Cancer Program Annual Report
2019

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The Cancer Program at Signature Healthcare

Rolf Freter, MD, PhD, Chief, Medical Oncology and Hematology, Chair, Cancer Committee

At Signature Healthcare we are proud to be a leader in cancer care in the region. We strive to bring the highest level of multidisciplinary cancer care to our patients in Brockton and the surrounding communities. This involves coordinated interactions among multiple specialists (radiation oncologists, medical oncologists, cancer surgeons, oncology nursing, gastroenterologists and pulmonologists, among others) with the goal of creating and implementing an effective individualized cancer treatment plan for every patient. Weekly 90-minute Tumor Board conferences, including participation by attending pathologists and radiologists, facilitate in-depth multidisciplinary discussions of cancer diagnosis and care.

We offer comprehensive diagnostic, treatment and rehabilitative services for our cancer patients, including advanced imaging techniques, pain management, nutritional counseling, social work services and pastoral care. A patient navigator is available to assist our patients to better cope with their diagnoses and treatments from physical, emotional and financial perspectives.

An in-house Medical Oncology Division was formed in 2016. This addition greatly facilitates multidisciplinary care to our patients. The growth of Medical Oncology has been rapid, with providers evaluating over 1,300 new patients with cancers and hematologic problems in the first full year of operation. Medical Oncology providers aim to provide next business day consultations for patients with a new diagnosis of cancer. Of particular importance is our affiliation with the Beth Israel Deaconess Medical Center in Boston. For the cancer program, this allows our patients access to appropriate ongoing clinical trials in Boston, Boston-based specialists for second opinion consultations and highly specialized procedures as needed.

With the opening of the Greene Cancer Center in October 2017, all Medical Oncology and Radiation Oncology services relocated under one roof. This proximity facilitates efficient multidisciplinary care for our patients.

In 2018, we recruited a third Medical Oncologist, Dr. Reve Shields, to the Greene Cancer Center. Dr. Shields completed her Fellowship at Brown and has been in practice for 7 years. She has a particular interest/expertise in gastrointestinal malignancies. In 2018, we also developed and implemented a Multidisciplinary Breast Cancer Clinic. The clinic meets weekly and allows women with a new diagnosis of breast cancer to be evaluated by specialists in Radiation Oncology, Medical Oncology and (Breast) Surgery in one session.

The primary goal of all staff in the Greene Cancer Center is to provide timely, efficient, evidence-based, personalized and compassionate care to all of our patients. The proximity of both divisions in the new Greene Cancer Center allows providers and all cancer center staff to better meet this goal for the people of Brockton and the surrounding communities in 2019 and beyond.

Offering the Best in Breast Healthcare

Warren Salzman, MD, Chief, Radiology
Susan Boulanger, Associate Vice President, Imaging

Technological innovations in the healthcare industry continue to provide physicians with new ways to improve the quality of care we provide to our patients. In a previous report we shared Signature Healthcare's implementation of Digital Breast Tomosynthesis (DBT). We were excited to communicate our vision of being able to offer this new advanced technology to all mammography patients seen at our organization. As a result we have seen improved mammography screening outcomes which include lower recall and higher cancer detection rates. The additional invasive cancers detected with digital ***breast tomosynthesis*** tend to be smaller, lower grade and have a more favorable prognosis.

Digital Breast Tomosynthesis imaging offers the radiologist three dimensional breast images with high spatial resolution. Instead of viewing two to three images of each breast they must now review thousands of images for a routine screening or diagnostic breast exams. Although the images are high resolution, the sheer volume of images produced provides some unique challenges. These include significantly increased radiologist interpretation time and reading fatigue. A meaningful solution to these concerns would soon see the development and implementation of artificial intelligence in the mammography environment.

Artificial intelligence in healthcare is defined as the use of complex algorithms and software to emulate human cognition in the analysis of complicated medical data. Built on this (deep learning) technology, a new technique was morphed with existing computer aided detection or iCAD technology.

This technology called ProFound AI from iCAD runs on an algorithm trained to detect malignant soft-tissue densities and calcifications. ProFound AI aids radiologists in breast cancer detection and is clinically proven to improve cancer detection rates, reduce false positives and unnecessary patient recalls as well as decrease reading times. The software rapidly and accurately analyzes each DBT image and provides radiologists with key information which assist radiologists in making clinical decisions and prioritizing caseloads. The algorithm's confidence that a detection or case is malignant is scored on a 0 to 100 percent scale. A higher score indicates a higher level of confidence in the malignancy of the detection or case. These Certainty of Finding and Case Scores serve as a guide to help interpreting radiologists determine if a suspicious finding or case needs further workup. ProFound AI helps us detect calcifications and flag anything suspicious and saves the radiologist a significant amount of time as it reduces the reading time of these images.

Studies have shown that concurrent use of iCAD with DBT resulted in 29-52% faster reading time, while maintaining reader interpretation performance. The call back rates for patients also saw another 7% decline.

Awarded the Best New Radiology Solution in 2019 by the MedTech Breakthrough Awards program, the technology has also been showcased recently on FOX News, 60 Minutes and CBS.

In our ongoing effort to provide the best in healthcare to our patients by keeping the Imaging Department at the forefront of technology we will complete our implementation of Profound AI by mid-January 2020.

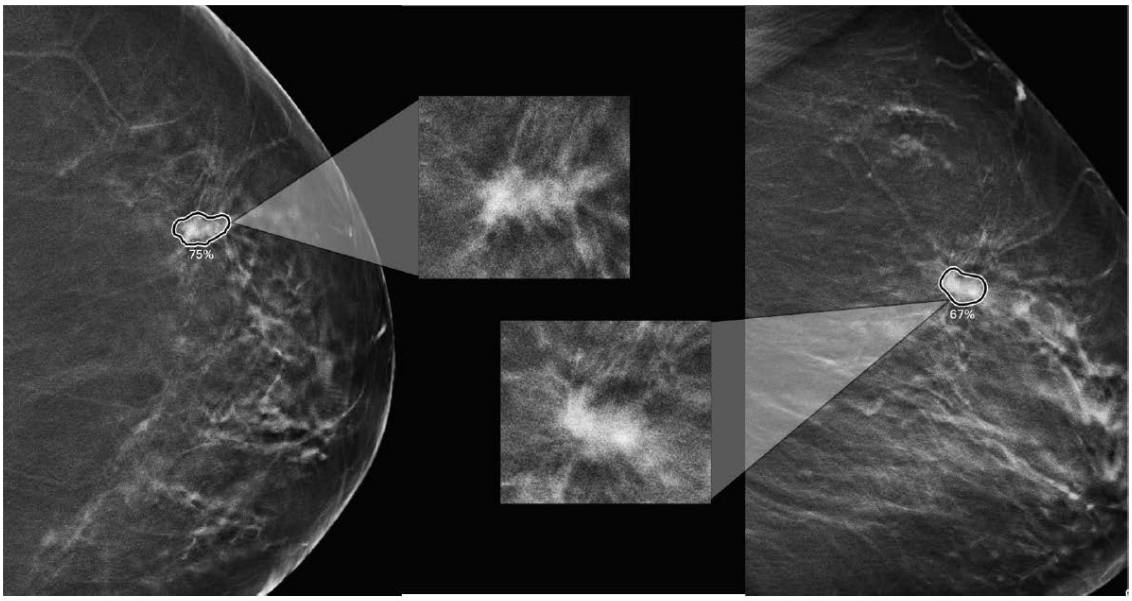


Figure 1: ProFound AI Detections and Certainty of Findings Scores for a Soft Tissue Density

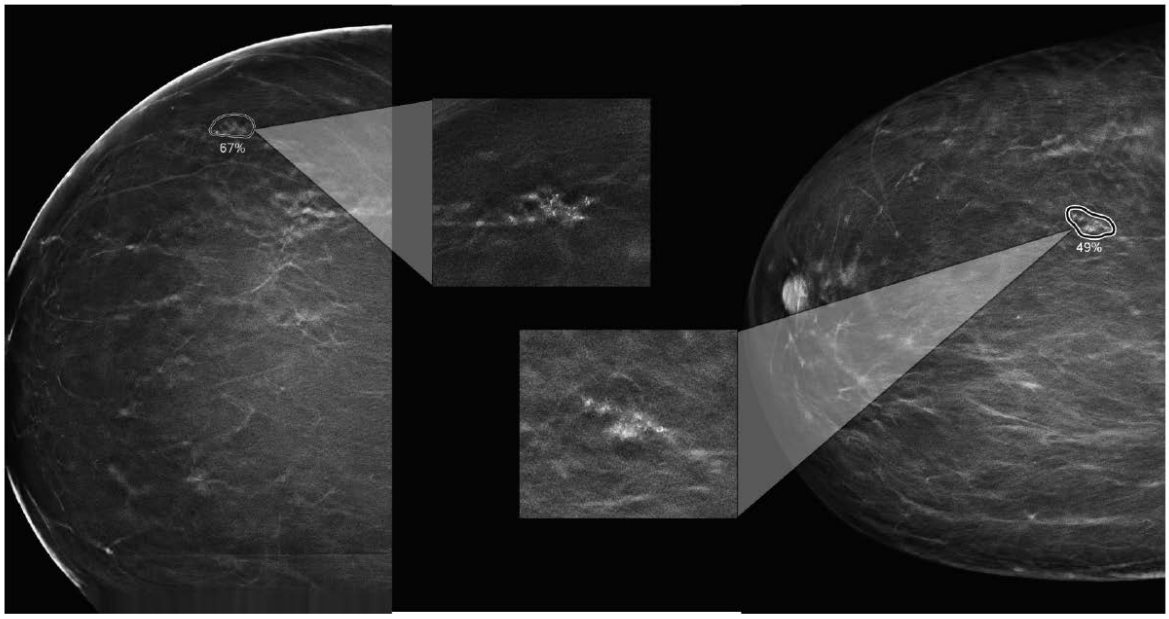


Figure 2: ProFound AI Detections and Certainty of Finding Scores for Calcifications

Pathology Services

Desiree Carlson, MD, Chief, Pathology

The Pathology Department at Signature Healthcare Brockton Hospital is an integral part of the overall diagnostic and management course for patients with cancer. The department has five pathologists, all of whom are board certified by the American Board of Pathology in both Anatomic and Clinical Pathology. Any pathologist with a time limited certificate has recertified, as necessary, and participates in the maintenance of certification program. In addition, Dr. Carlson, the Chief of Pathology, has voluntarily recertified in 1997, 2007 and 2014. Three of the pathologists are additionally certified in Cytopathology.

All pathologists are licensed to practice medicine in Massachusetts and must be able to certify that they have 100 CME credits for each two year cycle.

The pathologists routinely are present at the beginning of the patient's course. We work closely with the radiologists in the CT and Ultrasound areas to render immediate evaluations of fine needle aspirations to determine if the area of interest was adequately sampled. We then direct the radiologists to take additional core biopsy samples and place them in tissue culture media for flow cytometry for suspected lymphoproliferative disease or formalin for solid tumor diagnosis with immunohistochemical staining as needed. The pathologist provides a written intra-procedural consultation and diagnosis which is scanned into the PACS system.

In the operating room, the pathologists collaborate with the surgeons to evaluate specimens for margin status during surgery to determine if adequate tissue was removed. Frozen sections and cytologic evaluations are made. Breast carcinoma specimens are oriented, inked and sent to Radiology to determine if the lesion or clip is in the resected specimen. If required, the specimen is then sectioned while the patient is under anesthesia to determine if there are adequate margins. For other cancer surgeries, the pathologists are available to evaluate margins or open specimens to show the surgeon in the actual surgical suite. The pathologists frequently go into the OR to see the specimen in situ and to discuss the case with the surgeon. All intraoperative consultations are called to the surgeon or presented in person. The diagnoses are written on NCR paper and a copy is placed in the patient's medical record. The method of communication to the surgeon is included on the consultation form.

In some breast cases, the pathologists examine a sentinel lymph node intraoperatively. Two pathologists independently evaluate the touch preps or smears to ensure that no metastatic cancer is missed and also that there are no false positives which would lead to unnecessary axillary dissection.

The Pathology Department routinely utilizes the American College of Surgeons/College of American Pathologists synoptic reporting protocols for all invasive carcinomas and also for DCIS in the breast. Since April 2016, we have used electronic cancer checklists which require the pathologist to complete all the required data elements or else the report will not finalize. By using these, the required data elements for treatment decisions are consistently reported in the same format by all pathologists. This also allows patients to have their slides and our report sent out for a second opinion since all required data elements are reported.

The Pathology Department was an early adopter for the proper handling of resected breast specimens to ensure that prognostic marker results are valid. All breast specimens for both women and men except for reduction mammoplasties have the time excised and time in formalin written on the specimen label either in the OR or Radiology for core biopsies. Specimens are then fixed for at least 6 and no more than 72 hours in formalin. The cold ischemia and formalin fixation times are strictly followed. Estrogen receptor (ER) and

progesterone receptor (PR) status results are obtained for all ductal carcinoma-in-situ cases. ER, PR and Herceptin (Her2) are obtained for invasive breast cancer and FISH is performed for all Her2 with a result of 2+.

The Pathology Department is actively involved in presenting cases at the weekly Tumor Board/Cancer Conference. One pathologist takes microscopic photographs of each case. These are displayed on the screen in the Greene Cancer Center conference room and can also be viewed on computers in the offices of physicians who call in from their offices. When the cases are discussed, the medical oncologists will determine which molecular or genetic tests are required to select therapeutic agents. The pathologist will then send out the appropriate slides or blocks and report the results in an addendum to the original pathology report.

Two pathologists are the member and alternative member of the Breast Leadership Committee. We all work collaboratively to coordinate and streamline the care of women diagnosed with breast cancer. Two pathologists are similarly the member and alternative member for the Oncology Committee. The two pathologists who are members of the Breast Leadership Committee must obtain breast related continuing medical education credits by attending a national meeting or through online or written methods.

The Pathology Department is accredited by the College of American Pathologists (CAP) every other year with an onsite inspection and on the alternate year by a comprehensive self inspection, the results of which are reviewed by the next onsite inspection team. Our performance is continuously monitored by the CAP based on our performance on proficiency testing for each type of test performed in the pathology department and laboratory.

Starting in 2016, specific breast cancer quality indicators were reported on one table to the Breast Cancer Leadership. These include:

- PQRS #99 for staging of invasive breast cancer on resection specimens. This indicator was discontinued by CMS after 2018.
- PQRS #251 for including ER, PR and Her2 results on core biopsies and resection specimens, as needed if not performed or were negative on a previous core biopsy. This indicator was discontinued by CMS after 2018.
- Breast cold ischemia time and formalin fixation time.
- Correlation of sentinel lymph node touch prep diagnosis intraoperatively to the diagnosis on permanent sections which is similar to NAPBC Standard 2.4.
- Results of CAP ER/PR prognostic marker proficiency tests.
- Breast core biopsy turnaround time from date of procedure to date the report is finalized.
- Breast lumpectomy or mastectomy turnaround time from date of procedure to date the report is finalized.
- Pathology synoptic report completeness.
- Comparison of our ER and PR rates for pre and post menopausal women to those published in the College of American Pathologists accreditation checklist.

The pathologists also compile a table each month for the Cancer Registrar showing compliance with NAPBC Standard 2.7, documenting review of outside core biopsy cases prior to definitive surgery at Signature Healthcare Brockton Hospital.

The following additional quality indicators for all other cancer cases are studied in the Pathology Department:

- Adequacy of synoptic report required data elements for all carcinomas.
- Finding at least 12 lymph nodes for colon carcinomas based on specimen length and any previous adjuvant therapy.
- CMS PQRS studies 249 for Barrett's esophagus, 250 for radical prostatectomy, 395 for lung biopsy, 396 for lung wedge/resection, 397 for melanoma reporting and 440 for turnaround time from specimen receipt in the Pathology department to date the report is available to the clinician for both basal cell and squamous cell carcinomas.
- Correlation studies between current malignant diagnosis as compared to any previous cytology studies.
- Frozen section to permanent section correlation.
- Comparison of intraoperative immediate evaluation of sentinel lymph nodes for both breast carcinoma and melanoma cases to the results on permanent section slides.

All pathologists participate in diagnosing unknown slides in College of American Pathologists proficiency testing programs for gynecologic (Pap smears) cytology, non-gynecologic cytology, fine needle aspiration cytology, surgical pathology and interpretation of unknown cases for ER and PR percentage and intensity of staining.

There are criteria for second pathologist blinded review of cases including all new malignancies and core biopsy cases for possible malignancy.

When a resection case is booked for the operating room, the pathologist on call obtains information on the prior day to include review of the previous biopsy slides if it was performed here, obtaining outside slides and reports, review of any radiologic studies and review of other information in Meditech. Surgeon offices are called to obtain office notes and whether any pathology had been diagnosed elsewhere.

Pathologists facilitate special studies on cancer cases with slide and block selection for Oncotype DX, MSI, B&T studies, next generation sequencing, molecular testing and Foundation One and include results in an addendum to the original pathology report.

There are requirements for communication of malignant and unexpected results to include calling the clinician and faxing the results to ensure that there is at least one additional method of communication other than the report being in Meditech.

When a cancer case is sent out for a second opinion based on a request from a clinician or the patient, the outside diagnosis is compared to our original diagnosis. Our report is amended if there is a significant difference. Data is reported as part of the Ongoing Professional Practice Evaluation (OPPE) to the Quality Resources Department and is used in the recredentialing process for each pathologist.

2019 CT Lung Cancer Screening Update

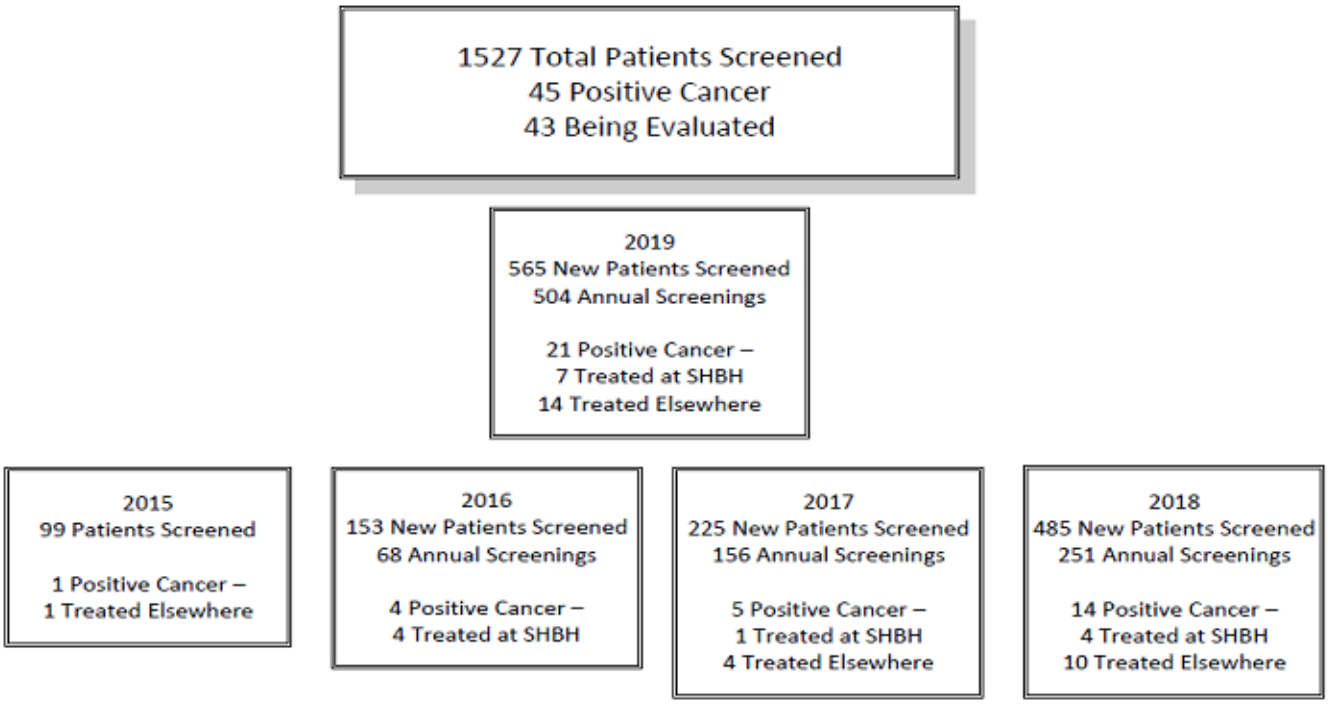
Holly Avery, Radiology Quality Assurance Manager

We continue to work with Dr. Robert Weinstein, Chief of Family Medicine and Pat Cullen, Vice President of Quality Performance to increase provider participation. Although we have increased the number of patients that have received their baseline screening, there continues to be a substantial number of patients that would qualify for this life saving program that have not been offered the opportunity. Radiology has placed marketing materials in each outpatient office and has met with practice managers as well as physicians when requested.

Last year, we were investigating a new electronic tracking system called Nuance but have decided to wait until the Meditech Expanse go live. This new system would allow the opportunity to interface with the patient's electronic medical record which would eliminate hours of time consuming manual data entry.

We are currently recruiting for a dedicated Lung Screening Patient Navigator to ensure that our patients receive the best continuity of care here at Signature Healthcare. The navigator will be an immediate source of information for the patient to have any questions or concerns answered in a timely manner, as well as guide the patient through the maze of treatment and services that are available to them while they are receiving their care. Many of our patients have received follow-up exams as well as treatment at outside facilities. I feel that a navigator in conjunction with our growing Thoracic Surgery Department will help eliminate this leakage to outside facilities for treatment. The recruitment of Dr. Rebecca M. Weaver will be instrumental in providing complete cancer care for the patients in our CT lung screening program.

Low Dose CT Lung Screening Statistical Data:



Patient Navigation 2019 Report

Maria Odete Luiz, BA

Signature Healthcare's Oncology Patient Navigator and Women's Imaging work together to identify all patients who have been informed that the result of their screening is abnormal. The abnormal results are explained to the patient and they are provided with contact information for the patient navigator. The navigator receives personal information about each patient and is alerted to any barriers identified by the radiology technicians such as the patient is needle phobic, has a personal history of breast cancer or has a language barrier. Armed with this information, the navigator makes a personal call to each patient to offer help and support. The navigator is able to educate, alleviate concerns and identify barriers to access and to make certain that the patient secures a timely appointment for follow-up. Fortunately for most patients with an abnormal finding, a biopsy results in a non-cancerous diagnosis. However, for those that receive a diagnosis of malignancy, contact with the navigator has already been established and they are available to help meet the patient's individual needs.

Patients with a solid support system and an uncomplicated treatment course receive phone calls from the navigator to check in to make sure they are doing well as they progress through their treatment and into survivorship. For patients who are anxious, alone or experiencing a rocky treatment course, the navigator's role is to help make the treatment less stressful and to alleviate barriers to the patient's care. The navigator may contact a patient's medical oncologist when they learn that the patient is experiencing distress due to family issues, transportation problems, language and financial issues or when the patient appears to lack understanding about her treatments, is confused about appointments and expressing fear about their situation. The navigator will work to help remove barriers that are causing distress to the patient using community and hospital resources. Patient responses to this program have been rewarding.

The navigator is part of the Oncology team here at Signature Healthcare and is available to provide the team with patient updates, current potential barriers to patient care or insurance issues. This team approach aligns with Signature Healthcare's philosophy of patient centered care. Part of the navigation program is conducting annual Patient Needs Assessments (PNA) to identify possible barriers to patient care. A recent PNA helped the navigator to identify Signature Healthcare Oncology patients' greatest barrier to care, which was transportation to/from their oncology appointments. Through a collaborative effort, Signature Healthcare was able to obtain a grant funded program that provides free transportation for all Signature Healthcare Oncology Patients. Alleviating this barrier to care has decreased patient no-show rate and improved overall patient care.

The patient navigator is a member of the Multidisciplinary Breast Cancer Clinic. The navigator works closely with the Primary Care Physician and Pathology Department to identify eligible patients with breast cancer for Multidisciplinary Breast Clinic. For breast cancer patients, this starts with positive biopsy results. Communication between the oncology patient navigator, primary care office and surgical team to coordinate next step is the key. It is necessary that patients are seen in a timely fashion from biopsy through the initiation of treatment and beyond. Multidisciplinary clinic allows the patient to be seen in one visit instead of three or more. The patient navigator also serves as the point of contact for the patient who is being seen by multiple providers.

Outreach and education is another important aspect of patient navigation at Signature Healthcare. Breast health talks, free screenings for patients and educational sessions have been provided to patients and caregivers within our community.

Multidisciplinary Oncology Conferences

Steven Lane, MD, Chief, Radiation Oncology, Cancer Conference Coordinator

At Signature Healthcare, Oncology Conferences are held weekly for all sites. All conferences are open to the entire medical staff. Conferences are multidisciplinary for review and discussion of treatment options and possible clinical trial participation.

Fifteen percent of the annual caseload must be presented at the multidisciplinary oncology conference. Signature presents over 90% of the annual caseload. Presentations may include newly diagnosed patients prior to initiating treatment, patients completing initial treatment to discuss the need for further treatment and surveillance or patients previously discussed that need further treatment recommendations. Discussions include a review of disease presentation, personal and family history of malignancies, pertinent imaging studies, pathology specimens, laboratory studies and surgical interventions. Treatment recommendations are based on the National Comprehensive Cancer Network (NCCN) guidelines.

Breast cancer is the leading cancer diagnosis among women at Signature Healthcare. Our goal is to present every patient case with newly diagnosed breast cancer for review and discussion of treatment options.

Our multidisciplinary team consists of representatives from Radiology, Pathology, Surgery, Medical and Radiation Oncology, Rehabilitative Services, as well as the Patient Navigator, Quality Improvement Coordinator and Clinical Trials Coordinator. To promote continuity of care, conferences are available via secure web access to allow primary care physicians and specialists who cannot be present on site to join the conference and participate in patient discussions.

Clinical Trials

Sarah Usher, RN, MSN, OCN®

The purpose of conducting clinical trials is to gather important clinical information about disease processes and to develop new and effective treatments for cancer. Our clinical affiliation with Beth Israel Deaconess Medical Center allows our patients potential participation in clinical trials. At Signature Healthcare, oncology patients are screened for potential trial eligibility and are referred to Beth Israel Deaconess Medical Center in Boston for further evaluation and enrollment. Additionally, we track any patients who have participated in tissue studies.

Rehabilitative and Support Services: Oncology Rehabilitation Program

A cancer diagnosis can be traumatic and so can life-saving treatments. Chemotherapy, radiation therapy and surgery can harm a patient's health and cause serious medical problems that interfere with daily function and well-being. Survivors are commonly plagued with symptoms such as fatigue, weakness, insomnia, memory loss, fear, anxiety and depression. A team of clinicians was assembled and completed a comprehensive oncology rehab program developed by Dr. Julie Silver, assistant professor at Harvard Medical School, breast cancer survivor and co-founder of Oncology Rehab Partners. This team was certified in January of 2012 and is available to provide physical and psychological rehabilitation, so survivors can recover more quickly and more completely than they would otherwise. Feeling well and being able to resume normal day-to-day activities is essential to enjoying a good quality of life.

Newly diagnosed patients may want to increase their strength and endurance and prevent future medical problems; survivors living with cancer as a chronic disease may come to us for help managing treatment-related conditions; and individuals who are cured or in remission may enroll in our program with the goal of resuming their pre-cancer activities

In addition the Outpatient Department is certified in the provision of Lymphatic drainage. This provides a vital service at the local level to patients suffering from lymphedema.

Our oncology program's rehabilitation services provided in the hospital setting and the outpatient setting are covered by most insurance plans, thus allowing an increased number of survivors to take part in the program. Rehabilitation services for cardiac and orthopedic patients have been standard practice for some time. Providing rehabilitation services for cancer patients in treatment, in remission or living with cancer is essential to enjoying a good quality of life.

American Cancer Society Collaboration

Kerri Medeiros, American Cancer Society

Signature Healthcare and the American Cancer Society share a commitment to our community to improve the quality of cancer care, increase awareness about the importance of cancer prevention, early detection and provide patients and caregivers with information on cancer treatment and the resources and services available.

The American Cancer Society is a global grassroots force of 1.5 million volunteers dedicated to saving lives, celebrating lives and leading the fight for a world without cancer. Through our partnerships with hospital systems such as Signature Healthcare Brockton Hospital, we aim to increase access to care for cancer patients and expand our cancer control initiatives such as Colorectal Cancer Screening and HPV vaccination.

Community Outreach

Kathryne McNichols

Cancer Support

A cancer diagnosis means having to cope with emotional, physical and spiritual challenges as well as medical treatments. Although each patient's experience is unique, a support system and reliable resources are critical for every patient. A good support system can help a patient feel less alone, help them to better understand their options for treatment and foster a sense of belonging, all of which improve a patient's quality of life. Finding the right type of resources and support is important, especially for patients who are alone.

Signature Healthcare offers different types of support designed to address individual patient needs. From a meeting with our patient care team to accessing on-line webinars on employment rights, patients receive support, education, advocacy and individual attention.

Our oncology nurses and patient navigator work together to provide patients general cancer support and may include discussing treatment options, how to ask questions when you speak with your physician, cancer coping mechanisms, exercise and survivorship issues as well as how to locate credible resources. On-line and self-paced tutorials are available on our Signature Healthcare website to access from home or office to allow patients who can't easily attend our on-site programs.

Spiritual support is available for patients in both the inpatient and outpatient setting. For patients who qualify, financial assistance is available through the hospital's Hope Fund. Signature Healthcare offers assistance for patients experiencing transportation challenges, language barriers, work-related issues and financial or insurance problems, and then works with community to find resources to support patients and their families.

Free Cancer Screenings for the community: Kathryne McNichols

On Wednesday 9/11/2019 Signature Healthcare and ENT Specialists hosted a free head and neck cancer screening. This free screening was promoted to uninsured and under insured members of the community. Fourteen people attended and 14 screenings were done. Four people needed follow up. One person was a regular patient and needed f/u for hearing loss, one needs a biopsy, one needs a GERD follow up and one patient was a no show to her appointment. The no show patient was called seven times (Four by ENT and Three by me). A registered letter was sent to the patient on 10/20/2019. All attendees were educated on the importance of smoking cessation, sunscreen, alcohol intake and other risks.

Cancer Education in the Community- *Kathryne McNichols*

- Colorectal cancer prevention and treatment presentation took place on 3/21/2019 at the East Bridgewater Senior Center. Dr. Seshadri presented to a group of 12 seniors

- Colorectal cancer prevention and education discussion 3/28/2019. Dr. Seshadri and Dr. Shields provided education. Event held at Boston Tavern and had 24 attendees.

- Skin cancer information table at Massasoit Community College 4/3/2019 hosted by Kathryne McNichols.

- Dr. Reve Shields presented on UV Awareness at the Brockton Council on Aging as part of the Signature Series on 7/15/2019. There were 20 seniors in attendance.

- On 10/23/2019 Signature Healthcare hosted its 6th annual Ladies Night. Educational tables were hosted by Primary Care, OB/GYN, Women's Imaging and the Greene Cancer Center. Eight screenings were booked. There were more than 50 attendees

Survivorship Support

According to the Livestrong Foundation "more than 10 million cancer survivors live in the United States today and three out of four families will help care for a family member with cancer." Support for survivors is an important need that is too often overlooked. Signature Healthcare is addressing that on multiple fronts. Through our hospital-based programs as well as our community affiliations and partnerships with The American Cancer Society, The Cancer Support Community, The Charity Guild, Community Servings and the Livestrong Program at the YMCA, we are able to link survivors and their family members with programs to address their needs as they move through the process of diagnosis, treatment and into survivorship.

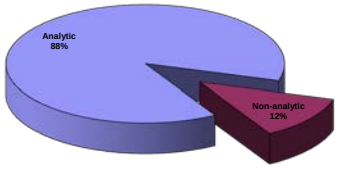
"*The Survivor's Brunch: Alive, Grateful and Surviving"* is an event themed to uplift men and women who are survivors of cancer through an evening of celebration infused with laughter and gratitude for life. The event included a keynote speaker, Mary Waldron, a comedic host, a beauty station and an awards ceremony. In partnership with Grown Women Real Talk, founded by Yolanda Lewis, the mission is to celebrate triumphant living over cancer with encouragement, strong relationships and community support in a way that inspires life beyond survival. The event took place on Sunday, October 28 from 1-4 p.m. at Thorny Lea Golf Club in Brockton. Signature Healthcare made a small donation to the event to help defer costs.

Cancer Registry Statistical Summary – Reflecting 2018 Data

Avis Watson, CTR, Cancer Registrar

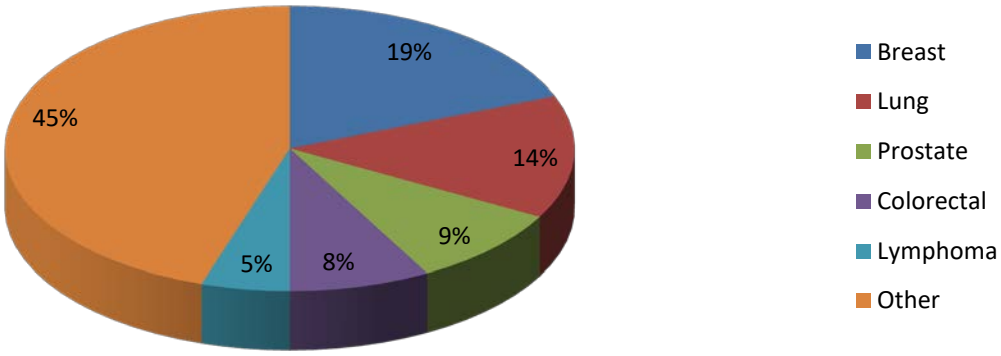
The Signature Healthcare Cancer Registry maintains data on all patients diagnosed and /or treated for cancer. All cancer cases are reported to the Massachusetts cancer registry as required by law.

A total of 582 cancer cases were added to the Signature Healthcare Brockton Hospital Cancer Registry database in 2018. Of those, 515 patients (88%) were diagnosed and/or received all or part of their first course of treatment at Signature Healthcare Brockton Hospital (analytic cases). Sixty-seven patients (12%) were diagnosed elsewhere and received subsequent treatment at Signature Healthcare Brockton Hospital (non-analytic cases).



Five Major Cancer Sites

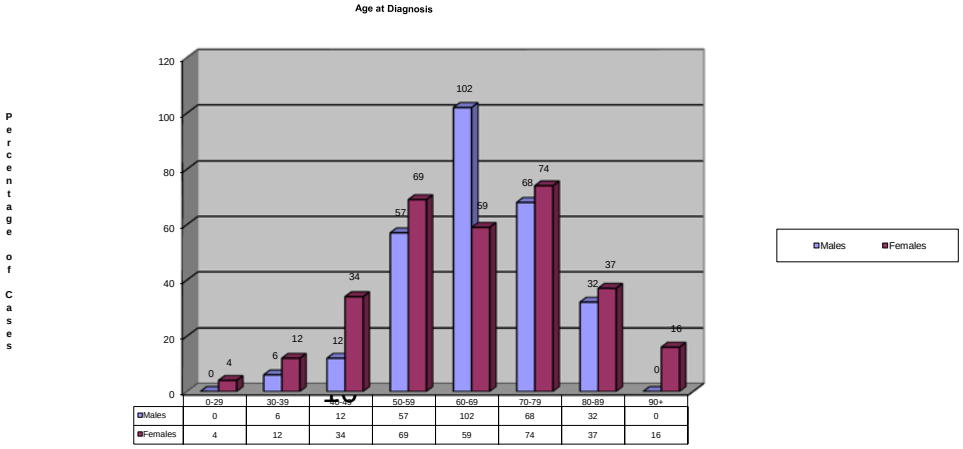
Breast (96 cases) cancer remains the most frequent site of cancer diagnosed and/or treated at Signature Healthcare Brockton Hospital in 2018 and this is comparable with national data. Lung cancer is the second most frequent site in 2018 with 74 diagnosed cases. Prostate (48 cases), colorectal (43 cases), and Lymphoma (23 cases) round out the five most frequent cancer diagnoses.



Age Distribution All Sites

Male and Female

A total of 582 cases were diagnosed/and or treated in 2018, 277 were males (48%) and 305 (52%) were women.



Standard 4.6 Monitoring Compliance with Evidence-Based Guidelines

Reve Shields, MD

Treatment evaluation for Lung at Signature Healthcare – 2018

A total of 15 cases were reviewed for all cases at Signature Healthcare Brockton Hospital in 2018. 73% were histologically confirmed and 13% were confirmed by cytology. Thirteen percent (two patients) did not get a biopsy per patient preference as both patients declined treatment.. We are 100% compliant on histologic confirmation per NCCN guidelines. All patients (100%) underwent staging CT, CAP or PET. All patients except for five cases had brain imaging but all of these five patients declined treatment per patient preference. All patients who agreed to undergo treatment had prognostic indicators sent and we are 100% compliant. All eight patients who agreed to be treated for their cancer received appropriate first line therapy with 100% compliance.

Breast Program Re-Excision Rate Summary Report for 2019

Chris Murphy, Surgical Program Manager

Goal: To reduce the incidence of a re-excision procedure(s) for Signature Healthcare breast cancer patients

Introduction:

It is understood that early-stage cancers are generally smaller and more localized to one place in the body. It is also understood that early-stage cancers can be easier to treat and may have a higher treatment success rate. [1] The literature supports that early diagnosis and treatment of any cancer can be central to the likelihood of successful cure and improved survival.

"Breast cancer is a disease in which cells in the breast grow out of control. There are different kinds of breast cancer. Breast cancer most commonly develops in cells from the lining of milk ducts and the lobules that supply these ducts with milk. Cancers developing from the ducts are known as ductal carcinomas, while those developing from lobules are known as lobular carcinoma."[2]

Focus:

Signature Healthcare physicians utilize tests to find and/or diagnose breast cancer. The physicians may refer patients to our breast specialist, Dr. Jessie MacVicar, who has been specially trained in diagnosing as well as treating breast concerns.

The diagnosis of breast cancer is confirmed by taking a biopsy of the tissue in question. Most often a non-surgical core needle biopsy can be performed in the Radiology Department. When this technique is not possible for a particular patient, our breast surgeon will perform a diagnostic biopsy in one of our operating rooms. Once the diagnosis of breast cancer has been established, a breast-conserving surgery (BCS) is the treatment of choice for early breast cancer.

Actions:

At the time of the patient's first cancer surgery, the team (Radiology, Breast Surgeon and Pathology) works collaboratively to ensure they have the right patient, right side and right tissue to be removed. The team establishes that the tissue margins do not contain ANY cancer cells. There is a process for final pathology where the pathologist re-examines the tissue under a microscope and performs specific tests for a final determination on the margins. If the pathologist determines the margins are not clear, meaning there are some cancer cells left, the patient would have to return for a second procedure to remove the cancerous tissue.

Data:

Commission on Cancer (CoC) Breast Procedure Standard 4.7(a) target 25.0 % or less breast in situ Cancer re-excision rate

- In 2019 there were (30) patients with a diagnosis of in situ breast cancer.
- Of those patients (2) returned to the operating room after the diagnosis was made in order to remove the remaining cancerous tissue.
- **SHBH 2019 rate 6.7%**

Commission on Cancer (CoC) Breast Procedure Standard 4.7(b) target 20.0 % or less breast invasive Cancer re-excision rate

- In 2019 there were (74) patients with a diagnosis of invasive breast cancer.
- Of those patients (10) returned to the operating room to remove the remaining cancerous tissue.
- **SHBH 2019 rate 13.5%**

Conclusions:

As evidenced by the low breast cancer re-excision rates experienced at Signature Healthcare Brockton Hospital, it takes a team to deliver the best. The breast surgeon, radiologists, pathologists, oncologists and all of their staffs, working collaboratively, have positively impacted outcomes for the breast cancer patient seeking care and treatment at Signature Healthcare.

Reference:

1. **Page last reviewed: July 26, 2019 Division of Cancer Prevention and Control, Centers for Disease Control and Prevention**
2. **Page last reviewed: May 28, 2019 Division of Cancer Prevention and Control, Centers for Disease Control and Prevention**