Translate

7T research power into clinical care

MAGNETOM Terra
MAGNETOM Terra – Translate 7T research power into clinical care

MAGNETOM Terra is designed to let you explore new territories in MRI by enabling powerful 7T research and enhancing clinical care. Uncover a whole new world of clinical insights with double SNR for more precision. Our advanced ultra-high-field (UHF) technology will keep you at the cutting edge of MRI, to attract the brightest minds to your facility, sharpen your competitive edge and strengthen your reputation. It delivers a fertile platform for unlocking research capabilities, publishing new insights first, and setting the pace in diagnostic imaging. Welcome to an exclusive research community. Welcome to a whole new world in MRI.

Welcome to clinical 7T.

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MAGNETOM Terra – Translate 7T research power into clinical care

**Unique Dual Mode functionality**

- Uncover a whole new world of clinical knowledge with the flexibility to get more from your scanner
- Secure switch between research and clinical operation in less than 7 minutes
- Operating with 2 separate databases for clear research and clinical distinction

**80/200 gradients, 8-channel pTX and up to 64 channels**

- More power for greater diffusion MRI and functional MRI with 80/200 gradients
- Higher homogeneity for challenging body regions with 8-channel parallel transmit (in research mode)
- Higher acceleration factors with 64 receive channels

**50% lighter 7T magnet technology**

- First 7T scanner released for clinical use
- Lower weight and cold-shipment for easier integration in clinical environments
- Reduced operating costs thanks to Zero Helium boil-off

**Double SNR for more precision**

- 0.2 mm in-plane resolution to visualize previously unseen structures
- 0.14 cm³ voxel sizes for metabolic brain mapping (in research mode)
- Submillimeter BOLD fMRI precision to visualize sub-cortical activations

50% lighter 7T magnet technology
> 70% global market share in 7T technology

- Over 70% of 7T and 100% of vendor-integrated > 7T MRI human scanners worldwide from Siemens
- 8 of 11 leading U.S. hospitals with a 7T, (2016–2017), trust Siemens when they decide for 7T investment¹
- 74% of ISMRM UHF abstracts in 2017 were based on data from Siemens UHF systems¹

The world’s largest UHF community

- Largest installed base for exchanging ideas in a strong collaborative network
- An opportunity to enhance your reputation and competitiveness
- Incentive for the brightest minds in the MRI community to work with you
Uncover a whole new world of clinical insights

Discovering new ground in MRI can help you significantly enhance patient outcomes. Imaging at 7T offers more than double the SNR of 3T. This delivers potential for better lesion conspicuity, faster image acquisition to reduce motion artefacts, and earlier disease detection at submillimeter resolution. MAGNETOM Terra is the first 7T scanner released for clinical use. Its Dual Mode lets you switch between clinical and research tasks, unlocking new opportunities and providing a solid, well-founded platform for innovative results.

“Based on higher resolution, 7T provides new insights into gray and white matter disease in the brain, such as multiple sclerosis, focal cortical dysplasia, and hippocampal sclerosis. Furthermore, functional MR benefits from 7T based on a clinically relevant increase in functional sensitivity and specificity. In musculoskeletal imaging, 7T enhances the visualization of small joint structures and subtle pathologies, such as small meniscal tears, triangular fibrocartilage lesions, and early stages of cartilage degeneration.”

Professor Siegfried Trattnig
Director of the MR Centre of Excellence,
MedUni Wien, Vienna, Austria
Uncover a whole new world of clinical insights – Double SNR for more precision with clinical applications in Dual Mode

Dual Mode flexibility
MAGNETOM Terra is the first 7T scanner released for clinical use. With selected neurological and musculoskeletal scan protocols, it has potential to uncover a whole new world of clinical care. Its unique Dual Mode functionality lets you switch between research and clinical operation, giving you flexibility to get more from your scanner.

Ultra-fine anatomical resolution
In brain and musculoskeletal MRI, 7T reveals details previously unseen at lower field strengths. For example, cerebral cortex imaging at 0.2 mm in-plane resolution may detect changes in cortical structure indicating early dementia. It also helps visualize cortical microinfarcts and plaques in MS patients and delivers insight into the plaque-vessel relationship and iron accumulation.

Submillimeter fMRI
The BOLD contrast increases linearly with field strength. In clinical use, this could mean higher precision in oncology compared to 3T applications, for example, through smaller voxel sizes. Potentially, this can increase the accuracy of neurological pre-surgical evaluation of eloquent areas before tumor removal, while keeping scanning times viable.

Powerful image reconstruction
MAGNETOM Terra delivers improvements in workflow for easier operation and better patient handling. Leveraging the latest syngo MR E11 software platform, it lets you work in the same way as you do with cutting-edge 3T technology. What’s more, it comes with the most powerful MaRS (Measurement and Reconstruction System) computing technology ever built.

8 of 11 leading U.S. hospitals with a 7T, (2016–2017), trust Siemens when they decide for 7T investment
Switch between research and clinical tasks with Dual Mode

Ultra-fine resolution to visualize details previously unseen

Submillimeter BOLD fMRI precision for pre-surgical evaluation

Ultra-fast image reconstruction and syngo MR E11
Dual Mode offers the flexibility to switch from research to clinical tasks

**Clinical Mode**
- 1 transmit channel
- 11 kW RF power
- 2 coils (Head 32, Knee 28)
- Neuro and MSK optimized clinical applications

**Research Mode**
- single channel and 8-channel parallel transmit
- 8 x 2 kW RF power
- Wider range of RF coils
- Whole-Body WIP Applications
• syngo MR E11 software line
• XR Gradients 80/200
• Up to 64 receive channels
• Latest MaRS computer
• 3rd order shims
Clinical Mode – Multiple Sclerosis

Hyperintense MS lesion with hypointense center

DarkFluid TSE
0.3 x 0.3 x 3 mm³,
5:59 min

SWI minIP/phase
0.2 x 0.2 x 1.2 mm³,
5:38 min

Typical central vein and perivenular demyelination is visible.
Clinical Mode – Tumor

3D SWI of Glioblastoma

3D SWI miniIP provides superior assessment of the microvasculature.

Erwin L. Hahn Institute for MRI, Essen, Germany

3 Tesla

0.85 x 0.72 x 2 mm³

7 Tesla

0.25 x 0.25 x 1 mm³
Glioblastoma

Higher SNR for ultra-high 0.2 mm in-plane resolution for imaging tumor vascularization.

DKFZ, Heidelberg, Germany
Clinical Mode – Stroke

Small focus of strong cortical/subcortical signal abnormality in the right precentral gyrus.

FAU, Erlangen, Germany

RESOLVE 1 x 1 x 3 mm³, 1:46 min

PD FS TSE 0.2 x 0.2 x 3 mm³, 5:14 min

DarkFluid TSE
0.3 x 0.3 x 3 mm³, 5:59 min
Clinical Mode – Tumor

High resolution standard protocols for detailed visualisation of pathologies, increased tissue contrast and high resolution at 7T.

FAU, Erlangen, Germany
**Clinical Mode – Healthy Volunteer**

**Hippocampus imaging**
High-resolution imaging of the hippocampus at 0.25 mm in-plane resolution.
*Scannexus, Maastricht, Netherlands*

**T2* weighted imaging**
High-resolution imaging of the brainstem at 0.3 mm in-plane resolution.
*MGH, Boston, USA*
Clinical Mode – Diffuse axonal injury

Diffuse axonal injury

The higher sensitivity at 7T reveals hemosiderin from traumatic brain injury in PD images.

Erwin L. Hahn Institute for MRI, Essen, Germany
Clinical Mode – Healthy volunteer

Clear identification of anatomical structures with increased tissue contrast and high resolution at 7T.

0.6 x 0.6 x 0.6 mm³, 13:45 min

FAU, Erlangen, Germany
Clinical Mode – Stroke

Time of Flight (ToF) with 400 micron isotropic resolution reveals smallest vessels in the brain. The higher the signal and the longer the T1 at 7T are, the higher the quality of the Maximum Intensity Projection (MIP) gets.

Visualize smallest vessels with 0.4 mm isotropic resolution.

0.4 x 0.4 x 0.4 mm³, 8:09 min

FAU, Erlangen, Germany
Clinical Mode – Healthy volunteer

0.2 mm in plane resolution
The basal ganglia Caudate, Putamen and Globus Pallidus can be differentiated. Enlarged sections: cortical veins can be depicted.

SWI 0.2 x 0.2 x 1 mm³, 10:59 min
Clinical Mode – Enchondroma

Fine structure visible in the lesion with different contrasts.

**PD TSE FS** 0.2 x 0.2 x 2.5 mm³, 3:15 min

**T2 TSE** 0.3 x 0.3 x 2 mm³, 3:24 min

**3D DESS** 0.5 x 0.5 x 0.5 mm³, 3:43 min

FAU, Erlangen, Germany
Clinical Mode – Healthy volunteer

Clear delimitation of anatomical structures, such as ligaments, vessels or cartilage.

**T1 SE**
0.2 x 0.2 x 2.5 mm³, 4:05 min

**T1 qSE**
0.3 x 0.3 x 2.5 mm³, 7:21 min
Clinical Mode – Healthy volunteer

PD qTSE FS
0.2 x 0.2 x 2.5 mm³,
3:15 min

T1 FL3D WE
0.5 x 0.5 x 0.5 mm³,
4:35 min
Change the game in UHF business

Medical research funding has stagnated in the last decade. Ensuring your high-end MRI endeavors have the right business impact is crucial in today’s competitive environment. MAGNETOM Terra is the result of over 25 years of Siemens UHF innovations, culminating in the design of a brand-new, volume-produced 7T magnet. The magnet is 50% lighter than previous generations and supports easier integration into clinical environments. MAGNETOM Terra can help you become more competitive, while making a tangible difference to clinical care, research – and your business.

“When you talk to other people in the field, it is clear that Siemens has by far the greatest expertise in ultra-high-field imaging.”

Professor Rainer Goebel
University of Maastricht & scannexus,
Maastricht, The Netherlands
Change the game in UHF business
with Siemens Healthineers’ 50% lighter 7T magnet

Innovative magnet technology
Siemens Healthineers’ 7T magnet is a milestone in MR magnet technology. Its unique design and thermally balanced materials minimize physical interactions between core components. The result is 50% lighter than previous generations, with a higher structural stability and a greater fundamental stress capacity. In addition, excellent homogeneity makes for enhanced image quality.

Easy clinical integration
Thanks to the lighter magnet, the scanner can be shipped cold via airfreight. What’s more, you benefit from up to 50% faster installation time and ramp-up. Zero Helium boil-off translates into lower lifecycle costs and an improved eco-footprint. All this has the potential to enhance performance, lower resource consumption, improve sustainability, and reduce operating costs.

Increased competitiveness
MAGNETOM Terra’ can help you broaden research funding opportunities, making your institution stand out as a leader in life sciences. By being at the cutting edge of clinical care and research, you have the opportunity to increase competitiveness for grants, benefit from reduced complexity in clinical trials, and open up potential for clinical imaging reimbursements.

Forward-looking technology
An investment in MAGNETOM Terra’ is an investment in the future. Siemens is committed to serving the ultra-high-field community – today and tomorrow – with a host of outstanding innovations. From development and production, to service – all of MAGNETOM Terra’s’ key components are delivered from a single reliable partner you can trust, for maximum peace of mind.
Lower weight and cold-shipment for easy integration

Zero Helium boil-off

First 7T scanner released for clinical use

50% Lighter magnet technology

Lower weight and cold-shipment for easy integration

Zero Helium boil-off
Proven innovations in the development and production of magnet technology

1980
The world’s first superconducting whole-body MRI

1989
The world’s first 1.5T active-shielded magnet

1994
The world’s first open MRI magnet

1997
The world’s first 3T active-shielded magnet

Award-winning development and production

Siemens Magnet Technology in Oxford, UK, has received seven Best Factory Awards and seven Queen’s Awards for Enterprise in multiple categories, including for processes and design. The facility deploys leading-edge supply chain management methods, and prides itself on reliable, robust production and the highest standards of quality.
April 2015 – Installation of Siemens’ first 7T magnet

During the 30 years that we have been producing 1.5T and 3T magnets, we have gained extensive engineering skills and well-founded process expertise. This knowledge and experience has led to the development and production of our own 7T magnet.

“We are extremely proud at Siemens Magnet Technology to have developed the 7T magnet at the heart of the MAGNETOM Terra. Once again our expert design and process teams have demonstrated how their innovative thinking has led to a product that has pushed forward the boundaries of magnet technology. It is wonderful to see how seamlessly the manufacture of this flagship product has already been integrated into our award winning facility.”

Ralph Seidler
Managing Director,
Siemens Magnet Technology
Unlock research beyond clinical limits

When it comes to research, the freedom to push the boundaries is imperative for gaining a competitive edge. For neuroscience and clinical research applications, MAGNETOM Terra delivers ultra-high SNR and 8-channel pTX for imaging challenging body regions. In addition, it has up to 64 receive channels for higher acceleration factors and 80/200 gradients for maximum flexibility. Moreover, this powerful, reliable scanner supports basic research by helping you develop groundbreaking technologies, set new trends and translate your outcomes into clinical routine.

“The increased spatial resolution offered by 7T MRI enables us to study fine-grained activation patterns within cortical areas and investigate detailed functional topography of the cerebral cortex in individual human subjects. This will provide us with a deeper understanding of the human brain and its connectomics in healthy and diseased populations.”

Professor Kamil Ugurbil
Director of the Center for Magnetic Resonance Research (CMRR), Minneapolis, Minnesota, USA
Unlock research beyond clinical limits with 8-channel parallel transmit

Enhanced images with pTX
Image quality and speed are key, but inhomogeneities may present challenges, for example, in body MRI. MAGNETOM Terra’s 8-channel pTX technology helps you overcome these issues and generate images of excellent quality. This particularly promising technology has the potential to support your own hardware developments.

Ultra-high resolution spectroscopy
Proton magnetic resonance spectroscopy at 7T not only delivers metabolic information, but also gives accurate anatomical insight. Ultra-high 0.14 cm³ resolution has the potential to reveal valuable new diagnostic information for clinical applications – including patients with tumors, epilepsy, multiple sclerosis or other neurodegenerative diseases.

More power for your research
MAGNETOM Terra offers a host of cutting-edge research functionalities, providing access to works in progress packages and powerful hardware configurations. 80/200 gradients and up to 64 receive channels deliver enhanced capabilities for your studies. What’s more, the scanner gives you the freedom to explore and develop new clinical applications only possible at ultra-high-field strengths.

Open platform architecture
MAGNETOM Terra provides a flexible, fertile ground for your own UHF hardware and software developments. For example, Siemens collaboration partners benefit from technical support and direct access to the sequence, the Image Calculation Environment (ICE), and imaging protocols.
8-channel pTX for higher homogeneity

80 / 200 gradients and 64 receive channels for more research power

Open platform architecture for own developments

0.14 cm³ voxel size in spectroscopy for metabolic brain mapping¹
Transparent fibers
Tracks calculated with spherical deconvolution based on diffusion-weighted EPI acquisitions with 1 mm isotropic resolution covering the whole brain. The high SNR provided by 7T allows resolving crossing fibers in many brain sub-regions.

Max Planck Institute, Leipzig, Germany
In-vivo histology

syngo.via Frontier, the research extension of syngo.via, helps bridge the gap in post-processing translational research. Cinematic rendered images based on MR data sets may be used for patient counseling, surgery planning, or teaching purposes.5
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Functional MRI

Contrast-to-noise ratio maps in resting state fMRI.

Consortium The Human Connectome Project.
CMRR, Minnesota, USA
Washington University St. Louis, USA
Oxford University, UK

3 Tesla

7 Tesla
Depiction of cortical layers

Post-processed high-resolution anatomical MR data reveals reconstructed surfaces at different cortical depth levels. The inner red surface runs along the white/gray matter boundary. The outer blue surface runs along the outer (pial) boundary of the cortex.

Scannexus, Maastricht, The Netherlands
Tissue segmentation

Delineation of subcortical nuclei in the thalamus and brainstem at 1mm isotropic resolution. White matter nulled MPRAGE (top TA 8:52 min) and gray matter nulled MPRAGE (bottom TA 10:38 min).

MGH, Boston, USA
High-resolution fMRI

Cortical-layer-specific activation with fMRI at 1 mm isotropic resolution, inflated view. The fMRI visual stimulus was designed to activate a pattern in the shape of the number “7” using the known retinotopic mapping in the human visual cortex.

MGH, Boston, USA

“Siemens provides the best possible open hardware and software environment to explore these new transmit and receive concepts, all of which have proved essential to allow ultra-high fields to fulfill their potential for the benefit of human health.”

Professor Lawrence L. Wald, Director
MGH NMR Core at Martinos Center, Department of Radiology,
Boston, Massachusetts, USA
Spine imaging
Ultra-high resolution of the cervical spine using a custom-built spine coil.

MGH, Boston, USA

3 T tesla
0.5 mm in-plane

7 T tesla
0.3 mm in-plane

7 T tesla
0.5 mm in-plane

3 T tesla
0.5 mm in-plane
Body imaging

Left image, 3D VIBE FatSat, right image, thin MIP from the 3D VIBE FatSat. Images acquired using pTX and custom-built coils.

Erwin L. Hahn Institute for MRI, Essen, Germany

Body imaging

Image left, rectum carcinoma imaged with a ce-FLASH (0.3 x 0.6 x 2 mm³, TA 2:14 min). Images acquired using pTX and custom-built coils. Image right, abdominal small bowel imaging with TrueFISP (0.4 x 0.8 x 2 mm³, TA 26 s).

Erwin L. Hahn Institute for MRI, Essen, Germany
Cardiac imaging

Accelerated T1-weighted FLASH acquisitions.

**Berlin Ultrahigh Field Facility, Berlin, Germany**

**Short axis view** FLASH cine retro (1 x 1 x 4 mm\(^3\), GRAPPA 2, TA 18 s).

**Right ventricular output tract** FLASH cine retro (1.3 x 1 x 4 mm\(^3\), SENSE 2, TA 13 s).

**Four chamber view** FLASH cine retro (1 x 1 x 4 mm\(^3\), GRAPPA 2, TA 16 s).

**Two chamber view** FLASH cine retro (1.2 x 1 x 4 mm\(^3\), SENSE 2, TA 13 s).
Hip cartilage transplant

Cartilage transplant visible in 3D DESS (0.37 x 0.74 x 0.74 mm³, TA 5:11), 3D VIBE SPAIR (0.19 x 0.39 x 0.8 mm³, TA 5:58) and T2 MapIt (0.25 x 0.5 x 2.5 mm³, TA 4:47) 14 months after Autologous Chondrocyte Transplantation (ACT).

Erwin L. Hahn Institute for MRI, Essen, Germany
Biochemical imaging using CEST

Male patient nine years after Autologous Osteochondral Transplantation (AOT) in the medial femoral condyle.

MedUni Wien, Vienna, Austria
Breast imaging
High-resolution bilateral breast imaging in short acquisition time. Pre- and post-contrast 3D FLASH SPAIR, 1.4 mm isotropic resolution, TA 1:48 min/series.

NYU Langone Medical Center, New York, USA
Join the largest research community

Your reputation plays a pivotal role in your institution’s success. MAGNETOM Terra has the power to let you go deeper than ever before, making your research and patient outcomes stand out from the rest. What’s more, this leading-edge technology can help you attract the brightest minds to your facility, further enhancing your capabilities. MAGNETOM Terra has the potential to put your organization firmly on the map, offering access to an exclusive network of expertise and broad scope for collaboration and exchange.

“When we were in a position to order a 7T system, Siemens was the logical choice.”

Professor Peter Jezzard
Professor of Neuroimaging,
University of Oxford, Oxford, UK
Enhance your reputation
MAGNETOM Terra helps you achieve your research goals, giving you the opportunity to publish first and become a true opinion leader. This advanced technology has the potential to strengthen your position by attracting the brightest brains to your facility. The scanner lets you deliver previously unseen insights that could improve patient outcomes and further enhance your reputation.

Expand your network
Even if you are taking your first steps in ultra-high-field imaging, you will never be alone. Siemens has proven expertise in UHF MRI and cultivates links with an extensive network of users. As a result, you benefit from the experience of others and can share your own ideas. Siemens is the global leader in 7T – with a market share of over 70% and more than 25 years of experience in this field.

Exchange your ideas with peers
When you become part of the Siemens UHF community, you join an exclusive group of outstanding MRI experts. Through collaboration and exchange with other leaders in your field, you can extend your own knowledge and gain deeper insights. Siemens’ regular user meetings and an online discussion board are the ideal platforms to interact with your peers.

74% of ISMRM UHF abstracts in 2017 were based on data from Siemens UHF systems.2
Over 70% of 7T scanners deployed worldwide are from Siemens

Attract and retain the brightest minds and publish first

Strong network for collaboration and peer-to-peer exchange
UHF systems installed and projects in progress

1. Athinoula A. Martinos Center for Biomedical Imaging of MGH, Boston, Massachusetts, USA
2. Leibniz Institute for Neurobiology (LIN), Magdeburg, Germany
3. Bernard and Irene Schwartz Center for Biomedical Imaging (CBI) of New York University Langone Medical Center, New York City, New York, USA
4. Center for MR Research (CMRR), University of Minnesota, Minneapolis, Minnesota, USA
5. Neuroscience Research Institute (NRI) of Gachon University of Medicine and Science, Incheon, South Korea
6. Advanced Imaging Research Center (AIRC), Oregon Health & Science University, Portland, Oregon, USA
7. Erwin L. Hahn Institute for Magnetic Resonance Imaging (ELH), Essen, Germany
8. Center for Imaging in Biomedicine (CIBM), École polytechnique fédérale de Lausanne (EPFL), Lausanne, Switzerland
9. Max Planck Institute for Biological Cybernetics (MPI KYB), Tübingen, Germany (9.4T)
10. NeuroSpin, French Alternative Energies and Atomic Energy Commission (CEA), Saclay, France
11. NeuroSpin, French Alternative Energies and Atomic Energy Commission (CEA), Saclay, France (11.7T)
12. Magnetic Resonance Research Center (MRRC), University of Pittsburgh Medical Center (UPMC), Pittsburgh, Pennsylvania, USA
13. Max Planck Institute for Human Cognitive and Brain Sciences (MPI), Leipzig, Germany
14. Excellence Center for Highfield MR, Medical University of Vienna (MUW), Vienna, Austria
15. German Cancer Research Center (DKFZ), Heidelberg, Germany
16. Institute of Neuroscience and Medicine (INM), Research Centre Jülich, Jülich, Germany (9.4T)
17. Center For Magnetic Resonance And Optical Imaging (MMRCC), University of Pennsylvania Health System (HUP), Philadelphia, Pennsylvania, USA
18. Berlin Ultrahigh Field Facility (B.U.F.F.), Experimental and Clinical Research Center (ECRC), Berlin, Germany
19. State Key Laboratory of Brain and Cognitive Science, Institute of Biophysics, Chinese Academy of Sciences (CAS), Beijing, China
100% of vendor-integrated human MRI scanners with a field strength higher than 7T are from Siemens.

Over 70% of 7T scanners deployed worldwide are from Siemens.

26 Center for MR Research (CMRR), University of Minnesota, Minneapolis, Minnesota, USA (10.5T)
27 Center for Imaging of Neurodegenerative Diseases (CIND), San Francisco VA Medical Center, UCSF, San Francisco, California, USA
28 German Center for Neurodegenerative Diseases (DZNE), Bonn, Germany
29 Biomedical Research Imaging Center (BRIC), University of North Carolina (UNC), Chapel Hill, North Carolina, USA
30 Maastricht Brain Imaging Centre (M-BIC), Maastricht University, Maastricht, The Netherlands (9.4T)
31 Maastricht Brain Imaging Centre (M-BIC), Maastricht University, Maastricht, The Netherlands
32 Mt Sinai School of Medicine, New York City, New York, USA
33 Cleveland Clinic, Cleveland, Ohio, USA
34 Centre for Advanced Imaging, University of Queensland, Brisbane, Queensland, Australia
35 Royal Melbourne Hospital, University of Melbourne, Victoria, Australia
36 University of Sao Paulo (USP), Sao Paulo, Brazil
37 Centre d’Exploration Métabolique par Résonance Magnétique (CEMEREM), Marseille, France
38 Centre for Functional and Metabolic Mapping, Robarts Research Institute, London, Ontario, Canada
39 National Institute for Physiological Sciences (NIPS), Okazaki, Japan
40 Kyoto University, Kyoto, Japan
41 Zhejiang University, Hangzhou, China
42 Brigham and Women’s Hospital (BWH), Boston, USA
43 University of Southern California (USC), Los Angeles, California, USA
44 Cardiff University Brain Research Imaging Centre (CUBRIC) Cardiff, UK
45 Wolfson Brain Imaging Centre (WBIC), University of Cambridge, Cambridge, UK
46 Imaging Centre of Excellence (ICE), South Glasgow University Hospital, Glasgow, UK
47 Magnetic Resonance Research Center (MRRC), Yate University, New Haven, Connecticut, USA
48 Comprehensive Heart Failure Center (CHFC), Würzburg University Hospital, Würzburg, Germany
49 Weizmann Institute of Science, Tel Aviv, Israel
50 Mayo Clinic, Rochester, USA
51 Toronto Western Hospital (TWH), University Health Network (UHN), Toronto, Canada
52 National Institute of Health, National Institute on Drug Abuse (NIH-NIDA), Bethesda, Maryland, USA
53 Forschungszentrum Jülich, Jülich, Germany
54 CRC, University of Liege, Liege, Belgium
55 Houston Methodist, Houston, Texas, US
56 Athinoula A. Martinos Center for Biomedical Imaging of MGH, Boston, Massachusetts, USA
Siemens’ end-to-end services ensure you stay at the leading edge of MRI technology throughout the entire system lifecycle – from installation, to operation, to upgrades, to ongoing support. Moreover, our diverse communication platforms and communities keep you up to speed on the world of MRI and enable you to share your ideas and experiences with your peers.
Utilization management and reporting
This powerful solution gives you more from your MRI scanner. It allows you to monitor KPIs and benchmark your system against other Siemens MRI machines at any facility or organization. So you can keep track of your MRI performance, and reap the maximum reward from your scanner.

Predictive maintenance
When systems go down, it impacts both your ability to care for your patients and your bottom line. Siemens provides a predictive maintenance service to help you minimize lost time. It informs you when a part of your MRI system is likely to fail, enabling you to plan repairs and prevent downtime before it happens.

EVOLVE
Keep your hardware and software up to date at all times – a key factor in enhancing performance and diagnostic quality. You receive all applicable upgrades for software and the syngo OS, plus at least one workstation hardware upgrade within the first six years.

Siemens Guardian program
This program provides the latest service technology so you can better manage your MRI system. It combines many features in a single package – offering real-time system monitoring, expert advice to improve workflow efficiency, proactive maintenance, and support. Moreover, it guarantees defined repair times, giving you complete peace of mind.

Proven upgrade paths
With MAGNETOM scanners, taking your MRI system to the next level is simplicity itself, thanks to clearly defined upgrade paths. In fact, Siemens has built an entire organization (CDV) to help customers truly maximize their system life – and increase their return on investment.
Service and exchange – Peer-to-peer information

On MAGNETOM Flash:
“An excellent and useful combination of technological and clinical articles that both keep one up to date with advances in MRI and provide practical assistance for day-to-day practice – good and interesting learning material.”

Mark Lourens
St Vincent’s Hospital, Fitzroy, Victoria, Australia
Siemens Healthineers’ global MRI community offers peer-to-peer support and information. Radiologists, cardiologists, technologists, and physicists have all contributed with publications, presentations, training documents, case studies, and more—all freely available to you via this unique network. Plus, the bi-annual MAGNETOM World Summit is the ideal opportunity to share and exchange ideas.

MAGNETOM Flash
Published quarterly, the MR customer magazine features up-to-date clinical case studies, application tips and technical and product information relevant to you. All content is carefully compiled by experts to meet the needs of today’s MRI users in both clinical and research scenarios. In fact, 98.5% of readers report that MAGNETOM Flash is clinically relevant.

IDEA / UHF Online Discussion Board
IDEA² is an open development platform for the largest and most active 3T and UHF research communities in the world. It unites users from across the globe and fosters innovation in the field of MRI. Members collaborate online at www.mr-idea.com and at an annual meeting. IDEA includes an exclusive area, the UHF Online Discussion Board, to help users focus on topics of interest, as well as find and communicate with the right peers.

Visit MAGNETOM World
siemens.com/magnetom-world
## Technical specifications

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<th>MAGNETOM Terra Technical specifications</th>
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Why Siemens Healthineers?

At Siemens Healthineers, our focus is to help healthcare providers succeed in today’s dynamic environment.

Healthcare providers around the world have long relied upon our engineering excellence – leading-edge, high-quality medical technologies across a broad portfolio. Our technologies touch an estimated 5 million patients globally every day. At the same time, they help hospital departments to continuously improve their clinical, operational, and financial outcomes.

We now consolidate this unprecedented volume of data and insights and turn them into pioneering enterprise and digital health services. With those, we maximize opportunities and share risk for the success of your entire health system.

Partnerships are built on people. With Siemens Healthineers, there is no team more committed and more connected than we are to realize your success together.
