

**Validation of different prognostic scores in breast cancer patients with brain metastases of the BMBC registry (GBG-79)**

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**Background**

The incidence of brain metastases from breast cancer is increasing and treatment is a major challenge. Different scores were developed to estimate the prognosis of patients with brain metastases by objective criteria. Sperduto et al. established the disease-specific breast-graded prognostic assessment (GPA) score in 400 breast cancer patients which includes age, performance status and tumor subtype. It has been described that the Breast-GPA best identifies patients with bad prognosis (Laakmann et al. 2016). Aim of this analysis was to validate the Breast-GPA in a large cohort of breast cancer patients with brain metastases.

**Materials and methods**

Data of 613 breast cancer patients from the Brain Metastases in Breast Cancer (BMBC) registry treated in 80 different clinical German institutions between 2000 and 2016 was analyzed.

**Results**

135 patients (22%) had a triple-negative, 199 (32%) a luminal-like und 279 (46%) a HER2-positive primary breast cancer. At diagnosis of brain metastases most patients had a good Karnofsky performance status (100%: 14.4%, 80-90%: 44.7%, 60-70%: 28.9%, 40-50%: 9.0%, 10-30%: 3.1%). Median age of patients was 56 years (22-90 years). Median survival in the overall cohort was 7.1 months (95% CI 6.2-7.8 months).

Distribution of GPA scores was: 0-1: 11.9% (n=73), 1,5-2: 22.3% (n=137), 2,5-3: 47.8% (n=293), 3,5-4: 18% (n=110).

Median overall survival within the GPA-subgroups varied between 2.4 (CI95% 2.0 - 3.4); 4.8 (3.6 - 6.9); 9.2 (7.2 - 11.3) and 12.3 (8.9 - 18.0) months and, thus, was significantly shorter compared with the times published by Sperduto et al. (3.4; 7.7; 15.1 und 25.3 months).

**Conclusions**

The breast-GPA is easy to calculate in clinical routine, allows to assess patients` prognosis objectively and can facilitate making therapeutic decisions. However, absolute survival may differ from the originally published cohort in other settings.

**Session:** Poster Session 4: Prognostic and Predictive Factors: Prognostic Factors — clinical testing and validation (7:30 AM-9:00 AM)

**Date/Time:** Friday, December 7, 2018 - 7:00 am

**Room:** Hall 1

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