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PECS I AND II

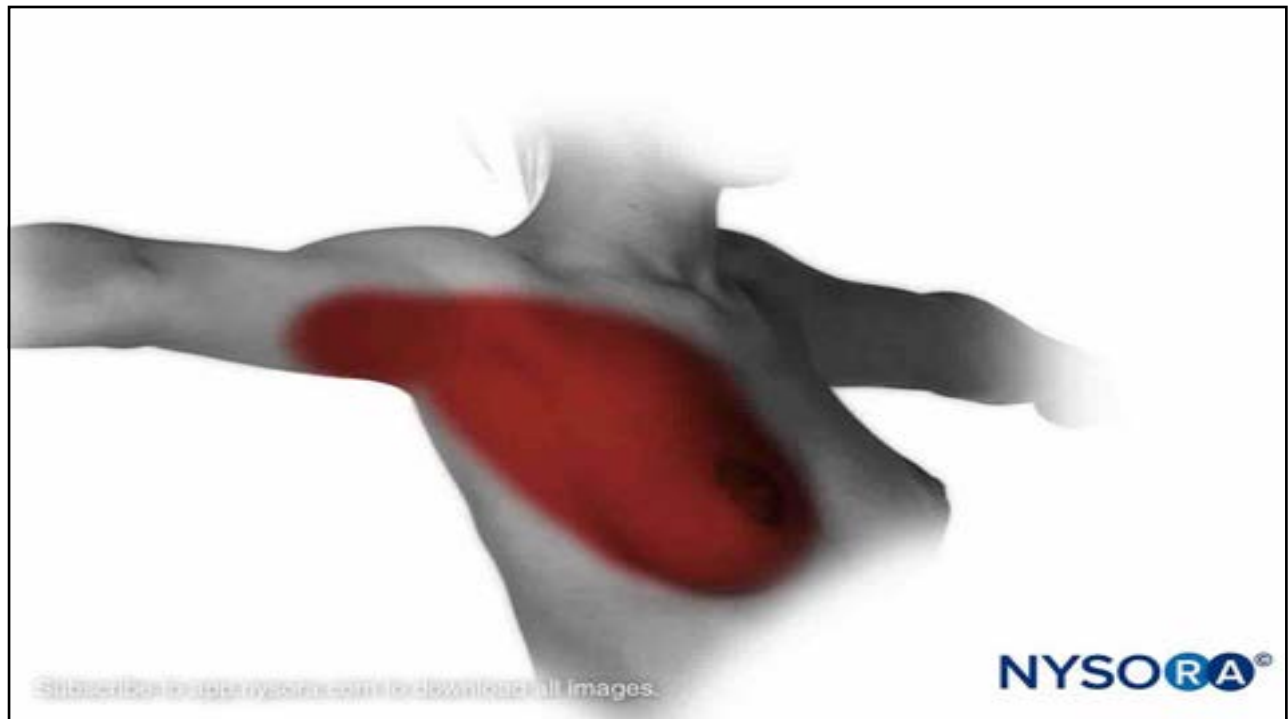
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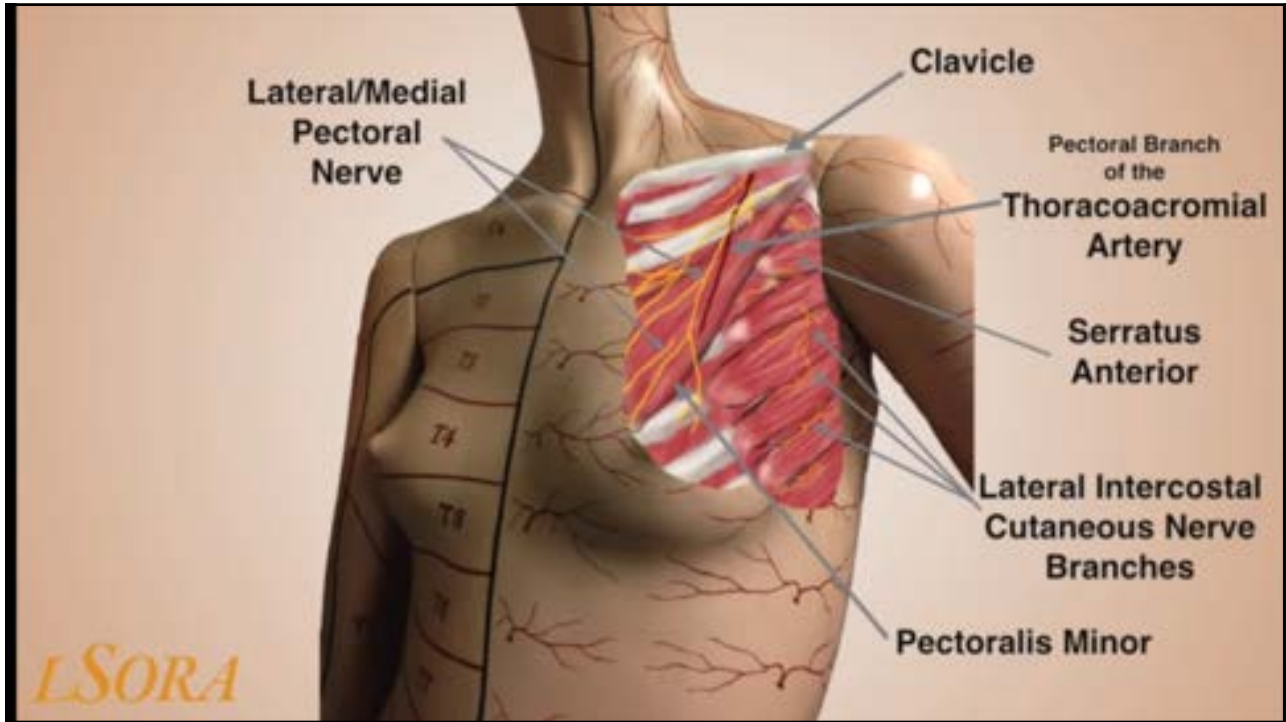
94 Y/O EF 20% AICD GEN CHANGE

- VERY LITTLE LOCAL BY CARDS**
- OLD GENERATOR DEEP AND SCARRED**
- WHY ARE YOU DOING THIS TO ME? YOU'RE TORTURING ME!!!!**

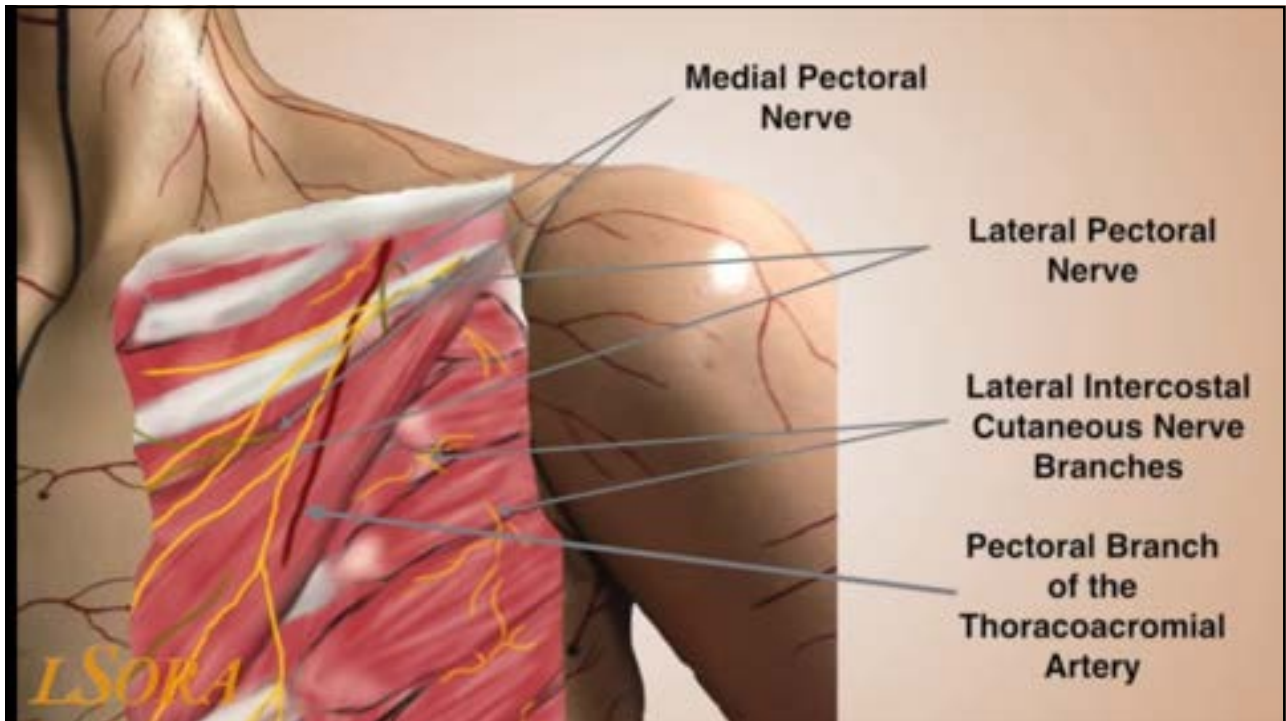
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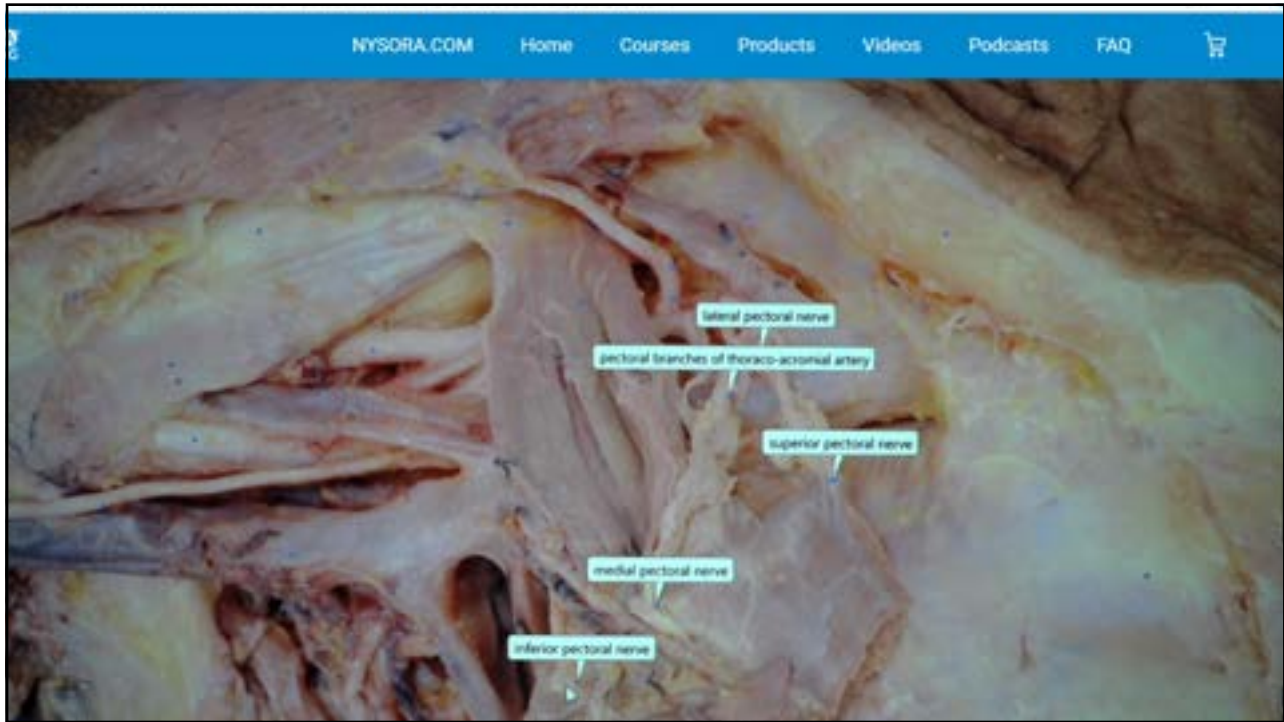
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FASCIAL PLANE BLOCKS

- RELATIVELY SMALL NERVES OF CHEST WALL
- ANATOMY
- APPROACH
- TIPS FOR PECS SUCCESS


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PECS I AND PECS II

- EACH SERVE A SEPARATE PURPOSE
- OFTEN DONE TOGETHER

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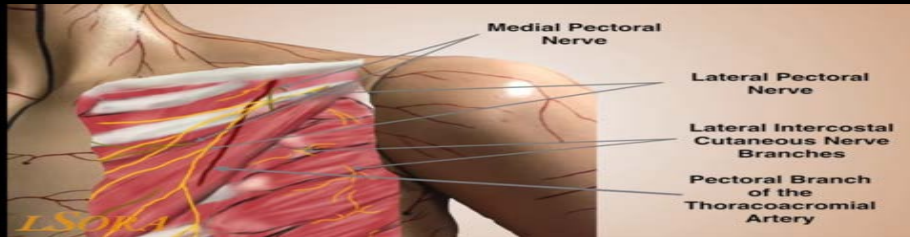
PECS 1

- PECTORAL
- IMPLANTS
- PEC MUSCLES
- MINIMALLY INVASIVE CT SURGERY
- MODIFIED RADICAL MASTECTOMY WHERE PEC MUSCLE IS STRIPPED

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PECS 1 -FIRST GOAL

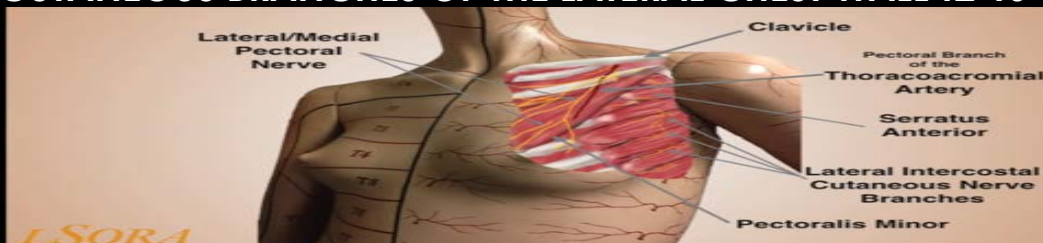
- LA B/T PEC MAJOR AND PEC MINOR MM (2-3 R)
- BLOCK MEDIAL + LATERAL PECTORAL NERVES
- THESE NERVES SUPPLY THE PEC MUSCLES
- BUT NOT THE OVERLYING SKIN



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PECS II

- PLACES LA ONE PLANE DEEPER (3-4 R)
- B/T PEC MINOR AND SERRATUS ANTERIOR MM
- EXPANSIVE SPREAD OF LA ALONG THE SIDE OF THE CHEST WALL
- CUTANEOUS BRANCHES OF THE LATERAL CHEST WALL T2-T6



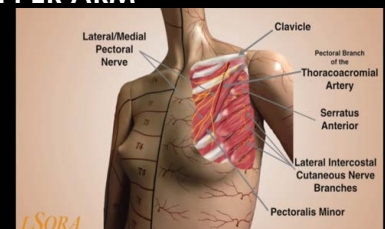
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- PECS I -> 2 -> 3 (B/T 2ND-3RD RIBS) 10CC
- PECS 2-> 3 -> 4 (B/T 3RD-4TH RIBS) 20 CC

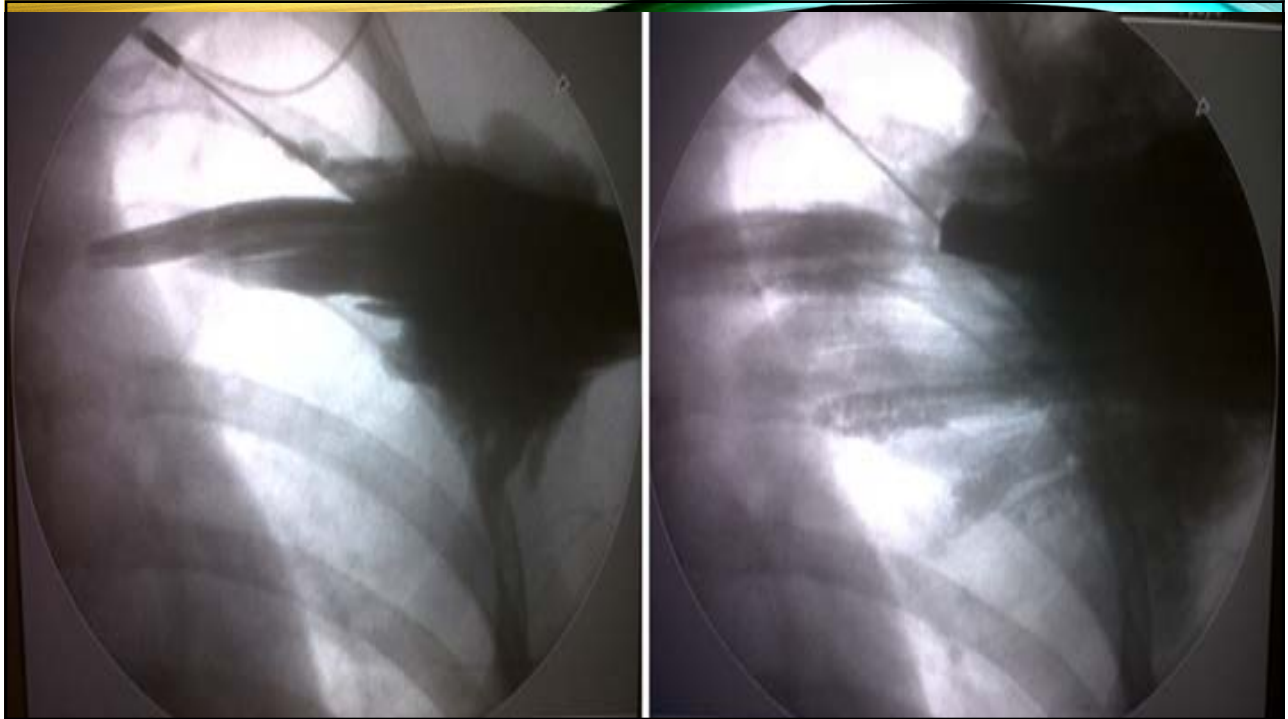
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PECS II

- SENSORY BLOCK OF THE SKIN, BREAST, AND SOFT TISSUE
- CORRESPONDING TO T2 TO T6
- WELL SUITED FOR BREAST SURGERY
- GETS T2-T3, WELL SUITED FOR AXILLARY DISSECTION OR SENTINAL NODE BX
- INTERCOSTAL BRACHIAL NN (BRANCH OF T2) ALSO CONSISTENTLY BLOCKED
- CAN BE ADDED TO BPB FOR AV GRAFT FORMATION OF UPPER ARM
- MIDLINE OF CHEST IS SPARED
- (WE DON'T GET THE ANTERIOR CUTANEOUS BRANCHES)
 - -EASILY FIXED WITH LOCAL INFILTRATION




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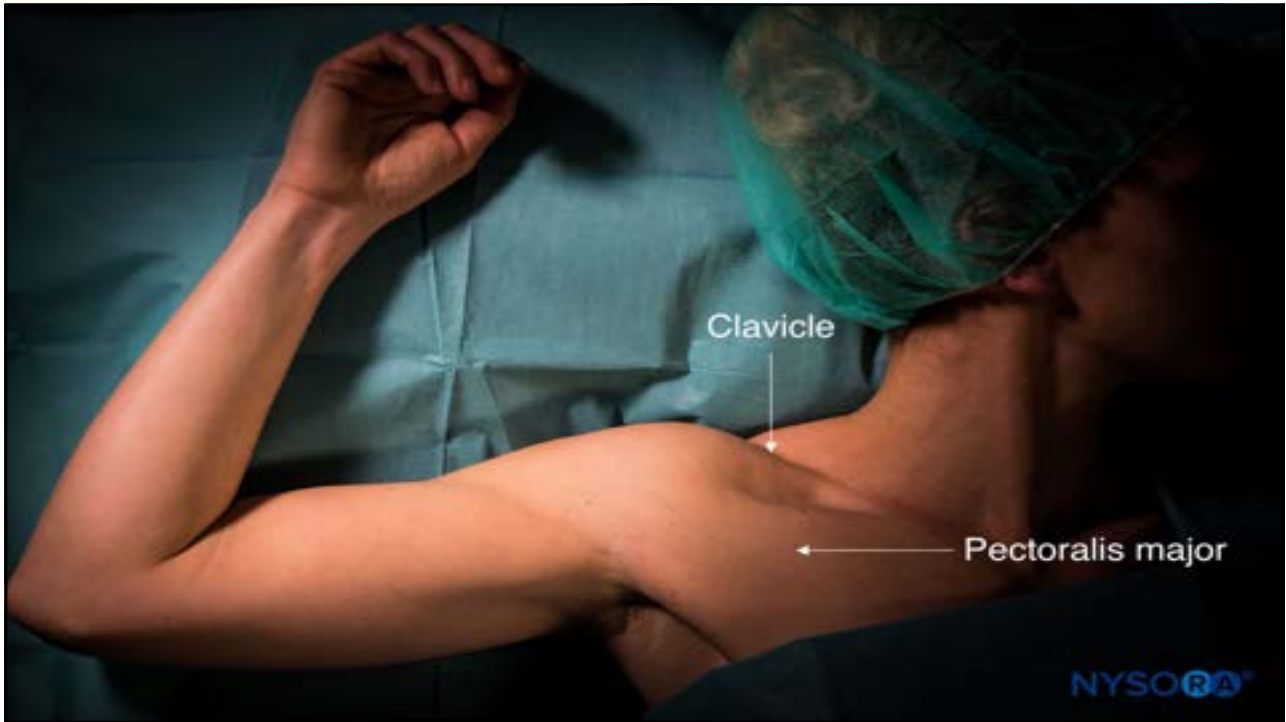
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POSITION

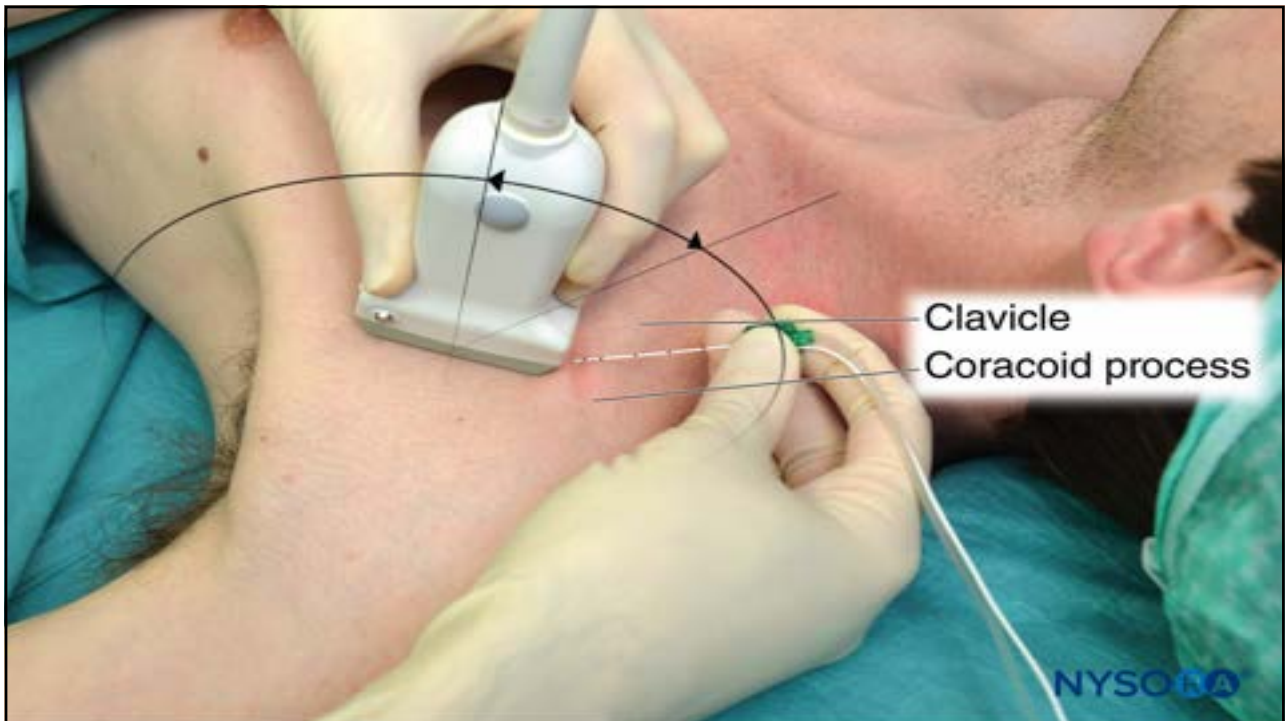
- ABDUCT ARM 90 DEGRESS – STRETCH THE PEC MM
- PROBE PLACED ON LATERAL CHEST WALL
- JUST MEDIAL TO CORACOID PROCESS TRANS SAGITTAL
- STAND AT HEAD OF THE BED
- NEEDLE GUIDED IN PLANE
- SEE SONOANATOMY OF INFRACLAVICULAR BRACHIAL PLEXUS



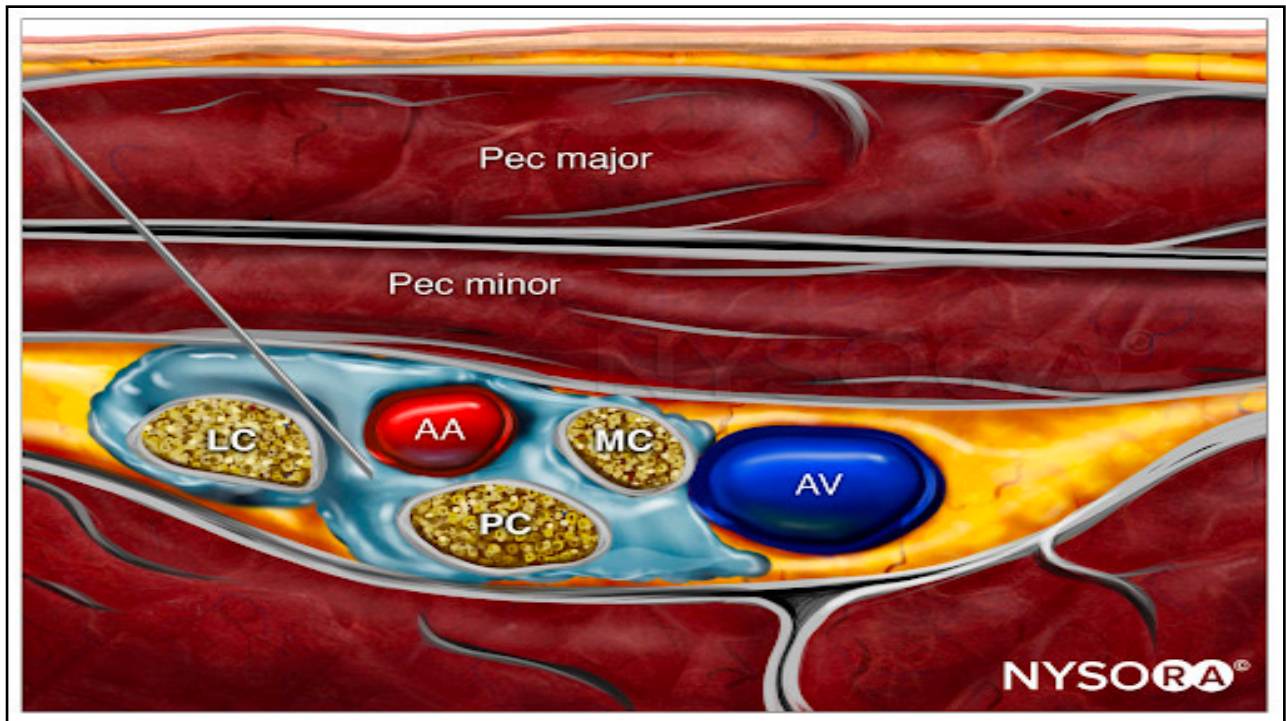
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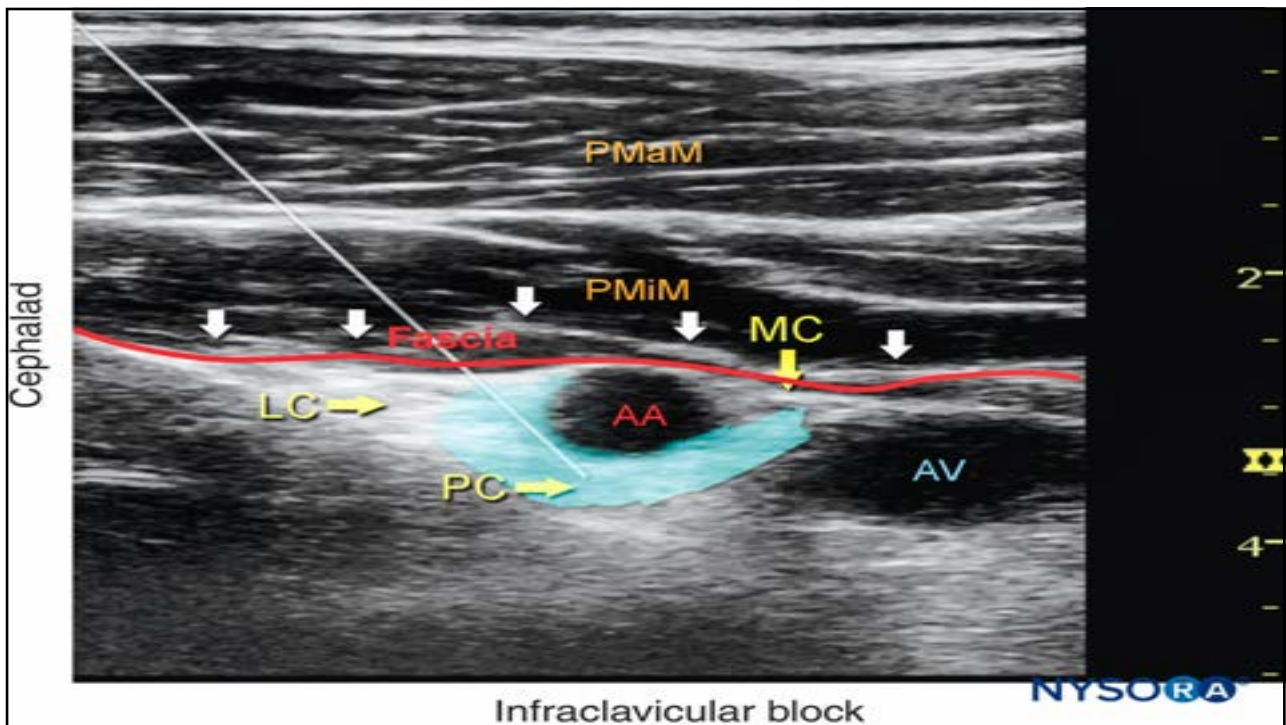
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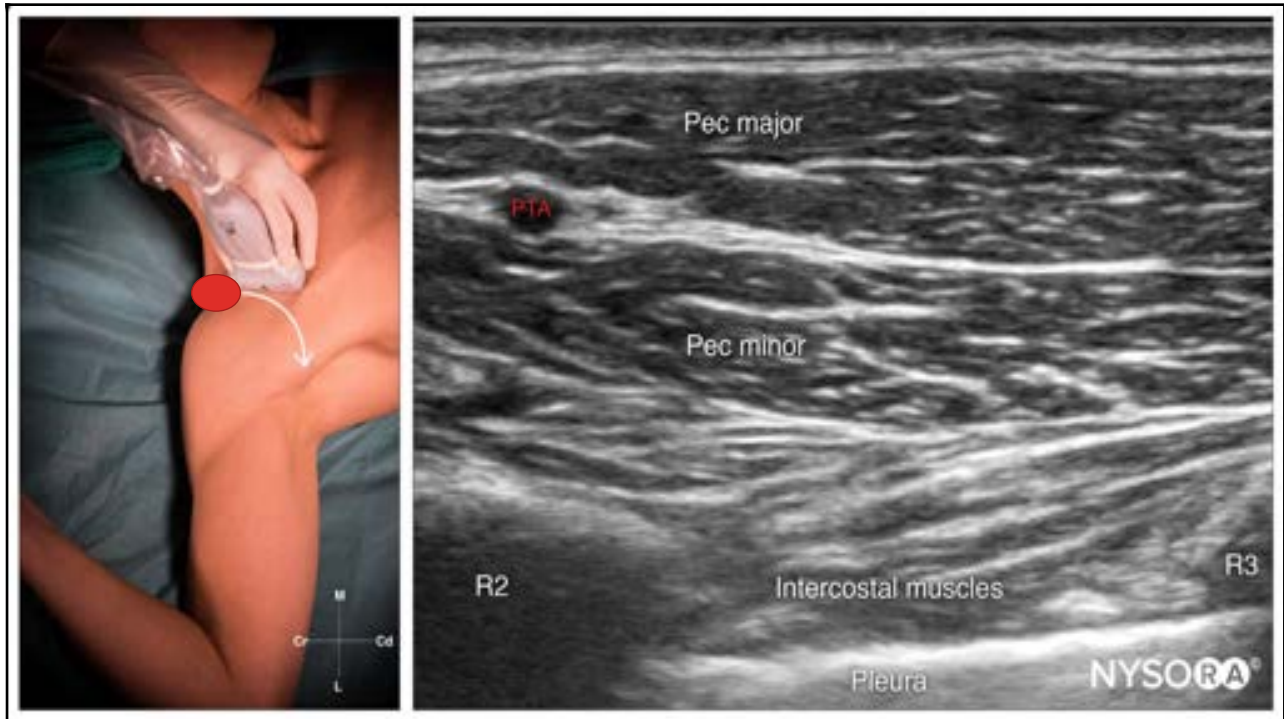
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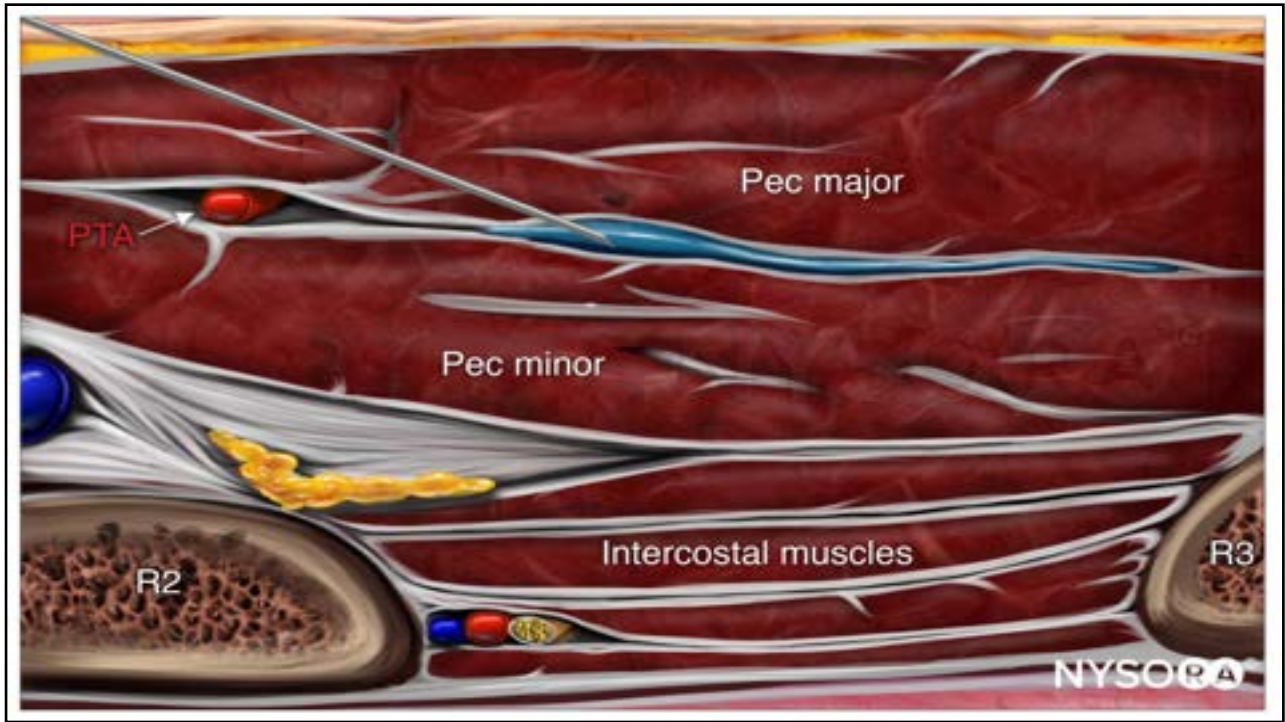


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PECS I VS II

- PECS I B/T PEC MAJ ON TOP + PEC MIN BELOW
- PECS II B/T PEC MIN + SERRATUS
- PECS II MUCH MORE EXPLANSIVE SPREAD
 - ANESTHETIZE LATERAL CUTANEOUS BRANCHES
 - FROM THE SERRATUS MM OF THE LATERAL CHEST WALL

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PROBE MANEUVERS MATTER

- TILT MEDIALY – TOWARD THE RIBS
- TWIST SO PROBE IS IN-LINE WITH **DELTOID PECTORAL GROOVE**
- BRINGS CHEST WALL INTO VIEW UNDER THE AXILLARY VESSELS
- COUNTING THE RIBS IS CRUCIAL
- RIB DIRECTLY BENEATH THE AXILLARY VEIN IS THE SECOND RIB
- MOVE THE PROBE INFERIOR AND LATERAL = 3RD RIB
- FASCIAL PLANE BETWEEN THE PEC M/m = target PECS I



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TIPS

- DO PECS II FIRST
- DEEPER, SO WON'T OBSCURE VISUALIZATION WITH FIRST INJECTION
- AS NEEDLE IS WITHDRAWN IT TENDS TO FALL RIGHT INTO CORRECT PECS I PLANE OVER THE 3RD RIB OVER THE PECS I PLANE TO DEPOSIT FINAL 10 CC OF LA
- COMMON TO LOSE SITE OF THE RIBS – TILT MEDIALY
- 10 MILS FOR I
- 20 MLS FOR II
- IF OBESE CONSIDER OUT OF PLANE TO VISUALIZE 4TH RIB, INJECTING UNDER SERRATUS
- BLOCK IS THE SAME IF LA INJECTED ABOVE OR BELOW SERRATUS

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PECS II

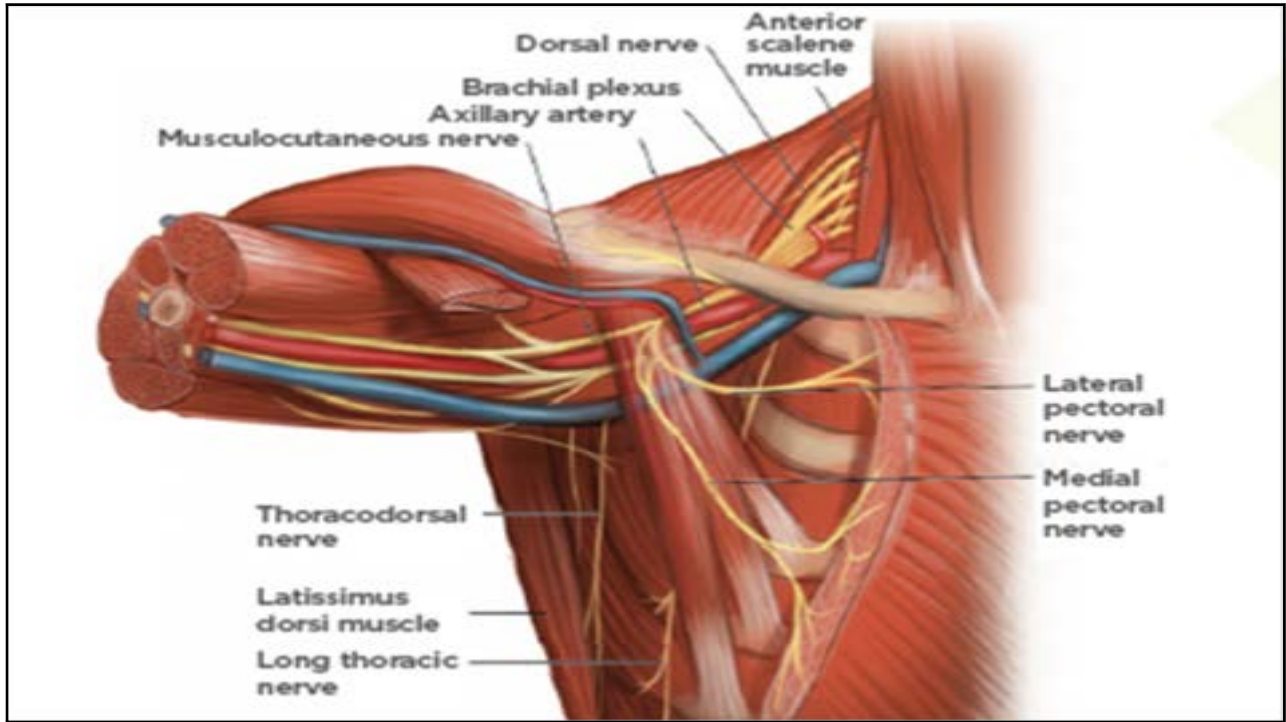
- **SIMPLE** ALTERNATIVE TO PARAVERTEBRAL AND THORACIC EPIDURAL FOR BREAST SURGERY
- AVOID PTX, SYMPATHECTOMY
- EXCELLENT ANALGESIA
- GOOD RESCUE BLOCK
- EASILY IDENTIFIABLE LANDMARKS
- blanco

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DISTRIBUTION OF LA PECS BLOCK

- Combines both motor and sensory nerve blocks that compare with wound infiltration techniques that only aim for sensory nerves.
- Pecs advantages,
 - Opiates are not usually necessary
 - Less tumor recurrence (Not replicated)
 - Simple and fast acting block.
 - Injection in the fascial plane between the pectoralis muscles is not enough to reach the anterior branches of the intercostal nerves Ergo PECS II
 - Cover dermatomes from T2 to T4 with variable spread to T6.
 - For parasternal branches of the intercostal nerves it is advised to infiltrate between Pmm and serratus muscle, but on the medial side, close to the nipple

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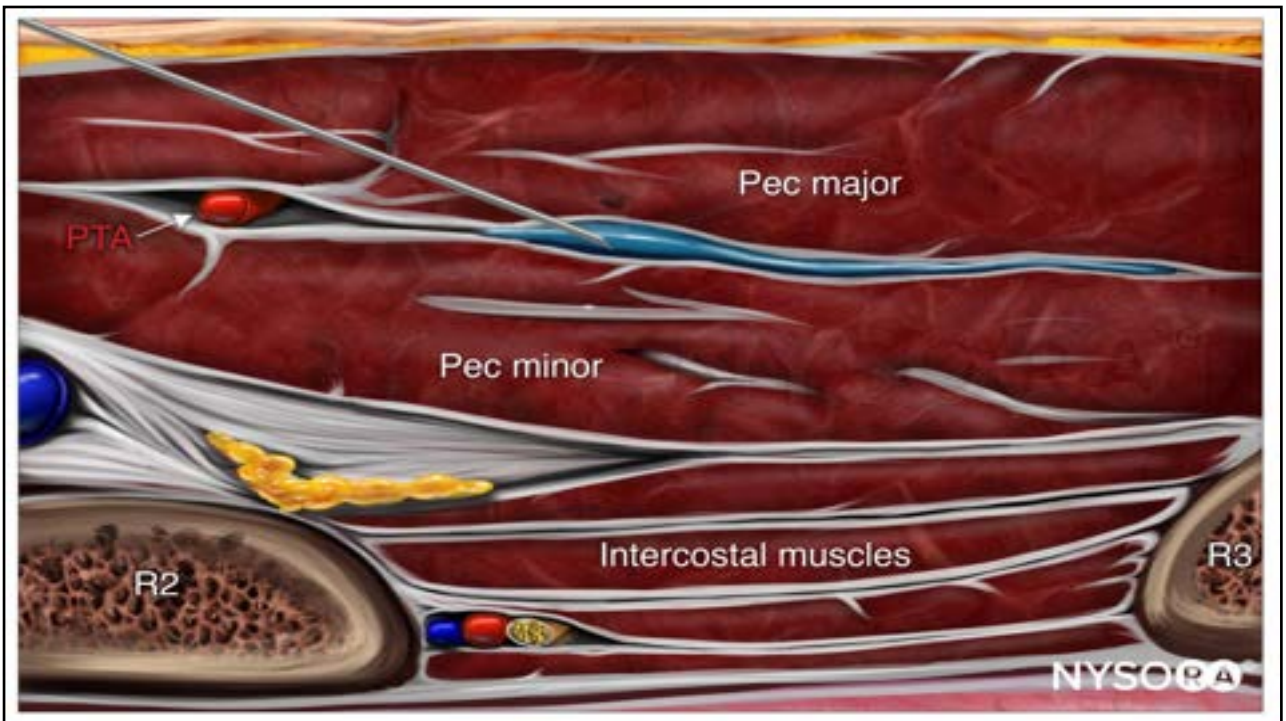
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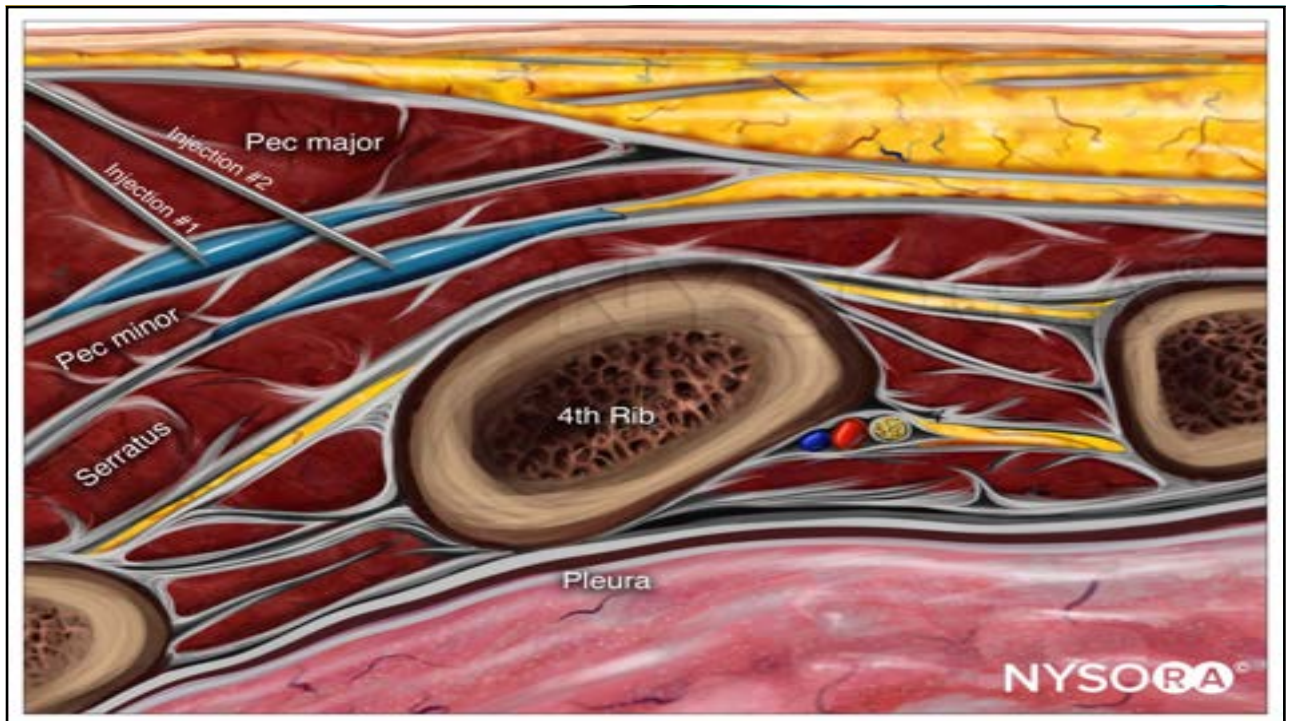
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SUMMARY

- Ultrasonography to identify tissue layers and fascial layers for analgesia of the chest and abdominal wall.
- Pecs I: Medial + lateral pectoral nerves (innervate the pectoralis muscles).
 - Injection of local anesthetic **in the fascial plane between the pectoralis major and minor muscles.**
- The Pecs II nerve block (which also includes the Pecs I nerve block) is an extension that involves a second injection lateral to the Pecs I injection point
 - **in the plane between the pectoralis minor and serratus anterior muscles** with the intention of providing blockade of the upper intercostal nerves.
- NYSORA

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14 TIER-1

- TIER-1 OPERATORS
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