“Advanced Treatments For Sacroiliac Joint Pain”

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Advanced Treatments For Sacroiliac Joint Pain

- No disclosures
- This presentation does not contain off-label or investigational use of drugs or products.

Objectives

- Recognize the different advanced treatment options for SI joint pain
- Identify which treatment option is best for an individual patient
- Recognize the risk and benefits of these treatment options

Types of Advanced Treatments

- Prolotherapy
- Platelet Rich Plasma (PRP)
- SI joint fusion
  - Open vs. percutaneous approach
  - Lateral vs. posterior lateral vs. posterior approach

Prolotherapy – What is it?

- “Proles” - “growth” or “offspring” in Latin
- Often uses irritant solution (often hyperosmolar glucose) not containing biologic material to create an inflammatory response
- Induces growth of connective tissue to strengthen the attachment of ligaments or tendons at fibrous-osseous junctions
- Useful in SI joint ligamentous laxity

Prolotherapy – Data

- **Kim et al. A randomized controlled trial of intra-articular prolotherapy versus steroid injection for sacroiliac joint pain. 2010.** Level I evidence

  - Inclusion: ≥ 3 months SI joint pain, ≥50% improvement with local block
  - 3 injections (2 weeks apart)
  - ODI and NRS significantly improved at 2 weeks with no significant difference between them
  - ≥50% pain relief at 15 months: 58.7% with prolotherapy vs. 10.2% with steroid

Prolotherapy – Data

- **Cusi et al. The use of prolotherapy in the sacroiliac joint. Br J Sports Med. 2010.** Level II evidence

  - Prospective descriptive study
  - 3 hypertonic dextrose injections (6 weeks apart) into dorsal interosseous ligament under CT guidance
  - Positive clinical outcomes in 76% of patients at 3-months (76% at 12 months and 32% at 24 months)

Prolotherapy – Data

- **Hoffman and Agnish. Functional outcome from sacroiliac joint prolotherapy in patients with sacroiliac joint instability. 2018.**
  Level IV evidence

  - Retrospective cohort study
  - Series of 3 SI joint prolotherapy injections (15% dextrose in lidocaine) at 1 month intervals
    - 24 (23%) patients improvement ≥15 points on the ODI
    - 50 patients no improvement
    - 29 patients improvement in ODI score <15 points
  - Minimal improvement with 2nd and 3rd injection if no improvement with 1st

Platelet Rich Plasma (PRP)

- Autologous concentrate of platelets from centrifuged whole blood
- Initiates the body's own repair processes, modulates inflammation, delivers growth factors, and attracts and activates mesenchymal stem cells, which promote a healing environment and reduce pain

PRP-Data

- **Navani and Gupta. Role of intra-articular platelet-rich plasma in sacroiliac joint pain. 2015.** Level III evidence

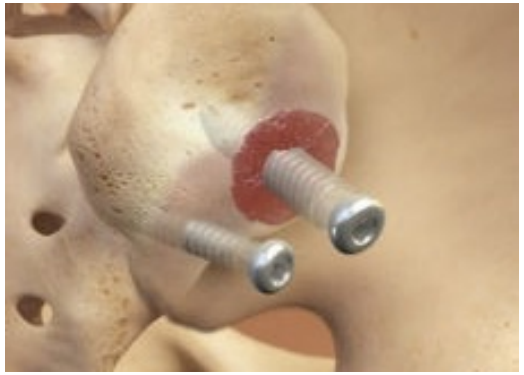
  - 10 patient case series
  - >50% improvement in pain at 12 months
  - Improvement in function at 12 months

SI Joint Fusion

- Approaches:
  - Open vs. **Minimally Invasive (MIS)**
  - Lateral vs. Posterior Lateral vs. **Posterior Approach**
    - **CornerLoc**
    - **PainTeq**
    - **Omnia Medical**

First Generation Systems Based on Orthopedic Trauma:

iFuse



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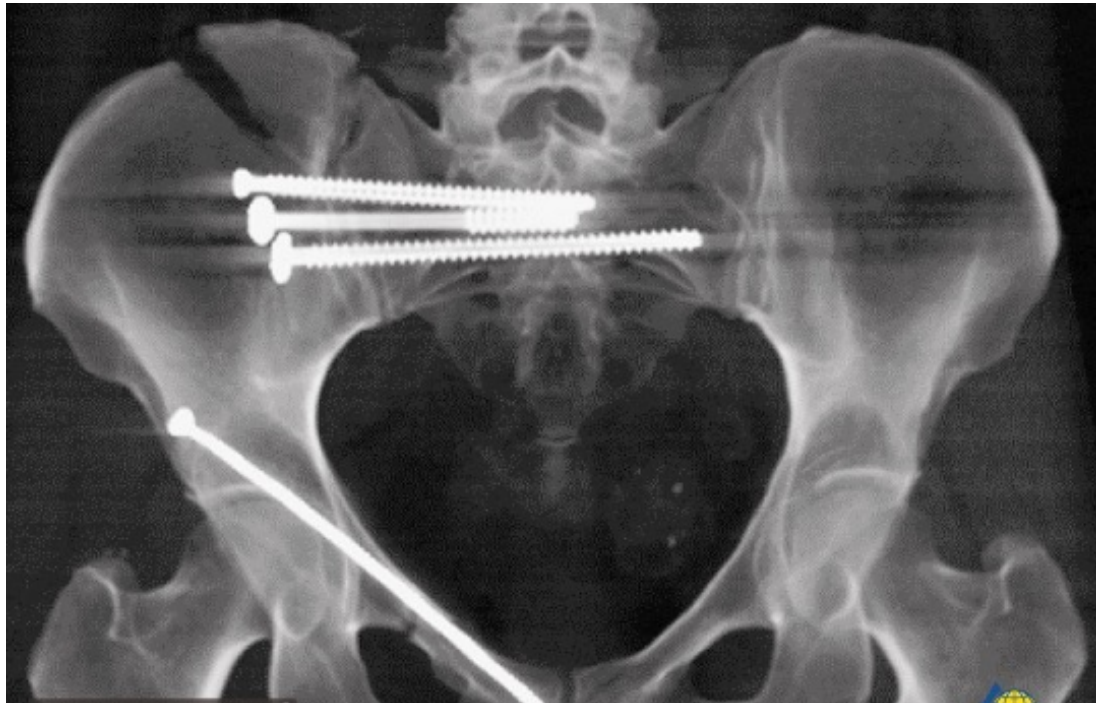
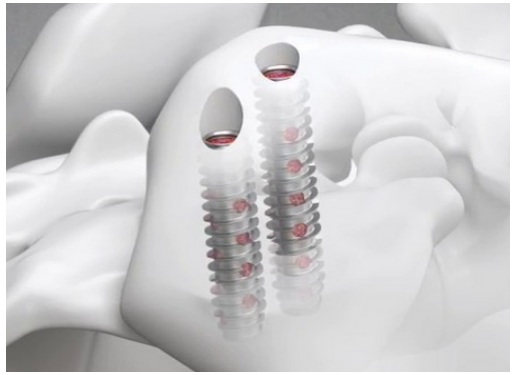




Rialto

MIS - CornerLoc

Study	Design	Patients	Results
Patterson et al. 2018	Retrospective	21	• 73.2% pain reduction at 10-12 weeks • 81.8% of patients reported at least 60% pain relief
Mann et al. 2019	Retrospective	10	• 62.3% pain reduction at 12 weeks • 79.2% pain reduction at 12 months

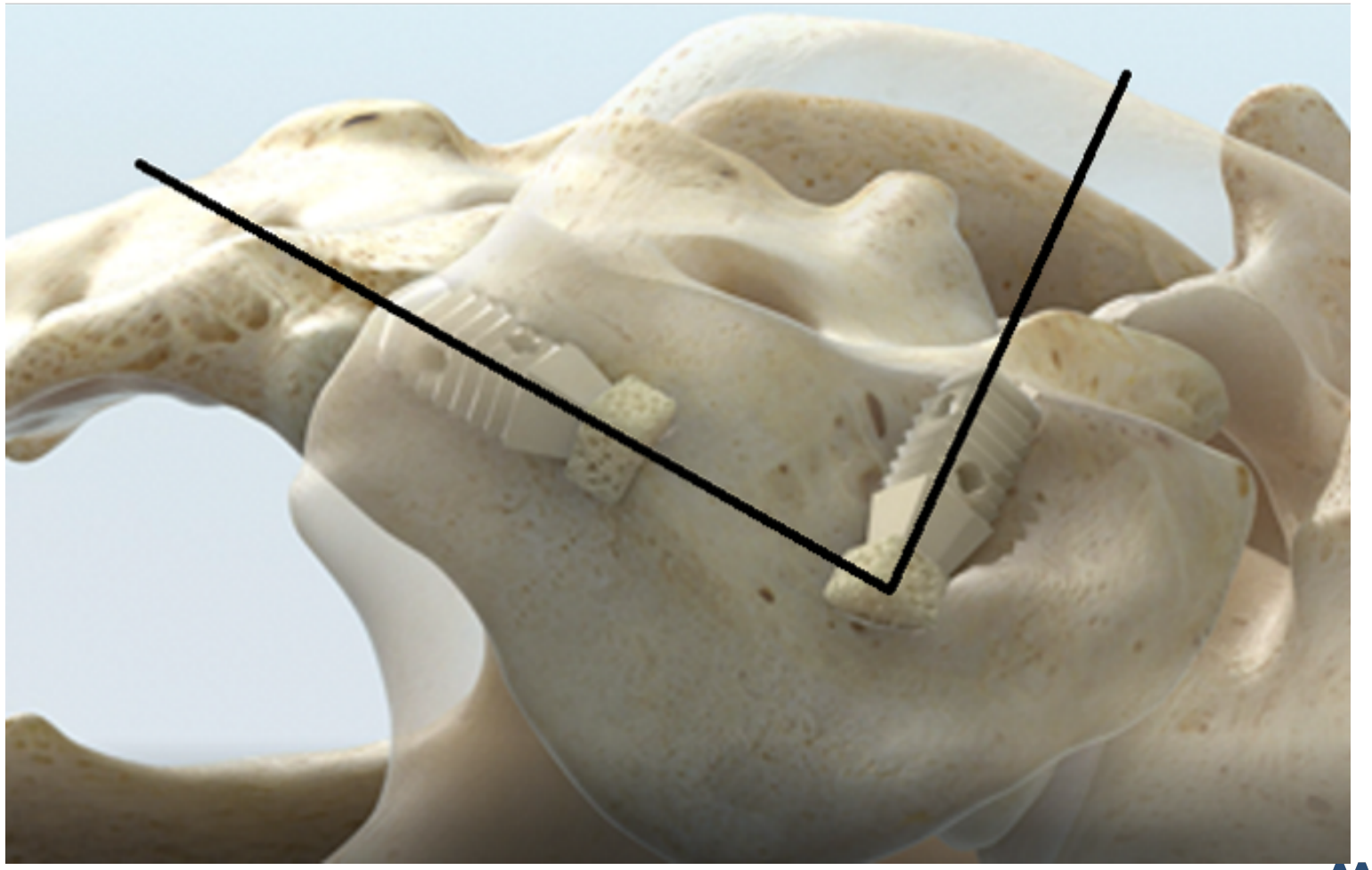
MIS - PainTeq

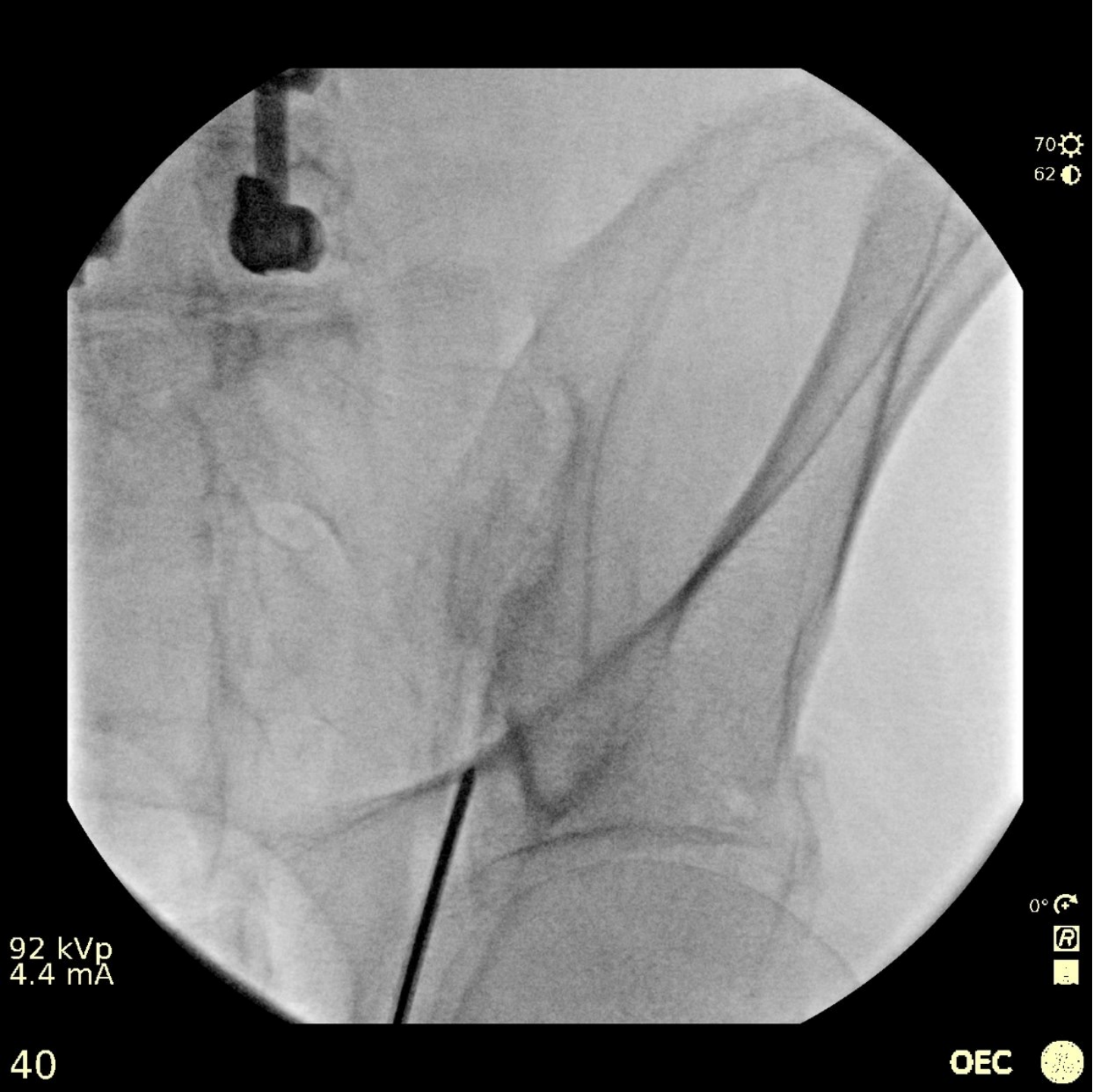
Study	Design	Patients	Results
Pyles S. 2019	Case Series	20	• 55% had complete resolution of pain at 6 months • Average 72% pain reduction at 6 months
Kim et al. 2019	Case Series	16	• Average 88% pain reduction at 6 months
Lam et al. 2020	Multicenter retrospective review	62	• Average 83.3% pain reduction at 3 months
Sayed et al. 2021	Multicenter retrospective review	50	• Average 65.5% pain reduction at least 12 months postop
Deer et al. 2021	Multicenter retrospective review	111	• Average 67.6% pain reduction at follow up

SI Joint Fusion – Workup

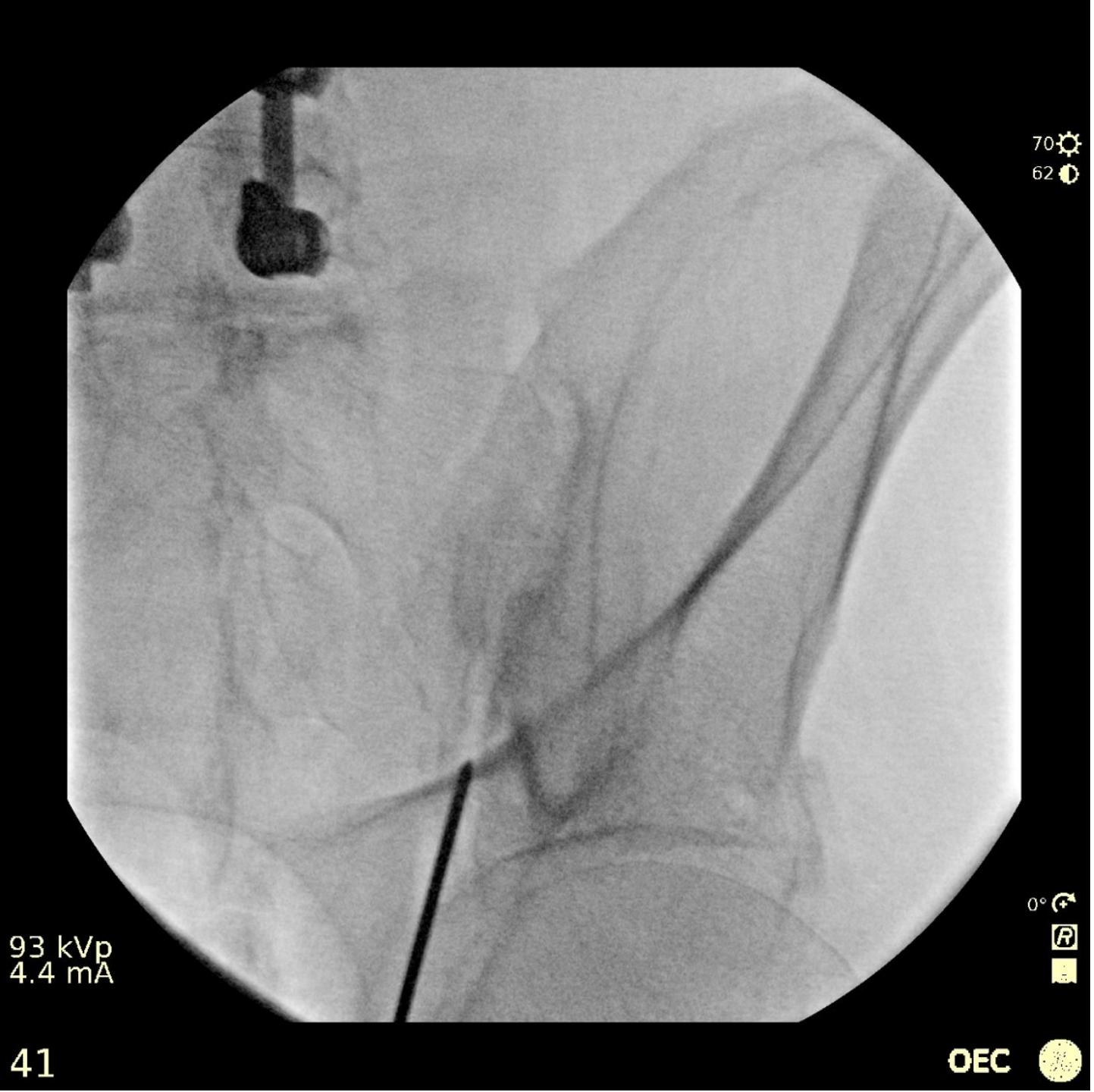
History	Undergone 6 months prior therapies
Physical Exam	1. Finger Fortin Test 2. Thigh Thrust OR Compression 3. Need two of below: • Distraction • Faber • Gaenslen's
Diagnostic Injections	2 diagnostic injections with 75% pain relief at any point
Diagnostic Imaging must include ALL of the following:	1. Imaging (plain radiographs and a CT or MRI) of the SI joint that excludes the presence of destructive lesions (e.g. tumor, infection) or inflammatory arthropathy that would not be properly addressed by percutaneous SIJ fusion 2. Imaging of the ipsilateral hip (plain radiographs) to rule out osteoarthritis 3. Imaging of the lumbar spine (CT or MRI) to rule out neural compression or other degenerative condition that can be causing low back or buttock pain

MIS – Technique CornerLoc





Steinmann Pins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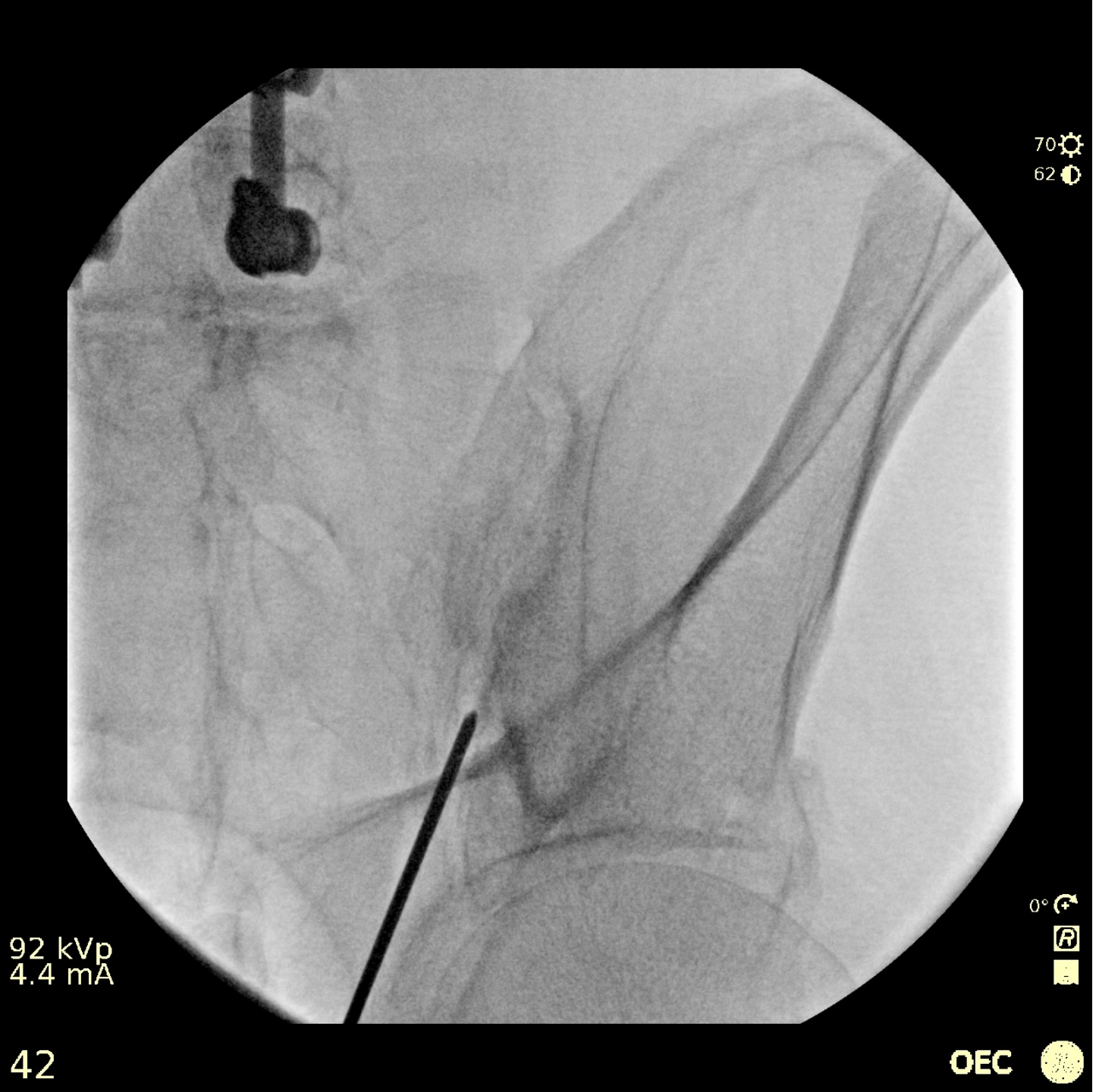
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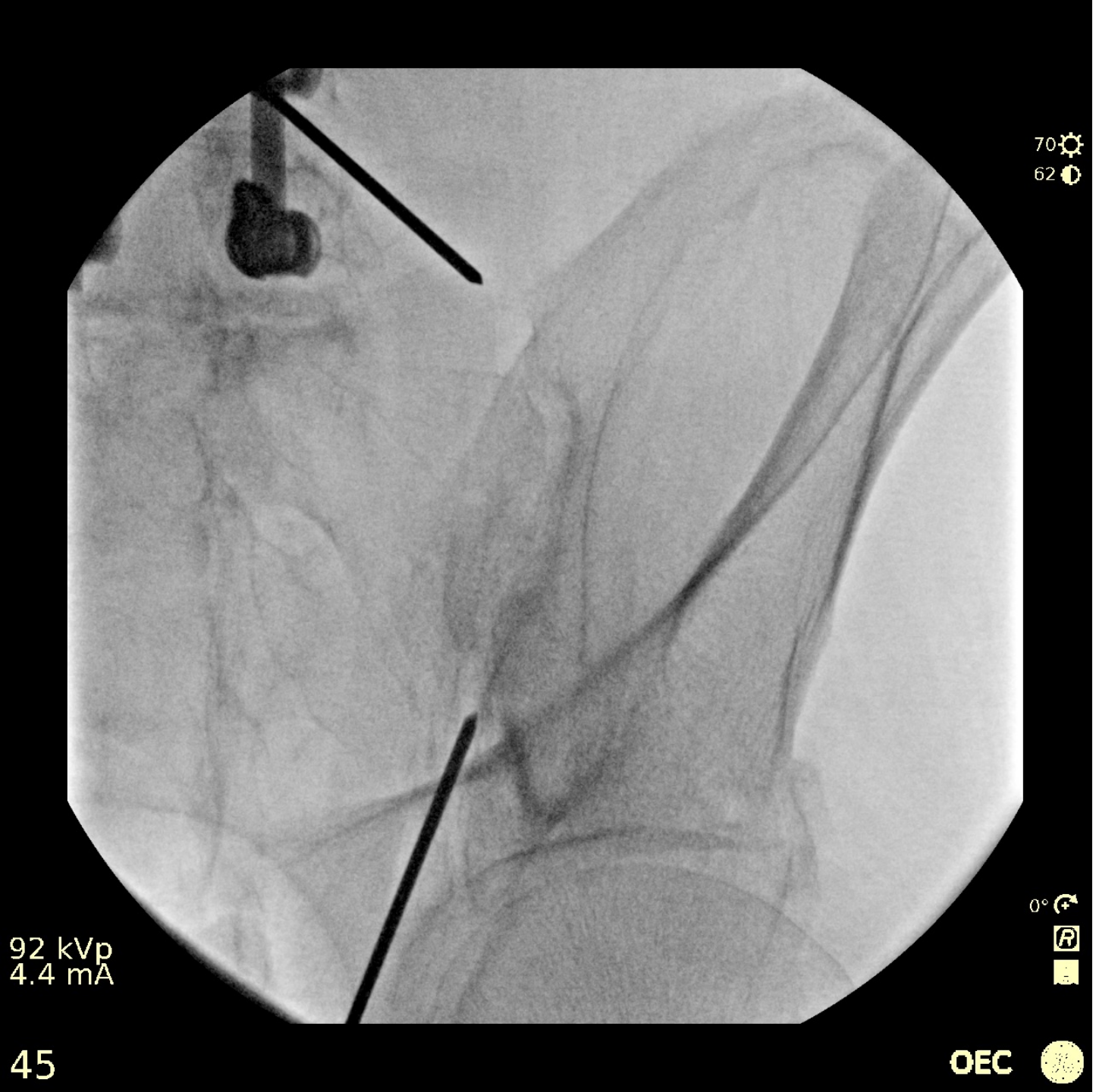

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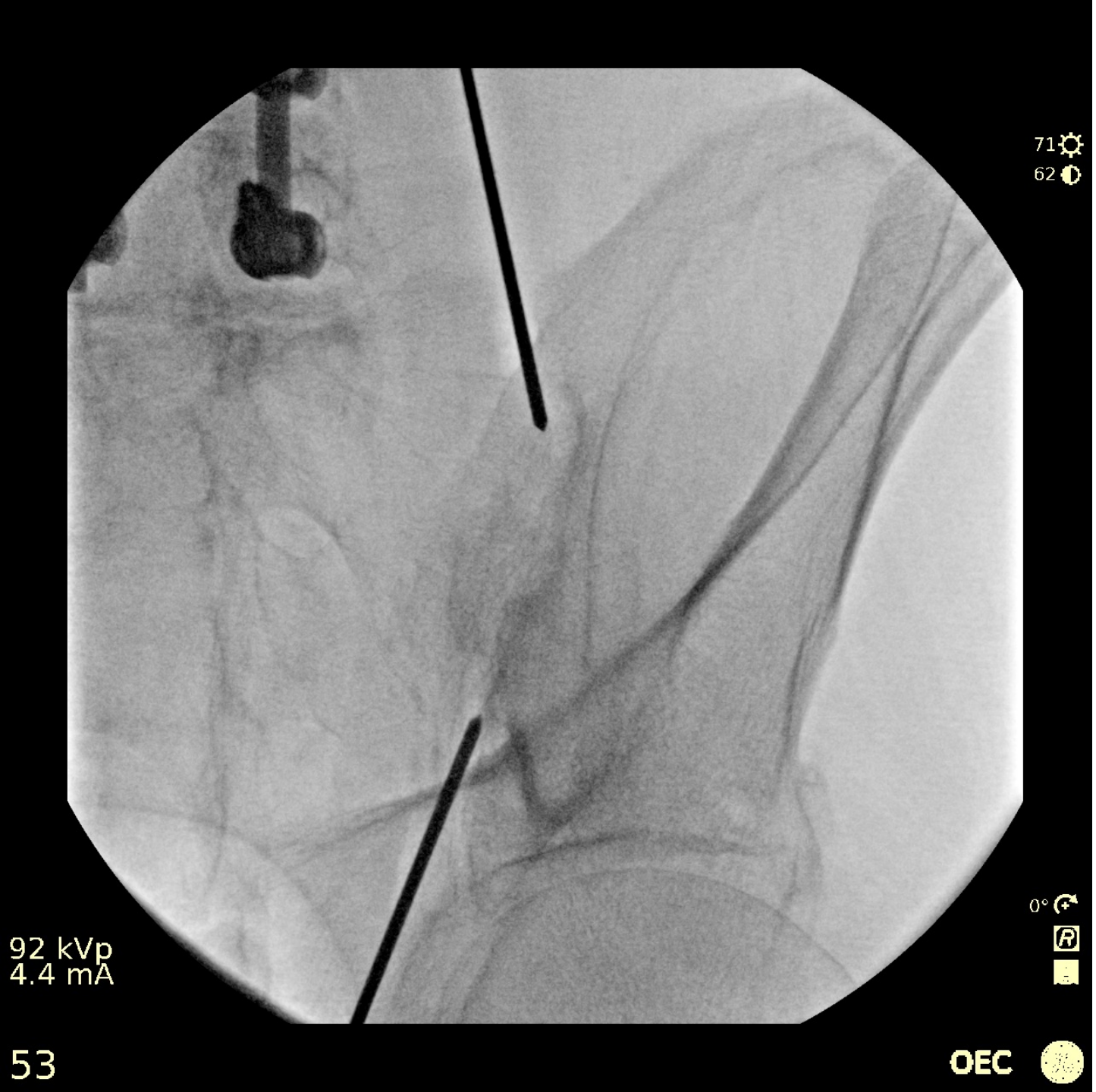
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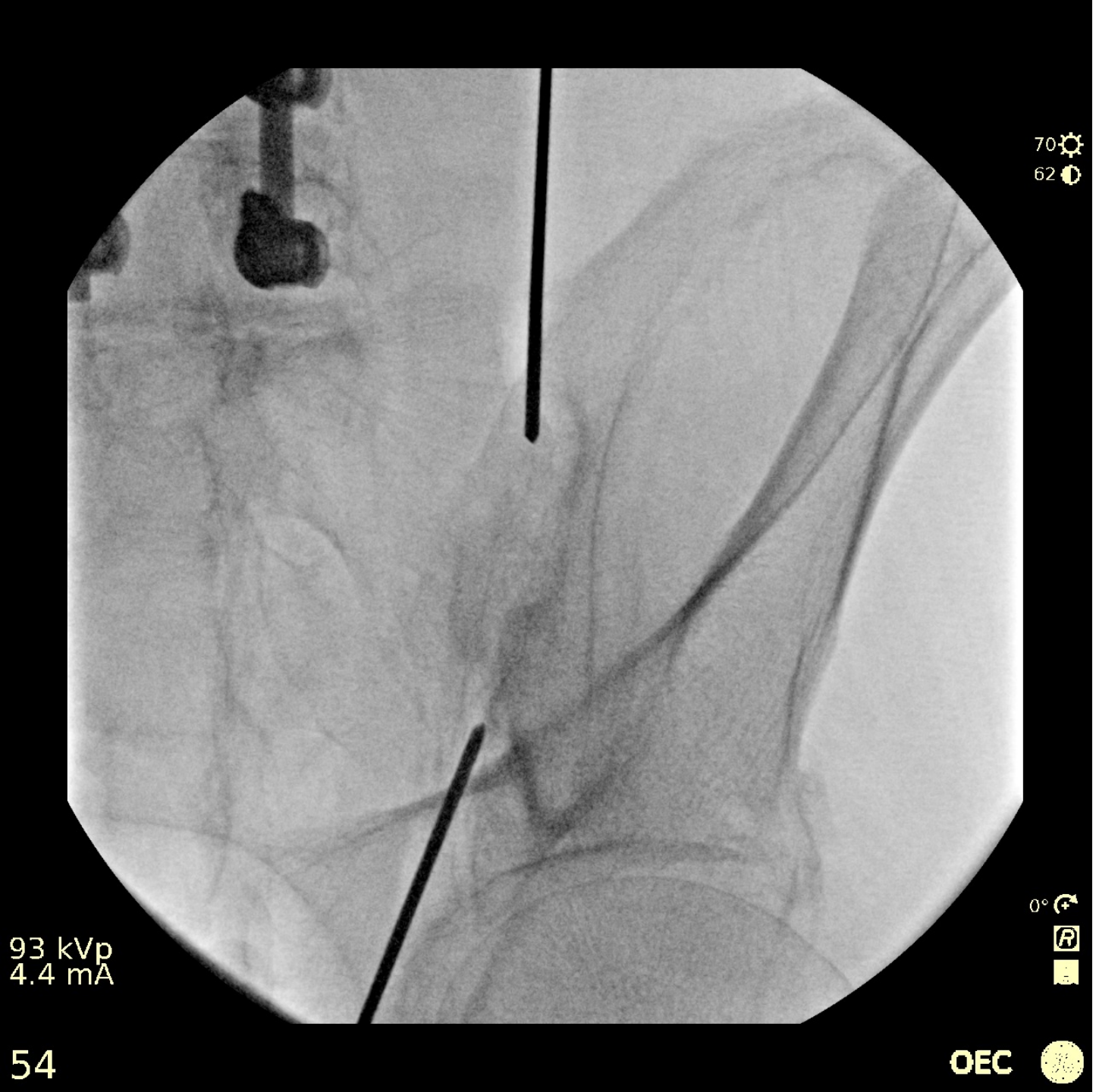

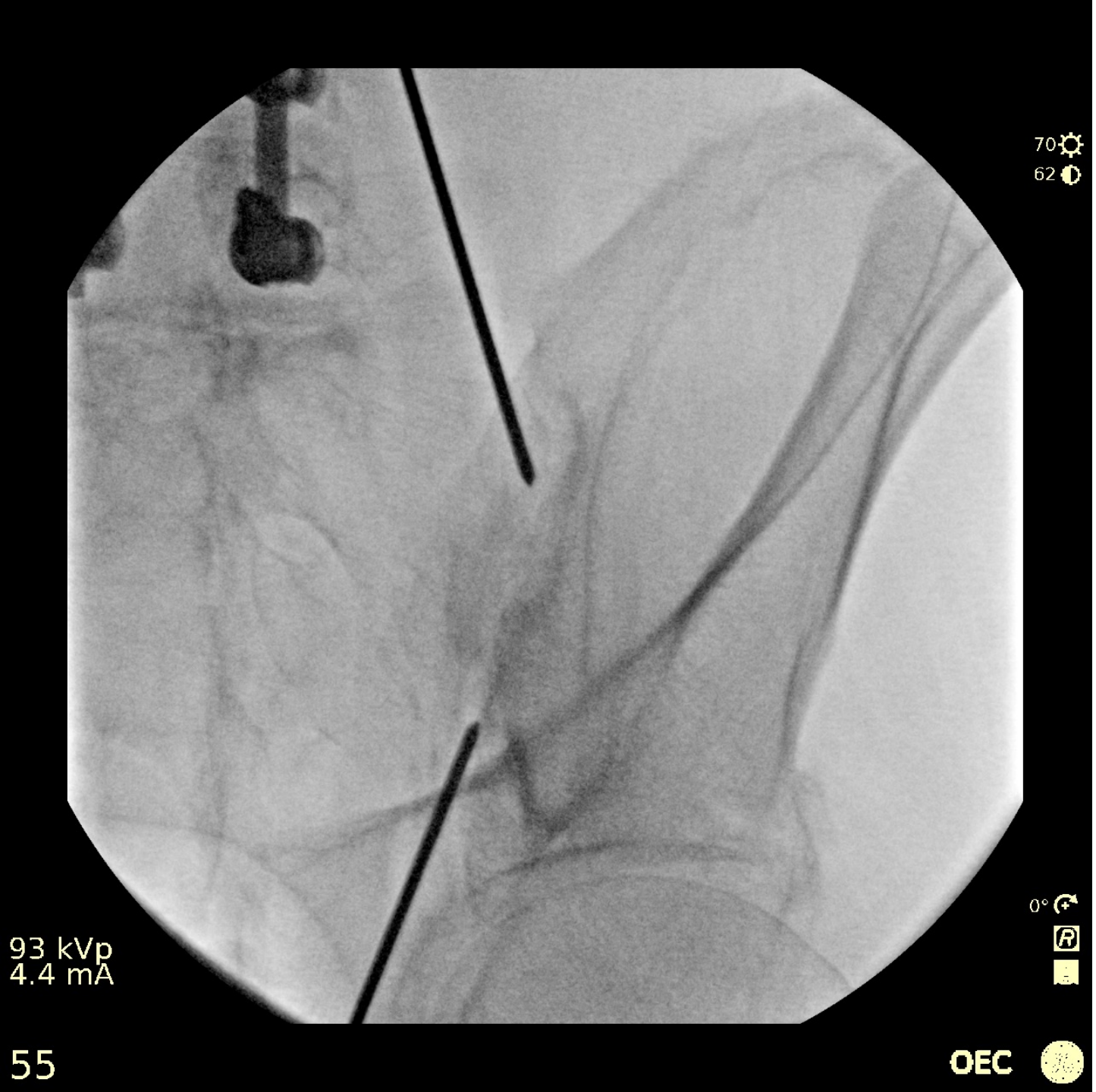
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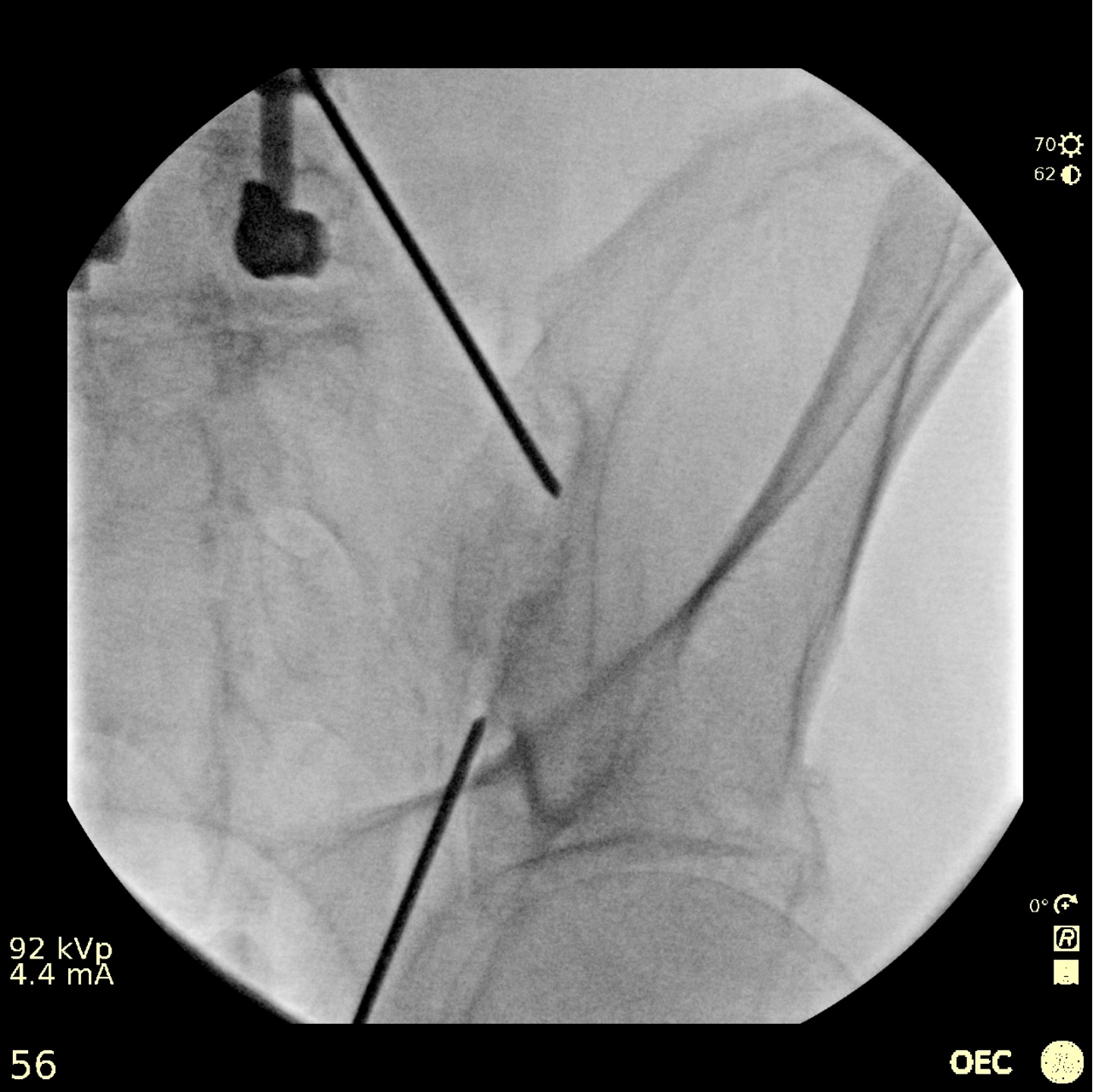
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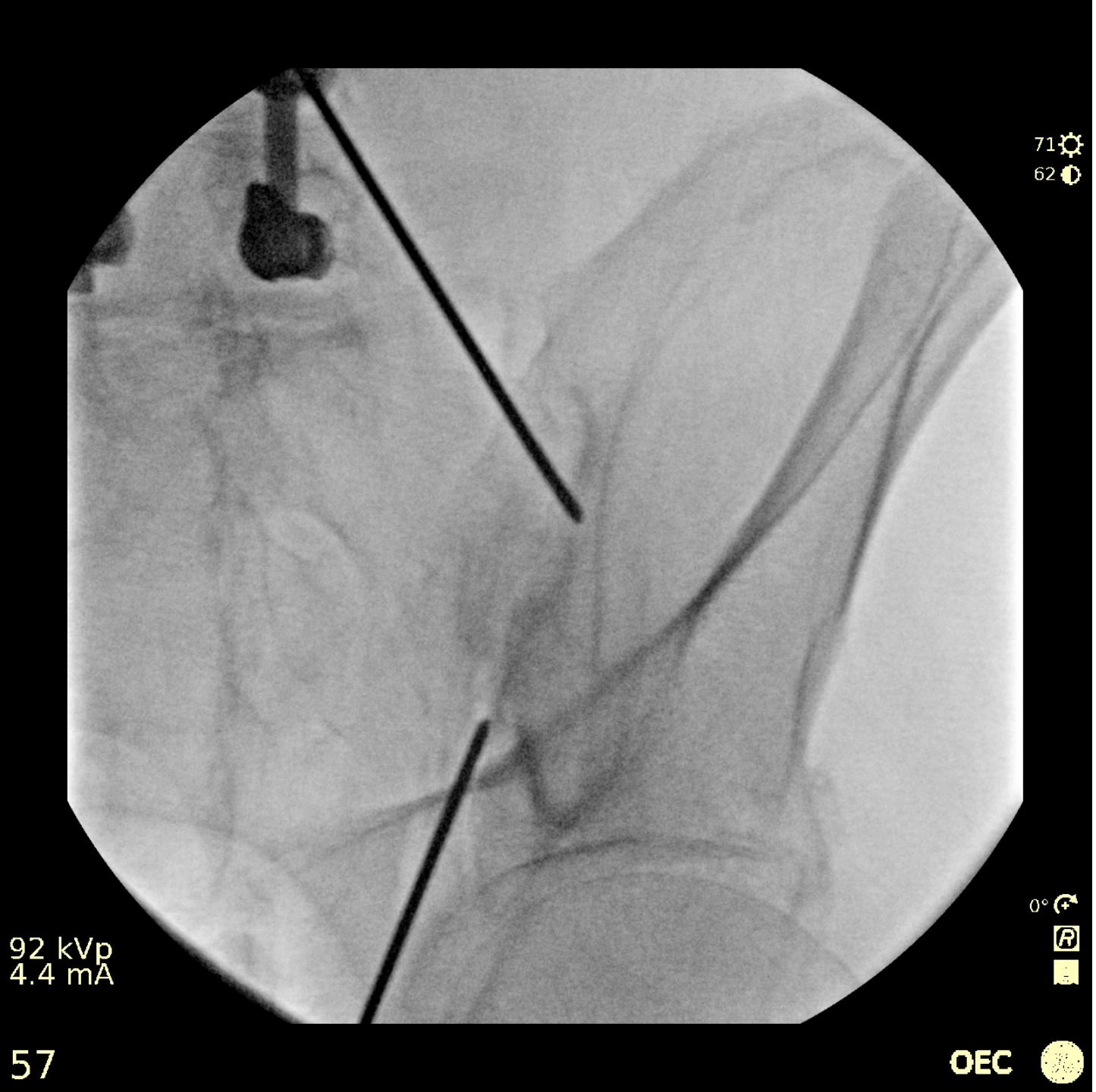

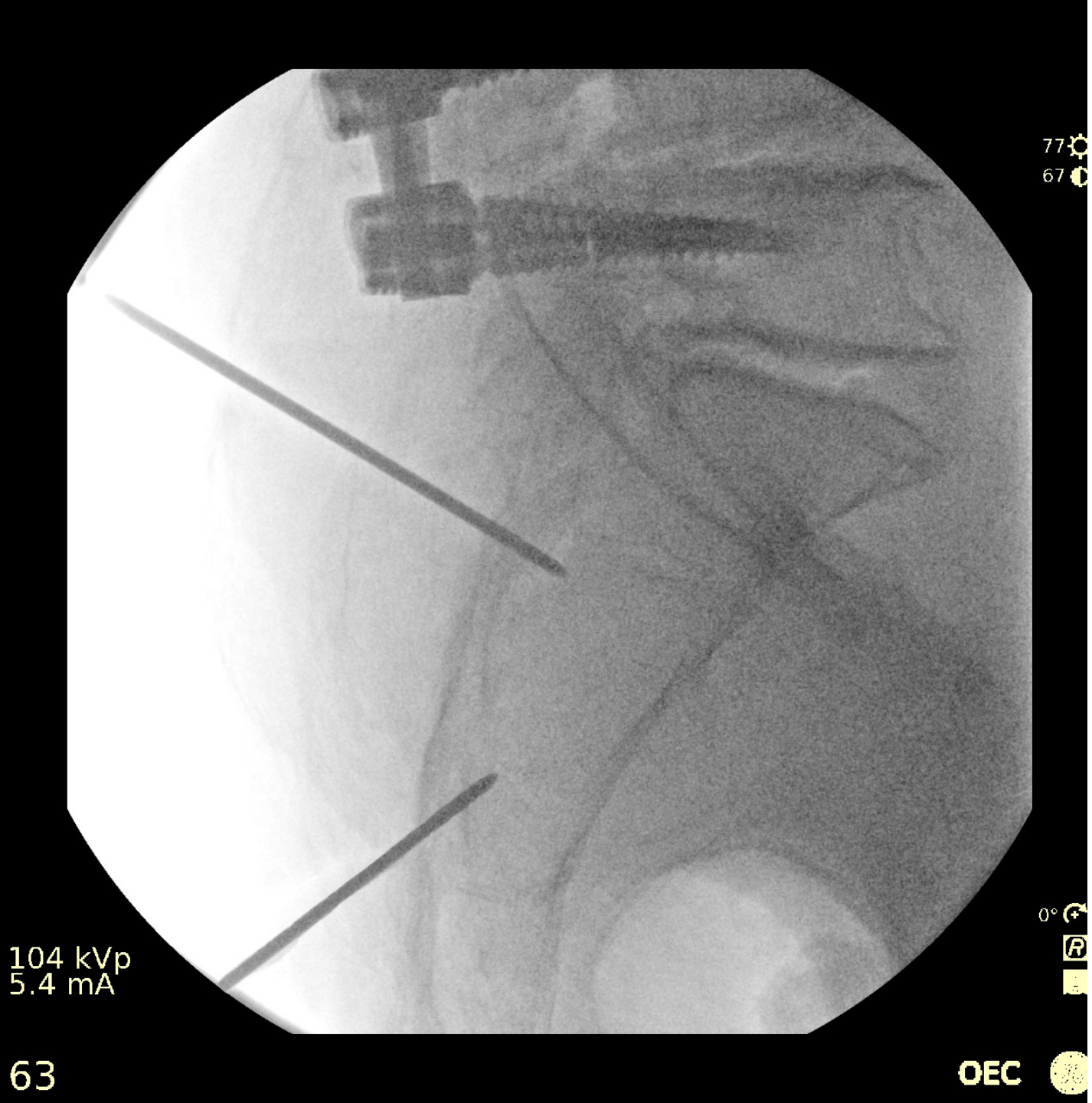
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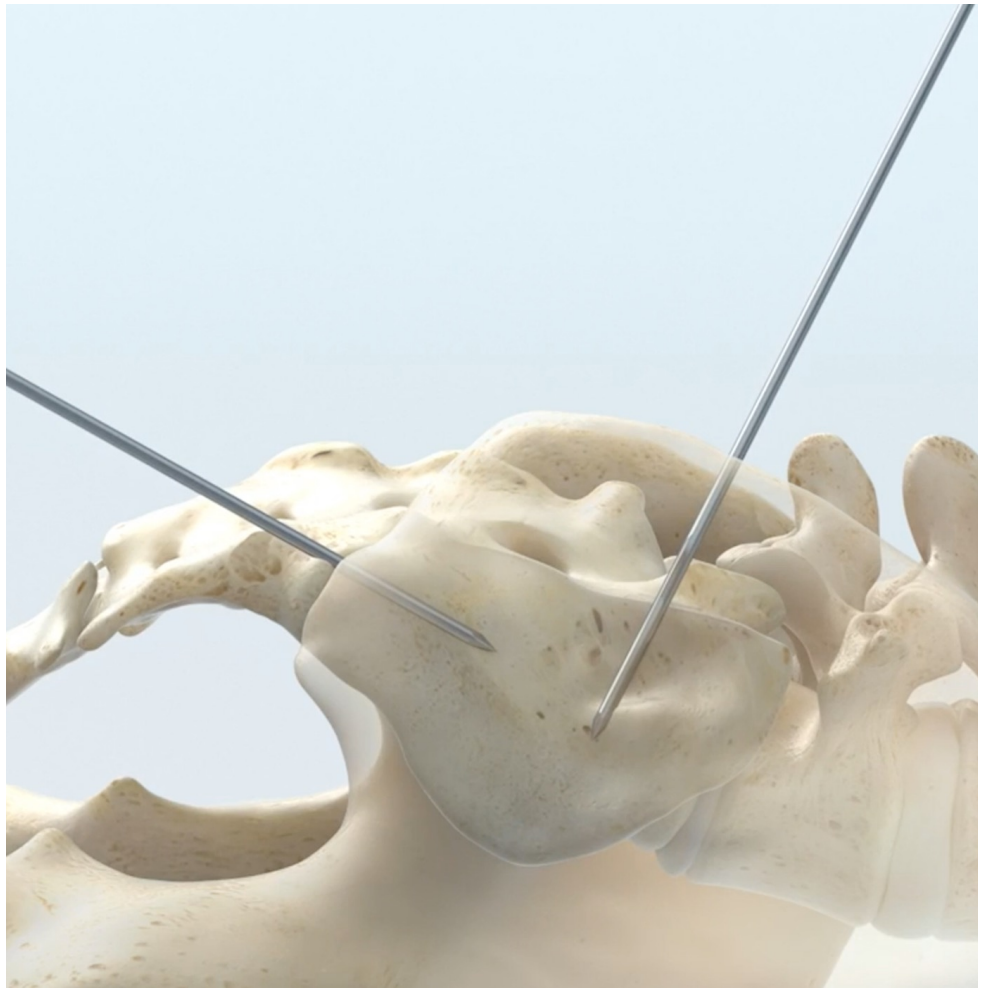

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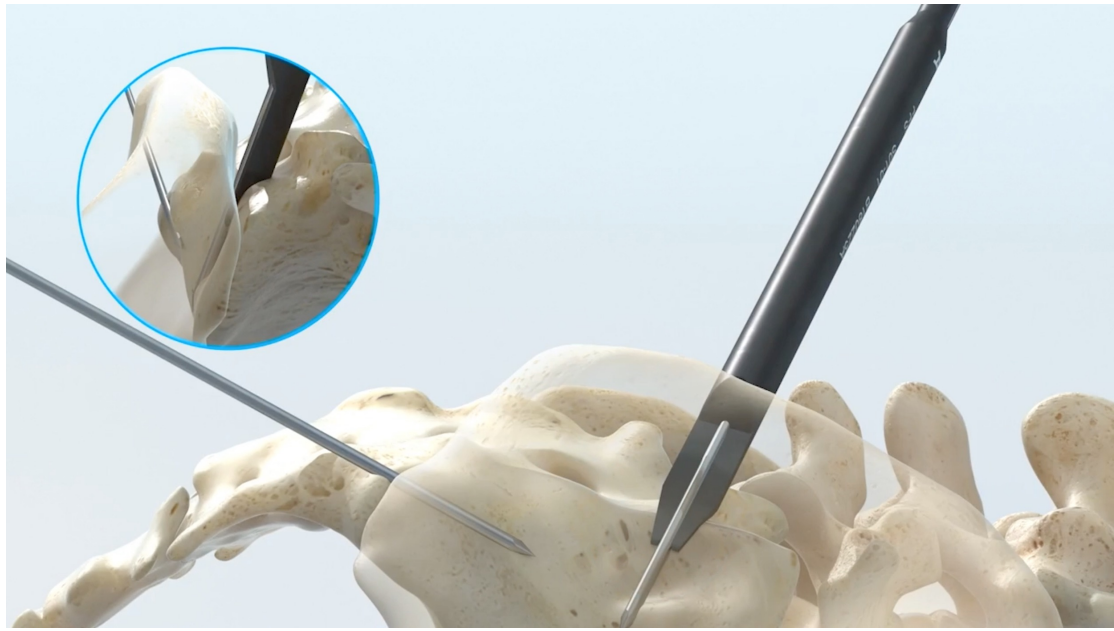

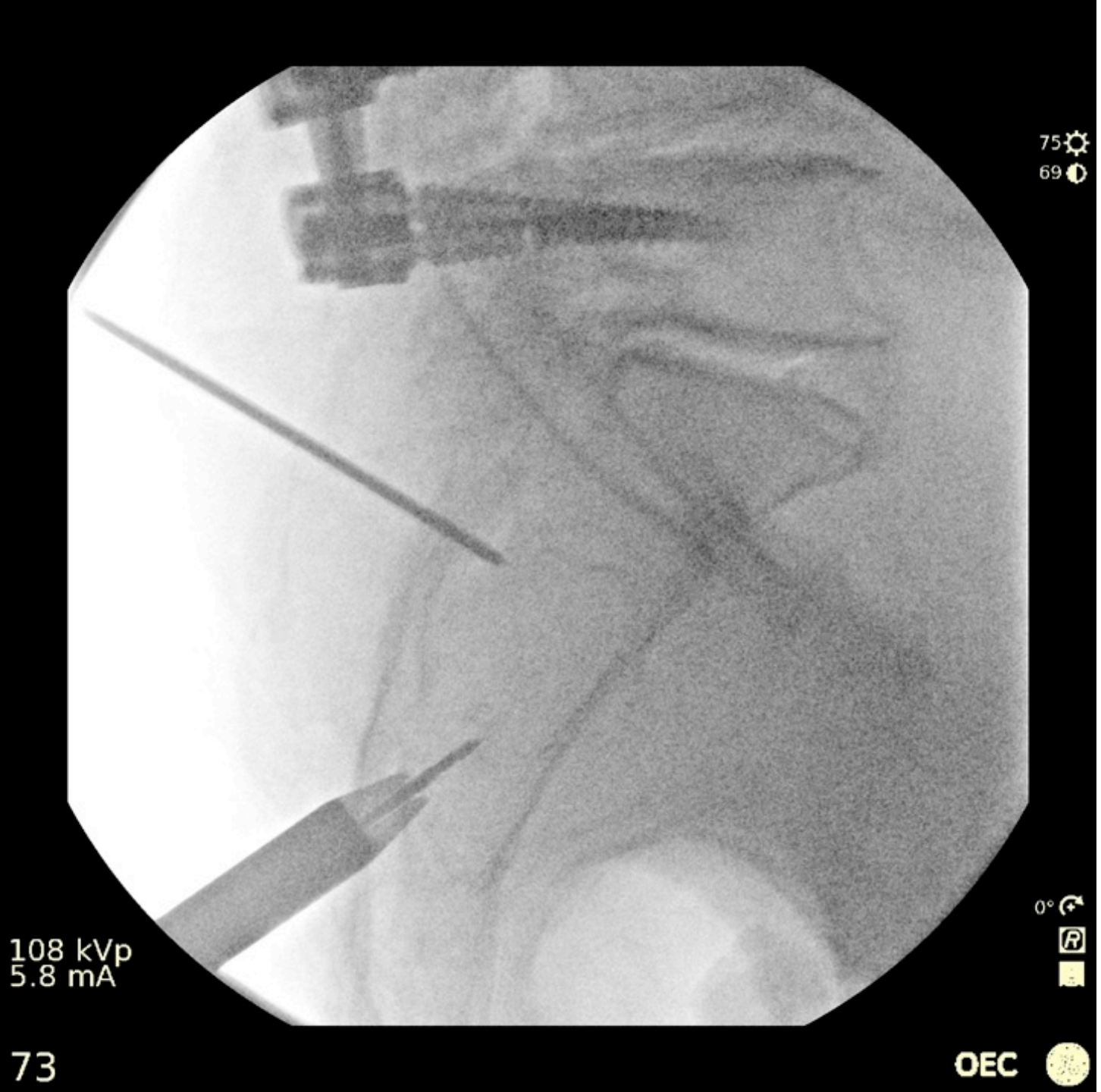

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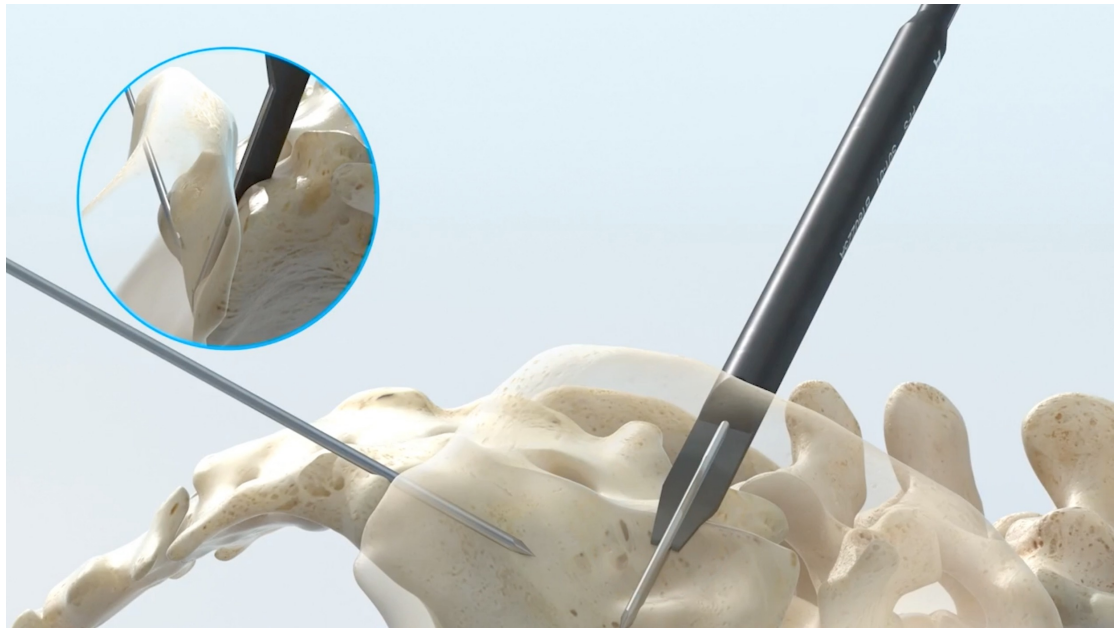
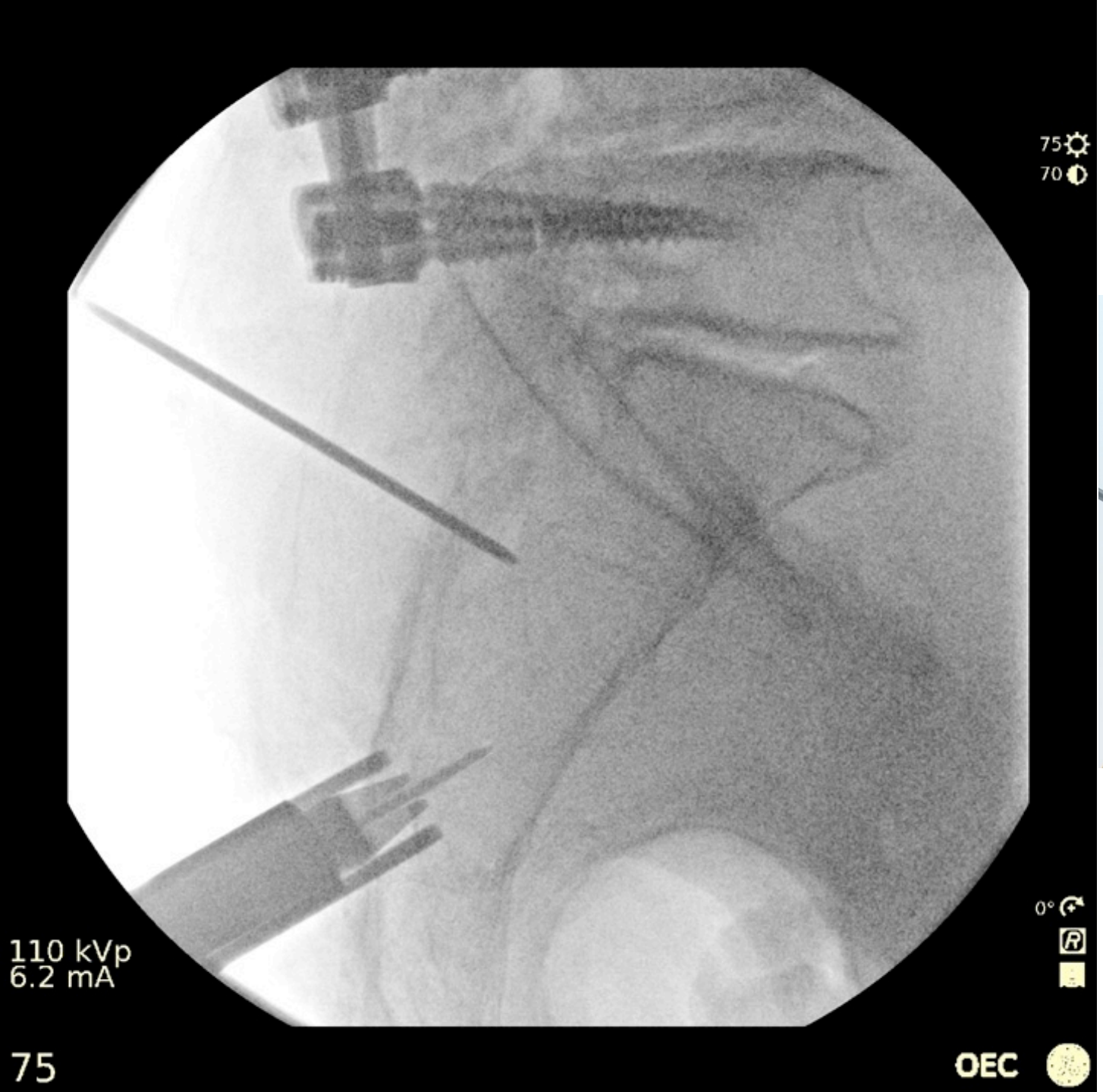
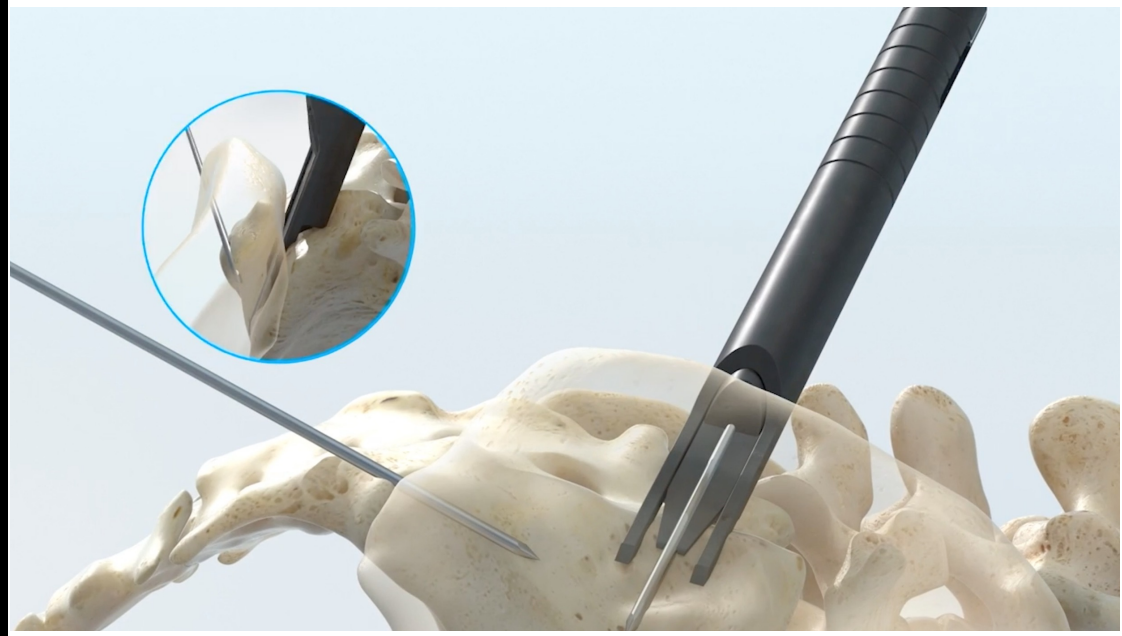
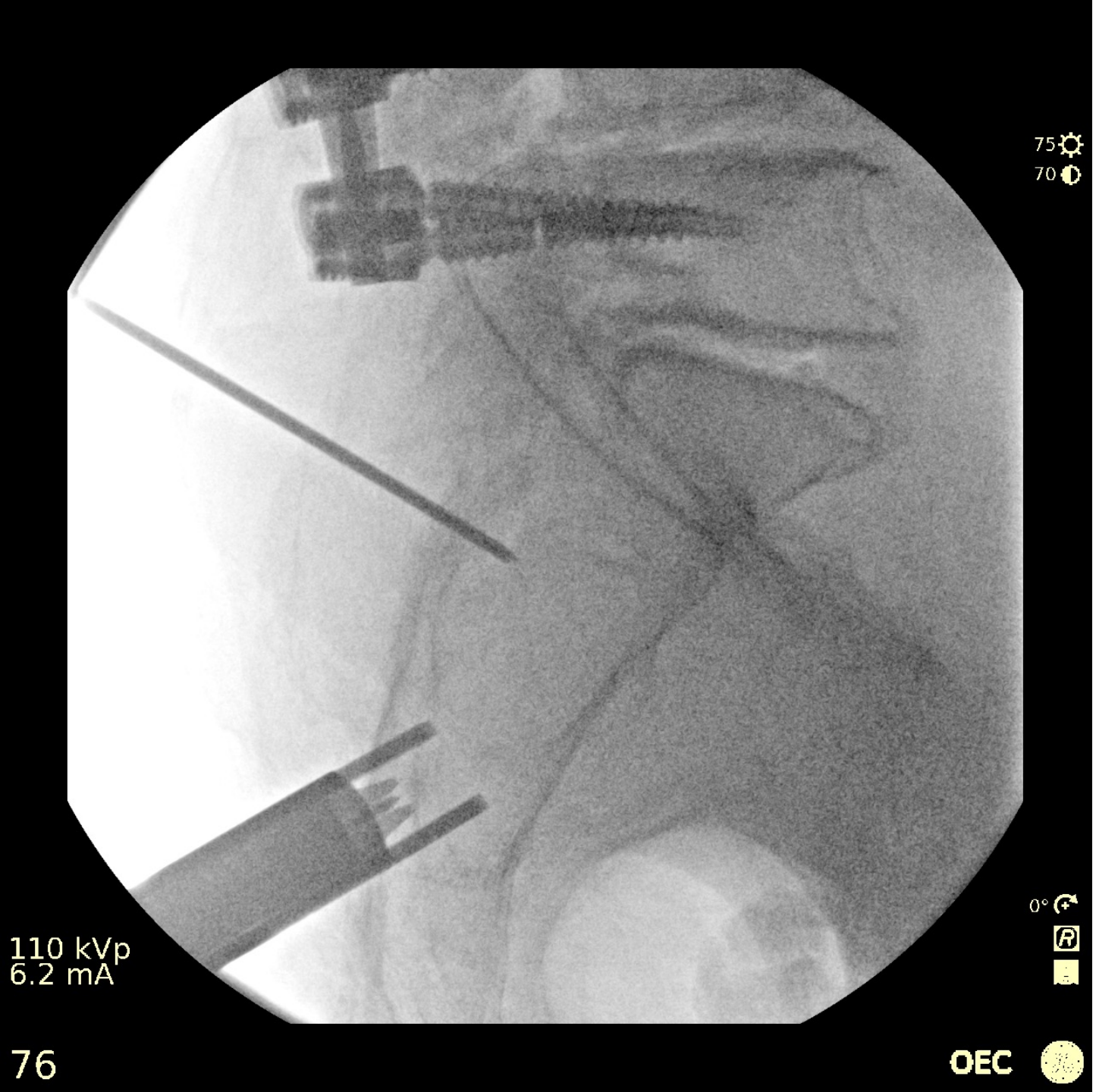




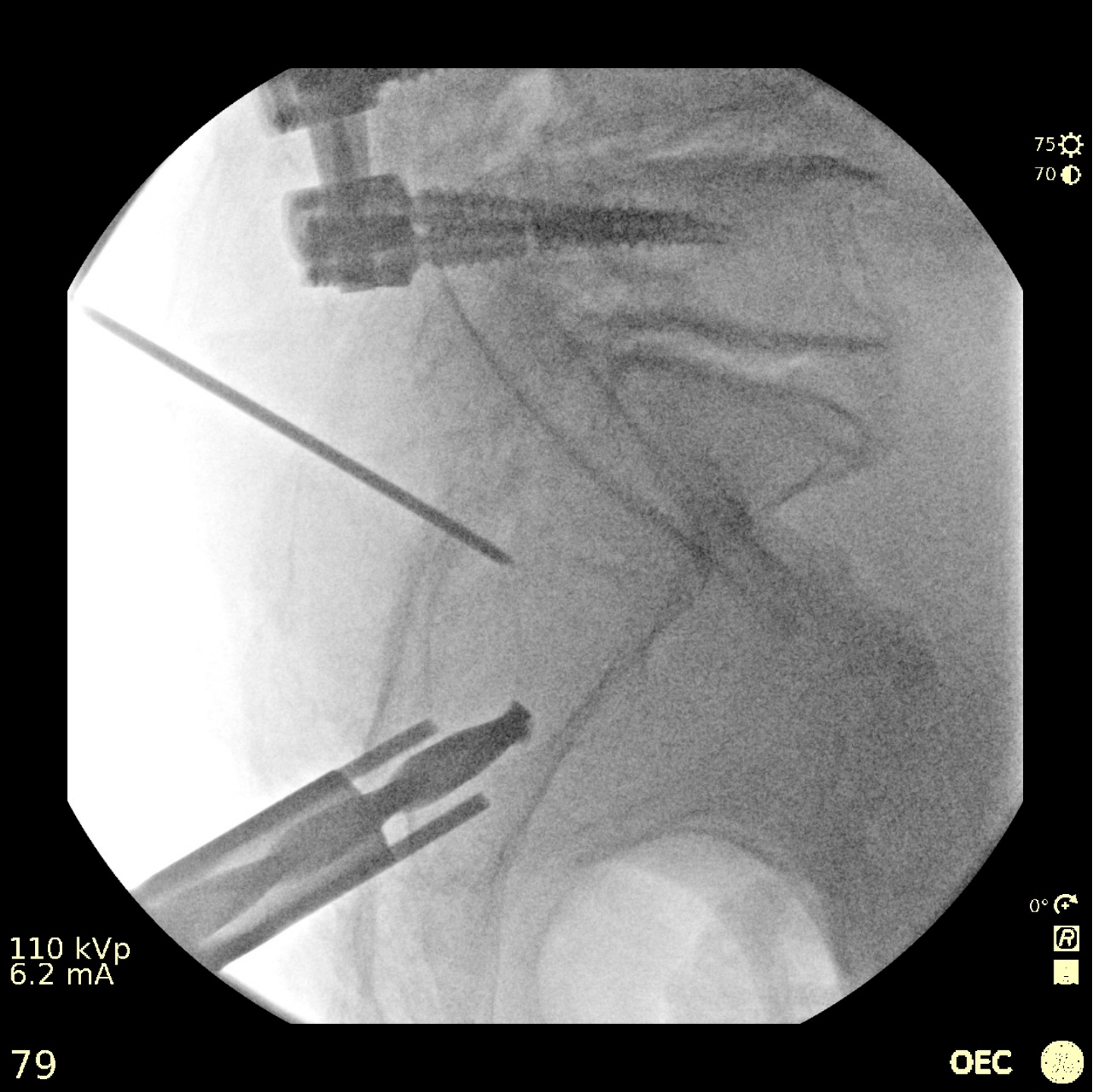
B – Working canula

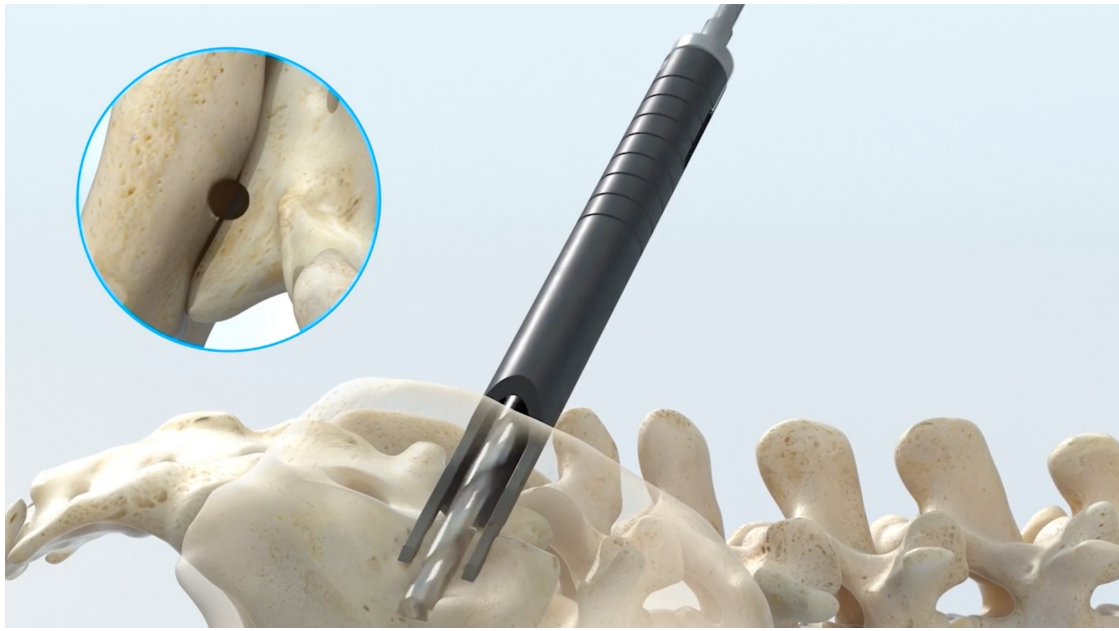




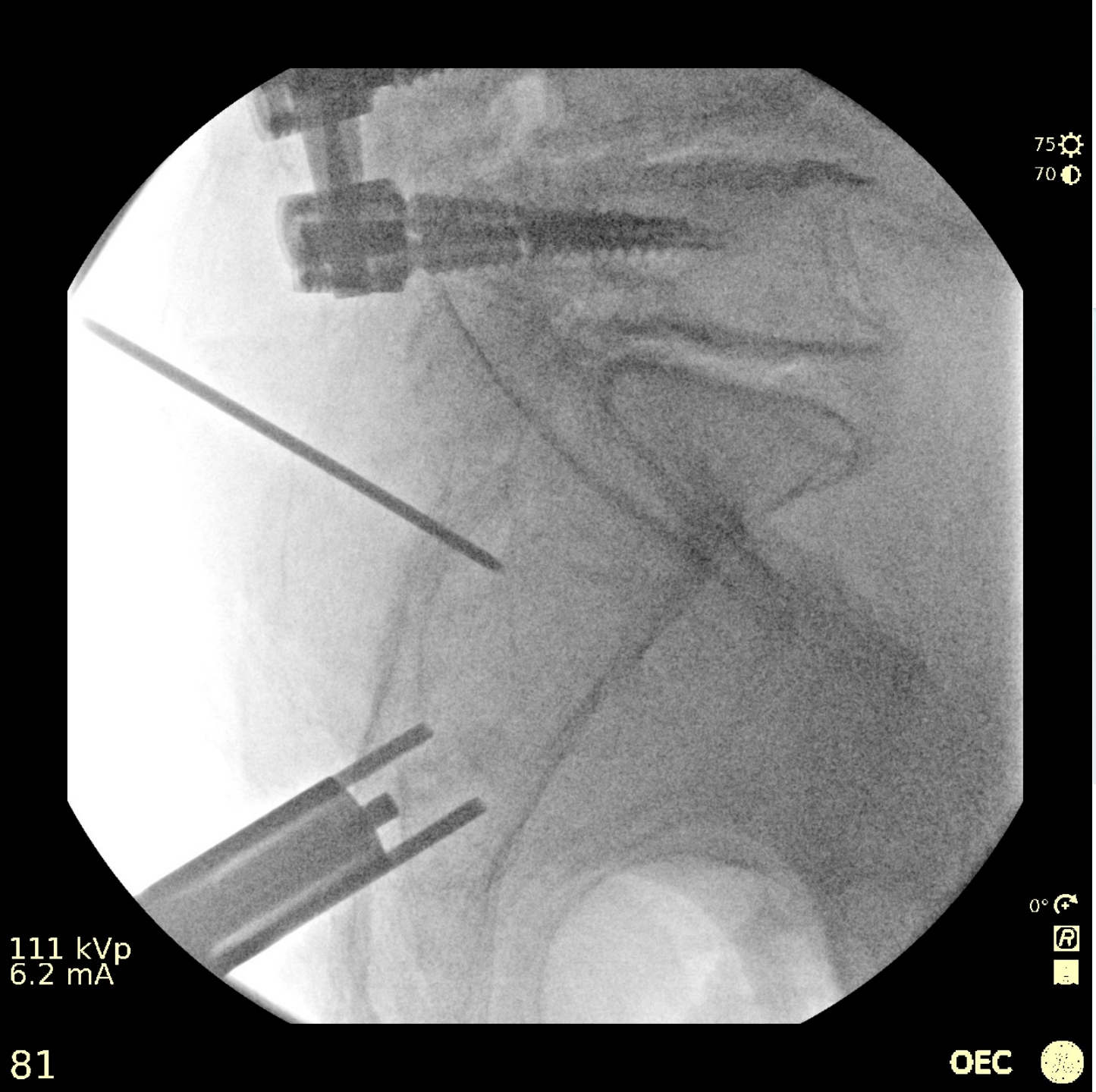
Remove Joint Finder

C - Drill





D - Broach



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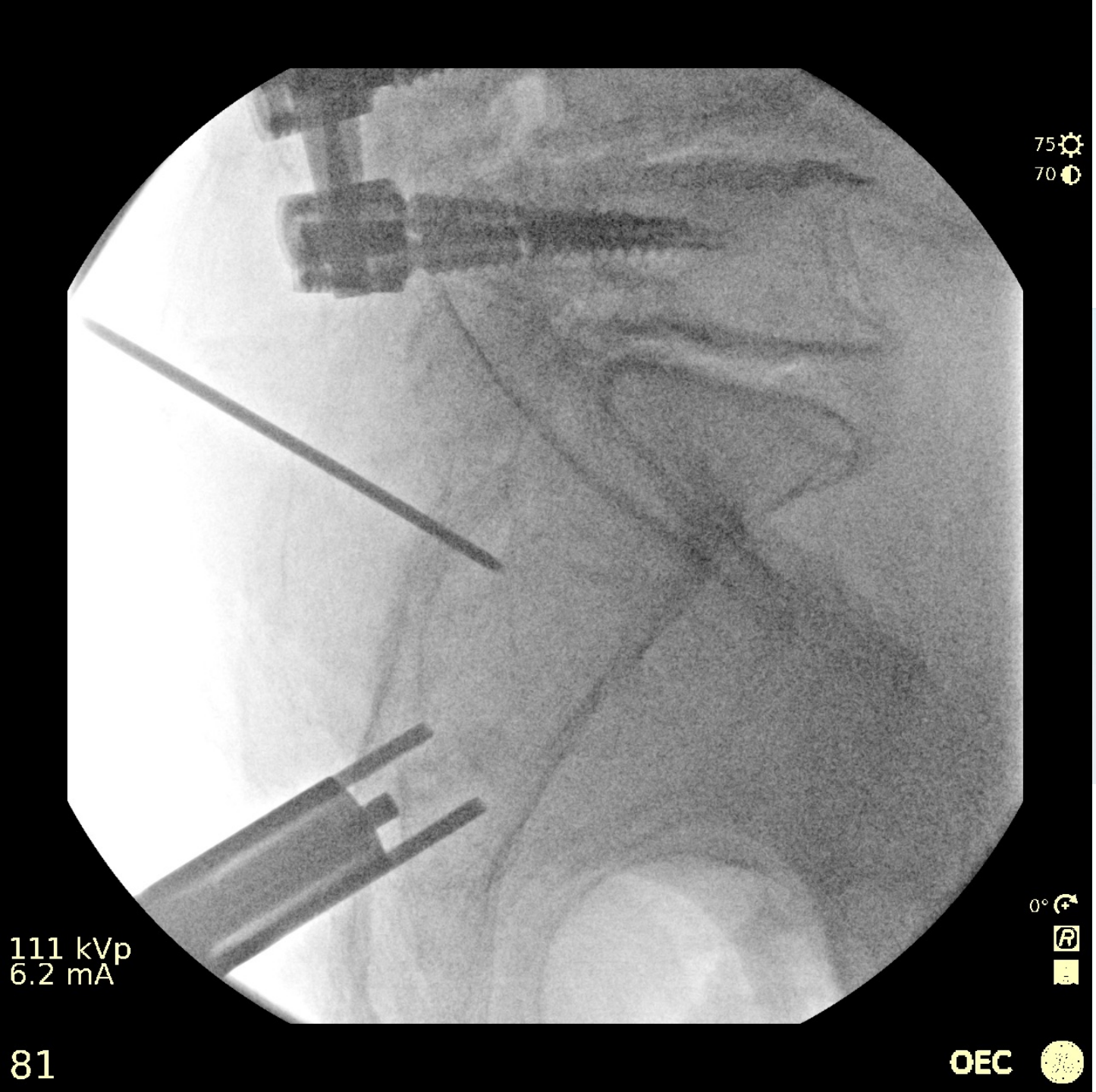

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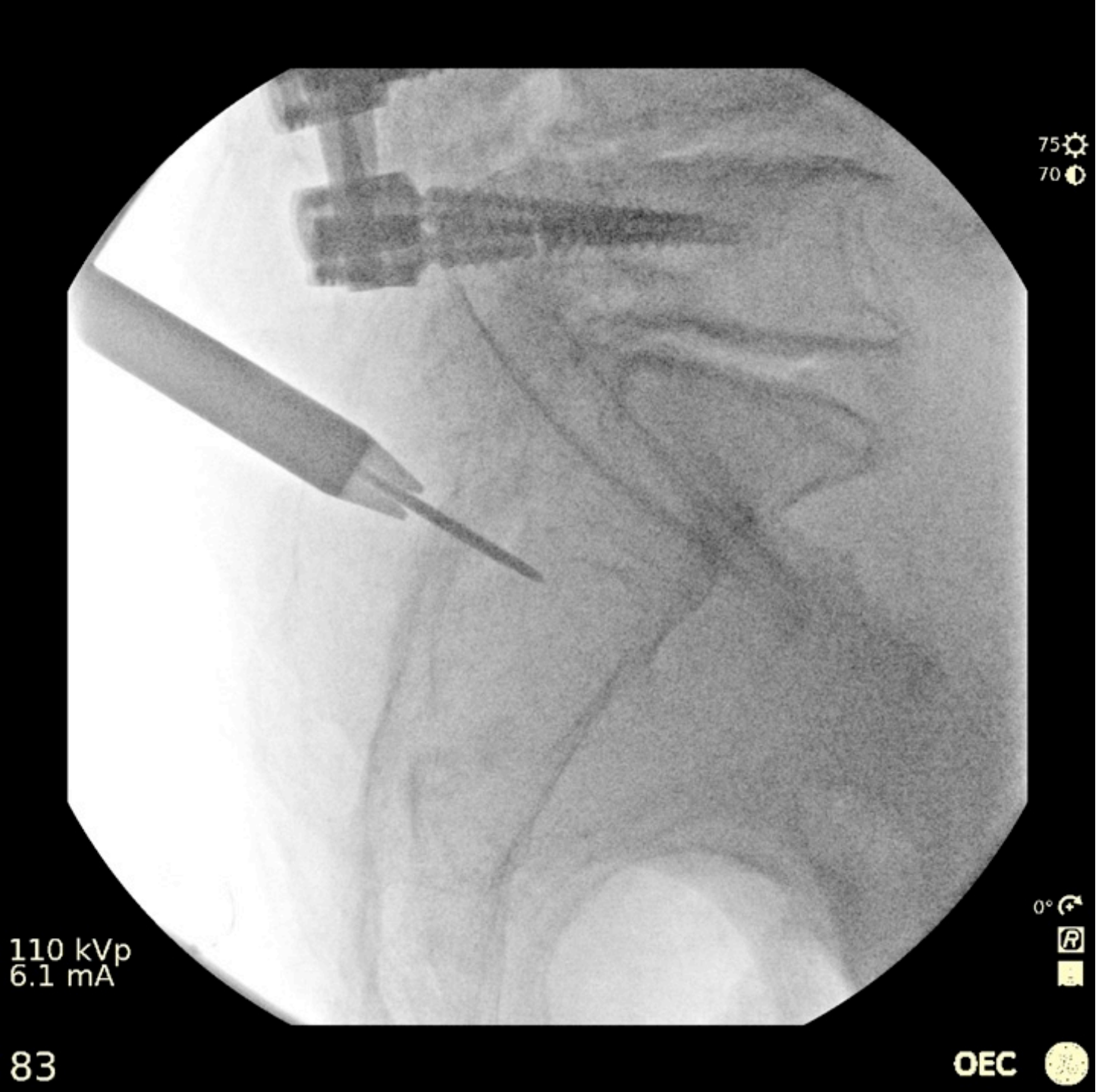
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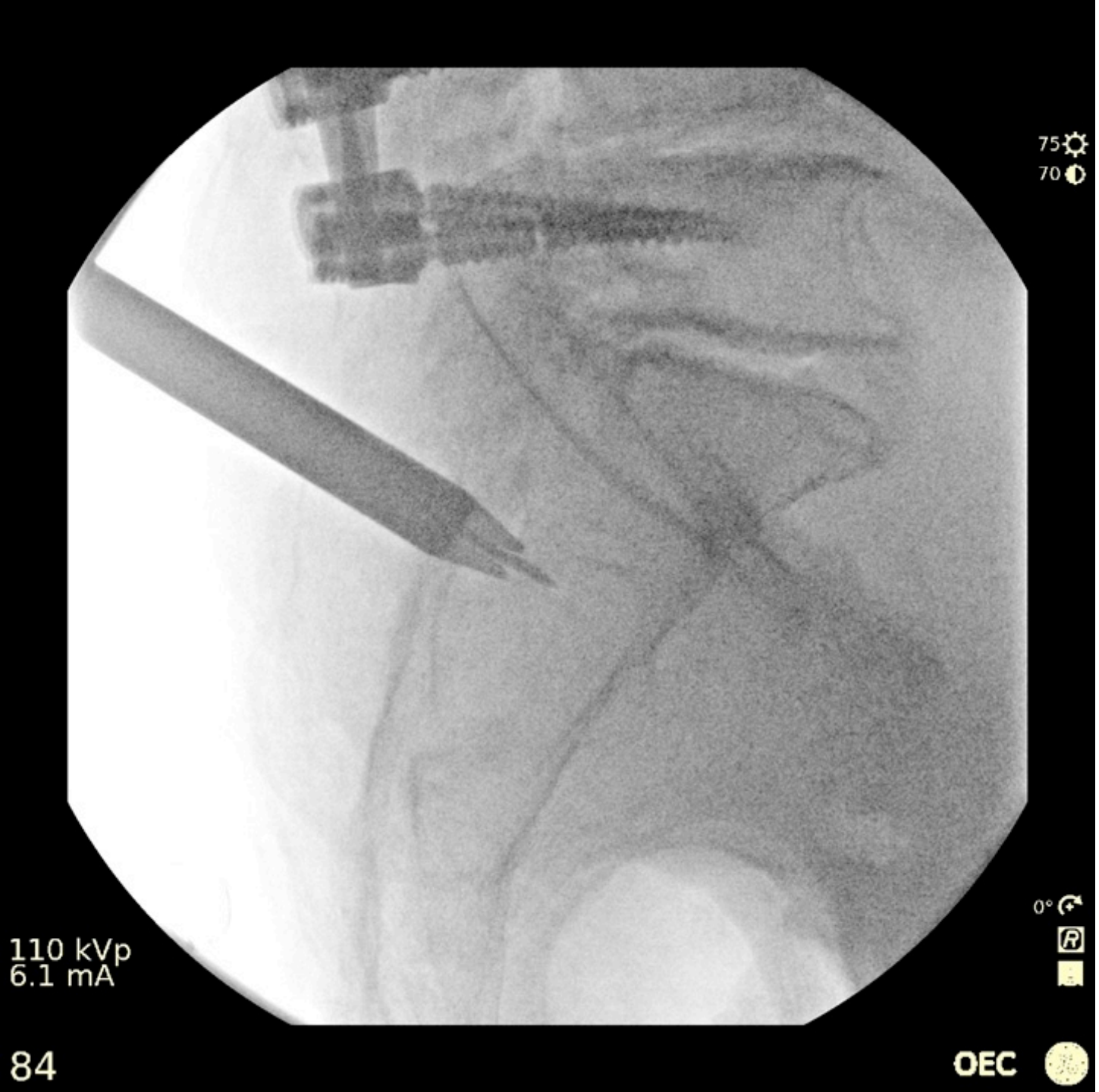
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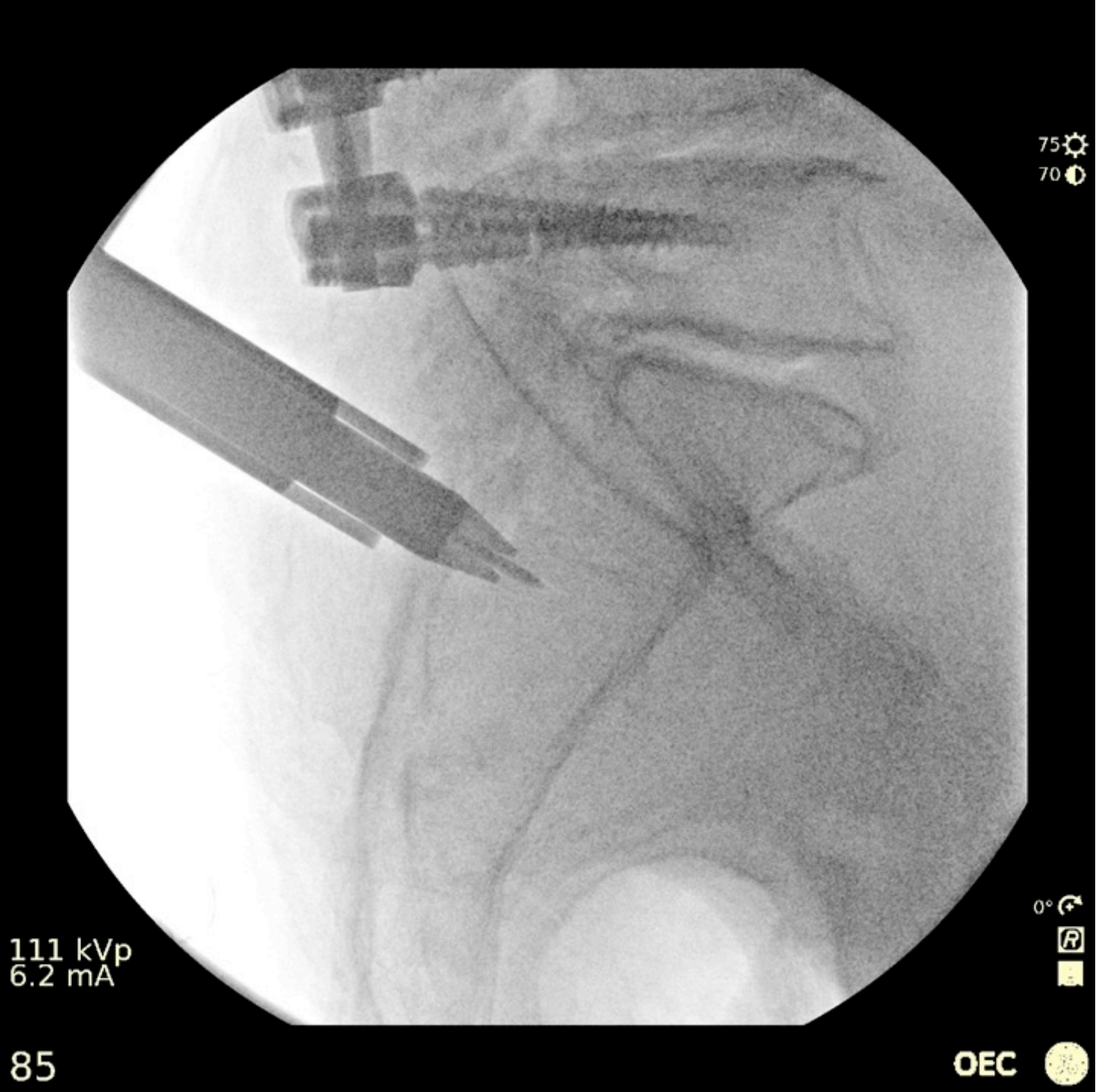
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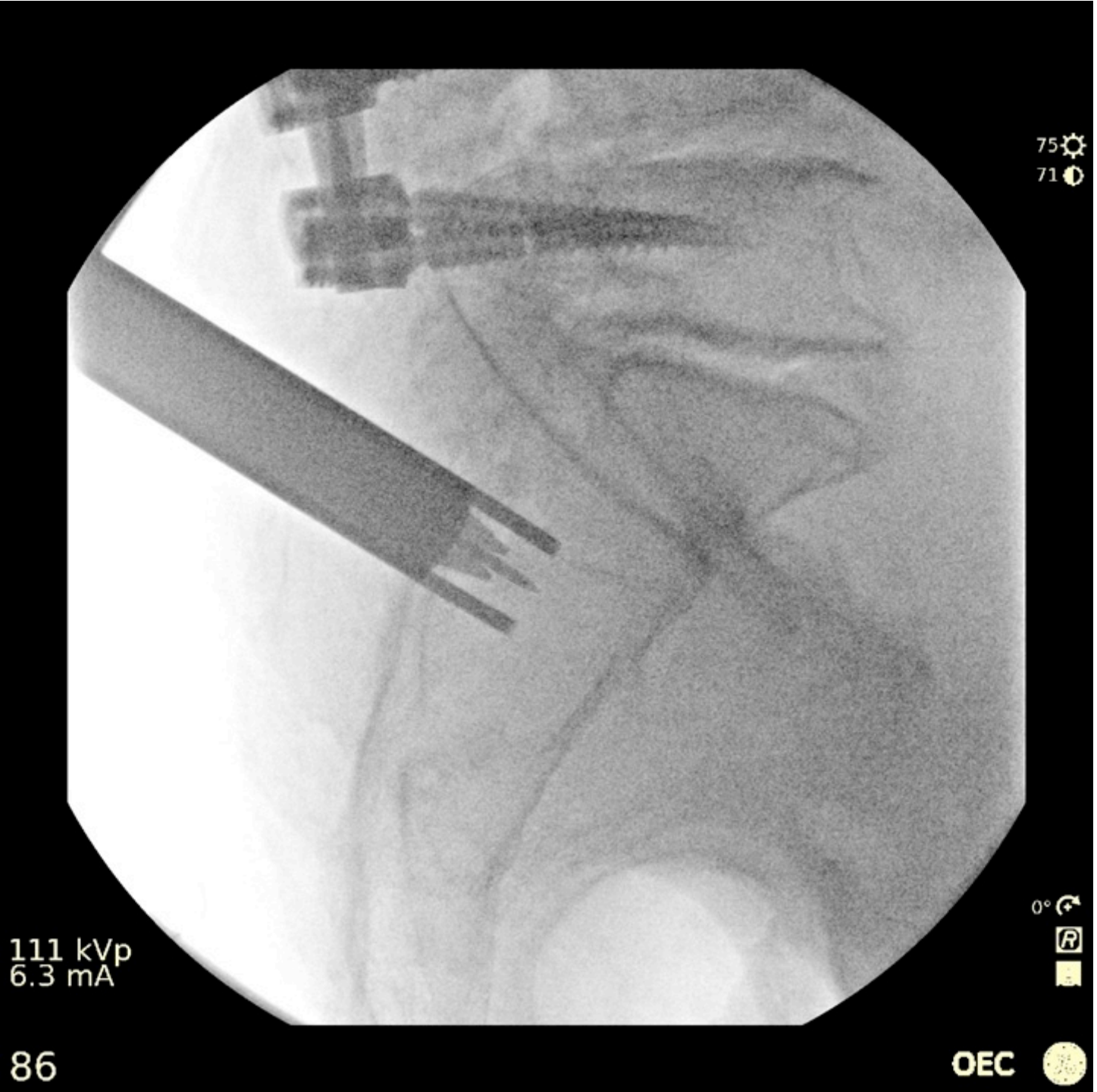
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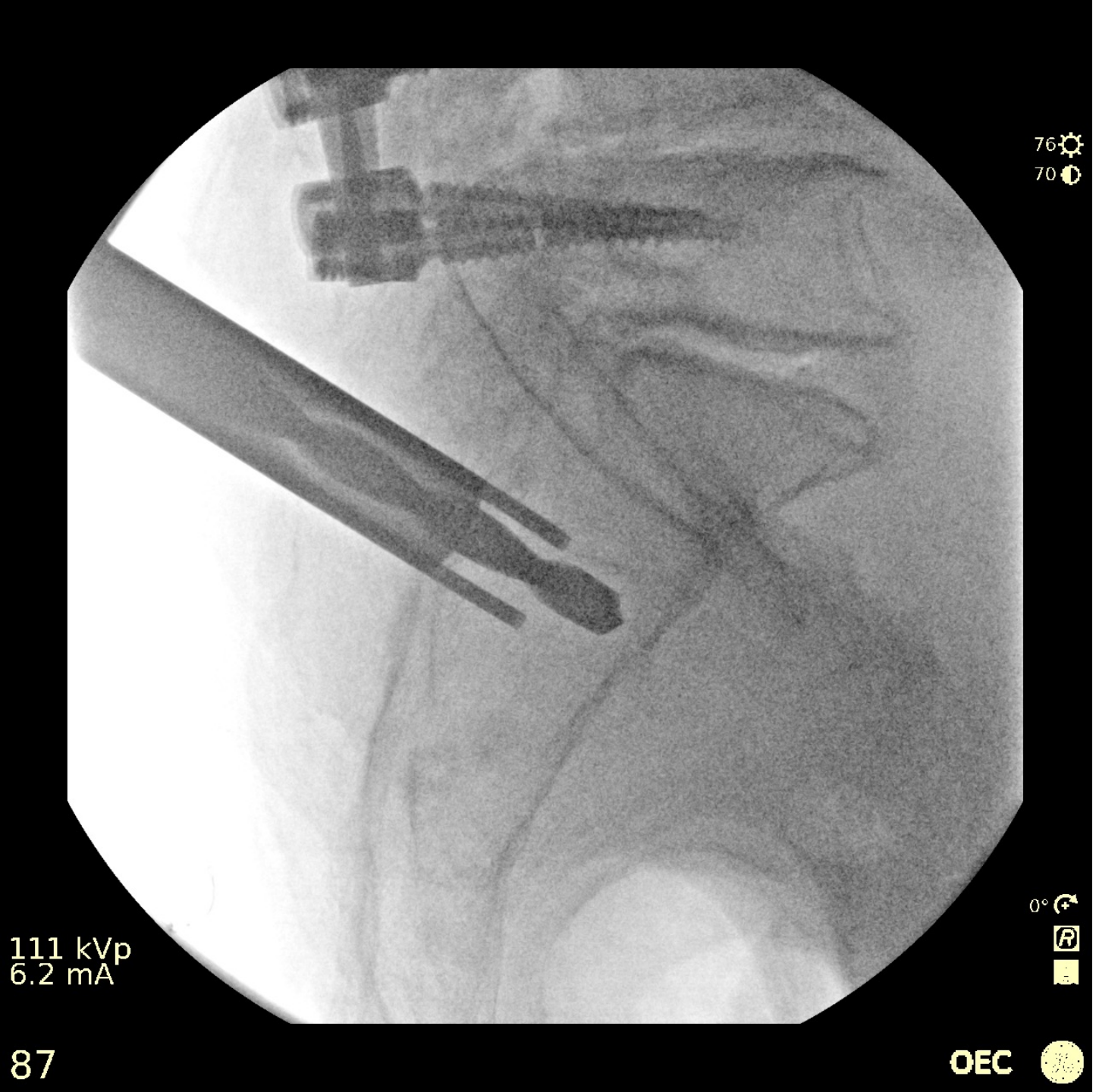

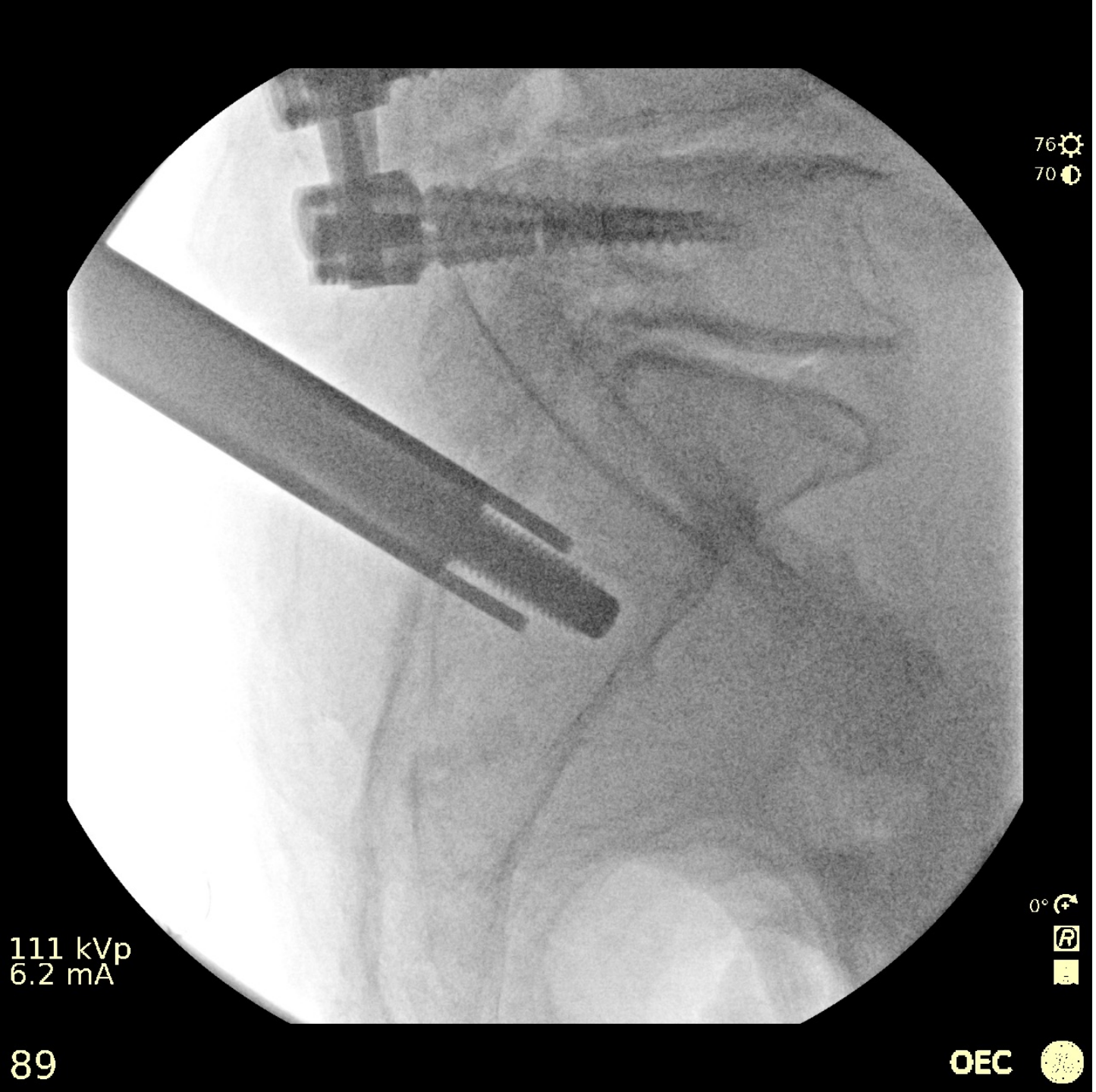
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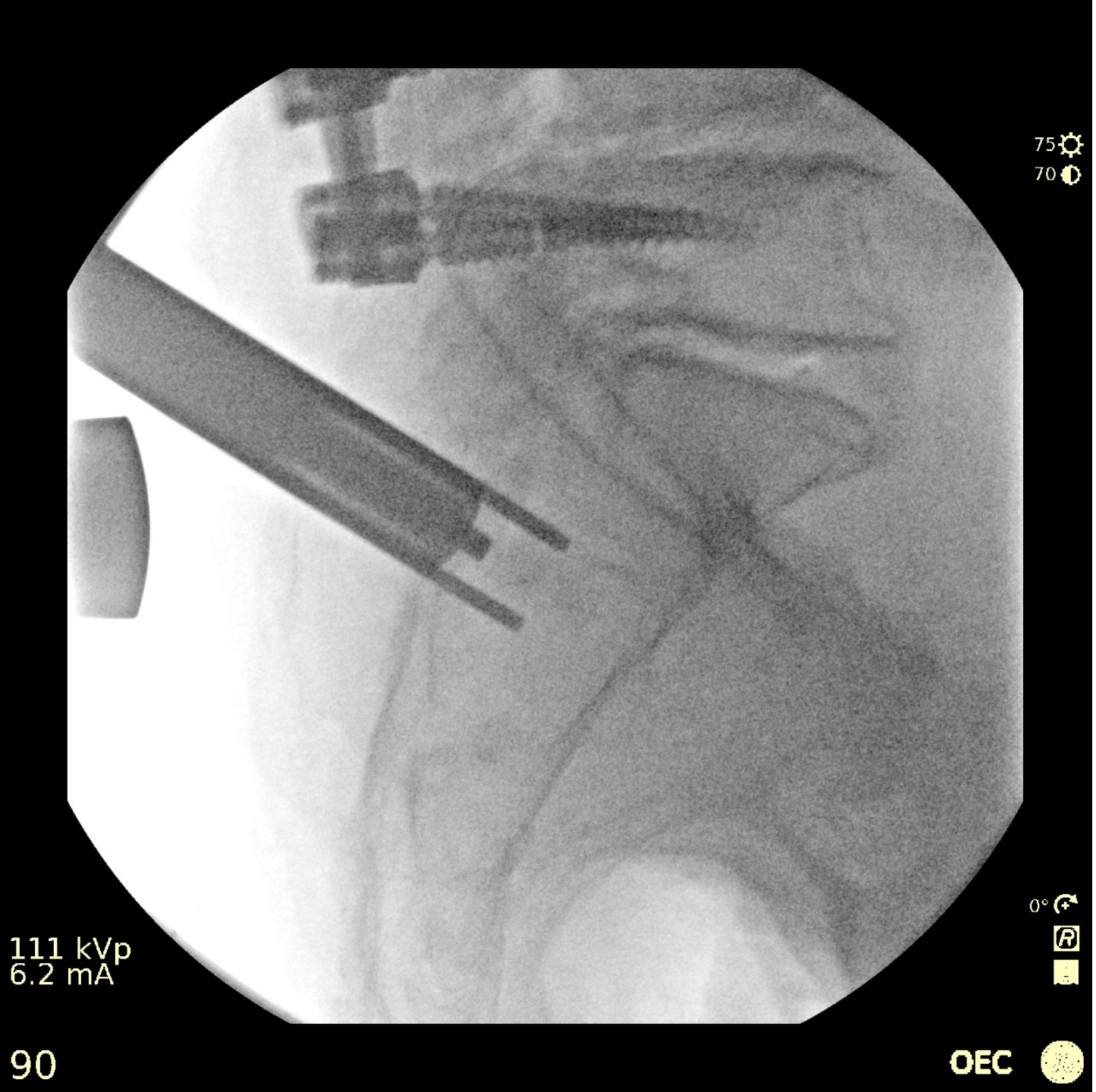

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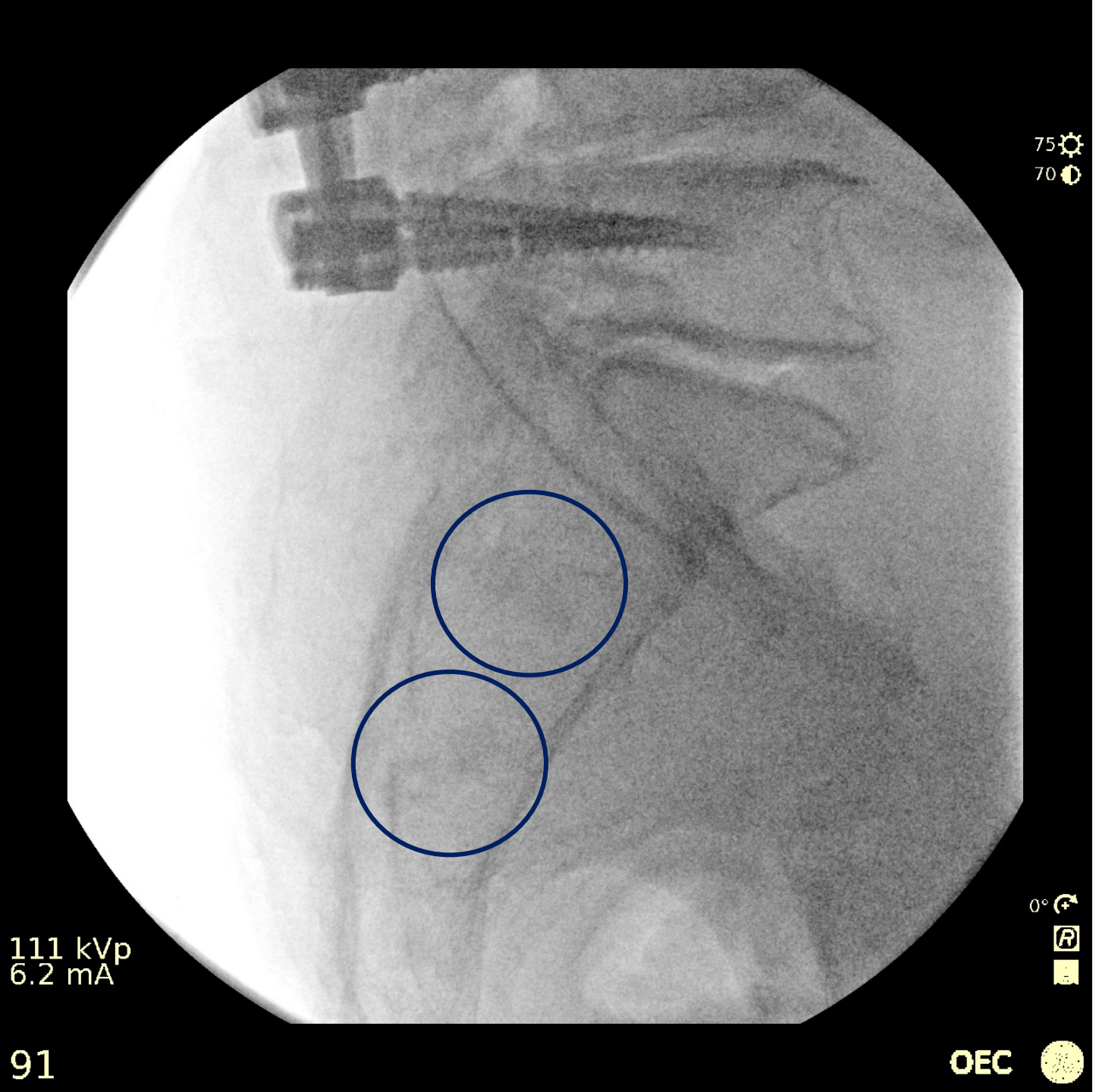
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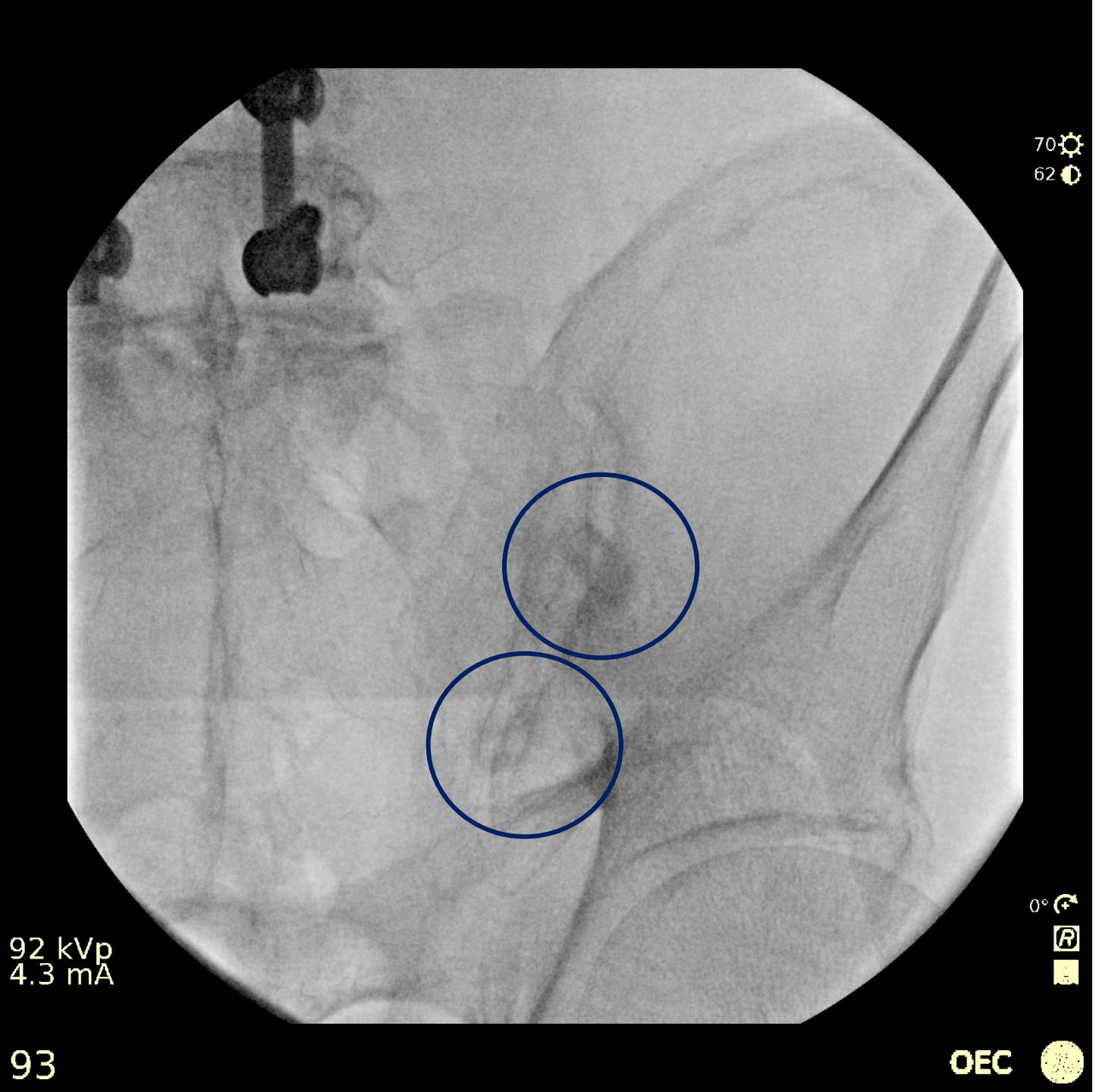

Post Operative Care/Operative Note

SI JOINT FUSION RECOVERY

- Most patients walking same day
- Return to work and perform light activities after 2 weeks

POST OP INSTRUCTIONS:

- No driving for 2 weeks
- Keep dressing on for 2 weeks until follow up
- Sponge bath for 2 weeks until follow up with Doctor
- No lifting above 10 pounds for 6 weeks
- No NSAIDs for 6 weeks
- No running or jumping for 12 weeks

Questions?

References

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