

***Oncology Data Unit
Department of Oncology
King Faisal Specialist Hospital
& Research Centre***

**2000
Tumor Registry Annual Report**

ACKNOWLEDGEMENTS:

The Cancer Program is a combined effort of many individuals. It is not possible to enumerate all the nurses, technicians, therapists, pharmacists, dentists, physicians, scientists, social workers and others whose work is primarily on behalf of the patients with cancer. In addition, nearly everyone associated with the hospital comes in contact with the cancer patients from time to time, frequently contributing significantly to their care. The staff of the Tumor Registry recognizes this hospital-wide involvement in the care of cancer patients. The information in this report is provided to assist all health care professionals to better understand the problems faced in treating patients with cancer.

The following Departments have assisted throughout the year and without their invaluable support this report would not be possible. The Tumor Registry staff acknowledges these Departments:

Department of Pathology & Laboratory Medicine
Information Technology Affairs
Medical Records Services
Department of Radiation Therapy
Department of Oncology
Home Health Care

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Raghad Al Saad, CTR, Assistant Tumor Registrar
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Annual Report Prepared by the Staff of the Tumor Registry
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2000 TUMOR REGISTRY ANNUAL REPORT

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I. KING FAISAL SPECIALIST HOSPITAL & RESEARCH CENTRE TUMOR REGISTRY

The King Faisal Specialist Hospital and Research Centre (KFSH&RC) opened in June 1975 to provide specialized medical treatment to the people of Saudi Arabia and to promote the prevention of disease through research and education. It is a national and international tertiary care hospital for Oncology and the principal center for cancer therapy in Saudi Arabia.

The KFSH&RC Tumor Registry is a hospital-wide data system designed for the collection, management, and analysis of data on patients with the diagnosis of a malignant neoplasm (cancer). The Registry was established to meet one of the requirements for an Approved Cancer Program of the American College of Surgeons (ACoS). The database now includes 43,450 malignant cases seen at KFSH&RC from June 1975 through December 31, 2000, as well as cases seen at the Children's Cancer Centre since its opening in March 1997. More than 2,500 new cases are added annually.

The Registry is primarily staffed with certified tumor registrars who support the database in case ascertainment, abstracting, follow up and statistical analyses. The basic source document is the patient's medical record from which pertinent information is abstracted for use in the Registry. The electronic data system used is the Cansur 3.0 designed by the ACoS in which the details of each diagnosed cancer case is entered and stored. (Please refer to Figures 1-A to 1-D for a sample data set.)

The data maintained in the Tumor Registry provides the statistics for the publication of the KFSH&RC Annual Report which summarizes the hospital's cancer experience. The data also supports a wide variety of reports at the request of physicians, researchers, and ancillary personnel. These reports support patient management and outcome, basic and clinical research investigations, educational publications and presentations, and resource utilization. In 2000, the Tumor Registry supported 35 data requests (see Appendix A for a listing of requests for Tumor Registry data). It also identified and reported to the National Cancer Registry 2,663 cases seen in 2000 that were diagnosed on or after 01 January 1994.

FIGURE 1-A

KING FAISAL SPECIALIST HOSPITAL
AND RESEARCH CENTRE

CANCER REGISTRY WORKSHEET
(CanSur 3.0)

PATIENT NAMEPLATE

PF 10 TACS - ACCESSION FILE MAINTENANCE ACCESSION NUMBER (ACCH): <u>870123</u> TUMOR SEQUENCE (SEQ): <u>010</u> Malignant/In situ tumors 00 - One primary only 01 - First of two or more 90 - 90th or later primary 99 - Unspecified sequence Benign tumors XX - One primary only AA - First of two or more 101 - 8th or later primary 0 - Unspecified sequence THIS CANCER ACCESSION YEAR: <u>87</u> MEDICAL RECORD NO.: <u>1394657</u> CASE STATUS: <u>3</u> 0 - Suspense 1 - Incomplete 3 - Completed per Release 3 PATIENT NAME Last: _____ First: _____ Second: _____ Third: _____ ADDRESS AT DIAGNOSIS P.O. City: _____ <u>Riyadh</u> City [R] [Y] ZIP Code: [] [] [] [] - [] [] [] Prov.		MARITAL STATUS AT DX: <u>2</u> 1 - Single 2 - Married 3 - Separated 4 - Divorced 5 - Widowed 9 - Unknown RELIGION: <u>01</u> 01 - Muslim 02 - Christian 03 - Hindu 04 - Buddhist 06 - Other 99 - Unknown ALCOHOL USAGE: <u>3</u> 1 - Current alcohol usage 2 - Past history of alcohol usage 3 - Never used alcohol 9 - Unknown FAMILY HISTORY OF CANCER: <u>1</u> 1 - Family history of cancer 2 - No family history of cancer 9 - Unknown SMOKING/CHEWING HISTORY: <u>3</u> 1 - Current smoker cig. 2 - Past smoker 3 - Patient never smoked 4 - Chai 5 - Shamma 6 - Shisha 7 - Concha 8 - Other 9 - Unknown TOTAL PACK YEARS: [] [] [] INDUSTRY: [] [] [] [] [] [] OCCUPATION: <u>Teacher</u> [] [] [] [] DATE ADMITTED (mm/dd/yyyy) <u>01/20/1987</u> DATE DISCHARGED (mm/dd/yyyy) <u>02/15/1987</u>	
PF 11 TPAT - PATIENT IDENTIFICATION CAUDI ID: <u>12345</u> BIRTH DATE: <u>01/01/1946</u> AGE AT DX: <u>41</u> SEX: <u>2</u> 1 - Male 2 - Female 9 - Unknown NATIONALITY: <u>01</u> 00 - Saudi 01 - Amer, Can, Brit 02 - Egyptian 03 - Leb, Syr, Pal 04 - Yemeni 05 - Other Arab 06 - Ind, Pak 07 - African 08 - 09 - Other		REPORTING SOURCE: <u>1</u> 1 - Inpatient 2 - Clinic/outpatient 3 - Laboratory 4 - Physician's office 5 - Nursing home 6 - Autopsy 7 - Death Cert. 9 - Unknown HOSPITAL REFERRED FROM: <u>0000101</u> <u>Riyadh Central Hospital</u> HOSPITAL REFERRED TO: [] [] [] [] [] []	

FIGURE 1-B

<p>PF 12 TEXT - MISCELLANEOUS TEXT</p> <p>PHYSICAL EXAM: 6-INO hx 2 cm mass rt breast UOQ, mobile, no skin changes. 3x4 cm rt axillary LN. Lt breast NED.</p> <p>x RAYS / SCANS: 01/20/87 Bilat Mammogram - 2x2.5x2.5 cm mass rt breast UOQ, CXR, Bone Scan, U/S Abdomen - NED</p> <p>SCORES / LAB: 01/25/87 ERA (+), PRA (+)</p> <p>OPERATIVE FINDINGS: 01/25/87 Rt Mod Rad Mastectomy - no description of tumor.</p> <p>PATHOLOGY / AUTOPSY: 87SP3286 01/25/87 Duct Cell Ca, gr 3; 11/19 LN's. (tumor size: 2.2x2x1.8 cm completely excised) Nipple & overlying skin NED. (largest LN 1.5 cm)</p>	<p style="text-align: center;">TCAM - Cancer Identification (Continued)</p> <p>GRADE: 1 </p> <table style="width: 100%; border: none;"> <tr> <td>1 - Well differentiated (I)</td> <td>5 - T-cell</td> </tr> <tr> <td>2 - Mod well differentiated (II)</td> <td>6 - B cell</td> </tr> <tr> <td>3 - Poorly differentiated (III)</td> <td>7 - Hist cell</td> </tr> <tr> <td>4 - Undifferentiated (IV)</td> <td>9 - Hist distal, unknown</td> </tr> </table> <p>LATERALITY: 1 </p> <table style="width: 100%; border: none;"> <tr> <td>0 - Not paired organ</td> <td>3 - Rt or Lt unspecified</td> </tr> <tr> <td>1 - Right</td> <td>4 - Both, simultaneous</td> </tr> <tr> <td>2 - Left</td> <td>9 - Unknown laterality</td> </tr> </table> <p>DX CONFIRMATION: 1 </p> <table style="width: 100%; border: none;"> <tr> <td>1 - Positive histology</td> <td>6 - Direct visualization</td> </tr> <tr> <td>2 - Cytology</td> <td>7 - Radiotherapy</td> </tr> <tr> <td>4 - Pos. micro, conf. m. I/O/S</td> <td>8 - Clinical</td> </tr> <tr> <td>5 - Laboratory test/Marker</td> <td>9 - Unknown</td> </tr> </table> <p>REGIONAL NODES EXAMINED: 1 9 </p> <table style="width: 100%; border: none;"> <tr> <td>00 - No nodes examined</td> <td>97 - 97 + nodes examined</td> </tr> <tr> <td>01 - One node examined</td> <td>99 - Nodes examined, number unknown</td> </tr> <tr> <td>...</td> <td>99 - Unknown if nodes examined</td> </tr> </table> <p>REGIONAL NODES POSITIVE: 1 1 </p> <table style="width: 100%; border: none;"> <tr> <td>00 - No nodes positive</td> <td>97 - Positive nodes, number unknown</td> </tr> <tr> <td>01 - One node positive</td> <td>99 - No nodes examined</td> </tr> <tr> <td>...</td> <td>99 - Unknown if any nodes +/-</td> </tr> <tr> <td>99 - 99 + nodes positive</td> <td></td> </tr> </table> <p>TUMOR SIZE (cm) 0 2 2 </p> <p>eg. 000 - No mass, 002 - 0.2 cm, 055 - 5.5 cm, 999 - Unknown</p> <p>RESIDUAL TUMOR: 0 </p> <table style="width: 100%; border: none;"> <tr> <td>0 - None</td> <td>2 - Macroscopic</td> <td>9 - Unknown</td> </tr> <tr> <td>1 - Microscopic</td> <td>8 - No reaction, I/A</td> <td></td> </tr> </table> <p>DISTANT METS: 1 </p> <table style="width: 100%; border: none;"> <tr> <td>0 - Brain/Mx.</td> <td>4 - Liver</td> <td>8 - Lymph node (distal)</td> </tr> <tr> <td>1 - Peritoneum</td> <td>5 - Bone</td> <td>9 - Unknown/other</td> </tr> <tr> <td>2 - Lung</td> <td>6 - CNS</td> <td></td> </tr> <tr> <td>3 - Pleura</td> <td>7 - Skin</td> <td></td> </tr> </table> <p>GENERAL SUMMARY STAGE: 3 </p> <table style="width: 100%; border: none;"> <tr> <td>0 - In situ</td> <td>4 - Regional, both 2 & 3</td> </tr> <tr> <td>1 - Localized</td> <td>5 - Regional, NOS</td> </tr> <tr> <td>2 - Regional, direct extension</td> <td>7 - Distant</td> </tr> <tr> <td>3 - Regional, nodes</td> <td>9 - Unknown/verstageable</td> </tr> </table>	1 - Well differentiated (I)	5 - T-cell	2 - Mod well differentiated (II)	6 - B cell	3 - Poorly differentiated (III)	7 - Hist cell	4 - Undifferentiated (IV)	9 - Hist distal, unknown	0 - Not paired organ	3 - Rt or Lt unspecified	1 - Right	4 - Both, simultaneous	2 - Left	9 - Unknown laterality	1 - Positive histology	6 - Direct visualization	2 - Cytology	7 - Radiotherapy	4 - Pos. micro, conf. m. I/O/S	8 - Clinical	5 - Laboratory test/Marker	9 - Unknown	00 - No nodes examined	97 - 97 + nodes examined	01 - One node examined	99 - Nodes examined, number unknown	...	99 - Unknown if nodes examined	00 - No nodes positive	97 - Positive nodes, number unknown	01 - One node positive	99 - No nodes examined	...	99 - Unknown if any nodes +/-	99 - 99 + nodes positive		0 - None	2 - Macroscopic	9 - Unknown	1 - Microscopic	8 - No reaction, I/A		0 - Brain/Mx.	4 - Liver	8 - Lymph node (distal)	1 - Peritoneum	5 - Bone	9 - Unknown/other	2 - Lung	6 - CNS		3 - Pleura	7 - Skin		0 - In situ	4 - Regional, both 2 & 3	1 - Localized	5 - Regional, NOS	2 - Regional, direct extension	7 - Distant	3 - Regional, nodes	9 - Unknown/verstageable
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<p>PF 13 TCAM - CANCER IDENTIFICATION</p> <p>DATE OF INITIAL DIAGNOSIS: (mm/dd/yyyy) 0 1 / 2 5 / 1 9 0 7 </p> <p>CLASS OF CASE: 1 </p> <table style="width: 100%; border: none;"> <tr> <td>0 - Dx here, elsewhere</td> <td>4 - Dx here prior</td> </tr> <tr> <td>1 - Dx elsewhere</td> <td>5 - Dx at autopsy</td> </tr> <tr> <td>2 - Dx here</td> <td>9 - Unknown</td> </tr> <tr> <td>3 - Dx elsewhere</td> <td></td> </tr> </table> <p>PRIMARY SITE - TEXT: Breast, Right UOQ</p> <p>CODE: 1 7 1 1 </p> <p>HISTOLOGY - TEXT: Duct Cell Carcinoma, gr 3</p> <p>CODE: 0 5 0 0 / 3 </p>	0 - Dx here, elsewhere	4 - Dx here prior	1 - Dx elsewhere	5 - Dx at autopsy	2 - Dx here	9 - Unknown	3 - Dx elsewhere		<p>AJCC STAGE:</p> <p>CLINICAL T 2 • N 1 • M 0 • STAGE GROUP 2 1 ••</p> <p>PATHOLOGICAL T 2 • N 1 1 • M 0 • STAGE GROUP 2 1 ••</p> <p>OTHER ••• T • N • M • STAGE GROUP ••</p> <p>* ICD Codes - use alpha codes as appropriate; eg. 12A 2A, 12 2, 11B-1D, M0-0, IS-in situ, X Unknown</p> <p>** AJCC Stage Group - use alpha codes as appropriate; eg. 3A Stage IIIA, 1-Stage I</p> <table style="width: 100%; border: none;"> <tr> <td>0 - In situ</td> <td>2 - Stage II</td> <td>4 - Stage IV</td> </tr> <tr> <td>1 - Stage I</td> <td>3 - Stage III</td> <td>9 - Unknown</td> </tr> </table> <p>*** Other (basis): (S - Surgical, A - Autopsy, R - Recurrence)</p>	0 - In situ	2 - Stage II	4 - Stage IV	1 - Stage I	3 - Stage III	9 - Unknown																																																
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FIGURE 1-C

<p>PF 14 TRX1 - 1ST COURSE TREATMENT (SURGERY, RADIATION)</p> <p>SURGERY</p> <p>REASON: 0 </p> <table style="width:100%; border:none;"> <tr> <td style="width:50%; border:none;"> 0 - Can directed surg performed 1 - Not recommended 2 - Contra-indicated, other </td> <td style="width:50%; border:none;"> 3 - Reason unknown, no surg 4 - Patient/guardian refused 5 - Recommended, unk if done 6 - unknown </td> </tr> </table> <p>SUMMARY: (Entire 1st course) 5 0 </p> <p>AT THIS HOSPITAL: 5 0 </p> <p>* Refer to Appendix A in CanSur User Manual for site specific codes.</p> <p>STARTED: (mm/dd/yyyy) 0 1 / 2 5 / 1 9 8 7 </p> <p>TEXT: <u>Rt. Mod Rad Mastectomy w/ Rt Axillary Dissection</u></p> <hr/> <p>RADIATION</p> <p>SUMMARY:</p> <p>AT THIS HOSPITAL 1 </p> <table style="width:100%; border:none;"> <tr> <td style="width:50%; border:none;"> 0 - No Radiation therapy 1 - Brachyirradiation 2 - Radioactive implants 3 - Radioisotopes 4 - Combi 1 + 2 or 3 </td> <td style="width:50%; border:none;"> 5 - Radiation therapy, NOS 6 - Patient/guardian refused 7 - Recommended, unk if done 8 - Unknown </td> </tr> </table> <p>STARTED: (mm/dd/yyyy) 0 8 / 2 9 / 1 9 8 7 </p> <p>TO BRAIN & CNS: (lung & leukemia cases only) 9 </p> <table style="width:100%; border:none;"> <tr> <td style="width:50%; border:none;"> 0 - None to CNS 1 - Radiation therapy 7 - Patient/guardian refused </td> <td style="width:50%; border:none;"> 2 - Recommended, unk if done 3 - Unknown/not applicable </td> </tr> </table> <p>RADIATION/SURGERY SEQ: 3 </p> <table style="width:100%; border:none;"> <tr> <td style="width:50%; border:none;"> 0 - Not applicable 2 - Radiation before surgery 3 - Radiation after surgery 4 - Before & after surgery </td> <td style="width:50%; border:none;"> 5 - Intraoperative radiation 6 - Intraoperative plus 2, 3 or 4 9 - Sequence unknown </td> </tr> </table> <p>TEXT: <u>Chest Wall 6000</u></p>	0 - Can directed surg performed 1 - Not recommended 2 - Contra-indicated, other	3 - Reason unknown, no surg 4 - Patient/guardian refused 5 - Recommended, unk if done 6 - unknown	0 - No Radiation therapy 1 - Brachyirradiation 2 - Radioactive implants 3 - Radioisotopes 4 - Combi 1 + 2 or 3	5 - Radiation therapy, NOS 6 - Patient/guardian refused 7 - Recommended, unk if done 8 - Unknown	0 - None to CNS 1 - Radiation therapy 7 - Patient/guardian refused	2 - Recommended, unk if done 3 - Unknown/not applicable	0 - Not applicable 2 - Radiation before surgery 3 - Radiation after surgery 4 - Before & after surgery	5 - Intraoperative radiation 6 - Intraoperative plus 2, 3 or 4 9 - Sequence unknown	<p>PF 15 TRX3 - 1st COURSE TREATMENT (CHEMO, HORMONES, BNM, OTHER)</p> <p>CHEMOTHERAPY</p> <p>SUMMARY: 3 </p> <p>AT THIS HOSPITAL: 3 </p> <table style="width:100%; border:none;"> <tr> <td style="width:50%; border:none;"> 0 - No chemotherapy 1 - Chemotherapy, NOS 2 - Chemotherapy, single agent 3 - Chemotherapy, multi-agent combination </td> <td style="width:50%; border:none;"> 4 - Patient/guardian refused 5 - Recommended, unk if done 6 - Unknown </td> </tr> </table> <p>STARTED: (mm/dd/yyyy) 0 2 / 1 3 / 1 9 8 7 </p> <p>TEXT: <u>5-FU, Adria, Ctx</u></p> <hr/> <p>HORMONE/STEROIDS</p> <p>SUMMARY: 1 </p> <p>AT THIS HOSPITAL: 1 </p> <table style="width:100%; border:none;"> <tr> <td style="width:50%; border:none;"> 0 - No hormonal therapy 1 - Hormonal therapy 2 - Endocrine stag/radiation 3 - Hormones + endo stag/nd </td> <td style="width:50%; border:none;"> 4 - Patient/guardian refused 5 - Recommended, unk if done 6 - Unknown </td> </tr> </table> <p>STARTED: (mm/dd/yyyy) 0 2 / 0 9 / 1 9 8 7 </p> <p>TEXT: <u>Tamoxifen</u></p> <hr/> <p>BIO RESPONSE MODIFIER (BRM)</p> <p>SUMMARY: 0 </p> <p>AT THIS HOSPITAL: 0 </p> <table style="width:100%; border:none;"> <tr> <td style="width:50%; border:none;"> 0 - No BRM 1 - BRM 2 - Allo BMT 3 - Auto BMT </td> <td style="width:50%; border:none;"> 4 - Patient/guardian refused 5 - Recommended, unk if done 6 - Unknown </td> </tr> </table> <p>STARTED: (mm/dd/yyyy) / / </p> <p>TEXT: _____</p> <hr/> <p>OTHER RX</p> <p>SUMMARY: 0 </p> <p>AT THIS HOSPITAL: 0 </p> <table style="width:100%; border:none;"> <tr> <td style="width:50%; border:none;"> 0 - In other ca directed rx 1 - Other ca directed rx 2 - Experimental ca rx 3 - Double-blind study </td> <td style="width:50%; border:none;"> 4 - Unproven therapy 5 - Patient/guardian refused 6 - Recommended, unk if done 7 - Unknown </td> </tr> </table> <p>STARTED: (mm/dd/yyyy) / / </p> <p>TEXT: _____</p>	0 - No chemotherapy 1 - Chemotherapy, NOS 2 - Chemotherapy, single agent 3 - Chemotherapy, multi-agent combination	4 - Patient/guardian refused 5 - Recommended, unk if done 6 - Unknown	0 - No hormonal therapy 1 - Hormonal therapy 2 - Endocrine stag/radiation 3 - Hormones + endo stag/nd	4 - Patient/guardian refused 5 - Recommended, unk if done 6 - Unknown	0 - No BRM 1 - BRM 2 - Allo BMT 3 - Auto BMT	4 - Patient/guardian refused 5 - Recommended, unk if done 6 - Unknown	0 - In other ca directed rx 1 - Other ca directed rx 2 - Experimental ca rx 3 - Double-blind study	4 - Unproven therapy 5 - Patient/guardian refused 6 - Recommended, unk if done 7 - Unknown
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PF 16	TRX2 - SUB. THERAPY											
	<table style="width:100%; border:none;"> <tr> <th style="width:15%;">Start</th> <th style="width:15%;">Course</th> <th style="width:15%;">Type</th> <th style="width:15%;">Code</th> <th style="width:15%;">Desc.</th> </tr> <tr> <td style="font-size:small;">mm/dd/yyyy</td> <td></td> <td></td> <td></td> <td></td> </tr> </table>	Start	Course	Type	Code	Desc.	mm/dd/yyyy					
Start	Course	Type	Code	Desc.								
mm/dd/yyyy												
1.	/ /	_____										
2.	/ /	_____										
3.	/ /	_____										

FIGURE 1-D

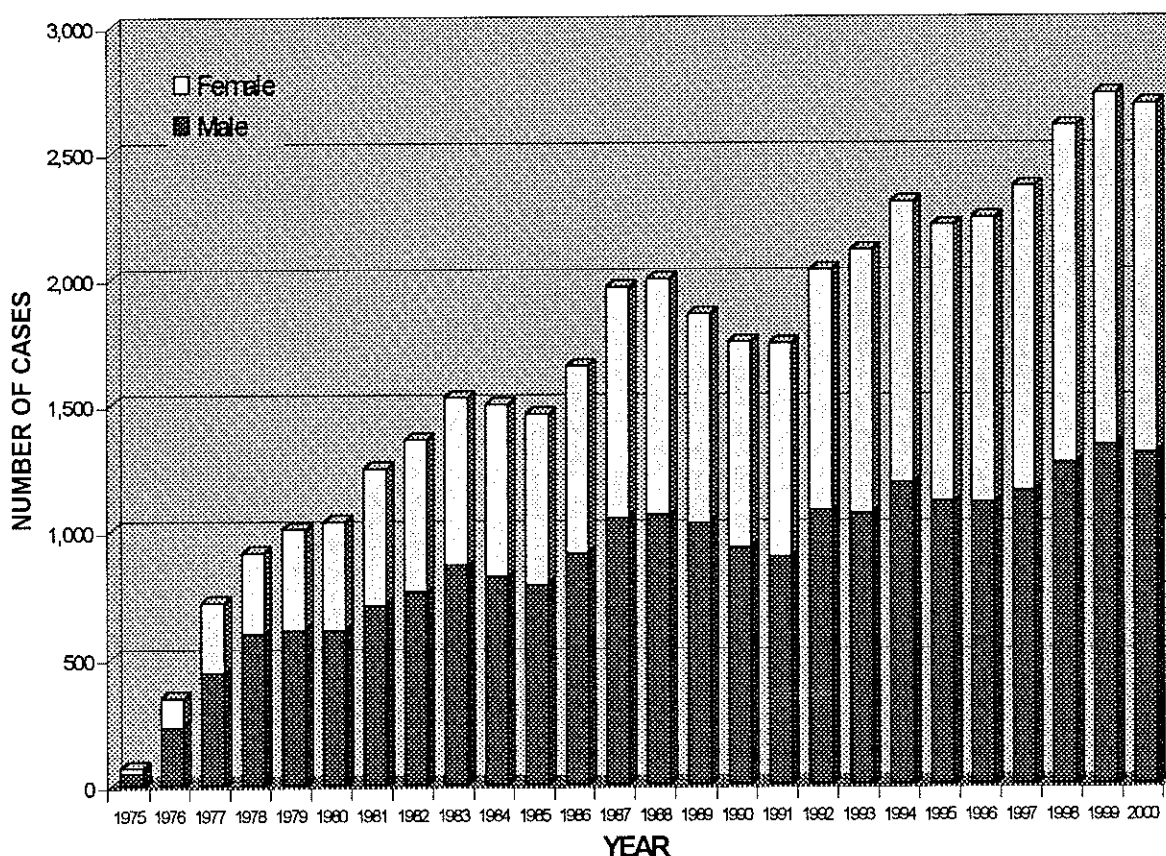
PF 17 TFIU - FOLLOW-UP INFORMATION		PF 20 TIRM - REMARKS/SPECIAL DATA ITEMS	
LAST CONTACT DATE (mm/dd/yyyy) 11/07/1989		FILE FORMAT AREA:	
CAUSE OF DEATH ICD CODE: 1111		REMARKS: Mother died of breast cancer.	
CURRENT VITAL STATUS: 1 Alive 2 Dead 11			
CURRENT CANCER STATUS: 12			
1 - Absence of cancer 2 - Unknown cancer 9 - Unknown			
QUALITY OF SURVIVAL: 19		OVERRIDE FIELDS (Y - Bypass edit, leave blank if edit not bypassed)	
0 - Excellent 3 - About 50% 8 - N/A, dead		SITE/HST:	
1 - Symptomatic 4 - Proliferates 9 - Unknown		AGE /SITE/HST:	
2 - About 10%		SCNO/SITE/HST:	
PATIENT FLAGS -		SPECIAL FIELDS:	
PATIENT (dots or asterisk, etc., A, B, H)		/ 1: Hepatitis	
CONTACT (eg. 0 - last contact, 3 - first contact)		/ 2: Bilharzia	
CURRENTLY FOREIGN RESIDENT		/ 3: Burn Scar	
Y - Yes, foreign resident, leave blank for all others		/ 4: Consanguinity	
CONTACT FREQUENCY months		/ 5: Predisposing Factors	
(eg. 01 - One month, 03 - 3 months, 12 - Annual follow-up)		/ 6: Pregnancy during dx/tx	
MEDICAL CONDITIONS		/ 7: Renal Transplant	
PLACE OF DEATH (State of country - Geographic)		/ 8: Immunodeficiency Disorder	
RECORDING INFORMATION		/ 9:	
DATE (mm/dd/yyyy) 10/91/10/1989		/ 10:	
TYPE: 13		PF 21 TADN - PATIENT NAME ADDRESS FILE	
0 - Interviewee 3 - District residence		MAILING NAME:	
1 - Telephone interview 4 - Never free		SALUTATION:	
2 - Hospital interview 9 - Unknown		ADDRESS 1: Riyadh	
DISTRICTS: 1: 4		ADDRESS 2:	
0 - Nil 1 - Liver 0 - Symptomatic (distal) 2: 5		CITY: Riyadh	
1 - Prostate 5 - Bone 0 - Unknown/Other 3: 1		prov. [RY] zip code	
2 - Lung 6 - CNS		TELEPHONE: (11) 445 6778 ext.	
3 - Breast 7 - Skin		COMMENT:	
FOLLOWER PHYSICIAN		PATIENT/GUARDIAN CODE: P - Patient G - Guardian	
1. ATTENDING PHYSICIAN: 101011213141 Oncologist		PF 22 TCON - CONTACT NAME/ADDRESS FILE MAINTENANCE	
2. OTHER PHYSICIAN: 101711617181 Rad. Onc.		CONTACT NUMBER: (0 - first contact, 1 - Special, ... 9 - Test)	
3. OTHER PHYSICIAN: 101912118151 Surgeon		MAILING NAME: Riyadh Central Hospital	
4. OTHER PHYSICIAN:		SALUTATION:	
5. OTHER PHYSICIAN:		ADDRESS 1: Riyadh	
6. OTHER PHYSICIAN:		ADDRESS 2:	
LAST SURVIVE FU HOSP:		CITY: Riyadh	
NEXT HOSP FOR FU:		prov. [RY] zip code	
DEATH CERTIFICATE REF NO:		TELEPHONE: ext.	
		COMMENT:	
		REFER HOSP. NUM: 89856	

II. KFSH&RC CANCER PATIENT POPULATION

A total of 2,693 cases were accessioned in 2000, with 1,304 males and 1,389 females or a male/female ratio of almost 0.9:1. This represents a 1.5% decrease from 1999.

FIGURE 2

DISTRIBUTION OF ALL CASES ACCESSIONED BY YEAR 1975 - 2000 (TOTAL CASES = 43,450)



From the opening of the hospital (mid 1975) until December 2000, 43,450 cancer cases were registered (22,997 males and 20,453 females) with a male/female ratio of 1.1:1. There were 5,708 (13.1%) pediatric cases (0 to 14 years of age) and 37,742 (86.9%) adults (15 years old and above). A slight difference in the proportion was noted in 2000, 15.0% (403) for pediatrics and 85.0% (2,290) for adults.

TABLE 1

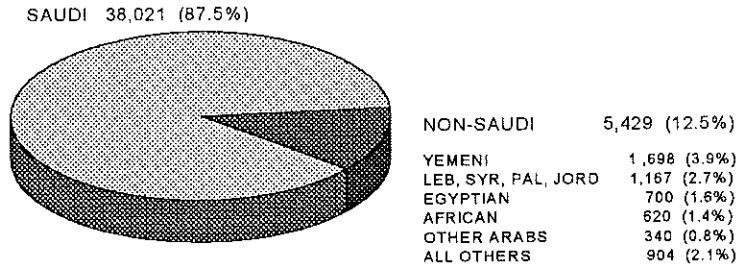
ALL CASES SEEN AT KFSH&RC (MALE/FEMALE & PEDIATRICS/ADULTS) BY 5-YEAR PERIOD
1975 - 2000

	1975-1976*	1977-1981	1982-1986	1987-1991	1992-1996	1997-2000**	TOTAL
MALE	280	2,981	4,149	4,969	5,554	5,064	22,997
FEMALE	135	1,946	3,358	4,342	5,342	5,330	20,453
TOTAL	415	4,927	7,507	9,311	10,896	10,394	43,450
M/F RATIO	2.1:1	1.5:1	1.1:1	1.1:1	1.0:1	1.0:1	1.1:1
PEDIATRICS***	55	593	984	1,163	1,396	1,517	5,708
(%)	13.2%	12.0%	13.1%	12.5%	12.8%	14.6%	13.1%
ADULTS	360	4,334	6,523	8,148	9,500	8,877	37,742
(%)	86.8%	88.0%	86.9%	87.5%	87.2%	85.4%	86.9%
TOTAL	415	4,927	7,507	9,311	10,896	10,394	43,450

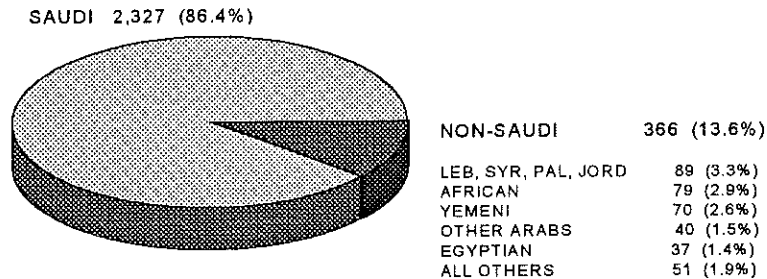
* First two years of KFSH&RC partial operation.
 ** Four years data only.
 *** Pediatrics = 0 to 14 years of age; Adults = 15 years and above.

FIGURE 3

DISTRIBUTION OF ALL CASES BY NATIONALITY
1975 - 2000 (TOTAL CASES = 43,450)



2000 (TOTAL CASES = 2,693)



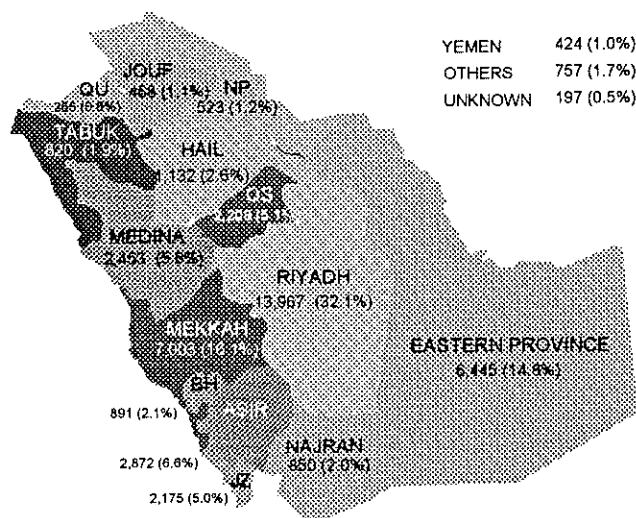
Saudi nationals totaled 2,327 (86.4%) in 2000 and the non-Saudi, 366 (13.6%). During the period 1975 to 2000, the former accounted for 87.5% (38,021) while the latter, 12.5% (5,429).

Geographically, the referral pattern in 2000 is mainly from the Riyadh Region with 35.2% of all cases, followed by the Eastern Province and the Makkah Region with 17.2% and 8.9%, respectively. These same regions had the highest number of cases during the 26 years in review, i.e., 32.1% from Riyadh, 16.1% from Makkah and 14.8% from the Eastern Province.

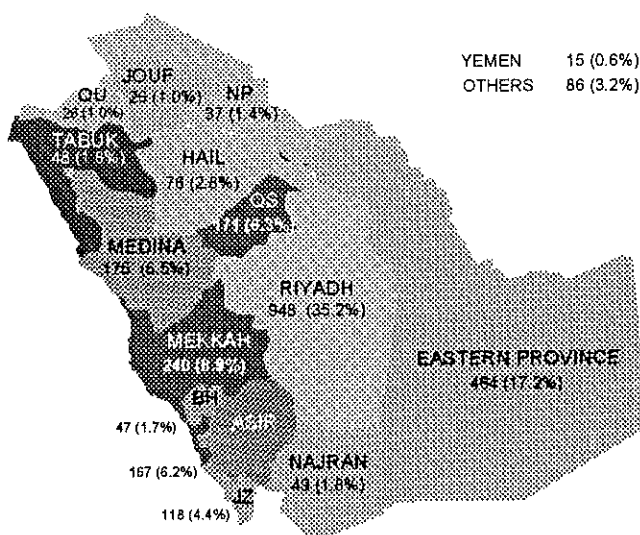
These percentages reflect the KFSH&RC actual experience rather than adjusted to reflect the population of those regions.

FIGURE 4

DISTRIBUTION OF CASES BY REGION
(Based on Given Address at Time of Diagnosis)
1975 - 2000 (TOTAL CASES = 43,450)



2000 (TOTAL CASES = 2,693)



BH - AL BAHA NP - NORTHERN PROVINCE QS - AL QASSIM
JZ - JIZAN QU - AL QURAYYAT

TRENDS IN RELATIVE FREQUENCY OF CANCER AT KFSH&RC

The crude relative frequency is the proportion of a given cancer in relation to all cases in a clinical or pathological series. Although such frequencies are subject to many biases, historically many elevated frequencies have been confirmed when complete cancer registration was introduced.

Biases that may have an effect on the relative frequencies of cancer cases at KFSH&RC include:

- possible nonusage of medical services by some of the population so that the hospital population may not reflect the disease state of the community
- resistance to examination by part of the female population
- absence of postmortem examinations/death certificates
- selective referral of certain malignancies because of the specialty services available
- eligibility criteria for admission to KFSH&RC
- age distribution of the population

Breast cancer led the list of total cancer cases seen from 1975 to 2000 with 10.0%, followed by Leukemia (8.6%), Non-Hodgkin's Lymphoma (8.2%), Thyroid (5.8%) and Oral Cavity (5.2%).

FIGURE 5

DISTRIBUTION OF 20 MOST COMMON MALIGNANCIES 1975 - 2000 (TOTAL CASES = 43,450)

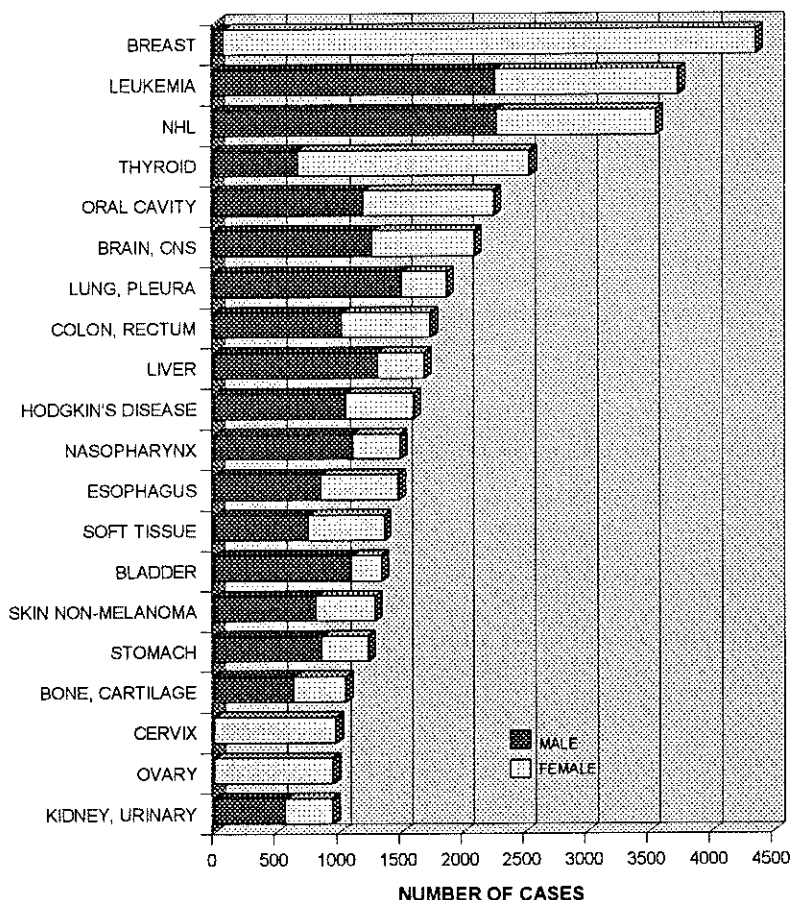


TABLE 2

TEN MOST COMMON MALIGNANCIES BY THE MOST COMMON AGE GROUP AT DIAGNOSIS
1975 - 2000

SITE	AGE GROUP	No.	%	SITE	AGE GROUP	No.	%
BREAST	40 - 49	1,363	31.3%	BRAIN, CNS	00 - 09	722	34.5%
	30 - 39	1134	26.0%		10 - 19	399	19.1%
	50 - 59	867	19.9%		20 - 29	208	9.9%
	60 - 69	464	10.6%		50 - 59	206	9.8%
	20 - 29	308	7.1%		30 - 39	201	9.6%
LEUKEMIA	00 - 09	1,226	32.8%	LUNG, PLEURA	60 - 69	621	33.3%
	10 - 19	701	18.8%		50 - 59	465	24.9%
	20 - 29	444	11.9%		70 - 79	330	17.7%
	30 - 39	438	11.7%		40 - 49	245	13.1%
	40 - 49	329	8.8%		30 - 39	92	4.9%
NON-HODGKIN'S LYMPHOMA	60 - 69	585	16.5%	COLON, RECTUM	50 - 59	411	23.7%
	50 - 59	541	15.2%		60 - 69	386	22.2%
	00 - 09	464	13.1%		40 - 49	297	17.1%
	40 - 49	462	13.0%		30 - 39	231	13.3%
	30 - 39	390	11.0%		70 - 79	216	12.4%
THYROID	30 - 39	613	24.2%	LIVER	60 - 69	540	32.1%
	20 - 29	513	20.2%		50 - 59	449	26.7%
	40 - 49	434	17.1%		70 - 79	274	16.3%
	50 - 59	355	14.0%		40 - 49	205	12.2%
	60 - 69	272	10.7%		80 - 89	68	4.0%
ORAL CAVITY	60 - 69	546	24.2%	HODGKIN'S DISEASE	10 - 19	469	29.4%
	50 - 59	522	23.2%		20 - 29	325	20.4%
	70 - 79	393	17.4%		00 - 09	271	17.0%
	40 - 49	289	12.8%		30 - 39	215	13.5%
	30 - 39	180	8.0%		40 - 49	133	8.3%

Cancer among pediatrics (under the age of 15) accounted for 13.1% of all cases from 1975 to 2000. The five most common pediatric malignancies were Leukemia (27.6%), Lymphoma (18.9%) [NHL 10.4% and HD 8.5%], Brain/CNS (16.9%), Soft Tissue (8.3%) and Eye (6.7%).

FIGURE 6

DISTRIBUTION OF 10 MOST COMMON PEDIATRIC MALIGNANCIES, 1975 - 2000 (TOTAL CASES = 5,708)

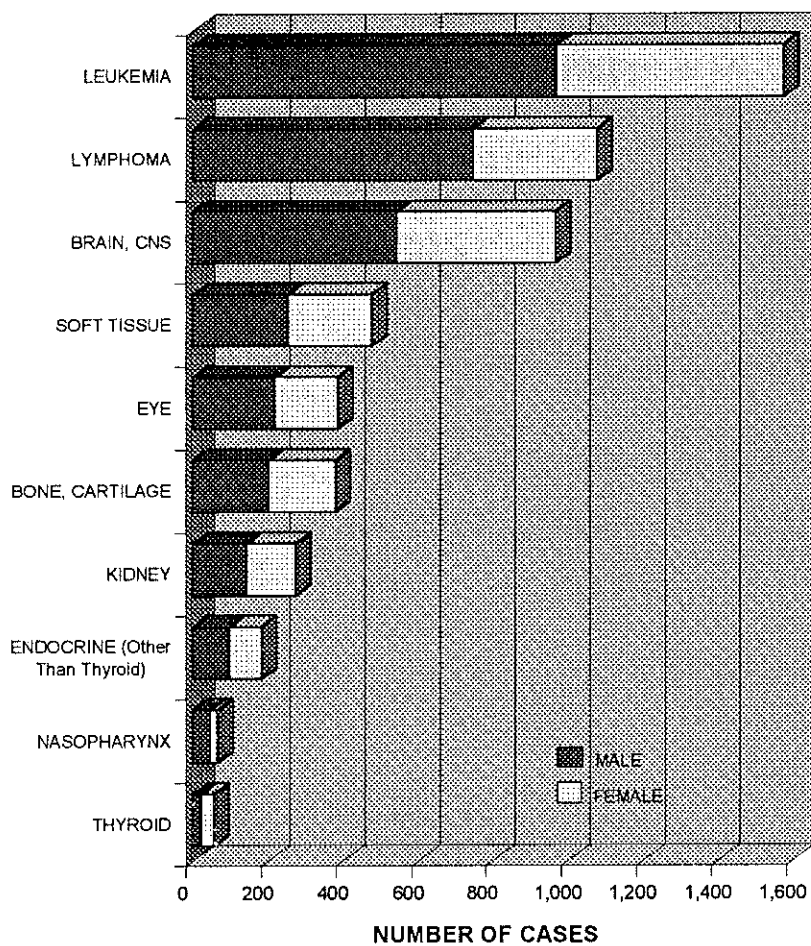


FIGURE 7

**DISTRIBUTION OF 10 MOST COMMON PEDIATRIC
MALIGNANCIES BY HISTOLOGY
1975 - 2000 (TOTAL CASES = 5,708)**

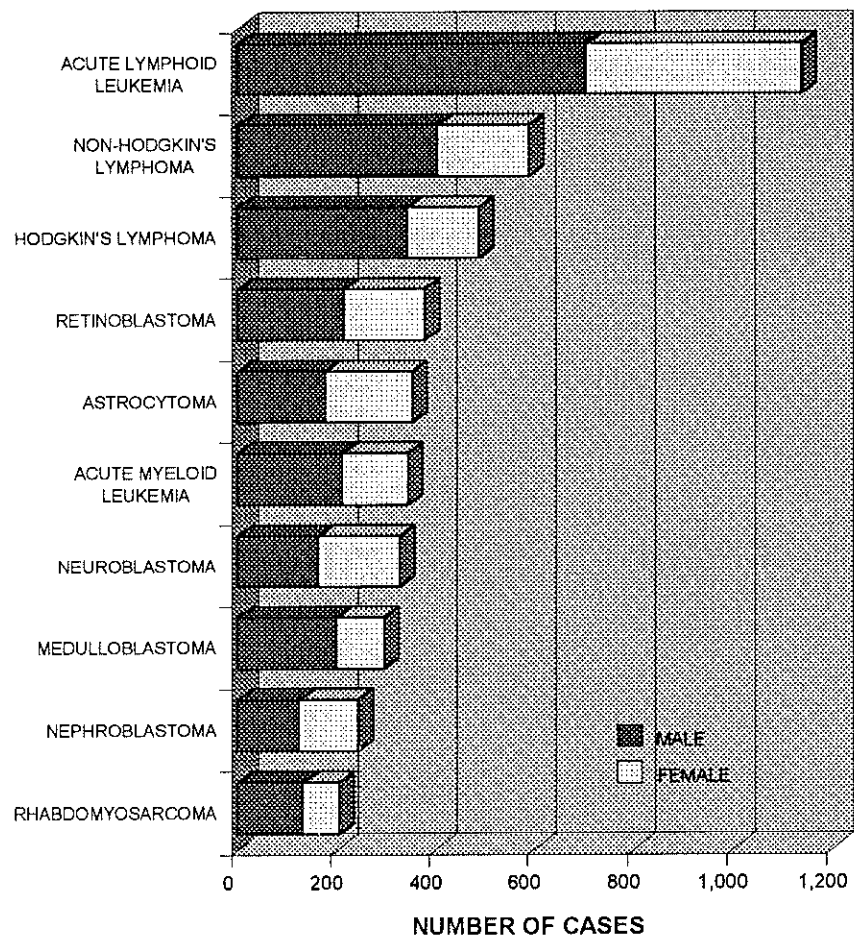


TABLE 3

ALL CASES SEEN AT KF5H&RC BY SITE* AND YEAR

1975 - 2000

SITE	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
Oral Cavity	1	14	33	79	69	71	58	80	101	76	104	76	96	129	104	103	103	112	98	97	121
Nasopharynx	3	11	38	34	37	35	48	46	65	46	45	49	80	65	62	62	62	53	59	58	62
Esophagus	1	15	51	62	67	67	57	62	77	78	56	69	76	66	68	72	66	69	47	50	50
Stomach	2	15	32	35	50	37	50	51	64	60	49	64	61	47	52	53	36	47	42	68	61
Colon, Rectum	1	13	22	24	31	38	51	39	43	59	45	51	70	82	61	64	80	88	83	95	89
Liver	7	15	33	44	49	33	41	54	53	64	57	84	78	71	68	55	66	76	82	103	102
Pancreas	1	5	7	11	15	14	20	22	14	20	16	28	20	16	27	12	13	27	21	22	25
Other G.I.	2	3	9	9	9	10	14	11	11	14	15	21	25	22	20	21	13	29	31	32	21
Larynx	1	5	12	12	12	14	20	13	23	22	25	16	23	33	21	26	34	27	31	35	38
Lung, Pleura	3	11	24	34	45	39	56	62	75	74	86	84	83	107	92	75	84	82	89	92	86
Multiple Myeloma	0	5	6	11	7	9	7	13	9	12	14	13	24	20	29	13	24	24	23	32	26
Lymphoid Leukemia	4	14	15	38	32	38	53	69	66	48	59	84	92	77	75	55	74	79	89	71	88
Myeloid Leukemia	3	13	23	47	54	42	65	55	44	75	59	73	90	73	76	73	74	61	97	91	117
Other Leukemias	0	1	2	2	4	3	3	1	7	4	3	2	3	7	5	4	10	4	6	7	3
Reticuloendothelium	0	1	0	1	1	1	1	1	1	1	1	6	3	1	1	1	0	0	0	2	0
Bone, Cartilage	1	6	13	25	21	20	23	42	35	40	23	31	40	46	45	37	41	52	55	61	57
Soft Tissue	1	16	29	32	34	28	36	40	34	37	42	49	55	51	63	66	76	52	54	84	92
Skin	0	4	4	8	8	6	7	4	11	12	7	7	11	12	6	5	9	14	8	7	6
Skin Non-Melanoma	2	14	27	32	48	40	50	56	55	56	67	70	48	51	58	45	52	61	53	64	50
Breast	3	24	53	46	57	65	101	111	111	153	131	127	174	194	137	168	169	188	251	241	231
Uterus, Genital	1	2	12	12	13	12	17	16	35	23	22	29	38	38	34	34	34	42	36	55	39
Cervix	0	10	18	18	25	18	26	25	33	33	41	55	51	50	33	44	35	52	50	52	49
Ovary	2	6	10	10	17	21	20	35	31	27	24	34	41	47	53	46	36	44	55	50	54
Prostate	0	7	5	4	5	10	11	18	28	19	19	17	22	27	27	24	16	41	27	45	37
Testis, Genital	0	4	10	8	13	11	18	13	11	16	17	14	20	19	13	19	16	22	28	25	14
Bladder	4	7	12	24	29	39	37	23	41	35	46	51	79	74	73	60	44	65	88	72	60
Kidney, Urinary	0	9	18	18	18	15	18	30	23	22	25	42	34	59	33	35	35	54	52	66	49
Eye	0	6	11	17	11	22	27	34	25	16	30	22	32	42	23	29	6	15	38	27	13
Brain, CNS	3	24	27	40	26	31	31	77	53	58	49	71	88	92	98	81	84	112	88	116	128
Thyroid	2	8	17	28	33	44	57	51	66	71	63	82	119	112	110	94	110	141	135	159	134
Other Endocrine	1	1	2	2	2	2	9	7	13	8	17	10	10	13	2	6	8	14	11	10	9
NHL - Lymph Nodes	4	19	62	69	97	92	95	91	116	98	88	85	95	99	93	92	71	89	80	80	68
NHL - Extra-nodal	0	4	11	6	7	20	34	25	56	41	36	57	62	54	73	62	52	61	74	79	91
Hodgkin's Disease - LNs	13	19	40	41	36	42	47	42	52	50	49	44	65	57	74	56	57	72	71	76	88
HD - Extra-nodal	0	0	0	0	0	0	0	0	2	0	0	1	0	0	1	0	0	3	2	2	0
Primary Unknown	3	11	23	24	20	27	34	30	33	26	25	25	37	32	42	39	40	51	42	62	36
All Other Sites	1	3	10	8	5	9	8	12	11	9	9	8	21	15	7	14	11	11	17	13	15
TOTAL	70	345	721	915	1008	1036	1247	1361	1528	1503	1464	1651	1966	2000	1859	1745	1741	2034	2113	2301	2209

* Includes Multiple Primary Neoplasms.

Table 3 (cont'd)

ALL CASES SEEN AT KFSH&RC BY SITE* AND YEAR

1975 - 2000

SITE	1996	1997	1998	1999	2000	TOTAL
Oral Cavity	106	112	87	107	116	2,253
Nasopharynx	86	90	108	101	84	1,489
Esophagus	52	51	62	34	50	1,475
Stomach	57	45	42	54	53	1,227
Colon, Rectum	94	101	122	145	146	1,737
Liver	103	96	84	88	78	1,684
Pancreas	21	24	34	18	36	489
Other G.I.	26	22	29	33	32	486
Larynx	36	31	30	35	33	608
Lung, Pleura	86	89	106	109	94	1,867
Multiple Myeloma	20	10	22	16	22	411
Lymphoid Leukemia	90	115	129	131	132	1,817
Myeloid Leukemia	75	112	100	119	115	1,826
Other Leukemias	2	0	3	3	2	91
Reticuloendothelium	0	0	1	0	0	24
Bone, Cartilage	57	66	70	62	80	1,049
Soft Tissue	61	77	83	102	68	1,362
Skin Melanoma	9	5	4	6	5	185
Skin Non-Melanoma	66	56	42	65	56	1,284
Breast	280	290	333	336	383	4,357
Uterus, Genital	34	37	36	42	41	734
Cervix	48	46	62	57	41	972
Ovary	56	60	63	52	58	952
Prostate	49	43	44	62	47	654
Testis, Genital	15	20	18	20	21	405
Bladder	56	65	84	91	78	1,337
Kidney, Urinary	48	49	61	72	60	945
Eye	22	28	17	23	26	562
Brain, CNS	128	133	162	145	148	2,093
Thyroid	161	160	192	209	180	2,538
Other Endocrine	11	17	11	13	20	236
NHL - Lymph Nodes	83	93	99	97	96	2,151
NHL - Extra-nodal	74	100	108	109	106	1,402
Hodgkin's Disease - LNs	76	75	98	114	128	1,582
HD - Extra-nodal	0	1	0	2	1	15
Primary Unknown	41	35	50	49	43	880
All Other Sites	10	9	9	12	14	271
TOTAL	2239	2363	2605	2733	2693	43,450

TABLE 4
ALL CASES SEEN AT KF5H&RC BY SITE* AND 5-YEAR PERIOD
1975 - 2000

SITE	1975-1976**		1977-1981		1982-1986		1987-1991		1992-1996		1997-2000***		TOTAL	
	No	%	No	%	No	%	No	%	No	%	No	%	No	%
Oral Cavity	15	3.6%	310	6.3%	437	5.8%	535	5.7%	534	4.9%	422	4.1%	2,253	5.2%
Nasopharynx	14	3.4%	192	3.9%	251	3.3%	331	3.6%	318	2.9%	383	3.7%	1,489	3.4%
Esophagus	16	3.9%	304	6.2%	342	4.6%	348	3.7%	268	2.5%	197	1.9%	1,475	3.4%
Stomach	17	4.1%	204	4.1%	288	3.8%	249	2.7%	275	2.5%	194	1.9%	1,227	2.8%
Colon, Rectum	14	3.4%	166	3.4%	237	3.2%	357	3.8%	449	4.1%	514	4.9%	1,737	4.0%
Liver	22	5.3%	200	4.1%	312	4.2%	338	3.6%	466	4.3%	346	3.3%	1,684	3.9%
Pancreas	6	1.4%	67	1.4%	100	1.3%	88	0.9%	116	1.1%	112	1.1%	489	1.1%
Other G.I.	5	1.2%	53	1.1%	72	1.0%	101	1.1%	139	1.3%	116	1.1%	486	1.1%
Larynx	6	1.4%	70	1.4%	99	1.3%	137	1.5%	167	1.5%	129	1.2%	608	1.4%
Lung, Pleura	14	3.4%	198	4.0%	381	5.1%	441	4.7%	435	4.0%	398	3.8%	1,867	4.3%
Multiple Myeloma	5	1.2%	40	0.8%	61	0.8%	110	1.2%	125	1.1%	70	0.7%	411	0.9%
Lymphoid Leukemia	18	4.3%	176	3.6%	326	4.3%	373	4.0%	417	3.8%	507	4.9%	1,817	4.2%
Myeloid Leukemia	16	3.9%	231	4.7%	306	4.1%	386	4.1%	441	4.0%	446	4.3%	1,826	4.2%
Other Leukemias	1	0.2%	14	0.3%	17	0.2%	29	0.3%	22	0.2%	8	0.1%	91	0.2%
Reticuloendothelium	1	0.2%	4	0.1%	10	0.1%	6	0.1%	2	0.0%	1	0.0%	24	0.1%
Bone, Cartilage	7	1.7%	102	2.1%	171	2.3%	209	2.2%	282	2.6%	278	2.7%	1,049	2.4%
Soft tissue	17	4.1%	159	3.2%	202	2.7%	311	3.3%	343	3.1%	330	3.2%	1,362	3.1%
Skin Melanoma	4	1.0%	33	0.7%	41	0.6%	43	0.5%	44	0.4%	20	0.2%	185	0.4%
Skin Non-Melanoma	16	3.9%	197	4.0%	304	4.0%	254	2.7%	294	2.7%	219	2.1%	1,284	3.0%
Breast	27	6.5%	322	6.5%	633	8.4%	842	9.0%	1191	10.9%	1342	12.9%	4,357	10.0%
Uterus, Genital	3	0.7%	66	1.3%	125	1.7%	178	1.9%	206	1.9%	156	1.5%	734	1.7%
Cervix	10	2.4%	105	2.1%	187	2.5%	213	2.3%	251	2.3%	206	2.0%	972	2.2%
Ovary	8	1.9%	78	1.6%	151	2.0%	223	2.4%	259	2.4%	233	2.2%	952	2.2%
Prostate	7	1.7%	35	0.7%	101	1.4%	116	1.2%	199	1.8%	196	1.9%	654	1.5%
Testis, Genital	4	1.0%	60	1.2%	71	0.9%	87	0.9%	104	1.0%	79	0.8%	405	0.9%
Bladder	11	2.7%	141	2.9%	196	2.6%	330	3.5%	341	3.1%	318	3.1%	1,337	3.1%
Kidney, Urinary	9	2.2%	87	1.8%	142	1.9%	196	2.1%	269	2.5%	242	2.3%	945	2.2%
Eye	6	1.4%	88	1.8%	127	1.7%	132	1.4%	115	1.1%	94	0.9%	562	1.3%
Brain, CNS	27	6.5%	155	3.1%	308	4.1%	443	4.8%	572	5.2%	588	5.7%	2,093	4.8%
Thyroid	10	2.4%	179	3.6%	333	4.4%	545	5.9%	730	6.7%	741	7.1%	2,538	5.8%
Other Endocrine	2	0.5%	24	0.5%	55	0.7%	39	0.4%	55	0.5%	61	0.6%	236	0.5%
NHL - Lymph Nodes	23	5.5%	415	8.4%	478	6.4%	450	4.8%	400	3.7%	385	3.7%	2,151	5.0%
NHL - Extra-nodal	4	1.0%	78	1.6%	215	2.9%	303	3.3%	379	3.5%	423	4.1%	1,402	3.2%
Hodgkin's Disease-LNs	32	7.7%	206	4.2%	237	3.2%	309	3.3%	383	3.5%	415	4.0%	1,582	3.6%
HD - Extra-nodal	0	0.0%	0	0.0%	3	0.0%	1	0.0%	7	0.1%	4	0.0%	15	0.0%
Primary Unknown	14	3.4%	128	2.6%	139	1.9%	190	2.0%	232	2.1%	177	1.7%	880	2.0%
All Other Sites	4	1.0%	40	0.8%	49	0.7%	68	0.7%	66	0.6%	44	0.4%	271	0.6%
TOTAL	415	100.0%	4,927	100.0%	7,507	100.0%	9,311	100.0%	10,896	100.0%	10,394	100.0%	43,450	100.0%

*** Four Years Data Only.

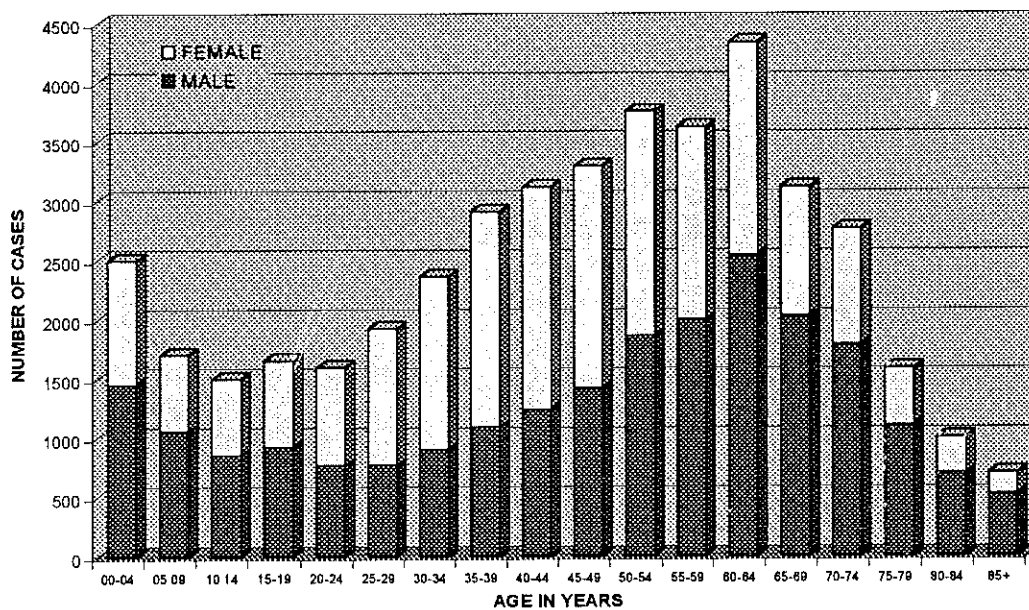
** First Two Years of KF5H&RC Partial Operation.

* Includes Multiple Primary Neoplasms.

The largest number of cases was noted in the 5th and 6th decades of life in males and in the 4th and 5th in females. In 2000, the mean age was 43.4, the median was 45.1 and the mode was at 65. Pediatric malignancies are most common among children three years of age.

FIGURE 8

**DISTRIBUTION OF ALL CASES BY AGE AT DIAGNOSIS
1975 - 2000 (TOTAL CASES = 43,450)**



2000 (TOTAL CASES = 2,693)

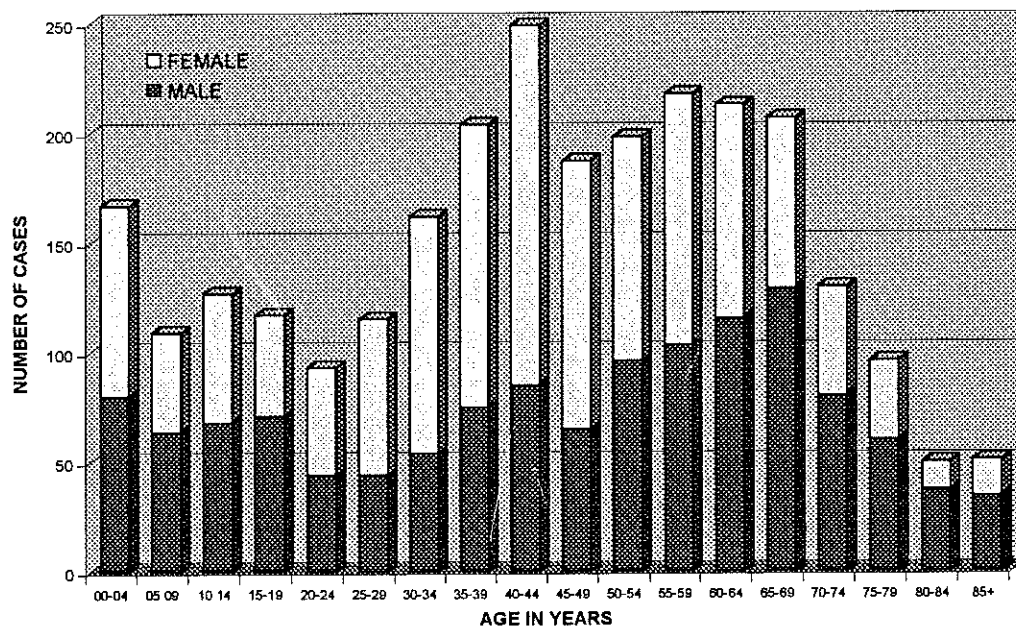
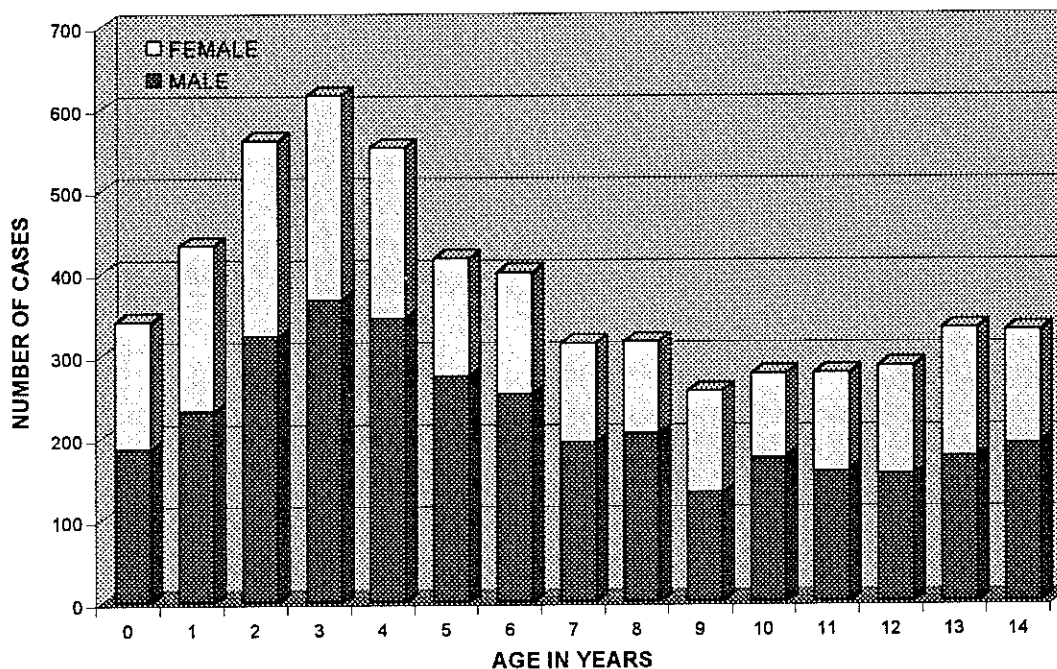


FIGURE 9

**DISTRIBUTION OF ALL PEDIATRIC CASES BY AGE AT DIAGNOSIS
1975 - 2000 (TOTAL CASES = 5,708)**



Of the 2,693 cases in 2000, 2,304 (85.6%) were **analytic** (defined as cases which were first diagnosed and/or received all or part of their first course of treatment at KFSH&RC). The remaining 389 cases (14.4%) were **non-analytic** (defined as cases diagnosed elsewhere and received all of their first course of treatment elsewhere). Out of the 2,304 analytic cases, pediatric cases totaled 361, with 185 males and 176 females.

See Table 5 for the distribution of cases by site, sex, class of case, and stage at diagnosis and Tables 6, 7 and 8 for the distributions of analytic cases by site, sex and age at diagnosis.

TABLE 5

ALL CASES SEEN AT KFSH&RC BY SITE*, SEX, CLASS OF CASE AND SUMMARY STAGE

SITE	T O T A L		S E X		CLASS OF CASE**		G E N E R A L S U M M A R Y S T A G E			A N A L Y T I C C A S E S	
	Number	%	Male	Female	Analytic	Non-Anal	In Situ	Localized	Regional	Distant	Unstageable
Breast	383	14.2%	5	378	322	61	9	77	172	62	2
Leukemia	249	9.2%	145	104	221	28	0	0	0	221	0
Non-Hodgkin's Lymphoma	202	7.5%	120	82	166	36	0	33	60	73	0
Thyroid	180	6.7%	46	134	161	19	0	68	76	14	3
Brain, CNS	148	5.5%	77	71	137	11	0	91	39	6	1
Colon, Rectum	146	5.4%	82	64	114	32	0	20	64	28	2
Hodgkin's Disease	129	4.8%	80	49	111	18	0	10	48	52	1
Oral Cavity	116	4.3%	58	58	103	13	1	34	46	16	6
Lung, Pleura	94	3.5%	74	20	82	12	0	7	30	44	1
Nasopharynx	84	3.1%	67	17	79	5	0	2	45	30	2
Bone, Cartilage	80	3.0%	51	29	73	7	0	9	44	20	0
Bladder	78	2.9%	64	14	56	22	8	13	18	15	2
Liver	78	2.9%	57	21	72	6	0	26	10	29	7
Soft Tissue	68	2.5%	34	34	54	14	0	20	19	13	2
Kidney, Urinary	60	2.2%	44	16	42	18	1	11	9	20	1
Ovary	58	2.2%	0	58	47	11	0	8	4	35	0
Skin Non-Melanoma	56	2.1%	36	20	37	19	0	22	9	6	0
Stomach	53	2.0%	42	11	40	13	0	2	23	14	1
Esophagus	50	1.9%	25	25	45	5	0	15	16	14	0
Prostate	47	1.7%	47	0	37	10	0	15	6	12	4
Primary Unknown	43	1.6%	25	18	42	1	0	0	0	0	42
Uterus, Genital	41	1.5%	0	41	39	2	1	17	12	8	1
Cervix	41	1.5%	0	41	40	1	6	6	19	9	0
Pancreas	36	1.3%	19	17	34	2	0	4	17	10	3
Larynx	33	1.2%	27	6	32	1	0	15	9	8	0
Other G.I.	32	1.2%	16	16	23	9	0	4	15	2	2
Eye	26	1.0%	10	16	23	3	0	5	15	2	1
Multiple Myeloma	22	0.8%	14	8	21	1	0	0	0	21	0
Testis, Genital	21	0.8%	21	0	17	4	0	7	7	3	0
Other Endocrine	20	0.7%	10	10	17	3	0	5	2	10	0
ALL Other Sites	14	0.5%	6	8	12	2	0	2	10	0	0
Skin Melanoma	5	0.2%	2	3	5	0	0	1	0	2	2
TOTAL	2,693	100.0%	1,304	1,389	2,304	389	26	549	844	799	86

* Includes Multiple Primary Neoplasms.

** Analytic Cases - cases which were first diagnosed and/or received all or part of their first course of treatment at KFSH&RC. Non-Analytic Cases - cases which were diagnosed elsewhere and received all of their first course of treatment elsewhere.

TABLE 6

ANALYTIC CASES SEEN AT KFSH&RC BY SITE* AND AGE

2 0 0 0

SITE	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	70-74	75-79	80-84	85+	TOTAL
Oral Cavity	0	0	3	2	4	4	4	9	7	5	9	15	12	12	4	5	3	5	103
Nasopharynx	0	1	2	2	2	4	4	7	15	11	11	8	4	5	3	1	1	0	79
Esophagus	0	0	0	0	0	0	0	3	2	2	5	3	4	6	6	6	4	4	45
Stomach	0	0	0	0	0	1	1	2	2	3	1	6	5	8	3	3	3	2	40
Colon, Rectum	0	0	1	0	2	1	7	9	10	12	15	16	12	11	5	9	2	2	114
Liver	2	0	1	2	0	1	0	1	1	1	8	14	8	12	14	5	2	0	72
Pancreas	0	0	0	1	0	0	0	3	6	2	5	1	5	4	3	2	1	1	34
Other G.I.	0	0	0	0	0	0	1	0	1	1	5	5	2	5	2	1	0	0	23
Larynx	0	0	0	0	0	0	0	2	1	3	2	3	5	7	3	1	1	4	32
Lung, Pleura	0	0	0	0	1	0	1	2	6	7	5	7	11	17	11	8	3	3	82
Multiple Myeloma	0	0	0	0	0	0	1	3	2	2	1	3	3	5	1	0	1	1	21
Lymphoid Leukemia	44	19	15	15	3	2	2	0	2	3	2	1	4	4	0	1	0	1	118
Myeloid Leukemia	9	12	11	8	6	7	10	8	12	2	7	5	3	0	1	0	0	0	101
Other Leukemias	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	2
Bone, Cartilage	4	8	20	17	7	1	2	2	4	0	1	1	3	2	0	1	0	0	73
Soft Tissue	18	4	3	1	2	5	1	3	3	0	0	3	4	1	2	2	1	0	54
Skin Melanoma	0	0	0	0	0	2	0	1	0	0	0	0	0	1	0	0	0	0	5
Skin Non-Melanoma	0	0	2	1	0	0	3	1	2	0	3	3	4	4	5	4	3	2	37
Breast	0	0	0	0	4	13	27	50	57	46	33	31	30	16	10	3	0	2	322
Uterus, Genital	0	0	0	1	0	1	2	1	4	6	4	4	8	5	1	1	0	1	39
Cervix	0	0	1	0	0	0	7	5	10	3	4	2	4	3	3	1	0	0	40
Ovary	0	2	2	2	3	2	3	1	4	5	5	5	4	2	3	4	0	0	47
Prostate	0	0	0	0	0	0	0	0	1	0	0	1	6	13	6	4	2	2	37
Testis, Genital	2	0	0	2	1	4	1	2	1	1	1	1	0	1	0	0	0	0	17
Bladder	1	0	0	0	1	1	1	2	4	4	7	8	9	6	4	6	1	1	56
Kidney, Urinary	11	3	1	0	0	0	1	1	1	1	5	4	3	2	3	1	2	3	42
Eye	20	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	23
Brain, CNS	23	23	11	10	6	3	9	5	8	4	7	10	7	6	2	3	0	0	137
Thyroid	0	0	4	6	17	25	27	23	18	8	10	7	2	5	5	2	2	0	161
Other Endocrine	8	2	1	3	1	1	0	0	0	1	0	0	0	0	0	0	0	0	17
NHL - Lymph Nodes	1	3	7	4	3	1	8	5	4	4	5	3	7	7	4	2	4	1	73
NHL - Extra-nodal	4	3	4	3	3	3	7	13	7	7	6	6	5	9	5	2	2	4	93
Hodgkin's Disease-LNs	6	17	18	23	14	12	4	4	5	3	2	0	0	0	1	0	1	0	110
HD - Extra-nodal	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Primary Unknown	1	0	1	0	0	1	3	0	7	6	2	5	4	6	1	1	1	3	42
All Other Sites	0	0	0	1	0	0	1	1	1	1	1	0	0	2	1	1	0	2	12
TOTAL	154	98	109	105	81	93	138	169	207	154	174	181	178	187	109	80	43	44	2,304

* Includes Multiple Primary Neoplasms.

TABLE 7

ANALYTIC MALE CASES SEEN AT KF5H&RC BY SITE* AND AGE

2 0 0 0

SITE	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	70-74	75-79	80-84	85+	TOTAL
Oral Cavity	0	0	1	2	1	0	3	5	3	1	4	9	6	8	1	3	2	3	52
Nasopharynx	0	1	2	1	2	2	1	5	12	9	9	7	4	5	3	0	1	0	64
Esophagus	0	0	0	0	0	0	0	0	2	1	3	1	2	4	1	4	3	3	24
Stomach	0	0	0	0	0	0	1	1	1	2	1	4	5	4	3	3	3	2	30
Colon, Rectum	0	0	0	0	2	0	3	5	4	5	10	8	8	8	2	5	1	1	62
Liver	2	0	1	1	0	0	0	0	1	0	7	11	6	9	10	5	2	0	55
Pancreas	0	0	0	0	0	0	0	0	4	1	3	0	2	4	2	1	0	1	18
Other G.I.	0	0	0	0	0	0	0	0	0	0	2	3	2	2	1	1	0	0	11
Larynx	0	0	0	0	0	0	0	2	1	1	2	3	5	5	2	1	0	4	26
Lung, Pleura	0	0	0	0	1	0	1	1	5	4	2	5	11	14	10	5	3	1	63
Multiple Myeloma	0	0	0	0	0	0	1	1	0	1	0	1	3	3	1	0	1	1	13
Lymphoid Leukemia	19	14	10	13	3	0	1	0	0	1	2	0	3	2	0	1	0	0	69
Myeloid Leukemia	5	8	4	2	5	2	5	4	6	1	5	4	2	0	1	0	0	0	54
Other Leukemias	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	2
Bone, Cartilage	2	4	9	14	5	1	1	2	3	0	1	1	1	2	0	1	0	0	47
Soft Tissue	10	1	1	0	2	2	0	2	2	0	1	1	2	1	2	1	1	0	29
Skin Melanoma	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	2
Skin Non-Melanoma	0	0	1	1	0	0	3	0	0	0	1	3	4	2	4	3	1	1	24
Breast	0	0	0	0	0	0	0	1	0	0	0	1	1	1	0	0	0	0	4
Uterus, Genital	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cervix	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ovary	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Prostate	0	0	0	0	0	0	0	0	1	0	0	1	6	13	6	4	4	2	37
Testis, Genital	2	0	0	2	1	4	1	2	1	1	1	1	0	1	0	0	0	0	17
Bladder	1	0	0	0	1	1	1	2	3	2	6	6	7	5	4	6	1	1	47
Kidney, Urinary	6	2	0	0	0	0	1	1	1	1	4	2	2	2	3	1	2	2	29
Eye	7	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
Brain, CNS	7	14	3	7	2	2	4	4	7	2	2	4	4	5	2	2	0	0	71
Thyroid	0	0	3	1	4	7	3	8	0	2	4	2	1	2	2	0	1	0	40
Other Endocrine	3	1	0	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	7
NHL - Lymph Nodes	1	3	5	1	2	1	6	4	3	4	4	1	4	4	3	2	2	1	51
NHL - Extra-nodal	1	1	3	3	1	2	4	5	3	6	3	2	1	3	3	1	2	1	45
Hodgkin's Disease-LNs	5	9	11	14	5	8	3	3	3	2	1	0	0	0	1	0	1	0	66
HD - Extra-nodal	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Primary Unknown	0	0	1	0	0	0	2	0	2	4	2	3	2	4	0	0	1	3	24
All Other Sites	0	0	0	0	0	0	0	0	1	0	1	0	0	1	0	0	0	2	5
TOTAL	71	58	56	65	37	34	45	58	70	51	82	84	94	115	67	50	31	29	1,097

* Includes Multiple Primary Neoplasms.

TABLE 8
ANALYTIC FEMALE CASES SEEN AT KFHS&RC BY SITE* AND AGE

SITE	2 0 0 0																TOTAL		
	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	70-74	75-79		80-84	85+
Oral Cavity	0	0	2	0	3	4	1	4	4	4	5	6	6	4	3	2	1	2	51
Nasopharynx	0	0	0	1	0	0	3	2	3	2	2	1	0	0	0	1	0	0	15
Esophagus	0	0	0	0	0	0	0	3	0	1	2	2	2	2	5	2	1	1	21
Stomach	0	0	0	0	0	1	0	1	1	1	0	2	0	4	0	0	0	0	10
Colon, Rectum	0	0	1	0	0	1	4	4	6	7	5	8	4	3	3	4	1	1	52
Liver	0	0	0	1	0	1	0	1	0	1	1	3	2	3	4	0	0	0	17
Pancreas	0	0	0	1	0	0	0	3	2	1	2	1	3	0	1	1	1	0	16
Other G.I.	0	0	0	0	0	0	1	0	1	1	3	2	0	3	1	0	0	0	12
Larynx	0	0	0	0	0	0	0	0	0	2	0	0	0	2	1	0	1	0	6
Lung, Pleura	0	0	0	0	0	0	0	1	1	3	3	2	0	3	1	3	0	2	19
Multiple Myeloma	0	0	0	0	0	0	0	2	0	1	1	2	0	2	0	0	0	0	8
Lymphoid Leukemia	25	5	5	2	0	2	1	0	2	2	0	1	1	2	0	0	0	1	49
Myeloid Leukemia	4	4	7	6	1	5	5	4	6	1	2	1	1	0	0	0	0	0	47
Other Leukemias	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bone, Cartilage	2	4	3	3	2	3	1	0	1	0	0	0	2	0	0	0	0	0	26
Soft Tissue	8	3	2	1	0	3	1	1	1	0	0	2	2	0	0	1	0	0	25
Skin Melanoma	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1	0	3
Skin Non-Melanoma	0	0	1	0	0	0	0	1	2	0	2	0	0	0	0	1	2	1	13
Breast	0	0	0	0	4	13	27	49	57	46	33	30	29	15	10	3	0	2	318
Uterus, Genital	0	0	0	1	0	1	2	1	4	6	4	4	8	5	1	1	0	1	39
Cervix	0	0	1	0	0	0	7	5	10	3	4	2	4	3	0	1	0	0	40
Ovary	0	2	2	2	3	2	3	1	4	5	5	5	4	2	3	4	0	0	47
Prostate	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Testis, Genital	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bladder	0	0	0	0	0	0	0	0	1	2	1	2	2	1	0	0	0	0	9
Kidney, Urinary	5	1	1	0	0	0	0	0	0	0	1	2	1	0	0	0	1	1	13
Eye	13	1	0	0	1	0	0	0	1	2	1	2	1	0	0	0	0	0	15
Brain, CNS	16	9	8	3	4	1	5	1	18	6	6	6	3	1	0	1	0	0	66
Thyroid	0	0	1	5	13	18	24	15	18	6	6	5	1	3	3	2	1	0	121
Other Endocrine	5	1	1	1	1	0	0	0	0	1	0	0	0	0	0	0	0	0	10
NHL - Lymph Nodes	0	0	2	3	1	0	2	1	1	0	1	2	3	3	1	0	2	0	22
NHL - Extra-nodal	3	2	1	0	2	1	3	8	4	4	3	4	4	6	2	1	0	3	48
Hodgkin's Disease-LNs	1	8	7	9	9	4	1	1	2	1	1	0	0	0	0	0	0	0	44
HD - Extra-nodal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Primary Unknown	1	0	0	0	0	1	1	0	5	2	0	2	2	2	1	1	0	0	18
All Other Sites	0	0	0	1	0	0	1	1	0	1	0	0	0	1	1	1	0	0	7
TOTAL	83	40	53	40	44	59	93	111	137	103	92	97	84	72	42	30	12	15	1,207

* Includes Multiple Primary Neoplasms.

TRENDS IN RELATIVE FREQUENCY OF CANCER AT KFSH&RC (cont'd)

The relative frequencies of primary cancers seen at KFSH&RC are very different from the Western world. Common tumors of the West (lung, colon, and prostate) are much less frequent here while leukemia and thyroid cancer, among others, are more common. The following 2000 analytic cases, which show a quite similar pattern with the data from the National Cancer Registry (NCR), exhibit significant differences in trends from those of the West when compared to the data published in *Cancer Facts & Figures - 2000*, by the American Cancer Society:

TABLE 9
COMPARATIVE DATA - KFSH&RC vs NCR vs USA
(% to TOTAL CANCER CASES)

SITE	KFSH&RC 2000 Analytics	NCR 1997-1998 Saudis	USA 2000 Estimates
BREAST	14.0%	9.4%	15.1%
LEUKEMIA	9.6%	7.6%	2.5%
NON-HODGKIN'S LYMPHOMA	7.2%	7.6%	4.5%
THYROID	7.0%	6.0%	1.5%
BRAIN, CNS	5.9%	4.0%	1.4%
COLON, RECTUM	4.9%	5.6%	10.7%
HODGKIN'S DISEASE	4.8%	3.4%	0.6%
LUNG, PLEURA	3.6%	4.4%	13.9%
BONE, CARTILAGE	3.2%	1.6%	0.2%
LIVER	3.1%	6.9%	1.3%
SOFT TISSUE	2.3%	2.0%	0.7%
PROSTATE (% to MALES)	3.4%	4.9%	29.1%

Breast - The most common malignancy seen at KFSH&RC is breast cancer, comprising 14.0% of all cases, as compared to 15.1% of all neoplasms diagnosed in the U.S.A. It affects mostly women under the age of 50, while in the U.S.A., those more than 50 years of age are most frequently affected. As in the Western countries, it is the number one cancer among women.

Leukemia - The most striking feature is the unusually high crude relative frequency of leukemia cases, constituting 9.6% of all cases seen at KFSH&RC, as compared to about 2.5% of all neoplasms diagnosed in the U.S.A. The male/female ratio is 1.3:1. It is the most common type of malignancy seen in males and third in females. It is also the most common malignancy among pediatric cases.

Non-Hodgkin's Lymphoma - Cases of non-Hodgkin's lymphoma account for 7.2% of all cases. The male/female ratio is 1.4:1. In the U.S.A., NHL accounts for only 4.5% of all cancer.

Thyroid - 3.6% of all male malignancies in KFSH&RC are thyroid tumors. However, they represent 10.0% of female malignant neoplasms, second to breast cancer. The male/female ratio is 0.3:1. Thyroid cancer accounts for only 1.5% of all cases in the U.S.A. and 2.3% of female malignancies.

Brain/CNS - Primary malignant neoplasm of the brain and CNS accounts for 5.9% of all malignancies and ranks second among the most common pediatric malignancies. The male/female ratio is 1.1:1. This is comparatively higher than in the West with only 1.4% of all cases.

Colo-Rectal - Markedly less common than in the West, this disease represents only 4.9% of all tumors. In the U.S.A. it constitutes 10.7% of newly diagnosed cancer cases. Dietary factors, particularly lower animal fat intake, may play a role. The male/female ratio at KFSH&RC is 1.2:1.

Hodgkin's Disease - The incidence of Hodgkin's lymphoma is comparatively more frequent at KFSH&RC than in Western countries. In the U.S.A. it constitutes 0.6% of all cancers, compared to 4.8% at KFSH&RC. The male/female ratio is 1.5:1.

Lung - Frequency of lung cancer is much lower than in Western countries, most likely reflecting the much lower levels of smoking and industrial pollution. In the U.S.A., primary lung cancer represents 13.9% of all cancer cases (15.1% in males, and 12.6% in females). At KFSH&RC, 3.6% of all diagnoses are lung cancer; in males it is the sixth most common tumor, constituting 5.7% of male malignancies and in females, 1.6%. The male/female ratio is 3.3:1, in the West, 1.2:1.

Bone - A higher crude relative frequency rate is seen in bone cancer. It constitutes 0.2% of all the cancers in most centers in the West, but is 3.2% of the cases at KFSH&RC. The male/female ratio at KFSH&RC is 1.8:1.

Liver - The relative frequency of liver cancer at KFSH&RC (3.1%) is about three times higher than that of the West (1.3%). The male/female ratio is 3.2:1 at KFSH&RC and 1.9:1 in the West.

Soft Tissue - KFSH&RC cases show a higher rate of soft tissue malignancies than the U.S.A., with 2.3% against the latter's 0.7% of all cases. The male/female ratio is 1.2:1 at KFSH&RC and 1.1:1 in the West.

Prostate - The observed rate of prostatic cancer in men is much lower than in the West, where it is one of the most common male cancers (constituting 29.1% of the male malignancies). This is in contrast to the KFSH&RC experience, where prostatic cancer makes up only 3.4% of the male cancer. This is probably due to the population age difference. Prostate cancer is a disease chiefly of old men and the population of Saudi Arabia is, in general, very young.

FIGURE 10

**DISTRIBUTION OF 20 MOST COMMON MALIGNANCIES
2000 ANALYTIC CASES (TOTAL CASES = 2,304)**

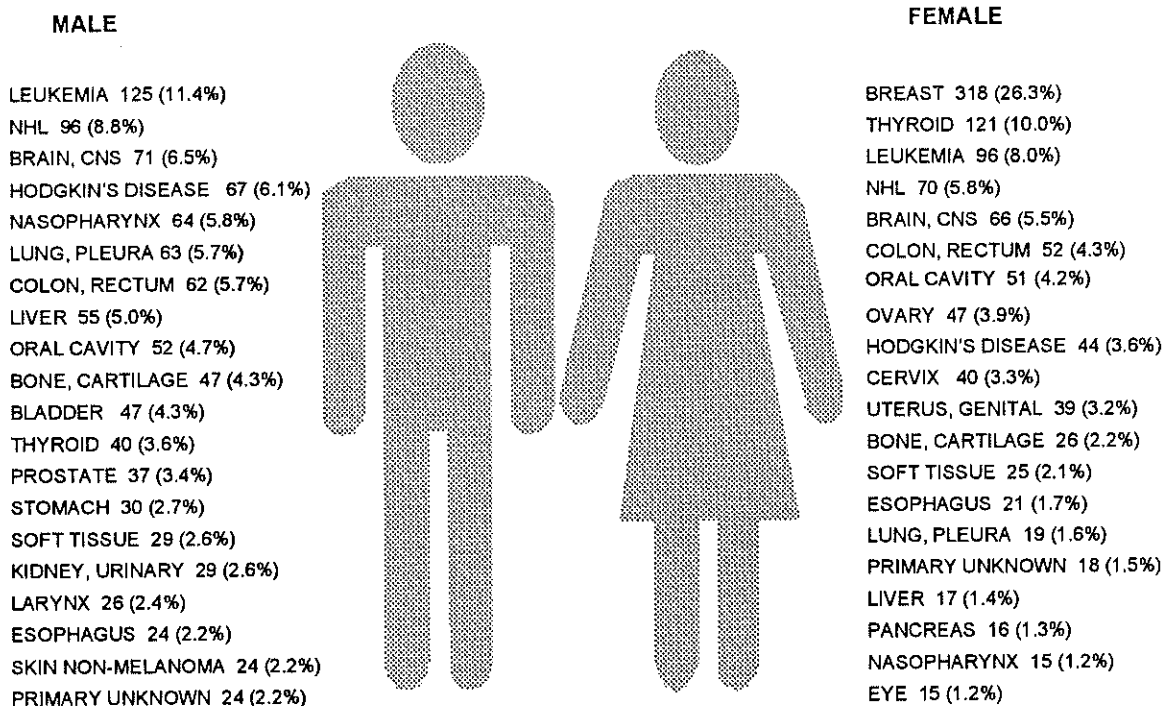


FIGURE 11
DISTRIBUTION OF PEDIATRIC MALIGNANCIES
2000 ANALYTIC CASES (TOTAL CASES = 361)

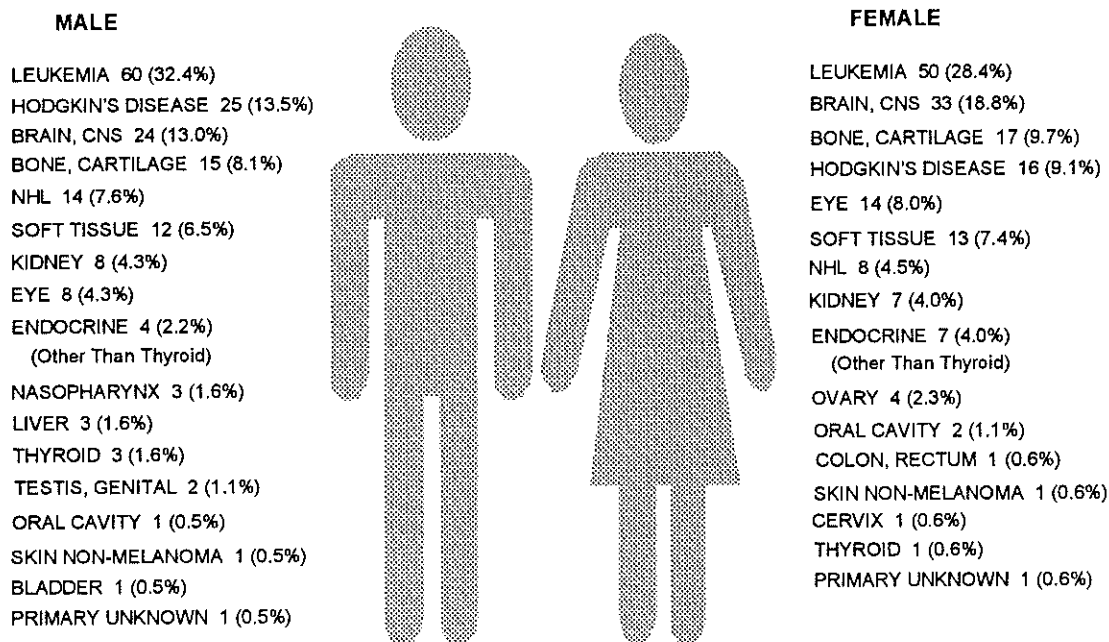


FIGURE 12

DISTRIBUTION OF 10 MOST COMMON PEDIATRIC MALIGNANCIES BY HISTOLOGY
2000 ANALYTIC CASES (TOTAL CASES = 361)

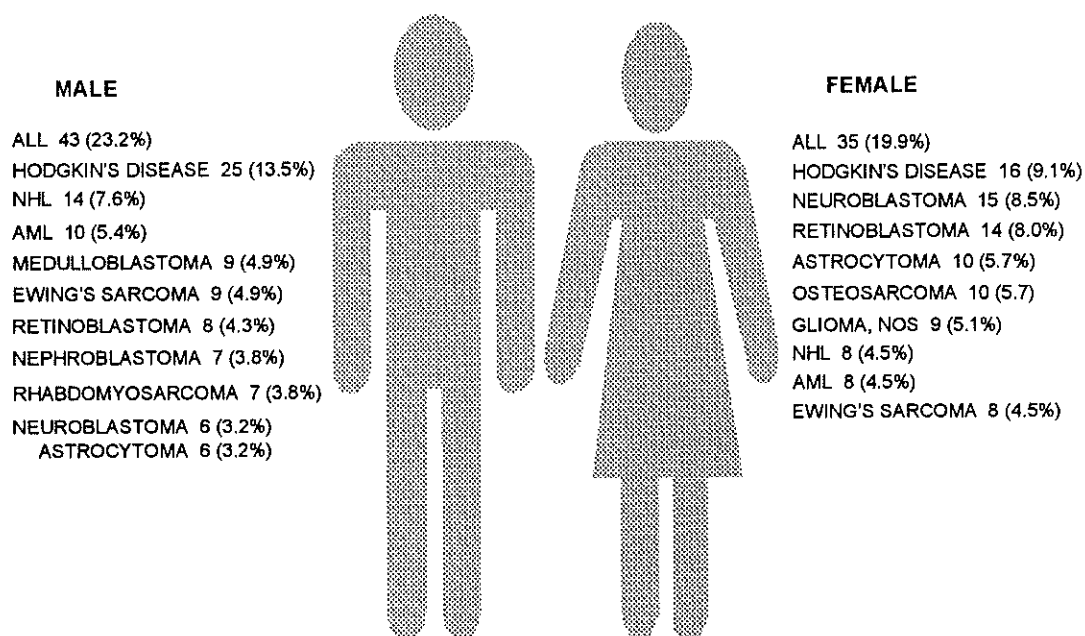


TABLE 10
 PRIMARY SITE TABLE
 (INCLUDES MULTIPLE PRIMARIES)
 2 0 0 0

SITE	HISTOLOGY (NOS-Not Otherwise Specified)	ALL CASES	ADULTS		PEDIATRICS	
			MALE	FEMALE	MALE	FEMALE
		2,693	1,092	1,198	212	191
LIP		6	4	2	0	0
	Squamous Cell Carcinoma					
TONGUE		40	24	16	0	0
	Squamous Cell Carcinoma	36	22	14	0	0
	Basosquamous Carcinoma	1	1	0	0	0
	Adenocarcinoma, NOS	1	1	0	0	0
	Carcinoma, NOS	1	0	1	0	0
	Non-Hodgkin's Lymphoma	1	0	1	0	0
MAJOR SALIVARY GLANDS		15	4	9	1	1
	Adenoid Cystic Carcinoma	8	2	5	1	0
	Acinar Cell Carcinoma	2	0	1	0	1
	Mucoepidermoid Carcinoma	2	0	2	0	0
	Carcinoma in Pleomorphic Adenoma	1	1	0	0	0
	Lymphoepithelial Carcinoma	1	0	1	0	0
	Carcinoma, NOS	1	1	0	0	0
GUM		15	8	7	0	0
	Squamous Cell Carcinoma	13	8	5	0	0
	Verrucous Carcinoma	1	0	1	0	0
	Papillary Squamous Cell Carcinoma	1	0	1	0	0
FLOOR OF MOUTH		4	2	2	0	0
	Squamous Cell Carcinoma	3	2	1	0	0
	Verrucous Carcinoma	1	0	1	0	0
OTHER PARTS OF MOUTH		23	11	11	0	1
	Squamous Cell Carcinoma	14	7	7	0	0
	Mucoepidermoid Carcinoma	3	0	2	0	1
	Non-Hodgkin's Lymphoma	2	1	1	0	0
	Verrucous Carcinoma	1	0	1	0	0
	Adenoid Cystic Carcinoma	1	1	0	0	0
	Melanoma	1	1	0	0	0
	Embryonal Rhabdomyosarcoma	1	1	0	0	0
OROPHARYNX		12	6	5	1	0
	Non-Hodgkin's Lymphoma	11	6	4	1	0
	Squamous Cell Carcinoma	1	0	1	0	0
NASOPHARYNX		91	65	19	6	1
	Carcinoma, Undifferentiated	34	26	8	0	0
	Squamous Cell Carcinoma	33	25	5	3	0
	Carcinoma, NOS	15	11	4	0	0
	Non-Hodgkin's Lymphoma	7	1	2	3	1
	Neuroendocrine Carcinoma	1	1	0	0	0
	Myeloid Sarcoma	1	1	0	0	0

Primary Site Table (cont'd)

SITE	HISTOLOGY (NOS-Not Otherwise Specified)	ALL CASES	ADULTS		PEDIATRICS	
			MALE	FEMALE	MALE	FEMALE
HYPOPHARYNX		15	5	10	0	0
	Squamous Cell Carcinoma					
ESOPHAGUS		50	25	25	0	0
	Squamous Cell Carcinoma	35	15	20	0	0
	Adenocarcinoma, NOS	13	10	3	0	0
	Small Cell Carcinoma	1	0	1	0	0
	Carcinoma, NOS	1	0	1	0	0
STOMACH		70	51	19	0	0
	Adenocarcinoma, NOS	26	22	4	0	0
	Non-Hodgkin's Lymphoma	17	9	8	0	0
	Signet Ring Cell Carcinoma	16	11	5	0	0
	Intestinal Adenocarcinoma	6	5	1	0	0
	Carcinoma, NOS	2	2	0	0	0
	Squamous Cell Carcinoma	1	1	0	0	0
	Tubular Adenocarcinoma	1	1	0	0	0
	Carcinoid Tumor	1	0	1	0	0
SMALL INTESTINE		13	9	3	0	1
	Non-Hodgkin's Lymphoma	4	1	2	0	1
	Adenocarcinoma, NOS	4	4	0	0	0
	Carcinoid Tumor	2	2	0	0	0
	Neuroendocrine Carcinoma	1	1	0	0	0
	Leiomyosarcoma	1	0	1	0	0
	Spindle Cell Sarcoma	1	1	0	0	0
COLON		72	39	32	0	1
	Adenocarcinoma, NOS	50	26	24	0	0
	Mucinous Adenocarcinoma	9	7	2	0	0
	Carcinoma, NOS	5	4	1	0	0
	Non-Hodgkin's Lymphoma	4	2	1	0	1
	Mucin-Producing Adenocarcinoma	2	0	2	0	0
	Adenoca in Tubulovillous Adenoma	1	0	1	0	0
	Malignant Neoplasm, NOS	1	0	1	0	0
RECTUM/RECTOSIGMOID JUNCTION/ANUS		78	45	31	0	2
	Adenocarcinoma, NOS	58	29	28	0	1
	Mucinous Adenocarcinoma	10	9	0	0	1
	Signet Ring Cell Carcinoma	3	1	2	0	0
	Squamous Cell Carcinoma	3	3	0	0	0
	Mucin-Producing Adenocarcinoma	1	1	0	0	0
	Adenocarcinoma in Villous Adenoma	1	0	1	0	0
	Basaloid Carcinoma	1	1	0	0	0
	Malignant Neoplasm, NOS	1	1	0	0	0
LIVER/INTRAHEPATIC BILE DUCTS		80	54	23	3	0
	Hepatocellular Carcinoma	67	51	16	0	0
	Cholangiocarcinoma	4	2	2	0	0
	Hepatoblastoma	2	0	0	2	0
	Embryonal Rhabdomyosarcoma	2	0	1	1	0
	Non-Hodgkin's Lymphoma	2	0	2	0	0
	Neuroendocrine Carcinoma	1	0	1	0	0
	Carcinoma, NOS	1	0	1	0	0
	Malignant Neoplasm, NOS	1	1	0	0	0

Primary Site Table (cont'd)

SITE	HISTOLOGY (NOS-Not Otherwise Specified)	ALL CASES	ADULTS		PEDIATRICS	
			MALE	FEMALE	MALE	FEMALE
GALLBLADDER/EXTRAHEPATIC BILE DUCTS		21	7	14	0	0
	Adenocarcinoma, NOS	12	4	8	0	0
	Carcinoma, NOS	4	0	4	0	0
	Cholangiocarcinoma	2	2	0	0	0
	Papillary Adenocarcinoma	2	0	2	0	0
	Malignant Neoplasm, NOS	1	1	0	0	0
PANCREAS		36	19	17	0	0
	Adenocarcinoma, NOS	21	11	10	0	0
	Carcinoma, NOS	10	6	4	0	0
	Malignant Neoplasm, NOS	4	2	2	0	0
	Mucinous Adenocarcinoma	1	0	1	0	0
OTHER G.I. SITES		2	1	1	0	0
	Neuroendocrine Carcinoma	1	1	0	0	0
	Mesothelioma	1	0	1	0	0
NASAL CAVITIES/ACCESSORY SINUSES		17	8	7	0	2
	Non-Hodgkin's Lymphoma	7	3	2	0	2
	Squamous Cell Carcinoma	6	4	2	0	0
	Melanoma	2	1	1	0	0
	Adenoid Cystic Carcinoma	1	0	1	0	0
	Carcinoma, NOS	1	0	1	0	0
LARYNX		33	27	6	0	0
	Squamous Cell Carcinoma	31	26	5	0	0
	Plasmacytoma	1	0	1	0	0
	Carcinoma, NOS	1	1	0	0	0
BRONCHUS/LUNG		92	72	20	0	0
	Adenocarcinoma, NOS	34	24	10	0	0
	Squamous Cell Carcinoma	19	18	1	0	0
	Small Cell Carcinoma	11	9	2	0	0
	Carcinoma, NOS	11	7	4	0	0
	Carcinoid Tumor	5	4	1	0	0
	Bronchiolo-Alveolar Adenocarcinoma	2	2	0	0	0
	Mucinous Adenocarcinoma	2	1	1	0	0
	Undifferentiated Carcinoma	2	2	0	0	0
	Malignant Neoplasm, NOS	2	1	1	0	0
	Mucoepidermoid Carcinoma	1	1	0	0	0
	Large Cell Carcinoma	1	1	0	0	0
	Solid Carcinoma	1	1	0	0	0
	Non-Hodgkin's Lymphoma	1	1	0	0	0
PLEURA		3	3	0	0	0
	Mesothelioma	2	2	0	0	0
	Spindle Cell Sarcoma	1	1	0	0	0
THYMUS/MEDIASTINUM		7	3	4	0	0
	Malignant Thymoma	2	0	2	0	0
	Peripheral Neuroectodermal Tumor	1	0	1	0	0
	Malignant Teratoma	1	1	0	0	0
	Non-Hodgkin's Lymphoma	1	1	0	0	0
	Hodgkin's Disease	1	1	0	0	0
	Carcinoma, NOS	1	0	1	0	0

Primary Site Table (cont'd)

SITE	HISTOLOGY (NOS-Not Otherwise Specified)	ALL CASES	ADULTS		PEDIATRICS	
			MALE	FEMALE	MALE	FEMALE
MULTIPLE MYELOMA		22	14	8	0	0
BONE MARROW		249	77	52	68	52
	Acute Lymphoid Leukemia	118	22	11	48	37
	Acute Myeloid Leukemia	53	18	14	13	8
	Chronic Myeloid Leukemia	48	21	19	4	4
	Chronic Lymphoid Leukemia	14	9	5	0	0
	Acute Promyelocytic Leukemia	5	3	1	1	0
	Acute Myelomonocytic Leukemia	3	0	2	0	1
	Acute Monocytic Leukemia	3	2	0	1	0
	Chronic Myelomonocytic Leukemia	2	0	0	1	1
	Megakaryocytic Leukemia	1	0	0	0	1
	Hairy Cell Leukemia	1	1	0	0	0
	Acute Leukemia, NOS	1	1	0	0	0
SPLEEN		5	2	3	0	0
	Non-Hodgkin's Lymphoma					
BONE/CARTILAGE		88	41	15	15	17
	Ewing's Sarcoma	29	11	2	9	7
	Osteosarcoma, NOS	24	10	2	5	7
	Chondroblastic Osteosarcoma	10	5	2	0	3
	Non-Hodgkin's Lymphoma	8	5	3	0	0
	Chondrosarcoma, NOS	5	5	0	0	0
	Plasmacytoma	5	4	1	0	0
	Chordoma	3	0	2	1	0
	Juxtacortical Osteosarcoma	2	0	2	0	0
	Telangiectatic Osteosarcoma	1	0	1	0	0
	Mesenchymal Chondrosarcoma	1	1	0	0	0
CONNECTIVE/SUBCUTANEOUS/SOFT TISSUE		76	21	22	17	16
	Neuroblastoma	11	0	1	2	8
	Non-Hodgkin's Lymphoma	9	2	4	2	1
	Spindle Cell Sarcoma	6	1	4	0	1
	Leiomyosarcoma	6	3	3	0	0
	Rhabdomyosarcoma, NOS	5	0	2	3	0
	Embryonal Rhabdomyosarcoma	4	0	0	4	0
	Malignant Fibrous Histiocytoma	4	1	3	0	0
	Synovial Sarcoma	3	2	0	0	1
	Infantile Fibrosarcoma	3	0	0	2	1
	Liposarcoma, NOS	3	3	0	0	0
	Peripheral Neuroectodermal Tumor	3	0	1	1	1
	Ewing's Sarcoma	3	1	0	1	1
	Myxoid Liposarcoma	2	0	2	0	0
	Sarcoma, NOS	2	2	0	0	0
	Endodermal Sinus Tumor	2	1	0	1	0
	Malignant Neoplasm, NOS	2	1	0	0	1
	Alveolar Rhabdomyosarcoma	1	0	0	1	0
	Dedifferentiated Liposarcoma	1	1	0	0	0
	Giant Cell Sarcoma	1	1	0	0	0
	Rhabdoid Sarcoma	1	0	0	0	1
	Epithelioid Sarcoma	1	0	1	0	0
	Small Cell Sarcoma	1	1	0	0	0
	Fibrosarcoma, NOS	1	0	1	0	0
	Chondroblastic Osteosarcoma	1	1	0	0	0

Primary Site Table (cont'd)

SITE	HISTOLOGY (NOS-Not Otherwise Specified)	ALL CASES	ADULTS		PEDIATRICS	
			MALE	FEMALE	MALE	FEMALE
SKIN (MELANOMA)		5	2	3	0	0
SKIN (NON-MELANOMA)		64	42	20	1	1
	Basal Cell Carcinoma	23	12	11	0	0
	Squamous Cell Carcinoma	15	13	1	1	0
	Non-Hodgkin's Lymphoma	5	5	0	0	0
	Basosquamous Carcinoma	4	1	2	0	1
	Kaposi's Sarcoma	4	4	0	0	0
	Dermatofibrosarcoma	4	3	1	0	0
	Sebaceous Adenocarcinoma	3	0	3	0	0
	Mycosis Fungoides	3	2	1	0	0
	Merkel Cell Carcinoma	2	1	1	0	0
	Bowen's Disease	1	1	0	0	0
BREAST, FEMALE		381	0	380	0	1
	Duct Cell Carcinoma	313	0	313	0	0
	Lobular Carcinoma	19	0	19	0	0
	Carcinoma, NOS	12	0	12	0	0
	Paget's Disease & Duct Cell Ca	10	0	10	0	0
	Comedocarcinoma	5	0	5	0	0
	Medullary Carcinoma	4	0	4	0	0
	Infiltrating Duct & Lobular Ca	3	0	3	0	0
	Non-Hodgkin's Lymphoma	3	0	3	0	0
	Mucinous Adenocarcinoma	2	0	2	0	0
	Tubular Adenocarcinoma	2	0	2	0	0
	Cystosarcoma Phyllodes	1	0	1	0	0
	Intraductal Papillary Adenoca	1	0	1	0	0
	Sarcoma, NOS	1	0	1	0	0
	Squamous Cell Ca, Spindle Cell	1	0	1	0	0
	Chondrosarcoma	1	0	1	0	0
	Peripheral Neuroectodermal Tumor	1	0	0	0	1
	Adenocarcinoma, NOS	1	0	1	0	0
	Malignant Neoplasm, NOS	1	0	1	0	0
BREAST, MALE		5	5	0	0	0
	Duct Cell Carcinoma					
CERVIX UTERI		41	0	40	0	1
	Squamous Cell Carcinoma	36	0	36	0	0
	Adenocarcinoma, NOS	3	0	3	0	0
	Sarcoma, NOS	1	0	0	0	1
	Carcinoma, NOS	1	0	1	0	0
PLACENTA		4	0	4	0	0
	Placental Site Trophoblastic Tumor	3	0	3	0	0
	Choriocarcinoma	1	0	1	0	0
CORPUS UTERI		33	0	33	0	0
	Adenocarcinoma, NOS	13	0	13	0	0
	Endometrioid Carcinoma	6	0	6	0	0
	Leiomyosarcoma	3	0	3	0	0
	Mullerian Mixed Tumor	2	0	2	0	0
	Carcinosarcoma	2	0	2	0	0
	Carcinoma, NOS	2	0	2	0	0
	Endometrial Stromal Sarcoma	1	0	1	0	0

Primary Site Table (cont'd)

SITE	HISTOLOGY (NOS-Not Otherwise Specified)	ALL CASES	ADULTS		PEDIATRICS	
			MALE	FEMALE	MALE	FEMALE
CORPUS UTERI (cont'd)						
	Papillary Serous Cystadenocarcinoma	1	0	1	0	0
	Serous Cystadenocarcinoma	1	0	1	0	0
	Malignant Fibrous Histiocytoma	1	0	1	0	0
	Clear Cell Adenocarcinoma	1	0	1	0	0
OVARY		58	0	53	0	5
	Adenocarcinoma, NOS	9	0	9	0	0
	Mucinous Adenocarcinoma	8	0	8	0	0
	Papillary Serous Cystadenocarcinoma	7	0	7	0	0
	Serous Surface Papillary Adenoca	5	0	5	0	0
	Dysgerminoma	5	0	3	0	2
	Endometrioid Carcinoma	4	0	4	0	0
	Malignant Teratoma	4	0	4	0	0
	Papillary Serous, Borderline Malig	4	0	4	0	0
	Mixed Germ Cell Tumor	2	0	0	0	2
	Carcinoma, NOS	2	0	2	0	0
	Malignant Granulosa Cell Tumor	1	0	1	0	0
	Endodermal Sinus Tumor	1	0	0	0	1
	Serous Cystadenocarcinoma	1	0	1	0	0
	Papillary Adenocarcinoma	1	0	1	0	0
	Mucinous Cystadenoma, Border Malig	1	0	1	0	0
	Cystadenocarcinoma, NOS	1	0	1	0	0
	Clear Cell Adenocarcinoma	1	0	1	0	0
	Solid Carcinoma	1	0	1	0	0
OTHER FEMALE GENITAL ORGANS		4	0	4	0	0
	Squamous Cell Carcinoma	3	0	3	0	0
	Choriocarcinoma	1	0	1	0	0
PROSTATE		47	47	0	0	0
	Adenocarcinoma, NOS	43	43	0	0	0
	Carcinoma, NOS	4	4	0	0	0
TESTIS		21	19	0	2	0
	Seminoma	10	10	0	0	0
	Mixed Germ Cell Tumor	5	5	0	0	0
	Endodermal Sinus Tumor	3	1	0	2	0
	Non-Hodgkin's Lymphoma	2	2	0	0	0
	Choriocarcinoma	1	1	0	0	0
OTHER MALE GENITAL ORGANS		2	2	0	0	0
	Squamous Cell Carcinoma					
URINARY BLADDER		78	63	14	1	0
	Papillary Transitional Cell Ca	34	27	7	0	0
	Transitional Cell Carcinoma	32	28	4	0	0
	Squamous Cell Carcinoma	6	4	2	0	0
	Adenocarcinoma, NOS	2	2	0	0	0
	Carcinoma, NOS	2	1	1	0	0
	Embryonal Rhabdomyosarcoma	1	0	0	1	0
	Giant Cell Sarcoma	1	1	0	0	0

Primary Site Table (cont'd)

SITE	HISTOLOGY (NOS-Not otherwise Specified)	ALL CASES	ADULTS		PEDIATRICS	
			MALE	FEMALE	MALE	FEMALE
KIDNEY/URETER/URETHRA		60	35	8	9	8
	Renal Cell Carcinoma	21	16	5	0	0
	Nephroblastoma	16	0	0	8	8
	Papillary Transitional Cell Ca Carcinoma, NOS	12	10	2	0	0
	Malignant Neoplasm, NOS	3	2	1	0	0
	Transitional Cell Carcinoma	2	1	0	1	0
	Granular Cell Carcinoma	1	1	0	0	0
	Clear Cell Adenocarcinoma	1	1	0	0	0
	Chromophobe Carcinoma	1	1	0	0	0
	Squamous Cell Carcinoma	1	1	0	0	0
	Adenocarcinoma, NOS	1	1	0	0	0
EYE/LACRIMAL GLAND		27	0	2	10	15
	Retinoblastoma	25	0	0	10	15
	Adenoid Cystic Carcinoma	1	0	1	0	0
	Non-Hodgkin's Lymphoma	1	0	1	0	0
BRAIN		141	51	32	23	35
	Glioblastoma	31	16	11	2	2
	Medulloblastoma	20	5	0	9	6
	Pilocytic Astrocytoma	19	0	4	6	9
	Malignant Glioma, NOS	19	4	4	2	9
	Ependymoma	13	3	1	3	6
	Astrocytoma, NOS	10	5	3	0	2
	Mixed Glioma	8	4	3	1	0
	Oligodendroglioma	7	6	1	0	0
	Anaplastic Astrocytoma	6	4	1	0	1
	Non-Hodgkin's Lymphoma	4	3	1	0	0
	Gemistocytic Astrocytoma	1	1	0	0	0
	Protoplasmic Astrocytoma	1	0	1	0	0
	Pleomorphic Xanthoastrocytoma	1	0	1	0	0
	Malignant Neoplasm, NOS	1	0	1	0	0
OTHER NERVOUS SYSTEM		11	3	4	3	1
	Malignant Meningioma	4	1	2	1	0
	Pilocytic Astrocytoma	2	0	1	1	0
	Malignant Glioma, NOS	2	0	0	1	1
	Anaplastic Ependymoma	1	1	0	0	0
	Melanoma	1	1	0	0	0
	Malignant Fibrous Histiocytoma	1	0	1	0	0
THYROID		188	45	138	4	1
	Papillary Carcinoma	144	35	106	2	1
	Papillary & Follicular Adenoca	16	0	14	2	0
	Follicular Adenocarcinoma	10	2	8	0	0
	Non-Hodgkin's Lymphoma	8	3	5	0	0
	Medullary Carcinoma	5	3	2	0	0
	Anaplastic Carcinoma	3	1	2	0	0
	Oxyphilic Adenocarcinoma	1	0	1	0	0
	Carcinoma, NOS	1	1	0	0	0

Primary Site Table (cont'd)

SITE	HISTOLOGY (NOS-Not Otherwise Specified)	ALL CASES	ADULTS		PEDIATRICS	
			MALE	FEMALE	MALE	FEMALE
OTHER ENDOCRINE GLANDS		21	5	4	5	7
Neuroblastoma		14	1	1	5	7
Adrenal Cortical Carcinoma		4	3	1	0	0
Dysgerminoma		1	1	0	0	0
Carcinoma, NOS		1	0	1	0	0
Non-Hodgkin's Lymphoma		1	0	1	0	0
LYMPH NODES, NON-HODGKIN'S LYMPHOMA (Excluding Extra-Nodal Lymphoma)		96	55	28	10	3
Large Cell, Diffuse		45	28	14	1	2
Follicular, NOS		15	10	5	0	0
Lymphoblastic		7	1	2	4	0
Non-Hodgkin's Lymphoma, NOS		4	3	1	0	0
Immunoblastic		4	4	0	0	0
Small Lymphocytic		4	1	3	0	0
T-Cell Rich B-Cell		4	2	1	1	0
Burkitt's		3	0	0	3	0
Ki-1 (Anaplastic Large Cell)		4	2	0	1	1
T-Cell Lymphoma		2	2	0	0	0
Lymphoplasmacytic		1	0	1	0	0
Mantle Cell		1	1	0	0	0
Mixed Small Cleaved & Large Cell		1	0	1	0	0
Reticulosarcoma		1	1	0	0	0
LYMPH NODES, HODGKIN'S DISEASE		128	47	31	32	18
Nodular Sclerosis		88	28	28	19	13
Mixed Cellularity		15	5	0	9	1
Hodgkin's Disease, NOS		12	6	2	4	0
Lymphocytic Predominance		12	7	1	0	4
Lymphocytic Depletion		1	1	0	0	0
PRIMARY UNKNOWN		43	24	17	1	1
Adenocarcinoma, NOS		9	5	4	0	0
Malignant Neoplasm, NOS		9	4	4	0	1
Carcinoma, NOS		10	5	3	1	0
Undifferentiated Carcinoma		4	4	0	0	0
Mucinous Adenocarcinoma		3	0	3	0	0
Squamous Cell Carcinoma		2	2	0	0	0
Large Cell Carcinoma		2	1	1	0	0
Neuroendocrine Carcinoma		1	0	1	0	0
Carcinoid Tumor		1	0	1	0	0
Signet Ring Cell Carcinoma		1	1	0	0	0
Malignant Teratoma		1	1	0	0	0
Pleomorphic Carcinoma		1	1	0	0	0

TABLE 11
 MULTIPLE PRIMARY SITES TABLE
 2 0 0 0

PRIMARY SITE 2000	HISTOLOGY (NOS-Not Otherwise Specified)	OTHER PRIMARIES (PREVIOUS OR CONCURRENT)	ALL PATIENTS	MALE	FEMALE
			90	43	47
LIP			1	0	1
	Squamous Cell Carcinoma	Skin Face - Basosquamous Ca			
TONGUE			3	2	1
	Squamous Cell Carcinoma	Esophagus - Carcinoma, NOS	1	0	1
	Squamous Cell Carcinoma	Acute Lymphoid Leukemia	1	1	0
	Adenocarcinoma, NOS	Anal Canal - Sq Cell Ca	1	1	0
HARD PALATE			1	1	0
	Adenoid Cystic Carcinoma	Larynx - Sq Cell Ca			
OROPHARYNX			1	0	1
	Non-Hodgkin's Lymphoma	Cecum - Carcinoma, NOS			
STOMACH			2	2	0
	Signet Ring Cell Carcinoma	Stomach - Tubular Adenoca	1	1	0
	Adenocarcinoma, NOS	Pancreas - Malig Neoplasm	1	1	0
SMALL INTESTINE			1	1	0
	Adenocarcinoma, NOS	Rectum - Adenocarcinoma			
COLON			5	3	2
	Mucin-Producing Adenoca (Sigmoid)	Cecum - Adenocarcinoma	1	0	1
	Adenocarcinoma (Sigmoid)	Cecum - Adenocarcinoma	1	1	0
	Adenocarcinoma, NOS	Endometrium-Adenocarcinoma	1	0	1
	Carcinoma In Situ	Lung-Bronchiolo Alveolar Ca	1	1	0
	Carcinoma, NOS	Lung - Non Small Cell Ca	1	1	0
LIVER			3	3	0
	Hepatocellular Carcinoma	Kidney - Renal Cell Ca	1	1	0
	Hepatocellular Carcinoma	Bladder - Pap Trans Cell Ca	1	1	0
	Hepatocellular Carcinoma	LNs - NHL	1	1	0
PANCREAS			1	0	1
	Adenocarcinoma, NOS	Bladder - Pap Trans Cell Ca			
PERITONEUM			1	1	0
	Neuroendocrine Carcinoma	Bladder - Pap Trans Cell Ca			
NASAL CAVITIES/ACCESSORY SINUSES			2	1	1
	Squamous Cell Carcinoma	Rectum - Carcinoma, NOS	1	1	0
	Non-Hodgkin's Lymphoma	Thyroid - Papillary Ca	1	0	1
LARYNX			1	0	1
	Squamous Cell Carcinoma	Thyroid - Papillary Ca			

Multiple Primary Sites Table (cont'd)

PRIMARY SITE 2000	HISTOLOGY (NOS-Not Otherwise Specified)	OTHER PRIMARIES (PREVIOUS OR CONCURRENT)	ALL PATIENTS	MALE	FEMALE
LUNG			4	4	0
Squamous Cell Carcinoma	Tonsil - Sq Cell Ca		1	1	0
Squamous Cell Carcinoma	Tongue - Sq Cell Ca		1	1	0
Squamous Cell Carcinoma	Bladder - Pap Trans Cell Ca		1	1	0
Adenocarcinoma, NOS	Bladder - Carcinoma, NOS		1	1	0
BONE MARROW			4	0	4
Acute Myeloid Leukemia	Breast - Duct Cell Ca		1	0	1
Acute Myeloid Leukemia	LN's - Hodgkin's Disease		1	0	1
Chronic Lymphoid Leukemia	Liver - NHL		1	0	1
Megakaryocytic Leukemia	Bone - Ewing's Sarcoma		1	0	1
BONE			2	2	0
Osteosarcoma	Eye - Retinoblastoma		1	1	0
Osteosarcoma	Kidney - Renal Cell Ca		1	1	0
CONNECTIVE/SOFT TISSUE			3	2	1
Malig Fibrous Histiocytoma	Breast - Duct Cell Ca		1	0	1
Sarcoma, NOS	LN's - NHL		1	1	0
Spindle Cell Sarcoma*	Chronic Lymphoid Leukemia		1	1	0
	Thyroid - Papillary Ca				
SKIN			8	7	1
Squamous Cell Carcinoma	Skin - Basal Cell Ca		3	3	0
Basal Cell Carcinoma	LN's - NHL		1	0	1
Basal Cell Carcinoma	Liver - Hepatocellular Ca		1	1	0
Basal Cell Carcinoma	Colon - NHL		1	1	0
Basosquamous Carcinoma	Skin - Sq Cell Ca		1	1	0
Kaposi's Sarcoma	LN's - NHL		1	1	0
BREAST			25	0	25
Duct Cell Carcinoma	Contralateral Breast		11	0	11
Duct Cell Carcinoma	LN's - Hodgkin's Disease		2	0	2
Duct Cell Carcinoma	Contra Breast-Medullary Ca		1	0	1
Duct Cell Carcinoma	Breast - Lobular Ca		1	0	1
Duct Cell Carcinoma	Thyroid - Papillary Ca		1	0	1
Duct Cell Carcinoma	Cervix - Carcinoma, NOS		1	0	1
Duct Cell Carcinoma	Rectosigmoid - Adenoca		1	0	1
Duct Cell Carcinoma	LN's - NHL		1	0	1
Lobular Carcinoma	Contralateral Breast		1	0	1
Lobular Carcinoma	Contra Breast-Adenoca, NOS		1	0	1
Non-Hodgkin's Lymphoma	Contralateral Breast		1	0	1
Duct Cell Carcinoma*	Contralateral Breast		1	0	1
	Endometrium - Adenoca, NOS				
Duct Cell Carcinoma*	Contralateral Breast		1	0	1
	Same Side Breast-Lobular Ca				
Lobular Carcinoma*	Contralateral Breast		1	0	1
	Thyroid - Papillary Ca				
CERVIX UTERI			3	0	3
Sarcoma, NOS	Skin - Basal Cell Ca		1	0	1
Squamous Cell Carcinoma	Vulva - Sq Cell Ca		1	0	1
Squamous Cell Carcinoma**	Desc Colon - Adenocarcinoma		1	0	1
	Cecum - Adenocarcinoma				
	Duodenum - NHL				

Multiple Primary Sites Table (cont'd)

PRIMARY SITE 2000	HISTOLOGY (NOS-Not Otherwise Specified)	OTHER PRIMARIES (PREVIOUS OR CONCURRENT)	ALL PATIENTS	MALE	FEMALE
CORPUS UTERI			1	0	1
Leiomyosarcoma		Rectum - Adenocarcinoma			
OVARY			1	0	1
Dysgerminoma		Contralateral Ovary			
PROSTATE			3	3	0
Adenocarcinoma, NOS		Bladder - Trans Cell Ca	1	1	0
Adenocarcinoma, NOS		Bladder - Pap Trans Cell Ca	1	1	0
Adenocarcinoma, NOS		Soft Tissue - Liposarcoma	1	1	0
TESTIS			1	1	0
Mixed Germ Cell Tumor		Contralateral Testis			
URINARY BLADDER			5	5	0
Pap Transitional Cell Ca		Ureter - Pap Trans Cell Ca	1	1	0
Pap Transitional Cell Ca		Kidney - Pap Trans Cell Ca	1	1	0
Pap Transitional Cell Ca		Renal Pelvis-Pap Trans Cell	1	1	0
Transitional Cell Ca		Renal Pelvis-Pap Trans Cell	1	1	0
Giant Cell Sarcoma		LN's - Reticulosarcoma	1	1	0
KIDNEY			3	2	1
Renal Cell Carcinoma		Contralateral Kidney	1	1	0
Renal Cell Carcinoma		Thyroid - Papillary Ca	1	0	1
Chromophobe Carcinoma*		Bladder - Trans Cell Ca	1	1	0
		LN's - NHL			
THYROID			4	2	2
Papillary Carcinoma		Thyroid - Medullary Ca	1	0	1
Papillary Carcinoma		Brain - Medulloblastoma	1	0	1
Papillary Carcinoma		LN's - NHL	1	1	0
Adenocarcinoma, NOS		LN's - NHL	1	1	0
PRIMARY UNKNOWN			1	1	0
Adenocarcinoma, NOS		LN's - Hodgkin's Disease	1	1	0

*Patient has three primary malignancies.

**Patient has four primary malignancies.

STAGE OF DISEASE AT DIAGNOSIS

Stage in any malignant process may be defined as the particular step, phase, or extent in a tumor's development, which is one of the predictors for outcome and treatment selection assigned at the time of initial diagnosis. The microscopic appearance, extent, and biological behavior of a tumor, as well as host factors, play a part in prognosis and are therefore important in staging.

The SEER (Surveillance, Epidemiology, and End Results) Summary Staging Guide was utilized for all stageable cases. This system summarizes the disease categories into four general staging groups (i.e. in situ, localized, regional, and distant). Stage categories are based on a combination of clinical observations and operative-pathological evaluation.

Summary Staging Definitions:

IN SITU: Intraepithelial, noninvasive, noninfiltrating

LOCALIZED: Within organ

- a. Invasive cancer confined to the organ of origin
- b. Intraluminal extension where specified

REGIONAL: Beyond the organ of origin

- a. By direct extension to adjacent organs/tissues
- b. To regional lymph nodes
- c. Both (a) and (b)

DISTANT: Direct extension or metastasis

- a. Direct continuity to organs other than above
- b. Discontinuous metastasis
- c. To distant lymph nodes

Systemic diseases, i.e., leukemia and multiple myeloma and cases of unknown primary were disregarded in graphically illustrating the stages for all analytic cases seen at KFSH&RC in 2000 (Figure 13). The 44 cases unstageable at diagnosis were those patients who refused further diagnostic workup or further workup was not possible due to the patients' state of health; e.g. terminal cases or those with co-morbid conditions. Please refer also to Table 5 for the distribution of the 2000 analytic cases by site and stage at diagnosis.

In addition to the SEER Summary Staging, the cases were also staged according to the American Joint Committee on Cancer (AJCC) TNM system. This scheme is based on the premise that cancers of similar histology or site of origin share similar patterns of growth and extension. This system is based on the assessment of three components:

T: Extent of the primary tumor

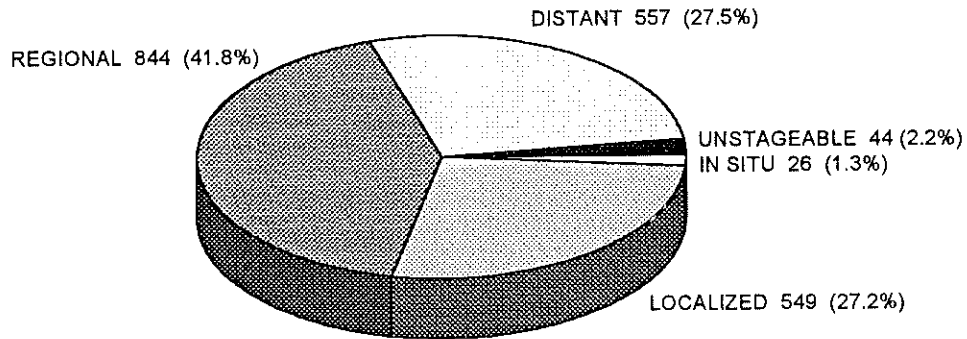
N: Absence or presence and extent of regional lymph node involvement

M: Absence or presence of distant metastasis

Analytic cases of four major sites, i.e., breast, lung, nasopharynx and Hodgkin's Disease are presented in Table 12 with their clinical group stage and yearly comparative figures from 1996 to 2000. The pathologic group stages of stomach and colorectum are also presented in the same table.

FIGURE 13

**DISTRIBUTION OF ANALYTIC CASES
BY STAGE (SEER) AT DIAGNOSIS
2000 (TOTAL CASES = 2,020)**



*Excludes Unknown Primaries (42 cases)

*Excludes Leukemia and Multiple Myeloma (242 cases)

FIGURE 14

**DISTRIBUTION OF ANALYTIC CASES
BY FIRST TREATMENT MODALITY
2000 (TOTAL CASES = 2,304)**

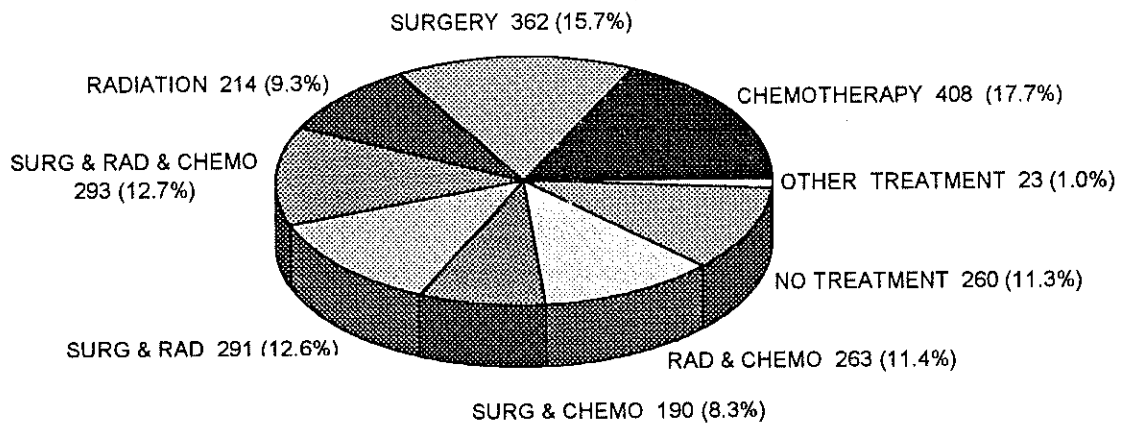


TABLE 12

AJCC CLINICAL TNM GROUP STAGE OF ANALYTIC CASES OF MAJOR SITES* BY YEAR
1996 - 2000

BREAST												
Stage	1996		1997		1998		1999		2000		TOTAL	
	No	%	No	%	No	%	No	%	No	%	No	%
0	4	1.7	3	1.2	3	1.1	0	0.0	2	0.6	12	0.9
1	22	9.5	15	6.0	11	3.9	23	7.9	20	6.2	91	6.6
2A	52	22.5	51	20.3	53	18.8	43	14.8	54	16.8	253	18.4
2B	38	16.5	42	16.7	27	9.6	63	21.7	51	15.8	221	16.1
3A	19	8.2	13	5.2	27	9.6	20	6.9	24	7.5	103	7.4
3B	21	9.1	36	14.4	37	13.1	42	14.5	59	18.3	195	14.2
4	36	15.6	49	19.5	63	22.3	44	15.2	60	18.6	252	18.3
Unstageable	39	16.9	42	16.7	61	21.6	55	19.0	52	16.2	249	18.1
Total	231	100.0	251	100.0	282	100.0	290	100.0	322	100.0	1,376	100.0

LUNG												
Stage	1996		1997		1998		1999		2000		TOTAL	
	No	%	No	%	No	%	No	%	No	%	No	%
1	2	2.6	5	6.8	12	12.2	0	0.0	0	0.0	19	4.5
1A	-	-	-	-	-	-	2	2.1	3	3.8	5	1.2
1B	-	-	-	-	-	-	3	3.1	3	3.8	6	1.4
2	3	3.8	0	0.0	3	3.1	0	0.0	0	0.0	6	1.4
2A	-	-	-	-	-	-	1	1.1	0	0.0	1	0.2
2B	-	-	-	-	-	-	3	3.1	3	3.8	6	1.4
3A	6	7.7	7	9.4	12	12.2	7	7.4	6	7.6	38	9.0
3B	26	33.3	18	24.3	14	14.3	19	20.0	17	21.5	94	22.1
4	27	34.6	33	44.6	44	44.9	49	51.6	30	38.0	183	43.2
Unstageable	14	18.0	11	14.9	13	13.3	11	11.6	17	21.5	66	15.6
Total	78	100.0	74	100.0	98	100.0	95	100.0	79	100.0	424	100.0

NASOPHARYNX												
Stage	1996		1997		1998		1999		2000		TOTAL	
	No	%	No	%	No	%	No	%	No	%	No	%
0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
1	0	0.0	0	0.0	0	0.0	1	1.1	2	2.6	3	0.7
2	2	2.5	0	0.0	2	2.0	-	-	-	-	4	0.9
2A	-	-	-	-	-	-	3	3.2	2	2.6	5	1.2
2B	-	-	-	-	-	-	8	8.5	7	8.9	15	3.5
3	7	8.9	6	7.4	11	10.9	20	21.3	14	18.0	58	13.4
4	67	84.8	75	92.6	88	87.1	-	-	-	-	230	53.1
4A	-	-	-	-	-	-	24	25.5	28	35.9	52	12.0
4B	-	-	-	-	-	-	25	26.6	16	20.5	41	9.5
4C	-	-	-	-	-	-	10	10.6	7	8.9	17	3.9
Unstageable	3	3.8	0	0.0	0	0.0	3	3.2	2	2.6	8	1.8
Total	79	100.0	81	100.0	101	100.0	94	100.0	78	100.0	433	100.0

* Excludes Lymphoma Cases.

N.B. New staging scheme for Lung and Nasopharynx effective 1999.

Table 12 (cont'd)

AJCC CLINICAL GROUP STAGE OF ANALYTIC CASES OF A MAJOR SITE BY YEAR
1996 - 2000

Stage	HODGKIN'S DISEASE										T O T A L	
	1 9 9 6		1 9 9 7		1 9 9 8		1 9 9 9		2 0 0 0		No	%
	No	%	No	%	No	%	No	%	No	%		
1A	8	11.3	4	5.9	7	7.9	20	19.1	9	8.1	48	10.8
1B	1	1.4	1	1.5	3	3.4	0	0.0	1	0.9	6	1.4
2A	20	28.2	22	32.3	21	23.6	29	27.6	39	35.2	131	29.5
2B	10	14.1	10	14.7	13	14.6	13	12.4	9	8.1	55	12.4
3A	6	8.4	10	14.7	14	15.7	10	9.5	16	14.4	56	12.6
3B	10	14.1	7	10.3	13	14.6	10	9.5	16	14.4	56	12.6
4A	3	4.2	4	5.9	3	3.4	4	3.8	1	0.9	15	3.4
4B	13	18.3	10	14.7	15	16.8	18	17.1	19	17.1	75	16.9
Unstageable	0		0		0		1	1.0	1	0.9	2	0.4
Total	71	100.0	68	100.0	89	100.0	105	100.0	111	100.0	444	100.0

AJCC PATHOLOGIC TNM GROUP STAGE OF ANALYTIC CASES OF MAJOR SITES* BY YEAR
1996 - 2000

Stage	STOMACH										T O T A L	
	1 9 9 6		1 9 9 7		1 9 9 8		1 9 9 9		2 0 0 0		No	%
	No	%	No	%	No	%	No	%	No	%		
0	0	0.0	0	0.0	0	0.0	0	0.0	0	2.5	0	0.0
1A	2	3.9	0	0.0	0	0.0	1	2.1	1	2.5	4	1.9
1B	3	5.9	0	0.0	1	2.7	2	4.3	1	7.5	7	3.4
2	0	0.0	2	6.2	4	10.8	5	10.6	3	20.0	14	6.8
3A	18	35.3	3	9.4	8	21.6	5	10.6	8	2.5	42	20.3
3B	4	7.8	4	12.5	3	8.1	2	4.3	1	20.0	14	6.8
4	1	2.0	1	3.1	2	5.4	4	8.5	8	45.0	16	7.7
Unstageable	23	45.1	22	68.8	19	51.4	28	59.6	18		110	53.1
Total	51	100.0	32	100.0	37	100.0	47	100.0	40	100.0	207	100.0

Stage	COLON, RECTUM										T O T A L	
	1 9 9 6		1 9 9 7		1 9 9 8		1 9 9 9		2 0 0 0		No	%
	No	%	No	%	No	%	No	%	No	%		
0	0	0.0	1	1.3	0	0.0	0	0.0	0	0.0	1	0.2
1	3	3.8	3	3.9	2	2.3	12	9.7	6	5.2	26	5.4
2	17	21.5	12	15.6	13	15.1	25	20.2	32	28.1	99	20.6
3	13	16.4	15	19.5	18	20.9	19	15.3	12	10.5	77	16.1
4	7	8.9	7	9.1	9	10.5	7	5.6	10	8.8	40	8.3
Unstageable	39	49.4	39	50.6	44	51.2	61	49.2	54	47.4	237	49.4
Total	79	100.0	77	100.0	86	100.0	124	100.0	114	100.0	480	100.0

* Excludes Lymphoma Cases.

APPENDIX A

2000 REQUESTS FOR TUMOR REGISTRY DATA

*Publication **KFSH&RC Presentation ***Outside KFSH&RC Presentation

January	Malignant Spinal Cord Cases (Primary and Metastasis) All Information in the TR Database (MR Numbers Provided by Requestor)*	Ms. A. Sandridge
	Adult Non-Hodgkin's Lymphoma Cases with Recurrence Information (MR Numbers)	Dr. A. El Weshi
	Pediatric Chronic Myeloid Leukemia and Myelodysplas- tic Syndrome Cases (1975-present) (MR Numbers)*	Dr. A. Baothman
February	Pediatric Malignant Brain Tumor Cases (1999) (MR Numbers)	Dr. A. Kofide
	Lymphoma and Leukemia Cases (Pediatrics vs Adults) with Age at Diagnosis, Sex, Date of Diagnosis, Histology and Vital Status as of Last Contact Date (1997-1998) (MR Numbers)	Dr. S. Brown
	Pediatric Hepatic Cancer Cases (1993-present) (MR Numbers)*	Dr. R. Sathiapalan
March	Breast Cancer Cases (Western Region vs Southern Region vs Total KSA) (1994-1998)	Dr. E. Ibrahim
	Subsequent Primary Malignancies (2 nd , 3 rd , 4 th Primary vs Total Malignancies) (1994-1998)	Dr. A. Ezzat
April	Pediatric Acute Lymphoid Leukemia and Acute Myeloid Leukemia Cases with Date of Diagnosis (1999) (MR Numbers)	Dr. H. El-Solh
	Pediatric Malignant Brain Tumors by Year with Graph and by Histology (1994-1998)	Dr. A. Kofide
	Cancer Cases by Site and Sex (Pediatrics vs Total Cases) (1998)	Ministry of Health
May	Nasopharyngeal Cancer Cases with Age at Diagnosis, Sex, Region, Date of Diagnosis, Histology and Stage of Disease (1990-1999) (MR Numbers)	Dr. N. Al Rajhi
	Mediastinal Non-Hodgkin's Lymphoma Cases (1980-1999) (MR Numbers)	Dr. N. Al Rajhi
	Adult Bone Lymphoma Cases (1980-present) (MR Numbers)	Dr. M. El Foudeh
	Pediatric Acute Lymphoblastic Leukemia Cases by Year (1975-present) (Update of Previous Request)	Dr. A. Al Nasser
	Malignant Gestational Trophoblastic Neoplasm Cases (1985-present) (MR Numbers)*	Dr. I. Kerr
	PNET/Ewing's Sarcoma Cases of the Chest Wall and Ribs (1989-present) (MR Numbers)	Dr. M. Rahal
June	Adult Multiple Primary Cancer Cases with Site, Histology and Date of Diagnosis (1975-1998) (MR Numbers)	Dr. A. Belal
	Nasopharyngeal Cancer Cases (1985-1998) (MR Numbers)	Dr. M. Memon

Appendix A (cont'd)

July	Transitional Cell Carcinoma Cases of the Urinary Bladder with Ta, Tis, T1, N0, M0 (1992-1999) (MR Numbers)	Dr. S. Bazarbashi
	Adult Rhabdomyosarcoma Cases (1990-present) (MR Numbers)	Dr. M. Rahal
	Osteosarcoma Cases (<14 yrs old vs 14-24 yrs old; Non-metastatic vs Metastatic) (1998-1999)	Dr. I. Fawaz
	Soft Tissue Sarcoma Cases with Lung Metastasis (1995-present) (MR Numbers)	Dr. M. S. El Din
August	Pediatric Cancer Cases Referred from Jeddah, Makkah and Taif (1994-present) (MR Numbers)	Dr. G. Al Harbi
	Pediatric Cancer Cases by Histology, Sex and Age Group (1999)	Dr. J. Pritchard
September	Pediatric Cancer Cases by Year with Histology and Vital Status as of Last Contact Date (1996-present) (MR Numbers)	Dr. A. Kofide
	Extra-skeletal Ewing's Sarcoma/PNET Cases (1975-1000) (MR Numbers)	Dr. M. Memon
	Gastric MALT Lymphoma, All MALT Lymphoma and Mediastinal Lymphoma Cases (1975-1999) (MR Numbers)	Dr. D. Ajarim
	Optic Glioma Cases (1980-1995) (MR Numbers)	Dr. Y. Khafaga
October	Retinoblastoma Cases (1994-1999) (MR Numbers)**	Dr. A. Kofide
	Cancer Cases by Year (Western Region vs Total KSA) (1995-1999)	Dr. E. Ibrahim
	Thyroid Cancer Cases Treated with External Beam Irradiation (1980-1999) (MR Numbers)**	Dr. A. El Enbaby
	Inflammatory Breast Cancer Cases (1990-1999) (MR Numbers)	Dr. M. Baslaim
	Pediatric Medulloblastoma Cases with Age at Diagnosis (1994-present) (MR Numbers)	Dr. A. Kofide
November	Bilateral Breast Cancer Cases (1975-1998) (MR Numbers)	Dr. G. El Husseiny

IV. GLOSSARY OF TERMS

Accessioned: Patients are entered into the Tumor Registry by the year in which they were first seen at KFSH&RC for each primary cancer.

Age of Patient: Recorded in completed years at the time of diagnosis.

Analytic Cases: Cases which were first diagnosed and/or received all or part of their first course of treatment at KFSH&RC.

Non-Analytic Cases: Cases diagnosed elsewhere and received all of their first course of treatment elsewhere.

Case: A diagnosis or finished abstract. A patient who has more than one primary is reported as multiple cases.

Crude Relative Frequency: The proportion of a given cancer in relation to all cases in a clinical or pathological series.

First Course of Treatment: The initial tumor-directed treatment or series of treatments, usually initiated within four months after diagnosis.

Stage of Disease: Determined at the time of the first course of treatment.

SEER (Surveillance, Epidemiology and End Results) Summary Staging:

In Situ: Tumor meets all microscopic criteria for malignancy except invasion.

Local: Tumor is confined to organ of origin.

Regional: Tumor has spread by direct extension to immediately adjacent organs and/or lymph nodes and appears to have spread no further.

Distant: Tumor has spread beyond immediately adjacent organs or tissues by direct extension and/or has either developed secondary or metastatic tumors, metastasized to distant lymph nodes or has been determined to be systemic in origin.

AJCC (American Joint Committee on Cancer) TNM Staging: A classification scheme based on the premise that cancers of similar histology or site or origin share similar patterns of growth and extension.

T+N+M = Stage

T: Extent of primary tumor

N: Extent of regional lymph node involvement

M: Distant Metastasis

Clinical Stage: Classification based on the evidence acquired before treatment. Such evidence arises from physical examination, imaging, endoscopy, biopsy, surgical exploration and other relevant findings.

Pathologic Stage: Classification based on the evidence acquired before treatment, supplemented or modified by the additional evidence acquired from surgery and from pathologic examination of the resected specimen.

