INTRABEAM® IORT

Gentle, mobile, precise

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Gentle

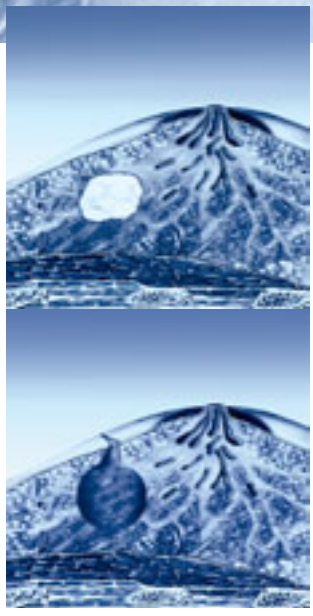
You get the effect yo
and you protect your

Healing – along with maximum protection of life and limb while making a positive impact on the patient's overall well-being – is the goal of every operation. Procedures involving the female breast or the brain, in particular, heavily demonstrate the interdependence of physical intactness and psychological well being.

The INTRABEAM® system guarantees pinpoint accuracy for radiosurgery, or tumor bed radiation. It delivers gentle, low energy – high dosage radiation and helps to spare surrounding healthy tissue from the effects of radiation. Exact radiosurgery can be performed either by inserting the probe into the existing biopsy channel, or by placing optimized applicators directly in the tumor bed. The special design of the INTRABEAM® system greatly reduces the risk of scatter radiation exposure for patients, physicians and operating room staff. The system provides fast, safe treatment and prevents the interruption of patient care during radiotherapy – a benefit to everyone involved in the procedure.

INTRABEAM®: Safe and Gentle

- For IORT throughout the body
- Protects surrounding tissue
- Minimizes exposure of patients and OR staff



Immediately after tumor removal, radiation is applied by means of a spherical applicator that completely fills the tumor cavity, ensuring equal distribution to the targeted tissue.

Applicators used for tumor bed irradiation

ou want,
r patient and staff

Interstitial irradiation of brain tumors is performed by inserting the INTRABEAM® probe through the biopsy channel. The tumor bed is irradiated from the center of the probe.

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Mobile

Take the flexibility of from one OR to the

The INTRABEAM® System optimally combines flexibility and mobility. One cannot exist without the other, and they are extremely beneficial to the physician, OR staff, and patients.

INTRABEAM® is ideal for intraoperative radiotherapy (IORT) in a variety of disciplines. The flexible, easy-to-use system can be used to treat tumors throughout the body – brain, breast, colorectal, etc. The compact, miniaturized x-ray source (XRS) can be used with both the surgical support system and the stereotactic frame. The support system can be placed exactly where you want it in the OR, enabling the x-ray source to be easily and precisely positioned in the surgical field.

The system not only saves space in the OR, but also provides surgeons with plenty of room. The long support arm enables the surgeon to access tumors in difficult to reach positions. The support system can be used in an overhead position, providing the surgeon with ample working space between the operating table and the support system.

Casters allow INTRABEAM® to be quickly and easily moved from one operating room to another – throughout the hospital – enabling fast turnaround times for the next patient. The miniaturized x-ray source and applicators can be quickly and safely sterilized, providing added comfort and ease of mind to both the surgeon and the patient.

INTRABEAM®: As mobile as you are.

- Suitable for multidisciplinary use
- Extremely wide range of positioning options
- Rapid turnaround times for use in different operating rooms

The INTRABEAM® surgical support system, modeled on the world-renowned free-floating Contraves system, offers optimal flexibility and mobility.
The Intrabeam uses mobile casters that allow for the expeditious transport of the system from one operating room to the next.

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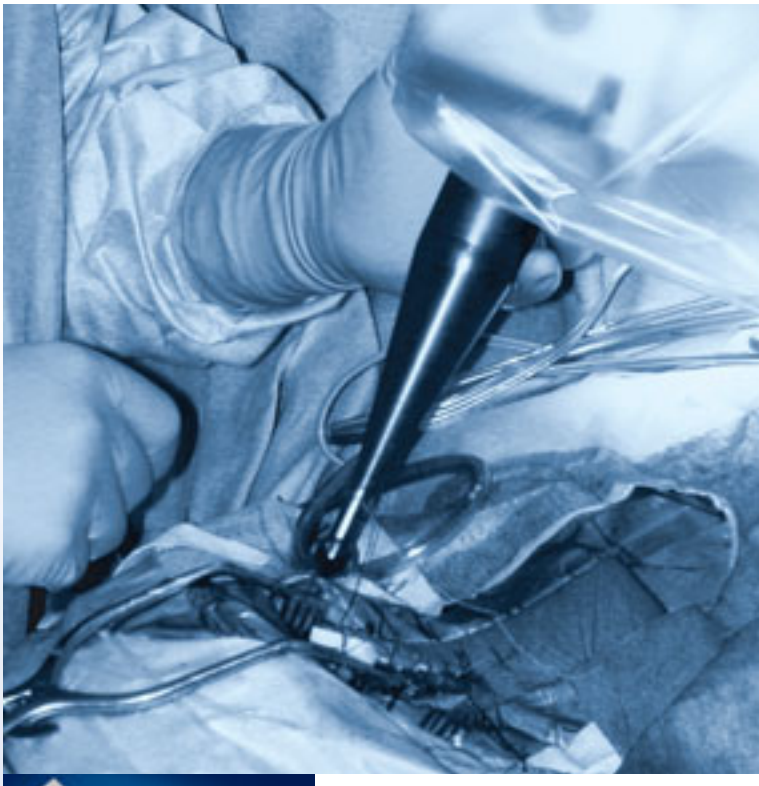

Tumor bed irradiation in the brain.

*INTRABEAM® x-ray source on a CRW stereotactic frame.**

The appropriate applicator is selected depending on the size of the tumor cavity. The x-ray probe is located in its center during irradiation.

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* The CRW stereotactic frame is a product of Tyco-Radionics, Burlington, MA USA

Precise

As in surgical intervention, precision and reliability are essential to radiotherapy. INTRABEAM® easily fulfills these requirements thanks to its rigorously coordinated system components.

The INTRABEAM® system accurately delivers the radiation to its intended target at the center of a tumor or tumor cavity. The INTRABEAM® control unit reliably ensures that the selected dosage is administered in accordance with the specified parameters. The system automatically shuts down when treatment is completed. The rapid drop in dosage also ensures that surrounding tissue is only minimally exposed.

The extremely flexible support system plays a major role in accurately targeting the radiation. Once the position as been selected, the electromagnetic clamps of the INTRABEAM® support system securely lock the position throughout the duration of the treatment.

INTRABEAM®: Precise.

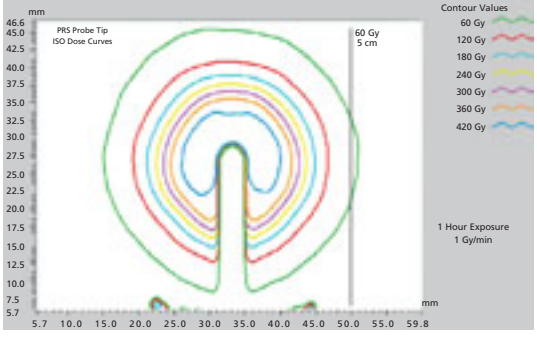
- Radiation is accurately delivered to the intended location
- The system precisely monitors the radiation dosage
- Extremely accurate positioning

You place the radiati where you need it

The highly flexible, "free-floating" INTRABEAM® support system facilitates exact and stable positioning of the x-ray source.

ion exactly

The control unit enables you to precisely set and monitor the desired dosage. When the target dosage has been reached, the control unit automatically shuts off the x ray source.



Spherical dose distribution of the x-rays: the rapid decrease in dosage ensures that most of the radiation remains in the targeted tissue.

The handy, miniaturized INTRABEAM® x-ray source can be used both with the INTRABEAM® support system and with a CRW stereotactic frame. X-rays are emitted spherically from the tip of the probe.

Technical Specifications

INTRABEAM® X-ray Source (XRS 4)

Energy (max.): 50 kV, 40 µA
Weight: approximately 1.6 kg
Dimensions (L x W x H in cm): 17.5 x 11 x 7

INTRABEAM® Control Unit (PRS 500)

Weight: 4.5 kg
Dimensions (L x W x H in cm): 38.1 x 30.5 x 8.9
Input voltage: 100 – 240 V AC
Power consumption (max.): 60 VA
Line in frequency: 50 – 60 Hz
Accelerating voltage: 40 or 50 kV
Beam current: 5, 10, 20 or 40 µA

The System meets the following requirements:
MDD 93/42/EEC (Medical Device Directive)
IEC 60601-1, EN 60601-1, UL 60601-1
CAN/CSA-C22.2 No. 601.1, IEC 60601-1-2, IEC 60601-2-8
ISO 9001, ISO 13485

INTRABEAM® Applicators

Spherical applicators with diameters
between 1.5 and 5 cm. Can be sterilized with steam

INTRABEAM® Surgical Support System

Six degrees of freedom
Counterbalancing
Magnetic brakes
Hand and foot controls
Input voltage: 100/120/230 V AC ± 10%
Fan-in current 8/7/4 A
Line in frequency: 50 – 60 Hz

CE 0297

INTRABEAM®

The book on
INTRABEAM® IORT:
Useful for you.
And for your IORT team.

Contact your nearest Carl Zeiss branch.

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