

## **METAPLASTIC BREAST CANCER – CLINICAL SIGNIFICANCE**

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**Background:** Metaplastic breast carcinoma (MBC) is a rare breast cancer characterized by co-existence of ductal carcinoma with areas of matrix producing, spindle cell, sarcomatous or squamous differentiation. The tumors tend to be poorly differentiated and ER/PR/HER2 negative. Treatments have been standard aggressive multidisciplinary breast cancer therapy. Outcomes have generally been described as poor.

**Method:** The Swedish Cancer Institute prospective breast cancer database has over 6500 patients from 1990-2005 including 24 (0.4%) MBC patients.

**Results:** MBC mean patient age was 55 years (range 26-80) at presentation. Mean primary tumor diameter was 2.4cm (range 0.6-7.0; T1=13/24, T2=9/24, T3=2/24). Cytoplasmic grade was usually high (21/24) as was nuclear grade (high=18/24, moderate=5/24) and the modified Bloom-Richardson grade (high=10/12, moderate=2/12). All patients had axillary lymph node assessment by sentinel (SLN) or axillary (AND) dissection, or both (N0=17/24 and N1=7/24). Mean number of positive nodes was 1.7 (range 1-4). No patient had distant metastasis (M0=24/24). Hormone receptor status was predominately negative (ER-/PR-=22/24, ER+/PR-=1/24, ER-/PR+=1/24) as was HER2 (IHC: negative=9/11, indeterminate [2+]=2/11; FISH: negative=1/2, indeterminate=1/2). All patients had surgical resection as first treatment: breast conserving surgery (BCS)=18/24, total mastectomy (TM)=6/24, SLN only=7/24 and AND=17/24. Chemotherapy was given to 18/24 patients (BCS=13/18, TM=5/6; CMF=2/18, AC=6/18, A+T=9/18). Radiotherapy was given to 22/24 patients (BCS=18/18, TM=4/6). One BCS patient had a local recurrence at 21 months treated by TM. Four patients had distant recurrences 5-88 months from diagnosis. Three died of disease (mean=41 months from initial diagnosis, 9 months from recurrence). Mean survival of 21 patients with no evidence of disease was 64 months (range 1-175). Overall 5-year survival was 80% (12/15).

**Conclusion:** MBC is associated with poor histologic grade and negative ER/PR/HER2 (“triple negative”) - poor prognostic indicators. However, outcomes better than anticipated, based on prognostic indicators or the limited literature reports, can be achieved with aggressive multidisciplinary care.