



OrthoWorks

Accelerated musculoskeletal imaging
solutions with high resolution &
consistent tissue contrast

AIR™ Recon DL for *Speed* with oZTEo and AIR™ MP Coil

total exam time: 454 seconds



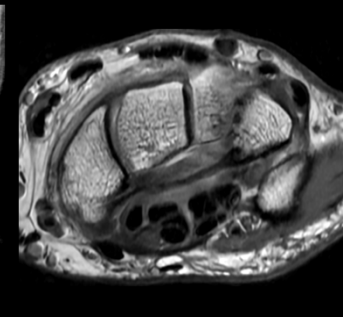
Coronal PD FatSat
0.4 x 0.6 x 2.5 mm
46 sec



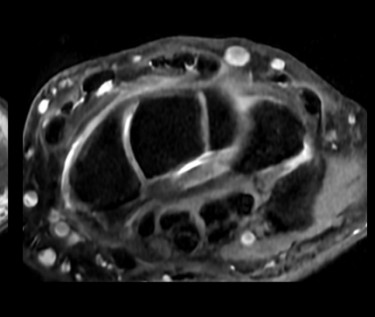
Coronal PD FSE
0.3 x 0.5 x 2.5 mm
51 sec



Sagittal PD FSE
0.2 x 0.4 x 2.5 mm
65 sec



Axial PD FSE
0.2 x 0.4 x 2.5 mm
57 sec



Axial PD FatSat
0.3 x 0.5 x 2.5 mm
46 sec

Coronal oZTEo
0.7 x 0.7 x 1.2 mm
3:09 min



Sagittal and Axial MPR

3D oZTEo
fused with
Coronal PD FatSat

Integrated Registration
on AW Server

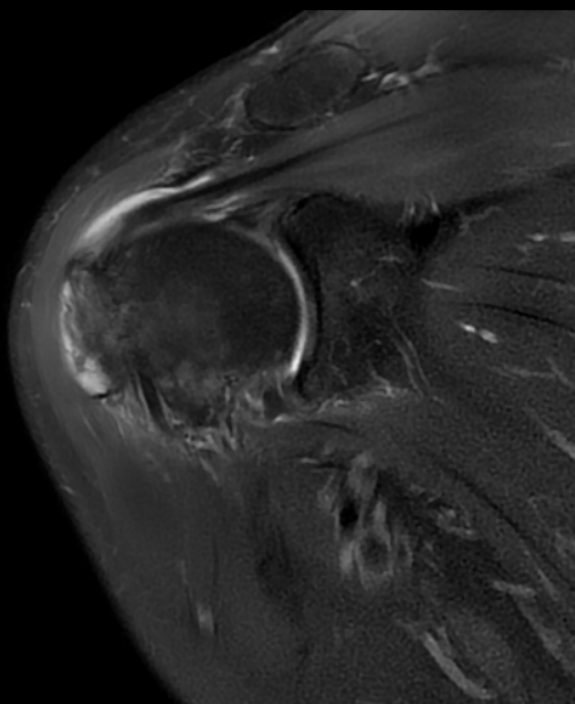


Bone imaging with oZTEo

Calcific Bursitis

Clinical case:

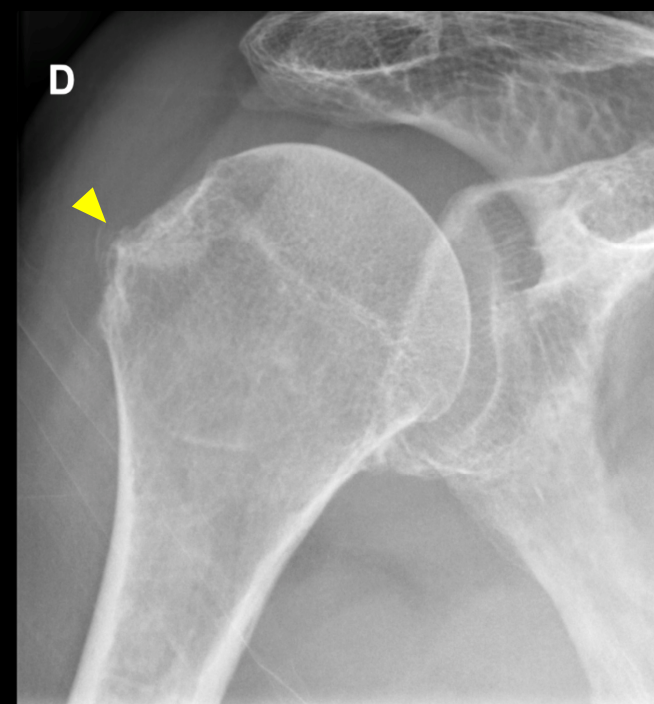
- 62 yo female
- right shoulder pain
- subacromial bursitis secondary to migration of calcium fragments from the anterior part of the rotator cuff into the subacromial bursa



Cor T2 FatSat PROPELLER
0.4 x 0.4 x 3mm
3:07



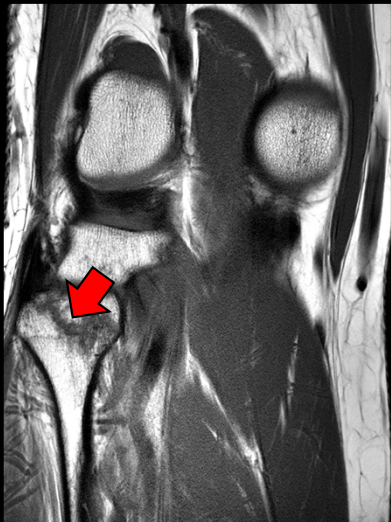
Ax 3D oZTEo
1 x 1 x 1 mm
3:38 min



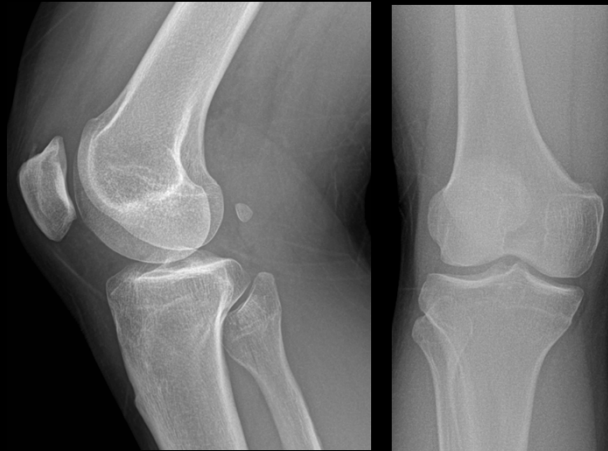
x-ray

Bone imaging with oZTEo

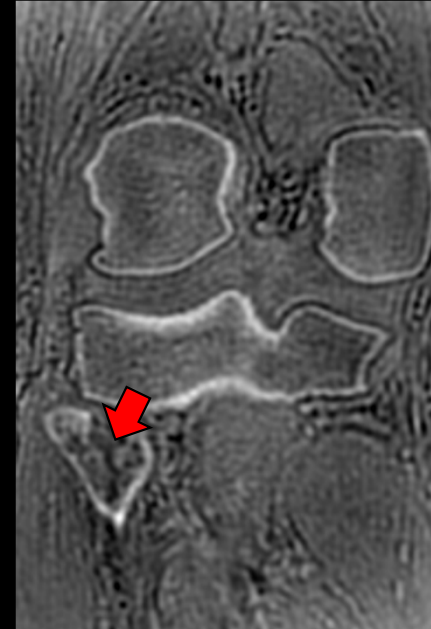
Peroneal fracture



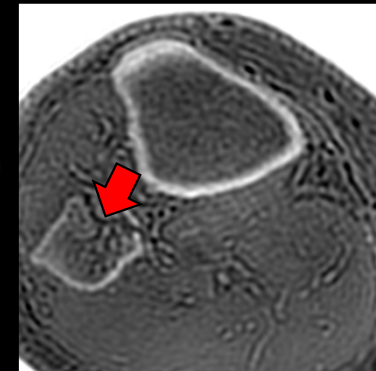
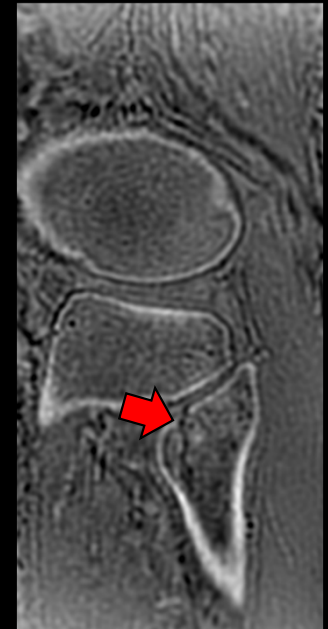
Coronal T1 FSE
0.2 x 0.2 x 3.0 mm



Xray

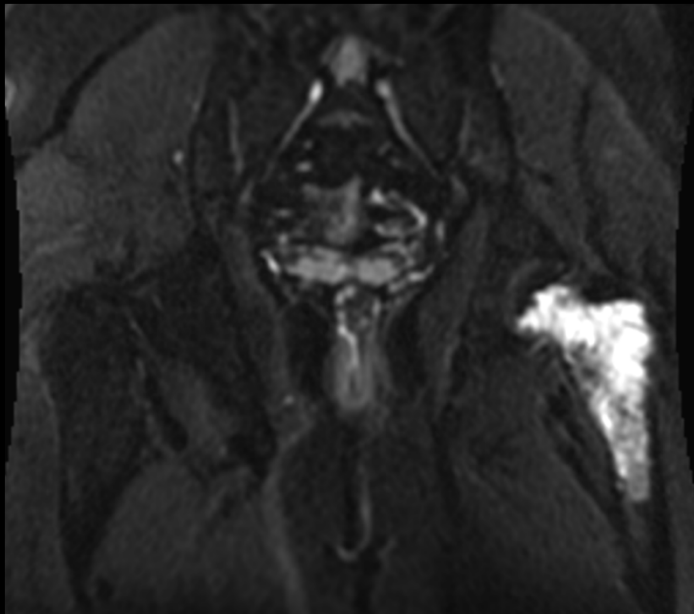


3D T1 oZTEo
(Silent Suite)
0.7 x 0.7 x 1.0 mm
5:00 min



Bone imaging with oZTEo

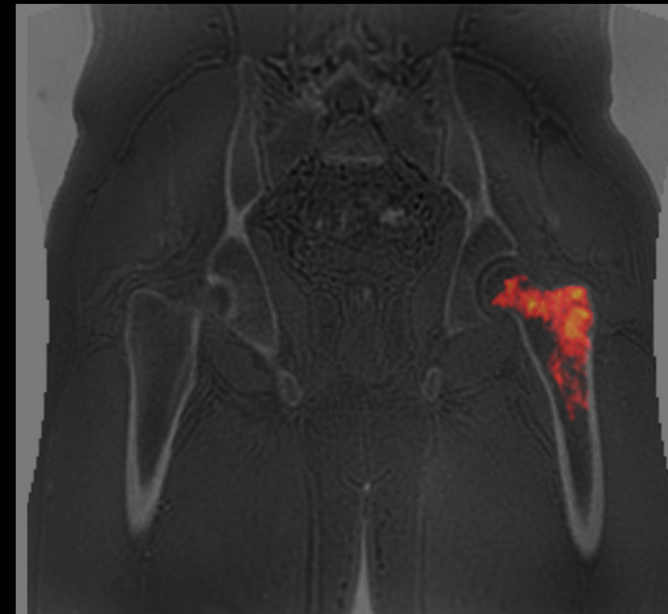
Hip AVN



Cor MUSE DWI
Matrix: 128x150
FOV: 30x30 | 4:16



oZTEo (from Silent Suite)
Matrix: 220x220
FOV: 36x36
S.Th: 1.8/-0.9 | 3:11



Fused oZTEo & MUSE DWI

Bone imaging with oZTEo

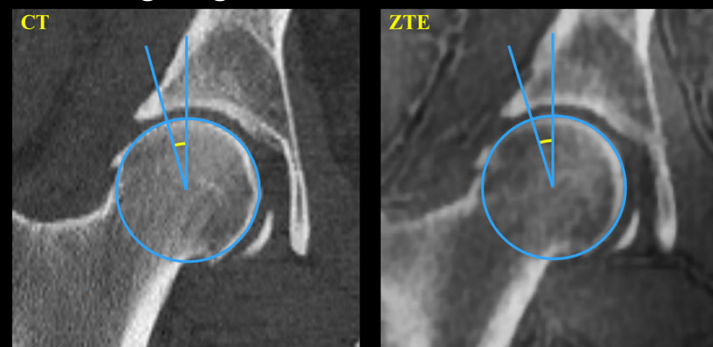
FAI Measurement

Evaluation of Osseous Morphology of the Hip Using Zero Echo Time Magnetic Resonance Imaging.

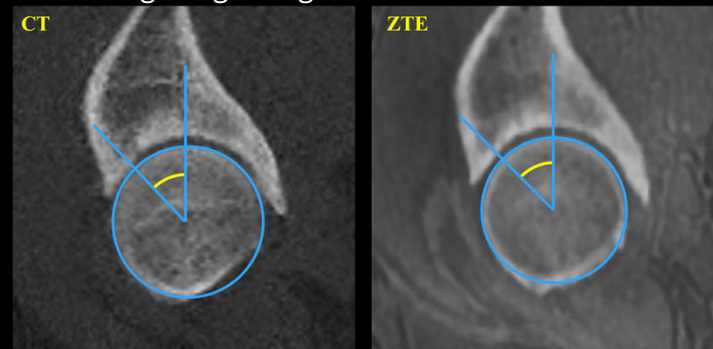
R.E. Breighner, E.A. Bogner, S.C. Lee, M.F. Koff, H.G. Potter

The American Journal of Sports Medicine, 2019; 47(14): 3460-3468.
<https://doi.org/10.1177/0363546519878170>

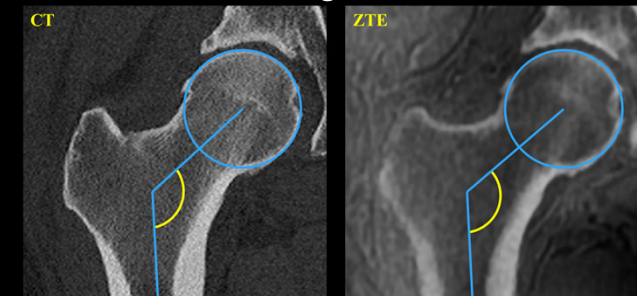
Center Edge Angle (Coronal)



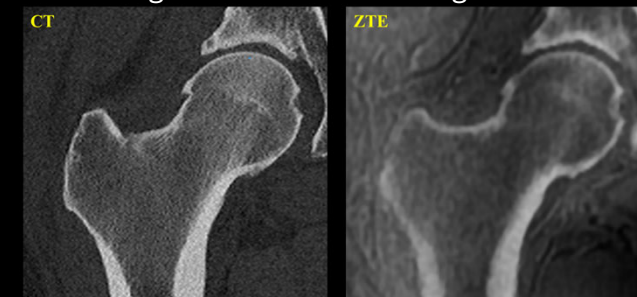
Center Edge Angle (Sagittal)



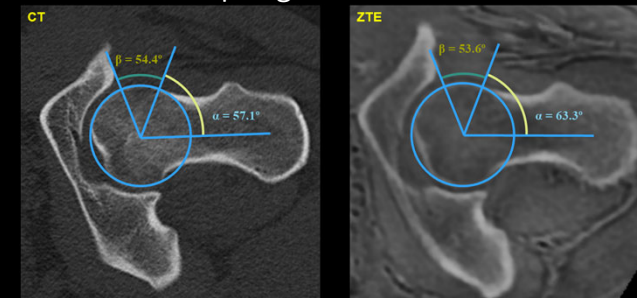
Femoral Neck-Shaft Angle



Tonnis Angle (Acetabular Roof Angle)



α and modified β angles

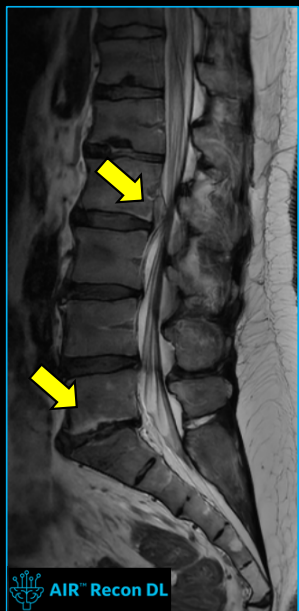


Bone imaging with oZTEo

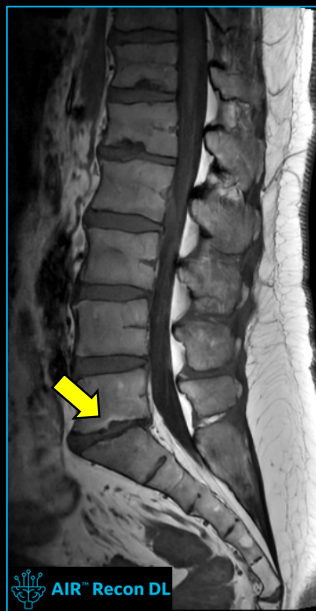
L-spine disc prolapse

Clinical case:

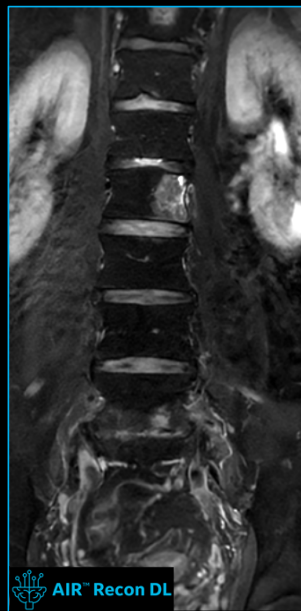
- 41 yo with large-lumen herniated disc
- retrolisthesis, retrospondylosis and osteochondrosis shown by oZTEo and T1 / T2 FSE with low activation signs of L5 via S1
- presentation of the herniated disc and bone marrow edema of L2



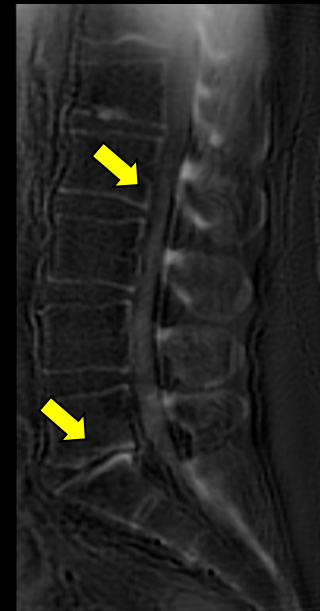
Sag T2 FSE
0.8 x 1.0 x 3.0 mm
20 Slices
1:57 min



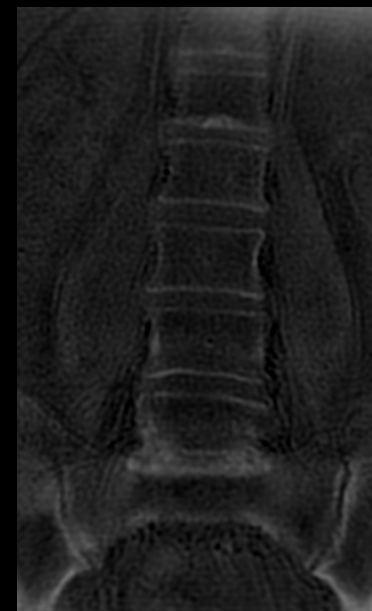
Sag T1 FSE
0.9 x 1.0 x 3.0 mm
20 Slices
2:25 min



Cor T2 FS FSE
0.7 x 0.7 x 4.0 mm
22 Slices
1:57 min



Cor 3D oZTEo (MPR Sag/Cor 8mm)
1.0 x 1.0 x 1.0 mm
102 Slices
4:55 min



Bone imaging with oZTEo

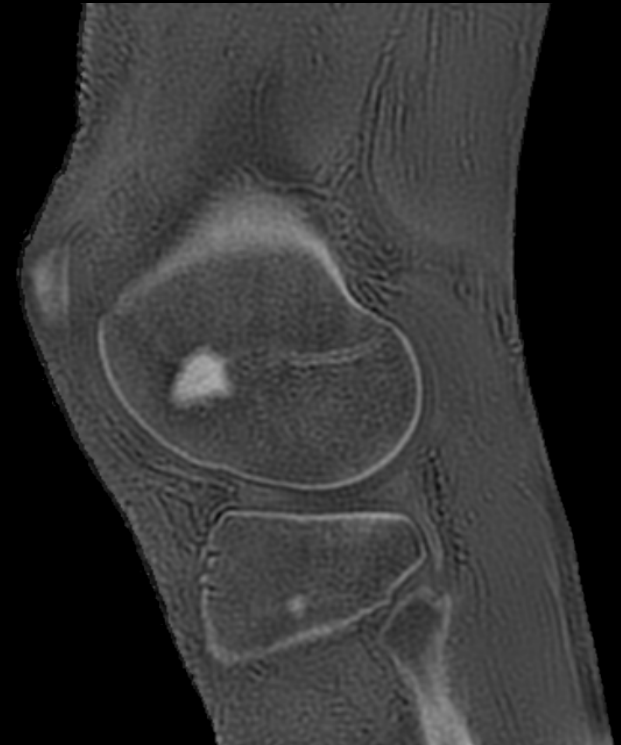
Osteitis condensans ilii



Sag T1 FSE
0.2 x 0.2 x 3 mm
2:26 min



Sag PD FSE
0.3 x 0.3 x 3mm
2:26 min



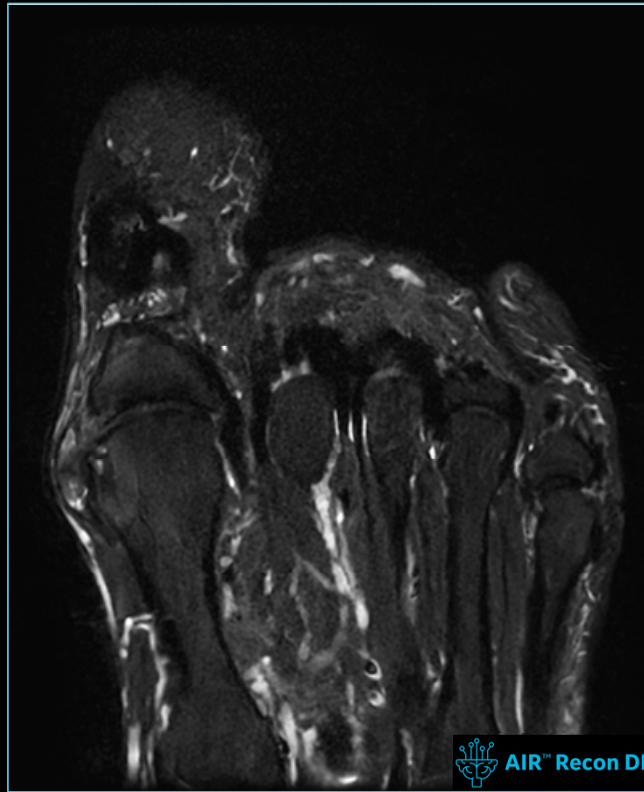
Sag 3D oZTEo
0.8 x 0.8 x 0.8 mm
3:32 min

Bone imaging with oZTEo

Tophaceous gout with erosion at the first metatarsophalangeal joint



Coronal T1 FSE
0.1 x 0.3 x 1.5 mm
1:33 min



Coronal T2 STIR
0.4 x 0.4 x 1.5mm
3:41min



Coronal oZTEo
0.9 x 0.9 x 1.0 mm
3:14 min

Bone imaging with oZTEo

Tophaceous gout with erosion at the first metatarsophalangeal joint



Clinical case:

- oZTEo shows characteristic “punch out” erosion (yellow arrow) with sclerotic margins that is indicative of gout
- oZTEo shows calcification within the soft-tissue mass (blue arrows) which represents tophaceous deposit of urate crystals seen in chronic gout

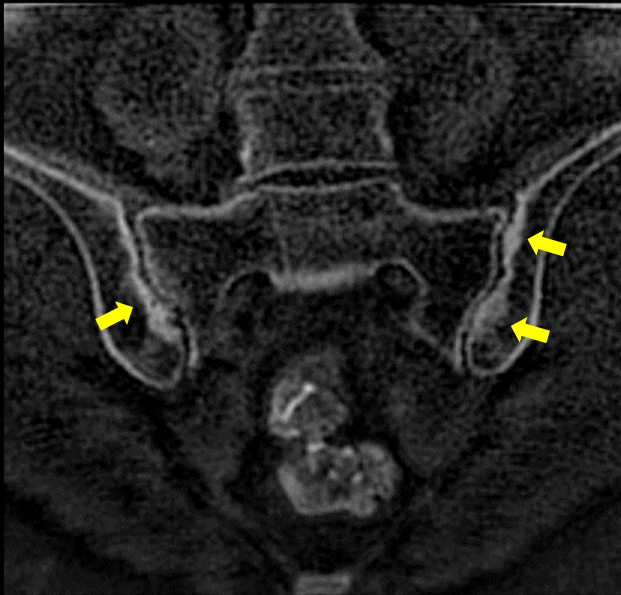


Coronal oZTEo
0.9 x 0.9 x 1.0 mm
3:14 min

Courtesy of Cambridge University Hospitals, UK

Bone imaging with oZTEo

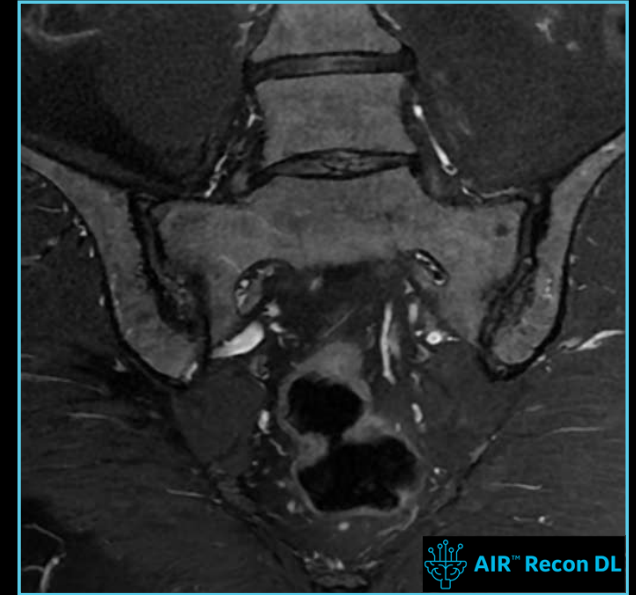
Sacroiliac joint bone erosion



Cor oZTEo
1.2 x 1.2 x 3.0 mm
2:59 min



Cor T1 FSE
0.6 x 0.8 x 3.0 mm
4:11 min



Cor T2 FSE FatSat
0.7 x 0.8 x 3.0 mm
3:28 min

