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## COULD PRIMARY TUMOR RESECTION IMPROVE SURVIVAL IN METASTATIC BREAST CANCER?

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**Objective:** Resection of the primary tumor in metastatic breast cancer is controversial in literature. Some evidence have suggested that women who undergo resection of the primary metastatic breast cancer achieved improved survival outcomes. The objective of this study is to evaluate the impact of primary tumor resection (PTR) in patients with metastatic breast cancer. **Methodology:** Literature review. We performed our search in the following databases: Medical Literature Analysis and Retrieval System Online (MEDLINE), Wiley Online Library, Scopus, and PubMed Central (PMC). Eight studies from 2016–2019, including randomized controlled trials, meta-analysis, and systematic reviews were selected. **Results:** Although there are some polemic opinions about the surgical treatment, the latest studies that we have analyzed emphasized that PTR is associated with better prognosis in women with metastatic breast cancer. In most studies, it was reported in literature that progression-free survival (PFS) is better on those who underwent surgery. In addition, primary tumor resection has been reported to be associated with longer progression-free survival at a distance (Hazard Ratios 0.42). Improved survival was even associated with surgery regardless of tumor size. An expert group of oncologists from India came to a consensus that surgery for primary tumor should be done in patients with oligometastatic breast cancer. A similar conclusion was reached by a research group in Mexico, who suggest that PTR has a positive impact on women PFS and borderline overall survival, particularly benefiting those with oligometastatic disease. Primary tumor resection was also associated with a longer median overall survival (OS). On a study conducted in USA, which included 29,916 patients with metastatic breast cancer, 15,129 (51%) underwent primary tumor resection, and 14,787 (49%) patients did not undergo surgery. OS achieved was 34 vs 18 months, in favor of surgical patients. A retrospective cohort study in USA registered survival of at least 10 years seen in 9.6% (n=353) and 2.9% (n=107) of those who did and did not receive surgery, respectively. Additionally, those undergoing surgery had longer median survival than those who did not (28 months vs 19 months). In women with *de novo* stage IV breast cancer, current studies show that surgical resection of the primary tumor occurs in almost half of those alive 1 year after diagnosis. However, we acknowledge that there are considerable discussions about the selection of patients, since most studies are likely to choose those with good status performance. **Conclusion:** The primary role of local treatment to the breast in metastatic breast cancer is palliation. Patients with metastatic disease should be evaluated for possible local management of the primary if it may control local complications from the cancer (e.g. bleeding, infection, or wound management). Based in the analysis, primary tumor resection in metastatic breast cancer is associated with higher survival rates, when compared to not surgical groups. We suggest a new approach to annul the possible selection bias in studies.