

Press Release

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Trinias MiX-Package

Shorter treatment times and less contrast media used

**Trinias angiography system providing enhanced therapeutic support applications /
3D application, trace mapping function, PCI support application**

Shimadzu, a worldwide leading manufacturer of diagnostic imaging equipment, highlights its new Trinias MiX package (Minimally invasive eXperience) during the ECR 2016 congress in Vienna, Austria. This product supports less invasive treatments through a variety of applications. The Trinias MiX package is an extension of the Trinias angiography system, which facilitates high-level interventions through proprietary image processing technology. Shimadzu provides functional enhancements, such as newly developed 3D application, the trace mapping function, and the PCI support application. As a result, shorter treatment times are achieved and less contrast media is used.

The 3D application allows the angiography system to be linked to previously acquired CT images during the interventional procedure. The trace mapping function automatically extracts and displays only the outline of vessel walls providing a map image for easy device guidance. In addition, the PCI (Percutaneous Coronary Intervention) Support application can display stents in a fixed position in real-time. Furthermore, thanks to the SCORE PRO Advance image-processing engine, the system now can operate at about half the conventional X-ray dose. Together, these support more user-friendly treatment, with less burden on patients.

Minimally invasive procedures

In comparison to invasive surgical procedures, minimally invasive procedures use a catheter (a small tube for medical procedures), which is inserted into a blood vessel through a small incision in the skin. X-ray fluoroscopy is used during the procedure to

guide the catheter and deploy devices. Endovascular therapy is less invasive and more patient-friendly and as a result, widely used in the context of a heightened awareness of the Quality of Life (QOL).

Angiography systems must provide high imaging quality and ease of operation to support the practitioner during procedures. It is expected that advances in stents and other endovascular therapeutic devices in recent years, as well as the establishment of various interventional procedures will further reduce the burden on patients.

Features of the New Package

The Trinius MiX-Package functional enhancements cover the following therapeutic support applications:

- 1. SCORE Navi + Plus 3D Application interlinked with CT images**

With this application, pre-procedure CT images can be imported to the workstation, enabling an overlay with fluoroscopy, including angular synchronization with the angiography system C-arm. Linking the CT images directly to the treatment images allows a seamless flow from pre-procedural therapeutic design to navigation during the procedure.

- 2. SCORE StentView + Plus PCI Support Application improves device detection efficiency**

This is the more advanced version of Shimadzu's proprietary SCORE StentView application to support safe and reliable PCI. In addition to a function allowing stents, which are in constant motion due to heartbeats, to be enhanced and displayed in a fixed position in real-time, a new function has been added to configure the region of interest (ROI) from the preceding fluoroscopy image. Narrowing the detection area on the fluoroscopy image dramatically improves the device detection efficiency, even in procedures using multiple devices, thereby shortening treatment times.

- 3. SCORE MAP provides automatic trace mapping for aortic stent grafting**

This newly developed trace mapping function automatically extracts only the

outline of vascular walls based on DSA¹ images. Overlaying this with fluoroscopy images dramatically increases the visibility of wires and devices. This is useful in endovascular treatments in the aorta, where contrast concentration uniformity is particularly problematic, while helping to reduce contrast media use. In addition, the mapping region can be narrowed and sketched by the practitioners themselves, supporting more efficient procedures.



Figure 1: Trinius F12 MiX package Floor-Mounted C-Arm Type provides functional enhancements which achieve shorter treatment times and less contrast media.



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¹ DSA (Digital Subtraction Angiography) is a radiography procedure in which images of bone and blood vessels taken after the administration of a contrast media are processed to digitally subtract the information on the bones only in real-time, thereby extracting just the blood vessels.