

# **Breast & Axillary surgery in metastatic breast cancer**

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Approximately 6% of all breast cancer patients present with an intact primary and synchronous distant disease. For these patients, overall survival is dictated by the systemic disease burden rather than the status of the primary tumor. Consequently, **systemic therapy is first-line treatment**, and resection of the intact breast tumor is generally not recommended because the expectation is that most patients succumb to their disease before they develop uncontrolled local disease (ULD).

While patients with metastatic breast cancer are unlikely to be cured of their disease, more effective systemic therapies with chemotherapy and targeted endocrine and biologic therapies have contributed to significantly improved overall survival and progression-free survival in the past decade, particularly among those with hormone receptor-positive and/or human epidermal growth factor receptor 2 (HER2)-positive disease .

Metastatic breast cancer **is not a curable disease**,  
Surgery to remove the primary tumour is  
associated with an increased survival in other  
types of metastatic cancer. Breast surgery **is not  
standard treatment** for metastatic disease.

The primary treatment approach recommended by the **NCCN Panel** for women with metastatic breast cancer and an intact primary tumor is systemic therapy, with consideration of surgery after initial systemic treatment for those women requiring palliation of symptoms or with impending complications, such as **skin ulceration, bleeding, fungation, Infection** and **pain**.

Generally such surgery should be undertaken only if complete local clearance of tumor may be obtained and if other sites of disease are not immediately threatening to life.

Retrospective studies suggest a potential survival benefit from complete excision of the in-breast tumor in select patients with metastatic breast cancer. Substantial selection biases exist in all of these studies and are likely to confound the study results.

In one **prospective trial**, women (n =350) with **de-novo metastatic breast cancer** who achieved a partial or complete response to anthracycline-based chemotherapy were randomly assigned to either surgery of the primary tumor plus adjuvant radiation versus no locoregional treatment. There was **no difference in the overall survival (OS)** between the group that received surgery and the group that did not .



However, another trial by the **Turkish Federation**, MF07-01 of women (n=274) with de-novo metastatic breast cancer randomized to local management (mastectomy, or BCS with radiation) followed by systemic therapy versus systemic therapy only, observed a **benefit** with surgery. While no difference in survival was seen at 36 months, at **40 months**, patients treated with local management showed an improvement in survival with locoregional treatment.

randomization in the Turkish trial **was not balanced**. Patients who received surgery had lower rates of :  
triple-negative disease (7% vs. 17%),  
visceral metastases (29% vs. 45%),  
and many had solitary bone metastases only (33% vs. 20%).

In an unplanned subgroup analysis, patients who appeared to derive the greatest OS benefit from local management included those with HR-positive disease, HER2-negative disease, those younger than 55 years and those with solitary bone metastases.

Though the available data does not support broadly considering local therapy with surgery and/or RT, this may be reasonable in **select patients** responding to initial systemic therapy. In such clinical scenarios, patient engagement in the decision is encouraged.

Bone is the **most common** site of metastasis in breast cancer patients, and **up to 6%** of all breast cancer patients already have bone metastases (BM) at the time of initial diagnosis

Also, the difference in the location of distant metastases from breast cancer can make a difference in overall survival (OS).

The median OS of breast cancer patients with liver metastasis is **6 months**, the median OS of breast cancer patients with lung metastasis is **14.1 months**, while the median OS of breast cancer patients with BM is **28 months**.

Due to the fact that BM is **most common** in breast cancer and tend to have longer survival than other single metastases, these patients are more likely to undergo surgery for the primary tumor .

The **role of axillary surgery** on overall survival has been difficult to evaluate in the published retrospective analyses.

A meta-analysis by Hartmann and colleagues considered six retrospective studies that gave information about whether an axillary surgical procedure was performed in case of surgery . Only three studies investigated the impact of axillary surgery on survival, and **did not find a benefit**.



Given current concepts regarding the role and value of axillary dissection in nonmetastatic breast cancer, this procedure **cannot be recommended** in patients with metastatic disease.

The primary role of local treatment to the breast and/or regional nodes in patients with stage IV breast cancer is palliation. Patients with metastatic disease should be evaluated for possible management of the primary and/or regional nodes if it may control debilitating symptoms from the cancer (eg, locally advanced breast tumors causing pain, bleeding, ulceration, infection, and poor wound healing; or regional nodal disease causing pain, motor weakness, and sensory deficits from brachial plexus invasion, or lymphedema).

It should be noted that systemic therapy can also be helpful in such situations, decreasing the size of the tumor and alleviating symptoms. However, in general, for patients who are asymptomatic at the site of their locoregional disease, locoregional treatment with surgery and/or radiation therapy **is not standard-of-care treatment** given lack of clear evidence that this improves survival.

We may also do surgery in patients who are not symptomatic, but we are concerned they may be symptomatic if they do not respond quickly, such as a primary breast mass that is amenable to resection and close to ulcerating. However, the decision to proceed with local management in a similar situation should take into account **patient preferences** and should be made in a **multidisciplinary setting**.

At present, locoregional therapy should only be offered to patients with stage IV de novo breast cancer with a clear understanding of the risks and costs of such therapy, and the lack of a demonstrated survival benefit.



THANK YOU  
FOR YOUR  
ATTENTION