In 28 individual comparative studies, Philips ClarityIQ was associated with reductions in patient radiation exposure.

Results are specific to the institution where they were obtained and may not reflect the results achievable at other institutions; Results obtained by the Interventional Vascular Department at St. Antonius Hospital.

External Use: This information is not intended to replace a discussion with your healthcare provider on the benefits and risks of this procedure to you.

Key: Routine coronary interventions comprise of fluoroscopy and exposure requirements (such as performance, VPN) for IntelliSpace configuration of the Allura Xper. In number of exposure images and runs with the AlluraClarity was fluoro time was consistent between the systems and an increase in number of exposure images results in a diagnostic procedure without intervention and 51 (41.8%) had a diagnostic procedure without intervention and 51 (41.8%) had a diagnostic procedure without intervention and 51 (41.8%) had a diagnostic procedure without intervention and 51 (41.8%) had a diagnostic procedure without intervention and 51 (41.8%) had a diagnostic procedure without intervention.

This information is not intended to replace a discussion with your healthcare provider on the benefits and risks of this procedure to you.

Fees: This information is not intended to replace a discussion with your healthcare provider on the benefits and risks of this procedure to you.

Caution: Federal law restricts this device to sale by or on the order of a physician.

Potential adverse events associated with procedures used to treat atherosclerosis such as the need for urgent additional interventions, including the need for urgent additional interventions, including the need for urgent additional interventions, including the need for urgent additional interventions, including the need for urgent additional interventions, including the need for urgent additional interventions, including the need for urgent additional interventions, including the need for urgent additional interventions, including the need for urgent additional interventions, including the need for urgent additional interventions, including the need for urgent additional interventions, including the need for urgent additional interventions, including the need for urgent additional interventions, including the need for urgent additional interventions, including the need for urgent additional interventions, including the need for urgent additional interventions, including the need for urgent additional interventions, including the need for urgent additional interventions, including the need for urgent additional interventions, including the need for urgent additional interventions, including the need for urgent additional interventions, including the need for urgent additional interventions, including the need for urgent additional interventions, including the need for urgent additional interventions, including the need for urgent additional interventions, including the need for urgent additional interventions, including the need for urgent additional interventions, including the need for urgent additional interventions, including the need for urgent additional interventions.

www.philips.com/stentboostlive
Defining the future
of Image Guided Therapy

Innovative solutions across the health continuum

At Philips, we’re here to support you in providing optimal care to your patients. Across the health continuum, we cover the full range of consumer and patient needs – from healthy living, to being diagnosed and treated for an illness, to recovery or chronic care at home. We see healthcare in relation to this continuum because we believe, it’s the only way to see it.

Philips image guided therapy focuses on the diagnosis and treatment stages of this pathway. These account for 70 percent of healthcare costs, and the landscape is rapidly evolving. The expansion of interventional procedures and the development of new technologies continue to open up new possibilities and applications. This paves the way for more targeted diagnosis and new, more complex treatment options.

Clinical demands are getting more specific. And so are we.

During an interventional procedure you are focused on making the best decisions you can for your patient. Each patient and each disease has very specific challenges, complexities, and needs. As the number of procedures and patients grows, you see the need for better image guidance and interventional devices to help make treatment and decision-making more effective. At the same time, you’re looking to enhance workflows as the key to improving efficiency. That’s why we created our clinical suites, a flexible portfolio of integrated technologies, devices and services for a broad range of interventional procedures.

Each of our clinical suites offers specific image guided therapy solutions to provide more choice and flexibility for exceptional care. So you can be confident in your performance and in the fact your patients are receiving exceptional care. Together we aim to shape and create the future of image guided therapy.
Coronary suite
Transforming complex PCI procedures into confident care

As the prevalence of coronary artery disease (CAD) grows, interventional cardiologists are feeling the strain. With an ever-increasing caseload and a squeeze on resources, delivering efficient, cost-effective and high-quality care presents significant challenges. Moreover, smart management of X-ray dose to protect your patients, your staff and yourself remains a central issue.

To provide easy access to relevant applications and imaging tools, Philips has created the Coronary suite – designed to support confident decisions and deliver insight into treatment success. It is a comprehensive range of solutions and services for every step of your procedures, from diagnosis to restoring vessel patency. The suite features dedicated coronary imaging applications, tools for improving lab performance, dose management and system integration, plus therapeutic and diagnostic devices to further complete the continuum of care.

The basis of the Coronary suite is the Azurion image guided therapy platform, which helps reduce procedure time by 17%, potentially letting you treat more patients each day. Proven tools and our unique holistic approach empower you to decide, guide, treat and confirm with confidence. This comprehensive suite offers workflow options for high efficiency and specialized tools like the state-of-the-art StentBoost Live and Dynamic Coronary Roadmap, to guide coronary procedures and device placement.

Also included within the Coronary suite, is the all-new IntraSight interventional applications platform. IntraSight offers you a comprehensive suite of clinically proven physiology, IVUS and co-registration tools on a modern, secure platform that will help you simplify complex interventions, speed routine procedures and improve lab efficiencies. These best-in-class interventional tools allow you to see clearly beyond the angiogram and ultimately complete your view of the target vessel so you can make fast, informed clinical decisions to treat optimally.

Key benefits
- Easy access to applications and imaging tools to streamline cath lab workflows
- Solutions for every step of coronary procedures, from diagnosis to restoring vessel patency
- Reduction in procedure time by up to 17%, potentially letting you treat more patients each day

The healthcare landscape is evolving. And the world of interventional cardiology is changing too. The foundation of the Coronary suite, along with its Azurion and IntraSight platforms, is designed for today’s cath lab needs yet ready for tomorrow’s innovations. This means you are investing in a futureproof solution that delivers benefits as your facility, workload and clinical requirements evolve.
Two of your key challenges in today’s changing cardiac environment are achieving efficiency in the cathlab and managing dose. The Philips Coronary suite includes the Azurion system that offers solutions for streamlining workflow, so you can improve lab performance, treat more patients and enhance results. Coronary suite features our coronary tools and devices, plus features such as live patient monitoring with the Philips Interventional Hemodynamic system, iFR Co-registration 2, IVuS Co-registration 2 and 2D-QA measurements, for diagnosis, planning, decision-making and evaluation support your day-to-day processes.

Furthermore, the Azurion includes smart solutions, such as ClarityIQ and Zero-dose positioning for managing radiation dose. This responds to a growing demand for enhanced patient and employee safety by providing low-dose X-ray that does not compromise image quality.

With Azurion, performance and superior care become one.

“...This design is really the right direction to move forward, so sophisticated!”

Dr. Y. Kashima, Executive Director and Vice President of Sapporo Heart Center / Cardiovascular Clinic, Japan
Philips IntraSight
Interventional applications platform

IntraSight unites best-in-class imaging, physiology and co-registration tools on a secure applications-based platform to simplify complex interventions and help you provide superior patient care. An intuitive user interface and simplified workflow contribute to an outstanding user experience. With a tableside touchscreen control, systems integration, data management, and remote service diagnostics, IntraSight helps you optimize your cath lab performance.

Choice of evidence-based iFR and FFR modalities enable you to quickly assess ischemia, and iFR pullback technology for physiologic guidance.

Smart. Simple. Seamless.

IntraSight is the only interventional platform protected by the advanced data encryption technology of Windows 10, your best defense against cybersecurity threats. Customizable access and data management settings and policies are available to fit your organization’s individual security needs.

Unrivaled security.

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Unrivaled security.

Choice of evidence-based iFR and FFR modalities enable you to quickly assess ischemia, and iFR pullback technology for physiologic guidance.

Broad portfolio of coronary and peripheral applications, including high-resolution rotational IVUS and Philips’ exclusive plug-and-play digital IVUS.

Combine iFR and IVUS data with the angiogram for improved treatment outcomes using Philips’ exclusive iFR and IVUS Co-registration technology.

Tools that see beyond the angiogram to help provide superior care.

Secure
Advanced protection against cybersecurity threats with Windows 10
Orchestrating your interventional cardiology workflow

IntelliSpace Cardiovascular
Is designed to help streamline workflow and improve operational performance throughout the cardiovascular service line, with a tight integration with Philips TOMTEC, Xper IM, IntelliSpace Portal and IntelliSpace ECG. IntelliSpace Cardiovascular also interfaces with multiple third-party applications. It can be viewed and controlled from the FlexSpot and FlexVision Pro of Azurion.

Key benefits
• Single point of access anytime and virtually anywhere to support informed decision-support by providing a comprehensive multi-modality patient overview
• Improve information exchange across your clinical ecosystem by providing quick and easy access to images and information
• Access a variety of systems and applications from a single location and analyze data to streamline efficiency

Philips Interventional Hemodynamic System (Philips Hemo System)
Brings advanced hemodynamic measurements into the interventional lab to support clinical decision making. This system includes a patient monitoring device mounted at the table side and a workstation in the control room with a user interface designed to simplify hemodynamic monitoring and assessment. The users in the control room can also perform hemodynamic analyses and display them in the exam room. Displaying all relevant physiologic waveforms and analyses supports you in making a real-time assessment of the patient’s condition during an intervention.

Key benefits
• Improved communication in the interventional lab by visualizing hemodynamic analyses in the exam room
• Enhanced workflow through integrated iFR
• Confidently used by all staff members with minimal training

Xper Information Management
Xper IM is designed to enable more efficient cath lab workflows with hemo monitoring and data management. It streamlines workflows in physician reporting, billing, registry reporting and inventory management. Xper IM has a broad range of interfaces, orchestrating disparate patient data across the care continuum to support informed decision making. Xper IM can be viewed and controlled from the FlexSpot and FlexVision Pro of Azurion.

Key benefits
• Reduce the need to manually chart and reduce the chance of human errors
• Reduce time and efforts associated with admin tasks
• Our decision support tools with analytics capabilities drive provider reimbursement and create positive clinical, operational and financial outcomes
See clearly. Treat optimally. Support across the entire treatment pathway

**Decide**

- Efficient diagnostic acquisition
- Quick measurements of lesions
- Advanced imaging

**Guide**

- Live guidance
- Advanced imaging

**Treat**

- Pre-stenting evaluation
- Live guidance

**Confirm**

- Post intervention advanced imaging

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Cardiac Swing of LCA and RCA gives an overview of the coronary vasculature, providing additional anatomical insights.

Quick measurements of lesions enable 2D-QA stenosis measurements on an angiogram during the procedure, now possible to do in parallel to fluoroscopy with Instant Parallel Working.

Advanced imaging IVuS Co-registration on SyncVision helps you obtain insights to more easily plan stent diameter, length, and landing zones.

Therapy devices During treatment, you have to decide if it is safe to treat the lesion, and what type of device to use for best long-term benefit. Philips Image Guided Therapy Devices provide a portfolio of coronary solutions that allow you to personalize treatment decisions for each patient. For example, the AngioSculpt PTCA scoring balloon is designed to address complex lesions found in the coronary arteries, and ELCA Laser provides the necessary coordination to treat even the most difficult coronary lesions.

Advanced physiological measurements (FFR or iFR measurements) are focused when the lesions are more complex and advanced insights are required by mapping the physiology gradients onto the angiogram.

Integrate FFR and iFR measurements with clinical data to produce an optimal treatment plan.

Enhance stent visualization post-stenting with StentBoost image enhancement to verify guidewire position distal to the lesion.

Post intervention advanced imaging IVuS can be used to evaluate the result of the intervention and to verify whether additional treatment is needed.

Integrate FFR and iFR measurements with clinical data to produce an optimal treatment plan.

Philips Image Guided Therapy Devices provide a portfolio of coronary solutions that allow you to personalize treatment decisions for each patient. For example, the AngioSculpt PTCA scoring balloon is designed to address complex lesions found in the coronary arteries, and ELCA Laser provides the necessary coordination to treat even the most difficult coronary lesions.

Integrate FFR and iFR measurements with clinical data to produce an optimal treatment plan.
Dynamic Coronary Roadmap

Seeing better can make your job a whole lot easier. Positioning devices in the coronaries sometimes requires use of contrast puffs to support navigation. Dynamic Coronary Roadmap, a Philips-exclusive technology, creates a motion-compensated, real-time view of coronary arteries. A highlighted coronary angiogram is superimposed on a live 2D fluoroscopic image, creating a colored roadmap that adjusts automatically, providing continuous visual feedback on positioning of wires and catheters. It’s also fully integrated with the system and features automatic storage and easy re-display of previously acquired roadmaps to enhance.

How Dynamic Coronary Roadmap benefits you:

- Real-time, automatic, motion-compensated coronary imaging for easier image guidance
- Easy storage and re-display of previously acquired roadmaps to enhance procedure efficiency
- Seamless integration into standard-of-care workflow and daily clinical practice

One of the most common complications of PCI is acute kidney injury (AKI), primarily induced by the use of nephrotoxic contrast medium. PCI patients who develop AKI have an increased risk for complications, length of stay, and additional acute care costs. The graph is reproduced from data presented by Brown et al. The results of this study show that contrast medium reduction should be a priority in today’s PCI procedures.

Incidence of acute kidney injury (AKI) and dialysis-requiring AKI (AKI-D)

<table>
<thead>
<tr>
<th>Year</th>
<th>Incidence AKI</th>
<th>Incidence AKI-D</th>
</tr>
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<tbody>
<tr>
<td>2001</td>
<td>8789(AKI) + 877(AKI-D)</td>
<td>30,000</td>
</tr>
<tr>
<td>2011</td>
<td>26851(AKI) + 1915(AKI-D)</td>
<td>25,000</td>
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Angioplasty of LAD with bifurcation lesion

A severe lesion is located at the mid-portion of the LAD, immediately distal to a large diagonal branch. Because of the complicated location of the lesion, the guide wire tracks down the diagonal branch instead of the LAD. Anchoring the wire in the LAD is required to provide enough stability to cross the lesion with the stent. With Dynamic Coronary Roadmap, you can retrieve and selectively advance the wire to the targeted lesion in the LAD without required additional contrast test injections.

Real confident, real-time navigation
StentBoost Live
Accuracy is everything in your job — but stents are getting harder to see. Building on a decade of innovation and experience, our StentBoost Live offers Philips’ most advanced live stent visualization technology yet. It quickly helps you verify positioning before and after deploying balloons, stents, and intra-coronary devices to display underdeployment and confirm full expansion. And it’s all done in real-time, so you no longer need to wait for new images before you reposition.

Key benefits:
- Live enhanced visualization of device positioning and deployment in real-time
- Designed for procedural effectiveness and greater efficiency with enhanced visualization of moving intra-coronary devices
- Seamless integration into standard of care workflow for optimized PCI

Stentboost and Stentboost Subtract
Stentboost is a simple, quick, and cost-effective tool to enhance stent visualization in the coronary arteries. With the StentBoost Subtract feature, you can see the stent in relation to the vessel wall as you are working. These functionalities can aid in several clinical scenarios, for instance in determining the need for post dilation to assure correct stent apposition, it can help you assess the neocarina in bifurcation stenting, determine whether there is adequate coverage following overlapping stenting, and allow for prediction of the mandatory extent of vessel preparation of calcified lesions. Oh et al. investigated the clinical outcomes of Stentboost guided PCI and showed that the use of Stentboost can help with lower rates of late loss and binary restenosis compared with the no-StentBoost group at 6 months follow up. At 12 months, StentBoost group had significantly lower incidence of target lesion revascularization.11

Post-stenting balloon dilation with a high pressure balloon
To avoid vessel injuries, a high-pressure balloon must be accurately placed within a stent. However, advances in stent design have made visualization of struts and stent edges more difficult, creating a challenge for accurate balloon placement. StentBoost Live is used to visually guide the high-pressure balloon to the proximal end of stent. Continuous stent visualization shows the placement of the balloon fully within the stent.

StentBoost Live enables placements of multiple stents and achieves the right amount of overlap – or avoids overlap in case of EVS. According to the personal opinion of Dr. B. Drieghe, Interventional Cardiology and Electrophysiology, University Hospital Gent, Gent, Belgium.
More than 4500 patients
2 prospective randomized controlled trials
Published in The New England Journal of Medicine

Reduced costs per patient
Cost effectiveness analysis of DEFINE FLAIR demonstrates a patient annual cost reduction of $896 for the US system when using iFR compared to FFR.

Improved care
DEFINE FLAIR demonstrates that you can achieve a 90% reduction in patient discomfort during procedures without hyperemia.

Workflow optimization
DEFINE FLAIR reported an average procedural time of 40.5 minutes in the iFR arm, vs. 45.0 minutes in the FFR arm.

ClarityIQ technology
High standards of safety and low radiation exposure
Several Azurion features have a focus on dose management. Our Dose management solutions help you take control over patient care and staff safety, with a comprehensive suite of radiation dose management tools, training, and integrated product technologies.

MACE rates

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<tr>
<th></th>
<th>iFR (%)</th>
<th>FFR (%)</th>
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<tr>
<td>患者</td>
<td>6.8%</td>
<td>7.0%</td>
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Intravascular imaging
Recent randomized trials corroborate what was already suggested by a preponderance of clinical data: IVUS benefits patients. IVUS is associated with changes in treatment strategy, improved outcomes, and cost-effectiveness especially in challenging patient subsets. Philips makes it easy by offering a choice in technologies and leadership in ease of use to support the needs of your cath lab.

Key benefits:
• Simple workflow: Fast plug-and-play simplicity only offered by Philips.
• Advanced insight: Compatible with SyncVision IVUS Co-registration. Allows you to clearly see where the disease lies on the angiogram, and facilitates easy length measurements without the need for a pullback device.
• Multiple options: Choice of digital and rotational IVUS technologies, grayscale, and ChromaFlo imaging.

Elgendy meta-analysis of 7 Randomized trials:
37% reduction in MACE and appearance of lower mortality at a mean of 15 months.

Simplicity, confidence, and quality care

Preparing the vessel with ELCA® coronary laser, Angiosculpt PTCA® scoring balloons
Certain patient and lesion types are at greater risk for poor vessel compliance and inadequate stent expansion. Plaque modification to improve vessel compliance helps enable full stent expansion, which is related to a reduction in future restenosis and thrombosis.27

Angiosculpt PTCA scoring balloons
The only specialty scoring device indicated for ISR and complex type C lesions

Concentric scoring design engages plaque regardless of device orientation
Leading edges drive outward force at 25 times that of POBA, delivering maximum lumen gain to help optimize stent expansion

ELCA coronary laser
Crosses occluded arteries and modifies the most challenging morphologies with a safe and easy to use system

Simplicity, confidence, and quality care
**17% reduction in procedure time**

This is just one of the many improvements in lab performance achieved by the Interventional Vascular Department at St. Antonius Hospital after installing the Azurion system. The impressive results achieved in this first Azurion lab performance study have been verified by an independent third party.¹

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<table>
<thead>
<tr>
<th>Lab performance and dose management</th>
</tr>
</thead>
<tbody>
<tr>
<td>Azurion</td>
</tr>
<tr>
<td>Procedure cards, checklists, protocols</td>
</tr>
<tr>
<td>Intrasight</td>
</tr>
<tr>
<td>Flexible workspaces</td>
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<tr>
<td>Zero dose positioning</td>
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<tr>
<td>ClarityIQ</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Dedicated coronary applications</th>
</tr>
</thead>
<tbody>
<tr>
<td>CardiacSwing</td>
</tr>
<tr>
<td>2D-QA</td>
</tr>
<tr>
<td>iFR Co-registration⁴</td>
</tr>
<tr>
<td>Dynamic Coronary Roadmap</td>
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<tr>
<td>StentBoost Live</td>
</tr>
<tr>
<td>IVUS Co-registration⁴</td>
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</tbody>
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<thead>
<tr>
<th>Therapeutic and diagnostic technologies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Venous Plus stent</td>
</tr>
<tr>
<td>iFR spot and iFR Scout</td>
</tr>
<tr>
<td>IVUS Digital Catheters</td>
</tr>
<tr>
<td>Angioplasty</td>
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<tr>
<td>PTCA scoring</td>
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<tr>
<td>Balloon Catheter</td>
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<tr>
<td>Intravascular OCT</td>
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<tr>
<td>INIS (Interactive Intravascular System)</td>
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<tr>
<td>Verrata Plus</td>
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<tr>
<td>FFR/iFR</td>
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<td>Pressure guidewire</td>
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</tbody>
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<thead>
<tr>
<th>Integrated solutions</th>
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</thead>
<tbody>
<tr>
<td>IntelliSpace Cardiovascular</td>
</tr>
<tr>
<td>Ultrasound CSD</td>
</tr>
<tr>
<td>Philips Inners System</td>
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<tr>
<td>DoseAware and DoseWise Portal</td>
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<td>Xper IM</td>
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¹ ELCA: Coronary laser atherectomy catheter
² AngioSculpt Balloon Catheter
³ PTCA Scoring Balloon Catheter
⁴ iFR Co-registration
⁵ IVUS Co-registration