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The association between initial metastatic site and overall survival of patients with single-organ HER2+ metastatic breast cancer (mBC): A real-world SONABRE study

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Background

Advancements in therapy for HER2 positive metastatic breast cancer (HER2+ mBC) increased survival of the subtype drastically. Patients with HER2+ mBC with single-organ metastases have a more favourable prognosis than those with multiple metastatic sites. Within the group of patients with single organ metastasis, it is unknown whether the specific location of the metastatic site is associated with overall survival (OS).

Methods

Patients diagnosed with single-organ metastasis of HER2+ mBC between 2007 and 2022 were retrieved from the SONABRE registry (NCT-03577197). Patients were categorized by metastatic site. Categories with fewer than 10 patients were excluded. OS was estimated using Kaplan-Meier methodology. Multivariable cox proportional hazards regression was used to investigate the effect of metastatic site on OS, adjusting for age, WHO performance status (PS), histology, metastatic-free interval (MFI) and first-line systemic therapy. A p-value of <0.05 was considered statistically significant.

Results

Of 931 patients with HER2+ mBC, 377 (40.5%) had single-organ metastases and 366 had at least 10 patients per metastatic site. Among these, the median age was 59.3 years (IQR 39.7-78.9). The majority had a good PS of 0-1 (66.1%), non-lobular histology (90.4%), recurrent mBC (59.3%) and received first-line HER2 targeted therapy (64.2%) or endocrine therapy (29.8%). Older age (≥75 vs. <50: hazard ratio (HR) 2.26), poor PS (≥2 vs. 0-1: HR 3.36) and MFI (3-60 vs. <3 months: HR 1.62) were significantly associated with worse OS. Results of the association between location and OS, are demonstrated in the Table. Updated data will be presented at ESMO.Table: 543P

Localisation	Number	Median OS	Adjusted HR	95%CI	P-value
Bone	181	52.1	Ref	Ref	
Liver	66	49.5	1.25	0.87-1.80	NS
Lymph nodes	43	64.1	0.82	0.53-1.29	NS
Lung	41	68.8	0.47	0.28-0.78	0.003
Brain	21	40.6	1.01	0.54-1.90	NS
Pleura	14	18.8	1.57	0.86-2.88	NS

Conclusions

Patients with HER2+ mBC with lung-only metastases had the most favourable prognosis, whereas OS for the other metastatic locations was not significantly different from bone-only metastasis.

Legal entity responsible for the study

The authors.

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