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Taipei International Breast Cancer Symposium

台北國際乳癌研討會

Speech Abstract

Topic:

Current topics in breast cancer radiation oncology: Axillary management; multi-centric disease and second breast-conserving therapy.

Abstract

As demonstrated repetitively by the EBCTCG meta-analyses, radiation therapy (RT) reduces the risk of local, regional and distant recurrences. As such, RT has a positive impact on mortality after mastectomy for node-positive and selected node-negative disease and for all patients after breast conserving surgery. The relative risk reduction is partially independent from patient-, tumour- and treatment-related factors, while the absolute benefit depends to a large extent on the absolute risks without RT. The recently published analyses on regional nodal irradiation (RNI) clearly demonstrated that in trials starting after 1989, up to 15-years of follow-up, no detrimental effect on survival was present due to RNI. This was in sharp contrast with the older trials, causing increased non-breast-cancer related events following RNI. This paradigm shift, that contemporary RT doesn't harm, is likely attributable to improvements in breast cancer RT procedures, leading to increased breast-cancer specific and overall survival rates. Of note is also an important interaction between systemic and locoregional treatments, with a decreased risk for dying due to distant metastases having a positive impact on the impact of optimising locoregional control that can be obtained by surgery and RT.

The continuous improvements in outcomes of patients diagnosed with breast cancer paved the way towards de-escalation of the overall treatment burden. In this, the decreased extent of axillary surgery led to an increased proportion of patients eligible for nodal RT. Nowadays, surgery is generally regarded as a staging procedure, providing important prognostic information based on which subsequent therapies, systemic and RT, can be planned. Without necessary leading to an excessive use of axillary RT, many patients can be spared axillary surgery and treated with RNI, also including the nodal regions that are outside of the area of axillary surgery. Of note, omission of axillary surgery for N2-disease remains investigational, albeit frequently challenged and substituted by RNI. The response of primary systemic therapy can be used to tailor subsequent locoregional treatments, a topic on which several trials are currently being conducted and analysed. Also using this parameter, RT for breast cancer continues evolving to offer the most personalised approach for every single patient by optimising treatment indications, dose and volume prescriptions, target volume definitions and integration with surgery and systemic treatments within the overall treatment approach. This way, the burden related to the treatment has been strongly reduced over the last decades in a stepwise manner, resulting in a reduction of both early and late side effects and a decrease in the number of visits for treatment sessions, all without compromising on treatment efficacy.

While multifocal disease is already considered for a long time of being amenable to breast-conserving therapy similar to unifocal disease, the acceptance in guidelines of multicentric disease is a more recent addition to the therapeutic spectrum. For this, the estimation of the impact of surgery on the expected

shape of the breast is the most important, for which oncoplastic surgical techniques offer a great tool. Second comes the RT-boost to the primary tumour bed, which' indication and use are often based on outdated protocols. Based on the estimation of the volume and the proportion of the breast receiving a high dose, it may be decided to adapt or omit the delivery of a boost after the standard whole-breast RT. Second breast conserving therapy has been proposed as an alternative to standard mastectomy for ipsilateral breast tumour recurrences. While lumpectomy alone seems associated with worse outcomes, also in survival, a lumpectomy with re-irradiation of the part of the breast surrounding the recurrent tumour offers similar outcomes compared to mastectomy in several retrospective and small prospective non-randomised studies. GEC-ESTRO recently presented the TAM-score, based on the combination of the time interval between first and second surgery (=T), the eligibility criteria for accelerated partial breast irradiation (APBI, =A) and the molecular breast cancer classification (=M). This score can help to estimate the risk for subsequent breast events and to select patients who may be best suitable for second breast conserving therapy, combining lumpectomy with RT. However, high-level is missing, and further research is required, preferably in the form of a phase 3 randomized trial comparing salvage mastectomy to second breast conserving therapy. At this moment, a global initiative involving several multidisciplinary societies and patients' representatives is working on a consensus statement related to this topic.