

Pelvic Ring: Percutaneous Screw Placement

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The Fundamentals

- | Reduced sacrum or SI joint
- | Anatomy: Normal vs Dysmorphic Sacrum
- | Fluoroscopic image interpretation
- | Pre-op Planning
 - Corridor size
 - Screw length
 - Inlet/Outlet angles

Normal Sacrum

- | Sacrum is recessed into pelvis
- | No residual disc
- | S1 foramina are round
- | S1 between posterior ilium/SI joints



Dysmorphic Sacrum

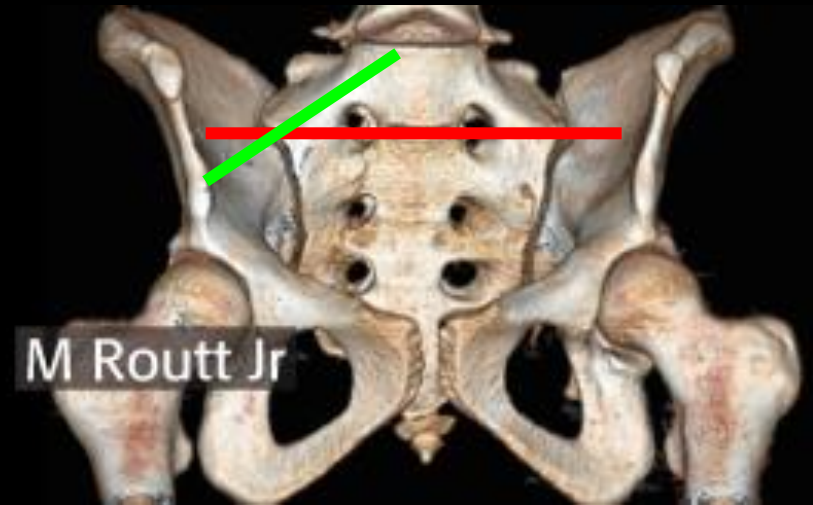
- Top of sacrum co-linear with tops of ilium
- Residual disc between S1/S2
- S1 foramina are oval
- Mamillary processes
- S1 NOT between posterior ilium/SI joints
 - Sacral Ala sloped
 - S1 positioned forward and cephalad



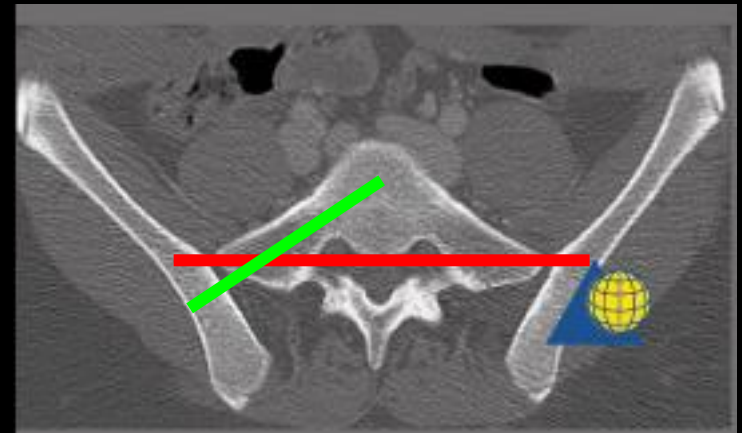
NORMAL



DYSMORPHIC



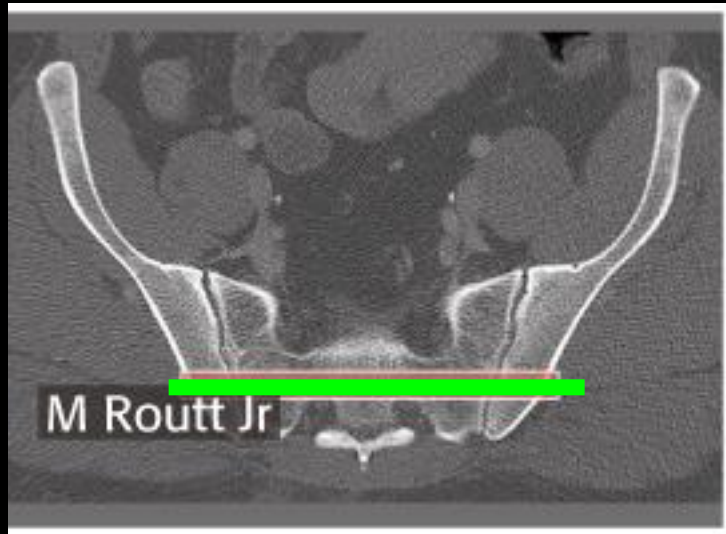
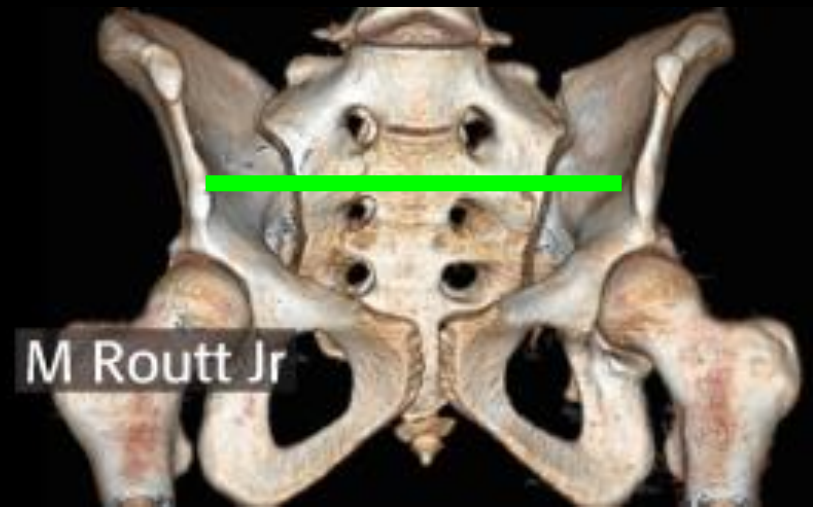
S1



NORMAL



DYSMORPHIC



S2





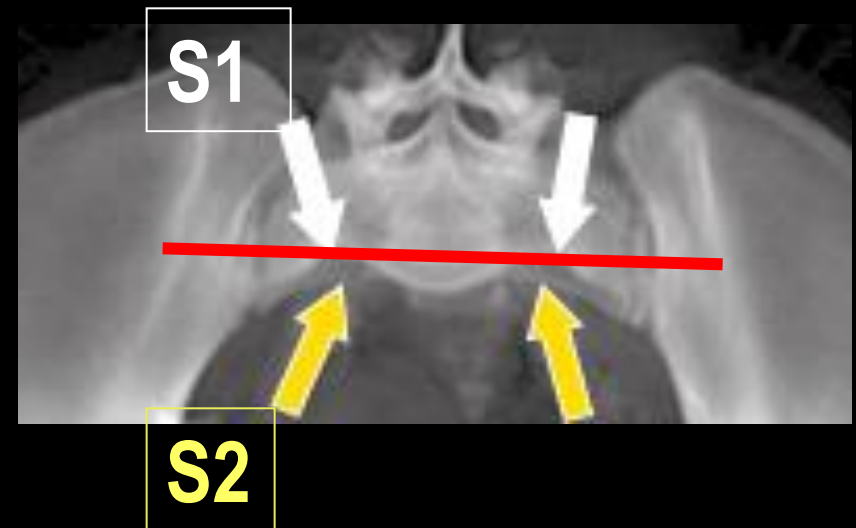
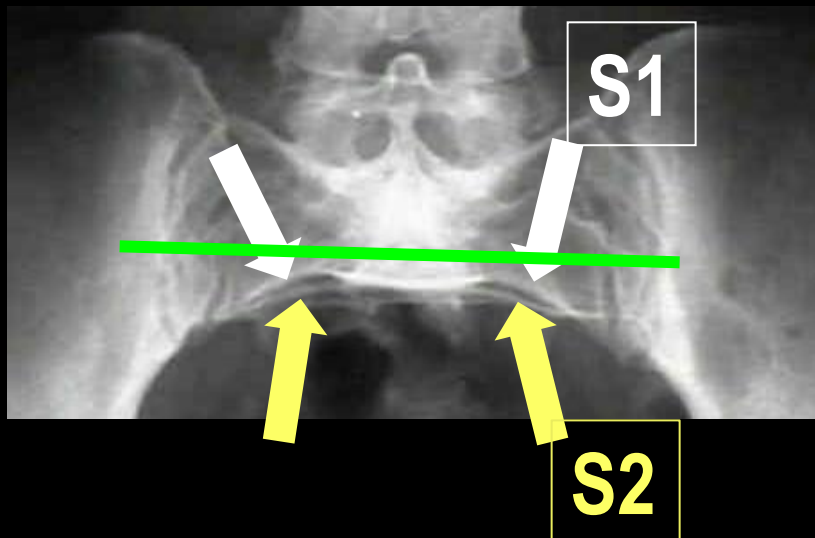
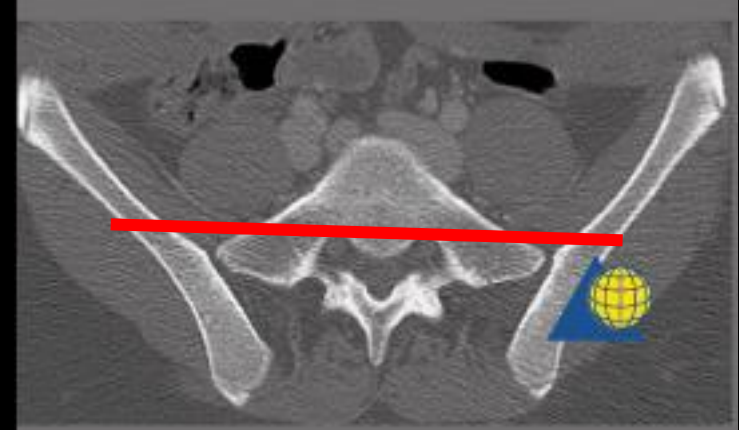
NORMAL



DYSMORPHIC

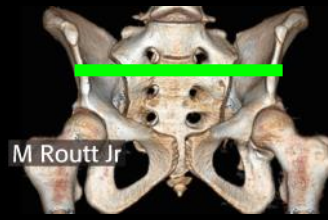


S1





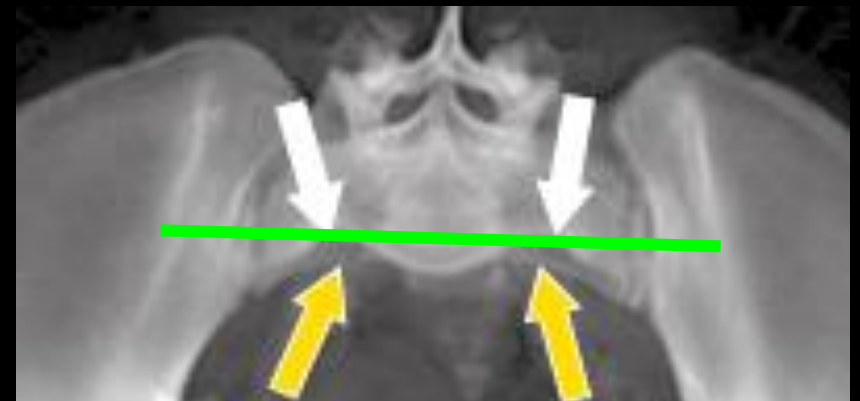
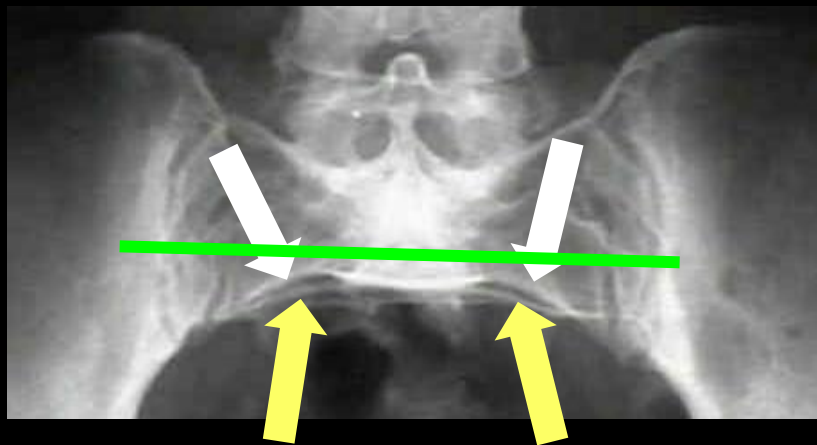
NORMAL

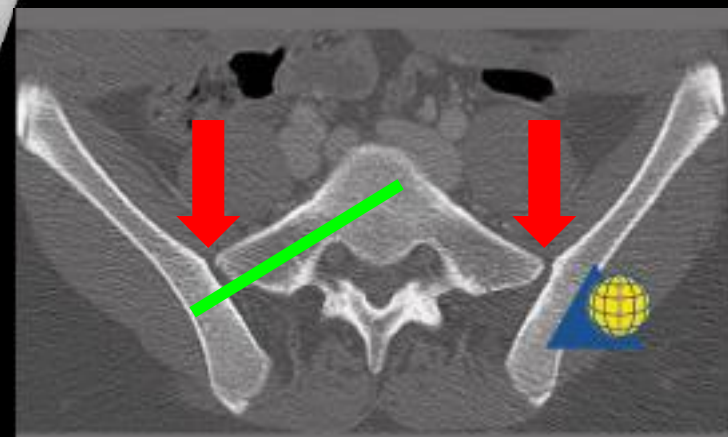
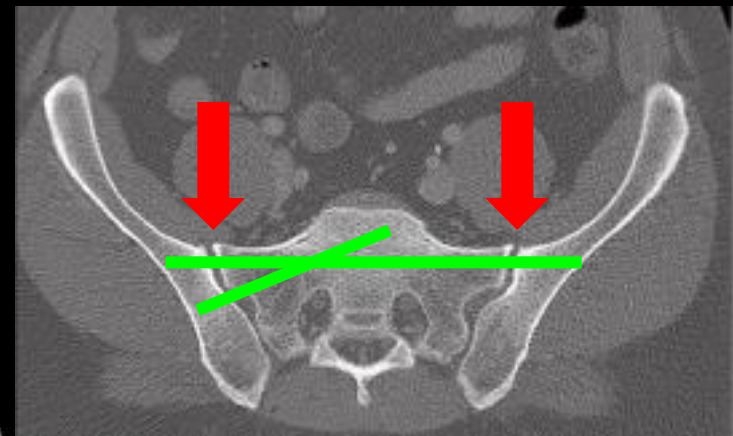
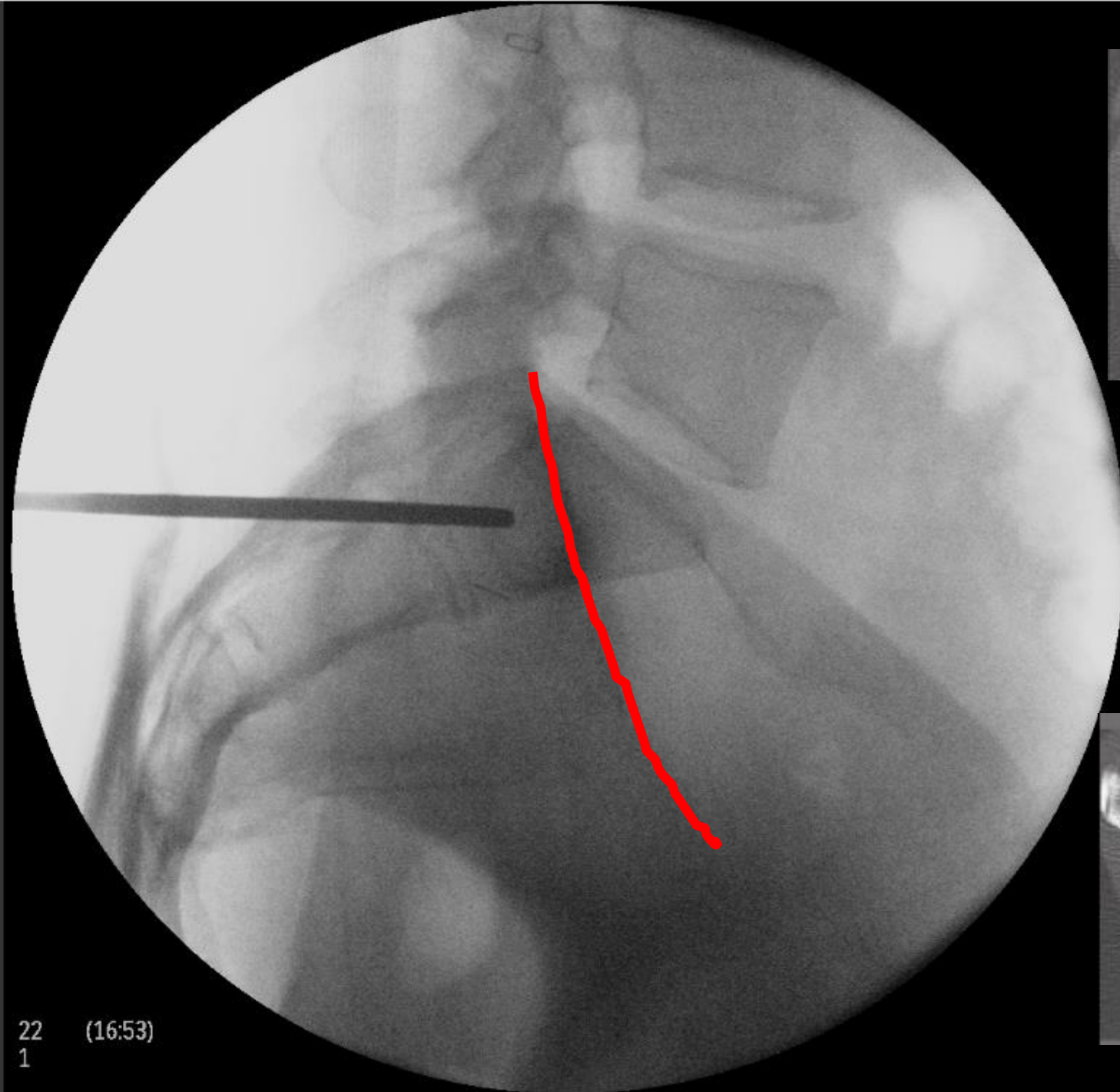


DYSMORPHIC

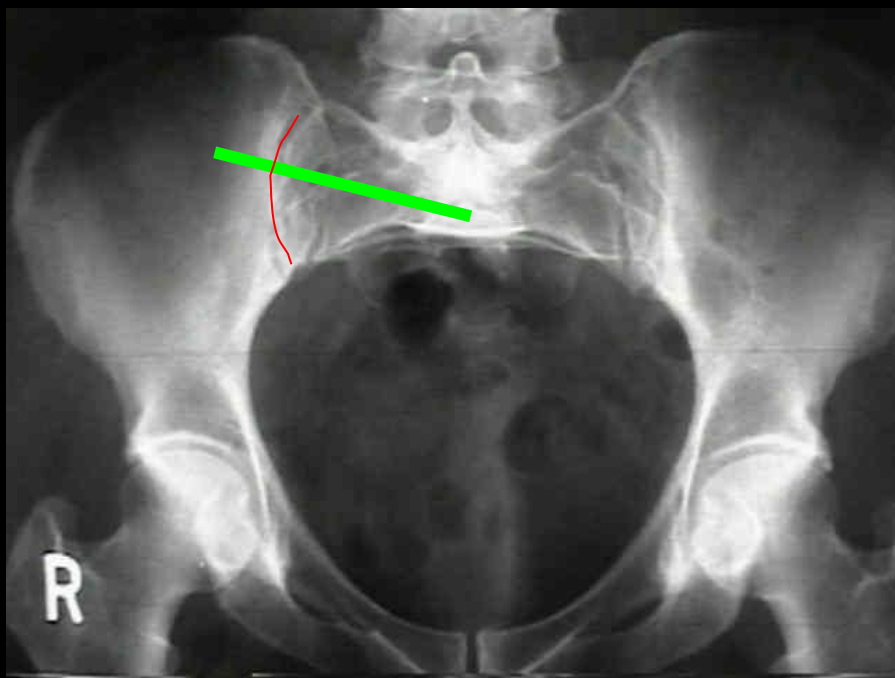


S2

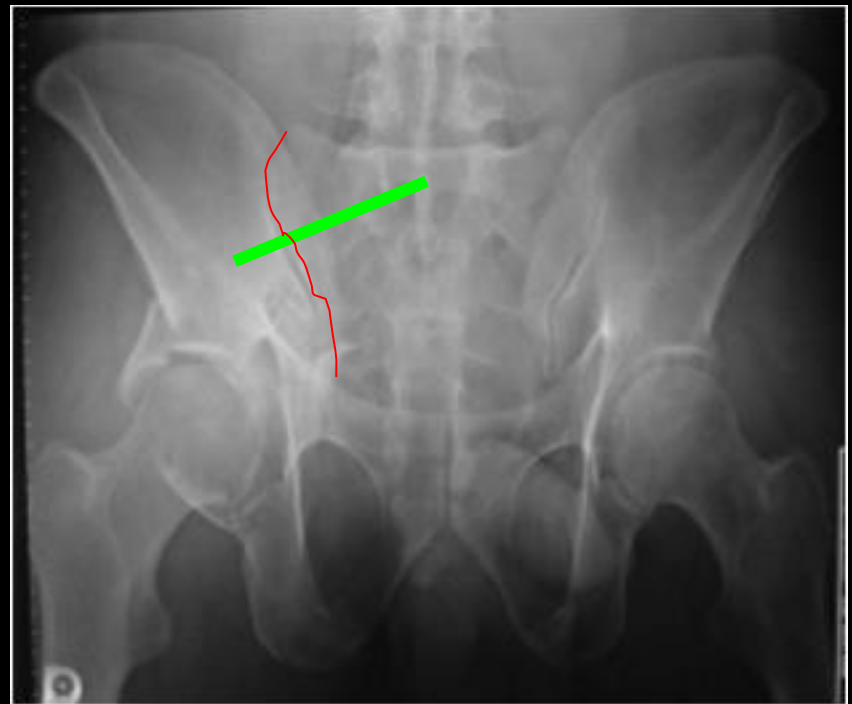




Screw Trajectory: SI joint Injury

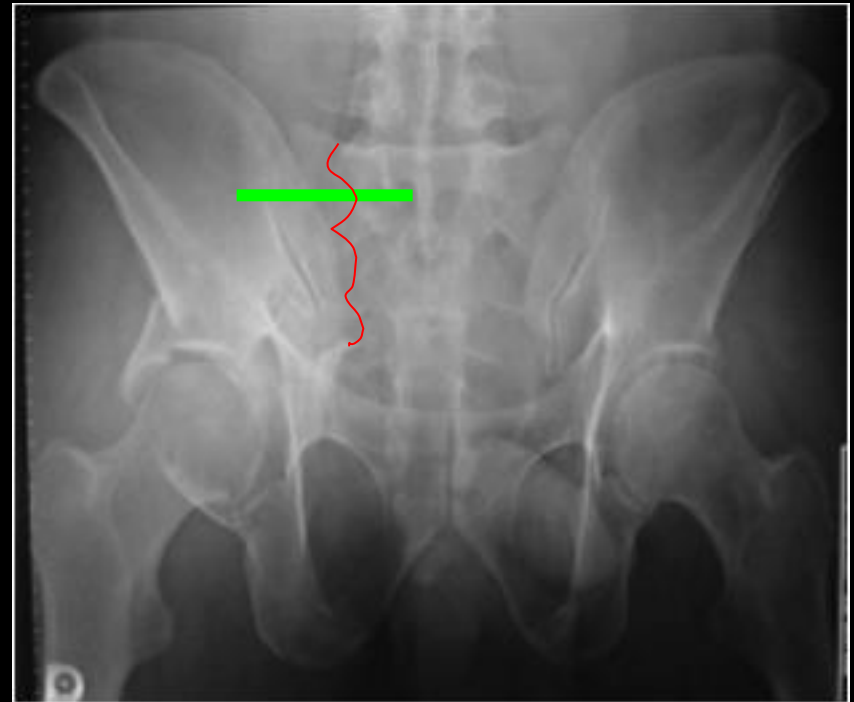
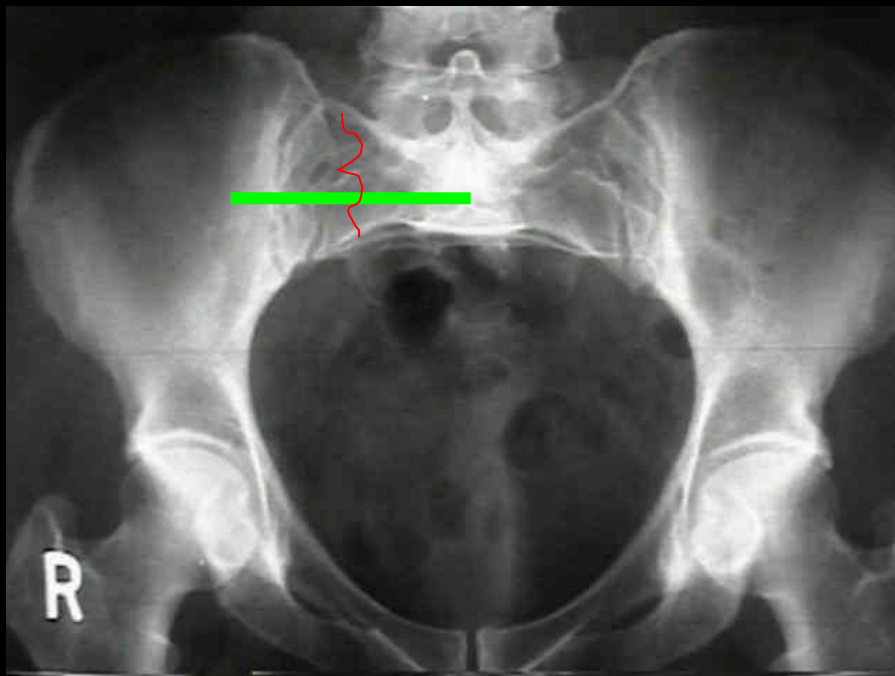


Inlet

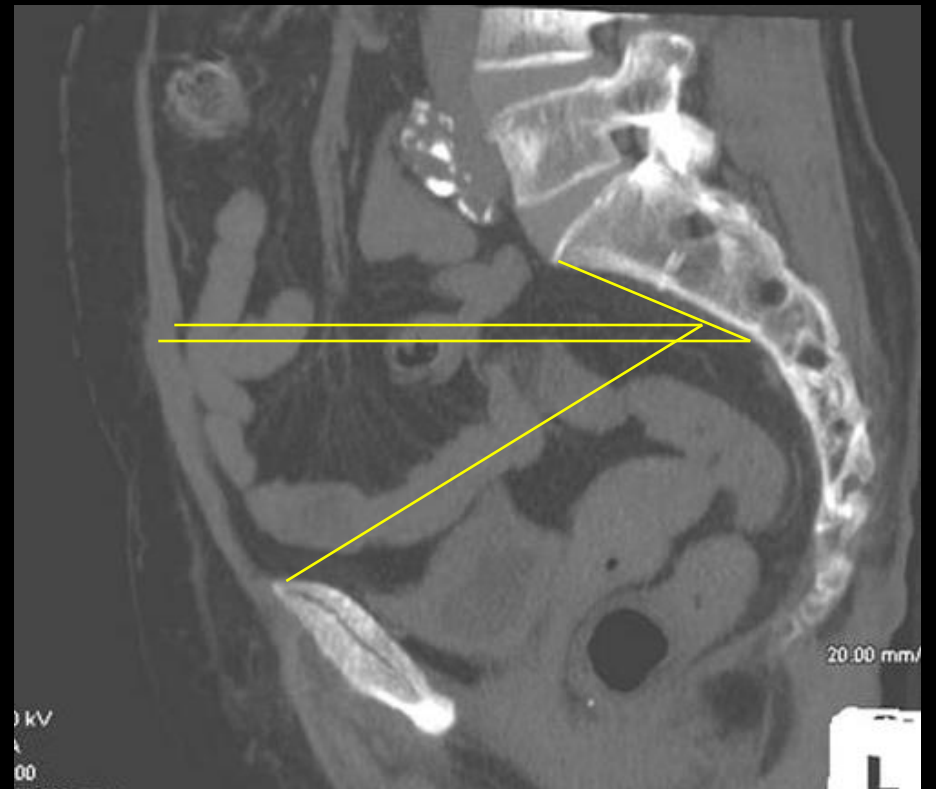
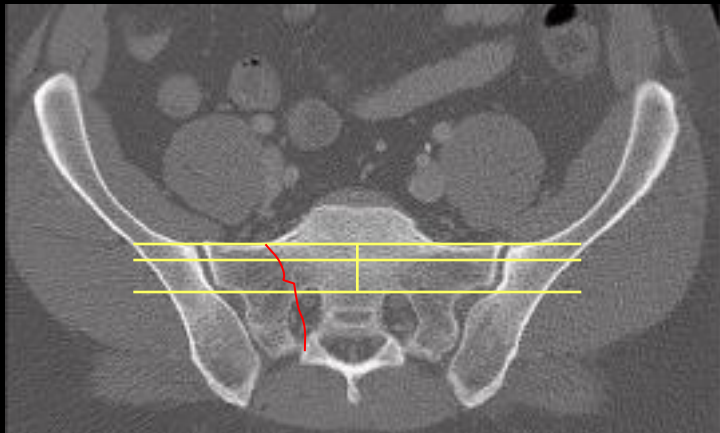
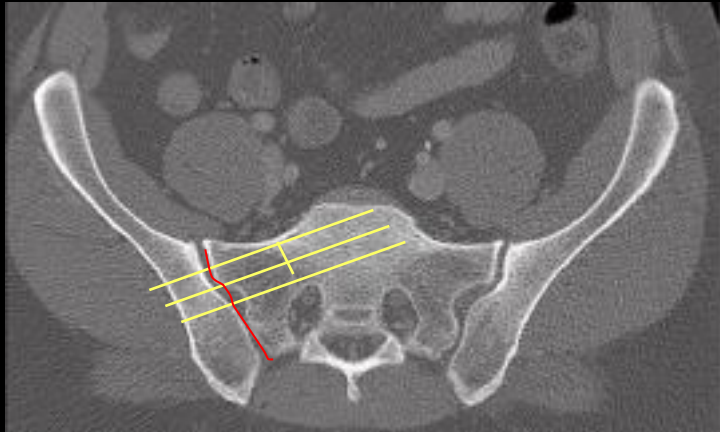


Outlet

Screw Trajectory: Sacral Fracture



Pre-Op Planning



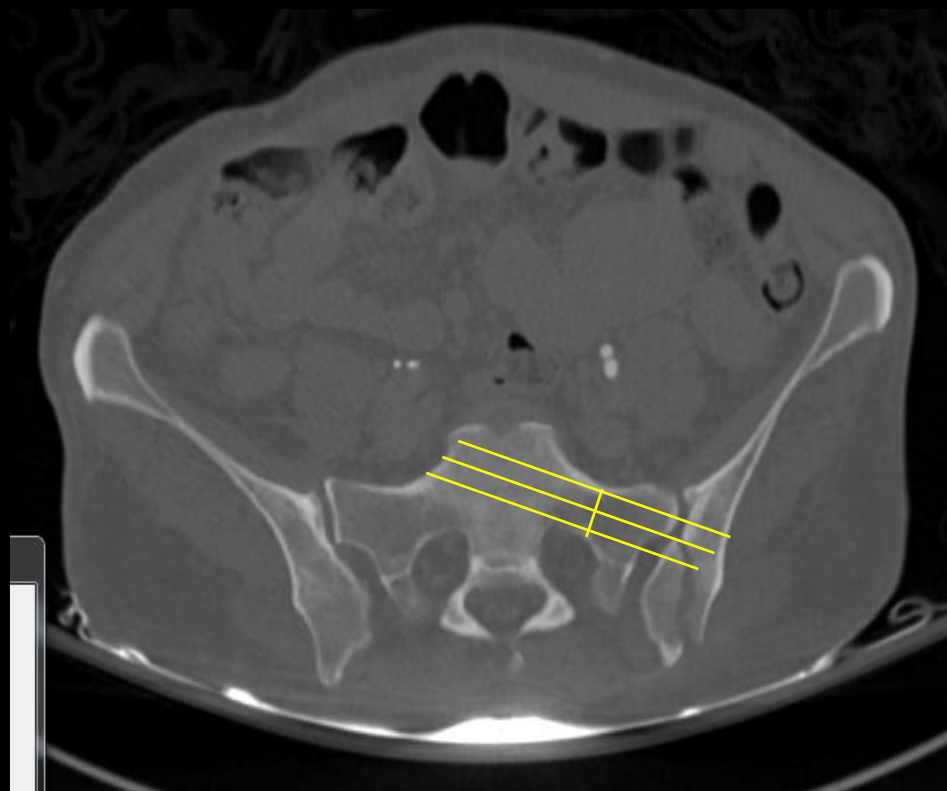
Case



Case

19mm

85mm



Case

13mm

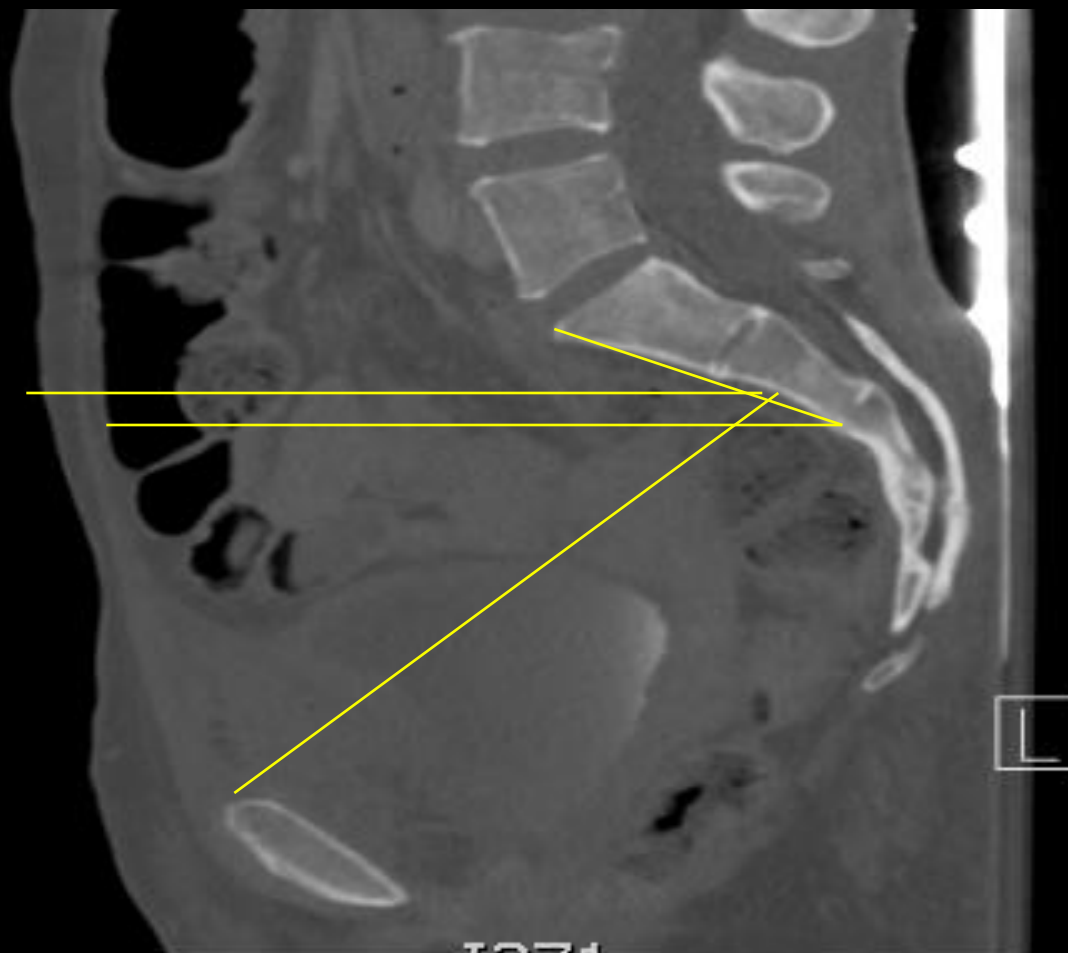
95mm



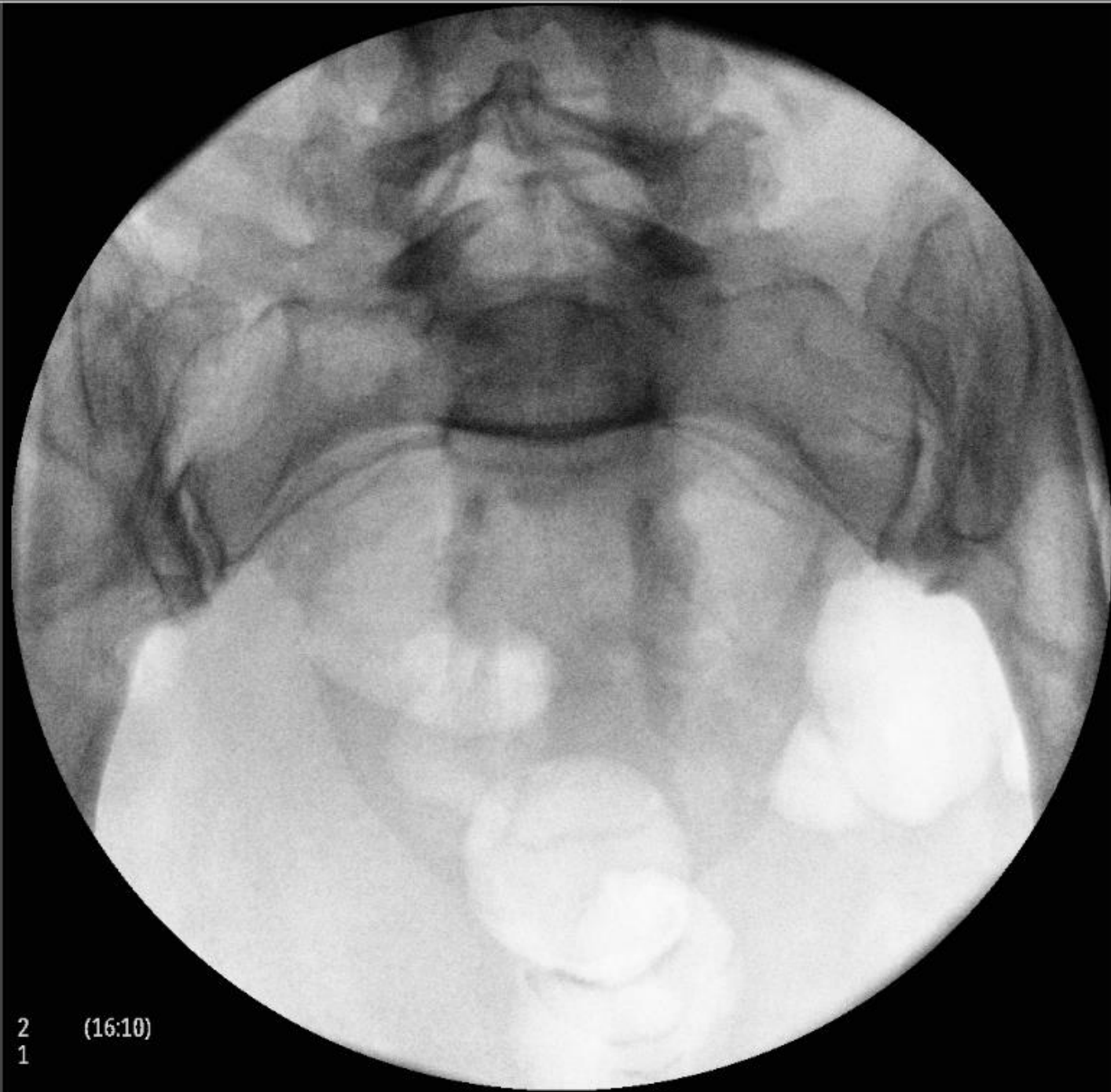
Case

INLET: 10

OUTLET: 40

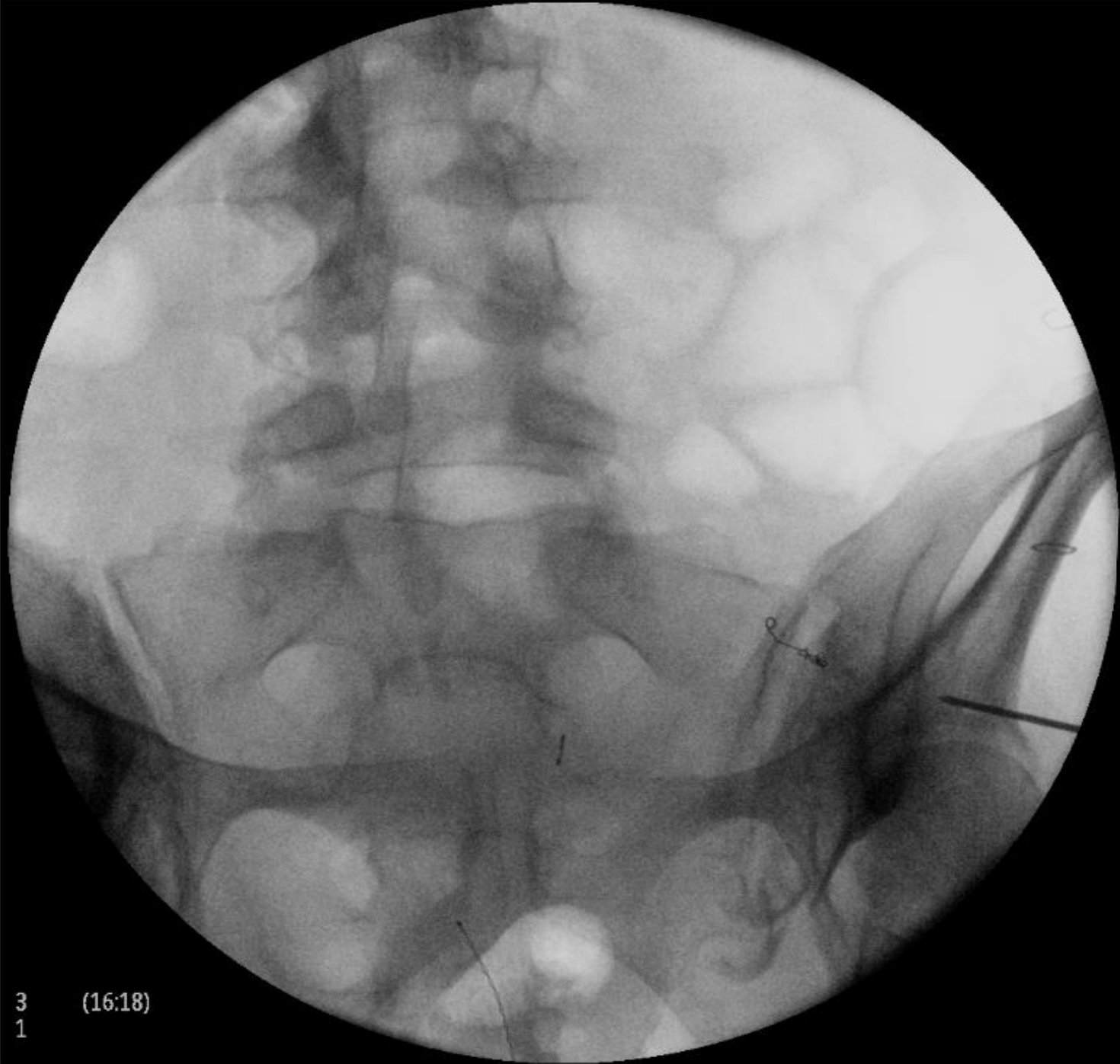


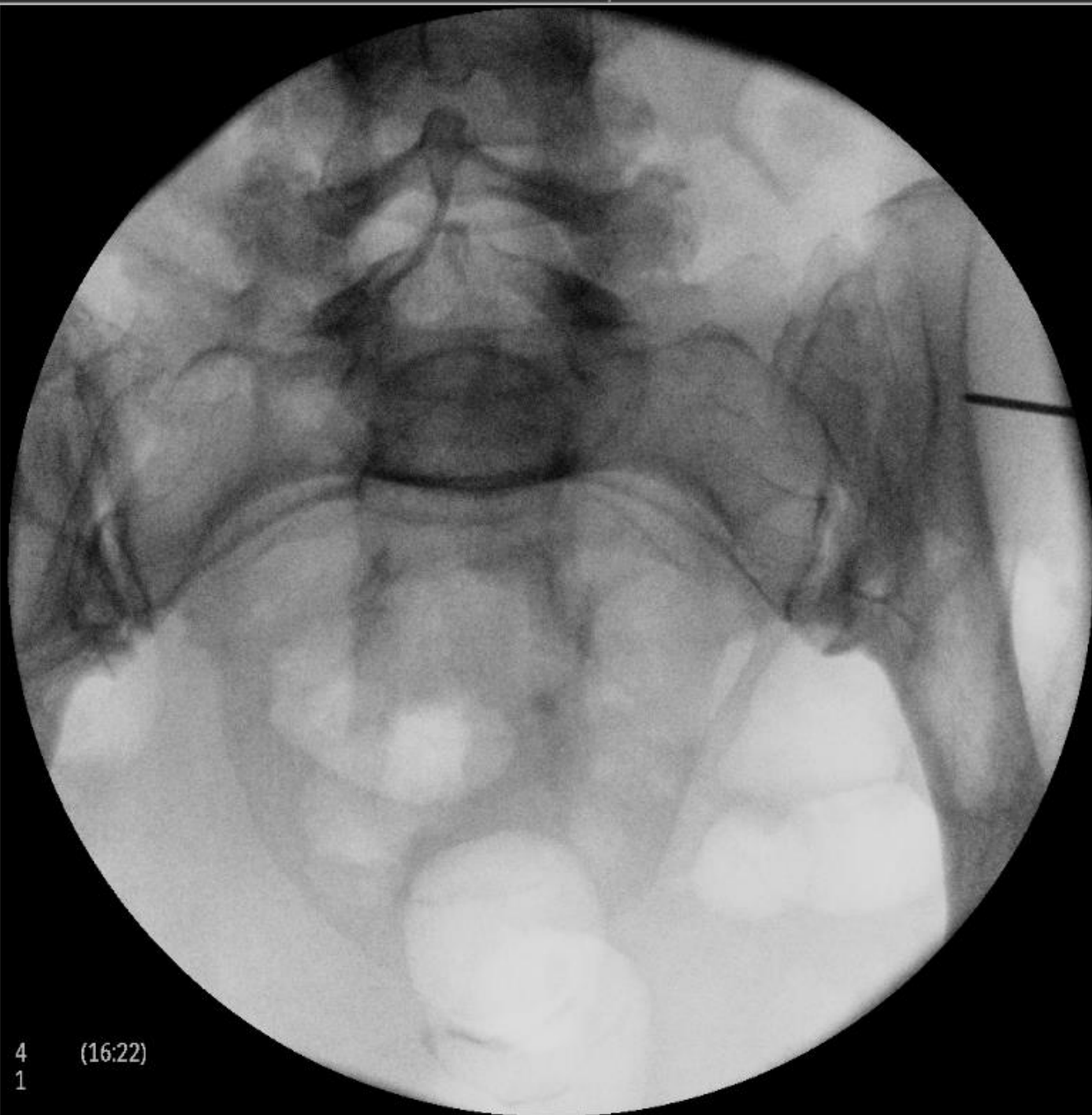
I371

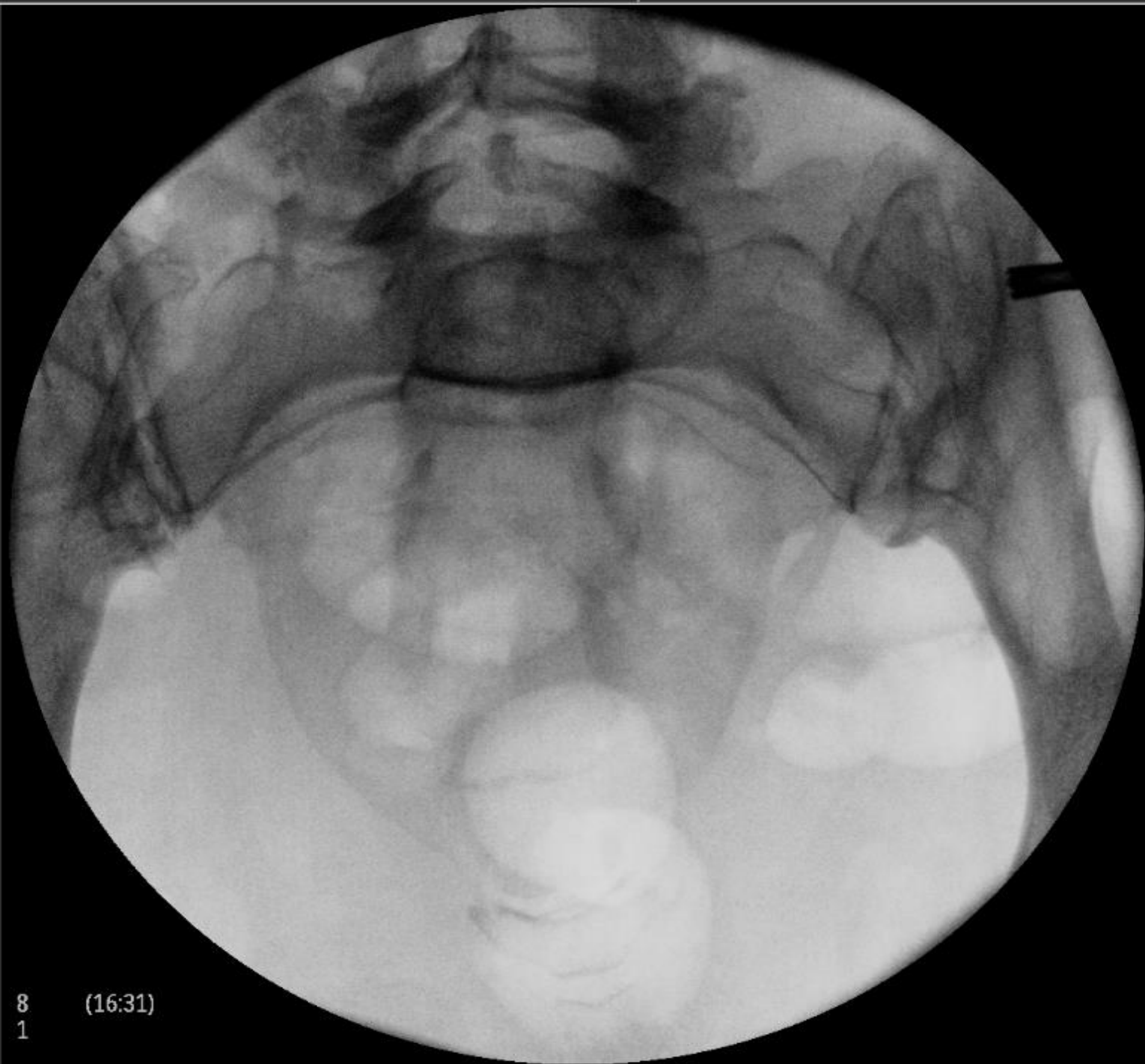


2
1

(16:10)



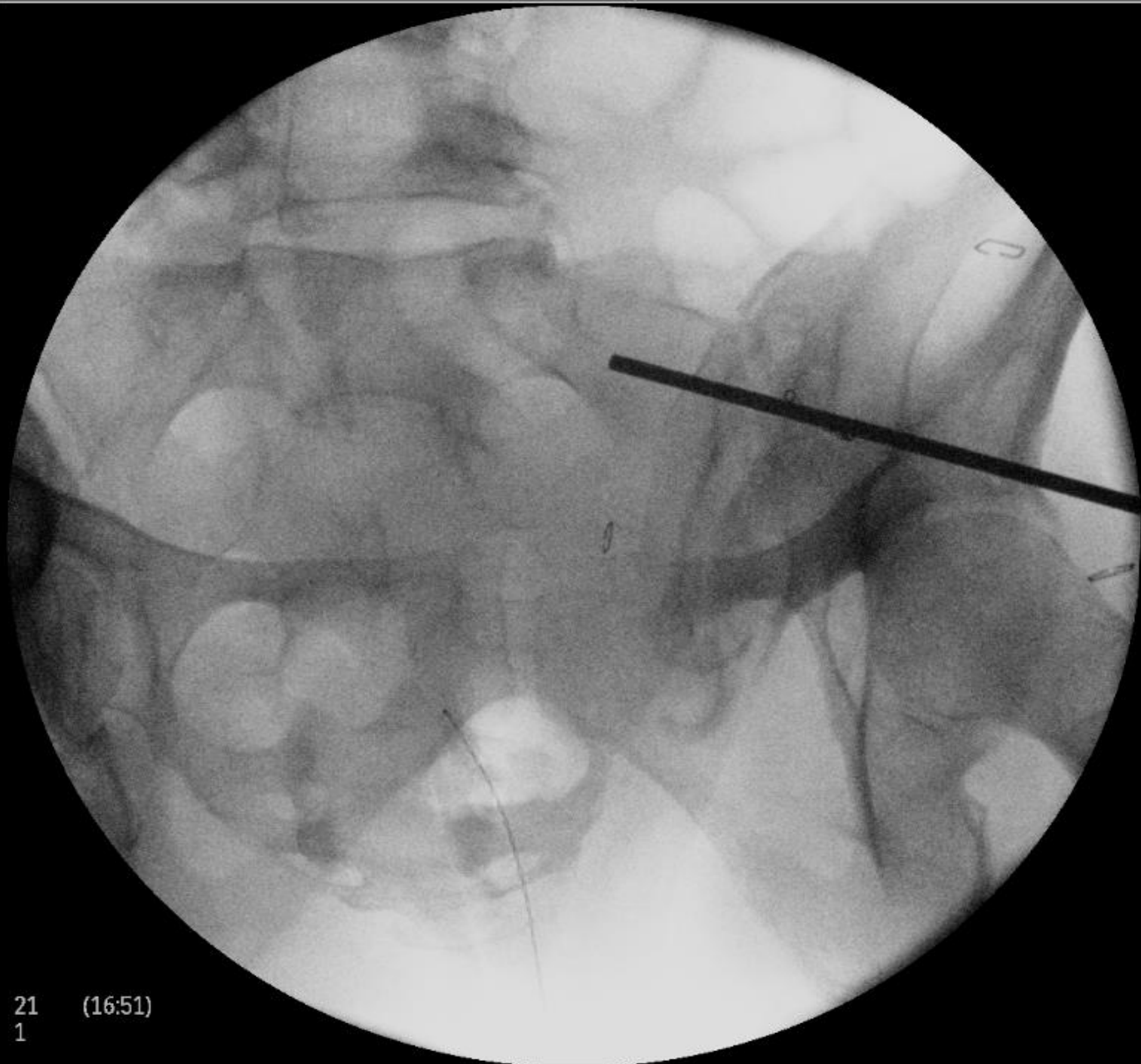


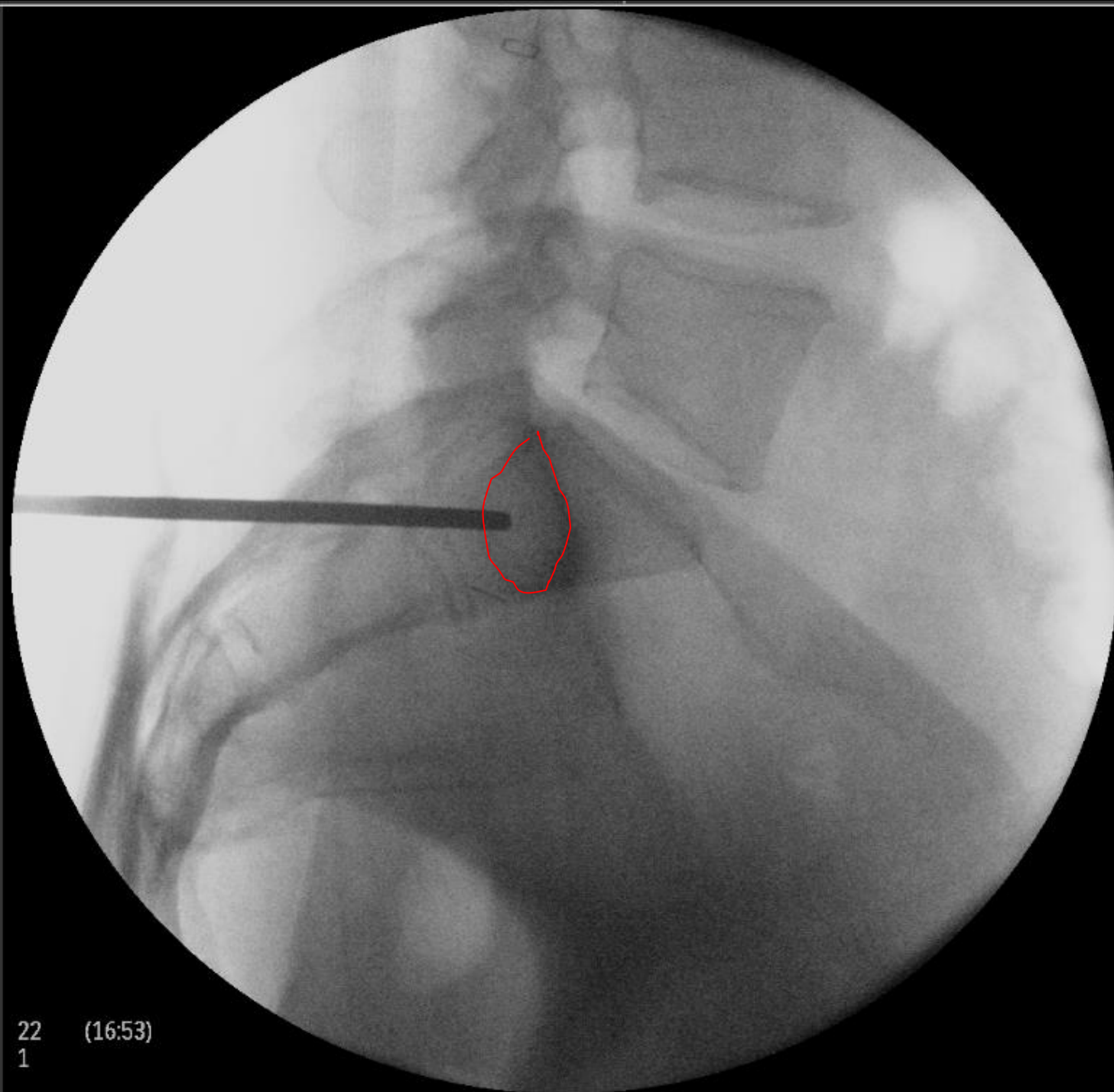


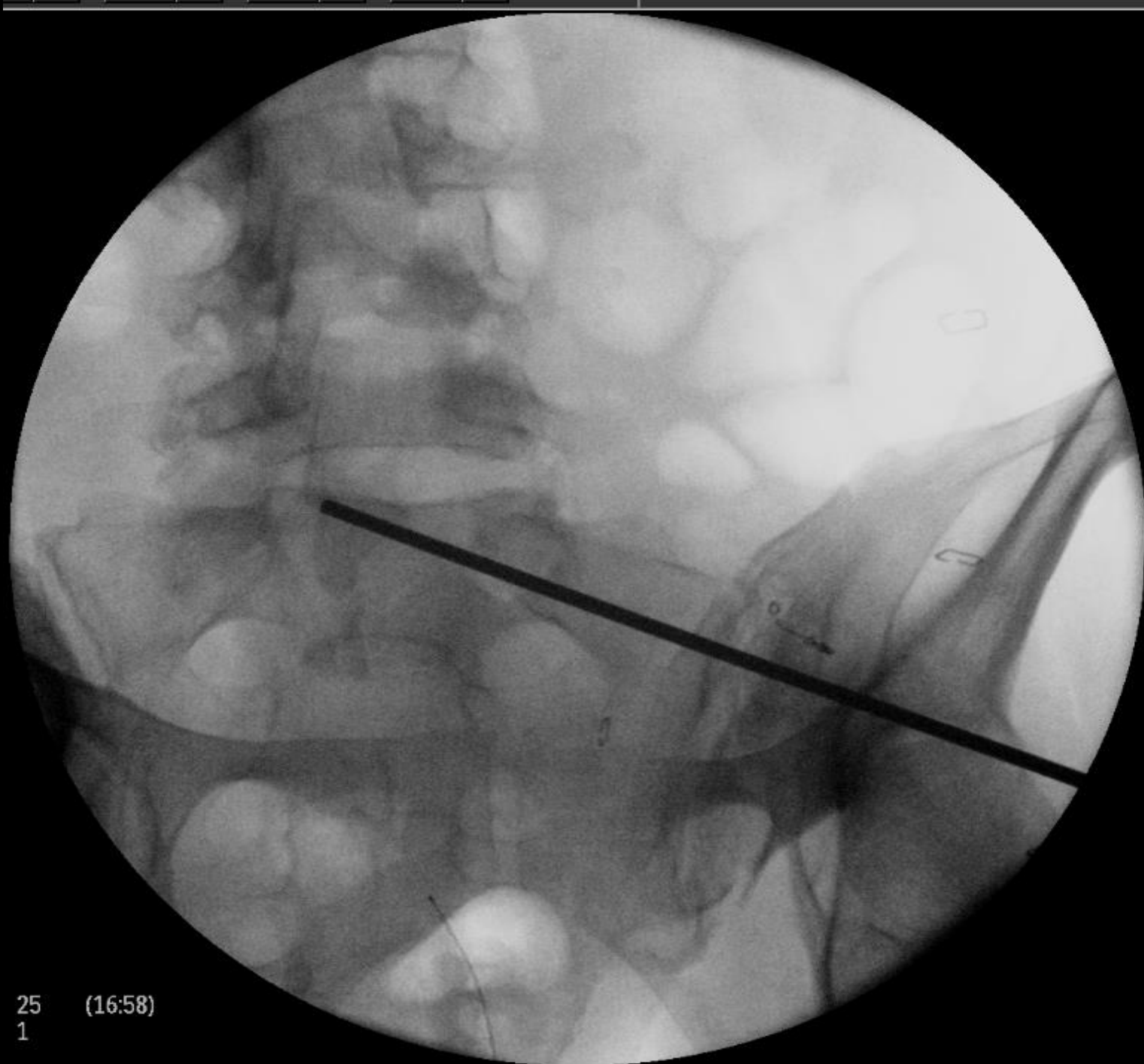
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1 (16:31)

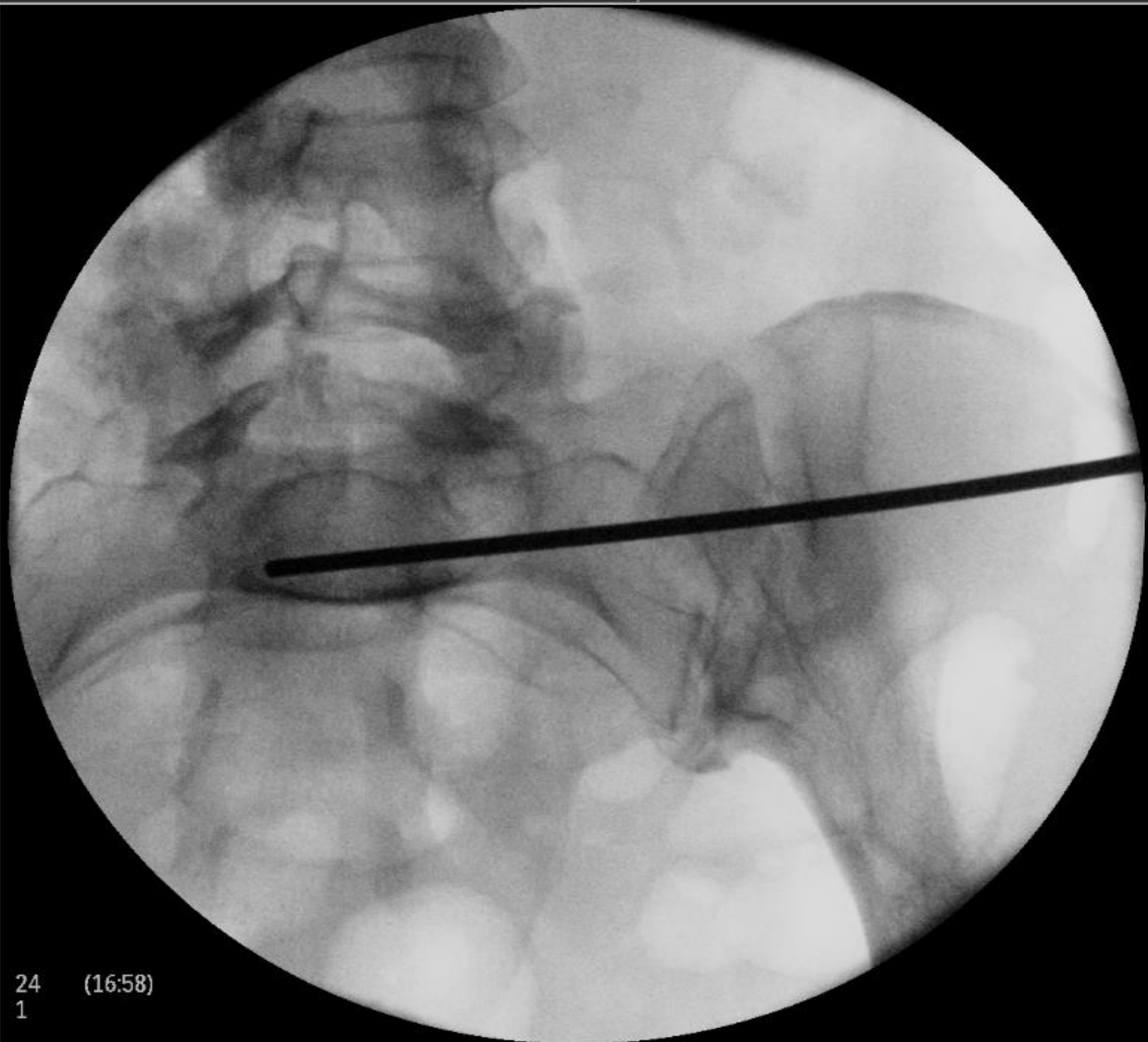




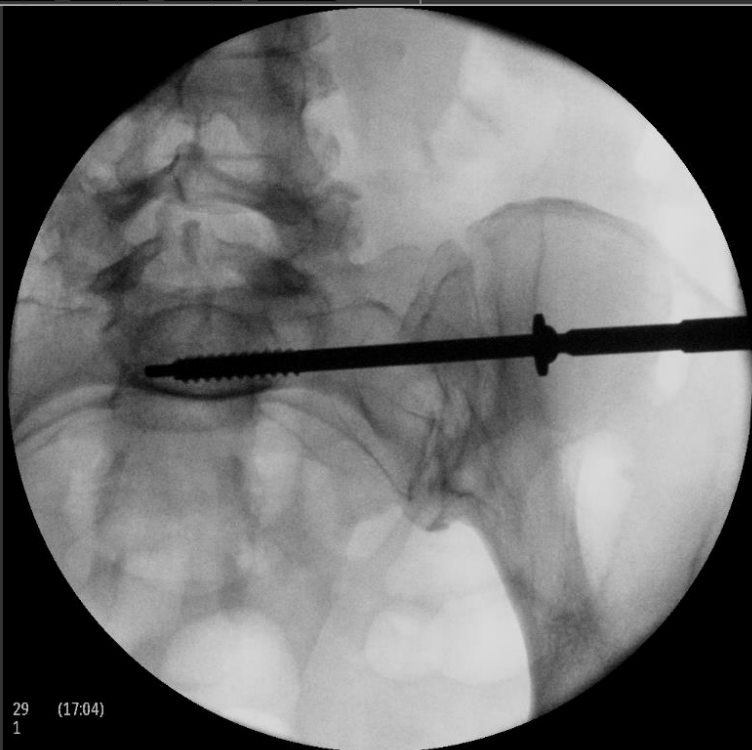


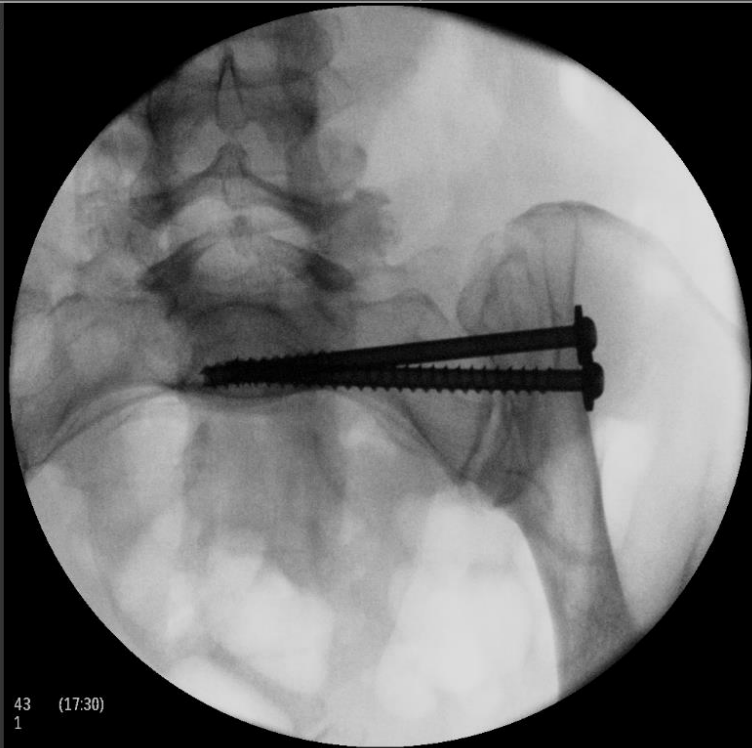






24 (16:58)
1







45 (17:32)
1



Thank You