2019

CANCER ANNUAL REPORT



A WORD FROM OUR LEADERSHIP

We are pleased to present our 2019 Annual Report highlighting advances in state-of-the-art cancer care at Roper St. Francis Healthcare. Our goal is to fulfill our mission of healing all people with compassion, faith and excellence. To that end, we provide a range of cancer prevention services, screening, diagnostics, therapeutics, cancer patient support and survivorship.

Services Provided in 2019

- New cancer treatment facilities:
 - We opened Roper St. Francis Berkeley Hospital to care for our communities in Berkeley and Dorchester counties. We purchased a new TruBeam linear accelerator and have begun construction on a new radiation therapy department that is scheduled to become operational in 2021.
 - All of our medical oncology and infusion services in the West Ashley area were consolidated into our flagship Cancer Center on the campus of Bon Secours St. Francis Hospital.
- Our pharmacy department achieved compliance with new USP 800 pharmacy regulations.
- Outreach, prevention and screening programs for breast and colorectal cancer were held at Roper
 St. Francis Cancer Care in Charleston.
- Through a generous donation, the Laurel and Hank Greer Colorectal Cancer Program supported colorectal cancer prevention and screening.
- The Donna Fielding Cancer Wellness Center provided psychological and financial counseling, nutritional counseling, an exercise rehabilitation program, therapeutic massage, art and music therapy and pro bono legal services.
- We added 3D mammography at all five of our breast imaging centers.
- We emphasized coordinated, multidisciplinary cancer care anchored by dedicated case conferences
 attended by surgeons, radiation and medical oncologists, our cancer geneticist, diagnostic
 radiologists and pathologists. Individual conferences are dedicated to breast cancer, thoracic
 malignancies, hepatobiliary and pancreatic malignancies, genitourinary cancers and other solid
 tumors, including colorectal cancer and head and neck cancer.
- We continued our compliance with all of the standards mandated by the Commission on Cancer of the American College of Surgeons and maintained our accreditation.

- In collaboration with our primary care colleagues, we expanded our low-dose helical lung CT screening program that screened more than 1,200 at-risk individuals.
- We collaborated in a clinical trials program with Charleston Oncology.

This year we would like to highlight our continued efforts to provide state-of-the-art breast cancer care in our community. Plastic surgeon, Dr. Tracy Cordray, discusses modern breast reconstructive techniques. In 2019, Dr. Cordray and other Roper St. Francis Healthcare affiliated plastic surgeons performed implant reconstructions and flap reconstructions, illustrating the substantial experience of our reconstructive surgeons with these techniques. Radiation oncologist, Dr. Laurie Harrell, highlights one of the recent advances in radiation therapeutic treatment of breast cancer, hypofractionated treatment regimens. Hypofractionation allows patients to have a markedly reduced radiation treatment duration without compromising their treatment outcome.

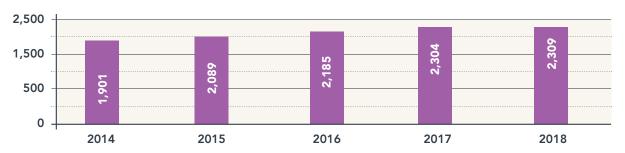


Steven A. Akman, MD

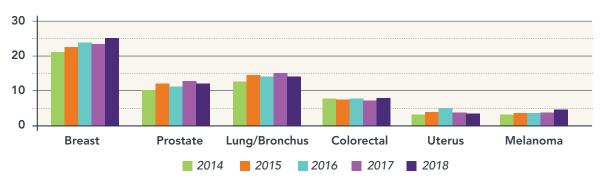
Medical Director, Roper St. Francis Cancer Care

5 Year Trend: Cancer Care

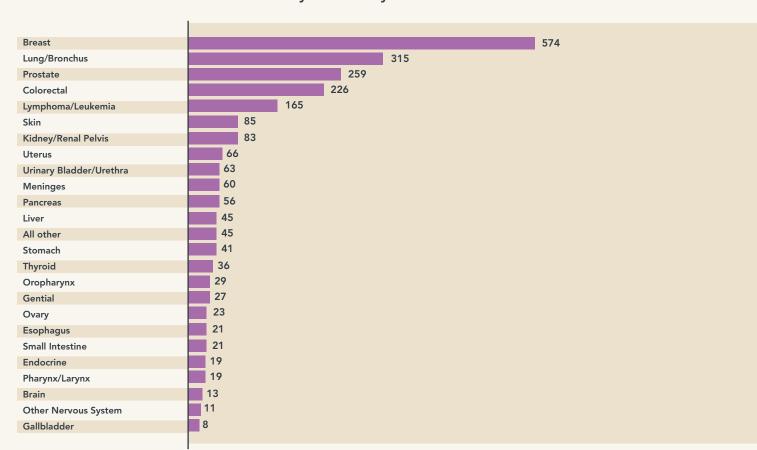
Total Number of Patients with New Cancer Diagnoses at RSFH



Percentage of Total Cancer Cases Represented by the Top Five Sites



2018 Analytic Cases by site at RSFH





Multidisciplinary Breast Cancer Program

Laurie Ray Harrell, MD, Radiologist at Roper St. Francis Healthcare

Breast cancer treatment is complex and challenging, and many factors influence the specific integration of surgery, radiation therapy and chemotherapy for each patient. While mastectomy (with or without breast reconstruction) is an option for breast cancer patients, conservative breast therapy (CBT) is often an equivalent choice with the benefit of breast preservation.

Conservative breast therapy consists of a "lumpectomy," which is a more limited surgical procedure to remove just the cancer in the breast. A lymph node biopsy is frequently performed at the same time. Most women who opt for a CBT approach also need breast radiation therapy following lumpectomy as part of the overall CBT treatment plan.

Radiation therapy is typically directed at the whole breast, and the daily treatment takes about 30 minutes, five days a week, for approximately six weeks. Recent studies have shown that breast radiation therapy can be given over a shorter period of only four weeks for most patients. This shorter course of treatment, known as "hypofractionated" radiation therapy, is safe and effective for most patients in need of breast radiation therapy following lumpectomy who meet national guidelines. In 2019, Roper St. Francis Cancer Care radiation therapy department treated breast cancer patients with hypofractionated radiation therapy. All patients are encouraged to discuss the appropriateness of hypofractionated radiation therapy with their radiation oncologist in the treatment of their breast cancer.

For more information, call radiation oncology at Roper St. Francis Cancer Care at (843) 958-2550.



The Goal of Breast Reconstruction

Tracy Cordray, MD, Plastic Surgeon at Roper St. Francis Healthcare

After a mastectomy, the removal of a breast, the goal of breast reconstruction is to restore the breast mound or mounds and achieve symmetry. Our breast surgeons, who perform mastectomies, and plastic surgeons, who reconstruct breasts, work closely with medical oncologists, radiation oncologists and with the patients themselves to develop the optimal surgical treatment and a reconstruction strategy.

Several factors are considered when formulating a plan for surgery and reconstruction, including the type, location and stage of the cancer. We also consider her body type, general health status and additional therapy she may need before or after surgery, as well as her wishes regarding the type of surgery.

Breast Reconstruction with Implants

The implant is the most common form of breast reconstruction, and it involves using a silicone or a saline implant to rebuild the breast. At Roper St. Francis Healthcare, we most commonly use silicone because it's softer and feels more like a natural breast.

For most patients, implant surgery can now be performed in a single stage. Often, an implant can replace the breast mound immediately following mastectomy. This is called direct-to-implant reconstruction, or DTI. In a nipple-sparing mastectomy, the implant can be inserted through an incision

below the breast, often providing the look of a breast augmentation. If a patient is not a candidate for DTI, the reconstruction can be performed in two stages. First, at the time of mastectomy, a tissue expander is placed either underneath the pectoralis muscle or on top of the muscle. After a couple of weeks — once things start to heal — we slowly fill the expander with saline so that the muscle and skin gradually stretch out. On average, the expansion process takes around six to eight weeks. Then, after another three to six months (depending on the patient's treatment plan), we remove the expander and put the final implant in its place.

The best candidates for implants tend to be smaller, thinner women with B or C-cup breasts. Fuller-breasted women can have implant reconstruction, but if they receive a unilateral mastectomy, when one breast is removed, we would do a reduction of the natural breast in order to achieve symmetry with the implant. Similarly, for women with an A cup breast size, we may need to do a breast augmentation of the natural breast to achieve symmetry with the reconstructed breast.

Implants can sometimes get infected or become hard (capsular contracture), which may require removal of the implant and another procedure down the road. However, implants do provide very good results and are a great option for many women.

Flap Reconstruction

Flap reconstruction uses a woman's own tissue — including skin, fat and occasionally muscle — to reconstruct the breast. That tissue and skin can be obtained from a variety of places, and the area and method we choose will depend on factors such as the patient's body habitus, the amount and quality of tissue available, as well as the patient's preference.

The most common of these methods, TRAM flap reconstruction, involves using tissue from the area below the belly button. The skin, fat and at least one abdominal muscle are tunneled underneath the skin upward into the breast area but remain attached to their blood vessels in the abdomen. This allows the transferred tissue to continue to get its blood supply from where it originated, making it the simplest of the flap procedures. This is called a pedicled TRAM flap. The downside is that it requires sacrificing muscle, which potentially can affect function in the abdominal region. The benefit of this flap is shorter operating time and less risk of complete flap loss.

Our overall approach is to sacrifice the least amount of abdominal muscle possible, or in some cases, no muscle at all. We can do that using two newer reconstructive techniques — the free TRAM flap and DIEP flap. These procedures involve relocating the tissue and its blood supply, which means that microvascular surgery techniques are required to maintain blood supply to the transferred tissue.

Microvascular surgery refers to surgery performed on very small blood vessels, sewing artery to artery and vein to vein, using an operating room microscope and a variety of tiny, special instruments. In a free TRAM flap, very little muscle is removed, and in a DIEP flap, the entire abdominal muscle can be spared.

Aside from the abdomen, another area that often has a lot of tissue for donating is the buttocks.

The gluteus flap utilizes the buttock as a source of skin and fat for breast reconstruction. This type of reconstruction also requires microvascular surgery using the operating room microscope.

Benefits of flap reconstruction

Using the patient's tissue makes for the most natural-feeling and natural-looking breast. So, if a larger, softer breast is wanted, a flap is a great choice. That's the main benefit. There is also much less risk of infection with flap reconstruction. With flaps, the newly reconstructed breasts tend to age the same way as a natural breast. There must be enough tissue available to donate, whether it's from the abdomen or buttock. For very thin women, implants are a great alternative.

Downsides of flap reconstruction

Performing a flap reconstruction will often add six to eight hours to a mastectomy, whereas an implant reconstruction usually adds only about 90 minutes. The main downside of doing a flap is the potential impact on the area you're taking the tissue from, called the donor site. If muscle is removed, you risk compromising strength and function in the affected area. A longer recovery period is also required for flap reconstruction. Recovery after flap reconstruction is approximately six weeks, whereas recovery from implant reconstruction is only 2–3 weeks.

Contraindications to breast reconstruction

As a general rule, we like to consider all patients as potential breast reconstruction candidates. The ones who aren't candidates tend to be patients with very advanced disease, multiple serious medical problems (i.e., cardiac disease) or the very elderly.

Program Outcomes: Prevention and Screening

Shelley Usher, MSN, RN, Oncology Nurse Navigator

2019 Community Outreach

Roper St. Francis Cancer Care offered numerous cancer screening events to the community with the assistance of our affiliated physicians, mid-level providers, clinical and non-clinical volunteers. The providers followed screening guidelines as directed by the American Cancer Society. This year screenings focused on breast, colorectal, and skin cancers for a total of 310 participants. Patients who had abnormal results found during the screening events were provided guidance for further follow-up or intervention by the Oncology Nurse Navigator who led the screenings. Participants also received education from our specialists on prevention, wellness and early detection regarding HPV, nutrition, stroke, diabetes and bariatric services.

Roper St. Francis Cancer Care was also a presence in the community participating at the Berkeley Health Literacy event educating about HPV prevention and having a member on the Trident United Way Healthy Tri-County initiative working on clinical preventive services.

Results from 2019 screenings:

BREAST SCREENING

- 108 Participants screened by CBE
- 74 Referred for screening mammography
- 9 Referred for diagnostic testing
- 1 Invasive cancers detected to date

COLORECTAL SCREENING

- 93 Participants
- 88 FIT screened
- 11 Referred for colonoscopy
- 6 Referred for colonoscopy for familial or personal history

SKIN SCREENING

- 119 Participants screened
- 31 Referred for follow-up
- Pound to have Skin Cancer- one with Melanoma, one with Squamous Cell Carcinoma