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LETTER – BREAST ONCOLOGY

Can Patients with Multiple Breast Cancers in the Same Breast Avoid Mastectomy by Having Multiple Lumpectomies to Achieve Equivalent Rates of Local Breast Cancer Recurrence? Response to the Preliminary Alliance 11102 Trial Report

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TO THE EDITORS:

Rosenkranz and colleagues[1] report reassuringly high success rates for breast-conserving surgery (BCS) in women with multiple ipsilateral breast cancers (MIBCs). Surgical management of MIBCs can pose a dilemma when more sensitive imaging modalities detect additional tumor foci that are potentially amenable to adaptive forms of BCS employing oncoplastic techniques.[2] Interestingly, there was minimal use of therapeutic mammoplasty among these patients, the majority of whom had two tumors (96%) separated by at least 2 cm, with the largest focus measuring $\leq$ 15 mm.[1] Despite this highly selected group, more than 80% underwent standard BCS without tissue rearrangement, and three-quarters of all conservation patients achieved clear margins with a single operation.[1] There is potential for the resection of larger T2 multicentric cancers in the Z11102 trial using more advanced oncoplastic surgery, such as level II mammoplasties.[1,2] Furthermore, larger tumors are more likely to require a boost dose and there are concerns about adverse effects from a double radiotherapy boost following BCS for MIBC.[2,3] There are limited data from phantom studies on relative positioning and delivery of two separate boosts.[2,3] Despite a median largest tumor size of 15 mm, these patients received a boost to each tumor bed (10–16 Gy) that could lead to severe fibrosis, with an estimated 10% increase in volume of breast tissue exposed to > 60 Gy.[3]

Although there is a lack of high-quality comparative data from randomised or prospective cohort studies, a degree of surgical equipoise exists which prompted the latest St Gallen consensus to endorse BCS for some cases of MIBC.[4] In a systematic review involving 24 retrospective studies, only six studies compared rates of locoregional recurrence (LRR) for BCS versus mastectomy,[2] with rates of LRR ranging from 2 to 23% after BCS. Formal meta-analysis showed homogeneity among studies with equivalent rates of LRR irrespective of surgical procedure (risk ratio 0.94, 95% confidence interval 0.65–1.36).[2] This may have partly reflected a similar case selection bias, with surgeons choosing BCS for low-risk patients and mastectomy for higher-risk cases. Such confounding would lead to inconclusive results in terms of safety and clinical outcomes of BCS compared with mastectomy for MIBC.

A survey of UK surgeons confirmed that 90% supported a randomised trial evaluating the efficacy of BCS compared with mastectomy (± reconstruction) for MIBC.[2,5] The MIAMI trial will open as a preliminary study to assess whether a sufficient number of eligible patients (n = 50) can be identified who will accept a randomized intervention over a 15-month period.[2,5] This feasibility phase will inform the main trial that is powered using a 2% non-inferiority margin on a predicted 5-year LRR of 2.5% between BCS and mastectomy for all types of MIBCs involving individual tumor foci up to 50 mm.[2,5]

DISCLOSURE Zoe E. Winters and John R. Benson declare no competing interests.

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