



**COMBINED TUMOR REGISTRY ANNUAL REPORT 2003**

WITH STATISTICAL DATA FROM 2002

UNIVERSITY OF MIAMI  
SYLVESTER COMPREHENSIVE CANCER CENTER

JACKSON HEALTH SYSTEM

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## A MESSAGE FROM THE CHAIR

The combined Cancer Committee for Jackson Health System (JHS) and the University of Miami Sylvester Comprehensive Cancer Center (UM/Sylvester) continues to expand in scope in order to maintain its accreditation by the American College of Surgeons Commission on Cancer (ACoS CoC).

Due to the retirement of Martha E. Oliva, the long-standing tumor registrar and manager of the Oncology Data Center, we were granted an extension by the CoC to submit the next survey by May 2005. During this past year, in fact, another dedicated staff member—Lizette Acosta, senior administrative assistant of the Oncology Data Center—also left. However, both Sandra Hamlin and Rachel Olensky of the JHS/HIM Department ably stepped in to ensure a smooth transition.



During 2002-2003, the Cancer Committee established two important subcommittees—"Professional Development" and "Access to Resources." As a result of the former subcommittee, more nurses at Jackson Memorial Hospital and associated outpatient clinics have been certified to deliver chemotherapy than ever before. Also, a request for setting up an oncology nurses' trust fund has been established to raise funds for the education of nurses regarding general oncology care, including the delivery of chemotherapeutic agents. The Professional Development Subcommittee has achieved better, more direct communication between physicians in oncologic services and the Department of Radiology at Jackson Memorial Hospital (JMH) by ensuring no more than a one-week turnaround time for obtaining necessary CT imaging for any patient enrolled in a clinical trial approved by the University of Miami's Institutional Review Board (IRB).

Looking forward to next year, I anticipate increased participation in the Cancer Committee by all areas and staff of both medical facilities. We currently are searching for a new manager to oversee the tumor registries at JHS and UM/Sylvester. In addition, we will continue to improve compliance when assigning the appropriate TNM stage for each tumor site that is initially diagnosed at our medical centers. Finally, we will address the means of implementing the "Practicing Pathology Cancer Protocols" established by the College of American Pathologists (CAP) to more accurately stage all newly diagnosed cancer cases. The CoC has mandated these CAP protocols and our institutional adherence to them will be reviewed during the CoC survey in May 2005.

A handwritten signature in cursive script that reads "Aaron H. Wolfson, M.D.".

Aaron H. Wolfson, M.D.  
Chair, Cancer Committee

## SUMMARY OF DATA AND ACTIVITIES FOR THE YEAR 2002

The primary function of the University of Miami Sylvester Comprehensive Cancer Center tumor registry is to accurately collect essential basic data from our cancer patients. Detailed and sophisticated statistical data are then used to implement quality improvement studies for public education, clinical research, treatment evaluation, quality assessment, patient follow-up, administrative planning, in addition to a wide range of other uses. The registry follows and meets the requirements of the American College of Surgeons Commission on Cancer (ACoS CoC). UM/Sylvester was successfully evaluated and accredited by the ACoS in 1996 and 2000.

More than 19,900 cases have been accessioned in the registry database since the creation of the tumor registry in 1993. The numbers and percentages presented in this report represent 2,875 new cases in 2002—an 8% increase from the previous year. The follow-up lifetime survival data now are performed on more than 6,300 patients annually. **Figure 1, Cancer Incidence by Anatomic Site, Sex, Class of Case, and AJCC Stage**, represents the incidence of cancer by site, gender, class of case, and American Joint Commission on Cancer (AJCC) staging. The frequency of cancer at UM/Sylvester shows prostate as the top cancer site at 15.1%, breast at 9.4%, colorectal at 6.5%, hematopoietic and reticuloendothelial at 5.4%, skin at 5%, and bladder at 4.7%. These sites represent 46.1% of all new cancer cases at UM/Sylvester. Meanwhile, **Figure 1** illustrates the common sites in males and females.

**Age at Diagnosis and AJCC Staging:** The mean age at diagnosis for all patients seen at UM/Sylvester in 2002 was 59.5 years, while the median age was 61. The majority of patients seen/treated at the cancer center fell into the 60-69 age group (28%), followed by the 50-59 age group (22%), and the 70-79 age group (21%).

**Gender/Race/Ethnicity:** Male patients accounted for 58% of cases while females accounted for 42%. The patient population at UM/Sylvester is diverse and consists of patients from different ethnic and national origin backgrounds. The majority of patients were white (89%), while 9% were black and 2% were of other races. Meanwhile, 67% were non-Hispanic and 33% were Hispanic. Of the Hispanic patient population, Cubans represented the largest group with 18%, Central and South Americans with 9%, Puerto Ricans 1%, and other Hispanic 4%.

**Stage at Diagnosis:** There were 1,902 analytic cases accessioned in the tumor registry database. Stage II was the most frequent at 27%, followed by 17% with Stage IV, and 16% with Stage I. However, 17% of cases were not applicable (N/A) for staging as described in the *American Joint Committee on Cancer (AJCC) Cancer Staging Manual, Sixth Edition*.

**Initial Therapy:** Surgery (35.4%) was the most common modality of treatment, followed by surgery-chemotherapy with 7.8%, radiation with 7.6%, surgery-radiation 7.5%, other modalities of treatment 30.1%, and no treatment at 11.6%.

**Studies:** Under the direction of the Cancer Committee, the tumor registry participates in at least two patient care evaluation studies each year. A study of African-American and White breast cancer patients between 1998-2002 currently is underway.

**Data Requests:** The tumor registry received 36 research/study requests from staff physicians, administration, and outside hospital registries. Annual reports to the National Cancer Data Base (NCDB) and Florida Cancer Data System (FCDS, state registry) were submitted.

**FIGURE 1**  
**CANCER INCIDENCE BY ANATOMIC SITE, SEX, CLASS OF CASE, AND AJCC STAGE**  
**UNIVERSITY OF MIAMI SYLVESTER COMPREHENSIVE CANCER CENTER**

Site	Total		Sex		Class of Case		AJCC Stage at Initial Diagnosis						
	Number	Percent	Male	Female	Analytic	Non-analytic	0	I	II	III	IV	Unk	N/A
<b>All Sites</b>	<b>2,875</b>	<b>100.0</b>	<b>1,658</b>	<b>1,217</b>	<b>1,902</b>	<b>973</b>	<b>143</b>	<b>305</b>	<b>511</b>	<b>271</b>	<b>332</b>	<b>24</b>	<b>316</b>
<b>Head &amp; Neck</b>	<b>391</b>	<b>13.6</b>	<b>271</b>	<b>120</b>	<b>264</b>	<b>127</b>	<b>10</b>	<b>46</b>	<b>24</b>	<b>48</b>	<b>114</b>	<b>3</b>	<b>19</b>
Lip	8	0.3	5	3	3	5	0	1	0	1	0	1	0
Base of Tongue	48	1.7	39	9	34	14	1	1	3	10	17	0	2
Other & Unspecified Parts of Tongue	35	1.2	20	15	25	10	3	7	5	5	5	0	0
Gum	10	0.3	7	3	8	2	0	1	2	1	3	0	1
Floor of Mouth	26	0.9	17	9	20	6	0	7	0	4	9	0	0
Palate	6	0.2	1	5	2	4	0	0	0	1	0	0	1
Other Parts of Mouth	26	0.9	15	11	17	9	2	5	2	1	6	0	1
Parotid Gland	27	0.9	16	11	21	6	0	5	0	5	10	0	1
Other Parts of Major Salivary Glands	4	0.1	3	1	4	0	0	2	0	0	1	0	1
Tonsil	38	1.3	26	12	27	11	1	0	1	7	17	0	1
Oropharynx	8	0.3	6	2	5	3	0	0	0	0	3	0	2
Nasopharynx	10	0.3	4	6	8	2	0	1	1	1	5	0	0
Pyrimiform Sinus	12	0.4	9	3	7	5	0	0	1	1	5	0	0
Hypopharynx	16	0.6	12	4	10	6	0	0	1	2	7	0	0
Other Lip, Oral Cavity, & Pharynx	5	0.2	4	1	4	1	0	1	2	0	1	0	0
Nasal Cavity/Middle Ear	9	0.3	5	4	8	1	0	0	0	0	0	0	8
Accessory Sinuses	6	0.2	1	5	5	1	0	0	0	1	4	0	0
Larynx	97	3.4	81	16	56	41	3	15	6	8	21	2	1
<b>Digestive Organs</b>	<b>450</b>	<b>15.6</b>	<b>267</b>	<b>183</b>	<b>295</b>	<b>155</b>	<b>13</b>	<b>43</b>	<b>47</b>	<b>83</b>	<b>85</b>	<b>6</b>	<b>18</b>
Esophagus	26	0.9	16	10	21	5	0	1	5	10	4	1	0
Stomach	56	1.9	37	19	44	12	1	4	13	15	8	1	2
Small Intestine	12	0.4	7	5	10	2	0	1	2	0	2	1	4
Colon	148	5.1	85	63	57	91	7	16	6	11	16	0	1
Rectosigmoid Junction	20	0.7	13	7	10	10	0	5	0	3	2	0	0
Rectum	20	0.7	9	11	10	10	2	2	3	2	1	0	0
Anus & Anal Canal	12	0.4	5	7	9	3	1	2	3	3	0	0	0
Liver/Intrahepatic Bile Ducts	63	2.2	45	18	49	14	0	2	1	22	18	1	5
Gallbladder	10	0.3	8	2	9	1	0	1	0	4	3	0	1
Other & Unspecified Parts of Biliary Tract	19	0.7	10	9	17	2	1	2	4	3	7	0	0
Pancreas	62	2.2	30	32	58	4	1	7	10	10	24	2	4
Other & Ill-Defined Digestive	2	0.1	2	0	1	1	0	0	0	0	0	0	1
<b>Respiratory &amp; Intrathoracic Organs</b>	<b>132</b>	<b>4.6</b>	<b>74</b>	<b>58</b>	<b>84</b>	<b>48</b>	<b>0</b>	<b>21</b>	<b>6</b>	<b>13</b>	<b>34</b>	<b>0</b>	<b>10</b>
Thymus	1	0.0	0	1	1	0	0	0	0	0	0	0	1
Bronchus & Lung	124	4.3	70	54	78	46	0	21	6	13	33	0	5
Heart, Mediastum, & Pleura	6	0.2	3	3	4	2	0	0	0	0	1	0	3
Trachea	1	0.0	1	0	1	0	0	0	0	0	0	0	1
<b>Bones, Joints, &amp; Articular Cartilage</b>	<b>20</b>	<b>0.7</b>	<b>11</b>	<b>9</b>	<b>17</b>	<b>3</b>	<b>0</b>	<b>4</b>	<b>5</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>5</b>
Bones, Joints, & Articular Cartilage of Limbs	12	0.4	8	4	10	2	0	2	5	0	0	0	3
Bones, Joints, & Articular Cartilage of Other	8	0.3	3	5	7	1	0	2	0	1	1	1	2
<b>Hematopoietic &amp; Reticuloendothelial</b>	<b>155</b>	<b>5.4</b>	<b>80</b>	<b>75</b>	<b>78</b>	<b>77</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>78</b>
Acute Leukemia (1)	3	0.1	1	2	0	3	0	0	0	0	0	0	0
Acute Lymphocytic Leukemia	8	0.3	4	4	4	4	0	0	0	0	0	0	4
Acute Myeloid Leukemia (1)	31	1.1	17	14	25	6	0	0	0	0	0	0	25
Chronic Lymphocytic Leukemia	30	1.0	17	13	4	26	0	0	0	0	0	0	4
Chronic Myeloid Leukemia	11	0.4	6	5	9	2	0	0	0	0	0	0	9
Myeloid Leukemia (1)	2	0.1	1	1	2	0	0	0	0	0	0	0	2
Other Leukemia	3	0.1	1	2	1	2	0	0	0	0	0	0	1
Other Myeloid Leukemia (1)	5	0.2	1	4	2	3	0	0	0	0	0	0	2

1 NOS (Not otherwise specified) 2 Includes cancer in situ 3 Includes benign tumor 4 Excludes extra-nodal lymphomas

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FIGURE 1 — CONTINUED

CANCER INCIDENCE BY ANATOMIC SITE, SEX, CLASS OF CASE, AND AJCC STAGE  
UNIVERSITY OF MIAMI SYLVESTER COMPREHENSIVE CANCER CENTER

Site	Total		Sex		Class of Case		AJCC Stage at Initial Diagnosis						
	Number	Percent	Male	Female	Analytic	Non-analytic	0	I	II	III	IV	Unk	N/A
Multiple Myeloma	43	1.5	21	22	18	25	0	0	0	0	0	0	18
Myelodysplastic Syndrome (1)	14	0.5	8	6	10	4	0	0	0	0	0	0	10
Plasmacytoma (1)	2	0.1	1	1	2	0	0	0	0	0	0	0	2
Waldenstrom's Macroglobulinemia	3	0.1	2	1	1	2	0	0	0	0	0	0	1
<b>Skin</b>	<b>142</b>	<b>5.0</b>	<b>90</b>	<b>52</b>	<b>85</b>	<b>57</b>	<b>15</b>	<b>29</b>	<b>12</b>	<b>11</b>	<b>3</b>	<b>2</b>	<b>13</b>
Malignant Melanoma	117	4.1	75	42	67	50	15	27	9	7	3	2	4
Merkel Cell Carcinoma	4	0.1	1	3	4	0	0	2	0	0	0	0	2
Dermatofibrosarcoma	2	0.1	0	2	2	0	0	0	0	0	0	0	2
Kaposi Sarcoma	2	0.1	2	0	1	1	0	0	0	0	0	0	1
Cutaneous T-Cell Lymphoma	2	0.1	0	2	0	2	0	0	0	0	0	0	0
Other	15	0.5	12	3	11	4	0	0	3	4	0	0	4
<b>Peripheral Nerves, Connective, Subcutaneous, &amp; Soft Tissue</b>	<b>57</b>	<b>2.0</b>	<b>31</b>	<b>26</b>	<b>39</b>	<b>18</b>	<b>0</b>	<b>5</b>	<b>9</b>	<b>11</b>	<b>4</b>	<b>2</b>	<b>8</b>
Peripheral Nerves & Autonomic Nervous System	1	0.0	1	0	0	1	0	0	0	0	0	0	0
Retroperitoneum & Peritoneum	8	0.3	5	3	5	3	0	0	1	3	0	0	1
Connective, Subcutaneous, & Other Soft Tissue	48	1.7	25	23	34	14	0	5	8	8	4	2	7
<b>Breast</b>	<b>269</b>	<b>9.4</b>	<b>2</b>	<b>267</b>	<b>175</b>	<b>94</b>	<b>42</b>	<b>52</b>	<b>54</b>	<b>17</b>	<b>8</b>	<b>2</b>	<b>0</b>
<b>Female Genital Organs</b>	<b>181</b>	<b>6.3</b>	<b>0</b>	<b>181</b>	<b>129</b>	<b>52</b>	<b>41</b>	<b>40</b>	<b>10</b>	<b>10</b>	<b>20</b>	<b>1</b>	<b>7</b>
Cervix Uteri (2)	66	2.3	0	66	56	10	29	15	2	3	5	1	1
Corpus Uteri	38	1.3	0	38	27	11	0	16	3	2	4	0	2
Uterus (1)	5	0.2	0	5	0	5	0	0	0	0	0	0	0
Vulva	21	0.7	0	21	17	4	11	2	4	0	0	0	0
Vagina	1	0.0	0	1	1	0	1	0	0	0	0	0	0
Ovary	46	1.6	0	46	26	20	0	6	1	5	11	0	3
Other Female Genital	4	0.1	0	4	2	2	0	1	0	0	0	0	1
<b>Male Genital Organs</b>	<b>464</b>	<b>16.1</b>	<b>464</b>	<b>0</b>	<b>335</b>	<b>129</b>	<b>5</b>	<b>7</b>	<b>278</b>	<b>18</b>	<b>22</b>	<b>1</b>	<b>4</b>
Prostate Gland	434	15.1	434	0	316	118	2	0	275	16	20	1	2
Testes	20	0.7	20	0	11	9	0	7	1	1	0	0	2
Penis	10	0.3	10	0	8	2	3	0	2	1	2	0	0
<b>Urinary Organs</b>	<b>230</b>	<b>8.0</b>	<b>173</b>	<b>57</b>	<b>134</b>	<b>96</b>	<b>17</b>	<b>32</b>	<b>34</b>	<b>20</b>	<b>29</b>	<b>0</b>	<b>2</b>
Kidney	80	2.8	50	30	52	28	0	18	12	5	15	0	2
Renal Pelvis	9	0.3	5	4	7	2	0	2	1	2	2	0	0
Ureter	3	0.1	2	1	2	1	1	1	0	0	0	0	0
Bladder	135	4.7	113	22	71	64	16	10	21	13	11	0	0
Other Urinary	3	0.1	3	0	2	1	0	1	0	0	1	0	0
<b>Eye &amp; Adnexa (3)</b>	<b>77</b>	<b>2.7</b>	<b>39</b>	<b>38</b>	<b>71</b>	<b>6</b>	<b>0</b>	<b>14</b>	<b>25</b>	<b>15</b>	<b>3</b>	<b>1</b>	<b>13</b>
<b>Central Nervous System</b>	<b>92</b>	<b>3.2</b>	<b>50</b>	<b>42</b>	<b>61</b>	<b>31</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>59</b>
Meninges (3)	10	0.3	4	6	6	4	0	0	0	0	0	0	6
Brain (3)	76	2.6	43	33	52	24	0	0	0	0	0	2	50
Other Central Nervous System	6	0.2	3	3	3	3	0	0	0	0	0	0	3
<b>Endocrine Glands</b>	<b>85</b>	<b>3.0</b>	<b>32</b>	<b>53</b>	<b>59</b>	<b>26</b>	<b>0</b>	<b>12</b>	<b>5</b>	<b>20</b>	<b>5</b>	<b>1</b>	<b>16</b>
Thyroid	64	2.2	18	46	45	19	0	12	5	20	5	1	2
Adrenal	5	0.2	4	1	4	1	0	0	0	0	0	0	4
Other Endocrine	16	0.6	10	6	10	6	0	0	0	0	0	0	10
<b>Lymphomas (4)</b>	<b>105</b>	<b>3.6</b>	<b>57</b>	<b>48</b>	<b>54</b>	<b>51</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>4</b>	<b>4</b>	<b>2</b>	<b>42</b>
Hodgkin's Disease	15	0.5	8	7	5	10	0	0	0	0	0	0	5
Non-Hodgkin's Lymphoma	64	2.2	33	31	41	23	0	0	2	4	2	2	31
Malignant Lymphomas (1) or Diffuse	19	0.7	9	10	5	14	0	0	0	0	2	0	3
Mature T-and NK-Cell Lymphoma	7	0.2	7	0	3	4	0	0	0	0	0	0	3
<b>Unknown Primary Site</b>	<b>25</b>	<b>0.9</b>	<b>17</b>	<b>8</b>	<b>22</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>22</b>

1 NOS (Not otherwise specified) 2 Includes cancer in situ 3 Includes benign tumor 4 Excludes extra-nodal lymphomas

## SUMMARY OF DATA AND ACTIVITIES FOR THE YEAR 2002

The data collected at Jackson Memorial Hospital (JMH) and Jackson South Community Hospital (JSCH) are based on inpatient and outpatient discharges for 2002, plus other multiple sources used to identify eligible cases. In 2002, the registry acquired 3,122 unduplicated cases. Of that total, 78% (2,445 cases) were analytic and 22% (677 cases) were non-analytic. Of the total 3,122 new cases, malignancies accounted for 87% and benign tumors of the endocrine, brain, and central nervous system for 13%.

Meanwhile, 54% (1,690) of these cases were female, while 46% (1,432) were male. Furthermore, 77% (2,398) were white, 22% (678) were black, and 1% (46) other. Fifty-five percent (1,701) were non-Hispanic, 45% (1,418) were Hispanic, while only three cases were classified as unknown ethnicity.

The distribution of age at the time of diagnosis demonstrates that the majority of patients were between the ages of 50-59 (24.9%), followed by the 60-69 age group (21.1%), the 40-49 age group (19.1%), the 30-39 age group (12%), the 70-79 age group (10.9%), the 20-29 age group (7.9%), the 80-89 age group (3.5%), and 90 years old and above (0.2%).

Among the five major cancer sites in the Jackson Health System (JHS) tumor registry, breast continued to be the most common cancer with 12.2%, followed by brain/central nervous system including benign (7.8%), colorectal (7.5%), lung (6.9%), and prostate (6.2%).

Analysis of initial therapy showed that 44.7% of patients received surgical treatment, 8.3% received chemotherapy, 8% received a combination of surgery and chemotherapy, 4.4% received surgery and radiotherapy, and 19.2% received a combination of modalities, while 15.4% received no treatment at all.

Our experience has shown that the patients at JHS are staged by the standards of the American Joint Committee on Cancer (AJCC). Stage 0 (*in situ*) accounts for 6%, Stage I for 15%, Stage II for 15%, Stage III for 11%, Stage IV for 18%, and unknown stage accounts for 7%. (For incidence comparison with state and national figures refer to **Figure 3, National vs. State vs. Local Analytic Top Sites.**)

The Taylor Breast Health Center saw 5,452 initial visits and 12,941 follow-up visits, for a total of 18,393 visits with a daily average of 74.

Pedro Velez, M.D., American College of Surgeons liaison and medical director for the Taylor Breast Health Center, supervises the tumor registry and ensures accurate and timely abstracting, staging, and follow-up reporting as required by the standards. Monthly re-abstracting of some cases is performed by the registry's manager. For the year 2002, the tumor registry staff responded with 46 individual sets of data to fulfill requests from the medical staff and hospital administration.

The tumor registry serves as support to the multidisciplinary, weekly Cancer Conferences or Tumor Board. In 2003, there were 48 presentations and 95 cases discussed. These conferences are not only educational in nature, they provide multidisciplinary input into the treatment of individual patients. Two studies of patient care evaluation for prostate and hepatocellular cancer were completed and submitted to the National Cancer Data Base (NCDB) in 2003.

**FIGURE 2**  
**CANCER INCIDENCE BY ANATOMIC SITE, CLASS OF CASE, AND AJCC STAGE**  
**JACKSON HEALTH SYSTEM**

Site	Total		Class of Case		AJCC Stage at Initial Diagnosis						
	Number	Percent	Analytic	Non-Analytic	In Situ	I	II	III	IV	Unk	N/A
<b>All Sites</b>	<b>3,122</b>	<b>100</b>	<b>2,445</b>	<b>677</b>	<b>135</b>	<b>378</b>	<b>359</b>	<b>262</b>	<b>435</b>	<b>194</b>	<b>682</b>
<b>Head &amp; Neck</b>	<b>250</b>	<b>8.0</b>	<b>190</b>	<b>60</b>	<b>1</b>	<b>26</b>	<b>23</b>	<b>27</b>	<b>68</b>	<b>13</b>	<b>32</b>
Lip	8	0.2	7	1	1	4	0	1	0	1	0
Base of Tongue	16	0.5	13	3	0	1	1	0	9	1	1
Gum	9	0.3	9	0	0	3	1	3	1	0	1
Floor of Mouth	18	0.5	15	3	0	0	4	6	4	1	0
Palate	10	0.3	9	1	0	2	1	2	1	1	2
Other Parts of Mouth	16	0.5	12	4	0	1	3	0	5	2	1
Parotid Gland	31	1.0	24	7	0	3	2	2	3	3	11
Tonsil	23	1.0	17	6	0	1	1	1	13	0	1
Oropharynx	2	0.0	1	1	0	0	0	0	1	0	0
Nasopharynx	12	0.3	11	1	0	0	0	0	4	1	6
Pyriiform sinus	6	0.1	3	3	0	0	0	0	3	0	0
Hypopharynx	2	0.0	2	0	0	1	0	1	0	0	0
Nasal Cavity/Middle Ear	7	0.2	7	0	0	0	0	0	0	0	7
Accessory Sinuses	4	0.0	4	0	0	1	0	0	2	0	1
Larynx	65	2.1	40	25	0	6	4	11	16	3	0
Other Head & Neck	21	1.0	16	5	0	3	6	0	6	0	1
<b>Digestive Organs</b>	<b>562</b>	<b>18.0</b>	<b>445</b>	<b>117</b>	<b>2</b>	<b>65</b>	<b>60</b>	<b>80</b>	<b>122</b>	<b>63</b>	<b>53</b>
Esophagus	28	1.1	23	5	0	3	4	3	3	9	1
Stomach	72	2.3	62	10	0	12	4	9	14	13	10
Small Intestine	19	0.6	17	2	0	1	2	2	2	0	10
Colon	160	5.1	101	59	0	21	18	20	30	5	7
Rectosigmoid Junction	38	1.2	25	13	0	3	5	4	10	1	2
Rectum	37	1.2	29	8	0	1	7	4	12	3	2
Anus & Anal Canal	14	0.4	9	5	1	1	5	0	0	1	1
Liver/Intrahepatic Bile Ducts	63	2.0	58	5	0	9	1	14	11	12	11
Gallbladder	16	0.5	15	1	0	1	1	2	6	4	1
Pancreas	77	2.4	72	5	0	8	8	15	24	9	8
Other Digestive	38	1.2	34	4	1	5	5	7	10	6	0
<b>Respiratory &amp; Intrathoracic Organs</b>	<b>231</b>	<b>7.4</b>	<b>193</b>	<b>38</b>	<b>0</b>	<b>35</b>	<b>13</b>	<b>18</b>	<b>88</b>	<b>21</b>	<b>18</b>
Thymus	8	0.2	8	0	0	2	0	0	0	0	6
Bronchus & Lung	211	6.9	175	36	0	33	11	18	86	20	7
Heart, Mediastinum & Pleura	11	0.3	9	2	0	0	2	0	2	1	4
Trachea	1	0.0	1	0	0	0	0	0	0	0	1
<b>Bone</b>	<b>35</b>	<b>1.1</b>	<b>30</b>	<b>5</b>	<b>0</b>	<b>5</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>10</b>	<b>11</b>
<b>Connective Tissue</b>	<b>44</b>	<b>1.4</b>	<b>35</b>	<b>9</b>	<b>0</b>	<b>7</b>	<b>6</b>	<b>4</b>	<b>7</b>	<b>2</b>	<b>9</b>
<b>Hematopoietic &amp; Reticuloendothelial</b>	<b>91</b>	<b>2.5</b>	<b>46</b>	<b>45</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>46</b>
Acute Myeloid Leukemia (1)	15	0.5	10	5	0	0	0	0	0	0	10
Acute Myelomonocytic Leukemia	6	0.1	6	0	0	0	0	0	0	0	6
Acute Promyelocytic Leukemia	4	0.0	3	1	0	0	0	0	0	0	3
Chronic B-cell Lymphocytic Leukemia	10	0.3	2	8	0	0	0	0	0	0	2
Chronic Myeloid Leukemia	3	0.0	1	2	0	0	0	0	0	0	1

1 NOS (Not otherwise specified) 2 Includes cancer in situ 3 Includes benign tumor 4 Excludes extra-nodal lymphomas

continued on next page

FIGURE 2 — CONTINUED  
 CANCER INCIDENCE BY ANATOMIC SITE, CLASS OF CASE, AND AJCC STAGE  
 JACKSON HEALTH SYSTEM

Site	Total		Class of Case		AJCC Stage at Initial Diagnosis						
	Number	Percent	Analytic	Non-Analytic	In Situ	I	II	III	IV	Unk	N/A
Leukemia (1)	5	0.0	1	4	0	0	0	0	0	0	1
Precursor Cell Lymphoblastic Leukemia	13	0.5	9	4	0	0	0	0	0	0	9
Multiple Myeloma	28	1.1	10	18	0	0	0	0	0	0	10
Myelodysplastic Syndrome (1)	2	0.0	1	1	0	0	0	0	0	0	1
Plasmacytoma	1	0.0	1	0	0	0	0	0	0	0	1
Other Blood	4	0.0	2	2	0	0	0	0	0	0	2
<b>Skin</b>	<b>84</b>	<b>2.5</b>	<b>47</b>	<b>37</b>	<b>2</b>	<b>11</b>	<b>6</b>	<b>7</b>	<b>3</b>	<b>3</b>	<b>15</b>
Malignant Melanoma	52	1.7	23	29	2	10	4	3	1	3	0
Kaposi's Sarcoma	11	0.3	8	3	0	0	0	0	0	0	8
Lymphoma	3	0.0	1	2	0	0	0	0	0	0	1
Squamous Cell Carcinoma	11	0.3	8	3	0	0	2	4	2	0	0
Other	7	0.2	7	0	0	1	0	0	0	0	6
<b>Peripheral Nerves</b>	<b>7</b>	<b>0.2</b>	<b>6</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>5</b>
<b>Peritoneum &amp; Retroperitoneum</b>	<b>13</b>	<b>0.4</b>	<b>11</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>3</b>	<b>1</b>	<b>1</b>	<b>4</b>
<b>Breast</b>	<b>381</b>	<b>12.2</b>	<b>294</b>	<b>87</b>	<b>40</b>	<b>45</b>	<b>93</b>	<b>52</b>	<b>25</b>	<b>29</b>	<b>10</b>
<b>Female Genital Organs</b>	<b>412</b>	<b>13.2</b>	<b>369</b>	<b>43</b>	<b>80</b>	<b>97</b>	<b>21</b>	<b>33</b>	<b>40</b>	<b>20</b>	<b>78</b>
Cervix Uteri (2)	169	5.4	149	20	61	37	13	18	13	7	0
Corpus Uteri	80	2.6	72	8	1	49	4	10	3	1	4
Uterus, (1)	5	0.0	2	3	0	0	0	0	1	0	1
Vagina	2	0.0	2	0	2	0	0	0	0	0	0
Vulva	24	1.0	24	0	16	4	3	0	0	1	0
Ovary	114	3.7	104	10	0	7	1	5	23	11	57
Other Female Genital (includes Placenta)	18	0.5	16	2	0	0	0	0	0	0	16
<b>Male Genital Organs</b>	<b>224</b>	<b>7.2</b>	<b>148</b>	<b>76</b>	<b>4</b>	<b>9</b>	<b>85</b>	<b>7</b>	<b>28</b>	<b>13</b>	<b>2</b>
Prostate Gland	196	6.2	130	66	0	4	83	2	28	12	1
Other Male Genital	28	1.0	18	10	4	5	2	5	0	1	1
<b>Urinary Organs</b>	<b>210</b>	<b>6.7</b>	<b>149</b>	<b>61</b>	<b>6</b>	<b>53</b>	<b>29</b>	<b>21</b>	<b>28</b>	<b>8</b>	<b>4</b>
Bladder	92	3.0	50	42	6	10	12	8	10	4	0
Kidney	111	3.5	93	18	0	41	14	12	18	4	4
Other Urinary	7	0.2	6	1	0	2	3	1	0	0	0
<b>Eye &amp; Adnexae</b>	<b>16</b>	<b>0.5</b>	<b>10</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>8</b>
<b>Central Nervous System</b>	<b>243</b>	<b>7.8</b>	<b>217</b>	<b>26</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>217</b>
Brain (3)	112	3.6	98	14	0	0	0	0	0	0	98
Meninges (3)	72	2.3	65	7	0	0	0	0	0	0	65
Other Central Nervous System	59	1.9	54	5	0	0	0	0	0	0	54
<b>Endocrine Glands</b>	<b>176</b>	<b>5.7</b>	<b>145</b>	<b>31</b>	<b>0</b>	<b>21</b>	<b>8</b>	<b>6</b>	<b>0</b>	<b>3</b>	<b>107</b>
Thyroid	59	1.9	45	14	0	21	8	6	0	3	7
Other Endocrine	117	3.8	100	17	0	0	0	0	0	0	100
<b>Lymphomas (4)</b>	<b>74</b>	<b>2.3</b>	<b>47</b>	<b>27</b>	<b>0</b>	<b>2</b>	<b>8</b>	<b>4</b>	<b>23</b>	<b>10</b>	<b>0</b>
Hodgkin's Disease	19	0.5	12	7	0	0	4	1	2	5	0
Non-Hodgkin's Lymphoma	55	1.8	35	20	0	2	4	3	21	5	0
Other Ill-defined Sites	2	0.0	1	1	0	0	0	0	0	0	1
<b>Unknown Primary Site</b>	<b>67</b>	<b>2.2</b>	<b>62</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>62</b>

1 NOS (Not otherwise specified) 2 Includes cancer in situ 3 Includes benign tumor 4 Excludes extra-nodal lymphomas

# JACKSON HEALTH SYSTEM, UM/SYLVESTER, BASCOM PALMER EYE INSTITUTE

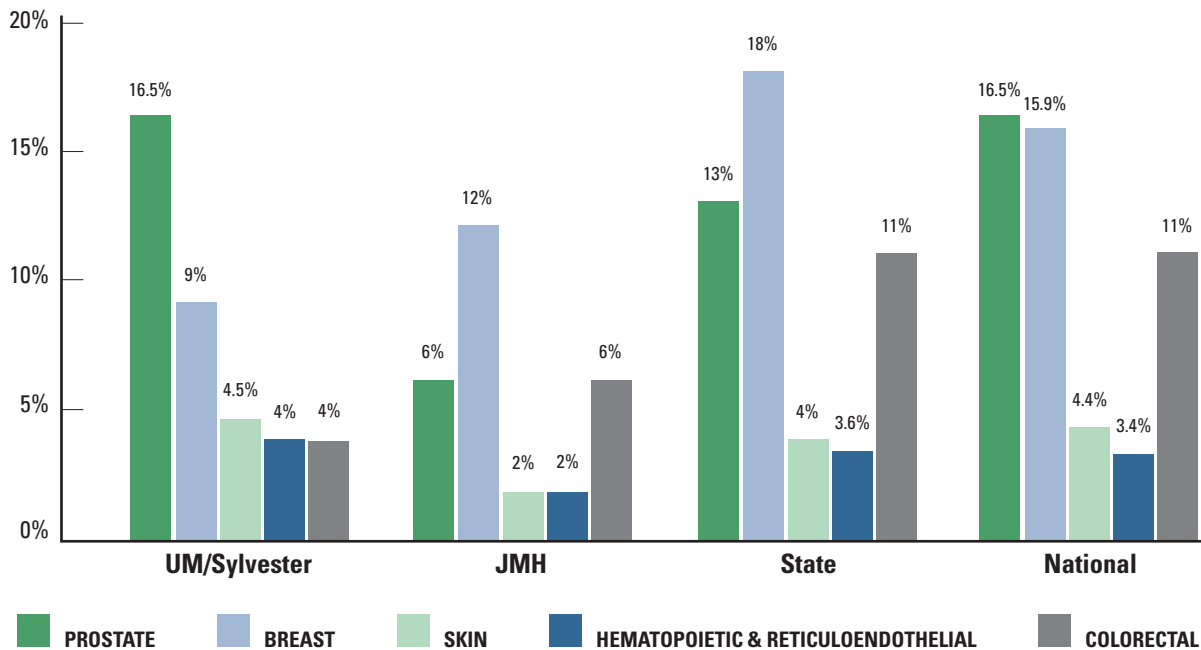
## SUMMARY OF DATA AND ACTIVITIES FOR THE YEAR 2002

As *Figure 4, Cancer Incidence by Anatomic Site, Sex, Class of Case, and AJCC Stage* on the next page indicates, the combined tumor registry data from Jackson Health System (JHS), UM/Sylvester, and the Bascom Palmer Eye Institute revealed 5,726 unduplicated cases for the year 2002. Of this total, 72.3% were analytic (initial diagnosis and/or treatment at one of our medical facilities) while 27.7% were non-analytic (diagnosed and/or primarily treated at an outside institution). Cancers involving the digestive tract were the most common type of cancer (16.3%) with colon cancer leading the way. The second most common were cancers of the male genital organs (11.5%) with prostate cancer being the most prevalent. Breast cancer was the third most common cancer (11.2%), while cancers of the head and neck and female genital organs (10% for each) were tied at fourth place.

Of the total number of cancer cases, there was a nearly equal split between males (51.3%) and females (48.7%). However, the greatest disparity was seen in malignant lesions of the head and neck with males (68.4%) outnumbering females (31.6%) by more than 30%. There also was a larger number of males with cancer of the stomach (67.8%) than females (32.2%).

Of the analytic cases that had an appropriate assigning of the stage of disease at diagnosis, the most frequent (58.7%) were either non-invasive or Stage I/II cancers versus 41.3% for Stage III/IV cancers. However, one cancer site that still requires attention at both JHS and UM/Sylvester is cancer of the uterine cervix, which was the second most common type of invasive cancer of the female genital organs (excluding the non-invasive subtype "0"), which is higher than the national level. With the implementation of Pap smears for earlier detection of cervical lesions for women in their reproductive years, invasive cervical cancer now is the third most common invasive female malignant tumor at the national level. In other words, there is a need for increased community outreach on the part of JHS and UM/Sylvester in order to increase voluntary participation of at-risk women in screening programs that may ultimately decrease mortality rates through earlier detection of this disease.

**FIGURE 3**  
NATIONAL VS. STATE VS. LOCAL ANALYTIC TOP SITES



**FIGURE 4**  
**CANCER INCIDENCE BY ANATOMIC SITE, SEX, CLASS OF CASE, AND AJCC STAGE**  
**JACKSON HEALTH SYSTEM, UM/SYLVESTER, BASCOM PALMER EYE INSTITUTE**

Site	Total		Sex		Class of Case		AJCC Stage at Initial Diagnosis						
	Number	Percent	Male	Female	Analytic	Non-analytic	0	I	II	III	IV	Unk	N/A
<b>All Sites</b>	<b>5,834</b>	<b>100</b>	<b>3,008</b>	<b>2,826</b>	<b>4,214</b>	<b>1,620</b>	<b>287</b>	<b>643</b>	<b>819</b>	<b>493</b>	<b>722</b>	<b>197</b>	<b>1,053</b>
<b>Head &amp; Neck</b>	<b>600</b>	<b>10.0</b>	<b>412</b>	<b>188</b>	<b>422</b>	<b>178</b>	<b>11</b>	<b>67</b>	<b>41</b>	<b>71</b>	<b>165</b>	<b>14</b>	<b>53</b>
Lip	14	0.2	9	5	10	4	1	5	0	2	0	2	0
Base of Tongue	61	1.0	49	12	44	17	1	2	4	10	23	1	3
Other & Unspecified Parts of Tongue	50	0.9	30	20	37	13	3	12	10	4	8	0	0
Gum	18	0.3	11	7	16	2	0	4	2	4	4	0	2
Floor of Mouth	35	0.6	24	11	27	8	0	6	3	8	9	1	0
Palate	15	0.3	5	10	11	4	0	2	1	3	1	1	3
Other Parts of Mouth	36	0.6	24	12	24	12	2	4	5	1	8	2	2
Parotid Gland (3)	61	1.1	35	26	46	15	0	8	2	7	13	2	14
Other Parts of Major Salivary Glands (3)	9	0.2	7	2	8	1	0	2	0	0	2	0	4
Tonsil	59	1.0	38	21	42	17	1	1	2	8	29	0	1
Oropharynx	10	0.2	8	2	6	4	0	0	0	0	4	0	2
Nasopharynx	21	0.4	9	12	19	2	0	1	1	2	9	0	6
Pyriiform Sinus	14	0.2	11	3	8	6	0	0	1	1	6	0	0
Hypopharynx	17	0.3	13	4	11	6	0	1	1	2	7	0	0
Other Lip, Oral Cavity, & Pharynx	6	0.1	4	2	4	2	0	1	1	0	2	0	0
Nasal Cavity/Middle Ear	14	0.2	7	7	13	1	0	0	0	0	0	0	13
Accessory Sinuses	10	0.2	2	8	9	1	0	1	0	1	6	0	1
Larynx	150	2.6	126	24	87	63	3	17	8	18	34	5	2
<b>Digestive Organs</b>	<b>954</b>	<b>16.0</b>	<b>561</b>	<b>393</b>	<b>690</b>	<b>264</b>	<b>17</b>	<b>101</b>	<b>97</b>	<b>144</b>	<b>201</b>	<b>62</b>	<b>68</b>
Esophagus	52	0.9	37	15	42	10	0	3	9	14	8	7	1
Stomach (3)	117	2.0	79	38	98	19	1	14	12	24	22	12	13
Small Intestine	23	0.4	13	10	20	3	0	1	3	2	3	0	11
Colon	308	5.3	163	145	160	148	8	40	24	29	47	5	7
Rectosigmoid Junction	55	0.9	36	19	32	23	0	6	5	6	12	1	2
Rectum	58	1.0	28	30	39	19	2	3	10	6	13	3	2
Anus & Anal Canal	25	0.4	13	12	18	7	3	3	8	3	0	0	1
Liver/Intrahepatic Bile Ducts	125	2.1	92	33	106	19	0	11	2	30	30	16	17
Gallbladder	24	0.4	12	12	23	1	0	2	1	5	9	4	2
Other/Unspecified Parts of Biliary Tract	45	0.8	22	23	42	3	2	5	6	7	15	7	0
Pancreas (3)	116	2.0	62	54	108	8	1	12	17	18	42	7	11
Other & Ill-Defined Digestive	6	0.1	4	2	2	4	0	1	0	0	0	0	1
<b>Respiratory &amp; Intrathoracic Organs</b>	<b>348</b>	<b>5.0</b>	<b>213</b>	<b>135</b>	<b>265</b>	<b>83</b>	<b>0</b>	<b>47</b>	<b>16</b>	<b>28</b>	<b>122</b>	<b>20</b>	<b>32</b>
Thymus (3)	10	0.2	4	6	10	0	0	2	0	0	0	0	8
Bronchus & Lung	318	5.5	196	122	240	78	0	45	14	28	119	19	15
Heart, Mediastinum, and Pleura	18	0.3	12	6	13	5	0	0	2	0	3	1	7
Trachea	2	0.0	1	1	2	0	0	0	0	0	0	0	2
<b>Bones, Joints, &amp; Articular Cartilage</b>	<b>53</b>	<b>0.9</b>	<b>31</b>	<b>22</b>	<b>45</b>	<b>8</b>	<b>0</b>	<b>9</b>	<b>7</b>	<b>1</b>	<b>3</b>	<b>11</b>	<b>14</b>
Bones, Joints, & Articular Cartilage of Limbs	30	0.5	18	12	24	6	0	3	5	0	1	8	7

1 NOS (Not otherwise specified) 2 Includes cancer in situ 3 Includes benign tumor 4 Excludes extra-nodal lymphomas

continued on next page

FIGURE 4 — CONTINUED

CANCER INCIDENCE BY ANATOMIC SITE, SEX, CLASS OF CASE, AND AJCC STAGE  
 JACKSON HEALTH SYSTEM, UM/SYLVESTER, BASCOM PALMER EYE INSTITUTE

Site	Total		Sex		Class of Case		AJCC Stage at Initial Diagnosis						
	Number	Percent	Male	Female	Analytic	Non-analytic	0	I	II	III	IV	Unk	N/A
Bones, Joints, & Articular Cartilage of Other	23	0.4	13	10	21	2	0	6	2	1	2	3	7
<b>Hematopoietic &amp; Reticuloendothelial</b>	<b>258</b>	<b>4.4</b>	<b>139</b>	<b>119</b>	<b>137</b>	<b>121</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>136</b>
<b>Skin</b>	<b>221</b>	<b>3.8</b>	<b>142</b>	<b>79</b>	<b>130</b>	<b>91</b>	<b>19</b>	<b>40</b>	<b>14</b>	<b>16</b>	<b>4</b>	<b>4</b>	<b>33</b>
<b>Peripheral Nerves, Connective, Subcutaneous, &amp; Soft Tissue</b>	<b>113</b>	<b>1.9</b>	<b>63</b>	<b>50</b>	<b>85</b>	<b>28</b>	<b>0</b>	<b>11</b>	<b>16</b>	<b>16</b>	<b>12</b>	<b>3</b>	<b>27</b>
Peripheral Nerves & Autonomic Nervous System (3)	8	0.1	4	4	6	2	0	0	0	0	0	0	6
Retroperitoneum & Peritoneum	18	0.3	8	10	14	4	0	0	3	4	1	0	6
Connective, Subcutaneous, & Other Soft Tissue	87	1.5	51	36	65	22	0	11	13	12	11	3	15
<b>Breast</b>	<b>648</b>	<b>11.1</b>	<b>8</b>	<b>640</b>	<b>468</b>	<b>180</b>	<b>85</b>	<b>96</b>	<b>143</b>	<b>67</b>	<b>35</b>	<b>31</b>	<b>11</b>
<b>Female Genital Organs</b>	<b>576</b>	<b>9.0</b>	<b>0</b>	<b>576</b>	<b>486</b>	<b>90</b>	<b>121</b>	<b>119</b>	<b>34</b>	<b>41</b>	<b>56</b>	<b>13</b>	<b>102</b>
Cervix Uteri (2)	230	3.9	0	230	201	29	91	42	20	21	17	9	1
Corpus Uteri	104	1.8	0	104	88	16	1	57	7	10	6	1	6
Uterus	9	0.2	0	9	2	7	0	0	0	0	1	0	1
Vulva	44	0.8	0	44	39	5	27	6	5	0	0	0	1
Vagina	2	0.0	0	2	2	0	2	0	0	0	0	0	0
Ovary (3)	164	2.8	0	164	136	28	0	14	2	10	32	3	75
Other Female Genital	7	0.1	0	7	3	4	0	0	0	0	0	0	3
Placenta (3)	16	0.3	0	16	15	1	0	0	0	0	0	0	15
<b>Male Genital Organs</b>	<b>672</b>	<b>11.6</b>	<b>672</b>	<b>0</b>	<b>462</b>	<b>210</b>	<b>9</b>	<b>17</b>	<b>339</b>	<b>22</b>	<b>52</b>	<b>14</b>	<b>9</b>
Prostate Gland	616	10.6	616	0	426	190	2	5	335	15	50	13	6
Testes	39	0.7	39	0	23	16	0	12	2	6	0	1	2
Penis	16	0.3	16	0	12	4	7	0	2	1	2	0	0
Other Male Genital	1	0.0	1	0	1	0	0	0	0	0	0	0	1
<b>Urinary Organs</b>	<b>421</b>	<b>7.0</b>	<b>302</b>	<b>119</b>	<b>270</b>	<b>151</b>	<b>25</b>	<b>86</b>	<b>57</b>	<b>39</b>	<b>50</b>	<b>9</b>	<b>4</b>
Kidney	183	3.1	110	73	139	44	0	62	23	17	28	5	4
Renal Pelvis	13	0.2	7	6	11	2	1	4	2	2	2	0	0
Ureter	6	0.1	4	2	5	1	1	3	0	1	0	0	0
Bladder	213	3.7	175	38	111	102	23	16	30	19	19	4	0
Other Urinary	6	0.1	6	0	4	2	0	1	2	0	1	0	0
<b>Eye &amp; Adnexa</b>	<b>135</b>	<b>2.3</b>	<b>73</b>	<b>62</b>	<b>115</b>	<b>20</b>	<b>0</b>	<b>17</b>	<b>32</b>	<b>17</b>	<b>4</b>	<b>8</b>	<b>37</b>
<b>Central Nervous System</b>	<b>313</b>	<b>5.0</b>	<b>138</b>	<b>175</b>	<b>257</b>	<b>56</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>255</b>
Meninges (3)	81	1.4	23	58	71	10	0	0	0	0	0	0	71
Brain (3)	167	2.9	88	79	130	37	0	0	0	0	0	0	130
Other Central Nervous System (3)	65	1.1	27	38	56	9	0	2	0	0	0	0	54
<b>Endocrine Glands</b>	<b>253</b>	<b>4.0</b>	<b>93</b>	<b>160</b>	<b>197</b>	<b>56</b>	<b>0</b>	<b>29</b>	<b>14</b>	<b>24</b>	<b>5</b>	<b>2</b>	<b>123</b>
Thyroid Gland (3)	121	2.1	33	88	87	34	0	29	13	24	5	2	14
Adrenal Gland (3)	34	0.6	20	14	31	3	0	0	1	0	0	0	30
Other Endocrine (3)	98	1.7	40	58	79	19	0	0	0	0	0	0	79
<b>Lymphomas (4)</b>	<b>177</b>	<b>3.0</b>	<b>103</b>	<b>74</b>	<b>103</b>	<b>74</b>	<b>0</b>	<b>1</b>	<b>9</b>	<b>7</b>	<b>13</b>	<b>5</b>	<b>68</b>
<b>Other III-Defined Sites</b>	<b>1</b>	<b>0.0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Unknown Primary Site</b>	<b>91</b>	<b>1.6</b>	<b>58</b>	<b>33</b>	<b>82</b>	<b>9</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>81</b>

1 NOS (Not otherwise specified) 2 Includes cancer in situ 3 Includes benign tumor 4 Excludes extra-nodal lymphomas

**SITE SPECIFIC STUDY: A COMPARATIVE ANALYSIS OF  
BREAST CANCER, FAMILY HISTORY, AND RACE**

**Aaron H. Wolfson, M.D.**  
Associate Professor, Radiation Oncology  
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**B**reast cancer is the leading form of cancer in women in the United States with an estimated 211,300 new cases of invasive breast cancer and an additional 55,700 new cases of *in situ* breast cancer diagnosed in 2003, according to *Cancer Facts and Figures* and based upon SEER data.

At least 5% or more of all female breast cancer cases are inherited. The majority of these occur because of a mutation in the BRCA1 or the BRCA2 genes, which are suppressor genes that are responsible for cell growth, cell division, and DNA repair. Other genes also may be responsible for the development of breast cancer, but this has not been substantiated. Studies have shown that patients with mutated or defective BRCA1 or BRCA2 genes have a much higher risk of eventually developing breast cancer than patients with normal genes. Individuals with a parent who has either a mutated BRCA1 or BRCA2 gene stand a 50% chance of inheriting that gene mutation and consequently are at much greater risk of eventually developing breast cancer. Overall, both cancer incidence and mortality is higher among African-Americans than whites nationally.

This report presents a summary of patients who presented for the first time with newly diagnosed breast cancer at UM/Sylvester and Jackson Memorial Hospital between 1998-2002. Of this group, 1,454 patients were white (73%), while the remaining 527 patients (27%) were African-American. Of these, 33.4% had a positive family history of breast cancer. Among both the white and African-American patients combined, the highest rate of incidence of breast cancer in a family member occurred in the mother (15%), followed by sister (12%), or maternal aunt (9%).

BRCA testing through the use of DNA sequencing is a highly controversial way of determining if an individual is at greater risk of developing breast cancer. The test identifies the mutated BRCA1 or BRCA2 gene in a patient with breast cancer. Family members are then tested to determine if they have inherited the mutated gene.

Patients who are identified through DNA sequencing to carry the mutated BRCA gene may wish to be monitored more closely by their physicians through the use of diagnostic testing such as mammography, CA-125, and physical examinations. Treatment options for patients with a diagnosis of breast cancer include surgery, radiation therapy, chemotherapy, or hormone therapy, alone or in combination.

Other risk factors for developing breast cancer are increased age, biopsy-confirmed atypical hyperplasia or increased breast density, prolonged menstrual history (early and/or late menarche), obesity, use of postmenopausal estrogen, alcohol consumption, and a high fat diet. Also, women who have never had children or who have their first child after 30 years of age are at greater risk of developing breast cancer.

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## GLOSSARY

**Analytic Case**—Diagnosed and/or received all or part of the first course of treatment at this institution.

**Non-Analytic Case**—Diagnosed and received the entire initial course of treatment prior to the first contact with this institution.

### **AJCC (TNM) Staging:**

The TNM staging system (Stage 0-IV) is a shorthand notation for describing the anatomic extent of malignant neoplasm:

**T**—Tumor growth represents the size or extent of the primary tumor.

**N**—The absence or presence and extent of the regional lymph node metastasis.

**M**—The absence or presence of distant metastasis.

Once T, N, and M have been classified, this information can be used to assign the stage of the tumor. Staging is a method of grouping cases with similar characteristics:

**Stage 0**—Carcinoma *in situ*

**Stage 1**—Localized carcinoma

**Stage II**—Limited local extension and/or limited regional lymph node spread

**Stage III**—More extensive local or regional lymph node spread

**Stage IV**—Distant spread

### **General Summary Stage:**

***In situ***—A tumor that fulfills all of the microscopic criteria for malignancy, except invasion.

**Localized**—A tumor that appears to be entirely confined to the organ of origin.

**Regional**—A tumor that has spread beyond the organ of origin into: 1) surrounding organs or tissues by direct extension; 2) regional lymph nodes; or 3) a combination of 1 and 2, but appears to have spread no further.

**Distant**—A tumor that has spread to parts of the body that are distant from the primary tumor.

**Unknown/Not Recorded**—Stage is considered unknown when it cannot be determined from the medical record or when information is insufficient to stage properly.

**SEER**—Surveillance, Epidemiology, and End Results program. A cancer incidence and survival reporting system of the National Cancer Institute (NCI).

## REFERENCES

AJCC Cancer Staging Manual, Sixth Edition, 2002, New York: Springer

## ABBREVIATIONS

ACS—American Cancer Society

ACoS—American College of Surgeons

ACoS CoC—American College of Surgeons Commission on Cancer

AJCC—American Joint Committee on Cancer

BPEI—Bascom Palmer Eye Institute

BRCA1—breast cancer 1

BRCA2—breast cancer 2

CAP—College of American Pathologists

CoC—Commission on Cancer

FCDS—Florida Cancer Data System (state registry)

IRB—Institutional Review Board

JHS—Jackson Health System

JHS/HIM—Jackson Health System/Health Information Management

JMH—Jackson Memorial Hospital

JSCH—Jackson South Community Hospital

NCDB—National Cancer Data Base

NCI—National Cancer Institute

UM/Sylvester—University of Miami Sylvester Comprehensive Cancer Center



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