

# Elbow Trauma

## Patient History

39-year-old male presented with elbow trauma. Standard 2D X-ray imaging was performed as the routine imaging choice. Imaging on the CARESTREAM OnSight 3D Extremity System was ordered due to inconclusive findings on the 2D radiographs.

## Findings

The standard X-ray indicated significant intra-articular joint fluid consistent with a fracture, but no evidence of this was seen in either the AP or lateral X-rays that traditionally form the basis of the normal imaging workup for such a patient (see Figure 1).



Figure 1 Standard 2D X-ray of elbow trauma patient with evidence of intra-articular fluid build-up consistent with a fracture, but no evidence of fracture seen.

Evidence of a clear trabecular fracture of the radial head became apparent when the patient was scanned on the CARESTREAM OnSight 3D Extremity System. This is shown in Figure 2. The nature of the fracture, where most of the cortical bone was intact, meant that it was very difficult to appreciate on the 2D radiographs. This type of trauma required the patient to be placed in a cast rather than allowing elbow motion as might have been the diagnosis from the 2D radiograph. This case demonstrates the value of acquiring high-resolution 3D data for patients where fracture is suspected but not confirmed with traditional imaging protocols.

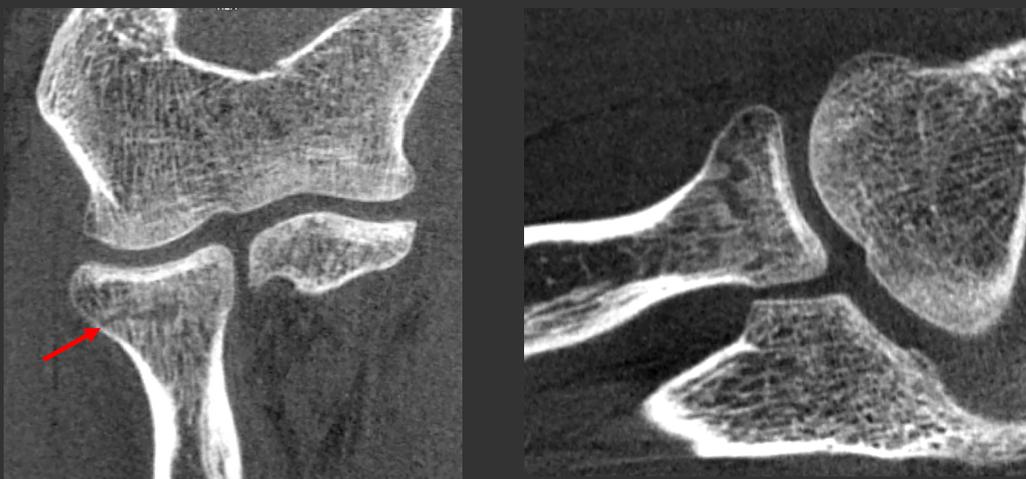


Figure 2 MPR slices from the patient in Figure 1 acquired with the OnSight extremity CT system showing a clear trabecular fracture of the radial head that was not visible on the standard 2D radiographs.