

[P6-17-08] Brain metastases in breast cancer network Germany (BMBC, GBG 79): First analysis of 548 patients from the multicenter registry

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Background: The incidence of brain metastases (BM) in breast cancer patients is rising and has become a major clinical challenge. So far, limited therapeutic options and insights into the biology of BM exist since only a few studies analyzed exclusively data of breast cancer patients. In order to improve this situation, our multicenter registry was initiated in 2014: Brain Metastases in Breast Cancer Network Germany (BMBC, GBG79).

Materials and Methods: Patients with BM diagnosed since 2000, a history of breast cancer and no history of other malignant or neurologic disease can be included. Registration is allowed retrospectively as well as prospectively into a web-based database ("MedCodes"). Characteristics of the primary tumor, metastatic disease and BM as well as treatment details are documented. For this first analysis, 548 patients from 39 German centers were included.

Results: Median age at first diagnosis of BM was 55 years (25 – 90 years). 43% of patients (233/548) were HER2 positive, 19% (n=105) were triple-negative and 25% (n= 138) had luminal primary tumors indicating a selection of patients with specific tumor biology who develop BM. 54 % of the patients (n=267) had up to three BM whereas 45% (n=223) had more than three BM. 19% of patients (n=106) had BM without evidence of extracranial disease. 27% of the patients (n=146) underwent surgery of the BM. Of these patients, 61% (n= 89) were treated with whole brain radiotherapy and 16% (n=23) with stereotactic radiotherapy. In patients without surgery (n=397), 73% (n=289) received whole brain radiotherapy and 7% (n=28) stereotactic radiotherapy.

Median time from diagnosis of primary breast cancer to BM was 38.5 month for the entire cohort (CI95% 35.4 – 43.3). The time from first diagnosis to BM was shorter for triple-negative patients (20.9 month, CI95% 15.5 – 25.9) compared with patients with HER2-positive (37.0 month, CI95% 30.5 – 42.0) or luminal tumors (48.3 month, CI95% 38.2 – 54.0) ($p<0.001$). Median time from first diagnosis of BM to death in the entire cohort was 6.1 months (CI95%: 5.2 – 7.3). One year survival rate from diagnosis of BM was 32.2 % (CI95%: 2.2 – 67.8). Regarding tumor subtypes, HER2-positive patients had the longest median survival with 9.4 months (CI95%: 7.1 – 13.4) compared with 6 months (CI95%: 4.0 – 7.3) for luminal primary tumors and 3.2 months (CI95%: 2.1 – 4.6) for triple-negative patients ($p<0.001$). HER2 positive patients receiving HER2-directed therapy after the diagnosis of BM lived longer than those without (median 9.6 vs. 5.5 months, $p=0.029$). Regarding the number of BM, no difference in survival was observed between one, two or three BM (median survival of 7.8 months). However, survival was shorter in those patients with more than three BM (5.2 months; $p=0.007$).

Conclusion: This is so far the largest analysis of breast cancer patients with BM treated in Germany. In this cohort, triple-negative subtype or more than three BM were associated with shorter survival from the diagnosis of BM. HER2 positive patients with no HER2 directed therapy after the diagnosis of BM showed a shorter survival. The recruitment of the registry is ongoing and we aim to include more than 1000 patients by the end of 2015.

Saturday, December 12, 2015 7:30 AM

Poster Session 6: Treatment: Brain Metastases (7:30 AM-9:00 AM)

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