How Did PET Help?
In this case, PET helped to detect initial metastatic breast cancer and recurrence after therapy. PET also helped to evaluate the chemotherapy response after the initial therapy.

Discussion
18F-FDG PET has been found to be superior to bone scans in detecting bone metastasis in various malignant diseases, including breast cancer. FDG-PET often detects early marrow involvement before an identifiable bone reaction. Although 18F-FDG-PET has been reported as being appropriate for detecting all types of bone metastasis including lytic, sclerotic, and mixed lesions, it is more sensitive in detecting lytic metastasis than sclerotic metastasis. Quantitative assessment of therapy-induced changes in tumor F-FDG uptake may allow the prediction of both tumor response and patient outcome very early in the course of therapy. Treatment may be adjusted according to the chemosensitivity and radiosensitivity of the tumor tissue in an individual patient. Thus, 18F-FDG-PET has an enormous potential to reduce the side effects and costs of ineffective therapy.