

# ANNUAL CANCER REGISTRY REPORT-2005

## CANCER STATISTICS

### Distribution of neoplasms

Of a total of 3,115 new neoplasms diagnosed or treated at the Hospital from January 2005 to December, 2005, 1,473 were seen in males (47.28%) and 1,642 (52.72%) in females. Two thousand eight hundred and thirty five 2,835 (91%) neoplasms were found in adults, whereas, 280 (9.0%) were seen in children. Children were classified as those 18 years or less in age and adults as more than 18 years of age. Table 1 shows the stratification of cases by behavior and age groups.

**Table 1. Distribution of neoplasms by behavior and age groups.**

<b>Behavior</b>	<b>Age Group</b>	<b>Registered patients (3,099)</b>	<b>Reported neoplasm* (3,115)</b>
<b>Malignant<sup>♦</sup></b>	Adults	2,737	2,744
	Pediatrics	271	273
	Total	3,008	3,017
<b>Benign<sup>€</sup> &amp; Uncertain Behavior</b>	Adults	84	91
	Pediatrics	7	7
	Total	91	98

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\* The difference in the number of registered patients and reported neoplasms is attributed to multiple neoplasms in 16 patients.

♦ Cases with behavior code /3 and /2 are considered as malignant cases.

€ Cases with behavior code /0 and /1 are considered as benign and uncertain respectively.

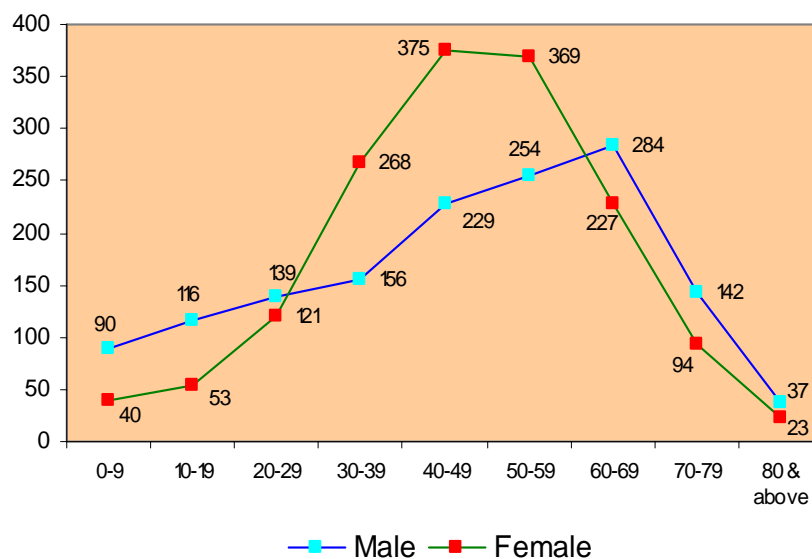
## Distribution of malignancies

In the year 2005, 3,017 malignant cases were diagnosed at the Hospital with 1,447 seen amongst males and 1,570 amongst females. Table 2 displays the distributions of male and female patients according to age groups and gender.

**Table 2. Distribution of cancer cases by sex and age groups**

Age range	Male	Female	Total
0-9	90	40	130
10-19	116	53	169
20-29	139	121	260
30-39	156	268	424
40-49	229	375	604
50-59	254	369	623
60-69	284	227	511
70-79	142	94	236
80 & above	37	23	60
<b>Total</b>	<b>1,447</b>	<b>1,570</b>	<b>3,017</b>

**Figure 2. Distribution of malignancies by age groups and sex**

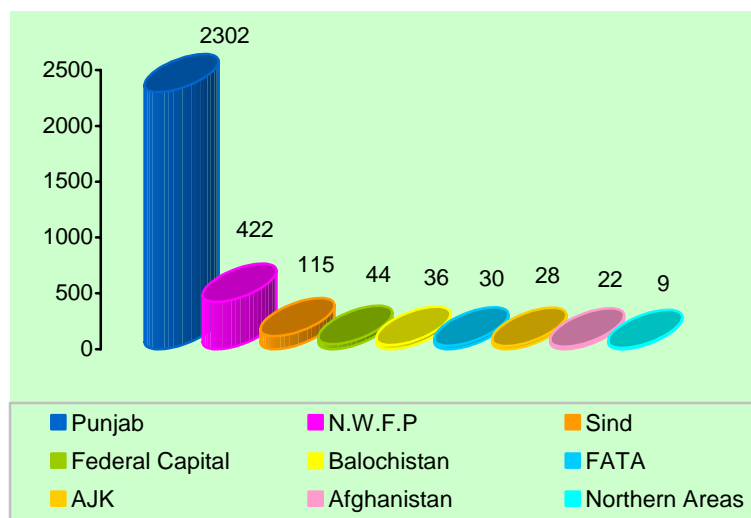


## Demographics

Of the 3,008 patients diagnosed with malignant, nearly 77% (2,302) belonged to the province of Punjab and approximately 14% to the North West Frontier Province (N.W.F.P) (Table 3). The fact that the geographic area of residence of a vast majority of patients was Punjab can be explained in light of the information that the hospital is situated in the provincial capital of Punjab and that, this province accounts for almost 56% of the total population of the country.

**Table 3. Province-wise distribution of patients**

Province/Region	Patients
Punjab	2,302
N.W.F.P	422
Sindh	115
Federal Capital	44
Balochistan	36
F.A.T.A	30
Azad Jammu, Kashmir	28
Afghanistan	22
Northern Areas	9
<b>Total</b>	<b>3,008</b>

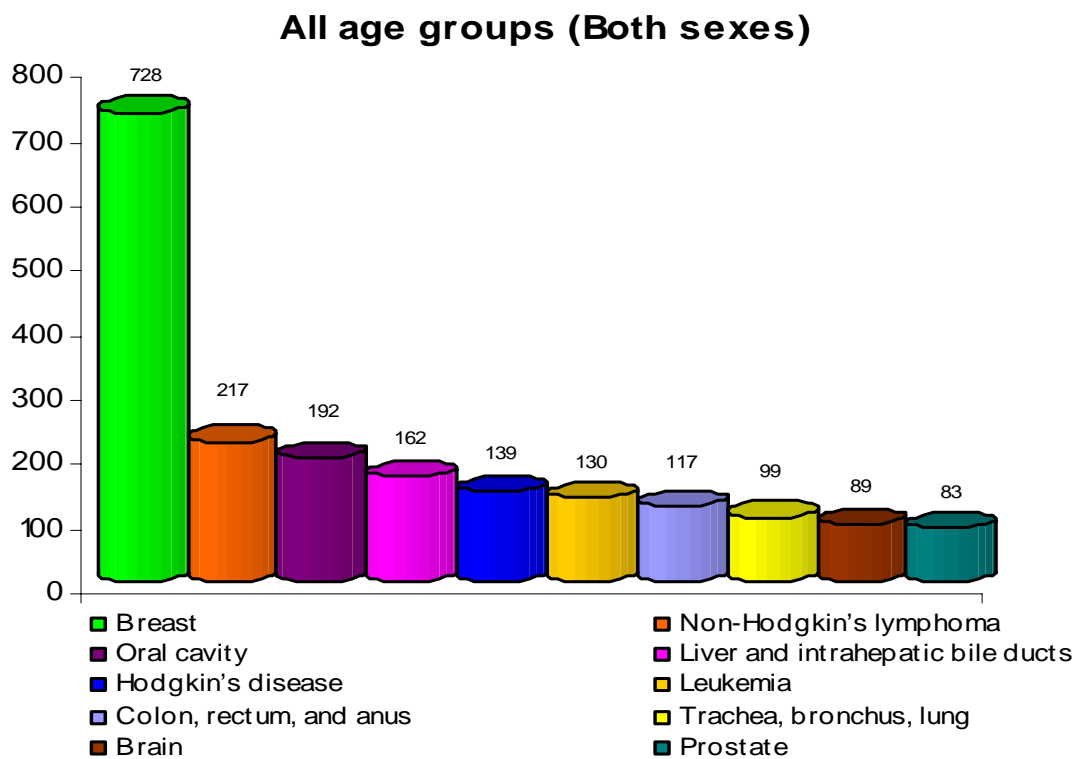


## Top Ten Cancers

Table 4 shows the list of the ten commonest malignancies seen at SKMCH & RC during the year 2005. Breast cancer was the leading malignancy with 728 cases accessioned into the Registry. Non-hodgkin's lymphoma and cancer of the oral cavity were the second and third most frequently seen cancers, respectively.

**Table 4. Top 10 malignancies seen at SKMCH & RC, from January 2005 till December 2005, in all age groups and both sexes combined.**

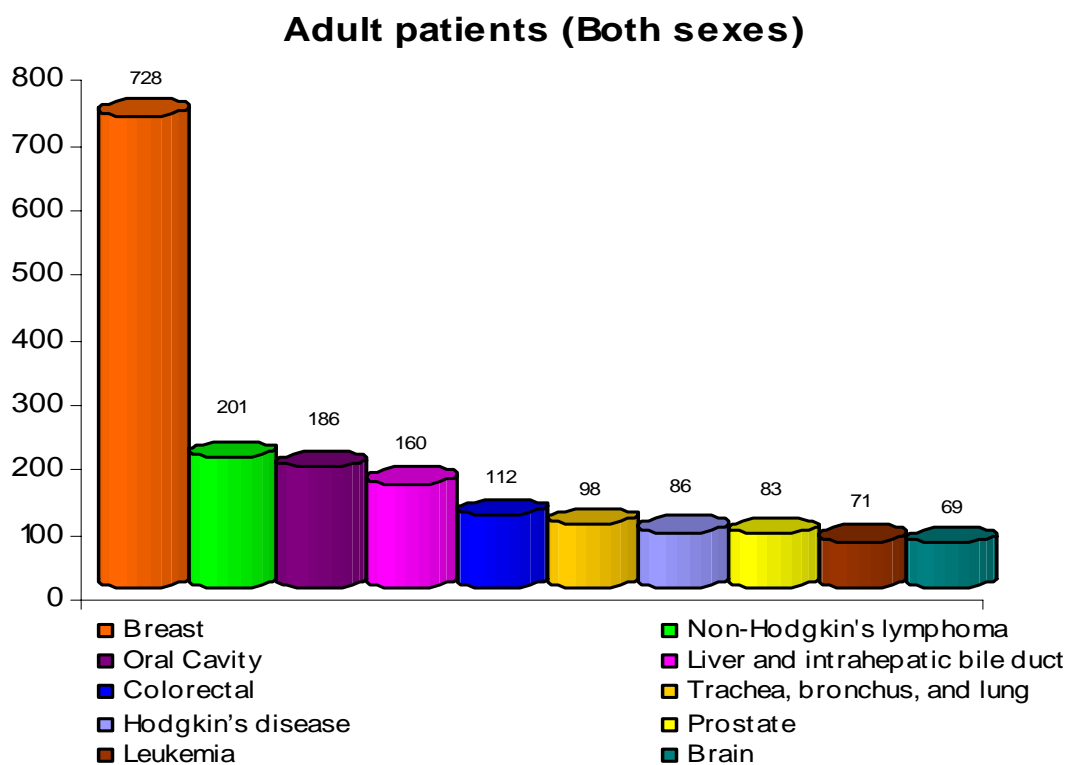
Sr. No.	ICD-O-3 Category	Count	Percentage	ICD-O-3 Code
1	Breast	728	24.13	C50.0 - C50.9
2	Non-Hodgkin's lymphoma	217	7.19	M9590,91 - M967-972
3	Oral cavity	192	6.36	C00.0 - C08.9
4	Liver and intrahepatic bile ducts	162	5.37	C22.0 - C22.1
5	Hodgkin's disease	139	4.61	M9650 - M9667
6	Leukemia	130	4.31	M982 - M994
7	Colon, rectum, and anus	117	3.88	C18.0 - C21.8
8	Trachea, bronchus, lung	99	3.28	C33.9 - C34.9
9	Brain	89	2.95	C71.0 - C71.9
10	Prostate	83	2.75	C61.9



Amongst adults, during the year 2005, a total of 2,744 malignancies were diagnosed or treated at the Hospital. Breast cancer, NHL and cancer of the oral cavity were registered as the most frequently seen cancers.

**Table 5. Top 10 malignancies seen amongst adults (> 18 years) at SKMCH & RC, from January 2005 till December 2005.**

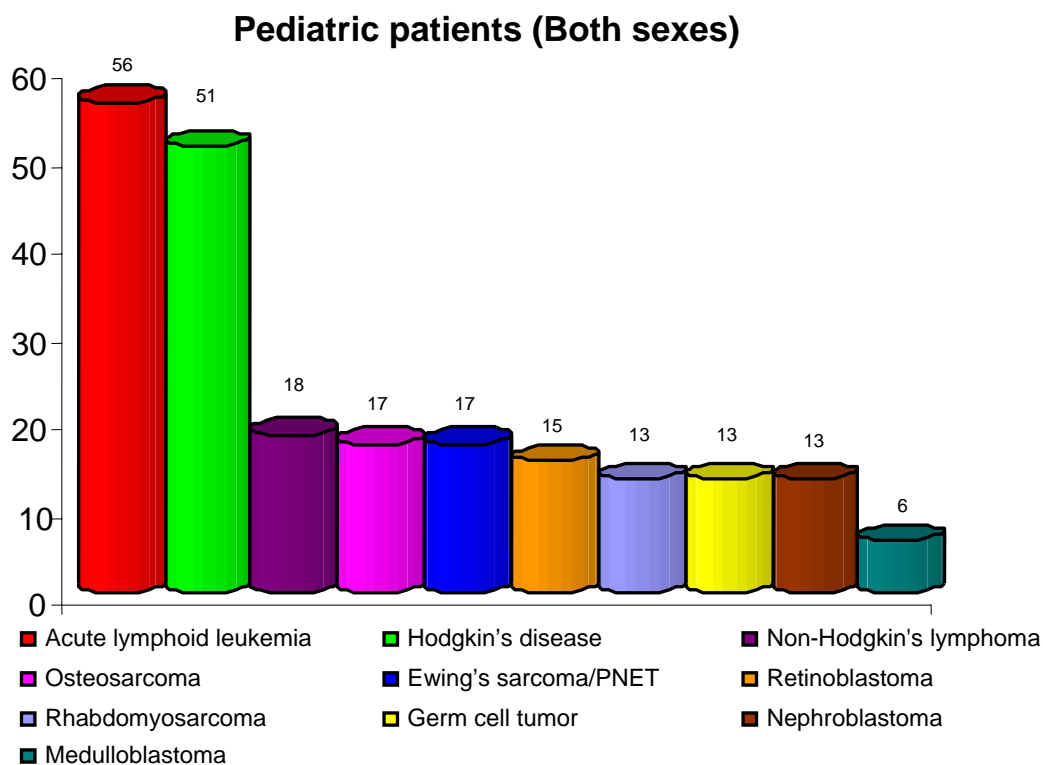
Sr. No.	ICD-O-3 Category	Count	Percentage	ICD-O-3 Code
1	Breast	728	26.53	C50 - C50.9
2	Non-Hodgkin's lymphoma	201	7.32	M9590,91 - M967-972
3	Oral cavity	186	6.77	C00.0 - C08.9
4	Liver and intrahepatic bile duct	160	5.83	C22.0 - C22.1
5	Colorectal	112	4.08	C18 - C21.8
6	Trachea, bronchus, and lung	98	3.57	C33.9 - C34.9
7	Hodgkin's disease	86	3.13	M9650 - M9667
8	Prostate	83	3.02	C61.9
9	Leukemia	71	2.59	M982 - M994
10	Brain	69	2.51	C71.0 - C71.9



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

**Table 6. Top 10 malignancies seen in children ( $\leq 18$  years) at SKMCH & RC, from January 2005 till December 2005.**

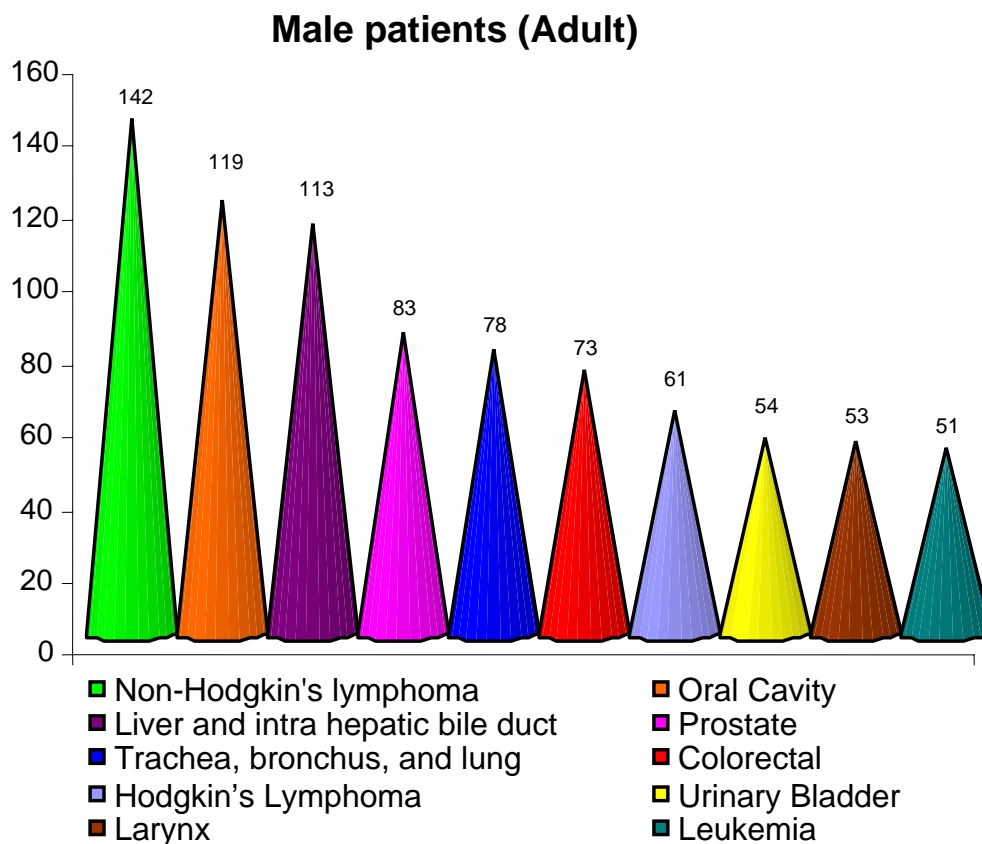
Sr. No.	ICD-O-3 Category	Count	Percentage	ICD-O-3 Code
1	Acute lymphoid leukemia	56	20.51	M982 - 983
2	Hodgkin's disease	51	18.68	M9650 - M9667
3	Non-Hodgkin's lymphoma	18	6.59	M9590, 91- M967-972
4	Osteosarcoma	17	6.22	M918 - 919
5	Ewing's sarcoma/PNET	17	6.22	M9260 - 9364
6	Retinoblastoma	15	5.49	M951
7	Rhabdomyosarcoma	13	4.76	M890
8	Germ cell tumor	13	4.76	M906 - 909
9	Nephroblastoma	13	4.76	M8960
10	Medulloblastoma	6	2.19	M9470



In adult males, the commonest malignancies were non-Hodgkin's lymphoma, cancer of the oral cavity and liver cancer (Table 7).

**Table 7. Top 10 malignancies in adult males seen at SKMCH & RC from January 2005 till December 2005.**

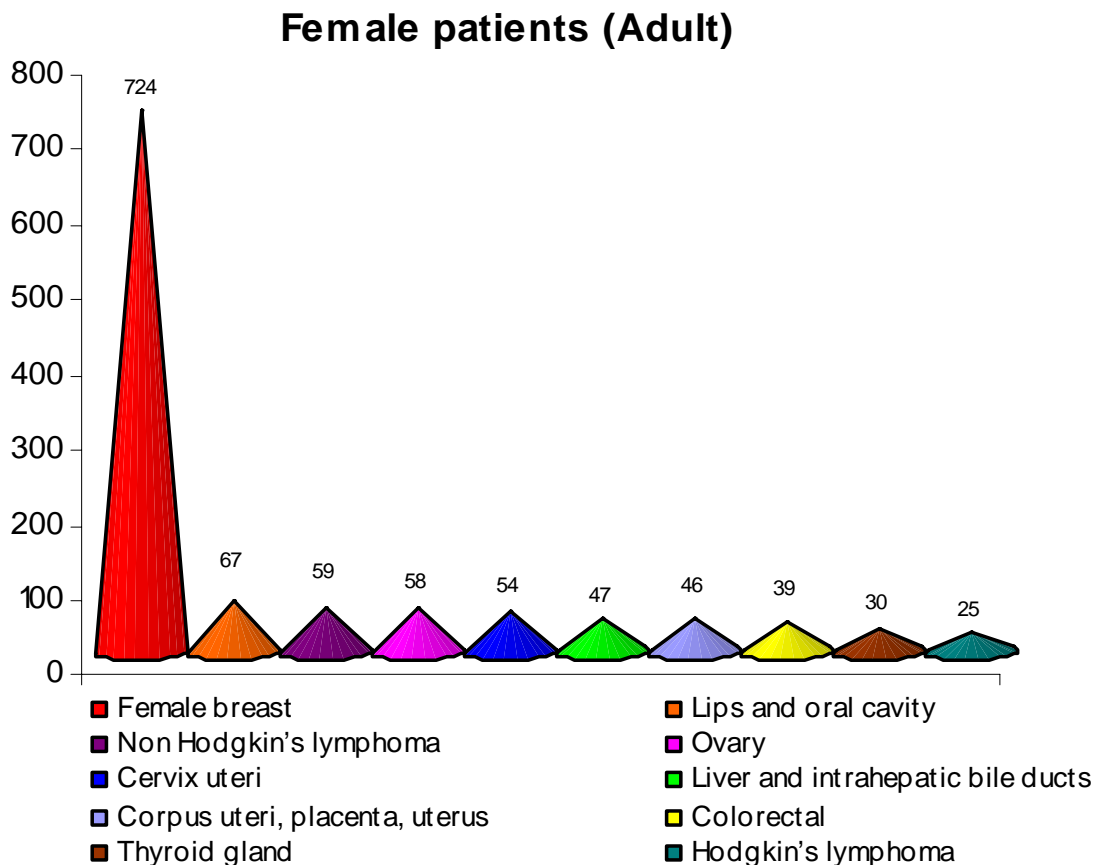
Sr.No.	ICD Category	Count	Percentage	ICD-O-3 Code
1	Non-Hodgkin's lymphoma	142	11.25	M9590, 91- M967-972
2	Oral Cavity	119	9.42	C00.0 - C08.9
3	Liver and intra hepatic bile duct	113	8.95	C22.0 - C22.1
4	Prostate	83	6.57	C61.9
5	Trachea, bronchus, and lung	78	6.18	C33 - C34.9
6	Colorectal	73	5.78	C18 - C21.8
7	Hodgkin's lymphoma	61	4.83	M9650 - M9667
8	Urinary bladder	54	4.27	C67.0 - C67.9
9	Larynx	53	4.20	C32.0 - C32.9
10	Leukemia	51	4.04	M980 - M994



The most frequent diagnosis in adult women was breast cancer accounting for 48.85% of the total cancers in females. Oral cancer was ranked as the second highest cancer accounting for 4.52% and, NHL the third most common malignancy with 3.98% of the total carcinomas in females.

**Table8: Top 10 malignancies seen at SKMCH & RC from January 2005 till December 2005 amongst adult females.**

Sr. No.	ICD Category	Count	Percentage	ICD-O 3 Code
1	Female breast	724	48.85	C50.0 - C50.9
2	Lips and oral cavity	67	4.52	C00.0 - C08.9
3	Non Hodgkin's lymphoma	59	3.98	M9590, 91- M967 - 972
4	Ovary	58	3.91	C56.9 - C57.9
5	Cervix uteri	54	3.64	C53.0 - C53.9
6	Liver and intrahepatic bile ducts	47	3.17	C22.0 - C22.1
7	Corpus uteri, placenta, uterus	46	3.10	C54.0 - C55.9, C58.9
8	Colorectal	39	2.63	C18.0 - C21.8
9	Thyroid gland	30	2.02	C73.9
10	Hodgkin's lymphoma	25	1.68	M965 - 966

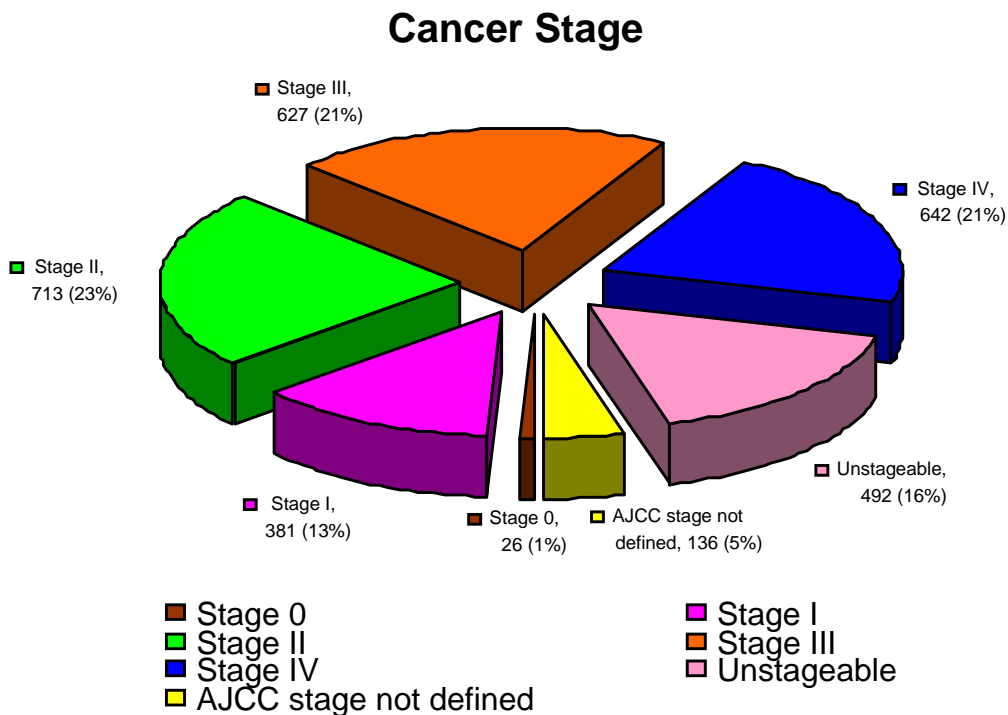


## Staging

The Registry uses the American Joint Commission on Cancer TNM staging system for all available cancer sites. TNM categorizes cancers in stages 0, 1, 2, 3, 4, and unstageable. Cancers may be unstageable due to non-availability of AJCC staging for that site. Also, the patients may choose not to receive any treatment or undergo further tests at the Hospital, needed to establish an appropriate stage. During the year 2005, cancer staging for 3,017 patients showed that 26 (0.9%) patients fell into 0 or in situ category, 381 (13%) in stage I, 713 (24%) in stage II, 627 (21%) patients in stage III, and 642 (21%) in stage IV, (table 9); 492 (16.3%) patients were unstageable. Of these 136 (4.51%) had no AJCC stage for the site.

**Table 9. Cancer stage of patients at SKMCH & RC during year 2005.**

AJCC Stage	No. of Patients
Stage 0	26
Stage I	381
Stage II	713
Stage III	627
Stage IV	642
Unstageable	492
AJCC stage not defined	136
<b>Total</b>	<b>3017</b>



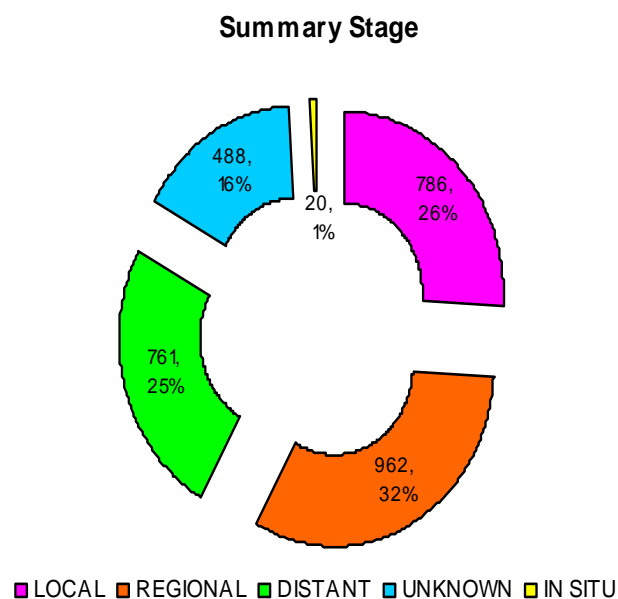


## Extent of Disease (EOD)

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 and every site. The cancer data for the year 2005 reflects that there were 0.6% in situ cases, 26% localized cancers, 32% regional cases, 25% distant, and there were 16% cases in which the summary stage was unknown.

**Table 10. Classification according to the Extent of Disease during the year 2005.**

EXTENT OF DISEASE	
LOCAL	786
REGIONAL	962
DISTANT	761
UNKNOWN	488
IN SITU	20
<b>TOTAL</b>	<b>3,017</b>



## SUPPLEMENTAL INFORMATION

Table 11 depicts the results stratified by various systems according to the ICD-O-3 nomenclature. According to this, breast cancer, digestive cancers, and lymphoma are the commonest system/site(s) for the malignancies seen at the Hospital.

**Table 11. Distribution of primary malignant sites, 2005**

Primary site	**ICD-0-3 Code	Female	Male	Total
<b>Lip, Oral Cavity, Pharynx</b>	<b>C00-C14</b>	<b>93</b>	<b>155</b>	<b>248</b>
Lip	C00	0	4	4
Tongue	C01-C02	26	46	72
Salivary glands	C07-C08	5	15	20
Gum	C03	14	25	39
Floor and other Parts of mouth	C04-C06	24	33	57
Oropharynx	C10	1	1	2

Nasopharynx	C11-C12	10	24	34
Hypopharynx	C13	12	6	18
Tonsil	C09	1	1	2

<b>Digestive system</b>	<b>C15.0-C26.9</b>	<b>185</b>	<b>296</b>	<b>481</b>
Esophagus	C15	22	29	51
Stomach	C16	22	41	63
Small intestine	C17	3	2	5
Colon	C18	12	36	48
Rectum, anal canal, anus	C19	27	42	69
Liver & Intrahepatic bile ducts	C22.0-C22.1	47	115	162
Gall bladder & Extra hepatic bile duct	C23-C24	37	15	52
Pancreas	C25	15	16	31

<b>Retro peritoneum, Peritoneum</b>	<b>C48</b>	<b>3</b>	<b>4</b>	<b>7</b>
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<b>Respiratory system</b>	<b>C30-C39</b>	<b>35</b>	<b>149</b>	<b>184</b>
Nasal cavities, Ear, acc. sinuses	C30-C31	8	12	20
Larynx	C32	5	53	58
Trachea, bronchus, lungs	C33-C34	20	79	99
Thymus, heart, mediastinum	C37-C38	2	5	7

<b>Bone</b>	<b>C40-C41</b>	<b>19</b>	<b>47</b>	<b>66</b>
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<b>Connective tissue</b>	<b>C49</b>	<b>26</b>	<b>43</b>	<b>69</b>
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<b>Skin</b>	<b>C44</b>	<b>31</b>	<b>28</b>	<b>59</b>
<b>Breast</b>	<b>C50</b>	<b>724</b>	<b>4</b>	<b>728</b>

<b>Female genital organ</b>	<b>C51-C58</b>	<b>173</b>	<b>0</b>	<b>173</b>
Cervix	C53	54	0	54
Corpus uteri, Uterus & Placenta	C54-C55.9, C58.9	46	0	46
Ovary, uterine adnexa	C56.9-C57.9	63	0	63
Vagina	C52.9	5	0	5
Vulva	C51	5	0	5

<b>Male genital organ</b>	<b>C60-C63</b>	<b>0</b>	<b>124</b>	<b>124</b>
Prostate	C61.9	0	83	83
Testis	C62	0	39	39
Penis	C60		2	2

<b>Urinary system</b>	<b>C64-C68</b>	<b>23</b>	<b>92</b>	<b>115</b>
Bladder	C67	8	54	62
Kidney, renal pelvis, ureter	C64-C66	15	38	53
Others and unspecified	C68	0	0	0
<b>Eye</b>	<b>C69</b>	<b>4</b>	<b>18</b>	<b>22</b>
<b>*Brain &amp; CNS</b>	<b>C70-C72</b>	<b>31</b>	<b>67</b>	<b>98</b>
Brain	C70-C71	29	65	94
Others	C72	2	2	4
<b>Endocrine glands</b>	<b>C73-C75</b>	<b>35</b>	<b>17</b>	<b>52</b>
Thyroid gland	C73.9	31	7	38
Other endocrine gland and related structures	C74-C75	4	10	14
<b>Hematopoietic and Reticuloendothelial system</b>	<b>C42.0-C42.4</b>	<b>45</b>	<b>88</b>	<b>133</b>
Myeloid leukemia	M984-M993	12	27	39
Lymphoid leukemia	M982-M983	30	57	87
Myelodysplastic syndrome	M998	1	2	3
Others	M9940	2	2	4
<b>Plasma cell tumor</b>	<b>M973-M973</b>	<b>11</b>	<b>28</b>	<b>39</b>
Plasmacytoma	M9731	1	3	4
Multiple myeloma	M9732	10	25	35
<b>Lymphatic system</b>	<b>C77</b>	<b>98</b>	<b>256</b>	<b>354</b>
Hodgkin's disease	M9650-M9622	36	101	137
Non-Hodgkin's lymphoma	M9590,91, 967-972	62	155	217
<b>Unknown Primary site</b>	<b>C80</b>	<b>31</b>	<b>29</b>	<b>60</b>
<b>Others &amp; ill defined sites</b>	<b>C76</b>	<b>3</b>	<b>2</b>	<b>5</b>

Note:

\*\* Diseases are listed according to International Classification of disease for Oncology, 3<sup>rd</sup> Edition.

\* Non-malignant primary intracranial and CNS tumors reported in 2005 are also included in the table. CNS: Central Nervous System

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