



IORT is a disruptive technology that is appropriate for around 30% of breast cancer patients (early stage – around 1,000 women/year). Treatment consists of a single dose of radiation within breast conserving surgery which eliminates the need for a further 15-25 visits to hospital for post-operative radiation therapy.

The treatment has been available for two years at the Auckland Breast Centre on Auckland's North Shore under the name Intrabeam (the brand name for the Zeiss IORT system).

## FREQUENTLY ASKED QUESTIONS

### 1. Is Intrabeam approved for use in New Zealand?

Before it was disbanded in early 2016, the National Health Committee signed off Intrabeam as clinically effective in a Tier 2 Assessment. The project plan for the introduction of IORT has been passed to the Ministry of Health.

### 2. Is Intrabeam currently in use in New Zealand?

Yes – at Southern Cross North Harbour on Auckland's North Shore. During the two years that Intrabeam has been available in New Zealand, 83 patients have been treated.

### 3. What is the clinical evidence for Intrabeam?

- An international trial of 3,451 patients (the Targit<sup>1</sup> trial) concluded that the Intrabeam treatment is convenient, effective and has fewer side effects than the conventional alternative of whole breast radiation therapy.
- The Targit R Trial<sup>2</sup> (USA retrospective, 935 patients) confirmed low rates of local recurrence from Intrabeam IORT.

- The Targit A<sup>1</sup> and a recent meta-analysis<sup>3</sup> demonstrate a reduced mortality from Intrabeam treatment compared to standard whole breast radiation.
- Intrabeam is now in use in over 250 centres throughout the world, 60 of those in the US. Intrabeam is also approved for use in the public and private systems of Australia and in the UK within the NHS while the National Institute for Health and Care Excellence (NICE) continues their assessment.

### 4. What does Intrabeam cost and is it publicly funded?

The cost of treatment with Intrabeam is between \$5,000 and \$8,000 less than traditional forms of treatment (linear accelerator) requiring between 15 – 25 follow up radiation treatments. Currently Intrabeam is only available privately or through some health insurers but discussions are already taking place with DHB's to encourage them to make the treatment available publicly.

<sup>1</sup>Published in the Lancet in 2010 and 2015 with an update from the TARGIT A authors Jan 2015. <sup>2</sup>Ann Surg Online May 2016.

<sup>3</sup>Reduced mortality with partial breast irradiation for early breast cancer – a metaanalysis of randomised trials. Vaidya J et al. Int Jnl Rad May 2016.

## 5. What costs would be involved in having Intrabeam available through the public health system?

Because Intrabeam has been brought to New Zealand privately, no capital expenditure is required for DHB's to start referring patients. DHBs simply have to refer eligible patients to Focus Radiotherapy, the clinic where Intrabeam is located, and agree to pay the cost, which is less than traditional treatment with a linear accelerator.

Although there is currently only one Intrabeam machine in New Zealand, this is capable of doing up to 20 procedures a week. The cost of the "head" of the machine, the active component which delivers the radiation treatment, is \$1.0 m. However the "arm" that is required in the procedure to carry the treatment is only \$400,000. New Zealand could have "arms" at several sites and move the "head" around the country on a rotating roster.

Estimates are that the whole country could be covered with two "heads" and 4 – 5 "arms" – all at less than the cost of commissioning one of the traditional linear accelerators that currently delivers 15 – 25 treatments to each patient.

## 6. Is the cost of Intrabeam covered by Health Insurance?

Currently six private health insurance companies cover the cost of Intrabeam: nib (formerly Tower), Sovereign, Partners Life, Onepath (also now owned by nib), Unimed and Accuro.

The largest health insurer in New Zealand, Southern Cross, does not currently cover the cost of Intrabeam although discussions are taking place to get it approved. Of the 83 patients who have been treated with Intrabeam over the last two years, 54 of those were Southern Cross patients who chose to self-fund because Southern Cross will not cover the cost of the treatment. The balance were self-funded or funded by one of the six other health insurance companies who do cover the treatment

## 7. Why is Intrabeam regarded as a more appropriate treatment for early stage breast cancer patients?

- Intrabeam provides for better patient outcomes because there is no requirement for weeks of ongoing radiation treatment;

- Intrabeam is a less expensive way to treat early stage breast cancer because it eliminates all follow up radiation treatments;
- Intrabeam reduces the incidence of treatment related side effects;
- Intrabeam is financially advantageous for all patients and for the economy because it allows an earlier return to work and/or family duties.
- Patients who live outside a treatment centre have to stay away from home for the 3 – 5 weeks of their traditional radiation treatment. Some women have chosen to have full mastectomies rather than partial mastectomies to avoid this need to be away from home, friends and family. This places a higher cost burden on the public health system and means a much bigger operation for the patient concerned, also involving reconstructive surgery.

## 8. Given that Intrabeam is only currently available privately or through some health insurers, what has been the impact on equal access to the treatment across all demographics?

During the two years that Intrabeam has been available only one Maori woman and no Pacific Island patients have received the treatment. This is why DHBs are being pressured to agree to refer patients for IORT treatment, which could happen immediately. Also the cost of doing so is less to the DHBs than the traditional linear accelerator form of treatment which requires 15 – 25 follow up visits.

## 9. What can I do to help to get Intrabeam available to more New Zealand women?

Write to the Minister of Health or your local MP at Parliament Buildings in Wellington, and write to the head of your local DHB asking them to make Intrabeam available to all eligible patients, not just those who can afford to pay for the treatment privately or through one of the health insurance companies that cover the cost of the Intrabeam treatment.

If you are a Southern Cross member, you can also write to Southern Cross asking why they do not fund the treatment.