

# Elbow instability

Multitom Rax Real3D<sup>1</sup> Hi-Res clinical case  
University Hospital Wuerzburg, Germany



<sup>1</sup>Option



Image reprocessed on *syngo.via* with cinematic VRT.  
Cinematic VRT is recommended for communication, education,  
and publication purposes and not intended for diagnostic reading.

Study ID 5aab555

# Clinical background and indication for Multitom Rax Real3D<sup>1</sup> Hi-Res examination

## Patient

Male | \*1960 | BMI 26.3 kg/m<sup>2</sup>

## Anamnesis

Fall on the outstretched hand resulting in elbow luxation.

## Indication for Real3D<sup>1</sup> examination

Elbow instability and fracture suspicion. Due to the severity of the injury, CT imaging was requested without previous radiography.

Based on the results of several peer-reviewed publications and their own clinical experience, Real3D<sup>1</sup> has been established as the standard for distal extremity imaging in trauma at the radiology department at University Hospital in Wuerzburg.

The Real3D<sup>1</sup> scan mode of Multitom Rax is routinely used for detection of occult fractures or visualization of dislocated fracture patterns for surgical planning.

# Multitom Rax Real3D<sup>1</sup> Hi-Res Settings



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## Settings for tableside scan with High Quality Protocol

<i>Tube voltage</i>	80.5 kV
<i>Current time product</i>	792 mAs
<i>Dose area product</i>	598 $\mu\text{Gy}\cdot\text{m}^2$
<i>Calculated value for CTDI<sub>vol,32</sub></i>	8.2 mGy
<i>Scan time</i>	14 sec
<i>Number of projections</i>	318

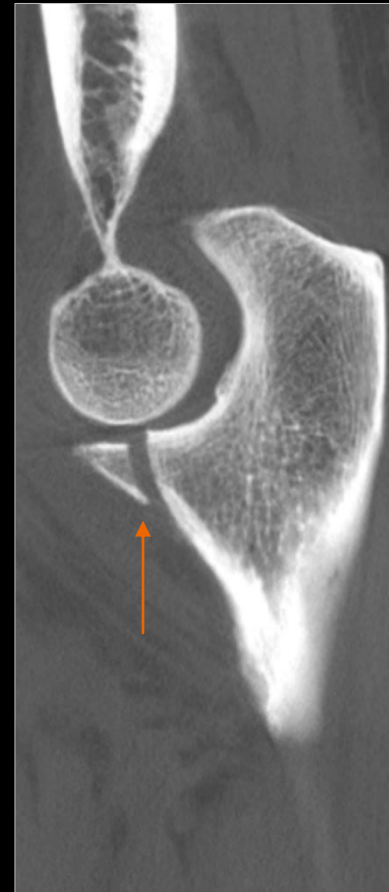
## Reconstruction settings for sectional views

<i>Pixel size</i>	0.2 mm
<i>Reconstruction kernel</i>	very sharp (equivalent to Ur77)
<i>Slice thickness</i>	2 mm

# Multitom Rax Real3D<sup>1</sup> Hi-Res

## Diagnostic findings

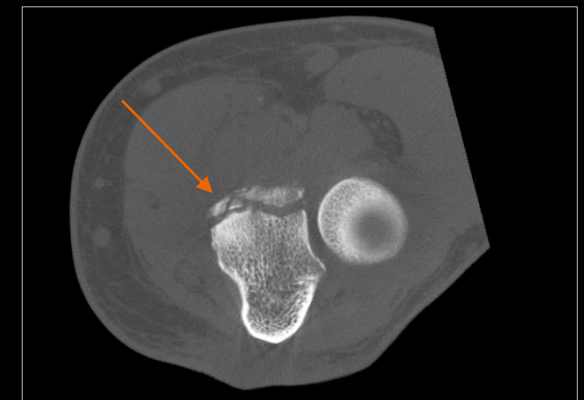
Real 3D<sup>1</sup> images exhibit an isolated multi-fragment injury of the coronoid process, which is commonly seen in dislocation of the ulnohumeral joint. The fracture involves the anteromedial facet, corresponding to type II of the O'Driscoll classification. Sagittal images display a midportion fracture of the coronoid process, corresponding to type II of the Regan & Morrey classification.



*Sagittal view*



*VRT view*



*Axial view*

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The products/features (mentioned herein) are not commercially available in all countries.

Their future availability cannot be guaranteed.

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*“Spatial resolution is excellent in Real3D examinations. Hi-Res studies appear sharp with almost perfect discrimination of cancellous bone and fatty marrow.”<sup>1</sup>*

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<sup>1</sup>The 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.