# SagiStar®

## Affordable healthcare for everyone

# SagiStar_C

**Treatment Couch**

Double scissor type treatment couch features high accuracy and a stable structure.

Precise treatment couch with international patented pneumatic brake technology with high repeat accuracy.

Advanced Carbon Fiber Construction.

Free of Metal and Other Artefact-Creating Materials.

User friendly for patient setup.

Single photon energy linear accelerator
Capabilities for treatment techniques;
3D-CRT, IMRT & VMAT

120-leaf MLC with 5mm thick leaves projected at isocenter
40mm/s leaf speed enables high beam modulation

Laser-Based Patient Protection

CBCT Imaging System for 2D and 3D Verification

Advanced Carbon Fiber Construction
Free of Metal and Other Artefact-Creating Materials

The double-scissors type couch
features high accuracy and a stable structure

Remote Control
Automatic Deployment

Capable of High EPID Image Resolution
2048×2048

SagiStar C

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# SagiStar_E

**Keyboard Panel**

Remote control of motion, imaging systems and treatment delivery.

Backlit Illumination for user guidance.

User friendly by intuitive design.

Dual photon energy linear accelerator
Multi Electron Energy
Capabilities for treatment techniques;
3D-CRT, IMRT & VMAT

120-leaf MLC with 5mm thick leaves
projected at isocenter
40mm/s leaf speed enables high beam modulation

Remote Control
Automatic Deployment

CBCT Imaging System for 2D and 3D Verification

Advanced Carbon Fiber Construction
Free of Metal and Other Artefact-Creating Materials

Capable of High EPID Image Resolution
2048×2048

The double-scissors type couch features high
accuracy and a stable structure.

# POWERED BY RAYSEARCH

SagiStar®, engineered by BEBIG Medical and powered by RaySearch Laboratories, represents a remarkable fusion of cutting-edge technology and medical innovation. This state-of-the-art system redefines precision and efficacy in radiation therapy, offering clinicians and patients alike a beacon of hope in the fight against cancer.

RaySearch Laboratories AB (publ) is a medical technology company that develops innovative software solutions for improved cancer treatment.

Leveraging BEBIG Medical's expertise in medical device development and RaySearch's mastery of advanced treatment planning solutions, SagiStar® embodies a harmonious synergy that empowers oncologists to deliver tailored, optimized treatments with unparalleled accuracy and efficiency.

With its seamless integration of sophisticated imaging, planning, and delivery capabilities, SagiStar® promising affordable healthcare for everyone and brighter outcomes and improved quality of life for cancer patients worldwide.

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# SagiStar®
## Software

**Empowering clinicians to drive treatment planning and manage patient workflows with precision and efficiency.**

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# SagiStar®
## RayStation

RayStation/RayPlan is a flexible, innovative treatment planning system chosen by many of the leading cancer centers worldwide. RayStation/RayPlan supports a wide range of treatment modalities, providing one control center for all treatment planning needs including:

- A comprehensive toolbox for physicians
- Automated treatment planning (saves time and reduces errors)
- Extremely fast GPU based Monte Carlo dose engine
- Multi-criteria optimization
- Machine learning for intelligent treatment planning
- 3D-CRT Planning
- IMRT planning
- VMAT planning
- Electron planning
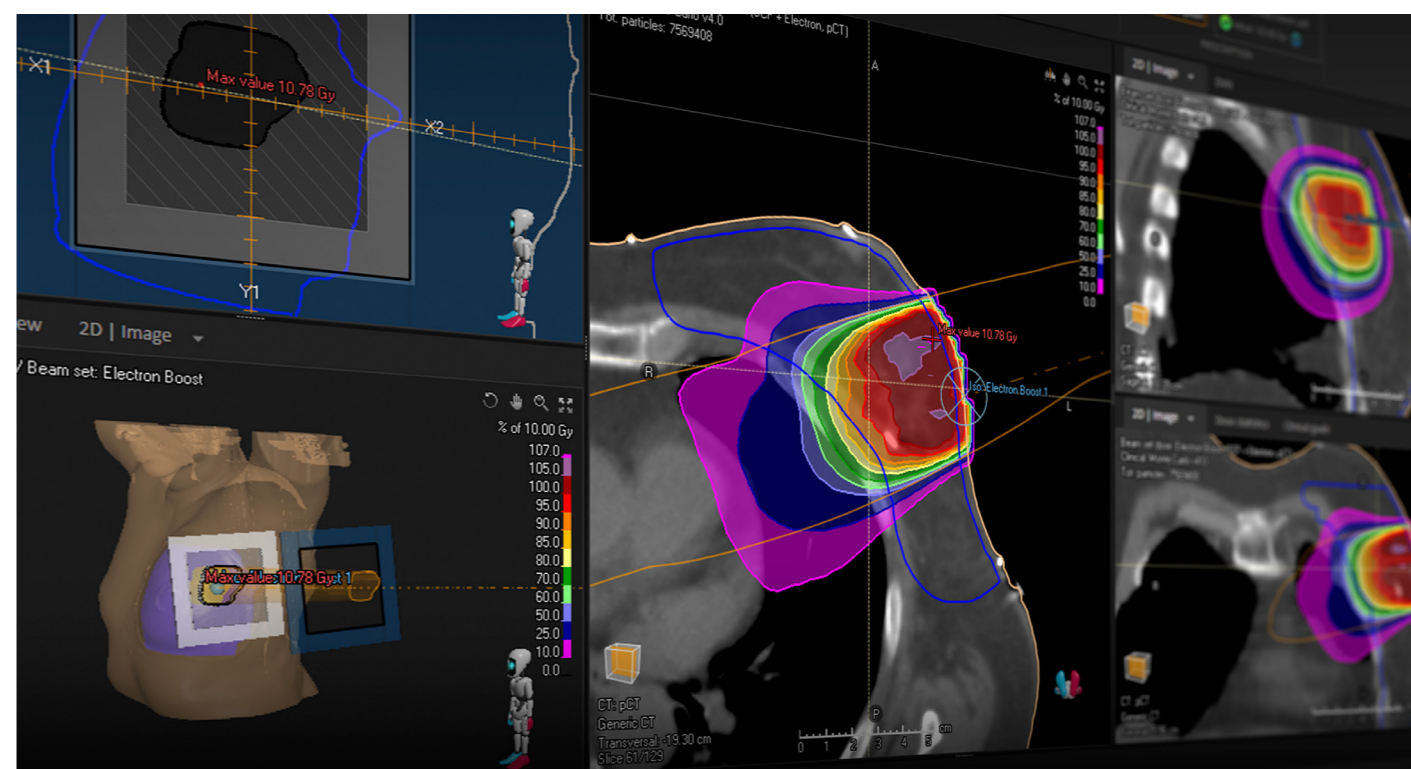
### Electron Planning

RayStation provides a simple way to work with mixed electron and photon plans – with multiple coupled or independent beam sets applied in a single treatment plan. The electron planning module offers a range of useful tools and a 3D visualization of the treatment setup.

The 3D view makes it possible to inspect the physical perimeter of the selected applicator in the patient geometry, which assists the planner in collision avoidance.

The electron module supports automatic generation of the cutout shape, using the same treat-and-protect tools as in the 3D-CRT module. The cutout can also be created and edited using a manual tools.

### IMRT Planning

State-of-the-art tools to design and optimize IMRT treatment plans.

Direct optimization of step-and-shoot segments enables high - quality IMRT plans with a minimum number of segments. This increases overall treatment quality by speeding up both the planning and delivery processes. Conversion for Sliding Window (dynamic MLC) IMRT is also supported.

As the computation time is measured in seconds rather than minutes,

you can efficiently produce several competing treatment plans to assess different trade - off situations instead of opening a second case or going on a break during computations.

## VMAT Planning

Design and optimization of single - or multiple - arc plans is enabled. VMAT is planned through an optimization procedure (inverse planning).

The direct optimization of machine parameters means the optimized plan is directly deliverable with no quality - degrading post processing required.

As the computation time is measured in seconds rather than minutes, you can efficiently produce several competing treatment plans to assess different trade - off situations instead of opening a second case or going on a break during computations. Download the study below and see how decreasing calculation times for VMAT planning significantly increased the fulfillment of clinical goals.

## Physician Toolbox

RayStation provides you with fast and user - friendly tools to efficiently and accurately contour the patient in the treatment planning process. Contouring OAR. It includes a comprehensive toolset ranging from manual tools to high-end semi-automatic and fully automatic contouring tools. Discover some of our customers' favorite tools below.

Physicians can easily evaluate, compare and approve treatment plans.

The use of radiobiological response models brings the planning process closer to the intent to create a plan with the highest possible probability of curing the patient while keeping the risk of complications to the surrounding healthy tissue as low as possible. The philosophy is to use biological models to reveal effects that are difficult to understand from the dose distribution alone.

## Automated breast planning

RayAutoBreast provides tools for automated generation of tangential breast IMRT plans using heuristic optimization and includes features such as:

. Detection of radio-opaque markers defining the breast.
. Contouring of all the relevant target and risk organs.
. Setup of beams, including heuristic optimization of gantry and
   collimator angles.
. Creation of objective functions, optimization and segmentation
   settings and clinical goals.

## Extremely fast GPU based Monte Carlo dose engine

Decreasing calculation times for VMAT planning – from around 10-17 minutes for optimization and final dose calculation to around 2-4 minutes – significantly increases the fulfillment of clinical goals. RayStation also offers the possibility to use Monte Carlo dose algorithms, providing the highest level of accuracy. All calculations are run on GPU to enable outstanding results like those displayed here.

## Multi-criteria optimization

Multi-criteria optimization offers oncology teams an alternative to traditional optimization workflows.

Avoid iterative optimization with adjustments to functions and weights with multi-criteria optimization in RayStation. This module instead allows Pareto optimal treatment plans to be generated according to user-specified objectives and constraints.

## Machine learning for intelligent treatment planning*

RayStation can help clinics save time and increase consistency by automating plan generation and organ segmentation.

Key features:

. Deep learning segmentation of CT structures
. Deep learning based dose prediction for automated treatment plan
   generation
. Deep learning solutions are integrated into RayStation
. Validated models are released with RayStation releases
. Spend less time on repetitive tasks
. Have more time for patient consultations and complex cases

# BEBIG Medical
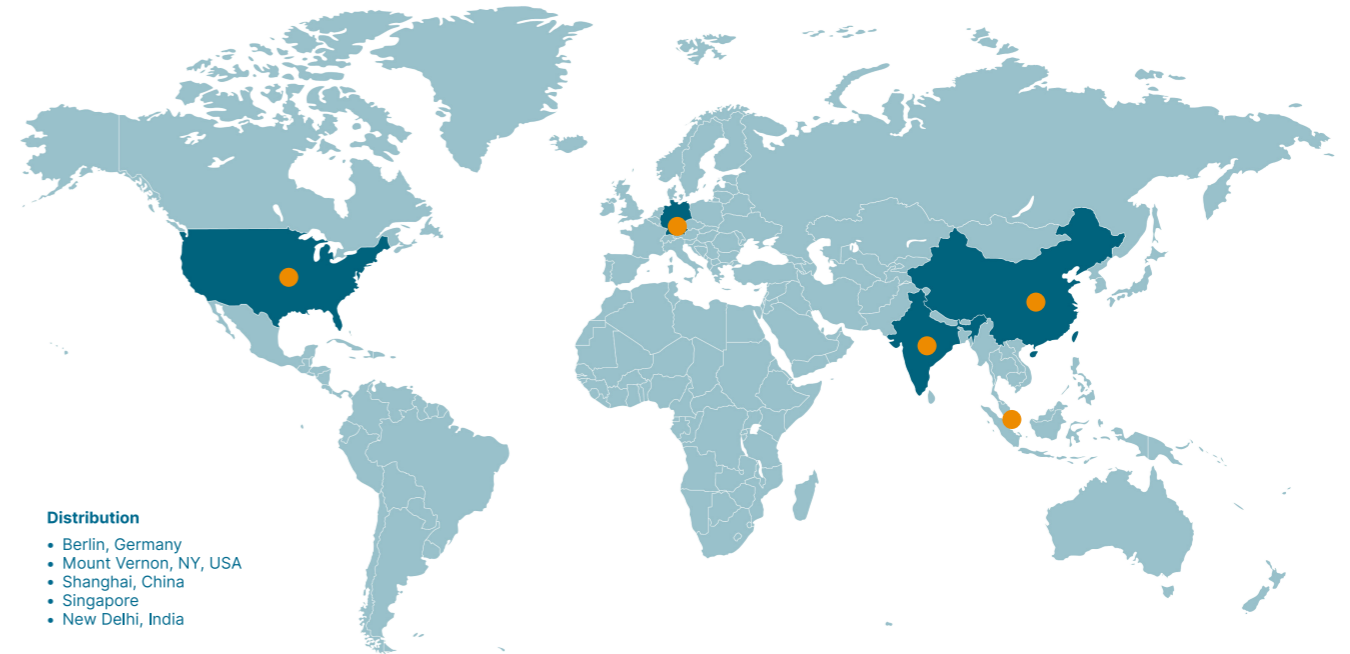
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Customers and stakeholders are advised to stay informed about updates and changes through official channels. Once regulatory approval is secured, finalized product details will be communicated accordingly.

Please contact your local BEBIG Medical representative for more information.