Cancer Symposium
Presented at:

Overall survival of metastatic breast cancer registries - data from the PRAEGNANT breast cancer registry

BACKGROUND
Breast cancer is the most common malign cancer in women in Western countries and is still the leading cause of cancer death in women. About 9% of women with breast cancer have distant metastatic disease at initial presentation. Furthermore, 20% of patients with early-stage disease treated with post-operative adjuvant therapy experience a recurrence, Sanford 2 years after initial diagnosis. Metastatic breast cancer is often incurable and an aggressive tumor. As the treatment options vary among countries and even within the same country, patient survival and disease outcomes vary among treatment modalities. The aim of this study was to investigate the survival and disease outcomes of metastatic breast cancer patients in the German-speaking countries.

STUDY DESIGN AND METHODS
The PRAEGNANT study is conducted as a prospective diagnostic translation and multi-center control with a central documentation of patient and tumor characteristics and a central biomaterial archive for prospective molecular studies. The study network aims at including 2000 breast cancer patients with advanced, inoperable, metastatic disease.

Patients of all therapy arms were included in the study. Data collection comprises questionnaires, adherence events, quality of life and other patient reported outcomes.

Data collection
Clinical data were collected by trained and dedicated staff at the sites participating in the prospective PRAEGNANT study. These data are monitored using automated quality assurance checks and through correlation with clinical oncology.

Statistical methods
Overall survival rates according to subtype, metastatic site, patient and tumor characteristics were calculated using life table methods. Kaplan Meier survival curves according to therapy line were performed in the whole data set. Survival curves were compared using log-rank test.

RESULTS
The PRAEGNANT registry comprises data from a total of 2426 patients with metastatic breast cancer. For the present analysis a total of 1654 patients with complete data sets were selected. Table 1 summarizes the patient and tumor characteristics of the 1654 patients. Of all patients included in the present analysis, 59% were in the 1st line metastatic situation, and 41% and 1st and 2nd line. Table 2 displays the patient population for the 1st line setting. At the time of this analysis, a total of 320 deaths were observed among the 1654 selected patients. Median follow-up for the whole cohort occurred 5.7 years.

Table 2: Patient characteristics according to therapy line

<table>
<thead>
<tr>
<th>Therapy line</th>
<th>OS in 1Y</th>
<th>OS in 2Y</th>
<th>OS in 3Y</th>
<th>OS in 4Y</th>
<th>OS in 5Y</th>
<th>OS in 6Y</th>
<th>OS in 7Y</th>
<th>OS in 8Y</th>
<th>OS in 9Y</th>
<th>OS in 10Y</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st line</td>
<td>70.0%</td>
<td>59.8%</td>
<td>55.0%</td>
<td>50.9%</td>
<td>46.6%</td>
<td>43.0%</td>
<td>36.7%</td>
<td>31.5%</td>
<td>26.6%</td>
<td>22.6%</td>
</tr>
<tr>
<td>2nd line</td>
<td>59.0%</td>
<td>50.0%</td>
<td>45.0%</td>
<td>40.9%</td>
<td>36.8%</td>
<td>33.6%</td>
<td>29.0%</td>
<td>25.0%</td>
<td>21.5%</td>
<td>18.5%</td>
</tr>
<tr>
<td>3rd line</td>
<td>49.0%</td>
<td>41.0%</td>
<td>37.8%</td>
<td>34.8%</td>
<td>31.8%</td>
<td>29.6%</td>
<td>25.4%</td>
<td>22.3%</td>
<td>19.2%</td>
<td>16.2%</td>
</tr>
</tbody>
</table>

Table 3: Five year and three year survival rates according to patient subgroups

<table>
<thead>
<tr>
<th>Subgroup</th>
<th>5 year OS</th>
<th>3 year OS</th>
</tr>
</thead>
<tbody>
<tr>
<td>ER positive</td>
<td>75.0% (62.0%, 84.0%)</td>
<td>60.0% (37.0%, 74.0%)</td>
</tr>
<tr>
<td>ER negative</td>
<td>40.0% (27.0%, 53.0%)</td>
<td>27.0% (14.0%, 40.0%)</td>
</tr>
</tbody>
</table>

CONCLUSIONS
The PRAEGNANT breast cancer registry includes metastatic breast cancer patients with no disease and isolated dispersed over all therapy lines, however mainly during the 1st line of therapy. Patient and tumor characteristics can hereby metastic breast cancer patients into different subgroups. The 1st line of therapy in metastatic breast cancer and ER2+ positive disease had the best overall survival, whereas ER2+ and HER-2 positive patients had the worst prognosis. Furthermore, we observed among patients with brain metastasis the worst OS. There were no differences between patients with no and isolated metastatic disease. As most of the patients included in the registry, were treated in Germany, a high number of patients were included within this subgroup of patients. This underlines the utmost importance for further and continuous therapy development in the luminal A like subgroup of metastatic breast cancer patients. These results should encourage further research that will serve to improve therapy in breast cancer patients with metastatic disease.

ACKNOWLEDGEMENT
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SUPPORTED BY

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