

ANNUAL CANCER REGISTRY REPORT-2021: SHAUKAT KHANUM MEMORIAL CANCER HOSPITAL & RESEARCH CENTER, PAKISTAN

Shahid Mahmood, Raqib Faraz, Aneel Yousaf, Ain ul Quader, Hina Asif, Adna Atif, Natasha Parveen, Roma Tanveer, Azam Hussain, Ayesha Zafar, Faiza Kiran, Usman Amin, and Farhana Badar.

CANCER STATISTICS

This report includes patients registered at the centers affiliated with the Shaukat Khanum Memorial Trust and accessioned into the hospital information system, in Lahore. The centers associated with the Trust include two hospitals: 'Shaukat Khanum Memorial Cancer Hospital and Research Center' (SKMCH&RC) in Lahore and Peshawar, the Karachi Diagnostic Center (KDC), and Shaukat Khanum Diagnostic Center Liberty (SKDCL), Lahore. SKMCH&RC Lahore is the oldest center and has been functioning since December 29, 1994; SKMCH&RC Peshawar since December 29, 2015; KDC since 2010; and SKDCL since August 01, 2019. All these centers are referred to as SKMCH&RC/hospital in this combined report.

Distribution of neoplasms

Of a total of 7,539 new neoplasms diagnosed or treated at the aforementioned facilities in Pakistan, from January 1, 2021, to December 31, 2021, 3,156 were seen in males (41.9%) and 4,383 (58.1%) in female patients. Six-thousand, eight hundred and six (6,806 (90.3%)) neoplasms were found in adults, whereas 733 (9.7%) were seen in children. Children were classified as those 18-years or less and adults as more than 18-years of age. Table 1 shows the stratification of cases by behavior and age group.

Table 1. Distribution of neoplasms by behavior and age group, Jan. 2021 to Dec. 2021.

Behavior	Age-group	Registered patients (7,264)	Reported neoplasm* (7,539)
Malignant[†]	Adults	6,100	6,176
	Pediatrics	717	718
	Total	6,817	6,894
Benign[‡] & uncertain behavior	Adults	561	630
	Pediatrics	13	15
	Total	574	645

* The difference in the number of registered patients and reported neoplasms is attributed to multiple malignancies and benign neoplasms diagnosed in 77 and 71 patients, respectively. Further, 127 patients have both malignant and benign neoplasm simultaneously.

[†] Cases with behavior codes /3 and /2 are considered to be malignant cases.

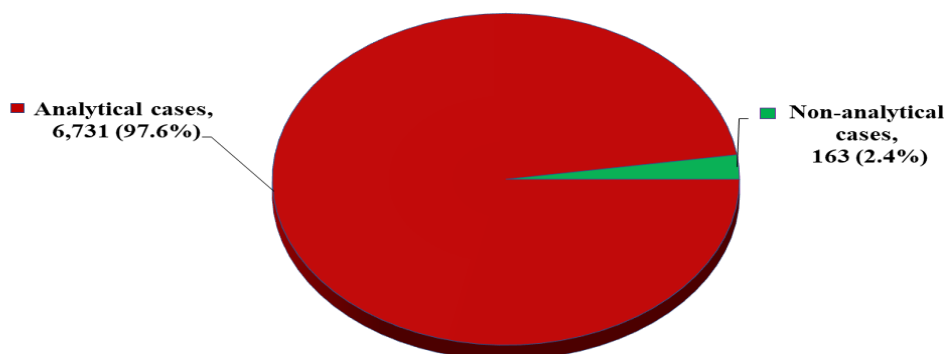
[‡] Cases with behavior codes /0 and /1 are considered to be benign and uncertain, respectively.

[§] According to the Facility Oncology Revised Data Standards (FORDS), Revised for 2004, Class of Case 00 to 20 are analytical cases and included in treatment and survival analysis, whereas, Class of Case 30 to 33 are non-analytical cases, usually not included in routine treatment or survival statistics.

Class of Case

Of a total of 6,894 malignant cases recorded in the Registry from January 2021 to December 2021, 6,731 (97.6%) were analytical cases and 163 (2.4%) non-analytical. Figure 1 shows the stratification of analytical and non-analytical cases[¥].

Figure 1. Stratification of analytical and non-analytical cases, Jan. 2021 to Dec. 2021.



Data Source: Cancer Registry & Clinical Data Management, SKMCH&RC

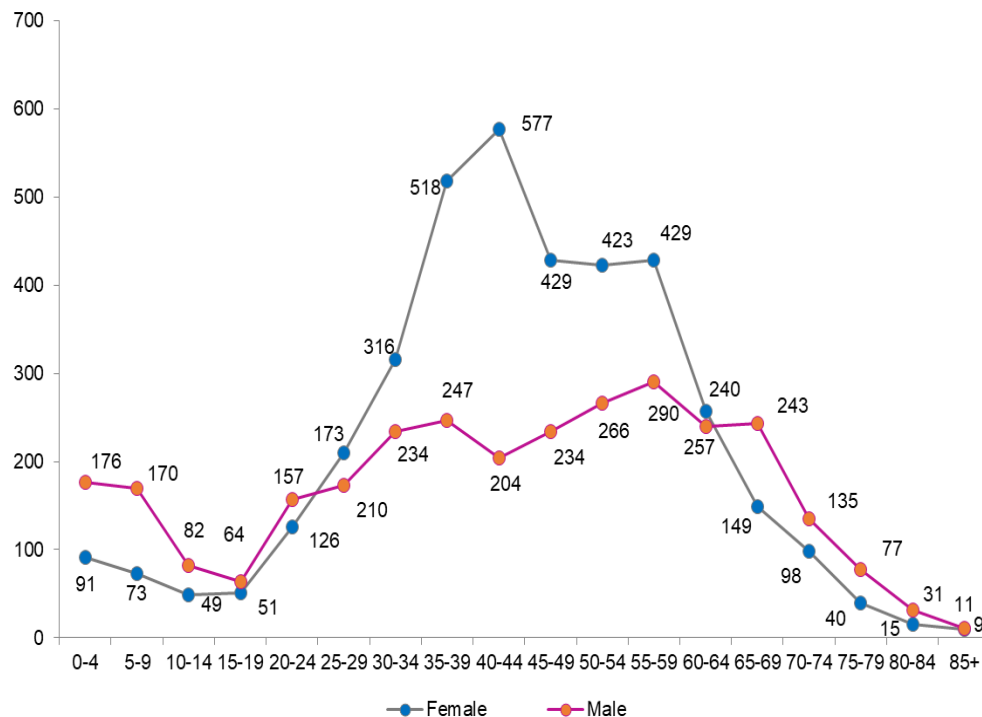
Distribution of malignancies

In the year 2021, a total of 6,894 malignancies were diagnosed at the hospital with 3,860 seen among females and 3,034 among males. Table 2 displays the distributions of female and male patients according to sex and age group.

Table 2. Distribution of cancer cases by sex and age group (years), Jan. 2021 to Dec. 2021.

Age-range	Female	Male	Total
0-4	91	176	267
5-9	73	170	243
10-14	49	82	131
15-19	51	64	115
20-24	126	157	283
25-29	210	173	383
30-34	316	234	550
35-39	518	247	765
40-44	577	204	781
45-49	429	234	663
50-54	423	266	689
55-59	429	290	719
60-64	257	240	497
65-69	149	243	392
70-74	98	135	233
75-79	40	77	117
80-84	15	31	46
85+	9	11	20
Total	3860	3034	6894

Figure 2. Cancer cases by sex and age group (years), Jan.-Dec. 2021.



Data Source: Cancer Registry & Clinical Data Management, SKMCH&RC

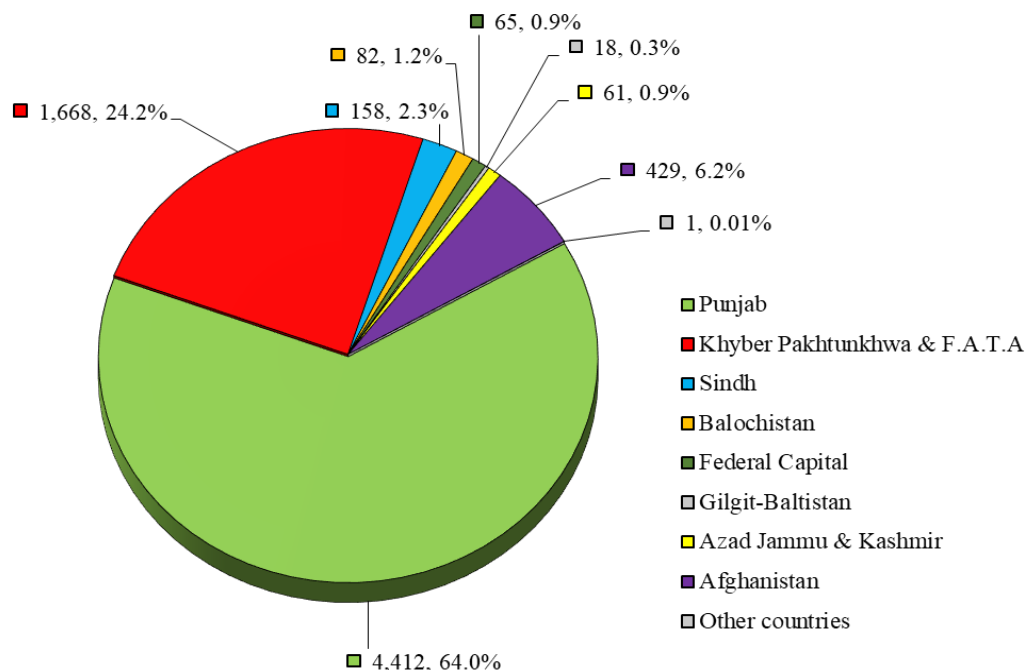
Demographics

Of the 6,894 malignant cancers, nearly 64.0% (4,412) belonged to the province of Punjab and approximately 24.2% (1,668) to Khyber Pakhtunkhwa (Table 3). The fact that the geographic area of residence of a vast majority of patients was Punjab can be explained by the fact that the oldest affiliate is situated in the provincial capital of Punjab and that, this province accounts for almost 50% of the total population of the country.

Table 3. Distribution of malignancies according to the geographic area of residence of the patients, Jan. 2021 to Dec. 2021.

Province/Region	Malignancies	Percentage
Punjab	4,412	64.0
Khyber Pakhtunkhwa including FATA [1]	1,668	24.2
Sindh	158	2.3
Balochistan	82	1.2
Federal Capital	65	0.9
Gilgit-Baltistan	18	0.3
Azad Jammu & Kashmir	61	0.9
Afghanistan	429	6.2
Other countries	1	0.01
Total	6,894	100.0

Figure 3. Distribution of malignancies according to the geographic area of residence of the patients, Jan. 2021 to Dec. 2021.



Data Source: Cancer Registry & Clinical Data Management, SKMCH&RC

^[1] The administrative unit of the Federally Administered Tribal Areas (FATA) was merged with the province of Khyber Pakhtunkhwa on May 28, 2018.

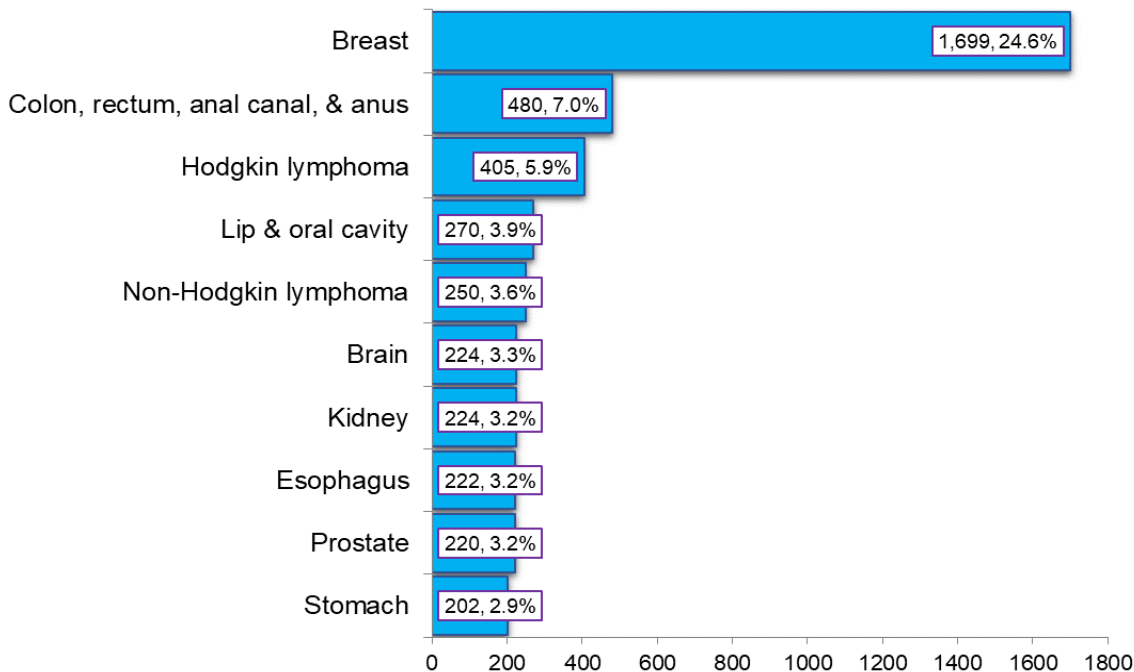
Top ten cancers

Tables 4 to 8 show the list of the ten commonest malignancies seen at SKMCH&RC during the year 2021. Of a total of 6,894 malignancies, breast cancer was the leading one with 1,699 cases accessioned into the Registry. Cancers of the colon, rectum, anal canal/anus, and Hodgkin lymphoma were the second and third most frequently seen cancers, respectively.

Table 4. Top 10 malignancies among all age groups, both sexes combined, Jan. 2021 to Dec. 2021.

Sr. No.	ICD-O-3 Category	Count	Percentage	ICD-O-3 Code
1	Breast	1,699	24.6	C50.0 - C50.9
2	Colon, rectum, anal canal, & anus	480	7.0	C18.0 - C21.8
3	Hodgkin lymphoma	405	5.9	M9650 - M9667
4	Lip & oral cavity	270	3.9	C00.0 - C08.9
5	Non-Hodgkin lymphoma	250	3.6	M9590 - 91, M967 - 972
6	Brain	224	3.2	C71.0 - C71.9
7	Kidney	224	3.2	C64.0 - C64.9
8	Esophagus	222	3.2	C15
9	Prostate	220	3.2	C61.9
10	Stomach	202	2.9	C44.0 - C44.9

Figure 4. Top 10 malignancies among all age groups, both sexes combined, Jan. 2021 to Dec. 2021.



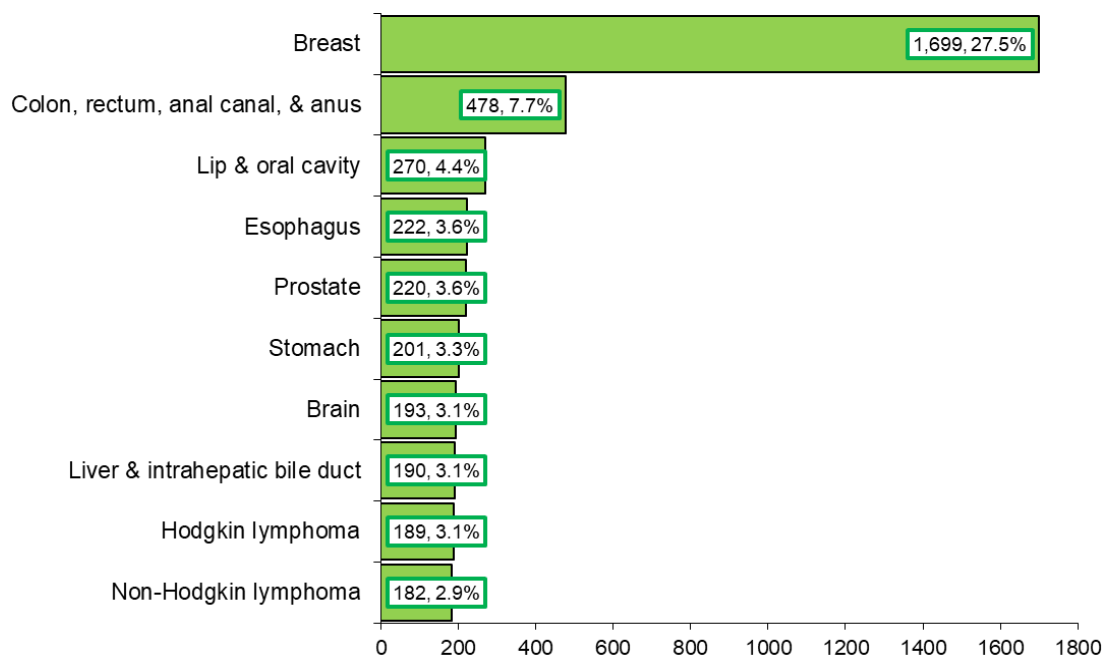
Data Source: Cancer Registry & Clinical Data Management, SKMCH&RC

Among adults, during the year 2021, a total of 6,176 malignancies were diagnosed or treated at SKMCH&RC. Cancers of the breast, colon/rectum/anal canal/anus, and lip & oral cavity were registered as the most frequently seen cancers.

Table 5. Top 10 malignancies among adults (> 18 years), Jan. 2021 to Dec. 2021.

Sr. No.	ICD-O-3 Category	Count	Percentage	ICD-O-3 Code
1	Breast	1699	27.5	C50.0 - C50.9
2	Colon, rectum, anal canal, & anus	478	7.7	C18.0 - C21.8
3	Lip & oral cavity	270	4.4	C00.0 - C08.9
4	Esophagus	222	3.6	C15
5	Prostate	220	3.6	C61.9
6	Stomach	201	3.3	C16
7	Brain	193	3.1	C71.0 - C71.9
8	Liver & intrahepatic bile duct	190	3.1	C22
9	Hodgkin lymphoma	189	3.1	M9650 - M9667
10	Non-Hodgkin lymphoma	182	2.9	M9590 - 91, M967 - 972

Figure 5. Top 10 malignancies among adults (> 18 years), Jan. 2021 to Dec. 2021.



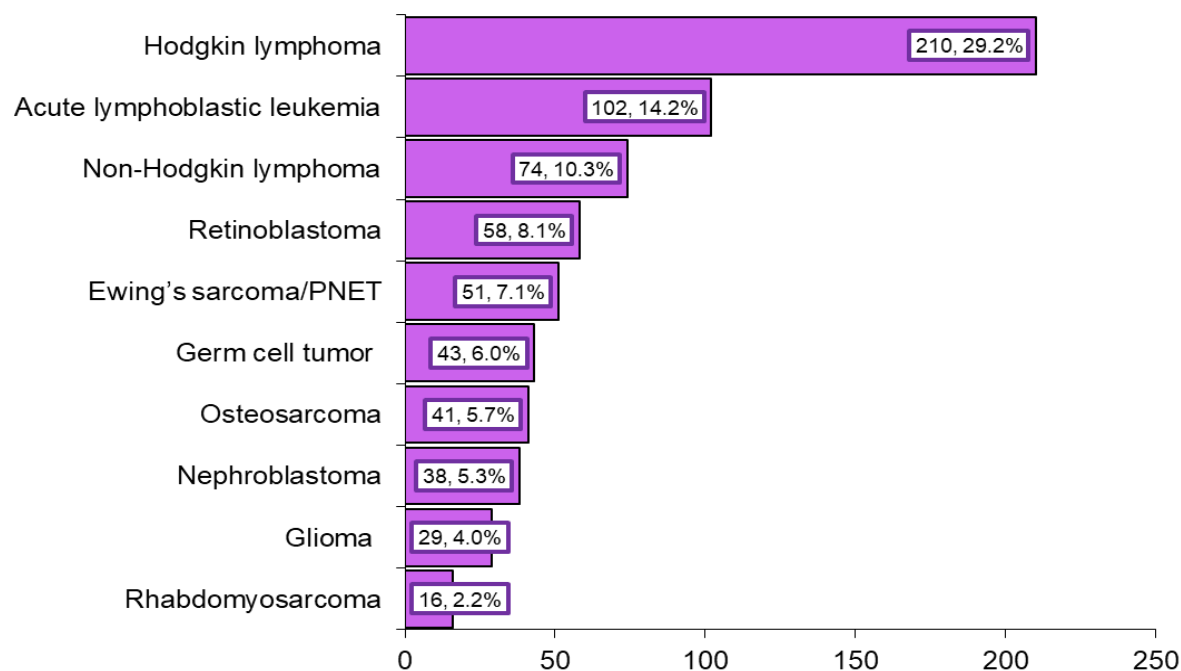
Data Source: Cancer Registry & Clinical Data Management, SKMCH&RC

In 718 childhood malignancies, using the classification based on tumor morphology, Hodgkin lymphoma, acute lymphoblastic leukemia, and non-Hodgkin lymphoma were identified as the three most common malignancies diagnosed or treated at SKMCH&RC. Table 6 shows the distributions of the top ten malignancies seen in children at SKMCH&RC.

Table 6. Top 10 malignancies in children (<= 18 years), Jan. 2021 to Dec. 2021.

Sr. No.	ICD-O-3 Category	Count	Percentage	ICD-O-3 Morphology Code
1	Hodgkin lymphoma	210	29.2	M9650 - M9667
2	Acute lymphoblastic leukemia	102	14.2	M982 - M983
3	Non-Hodgkin lymphoma	74	10.3	M9590 - 91, M967 - 972
4	Retinoblastoma	58	8.1	M9510 - M9514
5	Ewing's sarcoma/PNET	51	7.1	M9260
6	Germ cell tumor	43	6.0	M906 - M909
7	Osteosarcoma	41	5.7	M9180 - M9195
8	Nephroblastoma	38	5.3	M8960 - M8960
9	Glioma	29	4.0	M938 - M948
10	Rhabdomyosarcoma	16	2.2	M8900 - M8921

Figure 6. Top 10 malignancies in children (<= 18 years), Jan. 2021 to Dec. 2021.



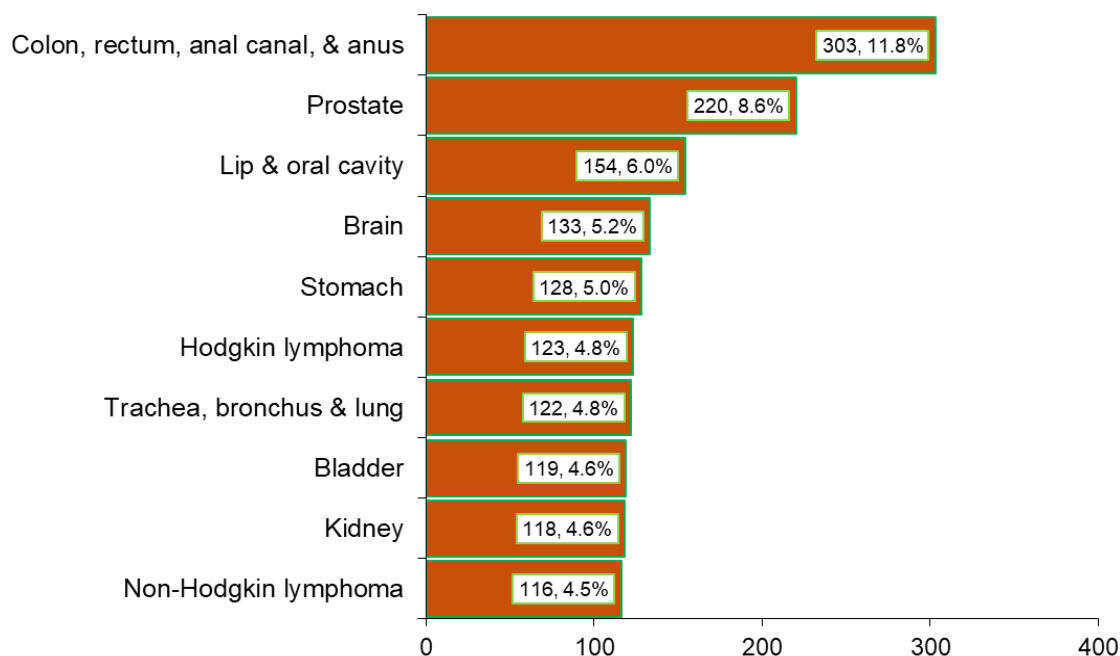
Data Source: Cancer Registry & Clinical Data Management, SKMCH&RC

In adult males (2,565 malignancies), the commonest cancers were those of the colon, rectum, anal canal, and anus, prostate, and lip & oral cavity (Table 7).

Table 7. Top 10 malignancies among adult males (> 18 years), Jan. 2021 to Dec. 2021.

Sr. No.	ICD Category	Count	Percentage	ICD-O-3 Code
1	Colon, rectum, anal canal, & anus	303	11.8	C18 - C21.8
2	Prostate	220	8.6	C61.9
3	Lip & oral cavity	154	6.0	C00.0 - C08.9
4	Brain	133	5.2	C71.0 - C71.9
5	Stomach	128	5.0	C16
6	Hodgkin lymphoma	123	4.8	M9650 - M9667
7	Trachea, bronchus & lung	122	4.8	C34
8	Bladder	119	4.6	C67
9	Kidney	118	4.6	C64.0 – C64.9
10	Non-Hodgkin lymphoma	116	4.5	M9590 - 91, M967 - 972

Figure 7. Top 10 malignancies among adult males (> 18 years), Jan. 2021 to Dec. 2021.



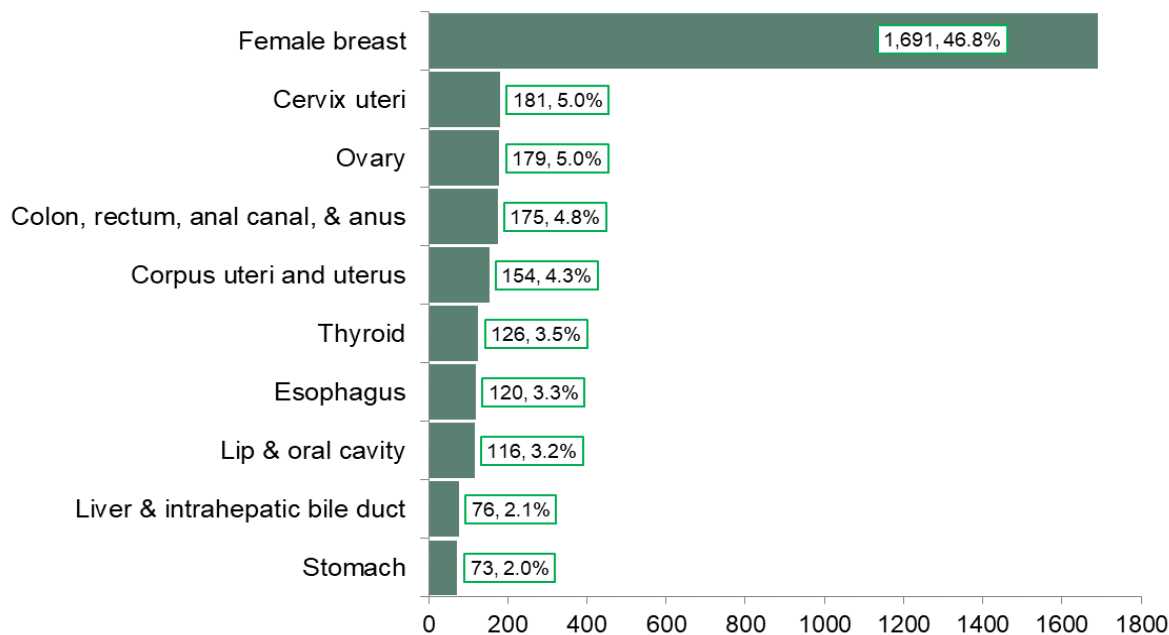
Data Source: Cancer Registry & Clinical Data Management, SKMCH&RC

The most frequent diagnosis in adult women (3,611) was breast cancer accounting for 46.8% of the cancers. Cancer of the cervix uteri was ranked as the second-highest (5.0%), and the ovary the third most common malignancy in females.

Table 8. Top 10 malignancies among adult females (> 18 years), Jan. 2021 to Dec. 2021.

Sr. No.	ICD Category	Count	Percentage	ICD-O 3 Code
1	Female breast	1,691	46.8	C50.0 - C50.9
2	Cervix uteri	181	5.0	C53.0 - C53.9
3	Ovary	179	5.0	C56
4	Colon, rectum, anal canal, & anus	175	4.8	C18 - C21.8
5	Corpus uteri and uterus	154	4.3	C54.0 - C55.9
6	Thyroid	126	3.5	C73.9
7	Esophagus	120	3.3	C15 - C15.9
8	Lip & oral cavity	116	3.2	C00.0 - C08.9
9	Liver & intrahepatic bile duct	76	2.1	C22
10	Stomach	73	2.0	C16

Figure 8. Top 10 malignancies among adult females (> 18 years), Jan. 2021 to Dec. 2021.



Data Source: Cancer Registry & Clinical Data Management, SKMCH&RC

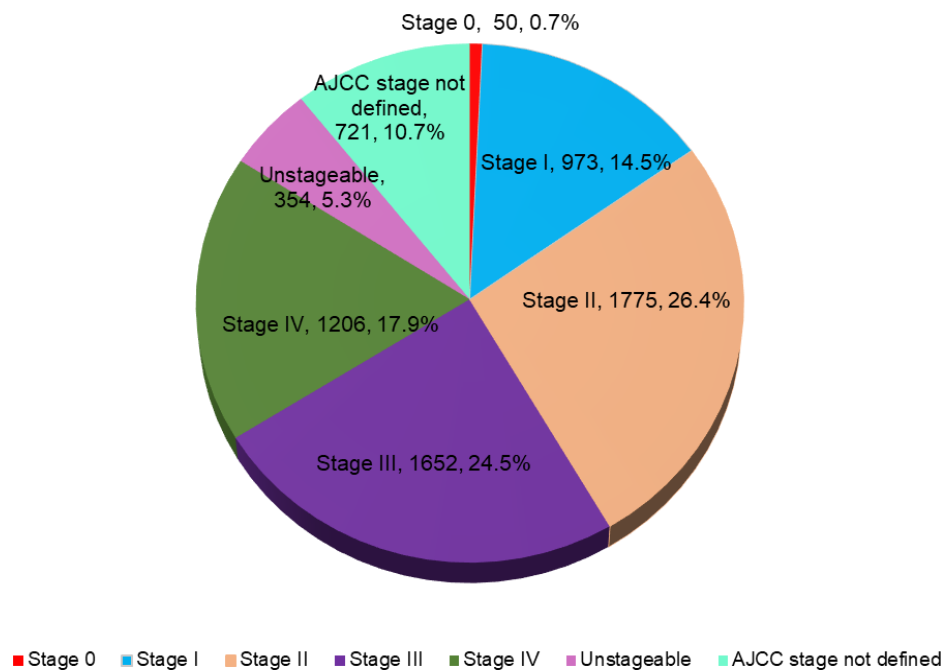
Staging

The Registry uses the American Joint Commission on Cancer TNM staging system for all analytical cancer cases. TNM categorizes cancers in stages 0, 1, 2, 3, 4, unstageable, and not applicable in all analytical cases (Class of Case 00, 10, 11, 12, and 20). Cancers are classified as being unstageable as the patients may choose not to receive any treatment or undergo further tests at the hospital needed to establish an appropriate stage. “Not applicable” means non-availability of AJCC staging for that site. During the year 2021, cancer staging for 6,731 analytical cases (Class of Case 00, 10, 11, 12, and 20) showed that 50 (0.7%) of cases fell into 0 or in-situ category, 973 (14.5%) in Stage I, 1,775 (26.4%) in Stage II, 1,652 (24.5%) in Stage III, 1,206 (17.9%) in Stage IV, 354 (5.3%) were unstageable, and 721 (10.7%) had no AJCC stage defined for that site (Table 9).

Table 9. TNM Stage of cancer patients at SKMCH&RC, Jan. 2021 to Dec. 2021.

AJCC Stage	Count	Percentage
Stage 0	50	0.7
Stage I	973	14.5
Stage II	1,775	26.4
Stage III	1,652	24.5
Stage IV	1,206	17.9
Unstageable	354	5.3
AJCC stage not defined	721	10.7
Total	6,731	100.0

Figure 9. TNM stage of cancer patients at SKMCH&RC, Jan. 2020 to Dec. 2021.



Data Source: Cancer Registry & Clinical Data Management, SKMCH&RC

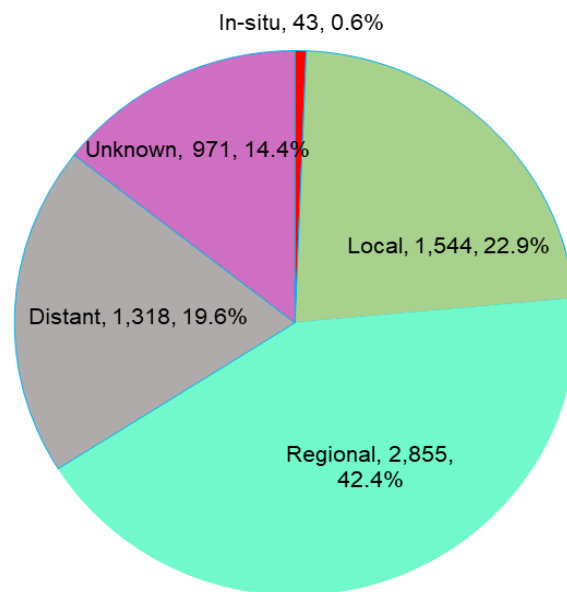
Summary Stage

The SEER Summary Staging Manual-2000 Codes and Coding Instructions were used to describe how far the tumor had spread from the organ or the site of origin. This manual consists of a one-digit hierarchical code for each site. All analytical cases (Class of Case 00, 10, 11, 12, and 20), were included to generate results. The cancer data for the year 2021 reflects that there were 0.6% in-situ cases, 22.9% localized cancers, 42.4% regional cases, 19.6% distant, and 14.4% cases with summary stage unknown.

Table 10. Classification of patients according to the SEER Summary Stage, Jan. 2021 to Dec. 2021.

SEER Summary Stage	Count	Percentage
In-situ	43	0.6
Local	1,544	22.9
Regional	2,855	42.4
Distant	1,318	19.6
Unknown	971	14.4
Total	6,731	100.0

Figure 10. Classification according to the SEER Summary Stage, Jan. 2021 to Dec. 2021.



Data Source: Cancer Registry & Clinical Data Management, SKMCH&RC

Grade/Differentiation/Immunophenotype

In the International Classification of Diseases for Oncology, Third Edition (ICD-O-3), codes, and guidelines have been used to categorize grade/differentiation/immunophenotype. All analytical cases (Class of Case 00, 10, 11, 12, and 20), were included to generate results.

Table 11. Grade/differentiation/immunophenotype of cancers, Jan. 2021 to Dec. 2021.

Grade/differentiation/immunophenotype	Count	Percentage
Grade I	434	6.4
Grade II	2,042	30.3
Grade III	1,687	25.1
Grade IV	120	1.8
T-cell	14	0.2
B-cell	275	4.1
NK-cell	1	0.01
Grade/differentiation/immunophenotype not determined, not stated, or not applicable	2,158	32.1
Total	6,731	100.0

SUPPLEMENTAL INFORMATION

Table 12 depicts the results stratified by primary site, age group, and sex. According to this, cancers of the breast, colon/rectum/anal canal/anus, lymphoma, and lip/oral cavity are the commonest systems/site(s) for malignancies seen at SKMCH&RC. Table 13 shows the results stratified by sex, primary site, and morphology.

Table 12. Distribution by sex, primary malignant site, and 5-year age group, 2021

**FEMALES
FEMALES**

ICD-O-3 code	Primary site	0-	5-	10-	15-	20-	25-	30-	35-	40-	45-	50-	55-	60-	65-	70-	75-	80-	85+	Total
C00	Lip	0	0	0	0	0	0	0	0	0	0	0	2	0	1	0	0	0	0	3
C01-C02	Tongue	0	0	0	0	1	1	3	1	4	7	7	13	4	5	4	2	1	1	54
C03	Gum	0	0	0	0	0	0	1	0	0	2	3	3	1	3	1	1	0	0	15
C04-C06	Floor & other parts of the mouth	0	0	0	0	0	2	2	0	2	1	1	3	4	3	4	0	0	0	22
C07-C08	Salivary gland	0	0	0	0	0	2	2	4	2	2	7	0	1	1	1	0	0	0	22
C09-C10	Tonsil & oropharynx	0	0	0	0	0	0	1	0	0	1	3	0	1	0	0	0	0	0	6
C11	Nasopharynx	0	0	0	3	2	3	2	0	0	4	2	1	1	0	1	0	0	0	19
C12-C13	Pyriform sinus & hypopharynx	0	0	0	0	1	0	2	3	2	6	3	1	2	2	1	0	0	0	23
C15	Esophagus	0	0	0	0	1	4	8	20	19	31	15	14	6	1	1	0	0	0	120
C16	Stomach	0	0	0	1	0	2	4	9	12	10	17	10	5	2	1	1	0	0	74
C17	Small intestine	0	0	0	0	0	1	0	1	0	0	1	1	2	0	1	0	0	0	7
C18	Colon	0	0	0	1	3	5	7	8	7	10	9	5	5	2	3	2	0	0	67
C19-C21	Rectosigmoid, rectum, anal canal & anus	0	0	0	1	4	21	7	12	14	15	13	14	2	2	1	2	1	0	109
C22	Liver & intrahepatic bile duct	3	0	0	0	0	0	0	1	3	9	12	25	10	8	8	0	0	0	79
C23-C24	Gall bladder & extrahepatic bile duct	0	0	0	0	1	3	3	5	1	4	3	10	10	7	5	3	0	0	55
C25	Pancreas	0	0	0	0	2	1	1	2	3	3	5	10	6	6	0	0	1	0	40
C30-C31	Nasal cavity, middle ear, & acc. sinuses	0	0	0	0	1	0	1	2	1	2	1	1	0	1	2	0	0	0	12
C32	Larynx	0	0	0	0	0	0	0	0	1	1	0	1	0	0	1	0	0	0	4
C33-C34	Traches, bronchus, & lung	0	0	0	0	0	2	2	2	1	7	4	5	7	7	3	1	1	0	42
C37-C38	Thymus, heart, mediastinum & pleura	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	2
C40-C41	Bone & articular cartilage	1	10	18	8	2	1	1	3	0	1	0	0	0	0	0	0	0	0	45
C44	Skin	1	0	0	0	0	2	0	4	3	6	3	8	17	5	13	2	0	3	67
C47	Peripheral & autoimmune nervous system	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
C49	Connective & soft tissue	3	2	3	4	3	2	3	4	1	3	4	0	1	2	0	0	0	0	35
C50	Breast	0	0	0	0	20	71	164	324	368	205	183	174	88	38	26	18	9	3	1691
C51-C52	Vulva & vagina	2	0	0	0	0	0	0	0	2	2	3	4	2	2	0	0	0	0	17
C53	Cervix uteri	0	0	0	0	0	4	10	17	35	27	33	25	25	4	1	0	0	0	181
C54	Corpus uteri	0	0	0	0	1	2	7	10	16	10	25	29	21	9	1	0	1	0	132
C55	Uterus	0	0	0	0	0	1	1	1	3	2	2	3	2	3	3	0	0	0	21
C56-C58	Ovary & other female genital organs	1	2	8	8	7	11	12	22	25	25	25	25	12	9	2	3	1	0	198
C64-C66	Kidney & other urinary organ	13	2	0	1	1	4	3	6	3	5	12	10	6	8	1	2	0	0	77
C67	Urinary bladder	0	0	0	0	0	0	0	1	1	5	4	2	0	0	1	0	0	1	15
C69	Eye	26	3	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	30
C70-C71	Brain	1	6	1	2	11	6	9	12	6	2	4	3	2	3	2	0	0	0	70
C72	Other parts of the nervous system	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
C73	Thyroid gland	0	0	0	3	13	20	28	20	18	7	7	6	2	3	1	0	0	0	128
C74-C75	Adrenal & other endocrine glands	1	0	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	4
C76	Other & ill-defined sites	5	3	2	2	0	2	0	1	0	2	0	0	0	0	0	0	0	0	17
C80	Unknown primary	0	0	0	1	1	1	3	3	3	3	2	4	3	2	5	2	0	1	34
M9590-91, 967-972	Non-Hodgkin lymphoma	11	13	0	3	12	10	12	6	1	3	4	10	3	2	1	1	0	0	92
M9650-M9667	Hodgkin lymphoma	5	19	14	7	21	15	12	6	8	2	1	0	0	0	1	0	0	0	111
M9731-M9734	Multiple myeloma & immuno. neoplasms	0	0	0	0	0	0	0	0	0	1	0	0	0	2	1	0	0	0	4
M982-M983	Lymphoid leukemia	16	11	1	4	5	1	0	0	1	0	1	1	1	0	0	0	0	0	42
M984-M993	Myeloid leukemia	0	0	0	0	4	1	1	0	0	0	0	0	0	1	0	0	0	0	7
M995-M998	Other lymphatic & hematopoietic tissue	0	0	0	0	0	1	0	0	0	1	0	0	1	1	0	0	0	0	4
~	Other reportable CNS neoplasms	0	1	1	2	9	5	3	7	11	2	3	6	4	4	1	0	0	0	59
Total		91	73	49	51	126	210	316	518	577	429	423	429	257	149	98	40	15	9	3860

MALES

ICD-O-3 code	Primary site	0-	5-	10-	15-	20-	25-	30-	35-	40-	45-	50-	55-	60-	65-	70-	75-	80-	85+	Total
C00	Lip	0	0	0	0	0	1	2	0	4	0	2	0	1	1	2	0	0	0	13
C01-C02	Tongue	0	0	0	0	0	2	3	8	5	10	9	7	10	5	2	0	0	0	61
C03	Gum	0	0	0	0	0	0	0	0	0	0	0	4	8	4	3	0	0	0	19
C04-C06	Floor & other parts of the mouth	0	0	0	0	0	2	2	0	7	6	11	9	4	5	2	0	0	0	48
C07-C08	Salivary gland	0	0	0	0	1	0	2	2	1	3	0	1	0	1	2	0	0	0	13
C09-C10	Tonsil & oropharynx	0	0	0	0	0	0	0	2	0	0	1	0	0	2	0	0	0	0	5
C11	Nasopharynx	0	0	0	1	1	5	6	4	6	4	8	9	6	1	1	0	0	0	52
C12-C13	Pyriiform sinus & hypopharynx	0	0	0	0	0	1	4	4	1	1	1	1	4	1	3	1	0	0	22
C14	Other & ill-defined lip, oral cavity, pharynx	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
C15	Esophagus	0	0	0	0	1	6	8	15	9	27	15	9	7	4	0	1	0	0	102
C16	Stomach	0	0	0	0	2	5	10	13	12	21	21	22	16	5	1	0	0	0	128
C17	Small intestine	0	0	0	0	0	1	2	0	1	3	0	1	0	0	2	0	0	0	10
C18	Colon	0	0	0	1	5	10	7	17	16	13	14	12	4	7	1	1	2	0	110
C19-C21	Rectosigmoid, rectum, anal canal, & anus	0	0	0	2	10	11	28	26	22	16	29	21	14	4	7	1	2	1	194
C22	Liver & intrahepatic bile duct	4	0	0	0	0	1	1	2	9	12	24	23	16	17	7	2	0	0	118
C23-C24	Gall bladder & extrahepatic bile duct	0	0	0	0	0	0	3	9	2	11	7	13	9	6	2	3	0	0	65
C25	Pancreas	0	0	0	0	0	0	2	4	2	3	4	14	3	7	4	1	2	0	46
C26	Other & ill-defined digestive organs	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
C30-C31	Nasal cavity, middle ear, & acc. sinuses	0	0	1	1	0	0	2	1	5	1	2	1	1	1	0	0	0	0	16
C32	Larynx	0	0	0	0	0	0	0	8	4	6	17	11	10	12	10	1	1	0	80
C33-C34	Traches, bronchus, & lung	0	0	0	0	3	2	5	4	6	6	9	17	15	18	18	14	4	1	122
C37-C38	Thymus, heart, mediastinum, & pleura	0	0	0	0	1	0	4	3	2	1	3	0	1	0	0	0	0	0	15
C40-C41	Bone & articular cartilage	4	18	22	11	17	7	6	5	2	0	0	1	2	1	1	0	0	0	97
C44	Skin	0	0	0	0	2	3	4	3	2	6	8	13	7	4	16	10	0	3	81
C47	Peripheral & autoimmune nervous system	9	1	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	12
C49	Connective & soft tissue	7	2	1	0	4	2	6	3	5	4	6	4	3	5	1	1	0	0	54
C50	Breast	0	0	0	0	0	0	1	0	2	1	2	2	0	0	0	0	0	0	8
C61	Prostate	0	0	0	0	0	0	0	0	3	6	8	22	48	75	26	19	11	2	220
C62	Testis	8	0	0	8	22	23	30	18	9	1	0	0	0	0	0	0	0	0	119
C64-C66	Kidney & other urinary organ	22	6	1	0	0	4	4	17	8	12	16	25	12	12	6	2	0	0	147
C67	Urinary bladder	1	0	0	0	1	3	5	6	7	22	12	9	14	17	8	8	5	2	120
C69	Eye	26	4	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	31
C70-C71	Brain	1	7	6	3	10	19	24	16	18	7	8	14	3	4	1	1	0	0	142
C72	Other parts of the nervous system	0	0	3	0	0	5	1	1	1	0	0	0	0	0	0	0	0	0	11
C73	Thyroid gland	0	0	0	0	4	11	13	7	3	5	2	1	2	1	0	2	0	0	51
C75	Endocrine gland & related structure	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
C76	Other & ill-defined sites	3	0	0	1	0	0	0	0	0	0	1	1	1	0	0	0	0	0	7
C80	Unknown primary	1	0	0	1	1	0	0	0	1	3	4	4	7	7	4	3	3	1	40
M9590-91, 967-972	Non-Hodgkin lymphoma	15	20	2	8	16	16	20	18	7	6	6	11	4	5	0	4	0	0	158
M9650-M9667	Hodgkin lymphoma	25	92	41	16	33	23	21	20	12	4	2	2	2	1	0	0	0	0	294
M9731-M732	Multiple myeloma & immuno. neoplasms	0	0	0	0	0	1	1	1	1	2	1	1	1	1	1	1	0	0	12
M982-M983	Lymphoid leukemia	49	18	1	8	15	1	1	0	1	0	1	0	1	0	0	0	0	0	96
M984-M993	Myeloid leukemia	1	0	0	1	7	0	2	1	0	0	1	0	1	1	1	0	0	0	16
M995-M998	Other lymphatic & hematopoietic tissue	0	0	0	0	0	0	1	1	1	1	2	2	2	4	1	0	0	1	16
~	Other reportable CNS neoplasms	0	2	4	2	1	7	3	6	7	10	7	3	1	4	1	1	1	0	60
Total		176	170	82	64	157	173	234	247	204	234	266	290	240	243	135	77	31	11	3034

*Diseases are listed according to the International Classification of Diseases for Oncology, Third Edition (ICD-O-3) codes.

~Non-malignant primary intracranial and CNS tumors are also included in the count.

Table 13 - Morphology, site, and sex, 2021

ICD-O-3 Code	Morphology	Female	Male	Grand Total
C00 Lip	Squamous Cell Carcinoma, Nos	2	13	15
	Adenoid Cystic Carcinoma	1		1
C01-C02 Tongue	Squamous Cell Carcinoma, Nos	45	49	94
	Squamous Cell Carcinoma, Keratinizing, Nos	7	11	18
	Papillary Squamous Cell Carcinoma	1		1
	Squamous Cell Carcinoma In Situ, Nos		1	1
	Verrucous Carcinoma, Nos	1		1
C03-C06 Gum, FOM, palate, other & unspecified parts of the mouth	Squamous Cell Carcinoma, Nos	13	38	51
	Squamous Cell Carcinoma, Nos	11	15	26
	Squamous Cell Carcinoma, Keratinizing, Nos	2	4	6
	Squamous Cell Carcinoma, Keratinizing, Nos	2	4	6
	Mucoepidermoid Carcinoma	4	1	5
	Adenoid Cystic Carcinoma	2	2	4
	Carcinoma, Nos	2	1	3
	Squamous Cell Carcinoma, Spindle Cell	1		1
	Clear Cell Adenocarcinoma, Nos		1	1
Polymorphous Low Grade Adenocarcinoma		1	1	
C07-08 Parotid and other major Salivary glands	Carcinoma, Nos	5	6	11
	Mucoepidermoid Carcinoma	8	2	10
	Adenoid Cystic Carcinoma	6	2	8
	Adenocarcinoma, Nos		2	2
	Squamous Cell Carcinoma, Nos	2		2
	Clear Cell Adenocarcinoma, Nos	1		1
	Malignant Myoepithelioma		1	1
	Plasmacytoma, Nos		1	1
C09-C10 Tonsil & oropharynx	Squamous Cell Carcinoma, Nos	2	3	5
	Malignant Lymphoma, Large B-Cell Diffuse Nos		3	3
	Squamous Cell Carcinoma, Keratinizing, Nos	3		3
	Adenocarcinoma, Nos		1	1
	Lymphoepithelial Carcinoma	1		1
	Polymorphous Low-Grade Adenocarcinoma		1	1
C11 Nasopharynx	Carcinoma, Undifferentiated, Nos	12	38	50
	Carcinoma, Nos	3	11	14
	Squamous Cell Carcinoma, Large Cell, Nonkeratinizing, Nos	1	1	2
	Adenocarcinoma, Nos	1		1
	Adenoid Cystic Carcinoma	1		1
	Lymphoepithelial Carcinoma		1	1
	Neoplasm, Malignant	1		1

	Squamous Cell Carcinoma, Nos		1	1
C12-C13 Pyriform sinus & hypopharynx	Squamous Cell Carcinoma, Nos	17	18	35
	Squamous Cell Carcinoma, Keratinizing, Nos	6	3	9
	Squamous Cell Carcinoma, Large Cell, Nonkeratinizing, Nos		1	1
C14 Other & ill-defined sites in the lip, oral cavity				
	Carcinoma, Nos		1	1
C15 Esophagus	Squamous Cell Carcinoma, Nos	104	81	185
	Squamous Cell Carcinoma, Keratinizing, Nos	10	6	16
	Adenocarcinoma, Nos	3	9	12
	Signet Ring Cell Carcinoma	1	2	3
	Neoplasm, Malignant		2	2
	Small Cell Carcinoma, Nos	2		2
	Adenosquamous Carcinoma		1	1
	Neuroendocrine Carcinoma, Nos		1	1
C16 Stomach	Adenocarcinoma, Nos	32	72	104
	Signet Ring Cell Carcinoma	26	36	62
	Neuroendocrine Carcinoma, Nos	4	8	12
	Squamous Cell Carcinoma, Nos	9	2	11
	Adenocarcinoma In Tubulovillous Adenoma	2	2	4
	Malignant Lymphoma, Large B-Cell Diffuse Nos	2	1	3
	Neoplasm, Malignant		3	3
	Adenosquamous Carcinoma		2	2
	Gastrointestinal Stromal Sarcoma	1	1	2
	Marginal Zone B-Cell Lymphoma, Nos	1	1	2
	Squamous Cell Carcinoma, Keratinizing, Nos		2	2
C17 Small intestine	Adenocarcinoma, Nos	4	6	10
	Neuroendocrine Carcinoma, Nos	1	4	5
	Malignant Lymphoma, Large B-Cell Diffuse Nos	1	3	4
	Burkitt Lymphoma, Nos	1	1	2
	Intestinal T-Cell Lymphoma	1		1
	Marginal Zone B-Cell Lymphoma, Nos		1	1
	Signet Ring Cell Carcinoma	1		1
	Squamous Cell Carcinoma, Nos	1		1
C18 Colon	Adenocarcinoma, Nos	43	68	111
	Mucinous Adenocarcinoma	7	18	25
	Signet Ring Cell Carcinoma	8	11	19
	Adenocarcinoma In Tubulovillous Adenoma	6	9	15
	Burkitt Lymphoma, Nos	3	1	4
	Neuroendocrine Carcinoma, Nos	3	1	4
	Malignant Lymphoma, Large B-Cell Diffuse Nos		2	2
	Adenocarcinoma In Adenomatous Polyp		1	1
	Adenocarcinoma In Villous Adenoma		1	1

	Neoplasm, Malignant		1	1
C19-C21 Rectosigmoid junction, rectum, anal canal, & anus	Adenocarcinoma, Nos	63	101	164
	Signet Ring Cell Carcinoma	11	41	52
	Adenocarcinoma In Tubulovillous Adenoma	11	28	39
	Mucinous Adenocarcinoma	7	11	18
	Malignant Melanoma, Nos	6	4	10
	Neuroendocrine Carcinoma, Nos	6	1	7
	Squamous Cell Carcinoma, Nos	1	4	5
	Neoplasm, Malignant	3		3
	Squamous Cell Carcinoma, Keratinizing, Nos		3	3
	Adenocarcinoma In Adenomatous Polyp		1	1
	Adenosquamous Carcinoma	1		1
Hodgkin Lymphoma, Mixed Cellularity, Nos		1	1	
C22 Liver & intrahepatic bile ducts	Hepatocellular Carcinoma, Nos	64	103	167
	Cholangiocarcinoma	9	10	19
	Hepatoblastoma	3	4	7
	Adenocarcinoma, Nos	1		1
	Hepatocellular Carcinoma, Fibrolamellar	1		1
	Leiomyosarcoma Nos	1		1
	Malignant Lymphoma, Non-Hodgkin, Nos	1		1
	Neuroendocrine Carcinoma, Nos		1	1
	Plasmacytoma, Nos		1	1
C23-C24 Gall bladder & other unspecified parts of the biliary tract	Adenocarcinoma, Nos	39	41	80
	Cholangiocarcinoma	3	8	11
	Adenocarcinoma In Tubulovillous Adenoma	3	6	9
	Neuroendocrine Carcinoma, Nos	6	2	8
	Neoplasm, Malignant	2	5	7
	Carcinoma, Nos	1	1	2
	Small Cell Carcinoma, Nos	1	1	2
	Signet Ring Cell Carcinoma		1	1
C25 Pancreas	Adenocarcinoma, Nos	31	30	61
	Neuroendocrine Carcinoma, Nos	7	8	15
	Neoplasm, Malignant		4	4
	Carcinoma, Nos		2	2
	Carcinoma, Undifferentiated, Nos		1	1
	Gastrointestinal Stromal Sarcoma		1	1
	Mucinous Adenocarcinoma	1		1
	Solid Pseudopapillary Carcinoma	1		1
C26 Other & ill- defined digestive organs	Adenocarcinoma, Nos		1	1
C30-C31 Nasal cavity, middle ear, & accessory sinuses	Squamous Cell Carcinoma, Nos	7	4	11
	Adenoid Cystic Carcinoma	1	2	3
	Mucoepidermoid Carcinoma	1	1	2
	Neuroendocrine Carcinoma, Nos		2	2
	Adenocarcinoma, Intestinal Type	1		1

	Adenocarcinoma, Nos		1	1
	Alveolar Rhabdomyosarcoma		1	1
	Burkitt Lymphoma, Nos	1		1
	Carcinosarcoma, Nos		1	1
	Epithelial-Myoepithelial Carcinoma		1	1
	Ewing Sarcoma		1	1
	Nk/T-Cell Lymphoma, Nasal, And Nasal-Type		1	1
	Rhabdomyosarcoma, Nos		1	1
	Squamous Cell Carcinoma, Keratinizing, Nos		1	1
	Squamous Cell Carcinoma, Large Cell, Nonkeratinizing, Nos	1		1
	Synovial Sarcoma, Nos	1		1
C32 Larynx	Squamous Cell Carcinoma, Nos	4	63	67
	Squamous Cell Carcinoma, Keratinizing, Nos		11	11
	Papillary Squamous Cell Carcinoma		2	2
	Basaloid Squamous Cell Carcinoma		1	1
	Squamous Cell Carcinoma In Situ, Nos		1	1
	Squamous Cell Carcinoma, Adenoid		1	1
	Squamous Cell Carcinoma, Spindle Cell		1	1
C33-C34 Trachea, bronchus, & lung	Adenocarcinoma, Nos	12	29	41
	Squamous Cell Carcinoma, Nos	5	36	41
	Small Cell Carcinoma, Nos	8	21	29
	Neuroendocrine Carcinoma, Nos	5	11	16
	Acinar Cell Carcinoma	4	9	13
	Carcinoma, Nos	1	3	4
	Neoplasm, Malignant	2	2	4
	Mucinous Adenocarcinoma	1	2	3
	Adenoid Cystic Carcinoma	1	1	2
	Atypical Carcinoid Tumor		2	2
	Pseudosarcomatous Carcinoma		2	2
	Squamous Cell Carcinoma, Keratinizing, Nos		2	2
	Leiomyosarcoma Nos	1		1
	Non-Small Cell Carcinoma		1	1
	Signet Ring Cell Carcinoma	1		1
	Solid Carcinoma, Nos	1		1
Spindle Cell Sarcoma		1	1	
Hodgkin Lymphoma, Mixed Cellularity, Nos	1		1	
C37-C38 Thymus, heart, mediastinum, & pleura	Thymoma, Type B2, Malignant		5	5
	Mediastinal Large B-Cell, Lymphoma	2	2	4
	Atypical Carcinoid Tumor		3	3
	Hodgkin Lymphoma, Nodular Sclerosis, Nos	2	1	3
	Seminoma, Nos		2	2
	Thymoma, Malignant, Nos	2		2
	Malignant Lymphoma, Large B-Cell Diffuse Nos		2	2
	Precursor T-Cell Lymphoblastic Lymphoma	1	1	2

	Epithelioid Mesothelioma, Malignant		1	1
	Fibrous Mesothelioma, Malignant		1	1
	Mesothelioma, Malignant		1	1
	Neuroendocrine Carcinoma, Nos		1	1
	Thymic Carcinoma, Nos		1	1
C40-41 Bones, joints, & articular cartilage	Osteosarcoma, Nos	16	42	58
	Ewing Sarcoma	19	35	54
	Chondroblastic Osteosarcoma	6	5	11
	Chondrosarcoma, Nos	2	5	7
	Malignant Lymphoma, Large B-Cell Diffuse Nos		6	6
	Langerhans Cell Histiocytosis, Disseminated	1	4	5
	Adamantinoma Of Long Bones		1	1
	Chordoma, Nos		1	1
	Clear Cell Chondrosarcoma		1	1
	Dedifferentiated Chondrosarcoma		1	1
	Fibroblastic Osteosarcoma		1	1
	Malignant Lymphoma, Non-Hodgkin, Nos		1	1
	Neoplasm, Malignant		1	1
	Parosteal Osteosarcoma	1		1
C42 Hematopoietic & reticuloendothelial system	Precursor B-Cell Lymphoblastic Leukemia	39	85	124
	Multiple Myeloma	4	9	13
	Acute Myeloid Leukemia, Nos	3	9	12
	Myelodysplastic Syndrome, Nos	2	6	8
	Precursor T-Cell Lymphoblastic Leukemia	1	7	8
	Polycythemia Vera		6	6
	Acute Promyelocytic Leukemia,	2	3	5
	B-Cell Chronic Lymphocytic Leukemia/Small Lymphocytic Lymphoma	2	3	5
	Chronic Myeloid Leukemia, Nos	2	3	5
	Essential Thrombocythemia	2	3	5
	Chronic Myelogenous Leukemia, Bcr/Abl Positive		1	1
	Malignant Lymphoma, Large B-Cell Diffuse Nos		1	1
	Malignant Lymphoma, Non-Hodgkin, Nos		1	1
	Plasmacytoma, Nos		1	1
	Precursor Cell Lymphoblastic Leukemia, Nos		1	1
Waldenstrom Macroglobulinemia		1	1	
C44 Skin	Squamous Cell Carcinoma, Nos	22	34	56
	Basal Cell Carcinoma, Nodular	18	21	39
	Basal Cell Carcinoma, Nos	10	7	17
	Dermatofibrosarcoma, Nos	4	6	10
	Squamous Cell Carcinoma, Keratinizing, Nos	2	5	7
	Basosquamous Carcinoma	4	2	6
	Sebaceous Adenocarcinoma	1	2	3
	Adenoid Basal Carcinoma	1	1	2
	Malignant Melanoma, Nos	2		2

	Squamous Cell Carcinoma In Situ, Nos		2	2
	Infiltrating Basal Cell Carcinoma, Nos	1		1
	Langerhans Cell Histiocytosis, Unifocal	1		1
	Mucinous Adenocarcinoma	1		1
	Mycosis Fungoides		1	1
	Squamous Cell Carcinoma, Adenoid		1	1
C47 Peripheral nerves & auto-immune N.S	Neuroblastoma, Nos	2	10	12
	Malignant Peripheral Nerve Sheath Tumor	1	2	3
C49 Connective, subcutaneous & other soft tissues	Undifferentiated Sarcoma	2	10	12
	Embryonal Rhabdomyosarcoma, Nos	5	6	11
	Ewing Sarcoma	8	3	11
	Spindle Cell Sarcoma	1	8	9
	Leiomyosarcoma Nos	3	2	5
	Dedifferentiated Liposarcoma	1	3	4
	Fibromyxosarcoma	2	2	4
	Fibrosarcoma, Nos	2	2	4
	Sarcoma, Nos	2	1	3
	Synovial Sarcoma, Spindle Cell	1	2	3
	Giant Cell Sarcoma		2	2
	Myxoid Chondrosarcoma	1	1	2
	Pleomorphic Liposarcoma		2	2
	Rhabdomyosarcoma, Nos		2	2
	Synovial Sarcoma, Nos	2		2
	Alveolar Soft Part Sarcoma	1		1
	Epithelioid Sarcoma	1		1
	Follicular Dendritic Cell Sarcoma		1	1
	Histiocytic Sarcoma		1	1
	Langerhans Cell Histiocytosis, Disseminated		1	1
	Liposarcoma, Nos		1	1
	Liposarcoma, Well Differentiated	1		1
	Myxoid Leiomyosarcoma		1	1
	Myxoid Liposarcoma		1	1
	Myxosarcoma		1	1
	Solitary Fibrous Tumor, Malignant		1	1
Spindle Cell Rhabdomyosarcoma	1		1	
Synovial Sarcoma, Biphasic	1		1	
C50 Breast	Infiltrating Duct Carcinoma, Nos	1460	8	1468
	Lobular Carcinoma, Nos	83		83
	Carcinoma, Nos	34		34
	Inflammatory Carcinoma	20		20
	Infiltrating Duct Mixed With Other Types Of Carcinoma	18		18
	Comedocarcinoma, Noninfiltrating	10		10
	Metaplastic Carcinoma, Nos	9		9

	Neoplasm, Malignant	7		7
	Phyllodes Tumor, Malignant	7		7
	Paget Disease And Infiltrating Duct Carcinoma Of Breast	6		6
	Mucinous Adenocarcinoma	5		5
	Paget Disease And Intraductal Carcinoma Of Breast	5		5
	Ductal Carcinoma In Situ, Solid Type	4		4
	Infiltrating Duct And Lobular Carcinoma	4		4
	Cribriform Carcinoma In Situ	2		2
	Intraductal Carcinoma, Noninfiltrating, Nos	2		2
	Intraductal Micropapillary Carcinoma	2		2
	Malignant Lymphoma, Large B-Cell Diffuse Nos	1	1	2
	Noninfiltrating Intraductal Papillary Adenocarcinoma	2		2
	Paget Disease, Mammary	2		2
	Adenocarcinoma, Nos	1		1
	Lobular Carcinoma In Situ, Nos	1		1
	Malignant Melanoma, Nos	1		1
	Medullary Carcinoma, Nos	1		1
	Micropapillary Carcinoma, Nos	1		1
	Neuroendocrine Carcinoma, Nos	1		1
	Papillary Carcinoma, Nos	1		1
	Sarcoma, Nos	1		1
	Secretory Carcinoma Of Breast	1		1
C51-C52 Vulva & vagina	Squamous Cell Carcinoma, Nos	5		5
	Carcinoma, Nos	2		2
	Adenocarcinoma, Nos	1		1
	Adenoid Cystic Carcinoma	1		1
	Basaloid Carcinoma	1		1
	Embryonal Rhabdomyosarcoma, Nos	1		1
	Endometrioid Adenocarcinoma, Nos	1		1
	Leiomyosarcoma Nos	1		1
	Small Cell Carcinoma, Nos	1		1
	Squamous Cell Carcinoma, Keratinizing, Nos	1		1
	Squamous Cell Carcinoma, Large Cell, Nonkeratinizing, Nos	1		1
	Yolk Sac Tumor	1		1
C53 Cervix uteri	Squamous Cell Carcinoma, Nos	79		79
	Squamous Cell Carcinoma, Large Cell, Nonkeratinizing, Nos	38		38
	Squamous Cell Carcinoma, Keratinizing, Nos	21		21
	Adenocarcinoma, Nos	10		10
	Adenosquamous Carcinoma	6		6
	Carcinoma, Nos	4		4
	Clear Cell Adenocarcinoma, Nos	4		4

	Adenocarcinoma, Endocervical Type	3		3
	Endometrioid Adenocarcinoma, Nos	3		3
	Neuroendocrine Carcinoma, Nos	2		2
	Basaloid Carcinoma	1		1
	Basaloid Squamous Cell Carcinoma	1		1
	Carcinoma, Undifferentiated, Nos	1		1
	Choriocarcinoma, Nos	1		1
	Embryonal Rhabdomyosarcoma, Nos	1		1
	Malignant Melanoma, Nos	1		1
	Neoplasm, Malignant	1		1
	Papillary Squamous Cell Carcinoma	1		1
	Squamous Cell Carcinoma In Situ, Nos	1		1
	Squamous Intraepithelial Neoplasia, Grade III	1		1
	Undifferentiated Sarcoma	1		1
C54 Corpus uteri	Endometrioid Adenocarcinoma, Nos	99		99
	Serous Cystadenocarcinoma, Nos	6		6
	Carcinoma, Nos	5		5
	Endometrial Stromal Sarcoma, Nos	5		5
	Adenosarcoma	3		3
	Carcinosarcoma, Nos	3		3
	Clear Cell Adenocarcinoma, Nos	3		3
	Adenocarcinoma, Nos	2		2
	Endometrial Stromal Sarcoma, Low Grade	2		2
	Leiomyosarcoma Nos	2		2
	Papillary Serous Cystadenocarcinoma	1		1
	Undifferentiated Sarcoma	1		1
C55 Uterus	Carcinosarcoma, Nos	8		8
	Leiomyosarcoma Nos	6		6
	Endometrioid Adenocarcinoma, Nos	2		2
	Serous Cystadenocarcinoma, Nos	2		2
	Endometrial Stromal Sarcoma, Nos	1		1
	Neoplasm, Malignant	1		1
	Undifferentiated Sarcoma	1		1
C56-C58 Ovary & other female genital organs	Serous Cystadenocarcinoma, Nos	104		104
	Endometrioid Adenocarcinoma, Nos	15		15
	Mucinous Adenocarcinoma	13		13
	Clear Cell Adenocarcinoma, Nos	11		11
	Dysgerminoma	9		9
	Mixed Germ Cell Tumor	7		7
	Yolk Sac Tumor	7		7
	Adenocarcinoma, Nos	5		5
	Carcinoma, Nos	5		5
	Neoplasm, Malignant	4		4
	Papillary Serous Cystadenocarcinoma	4		4
	Granulosa Cell Tumor, Malignant	3		3

	Germinoma	2		2
	Carcinosarcoma, Nos	1		1
	Choriocarcinoma, Nos	1		1
	Embryonal Carcinoma, Nos	1		1
	Granular Cell Tumor, Malignant	1		1
	Malignant Melanoma, Nos	1		1
	Mucinous Cystadenocarcinoma, Nos	1		1
	Papillary Cystadenocarcinoma, Nos	1		1
	Serous Surface Papillary Carcinoma	1		1
	Teratoma, Malignant, Nos	1		1
C61 Prostate	Adenocarcinoma, Nos		185	185
	Acinar Cell Carcinoma		16	16
	Neoplasm, Malignant Carcinoma, Nos		11	11
			3	3
	Adenocarcinoma With Neuroendocrine Differentiation		2	2
	Adenosquamous Carcinoma		1	1
	Neuroendocrine Carcinoma, Nos		1	1
	Small Cell Carcinoma, Nos		1	1
C62-63 Testis & other male genital organs	Mixed Germ Cell Tumor		50	50
	Seminoma, Nos		37	37
	Yolk Sac Tumor		10	10
	Embryonal Carcinoma, Nos		9	9
	Germinoma		4	4
	Teratoma, Malignant, Nos		4	4
	Neoplasm, Malignant		2	2
	Choriocarcinoma, Nos		1	1
	Ewing Sarcoma		1	1
Germ Cell Tumor, Nonseminomatous		1	1	
C64-C66 Kidney, renal pelvis, & ureter	Clear Cell Adenocarcinoma, Nos	38	66	104
	Renal Cell Carcinoma, Nos	12	30	42
	Nephroblastoma, Nos	12	26	38
	Neoplasm, Malignant	4	2	6
	Renal Cell Carcinoma, Chromophobe Type	2	4	6
	Clear Cell Sarcoma, Nos	2	1	3
	Papillary Adenocarcinoma, Nos	1	2	3
	Papillary Transitional Cell Carcinoma		3	3
	Transitional Cell Carcinoma, Nos		3	3
	Ewing Sarcoma	1	1	2
	Papillary Carcinoma, Nos	1	1	2
	Renal Cell Carcinoma, Sarcomatoid	2		2
	Spindle Cell Carcinoma, Nos		2	2
	Carcinoma, Undifferentiated, Nos		1	1
	Chromophobe Carcinoma		1	1

	Clear Cell Sarcoma Of Kidney		1	1
	Collecting Duct Carcinoma		1	1
	Dedifferentiated Liposarcoma		1	1
	Malignant Lymphoma, Large B-Cell Diffuse Nos	1		1
	Mucinous Adenocarcinoma	1		1
	Neuroblastoma, Nos	1		1
	Squamous Cell Carcinoma, Nos		1	1
C67 Bladder	Transitional Cell Carcinoma, Nos	8	65	73
	Papillary Transitional Cell Carcinoma	3	47	50
	Squamous Cell Carcinoma, Nos	1	2	3
	Papillary Transitional Cell Carcinoma, Non-Invasive	1	1	2
	Adenocarcinoma, Nos	1		1
	Carcinoma, Nos		1	1
	Embryonal Rhabdomyosarcoma, Nos		1	1
	Neoplasm, Malignant		1	1
	Paraganglioma, Malignant		1	1
	Small Cell Carcinoma, Nos		1	1
	Transitional Cell Carcinoma, Spindle Cell	1		1
C69 Eye and adnexa	Retinoblastoma, Nos	28	30	58
	Malignant Melanoma, Nos	1	1	2
	Burkitt Lymphoma, Nos	1		1
	Embryonal Rhabdomyosarcoma, Nos	1		1
	Marginal Zone B-Cell Lymphoma, Nos		1	1
C70-C71 Meninges & brain	Glioma, Malignant	17	52	69
	Astrocytoma, Nos	17	29	46
	Glioblastoma, Nos	11	20	31
	Meningioma, Nos	17	13	30
	Oligodendroglioma, Nos	3	13	16
	Pilocytic Astrocytoma	2	12	14
	Medulloblastoma, Nos	7	6	13
	Malignant Lymphoma, Large B-Cell Diffuse Nos	6	2	8
	Neoplasm, Uncertain Whether Benign Or Malignant	4	4	8
	Ependymoma, Nos	3	3	6
	Meningothelial Meningioma	2	3	5
	Astrocytoma, Anaplastic	2	2	4
	Atypical Meningioma	1	2	3
	Gemistocytic Astrocytoma	2	1	3
	Oligodendroglioma, Anaplastic	1	2	3
	Neoplasm, Malignant	1	1	2
	Pleomorphic Xanthoastrocytoma	2		2
	Alveolar Soft Part Sarcoma	1		1
	Central Neurocytoma	1		1
	Dysembryoplastic Neuroepithelial Tumor		1	1
Gliosarcoma	1		1	

	Hemangioblastoma		1	1
	Mixed Germ Cell Tumor		1	1
	Neuroblastoma, Nos		1	1
	Subependymal Giant Cell Astrocytoma		1	1
C72 Spinal cord, cranial nerves, & other parts of the CNS	Neurilemoma, Nos	6	1	7
	Ependymoma, Nos		5	5
	Glioma, Malignant	1	2	3
	Myxopapillary Ependymoma		2	2
	Neoplasm, Uncertain Whether Benign Or Malignant	1	1	2
	Pilocytic Astrocytoma		2	2
	Astrocytoma, Nos		1	1
	Ewing Sarcoma		1	1
	Hemangioblastoma		1	1
	Malignant Lymphoma, Non-Hodgkin, Nos		1	1
C73 Thyroid	Papillary Carcinoma, Nos	94	36	130
	Medullary Carcinoma, Nos	8	7	15
	Papillary Carcinoma, Follicular Variant	11		11
	Follicular Adenocarcinoma, Nos	4	4	8
	Papillary Microcarcinoma	5		5
	Carcinoma, Nos	2	2	4
	Follicular Carcinoma, Minimally Invasive	1	1	2
	Papillary Carcinoma, Encapsulated	2		2
	Carcinoma, Anaplastic, Nos		1	1
	Neoplasm, Malignant	1		1
C74 Adrenal gland	Adrenal Cortical Carcinoma	1		1
	Neuroblastoma, Nos	1		1
C75 Other endocrine glands & related structures	Pituitary Adenoma, Nos	23	25	48
	Craniopharyngioma	3	3	6
	Carcinoma, Nos	1		1
	Craniopharyngioma Adamantinomatous	1		1
	Glomus Tumor, Malignant	1		1
	Pineoblastoma		1	1
	Prolactinoma		1	1
C76 Other & ill-defined sites	Burkitt Lymphoma, Nos	5	14	19
	Yolk Sac Tumor	5	4	9
	Dysgerminoma	4		4
	Malignant Lymphoma, Large B-Cell Diffuse Nos	1	3	4
	Germinoma	2		2
	Neoplasm, Malignant	1	1	2
	Neuroendocrine Carcinoma, Nos		2	2
	Teratoma, Malignant, Nos	2		2
	Anaplastic Large Cell Lymphoma, T Cell, And Null Cell Type	1		1
	Hodgkin Lymphoma, Nos		1	1

	Malignant Myoepithelioma	1		1
	Mixed Germ Cell Tumor	1		1
	Serous Cystadenocarcinoma, Nos	1		1
C77 Lymph nodes (NHL, HL)	Hodgkin Lymphoma, Mixed Cellularity, Nos	54	178	232
	Malignant Lymphoma, Large B-Cell Diffuse Nos	38	57	95
	Hodgkin Lymphoma, Nodular Sclerosis, Nos	31	60	91
	Hodgkin Lymphoma, Nos	14	33	47
	Burkitt Lymphoma, Nos	7	18	25
	Hodgkin Lymphoma, Nodular Lymphocyte Predominance	4	14	18
	Hodgkin Lymphoma, Lymphocyte-Rich	5	5	10
	Anaplastic Large Cell Lymphoma, T Cell And Null Cell Type	3	4	7
	Composite Hodgkin And Non-Hodgkin Lymphoma	1	5	6
	Malignant Lymphoma, Non-Hodgkin, Nos	2	4	6
	Follicular Lymphoma, Grade 3	2	3	5
	Follicular Lymphoma, Grade 2	2	2	4
	Mantle Cell Lymphoma	1	2	3
	T-Cell/Histiocyte Rich Large B-Cell Lymphoma	1	2	3
	Alk Positive Large B-Cell Lymphoma	1	1	2
	Follicular Lymphoma, Grade 1	1	1	2
	Mediastinal Large B-Cell, Lymphoma		2	2
	Precursor T-Cell Lymphoblastic Lymphoma	2		2
	Angioimmunoblastic T-Cell Lymphoma		1	1
	B-Cell Chronic Lymphocytic Leukemia/Small Lymphocytic Lymphoma		1	1
	Follicular Lymphoma, Nos	1		1
	Hodgkin Lymphoma, Nodular Sclerosis, Grade 2		1	1
	Malignant Lymphoma, Lymphoplasmacytic		1	1
Marginal Zone B-Cell Lymphoma, Nos		1	1	
Precursor B-Cell Lymphoblastic Lymphoma		1	1	
C80 Unknown primary site	Adenocarcinoma, Nos	12	17	29
	Neoplasm, Malignant	9	14	23
	Carcinoma, Nos	4	5	9
	Neuroendocrine Carcinoma, Nos	2	2	4
	Signet Ring Cell Carcinoma	3		3
	Squamous Cell Carcinoma, Nos	1	1	2
	Dysgerminoma	1		1
	Leiomyosarcoma Nos	1		1
	Malignant Lymphoma, Non-Hodgkin, Nos		1	1
	Mucinous Adenocarcinoma	1		1
	Neoplasm, Metastatic		1	1
Grand Total		3860	3034	6894

"NOS" is an abbreviation for Not Otherwise Specified.

Note: Lymphomas arise in solid organ sites categorized in their respective sites.