29th Annual Gabor Racz Advanced Interventional Pain Conference and Workshop

Budapest, Hungary August 24-26, 2026

Avoiding Complications in Interventional Pain Procedures

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Traweek-Racz Endowed Professor in Pain Research

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Pain Medicine Fellowship Director

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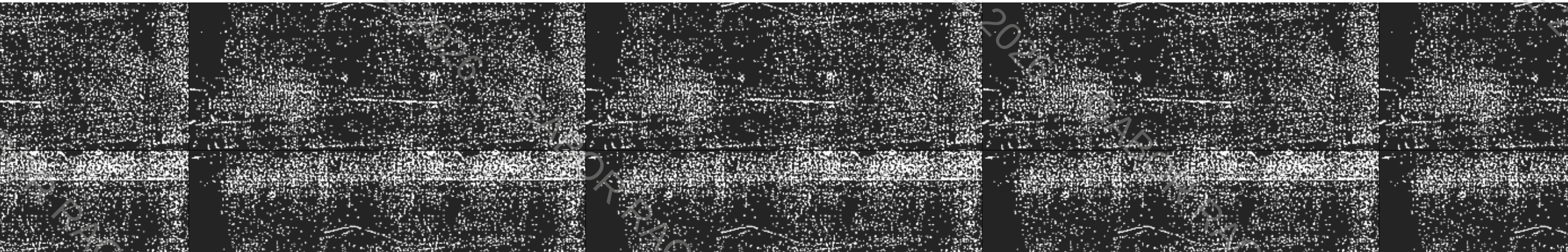
Conflict of Interest

President World Institute of Pain

Objectives

- Review the incidence of complications in interventional pain management
- Identify points of care where complications may originate
- Identify ways to decrease the potential of having complications

Pain Management Closed Claims



ASA Abstract 2014

Chronic pain malpractice claims 1980-2011

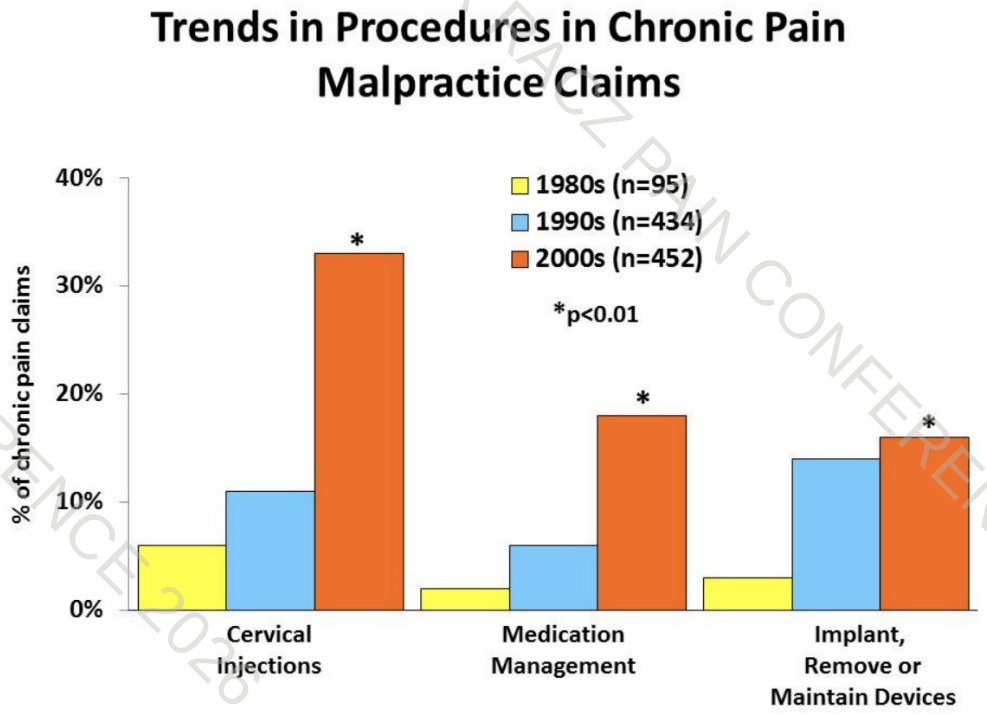
N=981

Chronic pain malpractice claims comprised 3% of anesthesia malpractice claims in the 1980s and increased to 18% in 2000-2011.

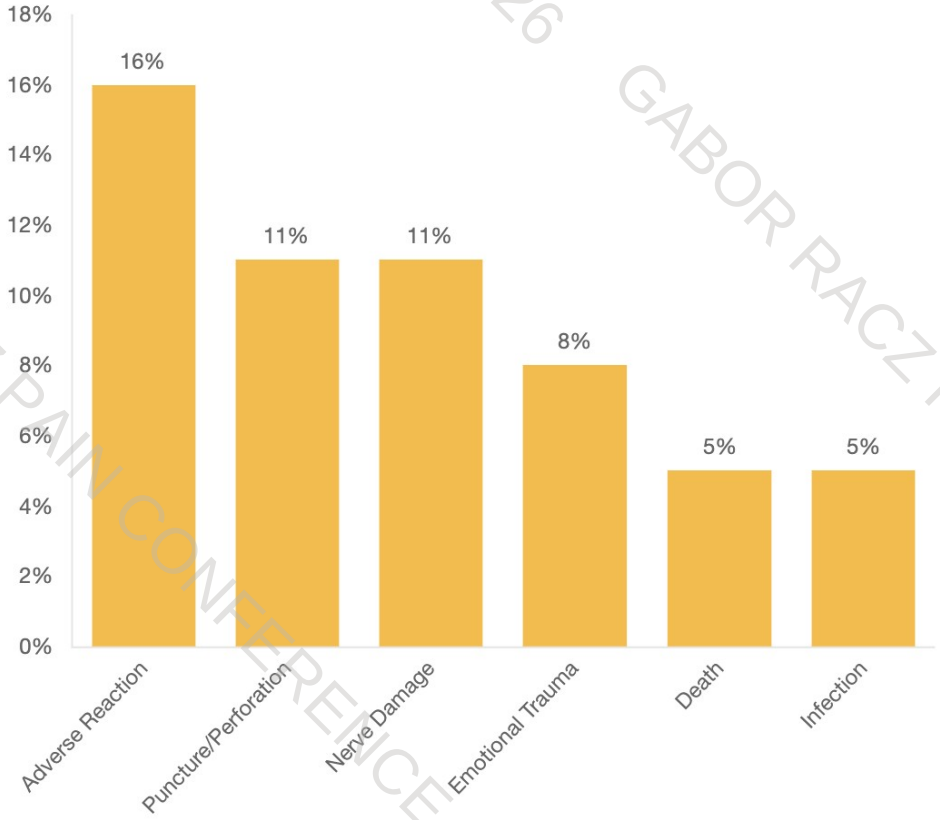
BOC02
October 14, 2014
1:00 PM - 3:00 PM
Room Room 275-277

Chronic Pain Management: A Closed Claims Update

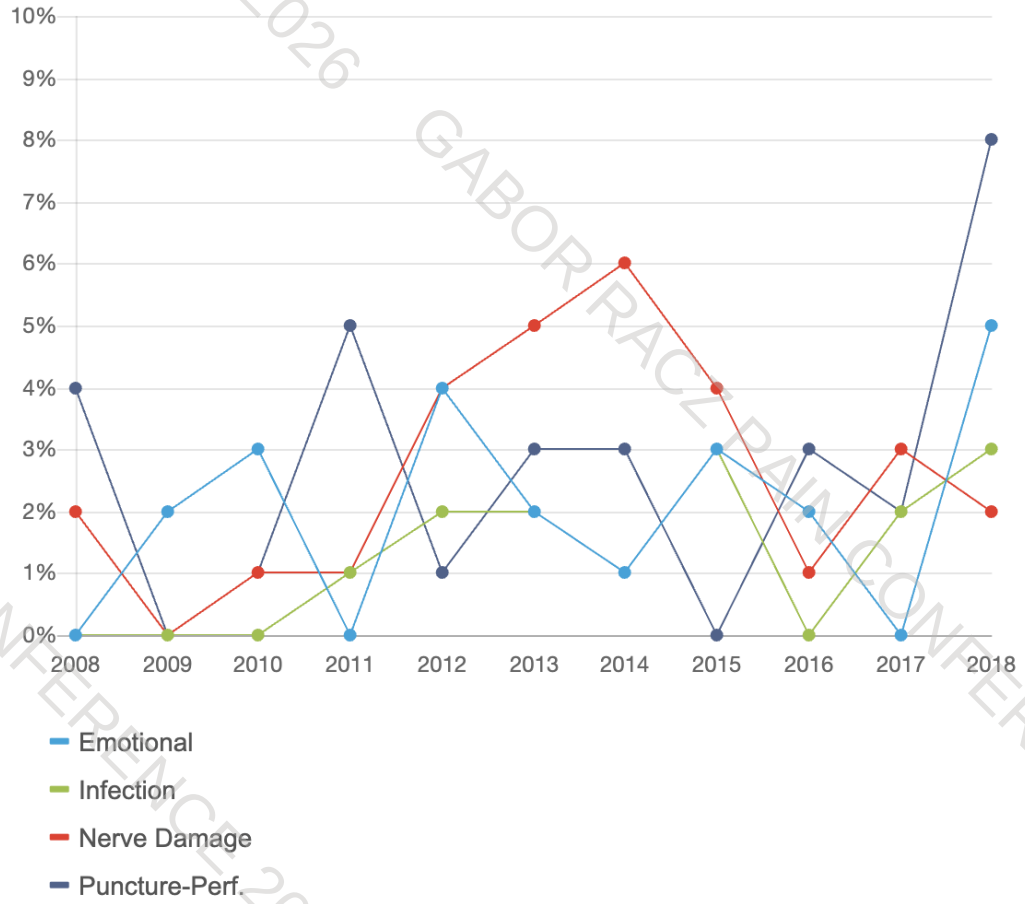
Kelly A. Pollak, M.D., Linda S. Stephens, Ph.D., Karen L. Posner, Ph.D., Dermot R. Fitzgibbon, M.D., James P. Rathmell, M.D., Edward Michna, M.D., Karen B. Domino, M.D., M.P.H.
University of Washington & Seattle Cancer Care Alliance, Seattle, Washington, United States



Top Major Injuries in Claims Involving Pain Management Physicians 2008–2018

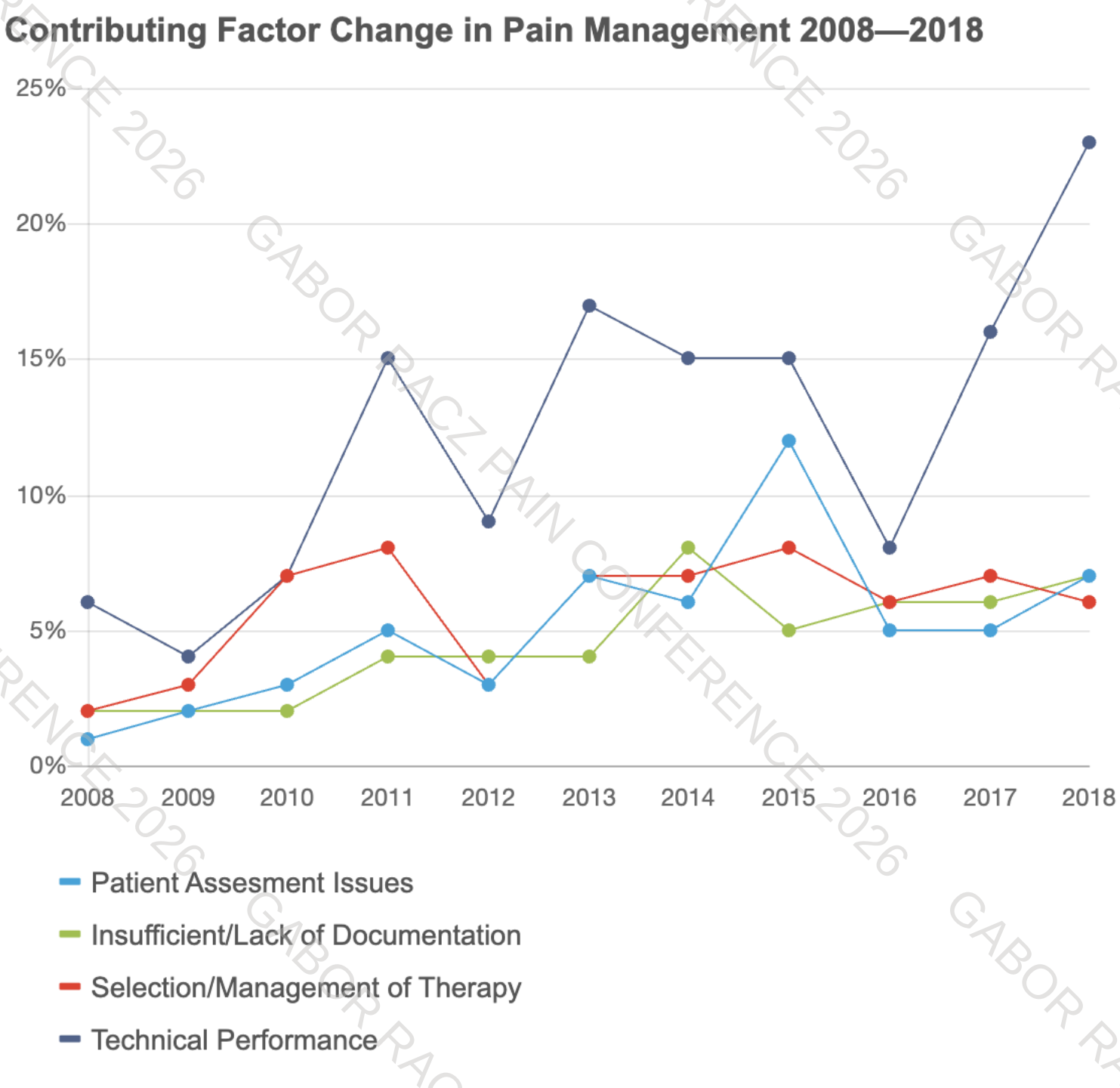


Major Injuries in Pain Management Claims 2008—2018

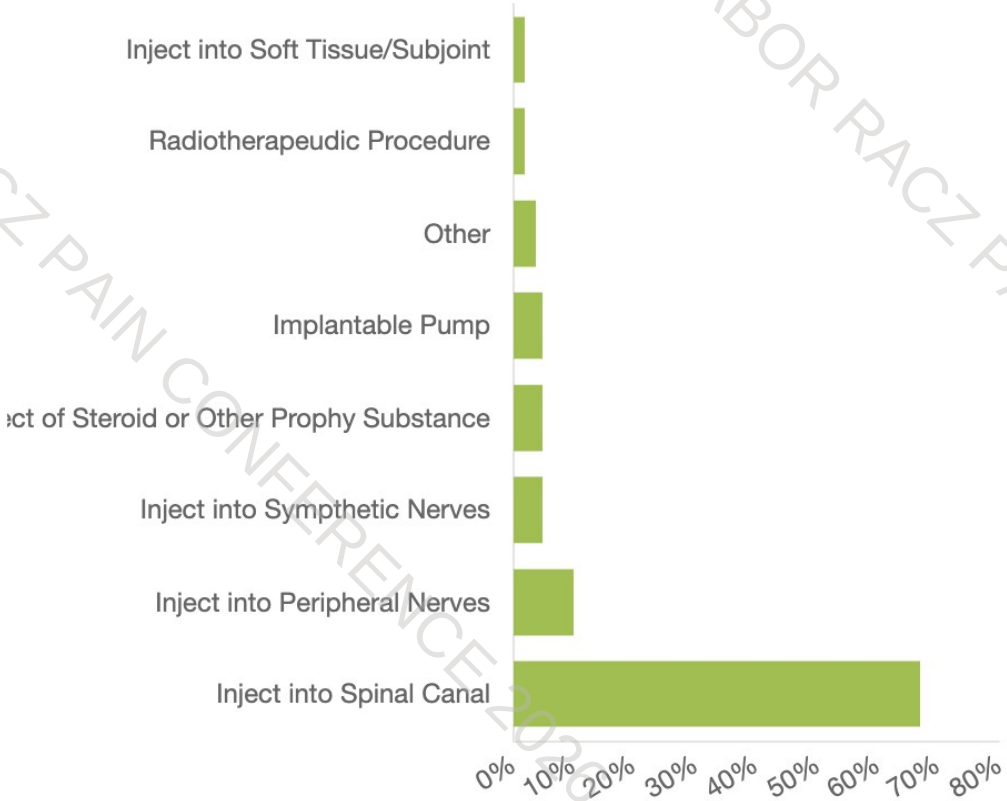


The Doctors Company
TDC GROUP

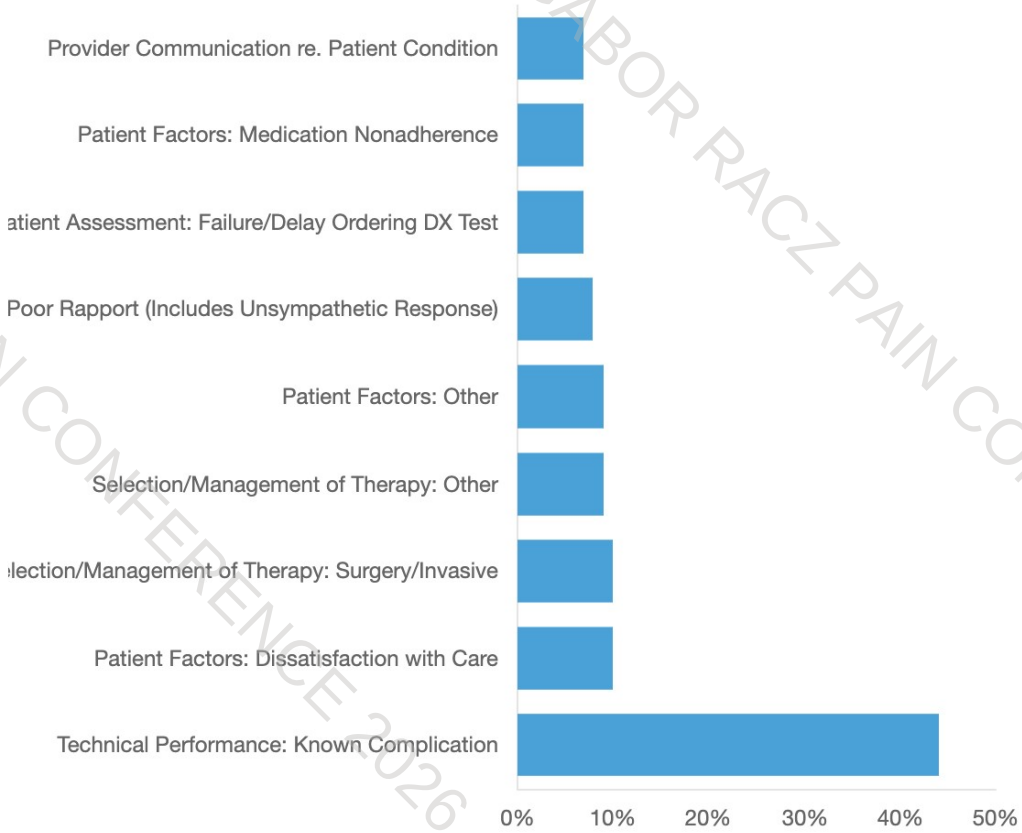
N=273 claims and lawsuits from 2008-2018
Cross sectional analysis using the CRICO Comprehensive Risk Intelligence Tool.
Analysis includes a review of physician experts review of medical records, depositions, interviews and other documents.



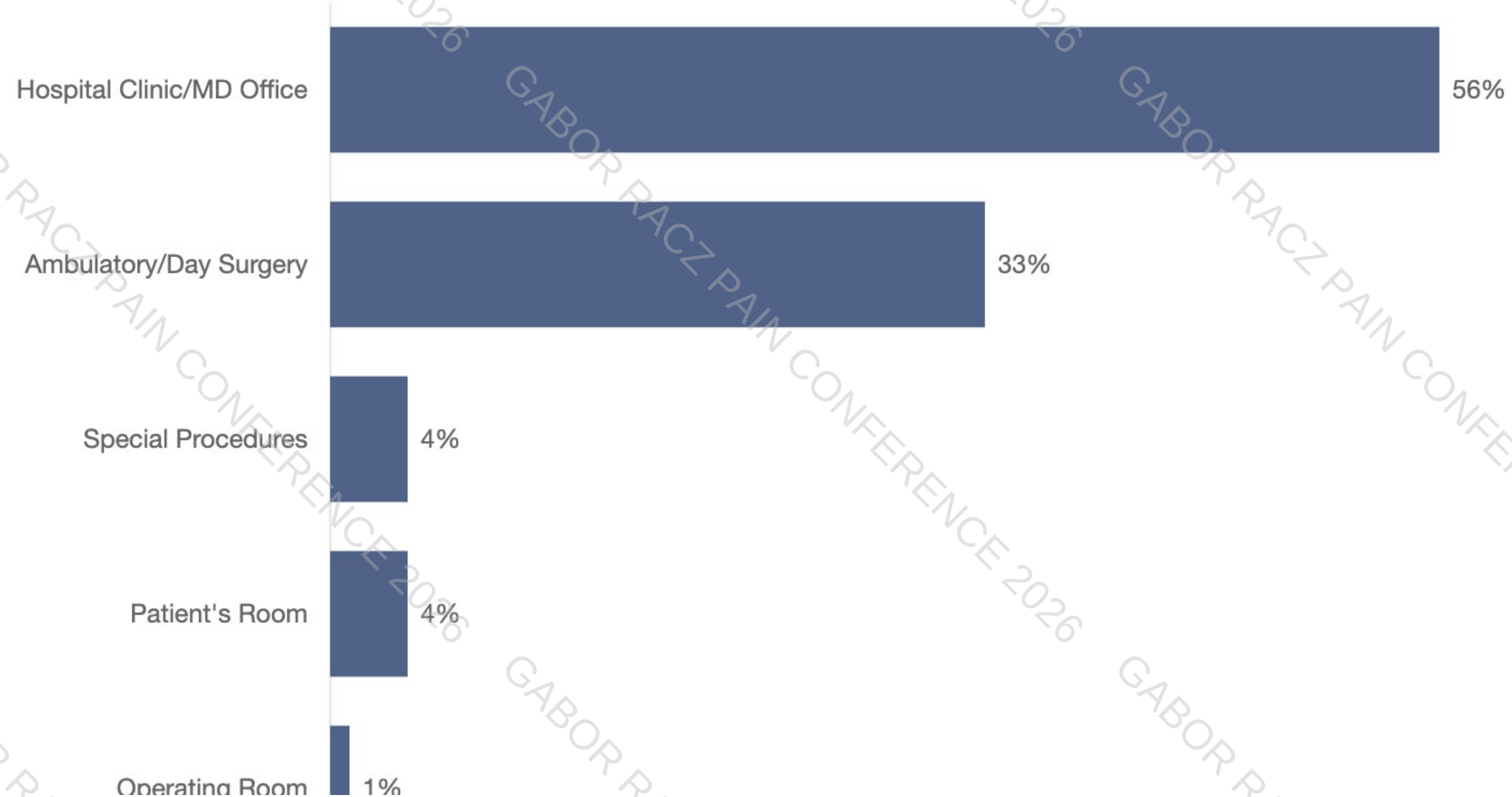
Procedures Involved in Malpractice Claims Alleged Against Pain Management Physicians 2008–2018



Top Contributing Factors Among Pain Management Physicians 2008–2018



Location of Pain Management Claims 2008–2018



Points of care where complications may originate

Clinic visit

- History and physical exam
- Past medical history
- Diagnosis
- Scheduling
- Transportation

Pre-procedure

- NPO status
- Pregnancy
- Consent
- Anticoagulants

Points of care where complications may originate

During the procedure

- The “Time out”
- Monitoring
- Sedation
- Positioning
- Medications
- Equipment
- Anatomy

Post- procedure

- Monitoring
- Discharge instructions
- On-call availability

During the Procedure

The “Time out”

Was one performed?

Who does it?

Where is it documented?

Monitoring

Is it necessary?

- Trigger point? Facet block? ESI? SCS?
- Where is it recorded?

Pulse ox? Blood pressure? Heart rate? EKG?

Oxygen?

- Is it available

During the Procedure

- Sedation
  - Is it needed?
    - Does it depend on the procedure?
  - Does it depend on the patient's position?
    - Prone vs. supine
  - What level of sedation is necessary?
  - What type?
    - Opiate vs. benzodiazepine vs. propofol vs. combination
  - Do you need another anesthesia provider to administer the medications?

During the Procedure

- Positioning
  - Can the patient be positioned to safely perform the procedure?
  - Padding
- Medications
  - Are procedure cards used?
    - Did the physician review them?
  - Who draws up the medications for the procedure?
    - Surgical tech vs. nurse vs. physician
  - Are the medications labeled?
    - Most medications are clear
  - Allergies to medications including skin prep solutions?
    - Pre-treat patient?

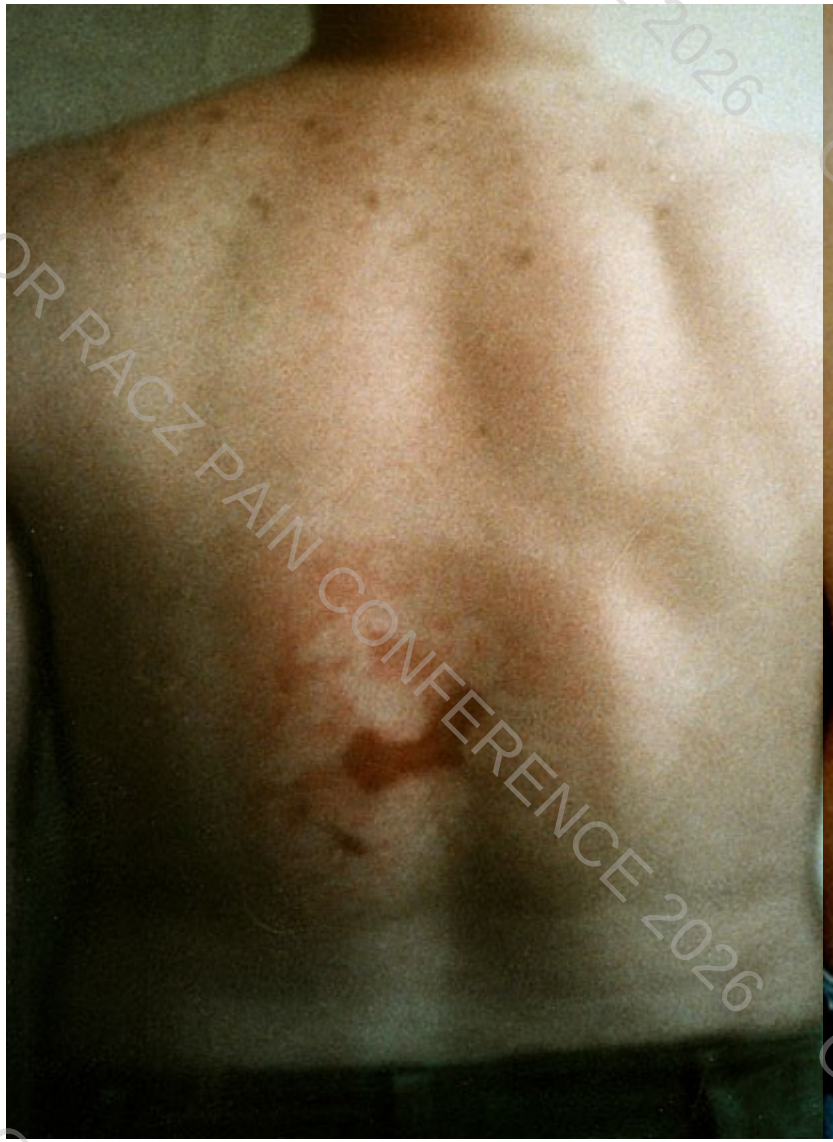
During the Procedure

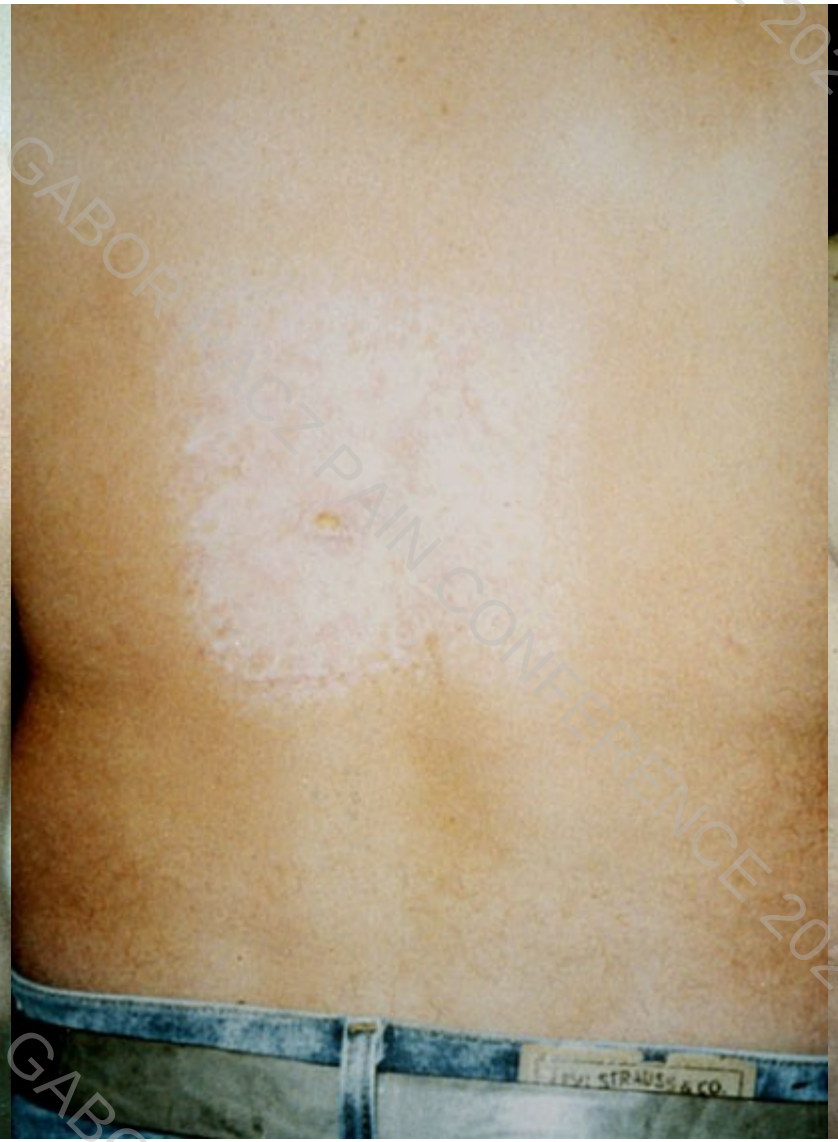
Medications

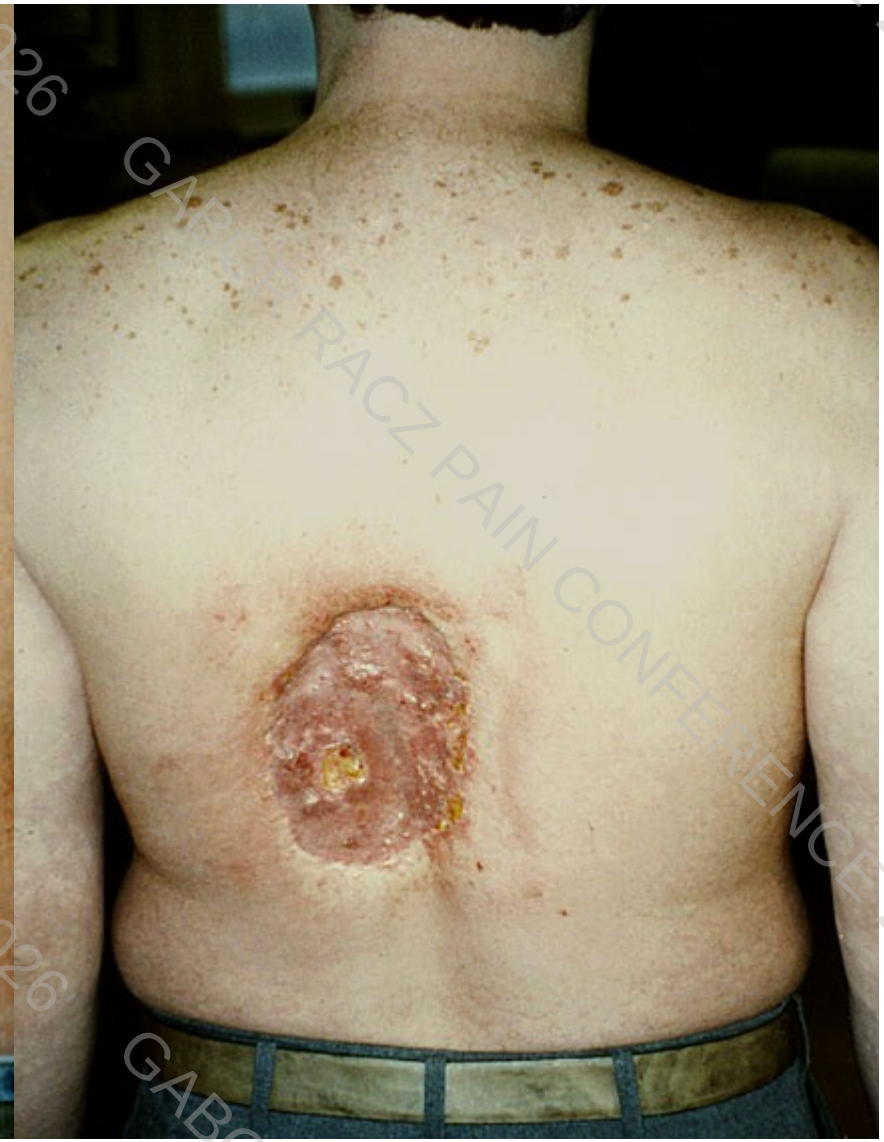
- Steroids
  - Particulate vs. non-particulate
  - Does the type of or the level of the procedure matter?

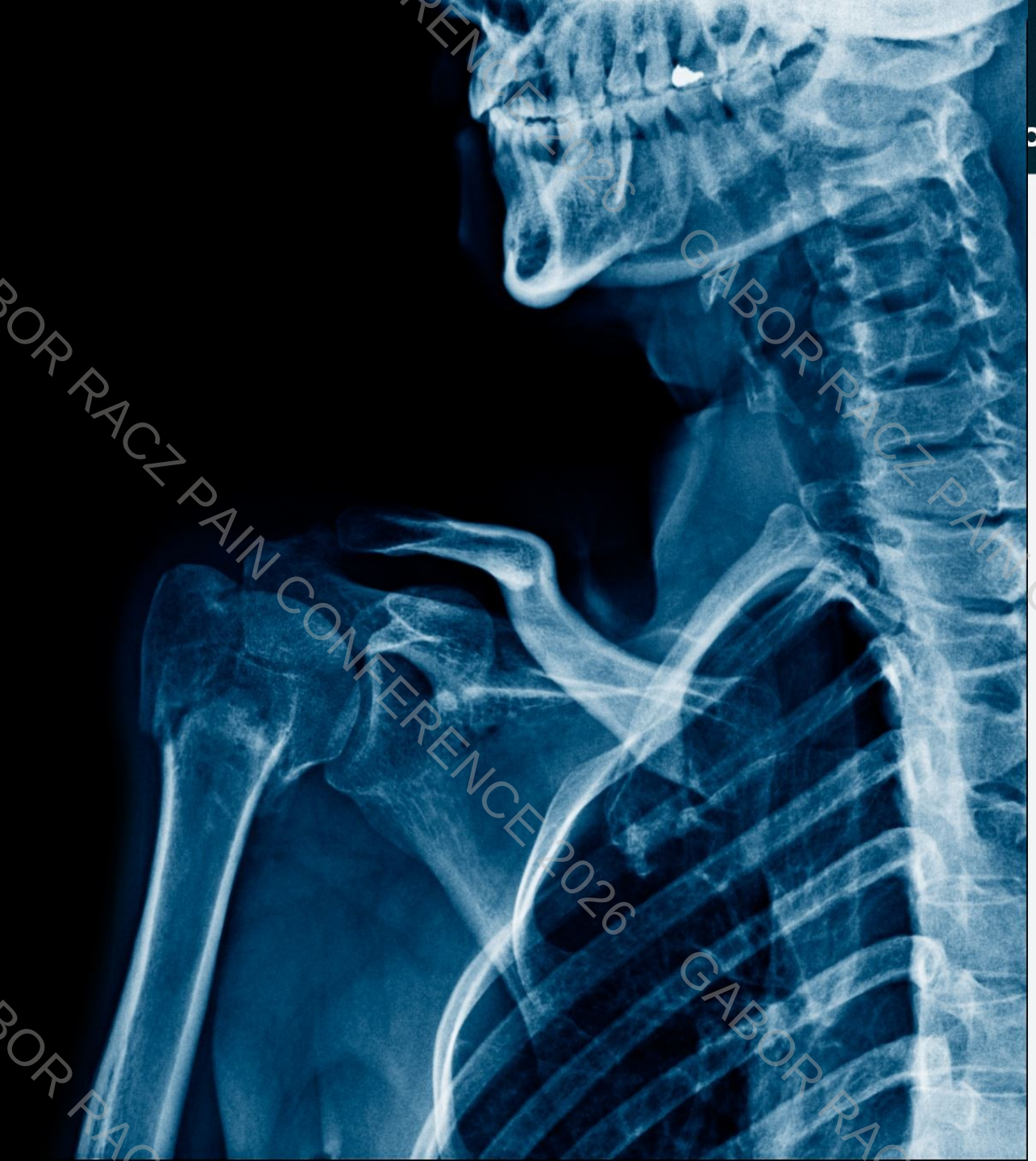
Equipment

- C-arm
  - Age of the machine
  - Should it have a laser pointer?
  - Should it have digital subtraction capabilities?
  - Radiation safety





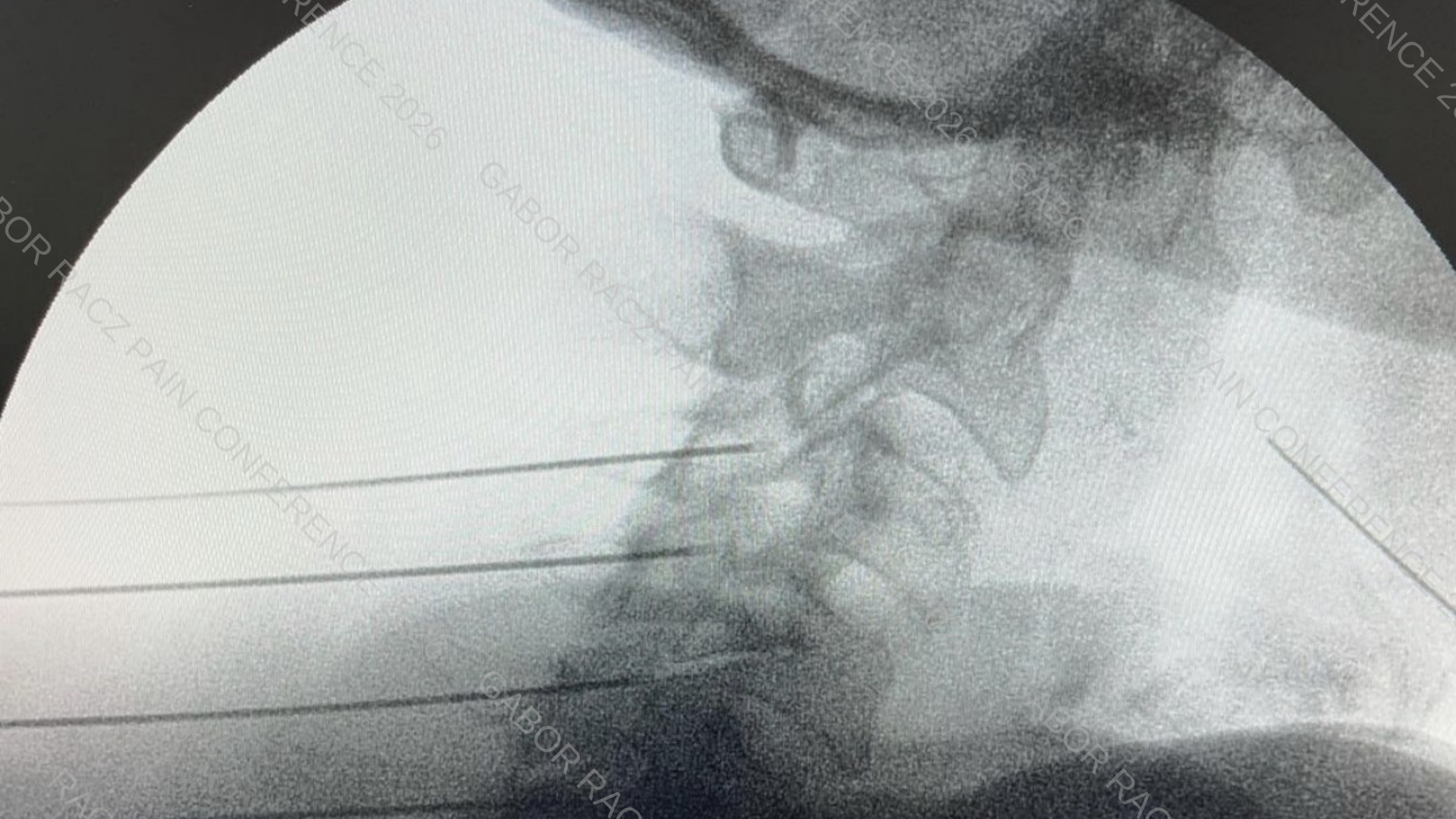


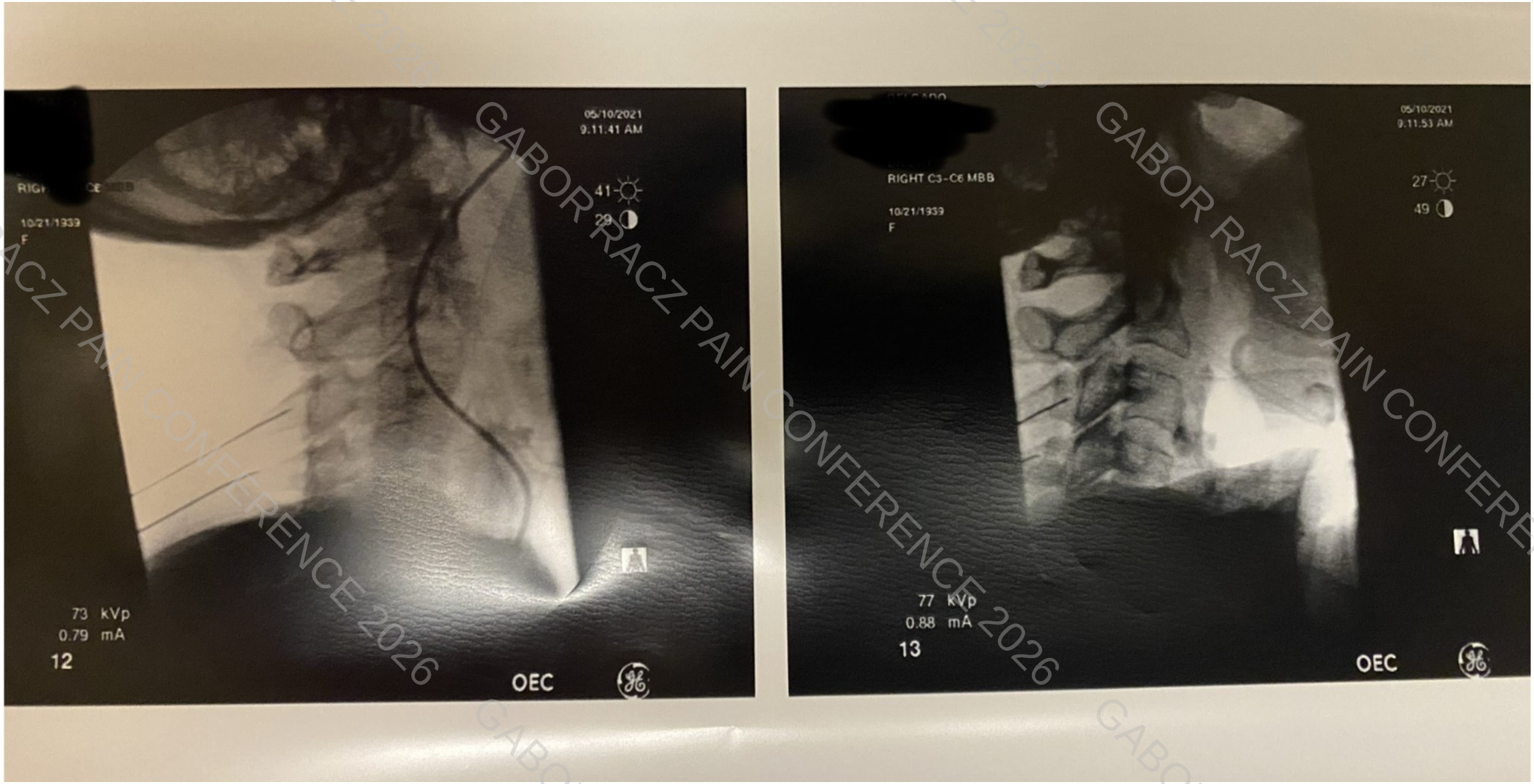


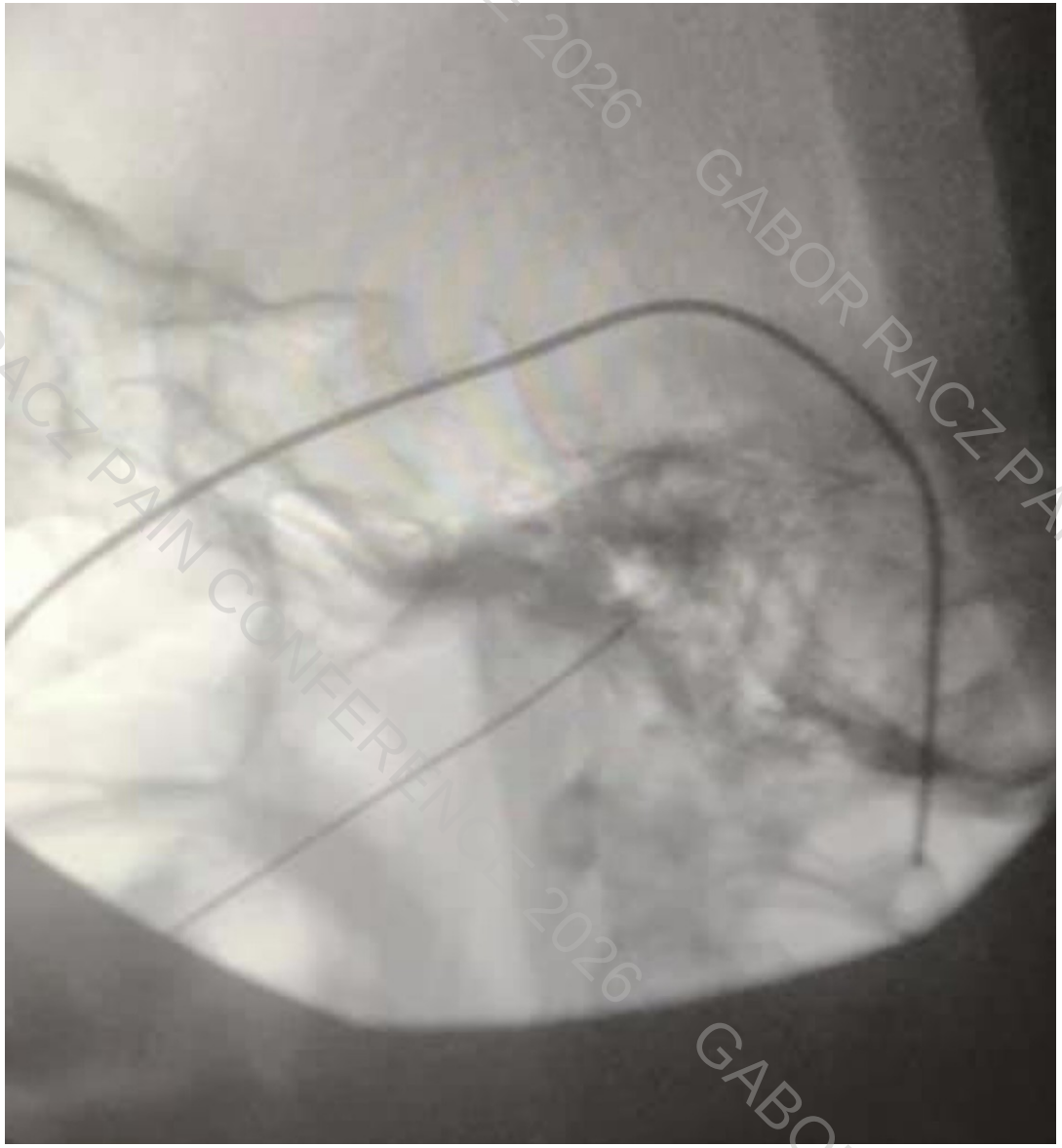
orkshop

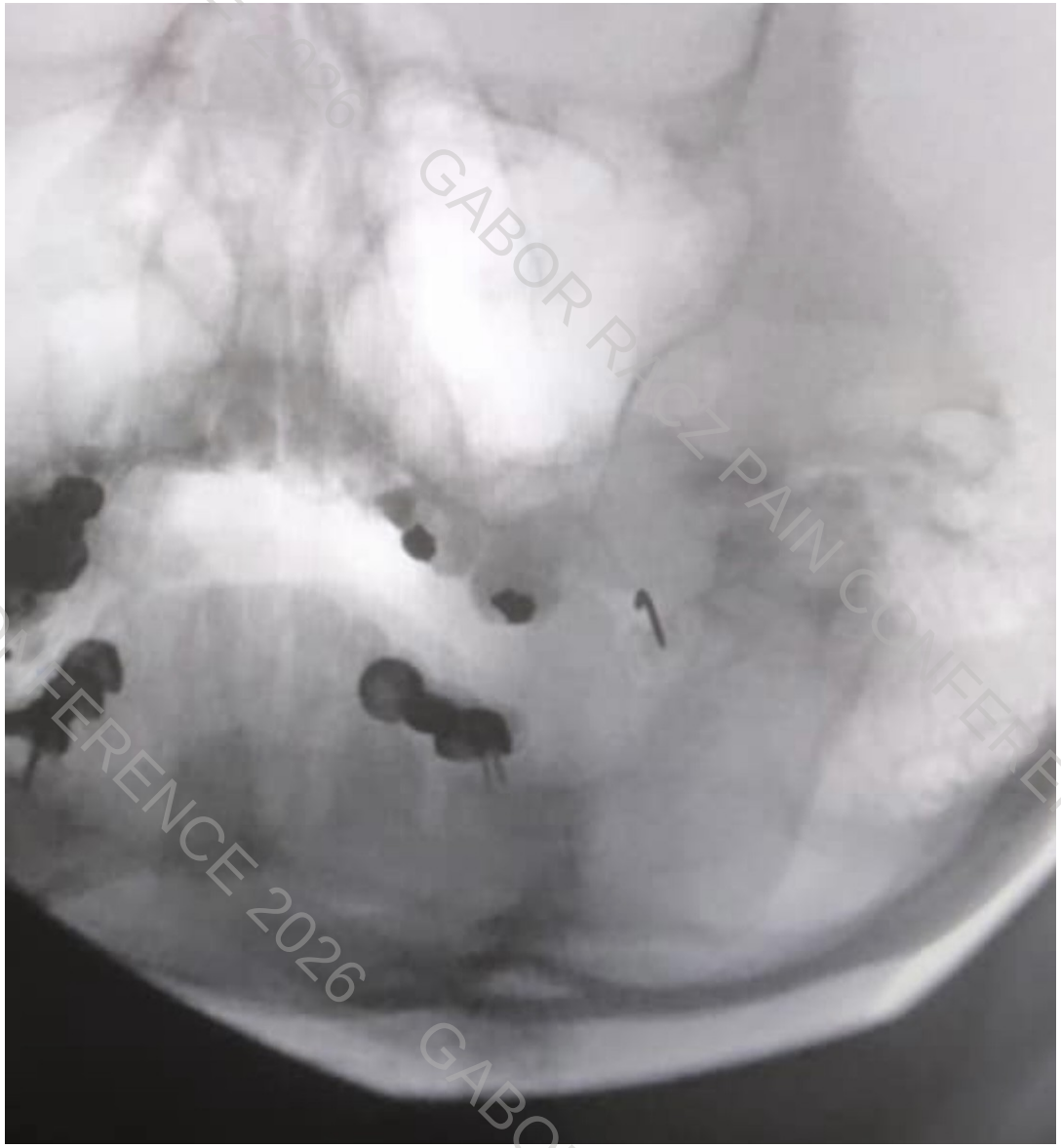
During the Procedure

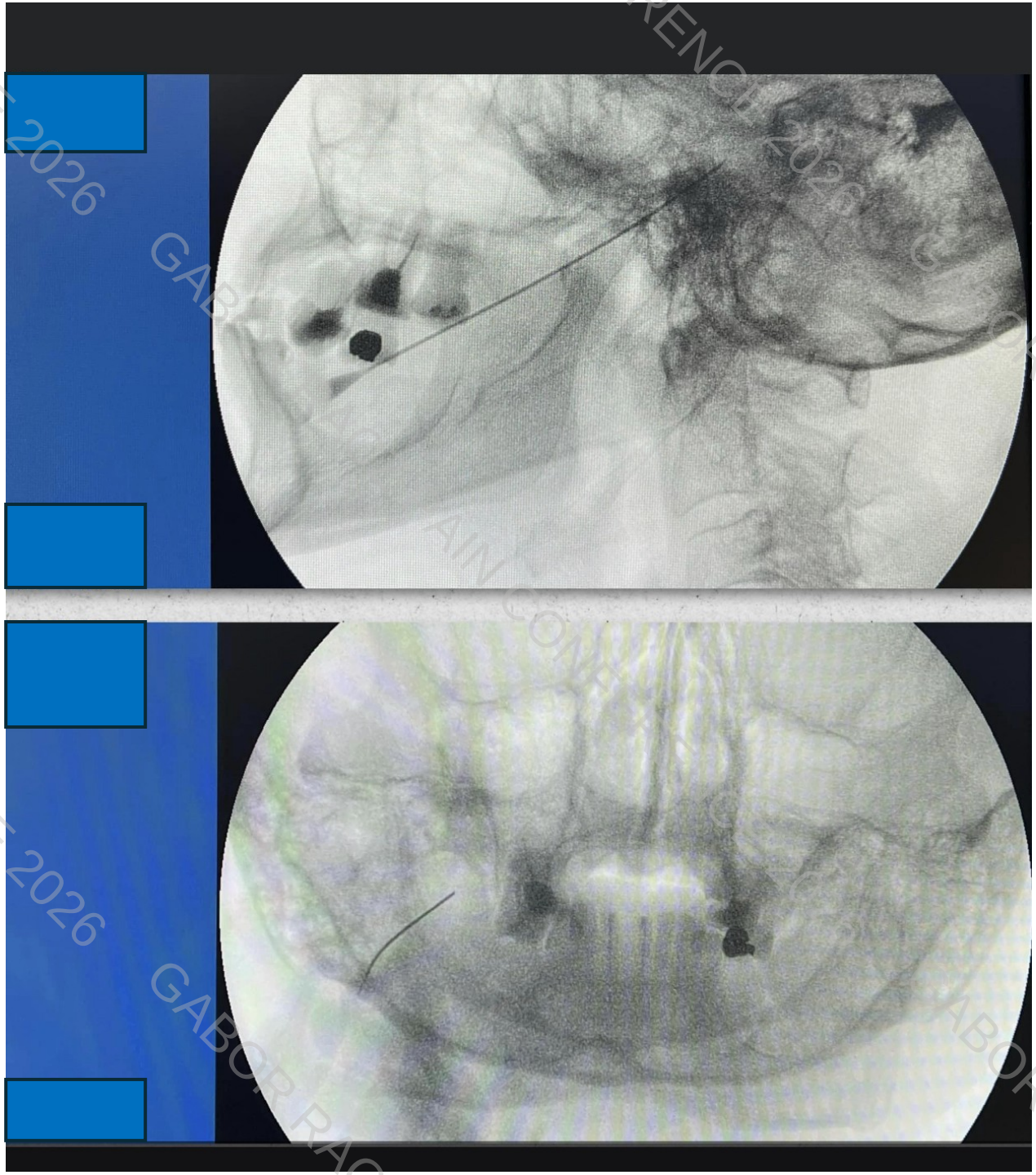
- Equipment
  - Needles
    - Sharp vs. blunt
- Anatomy
  - Does the physician have the knowledge base to identify anatomic structures with fluoroscopy (or ultrasound)?
  - Can the c-arm provide quality pictures?
    - Does the fluoroscopist know how to run the c-arm?
    - Has parallax been corrected?
    - Has patient positioning and the level of the procedure been taken into account by the fluoroscopist?
    - Do you use continuous fluoroscopy while injecting medication?
    - Do you center the target level in the middle of the screen image?

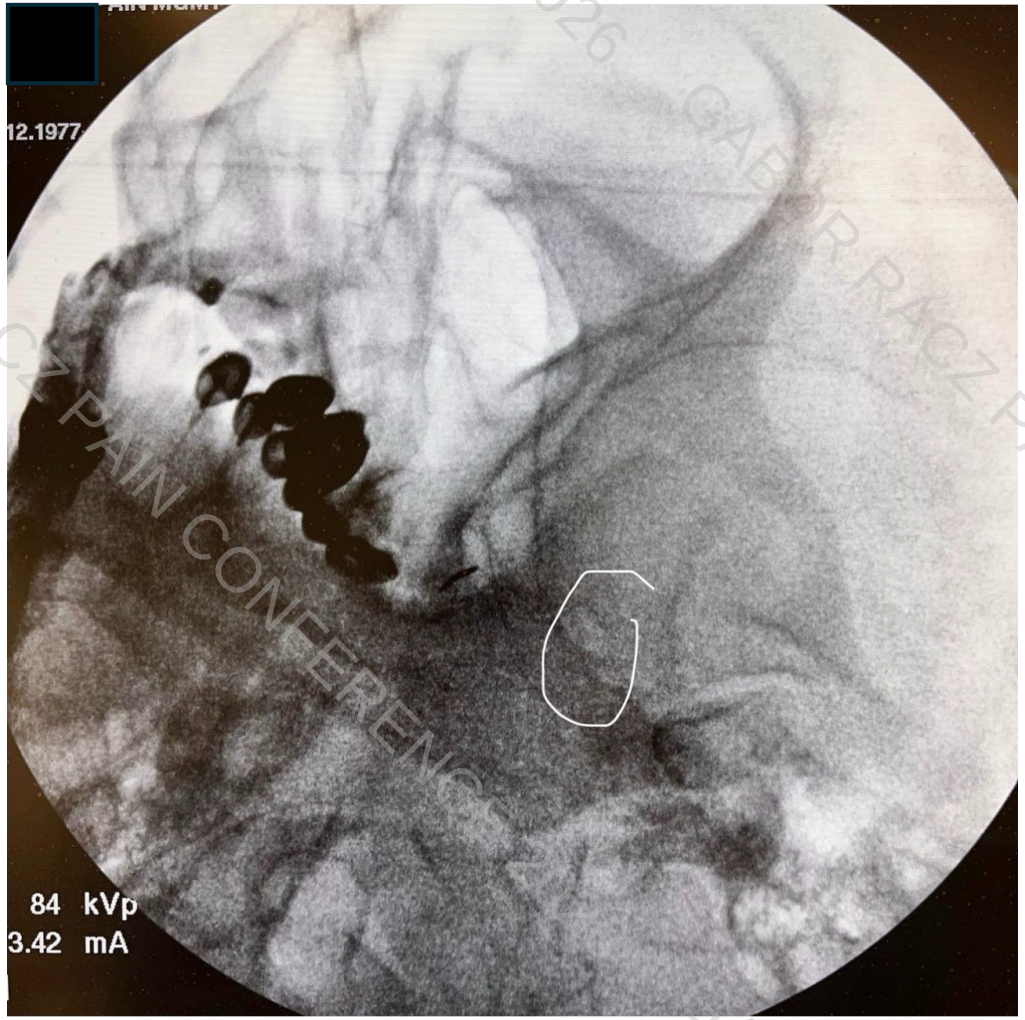


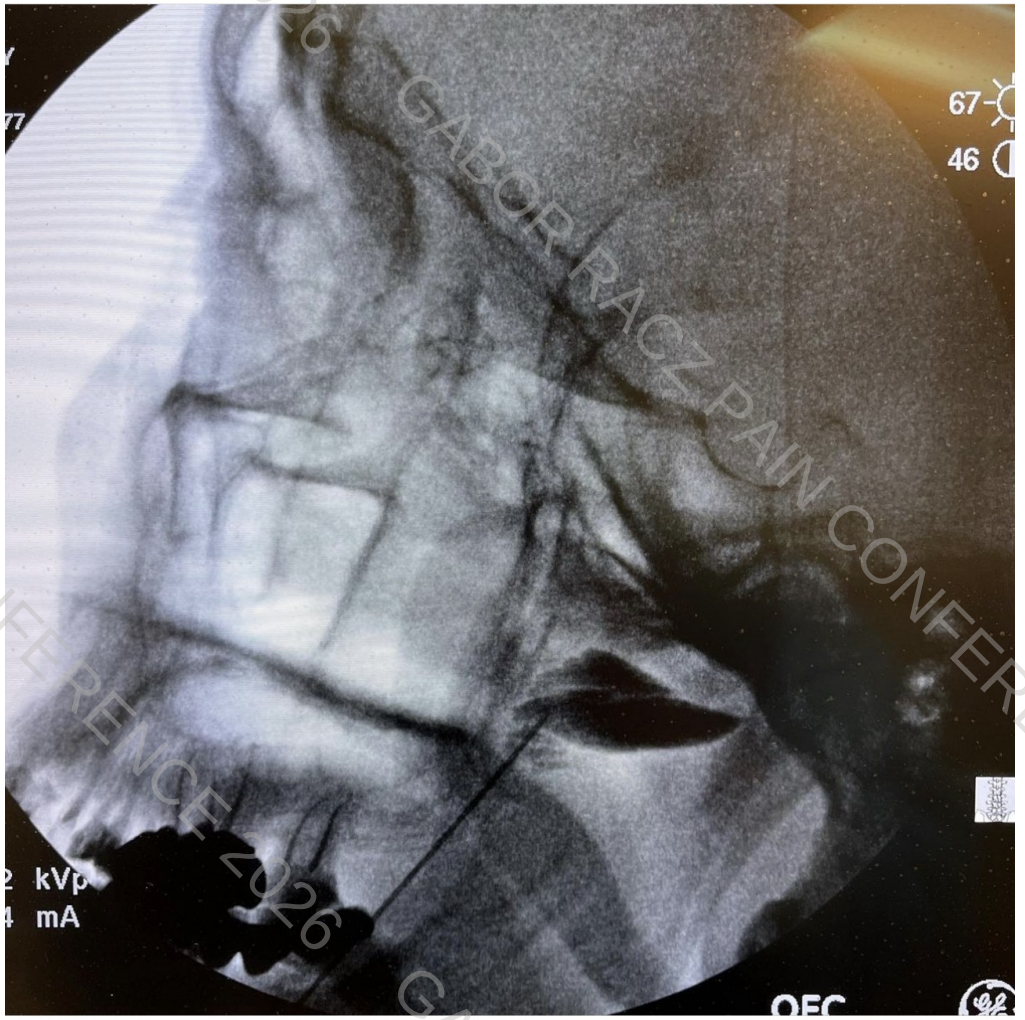

05/10/2021
9:11:41 AM
10/21/1939
F
41
29
73 kVp
0.79 mA
12
OEC
RIGHT C3-C6 MBB
05/10/2021
9:11:53 AM
10/21/1939
F
27
49
77 kVp
0.88 mA
13
OEC

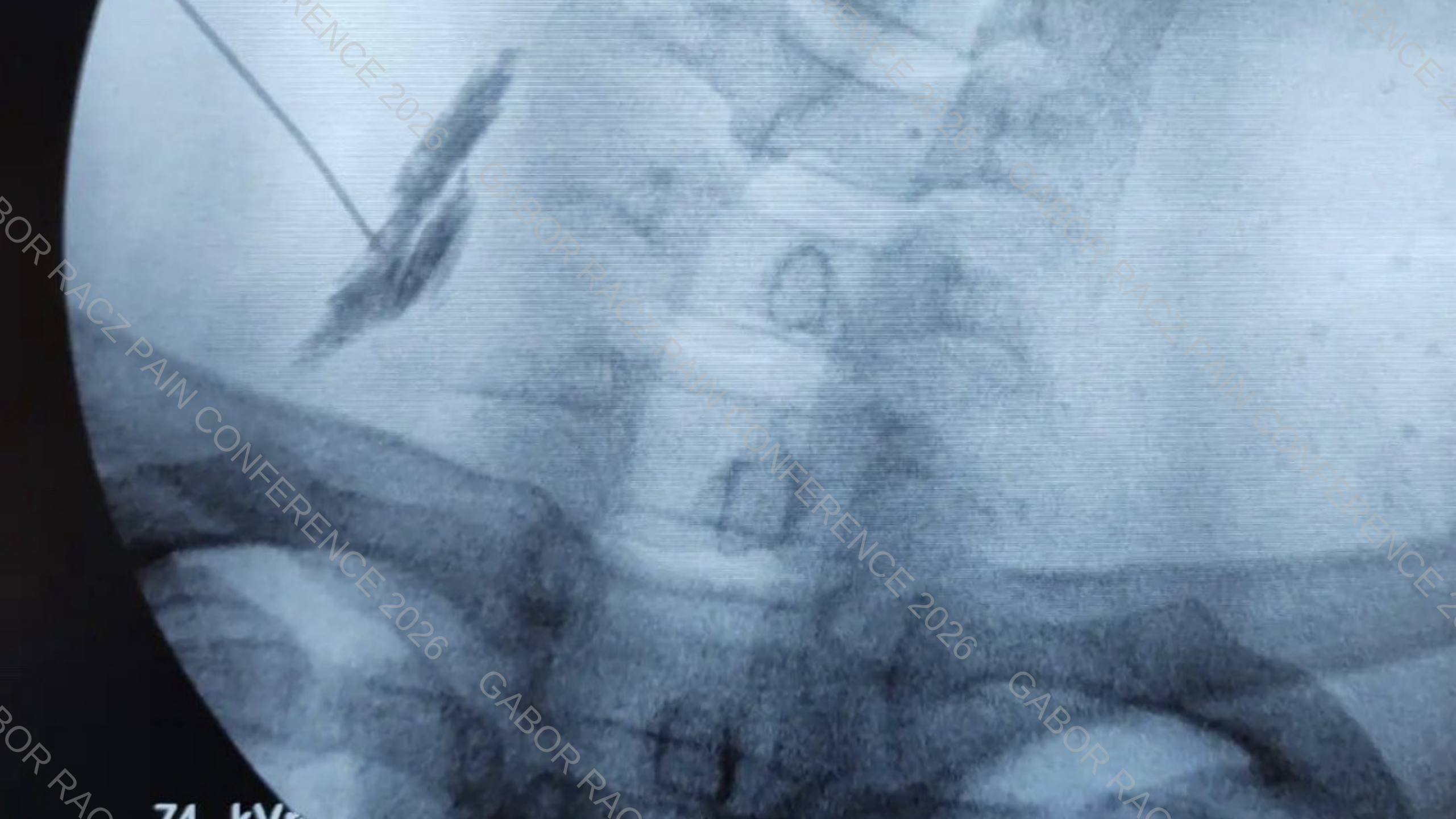


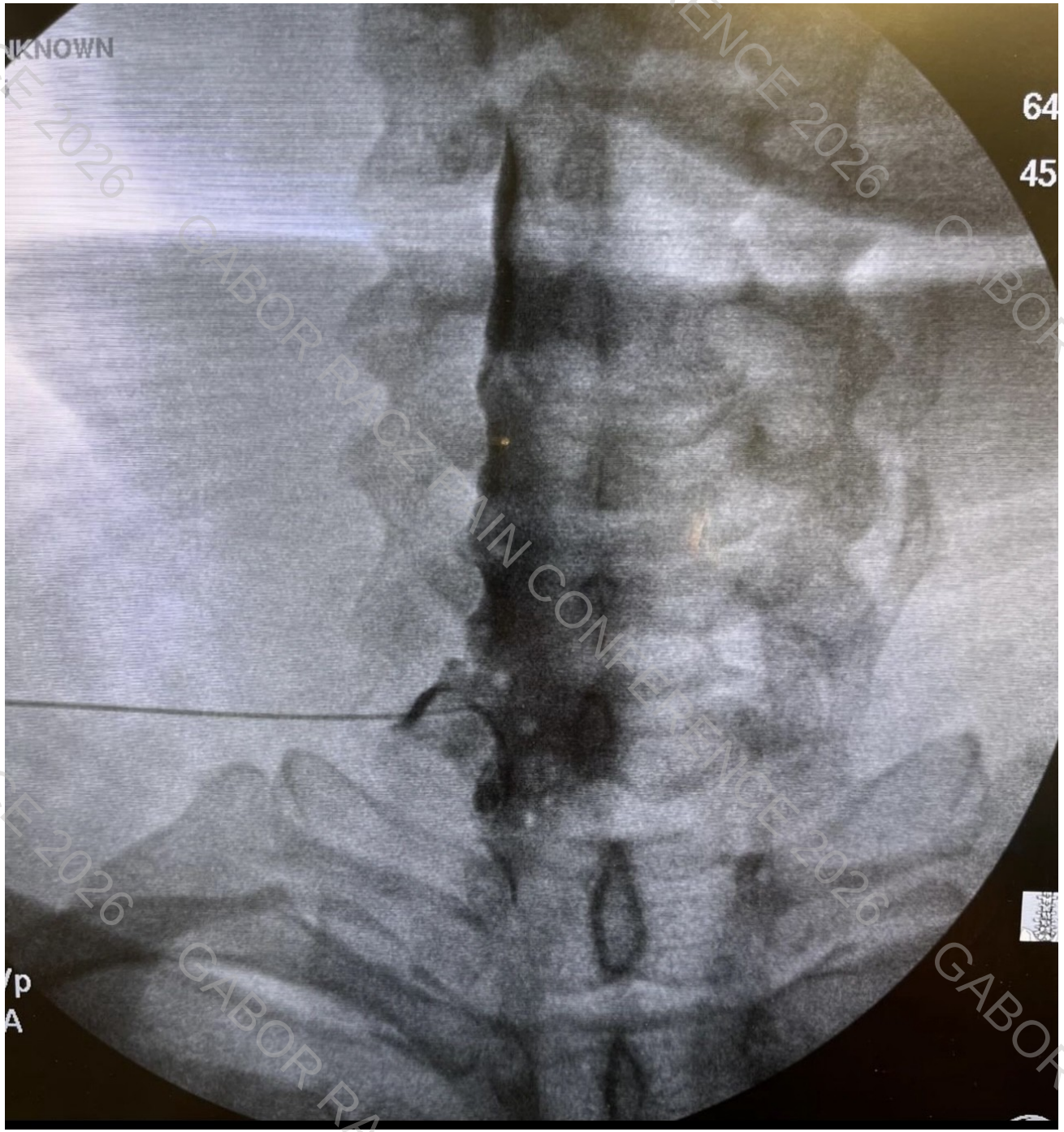


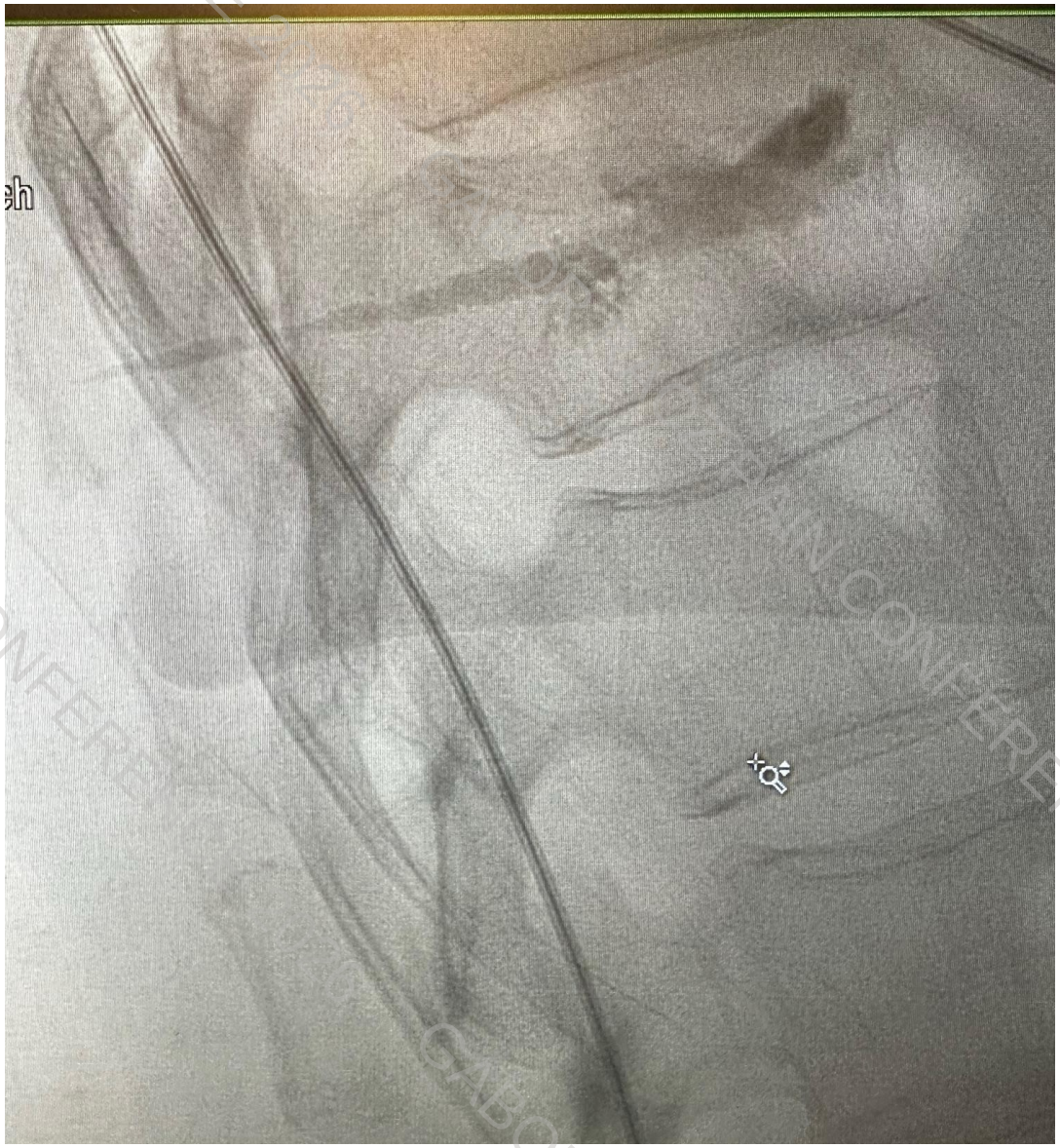


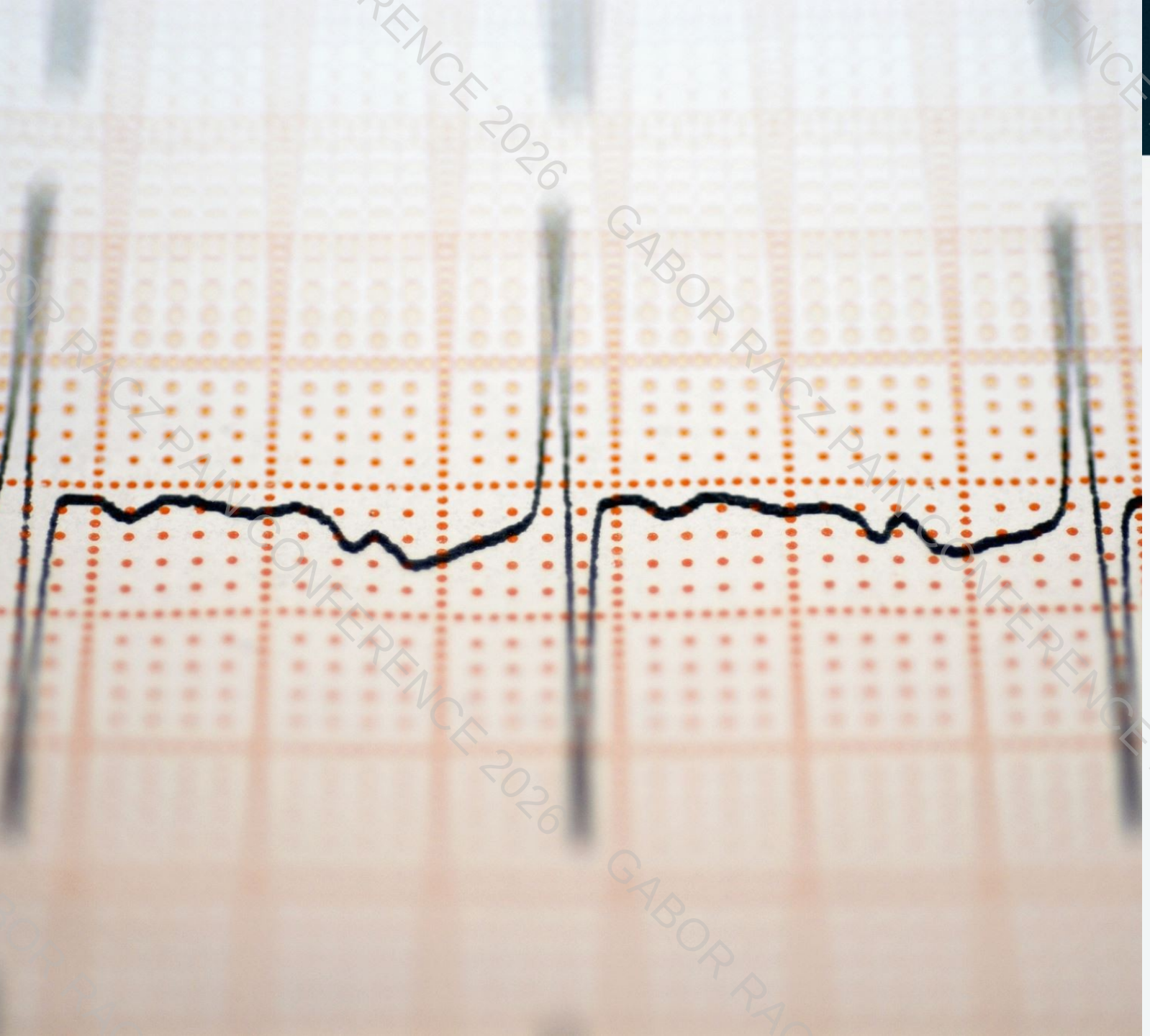












How can we decrease complications?

During the Procedure

- Do your time-out and document it
- Monitoring
  - At a minimum, get pre- and post-op vitals for simple procedures, i.e. trigger points, intraarticular joint injections, etc.
  - For more invasive procedures use, at a minimum, pulse-oximetry
    - Gives you O2 sats and HR
  - If using sedation, suggest pulse oximetry, blood pressure and supplemental oxygen
    - Some may use EKG monitoring as well

How can we decrease complications? During the Procedure

Sedation

In my opinion, less is better

If heavier sedation is required, use an anesthesia provider

Take into account the patient's co-morbidities

Take into account the type and complexity of the procedure

Medications

Have and review procedure cards

- Make sure they are available to whomever is responsible for preparing the medications

Label all syringes

Consider gadolinium in patients with iodine-based contrast allergies

How can we decrease complications? During the Procedure

Steroids

- An entirely separate lecture

Equipment

- Train your fluoroscopist
- The use of digital subtraction may help, but doesn't prevent complications
- The use of a blunt needle may help decrease complications

Anatomy

- Be able to interpret what you see
- Use real-time fluoroscopy while injection solutions
- Center the target in the middle of the screen
- Avoid parallax, by overlapping anatomical lines

Conclusions

EDUCATE YOURSELF

ESTABLISH POLICIES

DOCUMENT, DOCUMENT, DOCUMENT!

HELPFUL REVIEW ARTICLE TITLED “ AVOIDING COMPLICATIONS FROM INTERVENTIONAL SPINE TECHNIQUES” IN THE MARCH 1, 2010 EDITION OF PRACTICAL PAIN MANAGEMENT

WIP

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2026

19 - 21 September 2026

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