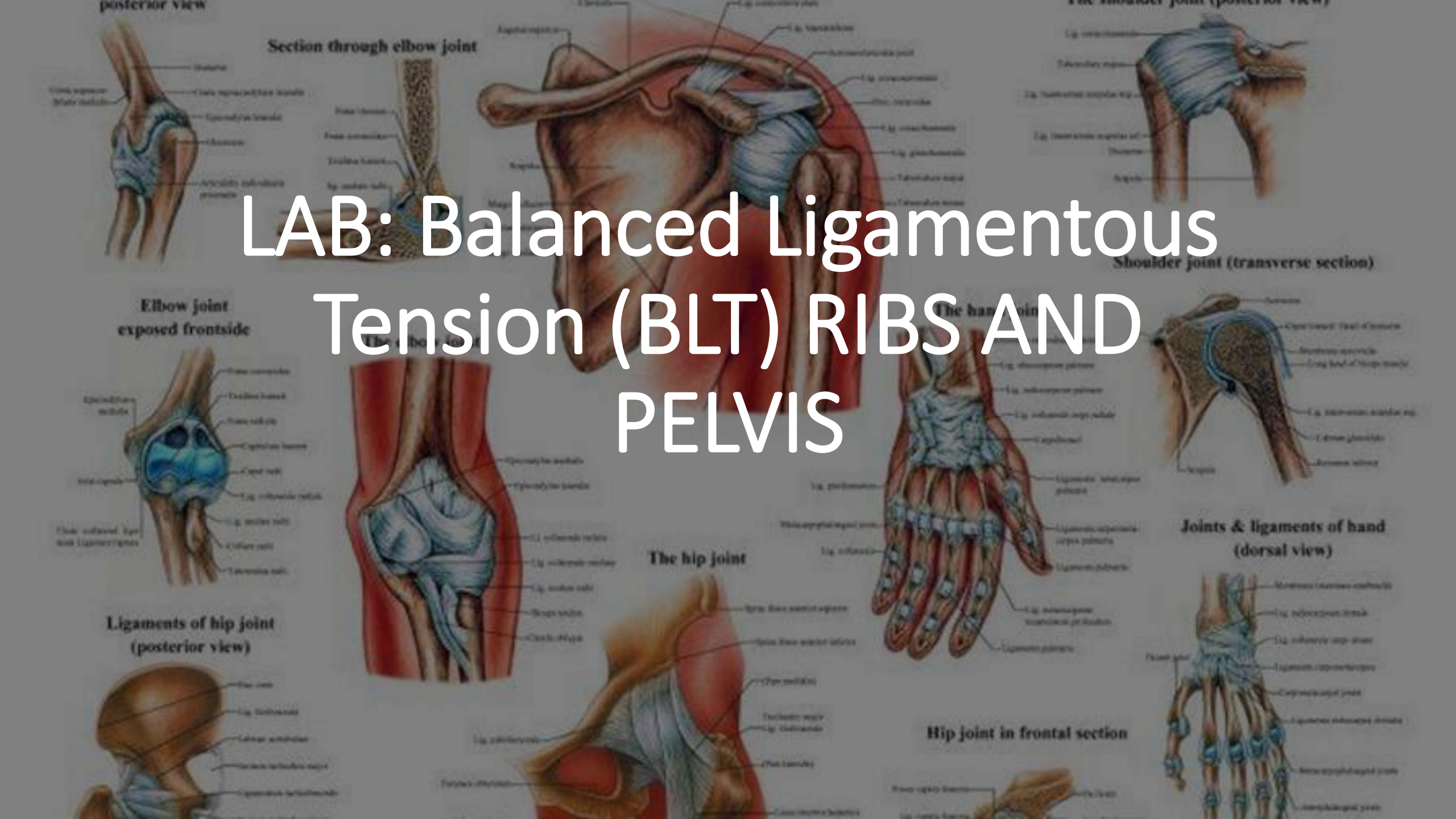
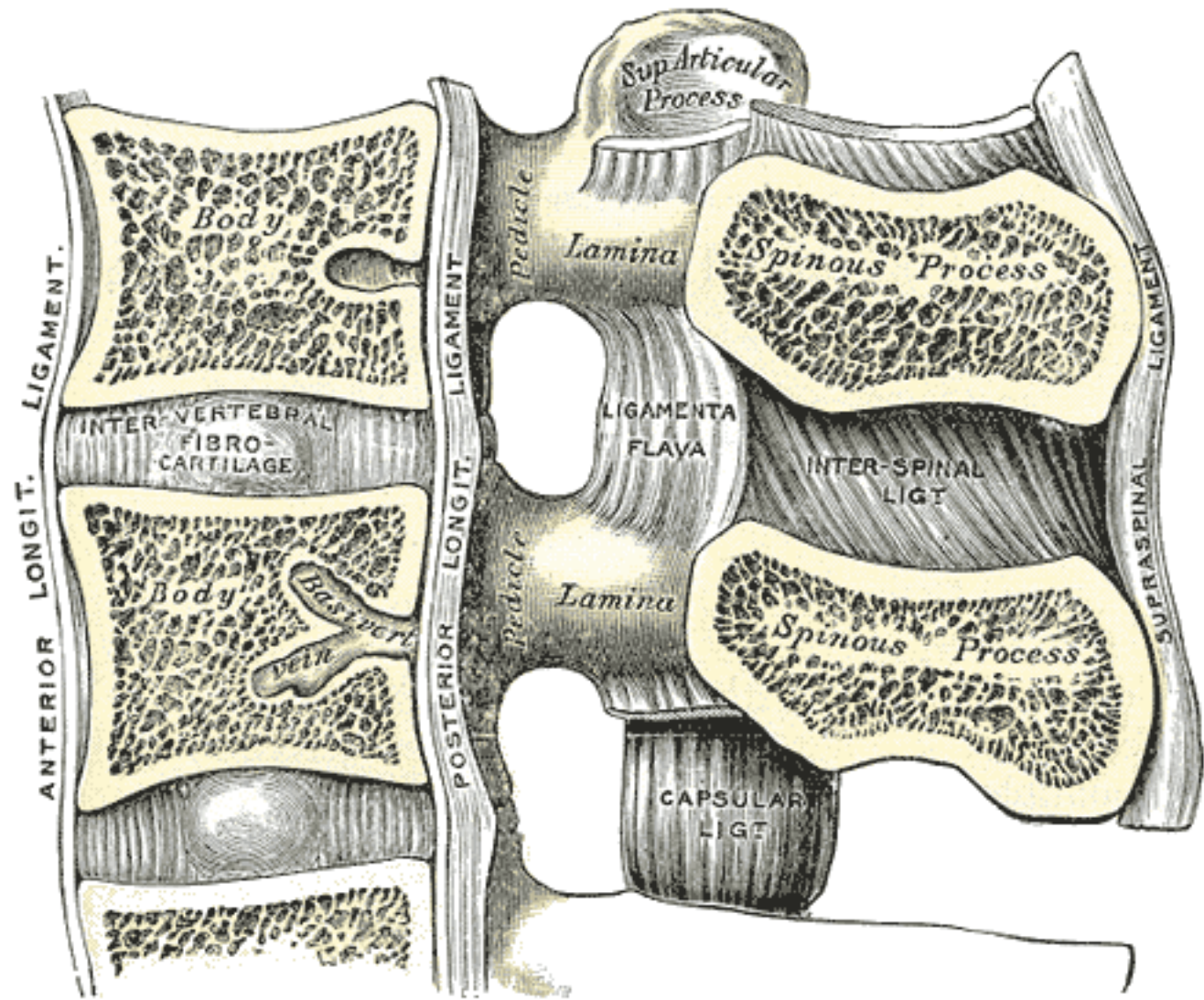


LAB: Balanced Ligamentous Tension (BLT) RIBS AND PELVIS



Thoracic BLT



Lumbosacral Decompression BLT

Possible Clinical Indications: LBP, pregnancy

Possible TART Findings/Diagnosis: lumbosacral compression, TART changes over lumbosacral junction

Example Diagnosis: R lumbosacral compression

Patient Position: Supine

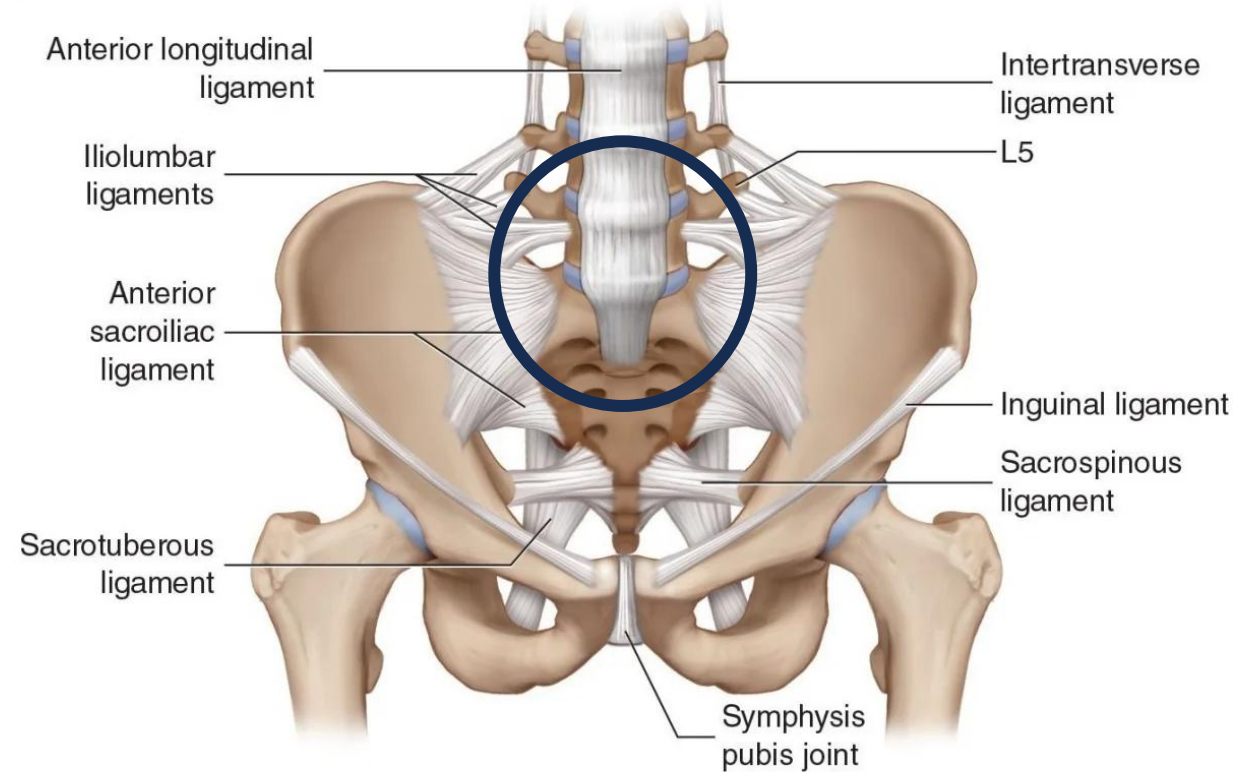
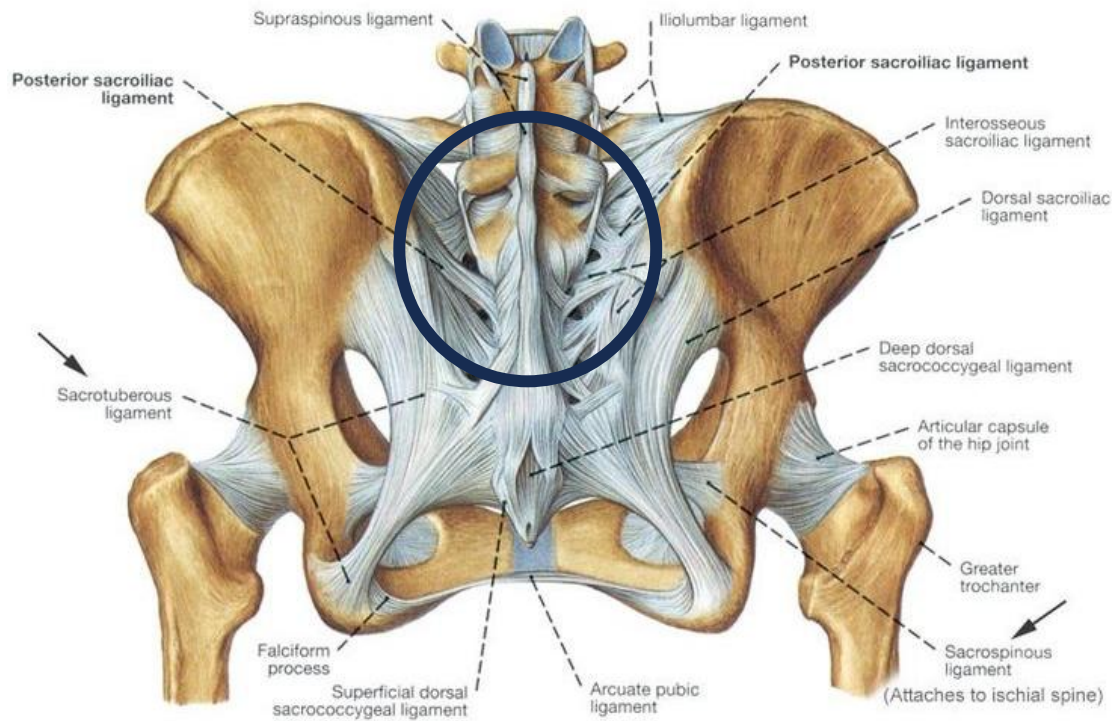
Physician Position: Side of patient

Treatment:

1. The physician places their cephalad hand on the lower aspect of the lumbar spine (L4-L5) so that the spinous processes will fall on the palmar crease with the thenar eminence and fingertips engaged on the paraspinal musculature.
2. The caudad hand will be on the sacrum with the fingertips pointing cephalad.
3. With the cephalad hand first, move the spine into a point of balanced tension in rotation, sidebending, and flexion/extension. Then do the same with the caudad hand, moving the sacrum as if it were a vertebrae into rotation, sidebending, and flexion/extension. (Note: the caudal contact can either go between the patient legs or from the side under the thigh depending on patient/practitioner preference and setting/context.)
4. Once both hands have positioned themselves and have found the point of balanced tension, hold until a release is palpate.
5. After releasing, reassess by inducing the same motions.



Posterior and Anterior Lumbosacral Ligaments



Supine SI Decompression BLT

Possible Clinical Indications: low back pain, hip pain

Possible TART Findings/Diagnosis: SI compression, decreased ROM along inferior, middle or superior axis of rotation of the SI joint

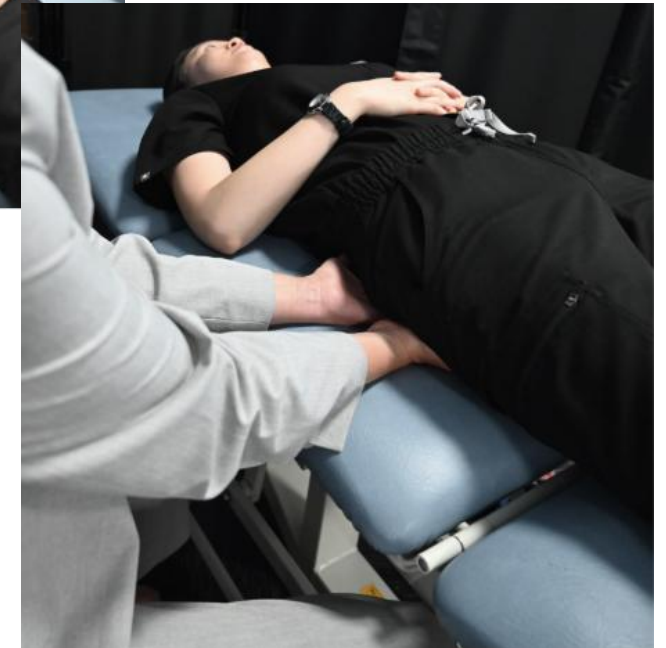
Example Diagnosis: R SI compression

Patient Position: Supine

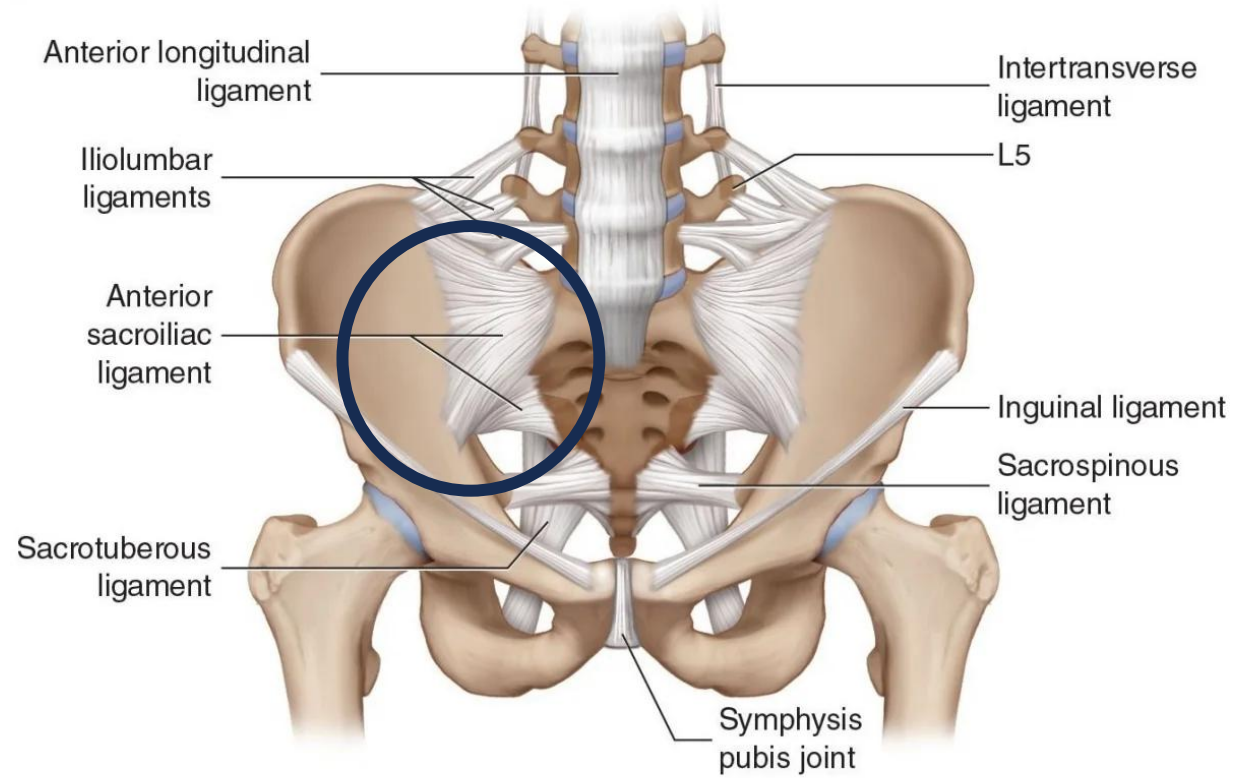
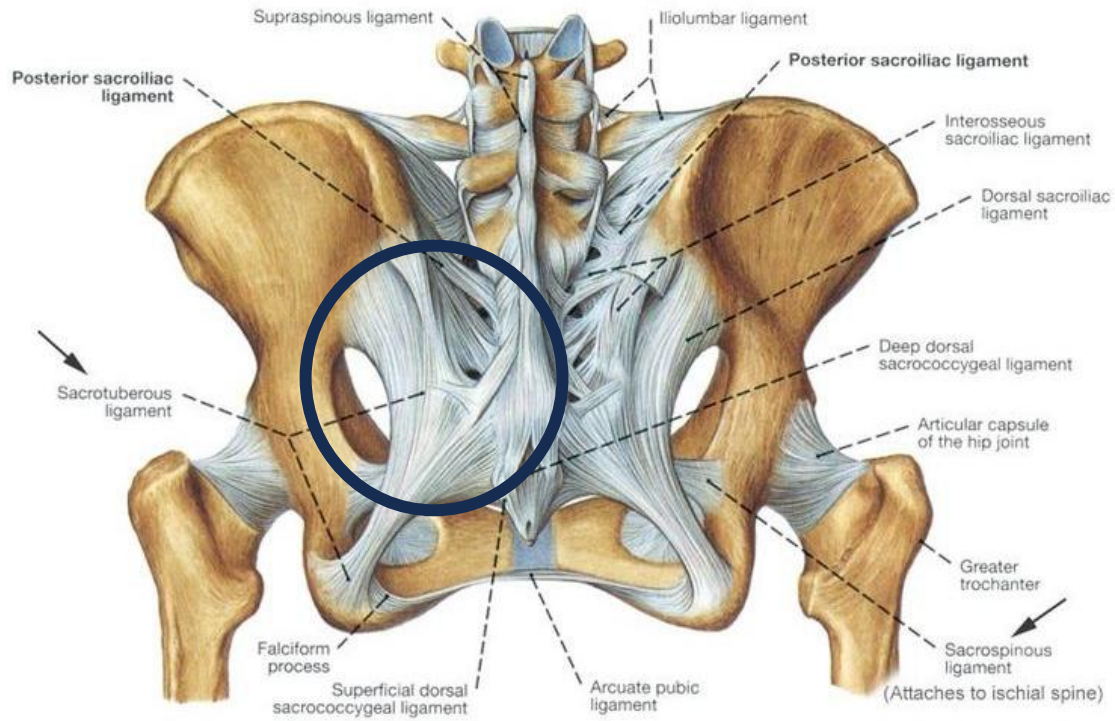
Physician Position: Standing or seated at the table on ipsilateral side facing patient head

Treatment:

1. Place the cephalad hand beneath the pelvis with palm up and fingertips medial to the SI joint along the joint line.
2. For short lever: place fingertips of the caudad hand just below
3. For long lever: secure the patient's ipsilateral hip and straightened knee between your caudal forearm, elbow and body wall.
4. Internally rotate the patient's hip and femur to localize forces through the leg to the ipsilateral sacrum. Using the patient's femur as a long lever, balance tensions at the SI joint, using adduction/abduction, flexion/extension and compression/distraction.
5. Once tensions have been balanced, wait for a release which may be appreciated by a softening of the tissues under the cephalad hand.
6. Slowly return the femur back to a neutral position and reassess your patient.



Posterior and Anterior Sacroiliac Ligaments



Supine Rib Release BLT

Possible Clinical Indications: Rib pain, upper and mid back pain

Possible TART Findings/Diagnosis: single rib restriction, inhalation/exhalation rib dysfunction

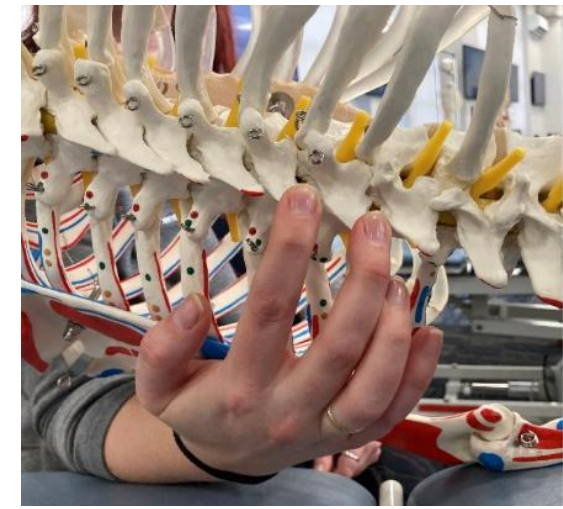
Example Diagnosis: R rib 7 posterior rib

Patient Position: Supine

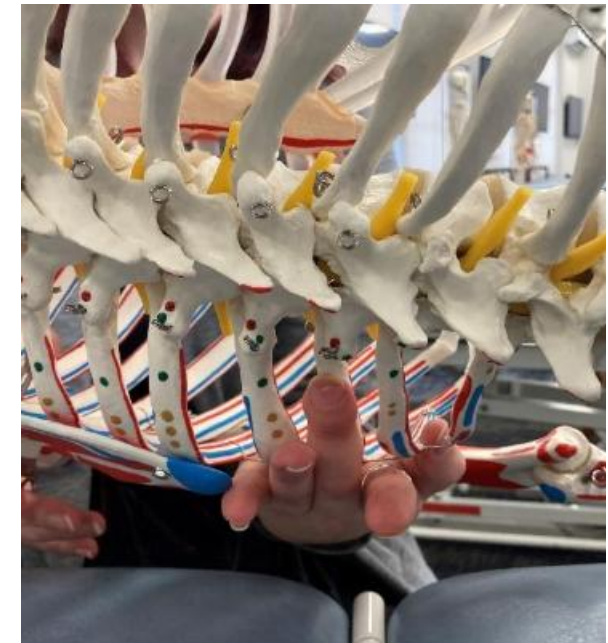
Physician Position: Standing/seated ipsilateral on the side of the patient

Treatment:

1. The physician places their index finger of their cephalad hand on the contralateral aspect of the spinous process above the rib to be treated, and places their middle finger of their cephalad hand on the contralateral aspect of the spinous process on the rib below medial to the rib angle.
2. The physician then places their middle finger of their caudad hand along the dysfunctional rib with the fingertip medial to the rib angle.
3. The physician induces an anterior force with both hands to engage the segments and rib and then draws both hands laterally towards themselves. The fingers on the opposite side of the spinous process will rotate the vertebrae away, putting slack in the ligaments at the costovertebral junction
4. The physician continues to engage the rib along the long axis on the shaft of the rib until a release occurs.
5. Reassess.

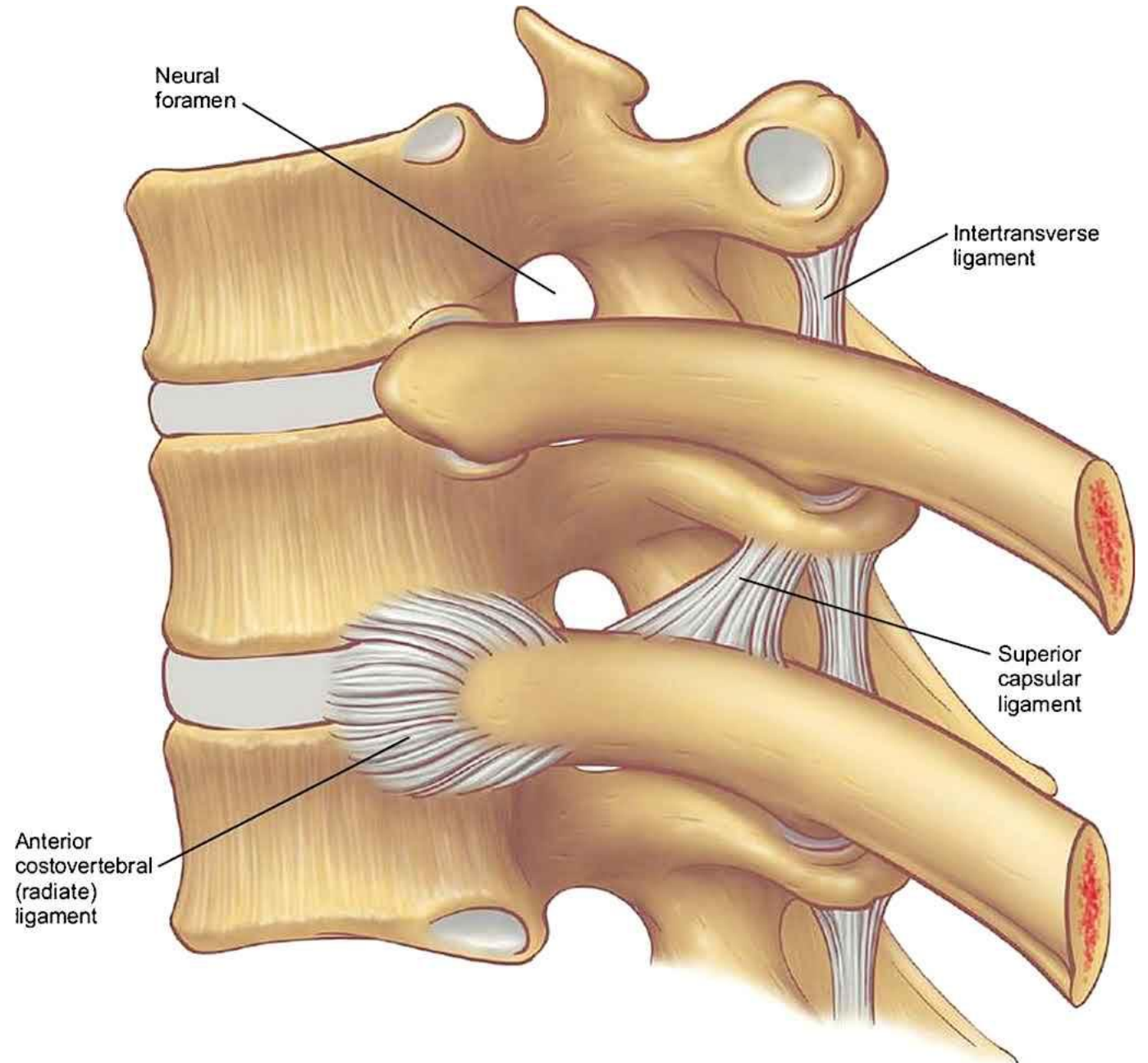


Cephalad Hand: Index finger and middle finger on spinous processes



Caudad Hand: Middle finger on shaft of rib

Anterior Costovertebral (Radiate) Ligament



Sutherland Rib Technique

Possible Clinical Indications: Rib pain or thoracic back pain

Possible TART Findings/Diagnosis: single rib dysfunction or key rib in group dysfunction

Example Diagnosis: R rib 7 anterior

Patient Position: Seated at the end of the table

Physician Position: Seated next to and below the patient, ipsilateral to rib to be treated

Treatment:

1. Establish a secure contact on the dysfunctional rib and disengage the rib head by side bending the patient toward the physician in the lumbar spine, while side bending away from the physician in the thoracic spine to open the demi facets.
2. The weight of the patient should be fully supported at this point by the physician through the contact on the dysfunctional rib.
3. The rib is then translated in an anterior and posterior direction testing for ease and moving in the direct of ease to obtain balanced tension and hold this position while stacking other motions.
4. Next, ease is tested for elevation and depression keeping in mind bucket handle motion. The direction of ease is held to achieve balanced tension while stacking other planes.
5. Holding the above eases, instruct your patient to rotate their trunk away from the rib until balanced tension is achieved by the physician. The patient should keep their head erect during this motion and move it with the thorax as a unit.
6. The physician then fine tunes the previous induced motion including elevation and depression, translation anteriorly and posteriorly, and side bending away from the rib to achieve balanced tension.
7. Breath may be added as an activating force until you have achieved balanced tension.
8. Once you have reached a point of balance, you wait for a release, and once a release has been appreciated the patient can be returned to neutral and the dysfunctional rib can be reassessed.



Rib Ligaments

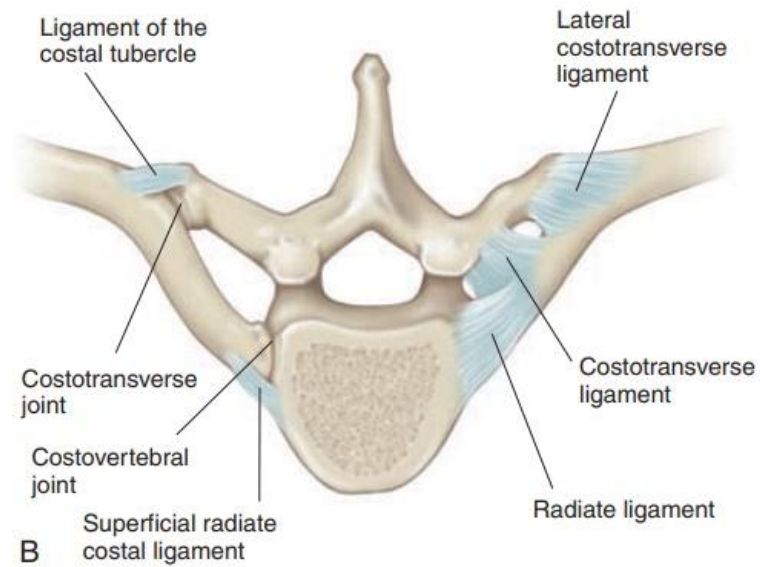
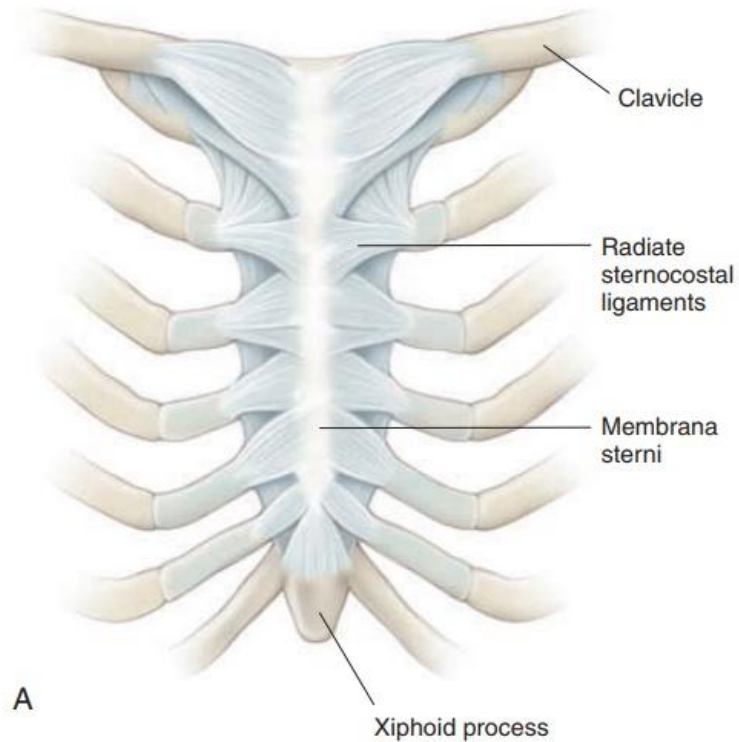
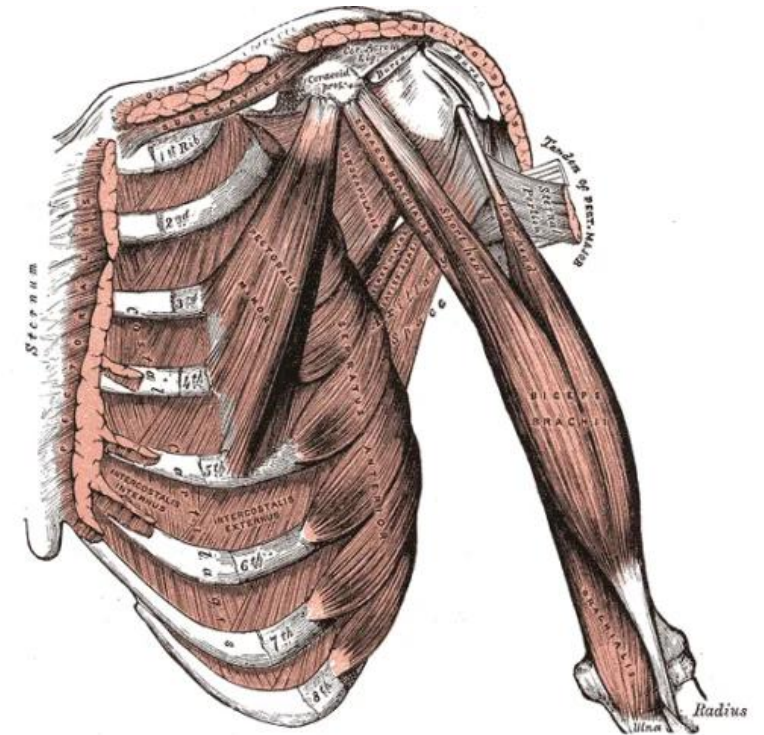


FIGURE 3.38. Rib Articulations. **A**, Costosternal Joints; **B**, Costovertebral Joints



Mediastinal BLT

Possible TART Findings/Diagnosis: Restriction or ease of motion superior/inferior, Lt/Rt, diagonal or CW/CCW over location of attachment of sternopericardial ligaments

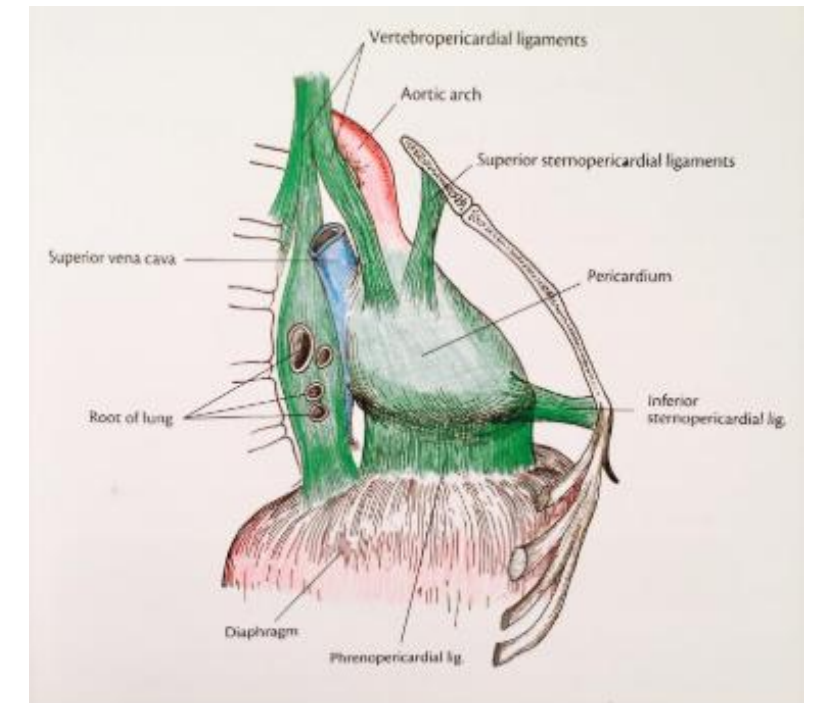
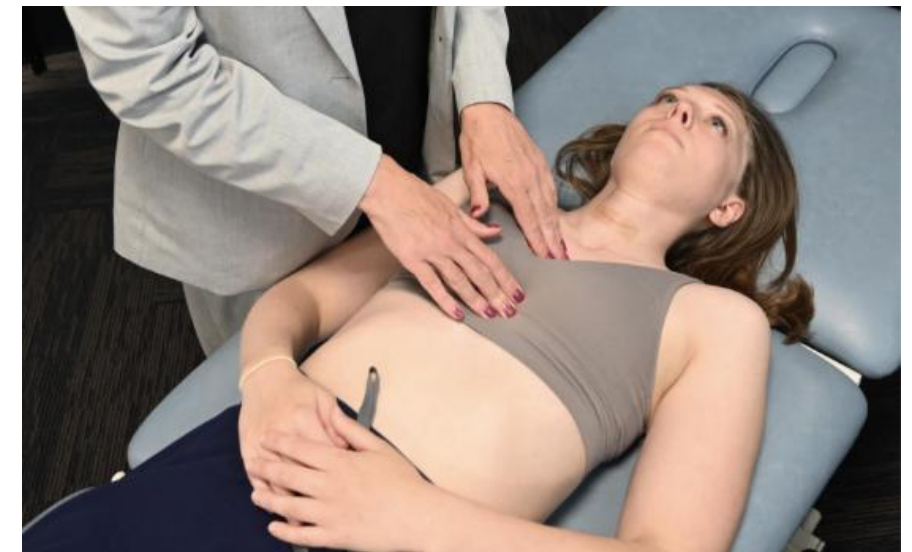
Example Diagnosis: Superficial sternal ligamentous restriction

Patient Position: Supine

Physician Position: Standing at patient's side

Treatment:

1. The physician places their cephalad hand on the sternum over the superior sternopericardial ligament and the caudad hand on the sternum over the inferior sternopericardial ligament.
2. The physician gently and steadily compresses posteriorly, palpating the tensions as they slowly move through the layers of fascia superficial to the sternum, the sternum itself, and the ligaments deep to the sternum.
3. The physician then slowly tests superior/inferior, Lt/Rt, diagonal glides, and CW/CCW motions.
4. The physician then stacks into the ease or restriction in all planes.
5. The physician holds until a release is felt.
Additionally, the physician can instruct the patient to take a deep breath or add a subtle vibratory activating force to facilitate further release.
6. The physician gently releases their contact.
7. Reassess.



Sternopericardial Ligaments

