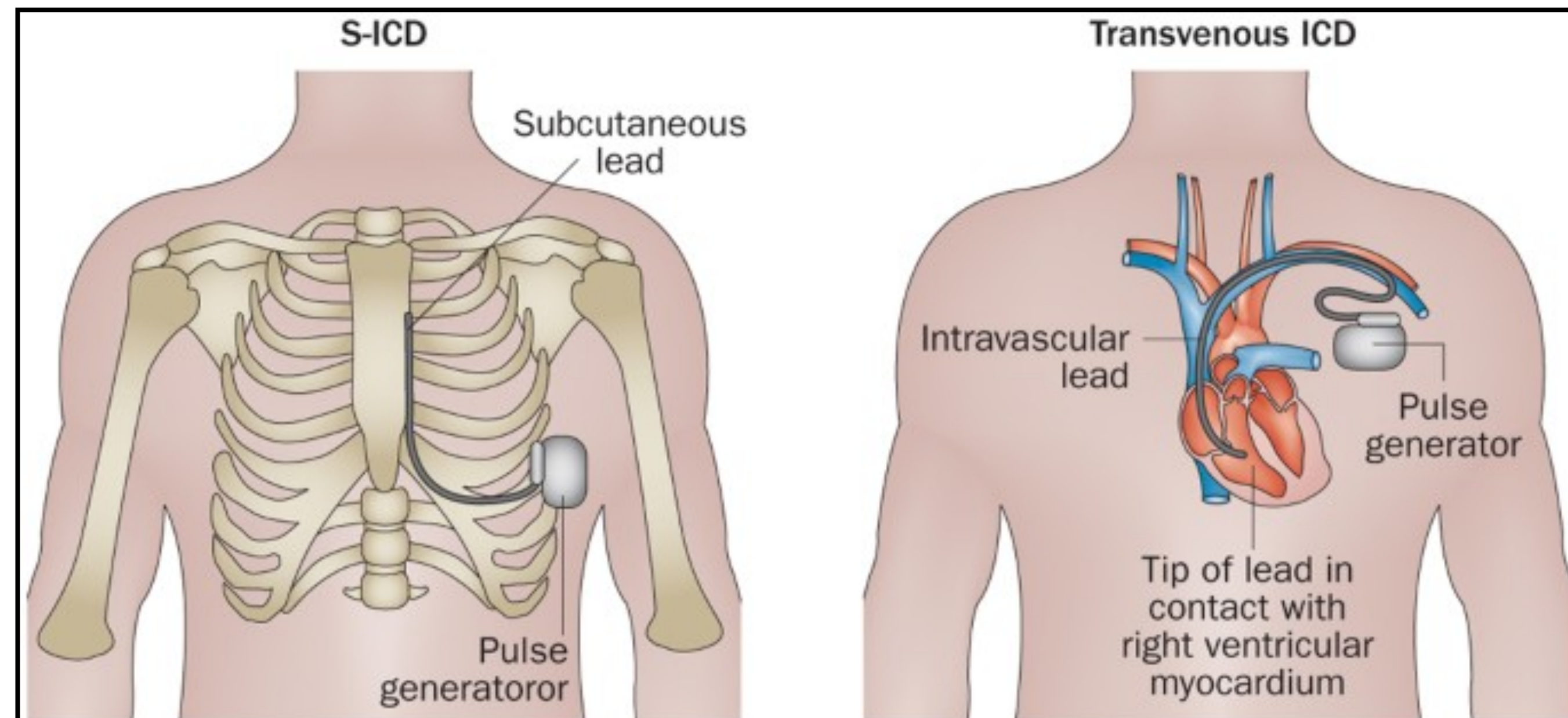


INTRODUCTION

- What is an Implantable Cardioverter Defibrillator?
 - Necessary and life-saving intervention in order to prevent sudden cardiac death in particular individuals
 - Traditionally Transvenous
- Traditional TV-ICD and complications
 - device infection
 - lead related issues (dislodgement, fracture, infection)
 - Pneumothorax
 - pericardial effusion
 - tamponade seen within 45-90 days of initial implantation.¹
- Subcutaneous -ICD developed
 - Implantation Technique and Defibrillation Testing

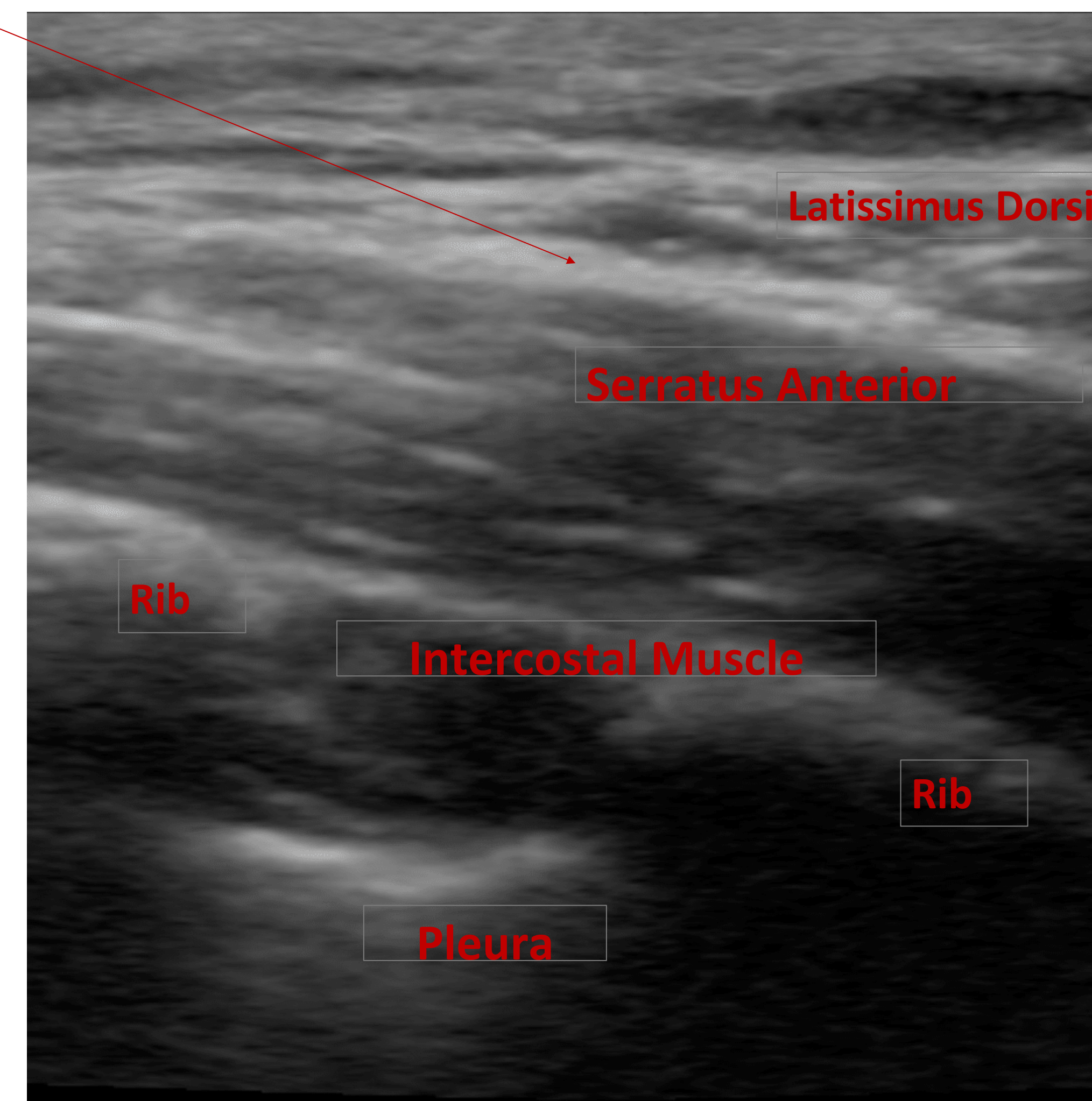


<https://www.nature.com/articles/nrcardio.2015.56>

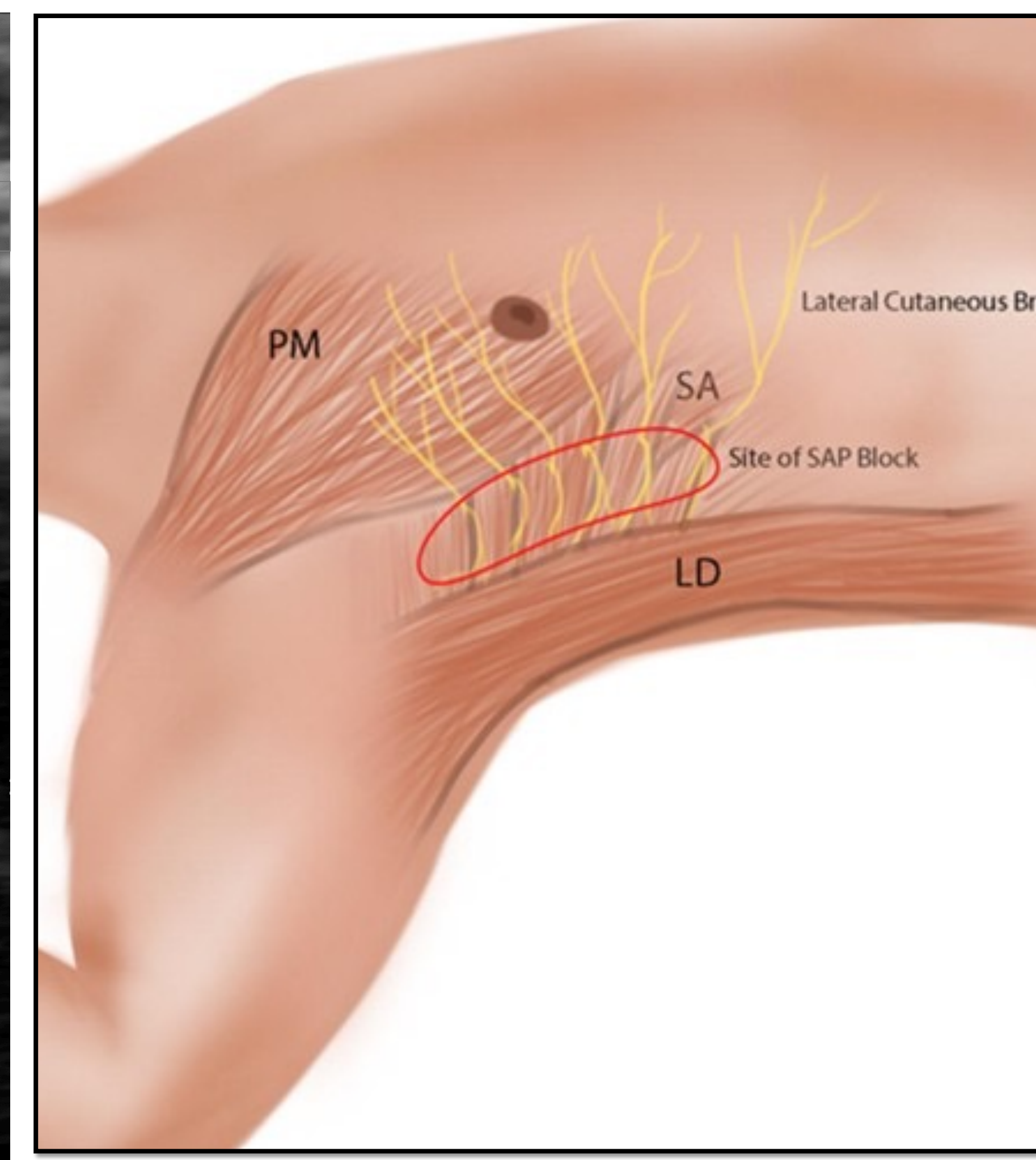
- Most common anesthesia technique used for S-ICD placement is general at 64%; however, there are complications associated with general anesthesia technique
 - limited resources
 - airway injury
 - risk of postintubation pneumonia
 - hemodynamic instability from volatile anesthetics
 - longer recovery time³
- Monitored Anesthetic Care with Local Anesthesia
 - Suboptimal due as technique for implantation is invasive and can cause distress if local anesthetic is not adequate
 - Moderate to deep sedation required for tunneling and defibrillation testing
- Regional Techniques

CASE SUMMARY

61 year old male with past medical history significant for episode of resuscitated sudden cardiac death due to unclear etiology
PMHx: Coronary artery disease status post coronary bypass graft, mitral valve prolapse. Most recent echocardiogram revealed ejection fraction of 50-55% and reduced right ventricular systolic function.
Initially, underwent ICD placement with a ST Riata dual coil lead, however, starting having complications
Preoperatively: left sided single shot serratus anterior plane (SAP) block was performed under ultrasound guidance without complications. Left sided T4 and T6 serratus anterior plane was visualized at posterior axillary line and 30mL of 0.5% Ropivacaine with Epinephrine and 8mg Decadron.
Intraoperatively: patient was maintained on a Propofol infusion and Dexmedetomidine infusion. Also received a total of 2mg Midazolam and 30mg Ketamine.
Postoperatively: Patient was discharged the same day. On 5th post-surgical day, over telephone interview, patient reported no pain, only soreness at incision site since coming home from the hospital.



<https://litfl.com/serratus-anterior-plane-block/>



<https://link.springer.com/article/10.1007/s40140-019-00359-4>

DISCUSSION

- Use of S-ICD is growing worldwide
- Patient Outcomes with Regional and MAC
 - Less pain postoperatively
 - Less time in recovery
 - Complications related to general with endotracheal intubation avoided
 - Airway
 - Hemodynamics
- Benefits of Regional Technique
 - Less anesthetic required for sedation and discomfort during tunneling process and DT
 - May be beneficial to compare different types of blocks for S-ICD placement

REFERENCES

- Tan JL, Russo AM. (2022 Oct 21) Heart Rhythm O2 3(5):589-596.
- Brouwer T.F., Miller M.A., Quast A.B., et al. (2017) Circ Arrhythm Electrophysiol 0(1):e004663.
- Essandoh, MK, Mark, GE, Aasbo, JD, et al. (2018) Pacing Clin Electrophysiol. 41: 807– 816.