

SIEMENS

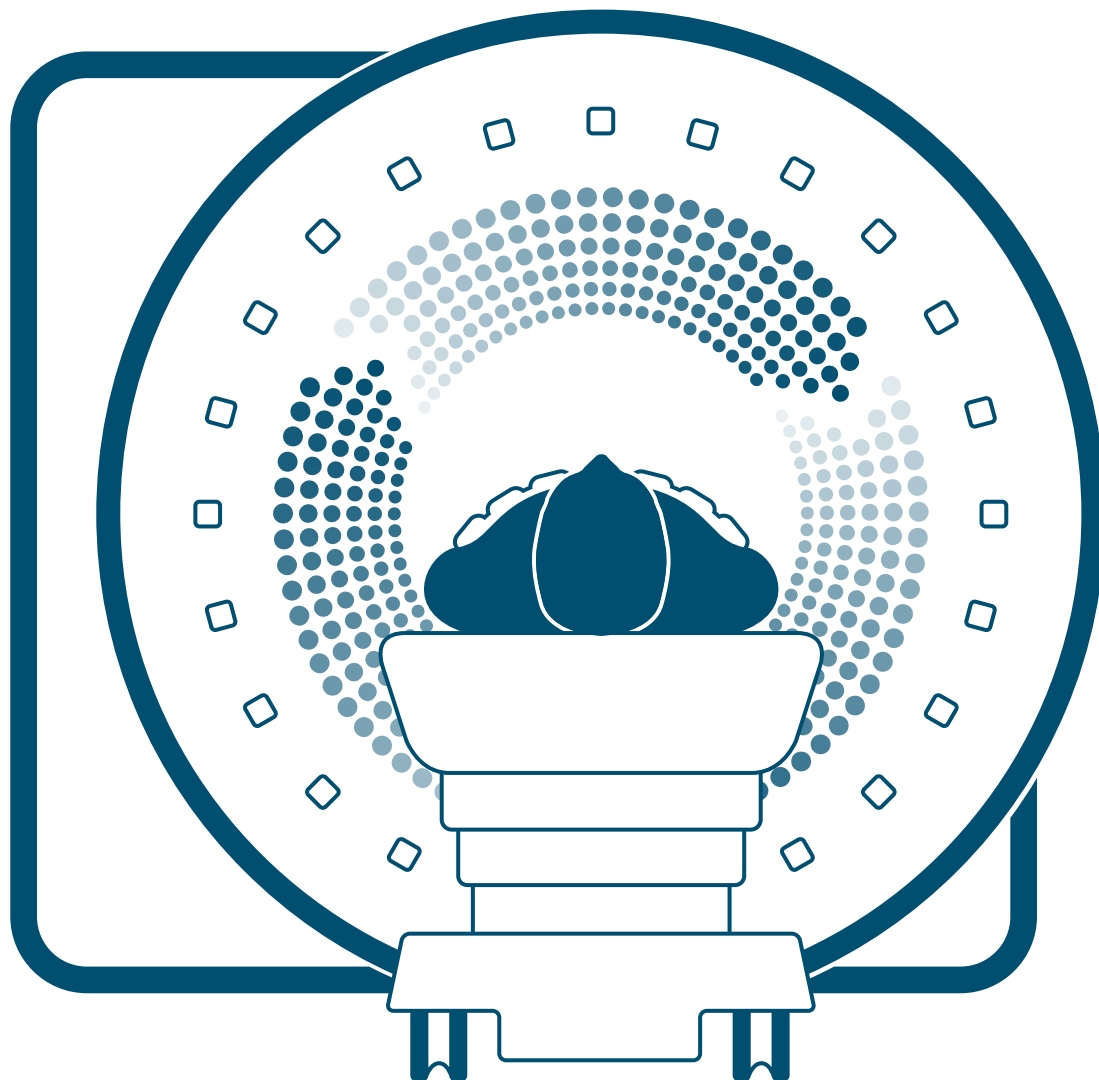
MEDLIGA
медицинское оборудование



[siemens.com/spectra](https://www.siemens.com/spectra)

MAGNETOM Spectra

medliga.ru



equipment-provider alike: How to manage volume growth with limited resources? How to control costs without compromising quality of care? How to expand services in either established or growing markets? How to continuously strive for clinical excellence in the interest of patients despite economic restraints?

Siemens MRI provides answers to these questions by offering a unique combination of MRI technology, software and clinical applications, supporting you in turning these challenges into opportunities.



MAGNETOM Spectra The key to 3T.

MAGNETOM Spectra The key to 3T.

Healthcare must evolve with changing needs. Demand for medical services is climbing, yet reimbursements are falling – and any inefficient use of resources strains staff and budgets.

MAGNETOM Spectra is your key to resolving these issues. It gives you powerful 3T MRI and innovative *syngo* MR E11 software, plus cutting-edge applications. It allows you to expand your exam offering, streamline workflows and enhance resource efficiency.

It's your key to 3T.

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MAGNETOM Spectra at a glance

The key to 3T.

Up to **55%**
faster MRI exams⁴

- Rapid image acquisition with Tim 4G coil technology
- Higher patient throughput
- Simplified exam set-up

**Free-breathing
Body MRI
with FREEZEit**

- Ideal contrasts for dynamic liver exams
- Non-invasive liver evaluation
- Powerful syngo MR E11 software



Up to **97%** reduction in sound pressure⁵

- Complete, quiet neurological and orthopedic examinations
- More patient acceptance, fewer rescans
- No compromise on image quality

Up to **46%** fewer parameter adjustments^{1,2,3}

- Routine tasks automated with DotGO workflow
- Time savings for technicians
- Highly efficient preconfigured protocols

Up to **33%** TCO savings across the system lifecycle

- State-of-the-art Zero Helium boil-off technology
- Power-saving technology for higher energy efficiency
- Reduced power consumption with Eco-Chiller self-adjusting components



MAGNETOM Spectra
A Tim+Dot System

SIEMENS



Achieve exceptional financial performance

More and more exams are performed, yet healthcare providers are under mounting pressure from falling MRI reimbursements and rising operating expenses. Against this background, enhancing financial performance is a chief concern. MAGNETOM Spectra enables you to address this challenge by placing state-of-the-art 3T technology at your fingertips – while cutting TCO by as much as 33%.⁶

Achieve exceptional financial performance

with unmatched TCO

Up to **33%**
TCO savings across
the system lifecycle⁶

Save **18%**
energy during standby
mode with power-
saving technology⁷



Eliminate the
fastest-rising MRI
operating cost with
Zero Helium boil-off

Unmatched TCO

With an outstanding price-performance ratio, small installation footprint and low overall power consumption, MAGNETOM Spectra offers unmatched total cost of ownership – up to 33%⁶ lower across the system's lifecycle compared to other 3T units. In addition, it features state-of-the-art MR technology, such as Tim 4G, DotGO and Body MRI.

“As a private radiology practice, we work in a cost-sensitive environment, and MAGNETOM Spectra is the first 3T system that gives us the opportunity to provide this very high standard of MR imaging to our patients.”³

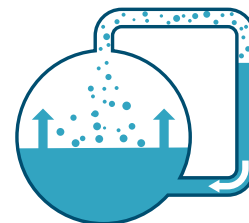
Dr. Axel McKenna-Küttner
Gemeinschaftspraxis für Radiologie und Nuklearmedizin,
Frankfurt/Bad Nauheim, Germany

Excellent energy efficiency

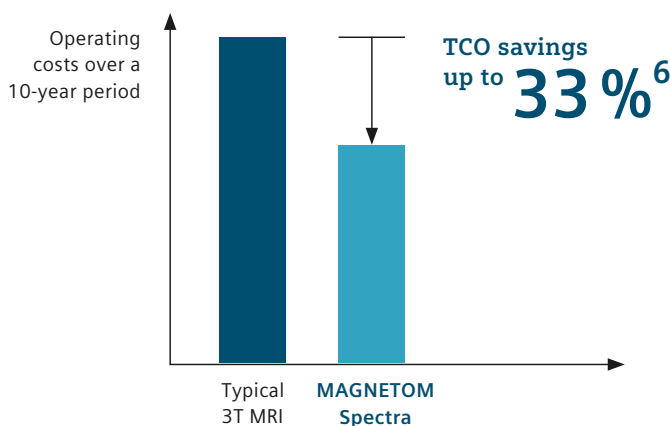
On average, MRI systems consume 209.57 kWh of power daily – as computed by COCIR. COCIR is a non-profit organization that represents the medical imaging community and related industries, and provides a common framework for measuring and comparing the energy consumption of MRI systems.

By comparison, MAGNETOM Spectra lies 18% below this average. Its power-saving technology uses less electricity – and in turn, cuts costs. Components switch off automatically when not in use, and optimized sequences reduce the need for gradient switching.

Compared to typical 3T MRI scanners, MAGNETOM Spectra delivers exceptional financial performance throughout the entire lifecycle, reducing TCO by up to 33%.⁶



Zero Helium boil-off



Zero Helium boil-off

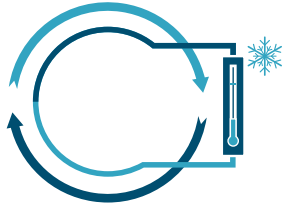
Cut out helium refills – the fastest-rising MRI operating cost – and improve your eco-footprint with true Zero Helium boil-off technology and lower power and cooling requirements. At the same time, enjoy enhanced performance and greater investment protection.

Power-saving technology

Reap the benefits of cutting-edge, intelligent technology, including components that switch off automatically after a period of inactivity. In addition, optimized sequences reduce the need for gradient switching, contributing to energy savings of up to 18% in standby mode.⁷



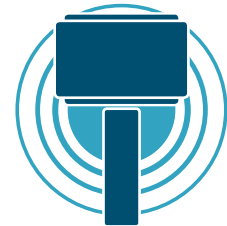
Power-saving
technology



Eco-Chiller



Short
installation time



Small footprint

Eco-Chiller

Normally, considerable power is needed to liquefy helium for cooling. However, the corresponding pump intelligently adapts to changing pressure levels and cooling requirements, lowering electricity consumption. Furthermore, Eco-Chiller features high heat conversion efficiency.

Short installation time

MAGNETOM Spectra's compact design means it can be installed within seven working days, helping reduce costs from the start.

Small footprint

MAGNETOM Spectra's magnet, electronics and console room require less than 31 m² of space. It complies with standard ceiling heights and features an integrated water cooling cabinet.



Expand clinical capabilities

To accommodate growing demand for MRI and broaden their offering, healthcare institutions need solutions that enhance productivity but avoid complexity. MAGNETOM Spectra features an expanded suite of innovative trendsetting applications, including RESOLVE, CAIPIRINHA and FREEZEit. These help achieve exceptional quality and speed. Moreover, features like Advanced Warp enable a greater variety of exams – attracting new patient populations, increasing referrals, and making better use of MRI resources.

Expand clinical capabilities

with *syngo* MR E11

Free-breathing Body MRI
with FREEZEit

CAIPIRINHA and RESOLVE
enable high-resolution
imaging with short breath
holds, and accelerated DWI

Deliver exceptional
image quality
and speed in MRI
with Tim 4G



Enjoy fast, high-quality imaging
MAGNETOM Spectra paves the way for superior image quality with Tim 4G high-density coil technology and an exceptional signal-to-noise ratio (SNR). Up to 120 coil elements and 24 RF channels enable efficient scanning with no coil or patient repositioning. Plus, Tim 4G enables MRI for large anatomical areas, even whole body scans.

“MAGNETOM Spectra has been an excellent choice for us. I believe that 3T will be the imaging modality of choice in the future, because of the advancements that have been put into the machine.”³

Dr. Francis Lau,
Island Hospital, Penang, Malaysia

Expand your MRI services

With a broad portfolio of MR applications and powerful syngo MR E11 software, MAGNETOM Spectra supports a comprehensive and unique range of 3T clinical services. As a result, you can expand and differentiate your offering, and make even the most challenging scans part of your clinical routine.

Leverage cutting-edge applications

Join the forefront of MRI by deploying trendsetting applications. Advanced WARP, for example, enables more accurate visualization of tissue with metal implants.⁸ MyoMaps provides powerful myocardial tissue quantification. QISS supports contrast-free angiography exams on par with CE scans. And LiverLab opens up non-invasive evaluations.

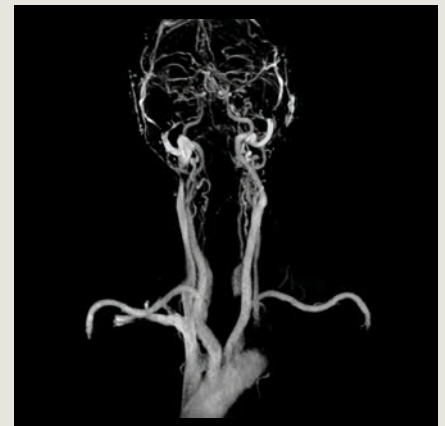
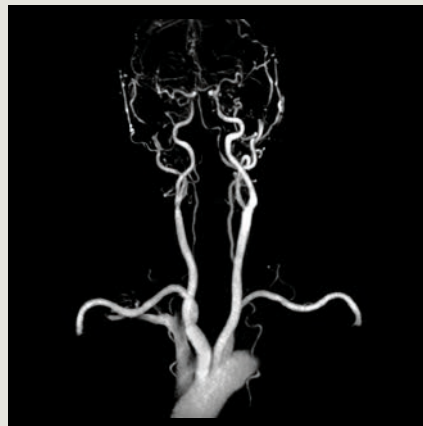
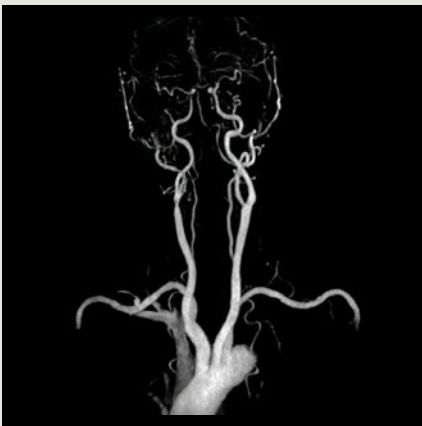


WHOLE BODY: Superior-quality imaging from meters to microns. Scan the entire length of the body up to 205 cm, with high resolution using the 512 matrix to see small details.



NEUROLOGY: Achieve advanced neuro imaging with
MAGNETOM Spectra and Tim 4G high-density coils.
Diffusion tractography, 20 directions, TA: 4:54 min.

Gemeinschaftspraxis für Radiologie und Nuklearmedizin,
Frankfurt/Bad Nauheim, Germany



HEAD/NECK: With excellent SNR, the Head/Neck 16 coil reveals details in the brain, inner ear, orbits, skull base, neck and spinal cord – improving insights in neuroanatomy while enhancing scan time and resolution.

Kajikawa Hospital, Hiroshima, Japan

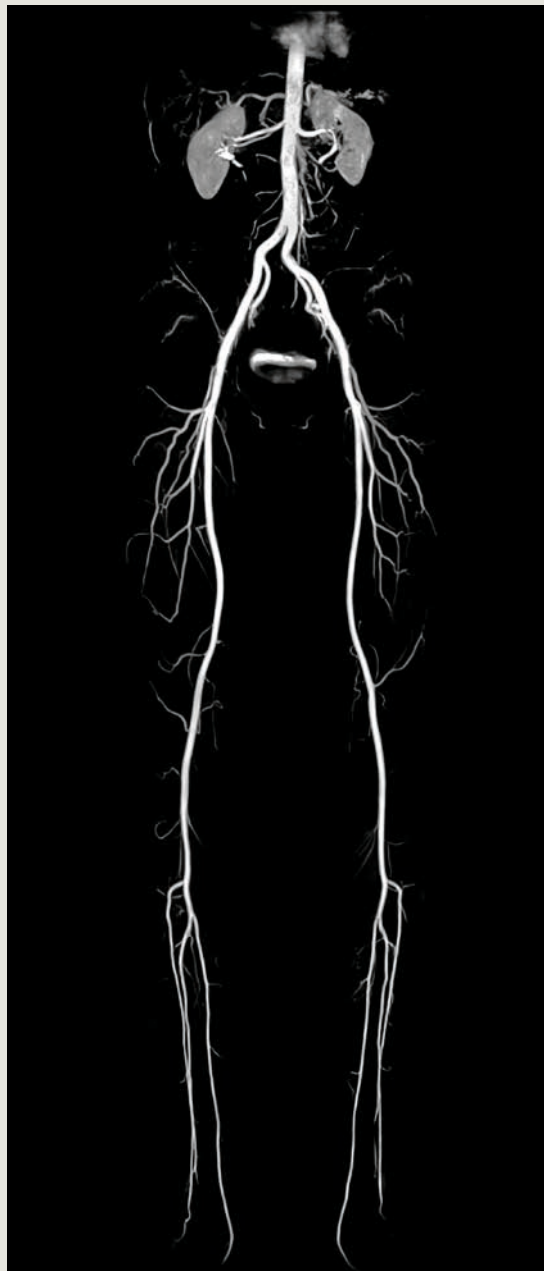
PEDIATRICS: Ultra high-density, lightweight Tim 4G coils enable faster examinations, helping reduce the need for sedation and rescans in pediatrics.⁹

Huai'an No. 1 People's Hospital, Huai'an City, P.R. China



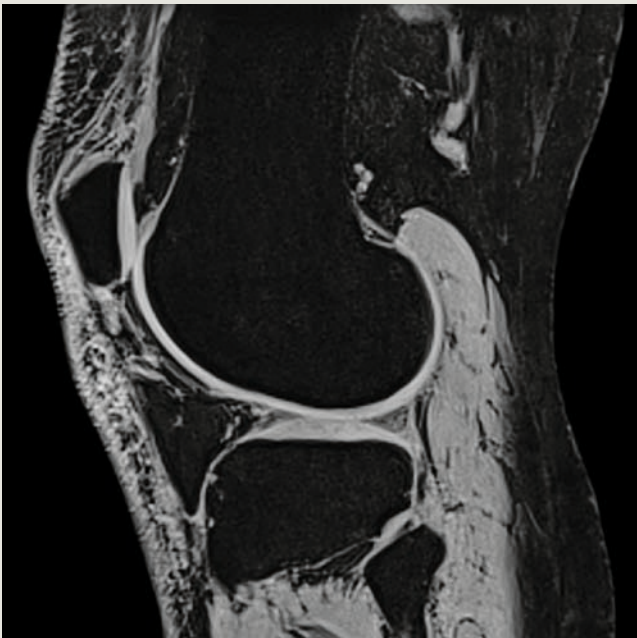
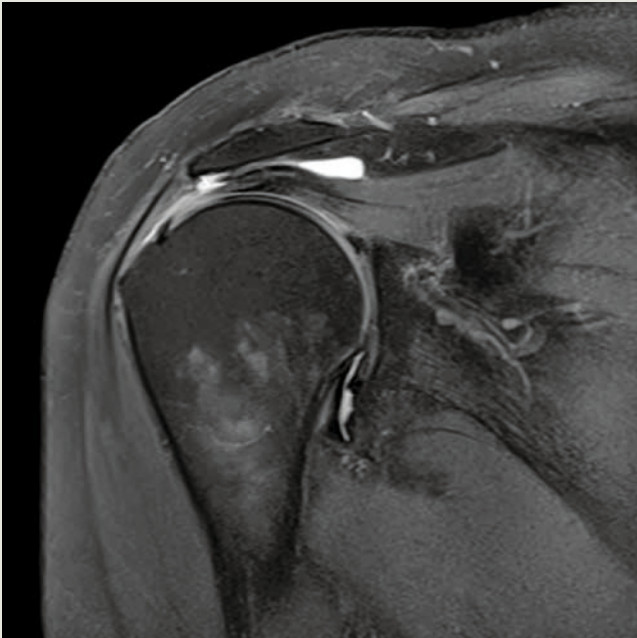
"It is so easy to use. Our technologists really like the new system, especially the Tim coils. We could easily shift our routine from 1.5T to 3T."³

Dr. Chieko Wakabayashi,
Suiseikai Kajikawa Hospital, Hiroshima, Japan



ANGIOGRAPHY: Tim 4G's new ultra high-density coils and 205 cm scan range allow you to perform high-resolution whole-body angiography easily and without repositioning the patient. And, with DotGO's on-board guidance, you can move through the scan with ease.

Gemeinschaftspraxis für Radiologie und
Nuklearmedizin, Frankfurt/Bad Nauheim, Germany

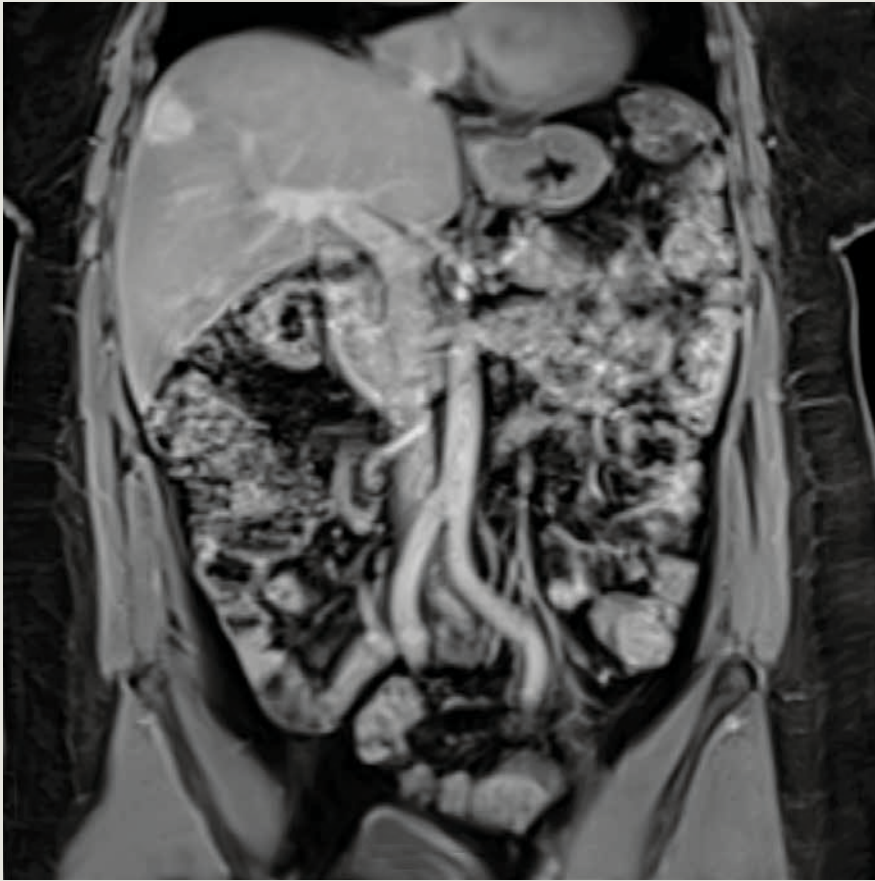


ORTHOPEDICS: Tim 4G's ultra high-density coils for MSK imaging maximize SNR and anatomic coverage.

Top left: Radiologische Praxisgemeinschaft, Oldenburg, Germany

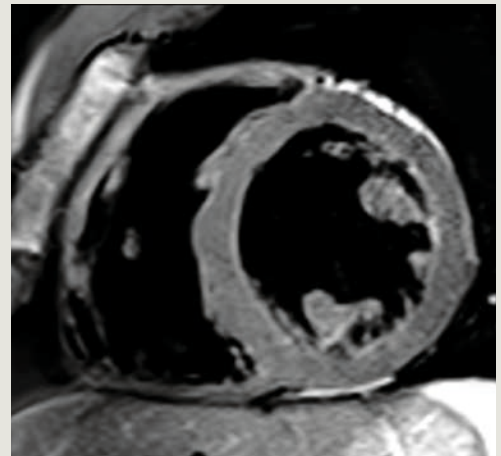
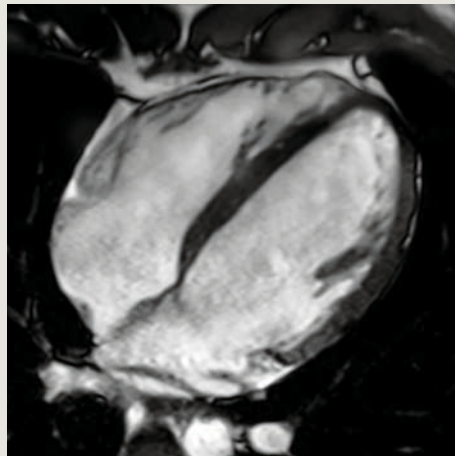
Top right: Rinku General Medical Center, Osaka, Japan

Bottom right: Radiologie Muenchen Harlaching, Munich, Germany

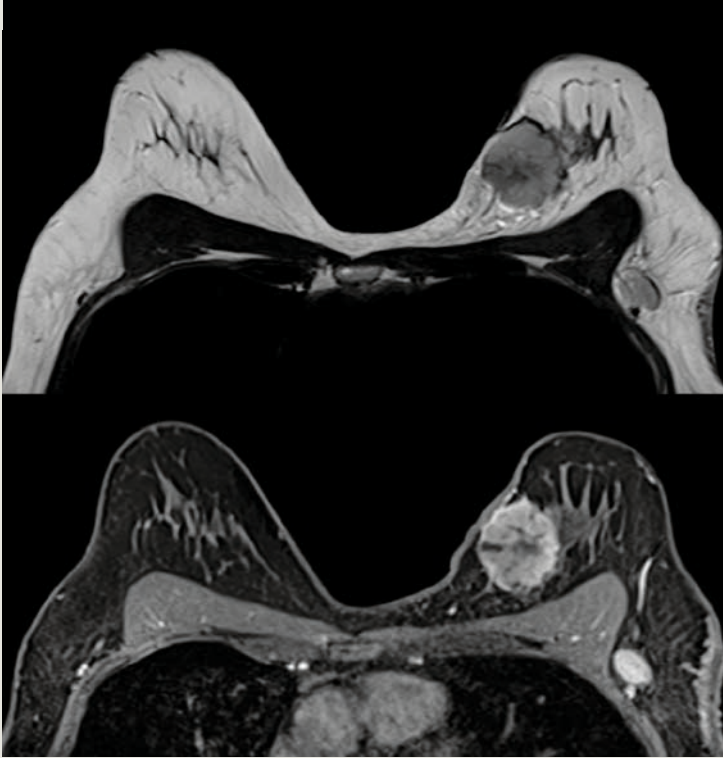


BODY: Tim 4G offers high-channel body imaging thanks to the combination of ultra high-density body and spine coils. Moreover, our trendsetting applications help you expand your service lines in MRI.

Gemeinschaftspraxis für Radiologie und Nuklearmedizin,
Frankfurt/Bad Nauheim, Germany

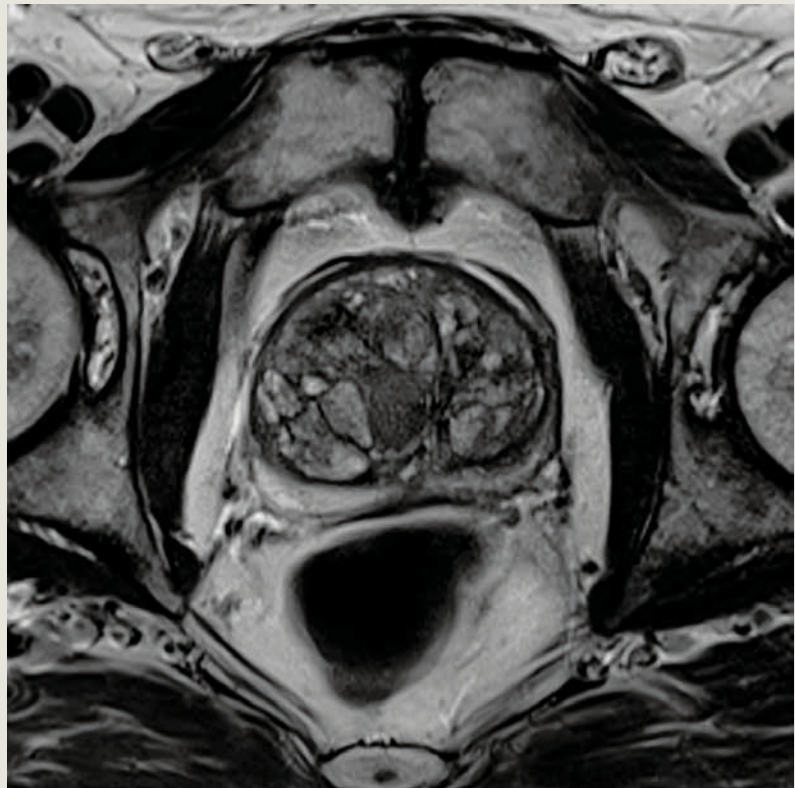


CARDIOLOGY: Cardiac examinations benefit from high SNR and increased parallel imaging factors in any direction to achieve ultra-fast acquisition times, from morphology, function, and perfusion, to viability.



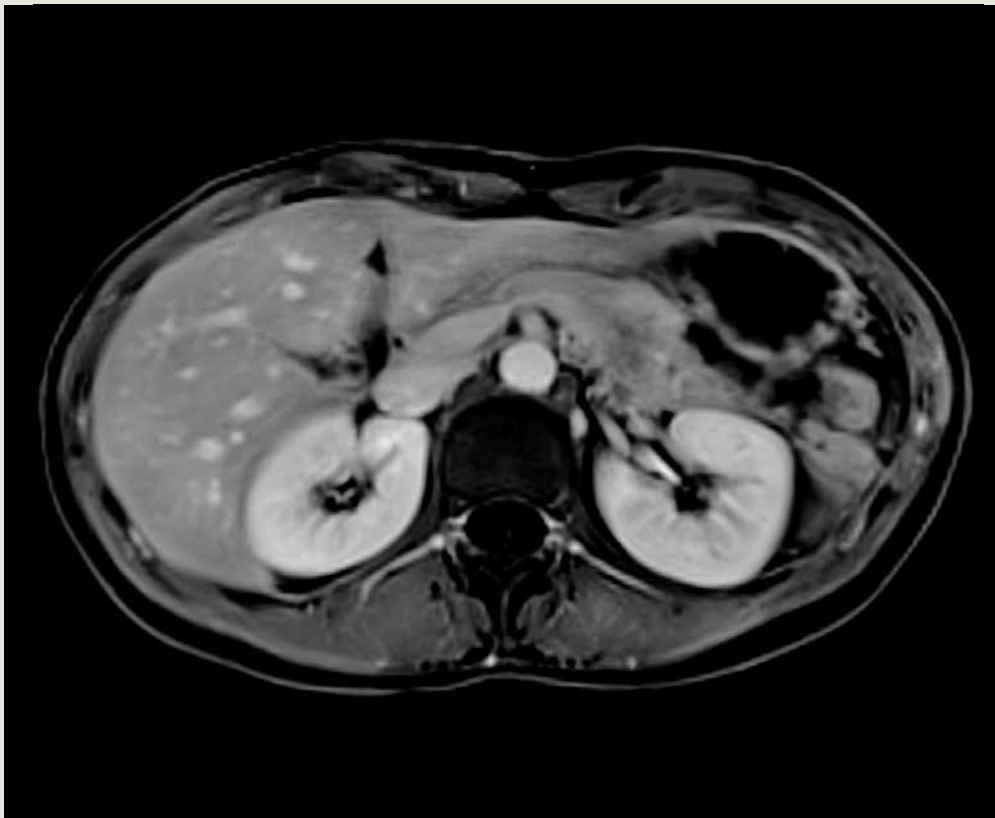
BREAST MRI: From clinical imaging to biopsy guidance, MAGNETOM Spectra and Tim 4G offer a wide selection of breast coils and outstanding image quality.

IRM Paris Nord, Paris, France



PROSTATE MRI: With the high-density spine and body coils alone or in combination with an endorectal coil, Tim 4G delivers excellent flexibility in multiparametric imaging of the prostate in terms of morphology, physiology and function.

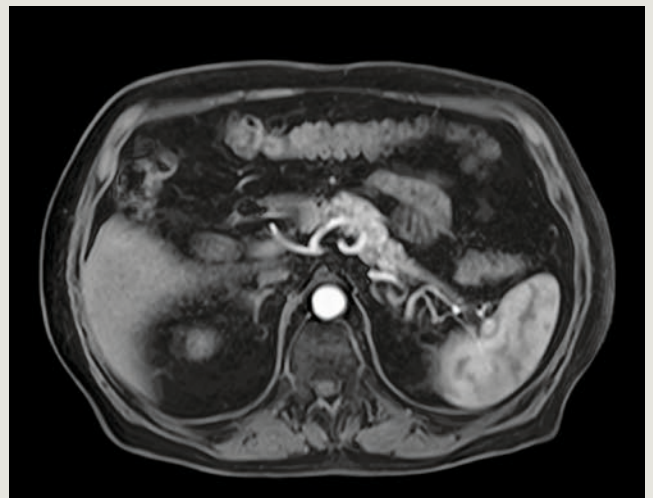
Radiologische Praxisgemeinschaft, Oldenburg, Germany

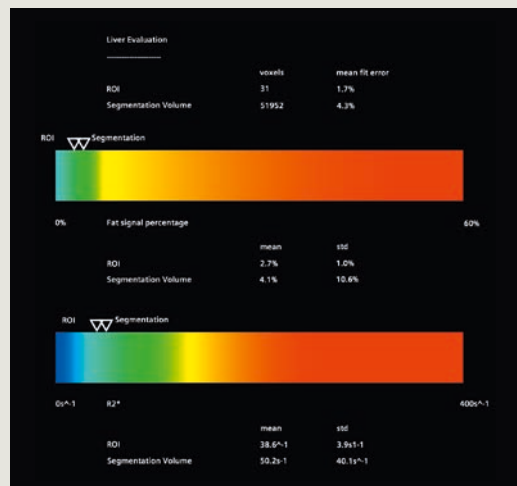
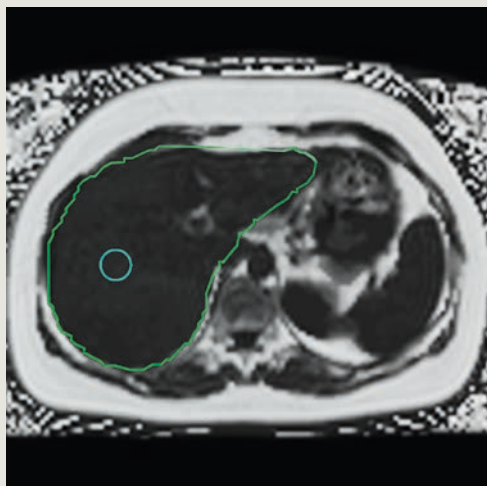


StarVIBE: Enable free-breathing and contrast-enhanced exams for a range of patient groups thanks to StarVIBE's intelligent insensitivity to motion artifacts.

Gemeinschaftspraxis für Radiologie und Nuklearmedizin, Frankfurt/Bad Nauheim, Germany

FREEZEit: Take abdominal imaging to the next level with our motion-embracing technology. MRI exams of the liver have become increasingly difficult due to contrast timing challenges and breathing motion. FREEZEit, which comprises TWIST-VIBE and StarVIBE, makes MRI faster and more robust than ever, overcoming previous limitations and significantly pushing the boundaries of what's possible.





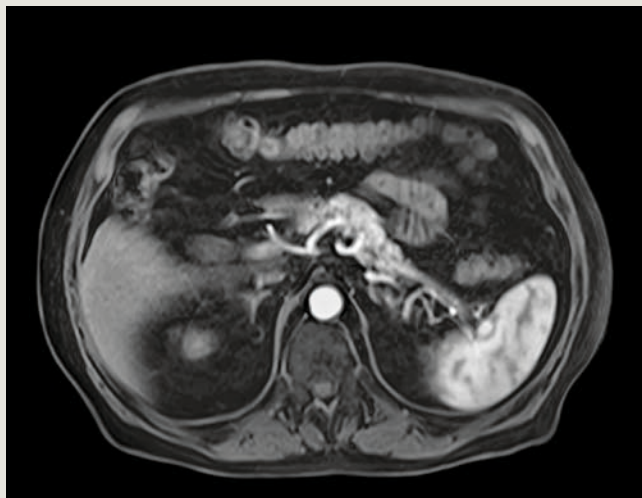
LiverLab: Monitor cases of liver disease as they become increasingly common across the globe. LiverLab supports quantitative, non-invasive liver evaluation.

Gemeinschaftspraxis für Radiologie und Nuklearmedizin, Frankfurt/Bad Nauheim, Germany

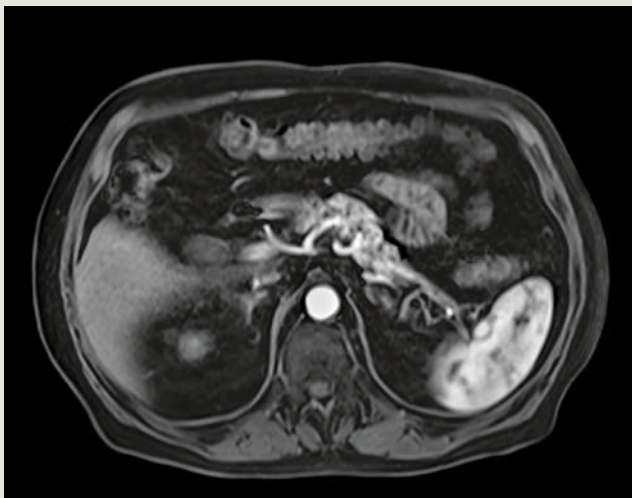
TWIST-VIBE: Benefit from high temporal and high spatial resolution, to always achieve the right contrast in dynamic examinations.

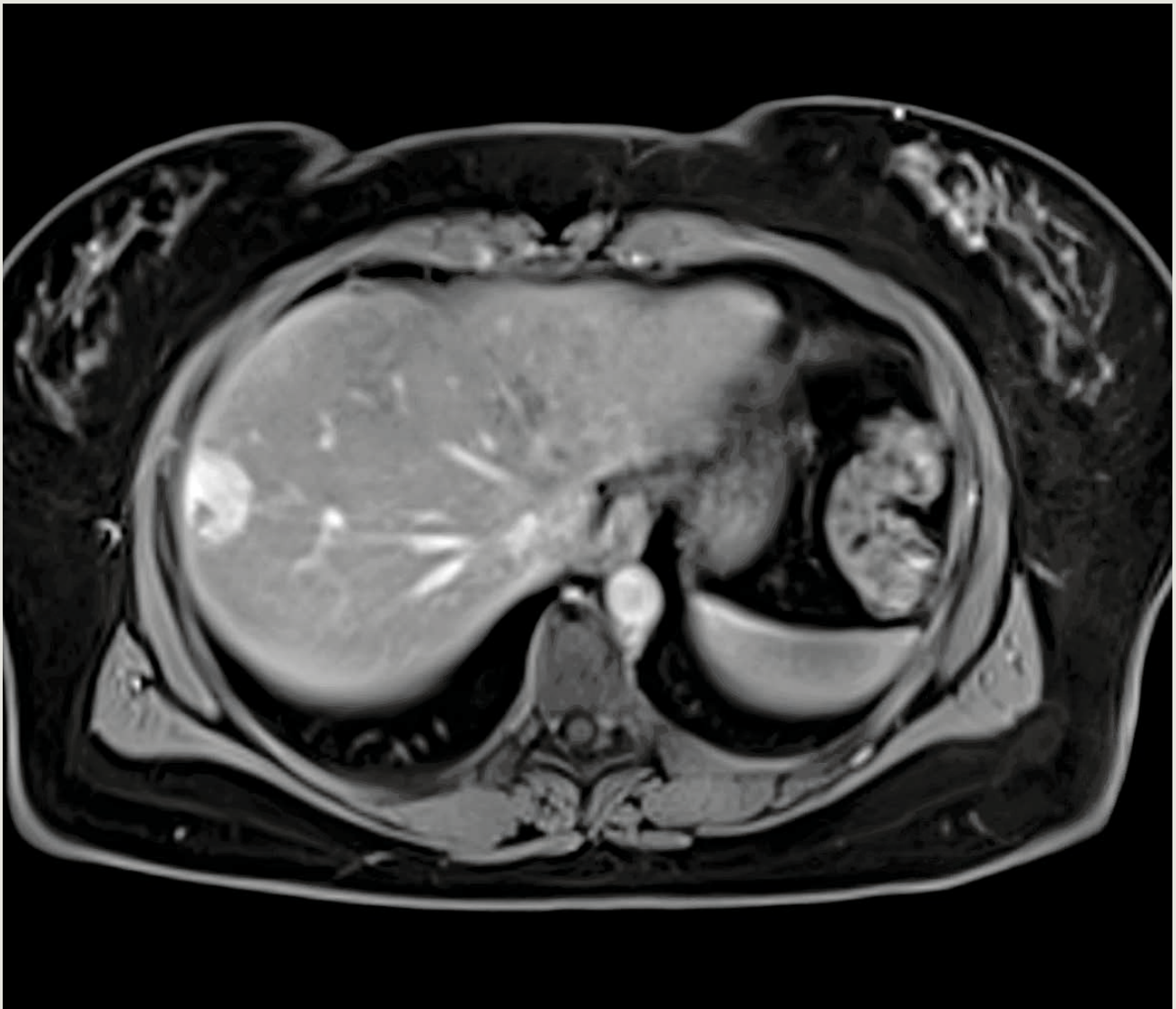
Gemeinschaftspraxis für Radiologie und Nuklearmedizin, Frankfurt/Bad Nauheim, Germany

10 seconds



12 seconds



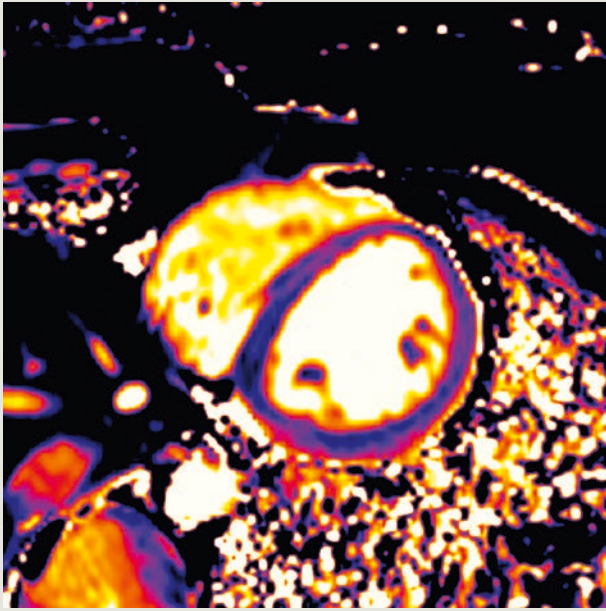


CAIPIRINHA: Address the needs of patients with limited breath-hold capacity by deploying CAIPIRINHA. The application comes standard with MAGNETOM Spectra, and enables ultra-short breath holds. In this example, a scan of 72 slices was performed over a breath hold of 14 seconds.

Gemeinschaftspraxis für Radiologie und Nuklearmedizin, Frankfurt/Bad Nauheim, Germany



QISS: Non-CE peripheral MRI for patients with renal insufficiency. QISS delivers accuracy comparable to contrast-enhanced MRI.



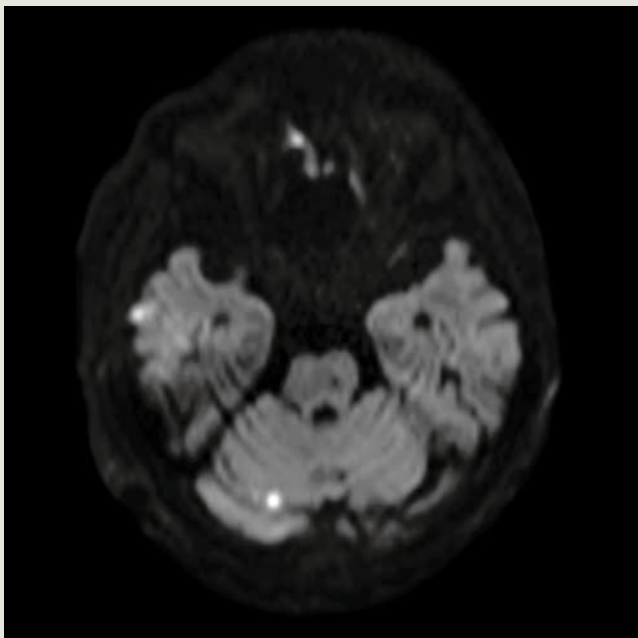
MyoMaps: Benefit from inline myocardial quantification, detect normally missed global, diffuse, myocardial pathologies (T1 Map) and better depict cardiac edema (T2 Map) with MyoMaps, based on Siemens' unique HeartFreeze.

Gemeinschaftspraxis für Radiologie und Nuklearmedizin, Frankfurt/Bad Nauheim, Germany

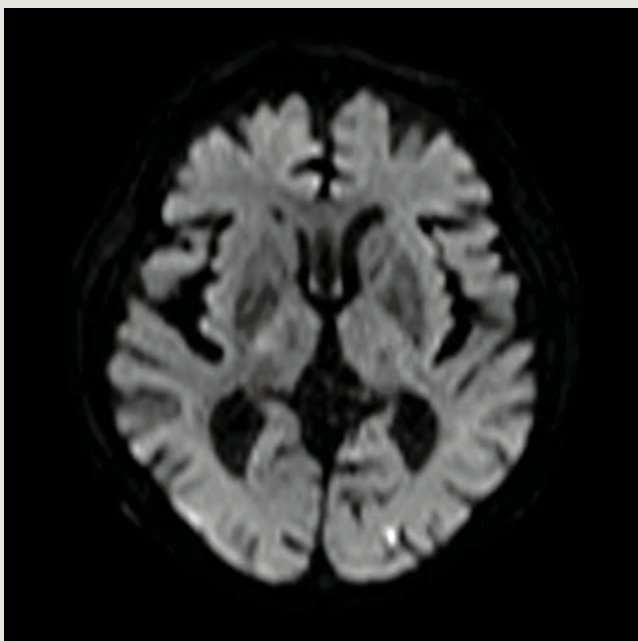
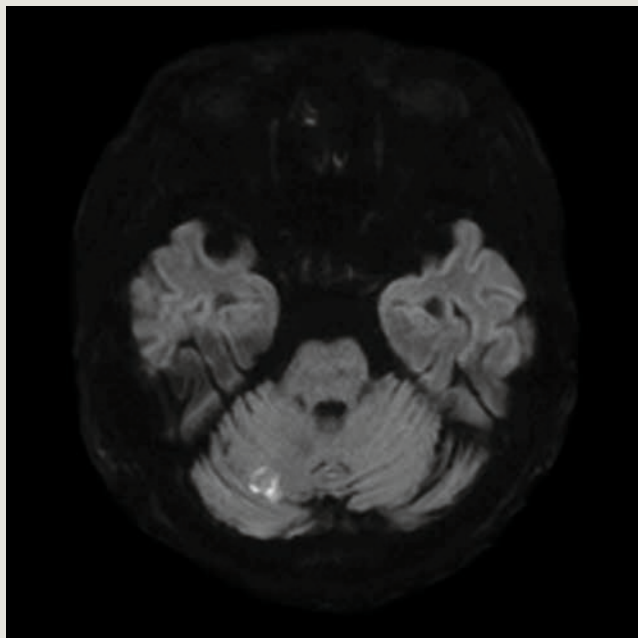
Advanced WARP: Serve a rapidly growing population of patients with artificial joints and implants.⁸ The benefits are substantial: infections can be diagnosed earlier and there is a significant gain in image quality for any MR indication.



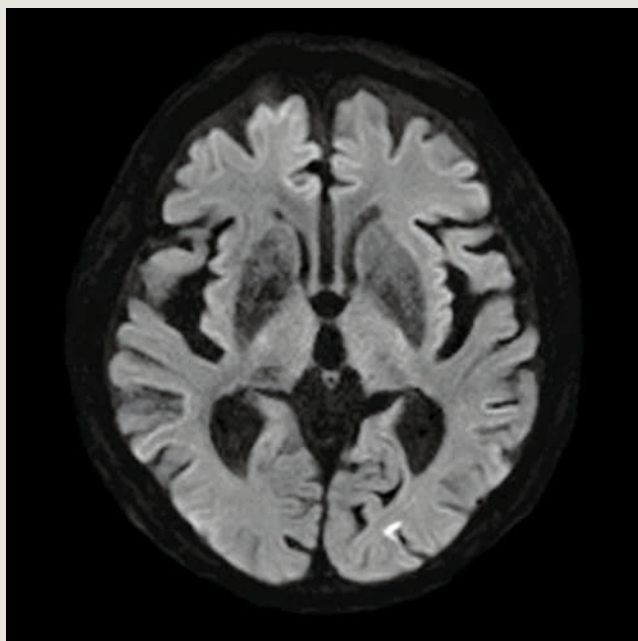
b-value 1000
DWI



b-value 1000
RESOLVE



b-value 1000
DWI



b-value 1000
RESOLVE

RESOLVE: Experience outstanding diagnostic performance with sharp, high-resolution DWI and DTI of the brain and spine.

Rinku General Medical Center, Osaka, Japan



Go for consistent results, efficiently

In the face of diverse patient needs and complex MR software functionality, greater standardization and consistency are vital. MAGNETOM Spectra allows you to tailor and manage protocols in line with your specific needs, improve flexibility and deliver reliably high-quality care. With DotGO,¹⁰ you enjoy a comprehensive overview of processes, intuitive user guidance and smart automation – all integrated into a single user interface. The result is greater efficiency and excellence for each and every scan.

Go for consistent results, efficiently

with DotGO workflow

Less than
1 minute
exam-time variation¹¹

46%
fewer parameter
adjustments^{1,2}



90% of MRI
exams supported
by Dot engines¹²

Flexibility

With one central user interface to configure any protocol and flexibly create your exam strategies, DotGO empowers you to define a higher standard of care and service for more patients and referrers. And it lets you adjust strategies ad hoc to accommodate a multitude of clinical requirements, individual patient needs and changing scenarios.

“The key feature of the new DotGO is the ability to quickly see your entire protocol on one page, as opposed to having to drill down multiple levels to see what your protocols actually are. It gives us a great overview of the protocol. You know exactly what’s in there at any given time just by glancing at it.”³

Anthony Pavone
Chief MRI Technologist
Zwanger-Pesiri Radiology, New York, USA

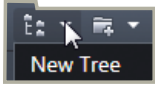
Consistency

DotGO enables you to standardize your MRI operations with a comprehensive guidance system, predefined strategies and Dot engines that create reproducible, high-quality outcomes every time. This significantly reduces the need for rescans and allows any technician to perform any exam with consistent results – even for complex cardiac imaging.

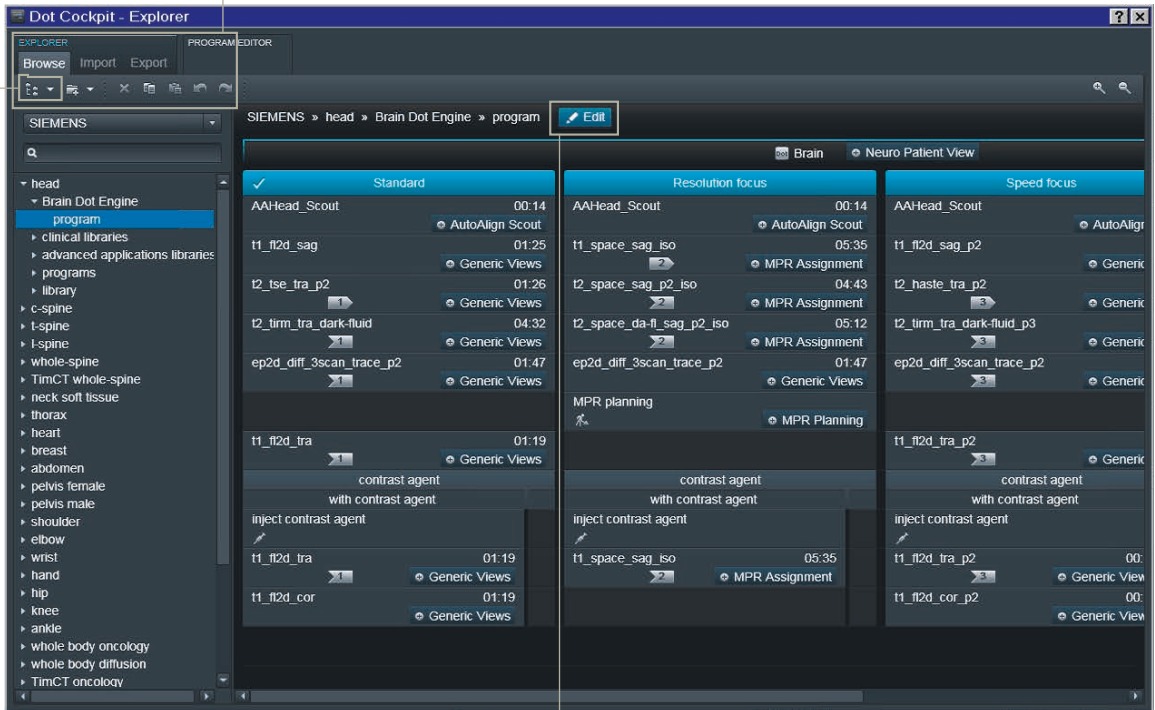
Efficiency

Thanks to DotGO’s automated functionalities, MAGNETOM Spectra dramatically improves the efficiency of your MRI workflow. Automatic slice positioning, voice commands, and organ labeling reduce the level of interaction required from technicians, freeing them up for other important tasks. Additionally, they standardize exams and lower costs.

Explorer and Editor in one interface
Easy navigation and shortcuts

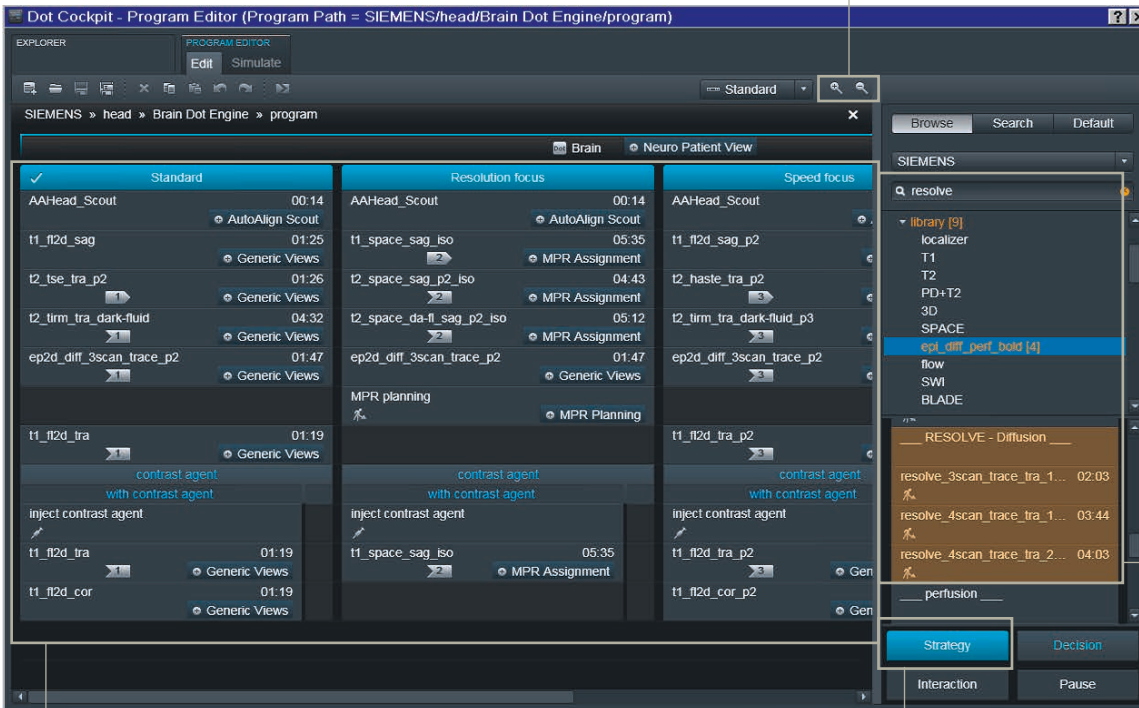


Multiple User Trees



Edit protocols instantly

Zoom in and out to conveniently display protocols



Dynamic context search, highlighting results

Build as many strategies as you need

Create a strategy with one click (drag & drop)



Brain Dot engine

More efficient and reproducible brain exams.



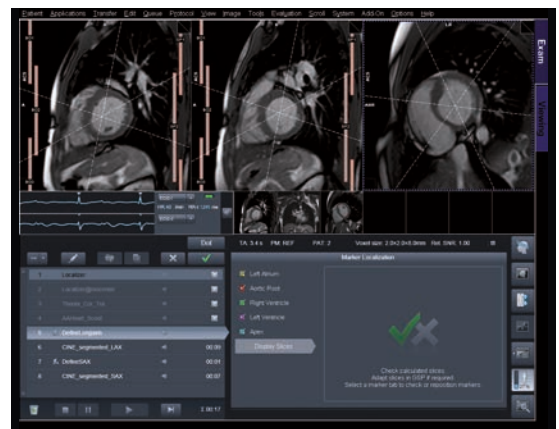
Spine Dot engine

Optimized spine imaging for a wide range of patients and conditions.



Breast Dot engine

Increased certainty in breast imaging.



Cardiac Dot engine

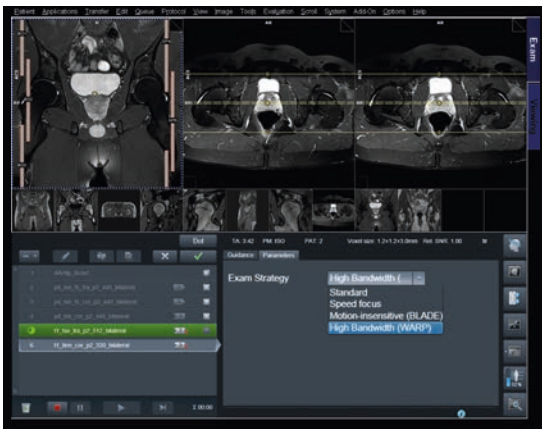
Up to 50%¹³ increase in patient throughput.

“Dot engines really enhance our throughput in day-to-day scanning, but also improve quality reproducibility. Dot helps technicians and radiologists produce excellent images.”³

Anthony Pavone
Chief MRI Technologist
Zwanger-Pesiri Radiology, New York, USA

“The number of failed examinations has been drastically reduced by the Dot engines, and the angiographies have become better. Everything is simply much more standardized now.”³

Prof. Thomas Vogl
Medical Director of the Institute for
Diagnostic and Interventional Radiology of
the University Hospital Frankfurt, Germany
Spokesperson of the Frankfurt Klinikallianz



Large Joint Dot engine

Increased consistency for all large joints – hip, shoulder, and knee.



Abdomen Dot engine

Optimized bolus timing for dynamic liver examinations.



Angio Dot engine

Optimally timed contrast images with interactive bolus timing.



Increase patient comfort

Healthcare users today have greater choice. Consequently, ensuring a positive patient experience plays a central role in securing revenue.

MAGNETOM Spectra gives you a competitive edge by enhancing patient comfort. Expand your services to anxious patients, and those requiring specialized care – such as children⁹ and the elderly – with a variety of applications. Reduce sound pressure during exams by up to 97%,⁵ and enable free-breathing and short set-up times for optimal results.

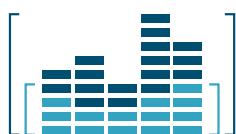
Increase patient comfort

with Life Design and Quiet Suite

Up to **97%**
reduction in sound
pressure with Quiet Suite⁵

173 cm
ultra-short
magnet

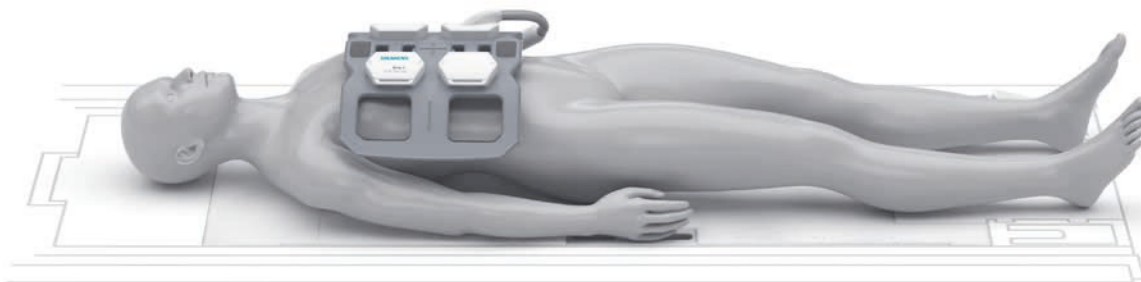
Award-winning
design in pure white



**DirectConnect and
SlideConnect for faster
and easier patient set-up**

Enhanced patient comfort

A key element of Siemens MRI Life Design is putting the patient first. The shortest magnets in the industry enable more exams to be performed with the head outside the bore. These and other leading-edge features increase satisfaction and allow you to serve more patient groups.



SlideConnect: Position coils simply, swiftly, and reliably – accelerating patient set-up.

“Quiet Suite sequences are less loud and, even more importantly, have significantly less vibration, making the examination more comfortable for the patients. This ‘soft scanning’ comes at no compromise to image quality or scan time, an important factor for our busy practice.”³

Dr. Johan Dehem, Chief Radiologist,
Jan Yperman Ziekenhuis, Leper, Belgium

Increased workflow efficiency

Life Design helps make your MRI operations more efficient and economical. And the central *syngo* user interface offers a consistent look and feel at every scanner, helping staff perform tasks faster and enhance their productivity.

Improved scanning experience

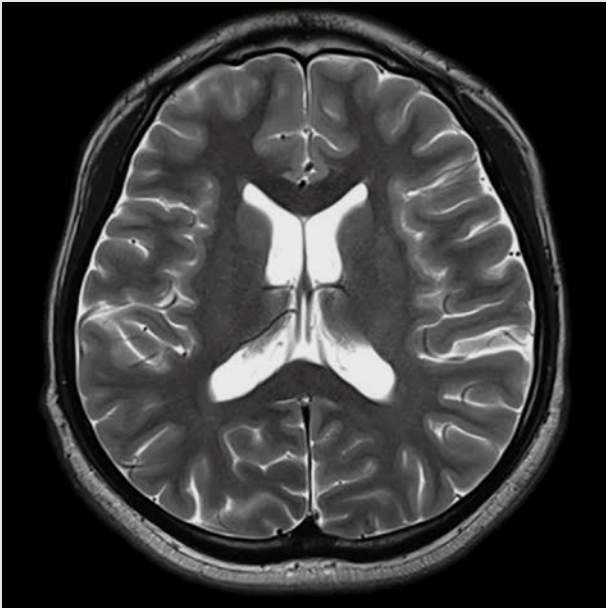
Diverse patient populations have diverse requirements. MAGNETOM Spectra incorporates Quite Suite and an ultra-short magnet to help address the needs of particularly anxious patient groups, or those that otherwise require special care. All in all, it helps provide a better scanning experience.



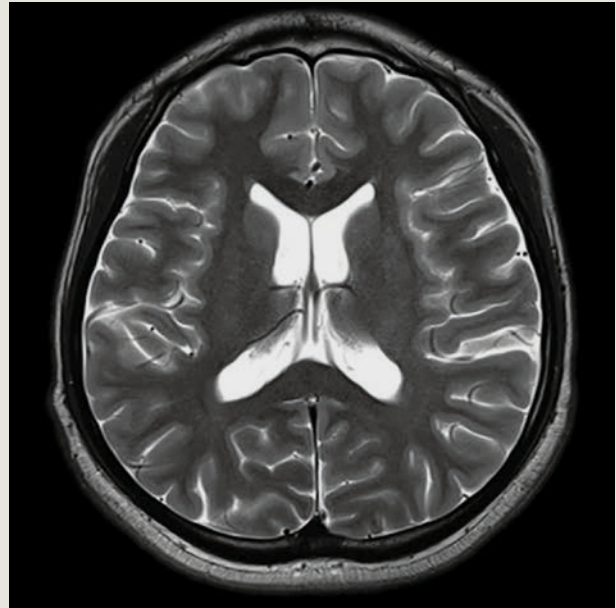
Quiet Suite: Conduct complete, quiet exams for neurology and orthopedics, with up to 97% reduction in sound pressure.⁵ Quiet Suite minimizes the need for sedation of certain groups of patients such as children⁹ and the elderly – without compromising image quality. Because imaging is to be seen, not heard.



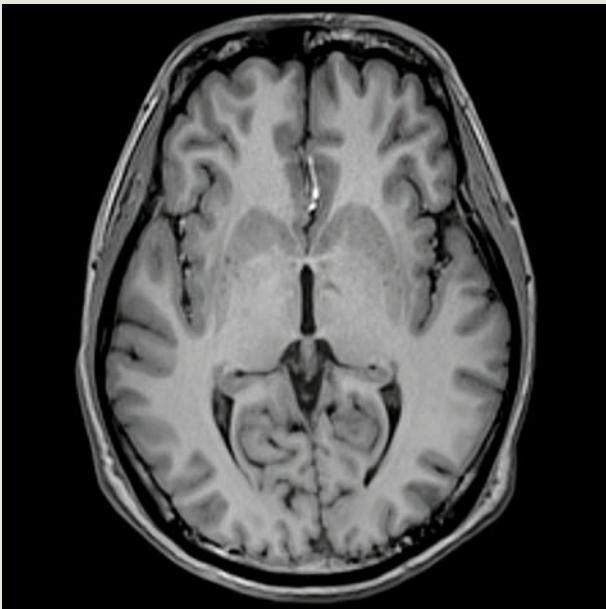
Tim coil technology: Tim 4G technology accelerates set-up and provides a high level of patient comfort.



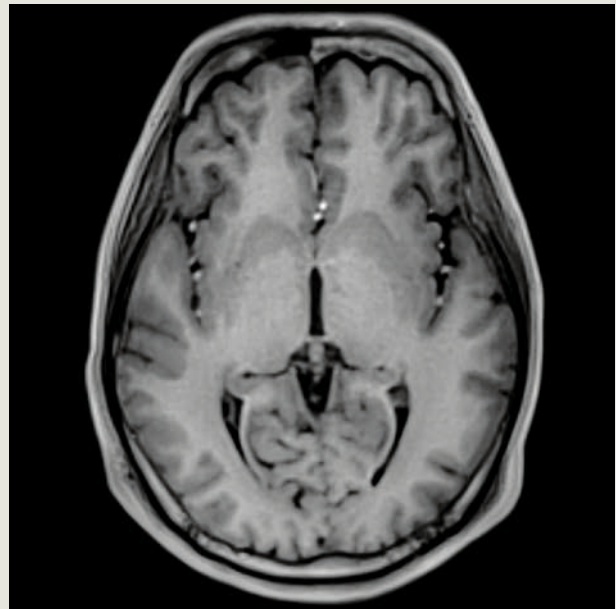
Conventional
T2 TSE
Matrix 512
TA 2:08 min
dB(A) 90



QuietX
T2 TSE
Matrix 512
TA 2:12 min
dB(A) 79



MPRAGE
Matrix 256
TA 4:21 min
dB(A) 96.3



PETRA
Matrix 320
TA 4:25 min
dB(A) 66.8

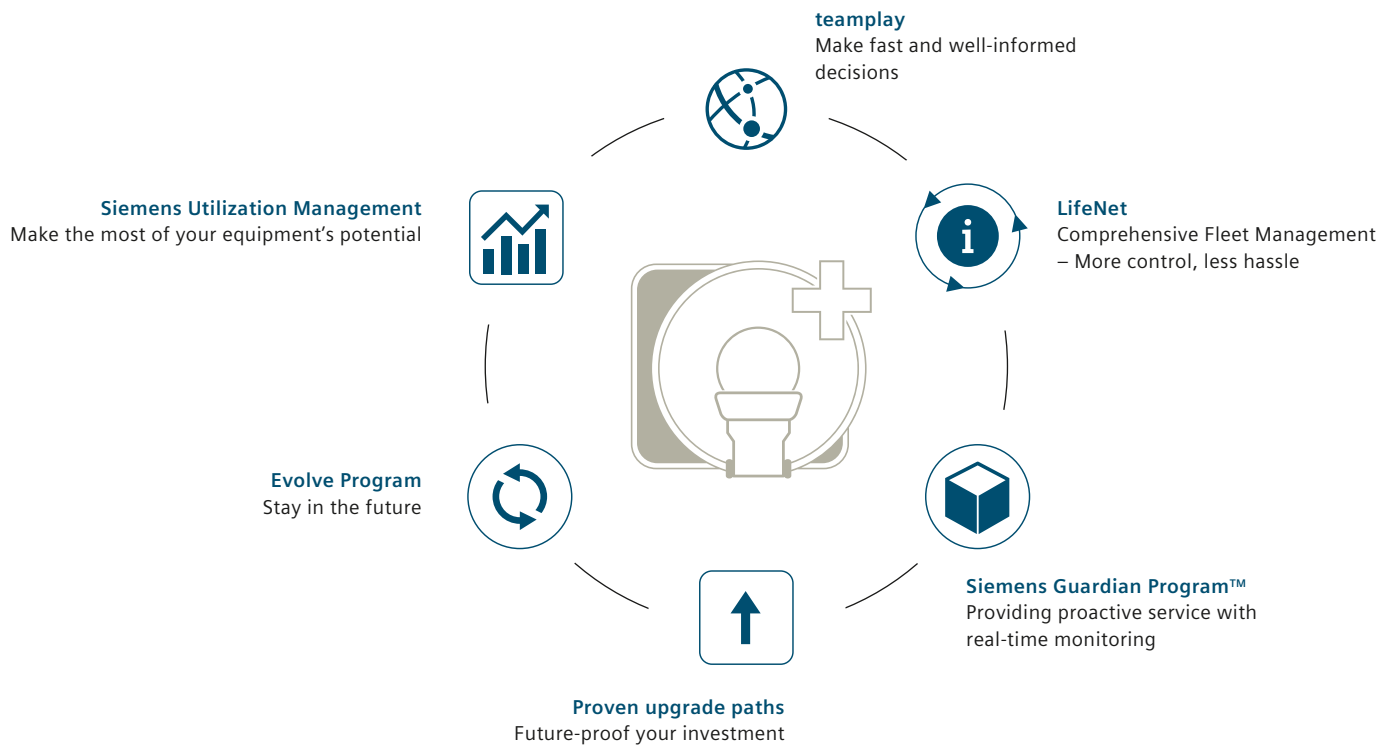


Service and exchange

Siemens' service offerings ensure that you stay at the leading edge of 3T technology throughout the entire MRI lifecycle – from installation, to operation, to upgrades, to ongoing support. Moreover, our globally active communication platforms and communities – such as MAGNETOM World – keep you up to speed on the world of MRI and enable you to share your ideas and experiences with your peers.

Service and exchange

Comprehensive services



Siemens Utilization Management

Make the most of your MRI scanner and achieve maximum transparency. Siemens Utilization Management allows you to monitor KPIs and benchmark your system against other Siemens MRI machines at any facility or organization under a comparable contract. So you can keep track of your MRI performance, and reap the maximum reward from your scanner.

Siemens Guardian Program™

By continuously monitoring systems for possible deviations from current norms, the Siemens Guardian Program helps maximize system availability, makes it easy to detect and resolve system errors, prevents downtime, and avoids the rescheduling that disrupts patient care.



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 to help customers truly maximize their system life – and in turn, to increase their return on investment.

LifeNet

More control and less hassle with a personalized control center safeguarding your fleet's productivity. This web-based portal bundles all service-related activities, documents, and reports in one comprehensive online resource available 24/7, whenever it is needed. LifeNet is provided at no charge to all Siemens Healthcare customers.

Evolve Program

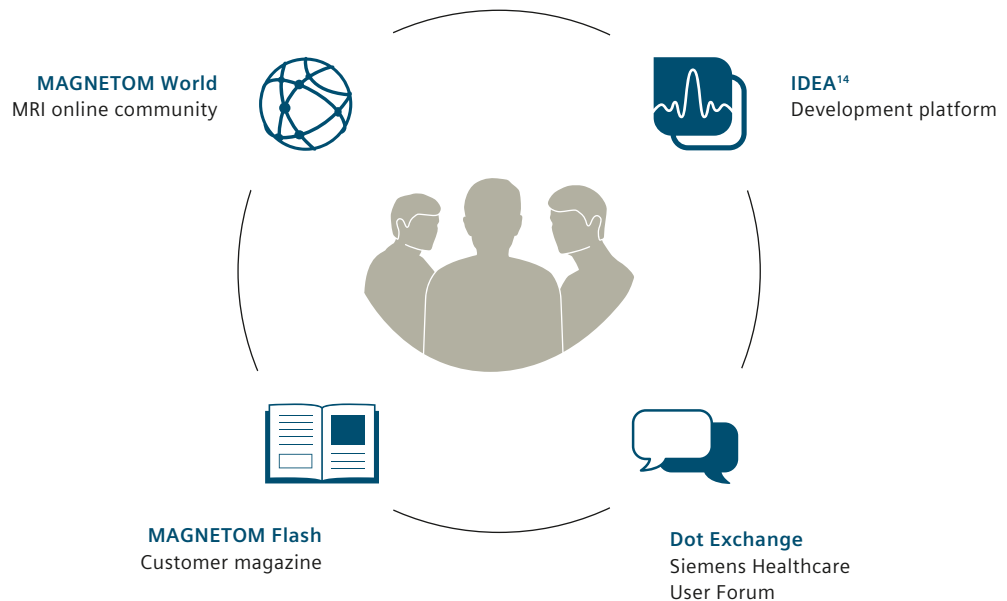
An investment protection program to enable you to cost-effectively keep your imaging system technology current, and extend the life of your equipment. Ensure your imaging system uses the latest software versions, and cutting-edge applications – for more accurate diagnostics and greater speed.

teampay

teampay grants instant¹⁵ access to statistics from your imaging device fleet. Its multi-vendor support empowers you to identify improvement potential on all levels of execution. teampay provides an easy-to-grasp overview of an institution's imaging workflow for enhancing efficiency, competitiveness and quality of care in one intuitive Plug & Play solution.

Service and exchange

Peer-to-peer information



MAGNETOM World

Siemens' 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

MAGNETOM Flash is the MR customer magazine. Published quarterly, it features up-to-date clinical case studies, application tips, as well as 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.¹⁵



Visit
MAGNETOM
World

www.siemens.com/magnetom-world

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."³

Mark Lourensz, St Vincent's Hospital
Fitzroy, Victoria, Australia

Dot Exchange

Part of the Siemens Healthcare User Forum, Dot Exchange connects Dot users, enabling them to share their clinical experience of working with the system. By registering on www.siemens.com/dot-exchange, you can upload and discuss protocol files and engage in dialog with peers. Plus, you can access a host of interesting features and articles, making sure you are the first to hear about the latest developments in MRI.

IDEA

IDEA¹⁴ is an open development platform supporting the largest and most active MR research community in the world. It brings users from across the globe together and fosters innovation in the field of MRI. Members collaborate online at www.mr-idea.com.



MAGNETOM Spectra Technical specifications

| | |
|--|--|
| Field strength | 3 Tesla |
| Bore size | 60 cm |
| System length ¹⁶ | 173 cm |
| System weight (in operation) ¹⁶ | 5.5 tons |
| Minimum room size ¹⁶ | 31 m ² / 334 ft ² |
| RF | Tim [96 x 24] [120 x 24] with Tim Whole Body Suite |
| Gradient strength | 33 mT/m @ 125 T/m/s |
| Helium consumption | Zero Helium boil-off technology |



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