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MAGNETOM Avanto

The landmark in 1.5T imaging.

The landmark in 1.5T imaging.

MAGNETOM® Avanto. It's the landmark in 1.5T imaging, with more than 3,000 installations worldwide. With advanced Tim® (Total imaging matrix) technology, it enables ultra-fast image acquisition. This, in turn, results in productivity that simply leaps ahead. Accompanied by a dramatic reduction in acoustic noise, without compromising gradient performance. And now, these factors are extended with Dot® (Day optimizing throughput). The next movement in MRI. MAGNETOM Avanto with Dot is helping more customers transform the way they work with MRI. By moving 1.5T imaging to the next level. For fast return-on-investment. And truly seamless workflow automation.

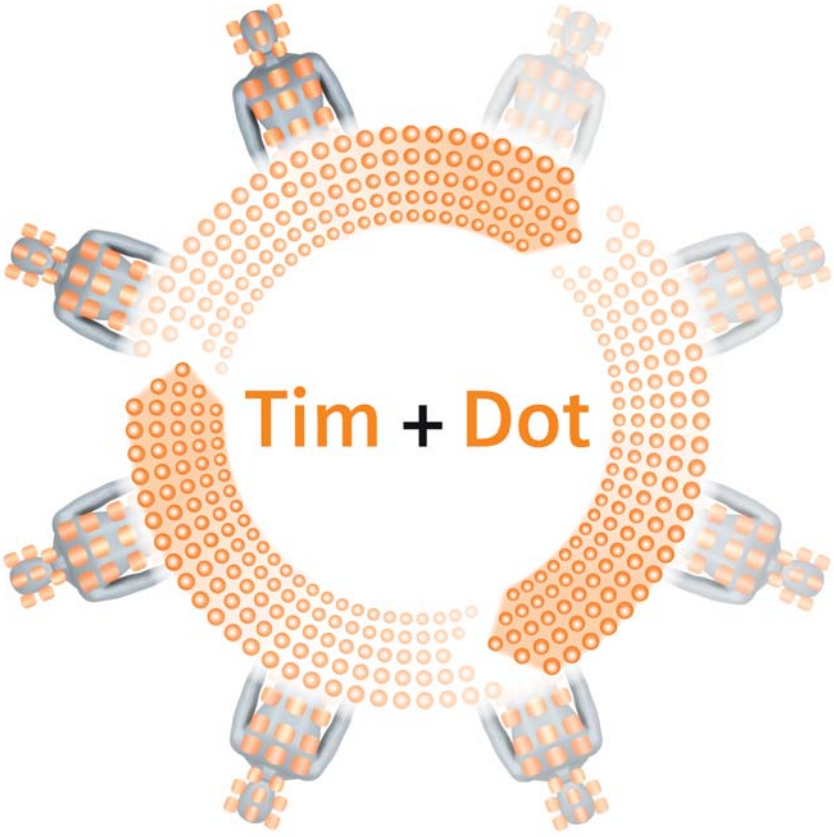
From a clinical, patient, and business perspective, Siemens helps improve patient care. By delivering trendsetting technologies like MAGNETOM Avanto.

It's the landmark in 1.5T imaging.

SIEMENS
M Avanto

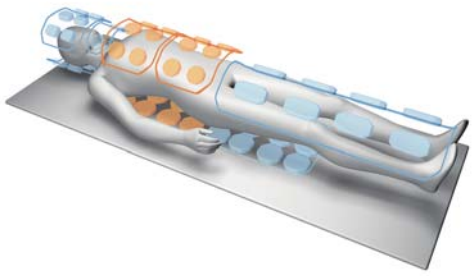
Tim+Dot integrated

Tim+Dot are the direct response to today's demanding world of healthcare economics. Tim is Siemens' ultimate innovation technology that unlocks imaging power like never before. Dot helps take the complexity out of MRI. And at the same time it enables up to 50%[2] higher productivity.



Together, they redefine productivity.

Tim – sets the standard in MRI



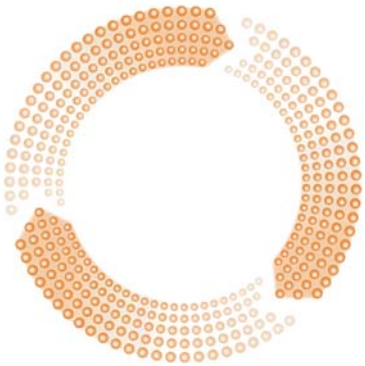
Tim advances MR imaging. With flexibility, accuracy, and speed. It seamlessly integrates up to 76 coil elements with up to 32 RF channels. It escalates image quality and acquisition speed to a whole new level. With Tim's whole-body coverage, repositioning patients for multiple exams is no longer necessary. Think more exams per day. Every day.

Flexibility
Select exams, not coils. Tim is adaptable, versatile, and easy. For faster exams and greater diagnostic confidence. Improving workflow and increasing productivity.

Accuracy
Local and total. With extreme, pinpointed precision, Tim delivers excellent image quality – from small lesions to the whole body.

Speed
Time is precious. Tim speed means faster and simpler exam set-up, and a dramatically shorter acquisition time. Now patient volume – and daily productivity – can really soar.

Dot – the next movement in MRI



Dot offers patient personalization, user guidance, and exam automation. It helps take away the complexity of MRI scanning. By enabling greater image consistency, reproducibility, and diagnostic confidence. It offers greater ease-of-use. And a day that's more productive than ever before.

Personalized
Dot allows for uniquely tailored, optimized scans adaptable to the patient or clinical question, and according to the standards of care.

Guided
Dot provides step-by-step user guidance for greater efficiency, excellent image quality, and consistency.

Automated
With intelligent workflows customized to the standards, Dot delivers a degree of automation that takes efficiency to a whole new level.

Dot engines

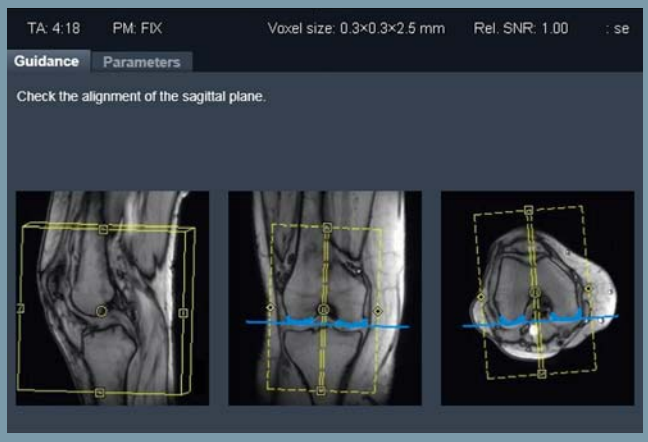
Dot is the next movement in MRI. And Dot engines are the driving force within this movement. With specialized Dot engines for many MRI exams, Dot helps to take the complexity out of MRI scanning. For seamless workflow automation. Resulting in greater efficiency, reproducibility, and consistency. With MAGNETOM Avanto, the following Dot engines are available: Brain, Knee, Abdomen, Cardiac, Angio, TimCT Angio, and TimCT Onco.

Experience Dot yourself:
siemens.com/Dot

Brain Dot Engine

Personalized exam strategies help to adapt the examination to patient condition or clinical questions. Also when conditions change during the examination.

Knee Dot Engine

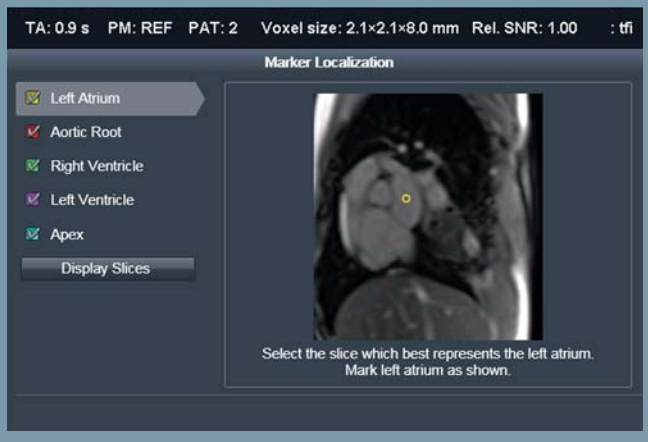


MPR alignment guidance helps to increase consistency.

Abdomen Dot Engine

Automated Bolus Detection helps to increase timing accuracy by up to 28%[2].

Cardiac Dot Engine

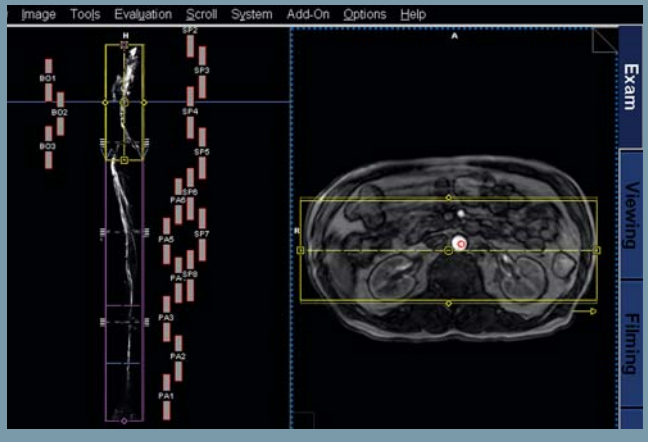


AutoAlign Heart makes cardiac exams easier than ever.

Angio Dot Engine

Step-by-step user guidance through the Test Bolus data acquisition.

TimCT Angio Dot Engine



Two Siemens-unique technologies TimCT (Continuous Table movement) and Dot enable large Field-of-View applications with smooth workflow.

TimCT Onco Dot Engine

Fast and seamless scanning with excellent image quality.

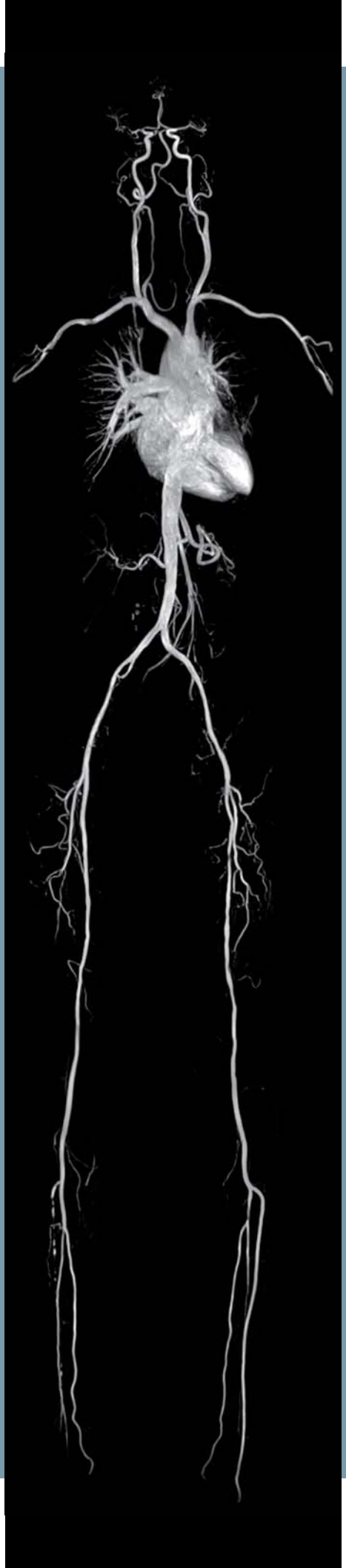
The landmark in technology.

MAGNETOM Avanto provides excellent image quality. In addition to short scan times and ease-of-use. The scanner offers leading magnet and gradient technology. And these are combined with revolutionary image acquisition techniques. The outcomes are outstanding clinical benefits:

- High diagnostic confidence due to exceptional magnet homogeneity for excellent fat saturation
- Large 50 cm Field-of-View
- Strong gradients for high resolution and short scan times
- Siemens-unique TimCT technology with Continuous Table movement for CT-like scanning

AudioComfort
MAGNETOM Avanto's AudioComfort lowers sound-related irritation for the patient. Special casting for gradient coils. Effective magnet suspension. Unique MR sequence design. All these factors are combined to reduce sound pressure by up to 97%[2].

More Accessibility
MAGNETOM Avanto has an appealing design. It has a low-to-the-floor table position of just 47 cm (18 inches). Making it accessible for a wide range of patients. For claustrophobic patients, MAGNETOM Avanto enables feet-first exams. For nearly all MRI procedures. For obese patients, it supports up to 250 kg (550 lbs). Without any table movement restrictions.



Whole-body Angio

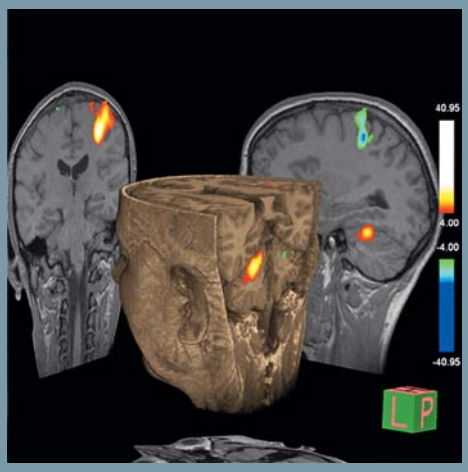
With the flexibility of Tim+Dot, a Field-of-View up to 205 cm can be addressed. Accurate to see tiny vessels. Fast with Parallel Imaging from head to toe: Total TA 1:20 min, 512 matrix, GRAPPA 2. And efficient to perform with Dot's step-by-step user guidance.

High Gradient Power

MAGNETOM Avanto excels in cardiac MRI. With strong gradients, superb Parallel Imaging with *syngo* GRAPPA, and high magnet homogeneity. And the Cardiac Dot Engine helps to make cardiac imaging part of clinical routine. Everything desired for cardiac MRI.

Large Field-of-View

Up to 50 cm Field-of-View provides an excellent view of pathologies.



Functional MRI

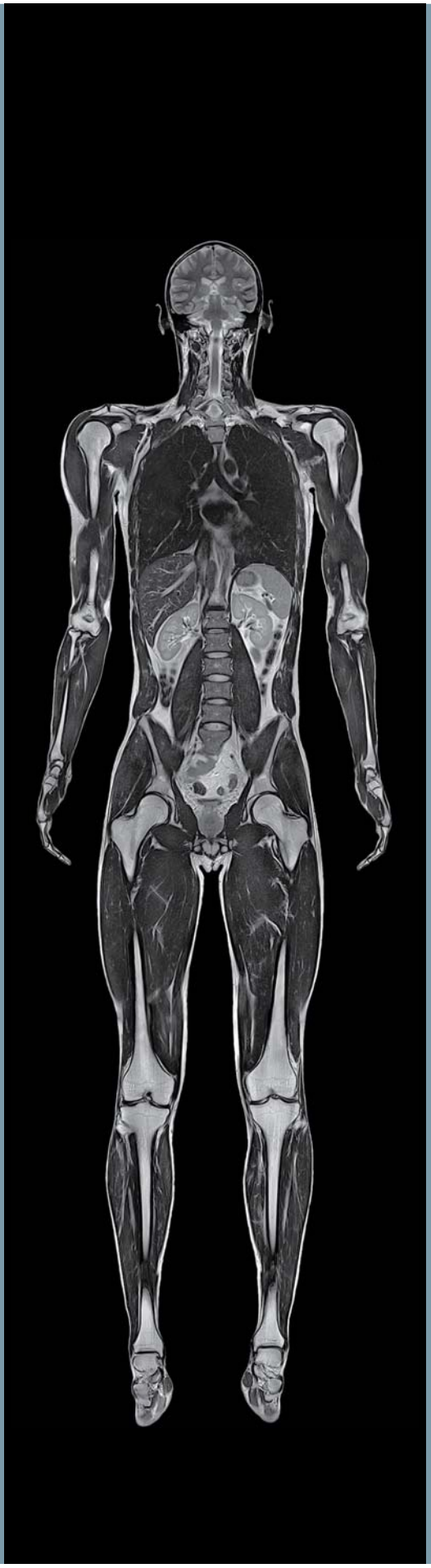
With strong gradients, MAGNETOM Avanto is equipped for advanced applications.

The landmark in applications.

MAGNETOM Avanto helps to diagnose extremely challenging diseases. With a high level of confidence. It facilitates the evaluation of complex pathologies. And difficult patients are simply easier to handle.

In each clinical field, Siemens *syngo*® MR applications, powered by Tim+Dot, are helping to create the future of MRI.

Head, cardiac, knee, abdomen ...
MAGNETOM Avanto offers a high level of flexibility. With innovative applications for each part of the body. And Tim seamlessly scans up to 205 cm without patient or coil repositioning. For true whole-body functionality.



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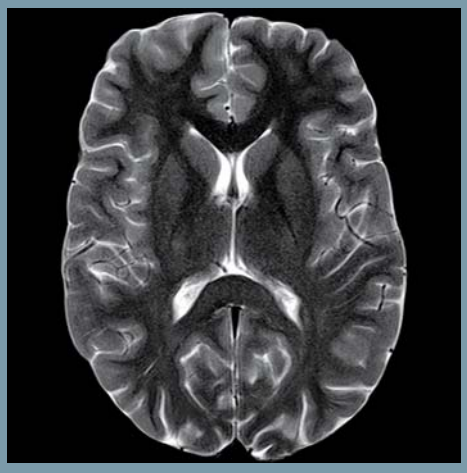
Standard Tim Application Suite

MAGNETOM Avanto is fully equipped with a broad range of dedicated applications. The Tim Application Suite will help address clinical needs. Without any additional costs. In every clinical field.

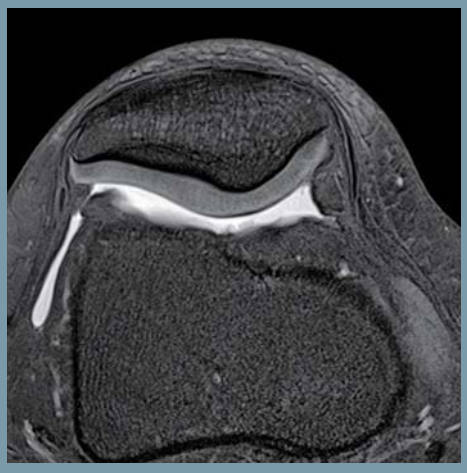
Neuro

Evaluation of pathology from disc herniation to acute stroke. With high-quality morphological and functional techniques.



Ortho

Examination of ligament tears to cartilage degeneration. With high-resolution imaging.



Body

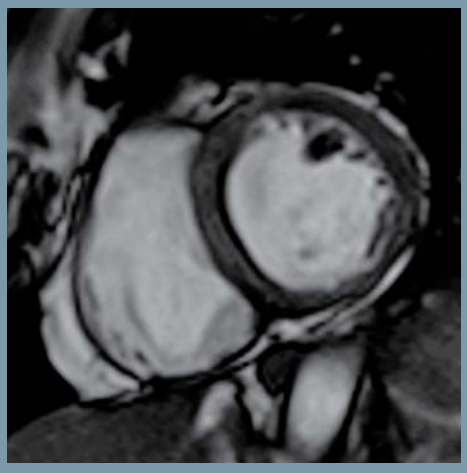
Free-breathing high-resolution MRCP to pancreatic and pelvic studies.

Angio

Depiction of vessel diseases with a wide range of contrast and non-contrast enhanced techniques.

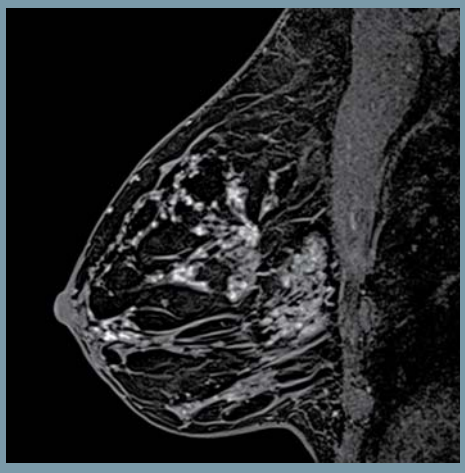
Cardiac

Clinical questions can easily be answered. From cardiomyopathies to ischemic heart disease. And from valvular to congenital heart diseases.



Breast

Streamlined workflow in clinical cases. Including lobular cancer, breast implant assessment, and therapy monitoring.

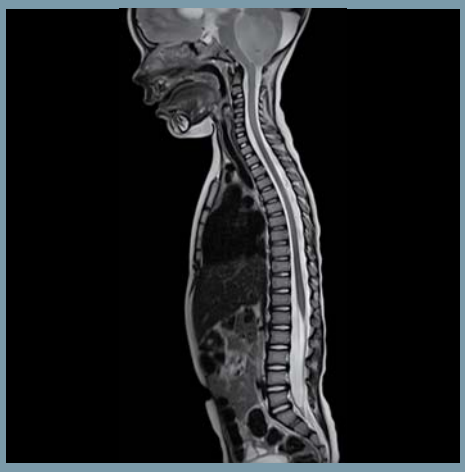


Onco

State-of-the-art oncology services for tumor detection. And staging of prostate, liver cancers, and more.

Pediatric[1]

Excellent contrast and resolution with multiple protocols. Using ultrafast and motion correction techniques.

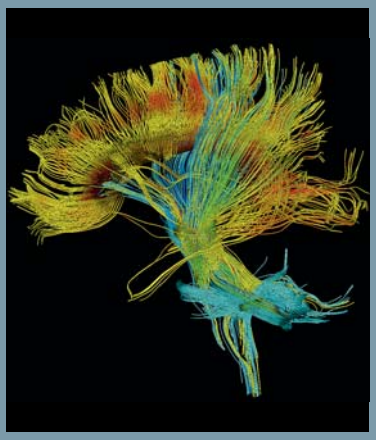


Advanced Applications

Cutting-edge MRI with high-end applications in all clinical fields.

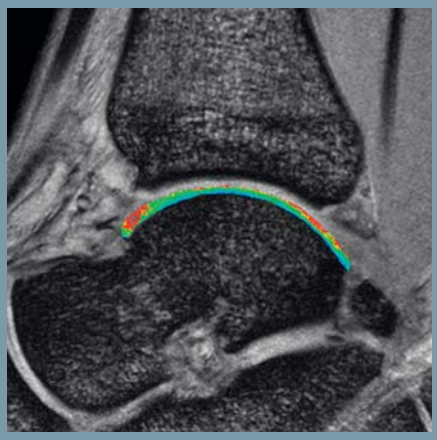
Advanced neuro imaging

***syngo* DTI Tractography**
Advanced neuro imaging visualizes white matter fiber tracts.



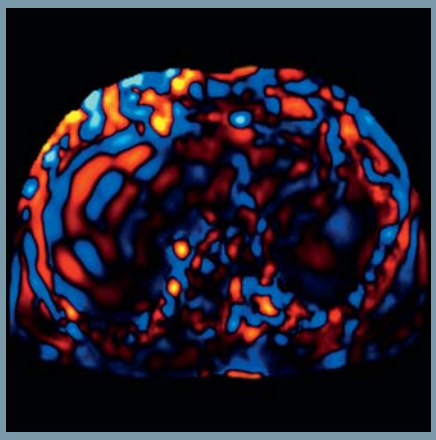
Enhanced pathology visualization

***syngo* MapIt**
Allows the early detection of osteo-arthritic pathology based on the T1, T2, and T2* properties of the cartilage. Assessment of T1, T2, and T2* properties of tissues in other body regions is possible as well.



Advanced non-invasive assessment

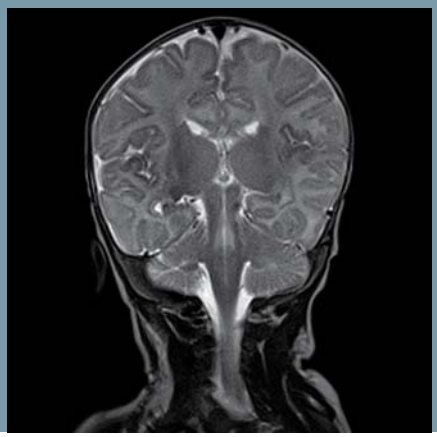
MR Elastography
New MRI-based biomarker for characterizing tissue non-invasively. Especially in the field of liver fibrosis.



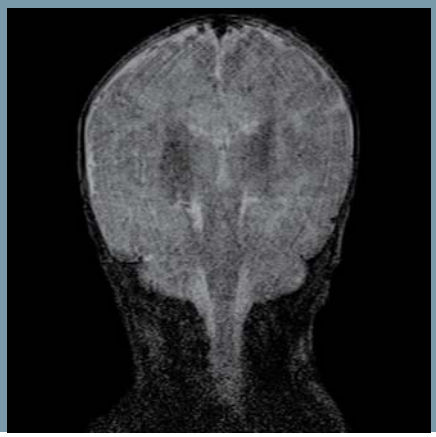
Cutting-edge motion correction

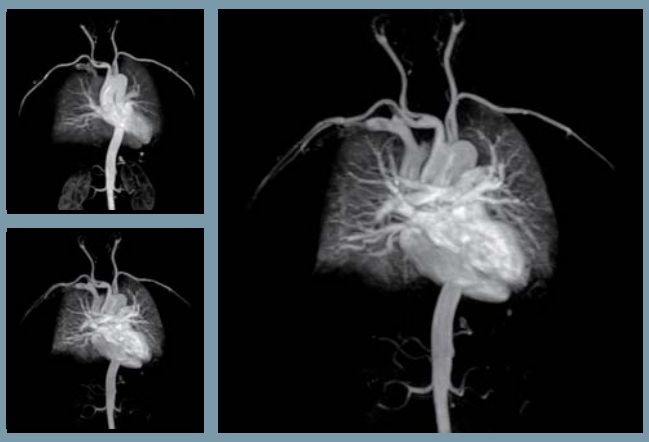
***syngo* BLADE**
Motion-insensitive Turbo Spin Echo sequence for any organ (head, joint, spine, abdomen). For any contrast (T1, T2, Dark Fluid). And for any orientation. Compatible with parallel acquisition technique.

with *syngo* BLADE[1]



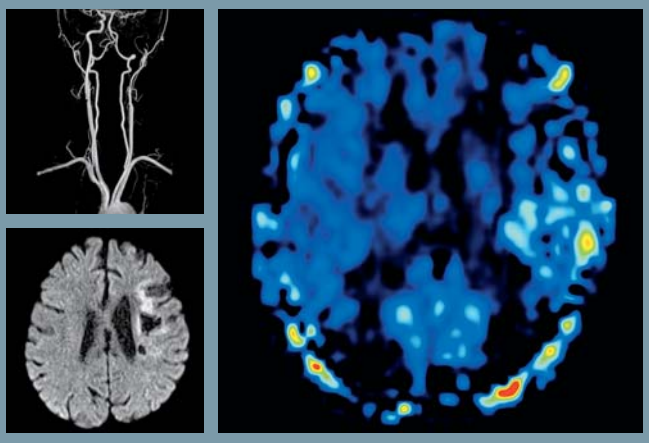
without *syngo* BLADE[1]





Time-resolved MR Angiography

***syngo* TWIST**
4D MRA in all body parts with low contrast dose.

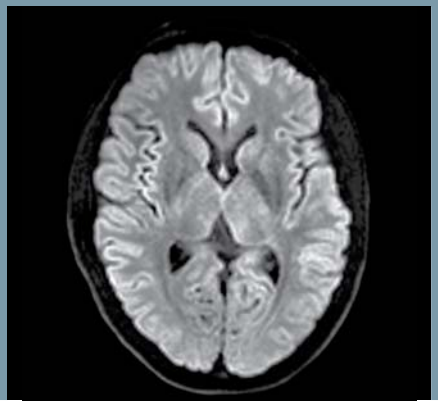


Non-contrast enhanced imaging

***syngo* ASL**
High spatial resolution perfusion imaging for evaluation of stroke, tumors, degenerative diseases, epilepsy.

Comprehensive metastasis screening

***syngo* REVEAL**
Body diffusion imaging to distinguish malignant from benign lesions.



High resolution diffusion-weighted imaging

***syngo* RESOLVE**
For visualizing the diffusion properties of fine anatomical structures. Insensitive to susceptibility effects. Enables more accurate lesion evaluation.

The landmark in 1.5T: Always secure, always ahead.

MAGNETOM Avanto with Tim+Dot helps leading healthcare institutions develop new approaches to clinical care. Tim is proven by more than 6,000 installations worldwide. With Tim, MRI moved to the next level. And now, Dot is available as the next movement in MRI. Consequently MAGNETOM Avanto helps give customers security. The security of knowing that they can move a step forward. Today, and for years to come.

A clinical perspective.

Continuously evaluating and well addressing customers' clinical needs. This is what puts Siemens at the forefront of innovation in the field of MRI. And it is the only way to help customers stay secure and ahead with their investment. And to make sure patients benefit most in the end. MAGNETOM Avanto has both the power of Tim+Dot and the simplicity of *syngo*. This streamlines MRI examinations. From ordering through planning, performing exams, processing, reporting, and distribution.

MAGNETOM Avanto offers exceptional magnet homogeneity for excellent fat saturation. Just what is needed to excel, for example, in cardiac MRI. Its up to 50 cm Field-of-View offers a superior view of pathologies. With high gradient power, MAGNETOM Avanto delivers high resolution. And, at the same time, short scan times. Tim's broad range of dedicated applications means increased consistency. For faster and more reliable diagnoses.

MAGNETOM Avanto, now with Dot. Significant workflow innovations help make every exam easier. With fast and consistent adaptation to both patient condition and the clinical question. Even when conditions change.

syngo Inline Technology allows certain processing steps during image reconstruction. They are immediately displayed after completion. The result: Processing instead of postprocessing.

AutoAlign facilitates reproducible slice positioning, e.g. in head or knee. No manual adjustments needed. This maximizes standardization and comparability in follow-up examinations.

With the seamless integration to *syngo*.via not only the workflow right at the scanner will be further improved. But also the workflows beyond.

These harmonized imaging assets allow reproducible follow-up examinations. And they provide broadness in options and depth in possibilities. To well address the clinical perspective. In short: A Siemens solution.

A patient perspective.

The patient is the center of attention. Always has been, always will be. MAGNETOM Avanto with Tim+Dot changes the entire patient experience. Each exam can be tailored to individual patient conditions. With just a click of the mouse. According to different patient conditions.

Patient comfort is enhanced with short scan times. Ultra-lightweight Tim coils help patients to relax. AudioComfort results in up to 97%[2] reduced sound pressure. AutoVoice Commands integrated into Dot support multiple languages for a truly personalized exam. Patients can be offered feet-first exams for nearly all MRI procedures. This, in turn, helps to reduce possible claustrophobia. No repositioning of the patient is needed. Even for large Field-of-View exams. This means, studies go faster and feel easier – for everyone.

A business perspective.

The economics are strong behind MAGNETOM Avanto with Tim+Dot. To start, it grants access to the latest technology. Access to smart future-proof performance. Access to a compact design allowing low-cost installation with minimal space requirements. Easy siting with a small footprint.

With Tim+Dot customers can achieve higher patient throughput with shortened examination times. Tim dramatically improves workflow by expediting exams and increasing throughput. Patient set-up is faster. Scan times are reduced. Dot optimizes the workload through personalized, guided, and automated exams. That makes examinations more consistent, faster, and with less chance of errors.

Tim+Dot also enable faster training and increased staff versatility. Especially when it comes to job rotation between modalities or scanner operation during night shifts.

With Zero Helium boil-off and low power and cooling requirements, MAGNETOM Avanto significantly reduces costs. From the first day of operation.

With MAGNETOM Avanto, Siemens meets imaging needs. From every perspective. It offers a unique combination of outstanding 1.5T and minimized lifecycle costs. Siemens is continually providing trendsetting technologies. They support the business of customers and help improve patient care.

Customer care and services

Dedicated to helping you get the most out of your investment throughout the product lifecycle and beyond.

MAGNETOM World

Relevant for the clinical routine: our international user community with the latest clinical information, publications, talks, application tips, videos, education and training programs, and more.

siemens.com/magnetom-world

Financial Solutions

Siemens Financial Services creates value with best-in-class financing solutions.

siemens.com/finance

Options and Upgrades

Get the most out of your Siemens system during the whole product lifecycle. Discover new possibilities with our applications, coils, and *syngo*.via.

siemens.com/discoverMR

Customer Services

We offer you a wide range of proactive services – thus enabling increased system availability, optimized performance, and workflow efficiency.

We focus on real-time remote monitoring and preventive maintenance of medical hardware and software. That's how we solve problems before they occur, thus enabling increased system availability, optimized performance, and workflow efficiency. To keep you on track to success – now and in the future.

siemens.com/uptime-services

syngo Evolve MR

Up-to-date, powerful hardware and software are key factors for enhancing the performance and diagnostic quality of your systems. *syngo* Evolve helps you to keep pace with rapidly developing technological advances.

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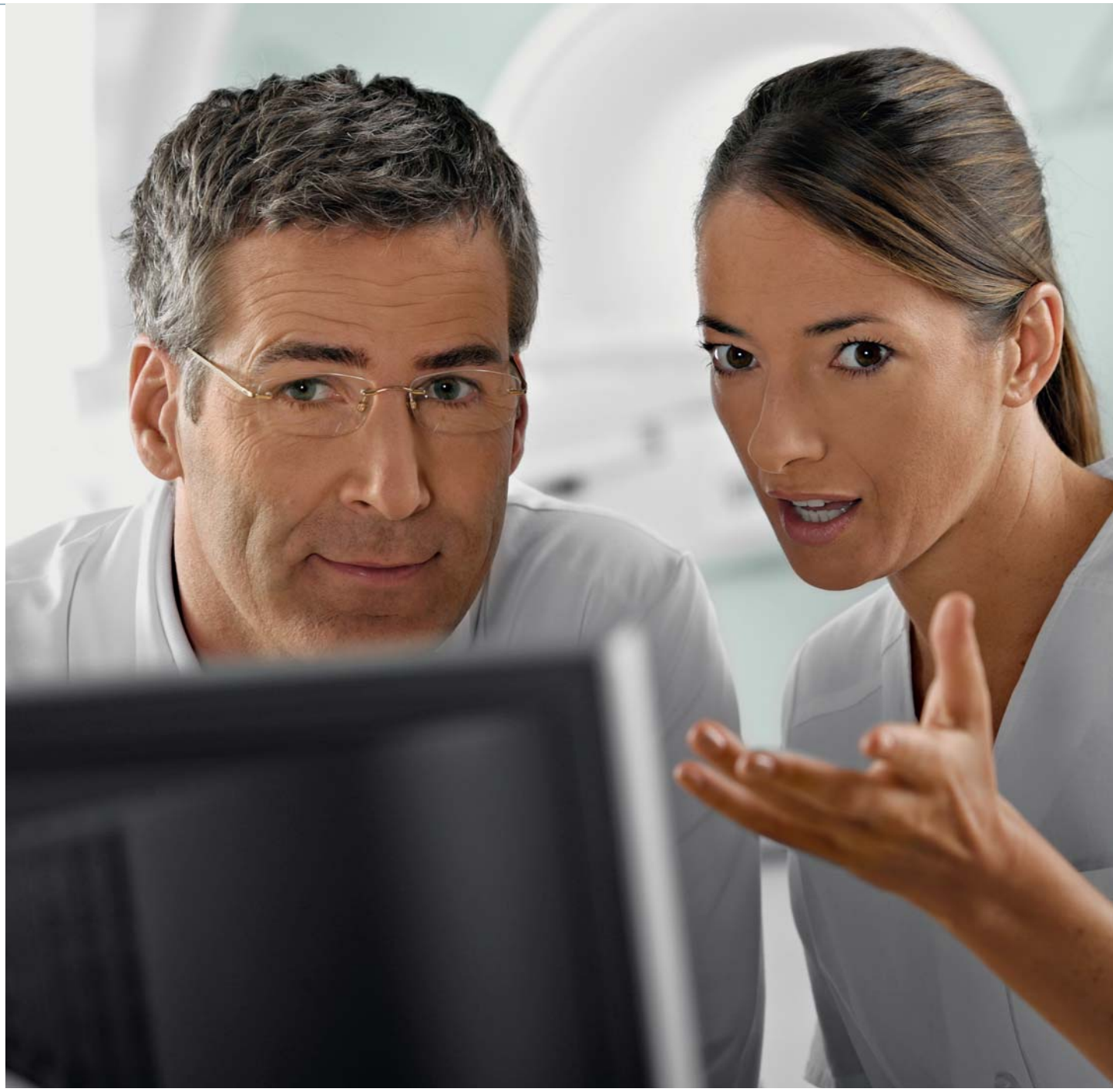
MAGNETOM World, where MRI meets clinical expertise.



[1] MR scanning has not been established as safe for imaging fetuses and infants under two years of age. The responsible physician has to decide about the benefit of the MRI examination in comparison to other imaging procedures.

[2] Data on file; results may vary.

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