

Breast Cancer Metastasis to the Spine: Outcomes at a Single Institution using the Charlson Comorbidity Index and Hormone Receptor Status

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Introduction

The objective of this study is to look at metastatic breast cancer to the spine at a single institution analyzing the outcomes of patients with spinal metastases from breast cancer and correlate the Charlson comorbidity index effect on survival.

Methods

A total of 27 patients with breast cancer and spinal metastasis involvement were studied retrospectively at a single institution from 2013 to 2016. Demographic, clinical, and radiologic parameters were reviewed and the Charlson morbidity index and scores were analyzed and compared to their survival along with tumor histology and receptor status.

Results

All patients were female. Median age at diagnosis of metastatic breast cancer was 68 years of age and the average survival was 16 months (1 – 49 months). For breast adenocarcinoma, 11 patients were identified, and average age was 64 with average survival of 21.5 months. For invasive ductal carcinoma, 11 patients were identified, and average age was 70 with survival of 15.3 months. There was only one inflammatory breast cancer metastatic to the spine who died. Lastly, there were four invasive lobular carcinomas to the spine with average age of 71 and survival of 12 months. The percentage of ER positive patients in adenocarcinoma was 64% and 45% for PR positive receptors. For invasive ductal carcinoma, the ER positive rate was 91% and PR receptor rate was 73%. The Charlson comorbidity index was 10.45 for adenocarcinoma, 11.27 for invasive ductal carcinoma, and 11.25 for invasive lobular carcinoma.

Conclusions

The survival rate in patients with breast cancer metastases to the spine varies depending on receptor status and Charlson comorbidity index. Patients with ER positive breast cancer in adenocarcinoma had a slightly longer survival at 22 months and patients who were PR positive had an even longer survival at 27 months, even with similar Charlson comorbidity indexes.

Learning Objectives

Participants should be able understand the significance of tumor hormone status and the effect of comorbidities in outcomes of patients with metastatic breast cancer to the spine.