

**MAGNETOM Amira  
A BioMatrix System**

**No matter  
what**

[siemens-healthineers.com/amira](http://siemens-healthineers.com/amira)



A BioMatrix  
System



**SIEMENS**  
**Healthineers**

## **MAGNETOM Amira – A BioMatrix System**

# **No matter what**

Acceptable MR image quality can easily be achieved for routine exams. What sets an MR system apart is the ability to deliver high-quality imaging even with complex variables – no matter what. These variables can be due to patient condition, staff management, operational scheduling, and other disruptions. They can lead to additional pressure and reduced reimbursements.

Thanks to our unique technology, MAGNETOM Amira with BioMatrix sets your institution apart by delivering consistently high-quality imaging, providing financial certainty, and expanding clinical opportunities.

With BioMatrix and myExam Companion, MAGNETOM Amira delivers consistent and reproducible results, regardless of the patient or user. A set of productivity-boosting technologies accelerates the acquisition time with no compromise in image quality for increased patient throughput, driving financial certainty. And with its free-breathing applications, MAGNETOM Amira with BioMatrix improves the patient experience and grants more patients access to advanced MRI exams.

MAGNETOM Amira with BioMatrix truly transforms the way you deliver care to your patients, enabling reproducible high-quality results you can count on – no matter what.



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# myExam Companion – Intelligence that works with you

Using the new possibilities of digitalization and AI, data is turned into integrated expertise and tailored assistance. myExam Companion comes in three different modes to provide tailored user assistance enabling consistent results.



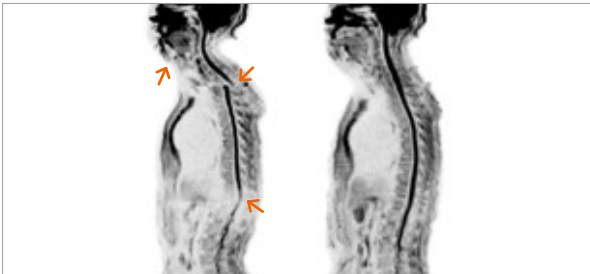
## BioMatrix – Embrace human nature

BioMatrix technology helps to overcome the challenges caused by biovariability with a whole new approach: By embracing human nature. Instead of expecting patients to adjust to the technology, BioMatrix automatically adjusts to the patient.



### Anticipate

motion for high-quality results with  
**BioMatrix Respiratory Sensor**



### Adapt

to challenging anatomies for reliable exams with  
**BioMatrix Tuner SliceAdjust**



### Accelerate

patient preparation for increased efficiency with  
**BioMatrix Interface Select&GO**

# Consistent quality, every day with standardized workflows

Each patient is unique. Staff can fluctuate. Flexible strategies and efficient workflows help you prevent exam inconsistencies that can jeopardize productivity. MAGNETOM Amira simplifies processes and gives healthcare professionals total control and flexibility with myExam Companion.

## myExam Autopilot

myExam Autopilot offers users most advanced and intelligent automation. It enables users to scan at high quality with just a simple click and has the potential to remove burdensome routine tasks.



Automate intelligently

## myExam Assist

myExam Assist provides guided workflows. It allows for high quality, efficient exams even when conditions change.



Flexible and guided

## myExam Cockpit

myExam Cockpit allows users to customize intuitively. It provides a central workspace for protocol management.



Customize intuitively

# myExam Assist automated workflows and myExam Cockpit

## myExam Assists

### Flexibly guided

75 percent<sup>1</sup> of all exams are brain, spine, and MSK. MAGNETOM Amira comes with myExam Brain Assist, myExam Large Joint Assist, and myExam Spine Assist to automate and standardize your exams for the highest consistency across a broad variety of patients and indications.

The following myExam Assists are also available as options:

- myExam Angio Assist
- myExam Cardiac Assist
- myExam Breast Assist
- myExam Abdomen Assist
- myExam Whole Body Assist
- myExam Liverlab Assist

Together they provide highly automated scan procedures for a variety of body regions with comprehensive guidance and predefined scan strategies. Powered by artificial intelligence, AutoAlign delivers automatic placement of imaging slices to ensure reproducible scan results – every time.

## myExam Cockpit

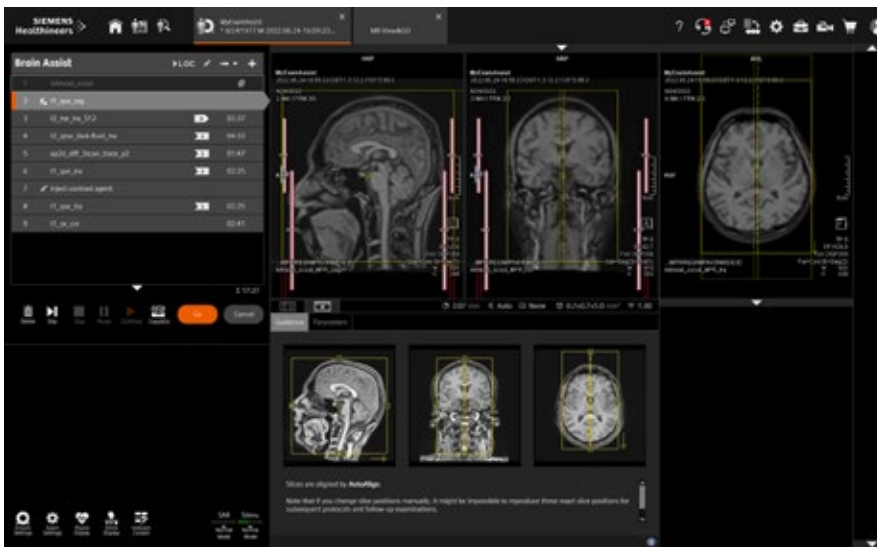
### Intuitively customized

Consistent quality is achieved by eliminating variables that arise from varying acquisition techniques and/or non-optimized parameters. Via a central user interface, users can manage all myExam Assists in the myExam Cockpit and simplify protocol optimization, customization, and organization.

## Common user interface

### Simplifies staff training

The *syngo* MR XA software with myExam Companion runs on all current Siemens Healthineers MRI scanners. The familiar interface in this powerful software platform helps shorten learning curves and make cross-scanner training easier.



myExam Brain Assist



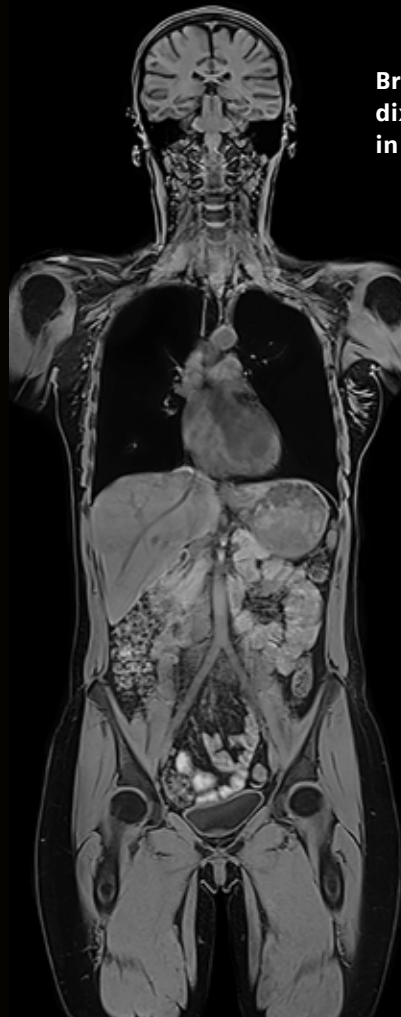
myExam Spine Assist



myExam Large Joint Assist

**myExam Whole Body Assist**

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



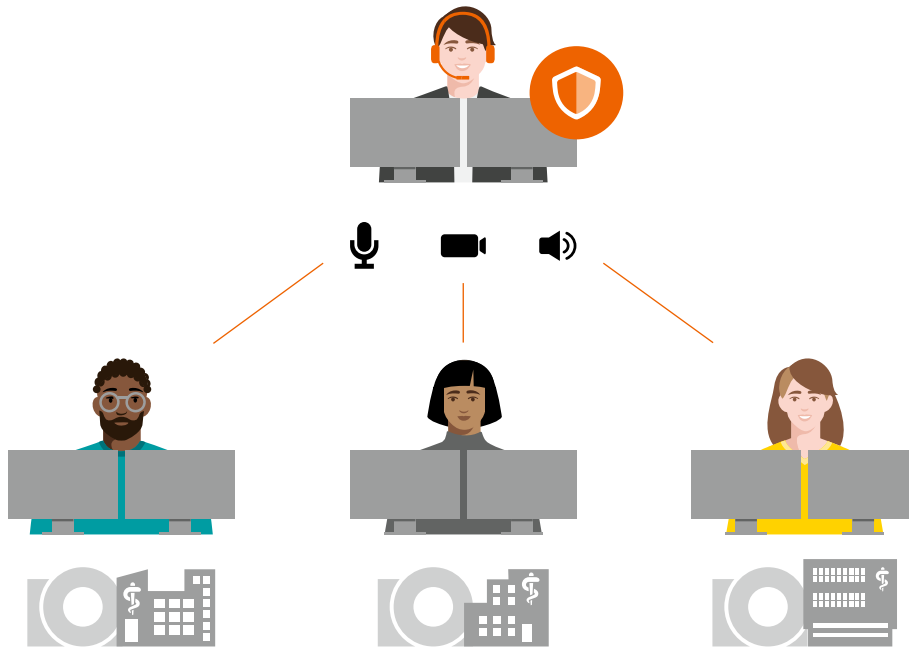
**Breath-hold VIBE  
dixon water acquired  
in three steps**

1aaad0484

# Move knowledge, not staff, with *syngo* Virtual Cockpit<sup>2</sup>

*syngo* Virtual Cockpit<sup>2</sup> is designed to support 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 on up to three scanners simultaneously
- Expert communicates with scanner operator via chat, video, or voice
- Assist MR, MR-PET, CT, and PET/CT scanners



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For more information on *syngo* Virtual Cockpit<sup>2</sup>:  
[siemens-healthineers.com/syngo-virtual-cockpit](https://siemens-healthineers.com/syngo-virtual-cockpit)

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# Count on financial certainty with productivity-boosting technologies

Finding a way to reconcile productivity improvements and cost savings while providing high-quality care is a major challenge in today's healthcare industry. Overwhelming workloads and operating costs can drive down profits from your MR operations.

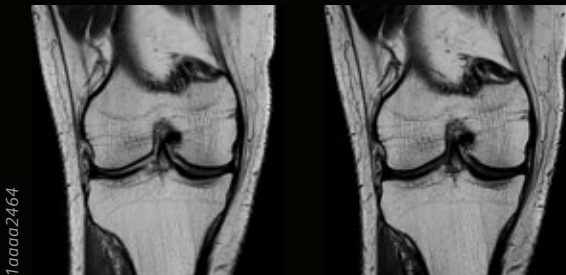
MAGNETOM Amira with BioMatrix provides financial security by increasing patient throughput and delivering high-quality results with Simultaneous Multi-Slice available with the Turbo Suite packages.

## Simultaneous Multi-Slice<sup>3</sup>

Simultaneous Multi-Slice TSE can dramatically reduce scan times for routine examinations. It helps enhance your efficiency and optimize clinical operations.

## Segmented time-of-flight

Segmented time-of-flight enables faster non-contrast MRA exams without compromising image quality.



1a00a2464

PD TSE, PAT 2  
0.7 x 0.7 x 3 mm<sup>3</sup>  
TA 2:49 min

PD TSE, SMS 2  
0.7 x 0.7 x 3 mm<sup>3</sup>  
TA 1:01 min

> TA 1:01 min with SMS TSE



1a00a2470

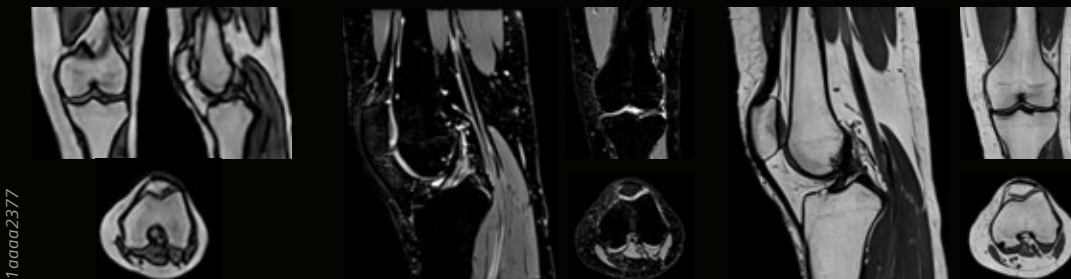
Conventional TOF  
TA 6:06 min

Segmented TOF  
TA 4:30 min

> 25% faster

## GOKnee3D

GOKnee3D is the new clinically validated push-button, high-resolution 3D knee exam. Thanks to CAIPIRINHA SPACE, you can now acquire submillimeter 3D isotropic scans faster than ever before.



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AutoAlign localizer

T2 SPACE  
0.8 x 0.8 x 0.8 mm<sup>3</sup>  
TA 5:56 min

PD SPACE  
0.6 x 0.6 x 0.6 mm<sup>3</sup>  
TA 4:03 min

> TA 10:16 min

# Deep Resolve Technology

Deep Resolve is an advanced reconstruction technology that increases image sharpness and scan speed based on deep neural networks and innovative MR noise reduction technique.

## Deep Resolve Gain

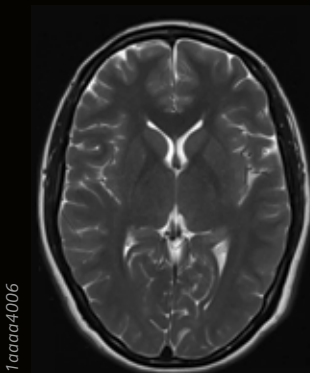
Deep Resolve Gain enables targeted denoising thus addressing local variations in image noise.

## Deep Resolve Sharp

Deep Resolve Sharp is an AI-powered image reconstruction technology with a deep neural network at its core that increases the sharpness of the image.

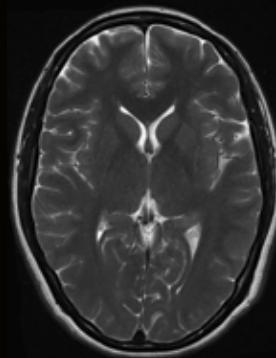
## Deep Resolve Boost

Deep Resolve Boost is a raw data-to-image deep learning reconstruction technology that enables high signal-to-noise (SNR) and radically accelerated image acquisition.



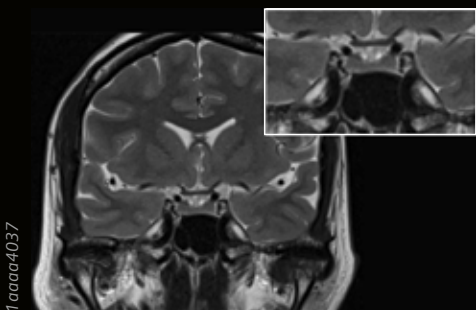
### Conventional

T2 TSE  
0.5 x 0.5 x 5 mm<sup>3</sup>  
TA 2:35 min



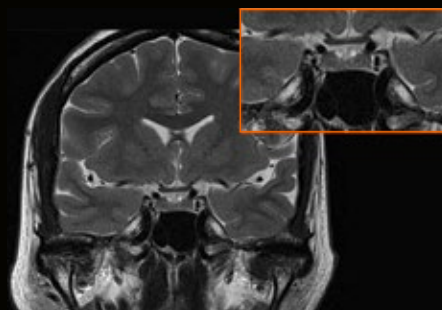
### Deep Resolve Gain & Sharp

T2 TSE  
0.2 x 0.2 x 5 mm<sup>3</sup>  
TA 1:20 min



### Conventional

T2 TSE  
0.6 x 0.6 x 3 mm<sup>3</sup>  
TA 2:45 min



### Deep Resolve Boost & Sharp

T2 TSE  
0.3 x 0.3 x 3 mm<sup>3</sup>  
TA 1:33 min

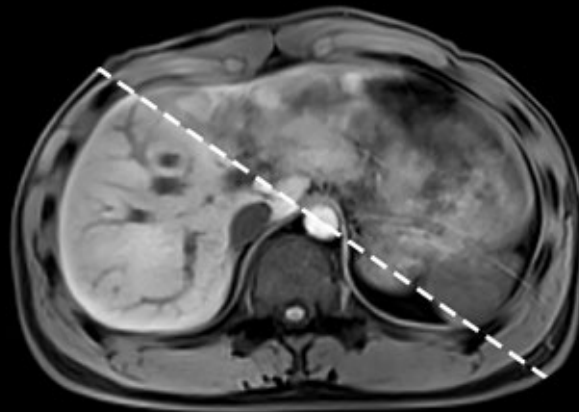
# Count on new clinical opportunities with free-breathing applications

To set yourself apart as a healthcare provider, you want to differentiate your institution through unique MRI services to attract more patients and referrers.

MAGNETOM Amira with BioMatrix opens up new clinical capabilities that increase patient access to advanced MRI exams. Compressed Sensing<sup>3</sup> provides a better patient experience by enabling free-breathing body and cardiac examinations – thereby transforming care delivery.

## Compressed Sensing GRASP-VIBE

- Provides push-button, free-breathing liver dynamics
- Removes timing challenges in dynamic imaging, and respiratory artifacts
- Outperforms Cartesian VIBE acquisition under free breathing



Free breathing with Compressed Sensing GRASP-VIBE

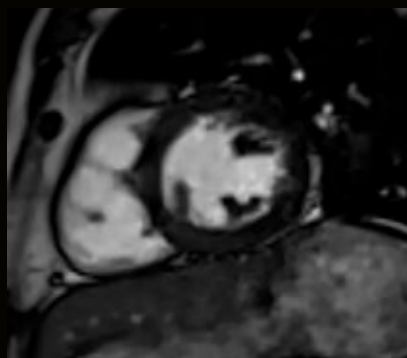
Suboptimal breath-hold VIBE

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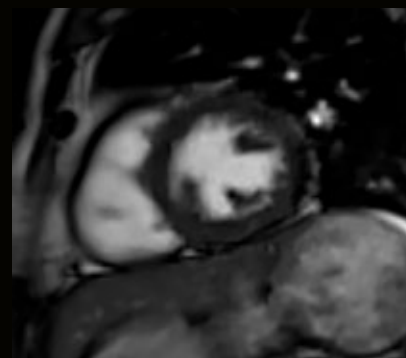
## Compressed Sensing Cardiac Cine

Cardiac function evaluation can now be offered to all patients – even those with arrhythmia.

- Acquire free-breathing, high-resolution Cardiac Cine images
- Capture the whole cardiac cycle for precise quantification
- Expand the patient population eligible for cardiac MRI



Compressed Sensing Cardiac Cine segmented TrueFISP with one breath-hold (acquired in two heartbeats)



Compressed Sensing Cardiac Cine TrueFISP real-time acquired with free-breathing

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# Resource efficient features for lower operating costs

## Jointly towards a sustainable future

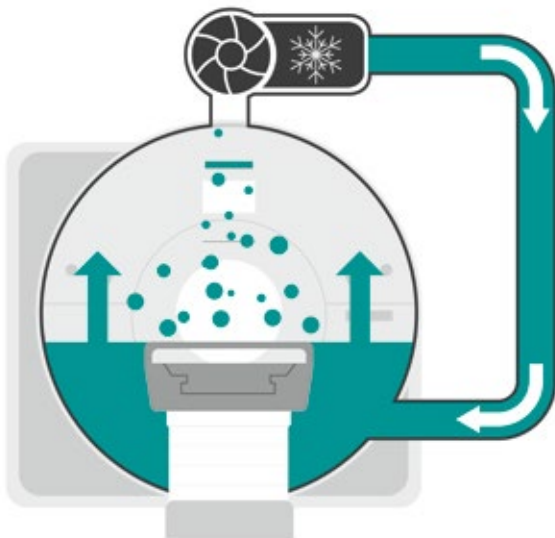
### Eco Power Mode

MAGNETOM Amira incorporates the Eco Power Mode for up to 30 percent<sup>4</sup> savings in energy consumption during system stand-by and system off-modes. This means that the cold head compressor is automatically switched off during prolonged system idle while maintaining zero helium boil-off. In addition, energy is saved by disabling the Gradient Power Amplifier during system idle times: for example, when the table remains in the home position for a longer period of time.

### Zero Helium Boil-off

Reduce lifecycle costs and improve your eco-footprint – with Zero Helium Boil-off technology and minimum power and cooling demands. All of this adds up to enhanced performance, lower resource consumption, and greater investment protection.

With its low space requirements and low connection values, MAGNETOM Amira is easy to site, which enables its use in existing infrastructures and reduces installation costs.



**Reduce energy consumption by 30 percent<sup>4</sup> when system is not in use**



**International version. Not for distribution or use in the U.S.**

MAGNETOM Amira – A BioMatrix System is not commercially available in all countries. Due to regulatory reasons, its future availability cannot be guaranteed. Please contact your local Siemens Healthineers organization for further details.

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The information in this document contains general descriptions of the technical options available and may not always apply in individual cases.

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In the interest of complying with legal requirements concerning the environmental compatibility of our products (protection of natural resources and waste conservation), we may recycle certain components where legally permissible. For recycled components we use the same extensive quality assurance measures as for factory-new components.

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

<sup>1</sup> Evaluation of MRI utilization.  
Based on 2.2 million  
Siemens Healthineers MR  
examinations in 2013.

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

<sup>3</sup> Optional

<sup>4</sup> Data on file. Results may vary.

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