2017

Qatar National Cancer Registry QNCR

Annual Report

2017



التقرير السنوي

2017





2017 Cancer Annual Report State of Qatar

National Cancer Program Qatar National Cancer Registry Ministry of Public Health, Qatar P.O. Box 42 Doha, Qatar www.nhsq.info gncr@moph.gov.qa Printed in Qatar, 2021

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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 2020. QNCR 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 <u>qncr@moph.gov.qa</u>

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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 0-3	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
РНСС	Primary Healthcare Corporation
QNCR	Qatar National Cancer Registry
MoPH	Ministry of Public Health
ASR_WHO	Age Standardized Rate based on Standard WHO Population Structure
Cum_risk_0_74	Cumulative Risk of Incidence in the age range of 0-74
MV(%)	The proportion of cases microscopically verified
DCO(%)	Percentage of cases reported through Death Certificate.

تقديم

يسعدني أن أقدم التقرير السنوي لسجل قطر الوطني للسرطان المتعلق بمعدلات الإصابة بالسرطان خلال عام 2017. تقرير ذو قيمة كبيرة لمجتمعنا العلمي والطبي في دولة قطر. سوف يوفر هذا المنتج العلمي مصدرًا للمعلومات المتعلقة بعبء السرطان في بلدنا ، وستكون هذه المعلومات مفيدة لصانعي السياسات والباحثين السريريين ومخططي الصحة العامة لدينا. أود أن أغتنم هذه الفرصة لأقدم تقديري العميق للعمل التعاوني عبر المؤسسات الشريكة ، مؤسسة حمد الطبية ، مؤسسة الرعاية الصحية الأولية وسدرة للطب. شكراً جزيلاً لفريقنا في وزارة الصحة العامة ، البرنامج الوطني للسرطان على جمودهم المتفانية لتمكين إنتاج التقرير.

> **الشيخ د. محمد بن حمد أل ثاني** نائب رئسس اللجنة الوطنية للسرطان مدير ادارة الصحة العامة وزارة الصحة العامة

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 2017 2016مبسمة.

المج <i>مو</i> ع الكل	غير قطري			قطري			السلوك السرطاني
، ــــي	إناث	ذكور	المجموع	إناث	ذكور	المجموع	
1858	576	823	1399	266	193	459	خبيت
76	35	20	55	18	3	21	موضعي
1	0	0	0	1	0	1	حميد (الدماغ والجهاز العصبي المركزي فقط)
4	4	0	4	0	0	0	غير محدد
1939	615	843	1458	285	196	481	المجموع الكلى

خلال العام 2017 ، تم تسجيل 1939 حالة إصابة جديدة بالسرطان، والجدول ادناه يبين توزيع هذه الحالات حسب الجنسية والجنس:

معدل الإصابة الخام وجد أنه 71.2حالة لكل 100000 وأن المعدل المصحح للعمر كان بواقع 168 لكل 100000 . الرسم التوضيحي أدناه بيرز توزيع الحالات حسب المجموعات العمرية، ونلاحظ أن أكثر الحالات كانت في الفترة العمرية 55-55



معدلات السرطان الأكثر انتشارا بين الجنسين

في العام 2017، سجل سرطان الثدي المعدل الاعلى للاصابات بواقع 357 حالة، اي ما نسبته 18.4 % من مجمل حالات السرطان، تلاه سرطان القولون والمستقيم و غطى نسبة 9.18 % من مجمل الحالات. سرطان الدم جاء ثالثا وبنسبة 7 % من مجمل الحالات.

نظام الترميز الدولي 10	موقع السرطان	العدد	%	المعدل الخام	المعدل المصحح للعمر	الخطورة التراكمية
C50 / D05	الثدي	357	18.41	2.18	3.82	0.44
C18-C21 / D01	القولون والمستقيم	178	9.18	0.41	1.02	0.12
C91-C95	الدم	136	7.01	0.38	0.6	0.06
C73 / D09.3	الغدة الدرقية	108	5.57	0.79	1.07	0.11
C61 / D07.5	غدة البروستات	92	4.74	2.25	13.67	1.31
C33-C34 / D02.1-D02.2	الرئة والقصبة الهوائية	90	4.64	0.83	2.9	0.34
C82-C85, C96	ليمفوما غير هودجكينية	87	4.49	0.23	0.46	0.03
C64-C66	الكلى	80	4.13	0.37	0.85	0.09
C44 / D04	الجلد الاميلانومي	74	3.82	0.39	1.16	0.16
C22 / D01.5	الكبد والقناة الصفراء	58	2.99	0.53	1.84	0.12

الجدول ادناه يبين حالات السرطان الاكثر انتشارا في كلا الجنسين ومن كل الجنسيات

FOREWORD

It is with pleasure that I present the annual report for Qatar National Cancer Registry, related to the cancer incidence during the year of 2017. A report of great value to our scientific and medical community in the State of Qatar.

This scientific product should provide a source of information related to the cancer burden in our country, such information will be useful for our policy makers, clinical researchers and public health planners.

I would like to take this opportunity to present my deepest appreciation to the collaborative work across partner institutions, Hamad Medical Corporation, Primary Healthcare Corporation and Sidra Medicine.

Great thanks to our team at the Ministry of Public Health, National Cancer Program for their dedicated efforts to enable the production of the report.

Looking forward to productive reading and extensive use of this report.

Shk. Dr. Mohammad bin Hamad Al Thani

Vice Chair, National Cancer Committee Director of Public Health Ministry of Public Health

ACKNOWLEDGEMENT

The Qatar Cancer Incidence Annual Report for 2017 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.

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

INCIDENCE³

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).

MORTALITY³

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.

PREVALENCE³

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 RATE³

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 ASR³

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 RISK³

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 new born 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 ¹

It is calculated according to the following equation:

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

AGE-SPECIFIC INCIDENCE RATE ASIR ERROR! REFERENCE SOURCE NOT FOUND.

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.

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

AGE STANDARDIZED RATE ASR⁴

It is calculated as

$$ASR = \sum ASIR \times Weight of Standard Population$$

The weight of standard population is calculated as follows

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

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

Table 1 represents the standard age-group population published by WHO. Error! Reference source not found.

Table 1: WHO Standard Population

THE CUMULATIVE RISK ERROR! REFERENCE SOURCE NOT FOUND.⁴

The cumulative rate is expressed as

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

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

OVERALL CANCER INCIDENCE



OVERALL CANCER INCIDENCE

EXECUTIVE SUMMARY

The Qatar National Cancer Registry (QNCR), at the Ministry of Public Health is the national cancer registry for the State of Qatar, covering the total population of 2,724,606 in 2017.

During the year 2017, there were 1939 registered new cancer cases, with a distribution of 24.81% Qataris, and 75.19% Non-Qataris. The following table describes the number of cases distributed by behavior, gender, and nationality:

Concor Bobovior	Non-Qatari			Qatari			Grand
Cancer Benavior		F	Total	М	F	Total	Total
Benign (Brain & CNS)	0	0	0	0	1	1	1
Uncertain (Brain & CNS)	0	4	4	0	0	0	4
In Situ	20	35	55	3	18	21	76
Malignant	823	576	1399	193	266	459	1858
Grand Total	843	615	1458	196	285	481	1939

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

Crude incidence rate was 71.2 per 100 000 and Age Standardized Rate ASR was 168.0 per 100 000 population at risk.

Distribution of cases by basis of diagnosis showed that 81.74% of the cases where microscopically confirmed:

Basis of Diagnosis	%
Positive histology	81.74
Positive cytology	9.59
Radiology and other imaging techniques without microscopic confirmation	4.64
Death Certificate Only	2.68
Positive laboratory test/marker study	1.03
Clinical diagnosis only	0.26
Direct visualization without microscopic confirmation	0.05
Grand Total	100

Table 3: Distribution of Basis of Diagnosis

SEER Summary stage gives another view of the cancer incidence in the country.

SEER Summary Stage	%
Localized only	40.33
Unknown if extension or metastasis (unstaged, unknown, or unspecified)	22.54
Distant site(s)/node(s) involved	16.61
Regional lymph nodes only	12.74
In Situ	4.64
Regional by BOTH direct extension AND regional lymph nodes	1.6
Regional by direct extension only	1.24
Regional NOS	0.31
Total	100

Table 4: Overall Distribution of SEER Summary stage

Distribution by age group indicates that the peak of incidence was among the patients of the age 55-59:



DISTRIBUTION OF CANCER IN QATAR IN 2017 BY AGE GROUP

Figure 1: Distribution of cancer by age groups



DISTRIBUTION OF CANCER IN QATAR IN 2017 BY AGE GROUP AND GENDER

Figure 2:Distribution of cancer by age groups and gender

Regardless of the nationality and the gender, the following table presents the most common cancers diagnosed during 2017. Breast was the most common of all cancers with 18.41% of all cases, followed by colorectal cancer with 9.18%, and leukemia came third at the rate of 7% of all cancer cases.

ICD 10 Codes	Primary Site	N	%	Crude_Rate	ASR_WHO	Cum_risk_0_74	MV(%)	DCO(%)
C50 / D05	Breast	357	18.41	2.18	3.82	0.44	97.48	1.68
C18-C21/ D01	Colorectal	178	9.18	0.41	1.02	0.12	94.94	3.93
C91-C95	Leukemia	136	7.01	0.38	0.6	0.06	98.53	1.47
C73 / D09.3	Thyroid gland	108	5.57	0.79	1.07	0.11	97.22	2.78
C61 / D07.5	Prostate	92	4.74	2.25	13.67	1.31	94.57	1.09
C33-C34 / D02.1-D02.2	Trachea bronchus and lung	90	4.64	0.83	2.9	0.34	93.33	4.44
C82-C85, C96	Non-Hodgkin Lymphoma	87	4.49	0.23	0.46	0.03	98.85	0
C64-C66	Kidney	80	4.13	0.37	0.85	0.09	80	1.25
C44 / D04	Non-Melanoma skin cancer	74	3.82	0.39	1.16	0.16	100	0
C22 / D01.5	Liver and intrahepatic bile ducts	58	2.99	0.53	1.84	0.12	22.41	5.17

Table 5: Top 10 cancers, all genders and all nationalities



Figure 3: Top 10 cancers by nationality

Age-Group		Male	Fei	male	Both G	Genders
(5 year)	Ν	ASIR	N	ASIR	N	ASIR
0-4	13	17.84	16	22.53	29	20.16
5-9	10	15.5	11	17.33	21	16.41
10-14	9	17.71	6	12.08	15	14.93
15-19	10	17.69	11	30.52	21	22.69
20-24	16	6.74	8	17.01	24	8.44
25-29	40	10.28	37	39.88	77	15.98
30-34	72	19.92	60	62.76	132	28.88
35-39	93	34.27	96	125.71	189	54.35
40-44	94	45.91	102	193.95	196	76.16
45-49	110	76.11	127	363.21	237	132.04

Age-Group		Male	Fei	male	Both C	Genders
(5 year)	Ν	ASIR	N	ASIR	N	ASIR
50-54	117	130.35	108	461.36	225	198.82
55-59	141	242.18	115	749.14	256	347.96
60-64	109	430.85	76	828.88	185	536.73
65-69	92	846.99	59	1253.19	151	969.81
70-74	48	1078.17	33	1105.9	81	1089.3
75-79	26	1214.39	17	1037.22	43	1137.57
80+	39	2086.68	18	1013.51	57	1563.79
Total "N"		1039	9	900	1	939
ASR / 100000		152.4	24	42.7	16	58.0
Crude Incidence / 100000		50.8	1	32.6	7	1.2
Cumulative Risk of Incidence [0-74]		13.9	2	3.2	1	6.2

Table 6: Summary of cancer burden

CANCERS ACROSS ALL NATIONALITIES AND GENDERS

ICD10 Code	ICD10 Description	Qatari Male (N)	Qatari Male (%)	Qatari Female (N)	Qatari Female (%)	Qatari (N)	Qatari (%)	Non- Qatari Male (N)	Non- Qatari Male (%)	Non- Qatari Female (N)	Non- Qatari Female (%)	Non- Qatari (N)	Non- Qatari (%)	Total (N)	Total (%)
C00	Malignant neoplasm of lip	0	0	0	0	0	0	4	0.5	0	0	4	0.27	4	0.21
	Malignant neoplasm of														
C01	base of tongue	0	0	1	0.4	1	0.21	2	0.2	1	0.2	3	0.21	4	0.21
	Malignant neoplasm of														
	other and unspecified														
C02	parts of tongue	1	0.5	0	0	1	0.21	16	1.9	2	0.3	18	1.23	19	0.98
	Malignant neoplasm of														
C03	gum	1	0.5	0	0	1	0.21	4	0.5	0	0	4	0.27	5	0.26
	Malignant neoplasm of														
C04	floor of mouth	0	0	1	0.4	1	0.21	1	0.1	0	0	1	0.07	2	0.1
	Malignant neoplasm of														
C05	palate	0	0	0	0	0	0	1	0.1	1	0.2	2	0.14	2	0.1
	Malignant neoplasm of														
	other and unspecified														
C06	parts of mouth	1	0.5	0	0	1	0.21	12	1.4	0	0	12	0.82	13	0.67
	Malignant neoplasm of							_				_			
C07	parotid gland	0	0	0	0	0	0	0	0	2	0.3	2	0.14	2	0.1
	Malignant neoplasm of														
	other and unspecified														
C08	major salivary glands	0	0	0	0	0	0	1	0.1	0	0	1	0.07	1	0.05
	Malignant neoplasm of														
C09	tonsil	0	0	0	0	0	0	2	0.2	0	0	2	0.14	2	0.1
	Malignant neoplasm of													_	
C10	oropharynx	1	0.5	0	0	1	0.21	1	0.1	0	0	1	0.07	2	0.1
	Malignant neoplasm of							_							
C11	nasopharynx	1	0.5	0	0	1	0.21	5	0.6	0	0	5	0.34	6	0.31
	Malignant neoplasm of														
	other and ill-defined sites														
C14	in the lip														
	Malignant neoplasm of							_							
C15	oesophagus	1	0.5	1	0.4	2	0.42	5	0.6	1	0.2	6	0.41	8	0.41

ICD10 Code	ICD10 Description	Qatari Male (N)	Qatari Male (%)	Qatari Female (N)	Qatari Female (%)	Qatari (N)	Qatari (%)	Non- Qatari Male (N)	Non- Qatari Male (%)	Non- Qatari Female (N)	Non- Qatari Female (%)	Non- Qatari (N)	Non- Qatari (%)	Total (N)	Total (%)
C16	Malignant neoplasm of stomach	2	1	3	1.1	5	1.04	19	2.3	4	0.7	23	1.58	28	1.44
C17	Malignant neoplasm of small intestine	1	0.5	0	0	1	0.21	6	0.7	1	0.2	7	0.48	8	0.41
C18	Malignant neoplasm of colon	16	8.2	12	4.2	28	5.82	51	6	31	5	82	5.62	110	5.67
C19	Malignant neoplasm of rectosigmoid junction	6	3.1	3	1.1	9	1.87	11	1.3	7	1.1	18	1.23	27	1.39
C20	Malignant neoplasm of rectum	7	3.6	5	1.8	12	2.49	22	2.6	3	0.5	25	1.71	37	1.91
C21	Malignant neoplasm of anus and anal canal	1	0.5	0	0	1	0.21	1	0.1	1	0.2	2	0.14	3	0.15
C 22	Malignant neoplasm of liver and intrahepatic bile	14	7.1		2.0	22	4.57	25	4.2	1	0.2	20	2.47	50	2.00
	Malignant neoplasm of	14	7.1	8	2.8	22	4.57	35	4.2	1	0.2	36	2.47	58	2.99
C23	gallbladder Malignant neoplasm of	1	0.5	3	1.1	4	0.83	5	0.6	5	0.8	10	0.69	14	0.72
C24	other and unspecified parts of biliary tract	1	0.5	2	0.7	3	0.62	13	1.5	0	0	13	0.89	16	0.83
C25	Malignant neoplasm of pancreas	8	4.1	9	3.2	17	3.53	18	2.1	5	0.8	23	1.58	40	2.06
	Malignant neoplasm of other and ill-defined														
C26	digestive organs Malignant neoplasm of	0	0	0	0	0	0	1	0.1	0	0	1	0.07	1	0.05
C30	nasal cavity and middle ear	0	0	0	0	0	0	3	0.4	1	0.2	4	0.27	4	0.21
C31	Malignant neoplasm of accessory sinuses	0	0	0	0	0	0	4	0.5	0	0	4	0.27	4	0.21
C32	Malignant neoplasm of larynx	5	2.6	1	0.4	6	1.25	6	0.7	0	0	6	0.41	12	0.62
C34	Malignant neoplasm of bronchus and lung	18	9.2	9	3.2	27	5.61	52	6.2	11	1.8	63	4.32	90	4.64
C38	Malignant neoplasm of heart														
C40	Malignant neoplasm of bone and articular cartilage of limbs	0	0	0	0	0	0	4	0.5	3	0.5	7	0.48	7	0.36
	Malignant neoplasm of bone and articular cartilage of other and														
C41	unspecified sites Malignant melanoma of	1	0.5	1	0.4	2	0.42	3	0.4	2	0.3	5	0.34	7	0.36
C43	skin Other malignant	0	0	1	0.4	1	0.21	3	0.4	8	1.3	11	0.75	12	0.62
C44	neoplasms of skin	4	2	5	1.8	9	1.87	47	5.6	15	2.4	62	4.25	71	3.66
C45	Mesothelioma	0	0	0	0	0	0	0	0	1	0.2	1	0.07	1	0.05
C40	Malignant neoplasm of	0	0	0	0			1	0.1	0	0	1	0.07	-	0.05
C47	autonomic nervous	0	0	0	0	0		1	0.1	0	0	11	0.07	_1_	0.05
C+/	Malignant neoplasm of	0			0			1	0.1	0	0		0.07		0.05
C48	peritoneum Malignant neonlasm of	0	0	0	0	0	0	0	0	1	0.2	1	0.07	1	0.05
C49	other connective and soft tissue	1	0.5	3	1.1	4	0.83	6	0.7	6	1	12	0.82	16	0.83

ICD10 Code	ICD10 Description	Qatari Male (N)	Qatari Male (%)	Qatari Female (N)	Qatari Female (%)	Qatari (N)	Qatari (%)	Non- Qatari Male (N)	Non- Qatari Male (%)	Non- Qatari Female (N)	Non- Qatari Female (%)	Non- Qatari (N)	Non- Qatari (%)	Total (N)	Total (%)
C50	Malignant neoplasm of breast	1	0.5	90	31.6	91	18.92	4	0.5	229	37.2	233	15.98	324	16.71
C51	Malignant neoplasm of vulva	0	0	1	0.4	1	0.21	0	0	1	0.2	1	0.07	2	0.1
C53	Malignant neoplasm of cervix uteri	0	0	9	3.2	9	1.87	0	0	27	4.4	27	1.85	36	1.86
C54	Malignant neoplasm of corpus uteri	0	0	15	5.3	15	3.12	0	0	34	5.5	34	2.33	49	2.53
C55	Malignant neoplasm of uterus														
C56	Malignant neoplasm of ovary	0	0	10	3.5	10	2.08	0	0	13	2.1	13	0.89	23	1.19
C57	Malignant neoplasm of other and unspecified female genital organs	0	0	1	0.4	1	0.21	0	0	2	0.3	2	0.14	3	0.15
C58	Malignant neoplasm of placenta	0	0	0	0	0	0	0	0	1	0.2	1	0.07	1	0.05
C60	Malignant neoplasm of penis	0	0	0	0	0	0	2	0.2	0	0	2	0.14	2	0.1
C61	Malignant neoplasm of prostate	19	9.7	0	0	19	3.95	73	8.7	0	0	73	5.01	92	4.74
C62	Malignant neoplasm of testis	9	4.6	0	0	9	1.87	20	2.4	0	0	20	1.37	29	1.5
C63	Malignant neoplasm of other and unspecified male genital organs	1	0.5	0	0	1	0.21	1	0.1	0	0	1	0.07	2	0.1
C64	Malignant neoplasm of kidney														
C65	Malignant neoplasm of renal pelvis	0	0	0	0	0	0	4	0.5	1	0.2	5	0.34	5	0.26
C66	C66Malignant neoplasm of ureter	1	0.5	0	0	1	0.21	1	0.1	0	0	1	0.07	2	0.1
C67	Malignant neoplasm of bladder	5	2.6	3	1.1	8	1.66	26	3.1	1	0.2	27	1.85	35	1.81
C68	Malignant neoplasm of other and unspecified	0	0	0	0	0	0	1	0.1	0	0	1	0.07	1	0.05
C70	Malignant neoplasm of	0	0	0	0	0	0	0	0.1	2	03	2	0.14	2	0.03
C71	Malignant neoplasm of brain	8	4.1	3	1.1	11	2.29	28	3.3	12	2	40	2.74	51	2.63
C73	Malignant neoplasm of thyroid gland	5	2.6	20	7	25	5.2	25	3	57	9.3	82	5.62	107	5.52
C74	Malignant neoplasm of adrenal gland	1	0.5	3	1.1	4	0.83	7	0.8	2	0.3	9	0.62	13	0.67
C76	Malignant neoplasm of other and ill-defined sites	1	0.5	1	0.4	2	0.42	3	0.4	0	0	3	0.21	5	0.26
C80	Malignant neoplasm														
C81	Hodgkin lymphoma	7	3.6	6	2.1	13	2.7	22	2.6	7	1.1	29	1.99	42	2.17
(82	Follicular lymphoma	6	3.1	1	0.4	6	1.46	38	0.5	12	0.3	50	0.41	13 56	0.67
C84	Mature T/NK-cell	1	0.5	0	0.7	0	0.21_	6	4.5	2	0.5	9	0.62	10	0.52
	Other and unspecified types of non-Hodgkin		0.5						0.7		0.5				
C85	lymphoma Other specified types of T/NK-cell lymphoma	0	0	0	0.4	1	0.21	5 3	0.6	2	0.3	7	0.48	8	0.41

ICD10 Code	ICD10 Description	Qatari Male (N)	Qatari Male (%)	Qatari Female (N)	Qatari Female (%)	Qatari (N)	Qatari (%)	Non- Qatari Male (N)	Non- Qatari Male (%)	Non- Qatari Female (N)	Non- Qatari Female (%)	Non- Qatari (N)	Non- Qatari (%)	Total (N)	Total (%)
C88	Malignant immunoproliferative diseases	1	0.5	0	0	1	0.21	0	0	2	0.3	2	0.14	3	0.15
C90	C90Multiple myeloma and malignant plasma cell neoplasms	2	1	2	0.7	4	0.83	17	2	2	0.3	19	1.3	23	1.19
C91	C91Lymphoid leukaemia	7	3.6	6	2.1	13	2.7	27	3.2	10	1.6	37	2.54	50	2.58
C92	Myeloid leukaemia	5	2.6	6	2.1	11	2.29	55	6.5	12	2	67	4.6	78	4.02
C93	Monocytic leukaemia	0	0	0	0	0	0	2	0.2	0	0	2	0.14	2	0.1
C94	Other leukaemias of specified cell type	1	0.5	1	0.4	2	0.42	0	0	1	0.2	1	0.07	3	0.15
C95	Leukaemia of unspecified cell type	0	0	0	0	0	0	3	0.4	0	0	3	0.21	3	0.15
D010	Colon	0	0	1	0.4	1	0.21	0	0	0	0	0	0	1	0.05
D019	Digestive organ														
D04	Carcinoma in situ of skin	1	0.5	0	0	1	0.21	1	0.1	1	0.2	2	0.14	3	0.15
D05	Carcinoma in situ of breast	0	0	11	3.9	11	2.29	0	0	22	3.6	22	1.51	33	1.7
D06	Carcinoma in situ of cervix uteri	0	0	5	1.8	5	1.04	0	0	11	1.8	11	0.75	16	0.83
D090	Bladder	2	1	0	0	2	0.42	18	2.1	0	0	18	1.23	20	1.03
D093	Thyroid and other endocrine glands	0	0	1	0.4	1	0.21	0	0	0	0	0	0	1	0.05
D33	Benign neoplasm of brain and other parts of central nervous system	0	0	1	0.4	1	0.21	0	0	0	0	0	0	1	0.05
D43	Neoplasm of uncertain or unknown behaviour of brain and central nervous system	0	0	0	0	0	0	0	0	4	0.7	4	0.27	4	0.21
D45	Polycythaemia vera	6	3,1	2	0.7	8	1.66	13	1.5	3	0.5	16	1.1	24	1.24
D46	Myelodysplastic syndromes	0	0	0	0.7	0	0	2	0.2	1	0.2	3	0.21	3	0.15
D47	Other neoplasms of uncertain or unknown behaviour of lymphoid														

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

MOST COMMON CANCER IN MALES

The most common cancer in males was colorectal with 11.07% of the registered cases, followed by Leukemia with 9.62%.

ICD 10 Codes	Primary Site	N	%	Crude_Rate	ASR_WHO	Cum_risk_0_74	MV(%)	DCO(%)
C18-C21 / D01	Colorectal	115	11.07	0.7	1.98	0.22	96.52	1.74
C91-C95	Leukemia	100	9.62	0.7	1.18	0.11	98	2
C61 / D07.5	Prostate	92	8.85	2.25	13.67	1.31	94.57	1.09
C33-C34 / D02.1-D02.2	Trachea bronchus and lung	70	6.74	1.71	6.29	0.78	91.43	5.71
C82-C85 C96	Non-Hodgkin Lymphoma	64	6.16	0.45	1.21	0.08	98.44	0
C64-C66	Kidney	61	5.87	0.6	1.54	0.15	83.61	0
C44 / D04	Non-Melanoma skin cancer	53	5.1	0.65	2.33	0.33	100	0

ICD 10 Codes	Primary Site	N	%	Crude_Rate	ASR_WHO	Cum_risk_0_74	MV(%)	DCO(%)
C67 / D09.0	Bladder	51	4.91	0.62	2.74	0.27	94.12	5.88
C22 / D01.5	Liver and intrahepatic bile ducts	49	4.72	1.2	4.35	0.27	24.49	4.08
C70-C72	Brain & CNS	36	3.46	0.88	1.81	0.21	69.44	11.11

Table 8: Most common cancers in males of all nationalities

MOST COMMON CANCER IN FEMALES

Breast was the most common cancer with 39.11% of the registered cases in females. Thyroid gland was the second most common with 8.67%.

ICD 10 codes	Primary Site	N	%	Crude_Rate	ASR_WHO	Cum_risk_0_74	MV(%)	DCO(%)
C50 / D05	Breast	352	39.11	12.97	22.01	2.45	97.44	1.7
C73 / D09.3	Thyroid gland	78	8.67	3.83	4.89	0.52	97.44	2.56
C18-C21 / D01	Colorectal	63	7	1.16	2.46	0.28	92.06	7.94
C54-C55 / D07.0	Uterus	55	6.11	0	4.85	0.6	98.18	1.82
C53 / D06	Cervix uteri	52	5.78	0	2.29	0.26	100	0
C91-C95	Leukemia	36	4	0.88	1.28	0.14	100	0
C56	Ovary	23	2.56	0	3.79	0.31	86.96	8.7
C82-C85, C96	Non-Hodgkin Lymphoma	23	2.56	0.48	0.61	0.05	100	0
C44 / D04	Non-Melanoma skin cancer	21	2.33	1.03	2.2	0.27	100	0
C33-C34 / D02.1-D02.2	Trachea bronchus and lung	20	2.22	1.47	4.6	0.46	100	0

Table 9: Most common cancers in females of all nationalities

DISTRIBUTION BY NATIONALITY

When distributed according to nationality, 481 (24.81%) new cases of cancer were amongst Qataris, and 1458 (75.19%) new cases were amongst Non-Qataris.



Figure 4: Cancer incidence distribution by nationality

ISTRIBUTION BY GENDER

Across all nationalities, all new malignant cancer cases among males were accounted for 1039 (53.58%), while females accounted for 900(46.42%).



Figure 5: Cancer incidence distribution by gender

AGE STANDARDIZED INCIDENCE RATE ASIR

The Age Standardized Incidence Rate (ASIR) shows an increasing distribution of cancer cases with increased age, which is similar to the international trend of cancer incidence.



Age at diagnosis

Figure 6: Age Standardized Incidence Rate ASIR for all cancers

CANCER INCIDENCE IN QATARIS



CANCER INCIDENCE AMONGST QATARIS

A total of 481 cancer cases were registered amongst Qataris. Majority of them were reported as single primary. Only one case was reported with multiple primaries.

DISTRIBUTION BY GENDER

During 2017, 285 (59.25%) new cases were diagnosed in females, while 196 (40.75%) new cases were diagnosed in males.



Figure 7: Cancer incidence by gender among Qataris

MOST COMMON CANCERS ACROSS ALL GENDERS

In the Qatari population, the top ten cancers accounted for 324 (67.36%) among cases newly diagnosed with cancer among Qataris during 2017. On top of which is the breast (21.21%) followed by colorectal (10.6%)

ICD 10 Codes	Primary Site	N	%	Crude_Rate	ASR_WHO	Cum_risk_0_74	MV(%)	DCO(%)
C50 / D05	Breast	102	21.21	11.29	16.72	1.75	96.08	2.94
C18-C21 / D01	Colorectal	51	10.6	2.12	3.46	0.43	88.24	9.8
C33-C34 / D02.1-D02.2	Trachea bronchus and lung	27	5.61	4.48	7.69	0.97	88.89	11.11
C73 / D09.3	Thyroid gland	26	5.41	2.88	4.4	0.45	88.46	11.54
C91-C95	Leukemia	26	5.41	1.44	1.65	0.18	100	0
C22 / D01.5	Liver and intrahepatic bile ducts	22	4.57	3.65	6.56	0.48	9.09	4.55
C54-C55 / D07.0	Uterus	19	3.95	6.21	8.97	0.95	100	0
C61 / D07.5	Prostate	19	3.95	12.82	27.79	2.22	84.21	5.26
C25 / D01.7	Pancreas	17	3.53	2.82	4.55	0.54	82.35	5.88
C82-C85, C96	Non-Hodgkin Lymphoma	15	3.12	0.83	1.22	0.08	100	0

Table 10: Most common cancers across all genders of Qataris, 2017

MOST COMMON CANCERS AMONGST MALES QATARIS

Colorectal cancer is the most common amongst male Qatari's which accounts for 30 (15.71%) followed by prostate cancer which accounts for 19 (9.95%). Trachea bronchus and lung cancer accounts 18 (9.42%) which is closely followed after the number of new cases of prostate cancer.

ICD 10 Codes	Primary Site	N	%	Crude_Rate	ASR_WHO	Cum_risk_0_74	MV(%)	DCO(%)
C18-C21 / D01	Colorectal	30	15.71	0.37	1.42	0.05	90	6.67
C61 / D07.5	Prostate	19	9.95	0.93	8.91	0.07	84.21	5.26
C33-C34 / D02.1-D02.2	Trachea bronchus and lung	18	9.42	0.88	3.14	0.17	83.33	16.67
C22 / D01.5	Liver and intrahepatic bile ducts	14	7.33	0.68	5.15	0.09	7.14	7.14
C91-C95	Leukemia	13	6.81	0.21	0.59	0.02	100	0
C82-C85, C96	Non-Hodgkin Lymphoma	11	5.76	0.18	0.99	0.02	100	0
C62	Testis	9	4.71	0.44	0.35	0.02	100	0
C25 / D01.7	Pancreas	8	4.19	0.39	0.74	0.05	75	12.5
C70-C72	Brain & CNS	8	4.19	0.39	0.55	0.02	75	25
C67 / D09.0	Bladder	7	3.66	0.17	1.71	0	85.71	14.29

Table 11: Most common cancers among male Qataris

MOST COMMON CANCERS AMONGST FEMALES QATARIS

The most common cancer amongst female Qataris was breast with 101(36.07%) new cases. The second most common was colorectal and thyroid gland with 21 (7.5%) new cases.

ICD 10 Codes	Primary Site	N	%	Crude_Rate	ASR_WHO	Cum_risk_0_74	MV(%)	DCO(%)
C50 / D05	Breast	101	36.07	12.97	15.33	0.94	100	0
C18-C21 / D01	Colorectal	21	7.5	1.16	2.08	0.08	90	6.67
C73 / D09.3	Thyroid gland	21	7.5	3.83	2.72	0.13	80	20
C54-C55 / D07.0	Uterus	19	6.79	2.03	8.97	0.72	0	0
C53 / D06	Cervix uteri	14	5	1.53	6.68	0.4	0	0
C91-C95	Leukemia	13	4.64	0.88	1.26	0.07	100	0
C56	Ovary	10	3.57	1.69	10.44	0.46	0	0
C25 / D01.7	Pancreas	9	3.21	1.03	4.23	0.07	75	12.5
C33-C34 / D02.1-D02.2	Trachea bronchus and lung	9	3.21	1.47	5.6	0.07	83.33	16.67
C22 / D01.5	Liver and intrahepatic bile ducts	8	2.86	0.66	3.94	0.18	7.14	7.14

Table 12: Most common cancers among female Qataris



DISTRIBUTION OF CANCER - QATARI ONLY - IN 2017 BY AGE GROUP AND GENDER

Figure 8: Cancer distribution by age groups amongst Qataris

Crude incidence rate was 159.74per 100 000 and Age Standardized Rate ASR was 250.32 per 100 000 population at risk.

Age-Group (5 year)		Male		Female		Both Genders	
		ASIR	N	ASIR	N	ASIR	
0-4	3	14.56	4	20.38	7	17.4	
5-9	4	20.74	5	26.3	9	23.5	
10-14	3	17.46	1	6.04	4	11.86	
15-19	4	27.28	5	35.23	9	31.19	
20-24	2	14.61	3	22.35	5	18.45	
25-29	6	49.46	7	58.14	13	53.79	
30-34	6	59.62	10	88.53	16	74.91	
35-39	15	176.99	20	206.06	35	192.51	

Age-Group		Male		Female		Both Genders	
(5 year)	N	ASIR	N	ASIR	N	ASIR	
40-44	10	140.41	20	246.24	30	196.8	
45-49		216.85	35	482.83	49	357.53	
50-54		202.32	34	529.1	45	379.33	
55-59		473.19	35	646.11	56	568.24	
60-64		823.17	33	844.64	60	834.84	
65-69		1055.81	29	1318.18	50	1193.6	
70-74		910.27	18	975.61	32	945.91	
75-79	11	1257.14	13	1364.11	24	1312.91	
80+	24	2620.09	13	1310.48	37	1939.2	
Total "N"	196		285		481		
ASR / 100000	225.35		271.55		250.32		
Crude Incidence / 100000		132.30		186.32		159.74	
Cumulative Risk of Incidence [0-74]		18.95		24.06		21.73	

Table 13: Summary of cancer burden in Qataris

AGE STANDARDISED INCIDENCE RATE



Age at diagnosis

Figure 9: ASIR amongst Qataris

CANCER INCIDENCE IN NON-QATARIS


CANCER INCIDENCE AMONGST NON-QATARIS

A total of 1458 newly diagnosed malignant cancers were reported among the Non-Qatari population. Majority of these cases were reported as single primary. Fourteen cases reported with multiple primaries.

DEMOGRAPHIC DISTRIBUTION OF CANCER INCIDENCE

DISTRIBUTION BY GENDER

Cancer incidence was higher in male Non-Qataris than in females. During 2017, 843 (57.82%) cases were newly diagnosed in males, while 615 (42.18%) new cases were diagnosed in females.



CANCER INCIDENCE DISTRIBUTION BY GENDER NON-QATARI ONLY 2017

Figure 10: 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 2017, the top ten malignant cancers accounted for a total of 960 (65.84%) cases. Breast was the most common cancer with 255 (17.49%) new cases, followed by colorectal with 127 (8.71%) new cases.

ICD 10 Codes	Primary Site	N	%	Crude_Rate	ASR_WHO	Cum_risk_0_74	MV(%)	DCO(%)
C50 / D05	Breast	255	17.49	3.51	6.1	0.37	98.04	1.18
C18-C21 / D01	Colorectal	127	8.71	0.66	1.76	0.08	97.64	1.57
C91-C95	Leukemia	110	7.54	0.65	1.04	0.06	98.18	1.82
C73 / D09.3	Thyroid gland	82	5.62	1.69	1.53	0.13	100	0
C61 / D07.5	Prostate	73	5.01	3.85	26.34	0.59	97.26	0
C82-C85, C96	Non-Hodgkin Lymphoma	72	4.94	0.37	0.79	0.03	98.61	0
C64-C66	Kidney	69	4.73	0.57	1.66	0.07	81.16	1.45
C44 / D04	Non-Melanoma skin cancer	64	4.39	0.66	2.28	0.08	100	0
C33-C34 / D02.1-D02.2	Trachea bronchus and lung	63	4.32	1.3	5.64	0.15	95.24	1.59
C67 / D09.0	Bladder	45	3.09	0.62	2.74	0.07	95.56	4.44

Table 14: Most common cancers across all genders of Non-Qataris

MOST COMMON CANCERS AMONGST MALES OF NON-QATARIS

The most common cancer amongst male of non-Qatari was leukemia cancer which accounted for 87 (10.94%) of the new cases and was closely followed by colorectal cancer which accounted for 85 (10.69%). The third most common was prostate cancer with 73 (9.18%).

ICD 10 Codes	Primary Site	N	%	Crude_Rate	ASR_WHO	Cum_risk_0_74	MV(%)	DCO(%)
C91-C95	Leukemia	87	10.94	1.15	2.12	0.11	97.7	2.3
C18-C21 / D01	Colorectal	85	10.69	1.12	3.47	0.14	98.82	0
C61 / D07.5	Prostate	73	9.18	3.85	26.34	0.59	97.26	0
C64-C66	Kidney	56	7.04	0.98	2.99	0.12	83.93	0
C82-C85, C96	Non-Hodgkin Lymphoma	53	6.67	0.7	1.9	0.06	98.11	0
C33-C34 / D02.1-D02.2	Trachea bronchus and lung	52	6.54	2.74	13.7	0.3	94.23	1.92
C44 / D04	Non-Melanoma skin cancer	48	6.04	1.26	4.75	0.17	100	0
C67 / D09.0	Bladder	44	5.53	1.16	5.55	0.12	95.45	4.55
C22 / D01.5	Liver and intrahepatic bile ducts	35	4.4	1.84	4.39	0.28	31.43	2.86
C70-C72	Brain & CNS	28	3.52	1.48	4.3	0.1	67.86	7.14

Table 15: Most common cancers among male Non-Qataris

MOST COMMON CANCERS AMONGST FEMALES OF NON-QATARIS

The most common cancer among Non-Qatari females was breast cancer with 251 (41.9%) new cases. The second most common was thyroid gland cancer with 57 (9.52%) new cases.

ICD 10 Codes	Primary Site	N	%	Crude_Rate	ASR_WHO	Cum_risk_0_74	MV(%)	DCO(%)
C50 / D05	Breast	251	41.9	23.88	44.89	3.08	98.01	1.2
C73 / D09.3	Thyroid gland	57	9.52	10.84	12.62	1.16	100	0
C18-C21 / D01	Colorectal	42	7.01	2	4.69	0.29	95.24	4.76
C53 / D06	Cervix uteri	38	6.34	2.41	2.89	0.23	100	0
C54-C55 / D07.0	Uterus	36	6.01	3.42	11.76	0.58	97.22	2.78
C91-C95	Leukemia	23	3.84	1.46	1.91	0.13	100	0
C82-C85, C96	Non-Hodgkin Lymphoma	19	3.17	0.9	1.17	0.1	100	0
C44 / D04	Non-Melanoma skin cancer	16	2.67	1.52	4.16	0.16	100	0
C70-C72	Brain & CNS	14	2.34	1.33	2.2	0.08	100	0
C56	Ovary	13	2.17	2.47	4.95	0.31	100	0

Table 16: Most common cancers among female Non-Qataris

DISTRIBUTION BY AGE



DISTRIBUTION OF CANCER - NON-QATARI ONLY IN 2017 BY AGE GROUP AND GENDER

Figure 11: Cancer distribution by age groups amongst Non-Qataris

Age-Group		Male		Female		Both Genders	
(5 year)	N	ASIR	N	ASIR	N	ASIR	
0-4	10	19.14	12	23.36	22	21.23	
5-9	6	13.27	6	13.49	12	13.38	
10-14	6	17.83	5	15.1	11	16.48	
15-19	6	14.34	6	27.46	12	18.84	
20-24	14	6.26	5	14.88	19	7.39	
25-29	34	9.02	30	37.16	64	13.98	
30-34	66	18.78	50	59.31	116	26.62	
35-39	78	29.67	76	114.01	154	46.73	
40-44	84	42.5	82	184.39	166	68.56	
45-49	96	69.53	92	331.93	188	113.4	
50-54	106	125.71	74	435.73	180	177.68	
55-59	120	223.12	80	805.32	200	313.89	
60-64	82	372.41	43	817.18	125	458.19	
65-69	71	800.18	30	1196.17	101	887.44	
70-74	34	1166.78	15	1316.94	49	1208.98	
75-79	15	1184.83	4	583.09	19	973.36	
80+	15	1573.98	5	637.76	20	1151.41	
Total "N"	843		615		14	158	
ASR / 100000	1	39.81	22	9.47	15	0.84	
Crude Incidence / 100000	44	.41758	117	.0091	60.161		
Cumulative Risk of Incidence [0-74]		13.62	23.63		15.6		

Table 17: Summary of cancer burden in Non-Qataris

AGE STANDARDISED INCIDENCE RATE BY GENDER



Age at diagnosis

Figure 12: ASIR amongst Non-Qataris

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.



Figure 13: Crude rate of incidence in Qatar 2020 compared to regional countries

AGE STANDARDIZED RATE ASR -WHO REGIONS



Figure 14: ASR compared to WHO EMRO regions

PEDIATRIC CANCER INCIDENCE



PEDIATRIC CANCER INCIDENCE

Within the age range of 0-14 years, there were 65 cases newly diagnosed with cancer during 2017.

DISTRIBUTION BY NATIONALITY

When distributed according to nationality, 20 (30.77%) new cases were Qataris, and 45 (69.23%) new cases were Non-Qataris.





Figure 15: Pediatric cancer incidence distribution by nationality

DISTRIBUTION BY GENDER

Across all nationalities, gender distribution shows 32 (49.23%) new cases were found in males and 34 (50.77%) new cases in females.



PAEDIATRIC CANCER INCIDENCE DISTRIBUTION BY GENDER -QATAR 2017

Figure 16: Pediatric cancer incidence distribution by gender

MOST COMMON PEDIATRIC CANCERS

The most common cancer amongst pediatrics was Leukemia which accounted for 26 (40%) of new cases. The second most common was Brain & CNS which accounted for 7 (10.77%) of new cases.

ICD 10 codes	Primary Site	Ν	%
C91-C95	Leukemia	26	40
C70-C72	Brain & CNS	7	10.77
C81	Hodgkin lymphoma	7	10.77
C82-C85, C96	C82-C85 C96 Non-Hodgkin Lymphoma	7	10.77
C64-C66	Kidney	5	7.69
C74	Adrenal gland	3	4.62

Table 18: Most common cancers among pediatrics

CANCER DEATHS



CANCER DEATH - QATARIS

During the year 2017, there were 46 deaths amongst Qataris cancer patients.

Amongst Qatari population, the Age Standardized Rate ASR for death was 24.32 per 100 000, while the cumulative risk of death within the age range of 0-74 years old was 2.62

Age-Group	Qat	aris	
(5 year)	N	ASIR	
0-4	0	0.00	
5-9	0	0.00	
10-14	0	0.00	
15-19	1	3.47	
20-24	0	0.00	
25-29	0	0.00	
30-34	1	4.68	
35-39	1	5.50	
40-44	1	6.56	
45-49	5	36.48	
50-54	7	59.01	
55-59	2	20.29	
60-64	7	97.40	
65-69	10	238.72	
70-74	2	59.12	
75-79	4	218.82	
80+	5	262.05	
Total "N"	46		
ASR / 100000	24.32		
Crude Mortality / 100000	15.28		
Cumulative Risk of Mortality [0-74]	2.62		

Table 19: Death summary amongst Qataris cancer patients



Age at diagnosis

Figure 17: ASMR amongst Qataris

MOST COMMON CANCER DEATHS - QATARIS

Among Qataris, most common death that occurred was due to colorectal and trachea, bronchus and lung cancer which accounted for 5 (10.87%) and this is closely followed by prostate with 4 (8.7%).

	ICD 10 – Primary Site	N	%
C18-C21 / D01	Colorectal	5	10.87
C33-C34 / D02.1-D02.2	Trachea, bronchus and lung	5	10.87
C61 / D07.5	Prostate	4	8.7
C22 / D01.5	Liver and intrahepatic bile ducts	3	6.52
C25 / D01.7	Pancreas	3	6.52
C73 / D09.3	Thyroid gland	3	6.52
C91-C95	Leukemia	3	6.52
C16 / D00.2	Stomach	2	4.35
C50 / D05	Breast	2	4.35
C56	Ovary	2	4.35

Table 20: Most common cancer deaths among Qataris

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 18: ASIR to ASMR in Qataris

Top 10 Cancers



FEMALE BREAST

ICD 10 CODES

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

Table 21: ICD 10 codes for breast cancer in QNCR

KEY FACTS

In 2017, there were 352 newly diagnosed cases of breast cancer. There were 319 malignant cases versus 33 cases in situ.

Behavior	Qatari - Female	Non-Qatari - Female	Grand Total
Malignant	90	229	319
In Situ	11	22	33
Grand Total	101	251	352

Table 22: Breast cancer distribution by behavior, gender and nationality

The Age Standardized Rate (ASR) was found to be 22.01 per 100 000 of female population at risk. The crude incidence rate found to be 12.97 per 100 000.

Total "N"	252
	552
ASR / 100000	22.01
Crude Incidence / 100000	12.97
Cumulative Risk of Incidence [0-74]	2.45
MV(%)	97.44
DCO(%)	1.7

Table 23: Summary of female breast cancer burden

DEMOGRAPHICS

Peak of incidence was in the age group of 45-49, where the youngest age was 26 years old and the average age was 50 years old.



Figure 19: Breast cancer distribution by age groups

Average of Age	Min (years)	Max (years)
50	26	89

PREVALENCE

Amongst the Qatari female population registered in the QNCR, there were 101 cases diagnosed with breast cancer. Of these cases, 165 (23%) have died and 561 (77%) are still alive.

HISTOLOGY

ICD 10 Codes	Histology	Ν	%
8500	Invasive carcinoma of no special type	283	80.4
8520	Lobular carcinoma NOS	25	7.1
8000	Neoplasm malignant	11	3.12

ICD 10 Codes	Histology	Ν	%
8201	Cribriform carcinoma	8	2.27
8480	Mucinous adenocarcinoma	5	1.42
8522	Infiltrating duct and lobular carcinoma	4	1.14
8575	Metaplastic carcinoma NOS	3	0.85
8050	Papillary carcinoma NOS	3	0.85
8140	Adenocarcinoma NOS	2	0.57
8501	Comedocarcinoma NOS	2	0.57
8010	Carcinoma NOS	1	0.28
8523	Infiltrating duct mixed with other types of carcinoma	1	0.28
8524	Infiltrating lobular mixed with other types of carcinoma	1	0.28
8504	Intracystic carcinoma NOS	1	0.28
8503	Intraductal papillary adenocarcinoma with invasion	1	0.28
8230	Solid carcinoma NOS	1	0.28

Table 24: ICDO-3 Histology distribution of breast cancer

STAGING

More than 69% of the total cases reported in 2017 did not have a known cTNM stage. Of those cases that did report a cTNM stage. [PLEASE SEE DISCLAIMER]

DISTRIBUTION OF BREAST CANCER BY CTNM GROUP_female only IN QATAR 2017



Figure 20: cTNM group staging for female malignant breast cancer

TREATMENT

In 2017, all cases were reported with treatment information. The following table shows the treatment types in no particular order. [PLEASE SEE DISCLAIMER]

Treatment Modality	%	
Surgery		
Surgery Chemotherapy	13.79	
Surgery Chemotherapy Hormonotherapy Radiotherapy	11.49	
Surgery Radiotherapy		
Surgery Chemotherapy Radiotherapy		
Surgery Hormonotherapy Radiotherapy		
Chemotherapy		
Surgery Hormonotherapy		
Chemotherapy Radiotherapy		
Radiotherapy		
Chemotherapy Hormonotherapy	2.3	

Treatment Modality	%	
BMT	1.92	
Surgery Chemotherapy Hormonotherapy	1.92	
Immunotherapy	0.77	
Radiotherapy Immunotherapy	0.77	
Hormonotherapy		
Hormonotherapy Radiotherapy		
Chemotherapy BMT		
Chemotherapy Hormonotherapy Radiotherapy		
Surgery Chemotherapy Immunotherapy		
Chemotherapy Immunotherapy		
Surgery Immunotherapy	0.38	

Table 25: Treatment modalities for breast cancer

SURVIVAL DATA 2013-2017

Survival from breast cancer during the period 2013-2017 was relatively high at 88% with a confidence interval (95 % CI) of 80.64%-93.96%.

Survival calculations do not take into consideration different variables such as cTNM stage.

COLORECTAL

ICD 10 CODES

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
	Carcinoma in situ of other and unspecified
D01	digestive organs
D010	Colon
D014	Other and unspecified parts of intestine

KEY FACTS

In 2017, there were 178 newly diagnosed cases of malignant colorectal cancer. From which 115 (66.6%) cases were males, and 63 (35.39%) cases were in females. The crude incidence was found to be 0.41 per 100 000 and the Age Standardized Rate ASR to be 1.02 per 100 000.

Behavior	Qatari - Male	Qatari - Female	Qatari - Total	Non- Qatari - Male	Non- Qatari - Female	Non- Qatari - Total	Grand Total
Malignant	30	20	50	85	42	127	177
In Situ	0	1	1	0	0	0	1
Grand Total	30	21	51	85	42	127	178

Table 26: Colorectal cancer distribution by behavior, gender and nationality

Total "N"	178
ASR / 100000	1.02
Crude Incidence / 100000	0.41
Cumulative Risk of Incidence [0-74]	0.12
MV(%)	94.94
DCO(%)	3.93

Table 27: Summary of colorectal cancer burden

DEMOGRAPHICS

Amongst the males the peak age group of colorectal cancer incidence was 60-64. Amongst the female the peak age group is 55-59. The youngest age diagnosed was 20 years old male and the average age amongst both genders was 53.8.



Figure 21: Colorectal cancer distribution by age groups

Average of Age	Min (years)	Max (years)
53.8	20	90

PREVALENCE

Amongst the Qatari population registered in the QNCR, there were 178 cases diagnosed with colorectal cancer. Of these cases, 5 (2.89%) have died and 173 (97.11%) are still alive.

HISTOLOGY

ICD 10 Codes	Histology	Ν	%
8140	Adenocarcinoma NOS	135	75.84
8246	Neuroendocrine carcinoma	14	7.87
8000	Neoplasm malignant	10	5.62
8480	Mucinous adenocarcinoma	6	3.37
8263	Adenocarcinoma in tubulovillous adenoma	3	1.69
8490	Signet ring cell carcinoma	2	1.12
8070	Squamous cell carcinoma NOS	2	1.12
8210	Adenocarcinoma in adenomatous polyp	1	0.56
8144	Adenocarcinoma intestinal type	1	0.56
8010	Carcinoma NOS	1	0.56
8936	Gastrointestinal stromal sarcoma	1	0.56
8470	Mucinous cystadenocarcinoma NOS	1	0.56
9834	Prolymphocytic leukemia T-cell type	1	0.56

Table 28: Histology distribution for colorectal cancer

STAGING

Of the reported cases, 28% had cTNM data.



DISTRIBUTION OF COLORECTAL CANCER BY CTNM GROUP IN QATAR 2017

Figure 22: cTNM distribution for colorectal cancer

TREATMENT

In 2017, only 135 (75.84%) of total cases were reported with treatment information. The following table shows the treatment types in no particular order. [PLEASE SEE DISCLAIMER]

Treatment Modality	%	
Surgery	31.85	
Surgery Chemotherapy	13.33	
Chemotherapy	8.89	
Surgery Radiotherapy	8.15	
Chemotherapy Radiotherapy		
Surgery Chemotherapy Radiotherapy		
Surgery Hormonotherapy Radiotherapy		
Surgery Hormonotherapy		
Chemotherapy BMT		
Surgery Chemotherapy Hormonotherapy		

Treatment Modality		
Surgery Chemotherapy Hormonotherapy Radiotherapy		
Radiotherapy	2.22	
Radiotherapy Immunotherapy	1.48	
Hormonotherapy		
Chemotherapy Radiotherapy Immunotherapy		
BMT		
Chemotherapy Radiotherapy BMT		
Chemotherapy Hormonotherapy		
Surgery Chemotherapy Immunotherapy		

Table 29: Treatment modalities for colorectal cancer

SURVIVAL DATA 2013-2017

Survival from colorectal cancer during the period 2013-2017 was relatively high at 81.8% with a confidence interval (95 % CI) of 61.14%-80.10% .Survival calculations do not take into consideration different variables such as cTNM stage or gender.

LEUKEMIA

ICD 10 CODES

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

During the year 2017, 136 cases were reported with Leukemia. From which 36 (26.47%) of cases were female, and 100 (73.53%) were male. There was a total of 110 cases (80.88%) were in non-Qatari and 26 cases (19.12%) amongst Qataris.

Behavior	Qatari - Male	Qatari - Female	Qatari - Total	Non- Qatari - Male	Non- Qatari - Female	Non- Qatari - Total	Grand Total
Malignant	13	13	26	87	23	110	136
Grand Total	13	13	26	87	23	110	136

Table 30: Distribution of leukemia by gender and nationality

Total "N"	136
ASR / 100000	0.6
Crude Incidence / 100000	0.38
Cumulative Risk of Incidence [0-74]	0.06
MV(%)	98.53
DCO(%)	1.47

Table 31: Summary of leukemia burden

DEMOGRAPHICS

Amongst males, the peak age group of leukemia incidence was 35-39 and 55-59. The peak age group in female was 0-4. The youngest age was less than a year old and the average age was 36 years old.



Figure 23: Distribution of leukemia by age groups

Average of Age	Min (years)	Max (years)
36	0	87

PREVALENCE

Amongst the Qatari population registered in the QNCR, there were 26 newly diagnosed cases with leukemia. Of these cases, 60 (33%) have died and 123 (67%) are still alive.

HISTOLOGY

ICD 10 Codes	Histology	N	%
9861	Acute myeloid leukemia	33	24.26
9836	Precursor B-cell lymphoblastic leukemia	20	14.71
9875	Chronic myelogenous leukemia BCR/ABL positive	19	13.97
9823	Chronic lymphocytic leukemia/small lymphocytic lymphoma	15	11.03
9863	Chronic myeloid leukemia NOS	9	6.62
9876	Atypical chronic myeloid leukemia BCR/ABL negative	8	5.88
9826	Burkitt cell leukemia	6	4.41
9837	T lymphoblastic leukemia/lymphoma	5	3.68
9801	Acute leukemia NOS	2	1.47
9945	Chronic myelomonocytic leukemia NOS	2	1.47
9835	Precursor cell lymphoblastic leukemia NOS	2	1.47
9895	Acute myeloid leukemia with multilineage dysplasia	1	0.74
9840	Acute myeloid leukemia M6 type	1	0.74
9931	Acute panmyelosis with myelofibrosis	1	0.74
9827	Adult T-cell leukemia/lymphoma (HTLV-1 positive) (includes all variants)	1	0.74
9800	Leukemia NOS	1	0.74
9820	Lymphoid leukemia NOS	1	0.74
9742	Mast cell leukemia	1	0.74

Table 32: Histology distribution for leukemia

STAGING

Of the reported cases, 28.7% had cTNM data.



DISTRIBUTION OF LEUKEMIA CANCER BY CTNM GROUP IN QATAR 2017

Figure 24: cTNM distribution for colorectal cancer

TREATMENT

In 2017, only 129 (94.64%) of total cases were reported with treatment information. The following table shows the treatment types in no particular order. [PLEASE SEE DISCLAIMER]

Treatment Modality	%
Surgery	46.24
Chemotherapy	26.88
Surgery Chemotherapy	7.53
Surgery Hormonotherapy Radiotherapy	3.23
Radiotherapy	2.15
Chemotherapy Radiotherapy	2.15
Surgery Chemotherapy Radiotherapy	2.15
Surgery Chemotherapy Hormonotherapy Radiotherapy	2.15
Hormonotherapy	1.08
Hormonotherapy Radiotherapy	1.08

Treatment Modality	%
Chemotherapy Immunotherapy	1.08
Surgery Radiotherapy	1.08
Surgery Hormonotherapy	1.08
Surgery Chemotherapy Radiotherapy Immunotherapy	1.08
Surgery Chemotherapy Hormonotherapy	1.08

Table 33: Treatment modalities for colorectal cancer

THYROID GLAND

ICD 10 CODES

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

KEY FACTS

In 2017, 108 cases were newly diagnosed with malignant thyroid cancer, 26 (24.1%) of which were Qataris and 82 (75.9%) cases Non-Qataris. Of the total cases 78 (72.2%) were female and 30 (27.8%) were male. The Age Standardized Rate ASR was found to be 1.07 per 100 000 of population at risk.

Behavior	Qatari - Male	Qatari - Female	Qatari - Total	Non- Qatari - Male	Non- Qatari - Female	Non- Qatari - Total	Grand Total
In Situ	0	1	1	0	0	0	1
Malignant	5	20	25	25	57	82	107
Grand Total	5	21	26	25	57	82	108

Table 34: Distribution of thyroid cancer by gender and nationality

Total "N"	108
ASR / 100000	1.07
Crude Incidence / 100000	0.79
Cumulative Risk of Incidence [0-74]	0.11
MV(%)	97.22
DCO(%)	2.78

Table 35: Summary of thyroid cancer burden

DEMOGRAPHICS

Amongst females, the peak age group of Thyroid cancer incidence was 35-39 and 45-49. The peak age group for men is 45-49, closely followed by 25-29 and 35-39. The youngest age to be diagnosed with thyroid gland cancer was 17 years old and the average age was 40 years old.



Figure 25: Distribution of thyroid cancer by age groups

Average of Age	Min (years)	Max (years)
43.7	17	78

PREVALENCE

Amongst the Qatari population registered in the QNCR, there were 26 cases diagnosed with thyroid cancer. Of these cases, 25 (12%) have died and 179 (88%) are still alive.

HISTOLOGY

ICD 10 Codes	Histology	Ν	%
8260	Papillary adenocarcinoma NOS	80	74.07
8050	Papillary carcinoma NOS	11	10.19
8341	Papillary microcarcinoma	6	5.56
8000	Neoplasm malignant	3	2.78
8340	Papillary carcinoma follicular variant	3	2.78
8330	Follicular adenocarcinoma NOS	2	1.85
8335	Follicular carcinoma minimally invasive	1	0.93
8510	Medullary carcinoma NOS	1	0.93
8343	Papillary carcinoma encapsulated	1	0.93

Table 36 : Histology distribution for thyroid cancer

STAGING

Almost 78.7% of the total cases reported in 2017 did not have a known cTNM stage. [PLEASE SEE DISCLAIMER]



DISTRIBUTION OF THYROID CANCER BY CTNM GROUP IN QATAR 2017

Figure 26: cTNM Distribution for thyroid cancer

TREATMENT

In 2017, All cases of thyroid gland cancer was reported with treatment information. The following table shows the treatment types in no particular order. [PLEASE SEE DISCLAIMER]

Treatment Modality	%
Surgery	30.26
Chemotherapy	15.79
Surgery Radiotherapy	11.84
Surgery Chemotherapy	11.84
Surgery Hormonotherapy Radiotherapy	7.89
Surgery Chemotherapy Radiotherapy	6.58
Chemotherapy Radiotherapy	5.26
Surgery Chemotherapy Hormonotherapy Radiotherapy	3.95
Surgery Hormonotherapy	2.63
Hormonotherapy Radiotherapy	1.32
Chemotherapy Hormonotherapy Radiotherapy	1.32
Surgery Chemotherapy Hormonotherapy	1.32

Table 37: Treatment modalities for colorectal cancer
PROSTATE

ICD 10 CODES

ICD 10 Code	Description
C61	Malignant neoplasm of prostate
D075	Carcinoma in situ of prostate

KEY FACTS

In 2017, there were 92 newly diagnosed cases of prostate cancer. From which 19 (20.65%) were Qatari's and 73 (79.35%) were Non-Qatari's.

Cancer Behavior	Qatari	Non- Qatari	Grand Total
Malignant	19	73	92
Grand Total	19	73	92

Table 38: Distribution of prostate cancer by gender and nationality

The cumulative risk, or the chance of a male getting prostate cancer between the ages of 0-74 is 1.31.

Age Standardized Rate (ASR) was found to be 13.67 per 100 000 of population at risk.

Total "N"	92
ASR / 100000	13.67
Crude Incidence / 100000	2.25
Cumulative Risk of Incidence [0-74]	1.31
MV(%)	94.57
DCO(%)	1.09

Table 39: Summary of prostate cancer burden

DEMOGRAPHICS

The peak of incidence of prostate cancer is in the age group of 65-69. The youngest age diagnosed was 45 years old and the average age was 65.6 years old.



Figure 27: Distribution of prostate cancer by age groups

Average of Age	Min (years)	Max (years)		
65.6	45	90		

PREVALENCE

Amongst the Qatari population registered in the QNCR, there were 181 cases diagnosed with prostate cancer. Of these cases, 55 (30%) have died and 126 (70%) are still alive.

HISTOLOGY

ICD 10 Codes	Histology		%
8550	Acinar cell carcinoma	51	55.43
8140	Adenocarcinoma NOS	35	38.04
8000	Neoplasm malignant	4	4.35
8041	Small cell carcinoma NOS	1	1.09
8120	Transitional cell carcinoma NOS	1	1.09

STAGING

Almost 68.48% of the total cases reported in 2017 did not have a known cTNM stage. [PLEASE SEE DISCLAIMER]





Figure 28: cTNM Distribution for prostate cancer

TREATMENT

In 2017, All prostate cancer cases were reported with treatment information. The following table shows the treatment types in no particular order. [PLEASE SEE DISCLAIMER]

Treatment Modality	%
Surgery	21.54
Surgery Chemotherapy	12.31
Surgery Hormonotherapy Radiotherapy	10.77
Surgery Chemotherapy Radiotherapy	10.77
Chemotherapy	9.23
Surgery Radiotherapy	7.69
Radiotherapy	4.62
Hormonotherapy Radiotherapy	
Surgery Hormonotherapy	
BMT	3.08
Hormonotherapy	3.08
Chemotherapy Radiotherapy	3.08
Chemotherapy Immunotherapy	1.54
Chemotherapy Hormonotherapy	
Surgery Chemotherapy Hormonotherapy Radiotherapy	1.54

Table 41: Treatment modalities for prostate cancer

NON-HODGKIN LYMPHOMA

ICD 10 CODES

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

KEY FACTS

In 2017, there were 87 cases of malignant Non-Hodgkin Lymphoma. From which 15 (17.24%) of cases were Qataris and 72 (82.76%) were Non-Qataris. Amongst the female there were 23 (26.44%) and amongst the male were 64 (73.56%).

Behavior	Qatari - Male	Qatari - Female	Qatari - Total	Non- Qatari - Male	Non- Qatari - Female	Non- Qatari - Total	Grand Total
Malignant	11	4	15	53	19	72	87
Grand Total	11	4	15	53	19	72	87

Table 42: Non-Hodgkin Lymphoma distribution by gender and nationality

The cumulative risk, or the chance of any person getting a Non-Hodgkin Lymphoma between the ages of 0-74, is 0.03.

The Age Standardized Rate (ASR) was found to be 0.46 per 100 000 of population at risk.

Total "N"	87
ASR / 100000	0.46
Crude Incidence / 100000	0.23
Cumulative Risk of Incidence [0-74]	0.03
MV(%)	98.85
DCO(%)	0

Table 43: Summary of Non-Hodgkin Lymphoma burden

DEMOGRAPHICS

Amongst males, peak of incidence of Non-Hodgkin Lymphoma was the age group of 55-59, and in females the peak of age group was 45-49 and 55-59. The youngest age was 4 years old within the male group. The average age was 44.2 years old.



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

Average of Age	Min (years)	Max (years)		
44.2	4	85		

PREVALENCE

Amongst the Qatari population registered in the QNCR, there were 201 cases diagnosed with Non-Hodgkin Lymphoma. Of these cases, 54 (27%) have died and 147 (73%) are still alive.

s

HISTOLOGY

ICD 10 Codes	Histology	Ν	%
9680	Malignant Lymphoma large B-cell diffuse	41	47.13
9691	Follicular lymphoma grade 2	7	8.05
9591	Malignant lymphoma non-Hodgkin	5	5.75
9714	Anaplastic large cell lymphoma T-cell and Null cell type	4	4.6
9689	Splenic marginal zone B-cell lymphoma	4	4.6
9728	Precursor B-cell lymphoblastic lymphoma	3	3.45
9729	Precursor T-cell lymphoblastic lymphoma	3	3.45
9695	Follicular lymphoma grade 1	2	2.3
9698	Follicular lymphoma grade 3	2	2.3
9690	Follicular lymphoma NOS	2	2.3
9590	Malignant lymphoma NOS	2	2.3
9699	Marginal zone B-cell lymphoma NOS	2	2.3
9702	Mature T-cell lymphoma NOS	2	2.3
9700	Mycosis fungoides	2	2.3
9687	Burkitt lymphoma NOS	1	1.15
9709	Cutaneous T-cell lymphoma NOS	1	1.15
9671	Malignant Lymphoma lymphoplasmacytic	1	1.15
9673	Mantle cell lymphoma	1	1.15
9679	Mediastinal large B-cell lymphoma	1	1.15
9701	Sezary syndrome	1	1.15

Table 44: Histology distribution for Non-Hodgkin Lymphoma

TREATMENT

In 2017, only 64 (73.56%) of total cases were reported with treatment information. The following table shows the treatment types in no particular order. [PLEASE SEE DISCLAIMER]

Treatment Modality	%
Surgery	26.56
Surgery Radiotherapy	12.5
Chemotherapy	10.94
Surgery Chemotherapy Hormonotherapy Radiotherapy	10.94
Surgery Chemotherapy	9.38
Surgery Hormonotherapy Radiotherapy	7.81
Surgery Chemotherapy Radiotherapy	6.25
Surgery Chemotherapy Hormonotherapy	6.25
Radiotherapy	1.56
Radiotherapy Immunotherapy	1.56
Hormonotherapy	1.56
Chemotherapy Radiotherapy	1.56

Treatment Modality		
Surgery Hormonotherapy	1.56	
Surgery Chemotherapy Immunotherapy	1.56	

Table 45: Treatment modalities for Non-Hodgkin Lymphoma

LIVER AND INTR AHEPATIC BILE DUCTS

ICD 10 CODES

ICD 10 Code	Description
C22	Malignant neoplasm of liver and intrahepatic bile ducts
D015	Carcinoma in situ of liver, gallbladder and bile ducts

KEY FACTS

In 2017, 58 cases were diagnosed with liver cancer, 22 (37.9%) of which were Qataris and 36 (62.1%) were Non-Qataris. Amongst the female there were 9 (15.52%) and amongst the male were 49 (84.48%).

Behavior	Qatari - Male	Qatari - Female	Qatari - Total	Non- Qatari - Male	Non- Qatari - Female	Non- Qatari - Total	Grand Total
Malignant	14	8	22	35	1	36	58
Grand Total	14	8	22	35	1	36	58

Table 46: Distribution of liver cancer by gender and nationality

The cumulative risk, or the chance of any person getting liver cancer between the ages of 0-74, is 0.12.

The Age Standardized Rate ASR was found to be 1.84 per 100 000 of population at risk.

Total "N"	58
ASR / 100000	1.84
Crude Incidence / 100000	0.53
Cumulative Risk of Incidence [0-74]	0.12
MV(%)	22.41
DCO(%)	5.17

Table 47: Summary of liver cancer burden

DEMOGRAPHY

Amongst males, peak of incidence of liver cancer was the age group of 50-54, and in females the peak of age group was 60-64. The youngest age was 1 years old within the female group. The average age was 58 years old



Figure 30: Distribution of liver cancer by age groups

Average of Age	Min (years)	Max (years)	
58	1	94	

PREVALENCE

Amongst the Qatari population registered in the QNCR, there were 174 cases diagnosed with liver cancer. Of these cases, 138 (79%) have died and 36 (21%) are still alive

HISTOLOGY

ICD-O-3 Codes	Histology	Ν	%
8170	Hepatocellular carcinoma NOS	54	93.1
8000	Neoplasm malignant	2	3.45
8970	Hepatoblastoma	1	1.72
8801	Spindle cell sarcoma	1	1.72

Table 48: Histology distribution for liver cancer

Almost 58.62% of the total cases reported in 2017 did not have a known cTNM stage. [PLEASE SEE DISCLAIMER]



DISTRIBUTION OF LIVER CANCER BY CTNM GROUP IN QATAR 2017

Figure 31: cTNM distribution for liver cancer

TREATMENT

In 2017, only 21(25) of total cases were reported with treatment information. The following table shows the treatment types in no particular order. [PLEASE SEE DISCLAIMER]

Treatment Modality	%		
Surgery	31.43		
Chemotherapy	22.86		
Chemotherapy Radiotherapy	14.29		
Surgery Chemotherapy Radiotherapy			
Radiotherapy			
Surgery Chemotherapy			
Surgery Chemotherapy Hormonotherapy Radiotherapy			
Chemotherapy Immunotherapy	2.86		

Table 49: Treatment modalities for liver cancer

TRACHEA, BRONCHUS AND LUNG

ICD 10 CODES

ICD 10 Code	Description
C33	Malignant neoplasm of trachea
C34	Malignant neoplasm of bronchus and lung
D02.1	Carcinoma in situ of trachea

KEY FACTS

In 2017, 90 cases were newly diagnosed with lung cancer, 12(24%) of which were Qataris and 38(76%) Non-Qataris.

Behavior	Qatari - Male	Qatari - Female	Qatari - Total	Non- Qatari - Male	Non- Qatari - Female	Non- Qatari - Total	Grand Total
Malignant	18	9	27	52	11	63	90
Grand Total	18	9	27	52	11	63	90

Table 50: Distribution of lung cancer by gender and nationality

The cumulative risk is 0.7, 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 6.6 per 100 000 of population at risk.

Total "N"	90
ASR / 100000	0.83
Crude Incidence / 100000	2.04
Cumulative Risk of Incidence [0-74]	0.34
MV(%)	93.33
DCO(%)	4.44

Table 51: Summary of lung cancer burden

DEMOGRAPHY

Across both genders, 78% of the cases were above the age of 50. The youngest age was 28 years old and the average age was 57 years old.

Lung distribution by age groups QATAR 2017



Figure 32: Distribution of lung cancer by age groups

Average of Age	Min (years)	Max (years)
57.6	30	85

PREVALENCE

Amongst the Qatari population registered in the QNCR, there were 221 cases diagnosed with lung cancer. Of these cases, 175 (79%) have died and 46 (21%) are still alive.

HISTOLOGY

ICD-O-3 Codes	Histology	Ν	%
8140	Adenocarcinoma NOS	38	42.22
8070	Squamous cell carcinoma NOS	11	12.22
8000	Neoplasm malignant	6	6.67
8046	Non-small cell carcinoma	6	6.67
8550	Acinar cell carcinoma	5	5.56
8246	Neuroendocrine carcinoma	5	5.56
8010	Carcinoma NOS	4	4.44
8041	Small cell carcinoma NOS	4	4.44
8240	Carcinoid tumor malignant	2	2.22
8480	Mucinous adenocarcinoma	2	2.22
8490	Signet ring cell carcinoma	2	2.22
8255	Adenocarcinoma with mixed subtypes	1	1.11

ICD-O-3 Codes	Histology	Ν	%
8560	Adenosquamous carcinoma	1	1.11
8249	Atypical carcinoid tumor		1.11
8253	Invasive mucinous adenocarcinoma	1	1.11
8890	Leiomyosarcoma NOS		1.11

Table 52: Histology distribution for lung cancer

STAGING



DISTRIBUTION OF LUNG CANCER BY CTNM GROUP IN QATAR 2017

Figure 33: cTNM Distribution for lung cancer

TREATMENT

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

Treatment Modality	%
Surgery	27.12
Chemotherapy	20.34
Surgery Hormonotherapy Radiotherapy	
Surgery Chemotherapy	
Surgery Chemotherapy Hormonotherapy Radiotherapy	
Chemotherapy Radiotherapy	
Surgery Radiotherapy	5.08
Surgery Hormonotherapy	5.08

Treatment Modality	
Surgery Chemotherapy Radiotherapy	
Radiotherapy	1.69
Hormonotherapy	
Hormonotherapy Radiotherapy	
Chemotherapy BMT	1.69
Chemotherapy Immunotherapy	1.69
Chemotherapy Radiotherapy BMT	
Surgery Chemotherapy Hormonotherapy	

Table 53: Treatment modalities for lung cancer

KIDNEY

ICD 10 CODES

ICD 10 Code	Description
C64	Malignant neoplasm of kidney, except renal pelvis
C65	Malignant neoplasm of renal pelvis
C66	Malignant neoplasm of ureter

KEY FACTS

Behavior	Qatari - Male	Qatari - Female	Qatari - Total	Non- Qatari - Male	Non- Qatari - Female	Non- Qatari - Total	Grand Total
Malignant	5	6	11	56	13	69	80
Grand Total	5	6	11	56	13	69	80

Table 54: Distribution of kidney cancer by gender and nationality

DEMOGRAPHY



Figure 34: Distribution of kidney cancer by age groups

Average of Age	Min (years) Max (yea	
48.8	1	80

PREVALENCE

Amongst the Qatari population registered in the QNCR, there were 96 cases diagnosed with kidney cancer. Of these cases, 35 (36%) have died and 61 (64%) are still alive.

HISTOLOGY

ICD-O-3 Codes	Histology	Ν	%
8312	Renal cell carcinoma	41	51.25
8317	Renal cell carcinoma chromophobe type	8	10
8000	Neoplasm malignant	7	8.75
8960	Nephroblastoma NOS	5	6.25
8260	Papillary adenocarcinoma NOS	5	6.25
8120	Transitional cell carcinoma NOS	5	6.25
8130	Papillary Transitional cell carcinoma	3	3.75
8310	Clear cell adenocarcinoma NOS	2	2.5
8318	Renal cell carcinoma sarcomatoid	2	2.5
8890	Leiomyosarcoma NOS	1	1.25
8033	Pseudosarcomatous carcinoma	1	1.25

Table 55: Histology distribution for kidney cancer

TREATMENT

In 2017, only 23 (48) of total cases were reported with treatment information. The following table shows the treatment types in no particular order. [PLEASE SEE DISCLAIMER]

Treatment Modality	%
Surgery	
Chemotherapy	13.04
Surgery Chemotherapy Radiotherapy	10.87
Surgery Radiotherapy	6.52
Surgery Hormonotherapy Radiotherapy	
Surgery Chemotherapy	
Surgery Chemotherapy Hormonotherapy Radiotherapy	
Hormonotherapy	
Chemotherapy Immunotherapy	
Chemotherapy Radiotherapy Immunotherapy	

Table 56: Treatment modalities for kidney cancer

2017 Cancer Incidence Report State of Qatar

National Cancer Program Qatar National Cancer Registry Ministry of Public Health, Qatar P.O. Box 42 Doha, Qatar <u>www.nhsq.info</u> <u>gncr@moph.gov.qa</u> Printed in Qatar, 2021.



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