MAGNETOM Free.Max RT Edition

Breaking barriers in MRI for RT

siemens-healthineers.com/magnetom-free-max-rt-edition

SIEMENS Healthineers

This is how you break barriers in MR imaging for radiation therapy

The key to successful radiation therapy is accurate treatment planning. While CT systems can adequately visualize regions of interest, adding MR imaging can help you take your workflow to the next level. MAGNETOM Free.Max RT Edition delivers excellent soft-tissue contrast for detailed images, a large 80 cm bore for more positioning flexibility, and an innovative combination of small footprint and quench pipe-free design for easy siting as well as maximum affordability.

Detailed

MAGNETOM Free.Max RT Edition can help you take your treatment to a new level. New clinical insights await you thanks to the power of MR imaging.

Flexible

MAGNETOM Free.Max RT Edition allows you to perform MR imaging on your own terms. You decide who, when, and how you want to scan, thereby elevating your radiation therapy workflow.

Affordable

Installing an MR system typically requires elaborate planning, and subsequent operating costs can drain your department's budget. MAGNETOM Free.Max RT Edition, though, allows you to bring MR imaging to radiation therapy in an affordable and simple way.

"The 0.55T system can provide the advantages of MRI for radiotherapy treatment planning with additional benefits of a large (80 cm) bore to accommodate immobilization devices, fewer susceptibility-induced artifacts caused by implants, and improved siting accessibility."[1,2]

Jess Scholey, PhD DABR
Assistant Professor of Medical Physics
UCSF Department of Radiation Oncology

Go for the details

Take treatment individualization to the next level with MAGNETOM Free.Max RT Edition. The excellent soft-tissue contrast native to MR imaging allows you to visualize details you may not have had access to before – as can be seen in these scans of a patient with brain metastases.

T1-VIBE

0.6 x 0.6 x 1.0 mm³
TA 6:34 min

T1-MPRAGE

0.5 x 0.5 x 1.0 mm³
TA 12:07 min

7aaaa0191

T1-SPACE

0.5 x 0.5 x 0.6 mm³
TA 10:31 min

T2-SPACE dark fluid

0.6 x 0.6 x 3.0 mm³
TA 2:31 min

These images are obtained using diagnostic coils. Similar results cannot be guaranteed with other set-ups.

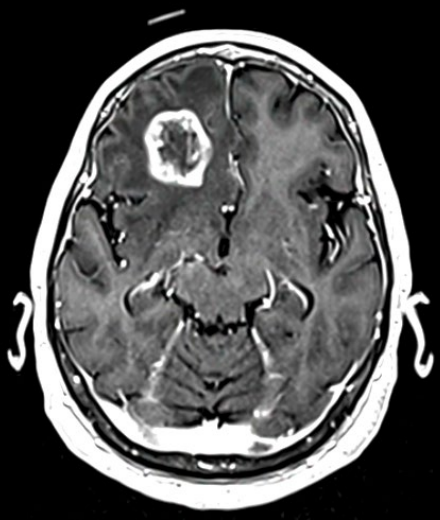
Uncovering valuable information about brain tissue

MR imaging perfectly complements CT imaging when it comes to radiation therapy planning. You can unlock new clinical insights about tumors such as brain metastases.

Computed tomography

Free.Max_go.Open_Pro_0352

MAGNETOM Free.Max RT Edition



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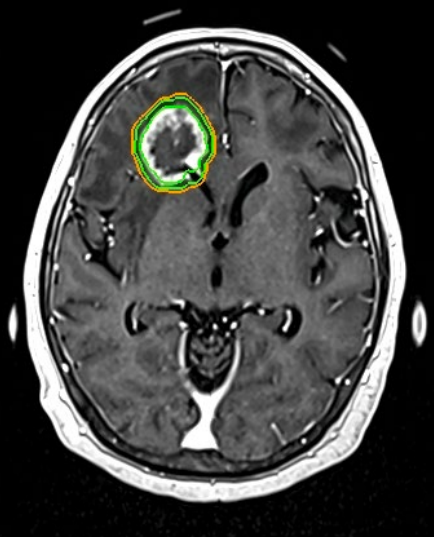
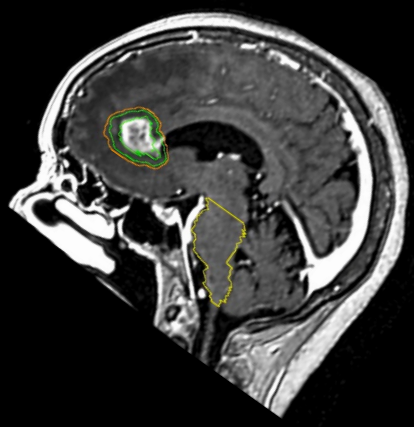
Confident contouring

Since MR scans reveal so many anatomical details, the process of contouring target areas within the brain is simplified.





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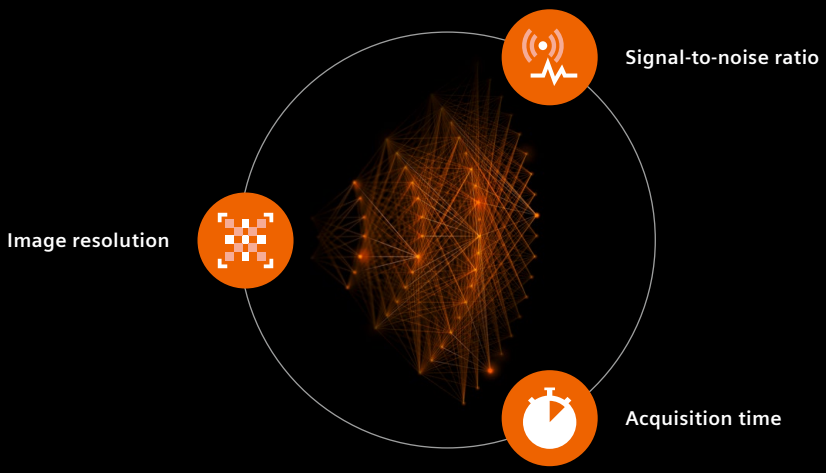
Courtesy of Universitätsklinikum Erlangen, Germany

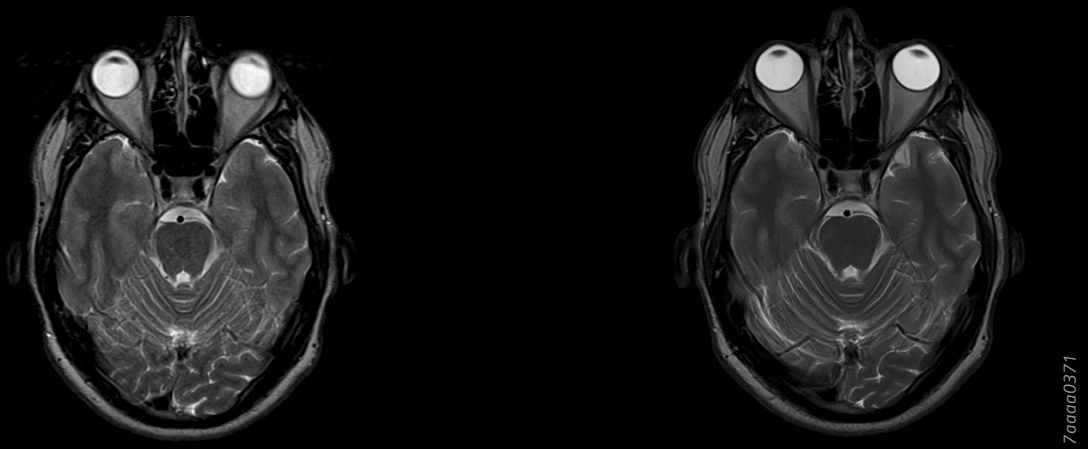
An innovation in speed and clarity

Achieve fast scans while maximizing image quality thanks to image processing technology powered by AI. The deep learning-based reconstruction of images results in improved image resolution, signal-to-noise ratio, and acquisition time.



Faster scans at higher quality with Deep Resolve

The on-board AI image reconstruction algorithm provides you with visibly sharper results and more image depth at impressive speeds.



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Standard
0.4 x 0.4 x 5.0 mm³
TA 2:50 min

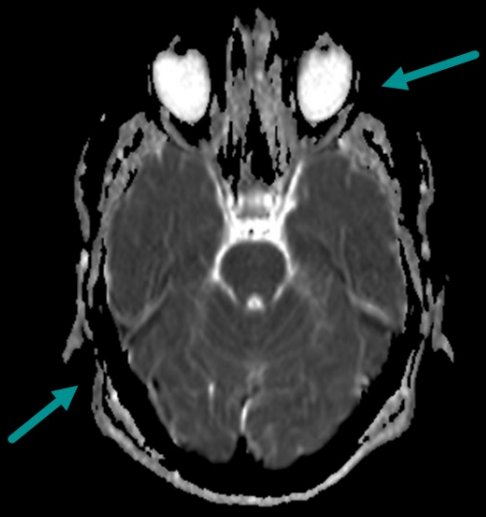
Deep Resolve
0.4 x 0.4 x 5.0 mm³
TA 2:06 min

These images are obtained using diagnostic coils. Similar results cannot be guaranteed with other set-ups.

Overcoming susceptibility challenges

In just a single-shot of echo planar imaging, MAGNETOM Free.Max RT Edition can mitigate susceptibility artifacts caused by air in the area of the sinuses and acoustic channel. This allows for better visualization of the optic nerve through all slices and correction of the distorted eyeball.

Conventional MR imaging



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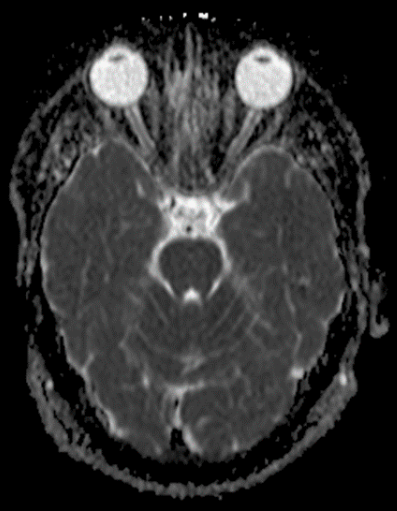
MAGNETOM Free.Max RT Edition



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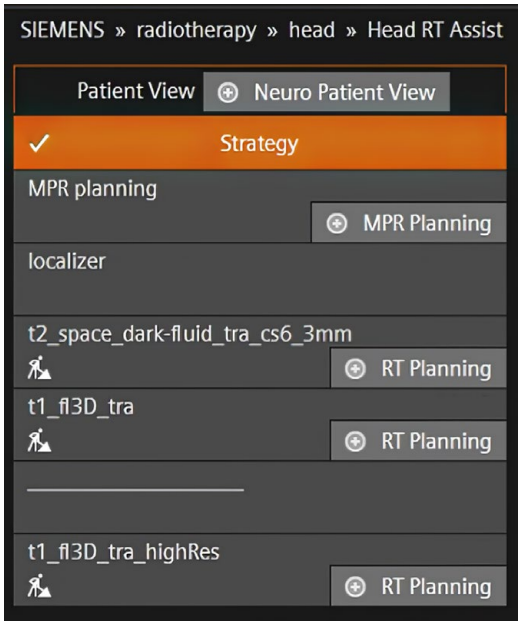
These images are obtained using diagnostic coils. Similar results cannot be guaranteed with other set-ups.



The protocols are without Deep Resolve technology.

Automated 3D protocols for a simpler workflow

myExam RT Assist[3] supports consistency and reproducibility in radiation therapy targeting brain tumors. Developed in collaboration with experts in the field, the included imaging protocols offer assistance via the following functions:

- Automatic distortion correction for improving spatial integrity
- Automatic axial image reconstruction, enabling all data to be directly processed in the RT planning software
- Quality assurance to maintain high accuracy in positioning

Always stay flexible

Maximizing system utilization via modality sharing

Sharing MAGNETOM Free.Max RT Edition with other departments in your institution helps maximize the use of your RT-optimized MR system. The radiology department, for instance, can benefit from the large 80 cm bore size because it improves comfort for obese and claustrophobic patients. This means you can generate revenue during otherwise unoccupied imaging time slots.

Easy patient positioning thanks to flexible coils

MAGNETOM Free.Max RT Edition offers coils that are comfortable to wear for patients and easy to handle for staff.

Coil Link

- 151 cm length
- Exchangeable coil cable for Contour S & L

Contour S Coil

- 45 x 27 cm²
- 6 elements

Contour M Coil

- 60 x 30 cm²
- 12 elements
- RT Edition with 2 Contour M coils

More space to accommodate more patients

Thanks to the 80 cm bore, MAGNETOM Free.Max RT Edition allows you to comfortably scan a broad range of patients regardless of size. Additionally, you can work with RT-specific accessories that require extra space.

Streamlined patient setup

BioMatrix Select&GO automates patient positioning for staff. The AI body model correctly centers the region to be scanned, resulting in fast and consistent positioning – even with flexible coils.

Low table height for easy access

With a minimum table height of 48 cm, MAGNETOM Free.Max RT Edition supports patients regardless of anatomical challenges.

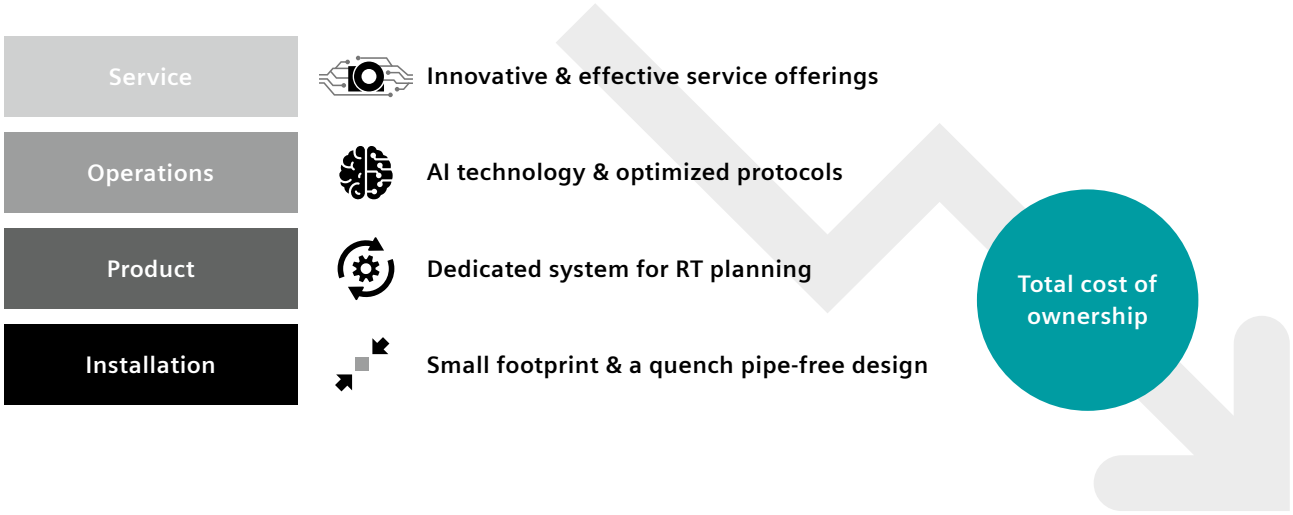
Keep your costs and efforts to a minimum

"It's more convenient, it's less expensive, and it's faster. So from a siting perspective there are only benefits, not a single disadvantage. This is great." [1,4]

Prof. Elmar M. Merkle, M.D.
Chief Physician in Radiology and Nuclear Medicine
Universitätsspital Basel, Switzerland

Redefining MR imaging affordability

MAGNETOM Free.Max RT Edition provides access to MR imaging at a lower total cost of ownership than traditional MR systems.



More compact means easier to install

The compact dimensions of MAGNETOM Free.Max RT Edition allow for installation in rooms that could not house a traditional MR system.

Small

24 m²
258 ft² [4]

Light

< 3.2 t [7]
< 7,050 lbs

Low

< 2 m
< 6.5 ft

Reduced installation costs

Since MAGNETOM Free.Max RT Edition has a small footprint and quench-pipe-free design, you can bypass conventional infrastructure requirements and minimize associated installation costs.

A minimum of maintenance

The sealed-for-life magnet design and minimalistic 0.7 l helium requirement make system maintenance as simple as it gets. In case of prolonged blackouts, MAGNETOM Free.Max RT Edition can even automatically ramp the magnet down and then back up once power has returned.

MAGNETOM Free.Max RT Edition at a glance:

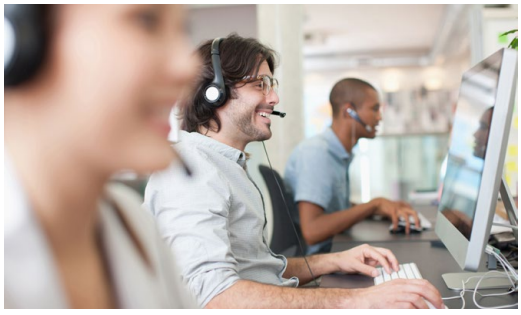
- Reduced installation costs
- No quench pipe
- Virtually helium-free infrastructure
- Increased siting flexibility
- Proximity to linac bunker
- New benchmark in rampup times

Stay connected to keep one step ahead

Automatic updates

Our Advance Plans keep systems cybersecure and highly efficient via automatic updates and upgrades.

Your benefit:
24/7 service for maximum efficiency[5]



Proactive monitoring

With Guardian Program, you get real-time system monitoring that detects and corrects errors before they even occur.[6]

Your benefit:
AI support for maximum system uptime

MAGNETOM Free.Max RT Edition is pending 510(k) clearance, and is not yet commercially available in the United States.

The products/features mentioned herein are not commercially available in all countries. Their future availability cannot be guaranteed.

[1] The statements by Siemens Healthineers customers described herein are based on results that were achieved in the customer s unique setting. Because there is no typical hospital or laboratory and many variables exist (e.g., hospital size, samples mix, case mix, level of IT and/or automation adoption) there can be no guarantee that other customers will achieve the same results.

[2] Jess Scholey is employed by an institution that receives financial support from Siemens Healthineers for collaborations.

[3] The name "myExam RT Assist" has been used since software version syngo MR XA50. In former software versions, it is called "RT Dot Engine".

[4] Prof Merkle is employed by an institution that receives financial support from Siemens Healthineers for collaborations.

[5] 24/7 refers in this context to the availability of our online platforms and remote service channels. Any additional scope is subject to the specific service agreements with your country service organization.

[6] Guardian deliverables vary by device and are not applicable to all Siemens Healthineers equipment. Ask a local Customer Service representative for advice. Prerequisites: Stable Smart Remote Services (SRS) connection with adequate bandwidth. The products/features and/or service offerings (here mentioned) are not commercially available in all countries and/or for all modalities. If the services are not marketed in countries due to regulatory or other reasons, the service offering cannot be guaranteed. Please contact your local Siemens Healthineers organization for further details.

[7] Measured in metric tons. Including all components within the scanner room.

Siemens Healthineers Headquarters
Siemens Healthcare GmbH
Henkestr. 127
91052 Erlangen, Germany
Phone: +49 9131 84-0
siemens-healthineers.com

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