

## Ipsilateral breast cancer recurrence:

### Treatment and long-term oncological results at a high volume center.

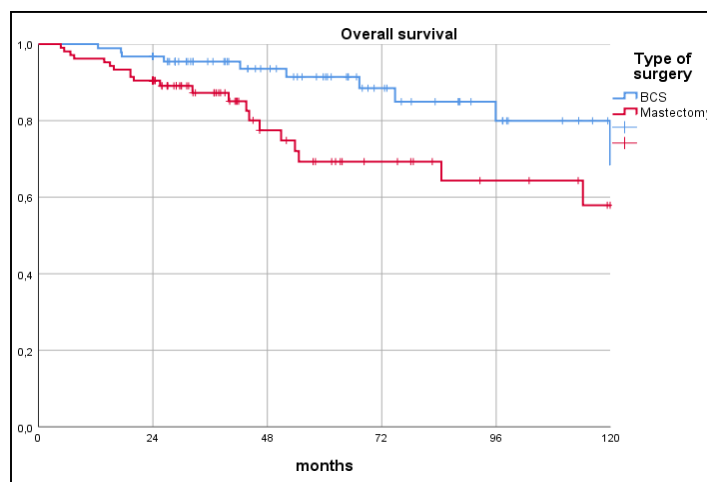
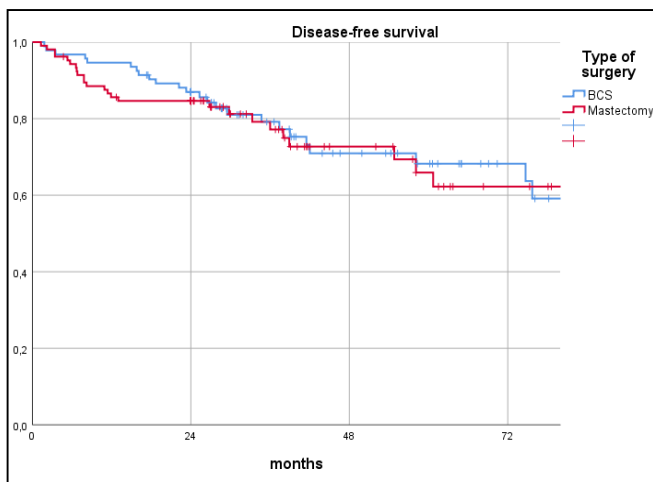
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#### BACKGROUND

A small proportion of patients with primary breast cancer who receive breast conserving surgery (BCS) will develop an ipsilateral breast cancer recurrence (IBCR). In these patients, salvage mastectomy is still considered the treatment of first choice, even if a second conservative approach is technically feasible. The purpose of this study was to describe the clinical characteristics of patients with IBCR after BCS, to compare the two different therapeutic options (either salvage mastectomy or second BCS) in terms of long-term oncological outcomes, and to identify the independent factors that may predict the type of treatment for IBCR.

#### METHODS

Our prospectively maintained institutional database was queried, and 309 patients with IBCR after BCS who underwent either repeat BCS or salvage mastectomy, between January 2008 and December 2018, were identified. All the analyzed patients with IBCR after BCS were affected by true recurrence. Exclusion criteria were: primary breast cancer treated with mastectomy, contralateral recurrence, new ipsilateral primary tumor, recurrent benign breast tumors, breast sarcomas, synchronous metastatic disease, isolated axillary lymph node recurrence, inoperable IBCR, previous non-breast malignancies, disease-free interval (DFI)  $\leq$  6 months, and follow-up  $<$  24 months.



#### RESULTS

Out of 309 patients with IBCR after BCS, 143 underwent repeat BCS and 166 underwent salvage mastectomy. At multivariable analysis, young age,  $<65$  years (59.6% vs. 37.1% if age  $\geq 65$  years, odds ratio (OR)=2.374, 95% confidence interval (95%CI)=0.92-5.24,  $p=0.018$ ) and short DFI  $<24$  months (15.7% vs. 10.5% if DFI  $\geq 24$  months, OR=2.705, 95%CI=1.42-5.97,  $p=0.007$ ) were found to significantly increase the probability to receive mastectomy for IBCR after BCS. After IBCR, disease-free survival rate at 3-, 5-, and 10-years was 79.2%, 68.2%, 36.9%, and 77.2%, 65.9%, 55.3%, in patients receiving repeat BCS or mastectomy, respectively ( $p=0.842$ ). Overall-survival rate at 3-, 5-, and 10-years was 95.4%, 91.4%, 68.5%, and 87.3%, 69.3%, 57.9%, in patients receiving repeat BCS or mastectomy, respectively ( $p=0.018$ ).

#### CONCLUSIONS

Salvage mastectomy should not be considered the treatment of choice for IBCR and it does not seem to improve survival compared to second BCS. A second conservative approach for IBCR can still be evaluated and should be proposed, when technically feasible, to IBCR patients, presenting acceptable loco-regional control and survival. An exhaustive discussion with the patient is crucial and the information about the risk of poor long-term prognosis after mastectomy should be shared.