



**PHILIPS**

Magnetic Resonance

SmartPath upgrade

Ingenia Elition X

**Step into the future,**  
with confidence

# Step into the future, with confidence

The healthcare industry is under tremendous pressure to hold costs down while delivering exceptional patient care. As a result, there is a clear trend towards keeping existing medical equipment.

With Philips MR SmartPath you can convert your existing Ingenia 3.0T system to an Ingenia Elition X. The new high-end performance Vega HP gradients help you reach new levels of precision in anatomical and functional clinical imaging. It enables you to boost your performance with innovative SmartWorkflow solutions that include touchless patient sensing technology, in-room guidance on patient set-up and initiation of the exam at the patient's side. Adding Compressed SENSE allows you to scan up to 50% faster with virtually equal image quality<sup>1</sup>, in both 2D and 3D scanning and for all anatomies. MR SmartPath also includes the ComfortPlus mattress, which delivers a more comfortable table experience<sup>2</sup>. A positive patient experience can be further supported through installation of an immersive audio-visual experience that calms patients and guides them through MR exams. Your MR SmartPath conversion also gives you access to the latest scanning techniques for confident diagnosis of the most challenging indications.

**Discover how Philips SmartPath program can help you step into the future with confidence. It's your path to longer system lifetime.**

<sup>1</sup> Compared to Philips scans without Compressed SENSE.  
<sup>2</sup> Compared to the standard mattress.

<a href="#">Extend the lifetime of your equipment</a>	4
<a href="#">Benefit from more performance and more control</a>	7
<a href="#">Boost your performance with latest workflow solutions</a>	10
<a href="#">Scan up to 50% faster, with virtually equal image quality<sup>1</sup></a>	21
<a href="#">A more comfortable experience for your patients</a>	31
<a href="#">Access to the latest scanning techniques</a>	37
<a href="#">Enhance the value of your MR investment</a>	44

Extend the lifetime of your equipment

SmartPath allows you to enhance your investment, extend the lifetime of your equipment and easily upgrade to the latest technology for long term success. With this program, you completely renew your trusted Ingenia MR system, just as if you had bought a new MR, extending the lifetime of your equipment and improving your total cost of ownership. Furthermore, it alleviates the delays and expense of installing a new MR magnet, that can involve breaking down walls and ceilings and using heavy cranes to transport the magnet in and out of the hospital.



Your current Ingenia 3.0T...



... will be dismantled and upgraded to become ...



... your new Ingenia Elition X

A sustainable choice for substantially less cost

Re-using your existing magnet and converting to the next generation of MR costs substantially less than purchasing a new system. When you convert your MR instead of buying a new system, you also make the sustainable choice . Saving the CO<sub>2</sub> output and energy usage that would be required to manufacture a new magnet , and saving the costs of transporting, lifting and installing a new magnet weighing up to 3000 kilograms.

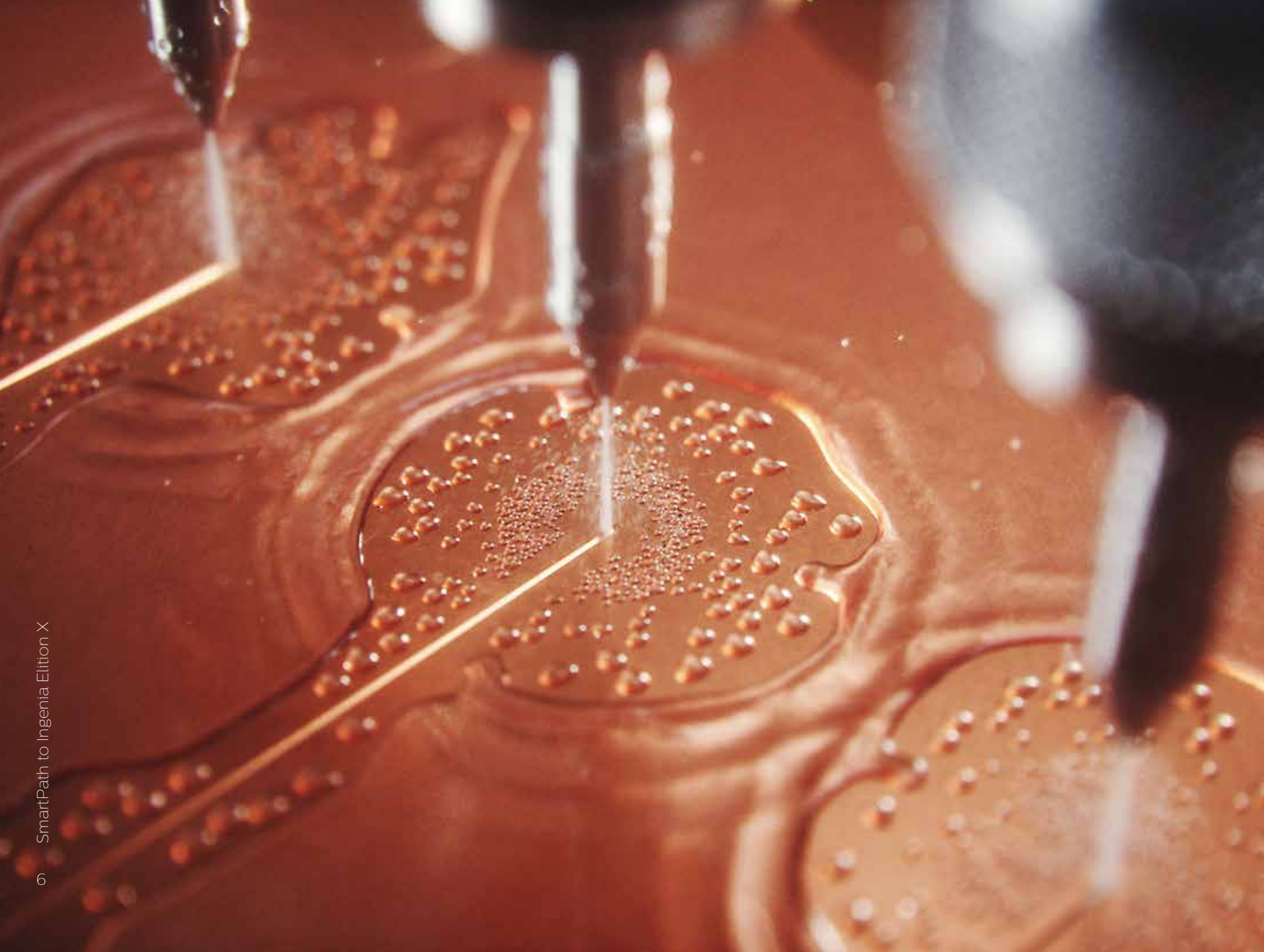


Make the sustainable choice



For less cost than purchase of a new system





## Benefit from **more performance and more control**

Ingenia Elition X supports confident diagnosis by innovating on all fronts. The new high-end Vega HP performance gradients help you reach new levels of precision in anatomical and functional clinical imaging. You can achieve up to 60% higher resolution<sup>1</sup>, scan your DWI images up to 30% faster<sup>2</sup>, and unlock new territories in neurofunctional MRI. The Elition X gradient design takes into account all electrically conducting elements. Also, other effects of the gradient design, like mechanical forces- and vibrations between components are kept within required boundary conditions, e.g. to optimize the patient experience. It's precision made efficient.

<sup>1</sup> Compared to Philips scans without Compressed SENSE  
<sup>2</sup> Compared to Ingenia 3.0T Omega HP

High spatial resolution MSK imaging



T2\* mFFE  
0.2 x 0.3 x 2.0 mm  
FOV 60 mm  
3:07 min



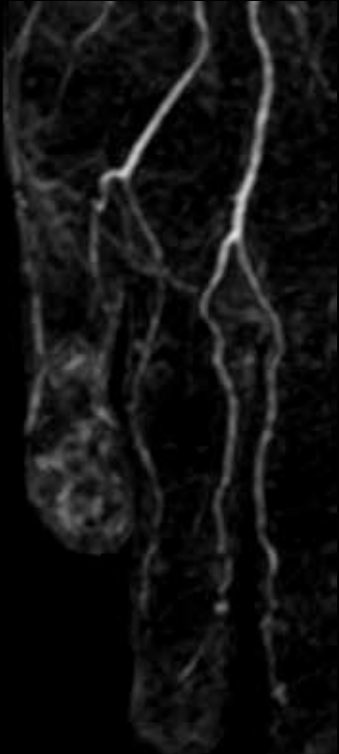
PDw TSE  
0.2 x 0.2 x 2.0 mm  
FOV 120 mm  
4:18 min



T1w TSE  
Compressed SENSE  
0.2 x 0.4 x 1.5 mm  
2:56 min

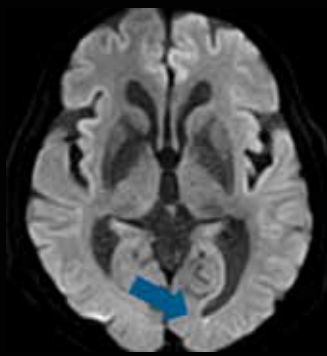


PDw SPAIR  
0.3 x 0.5 x 1.5 mm  
5:39 min

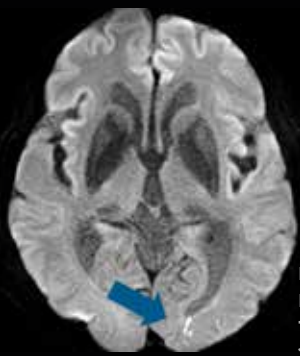


4D-TRAK XD (MIP)  
Compressed SENSE  
3 sec /dynamic  
2:26 min

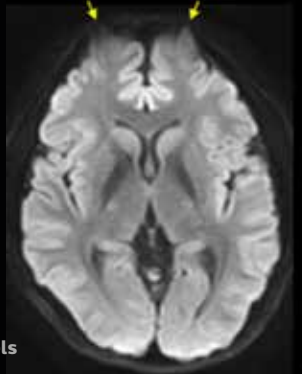
Up to 23% higher temporal resolution in fMRI studies<sup>1</sup>



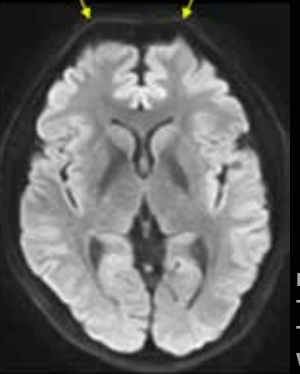
Diffusion  
Matrix 128  
TE 79 ms  
1:00 min



Diffusion  
Matrix 256  
TE 93 ms  
1:54 min

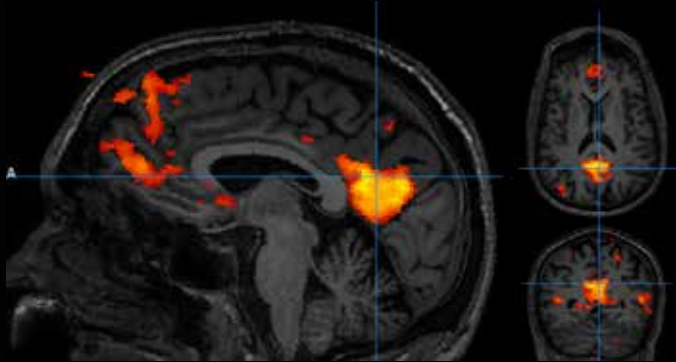


Ingenia 3.0T  
TR 4.7 sec  
TE 71 ms  
WFS 27.3 pixels

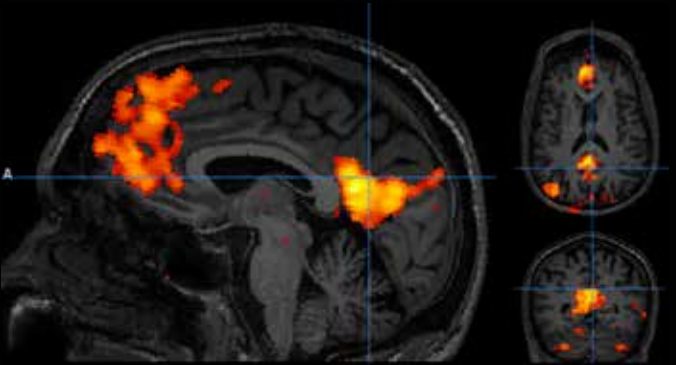


Ingenia Elition 3.0T X  
TR 4.0 sec  
TE 64 ms  
WFS 18.4 pixels

Up to 22% faster EPI's and sharper DWI images<sup>1</sup>



Ingenia 3.0T  
MultiBand SENSE  
2.2 x 2.2 x 2.2 mm  
56 slices  
TR 1.62 seconds  
220 volumes  
5:57 min



Ingenia Elition 3.0T X  
MultiBand SENSE  
2.2 x 2.2 x 2.2 mm  
56 slices  
TR 0.88 seconds  
415 volumes  
6:05 min

<sup>1</sup> Due to lower WFS, compared to Ingenia 3.0T Omega HP R5.3. Results from case studies are not predictive of results in other cases. Results in other cases may vary.

<sup>1</sup> Compared to Ingenia 3.0T Omega HP R5.3. Results from case studies are not predictive of results in other cases. Results in other cases may vary.



## Boost your performance with **latest workflow solutions**

With a growth in the elderly population and constant demands to do more with less, the pressure on healthcare providers is immense. This pressure is also evident in radiology departments and imaging centers. The increasing use of MR to diagnose a variety of conditions and illnesses has led to demands for greater efficiency, even as departments try to manage a shortage of MR operators and variability in staff expertise. Too often, it seems that productivity is at odds with giving patients the time and attention they desire.

With SmartWorkflow, you can achieve high productivity while enabling your staff to focus on patients. It reduces and simplifies the number of steps needed in a conventional MR exam workflow, using technology to guide and coach where required, and automate where possible. An end-to-end workflow solution that directly boosts efficiency through reduced variability and task automation, while supporting a better patient and staff experience, resulting in patient-centered productivity.





#### Guided exam set-up

A virtual coach guiding exam set-up; allowing your staff to focus on the patient

#### Auto patient centering

Put your patients at ease, while manual steps in the workflow are automated



#### Touchless respiratory-triggering

Remove the hassle of respiratory belt placement while providing superior image quality<sup>1</sup>



#### In-room exam start

Increase productivity and free up time for other tasks<sup>2</sup>



## SmartWorkflow in **the exam room**

### Guided exam set-up and automation, to increase productivity and free up time to focus on the patient

In the exam room, SmartWorkflow provides guided exam set-up and automation, to increase productivity and free up time to focus on the patient. Even new operators who have never worked with the scanner can proceed with confidence. Allow your staff to focus less on technology, and fully engage with patients. Enjoy reduced variability in patient positioning and quality of respiratory triggering, supporting consistent, high-quality studies. SmartWorkflow decreases patient set-up to less than a minute<sup>3</sup>, and allows operators to initiate the start of the exam with a single touch directly at the MR scanner, starting immediately after closing the door.

**“The entire workflow is smooth: Patient positioning and set-up; launching the scan as soon as we leave the exam room; the intuitive touchscreen on the gantry; Touchless patient sensing... All of these things are much better than on our old system.”**

*Lauro Barlow, RTMR, MRI Technologist Supervisor at the University of British Columbia*

<sup>1</sup> Compared to respiratory belt based signal. Requires an unobstructed line-of-sight.

<sup>2</sup> With VitalScreen, initiating the exam at the patient side.

<sup>3</sup> Based on in-house testing.

# SmartWorkflow in **the control room**

## Reduce operator workload, with standardized results and increased throughput

In the control room, SmartWorkflow automates exam planning, scanning and processing, improving staff experience and driving efficiency by freeing time to check imaging results or prepare for the next exam. Decreased exam variability results in imaging excellence supporting confident diagnoses while automated patient coaching enhances patient experience. Furthermore, with SmartWorkflow you can confidently offer imaging to patients with MR Conditional implants. The guided and automated workflow supports the staff, which gives them more time for the patient, resulting in patient-centered productivity.

**“ We don’t have to manually direct the patient to breathing and not breathing. We can go ahead and let the machine do the work of the breathing instructions while we continue our planning of the exam.”**

*Carlos Avila, RT, technologist at Miami Cardiac & Vascular Institute*



### Automated patient coaching

Reduce your workload while patients are put at ease and guided through the exam



### Confidence for MR Conditional implants

Increase efficiency while providing access to patients with MR Conditional implants<sup>2</sup>

### Automated planning and scanning

Standardize results with reduced variability and increased efficiency<sup>1</sup>



### Automated post-processing

Remove the burden of repetitive post-processing to support increased throughput<sup>1</sup>



<sup>1</sup> With SmartExam, automated geometry planning and execution of complete MR exams.

<sup>2</sup> With ScanWise Implant, providing step-by-step guidance to enter the condition values as specified by the implant manufacturer.





### A virtual coach **guiding exam set-up**

Increase staff confidence and speed up patient set-up through automated real-time guidance and insights on the details of the current patient study. Achieve high quality results, independent from staff's expertise level. VitalScreen provides guidance at your staff's fingertips. Two 12-inch interactive touchscreens on the scanner provide coaching and visual guidance on recommended patient position, study laterality, coil and accessory placement. Moreover, feedback is provided on important exam details, including physiology signals (both VCG and respiratory) and – if applicable – contrast usage and breath-hold guidance.

### **Put your patients at ease**, while manual steps in the workflow are automated

Free up your staff from monotonous, manual steps and enable them to focus on the patient through automatic placement of the region of interest in the scanner iso-center. The manual use of a laser light visor for iso-center positioning has become obsolete. VitalScreen automatically detects landmarks for selected anatomies and places the region of interest in the iso-center of the magnet. Once the patient is positioned on the table, only the push of a button is required to position the patient in the center of the bore.

### **Increase productivity and free up time for other tasks**

Start exams as soon as possible, eliminating extra steps for your staff and decreasing the time the patient has to spent in the magnet, resulting in a more positive patient experience. VitalScreen allows staff to initiate the exam with a single touch of a button at the patient side. The exam starts immediately after the operator has closed the exam room door, so no time is wasted.

## Continuous and robust respiratory signal providing superior image quality

Relieve your staff from the burden of positioning – and re-positioning – a respiratory belt. Positioning a belt shifts the operator's focus from the patient to the technology at a moment when it is critical that the patient is comfortable and reassured. Enjoy optical sensing and AI<sup>1</sup> to automatically detect patient respiratory patterns. VitalEye touchless patient sensing provides a fast detection of patient's breathing without any operator interaction. With VitalEye, the technologist no longer needs to set up an old-fashioned respiratory belt but receives a continuous and robust respiratory signal without any interaction. This revolution in touchless patient sensing helps your staff to keep a caring eye on your patient. The quality of the physiology signal detected by VitalEye is better than a belt-based approach providing superior image quality, for a broad range of patient sizes.

**“It always works, and it's always there.”**

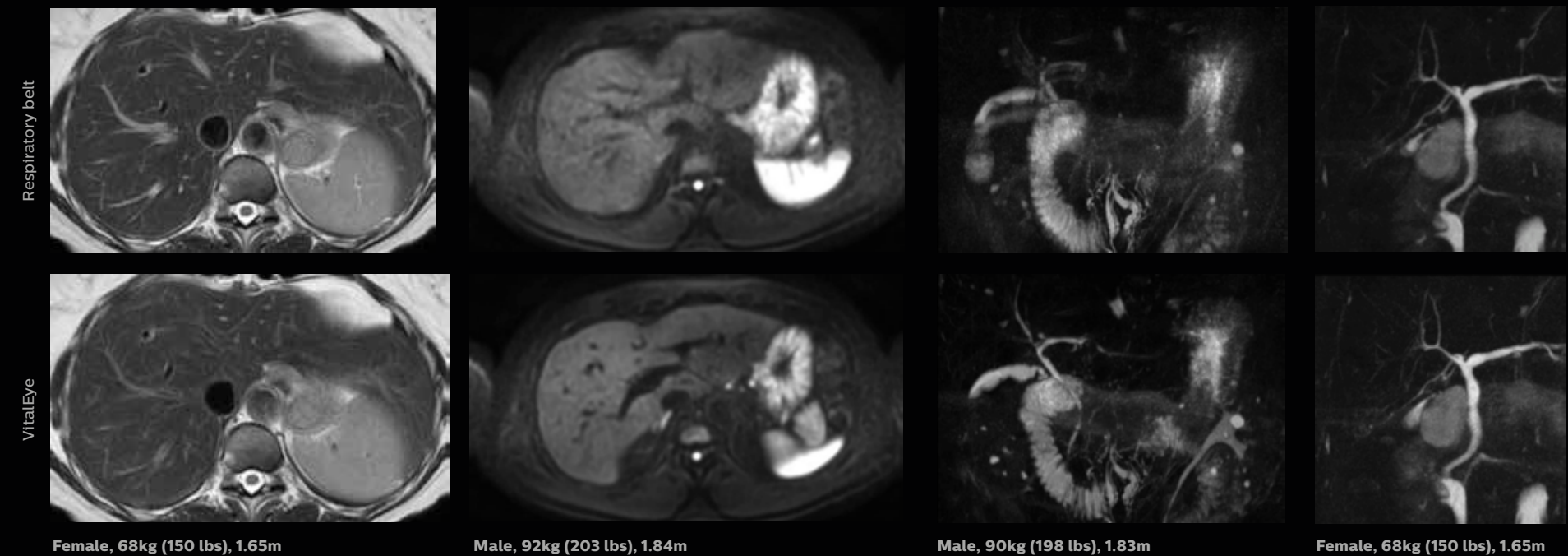
MR operator, University of Bonn, Germany



<sup>1</sup> AI stands for Artificial Intelligence, according to the definition of AI from the EU High-Level Expert Group.

## Touchless patient sensing

### Superior image quality with VitalEye<sup>1</sup>, consistently



<sup>1</sup> Compared to Philips belt-based signal. Requires an unobstructed line of sight. Results from case studies are not predictive of results in other cases. Results in other cases may vary.



## Scan up to 50% faster, with virtually equal image quality<sup>1</sup>

Time is one of the most precious commodities you have in your MR department. What if we told you there was a way to recover time you have been losing during your MR examinations? And use the time you do have more wisely? Imagine how that could help you make better use of your scarce resources and better meet the demands of referring physicians.

That's exactly what Compressed SENSE can do for your MR department. It accelerates your existing MR scans by up to 50% with virtually equal image quality, frees up time to improve your patient experience and can provide up to 60% higher resolution to enhance diagnostic confidence.<sup>1</sup>

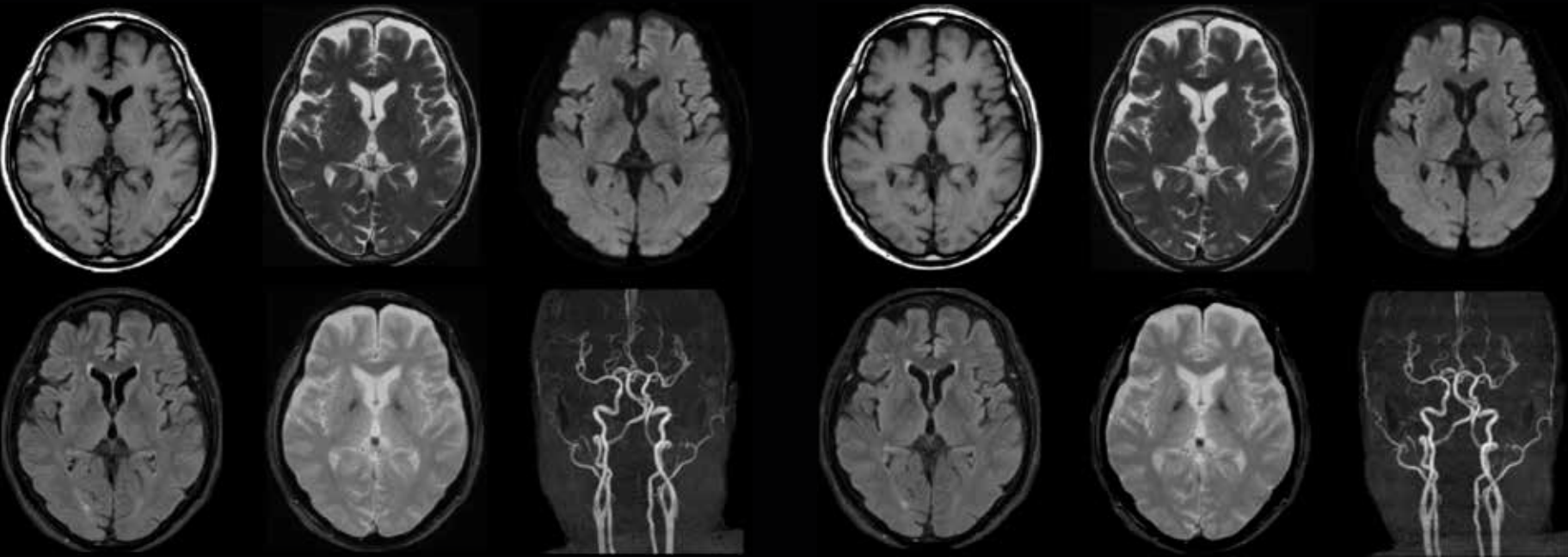
Compressed SENSE is suitable for all anatomies and can be used for all anatomical contrasts, in both 2D- and 3D scanning.

<sup>1</sup> Compared to Philips scans without Compressed SENSE



# Up to 50% faster MRI exams with virtually equal IQ<sup>1</sup>

## Brain ExamCard with 2D and 3D protocols



16:52 min

T1w SE0.9 x 1.3 x 5.0 mm2:35 min

T2w TSE0.6 x 0.7 x 5.0 mm2:04 min

DWI (b1000)1.8 x 1.4 x 5.0 mm0:45 min

T2w FLAIR1.0 x 1.2 x 5.0 mm2:12 min

T2w FFE0.9 x 1.1 x 5.0 mm1:15 min

3D Inflow0.7 x 1.3 x 1.4 mm7:11 min

9:06 min

T1w SE0.9 x 1.3 x 5.0 mm1:14 min48%

T2w TSE0.6 x 0.7 x 5.0 mm1:30 min27%

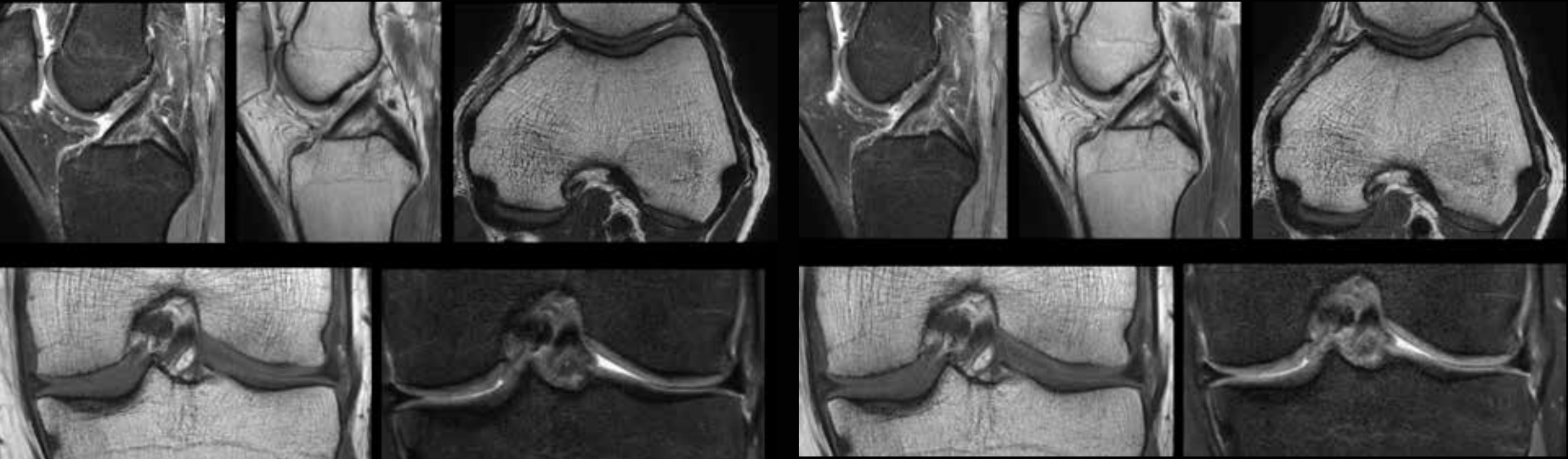
DWI (b1000)1.8 x 1.4 x 5.0 mm0:45 min-



T2w FLAIR1.0 x 1.2 x 5.0 mm1:30 min32%

T2w FFE0.9 x 1.1 x 5.0 mm0:49 min35%

3D Inflow0.7 x 1.3 x 1.4 mm3:06 min59%

## Knee ExamCard with 2D protocols



	PDw SPAIR Sag	0.4 x 0.4 x 2.5 mm	4:24 min		PDw SPAIR Sag	0.4 x 0.4 x 2.5 mm	3:02 min	31%
	PDw SPAIR Cor	0.4 x 0.5 x 2.5 mm	3:01 min		PDw SPAIR Cor	0.4 x 0.5 x 2.5 mm	1:49 min	40%
	PDw TSE Sag	0.3 x 0.4 x 1.5 mm	3:55 min		PDw TSE Sag	0.3 x 0.4 x 1.5 mm	2:20 min	40%
	T2w TSE Tra	0.4 x 0.4 x 1.5 mm	3:49 min		T2w TSE Tra	0.4 x 0.4 x 1.5 mm	1:52 min	51%
	T1w TSE Cor	0.4 x 0.4 x 1.5 mm	2:23 min		T1w TSE Cor	0.4 x 0.4 x 1.5 mm	1:13 min	49%
				10:16 min				
17:32 min								

<sup>1</sup> Compared to Philips scans without Compressed SENSE. Results from case studies are not predictive of results in other cases. Results in other cases may vary  
Courtesy: Kumamoto Chuo Hospital, Japan,

Results from case studies are not predictive of results in other cases. Results in other cases may vary.


# Fast push button exams

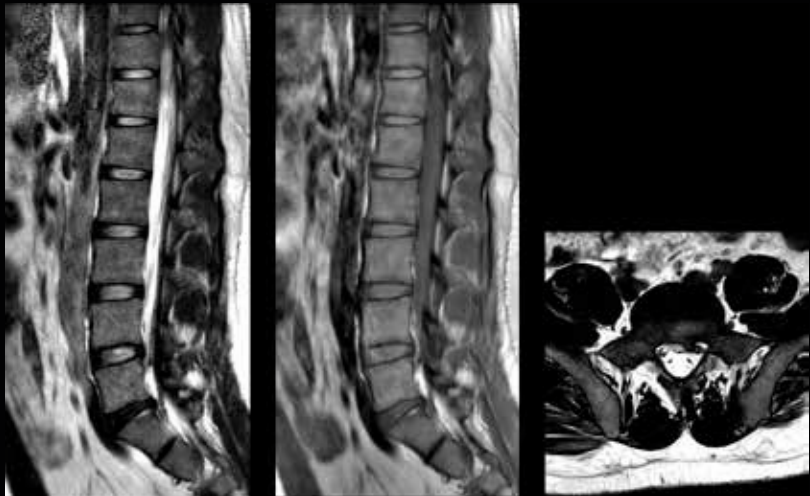
 Brain 10:37 min



Ax T1w SE	1.0 x 1.0 x 5.0 mm	2:31 min
Ax T2w TSE	0.6 x 0.8 x 5.0 mm	0:49 min
Ax T2w FLAIR	0.8 x 1.0 x 5.0 mm	1:30 min
Ax DWI b1000	1.8 x 1.5 x 5.0 mm	0:48 min
Ax T1w SE gado	1.0 x 1.0 x 5.0 mm	2:31 min
Ax 3D T1w TSE gado	1.0 x 1.0 x 1.0 mm	2:28 min
Cor Reformat	1.0 x 1.0 x 1.0 mm	-
Sag Reformat	1.0 x 1.0 x 1.0 mm	-

Courtesy: Kumamoto Chuo Hospital, Japan

 L-Spine 6:31 min



Sag T2w TSE	0.5 x 0.7 x 3.5 mm	2:07 min
Sag PDw TSE	0.5 x 0.7 x 3.5 mm	2:09 min
Ax 3D T2w SpineVIEW	0.6 x 0.7 x 3.0 mm	2:15 min

Courtesy: AZ St Jan, Brugge, Belgium

# Enabled by Compressed SENSE and SmartWorkflow

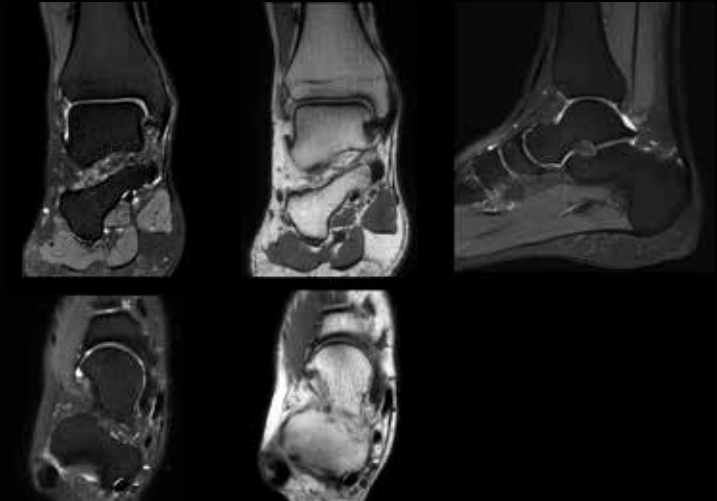
 Knee HR 10:56 min



Sag T1w TSE	0.4 x 0.4 x 2.5 mm	2:06 min
Sag PDw TSE	0.4 x 0.4 x 2.5 mm	3:32 min
mDIXON(Water only + In Phase)	0.4 x 0.4 x 3.0 mm	2:25 min
Cor PDw SPIR	0.4 x 0.4 x 3.5 mm	2:53 min
Ax PDw SPAIR		

Courtesy: Auckland Radiology Group, New Zealand

 Ankle HR 12:52 min



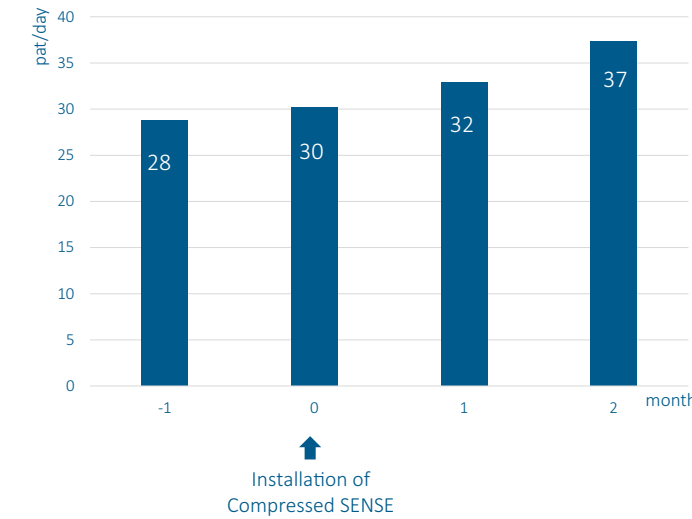
Cor T2w TSE FatSat	0.4 x 0.4 x 3.0 mm	2:59 min
Cor PDw TSE	0.3 x 0.4 x 2.5 mm	2:18 min
Sag T2w TSE FatSat	0.4 x 0.5 x 2.5 mm	2:30 min
Ax T2w TSE FatSat	0.4 x 0.4 x 3.5 mm	2:37 min
Ax PDw TSE	0.4 x 0.4 x 3.5 mm	2:28 min

Courtesy: Q-Scan, Coomera, Australia

### Add extra patient slots to your daily MRI schedule

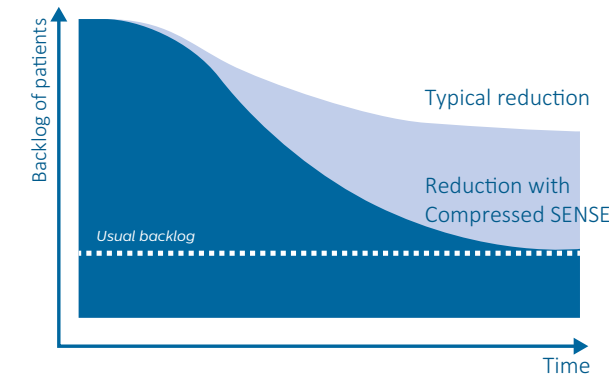
Many radiology departments and imaging centers are looking for ways to increase the utilization of their MR equipment to meet the rising demand for MRI services. A full MRI exam performed with Compressed SENSE, for example, can save minutes compared to a conventional MRI exam. This could free up one or two extra exam slots in your daily schedule, which can result in much higher productivity and shorter waitlists without adding more operator hours.

Scan >5 patients/day extra within same scanning hours



Radiologie Dr Wagner in Gottingen , Germany can accommodate > 5 more patients per day, within the same scanning hours, after the introduction of Compressed SENSE.

Allowing you to reduce your backlog faster



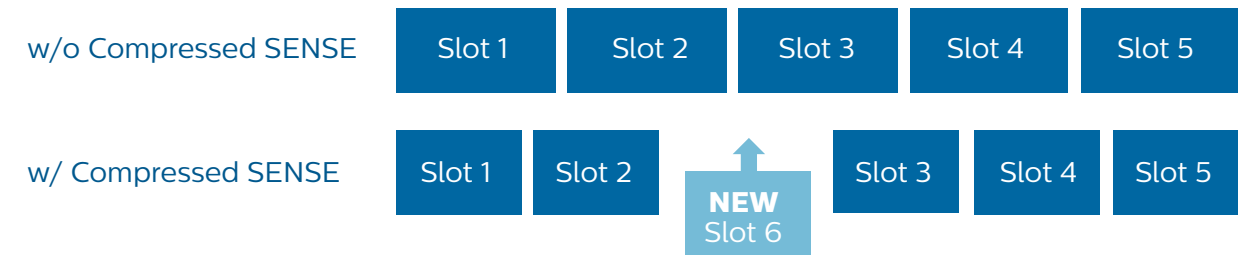
### Easily fit in unplanned patients

Do unscheduled patients disrupt your daily schedule and put extra stress on your staff? With Compressed SENSE you can create a buffer to easily handle emergency cases or urgent patients that are referred on the same day. This extra capacity can help you serve patients and referring physicians faster and make daily workflow go smoother.

**“We can now provide a more flexible and faster MRI service to our patients and referring physicians. For instance, when a referring physician is requesting it, we can now quite smoothly insert an additional MRI examination without previous appointment on the same day.”**

Hideki Koyasu, MD, Neurosurgical Clinic in Kanagawa, Japan

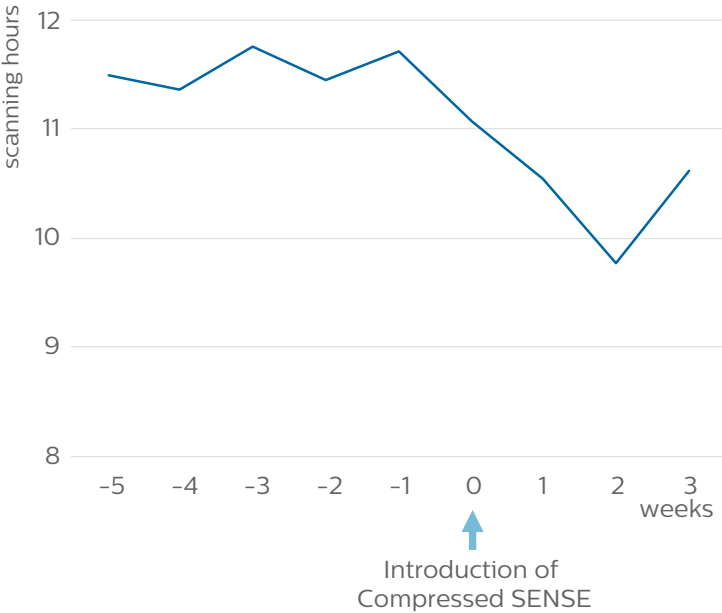
#### Easily fit in unplanned patients





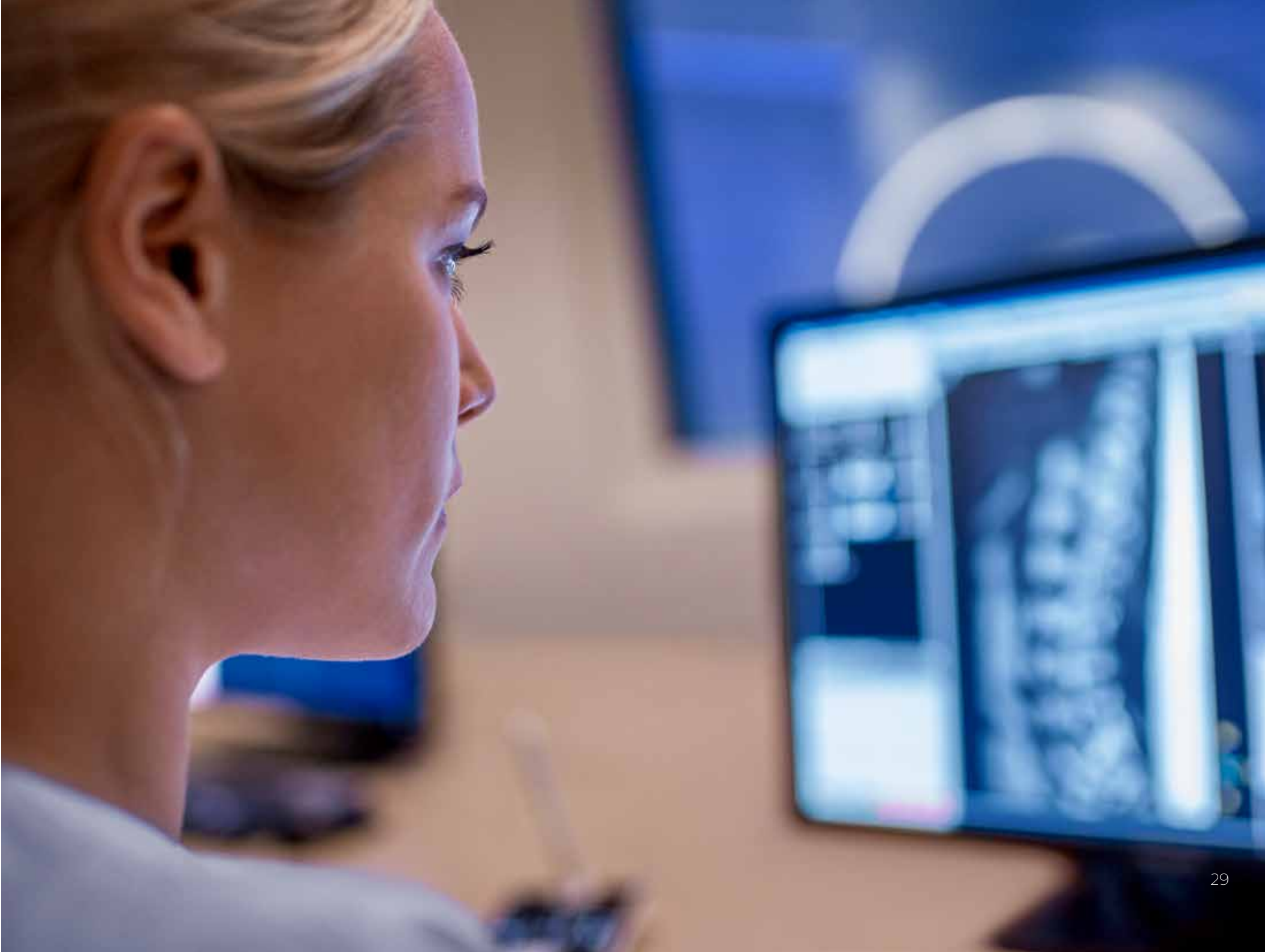
**Reduction in overtime**, while maintaining same patient throughput per day

Having to work overtime is a recurring issue for many radiology departments and imaging centers that can impact staff satisfaction and run-up operational costs. The stress caused by heavy workloads and overtime hours greatly contribute to burnout among radiology technologists, not to mention long-term mental and physical health issues.<sup>1</sup> By reducing MRI scan times and improving scheduling flexibility, Compressed SENSE helps patients and staff to get home on time. This can improve the experience for all involved.



ComputerTomography Institut in Innsbruck, Austria has been able to reduce overtime by more than one hour, keeping the same patient throughput per day, after the introduction of Compressed SENSE.

<sup>1</sup> Vinu, Raj. Occupational stress and Radiography. NCBI. Nov-Dec 2006. <https://www.ncbi.nlm.nih.gov/pubmed/17119177>  
Results from case studies are not predictive of results in other cases. Results in other cases may vary.





## A more comfortable experience for your patients

Your patients are at the heart of Ingenia Elition X – which includes an MR experience that enhances comfort and compliance. With up to 80% acoustic noise reduction<sup>1</sup>, voice guidance, immersive in-bore visuals and a comfortable table mattress, Ingenia Elition X helps your patients feel at ease, resulting in smooth, fast exams.

<sup>1</sup> Compared to scanning without ComforTone.



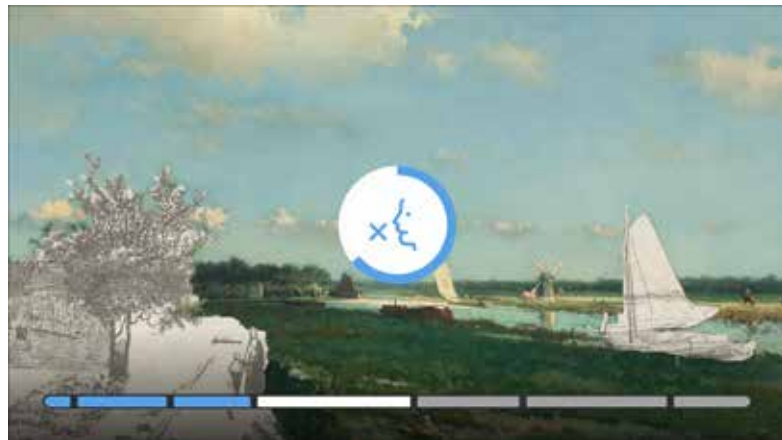
## Provide an **immersive visual experience**

Your patients' scanning experience is significantly enhanced with Ingenia Elition X. Designed to offer a relaxing sensory experience, Ambient Experience provides positive distractions for patients by incorporating dynamic lighting, projection and sound, contributing to a positive, engaging environment to benefit quality of care. From the moment a patient is moved into the scanner (the point at which people report the most stress), through completion of the scan, the In-Bore Connect solution can help patients to relax, follow directions and minimize motion. In a study, conducted using our in-bore solution, Herlev Gentofte University Hospital in Denmark managed to reduce the number of rescans by up to 70%<sup>1</sup>. A case study at Radiologisches Zentrum am Kaufhof, Lübeck, Germany showed that the number of patients needing sedation was reduced by 80%<sup>2</sup>.

***We've had a lot of patients provide compliments on the environment.  
We have the Ambient solution in there that creates a soothing environment."***

“

Carol Melvin, COO, Miami Cardiac and Vascular Institute



<sup>1</sup> Compared to the average of the other 5 Philips Ingenia MR scanners without Ambient Experience and In-Bore Connect. Results from case studies are not predictive of results in other cases. Results in other cases may vary.

<sup>2</sup> Results from case studies are not predictive of results in other cases. Results in other cases may vary. \*The tranquilizer referred to is a valium-based derivative called "Diazepam".







### **Comfort** in every detail

Because no detail is too small when it comes to helping your patients feel comfortable, Ingenia Elition X includes the ComfortPlus mattress. On average, 90% of patients in severe discomfort find it easy to lie still on the ComfortPlus mattress. Overall comfort for this group of patients can increase by up to 36%.<sup>1</sup>

**“The most frequent comment we are getting from our technologists, is that for patients who have had scans on other Philips scanners, this new mattress is really significantly more comfortable.”**

Dr. Oswood, Hennepin County Medical Center

<sup>1</sup> Compared to using a standard mattress.

# 90%

of patients in severe discomfort found it easy to lie still on the Comfort Plus Mattress during the exam

# 87%

of the patients indicated it was easy to lie still on the Comfort Plus Mattress



## Access to the **latest scanning techniques**

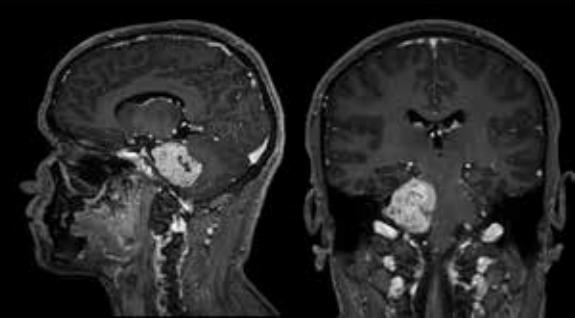
Your SmartPath conversion also gives you access to the latest scanning techniques for confident diagnosis of the most challenging indications.

Contrast-free MR imaging methods like 3D APT, addressing the need for more confident diagnosis in neuro oncology. Acceleration in MR brain imaging by simultaneously exciting multiple slices with MultiBand SENSE. Addressing patients who have difficulty holding their breath with 4D FreeBreathing. Reducing geometric distortion<sup>1</sup> in diffusion imaging with DWI TSE XD and SmartShim while enhancing your clinical diffusion workflow by generating synthetic high b-value images with Computed DWI. Non-invasive quantification of liver fat fraction with mDIXON Quant and assessment of differences in liver tissue stiffness with MR Elastography.

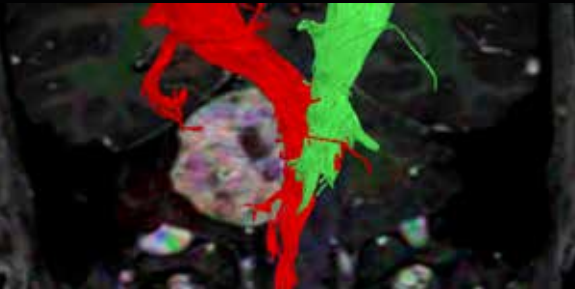
<sup>1</sup> Compared to DWI EPI.



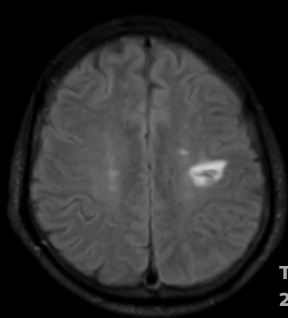
# Enhance your diagnostic confidence for Brain imaging



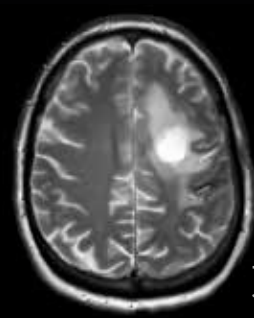
**3D VIEW T1w TFE with gado**  
**Reformats in any plane without loss of resolution**  
 Centre Hospitalier de Université, Lyon-Sud, France



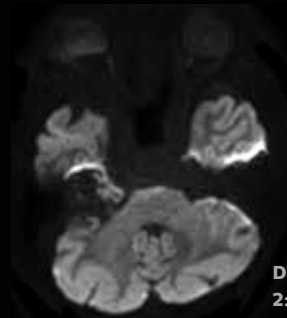
**Multiband SENSE DTI 64 directions**  
**Acquire a high number of diffusion directions in a short scan time**  
 Centre Hospitalier de Université, Lyon-Sud, France



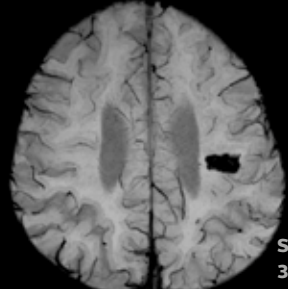
**T2w FLAIR**  
 2:30 min



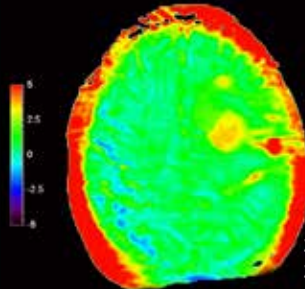
**T2w TSE**  
 1:49 min



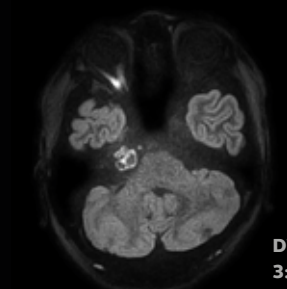
**DWI EPI**  
 2:42 min



**SWIp**  
 3:00 min



**3D APT**  
 3:45 min



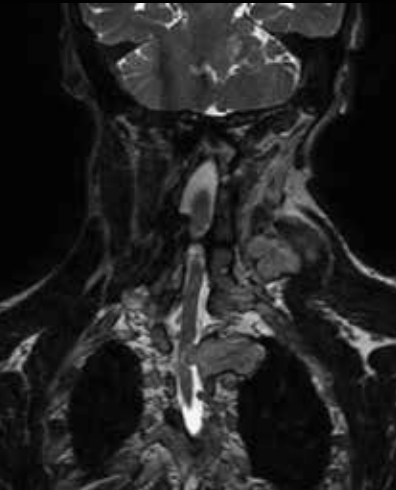
**DWI TSE XD**  
 3:00 min

**DWI TSE XD**  
**diffusion imaging with reduced geometric distortion<sup>1</sup>**  
 Kumamoto Chuo Hospital, Japan

# Uniform and complete fat-free Spine imaging



**3D SpineVIEW T2w TSE**  
 1.1 x 1.1 x 1.0 mm, 2:42 min  
 Courtesy: Kumamoto Chuo Hospital, Japan



**3D NerveVIEW**  
 1.2 x 1.2 x 2.0, 3:29 min



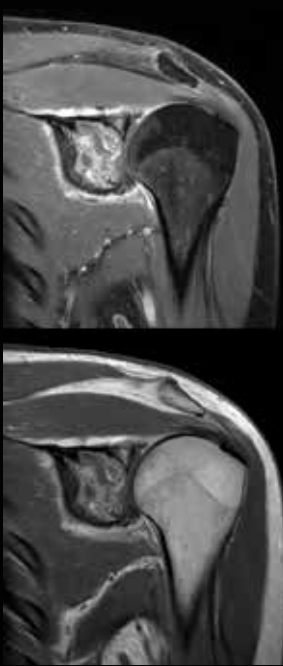
**T2w TSE mDIXON XD**  
**Water only + In Phase**  
 0.7 x 1.1 x 3.0 mm, 2:26 /station  
 Courtesy: Auckland Radiology Group, New Zealand



# High resolution MSK imaging



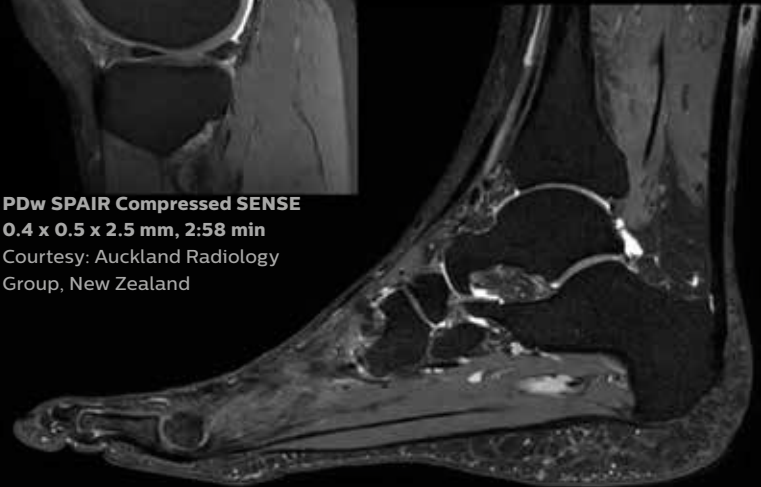
**T1w TSE mDIXON XD post-gado  
Water only + In Phase**  
**0.4 x 0.5 x 2.0 mm, 3:46 min**  
Courtesy: Academic Medical  
Center, Amsterdam, The  
Netherlands



**T1w TSE mDIXON XD post-gado  
Compressed SENSE**  
**Water only + In Phase**  
**0.4 x 0.4 x 3.0 mm, 4:50 min**  
Courtesy: Academic Medical  
Center, Amsterdam, The  
Netherlands

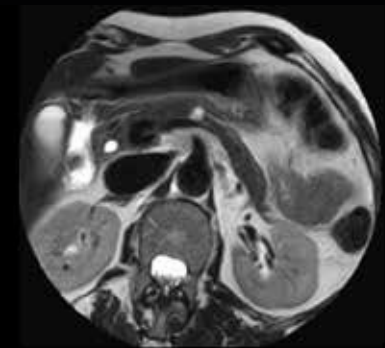


**PDw SPAIR Compressed SENSE**  
**0.4 x 0.5 x 2.5 mm, 2:58 min**  
Courtesy: Auckland Radiology  
Group, New Zealand



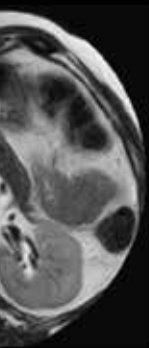
**3D VIEW PDw SPAIR**  
**0.7 x 0.7 x 0.7 mm, 5:39 min**  
Courtesy: Technical University Munich,  
Germany

# New possibilities for Body and Breast imaging

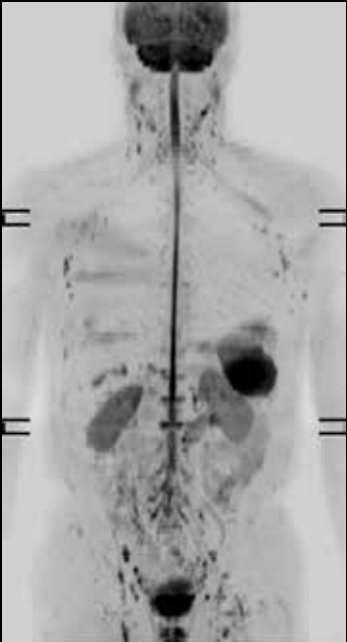


**T2w TSE  
MultiVane XD**  
**1.1 x 1.1 x 3.0 mm**  
**3:45 min**

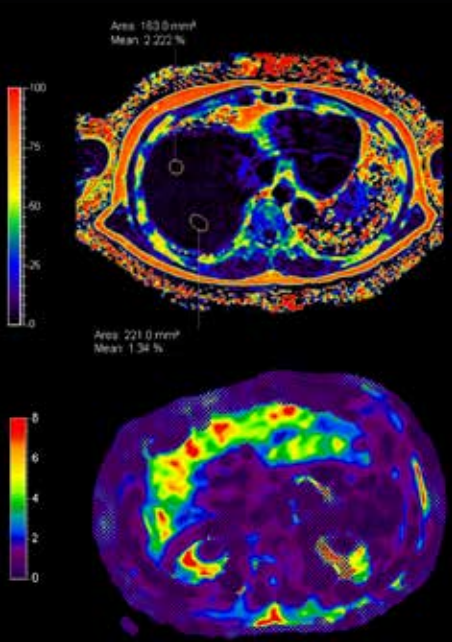
Courtesy: Centre Hospitalier de Université,  
Lyon-Sud, France



**T1w FFE  
4D  
FreeBreathing**  
**1.7 x 1.7 x 1.5 mm**  
**3 sec /dynamic**

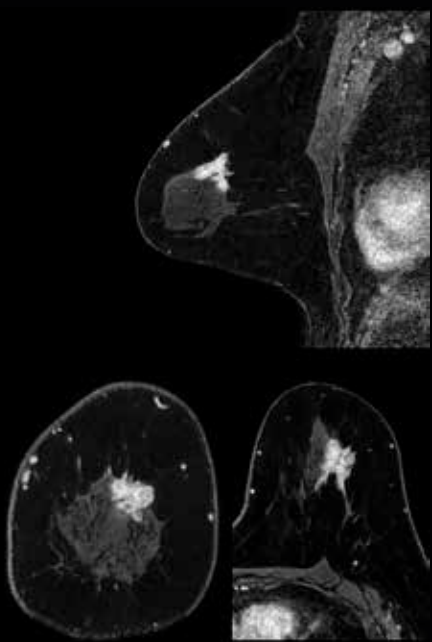


**DWIBS  
SmartShim**  
**3.5 x 3.5 x 6.0 mm**  
**2:39 min /station**



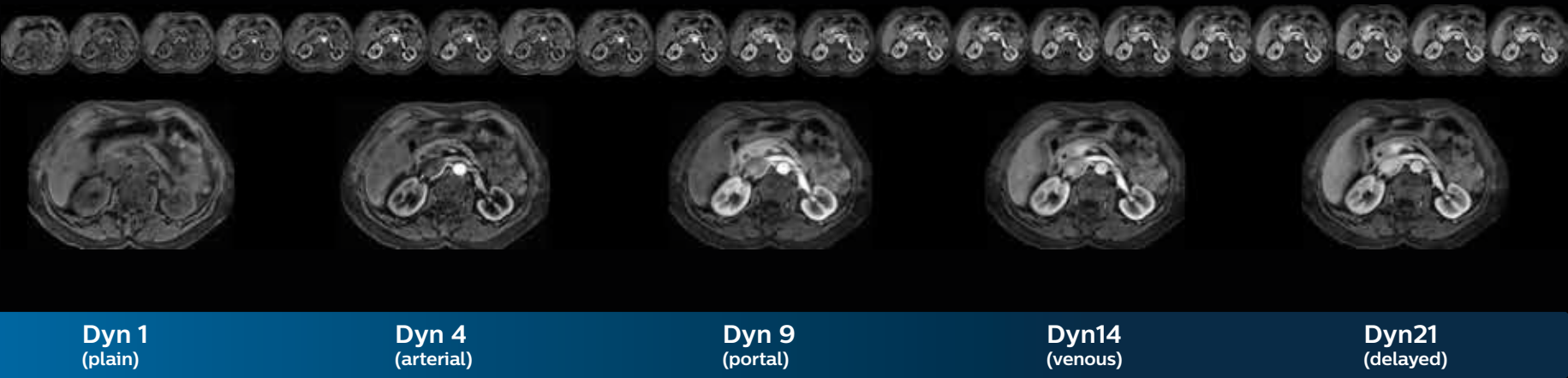
**mDIXON Quant  
Fat Fraction**  
**2.5 x 2.5 x 5.0 mm**  
**16 sec**  
Courtesy: Kumamoto  
Chuo Hospital, Japan

**MR Elastography  
Stiffness map**  
**5.2 x 5.2 x 10.0 mm**  
**13 sec (4 slices)**  
Courtesy: Centre  
Hospitalier de  
Université, Lyon-Sud,  
France



**T1w FFE Compressed SENSE  
mDIXON XD**  
**0.8 x 0.8 x 0.8 mm**  
**2:20 min**  
Courtesy: Kumamoto Chuo  
Hospital, Japan

# Diagnose liver lesions without breath holds



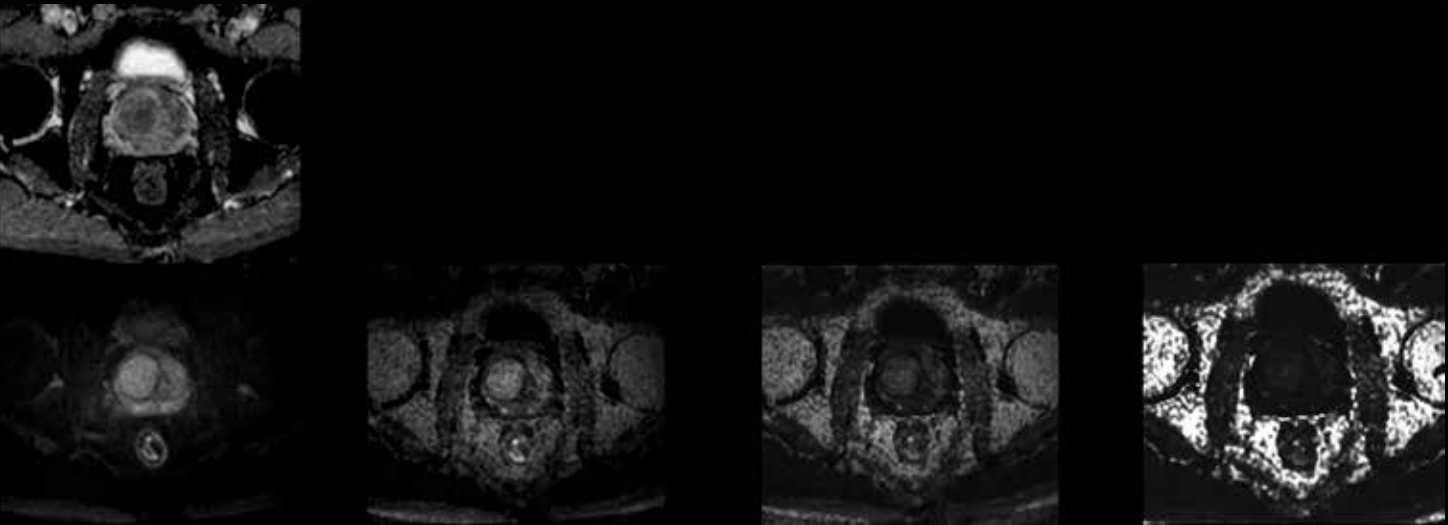
**4D FreeBreathing**  
1.7 x 1.7 x 1.5 mm

**Multi-phase contrast-enhanced MRI**  
Temporal resolution of 3 seconds per phase  
Real-time reconstruction = images available for viewing during the acquisition

**“ 4D free-breathing is versatile and easy to adapt to specific clinical needs for liver imaging”**

Dr Laurent Milot, CHU Lyon, France

# Generate synthetic high b-value images



**Acquired DWI, b1000 + ADC**  
1.8 x 1.8 x 4.0 mm, 2:08 min

**Computed DWI, b2000**

**Computed DWI, b3000**

**Computed DWI, b5000**

## Enhance the value of your MR investment

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 solutions for maintenance, fleet management, cybersecurity, education and financing.





500   
parameters are  
monitored on an MR

+90,000  
remote connections across  
25,000  
healthcare facilities in  
139  
countries<sup>3</sup>



25%  
connected Philips  
MR service cases<sup>2</sup> are  
resolved before they  
cause downtime, due  
to proactive monitoring

>50%   
of MR service cases  
are resolved remotely<sup>1</sup>



### Prevent issues before they occur

Scanner downtime can disrupt your schedule and delay patient care. We offer maintenance agreements that are suited to your needs, enabled by the latest service innovations and including an uptime guarantee. We prevent issues before they occur through proactive remote monitoring, remote diagnostics and remote and field service support. With e-Alerts and other remote data, we monitor more than 500 parameters of your MR system from a distance, detecting and resolving issues without impacting your department's operations. In fact, more than 50% of MR service cases are resolved remotely.<sup>1</sup> Our Philips-qualified service experts can also proactively resolve issues on-site, fix your system before it causes any disruption, and provide reliable and knowledgeable support.<sup>2</sup>

### Protecting your MR equipment from patient data breaches and cyber-attacks

Protecting patient health information requires constant vigilance. To keep health information and medical devices secure, we employ best practices in medical device security. Our multi-layered defense barriers include security policies, procedures, access controls, technical measures, training, and risk assessments. The Technology Maximizer Plus subscription program conveniently keeps your MR systems up-to-date through access to the latest cybersecurity patches and mandatory safety fixes via regular and ongoing software upgrades and hardware refreshes.

## Standardize your MR fleet at a fixed annual cost

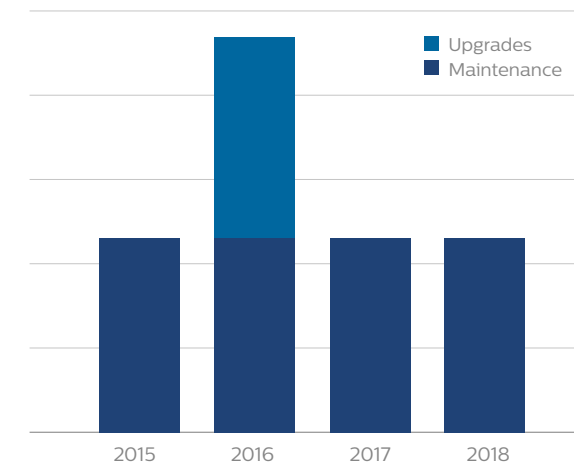
If you own more than one Philips scanner, standardizing under the same software release can enhance efficiency through one user interface for operators to learn and use the same ExamCards across multiple scanners. The Ingenia Elition X is delivered with the latest available software release, providing a perfect opportunity to upgrade your fleet to this release and enter into a Technology Maximizer Plus subscription program.<sup>1</sup> Under the program, your Ingenia Elition X and the rest of your fleet will receive software updates whenever available, giving you the benefits of software improvements and cyber-security advances while maintaining all your MR systems on the same level.

**“It was consistently a challenge to plan for annual upgrades and predict their costs. Thanks to Technology Maximizer, we can now continue to have the latest versions of software for all of our MRI systems.”**

Eliseo Vañó Galván, MD, Cardiovascular radiologist, Chairman of the CT & MR Department at Hospital Nuestra Señora del Rosario, Madrid, Spain

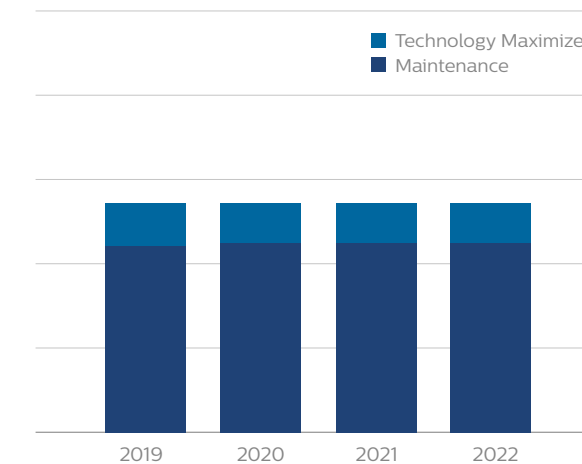
<sup>1</sup> Check for compatibility with your Philips representative.

Cost of maintenance and upgrades in **previous years**



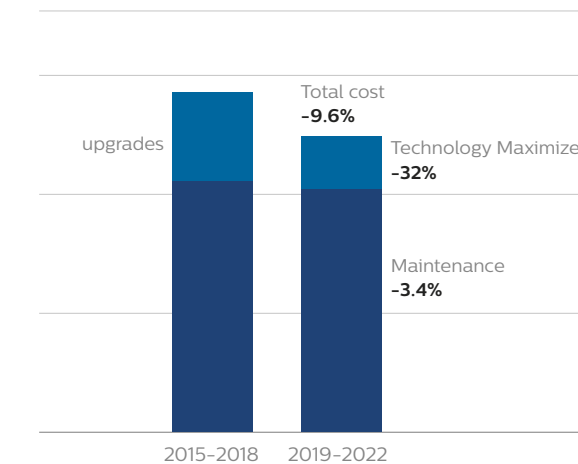
- Large variation in annual cost
- Upgrading once in 4 years

Cost of maintenance and upgrades with **Technology Maximizer program**



- ✓ Fixed annual cost
- ✓ Yearly updating

**Reduction in accumulated cost of maintenance and upgrades over 4 years**  
Before vs with Technology Maximizer



- ✓ Technology Maximizer saves cost and provides more frequent updates

## Achieve excellence through **ongoing education**

Delivering consistent healthcare day-in and day-out is a challenge, particularly when faced with staff shortages and the need to cross-train department personnel. Our Philips MR Healthcare Education can help unlock the full potential of your staff, technology, and organization through innovative and meaningful healthcare education, delivered on-site or as e-Learning. For example, the Philips MR Technologist Development Program at Burjeel Hospital for Advanced Surgery (BHAS), a leading orthopedic and joint care center in Dubai, UAE, resulted in an average of 30% improvement in image quality across all procedures.<sup>1</sup> Team knowledge increased 30–40% in the key areas of patient care<sup>1</sup>, imaging procedures, data acquisition and physics of image formation. The comprehensive, clinically-relevant courses, programs, and learning paths are designed to support clinical excellence, enhance operational efficiency and provide high-quality patient care.

## **Tailored financing solutions** in line with your cash flow needs, budgets, and business strategy

Providing access to best-in-class healthcare is a leading priority for facilities like yours around the globe. At the same time, financial security and protecting your assets over time are also high on the agenda. To manage your financial challenges, you need to know whether your healthcare investments are sustainable – and how to get the most from your equipment. Financing your Ingenia Elition X helps you exchange variability and unpredictability for visibility and certainty. This helps you avoid the burden and risk of upfront expenditures and benefit from transparent, predictable cost structures. As a result, you can manage and plan budgets more efficiently and free up capital that would otherwise be tied up in fixed assets.

<sup>1</sup> Results from case studies are not predictive of results in other cases. Results in other cases may vary







**How to reach us**

Please visit [www.philips.com/mri](http://www.philips.com/mri)  
[healthcare@philips.com](mailto:healthcare@philips.com)