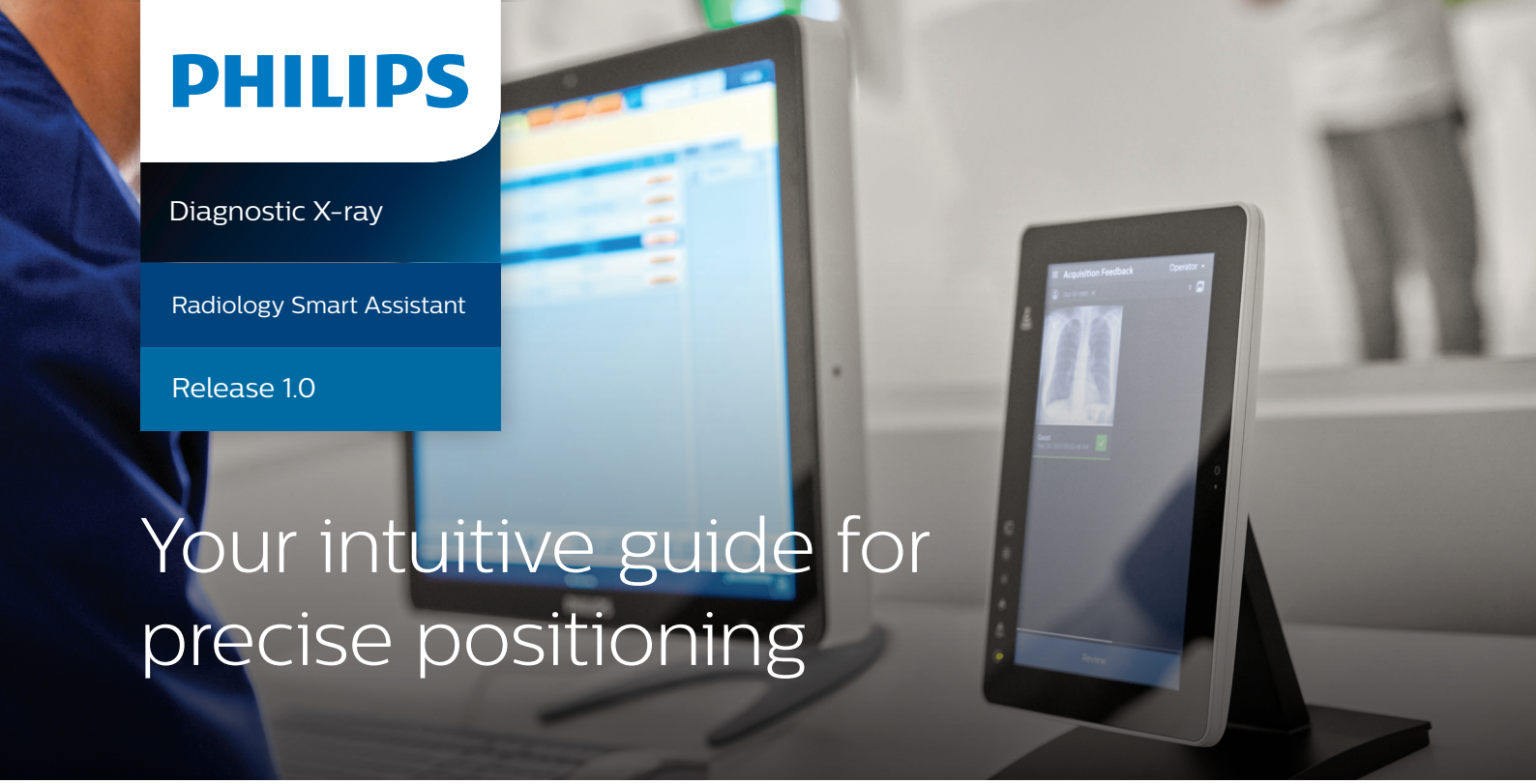
PHILIPS

Diagnostic X-ray

Radiology Smart Assistant

Release 1.0



Your intuitive guide for precise positioning

The acquisition of X-ray exams represents one of the most defining moments in a radiology department's workflow. The speed and accuracy with which high-volume exams such as chest X-rays are acquired can have a major impact on the department's efficiency and, ultimately, on patient care.

What if you could support X-ray technologists with timely and useful feedback on every upright chest X-ray exam? Artificial Intelligence[1] (AI) is the key. Philips Radiology Smart Assistant[2,3] is an AI-based solution to help you improve acquisition accuracy for these exams through continual quality analysis and feedback given at the point of image acquisition. Supporting X-ray technologists to do their best has never been easier.

Expert guidance, every time

Provides immediate feedback for every PA chest radiograph about positioning accuracy at the point of acquisition.

Offers seamless workflow integration without change or interruption to the existing workflow, and intuitive use that is based on visual feedback.

Helps well-educated X-ray technologists to improve their performance through consistent feedback and positive reinforcement.

Improves efficiency for fast procedure time.

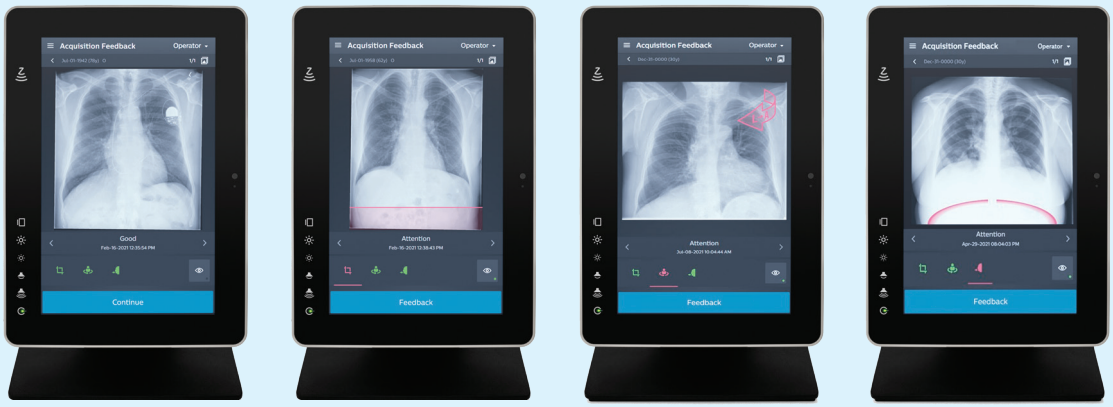
Puts AI to work for X-ray technologists

Never before have X-ray technologists had access to the instant AI guidance that Radiology Smart Assistant provides. It gives valuable feedback in the moment, coaching each technologist about key exam parameters at the point of acquisition, helping to improve precision over time. It fits into standard workflow, so it's easy to use from the start.

Easy to use for simple and fast workflow

Instant feedback about three key factors for every PA chest X-ray exam can help increase confidence about positioning. Now there's no reason to wonder. An intuitive touch user interface and visual feedback show results achieved for each exam, and how collimation, rotation or inhalation have deviated from clinical thresholds.

Provides instant guidance about three key factors for every PA chest X-ray exam



1

Precise acquisition

Excellent result, with no adjustment required

2

Collimation

Indicates that collimation is less than optimal.

3

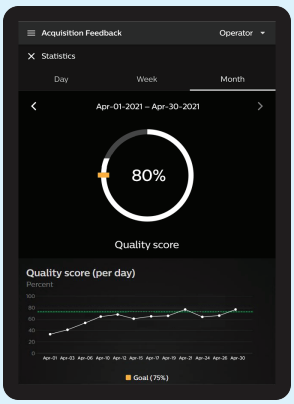
Rotation

Shows that adjustment in rotation was needed.

Inhalation

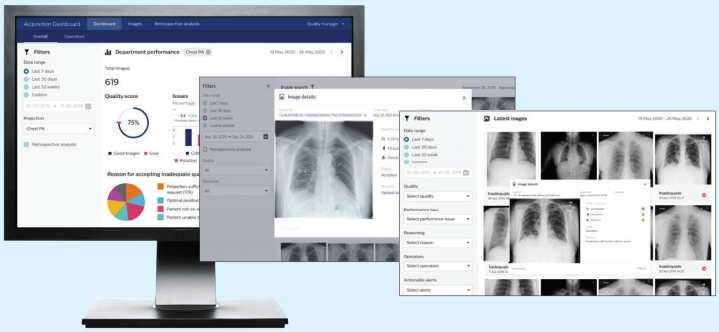
Calls out less-than-desirable breath-hold.

Individual statistics



Individual acquisition data allows X-ray technologists to track their own statistics using the smart device so that they can very quickly see progress over time.

Acquisition dashboard



A department-level view with individual report generation provides administrators with valuable metrics to easily identify opportunities for improvement.

It's like a technologist's personal assistant

Radiology Smart Assistant offers the information that technologists have always wanted: Is every patient precisely positioned for a successful exam? Now technologists can be certain[4], and they can track their own progress over time to see how well they're doing. The intuitive user interface makes it easy.

Greater precision in X-ray acquisition helps everyone

When X-ray acquisition is more precise, everyone benefits. Radiology Smart Assistant supports intelligent imaging with immediate impact.

Technologist

With the positive reinforcement of this intuitive guide, there's no more wondering if the last exam was correctly positioned.[4] This immediate feedback helps promote continuous improvement of positioning accuracy for a positive experience for technologist and patient.

Radiologist

More precise acquisition helps for improved image reading leading to more uninterrupted interpretation and enhanced confidence in X-ray for fast diagnosis.

Administrator

Ongoing quality analysis promotes staff efficiency at manageable costs.

Patient

Fast procedure time with a confident technologist helps to increase patient experience and avoid imaging retakes.

A clinical study conducted over 11 months showed:

That **30% more** of Chest PA examinations could be acquired with accurate patient positioning in terms of collimation and inhalation.[5]

That the unnecessarily exposed area of Chest PA examinations could be **reduced up to 34%.**[5]

28% more Chest PA examinations with accurate beam collimation.[5]

"The Philips Radiology Smart Assistant helps us to improve examination accuracy for PA chest radiograms and hereby enhances qualified image reading. This concept is an exciting path to go and holds, definitely, potential to become a future standard in imaging workflow."

– Prof. Dr. Axel Goßmann
Chair of the Department of Radiology, Kliniken der Stadt Koeln, University of Witten/Herdecke, Germany

PHILIPS

[1] We embrace the following formal definition of AI (source: HLEG definition AI)
https://www.philips.com/a-w/about/artificial-intelligence/philips-ai-principles

[2] Philips Radiology Smart Assistant is only available for sale in selected markets, please check with your local sales representative.

[3] Philips Radiology Smart Assistant will be available as an option for new Philips premium X-ray systems including DigitalDiagnost C90, CombiDiagnost R90 and ProxiDiagnost N90, and also as a retrofit for the existing Philips installed base.

[4] For sensitivity and specificity see: Young S, et al. Measuring patient positioning quality in clinical chest radiographs. In: European Congress of Radiology. 2020

[5] Poggenborg J, et al. Impact of AI-based Real Time Image Quality Feedback for Chest Radiographs in the Clinical Routine. In: medRxiv 2021

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

Printed in The Netherlands.
4522 991 74091 * JAN 2022