



**PHILIPS**

Ingenia 1.5T

MR systems

- 1 Up to 40% more SNR compared to Achieva as non digital/dStream system.
- 2 Digital clarity and speed defined as SNR obtained with Ingenia or SmartPath to dStream compared to Philips Achieva.
- 3 Premium SNR defined as SNR obtained with dStream compared to Achieva.
- 4 Premium IQ defined as increased SNR and speed and improved fat-free and motion-free imaging obtained on dStream with dS SENSE, mDIXON and MultiVane XD compared to Achieva with SENSE, Dixon, and Propeller.
- 5 Premium speed defined as dS SENSE speed compared to SENSE.
- 6 Premium Fat-free defined as mDIXON Fat-free compared to DIXON Fat-free (3-echo, fixed TE).
- 7 Premium Motion-free defined as MultiVane XD compared to Propeller correction (Pipe et al. A Revised Motion Estimation Algorithm for PROPELLER M 6 Philips Ingenia 1.5T RI, MRM August, 2014.)
- 8 Accuracy and reproducibility were assessed using a reference liver protocol, on fat phantoms [range: 0-100%]. Reproducibility assessed over systems.
- 9 Due to multi-echo approach.
- 10 Compared to Achieva.
- 11 SmartExam is not available to patients with MR Conditional Implants.
- 12 Increased patient comfort with the patient in-bore solution compared to without, faster workflow compared to Philips Achieva.



**Accelerate  
performance**

with digital clarity and speed

© 2018 Koninklijke Philips N.V. All rights reserved.  
Specifications are subject to change without notice.  
Trademarks are the property of Koninklijke Philips N.V.  
(Royal Philips) or their respective owners.



**How to reach us**  
Please visit [www.philips.com/healthcare/product/HC781341/ingenia-15t-mr-system](http://www.philips.com/healthcare/product/HC781341/ingenia-15t-mr-system)  
[healthcare@philips.com](mailto:healthcare@philips.com)

4522 991 13801 \* APR 2018



# Innovation that matters to you

From the very beginning, we have always had one thing at the heart of our company – our mission to improve people’s lives through meaningful innovation. This mission inspires us to work with you to find the shortest path to the best care at the lowest cost. It drives us to create technology that makes a difference – to those who run our MR systems, those who read the images, and those patients who benefit from confident diagnoses.

We are dedicated to improving and saving lives through innovation that we develop together with clinicians and customers. Your patients can have better, more personalized care, while you make the best use of time and budget. Together, we can drive clinical performance, enhance patient and user experience, and ensure economic value, within and beyond the walls of your enterprise.

## Drive clinical performance

Our technical advances in image quality and anatomical intelligence are focused on clinical reality. We innovate to make a difference in people’s health.

## Enhance patient and user experience

We deliver patient comfort by reducing examination times and creating soothing environments. We provide patient-centric imaging to support first-time-right imaging results.

## Ensure economic value

To help you maximize your MR investment, we design our systems to pay off quickly and return dividends for a long time, through upgrade programs, extensive service offerings, and low operating costs.



# Designed to meet **your needs**

It seems that nearly every day, a new advance makes MRI more accessible for more people. Yet keeping pace with the changing nature of MR imaging services can be challenging. As you respond to the need to perform procedures better and faster -- ever seeking new ways to streamline workflow -- you also must keep abreast of new advances, such as those for oncology and body imaging.

The Ingenia 1.5 MR system keeps you in control, with innovations designed to meet the needs of a busy – and growing – MR department.

Powered by the breakthrough dStream architecture, the Ingenia 1.5T 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<sup>1</sup>, combined with enhanced workflow and ease of use for greater efficiency in your daily operations.<sup>1</sup>

Our Ingenia 1.5T with dStream is designed for SNR gains of up to 40%, which you can use to increase image quality and exam speed<sup>1</sup>. 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, and fat-free and motion-free imaging<sup>2</sup> to elevate image quality.

### Key benefits

- Excel with digital clarity and speed
- Embrace emerging applications
- Welcome challenging patients
- Enhance productivity

### dStream digital broadband MR

The established digital broadband MR platform, dStream enables you to get more information in the same time by delivering premium image quality with digital clarity and speed.<sup>2</sup> Our premium SNR expands your imaging options.<sup>3</sup>



# Drive clinical performance

## Digital clarity and speed<sup>1</sup>

Despite many changes in the imaging business, people still remain at the heart of care. And while the industry calls some types of imaging routine, you know that even the most common MR study is really an opportunity to provide your patients with outstanding care.

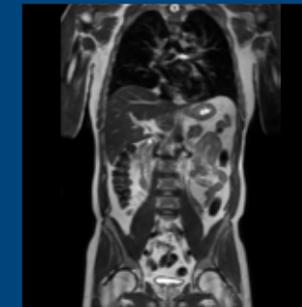
The Ingenia 1.5T helps you maximize diagnostic information, every time, within the available time slot, by bringing high clinical performance to imaging procedures such as brain, spine and musculoskeletal imaging. Digital, broadband dStream technology delivers high SNR, while industry-leading dS SENSE acceleration and the Premium IQ<sup>4</sup> Pack enable fast, robust imaging and superb motion and fat suppression in almost all procedures.

Premium IQ<sup>4</sup>  
Achieve new level of clinical performance by solving the common MR challenges of speed, fat suppression, and motion control.



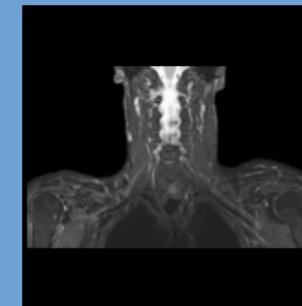
### Premium SNR with dStream<sup>3</sup>

dStream digitizes the signal in the coil, 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%.<sup>4</sup>



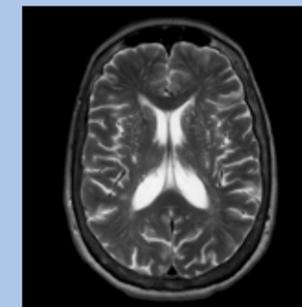
### Premium speed with dS SENSE<sup>5</sup>

When dStream coils are combined with SENSE to create dS SENSE, the result is astounding. Suddenly, conventional parallel imaging – once the gold standard for speed – seems leisurely in its pace. Because dS SENSE makes nearly every exam faster, you can image with fewer or shorter breath holds, drastically cut imaging time, dramatically reduce artifacts – or even add more slices if you need more information. dS SENSE also includes quick, fully integrated reference scans that are planned automatically.



### Premium fat-free with mDIXON XD<sup>6</sup>

Inconsistent fat suppression can lead to inconclusive exams, second guessing, rescans and retakes. So Philips developed mDIXON XD, a fat suppression innovation that is both consistent and fast. A Philips exclusive, mDIXON XD provides improved fat suppression when compared to standard spectral fat suppression techniques (e.g. SPIR). Furthermore, our mDIXON TSE fat-free technology is 30% faster and up to 30% sharper (less blurring) than any other DIXON TSE technique available in the industry.



### Premium motion-free with MultiVane XD<sup>7</sup>

Sometimes making innovation matter to you means expanding its use. MultiVane, which has intrinsically reduced sensitivity to motion, was originally developed for use in the brain. Now, it reduces motion artifacts in livers and knees as well, giving you an elegant solution to the vexing problem of in-plane motion.

# Clinical excellence in emerging applications

Offering MR services that address new clinical indications can help you grow referral value. The Ingenia 1.5T system's advanced functionality makes it easy to incorporate breakthrough technologies in your service offering.

## High accuracy, non-invasive fat fraction quantification in the liver

mDIXON Quant<sup>®</sup> allows you to quickly and easily acquire the data needed for fat quantification in the liver non-invasively, in a single breathhold. It uses robust 6-echo acquisition, 7-peak fat modeling, and T2\* correction to create 3D fat fraction maps of the whole liver with high accuracy ( $\pm 3.5\%$ ) and reproducibility ( $\pm 1.4\%$ ), even for short T2\*. To aid your diagnostic assessment, you can display fat fraction maps in colors with a quantification bar, and view T2\* (or R2\*) relaxation maps.

## Comprehensive liver assessment

We've created a comprehensive solution for assessment of diffuse liver disease.

- Anatomical detail: T2 TSE coronal, T2 TSE axial, mDIXON FFE axial with water, fat, in-phase and out-phase images reconstructed
- Fat Fraction and T2\*: mDIXON Quant reconstruction produces fat fraction and T2\* maps. You can select a region of interest to determine fat fraction percentage as well as T2\*
- Stiffness: MR Elastography enables rapid, non-invasive assessment of liver stiffness. The MREView package allows for evaluation of the acquired data, creation of stiffness maps, and region-of-interest placement for obtaining stiffness values.



## Non-invasive assessment of myocardial tissue characteristics

With data from a fast, single breathhold scan, CardiacQuant gives you access to exciting new applications for cardiology, which can help in the non-invasive assessment of myocardial tissue characteristics by providing you with comprehensive graphs and pixel-based, quantitative information (T2/R2, T2\*/R2\*, or myocardial T1) in different regions of the myocardium helping you to guide early decisions for therapy. In addition, Cardiac Quant is compatible with dS SENSE.

## Advance your neuro applications

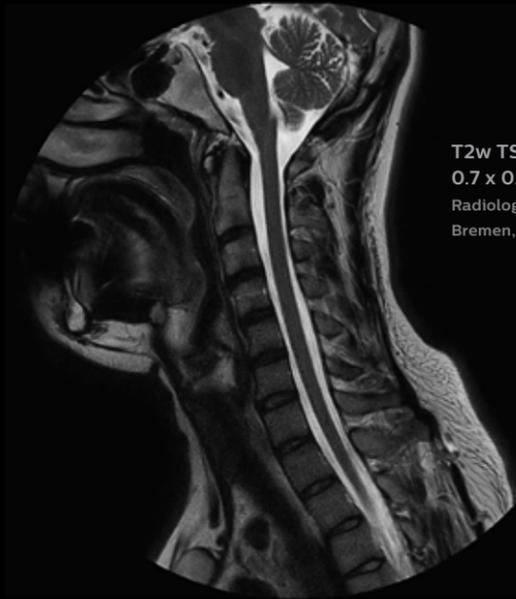
Philips SWIp (susceptibility weighted imaging with phase enhancement) offers the speed you need to easily integrate it into your mainstream neuro exams. SWIp has a high sensitivity to enhance contrast for deoxygenated (venous) blood or calcium deposits and may help you, when used in combination with other clinical information, in the diagnosis of various neurological pathologies. SWIp offers high resolution 3D susceptibility weighted brain imaging allowing you to easily integrate it into your mainstream practice. Additional information:

- High signal-to-noise ratio<sup>9</sup>
- Includes detailed phase maps to support advanced diagnosis

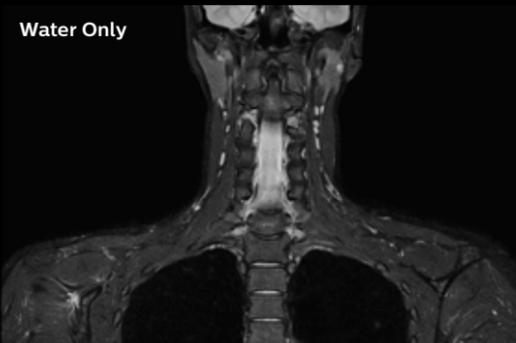
# Broad range of Neuro clinical capabilities



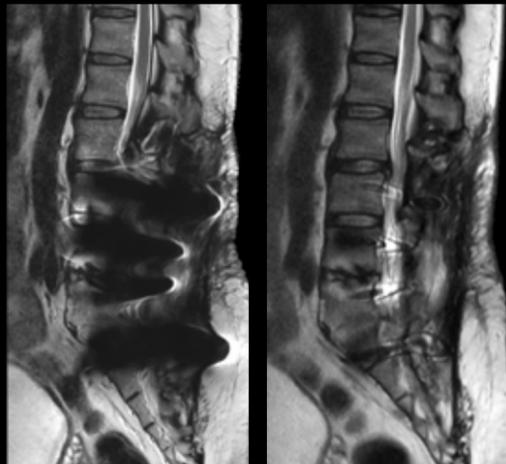
T2w TSE, mDIXON XD  
0.8 x 1.1 x 4.0 mm, 4:25 min  
Aarhus University Hospital, Denmark



T2w TSE, MultiVane XD  
0.7 x 0.7 x 3.0 mm, 3:37 min  
Radiologie am St Jozef Stift,  
Bremen, Germany

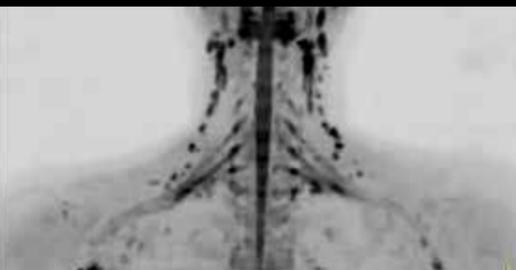


Water Only



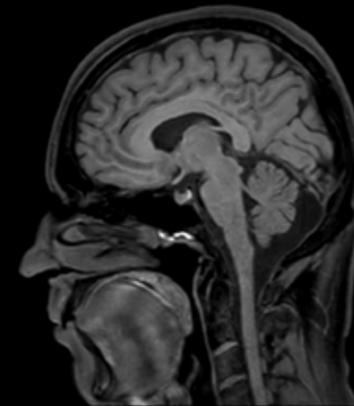
T2w TSE  
0.9 x 1.1 x 4.0 mm  
2:51 min

T2w TSE, O-MAR XD  
1.1 x 1.1 x 4.0 mm  
7:12 min

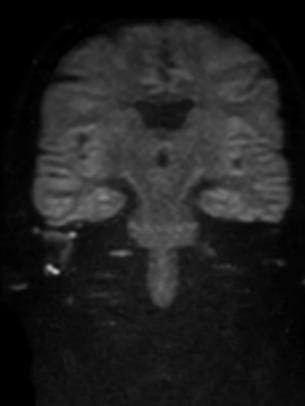


T2w TSE, mDIXON XD  
0.8 x 1.0 x 3.0 mm, 5:05 min  
Clinique Generale Beaulieu, Geneva, Switzerland

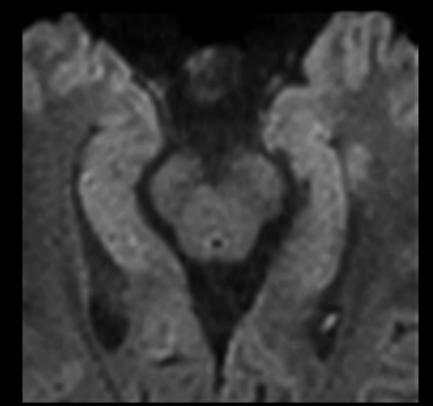
Neurography – DWIBS  
3.0 x 3.0 x 3.0 mm, 5:29 min  
Clinique Generale Beaulieu, Geneva, Switzerland



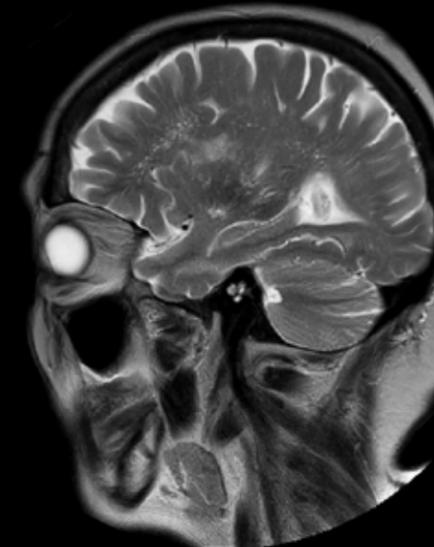
T1w TSE, 3D View  
1.2 x 1.2 x 1.2 mm, 4:55 min  
Internal



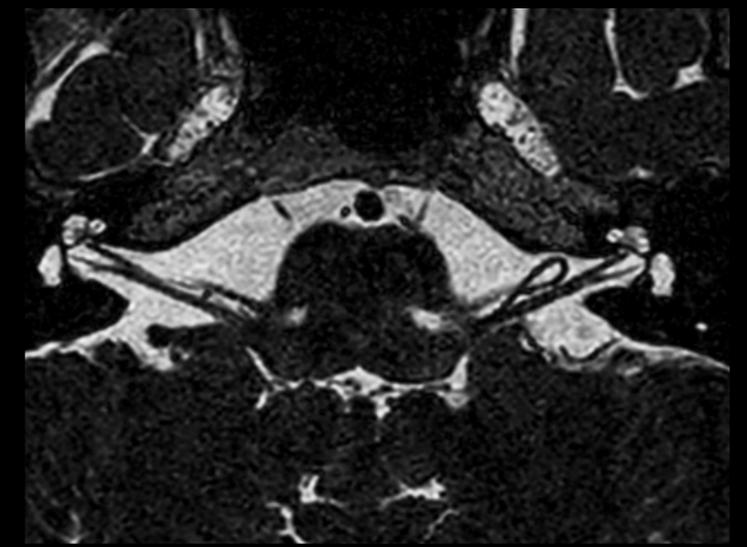
IAC, Diffusion TSE (b1000)  
1.8 x 2.1 x 3.0 mm, 5:10 min  
Meander Medisch Centrum, Amersfoort, Netherlands



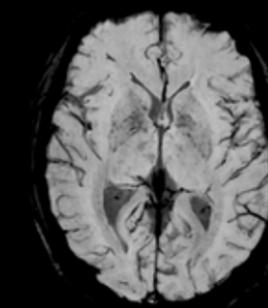
Hippocampus, dS Zoom DWI  
1.3 x 1.3 x 3.0 mm, 3:56 min  
Internal



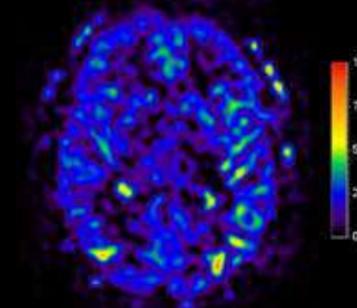
T2w TSE, MultiVane XD  
0.6 x 0.6 x 5.0 mm, 2:08 min  
Radiologie am St Jozef Stift, Bremen, Germany



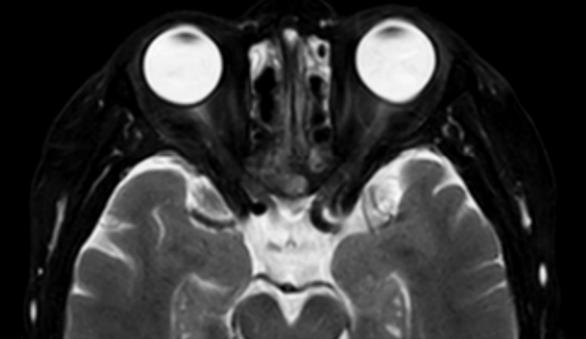
IAC, T2w 3D DRIVE  
T2w TSE, 1.7 x 2.1 x 3.0 mm, 5:10 min  
Internal



Brain, SWIp  
1.0 x 1.0 x 2.0 mm, 3:27 min  
Internal

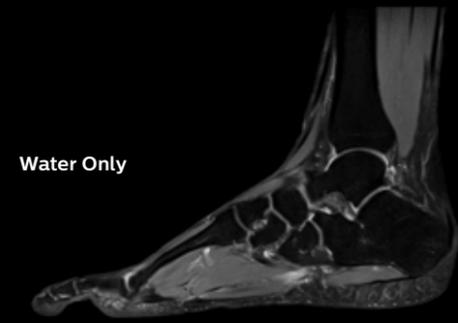


Brain, pCASL  
3.5 x 3.5 x 6.0 mm, 4:39 min  
Internal

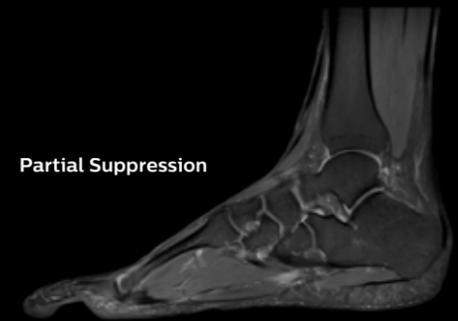


Orbits, T2w TSE, mDIXON XD T2w TSE,  
0.8 x 0.8 x 4.5 mm, 4:27 min  
Kurashiki Central Hospital, Japan

# Imaging excellence for your most common **MSK applications**



Water Only



Partial Suppression

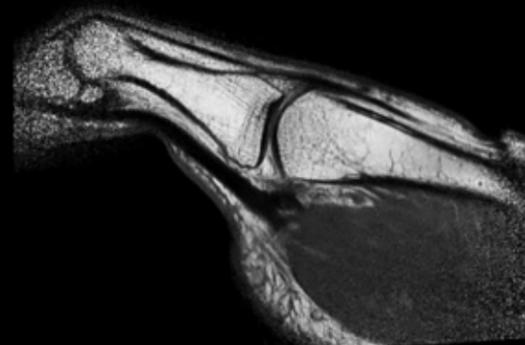


In Phase

PDw TSE, mDIXON XD  
0.4 x 0.6 x 2.5 mm, 2:20 min  
Internal



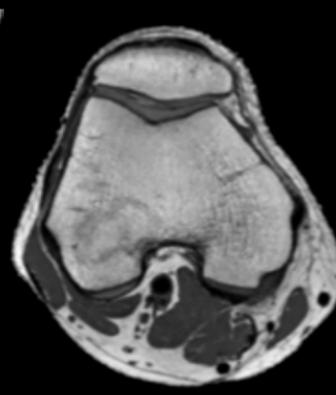
Elbow, PDw TSE  
0.4 x 0.5 x 3.0 mm, 3:58 min  
Internal



Finger, PDw aTSE  
0.2 x 0.2 x 1.5 mm, 3:16 min  
Internal



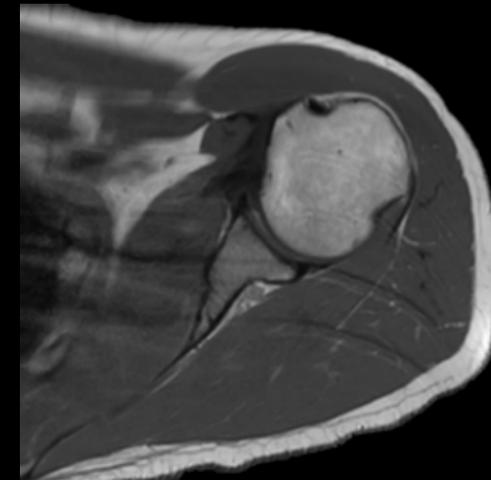
PDw TSE, 3D View  
0.5 x 0.5 x 0.5 mm, 6:21 min  
Internal



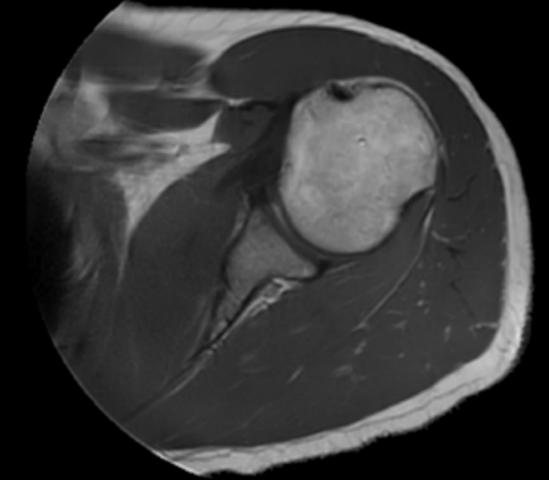
PDw TSE, 3D View  
0.5 x 0.5 x 0.5 mm, 6:21 min  
Internal



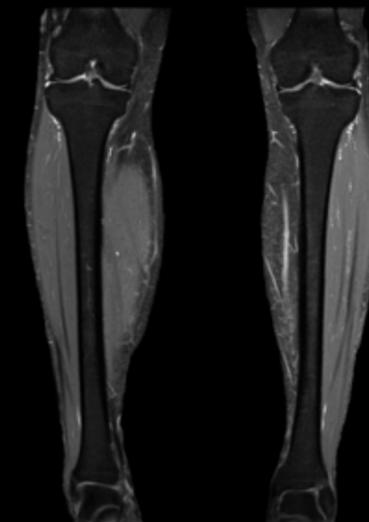
PDw TSE, mSPIR  
0.5 x 0.7 x 3.0 mm, 1:55 min  
Meander Medisch Centrum, Amersfoort, Netherlands



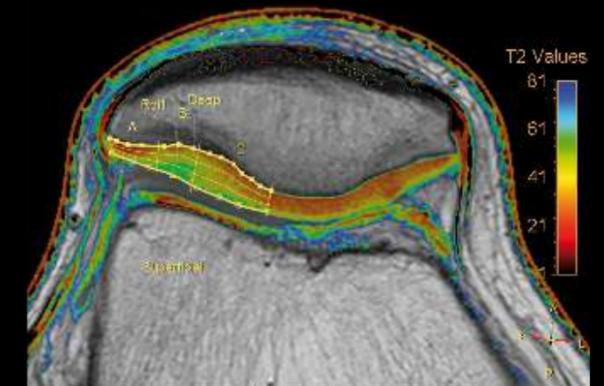
PDw TSE  
0.7 x 0.7 x 3.0 mm, 3:03 min  
Internal



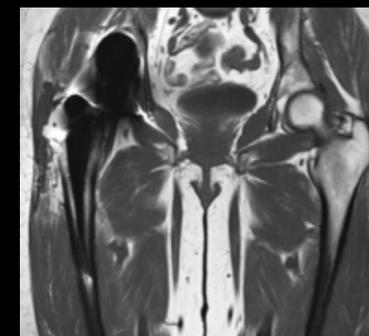
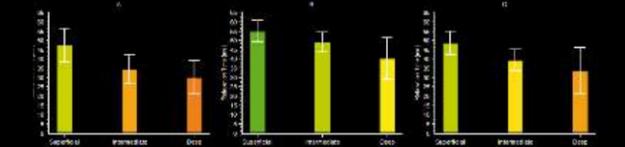
PDw TSE, MultiVane XD  
0.7 x 0.7 x 3.0 mm, 3:13 min  
Internal



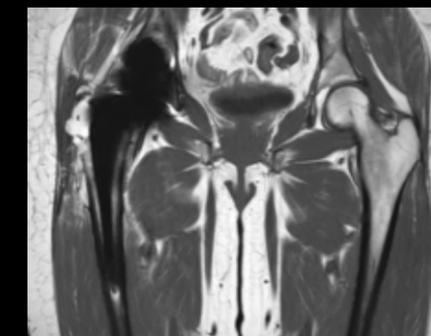
PDw TSE, mDIXON XD  
FOV 460, dS Torso coil  
Internal



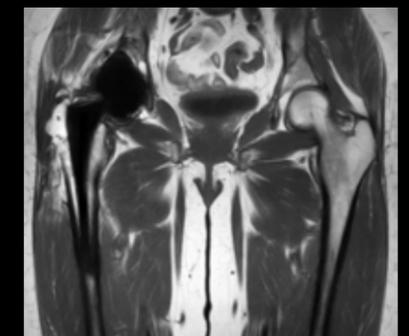
T2\* imaging, cartilage assessment  
0.4 x 0.5 x 2.5 mm, 5:24 min  
Internal



T1w TSE, High Bandwidth  
1.1 x 1.4 x 5.0 mm, 0:58 min  
Hennepin County Medical Center,  
Minneapolis, USA

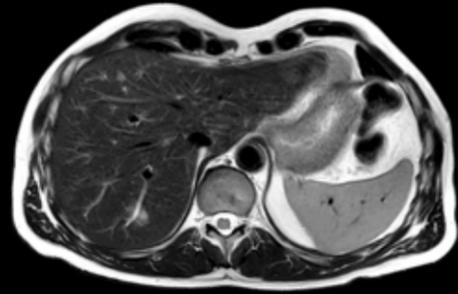


T1w TSE, O-MAR  
1.1 x 1.4 x 5.0 mm, 2:17 min  
Hennepin County Medical Center,  
Minneapolis, USA

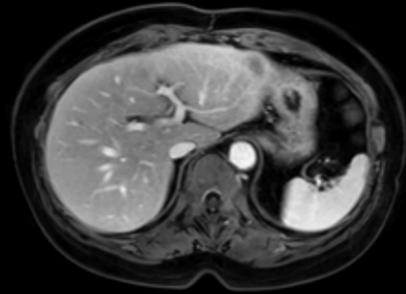


T1w TSE, O-MAR XD  
1.1 x 1.4 x 5.0 mm, 6:20 min  
Hennepin County Medical Center,  
Minneapolis, USA

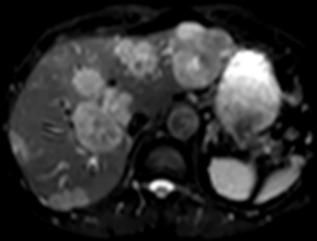
# Access to new clinical applications, ready for mainstream practice



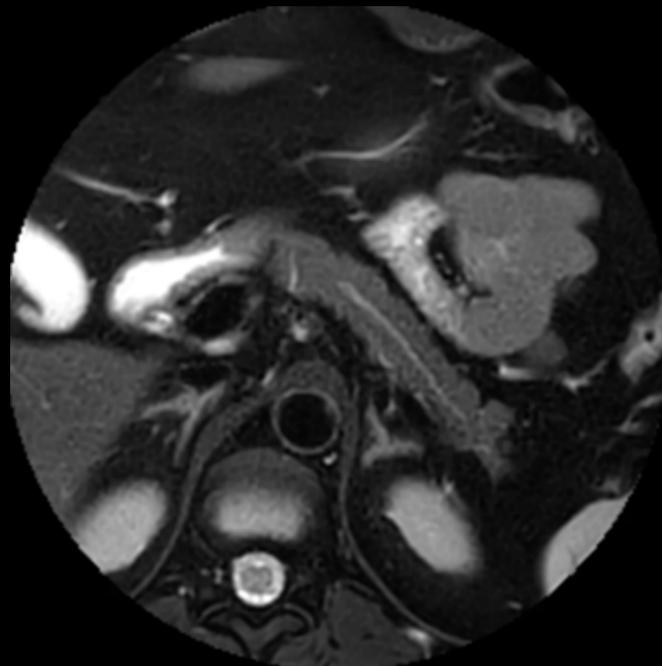
T2w TSE, MultiVane XD  
1.0 x 1.0 x 5.0 mm, 2:33 min  
Internal



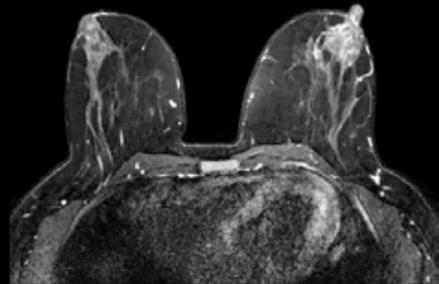
mDIXON XD, dS SENSE 7  
1.3 x 1.8 x 5.0 mm, 0:06 min  
Gemeinschaftspraxis Bocholt, Germany



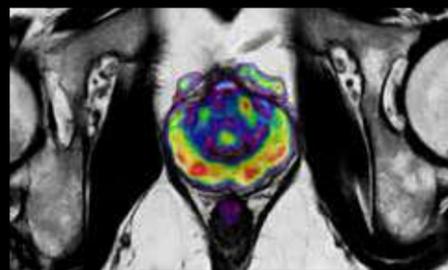
Diffusion (b500)  
2.8 x 3.6 x 5.0 mm, 4:48 min  
Internal



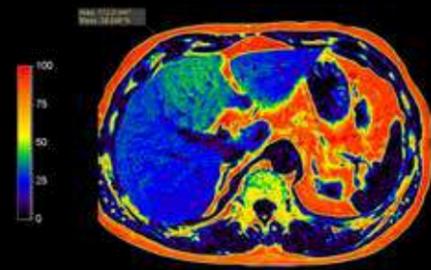
T2w SPIR, MultiVane XD  
1.1 x 1.1 x 3.0 mm, 3:36 min  
Aarhus University Hospital, Denmark



T2w SPAIR  
1.0 x 1.0 x 3.0 mm, 3:44 min  
Barnabas Health ACC, Livingston, USA



DWI (b600) fused with T2w TSE  
2.2 x 2.5 x 3.0 mm, 3:23 min  
Clinique Jules Verne, Nantes, France



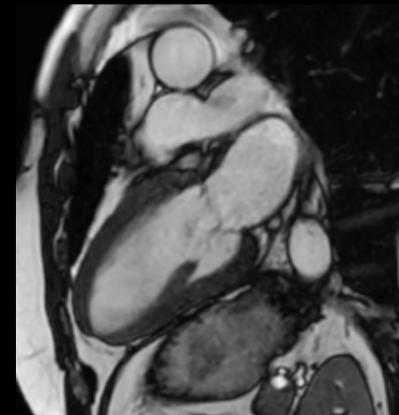
mDIXON Quant  
2.0 x 2.0 x 4.6 mm, 0:15 min  
Kurashiki Central Hospital, Japan



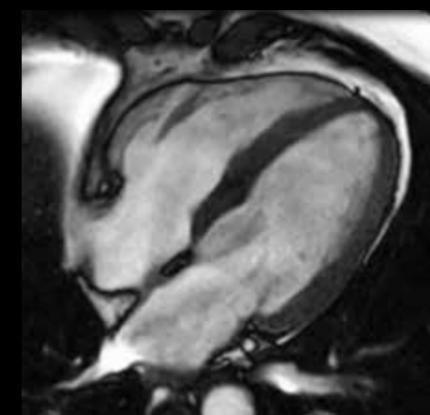
mDIXON XD, MRA  
1.3 x 1.3 x 1.4 mm, 0:18 min  
Utrecht Medical Center, Utrecht, Netherlands



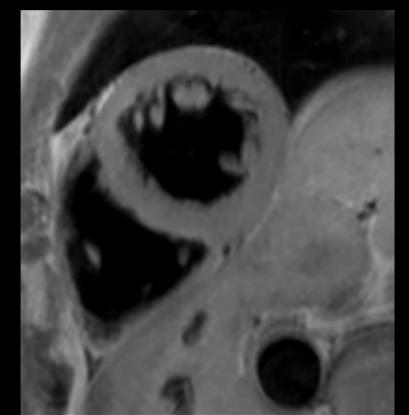
Carotid imaging  
0.6 x 0.6 x 460 mm, 1:26 min  
Clinique Belledonne, Saint Martin d'Herès, France



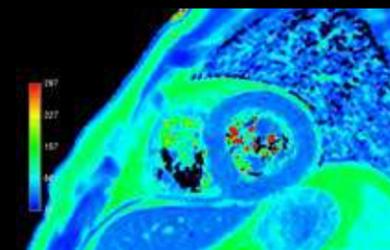
2 chamber bTFE cine  
1.7 x 1.7 x 8.0 mm, 0:12 min  
Internal



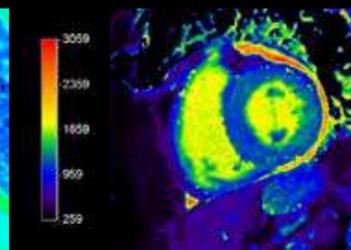
4 chamber bTFE cine  
1.7 x 1.7 x 8.0 mm, 0:11 min  
Internal



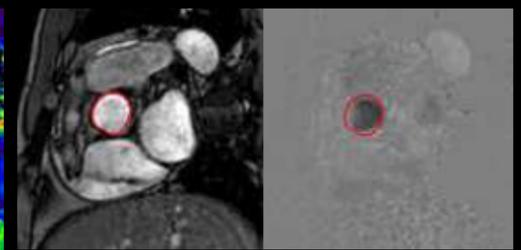
Black Blood imaging  
1.2 x 1.4 x 8.0 mm, 0:18 min  
Internal



T2 Map  
2.0 x 2.1 x 8.0 mm, 0:19 min  
Internal



T1 Map  
2.0 x 2.0 x 10.0 mm, 0:16 min  
Bonn University Hospital, Germany

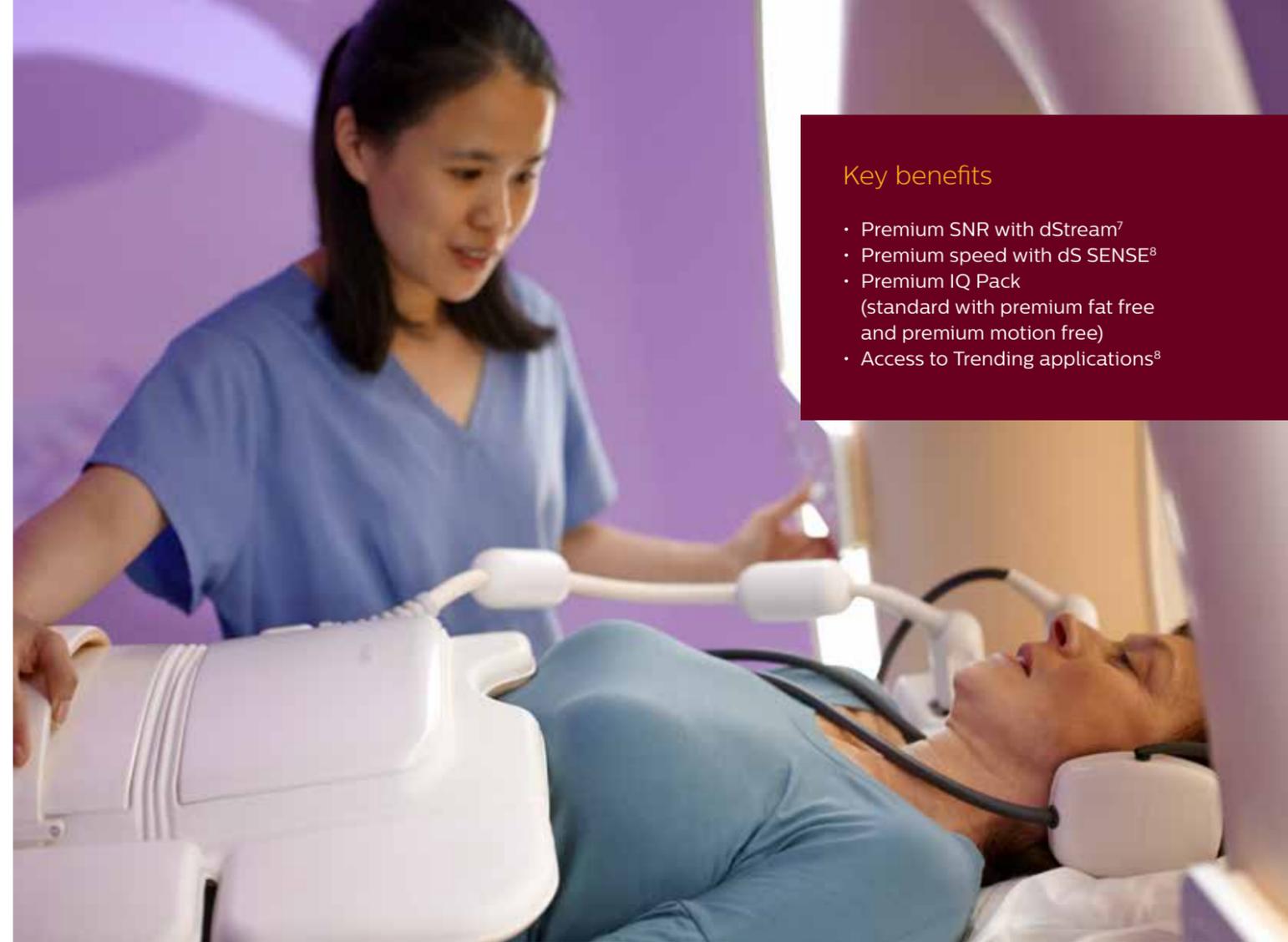


Q-flow  
2.5 x 2.5 x 8.0 mm, 0:16 min  
OHSU, Portland, USA

# Enhance patient and user experience

## Access to trending applications

Just as every patient is different, so is every community. Your community may have specific imaging needs, and you need an MR system that can adapt to those needs. Ingenia 1.5T allows you to provide a wide range of services, including imaging in neuro, cardiac, and oncology in children, elderly, and obese patients.



### Key benefits

- Premium SNR with dStream<sup>7</sup>
- Premium speed with dS SENSE<sup>8</sup>
- Premium IQ Pack (standard with premium fat free and premium motion free)
- Access to Trending applications<sup>8</sup>



### IntelliSpace Portal brings brilliant focus to your screen from any source

Working where you want doesn't mean you have to compromise on functionality, or deal with limited access to images and information. IntelliSpace Portal provides access to images and processing from almost any PC – in the department, in your office, and even in your home. With advanced visualization and analytics at your fingertips, you can review and diagnose efficiently and with confidence, efficiently communicate with referring physicians, and view images from multiple modalities to get a complete picture of your patients' health – boosting productivity no matter where you are.

### Ready for the mainstream

Offering advanced diagnostic capabilities is good for patients, who benefit from access to the latest tools, and good for your practice, as it gains a reputation among referrers as the place to turn to solve diagnostic challenges. Our imaging solutions deliver capabilities that are ready for mainstream practice, providing information that aids clinicians dealing with a wide range of patients by providing routine and advanced neuro imaging, cardiac imaging, and oncology imaging.

### Leverage intelligence, integration, and interpretation on every case

IntelliSpace Portal contains a powerful combination of intelligence, integration, and interpretation in a secure, real-time, and collaborative platform, so you can access, create, and disseminate actionable information throughout your enterprise.

This multimodality advanced visualization and analysis solution gives you capabilities to support diagnostic objectiveness and consistency. It supports MR, CT, molecular imaging, and ultrasound images, so you can view all images that are relevant to a diagnosis. Clinical applications include:

- Calculating MR diffusion
- Assessing MR T1 perfusion
- Assessing MR neuro perfusion
- Calculating MR subtraction
- Calculating MR echo accumulation
- Full FOV MR images with MobiView
- Assessing cartilage quality



FlexCoverage Posterior coil



FlexCoverage Anterior coil\*



FlexConnect connection



FlexCaddy coil storage cart\*



FlexTrak Patient Transport System\*



FlexTrak Mammo\*

\* Optional

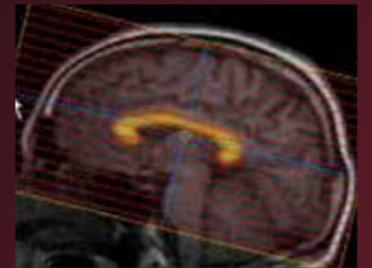
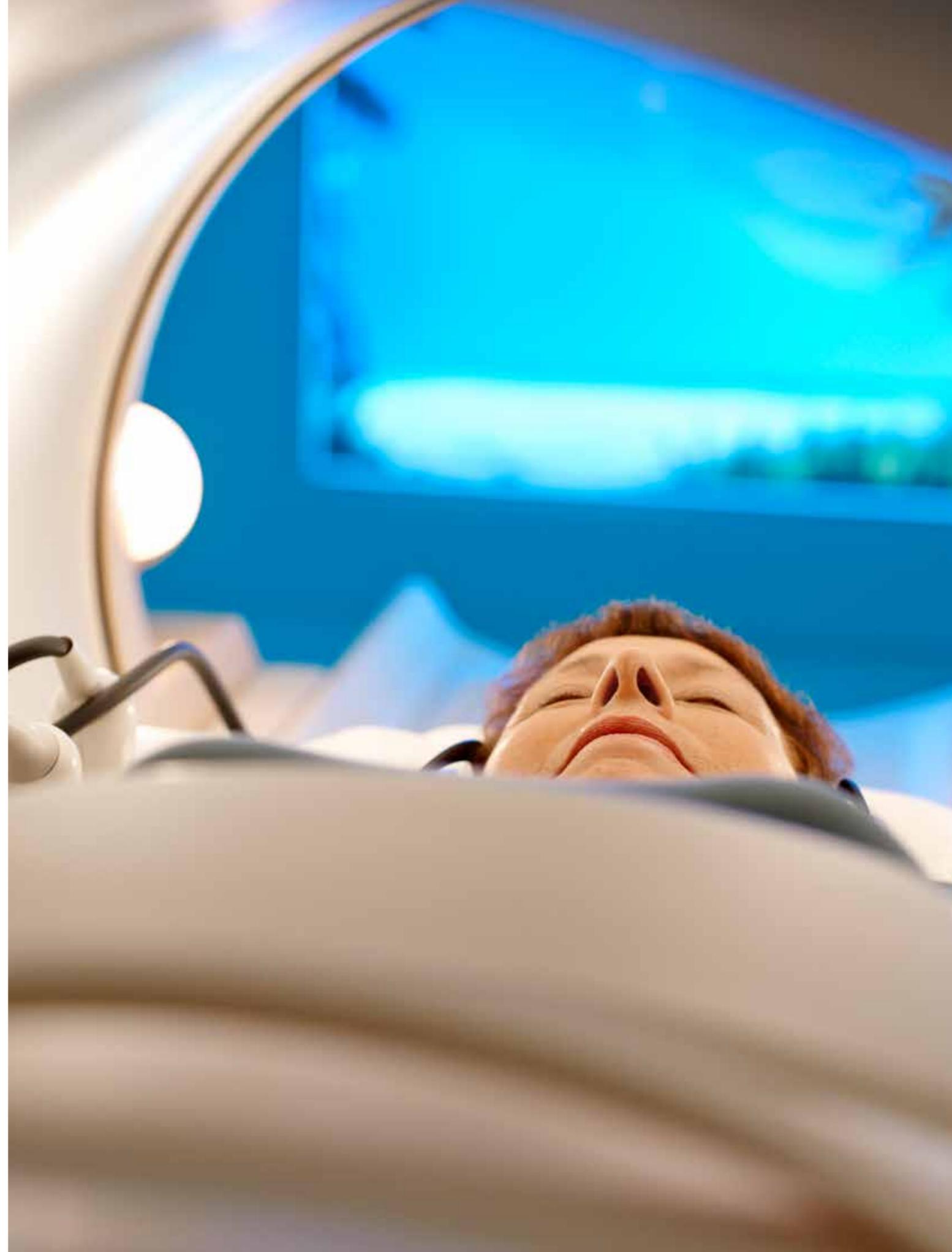
# In control of image quality

Image quality is at the core of everything you offer to patients and referring physicians. To make MR imaging predictable and reproducible, iPatient automates repetitive tasks and incorporates best practices into ExamCards. In fact, Smart Exam automation assists in delivering reproducible planning results in more than 80% of procedures.

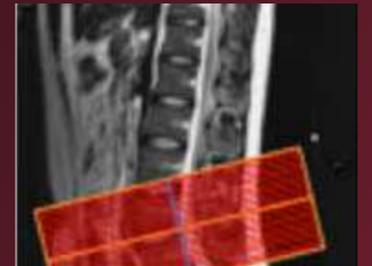
## Imaging workflow eliminates repetitive tasks

iPatient eliminates up to 50% of repetitive tasks.<sup>10</sup> At the touch of a button, the table moves to the isocenter and the system starts the exam. The SmartSelect feature automatically determines which coils and elements should be activated to produce the highest SNR for the selected field-of-view. Then, the SmartExam\* feature positions slices on the target anatomy based on your validated scanning preferences enhancing consistency in follow-up exams of the same patient and from patient to patient.

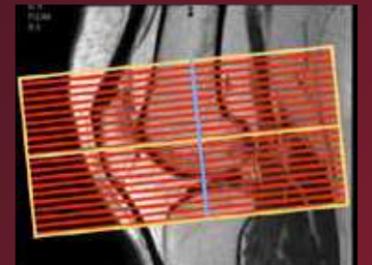
While images are being acquired, iPatient saves time by performing intelligent background processing (such as volume view, diffusion, perfusion etc.) of multiple image datasets. In addition, it simplifies the planning, viewing and processing of multi-sequence, multistation exams, treating multi-station exams as one volume.



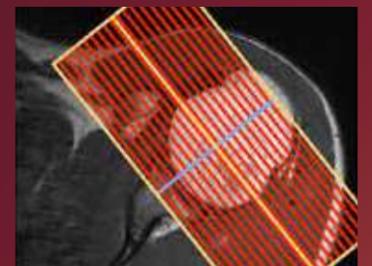
SmartExam Brain\*



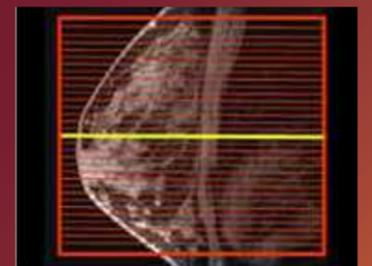
SmartExam Spine\*



SmartExam Knee\*



SmartExam Shoulder\*



SmartExam Breast\*

\* optional

# Ensure economic value

## Key benefits

- No channel upgrades needed anymore with Channel independency
- Tailored education, services and financing options
- Reduce power consumption, save money with PowerSave technology

Imaging is both a clinical and an economic challenge. You need to manage a host of financial obligations and opportunities, all while keeping your focus on your patients. We can help, by putting together a package of offerings that keep total cost of ownership in check while providing you with tailored educational, service, and financing options.

## Expandability and channel independence

With Ingenia 1.5T, 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.

## PowerSave

PowerSave technology adapts gradient energy consumption to the system status to reduce power consumption and save money. PowerSave is one result of Philips' continuous drive to improve the sustainability of its products.

## Utilization services

Philips Utilization Services provides you with actionable insights into your department's operations and workflow. Rapid workflow improvement consultancy projects based on insights from Philips Utilization Services have shown stunning results, drastically reducing waiting lists and improving patient services and staff satisfaction.

## First-rate care

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 2014 and 2015, Philips MR was rated Best in KLAS in medical equipment and infrastructure in composite user satisfaction ratings.

## Count on us as your patients count on you

Staying on top of today's complex and ever changing healthcare environment is challenging enough. The last thing you need to be concerned with is keeping your care systems up and running smoothly.

At Philips, we work as one with your teams. We share their dedication to solve issues before they start and their drive to keep going day and night until the job is done. With us taking care of your systems you can focus on what really matters – delivering better care, to more people, at lower cost. Together we can create a healthier future.



## dStream

Ingenia 1.5T with dStream is designed for first-time-right imaging and better patient comfort for faster workflow,<sup>12</sup> and allows access to Philips education and skilled service personnel.



## Partnering with Philips to enhance your investment and expand your capabilities



Enhance



Optimize



Trade-In



Transform

We collaborate with you in the long-range planning of your medical imaging needs. With Philips SmartPath you can optimize, enhance, or transform your existing equipment so you have “like new” functionality throughout the whole lifecycle. You gain the most advanced enhancements in workflow, clinical capabilities and imaging quality with the equipment you already own.

Philips SmartPath is a partnership program that also helps you extend the life of your equipment. You can get the latest technology for a fraction of the cost or disruption of buying and installing new. If you prefer to replace your equipment with a new system, you can choose to trade in your current system at attractive terms. And you can conserve capex budget by selecting a financing option that suits your business need.

For more information check [www.philips.com/smartpath](http://www.philips.com/smartpath)