COST-EFFECTIVENESS OF POST-OPERATIVE RADIOTHERAPY IN MINIMUM RISK ELDERLY

Background

The use of post-operative breast irradiation (radiotherapy) following breast conserving surgery reduces the risk of local recurrence. However, radiotherapy has side-effects such as fatigue and therefore may reduce quality of life. Also, radiotherapy places substantial demands upon hard pressed radiotherapy departments. Because of these concerns the need for postoperative radiotherapy in tumours with a low risk of recurrence has been questioned. The risk of local recurrence after conservation surgery and postoperative radiotherapy declines with age and it may therefore be appropriate to withhold radiotherapy in older women. Given the potential impact on both resource use and health outcomes, it is important to assess the cost-effectiveness of radiotherapy.

References

**Results**

The table reports the mean costs for both the radiotherapy and no-radiotherapy arms of the trial. As would be expected, radiotherapy was the main cost driver for the radiotherapy arm contributing 61% of total cost. On average the patients attended 20 sessions of radiotherapy, with a mean cost of £2,128. Patients in the no-radiotherapy arm received relatively more expensive endocrine therapy and other medication costs were also higher. The mean total costs were £1,893 for the no-radiotherapy arm and £3,500 for the radiotherapy arm. No local recurrence was reported in either arm. The difference in mean total cost was £1,607.

The table also shows the mean QALYs. After adjusting for baseline difference, the difference in QALYs was extremely small (-0.008).

**Conclusions**

If the findings of this study are maintained in further research, then they suggest that adjuvant breast irradiation after breast conserving surgery and adjuvant endocrine therapy should not be provided to low risk older patients. The estimated difference in health outcomes, measured in QALYs, was close to zero whilst the costs were substantially higher in the radiotherapy arm. The probability that no-radiotherapy is cost-effective relative to radiotherapy was very high, namely 94%.

Radiotherapy capacity in Scotland and the UK is considered to be inadequate. If radiotherapy is not provided to this patient group then this will free up some of this very scarce radiotherapy capacity. There were around 20,000 new breast cancer patients aged over 65 in the UK in 2003. Around 31% would be classified as low risk resulting in freeing up around 120,000 radiotherapy sessions.

The magnitude of any excess local recurrence in patients not receiving radiotherapy is still uncertain. The follow-up was 15 months and no recurrences were reported. A longer-term trial is required to assess the longer term clinical outcome in this patient population. The PRIME II trial, which is currently recruiting, will meet this need.

The executive summary and full text of the report (reference 1) is available at the NHS HTA Programme website: http://www.hta.nhsweb.nhs.uk/.

This briefing paper describes work conducted by the Economic Evaluation Programme of HERU. Further information about this topic can be obtained by contacting Dr Marjon van der Pol, HERU, University of Aberdeen, Foresterhill, AB25 2ZD (tel: 01224 553269; email: m.vanderpol@abdn.ac.uk).

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