# 2018

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# CANCER ANNUAL REPORT

Baptist Health Cancer Program







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# **MESSAGE FROM LEADERSHIP**

It is our pleasure to present the annual report for Baptist Health Cancer Program. This report represents a summary of our program's activities and data as an American College of Surgeons' Commission on Cancer accredited program. We are proud of the collective effort and improvements in our program and look forward to sharing them with you in this report.

Our program remains focused on serving patients in Central Alabama with a commitment to delivering highquality, multidisciplinary, patient centered cancer care in our community. A few accomplishments this year include:

- Baptist Health Cancer Program is committed to making the best medical oncology therapies available to our patients. Many of those therapeutic medications are available in oral form rather than an intravenous form. We continued to expand our MCC Apothecary Retail Pharmacy and Specialty Pharmacy operations to bring high-quality engagement and remote monitoring of patient's compliance and clinical management. Our patients have more treatment options and we are challenging ourselves to provide patient management monitoring and care in different ways as well.
- Continued commitment to offering advanced technology and comprehensive imaging services to patients in Central Alabama. Carmichael Imaging Center installed new state of the art 3.0T Magnetic Resonance Imaging equipment. This new equipment offers improved diagnostic capabilities and patient comfort.
- Financial toxicity is described by the National Cancer Institute as problems a cancer patient has related to the cost of their treatments and cancer is one of the most expensive medical conditions to treat. Baptist Health Cancer Program believes our responsibility is to provide care for the whole patient including financial advocacy. We invested in dedicated resources with expertise in financial advocacy for patients and present each treatment patient with a financial care plan tailored specifically to each patient and their unique circumstances. Our goal is to reduce barriers to care created by financial burdens.
- Our commitment to early identification and treatment of lung cancer continues to expand with over 650 low dose computed tomography (LDCT) lung cancer screenings performed this year. This screening program uses LDCT for a defined at-risk population of patients to find lung cancer earlier. Early detection of lung cancer, often before symptoms begin, helps expand optimal treatments options and decrease mortality.

We are thankful for our patients and our community's support of our program. We are proud of our program's growth and strategic lead we continue to take in the delivery of oncology care in the River Region. If you have any questions regarding this report, please call (334) 273-7000 or visit www.montgomerycancercenter.com to learn more.

Scott McDaniel, MD Cancer Committee Chair Laura Hamilton Cancer Program Manager Susan Reed Cancer Program Administrator

# CANCER COMMITTEE

Cancer Committee is a multidisciplinary team of representatives from multiple physician specialties, nursing, administration, quality, and cancer registry. Cancer Committee meets regularly to review and evaluate the quality and direction of the cancer program and make recommendations for improvement using American College of Surgeons' Commission on Cancer guidelines. The committee's overall goal is to strive for cancer care program excellence in prevention, early detection, diagnosis, and treatment of cancer based on the framework of the standards of American College of Surgeons' Commission on Cancer surgeons' Commission on Cancer.

Scott McDaniel, MD	Medical Oncology, Chair
Naresh Bellam, MD	Medical Oncology, Cancer Liaison Physician
Pat Rucker, MD	Diagnostic Radiologist
Walter Bell, MD	Pathologist
John Mark Vermillion, MD	Surgeon
Lee Franklin, MD	Radiation Oncologist
Anna Maria Affan, MD	Palliative Care
Susan Reed, CPA, MBA	Cancer Program Administrator
Laura Hamilton, RN, BSN	Cancer Program Manager
Jennifer Bratz, MA,BSHAS, RHIA	Quality Management
Jeni Huggins, RN, BSN, OCN	Research Coordinator
Tammy Inge-Bowdoin, CPC	Cancer Conference Coordinator
John Reardon, MD	Community Outreach Coordinator
Alta Gipson, LBSW	Psychosocial Services Coordinator
Judy Smith, CTR	Registry Quality Coordinator
Chad Brown, CTR	Certified Tumor Registrar
Genger Gallup, RN, BSN, OCN	Oncology Nurse
Brad Talley, RN, BSN	Oncology Nurse
Pam Strickland, MD	Breast Surgery
Kertrisa McWhite, MD	Breast Surgery
Jeannie Mann	American Cancer Society
Carrie Webb, Pharm D	Pharmacist
Rebecca Goff, Clinical Pastor	Pastoral Care
Tommy Patterson, RT, (R)	Oncology Imaging
Mark Sexton, RN, BMCS, DON	BMCS Nursing Administration
Ali Pritchett, RD	Registered Dietician
Will Thames, OT	Rehabilitative Services

# **CANCER REGISTRY**

The cancer registry collects data on all cancer patients who are diagnosed and/or treated at each of the Baptist Health facilities, including Baptist Medical Center South, Baptist Medical Center East, and Prattville Baptist Hospital. Data collected by the cancer registry is used to support cancer program development, quality improvement, and outcomes analysis. Cancer registry data is also used to monitor compliance with national evidence-based clinical practice guidelines endorsed by the American College of Surgeons' Commission on Cancer. Specially trained Certified Tumor Registrars capture a summary of each cancer case in the cancer registry database including clinical diagnostic and therapeutic data, which is also reported to the central Alabama Statewide Cancer Registry and to the National Cancer Data Base.

# MULTIDISCIPLINARY CANCER CONFERENCES

Baptist Health Cancer Program holds weekly multidisciplinary cancer conferences with key physicians, practitioners, and care team members actively participating in treatment planning discussions. Medical oncologists, surgeons, radiologists, radiation oncologists, and pathologists examine clinical, radiologic, and pathologic factors specific to each case and consider treatment options. This conference allows cancer care specialists to share expertise and discuss evidence-based guidelines to recommend treatment options for each case reviewed. Nursing, administrative, and ancillary staff attend for educational purposes.

In 2017, 47 cancer conferences were held with 235 patient cases presented for multidisciplinary discussion. 95% of cases presented were prospective presentations, discussing diagnosis, treatment, or follow-up care. The following table gives a summary of the cases presented.

SITE	CASES
	PRESENTED
Oral Cavity, Pharynx	13
Digestive System	36
Respiratory System	40
Bone	2
Soft Tissue	11
Skin	10
Breast	44
Female Genital System	8
Male Genital System	13
Urinary System	13
Eye Orbit	1
Brain, Other Nervous System	7
Endocrine	1
Lymphoma	26
Myeloma	5
Leukemia	2
Miscellaneous	3
Total for all sites	235

# CANCER PROGRAM REPORT MCC INVESTS IN QUALITY CARE FOR PATIENTS ON ORAL CHEMOTHERAPY



achieving the best treatment outcomes. Successful home dosing management requires taking medication as prescribed, careful monitoring for adverse effects, and storing and handling medication according to instructions. Unfortunately, oral chemotherapy at home tends to shift this burden to the patient; however, the independence created for the patient and family usually outweighs this burden.

The leadership of the Baptist Health Cancer Program strongly believes in active engagement of the clinical team during treatment. The gold standard model of care centers on a multidisciplinary approach to dispensing medications and monitoring safety and adherence. With this in mind, a patient centered care program for oral chemotherapy management was established as a goal for the cancer program. Outpatient pharmacy services were recently expanded to include an oncology Patient Management Program (PMP) at the MCC Apothecary. Through the PMP, patients receive ongoing follow up care by a care team which includes a pharmacist, registered nurse, and a pharmacy technician. The PMP is based on patient centered care standards established by the Utilization Review Accreditation Commission (URAC) and the Accreditation Commission for Health Care (ACHC). MCC Apothecary used these standards to guide best practices for coordination of care, communication, education, patient rights and responsibilities, measurement of customer satisfaction, adherence to drug safety protocols, and meeting rigorous performance measures for accuracy and turnaround time of dispensed prescriptions.

Upon beginning a new treatment regimen, each patient meets face-to-face for 60-90 minutes with a professional oncology nurse trained in oral chemotherapeutics. The oncology nurse is able to assess health literacy, provide appropriate education, and assess understanding. Patients on oral chemotherapy also receive a 7-day follow up call by the pharmacist and calls at 3- and 6-months in the care plan. During monitoring, a pharmacy technician reviews hospitalizations, changes in health care status, and medication adherence. Problems are escalated to the pharmacist for development of a care plan. A specialty pharmacy software platform facilitates coordination of care providing drug interaction, compliance, and toxicity monitoring.

Oral chemotherapy assuredly offers improved quality of life for many patients and families. Baptist Health and Montgomery Cancer Center have established an excellent oral chemotherapy dispensing and monitoring program, thus providing state of the art patient support and compassionate care in the comfort of home.

A growing menu of oral chemotherapy options is the latest game changer in convenient oncology care. By reducing time in the clinic, oral chemotherapies improve quality of life and reduce care burden while prolonging survival. Though oral medications are well received by patients and doctors alike, there are clinical challenges regarding oral chemotherapeutics including patient safety and adherence. Adherence to the prescribed therapeutic regimen is critical to



# **CANCER PROGRAM REPORT**

#### **CARMICHAEL IMAGING UPGRADES MRI TECHNOLOGY**



Baptist Health is excited to announce the installation of new 3T MRI technology in its outpatient imaging center, Carmichael Imaging. This multi-million dollar investment in the magnetic resonance imaging (MRI) suite represents Baptist Health's continued commitment to offer advanced technology and comprehensive imaging services to patients in Central Alabama. The renovated MRI suite opened July 2018, offering improved patient comfort and diagnostic capability.

Magnetic resonance imaging uses radio waves and magnetic fields to create detailed internal images of organs, tissue and skeletal systems to help physicians diagnose a variety of medical conditions. The GE Discovery MRI 750W 3T technology doubles the magnet strength of traditional 1.5 Tesla MRI units, providing higher-resolution images and

reduced scan times. Overall, patients are offered improved comfort with a larger 70cm wide bore, brighter lighting, softer cushioning, and faster scan times.

#### **REFRESH FOR FINANCIAL ADVOCACY PROGRAM**

In a state with the 6th highest poverty rate in the United States, Baptist Health and Montgomery Cancer Center serve an economically vulnerable population. Thus, financial advocacy for patients is a central focus for the cancer program. This year, the Cancer Committee chose the financial advocacy program for a quality improvement focus. The process improvement focused on early patient engagement, improved patient and staff understanding, and timely, transparent communication among clinic providers. The goal was to prevent delays in care due to lack of financial clearance, which can compromise clinic efficiencies and increase stress on patients.

Early engagement by the patient results in immediate awareness of advocacy efforts undertaken on his/her behalf to assist with the



financial implications of therapy, creating an opportunity to decrease financial stress. At this early contact, patients are given team member contact information who are available to field financial questions before treatment begins. The financial advocate and social worker engage with patients about their needs and assemble a financial care plan tailored specifically to the patient. Each plan will include patient-specific mix of elements including insurances, drug replacement programs, charity care, co-pay assistance programs, foundations, and/or transportation support.

Social worker involvement with the charity care application process was redesigned to include preliminary patient assessment and follow up. The social worker explains the application process step-by-step, helping the patient understand what financial documents are required to have their application processed. By improving patient understanding and monitoring process completion, the social worker helps prevent delays in therapy related to approval of charity care.

Finally, up-to-date electronically available documentation of the strategy and approval status for each element of the patient's care plan is critical. Pharmaceutical-company-sponsored drug replacement programs for indigent patients are critical to charity care programs, often making access to state of the art medications possible. However, compliance with requirements for patient assistance programs must be carefully coordinated with pharmacy, nursing, and financial advocates. To prevent delays, financial clearance for treatment requires timely communication between the treatment authorization team, social workers, nurses, physicians, pharmacy staff, billing staff, and administration. This process has been restructured and streamlined.

The financial advocacy program goal is to successfully and dependably protect both the patient and the facility. By adding structure to the communication process, the approval process became more transparent. Comprehensive, up-to-date documentation has increased clinic efficiencies and improved patient engagement. Financial Advocates and clinical staff report improved satisfaction with communication within the clinic, and patients have expressed greater understanding of the Montgomery Cancer Center's commitment to both protecting patients financially and providing quality care to our community.

In 2018, the financial advocacy team helped hundreds of patients obtain access to cancer care. To assist patients with practical financial needs, Montgomery Cancer Center employs a team of financial advocates, including three full time financial counselors, two full time social workers, and an independent contracted company to help eligible patients enroll in government sponsored programs. Additionally, on behalf of patients, a team of six business office staff work with insurance payers to manage pre-certifications and treatment authorizations required for diagnostic testing and treatments.

To support patients with infusion care, financial counselors connected more than 385 eligible patients with co-pay assistance or grant programs as well as more than 140 eligible patients to assistance programs sponsored by pharmaceutical companies. More than 165 patients were assisted with enrollment in government-sponsored programs including Medicaid and Social Security Disability. Further, Baptist Health assisted other eligible patients in obtaining access to charitable financial assistance for cancer care.

In addition, Montgomery Cancer Center works closely with organizations like the American Cancer Society and the Cancer Wellness Foundation of Central Alabama. The Cancer Wellness Foundation of Central Alabama helped more than 840 cancer patients in central Alabama with \$9.8 million in financial support for medications, co-pays, and transportation. Moreover, Montgomery Cancer Center was awarded a \$5,000 transportation grant from the American Cancer Society to help cancer patients from Pike, Bullock, and Butler counties who have limited access to public transportation systems.



# **COMMUNITY OUTREACH**

### **RAISING AWARENESS ABOUT HEREDITARY CANCERS**

In the battle against cancer, one of the most rapidly growing areas is that of cancer genetics. The field of cancer genetics has implications for prevention, management and treatment of cancer. Raising general awareness about genetics resources available to high risk individuals has been an outreach focus for the Baptist Health Cancer Program. A known genetic predisposition to cancer allows individuals to consider risk-reduction strategies for themselves and their family members.

The US Preventative Services Task Force recommends that primary care providers screen women who have family members with breast, ovarian, tubal, or peritoneal cancer to identify a family history that may be associated with an increased risk for potentially harmful mutations in breast cancer susceptibility genes (BRCA1 or BRCA2). Women with positive screening results should receive genetic counseling and, if indicated after counseling, BRCA testing.



At community outreach events specifically directed to reducing late stage diagnosis of breast cancer, nurse navigators interviewed women about family cancer histories. At these events, face-to-face screening discussions with 82 women identified 14 women with one or more hallmarks of hereditary cancer in their personal or family cancer history. Outreach staff emphasized importance of regular screening for all women and awareness of risk factors. Participants were invited to schedule 3D mammogram at Montgomery Breast Center. Each of these women were given a completed checklist of red flags for hereditary cancer syndromes and encouraged to discuss the red flags with their primary care physician.

To further educate the community about hereditary cancers, the cancer program leaders partnered with the Joy to Life Foundation. The mission of Joy to Life is similar to the Baptist Health Cancer Program in that it promotes overall health, well-being, and education throughout the state. Specifically focused on breast cancer, Dr. John Reardon and Tina Hodge worked with Joy to Life to publish an explanatory article in the Summer 2018 Joy to Life magazine aimed at raising awareness about hereditary cancers, genetic testing, screening and potential prophylactic interventions.

With a circulation of 25,000 engaged readers each quarter, the Joy to Life Magazine distributes 10,000 printed copies of each issue, reaching mostly women (75%) in the 25-50 year old age range. Joy to Life Magazine is

> distributed to engaged readers throughout the River Region via a network of health focused venues including various Baptist Health locations, physician offices, and retail pharmacy stores. A full digital copy is also posted online. Joy to Life is the perfect education partner for building awareness about genetic counseling available for persons concerned about their family history of cancer.

In the future, precision medicine will increasingly account for individual variability in genes, environment, and lifestyle to both treat and prevent cancer. Cancer program leadership is working to build community awareness about the expanding role of genetic awareness in cancer prevention. While the majority of cancers are not due to heredity, it is estimated that 5-10% of each type of cancer may be due to an inherited predisposition. Compared to the general population, individuals with a known genetic predisposition have a higher risk of developing certain types of cancers in their lifetime, possibly at a younger age.

While only some cancers are inherited, all cancers have a genetic foundation. Genetic testing can be performed to search for changes (mutations) in genes related to specific cancer types. There are two categories of testing, somatic genetic testing and germline genetic testing. Each provides different information to patients and their doctors.

- present in that tissue and are not inherited. These acquired mutations typically occur due to factors such as aging and environmental exposures (like tobacco, ultraviolet radiation, or viruses). Acquired may help clinicians choose the best therapy.
- of the body and can pass from generation to generation.

Having a hereditary predisposition to cancer is associated with an increased risk of developing cancer over a person's lifetime. It does not mean an individual will definitely develop cancer. In fact, most cancers are not related to heredity; therefore, genetic testing is not right for everybody. Since cancer risk tends to be highest in families with a strong family history of cancer, accurately sorting out a family's cancer health history is essential in helping health care teams personalize risk reduction strategies.

Individuals can obtain a thorough risk assessment by meeting with cancer professionals like genetic counselors or physicians with special training in cancer genetics. These professionals are specially trained to determine whether genetic testing is appropriate. First, a thorough review of the patient's medical and family histories is collected to provide a better understanding of cancer history within a family. Cancer diagnosed in close relatives, is a red flag for hereditary cancer. Close relatives include parents, brothers, sisters, children, grandparents, grandchildren, aunts, uncles, nieces, and nephews. Specific red flags in these relatives include:

- Several family members with the same or related forms of cancer.
- Family members in multiple generations diagnosed with cancer.
- Early age at cancer diagnosis (usually under age 50).
- One person with multiple types of cancer, multiple primary tumors, or bilateral cancer (like cancer in both breasts).
- Pattern of tumors associated with a specific cancer syndrome (e.g. breast & ovarian or colon and uterine).
- Rare cancers or cancer in the less commonly affected sex (such as male breast cancer).
- High-risk ethnicity (e.g., Ashkenazi Jewish).

If one or more of these red flags are found in a family's health history, further genetic counseling or testing may be recommended.

• **Somatic genetic testing** is typically done on tumor tissue to identify acquired mutations that are only mutations are the most common cause of cancer. Knowing the genetic expression of a patient's cancer

• Germline genetic testing is performed to identify mutations that were inherited from a parent, typically using a blood or saliva sample. If a germline mutation is found in an individual, it is present in every cell

Testing can identify a variant, or mutation, in one of many different genes. Only a small number reveal mutations known to predispose an individual to cancer, like BRCA1 or BRCA2. Sometimes, results reveal mutations whose effect is not yet known, called a "variant of unknown significance".

#### TWO COMMON HEREDITARY CANCER SYNDROMES

Hereditary Breast Ovarian Cancer Syndrome: Inheritance of a germline mutation in the BRCA1 or BRCA2 gene results in a significant increased risk of developing breast and/or ovarian cancer in women as well as breast and prostate cancer in men. A germline mutation in one of these genes may also confer an increased risk of pancreatic cancer and melanoma in both men and women. BRCA gene mutations can be inherited from either the mother or father, and only one copy of the mutation is needed to be at risk. Hereditary nonpolyposis colorectal cancer (HNPCC) or Lynch Syndrome is a genetic condition that has a high risk of colon cancer as well as other cancers, including endometrial (second most common), ovary, stomach, small intestine, pancreas, upper urinary tract, brain, and skin.

The risks of cancers associated with hereditary syndromes can be reduced with appropriate screening and risk-reduction strategies. The National Comprehensive Cancer Network (NCCN) provides evidence-based guidelines for management of patients with genetic mutations. For example, studies have shown that women with a BRCA1 or BRCA2 mutation dramatically reduced their risk of ovarian cancer by undergoing removal of their ovaries and fallopian tubes. When a patient is found to have a genetic mutation, the medical team collaborates to determine and provide evidence-based preventative care.

#### **GENETIC INFORMATION NONDISCRIMINATION ACT (GINA)**

Genetic discrimination refers to people being treated differently because they have a gene mutation that is associated with a genetic condition. In 2008, Congress passed the Genetic Information Nondiscrimination Act (GINA) providing protection against genetic discrimination in health insurance or employment. Specifically, GINA makes it illegal for a health insurer or employer to use a genetic test result or family health history to make decisions about employment, deny insurance coverage, or decide on the cost of health insurance. It is important to note that GINA and other laws do not provide protections in obtaining other forms of insurance, such as life, disability, or long-term and short-term care insurance.



#### LUNG CANCER SCREENING

As a designated American College of Radiology lung cancer screening facility, Carmichael Imaging uses annual low-dose CT screening to detect lung cancer early in high-risk patients. In 2018, 655 patients were screened. A nurse navigator provides follow up care of patients in the lung cancer screening program and reports screening results to a national registry. Of patients screened, 58 were recommended for immediate follow up with PET (positron emission tomography), biopsy, or pulmonary consult. 8 cases were recommended for three-month follow up, and 88 cases were recommended for six-month

follow up. Using the LungRad protocol, 64 cases were identified as having more than a 15% chance of malignancy. Ultimately, three patients had malignancies diagnosed and surgically removed due to findings on the screening exam. Finding lung cancer at early and resectable stages represents success for the lung cancer screening program because these patients are expected to have better treatment outcomes.

#### SKIN CANCER PREVENTION

At Spring opening ceremonies for Montgomery American Little League Baseball season, leadership of Montgomery Cancer Center promoted skin cancer awareness and prevention. The team distributed 100 bottles of sunscreen and hand-held paper fans with illustrations on proper choice and application of sunscreen. Additionally, oncology nurses used illustrations from the American Academy of Dermatology to educate participants on the protecting skin from sun, the ABCDEs of Melanoma, how to self-examine spots on skin for potential warning signs for skin cancer and recommend making records of spots on skin to regularly track changes.



## DISTRIBUTION OF CASES **BY COUNTY**

The cancer registry accessioned 1,787 cases for Baptist Medical Center South in 2017. This number includes 1,567 analytic cases. 782 (44%) were male and 1005 (56%) were female. These patients primarily reside in Montgomery (43%), Elmore (15%) and Autauga (11%) counties. The overall distribution of patient origin is presented in the following state map.



# MOST COMMONLY TREATED CANCERS

Review of registry data shows the top three sites for our program are breast (28%), lung (16%) and colorectal (8%) cancers. These top three disease sites represent 52% of the new cancer treated by our program.

#### **BREAST CANCER STAGE AT DIAGNOSIS**



#### LUNG CANCER STAGE AT DIAGNOSIS



# 2017 CASELOAD BY DIAGNOSIS



## COLORECTAL CANCER STAGE AT DIAGNOSIS



<b>ST</b>	n	%
e 0	51	11%
e l	170	38%
e II	132	30%
e III	49	11%
e IV	39	<b>9</b> %
iown	5	1%
l	446	

G & NCHUS	n	%
e l	29	12%
e II	20	8%
e III	62	25%
e IV	128	52%
nown	7	3%
l	246	

ORECTAL	n	%
e 0	3	2%
e l	5	4%
e II	23	18%
e III	42	33%
e IV	44	34%
iown	11	<b>9</b> %
l	128	

#### GENITOURINARY CASES

Genitourinary cases have increased with the addition of urology services at the UAB Multispecialty Clinic. Male genitourinary cases (prostate, testis, penis) rose 228% from 36 in 2016 to 118 in 2017, and urinary system cancer cases (bladder, kidney, renal pelvis, and ureter) rose 27% from 60 in 2016 to 76 in 2018.



PROSTATE
URINARY BLADDER
E KIDNEY
UTERUS
OVARY
CERVIX UTERI
TESTIS
OTHER FEMALE GENITAL
EPENIS

109	44%
42	
43	17%
32	13%
19	8%
17	7%
12	5%
7	3%
6	2%
2	1%
247	
	17 12 7 6 2 247

2017 CASES BY SEX AND AGE



2017 CASES BY RACE AND AGE



## **PRIMARY SITE TABLE 2017**

	Class of Case		Ge	nder	STAGE (Analytic Cases)								
Diagnostic Site	Analytic	Non- Analytic	Male	Female	0	I	п	ш	IV	NA	UNK	Total	% Total
ORAL CAVITY, PHARYNX	24	9	25	8	0	0	2	1	20	1	0	33	1.85
Lip	0	1	0	1	0	0	0	0	0	0	0	1	0.06
Tongue	6	0	4	2	0	0	1	0	5	0	0	6	0.34
Salivary Gland	2	4	5	1	0	0	1	0	1	0	0	6	0.34
Floor of Mouth	1	1	2	0	0	0	0	0	1	0	0	2	0.11
Gum, Other Mouth	2	1	3	0	0	0	0	1	1	0	0	3	0.17
Tonsil	9	1	8	2	0	0	0	0	9	0	0	10	0.56
Nasopharynx	0	0	0	0	0	0	0	0	0	0	0	0	0.00
Oropharynx	2	0	2	0	0	0	0	0	1	1	0	2	0.11
Hypopharynx	2	1	1	2	0	0	0	0	2	0	0	3	0.17
DIGESTIVE SYSTEM	228	38	145	121	3	16	36	58	97	0	18	266	14.89
Esophagus	19	2	16	5	0	1	3	2	9	0	4	21	1.18
Stomach	20	3	13	10	0	1	3	2	11	0	3	23	1.29
Small Intestine	0	5	2	3	0	0	0	0	0	0	0	5	0.28
Colon, Rectum, Anus	128	19	80	67	3	5	23	42	44	0	11	147	8.23
Colon Excluding Rectum	88	13	61	40	3	3	12	29	36	0	5	101	5.65
Cecum	23	2	13	12	0	1	4	4	13	0	1	25	1.40
Appendix	4	0	2	2	0	0	1	0	1	0	2	4	0.22
Ascending Colon	14	2	11	5	0	1	0	7	5	0	1	16	0.90
Hepatic Flexure	1	0	1	0	0	0	0	1	0	0	0	1	0.06
Transverse Colon	9	4	9	4	0	0	2	7	0	0	0	13	0.73
Splenic Flexure	3	0	1	2	0	0	1	0	2	0	0	3	0.17
Descending Colon	6	1	3	4	1	0	1	3	1	0	0	7	0.39
Sigmoid Colon	27	3	19	11	2	1	3	7	13	0	1	30	1.68
Large Intestine, NOS	1	1	2	0	0	0	0	0	1	0	0	2	0.11
Rectosigmoid, Rectum, Anus	40	6	19	27	0	2	11	13	8	0	6	46	2.57
Rectosigmoid Junction	7	1	4	4	0	0	0	3	3	0	1	8	0.45
Rectum	22	3	14	11	0	2	8	5	4	0	3	25	1.40
Anus, Anal Canal, Anorectum	11	2	1	12	0	0	3	5	1	0	2	13	0.73
Liver, Gallbladder, Intrahep Bile Duct	16	4	10	10	0	4	1	4	7	0	0	20	1.12
Liver	9	4	8	5	0	2	0	4	3	0	0	13	0.73
Gallbladder	1	0	0	1	0	0	0	0	1	0	0	1	0.06
Intrahepatic Bile Duct	5	0	2	3	0	2	1	0	2	0	0	5	0.28
Other Biliary	1	0	0	1	0	0	0	0	1	0	0	1	0.06
Pancreas	43	5	24	24	0	5	6	7	25	0	0	48	2.69
Peritoneum, Omentum, Mesentery	2	0	0	2	0	0	0	1	1	0	0	2	0.11
RESPIRATORY SYSTEM	251	22	161	112	0	29	21	65	129	0	7	273	15.28
Nose, Nasal Cavity, Middle Ear	0	1	1	0	0	0	0	0	0	0	0	1	0.06
Larynx	5	2	5	2	0	0	1	3	1	0	0	7	0.39
Lung and Bronchus	246	19	155	110	0	29	20	62	128	0	7	265	14.83
Non-Small Cell	195	19	128	86	0	26	18	49	96	0	6	214	11.98
Small Cell	33	0	18	15	0	1	1	9	21	0	1	33	1.85
Other Lung	18	0	9	9	0	2	1	4	11	0	0	18	1.01
Trachea	0	0	0	0	0	0	0	0	0	0	0	0	0.00
Mediastinum, Other Resp.	0	0	0	0	0	0	0	0	0	0	0	0	0.00
BONES, JOINTS	1	0	0	1	0	0	0	0	1	0	0	1	0.06
SOFT TISSUE INCLUDING HEART	7	0	3	4	0	4	2	1	0	0	0	7	0.39
SKIN	24	21	25	20	2	5	2	6	5	1	3	45	2.52
Skin: Melanoma	21	20	22	19	2	5	2	6	3	0	3	41	2.29
Skin: Other Non-Epithelial	3	1	3	1	0	0	0	0	2	1	0	4	0.22
Epithelial Skin	0	0	0	0	0	0	0	0	0	0	0	0	0.00
BREAST	446	22	2	466	51	170	132	49	39	0	5	468	26.19
Female Breast	444	22	0	466	51	170	130	49	39	0	5	466	26.08
Male Breast	2	0	2	0	0	0	2	0	0	0	0	2	0.11

# PRIMARY SITE TABLE 2017

	Class	of Case	Ger	nder			STAGE	E (Analytic	Cases)				
Diagnostic Site	Analytic	Non- Analytic	Male	Female	0	I	п	ш	IV	NA	UNK	Total	% Total
FEMALE GENITAL SYSTEM	53	17	0	70	0	5	5	15	19	1	8	70	3.92
Cervix Uteri	12	3	0	15	0	2	3	3	3	0	1	15	0.84
Corpus, Uterus: NOS	19	7	0	26	0	3	0	4	6	1	5	26	1.45
Corpus Uteri	18	7	0	25	0	3	0	4	5	1	5	25	1.40
Uterus: NOS	1	0	0	1	0	0	0	0	1	0	0	1	0.06
Ovary	17	4	0	21	0	0	2	5	10	0	0	21	1.18
Vagina	1	0	0	1	0	0	0	0	0	0	1	1	0.06
Vulva	1	3	0	4	0	0	0	0	0	0	1	4	0.22
Other Female Genital Organs	3	0	0	3	0	0	0	3	0	0	0	3	0.17
MALE GENITAL SYSTEM	118	35	153	0	0	15	65	10	19	0	9	153	8.56
Prostate	109	35	144	0	0	15	63	9	19	0	3	144	8.06
Testis	7	0	7	0	0	0	2	1	0	0	4	7	0.39
Penis	2	0	2	0	0	0	0	0	0	0	2	2	0.11
URINARY SYSTEM	76	22	67	31	9	22	16	8	7	0	14	98	5.48
Urinary Bladder	43	12	40	15	9	9	13	6	4	0	2	55	3.08
Kidney	32	10	26	16	0	13	3	2	3	0	11	42	2.35
Renal Pelvis	0	0	0	0	0	0	0	0	0	0	0	0	0.00
Ureter	1	0	1	0	0	0	0	0	0	0	1	1	0.06
EYE, ORBIT	1	3	2	2	0	0	0	0	0	1	0	4	0.22
Eye, Orbit: Non-Melanoma	1	0	0	1	0	0	0	0	0	1	0	1	0.06
Eye, Orbit: Melanoma	0	3	2	1	0	0	0	0	0	0	0	3	0.17
BRAIN, OTHER NERVOUS SYSTEM	31	4	15	20	0	0	0	0	0	31	0	35	1.96
Brain: Malignant	20	0	11	9	0	0	0	0	0	20	0	20	1.12
Cranial Nerves, Other Nervous System	1	0	0	1	0	0	0	0	0	1	0	1	0.06
Brain-CNS: Benign, Borderline	10	4	4	10	0	0	0	0	0	10	0	14	0.78
ENDOCRINE SYSTEM	16	2	8	10	0	1	0	0	1	10	4	18	1.01
Thyroid	6	2	2	6	0	1	0	0	1	0	4	8	0.45
Thymus	2	0	1	1	0	0	0	0	0	2	0	2	0.11
Adrenal Gland	0	0	0	0	0	0	0	0	0	0	0	0	0.00
Endocrine: Benign, Borderline	8	0	5	3	0	0	0	0	0	8	0	8	0.45
LYMPHOMA	100	6	65	41	0	11	25	26	33	1	4	106	5.93
Hodgkin Lymphoma	16	1	10	7	0	0	5	5	6	0	0	17	0.95
Hodgkin - Nodal	16	1	10	7	0	0	5	5	6	0	0	17	0.95
Hodgkin - Extranodal	0	0	0	0	0	0	0	0	0	0	0	0	0.00
Non-Hodgkin Lymphoma	84	5	55	34	0	11	20	21	27	1	4	89	4.98
NHL - Nodal	57	2	37	22	0	3	14	20	19	0	1	59	3.30
NHL - Extranodal	27	3	18	12	0	8	6	1	8	1	3	30	1.68
MYELOMA	59	4	36	27	0	0	0	0	0	59	0	63	3.53
LEUKEMIA	55	4	37	22	0	0	0	0	0	55	0	59	3.30
Lymphocytic Leukemia	36	4	24	16	0	0	0	0	0	36	0	40	2.24
Acute Lymphocytic Leukemia	4	2	3	3	0	0	0	0	0	4	0	6	0.34
Chronic Lymphocytic Leukemia	31	2	20	13	0	0	0	0	0	31	0	33	1.85
Other Lymphocytic Leukemia	1	0	1	0	0	0	0	0	0	1	0	1	0.06
Non-Lymphocytic Leukemia	17	0	12	5	0	0	0	0	0	17	0	17	0.95
Acute Myeloid Leukemia	5	0	4	1	0	0	0	0	0	5	0	5	0.28
Acute Monocytic Leukemia	1	0	1	0	0	0	0	0	0	1	0	1	0.06
Chronic Myeloid Leukemia	11	0	7	4	0	0	0	0	0	11	0	11	0.62
Other Myeloid-Monocytic Leuken	0	0	0	0	0	0	0	0	0	0	0	0	0.00
Other Leukemia	2	0	1	1	0	0	0	0	0	2	0	2	0.11
Other Acute Leukemia	0	0	0	0	0	0	0	0	0	0	0	0	0.00
Aleukemic, Subleukemic, NOS	2	0	1	1	0	0	0	0	0	2	0	2	0.11
MESOTHELIOMA	1	0	0	1	0	0	0	0	1	0	0	1	0.06
MISCELLANEOUS	76	11	38	49	0	0	0	0	0	76	0	87	4.87
TOTALS	1567	220	782	1005	65	278	306	239	371	236	72	1787	100.00

