



Changing expectations

Philips Ingenia 3.0T Magnetic Resonance System, the first-ever digital broadband MR

PHILIPS
sense and simplicity

Ingenia 3.0T: The first-ever digital



broadband MR

As healthcare rapidly changes around the world, so do the requirements for MR scanning. In addition to performing the most common procedures better and faster, there is a growing need for oncology and body imaging, often on larger patients. More services and faster delivery are the name of the game.

How do you keep pace with these changes, now and in the future? With Philips Ingenia 3.0T, the first digital broadband MR scanner.

Powered by the breakthrough dStream architecture, the Ingenia 3.0T is the first MR system that brings MR signal digitization where it has never been before – in the RF coil, as close to the patient as possible. dStream unleashes the power of digitization by delivering a high purity MR signal for increased SNR, combined with

enhanced workflow and ease of use for greater efficiency in your daily operations.

Philips Ingenia is designed to avoid compromises. Better, more consistent image quality for all applications pairs with clinical versatility to expand into new areas such as body/oncology, in a wide aperture system that promotes excellent patient comfort. And productivity is enhanced with every feature of the Ingenia, with automation where it makes sense, while still giving you the control you want or need.

Elevated clinical performance, accelerated patient management and improved economic value – all for the life of the system – the Ingenia 3.0T will change your expectations on what MR is and should be.

Ingenia 3.0T
powered by



Architecture



Imaging Space

Designed with patients in mind

Developed for a wide diversity of patients with different ages, sizes and physical conditions, the Ingenia 3.0T has features that will put your patients at ease:

- 70 cm bore provides more space and helps to reduce anxiety.
- Smart software to reduce retakes increase consistency and exam speed.
- Digital coil design greatly reduces coil weights and leads to less patient repositioning in many exams.
- The ambient light ring on the magnet façade and adjustable, in-bore lighting enhance the openness of the system.
- Patient-perceived gradient acoustic noise is reduced by more than 80%.

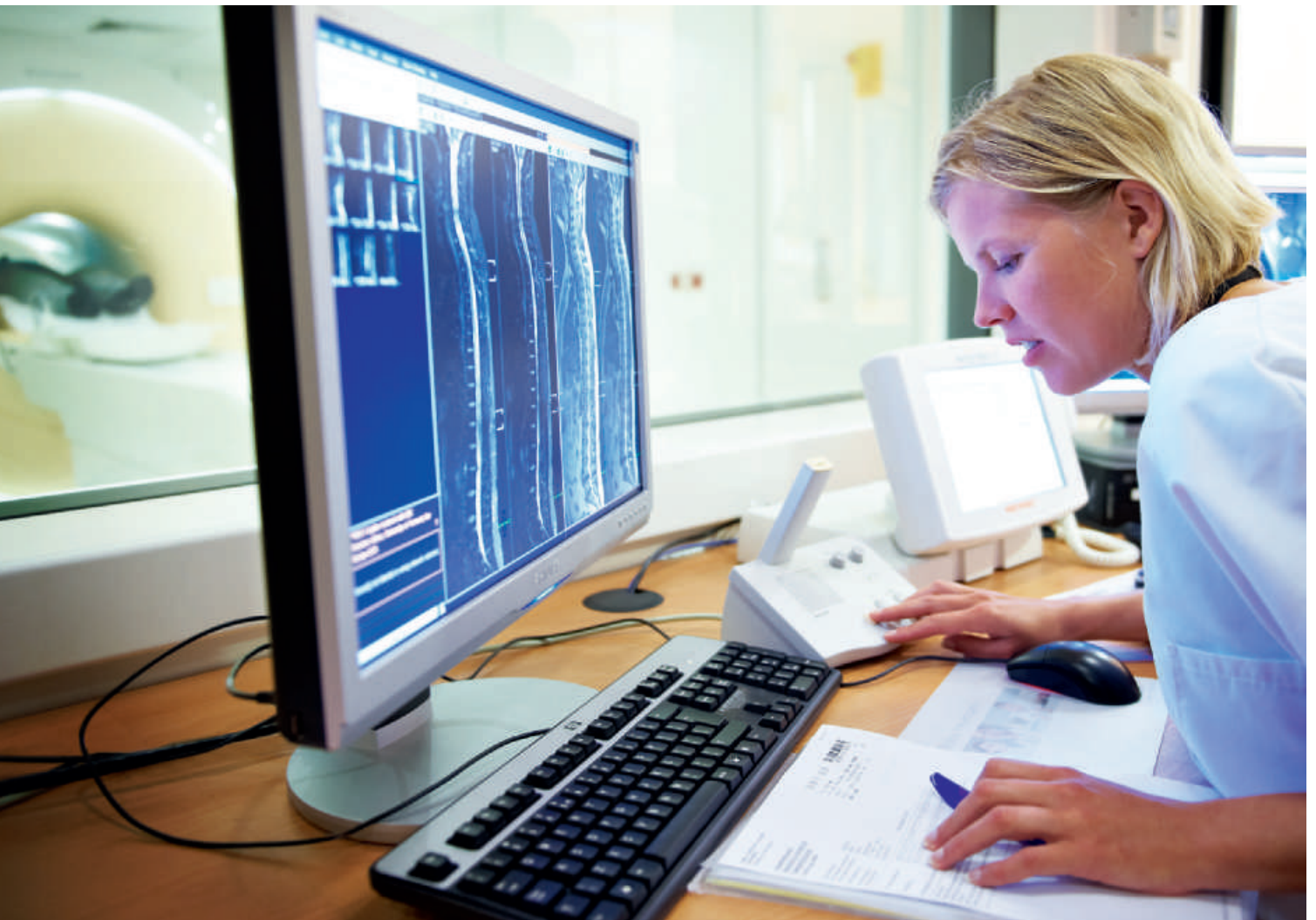
dStream architecture delivers clarity,

At the heart of the Ingenia 3.0T is the new dStream architecture. dStream comprises:

- **DirectDigital** RF receive technology, which digitizes the MR signal directly in the RF coil, at the patient.
- **FlexStream** workflow, which increases system versatility and throughput through better coil and patient management.
- **EasyExpand**, which enables plug and play expansion of clinical capabilities without major hardware upgrades.

Gain up to 40% SNR

DirectDigital RF receive technology digitizes the MR signal at the patient, eliminating noise influences typical of analog pathways, to capture the MR signal where it is at its purest. The fiber-optic connection from the coil to the image reconstructor enables lossless broadband data transmission. This results in SNR gains of up to 40%, which you can use to increase image quality and exam speed. dStream architecture also brings next generation parallel imaging dS-SENSE for even more speed or resolution.



speed and expandability



As much as 30% improvement in throughput
Hinged upon the unique FlexCoverage Posterior coil that provides neck-to-toe coverage without the need for any manual removal or repositioning, FlexStream enables imaging with fewer coils and reduces coil positioning and patient setup time.

Easily expand clinical capabilities with EasyExpand
With dStream's EasyExpand, you never have to worry about upgrading your RF receive channels to keep up with advances in coil technology. Because digitization occurs in the RF coil, the channels available are determined by the coils, rather than the system. This enables plug-and-play expansion of clinical capabilities without major hardware upgrades, resulting in lower lifecycle costs and improved economic value.



Breakthrough technology to enhance and expand clinical capabilities

Revolutionary miniaturization of the receive electronics in Ingenia 3.0T makes it possible to digitize MR signals in the RF coil as close to the patient as possible. dStream architecture enables DirectDigital and EasyExpand

DirectDigital

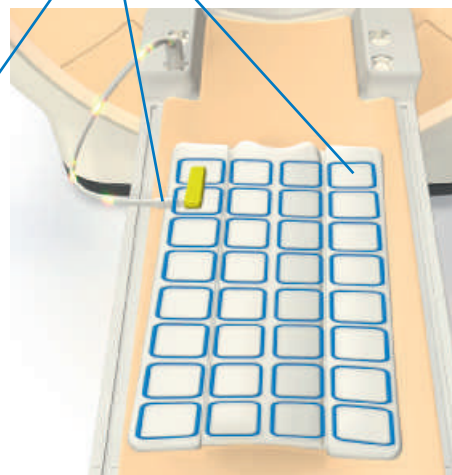
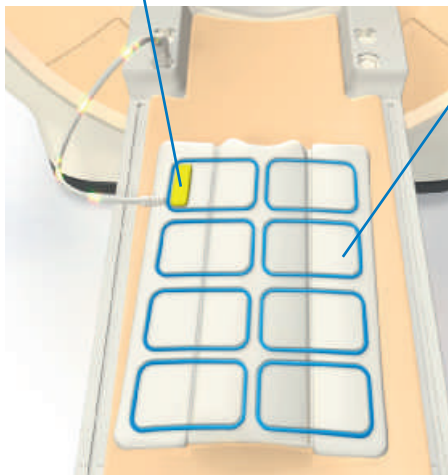
Ingenia 3.0T delivers up to 40% higher SNR, which can be combined with dS-SENSE parallel imaging for outstanding image clarity and speed.

EasyExpand

With EasyExpand, the number of RF receive channels is no longer a system specification. This enables plug-and-play expansion of clinical capabilities without the need for RF channel upgrades.

Revolutionary miniaturization of receive electronics enables digitization directly in the RF coil.

Single digital broadband fiber optic cable independent of number of elements/channels in a RF coil.





Ingenia 3.0T



Ingenia 3.0T with DirectDigital.



DirectDigital: miniaturized electronics in the coil.

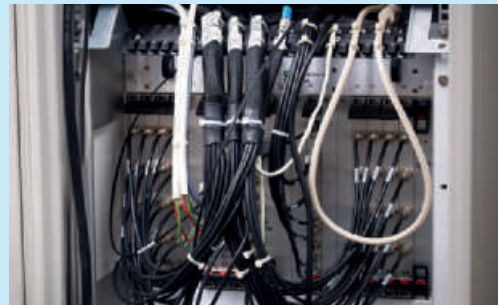


Ingenia 3.0T: Up to 40% improvement in SNR with DirectDigital.

Other MR



Other MR: Digitization away from coil.



Other MR: Large electronics rack distant from the coil.



Other MR: Signal loss resulting from digitization performed away from the coil.

FlexStream enhances workflow and

FlexStream is a new concept in exam management designed to streamline workflow, increase flexibility and reduce exam time, bringing up to 30% improvement in your throughput.



FlexCoverage Posterior coil

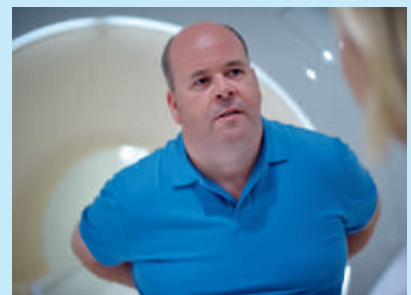
Integrated in the tabletop, the FlexCoverage Posterior coil is the answer for about 60% of your routine applications, providing neck-to-toe coverage, head-or-foot first, without coil handling or positioning. The Posterior coil combines effortlessly with other dStream coils for large coverage, and fast and easy patient setup.

FlexCoverage Anterior coil*

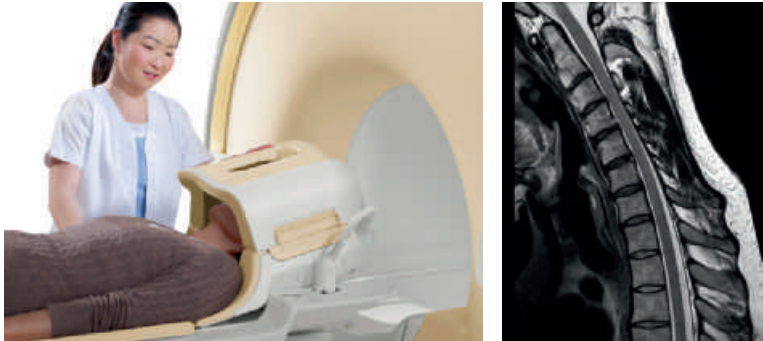
By combining the lightweight FlexCoverage Anterior coil with the Posterior coil, you can image anatomies from above the shoulder to the toe. Due to its unique design, it conforms comfortably to the patient's body shape, allowing strap-free use for fast and easy positioning.

FlexConnect connection

FlexConnect enables single-handed coil connections as well as auto-eject for easy table undocking.



productivity



FlexStream workflow enables imaging patients with kyphosis due to the ability to tilt the dS HeadSpine / HeadNeckSpine coils.



FlexCaddy coil storage cart*

If other dStream coils are required, choose from a variety of coil solutions readily available in the optional FlexCaddy coil storage cart.



FlexTrak Patient Transport System*

FlexTrak dockable patient transport system provides simplified patient preparation, handling and transportation from the preparation room to the MR scanner, as well as easy exam set up.



FlexTrak Mammo*

Specialty dockable tables can instantly convert your general purpose Ingenia 3.0T into a specialty scanner for breast imaging, intervention or therapy applications, while ensuring high throughput.



* Optional

Pushing the boundaries

The Ingenia 3.0T is designed to outperform other MR systems in many ways.

High performance Xtend imaging space

The industry leading Xtend design provides the largest homogenous field-of-view in a commercial 70 cm system. It also offers the best combination of magnet homogeneity and gradient performance.

- 70 cm bore for increased patient comfort and easy positioning.

- An ultra-large, up to 55 cm field of view for extended coverage.
- The industry's highest homogeneity for a 70 cm system (1.8 ppm over 50 cm FOV) for excellent image quality, off-center imaging and fat suppression.



Xtend benefits:

- Eyes-to-thighs imaging in as few as two stations.
- Simplified imaging even for large patients.
- Seamless matching of multi-station exams.

Large Field of View.
T2W spine with SPAIR fat suppression.



Two-station T2W whole
spine imaging.





Contrast uniformity, speed and consistency

Philips-exclusive MultiTransmit reduces dielectric shading to provide superb image uniformity, contrast and consistency, as well as faster imaging. MultiTransmit uses parallel RF transmission with multiple RF sources to adapt the RF signals to each patient, resulting in excellent image quality and consistency.

Now with MultiTransmit 4D*, all the benefits of MultiTransmit technology can also be applied to cardiac imaging. New MultiTransmit 4D* enables optimal RF transmission even during real-time applications. MultiTransmit also helps manage local Specific Absorption Rate (SAR) and takes advantage of optimized RF management to provide up to 40% increase in scanning speed.

MultiTransmit benefits:

- Enhanced contrast and image uniformity.
- More consistent results, patient after patient.
- Up to 40% more speed.
- MultiTransmit 4D* enables growth areas for MR including cardiac, to become preferred at 3T.

“Ingenia image quality is incredible. It’s the best I’ve ever seen on a 3.0T system.”

Dr.Suresh K. Mukherji, MD, FACR, Professor of Radiology and Chief of Neuroradiology, University of Michigan (Ann Arbor, Michigan, USA)



Cine and Black Blood imaging of the heart.

T2W SPAIR of the upper abdomen.

Conventional 3T.

Ingenia 3.0T with MultiTransmit 4D*.

Imaging excellence for your most common applications

The Ingenia 3.0T system's dStream architecture and dS coil solutions result in high SNR that benefits every application. You no longer have to trade resolution for speed: now you can perform routine exams for brain, spine, knee, ankle and liver within less than 8 minutes with excellent image quality.

Fast routine imaging is enabled by:

dStream (dS) coil solutions

Tailored to your clinical needs and addressing a full range of clinical situations, dStream coil solutions and have been optimized for:

- Intrinsic signal-to-noise ratio.
- Imaging coverage.
- Parallel imaging performance.

dS-SENSE parallel imaging

Powered by dStream architecture, dS-SENSE enables higher parallel imaging factors for more speed or resolution. It includes quick, fully integrated reference scans which are planned automatically.

SmartAssist efficiency assistance

SmartAssist is the next generation of Philips powerful combination of SmartExam and ExamCards. It can halve the number of repetitive tasks for greater efficiency, consistency and reproducibility.

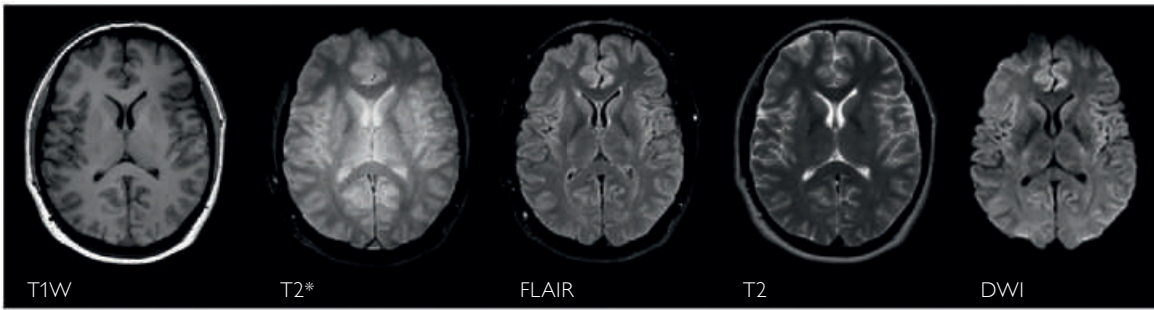
It includes:

- SmartStart: Moves the table to isocenter and starts the exam at the touch of a button.
- SmartSelect: Automatically determines which coils and elements should be activated to produce the highest SNR for the selected area.
- SmartExam: Positions slices on the target anatomy, reducing operator input to as little as a single mouse click. It is optionally available for brain, spine, shoulder, knee and breast imaging.
- SmartLink: Simplifies the planning, viewing and processing of multi-sequence, multi-station exams, treating multi-station exams as one volume.
- SmartLine: Performs intelligent background processing (such as volume view, diffusion, perfusion etc.) of multiple image datasets in parallel with image acquisition.

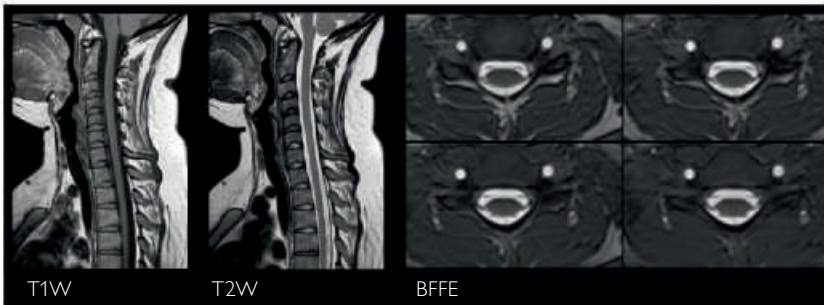
Image obese patients with ease

The Ingenia 3.0T can accommodate even very large patients with ease.

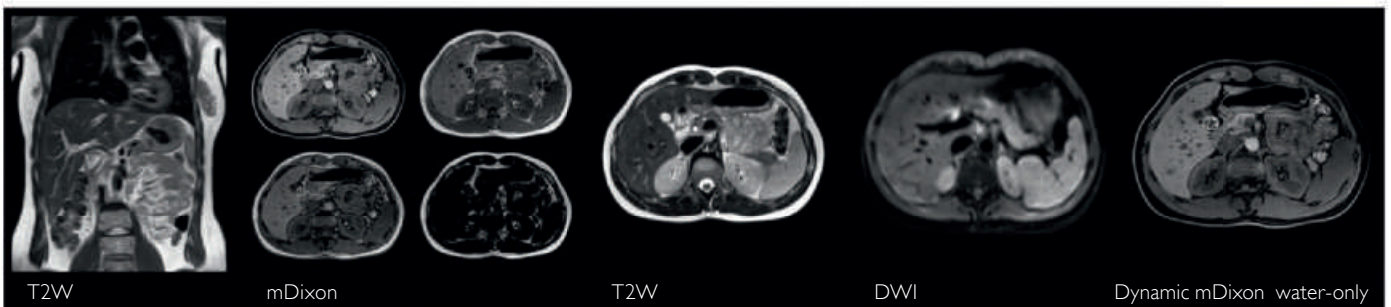
- The patient support enables patients weighing up to 250 kg (550 lbs) to be comfortably examined.
- The wide FlexTrak table top and 70 cm bore improve patient comfort.
- 2 x 18 kW high-performance solid-state RF power amplifiers allow short, complex RF pulses, even on large patients.
- Flexible, lightweight conforming coils accommodate patients with different sizes.



<8 minute Brain Exam



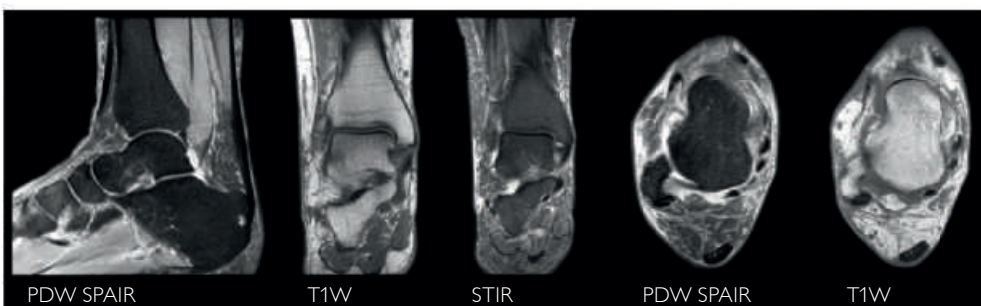
<8 minute Cervical Spine Exam



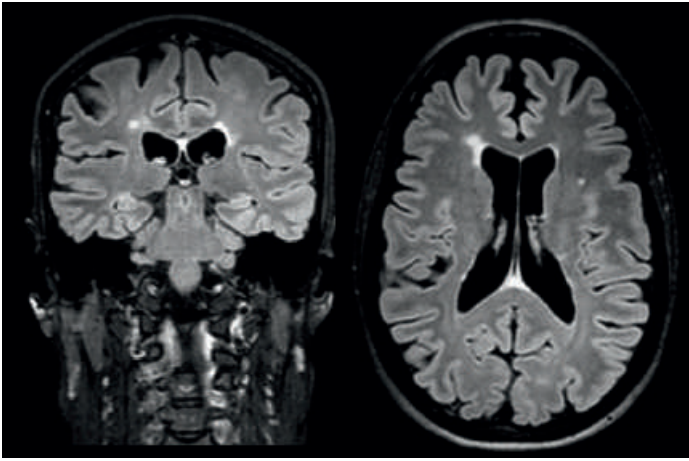
<8 minute Abdominal Exam



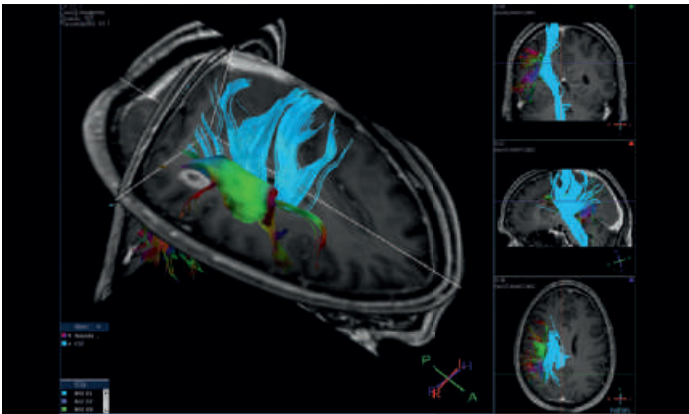
<8 minute Knee Exam



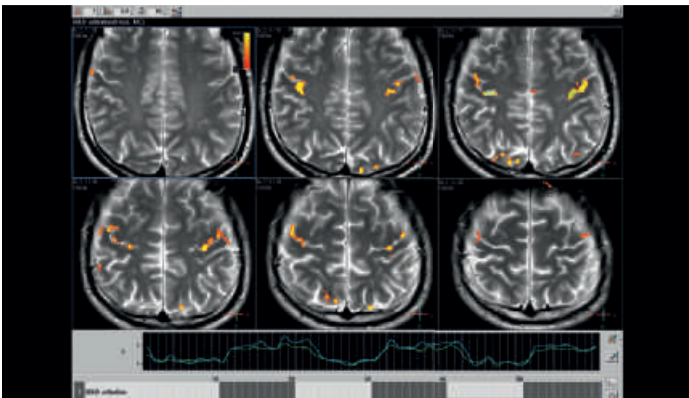
<8 minute Ankle Exam



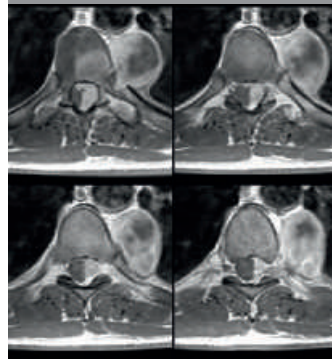
MPR's of 3D BrainView FLAIR showing white matter lesion.



FiberTrak and spectroscopic imaging of patient with intra-cranial lesion.



fMRI of bilateral finger tapping showing activated motor cortex.



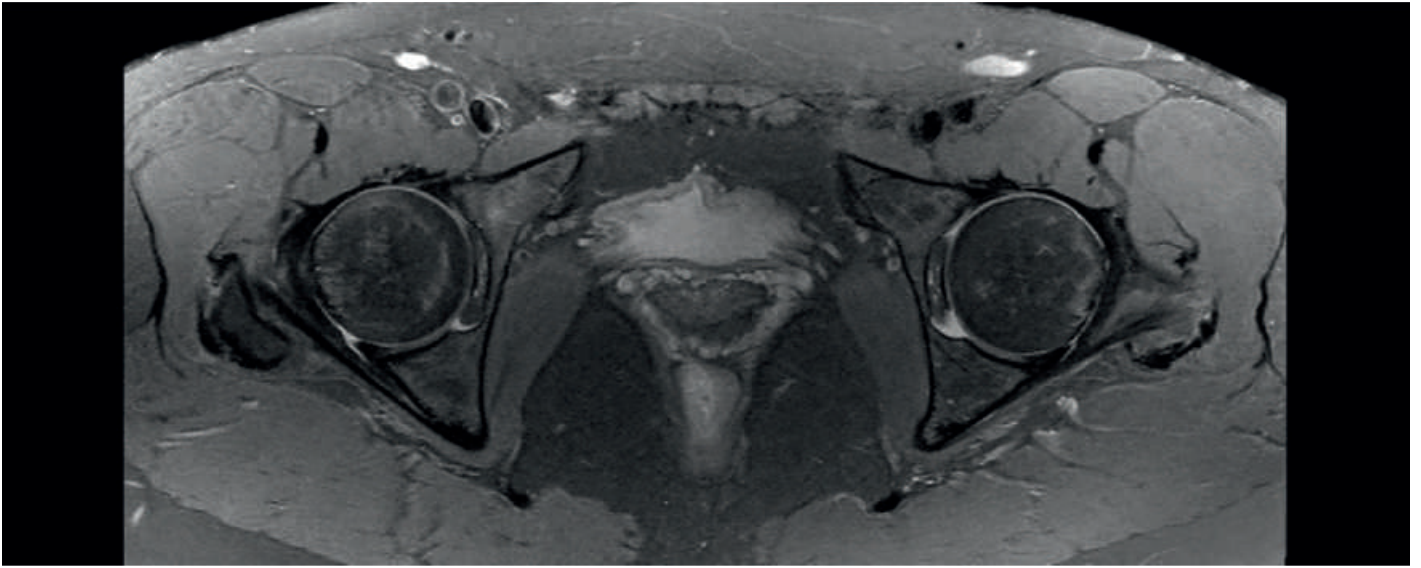
Sagittal T2W and axial T1W post contrast imaging of the thoracic spine.



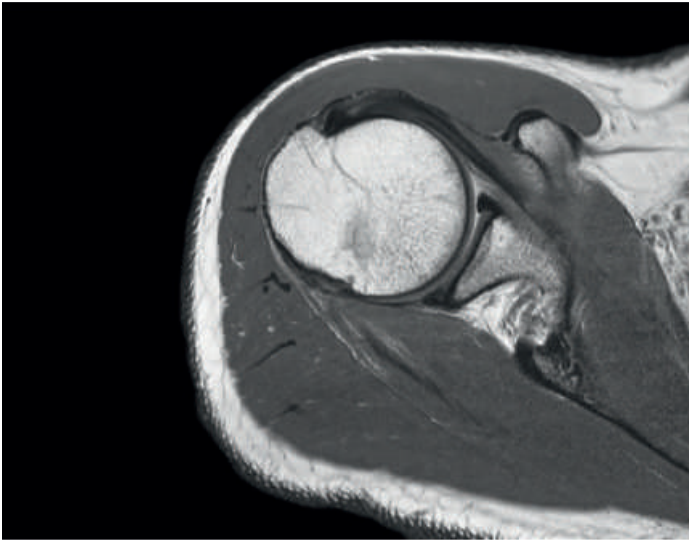
Two-station T1W total spine imaging.



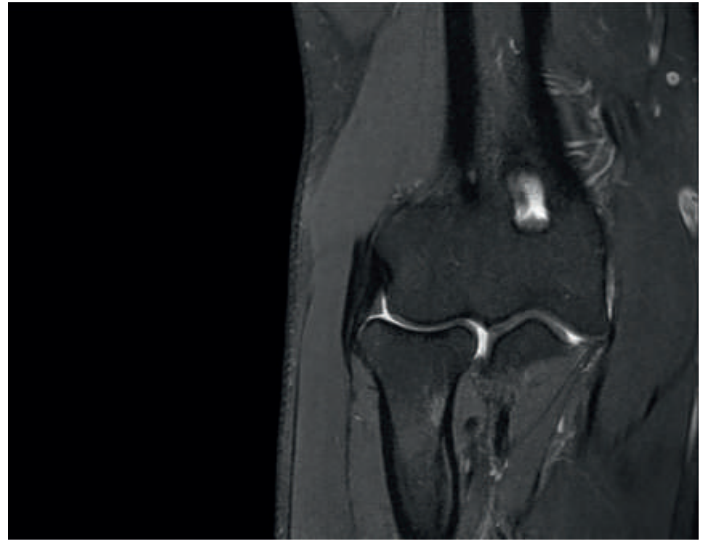
T1W and T2W TSE with single station, 450 mm field of view.



High resolution imaging of hips.



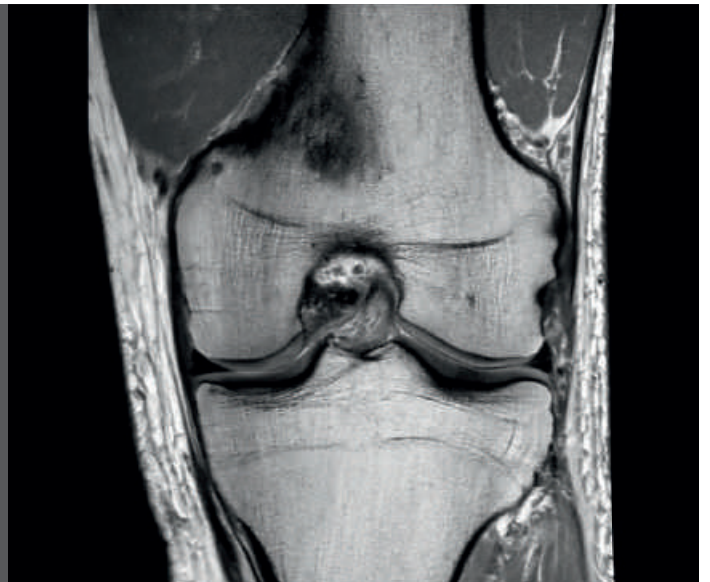
High resolution PDW of the shoulder.



Robust off-center fat suppression, imaging the elbow at the patient's side.

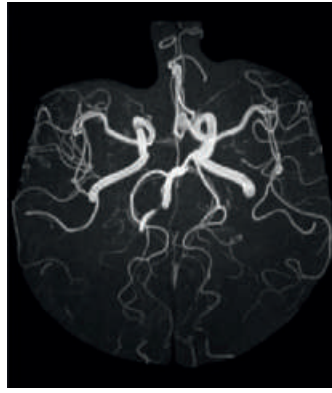


Excellent cartilage visualization with asymmetric PDW imaging.





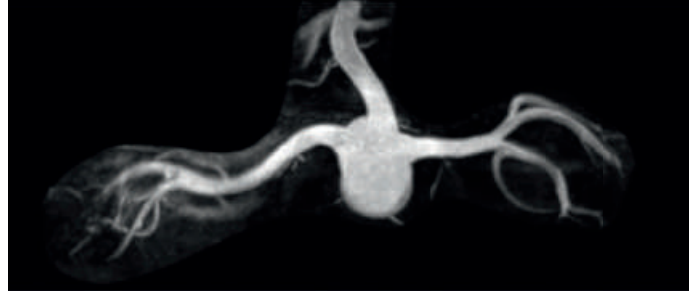
Peripheral run-off in only three stations.



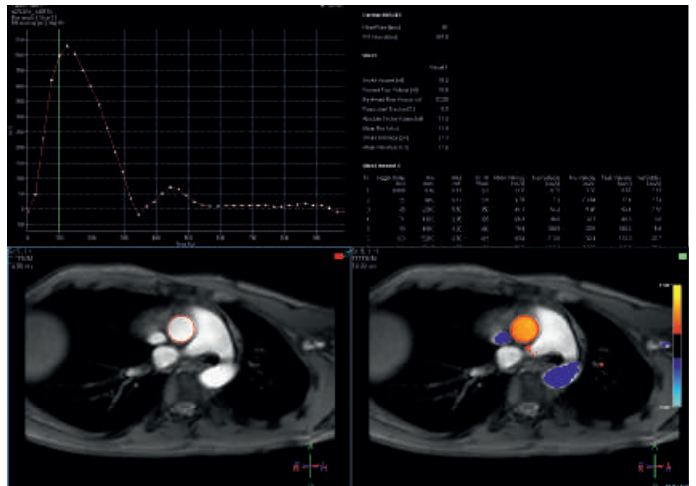
Small vessel visualization with Time Of Flight.



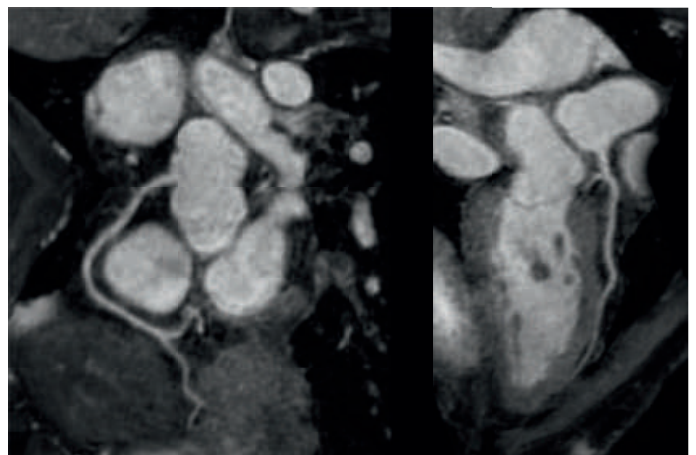
MRA from aortic arch to circle of willis.



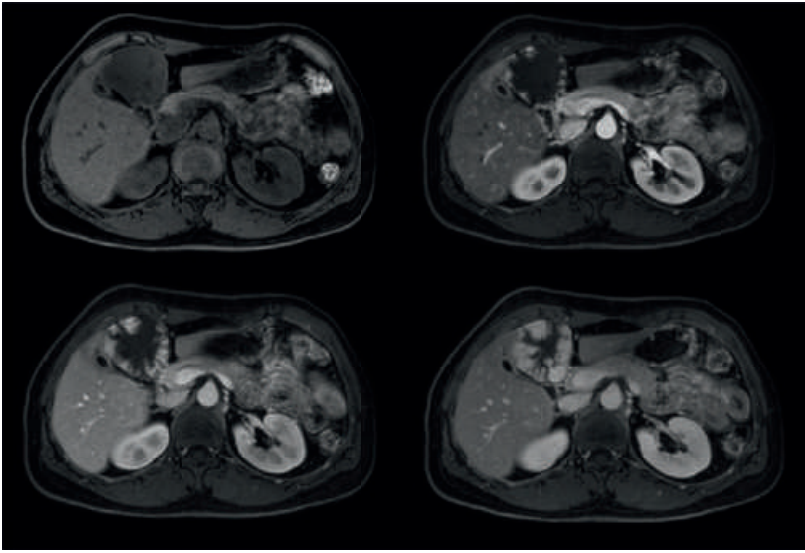
Renal arteries without contrast agent (Balanced TFE acquisition of renal arteries).



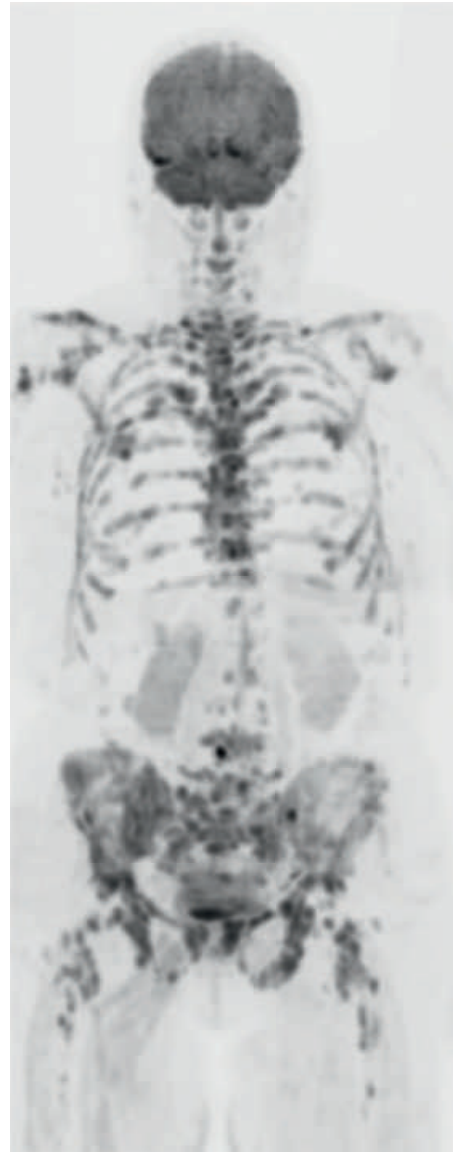
Aortic flow quantification.



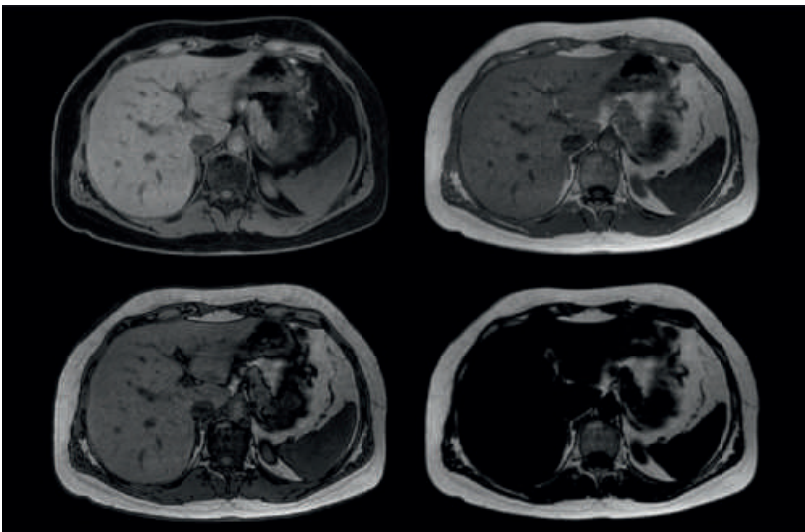
Navigator-compensated B-TFE for Coronary Artery imaging.



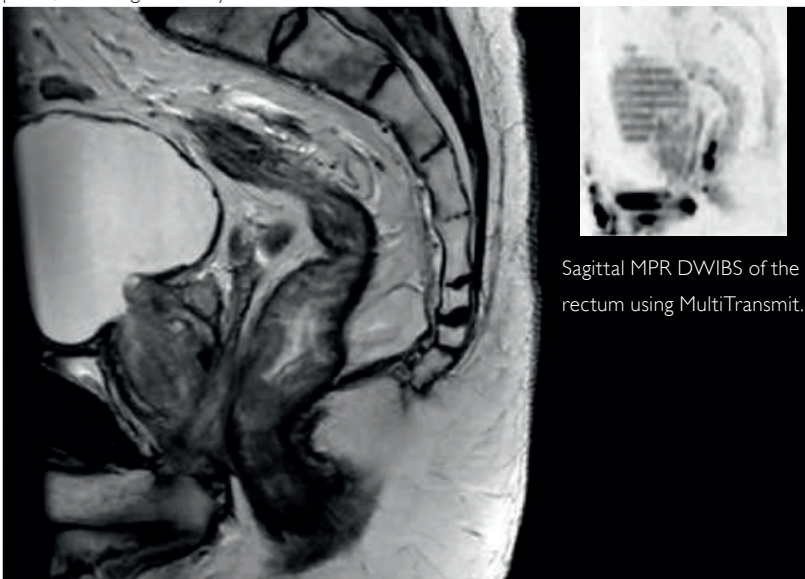
Dynamic mDIXON - water-only; upper abdomen, using MultiTransmit.



Whole body DWIBS using MultiTransmit.

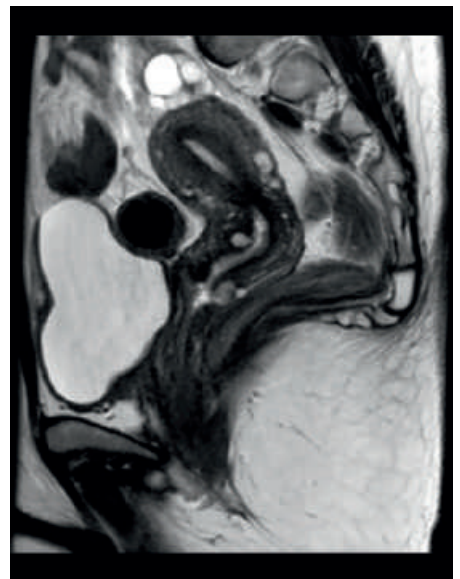


mDIXON - all; upper abdomen: upper left water only, upper right in phase, lower left out of phase, lower right fat only.



Sagittal MPR DWIBS of the rectum using MultiTransmit.

Sagittal T2W image of the rectum using MultiTransmit.



Sagittal T2W female pelvis using MultiTransmit.

New solutions for emerging

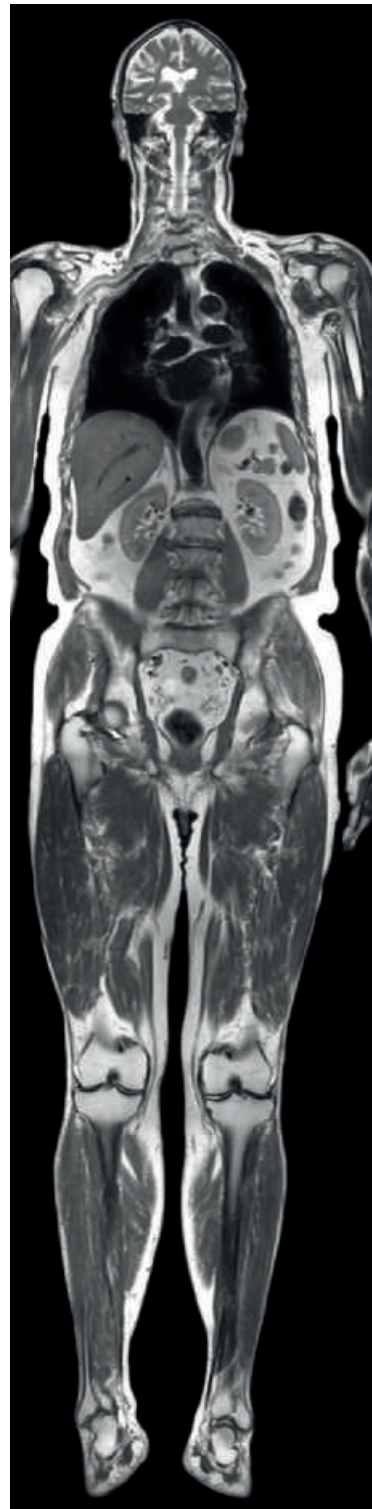
In addition to the growth in traditional applications of MR, there is an increasing role for MR in oncology and cardiology applications. Designed to address these trends, Ingenia 3.0T provides advanced functionality for oncology and cardiac applications, safeguarding your investment.

Differentiate your practice with oncology imaging

As MR continues to demonstrate value in cancer imaging, staging, treatment planning and monitoring, offering oncology services is of growing interest. The Ingenia 3.0T positions your practice to provide outstanding oncology services.

Ingenia 3.0T advantages:

- The accuracy provided by the magnet's high homogeneity, combined with the exceptional linearity of the gradient coil, makes it ideally suited to address diagnostics through therapy planning.
- Fusion of anatomical and diffusion data delivers robust and sensitive results in a timeframe comparable to the gold standard PET-CT exam, bringing whole body oncology staging and follow-up to the clinical mainstream.
- The ultra-large FOV with 70 cm bore can facilitate imaging in the treatment position for possible future radiation therapy applications.
- FlexTrak Mammo, a dockable patient support and on-console breast biopsy planning system, allows seamless integration of breast MR into your department.



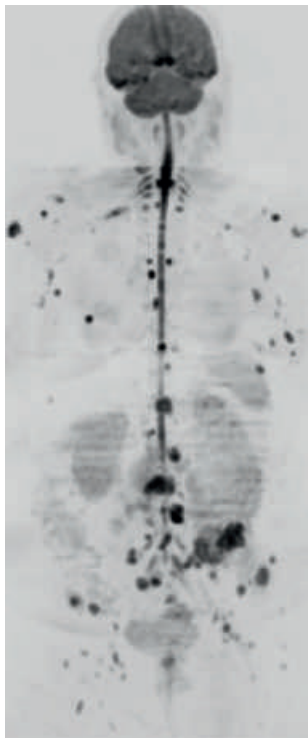
Fast whole body
T2W imaging.

applications

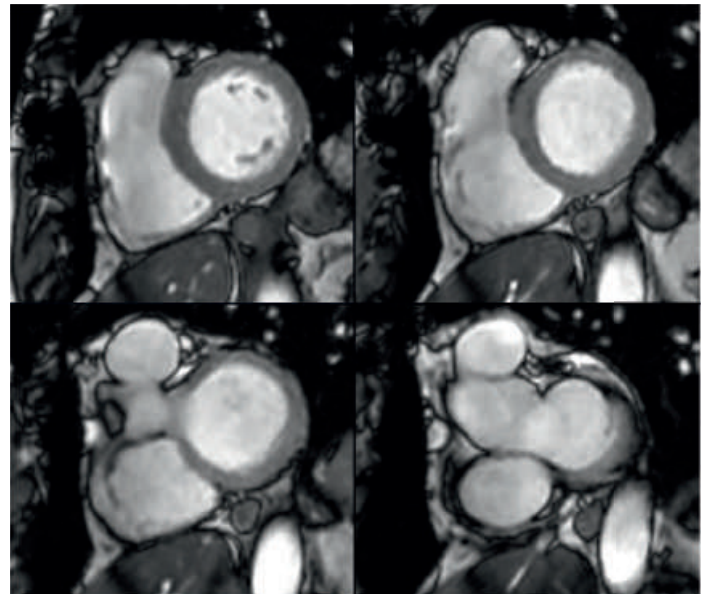
Cardiac imaging made easy

Ingenia 3.0T with dStream and Elite Cardiac Clinical Solutions advances cardiac MR workflow to mainstream use.

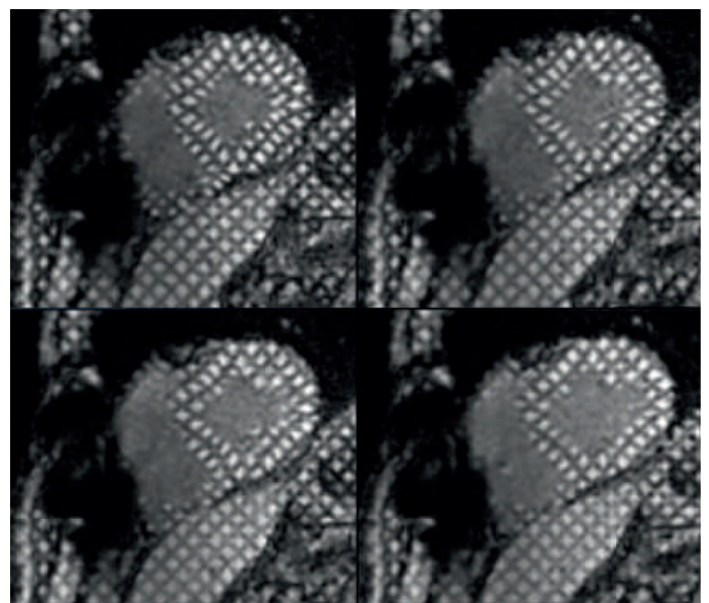
- Powerful clinical tools such as kT-BLAST, PSIR, and volumetric imaging for cutting edge, one-stop cardiac MR exams.
- Supporting dStream coil solution and wireless VCG for high quality cardiac imaging.
- Workflow support tools such as Real Time interactive planning and Cardiac Explorer for task-guided processing including automated segmentation, screen layout and reporting.



Total torso DWIBS.



Cine imaging on patient with sternal wires.



Cardiac tagging on patient with sternal wires.

Value added services

When you purchase a Philips MR system, you partner with a company that understands that while technology is important, healthcare is about people. That's why we've designed services and solutions that not only keep your equipment running smoothly, but also help you provide outstanding patient care, educate your staff, improve operating efficiencies and enhance system capabilities. Our lifecycle solution is designed around your patients, your people, your organization and your equipment to support success in every phase of system ownership.

Fast and easy installations

Philips EasySite enables installation in an average of only seven days, reducing costs and getting you operational faster. Lightweight and with a small footprint, Ingenia 3.0T MR systems can be installed in spaces as small as 30 m² (323 sq ft).

Training and starting up

We understand your greatest asset is your staff, and their ability to master clinical procedures to fully utilize the capabilities of the systems. Philips provides comprehensive programs in clinical, technical and continuing-education services. In support of this goal, we have accredited campuses

around the globe, an extensive virtual learning center and experienced clinical educators ready to provide education and on-site assistance.

First-rate maintenance and uptime

Our global network of skilled personnel and worldwide spare parts availability helps maintain high uptime that supports you in delivering reliable imaging services to your patients. In 2010, independent reports ranked Philips MR as best-in-class in composite user satisfaction ratings. With Ingenia we extend our maintenance still further with DigiDetect. This provides insight into coil performance and, with

proactive monitoring, ensures that every coil element is operating as specified, thereby enabling early detection of failures at a more detailed level than is possible with today's non-digital MRI systems.

Low operating cost

Your Ingenia 3.0T system is equipped with features that save you money every day. HeliumSave zero boil-off technology and PowerSave technology help reduce helium and power consumption costs and spare the environment.

Philips Utilization Services

Philips Utilization Services enable you to improve procedural workflows and quality of care by providing detailed insights into exactly how your system is being used. Utilization Services can assist in creating procedural efficiency gains of up to 30%. Named winner of the Technology Services Industry Association 2011 Vision Award for demonstrating Game-Changing Innovation in Technology Services, Philips Utilization Services help you optimize clinical procedures and improve your patient workflow.

Online Experience

NetForum Communities are a platform is Philips' online community for and by healthcare professionals who wish to share the latest in clinical innovations and download the most advanced MR ExamCards. Connecting to Philips Utilization Services via NetForum provides you with actionable insights into your department's operations and workflow. The NetForum online experience is designed to help you operate your facility to its full potential, customized to match your ever-evolving clinical and business needs. www.philips.com/netforum

Ambient Experience

Philips Ambient Experience provides a positive environment for patients and healthcare professionals to enhance clinical processes and patient care. Ambient Experience integrates architecture, design and enabling technologies, such as dynamic lighting and sound, to allow patients to personalize their environment and surround themselves in a relaxing atmosphere. The innovative, people-focused solution enables patients to select room themes and sounds, empowering them to be involved in their own care. All Ambient Experience functionality is controlled with an easy to use touch screen interface. The solution includes site-specific recommendations to optimize the clinical area in terms of workflow and storage, including opportunities to minimize clutter for a more soothing environment. These recommendations are incorporated into the standard equipment Site Plans.



Philips Technology Upgrades

Philips has shown an unparalleled track record in upgradeability and now Ingenia takes upgradeability a step further. Ingenia's channel independent dStream architecture eliminates expensive RF channel upgrades, thereby allowing you to easily enhance the system with new software options and coils. By including Philips Technology Upgrades in your contract, your MRI system software is

also kept at the latest compatible software level. This allows you to enhance your MRI functionality with new clinical options as they become available and helps keep your system at the required performance without lengthy and costly software upgrades.



Transform



Enhance



Optimize

Philips SmartPath

Your Philips imaging system is designed to be reliable and efficient. Ensuring that it remains so from day one, is our commitment to you. Philips SmartPath is a way to give you easy access to the latest updates, upgrades and innovations throughout the cycle of product ownership. By maintaining your equipment at peak performance, you can realize your full clinical and operational potential and be ready to quickly benefit from next-generation solutions. From small enhancements to major system conversions, we help you maximize your investment, for success today and into the future.

Philips Healthcare is part of
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For more information,
visit www.philips.com/healthcareservices
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