

SIEMENS



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

MAGNETOM Aera

Image Gallery

Clinical excellence, consistently. With Tim+Dot.

Tim 4G (Total imaging matrix) Technology

Tim® 4G is Siemens ultimate innovation technology that unlocks imaging power like never before.

4G Flexibility

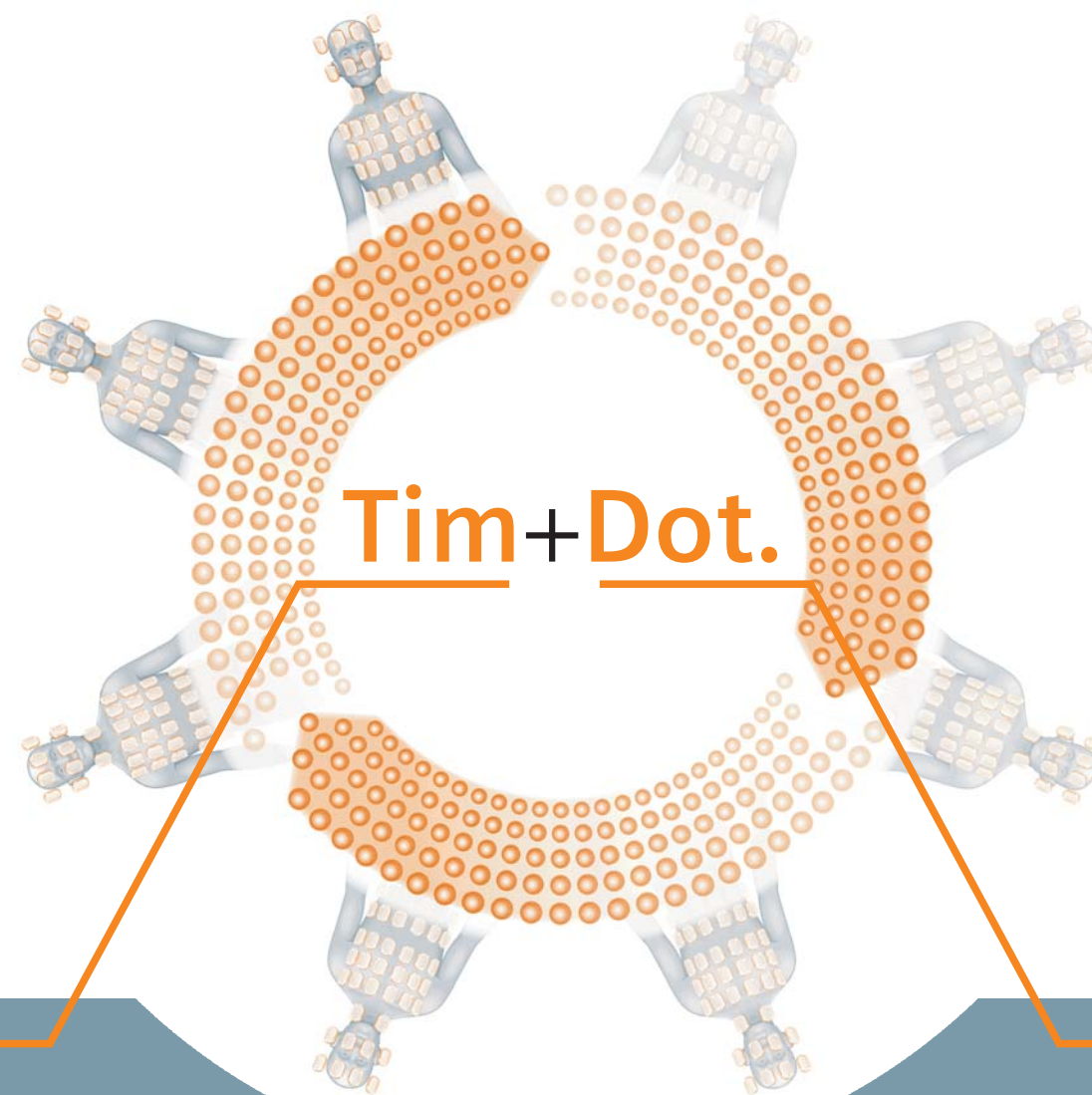
- Up to [204x64]. Ultra high-density coil array for high resolution and an imaging distance up to 205 cm with no coil repositioning
- Excellent flexibility of any coverage up to whole body
- Up to 204 coil elements combined with up to 64 channels for flexible Parallel Imaging

4G Accuracy

- DirectRF™. Tim's new all digital-in/digital-out design for true signal purity
- From meters to microns. High resolution imaging even when zooming in on multistation images
- TrueForm® Magnet and Gradient design. Cylindrically optimized Homogeneity volume that matches the true form of the human body

4G Speed

- Faster and simpler exam set-up and improved SNR with DirectConnect™ coils
- Tim 4G processing speed
- iPAT² technology. Parallel acquisition in two directions for fast 3D data



Dot (Day optimizing throughput) Engine

Dot™ offers a customizable framework to help optimize every part of your MR workflow.

Dot is personalized

- Optimized exam strategies. Your customized protocols are proposed based on the patient's condition or clinical indication
- Consistent, high quality exams even when conditions change
- Dot speaks your clinical language. Customize Dot to create strategies tailored to your clinical practice

Dot is guided

- Real-time on-board guidance. Dot guides you, intuitively, even through complicated exams
- Integrated decision points. The user can add or eliminate protocols or groups of protocols with the click of a button
- Customizable to your standards, to follow your standards of care

Dot is automated

- Intelligent, workflows. Dot Engines can be tailored to your clinical needs
- Effortless set-up. Dot links your protocols and procedures
- Timing is synchronized. Dot integrates AutoVoiceCommands ensuring the synchronized timing of breathing, scanning. In addition, contrast timing is more accurate due to AutoBolus Detection.



High image quality with
Tim's new 4G technology

Image consistency and
diagnostic confidence with
Siemens unique Dot Engines



Tim+Dot. Together, they redefine productivity.

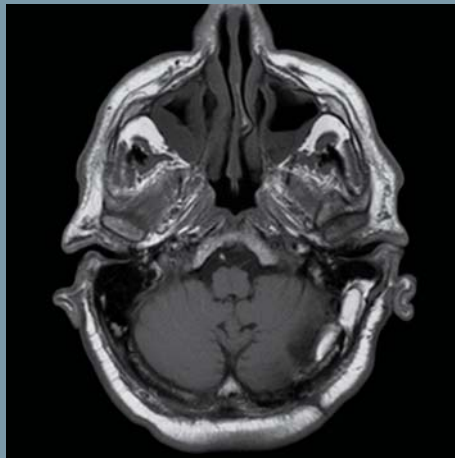
Brain

Head/Neck 20

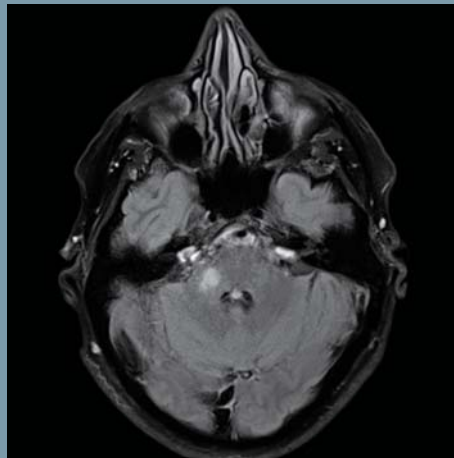
Tim 4G offers a 20-channel Head/Neck coil designed to accommodate a wide variety of patients while offering a superb signal-to-noise ratio (SNR) for both clinical and research imaging. The unique Dual-Density Signal Transfer architecture enables a DirectConnect design eliminating cables to reduce set-up time. The open coil design increases patient comfort further.



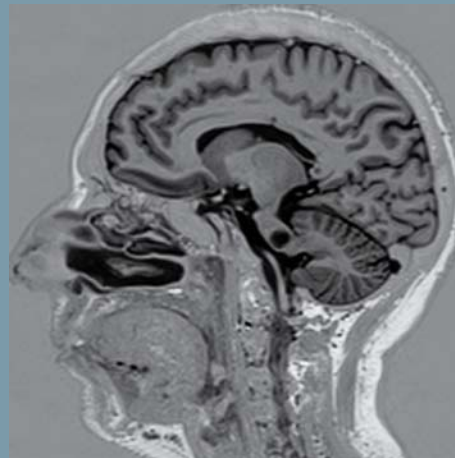
T2 TSE, 512 matrix, SL 5 mm, TR 5000, TE 92, TA 3:35 min
Northwestern Memorial Hospital, Chicago, USA



T1 SE, 320 matrix, SL 5 mm, TR 550, TE 8.9, TA 2:20 min
Northwestern Memorial Hospital, Chicago, USA



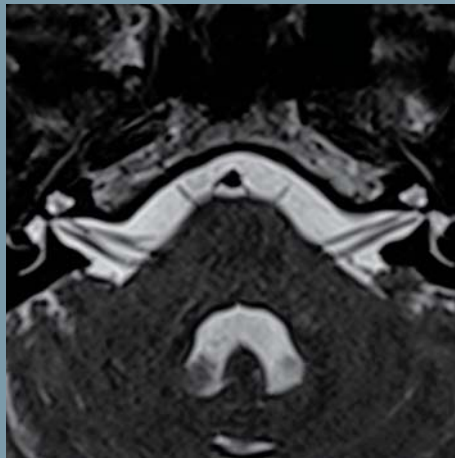
T2 TIRM, GRAPPA 2, 320 matrix, SL 4 mm, TR 11570, TE 82, TI 2731.2, TA 3:16 min
Centre Republique, Clermont Ferrand, France



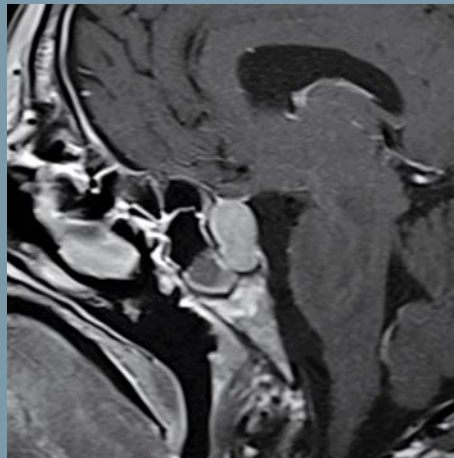
3D SPACE IR Restore, GRAPPA 2, 256 matrix, SL 1 mm, TR 3000, TE 257, TI 350, TA 5:30 min
Centre Republique, Clermont Ferrand, France



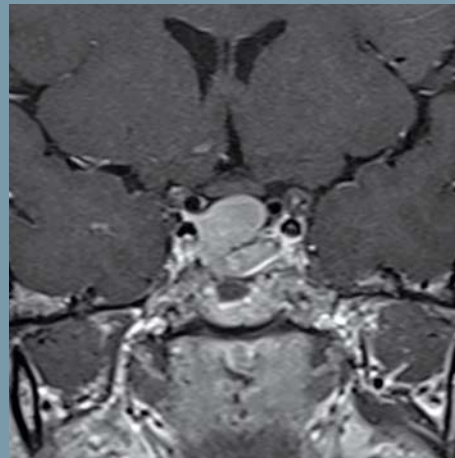
T1 FLASH, 288 matrix, SL 5 mm, TR 200, TE 4.8, TA 43 s



3D T2 TSE Restore, GRAPPA 2, 256 matrix, SL 1 mm, TR 750, TE 113, TA 3:22 min



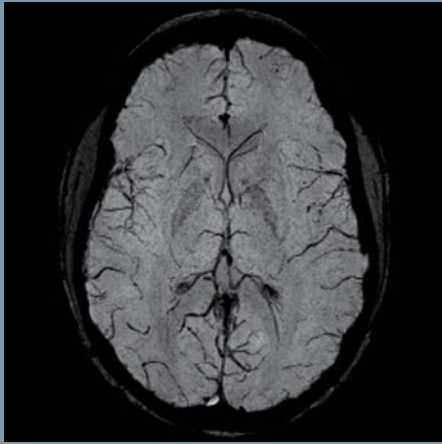
T1 SE, 512 matrix, SL 2 mm, TR 570, TE 15, TA 4:02 min
University Hospital, Essen, Germany



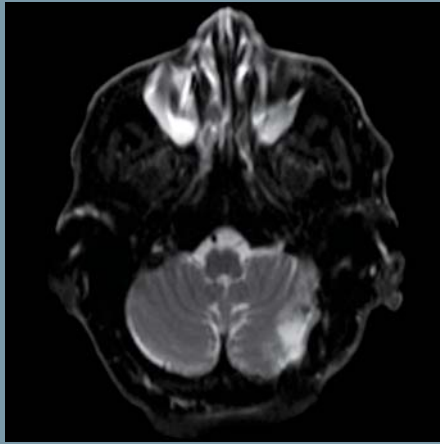
T1 SE, 512 matrix, SL 2 mm, TR 570, TE 15, TA 4:02 min
University Hospital, Essen, Germany

Tim coil activation:

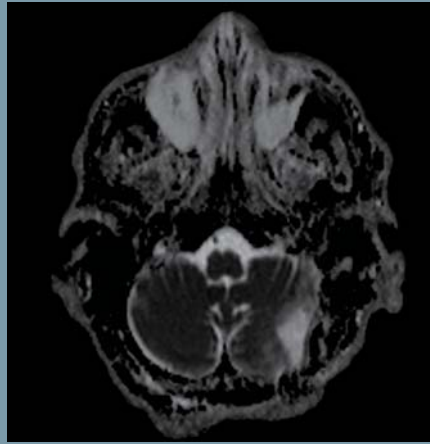
Peripheral Angio 36	Body 18	Body 18	Head/Neck 20
Spine 32			



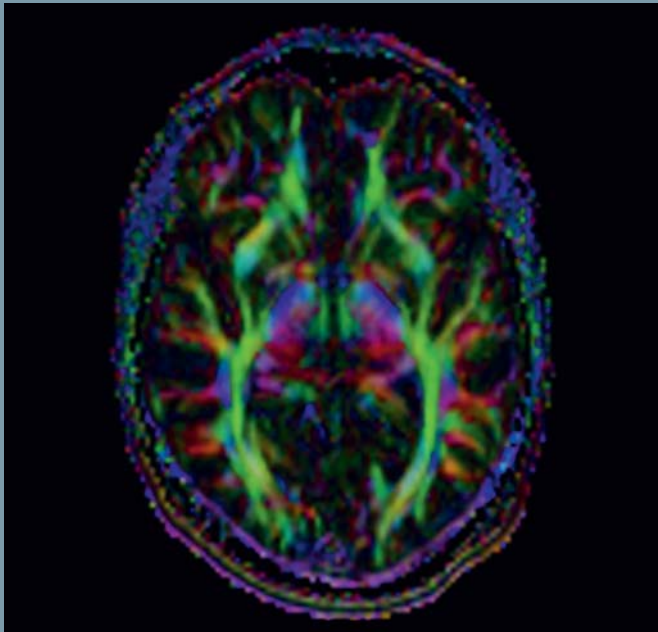
3D SWI, minIP, GRAPPA 2, 320 matrix, SL 1.8 mm, TR 49, TE 40, TA 5:50 min
Northwestern Memorial Hospital, Chicago, USA



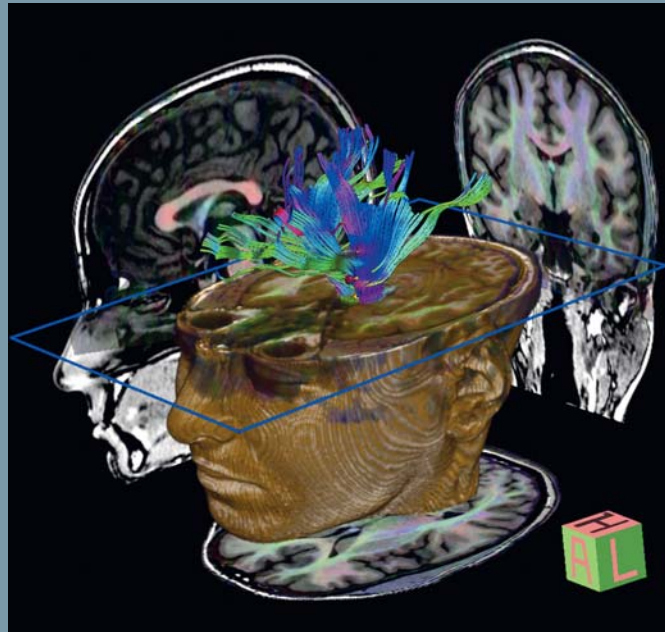
EPI Diffusion, b-value 0, GRAPPA 2, 192 matrix, SL 5 mm, TR 8100, TE 89, TA 0.06 s/slice
Northwestern Memorial Hospital, Chicago, USA



EPI Diffusion, ADC map, GRAPPA 2, 192 matrix, SL 5 mm, TR 8100, TE 89, TA 0.06 s/slice
Northwestern Memorial Hospital, Chicago, USA



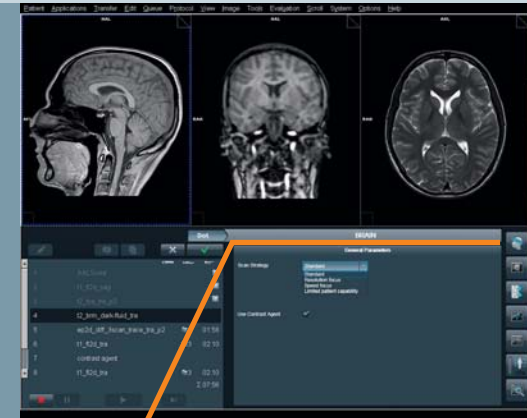
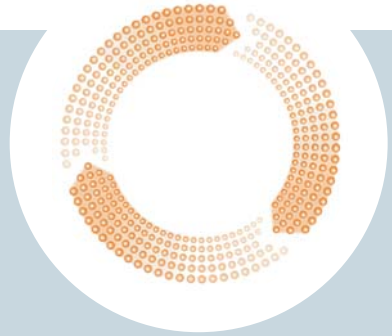
EPI Diffusion, FA map, 20 directions, GRAPPA 2, 128 matrix, SL 5 mm, TR 3500, TE 83, TA 0.03 s/slice



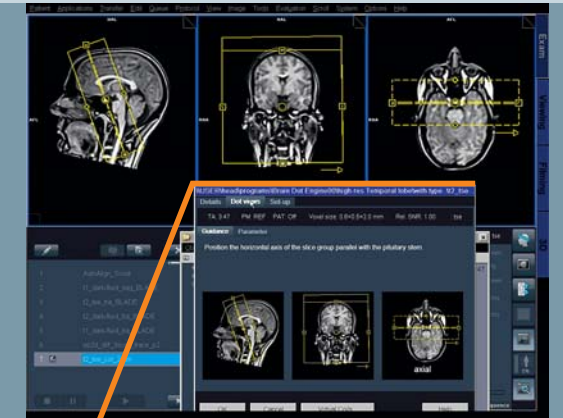
DTI Fibertracking, 20 directions, GRAPPA 2, 128 matrix, SL 5 mm, TR 3500, TE 83, TA 0.03 s/slice

Brain Dot Engine

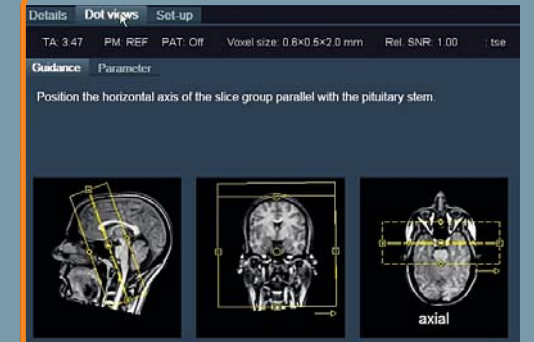
The Brain Dot Engine simplifies general brain examinations with guided and automated workflows customized to your standards of care. It supports the user in achieving reproducible image quality with increased ease of use and time efficient exams. One can choose between different exam strategies depending on the patient condition or clinical indication. With *syngo* BLADE, the Brain Dot Engine improves image quality by correcting for the effects of motion during an MR acquisition. With Inline Technology automatic calculation of trace-weighted images and ADC maps are available, i.e. Inline Diffusion. The Brain Dot Engine has been shown to reduce exam times by 20% and significantly reduce the need for manual parameter adjustments.*



Dot Exam Strategies: With an intuitive drop-down menu, different protocols from your institution are automatically selected to get excellent results – for virtually any type of patient.



Dot Guidance View: Step-by-step user guidance for more efficient scanning. Images and texts are easily customizable.



Tim coil activation:

Peripheral Angio 36

Body 18

Body 18

Head/Neck 20

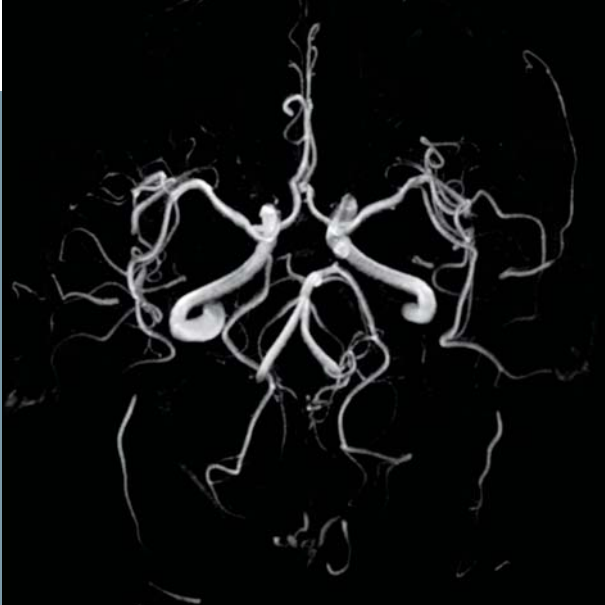
Spine 32

*Data on file; results may vary. – Results: Prof. Forsting, Prof. Antoch, Department of Diagnostic and Interventional Radiology and Neuroradiology, University Hospital Essen, Germany

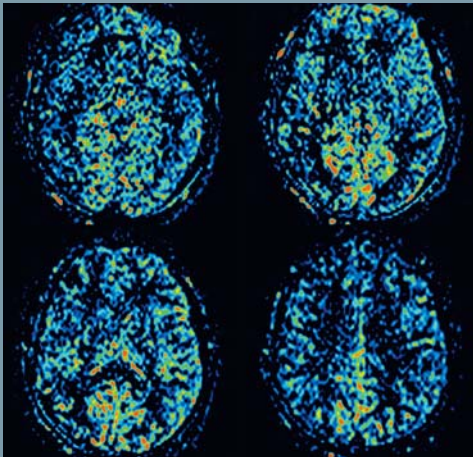
Neurovascular

Head/Neck 20, Body 18 and Spine 32

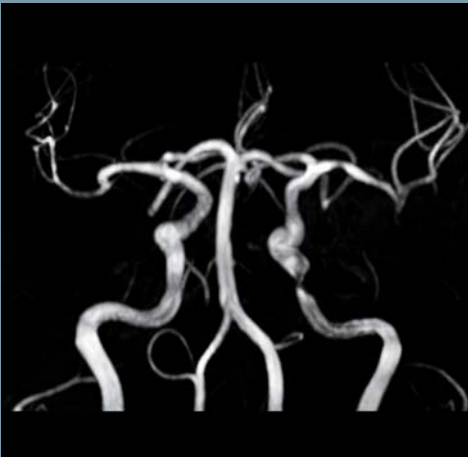
The flexibility of Tim 4G allows you to easily create your own neurovascular array. The combination of Tim's Head/Neck 20, Body 18, and Spine 32 coils enables a seamless imaging field of view from the heart to the top of the head to ease examinations such as the carotid arteries or brachial plexus.



3D FLASH ToF, MIP, GRAPPA 2, 320 matrix, SL 1.3 mm, TR 27, TE 7, TA 6:52 min



3D ASL* Perfusion, TGSE, 96 matrix, SL 2 mm, TR 3500, TE 24.7, TA 1:20 min



3D FLASH ToF, MIP, GRAPPA 2, 256 matrix, SL 0.54 mm, TR 24, TE 7, TA 6:08 min
Centre Cardio Thoracique de Monaco, Monaco



3D FLASH ToF, VRT, GRAPPA 2, 256 matrix, SL 0.4 mm, TR 24, TE 7, TA 6:30 min



3D FLASH ce-MRA, MIP, GRAPPA 2, 448 matrix, SL 0.7 mm, TR 3.4, TE 1.2, TA 22.16 s
St. Johannes-Hospital, Dortmund, Germany



3D FLASH ToF, VRT, GRAPPA 2, 256 matrix, SL 0.4 mm, TR 24, TE 7, TA 6:30 min

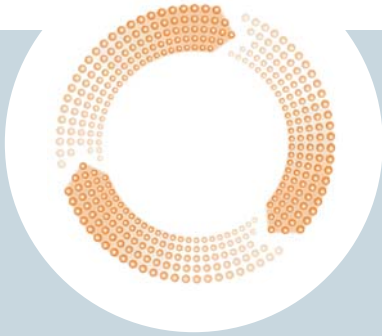


3D FLASH ce-MRA, VRT, GRAPPA 3, 384 matrix, SL 0.9 mm, TR 3.4, TE 1.2, TA 18.71 s
Northwestern Memorial Hospital, Chicago, USA



3D FLASH ce-MRA, MIP, GRAPPA 2, 320 matrix, SL 1 mm, TR 3.4, TE 1.4, TA 18.05 s
Radiology, Worms, Germany

TimCT Angio Dot Engine



TimCT Angio Dot Engine* employs the revolutionary TimCT (Continuous Table move) technology for large field of view angiographies with smooth workflow and homogeneous image quality. No time is lost due to inter station table move, and there is no need to compose images. Thanks to the streamlined and automated workflow and the fast acquisition time with TimCT Angio Dot Engine, a complete peripheral vessel runoff exam can be performed in less than 15 minutes** with exceptional homogeneous image quality.

TimCT Angio Dot Engine offers optimized protocols for peripheral vessel runoff exams. It allows CT-like scanning with MR: Just define the start and end of the scan range. There is no need to plan multiple steps or overlapping sections.

TimCT 3D FLASH ce-MRA, MIP, GRAPPA 3, 320 matrix, SL 1.2 mm, TR 3.2, TE 1.1, TA 1:04 min
University Hospital, Essen, Germany

Tim coil activation:

Peripheral Angio 36

Body 18

Body 18

Head/Neck 20

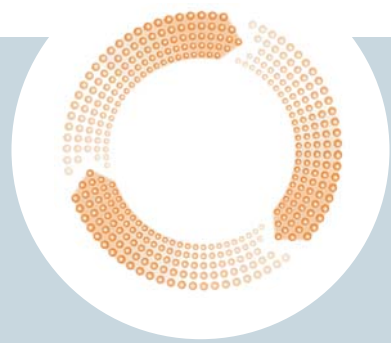
Spine 32

*This product is pending 510(k) clearance and is not commercially available in the US.

*CAUTION: Investigational Device. Limited by U.S. Federal Law to Investigational Use.
**Data on file; results may vary.

Angio Dot Engine

The Angio Dot Engine* helps take the complexity out of MR angiography examinations. It enables the user to perform high spatial resolution, contrast-enhanced MR angiography with optimized contrast to noise ratio.



After a simple click, the localizer and vessel scout are acquired and loaded into the Graphical Slice Positioning (GSP). The next workflow step opens a customizable Guidance View that visually explains how to set up the test bolus measurement correctly. According to the instructions, you adjust the test bolus slice in the GSP. The planning of the test bolus step is completed by simply clicking on apply.

Spine cervical/ Neck imaging

Head/Neck 20 and Spine 32

The neck portion of the Head/Neck 20 coil enables excellent cervical spine imaging through a combination of high SNR and an open design to accommodate a wide variety of patient shapes and sizes. The Head/ Neck 20 coil can be combined with the Spine 32 coil to image further down the spine at any time during the exam and without patient repositioning.



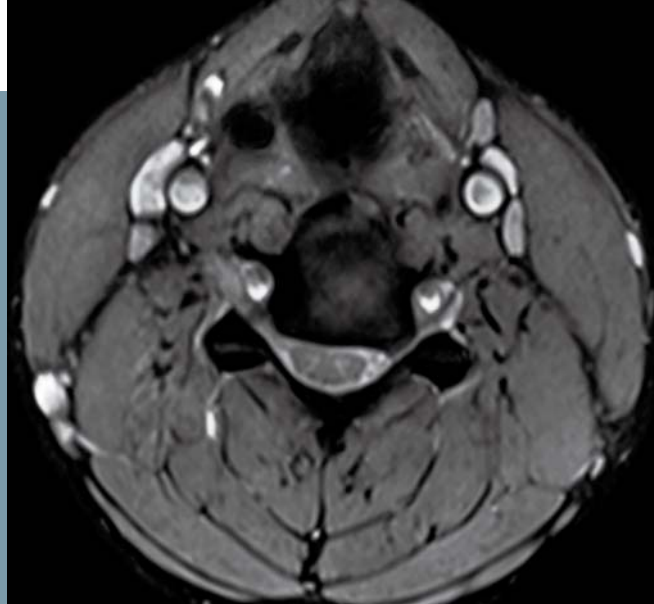
T1 TSE, 256 matrix, SL 3 mm, TR 543, TA 9.6, TA 2:46 min



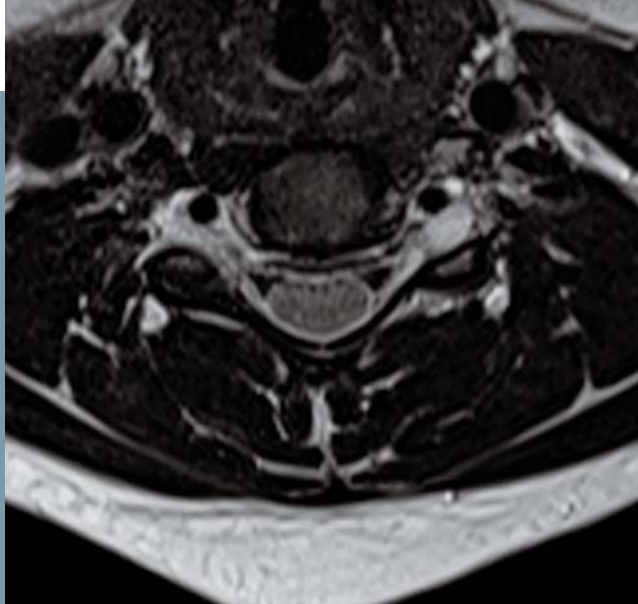
T2 TSE Restore, 384 matrix, SL 3 mm, TR 3500, TE 104, TA 3:36 min



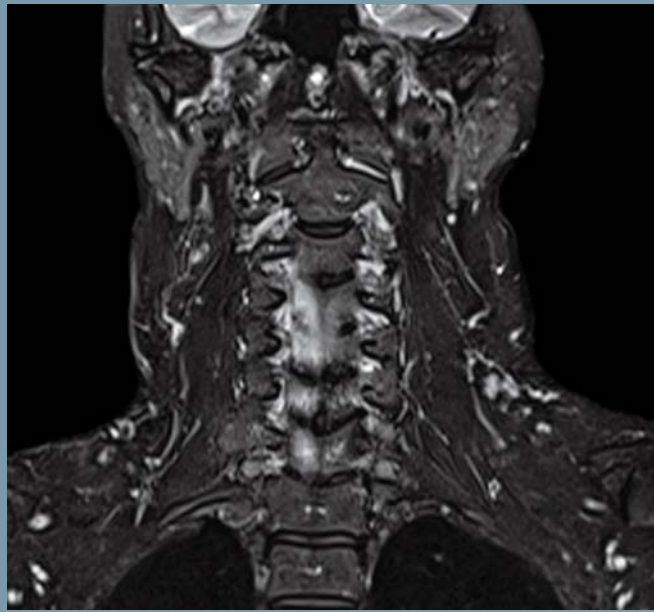
T2 TIRM, 256 matrix, SL 3 mm, TR 4530, TE 77, TI 150, TA 4:09 min
Northwestern Memorial Hospital, Chicago, USA



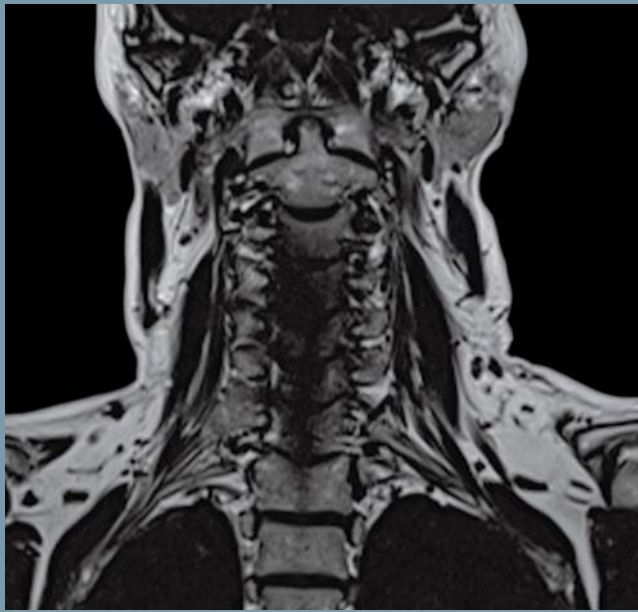
T2 MEDIC, 256 matrix, SL 3 mm, TR 580, TE 24, TA 5:02 min
Northwestern Memorial Hospital, Chicago, USA



T2 TSE Restore, 256 matrix, SL 3 mm, TR 4200, TE 84, TA 3:42 min



T2 TSE Restore, DIXON water image, 256 matrix, SL 3 mm, TR 5420, TE 87, TA 4:32 min



T2 TSE Restore, DIXON fat image, 256 matrix, SL 3 mm, TR 5420, TE 87, TA 4:32 min

*This product is pending 510(k) clearance and is not commercially available in the US.

Spine thoracic lumbar

Spine 32

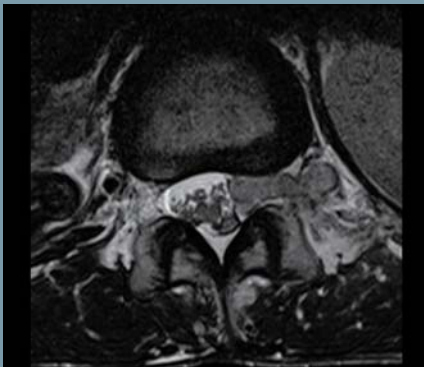
With a high density of elements, Tim 4G's Spine 32 coil offers a flexible solution that accommodates a wide variety of lumbar spine patients. The extensive coverage of the coil makes patient positioning easier and each row of elements can be switched on or off from the user console to maximize speed and SNR. A total of 12 elements would normally be selected for routine lumbar exams enabling iPAT to reduce exam times.



T1 TSE, GRAPPA 3,
448 matrix, SL 3 mm,
TR 605, TE 10,
TA 1:55 min



T2 TSE Restore,
448 matrix, SL 3.5 mm,
TR 4090, TE 114,
TA 3:37 min
*Benedictus Hospital,
Tutzing, Germany*



T2 TSE, 384 matrix,
SL 4 mm,TR 3450,
TE 114, TA 2:14 min
*Benedictus Hospital,
Tutzing, Germany*



T1 TSE, GRAPPA 2, 448 matrix, SL 4 mm, TR 693,
TE 11, TA 2:35 min
St. Johannes-Hospital, Dortmund, Germany



T2 TSE Restore, GRAPPA 2, 512 matrix, SL 4 mm,
TR 4000, TE 101, TA 2:28 min
St. Johannes-Hospital, Dortmund, Germany



T2 TIRM, GRAPPA 2, 384 matrix, SL 4 mm,
TR 3000, TE 32, TI 160, TA 3:33 min
St. Johannes-Hospital, Dortmund, Germany

Tim coil activation:

Peripheral Angio 36	Body 18	Body 18	Head/Neck 20
	Spine 32		

Whole Spine

Head/Neck 20 and Spine 32

Whole spine imaging in two or three steps without the need for patient repositioning is easily achieved with the Spine 32 coil and the Head/Neck 20 coil. In addition, the syngo user interface allows you to quickly move back and forth between spinal regions if exams call for images before and after contrast agents. *syngo* Composing makes it possible to view the entire spine as one, seamless image for a comprehensive evaluation.



T2 TSE, GRAPPA 2, 4 steps, 512 matrix, SL 4 mm, TR 3500, TE 83, TA 4x2:51 min



T2 TIRM, GRAPPA 2, 4 steps, 384 matrix, SL 4 mm, TR 3500, TE 34, TI 160, TA 4x3:47 min



T2 TSE Restore, GRAPPA 2, 2 steps, 512 matrix, wwSL 4 mm, TR 4000, TE 101, TA 2x2:28 min
St. Franziskus Hospital, Muenster, Germany

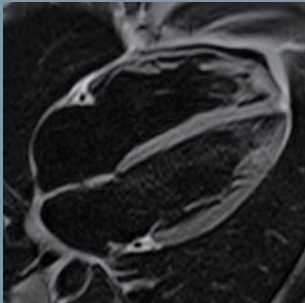
Tim coil activation:

Peripheral Angio 36	Body 18	Body 18	Head/Neck 20
	Spine 32		

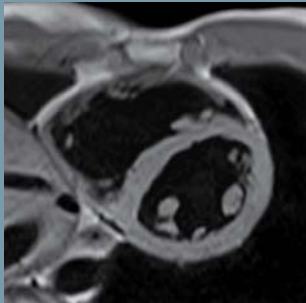
Chest & Heart

Body 18 and Spine 32

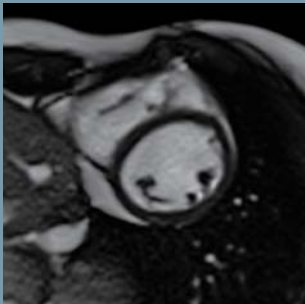
Imaging of the chest and heart is challenging due to the complexity of respiratory and cardiac motion. The Body 18 coil combines with the Spine 32 coil to offer up to 30 elements in a single field of view for chest or cardiac exams. This high density of elements enables high SNR and increased parallel imaging factors in any direction to achieve ultra-fast acquisition times. In addition, syngo PACE offers software based triggering and gating resulting in superb thoracic and abdominal image quality.



T2 TSE Dark Blood, GRAPPA 3, 256 matrix, SL 5 mm, TR 2033.8, TE 60, TA 8.2 s



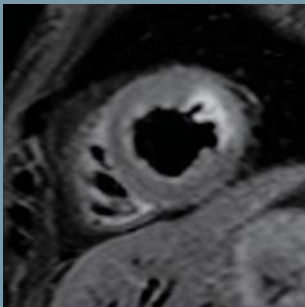
T1 TSE Dark Blood, GRAPPA 2, 256 matrix, SL 5 mm, TR 2064.6, TE 28, TA 12.42 s



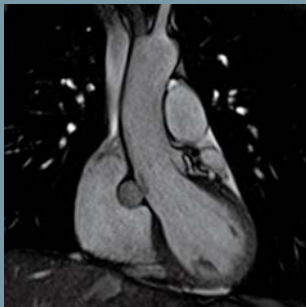
TrueFISP cine retro, GRAPPA 4, 192 matrix, SL 6 mm, TR 49.7, TE 1.2, TA 4.53 s



3D T2 SPACE IR, thin MIP, GRAPPA 3, respiration-triggered, 320 matrix, SL 4 mm, TR 4044.4, TE 102, TI 180, TA 4:10 min

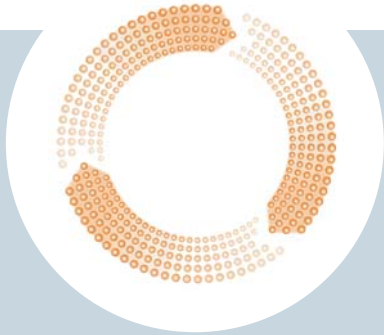


TIRM Dark Blood, 256 matrix, SL 6 mm, TR 1825.5, TE 56, TI 170, TA 9.2 s
Centre Cardio Thoracique de Monaco, Monaco



TrueFISP cine, GRAPPA 2, 320 matrix, SL 4.5 mm, TR 56.7, TA 1.3, TA 9.83 s

Cardiac Dot Engine



Cardiac imaging is widely regarded as one of the most complex exams in MRI. To help make cardiac MRI routine, the Cardiac Dot Engine guides you through the examination to achieve excellent results, consistently. Clinical testing of the Cardiac Dot Engine showed a significant increase in cardiac MR patient throughput by 50%.*



Cardiac exams are easier and more consistent with the Cardiac Dot Engine. Five simple guidance steps assist the user in acquiring the basic cardiac views. The intuitive text and image examples provide support throughout the exam.

Tim coil activation:

Peripheral Angio 36	Body 18	Body 18	Head/Neck 20
	Spine 32		

*Data on file; results may vary. – Results: Dr. Russell Bull, Royal Bournemouth Hospital, U.K.

Abdomen

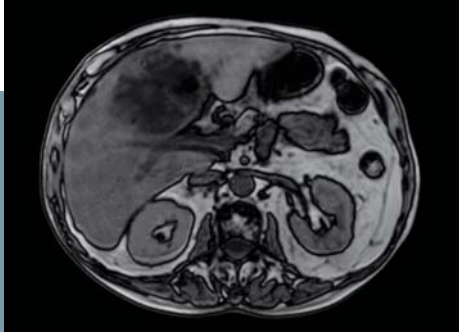
(1 Body 18 coil)

Body 18 and Spine 32

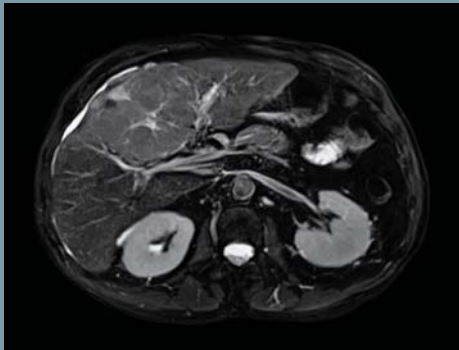
The all new Body 18 coil advances abdominal imaging with an ultra-high density array of elements and extended coverage in a light and flexible design. Combining the Body 18 coil with the Spine 32 coil enables 30 channel imaging. The Body 18 coil can also be rotated 90 degrees to extend the z-direction coverage.



T2 HASTE SPAIR, GRAPPA 2, 256 matrix, SL 6 mm, TR 2000, TE 91, TA 0.8 s/slice



T1 FLASH, opposed phase, 256 matrix, SL 5.5 mm, TR 130, TE 2.3, TA 42 s
Centre Republique, Clermont Ferrand, France



T2 TSE Restore SPAIR, GRAPPA 2, with BLADE, respiration-triggered, 320 matrix, SL 6 mm, TR 2899.7, TE 93, TA 3:46 min
Centre Republique, Clermont Ferrand, France



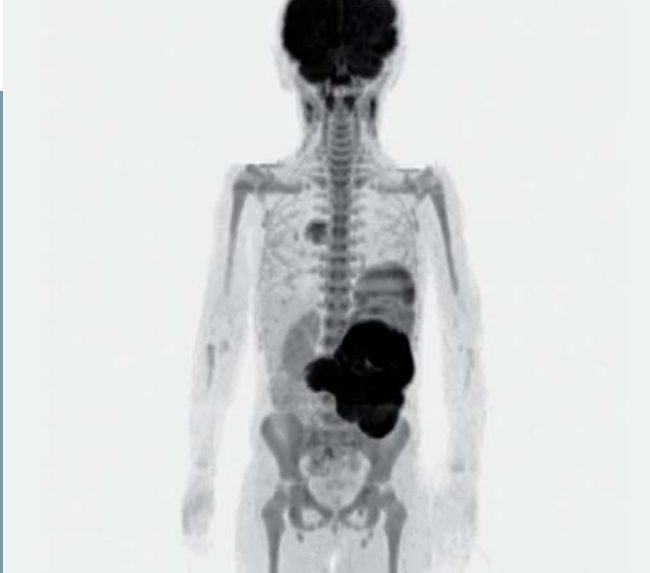
3D T1 VIBE, GRAPPA 2, 320 matrix, SL 3.5 mm, TR 4.5, TE 2.2, TA 21 s
Centre Republique, Clermont Ferrand, France

Tim coil activation:

Peripheral Angio 36	Body 18	Body 18	Head/Neck 20
	Spine 32		

Abdomen

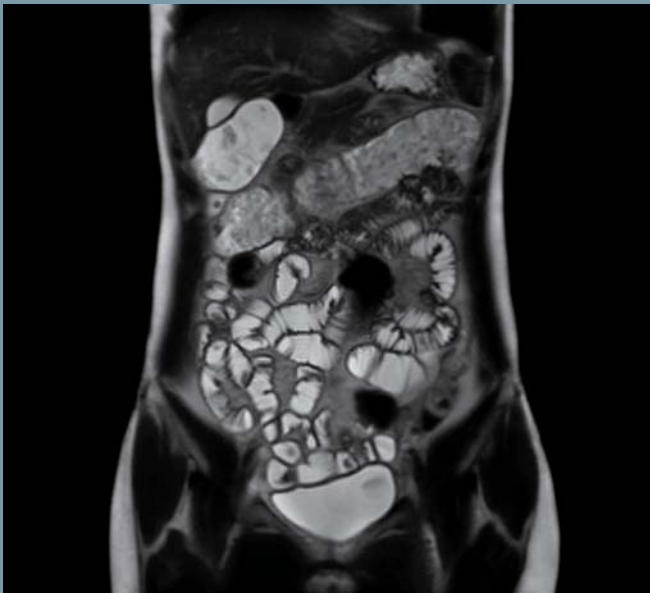
(2 Body 18 coils)



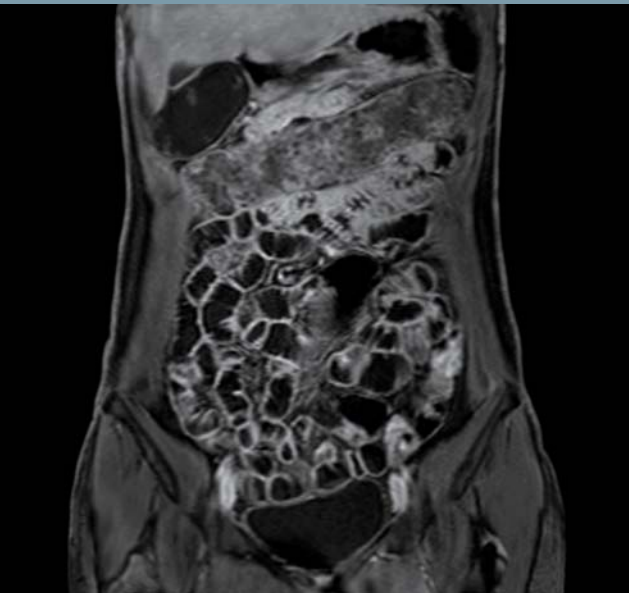
REVEAL, T2 STIR, b-value 800, inverted, 5 steps, GRAPPA 2, SL 5 mm, TR 15400, TE 75, TI 180, TA 0.02 s/slice
University Hospital Saarland, Homburg, Germany



T2 TSE, GRAPPA 2, respiration-triggered, 512 matrix, SL 6 mm, TR 3507.6, TE 102, TA 04:50
University Hospital Saarland, Homburg, Germany



T2 HASTE, GRAPPA 2, 256 matrix, SL 6 mm, TR 1200, TE 91, TA 0.68 s/slice
St. Franziskus Hospital, Münster, Germany



3D T1 VIBE, GRAPPA 3, 288 matrix, SL 1.8 mm, TR 3.7, TE 1.7, TA 20 s
St. Franziskus Hospital, Münster, Germany

Tim coil activation:

Peripheral Angio 36	Body 18	Body 18	Head/Neck 20
	Spine 32		

Abdomen Dot Engine

One of the most complex MR exams is an exam of the liver. Today, the challenge is the calculation of the timing. The Abdomen Dot Engine gives unique guidance through the examination and assists the user in important workflow steps to achieve excellent results, consistently. Clinical testing of the Abdomen Dot Engine showed a 28% increase in timing accuracy for enhanced liver examinations.*



Dot's Guidance View intuitively displays the different phases of the liver dynamics. On this timeline, the user can easily plan the liver dynamics patient-specifically. After the user has input the settings and started the scan, the liver dynamic scans run without any further user interaction. The same timeline is displayed online in the monitoring area while the liver dynamic examination is performed. This makes it easy to keep an eye on the timing and directly observe which phase is already measured and what phase comes next.

*Data on file; results may vary. – Results: D.R. Martin, Emory University, Atlanta, Georgia, United States

TimCT Onco Dot Engine

TimCT Onco Dot Engine employs the revolutionary TimCT (Continuous Table move) technology for large field of view exams, even up to whole body. Combined with our unique Dot technology providing additional workflow benefits such as AutoBolusDetection, Timeline, AutoFOV, TimCT helps users achieve a smooth workflow and homogeneous image quality. There is no time lost in examinations due to inter-station table move and no need to compose images. Thanks to the streamlined and automated workflow and the fast acquisition time with TimCT Onco Dot Engine, a comprehensive and complete whole body scan i.e., for staging of advanced tumors, can be performed in less than 30 min total exam time.*

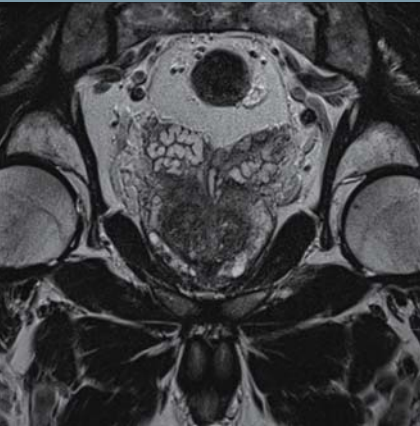


*Data on file; results may vary.

Pelvis

Body 18 and Spine 32

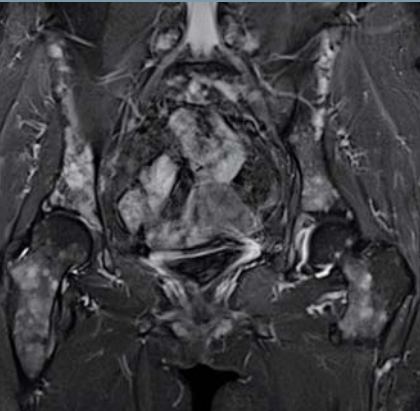
MR exams of the pelvis can now be acquired routinely with up to 30 channels for outstanding SNR and parallel imaging performance. The extended coverage of the Body 18 coil makes it possible to cover the entire pelvis and is combined with the Spine 32 coil to improve SNR.



T2 TSE Restore, GRAPPA 2, with BLADE, 320 matrix, SL 3 mm, TR 2600, TE 126, TA 2:30 min
Centre Republique, Clermont Ferrand, France



T2 TSE, DIXON water image, 320 matrix, SL 5 mm, TR 3430, TE 86, TA 3:26 min
Benedictus Hospital, Tutzing, Germany



T2 TIRM, GRAPPA 2, with BLADE, 320 matrix, SL 5 mm, TR 4200, TE 57, TI 160, TA 3:46 min
St. Johannes-Hospital, Dortmund, Germany

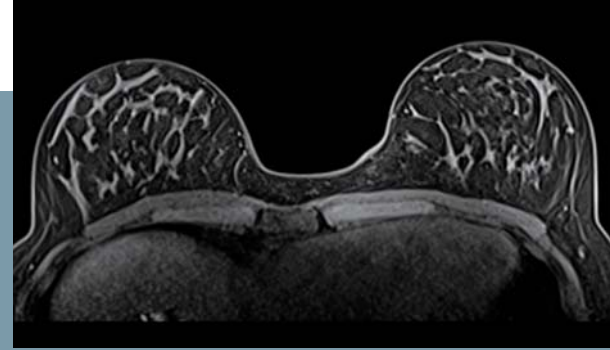
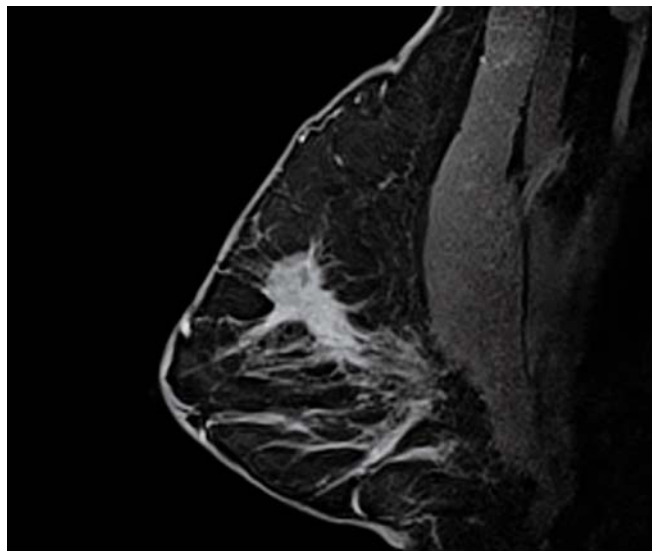
Tim coil activation:

Peripheral Angio 36	Body 18	Body 18	Head/Neck 20
	Spine 32		

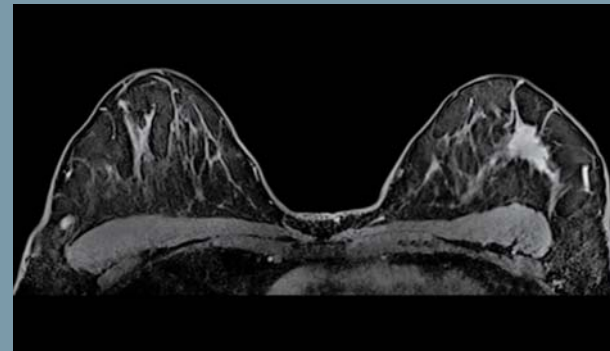
Breast

Breast coils

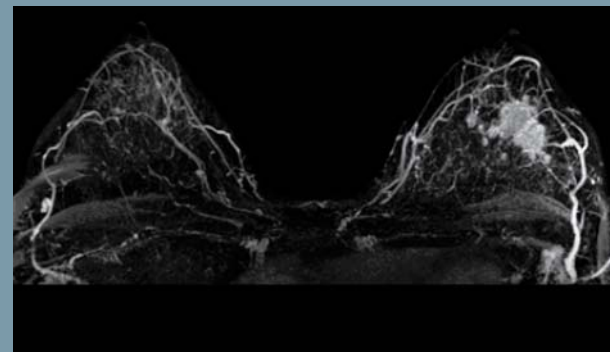
A variety of breast coils are enabled by the Tim Coil Interface resulting in flexible breast imaging options to meet a variety of needs. From clinical imaging to biopsy guidance, the MAGNETOM Aera offers a wide selection of breast coils and enables outstanding image quality. Additionally, the 70 cm Open Bore of MAGNETOM Aera makes it possible to comfortably accommodate more patients.



3D dynVIEWS SPAIR. GRAPPA 3, 384 matrix, SL 1.6 mm, TR 4.7, TE 1.8, TA 1:28 min



3D dynVIEWS, GRAPPA 3, 448 matrix, SL 1.5 mm, TR 5.3, TE 2.6, TA 1:31 min
Imagerie Paris Centre, Paris, France



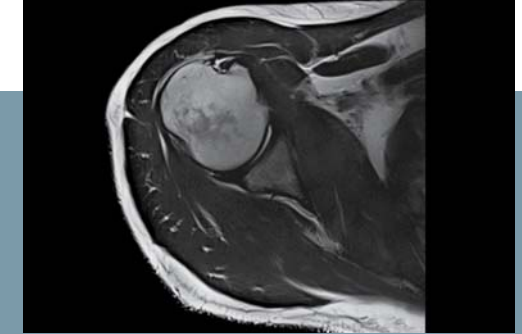
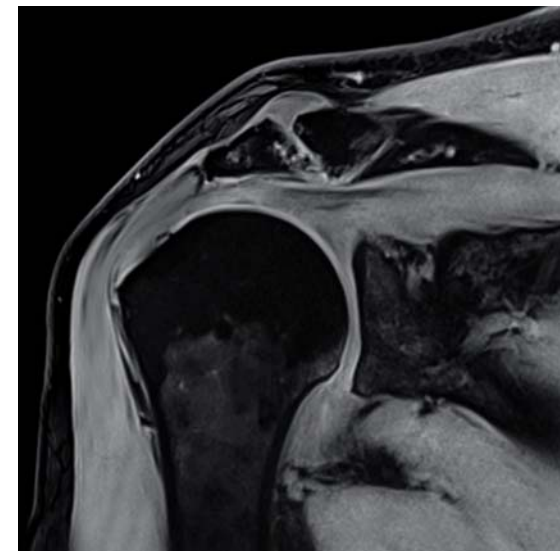
3D dynVIEWS subtraction, MIP, GRAPPA 3, 448 matrix, SL 1.5 mm, TR 5.3, TE 2.6, TA 1:31 min
Imagerie Paris Centre, Paris, France

3D dynVIEWS, GRAPPA 3, 448 matrix, SL 2 mm, TR 5.3, TE 2.6, TA 1:33 min
Imagerie Paris Centre, Paris, France

Shoulder

Shoulder 16

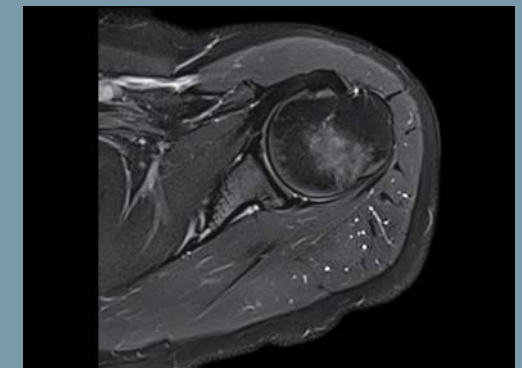
The Shoulder 16 coil currently offers the industry's highest number of elements for shoulder imaging. This high density of elements can be used to achieve excellent shoulder exams with outstanding speed. The Shoulder 16 coil is delivered in both small and large versions to accommodate more patient sizes and shapes.



T2 TSE, with BLADE, 256 matrix, SL 3 mm, TR 4000, TE 81, TA 2:40 min



T1 TSE, GRAPPA 2, 384 matrix, SL 3 mm, TR 736, TE 12, TA 4:22 min
Northwestern Memorial Hospital, Chicago, USA



T2 TSE SPAIR, with BLADE, 256 matrix, SL 4 mm, TR 3000, TE 81, TA 3:30 min

3D T1 VIBE water excitation, 320 matrix, SL 1.5 mm, TR 16, TE 7.1, TA 4:31 min

Elbow

Flex Small 4 and Flex Large 4

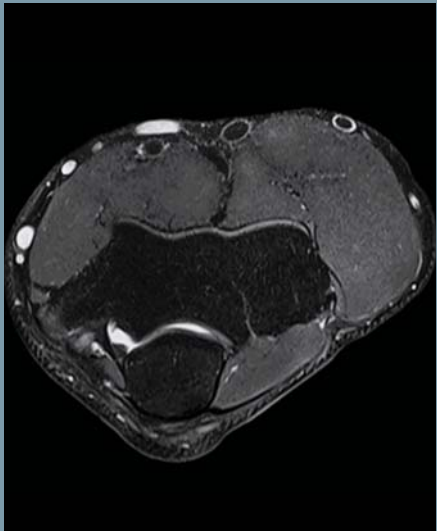
Examinations of the elbow require a highly flexible coil solution. The small and large Flex coils offer 4 channels in a design that easily fits the shape of the elbow. And with the access provided by MAGNETOM Aera's 70 cm Open Bore, it's possible to perform most elbow exams with the patients arm at their side.



PD TSE, 384 matrix, SL 3 mm, TR 3000, TE 37, TA 3:21 min



PD TSE, 384 matrix, SL 3 mm, TR 3000, TE 37, TA 3:21 min



PD TSE FatSat, 320 matrix, SL 3 mm, TR 3000, TE 37, TA 2:57 min



3D T1 VIBE water excitation, 256 matrix, SL 0.5 mm, TR 16, TE 6.5, TA 5:36 min

Hand/Wrist

Hand/Wrist 16

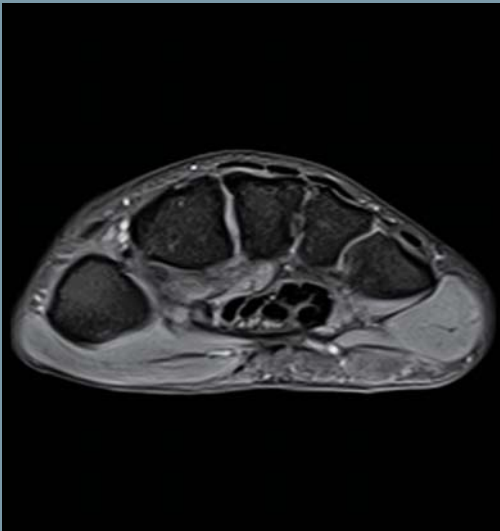
The Hand/Wrist 16 coil concentrates 16 channels over the hand and wrist area to enable superb imaging. The coil is large enough to accommodate a wide variety of patients while still providing excellent SNR. The rigid design reduces involuntary patient motion for superb image quality.



PD TSE FatSat, GRAPPA 2, 512 matrix, SL 3 mm, TR 3000, TE 34, TA 1:57 min



T1 TSE, GRAPPA 2, 256 matrix, SL 3 mm, TR 550, TE 13, TA 1:13 min



T1 TSE FatSat, 256 matrix, SL 3 mm, TR 745, TE 15, TA 3:10 min



3D DESS water excitation, 384 matrix, SL 1.5 mm, TR 18.8, TE 7.2, TA 4:02 min
St. Franziskus Hospital, Muenster, Germany

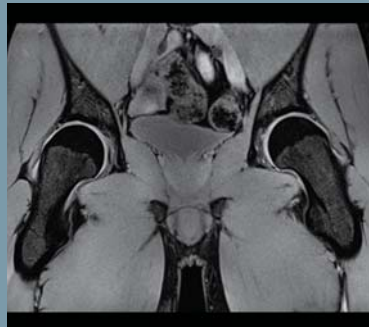
Hip

Body 18 and Spine 32

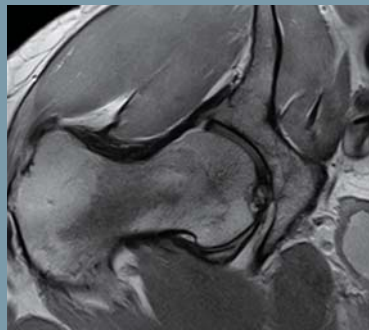
The Body 18 coil combines a high-density array with large or small field of view coverage for hip imaging. Hip exams with high SNR and high resolution are easily achieved. The coil is generally large enough to cover both hips for bilateral imaging or can be wrapped around one side to increase the element density when examining unilaterally.



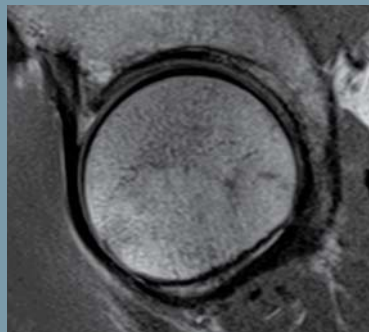
T1 TSE, 512 matrix,
SL 3 mm, TR 551,
TE 20, TA 3:31 min



T1 FLASH FatSat,
GRAPPA 2, 512 matrix,
SL 3 mm, TR 710,
TE 7.1, TA 4:25 min



PD TSE Restore, 3
20 matrix, SL 3 mm,
TR 2100, TE 23,
TA 4:10 min



PD TSE Restore,
320 matrix, SL 3 mm,
TR 2720, TE 20,
TA 5:25 min

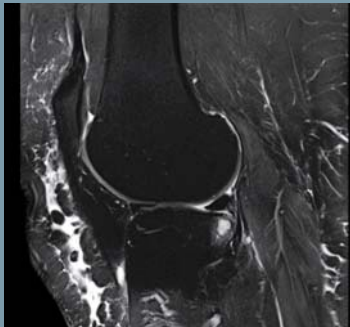
Knee

Tx/Rx 15-Channel Knee Coil

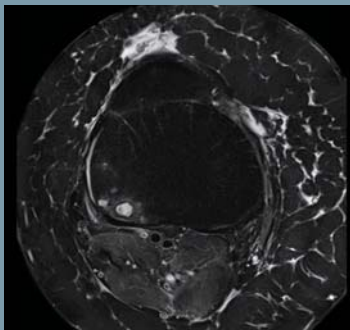
The Tx/Rx 15-Channel Knee Coil enables parallel imaging in any direction to power 2D and 3D knee exams with excellent resolution and a fast exam time. The coil's large architecture accommodates a wide variety of patients. If necessary, the Body 18 coil can also be used to image knees.



PD TSE Restore FatSat,
GRAPPA 2, 384 matrix,
SL 2.5 mm, TR 3220,
TE 29, TA 3:29 min
*Benedictus Hospital, Tutzing,
Germany*



T2 TSE Restore FatSat,
GRAPPA 2, 320 matrix,
SL 3 mm, TR 5940, TR 63,
TA 4:04 min



PD TSE FatSat, 320 matrix,
SL 3 mm, TR 5300, TE 49,
TA 2:34 min



T2 TSE, 448 matrix, SL 3 mm,
TR 4000, TE 77, TA 3:24 min

Tim coil activation:

Peripheral Angio 36	Body 18	Body 18	Head/Neck 20
	Spine 32		

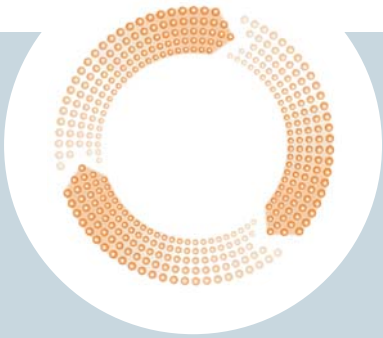
Knee Dot Engine

MR examinations of the knee are commonly performed in a variety of settings. The Knee Dot Engine is designed to provide an efficient and flexible 2D or 3D imaging workflow. The 3D Knee Dot Engine supports the paradigm shift to increased 3D imaging in musculoskeletal examinations.



In the Guidance View the user gets intuitive, step-by-step guidance for expert scans. Here customizable reference images are displayed to check if the automatically initiated slice positioning is correct. If the positioning is done, the user just needs to confirm and start the high-resolution imaging scan.

Plan the Multi-Planar Reconstructions (MPRs) while scanning. The user can easily plan the MPRs of the 3D scans to be performed in-line. For this an option for the three main slice orientations is suggested. The user simply selects the orientation and plans the 3D reconstruction on the localizer images in the image display area on the screen. After that the postprocessing is readily prepared even before the 3D scanning has finished. With this planning, the Knee Dot Engine will generate the reformatted images as soon as the first 3D sequence data are available.



Foot/Ankle

Foot/Ankle 16

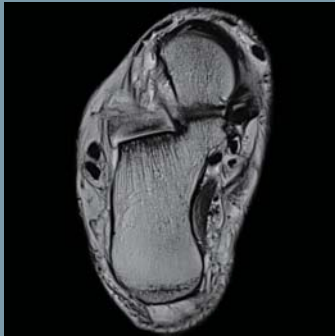
The Foot/Ankle 16 coil provides extended coverage to cover both the foot and ankle and yet provides a high concentration of elements for small fields of view with high resolution. The rigid design holds the patients foot and ankle securely in place and is large enough to accommodate a wide range of patients and due to DirectConnect the set-up can be done easy and fast, without plugging any cable.



T1 TSE, GRAPPA 2, 384 matrix, SL 3 mm, TR 640, TE 11, TA 1:54 min



T1 TSE, GRAPPA 2, 512 matrix, SL 2 mm, TR 570, TE 9.9, TA 2:15 min



T2 TSE, with BLADE, 384 matrix, SL 3 mm, TR 5000, TE 95, TA 2:45 min

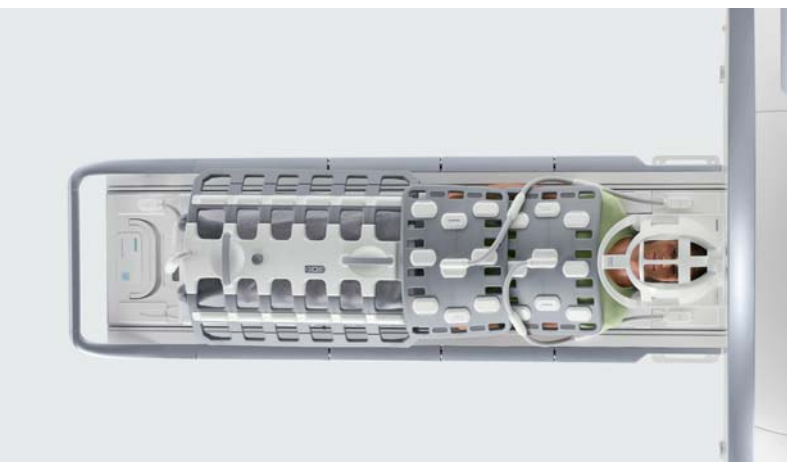


3D PD SPACE Restore SPAIR, GRAPPA 2, 320 matrix, SL 0.7 mm, TR 1000, TE 36, TA 6 min

Peripheral & Whole-body Angiography

Whole-body coverage of coils

Imaging the vessels of the peripheral vasculature or even the whole body is made possible by the highly flexible combination of Tim coils and the syngo user interface. Moving from region to region and dynamically turning coils on and off allows you to perform these complex exams quickly and consistently.



3D T2 SPACE NATIVE, MIP, GRAPPA 2, 3 steps, 384 matrix, SL 1.3 mm, TR 902.1, TE 79, TA 4:58 min, no contrast agent applied.
Northwestern Memorial Hospital, Chicago, USA



3D FLASH ce-MRA, MIP, GRAPPA 3, 3 steps, 384 matrix, SL 1.25 mm, TR 2.7, TE 1, TA 50 s
St. Johannes-Hospital, Dortmund, Germany



3D FLASH TWIST, MIP dynamic, GRAPPA 2, 384 matrix, SL 1.8 mm, TR 3.2, TE 1.3, TA 6.62 s/phase
St. Johannes-Hospital, Dortmund, Germany

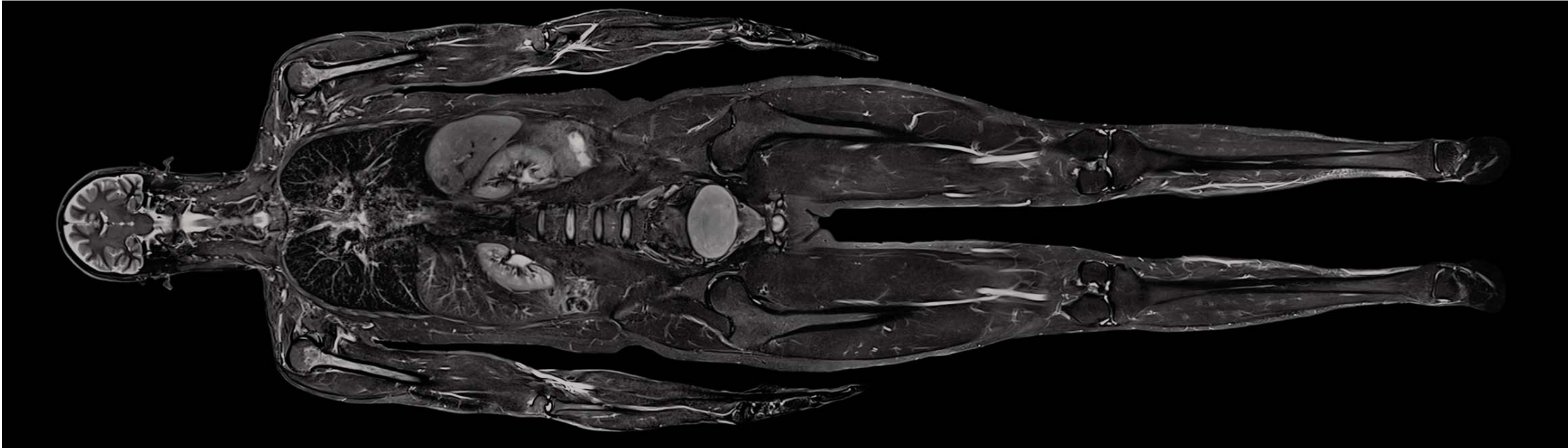
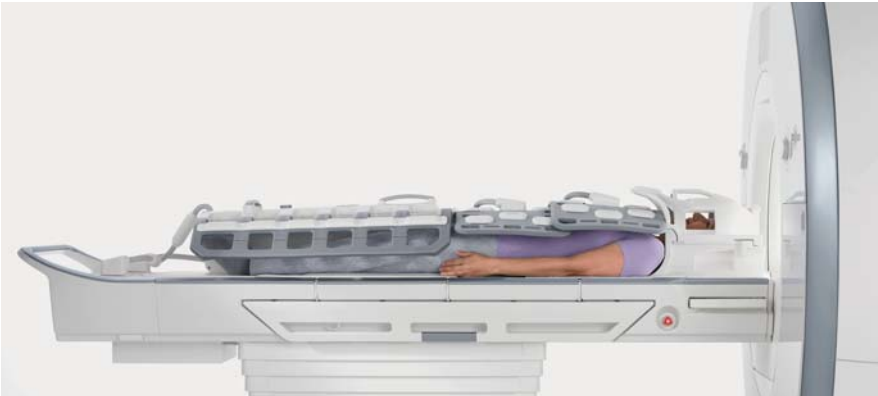
Tim coil activation:

Peripheral Angio 36	Body 18	Body 18	Head/Neck 20
	Spine 32		

Whole Body

Whole-body coverage of coils

Imaging from meters to microns. The flexibility of Tim makes it possible to cover the entire body up to 205 cm so you can examine large organs or organ systems and still have the signal and resolution to view small details.



Tim coil activation:	Peripheral Angio 36	Body 18	Body 18	Head/Neck 20
		Spine 32		

T2 TIRM, GRAPPA 2, 7 steps, 384 matrix, SL 5 mm, TR 5500, TE 54, TI 160, TA 7x2:12 min

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 sales organization worldwide. Availability and packaging may vary by country and are subject to change without prior notice. Some/All of the features and products described herein may not be available in the United States.

All devices listed herein may not be licensed according to Canadian Medical Devices Regulations. 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 reserves the right to modify the design, packaging, specifications, and options described herein without prior notice. Please contact your local Siemens sales representative for the most current information.

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

Please find fitting accessories:
[siemens.com/medical-accessories](https://www.siemens.com/medical-accessories)

Siemens Healthcare Headquarters

Siemens Healthcare GmbH
Henkestr. 127
91052 Erlangen
Germany
Phone: +49 9131 84-0
[siemens.com/healthcare](https://www.siemens.com/healthcare)