

Pectoralis Plane Block for Subcutaneous Implantable Cardioverter- Defibrillator Placement

PRESENTER:

Samuel Crowley, MD

Sophia Jacob, MD

Wesam Andraous, MD

Department of Anesthesiology

Background

Pectoralis plane block (PEC) targets nerves in the **interfacial plane** between the **pectoralis major** and **minor** muscles^{1,2}

Has utility in providing analgesia for **subcutaneous implantable cardioverter-defibrillator (SICD)** placement.³

Patients often have **significant comorbidities** and hemodynamic compromise, rendering them **greater risk under general anesthesia**.

Allows for successful placement or revision of SICD with intravenous sedation while **maintaining spontaneous respiration and minimizing hemodynamic extremes**.

Case Report: PEC Block for ICD placement in a patient high-risk for general anesthesia

Case highlights efficacy and **reproducibility** of PEC block for this procedure in patients who may **not tolerate general anesthesia**

67-year-old female **PMH**: nonischemic cardiomyopathy, persistent atrial fibrillation, symptomatic non-sustained ventricular tachycardia

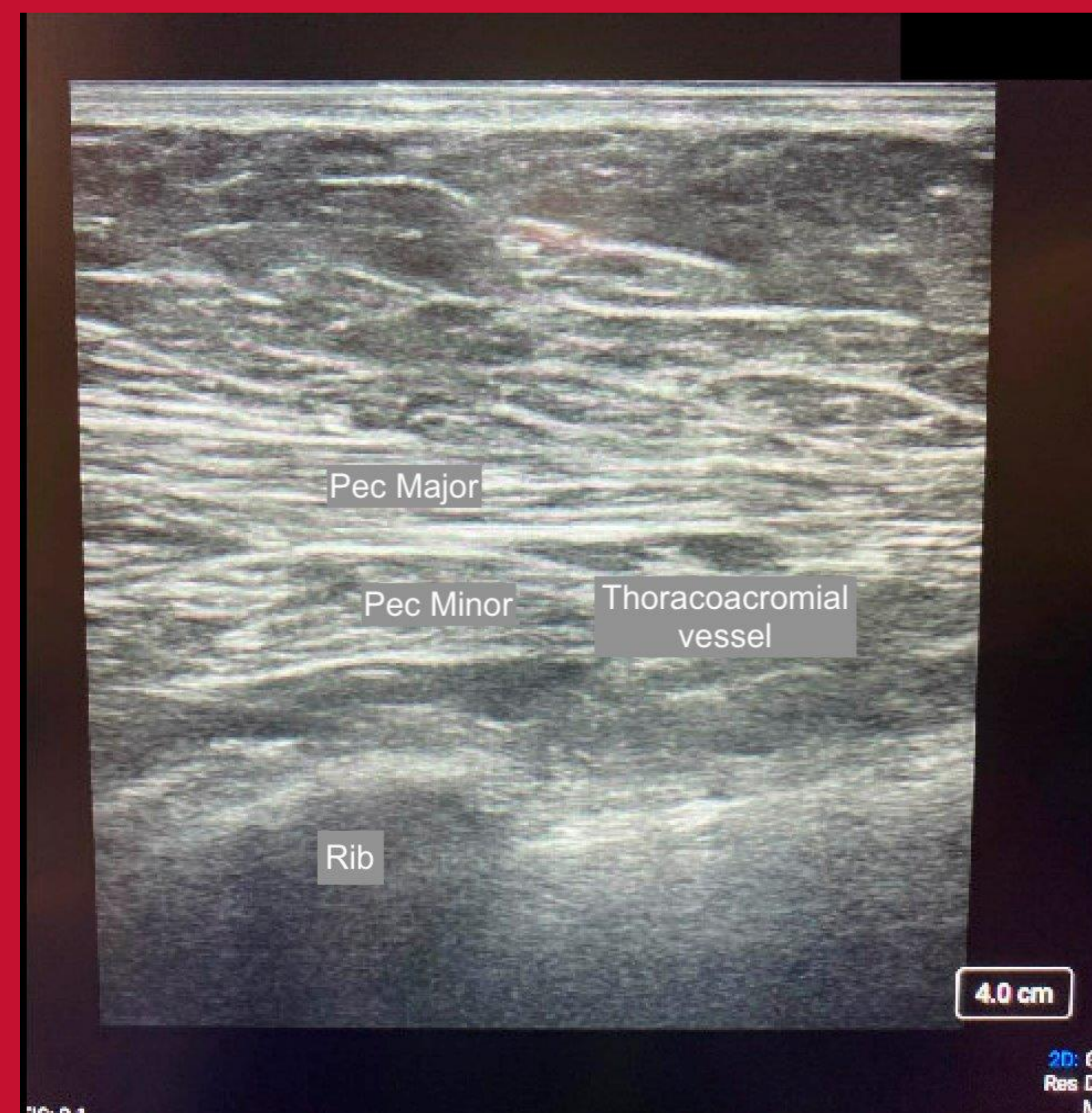
Pre-op TEE shows LVEF 15-20%

Deemed **high-risk** for general anesthesia with endotracheal intubation

Underwent **successful SCID placement with PEC block and intravenous sedation**

Later, patient required ICD lead revision and underwent similar anesthetic plan given success

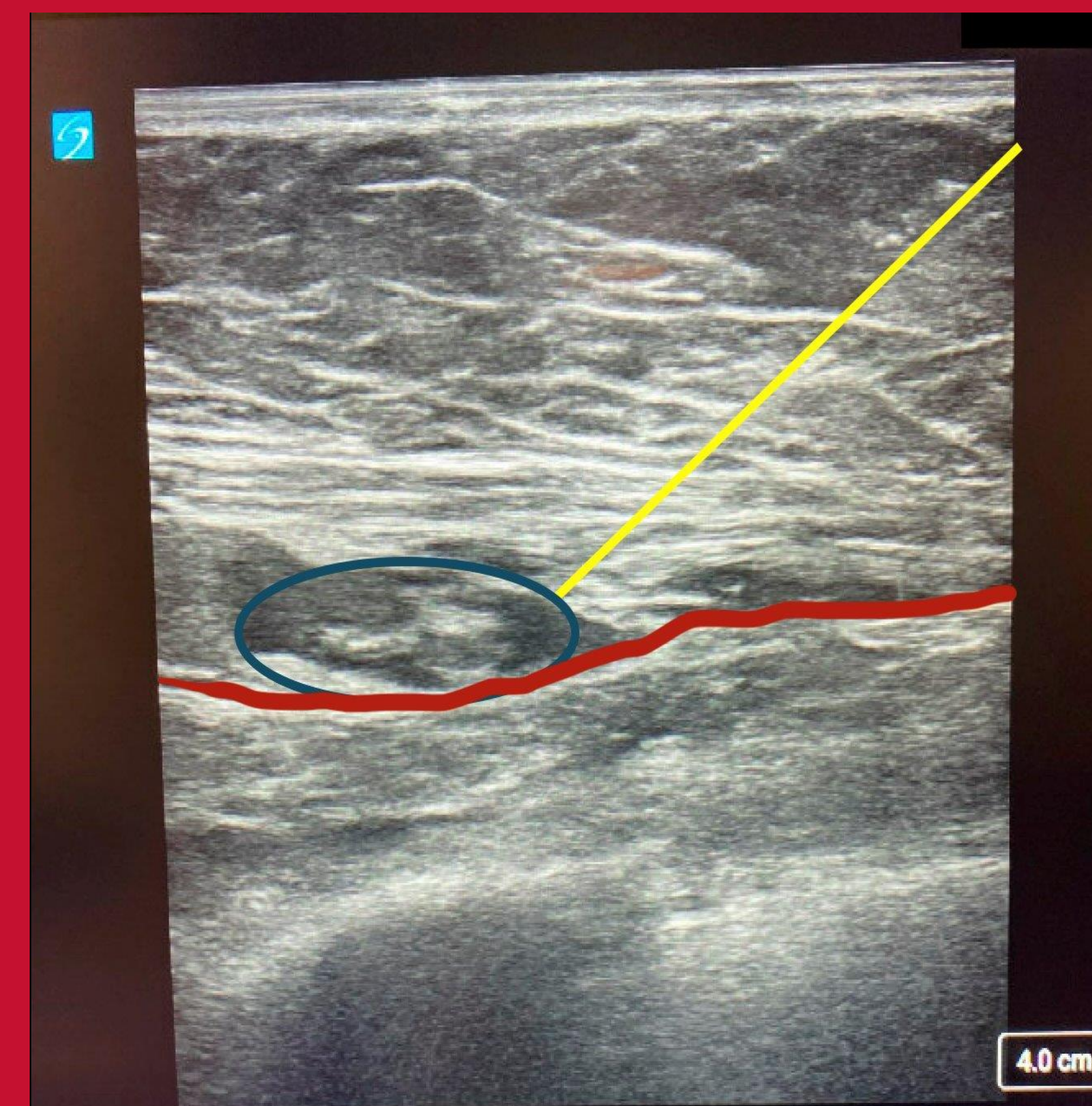
Pre-injection image



Post-injection image



Needle path (yellow) Local anesthetic (circled) fascial plane (red)



50th Annual Regional
Anesthesiology and Acute
Pain Medicine Meeting

May 1-3, 2025 | Orlando, FL



Additional Case Details

For SCID placement:

A single shot nerve block was placed under ultrasound guidance using the PECS I and II technique.

15 mL of 0.25% ropivacaine with 4mg dexamethasone was injected into each plane with adequate spread of local anesthesia.

IV sedation with dexmedetomidine and propofol infusions. Minimal narcotics were required, and the patient tolerated the procedure well.

She was discharged home that day with adequate analgesia.

Several months later, the patient had persistent atrial fibrillation requiring ablation, during which time **ICD lead dislodgement was noted, requiring revision**.

During lead revision:

20 mL of 0.5% ropivacaine was injected under ultrasound visualization between the pectoralis major, pectoralis minor, and serratus anterior

Propofol infusion and minimal narcotics used

The patient was again discharged home with adequate analgesia

PECS I targets the medial and lateral pectoral nerves lying between the pectoralis major and minor, while **PECS II targets anterior and lateral divisions of thoracic intercostal nerves, long thoracic nerve, and thoracodorsal nerve** between the pectoralis minor and serratus anterior.⁴

References

1. Blanco R. The 'pecs block': a novel technique for providing analgesia after breast surgery. *Anaesthesia* 2011; 66: 847-8.
2. Blanco R, Fajardo M, Parras Maldonado T. Ultrasound description of pecs II (modified pecs I): a novel approach to breast surgery. *Rev Esp de Anesthesiol Reanim* 2012; 59: 470-5.
3. Fujiwara A, Komasa N, Minami T. Pectoral nerves (pecs) and intercostal nerve block for cardiac resynchronization therapy device implantation. *Springerplus* 2014; 3: 1049.
4. Yang JK, Char DS, Motonaga KS, et al. Pectoral nerve blocks decrease postoperative pain and opioid use after pacemaker or implantable cardioverter-defibrillator placement in children. *Heart rhythm*. 2020;17(8):1346-1353. doi:10.1016/j.hrthm.2020.03.009