

**MAGNETOM Lumina
with BioMatrix**

**Confidence
to deliver**

➤ siemens-healthineers.us/lumina



SIEMENS
Healthineers

MAGNETOM Lumina

Confidence to deliver

As part of our groundbreaking new BioMatrix scanner generation, MAGNETOM Lumina is the latest 3T Open Bore system designed to fundamentally transform care delivery in your key clinical areas while providing financial sustainability.

New 3T magnet

with 70 cm Open Bore and large 55 x 55 x 50 cm³ FoV

Tim [180x32] RF technology

with powerful XK gradients
(36 mT/m @ 200 T/m/s simultaneously)

syngo MR XA software platform

for intuitive system operation and
one user interface across your fleet



Transforming
**care
delivery**



Unique BioMatrix Technology
automatically adjusts to patient biovariability

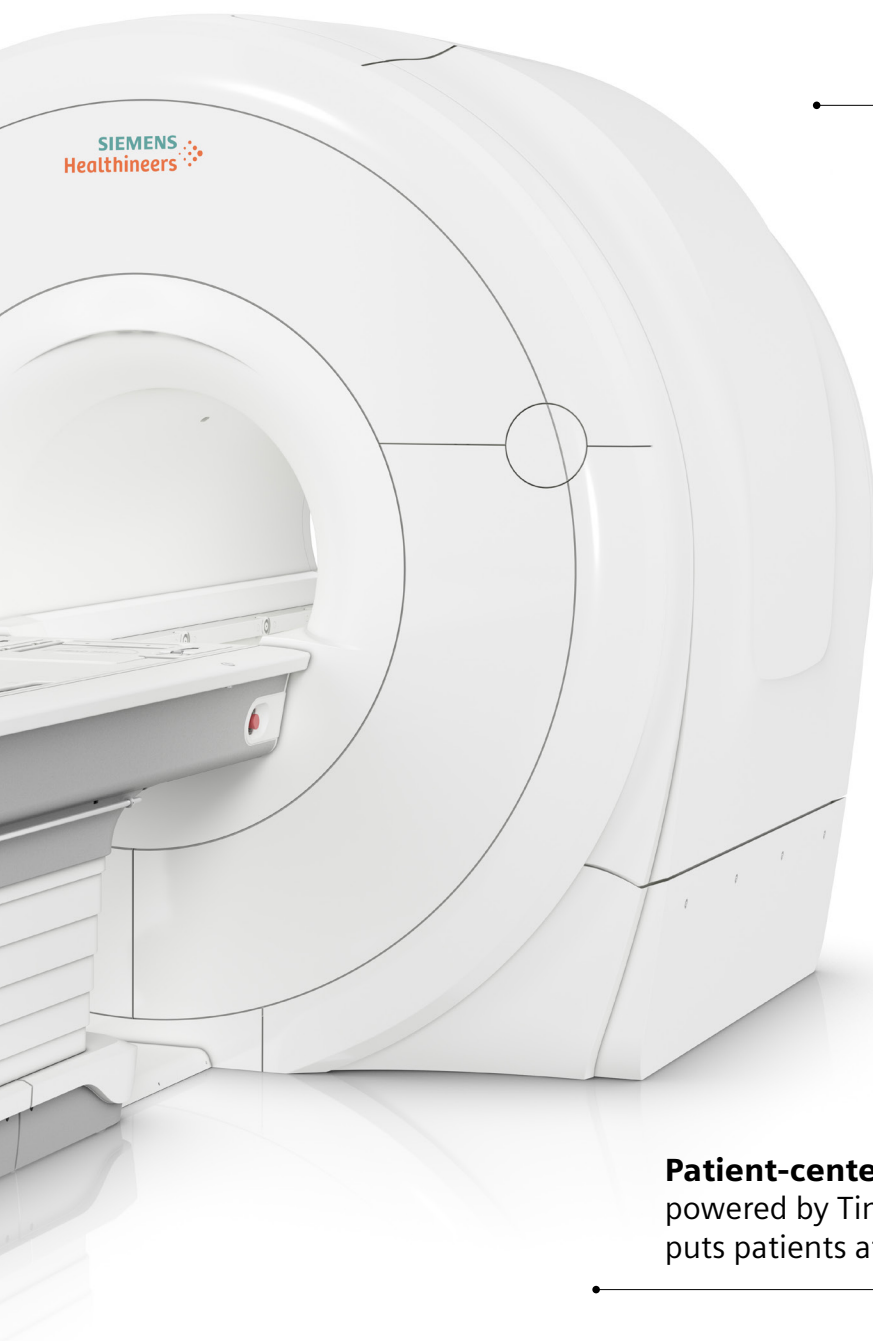
Turbo Suite
acceleration packages enable
up to 50%¹ faster scanning

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

GO technologies
powered by artificial intelligence
boost patient throughput

syngo Virtual Cockpit²
the game-changing
remote scanning assistance
for standardized results
across your system fleet

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



MAGNETOM Lumina

Confidence to deliver productivity gains

MAGNETOM Lumina 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 Lumina 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.



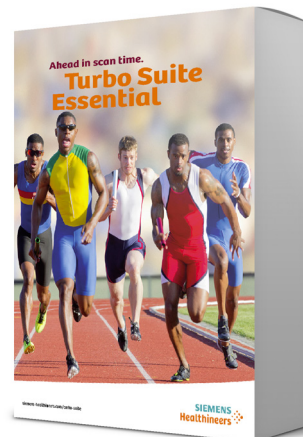
Reduce the total exam time by
up to 50%¹

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

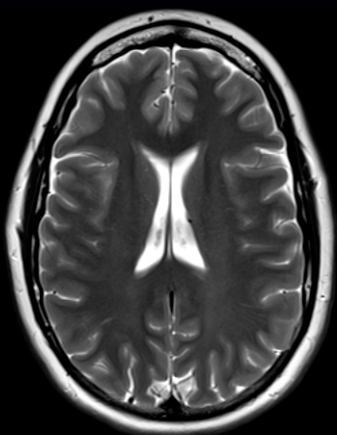
Turbo Suite Essential

Be ahead in scan time and maximize productivity with core MR acceleration technologies

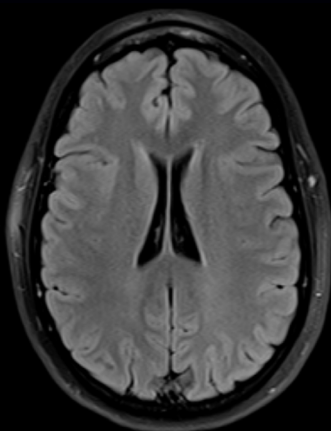
Turbo Suite Essential is our standard acceleration package for MAGNETOM Lumina. This package leverages high element density coils, the parallel imaging technique GRAPPA, and our unique CAIPIRINHA to deliver routine exams in 10 to 15 minutes².



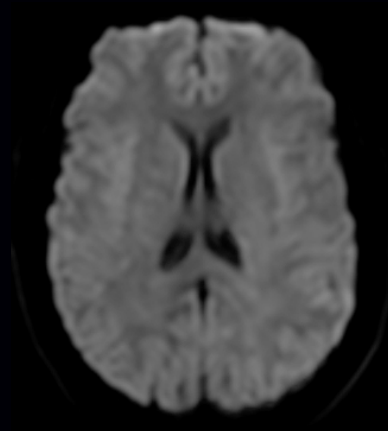
Neuro imaging



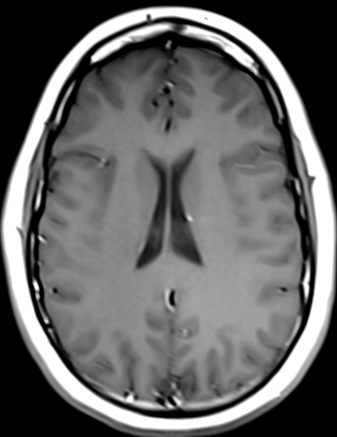
2D T2 TSE
0.6 x 0.6 x 4 mm³, TA 1:30 min



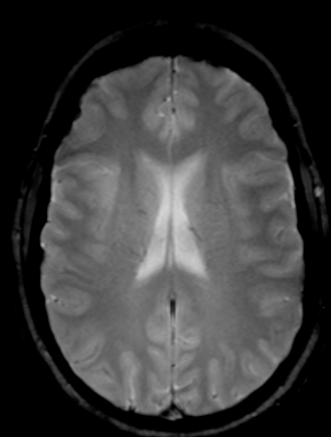
T2 Dark Fluid
0.8 x 0.8 x 4 mm³, TA 1:21 min



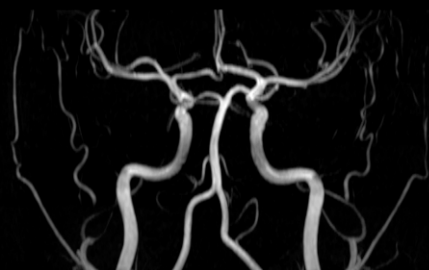
DWI, b1000
1.1 x 1.1 x 4 mm³, TA 1:01 min



2D T1 SE
0.6 x 0.6 x 4 mm³, TA 1:10 min



T2*
0.8 x 0.8 x 4 mm³, TA 1:27 min



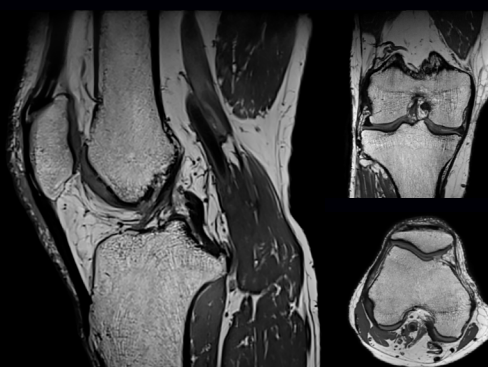
3D TOF
0.3 x 0.3 x 0.6 mm³, TA 4:08 min

Total exam
10:38 min

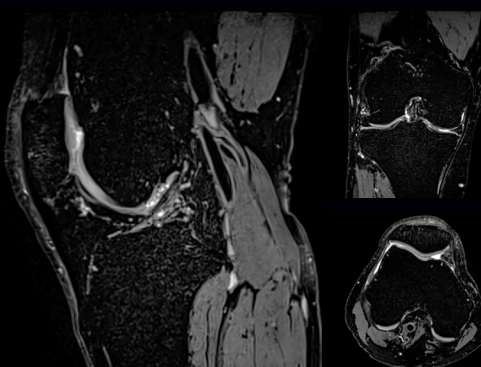
Routine exams in 10–15 minutes¹

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



T2w
0.5 mm iso, TA 4:34 min



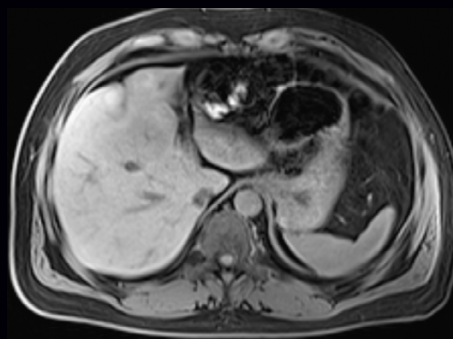
PD FS
0.6 mm iso, TA 4:31 min

Total exam
9:05 min
enabled by unique
CAIPIRINHA SPACE

Abdominal imaging – significantly shorter breath-holds and improved resolution



CAIPRINHA VIBE, CAIPI 6,
Matrix 320, SL 1.4 mm, TA 17.2 s

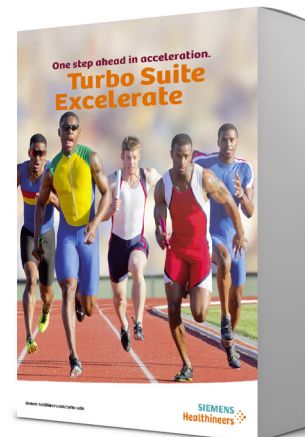


CAIPRINHA VIBE, CAIPI 4, TA 14 s

Turbo Suite Excelerate

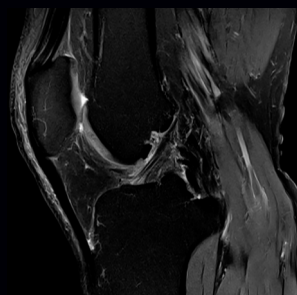
Be up to 50%¹ faster for routine, clinical exams

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

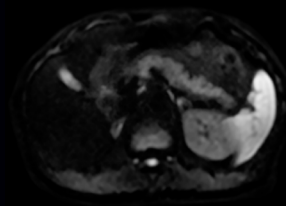


Simultaneous Multi-Slice

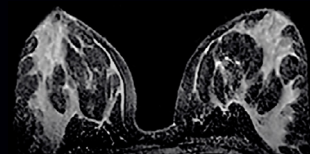
Conventional



PD TSE FS, PAT 2
0.5 x 0.4 x 3 mm³,
TA 2:42 min



DWI, PAT 3, b800
1.4 x 1.4 x 5 mm³,
TA 4:07 min



RESOLVE⁴, b800
1.2 x 1.2 x 5 mm³,
TA 4:21 min

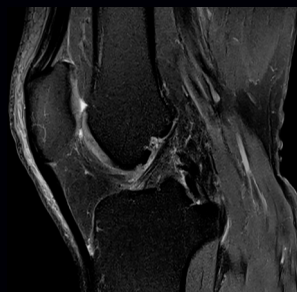
Turbo Suite
Excelerate

50% reduction

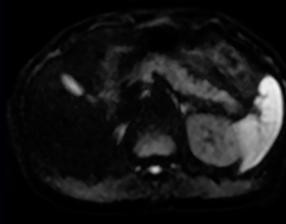
40% reduction

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 1:21 min



SMS DWI, PAT 2, SMS 2, b800
1.4 x 1.4 x 5 mm³,
TA 2:27 min



SMS RESOLVE^{2,8}, SMS 3, b800
1.2 x 1.2 x 5 mm³,
TA 1:44 min



Up to
50% time savings¹

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 Simultaneous Multi-Slice RESOLVE⁴, as well the Compressed Sensing acceleration for SPACE⁴, TOF⁴ & SEMAC⁴.

Compressed Sensing



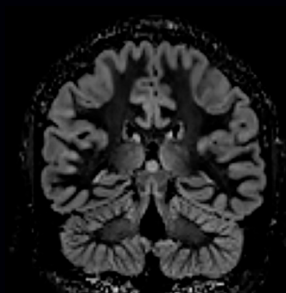
TOF Angio³, PAT 2
0.4 x 0.4 x 0.4 mm³,
TA 4:28 min

56% reduction



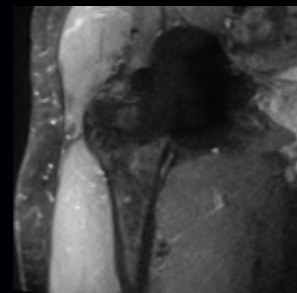
3D T2 SPACE MRCP³
0.5 x 0.5 x 1.0 mm³,
TA 7:16 min

97% reduction



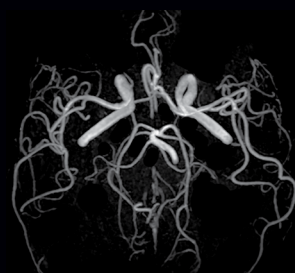
T2 SPACE DIR³
1.4 x 1.4 x 1.4 mm³,
TA 6:07 min

49% reduction

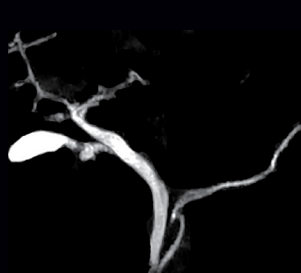


SEMAC^{3,5}
1.2 x 1.2 x 3 mm³,
TA 11:10 min

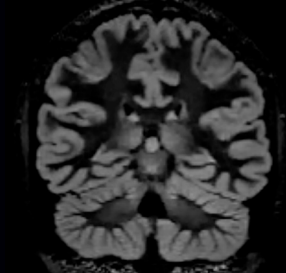
51% reduction



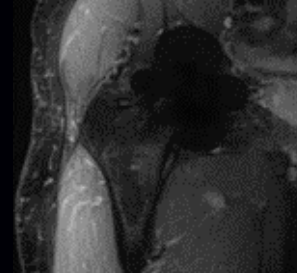
CS TOF Angio^{3,4}
0.4 x 0.4 x 0.4 mm³,
TA 1:58 min



CS 3D T2 SPACE MRCP^{3,4}
0.5 x 0.5 x 1.0 mm³,
TA 0:15 min



T2 CS SPACE DIR^{3,4}
1.0 x 1.0 x 1.0 mm³,
TA 3:07 min



CS SEMAC^{3,4,5}
1.2 x 1.2 x 3 mm³,
TA 5:30 min

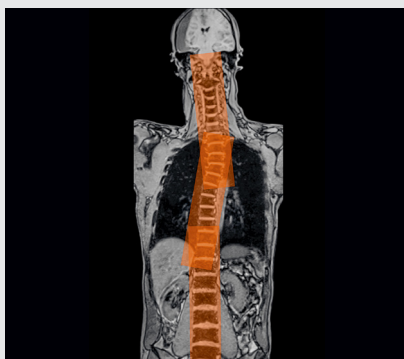
Automate your MR workflow with GO technologies

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

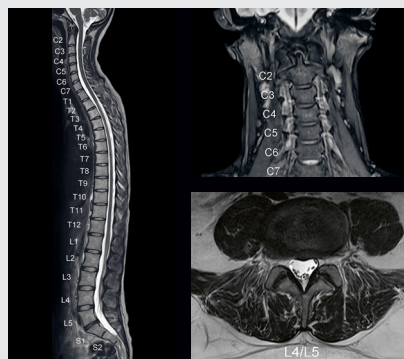
**30% faster¹
patient positioning**



**Push-button
planning & scanning**



**Zero click, fully automated
inline processing**



Select&GO

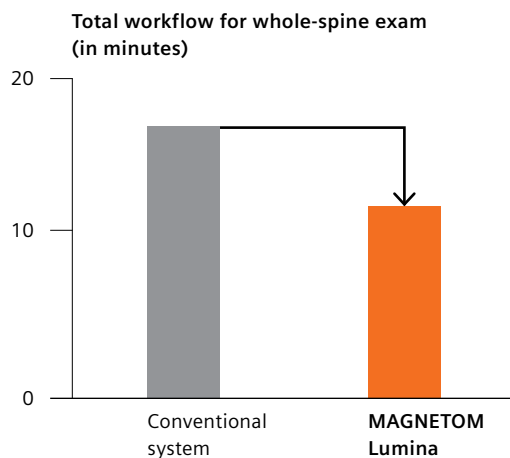
BioMatrix Select&GO, powered by AI, enables fully automated exam positioning with one touch on the display.

DotGO

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

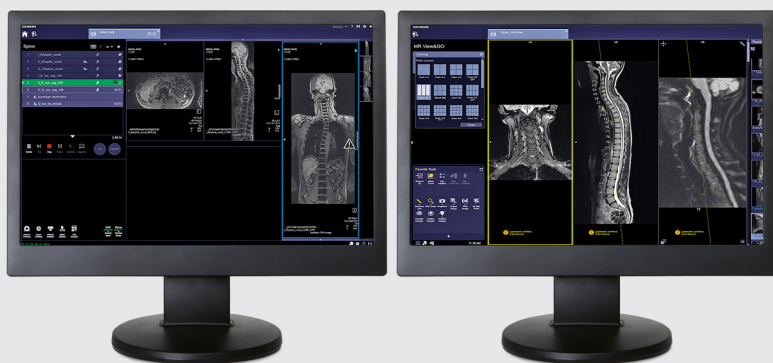
Recon&GO

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.



20% faster
spine exams¹ with GO technologies

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 to anticipate motion, adapt to any patient's body type and accelerate patient positioning. The result is higher diagnostic confidence, fewer rescans, predictable scheduling and consistent, high quality personalized exams.

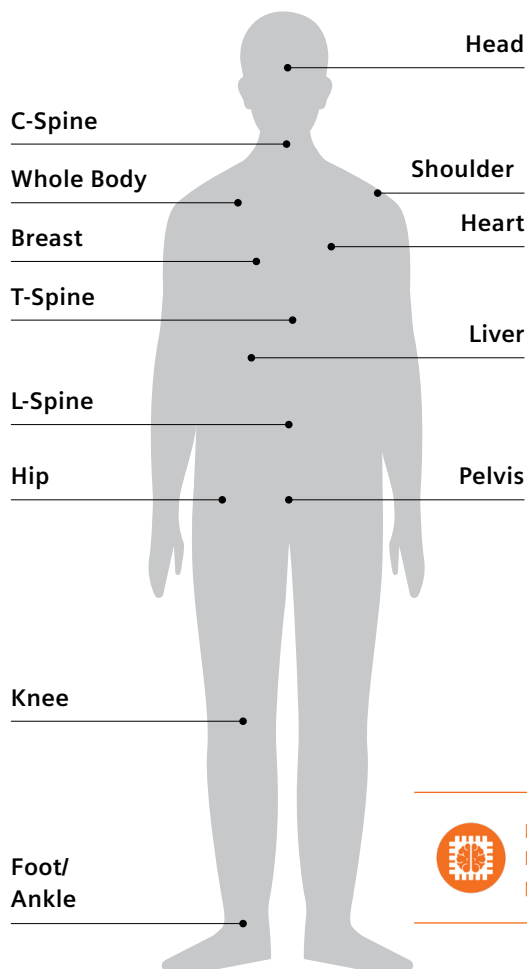


30% faster
patient positioning¹

BioMatrix Select&GO



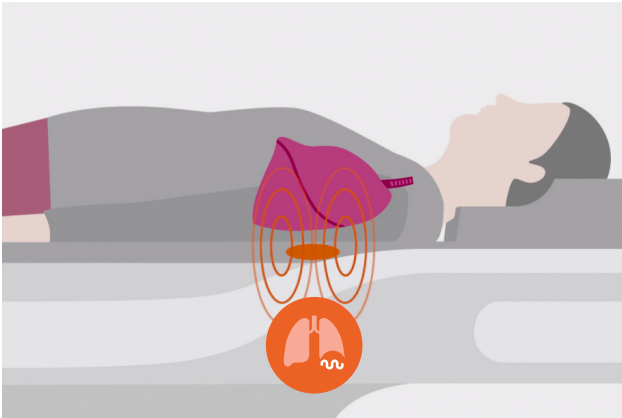
Powered by Artificial Intelligence, the BioMatrix Select&GO touch display enables patient positioning with one-touch, increasing throughput with 30% faster patient positioning¹.



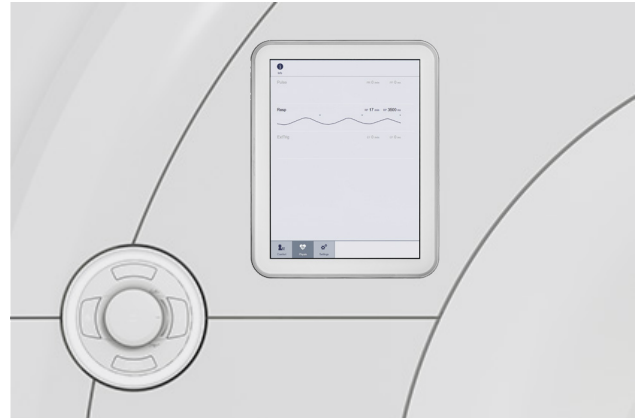
**Intelligent
Body Model
powered by AI**

Further information on BioMatrix:
siemens-healthineers.us/biomatrix

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 triggering⁶ without the need for the time-consuming application of ECG leads.

BioMatrix Dockable Table

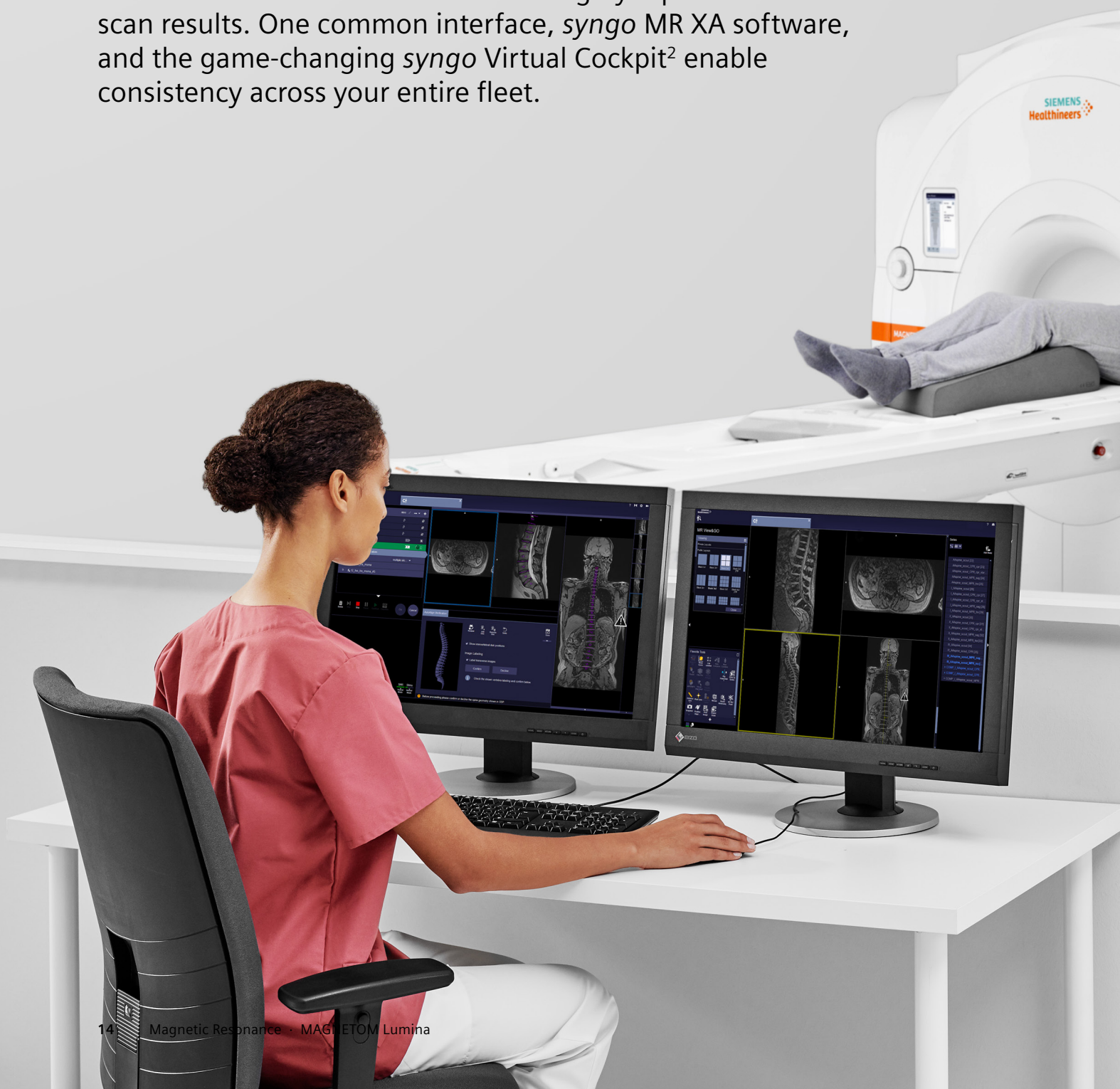


The BioMatrix Dockable Table with its intuitive control panel streamlines your patient flow especially for immobile patients.

MAGNETOM Lumina

Confidence to deliver reproducible results

MAGNETOM Lumina 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.



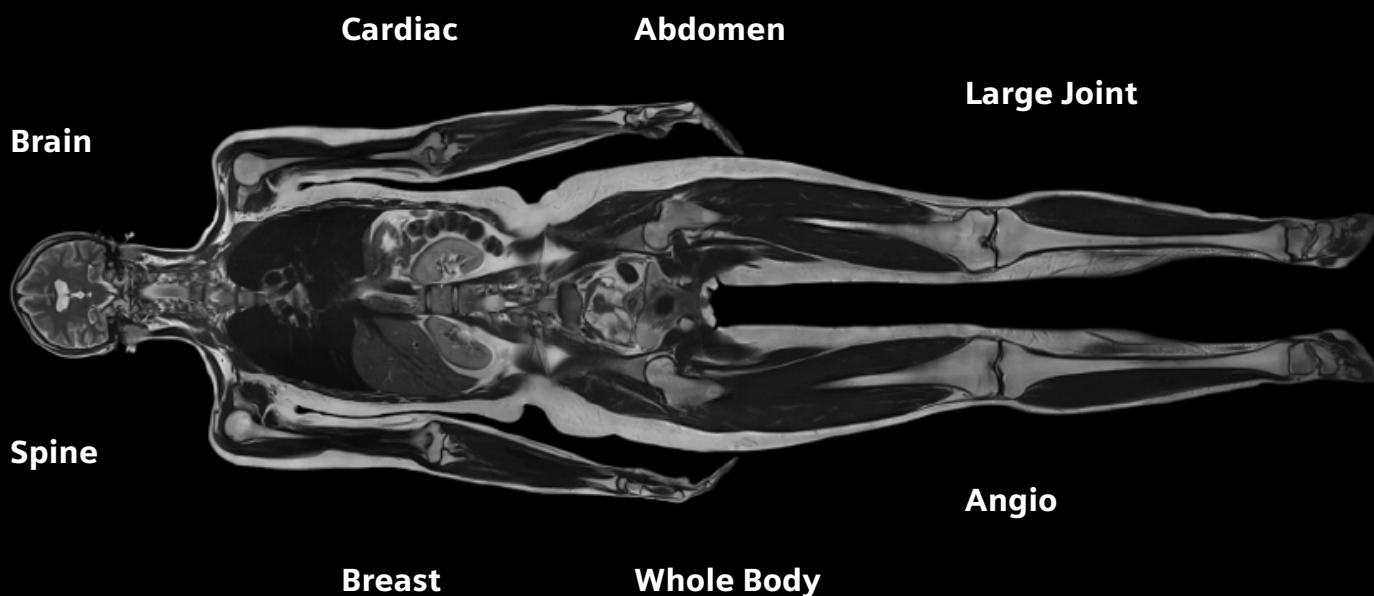
Automated reproducibility with Dot Engines

MAGNETOM Lumina's eight unique Dot Engines tailored to different body regions provide highly automated scan procedures for more than 90%¹ of all MRI exam requests. 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 24 min¹ 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).

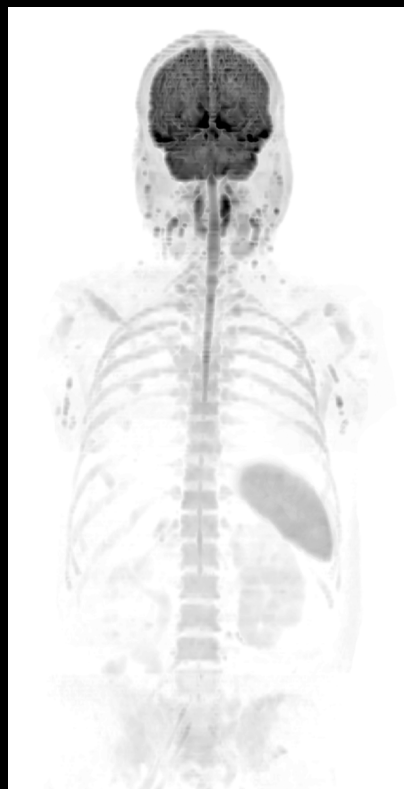
All core protocols for bone and lymph node metastasis detection are covered.



T2 HASTE STIR



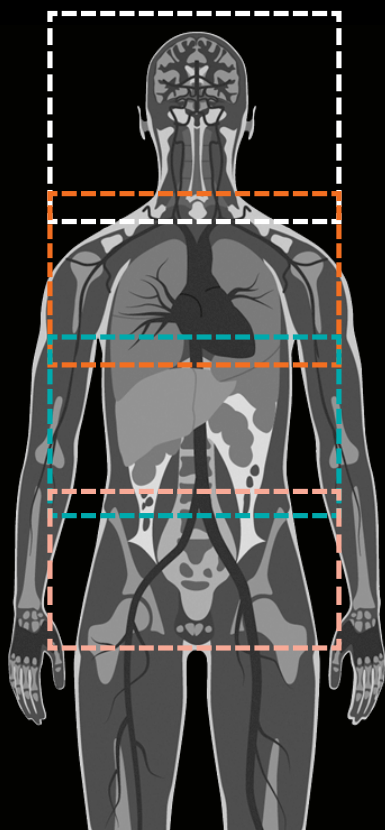
VIBE DIXON Water image



DWI b1400 MIP

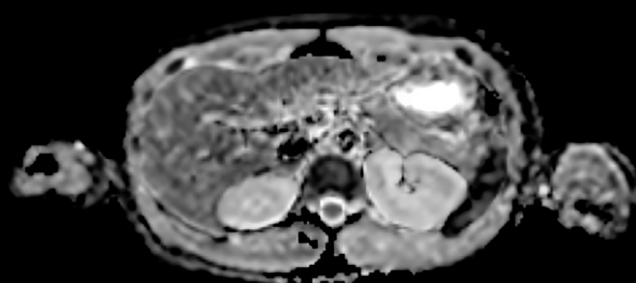


Intelligent Body Model
powered by artificial intelligence

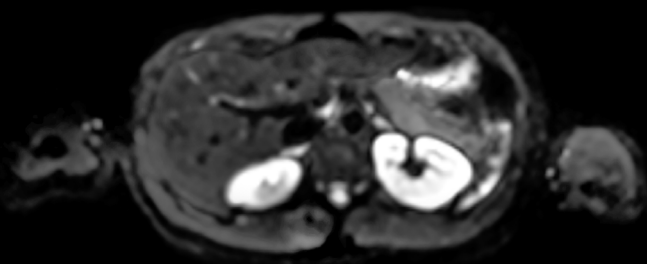


General Parameters	Breath-Hold Parameters
Exam Strategy: Standard	Breath-Hold Capability: 20 s
Focus Adaption: BH + AutoCoverag	Auto Breath-Hold Commands: <input checked="" type="checkbox"/> German (German)
Auto Bolus Detection: <input checked="" type="checkbox"/>	Pause Between Breath-Holds: 10 s
Auto ROI: <input checked="" type="checkbox"/>	
	Coverage
	Head Chest: Focus Abdomen: Focus Pelvis: Focus Legs: FastView

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 homogeneity 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



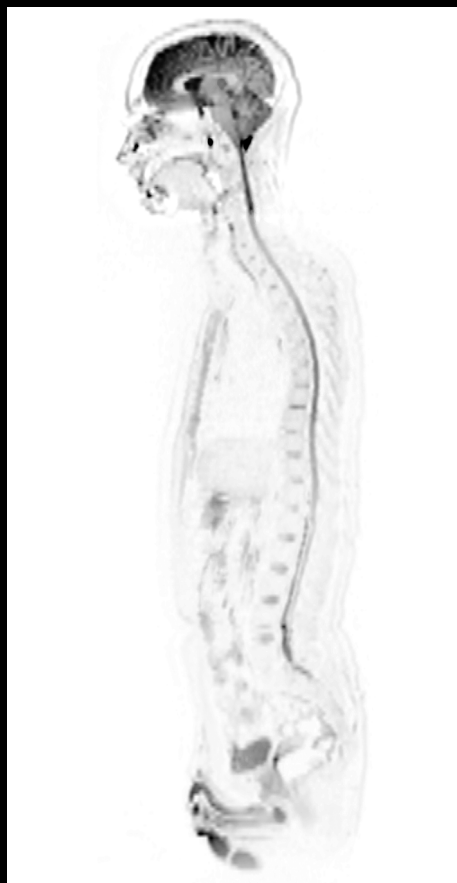
With CoilShim

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

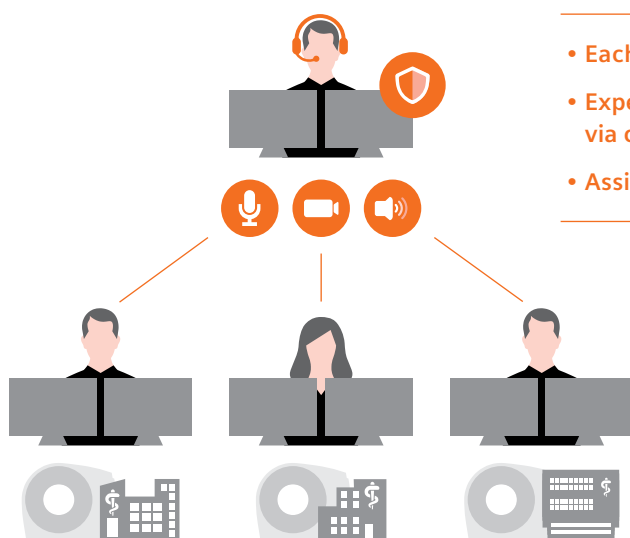


With SliceAdjust

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 Cockpit*²

*syngo Virtual Cockpit*² enables an expert to assist 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/syngo-virtual-cockpit

syngo Virtual Cockpit² can assist you in a 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



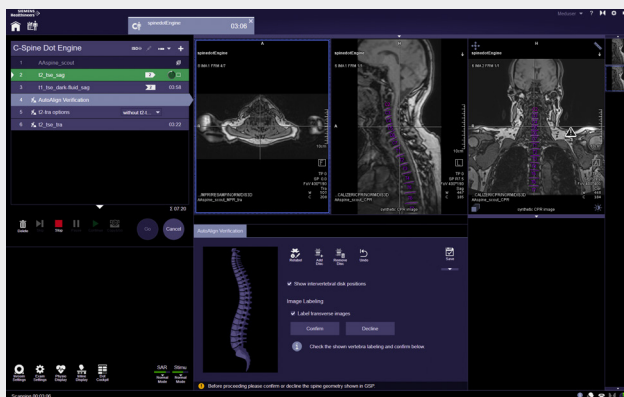
Complex examinations
An expert can assist from remotely, e.g., for protocol adjustment or contrast timing



Training
Staff members get hands-on training remotely

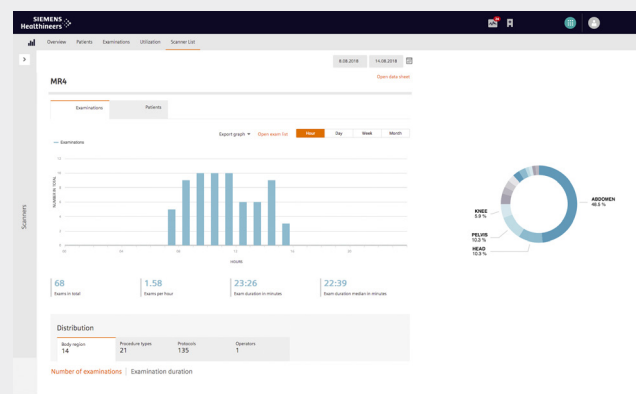
Additional fleet management solutions for consistency across your MR scanner fleet

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 teamwork.

MAGNETOM Lumina

Confidence to deliver patient satisfaction

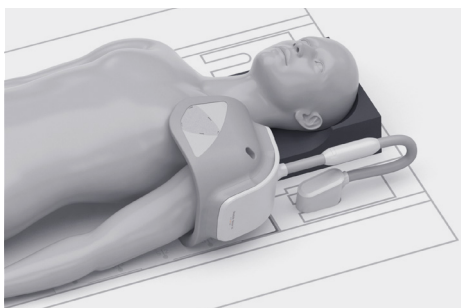
Patient experience matters. MAGNETOM Lumina transforms the MRI experience and puts patients at ease.



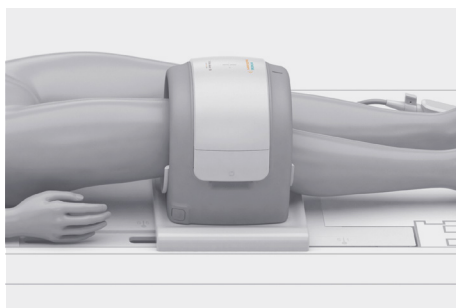
Tim 4G ultra-light and high-density coils are designed for patient comfort

Based on our proven Tim 4G technology MAGNETOM Lumina 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



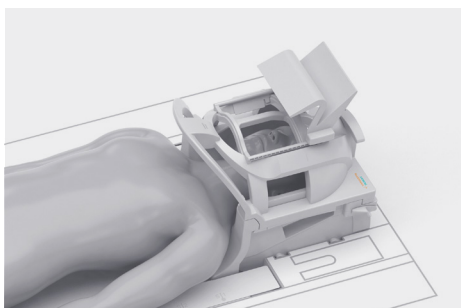
Shoulder Shape 16



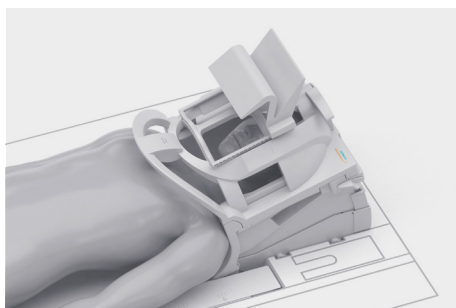
Tx/Rx Knee 18

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



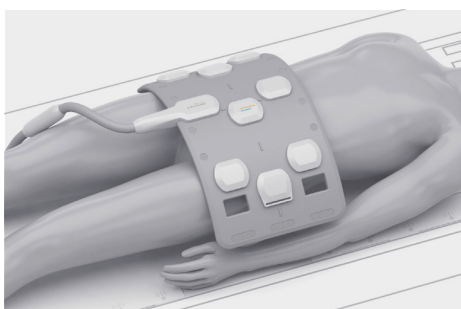
BioMatrix Head/Neck 20



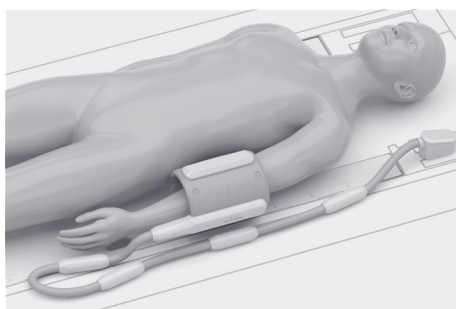
Head tilting between 0° and 18°

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 flexibility, for multipurpose imaging. Compared to standard 4-channel flex coils, resolution can be increased and acquisition accelerated.

MAGNETOM Lumina

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 Lumina's equipment service is based on Siemens Healthineers' unmatched 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 Lumina 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 Lumina

Technical specifications

Field strength	3 Tesla
Bore size	70 cm Open Bore design
System length from cover to cover	1.86 m
System weight (in operation)	8.1 tons
Minimum room size ⁷	31 m ²
RF technology	
Maximum number of channels ⁸	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	XK gradients 36/200 simultaneously [1.7 MVA]
Helium consumption	Zero Helium boil-off technology



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.

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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.

¹Data on file.

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

³The exemplary images and scan times displayed were acquired on MAGNETOM Vida.

⁴Still under development for MAGNETOM Lumina and not yet commercially available. Its future availability cannot be guaranteed.

⁵The 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.

⁶Cardiac Triggering is still under development and not commercially available yet. Its future availability cannot be ensured.

⁷Minimum total space requirements for magnet, electronics, and console room.

⁸Channels (coil elements) that can be connected simultaneously.

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