Shore Medical Center

2012 Cancer Program Annual Report
# Table of Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cancer Committee Members</td>
<td>1</td>
</tr>
<tr>
<td>Cancer Committee Chairman’s Message</td>
<td>2</td>
</tr>
<tr>
<td>Cancer Liaison Physician’s Message</td>
<td>3</td>
</tr>
<tr>
<td>Cancer Program Administrator’s Message</td>
<td>3</td>
</tr>
<tr>
<td>Radiation Oncology Services</td>
<td>3</td>
</tr>
<tr>
<td>Diagnostic Imaging Services</td>
<td>4</td>
</tr>
<tr>
<td>Clinical Laboratory Services</td>
<td>4</td>
</tr>
<tr>
<td>Patient Navigation</td>
<td>4</td>
</tr>
<tr>
<td>Cancer Education, Prevention, and Early Detection</td>
<td>4</td>
</tr>
<tr>
<td>Quality Improvement and Accountability</td>
<td>5</td>
</tr>
<tr>
<td>Cancer Conference</td>
<td>6</td>
</tr>
<tr>
<td>Cancer Registry</td>
<td>6</td>
</tr>
<tr>
<td>Cancer Registry Statistics</td>
<td>7</td>
</tr>
<tr>
<td>Site Specific Study: Breast Cancer</td>
<td>9</td>
</tr>
</tbody>
</table>
## Cancer Committee Members

<table>
<thead>
<tr>
<th>Physicians</th>
<th>Non-Physicians</th>
<th>Non-Physicians</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pathology</strong>&lt;br&gt;Robert J. Beach, MD&lt;br&gt;Chairman&lt;br&gt;James M. Pond, MD</td>
<td><strong>Program Administrator</strong>&lt;br&gt;Donna Cericola, RN, OCN</td>
<td><strong>Nursing/Medical Oncology</strong>&lt;br&gt;Kelly Duma, RN, BSN</td>
</tr>
<tr>
<td><strong>Medical Oncology</strong>&lt;br&gt;Julianne W. Childs, DO&lt;br&gt;Robert M. Goldberg, MD</td>
<td><strong>American Cancer Society</strong>&lt;br&gt;Colleen Thornton, MA</td>
<td><strong>Palliative Care</strong>&lt;br&gt;Maureen Deely, RN, MSN</td>
</tr>
<tr>
<td><strong>Radiation Oncology</strong>&lt;br&gt;Vasthi Wilson, MD</td>
<td><strong>Cancer Program</strong>&lt;br&gt;Anne Marie Taggart, RN, OCN</td>
<td><strong>Pharmacy</strong>&lt;br&gt;Timothy Guse, PharmD&lt;br&gt;Robin Keyack, RPh</td>
</tr>
<tr>
<td><strong>Diagnostic Imaging</strong>&lt;br&gt;Richard Menghetti, MD</td>
<td><strong>Cancer Registry</strong>&lt;br&gt;Michelle Bob, RHIT, CTR</td>
<td><strong>Quality Improvement</strong>&lt;br&gt;Valerie DeJoseph, MS, RDMS&lt;br&gt;Donna Stephens, RN, CPHQ</td>
</tr>
<tr>
<td><strong>Surgery</strong>&lt;br&gt;Jerry Batley, MD&lt;br&gt;David May, MD</td>
<td><strong>Cancer Education/Early Detection</strong>&lt;br&gt;Marguerite Scanny</td>
<td><strong>Radiation Oncology</strong>&lt;br&gt;Donna Kilgour, RT(R)(T)</td>
</tr>
<tr>
<td><strong>Advanced Pulmonary Diagnostic Center</strong>&lt;br&gt;Bennett Ojserkis, MD</td>
<td><strong>Clinical Research</strong>&lt;br&gt;Marie Gitsas, RN, OCN</td>
<td><strong>Social Services</strong>&lt;br&gt;Victor Gazzara, MSW, OSW-C&lt;br&gt;Iraida Melendez, MSW</td>
</tr>
<tr>
<td><strong>Hospitalist Program</strong>&lt;br&gt;Charles Roche, MD</td>
<td><strong>Discharge Planning/Hospice Representative</strong>&lt;br&gt;Barbara Juzaitis, RN, MSN</td>
<td><strong>University of Pennsylvania Cancer Network</strong>&lt;br&gt;Joy Sutter, MSW, MBA</td>
</tr>
<tr>
<td><strong>Diagnostic Imaging</strong>&lt;br&gt;Derek Suragh, PhD, RT(R)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
A message from:
Robert J. Beach, MD
Cancer Committee Chairman

The Cancer Program at Shore Medical Center focused its efforts in 2012 on improving our program, clinical approaches to care, community outreach, and monitoring of quality. The major accomplishments in each of these areas are as follows:

**Programmatic accomplishments.** The major programmatic improvement in 2012 was the opening of the Advanced Pulmonary Diagnostic Center with Dr. Bennett Ojserkis appointed as the new department’s Medical Director. Throughout 2012, the Cancer Committee prepared for next year’s upcoming survey by the American College of Surgeons Commission on Cancer (CoC) using their new and revised 2012 Cancer Program Standards. Although several of the new CoC standards categorized as “Continuum of Care Services” are not required until 2015, Shore Cancer Center proactively aligned its efforts to fulfill the standards as written. As a result, the Cancer Center has an established patient navigation process with resources to address health care disparities and barriers to care for patients; on-site psychosocial distress screenings and a referral system for the provision of psychosocial care; and survivorship care plans that are given to patients upon completion of treatment.

**Clinical accomplishments.** Per the recommendations of several members of the Cancer Committee, cancer conferences that are dedicated to breast cancer cases were started in the fall of 2012. These conferences were attended by surgeons, medical oncologists, radiation oncologists, pathologists, radiologists, oncology nurses, radiation therapists, social workers, a dietitian, and a physical therapist trained in lymphedema management. As a result of their effectiveness in improving the planning phase of patient care, the physicians recommended that the conferences be held weekly. Based on the current “Arm and Hand Care Lymphedema Risk Reduction Practices” by the National Lymphedema Network, the Cancer Center’s educational materials for patients and physician orders were updated and revised. In the Diagnostic Imaging Department, an ultra low-dose CT scanner was acquired and the provision for a mobile PET/CT unit was arranged.

**Community outreach.** In order to ensure that the cancer-related outreach programs are meeting the needs of the community, a community health needs assessment was conducted in 2012. The three major barriers for accessing healthcare were identified as language, poverty, and lack of insurance. The Cancer Center’s Cancer Community Outreach Department has had a history of proactively addressing these barriers and meeting the health care needs of the community through the grant-funded NJ Cancer Education and Early Detection Program in Atlantic County, the grant-funded Atlantic County Healthy Living Coalition based on the NJ Comprehensive Cancer Control Plan, and the hospital-funded Tobacco Prevention and Treatment Program.

**Quality Improvement.** The Cancer Committee conducted in-depth reviews on four cancer sites and presented the findings for analysis at the Oncology Practice Guidelines Conferences using the guidelines of the National Comprehensive Cancer Network as the criteria for best practice. When compared to external quality measures documented in the Cancer Program Practice Profile Report (CP3R) for cancer cases diagnosed in 2010, Shore Cancer Program exceeded the performance rates of all of the Commission on Cancer (CoC)-approved cancer programs in the State of NJ.
Robert J. Beach, MD  
American College of Surgeons Cancer Liaison Physician

Shore Cancer Program was notified that my 3-year appointment as the Cancer Liaison Physician was approved by the Commission on Cancer (CoC) effective July 1, 2012. In this role, my responsibilities will include monitoring and interpreting the cancer program’s performance using the National Cancer Data Base (NCDB) data; reporting on CoC activities and initiatives to the Cancer Committee, and serving as the liaison for the cancer program with the American Cancer Society. In preparation for this role, I completed a CoC orientation through their on-line educational portal.

Donna Cericola, RN, OCN  
Administrative Director, Oncology Services

On June 19, 2012, Shore Cancer Center enhanced its provision of healthcare services with the opening of the 1st Advanced Pulmonary Diagnostic Center in Southern New Jersey. The goal of this new department is to properly address the growing number of patients being diagnosed with tiny lesions, or nodules, in their lungs via CT scans. Recognizing the fact that more than 90% of these lung nodules are benign, this new service provides patients with appropriate consultation to determine the best plan for monitoring and evaluating these nodules while minimizing the use of unnecessary invasive medical and surgical procedures.

Shore Cancer Center was delighted to welcome Dr. Bennett Ojserkis as the Medical Director of the Advanced Pulmonary Diagnostic Center. Dr. Ojserkis is the region’s only pulmonologist with specialized training in the use of Electromagnetic Navigation Bronchoscopy (ENB) and Endobronchial Ultrasound (EBUS), which are minimally invasive procedures that are used to diagnosis lung nodules. ENB utilizes electromagnetic technology and virtual, three-dimensional bronchial mapping. EBUS utilizes ultrasound display providing real-time imaging of the surfaces of the lungs and lymph nodes.

**Radiation Oncology**

The radiation oncology department contains a large-bore CT simulator and a Varian 21EX Linear Accelerator which can deliver standard and conformal external beam radiation therapy as well as intensity modulated radiation therapy (IMRT). Image-Guided Radiation Therapy (IGRT) is accomplished through the linear accelerator’s on-board imager (OBI) utilizing cone-beam CT and KV imaging.

The department is accredited by the American College of Radiology.
Diagnostic Imaging Services
Diagnostic Imaging Services include nuclear medicine, ultrasound, angiography, digital radiography, mammography, DEXA, CT, MRI, and PET/CT. The American College of Radiology accredits mammography services at SMC, including Full-Field Digital Mammography and Digital Stereotactic. In July 2012 PET/CT was added as a new service to Shore Medical Center’s Diagnostic Imaging Department. The new service has been beneficial to Shore Medical Center and the patients we take care of, by providing them with the continuity of care they deserve.

Clinical Laboratory Services
Shore Medical Center provides a full range of clinical laboratory services. Tissue biopsies, blood, and body fluids are tested in our lab for maximum control and quick turnaround. The Clinical Laboratory at SMC is accredited by the College of American Pathologists and the Centers of Medicare and Medicaid Services (CLIA). In addition to on-site services, outpatient laboratory services are also available at convenient sites in Ocean City, Mays Landing, and Northfield.

Patient Navigation
Patient navigation in cancer care at Shore offers individualized guidance and support to people faced with a suspicious finding or a diagnosis of cancer. The patient navigation service is engineered to meet the needs of both patients and their family members. Every patient participating in the program receives personalized patient-centered care.

One-on-one sessions with a trained nurse navigator provides information to guide the patient through the treatment process, helping them understand the surgery, procedure, and/or treatment that may be performed and addressing any questions or concerns.

Cancer Education, Prevention, and Early Detection
The Cancer Committee monitors the provision of community-based cancer education, prevention, and early detection programs. These programs are provided and coordinated by the Cancer Community Outreach Department.

In 2012, 45 cancer-related programs and events were held in various locations in our community. 2,685 members of our community were provided with information about cancer prevention and early detection at these programs.

Shore Medical Center has been the lead agency for the NJ Cancer Education and Early Detection Program (NJ CEED) in Atlantic County since July of 1997. This program, which is supported by federal and state grant funds, provides screening and diagnostic procedures for breast, cervical, prostate and colorectal cancers for the underserved. The NJ CEED staff, located in the Cancer Center, managed the provision of 1,362 cancer screenings in 2012 for Atlantic County underserved people.
To further enhance the efforts of cancer prevention, the hospital is the lead agency for the implementation of the “New Jersey Comprehensive Cancer Control Plan”. During the first half of 2012 this plan was implemented through the efforts of the Atlantic County Healthy Living Coalition. One example in 2012 of a coalition project is “Sustainable Me”; a middle school assembly program in which 994 students were educated on a variety of topics such as nutrition, skin cancer, cancer basics, physical activity, the importance of not smoking and more through interactive mini lessons and workstations. In July 2012 the grant funding changed with new directives. The coalition was regionalized to create the Cape Atlantic Coalition for Health; a regional chronic disease coalition representing over 30 healthcare agencies, civic groups, and community organizations in the Cape Atlantic area. During the summer of 2012 three state-wide melanoma screenings called “Choose Your Cover” were provided to the regional area. Events were held in Brigantine, City of Cape May and Margate in which 181 people were screened and educated on sun safety. Additional long-term projects were begun in 2012 which focus on increasing colorectal cancer screening and decreasing secondhand smoke exposure.

Shore Medical Center received additional funding from the New Jersey Office of Cancer Control and Prevention to lead the southern region of the state in implementing “The Barbershop Initiative” in 2007. This five year initiative was designed to train barbers as lay health educators on the subject of prostate cancer screenings. The project ended in June 2012 at the completion of the project. There were 1,585 patrons educated and encouraged to be screened for prostate cancer in 2012.

State funding for Comprehensive Tobacco Control, generally known as the “Quit Centers” has not been continued; however Shore Medical Center values the services offered through this program. Therefore, the Cancer Center has continued individual smoking cessation counseling with cancer patients, NJ CEED patients and community members. The program is now called the Shore Medical Center’s Tobacco Prevention and Treatment Program.

Quality Improvement

Cancer Committee used the National Comprehensive Cancer Network (NCCN) Practice Guidelines in Oncology and the National Cancer Data Base (NCDB) Hospital Comparison Reports to measure quality and patient outcomes on the following types of cancer in 2012:

- Melanoma
- Prostate Cancer
- Bladder Cancer
- Breast Cancer
- Colon Cancer
- Rectal Cancer

Cancer Committee also used the Commission on Cancer’s Cancer Program Practice Profile Report (CP3R) to measure quality on the following types of cancer in 2012:

- Breast Cancer
- Colon Cancer
- Rectal Cancer
In 2012, members of the Cancer Committee implemented improvements that directly improved patient care. These improvements included the following:

- Expanded patient care services by opening the Advanced Pulmonary Diagnostic Center
- Improve the management of lymphedema based on the new guidelines by the National Lymphedema Network
- Enhanced the provision of Diagnostic Imaging services through the installation of an ultra low-dose CT and an on-site, mobile PET/CT

**Cancer Conference**

Shore Medical Center’s Cancer Program’s Henry Seidel, MD Cancer Conferences are an essential forum for prospective review of cancer cases and multidisciplinary involvement in the patient management process. During these conferences, the cases presented included the hospital’s five major sites, cases with unusual sites and histologies, and difficult management issues.

American Joint Committee on Cancer (AJCC) Stage and National Comprehensive Cancer Network (NCCN) Clinical Practice Guidelines in Oncology were referenced for 100% of the cases during these conferences. Discussion of the availability of clinical trials for each case presented was initiated in February 2012. For the remainder of the year, 100% of the cases presented also had the availability of clinical trials discussed. Each conference in 2012 was designated for a maximum of 1 AMA PRA Category I Credit by the Perelman School of Medicine at the University of Pennsylvania.

**Cancer Registry**

The Cancer Registry is an important component of the Cancer Care Program and is responsible for collecting, reporting, following, and maintaining the data of all patients diagnosed and/or treated with cancer at Shore Medical Center.

The data collected in the Registry is reported to the New Jersey State Cancer Registry, as required by law, and to the National Cancer Data Base (NCDB), as required for American College of Surgeons (ACoS) Commission on Cancer (CoC) accreditation. All data is private and confidential and the Registry staff strictly adheres to hospital-wide confidentiality policies.

Physicians and staff at SMC routinely utilize aggregate data for retrospective quality improvement review and initiatives, as well as outcomes analysis. Data collected in the Registry database is regularly reviewed for accuracy by physician members of the Cancer Committee to assure quality data is being collected and maintained at all times.

In 2012, the Registry continued to maintain compliance with CoC standards, including timely abstracting of cases, as well as maintaining lifetime annual follow-up rates within the required standards.

The Cancer Registry at SMC is managed by Precyse and is staffed by a Cancer Data Coordinator, who is a Certified Tumor Registrar (CTR). Registry staff routinely receives national continuing education in oncology data management and maintains membership in the National Cancer Registrar’s Association (NCRA) organization.
2012 Cancer Registry Statistics

In 2012, SMC accessioned 472 new cases into the Cancer Registry database. Of those cases, 423 were analytic, meaning they were diagnosed and/or received all or part of their first course of treatment at SMC, and 49 were non-analytic, meaning they were initially diagnosed and treated elsewhere but presented to SMC for subsequent treatment. Although the raw data has not been subjected to statistical analysis, the following data is being presented per the recommendations of the CoC.

The top five analytic sites at SMC in 2012 were lung, breast, colorectal, bladder, and melanoma, which remained consistent with the top 5 sites from last year.

![Most Frequent Sites 2012](image)

Of the 423 new analytic cases, 52% were female and 48% were male. Gender distribution of the top five sites is illustrated below.

![Top 5 Sites By Gender 2012](image)
The following graph shows the majority of new cancer cases diagnosed at SMC occurred in Stages 0, I, and II. As survival studies have show, diagnosing cancer in earlier stages of disease is particularly important for successful treatment, and is the primary reason that SMC is dedicated to providing cancer education, prevention, and early detection to members of the community.

Below is a comparison between SMC, New Jersey state, and national data from the 2012 American Cancer Society’s Cancer Facts and Figures. The total number of Colorectal, Bladder, and Melanoma cases are very close in comparison with state and national data; however Lung and Breast cases are higher at SMC.
Site-Specific Study: Breast Cancer
2008-2012

The report on breast cancer is the result of a collaborative effort of two physician members of the Cancer Committee: Robert Beach, MD, Pathologist and Julianne Childs, DO, using data from the American Cancer Society, the National Cancer Data Base, and Shore Medical Center’s Cancer Registry provided by Michelle Bob, RHIT, CTR.

Overview
According to the American Cancer Society’s 2012 Cancer Facts and Figures, breast cancer is the most frequently diagnosed cancer in women. In 2012, it’s estimated that there will be 226,870 new invasive breast cancer cases diagnosed in women in the United States, in addition to 63,300 non invasive cases, and another 2,190 cases of breast cancer diagnosed in men. Of that number, an estimated 6,970 new cases will be diagnosed in New Jersey female residents.

Between 2008 and 2012, the Cancer Registry at Shore Medical Center accessioned 423 new breast cancer cases into their database, 99% of which were women.

Etiology and Risk Factors
Sex, age, strong family history, reproductive history, and inherited genetics are some of the risk factors associated with developing breast cancer. A long menstrual history, high breast tissue density, never having children, or having the first child after the age of 30, are all associated with an increased risk, as are being overweight, physically inactive, consuming one or more alcoholic drinks per day, or prolonged usage of menopausal hormone therapy (MHT).

It’s estimated that 5%-10% of all breast cancer cases can be attributed to a cancer causing genetic mutation in the BRCA1 and BRCA2 genes. Studies have suggested that prophylactic removal of the breasts and/or ovaries significantly decreases the risk of developing breast cancer in BRCA1 and BRCA2 carriers. Women at increased risk for developing breast cancer due to strong family history of breast or ovarian cancer should consider genetic counseling to determine if genetic testing is appropriate.

Although the raw data has not been subjected to statistical analysis, the following data is being presented per the recommendations of the Commission on Cancer.
Breast cancer incidence generally increases with age. At SMC, the age at the time of diagnosis ranged from 24 to 95 years, with the peak incidence being in the fifth and sixth decades of life. These findings are fairly consistent with figures supplied by the National Cancer Data Base (NCDB), with a slightly higher incidence in the fifth decade being diagnosed at SMC, as illustrated in the following graph.

The population diagnosed and/or treated at SMC was predominantly Caucasian, followed by African American, Hispanic, Asian, and all other races. The chart below illustrates how data at SMC compares with that of the NCDB.
Signs and Symptoms

There are usually no symptoms associated with early stage breast cancer, and typically abnormalities are only detected on screening mammogram. For tumors that have grown large enough to palpate on clinical breast exam (CBE), however, some symptoms may include skin thickening and swelling, distortion, skin irritation, scaliness, tenderness, or nipple abnormalities, such as ulceration, discharge, or retraction. Cancerous tumors are often painless, and breast pain is usually the result of benign conditions caused by non-cancerous lumps, rather than early symptoms of cancer. All suspicious lumps should be biopsied for definitive diagnosis, however.

Early Detection and Diagnosis

The American Cancer Society recommends yearly mammograms for all women beginning at the age of 40. It’s estimated that mammography detects 80%-90% of breast cancer cases, sometimes several years prior to developing physical symptoms. And while mammograms are highly accurate, yearly clinical breast exams (CBE) are also essential for detecting any palpable abnormalities or changes within the breast. A CBE should be performed every 3 years for women in their 20’s and 30’s, and every year for women over the age of 40. It’s also important for women to make themselves familiar with the normal feel of their breasts, and to be able to identify any abnormalities or changes.

Pathology

Most breast cancers initially form within the terminal or lobular units of the breast. Non-invasive tumors, also called in situ, are confined within these ducts or lobules, and nearly all of these cancers can be cured with proper treatment. Invasive, or infiltrating tumors, are tumors that have broken through the duct or glandular walls and have invaded the surrounding breast tissue.

Consistent, unambiguous, and complete pathology reporting is essential for delivery of quality breast cancer care. As a result, the College of American Pathologists (CAP) has developed complete and standardized pathology reporting protocols for pathologists to utilize when reporting malignant tumors. The 90% accuracy rate set by the Commission on Cancer (CoC) as part of their accreditation process is regularly exceeded at SMC, as reflected in our routine physician quality assurance review.

Staging

The American Joint Committee on Cancer (AJCC) TNM staging classification is based upon the tumor size (T), lymph node involvement (N), and presence or absence of distant metastases (M). Once the TNM values are determined, a stage group can be assigned, with Stage 0 being the earliest stage, and Stage IV being the most advanced.

A sentinel lymph node biopsy can be used to help determine the stage of disease. Because a sentinel lymph node biopsy involves less extensive surgery and the removal of fewer lymph nodes than standard lymph node surgery, these types of biopsies limit extensive axillary dissection and subsequent lymphedema.
Between the years 2008-2012, patients diagnosed and/or treated with breast cancer at SMC were staged fairly consistent with national and state statistics. Greater than half of all cases were diagnosed early while Stage 0 or Stage I, while only 4% were diagnosed with the more advanced stage IV disease. The following chart identifies how the AJCC stage at the time of initial diagnosis at SMC compares with both national and NJ state figures.

![AJCC Stage at Diagnosis Chart]

**Treatment**

A central component for determining treatment options is identifying the full extent of disease, as well as knowing the biologic features of the tumor. Treatment options vary, based upon many factors, including patient age and co-morbid complications, menopausal status, clinical and pathologic characteristics of the tumor, tumor size and histology, hormone receptor and HER2 status, axillary lymph node status, stage at the time of diagnosis, presence or absence of metastasis, as well as patient preference.

In patients who are estrogen receptor (ER) positive and progesterone receptor (PR) positive, human epidermal growth factor receptor (HER2) negative and negative for lymph node involvement, a detailed analysis of their breast cancer is used to further determine whether they will benefit from chemotherapy. This analysis helps prevent the use of a modality of treatment that provides no benefit, as well as helps avoid both short and long term side effects that these treatments could cause. Current research is focused on the best means by which to analyze breast cancers more specifically so that more effective therapies can be chosen. An example of this focus in research is the use of platinum agents in triple negative breast cancer. The future holds exciting advances in breast cancer treatment for patients as a more detailed analysis of cancer cells results in more specific and individualized treatment.

Many patients opt for breast conservation therapy (BCT), which includes a lumpectomy followed by radiation therapy, while some patients prefer a total mastectomy. Studies have shown that long term survival rates for patients opting for BCT are similar to those who opt for total mastectomy, provided the cancer has not spread. In addition to surgery, treatment may also include chemotherapy, hormonal therapy, or targeted biologic therapy. Two or more methods are often used in combination for treatment.

As survival rates are equivalent among various treatment options, patient preference plays a major role in the treatment decision making process. The following chart illustrates how treatment at SMC compares with national data.
Conclusions

There are no guaranteed ways to prevent breast cancer, therefore mammograms are of vital importance, and are the single most effective method used for early detection. Women with increased risks should consider beginning mammogram screenings earlier than the age of 40, in addition to more frequent clinical exams.

Maintaining a healthy weight, engaging in regular physical activity, and limiting alcohol intake can all reduce the known risk factors associated with breast cancer.

While the incidence of breast cancer has continuously increased during the past several decades, mortality appears to be declining as a combined result of earlier detection and more effective treatment options.
References
5. National Cancer Data Base (NCDB), American College of Surgeons (ACoS) Commission on Cancer (CoC).