INTRODUCTION:
Cancer is a major public health problem both in the United States and worldwide. According to the American Cancer Society in 2018 there will be 1,735,350 new cancer cases with an estimated 609,640 cancer deaths in the United States. Over the past decade the cancer death rate has declined annually by about 1.5% in both men and women. In Massachusetts, there will be a projected 37,130 new cases of cancer diagnosed with 6,490 cases being female breast cancer. The most common cancer diagnosed in females will be breast cancer and prostate cancer in men. Overall, lung cancer accounts for the highest number of cancer deaths with breast cancer second in females compared to lung cancer followed by prostate cancer in men. The most common histologic subtypes of breast cancer include infiltrating ductal carcinoma, infiltrating lobular carcinoma and mixed ductal and lobular histology. Approximately 80% of breast cancers will be estrogen receptor and/or progesterone receptor positive and from a molecular standpoint of 20% of patients will overexpress HER-2/neu protein. Screening mammography has been shown to decrease breast cancer mortality.

Risk factors include obesity, alcohol, inactivity, hormone replacement, breast implants, family history, race, ethnicity, benign breast conditions as well as harboring high risk genetic alterations such as BRCA1 and BRCA2. Risk reduction strategies include increased physical activity, weight loss, and alcohol avoidance as well as risk reduction strategies in high risk genetically predisposed women such as prophylactic mastectomies and the use of estrogen blocking agents.

AJCC STAGING AND WORK-UP:
Initial workup for breast cancer at Norwood Hospital is in accordance as per NCCN (National Comprehensive Cancer Network) Guidelines and includes a history and physical exam, diagnostic bilateral mammogram, pathology review with ER and PR and HER-2/neu status as well as genetic counseling in high risk hereditary breast cancer cases. Also the use of breast MRI, CAT scan and PET scan play a role according to stage workup. In addition, a CBC and comprehensive metabolic profile are routinely obtained.

EPIDEMIOLOGY:
The 2018 estimates for breast cancer in the United States include 268,670 new cases of which 266,120 cases will be in women and 2,550 will be diagnosed in men. There will be an estimated 41,400 deaths secondary to breast cancer in the United States in 2018. In Massachusetts there will be an estimated 37,130 new cases of breast cancer in 2018 with an estimated 12,610 deaths in Massachusetts in 2018.
TREATMENT:

Treatment of breast cancer depends upon stage. For locoregional disease, lumpectomy with axillary surgical staging or a total mastectomy with surgical staging followed by adjuvant radiation, chemotherapy and hormonal therapy as indicated. For advanced metastatic disease as well as recurrent disease, the use of chemotherapeutic agents both cytotoxic and targeted agents comprise the mainstay of treatment. Supportive care, including bone strengthening agents as well as palliative therapies play a significant role as well. Lastly, the increased use of multigene genetic assays helps determine the appropriate role for adjuvant treatment such as chemotherapy as well.

NORWOOD HOSPITAL PATIENT DATA REVIEW:

Norwood Hospital’s breast cancer cases from 2017 were reviewed. In 2017 there were a total of 58 total primaries. The makeup of the cases by stage revealed 30% were stage 0, 35% stage I, 25% stage II, 8% stage III and 2% stage IV. All cases were staged and treated in accordance with national guidelines including the American Joint Committee on Cancer (AJCC) and the National Comprehensive Cancer Network (NCCN). Seventeen patients did not receive adjuvant treatments for reasons including patient declining both radiation and chemotherapy (5), patient declining radiation alone (5), patient declining endocrine therapy (2), physician recommending no chemotherapy (2), patient expired after biopsy (1), patient declining endocrine therapy and transferred care (1), and patient declined both chemotherapy and radiation and transferred care (1). Future direction in our cancer center include screening patients at high risk of developing cancer based on personal or family history for genetic susceptibility genes with intervention directed at those who harbor such mutations.