



<b>Title</b>	<b>Systematic Review of Intraoperative Radiotherapy for the Treatment of Early Stage Breast Cancer</b>
<b>Agency</b>	<b>ASERNIP-S, Australian Safety and Efficacy Register of New Interventional Procedures – Surgical</b> PO Box 688, North Adelaide, South Australia 5006, Australia; tel +61 8 8239 1144, fax +61 8 8239 1244
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## **Aim**

To compare the safety and efficacy of breast conserving surgery and intraoperative radiotherapy (IORT) for the treatment of early stage breast cancer and standard breast conserving surgery with postoperative radiotherapy (BCT).

## **Conclusions and results**

Studies that examined the use of IORT in early breast cancer were limited in number. Only 8 unique studies of IORT in early breast cancer could be identified. One was a randomized controlled trial of 70 patients, one was a concurrently controlled study, and the remainder were case series providing Level IV evidence. In terms of safety, the IORT studies reported only minor postoperative complications that typically resolved within a few months after surgery. In terms of efficacy, short-term followup results from the 8 IORT studies were similar to breast conserving therapy in terms of local recurrence, disease-free survival, and overall survival, but the immaturity of the current evidence base made any definitive assessment of its efficacy tenuous at best.

The ASERNIP-S review group concluded that the current evidence base on IORT and its use in early breast cancer is poor. Therefore, both the relative safety and efficacy of IORT compared to BCT cannot be determined at this time.

## **Methods**

Relevant literature on IORT and BCT was identified by searching Ovid preMEDLINE and MEDLINE, Current Contents, Cochrane Library, EMBASE, UK National Research Register, NIH Clinical Trials.Gov database, PubMed, and the HTA Database until March 2002. Only studies of patients treated with IORT were included for review.