
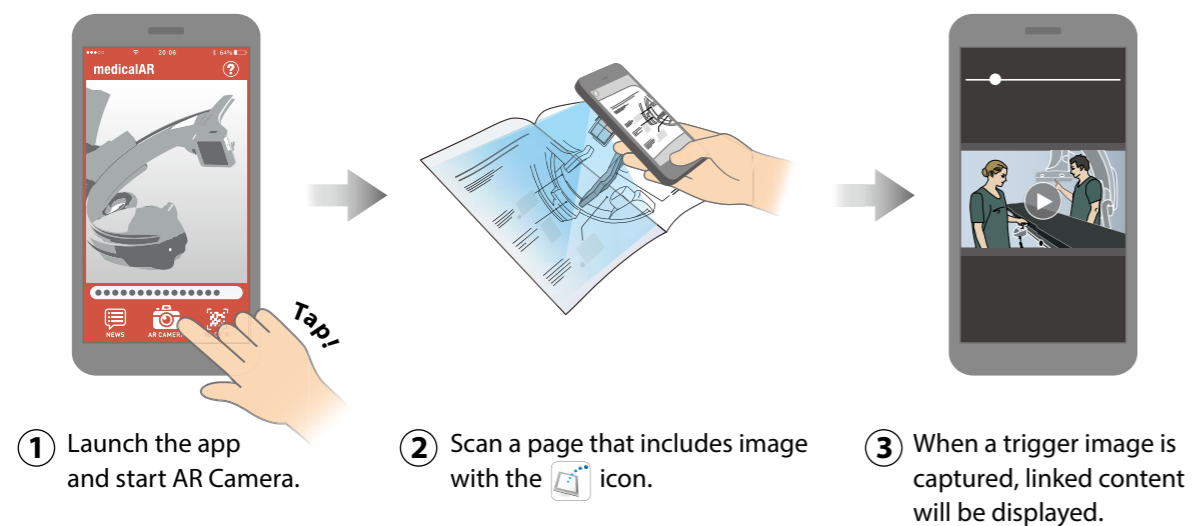


How to Use the medicalAR App

Images with the  icon can be viewed in motion.
To download the app, scan the QR code or visit our website:
<https://global.medical.canon/about/medicalAR>



Canon

CANON MEDICAL SYSTEMS CORPORATION
<https://global.medical.canon>

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Model number: INFx-8000V, INFx-8000C MCAxR0339EAA 2019-02 CMSC/SO/Printed in Japan

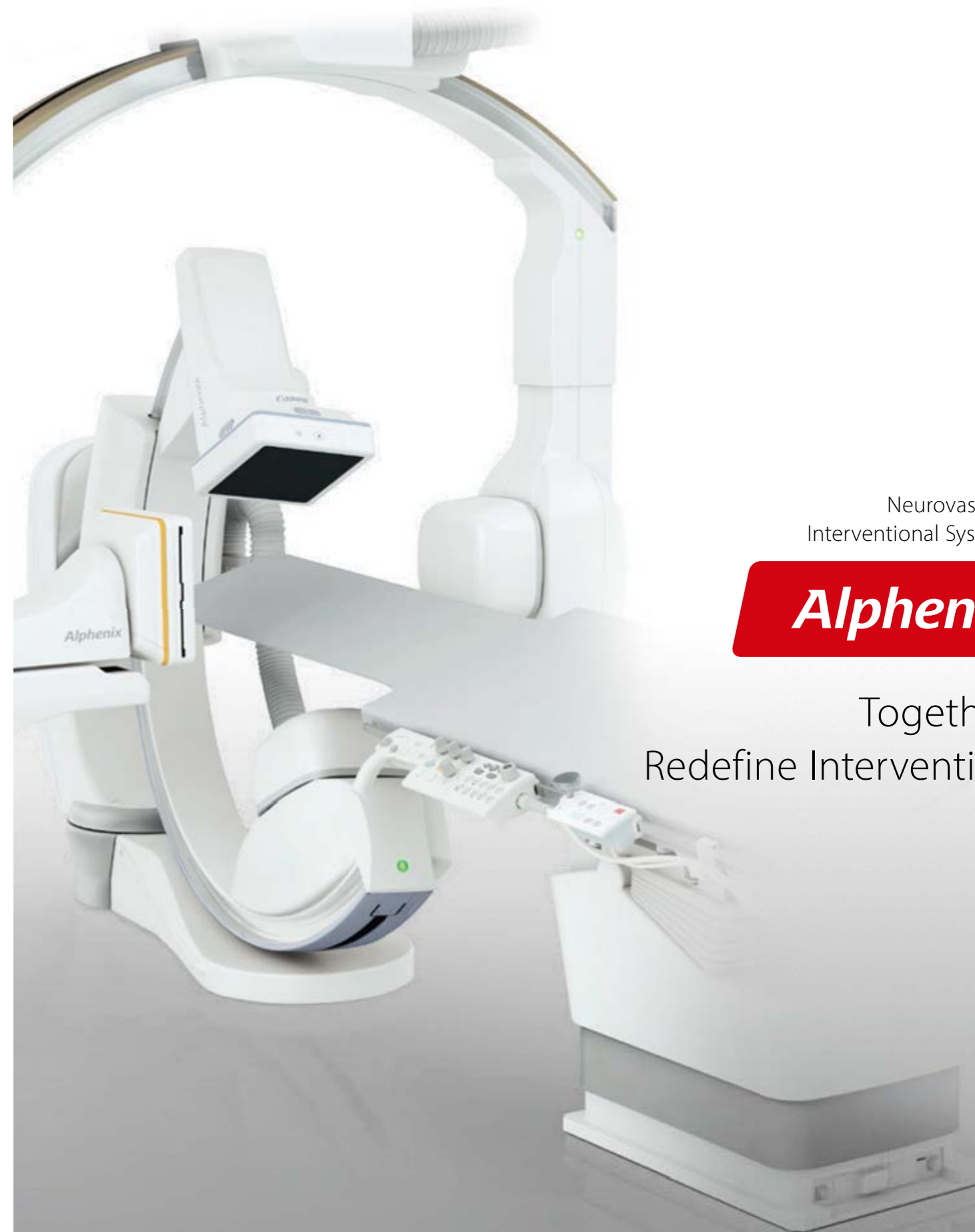
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Disclaimer: Some features presented in this brochure may not be commercially available on all systems shown or may require the purchase of additional options. Please contact your local representative from Canon Medical Systems for details.

Made For life

Canon



Neurovascular
Interventional Systems

Alphenix

Together,
Redefine Intervention



See new possibilities beyond the image.

The new Alphenix family of interventional systems deliver images with greater clarity and precision. Combined with industry-leading dose optimization technologies, enhanced workflow, and a new set of features, Alphenix continues Canon Medical's commitment to supporting you and your mission to provide patients with safe, accurate and fast imaging.



Innovative technologies to help you deliver the best possible care for your patient.

WorkRite

WorkRite technologies help you optimize workflow and provide an unprecedented range of patient access and coverage.

ImagingRite

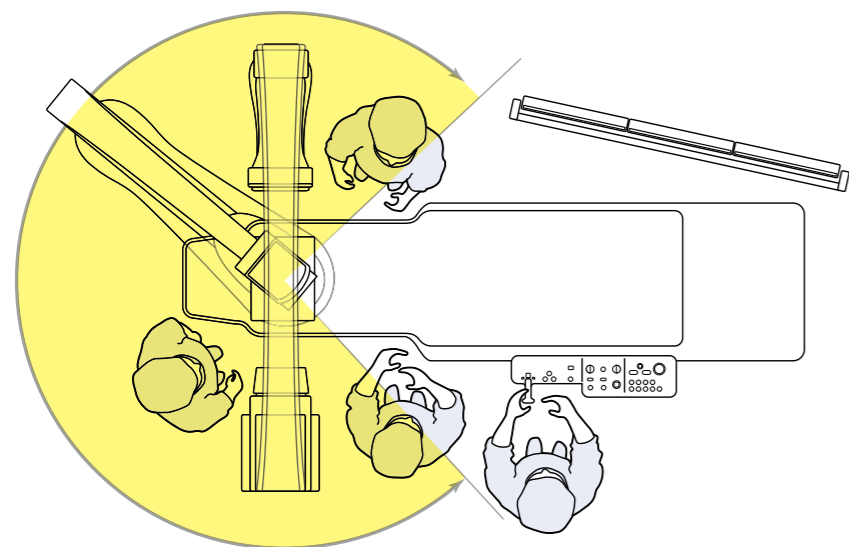
ImagingRite technologies enable you to deliver high-quality imaging and offer a full complement of fully customizable advanced imaging tools.

DoseRite

DoseRite technologies provide a comprehensive dose management suite of tools designed to help you minimize patient X-ray exposure while maintaining optimum image quality, enabling you to prioritize safe operating conditions for patients and clinical staff.

A workflow built around providing you with unparalleled flexibility and access.

Every patient is different. The Alphenix, with its WorkRite technologies, including the C-arm and 5-axis C-arm, provides you with unprecedented access to the patient and flexible anatomical coverage from any angle.



Biplane independent isocenter

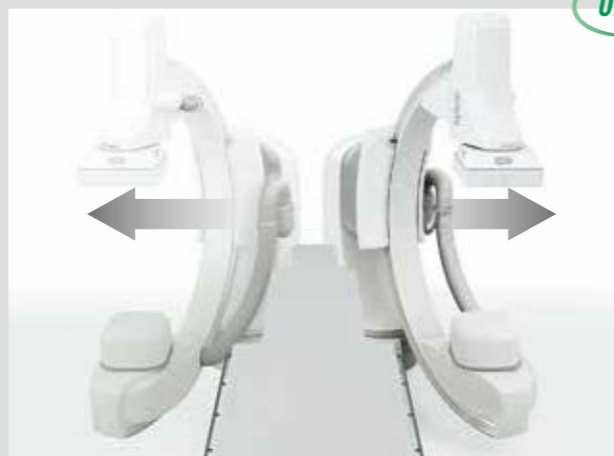
The unique ability to independently position the ceiling-mounted lateral Flat Panel Detector (FPD) and X-ray tube at the isocenter allows the table to remain at one height during critical shunt examinations.



Move the machine, not the patient

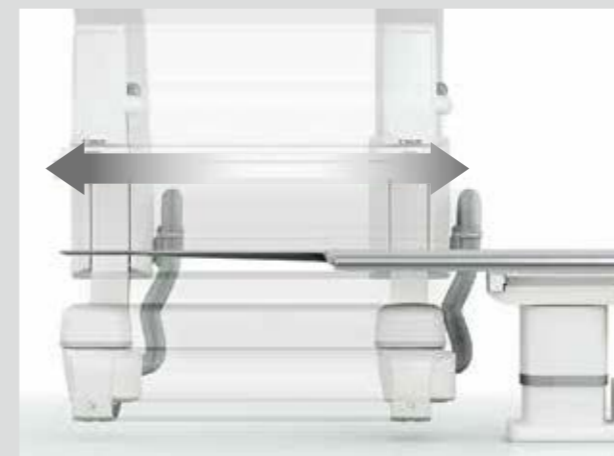
Unique

Unique



Head-to-toe coverage with multi-access floor-mounted C-arm

Fingertip-to-fingertip coverage with multi-access floor-mounted C-arm



Head-to-toe coverage with ceiling-mounted C-arm

Fingertip-to-fingertip coverage with ceiling-mounted C-arm

A fast, seamless, and intuitive work experience.

Easily select acquisition protocols and programed C-arm positions from the tableside Alphenix tablet.



Startup screen



Program tabs



Related functions



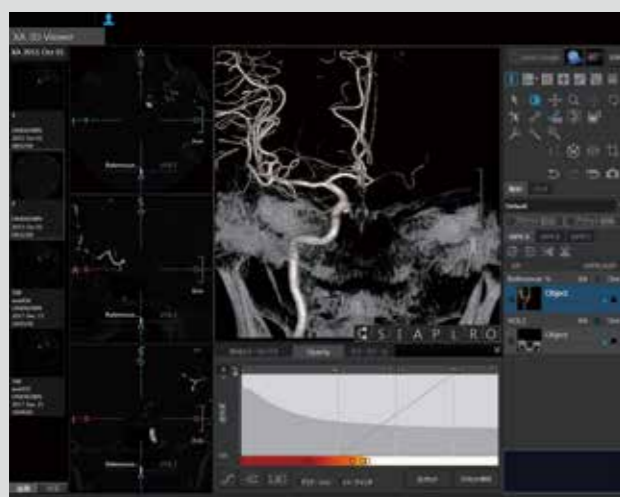
Intuitively select the position of the C-arm

A feature-rich workstation to enhance your productivity.

Fully integrated applications help you plan, analyze, and perform interventional procedures.



* This is a computer generated image



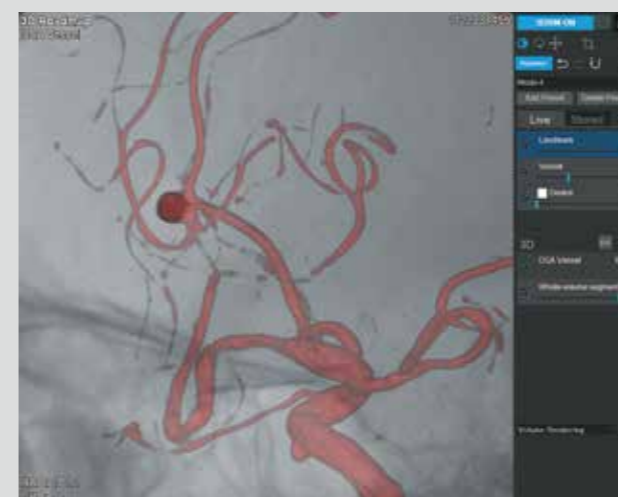
3D viewer

The GUI has been refreshed for easy operation and workflow. Viewing of 3D volume data, multi-segmentation of clinical regions, and editing features such as trimming are available.



BP Auto angle

Biplane positions can be registered as planned working angles, allowing biplane positioning to be performed easily.



3D/Multi-modality Roadmap (Option)

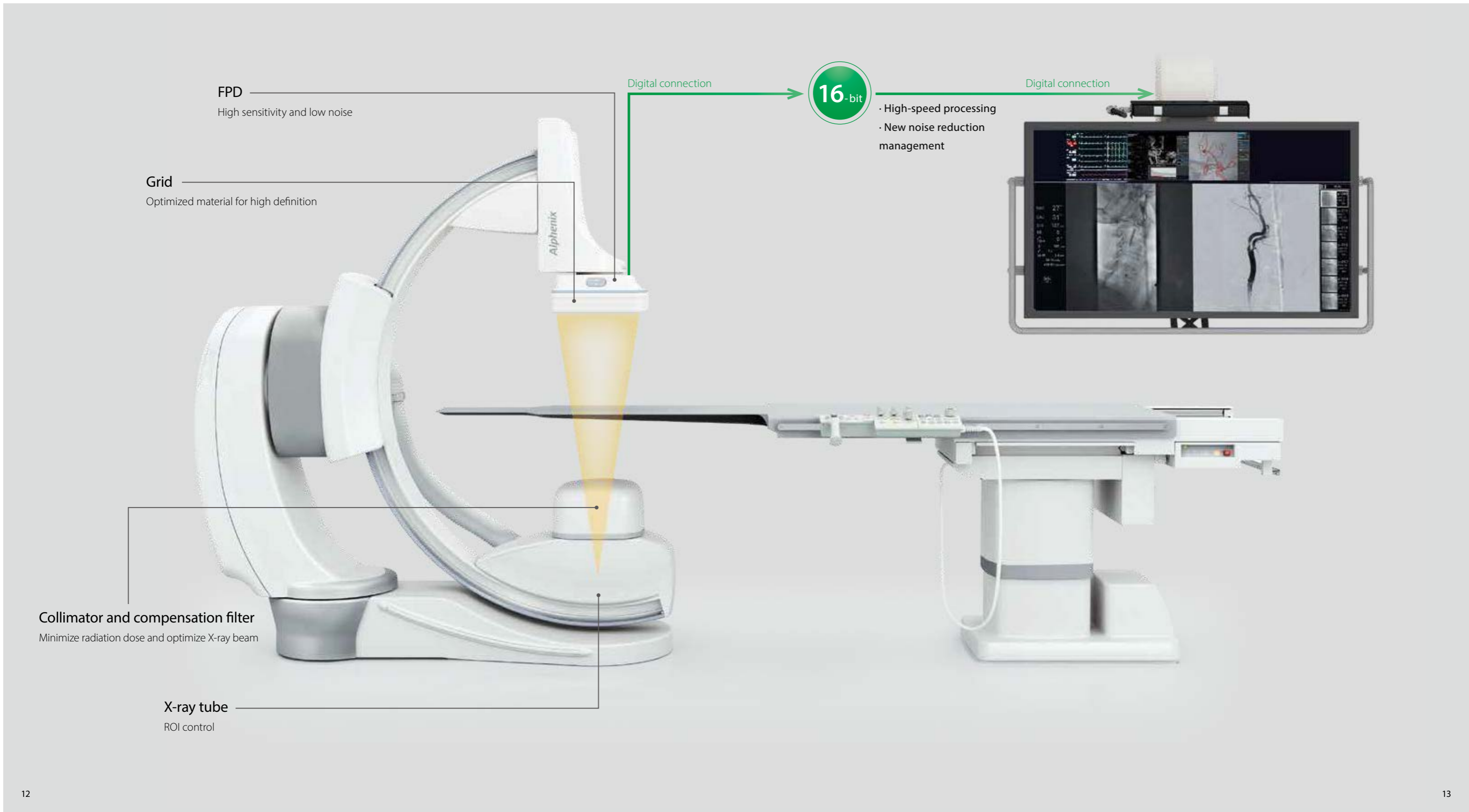
The GUI has been refreshed for easy operation and workflow. Any segmented regions of 3D volume data from Alpha CT (CBCT), CT, or MR can be selected and fused with fluoroscopy for easy reference.



Cerebral Aneurysm Analysis (CAA) vessel track (Option)

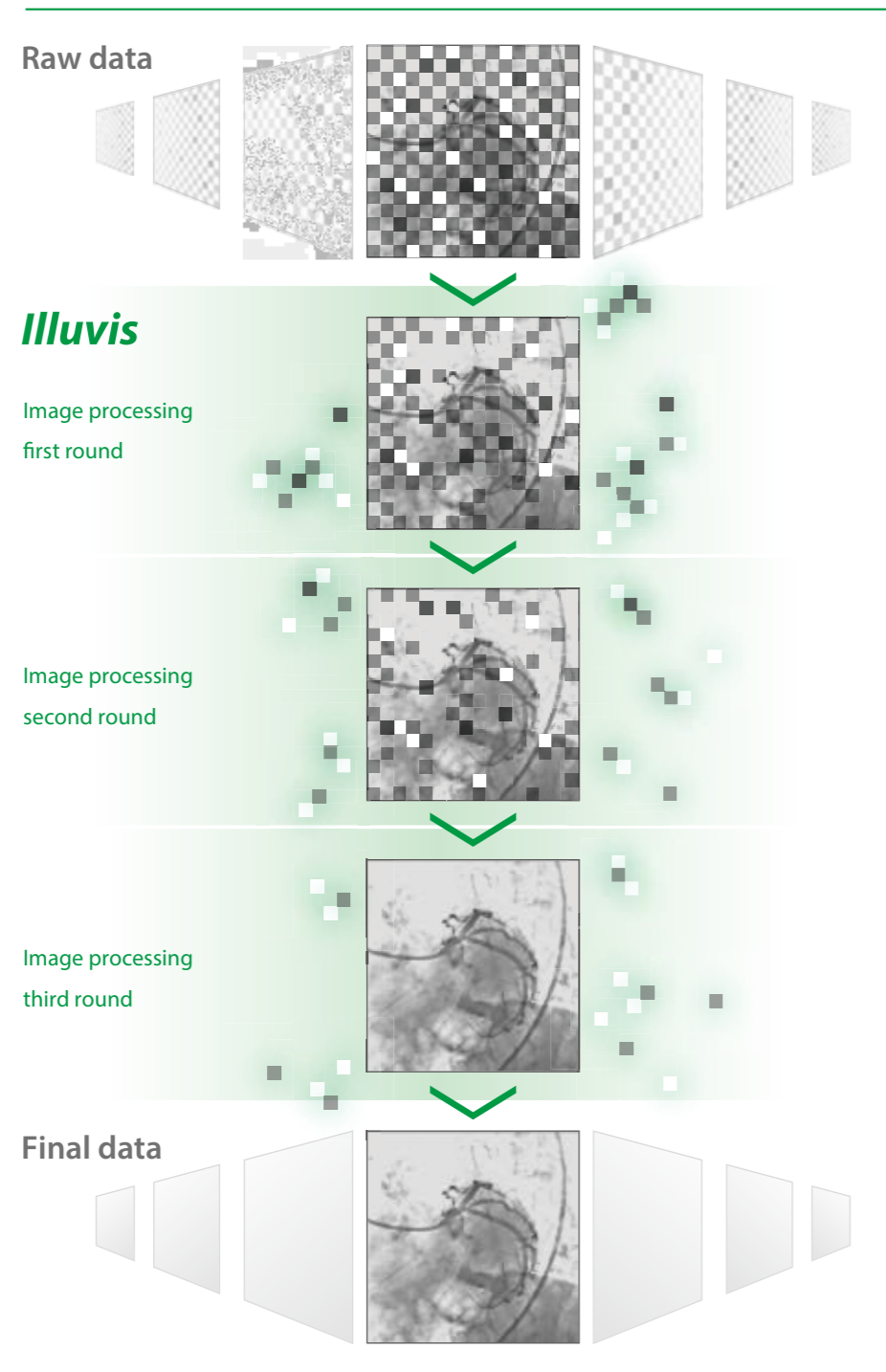
This application is intended to facilitate the extraction and segmentation of user identified aneurysms on the cerebral arteries from cerebral angiography data, allowing morphological characteristics to be assessed and the following numerical measurement results to be displayed.

Maintain and optimize image quality while reducing the exposure dose.



Powerful imaging and processing tools.

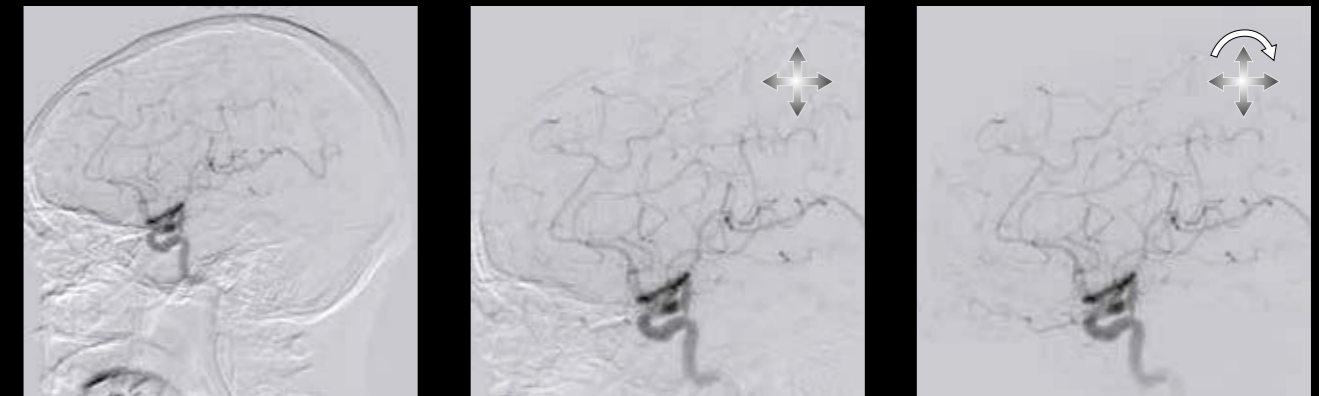
Illuvis technology takes advantage of new hardware and software improvements to reduce noise, enabling you to see through the clutter. Each frame is triple-processed in realtime to reduce background noise and enhance features.



Optimized dose efficiency and visualization capability.

Realtime Auto Pixel Shift

Automatically correct position shifting of the mask image generated by body motion during DSA or 2D roadmapping. Realtime auto pixel shift automatically corrects position shifting.



Manual auto pixel shift no longer required

Conventional auto pixel shift: only parallel movement in the vertical or lateral direction.

New auto pixel shift: parallel movement in the vertical/lateral direction + rotation

This function is automatically activated after image acquisition. No user operation is needed to apply this processing.

Instant Roadmap

Simplified operation allows the immediate smooth transition from DSA acquisition to 2D roadmap. 2D Roadmap enables clinicians to create a roadmap from an injection or previous acquisition to assist with guidance of catheters and devices during fluoroscopy.



Enhanced visualization with advanced 3D tools.

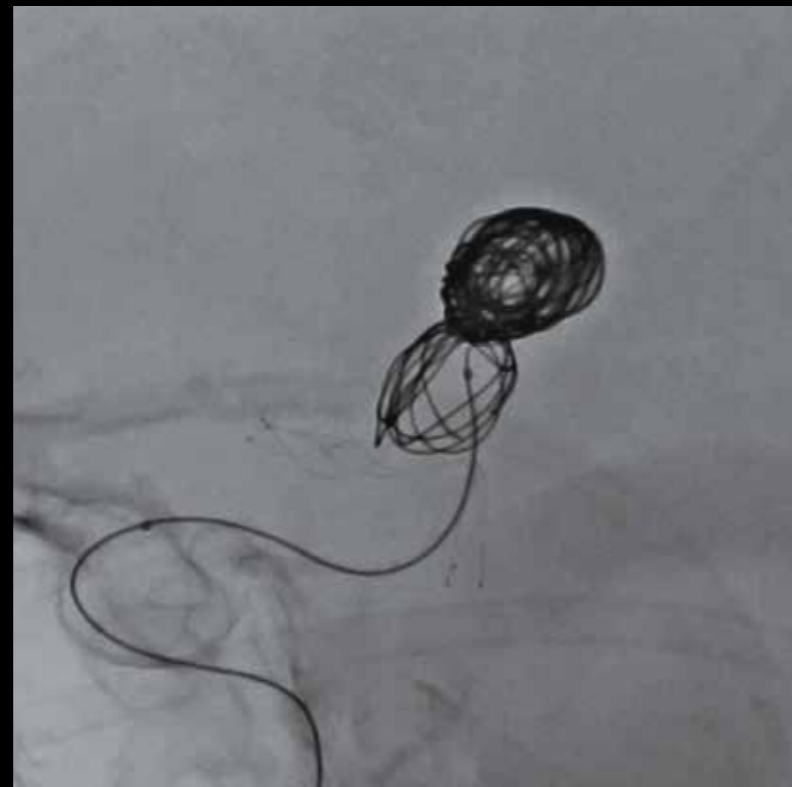


"During the critical parts of the case when you deploy a complex intravascular device - for example, a coil, a stent, a flow diverter, an endosaccular flow disrupter, anything where you really need to appreciate how the device is behaving in a small space and it is of critical implication - there's nothing that comes close to the ability to visualize these implements than high def technology."

Adnan SIDDIQUI, M.D., Ph.D.
Vice Chairman and Professor
Gates Vascular Institute

High-definition imaging (option)*

High-definition imaging mode allows you to effortlessly zoom up to 1.5" in resolution without losing image quality

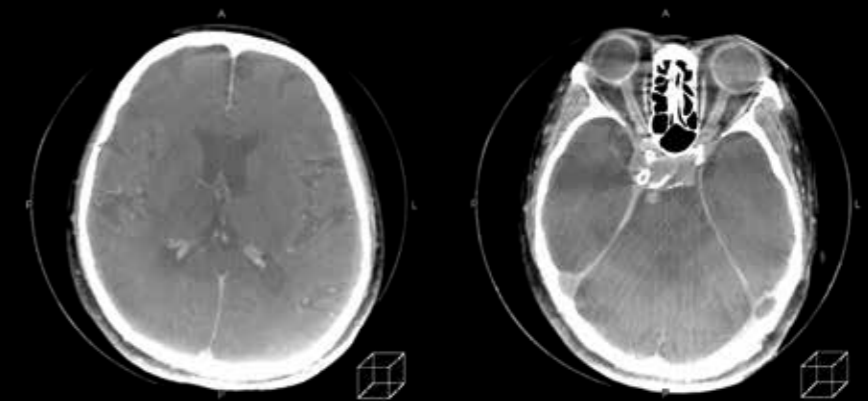


High resolution detector

* Hi-def images are only available for Alphenix Core+ (FPD12) and Alphenix Biplane (FPD12/FPD12).

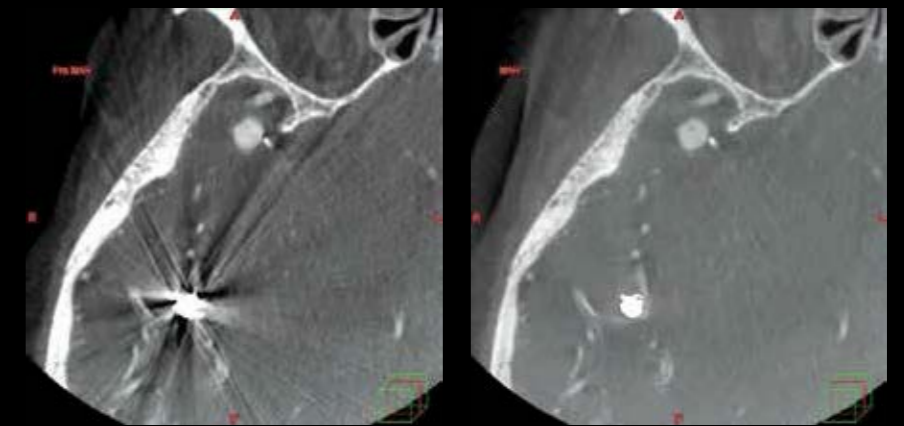
Alpha CT

To supplement 3D imaging, CT-like Imaging is available to support visualization of anatomy or pathology during interventional procedures. Alphenix systems utilize low contrast imaging to provide a view of three overlapping carotid/cerebral stents of varying radiopacity.



Metal artifact reduction (MAR)

It was previously difficult to observe areas near metal objects such as stents and embolization coils due to metal artifacts. This reconstruction technology reduces metal artifacts present in images.



Without MAR

With MAR

Stent imaging

In order to visualize devices such as stents with high resolution, a dedicated reconstruction mode is provided to support the most advanced intravascular interventional procedures.



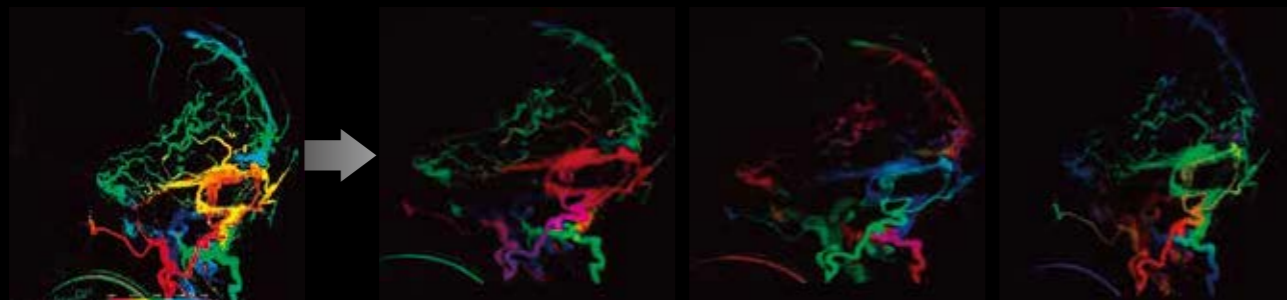
Inform your decisions with powerful imaging and processing tools.

Parametric imaging



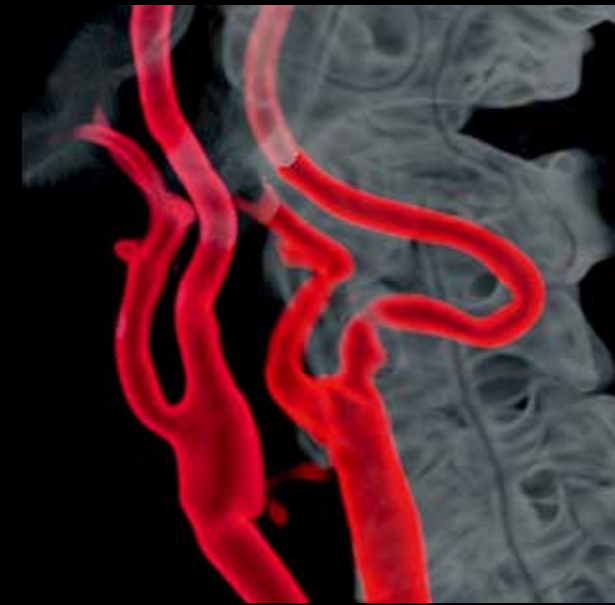
Parametric imaging software enhances the visual assessment of hemodynamic properties in neurological interventional procedures. More specifically, parametric imaging calculates parameters from time-density curves for each pixel of a 2D DSA image of the intracranial vascular anatomy and color codes each pixel based on the respective calculated value for display on the parametric image. The resulting parametric imaging maps can enhance the assessment of hemodynamic parameters. Comparison of preprocedural and postprocedural parametric imaging maps can help in the visualization of contrast media dynamics.

Color coded circulation (CCC)



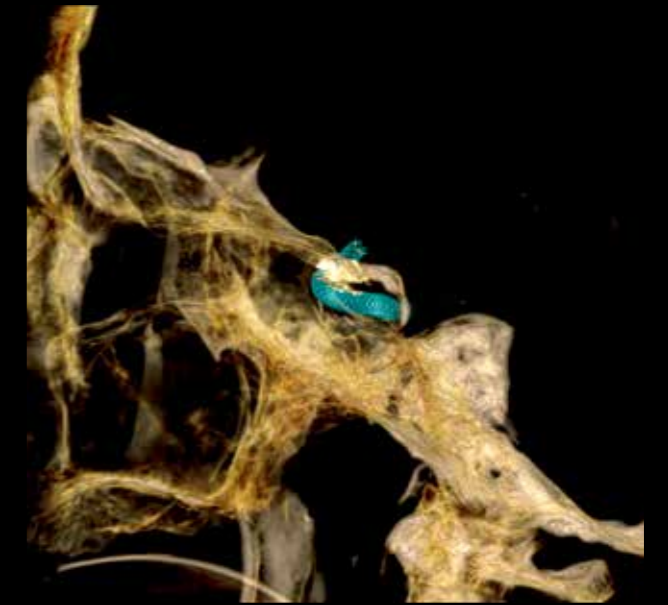
Parametric Imaging displays an entire image sequence as a single composite image that is color coded in order to characterize the contrast media dynamics and to allow easier visual evaluation.

3D imaging (option)



Carotid arteries

Fusion imaging (option)



Intracranial pipeline stent

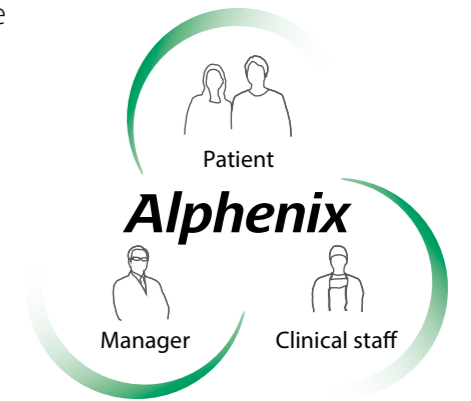


System movements are linked with the fused 3D and fluoroscopic display.

Optimize exposure dose while delivering high-quality imaging.



A redesigned imaging platform with next-generation AIP and noise reduction technology. Standard system configurations offer many dose management features to provide benefits for everyone, from patients to clinical staff and management.



Dose Management for Everyone.

- X-ray beam filter to reduce patient dose and scatter radiation
- Removable grid
- Live zoom to digitally increase image size without performing field of view magnification
- Variable dose mode to pre-program combinations of pulse rate, dose level and image processing parameters
- Virtual collimation and filtration to adjust collimation without additional fluoroscopy, further reducing exposure dose

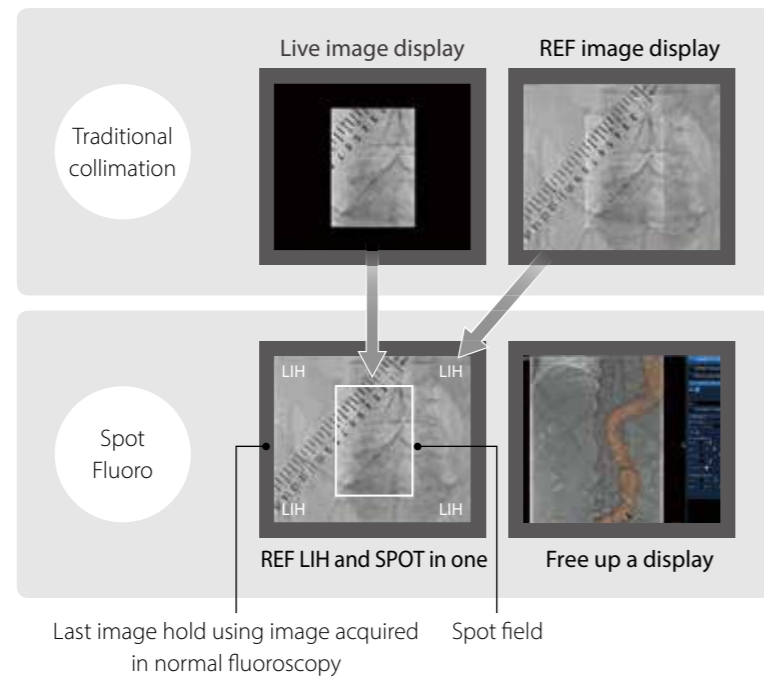
DoseRite PF	Dose Adjustment Filter	DoseRite F-Rec	DoseRite F-Store	DoseRite Live Zoom	Virtual Filter/ Virtual Collimator	DoseRite Position
Reverse Geometry	Auto Pixel Shift	3D Road Map	DoseRite SPOT ROI	DoseRite SpotFluoro	DoseRite DTS	DoseRite Report

Asymmetric collimation allows reductions in patient dose.

DoseRite SPOT Fluoro: Industry's first spot fluoroscopy technology.



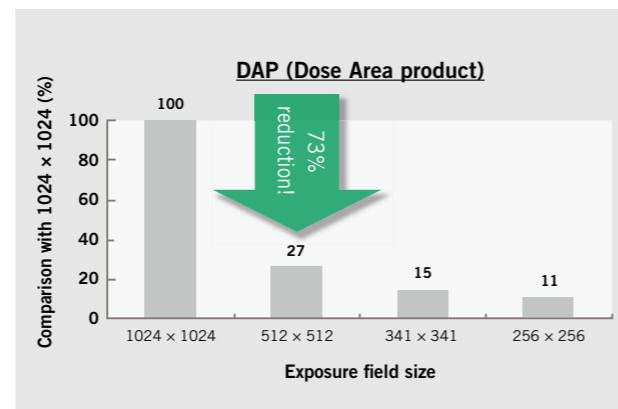
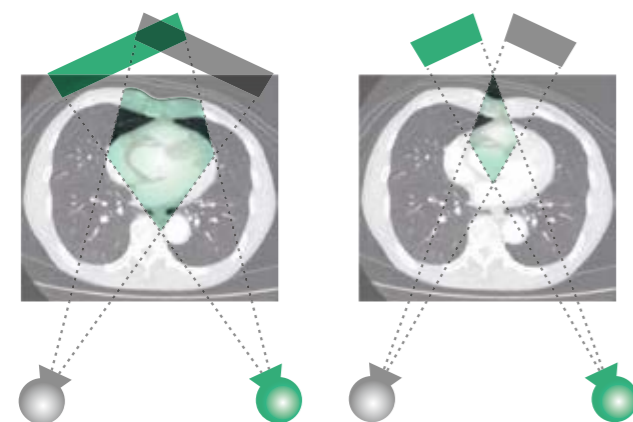
Conventional X-ray collimation has two disadvantages: black areas caused by the collimator blades are distracting for the interventionist, and exposure dose for the patient is increased because the system compensates for the reduction of scatter radiation due to collimation in the ABC Region of Interest (ROI).



Reduce DAP with Spot Fluoroscopy

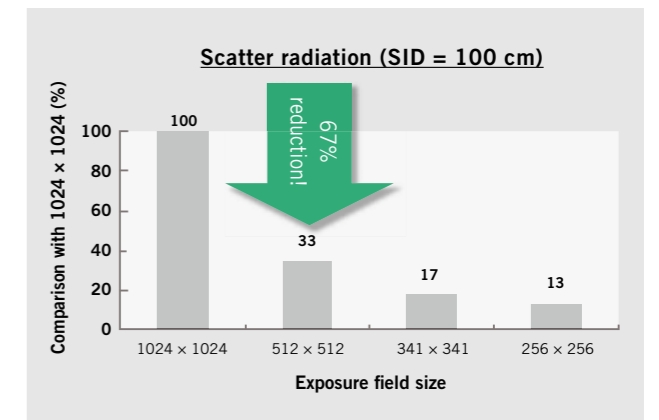
The cumulative DAPs (dose area products) measured on the three selectable live fluoroscopy ROI sizes are shown in the graph on the right (where this is defined as the patient exposure dose). Compared to normal-field fluoroscopy, Spot Fluoroscopy can reduce the dose by more than 50%.

The illustration on the right shows an additional benefit. Spot Fluoroscopy can greatly reduce the overlap between each exposure, saving the patient from unnecessary exposure when different angles are required.



Reduce exposure of patients, clinicians, and staff to scatter radiation

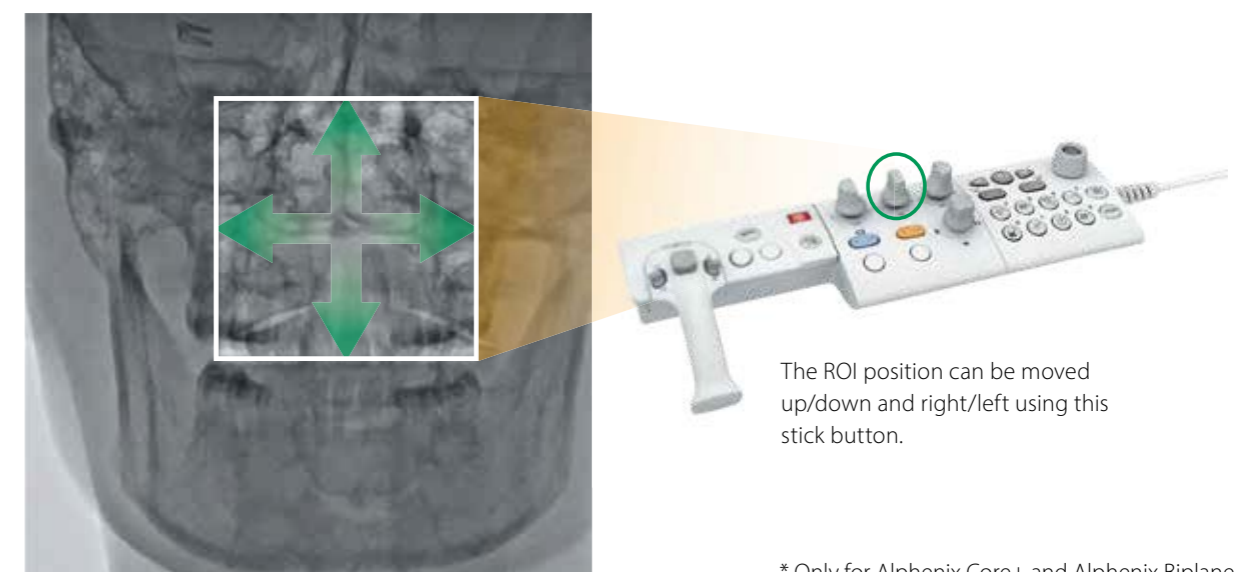
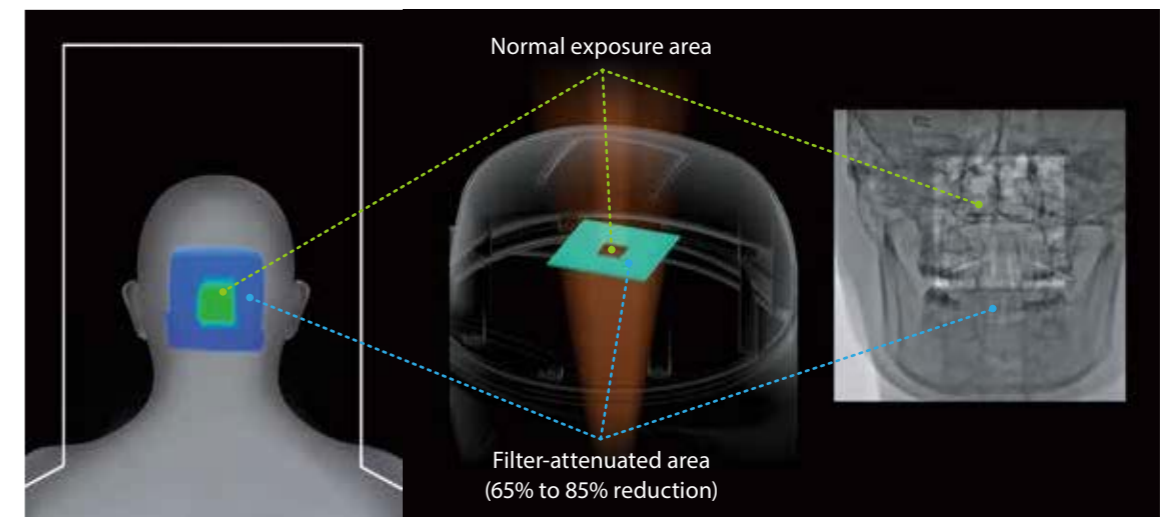
Spot Fluoroscopy realizes a reduction in scatter radiation of more than 50%, as shown in the graph on the right, which is beneficial for clinicians and staff as well as the patient. As these figures show, our exclusive Spot Fluoroscopy minimizes unnecessary exposure and reduces the radiation burden on the patient and clinical staff in the examination room.



DoseRite SPOT ROI*



Without completely blocking X-ray exposure outside the ROI, this new function reduces exposure dose with an X-ray filter and displays the background image in realtime.

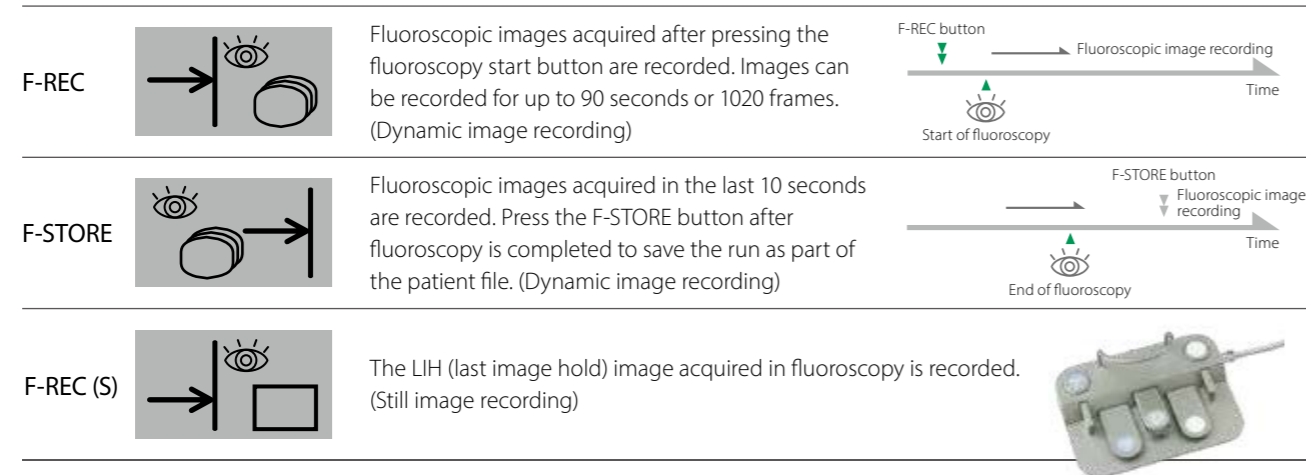


* Only for Alphenix Core+ and Alphenix Biplane

Advanced dose management tools.

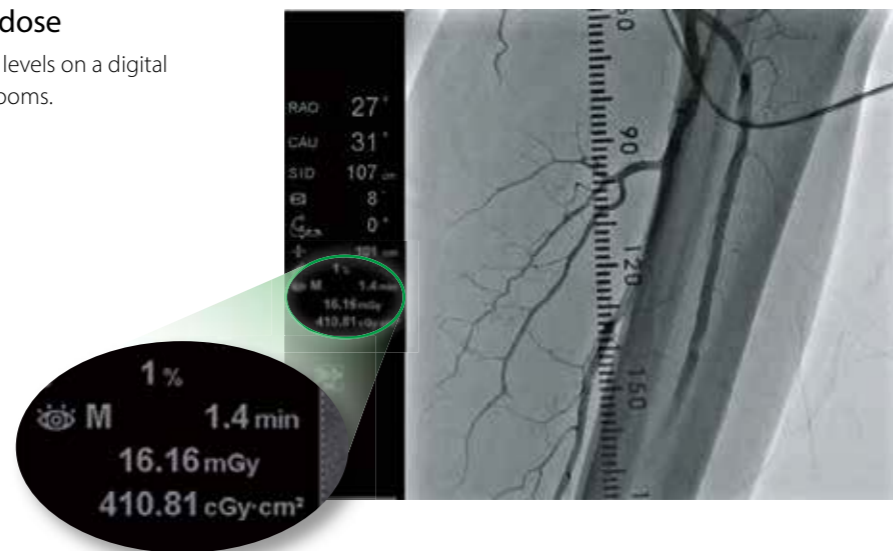
Fluoroscopic acquisition

Using the footswitch, the operator can capture still and dynamic images for future reference.



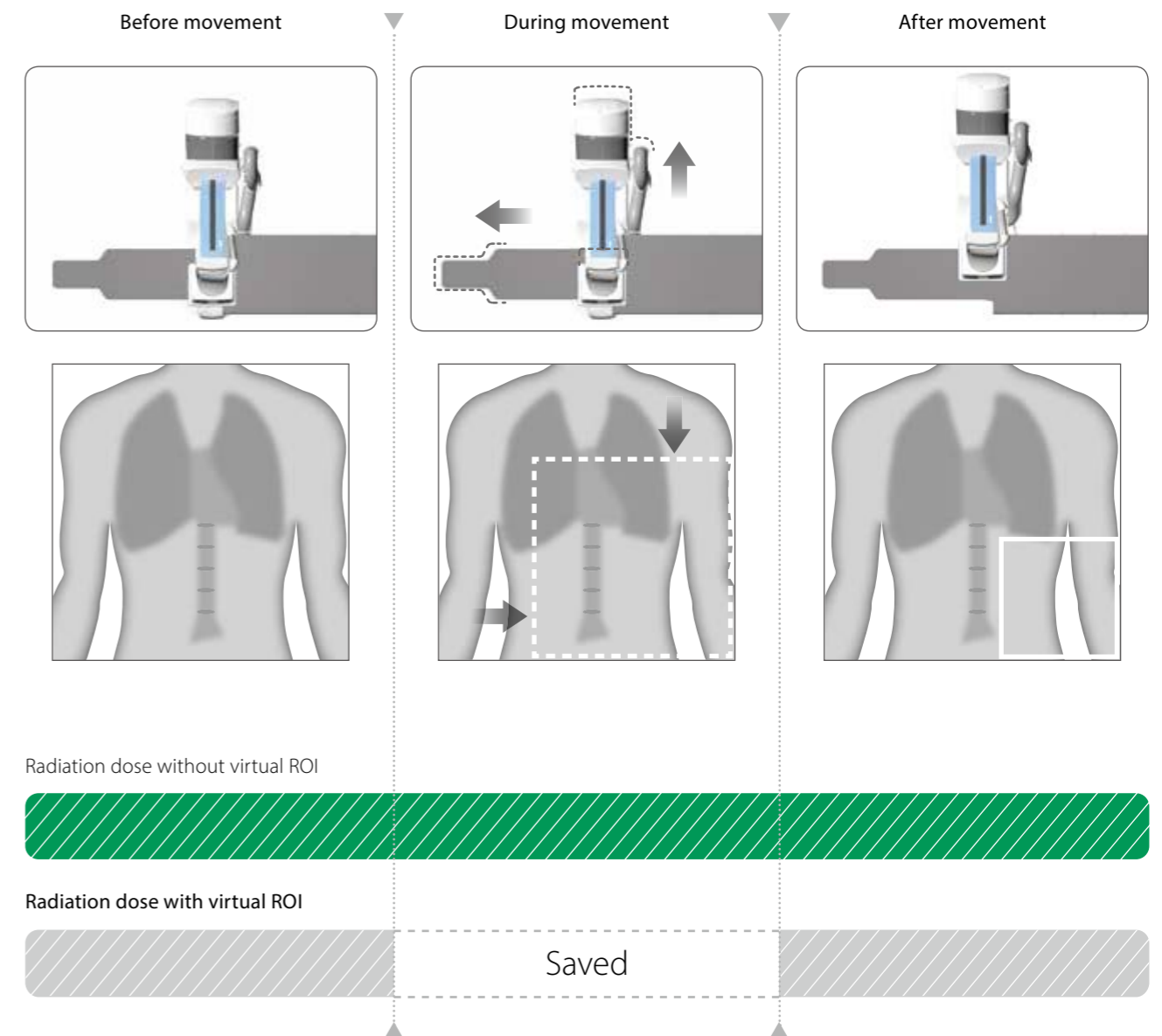
Realtime display of exposure dose

The operator can observe realtime dose levels on a digital display in the examination and control rooms.



DoseRite position

By applying a graphical outline on the Last Image Hold (LIH) image, Virtual ROI can provide the ROI position for the next image after the C-arm or the tabletop is moved. By anticipating the position, unnecessary exposure during movement of the arm or tabletop may be prevented.



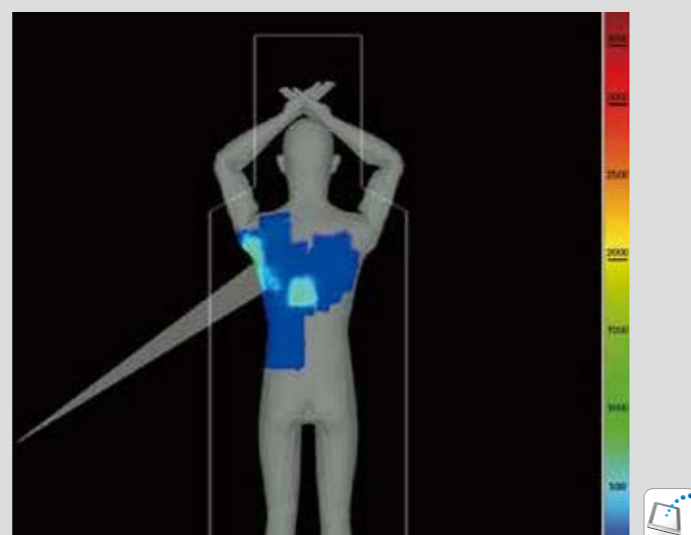
Visualize and document estimated peak skin dose in realtime.

Dose Tracking System (DTS) Unique

Enhanced dose awareness is available through the DTS tool, providing estimated skin dose in realtime. Displayed as a 3D color map on a realistic patient graphic, this data can be used to exclude regions of previous high exposure both during and in subsequent procedures.



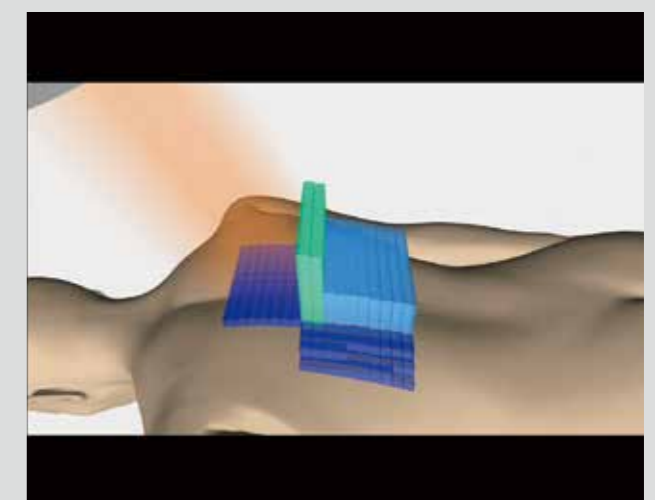
A library of realistic 3D patient models is available.



DTS indicates peak skin dose and maximum skin dose in the field-of-view in realtime.



Standard system



DTS

DTS can display a color coded estimate of skin dose in realtime on a realistic patient graphic. To learn more about the DTS, use the MedicalAR App to view the accompanying video from this page.

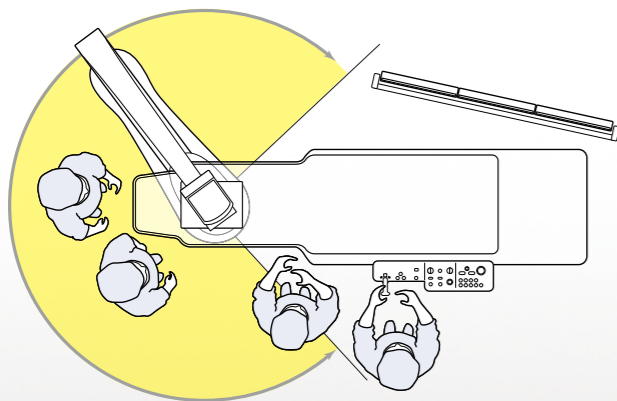
Work with unprecedented access.

Unique multi-access floor and ceiling mounted C-arm positioners were developed through extensive collaboration with leading clinicians. This resulted in designs that optimize C-arm positions in order to assist clinicians in providing optimal patient care.

Alphenix Core+

FLOOR-MOUNTED MULTI-ACCESS SINGLE-PLANE SYSTEM

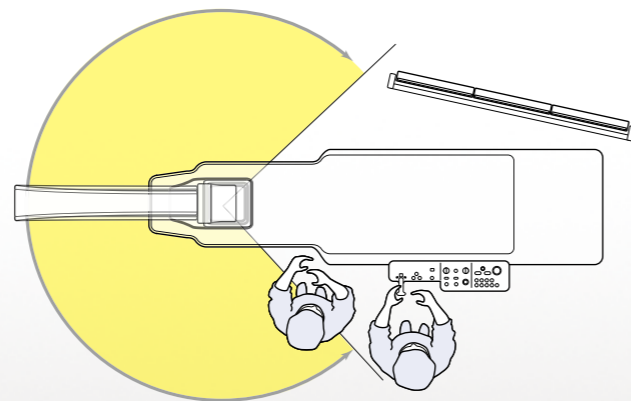
Providing flexible patient access, the 5-axis floor-mounted C-arm is ideally suited for a wide range of applications.



Alphenix Sky

CEILING-MOUNTED SYSTEM

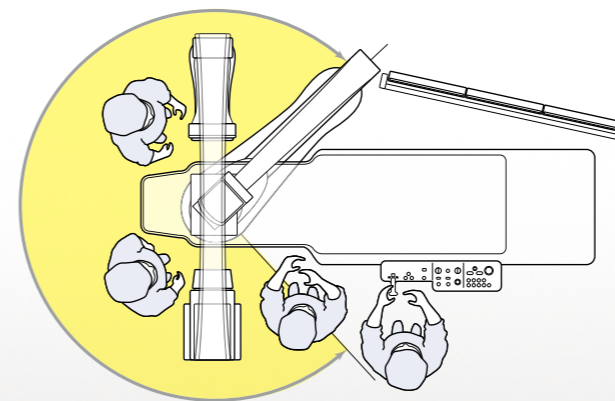
Unique ceiling-mounted C-arm offers motorized longitudinal and lateral coverage to support upper extremity examinations.



Alphenix Biplane

MULTI-ACCESS BIPLANE SYSTEM

Combining the exceptional flexibility of a floor-mounted and ceiling-mounted C-arm combination, the biplane system is an ideal choice for vascular and neuro diagnostic and interventional procedures.



Select the optimal lab for your clinical needs.

Alphenix interventional systems flexibly addresses your clinical needs, enabling you to enhance your workflow and prioritize patient care by offering multi-access c-arms with flat panel detectors in three different sizes.



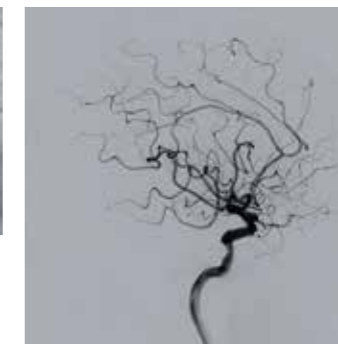
Detector size choices

Alphenix interventional angiography systems are available with a range of flat panel detector sizes to suit your coverage needs.

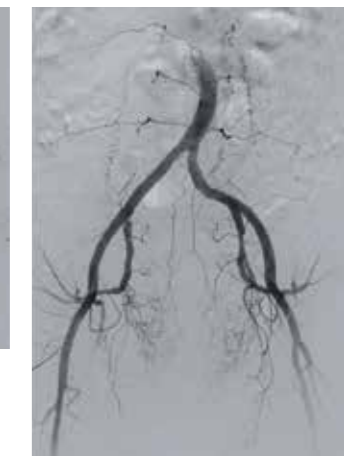
8" x 8"
(20 cm x 20 cm)



12" x 12"
(30 cm x 30 cm)



12" x 16"
(30 cm x 40 cm)



30 cm (12") neuro-sized FPD

Canon Medical Systems' unique 30 cm x 30 cm (12" x 12") FPD's compact housing clears the patient's shoulder in the lateral projection, making it ideally suited for neuroradiology.



Fast, easy flat panel positioning

The flat panel detectors and the beam limiting devices mounted to the frontal and lateral systems are automatically rotated so that images are always displayed with the head end at the top of the monitor screen.



Multiple table options

Designed to support your clinical practice using a hybrid approach to allow greater positioning flexibility in order to facilitate both endovascular and open surgical techniques.



Standard type



Tilting type