

# Recurrence Developing 21 Years After Treatment of Breast Cancer

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## Summary

**Background:** Breast cancer is a very common cancer among females. In which most recurrences (around 75%) occur within the initial 5 years after diagnosis, especially within 3 years. Recurrence after 20 years is very less reported in the last few decades.

**Case Information:** We present the case of a 67-year-old woman who presented with pleural based nodules suggestive of lung metastasis followed by brain metastasis. After reviewing history, we came to know that the patient was a previously treated case of breast carcinoma treated 22 years back with mastectomy.

**Conclusion:** We report late recurrence of breast cancer occurring 21 years after mastectomy suggesting that possibility of recurrence in carcinoma breast with a 21-years latency period although rare should be taken into consideration when making decisions regarding patients who may need long term follow up.

**Keywords:** late recurrence, breast cancer

## Introduction

Understanding the risk of recurrence more than 10 years after primary diagnosis helps distinguish patients who may be candidates for long-term follow-up.<sup>1</sup> After diagnosis of 1847 patients who underwent breast-conserving surgery between 1989 and 1999 in a Danish study showed a cumulative incidence of 15% for local recurrence and 21% for distant metastases after 20 years post diagnosis.<sup>2</sup>

## Case Report

A 67-year-old postmenopausal female presented with chief complaints of right limb weakness, headache with constipation for 6 days in August 2021. There was no associated complaint of fever, seizures, or loss of consciousness. On taking detailed history, she was a known case of carcinoma of the left breast. Estrogen and progesterone receptor negative and HER2/neu positive diagnosed and treated 22 years before. She had undergone modified radical mastectomy + 5 cycle CMF (5-FU, methotrexate and endoxan) chemotherapy treatment for the same. Patient did not receive any adjuvant radiotherapy. The patient was started on tablet tamoxifen and continued the same till 5 years. Patient was then lost to follow up for two years and presented back to our institute in August 2008 after which the patient was kept under observation.

Patient then presented with a complaint of right sided chest pain in August 2020. CT scan of September 2020 showed recurrent lesion involving left anterior chest wall, precarinal node, upper para aortic node with bilateral lung and bone metastases.

Immunohistochemistry (IHC) of CT guided lung biopsy was suggestive of metastatic ductal carcinoma (GATA - 3 +ve) with ER +ve, PR -ve and Her2/neu negative.

CT guided lung biopsy showed poorly differentiated carcinoma with IHC showing metastatic ductal carcinoma. Patient received 3 cycles of paclitaxel. Patient was kept on letrozole for one year. Patient presented to us with right upper limb weakness. On examination, the patient was semiconscious and disoriented with power 1 out of 5 in all limbs except 4 out of 5 in the left upper limb with decreased sensation and constipation for 6 days.

Routine blood investigations were normal. NCCT of the brain was suggestive of 24x13 mm left occipital metastasis. CT scan showed residual lesion and D9 vertebrae metastasis with lesion involving left high parietal region, left occipital region.

Patient was referred to the department of radiation oncology for palliative whole brain radiation therapy (WBRT). The patient was planned for palliative WBRT of a dose schedule of 3000 cGy in 10 fractions at 3 Gy in each fraction daily to be completed in 2 weeks through two parallel opposed fields. However, the patient took discharge against medical advice without starting WBRT.

## Discussion

Breast cancer is seen as more of a chronic disease where survival curves start to parallel that of the general population after 10 to 25 years. In breast cancer we cannot define a period after which a patient can be considered cured as it is seen with curable acute malignancies.<sup>3,4</sup> In breast carcinoma, late relapses are observed frequently.<sup>5</sup> Statistical cure is considered if the patient's survival curve parallels that of the general population.<sup>2,3,4</sup> The high-risk breast cancer group achieve statistical cure earlier than low-risk group

(respectively 10–15 vs 20–25 years after diagnosis). As seen from the survival curves, it's starting to match the survival curve for the general population earlier than early stage breast cancer.

According to a study by Rikke Nongaard Pedersen et al, recurrences have been reported in literature as occurring even up to 32 years after diagnosis of the primary.<sup>1</sup> Women with large tumor size, higher lymph node burden and ER-Positive tumors show higher late recurrence risk.<sup>1</sup>

Even though the statistics of these patients of carcinoma breast shows that long term disease free survival can be achieved with adequate treatment in early stages, it remains a question that - after how many years of disease free survival we can guarantee that the patient will have 0% chances of relapse .

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