



تقرير معدلات السرطان 2019 Cancer Incidence Report 2019

مركز قطر الوطني لمعلومات السرطان
Qatar Cancer Information Center (QCIC)

Cancer Annual Report

State of Qatar

National Cancer Program

Qatar National Cancer Registry

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DISCLAIMER

Information included in this report reflects the data at the time of closing the database for cleaning and analysis on March 2022. QCIC continues to receive more data and updates, so any missing or incomplete information, will be completed later on, and can be provided upon specific requests through an email to qncr@moph.gov.qa

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ABBREVIATIONS

ASR	Age Standardized Rate
ASIR	Age-Specific Incidence Rate
cTNM	Clinical Tumor Node Metastases stage
CTR	Certified Tumor Registrar
CNS	Central Nervous System
EMRO	Eastern Mediterranean Regional Office (World Health Organization)
GI	Gastro-Intestinal
HMC	Hamad Medical Corporation
ICD 10	International Classification of Disease 10 th Revision
ICD O-3	International Classification of Disease for Oncology 3 rd Revision
MDT	Multi-Disciplinary Team
MTA	Medical Treatment Abroad
NCCCR	National Center for Cancer Care and Research
NCP	National Cancer Program
NCS	National Cancer Strategy
NHS	National Health Strategy
PHCC	Primary Healthcare Corporation
QNCR	Qatar National Cancer Registry
MoPH	Ministry of Public Health



لا يزال استثمار دولة قطر في علاج السرطان، باعتباره معضلة صحية رئيسية، يحدث الفرق المنشود .

ويمثل تقرير حالات الإصابة بالسرطان لسنة 2019 الرصد الوطني لكافة حالات السرطان التي تم تشخيصها حديثاً في عام 2019 بكافة أرجاء دولة قطر. يهدف هذا التقرير إلى رسم صورة البيانات لمشكلة السرطان في البلاد، كما يساعد على مراجعة الجهود السابقة وعلى التخطيط للجهود المستقبلية. وبما أنه يمثل مصدراً دقيقاً للمعلومات، فسوف يكون بمثابة مرجع أساسي لعمل البحوث العلمية واتخاذ القرارات المناسبة.

يتألف التقرير من تسعة فصول، يصف الفصل الأول الأدوات والمناهج المستخدمة لتحليل البيانات، وتصف الفصول الثاني والثالث والرابع مشكلة السرطان بين جميع السكان في قطر، من القطريين وغير القطريين. ويشمل الفصلان التاليان وصفاً لكل من مسارات السرطان من المنظور الدولي. ويشمل الفصلان السابع والثامن معضلة السرطان بين الأطفال الذين تتراوح أعمارهم بين 0-18 عاماً وكذلك الوفيات لدى مرضى السرطان. كما تم أيضاً تناول المزيد من التفاصيل حول السرطانات الأكثر شيوعاً التي تم تشخيصها في دولة قطر خلال عام 2019.

أود أولاً أن أهنئ فريق البرنامج الوطني للسرطان على تقديم هذا التقرير، كما أتقدم بجزيل الشكر والتقدير لشركائنا الرئيسيين، مؤسسة حمد الطبية، مؤسسة الرعاية الصحية الأولية، وسدرة للطب، بالإضافة إلى شركائنا من القطاع الخاص، مستشفى العمادي، المستشفى الأهلي، وعيادة الدوحة، مع شكر خاص للجمعية القطرية للسرطان.

يعتبر هذا التقرير مرجعاً هاماً، حيث يقدم المعلومات بشكل منظم وهدف واضح، ومجموعة متكاملة من المعايير حول حالات الإصابة بالسرطان في دولة قطر، ويمكن استخدامه من قبل مختلف المتابعين بهدف التخطيط والرصد والبحث العلمي.

مرة أخرى، نعرب عن عميق امتناننا لجميع المؤسسات والأفراد الذين ساعدوا في إبراز هذا التقرير.

الشيخ د. محمد بن حمد آل ثاني

نائب رئيس المجلس الوطني لحوكمة السرطان

وزارة الصحة العامة

مؤسسة حمد الطبية



في عصر الطب الحديث لا يزال السرطان أحد أكثر الأمراض التي يصعب السيطرة عليها وعلاجها، ويعتبر السبب الرئيسي الثاني للوفاة في جميع أنحاء العالم. ومع زيادة النمو السكاني والشيخوخة، ستستمر أعداد السرطانات التي تم تشخيصها في دولة قطر بالارتفاع على مدى العقود القادمة.

ومع ذلك، هناك أسباب تدعو إلى التفاؤل - حيث تمتلك دولة قطر أقوى برنامج لعلاج السرطان في المنطقة وعلاجات كيميائية حديثة وقسم لعلاج الأورام بالأشعة (في المركز الوطني لعلاج وأبحاث السرطان) وذلك لتقديم نظام العلاج المضاد للسرطان لأولئك الذين تم تشخيص إصابتهم بالمرض. تضم خدمات جراحة الأورام

في مؤسسة حمد الطبية العديد من أطباء الأورام الجراحيين المتميزين والمشهورين عالمياً الذين يقدمون نتائج جراحية ممتازة لمرضى السرطان.

تغطي الأورام الدموية الخبيثة مجموعة واسعة من الأورام، ولها مستويات متفاوتة من التعقيد والتشخيص. ويوفر المركز الوطني لعلاج وأبحاث السرطان العلاج للأورام الدموية الخبيثة التي تختلف في شدتها وتشخيصها، من خلال العلاج الكيميائي والعلاج المناعي للمرضى في العيادات الخارجية إلى العلاج للحالات المعقدة وزرع الخلايا الجذعية للمرضى في العيادات الداخلية. ويعد برنامج زراعة نخاع العظام في دولة قطر برنامج معتمد دولياً، مما يضمن حصول جميع المرضى الذين يخضعون لعملية زراعة نخاع العظام على أعلى معايير الرعاية. وخلال العقد الماضي، حصلت الكثير من التغييرات للرعاية الملطفة في دولة قطر. ولدى المركز وحدة رعاية داعمة مخصصة لمرضى الرعاية الملطفة. بالإضافة إلى ذلك، يقوم المركز الآن بتطوير خدمة الرعاية الملطفة للرعاية المنزلية لتلبية احتياجات المرضى الذين يعانون من مرض متصاعد والذين يرغبون في البقاء في المنزل في بيئة مألوفة لأطول فترة ممكنة. وساعد الطب الدقيق من خلال الدراسات الجينية في وضع خطط العلاج الشخصية مما أدى إلى تحسين النتائج للعديد من مرضى السرطان لدينا. وبالإضافة إلى كل هذا يجب ألا ننسى أهمية التوعية العامة وبرامج الفحص الفعالة .

على مدى السنوات الماضية، عززت الدولة برنامجها لأبحاث السرطان، وتشارك الآن في العديد من التجارب السريرية متعددة المراكز. يدعم البرنامج التعليمي لأطباء رعاية مرضى السرطان في مؤسسة حمد الطبية أخصائيين الأورام وأخصائيين جراحة الأورام وأخصائيين علاج الأورام الشعاعي في تطوير معرفتهم ومهاراتهم. وأقام البرنامج روابط مع العديد من مراكز السرطان البارزة في الخارج، حيث يكمل عدد من زملائنا برامج الزمالة المعترف بها.

ويقوم هذا العمل المبتكر على نظام قوي لتسجيل مرضى السرطان والعديد من المجموعات المساهمة بالبيانات التي تمتد على جميع أنحاء نظام الرعاية الصحية في دولة قطر. وأود أن أعرب عن تقديري للعمل المكثف الذي قامت به المجموعات المساهمة بالبيانات وموظفو السجل الوطني للسرطان في قطر، ولولا حماسهم واجتهادهم لما تمكنا من تقديم تقارير السجل السنوية والإحصاءات التي تساعدنا في المبادئ الأساسية لرعاية مرضى السرطان.

مع خالص تحياتي

د. محمد سالم الحسن

المدير الطبي والرئيس التنفيذي للمركز الوطني لعلاج وأبحاث السرطان

الرئيس العام لخدمات السرطان - مؤسسة حمد الطبية

الملخص التنفيذي

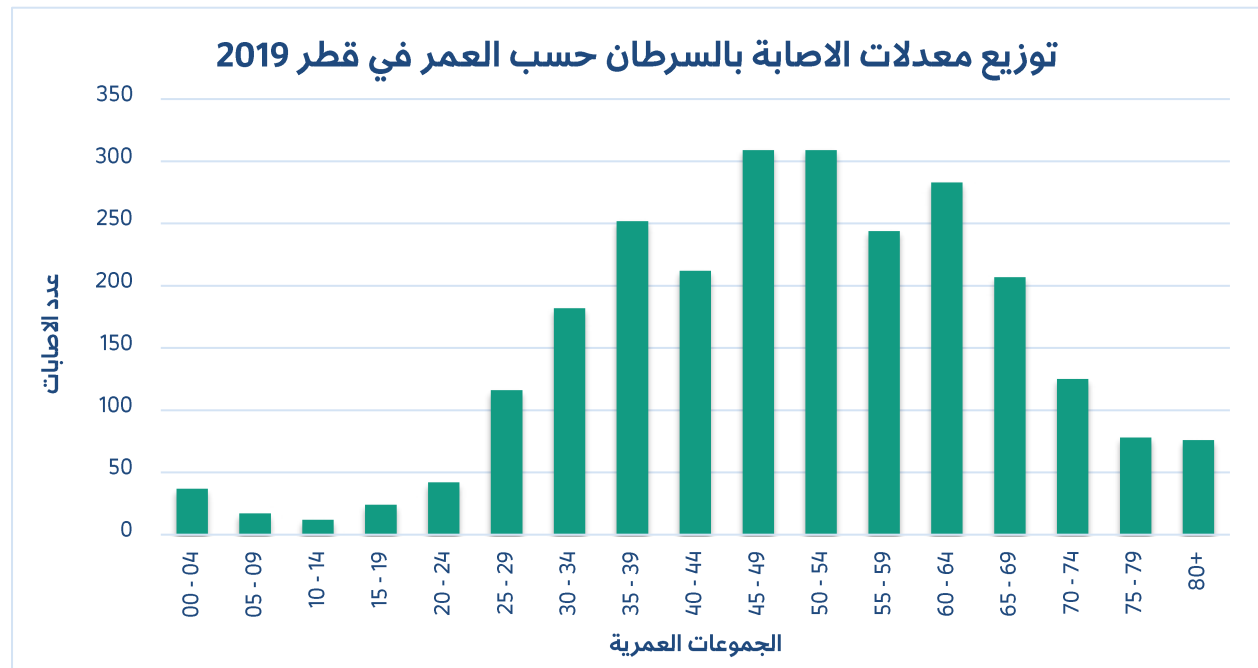
منذ تأسيسه عام 2014، يعكف سجل قطر الوطني للسرطان العامل في وزارة الصحة العامة، على تسجيل كافة حالات السرطان في دولة قطر والتي بلغ عدد سكانها عام 2019، مليونين وثمانمائة ألف نسمة.

خلال العام 2019، تم تسجيل 2525 حالة إصابة جديدة بالسرطان، والجدول ادناه يبين توزيع هذه الحالات حسب الجنسية والجنس:

المجموع الكلي	غير قطري			قطري			السلوك السرطاني
	إناث	ذكور	المجموع	إناث	ذكور	المجموع	
2410	879	1091	1940	269	201	470	خبيث
102	38	31	69	25	8	33	موضعي
4	2	2	4				حميد (الدماغ والجهاز العصبي المركزي فقط)
9	6	3	9				غير محدد
2525	925	1097	2022	294	209	503	المجموع الكلي

معدل الإصابة الخام وجد أنه 90.20 حالة لكل 100000 وأن المعدل المصحح للعمر كان بواقع 223.32 لكل 100000.

الرسم التوضيحي أدناه يبرز توزيع الحالات حسب المجموعات العمرية، ونلاحظ أن أكثر الحالات كانت في الفترة العمرية 54-45



معدلات السرطان الأكثر انتشارا بين الجنسين

نظام الترميز الدولي 10	موقع السرطان	العدد	%
C50 / D05	الثدي	439	17.39%
C18-C21 / D01	القولون والمستقيم	224	8.87%
C73 / D09.3	الغدة الدرقية	188	7.45%
C61 / D07.5	غدة البروستات	132	5.23%
C91-C95	سرطان الدم اللوكيميا	127	5.03%
C44/D04	سرطان الجلد غير الميلانومي	121	4.79%
C64-C66	الكلى	112	4.44%
C33-C34 / D02.1-D02.2	الرئة والقصبه الهوائية	106	4.20%
C82-C85, C96	الليمفوما غير الهيدجكونية	102	4.04%
C67 / D09.0	المثانة	85	3.37%

FOREWORD

Qatar's investment in cancer - as a major Public Health problem - is making a difference.

The Cancer Incidence Report 2019 represents the national consolidation of all cancer cases newly diagnosed during the year 2019, across the whole State of Qatar. This report aims at drawing the data driven picture of the cancer burden in the country. It helps reviewing the past efforts and planning for the future ones. As it is an accurate source of information, this report will serve as a first-hand account of the research process in the country and a golden reference for proper decision making.



Nine chapters make up the report, the first describes the material and methods used to conduct data analysis, the second, third and fourth describe the cancer burden amongst, respectively, all population in Qatar, Qataris, and Non-Qataris. A description of both the trends of cancer and international perspective were included in the next two chapters. Cancer burden amongst pediatric population of the age 0-18, as well as the death amongst cancer patients were the subject of the seventh and eighth chapters. Finally, more details were presented for the most common cancers found in the State of Qatar During the year 2019.

I would like first to congratulate the National Cancer Program Team, for producing this document. Yet, great deal of gratitude and appreciation to our main partners, Hamad Medical Cooperation, Primary Health Care Corporation Sidra Medicine, as well as our partners from the private sector, Al Emadi Hospital, Al Ahli Hospital and Doha Clinic, with special thanks for Qatar Cancer Society.

This report is a rich document that presents information in an organized format with clear purpose and a complete set of metrics about cancer incidence in the State of Qatar. It can be used by many audiences for planning, monitoring, and research.

Shk. Dr. Mohammad Bin Hamad Al Thani

Vice Chair, National Cancer Governance Board

Ministry of Public Health

HMC CORPORATE CANCER SERVICES

In the age of modern medicine, cancer remains one of the most difficult diseases to manage and treat; it is the second leading cause of death worldwide. With population growth and ageing we will continue to see an increase in the numbers of cancers diagnosed in the State of Qatar over the coming decades.



However, there are grounds for optimism - The State of Qatar has the most robust cancer program in the region with a State-of-the-Art Chemotherapy Facility and Radiation Oncology Center (located at the National Center for Cancer Care and Research) responsible for delivering systemic anti-cancer treatment to those diagnosed with cancer. The Surgical Oncology Services at Hamad Medical Corporation include many distinguished, world renowned surgical oncologists providing excellent surgical outcomes for cancer patients.

Hematological malignancies span a wide range of neoplasms, with varying levels of complexity and prognosis. The NCCCR provides treatment for hematological malignancies varying in intensity from surveillance, through outpatient chemotherapy and immunotherapy, to complex inpatient therapy up to the level of stem cell transplantation. The Bone Marrow Transplantation program in the State of Qatar is internationally accredited, ensuring that all patients undergoing Bone Marrow Transplantation receive the highest standards of care. Over the past decade the landscape of palliative care in the State of Qatar has changed dramatically. The NCCCR has a dedicated supportive care unit for palliative care patients. In addition to this, the center is now developing a homecare palliative care service, to address the needs of those patients with progressive disease who wish to remain at home in familiar surroundings for as long as possible. Precision medicine, through genetic studies has assisted in personalized treatment plans, thus improving the outcomes for many of our cancer patients. In addition to all of this, we must not forget the importance of public awareness and effective screening programs.

Over the past number of years, the country has further enhanced its cancer research program, and now participates in many multicenter clinical trials. HMC's educational program for cancer care clinicians supports medical, radiation and surgical oncologists in the development of their knowledge and skills. The program has established links with many eminent overseas cancer centers, where a number of our fellows complete recognized fellowship programs.

Underpinning all of this innovative work, is a robust cancer registry system and the many data contributor groups which span the breath of the healthcare system across the State of Qatar. I would like to acknowledge the extensive work carried out by the data contributor groups and the staff of the National Qatar Cancer

Registry, without their enthusiasm and diligence we would not be able to provide the annual registry reports and statistics that help us in the core principles of cancer care.

Best regards,

Dr. Mohamed Salem Al Hassan

Medical Director and Chief Executive Officer of NCCCR

Chair of Corporate Cancer Services, HMC

ACKNOWLEDGEMENT

The Qatar Cancer Incidence Annual Report for 2019 was mainly edited by **Mr. Amid Abu Hmaidan**, Manager of the Qatar National Cancer Registry QNCR.

Special thanks to **the Cancer Information Governance Board CIGB, Chaired by Dr. Al Hareth Al Khater**, for their in-depth review and recommendations on the scientific content of the report.

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Deepest appreciation to all our colleagues for their major contribution to the data reporting and analysis:

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DATA MANAGEMENT

DENOMINATOR

Cancer incidence nominator covers all cases diagnosed with cancer in the State of Qatar excluding cases classified as “Visitors”, in addition to Qatari cases diagnosed abroad.

Whilst for the calculation of prevalence and survival, we considered the Qatari population only, for being a stable population, which allows a reasonable control on the information compared to Non-Qatari population.

Only In situ and malignant cases are included, except for brain and central nervous system where all behaviors are included.

MATERIAL AND METHODS

DEFINITIONS

INCIDENCE

Incidence is the number of new cases arising in a given period in a specified mid-year population. This information is collected routinely by cancer registries. It can be expressed as an absolute number of cases per year or as a rate per 100,000 persons per year (see Crude rate and ASR below).

MORTALITY

Mortality is the number of deaths occurring in a given period in a specified population. It can be expressed as an absolute number of deaths per year or as a rate per 100,000 persons per year.

PREVALENCE

The prevalence of a particular cancer can be defined as the number of persons in a defined population who have been diagnosed with that type of cancer, and who are still alive at the end of a given year. Complete prevalence represents the number of persons alive at certain point in time who previously had a diagnosis of the disease, regardless of how long ago the diagnosis was, or if the patient is still under treatment or is considered cured. Partial prevalence, which limits the number of patients to those diagnosed during a fixed time in the past, is a particularly useful measure of cancer burden.

Prevalence is presented for the adult population only (ages 15 and over) and is available both as numbers and as proportions per 100,000 persons.

CRUDE RATE

Data on incidence or mortality are often presented as rates. For a specific tumor and population, a crude rate is calculated simply by dividing the number of new cancers or cancer deaths observed during a given time period by the corresponding number of person years in the population at risk. For cancer, the result is usually expressed as an annual rate per 100,000 persons at risk.

AGE STANDARDIZED RATE ASR0

An age-standardized rate (ASR) is a summary measure of the rate that a population would have if it had a standard age structure. Standardization is necessary when comparing several populations that differ with respect to age because age has a powerful influence on the risk of cancer. The ASR is a weighted mean of the age-specific rates; the weights are taken from population distribution of the standard population. The most frequently used standard population is the World Standard Population. The calculated incidence or mortality rate is then called age-standardized incidence or mortality rate (world). It is also expressed per 100,000.

CUMULATIVE RISK0

Cumulative incidence/mortality is the probability or risk of individuals getting/dying from the disease during a specified period. For cancer, it is expressed as the number of newborn children (out of 100) who would be expected to develop/die from a particular cancer before the age of 75 if they had the rates of cancer observed in the period in the absence of competing causes.

EQUATIONS

CRUDE INCIDENCE RATE

It is calculated according to the following equation:

$$\text{Crude Incidence Rate} = \frac{\text{Total Number of cancer cases diagnosed in the given year}}{\text{Total Population in the same year}} \times 100000$$

AGE-SPECIFIC INCIDENCE RATE ASIR

The Age-Specific Incidence Rate ASIR is calculated simply by dividing the number of cancer incidences observed in a given age category during a given time period by the corresponding number of person years in the population at risk in the same age category and time period. For cancer, the result is usually expressed as an annual rate per 100,000 person-years.

$$ASIR = \frac{\text{Number of cancer cases diagnosed in the given age group}}{\text{Population at risk in the same age group}} \times 100000$$

Age Standardized Rate ASR⁰

It is calculated as

$$ASR = \sum ASIR \times \text{Weight of Standard Population}$$

The weight of standard population is calculated as follows

$$\text{Weight} = \frac{\text{Standard population of a given age group}}{\text{Total standard population}}$$

Table 1: WHO Standard Population

Age Group	Population	Weight
0-4	88,569	0.088569
5 - 9	86,870	0.0868696
10 - 14	85,970	0.0859699
15 - 19	84,670	0.0846704
20 - 24	82,171	0.0821712
25 - 29	79,272	0.0792723
30 - 34	76,073	0.0760734
35 - 39	71,475	0.071475
40 - 44	65,877	0.0658769
45 - 49	60,379	0.0603789
50 - 54	53,681	0.0536812
55 - 59	45,484	0.0454841
60 - 64	37,187	0.037187
65 - 69	29,590	0.0295896
70 - 74	22,092	0.0220923
75 - 79	15,195	0.0151947
80 +	15,445	0.0154446
Total	100 000	1

THE CUMULATIVE RISK

The cumulative rate is expressed as

$$\text{The cumulative rate} = \sum_{i=1}^A a_i t_i$$

$$\text{The Cumulative risk} = 100 \times [1 - \exp(\text{cumulative rate}/100)]$$

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OVERALL CANCER INCIDENCE

2019

OVERALL CANCER INCIDENCE

EXECUTIVE SUMMARY

Qatar population during the year 2019 was 2,799,202, which represents the population over which the Qatar National Cancer Registry (QNCR), at the Ministry of Public Health is registering incidence of cancer. During the year 2019, there were 2525 registered cancer cases, with a distribution of 20% Qataris, and 80% Non-Qataris. The following table describes the number of cases distributed by behavior, gender and nationality:

Table 2: Number of cases distributed by behavior, gender, and nationality

Cancer Behavior	Non-Qatari			Qatari			Grand Total
	F	M	Total	F	M	Total	
Malignant , primary site (invasive)	879	1061	1940	269	201	470	2410
Carcinoma in situ	38	31	69	25	8	33	102
Uncertain (Reportable for intracranial and CNS sites only)	6	3	9				9
Benign (Reportable for intracranial and CNS sites only)	2	2	4				4
Grand Total	925	1097	2022	294	209	503	2525

Crude incidence rate found to be 90.20 per 100 000 while Age Standardized Rate ASR was 223.32 per 100 000 population at risk.

Distribution of cases by basis of diagnosis showed that 93.41% of the cases were microscopically confirmed:

Table 3: Basis of Diagnosis

Basis of Diagnosis	N	%
Positive histology	2181	86.38%
Positive cytology	169	6.69%
Unknown whether or not microscopically confirmed	130	5.15%
Radiology and other imaging techniques without microscopic confirmation	17	0.67%
Death Certificate Only	16	0.63%
Clinical diagnosis only	8	0.32%
Positive laboratory test/marker study	2	0.08%
Positive microscopic confirmation, method not specified	2	0.08%
Grand Total	2525	100%

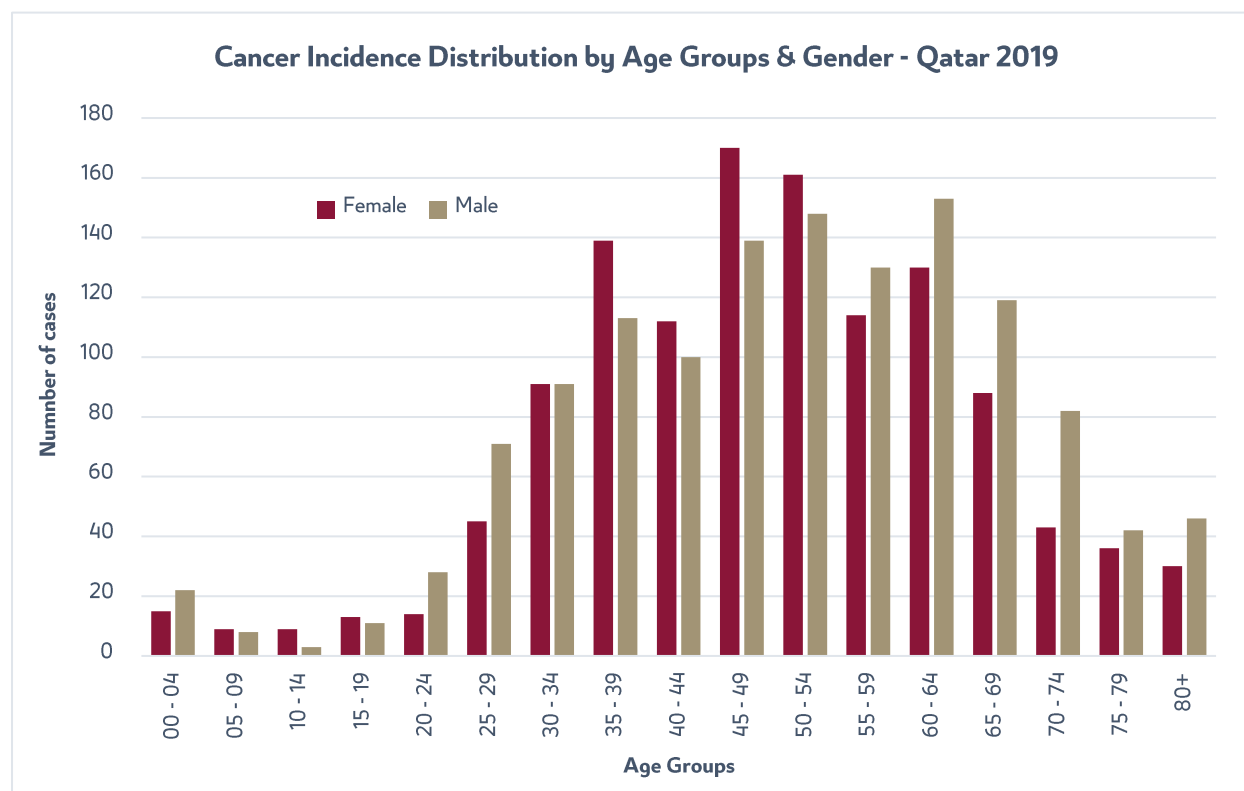
SEER Summary stage, the epidemiological staging system, showed that we had 44% of the cases were localized, 17% distant, and 20% were regional.

Table 4: SEER Summary stage

SEER Summary Stage	N	%
Localized only	1119	44.32%
Distant site(s)/node(s) involved	426	16.87%
Unknown if extension or metastasis (unstaged, unknown, or unspecified)	371	14.69%
Regional lymph nodes only	308	12.20%
In situ	102	4.04%
Regional by BOTH direct extension AND regional lymph nodes	85	3.37%
Regional by direct extension only	82	3.25%
Regional, NOS	28	1.11%
Benign, borderline	4	0.16%
Grand Total	2525	100.00%

Distribution by age group indicates that the peak of incidence was among the patients of the age 45-49 for female cases, and 60-64 for male ones.

Figure 1: Distribution of cancer by age groups



Regardless of the nationality and the gender, the following table presents the most common cancers diagnosed during 2019. Breast was the most common of all cancers with 17.39% of all cases, followed by colorectal (8.87% of the cases).

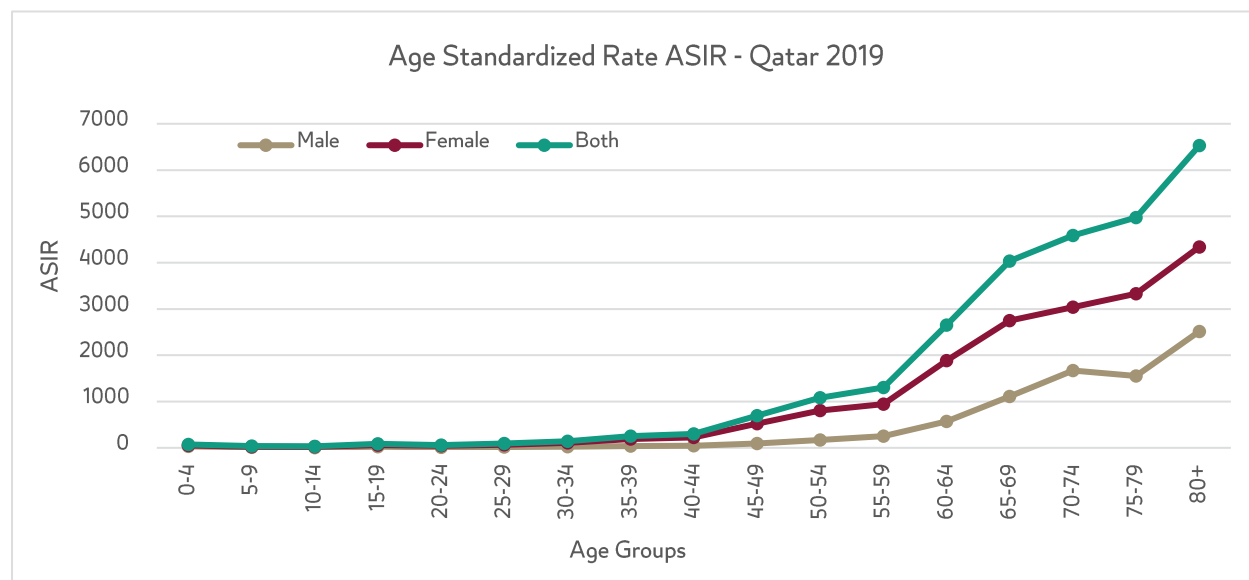
Table 5: Most common cancers, all genders, and all nationalities

ICD 10 Codes	Primary Site	N	%
C50 / D05	Breast	439	17.39%
C18-C21 / D01	Colorectal	224	8.87%
C73 / D09.3	Thyroid gland	188	7.45%
C61 / D07.5	Prostate	132	5.23%
C91-C95	Leukemia	127	5.03%
C44 / D04	Non-Melanoma skin cancer	121	4.79%
C64-C66	Kidney	112	4.44%
C33-C34 / D02.1-D02.2	Trachea, bronchus and lung	106	4.20%
C82-C85, C96	Non-Hodgkin Lymphoma	102	4.04%
C54-C55 / D07.0	Uterus	85	3.37%

Table 6: Summary of cancer burden

Age-Groups (5 year)	Male		Female		Both	
	N	ASIR	N	ASIR	N	ASIR
0-4	22	29.37	15	20.91	37	25.23
5 - 9	8	11.17	9	12.99	17	12.07
10 - 14	3	5.30	9	16.58	12	10.82
15 - 19	11	22.97	13	33.93	24	27.84
20 - 24	28	13.60	14	31.54	42	16.78
25 - 29	71	20.14	45	48.64	116	26.06
30 - 34	91	23.12	91	83.15	182	36.18
35 - 39	113	35.34	139	156.12	252	61.65
40 - 44	100	47.31	112	179.23	212	77.41
45 - 49	139	95.72	170	429.54	309	167.21
50 - 54	148	171.27	161	636.41	309	276.60
55 - 59	130	253.38	114	689.66	244	359.69
60 - 64	153	568.73	130	1316.46	283	769.50
65 - 69	119	1107.59	88	1640.26	207	1285.00
70 - 74	82	1671.76	43	1363.35	125	1551.06
75 - 79	42	1553.83	36	1772.53	78	1647.66
80 +	46	2516.41	30	1823.71	76	2188.31
Total "N"		2525				
ASR per 100000 (WHO population)		223.32				
Crude incidence rate per 100000		90.20				
Cumulative risk of incidence [0-74]		20.96				

Figure 2: Age Standardized Incidence Rate ASIR for both genders of all nationalities



CANCERS ACROSS ALL NATIONALITIES AND GENDERS

Table 7: Comprehensive table of cancers across all nationalities and gender

Primary Site (ICD 10 Classifications)	Female		Male		Total	Total %
	N	%	N	%	N	
All Cancers	1219	100.00%	1306	100.00%	2525	100.00%
Abdomen	1	0.08%		0.00%	1	0.04%
Accessory sinus, unspecified		0.00%	1	0.08%	1	0.04%
Acute leukaemia of unspecified cell type		0.00%	1	0.08%	1	0.04%
Acute lymphoblastic leukaemia [ALL]	13	1.07%	15	1.15%	28	1.11%
Acute megakaryoblastic leukaemia	1	0.08%		0.00%	1	0.04%
Acute myeloblastic leukaemia [AML]	6	0.49%	21	1.61%	27	1.07%
Acute panmyelosis with myelofibrosis	2	0.16%		0.00%	2	0.08%
Acute promyelocytic leukaemia [PML]		0.00%	7	0.54%	7	0.28%
Adrenal gland, unspecified	2	0.16%	5	0.38%	7	0.28%
Ampulla of Vater	1	0.08%	5	0.38%	6	0.24%
Anaplastic large cell lymphoma, ALK-positive		0.00%	1	0.08%	1	0.04%
Angioimmunoblastic T-cell lymphoma		0.00%	4	0.31%	4	0.16%
Angiosarcoma of liver		0.00%	1	0.08%	1	0.04%
Anterior wall of bladder		0.00%	3	0.23%	3	0.12%
Anus, unspecified	1	0.08%		0.00%	1	0.04%
Aortic body and other paraganglia		0.00%	1	0.08%	1	0.04%
Appendix	7	0.57%	16	1.23%	23	0.91%
Ascending colon	6	0.49%	10	0.77%	16	0.63%
Axillary tail of breast	5	0.41%		0.00%	5	0.20%
B-cell lymphoma, unspecified	2	0.16%	2	0.15%	4	0.16%
Benign neoplasm of meninges		0.00%	1	0.08%	1	0.04%
Biliary tract, unspecified		0.00%	1	0.08%	1	0.04%
Bladder	4	0.33%	27	2.07%	31	1.23%
Bladder, unspecified	6	0.49%	19	1.45%	25	0.99%
Body of pancreas	2	0.16%	3	0.23%	5	0.20%
Body of stomach	1	0.08%	8	0.61%	9	0.36%

Primary Site (ICD 10 Classifications)	Female		Male		Total N	Total %
	N	%	N	%		
Bone and articular cartilage of limb, unspecified		0.00%	1	0.08%	1	0.04%
Bone and articular cartilage, unspecified	1	0.08%		0.00%	1	0.04%
Bones of skull and face		0.00%	1	0.08%	1	0.04%
Brain stem		0.00%	1	0.08%	1	0.04%
Brain, unspecified	21	1.72%	46	3.52%	67	2.65%
Breast, unspecified	130	10.66%	4	0.31%	134	5.31%
Bronchus and lung		0.00%	1	0.08%	1	0.04%
Bronchus or lung, unspecified	9	0.74%	33	2.53%	42	1.66%
Burkitt lymphoma	1	0.08%	5	0.38%	6	0.24%
Malignant neoplasm of vagina	1	0.08%		0.00%	1	0.04%
Malignant neoplasm of ureter		0.00%	1	0.08%	1	0.04%
Caecum	2	0.16%	7	0.54%	9	0.36%
Carcinoma in situ of breast	28	2.30%		0.00%	28	1.11%
Carcinoma in situ of cervix uteri	22	1.80%		0.00%	22	0.87%
Carcinoma in situ of oral cavity, oesophagus and stomach		0.00%	1	0.08%	1	0.04%
Cardia		0.00%	10	0.77%	10	0.40%
Central nervous system, unspecified		0.00%	1	0.08%	1	0.04%
Central portion of breast	9	0.74%	1	0.08%	10	0.40%
Cerebellum	2	0.16%		0.00%	2	0.08%
Cerebral meninges		0.00%	2	0.15%	2	0.08%
Cerebrum, except lobes and ventricles	1	0.08%	1	0.08%	2	0.08%
Cervix uteri, unspecified	30	2.46%		0.00%	30	1.19%
Cheek mucosa	1	0.08%	9	0.69%	10	0.40%
Chronic eosinophilic leukaemia [hypereosinophilic syndrome]		0.00%	1	0.08%	1	0.04%
Chronic lymphocytic leukaemia of B-cell type	6	0.49%	15	1.15%	21	0.83%
Chronic myeloid leukaemia [CML], BCR/ABL-positive	7	0.57%	15	1.15%	22	0.87%
Chronic myelomonocytic leukaemia	1	0.08%	1	0.08%	2	0.08%
Chronic myeloproliferative disease	1	0.08%	6	0.46%	7	0.28%
Colon, unspecified	5	0.41%	4	0.31%	9	0.36%

Primary Site (ICD 10 Classifications)	Female		Male		Total	Total %
	N	%	N	%	N	
Connective and soft tissue of abdomen	1	0.08%		0.00%	1	0.04%
Connective and soft tissue of head, face and neck	1	0.08%		0.00%	1	0.04%
Connective and soft tissue of lower limb, including hip	4	0.33%	3	0.23%	7	0.28%
Connective and soft tissue of pelvis	1	0.08%		0.00%	1	0.04%
Connective and soft tissue of thorax		0.00%	3	0.23%	3	0.12%
Connective and soft tissue of trunk, unspecified		0.00%	2	0.15%	2	0.08%
Connective and soft tissue of upper limb, including shoulder		0.00%	1	0.08%	1	0.04%
Connective and soft tissue, unspecified	1	0.08%	6	0.46%	7	0.28%
Cornea		0.00%	1	0.08%	1	0.04%
Corpus uteri, unspecified	1	0.08%		0.00%	1	0.04%
Cutaneous T-cell lymphoma, unspecified	2	0.16%	1	0.08%	3	0.12%
Descended testis		0.00%	1	0.08%	1	0.04%
Descending colon	5	0.41%	10	0.77%	15	0.59%
Diffuse large B-cell lymphoma	17	1.39%	29	2.22%	46	1.82%
Dome of bladder		0.00%	2	0.15%	2	0.08%
Duodenum	1	0.08%	6	0.46%	7	0.28%
Endocervix	3	0.25%		0.00%	3	0.12%
Endometrium	76	6.23%		0.00%	76	3.01%
Essential (haemorrhagic) thrombocythaemia	7	0.57%	7	0.54%	14	0.55%
External lower lip		0.00%	1	0.08%	1	0.04%
Extrahepatic bile duct	3	0.25%	8	0.61%	11	0.44%
Extranodal marginal zone B-cell lymphoma of mucosa-associated lymphoid tissue [MALT-lymphoma]	2	0.16%		0.00%	2	0.08%
Eye, unspecified	1	0.08%	1	0.08%	2	0.08%
Fallopian tube	2	0.16%		0.00%	2	0.08%
Floor of mouth, unspecified		0.00%	2	0.15%	2	0.08%
Follicular lymphoma		0.00%	1	0.08%	1	0.04%
Follicular lymphoma grade I	1	0.08%	3	0.23%	4	0.16%

Primary Site (ICD 10 Classifications)	Female		Male		Total N	Total %
	N	%	N	%		
Follicular lymphoma grade II	2	0.16%		0.00%	2	0.08%
Follicular lymphoma grade III, unspecified	2	0.16%	2	0.15%	4	0.16%
Follicular lymphoma, unspecified	2	0.16%	1	0.08%	3	0.12%
Frontal lobe	3	0.25%	2	0.15%	5	0.20%
Fundus of stomach	2	0.16%	3	0.23%	5	0.20%
Fundus uteri	1	0.08%		0.00%	1	0.04%
Glottis		0.00%	5	0.38%	5	0.20%
Greater curvature of stomach, unspecified	1	0.08%		0.00%	1	0.04%
Hairy-cell leukaemia		0.00%	1	0.08%	1	0.04%
Head of pancreas	8	0.66%	11	0.84%	19	0.75%
Hepatic flexure	2	0.16%	5	0.38%	7	0.28%
Histiocytic sarcoma		0.00%	1	0.08%	1	0.04%
Hodgkin lymphoma, unspecified	1	0.08%	5	0.38%	6	0.24%
Hypopharynx, unspecified		0.00%	5	0.38%	5	0.20%
Ileum		0.00%	3	0.23%	3	0.12%
Ill-defined sites within the digestive system		0.00%	1	0.08%	1	0.04%
Intraductal carcinoma in situ	2	0.16%		0.00%	2	0.08%
Intrahepatic bile duct carcinoma	3	0.25%	8	0.61%	11	0.44%
Isthmus uteri	1	0.08%		0.00%	1	0.04%
Jejunum	1	0.08%	2	0.15%	3	0.12%
Lacrimal gland and duct		0.00%	1	0.08%	1	0.04%
Larynx, unspecified	1	0.08%	2	0.15%	3	0.12%
Lateral wall of bladder	1	0.08%	2	0.15%	3	0.12%
Lateral wall of nasopharynx		0.00%	2	0.15%	2	0.08%
Lip, oral cavity and pharynx		0.00%	1	0.08%	1	0.04%
Lip, unspecified		0.00%	1	0.08%	1	0.04%
Liver cell carcinoma	10	0.82%	40	3.06%	50	1.98%
Liver, gallbladder and bile ducts	1	0.08%		0.00%	1	0.04%
Lobular carcinoma in situ	1	0.08%		0.00%	1	0.04%
Long bones of lower limb	2	0.16%	4	0.31%	6	0.24%
Lower gum		0.00%	5	0.38%	5	0.20%
Lower limb		0.00%	1	0.08%	1	0.04%

Primary Site (ICD 10 Classifications)	Female		Male		Total N	Total %
	N	%	N	%		
Lower lip, inner aspect		0.00%	1	0.08%	1	0.04%
Lower lobe, bronchus or lung	4	0.33%	24	1.84%	28	1.11%
Lower third of oesophagus	1	0.08%	1	0.08%	2	0.08%
Lower-inner quadrant of breast	15	1.23%	1	0.08%	16	0.63%
Lower-outer quadrant of breast	32	2.63%		0.00%	32	1.27%
Lymphoblastic (diffuse) lymphoma		0.00%	1	0.08%	1	0.04%
Lymphocyte-rich (classical) Hodgkin lymphoma		0.00%	2	0.15%	2	0.08%
Main bronchus	1	0.08%	2	0.15%	3	0.12%
Major salivary gland, unspecified		0.00%	2	0.15%	2	0.08%
Malignant melanoma of skin	2	0.16%	2	0.15%	4	0.16%
Malignant melanoma of skin, unspecified	4	0.33%	3	0.23%	7	0.28%
Malignant neoplasm of bladder		0.00%	1	0.08%	1	0.04%
Malignant neoplasm of bronchus and lung		0.00%	2	0.15%	2	0.08%
Malignant neoplasm of cervix uteri	1	0.08%		0.00%	1	0.04%
Malignant neoplasm of gallbladder	8	0.66%	12	0.92%	20	0.79%
Malignant neoplasm of hypopharynx		0.00%	2	0.15%	2	0.08%
Malignant neoplasm of kidney, except renal pelvis	26	2.13%	83	6.36%	109	4.32%
Malignant neoplasm of lymphoid, haematopoietic and related tissue, unspecified		0.00%	1	0.08%	1	0.04%
Malignant neoplasm of ovary	41	3.36%	1	0.08%	42	1.66%
Malignant neoplasm of parotid gland	4	0.33%	9	0.69%	13	0.51%
Malignant neoplasm of penis		0.00%	1	0.08%	1	0.04%
Malignant neoplasm of placenta	1	0.08%		0.00%	1	0.04%
Malignant neoplasm of prostate		0.00%	132	10.11%	132	5.23%
Malignant neoplasm of rectosigmoid junction	12	0.98%	14	1.07%	26	1.03%
Malignant neoplasm of rectum	12	0.98%	23	1.76%	35	1.39%
Malignant neoplasm of renal pelvis		0.00%	2	0.15%	2	0.08%
Malignant neoplasm of skin, unspecified	8	0.66%	8	0.61%	16	0.63%
Malignant neoplasm of stomach	3	0.25%	6	0.46%	9	0.36%
Malignant neoplasm of thymus		0.00%	4	0.31%	4	0.16%
Malignant neoplasm of thyroid gland	126	10.34%	62	4.75%	188	7.45%

Primary Site (ICD 10 Classifications)	Female		Male		Total N	Total %
	N	%	N	%		
Malignant neoplasm of uterus, part unspecified	6	0.49%		0.00%	6	0.24%
Malignant neoplasm, primary site unspecified	1	0.08%	1	0.08%	2	0.08%
Mantle cell lymphoma		0.00%	5	0.38%	5	0.20%
Mature B-cell leukaemia Burkitt-type	2	0.16%	9	0.69%	11	0.44%
Maxillary sinus	2	0.16%		0.00%	2	0.08%
Mediastinal (thymic) large B-cell lymphoma		0.00%	4	0.31%	4	0.16%
Mediastinum, part unspecified		0.00%	5	0.38%	5	0.20%
Melanoma in situ	2	0.16%	1	0.08%	3	0.12%
Meninges, unspecified	2	0.16%		0.00%	2	0.08%
Mesothelioma of other sites		0.00%	1	0.08%	1	0.04%
Mesothelioma of peritoneum		0.00%	1	0.08%	1	0.04%
Mesothelioma of pleura		0.00%	6	0.46%	6	0.24%
Middle lobe, bronchus or lung	1	0.08%		0.00%	1	0.04%
Middle third of oesophagus	1	0.08%	3	0.23%	4	0.16%
Mixed cellularity (classical) Hodgkin lymphoma	5	0.41%	6	0.46%	11	0.44%
Monoclonal gammopathy of undetermined significance (MGUS)		0.00%	1	0.08%	1	0.04%
Mouth, unspecified		0.00%	1	0.08%	1	0.04%
Multiple myeloma	9	0.74%	14	1.07%	23	0.91%
Myelodysplastic syndrome, unspecified	2	0.16%	5	0.38%	7	0.28%
Myeloid leukaemia, unspecified	2	0.16%	1	0.08%	3	0.12%
Nasopharynx, unspecified	2	0.16%	9	0.69%	11	0.44%
Neoplasm of uncertain or unknown behaviour of brain and central nervous system	1	0.08%		0.00%	1	0.04%
Nipple and areola	14	1.15%		0.00%	14	0.55%
Nodular sclerosis (classical) Hodgkin lymphoma	9	0.74%	10	0.77%	19	0.75%
Non-Hodgkin lymphoma, unspecified	4	0.33%	1	0.08%	5	0.20%
Oesophagus, unspecified		0.00%	2	0.15%	2	0.08%
Orbit		0.00%	1	0.08%	1	0.04%
Osteomyelofibrosis	1	0.08%	2	0.15%	3	0.12%
Other and unspecified female genital organs	2	0.16%		0.00%	2	0.08%
Other and unspecified urinary organs		0.00%	4	0.31%	4	0.16%

Primary Site (ICD 10 Classifications)	Female		Male		Total N	Total %
	N	%	N	%		
Other parts of pancreas		0.00%	1	0.08%	1	0.04%
Overlapping lesion of bone and articular cartilage		0.00%	1	0.08%	1	0.04%
Overlapping lesion of brain		0.00%	1	0.08%	1	0.04%
Overlapping lesion of breast	5	0.41%		0.00%	5	0.20%
Overlapping lesion of cervix uteri	1	0.08%		0.00%	1	0.04%
Overlapping lesion of colon	1	0.08%	3	0.23%	4	0.16%
Overlapping lesion of pancreas		0.00%	2	0.15%	2	0.08%
Overlapping lesion of rectum, anus and anal canal		0.00%	2	0.15%	2	0.08%
Palate, unspecified	1	0.08%	1	0.08%	2	0.08%
Pancreas, unspecified	9	0.74%	13	1.00%	22	0.87%
Pancreatic duct	1	0.08%		0.00%	1	0.04%
Parathyroid gland	1	0.08%		0.00%	1	0.04%
Pelvic bones, sacrum and coccyx	1	0.08%	2	0.15%	3	0.12%
Pelvis	2	0.16%	1	0.08%	3	0.12%
Penis		0.00%	2	0.15%	2	0.08%
Penis, unspecified		0.00%	2	0.15%	2	0.08%
Peripheral T-cell lymphoma, not elsewhere classified	2	0.16%	5	0.38%	7	0.28%
Peritoneum, unspecified		0.00%	1	0.08%	1	0.04%
Pineal gland	1	0.08%		0.00%	1	0.04%
Pleura		0.00%	1	0.08%	1	0.04%
Polycythaemia vera	3	0.25%	10	0.77%	13	0.51%
Posterior wall of bladder		0.00%	2	0.15%	2	0.08%
Posterior wall of hypopharynx		0.00%	1	0.08%	1	0.04%
Posterior wall of nasopharynx		0.00%	2	0.15%	2	0.08%
Prolymphocytic leukaemia of T-cell type		0.00%	1	0.08%	1	0.04%
Pyloric antrum	3	0.25%	6	0.46%	9	0.36%
Pylorus		0.00%	1	0.08%	1	0.04%
Retina	1	0.08%		0.00%	1	0.04%
Retromolar area		0.00%	2	0.15%	2	0.08%

Primary Site (ICD 10 Classifications)	Female		Male		Total N	Total %
	N	%	N	%		
Retroperitoneum	1	0.08%	5	0.38%	6	0.24%
Scapula and long bones of upper limb		0.00%	1	0.08%	1	0.04%
Sigmoid colon	29	2.38%	29	2.22%	58	2.30%
Skin of ear and external auricular canal	1	0.08%	7	0.54%	8	0.32%
Skin of eyelid, including canthus	1	0.08%	4	0.31%	5	0.20%
Skin of lip	1	0.08%	2	0.15%	3	0.12%
Skin of lower limb, including hip	4	0.33%	4	0.31%	8	0.32%
Skin of other and unspecified parts of face	10	0.82%	26	1.99%	36	1.43%
Skin of scalp and neck	2	0.16%	10	0.77%	12	0.48%
Skin of trunk	9	0.74%	10	0.77%	19	0.75%
Skin of upper limb, including shoulder	3	0.25%	11	0.84%	14	0.55%
Small cell B-cell lymphoma	3	0.25%	1	0.08%	4	0.16%
Small intestine, unspecified	1	0.08%	4	0.31%	5	0.20%
Soft palate		0.00%	1	0.08%	1	0.04%
Spinal cord	1	0.08%	1	0.08%	2	0.08%
Splenic flexure	1	0.08%	5	0.38%	6	0.24%
Stomach, unspecified	6	0.49%	8	0.61%	14	0.55%
Subglottis		0.00%	1	0.08%	1	0.04%
Sublingual gland	1	0.08%		0.00%	1	0.04%
Submandibular gland	1	0.08%		0.00%	1	0.04%
Supraglottis		0.00%	1	0.08%	1	0.04%
Tail of pancreas	5	0.41%	6	0.46%	11	0.44%
Temporal lobe		0.00%	1	0.08%	1	0.04%
Testis, unspecified		0.00%	34	2.60%	34	1.35%
Thorax	2	0.16%	2	0.15%	4	0.16%
Tip of tongue	6	0.49%	14	1.07%	20	0.79%
Tongue, unspecified	3	0.25%	3	0.23%	6	0.24%
Tonsil, unspecified		0.00%	1	0.08%	1	0.04%
Transverse colon	5	0.41%	8	0.61%	13	0.51%
Undescended testis		0.00%	1	0.08%	1	0.04%
Upper gum	1	0.08%		0.00%	1	0.04%
Upper lobe, bronchus or lung	7	0.57%	22	1.68%	29	1.15%

Primary Site (ICD 10 Classifications)	Female		Male		Total	Total %
	N	%	N	%	N	
Upper third of oesophagus	1	0.08%	1	0.08%	2	0.08%
Upper-inner quadrant of breast	49	4.02%		0.00%	49	1.94%
Upper-outer quadrant of breast	143	11.73%		0.00%	143	5.66%
Uterine adnexa, unspecified	1	0.08%		0.00%	1	0.04%
Ventral surface of tongue		0.00%	1	0.08%	1	0.04%
Vertebral column	1	0.08%	1	0.08%	2	0.08%
Vestibule of mouth		0.00%	1	0.08%	1	0.04%
Vulva, unspecified	4	0.33%		0.00%	4	0.16%
Waldenström macroglobulinaemia	1	0.08%		0.00%	1	0.04%
All Cancers	1219	100.00%	1306	100.00%	2525	100.00%

MOST COMMON CANCER IN MALES

The most common cancer in males was colorectal cancer with 10.42% of the registered male cancer cases, followed by prostate cancer with 10.11%.

Table 8: Most common cancers in males of all nationalities

ICD 10 Codes	Primary Site	N	%
C18-C21 / D01	Colorectal	136	10.42%
C61 / D07.5	Prostate	132	10.11%
C91-C95	Leukemia	87	6.67%
C64-C66	Kidney	86	6.59%
C33-C34 / D02.1-D02.2	Trachea, bronchus and lung	84	6.44%
C44 / D04	Non-Melanoma skin cancer	82	6.28%
C82-C85, C96	Non-Hodgkin Lymphoma	64	4.90%
C73 / D09.3	Thyroid gland	62	4.75%
C67 / D09.0	Bladder	56	4.29%
C70-C72	Brain & CNS	52	3.98%

MOST COMMON CANCER IN FEMALES

Breast cancer was the most common cancer with 35.52% of the registered female cancer cases. Thyroid gland cancer was the second most common with 10.34%

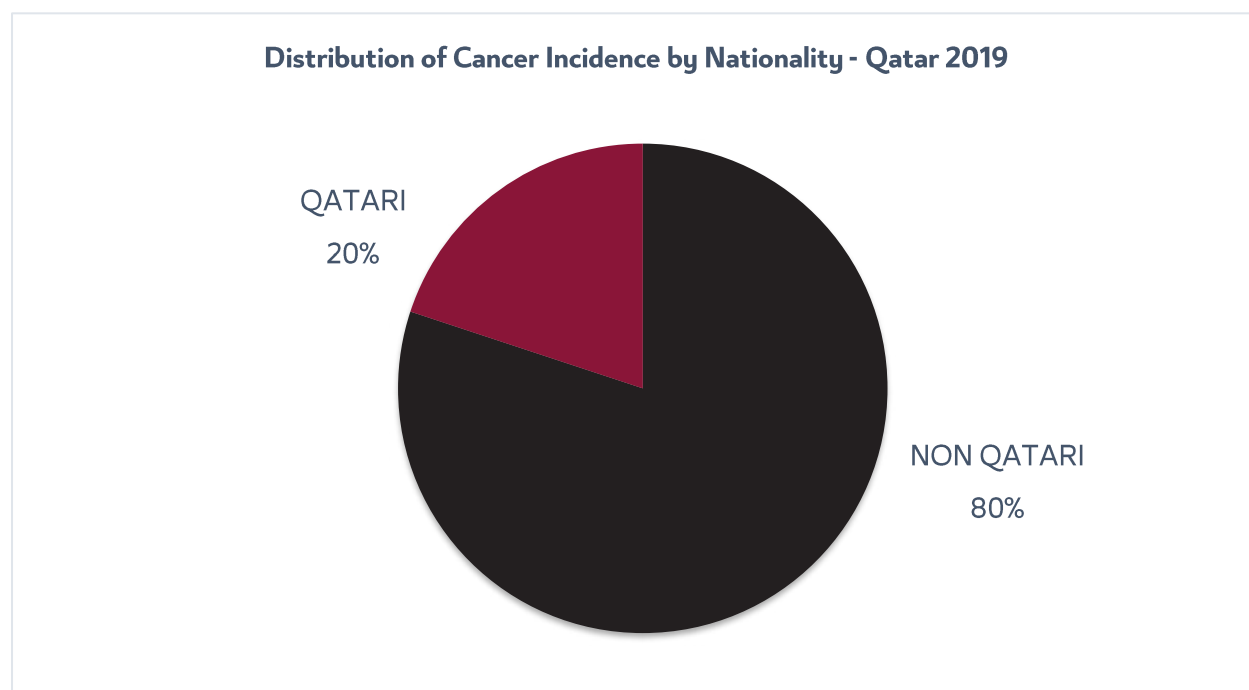
Table 9: Most common cancers in females of all nationalities

ICD 10 Codes	Primary Site	N	%
C50 / D05	Breast	433	35.52%
C73 / D09.3	Thyroid gland	126	10.34%
C18-C21 / D01	Colorectal	88	7.22%
C54-C55 / D07.0	Uterus	85	6.97%
C53 / D06	Cervix uteri	57	4.68%
C56	Ovary	41	3.36%
C91-C95	Leukemia	40	3.28%
C44 / D04	Non-Melanoma skin cancer	39	3.20%
C82-C85, C96	Non-Hodgkin Lymphoma	38	3.12%
C64-C66	Kidney	26	2.13%

DISTRIBUTION BY NATIONALITY

When distributed according to nationality, 503 (20%) new cases of cancer were registered amongst Qataris and 2022 (80%) new cases were in Non-Qataris.

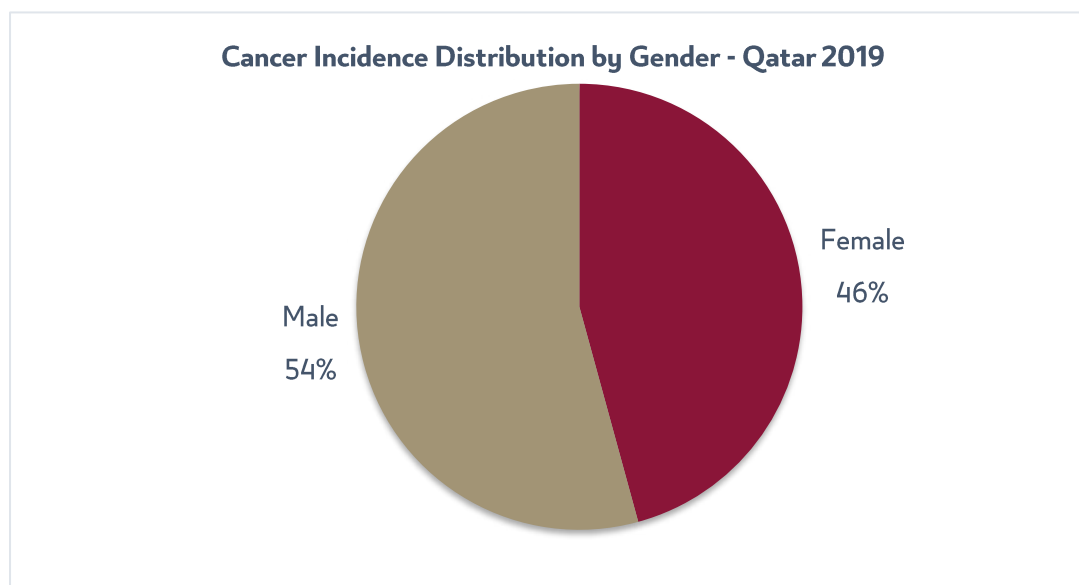
Figure 3: Cancer incidence distribution by nationality



DISTRIBUTION BY GENDER

Across all nationalities, newly registered cancer cases among males were found to be 1306 (52%) cases of total cancer cases, while females accounted for 1219 (48%) new cases.

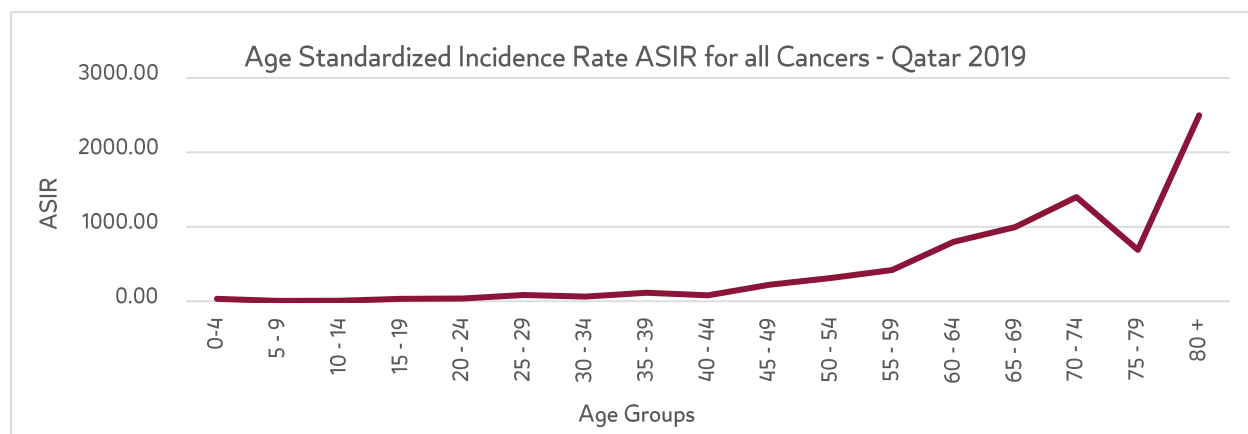
Figure 4: Cancer incidence distribution by gender



AGE STANDARDIZED INCIDENCE RATE ASIR

The Age Standardized Incidence Rate (ASIR) shows an increasing distribution of cancer cases with higher age.

Figure 5: Age Standardized Incidence Rate ASIR for all cancers



02

CANCER INCIDENCE AMONGST QATARIS

2019

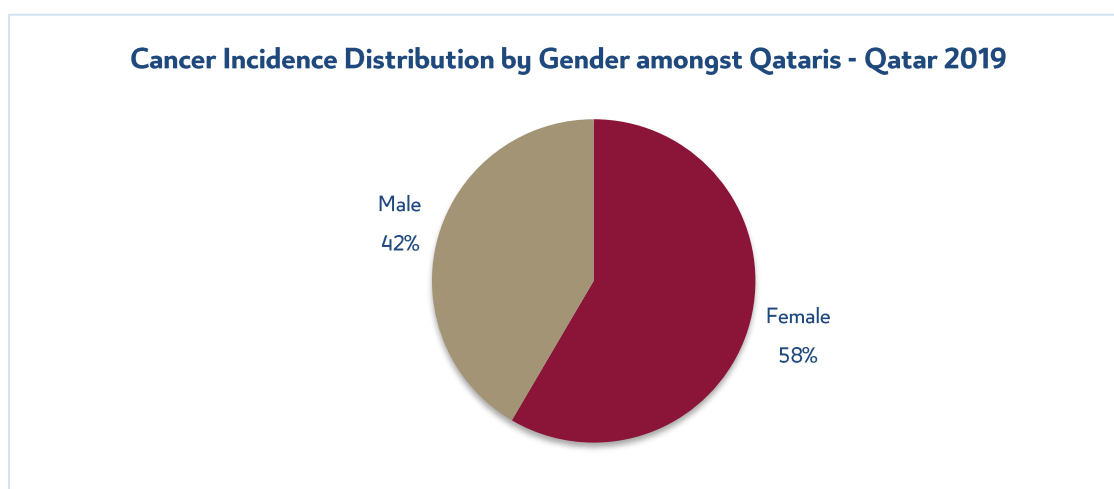
CANCER INCIDENCE AMONGST QATARIS

A total of 503 cancer cases were registered amongst Qataris, which accounted for almost 20% of all cancer cases newly diagnosed during 2019

DISTRIBUTION BY GENDER

During 2019, 294 (58%) new cases were diagnosed in female Qataris, while 209 (42%) new cases were diagnosed in Qatari males.

Figure 6: Cancer incidence by gender among Qataris



MOST COMMON CANCERS ACROSS ALL GENDERS OF QATARIS

In the Qatari population, the most common cancers newly diagnosed in 2019 were the breast cancer with 19.12% of all Qatari cancer cases, followed by colorectal cancer with 12.55%.

Table 10: Most common cancers across all genders of Qataris, 2019

ICD 10 Codes	Primary Site	N	%
C50 / D05	Breast	96	19.12%
C18-C21 / D01	Colorectal	63	12.55%
C73 / D09.3	Thyroid gland	35	6.97%
C64-C66	Kidney	28	5.58%
C61 / D07.5	Prostate	28	5.58%
C82-C85, C96	Non-Hodgkin Lymphoma	26	5.18%
C54-C55 / D07.0	Uterus	24	4.78%
C67 / D09.0	Bladder	20	3.98%
C33-C34 / D02.1-D02.2	Trachea, bronchus and lung	20	3.98%
C67 / D09.0	Leukemia	18	3.59%

MOST COMMON CANCERS AMONGST MALES QATARIS

Prostate cancer is the most common amongst male Qataris which accounts for 28 (13.46%) followed by colorectal cancer which accounts for 24 (11.54%).

Table 11: Most common cancers among male Qataris

ICD 10 Codes	Primary Site	N	%
C61 / D07.5	Prostate	28	13.46%
C18-C21 / D01	Colorectal	24	11.54%
C64-C66	Kidney	20	9.62%
C33-C34 / D02.1-D02.2	Trachea, bronchus and lung	18	8.65%
C67 / D09.0	Bladder	15	7.21%
C82-C85, C96	Non-Hodgkin Lymphoma	13	6.25%
C44 / D04	Non-Melanoma skin cancer	9	4.33%
C73 / D09.3	Thyroid gland	8	3.85%
C25 / D01.7	Pancreas	7	3.37%
C91-C95	Leukemia	6	2.88%

MOST COMMON CANCERS AMONGST FEMALES

QATARIS

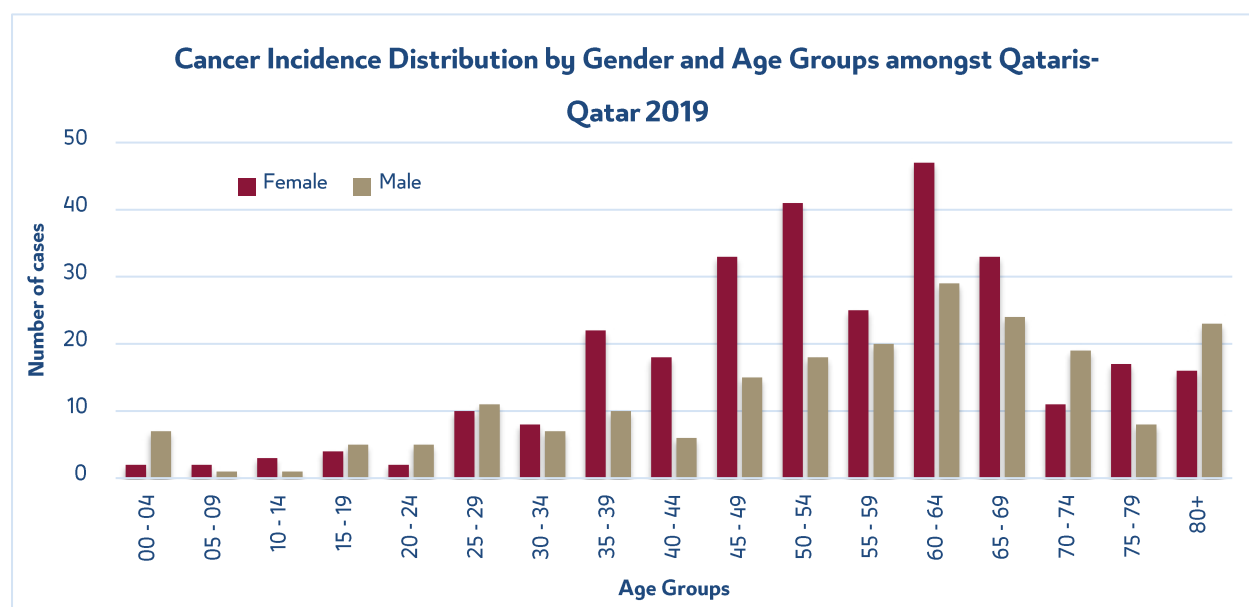
The most common cancer amongst female Qataris was breast cancer with 94 (31.97%) new cases. The second most common was colorectal with 39 (13.27%) new cases.

Table 11: Most common cancers among female Qataris

ICD 10 Codes	Primary Site	N	%
C50 / D05	Breast	94	31.97%
C18-C21 / D01	Colorectal	39	13.27%
C73 / D09.3	Thyroid gland	27	9.18%
C54-C55 / D07.0	Uterus	24	8.16%
C82-C85, C96	Non-Hodgkin Lymphoma	13	4.42%
C91-C95	Leukemia	12	4.08%
C56	Ovary	10	3.40%
C22 / D01.5	Liver and intrahepatic bile ducts	9	3.06%
C53 / D06	Cervix uteri	9	3.06%
C64-C66	Kidney	8	2.72%

DISTRIBUTION BY AGE

Figure 7: Cancer distribution by age groups amongst Qataris

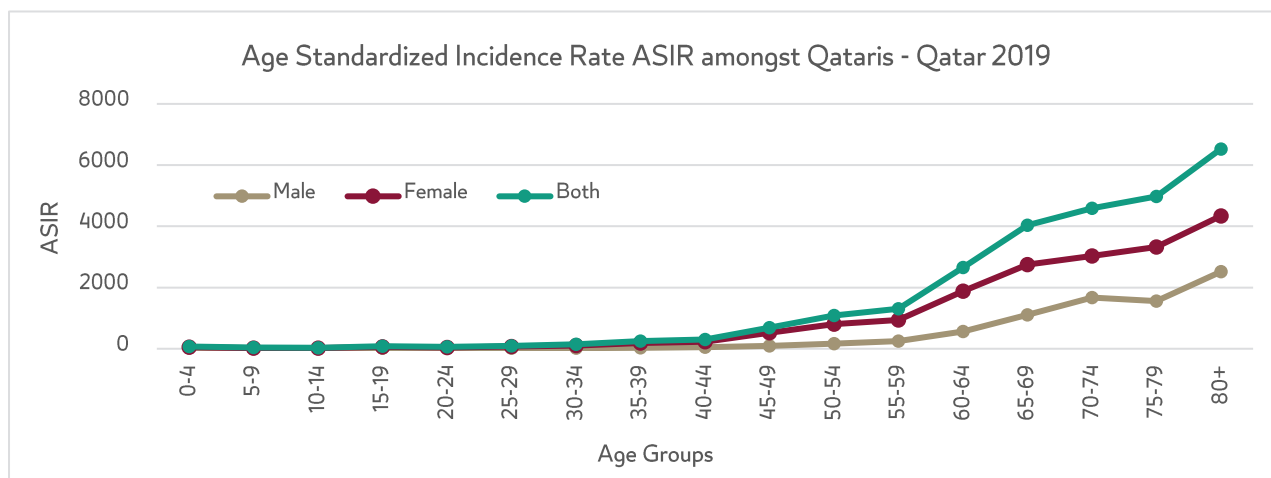


Crude incidence rate was 159.26 per 100 000 and Age Standardized Rate ASR was 242 per 100 000 population at risk.

Table 12: Summary of cancer burden in Qataris

Age-Groups (5 year)	Male		Female		Both Genders	
	N	ASIR	N	ASIR	N	ASIR
0-4	7	33.81	2	10.11	9	22.23
5-9	1	5.06	2	10.30	3	7.65
10-14	1	5.47	3	16.85	4	11.09
15-19	5	32.31	4	26.73	9	29.57
20-24	5	35.83	2	14.71	7	25.40
25-29	11	85.59	10	78.76	21	82.19
30-34	7	63.78	8	68.07	15	66.00
35-39	10	112.11	22	210.39	32	165.14
40-44	6	79.39	18	208.99	24	148.41
45-49	15	221.30	33	437.32	48	335.10
50-54	18	310.40	41	597.32	59	465.92
55-59	20	419.46	25	433.13	45	426.94
60-64	29	795.83	47	1039.82	76	930.92
65-69	24	996.68	33	1211.45	57	1110.68
70-74	19	1399.12	11	641.40	30	976.24
75-79	8	689.06	17	1300.69	25	1012.97
80+	23	2497.29	16	1624.37	39	2046.17
Total "N"		503				
ASR per 100000 (WHO population)		242				
Crude incidence rate per 100000		159.26				
Cumulative Risk of Incidence [0-74]		21.35				

Figure 8: Age Standardized Incidence Rate ASIR amongst Qataris 2019



03

CANCER INCIDENCE AMONGST NON-QATARIS

2019

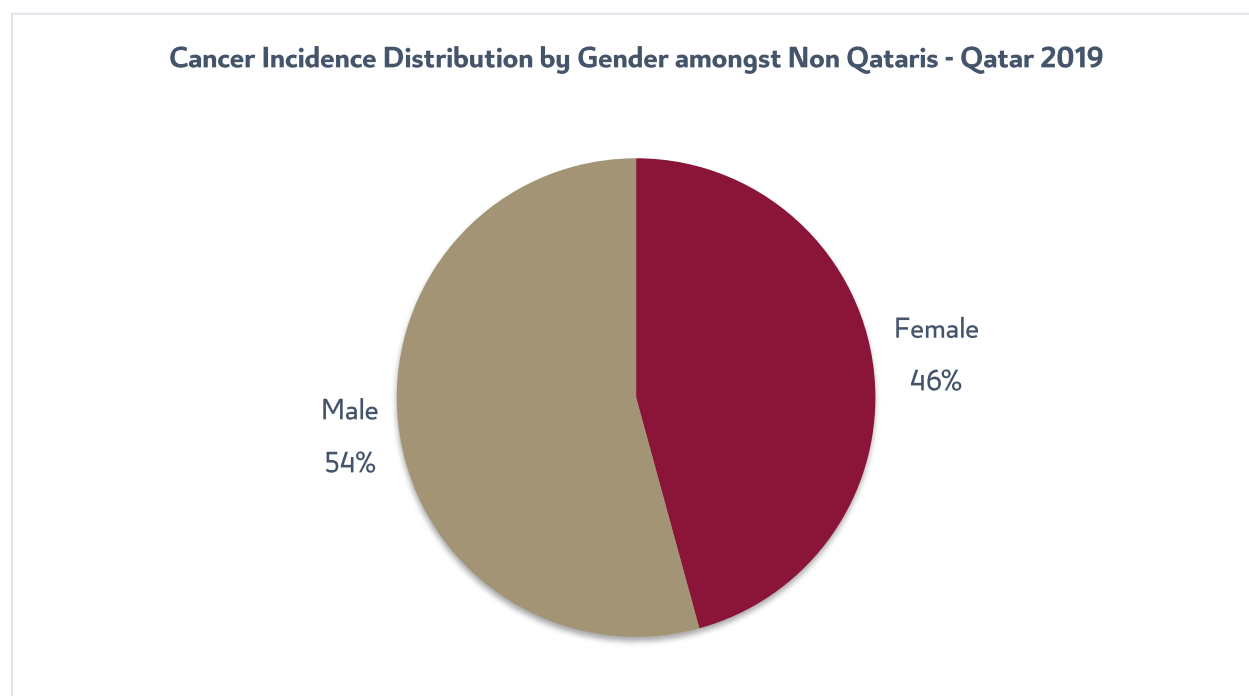
CANCER INCIDENCE AMONGST NON-QATARIS

A total of 2022 newly diagnosed cancers were reported during 2019 among the Non-Qatari population.

CANCER INCIDENCE BY GENDER AMONGST NON-QATARIS

Cancer presentations were higher in male Non-Qataris than in females. During 2019, 1097(54%) cases were newly diagnosed in males, while 925 (46%) new cases were diagnosed in females.

Figure 9: Cancer incidence by gender among Non-Qataris



MOST COMMON CANCERS ACROSS ALL GENDERS OF NON-QATARIS

In the Non-Qatari population newly diagnosed with cancer during 2019, breast cancer was the most common with 343 (16.96%) new cases, followed by colorectal with 161 (7.96%) new cases.

Table 13: Most common cancers across all genders of Non-Qataris

ICD 10 Codes	Primary Site	N	%
C50 / D05	Breast	343	16.96%
C18-C21 / D01	Colorectal	161	7.96%
C73 / D09.3	Thyroid gland	153	7.57%
C44 / D04	Non-Melanoma skin cancer	110	5.44%
C91-C95	Leukemia	109	5.39%
C61 / D07.5	Prostate	104	5.14%
C33-C34 / D02.1-D02.2	Trachea, bronchus and lung	86	4.25%
C64-C66	Kidney	84	4.15%
C82-C85, C96	Non-Hodgkin Lymphoma	76	3.76%
C70-C72	Brain & CNS	70	3.46%

MOST COMMON CANCERS AMONGST MALES NON-QATARIS

Colorectal cancer accounted for 112 (10.21%) of the new cases and was the most common amongst Non-Qatari males, followed by prostate cancer with 104 (9.48%) new cases.

Table 14: Most common cancers among male Non-Qataris

ICD 10 Codes	Primary Site	N	%
C18-C21 / D01	Colorectal	112	10.21%
C61 / D07.5	Prostate	104	9.48%
C91-C95	Leukemia	81	7.38%
C44 / D04	Non-Melanoma skin cancer	73	6.65%
C64-C66	Kidney	66	6.02%
C33-C34 / D02.1-D02.2	Trachea, bronchus and lung	66	6.02%
C73 / D09.3	Thyroid gland	54	4.92%
C70-C72	Brain & CNS	51	4.65%
C82-C85, C96	Non-Hodgkin Lymphoma	51	4.65%
C22 / D01.5	Liver and intrahepatic bile ducts	43	3.92%

MOST COMMON CANCERS AMONGST FEMALES NON-QATARIS

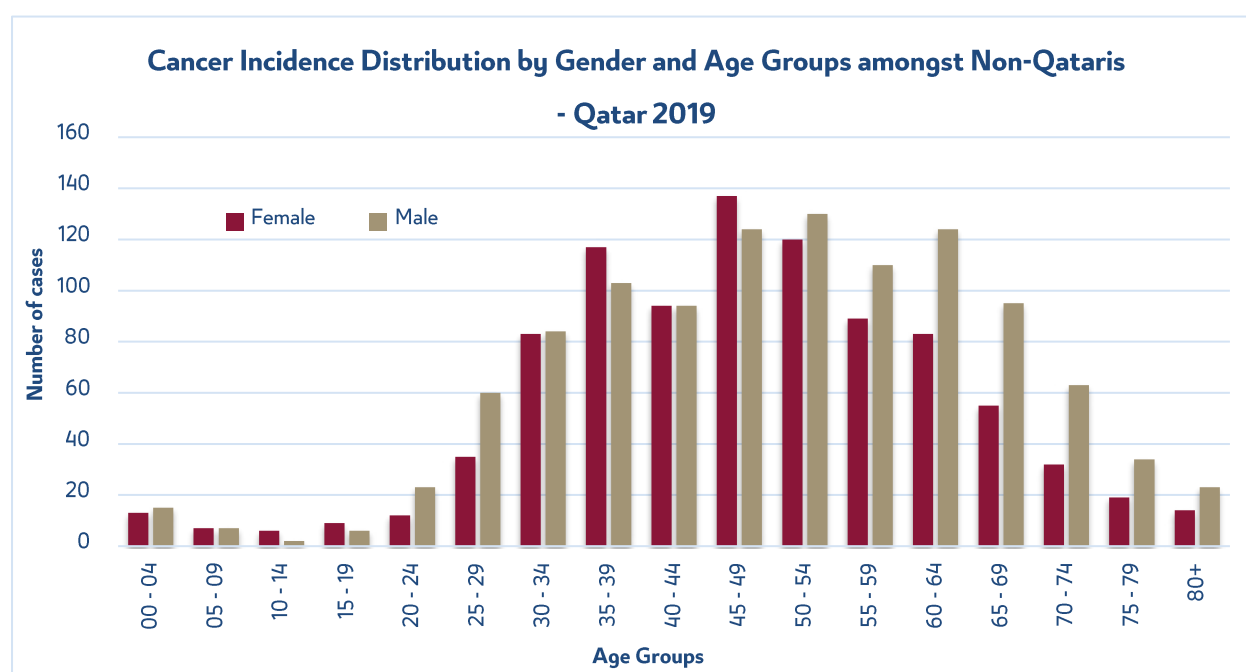
The most common cancer among Non-Qatari females was breast cancer with 339 (36.65%) new cases. The second most common was thyroid gland cancer with 99 (10.70%) new cases.

Table 15: Most common cancers among female Non-Qataris

ICD 10 Codes	Primary Site	N	%
C50 / D05	Breast	339	36.65%
C73 / D09.3	Thyroid gland	99	10.70%
C54-C55 / D07.0	Uterus	61	6.59%
C18-C21 / D01	Colorectal	49	5.30%
C53 / D06	Cervix uteri	48	5.19%
C44 / D04	Non-Melanoma skin cancer	37	4.00%
C56	Ovary	31	3.35%
C82-C86, C96	C91-C95 Leukemia	28	3.03%
C82-C85, C96	Non-Hodgkin Lymphoma	25	2.70%
C33-C34 / D02.1-D02.2	Trachea, bronchus and lung	20	2.16%

DISTRIBUTION BY AGE

Figure 10: Cancer distribution by age groups amongst Non-Qataris



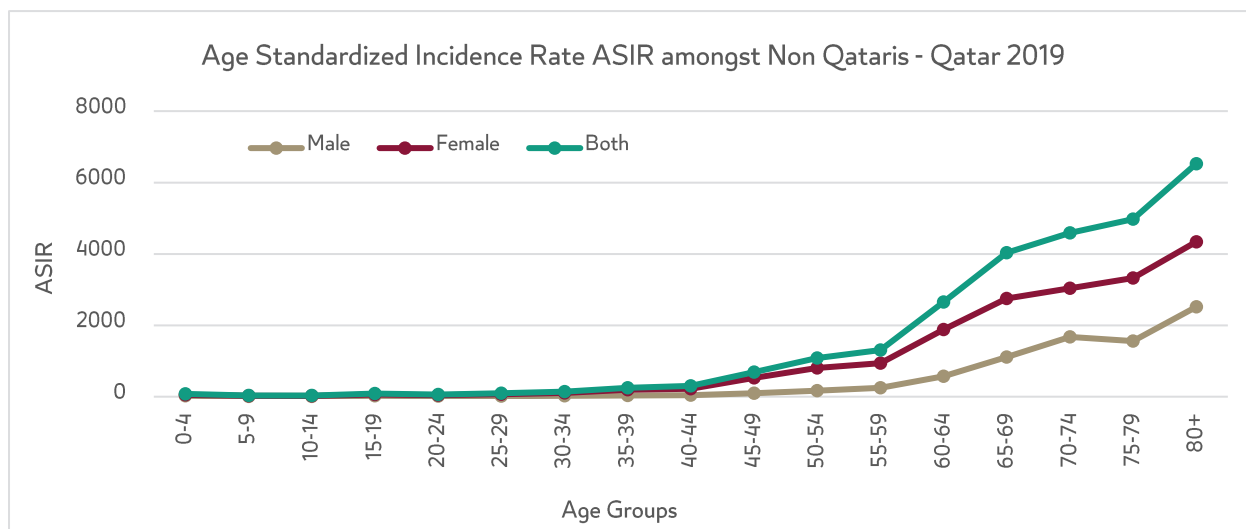
AGE STANDARDISED INCIDENCE RATE BY GENDER

Crude incidence rate was 81.42 per 100 000 and Age Standardized Rate ASR was 241.33 per 100 000 population at risk.

Table 16: Summary of cancer burden in Non-Qataris

Age-Groups (5 year)	Male		Female		Both Genders	
	N	ASIR	N	ASIR	N	ASIR
0-4	15	27.68	13	25.02	28	26.38
5-9	7	13.50	7	14.04	14	13.77
10-14	2	5.21	6	16.45	8	10.69
15-19	6	18.51	9	38.54	15	26.90
20-24	23	11.99	12	38.98	35	15.72
25-29	60	17.66	35	43.85	95	22.64
30-34	84	21.95	83	84.97	167	34.77
35-39	103	33.14	117	148.90	220	56.50
40-44	94	46.12	94	174.47	188	72.96
45-49	124	89.57	137	427.71	261	153.11
50-54	130	161.26	120	650.97	250	252.40
55-59	110	236.37	89	827.29	199	347.32
60-64	124	533.15	83	1549.95	207	723.45
65-69	95	1139.64	55	2082.54	150	1366.49
70-74	63	1776.15	32	2223.77	95	1905.33
75-79	34	2204.93	19	2624.31	53	2338.92
80+	23	2535.83	14	2121.21	37	2361.20
Total "N"		2022				
ASR per 100000 (WHO population)		241.33				
Crude incidence rate per 100000		81.42				
Cumulative Risk of Incidence [0-74]		22.23				

Figure 11: Age Standardized Incidence Rate ASIR amongst Non Qataris - 2019



04

TRENDS OF CANCER 2010-2019

2019

TRENDS OF CANCER 2010-2019

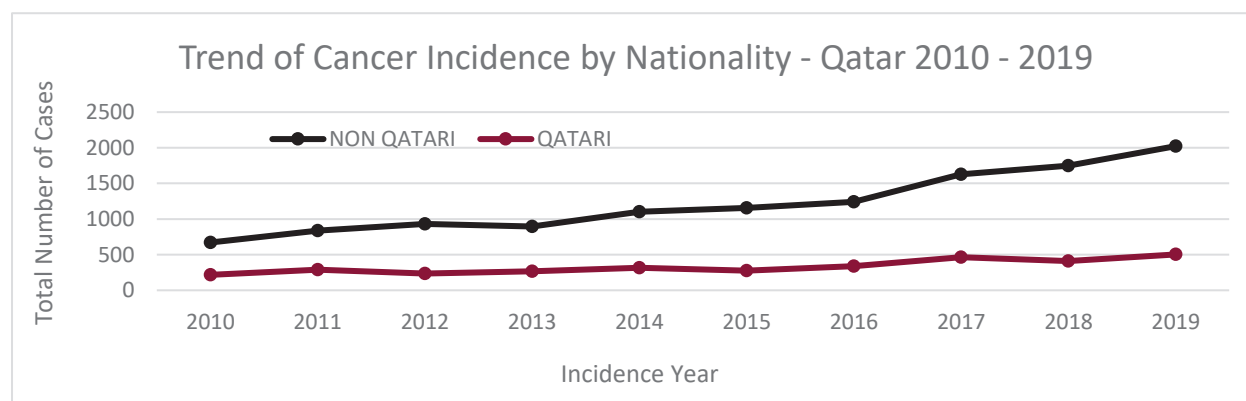
CRUDE RATE AND AGE STANDARDIZED RATE

Table 18: Summary of crude rate and ASR

year	cases	ASR per 100 000 (WHO Population)	Crude Rate per 100 000	Cumulative Risk 0- 74
2010	887	173.00	51.72	17.64
2011	1114	216.36	64.29	20.66
2012	1156	200.82	63.07	20.61
2013	1144	187.19	57.09	18.52
2014	1400	218.99	65.46	21.50
2015	1446	148.71	59.32	14.63
2016	1562	133.94	59.44	14.38
2017	2072	191.58	76.05	18.37
2018	2137	189.30	77.42	19.09
2019	2525	223.32	90.20	20.96

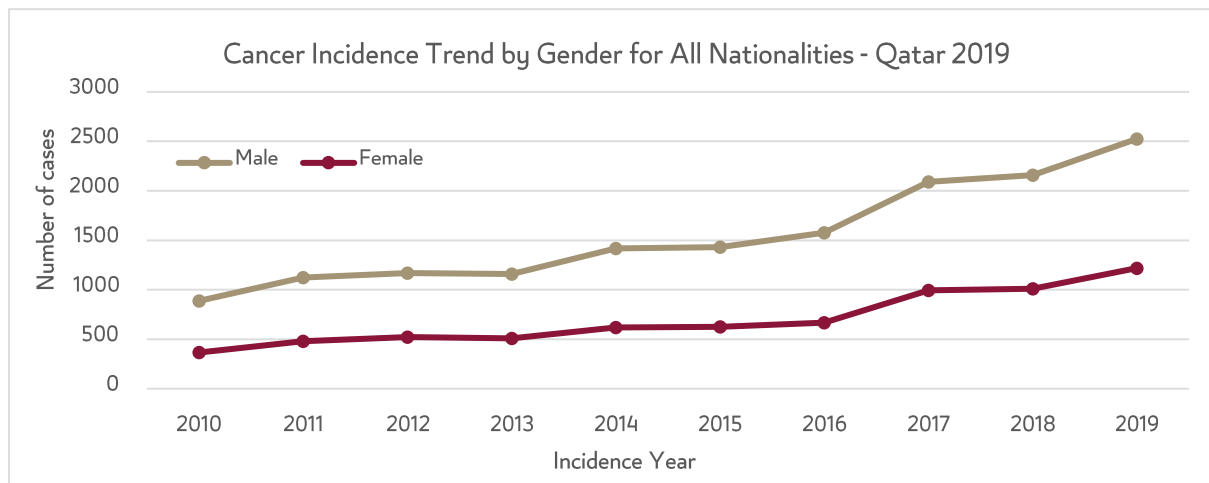
TREND OF INCIDENCE [NUMBER OF CASES] 2010-2019

Figure 13: Trend of cancer incidence, number of cases, of all nationalities



TREND OF INCIDENCE BY GENDER 2010-2019

Figure 14: Trend of number of cases, by gender of all nationalities



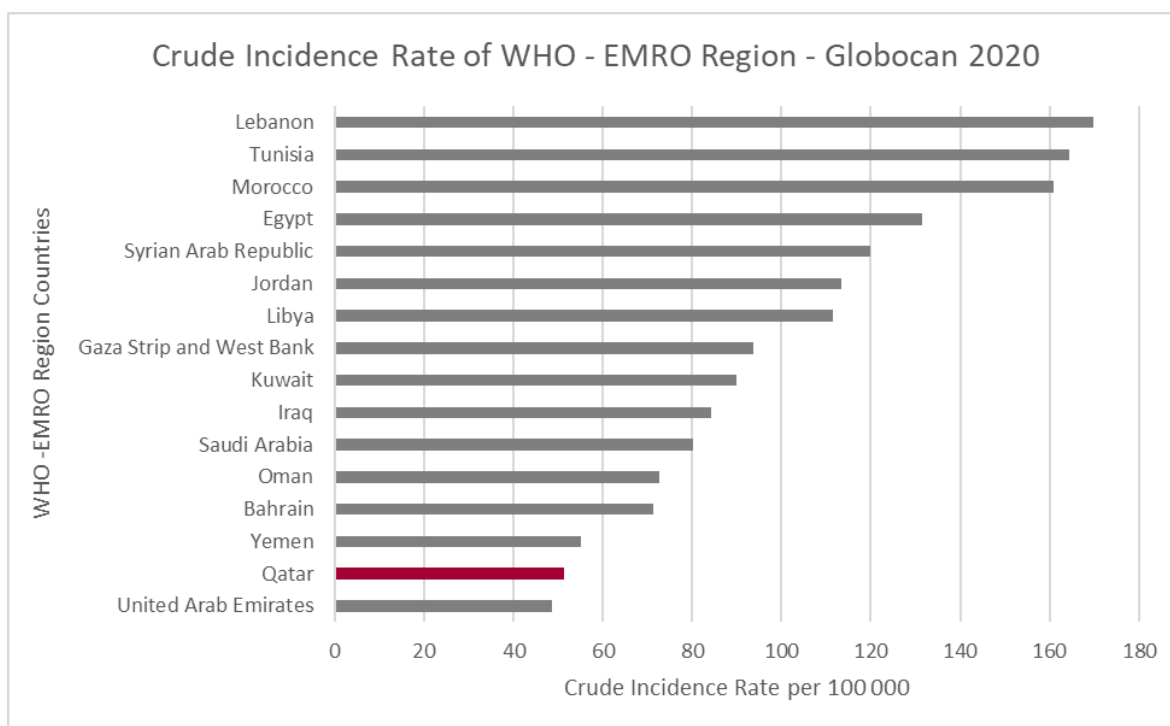
INTERNATIONAL PERSPECTIVE

Reference to the most recent available cancer data estimates, that is Globocan 2020, the following comparisons help position the cancer burden in the State of Qatar compared to international and regional countries

CRUDE RATE

Within the Gulf region and the overall of EMRO countries, and based on the estimates of Globocan-2020, Qatar data of shows low crude incidence rate

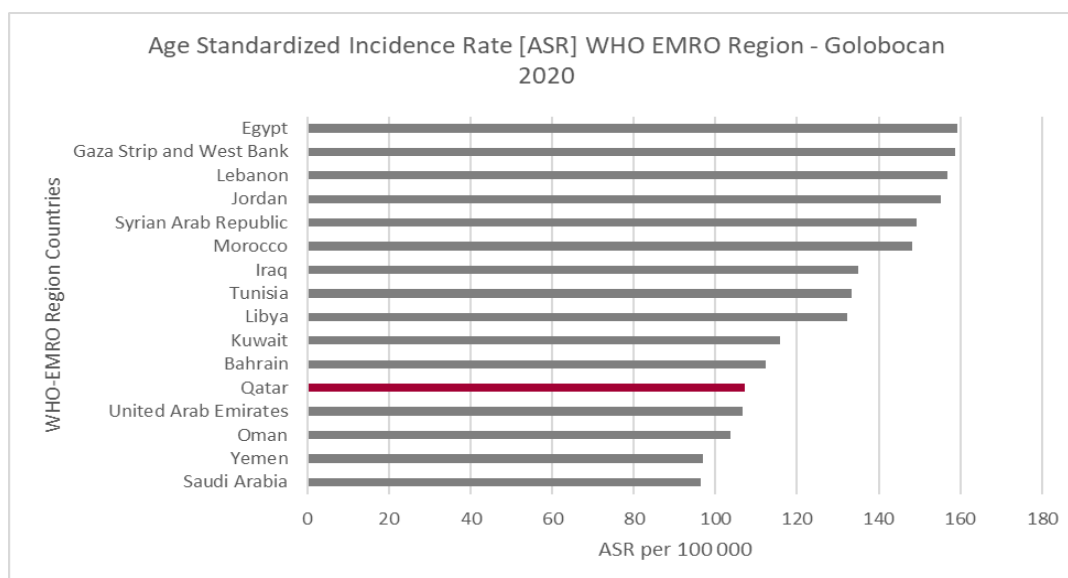
Figure 15: Crude rate of incidence based on Globocan 2020 – EMRO Region



AGE STANDARDIZED RATE ASR

Based on the estimates of Globocan -2020 Qatar has very low ASR per 100 000

Figure 16: ASR Based on GLOBOCAN 2020 – EMRO Region



05

PEDIATRICS CANCER

2019

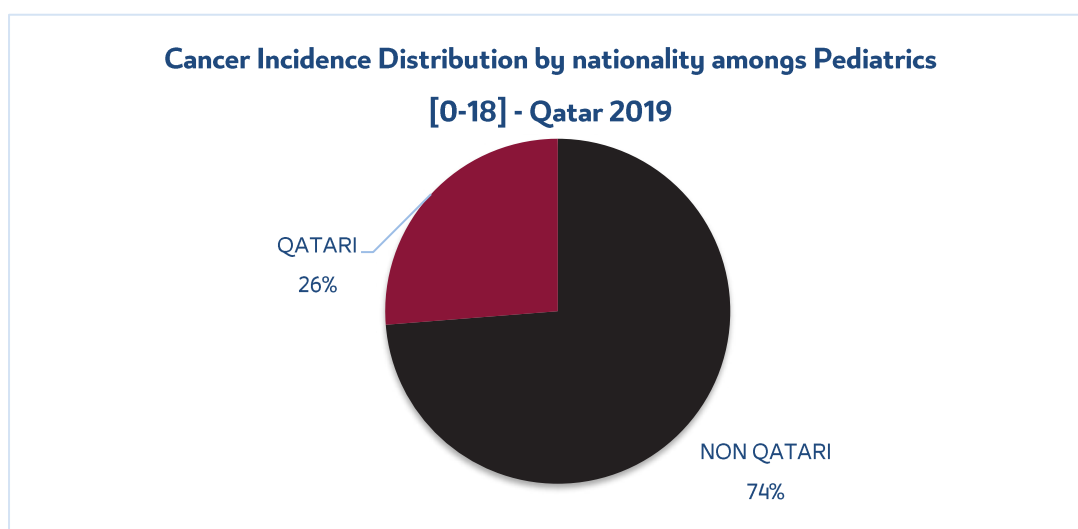
PEDIATRIC CANCER INCIDENCE [0-18]

Within the age range of 0-18 years, there were 80 cases newly diagnosed with cancer during 2019.

DISTRIBUTION BY NATIONALITY

When distributed according to nationality, 21(26%) new cases were Qataris, and 59 (74%) new cases were Non-Qataris.

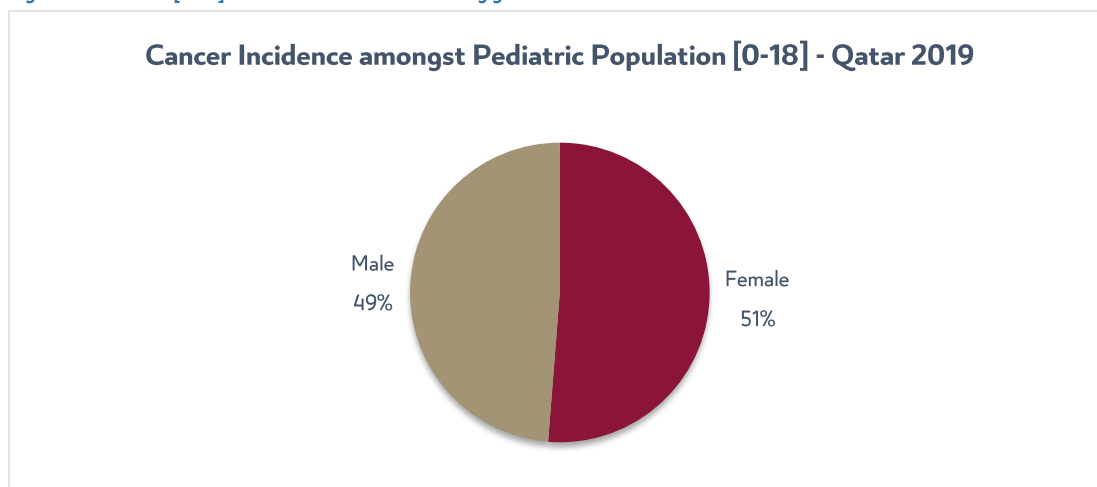
Figure 17: Pediatric [0-18] cancer incidence distribution by nationality



DISTRIBUTION BY GENDER

Across all nationalities, gender distribution shows 39 (49%) new cases were found in males and 41 (51%) new cases in females.

Figure 18: Pediatric [0-18] cancer incidence distribution by gender



MOST COMMON PEDIATRIC CANCERS

The most common cancer amongst pediatrics was Leukemia with 27 (33.75%) new cases. The second most common was Brain & CNS with 11 (13.75%) new cases.

Table 17: Most common cancers among pediatrics [0-18]

ICD 10 codes	Primary Site	N	%
C91-C95	Leukemia	27	33.75%
C70-C72	Brain & CNS	11	13.75%
C76 - C80	Unknown primary site	5	6.25%
C25 / D01.7	Pancreas	4	5.00%
C81	Hodgkin lymphoma	4	5.00%
C64-C66	Kidney	3	3.75%
C40-C41	Bone and articular cartilage	3	3.75%
C69 / D09.2	Eye and adnexa	3	3.75%
C74	Adrenal gland	2	2.50%
C73 / D09.3	Thyroid gland	2	2.50%

DEATHS AMONGST PEDIATRIC CANCERS

Table 18: Deaths among Pediatric [0-18] Cancer Population

ICD 10 codes	Primary Site	N	%
C91-C95	Leukemia	2	40.00%
D43	Neoplasm of uncertain behavior of brain and central nervous system	1	20.00%
C44 / D04	Non-Melanoma skin cancer	1	20.00%
C70-C72	Brain & CNS	1	20.00%

06

CANCER DEATHS

2019

CANCER DEATH – QATARIS

During the year 2019, there were 207 deaths amongst cancer patients, 156 (75%) Non-Qataris and 51 (25%) Qataris

Amongst Qatari population, the Age Standardized Rate ASR for death was 26.87 per 100 000, while the cumulative risk of death within the age range of 0-74 years old was 2.20

Table 19: Death summary amongst Qatari cancer patients

Age-Groups (5 year)	Qataris	
	N	ASMR
0-4	0	0.00
5-9	1	2.55
10-14	0	0.00
15-19	0	0.00
20-24	1	3.63
25-29	1	3.91
30-34	2	8.80
35-39	4	20.64
40-44	5	30.92
45-49	2	13.96
50-54	4	31.59
55-59	5	47.44
60-64	5	61.24
65-69	3	58.46
70-74	5	162.71
75-79	5	202.59
80+	8	419.73
Total "N"	51	
ASR / 100000	26.87	
Crude Mortality Rate / 100000	16.15	
Cumulative Risk of Mortality [0-74]	2.20	

MOST COMMON CANCER DEATHS - QATARIS

Among Qataris, most of the deaths that occurred during 2019 were uterus cancer cases with 12% of all deaths amongst Qataris during 2019, followed by breast cancer with 10%

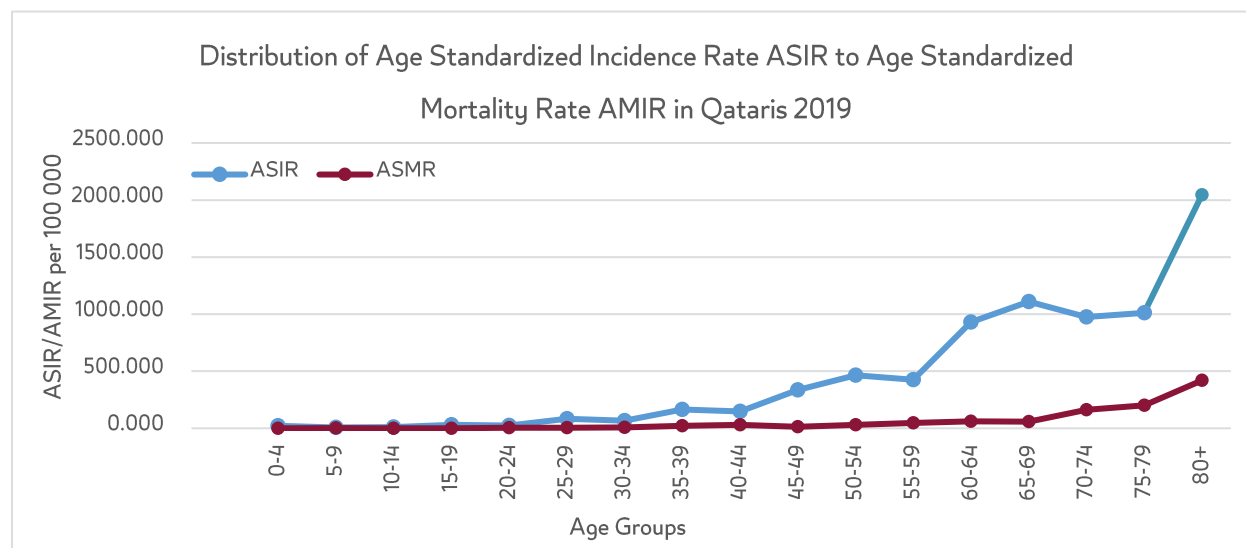
Table 20: Most common cancer deaths among Qataris

ICD 10	Primary Site	N	%
C54-C55 / D07.0	Uterus	6	12.00%
C50 / D05	Breast	5	10.00%
C18-C21 / D01	Colorectal	5	10.00%
C33-C34 / D02.1-D02.2	Trachea, bronchus and lung	3	6.00%
C67 / D09.0	Bladder	2	4.00%
C81	Hodgkin lymphoma	2	4.00%
C73 / D09.3	Thyroid gland	2	4.00%
C16 / D00.2	Stomach	2	4.00%
C25 / D01.7	Pancreas	2	4.00%
C61 / D07.5	Prostate	2	4.00%

MORTALITY / INCIDENCE RATIO

The healthcare system is actively working on improving the reporting of causes of death, so at present it is difficult to generate mortality to incidence ratio. However, it is possible to calculate the ratio of adjusted age in death among Qatari cancer patients to the adjusted age of incidence.

Figure 19: ASIR to AMIR in Qataris 2019



07

MOST COMMON CANCERS

2019

FEMALE BREAST

ICD 10 CODES

Table 21: ICD 10 codes for breast cancer in QNCR

ICD 10 Code	Description
C50	Malignant neoplasm of breast
D05	Carcinoma in situ of breast

KEY FACTS

In 2019, there were 439 newly diagnosed cases of breast cancer. 433 (99%) were among females to 6 (1% among males).

Table 22: Female breast cancer distribution by behavior, and nationality

Behavior	Non-Qatari - Female	Qatari - Female	Grand Total
Malignant, primary site (invasive)	321	81	402
Carcinoma in situ	18	13	31
Grand Total	339	94	433

The Age Standardized Rate (ASR) was found to be 109.97 per 100 000 of female population at risk. The crude incidence rate found to be 58.92 per 100 000.

Table 23: Summary of female breast cancer burden

Age-Groups (5 year)	Qataris	
	N	ASIR
0-4	0	0.00
5-9	0	0.00
10-14	0	0.00
15-19	0	0.00
20-24	0	0.00
25-29	10	10.81
30-34	16	14.62
35-39	45	50.54
40-44	49	78.41
45-49	79	199.61
50-54	81	320.18
55-59	50	302.48
60-64	47	475.95
65-69	22	410.07
70-74	16	507.29
75-79	9	443.13
80+	9	547.11
Total "N"	433	
ASR / 100000	109.97	
Crude Incidence Rate / 100000	58.92	
Cumulative Risk of Incidence [0-74]	11.17	

DEMOGRAPHICS

Peak of incidence was in the age group of 50-54, where the youngest age was 25 years old, and the average age was 51 years old.

Figure 20: Female breast cancer distribution by age groups

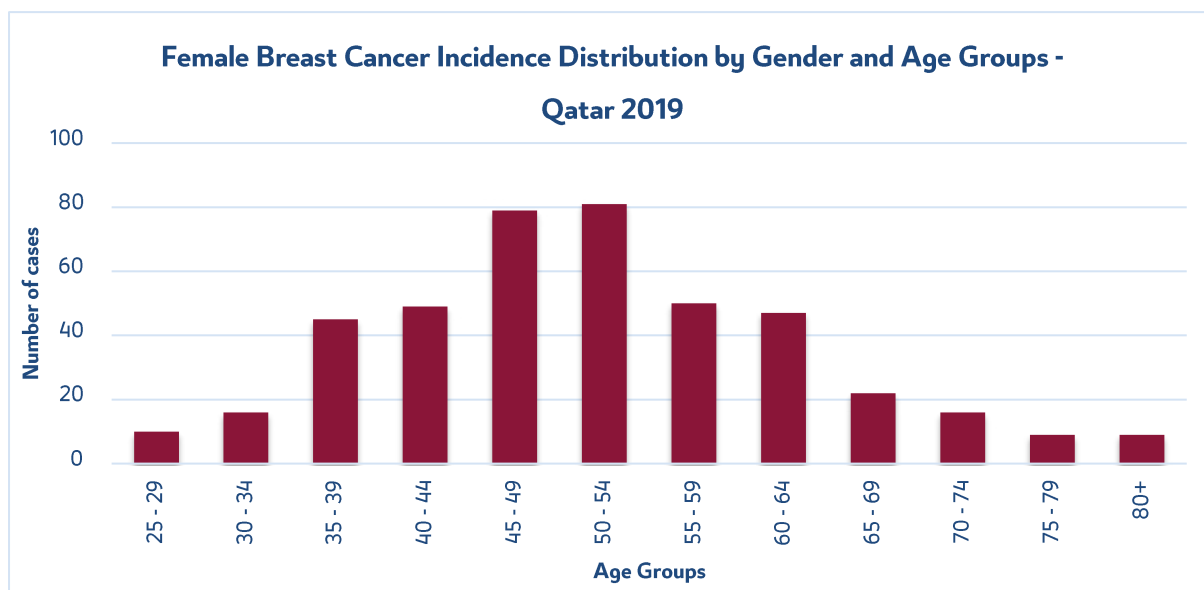


Table 26: Min, max and average age distribution for female breast cancer

Average of Age	Min (years)	Max (years)
51	25	93

PREVALENCE

Amongst the Qatari population registered in the QNCR, there were 1085 cases diagnosed with female breast cancer. Of these cases, 213 (20%) have died and 872 (80%) are still alive.

HISTOLOGY

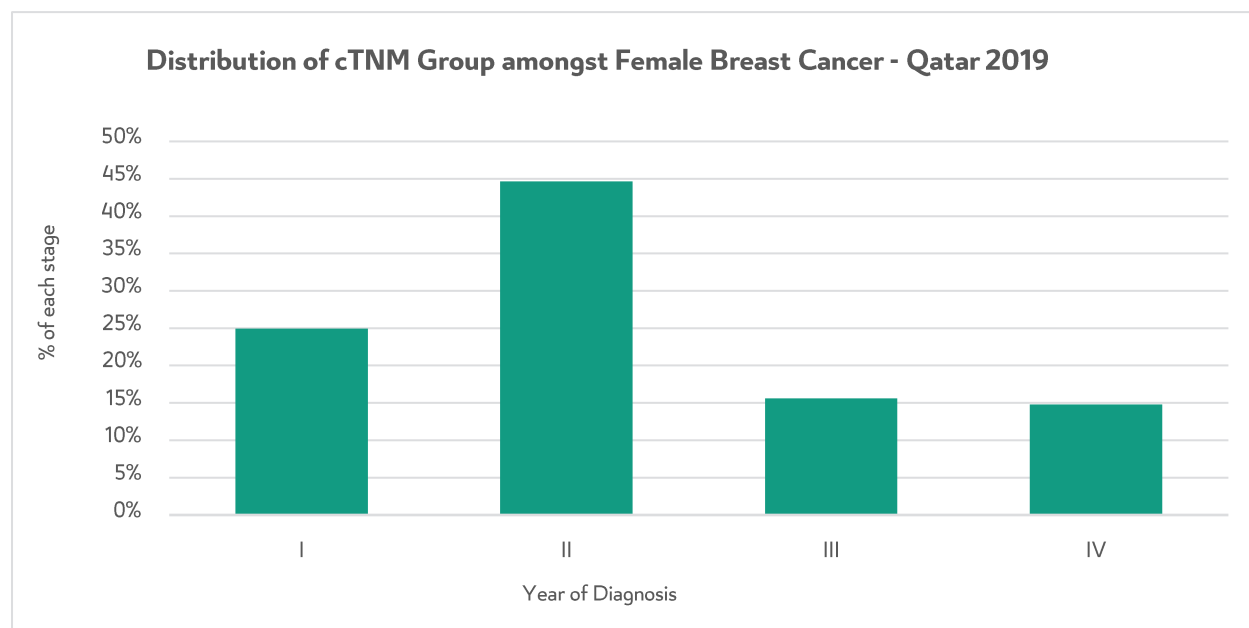
Table 27: ICDO-3 Histology distribution of female breast cancer

Histology	N	%
Infiltrating duct carcinoma	328	75.75%
Lobular carcinoma	33	7.62%
Intraductal carcinoma, noninfiltrating	16	3.70%
Lobular carcinoma in situ	7	1.62%
Neoplasm, malignant	6	1.39%
Infiltrating duct and lobular carcinoma	6	1.39%
Phyllodes tumor, malignant	4	0.92%
Metaplastic carcinoma	4	0.92%
Comedocarcinoma, noninfiltrating	3	0.69%
Papillary carcinoma	3	0.69%
Mucinous adenocarcinoma	3	0.69%
Tubular adenocarcinoma	3	0.69%
Adenocarcinoma with apocrine metaplasia	2	0.46%
Paget disease, mammary	2	0.46%
Cribriform carcinoma in situ	2	0.46%
Carcinoma	2	0.46%
Intraductal papillary adenocarcinoma with invasion	1	0.23%
Encapsulated papillary carcinoma with invasion	1	0.23%
Carcinoma in situ	1	0.23%
Cribriform carcinoma	1	0.23%
Adenocarcinoma with neuroendocrine differentiation	1	0.23%
Ductal carcinoma in situ, solid type	1	0.23%
Low grade serous carcinoma	1	0.23%
Infiltrating duct mixed with other types of carcinoma	1	0.23%
Intraductal carcinoma and lobular carcinoma in situ	1	0.23%

STAGING

Almost 11 % of the total cases reported in 2019 did not have a documented cTNM stage.

Figure 21: cTNM group staging for female breast cancer



TREATMENT

The following table shows the treatment modalities provided in no particular order. *[PLEASE SEE DISCLAIMER]*

Table 28: Treatment modalities for female breast cancer

Treatment Modality	%
Chemotherapy / Hormonotherapy / Radiation therapy / Surgery	22.59%
Hormonotherapy / Radiation therapy / Surgery	19.54%
Chemotherapy / Radiation therapy / Surgery	15.23%
Hormonotherapy / Immunotherapy / Radiation therapy / Surgery	6.60%
Chemotherapy	5.84%
Chemotherapy / Surgery	5.58%
Chemotherapy / Hormonotherapy	4.31%
Chemotherapy / Hormonotherapy / Surgery	4.06%
Hormonotherapy	3.30%
Surgery	3.05%
Hormonotherapy / Surgery	2.79%

Treatment Modality	%
Chemotherapy / Hormonotherapy / Radiation therapy	2.03%
Radiation therapy / Surgery	2.03%
Chemotherapy / Radiation therapy	1.52%
Hormonotherapy / Radiation therapy	0.76%
Radiation therapy	0.76%

328 cases reported with surgery as one of the treatment modalities. The following table provides information on the types of surgical procedures provided

Table 24: Surgery procedures (SEER) for female breast cancer

Surgery Procedure (SEER)	N	%
Lumpectomy or excisional biopsy	217	66.16%
Mastectomy, NOS	84	25.61%
Modified radical mastectomy, NOS	10	3.05%
Total (simple) mastectomy WITH removal of uninvolved contralateral breast WITH reconstruction, tissue	6	1.83%
Segmental mastectomy (including wedge resection, quadrantectomy, tylectomy)	4	1.22%
Total (simple) mastectomy WITH removal of uninvolved contralateral breast WITH reconstruction, implant	4	1.22%
Surgery, NOS	2	0.61%
Radical mastectomy, NOS	1	0.30%
Grand Total	328	100%

COLORECTAL

ICD 10 CODES

Table 29: ICD 10 codes for colorectal cancer in QNCR

ICD 10 Code	Description
C18	Malignant neoplasm of colon
C19	Malignant neoplasm of rectosigmoid junction
C20	Malignant neoplasm of rectum
C21	Malignant neoplasm of anus and anal canal
D01	Carcinoma in situ of other and unspecified digestive organs
D010	Colon
D014	Other and unspecified parts of intestine

KEY FACTS

In 2019, there were 224 newly diagnosed cases of malignant colorectal cancer, and of these 136 (61%) cases were in males, and 88 (39%) cases were in females.

Table 30: Colorectal cancer distribution by behavior, gender and nationality

Behavior	Qatari			Non-Qatari			Grand Total
	Male	Female	Total	Male	Female	Total	
Malignant	24	39	63	112	49	137	224
Grand Total	24	39	63	112	49	137	224

The crude incidence was found to be 8 per 100 000 and the Age Standardized Rate ASR to be 23.65 per 100 000.

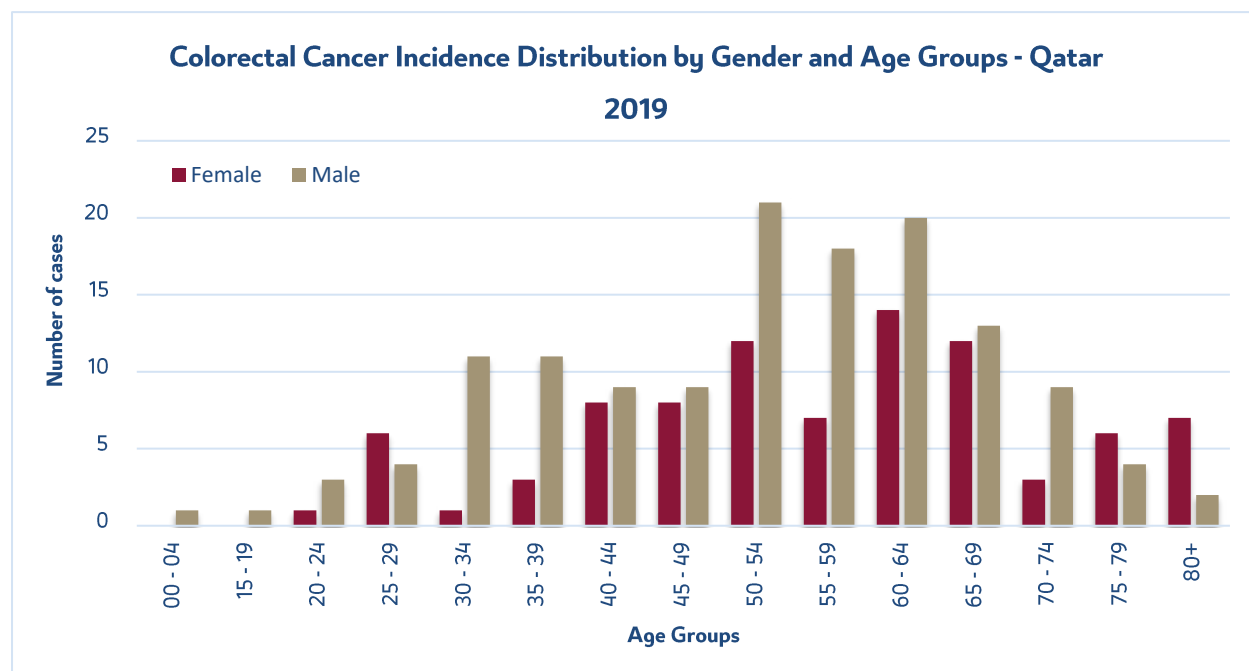
Table 31: Summary of colorectal cancer burden

Age-Groups (5 year)	Male		Female		Both Genders	
	N	ASIR	N	ASIR	N	ASIR
0-4	1	1.34	0	0.00	1	0.68
5-9	0	0.00	0	0.00	0	0.00
10-14	0	0.00	0	0.00	0	0.00
15-19	1	2.09	0	0.00	1	1.16
20-24	3	1.46	1	2.25	4	1.60
25-29	4	1.13	6	6.49	10	2.25
30-34	11	2.79	1	0.91	12	2.39
35-39	11	3.44	3	3.37	14	3.43
40-44	9	4.26	8	12.80	17	6.21
45-49	9	6.20	8	20.21	17	9.20
50-54	21	24.30	12	47.43	33	29.54
55-59	18	35.08	7	42.35	25	36.85
60-64	20	74.34	14	141.77	34	92.45
65-69	13	121.00	12	223.67	25	155.19
70-74	9	183.49	3	95.12	12	148.90
75-79	4	147.98	6	295.42	10	211.24
80+	2	109.41	7	425.53	9	259.14
Total "N"	224					
ASR per 100000 (WHO population)	23.65					
Crude incidence rate per 100000	8.00					
Cumulative Risk of Incidence [0-74]	2.42					

DEMOGRAPHICS

Amongst males, the peak age group of colorectal cancer incidence was 50-54 while in females it was 60-64, and the average age was 54 years old.

Figure 22: Colorectal cancer distribution by age groups



PREVALENCE

Amongst the Qatari population registered in the QNCR, there were 635 cases diagnosed with colorectal cancer. Of these cases, 180 (28%) have died and 455 (72%) are still alive.

HISTOLOGY

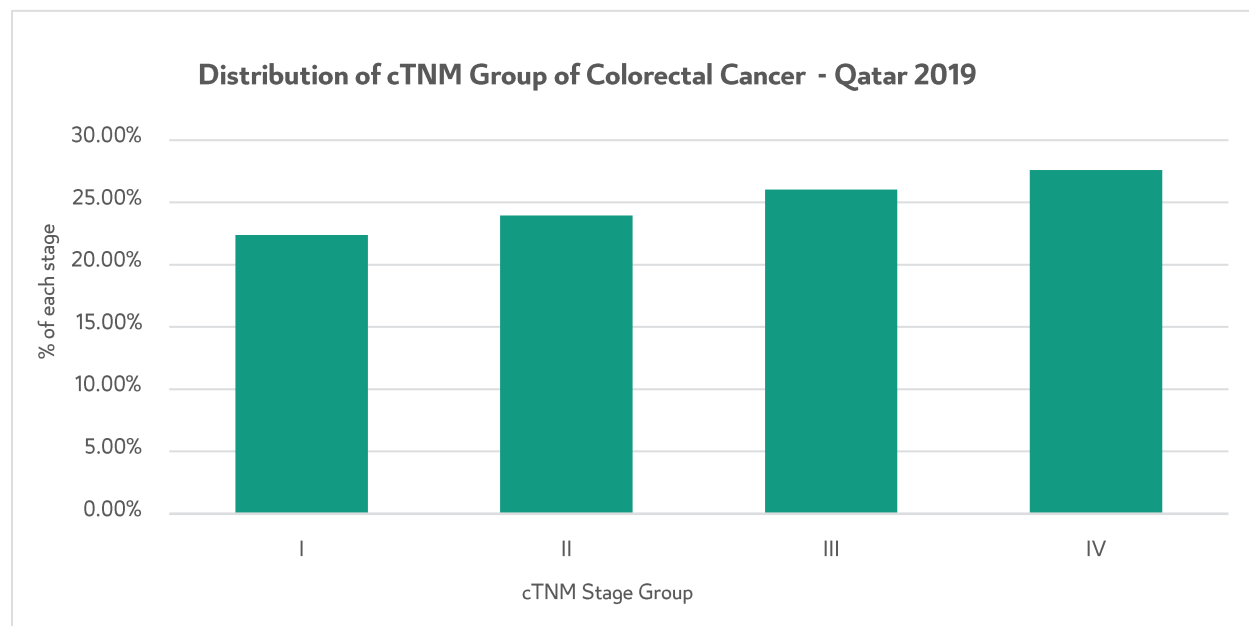
Table 33: Histology distribution for colorectal cancer

Histology	N	%
Adenocarcinoma, NOS	158	70.54%
Neuroendocrine tumor, NOS	16	7.14%
Mucinous adenocarcinoma	14	6.25%
Neoplasm, malignant	13	5.80%
Signet ring cell carcinoma	8	3.57%
Adenocarcinoma in tubulovillous adenoma	5	2.23%
Carcinoma, NOS	4	1.79%
Squamous cell carcinoma, NOS	2	0.89%
Neuroendocrine carcinoma, NOS	1	0.45%
Goblet cell carcinoid	1	0.45%
Adenocarcinoma in adenomatous polyp	1	0.45%
Infantile fibrosarcoma	1	0.45%

STAGING

Almost 13% of the total cases reported in 2019 did not have a cTNM stage reported value, 54% were at late stage (III and IV) and 46% were early stage (I and II).

Figure 23: cTNM distribution for colorectal cancer



TREATMENT

The following table shows the treatment types in no particular order. [PLEASE SEE DISCLAIMER]

Table 34: Treatment modalities for colorectal cancer

Treatment Modality	%
Surgery	48.70%
Chemotherapy / Surgery	27.98%
Chemotherapy / Radiation therapy / Surgery	8.81%
Chemotherapy / Radiation therapy	7.25%
Chemotherapy	5.70%
Radiation therapy	0.52%
Chemotherapy / Immunotherapy / Radiation therapy / Surgery	0.52%
Chemotherapy / Immunotherapy	0.52%

LEUKEMIA

ICD 10 CODES

Table 35: ICD 10 codes for Leukemia in QNCR

ICD 10 Code	Description
C91	Lymphoid leukaemia
C92	Myeloid leukaemia
C93	Monocytic leukaemia
C94	Other leukaemias of specified cell type
C95	Leukaemia of unspecified cell type

KEY FACTS

In 2019, 127 cases were reported with Leukemia, 40 cases (31%) amongst females, and 87 (69%) amongst males. There was a total of 109 cases (86%) were in non-Qatari and 18 cases (14%) amongst Qataris.

Table 36: Distribution of leukemia by gender and nationality

Behavior	Qatari			Non-Qatari			Grand Total
	Male	Female	Total	Male	Female	Total	
Malignant	6	12	18	81	28	109	127
Grand Total	6	12	18	81	28	109	127

The crude incidence was found to be 4.54 per 100 000 and the Age Standardized Rate ASR to be 8.87 per 100 000.

Table 37: Summary of leukemia burden

Age-Groups (5 year)	Male		Female		Both Genders	
	N	ASIR	N	ASIR	N	ASIR
0-4	10	13.35	6	8.37	16	10.91
5-9	2	2.79	6	8.66	8	5.68
10-14	1	1.77	1	1.84	2	1.80
15-19	2	4.18	0	0.00	2	2.32
20-24	5	2.43	0	0.00	5	2.00
25-29	12	3.40	0	0.00	12	2.70
30-34	11	2.79	1	0.91	12	2.39
35-39	4	1.25	5	5.62	9	2.20
40-44	9	4.26	3	4.80	12	4.38
45-49	12	8.26	3	7.58	15	8.12
50-54	3	3.47	4	15.81	7	6.27
55-59	5	9.75	0	0.00	5	7.37
60-64	3	11.15	4	40.51	7	19.03
65-69	2	18.62	2	37.28	4	24.83
70-74	4	81.55	3	95.12	7	86.86
75-79	2	73.99	0	0.00	2	42.25
80+	0	0.00	2	121.58	2	57.59
Total "N"	127					
ASR per 100000 (WHO population)	8.87					
Crude incidence rate per 100000	4.54					
Cumulative Risk of Incidence [0-74]	0.93					

DEMOGRAPHICS

Amongst males, the peak age group of leukemia incidence was in 25-29 & 40-44, while it was 0-9 amongst females. The youngest age was less than 1 year old and the average age was 37 years old.

Figure 24: Distribution of leukemia by age groups

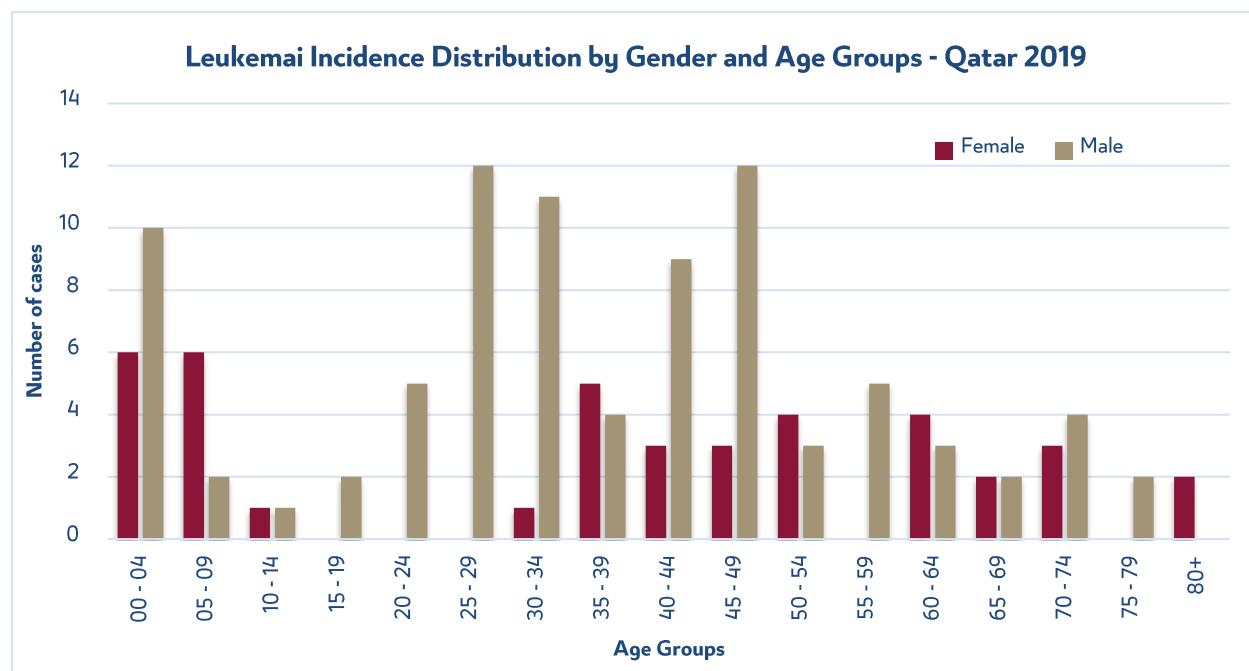


Table 38: Min, max and average age distribution for leukemia cancers

Average of Age	Min (years)	Max (years)
37	0	81

PREVALENCE

Amongst the Qatari population registered in the QNCR, there were 272 newly diagnosed cases with leukemia. Of these cases, 72 (26%) have died and 200 (74%) are still alive.

HISTOLOGY

Table 39: Histology distribution for leukemia

Histology	N	%
Acute myeloid leukemia, NOS	26	20.47%
Chronic myeloid leukemia, NOS	21	16.54%
B-cell chronic lymphocytic leukemia/small lymphocytic lymphoma	21	16.54%
Precursor B-cell lymphoblastic leukemia	20	15.75%
Burkitt cell leukemia	11	8.66%
Acute promyelocytic leukaemia, t(15;17)(q22;q11-12)	7	5.51%
Precursor T-cell lymphoblastic leukemia (see also M-9729/3)	5	3.94%
Chronic myeloid leukemia, BCR/ABL positive	4	3.15%
Chronic myelomonocytic leukemia, NOS	2	1.57%
Acute panmyelosis with myelofibrosis	2	1.57%
T-cell large granular lymphocytic leukemia	2	1.57%
Acute myeloid leukemia, minimal differentiation	1	0.79%
Precursor cell lymphoblastic leukemia, NOS	1	0.79%
Prolymphocytic leukemia, T-cell type	1	0.79%
Acute leukemia, NOS	1	0.79%
Hairy cell leukemia	1	0.79%
Acute megakaryoblastic leukaemia	1	0.79%

TREATMENT

The following table shows the treatment types in no particular order. [PLEASE SEE DISCLAIMER]

Table 40: Treatment modalities for leukemia cancer

Treatment Modality	%
Chemotherapy	93.14%
Chemotherapy / Radiation therapy	2.94%
Chemotherapy / Hormonotherapy / Immunotherapy / Radiation therapy / Surgery	1.96%
Targeted therapy	0.98%
Chemotherapy / Surgery	0.98%

THYROID GLAND

ICD 10 CODES

Table 40: ICD 10 codes for thyroid cancer in QNCR

ICD 10 Code	Description
C73	Malignant neoplasm of thyroid gland
D093	Thyroid and other endocrine glands

KEY FACTS

In 2019, 188 cases were newly diagnosed with malignant thyroid cancer, 35 (19%) of which were Qataris and 153 (81%) cases Non-Qataris. Of the total cases 126 (67%) were amongst female, while 62 (33%) were in males.

Table 41: Distribution of thyroid cancer by gender and nationality

Behavior	Qatari			Non-Qatari			Grand Total
	Male	Female	Total	Male	Female	Total	
Malignant	8	27	35	54	99	153	188
Grand Total	8	27	35	54	99	153	188

The crude incidence was found to be 6.72 per 100 000 and the Age Standardized Rate ASR to be 6.96 per 100 000.

Table 42: Summary of thyroid cancer burden

Age-Groups (5 year)	Male		Female		Both Genders	
	N	ASIR	N	ASIR	N	ASIR
0-4	0	0.00	0	0.00	0	0.00
5-9	0	0.00	0	0.00	0	0.00
10-14	0	0.00	0	0.00	0	0.00
15-19	0	0.00	3	8.00	4	4.64
20-24	0	0.00	2	4.43	5	2.00
25-29	4	1.10	8	8.85	21	4.72
30-34	5	1.29	14	13.42	32	6.36
35-39	8	2.59	15	17.48	35	8.56
40-44	8	3.94	16	26.69	23	8.40
45-49	5	3.52	9	23.62	28	15.15
50-54	2	2.38	7	28.64	14	12.53
55-59	3	5.86	2	12.58	10	14.74
60-64	4	15.57	2	21.33	11	29.91
65-69	0	0.00	2	40.07	4	24.83
70-74	1	21.38	0	0.00	1	12.41
75-79	1	38.82	1	50.33	0	0.00
80+	0	0.00	1	52.36	0	0.00
Total "N"	188					
ASR per 100000 (WHO population)	6.96					
Crude incidence rate per 100000	6.72					
Cumulative Risk of Incidence [0-74]	0.72					

DEMOGRAPHICS

Amongst females, the peak age group of Thyroid cancer incidence was 35-39, while it was 45-49 amongst males.

The youngest age was 15 years old and the average age was 41 years old.

Figure 25: Distribution of thyroid gland cancer by age groups

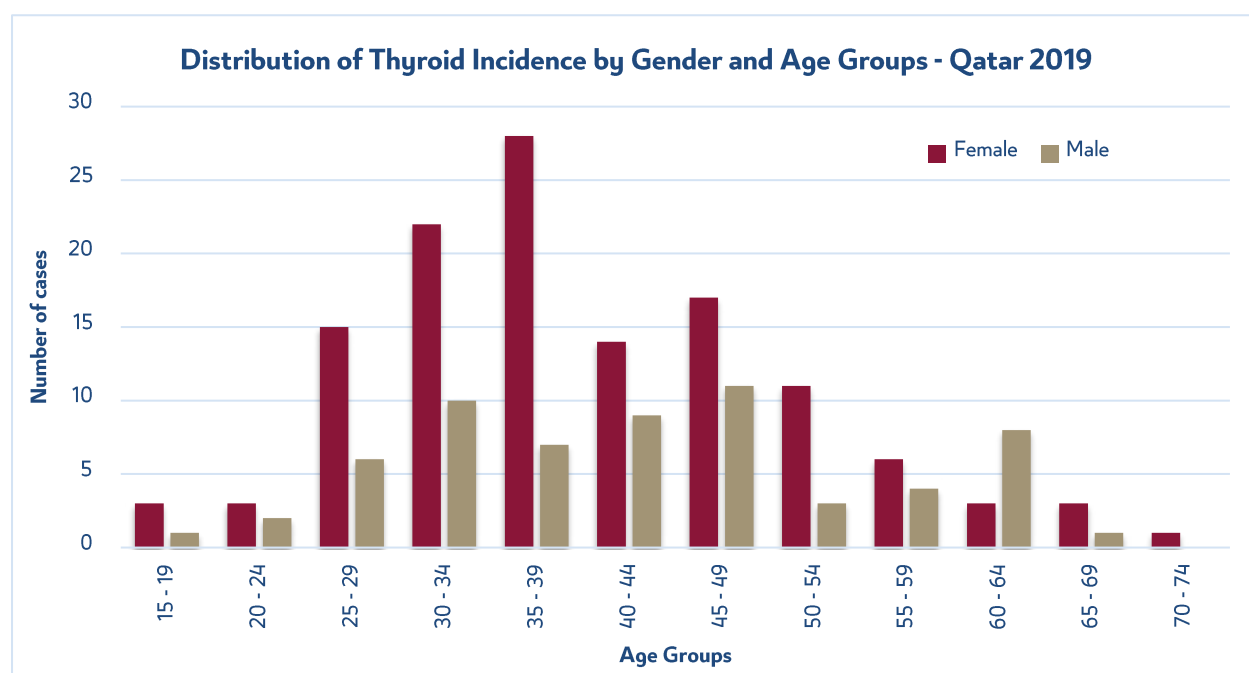


Table 25: Min, max and average age distribution for thyroid cancer

Average of Age	Min (years)	Max (years)
41	15	73

PREVALENCE

Amongst the Qatari population registered in the QNCR, there were 339 cases diagnosed with thyroid cancer. Of these cases, 24 (7%) have died and 315 (93%) are still alive.

HISTOLOGY

All cases of histology were reported.

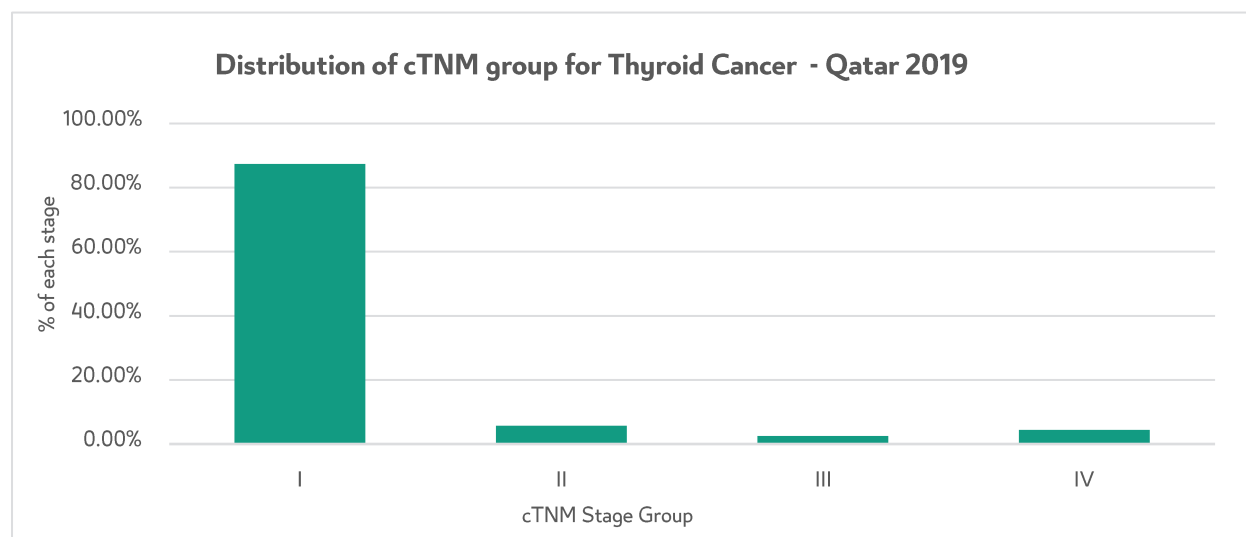
Table 44 : Histology distribution for thyroid gland cancer

Histology	N	%
Papillary adenocarcinoma, NOS	138	73.40%
Papillary microcarcinoma	24	12.77%
Follicular carcinoma, NOS	7	3.72%
Papillary carcinoma, NOS	6	3.19%
Neoplasm, malignant	3	1.60%
Medullary carcinoma, NOS	3	1.60%
Papillary carcinoma, follicular variant	2	1.06%
Adenocarcinoma, NOS	1	0.53%
Carcinoma, anaplastic, NOS	1	0.53%
Follicular carcinoma, minimally invasive	1	0.53%
Carcinoma, NOS	1	0.53%
Papillary carcinoma, encapsulated	1	0.53%

STAGING

Almost 16% of the total cases reported in 2019 did not have cTNM stage reported values. Of those cases that did report a cTNM stage, almost 7% were late stage (III and IV) and 93% were early stage (I and II), of which 87.34% were in stage I [PLEASE SEE DISCLAIMER]

Figure 26: cTNM Distribution for thyroid cancer



TREATMENT

The following table shows the treatment types in no particular order. [PLEASE SEE DISCLAIMER]

Table 45: Treatment modalities for thyroid cancer

Treatment Modality	%
Surgery	51.83%
Radiation therapy / Surgery	47.56%
Radiation therapy	0.61%

PROSTATE

ICD 10 CODES

Table 46: ICD 10 codes for prostate in QNCR

ICD 10 Code	Description
C61	Malignant neoplasm of prostate
D075	Prostate

KEY FACTS

In 2019, there were 132 newly diagnosed cases of prostate cancer, 28 (21%) of which were Qataris and 104 (79%) were Non-Qataris.

Table 47: Distribution of prostate cancer by nationality

Behavior	Qatari	Non-Qatari	Grand Total
Malignant	28	104	132
Grand Total	28	104	132

The cumulative risk, or the chance of a male getting prostate cancer between the ages of 0-74, is 4.57. Age Standardized Rate (ASR) was found to be 43.45 per 100 000 of population at risk.

Table 48: Summary of prostate cancer burden

Age-Groups (5 year)	Qataris	
	N	ASMR
0-4	0	0.00
5-9	0	0.00
10-14	0	0.00
15-19	0	0.00
20-24	0	0.00
25-29	0	0.00
30-34	0	0.00
35-39	0	0.00
40-44	0	0.00
45-49	2	1.38
50-54	13	15.04
55-59	10	19.49
60-64	22	81.78
65-69	33	307.15
70-74	25	509.68
75-79	16	591.93
80+	11	601.75
Total "N"	132	
ASR / 100000	43.45	
Crude Incidence Rate / 100000	6.39	
Cumulative Risk of Incidence [0-74]	4.57	

DEMOGRAPHICS

The peak of incidence of prostate cancer is in the age group 65-69. The youngest age was 46 years old and the average age was 68 years old.

Figure 27: Distribution of prostate cancer by age groups

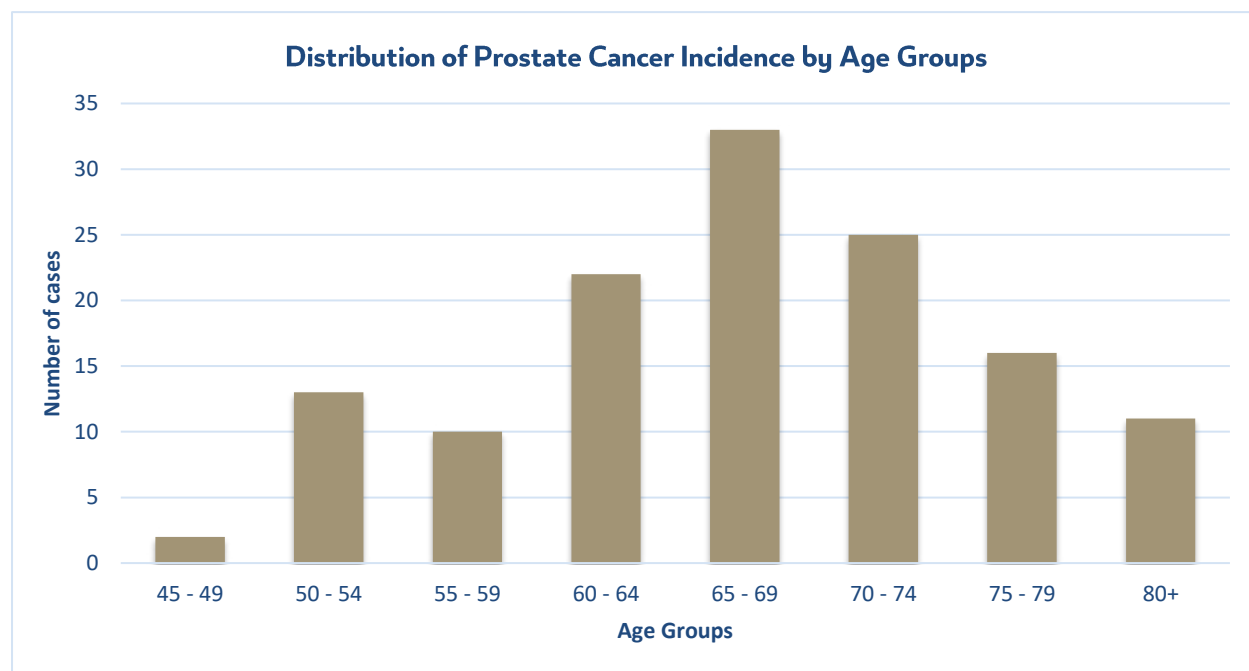


Table 49: Min, Max and Average Age Distribution for Prostate Cancer

Average of Age	Min (years)	Max (years)
68	46	100

PREVALENCE

Amongst the Qatari population registered in the QNCR, there were 268 cases diagnosed with prostate cancer. Of these cases, 71 (26%) have died and 197 (74%) are still alive.

HISTOLOGY

Table 50: Histology distribution for prostate cancer

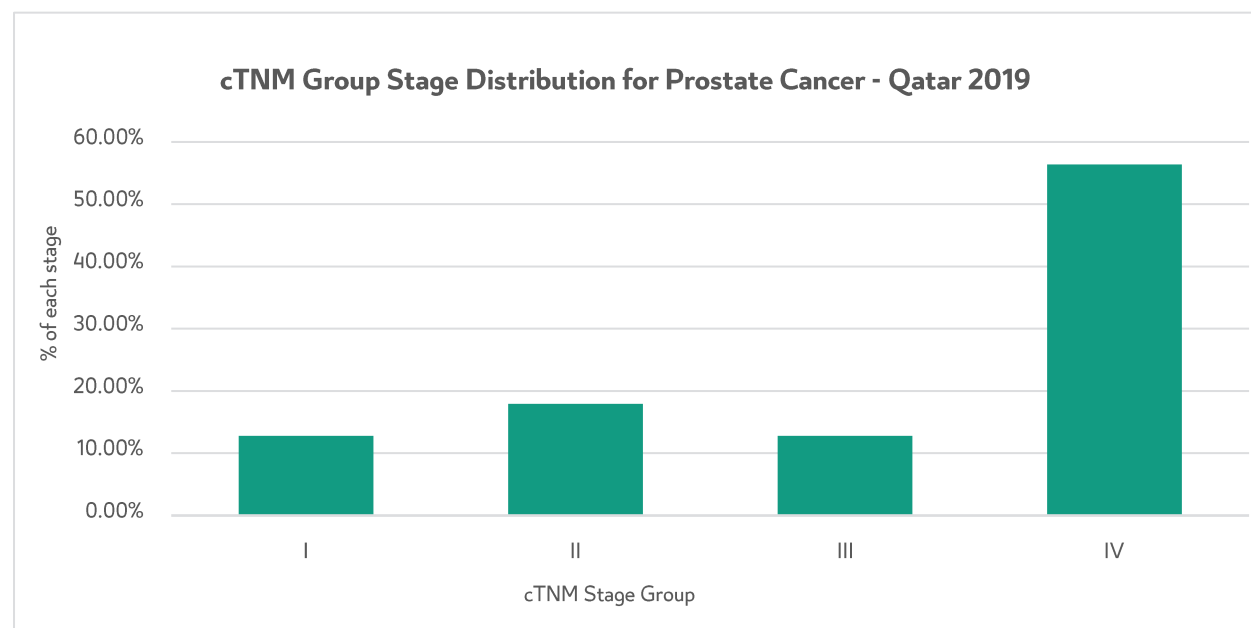
Histology	N	%
Acinar cell carcinoma	96	72.73%
Adenocarcinoma, NOS	28	21.21%
Neoplasm, malignant	7	5.30%
Carcinoma, NOS	1	0.76%

STAGING

Almost 10% of the total cases reported in 2019 did not have a known cTNM stage. Of those cases that did report a cTNM stage, more than 59% were late stages (III and IV) and 41% were early stage (I and II).

[PLEASE SEE DISCLAIMER]

Figure 28: cTNM Distribution for prostate cancer



TREATMENT

The following table shows the treatment types in no particular order. *[PLEASE SEE DISCLAIMER]*

Table 51: Treatment modalities for prostate cancer

Treatment Modality	%
Surgery	39.67%
Hormonotherapy / Radiation therapy / Surgery	20.66%
Hormonotherapy / Radiation therapy	18.18%
Hormonotherapy	9.09%
Hormonotherapy / Surgery	4.96%
Radiation therapy / Surgery	2.48%
Chemotherapy / Hormonotherapy	2.48%
Chemotherapy / Hormonotherapy / Radiation therapy / Surgery	0.83%
Chemotherapy / Hormonotherapy / Surgery	0.83%
Radiation therapy	0.83%

NON-HODGKIN LYMPHOMA NHL

ICD 10 CODES

Table 52: ICD 10 codes for Non-Hodgkin Lymphoma cancer in QNCR

ICD 10 Code	Description
C82	Follicular lymphoma
C83	Non-follicular lymphoma
C84	Mature T/NK-cell lymphomas
C85	Other and unspecified types of non-Hodgkin lymphoma
C96	Other and unspecified malignant neoplasms of lymphoid

KEY FACTS

In 2019, there were 102 newly diagnosed cases of malignant Non-Hodgkin Lymphoma, 26 (25%) cases of which were Qataris and 76 (75%) cases Non-Qataris.

Table 53: Non-Hodgkin Lymphoma distribution by gender and nationality

Behavior	Qatari			Non-Qatari			Grand Total
	Male	Female	Total	Male	Female	Total	
Malignant	13	13	26	51	25	76	102
Grand Total	13	13	26	51	25	76	102

The cumulative risk, or the chance of any person getting a Non-Hodgkin Lymphoma between the ages of 0-74, is 0.75.

The Age Standardized Rate (ASR) was found to be 8.79 per 100 000 of population at risk.

Age-Groups (5 year)	Male		Female		Both Genders	
	N	ASIR	N	ASIR	N	ASIR
0-4	0	0.00	0	0.00	0	0.00
5-9	0	0.00	0	0.00	0	0.00
10-14	0	0.00	1	1.84	1	0.90
15-19	2	4.18	0	0.00	2	2.32
20-24	1	0.49	1	2.25	2	0.80
25-29	5	1.42	1	1.08	6	1.35
30-34	5	1.27	5	4.57	10	1.99
35-39	9	2.82	4	4.49	13	3.18
40-44	5	2.37	3	4.80	8	2.92
45-49	11	7.57	2	5.05	13	7.03
50-54	7	8.10	4	15.81	11	9.85
55-59	5	9.75	3	18.15	8	11.79
60-64	4	14.87	6	60.76	10	27.19
65-69	2	18.62	3	55.92	5	31.04
70-74	2	40.77	2	63.41	4	49.63
75-79	5	184.98	1	49.24	6	126.74
80+	1	54.70	2	121.58	3	86.38
Total "N"	102					
ASR per 100000 (WHO population)	8.79					
Crude incidence rate per 100000	3.64					
Cumulative Risk of Incidence [0-74]	0.75					

Table 26: Summary of Non-Hodgkin Lymphoma burden

DEMOGRAPHICS

Amongst males, peak of incidence of Non-Hodgkin Lymphoma was in the age group 45-49, and 60-64 in females. The youngest age was 12 years old, and the average age was 49 years old.

Figure 29: Distribution of Non-Hodgkin Lymphoma by age groups

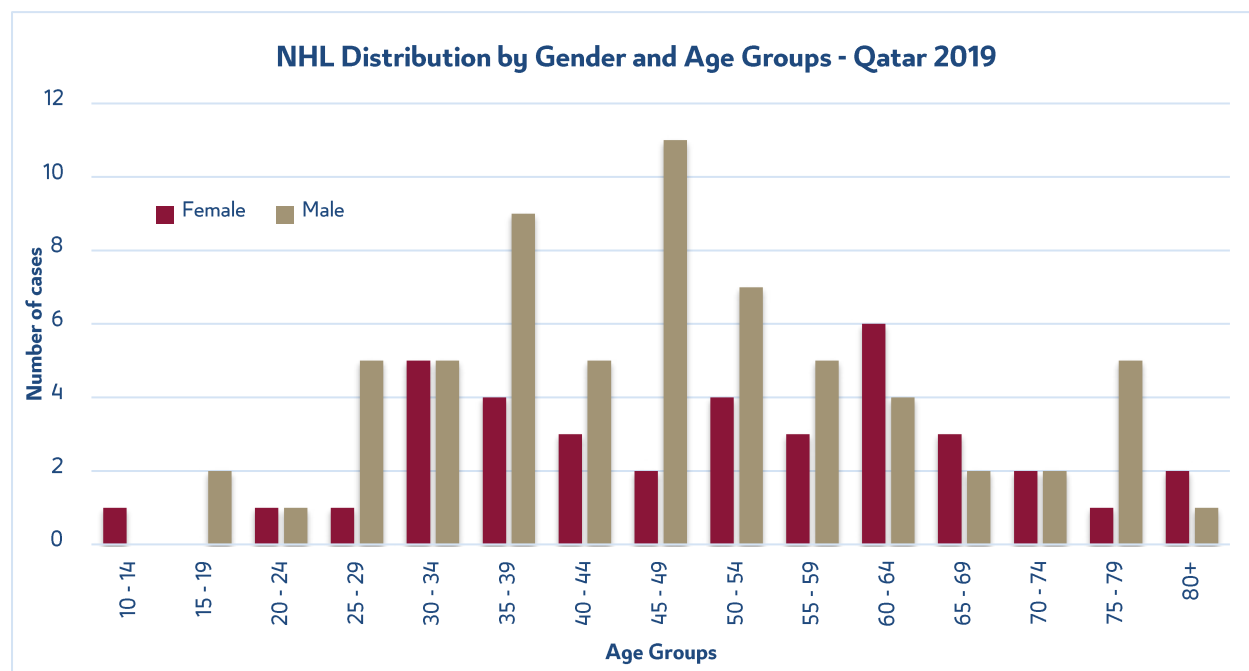


Table 55: Min, max and average age distribution for NHL cancer

Average of Age	Min (years)	Max (years)
49	12	85

PREVALENCE

Amongst the Qatari population registered in the QNCR, there were 257 cases diagnosed with Non-Hodgkin Lymphoma. Of these cases, 66 (26%) have died and 191 (74%) are still alive.

HISTOLOGY

Table 56: Histology distribution for Non-Hodgkin Lymphoma

Histology	N	%
Diffuse large B-cell lymphoma, NOS	45	44.12%
Burkitt lymphoma, NOS (Includes all variants, see also M-9826/3)	6	5.88%
Mantle cell lymphoma (Includes all variants: blastic, pleomorphic, small cell)	5	4.90%
Marginal zone B-cell lymphoma, NOS	5	4.90%
Mature T-cell lymphoma, NOS	4	3.92%
Precursor T-cell lymphoblastic lymphoma (see also M-9837/3)	4	3.92%
Mediastinal large B-cell lymphoma (C38.3)	4	3.92%
Follicular lymphoma, grade 1	4	3.92%
Follicular lymphoma, grade 3	4	3.92%
Follicular lymphoma, NOS (see also M-9675/3)	4	3.92%
Cutaneous T-cell lymphoma, NOS (C44)	3	2.94%
Malignant lymphoma, NOS	3	2.94%
Follicular lymphoma, grade 2	2	1.96%
Malignant lymphoma, non-Hodgkin, NOS	2	1.96%
Malignant lymphoma, small B lymphocytic, NOS (see also M-9823/3)	2	1.96%
T-cell rich large B-cell lymphoma	1	0.98%
Splenic marginal zone B-cell lymphoma (C42.2)	1	0.98%
Lymphoplasmacytic lymphoma	1	0.98%
Anaplastic large cell lymphoma, T cell and Null cell type	1	0.98%
Malignant histiocytosis	1	0.98%

TREATMENT

In 2018, 76% of total cases were reported with treatment information. The following table shows the treatment types in no particular order. *[PLEASE SEE DISCLAIMER]*

Table 57: Treatment modalities for Non-Hodgkin Lymphoma

Treatment Modality	%
Chemotherapy	65.06%
Chemotherapy / Radiation therapy	20.48%
Chemotherapy / Surgery	12.05%
Radiation therapy	1.20%
Surgery	1.20%

LIVER AND INTRAHEPATIC BILE DUCTS

ICD 10 CODES

Table 27: ICD 10 codes for liver cancer in QNCR

ICD 10 Code	Description
C22	Malignant neoplasm of liver and intrahepatic bile ducts
C24	Malignant neoplasm of other and unspecified parts of biliary tract
D015	Carcinoma in situ of liver, gallbladder and bile ducts

KEY FACTS

Table 28: Distribution of liver cancer by gender and nationality

Behavior	Qatari			Non-Qatari			Grand Total
	Male	Female	Total	Male	Female	Total	
Malignant	6	8	14	43	5	48	62
In situ	0	1	1	0	0	0	1
Grand Total	6	9	15	43	5	48	63

In 2019, 63 cases were newly diagnosed with liver cancer, 15 (24%) of which were Qataris and 48 (76%) Non-Qataris.

The cumulative risk is 0.9, that relates to the chance of a person to get liver cancer during the age of 0-74. The

Age Standardized Rate ASR was found to be 7.91 per 100 000 of population at risk.

Table 29: Summary of liver cancer burden

Age-Group (5 year)	Male		Female		Both Genders	
	N	ASIR	N	ASIR	N	ASIR
0-4	0	0.00	0	0.00	0	0.00
5-9	0	0.00	0	0.00	0	0.00
10-14	0	0.00	0	0.00	0	0.00
15-19	0	0.00	0	0.00	0	0.00
20-24	1	0.49	0	0.00	1	0.40
25-29	1	0.28	0	0.00	1	0.22
30-34	0	0.00	1	0.91	1	0.20
35-39	2	0.63	1	1.12	3	0.73
40-44	2	0.95	2	3.20	4	1.46
45-49	2	1.38	0	0.00	2	1.08
50-54	7	8.10	0	0.00	7	6.27
55-59	13	25.34	3	18.15	16	23.59
60-64	7	26.02	1	10.13	8	21.75
65-69	6	55.85	2	37.28	8	49.66
70-74	5	101.94	1	31.71	6	74.45
75-79	1	37.00	2	98.47	3	63.37
80+	2	109.41	1	60.79	3	86.38
Total "N"	63					
ASR per 100000 (WHO population)	7.91					
Crude incidence rate per 100000	2.25					
Cumulative Risk of Incidence [0-74]	0.90					

DEMOGRAPHY

In male patients, the peak age group was 55-59, with min age of 24 for both genders and average age of incidence is 58

Figure 30: Distribution of liver cancer by age groups

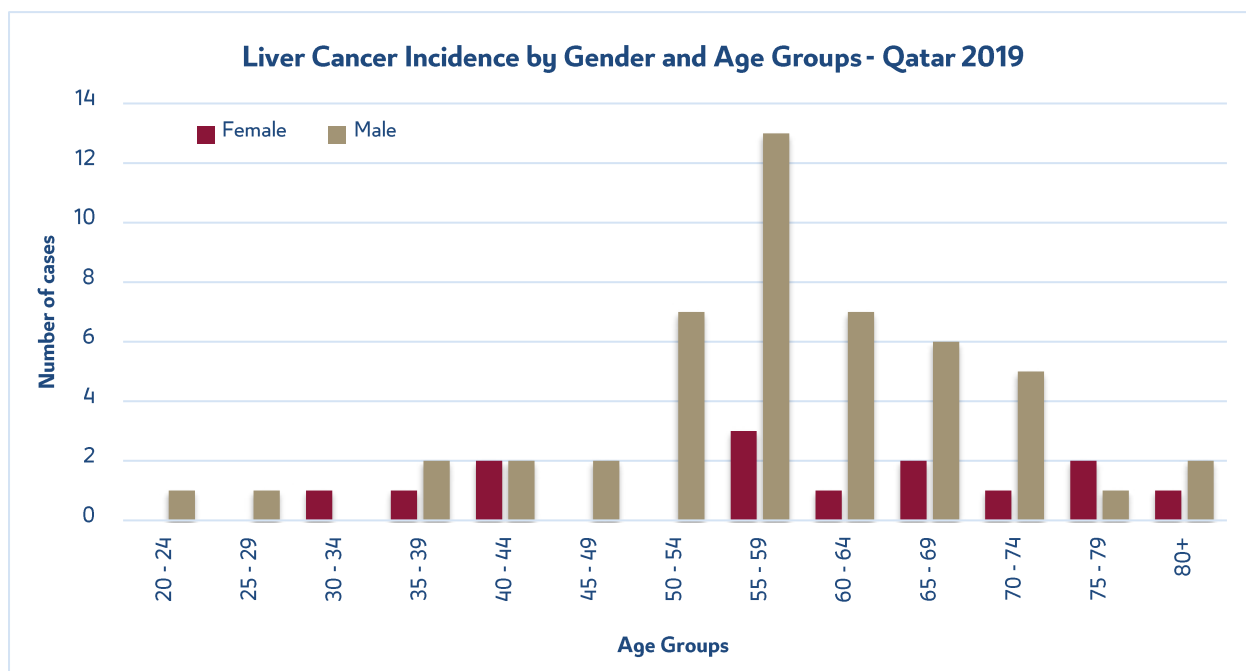


Table 30: Min, Max and Average Age Distribution for Liver Cancer

Average of Age	Min (years)	Max (years)
58	24	85

PREVALENCE

Amongst the Qatari population registered in the QNCR, there were 246 cases diagnosed with liver cancer. Of these cases, 161 (65%) have died and 85 (35%) are still alive.

HISTOLOGY

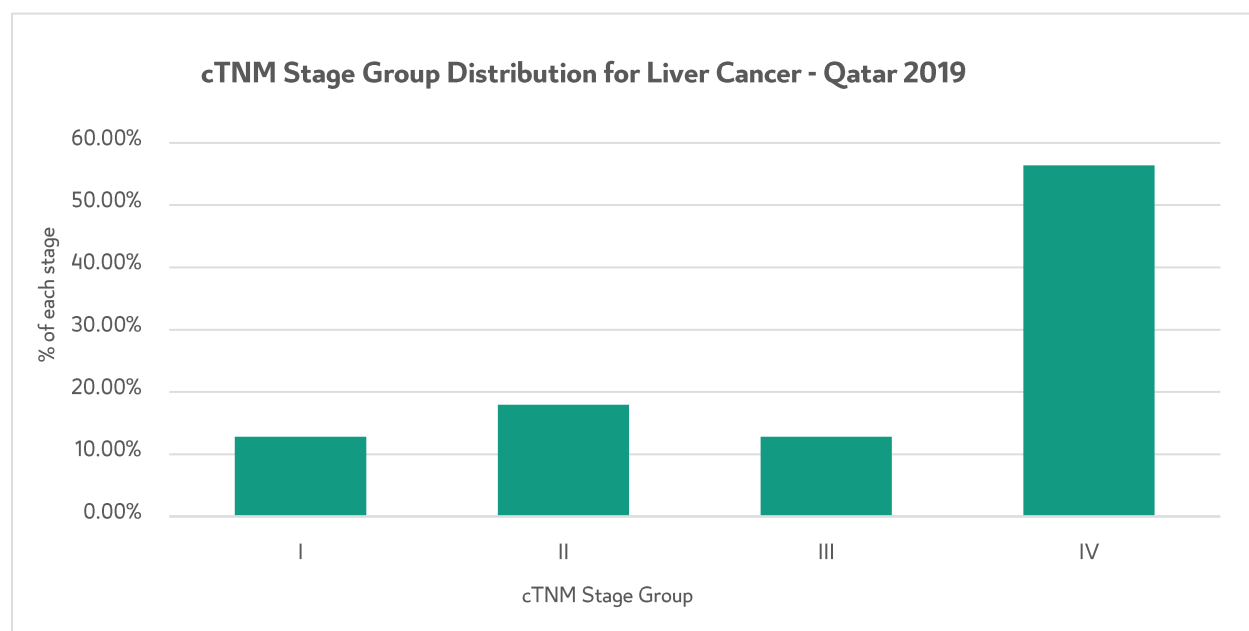
Table 31: Histology distribution for liver cancer

Histology	%
Hepatocellular carcinoma, NOS	32
Neoplasm, malignant	14
Cholangiocarcinoma	9
Adenocarcinoma, NOS	2
Hepatocellular carcinoma, fibrolamellar	1
Carcinoma, NOS	1
Neuroendocrine carcinoma, NOS	1
Haemangiosarcoma	1
Adenocarcinoma in situ, NOS	1
Combined hepatocellular carcinoma and cholangiocarcinoma	1

STAGING

Almost 37% of the total cases reported in 2019 did not have a known cTNM stage. Of those cases that did report a cTNM stage, more than 69% were late stages III and IV. *[PLEASE SEE DISCLAIMER]*

Figure 31: cTNM distribution for liver cancer



TREATMENT

The following table shows the treatment types in no particular order. *[PLEASE SEE DISCLAIMER]*

Table 32: Treatment modalities for liver cancer

Treatment Modality	%
Radiation therapy	22.58%
Chemotherapy	22.58%
Surgery	19.35%
Chemotherapy / Radiation therapy	16.13%
Chemotherapy / Immunotherapy	6.45%
Radiation therapy / Surgery	3.23%
Chemotherapy / Immunotherapy / Radiation therapy / Surgery	3.23%
Hormonotherapy / Immunotherapy / Radiation therapy / Surgery	3.23%
Chemotherapy / Surgery	3.23%

TRACHEA, BRONCHUS AND LUNG

ICD 10 CODES

Table 58: ICD 10 codes for lung cancer in QNCR

ICD 10 Code	Description
C33	Malignant neoplasm of trachea
C34	Malignant neoplasm of bronchus and lung
D021	Trachea

KEY FACTS

In 2019, 106 cases were newly diagnosed with lung cancer, 20 (19%) of which were Qataris and 86 (81%) were Non-Qataris.

Table 59: Distribution of lung cancer by gender and nationality

Behavior	Qatari			Non-Qatari			Grand Total
	Male	Female	Total	Male	Female	Total	
Malignant	18	2	20	65	20	85	105
In situ	0	0	0	1	0	0	0
Grand Total	18	2	20	66	20	86	106

The cumulative risk is 1.27, that relates to the chance of a person to get malignant lung cancer during the age of 0-74. The Age Standardized Rate ASR was found to be 12.75 per 100 000 of population at risk.

Table 60: Summary of lung cancer burden

Age-Groups (5 year)	Male		Female		Both Genders	
	N	ASIR	N	ASIR	N	ASIR
0-4	1	1.34	0	0.00	1	0.68
5-9	0	0.00	0	0.00	0	0.00
10-14	0	0.00	0	0.00	0	0.00
15-19	1	2.09	0	0.00	1	1.16
20-24	4	1.94	0	0.00	4	1.60
25-29	2	0.57	0	0.00	2	0.45
30-34	1	0.25	2	1.83	3	0.60
35-39	6	1.88	1	1.12	7	1.71
40-44	2	0.95	2	3.20	4	1.46
45-49	11	7.57	1	2.53	12	6.49
50-54	12	13.89	4	15.81	16	14.32
55-59	10	19.49	1	6.05	11	16.22
60-64	11	40.89	5	50.63	16	43.51
65-69	6	55.85	3	55.92	9	55.87
70-74	8	163.10	1	31.71	9	111.68
75-79	2	73.99	1	49.24	3	63.37
80+	7	382.93	1	60.79	8	230.35
Total "N"		106				
ASR per 100000 (WHO population)		12.75				
Crude incidence rate per 100000		3.79				
Cumulative Risk of Incidence [0-74]		1.27				

DEMOGRAPHY

In comparison to female, male have a higher peak of incidence of lung cancer at 50-54. The youngest age was 2 years and the average age was 55 years old.

Figure 32: Distribution of lung cancer by age groups

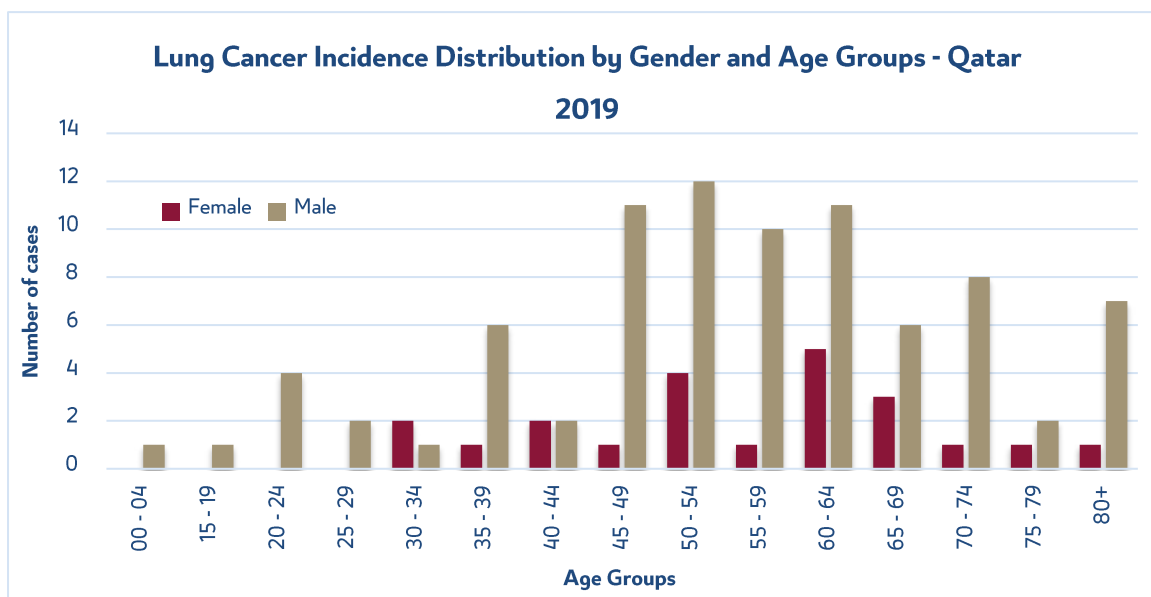


Table 61: Min, max and average age distribution for lung cancer

Average of Age	Min (years)	Max (years)
55	2	90

PREVALENCE

Amongst the Qatari population registered in the QNCR, there were 303 cases diagnosed with lung cancer. Of these cases, 206 (68%) have died and 97 (32%) are still alive.

HISTOLOGY

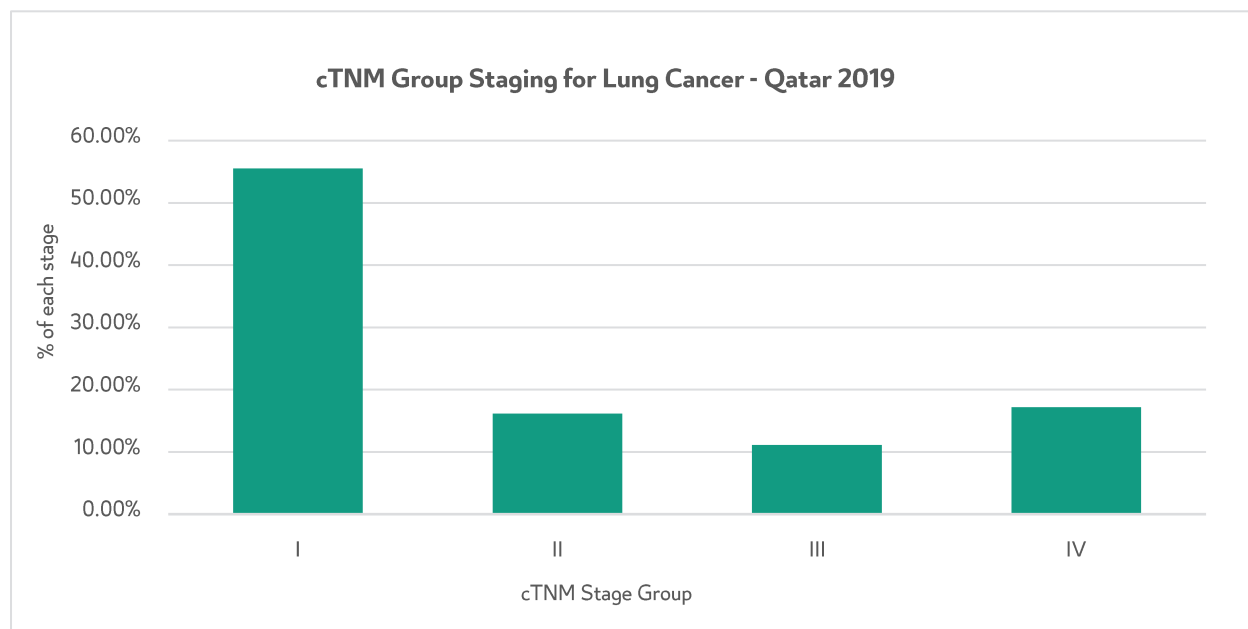
Table 62: Histology distribution for lung cancer

Histology	N	%
Adenocarcinoma, NOS	52	49.06%
Squamous cell carcinoma, NOS	11	10.38%
Small cell carcinoma, NOS	8	7.55%
Neoplasm, malignant	6	5.66%
Non-small cell carcinoma (C34)	5	4.72%
Acinar cell carcinoma	5	4.72%
Mucinous adenocarcinoma	4	3.77%
Neuroendocrine carcinoma, NOS	3	2.83%
Neuroendocrine tumor, NOS	3	2.83%
Carcinoma, undifferentiated, NOS	2	1.89%
Signet ring cell carcinoma	1	0.94%
Solid carcinoma, NOS	1	0.94%
Adenocarcinoma with mixed subtypes	1	0.94%
Langerhans cell histiocytosis, disseminated	1	0.94%
Carcinoma, NOS	1	0.94%
Carcinoma in situ, NOS	1	0.94%
Pleuropulmonary blastoma	1	0.94%

STAGING

Almost 9% of the total cases reported in 2019 did not have a known cTNM stage. Of those cases that did report a cTNM stage, 86 %were late stage (III and IV) and 14% were early stage (I and II). *[PLEASE SEE DISCLAIMER]*

Figure 33: cTNM Distribution for lung cancer



TREATMENT

The following table shows the treatment types in no particular order. *[PLEASE SEE DISCLAIMER]*

Table 63: Treatment modalities for lung cancer

Treatment Modality	%
Chemotherapy	22.67%
Chemotherapy / Radiation therapy	16.00%
Chemotherapy / Immunotherapy	13.33%
Chemotherapy / Radiation therapy / Surgery	12.00%
Chemotherapy / Immunotherapy / Radiation therapy	9.33%
Surgery	8.00%
Chemotherapy / Surgery	5.33%
Radiation therapy	2.67%
Immunotherapy	2.67%
Chemotherapy / Immunotherapy / Radiation therapy / Surgery	2.67%
Immunotherapy / Radiation therapy	2.67%
Chemotherapy / Immunotherapy / Surgery	1.33%
Chemotherapy / Hormonotherapy / Immunotherapy / Radiation therapy / Surgery	1.33%

URINARY TRACT

ICD 10 CODES

Table 64: ICD 10 codes for urinary tract in QNCR

ICD 10 Code	Description
C64	Malignant neoplasm of kidney
C65	Malignant neoplasm of renal pelvis
C66	Malignant neoplasm of ureter
C68	Malignant neoplasm of other and unspecified urinary organs
D091	Other and unspecified urinary organs

KEY FACTS

In 2019, 112 cases were newly diagnosed with kidney cancer, 28 (25%) of which were Qataris and 84 (75%) Non-Qataris.

Table 65: Distribution of urinary tract cancer by gender and nationality

Behavior	Qatari			Non-Qatari			Grand Total
	Male	Female	Total	Male	Female	Total	
Malignant	20	8	28	66	18	84	112
Grand Total	20	8	28	66	18	84	112

The cumulative risk is 1.04 that relates to the chance of a person to get kidney cancer during the age of 0-74.
The Age Standardized Rate ASR was found to be 9.16 per 100 000 of population at risk.

Table 66: Summary of urinary tract cancer burden

Age-Groups (5 year)	Male		Female		Both Genders	
	N	ASIR	N	ASIR	N	ASIR
0-4	1	1.39	1	0.00	2	1.36
5-9	1	0.00	0	1.49	1	0.71
10-14	0	0.00	0	0.00	0	0.00
15-19	0	0.00	0	0.00	0	0.00
20-24	0	2.25	1	0.00	1	0.40
25-29	1	2.16	2	0.00	3	0.67
30-34	3	0.91	1	0.96	4	0.80
35-39	7	1.12	1	2.33	8	1.96
40-44	10	4.80	3	3.34	13	4.75
45-49	12	12.63	5	2.62	17	9.20
50-54	12	0.00	0	20.45	12	10.74
55-59	13	18.15	3	12.58	16	23.59
60-64	13	30.38	3	0.00	16	43.51
65-69	7	93.20	5	40.07	12	74.49
70-74	3	0.00	0	0.00	3	37.23
75-79	2	0.00	0	50.33	2	42.25
80+	1	60.79	1	0.00	2	57.59
Total "N"	112					
ASR per 100000 (WHO population)	9.16					
Crude incidence rate per 100000	4.00					
Cumulative Risk of Incidence [0-74]	1.04					

DEMOGRAPHY

Figure 34: Distribution of urinary tract cancer by age groups

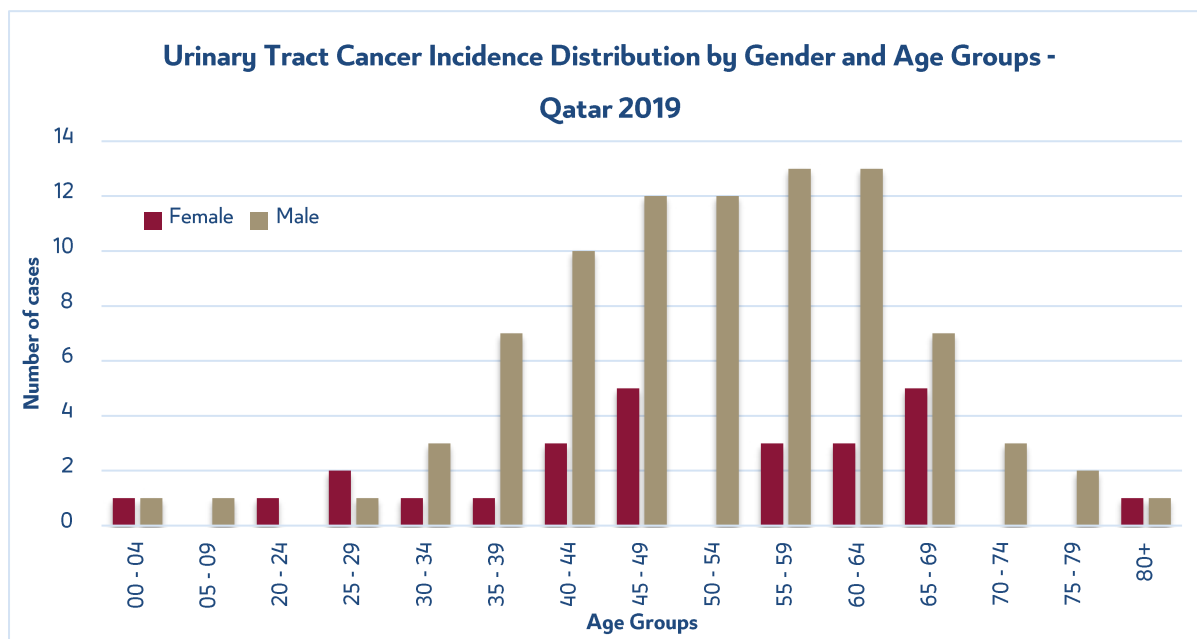


Table 66: Min, max and average age distribution for urinary tract cancer

Average of Age	Min (years)	Max (years)
51	2	82

PREVALENCE

Amongst the Qatari population registered in the QNCR, there were 165 cases diagnosed with kidney cancer. Of these cases, 38 (23%) have died and 127 (63%) are still alive.

HISTOLOGY

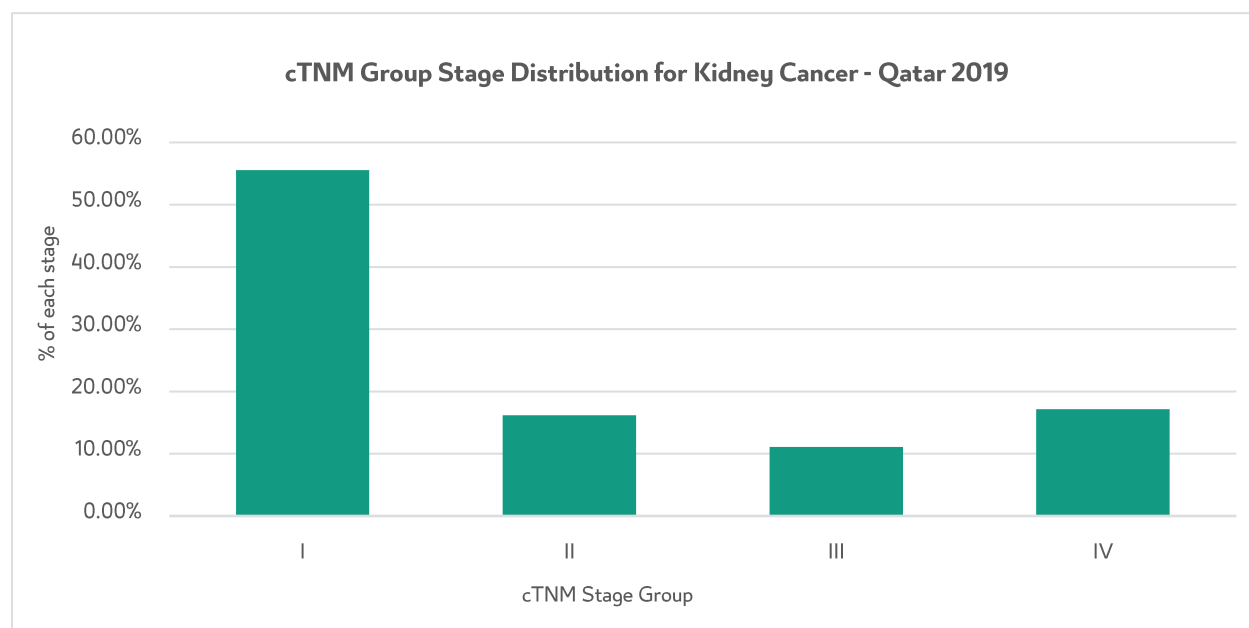
Table 67: Histology distribution for urinary tract cancer

Histology	N	%
Renal cell carcinoma, NOS	65	58.04%
Neoplasm, malignant	18	16.07%
Papillary adenocarcinoma, NOS	11	9.82%
Renal cell carcinoma, Chromophobe type	9	8.04%
Nephroblastoma, NOS	3	2.68%
Squamous cell carcinoma, NOS	1	0.89%
Liposarcoma, NOS	1	0.89%
Renal cell carcinoma, sarcomatoid	1	0.89%
Clear cell adenocarcinoma, NOS	1	0.89%
Collecting duct carcinoma	1	0.89%
Papillary transitional cell carcinoma	1	0.89%

STAGING

Almost 11% of the total cases reported in 2019 did not have a known cTNM stage. Of those cases that did report a cTNM stage, 28% were late stage (III and IV) and 72% were early stage (I and II). *[PLEASE SEE DISCLAIMER]*

Figure 8: cTNM Distribution for urinary tract cancer



TREATMENT

The following table shows the treatment types in no particular order. *[PLEASE SEE DISCLAIMER]*

Table 68: Treatment modalities for urinary tract cancer

Treatment Modality	%
Surgery	76.67%
Chemotherapy / Surgery	7.78%
Chemotherapy / Radiation therapy / Surgery	3.33%
Chemotherapy / Radiation therapy	3.33%
Chemotherapy / Immunotherapy / Surgery	2.22%
Chemotherapy	2.22%
Chemotherapy / Immunotherapy	2.22%
Radiation therapy	1.11%
Chemotherapy / Immunotherapy / Radiation therapy	1.11%



2019

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State of Qatar**

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