MAGNETOM Altea with BioMatrix

Confidence to deliver

siemens-healthineers.com/altea

SIEMENS Healthineers

MAGNETOM Altea

Confidence to deliver

As part of our groundbreaking new BioMatrix scanner generation, MAGNETOM Altea is the latest 1.5T Open Bore system designed to fundamentally transform care delivery in your key clinical areas while providing financial sustainability.

New, 1.5T magnet with 70 cm Open Bore and large 50 x 50 x 50 cm^3 FoV

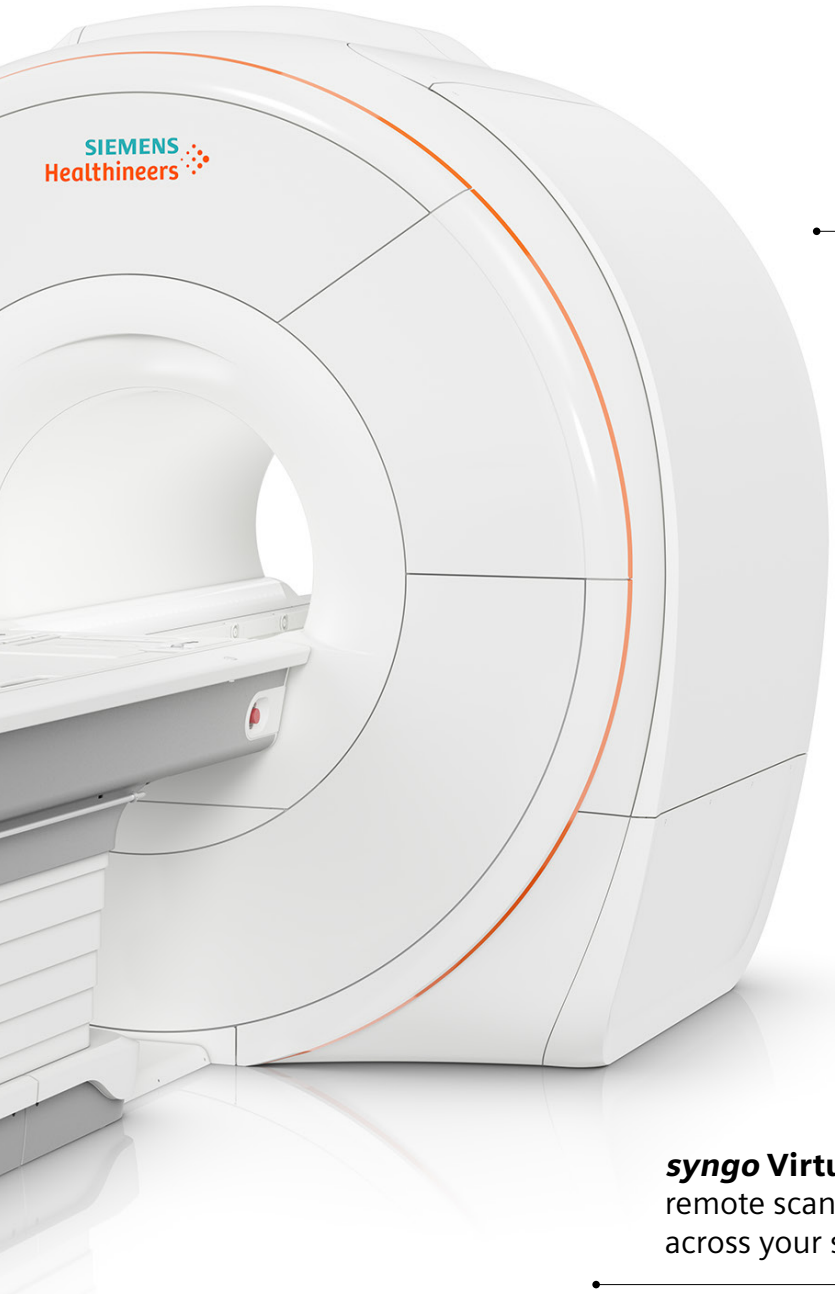
Tim [180x32] RF configuration with powerful XJ gradients (33 mT/m @ 125 T/m/s simultaneously)

Patient-centered coil portfolio powered by Tim 4G and BioMatrix Technology puts patients at greater ease

Unique BioMatrix Technology automatically adjusts to patient biovariability

Transforming
care
delivery

***syngo* MR XA software platform** for intuitive system operation and a single user interface across your fleet



GO technologies powered by artificial intelligence boost patient throughput

Turbo Suite acceleration packages enable up to 50%[1] faster scanning

8 unique Dot Engines provide highly automated scan procedures for more than 90%[1] of all MRI exams

***syngo* Virtual Cockpit[2]** provides game-changing, remote scanning assistance for standardized results across your system fleet

MAGNETOM Altea

Confidence to deliver productivity gains

MAGNETOM Altea accelerates routine scans by up to 50%[1] with our exclusive Turbo Suite, GO, and BioMatrix technologies.

Setting the pace in MR acceleration with Turbo Suite

Turbo Suite for MAGNETOM Altea is comprised of two packages with unique capabilities that can be tailored to your clinical needs.

With Turbo Suite, you gain access to future developments in MR acceleration, keeping you up to date.

Reduce the total exam time by up to 50%[1]

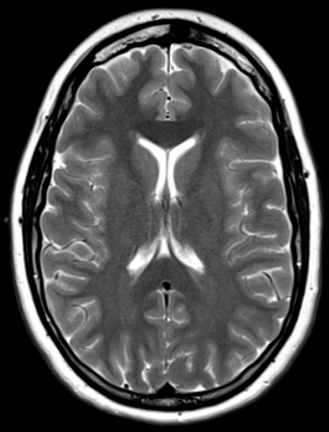
Further information on Turbo Suite:
siemens-healthineers.com/turbo-suite

Turbo Suite Essential

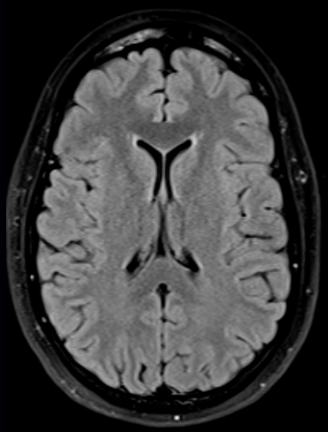
Stay on schedule and maximize productivity with core MR acceleration technologies

Turbo Suite Essential is our standard acceleration package for MAGNETOM Altea. This package leverages high element density coils, the parallel imaging techniques GRAPPA and our unique CAIPIRINHA to deliver routine exams in 10 to 15 minutes[1].

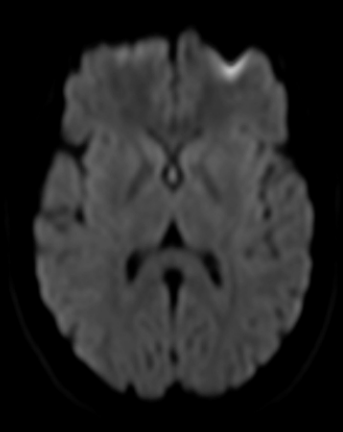
Neuro imaging



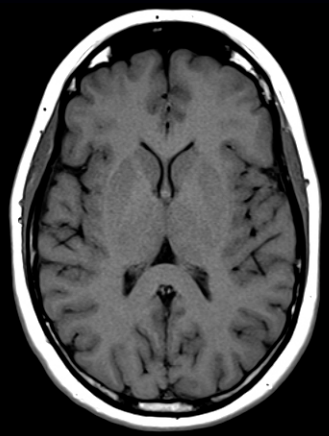
2D T2 TSE
0.6 x 0.6 x 4 mm³, TA 1:50 min



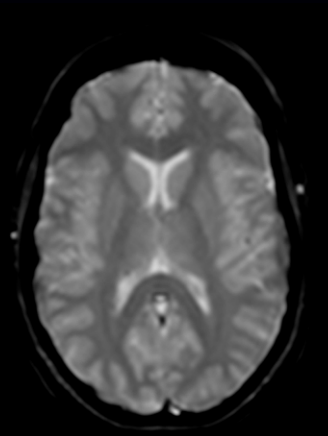
T2 Dark Fluid
0.8 x 0.8 x 4 mm³, TA 1:36 min



DWI, b1000
1.1 x 1.1 x 4 mm³, TA 1:16 min



2D T1 SE
0.6 x 0.6 x 4 mm³, TA 2:00 min



T2*
0.8 x 0.8 x 4 mm³, TA 1:29 min

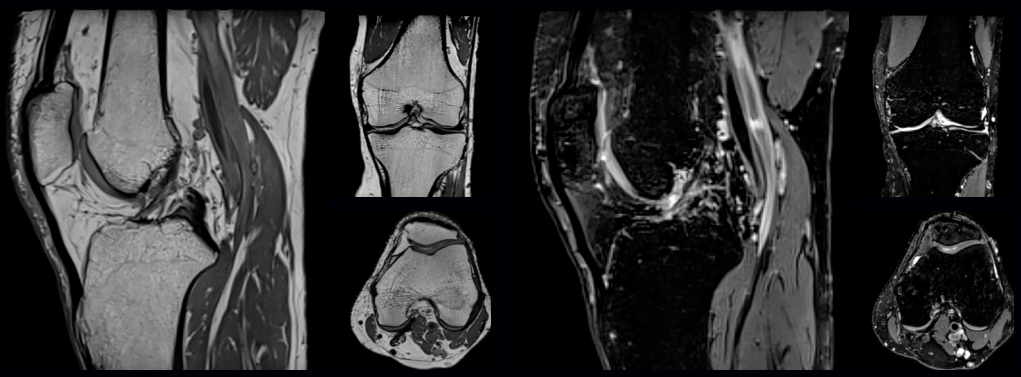
Total exam
12:35 min

3D TOF
0.3 x 0.3 x 0.6 mm³, TA 4:24 min

Routine exams in
10–15 minutes[1]

Isotropic 3D MSK exams utilize the power of CAIPIRINHA, delivering all clinically relevant contrasts in 10 minutes. For body imaging, up to 50%[1] shorter breath-holds and high-resolution scans are possible with CAIPIRINHA.

MSK imaging – 3D exam



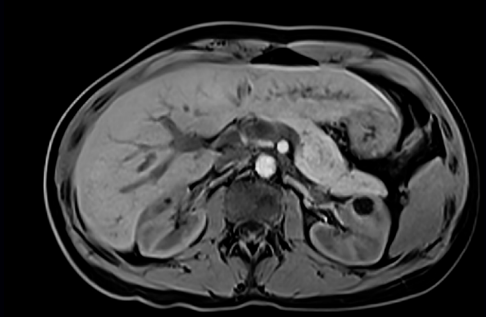
PD
0.6 mm iso, TA 3:55 min

T2 fs
0.8 mm iso, TA 5:42 min

Total exam
9:37 min
enabled by unique
CAIPIRINHA SPACE

Abdominal imaging – significantly shorter breath-holds and improved resolution

CAIPRINHA VIBE, CAIPI 5,
Matrix 211x288, SL 3 mm, TA 15 s



CAIPIRINHA VIBE, CAIPI 4, TA 15 s

Turbo Suite Excelerate

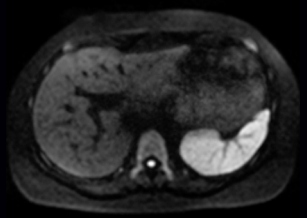
Up to 50%[1] faster for routine, clinical exams

Turbo Suite Excelerate introduces a paradigm shift in productivity with up to 50%[1] time savings, for all contrasts, orientations, and body regions.

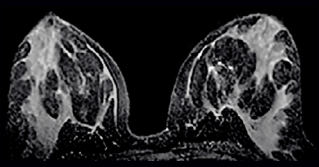
Simultaneous Multi-Slice

Conventional

T1 TSE, PAT 2
0.5 x 0.4 x 3 mm³,
TA 3:36 min



DWI, PAT 3, b800
1.4 x 1.4 x 5 mm³,
TA 3:07 min



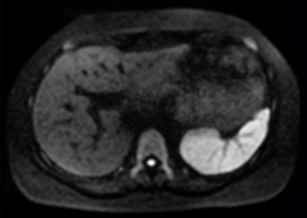
RESOLVE[7], b800
1.2 x 1.2 x 5.00 mm³,
TA 4:21 min

Turbo Suite Excelerate

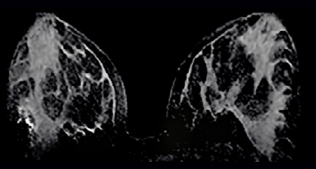
50% reduction | **44% reduction** | **60% reduction**

Powered by Simultaneous Multi-Slice and Compressed Sensing

SMS TSE, PAT 2, SMS 2
0.5 x 0.4 x 3 mm³,
TA 1:49 min



SMS DWI, PAT 2, b800
1.4 x 1.4 x 5 mm³,
TA 1:45 min



SMS RESOLVE[6,7], SMS 3, b800
1.2 x 1.2 x 5.00 mm³,
TA 1:44 min

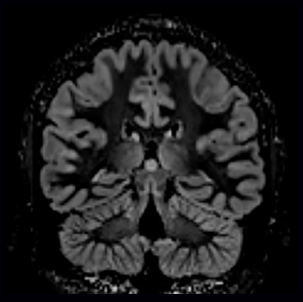
Up to
50% time savings[1]

In addition to our latest Simultaneous Multi-Slice applications for EPI and TSE, the Excelerate package provides future security with access to planned new acceleration techniques including Simultaneous Multi-Slice RESOLVE[6],as well as Compressed Sensing acceleration for SPACE[6], TOF[6] and SEMAC[6].

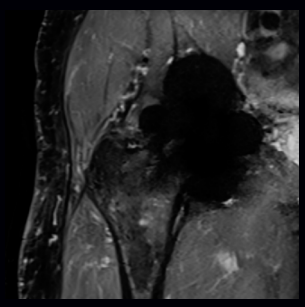
Compressed Sensing

TOF Angio[7], PAT 2
0.4 x 0.4 x 0.4 mm³,
TA 4:28 min

3D T2 SPACE MRCP[7]
0.5 x 0.5 x 1.0 mm³,
TA 7:16 min



T2 SPACE DIR[7]
1.4 x 1.4 x 1.4 mm³,
TA 6:07 min

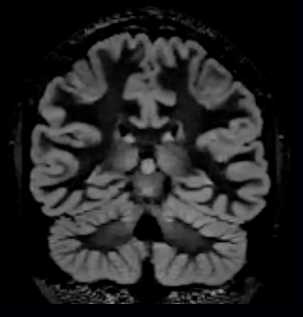


SEMAC[7,8]
1.2 x 1.2 x 3 mm³,
TA 11:10 min

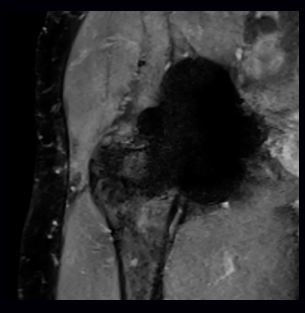
56% reduction | **97% reduction** | **49% reduction** | **51% reduction**

CS TOF Angio[6,7]
0.4 x 0.4 x 0.4 mm³,
TA 1:58 min

CS 3D T2 SPACE MRCP[6,7]
0.5 x 0.5 x 1.0 mm³,
TA 0:15 min



T2 CS SPACE DIR[6,7]
1.0 x 1.0 x 1.0 mm³,
TA 3:07 min



CS SEMAC[6,7,8]
1.2 x 1.2 x 3 mm³,
TA 5:30 min

Automate your MR workflow with GO technologies

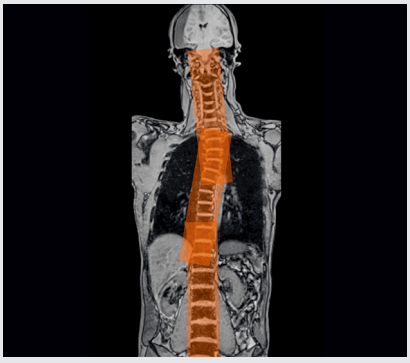
GO technologies powered by artificial intelligence (AI) and BioMatrix help you expedite the entire workflow from patient positioning to result distribution.

30% faster[1] patient positioning

Select&GO

BioMatrix Select&GO, powered by AI, enables fully automated exam positioning with one touch on the display.

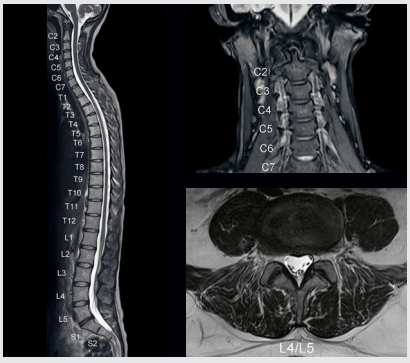
Push-button planning & scanning



DotGO

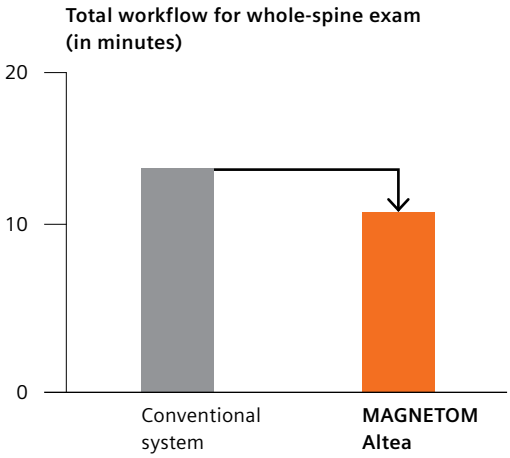
The intuitive Dot workflow offers automatic placement of imaging slices with the AI powered AutoAlign functionality – making even whole-spine imaging a push-button exam.

Zero click, fully automated inline processing



Recon&GO

Recon&GO automatically performs postprocessing steps in the background. For example: vertebrae in the sagittal, axial, and coronal views are automatically labeled in all contrasts.



19% faster
spine exams with GO technologies[1]

Reduced workload for radiologists through advanced applications

View&GO

Dual screens allow the user to efficiently check and distribute results in real time. In addition advanced applications such as generating computed high b-value images or 3D reconstructions of the plexus can be performed directly at the scanner, reducing the workload for radiologists.

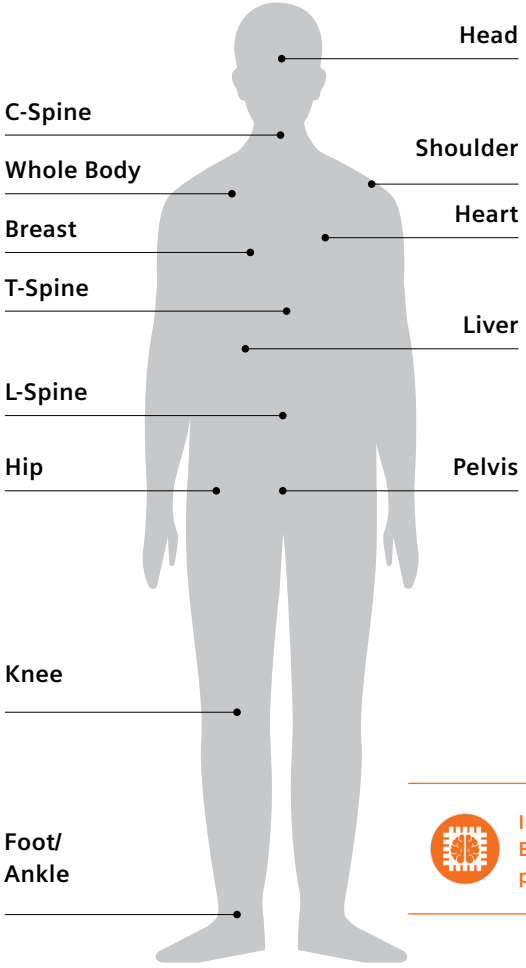
Streamline patient handling with BioMatrix Technology

BioMatrix Technology overcomes variations by automatically adjusting to the individual patient. BioMatrix Sensors, Tuners, and Interfaces enable you anticipate motion, adapt to any patient's body type and accelerate patient positioning. The result: higher diagnostic confidence, fewer rescans, predictable scheduling and consistent, high quality personalized exams.

30% faster
patient positioning[1]

BioMatrix Select&GO

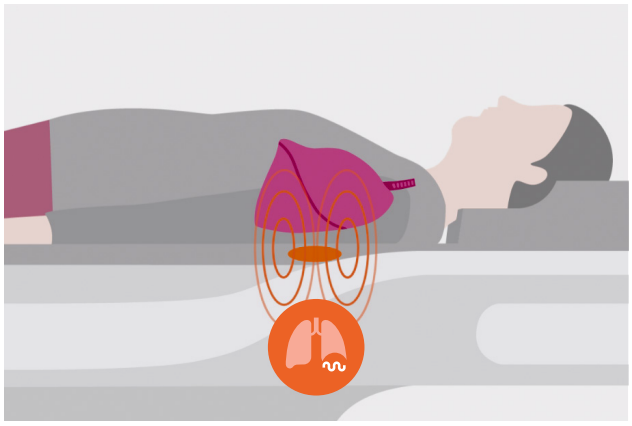
Powered by artificial intelligence – the BioMatrix Select&GO touch display enables patient positioning with one-touch, accelerating patient positioning by up to 30%[1].



Intelligent Body Model powered by AI

Further information on BioMatrix:
siemens-healthineers.us

BioMatrix Respiratory Sensors



Integrated into the BioMatrix Spine coil, Respiratory Sensors automatically detect breathing patterns as soon as the patient lies on the table. Respiratory-triggered scans can be performed without additional user interaction to help simplify and accelerate workflow.

Patient respiration data, acquired by the BioMatrix Sensors, are displayed on the user interfaces, including the Select&GO touch panel directly at patient-side. By viewing the patient's respiration rate, technologists have a sense for how patients are reacting to the exam and can adapt their patient and scanner interactions.

BioMatrix Beat Sensor

The Beat Sensor is seamlessly integrated into the BioMatrix Body 12. It is designed for automatic cardiac triggering[5 52958] – without the need for the time-consuming application of ECG leads.

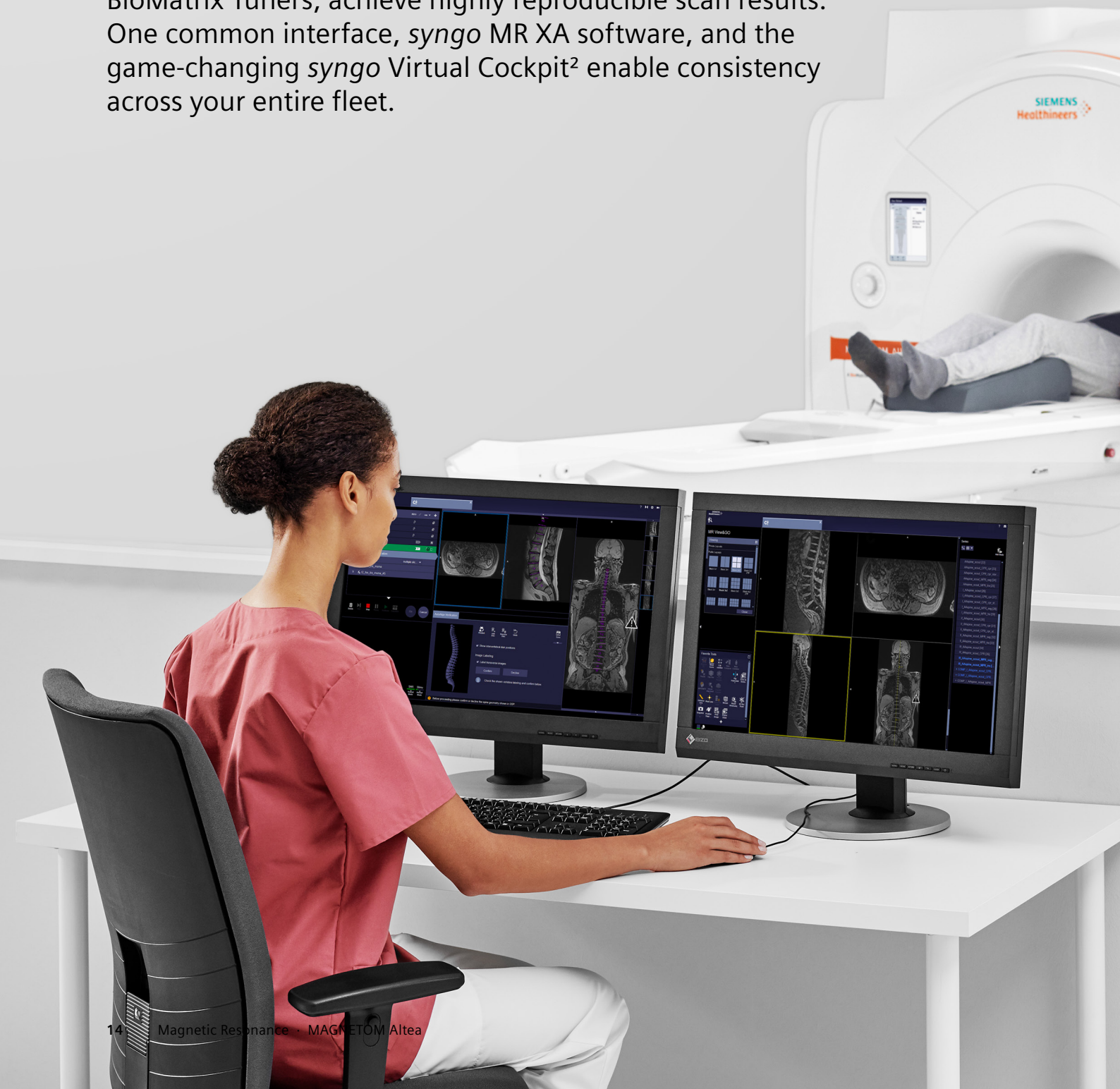
BioMatrix Dockable Table

The BioMatrix Dockable Table with its intuitive control panel streamlines your patient flow especially for immobile patients.

MAGNETOM Altea

Confidence to deliver reproducible results

MAGNETOM Altea delivers consistent diagnostic results across your institution. Eight unique Dot Engines and innovative BioMatrix Tuners, achieve highly reproducible scan results. One common interface, *syngo* MR XA software, and the game-changing *syngo* Virtual Cockpit² enable consistency across your entire fleet.



Automated reproducibility with Dot Engines

MAGNETOM Altea's eight unique Dot Engines tailored to different body regions provide highly automated scan procedures for more than 90%[1] of all MRI exams. Each Dot Engine provides a comprehensive guidance system and predefined scan strategies. AutoAlign, powered by artificial intelligence, delivers automatic placement of imaging slices to ensure reproducible scan results – every time.

Over 90%
of MRI exams covered

Intelligent Body Model
powered by artificial intelligence

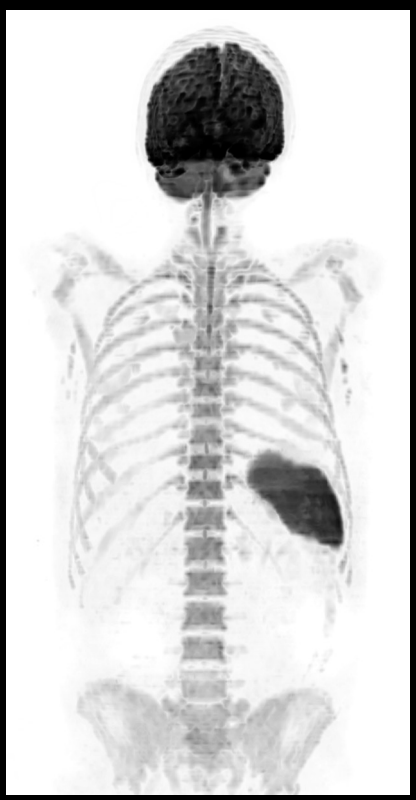
Whole-body MRI from head to pelvis in less than 22 min[1] scan time!

The Whole-Body Dot Engine reduces the planning and execution of complex, whole-body exams to a few clicks. Simply select which regions need to be scanned, choose whether a focus region should be investigated, and set a few patient specific parameters (e.g., breath-hold capability).

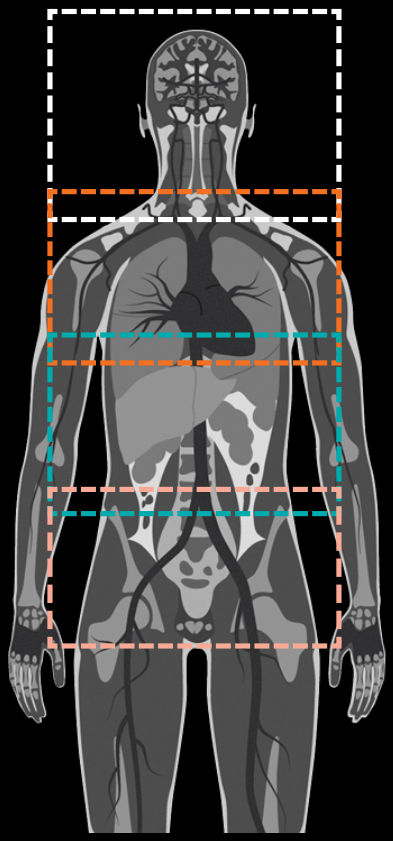
All core protocols for bone and lymph node metastasis detection are covered.

T2 HASTE STIR

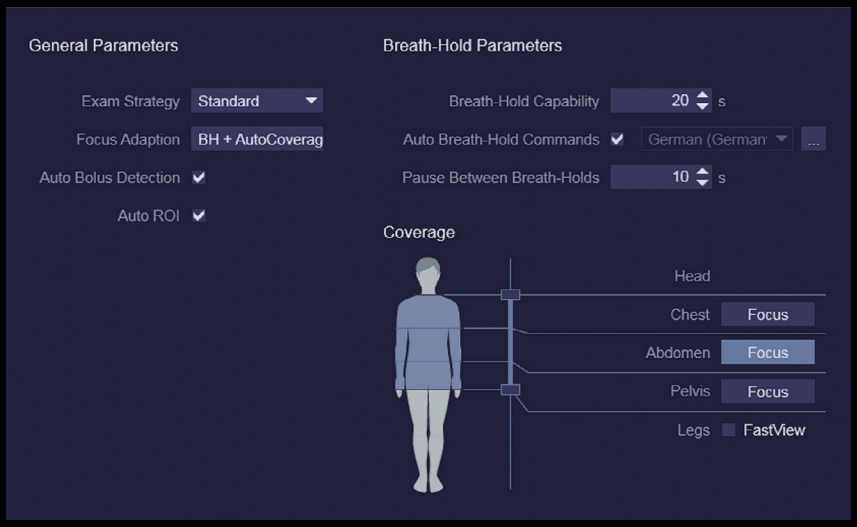
VIBE DIXON Water image



DWI b1400 MIP

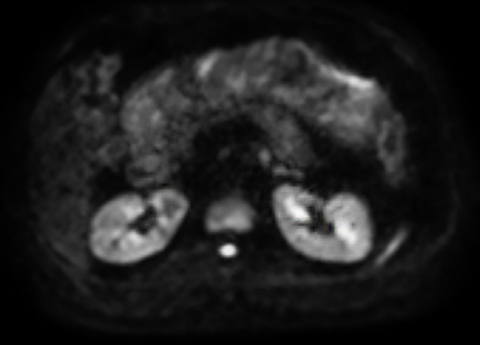


Intelligent Body Model
powered by artificial intelligence



Whole-Body Dot Engine: intuitive and guided workflow

ADC map



DWI b800

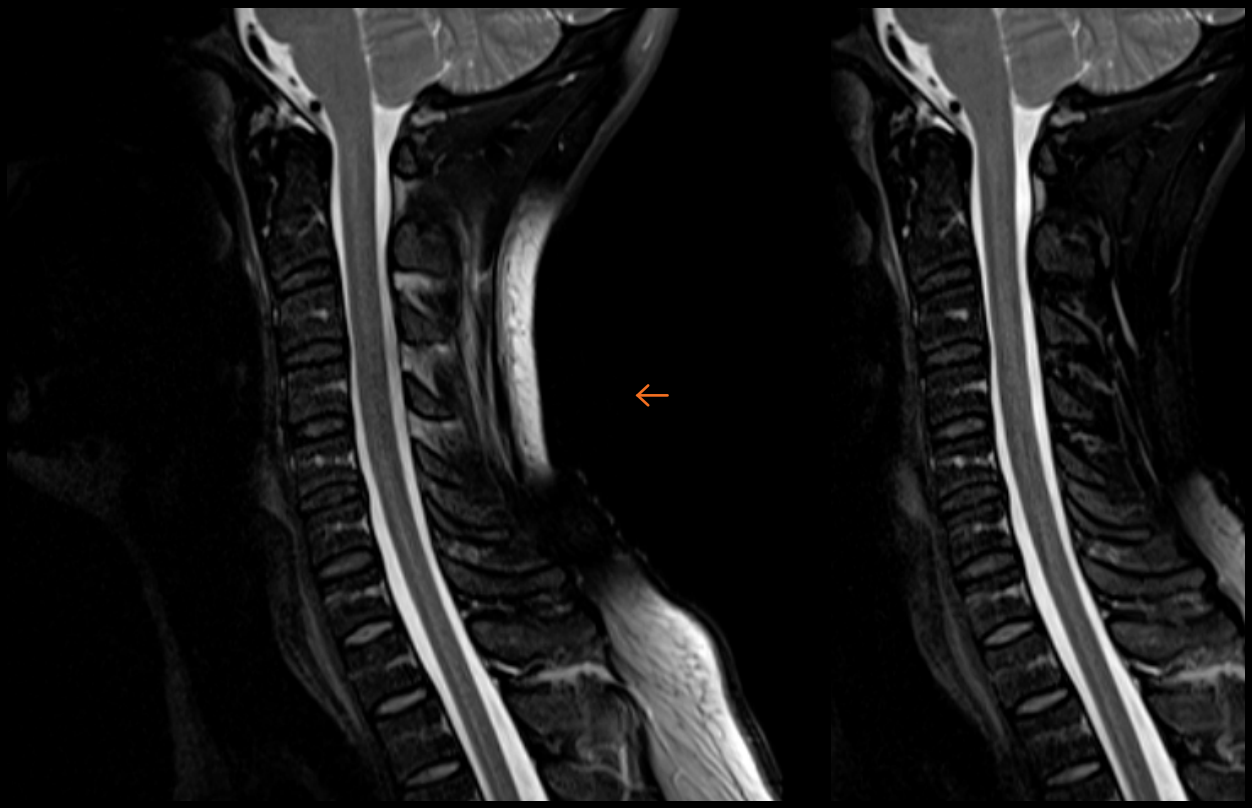
T2 STIR

T1 TSE

Adapt to challenging anatomies for reliable results with BioMatrix Tuners

BioMatrix Tuners adapt to challenging anatomies, such as the head/neck area, the spine and the abdomen, for reliable exam results. Even for difficult scan regions, our intelligent coil technology consistently delivers excellent homogenity and fat saturation – driving robustness and reproducible high-quality imaging – for every patient, every time.

Significantly improved fat saturation and image quality with BioMatrix Tuner CoilShim

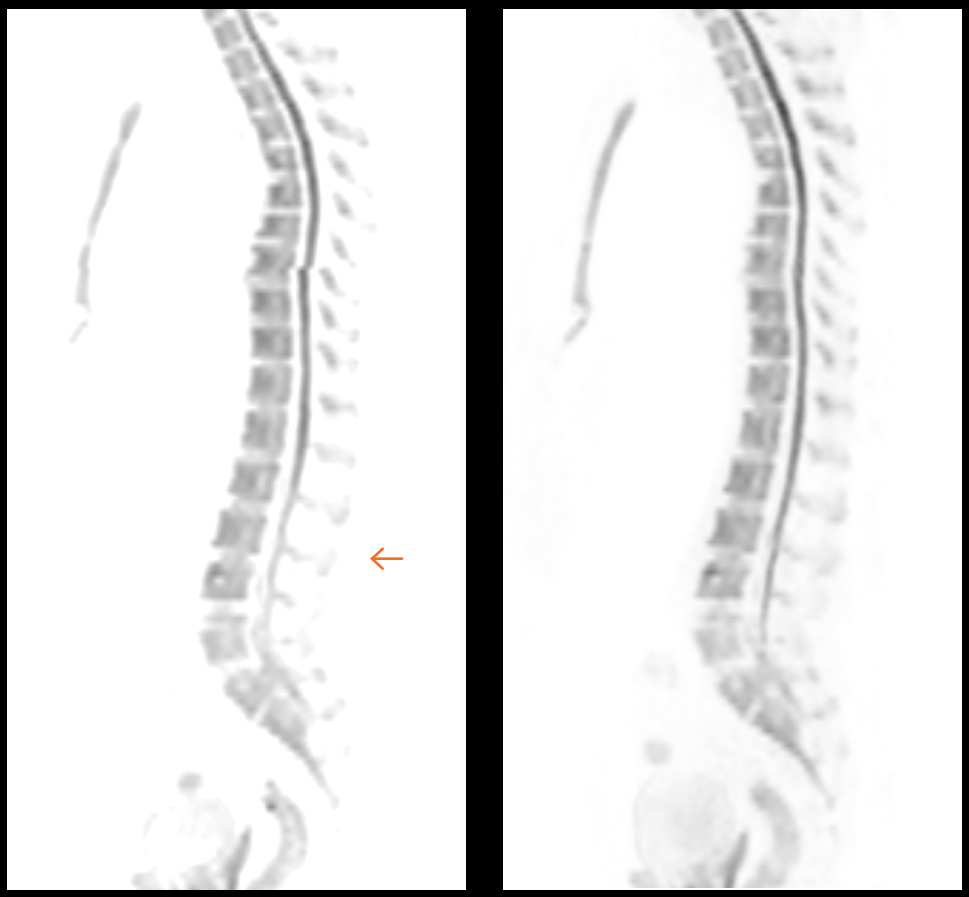


Conventional Shim

With CoilShim

Integrated into the new BioMatrix Head/Neck 20 coil, CoilShim increases diagnostic quality and reduces the need for repeat scans by delivering improved fat saturation and better DWI quality in the neck region. CoilShim technology ensures that the challenging area is automatically and optimally shimmed for reproducible quality in every patient.

Improved image quality in the entire imaging volume with BioMatrix Tuner SliceAdjust



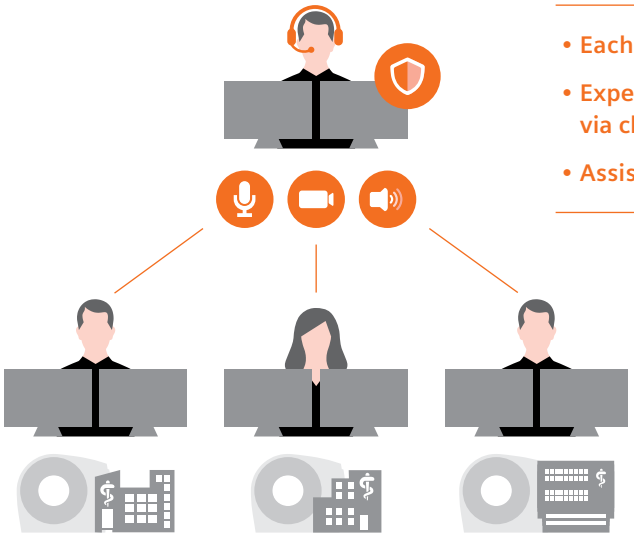
Conventional Volume Adjust

With SliceAdjust

SliceAdjust technology provides reliable fat saturation for both TSE and DWI sequences, as well as distortion-free whole-body DWI scans. It avoids broken spine artifacts in whole-body DWI for excellent correlation with anatomical scans.

Reproducible results across your fleet with *syngo* Virtual Cockpit²

syngo Virtual Cockpit² enables an expert to assist with scan procedures – from a distance. Expert colleagues receive access to the scanner and can support less-experienced technologists – ensuring reproducible results across your entire MR system fleet.



- Each expert can assist up to 3 scanners, simultaneously
- Expert communicates with scanner operator via chat, video, and voice
- Assist MR, MR-PET, CT & PET/CT scanners

Further information on *syngo* Virtual Cockpit: siemens-healthineers.us

Digitalizing
healthcare

syngo Virtual Cockpit[2] can assist you in a great variety of everyday use cases:

Routine examinations
Less-trained technologists can receive live support

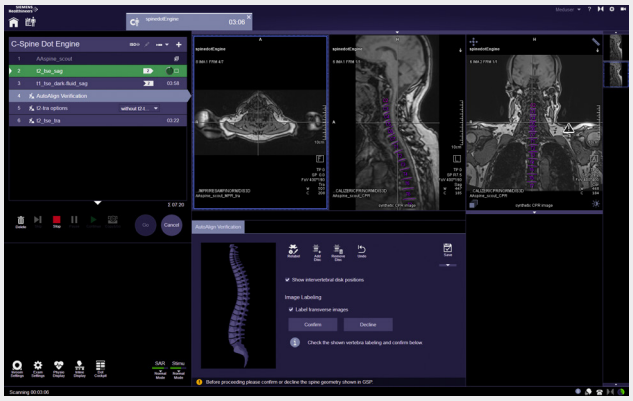
Staff bottlenecks
Personnel from distant sites can fill in without the need to commute

Complex examinations
An expert can assist remotely, e.g. for protocol adjustment or contrast timing

Training
Staff members get hands-on training remotely

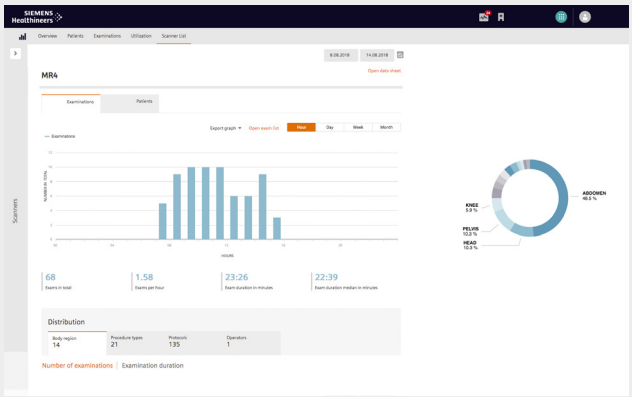
Additional fleet management solutions for consistency across your MR scanner fleet

syngo MR XA-line



One common software platform and user interface across our entire BioMatrix scanner portfolio. Ensuring consistency and reproducible results, no matter which scanner is operated.

teamplay



Optimize your scanner performance and ensure protocol consistency across your fleet with our cloud-based performance management solution teamplay.

MAGNETOM Altea

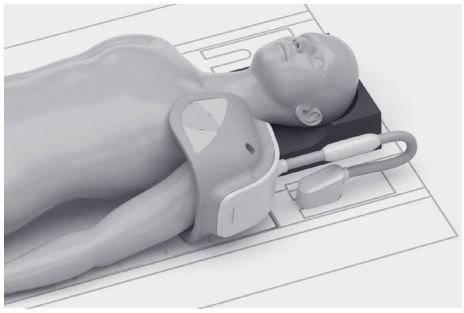
Confidence to deliver patient satisfaction

Patient experience matters. MAGNETOM Altea transforms the MRI experience and puts patients at ease.

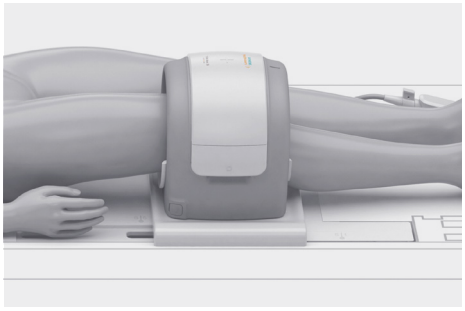
Tim 4G ultra-light and high-density coils are designed for patient comfort

Based on our proven Tim 4G technology MAGNETOM Altea offers a broad range of ultra-light and high-density coils that strongly support patient comfort.

New anatomy-adaptive coils for greater flexibility to accommodate larger patients



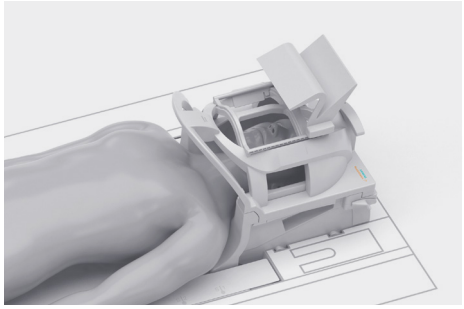
Shoulder Shape 16



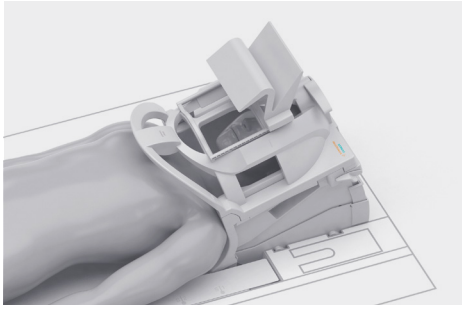
Tx/Rx Knee18

For orthopedic applications, the new Shoulder Shape 16 and the new Tx/Rx Knee 18 deliver greater flexibility to accommodate larger patients through their anthropomorphic design.

Better address kyphotic patients with the tiltable BioMatrix Head/Neck 20



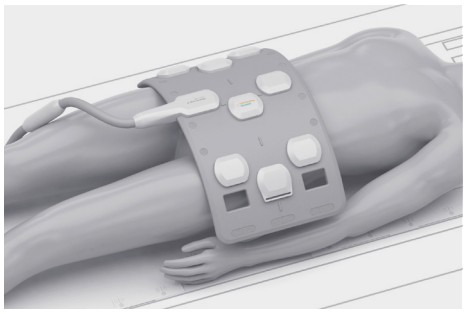
BioMatrix Head/Neck 20



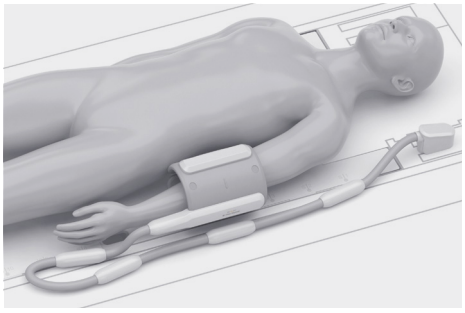
Head tilting between 0° and 18°

Increase patient comfort, better address kyphotic patients, and improve your imaging results with the tiltable BioMatrix Head/Neck 20.

Maximize flexibility with the new UltraFlex 18 coils in small & large



UltraFlex Large 18



UltraFlex Small 18

The new UltraFlex 18 Large and UltraFlex 18 Small combine ultra-high coil element density with high flexiblilty, for multipurpose imaging. Compared to standard 4-channel flex coils, resolution can be increased and acquisition accelerated.

MAGNETOM Altea

Product Services

Siemens Healthineers takes care of your equipment throughout the entire equipment lifecycle. We offer a comprehensive product service approach that ensures a smooth clinical workflow based on maximum equipment availability.

MAGNETOM Altea's equipment service is based on Siemens Healthineers' matchless service infrastructure around the world:

250 billion
data points for AI based error pattern analysis

400
system components constantly monitored

> 1,600
service engineers worldwide

Based on this exceptional infrastructure and connected through our Smart Remote Services MAGNETOM Altea offers unique services to continuously ensure system availability:

Condition Based Maintenance

50% reduced downtime by performing maintenance based on system use

Remote Diagnosis & Repair

50% remote fix rate, minimizing workflow interruptions

Guardian Program

23% reduced downtime through preventive monitoring of 400 critical system components

Smart Remote Services

MAGNETOM Altea

Technical specifications

Field strength	1.5 Tesla
Bore size	70 cm Open Bore design
System length from cover to cover	1.57 m
System weight (in operation)	4.2 tons
Minimum room size[4]	28 m²
RF technology	
Maximum number of channels[3]	180
Number of independent receiver channels that can be used simultaneously in one single scan and in one single FoV, each generating an independent partial image	32
Gradient strength	XJ gradients 33/125 simultaneously [1.3 MVA]
Helium consumption	Zero Helium boil-off technology

Why Siemens Healthineers?

At Siemens Healthineers, our purpose is to enable healthcare providers to increase value by empowering them on their journey toward expanding precision medicine, transforming care delivery, and improving patient experience, all supported by digitalizing healthcare.

An estimated 5 million patients globally benefit from our innovative technologies and services every day in the areas of diagnostic and therapeutic imaging, laboratory diagnostics and molecular medicine, as well as digital health and enterprise services.

We are a leading medical technology company with over 170 years of experience and 18,000 patents globally. With more than 48,000 dedicated colleagues in 75 countries, we will continue to innovate and shape the future of healthcare.

Siemens Healthineers pioneers breakthroughs in healthcare. For everyone. Everywhere. Sustainably. The company is a global provider of healthcare equipment, solutions and services, with activities in more than 180 countries and direct representation in more than 70. The group comprises Siemens Healthineers AG, listed as SHL in Frankfurt, Germany, and its subsidiaries. As a leading medical technology company, Siemens Healthineers is committed to improving access to healthcare for underserved communities worldwide and is striving to overcome the most threatening diseases. The company is principally active in the areas of imaging, diagnostics, cancer care and minimally invasive therapies, augmented by digital technology and artificial intelligence. In fiscal 2024, which ended on September 30, 2024, Siemens Healthineers had approximately 73,000 employees worldwide and generated revenue of around €22.4 billion.

Further information is available at www.siemens-healthineers.com.

The outcomes and statements provided by customers of Siemens Healthineers are unique to each customer's setting. Since there is no "typical" hospital and many variables exist (e.g., hospital size, case mix, and level of service/technology adoption), there can be no guarantee that others will achieve the same results.

On account of certain regional limitations of sales rights and service availability, we cannot guarantee that all products included in this brochure are available through the Siemens Healthineers sales organization worldwide. Availability and packaging may vary by country and is subject to change without prior notice. Some/All of the features and products described herein may not be available in the United States.

The information in this document contains general technical descriptions of specifications and options as well as standard and optional features, which do not always have to be present in individual cases.

Siemens Healthineers reserves the right to modify the design, packaging, specifications, and options described herein without prior notice. For the most current information, please contact your local sales representative from Siemens Healthineers.

Note: Any technical data contained in this document may vary within defined tolerances. Original images always lose a certain amount of detail when reproduced.

[1]Data on file.

[2]syngo Virtual Cockpit is not commercially available yet in all countries. Its future availability cannot be guaranteed.

[3]Channels (coil elements) that can be connected simultaneously.

[4]Minimum total space requirements for magnet, electronics, and console room.

[5]Cardiac Triggering is still under development and not commercially available yet. Its future availability cannot be ensured.

[6]Still under development for MAGNETOM Altea and not yet commercially available. Its future availability cannot be guaranteed.

[7]The exemplary images and scan times displayed were acquired on MAGNETOM Vida.

[8]The MRI restrictions (if any) of the metal implant must be considered prior to patient undergoing MRI exam. MR imaging of patients with metallic implants brings specific risks. However, certain implants are approved by the governing regulatory bodies to be MR conditionally safe. For such implants, the previously mentioned warning may not be applicable. Please contact the implant manufacturer for the specific conditional information. The conditions for MR safety are the responsibility of the implant manufacturer, not of Siemens Healthineers.

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