

**YSIO X.pree  
with myExam Companion**

# **A leap forward in intelligent X-ray imaging**

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reddot winner 2020



**SIEMENS**  
**Healthineers**



# Technology fit for tomorrow

The world of radiology is changing – and we have a clear vision of its future. We set out to shape this future with what we call “highly assisted imaging”: X-ray imaging in which intelligent technology leverages the system’s and user’s full potential, regardless of who performs the examination, regardless of time, and regardless of system or location.

At the core of our vision are:

- **User-assisting system intelligence** – built-in expertise for high quality of care and maximum patient focus
- **Valuable diagnostic information** that goes beyond the images themselves – to improve diagnostic accuracy and efficiency
- **Multi-system benefits** – efficiency and cost-reduction advantages based on more than a single system

At Siemens Healthineers, we strive to create the most comprehensive ecosystem of products and services on the market – providing valuable and easy-to-capture synergies across all modalities in a radiology department.

**Join us on the journey to a new era of X-ray imaging.**



Auto Thorax Collimation improves the user and patient experience

# A leap forward in intelligent X-ray imaging

With YSIO X.pree, we are presenting the first of its kind and a leap forward in radiography: an intelligent X-ray system – equipped with our new myExam Companion.

Experience intuitive, consistent, and future-ready radiography: YSIO X.pree introduces next-generation intelligence and will redefine the way you manage your workload.

YSIO X.pree offers a streamlined and easy-to-use interface, a 3D camera for patient positioning and advanced collimation, and brand-new, smart imaging concept. Let YSIO X.pree help you transform care delivery – with optimized clinical operations and an improved user and patient experience. Shape the future right now and be ready for the developments of tomorrow.

## Discover YSIO X.pree

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# YSIO X.pree at a glance



## myExam Companion

myExam Companion launches the era of intelligent imaging. Using the new possibilities of digitalization, it turns data into built-in expertise. It guides users through any procedure, so they can interact easily and naturally with both patient and technology. This helps to generate consistent, comprehensive results every time.

## AI-Rad Companion

AI-Rad Companion is a family of vendor-neutral, multi-organ augmented reading solutions that automatically prepare clinical images to be interpreted by radiologists and/or clinicians.

## Fleet benefits

A systematic concept which helps you to reduce complexity. By standardizing you can achieve consistency for operational and clinical excellence. Supervision of your department's performance generates transparency for high availability and utilization. Securing your systems means having confidence in data and systems protection.



## **Intuitive for easy operation**

Patient preparation has never been so straightforward. YSIO X.pree's visual guidance, system handling, intelligence, and ergonomic design combine to deliver your ideal workflow. A key element here is myExam 3D Camera – a camera that revolutionizes collimation with automatic and virtual approaches.

## **Consistent for excellent outcomes**

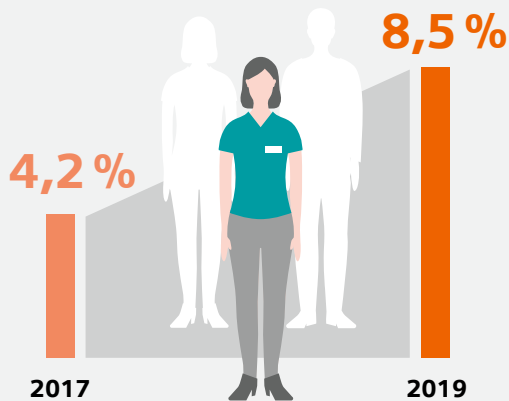
YSIO X.pree enables consistent images at low dose – from every operator and every YSIO X.pree device in your institution, and for all clinical protocols and each follow-up exam. Our new, smart imaging concept myExam IQ removes technical deviations that might cause distractions for radiologists.

## **Dynamic for evolving needs**

With YSIO X.pree, we've designed a system that gives you maximum flexibility from the very first day until well into the future. This is a system that will grow with you. Outstanding service and YSIO X.pree's upgradability are just two of the features that make this a smart investment for your radiology department.

# Intuitive – for easy operation

Are you also experiencing  
a shortage of technologists?



The U.S.<sup>1</sup> and Germany<sup>2</sup> are just two of the countries where vacancy rates for technologists are rising.

This means heavier workloads for employees.

YSIO X.pree introduces user-assisting system intelligence to X-ray examinations. Its supportive, intuitive, and ergonomic design delivers an excellent user experience and optimizes clinical operations for high levels of patient comfort.

## Enable easy and undisrupted operation

The user experience starts with exam preparation, and YSIO X.pree makes this simpler and smoother than ever. Our new user interface emphasizes visual logic and provides guidance for everyone on your team, regardless of their level of experience. The user interface is extremely easy to navigate, so technologists can quickly and easily find their way around – whether they are using the touch screen on the tube, or the touchscreen workstation in the control room.



Quickly perform L/R labeling or annotations

<sup>1</sup> ASRT: Radiographer vacancy rates on the rise. Auntminnie.com. 2019.

<sup>2</sup> German hospitals with staff shortages rose from 23% in 2011 to 46% in 2019. In: Fachkräftemangel und Fachkräftebedarf in MTA-Berufen. hcm-magazin.de. 2019.





Use an easy-to-understand interface and a concept that emphasizes visual logic

*YSIO X.pree is so intuitive that 100% of technologists were able to perform a standard chest X-ray exam without any prior explanation.<sup>3</sup>*

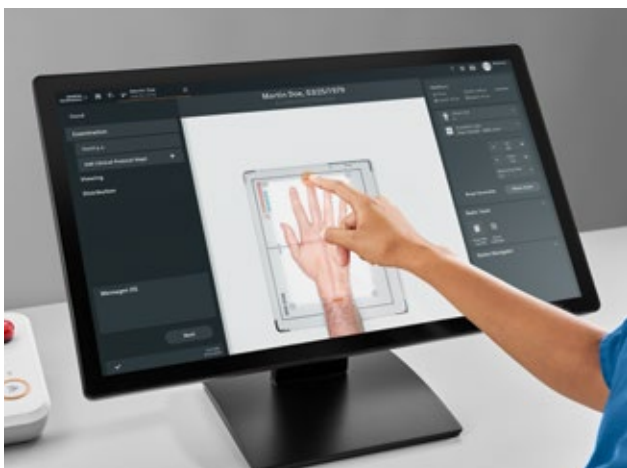
## Define your ideal workflow

The simplicity of the new user interface is driven by our intelligent workflow concept. This allows your team to define the ideal workflow for your institutional needs, and the system follows these preferences for each clinical protocol. It leads users through the imaging process, only displaying relevant information and enabling fast adjustments at the touchscreen. YSIO X.pree can also be controlled remotely, moving effortlessly into any predefined position at the touch of a button.

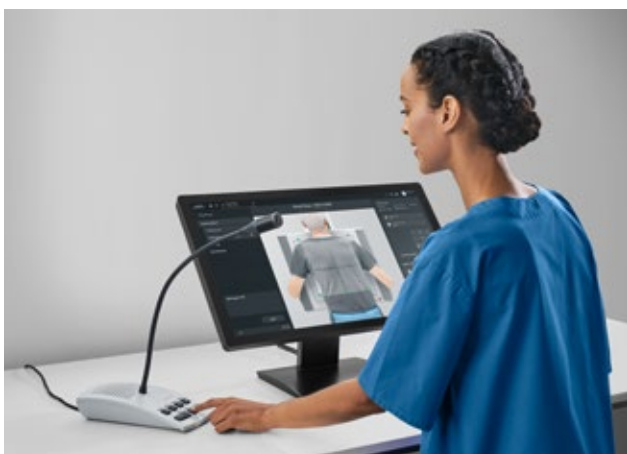
## Choose when to postprocess

YSIO X.pree also offers an exceptional new feature that gives your team the power to choose a preferred working style: With Quickflow, users can quickly perform post-processing immediately after acquiring each image. This can save time and avoid additional workflow steps. By selecting Standard Workflow, they can perform post-processing after acquiring all the images. Favorite Tools further simplify postprocessing with instant access to the most relevant tools, as selected by your team.

<sup>3</sup> Based on a study with 16 technologists, data on file.



Collimate precisely and with ease directly at your workstation



React to patient movements immediately before X-ray exposure

*myExam 3D Camera functionalities help to speed up the clinical workflow.*

## Provide optimal support during examinations

YSIO X.pree helps your technologists easily engage with both the system and their patients. With myExam 3D Camera, they have a camera that allows them to keep the patient in focus at all times and provide reassurance. It also helps users identify movements and supports high-quality outcomes.

By delivering a live patient image to the workstation, myExam 3D Camera enables myExam Collimate, which comprises three revolutionary new features:

### Virtual Collimation<sup>1</sup>

Using the touchscreen workstation, technologists can quickly collimate or perform collimation adjustments immediately before taking an X-ray.

### Auto Thorax Collimation<sup>1</sup>

An AI algorithm automatically detects the thorax and collimates accordingly, leaving your team to fully focus on patients.

### Smart Virtual Ortho<sup>1</sup>

Thanks to Virtual Collimation based on the live patient image, users benefit from visual guidance that reduces guesswork in orthopedic exams. By cutting the time between collimation and exposure, this solution may also reduce retakes and walking time.



Smoothly prepare orthopedic exams





Enable comfortable patient positioning

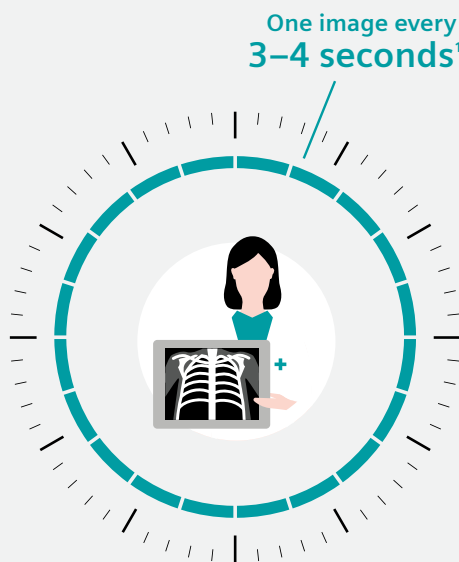
*YSIO X.pree places less physical burden on your staff.*

## Ease the physical burden

The well-being of your team is key to a successful radiology department. That's why YSIO X.pree features an ergonomic design. The tiltable multitouch monitor allows users to choose the most ergonomic position for their needs, while the remote control and a wireless barcode reader can help reduce walking distances. The flat table top and low table height enable comfortable patient positioning, and the fully automated system moves swiftly into position at the touch of a button.

# Consistent – for excellent outcomes

Are variations in image quality also an annoyance for your radiologists?



In some cases, radiologists have to interpret one image every three to four seconds.<sup>1</sup>

Inconsistent image quality can make it harder to manage a heavy workload.

YSIO X.pree helps you reduce unwarranted variations in images and offers an adaptable way to get there – one that is personalized, standardized, and flexible. YSIO X.pree introduces brand-new, smart imaging concept that delivers an excellent level of consistency.

## Reduce user-dependent variations

One way that YSIO X.pree improves consistency across different users is with the Positioning Guide. This can be tailored to your team's needs by editing individual patient positioning explanations, and it also increases standardization.

Providing immediate access to the most relevant tools for your team, Favorite Tools enable smoother, faster, more standardized postprocessing in all clinical exams.

In orthopedic imaging, Auto-Stitching acquires up to four images and turns them into a single image. It matches all anatomical structures without additional interaction.



Auto-Stitching combines multiple shots into one image

<sup>1</sup> The radiologist's gerbil wheel: interpreting images every 3-4 seconds eight hours a day at Mayo Clinic. *Applied Radiology*. 2017.



Correct protocol is automatically selected based on the patient's age

## Achieve consistent images with noticeably less dose

Sound diagnoses demand consistent images, but it is also important to minimize dose for patients. Dose Adaptions allow your team to tailor dose settings to its standards and apply the patient-size brackets defined in the Patient Size Adapter (S, M, L, XL).

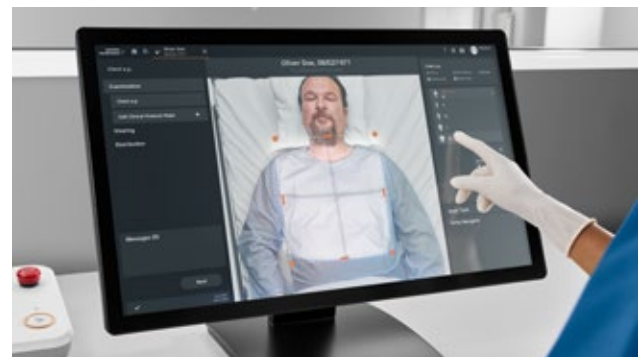
With Smart Virtual Ortho<sup>2</sup>, saving dose in orthopedic exams is easy: The live camera image enables accurate collimation and helps users to easily judge if they can perform an exam with fewer images. Dose adjustments per clinical image can further reduce dose.

myExam IQ is our brand-new imaging concept that deploys smart technologies to produce superb, consistent images. Intelligent noise elimination removes image noise by accessing up-to-date image content and characteristic detector data. This enables noticeable dose reductions for all clinical tasks, without compromising on image quality.

*Improved dose settings allow you to noticeably reduce dose without compromising on image quality, e.g. abdomen upright PA by up to 35%.<sup>3</sup>*



Dose Adaptions allow your team to care for all patients



Smart technologies help produce superb images at low dose

<sup>2</sup> Option

<sup>3</sup> Compared to Ysio Max VF10. Dose as determined by built-in DAP chamber. Based on a study with anthropomorphic knee, hand, foot, ankle, l-spine, c-spine, t-spine, abdomen, hip, pelvis, and chest phantoms – examined with the default acquisition parameters of Ysio Max VF10 and YSIO X.pree. See operator manual of YSIO X.pree for potential dose reductions per body part.



Adapt the system to your clinical workflow and your standards

## Be ready with standardized results

Thanks to intelligent dynamic range optimization, YSIO X.pree provides Ready-to-go Image Impressions that minimize post-processing steps. Easily adaptable Image Flavors allow your team to set the best look and feel for different diagnostic needs, while intelligent noise elimination supports gridless acquisition. AI-based Auto-Cropping produces well-cropped images efficiently in the same manner every time, regardless of the operator or type of acquisition – enabled by neural networks detecting collimator edges.

Standardized clinical results with consistent image impressions improve reading workflows by minimizing technical deviations that may cause diagnostic errors. This allows radiologists to focus fully on the diagnostic process and manage heavy reading workloads.

## Customize to your standards

Your team can customize YSIO X.pree to fit its standards and meet individual patient needs.

With myExam Cockpit, your team can adjust patient registration fields, switch features on and off, and – most importantly – define preferred workflows and the most-relevant tools. Tracking and motorization also give users full flexibility over how they work with the system.

For patients, your team can define dedicated clinical protocols according to chosen patient age brackets. The Patient Size Adapter can further fine-tune the protocol according to the individual patient's size. Motorization allows users to move the system into the ideal position for the patient's comfort and well-being.



Automatic tube tracking for vertical, horizontal, and tilting positions

# Ready-to-go Image Impressions

Adaptable Image Flavors give users control over image impressions



Study ID: 5aaa153

Knee DV Free exam / Gridless acquisition  
Image Flavor 1.3



Study ID: 5aaa189

Thorax PA Acquired with Auto Thorax Collimation  
Image Flavor 2.1



Study ID: 5aaa184

Hand PAFree exam / Gridless acquisition  
Image Flavor 2.2

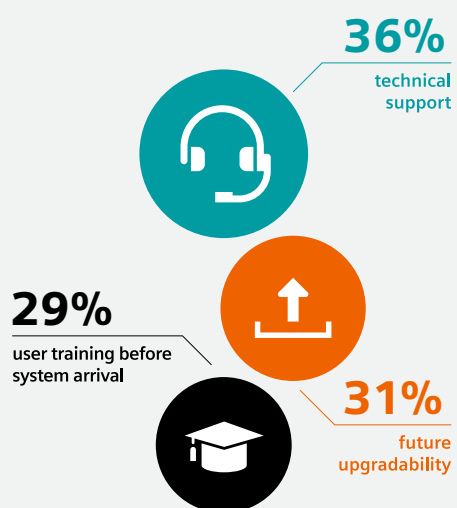


Study ID: 5aaa188

Lumbar spine AP  
Image Flavor 2.3



What is important to you in a new radiography system?



Service is a key topic when purchasing a new X-ray device.

It appeared in three of the top ten values that our customers consider when buying a new system.<sup>1</sup>

## Dynamic – for evolving needs

YSIO X.pree intelligently contributes to your workflows and evolves with your needs. Adapt it to your infrastructure and clinical requirements, and choose unique service offerings and interactive training programs. In the future, it will help you stay up to date and benefit from technological innovations.

### Enjoy outstanding service

We offer optimal service coverage with the perfect plan for your needs. Our local and remote presence has multiple benefits – such as maximizing equipment performance, increasing staff expertise, and boosting efficiency – so you can elevate your level of patient care.

The efficient training concept combines online and on-site elements delivered by YSIO X.pree specialists. It is a smarter and faster way to maintain expertise in intelligent X-ray imaging.

### Stay up to date and grow with an upgradable system

YSIO X.pree allows you to buy additional detectors if you need them, or add clinical capabilities such as Smart Virtual Ortho<sup>2</sup>.

You will also have access to the latest myExam Companion functionalities<sup>3</sup> as they become available. Software updates will keep your system performing well, long after installation.

<sup>1</sup> Study focusing on the identification of pains within radiography departments, SWELL GmbH, 2018.

<sup>2</sup> Option

<sup>3</sup> Please note that possible hardware limitations may mean that some functionalities cannot be upgraded.



## Tailor YSIO X.pree to your needs

We have designed YSIO X.pree so that it offers a flexible room design that fits your needs. The system requires a minimum ceiling height of just 2.5 meters, and provides maximum flexibility for storing settings for multiple table, Bucky wall stand, and free exams. The table can accommodate patients weighing up to 450 kg.

YSIO X.pree also offers flexible configurability to suit your clinical requirements, throughput, and patient needs. The modular platform allows you to choose or modify key features such as the level of automation, table, generator, and detectors.



Covers up to 8.5 m in trauma bays with high-speed automation

# Technical specifications



## myExam IQ

Your preferred image impression from day one, with easily adaptable Image Flavors.



## User-friendly interface

Intuitive workflow concept for easy and uninterrupted operation.



## Barcode reader licence<sup>1</sup>

Register patients in the examination room and start the exam immediately.



## Max Detectors<sup>1</sup>

- MAX wi-D detector: 35 cm x 43 cm  
Max. weight capacity: 300 kg
- MAX mini detector: 24 cm x 30 cm
- MAX static detector: 43 cm x 43 cm

## High-speed automation<sup>1</sup>

- Allow the system to move into position at the touch of a button
- Use freely programmable positions per clinical protocol
- Define a convenient and smooth workflow

## myExam 3D Camera

Enables myExam Collimate for:

- Auto Thorax Collimation<sup>1</sup>
- Virtual Collimation<sup>1</sup>
- Smart Virtual Ortho<sup>1</sup>

## Bucky wall stand<sup>1</sup>

- Automatic tube tracking for smooth exam preparation
- Vertical travel range: up to 145 cm
- Low central beam height: 27 cm
- Tilting: +90° / -20°
- Optional with MAX static or MAX wi-D





## Table<sup>1</sup>

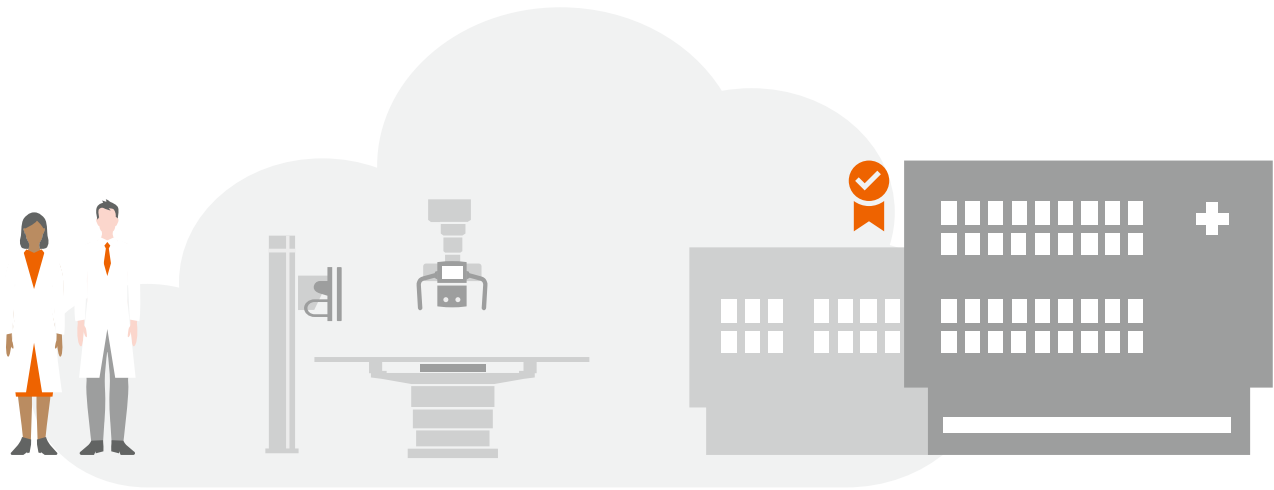
- Automatic tube tracking for smooth exam preparation
- Flexible and comfortable patient positioning according to your clinical requirements
- Adjustable height: from 52 to 96 cm
- High weight capacity: 450 kg
- Flat table top or standard table top
- Optional with MAX static or MAX wi-D

## Ceiling-mounted tube

- 10.4 inch touch user interface
- Easily reachable touchscreen

# Benefit from innovative services

Increasing value by partnering throughout the entire lifetime of your equipment



Continuously adding value and caring for your equipment, your workforce, and your entire institution.

## Equipment Maintenance & Monitoring

Reliably servicing your YSIO X.pree allows you to identify deviations from current norms to maximize equipment availability.

## Education Management

Personalized education and training improves your staff's expertise as well as your equipment efficiency.

## Fleet Management

A transparent overview of your fleet allows you to manage the performance and maintenance of your Siemens Healthineers equipment, 24/7.

## Performance Management

An intelligible overview of your radiography performance data helps you make prompt and well-informed decisions.

## Asset Management & Planning

Access to innovative medical technology and equipment throughout the entire contract life-time allows you to maximize focus on patient care.

## Accessory Solutions

Products from our partner companies complement your use of our equipment in your daily workflow.

## Business Modelling & Financing

Customized business and financial models address your budgetary and enterprise needs enabling you to remain more competitive.

## Departmental Layout Optimization

3D-Visualization and digital twin analysis create more efficient workflows and a more enjoyable working environment.



# Fleet Level Benefits

Unlock your potential – and increase the efficiency across your imaging fleet

As healthcare provider you are forced to do more with less, you have to run your radiology department more efficiently. A high level of complexity makes it challenging for you to reach the desired efficiency. Siemens Healthineers offers specific solutions across the entire X-ray portfolio

that let you standardize, analyze, and secure your fleet. Experience consistency, transparency, and confidence as valuable Fleet Level Benefits and improve outcomes, increase efficiency – and achieve greater staff and patient satisfaction.



## **Standardize** for consistency

- Systems with highly intuitive user interfaces and common workflows
- Staff with consistent knowledge level
- Unified image quality and same image impression



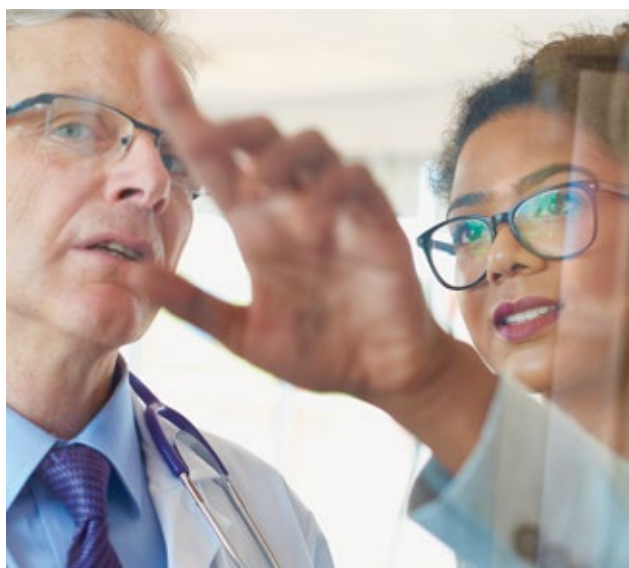
## **Analyze** for transparency

- Consolidated data in one place
- Analyzed and evaluated data turned into valuable information



## **Secure** for confidence

- Protect large IT network and imaging fleet with one cybersecurity philosophy
- Same maintenance cycles and update strategies for the whole fleet



## **Why Siemens Healthineers**

At Siemens Healthineers, our purpose is to enable healthcare providers to increase value by empowering them on their journey towards expanding precision medicine, transforming care delivery, and improving patient experience, all enabled by digitalizing healthcare. An estimated five million patients worldwide everyday benefit from our innovative technologies and services in the areas of diagnostic and therapeutic imaging, laboratory diagnostics and molecular medicine, as well as digital health and enterprise services. We're a leading medical technology company with over 120 years of experience and 18,500 patents globally. With about 50,000 dedicated colleagues in over 70 countries, we'll continue to innovate and shape the future of healthcare.

## Disclaimer

YSIO X.pree is not commercially available in all countries. Its future availability cannot be guaranteed. Please contact your local Siemens Healthineers organization for further details.

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The information in this document contains general descriptions of the technical options available and may not always apply in individual cases.

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In the interest of complying with legal requirements concerning the environmental compatibility of our products (protection of natural resources and waste conservation), it may contain recycled components that adhere to the same quality assurance measures used for factory-new components.

International version.

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### Siemens Healthineers Headquarters

Siemens Healthcare GmbH

Henkestr. 127

91052 Erlangen, Germany

Phone: +49 9131 84-0

[siemens-healthineers.com/ysio-xpree](https://www.siemens-healthineers.com/ysio-xpree)