Cancer Program Annual Report
2021

Contents

Oncology Committee Members 2021

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Oncology Committee Chairman
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Pathology

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Cancer Conference Coordinator

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Surgery

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Kelly Lencz, RN
Patient Navigator

Lindsay Nicholson
American Cancer Society Representative

Amanda Fyotek, RD, LDN
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Linda McAlear, PT
Rehabilitative Services

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Radiation Oncology
Clinical Trials Coordinator

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Avis Watson, BS, CTR
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Cancer Data Quality Coordinator

The Cancer Program at Signature Healthcare

Rolf Freter, MD, PhD, Director, Greene Cancer Center, Chief, Department of Human Oncology

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. Effective multidisciplinary cancer care involves the coordinated interactions among multiple specialists, with the goal of creating and implementing an effective individualized cancer treatment plan for every patient. With the advent of Precision Medicine, and an ever-growing knowledge of the molecular biology underpinning the development of cancers, tumor specimens are routinely analyzed for panels of so-called "driver mutations", altered cancer causing genes that can be targeted to attack a cancer, often with an oral medication and with dramatic results. Weekly 90-minute Tumor Boards review virtually all patients with a new diagnosis of cancer, or a cancer recurrence, facilitating in-depth multidisciplinary discussions of cancer diagnosis, targeted treatments, and supportive care.

An in-house Medical Oncology Division was formed in 2016, greatly facilitating multidisciplinary care to our patients. The growth of Medical Oncology has been rapid, with providers evaluating nearly 1,300 new patients with cancers and hematologic problems in 2021. A consultation with a Medical Oncologist occurs within 1-2 business days of a referral of a patient 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 cancer specialists for second opinion consultations, and highly specialized procedures, as needed.

With the opening of the Greene Cancer Center in 2017, all Medical Oncology and Radiation Oncology services, and many surgical and ancillary services, relocated under one roof. The Greene Cancer Center offers 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 and social worker are available to assist our patients to better cope with their diagnoses and treatments from physical, emotional, and financial perspectives.

In recognition of the complex interplay of the many disciplines involved in modern cancer care, we created a Department of Human Oncology (DHO) in 2021, with the goal of centralizing all of the components required to provide superb cancer care to our patients. New cancer treatments initiated under the auspices of the DHO include: stereotactic body irradiation, an advanced radiation technique allowing high doses of radiation to be precisely delivered to a small tumor target with only five treatments. Use of radiofrequency identification tags (RFID) for women with breast cancers undergoing breast conservation surgery facilitates more convenient and less invasive surgeries with better cosmetic results and the removal of less breast tissue. Advanced prostate cancer imaging with newer positron emission tomography (PSMA) scans, and advanced radionuclide treatments for prostate cancer (radium-223) are now being offered. The multidisciplinary Prostate Cancer Program within the DHO continues to grow, and offers the most recent and innovative treatment approaches to men with prostate cancers in a rapidly evolving treatment landscape.

In 2021, the ongoing COVID pandemic continued to place significant strains on the Greene Cancer Center, Brockton Hospital, and Signature Healthcare. Through continued screening of patients for COVID, and excellent teamwork, treatment in the Greene Cancer Center continued without interruption. I am very proud of the high level of cancer care all of the teams in the Greene Center provided to our patients under continued trying circumstances. This teamwork and excellent care continues, with the primary goal of all staff in the Greene Cancer Center being providing timely, efficient, evidence-based, personalized and compassionate care to all of our patients in 2022 and beyond.

Offering the Best in Breast Healthcare

George Bonnevie, MD, Chief, Radiology
Susan Boulanger, Associate Vice President, Imaging

Worldwide, over 1 million people die due to lung cancer each year, and lung cancer is the leading cause of death in the United States. It is estimated that cigarette smoking contributes to almost 90% of lung cancer risk in men and 70 to 80% in women. While Massachusetts ranks in the top ten nationally with the **lowest** smoking rates overall, the Brockton community has an at risk population with a 66% higher smoking average than the state average, (22.8% in Brockton compared to 13.7% statewide). It is estimated that almost 16,000 adult smokers reside in Brockton. Therefore, recognizing the need to provide early detection lung cancer screening to our patients, The Signature Healthcare Imaging Department was an early adopter of the Low Dose CT Screening program first validated by the 2011 National Lung Screening Trial (NLST) publication *.

In 2011, The National Lung Screening Trial (NLST) research team published the largest trial to date with over 53,000 participants over five years. Study participants were between the ages of 55 and 74 with a greater than 30 pack-year smoking history who continued to smoke or quit within the last fifteen years. They were randomized to be screened annually for 3 years with LDCT versus standard chest radiography.[1] In this study, there was a higher rate of both true positive and false positive tests in the CT arm, with a sensitivity of 93.8% and a specificity of 73.4%. This detection led to a significant decrease in cancer-related mortality, with a relative risk reduction of 20%, as well as an overall decrease in all-cause mortality by 6.7%. *. The study clearly demonstrated the value of a Low Dose CT (LDCT) screening program for at risk patients.

We have been providing LDCT at both the Liberty St. and the Brockton Hospital campuses since 2015. Currently, we have 2486 patients in the program and have detected 79 total cancers (3.2% positivity rate). While we have evaluated 2486 patients, there are an estimated 3,239 plus additional current smokers in our system who fit the criteria to be followed by low dose screening; clearly indicating the need to increase our efforts to enroll additional patients into the program. We have recently added a dedicated navigator to our team to increase enrollment within the provider groups and the community.

The Signature Healthcare program adheres to the American College of Radiology, CMS and US Preventive Services Task Force guidelines. The LDCT findings are categorized by use of the American College of Radiology Lung Imaging Reporting and Data System (Lung-RADS™) version 1.1 for standardizing the classification and follow-up of lung nodules found during a screening program. However, LDCT lung cancer screening does not constitute a staging CT, even when there is a suspicious mass.

More recently, in conjunction with our colleagues at the Greene Cancer Center, we are able to provide Nuclear Medicine "Xofigo" treatments for prostate cancer, one of the most common cancers in men. X*ofigo* is an alpha particle-emitting radioactive therapeutic agent indicated for the *treatment* of castration-resistant prostate cancer (mCRPC) that has spread to the bones. Signature Healthcare remains one of the only healthcare facilities in the area to offer this therapy.

We have also recently begun offering prostate imaging utilizing PET/CT with the recently FDA approved radioactive tracer Gallium (Ga) 68 PSMA 11. This new prostate –specific membrane antigen, utilized with PET/CT imaging, has been shown to significantly improve how we identify and treat prostate cancer, with up to 43% changes in staging and 59% changes in radiotherapy planning.

In 2021 we were able to offer these therapies to 32 patients needing Axumin, 7 PSMA, and 6 Xofigo treatments. We expect to see these numbers comntinue to grow moving forward.

We continue to evaluate new therapies, imaging modalities, and state of the art equipment and technology to bring the best in cancer screening and imaging services to our patients.

National Lung Screening Trial Research Team., Aberle DR, Adams AM, Berg CD, Black WC, Clapp JD, Fagerstrom RM, Gareen IF, Gatsonis C, Marcus PM, Sicks JD
N Engl J Med. 2011 Aug 4; 365(5):395-409.

Pathology Services

Abdallah Azouz, MD, Chief of 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 six pathologists, all of whom are Board Certified by the American Board of Pathology in both Anatomic and Clinical Pathology. Additionally, Dr. Kordunsky, Dr. Mondelblatt, and Dr. Moore are board Certified in cytopathology, and Dr. Azouz is board certified in Hematopathology. Any pathologist with a time limited certificate has recertified, as necessary, and participates in the maintenance of certification program.

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 six 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, by 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.

2021 CT Lung Cancer Screening Update

Holly Avery, Radiology Quality Assurance Manager

In 2021, we made some important advancements in the CT Lung Screening Program. We began implementation of a new tracking system called PowerScribe Lung Cancer Screening. This system will eliminate manual data entry as well as greatly improve follow up tracking.

The addition of Dr. Steven Milman to our Thoracic Team will allow us to provide surgical care and improve leakage. Dr. Milman has also taken the leading role in our Lung Steering Committee. In this collaboration, suspicious findings are presented at a weekly multidisciplinary meeting to provide physicians with recommendations for follow up care.

We recruited a dedicated Radiology Patient Navigator, Jillian Gagne and began creating pathways to support the providers and help enroll additional patients into this life saving program. Jillian, Dr. Milman and Dr. Weinstein are working to expand the program and improve follow up care as well as the patient experience. We also joined a collaboration with Beth Israel Lahey Health to share information and strategies to enhance our program as well as expand the Thoracic Surgery Department with the affiliation with Dr. Christian Campos from Beth Israel Deaconess Medical Center.

Low Dose CT Lung Screening Statistical Data

2486 Total Patients Screened
80 Positive Cancer
51 Being Evaluated

2021
451 New Patients Screened
874 Annual Screenings

19 Positive Cancer –
6 Treated at SHBH
7 Treated Elsewhere
4 Refused Treatment
2 Expired prior to treatment

2017
225 New Patients Screened
156 Annual Screenings

5 Positive Cancer –
1 Treated at SHBH
4 Treated Elsewhere

2018
485 New Patients Screened
251 Annual Screenings

14 Positive Cancer –
4 Treated at SHBH
10 Treated Elsewhere

2019
565 New Patients Screened
504 Annual Screenings

21 Positive Cancer –
7 Treated at SHBH
14 Treated Elsewhere

2020
405 New Patients Screened
709 Annual Screenings

16 Positive Cancer –
11 Treated at SHBH
3 Treated Elsewhere
2 Refused Treatment

2021 Patient Navigation Report

Kelly Lencz, MSN, RN

In the second year of the COVID-19 pandemic, many patients became more comfortable resuming in-person appointments as protocols were established in clinics to ensure the safety of both patients and staff. It will be important to continue to track patients who have missed appointments so they don't miss routine screenings that could have an impact on their long-term health. Unfortunately, the pandemic has had an impact on several resources that patients rely upon, including transportation programs. The navigator continues to work with patients to identify resources that may be available through their insurance as well as community programs. Grant funded transportation has been a valuable resource for many oncology patients who otherwise do not have other options available and need to get to their treatments and other important appointments.

The patient navigator continues to be in contact with the women's imaging program, reaching out to patients who receive abnormal mammogram results and establishing the next steps in their care as well as giving them a point of contact for any questions they may have. For patients who receive a positive biopsy result, the navigator continues to be a resource throughout their care and into the survivorship period. Additionally, the navigator can assist patients in better understanding the treatment plan their physician has created by connecting them with resources specific to their diagnosis.

It will be imperative to continue identifying barriers that may be present for patients as early as possible to avoid any delays or disruptions in their care. Patients who are facing a new cancer diagnosis are often understandably very overwhelmed and having a single point of contact who can assist with coordination of appointments among several providers can be an asset to them. In the coming year as we continue to face challenges related to the ongoing pandemic, it will also be important to create additional awareness of the navigation program to ensure that all patients who may benefit from assistance can be reached out to by the navigator.

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 and 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, Cancer Registrar 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.

Prior to weekly tumor board, a list of pertinent clinical trials are made available to our providers for these patients. These clinical trials are offered at our affiliated institution, Beth Israel Deaconess Medical Center.

Despite the ongoing pandemic in 2021, clinical trial patients seem to be holding steady. We have had a total of ten patient enrolled in trials in Boston hospitals. We will continue to screen for more as our Boston bound patients return to Brockton to continue treatment.

Rehabilitative and Support Services: Oncology Rehabilitation Program

Linda McAlear

A cancer diagnosis can be traumatic, and so can life-saving treatments. Chemotherapy, radiation therapy, and surgery can harm 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 providephysical 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 2014 , the outpatient department added services for treatment of lymphedema which may occur following treatment of certain cancers. In 2021, Pelvic Health services was added to the treatment options provided, allowing us to expand our ability to provide care to our oncology clients.

Our Oncology programs 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. Our locations in Brockton and surrounding areas improves access for these services for our patients. Rehabilitation services for neurological 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.

Social Work Services

Lisa Rule, LICSW, OSW-C

The diagnosis of cancer can have profound impacts in many areas of a patient's life. Beyond dealing with the physical issues related to cancer and treatment, patients and their loved ones must deal with the emotional impact and the effects on one's relationships with family, friends, work, and community. As patients and families come to terms with their diagnoses and prepare for treatments, they must adapt to a "new normal." Oncology social workers are licensed mental health professionals that offer support and assistance with emotional, social, and practical needs. In 2018, Signature Healthcare hired a full-time, dedicated social worker for the Greene Cancer Center. The Oncology Social Worker is available to all cancer patients and families for emotional support, short-term counseling and education, connection to community resources, navigating questions about insurance and employment, and referrals to outside agencies when indicated. In addition, she provides a direct link between the outpatient oncology care team and the inpatient social work department at Signature Healthcare Brockton Hospital, as well as coordination with social work team at our affiliate, Beth Israel Deaconess Medical Center.

All patients receiving intravenous chemotherapy are seen by the oncology social worker at the beginning of their treatment, typically on their first day. Initial meetings will consider patient coping, family support, financial stressors, mental health concerns, and patient understanding. All patients with a cancer diagnosis will complete a NCCN Distress Thermometer, which measures the level of distress patients may be experiencing in multiple areas. Social work follows up individually with patients who indicate higher levels of distress.

The oncology social worker supports patients with emotional, social, and concrete needs. If patients are struggling to cope with their diagnosis or illness, she is available for support and counseling. She facilitates a monthly cancer support group, currently virtual due to pandemic. If ongoing community support is needed, appropriate referrals can be made. If patients have financial concerns due to medical bills or an inability to work during treatment, social work can advise on the process of applying for disability as well as assist patients in applying for grants to offset the expenses surrounding cancer treatment. In 2021, she assisted patients in obtaining nearly $30,000 in outside grants. As patients complete active treatment and move towards survivorship, the oncology social worker is available to support their transition. She continues to be active in developing new resources for cancer survivors who have completed active cancer treatment.

In 2021, oncology social work met with over 265 patients. The most common diagnosis among these patients was breast cancer; however, many other types of cancer were seen, including lung, colorectal, prostate, hematologic cancers, and head and neck cancers, among others. The most common issues identified were emotional/family support needs and financial concerns.

In 2021, the oncology social worker obtained certification in oncology social work (OSW-C), which indicates advanced experience and competence in the field. The oncology social worker was actively involved in researching and obtaining new transportation services for our patients, including a new relationship with Uber Health. She is also developing an information class for newly diagnosed patients.

2021 Nutrition Annual Report

Amanda Fyotek MS, RD, LDN

- A registered and licensed dietitian is available 24 hours per week to provide care to the Greene Cancer Center's patients. Services range from weight maintenance counseling, symptom management of anti -cancer treatments and nutrition counseling for survivorship.

- Patients are referred to the dietitian, per the clinical judgment of the physician or nurse, for issues such as diagnosis, weight loss, weight gain, diminished appetite, electrolytes abnormalities, and uncontrolled GI symptoms, as well as by patient request.

- The Malnutrition Screening Tool (MST) has been incorporated into Meditech to screen for high risk patients based on appetite and weight loss. Cancer site is also used to identify patients who are at higher risk for nutrition related complications.

- From January 2021 – December 2021, nutrition services have completed **100** initial assessments, **153** follow-up assessments, and **87** brief notes of patients with different types of cancers. Of the 100 initial assessments, the break down includes:

    - Head and Neck: 16 (16%)
    - Lung: 15 (15%)
    - Breast: 20 (20%)
    - Colon: 5 (5%)
    - Pancreatic: 10 (10%)
    - Prostate: 2 (2%)
    - Esophageal: 13 (13%)
    - Lymphoma: 2 (2%)
    - Renal: 2 (2%)
    - Other GI tract: 4 (4%) (Including: stomach, small bowel, rectal)
    - Liver: 0
    - Hematology: 0
    - Other: 11 (11%) (Including: brain, leukemia, mesothelioma, ovarian, cholangiocarcinoma, multiple myeleoma, skin, myelodysplastic syndrome)

American Cancer Society Collaboration

Lindsay Nicholson, 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 and 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

Hilary Lovell

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. A sound support system can help a patient feel less alone, understand their options for better 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 essential, 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, 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.

Spiritual support is available for patients in both the inpatient and outpatient settings. For patients who qualify, financial assistance is available. Signature Healthcare's "Hope Fund" offers assistance for patients experiencing transportation challenges, work-related issues, and financial or insurance problems. Staff from the Greene Cancer Center work with the community to find resources to support patients and their families.

Free Cancer Screenings for the community: In collaboration with the Commission on Cancer, Signature Healthcare participated in the Screening PDSA Project in 2021.

Cancer Education in the Community-

- In partnership with the City of Brockton Mayor's office and America's Food Basket grocery store, Women's Imaging staff provided education on the importance of annual mammograms and scheduled mammography appointments throughout the week of October 18, 2021.

- The theme of Signature Healthcare's Fall 2021 issue of "Wellness Together" was "A Focused Approach to Cancer Care and Beyond". This issue included a patient testimonial from a breast cancer survivor and also provided education on the importance of your annual mammogram.

- Educational compilation videos were created and posted to the Signature Helathcare website in 2021. These videos focused on Melanoma as well as Lung Cancer prevention and care.

Survivorship Support

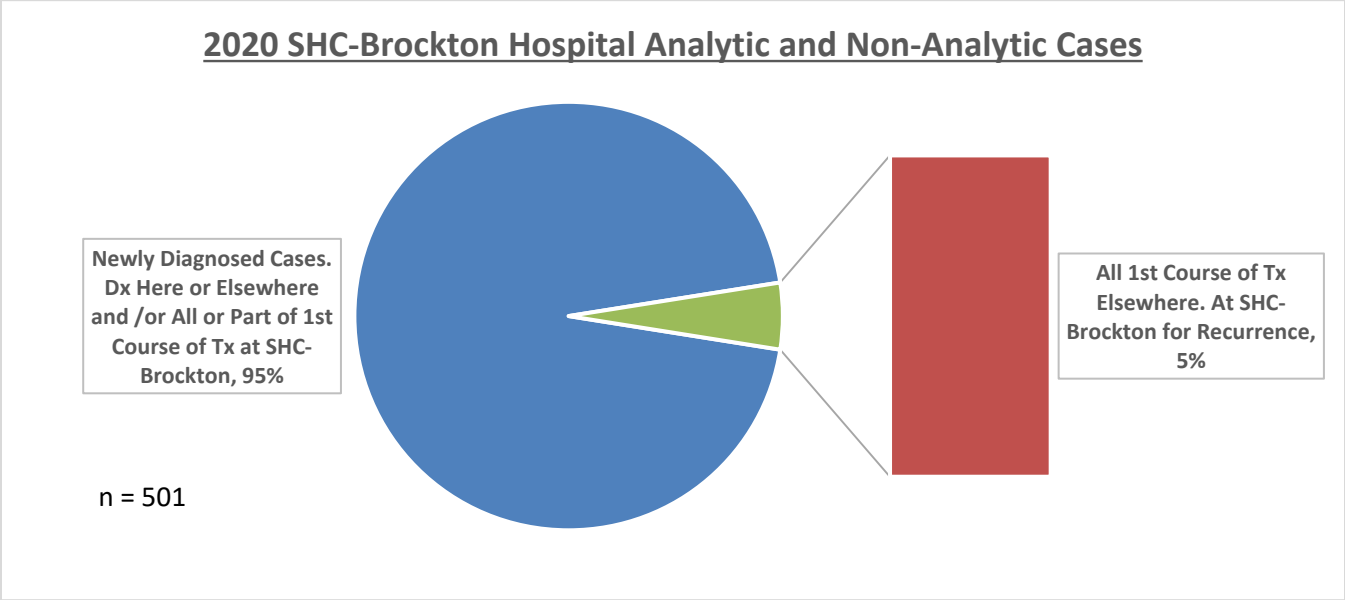
According to the Livestrong Foundation, "more than 10 million cancer survivors live in the United States today, and three out of four families will help care for a family member with cancer." Support for survivors is a critical need that is too often overlooked. Signature Healthcare is addressing that 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 can link survivors and their family members with programs to address their needs as they move through the process of diagnosis, treatment and into survivorship.

Cancer Registry Statistical Summary – Reflecting 2020 Data

Avis Watson, CTR, Cancer Registrar

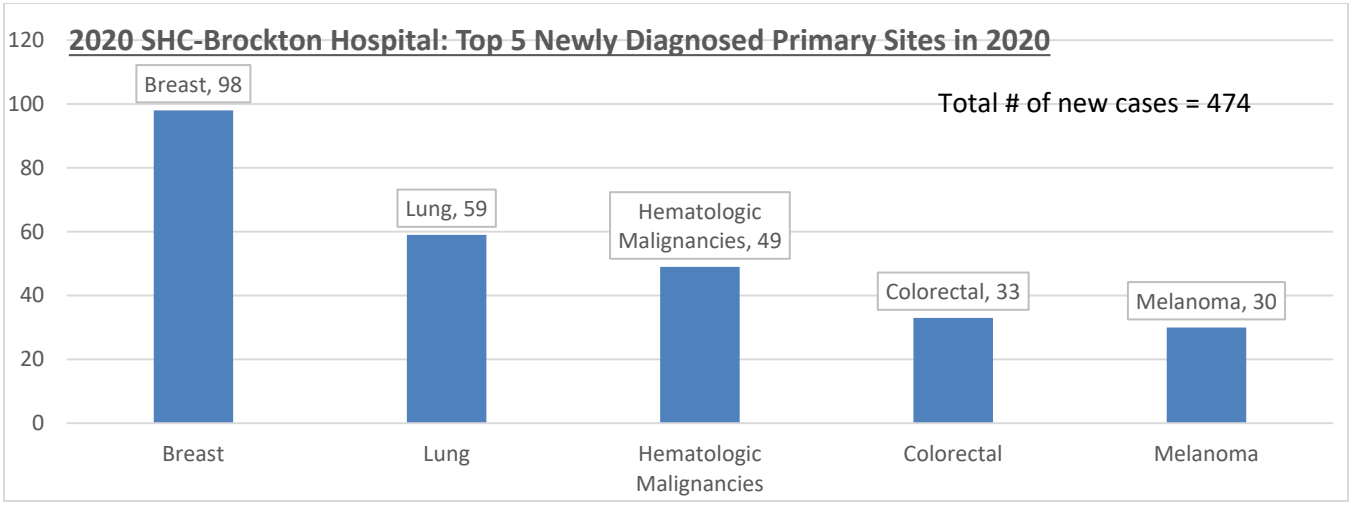
The Signature Healthcare Cancer Registry maintains data on all patients diagnosed and/or treated for cancer. All cancer cases are reported to the Massachusetts cancer registry as required by law.

A total of 514 cancer cases were added to the Signature Healthcare Brockton Hospital Cancer Registry database in 2020. Of those, 474 cases (95%) were diagnosed and/or received all or part of their first course of treatment at Signature Healthcare Brockton Hospital (analytic cases). Twenty-seven cases (5%) had their first course of treatment elsewhere and received subsequent treatment at Signature Healthcare Brockton Hospital (non-analytic cases).



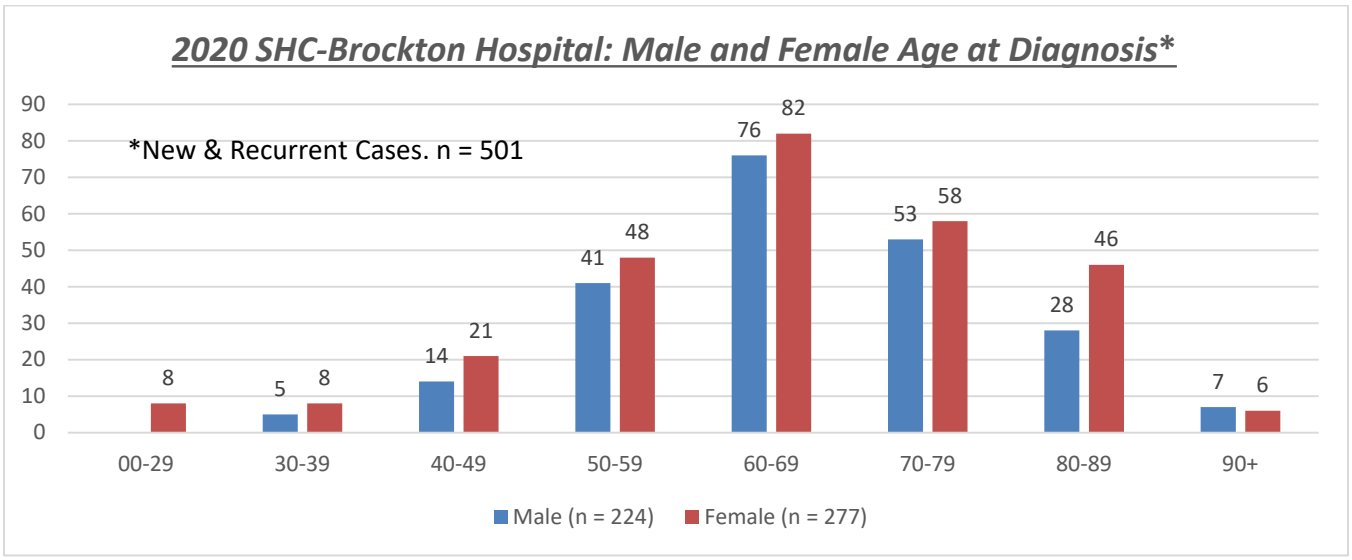
Top 5 Primary Cancer Sites:

Breast cancer (98 cases) remains the most frequent site of cancer diagnosed and/or treated at Signature Healthcare Brockton Hospital in 2020 and this is comparable with national data. Lung cancer is the second most frequent site in 2020 with 59 diagnosed cases. Hematologic malignancies (49 cases), Colorectal (33 cases), and Melanoma (30 cases) round out the five most frequent cancer diagnoses.



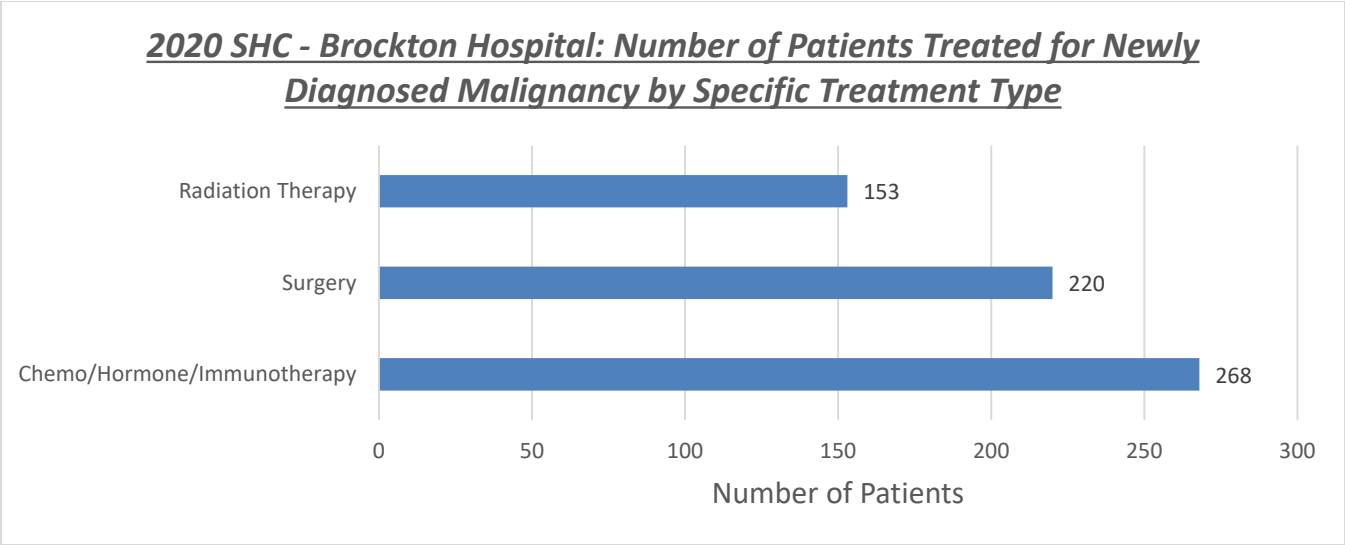
Age Distribution All Sites - Male and Female

A total of 501 new and recurrent cases were diagnosed/and or treated in 2020. 224 were males (44.7%) and 277 (55.3%) were females.



First Course of Treatment: (Excludes patients diagnosed here with all 1st course of treatment elsewhere)

324 patients received all or part of their first course of treatment at Signature Healthcare Brockton Hospital for newly diagnosed malignancies. First course of treatment included: Chemotherapy/Hormone Therapy/Immunotherapy (268 cases), Surgery (174 cases) and radiation therapy (153 cases). 68 patients did not receive first course of treatment: (45 patients refused treatment/treatment was not recommended, 18 patients were placed on active surveillance, and 5 patients were lost to follow-up.)


2020 SHC - Brockton Hospital: Number of Patients Treated for Newly Diagnosed Malignancy by Specific Treatment Type
Radiation Therapy
153
Surgery
220
Chemo/Hormone/Immunotherapy
268
0
50
100
150
200
250
300
Number of Patients

2021 Palliative Care Annual Report

Susan Lee, NP

Signature Healthcare Brockton Hospital (SHBH) and the Greene Cancer Center is pleased to partner with Old Colony Hospice and Palliative Care, a member of our community for over 40 years, to provide palliative care services to patients with serious illness and their families. Palliative care, also called supportive care, had its roots in hospice care but differs from hospice because palliative care is provided from diagnosis through treatment, not just end-of-life. It aims to help persons with serious illness live well by alleviating pain and other distressing symptoms, such as nausea, shortness of breath, or loss of appetite. Advanced practice registered nurses, Susan Lee, NP, Susan Mugford, NP, and Carol Rossi, NP and their collaborating physician, Helena Thornley, MD, are credentialed as members of the medical staff at SHBH to provide specialty palliative care consultation to our inpatients who may have Covid, heart failure, COPD, dementia, kidney disease, cancer, Parkinson's disease and other conditions. Through specialized assessments and by engaging an interdisciplinary team of social workers, case managers, nurses, chaplains, and pain management specialists, the NPs create a plan of care to help patients/families be fully informed about options for care, to reduce suffering, and to get the help they need to live well in ways that are important to them. In 2021, the palliative care NPs completed consults on 230 hospitalized patients at SHBH. The NPs also provide palliative care services in the home to patients with serious illness who are frail or homebound, always in close communication with their primary care providers and specialists.

Standard 7.2 Monitoring Compliance with Evidence-Based Guidelines

Lisa Manera, MD

Colon Cancer Treatment - 2020

The Cancer Committee reviewed the treatment of patients evaluated in the Greene Cancer Center in 2020 for colon cancer. This included 14 patients in total, three of whom have metastatic disease.
The de-identified patient data are listed at the end of this report.

Surgical resection is the only curative treatment for locoregional colon cancer. Choices for adjuvant therapy for patients with resected, nonmetastatic colon cancer depend on the stage of disease. Eleven patients with localized, Stage 0 –III, colon cancer were seen and met NCCN guidelines.

Per NCCN guidelines:
Patients with stage I disease and MSI-high stage II disease do not require any adjuvant therapy.
Patients with low-risk stage II disease that is microsatellite-stable (MSS) or MMR-proficient can be observed without adjuvant therapy or considered for capecitabine or 5-FU/leucovorin.

Patients with stage II disease that is MSS/pMMR and at high risk for systemic recurrence, defined as those with poor prognostic features, including T4 tumors (stage IIB/IIC); poorly differentiated/undifferentiated histology; lymphovascular invasion; PNI; tumor budding; bowel obstruction; lesions with localized perforation or close, indeterminate, or positive margins; or inadequately sampled nodes (< 12 lymph nodes), can be considered for 6 months of adjuvant chemotherapy with 5-FU/LV, capecitabine, or FOLFOX, or 3 months of adjuvant chemotherapy with CAPEOX (capecitabine and oxaliplatin). Observation without adjuvant therapy is also an option in this population.

For patients with low risk (T1-3, N1) stage III disease, the preferred adjuvant treatment options are 3 months of CAPEOX or 3 to 6 months of FOLFOX. Other treatment options include 6 months of single-agent capecitabine or 5-FU/LV in patients for whom oxaliplatin therapy is believed to be inappropriate.
For patients with high-risk (T4, N1-2 or any T, N2) stage III disease, the preferred adjuvant treatment options are 6 months of FOLFOX or 3 to 6 months of CAPEOX.

Metastatic colorectal cancer. Approximately 50-60% of patients diagnosed with colorectal develop colorectal metastases, and 80-90% of these patients have unresectable liver metastases.
Per NCCN guidelines for metastatic colorectal cancer, the current management of disseminated metastatic colorectal cancer involves various active drugs, either in combination or as single agents. The choice of therapy is based on consideration of the goals of therapy, the type and timing of prior therapy, the mutational profile of the tumor and the differing toxicity profiles of the constituent drugs.

Three patients with metastatic colorectal cancer were treated at the Greene Cancer Center in 2020. All 3 met NCCN guidelines (1 patient treated with FOLFOXIRI/Bevacizumab, 1 with FOLFOX, and the 3rd, who had neuroendocrine cancer of the ileocecal valve, treated with octreotide).

Metastatic colon cancer:
DW: diagnosed with bilateral breast cancer (ER+/Her 2+) and metastatic Kras mutant colon cancer (+omental mets). +disease progression on FOLFOX/Herceptin, now receiving FOLFIRI/Herceptin
VR: She achieved an excellent partial response to bevacizumab/FOLFOXIRI. Patient declined maintenance bevacizumab/5-FU/leucovorin. Opted for serial scans.
ZM: Colonoscopy 8/20/19 showed a 4cm mass in the ileocecal valve, pathology showing neuroendocrine tumor morphically similar to her liver biopsy. Receiving monthly octreotide. Also with high risk MDS on dacogen.

Localized colon cancer:
EB: colonoscopy polypectomy specimen showed moderately differentiated invasive adenocarcinoma, 1 cm in greatest dimension, involving the cauterized margin of resection. Tumor invaded the submucosa.

Lymphovascular vision was not identified. Carcinoma arose from a tubular adenoma. The polyp size was 1.2 cm. The deep margin was involved by invasive carcinoma. Patient seen by surgery. Expired (from sepsis/pneumonia)
LE: resected, stage I (T2N0) right sided adenocarcinoma. On surveillance.
ZS: Cecum, polypectomy: Tubular adenoma with high grade dysplasia/CIS with a minute focus suspicious, but not definitive for, early intramucosal carcinoma.
MH: Stage III colon cancer (T3, N1, M0) status post complete resection, status post 10 cycles of FOLFOX (cycle 11 was complicated by a severe oxaliplatin reaction). Patient lost to follow-up.
NH: Stage I sessile polyp with invasive adenocarcinoma (+ cancer at margin), status post right colectomy (no residual invasive adenocarcinoma, 0 of 15 tumor involved lymph nodes). On surveillance.
JM: 2. Colon, transverse, polypectomy: Tubular adenoma with high grade dysplasia and rare foci suspicious for intramucosal adenocarcinoma (possible invasion into but not beyond lamia propria). High grade dysplasia was not present at cauterized surgical resection (approximately 1 cm from the margin)
Colon, splenic flexure, polypectomy: Small focus of intramucosal adenocarcinoma (invasion into but not beyond lamina propria),arising in a tubular adenoma with high grade dysplasia. Intramucosal adenocarcinoma is 0.4-0.5 cm in greatest dimension and 0.8 cm away from
the cauterized resection margin. No lymphovascular invasion identified.
On surveillance with GI.
JP: Completely resected stage III colon cancer (T2, N1, M0). Adjuvant FOLFOX recommended but could not be given in setting of lung cancer requiring chemotherapy.
MR: Malignant sessile colon polyp, status post left colectomy (no residual cancer was noted, 0 of 19 tumor involved lymph nodes).
RS: synchronous ascending colon and transverse colon cancer, status post colectomy, final pathology for both tumors are T3N0 with macroscopic perforation. He was recommended adjuvant chemotherapy which he declined.
JW: Resected stage III colon cancer (T3, N1, 1 of 15 tumor involved lymph nodes, sigmoid colon primary, moderately differentiated adenocarcinoma, no adjuvant chemotherapy due to poor performance status.
CZ: Resected stage III colon cancer (T3, N1a, M0) an 8 cycle course of adjuvant oral Xeloda was recommended. The patient received 1 cycle and was then treated for perforated duodenal ulcer. No further chemo.