0	-	-	-	-	4	3	7	21	21	25	17	20	8	7	11	6	3	-	4.1	C19-20
Anus	22	0	-	-	-	-	1	-	-	3	3	7	3	1	1	-	2	1	-	-	0.6	C21
Liver	30	0	-	-	-	-	1	-	1	-	2	4	3	8	2	6	2	1	1	-	0.8	C22
Gallbladder etc.	46	0	-	-	-	-	1	-	1	3	4	7	2	8	9	5	2	1	4	-	1.2	C23-24
Pancreas	67	0	-	-	-	-	2	-	1	6	11	11	7	8	6	7	5	1	1	-	1.8	C25
Nose, sinuses etc.	5	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	C30-31
Larynx	4	1	-	-	-	-	-	-	1	-	1	1	-	-	-	-	-	-	-	-	0.1	C32
Trachea, bronchus and lung	49	0	-	-	-	-	1	-	1	4	7	6	7	6	2	8	5	-	2	-	1.3	C33-34
Other thoracic organs	6	0	-	-	-	-	2	-	-	1	1	-	-	1	-	-	-	-	-	-	0.2	C37-38
Bone	24	0	-	3	1	4	1	4	-	5	2	2	1	-	-	-	-	-	-	-	0.6	G40-41
Melanoma of skin	3	0	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	1	-	0.1	C43
Other skin	49	0	-	1	-	-	-	-	-	4	4	3	5	1	5	9	5	5	6	-	1.3	C44
Mesothelioma	2	0	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	0.1	C45
Kaposi sarcoma	2	0	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	0.1	C46
Connective and soft tissue	35	0	4	2	2	2	2	3	-	6	3	1	2	1	-	2	3	-	-	-	0.9	C47,C49
Breast	1535	1	-	-	-	-	25	76	163	262	301	235	166	126	77	49	27	11	16	-	41.4	C50
Vulva	8	0	-	-	-	-	2	-	1	-	1	-	2	-	1	1	-	-	-	-	0.2	C51
Vagina	7	0	-	-	-	-	1	-	-	1	-	1	1	-	-	-	-	1	-	-	0.2	C52
Cervix uteri	66	0	-	-	-	-	3	2	7	3	14	8	13	8	6	2	-	-	-	-	1.8	C53
Corpus uteri	202	0	-	-	-	-	1	5	10	21	38	43	31	19	23	3	3	5	-	-	5.4	C54
Uterus unspecified	72	0	-	-	-	-	1	-	1	2	9	7	7	17	14	5	7	1	1	-	1.9	C55
Ovary	168	0	-	-	-	-	2	2	12	17	27	34	17	15	15	5	6	3	6	-	4.5	C56
Other female genital organs	2	0	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	0.1	C57
Placenta	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	C58
Kidney	48	1	3	4	-	-	2	-	3	3	4	11	2	4	4	5	1	1	-	-	1.3	C64
Renal pelvis	1	0	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	0.0	C65
Ureter	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	C66
Bladder	38	0	-	-	-	-	1	-	-	3	2	7	6	4	4	4	4	1	2	-	1.0	C67
Other urinary organs	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	C68
Eye	7	0	4	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	0.2	C69
Brain, nervous system	88	0	6	5	5	1	3	7	5	4	5	9	6	10	5	5	4	1	1	-	2.4	C70-72
Thyroid	142	0	-	-	-	-	1	9	11	18	17	21	15	8	11	4	1	3	-	-	3.8	C73
Adrenal gland	14	0	7	4	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	0.4	C74
Other endocrine	1	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	C75
Hodgkin disease	65	0	1	2	3	6	13	8	14	4	5	1	3	2	2	-	1	-	-	-	1.8	C81
Non-Hodgkin lymphoma	94	0	1	2	4	1	4	5	7	6	10	5	10	15	9	-	5	4	1	-	2.5	C82-85,C96
Immunoproliferative diseases	4	0	-	-	-	-	-	-	1	1	-	-	-	1	-	-	-	-	-	-	0.1	C88
Multiple myeloma	30	0	-	-	-	-	-	1	2	2	3	3	5	1	4	5	2	1	1	-	0.8	C90
Lymphoid leukaemia	57	0	17	12	9	3	-	2	1	1	1	1	2	1	1	2	-	1	2	-	1.5	C91
Myeloid leukaemia	55	0	3	3	3	-	5	1	2	6	4	7	9	6	1	2	-	1	2	-	1.5	C92-94
Leukaemia unspecified	10	0	3	2	-	-	-	-	1	1	1	1	-	-	-	1	-	-	-	-	0.3	C95
Myeloproliferative disorders	2	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	MPD
Myelodysplastic syndromes	13	0	1	1	1	2	-	-	-	1	2	1	-	-	-	2	1	1	-	-	0.4	MDS
Other and unspecified	44	0	1	2	-	2	-	4	3	4	6	3	3	4	3	1	2	2	2	-	1.2	O&U
All sites	3757	3	54	44	31	28	48	95	159	270	465	541	518	408	361	257	205	129	65	76	100.0	ALL
All sites but C44	3708	3	54	43	30	28	48	95	159	270	461	537	515	403	360	252	196	124	60	70	100.0	ALLJC44

Table 36 Incidence per 100,000 by age group (period) -Male

SITE	ALL AGE AGES UNK	AGE GROUP																	CRUDE RATE	CUM (%)		ASR (100k)	ICD (10th)			
		0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80		85+	0-64			65-74		
Lip	3	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	0.1	0.01	0.02	0.1	C00
Tongue	17	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.5	0.6	0.06	0.08	0.8	C01-02
Mouth	6	0	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.2	0.2	0.01	0.02	0.2	C03-06
Salivary glands	13	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.4	0.5	0.06	0.06	0.6	C07-08
Tonsil	3	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	0.1	0.01	0.01	0.1	C09
Other oropharynx	6	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.2	0.2	0.04	0.04	0.3	C10
Nasopharynx	58	0	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.7	2.0	0.24	0.26	2.6	C11
Hypopharynx	3	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	0.1	0.02	0.02	0.2	C12-13
Pharynx unspecified	7	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.2	0.2	0.02	0.03	0.3	C14
Oesophagus	27	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.8	1.0	0.08	0.10	1.2	C15
Stomach	84	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.4	3.0	0.29	0.47	3.9	C16
Small intestine	28	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.8	1.0	0.10	0.14	1.3	C17
Colon	350	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10.0	12.4	1.14	2.05	16.7	C18
Rectum	210	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.0	7.4	0.69	1.07	9.9	C19-20
Anus	17	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.5	0.6	0.05	0.09	0.8	C21
Liver	38	0	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.1	1.3	0.13	0.21	1.9	C22
Gallbladder etc.	51	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.5	1.8	0.13	0.33	2.4	C23-24
Pancreas	84	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.4	3.0	0.32	0.47	4.1	C25
Nose, sinuses etc.	6	0	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.2	0.2	0.02	0.02	0.2	C30-31
Larynx	76	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.2	2.7	0.26	0.48	3.8	C32
Trachea, bronchus and lung	386	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11.1	13.6	1.20	2.36	18.9	C33-34
Other thoracic organs	7	0	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.2	0.2	0.02	0.02	0.2	C37-38
Bone	34	0	0.3	0.9	1.1	1.6	0.8	0.3	0.6	0.8	1.2	1.3	6.0	-	-	-	-	-	-	-	1.0	1.2	0.09	0.09	1.1	C40-41
Melanoma of skin	3	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	0.1	0.01	0.01	0.1	C43
Other skin	90	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.6	3.2	0.18	0.39	4.0	C44
Mesothelioma	4	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	0.1	0.02	0.02	0.2	C45
Kaposi sarcoma	2	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	0.1	0.00	0.00	0.1	C46
Connective and soft tissue	36	0	0.8	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.0	1.3	0.10	0.15	1.4	C47,C49
Breast	12	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.3	0.4	0.04	0.06	0.6	C50
Penis	1	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	0.0	0.00	0.00	0.1	C60
Prostate	325	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9.3	11.5	0.49	1.73	15.1	C61
Testis	38	0	0.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.1	1.3	0.08	0.08	1.0	C62
Other male genital organs	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	0.0	0.00	0.00	0.0	C63
Kidney	72	0	1.0	1.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.1	2.5	0.23	0.35	3.2	C64
Renal pelvis	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	0.0	0.00	0.00	0.0	C65
Ureter	1	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	0.0	0.00	0.01	0.1	C66
Bladder	177	0	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.1	6.3	0.56	1.05	8.6	C67
Other urinary organs	2	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	0.1	0.00	0.03	0.1	C68
Eye	7	0	0.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.2	0.2	0.02	0.04	0.3	C69
Brain, nervous system	128	0	4.7	2.9	2.5	1.3	0.5	1.1	0.9	2.0	3.3	10.7	15.5	18.8	7.5	9.0	15.2	16.7	6.3	20.0	3.7	4.5	0.36	0.48	5.0	C70-72
Thyroid	28	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.8	1.0	0.08	0.12	1.1	C73
Adrenal gland	10	0	1.0	0.6	0.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.3	0.4	0.01	0.01	0.3	C74
Other endocrine	4	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	0.1	0.02	0.02	0.2	C75
Hodgkin disease	59	0	0.3	0.3	1.4	1.3	1.9	1.6	2.8	2.8	4.4	3.8	1.2	1.3	3.0	-	-	-	-	-	1.7	2.1	0.13	0.13	1.7	C81
Non-Hodgkin lymphoma	136	0	1.0	2.0	1.4	1.3	1.1	0.8	0.6	4.7	6.0	9.2	11.9	10.0	10.5	23.5	28.0	40.0	44.4	30.1	3.9	4.8	0.30	0.56	5.4	C82-85,C96
Immunoproliferative diseases	2	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	0.1	0.01	0.01	0.1	C88
Multiple myeloma	30	0	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.9	1.1	0.10	0.15	1.4	C90
Lymphoid leukaemia	77	0	5.7	3.4	4.2	0.5	0.8	0.3	1.2	-	-	-	-	-	-	-	-	-	-	-	2.2	2.7	0.12	0.17	2.4	C91
Myeloid leukaemia	82	0	1.6	2.0	1.4	1.3	1.3	0.8	1.2	3.2	3.8	3.8	4.8	6.3	3.0	5.4	5.1	30.0	6.3	10.0	2.4	2.9	0.17	0.23	2.8	C92-94
Leukaemia unspecified	12	0	1.0	0.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.3	0.4	0.02	0.02	0.4	C95
Myeloproliferative disorders	5	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	0.2	0.01	0.01	0.2	MPD
Myelodysplastic syndromes	13	0	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.4	0.5	0.02	0.04	0.5	MDS
Other and unspecified	50	0	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.4	1.8	0.13	0.30	2.3	O&U
All sites	2920	2	20.4	15.4	13.3	10.9	11.4	12.9	19.2	41.8	90.2	177.9	306.2	392.6	522.9	524.9	757.3	910.0	931.9	1142.6	83.7	8.18	14.60	130.3	ALL	
All sites but C44	2830	2	20.4	15.4	13.3	10.9	10.9	12.9	18.6	39.8	87.5	174.8	297.9	386.4	510.8	512.3	726.8	873.3	887.5	992.3	81.1	100.0	8.00	14.20	126.2	ALL&C44

Table 37 Incidence per 100,000 by age group (period) -female

SITE	ALL AGE AGES UNK	CRUDE RATE																	CUM CUM ASR ICD (10th)													
		0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84		85+												
Lip	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	0.0	0.00	0.00	0.0	C00						
Tongue	17	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.5	0.5	0.06	0.09	0.8	C01-02	
Mouth	9	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.2	0.2	0.03	0.06	0.4	C03-06
Salivary glands	6	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.2	0.2	0.03	0.03	0.3	C07-08
Tonsil	2	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	0.1	0.01	0.01	0.1	C09
Other oropharynx	2	0	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	0.1	0.00	0.00	0.1	C10
Nasopharynx	24	0	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.7	0.6	0.06	0.10	0.9	C11
Hypopharynx	2	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	0.1	0.00	0.00	0.0	C12-13
Pharynx unspecified	2	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	0.0	0.00	0.00	0.0	C14
Oesophagus	10	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.3	0.3	0.03	0.04	0.4	C15
Stomach	65	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.9	1.8	0.21	0.38	3.1	C16
Small intestine	13	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.4	0.4	0.04	0.07	0.6	C17
Colon	337	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9.9	9.1	1.13	1.97	16.6	C18
Rectum	153	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.5	4.1	0.59	0.77	7.2	C19-20
Anus	22	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.6	0.6	0.09	0.10	1.0	C21
Liver	30	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.9	0.8	0.12	0.23	1.7	C22
Gallbladder etc.	46	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.4	1.2	0.15	0.31	2.5	C23-24
Pancreas	67	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.0	1.8	0.24	0.40	3.4	C25
Nose, sinuses etc.	5	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	0.1	0.01	0.02	0.2	C30-31
Larynx	4	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	0.1	0.02	0.02	0.2	C32
Trachea, bronchus and lung	49	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.4	1.3	0.17	0.31	2.4	C33-34
Other thoracic organs	6	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.2	0.2	0.02	0.02	0.2	C37-38
Bone	24	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.7	0.6	0.06	0.06	0.8	C40-41
Melanoma of skin	3	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	0.1	0.01	0.01	0.1	C43
Other skin	49	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.4	1.3	0.09	0.26	2.3	C44
Mesothelioma	2	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	0.1	0.00	0.01	0.1	C45
Kaposi sarcoma	2	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	0.1	0.00	0.01	0.1	C46
Connective and soft tissue	35	0	1.1	0.6	0.5	0.5	0.6	0.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.0	0.9	0.08	0.11	1.2	C47-C49
Breast	1535	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	45.3	41.4	5.86	7.35	68.7	C50
Vulva	8	0	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.2	0.2	0.02	0.05	0.3	C51
Vagina	7	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.2	0.2	0.02	0.02	0.2	C52
Cervix uteri	66	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.9	1.8	0.28	0.45	3.5	C53
Corpus uteri	202	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.0	5.4	0.88	1.40	10.8	C54
Uterus unspecified	72	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.1	1.9	0.28	0.49	3.9	C55
Ovary	168	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.0	4.5	0.62	0.85	8.0	C56
Other female genital organs	2	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	0.1	0.01	0.01	0.1	C57
Placenta	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	0.0	0.00	0.00	0.0	C58
Kidney	48	1	0.8	1.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.4	1.3	0.16	0.27	2.3	C64
Renal pelvis	1	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	0.0	0.01	0.01	0.1	C65
Ureter	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	0.0	0.00	0.00	0.0	C66
Bladder	38	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.1	1.0	0.13	0.23	1.9	C67
Other urinary organs	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	0.0	0.00	0.00	0.0	C68
Eye	7	0	1.1	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.2	0.2	0.01	0.01	0.2	C69
Brain, nervous system	88	0	1.6	1.5	1.5	0.3	0.8	1.9	1.6	1.6	2.7	7.0	6.8	7.6	17.6	10.3	14.0	13.7	6.2	8.5	2.6	2.4	0.26	0.38	3.6	2.6	2.4	0.26	0.38	3.6	C70-72	
Thyroid	142	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.2	3.8	0.46	0.52	5.4	C73
Adrenal gland	14	0	1.9	1.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.4	0.4	0.04	0.04	0.5	C74
Other endocrine	1	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	0.0	0.00	0.00	0.0	C75
Hodgkin disease	65	0	0.3	0.6	0.9	1.6	3.5	2.2	4.4	2.4	1.6	2.7	0.8	-	-	-	-	-	-	-	-	-	-	-	-	-	1.9	1.8	0.13	0.15	1.8	C81
Non-Hodgkin lymphoma	94	0	0.3	0.6	1.2	0.3	1.1	1.4	2.2	2.4	5.5	3.9	11.3	19.0	15.8	-	14.0	17.1	24.8	8.5	2.8	2.5	0.32	0.39	3.8	2.8	2.5	0.32	0.39	3.8	C82-85, C96	
Immunoproliferative diseases	4	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	0.1	0.02	0.02	0.2	C88
Multiple myeloma	30	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.9	0.8	0.08	0.19	1.4	C90
Lymphoid leukaemia	57	0	4.7	3.6	2.6	0.8	-																									

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PART VI

ARABIC SUMMARY الملخص العربي



ملخص النتائج

السجل الوطني للسرطان، ليبيا

السجل الوطني للسرطان، هو سجل سرطان سكاني، يقوم بجمع بيانات مرضى الأورام في جميع أنحاء ليبيا من مصادر البيانات المختلفة.

أنشئ السجل الوطني للسرطان في أكتوبر 2020م، كمكتب مختص بالبرنامج الوطني لمكافحة السرطان، وذلك لرصد عبء السرطان لدى جميع السكان في ليبيا، يقع المكتب الرئيسي في المقر الرئيسي للبرنامج الوطني لمكافحة السرطان في العاصمة طرابلس

أعتمد التاريخ 2020/1/1م كتاريخ مرجعي للسجل، حيث تم البدء في جمع البيانات فعليا في شهر نوفمبر 2020م، بعد أن تم تشكيل فرق تسجيل السرطان، وإقامة ورش عمل تدريبية حول أساسيات تسجيل السرطان في مختلف مناطق ليبيا، تم اعتماد النموذج الموحد لجمع بيانات مرضى السرطان، ويحتوي على الحد الأدنى من المعلومات الأساسية الواجب تسجيلها في وقت سابق بالتنسيق مع الوكالة الدولية لأبحاث السرطان. ويضم السجل الوطني للسرطان خمسة سجلات مناطقية، وهي:

سجل سرطان المنطقة الشرقية، سجل سرطان المنطقة الوسطى، سجل سرطان منطقة طرابلس الكبرى، سجل سرطان المنطقة الجنوبية، وسجل سرطان المنطقة الغربية.

يعتمد السجل طريقتين أساسيتين لجمع البيانات:

1- الرصد النشط؛ حيث تقوم فرق التسجيل باسترجاع ومراجعة المستندات المصدرية وجمع البيانات عن الحالات التي تم تشخيصها حديثاً، وفقاً للقائمة التي يتم الإبلاغ عنها.

2- التبليغ أو الرصد الذاتي، حيث يتم التبليغ عن وجود حالات السرطان عن طريق تعبئة نموذج خاص أعد للتبليغ عن الحالات، وهذه الطريقة تم اعتمادها في بعض مصادر البيانات الموثوقة.

بعد تسجيل البيانات، يقوم مسجلو السرطان بترميز الأورام المسجلة حسب الترميز الدولي للأورام؛ ليتم بعد ذلك إدخال البيانات في منظومة السجل الالكترونية عبر الإنترنت، ومن ثم تتم عملية تنقيح ومعالجة البيانات والتحقق من الازدواجية وتوحيد البيانات. وبعد ذلك يتم تصدير البيانات من المنظومة إلى برنامج Canreg5 لمزيد من معالجة البيانات وإجراء التحليلات الإحصائية.

يتم إعداد التقارير السنوية، ومن ثم نشر هذه التقارير وذلك لتوضيح معدلات الإصابات السنوية بالسرطان في ليبيا، ولكل نوع من أنواع السرطان على حدة، وكذلك التوزيع الجغرافي للسرطان، وتوزيعه حسب الجنس والفئات العمرية، وكذلك أيضا دراسة النوع النسيجي أيضا ولكل ورم مع إجراء المقارنات الدولية.

كل الخطوات السابقة تتم حسب المعايير العالمية المتبعة لتسجيل السرطان.

إحصائيات سنة 2020م

خلال الفترة من نوفمبر 2020 حتى ديسمبر 2023م، تم جمع وتسجيل ما مجموعه 11235 حالة سرطان بتواريخ حدوث الورم من 2020/1/1 إلى 2020/12/31م من مصادر بيانات مختلفة (42 مصدر بيانات) في جميع أنحاء ليبيا. ومن ثم تم ضمها إلى قاعدة بيانات السجل الوطني للسرطان، وقد تمت معالجة ومطابقة البيانات لكل الحالات المسجلة.

حيث بلغ إجمالي عدد حالات الإصابة الجديدة بالسرطان غير المكررة لعام 2020 (6830). ومن بين تلك الحالات، سجلت 153 حالة (2.24%) لغير الليبيين.

بالنسبة للمواطنين الليبيين، بلغ حالات الإصابة الجديدة بالسرطان لسنة 2020م، 6677 حالة؛ 2920 (43.7%) بين الرجال و3757 (56.3%) بين النساء، أي نسبة الذكور إلى الإناث 0.78:1. كان متوسط العمر لكلا الجنسين عند التشخيص 55 عامًا (60 عامًا للذكور و51 عامًا للإناث).

بلغ معدل الإصابة الخام لجميع أنواع السرطان بين الليبيين 97.0 لكل 100.000 نسمة (83.7 للذكور و110.8 للإناث). المعدل العمري القياسي العالمي للإصابة بالسرطان (المعدل وفقًا للمعيار العالمي للسكان) هو 150.1 حالة لكل 100.000 نسمة (130.2 للذكور و170.2 للإناث).

أظهر التوزيع الجغرافي لحالات السرطان حسب مناطق التسجيل الخمسة أن 31.9% من الحالات يقطنون منطقة طرابلس الكبرى (مدينة طرابلس 17.7%)، المنطقة الشرقية 24.3%، المنطقة الغربية 10.8%، المنطقة الوسطى 10.3%، المنطقة الجنوبية 4.4%.

السرطانات الأكثر شيوعًا

احتل سرطان الثدي الترتيب الأول (1547 حالة) بنسبة 23.2% تلاه سرطان القولون والمستقيم (1089 حالة) بنسبة 16.3% ثم سرطان الرئة (435 حالة) بنسبة 6.5% ثم سرطان الغدد الليمفاوية (360 حالة) بنسبة 5.4% ثم سرطان البروستاتا (325 حالة) بنسبة 4.9%.

في الذكور، كانت أعلى خمسة سرطانات هي: سرطان القولون والمستقيم 577 حالة (بنسبة 19.8%)، تلاه سرطان الرئة 386 حالة (بنسبة 13.2%)، ثم سرطان البروستاتا 325 حالة (بنسبة 11.1%)، ثم سرطان الغدد الليمفاوية 198 حالة (بنسبة 6.8%)، ثم سرطان المثانة البولية 177 حالة (بنسبة 6.1%). بينما في الإناث، كانت أعلى خمسة أنواع من السرطان هي: سرطان الثدي 1535 حالة (بنسبة 40.9%)، تلاه سرطان القولون والمستقيم 512 حالة (بنسبة 13.6%)، ثم سرطان الرحم 274 حالة (بنسبة 7.3%)، ثم سرطان المبيض 168 حالة (بنسبة 4.5%)، ثم سرطان الغدد الليمفاوية 163 حالة (بنسبة 4.3%).

سرطان الأطفال

بلغ العدد الاجمالي لحالات الإصابة بين فئة الأطفال العمرية (0-14 سنة) 297 حالة، حيث تمثل (4.45%) من مجمل حالات السرطان في ليبيا بنسبة ذكور إلى إناث 1.4:1. وكان معدل الإصابة الخام 139.0 حالة لكل 1000.000 نسمة والمعدل العمري القياسي العالمي للإصابة 141.3 حالة لكل 1000.000 نسمة.

أكثر خمسة سرطانات شيوعًا في الأطفال كانت حسب الترتيب:

سرطان الدم (42.1%)، سرطان الدماغ والجهاز العصبي المركزي (15.5%)، سرطان الغدد الليمفاوية (12.0%)، سرطان الخلايا البدائية العصبية (8.7%)، وسرطان الأنسجة الرخوة (6.1%).



PART VII
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