Unique choices in HDR brachytherapy

Precise targeting

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Eckert & Ziegler
Contributing to saving lives
SagiNova® Afterloader

- Ability to choose between widely used Ir-192 or long-lasting Co-60 source
- Exclusive, integrated In-Vivo Dosimetry for real-time dose monitoring
- QAssist supports quality assurance responsibilities
- Unique features to help ensure patient safety
- Optimized user-friendly GUI and intuitive design for streamlined workflow
- Advanced German engineering

Round-the-Clock Service Excellence

- Customizable service & support plans
- Scalable education & training programs

Sagitta [səˈɡɪtə] (lat): arrow
Novum [ˈnovum] (lat): novelty
SagiNova [səˈɡɪnəʊvə]:
new HDR afterloader for precise, arrow-like targeting
Dose-Rate Brachytherapy

SagiPlan® Treatment Planning
- One platform for all HDR planning needs
- User-friendly and intuitive
- Precise, targeted, and conformal
- Full and flexible connectivity
- Comprehensive plan evaluation

Complete Range of HDR Applicators
- Expansive portfolio of applicators
- Precise and durable
- Broad spectrum of MR capable applicators
- Unique system wide integration
- Full clinical support
The SagiNova® HDR afterloader was designed to address today’s needs for HDR brachytherapy applications regarding safety, seamless workflows, and cost efficiency. It distinguishes itself through outstanding features:

### Ability to Choose between Widely Used Ir-192 or Long-Lasting Co-60 Source
Eckert & Ziegler BEBIG provides the choice of two isotopes, Ir-192 and Co-60, according to individual institutional needs and preferences. The dose distributions based on the TG-43 formalism are equivalent for cobalt-60 and iridium-192. Both miniaturized sources have been in clinical use for more than 10 years and are suitable for the same clinical applications.

#### Miniaturized Co-60 source
- **Working Life:** 60 months
- **Source Transfers:** 100,000 transfers

#### Miniaturized Ir-192 source
- **Working Life:** 4 months
- **Source Transfers:** 25,000 transfers

The high quantity of source transfers and the long working life of the miniaturized cobalt-60 source, developed by Eckert & Ziegler BEBIG, reduce time for source exchange logistics and increase valuable clinic uptime.
Exclusive, Integrated In-Vivo Dosimetry for Real-Time Dose Monitoring
The unique In-Vivo Dosimetry System allows direct independent monitoring of doses to rectum and bladder at the control console alongside treatment information. Dose limit values can be defined via the SagiNova® treatment control software and warnings are displayed if bladder or rectum dose limits are exceeded. The complete data is integrated in the treatment report for a convenient documentation.
Since the system is operated directly from the SagiNova® treatment control station, In-Vivo Dosimetry is easily integrated into the treatment process with no additional equipment or screens.

QAssist Supports Quality Assurance Responsibilities
The highly customizable tool QAssist supports the user in a straightforward way to adhere to the highest quality assurance standards with full digital documentation. It offers pre-defined quality assurance tests which are performed in sequence and verify whether the system and critical components are operating correctly. QAssist configurations can be shared with partnering departments to allow for consistent quality reporting.
Unique Features to Help Ensure Patient Safety
The Automatic Length Measurement allows for convenient and safe multi-channel applications. By choosing an applicator in SagiPlan®, the length of the applicator and the overall length of the application are digitally transferred to SagiNova® without requiring any manual input. Hence, the afterloader is able to validate the correct overall length per channel prior to each source movement. SagiNova® measures the internal length of the catheter or applicator allowing the user to review and complete acceptance while the unit completes a verification of the length before the treatment is delivered.

The ultimate benefits of the Automatic Length Measurement are improved patient safety and peace of mind for clinicians when treating body sites such as head & neck, breast, and skin with flexible catheters or breast balloons.

With the Channel Color Coding of three-channel gynecological applicators, transfer tubes, and the SagiNova® channel indexer, it is virtually impossible to mix up channels during treatment preparations and hence SagiNova® comfortably assures patient safety by design.

Optimized User-Friendly GUI and Intuitive Design for Streamlined Workflow
The new SagiNova® graphical user interface was developed in cooperation with brachytherapy experts and usability engineers leading to the development of the next level of smooth and efficient workflow guidance.
SagiNova®

SagiNova’s world-class technology is based on Eckert & Ziegler BEBIG’s innovative approach to incorporate customer needs into product development.
SagiPlan® Platform:

One Platform for All HDR Planning Needs
SagiPlan® ensures that all body sites can be planned from the same software environment. With the fast and accurate image registration, you can have the best of different image datasets including fusion of the live ultrasound video stream for online real-time prostate planning.

User-Friendly and Intuitive
Individual user and treatment settings for different applications, combined with the complete portfolio of applicators in the Applicator List, make SagiPlan® very user-friendly and convenient. Furthermore, the intuitive order of the register tabs guides the user efficiently through the whole planning process. When a certain treatment type is used frequently, the complete setup of applicator type, dwell positions, control points, and prescribed dose can be stored as Plan Template allowing for a fast planning process.

Precise, Targeted, and Conformal
Following the individual shape of a tumor for each unique patient, the dose planning is accurate and fast. Various tools like manual dose shaping and inverse optimization are at your service for this purpose.
Comprehensive and Convenient

Full and Flexible Connectivity
Fully integrated DICOM import and export allows for a seamless integration of the SagiPlan® system in hospital networks. The virtual license model of SagiPlan® facilitates centralized and distributed planning.

Comprehensive Plan Evaluation
SagiPlan® offers a comprehensive set of plan evaluation tools. The 3D display together with the real-time visualization of DVH’s and histogram parameters creates the perfect environment to focus on the quality of the plan. The unique BED evaluation tool provides full information about the target and organs at risk (OAR) doses in combined brachytherapy and EBRT treatment courses.
Expansive Portfolio of Applicators

Eckert & Ziegler BEBIG develops and provides an extensive offering of state-of-the-art applicators for HDR brachytherapy. With applicators for intracavitary or interstitial access to tumors in body sites such as gynecological, rectal, prostate and breast tumor sites from head to toe may be treated.

The renowned Mick™ Radio-Nuclear Applicators, including the CT compatible and MR conditional Fletcher (FSD), Henschke, Split Ring, Miami, Ring & Tandem, 2 & 3 Channel Endometrial and Segmented Vaginal Applicators are also fully integrated in the SagiNova® and SagiPlan® systems. Besides the extensive range of gynecological Mick™ HDR Applicators, applicators and accessories for the treatment of prostate and skin cancers like the unique Harrison-Anderson-Mick (H.A.M.) Applicators complete the portfolio.

Precise and Durable

Eckert & Ziegler BEBIG stands for German engineering and creates applicators according to European and FDA regulations. We only use highly dedicated materials like titanium certified for surgical implant application or amorphous high performance thermoplastic (PPSU). Our standards make our applicators long-lasting with optimal robustness in clinical use.
Safe and Reliable

Broad Spectrum of MR Capable Applicators
MR Safe and MR Conditional Applicators allow for a broad choice of treatment options allowing for individualized image guided brachytherapy treatments.

Unique System Wide Integration
All available applicators are implemented in databases in SagiPlan® and SagiNova®. This allows for fast and accurate reconstruction in the planning system and enables precise automatic measurement of the internal length of the applicator.

“The integration of applicator information between SagiPlan® and SagiNova® reduces the risk of treatment error due to incorrect applicator selection at either planning or treatment.”

Antony Palmer
Head of Radiotherapy Physics & Lead Scientist Medical Physics
Queen Alexandra Hospital, Portsmouth
United Kingdom

Full Clinical Support
We provide and organize the support needed to achieve the best prerequisites to start and maintain a safe and efficient brachytherapy routine practice.
Application – Complete System Training and Full Clinical Support
Our team of qualified and experienced application specialists
- provides training on our treatment planning systems – in-house and on-site
- shows you how to use the entire range of HDR brachytherapy applicators
- provides updates and upgrades to keep your system up-to-date at all times
- is available 24 hours, 7 days a week

Service – Pre-installation Consulting, Preventive Maintenance, and Immediate Technical Assistance
Our dedicated team of expert service engineers
- helps you to plan the necessary steps in the course of preparing the site before the installation of our HDR afterloader system, in particular calculating the room shielding requirements
- carries out the installation of the device at the hospital, including all accessories, as well as the introduction to the use of the system
- performs maintenances once a year to uphold functionality on a sustained basis
- services your system in case of a repair request worldwide without any delay to minimize down-time
- updates your SagiPlan® software to keep up with the evolving technology and to maintain the highest level of performance
- offers you technical training and refresher courses

Support – Individual Service Plans and Streamlined Logistics
Our highly motivated and proficient back office team
- customizes service and support plans to your individual needs
- supplies you with required equipment and spare parts in short order, due to smart stock management
- arranges on-time delivery of the sources in line with local regulations for radiation safety
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<thead>
<tr>
<th>Year</th>
<th>Event</th>
<th>Details</th>
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<tbody>
<tr>
<td>1992</td>
<td>Foundation of BEBIG GmbH</td>
<td>worldwide supply of the unique Ru-106 Eye Applicators</td>
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<tr>
<td>2001</td>
<td>I-125 seed production set up</td>
<td>today the market leader in Europe</td>
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<td>2003</td>
<td>Entering the worldwide market</td>
<td>with the first MultiSource® installation in Japan with Co-60</td>
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<tr>
<td>2004</td>
<td>CE mark for MultiSource® HDR afterloader</td>
<td>with the world’s first integrated In-Vivo Dosimetry</td>
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<tr>
<td>2004</td>
<td>CE mark for HDRplus treatment planning software</td>
<td>with an integrated applicator library</td>
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<tr>
<td>2013</td>
<td>Acquisition of Mick Radio-Nuclear Instruments, Inc.</td>
<td>a brachytherapy pioneer and a leading manufacturer of applicators</td>
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<tr>
<td>2014</td>
<td>More than 250 afterloaders</td>
<td>have been delivered in over 50 countries worldwide, most of them are using Co-60 sources</td>
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<td>2015</td>
<td>Launch of the Eckert &amp; Ziegler BEBIG</td>
<td>next generation brachytherapy system SagiNova® and SagiPlan®</td>
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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.