



# Accelerate performance with digital clarity and speed

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Philips Ingenia 1.5T CX  
magnetic resonance system

**PHILIPS**



# Innovation that matters to you

Philips Ingenia 1.5T CX

From the very beginning, Philips has 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.

Philips is dedicated to improving and saving lives through innovation in radiology. We develop our solutions in partnership with clinicians and customers. Your patients can have better, more personalized care, while you make the best use of time and budget. We partner with you to 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

## MR challenges

The diversity of patients who need MR studies continues to grow, as do the clinical indications for MR imaging. Your MR system must help you address the imaging needs of patients from pediatrics to geriatrics, from tiny, premature infants to obese patients. You must be able to achieve diagnostic quality for nearly every anatomy and disease state. And you must do so efficiently, to minimize exam length and speed time to treatment.

As focus shifts to value-driven healthcare, you also must assess how to maximize the impact of technology and practices to achieve better quality outcomes per health care cost.

## The imperative: outstanding MR

Amid these changes, there is one constant – your imperative to provide patients with outstanding MR services. That's why Philips has designed Ingenia CX with features that help you do more, in less time. With Ingenia CX, you can complete exams quickly. You can gain access to impactful imaging techniques, developed in collaboration with leading institutions and radiologists. You can offer patients a comfortable scanning experience. Most importantly, you can reassure your patients that they are being imaged with state-of-the-art digital technology that opens the door to personalized care.



### dStream digital broadband MR

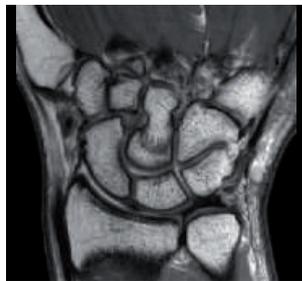
The established digital broadband MR platform, dStream enables you to get more information, more consistently in the same time by delivering premium image quality with digital clarity and speed. The high purity signal increases SNR, expanding your imaging options.



# Drive clinical performance

## Digital clarity and speed

Ingenia CX helps you maximize diagnostic information, every time, within the available time slot. Digital, broadband dStream technology combines with industry leading dS SENSE acceleration and impactful imaging techniques like mDIXON and MultiVane XD to enable fast imaging and superb motion and fat suppression in almost all procedures.



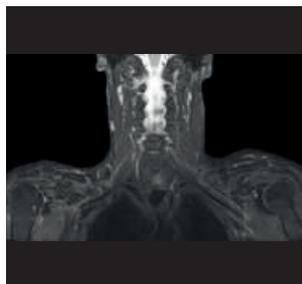
### Premium SNR with dStream

Ingenia CX is the only Philips 60 cm system to be equipped with powerful, broadband dStream technology. 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 10-40%.



### Premium speed with dS SENSE

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 breathholds, drastically cut imaging time, drastically reduced 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

Inconsistent fat suppression can lead to inconclusive exams, second-guessing, rescans and retakes. So Philips developed mDIXON, a fat suppression innovation that is both consistent and fast. A Philips exclusive, mDIXON 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

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 eliminates motion artifacts in livers and knees as well, giving you an elegant solution to the vexing problem of in-plane motion.



## Key benefits

Achieve new level of clinical performance by solving the common MR challenges of speed, fat suppression, and motion control.

# Expanding applications, growing referral value

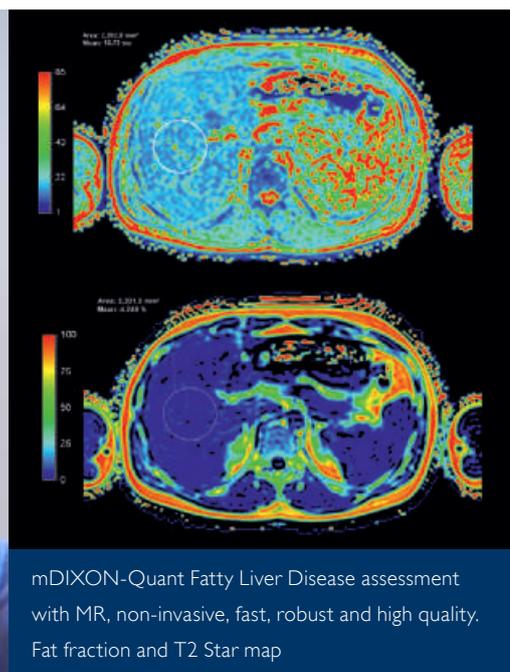
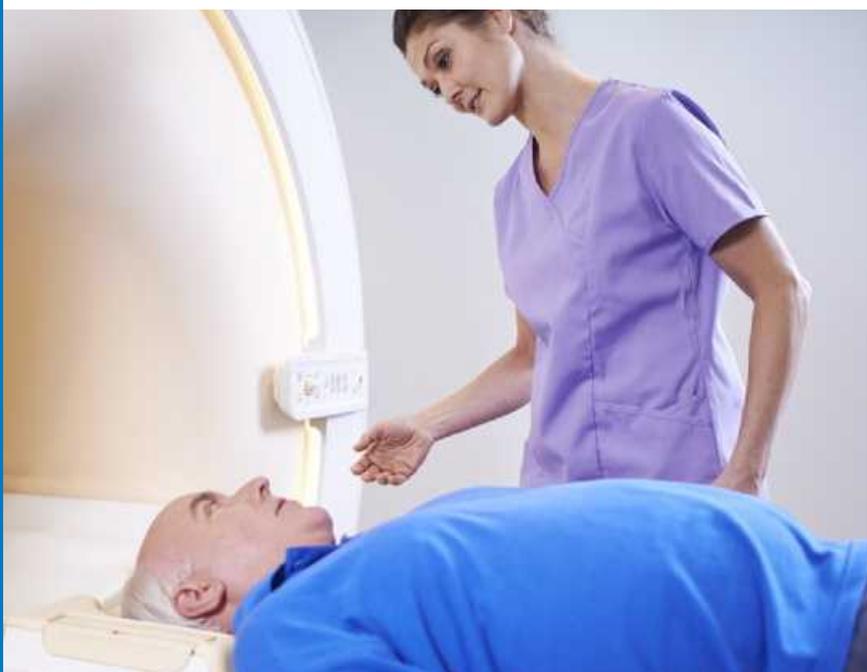
Trends such as a growing prevalence of neurodegenerative disease, improved personalization of treatment in oncology, and an increased level of ischemic and non-ischemic heart disease open new opportunities for MR.

## Advanced Imaging

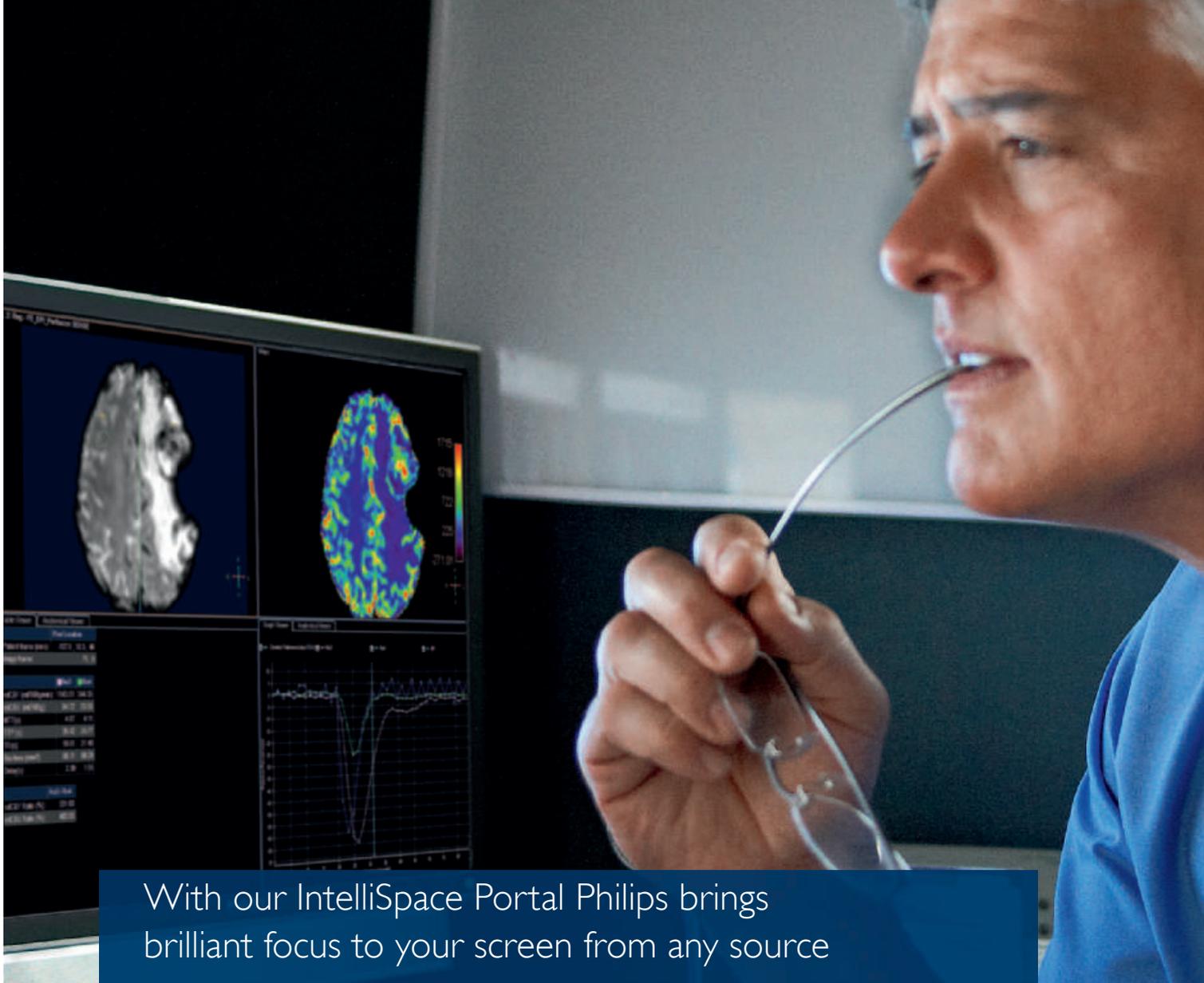
Offering advanced diagnostic capabilities is good for patients, who benefit from access to the latest tools, and good for your practice, as it gains a reputation among referrers as the place to turn to solve diagnostic challenges.

Our advanced imaging solutions deliver capabilities that are ready for mainstream practice, providing information that aids insight into:

- Cerebrovascular disease or traumatic brain injury
- Neurodegenerative and psychiatric diseases, including dementia
- Cancer detection and characterization anywhere in the body
- Monitoring and guiding of treatments
- Image guided interventions ranging from localized biopsies to localized treatment
- Staging of lifestyle diseases such as fatty liver disease
- Post-infarct treatment analysis and risk assessment for ischemic heart patients



mDIXON-Quant Fatty Liver Disease assessment with MR, non-invasive, fast, robust and high quality. Fat fraction and T2 Star map



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

Work where you want, without compromise. 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.

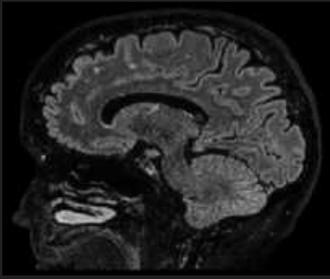
### **Leverage intelligence, integration, and interpretation on every case**

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 the enterprise.

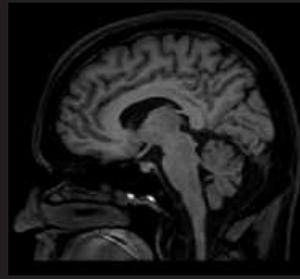
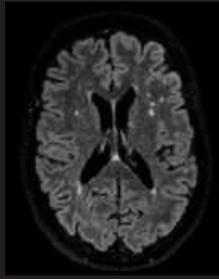
This multimodality advanced visualization and analysis solution gives you measurement and quantification capabilities to support diagnostic objectiveness and consistency. It supports MR, CT, molecular imaging, and ultrasound images, so you can view all images that are relevant to a diagnosis.

Clinical applications include:

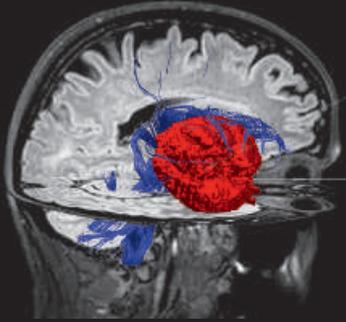
- Calculating MR diffusion
- Assessing MR T1 perfusion
- Assessing MR neuro perfusion
- Calculating MR subtraction
- Calculating MR echo accumulation
- Full FOV MR images with MobiView
- Assessing cartilage quality



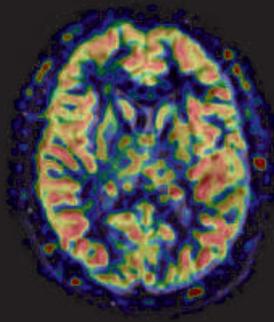
3D BrainView FLAIR, dS-SENSE factor 5, isotropic 1.1mm<sup>3</sup> in 4:34 minutes.  
Source slice sagittal and axial MPR



3D BrainView T1W TSE, dS-SENSE factor 5, isotropic 1.2mm<sup>3</sup> in 4:55 minutes.  
Source slice sagittal and axial MPR



OrthoViewer- combining data on IntelliSpace Portal, anatomical data, segmentation and fiber tracts



pCASL, non-contrast brain perfusion 3.5x3.5x6.0mm in 3:39 minutes



SWI<sub>p</sub>, high SNR Susceptibility Weighted imaging 0.8x0.8x1.0mm in 5:08 minutes



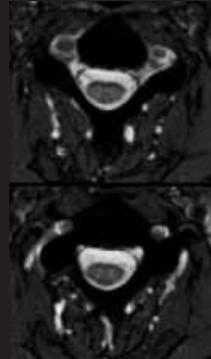
MultiVaneXD, Premium motion compensation with dS SENSE in 2:32 minutes



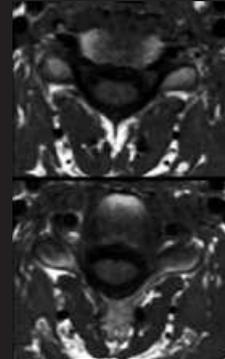
2 Station Total Spine, T1W TSE 1.8x2.2x4.0 mm in 5:50 minutes



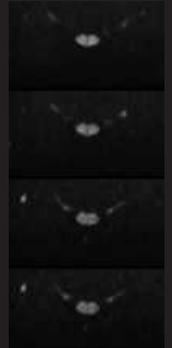
Sagittal T2W TSE, 0.8x1.0x3.0mm in 3:36min



mFFE, 0.8x0.8x3.0mm in 4:43 minutes



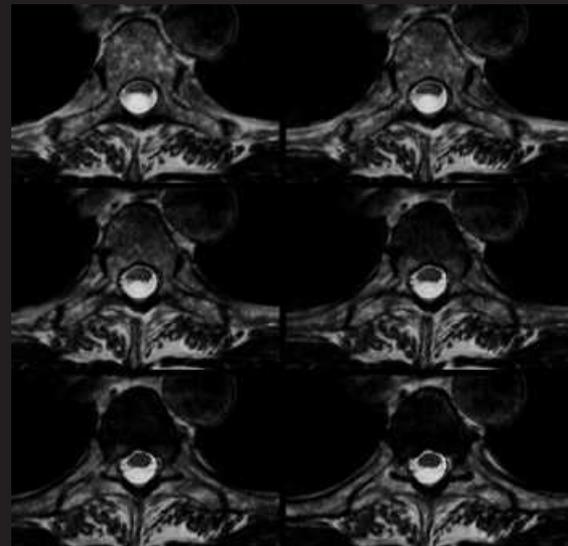
T1W TSE, 0.7x0.9x3.0mm in 4:55 minutes



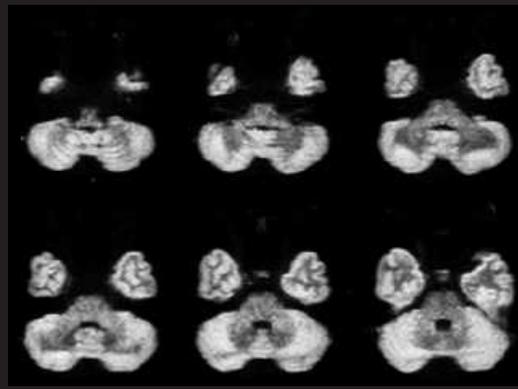
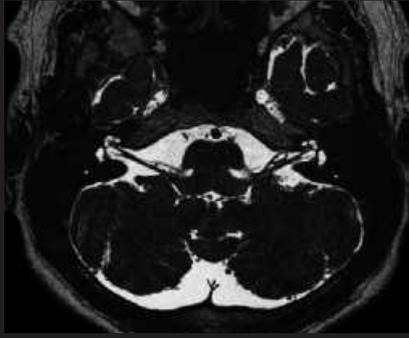
Axial DWI of the spinal cord with b=600 in 3:30 minutes



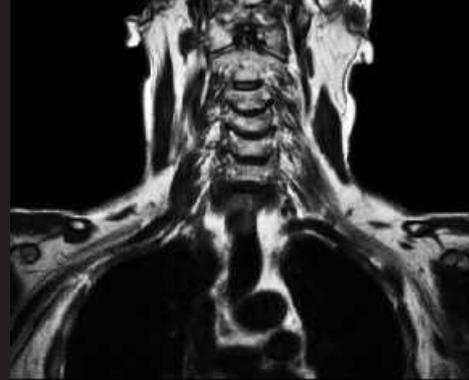
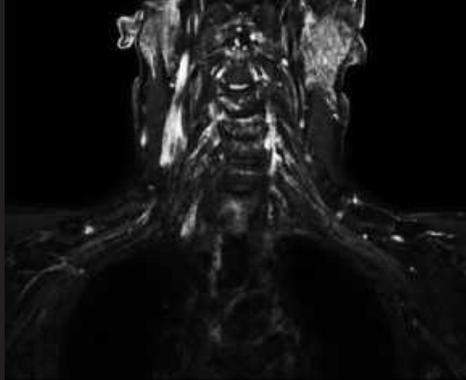
Thoracic spine, sagittal T2W TSE in 3:14 minutes, axial 3D T2W TSE in 4:32 minutes



▶ 3D T2W DRIVE,  
high resolution  
0.7mm<sup>3</sup> in  
6 minutes



◀ Distortion free  
Diffusion imaging of  
the inner  
ear with DWI TSE  
in 4:57 minutes

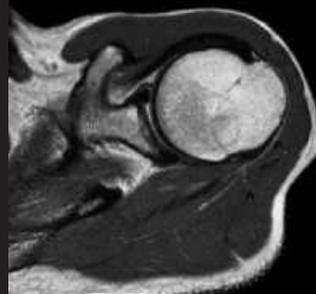
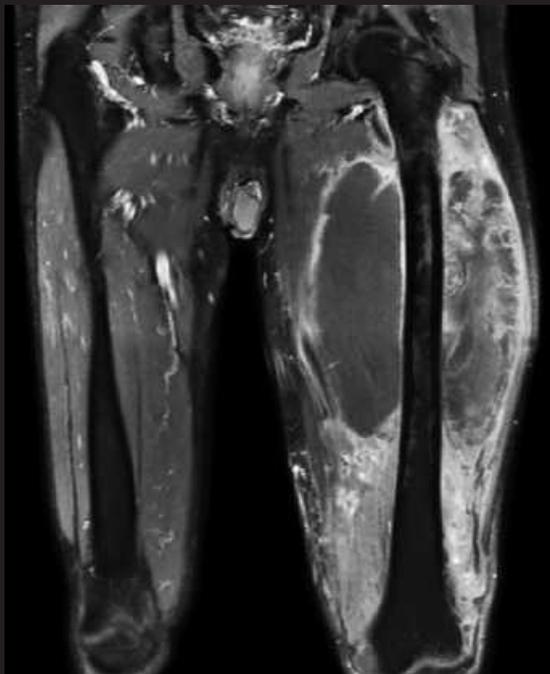


◀ mDIXON T2W  
TSE, fast and  
robust fat-free  
imaging, T2W fat  
free and T2W  
image in one  
single scan of 4:25  
minutes



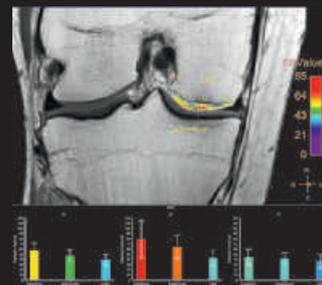
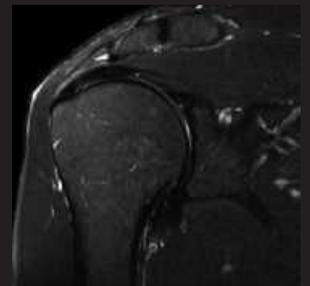
mDIXON T1W TSE, fast and robust fat-free imaging, T1W fat free and T1W image in single scan of 3:54 minutes

◀ Off-center imaging,  
PDW TSE,  
2mm slices in 3:30  
minutes



▶ Axial PDW TSE  
combining  
dS Flex M and dS  
Posterior coil  
elements in  
3:42 minutes

▶ Off-center fat  
suppression,  
T2W SPAIR in  
3:47 minutes

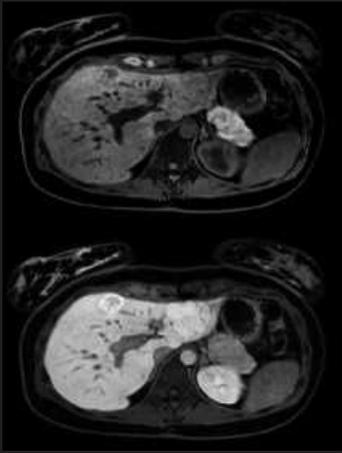


▶ Cartilage  
assessment on  
the IntelliSpace  
Portal

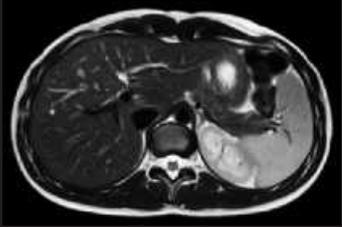
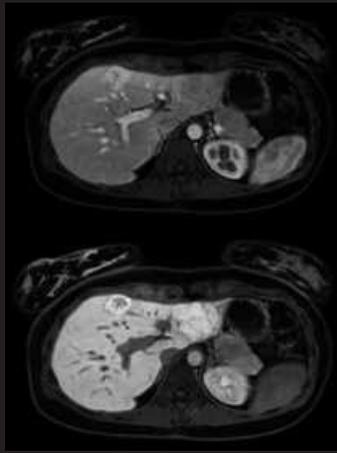
▶ Medium SPIR fat  
suppression, PDW  
in 1:55 minutes



mDIXON T1W TSE post contrast, fast and robust fat-free imaging, fat free T1W in 3:33 minutes



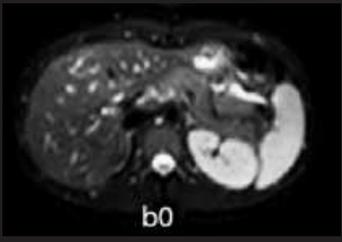
4-Phase dynamic Liver imaging with mDIXON FFE, 17 second breath hold



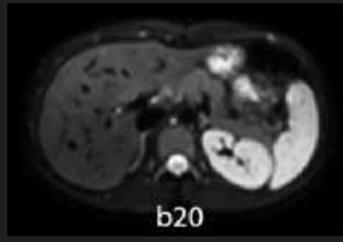
MultiVaneXD, high resolution motion free imaging. Left: free-breathing T2W TSE in 1:30 minutes, right: free-breathing T2W SPAIR TSE 1:32 minutes



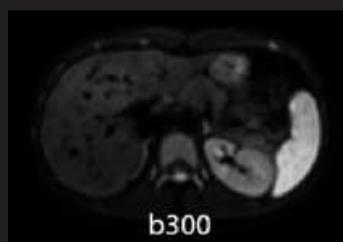
Two Station total Torso coverage with single dSTorso coil, T2W TSE in 3:30 minutes



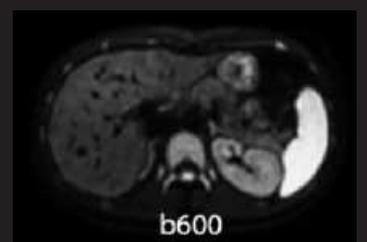
b0



b20



b300



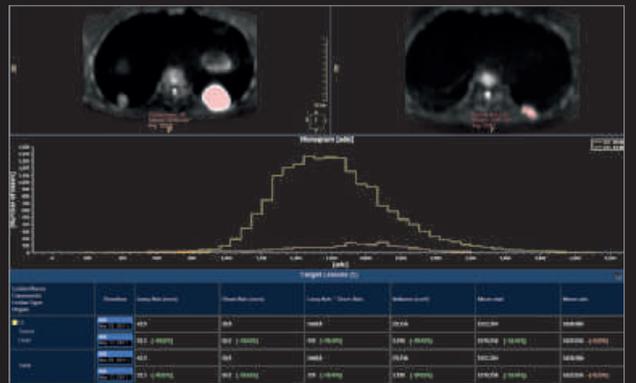
b600

Diffusion imaging of the whole liver, 4 b-values in 3:09 minutes

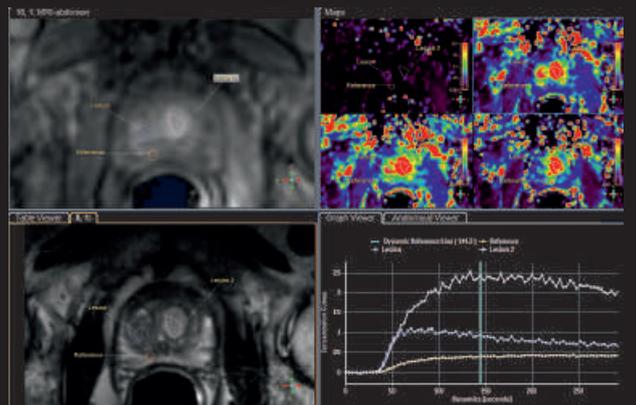


Oncology screening, Head to thighs DWIBS in 8 minutes

Multi-modality Tumor Tracking, monitoring tumor response over time on the IntelliSpace Portal



Permeability analysis on the IntelliSpace Portal





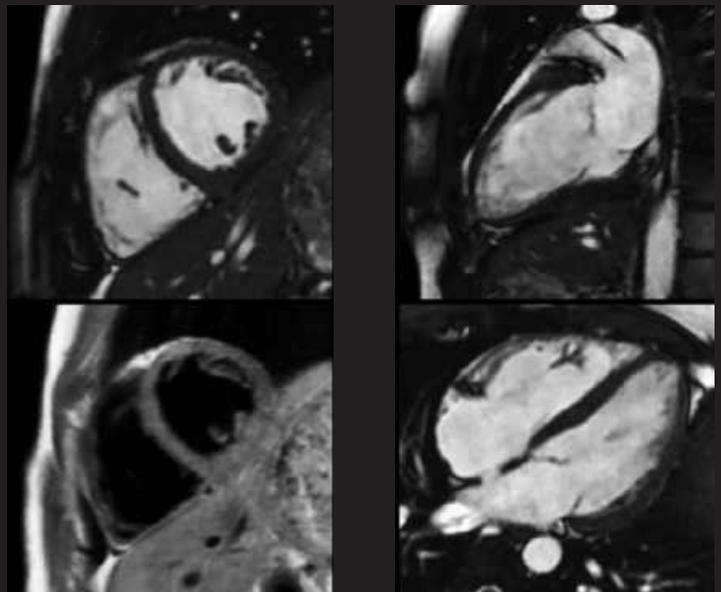
Fast Total Body Imaging, T2W TSE in 5 minutes



Carotid MRA with CENTRA and dS-SENSE in 1:14 minutes

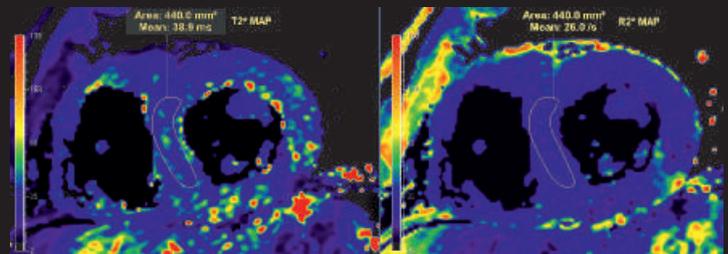


MRA of the Aorta with CENTRA and dS-SENSE in one breath-hold

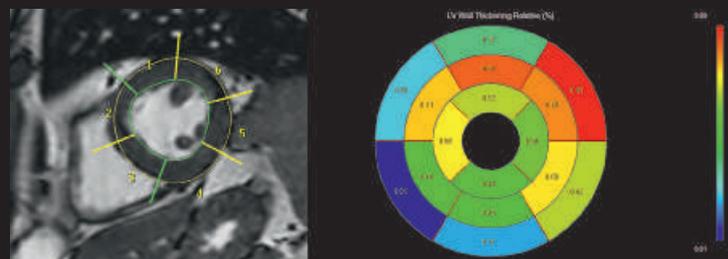


Cine and BlackBlood imaging with dS-SENSE, cine: 9 seconds, BlackBlood 12 seconds

StarQuant, visual assessment of myocardial tissue characteristics with T2\* and R2\* mapping



MR Cardiac on IntelliSpace Portal, easy and fast cardiac function assessment



# Enhance patient and user experience

## In control of personalized patient-centric imaging

Ingenia CX features iPatient, an advanced platform that puts you in control of personalized, patient-centric imaging. Encompassing everything from planning to coils to processing, iPatient adapts to patient variability in behavior, condition and anatomy and physiology to deliver a comfortable patient experience and exam efficiency.

### In control of patient comfort

Ingenia CX's iPatient includes optional accessories and hardware that are designed for specific patient types, to increase patient comfort. Digital coil design greatly reduces coil weights and leads to less patient repositioning in many exams, and many coils are adjustable for a custom coil fit.

iPatient enables imaging with fewer coils, and reduces coil positioning and set-up time. An integrated posterior coil is all you need for 60% of routine exams. When

combined with the anterior coil, you can easily image anatomies from above the shoulder to the toe. All coils can be connected with just one hand.

We also offer pediatric accessories to make scanning comfortable for your smallest patients, and a table that can accommodate patients up to 250 kg (550 lbs) for your larger patients. The ambient light ring on the magnet façade and adjustable, in-bore lighting enhance scanning comfort, as does the reduction of patient-perceived (in bore) gradient acoustic noise by more than 80%.

### Key benefits

iPatient brings consistency and efficiency to MR imaging.



FlexConnect makes it possible to connect coils single-handedly, and provides auto-eject for easy table undocking when the exam is finished.



Anterior coil frame\* to support the anterior coil, avoiding direct contact



Lightweight conforming coils for enhanced patient comfort and operator handling



Flexible, lightweight and easy-to-position FlexCoverage Anterior coil



Philips Ambient technology\* supports to put patients at ease



FlexCaddy coil storage cart.\*



FlexTrak dockable patient transport system\*



Table with integrated posterior coil

\* optional

## In control of personalized imaging

Patient variability has a significant effect on the robustness of imaging techniques. Patient behavior, condition, and anatomical and physiological variations can disrupt an otherwise highly efficient MR department. iPatient controls patient variability, delivering patient-adaptive imaging and improving throughput by up to 30%.

You can personalize imaging by selecting the ExamCard that best matches the patient condition. You can create your own ExamCards, or choose one shared by other Philips MR customers.

In addition to driving clinical performance, mDIXON and MultiVaneXD also help you personalize imaging for certain patient conditions. mDIXON enables fat-free imaging of obese patients, and MultiVaneXD helps you achieve high quality images even for patients who can't stay still or hold their breath. Additional techniques for personalized imaging are metal artifact reduction sequences (MARS), whose low sensitivity to metal artifacts can help you image patients with metal prostheses or implants, and time-efficient 3D imaging, which allows reconstruction in any direction so that imaging outcome is independent of patient/anatomy variability.



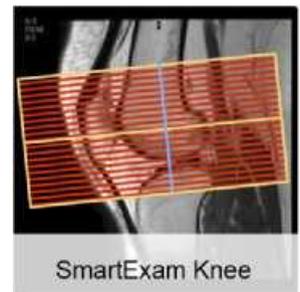
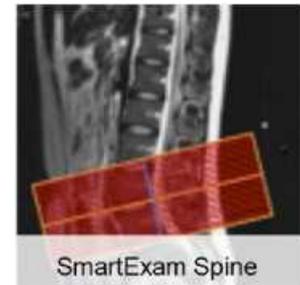
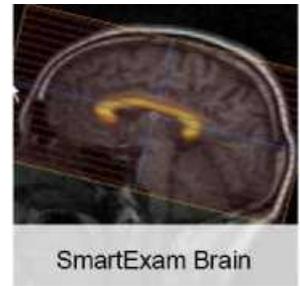
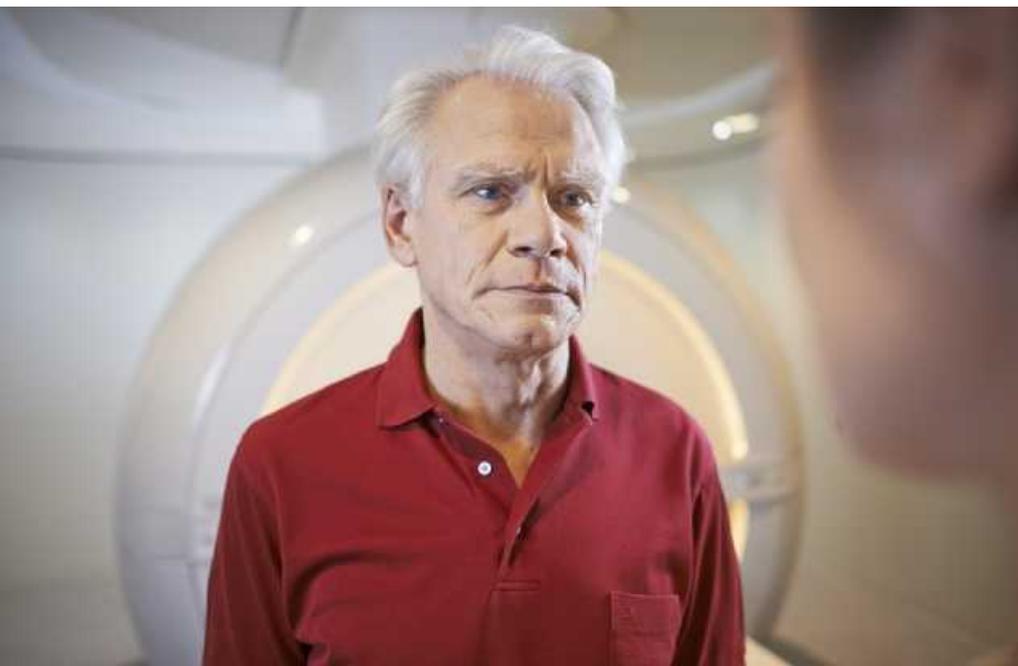
# In control of image quality

By automating repetitive tasks and incorporating best practices into ExamCards, iPatient enhances exam consistency. In fact, Smart Exam automation assists in delivering reproducible planning results in more than 70% of procedures.\*

## Imaging workflow eliminates repetitive tasks

iPatient eliminates up to 50% of repetitive tasks. 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, reducing operator input to as little as a single mouse click.\*

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, multi-station exams, treating multi-station exams as one volume.



\*SmartExam is optionally available for brain, spine, shoulder, knee and breast imaging.

# Ensure economic value

The most cost-effective dStream system available, the Ingenia CX comes with Philips services and offerings that enhance the value of your MR system.

## Expandability and channel independence

With Ingenia CX, 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, saving money and sparing the environment. PowerSave is one result of Philips' continuous drive to improve the sustainability of its products. Additionally, Ingenia CX's 60 cm bore decreases energy consumption by up to 10% when compared to wide bore.

## 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, with productivity increases of 10% or more, 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. Recent independent reports ranked Philips MR as best-in-class in medical equipment and infrastructure in composite user satisfaction ratings.

## Manage your investment

Philips SmartPath is our long-term promise to give you easy access to the latest innovations throughout the life cycle of your imaging system.

- Optimize: software and hardware updates to help increase your system performance.
- Enhance: new functionality, clinical innovations and workflow efficiencies to expand your capabilities.
- Transform: conversion or full replacement of existing systems to next-generation solutions helps you maintain your competitive edge and high quality of patient care.





## Key benefits

The Ingenia CX gives you all the advantages of dStream and iPatient at an attractive price, plus access to Philips education and skilled service personnel.



Ingenia 1.5T CX

**Philips Healthcare is part of Royal Philips**

How to reach us:  
[www.philips.com/healthcare](http://www.philips.com/healthcare)  
[healthcare@philips.com](mailto:healthcare@philips.com)

Product information:  
[www.philips.com/ingeniacx](http://www.philips.com/ingeniacx)

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