



ARCHBOLD

Lewis Hall Singletary Oncology Center

Annual Report 2018





In Review

2018

I am pleased to present the 2018 annual report for Archbold's Lewis Hall Singletary Oncology Center. The following pages provide a snapshot of data and activities from our Cancer Center in 2018.

This year has been particularly special for the Singletary Oncology Center—we celebrated 30 years since Archbold opened the first comprehensive cancer treatment center in the region. Over the past 30 years, the Center has offered area citizens world-class treatment in a community setting and has served well over 20,000 total patients.

For patients and their families, accreditation is an important measure of the high quality of care and commitment to excellence patients can expect from their hospital and cancer center. The Lewis Hall Singletary Oncology Center is accredited by The American College of Surgeons Commission on Cancer (CoC), a prestigious designation that only represents 30 percent of all healthcare institutions in the United States. The voluntary CoC accreditation process applies rigorous standards

to assure patients have access to the best cancer care and services. The CoC provides important metrics and tools that enable cancer centers to deliver comprehensive, high-quality, multidisciplinary, evidence-based, patient-centered care to all patients. We're very proud of our physicians and clinical staff's commitment to adhere to the rigorous CoC standards. Their dedication to excellence is reflected in the quality comprehensive cancer care that our patients have come to expect from Archbold.

Looking forward, we remain committed to providing the same high quality, compassionate care to all our patients, offering highly advanced treatment options and providing outstanding support to each patient during their cancer journey. The Lewis Hall Singletary Oncology Center truly has become a regional destination for cancer treatment. We're grateful for the support of our patients who have trusted us to care for them over the years.

Perry Mustian
President and CEO
Archbold Medical Center

2018 Cancer Committee Members

The Cancer Committee provides oversight for the Cancer Program at Archbold Memorial Hospital. Under the direction of the members of the Cancer Committee, multidisciplinary cancer conferences were held weekly. The 2018 meetings were open to Archbold medical staff members for case presentation and review. Ancillary and other professional support staff attended cancer conference meetings for diagnosis and treatment planning discussion.

Dr. Amanda May
*Chair/Medical
Oncologist*

Raven Edwards
Patient Navigator

Debbie Beeson
*Psychosocial
Services Coord/
Social Worker*

Rachel Sellars
*Psychosocial
Services Coord/
Social Worker*

Jean Phipps
*Cancer Program
Admin alternate*

Frances Turner
CTR alternate

Dr. Jakki Smith
Radiologist

Dr. Cianna Pender
Surgery

Dr. John Pham
Pathologist

Dr. Gregory Roesel
*Radiologist
alternate*

Dr. Edward Wright
*Pathologist
alternate*

Shelli Roberts
*Clinical Research
Coordinator alternate*

Jessica Burns, NP
Palliative Care

Todd Bennett
*Community
Outreach
Coordinator*

Dr. Scott Farquhar
Gastroenterologist

Mark Lowe
*Community Outreach
Coordinator alternate*

Dr. Steven Johnson
*CLP/Radiation
Oncologist*

Tiffany Woolum
*Clinical Research
Coordinator*

Dr. David Saunders
*Radiation Oncologist
alternate*

Lynn Kappel
*CTR/Cancer Registry
Quality Coordinator*

Dr. Katie Hanisee
Surgery alternate

Mary Weber
Hospice

Stephanie Dennis
*Cancer Conference
Coordinator*

Ken Brooker
*VP of Clinical Services/
Palliative Care alternate*

Yvette Thomas
QI Coordinator alternate

Paula White
Oncology Nurse

Chris Newman
Pharmacist

Shay Schie, NP
Survivorship

Barbra Crumpacker
Dietary Services

Ann Hatcher
*Oncology Nurse
alternate*

Jessica Davis
American Cancer Society

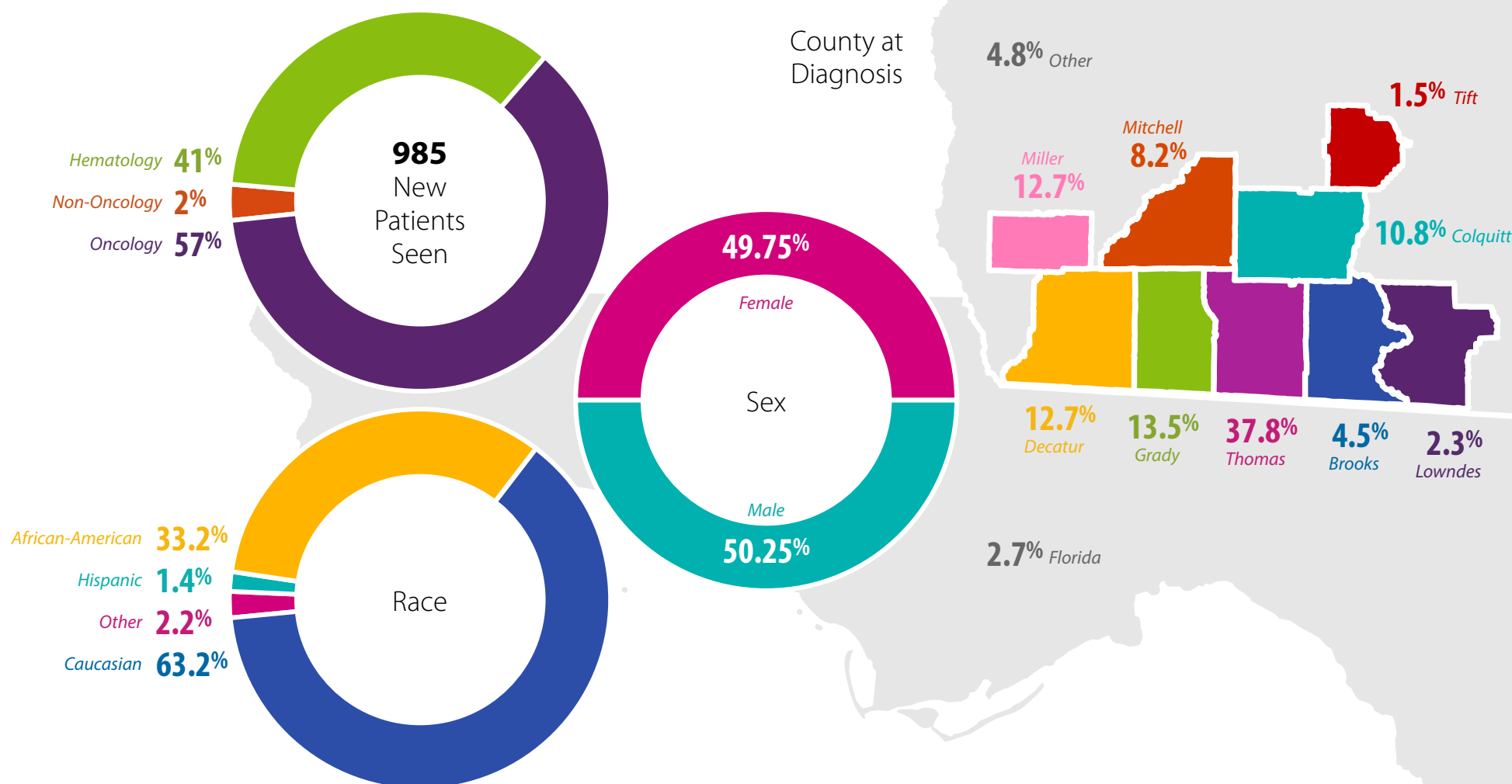
Becky Troyer
*Cancer Program
Administrator/
QI Coordinator*

Dr. Coy Irvin
Chief Medical Officer

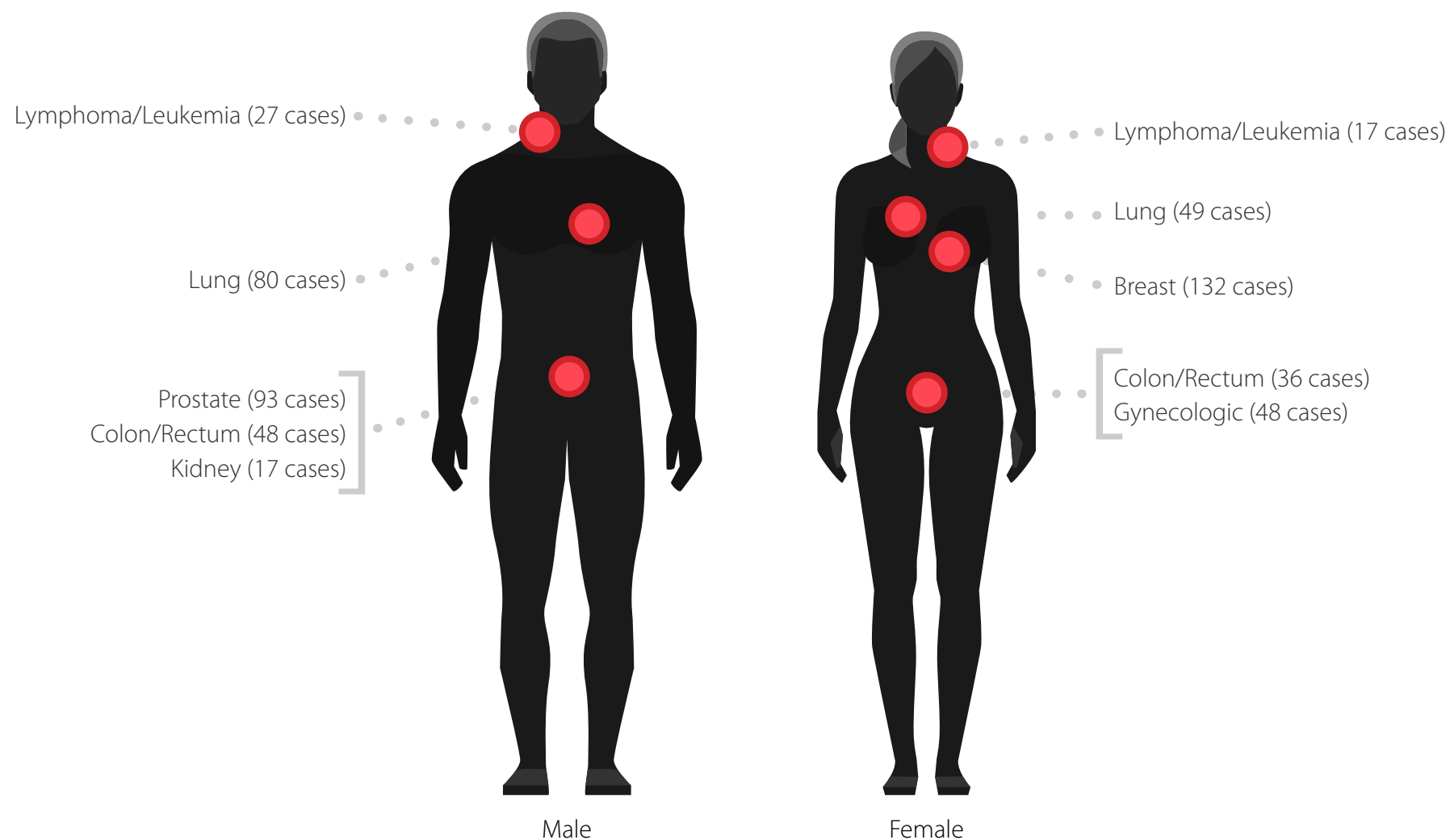
2018 Cancer Statistics

The Lewis Hall Singletary Oncology Center remained steady in the number of analytical cases for 2018.

The Tumor Registry Department reported 828 accessioned cases in 2018. *Accessioned cases are cases that require reporting to the state cancer registry based on diagnosis.*



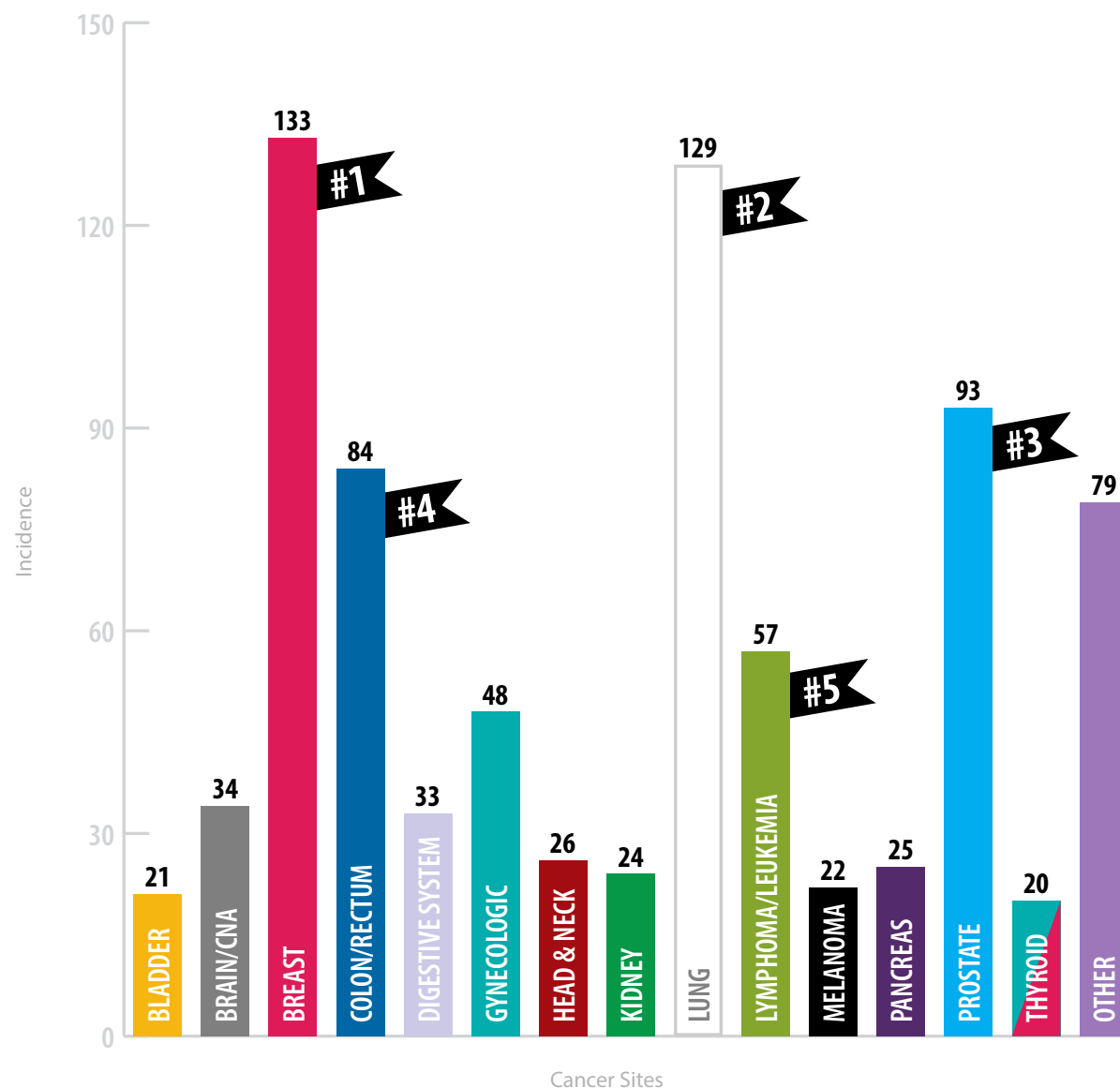
The Five **Most Common** Cancer Sites in 2018



All Cancer Sites by Incidence in 2018

Compared to 2016 statistics, breast cancer continued to hold the highest incidence among women referred to the oncology center. Prostate cancer surpassed lung cancer in 2017 as the highest incidence of cancer among men referred to the oncology center.

Key: **TOP 5 DIAGNOSES**



Singletary Oncology Center **Welcomes New Physicians**

Dr. Rohini Chintalapally earned her Bachelor of Medicine degree and Bachelor of Surgery degree from the Kasturba Medical College in Manipal, Karnataka, India. She completed a residency in internal medicine and a fellowship in hematology/oncology at the Medical College of Georgia in Augusta.



*Rohini Chintalapally, MD
Medical Oncologist/Hematologist*

Dr. Esther Tan earned her Bachelor of Science degree in biochemistry from Azusa Pacific University in Azusa, California. She earned a medical degree from the Chicago Medical School at Rosalind Franklin University of Medicine and Science in Chicago, Illinois and completed a residency at William Beaumont Army Medical Center in El Paso, Texas. She completed a fellowship in oncology and hematology at Walter Reed Army Medical Center in Washington D.C.



*Esther Tan, MD
Medical Oncologist/Hematologist*

Singletary Oncology Center Celebrates 30 Years of Cancer Care

This summer, Archbold's Lewis Hall Singletary Oncology Center marked a milestone in cancer care. The Center celebrated 30 years since Archbold opened the first comprehensive cancer treatment center in the region, a move that offered area citizens world-class treatment in a community setting.

The Thomasville-based Oncology Center was first dedicated on June 12, 1988 by Mr. and Mrs. Lewis Hall Singletary, the generous family who gave the lead gift for the building fundraising campaign, and for whom the Center was named.

By the end of year one, the Center had seen 399 registered patients and administered 4,714 radiation treatments and 643 chemotherapy treatments.

Over the past 30 years, the Center has served well over 20,000 total patients.

The Oncology Center has grown to be an important addition to Archbold. But it did not grow overnight.

Early Advancements

Shortly after opening its doors, the Oncology Center was already adding technological advancements and offering educational programs and seminars. In 1989, Archbold's surgery department acquired an ultrasound unit designed especially for prostate examinations allowing patients from the Center access to the latest technology to aid in the detection and treatment of prostate cancer.

In 1990, the Hospital Auxiliary donated a multi-passenger van allowing the center

to begin patient transportation services for patients who needed assistance getting to and from the Center for treatment.

Improving with Age and Expanded to Meet the Oncology Needs in the Region

The Lewis Hall Singletary Oncology Center marked its third anniversary in August of 1991 with more than 400 area citizens in attendance of the celebration. Not only did the gathering commemorate touching more than 1,500 lives since the center's opening, the Oncology Center received the highest and earliest eligible approval from the College's Commission on Cancer as a Comprehensive Community Cancer Center.

In the spring of 1992, the LHSOC became one of the first sites south of Atlanta to offer a revolutionary dialysis-type therapy treatment to cancer patients.

After five years of service, the Center planned for its first major expansion of services to accommodate the growth of the program. The expansion would include a larger infusion treatment

room, additional examination rooms, and a new blood drawing area. The LHSOC also began participating in national cancer research studies after being accepted into the Atlanta Center for Cancer Research and Education, providing access to experimental treatment programs for patients who otherwise would have had to travel great distance.

That same year, the Center introduced new radiation oncology treatment technology—the region's first and only high dose remote afterloader, which would allow high doses of radiation to be delivered directly to tumors in minutes rather than hours, while protecting staff and patients from unnecessary radiation exposure.

But cancer care didn't just happen behind the doors of the Oncology Center in Thomasville.

The services of the Oncology Center expanded throughout the region with the opening of clinics in neighboring communities.

The Oncology Center also began coordinating with Archbold Home





Health Services and Archbold's Hospice of Southwest Georgia to build a multi-disciplinary team that provided home delivered services for cancer patients, including nursing care, IV therapy, chemotherapy treatments, tube feedings, and dressings and wound care, as well as hospice services for terminally ill patients focusing on the quality of life.

10 Years of Service

In 1998, the Lewis Hall Singletary Oncology Center celebrated its 10th Anniversary, a milestone that marked serving almost 8,000 patients over a ten-year period.

Before heading into a new millennium, the Oncology Center brought forth another major advancement—Prostate Seed Implants, a new service to treat prostate cancer, one of the most common forms of cancer affecting men at the time.

Renovations to the Oncology Center began in the summer of 2000. The LHSOC added a new radiation vault and CT scanner, renovated the second floor,

and utilized a new computer system with an expanded patient library. The renovations were completed in February of 2002. Also that year, over 12 clinical trials were offered, along with over 40 health screenings, health fairs and education lectures.

The Year of the Gamma Knife

In January of 2003, the Leskell Gamma Knife would arrive at the Oncology Center, transforming treatment for a wide array brain cancer and benign malformations.

"The Gamma Knife has changed our entire practice," said Dr. Johnson.

The Gamma Knife team performed 19 procedures that inaugural year, and in five years over 400 patients received this advanced form of treatment.

Radiation oncologists Steven Johnson, MD, and David Saunders, MD, along with Archbold neurosurgeons Gerald Kadis, MD, and Craig Fredericks, MD, formed the original Gamma Knife physician treatment team. The original Gamma Knife team also included physicist

Ramesh Nair, PhD, and nurse Janet Collins, RN.

"The Gamma Knife has given us many new treatment options," said Dr. Kadis. "With the Gamma Knife, we can treat tumors that were formerly inoperable and impossible to reach due to their location. The technology allows us to quickly and easily treat multiple malignant tumors (brain metastasis) in one session. We can also treat many non-malignant tumors without open surgery."

Prior to Gamma Knife, treatment for many patients would have involved having the whole brain exposed to radiation, which frequently could produce unwanted cognitive changes, as well as hair loss not seen with Gamma Knife treatment.

"With Gamma Knife, multiple lesions can be treated in one visit, and quite successfully," said Dr. Kadis. "The Gamma Knife has been a revolutionary technology for transforming how we treat patients with complex intracranial pathology."

20 Years of Service and Beyond

In 2008, the Oncology Center marked two decades of service and dedication to the region. In its 20th year, the Center served over 11,500 patients and was offering nearly 40 services throughout the region.

As the celebration continued, renderings were created for a new larger Center needed to help meet the growing demand for cancer care in the South Georgia/North Florida region.

On May 12, 2009, Archbold broke ground on the new Broad Street site of the Singletary Oncology Center. In August of 2010, the new 40,000 square foot, state-of-the-art Lewis Hall Singletary Oncology Center opened its doors. Also referred to as the "New Home for Hope", the new Center boasted expanded waiting and registration areas, new patient support areas, 19 patient examination rooms, 22 infusion bays, two linear accelerators, and a designated Gamma Knife Center, all under one roof.



A Focus on Technology, Innovation and Research

In 2011 with a beautiful new building, new technological advances emerged. Archbold radiation oncologist Steve Johnson, MD, and Archbold general surgeon Ed Hall, MD, were recognized as the first in the state and the second worldwide to revolutionize surgical treatment for lung cancer using Cesium-131 mesh brachytherapy and the da Vinci Surgical Robot to treat early stage lung cancer.

In 2013, the Center celebrated a decade of Gamma Knife, and more than 1,200 benign and malignant lesions treated in approximately 750 patients from 55 counties and 10 states. The Center also provided 21,214 free screenings to 9,070 participants at 31 locations that year.

In the fall of 2015, the Center acquired the latest generation of the Gamma Knife—the Gamma Perfexion. Archbold remains the only hospital in the region with the Gamma Knife Perfexion technology.

In 2016, the cancer program recorded over 37,500 visits, including approximately 3,200 at outreach facilities in Camilla and Bainbridge alone.

Looking Towards the Future

Now in 2018, the Lewis Hall Singletary Oncology Center celebrates 30 years of

service. The Oncology Center continues to grow and evolve every year.

Dr. Steven Johnson, MD, was one of the original oncologists on staff when the Center opened. Dr. Johnson now serves as the Medical Director of Radiation Oncology at the Center.

“Whenever I think of the 30-year process, I think of the people,” said Dr. Johnson.



“The employees and the patients are so special to me. When it all began, there were only about ten staff members and two oncologists—the late Dr. Walter Morley, a medical oncologist, and myself. And now we have close to 80. But throughout the years, our oncology team has always been here to fight a hard fight, and exhaust themselves for each and every patient. Throughout the years, we’ve provided a unique team approach to cancer care to ensure our patients have access to the best oncology services and cancer fighting technology possible.”

As the Oncology Center celebrates 30 years, the Gamma Knife will make its mark, as well, celebrating 15 years in Thomasville. The Gamma Knife team has grown to include a third neurosurgeon, Brian Russell, MD, and nurse Jennifer Mathis, RN.

Becky Troyer, administrator of the Singletary Oncology Center, says the advanced treatments the Center offers

locally actually match what is available in major metropolitan areas.

“We are very current with new developments in oncology,” said Troyer. “Our physicians have a good mix of experience, and they are all well-connected to people and resources that keep us knowledgeable and up-to-date with the latest treatment advances and options that are available for our patients.”

When asked what the future holds for the Singletary Oncology Center, Troyer responded, “Rest assured we will not be stagnant. We’re looking to expand

our clinical trials research program even further, making advancements in chemotherapy and immunotherapy. And we’re looking to bring more technologically advanced equipment within the upcoming years. Our incredible staff of medical and radiation oncologists will continue to carry on a tradition of excellence, and will also add an additional medical oncologist within the next year.”

The Center now boasts seven oncologists—five specializing in medical oncology and two specializing in radiation oncology. Medical oncologists include Rohini Chintalapally, MD, Brian Gaupp, MD, Amanda May, MD, Josh Simmons, MD, and Esther Tan, MD. Radiation oncologists include Steven Johnson, MD, and David Saunders, MD.

“We’re so proud of what Archbold has accomplished over 30 years since we introduced comprehensive cancer care locally to our community. We will continue to provide the same compassionate care to all of our patients, offer the most advanced treatment options possible and the best overall support to each patient during their journey,” said Perry Mustian, Archbold President and CEO. “We’re grateful for the support of our patients who have trusted us to care for them over the years. The Lewis Hall Singletary Oncology Center truly has become a regional destination for cancer treatment.”

A Retrospective Study to Review the **Time to Treatment for Stage II Breast Cancers** Between 2008–2016 Treated in the Archbold Health System

Mary K. Hanisee, MD
General Surgeon

Reason for Study

We identified that our patients have worse outcomes for stage II breast cancer patients when compared to the National Benchmark Data. This retrospective study is to determine whether our time to treatment is reasonable and if that could be significantly affecting our stage II results.

Methods

Data collected by the registrar was reviewed for all stage II patients treated between 2008 and 2016. We looked specifically at time to treatment, including both surgery and neoadjuvant treatment, from diagnosis. Noting that we had different survival rates between our Caucasian and African American patients, we also look at the difference between time to treatment between those two groups. Findings were compared to other studies investigating similar issues.

Findings

Our average time to treatment was 30.1 days, well within the Western average. Upon literature review, there was no significant change to 5 year

survival rates to any patient's treated in less than 60 days.

In an attempt to improve the quality of our care, we wanted to look at our time to treatment in Stage II breast cancer patients, looking specially at if our time to treatment was appropriate and if this could have any correlation with our 5 year survival in the stage II breast cancer patients treatment in our health system. We were able to identify 176 stage II patients treated between 2008 and 2016. Three patients were removed from the analysis as they chose to delay their care for social or religious reasons. Our average time to any kind of treatment was 30.1 days. Noting that we had a different 5 year survival for our Caucasian and African American populations, we also inspected the differences in the time to treatment between those two groups. We found that the average time to treatment for Caucasian patients was 27.4 and 33.4 for our African American patients.

The average for Western countries average 22–46 days, so we are well within that range (2). The question then is whether we are affecting our

patient's outcomes with this time to treatment. There have been several studies looking at this question.

The United Kingdom has been frustrated that their 5-year survival rates are not on par with other developed countries. They have been working on a large initiative to improve this, and part of that has been both working on their time to definitive surgical treatment and assessing whether this is a significant factor in 5-year survival. They looked at 53,689 patients with all stages of breast cancer, excluding patients with wait times more than 62 days. Their median diagnosis to curative surgery waiting time was 22 days. They found that their older patients (>75 years), patients that lived outside of London, and those with undifferentiated tumors had a longer delay of 2-8 days. Their 5-year relative survival was 93%, and those numbers did not differ for women waiting <25 days, 25-38 days, or 39-62 days. Within 62 days of treatment, decreasing waiting times from diagnosis to surgery had no significant affect on survival time from localized breast cancer. Factors that did affect survival were living in the most deprived areas (28 % higher

excess mortality) and age with 65-74 years old having a 23% higher excess mortality. There was no significant difference in time to treatment for either the most deprived patients or the older patients (4).

Brazda et al did a retrospective review of their patients at UT Southwestern undergoing breast cancer treatment between August 2005 and December 2008 involving a multidisciplinary breast oncology program including two hospitals with different demographics. One hospital served mostly a minority, indigent population and the other a primarily Caucasian, insured population. They looked at interval to any treatment and overall survival was compared between the two groups. In a total of 1337 patients, they found the minority population had a 20 day +/- 2 days longer delay to treatment and an overall worse survival ($P=.02$). However, the survival difference did not hold true when controlled for stage, nor was time to treatment identified as an individual variable for impact on survival (1).

Similarly, a study by Mujar out of Malaysia failed to show that a delayed TPT affected overall survival on both a Univ Arianne and multivariate analysis. Their average time to primary treatment was 18 days overall, and significant factors for increased delay included ethnicity and stage at presentation (7).

Looking at a more high risk population, Eastman et al again out of UT Southwestern did a retrospective review looking specifically at triple negative disease patients. Looking at 301 patients and a 40 month follow up, the mean interval to treatment was 46 +/- 2 days. While they found higher stage did yield worse survival, time to treatment did not impact overall survival significantly, though they did note a trend towards worse survival with a delay over 90

days. The locaregional recurrence (LRR) was also evaluated and there was no impact of time to treatment to whether a LRR was seen nor time to LRR (10).

Despite not affecting overall survival, attempting to decrease time to treatment still helps patients and their families with a very anxious time. According to a study examining the quality of life across the continuum of breast cancer care, the most anxiety-producing time for patients is the waiting period for treatment initiation after diagnosis (11). In a study out of Seoul, they were able to identify several risk factors that were associated with longer delay of treatment initiation. This was calculated by date of pathological diagnosis and surgical treatment as initial therapy. They looked at 1702 patients and their median interval between diagnosis and time to treatment was 23 days, with a range of 0–134. Factors associated with delay were diagnosis at an outside hospital, medical comorbidities, and procedures performed before admission for surgery. Still, an interval between diagnosis and treatment initiation as a continuous variable or with a cutoff value of 15, 30, 45, and 60 days had no impact on disease-free survival (DFS). They also looked at subgroup populations, finding no correlation in time to treatment and DFS for patients with triple negative disease, younger age, hormone responsiveness, clinical stage, and type of initial treatment (2).

Gullatte et al wanted to pinpoint why African American women were more likely to skip breast cancer screening and more reluctant to report breast issues found on self exam via a survey. The most common patient-controlled delays were lack of education and knowledge about the seriousness of breast symptoms and about the potential benefits of early detection in improving

survival. Other factors included advancing age, low socioeconomic status, fear of diagnosis consequences of cancer treatments, and shame and embarrassment (6).

Satisfied that our time to treatment was both reasonable and unlikely to be a source of poorer 5-year survival rates, there still be improvement in our time to treatment—especially for our African American patients. Working to increase knowledge in the community and encouraging early evaluation could potentially help to lead to earlier staging in what seems, at least in our community, to be more aggressive disease..

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A Retrospective Study to Review the **Stage II Breast Cancers** Between 2008–2016 Treated in the Archbold Health System

Cianna Pender, MD
General Surgeon

Reason for Study

Concern for anecdotal worse outcomes for Stage II (as defined by TNM parameters) breast cancer patients when compared to the National Benchmark Data. Diagnosis, treatment and outcome data for all Stage II breast cancer patients were reviewed. Differences in outcomes between race has been well documented by multiple sources (American Cancer Society, 2017); we also wanted to determine if outcomes between races and if our survival rates for all comers are on par with national data .

Methods

Data collected by the registrar for race, age, tumor biology, treatment course and current survival data were reviewed. Cases were also divided into reason for qualifying as 'Stage II'—based either on tumor size or nodal status from TNM staging. Findings were compared to national benchmark data as well as

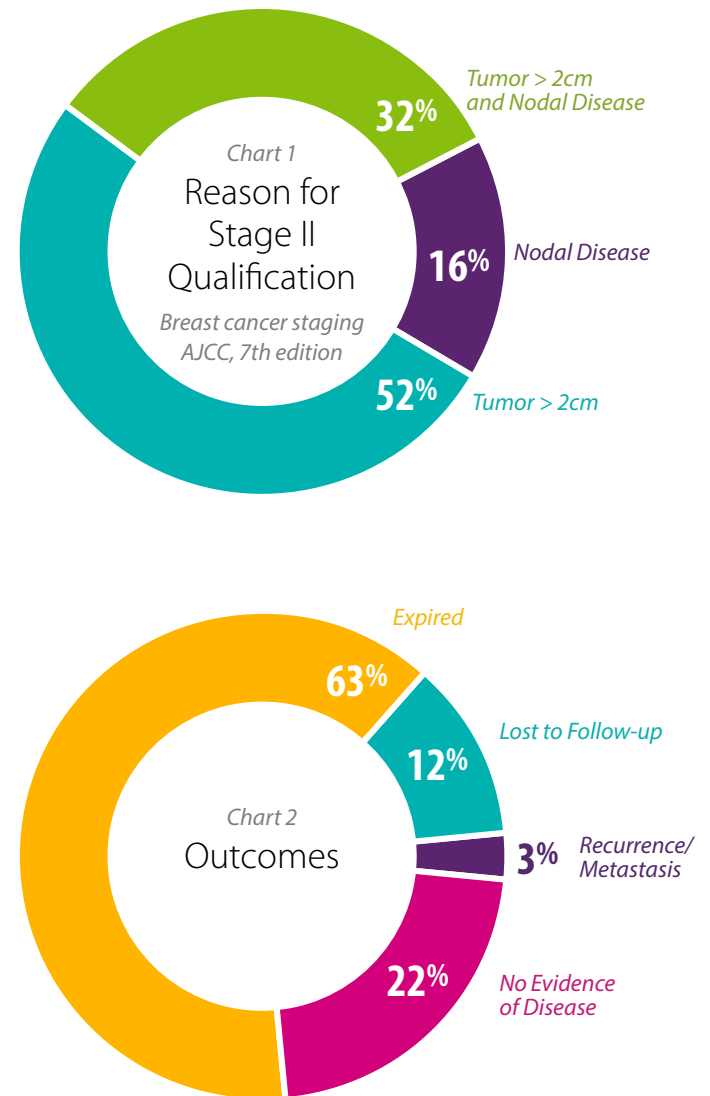
the NCCN guidelines for adherence to standard of care.

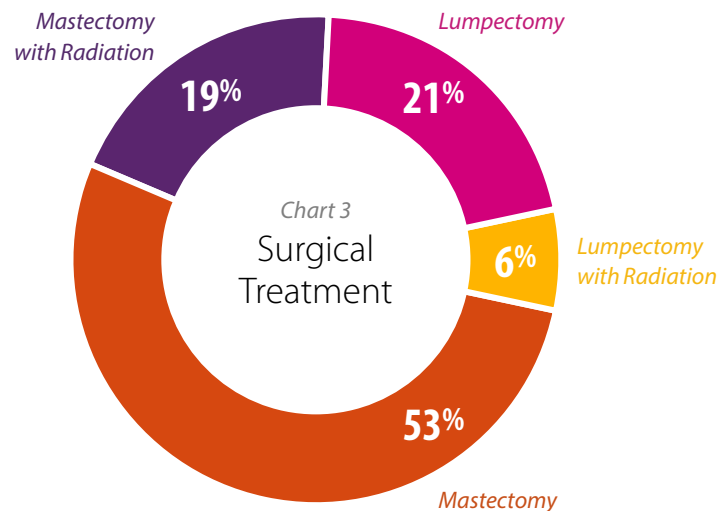
Findings

One hundred and seventy six patients were diagnosed with Stage II breast cancer during 2008–2016. No cancers in races other than Caucasian or African-American were documented. 52% were Stage II based on T parameters alone, 16% qualified based on N disease but not T, and 32% had both T and N disease within Stage II. In total, 84% had a primary tumor at time of diagnosis greater than two centimeters (Chart 1).

At most recent follow-up, 63% had no evidence of disease (NED), 22% had expired, 12% were lost to follow up and 3% had documented recurrence or metastatic disease (Chart 2). Of those who expired, 61.5% were T alone and 94.8% were T/T+N.

A subgroup analysis of the patients who expired was undertaken. The average





age for all patients at the time of diagnosis was 71; the average age for Caucasian patients being 75 and the average age for African-American patients being 69. When analyzed based on race, 62% of those who expired were African-American though African-American women only account for 44% of all Stage II breast cancers.

The expired patients' surgical treatments were reviewed and are noted in Chart 3. Though each case was reviewed and extenuating circumstances were noted in all based on patient autonomy, an unexpected number of patients undergoing BCT did not receive radiation. Also in the expired sub set of patients, one patient receiving BCT and one patient receiving a mastectomy had positive surgical margins and did not undergo either re-excision or radiation.

The expired subgroup data was examined also to look for trends in pathology. Tumor biology based on receptor status was reviewed and is broken down in Graph 1. In short, the expired patients who were African-American often exhibited Luminal A pathology which should portend more favorable outcomes.

Thomasville demographics based on 2017 U.S. Census Bureau data report 53.6% African-American, 43.4% Caucasian, 2.8% two or more races

present, .9% Hispanic/Latino and .1% Asian. In short, a (slight) majority of our regional population is African-American and though they do not comprise the majority of Stage II breast cancer patients, they do make up 2/3 of patients who expired in this data set. Some deviation from NCCN treatment guidelines (though in most cases patient preference for this deviation was documented) was noted. Future investigation into the tumor biology, appropriateness of treatment course and access to care is warranted in this subset of patients.

Graph 1
Tumor Biology Based on Receptor Status

