Severe elbow osteoarthritis

Multitom Rax Real3D[1] Hi-Res clinical case
University of Utah, United States of America



The products/features mentioned herein are not commercially available in all countries. Their future availability cannot be guaranteed. Results from case studies are not predictive of results in other cases. Results in other cases may vary.
1 Option

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Clinical background and indication for Multitom Rax Real3D[1] Hi-Res examination

Patient

Sex	Age	BMI
Male	65–69 years	45–50 kg/m²

Anamnesis

The patient presents to the ED feeling unwell.
He had a mechanical fall and fell onto his right shoulder.

Indication for Real3D[1] Hi-Res examination

Assessment of the elbow because of pain in the elbow joint and no range of motion.



Conventional X-ray examination



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Multitom Rax ReaI3D[1] Hi-Res
Settings



Settings for tableside scan
with High Quality Protocol

Tube voltage	81 kV
Current time product	321 mAs
Dose area product	423.8 µGy·m²
Calculated value for $CTDI_{vol,16}$	15.7 mGy
Scan time	14 sec
Number of projections	318

Reconstruction settings
for sectional views

Pixel size	0.2 mm
Reconstruction kernel	very sharp
Slice thickness	0.5 mm

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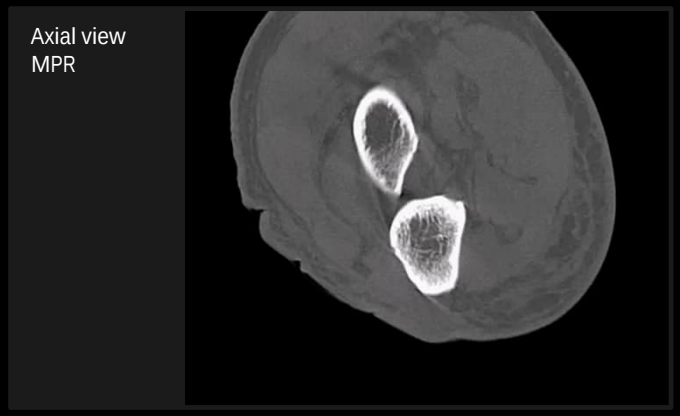
Multitom Rax ReaI3D[1] Hi-Res
Diagnostic findings

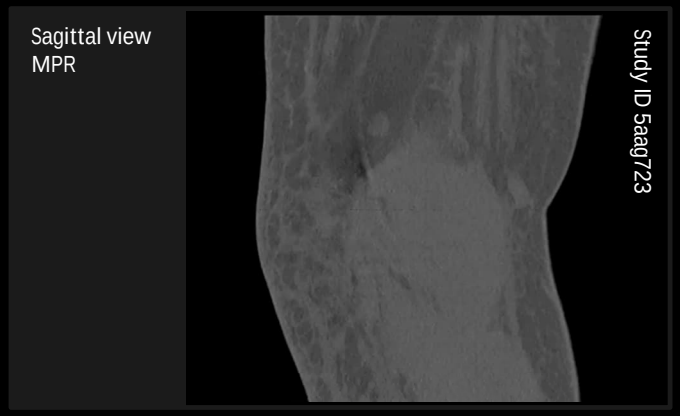
Severe elbow osteoarthritis (likely post-traumatic), with bone-on-bone apposition of the radiohumeral and ulnohumeral articulations, extensive subchondral cystic changes, and multiple osteophytes and heterotopic ossifications suggestive of prior trauma. No acute fracture or malalignment. No elbow joint effusion.











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“Learning points for this clinical case:

- High-quality images of the elbow were obtained despite a challenging patient health condition and severe obesity
- Real3D enabled the radiologist to:
  - Rule out fracture of the elbow
  - Clearly visualize numerous signs of severe osteoarthritis”[1]

1 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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Real3D is an option.

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Frederic Noo, PhD is employed by an institution that receives financial support from Siemens Healthineers for collaborations.

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