Small footprint – giant steps.

MAGNETOM C! with *syngo* MR C12

siemens.com/healthcare

SIEMENS

Expanding the scope of mid-field MRI

Work that flows, image quality that convinces and patient comfort that satisfies: these are just the beginning of the advantages of MAGNETOM C!

Field-proven technology and extensive experience are distilled into the surprisingly powerful MAGNETOM C! with the **most compact, C-shaped magnet** and smallest pole diameter of 137 cm (54 inches).

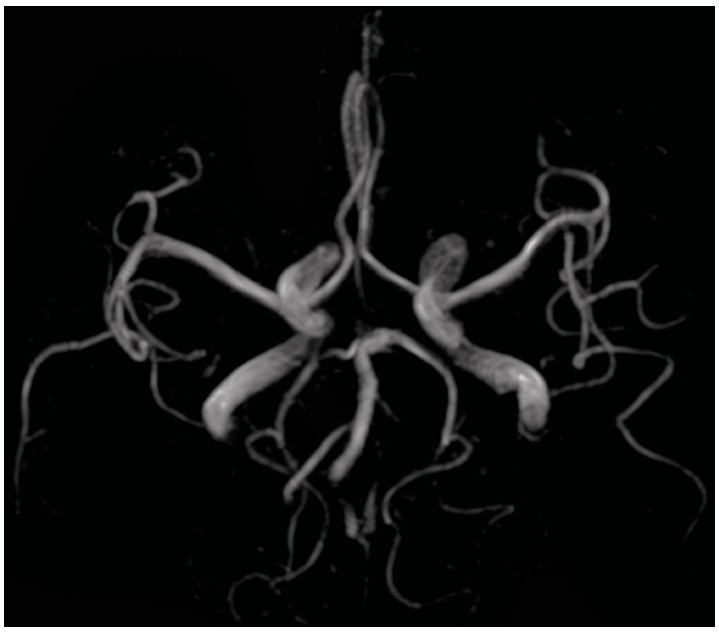
4 x 4. True multi channel imaging with 4 element coils and 4 channels allows simultaneous placement of up to 4 coils for faster head-to-toe scanning.

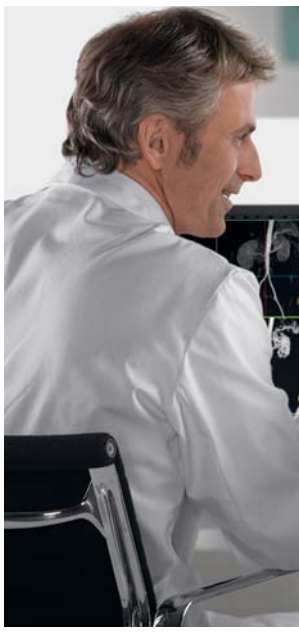
Optimized component integration, **high-field technology** and **superior workflow support** deliver superb image quality and high diagnostic confidence in an excellent price/performance package.

The generous, open feeling and inviting appearance contribute substantially to patient acceptance. Easy 270° accessibility and patient-friendly side loading add to optimum comfort and will make a crucial difference to your patients as well.

You will benefit from shorter scan times and higher throughput. Increased healthcare quality, **seamless workflow** and low operating costs all promote a high return-on-investment.

Discover the changing face of mid-field MRI.





High-field competence goes mid-field.

MAGNETOM C!

Experience and competence work together in the most efficient and compact form. Through the excellent integration and synchronization of advanced components, orchestrated by the very latest of software techniques, MAGNETOM C! moves beyond existing MRI mid-field boundaries.

Superior components

True multi channel imaging with fast and easy, simultaneous placement of up to 4 coils permits the largest anatomical coverage in mid-field MRI. Benefit almost instantly from extraordinary image quality in head-to-toe applications through the exceptional gradient system.

Unique, trendsetting *syngo* applications

Expanding new horizons to mid-field open MRI with applications formerly considered exclusively high-field:

- *syngo* GRAPPA – parallel acquisition technique for higher spatial and temporal resolution.
- *syngo* SPACE – isotropic 3D imaging in different contrasts e.g. for patients with spinal abnormalities.
- *syngo* REVEAL – diffusion weighted imaging in the abdomen e.g. for follow-up of liver cancer treatment
- *syngo* BLADE – motion correction reproducible, sharp images even for uncooperative patients (e.g. with trauma)

Experience high-field competence in mid-field.

Seamless workflow

syngo, intuitive and easy-to-use software integrates all patient related information, physiological and imaging data across your entire clinical workflow.

Competence

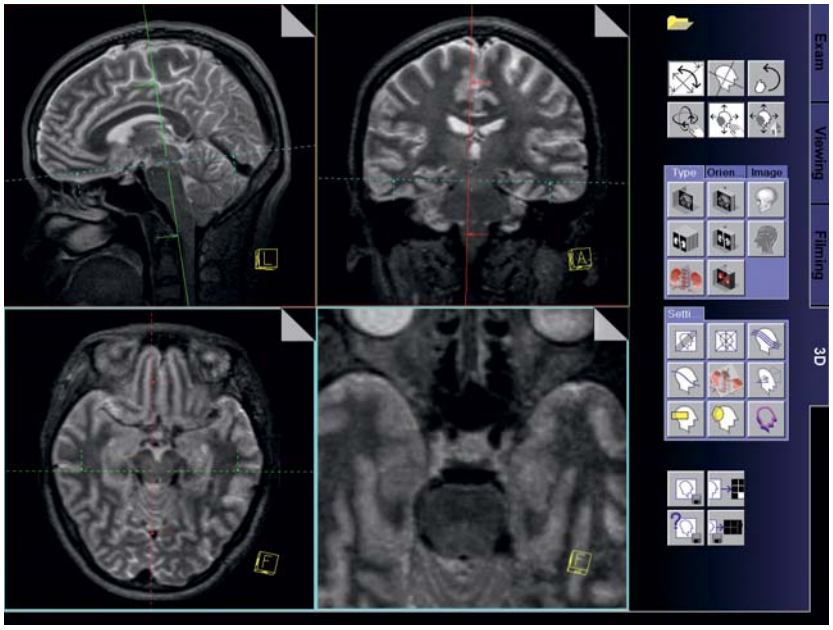
Phoenix gives superb reproducibility based on your image. Extract MR protocols from images by drag & drop. This means increased comfort for patients and technologists, as well as shorter exam times.

True multi channel RF system

- Complete range of 4-element coils
- Simultaneous placement of up to 4 coils (up to 13 elements)
- iPAT (integrated parallel acquisition technique) for high spatial and temporal resolution

High-field technology

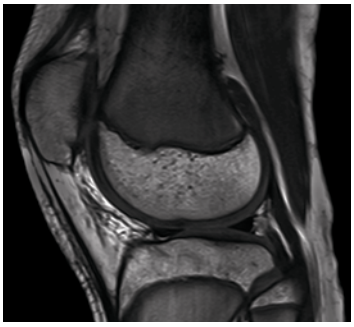
- Water cooled gradient system with 24mT/m and 55T/m/s slew rate



High resolution isotropic 3D imaging for multiplanar reconstruction with *syngo* SPACE

Applied high-field competence

MAGNETOM C!



High resolution imaging with good delineation of cartilage with unique 3D CISS.

Strong gradients – advanced applications

Most powerful gradients in class

- Gradient 24 mT/m
- Slew rate 55 T/m/s

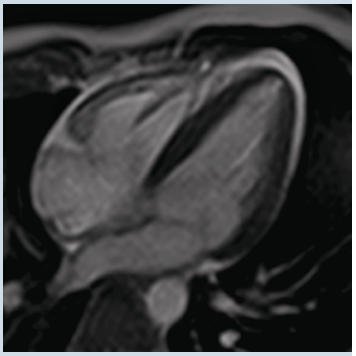
Advanced applications – *syngo* SPACE

Isotropic 3D imaging in different contrasts e.g. for patients with spinal abnormalities.

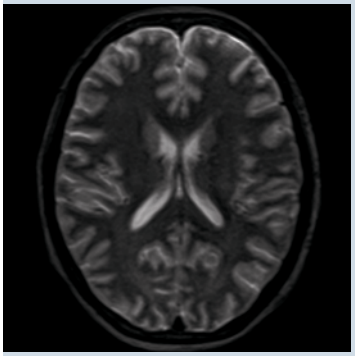
Advanced applications – *syngo* REVEAL

Diffusion weighted imaging in the abdomen e.g. for follow-up of liver cancer treatment

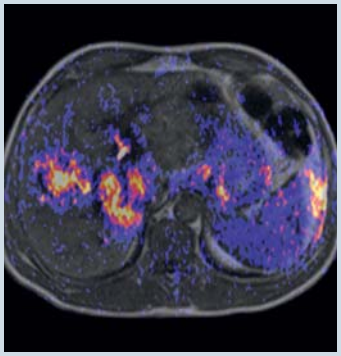
High-field gradients for faster scans like contrast enhanced MR angiography in the abdomen



High-field gradients to catch motion in cardiac cine studies



syngo SPACE for isotropic 3D imaging in various contrasts.



Advanced abdominal imaging with *syngo* REVEAL diffusion imaging in all body regions including liver.

“Higher field strength means higher signal-to-noise ratio – but it is not the only pre-requisite for good image quality. Gradient and RF technology of the MAGNETOM C! enable us to achieve mid-field images with a quality comparable to high-field MR systems.“

Prof. H.-M. Klein of Radiological Center – Ev. Jung-Stilling Hospital, Siegen, Germany

flexibility

Unprecedented coil combinations. 13 x 4 for coverage up to whole CNS.

accuracy

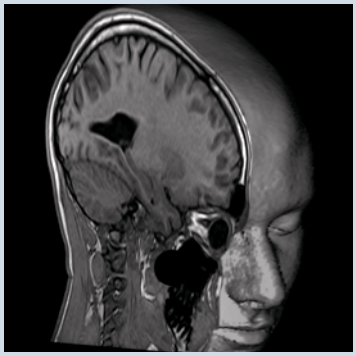
Excellent image quality. Superb SNR with comprehensive family of 4 element coils.

speed

Better results, faster. iPAT ensures fast acquisition with high resolution.

Advanced applications – *syngo* GRAPPA

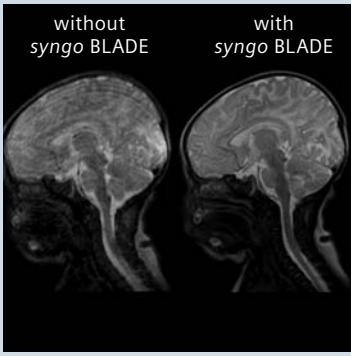
Parallel acquisition techniques (iPAT) for higher spacial and temporal resolution and larger coverage



syngo GRAPPA for larger coverage and higher resolution. 120 slices of 1.5 mm and 512 matrix in the head in 6:30 min.

Advanced Applications – *syngo* BLADE

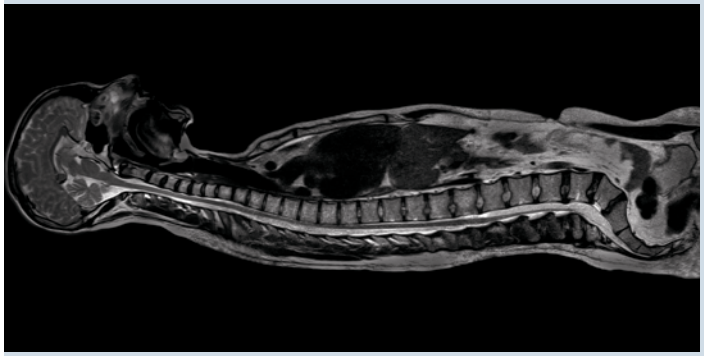
Correction of motion in all 3 directions for sharp images even with uncooperative patients and patients under stress



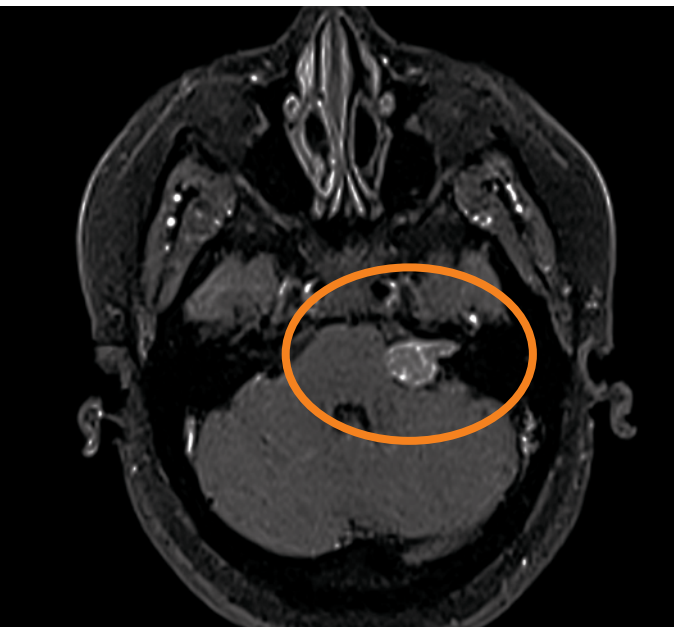
Trauma, claustrophobic or pediatric patients may move during the examination. *syngo* BLADE corrects for motion in all three directions.

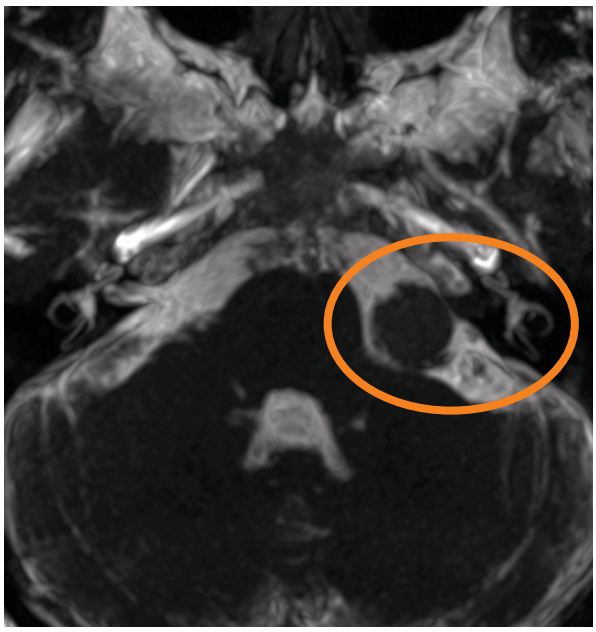
Flexibility – true multi-channel RF system

- Complete range of 4 element coils
- Up to four coils can be positioned simultaneously = 13 elements for one examination
- Posterior parts of the coils can stay on the table for more than 95% of the exams



Up to 4 coils with 13 elements can be positioned simultaneously for coverage of up to 100 cm field of view.





Confidence in diagnosis.

From a clinical perspective.

Expand your expectations. Expect superb image quality from the true multi channel RF system with the best SNR at 0.35 T and the largest anatomical coverage in mid-field. MAGNETOM C! offers exceptional gradients for rapid acquisition and highly differentiated image details. Iso-center imaging assures excellent image quality for all anatomical areas.

Advanced techniques such as comprehensive cardiac imaging and the unique *syngo* REVEAL revolutionize mid-field capabilities. *syngo* REVEAL for body diffusion increases metastasis conspicuity and permits virtually instant diagnosis. *syngo* GRAPPA parallel acquisition technique for higher resolution, larger coverage and faster scans, significantly speeds workflow. Referring physicians will notice and appreciate the improved service.

From now on, with MAGNETOM C! high-field diagnostic confidence at mid-field can be your standard.

Exceptional image quality

Best SNR at 0.35 T

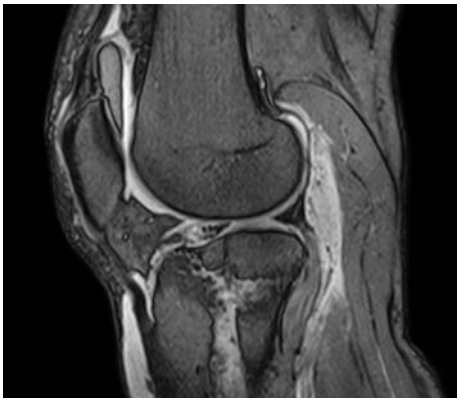
Multi-channel application suite

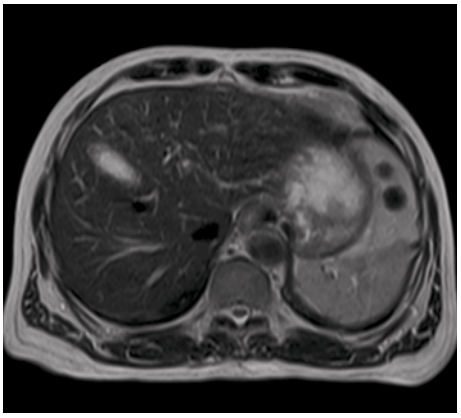
- Broad range of sequences and techniques for all clinical applications
- Included in the standard package

Outstanding *syngo* MR Applications

- *syngo* MR Neuro
- *syngo* MR Ortho
- *syngo* MR Vascular
- *syngo* MR Cardiac
- *syngo* MR Pediatric
- *syngo* MR Oncology
- *syngo* MR Body

Confidence



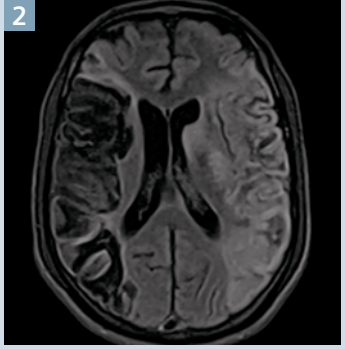


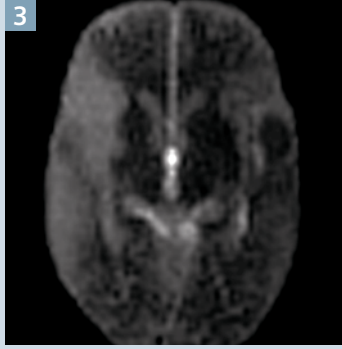
syngo MR Neuro

Comprehensive state of the art applications for neuro imaging including 3D FLASH, 3D HASTE, 3D TSE Restore, iPAT, Water Excitation, DIXON and Spectral Fat Saturation techniques.

Coverage up to whole CNS in one examination without patient repositioning [1]. Dark Fluid protocols for evaluation of lesions in the brain [2].

HASTE sequence for superior diffusion imaging with ADC maps [3] as well as EPI diffusion and perfusion. MR myelography [5] and Turbo SE sequence with Restore [4] for excellent T2 contrast with short acquisition times.



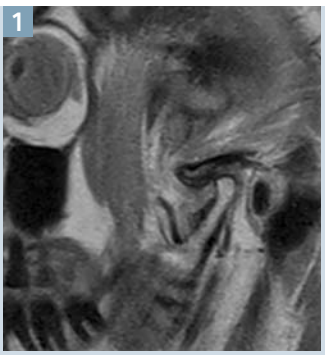


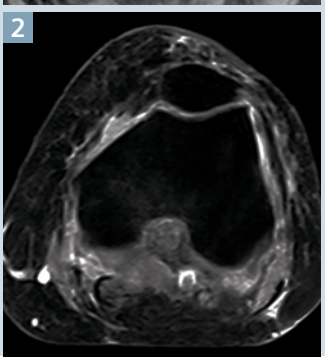
syngo MR Ortho

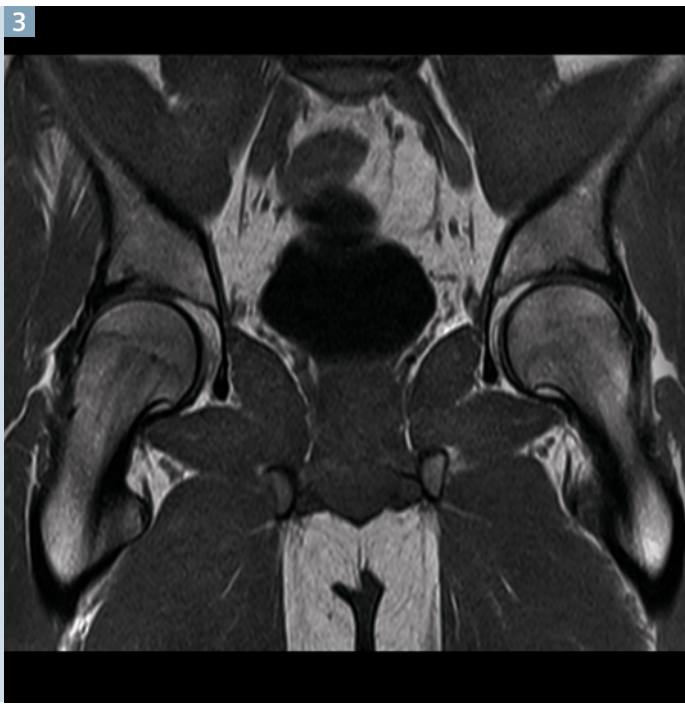
Comprehensive state of the art applications for orthopedic imaging including Siemens unique 3D DESS sequence for cartilage imaging. High resolution 3D protocols for imaging of smallest anatomies like TMJ [1] (512 matrix, 1.75 mm slice thickness with contiguous coverage).

Fat saturation to match every application with water excitation, spectral suppression [2], DIXON or inversion recovery.

Excellent image quality with 40 cm field of view for coverage of the hips [3] and thighs.







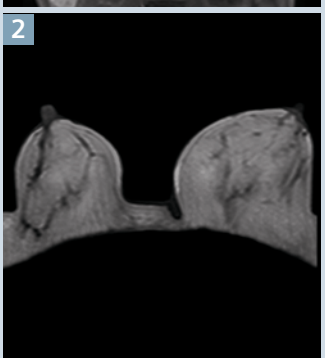
syngo MR Oncology

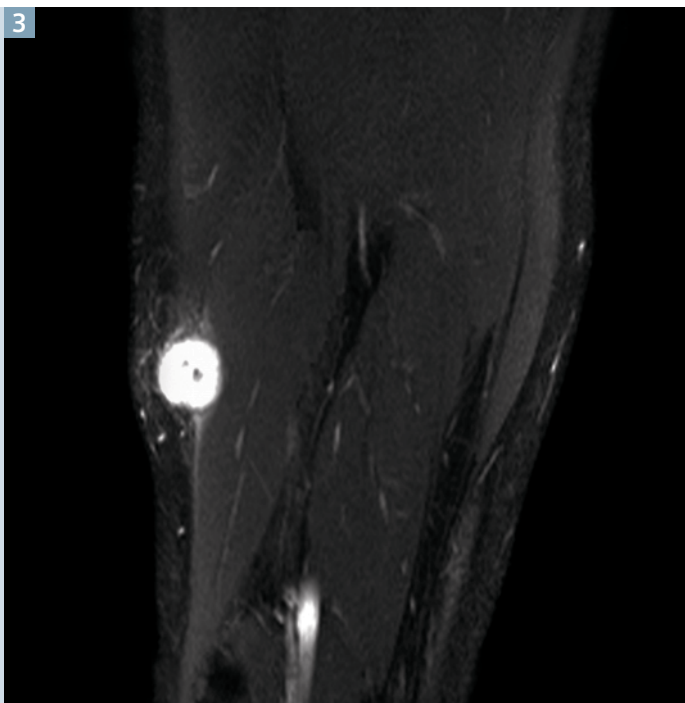
Comprehensive oncological applications for high-field diagnostic confidence.

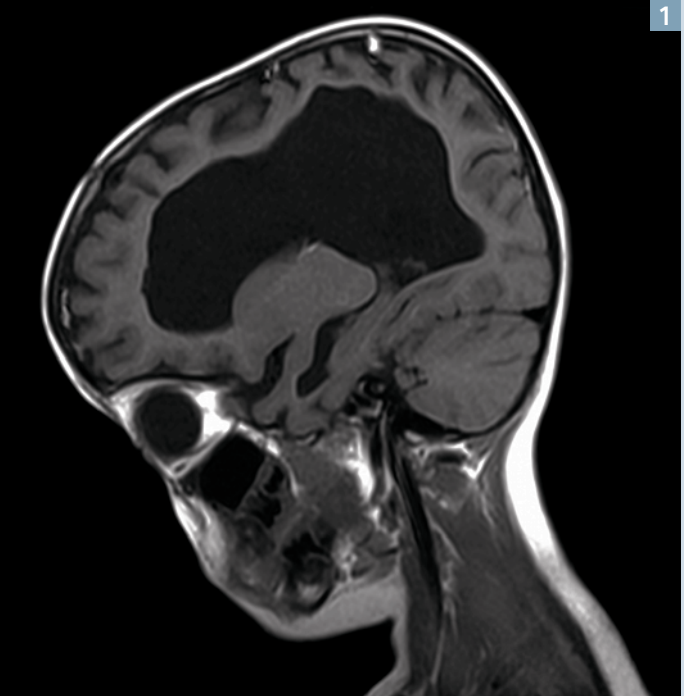
High-resolution imaging in a short 4 second breath-hold for maximum patient acceptance in oncologic imaging [1].

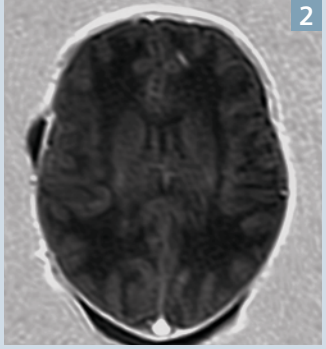
4 element coils for highest SNR and resolution: e.g. 4 element Breast Array coil for bilateral breast imaging [2].

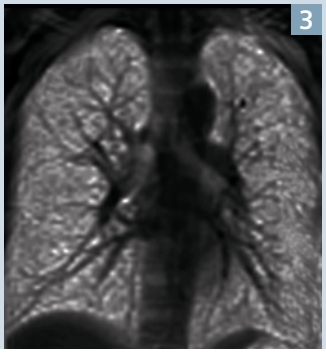
T1 Spin Echo with DIXON Fat Saturation for excellent visualization of contrast enhancement in a sarcoma [3].











syngo MR Pediatric

Excellent image quality for pediatric applications. Special protocols which match the special T1 and T2 values of infants and children are available for comprehensive applications including neuro [1, 2], orthopedic, oncological and abdominal imaging.*

No dose lung imaging with TrueFISP technique to avoid frequent exposure to x-rays during follow up studies e.g. of tuberculosis [3].

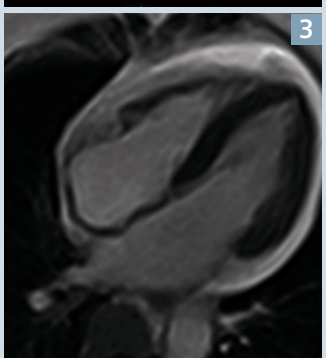
* The safety of imaging fetuses/infants has not been established.

syngo MR Body

Comprehensive set of applications for quick and easy body imaging.

2D PACE motion correction facilitates abdominal imaging at mid-field by enabling free-breathing examinations without respiratory belt and motion monitored [1 small image] and anatomically reordered multi-breath-hold studies [1].

3D TSE [2] and 3D HASTE sequences for visualization of fluid in the biliary system and urinary tract.



syngo MR Vascular and *syngo* MR Cardiac

Comprehensive vascular applications with and without contrast media facilitated by the high-field gradient system.

Time of flight [2, showing recurring hemorrhage], phase contrast and contrast enhanced MRA with Care Bolus bolus timing technique [1] are easy to use with Inline Technology.

The MAGNETOM C! also offers comprehensive cardiac applications at mid-field including e.g. cine TrueFISP for evaluation of cardiac function [3].

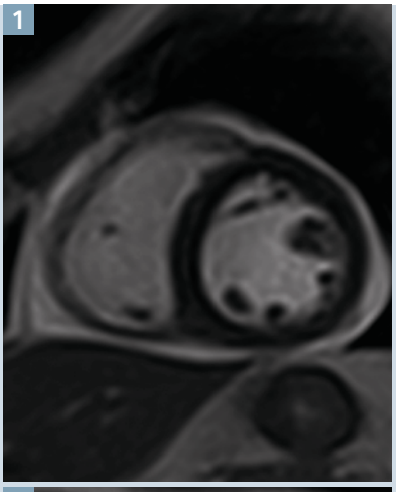
Cardiac Imaging.

Comprehensive cardiac applications at mid-field.

***syngo* MR Cardiac**

Comprehensive cardiac imaging at 0.35 T including cardiac late enhancement for assessment of myocardial viability. Evaluation of cardiac perfusion or myocardial wall thickening with a bulls eye plot. Dark blood technique for morphological imaging [2], cineTrueFISP for evaluation of cardiac function [1] and left ventricular volume [4] supported by 4D ventricular function visualization [3] and evaluation. For easier patient positioning and better patient comfort MAGNETOM C! can be equipped with a wireless patient monitoring unit with ECG, pulse and respiratory gating.

1



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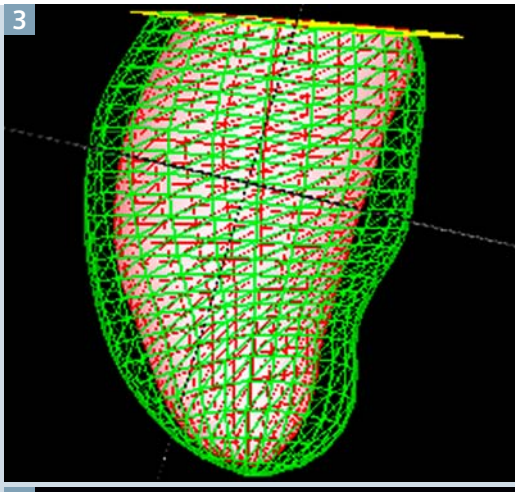

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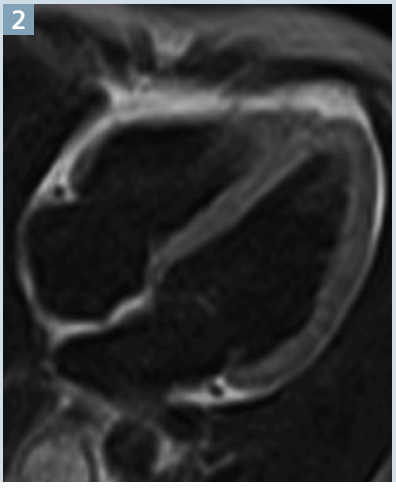

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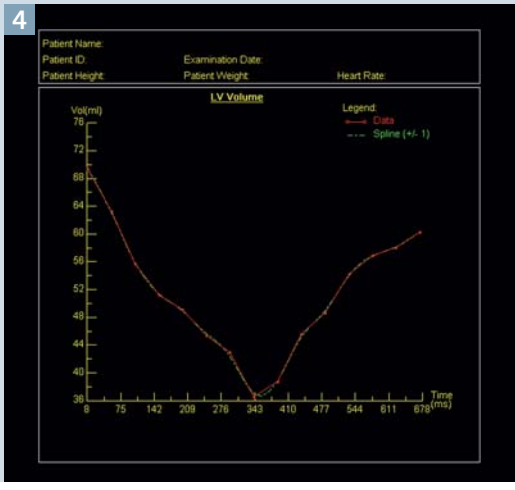
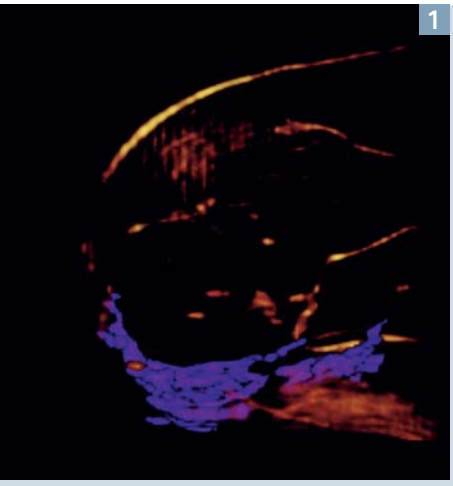
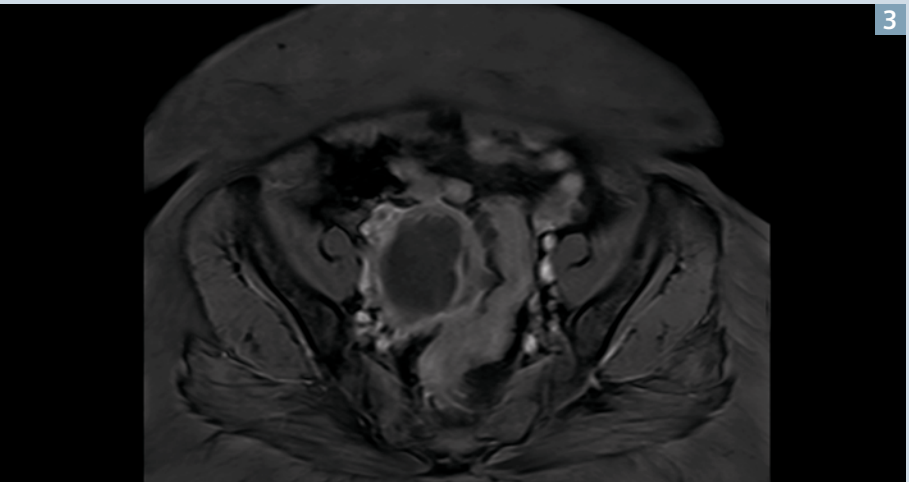


Women’s Health imaging.

Comprehensive applications at mid-field.

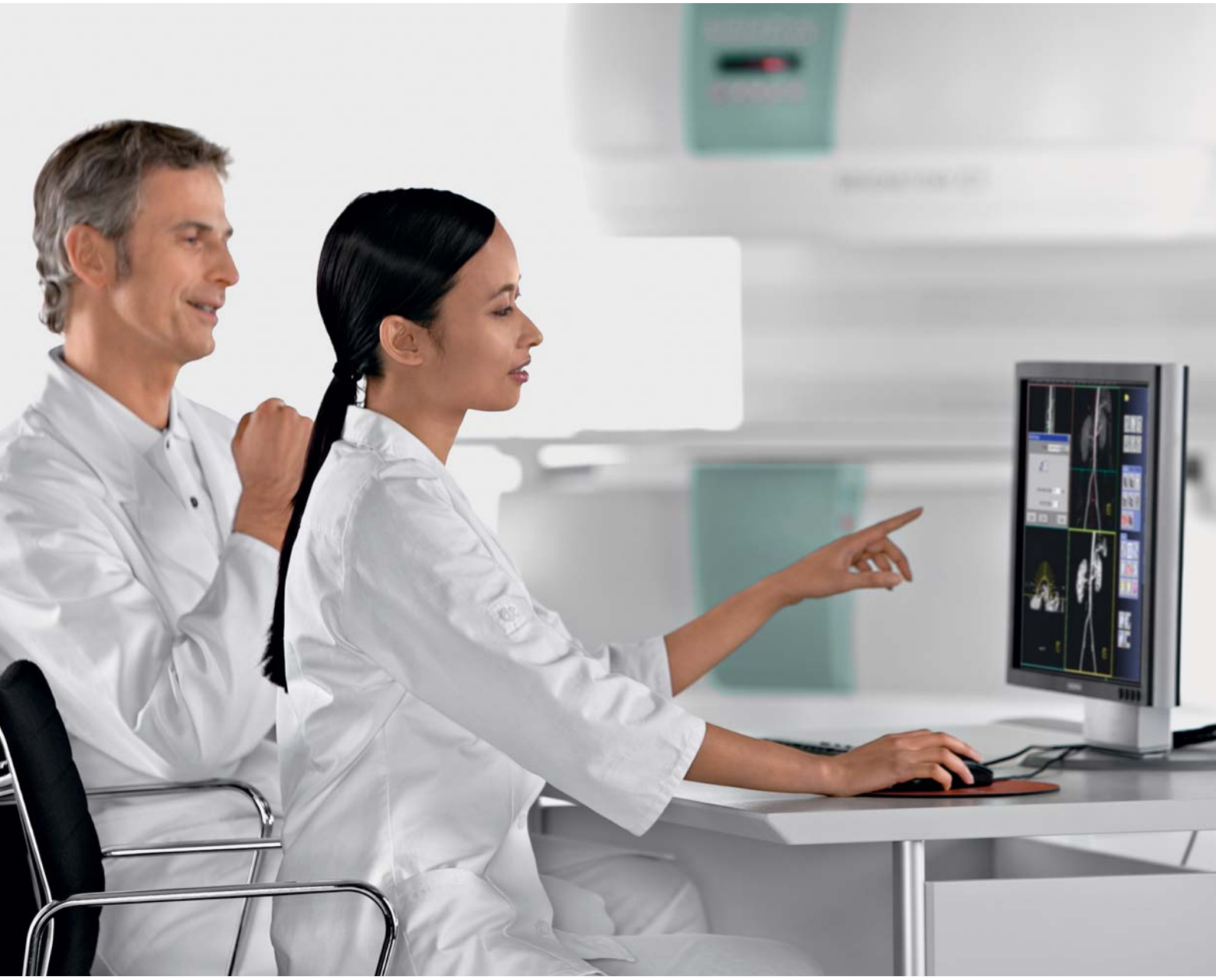




syngo MR Women’s Health

Superb gradient and RF systems enable high-resolution breast imaging with high signal-to-noise ratio. Bilateral breast imaging with 4 element Breast Array coil including dynamic imaging with inline calculation of wash-in and wash-out maps [1] and visualization of contrast media with fat saturation and subtraction techniques [2].

Homogeneous fat saturation over large field of views for imaging of the breast and cervix [3].



MAGNETOM C! makes it easy from start to finish.

Get ready for comprehensive workflow improvements:

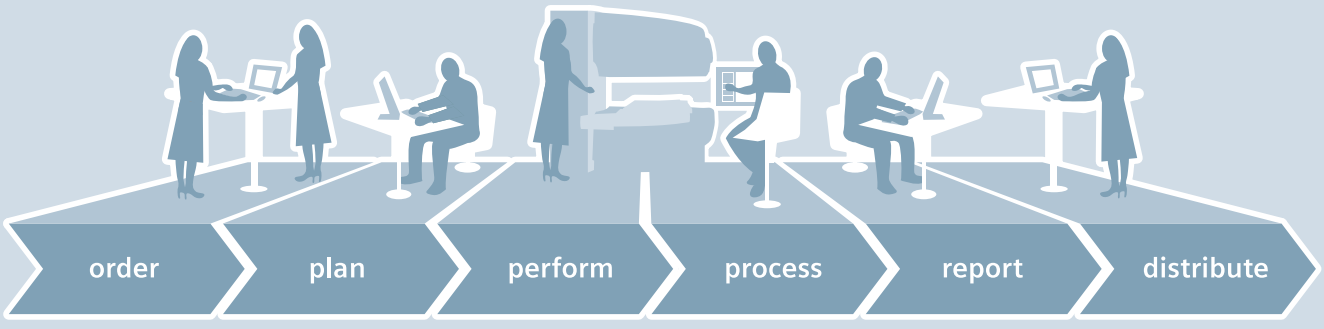
Workflow Innovations

- ***syngo* Inline Technology:** Allows you to perform certain processing steps as early as during image reconstruction and display them immediately after completion. That means processing instead of post-processing. Subtraction images, Maximum Intensity Projection, etc., are displayed immediately after completion of the scan.

- ***syngo* Phoenix:** Enable simple exchange of MR protocols, quickly retrieving the entire protocol information in one easy drag-and-drop step. This allows reproducible follow-up examinations.

- ***syngo* Expert-i:** Gives physicians and experts the ability to remotely access the MRI suite from virtually anywhere within the network, making it possible to address difficult clinical questions while a patient is being scanned.

- **Multi Channel Array coils:** Makes patient positioning easy. The posterior parts of the head an spine coils can stay on the table for almost all examinations to safe time during patient setup. Multiple coils for extended field of view can be placed simultaneously to avoid patient repositioning and facilitate image composition.



Comfort

Patient comfort at its best.

From a patient perspective.

More space means less anxiety. A unique C-shaped magnet for easy side loading and a friendly, compact design cooperate to create an open and free atmosphere. The smallest pole diameter – 137 cm (54“) ensures optimal patient comfort. For up to 2/3 of all exams, the patient’s head remains outside the magnet, giving a feeling of spaciousness and relaxing claustrophobic tensions. Easy 270° accessibility, the patients always feel close to assistance.

Design defines acceptance

The patients will appreciate the quick and comfortable examinations. Posterior coil parts remain on table for more than 95 % of the exams. Obese patients appreciate the comfortable side loading. For these patients, MAGNETOM C! comes with unique extra large body and knee coils. These advantages, combined with the open, patient-friendly design, attract more patients, who will recommend your site.

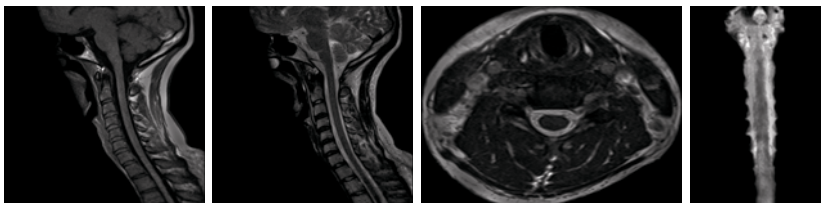
- **Patient friendly appearance**
  Most open, compact C-shaped magnet
- **Patient friendly exams**
  Side loading
- **Most open feeling**
  Smallest pole diameter – 137 cm (54 inches)
- **Easy set up**
  Posterior parts of the coils remain on table
- **Close to assistance**
  270° accessibility

Easy 270° accessibility.
Children feel relaxed, parents can be close during the examination.

Smallest pole diameter of 137 cm (54 inches). The patient's head remains outside the magnet for most exams.

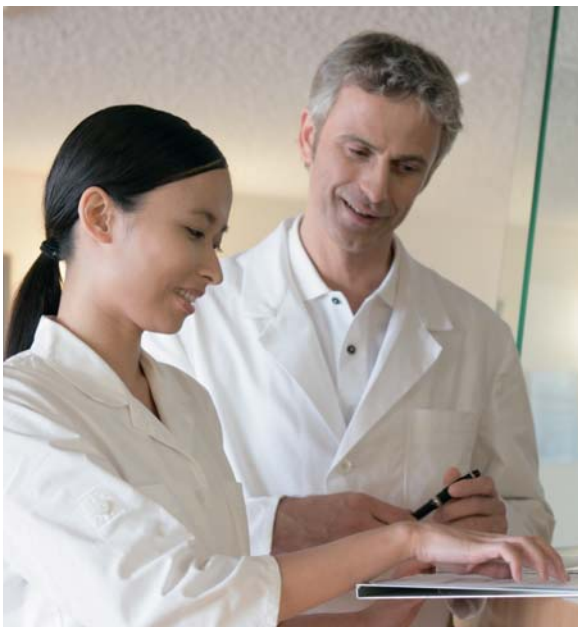
Complete range of anatomically optimized coils, including 175 cm (69") XXL body and XL 79 cm (31.1") knee arrays for obese patients.

Open on three sides for comfortable side loading and optimum patient comfort.



High patient throughput supported by fast sequences. T1 sagittal, T2 sagittal and axial and myelogram in less than 9 minutes.

Cost-Efficiency



From a business perspective.

Move up to cost efficient quality care.

Comprehensive workflow from start to finish. Every step is optimized to streamline your examinations: beginning with quick and easy patient positioning and posterior coil parts that remain on the table. New protocols and scan speed close to high-field performance assure increased throughput and higher image quality. A wide choice of applications opens opportunities for more referrals. Structured reporting and DVD burning accelerate distribution because time is essential.

And with Life, Siemens' integrated customer care solution, you'll know that your ever-evolving business needs are being met.

Evolve, the obsolescence protection program helps you to stay at the leading edge of technology and advancement. You will benefit more from the latest workflow improvements, clinical applications and the most advanced computer technology.

- **Excellent price performance ratio**
  Comprehensive application suite
- **Minimal siting requirements**
  Less than 30 m² (325 sq.ft)
- **Low operating costs**
  Permanent magnet – no helium
- **Inline technology**
  Processing instead of Post-Processing
- **Phoenix**
  What you see is what you get.
  Drag & drop images to scan.
- ***syngo* Expert-i**
  Allows remote access into the MR console by an expert user within the network.
- **Excellent Return-On-Investment**
  Decreased costs – optimized profitability


SIEMENS
MAGNETOM C!

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Cleveland Community Hospital, Cleveland, USA
Lone Star Imaging, Mission, USA
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