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Siemens Healthineers introduces functions to standardize imaging in the hybrid OR

- **Standardized workflows in imaging designed to simplify and speed up minimally invasive treatments in the hybrid OR.**

At the 2019 Charing Cross Symposium in London, an international congress for the management of vascular diseases, Siemens Healthineers introduces software and hardware functions for imaging that will simplify surgical workflows in the hybrid OR and standardize treatments for a wide range of cases. This could mean shorter procedure time in the OR and a lower complication rate for the patients.

The number of cases requiring endovascular repair in hybrid OR is on the rise, since improvements in medical technology are making more and more patient groups eligible for minimally invasive treatment. But imaging in the hybrid OR often necessitates time-consuming, manual settings of the imaging system. The functions offered by Siemens Healthineers for “Procedural Intelligence” will now help automate complex workflows in the hybrid OR and standardize endovascular procedures. As a result, the medical team can devote more attention to the patient during the operation, and also cut down the length of time the patient needs to spend in the OR.

The functions for “Procedural Intelligence” are a combination of new hardware design and new software functionalities. They will be available for both the Artis pheno, a robot-assisted angiography system, and the Artis icono floor, the new floor-mounted angiography system from Siemens Healthineers.

“As the number and complexity of image-guided minimally invasive treatments continue to grow, automation and standardization will become the keys to efficient and effective patient care,” says Peter Seitz, General Manager Surgery at Siemens Healthineers. “Our imaging systems with Procedural Intelligence enable us to optimize clinical operations in the hybrid OR and achieve consistent results for the patient, no matter how complex the procedures.”

The Artis icono and Artis pheno offer “Case Flows” as a means of reducing the number of manual steps on the angiography system. These are standardized presets covering many procedures, which let operators set the device in accordance with the requirements of the current stage and the operators’ own preferences at the push of a button.

Applications like Syngo EVAR Guidance can speed up the work of preparing for surgery. The pre-procedural CT image is prepared automatically for subsequent overlaying with the 2D x-ray image, a process known as fusion imaging. The applications recognize the vessel walls in the aorta, mark the main vessels branching away from it, and calculate the ideal angulation (the setting angle for the C-arm) for each landing zone. At this point the anatomical markings on the pre-procedural CT image can be displayed on the x-ray image to serve as a guide for the surgeon, enabling the stent to be precisely positioned.

Using the new OPTIQ image chain, image processing has been fundamentally redesigned, from image acquisition to post-processing and visualization of the images on the display of the angiography systems from Siemens Healthineers. For example, the OPTIQ software uses algorithms to select the right image parameters. As a result, image quality remains consistently high across a wide range of angulations and patient weights, which permits significant savings in radiation dose.

The requirements health care providers place on their hybrid OR can vary greatly, for example, depending on whether a modality requiring less space is needed for routine cardiovascular procedures, or whether they want to prepare for complex cases and multidisciplinary use. Siemens Healthineers has the appropriate hybrid OR imaging system for every scenario. The fixed C-arms with the functionality “Procedural Intelligence” support the surgeons’ individual needs by automating workflows and providing optimized

imaging. The floor-mounted angiography systems also provide sterile air circulation above the operating area. In addition, the antimicrobial surfaces ensure infection control in the OR.

Artis icono floor is a fully motorized C-arm system capable of supporting a high volume of endovascular procedures in standardized form, day in, day out. Thanks to its small footprint, it will generally fit into any existing OR.

Artis pheno, a robot-assisted C-arm system, is particularly suitable for use in large-scale, multidisciplinary hybrid ORs.

The products mentioned here are not yet commercially available in all countries. Their future availability cannot be ensured. They are not for sale in the U.S.

This press release is available at

www.healthcare.siemens.com/press-room/press-releases/pr-20190415014shs.html

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