

Intraoperative radiotherapy for breast cancer

Information for patients on
IORT boost treatment



INTRABEAM[®]



No reason for despair

Patients go through a period of great anxiety and apprehension when breast cancer is diagnosed. It is comforting to know that major advances in the development of diagnostic and treatment procedures have been made in recent years. Thanks to new, innovative methods of treatment, the quality of life of breast cancer patients is continually improving.

Today's therapy generally consists of surgery, medication and radiotherapy. There is an increasing trend towards less invasive therapy precisely tailored to the personal needs of each individual patient.

Intraoperative radiotherapy can play an important role here. The aim of this brochure is to provide further information on traditional and intraoperative radiotherapy.



Traditional radiotherapy

Radiotherapy is an important part of the breast-conserving treatment of breast cancer, with the goal of destroying any remaining tumor cells and preventing recurrences after surgical removal of the tumor.

In traditional radiotherapy the entire breast is irradiated by the use of linear accelerators. However, this exposes the entire tissue to a high dose of radiation. To reduce side-effects, the required radiotherapy is therefore spread over a period totaling 6 weeks, 5 times a week (Monday to Friday).

Frequently, boost irradiation with an increased dose is applied in the last 1-2 weeks. Boost irradiation involves additional radiotherapy of the tumor bed, i.e. the area of the breast where the tumor was located before surgery. Boost irradiation reduces the recurrence rate of the cancer in the breast, with minimal impairment of the cosmetic outcome.

Targeted intraoperative radiotherapy with INTRABEAM®

With **TARGETed Intraoperative radioTherapy (TARGIT)** the treatment is performed during the surgery after removal of the tumor, and the affected tissue in the tumor bed is exposed to the radiation from the inside. This method shows a better treatment outcome than expected and can additionally reduce traditional radiotherapy by 5-8 days. The INTRABEAM® radiotherapy system is used for this purpose.

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TARGIT Boost can shorten radiotherapy by 5-8 days

This method has over 10 years of clinical experience¹. Clinical results reveal that the recurrence rate is exceptionally low, up to one half or one third of that expected with the traditional method. This means that a tumor was found again in only 1.7 percent of the patients in the first five years after surgery.

Conventional radiotherapy approx. 3-5%

IORT with INTRABEAM®

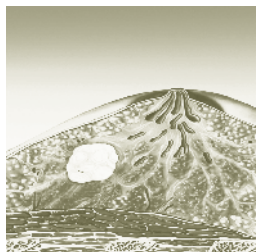
approx. 1,7%

Comparison of the breast cancer recurrence rate (Non-randomised)



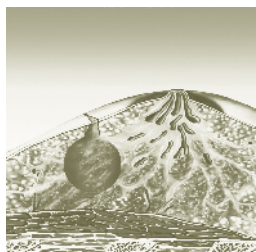
Treatment during surgery

INTRABEAM®



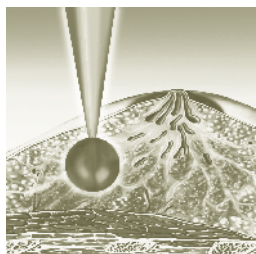
Step 1:

The position of the tumor is determined.



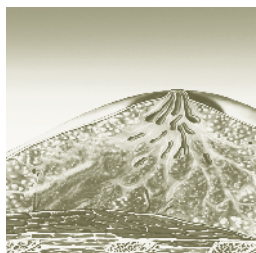
Step 2:

The tumor is surgically removed.



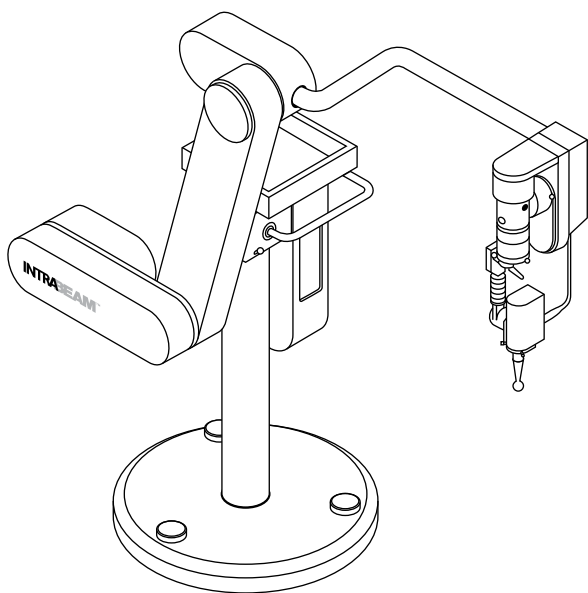
Step 3:

The INTRABEAM® applicator tip is positioned in the area of the breast where the tumor was located. The INTRABEAM® radiation is applied for about 30 minutes.



Step 4:

The applicator is removed and the incision is closed.



The INTRABEAM® system is used for targeted intra-operative radiotherapy. Its combination of targeted soft X-rays and direct use during the surgery ensures considerably reduced radiation exposure compared to traditional radiotherapy, allowing gentle and, at the same time, effective treatment.

Is intraoperative radiotherapy with INTRABEAM® an option for me?

Only the treating physician can determine after a thorough examination whether intraoperative radiotherapy is suitable for you. The method is currently used at various breast centers – please ask your treating physician.

Intraoperative radiotherapy for a local recurrence after breast-conserving surgery

A special case for possible intraoperative radiotherapy is the treatment of patients in whom a tumor recurrence is found in an already treated breast. Here, thanks to the targeted irradiation of the tumor bed and the protection of the surrounding tissue, the therapy with the INTRABEAM® can offer the patient the possibility of a second breast-conserving treatment. Only the treating physician can decide whether this possibility exists for the patient.

What benefits are offered by the IORT boost irradiation?

Benefits of TARGIT boost irradiation:

- **Considerably lower than expected long term local recurrence rate compared to traditional radiotherapy².**
- **Side-effects of traditional postoperative radiotherapy could be lessened.**
- **The cosmetic outcome is rated as very good by doctors and patients.**
- **Radiotherapy is reduced by one to two weeks.**

1 Vaidya JS, Baum M, Tobias JS et al, Targeted intraoperative radiotherapy (Targit): An innovative method of treatment for early breast cancer. *Annals of Oncology* 12:1075-1080, 2001

2 Vaidya JS, Baum M, Tobias JS et al. Efficacy of Targeted Intraoperative Radiotherapy (TARGIT) boost after breast conserving surgery: Updated results. *J Clin Oncol* 2008;26:565.

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For more information about TARGIT, please contact:

With the kind support of:



INTRABEAM®
TARGIT Therapy System