

# Sample case study on breast cancer

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Breast cancer is one of the deadliest cancer prevalent in the modern world. According to the Journal of national Comprehensive Cancer Network, the author Therese B. Bevers, (2009) clearly states that Women in the United States have an increased risk of breast cancer. The incidents and the mortality due to breast cancer has also drastically increased in past decade. Thus considering all above statistics, it is very clear that breast cancer is a grave disease. However, early diagnosis and treatment can hold the disease at bay. So, patient awareness is essential in identifying and tackling his this disease. This paper is about the case study of Mrs. Ann Thompson, age 52, who recently had the diagnosis of breast cancer. Below onwards are the answers for the questions pertaining to this case.

According to the history of patient, her mother and a cousin had had breast cancer. This is a significant family history information. Breast cancer is also a disease that runs through family with close genetic connection to the patient. The mutated genes responsible for breast cancer can pass through close siblings and children. In this case, Mrs. Ann had a cousin and her mother already having the disease. So it is quite possible that she has the breast cancer through hereditary factors. There are specific genes and chromosomes that becomes deranged in cases of cancer. If a person has two or more close relatives having the history of breast cancer, it is possible that the person is more susceptible for the disease. Because, the same genetic

skeleton is passed down from parents to the children and in siblings. That is why in case of Mrs. Ann, due to her close relatives having a history of breast cancer, she is more susceptible to cancer.

There are other positive signs of breast cancer that a person can regularly look for in their routine self-examination of breast. If one breast is larger or smaller than other, if nipples are puckered, if nipples are inwards, if there is bruising, abrasion or discharge from nipples, if the size or color of the areola has changed, if there is a nodule or a lump that is painless felt over breast. If the lump is increasing in the size, if the women is aged more than 30 and not have any issues, late menarche or early menopause, all these signs can be informative of breast cancer. If one finds out any of these signs, immediate mammography or needle biopsy for further diagnosis is advisable to rule out cancer. Sometimes benign lumps or tumors also mimic cancer. In such cases also diagnostic tests are helpful (Therese B. Bevers, JNCCN, 2009).

Metastasis is the phase of cancer in which the cancer cells leave the primary cancer site and spread to more distant parts of the body. Most metastasis cases are in lymph nodes, bones and distant organs like colon, stomach and uterus. The lump diagnosed in Mrs. Ann was not benign tumor because it had already metastasized. The benign tumor does not spread to any other tissue. They are usually stagnant and do not increase in size compared to the malignant tumors. When the cancer cells starts spreading in other parts of body it is called metastasis.

The mammography results must be confirmatory of the metastatic cancer pervaded to the other part of breast as well as the lymph nodes. That is the reason the Lumpectomy was performed on Mrs. A. T. and a number of

axillary lymph nodes were removed. In cases of metastasis, the cancer cells rapidly spreads towards nearby lymph nodes, through lymphatic system, they then spread to deeper tissues like bones, and other organs. That is the reason, with early diagnosis the affected part of the breast along with the local lymph nodes are removed through surgery to stop the spread of the disease to the other parts, (Berman AT Clinical breast Cancer, 2013).

According to an article from (breastcancer.org, 2014), A cancer is called estrogen-receptor-positive (or ER+) if it has receptors for estrogen. This suggests that the cancer cells, like normal breast cells, may receive signals from estrogen that could promote their growth. In case of Mrs. Ann, the diagnosis of ER+ can be helpful for the doctors to decide the prognosis, modes of intervention and the selection of medication. This way the grass-root level diagnosis of the cancer can have a huge effect on the recovery of the disease.

There are certain types of breast cancer depending on the stages. If the cancer is diagnosed in first stage where the lump is limited to breasts, the surgery is the ultimate option and the prognosis is good. If the cancer has travelled from the origin to localized tissue, then also the chemotherapy and surgery can have promising results. But in the case of Mrs. Ann the tumors have travelled beyond the primary organ to awards the local lymph-nodes that is the stage three. In this scenario, the lumpectomy and lymphectomy (Removal of the affected lymph nodes) is the first step of the treatment. The later stage is the chemotherapy and radiation rounds for the patient. The chemotherapy and radiation are essential for the destruction of any remaining cancer cells from the body. These treatments are usually

associated with the hormonal treatments also for ER+ cases of breast cancer. These courses of treatments removes the cancer cells as well as they bring the cancer into remission. The remission is the cancer free period that can last as long as five years in patients depending upon their treatment and resistance. In case of Mrs. Ann, the treatments were needful because of the metastasis of the cancer in her lymph nodes. The bone scans were done to check if the cancer cells have spread in her bones, too. However, the results were negative so the prognosis was good. (Berman AT, Clinical breast cancer. 2013)

The chemotherapy is the treatment that kills all the cells in the body. It basically means chemical therapy that is harmful for the cells of the body. Chemotherapy or radiation does not differentiate between healthy of cancerous cells, they just kill all the tissues and cells that they come in the contact with. However, that is the best treatment available for the cancer nowadays. The research is ongoing for targeted therapies for breast cancer in which the drugs target only the cancer cells in the body. The chemotherapy and radiation destructs the immunity of the body by killing all the healthy cells of the body. Radiation also effects the bone marrow that is responsible for producing the T-cells and white blood cells. When Mrs. Ann will be subjected to these therapies, her immune system will be compromised. She will then be susceptible to the opportunistic infections. That is the reason why Mrs. Ann has chances of getting infection after the therapy.

When cancer patient undergoes the needful treatments, there are good chances that the cancer will go into remission. In remission period, that is

variable from person to person, patient can live a cancer free life. Depending upon the immunity and body strength, a person can go for indefinite amount of time in remission. So, if Mrs. Ann, with all her early diagnosis and treatment goes for remission period, she will need a regular check-up and mammography to see if the cancer is still in remission or it has surfaced back (George W. Sledge, 2014).

## References

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