

**Breast Cancer**

Mary Kate Kane

Margaret H. Rollins School of Nursing

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H. Snyder, RN

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Breast cancer is a malignant tumor that develops within the glandular epithelium of the breast. Women and men can be diagnosed with breast cancer. More commonly seen in women, breast cancer affects one in eight women and less than one percent of men. (Atlanta American Cancer Society, 2022-2024) (Fox, et al 2021). Breast cancer symptoms are person dependent, yet the most common sign is a lump under the breast or armpit (MD Anderson Cancer Center, 2024). Possible other signs include breast dimpling, nipple discharge, change in nipple size and shape to name a few (MD Anderson Cancer Center, 2024). While breast cancer is the second leading cause of death and is unpreventable, knowledge of such diagnosis is important for the overall outcome. It is healthcare professionals that play a crucial role in the education of understanding breast cancer diagnosis, the risk factors, prevention/screening, and treatments.

### **Statement of Problem**

The breast consists of two important components that are affected by breast cancer. The first are lobules, which are milk producing glands (Dell, 2023). The second are ducts, which transport milk from the lobules to the nipple (Dell, 2023). There are several types of invasive and noninvasive breast cancer. The most common invasive type is known as invasive ductal carcinoma. Invasive lobular carcinoma is the second most common type. Invasive ductal carcinoma makes up eighty percent of breast cancer whereas invasive lobular carcinoma makes up ten to fifteen percent of breast cancer diagnosis (Dell, 2023). The difference between these two types of cancer is that invasive ductal carcinoma cancer cells develop within the ducts and progress to the outside lining of these ducts, causing the proximal breast tissue to become affected by the cancer cells (Dell, 2023). Invasive lobular carcinoma cancer cells begin in the lobular and once progressed outside of the lobular, the cancer cells begin to affect the

other organs within the body (Dell, 2023). Noninvasive breast cancer, cancer cells that do not metastasize and remain in the ducts or lobules, account for twenty percent of breast cancer (Dell, 2023).

### **Risk Reduction/Treatment of the Problem**

As a person ages, the likelihood of developing breast cancer increases. “Rates of breast cancer are low in females under 40 and highest in females over 70” (Lippincott, 2023). Risk factors for developing breast cancer are both modifiable and non-modifiable. Despite being non-modifiable, education on these risk factors is important as it can prevent the development of breast cancer. Furthermore, education on modifiable risk factors can aid in the long-term prevention of breast cancer. One modifiable risk factor that pertains to those working in healthcare, along with other professions, is working night shift (Kaleta et al. 2020). “This is due to the exposure of lights at night, causing an inhibition of melatonin synthesis, followed by an increase in estrogen levels” (Kaleta et al. 2020). Additionally, breast cancer has similar modifiable risk factors as many other diagnoses do, specifically alcohol use, smoking, and obesity. Coinciding with modifiable risk factors, it is important to be aware of the non-modifiable risk factors, such as family history and gene mutation, to aid in the awareness of early treatment. Genetic mutations and older age are two of the many risk factors for men (Center for Disease Control, 2023). This risk is doubled if a first degree relative was diagnosed at a young age (Dell, 2023). When an individual is diagnosed with breast cancer, it is never an easy diagnosis for themselves, their loved ones, or those taking care of them regardless of age.

With an ultimate goal being taking care of others, the nursing profession is one of the most rewarding careers. The challenging side of nursing often comes with emotions and hardships that are only relatable to those in this field. In 2023, PhD students conducted a study to

explore nurses' experiences in caring for women with breast cancer (Kidayi, et al. 2023).

“Globally, the incidence of cancer is estimated to be between 19.3 million and 10.0 million projected to reach 28.4 million cases in 2040 (Sung et al., 2023). Breast cancer accounts for about 11.7% of the total cancer cases” (Kidayi, et al. 2023). Within this study, a systemic review was conducted to determine the extensiveness of burnout among oncology nurses. After this study, the findings indicated that nurses face emotional distress and ethical dilemmas while caring for patients with breast cancer (Kidayi, et al. 2023). All healthcare professions, not just nursing, face what could be considered devastating situations that are impossible for which to prepare. When an oncology nurse reports for their assigned shift, the uncertainty of whether they will be telling a family their loved one has passed, holding the hand of a patient who just received a new diagnosis, or administering antiemetic medication to their patient receiving chemo, are just the baseline of the many emotional situations these nurses face. These nurses need to develop the tools to support their emotional ability to provide care to the patients with cancer, while also not forgetting to protect their own well-being emotionally.

An individual's willingness to be open to preventative screening and, if diagnosed, treatments can aid in the overall outcome of their breast cancer diagnosis. According to the American Cancer Society, screening refers to tests and exams used to find a disease in people who do not have any symptoms (American Cancer Society, 2024). Additionally, the American Cancer Society, states that early detection means finding and diagnosing a disease earlier than if you would have waited for symptoms to start (American Cancer Society, 2024). A mammogram is one of the most common types of screening for breast cancer. This type of screening happens through an x-ray that examines the breast. Screening recommendations are in place to educate on the appropriate time to begin prevention. For women between the ages of 40 and 44, yearly

screening is optional (American Cancer Society, 2024). Women 45 to 54 should have yearly mammograms (American Cancer Society, 2024). Women 55 and older are recommended to have a yearly screening or every other year screening (American Cancer Society, 2024). Following the recommended screening can prevent an early stage from progressing and the availability for treatment to give a greater chance of being successful. In addition to mammograms, another type of imaging test available for screening is a breast ultrasound. With this type of imaging, sound waves are used to look at the inside of a breast (The John Hopkins University, 2024). This type of imaging is typically used post mammogram when an impression indicates a need for further evaluation. Secondly, if there is a palpable exam that shows signs of breast cancer and a previous mammogram does not indicate any impression of cancer, breast ultrasounds will be utilized.

While getting a yearly mammogram is an example of an important preventative measure, choosing a healthy lifestyle is just as important. According to the American Cancer Society, regular physical activity has shown to reduce the risk of breast cancer (American Cancer Society, 2023). Additionally choosing to maintain a lifestyle of limiting alcohol, avoiding tobacco, and eating fruits and vegetables are controllable measures in lowering risks of a breast cancer diagnosis.

Treatment for breast cancer can be done in a variety of different methods based upon the individual diagnosis and staging. A commonly known cancer treatment is chemotherapy, which uses high-alert medications to shrink or kill the cancer cells. Not all cancer treatments are available for each stage of breast cancer, such as triple negative breast cancer. (Trayes & Cokensakes, 2021). In this specific type of breast cancer, chemotherapeutic drugs are the only therapy available (Trayes & Cokensakes, 2021). Another familiar treatment is a mastectomy, where surgery is performed to remove the breast tissue and regional lymphatic metastasis

(Lippincott, 2024). There are different types of mastectomies that all have a different degree of breast and tissue removal. Although there are many different treatment options, preventative measures are equally important for an individual's overall outcome of their diagnosis.

### **Planning of Teaching Content**

In preparation for the health fair, the overall objectives are to educate the community on the modifiable and non-modifiable risk factors as well as screenings and preventions. Included in the education will be handouts with teaching material for those who learn best through reading. As well as interactive education for those who learn best through hands-on teaching, such as educational breasts with and without lumps. One teaching tool that will be utilized is a trifold board with the important key points about breast cancer. Secondly, there will be a video visual to have on a loop throughout the fair. In this video, community members will be able to hear clips from breast cancer survivors and individuals who have been impacted by a family member or close friend with breast cancer. There will be pictures and videos from a variety of breast cancer awareness events.

Although breast cancer is unpreventable, education – specifically around care etiquette, modifiable risk factors, critical indicators like family history and treatment options – can improve a patient's outlook and treatment experience both pre and post diagnosis. Additionally, education helps providers stress the importance of preventative screenings and measures to patients – increasing early detection and improving survival chances.

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