Review

Hypofractionated radiotherapy for early breast cancer: Review of phase III studies

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**Abstract**

Breast-conserving surgery including whole breast irradiation has long been a recommended procedure for early breast cancer. However, conventionally fractionated radiotherapy requires a lengthy hospitalisation or prolonged commuting to a hospital for radiotherapy. In recent years, hypofractionated radiotherapy has increasingly been used. This method involves higher fraction doses (above 2 Gy) as compared to conventional radiotherapy, so the total dose can be delivered in fewer fractions and in a shorter overall treatment time. This review aims at presenting most important outcomes of four randomised studies comparing conventional and hypofractionated radiotherapy schemes including a total of 7000 patients. These studies have not shown apparent differences in treatment efficacy, incidence of late post-radiotherapy complications or cosmetic effects during a 5–10 year follow-up, but longer observation is warranted to fully evaluate the safety of this method. Currently, major societies consider modestly hypofractionated radiotherapy schemes as a routine management in selected groups of patients undergoing breast-conserving surgery. However, this method should be used cautiously in patients with lymph node metastases, big breasts, receiving chemotherapy or trastuzumab, or those under 50 years of age.

*Keywords:* Breast cancer; Adjuvant radiotherapy; Hypofractionated radiotherapy