SIEMENS

siemens.com/amira

MAGNETOM Amira

Uncover what lies behind Siemens’ leading MRI technology.

MAGNETOM Amira[1]
The clever spin on 1.5 T

Tim Technology

Deliver exceptional image quality and speed in MRI

DotGO Workflow

Go for consistent results, efficiently

Trendsetting Applications

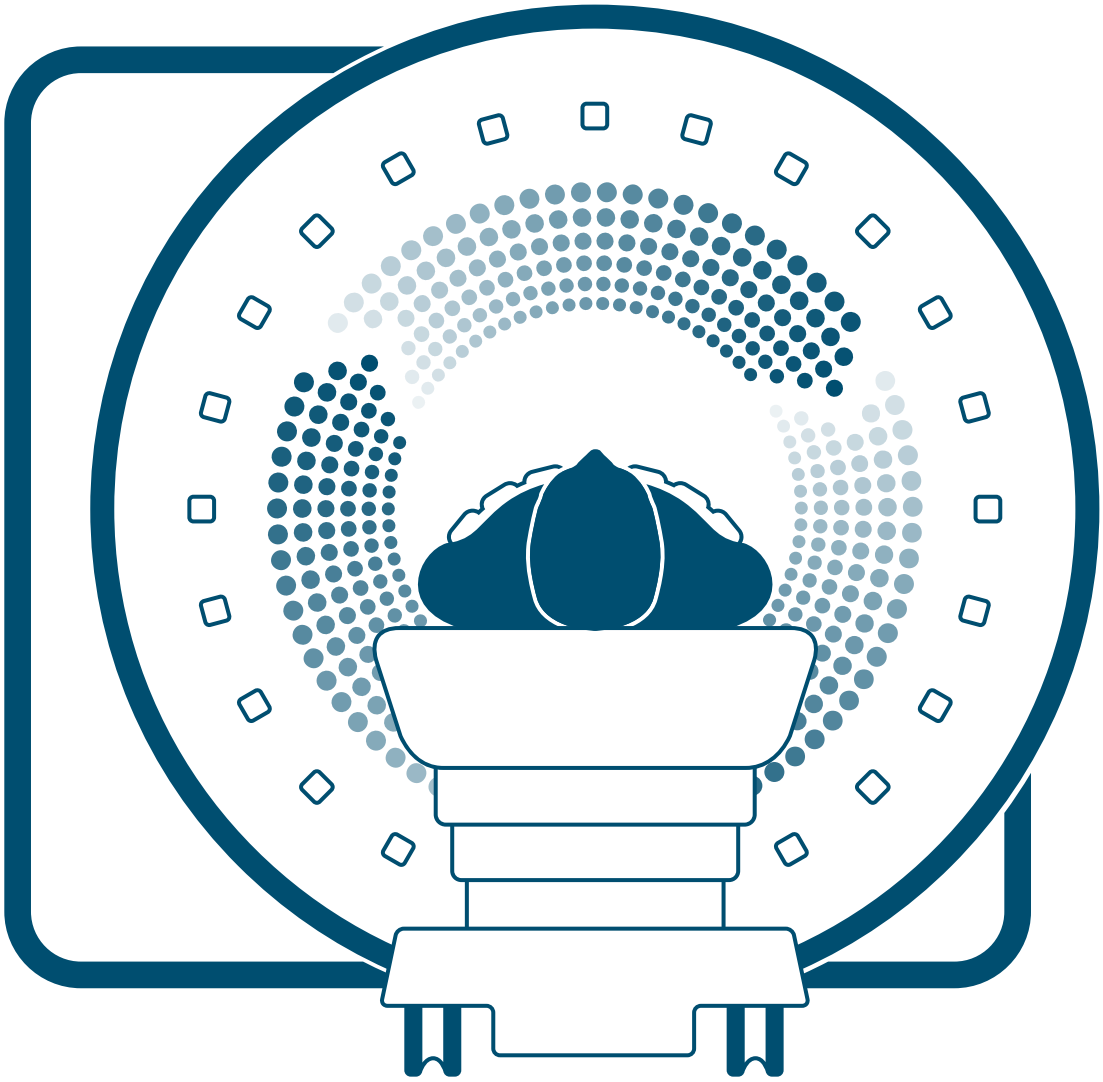
Expand your MRI services

Life Design

Maximize patient friendliness and investment protection

The DNA of Siemens MRI

An intensifying demographic shift, the rise of chronic diseases, patients turning into consumers, the pace of innovation, and a broader access to medical imaging across the globe lead to a constantly growing number of examinations, including MRI. At the same time this development raises central questions for you as healthcare- and us as



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 MR 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 Amira
The clever spin on 1.5 T

Providers and stakeholders around the world are working to increase the efficiency of healthcare systems. The aim: to achieve better outcomes for patients. MAGNETOM Amira provides answers to these modern-day challenges. Based on the very latest Siemens technology, this MRI scanner is specifically designed to enhance clinical capabilities. It helps extend care to a greater number of patients, improve the patient experience and boost process efficiency – at a lower cost per scan.

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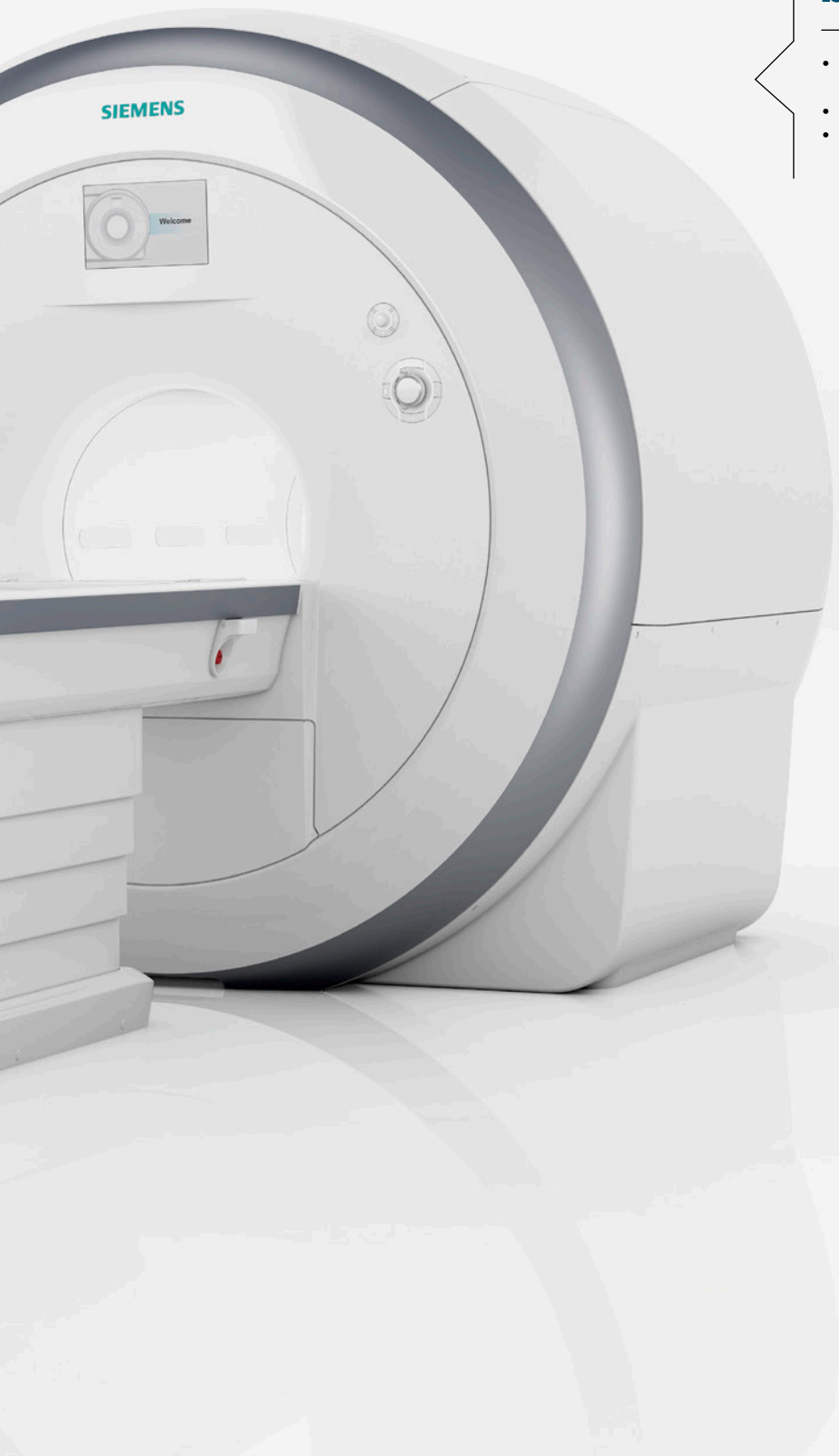
MAGNETOM Amira
The clever spin on 1.5 T

Up to 97% reduction in sound pressure[2] with Quiet Suite

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

The right timing and motion insensitive techniques for liver exams with FREEZEit

- Robust imaging even in difficult cases with Tim 4G and higher signal-to-noise ratio
- Free-breathing, contrast-enhanced body imaging
- Always the right contrast in dynamic liver examinations



10-min exams

with best-practice-based protocols

- Faster scanning for the body regions that represent up to 75%[3] of cases
- Defined examination strategies
- Easy and fast patient handling with Tim 4G and optimized scanner control

30%

energy savings in standby mode with Eco-Power

- Low installation footprint and low overall energy consumption
- Zero helium boil-off technology
- Flexible service offering in line with patient load

Increase patient comfort with Quiet Suite

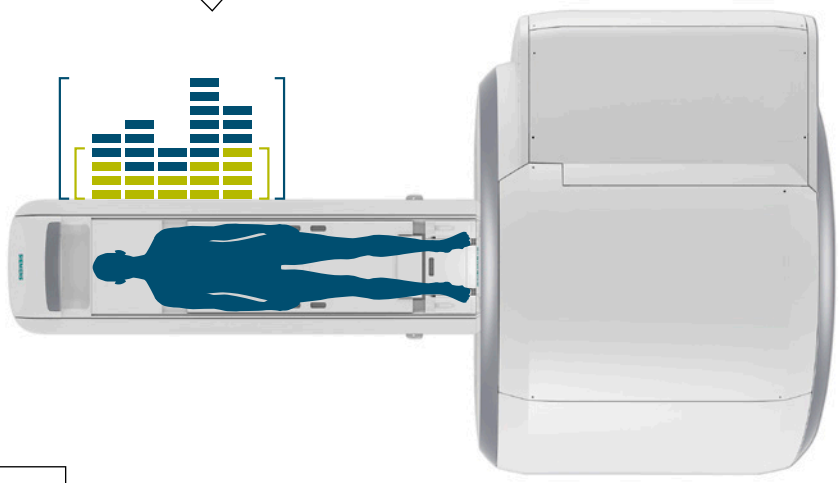
Staying competitive in a changing healthcare environment proves challenging. Today's patients have more freedom of choice and their satisfaction plays an ever-greater role in securing business. MAGNETOM Amira helps you differentiate your services and become more competitive – for example, by increasing patient comfort while reducing sound pressure in MRI exams by up to 97%[2].

Increase patient comfort

and become more competitive

Up to 97% reduction in sound pressure[2] with Quiet Suite

Contrast-free angiography exams with QISS



Non-invasive prostate exams with Body 13

Enhanced patient experience with Life Design

Quiet MRI scans
Conduct complete, quiet neurological and orthopedic exams with up to 97% reduction in sound pressure[2]. Quiet Suite minimizes the need for sedation of certain patient groups, including children and the elderly – and all with no compromises on image quality.

Non-invasive prostate exams
Perform prostate exams without the need for endorectal coils. MAGNETOM Amira's Body 13 supports multi-parametric imaging and provides excellent image quality. This new coil offers a highly homogenous signal-to-noise ratio (SNR) for prostate examinations.

"The realization of quiet MRI is truly exciting. It will improve clinical care for many pediatric, dementia and psychiatric patients, while providing a more comfortable experience for all patients. For the many patients scanned at our hospital, T1-weighted PETRA provided the same diagnostic information as MPRAGE. PETRA even provided diagnostic advantages in some cases; for example, paranasal sinuses could be imaged without susceptibility-related distortion."[4]

Dr. Masahiro Ida,Tokyo Metropolitan Ebara Hospital, Tokyo, Japan

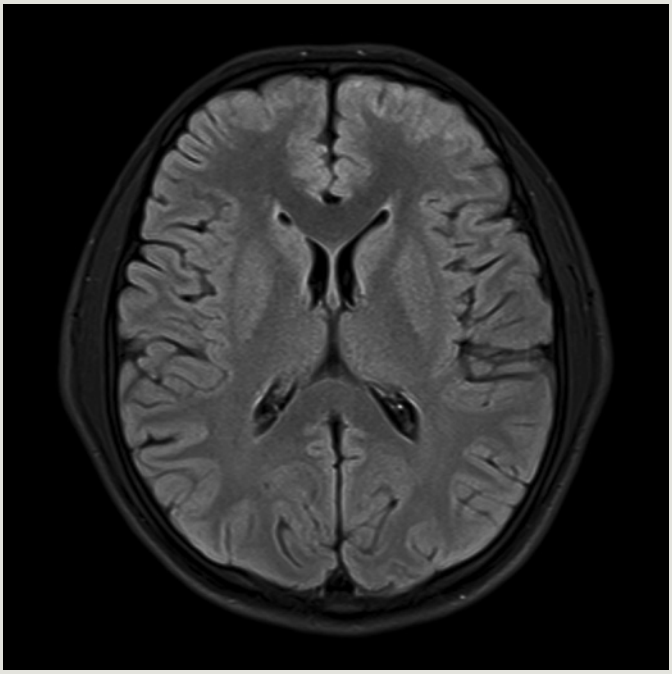
Contrast-free angiography

Offer contrast-free angiography exams with comparable quality to contrast-enhanced scans. Quiescent-interval-single-shot (QISS) enables high-quality imaging, especially for patients with severe renal insufficiency, enabling you to address more patient groups and improve the MRI experience.

Enhanced patient experience

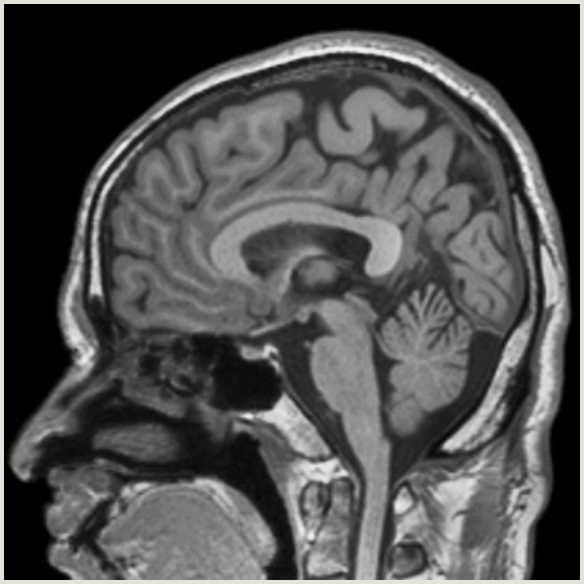
Benefit from Siemens' unique Life Design features. Maximize satisfaction and cooperation by providing a patient-friendly exam – thanks to a short magnet, lightweight, flexible coils, in-bore illumination, and air flow control.

Quiet Suite: Quiet Suite contains optimized protocols for complete neurological and orthopedic exams, QuietX for TSE, SE, and GRE sequences, plus the almost inaudible PETRA sequence.

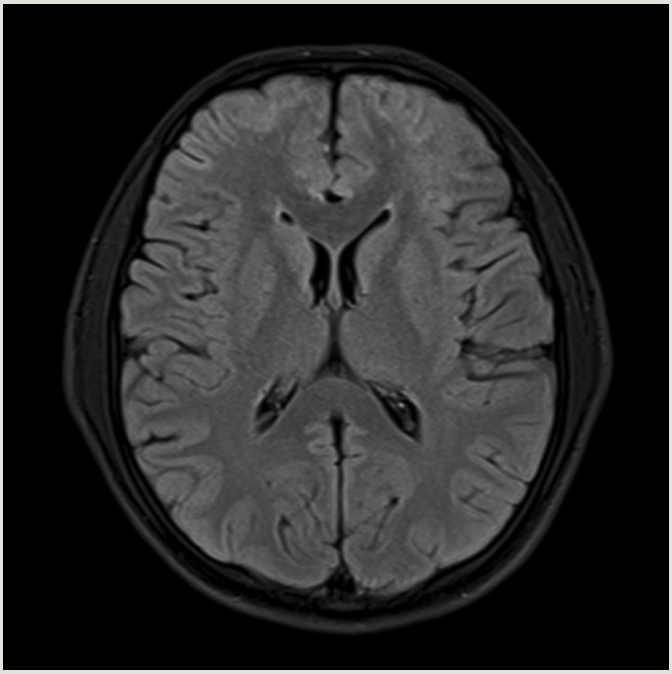


Conventional
DarkFluid
3:54 min
92.5 dBA

MPRAGE
4:46 min
102 dBA



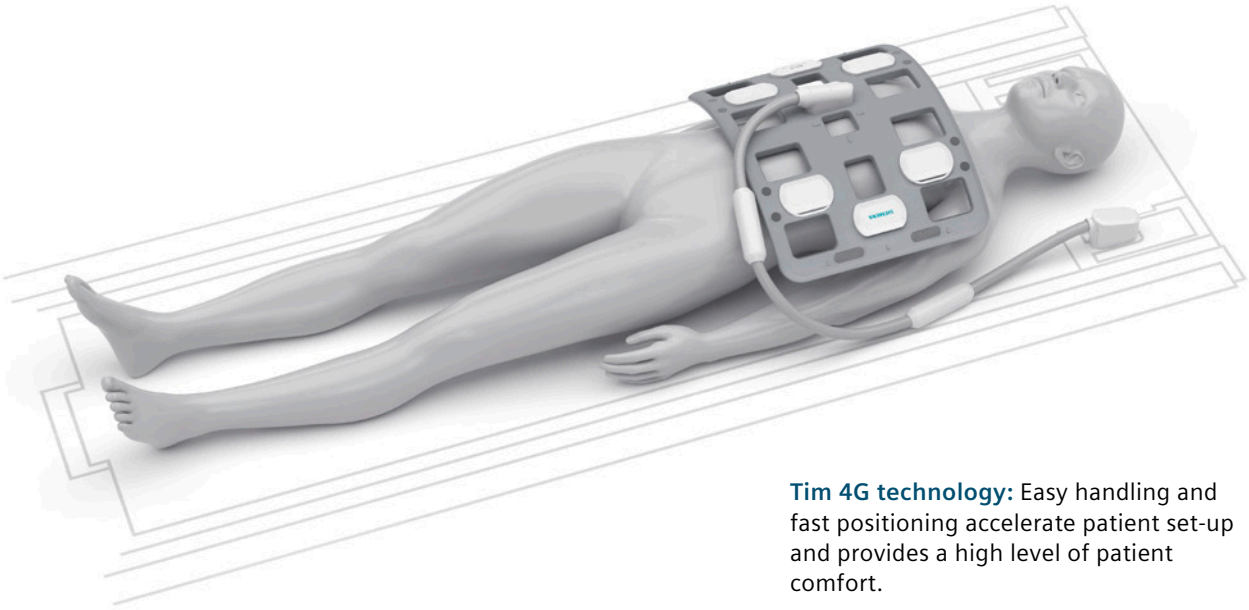
PETRA
5:44 min
69 dBA



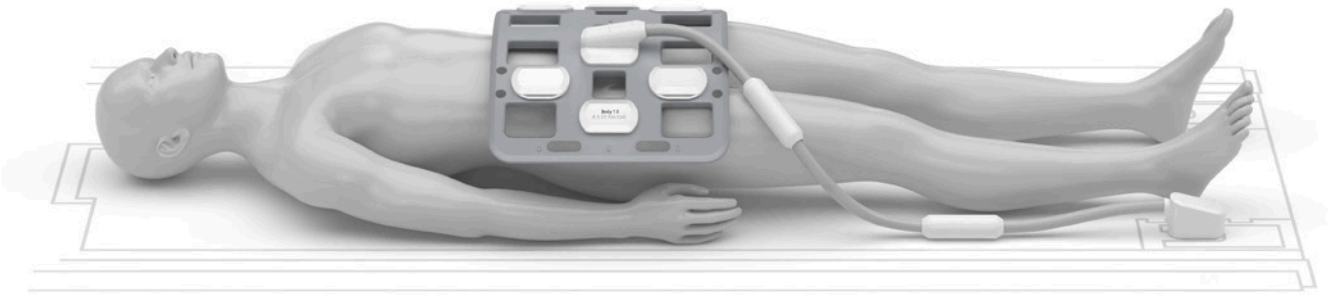
QuietX
DarkFluid
3:54 min
82.9 dBA

Quiet Suite, hear it yourself.

siemens.com/quiet-suite



Tim 4G technology: Easy handling and fast positioning accelerate patient set-up and provides a high level of patient comfort.



Body 13: With MAGNETOM Amira's new Body 13, you can perform prostate exams without the need for an endorectal coil.

Appealing system design: Benefit from our system design with short magnet, air flow and illumination control. MAGNETOM Amira is provided with a newly designed ergonomic patient table.


RADIOLOGIE
Cafeteria | Herzambulanz

Gain diagnostic value with FREEZEit

Healthcare facilities around the world are looking to extend their clinical capabilities, improving diagnostic results for patients. With the latest syngo software, high-density Tim 4G coils and enhanced SNR, MAGNETOM Amira lets you get more from MRI – for example, by extending your services to more patient groups thanks to free-breathing exams.

Gain diagnostic value

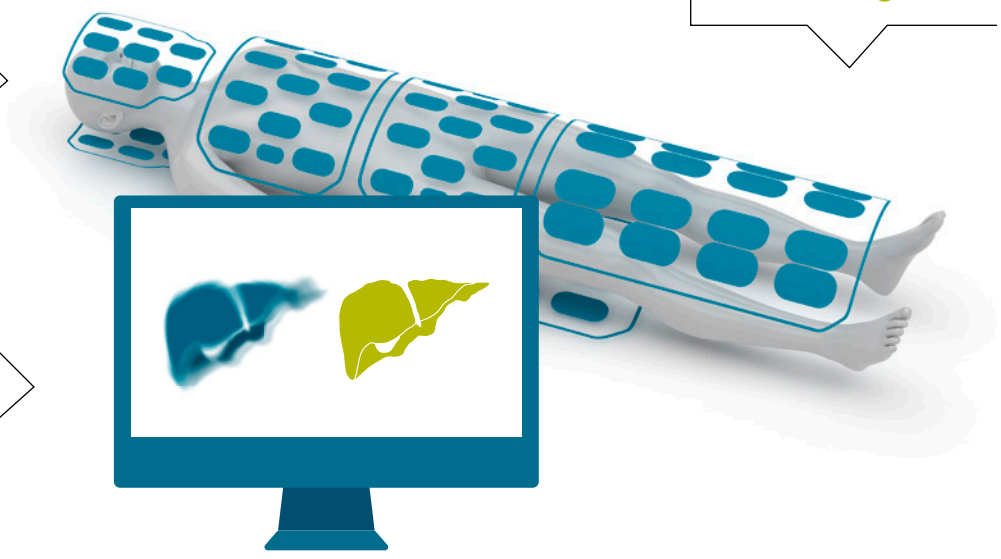
and expand your clinical capabilities

A broader portfolio of MRI services with *syngo*.MR E11 and *syngo*.via

Superior image quality with Tim 4G's high SNR

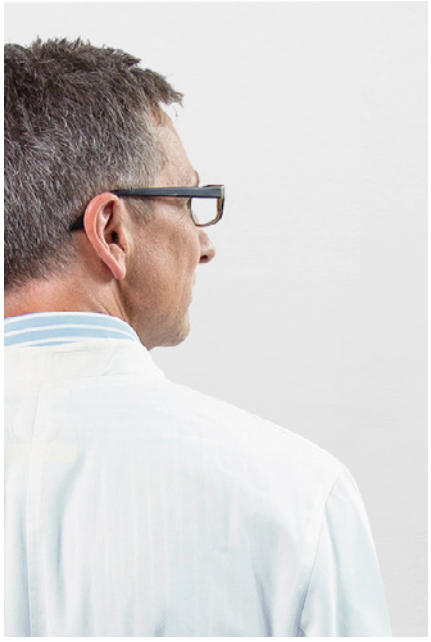
The right timing and motion insensitive techniques for liver exams with FREEZEit

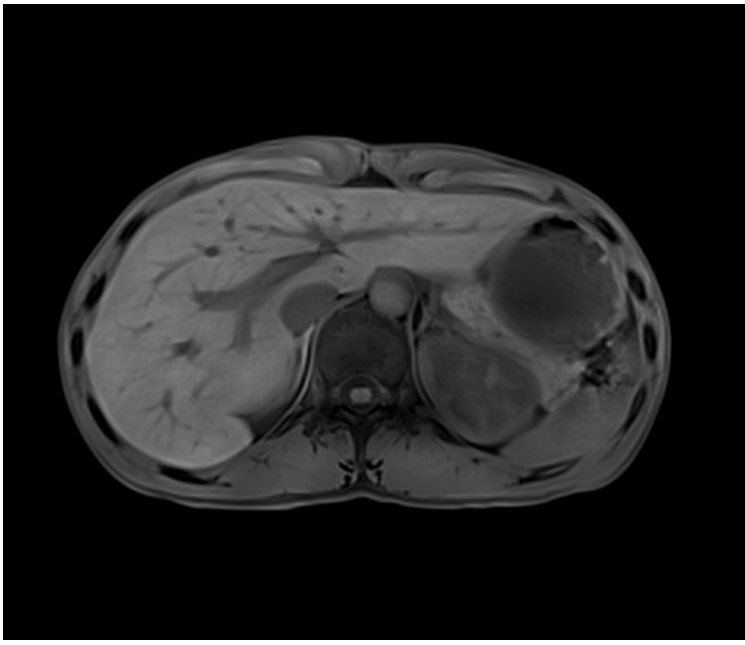
Quantitative imaging and reporting with MyoMaps and *syngo*.MR OncoCare



Greater diagnostic value
Benefit from the very latest Siemens technologies. FREEZEit, CAIPIRINHA and other Trendsetting Applications allow you to overcome motion, and provide care to patients previously excluded from MR examinations.

High image quality
Take advantage of high-density Tim 4G coils and high signal-to-noise ratio. As a result, you gain superior image quality and can accelerate scanning, achieving excellent results even in difficult cases.





"New indications in MRI are extremely important, because they open up new opportunities for patients."[4]

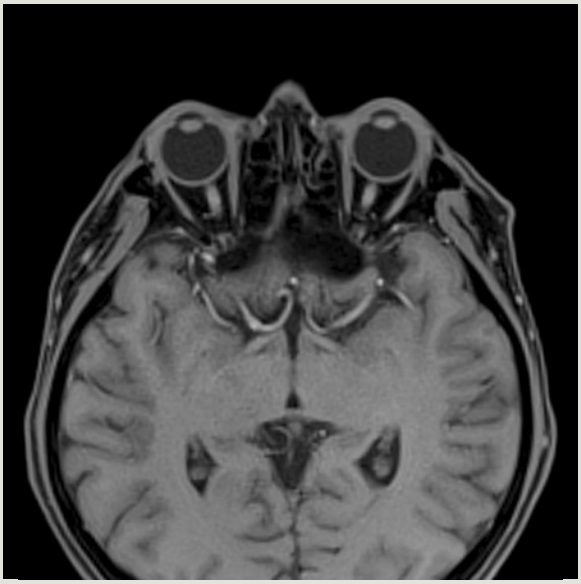
Prof. Rolf Janka, Director MRI and CT,
UK Erlangen, Erlangen, Germany.

More precise monitoring

Provide quantitative imaging and reporting and improve patient outcomes thanks to ongoing monitoring. *syngo*.MR OncoCare helps healthcare professionals chart the development of lesions, helping determine how effective treatment is.

Expanded MRI services

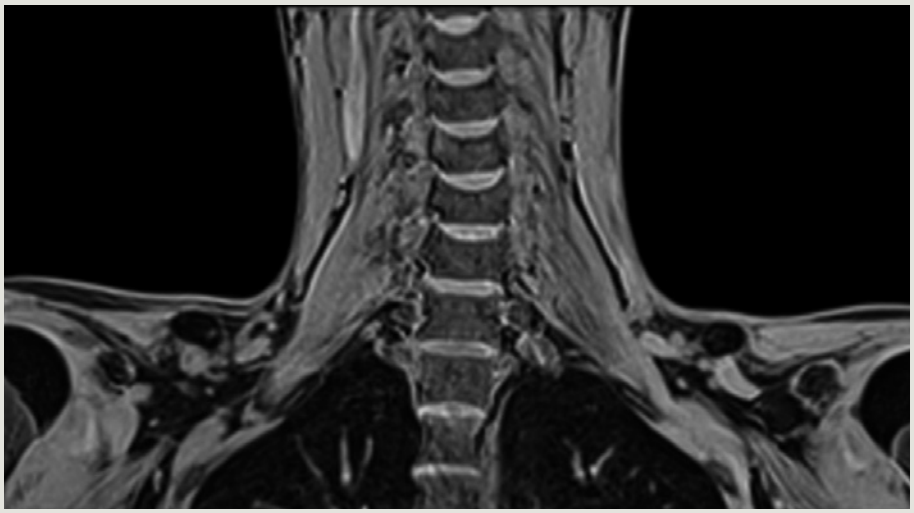
Open up new possibilities and deliver a broader range of MRI services. *syngo*.MR E11 software supports greater flexibility, consistency, and efficiency for faster, more intuitive planning and scanning. In addition, *syngo*.via extends MRI to broader patient groups and delivers uniform high-quality results.

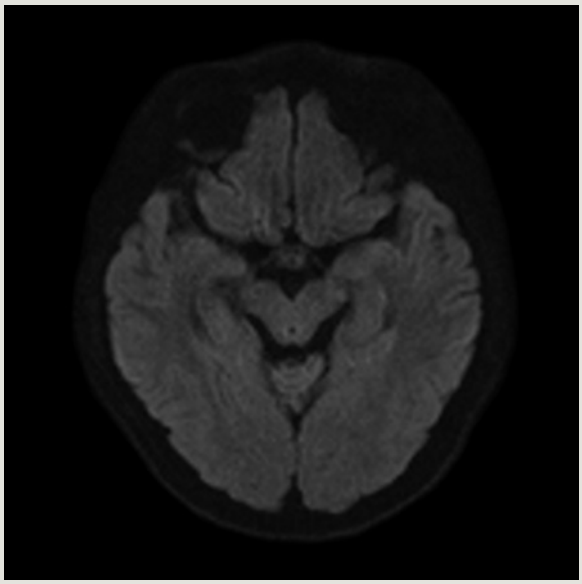


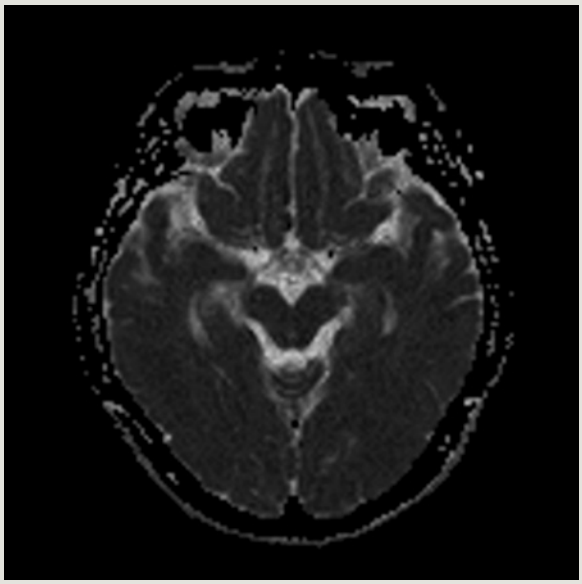
Neurology

siemens.com/neuro-mri

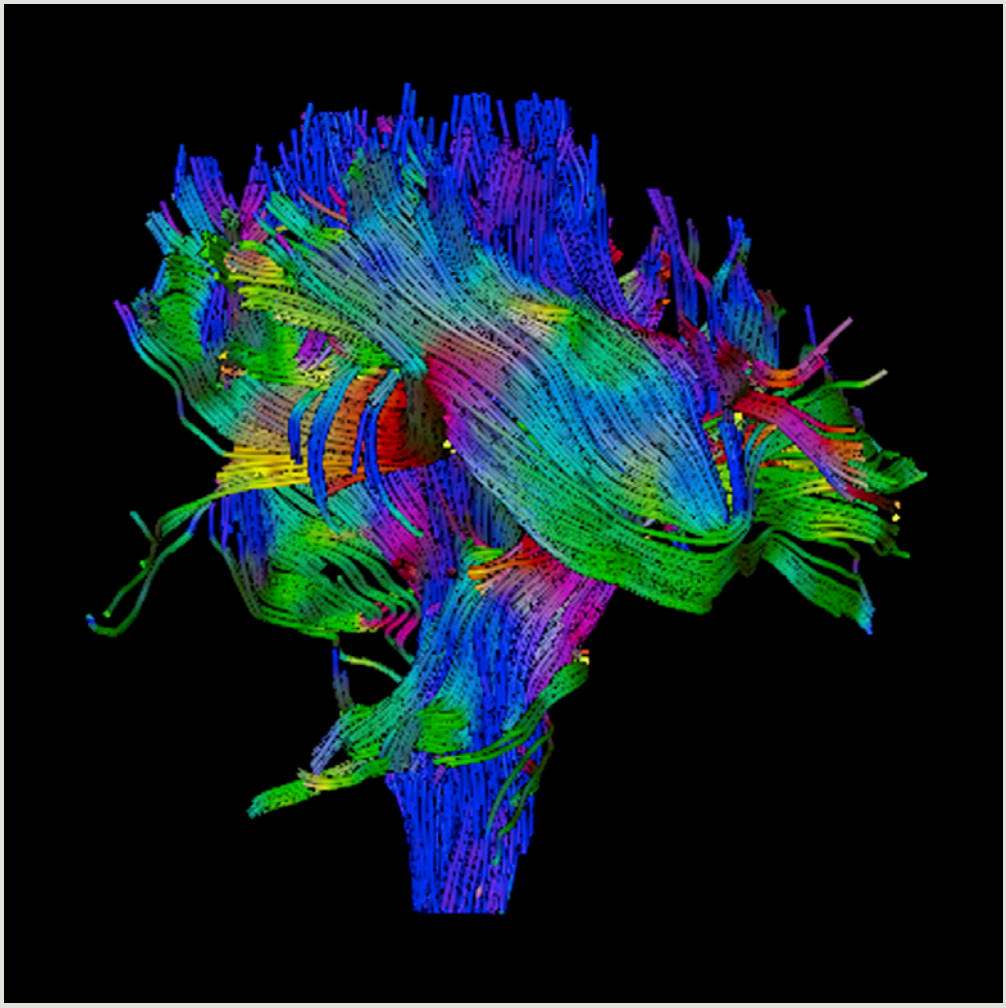
NEUROLOGY: With excellent SNR, the Head/Neck 16 delivers exceptional image quality for routine examinations and advanced neurological applications, while improving scan time and resolution.

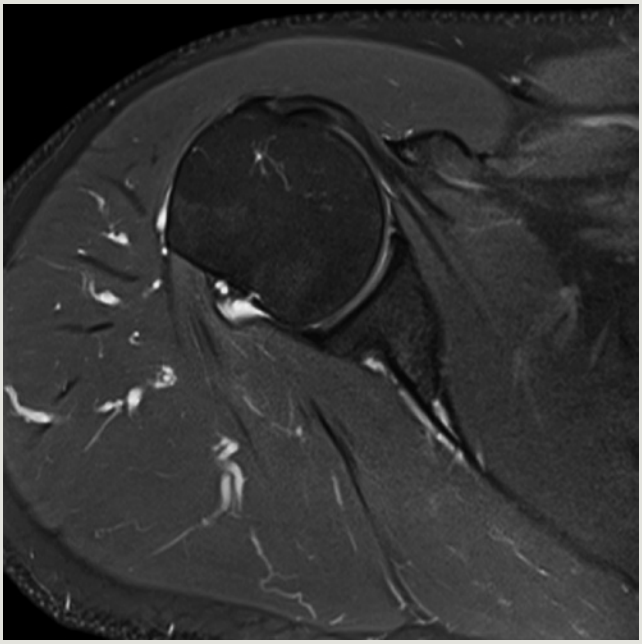


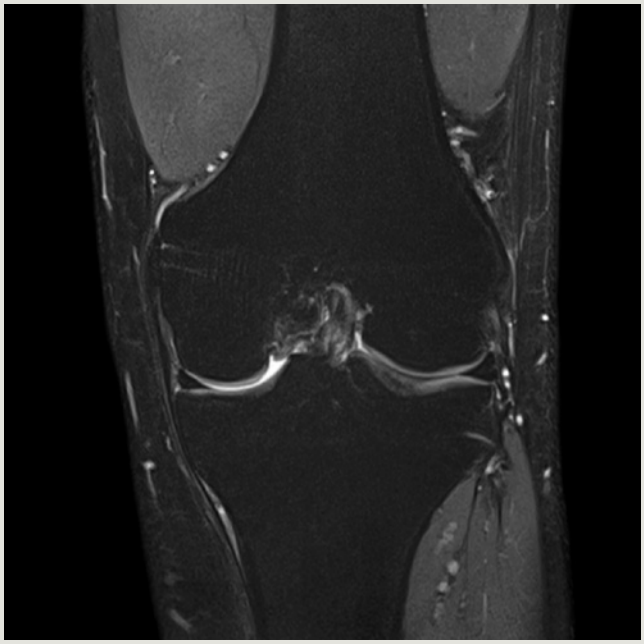




Experience outstanding diagnostic performance with sharp, high-resolution DWI and DTI of the brain and spine.







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

With **WARP**, you can now serve the rapidly-growing patient populations with artificial joints. The benefits are substantial: infections can be diagnosed earlier and there is a significant gain in image quality for any MR indication.

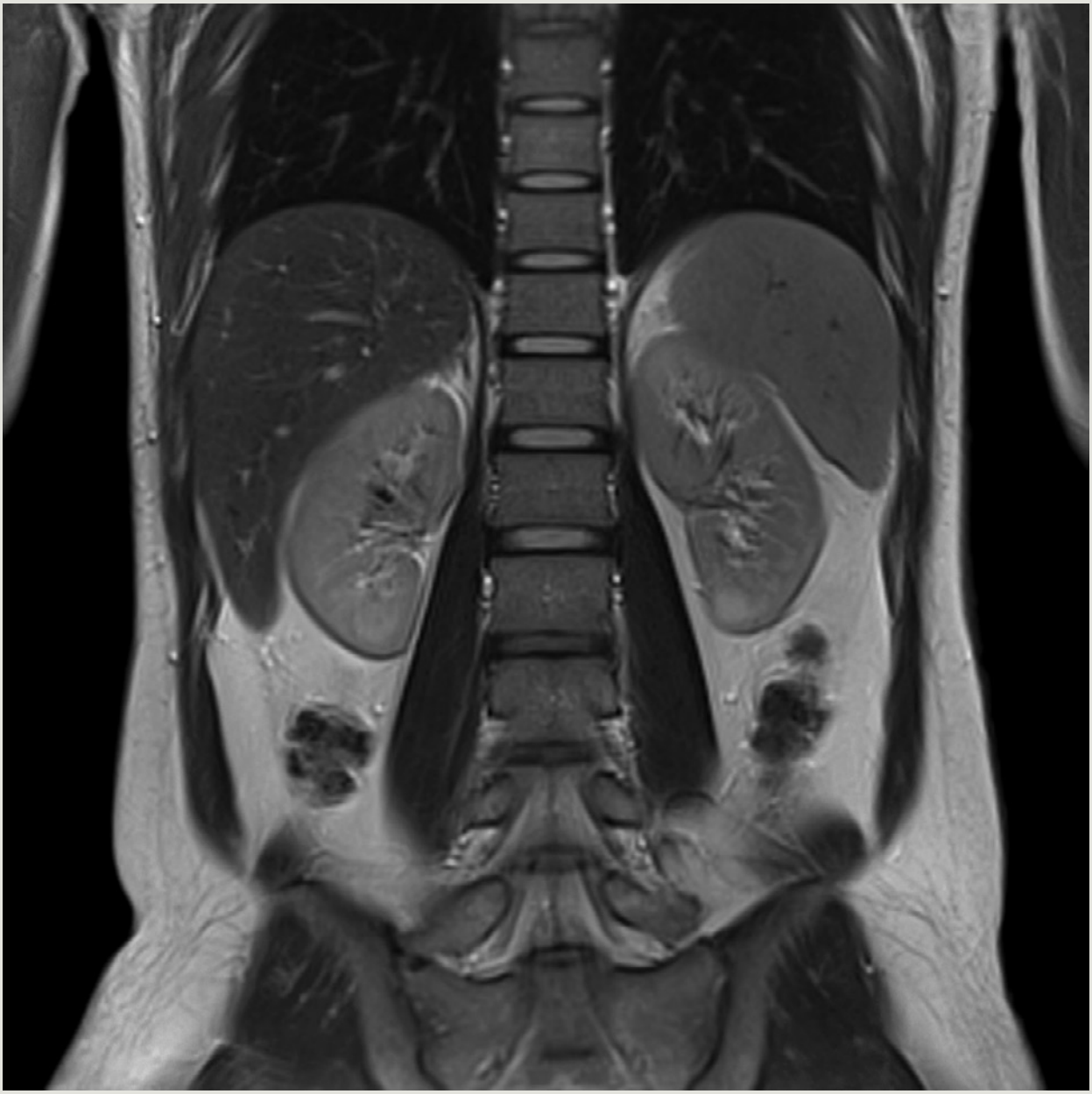
Orthopedics

siemens.com/msk-mri

"QISS MRA should become the non-contrast MRA technique of choice in patients with renal dysfunction."[4]

Maria L. Carr, Northwestern University, Department of Radiology, Feinberg School of Medicine, Chicago, USA.

ANGIOGRAPHY: Tim 4G's new ultra high-density coils allow you to perform high-resolution angiography easily and without repositioning the patient. New with MAGNETOM Amira, QISS enables contrast-free peripheral angiography. And, with DotGO's on-board guidance, you can move through the scan with ease.



BODY: Tim 4G offers high-channel body imaging thanks to the combination of the ultra-high density Body 13 and Spine 18 coils. Moreover, our Trendsetting Applications help you expand your service lines in MRI.

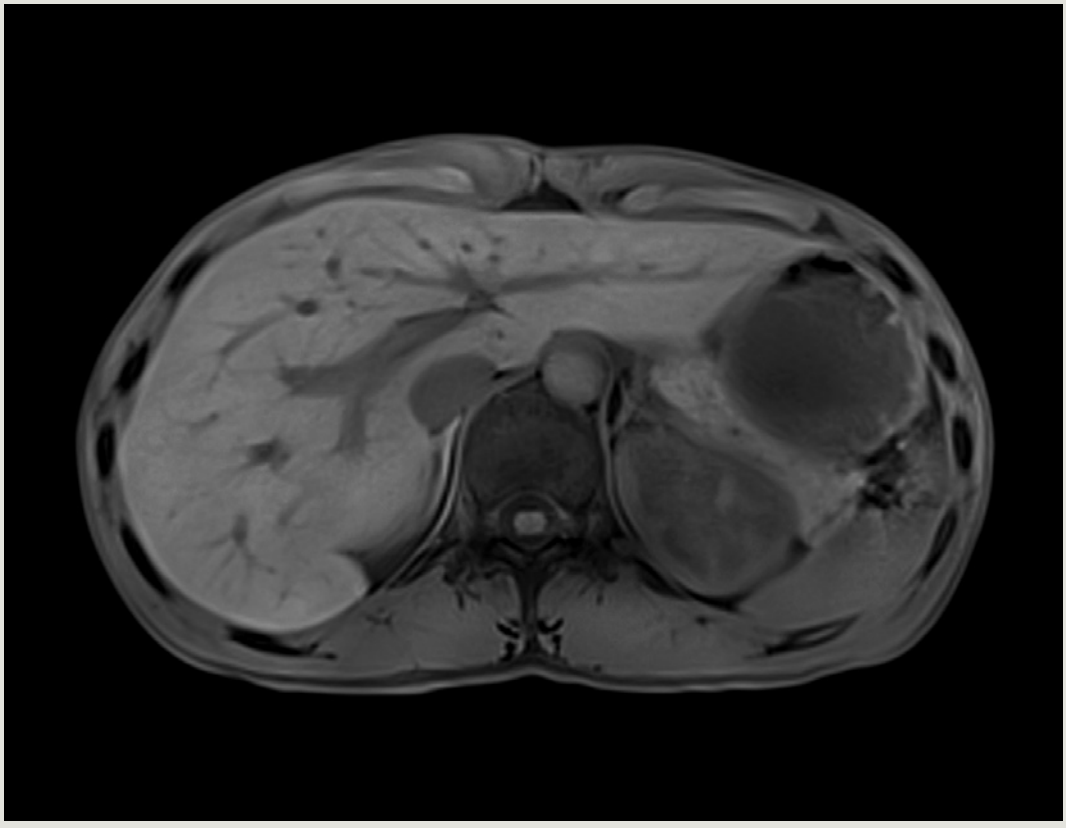
FREEZEit

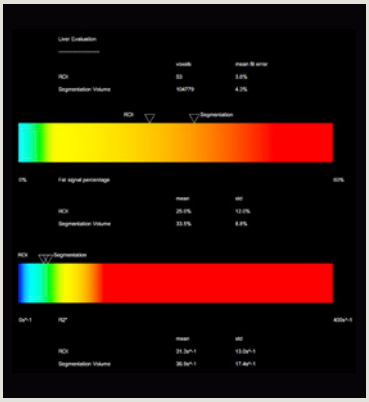
siemens.com/body-mri

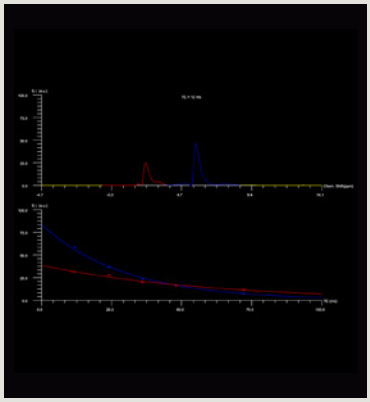
FREEZEit: MRI exams of the liver have become increasingly difficult due to contrast timing challenges and breathing motion. FREEZEit, combining TWIST-VIBE and StarVIBE, makes MRI faster and more robust than ever, overcoming previous limitations and significantly pushing the boundaries of what's possible.

TWIST-VIBE: Benefit from high temporal and high spatial resolution so that you always get the right contrast in dynamic examinations.

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

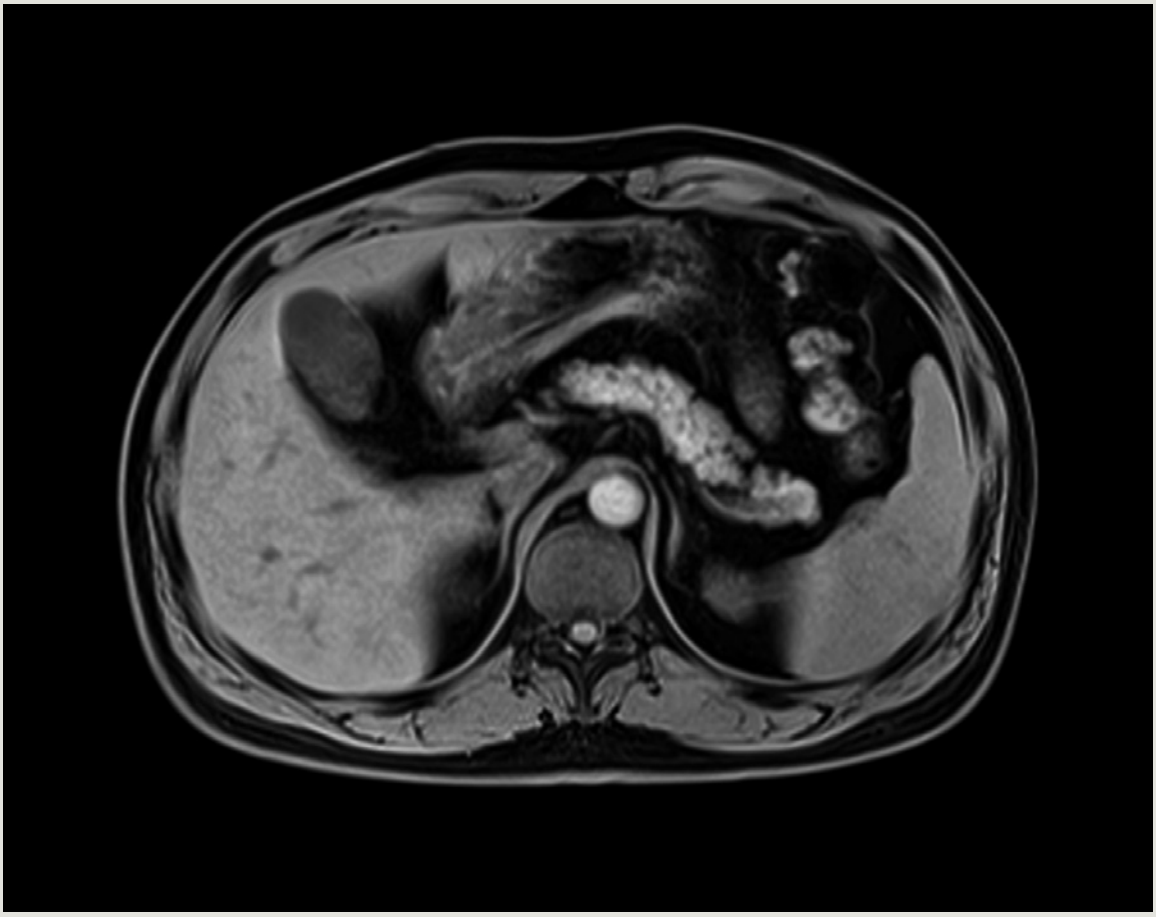


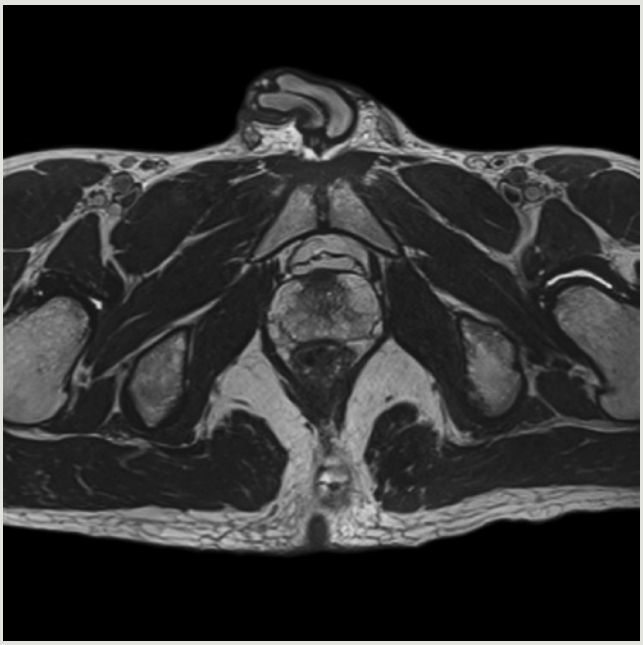




LiverLab: Monitor the growing number of liver disease cases. LiverLab supports quantitative, non-invasive liver evaluation.

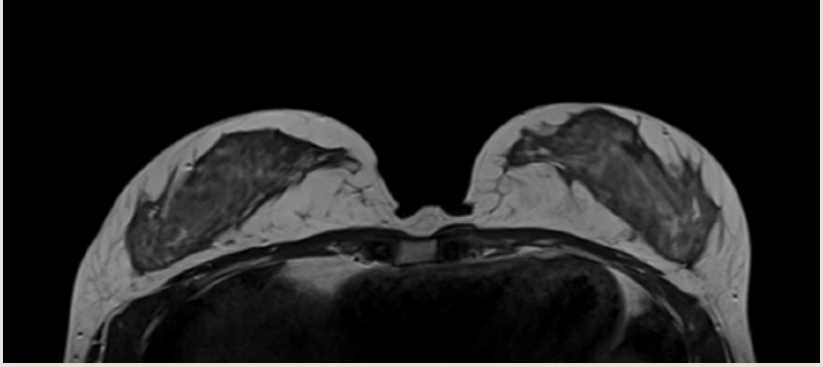
CAIPIRINHA: Address patients with limited breath-hold capacity with Siemens' unique CAIPIRINHA application and ultra-short breath holds – standard with your MAGNETOM Amira.

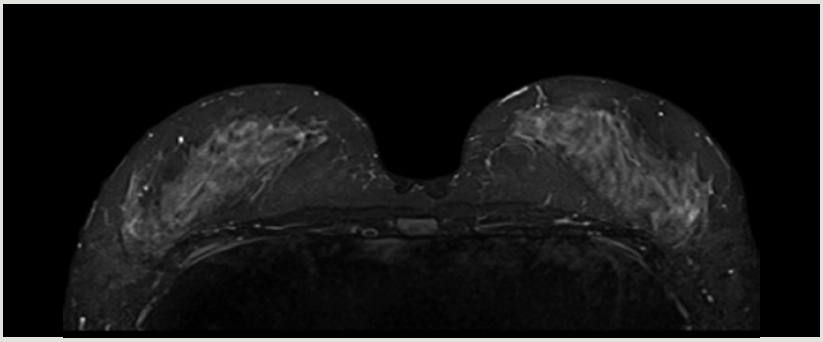




PROSTATE MRI: With the high-density Spine and Body coils alone, Tim 4G delivers excellent flexibility in multiparametric imaging of the prostate in terms of morphology, physiology, and function.

Prostate MRI
siemens.com/postate-mri



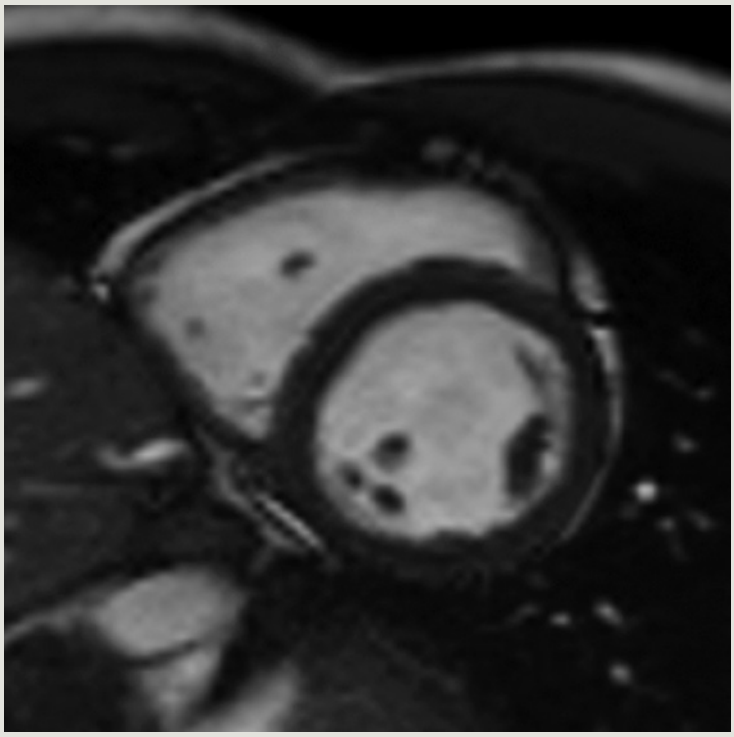


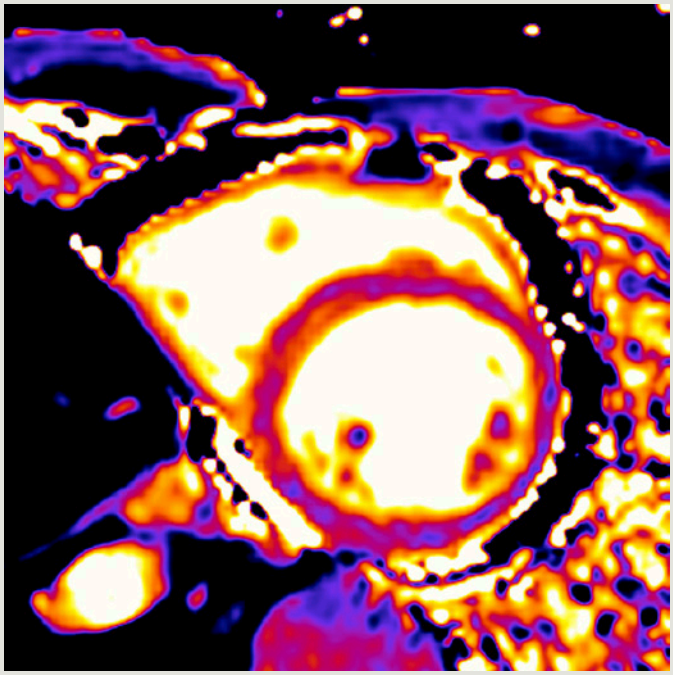
BREAST MRI: From clinical imaging to biopsy guidance, MAGNETOM Amira with Tim 4G offers outstanding quality for breast imaging.

Breast MRI

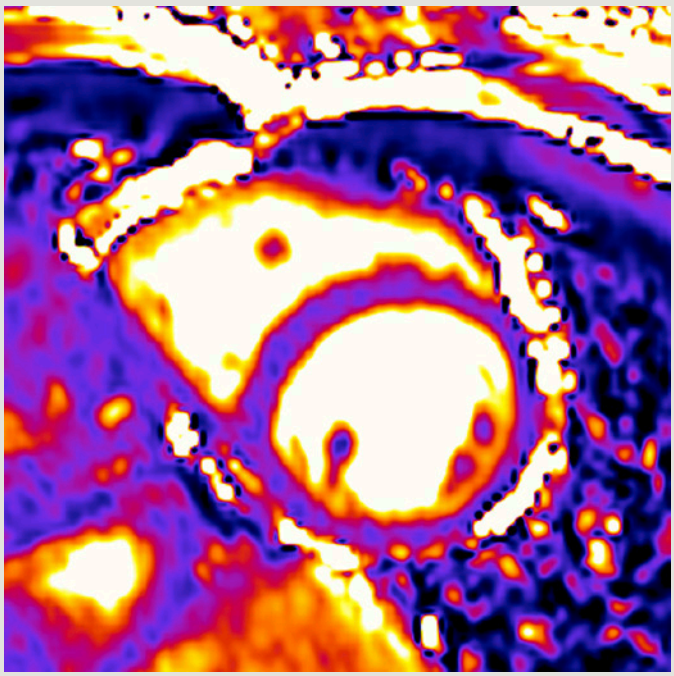
siemens.com/breast-mri

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.





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



Cardiology

siemens.com/CMR

Streamline operations with 10-min exams

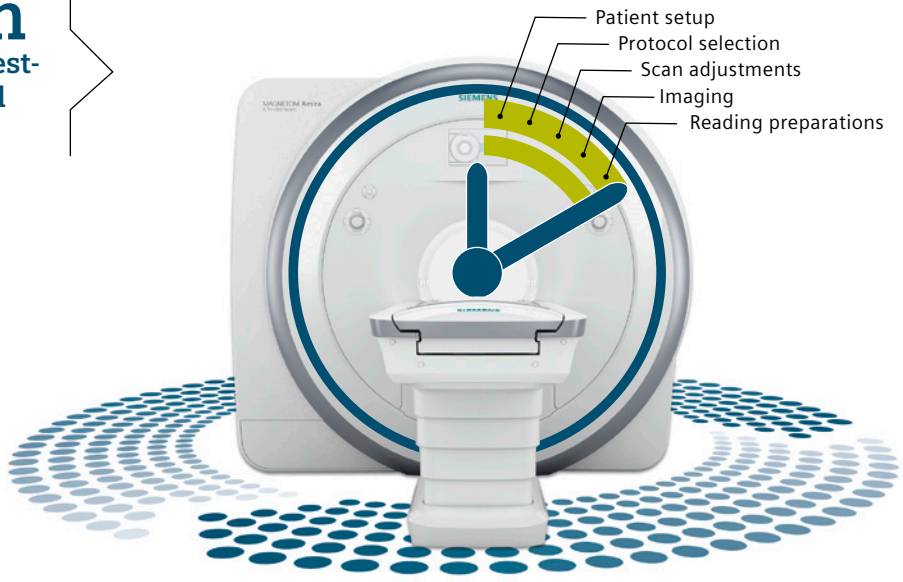
Ensuring consistent, standardized quality of care while remaining competitive is crucial. Changing clinical guidelines and diverse requests from referrers make it difficult to define and establish standards in MRI. MAGNETOM Amira streamlines operations and supports high-throughput routine scanning – for example, by enabling 10-minute exams for body regions representing up to 75% of cases.[3]

Streamline operations

and standardize quality of care

DotGO software with Dot Cockpit to easily adapt predefined standards

10-min
exams with best-practice-based protocols



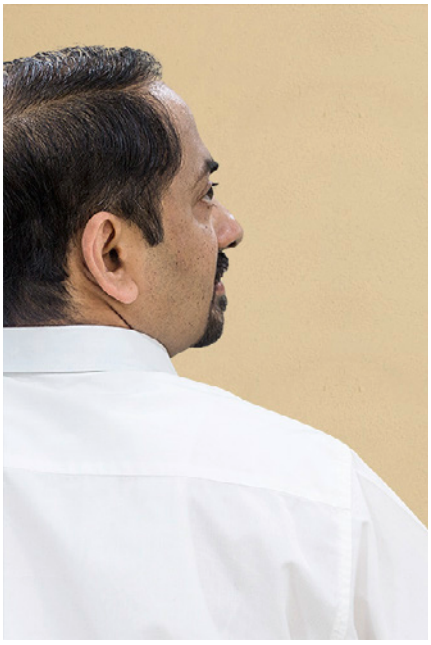
Easy and fast patient handling with Tim 4G coils and intuitive scanner control

Higher throughput

Introduce best-practice-based protocols for fast standardized scanning. MAGNETOM Amira and Siemens' latest technology support 10-minute exams, which enables scheduling more patients per hour for your routine examinations.

Customized protocols

Adapt predefined settings to your own clinical needs and changing scenarios. Next-generation DotGO workflow and the Dot Cockpit interface allow you to tailor protocols to your requirements – for greater flexibility, consistency, and efficiency in MRI.



"We not only need to improve clinical results, but we also need to make MRI systems in general more efficient."[4]

Dr. Harsha Chadaga, Head of Radiology,
Columbia Asia Hospital, Bangalore, India.

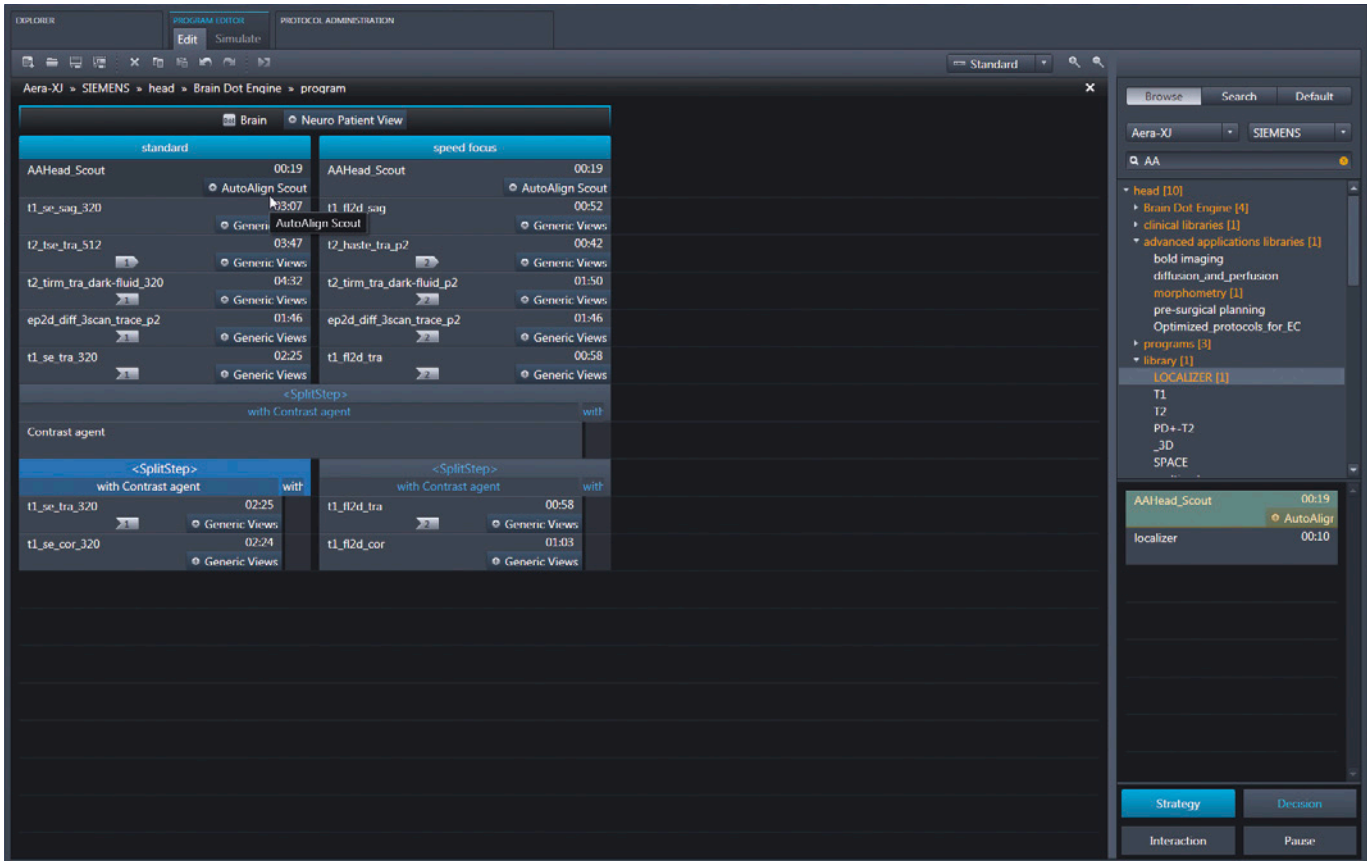
Defined examination strategies for consistent results with the Dot engines

Automated processes

Define examination strategies for consistent results. Preconfigured customizable Dot engines support high-quality, reproducible results every time, helping save time and streamline and automate operations across your department.

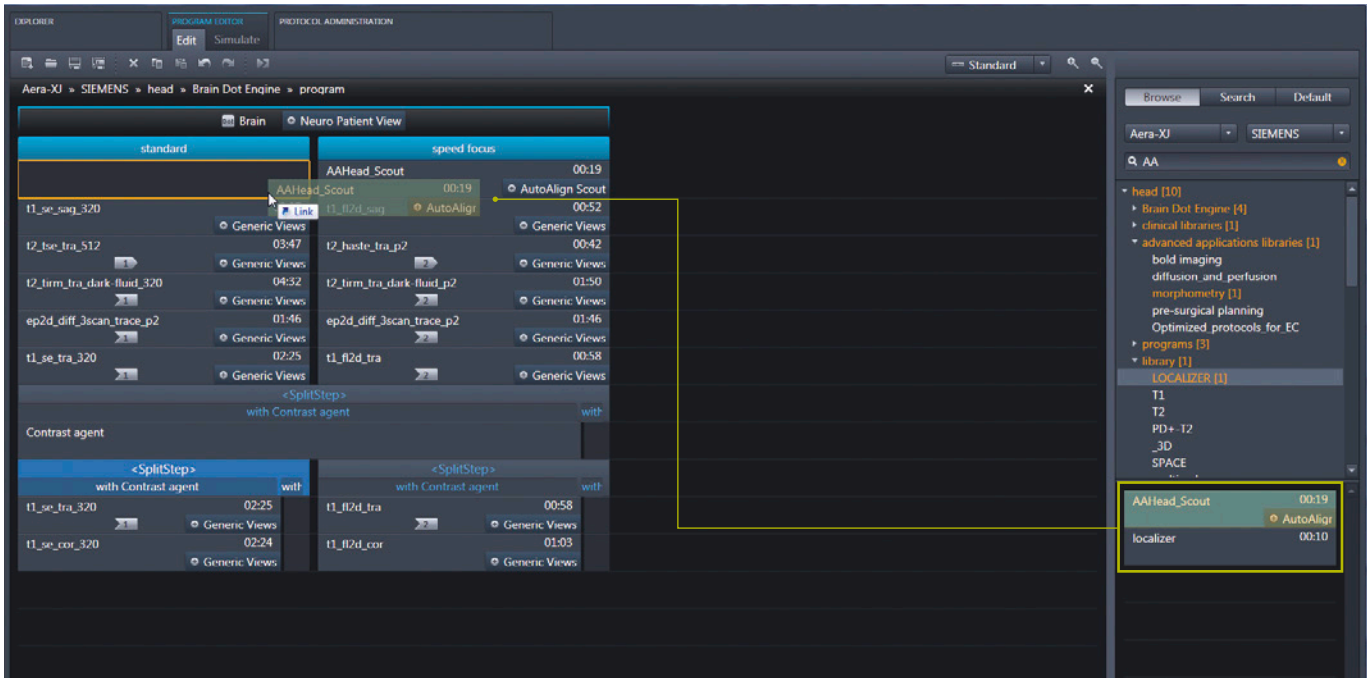
Faster scanning

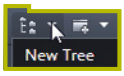
Enable easy and fast patient handling. Tim 4G coils and intuitive scanner control support simpler, quicker scan setups. Higher coil density means exams can be performed faster with no repositioning of the patients or the coils.



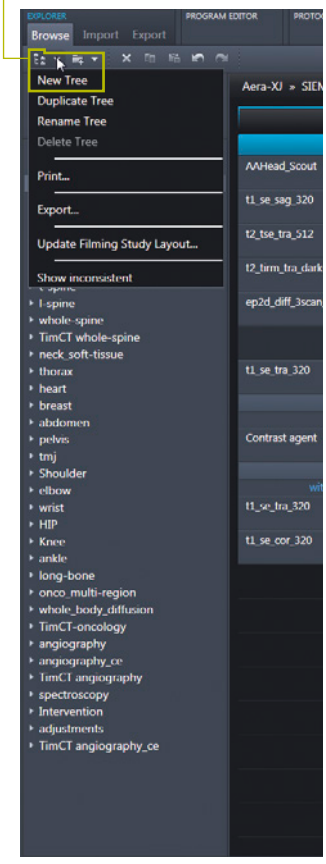
Dot Cockpit: A central user interface enables fast and intuitive protocol configuration and management. Dot Cockpit delivers up to 80%[10] greater usability.

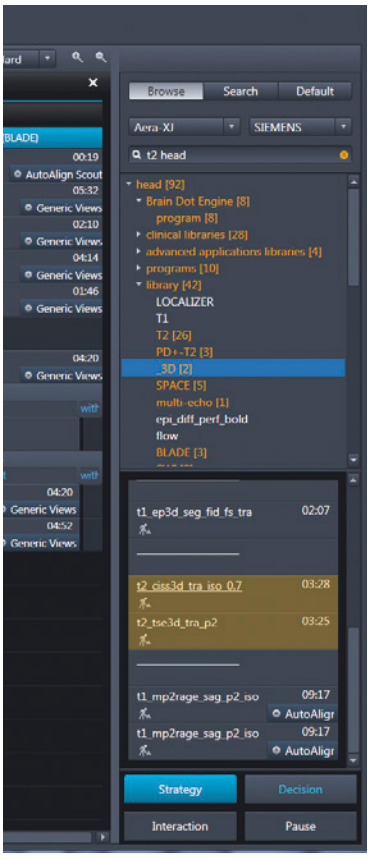
Drag&drop from the sidebar in editor





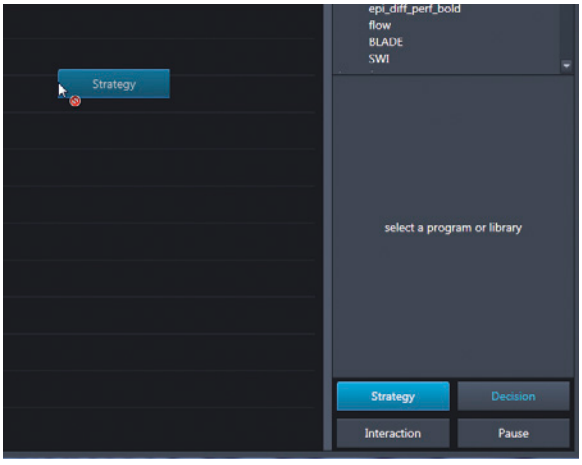
Multiple User Trees





Dynamic context search, highlighting results

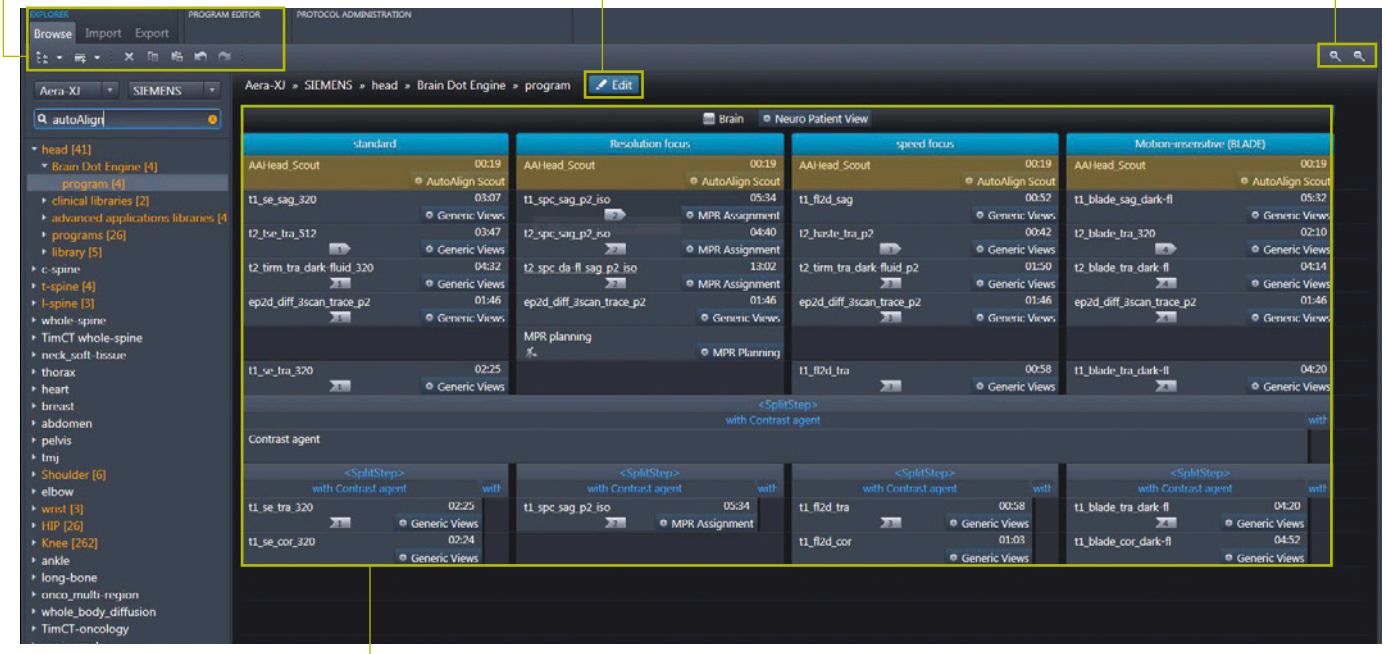
Create a strategy with one click (drag&drop)



Explorer and Editor in one interface
Easy navigation and shortcuts

Edit protocols instantly

Zoom in and out to conveniently display protocols

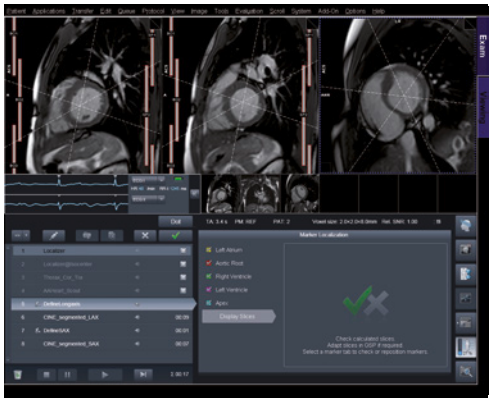


Build as many strategies as you need

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.

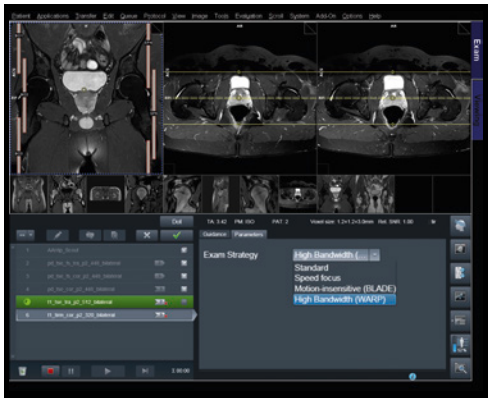


Cardiac Dot Engine
Up to 50%5 increase in patient throughput.

Abdomen Dot Engine
Optimized bolus timing for dynamic liver examinations.

"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



Large Joint Dot Engine
Increased consistency for all large joints – hip, shoulder, and knee.

Angio Dot Engine
Optimally timed contrast images with interactive bolus timing.

"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."[4]

Dr. Thomas Vogl
Medical Director of the Institute for Diagnostic and Interventional Radiology of the University Hospital Frankfurt, Germany
Speaker of the Frankfurt Klinikallianz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Aufnahme

Save 30% energy with Eco-Power

With expenditure on labor, energy, and helium increasing every year and MR reimbursements in decline, optimizing financial performance is a key concern for healthcare operators. MAGNETOM Amira helps you reduce energy requirements and overall costs – for example, by saving 30% energy[5] during standby.

Save energy

and improve your financial performance

Low installation footprint and low overall energy consumption

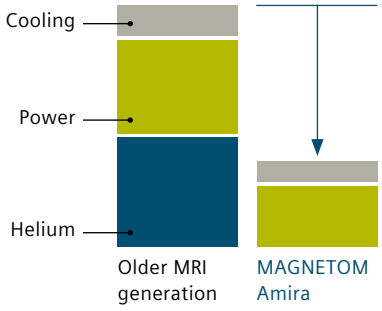
Eliminate the fastest rising cost component in MRI operations with zero helium boil-off technology

Save 30% energy[5] during standby with Eco-Power

Flexible service offering depending on your patient load

Lower costs
Save 30% energy[5] in standby mode. MAGNETOM Amira's Eco-Power technology reduces power consumption and cuts costs. Self-adapting components turn off automatically when not in use, and optimized sequences reduce the need for gradient switching – for significantly lower operating costs.

Zero helium boil-off
Reduce lifecycle costs and improve your eco-footprint – with zero helium boil-off technology and minimum power and cooling demands. All of this adds up to enhanced performance, lower resource consumption, and greater investment protection.



Significant energy cost savings up to €20,000 per year[6]

Low installation footprint

Keep your facility sustainable. Fast and simple installation, low space requirements, and reduced energy consumption help you optimize resource utilization and drive down costs. In addition, you can make a positive contribution to the environment.

Flexible service offerings

Select services flexibly to match the size and capacity of your facility. Scalable pricing models based on patient load mean you receive the services you actually need – and are charged accordingly.

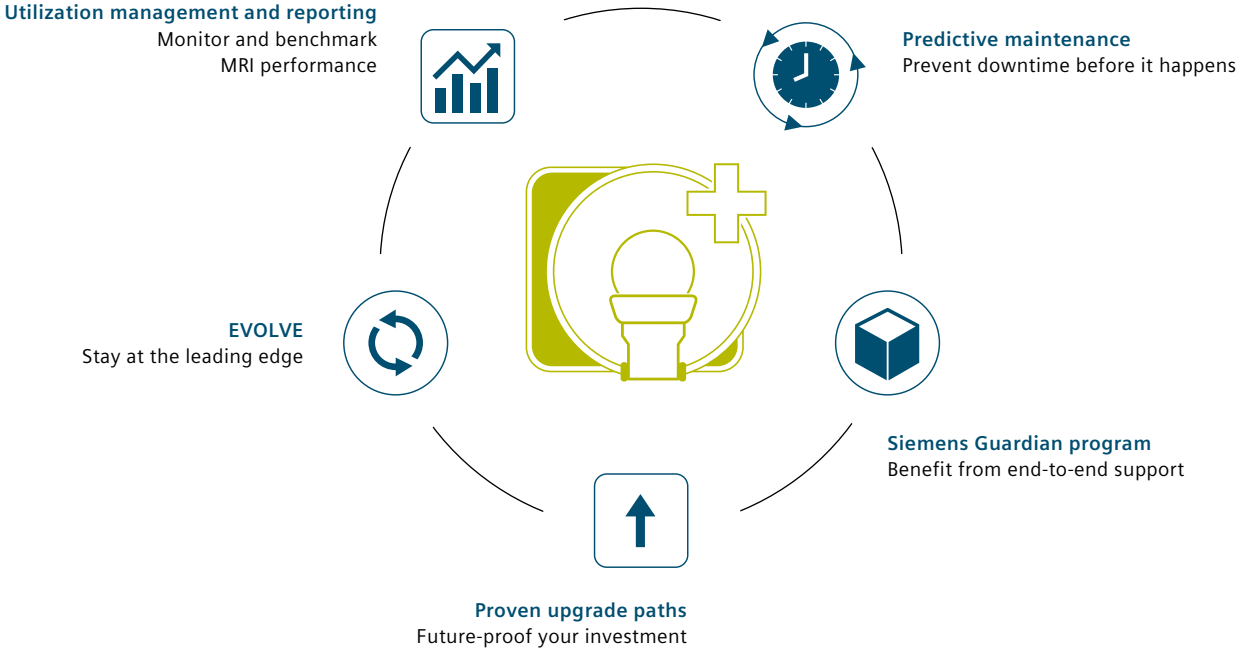

Bauteile C | Ausgang

Service and exchange

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.

Service and exchange

Comprehensive services



Utilization management and reporting
With our utilization management and reporting solution, you know that you are getting the most out of 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

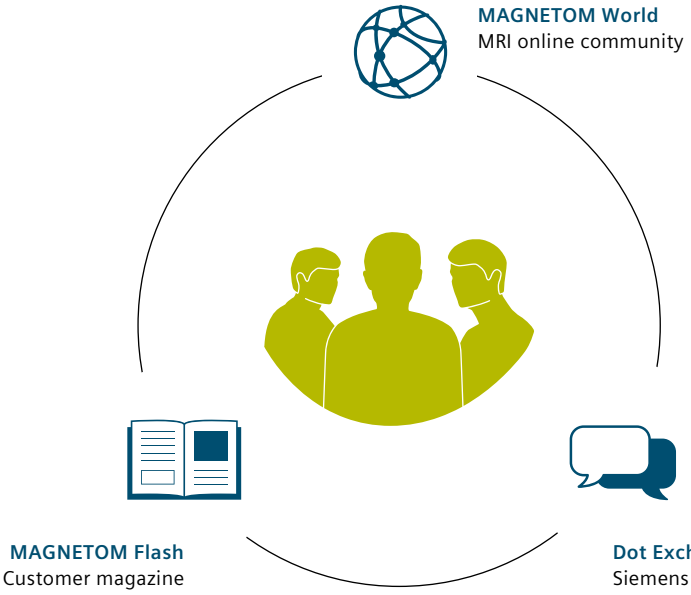
Our Guardian program provides the latest service technology so you can better manage your MRI system. It combines many features in a single package – offering real-time system monitoring, expert advice to improve workflow efficiency, proactive maintenance and support. Moreover, it guarantees defined repair times, giving you 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 in turn, to increase their return on investment.

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.[7]

Visit
MAGNETOM
World

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 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.

MAGNETOM Amira
Technical specifications

Field strength	1.5 Tesla
Bore size	60 cm
Magnet length	155 cm
System length*	171 cm
System weight (in operation)*	4.68 tons
Minimum room size*	28 m^2 / 302 sq ft
RF	Tim [96 x 24], [96 x 16]
Gradient strength	XF Gradients (33 mT/m @ 125 T/m/s)
Helium consumption	Zero helium boil-off technology
Power consumption	Eco-Power technology

* Minimum total space requirement for magnet, electronics, and console room

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Please find fitting accessories:
siemens.com/medical-accessories

[1] MAGNETOM Amira is currently under development; is not for sale in the U.S. and other countries. Its future availability cannot be guaranteed.

[2] Decibel measurements and images acquired on MAGNETOM Amira, November 2014. Data on file; results may vary.

[3] Evaluation of MRI utilization. Based on 2.2 million Siemens MR examinations in 2013.

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

[5] Data on file; results may vary.

[6] Comparison with "Symphony generation" MRI. Data on file.

[7] 2013 MAGNETOM Flash reader survey. Data on file.

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