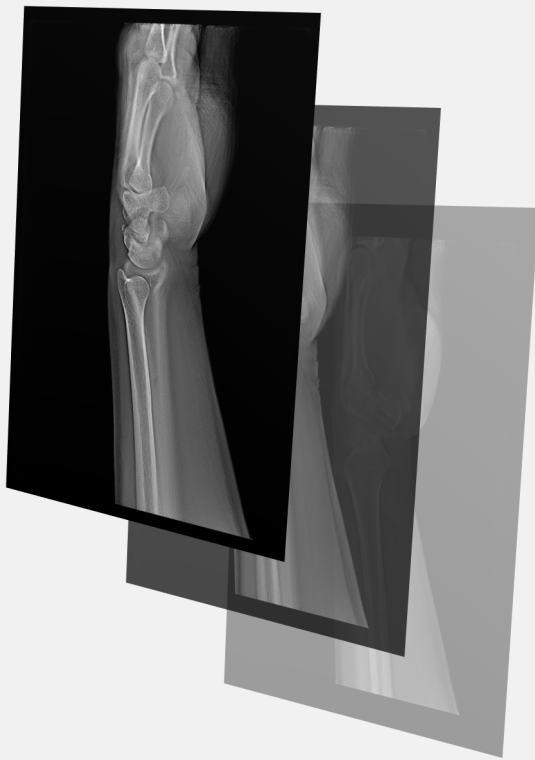


Clinical Case Study.

Point-of-Care Imaging Avulsion Fracture of the Triquetral

The Adaptix Ortho350 is a cutting edge, portable Digital Tomosynthesis (DT) system offering high-resolution, low-dose 2D and 3D imaging for musculoskeletal diagnostics. It uses a low-dose source that emits X-ray from an array of positions and, similar to CT, reconstructs image stacks for clearer visualization of our complex joint structures.



Point-of-Care Imaging Avulsion Fracture of the Triquetral

Clinical Setting | Orthopedic Surgery Center Miami, Florida

PATIENT PRESENTATION



A 50-year-old male presented with persistent wrist pain and reduced range of motion after sustaining a fall onto an outstretched hand. Initial plain radiographs were inconclusive; but clinical suspicion for a fracture remained high.

Imaging Challenge

The 3D tomosynthesis dataset demonstrates a triquetrum avulsion fracture. These are frequently missed on plain radiographs because of their small size, subtle displacement, and overlapping anatomy.

In cases where clinical suspicion remains high despite inclusive radiographs, patients are immobilized and referred for CT or MRI, contributing to increased cost, delayed diagnosis, and additional resource burden.

Adaptix Ortho350 Imaging

The patient underwent a low-dose 3D tomosynthesis scan using Adaptix Ortho350 at the point of care. The system produced multi-slice images of the wrist, enabling visualization of cortical and trabecular bone structures.



KEY FINDINGS

Adaptix 3D



Slice 9

Slice 14

Slice 25

*As we progress from Slice 9 to Slice 25, we are viewing the stack from medial to lateral

The Adaptix Ortho350 scan clearly demonstrated a triquetral avulsion fracture that was not visible on the initial radiographs. Tomosynthesis improves fracture visualization by generating multiple sectional images that reduce anatomical overlap.

Clinical Impact

- Immediate diagnosis at the point of care
- Avoided referral for CT/MRI
- Enabled early immobilization and treatment planning
- Reduced patient pathway delay

Digital tomosynthesis is able to improve fracture detection compared with standard radiography and can reduce the need for advanced imaging.

Operational impact for the facility

- Faster orthopedic decision-making
- Reduced CT/MRI demand
- Imaging performed directly within the MSK clinic

Outcome

The patient was treated with immobilization and orthopedic follow-up, avoiding additional imaging and enabling same-day diagnosis and care planning.