

Carestream

OnSight 3D Extremity System  
Clinical Imaging Insights

# 3D Clarity. 3D Accuracy. 3D Insight.

Reveal the Truth of Orthopaedic Injuries.



SMART IMAGING SOLUTIONS

# For More Confident Diagnoses, Step into the Third Dimension.

The next time you perform an orthopaedic extremity exam, think about this: your challenge is to diagnose a 3D joint that has a 3D problem in a 3D world. So why would you image it using 2D technology?

The fact is, a conventional X-ray will capture an image... but a true 3D X-ray will capture the truth.

Meet the CARESTREAM OnSight 3D Extremity System. It provides vivid, 3D X-ray images at the point of care. And it allows weight-bearing studies not possible with traditional CT.

The result? You get a fully dimensional image that you can rotate to examine from every angle. And, because it was imaged under natural load, you'll understand how the injury affects the joint while in use.

## Advantages at a Glance

- Provides 3D, weight-bearing and non-weight-bearing CT images of lower extremities and maximum patient comfort for upper extremities.
- Captures a large area of interest in a single scan and delivers pristine, 3D diagnostic images.
- Improves anatomical visibility and diagnostic confidence with iterative reconstruction and advanced metal-artifact correction.

## Feature-Rich Design Supports Clinical Imaging Excellence.

Secondary screen lets patients watch as their scan progresses.

Patient-support handles provide safety and comfort and rotate out of the way when not needed.

Capture and reprocess at a single station with an intuitive graphical interface. System can be installed with an attached or remote workstation.

Spacious imaging bore to accommodate large patients.

Wide door opening for easy, step-in patient access.

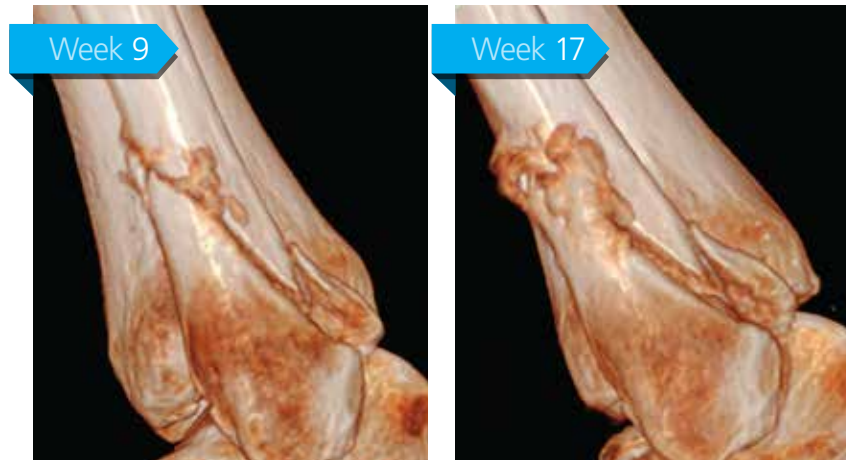
Dual-side positioning joystick.

Low capital equipment, installation and maintenance costs combine for a total low cost of ownership.

\*3D rendering can be viewed on the OnSight System; to view on PACS, a 3D rendering capability is required.

## True 3D Radiography Provides All of These Benefits:

- High-resolution 3D images that reveal the subtle fractures 2D images can't.
- Carestream's Tri-Source Technology utilizes 3 X-ray sources to capture 600 views per scan, yielding far more anatomical detail and reduces cone beam artifacts.
- Large field of view.
- Advanced scatter and metal artifact-correction algorithms.
- High-resolution isotropic image capture.
- Lower-dose imaging than traditional CT.
- Realistic, 3D images to help you better explain the injuries and treatment plans to patients.



The ability to monitor fracture healing over time is a key clinical use of the OnSight System. Its remarkable 3D image quality allows the surgeon to determine when a patient may be able to bear weight or return to sports activities.\*



# Foot Ankle Wrist Knee Elbow

## Image Quality That Speaks for Itself.

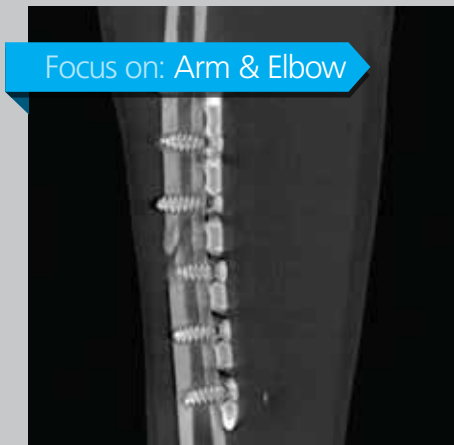


This 3D-rendered calcaneal fracture can be used by the surgeon for surgery planning. Knowing the precise locations of the fracture fragments allows surgeons to plan a more effective surgery.\*

\*3D rendering can be viewed on the OnSight System; to view on PACS, a 3D rendering capability is required.



One of the features of the OnSight System is a soft tissue reconstruction. Here we can see both the ACL and PCL, and while not a substitute for MRI, it offers additional information not possible with standard X-ray or many traditional CT systems.



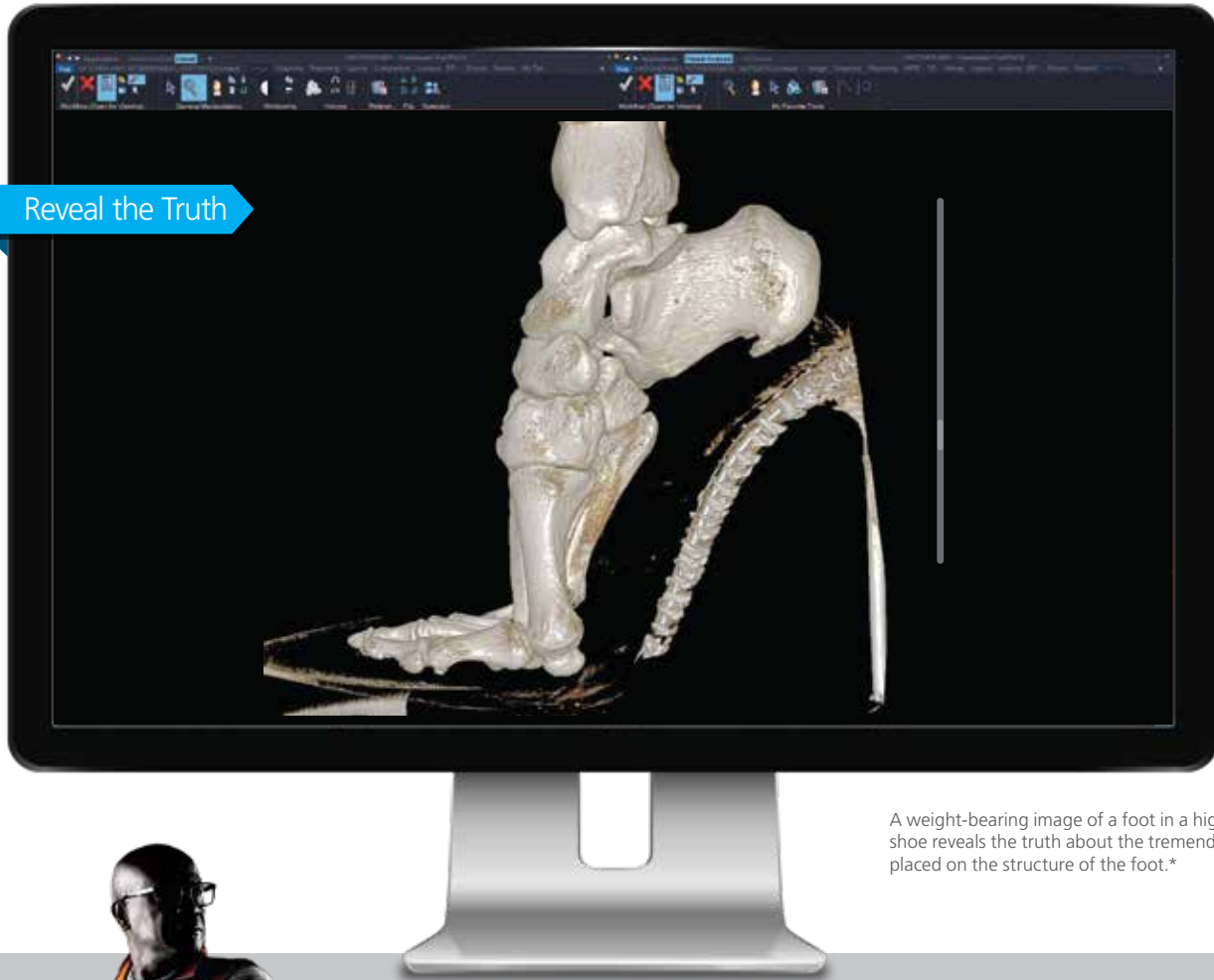
Sagittal plane through the arm showing internal fixation of the radius with plate and screws. The radius fracture is better visualized after CMAR 2 is applied.



Coronal view of the triquetrum shows the fracture not seen on 2D X-rays. This type of injury should be checked for consolidation to ensure the fragments do not displace further over time.

# FootAnkleArmHandWr

Reveal the Truth



A weight-bearing image of a foot in a high-heeled shoe reveals the truth about the tremendous stress placed on the structure of the foot.\*



Non-weight-bearing

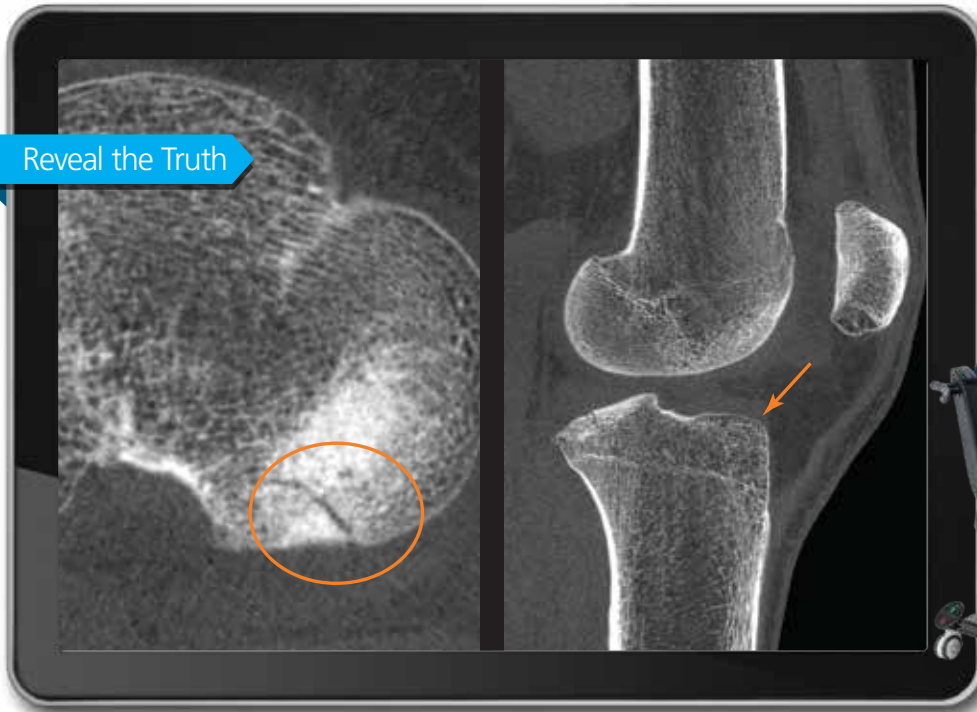


Weight-bearing

A natural weight-bearing configuration enables a more accurate determination of the relative placement and orientation of the bones in the foot, ankle and knee while under realistic load conditions. Note the curve of the arch (blue line) as well as the relative location of the joint spaces on the left image, as compared to the weight-bearing image on the right. The arch has flattened, illustrating a flatfoot deformity, and the position of the talus has changed, so it appears to impinge on the calcaneus.

\*3D rendering can be viewed on the OnSight System; to view on PACS, a 3D rendering capability is required.

# istKneeElbowExtremity



Axial and sagittal slice from the OnSight System scan that shows a classic impaction fracture of the posterior aspect of the lateral tibial plateau – which was missed on 2D X-rays. It is important that this type of fracture is identified and addressed since it can lead to osteoarthritis if left untreated. It also helps to determine the length of time the patient should be in a cast.



Tibial plateau fracture with fixation reveals fracture fragments in the presence of metal (CMAR) – useful for evaluating fracture healing and/or hardware stability.

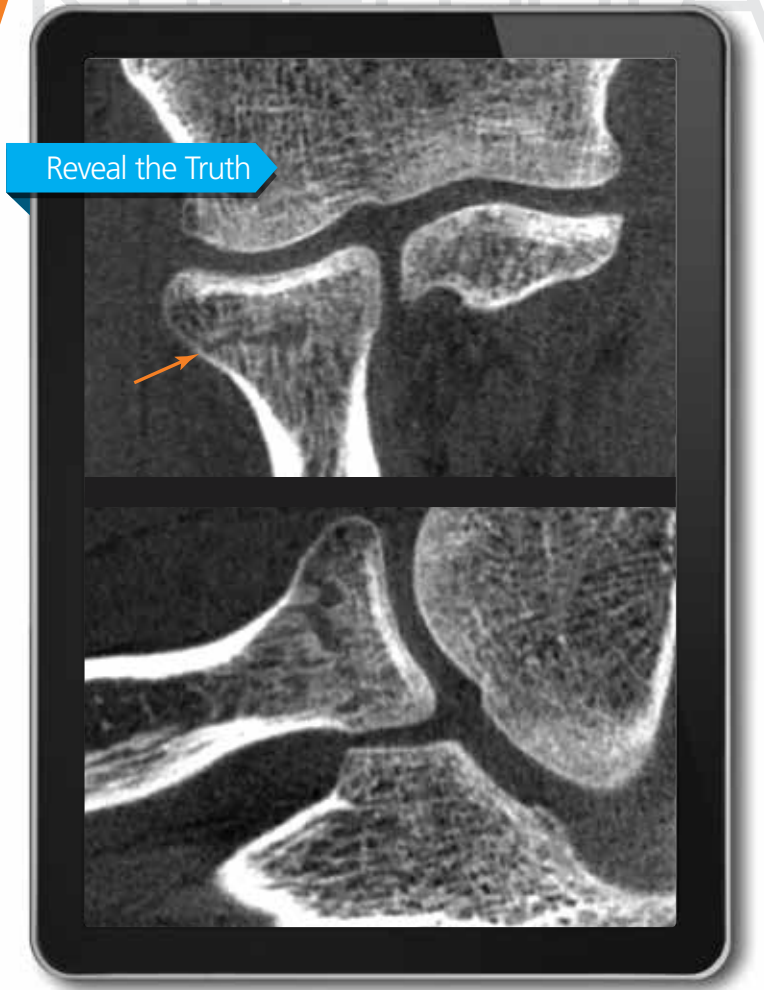
\*3D rendering can be viewed on the OnSight System; to view on PACS, a 3D rendering capability is required.



# Arm Elbow Knee Foot An



MPR slices acquired with the OnSight system showing a clear trabecular fracture of the radial head that was not visible on the standard 2D X-ray or traditional CT. In a traditional CT the elbow is placed next to the patient's head or torso causing increased scatter, increased noise and increased X-ray exposure to anatomy. The OnSight system positions the elbow away from the body and only the elbow is imaged.



While the displaced fracture of the proximal radius is clearly seen in the image on the left, the 3D-rendered image on the right will better assist the orthopaedic surgeon in developing a good preoperative treatment plan.\*

\*3D rendering can be viewed on the OnSight System; to view on PACS, a 3D rendering capability is required.

# HandWristExtremity

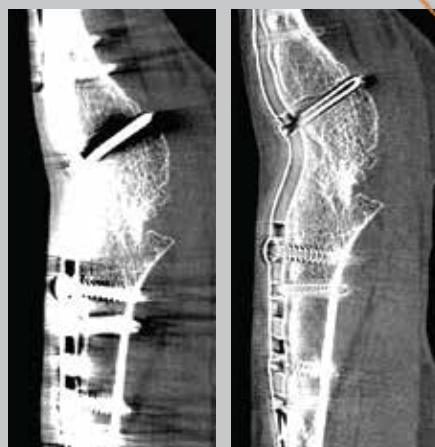


This surface-rendered 3D image clearly demonstrates the fracture of the distal portion of the radius as well as a subtle fracture of the trapezium that was missed on a 2D X-ray.\*



A non-displaced fracture of the scaphoid (blue) is seen here in a patient wearing a cast. Also seen is subchondral sclerosis of the proximal scaphoid at the scapho-radial joint (orange).

The fracture line could also be seen on the 2D radiograph, although not as clearly. However, the subchondral sclerosis cannot be appreciated on radiographs, which shows the added benefit of OnSight imaging.



With Carestream's proprietary Metal Artifact Reduction, the clinician can clearly visualize the degree of wrist fusion.

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NO MATTER WHICH ROAD YOU'RE ON,  
WE'LL GET YOU WHERE  
YOU NEED TO GO.

SMART IMAGING SOLUTIONS

### The Fastest Route to a Successful Imaging Future.

As you travel to the future of imaging, what's your next step? Maybe you want to move from analog to digital. Perhaps you need to accelerate your X-ray workflow. Or it could be you're ready to add new imaging modalities to your facility to provide better patient care. Wherever you're headed, we have the smart solutions you need: Full-digital imaging suites and leading-edge mobile units. Wireless, shareable detectors and CR-to-DR retrofit kits. Affordable CR systems. As well as additional modalities such as Extremity CT and Fluoroscopy.

### Start Mapping your Route Today.

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Carestream also offers a suite of products that support our solutions-based enterprise imaging IT platform. The gold standard in X-ray film. And, when it comes to digital output, our laser imagers, managed print solutions and self-service kiosk provide high-quality solutions for all imaging modalities.

### A Community of Service and Support.

For dependable service, look to our Customer Success Network. We work continuously to improve your imaging performance, help you to innovate as needs change, and make the most of your budget and resources. Carestream's Customer Success Network surrounds you with a dynamic team of experts, with a Single Point of Entry for easy, customized access to the right people in every situation. You and your patients will benefit from the expertise and best practices only Carestream can deliver – based on thousands of customer engagements worldwide and our 100-year heritage in medical-imaging innovation.



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