Background The TARGIT-A trial compared conventional fractionated external beam radiotherapy (EBRT), with the risk adapted approach using single dose targeted intraoperative radiotherapy (TARGIT); if TARGIT was given concurrently with lumpectomy and if high risk factors are found subsequently, additional EBRT was recommended as per protocol (in 15-20% of cases).

TARGIT: Targeted Intraoperative radioTherapy

- Radiation delivered to the tumour bed immediately after lumpectomy under the same anaesthetic
- Focused to the tissues at highest risk of recurrence
- Mobile machine used in a standard operating room
- Physical dose of 20 Gy at the surface of the tumour bed, delivered over ~25 min

Radiotherapy (EBRT), with the risk adapted approach using single dose targeted intraoperative radiotherapy (TARGIT-A trial): an international, prospective, randomised, non-inferiority phase 3 trial

Lancet 2010; 376: 91-102

June 2010 ASCO
First results of the TARGIT-A trial

Conclusion
- With the caveat of small numbers, there is no difference in cardiac deaths by tumour laterality
- The risk of cardiac death appears to be similar to a age matched population
- TARGIT+EBRT had significantly fewer non-breast cancer deaths than EBRT (p=0.012)
- Therefore, avoidance of EBRT toxicity may not completely explain the significant reduction in non-breast cancer deaths in the TARGIT arm of the randomised trial.

A new hypothesis is generated:

“The effect of TARGIT on the wound micro-environment spurs over causing systemic beneficial effects protective against cardiac and cancer mortality”

References