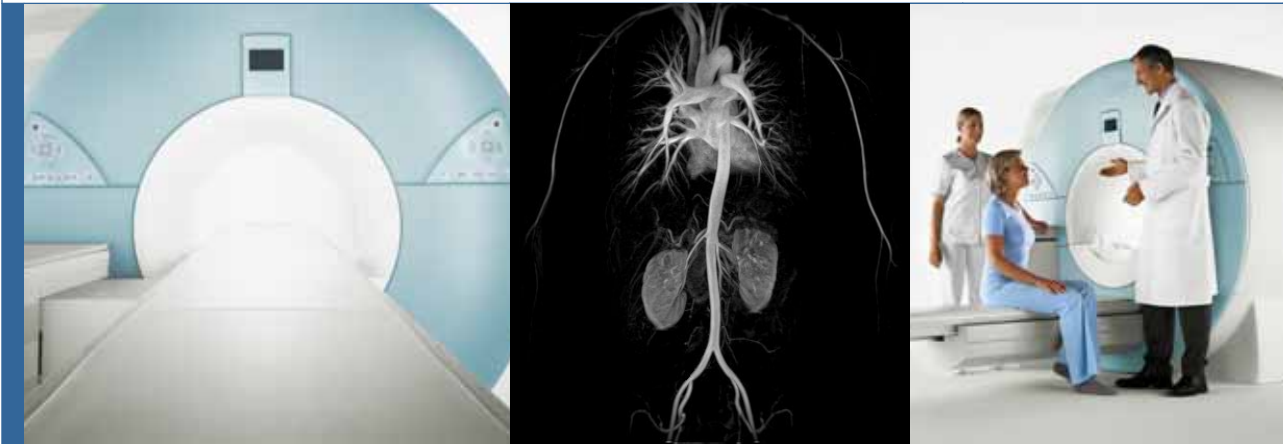


MAGNETOM Avanto

Leading applications



MAGNETOM Avanto

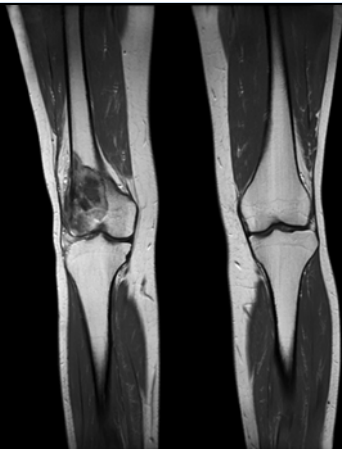
MAGNETOM Avanto

The first Tim System

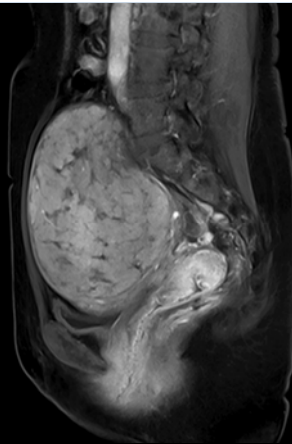


MAGNETOM Avanto

Excellent image quality in 1.5 T
MAGNETOM Avanto: High magnet homogeneity



Large 50 cm Field of View
University Munich (LMU), Germany



Superb fat saturation
Jikei University Hospital, Tokyo, Japan

MAGNETOM Avanto

Excellent image quality in 1.5 T
MAGNETOM Avanto: Strong gradients that whisper

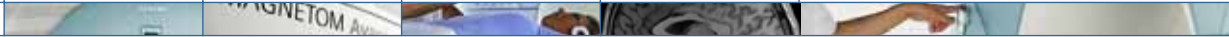


Q-engine: 33 mT/m @ 125 T/m/s
SQ-engine: 45 mT/m @ 200 T/m/s
University Munich (TU), Germany



- Time of Flight MRA – without contrast agent – benefiting from the high SNR of the Head Matrix coil
- 3D ce-MRA in a single breath-hold with iPAT

MAGNETOM Avanto



Tim

Total imaging matrix

MAGNETOM Avanto



Flexibility. Select exams not coils.

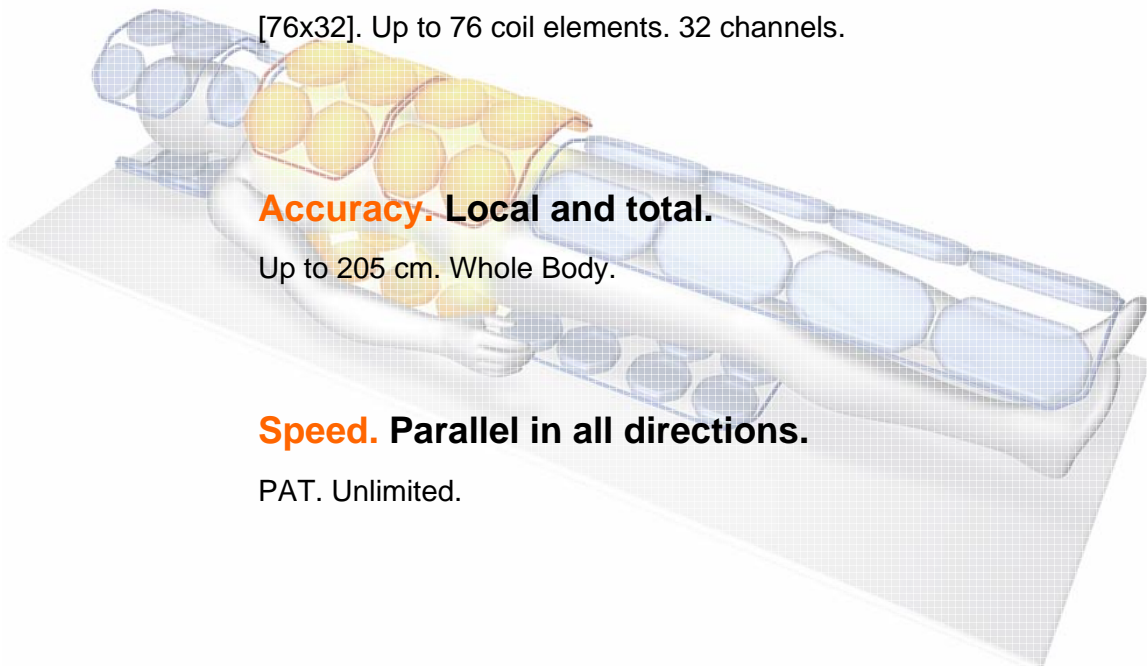
[76x32]. Up to 76 coil elements. 32 channels.

Accuracy. Local and total.

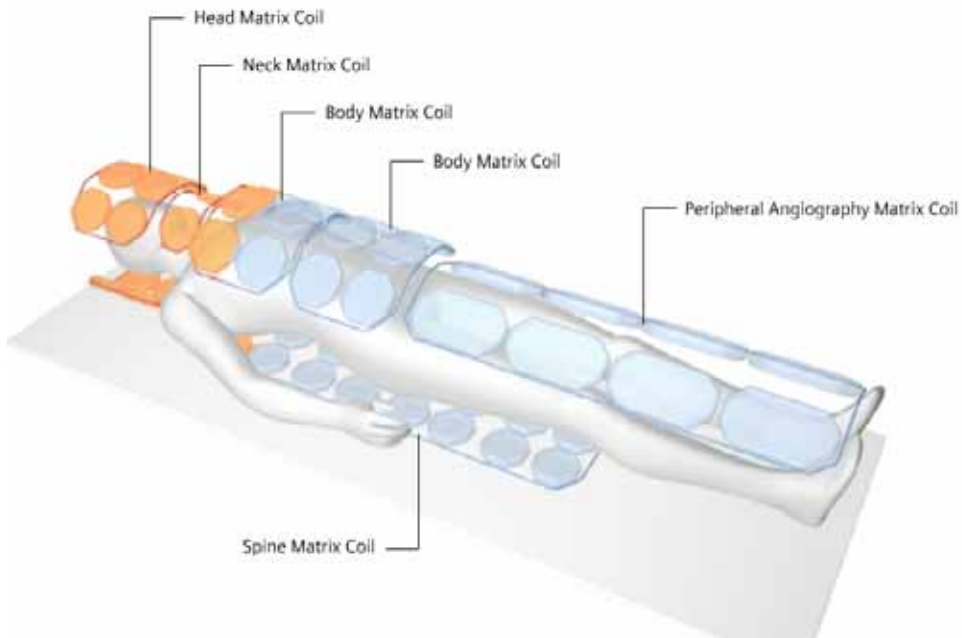
Up to 205 cm. Whole Body.

Speed. Parallel in all directions.

PAT. Unlimited.

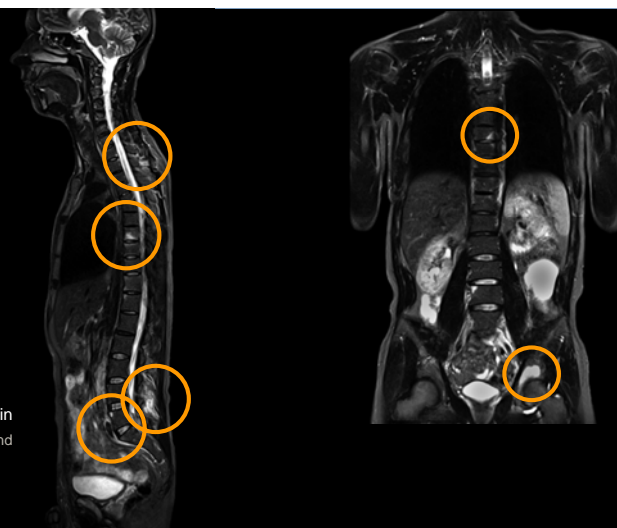


MAGNETOM Avanto



MAGNETOM Avanto

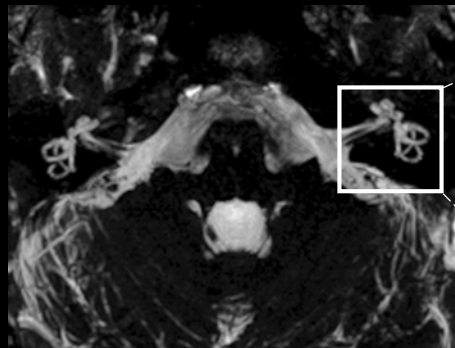
Flexibility



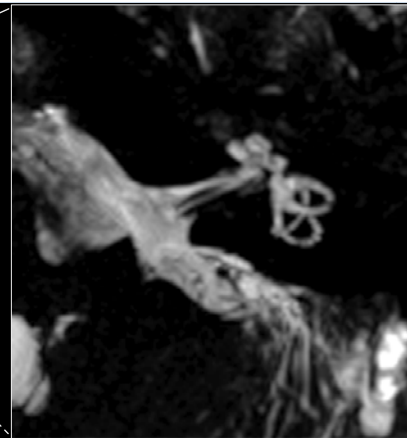
T2 TIRM, PAT 2, TA 4:36 min
 Courtesy of University Zürich, Switzerland

- One set-up assessment of spine, anterior chest wall, pectoral and pelvic girdle for efficient assessment of inflammatory diseases
- Evaluating the potential of early detection in ankylosing spondylitis

Accuracy



3D cochlea protocol



- High SNR with Matrix coils
- 0.7 mm slice resolution
- Submillimeter resolution in 3 min



Speed



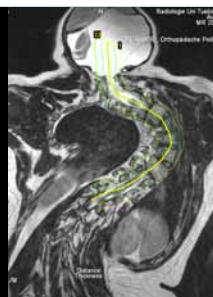
Dynamic ce-MRA
Courtesy of Fuwai Hospital, China

- Whole thorax in 300 ms
- Scan time reduction and reduced motion artifacts with iPAT (integrated Parallel Acquisition Techniques)
- High spatial resolution

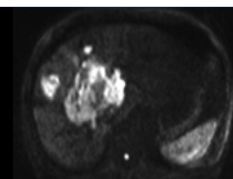
A Whole New World of Applications

MAGNETOM Avanto with Tim

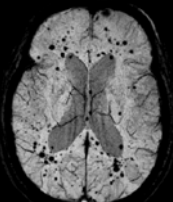
syngo MR B13



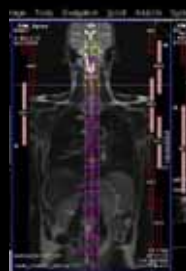
syngo SPACE



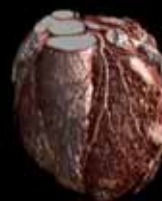
syngo REVEAL



syngo SWI



Set-n-Go



syngo BEAT



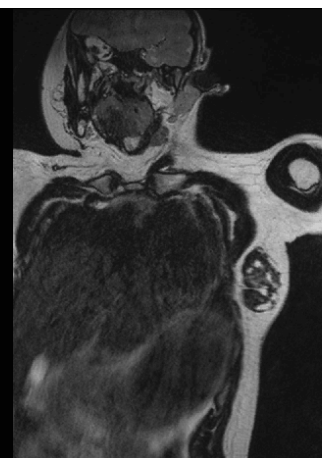
DTI + fMRI

MAGNETOM Avanto

syngo SPACE

Powered by Tim

syngo MR B13



Arnold-Chiari malformation and scoliosis
Courtesy of Dr. Lichy, Dr. Schlemmer, U. Tübingen, Germany

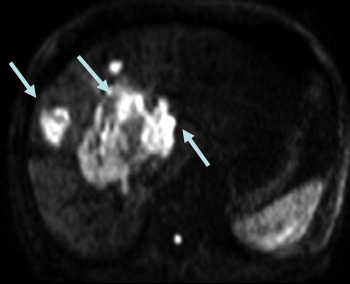
- 3D spine imaging with PAT 3
- 1 mm isotropic resolution
- Retrospective slice prescription including curved-cut
- For surgery planning of complex cases

MAGNETOM Avanto

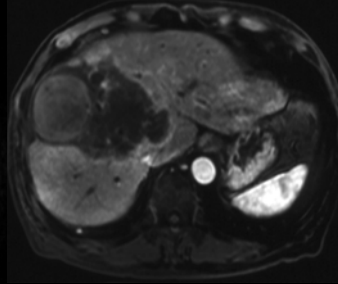
syngo REVEAL

Powered by Tim

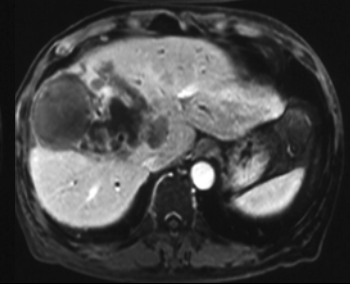
syngo MR B13



REVEAL



early phase



late phase

REVEAL and 3D VIBE with fat saturation
Courtesy Dr. Ichiba, Jikei University, Japan

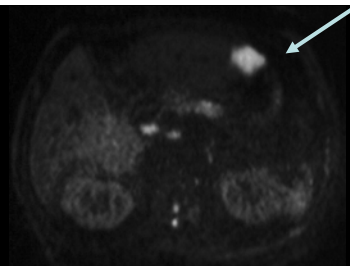
- REVEAL improves the differentiation between recurrent tumor, residual viable tumor and necrotic tissue

MAGNETOM Avanto

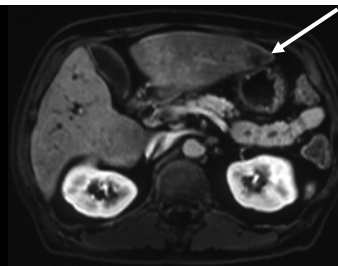
syngo REVEAL

Powered by Tim

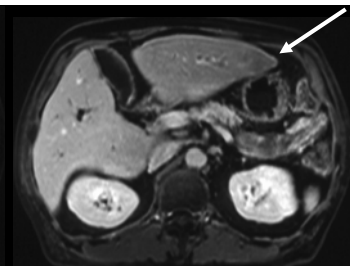
syngo MR B13



REVEAL



early phase



late phase

REVEAL and 3D VIBE with fat saturation
Courtesy Dr. Ichiba, Jikei University, Japan

- Increased metastasis conspicuity

MAGNETOM Avanto

syngo SWI

Powered by Tim

syngo MR B13

SWI, cavernous angiomas
Courtesy of Tokyo Metropolitan Ebara Hospital, Japan

- Now you can be more sensitive to intracranial bleeding without radiation
- Susceptibility weighted imaging with GRAPPA
- Fast acquisition (< 3 min) to replace the T2* GRE sequence



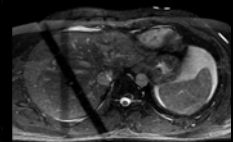
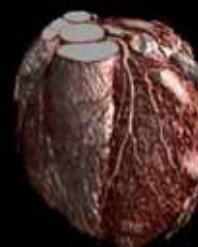
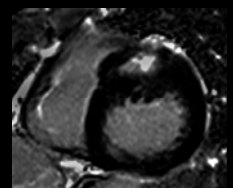
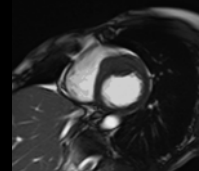
MAGNETOM Avanto

syngo BEAT

Powered by Tim

syngo MR B13

- BEAT makes cardiac MR easy.
- BEAT is comprehensive. It combines
 - Cardiac function
 - Morphology
 - 3D coronary anatomy and
 - Tissue characterization
- BEAT enables to optimize the scan to the individual patient condition, like
 - Arrhythmia
 - Obesity
 - Shortness of breath
- BEAT takes only one breath-hold



MAGNETOM Avanto

Combining DTI and fMRI

syngo MR B13



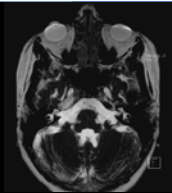
- Diffusion Tensor Imaging (DTI) with 256 directions
- Combined visualization with functional MR imaging results
- For advanced neuro and surgery planning

MAGNETOM Avanto

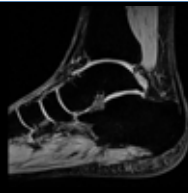
Tim Application Suite

9 comprehensive application suites in standard

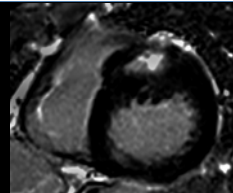
syngo MR B13



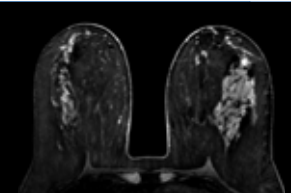
Tim Neuro Suite



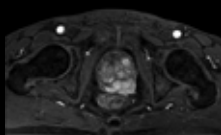
Tim Ortho Suite



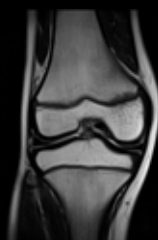
Tim Cardio Suite



Tim Breast Suite



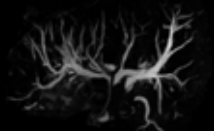
Tim Onco Suite



Tim Pediatric Suite



Tim Angio Suite



Tim Body Suite



Tim Scientific Suite

Monster power that whispers MAGNETOM Avanto with Tim

- **AudioComfort**
 - 30 dB noise reduction
 - No compromise in gradient strength
 - Increased working quality for staff
 - Reduced siting cost
- **Whisper Mode**
 - Whisper sequences for additional noise reduction e.g. for children or anxious patients
 - Standard with the Tim Application Suite



MAGNETOM Avanto

MAGNETOM Avanto Leading Applications



- **Excellent in technology**
 - Large 50 cm Field-of-View
 - Strong gradients that whisper
 - Unique Tim technology
- **Excellent image quality in 1.5T**

MAGNETOM Avanto

MAGNETOM Avanto

The first Tim System



MAGNETOM Avanto

**Thank you for your
attention.**