



PHILIPS

Image guided therapy

Onco suite

Onco suite

Critical insights for superior care
in interventional oncology

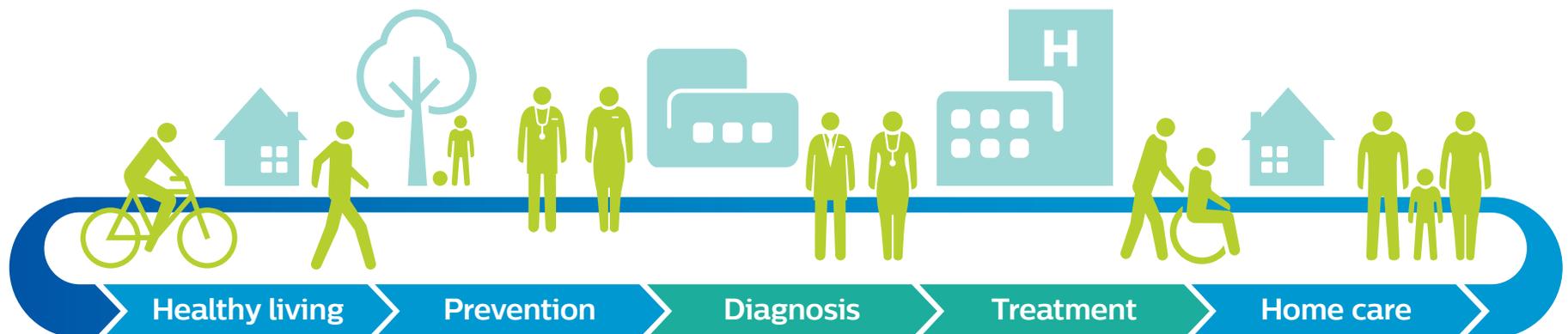
Defining the future

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 living healthily, to being diagnosed and treated for an illness, to recovery or chronic care at home. We look across the health continuum because when it comes to health, it's the only way you can see.

The areas of diagnosis and treatment are the focus of Philips Image Guided Therapy. They account for 70% of all healthcare costs, and this landscape is rapidly evolving. The expansion of interventional procedures and the development of new technologies continue to open up new possibilities and applications. This in turn opens the way for more targeted diagnosis and new, more complex treatment options.

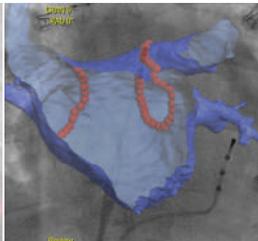
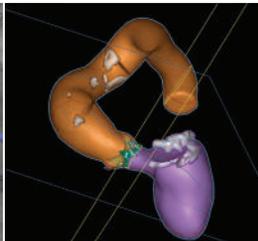
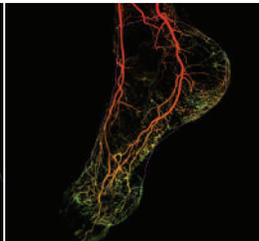
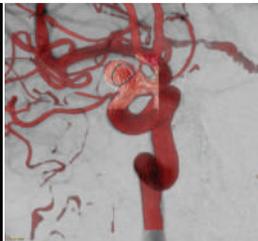
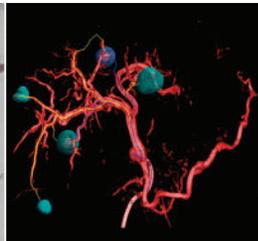


Onco suite is a combination of the Azurion platform, interventional solutions, devices, workflow options, accessories, education, and services.

Clinical demands are getting more specific. So are we.

During an interventional procedure you are focused on making the best decisions you can for each patient. Each patient and each disease has very specific challenges, complexities, and needs. As the number of procedures and patients goes up, you can see the need for better forms of image guidance and interventional devices for effective treatment and decision making. At the same time, optimized workflows are key to improving efficiency.

That's why we created 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 create the future of image guided therapy.

<p>Coronary suite Transforming complex PCI procedures into confident care</p>	<p>EP suite Seamless integration drives EP excellence</p>	<p>SHD suite From planning to live guidance for SHD procedures</p>	<p>Vascular suite Redefine the outcome for vascular treatment</p>	<p>Neuro suite Neuro decisions are based on what you see, so see more</p>	<p>Onco suite Critical insights for superior care in Interventional Oncology</p>	<p>Spine suite Perform spine procedures with confidence and precision</p>
						

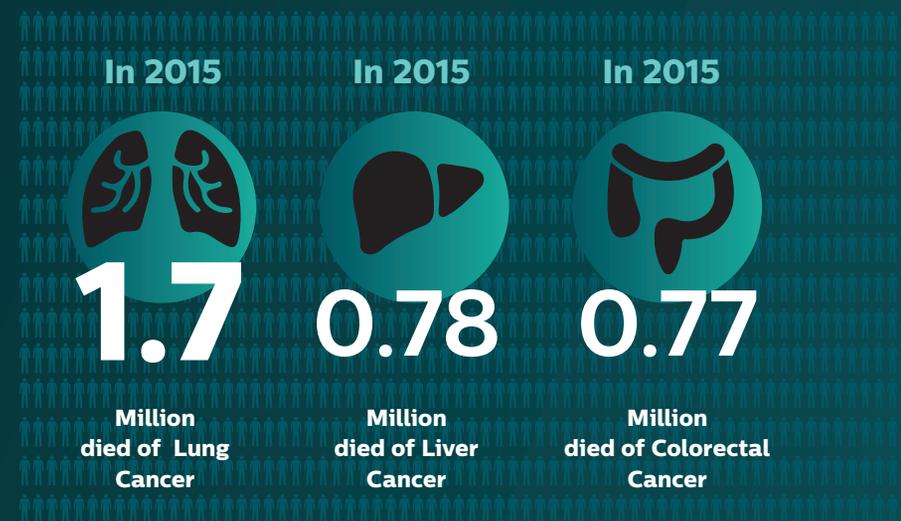
Trends

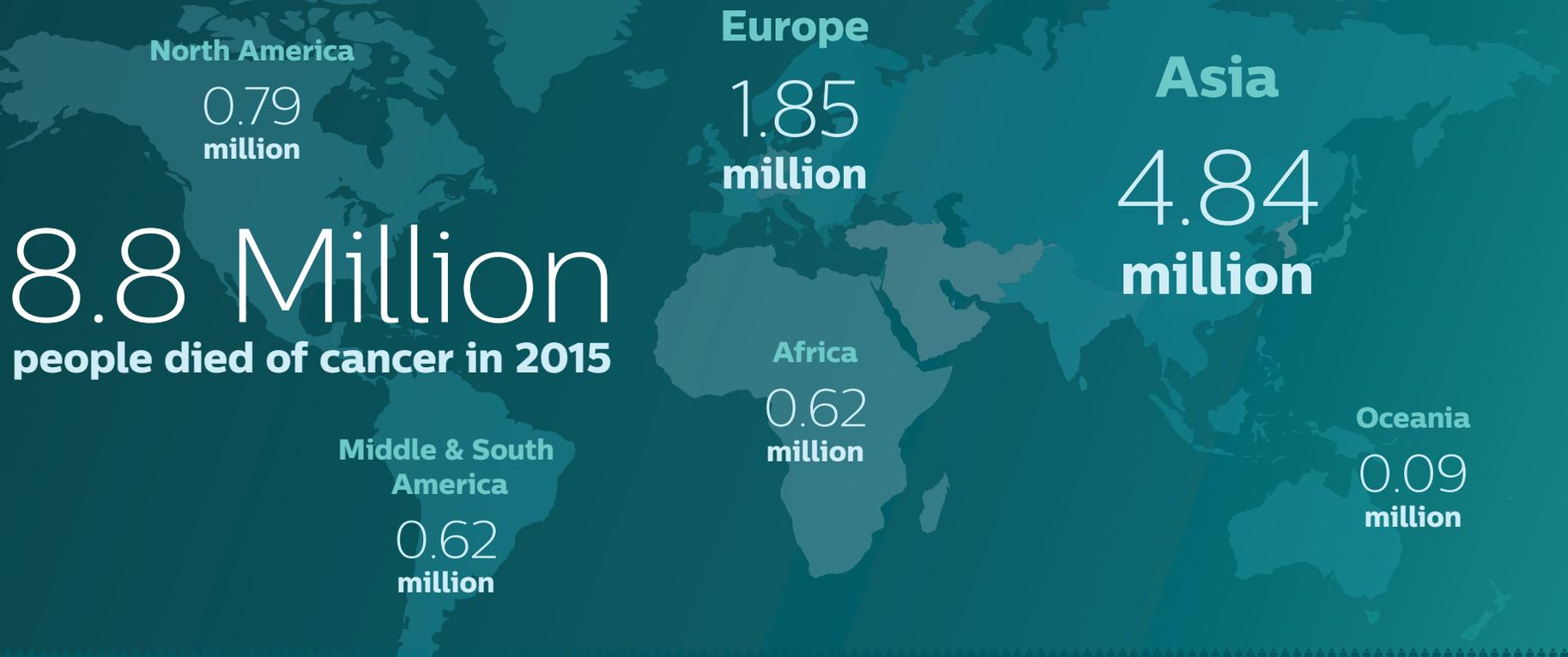
in interventional oncology procedures

Cancer is a leading cause of death worldwide, accounting for 8.8 million deaths in 2015. Approximately 70% of deaths from cancer occur in low- and middle-income countries. The economic impact of cancer is significant and is increasing. The total annual economic cost of cancer in 2010 was estimated at approximately US\$ 1.16 trillion¹.

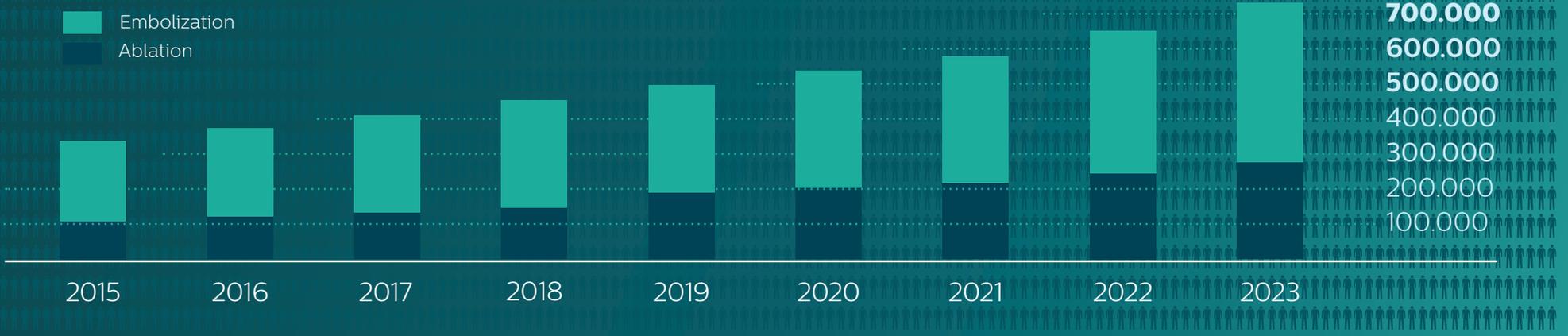
Although originally it was considered the therapy of last resort, Interventional Oncology has been a fast growing field for the last decade and is emerging as a recognized Interventional radiology sub-specialty. Many recent clinical studies have shown that interventional radiology is safer and more effective than traditional surgery for many conditions. Today it has become the fourth pillar of cancer care next to medical oncology, surgical oncology and radiation oncology.

Many minimally-invasive, imaging-guided procedures are replacing more traditional open surgical techniques of treating solid tumors in a variety of organs but mainly in liver (primary and metastatic tumors), lung and kidney.





Total IO procedures forecast



Onco suite

Critical insights for superior care in interventional oncology

Onco suite is a combination of the Azurion platform, interventional solutions, workflow options, education, and services. Interventional oncology has evolved from a niche specialty to a well-established treatment alternative for various types of cancers. Strong clinical evidence supports procedures such as transcatheter embolization for primary liver cancer and metastases, and focal tumor ablation therapy.

Philips is continuously driving the imaging evolution in interventional oncology by investing heavily in clinical research partnerships to bring meaningful interventional imaging solutions to this space.

In every successful intervention, critical insight and careful orchestration between imaging, treatment planning, and live guidance play a vital role. You must be able to spot all tumors including those on the periphery of the organ, easily access them, deliver targeted embolization/ablation, and finally, determine procedural success in the shortest time possible.

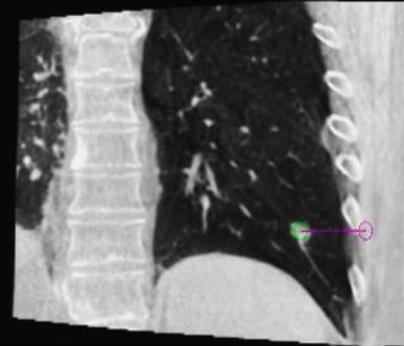
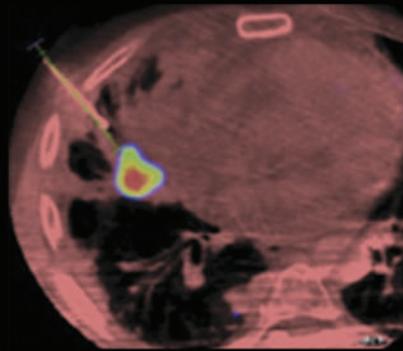
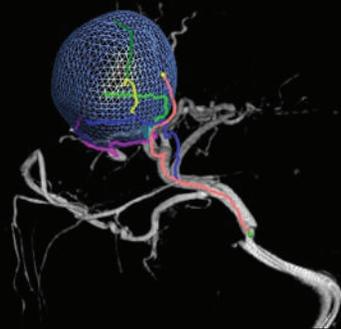
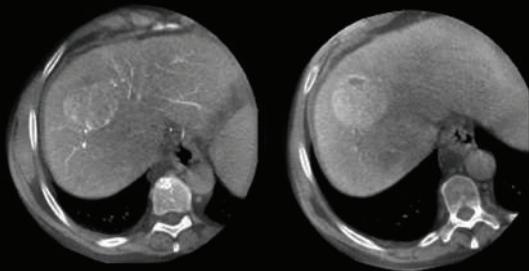
Based upon the Azurion platform, Onco suite supports an integrated set of technologies designed explicitly for this purpose. By removing the barriers to efficient and reproducible treatment through groundbreaking visualization techniques, Onco suite supports consistency and precision which leads to superior care and confident performance.

This consistency and precision is a result of our innovative Azurion platform – A recent clinical study in St. Antonius hospital, Nieuwegein, The Netherlands, showed that with Azurion platform procedure time can be reduced by 17% and post procedure lab time by 28%, providing the ability to treat one more patient per day¹.

Key benefits

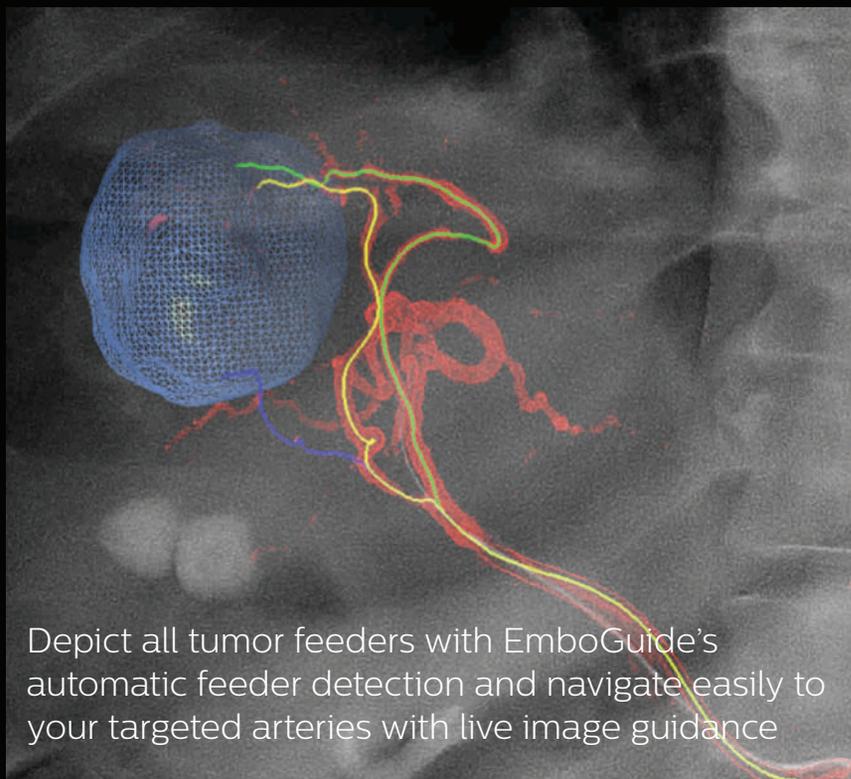
- Provides a comprehensive solution for planning and guidance of embolization and ablation procedures
- Supports treatment of multiple lesions simultaneously with advanced image guidance
- Assures lesion detection with high spatial resolution and enhanced contrast-to-noise performance
- Increases system utilization to help decrease your total cost of ownership

¹ Results are specific to the institution where they were obtained and may not reflect the results achievable at other institutions.



Visualizing full tumor enhancement and feeding arteries through dual phase XperCT acquisitions.

Overlay your pre-procedural PET/ MR or CT images for excellent needle path planning with XperGuide



Depict all tumor feeders with EmboGuide's automatic feeder detection and navigate easily to your targeted arteries with live image guidance



Optimize your needle position and your ablation coverage with live image guidance and virtual ablation zone visualization



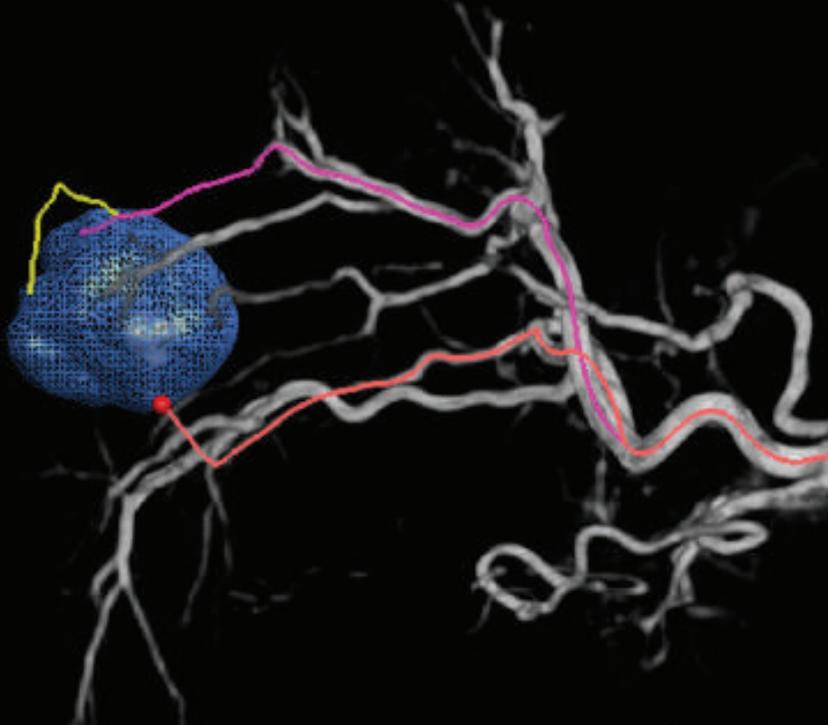
86%
Sensitivity¹



57%
Less false
positive¹



99.7%
Reader
agreement¹



Automatic Feeder Detection with EmboGuide

Our Automatic Feeder Detection solution can significantly improve feeding artery detection compared to using Cone Beam CT alone. EmboGuide supports you in maximizing the efficacy of your TACE procedures as it potentially enhances your sensitivity, reduces false positives and maximizes inter-reader agreement.

¹ Compared to manual feeder detection; M Chiaradia et al, J J Vasc Interv Radiol 2018;29:425-431

Tumor embolization

Effective guidance in treatment and decision making

Adoption of chemo/radioembolization techniques such as TACE and SIRT drives the need for standardization and efficiency. Case after case, you must reliably and consistently locate the tumor(s), identify all feeder vessels, and plan/execute the appropriate interventional approach.

The ability to detect and differentiate hepatic nodules and identify tiny feeder vessels is critical to determining proper therapy. Navigating to the region of interest by reaching all feeders, while remaining selective to the lesion, increases the opportunity for success. Confirmation of treatment endpoint and treatment success while the patient is still on the table boosts clinical outcome confidence.

Onco suite provides workflow options that empower you to provide high standard of care to your patients. They support each step of your procedure – as you decide, guide, treat, and confirm results.

Decide

Guide

Treat

Confirm

Optimized Lab workflow and dose management

20" detector

High-resolution imaging over a large field of view with full projection flexibility.

Zero Dose Positioning

Manage dose and enhance workflow.

Clarity IQ

Reduce patient dose up to 83% in iliac DSA while maintaining equivalent image quality¹

FlexVision

Displays all necessary and available information on the screen, eg: live, reference, planning roadmap overlay or patient monitoring, dose info.

Touch screen module Pro

Allows table side control of images and applications with tablet ease to save time and unnecessary walking in and out of the sterile area.

XperCT Dual for CBCT imaging

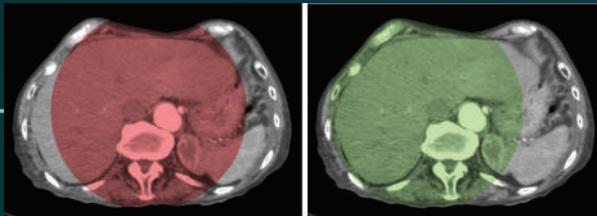
EmboGuide for Automatic Feeder Detection

¹ Compared to the system without ClarityIQ

Tumor embolization

Effective guidance in treatment and decision-making

Decide



Whole liver coverage with XperCT Open

By opening the arc to the left of the patient, XperCT open allows off center positioning of the patient table and therefore better centering of the FOV. It significantly increases image coverage to help visualize tumors on the periphery of the organ.¹



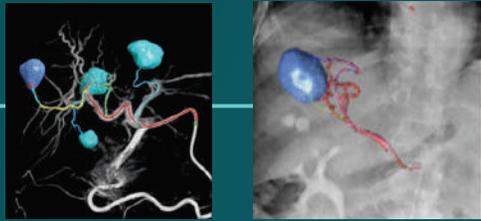
Excellent artery and tumor visualization with XperCT Dual

XperCT enables 3D acquisition of an arterial phase to visualize vascular structures and a post-arterial (delayed phase) to visualize accumulation of contrast medium, in a single automatic step.

Image fusion with Dual View

Dual View allows simultaneous visualization of two CBCT datasets (pre- and post). Both arterial and delayed phase can be displayed next to each other or in a single fused overlay view.

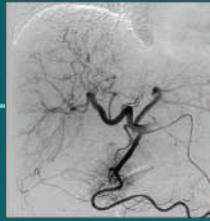
Guide



Automatic Artery feeder Detection with EmboGuide

EmboGuide provides efficient, workflow-based live 3D guidance with automatic feeder detection to navigate to each segmented tumor target for selective or super-selective embolization of hypervascular tumors

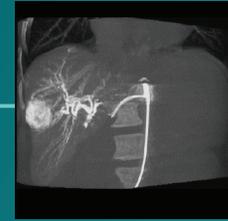
Treat



Treatment monitoring using Low dose Fluoroscopy with ClarityIQ

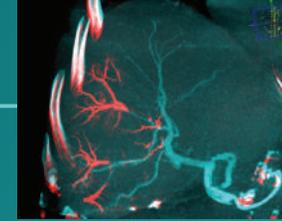
ClarityIQ produces tuned, high definition low dose images with superb vascular detail to monitor the embolization.

Confirm



Post embolization 3D imaging with XperCT

A post embolization 3D acquisition allows to visualize the targeted deposition of embolic material, such as Liopidol or radiopaque beads, in the tumor.



Pre- and Post -embolization 3D image fusion with Dual View

Dual View allows simultaneous visualization of pre-embolization arterial phase 3D image and the post embolization image to assess treatment endpoint and predict outcome.

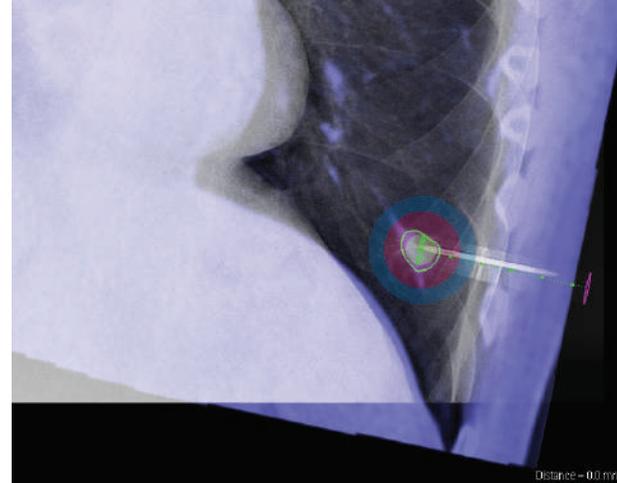
Biopsy and Ablation

Comprehensive approach supports successful outcomes

With the increasing adoption of screening programs in Lung, early lung cancers manifesting as small nodules have been detected more frequently than ever before. 14.5 % of a screened population was observed to have nodules ≤ 10 mm*. Biopsy procedures for small nodules must be accurate and safe.

Percutaneous ablation (radiofrequency, microwave, and cryoablation), is a well-established minimally invasive treatment of kidney, liver, lung and bone tumors. It is critical to define the tumor boundaries and decide on an optimal number of needles and corresponding needle trajectory so as to be able to perform a complete tumor treatment and not to cause damage to surrounding tissue.

Navigating accurately at low dose to the lesion of interest without needle repositioning increases the opportunity for success and reduces risk for complications of your biopsies or ablations. Confirmation of ablation treatment endpoint can be accomplished with 3D imaging while the patient is still on the table.



More accurate
needle positioning
compared to
conventional CT¹



Less needle
repositioning
compared to
conventional CT¹



Lower skin dose
compared to
conventional CT¹

Highly accurate and safe needle Interventions with XperGuide and XperCT.

Lesion heterogeneity and lack of conspicuity limit the quality of specimens as well as the feasibility of biopsies when performed under ultrasound or conventional CT.

Our needle navigation technology with CBCT increases precision, and enable the targeting of smaller (≤ 1 cm) or heterogeneous lesions more accurately with less needle repositioning and at lower dose than conventional CT.^{1,2}

¹ N Abi-jaoudeh et al (2016), J VasIntervRadio 127:1342–1349

² Ji Yung Choo Eur Radiol (2013) 23:712–719

Decide

Guide

Treat

Confirm

Optimized Lab workflow and dose management

20" detector

High-resolution imaging over a large field of view with full projection flexibility.

Flex Vision Pro

Gives you full control of all system inputs including CX50 ultrasound for your soft tissue biopsies at table side to save time and unnecessary walking in and out of the sterile area.

Zero Dose Positioning

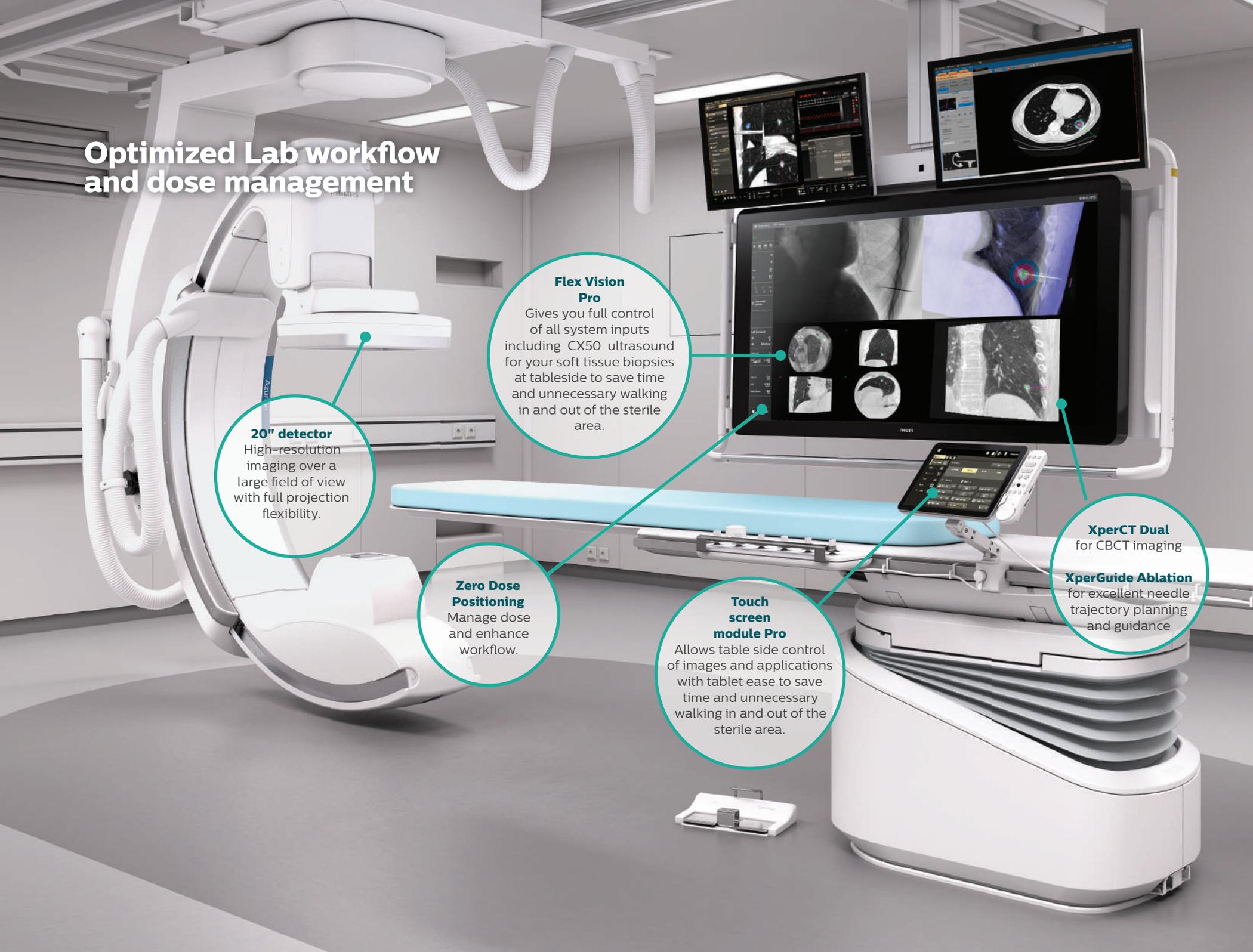
Manage dose and enhance workflow.

Touch screen module Pro

Allows table side control of images and applications with tablet ease to save time and unnecessary walking in and out of the sterile area.

XperCT Dual for CBCT imaging

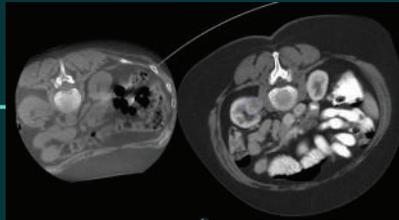
XperGuide Ablation for excellent needle trajectory planning and guidance



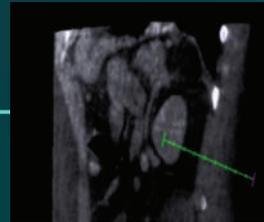
Tumor ablation

Comprehensive approach supports successful outcomes

Decide

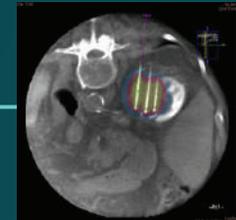


Align a pre-procedural image with a new CBCT 3D image using XperCT Dual View
XperCT Dual View allows the overlay of a pre-procedure 3D image (CT/MR/PET-CT) on an intra-procedure 3D CBCT to better visualize the lesions and access critical input for needle planning.



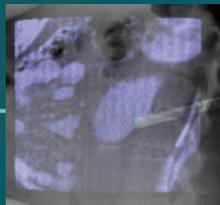
Plan your needle path with XperGuide Ablation
XperGuide Ablation provides comprehensive assistance for treatment planning and live image guidance for needle trajectory. Offers unique Parallax Correction to plan needle trajectories for off-center lesions.

Guide



Optimize the needle position for effective ablation with XperGuide Ablation
Displays the virtual needle path to assist in multiple needle planning. Shows needle characteristics such as ablation zone/ isotherm to confirm complete tumor coverage prior to ablation.

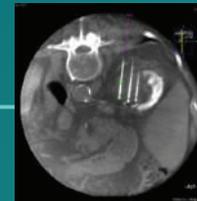
Treat



Monitor your needle insertion at low dose with ClarityIQ
Produces finely tuned high-definition fluoroscopic images with superb detail to assist with needle progression to target.

Life trajectory guidance with XperGuide
XperGuide provides highly accurate live image guidance of each needle to a targeted position by overlaying pre-planned trajectories with fluoroscopic imaging.

Confirm



Confirm the completeness of your ablation with XperCT
With XperCT acquire a post-ablation CBCT to demonstrate the extent of tumor coverage and confirm completeness of your treatment.



Onco suite solutions

We offer a comprehensive range of options and support to help you realize a suite that fits your clinical and budgetary requirements. Our offerings also include advanced education, efficiency programs, and RightFit service agreements

Azurion – one platform, an endless array of clinical possibilities

With its wide range of intervention tools, Azurion is designed to help you perform procedures more efficiently and consistently with fewer complications. It also offers greater user customization and control over every aspect of your interventions.

System platforms

- Azurion 7 C20 (recommended)
- 7 C20 FlexMove
- ClarityIQ technology

Oncology products

- XperCT Dual
- XperCT Open Trajectory
- XperCT LUMI
- EmboGuide
- XperGuide Ablation
- 3D Roadmap

Integrated tools

- IntelliSpace Portal
- DoseWise Portal
- DoseAware

Integrated tables



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.

*Results are specific to the institution, where they were obtained, and might differ from other institution



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