

Pakistan Atomic Energy Cancer Registry (PAECR)

2020 and 2021

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Abbreviations

AECH	Atomic Energy Cancer Hospitals	KP	Khyber Pakhtunkhwa
AEMC	Atomic Energy Medical Centre	LINAR	Larkana Institute of Nuclear Medicine and Radiotherapy
AJCC	American Joint Committee on Cancer	MINAR	Multan Institute of Nuclear Medicine and Radiotherapy
AJK	Azad Jammu and Kashmir	NIMRA	Nuclear Institute of Medicine and Radiotherapy
BINO	Bahawalpur Institute of Nuclear Medicine and Oncology	NM&O	Nuclear Medicine and Oncology
BINOR	Bannu Institute of Nuclear Medicine, Oncology and Radiotherapy	NORI	Nuclear Medicine, Oncology and Radiotherapy Institute
CENAR	Centre for Nuclear Medicine and Radiotherapy	NORIN	Nuclear Medicine, Oncology and Radiotherapy Institute of Nawabshah
DINAR	Dera Ismail Khan Institute of Nuclear Medicine and Radiotherapy	PAEC	Pakistan Atomic Energy Commission
GB	Gilgit Baltistan	PAECR	Pakistan Atomic Energy Cancer Registry
GINUM	Gujranwala Institute of Nuclear Medicine	PINUM	Punjab Institute of Nuclear Medicine
INMOL	Institute of Nuclear Medicine and Oncology Lahore	SINOR	Swat Institute of Nuclear Medicine, Oncology and Radiotherapy
INOR	Institute of Nuclear Medicine, Oncology and Radiotherapy	HMIS	Hospital Management Information System
IRNUM	Institute of Radiotherapy and Nuclear Medicine	NHL	Non Hodgkin Lymphoma
KIRAN	Karachi Institute of Radiotherapy and Nuclear Medicine		

Message from the Chairman PAEC



It is with a deep sense of responsibility and pride that I commend the release of the third volume of the PAEC Cancer Registry. This milestone reflects not only the Pakistan Atomic Energy Commission's enduring commitment to the peaceful use of nuclear technology but also its central role in advancing public health, particularly in the field of cancer diagnosis, treatment, and research.

Cancer remains a major global health challenge, and Pakistan is no exception. With the increasing cancer burden in the country, the need for a comprehensive and equitable response is greater than ever. The PAEC has responded to this national imperative by establishing a robust and largest network of 20 cancer hospitals across Pakistan, offering state-of-the-art diagnostic and therapeutic facilities, including nuclear medicine, radiotherapy, radiology, and advanced pathology services. These hospitals collectively serve over one million patients annually, many of whom come from underserved and remote areas, often without access to affordable cancer care elsewhere.

The PAEC Cancer Registry is a vital component of our cancer control strategy. It systematically collects, analyzes, and reports cancer incidence and patterns from our hospitals nationwide. This scientific data not only informs national cancer policies and public health programs but also serves as a critical research resource for epidemiologists and health planners. Evidence-based planning is

essential to improving outcomes, targeting interventions, and optimizing resource allocation in healthcare.

Beyond the clinical services, PAEC has also played a leading role in capacity-building by training hundreds of professionals in nuclear medicine, radiation oncology, and medical physics. Our centres are recognized by national and international institutions for postgraduate training and collaborative research. This strengthens Pakistan's human resource base in cancer care and promotes sustainability of services.

As we move forward, PAEC remains committed to enhancing its health initiatives through innovation, collaboration, and patient-centred care. The expansion of radioligand therapy, introduction of advanced theranostics, molecular diagnostics, and digitization of cancer data are part of our vision to strengthen Pakistan's response to cancer with compassion and scientific excellence.

I sincerely appreciate the tireless efforts of our dedicated oncology teams, researchers, data scientists, and hospital staff whose collective work has made this publication possible. The Cancer Registry is more than a document, it is a reflection of our values, our service to the people of Pakistan, and our contribution to a healthier, more equitable future.



*Dr. Raja Ali Raza Anwar, HI, SI, PoP
Chairman,
Pakistan Atomic Energy Commission*

Message from the Member (Science) PAEC



The publication of the third volume of the PAEC Cancer Registry is an occasion of both reflection and progress of the Pakistan Atomic Energy Commission's (PAEC) in combating cancer through peaceful use of nuclear technology.

PAEC cancer Registry captures real-time data on cancer incidence, trends, and distribution across Pakistan and reflects the strength of PAEC's institutional capacity built on a foundation of trained oncologists, physicists, technologists, and allied professionals. It provides an empirical foundation for cancer control policy formulation, resource allocation, and evidence-based decision making for targeted interventions. Moreover, it facilitates collaborative research, enhances national reporting capabilities, and strengthens Pakistan's alignment with global health standards.

Through establishment of nationwide network of 20 Atomic Energy Cancer Hospitals (AECHs), with an integrated continuum of services from early detection and state-of-the-art diagnostics to nuclear medicine, radiotherapy, and systemic therapies PAEC is making life-saving treatment accessible to a broad cross-section of our society, especially the underprivileged.

These institutions are not just hospitals; they are centers of excellence, delivering high-quality, affordable care to hundreds of thousands of

patients annually. Their presence in all regions ensures geographical equity, while their technological capabilities uphold international standards of care. Through structured postgraduate programs, research initiatives, and international collaborations, our hospitals are nurturing the next generation of cancer care specialists and researchers. By bringing cutting-edge oncology services to the doorstep of the Pakistani population, PAEC directly contributes to achieving Sustainable Development Goal (SDG) 3.4, which targets a significant reduction in premature mortality due to non-communicable diseases by 2030. PAEC cancer registry is an important element serving this purpose.

I offer my profound gratitude to all the dedicated professionals who contribute tirelessly to our hospitals and to the Cancer Registry. Their commitment and resilience form the foundation of this endeavor and continue to embody the spirit of service with which PAEC stands by the people of Pakistan.

A handwritten signature in blue ink, appearing to read 'Masood Iqbal'.

*Dr. Masood Iqbal, SI
Member Science,
Pakistan Atomic Energy Commission*

Message from the DG (NM&O) PAEC



The escalating incidence of cancer in Pakistan presents a formidable public health challenge, demanding a comprehensive and coordinated response. The World Health Organization (WHO) has noted a alarming increase in cancer cases, highlighting the urgent need for effective cancer control strategies. Breast cancer, along with cancers of the oral cavity, colorectum, esophagus, and liver, are among the most prevalent cancers afflicting the population. Significant disparities exist in cancer incidence between genders, with males exhibiting higher rates of oral cavity, colorectum, liver, prostate, and lung cancers, while females are disproportionately affected by breast, oral cavity, cervix, and uterus cancers. Middle-aged individuals, followed by seniors and adults, are the most vulnerable age groups for cancer development.

Cancer registries are indispensable tools for monitoring cancer incidence, prevalence, mortality, and survival trends, as well as for evaluating the effectiveness of cancer control interventions. Cancer registries play a pivotal role in strengthening healthcare systems by providing accurate and timely data on cancer incidence, mortality, and survival rates. Cancer registries serve as the cornerstone of evidence-based cancer control programs, guiding policymakers, healthcare providers, and researchers in planning, resource allocation, and evaluating the effectiveness of interventions.

The Pakistan Atomic Energy Commission (PAEC), through its dedicated network of 20 cancer hospitals spread across the country, is playing a pivotal role in delivering cancer care and gathering high-quality clinical and epidemiological data. These hospitals serve a large and diverse population, offering a unique opportunity to capture patterns, trends, and regional variations in cancer incidence and management.

This report is a testament to PAEC's longstanding commitment not only to cancer treatment but also to cancer surveillance and research. The data presented here represent years of meticulous collection and analysis, reflecting the collaborative efforts of clinicians, pathologists, epidemiologists, and data managers across the PAEC healthcare network. We hope this report will serve as a valuable resource for all stakeholders working towards a cancer-free future for Pakistan.

We express our sincere appreciation to all those whose dedication made this endeavor possible and reaffirm our commitment to expanding and strengthening cancer registries across the country.



*Dr. Shazia Fatima
Director General (NM&O),
Pakistan Atomic Energy Commission*

INTRODUCTION



The incidence of cancer is increasing worldwide as well as in Pakistan. According to Health Research Institute Pakistan, cancer is major public health problem for Pakistan with 148,000 new cancer cases and 100,000 deaths annually. Global cancer Observatory (GCO) reported 178,388 new cancer cases in Pakistan for year 2020 [1] and GLOBOCON 2022 [2] has also shown incidence of 185,748 new cases with 118,631 deaths in Pakistan for year 2022 (data provided by Punjab cancer registry). However, all these figures were considered underestimation for a population of more than 22 million

Importance of Cancer Registry

Cancer registry is considered vital for understanding magnitude of cancer burden, studying the prevalence, trends in risk factors, monitoring effects of early detection/ screening, treatment and palliative care as well as guiding the research on cancer causes and prevention. It helps the health authorities of a country for devising and implementing a national action plan for cancer prevention and management.

PAEC Cancer Registry

Pakistan Atomic Energy Commission (PAEC) has 20 Atomic Energy Cancer Hospitals (AECHs) established across Pakistan. Its policy to provide diagnostic and treatment facilities to all cancer patients, irrespective of the stage of disease makes it more accessible for masses, thus registering and receiving major burden of cancer patients. PAEC Cancer Registry, a hospital-

based cancer registry was established at Nuclear Medicine and Oncology (NM&O) Division in 2015 which receives monthly cancer data (January to December) from AECHs each year as recommended for cancer registry.

PAEC cancer registry has published two reports referred as PAEC Annual Cancer Registry Reports (PAECR) in Volume I and II covering cancer patient statistics from 17 AECHs for year 2015-2017, 2018 and 2019. In volume I, the three-year data (2015-2017) was used altogether. However as per international recommendation of yearly analysis for cancer registries, since 2018, PAECR is analyzing cancer statistics covering 12 months from January to December for respective year.

Contribution of PAEC Cancer Registry in Pakistan National Cancer Registry

PAECR 2015-2019 (5-year data) was included in first comprehensive report of cancer statistics by National Cancer Registry of Pakistan in 2023. It included data of eight cancer registries from Pakistan culminating in analysis of 269,707 patients. PAEC cancer registry contributed majorly almost 67.21% of this data. This proves AECHs with their wider reach, are a major stake holder and agent of change in cancer diagnosis, treatment and prevention. It is to emphasize here that AECHs should be major contributor in National Cancer Control Programs and allocation of resources at national and provincial levels for improvement of diagnostic and therapeutic services for cancer.

PAECR 2020-21

Current PAECR is the third volume covering the analysis of 33,512 & 39,358 cancer patients registered for 2020 and 2021 respectively.

Data Collection for PAECR 2020-21:

Quarterly data of cancer patients at 17 AECHs, recorded on HMIS having age, gender, demographic, and staging information, is received at NM & O Division, PAEC. Using cancer registry analytical tool developed by the Directorate of Management Information System (DMIS), data from all centers is compiled and analyzed at NM & O Division, PAEC as per ICD-10 codes.

Figure 1 shows the distribution of cancer cases in 17 AECHs for 2020 and 2021 with INMOL, KIRAN, NORI and IRNUM registering higher number of cancer patients similar to previous PAECR 2025-2017, 2018 and 2019.

The following information is included in statistical analysis of cancer data.

I Age Groups of Cancer Patients:

Standard 5 years' age groups starting from Age 0 (0-4, 5-9, 10-14, 15-19, 20-24, 25-29, 30-34, 35-39, 40-44, 45-49, 50-54, 55-59, 60-64, 65-69) to >70 years are used to study distribution of cancer cases. Data is analyzed for distribution of cancer cases in these age groups in both genders and in various regions of Pakistan for

each cancer.

However, for summarizing, the age groups used included children (0-9 years), Adolescents (10-19) years, adults (20-39 years), middle aged (40-59 years) and Senior citizen (> 60 years). Table 1 shows the percentage distribution of cancer

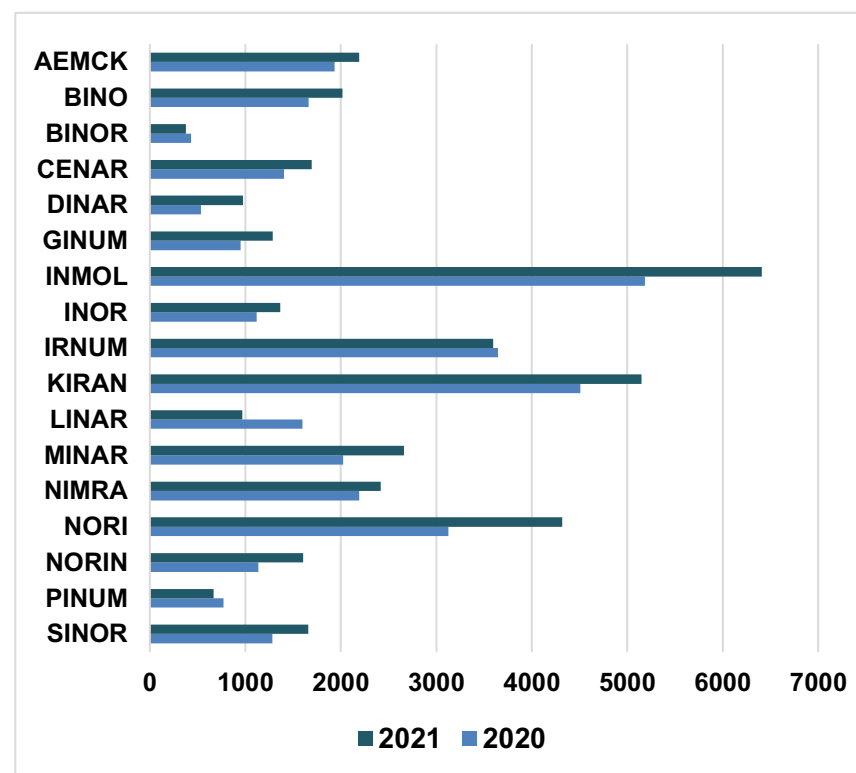


Figure 1: Patients registered at each AECHs from 2020 to 2021 (n=72,870)

patients with respect to age groups from 2020-2021 similar to previous PAECR Volume I and Volume II.

Statistical analysis like total number, percentages, highest and lowest number of patients in different age groups was used to identify trends, patterns, and inter and intra population relationships.

Age specific Incidence rate (ASIR) for all age groups using expected male and female population of Pakistan for respective years is derived and compared among age groups for all cancers as well as top most cancers i.e., Carcinoma Breast and Oral Cavity. For calculation of male and female population for each year, corresponding growth rate was applied to Census 2017 data

Age standardized rate (ASR) is also derived for all cancers in both genders using WHO standard population for comparison with other population.

II Regional Distribution:

Distribution of gender in all cancer patients as well as individual cancers at 17 AECHs at levels of divisions, districts and provinces is presented in the cancer registry. Major regional categories included Islamabad, Punjab, Sindh, Khyber Pakhtunkhwa (KP), Balochistan, Azad Jammu & Kashmir (AJK), Gilgit-Baltistan (GB) and Afghanistan. Table 2 shows the summary of regional percentage distribution of cancer patients

from 2015 to 2021 according to PAECR Volume I, Volume II and Volume III.

III Staging

Staging of cancers is important for management of cancer. Staging reflects the severity and spread of cancer at the time of diagnosis, future prognosis, guides selection of primary or adjuvant treatment and evaluates treatment results. Moreover, increasing trend of having more patients in early stages reflect success of primary and secondary prevention through early detection and treatment. Worldwide cancers are staged using TNM Staging classification established by American Joint committee on Cancer (AJCC). PAECR also provides the data analysis of each of cancer cases at time of diagnosis into stages (I to IV, Unknown and AJCC Non-specified) as per TNM staging system.

The Unknown category included patients with unknown or unspecified stages owing to the fact that patients did not arrive or proceeded with further management after initial diagnosis. The patients of Leukemia, Unknown primaries and primary brain tumors etc. are considered in AJCC not specified category. Stage 0 or Carcinoma in situ was not included in data analysis.

Table1: Comparison of gender and percentage (%) distribution in age groups from 2015 to 2021

PAECR	n	M: F	Children	Adolescents	Adults	Middle Aged	Senior Citizen
2015 -17	102,022	44:56	2	4	21	42	31
2018	38,457	44:56	2	4	19	43	32
2019	40,797	44:56	2	4	20	43	31
2020	33,512	44:56	2	4	20	43	32
2021	39,358	42:58	1	3	19	44	32

Table 2: Percentage (%) regional distribution of cancer patients from 2015 to 2021

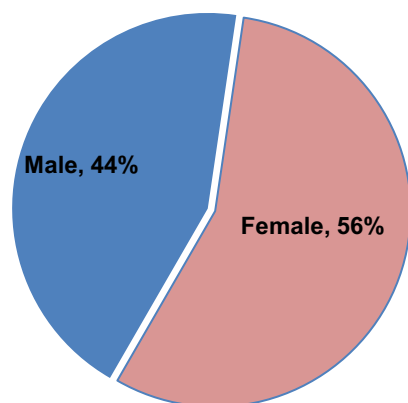
Year	n	Islamabad	Punjab	Sindh	KPK	Balochistan	AJK	GB	Afghanistan
2015 -17	102,022	1.9	44.2	28.2	11.8	6.6	1.4	0.3	4.6
2018	38,457	1.7	38.4	34.4	15.6	4.4	1.3	0.3	3.9
2019	40,797	1.5	40.4	32.4	16.1	4	1.3	0.3	4
2020	33,512	1.3	38.2	32	18.4	4.3	1.4	0.4	4
2021	39,358	1.5	40.3	29.4	18.1	4.5	2	0.4	4

2020

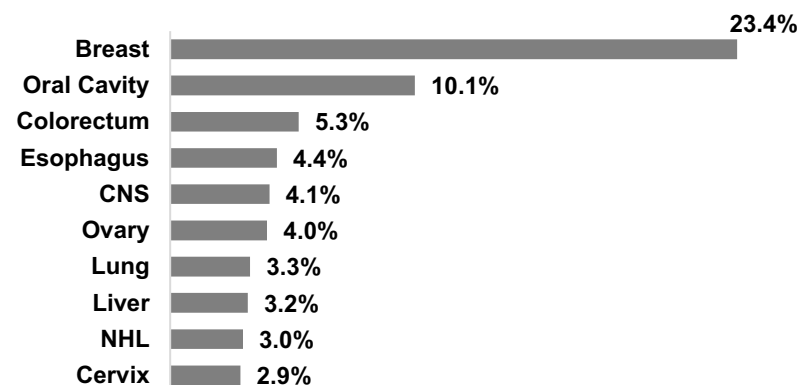


Top Ten Cancers Gender Wise

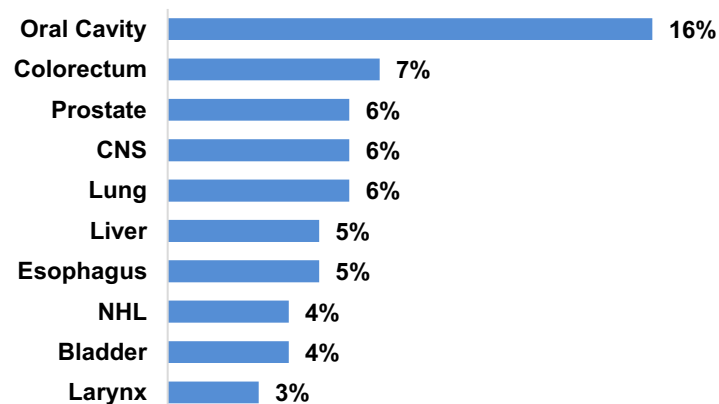
Male to female ratio (N=33512)



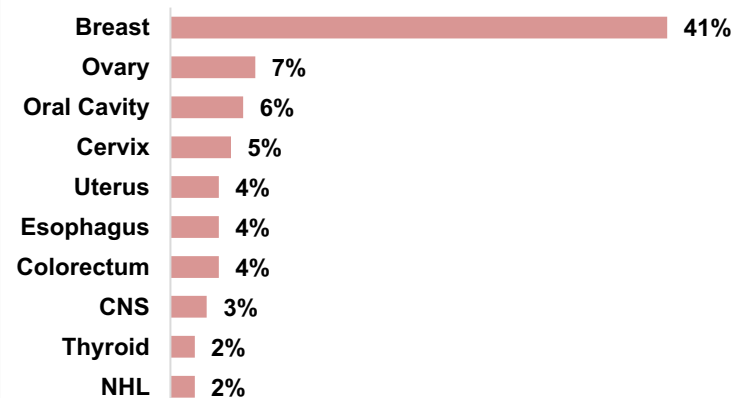
Top Ten Cancer in the total population (n=33,512)



Top Ten Cancer in Males (n=14,642)

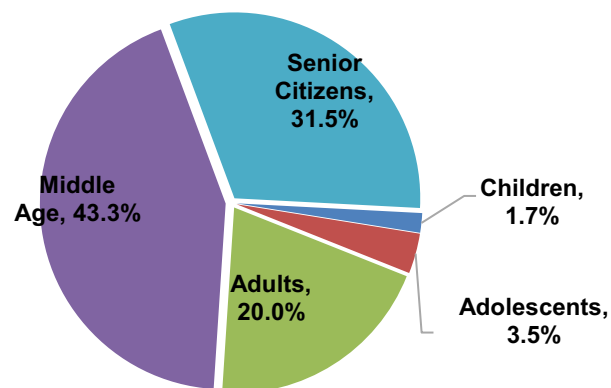


Top Ten Cancer in Females (n=18,870)

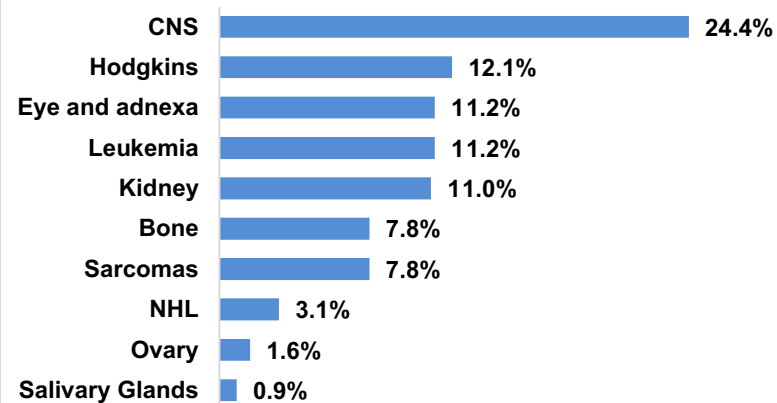
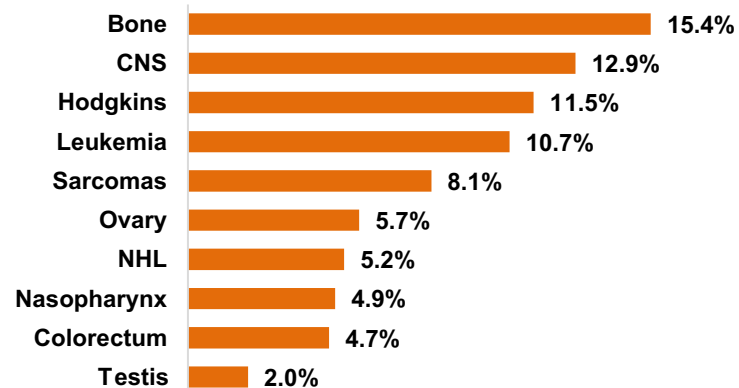


Top Ten Cancers Age Wise

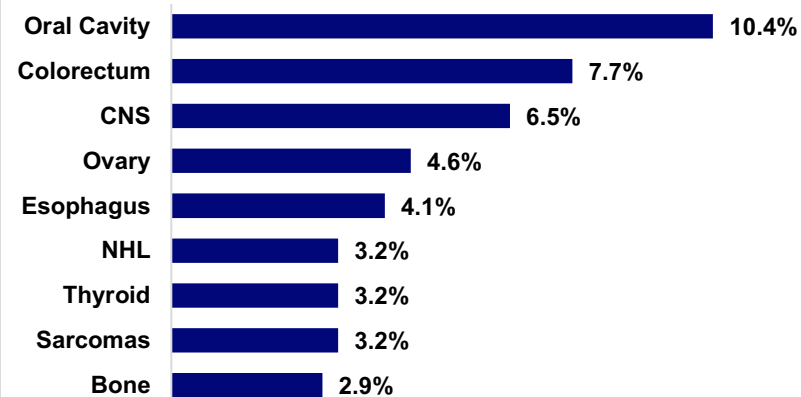
Age-wise Distribution of Patients (n=33,512)



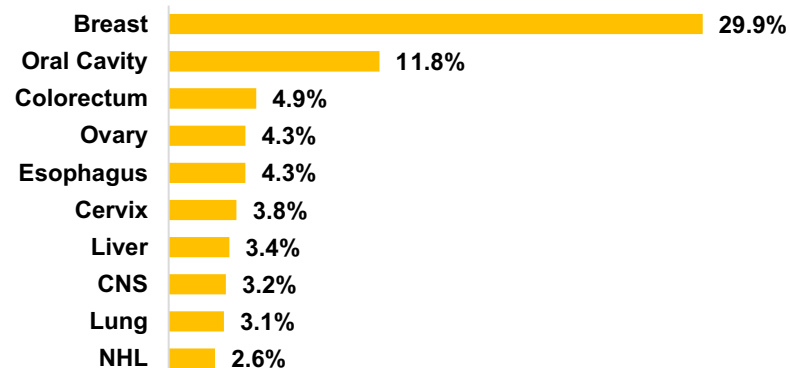
Leading Cancers in Children (0-9 Yrs) n=554

Leading Cancers in Adolescents (10-19 Yrs)
n=1,183

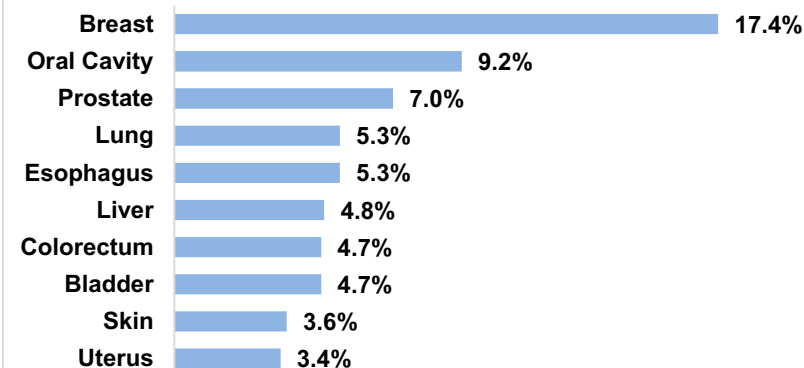
Leading Cancers in Adults (20-39 Yrs) n=6,693



Leading Cancers in Middle Aged (40-59 Yrs)
n=14,511



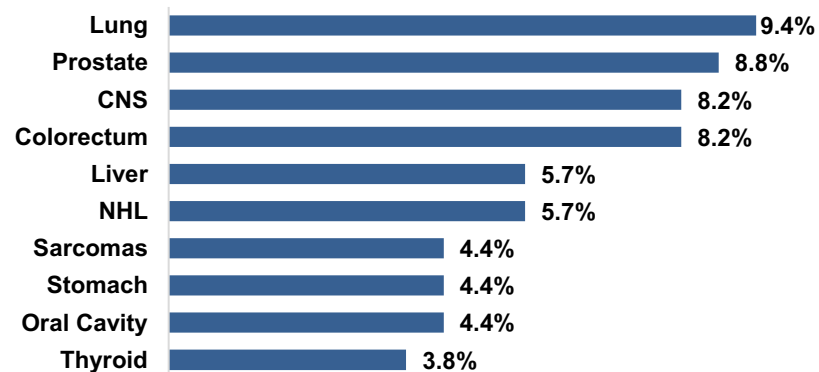
Leading Cancers in Senior Citizen (≥60 Yrs)
n=10571



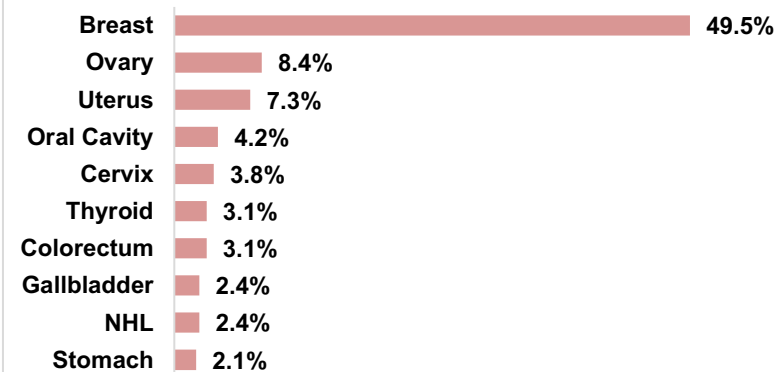
Top Ten Cancers Region Wise

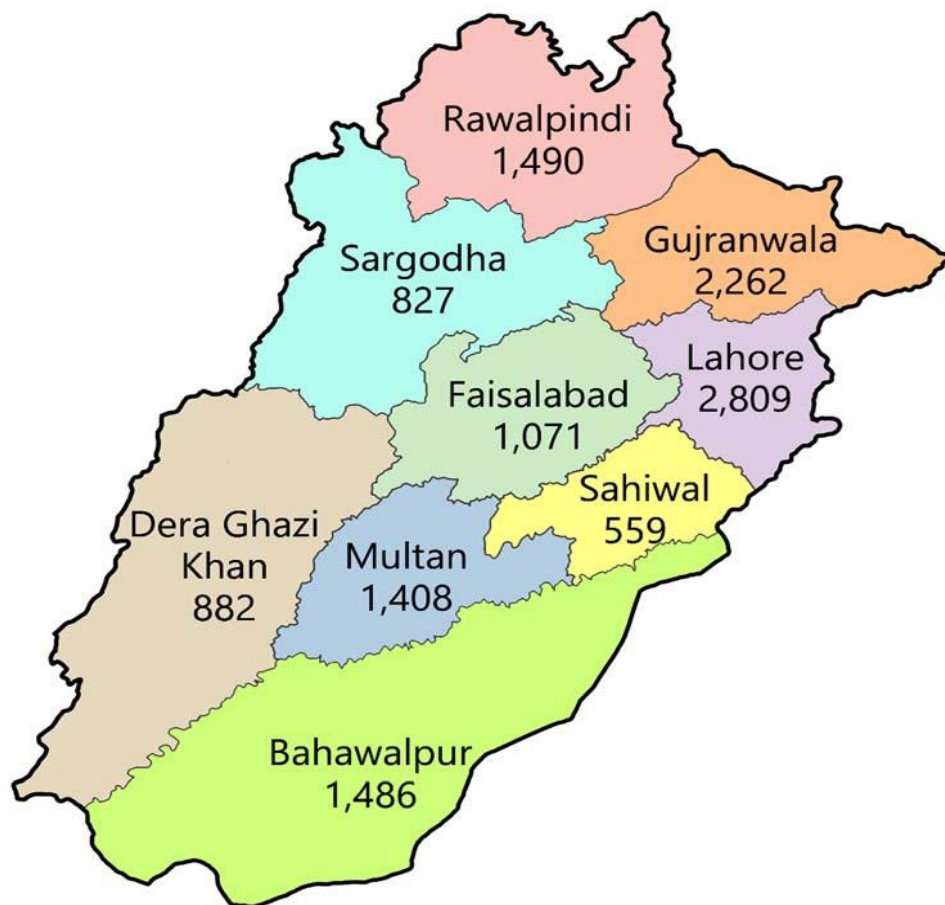
Islamabad (n=446)

Leading Cancers in Males from Islamabad
(n=159)



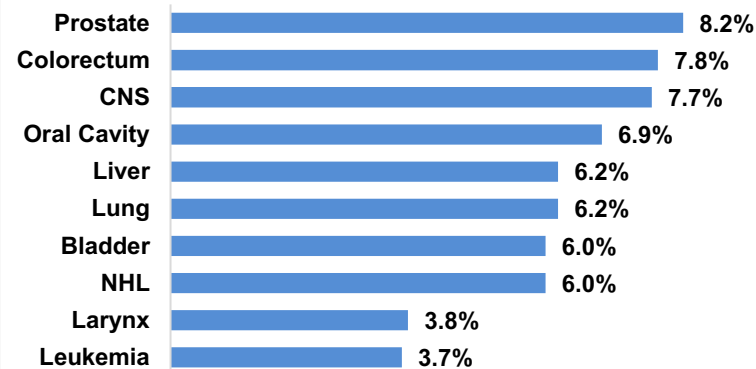
Leading Cancers in Females from Islamabad
(n=287)



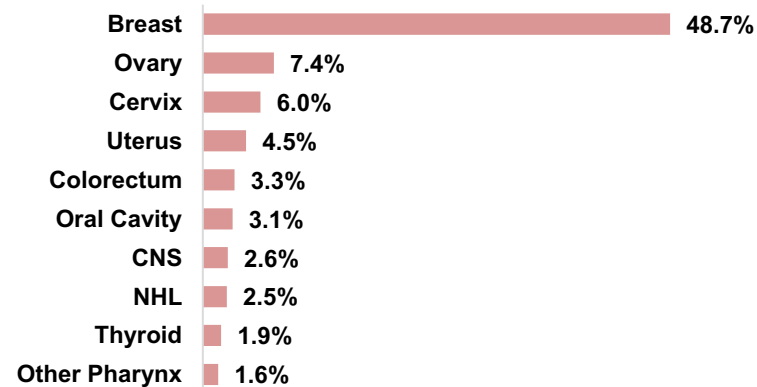


Cancer Patients from Different Divisions of Punjab

Leading Cancers in Males from Punjab (n=4,922)



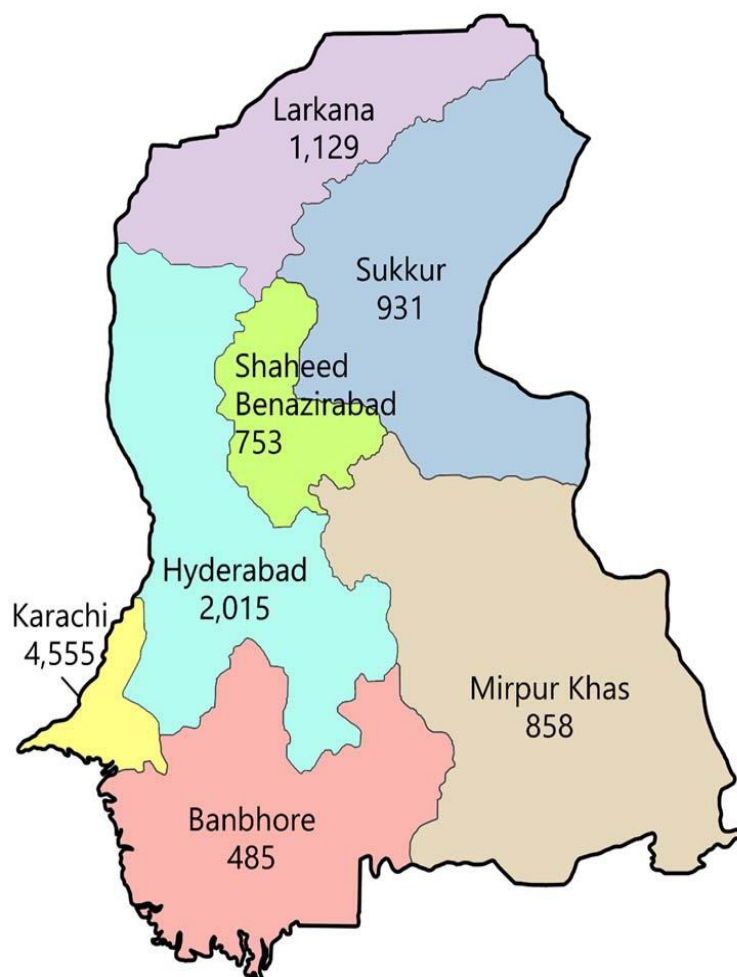
Leading Cancers in Female Patients from Punjab (n=7,872)



Cancer Patients from Different Districts of Punjab

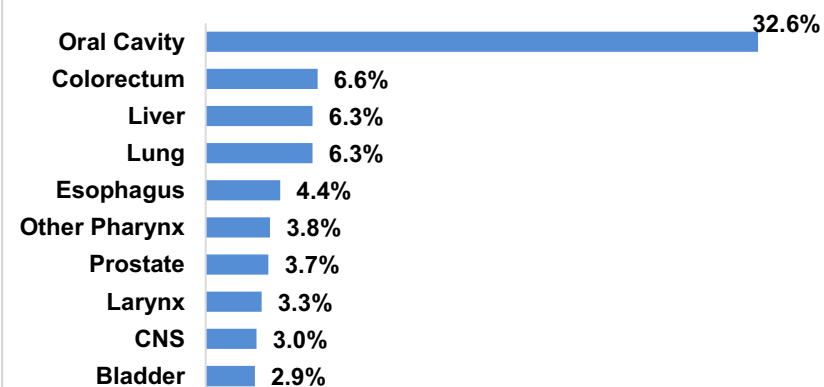
Division	District	Females	Males	Total
Bahawalpur	Bahawalnagar	224	154	378
	Bahawalpur	376	224	600
	Rahim Yar Khan	273	235	508
D G Khan	Dera Ghazi Khan	118	123	241
	Layyah	96	74	170
	Muzaffargarh	174	146	320
	Rajanpur	76	75	151
Faisalabad	Chiniot	35	26	61
	Faisalabad	442	233	675
	Jhang	100	77	177
	Toba Tek Singh	99	59	158
Gujranwala	Gujranwala	572	294	866
	Gujrat	261	135	396
	Hafizabad	74	26	100
	Mandi Bahauddin	111	65	176
	Narowal	68	52	120
	Sialkot	392	212	604

Division	District	Females	Males	Total
Lahore	Kasur	148	95	243
	Lahore	1,411	831	2,242
	Nankana Sahib	60	41	101
	Sheikhupura	136	87	223
Multan	Khanewal	164	119	283
	Lodhran	100	95	195
	Multan	399	267	666
	Vehari	146	118	264
Rawalpindi	Attock	139	91	230
	Chakwal	120	56	176
	Jhelum	141	72	213
	Rawalpindi	572	299	871
Sahiwal	Okara	146	84	230
	Pakpattan	63	55	118
	Sahiwal	141	70	211
Sargodha	Bhakkar	112	97	209
	Khushab	81	53	134
	Mianwali	109	81	190
	Sargodha	193	101	294

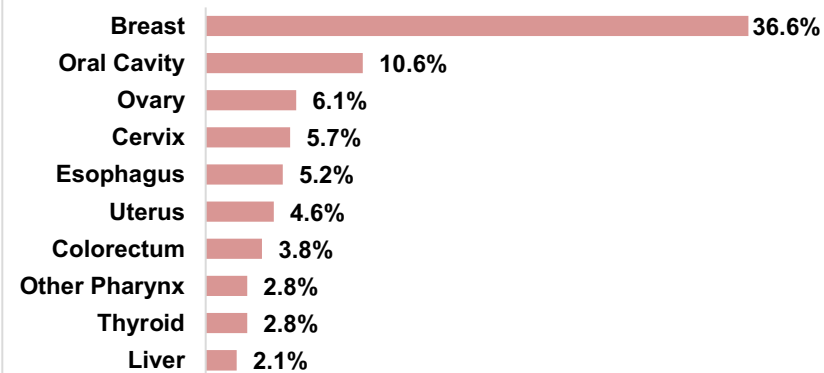


Cancer Patients from Different Divisions of Sindh

Leading Cancers in Male Patients from Sindh (n=5,130)



Leading Cancers in Female Patients from Sindh (n=5,596)

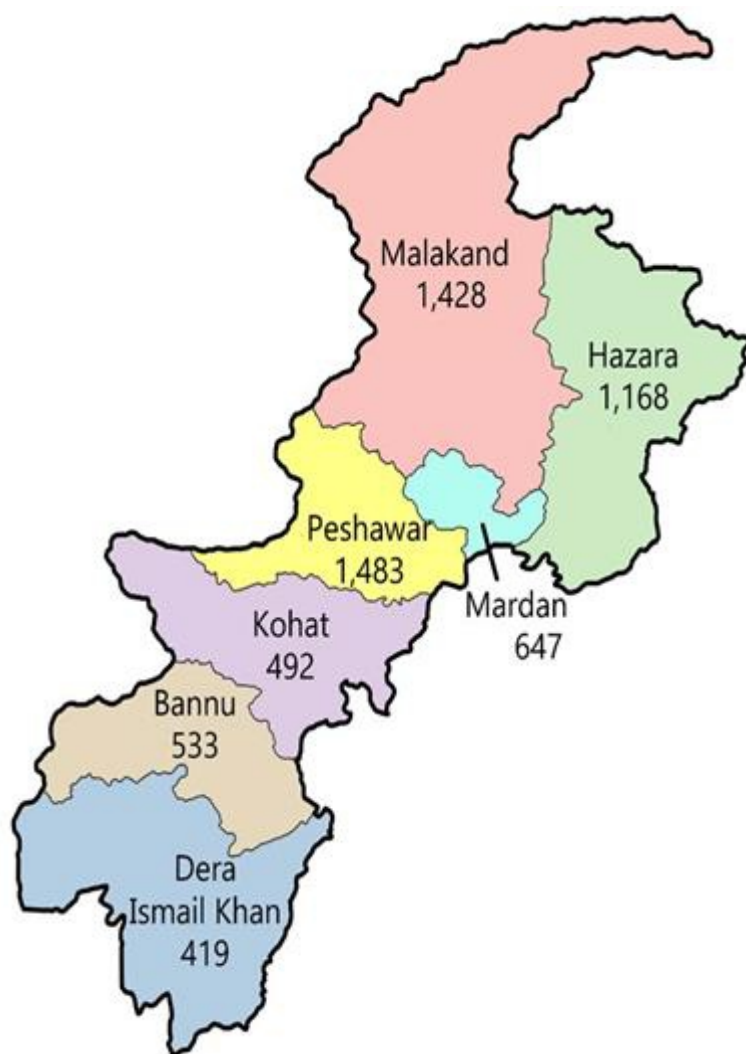


Cancer Patients from Different Districts of Sindh

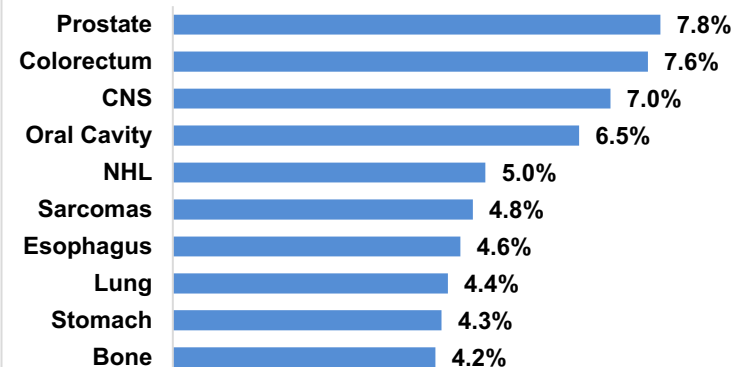
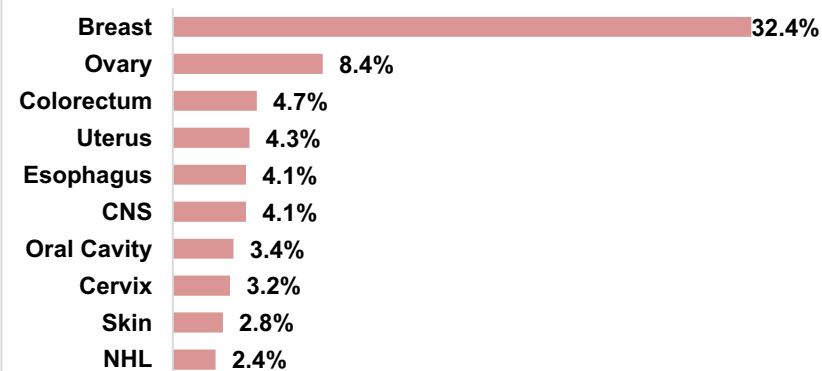
Division	District	Females	Males	Total
Banbhore	Badin	142	135	277
	Sujawal	13	17	30
	Thatta	75	103	178
Hyderabad	Dadu	203	189	392
	Hyderabad	436	460	896
	Jamshoro	121	114	235
	Matari	85	95	180
	Tando Allahyar	90	72	162
	Tando Muhammad Khan	81	69	150
Karachi	Karachi Central	680	526	1,206
	Karachi East	505	369	874
	Karachi South	341	347	688
	Karachi West	438	436	874
	Korangi	175	186	361
	Malir	303	249	552

Division	District	Females	Males	Total
Larkana	Jacobabad	79	72	151
	Kashmore	64	66	130
	Larkana	249	135	384
	Qambar Shahdadt	144	115	259
	Shikarpur	111	94	205
Mirpur Khas	Mirpur Khas	81	102	183
	Sanghar	204	241	445
	Tharparkar	36	71	107
	Umerkot	53	70	123
Shaheed Benazir Abad	Naushahro Firoze	172	181	353
	Shaheed Benazir Abad	201	199	400
Sukkur	Ghotki	97	87	184
	Khairpur	247	200	447
	Sukkur	170	130	300

Khyber Pakhtunkhwa (n=6,170)



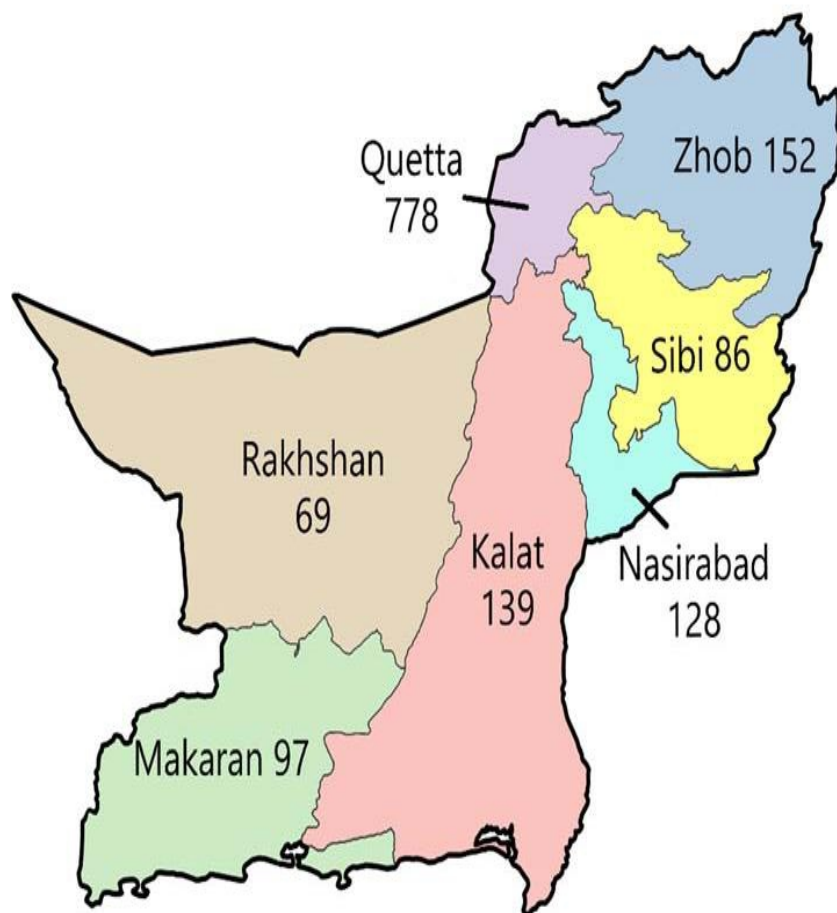
Cancer Patients from Different Divisions of KP

Leading Cancers in Male Patients from KP
(n=2,788)Leading Cancers in Female Patients from KP
(n=3,382)

Cancer Patients from Different Districts of KP

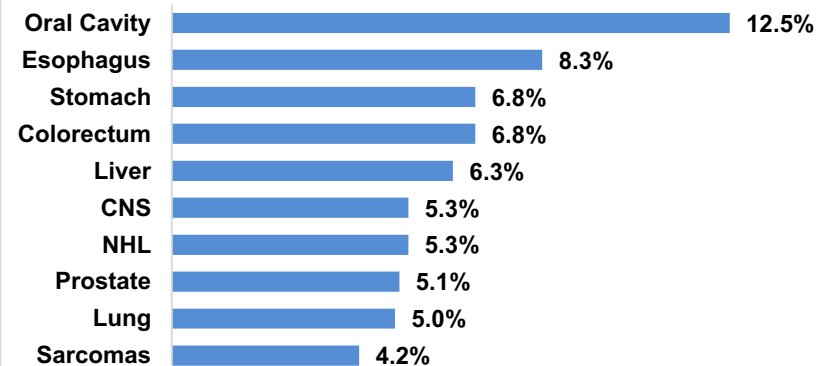
Division	District	Females	Males	Total
Bannu	Bannu	117	142	259
	Lakki Marwat	84	66	150
	North Waziristan Agency	58	66	124
D I Khan	Dera Ismail Khan	134	92	226
	South Waziristan Agency	70	63	133
	Tank	30	30	60
Hazara	Abbottabad	217	178	395
	Battagram	46	36	82
	Haripur	139	109	248
	Lower Kohistan	20	15	35
	Mansehra	218	170	388
	Torghar	2	4	6
	Upper Kohistan	5	9	14
Kohat	Hangu	41	42	83
	Karak	49	46	95
	Kohat	79	55	134
	Kurram	53	68	121
	Orakzai	26	33	59

Division	District	Females	Males	Total
Malakand	Bajaur	73	78	151
	Buner	72	62	134
	Lower Chitral	19	21	40
	Lower Dir	136	124	260
	Malakand	74	64	138
	Shangla	49	49	98
	Swat	241	212	453
	Upper Chitral	9	2	11
Mardan	Upper Dir	76	67	143
	Mardan	238	145	383
Peshawar	Swabi	157	107	264
	Charsadda	182	157	339
	Khyber	67	65	132
	Mohmand	49	34	83
	Nowshera	139	103	242
	Peshawar	413	274	687

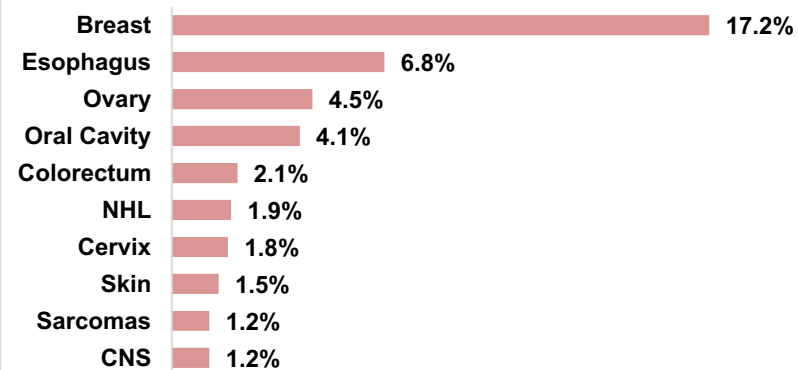


Cancer Patients from Different Divisions of Balochistan

Leading Cancers in Male Patients from Balochistan (n=663)



Leading Cancers in Female Patients from Balochistan (n=786)

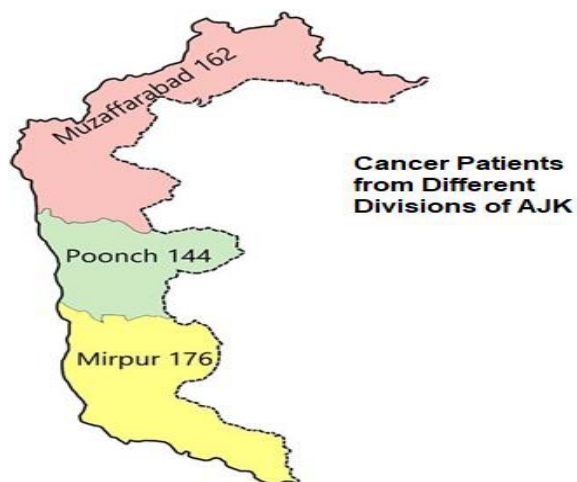


Cancer Patients from Different Districts of Balochistan

Division	District	Females	Males	Total
Kalat	Awaran	9	12	21
	Kalat	8	13	21
	Khuzdar	18	23	41
	Lasbela	14	16	30
	Mastung	15	11	26
Makran	Gwadar	12	14	26
	Kech (Turbat)	28	30	58
	Panjgur	9	4	13
Nasirabad	Jafarabad	40	19	59
	Jhal Magsi	3	7	10
	Kachhi (Bolan)	14	10	24
	Nasirabad	15	13	28
	Sohbatpur	4	3	7
Quetta	Qilla Abdullah	45	50	95
	Pishin	52	31	83
	Quetta	358	242	600

Division	District	Females	Males	Total
Rakhshan	Chagai	15	15	30
	Kharan	7	6	13
	Nushki	14	9	23
	Washuk	2	1	3
Sibi	Dera Bugti	7	7	14
	Harnai	2	3	5
	Kohlu	2	11	13
	Sibi	16	20	36
	Ziarat	7	11	18
Zhob	Barkhan	9	15	24
	Duki	2	3	5
	Qilla Saifullah	9	22	31
	Loralai	23	20	43
	Musakhel	9	5	14
	Sherani	3	2	5
	Zhob	15	15	30

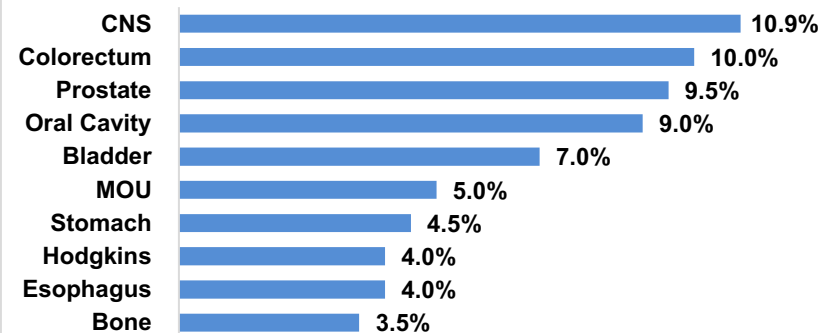
Azad Jammu & Kashmir (n=482)



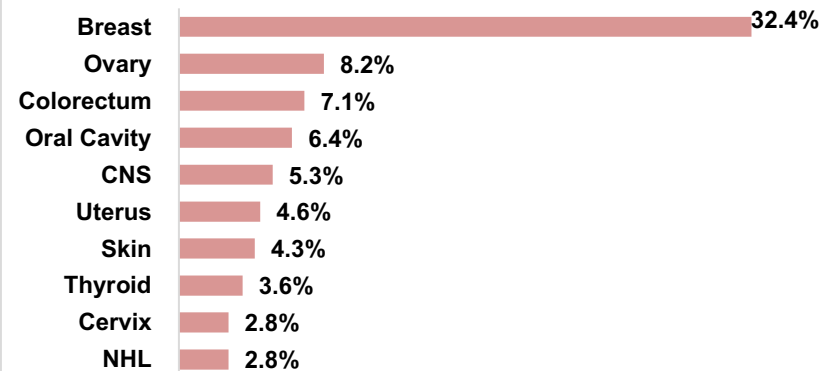
Cancer Patients from Different Districts of AJK

Division	District	Females	Males	Total
Mirpur	Bhimber	26	20	46
	Kotli	39	29	68
	Mirpur	32	30	62
Muzaffarabad	Hattian Bala	14	3	17
	Muzaffarabad	75	50	125
	Neelum	12	8	20
Poonch	Bagh	44	25	69
	Haveli	3	7	10
	Poonch	27	23	50
	Sudhnati	9	6	15

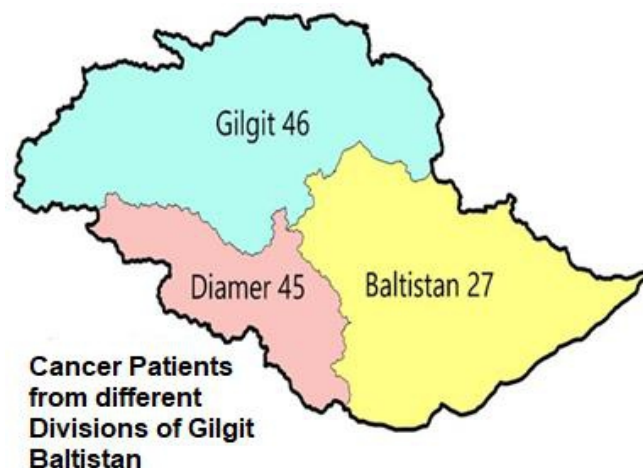
Leading Cancers in Male Patients from AJK (n=201)



Leading Cancers in Female Patients from AJK (n=281)



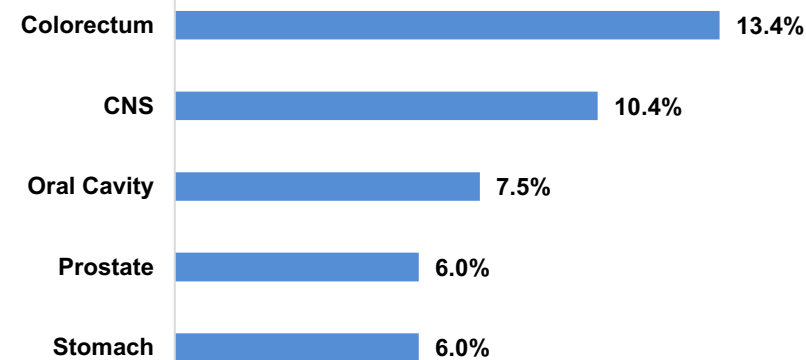
Gilgit-Baltistan (n=118)



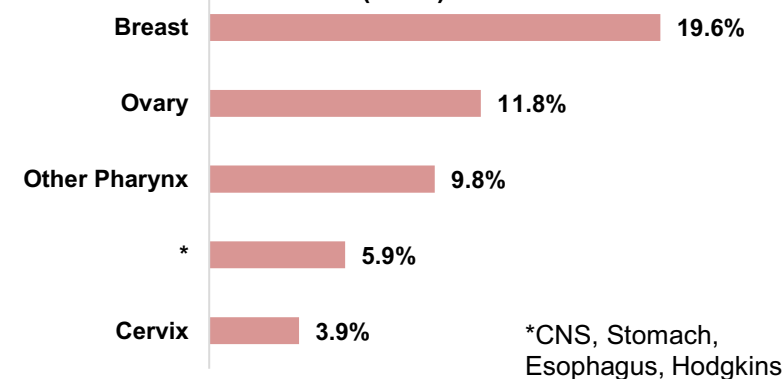
Cancer Patients from Different Districts of GB

Division	District	Females	Males	Total
Baltistan	Ghanche	4	4	8
	Kharmang	-	1	1
	Rondu	-	1	1
	Skardu	6	11	17
Diamer	Astore	4	5	9
	Darel	-	2	2
	Diamer	15	17	32
	Tangir	-	2	2
Gilgit	Ghizer	4	5	9
	Gilgit	16	15	31
	Gupis-Yaseen	-	1	1
	Hunza	1	2	3
	Nagar	1	1	2

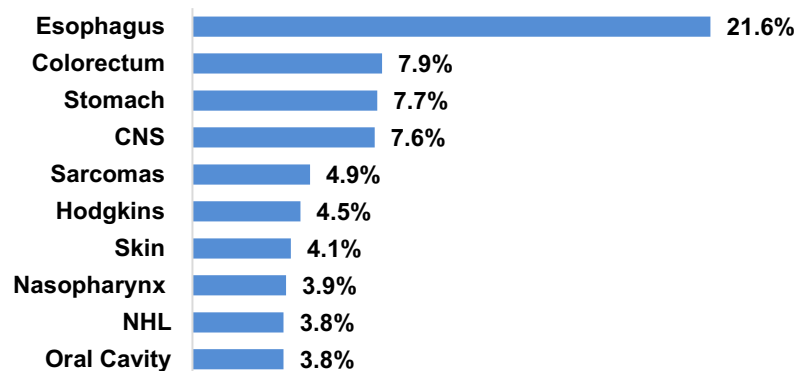
Leading Cancers in Male Patients from GB (n=67)



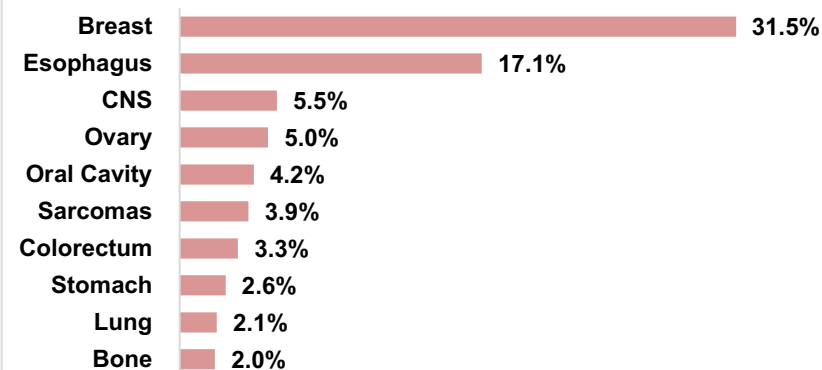
Leading Cancers in Female Patients from GB (n=51)



Leading Cancers in Male Patients from Afghanistan (n=712)



Leading Cancers in Female Patients from Afghanistan (n=615)



Gender & Age Wise Distribution (C00-C97)

Malignant Neoplasm	Age in years (BOTH GENDERS)															Totals
	0 - 4	5 - 9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70 +	
Lip, oral cavity and pharynx (C00-C14)	3	4	19	80	85	159	301	470	497	563	654	524	534	362	477	4,732
Digestive organs (C15-C26)	3	7	16	64	109	208	333	411	436	588	780	769	788	622	736	5,870
Respiratory and intrathoracic organs (C30-C39)	4	2	1	16	25	38	52	70	109	147	267	260	300	262	375	1,928
Bone and articular cartilage (C40-C41)	10	33	69	113	73	52	43	27	32	32	35	26	25	24	43	637
Melanoma and other of skin (C43-C44)		1	10	13	20	24	33	33	52	52	66	61	97	80	206	748
Mesothelial and soft tissue (C45-C49)	14	29	34	62	46	54	56	58	42	48	60	53	53	29	59	697
Breast (C50)	1	2	1	12	64	238	536	810	1,086	1,136	1,198	925	814	511	511	7,845
Female genital organs (C51-C58)	2	9	18	64	96	124	184	227	331	358	494	428	459	309	285	3,388
Male genital organs (C60-C63)	3	3	2	23	35	49	55	48	37	35	56	91	133	189	451	1,210
Urinary tract (C64-C68)	35	28	4	4	7	15	16	42	61	77	143	166	191	175	279	1,243
Eye, brain and other parts of central nervous system (C69-C72)	77	120	76	89	90	111	144	112	147	122	126	108	96	59	72	1,549
Thyroid and other endocrine glands (C73-C75)	4		3	21	32	54	79	65	55	62	57	53	44	38	49	616
Ill-defined, secondary and unspecified sites (C76-C80)	6	8	15	29	32	31	42	41	63	48	91	69	87	75	106	743
Lymphoid, hematopoietic and related tissue (C81-C96)	29	117	141	184	138	117	142	136	146	153	219	208	192	167	198	2,287
Independent (primary) multiple sites (C97)					1				2		1	5	4	3	3	19
Totals	171	125	409	774	853	1274	2016	2550	3,096	3,421	4,247	3746	3817	2905	3850	33,512

Codes	Malignant Neoplasm	Age in years (MALES)															Total
		00-04	05-09	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70 +	
C00-C14	Lip, oral cavity and pharynx	3	2	9	51	55	104	210	327	339	381	447	353	311	213	284	3089
C15-C26	Digestive organs	2	6	11	34	56	92	198	208	223	347	431	476	476	409	481	3450
C30-C39	Respiratory and intrathoracic organs	3	1	1	6	15	22	30	35	68	104	198	208	234	217	305	1447
C40-C41	Bone and articular cartilage	4	20	39	65	48	34	25	17	26	20	22	16	13	14	33	396
C43-C44	Melanoma and other malignant neoplasms of skin		1	4	7	11	8	22	19	27	27	43	39	55	44	117	424
C45-C49	Mesothelial and soft tissue	9	15	22	32	27	35	32	39	26	32	41	27	36	21	41	435
C50	Breast				1	1	4	5	13	19	30	16	29	29	13	24	184
C60-C63	Male genital organs	3	3	2	23	35	49	55	48	37	35	56	91	133	189	451	1210
C64-C68	Urinary tract	19	15	1	3	6	13	8	27	42	48	95	120	145	135	226	903
C69-C72	Eye, brain and other parts of central nervous system	42	64	44	52	64	72	89	70	92	79	78	74	61	37	43	961
C73-C75	Thyroid and other endocrine glands	1		1	4	5	10	24	16	18	17	16	24	17	20	17	190
C76-C80	Ill-defined, secondary and unspecified sites	3	6	9	20	15	18	24	23	41	30	57	43	53	53	68	463
C81-C96	Lymphoid, hematopoietic and related tissue	22	87	97	124	73	74	95	82	108	105	127	134	115	110	129	1482
C97	Independent (primary) multiple sites									1			1	2	2	2	8
Total		111	220	240	422	411	535	817	924	1067	1255	1627	1635	1680	1477	2221	14642

Codes	Malignant Neoplasm	Age in years (FEMALES)															Total
		00-04	05-09	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70 +	
C00-C14	Lip, oral cavity and pharynx		2	10	29	30	55	91	143	158	182	207	171	223	149	193	1643
C15-C26	Digestive organs	1	1	5	30	53	116	135	203	213	241	349	293	312	213	255	2420
C30-C39	Respiratory and intrathoracic organs	1	1		10	10	16	22	35	41	43	69	52	66	45	70	481
C40-C41	Bone and articular cartilage	6	13	30	48	25	18	18	10	6	12	13	10	12	10	10	241
C43-C44	Melanoma and other malignant neoplasms of skin			6	6	9	16	11	14	25	25	23	22	42	36	89	324
C45-C49	Mesothelial and soft tissue	5	14	12	30	19	19	24	19	16	16	19	26	17	8	18	262
C50	Breast				11	63	234	532	798	1068	1106	1182	897	784	498	487	7660
C51-C58	Female genital organs	2	9	18	64	96	124	184	227	331	358	494	428	459	309	285	3388
C64-C68	Urinary tract	16	13	3	1	1	2	8	15	19	29	48	46	46	40	53	340
C69-C72	Eye, brain and other parts of central nervous system	35	57	32	37	26	39	55	42	55	43	48	34	35	22	29	589
C73-C75	Thyroid and other endocrine glands	3		2	17	27	44	55	49	37	45	41	29	27	18	32	426
C76-C80	Ill-defined, secondary and unspecified sites	3	2	6	9	17	13	18	18	22	18	34	26	34	22	38	280
C81-C96	Lymphoid, hematopoietic and related tissue	7	30	44	60	65	43	47	54	38	48	92	74	77	57	69	805
C97	Independent (primary) multiple sites					1				1		1	4	2	1	1	11
Total		79	142	168	352	442	739	1200	1627	2030	2166	2620	2112	2136	1428	1629	18870

Lip, oral cavity and pharynx (C00-C14)

Codes	Malignant Neoplasm	Total	Female	Male	Age in years														
					0 - 4	5 - 9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70 +
C00	Lip	155	60	95				1	1		6	10	20	9	17	17	19	20	35
C01	Base of tongue	171	64	107				1	2	2	11	13	13	17	28	26	26	8	24
C02	Other and unspecified parts of tongue	680	244	436					12	29	43	64	82	93	108	73	90	43	43
C03	Gum	140	55	85				1		2	10	8	10	11	35	15	15	11	22
C04	Floor of mouth	154	63	91					1	4	9	9	12	17	22	21	18	16	25
C05	Palate	85	31	54				1	1	1	4	6	10	11	13	13	11	4	10
C06	Other and unspecified parts of mouth	1,722	433	1,289	1			8	17	56	122	208	214	225	256	198	178	121	118
C07	Parotid gland	212	93	119		4	6	5	3	10	11	18	16	24	22	21	23	19	30
C08	Other and unspecified major salivary glands	71	25	46	1		1	2	3	5	7	5	9	5	6	7	5	5	10
C09	Tonsil	54	22	32					3	1	4	6	4	6	6	4	7	8	5
C10	Oropharynx	149	59	90				2	2	5	8	15	8	19	25	16	21	8	20
C11	Nasopharynx	314	83	231	1		11	47	18	14	18	28	30	28	32	26	23	18	20
C12	Piriform sinus	13	7	6						1	1	4			1		1	2	3
C13	Hypopharynx	521	287	234				9	20	20	33	56	48	62	53	51	61	44	64
C14	Other and ill-defined sites in the lip, oral cavity and pharynx	291	117	174			1	3	2	9	14	20	21	36	30	36	36	35	48
	Total	4,732	1,643	3,089	3	4	19	80	85	159	301	470	497	563	654	524	534	362	477

Digestive organs (C15-C26)

Codes	Malignant Neoplasm	Total	Female	Male	Age in years														
					0-4	5 - 9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	070 +
C15	Oesophagus	1,459	766	693				10	20	38	85	129	127	160	174	158	193	161	204
C16	Stomach	656	216	440	1			3	4	22	37	52	51	64	92	82	96	69	83
C17	Small intestine	61	22	39		3			3	4	2	3	4	8	11	9	5	6	3
C18	Colon	762	294	468			5	8	24	40	57	55	67	82	97	102	85	63	77
C19	Rectosigmoid junction	148	61	87	1		3	5	6	11	18	13	7	10	18	16	12	8	20
C20	Rectum	727	296	431			6	27	40	55	73	81	63	62	71	64	63	61	61
C21	Anus and anal canal	148	58	90				2	3	12	13	12	14	20	9	11	12	18	22
C22	Liver and intrahepatic bile ducts	1,084	297	787	1	2	1	5	4	9	29	31	44	86	168	199	190	148	167
C23	Gallbladder	311	206	105					1	2	4	13	27	39	60	45	51	30	39
C24	Other and unspecified parts of biliary tract	41	21	20						1	1	1	2	5	9	4	6	5	7
C25	Pancreas	390	148	242				3	2	10	9	15	24	41	65	69	65	44	43
C26	Other and ill-defined digestive organs	83	35	48		2	1	1	2	4	5	6	6	11	6	10	10	9	10
	Total	5,870	2,420	3,450	3	7	16	64	109	208	333	411	436	588	780	769	788	622	736

Respiratory and intrathoracic organs (C30-C39)

Code	Malignant neoplasms	Total	Female	Male	Age in years														
					0-4	5 - 9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70 +
C30	Nasal cavity and middle ear	129	47	82	1			7	4	7	3	9	10	10	15	15	13	9	26
C31	Accessory sinuses	98	44	54	1			2	1	7	6	5	5	10	18	13	11	11	8
C32	Larynx	536	90	446	1			2	4	9	6	24	31	32	69	77	79	80	122
C33	Trachea	1		1														1	
C34	Bronchus and lung	1,092	271	821				3	10	14	30	30	51	88	158	151	192	149	216
C37	Thymus	17	5	12	1	1			2	1	3	1	4		1		1	2	
C38	Heart, mediastinum and pleura	38	18	20		1	1	2	3		2	1	6	5	4	2	3	6	2
C39	Other and ill-defined sites in the respiratory system and intrathoracic organs	17	6	11					1		2		2	2	2	2	1	4	1
	Total	1,928	481	1,447	4	2	1	16	25	38	52	70	109	147	267	260	300	262	375

Bone and articular cartilage (C40-C41)

Code	Malignant neoplasms	Total	Female	Male	Age in years														
					0-4	5 - 9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70 +
C40	Bone and articular cartilage oflimbs	383	137	246	5	17	47	72	55	37	24	17	19	19	14	13	10	9	25
C41	Bone and articular cartilage of other and unspecified sites	254	104	150	5	16	22	41	18	15	19	10	13	13	21	13	15	15	18
	Total	637	241	396	10	33	69	113	73	52	43	27	32	32	35	26	25	24	43

Melanoma and other malignant neoplasms of skin (C43-C44)

Code	Malignant neoplasms	Total	Female	Male	Age in years														
					0-4	5 - 9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70 +
C43	Malignant melanoma of skin	56	24	32			2	1		3	2	1	3	4	9	9	4	7	11
C44	Other malignant neoplasms of skin	692	300	392		1	8	12	20	21	31	32	49	48	57	52	93	73	195
	Total	748	324	424	0	1	10	13	20	24	33	33	52	52	66	61	97	80	206

Mesothelial and soft tissue (C45-C49)

Code	Malignant neoplasms	Total	Female	Male	Age in years															
					0-4	5 - 9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	070 +	
C45	Mesothelioma	28	.16	12								1	1	5	6	4	4	3	4	
C46	Kaposi's sarcoma																			
C47	Peripheral nerves and autonomic nervous system	12	5	7	2			1	2	1		3		1	1		1			
C48	Retroperitoneum and peritoneum	36	15	21		1	4	2	3	3		3	2	6	3	5	2	1	1	
C49	Other connective and soft tissue	621	226	395	12	28	30	59	41	50	56	51	39	36	50	44	46	25	54	
	Total	697	262	435	14	29	34	62	46	54	56	58	42	48	60	53	53	29	59	

Breast (C50)

Code	Malignant neoplasms	Total	Female	Male	Age in years															
					0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70+	
C50	Breast (Malignant)	7,844	7,660	184				12	64	238	537	811	1087	1136	1198	926	813	511	511	

Female genital organs (C51-C58)

Code	Malignant neoplasms	Total	Age in years														
			0-4	5 - 9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	070 +
C51	Vulva	62								1	4	4	9	8	10	3	23
C52	Vagina	45		1			2	1	2	2	5	2	7		8	5	10
C53	Cervix uteri	960				3	7	9	39	65	118	137	173	123	120	88	78
C54	Corpus uteri	365					6	3	11	13	13	32	68	61	80	49	29
C55	Uterus, part unspecified	449					9	6	23	18	27	36	59	74	90	62	45
C56	Ovary (Malignant)	1,357	2	7	18	49	46	68	88	107	153	142	173	157	150	99	98
C57	Other and unspecified female genital organs	23		1				1	1		3	3	4	4	1	3	2
C58	Placenta	127				12	26	36	20	21	8	2	1	1			
	Total	3,388	2	9	18	64	96	124	184	227	331	358	494	428	459	309	285

Male genital organs (C60-C63)

Code	Malignant neoplasms	Total	Age in years														
			0-4	5 - 9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70 +
C60	Penis	10							1				2	1		2	4
C61	Prostate	894		1			1	1		3	5	19	37	82	124	181	440
C62	Testis	294	2	2	2	22	32	47	53	45	32	15	16	6	8	5	7
C63	Other and unspecified male genital organs	12	1			1	2	1	1			1	1	2	1	1	
	Total	1,210	3	3	2	23	35	49	55	48	37	35	56	91	133	189	451

Urinary tract (C64-C68)

Code	Malignant neoplasms	Total	Female	Male	Age in years														
					0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70+
C64	Kidney, except renal pelvis	400	146	254	30	25	4	3	3	7	11	21	30	36	50	47	50	40	43
C65	Renal pelvis	47	17	30	3	3			1	3	1	2	4	3	10	8	3	4	2
C66	Ureter	7	2	5										2		1	1	2	1
C67	Bladder	783	174	609	2			1	3	5	4	19	27	36	82	110	135	127	232
C68	Other and unspecified urinary organs	6	1	5											1		2	2	1
	Total	1,243	340	903	35	28	4	4	7	15	16	42	61	77	143	166	191	175	279

Eye, brain and other parts of central nervous system (C69 -C72)

Code	Malignant neoplasms	Total	Female	Male	Age in years															
					0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70+	
C69	Eye and adnexa (Malignant)	186	86	99	40	23	4	8	4	7	5	4	10	6	10	7	12	11	35	
C70	Meninges (Malignant)	10	8	2					2	1	2		1		1	1		1	1	
C71	Brain	1,276	471	805	33	95	68	72	78	94	130	105	127	110	112	92	82	46	32	
C72	Spinal cord, cranial nerves and other parts of central nervous system	78	24	54	4	3	4	9	6	9	7	3	9	6	3	8	2	1	4	
	Total	1550	589	960	77	121	76	89	90	111	144	112	147	122	126	108	96	59	72	

Thyroid and other endocrine glands (C73-C75)

Code	Malignant neoplasms	Total	Female	Male	Age in years															
					0-4	5 - 9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70 +	
C73	Thyroid gland (Malignant)	572	409	163			2	21	30	50	74	59	53	58	53	49	42	34	47	
C74	Adrenal gland	32	15	17	4		1		1	4	3	5	2	2		4	2	2	2	
C75	Other endocrine glands and related structures	12	2	10					1		2	1		2	4			2		
	Total	616	426	190	4		3	21	32	54	79	65	55	62	57	53	44	38	49	

III-defined, secondary and unspecified sites (C76-C80)

Code	Malignant neoplasms	Total	Female	Male	Age in years														
					0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70 +
C76	Other and ill-defined sites	452	167	285	6	6	12	13	20	18	24	24	37	34	51	34	46	53	74
C77	Secondary and unspecified lymph nodes	149	52	97		1	3	9	8	8	9	10	13	7	18	17	19	12	15
C78	Secondary respiratory and digestive organs	19	7	12					1		1	2	2	2	3	1	5		2
C79	Secondary other sites	10	5	5				1		1	1		1		1		2	1	2
C80	Without specification of site	113	49	64		1		6	3	4	7	5	10	5	18	17	15	9	13
	Total	743	280	463	6	8	15	29	32	31	42	41	63	48	91	69	87	75	106

Lymphoid, hematopoietic and related tissue (C81-C96)

Code	Malignant neoplasms	Total	Female	Male	Age in years														
					00-04	05-09	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70 +
C81	Hodgkin's disease	524	177	347	8	59	74	62	48	38	38	28	32	31	34	28	16	17	11
C82	Follicular [nodular] non-Hodgkin's lymphoma	88	40	48					1	2	4	2	2	7	18	15	10	16	11
C83	Diffuse non-Hodgkin's lymphoma	787	295	492	1	15	17	38	44	28	45	47	50	57	82	95	91	79	98
C84	Peripheral and cutaneous T-cell lymphomas	25	7	18			2	1		1	1	9	3		1	1	1		5
C85	Other and unspecified types of non-Hodgkin's lymphoma	91	30	61				2	3	3	10	6	10	6	12	9	9	8	13
C88	Malignant immunoproliferative diseases	10	3	7					1		2	1	1	2	1		1	1	
C90	Multiple myeloma and malignant plasma cell neoplasms	198	65	133							8	8	14	19	29	29	41	25	25
C91	Lymphoid leukaemia	323	105	218	17	29	31	53	23	21	16	14	16	13	24	16	15	16	19
C92	Myeloid leukaemia	130	53	77	2	1	4	11	12	18	16	14	13	7	13	6	4	2	7
C93	Monocytic leukaemia	2	1	1				1											1
C94	Other leukaemias of specified cell type	4	1	3		1										1	2		
C95	Leukaemia of unspecified cell type	91	22	69	1	11	12	15	4	5	2	6	5	9	3	8	1	3	6
C96	Other and unspecified malignant neoplasms of lymphoid, haematopoietic and related tissue	14	6	8		1	1	1	2	1		1		2	2		1		2
	Total	2,287	805	1,482	29	117	141	184	138	117	142	136	146	153	219	208	192	167	198

Independent (primary) multiple sites (C97)

Code	Malignant neoplasms	Total	Female	Male	Age in years														
					00-04	05-09	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70 +
C97	Malignant neoplasms of independent (primary) multiple sites	19	8	11					1				2		1	5	4	3	3

Stage Distribution (C00-C97)

Code	Malignant neoplasms	STAGE I	STAGE II	STAGE III	STAGE IV	UNSTAGED	Total
C00-C14	Lip, Oral Cavity and pharynx	121	565	1,119	2,749	178	4732
C15-C26	Digestive organs	121	888	2,473	1,996	392	5870
C30-C39	Respiratory and intrathoracic organs	77	270	495	990	96	1928
C40-C41	Bone and Articular cartilage	50	146	109	249	83	637
C43-C44	Melanoma and other of skin	148	290	125	93	92	748
C45-C49	Mesothelial and soft tissue	58	144	246	187	62	697
C50	Breast	304	2,172	3,373	1,582	413	7844
C51-C58	Female genital organs	790	711	942	708	237	3388
C60-C63	Male genital organs	82	190	255	600	83	1210
C64-C68	Urinary tract	141	312	318	372	100	1243
C69-C72	Eye, Brain and Central nervous system	AJCC non specified					1550
C73-C75	Thyroid and other Endocrine glands	181	164	57	129	85	616
C76-C80	Ill-defined, secondary and unspecified sites	AJCC non specified					743
C81-C90	Lymphoid, haematopoietic and related tissue	163	349	654	358	199	1723
C91-C96	Lymphoid, haematopoietic and related tissue	AJCC non specified					564
C97	Independent (primary) multiple sites	AJCC non specified					19
Total		2236	6201	10166	10013	2020	33,512

Lip, oral cavity and pharynx (C00-C14)

Code	Malignant neoplasms	STAGE I	STAGE II	STAGE III	STAGE IV	UNSTAGED	Total
C00	Lip	11	37	39	60	8	155
C01	Base of tongue	5	26	46	91	3	171
C02	Other and unspecified parts of tongue	24	109	195	337	15	680
C03	Gum	2	10	34	89	5	140
C04	Floor of mouth	0	13	13	125	3	154
C05	Palate	3	10	20	48	4	85
C06	Other and unspecified parts of mouth	34	150	275	1,240	23	1722
C07	Parotid gland	8	49	67	73	15	212
C08	Other and unspecified major salivary glands	2	16	21	23	9	71
C09	Tonsil	3	10	20	17	4	54
C10	Oropharynx	3	17	28	92	9	149
C11	Nasopharynx	6	19	115	153	21	314
C12	Piriform sinus	1	1	5	3	3	13
C13	Hypopharynx	6	45	183	252	35	521
C14	Other and ill-defined sites in the lip, oral cavity and pharynx	13	53	58	146	21	291
Total		121	565	1,119	2,749	178	4,732

Digestive organs (C15 -C26)

Code	Malignant neoplasms	STAGE I	STAGE II	STAGE III	STAGE IV	UNSTAGED	Total
C15	Oesophagus	22	277	831	235	94	1459
C16	Stomach	14	69	263	255	55	656
C17	Small intestine	5	12	24	17	3	61
C18	Colon	23	156	295	247	41	762
C19	Rectosigmoid junction	0	14	72	50	12	148
C20	Rectum	15	98	382	171	61	727
C21	Anus and anal canal	7	39	58	28	16	148
C22	Liver and intrahepatic bile ducts	12	124	340	554	54	1084
C23	Gallbladder	11	48	71	164	17	311
C24	Other and unspecified parts of biliary tract	2	3	15	15	6	41
C25	Pancreas	7	41	99	218	25	390
C26	Other and ill-defined digestive organs	3	7	23	42	8	83
Total		121	888	2473	1996	392	5870

Respiratory and intrathoracic organs (C30 -C39)

Code	Malignant neoplasms	STAGE I	STAGE II	STAGE III	STAGE IV	UNSTAGED	Total
C30	Nasal cavity and middle ear	11	32	35	33	18	129
C31	Accessory sinuses	2	4	28	61	3	98
C32	Larynx	46	107	160	201	22	536
C33	Trachea	1				0	1
C34	Bronchus and lung	9	120	254	659	50	1092
C37	Thymus	3	3	5	6	0	17
C38	Heart, mediastinum and pleura	3	3	10	20	2	38
C39	Other and ill-defined sites in the respiratory system and intrathoracic organs	2	1	3	10	1	17
Total		77	270	495	990	96	1928

Bone and articular cartilage (C40 -C41)

Code	Malignant neoplasms	STAGE I	STAGE II	STAGE III	STAGE IV	UNSTAGED	Total
C40	Bone and articular cartilage of limbs	26	90	74	151	42	383
C41	Bone and articular cartilage of other and unspecified sites	24	56	35	98	41	254
Total		50	146	109	249	83	637

Melanoma and other malignant neoplasms of skin (C43 -C44)

Code	Malignant neoplasms	STAGE I	STAGE II	STAGE III	STAGE IV	UNSTAGED	Total
C43	Malignant melanoma of skin	3	7	10	29	7	56
C44	Other malignant neoplasms of skin	145	283	115	64	85	692
Total		148	290	125	93	92	748

Mesothelial and soft tissue (C45 -C49)

Code	Malignant neoplasms	STAGE I	STAGE II	STAGE III	STAGE IV	UNSTAGED	Total
C45	Mesothelioma	1	1	5	18	3	28
C46	Kaposi's sarcoma	0					
C47	Peripheral nerves and autonomic nervous system	3	1	2	4	2	12
C48	Retroperitoneum and peritoneum	0	8	12	12	4	36
C49	Other connective and soft tissue	54	134	227	153	53	621
Total		58	144	246	187	62	697

Breast (C50)

Code	Malignant neoplasms	STAGE I	STAGE II	STAGE III	STAGE IV	UNSTAGED	Total
C50	Breast (Malignant)	304	2,172	3,373	1,582	413	7844

Malignant neoplasms of female genital organs (C51 -C58)

Code	Malignant neoplasms	STAGE I	STAGE II	STAGE III	STAGE IV	UNSTAGED	Total
C51	Vulva	7	21	19	6	9	62
C52	Vagina	3	17	17	5	3	45
C53	Cervix uteri	116	348	240	211	45	960
C54	Corpus uteri	185	52	67	53	8	365
C55	Uterus, part unspecified	182	65	95	76	31	449
C56	Ovary (Malignant)	255	173	490	345	94	1357
C57	Other and unspecified female genital organs	4	3	4	8	4	23
C58	Placenta	38	32	10	4	43	127
Total		790	711	942	708	237	3388

Male genital organs (C60 -C63)

Code	Malignant neoplasms	STAGE I	STAGE II	STAGE III	STAGE IV	UNSTAGED	Total
C60	Penis	1	1	4	2	2	10
C61	Prostate	19	113	125	571	66	894
C62	Testis	60	72	122	25	15	294
C63	Other and unspecified male genital organs	2	4	4	2	0	12
Total		082	190	255	600	083	1210

Urinary tract (C64 - C68)

Code	Malignant neoplasms	STAGE I	STAGE II	STAGE III	STAGE IV	UNSTAGED	Total
C64	Kidney, except renal pelvis	15	40	79	231	35	400
C65	Renal pelvis	2	10	11	22	2	47
C66	Ureter	3	1	2	1	0	7
C67	Bladder	120	260	223	118	62	783
C68	Other and unspecified urinary organs	1	1	3		1	6
Total		141	312	318	372	100	1243

Eye, brain and other parts of central nervous system (C69 -C72)

AJCC non specified (n = 1,550)

Thyroid and other endocrine glands (C73 -C75)

Code	Malignant neoplasms	STAGE I	STAGE II	STAGE III	STAGE IV	UNSTAGED	Total
C73	Thyroid gland (Malignant)	177	158	48	110	79	572
C74	Adrenal gland	2	5	9	16	0	32
C75	Other endocrine glands and related structures	2	1		3	6	12
Total		181	164	57	129	85	616

III-defined, secondary and unspecified sites (C76 -C80)

AJCC non specified (n = 743)

Lymphoid, hematopoietic and related tissue (C81 -C96)

Code	Malignant neoplasms	STAGE I	STAGE II	STAGE III	STAGE IV	UNSTAGED	Total
C81	Hodgkin's disease	61	163	188	83	29	524
C82	Follicular [nodular] non-Hodgkin's lymphoma	5	9	37	27	10	88
C83	Diffuse non-Hodgkin's lymphoma	80	148	318	170	71	787
C84	Peripheral and cutaneous T-cell lymphomas	1	3	9	5	7	25
C85	Other and unspecified types of non-Hodgkin's lymphoma	10	22	26	24	9	91
C88	Malignant immunoproliferative diseases	1	1	2	2	4	10
C90	Multiple myeloma and malignant plasma cell neoplasms	5	3	74	47	69	198
C91	Lymphoid leukaemia	AJCC non specified					323
C92	Myeloid leukaemia	AJCC non specified					130
C93	Monocytic leukaemia	AJCC non specified					2
C94	Other leukaemias of specified cell type	AJCC non specified					4
C95	Leukaemia of unspecified cell type	AJCC non specified					91
C96	Other and unspecified malignant neoplasms of lymphoid, haematopoietic and related tissue	AJCC non specified					14
Total		163	349	654	358	199	2287

Independent (primary) multiple sites (C97)

AJCC non specified (n = 19)

Regional Distribution

Code	Malignant neoplasms	Islamabad	Punjab	Sindh	KP	Balochistan	AJK	GB	Afghanistan	Total
C00-C14	Lip, oral cavity and pharynx	29	1,001	2,781	544	205	48	12	112	4,732
C15-C26	Digestive organs	77	1,732	1,936	1,168	382	89	27	459	5,870
C30-C39	Respiratory and intrathoracic organs	25	701	698	348	65	24	8	59	1,928
C40-C41	Bone and articular cartilage	4	233	146	184	20	12	4	34	637
C43-C44	Melanoma and other malignant neoplasms of skin	7	188	246	205	46	16	4	36	748
C45-C49	Mesothelial and soft tissue	9	198	139	233	45	9	5	59	697
C50	Breast	143	3,934	2,093	1,122	251	92	10	199	7,844
C51-C58	Female genital organs	60	1,486	1,046	575	106	47	9	59	3,388
C60-C63	Male genital organs	18	550	272	268	49	25	7	21	1,210
C64-C68	Urinary tract	15	541	296	281	51	25	5	29	1,243
C69-C72	Eye, brain and other parts of central nervous system	14	634	280	392	69	37	10	114	1,550
C73-C75	Thyroid and other endocrine glands	16	222	231	102	23	11	2	9	616
C76-C80	Ill-defined, secondary and unspecified sites	7	262	264	147	25	12	7	19	743
C81-C96	Lymphoid, hematopoietic and related tissue	22	1,104	293	596	111	35	8	118	2,287
C97	Independent (primary) multiple sites		8	5	5	1				19
Total		446	12,794	10,726	6,170	1,449	482	118	1,327	33,512

Lip, oral cavity and pharynx (C00-C14)

Code	Malignant neoplasms	Islamabad	Punjab	Sindh	KP	Balochistan	AJK	GB	Afghanistan	Total
C00	Lip	1	27	75	28	14		1	9	155
C01	Base of tongue		58	66	24	17	1		5	171
C02	Other and unspecified parts of tongue	2	145	463	48	15	3	1	3	680
C03	Gum	2	18	68	44	1	4		3	140
C04	Floor of mouth		32	28	21	49	1		23	154
C05	Palate		12	62	7	1			3	85
C06	Other and unspecified parts of mouth	2	137	1,455	76	42	8		2	1,722
C07	Parotid gland	1	78	67	42	16	3		5	212
C08	Other and unspecified major salivary glands	1	27	23	16	2	1		1	71
C09	Tonsil	1	10	25	8	4	1		5	54
C10	Oropharynx	1	50	82	10	3	2		1	149
C11	Nasopharynx	3	100	76	68	29	3		35	314
C12	Piriform sinus			9	3			1		13
C13	Hypopharynx	3	151	237	102	9	2	5	12	521
C14	Other and ill-defined sites in the lip, oral cavity and pharynx	12	156	45	47	3	19	4	5	291
Total		29	1001	2781	544	205	48	12	112	4,732

Digestive organs (C15-C26)

Code	Malignant neoplasms	Islamabad	Punjab	Sindh	KP	Balochistan	AJK	GB	Afghanistan	Total
C15	Oesophagus	10	236	516	268	153	13	4	259	1,459
C16	Stomach	13	141	162	192	56	14	7	71	656
C17	Small intestine		16	18	18	5			4	61
C18	Colon	10	299	226	152	27	16	6	26	762
C19	Rectosigmoid junction	4	63	28	39	3	5	1	5	148
C20	Rectum	6	230	238	151	43	19	2	38	727
C21	Anus and anal canal	2	49	59	27	3		1	7	148
C22	Liver and intrahepatic bile ducts	14	411	442	134	55	5	1	22	1,084
C23	Gallbladder	7	117	97	62	14	5	2	7	311
C24	Other and unspecified parts of biliary tract	3	9	20	5	3	1			41
C25	Pancreas	5	131	120	93	20	3	2	16	390
C26	Other and ill-defined digestive organs	3	30	10	27		8	1	4	83
Total		77	1732	1936	1168	382	89	27	459	5,870

Respiratory and intrathoracic organs (C30-C39)

Code	Malignant neoplasms	Islamabad	Punjab	Sindh	KP	Balochistan	AJK	GB	Afghanistan	Total
C30	Nasal cavity and middle ear		50	31	30	5	1	1	11	129
C31	Accessory sinuses	1	33	35	19	1	2	1	6	98
C32	Larynx	4	214	215	72	10	11	2	8	536
C33	Trachea		1							1
C34	Bronchus and lung	19	380	406	196	47	8	4	32	1,092
C37	Thymus	1	10	2	4					17
C38	Heart, mediastinum and pleura		5	9	22	1			1	38
C39	Other and ill-defined sites in the respiratory system and intrathoracic organs		8		5	1	2		1	17
Total		25	701	698	348	65	24	8	59	1,928

Bone and articular cartilage (C40-C41)

Code	Malignant neoplasms	Islamabad	Punjab	Sindh	KP	Balochistan	AJK	GB	Afghanistan	Total
C40	Bone and articular cartilage of limbs	3	157	80	95	10	7	3	28	383
C41	Bone and articular cartilage of other and unspecified sites	1	76	66	89	10	5	1	6	254
Total		4	233	146	184	20	12	4	34	637

Melanoma and other malignant neoplasms of skin (C43-C44)

Code	Malignant neoplasms	Islamabad	Punjab	Sindh	KP	Balochistan	AJK	GB	Afghanistan	Total
C43	Malignant melanoma of skin	1	12	8	27	4	1	1	2	56
C44	Other malignant neoplasms of skin	6	176	238	178	42	15	3	34	692
Total		7	188	246	205	46	16	4	36	748

Mesothelial and soft tissue (C45-C49)

Code	Malignant neoplasms	Islamabad	Punjab	Sindh	KP	Balochistan	AJK	GB	Afghanistan	Total
C45	Mesothelioma	1	4		23					28
C46	Kaposi's sarcoma									
C47	Peripheral nerves and autonomic nervous system		4	1	6				1	12
C48	Retroperitoneum and peritoneum		12	6	12	2		1	3	36
C49	Other connective and soft tissue	8	178	132	192	43	9	4	55	621
Total		9	198	139	233	45	9	5	59	697

Breast (C50)

Code	Malignant neoplasms	Islamabad	Punjab	Sindh	KP	Balochistan	AJK	GB	Afghanistan	Total
C50	Breast (Malignant)	143	3,934	2,093	1,122	251	92	10	199	7,844

Female genital organs (C51 -C58)

Code	Malignant neoplasms	Islamabad	Punjab	Sindh	KP	Balochistan	AJK	GB	Afghanistan	Total
C51	Vulva		32	10	15		2		3	62
C52	Vagina	1	17	14	7	2			4	45
C53	Cervix uteri	11	475	321	107	26	8	2	10	960
C54	Corpus uteri	5	134	184	34	5	1		2	365
C55	Uterus, part unspecified	16	221	73	113	6	12	1	7	449
C56	Ovary (Malignant)	24	581	344	283	65	23	6	31	1,357
C57	Other and unspecified female genital organs	1	13	6	2	1				23
C58	Placenta	2	13	94	14	1	1		2	127
Total		60	1486	1046	575	106	47	9	59	3,388

Male genital organs (C60-C63)

Code	Malignant neoplasms	Islamabad	Punjab	Sindh	KP	Balochistan	AJK	GB	Afghanistan	Total
C60	Penis		3	5	1	1				10
C61	Prostate	14	403	188	217	34	19	4	15	894
C62	Testis	4	134	77	50	14	6	3	6	294
C63	Other and unspecified male genital organs		10	2						12
Total		18	550	272	268	49	25	7	21	1,210

Urinary tract (C64-C68)

Code	Malignant neoplasms	Islamabad	Punjab	Sindh	KP	Balochistan	AJK	GB	Afghanistan	Total
C64	Kidney, except renal pelvis	9	153	77	121	18	4	2	16	400
C65	Renal pelvis		17	13	14	1	2			47
C66	Ureter		3	3			1			7
C67	Bladder	6	365	202	145	32	17	3	13	783
C68	Other and unspecified urinary organs		3	1	1		1			6
Total		15	541	296	281	51	25	5	29	1,243

Eye, brain and other parts of central nervous system (C69-C72)

Code	Malignant neoplasms	Islamabad	Punjab	Sindh	KP	Balochistan	AJK	GB	Afghanistan	Total
C69	Eye and adnexa (Malignant)		49	32	61	17			26	185
C70	Meninges (Malignant)		4	3	3					10
C71	Brain	14	548	235	305	49	34	10	82	1,276
C72	Spinal cord, cranial nerves and other parts of central nervous system		33	10	23	3	3		6	78
Total		14	634	280	392	69	37	10	114	1,550

Thyroid and other endocrine glands (C73-C75)

Code	Malignant neoplasms	Islamabad	Punjab	Sindh	KP	Balochistan	AJK	GB	Afghanistan	Total
C73	Thyroid gland (Malignant)	15	208	219	85	23	11	2	9	572
C74	Adrenal gland		13	3	16					32
C75	Other endocrine glands and related structures	1	1	9	1					12
Total		16	222	231	102	23	11	2	9	616

III-defined, secondary and unspecified sites (C76-C80)

Code	Malignant neoplasms	Islamabad	Punjab	Sindh	KP	Balochistan	AJK	GB	Afghanistan	Total
C76	Other and ill-defined sites	4	183	129	101	10	7	4	14	452
C77	Secondary and unspecified lymph nodes		11	108	16	12	1	1		149
C78	Secondary respiratory and digestive organs		1	12	4	1			1	19
C79	Secondary other sites		1	3	4	1			1	10
C80	Without specification of site	3	66	12	22	1	4	2	3	113
Total		7	262	264	147	25	12	7	19	743

Lymphoid, hematopoietic and related tissue (C81 -C96)

Code	Malignant neoplasms	Islamabad	Punjab	Sindh	KP	Balochistan	AJK	GB	Afghanistan	Total
C81	Hodgkin's disease	6	238	67	136	21	12	3	41	524
C82	Follicular [nodular] non-Hodgkin's lymphoma	3	38	19	23		1		4	88
C83	Diffuse non-Hodgkin's lymphoma	12	395	109	167	58	9	4	33	787
C84	Peripheral and cutaneous T-cell lymphomas	1	7	2	15					25
C85	Other and unspecified types of non-Hodgkin's lymphoma		36	37	10	4	3		1	91
C88	Malignant immunoproliferative diseases		2	5	3					10
C90	Multiple myeloma and malignant plasma cell neoplasms		110	6	65	6	2		9	198
C91	Lymphoid leukaemia		166	19	110	4	2		22	323
C92	Myeloid leukaemia		67	15	26	16			6	130
C93	Monocytic leukaemia		1	1						2
C94	Other leukaemias of specified cell type		4							4
C95	Leukaemia of unspecified cell type		32	9	39	2	6	1	2	91
C96	Other and unspecified malignant neoplasms of lymphoid, haematopoietic and related tissue		8	4	2					14
Total		22	1,104	293	596	111	35	8	118	2,287

Independent (primary) multiple sites (C97)

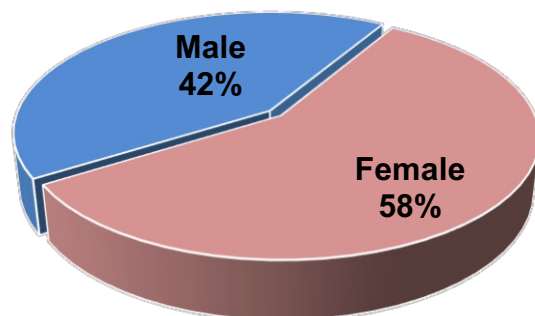
Code	Malignant neoplasms	Islamabad	Punjab	Sindh	KP	Balochistan	AJK	GB	Afghanistan	Total
C97	Malignant neoplasms of independent (primary) multiple sites		8	5	5	1				19

2021

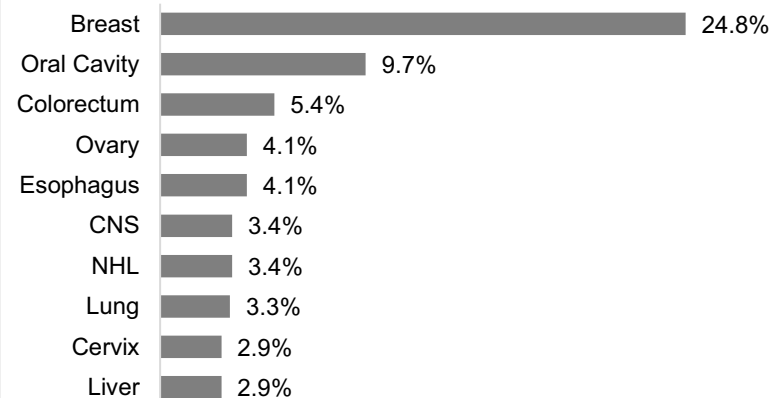


Top Ten Cancers Gender Wise

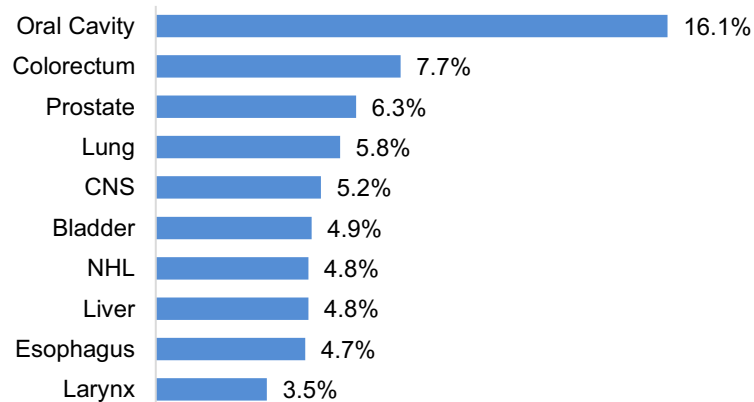
**Cancer Incidence Male to Female Ratio
(n=39,358)**



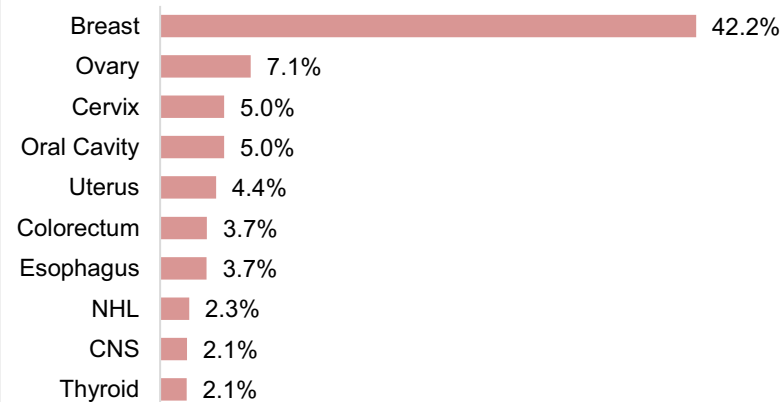
Leading Cancers in the Population (n=39,358)



Leading Cancers in Males (n=16,701)

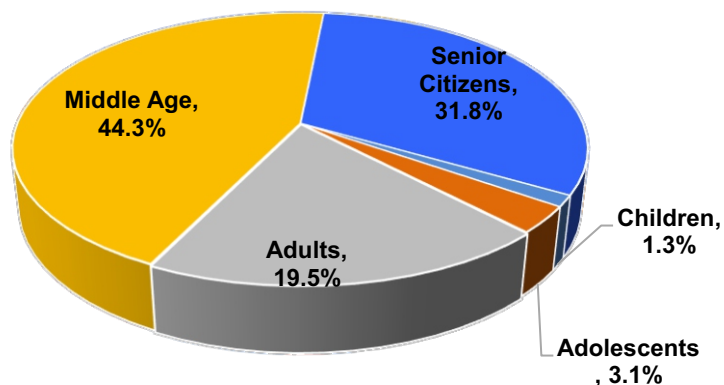


Leading Cancers in Females (n=22,657)

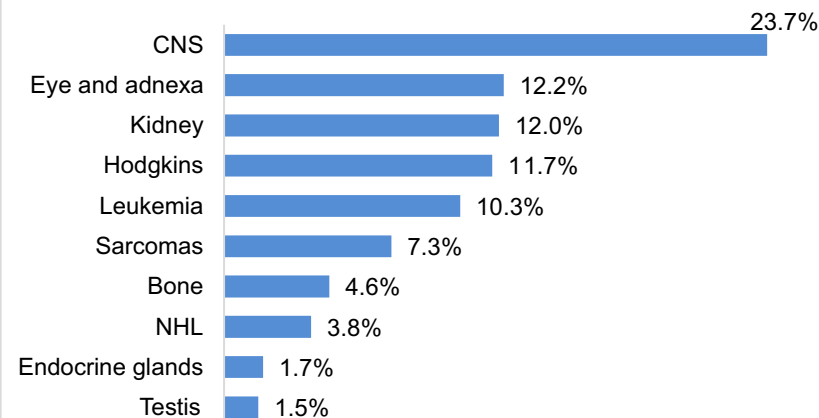


Top Ten Cancers Age Wise

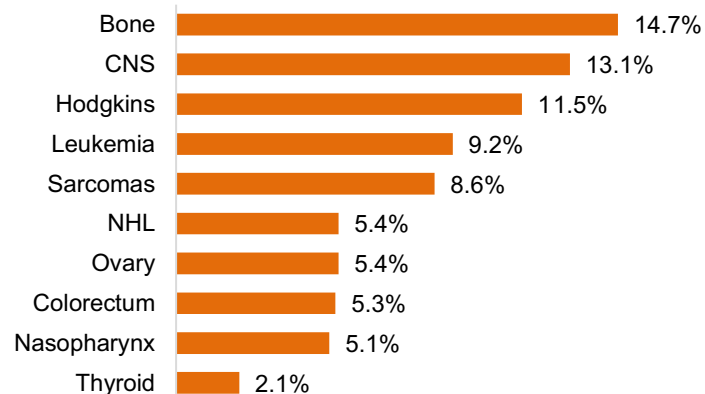
Age-wise Distribution of Patients (n=39,358)



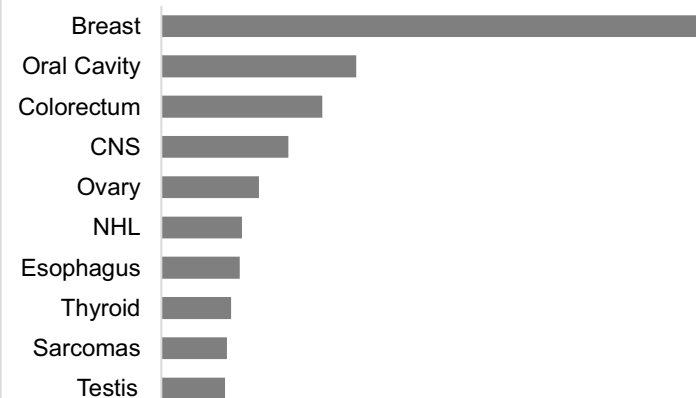
Leading Cancers in Children (0-9 yrs) n=522



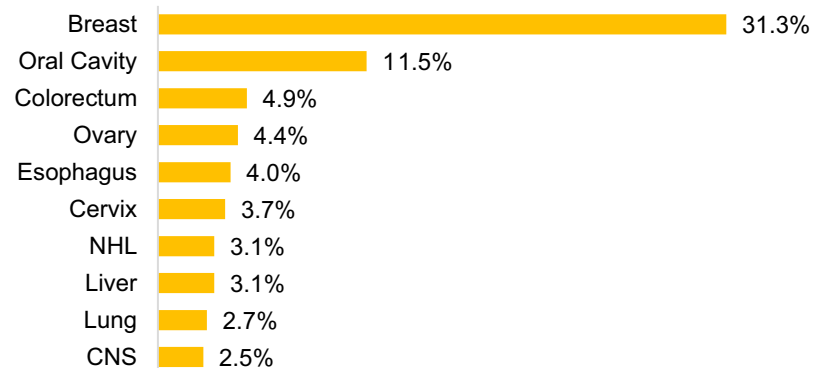
Leading Cancers in Adolescents (10-19 yrs) n=1,235



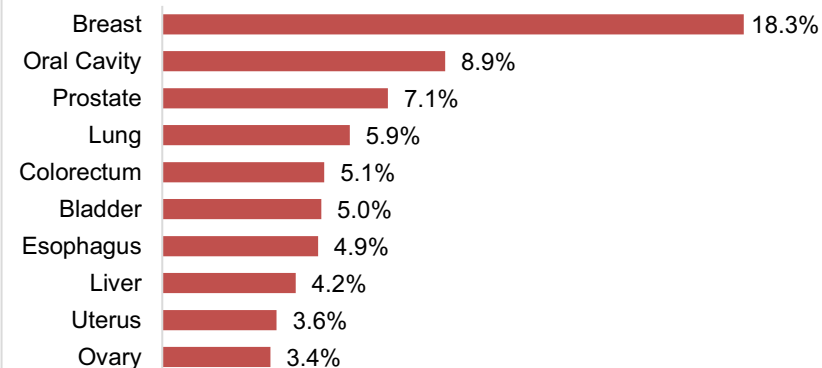
Leading Cancers in Adults (20-39 yrs) n=7,659



Leading Cancers in Middle Age (40-59 yrs)
n=17,432



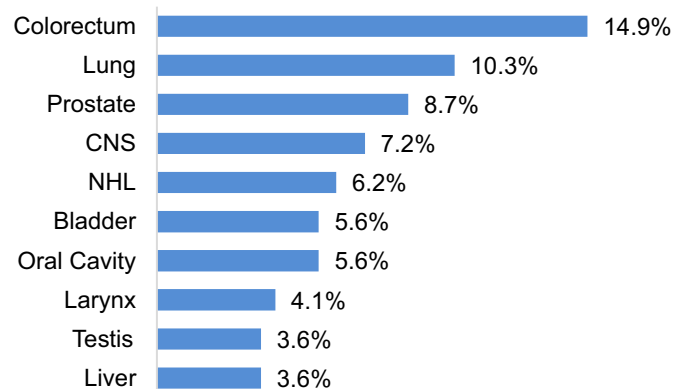
Leading Cancers in Senior Citizens (> 60 yrs)
n=12,510



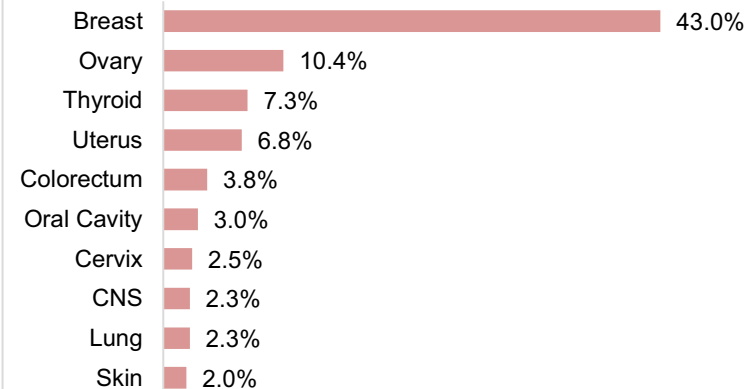
Top Ten Cancers Region Wise

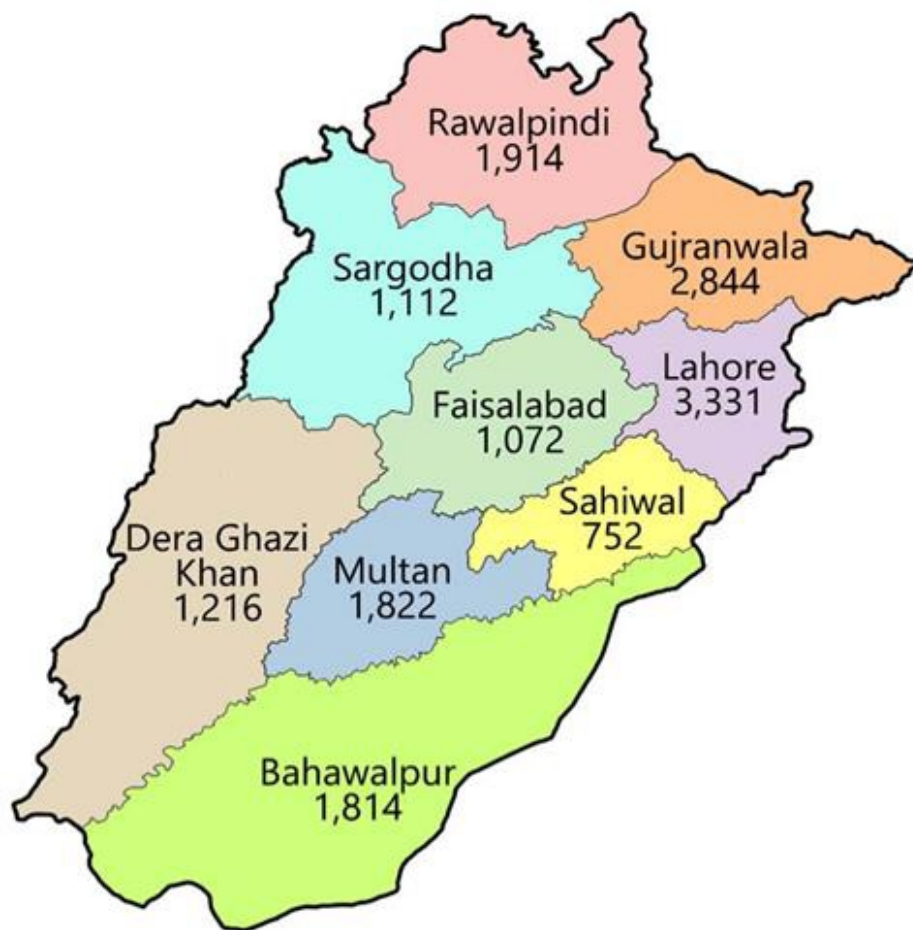
Islamabad (n=590)

Leading Cancers in Males from Islamabad
(n=195)



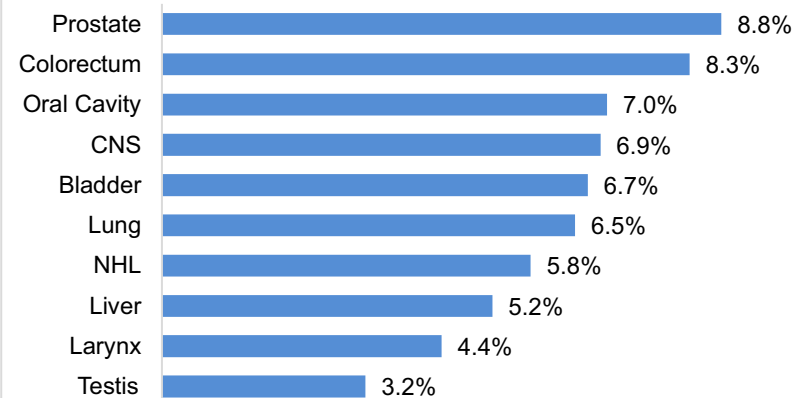
Leading Cancers in Female from Islamabad
(n=395)



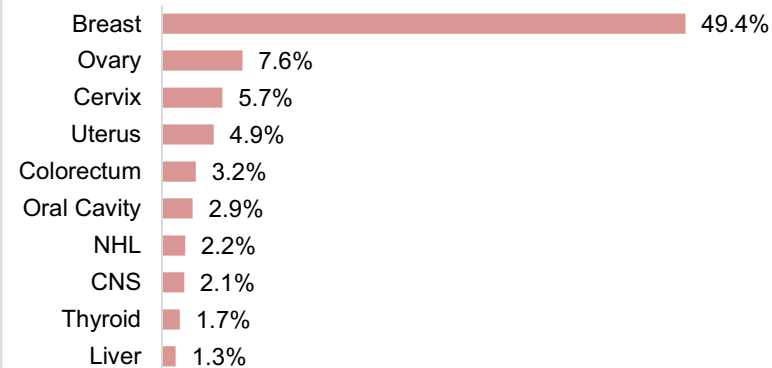


Number of Cancer Patients from Different Divisions of Punjab

Leading Cancers in Males from Punjab (n=5906)



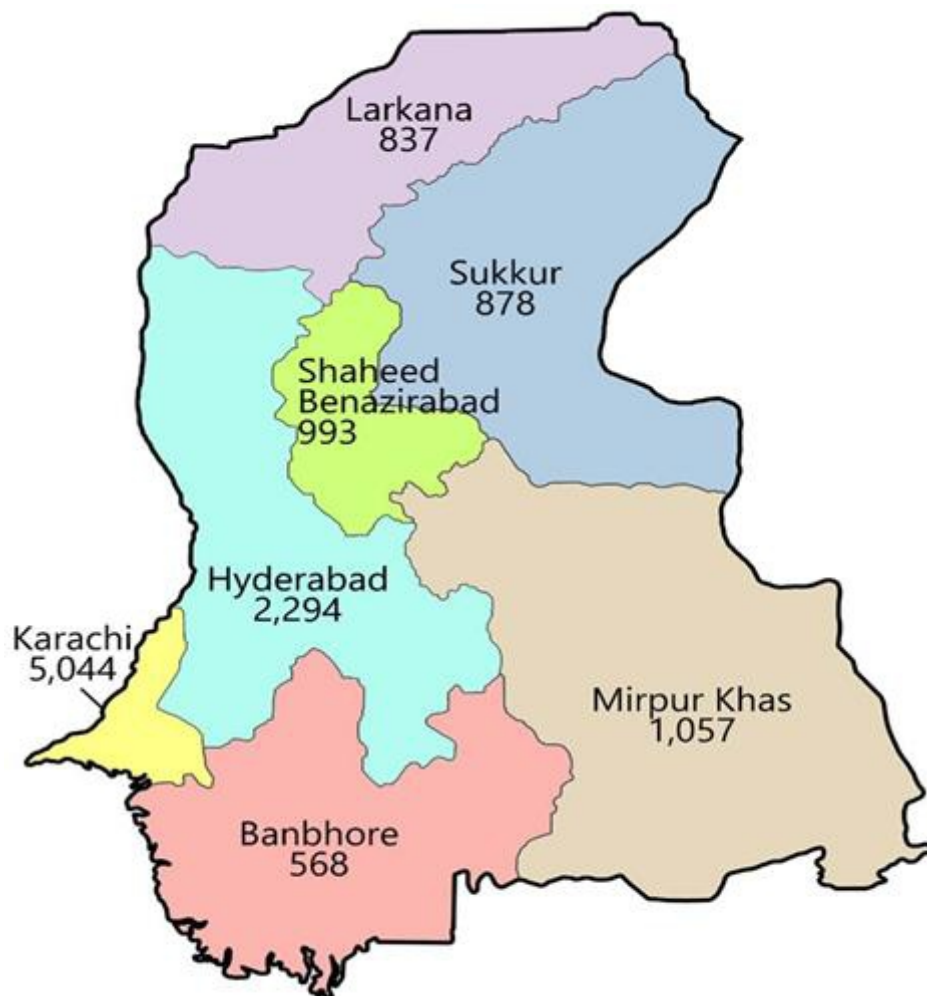
Leading Cancers in Females from Punjab (n=9971)



Cancer Patients from Different Districts of Punjab

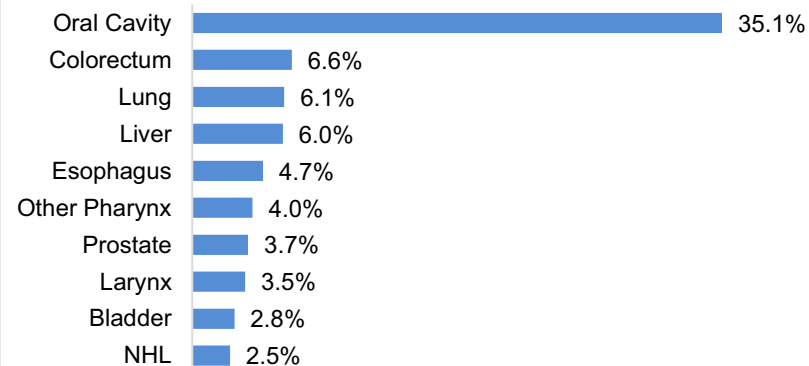
Division	District	Females	Males	Total
Bahawalpur	Bahawalnagar	281	187	468
	Bahawalpur	443	314	757
	Rahim Yar Khan	338	251	589
D G Khan	Dera Ghazi Khan	185	174	359
	Layyah	147	96	243
	Muzaffargarh	238	201	439
	Rajanpur	83	92	175
Faisalabad	Chiniot	41	21	62
	Faisalabad	444	183	627
	Jhang	152	65	217
	Toba Tek Singh	119	47	166
Gujranwala	Gujranwala	686	342	1028
	Gujrat	354	178	532
	Hafizabad	105	50	155
	Mandi Bahauddin	133	72	205
	Narowal	98	58	156
	Sialkot	521	247	768

Division	District	Females	Males	Total
Lahore	Kasur	207	139	346
	Lahore	1,637	925	2562
	Nankana Sahib	77	35	112
	Sheikhupura	205	106	311
Multan	Khanewal	238	148	386
	Lodhran	145	100	245
	Multan	535	274	809
	Vehari	238	144	382
Rawalpindi	Attock	197	142	339
	Chakwal	161	78	239
	Jhelum	140	87	227
	Rawalpindi	715	394	1109
Sahiwal	Okara	168	138	306
	Pakpattan	84	69	153
	Sahiwal	181	112	293
Sargodha	Bhakkar	185	136	321
	Khushab	103	56	159
	Mianwali	151	104	255
	Sargodha	235	142	377

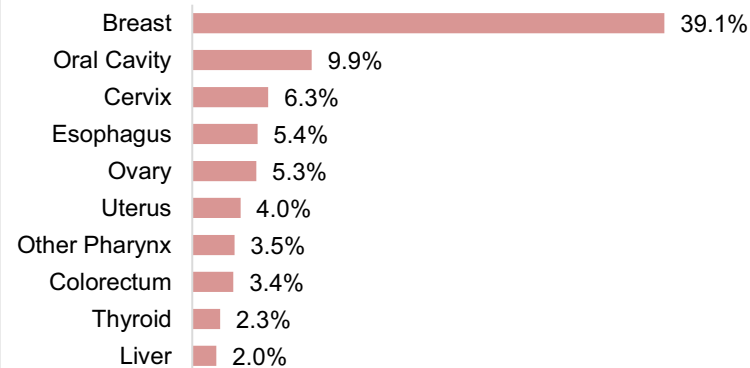


Number of Cancer Patients from Different Divisions of Sindh

Leading Cancers in Males from Sindh (n=5,492)



Leading Cancers in Females from Sindh (n=6,088)



Cancer Patients from Different Districts of Sindh

Division	District	Females	Males	Total
Banbhore	Badin	156	167	323
	Sujawal	14	14	28
	Thatta	105	112	217
Hyderabad	Dadu	213	149	362
	Hyderabad	517	503	1020
	Jamshoro	158	151	309
	Matari	131	115	246
	Tando Allahyar	89	111	200
	Tando Muhammad Khan	80	77	157
Karachi	Karachi Central	780	547	1327
	Karachi East	637	497	1134
	Karachi South	356	369	725
	Karachi West	441	383	824
	Keamari		1	1
	Korangi	219	232	451
	Malir	321	261	582

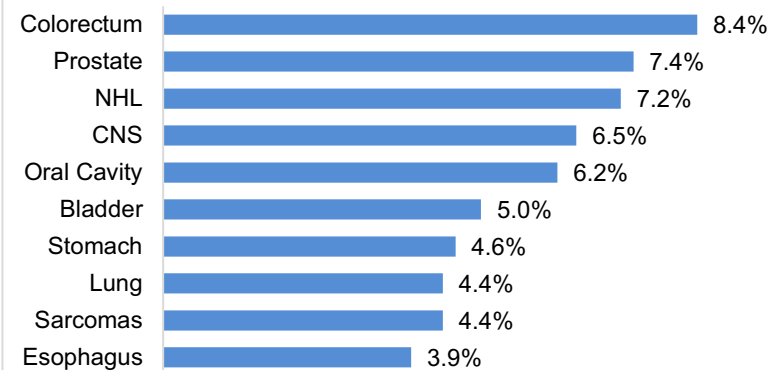
Division	District	Females	Males	Total
Larkana	Jacobabad	58	54	112
	Kashmore	63	71	134
	Larkana	167	134	301
	Qambar Shahdadkot	98	62	160
	Shikarpur	75	55	130
Mirpur Khas	Mirpur Khas	139	151	290
	Sanghar	276	279	555
	Tharparkar	39	63	102
	Umerkot	51	59	110
Shaheed Benazir Abad	Naushahro Firoze	234	197	431
	Shaheed Benazir Abad	271	291	562
Sukkur	Ghotki	63	80	143
	Khairpur	222	187	409
	Sukkur	114	121	235

Khyber Pakhtunkhwa (n=7,131)

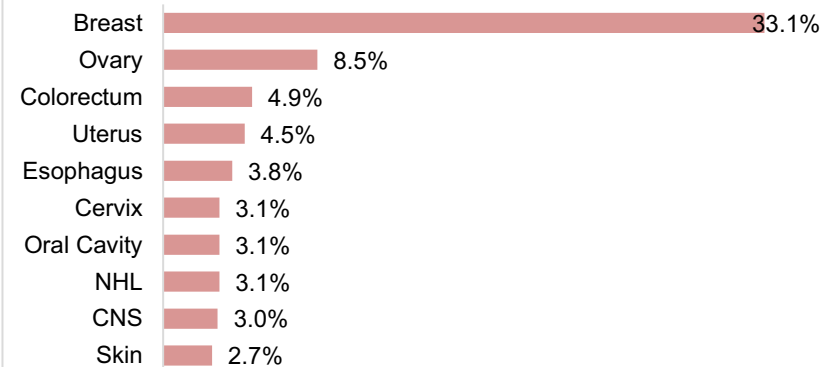


Number of Cancer Patients from Different Divisions of Khyber Pukhtoonkhwa

Leading Cancers in Males from Khyber Pukhtoonkhwa (n=3,171)



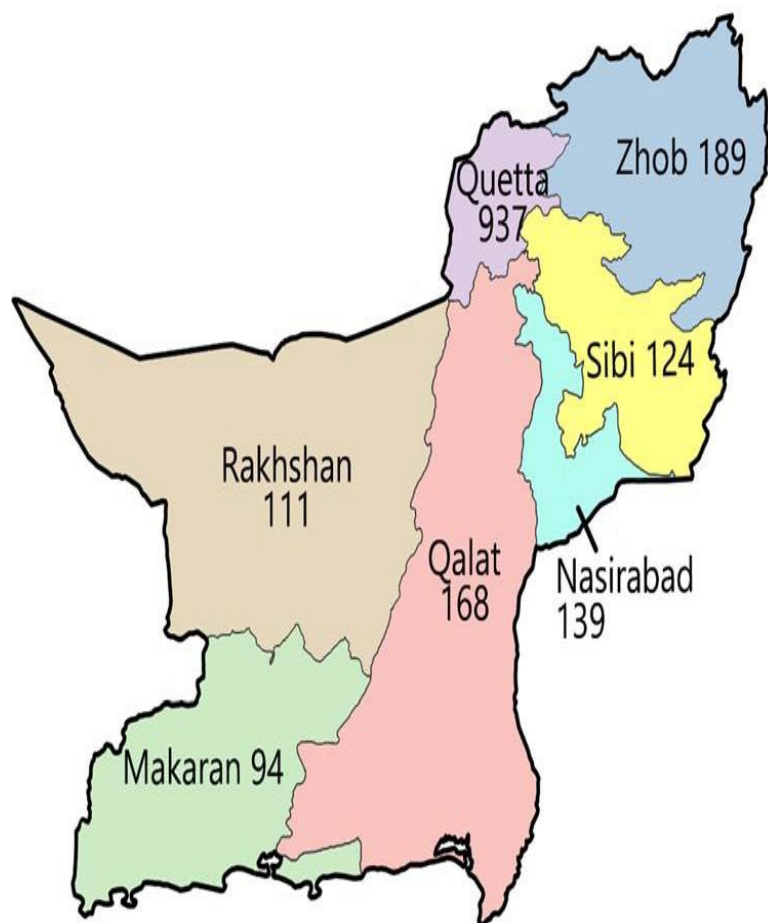
Leading Cancers in Females from Khyber Pukhtoonkhwa (n=3,960)



Cancer Patients from Different Districts of KP

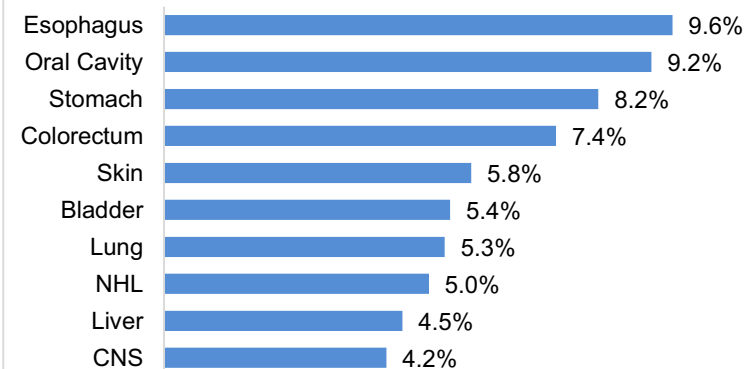
Division	District	Females	Males	Total
Bannu	Bannu	132	88	220
	Lakki Marwat	88	60	148
	North Waziristan Agency	60	51	111
D I Khan	Dera Ismail Khan	250	168	418
	South Waziristan Agency	71	90	161
	Tank	53	37	90
Hazara	Abbottabad	265	198	463
	Battagram	38	47	85
	Haripur	205	120	325
	Kolai Palas	2		2
	Lower Kohistan	17	26	43
	Mansehra	249	236	485
	Torghar	3	7	10
	Upper Kohistan	9	20	29
Kohat	Hangu	51	24	75
	Karak	48	48	96
	Kohat	106	68	174
	Kurram	61	59	120
	Orakzai	30	20	50

Division	District	Females	Males	Total
Malakand	Bajaur	79	71	150
	Buner	78	78	156
	Lower Chitral	16	14	30
	Lower Dir	143	149	292
	Malakand	87	64	151
	Shangla	63	54	117
	Swat	288	284	572
	Upper Chitral	17	9	26
Mardan	Upper Dir	70	77	147
	Mardan	257	210	467
Peshawar	Swabi	168	128	296
	Charsadda	188	150	338
	Khyber	77	63	140
	Mohmand	61	56	117
	Nowshera	182	97	279
	Peshawar	448	300	748

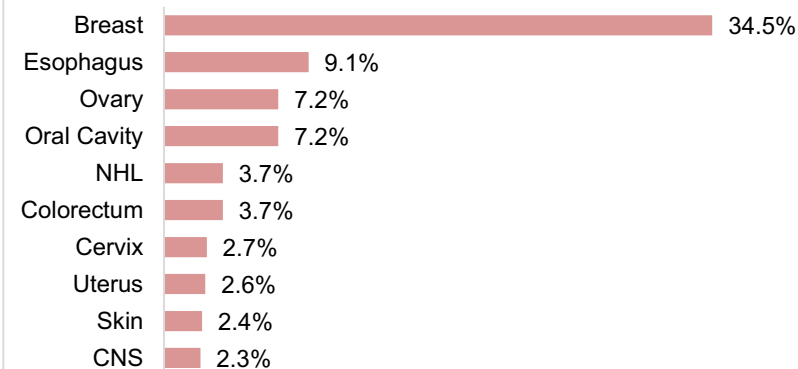


Number of Cancer Patients from Different Divisions of Balochistan

Leading Cancers in Males from Balochistan (n=794)



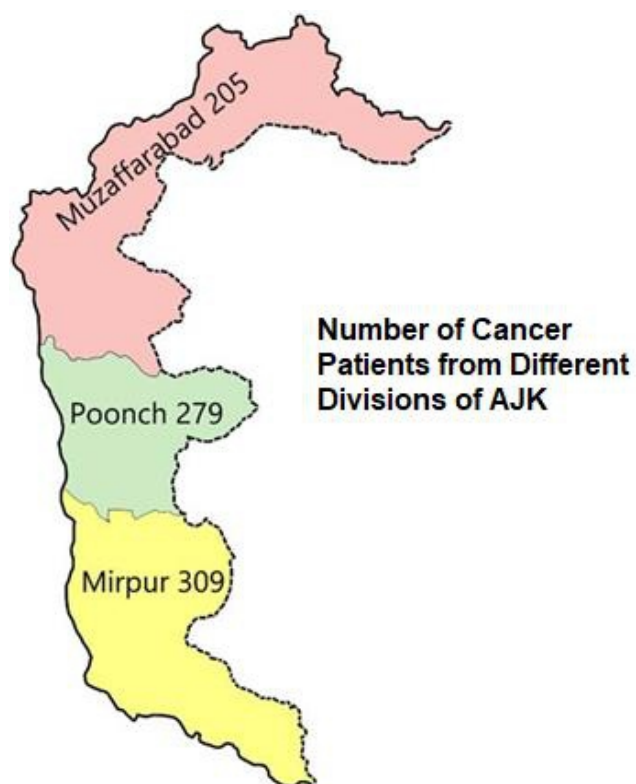
Leading Cancers in Females from Balochistan (n=968)



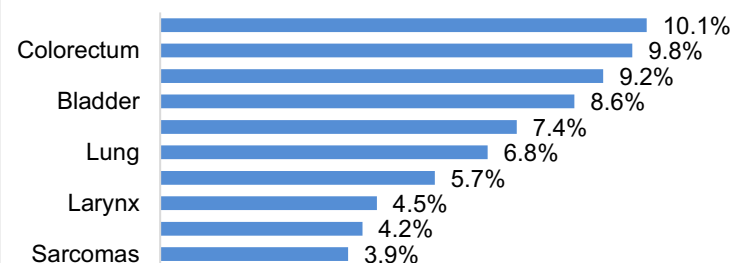
Cancer Patients from Different Districts of Balochistan

Division	District	Females	Males	Total
Kalat	Awaran	7	9	16
	Kalat	15	12	27
	Khuzdar	19	30	49
	Lasbela	9	20	29
	Mastung	25	20	45
	Shaeed Sikandarabad	2		2
Makran	Gwadar	21	14	35
	Kech (Turbat)	22	14	36
	Panjgur	10	13	23
Nasirabad	Jafarabad	29	14	43
	Jhal Magsi	4	4	8
	Kachhi (Bolan)	16	10	26
	Lehri	2	1	3
	Nasirabad	27	21	48
	Sohbatpur	7	4	11
Quetta	Qilla Abdullah	59	50	512
	Pishin	47	50	98
	Quetta	422	309	784

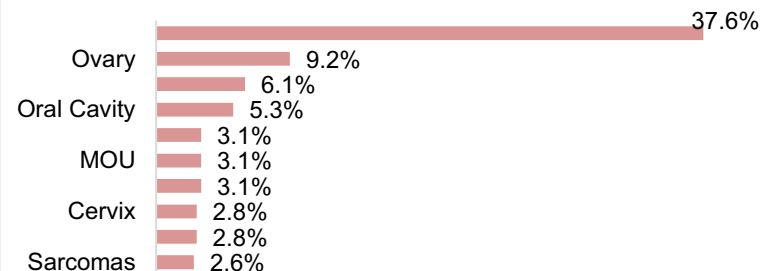
Division	District	Females	Males	Total
Rakhshan	Chagai	25	14	39
	Kharan	18	8	26
	Nushki	24	8	32
	Washuk	9	5	14
Sibi	Dera Bugti	9	7	16
	Harnai	5	4	9
	Kohlu	6	19	25
	Sibi	24	18	42
	Ziarat	14	18w	32
Zhob	Barkhan	11	12	23
	Duki	2	2	4
	Qilla Saifullah	20	17	37
	Loralai	26	29	55
	Musakhel	5	8	13
	Sherani	2	3	5
	Zhob	25	27	52



Leading Cancers in Males from Azad Jammu & Kashmir (n=336)



Leading Cancers in Females from Azad Jammu & Kashmir (n=457)

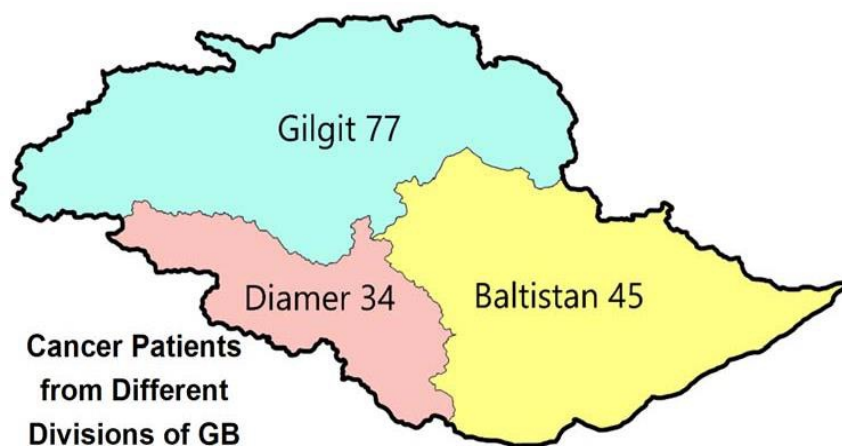


Cancer Patients from Different Districts of AJK

Division	District	Females	Males	Total
Mirpur	Bhimber	41	27	68
	Kotli	81	61	142
	Mirpur	60	39	99
Muzaffarabad	Hattian Bala	21	12	33
	Muzaffarabad	88	49	138
	Neelum	17	18	35

Division	District	Females	Males	Total
Poonch	Bagh	45	39	84
	Haveli	6	8	14
	Poonch	61	50	112
	Sudhnati	37	33	70

Gilgit-Baltistan (n=156)



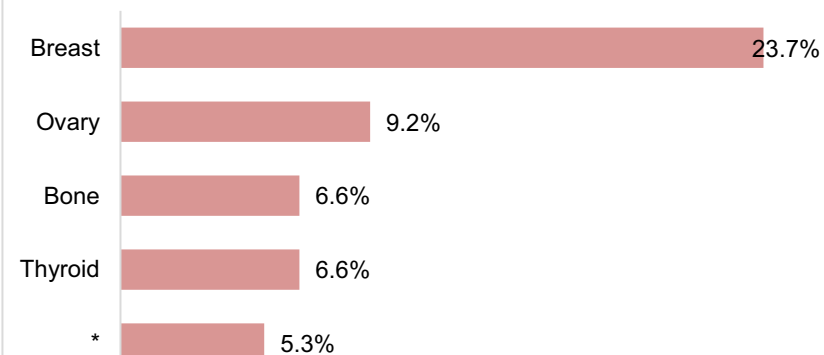
Cancer Patients from Different Districts of GB

Division	District	Females	Males	Total
Baltistan	Ghanche	6	3	9
	Kharmang	1	4	5
	Rondu	1	1	2
	Shigar		1	1
Diamer	Skardu	11	17	28
	Astore	6	4	10
	Diamer	9	13	22
	Tangir		2	2
Gilgit	Ghizer	8	5	13
	Gilgit	26	23	49
	Gupis-Yaseen	1		1
	Hunza	5	6	11
	Nagar	2	1	3

Leading Cancers in Males from Gilgit Baltistan (n=80)

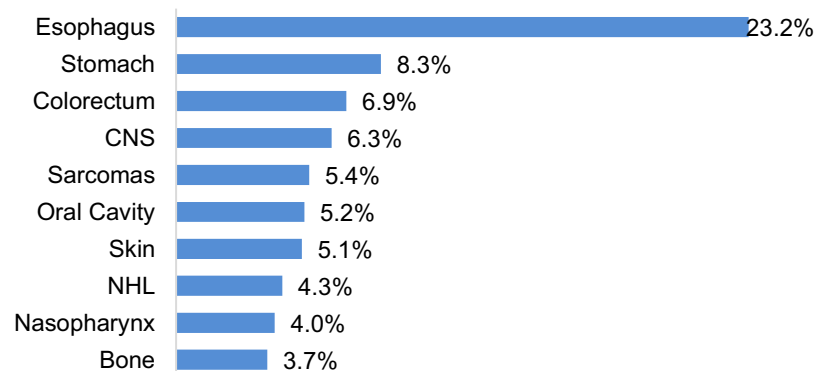


Leading Cancers in Females from Gilgit Baltistan (n=76)

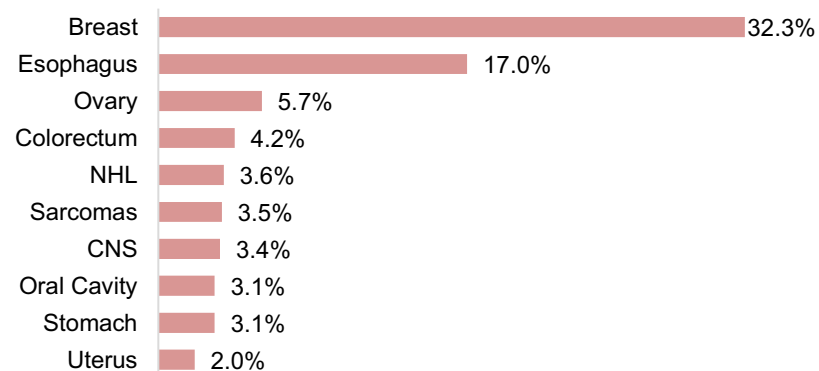


*Lung, NHL, Skin, Cervix

**Leading Cancers in Males from Afghanistan
(n=727)**



**Leading Cancers in Females from Afghanistan
(n=742)**



Gender & Age Wise Distribution (C00-C97)

Codes	Malignant Neoplasm	Age in years (BOTH GENDERS)																Total
		00-04	05-09	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70 +		
C00- C14	Lip, oral cavity and pharynx	2	4	26	71	68	153	311	503	639	625	817	619	536	451	540	5365	
C15- C26	Digestive organs	1	5	15	77	164	218	336	460	511	649	900	873	886	736	854	6686	
C30- C39	Respiratory and intrathoracic organs	3	4	4	21	23	40	59	94	128	177	295	304	402	346	463	2,363	
C40- C41	Bone and articular cartilage	5	19	67	115	87	51	48	33	40	42	39	28	40	22	29	665	
C43- C44	Melanoma and other malignant neoplasms of skin		2	5	12	18	12	32	45	54	62	67	66	77	91	201	744	
C45- C49	Mesothelial and soft tissue	17	21	44	65	56	51	67	73	69	82	80	75	68	64	78	910	
C50	Breast			1	3	61	290	636	1017	1371	1394	1503	1183	968	668	649	9744	
C51- C58	Female genital organs	1		11	78	106	169	187	296	405	483	550	486	522	387	381	4,062	
C60- C63	Male genital organs	7	1	2	22	57	63	69	46	41	48	57	106	158	235	519	1,431	
C64- C68	Urinary tract	34	31	7	7	9	17	24	40	82	117	184	209	246	227	325	1,559	
C69- C72	Eye, brain and other parts of central nervous system	73	115	75	99	95	104	162	139	117	124	120	121	96	65	75	1580	
C73- C75	Thyroid and other endocrine glands	4	7	2	26	35	69	93	70	70	60	57	53	46	34	48	674	
C76- C80	Ill-defined, secondary and unspecified sites	7	21	18	35	28	33	51	67	66	82	76	67	110	74	74	809	
C81- C96	Lymphoid, hematopoietic and related tissue	32	103	143	182	138	150	170	161	201	196	293	258	241	217	253	2738	
C97	Independent (primary) multiple sites	2			2	1		3	1	2	1	4	4	2	3	3	28	
Total		189	333	420	815	946	1,420	2,248	3,045	3,796	4,142	5,042	4,452	4,398	3,620	4,492	39,358	

Codes	Malignant Neoplasm	Age in years (MALES)															Total
		00-04	05-09	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70 +	
C00- C14	Lip, oral cavity and pharynx	2	1	22	32	38	98	219	396	448	413	553	412	321	261	317	3,533
C15- C26	Digestive organs		2	13	43	99	114	172	261	264	355	515	521	524	449	545	3,877
C30- C39	Respiratory and intrathoracic organs	2		1	15	17	27	41	58	77	123	208	247	305	275	381	1,777
C40- C41	Bone and articular cartilage	3	7	34	71	58	34	30	18	25	29	19	15	18	19	12	392
C43- C44	Melanoma and other malignant neoplasms of skin		1	4	5	9	8	21	25	26	30	41	29	42	55	123	419
C45- C49	Mesothelial and soft tissue	12	13	25	37	29	31	38	39	37	43	53	47	47	35	52	538
C50	Breast							5	12	26	26	28	28	19	19	31	194
C51- C58	Female genital organs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C60- C63	Male genital organs	7	1	2	22	57	63	69	46	41	48	57	106	158	235	519	1,431
C64- C68	Urinary tract	14	15	2	6	4	7	13	22	57	81	130	168	189	179	267	1,154
C69- C72	Eye, brain and other parts of central nervous system	43	77	42	58	57	67	112	96	76	86	74	74	57	46	39	1,004
C73- C75	Thyroid and other endocrine glands	3	2	1	7	3	15	11	19	21	13	18	17	13	11	21	175
C76- C80	Ill-defined, secondary and unspecified sites	5	14	13	20	17	20	28	36	32	40	46	40	75	42	43	471
C81- C96	Lymphoid, hematopoietic and related tissue	24	73	99	117	84	92	96	112	118	128	175	162	156	130	154	1,720
C97	Independent (primary) multiple sites	2						2	1			3	3		2	3	16
Total		117	206	258	433	472	576	857	1,141	1,248	1,415	1,920	1,869	1,924	1,758	2,507	16,701

Codes	Malignant Neoplasm	Age in years (FEMALES)															Total
		00-04	05-09	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70 +	
C00- C14	Lip, oral cavity and pharynx	1	3	4	39	30	54	92	107	191	212	264	207	215	190	223	1,832
C15- C26	Digestive organs	1	3	2	34	65	105	164	199	247	294	385	352	362	287	309	2,809
C30- C39	Respiratory and intrathoracic organs	1	4	3	6	6	13	18	36	51	54	87	57	97	71	82	586
C40- C41	Bone and articular cartilage	2	12	33	44	29	17	18	15	15	13	20	13	22	3	17	273
C43- C44	Melanoma and other malignant neoplasms of skin		1	1	7	9	4	11	20	28	32	26	37	35	36	78	325
C45- C49	Mesothelial and soft tissue	5	8	19	28	27	20	29	34	32	39	27	28	21	29	26	372
C50	Breast			1	3	61	290	631	1,005	1,345	1,368	1,475	1,155	949	649	618	9,550
C51- C58	Female genital organs	1		11	78	106	169	187	296	405	483	550	486	522	387	381	4,062
C60- C63	Male genital organs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C64- C68	Urinary tract	20	16	5	1	5	10	11	18	25	36	54	41	57	48	58	405
C69- C72	Eye, brain and other parts of central nervous system	30	38	33	41	38	37	50	43	41	38	46	47	39	19	36	576
C73- C75	Thyroid and other endocrine glands	1	5	1	19	32	54	82	51	49	47	39	36	33	23	27	499
C76- C80	Ill-defined, secondary and unspecified sites	2	7	5	15	11	13	23	31	34	42	30	27	35	32	31	338
C81- C96	Lymphoid, hematopoietic and related tissue	8	30	44	65	54	58	74	49	83	68	118	96	85	87	99	1,018
C97	Independent (primary) multiple sites				2	1		1		2	1	1	1	2	1		12
Total		72	127	162	382	474	844	1,391	1,904	2,548	2,727	3,122	2,583	2,474	1,862	1,985	22,657

Lip, oral cavity and pharynx (C00-C14)

Codes	Malignant Neoplasm	Total	Female	Male	Age in years															
					0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70 +	
C00	Lip	189	71	118						3	6	13	18	14	25	20	28	22	40	
C01	Base of tongue	173	62	111				1	1	2	10	22	12	18	27	25	22	16	17	
C02	Other and unspecified parts of tongue	768	259	509	1			3	4	18	55	88	94	90	146	82	68	58	61	
C03	Gum	138	39	99						4	4	8	13	15	17	13	21	22	21	
C04	Floor of mouth	131	54	77				1			5	5	10	13	19	17	12	14	35	
C05	Palate	141	51	90		1	1	1	4	2	9	7	18	21	15	19	15	16	12	
C06	Other and unspecified parts of mouth	1912	439	1,472			1	2	15	50	117	212	273	246	327	219	178	136	135	
C07	Parotid gland	239	96	143			4	9	9	14	18	17	27	21	27	24	20	21	28	
C08	Other and unspecified major salivary glands	95	42	53			1			6	5	7	15	9	14	9	12	6	11	
C09	Tonsil	56	27	29		1		1	2	3	1	2	4	2	8	11	4	11	6	
C10	Oropharynx	173	66	107				2	3	4	7	14	17	16	18	27	27	12	26	
C11	Nasopharynx	372	122	250	1		18	45	16	13	19	36	34	45	45	36	22	20	22	
C12	Piriform sinus	30	15	15					1	2	2	1	3	6	2	3	5	1	4	
C13	Hypopharynx	567	326	241				5	11	27	42	51	65	74	72	61	56	47	56	
C14	Other and ill-defined sites in the lip, oral cavity and pharynx	382	163	219		2	1	1	2	5	11	20	36	35	55	53	46	49	66	
	Total	5365	1832	3533	2	4	26	71	68	153	311	503	639	625	817	619	536	451	540	

Digestive organs (C15 -C26)

Codes	Malignant Neoplasm	Total	Female	Male	Age in years															
					0-4	5 - 9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70 +	
C15	Oesophagus	1614	830	784			2	14	32	55	84	115	134	164	220	180	219	172	223	
C16	Stomach	784	266	518				3	7	15	41	56	66	71	108	113	99	93	112	
C17	Small intestine	98	35	63		1	1	1	10	3	6	8	11	11	10	14	9	6	7	
C18	Colon	848	336	512		1	5	22	22	40	51	72	81	75	114	102	109	78	76	
C19	Rectosigmoid junction	222	93	129		1	1	8	8	18	20	18	19	16	20	22	19	22	30	
C20	Rectum	921	358	563			6	22	66	58	75	99	81	93	74	82	85	84	96	
C21	Anus and anal canal	137	48	89	1			2	2	6	11	14	15	15	23	14	8	11	15	
C22	Liver and intrahepatic bile ducts	1133	334	799		2		3	9	12	15	32	39	104	193	201	207	150	166	
C23	Gallbladder	401	283	118					2	2	14	19	29	32	64	69	61	60	49	
C24	Other and unspecified parts of biliary tract	44	16	28								1	5	8	10	9	3	5	3	
C25	Pancreas	394	175	219				1	4	4	15	19	25	50	53	54	55	51	63	
C26	Other and ill-defined digestive organs	90	35	55				1	2	5	4	7	6	10	12	13	12	4	14	
	Total	6686	2809	3877	1	5	15	77	164	218	336	460	511	649	901	873	886	736	854	

Respiratory and intrathoracic organs (C30 -C39)

Code	Malignant neoplasms	Total	Female	Male	Age (years)														
					00-04	05-09	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70 +
C30	Nasal cavity and middle ear	167	66	101	2	1	4	8	3	5	10	11	11	16	16	17	24	10	29
C31	Accessory sinuses	122	52	71				2	3	4	4	5	13	13	19	15	16	14	14
C32	Larynx	672	93	578				2	4	7	14	18	30	61	87	103	107	94	145
C33	Trachea	5	4	1											2			2	1
C34	Bronchus and lung	1306	344	962	1			6	3	13	28	48	68	84	158	167	249	220	261
C37	Thymus	20	7	13				1	1	1	1	4	3	1	2		3	1	2
C38	Heart, mediastinum and pleura	56	15	41		1		2	7	10	2	8	3	2	6	1	2	4	8
C39	Other and ill-defined sites in the respiratory System and intrathoracic organs	15	5	10		2			2						5	1	1	1	3
	Total	2363	586	1777	3	4	4	21	23	40	59	94	128	177	295	304	402	346	463

Bone and articular cartilage (C40-C41)

Code	Malignant neoplasms	Total	Female	Male	Age (years)														
					00-04	05-09	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70 +
C40	Bone and articular cartilage of limbs	387	155	232	3	10	39	89	56	32	26	14	22	29	14	16	16	7	14
C41	Bone and articular cartilage of other and unspecified sites	278	118	160	2	9	28	26	31	19	22	19	18	13	25	12	24	15	15
	Total	665	273	392	5	19	67	115	87	51	48	33	40	42	39	28	40	22	29

Melanoma and other malignant neoplasms of skin (C43-C44)

Code	Malignant neoplasms	Total	Female	Male	Age (years)														
					00-04	05-09	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70 +
C43	Malignant melanoma of skin	91	46	45			1	1	6	2	4	9	9	7	8	10	6	10	18
C44	Other malignant neoplasms of skin	653	279	374		2	4	11	12	10	28	36	45	55	59	56	71	81	183
	Total	744	325	419	0	2	5	12	18	12	32	45	54	62	67	66	77	91	201

Mesothelial and soft tissue (C45-C49)

Code	Malignant neoplasms	Total	Female	Male	Age (years)														
					00-04	05-09	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70+
C45	Mesothelioma	76	32	44					1	1	2	5	8	3	12	10	11	10	13
C46	Kaposi's sarcoma	1	1															1	
C47	Peripheral nerves and autonomic nervous system	13	6	7		1		1	1	2		2	1	1	1	2		1	
C48	Retroperitoneum and peritoneum	65	32	33	1		2	2	3	2	5	5	4	12	5	10	4	5	5
C49	Other connective and soft tissue	755	301	454	16	20	42	62	51	46	60	61	56	66	62	53	53	47	60
	Total	909	371	538	17	21	44	65	56	51	67	73	69	82	80	75	68	64	78

Breast (C50)

Code	Malignant neoplasms	Total	Female	Male	Age (years)														
					00-04	05-09	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70 +
C50	Breast (Malignant)	9744	9,550	194			1	3	61	290	636	1,017	1,371	1,394	1,503	1,183	968	668	649

Female genital organs (C51-C58)

Code	Malignant neoplasms	Total	Age (years)														
			00-04	05-09	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70 +
C51	Vulva	71						2	4	2	6	3	7	6	8	14	19
C52	Vagina	53					1	2	3	6	3	5	5	7	5	4	12
C53	Cervix uteri	1142				2	5	14	32	94	149	160	197	145	138	103	103
C54	Corpus uteri	433					4	11	12	20	32	35	58	63	85	61	52
C55	Uterus, part unspecified	567				6	12	17	15	25	28	52	74	85	101	81	71
C56	Ovary (Malignant)	1616	1		11	56	51	86	88	130	175	219	202	174	182	122	119
C57	Other and unspecified female genital organs	34				1	3	1	1	2	5	4	3	5	2	2	5
C58	Placenta	146				13	30	36	32	17	7	5	4	1	1		
	Total	4062	1	0	11	78	106	169	187	296	405	483	550	486	522	387	381

Male genital organs (C60-C63)

Code	Malignant neoplasms	Total	Age (years)														
			00-04	05-09	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70 +
C60	Penis	5											1	1	1	1	1
C61	Prostate	1047								2	2	20	38	96	147	229	513
C62	Testis	370	7	1	2	22	56	62	67	44	39	28	17	9	7	5	4
C63	Other and unspecified male genital organs	9					1	1	2				1		3		1
	Total	1431	7	1	2	22	57	63	69	46	41	48	57	106	158	235	519

Urinary tract (C64-C68)

Code	Malignant neoplasms	Total	Female	Male	Age (years)														
					00-04	05-09	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70 +
C64	Kidney, except renal pelvis	474	171	303	31	26	6	6	5	10	9	18	40	58	63	56	63	48	35
C65	Renal pelvis	55	25	30	2	4	1			1	1	4	1	3	11	6	5	10	6
C66	Ureter	6	5	1						1							3	1	1
C67	Bladder	1015	198	817	1	1		1	4	5	14	17	41	55	109	147	174	167	279
C68	Other and unspecified urinary organs	9	6	3								1		1	1		1	1	4
	Total	1559	405	1154	34	31	7	7	9	17	24	40	82	117	184	209	246	227	325

Eye, brain and other parts of central nervous system (C69-C72)

Code	Malignant neoplasms	Total	Female	Male	Age (years)														
					00-04	05-09	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70 +
C69	Eye and adnexa (Malignant)	232	94	138	37	27	2	9	11	7	13	8	9	12	10	13	20	21	33
C70	Meninges (Malignant)	3	3										2	1					
C71	Brain	1248	445	803	32	88	68	76	80	89	133	122	98	108	105	99	68	43	39
C72	Spinal cord, cranial nerves and other parts of central nervous system	97	34	63	4		4	14	4	8	16	10	8	3	5	9	8	1	3
	Total	1580	576	1004	73	115	74	99	95	104	162	140	117	124	120	121	96	65	75

Thyroid and other endocrine glands (C73-C75)

Code	Malignant neoplasms	Total	Female	Male	Age (years)														
					00-04	05-09	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70 +
C73	Thyroid gland (Malignant)	624	473	151		2	2	24	35	67	85	66	64	57	51	49	41	33	48
C74	Adrenal gland	37	21	16	4	5		1		1	7	4	4		5	3	3		
C75	Other endocrine glands and related structures	13	5	8				1		1	1		2	3	1	1	2	1	
	Total	674	499	175	4	7	2	26	35	69	93	70	70	60	57	53	46	34	48

III-defined, secondary and unspecified sites (C76 -C80)

Code	Malignant neoplasms	Total	Female	Male	Age (years)														
					00-04	05-09	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70 +
C76	Other and ill-defined sites	475	199	276	5	11	6	19	13	21	29	36	35	49	49	38	71	43	50
C77	Secondary and unspecified lymph nodes	185	75	110		7	11	7	10	7	12	16	15	17	17	13	22	21	10
C78	Secondary respiratory and digestive organs	11	3	8								3		1		2		2	3
C79	Secondary other sites	49	22	27	1	2		3	3	2	5	7	3	8	3	3	4	2	3
C80	Without specification of site	89	39	50	1	1	1	6	2	3	5	5	13	7	7	11	13	6	8
	Total	809	338	471	7	21	18	35	28	33	51	67	66	82	76	67	110	74	74

Lymphoid, hematopoietic and related tissue (C81 -C96)

Code	Malignant neoplasms	Total	Female	Male	Age (years)														
					00-04	05-09	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70 +
C81	Hodgkin's disease	566	197	369	9	52	73	70	50	38	30	30	44	34	39	26	27	19	25
C82	Follicular [nodular] non-Hodgkin's lymphoma	90	39	51					1	2	9	5	6	4	21	16	11	10	5
C83	Diffuse non-Hodgkin's lymphoma	1070	425	645	2	10	15	36	45	54	67	68	83	101	125	116	116	99	133
C84	Peripheral and cutaneous T-cell lymphomas	47	9	38		4	2	2	5	3	5	2	3	4	5		4	2	6
C85	Other and unspecified types of non-Hodgkin's lymphoma	99	37	62	1	2	3	8	3	2	10	5	9	5	19	12	10	5	5
C88	Malignant immunoproliferative diseases	14	9	5				1	2		1		4	1	1	1	1		2
C90	Multiple myeloma and malignant plasma cell neoplasms	250	83	167						3	1	14	19	19	41	39	37	36	41
C91	Lymphoid leukaemia	327	111	216	13	28	24	43	15	14	21	14	17	12	24	27	21	32	22
C92	Myeloid leukaemia	151	63	88	2		7	12	13	21	13	19	10	10	11	12	8	7	6
C93	Monocytic leukaemia	2	2							2									
C94	Other leukaemias of specified cell type	2	1	1						1									1
C95	Leukaemia of unspecified cell type	112	40	72	5	6	19	9	4	10	12	4	5	6	6	7	5	7	7
C96	Other and unspecified malignant neoplasms of lymphoid, haematopoietic and related tissue	8	2	6		1		1			1		1		1	2	1		
	Total	2738	1018	1720	32	103	143	182	138	150	170	161	201	196	293	258	241	217	253

Independent (primary) multiple sites (C97)

Code	Malignant neoplasms	Total	Female	Male	Age (years)														
					00-04	05-09	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70 +
C97	Malignant neoplasms of independent (primary) multiple sites	28	12	16	2			2	1		3	1	2	1	4	4	2	3	3

Stage Distribution

Code	Malignant neoplasms	STAGE I	STAGE II	STAGE III	STAGE IV	UNSTAGED	Total
C00-C14	Lip, Oral Cavity and pharynx	144	585	1,329	3,075	232	5365
C15-C26	Digestive organs	130	837	2,859	2,399	461	6686
C30-C39	Respiratory and intrathoracic organs	99	210	627	1,278	149	2,363
C40-C41	Bone and Articular cartilage	46	150	154	236	79	665
C43-C44	Melanoma and other of skin	141	210	162	122	109	744
C45-C49	Mesothelial and soft tissue	82	172	246	301	109	910
C50	Breast	368	2,508	4,045	2,127	696	9744
C51-C58	Female genital organs	966	619	1,206	922	349	4,062
C60-C63	Male genital organs	109	197	301	697	127	1,431
C64-C68	Urinary tract	199	321	423	495	121	1,559
C69-C72	Eye, Brain and Central nervous system	AJCC non specified					1580
C73-C75	Thyroid and other Endocrine glands	255	118	86	137	78	674
C76-C80	III-defined, secondary and unspecified sites	AJCC non specified					809
C81-C90	Lymphoid, haematopoietic and related tissue	228	420	780	464	244	2136
C91-C96	Lymphoid, haematopoietic and related tissue	AJCC non specified					602
C97	Independent (primary) multiple sites	AJCC non specified					28
Total		2767	6347	12218	12253	2754	39358

Lip, oral cavity and pharynx (C00 -C14)

Code	Malignant neoplasms	STAGE I	STAGE II	STAGE III	STAGE IV	UNSTAGED	Total
C00	Lip	13	45	53	60	18	189
C01	Base of tongue	5	26	43	95	4	173
C02	Other and unspecified parts of tongue	26	97	197	429	19	768
C03	Gum	3	12	33	85	5	138
C04	Floor of mouth		10	10	103	8	131
C05	Palate	6	14	40	76	5	141
C06	Other and unspecified parts of mouth	46	161	365	1314	25	1911
C07	Parotid gland	9	63	71	75	21	239
C08	Other and unspecified major salivary glands	3	14	27	41	10	95
C09	Tonsil	5	14	20	10	7	56
C10	Oropharynx	1	16	41	104	11	173
C11	Nasopharynx	9	24	120	195	24	372
C12	Piriform sinus		2	11	17		30
C13	Hypopharynx	9	37	210	281	30	567
C14	Other and ill-defined sites in the lip, oral cavity and pharynx	9	50	88	190	45	382
Total		144	585	1329	3075	232	5365

Digestive organs (C15 -C26)

Code	Malignant neoplasms	STAGE I	STAGE II	STAGE III	STAGE IV	UNSTAGED	Total
C15	Oesophagus	14	254	964	292	91	1615
C16	Stomach	15	78	297	341	53	784
C17	Small intestine	9	14	32	34	9	98
C18	Colon	19	144	350	283	52	848
C19	Rectosigmoid junction	2	23	106	75	16	222
C20	Rectum	16	118	499	233	55	921
C21	Anus and anal canal	4	26	68	22	17	137
C22	Liver and intrahepatic bile ducts	12	86	358	574	102	1132
C23	Gallbladder	15	42	79	241	24	401
C24	Other and unspecified parts of biliary tract	3	6	9	20	6	44
C25	Pancreas	17	37	81	235	24	394
C26	Other and ill-defined digestive organs	4	10	16	48	12	90
Total		130	838	2859	2398	461	6686

Respiratory and intrathoracic organs (C30 -C39)

Code	Malignant neoplasms	STAGE I	STAGE II	STAGE III	STAGE IV	UNSTAGED	Total
C30	Nasal cavity and middle ear	15	33	48	50	21	167
C31	Accessory sinuses	3	12	37	53	17	122
C32	Larynx	71	76	225	263	37	672
C33	Trachea	0	2	0	2	1	5
C34	Bronchus and lung	5	81	296	868	56	1306
C37	Thymus	3	2	2	7	6	20
C38	Heart, mediastinum and pleura	2	4	18	25	7	56
C39	Other and ill-defined sites in the respiratory system and intrathoracic organs	0	0	1	10	4	15
Total		99	210	627	1278	149	2363

Bone and articular cartilage (C40-C41)

Code	Malignant neoplasms	STAGE I	STAGE II	STAGE III	STAGE IV	UNSTAGED	Total
C40	Bone and articular cartilage of limbs	18	93	93	140	43	387
C41	Bone and articular cartilage of other and unspecified sites	28	57	61	96	36	278
Total		46	150	154	236	79	665

Melanoma and other malignant neoplasms of skin (C43-C44)

Code	Malignant neoplasms	STAGE I	STAGE II	STAGE III	STAGE IV	UNSTAGED	Total
C43	Malignant melanoma of skin	8	12	19	40	12	91
C44	Other malignant neoplasms of skin	133	198	143	82	97	653
Total		141	210	162	122	109	744

Mesothelial and soft tissue (C45-C49)

Code	Malignant neoplasms	STAGE I	STAGE II	STAGE III	STAGE IV	UNSTAGED	Total
C45	Mesothelioma		1	14	59	4	78
C46	Kaposi's sarcoma				1		1
C47	Peripheral nerves and autonomic nervous system	3	1		3	6	13
C48	Retroperitoneum and peritoneum	4	4	22	26	10	66
C49	Other connective and soft tissue	75	166	210	212	89	752
Total		82	172	246	301	109	910

Breast (C50)

Code	Malignant neoplasms	STAGE I	STAGE II	STAGE III	STAGE IV	UNSTAGED	Total
C50	Breast (Malignant)	368	2,508	4,045	2,127	696	9744

Female genital organs (C51-C58)

Code	Malignant neoplasms	STAGE I	STAGE II	STAGE III	STAGE IV	UNSTAGED	Total
C51	Vulva	10	10	24	17	10	71
C52	Vagina	4	6	23	15	5	53
C53	Cervix uteri	165	291	322	276	88	1,142
C54	Corpus uteri	196	64	94	57	22	433
C55	Uterus, part unspecified	199	86	130	104	48	567
C56	Ovary (Malignant)	338	127	594	427	130	1,616
C57	Other and unspecified female genital organs	6	2	7	13	6	34
C58	Placenta	48	33	12	13	40	146
Total		966	619	1,206	922	349	4,062

Male genital organs (C60-C63)

Code	Malignant neoplasms	STAGE I	STAGE II	STAGE III	STAGE IV	UNSTAGED	Total
C60	Penis	1	2	1	0	1	5
C61	Prostate	19	118	158	660	92	1,047
C62	Testis	89	76	137	37	31	370
C63	Other and unspecified male genital organs	0	1	5	0	3	9
Total		109	197	301	697	127	1,431

Urinary tract (C64-C68)

Code	Malignant neoplasms	STAGE I	STAGE II	STAGE III	STAGE IV	UNSTAGED	Total
C64	Kidney, except renal pelvis	22	49	97	281	25	474
C65	Renal pelvis	2	4	12	33	4	55
C66	Ureter	0	1	2	1	2	6
C67	Bladder	173	266	309	178	89	1015
C68	Other and unspecified urinary organs	2	1	3	2	1	9
Total		199	321	423	495	121	1559

Eye, brain and other parts of central nervous system (C69-C72)

AJCC non specified (n = 1,580)

Thyroid and other endocrine glands (C73-C75)

Code	Malignant neoplasms	STAGE I	STAGE II	STAGE III	STAGE IV	UNSTAGED	Total
C73	Thyroid gland (Malignant)	250	110	74	121	69	624
C74	Adrenal gland	2	7	11	13	4	37
C75	Other endocrine glands and related structures	3	1	1	3	5	13
Total		255	118	86	137	78	674

III-defined, secondary and unspecified sites (C76-C80)

AJCC non specified (n = 809)

Lymphoid, hematopoietic and related tissue (C81-C96)

Code	Malignant neoplasms	STAGE I	STAGE II	STAGE III	STAGE IV	UNSTAGED	Total
C81	Hodgkin's disease	73	147	196	107	43	566
C82	Follicular [nodular] non-Hodgkin's lymphoma	6	11	44	21	8	90
C83	Diffuse non-Hodgkin's lymphoma	111	238	388	250	83	1070
C84	Peripheral and cutaneous T-cell lymphomas	7	8	17	9	6	47
C85	Other and unspecified types of non-Hodgkin's lymphoma	16	9	35	26	13	99
C88	Malignant immunoproliferative diseases	2	0	2	6	4	14
C90	Multiple myeloma and malignant plasma cell neoplasms	13	7	98	45	87	250
C91	Lymphoid leukaemia	AJCC non specified					327
C92	Myeloid leukaemia	AJCC non specified					151
C93	Monocytic leukaemia	AJCC non specified					2
C94	Other leukaemias of specified cell type	AJCC non specified					2
C95	Leukaemia of unspecified cell type	AJCC non specified					112
C96	Other and unspecified malignant neoplasms of lymphoid, haematopoietic and related tissue	AJCC non specified					8
Total		228	420	780	464	244	2738

Independent (primary) multiple sites (C97)

AJCC non specified (n = 28)

Regional Distribution

Code	Malignant neoplasms	Islamabad	Punjab	Sindh	KP	Balochistan	AJK	GB	Afghanistan	Total
C00-C14	Lip, oral cavity and pharynx	40	1,128	3,154	608	227	75	12	121	5,365
C15-C26	Digestive organs	93	2,087	2,037	1,356	431	161	24	497	6,686
C30-C39	Respiratory and intrathoracic organs	39	921	758	434	92	55	12	52	2,363
C40-C41	Bone and articular cartilage	7	263	124	193	23	8	7	40	665
C43-C44	Melanoma and other malignant neoplasms of skin	11	214	180	198	69	16	7	49	744
C45-C49	Mesothelial and soft tissue	9	318	142	294	48	25	5	69	910
C50	Breast	171	5,033	2,424	1,342	338	176	18	242	9,744
C51-C58	Female genital organs	84	1,908	1,084	687	128	78	15	78	4,062
C60-C63	Male genital organs	24	711	293	291	41	37	7	27	1,431
C64-C68	Urinary tract	19	705	316	334	82	47	11	45	1,559
C69-C72	Eye, brain and other parts of central nervous system	26	695	267	371	82	34	11	94	1,580
C73-C75	Thyroid and other endocrine glands	34	242	185	136	35	11	9	22	674
C76-C80	Ill-defined, secondary and unspecified sites	5	393	220	128	16	22	5	20	809
C81-C96	Lymphoid, hematopoietic and related tissue	28	1,241	395	751	150	47	13	113	2,738
C97	Independent (primary) multiple sites		18	1	8		1			28
Total		590	15,877	11,580	7,131	1,762	793	156	1,469	39,358

Lip, oral cavity and pharynx (C00-C14)

Code	Malignant neoplasms	Islamabad	Pun jab	Sindh	KP	Balochistan	AJK	GB	Afghanistan	Total
C00	Lip		38	95	31	7	2	1	15	189
C01	Base of tongue	2	64	64	21	13	2		7	173
C02	Other and unspecified parts of tongue	3	147	543	40	17	9	1	8	768
C03	Gum	2	22	68	34		5		7	138
C04	Floor of mouth		26	17	17	54	1		16	131
C05	Palate	1	16	102	16	3	2		1	141
C06	Other and unspecified parts of mouth	2	148	1,613	86	42	16	1	3	1,911
C07	Parotid gland	2	96	59	51	19	1	4	7	239
C08	Other and unspecified major salivary glands	3	44	29	19					95
C09	Tonsil	1	8	22	17	2		1	5	56
C10	Oropharynx		37	108	18	3	4		3	173
C11	Nasopharynx	9	100	103	79	39	6	2	34	372
C12	Piriform sinus		2	24	3				1	30
C13	Hypopharynx	2	145	280	103	21	6		10	567
C14	Other and ill-defined sites in the lip, oral cavity and pharynx	13	235	27	73	7	21	2	4	382
Total		40	1,128	3,154	608	227	75	12	121	5,365

Digestive organs (C15-C26)

Code	Malignant neoplasms	Islamabad	Pun jab	Sindh	KP	Balochistan	AJK	GB	Afghanistan	Total
C15	Oesophagus	9	265	583	274	164	19	5	295	1,614
C16	Stomach	7	163	175	227	83	39	7	83	784
C17	Small intestine	2	32	30	23	5	3		3	98
C18	Colon	12	360	207	169	46	18	5	31	848
C19	Rectosigmoid junction	10	101	32	61	6	7		5	222
C20	Rectum	20	304	280	207	34	32	2	41	920
C21	Anus and anal canal	2	44	51	23	9	4		4	137
C22	Liver and intrahepatic bile ducts	14	445	447	148	45	19		16	1,134
C23	Gallbladder	7	148	99	110	17	7	3	10	401
C24	Other and unspecified parts of biliary tract		16	16	7	3	2			44
C25	Pancreas	6	158	107	87	17	9	2	8	394
C26	Other and ill-defined digestive organs	4	51	10	20	2	2		1	90
Total		93	2087	2037	1356	431	161	24	497	6,686

Respiratory and intrathoracic organs (C30-C39)

Code	Malignant neoplasms	Islamabad	Punjab	Sindh	KP	Balochistan	AJK	GB	Afghanistan	Total
C30	Nasal cavity and middle ear		67	43	40	9	2	1	5	167
C31	Accessory sinuses	1	37	40	40		1		3	122
C32	Larynx	9	298	230	87	20	15	1	12	672
C33	Trachea		2	1	2					5
C34	Bronchus and lung	29	496	423	228	62	33	10	25	1,306
C37	Thymus		7	3	6	1	1		2	20
C38	Heart, mediastinum and pleura		8	18	26		1		3	56
C39	Other and ill-defined sites in the respiratory system and intrathoracic organs		6		5		2		2	15
Total		39	921	758	434	92	55	12	52	2,363

Bone and articular cartilage (C40-C41)

Code	Malignant neoplasms	Islamabad	Punjab	Sindh	KP	Balochistan	AJK	GB	Afghanistan	Total
C40	Bone and articular cartilage of limbs	2	165	58	107	17	4	5	29	387
C41	Bone and articular cartilage of other and unspecified sites	5	98	66	86	6	4	2	11	278
Total		7	263	124	193	23	8	7	40	665

Melanoma and other malignant neoplasms of skin (C43-C44)

Code	Malignant neoplasms	Islamabad	Punjab	Sindh	KP	Balochistan	AJK	GB	Afghanistan	Total
C43	Malignant melanoma of skin	1	27	12	30	5	4	1	11	91
C44	Other malignant neoplasms of skin	10	187	168	168	64	12	6	38	653
Total		11	214	180	198	69	16	7	49	744

Mesothelial and soft tissue (C45-C49)

Code	Malignant neoplasms	Islamabad	Punjab	Sindh	KP	Balochistan	AJK	GB	Afghanistan	Total
C45	Mesothelioma		4	3	63	1		1	4	76
C46	Kaposi's sarcoma				1					1
C47	Peripheral nerves and autonomic nervous system		5	3	3		1		1	13
C48	Retroperitoneum and peritoneum	2	23	7	20	6	4	1	2	65
C49	Other connective and soft tissue	7	286	129	207	41	20	3	62	755
Total		9	318	142	294	48	25	5	69	910

Breast (C50)

Code	Malignant neoplasms	Islamabad	Punjab	Sindh	KP	Balochistan	AJK	GB	Afghanistan	Total
C50	Breast (Malignant)	171	5,033	2,424	1,342	338	176	18	242	9,744

Female genital organs (C51 -C58)

Code	Malignant neoplasms	Islamabad	Punjab	Sindh	KP	Balochistan	AJK	GB	Afghanistan	Total
C51	Vulva	1	36	11	13	2	5		3	71
C52	Vagina		12	25	10	3	1		2	53
C53	Cervix uteri	10	570	383	123	26	13	4	13	1,142
C54	Corpus uteri	3	200	163	50	9	3	1	4	433
C55	Uterus, part unspecified	24	290	83	130	16	11	2	11	567
C56	Ovary (Malignant)	41	754	323	337	70	42	7	42	1,616
C57	Other and unspecified female genital organs	2	16	9	6	1				34
C58	Placenta	3	30	87	18	1	3	1	3	146
Total		84	1908	1084	687	128	78	15	78	4062

Male genital organs (C60-C63)

Code	Malignant neoplasms	Islamabad	Punjab	Sindh	KP	Balochistan	AJK	GB	Afghanistan	Total
C60	Penis		2	3						5
C61	Prostate	17	515	205	234	28	31	5	12	1,047
C62	Testis	7	191	83	54	12	6	2	15	370
C63	Other and unspecified male genital organs		3	2	3	1				9
Total		24	711	293	291	41	37	7	27	1431

Urinary tract (C64-C68)

Code	Malignant neoplasms	Islamabad	Punjab	Sindh	KP	Balochistan	AJK	GB	Afghanistan	Total
C64	Kidney, except renal pelvis	7	185	93	125	31	8	4	21	474
C65	Renal pelvis		18	12	21		3		1	55
C66	Ureter		3	1	1		1			6
C67	Bladder	12	496	207	186	50	35	7	22	1,015
C68	Other and unspecified urinary organs		3	3	1	1			1	9
Total		19	705	316	334	82	47	11	45	1559

Eye, brain and other parts of central nervous system (C69-C72)

Code	Malignant neoplasms	Islamabad	Punjab	Sindh	KP	Balochistan	AJK	GB	Afghanistan	Total
C69	Eye and adnexa (Malignant)	3	80	49	47	27	2	1	23	232
C70	Meninges (Malignant)		3							3
C71	Brain	22	556	201	308	51	31	10	69	1,248
C72	Spinal cord, cranial nerves and other parts of central nervous system	1	56	17	16	4	1		2	97
Total		26	695	267	371	82	34	11	94	1580

Thyroid and other endocrine glands (C73-C75)

Code	Malignant neoplasms	Islamabad	Punjab	Sindh	KP	Balochistan	AJK	GB	Afghanistan	Total
C73	Thyroid gland (Malignant)	34	221	181	121	30	10	9	18	624
C74	Adrenal gland		18	4	10	2	1		2	37
C75	Other endocrine glands and related structures		3		5	3			2	13
Total		34	242	185	136	35	11	9	22	674

III-defined, secondary and unspecified sites (C76-C80)

Code	Malignant neoplasms	Islamabad	Punjab	Sindh	KP	Balochistan	AJK	GB	Afghanistan	Total
C76	Other and ill-defined sites	4	264	104	64	7	15	3	14	475
C77	Secondary and unspecified lymph nodes		43	94	40	8				185
C78	Secondary respiratory and digestive organs		3	5	2	1				11
C79	Secondary other sites	1	35	6	4		1	1	1	49
C80	Without specification of site		48	11	18		6	1	5	89
Total		5	393	220	128	16	22	5	20	809

Lymphoid, hematopoietic and related tissue (C81 -C96)

Code	Malignant neoplasms	Islamabad	Punjab	Sindh	KP	Balochistan	AJK	GB	Afghanistan	Total
C81	Hodgkin's disease	6	262	76	149	35	13	3	22	566
C82	Follicular [nodular] non-Hodgkin's lymphoma	1	39	23	23		2		2	90
C83	Diffuse non-Hodgkin's lymphoma	15	447	166	293	71	17	7	54	1,070
C84	Peripheral and cutaneous T-cell lymphomas		19	9	17		1		1	47
C85	Other and unspecified types of non-Hodgkin's lymphoma	1	45	30	14	4	3	1	1	99
C88	Malignant immunoproliferative diseases	1	10	1	2					14
C90	Multiple myeloma and malignant plasma cell neoplasms	4	118	15	83	12	6	1	11	250
C91	Lymphoid leukaemia		185	24	97	10	3		8	327
C92	Myeloid leukaemia		68	40	18	16			9	151
C93	Monocytic leukaemia			1		1				2
C94	Other leukaemias of specified cell type		2							2
C95	Leukaemia of unspecified cell type		42	10	54			1	5	112
C96	Other and unspecified malignant neoplasms of lymphoid, haematopoietic and related tissue		4		1	1	2			8
Total		28	1241	395	751	150	47	13	113	2738

Independent (primary) multiple sites (C97)

Code	Malignant neoplasms	Islamabad	Punjab	Sindh	KP	Balochistan	AJK	GB	Afghanistan	Total
C97	Malignant neoplasms of independent (primary) multiple sites		18	1	8		1			28

APPRAISAL



PAECR 2015-21

Pakistan Atomic Energy Annual Cancer Registry (PAECR) volumes I & II covering cancer statistics for 2015 to 2017 and 2018 to 2019 respectively from 17 Atomic Energy Cancer Hospitals (AECHs) have been found instrumental in understanding the cancer patient population getting treated at these AECHs. AECHs being established in major cities of all provinces of Pakistan cater to the needs of almost 80% of cancer patients in Pakistan. Hence, PAECR published by PAEC cancer registry is a better reflection of cancer in Pakistan as compared to other regional cancer registries. Current PAECR volume III evaluates yearly data from 17 AECHs from January 2020 to December 2021.

Cancer Patients in PAECR: An Overview from 2015 to 2021

A total of 254,156 cancer patients were registered from 2015 to 2021 with highest number of patients in year 2019. Comparison of registered patients in 2015 to 2017, 2018, 2019, 2020 and 2021 revealed that 102,022 (34,340 patients/year) were registered from 2015 to 2017 that increased to 38,457 in 2018 and 40,797 in 2019. In 2020 a decrease in registered patients was seen with 33,512 patients followed again by rising trend in 2021 to 39,358 patients. The overall increase in number of registered patients

from 2018 onwards may be attributed to Government of Pakistan (GOP) initiative of Sehat Card that enabled the poor patients to have better, dignified access to cancer diagnosis and treatment. The year of COVID 19 pandemic 2020 with patients getting isolated and restricted to homes saw the transient reduction.

Male to Female ratio in 2020 and 2021 were found to be 44:56 and 42:58 respectively consistent with similar trends in previous years.

Leading Cancers in PAECR 2020 & 2021:

Among total patient population and both genders, carcinoma Breast, Oral Cavity and Colorectum were the top three common cancers in Pakistan in 2020 and 2021, consistent but with rising trend as compared to PAECR 2018 and 2019. Carcinoma Esophagus which was the seventh commonest tumor in PAECR 2015 is seen to be the fourth common cancer in Pakistani population from 2018 to 2021. Cancers of Central Nervous System (CNS), Ovary, Lung, Liver, Non-Hodgkin Lymphoma (NHL) and Cervix were among the ten common cancers in Pakistani population from 2020 to 2021.

GLOBOCON 2020 reported Carcinoma Breast, Lung, Prostate, non-melanoma Skin, Colon, Stomach, Liver, Rectum, Cervix Uteri and Esophagus as ten most common cancers worldwide in descending order. The difference of PAECR 2020-2021 with

GLOBOCON 2020 in common cancer distribution further emphasizes the need of national cancer registry[1].

However, the top two cancers in our population are concordant with top two cancers reported by Global Cancer Observatory for Pakistan in GLOBOCON 2022 [2] followed by Lung and colorectal cancer as third and fourth common cancers in Pakistani population.

Comparison of leading five cancers for females in PAECR 2020 (Breast, Ovary, Oral cavity, Cervix Uterus) and PAECR 2021 (Breast, Ovary, Cervix, Lip/Oral Cavity, Uterus) were concordant with GLOBOCON 2022 in case of carcinoma Breast, Lip/Oral cavity, Cervix and Uterus. Though carcinoma Ovary was not the second most common cancers in females in GLOBOCON 2022 Pakistan.

The leading five cancers for males in PAECR 2020 were Oral cavity, Colorectum, Prostate, CNS, Lung and in PAECR 2021 were Oral cavity, Colorectum, Prostate, Lung, CNS. However, GLOBOCON 2022 Pakistan presented Lip/oral cavity, Lung, Colorectum, Prostate and Esophagus as five most common cancers in males.

Comparison of Regional Distribution of Pakistani Cancer Population from 2015- 2021:

Comparison of geographical distribution of cancer patients from

2015 to 2021 as shown in figure 1 shows that Percentage distribution of cancer patients in different regions; Islamabad Capital Territory (ICT), Punjab, Sindh, Khyber-Pakhtunkhwa (KPK), Baluchistan, Azad Jammu & Kashmir (AJK), Gilgit-Baltistan (GB) and Afghani Nationals during 2020 and 2021 followed a similar trend reported in PAECR 2015-17, 2018 & 2019. In 2020 & 2021, highest number of patients were registered in Punjab (38% and 40% respectively), followed by Sindh (32% & 29 % respectively). KPK, Baluchistan, AJK and GB contributed to 18%, 4%, 1% and 0% respectively of cancer patients in 2020 & 2021. The % contribution of cancer patients from Islamabad was found to be 1.33 and 1.5% for 2020 and 2021 respectively. Afghani nationals accounted for 4% of cancer patients in 2020 and 2021.

These regional and geographical differences in cancer patient's data can be attributed to better health literacy, availability of more AECHs (05) and high population density in Punjab (53%) and Sindh (23%) according to National Census 2017. It was also noted that more patients in Punjab and Sindh were from cities having AECHs with advanced diagnostic and treatment facilities like Lahore and Karachi respectively. KP also having five AECHs with population density of 17% contributed to 18% of total registered patients at its five AECHs similar to PAECR Volume I and Volume II.

Though matching the population density of KP, still difference in available diagnostic facilities in AECHs of KP as compared to Punjab and Sindh can be responsible for less contribution in total patient population. The geographical distribution in PAECR 2020 & 2021 is found concordant to National Cancer registry report

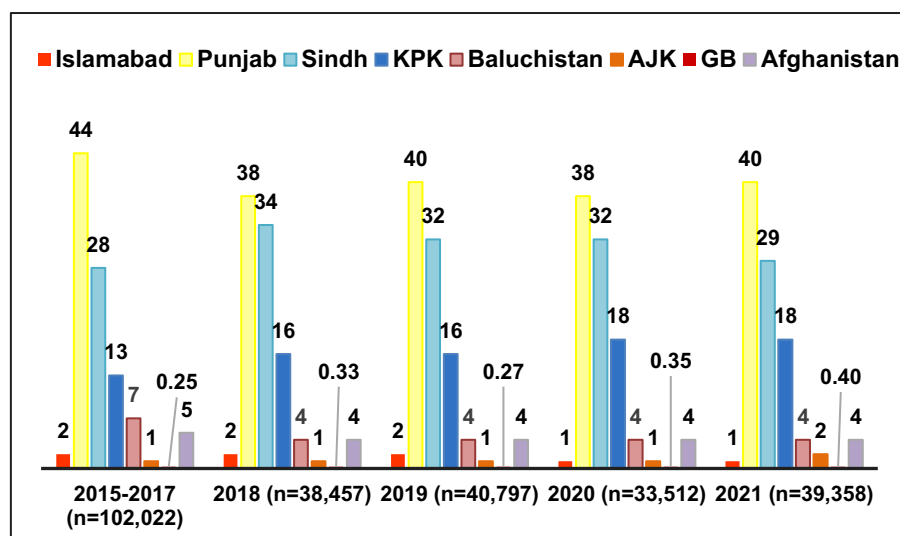


Figure 1: Geographical Distribution of Cancer Patients from 2015-2021

Comparison of Gender Distribution of New Cancer Cases in Age Groups with Age Specific Incidence Rate (ASIR) and Age Standardized Rate (ASR) from 2018 to 2021

Figure 2 to 5 illustrates the distribution of new cancer cases (bars) and ASIR /100,000/ year for 19 age groups using Pakistani population data adjusted by growth rate for respective year from Census 2017 for PAECR 2018 to 2021. It was seen that there was an overall increase in number of cases as well as ASIR from 2018 to 2019 with a decrease seen in 2020 owing to COVID 19 followed by an increase again in 2021.

The highest number of female patients from in 2020 & 2021 were in age bracket of 50-54 years and highest number of male patients were of 70+ years concordant with 2018 & 2019 data. However, for these years (2018-2021) a gradual but sharp rising trend of cancer incidence was seen in females after 30-34 years leading at 50-54 years. It indicate & emphasize the increased incidence of cancer in middle aged female population. Decreasing trend in 0-9 years shows less vulnerable female population.

ASIR /100,000/ year for both male and female population showed increasing trend after 50 years but peak ASIR differed in the age groups for the highest value. In 2018 and 2019 female patients had highest ASIR > 110 for 60-64 years that steadily increased in 2019, decreasing slightly in 2020 followed by a rise again in 2021. In 2020 & 2021 highest ASIR was noted for age group 65-69 years. For male patients maximum ASIR from 2018 to 2021 was

for 65-69 years followed by 70+ age group. The ASIR data shows that aging population in both males and females are at high risk of developing cancers.

The average ASIR for 2020 & 2021 was found to be 395 per 100,000 for 55-65 years age group in females and 277 per 100,000 for 60-70 years male patients, values lower than reported by Punjab Cancer Registry (PCR) 2017-2019 for Lahore [4]. The ASIR value as well as peak age group difference for ASIR in PAECR 2020-2021 could be due to smaller denominator of population figure used in PCR.

This difference of age groups with maximum number of patients and ASIR for female patients supports the worldwide trend of having higher population in lower age groups but with high individual risk of developing cancer in the elderly (60+). The maximum number of male cancer patients in 70+ age group but with high ASIR in 60-69 years shows that target area for cancer screening/ diagnosis is less than 70 years' age.

The high number of cases in middle age females supports need of enhancing screening and early detection programs and high ASIR in elderly population needs prioritized and enhanced geriatric cancer care/ prevention.

Age standardized rate (ASR)/100000 using WHO standard population came out to be (27 & 33) in females and (20 & 23) in

male cancer patients which is discordant with GLOBOCON 2022 ASR of 111.8 and 99.5 for Pakistani female and male cancer population respectively [1]. The difference could be due to the smaller number of patients in our PAECR data as compared to GLOBOCON 2022 [2]

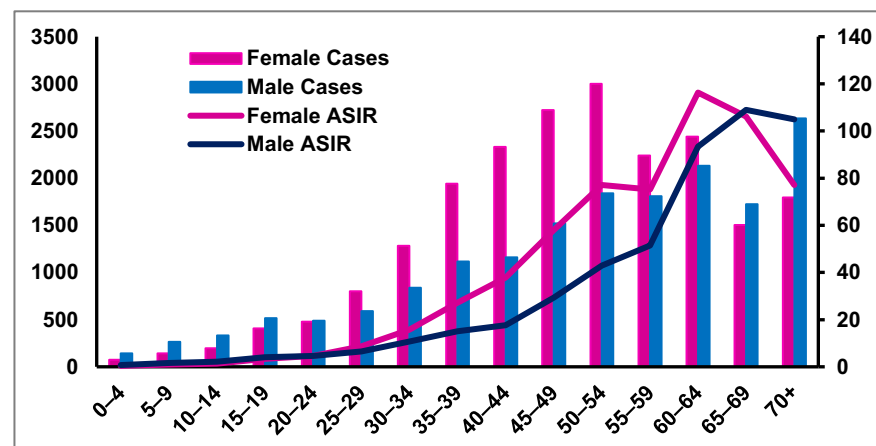


Figure 2: Cancer cases and ASIR/100,000/year for both females and males in PAECR 2018

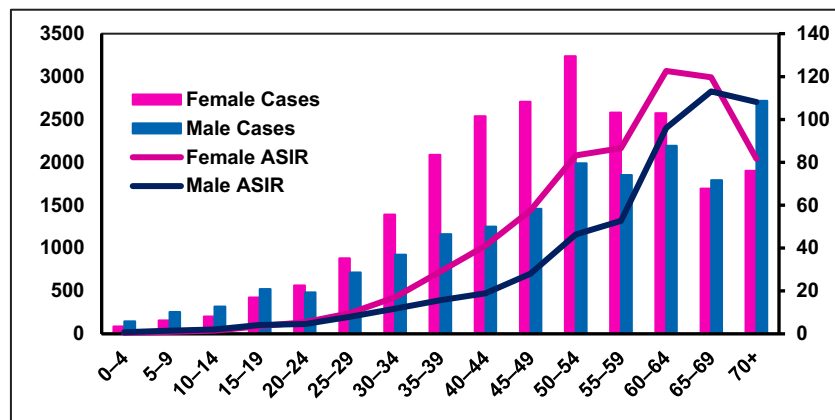


Figure 3: Cancer cases and ASIR/100,000/year for both females and males in PAECR 2019

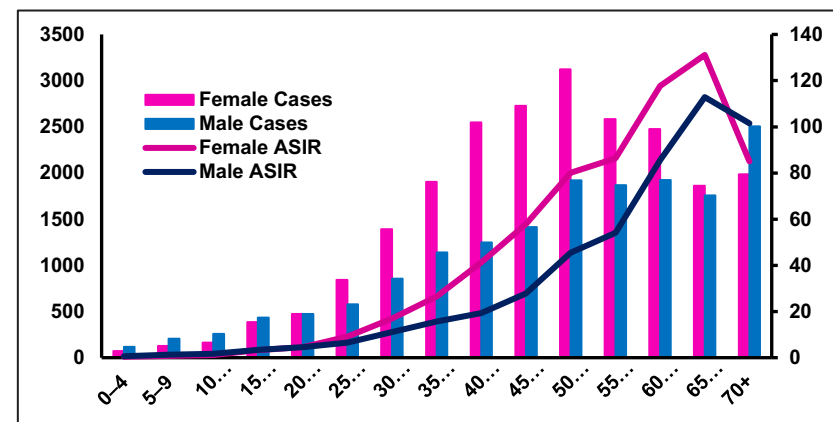


Figure 5: Cancer cases and ASIR/100,000/year for both females and males in PAECR 2021

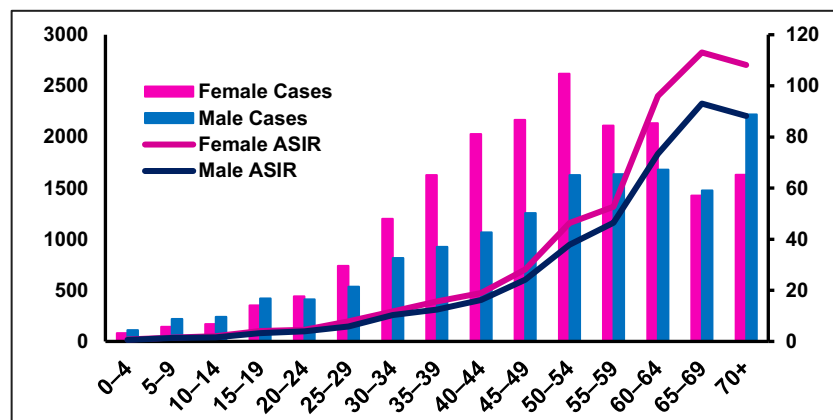


Figure 4: Cancer cases and ASIR/100,000/year for both females and males in PAECR 2020

Distribution of stages in Cancer Patients (PAECR 2020-2021):

Using American Joint Committee on Cancer (AJCC) TNM staging system, distribution of different stages (I, II, III, IV, Unknown and AJCC not specified) were studied in cancer data of PAECR2020 and 2021. Figure 6 shows the stage wise distribution for PAECR 2020 and 2021. It can be seen that maximum percentage of patients were diagnosed with Stage III and IV similar to findings of PAECR 2018 and 2019. Improvement was seen in increase in percentage of patients in stage II along with reduction in percentage of patients in Unknown stage or AJCC not specified criteria. This reflects better data registration as well as better and improved diagnosis resulting in appropriate stage categorization.

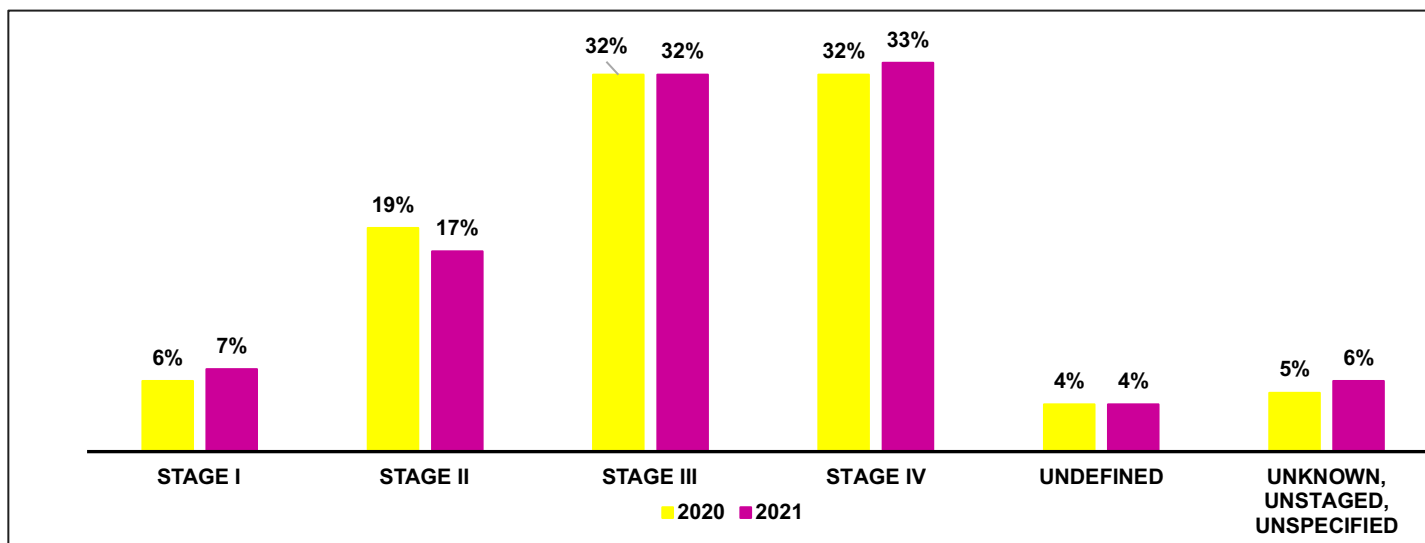


Figure 6: Percentage (%) stage distribution for all cancers (PAECR 2020 & 2021)

BREAST CANCER in PAECR 2020 & 2021

Breast cancer is the most common cancer in females worldwide with less prevalence in developing as compared to developed countries. The proportional disease burden/ mortality of breast cancer is expected to rise in Asia according to an estimate in 2020 whereas it will reduce in western countries due to the healthy lifestyle, tobacco resistance, awareness programs, and better health facilities.

Breast Cancer is the most common cancer in PAECR 2020 (23.4%) and 2021 (24.8%) as was in previous PAECR 2015-17 (22.6%), 2018(22.9%) & 2019 (24.1%) in both genders. Being the most common cancer in females in PAECR 2020 and 2021 accounting for 41% with 7068 patients and 42.2% with 9552 patients of all female cancers respectively. In males it accounted for 1.3 and 1.2 % of all male patients for 2020 and 2021 respectively.

Figure 7 represented total cases of breast cancer in females and male patients and ASIR/100,000/year in all age groups. It is seen that occurrence of most of the female breast cancer are in early to middle ages starting from 35 years onwards. However peak number of patients was in 50-54 years of age group. ASIR increased with increasing age and was highest for 60-64 years. Hence showing that more efforts need to be put into screening and early detection. In males' highest number of breast cancer were reported in 40-44 years' age group in 2020 and >70 years in 2021.

Age specific incidence rate (ASIR)/100,000 population was found to be 199 & 6.05 in 2020 and 270 & 5.83 for females and male adults (>20 years) respectively. This is in concordance with ASIR/100,000/year of 177.82 in females and 4.69 in males in Karachi cancer registry (KCR) 2017-2021. Age standardized rate (ASR)/100,000/year calculated using Segi Doll World standard population in females was 9.3 and 12 for 2020 and 2021 and 0.32 in males for 2020 & 2021.

ASR in our female population is low as compared to 51.7 in females by KCR and 34.2 by GLOBOCON 2022 but comparable with 15.0 for South-Eastern Asia. Lower ASR rate could be due to the fact that in our data we measured ASIR using overall male and female population in Pakistan. However, KCR used only Karachi

population and GLOBOCON 2022 used cancer data of Punjab cancer registry, both of which do not reflect the Pakistani cancer population completely in contrast with PAECR 2020 and 2021 data.

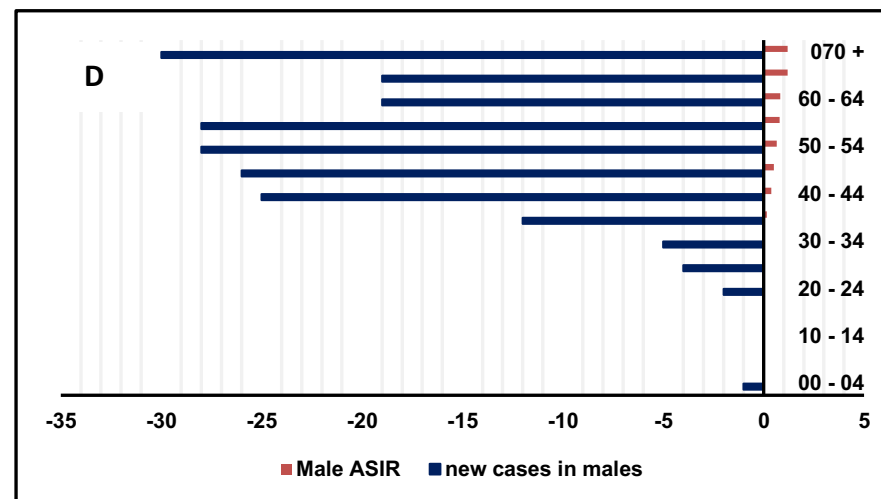
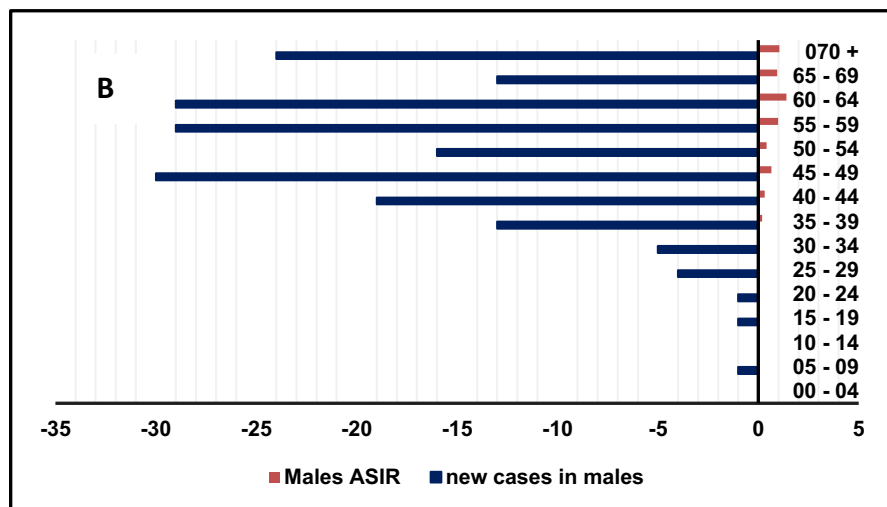
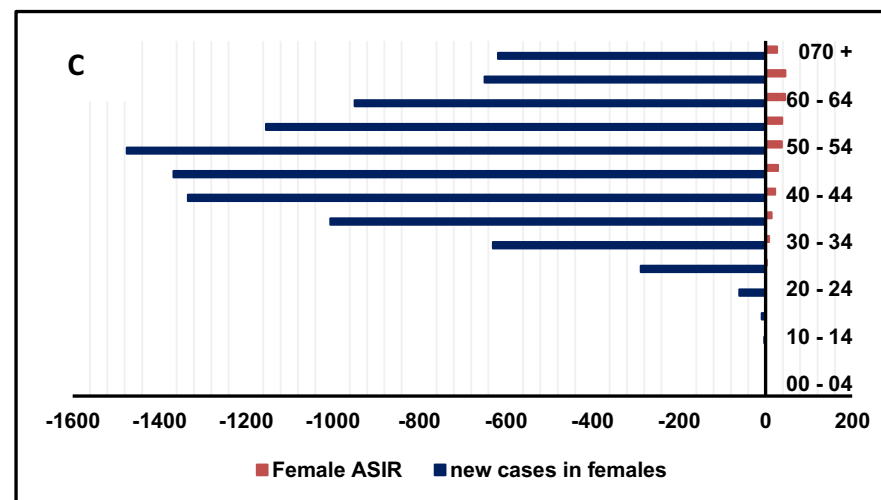
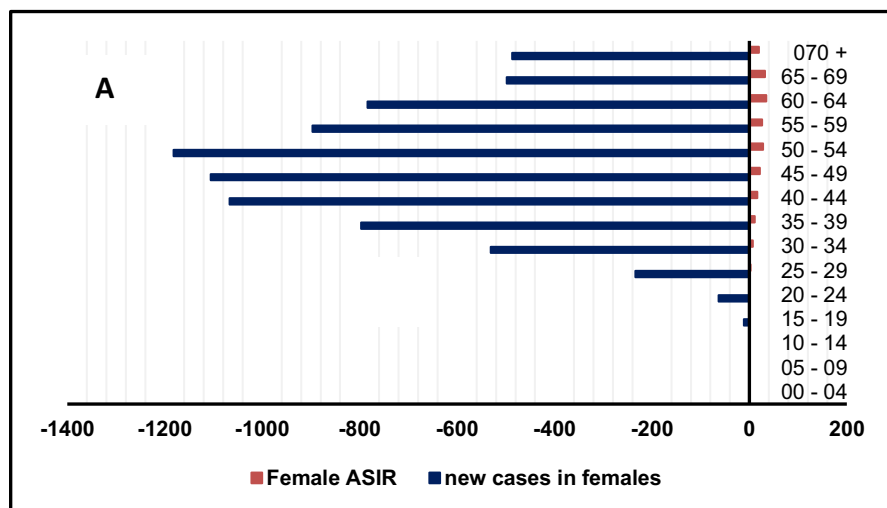


Figure 7: Breast Cancer cases and ASIR/100,000/year for both females and males in year 2020 (A, B) and 2021(C, D)

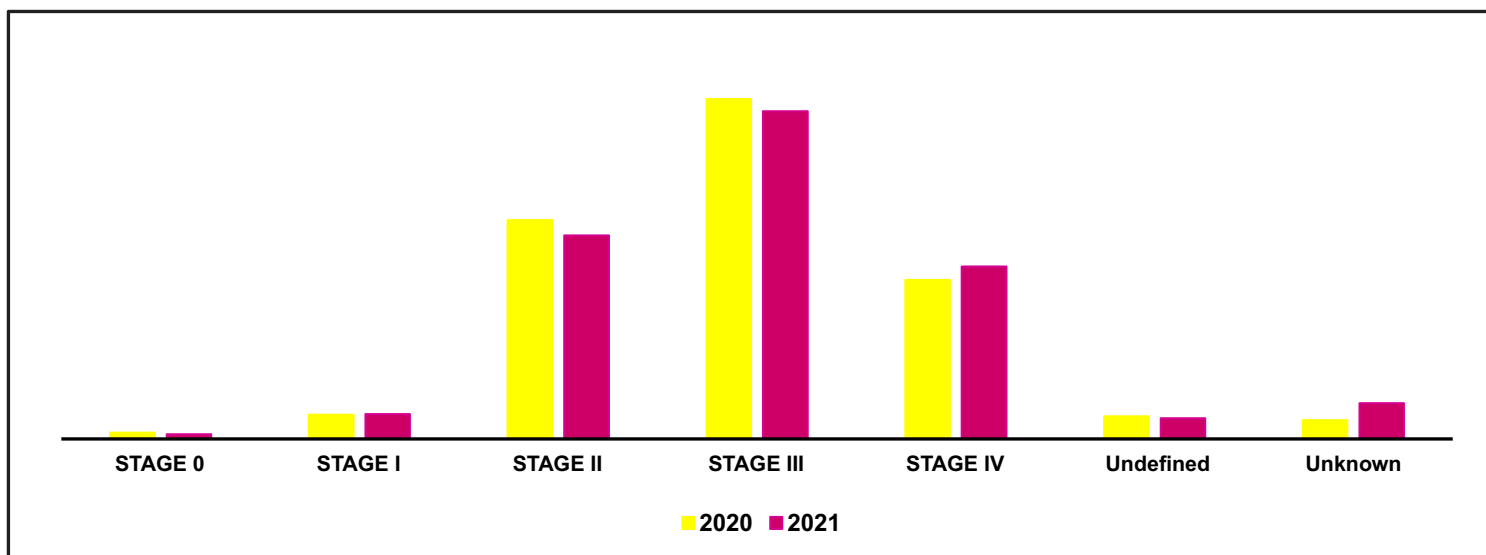


Figure 8: Percentage (%) distribution of breast cancer cases according to stage of disease

Figure 8 shows highest number of breast cancers in female patients in stage III followed by stage II and stage IV for both years 2020 and 2021, consistent with the fact that most of the patients are diagnosed late and present with metastatic disease. A similar trend was reported in previous PAECRs.

The analysis of regional distribution of breast cancer in table 1 shows highest number of cases reported in Punjab, followed by Sindh and KPK. An increase in breast cancer cases in all regions

has been observed in 2021 as compared to 2020. The highest percentage of breast cancer cases was 50 & 52% in Punjab followed by Sindh and KP. Among these regions, districts with better health facilities and higher population such as Karachi, Lahore, Gujranwala and Peshawar were reported to have more breast cancer patients (figure 9). The registration of higher number of cases in these regions could be due to better literacy, screening facilities and public awareness.

However, in view of social barriers in our society, the registration of more patients with advanced stage disease and higher age groups require increased efforts for effective breast cancer awareness campaigns at local and national levels through all forms of digital and nondigital media.

Table 1: Breast Cancer cases in different regions of Pakistan (2020-2021)

	Islamabad	Punjab	Sindh	KP	Balochistan	AJK	GB	Afghanistan
2020	143	3934	2094	1122	251	92	10	199
2021	171	5035	2429	1342	338	176	18	242



Figure 9: Regional distribution of breast cancer cases with major districts

CANCERS OF ORAL CAVITY

Cancers of Oral cavity (C00-C14) were the second most common cancer in Pakistani population in PAECR 2020 with 3398 (9.7%) and 3833 (10.1%) of all cancer patients consistent with 8.6 % reported by GLOBOCON 2022. It was the commonest in males accounting for 16% of all male cancers in 2020 & 2021 concordant with GLOBOCON Pakistan2022.

In females it was found to be third (6%) and fourth (5%) most common cancers in females in year 2020 & 2021 respectively consistent with 5% of all female cancers in GLOBOCON Pakistan 2022. Male to Female ratio of oral cavity cancer in registered cancer patients was found to be 2.1 & 2.36 in PAECR 2020 & 2021 respectively, consistent with PAECR 2018 & 2019.

Figure 10 shows highest incidence of cases in 50-54 years of age group in both genders. However, it is important to note that its occurrence increased in > 20 years' age. Age specific incidence rate (ASIR)/ 100,000 population in > 20-year age was found to be 49.10 & 55.3 for both sexes according to PAECR 2020 and 2021 respectively.

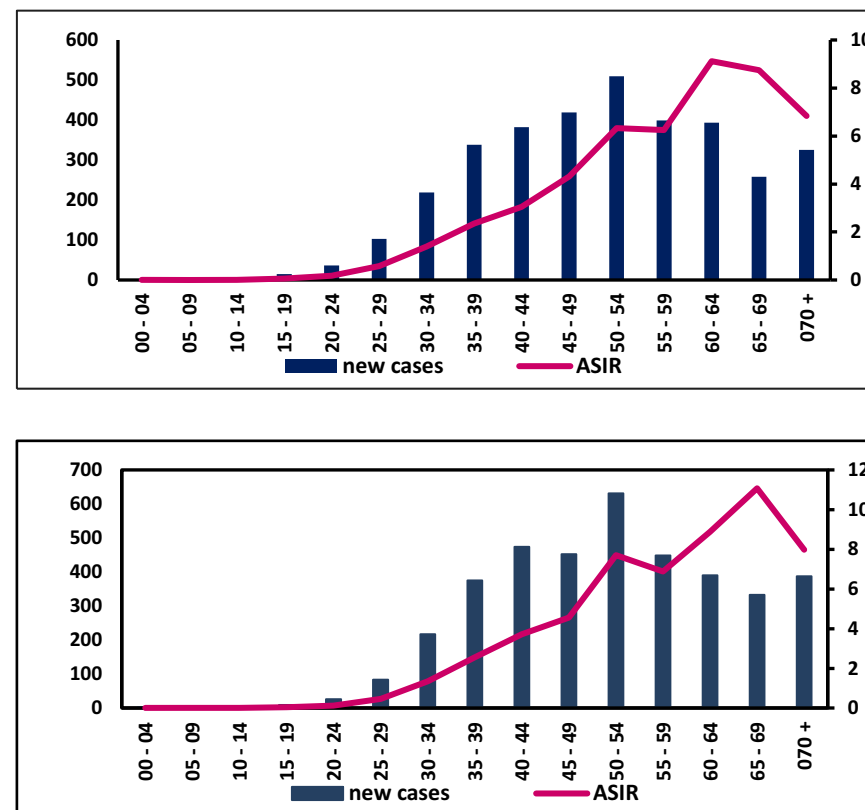


Figure 10: ASIR/ 100,000/ year in different age groups in both genders in PAECR 2020 & 2021

The ASIR increases with increase in age and was found highest in 60-64 years in 2020 and 65-69 years in 2021 for both genders

(Figure 10). This trend supports initiatives to increase public health cancer awareness and early screening program implementation specially in the population having high risk factors. This also includes ban on causative material like Pan, Guttka etc. by Sindh Govt.

ASR/ 100,000/ year for oral cavity cancers in both sexes and all ages was found to be 2.5 & 2.8 for both sexes in PAECR 2020 & 2021. These values are lower to 12.1 and 6.2 for male and female in GLOBOCON 2022 Pakistan, which could be due difference in data of PAECR 2020 & 2021 than GLOBOCON 2022.

The distribution of oral cavity cancers according to stage as shown in Figure 11 reveals highest percentage of cases registered in stage IV followed by stage III and II. Its comparison with PACER 2018 and 2019 shows that the cases in category of unknown has decreased revealing better data registration as well as better diagnosis.

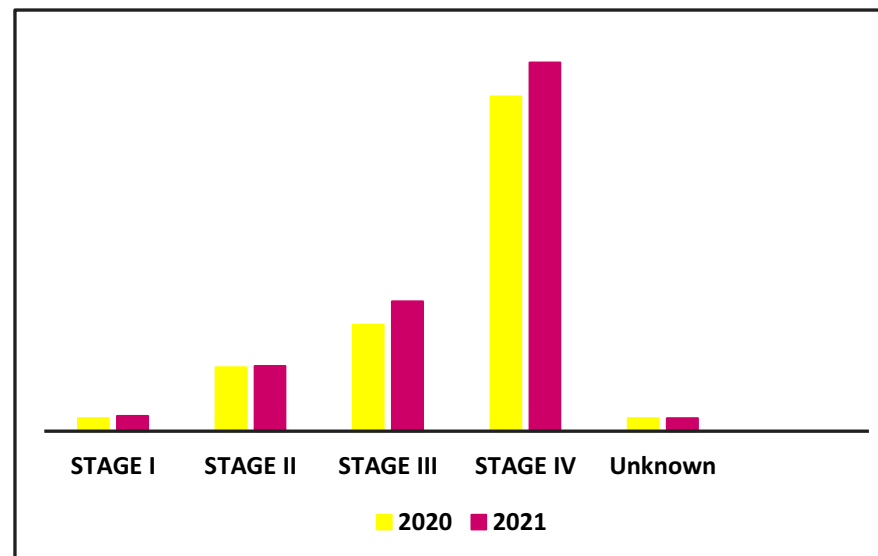


Figure 11: Comparison of Stage Distribution among Oral Cavity Cancer Patients

No change in distribution of primary sites affected by oral cavity cancer was noted as compared to previous PAECRs. The primary sites affected mostly in oral cavity included buccal mucosa & retromolar area followed by tongue similar to distribution noted in PAECR 2018 & 2019 (Figure 12).

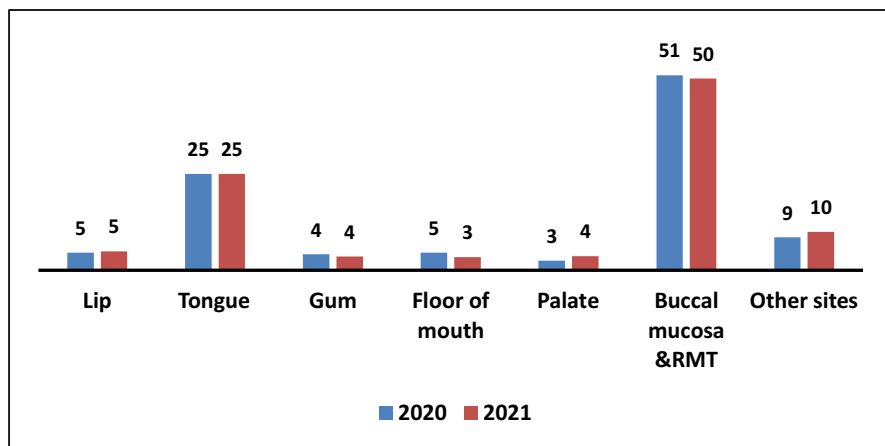


Figure 12: Primary site of distribution of Oral Cavity cancers in PAECR 2020 & 2021

Maximum number of patients with oral cavity were registered in Sindh (67&66) % followed by Punjab (17&18) % and Khyber Pakhtunkhwa (9 & 8) % in PAECR 2020 & 2021 respectively (figure 13). This trend was found consistent with PAECR 2018 & 2019 findings. People in Sindh were affected more with Oral cavity cancers owing to increased risk factor exposure with eating and chewing of pan, tobacco, & gutka. Moreover, the divisions of Sindh affected more included Karachi followed by Hyderabad in Sindh as shown in Figure 14.

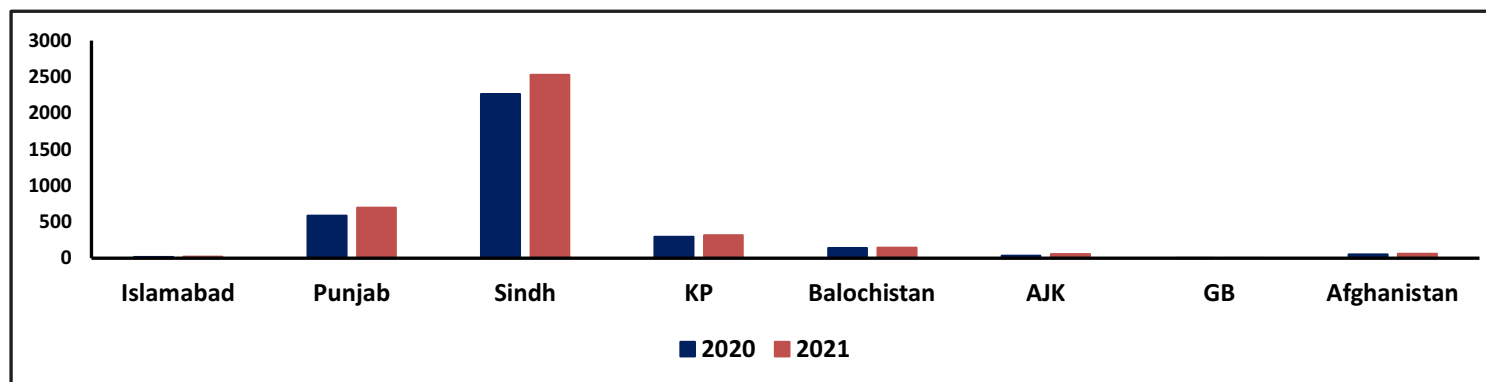


Figure 13: Regional distribution of Oral cavity cancers in PAECR 2020 & 2021

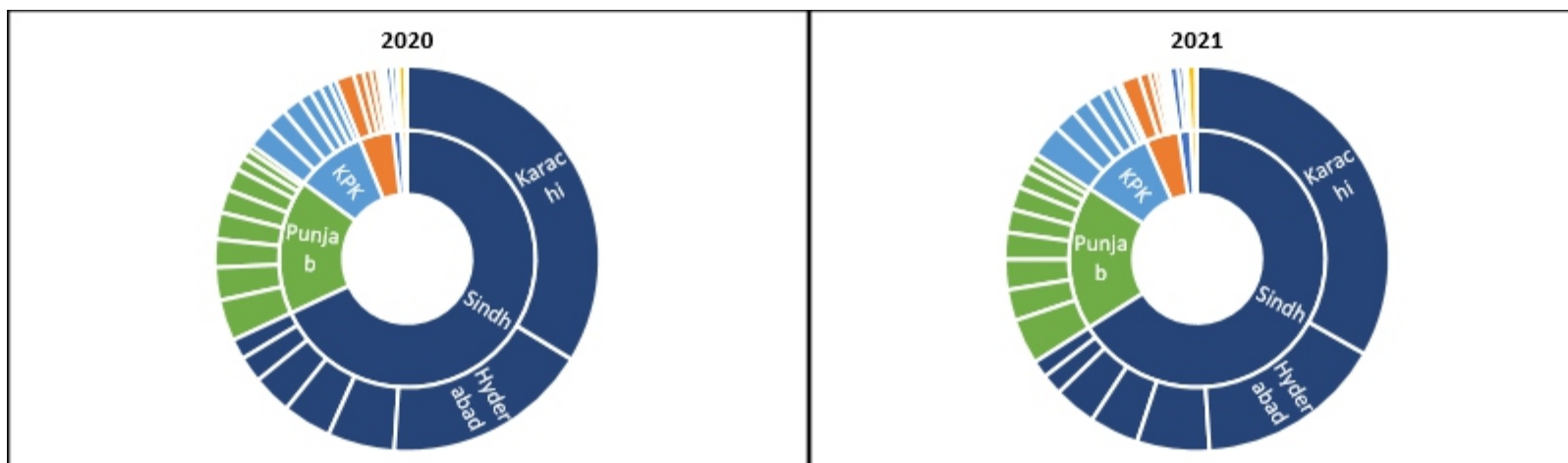


Figure 14: Distribution of Oral cavity cancers in Divisions of Pakistan

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