

Breast cancer is a very important disease process. It directly affects many people and it indirectly affects many more. In 2013, there were almost 300,000 women diagnosed with breast cancer in our country. That same year, over 2,200 men were diagnosed. With increased focus on detection and treatment, the outcome of people diagnosed with breast cancer continues to improve every year. Recent information provided by the American Cancer Society states that the five year survival for women diagnosed with Stage II or less breast cancer is 93%. There is a wide variety of treatment options for breast cancer including lumpectomy, mastectomy, chemotherapy, radiation therapy, and hormonal therapy. Ongoing evaluation of the diagnosis and treatment of breast cancer to find areas for improvement occurs not only a nationwide level, but on local levels as well.

In 2014, Dr. Luther Person, a diagnostic radiologist at RRHS, and Lynn Ross, Director of Oncology and Education at RRHS, undertook a review of all of the breast cancer cases reported at RRHS from 2012 and 2013. They did comprehensive data collection of all available information on each patient, including age, presentation, imaging, surgical results, and pathology. The records of the 102 patients diagnosed with breast cancer in Rutherford County in 2013 and 2014 were reviewed. There were over 3000 data fields assessed. All identifying patient information was removed from the data to ensure patient privacy. The data was presented at the RRHS Cancer Committee as well as for a more in depth discussion at the RRHS Breast Cancer Protocol Committee.

Imaging: Most patients diagnosed with breast cancer have multiple imaging studies including mammography, ultrasound, and MRI. Dr. Person reviewed the reports on the available studies but also evaluated the studies themselves. “One of the biggest personal benefits for me was to be able to review every imaging study in which breast cancer was present. I evaluated each exam with the knowledge that breast cancer was present but took them as unknowns. In other words, I didn’t know where the cancer was. I was then able to compare my findings with the report and subsequent imaging findings. I was pleased with both my retrospective assessment as well the quality of the initial interpretation by my partners and myself.” Counting prior exams, over 250 mammograms were reviewed.

Diagnosis: The method of obtaining a diagnosis was reported. Most patients had undergone an ultrasound guided biopsy of the area of interest. Some (those with microcalcifications) had stereotatic biopsies performed. One patient had an excisional biopsy.

Surgery/Treatment: The two primary types of surgical treatment are lumpectomy and mastectomy. Patients that undergo a lumpectomy may have the need for a repeat surgery if all of the cancer cells have not been removed. This is called “positive margins”. Patients with positive margins may have a repeat lumpectomy or may opt for a mastectomy. This subset of patients was one focus for this review. Occasionally, patients do not undergo surgical treatment. This can be for a variety of reasons including poor overall health.

Pathology: Information obtained included both pre operative pathologic results and post operative results. In addition, size of the tumor and the presence of positive or negative margins was obtained.

Results: “The amount of data available for review is almost overwhelming”, says Dr. Person. “The initial focus has been the subset of patients that required additional surgery to see if there is a common

thread amongst these patients. However, we still have many areas that can be studied with this data set.”

Below is an example of the information gleaned from the data:

1. Age at diagnosis (in years)
 - a. Average: 65.2
 - b. Median: 66
 - c. Range: 37-95
2. Imaging at RRHS
 - a. Mammography-94 patients had mammograms
What the mammograms revealed:
 - i. Mass/Asymmetric density-73
 - ii. Microcalcs-12
 - iii. Diffuse skin thickening/increased density-1
 - iv. No mammographic abnormality-8
 - b. Ultrasound-80 patients had ultrasounds
What the ultrasounds revealed:
 - i. Mass-74
 - ii. Shadowing-2
 - iii. Architectural distortion-1
 - iv. No ultrasound abnormality-3
 - c. MRI-14 patients had MRIs (1 post op)
 - d. Diagnosis
Study that led to the diagnosis:
 - i. Ultrasound Guided Biopsy- 72
 - ii. Stereotactic Biopsy-8
 - iii. Excisional Biopsy-1

One of the luxuries we have at RRHS is the relatively small size of our medical staff and patient care teams. We have constant formal and informal multidisciplinary discussions concerning patient care issues. When we presented this study at our Breast Cancer Protocol committee discussion, we had a medical oncologist, radiation oncologist, pathologists, radiologists, and surgeons present. In addition, there was support staff in attendance including the Director of Oncology & Education as well as the Cancer Outreach Program Manager.

Gathering this data had many benefits. Knowledge is power and to be able to share this information with others on the breast cancer care team is a real advantage. For example, the Patient Navigators were able to be part of the discussion concerning imaging, pathologic findings, and treatment. This helps them in turn educate the many cancer patients they work with. The RRHS Patient Navigators are an important part of the team and help us deliver the best care to our patients. Providing them additional information allows them to better perform their duties.

We will continue to study the data obtained from this study to identify any opportunities for improvement in our drive to provide the highest quality of care for breast cancer patients at RRHS.