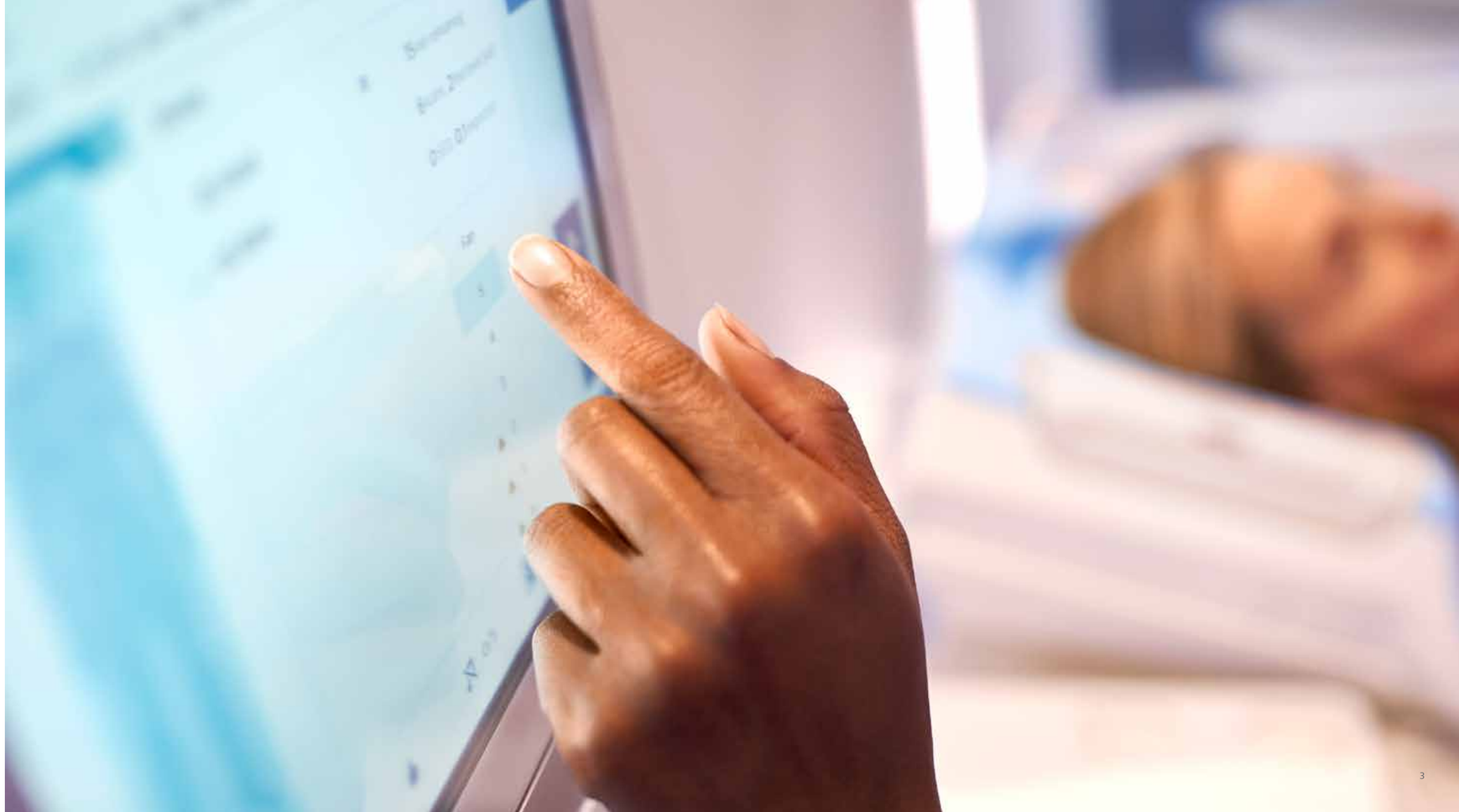

PHILIPS
MR Systems
Smart Workflow
Solutions
Patient-centered productivity

Patient-centered productivity

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

With Smart Workflow, 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.



Smart Workflow 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, Smart Workflow 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.

Smart Workflow decreases patient set-up to less than a minute*, 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.

* Based on in-house testing.

“The entire workflow is smooth: Patient positioning and setup; 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.”

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

Guided exam set-up

Coaching and visual guidance are provided at the front of the magnet façade

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.

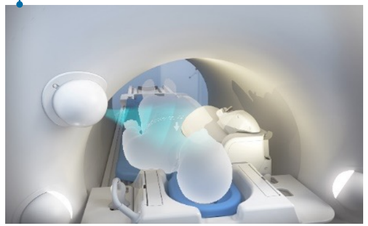
VitalScreen provides guidance at your staff’s fingertips. Two 12-inch interactive touchscreens on the scanner provide coaching and visual guidance on recommended patient position, study laterality, coil and accessory placement. Moreover, feedback is provided on important exam details, including physiology signals (both VCG and respiratory) and – if applicable- contrast usage and breath-hold guidance.

Auto patient centering

Region of interest is automatically placed in the iso-center of the magnet

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 isocenter 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.

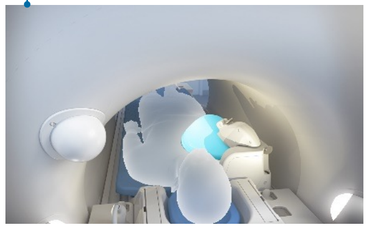


Touchless respiratory-triggering

Patient’s breathing is detected without any operator interaction

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 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[1] providing superior image quality, for a broad range of patient sizes.



Auto coil element selection

Optimal elements are selected automatically based on the anatomy planning

Simplify exams and facilitate higher throughput via reduced tasks in coil management. Simplify patient positioning and coil placement via automated recognition of coil and coil elements.

SmartSelect automatically detects and selects the right coil and coil elements to maximize the signal-to-noise ratio for the region of interest and area to be scanned.

In-room exam start

Exam start can be initiated with a single touch of at the patient’s side

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.

* According to the definition of AI from the EU High-Level Expert Group.
1. Requires an unobstructed line-of-sight..

Smart Workflow in **the control room**

Reduce operator workload, with standardized results and increased throughput

In the control room, Smart Workflow 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 Smart Workflow 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.”

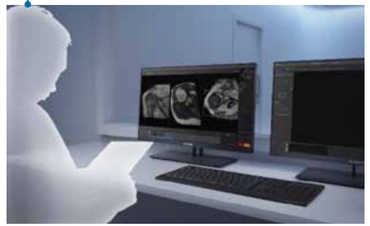
Carlos Avila, RT
Technologist at Miami Cardiac & Vascular Institute

Confidence for MR Conditional implants

Step-by-step guidance to enter the condition values as specified by the implant manufacturer

Confidently offer MR imaging to a growing and potentially underserved subset of the patient population: those with MR Conditional implants. Advanced software boosts productivity by reducing time-consuming manual calculations, while also potentially increasing referrals.

ScanWise Implant provides step-by-step guidance to enter the condition values as specified by the implant manufacturer. Your MR system then automatically applies these values for the entire examination helping you to simplify your scanning process and stay within the specified limits for patients with MR Conditional implants.



Auto planning and scanning

Fully automated geometry planning, coil element selection and execution of complete MR exams

Reduce imaging variability through automation, so you can schedule lessexperienced staff with confidence, knowing your results will be consistent and exam planning and scanning will be efficient.

SmartExam automates geometry planning and execution of complete MR exams. The time for the low-res survey scan has reduced from 60 seconds to just 10 seconds. Based on this survey the system automatically plans the geometry of the scans in the ExamCard. This is particularly valuable when conducting and comparing multiple studies of the same anatomy and/or patient. SmartExam also automates coil element selection based on optimal SNR.

Auto patient coaching

Patients are guided via announcements of scan duration, table movements and breath hold instructions

Be confident that your patients know what to do and what to expect through automated, consistent instructions, relieving some of the anxiety of an MR exam.

AutoVoice support exam compliance by guiding your patients through the MR examination. Including automatically announcing scan duration and table movements in your choice of 30 languages and dialects. In addition, providing breath hold instructions, with either manual timing or timing synchronized to fit the patient’s respiratory cycle.

Auto post-processing

Fully integrated post processing with guidance and automation to reduce time to results

Support increased throughput by removing the burden of time-consuming repetitive post-processing steps. Free up time for your staff to focus on other tasks, such as reviewing images or preparing for the next patient.

SmartExam fully automates post-processing of MR scans, such as multiplanar reformatting (MPR, for 3D scans), minimum intensity projections (MIP, for vascular scans) and apparent diffusion coefficient map creation (ADC, for diffusion scans) and more.

Plan your day in advance

Dashboard to plan examinations before patient arrival, allowing you to stay on schedule

Plan exams before the scheduled time, decreasing time spent gathering data when the patient arrives and receive an alert when a patient has arrived. Control over your schedule may decrease patient waiting times, enhancing the patient experience.

MR Day Manager provides vital patient and schedule information, directly from the HIS/RIS, at the click of a mouse. This allows you to assign ExamCards before the patient arrives, anticipate roadblocks, and prepare for special situations by entering MR Conditional implant information, pregnancy status, and ambulatory information.

* According to the definition of AI from the EU High-Level Expert Group.

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How to reach us
Please visit www.philips.com
healthcare@philips.com