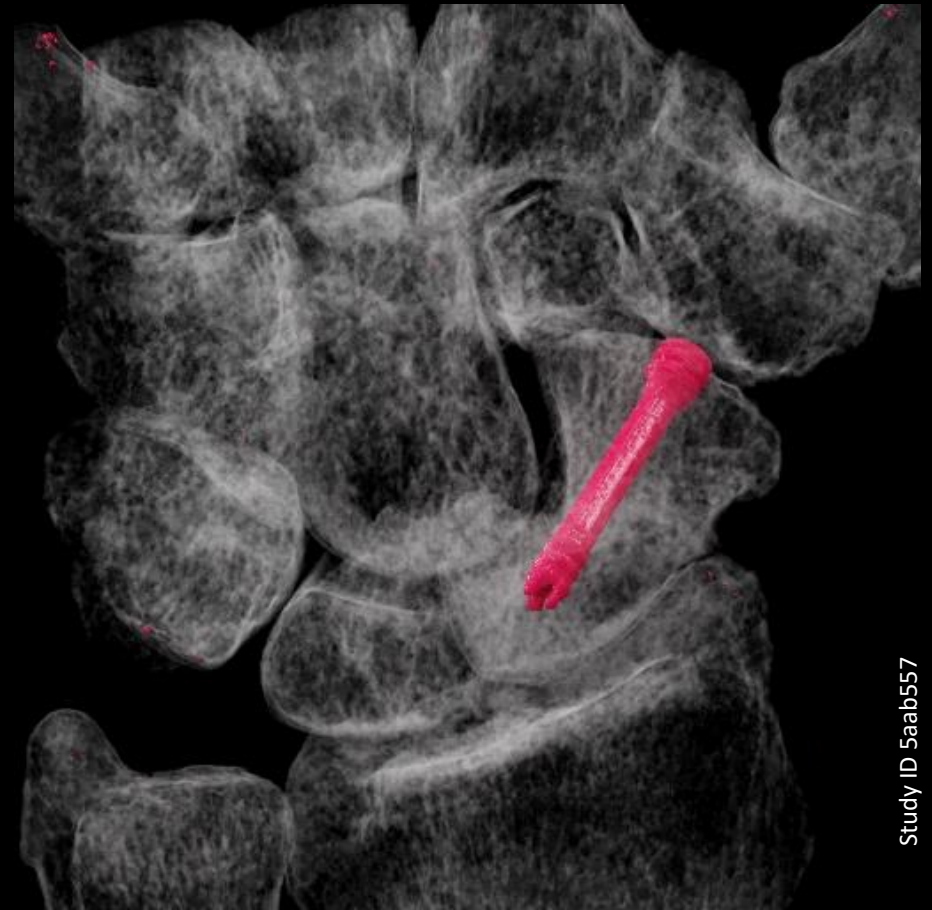


Scaphoid screw dislocation

Multitom Rax Real3D¹ Hi-Res clinical case
University Hospital Wuerzburg, Germany



¹Option



Clinical background and indication for Multitom Rax Real3D¹ Hi-Res examination

Patient

Female | *1951 | BMI 24.4 kg/m²

Anamnesis

Patient fell on the left wrist three months before the present examination and suffered a scaphoid waist fracture (Herbert B2). Conventional screw osteosynthesis was performed with subsequent cast immobilization for six weeks.

Currently, the patient reports subtle pressure pain over the radial side of the distal carpal row.

Indication for Real3D¹ examination

Radiography is unable to visualize proper screw placement and remains inconclusive with regard to fracture healing.



Lateral *AP*
Conventional X-ray examination

Study ID 5aab935

The products/features (mentioned herein) are not commercially available in all countries. Their future availability cannot be guaranteed.

¹ Option

Multitom Rax Real3D¹ Hi-Res Settings



Study ID 5aab557

Settings for tableside scan using dedicated metal protocol

<i>Tube voltage</i>	116 kV
<i>Current time product</i>	223 mAs
<i>Dose area product</i>	335 $\mu\text{Gy}\cdot\text{m}^2$
<i>Calculated value for $\text{CTDI}_{\text{vol},32}$</i>	5.0 mGy
<i>Scan time</i>	14 sec
<i>Number of projections</i>	318

Reconstruction settings for sectional views

<i>Pixel size</i>	0.2 mm
<i>Reconstruction kernel</i>	very sharp (equivalent to UR77)
<i>Slice thickness</i>	2 mm

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Multitom Rax Real3D¹ Hi-Res

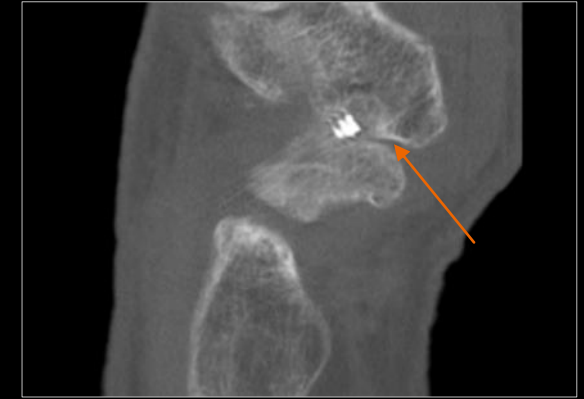
Diagnostic findings

In addition to completed fracture healing, Real3D¹ images with metal artefact reduction reveal screw displacement into the scaphotrapezial joint.

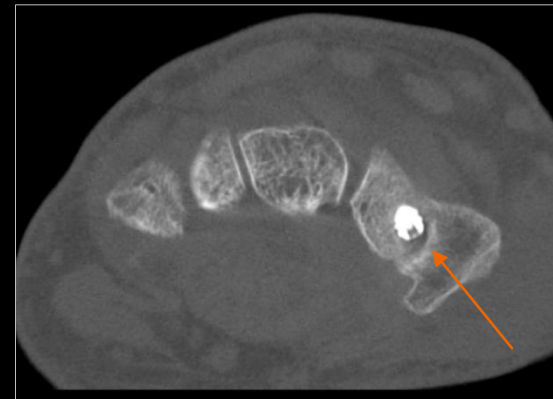
The proximal articular surface of the trapezium displays a small notch (arrow) congruent to the distal portion of the dislocated screw. Signs of secondary osteoarthritis are visible (joint space narrowing, subchondral sclerosis).



Coronal view



Sagittal view



Axial view



VRT view

Study ID 5aab557

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Cinematic VRT is recommended for communication, education, and publication purposes and not intended for diagnostic reading.

¹ Option



“VRT shows sufficient detail to be used for image demonstration in interdisciplinary meetings with orthopedic surgeons. After customization to highlight metal implants in color, it is particularly helpful for visualization of screw dislocation.”¹

Jan-Peter Grunz, MD

University Hospital Wuerzburg, Germany

¹The statements by Siemens Healthineers customers described herein are based on results that were achieved in the customer's unique setting. Since there is no “typical” hospital and many variables exist (e.g., hospital size, case mix, level of IT adoption) there can be no guarantee that other customers will achieve the same results.



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Results from case studies are not predictive of results in other cases. Results in other cases may vary.

Dr. Jan-Peter Grunz is employed by an institution that receives financial support from Siemens Healthineers for collaborations.