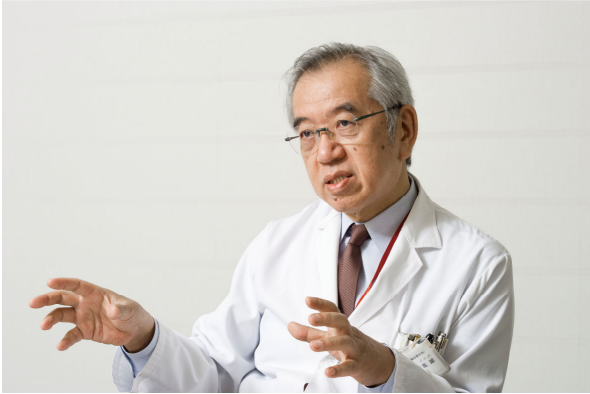


# Vascular

## Benefits of Using SCORE RSM for Lower Extremity Interventions –Okamura Hospital–



Dr. Takao Okamura, Director



Okamura Hospital

Okamura Hospital (Kochi City, Kochi Prefecture) is a general hospital with 11 medical departments including internal medicine, surgery and cardiovascular surgery, and 145 beds. The hospital was first established in 1946 as Okamura Surgery Hospital and became a general hospital in 1953. Operating on the basic principle of "Applying advanced techniques in service of the local community," the hospital takes a "patient-first" attitude in aiming to provide a superior treatment environment in terms of functionality, organization and environment. Since December 2012, Okamura Hospital has been using the Trinias F12 package – an angiography system for use during cardiac and lower extremity interventions. The hospital focuses especially on sophisticated lower extremity interventions, including for critical limb ischemia (CLI), and gives the SCORE RSM high praise. In this article, we asked Dr. Okamura's opinions on the usability of the Trinias system, focusing on use of SCORE RSM.

### – How do you use the Trinias angiography system?

At our hospital we normally employ ultrasound for diagnosis of vascular lesions in the lower extremity, and sometimes CT. Angiography systems are used for treatment. Talking in terms of use in different procedures, 80 % of angiography system usage is for lower extremity interventions and 20 % for cardiac interventions.

As you can grasp from the numbers, our hospital focuses very strongly on lower extremity interventions. We are not limited to interventions in the femoral artery, but actively perform interventions in cases with multiple lesions, including for total occlusion lesions in arteries below the knee. When it comes to assessing the true lumen in cases of total occlusion lesions, we will perform wire operation under echo guidance, which we believe to be a technique that is unique to this hospital compared with other institutions.

Also, the SCORE RSM image software included as standard with Shimadzu angiography systems differs from the usual DSA software in being able to create a sharp image of even microscopic blood vessels when the catheterization table is moved. We use the software a lot because of this feature.



Fig. 1 Trinias F12 Package Angiography System

### – Could you tell us a little more about SCORE RSM?

I first heard of this function when learning about Shimadzu angiography systems before one was introduced here at the hospital. To be honest, it would not be an exaggeration to say the reason we chose a Shimadzu system was because it came with this function. In practice, we use SCORE RSM imaging in every case of lower extremity intervention at this hospital. We believe we can perform any lower extremity intervention thanks to the functions of SCORE RSM. It is extremely useful.

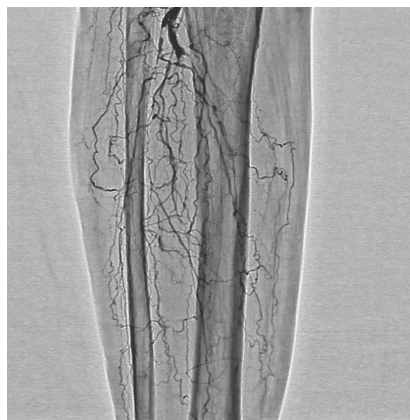
If you were to ask what are its benefits, I would say first its rendering performance. SCORE RSM image is almost the same quality as when using

DSA. In particular, we have many CLI patients who find it difficult to stay still on the catheterization table because of pain, but with SCORE RSM we are able to preserve detailed information on microscopic blood vessels in the rendered image even in patients who exhibit body motion. SCORE RSM is also very useful for understanding collateral circulation. Because masked imaging is not necessary, we keep information on patient bones, which makes it very easy to understand positional information that is actually very useful for treatment. When we have bone information, with CLI cases we are able to understand accurately how much blood flow is passing through which parts of collaterals. This is extremely useful.

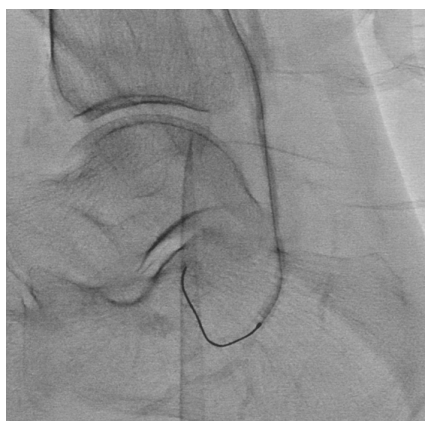
### Cases



**Fig. 2** Lower Extremity Imaging Using SCORE RSM Image Rendering with Uniform Density to the Subject Periphery



**Fig. 3** Collateral Circulation Rendered Clearly in a Case of CLI Using SCORE RSM



**Fig. 4** Transparent Image (4.5 Inch) During PPI

### – Are there any other advantages to Trinias?

The field-of-view size of the flat panel is very good. As I mentioned at the beginning, we use the Trinias both for lower extremity interventions and for cardiac interventions. A flat panel that is too big would cause problems, and a small flat panel size optimized for cardiac use would be difficult to use for lower extremity interventions. I think the 12 inch field-of-view size of the FPD that comes with the Trinias is just right for our needs at this hospital. When imaging the entire lower extremity, we are able to image both extremities simultaneously. The large field-of-view size captures the end of the wire, which is useful for reducing complications caused by wire perforations of the blood vessel.

The C arm is a floor-mounted design but also moves longitudinally, so after performing a cardiac examination and treatment, the patient can maintain their position while we subsequently perform contrast imaging of the lower extremity. This is a definite benefit.

Also, with the Trinias, there was no need to substantially redesign our existing catheterization room, and yet we were still able to install an imaging system with wide imaging range. This was a major positive.

### – Could you tell us any new ideas or features you would like to see included in the angiography system?

Particularly for total occlusion lesions, I would like to see the ability to more clearly render blood vessel calcification, or a function showing which blood vessels contain calcification. Also, I would like to see software developed that is able to measure and evaluate blood flow on angiographic images taken before and after EVT.

– Thank you very much.

### Case

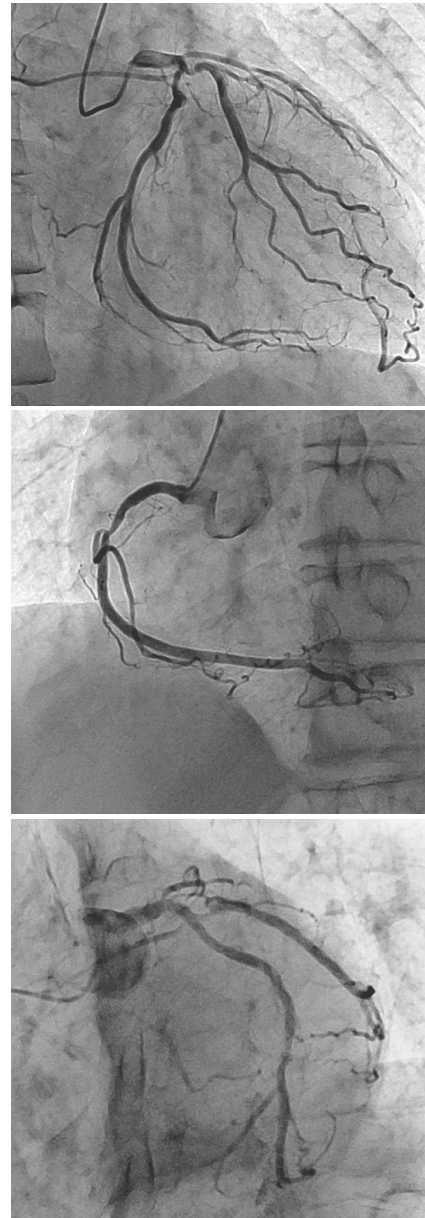


Fig. 5 Good Contrast Images Even with CAG