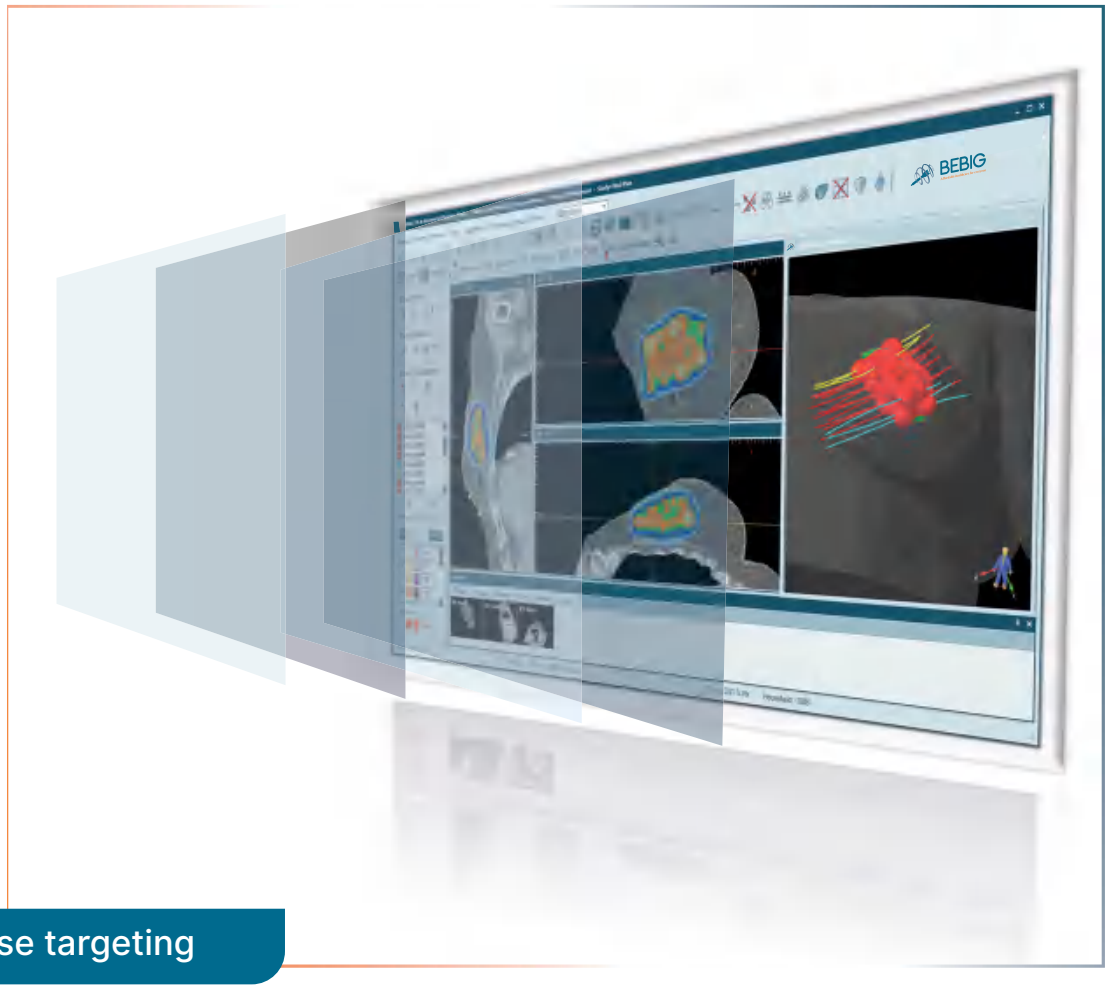
BEBIG

Affordable healthcare for everyone



Precise targeting

SagiPlan®

One platform for HDR treatment planning

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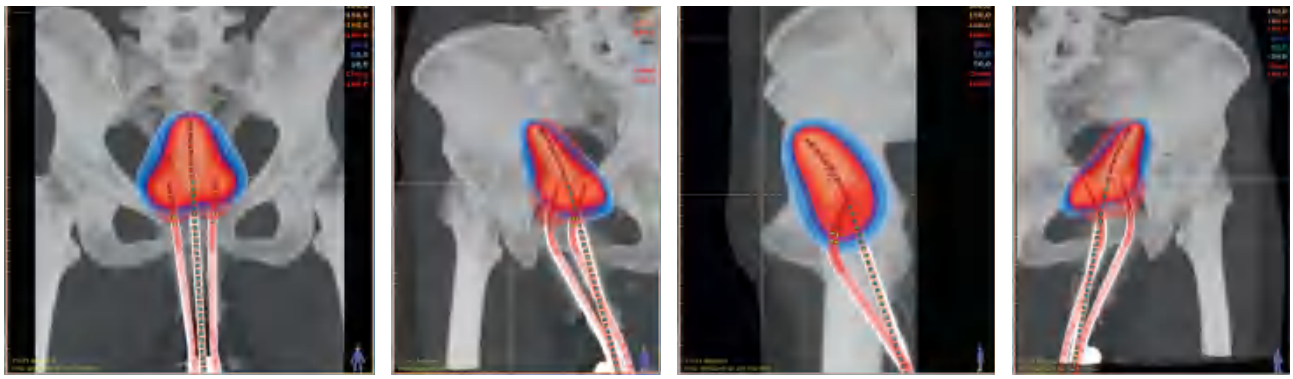


Reconstruction in all planes, even on DRR's.

SagiPlan®

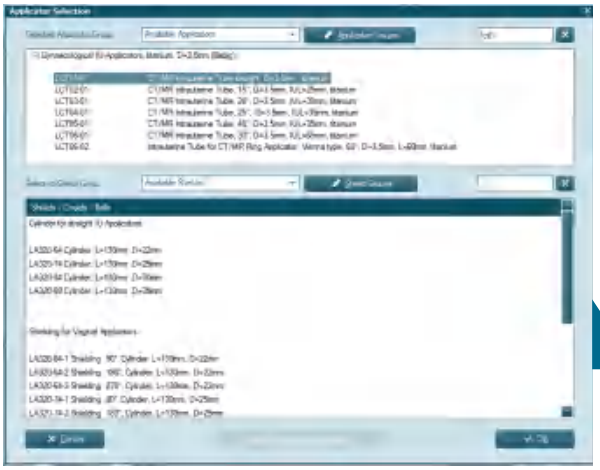
Brachytherapy has evolved drastically over the years. In the past, standard plans were sufficient for the majority of the patients. Today, patient treatments are based on modern imaging modalities with individualized and optimized treatment plans.

SagiPlan® guides the user through the different steps in planning. It imports images from different modalities, uses the latest optimization algorithms and the graphical user interface is easy to customize to individual demands.

The Applicator List enables a fast and accurate recon-struction of applicators and the Plan Template List ensures a quick and reproducible treatment plan setup for each patient.

SagiPlan® is a complete system solution including DICOM import and export, manual and automatic contouring, image registration, manual and automatic reconstruction of applicators, inverse optimization and comprehensive plan evaluation tools.

User-Friendly and Intuitive



User Defaults

SagiPlan® is a very user-friendly and intuitive treatment planning system. Users can set up the system to their own preferences and save them as User Defaults. Furthermore, the toolbar, screen layouts, treatment and reporting parameters are customizable and can be stored and then recalled at any moment during the planning process.

Applicator List

The Applicator List represents the library of all BEBIG Medical and Mick® HDR Applicators and allows the fast implementation of a user defined selection of applicators, ovoids, and shields thanks to the to the quick search feature. Since a 3D model of the applicator's geometry is available in the library, the reconstruction is fast, easy and very accurate. Furthermore, SagiPlan® provides an algorithm for the automatic reconstruction of non-rigid applicators.

Plan Template List

With the Plan Templates, the workflow is further improved. This module allows to quickly create new treatment plans by managing different plan templates for a specific application that can be selected using the quick search function. The Plan Template contains of 3D arrangements of rigid applicators and control points and provides entire source dwell position information.

Treatment Defaults

Additionally, treatment specific parameters can be administered as Treatment Defaults. A Treatment Default is a collection of treatment specific properties and settings such as structure names, histogram parameters, fractionation schemes and auto contouring settings. The Treatment Default can be loaded at any time during the planning process to speed up the process and to ensure the consistency of prescribing and reporting.

One Platform

Most clinics treat multiple body sites with HDR applications. And therefore SagiPlan® was designed to operate seamlessly as one system no matter what tumor location needs to be treated.

Interactive Real-Time Planning of the Prostate

The Prostate Module is an additional software module which is seamlessly integrated into SagiPlan®. Transversal and longitudinal Trans Rectal Ultrasound (TRUS) live image streams can be used for real-time online planning.

In both transversal and longitudinal mode, it is possible to fuse the live TRUS images with pretreatment datasets like CT, TRUS and weighted MRI for an enhanced view of the targeted areas. This feature will provide great added value if focal prostate therapy is utilized. The digital frame grabber guarantees a seamless connection to the ultrasound system for best image quality.

The correct needle positions are easy to locate by using automatic angle recognition with angle position feedback. Needle placement guidance on live TRUS images, real-time isodose calculation and real-time dose volume histogram evaluation facilitate state-of-the-art prostate HDR treatment.

"Since 2008, we are very pleased with the use of the HDR treatment planning software of BEBIG Medical. The interactive real-time planning module for the prostate is used routinely and results in high-quality treatment plans."

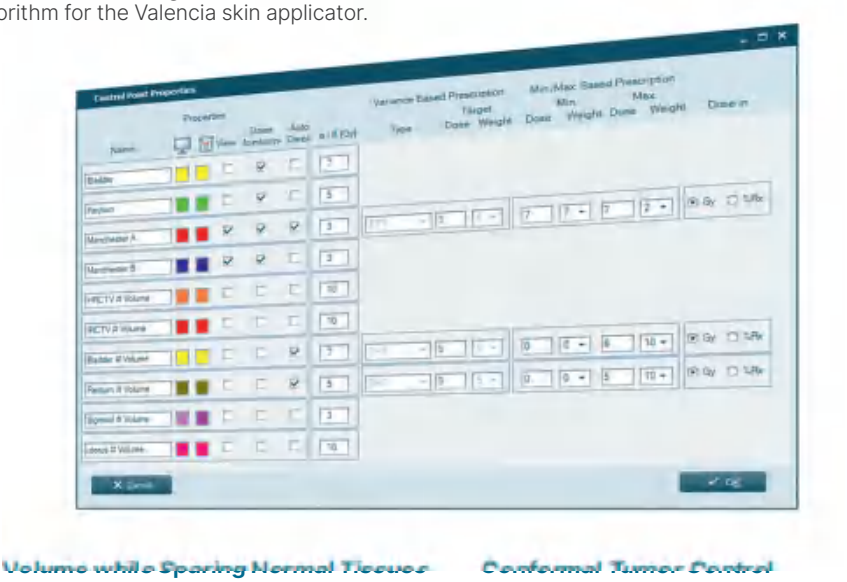
Prof. Dr. O. A. Sauer, Head of Medical Physics
University Hospital Würzburg, Germany

Precise, Targeted and Conformal

Precision and Accuracy with SagiPlan®

SagiPlan® allows for precise and accurate reconstruction through features like automatic applicator reconstruction, placement and the Plan Template List features. The Plan Templates and automatic contouring support an accurate, precise and expedited planning process.

Additionally, SagiPlan® exclusively provides a realistic (Monte Carlo based) 3D dose distribution using a modified AAPM TG-43 dose calculation algorithm for the Valencia skin applicator.



Targeting Tumor Volume while Sparing Normal Tissues

Dose planning is accurate and fast, following the unique shape of the tumor for each individual patient. Various tools including manual dose shaping, geometrical optimization and inverse optimization enable a reliable control of the target coverage.

The automated dwell time calculation is performed using the fast simulated annealing algorithm. This method is based on dose objectives assigned to different structures with definable weights.

Dose targets can be specified in BED or EQD2 exclusively in SagiPlan® respecting also external beam dose distributions.

Conformal Tumor Control

Conformal brachytherapy planning utilizes sophisticated computer technologies such as CT scans, MR images and ultrasound images, or their combination, to view tumors in three dimensions. With superior tumor imaging, patient treatment plans can be created with greater precision.

The image registration functionality supports modern image guided brachytherapy, specifically for prostate treatment. Three different registration modes are available to transform various image sequences: manual, landmark and automatic. Image fusion display allows to show two image sequences simultaneously and the synchronized plan comparison feature gives the user the opportunity to select the best conformal plan for tumor control.

Full and Flexible Connectivity

Full DICOM import and export functionalities allow for seamless integration of the SagiPlan® system in hospital networks.

The virtual licensing mechanism of SagiPlan® offers an agile way of working. It facilitates centralized and distributed planning. Whether in the hospital, a partnering clinic or remotely, SagiPlan® seamlessly distributes treatment plans. And with the system to secure the data to prevent for double access, plans can be processed anywhere and are stored in a centralized patient database.

As time plays a critical role in modern healthcare, SagiPlan® is designed to make the entire planning process faster, safer and easier.

The DICOM Query and Retrieve feature allows for fast data transfer from imaging devices and the electronic signature with DICOM Plan Approval provides additional confidence during the planning and treatment process.

Comprehensive Plan Evaluation

Dose Volume Histograms

Dose volume histograms are available in natural, differential and cumulative representation. These graphs as well as the histogram parameters window are updated in real-time during the planning process. The values for the different histogram parameters are displayed in different colors to show compliance with predefined planning goals. Applicator volumes can be included or excluded from dose volume histograms and calcu-lations. These features enable a quick and precise plan evaluation.

Multiple Plan Comparison

SagiPlan® provides a synchronized plan comparison feature, which allows to overlay dose distributions from different plans for simultaneous evaluation. DVH parameters can be presented and analyzed for up to four plans at the same time.

BED and EQD2

The biologically effective dose, total BED, equivalent dose for 2 Gy fractions and total EQD2 are calculated per volume of interest or control point. The calculation is based on the individually defined α/β ratios for each organ or control point and the fractionation scheme for both, external beam radiation and brachytherapy plans. A BED/EQD2 value for any structural volume is also possible for summation plans. SagiPlan® is the only radiation planning software for brachytherapy that allows inverse planning based on BED and EQD2 parameters.

3D Visualization

The 3D visualization enables a review of the complete application setup with applicators, isodose clouds, surface doses, volumes of interest and anatomical structures. The highly customizable 3D view is available during the entire planning process.

Comprehensive Reporting Functionalities

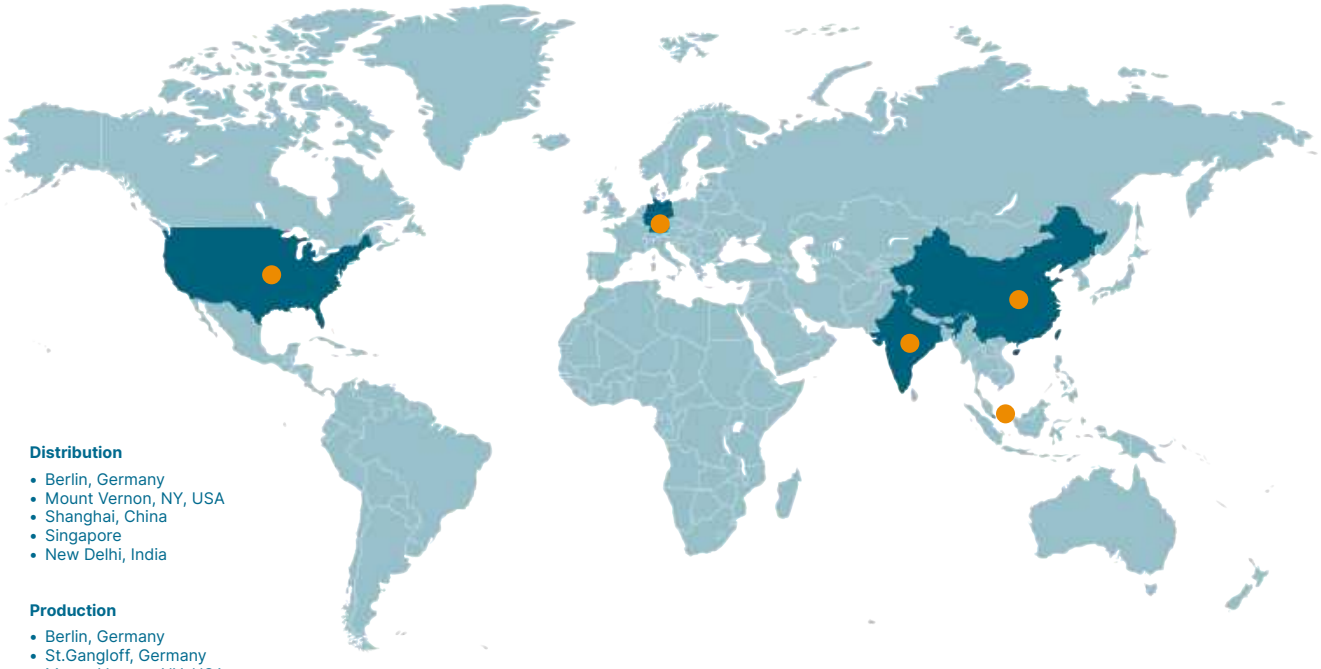
All planning parameters and evaluation details are stored and available for instant access. With the help of the dose prescription protocol, changes in treatment planning can be easily tracked. The SagiPlan® reporting tool can be customized to fulfill individual documentation requirements.

BEBIG Medical

BEBIG Medical GmbH is a global provider of radiation therapy products dedicated to cancer treatment with 40 years experience in the field and a track record of proven clinical outcomes through robust and innovative technology.

Specializing in the research and development, manufacturing, and worldwide distribution of radiation therapy medical devices, BEBIG Medical provides comprehensive product portfolio with linear accelerator, high-dose-rate brachytherapy, X-ray therapy products, and intraoperative radiation therapy devices.

BEBIG Medical boasts a substantial presence with over 700 active installation bases across more than 80 countries and regions, facilitated by a network of over 70 global distributors. With strategically positioned offices and a team of seasoned professionals in Europe, United States, and Asia, the company aims to deliver affordable healthcare solutions to everyone in the world.



Distribution

- Berlin, Germany
- Mount Vernon, NY, USA
- Shanghai, China
- Singapore
- New Delhi, India

Production

- Berlin, Germany
- St.Gangloff, Germany
- Mount Vernon, NY, USA
- Shanghai, China

Manufacturer:

BEBIG Medical GmbH

Robert-Rössle-Str. 10
13125 Berlin
Germany

Phone: +49 30 941 084 130
Fax: +49 30 941 084 112
Email: sales@bebigmedical.com

Mick Radio-Nuclear Instruments, Inc.
A BEBIG Medical Company
521 Homestead Avenue
Mount Vernon, NY 10550
USA

Phone +1 914 667 39 99
Fax +1 914 665 88 34
Email: sales@bebigmedical.com

Regional Sales, Marketing and Service:

GLOBAL

BEBIG Medical GmbH

Robert-Rössle-Str. 10
13125 Berlin
Germany

Phone: +49 30 941 084 130
Fax: +49 30 941 084 112
Email: sales@bebigmedical.com

NORTH AMERICA

Mick Radio-Nuclear Instruments, Inc.
A BEBIG Medical Company
521 Homestead Avenue
Mount Vernon, NY 10550
USA

Phone +1 914 667 39 99
Fax +1 914 665 88 34
Email: sales@bebigmedical.com

www.bebigmedical.com
www.micknuclear.com