LDR Prostate Brachytherapy

Dedicated solutions for real-time prostate seed implants

Hitting cancer on the spot

www.bebig.com

Eckert & Ziegler
Contributing to saving lives
Effective Treatment of Prostate Cancer
Prostate cancer is the second most frequent cancer in men worldwide, but can be treated very effectively when detected at an early stage. Prostate seed implantation, also called LDR (Low Dose Rate) prostate brachytherapy or permanent brachytherapy, is an effective and well-tolerated minimally invasive treatment option for early stage prostate cancer.

In this treatment, small radioactive iodine-125 sources, also known as seeds, are placed inside the prostate. Each seed has a length of 4.5 mm and a diameter of 0.8 mm and emits a specific low dose of radiation to the surrounding prostate tissue. By placing the seeds homogeneously throughout the organ, the prostate is covered with the designated dose required to destroy the cancerous cells. Since irradiation is mainly localized around the radioactive source, neighboring tissues are spared unnecessary damage.

The cure rates of LDR brachytherapy are comparable to those of external beam radiation therapy and prostatectomy for early stage prostate cancer. In the group of low risk patients, outcomes were even superior \(^1\). LDR brachytherapy is known to have a favorable side effect profile with regard to both incontinence and impotence compared to prostatectomy, as well as with regard to gastrointestinal secondary effects compared to EBRT \(^2\), \(^3\).

Patient Selection Criteria \(^4\)

Prostate seed implantation is especially suitable for patients with early stage prostate cancer. The cancerous tissue should be limited to the prostate gland. T1 and T2 tumors are designated as locally confined prostate carcinoma that can be classified as low-, intermediate- or high risk tumors.

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\(^1\) Grimm et al, Comparative analysis of prostate-specific antigen free survival outcomes for patients with low, intermediate and high risk prostate cancer treatment by radical therapy. BJU Int. 2012 Feb; 109 Suppl 1: 22-9


Expertise in LDR Brachytherapy

Eckert & Ziegler BEBIG – Your Complete Brachytherapy Provider

“Our mission is to develop and provide customers around the world with innovative medical devices for the effective treatment of cancer while preserving the patient’s quality of life. Through on-time delivery, consistent high quality, and constant self-improvement, we strive to meet the needs of our customers. Thanks to our expertise in LDR brachytherapy and our commitment to the method, we hold a long clinical record with more than 60,000 patients treated with Eckert & Ziegler BEBIG implant products.”

Dr. Edgar Löffler
Managing Director Eckert & Ziegler BEBIG

Eckert & Ziegler BEBIG offers a wide range of LDR prostate brachytherapy products with different types of sources, treatment planning software, on-site service, a comprehensive range of consumables and accessories, ultrasound and OR equipment, as well as tools for calibration and seed assay:

- Loose Seeds in Mick™ Magazines
- Stranded seeds
- Treatment planning software
- Consumables
- Ultrasound equipment
- Equipment for calibration and seed assay

IsoCord® Needle Loading Station  Mick™ Applicator
IsoStrand®  IsoSeed®

“Eckert & Ziegler BEBIG has been a reliable and helpful supplier to us since we worked with them as our LDR brachytherapy seed supplier in 2006. In this time, we received outstanding service and training.”

Duncan McLaren, MD
Radiation Oncologist
Western General Hospital, Edinburgh
United Kingdom
IsoSeed®: Excellent Visibility

IsoSeed® Loose Seed Placement with the Mick™ Applicator

IsoSeed® is a loose seed for use with the Mick™ Applicator and available in two sealed source model designs:

- IsoSeed® is manufactured to unparalleled quality standards. Available with either a gold (IsoSeed® I25.S06) or silver (IsoSeed® I25.S17plus) radiographic marker, Eckert & Ziegler BEBIG’s I-125 sealed source model designs provide excellent visibility under ultrasound, fluoroscopy, CT, or MRI.

<table>
<thead>
<tr>
<th>Class number</th>
<th>Air kerma strength in μGy m²/h</th>
<th>Apparent activity in mCi</th>
<th>Apparent activity in MBq</th>
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<td>0.240 – 0.259</td>
<td>0.189 – 0.204</td>
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Activities IsoSeed® I25.S17plus

Activities IsoSeed® I25.S06

Loose IsoSeeds
IsoCord® & IsoStrand®: Full Radiation Protection

IsoCord®
Stranded Seeds in a Convenient Magazine
IsoCord® is a seed chain with up to 70 seeds packaged in a radioprotective magazine. It consists of seeds and hourglass-shaped spacers in standard seed-spacer configuration, embedded in braided monofilament suture. This special design enables optimal fixation within prostate tissue and helps to reduce seed migration. IsoCord® is available with either I25.S06 or I25.S17plus source model designs.

IsoCord® Needle Loading Station
Strand Cutting under Full Radiation Protection
With the unique IsoCord® Needle Loading Station, the desired amount of seeds is moved out of the magazine into the illuminated positioning unit. IsoCord® is then cut into the desired length and subsequently loaded into the attached implantation needle with the integrated mandrel. The process of strand cutting and needle loading is performed under full radiation protection, without the need to handle strands manually.

- Up to 70 stranded seeds in a convenient magazine
- Fast intra-operative strand cutting under full radiation protection
- Optimal fixation of strands in prostate tissue

IsoStrand® and IsoStrand® Cutting Fixture
Facilitating Seed Assay
IsoStrand® consists of 10 IsoSeed® spaced 1.0 cm apart. The unique hourglass design of the bioabsorbable spacers and the braided suture carrier ensure excellent strand placement. IsoStrand® is cut under radiation protection using the unique cutting fixture.
Applicator Needle 17G/18G x 20 cm – hollow needle with 5.0 mm markings, trocar tip stylet, and slim needle hub

For safe and easy transfer of strands from the Needle Loading Station to the needle

Ideal storage solution for needles loaded in advance with easy distinction of loaded needles and practical handle for transport to the operating room

IsoCord® Needle 18G x 20 cm – steerable, bevel-shaped needle tip

Post Loading Needle 18G x 20 cm – steerable, bevel-shaped needle tip, cone-shaped needle hub for easy accommodation of postloading transfer tubes

Prostate Stabilization Needle 18G x 20 cm

Pajunk Delta-Fix Fixation Needle 18G x 20 cm

For safe and easy transfer of strands from the Needle Loading Station to the needle

Ideal storage solution for needles loaded in advance with easy distinction of loaded needles and practical handle for transport to the operating room
Equipment and Consumables

Ultrasound
B-K FlexFocus
B-K ProFocus
Hitachi HI VISION

Stepper
Brachystepper CIVCO Classic
Brachystepper CIVCO Ex III
DK-Tech Stepper

TRUS-probe
B-K 8848, Simultaneous Biplane Transducer
Hitachi EUP-U533 Biplane Ultrasound Probe

Grids
CIVCO Disposable Brachygrid, 17G or 18G
Mick™ Template Grid, reusable
DK-Tech Template for BK, reusable

Products for Calibration and Seed Assay
PTW Universal dosemeter UNIDOS E
PTW SourceCheck
Standard Imaging Well Chamber

Brachyballoon
CIVCO Latex-Free Endocavity Balloon

Brachydrape
CIVCO Brachydrape
Eckert & Ziegler BEBIG Today

Eckert & Ziegler BEBIG is a European-based group active in the medical device segment of the health care industry. Its core business is the production and distribution of medical products for the treatment of cancer using brachytherapy. The company’s headquarters are in Belgium, with production facilities in Germany and in the USA, as well as subsidiaries throughout Europe, the USA, India and Brazil. In addition, Eckert & Ziegler BEBIG has a worldwide network of distributors and agents to support the international marketing and distribution of its product line. The company’s products and equipment are intended for use by oncologists, radiotherapists, urologists, ophthalmologists and medical physicists. Eckert & Ziegler BEBIG employs approximately 130 people. The company has been listed on the Euronext stock exchange since April 1997.

The mentioned products are not available in all markets. Please contact your local Eckert & Ziegler BEBIG representative for more information.