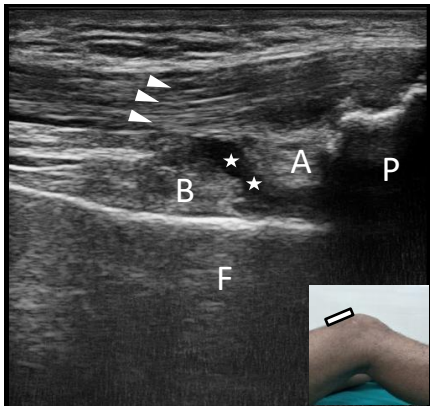
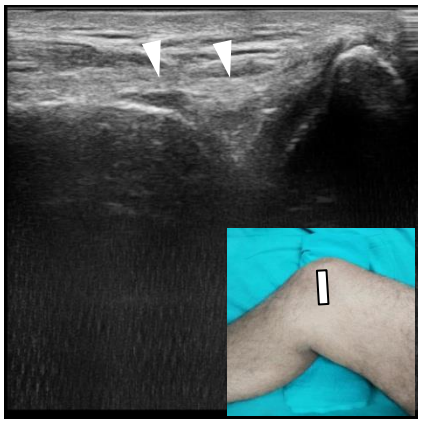
KNEE

A) ANTERIOR

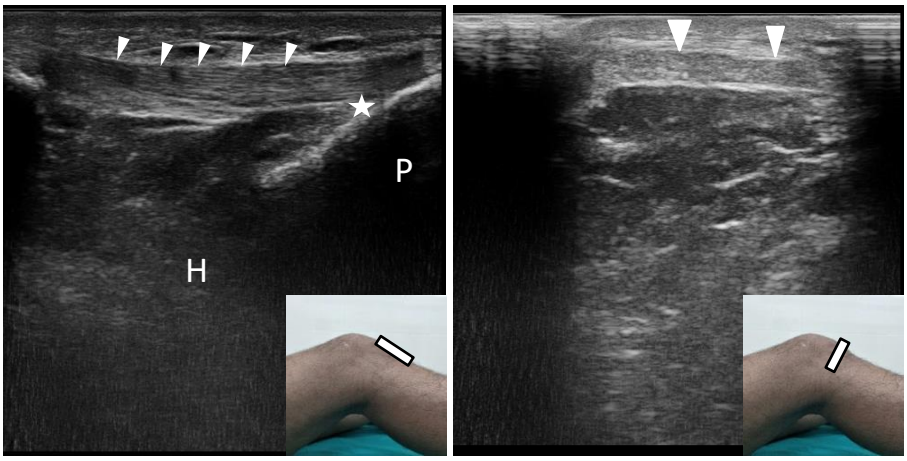
1. QUADRICEPS TENDON*:* Patient in placed in supine position. Knee in 20-30^{o} flexion, by placing a roll under the knee. Sagittal images are obtained by placing the probe in midline with distal edge over the patella. Transverse images are obtained by rotating the probe by 90^{o}.
2. SUPRAPATELLAR FAT: Found cranial to patella and deep to the quadriceps tendon. The suprapatellar synovial recess is found deep to the suprapatellar fat and quadriceps tendon as a hypoechoic space with a small amount of fluid. Deep to the synovial recess in the prefemoral fat. Probe is rotated transversely to look at the parapatellar recesses on either side of the quadriceps tendon.



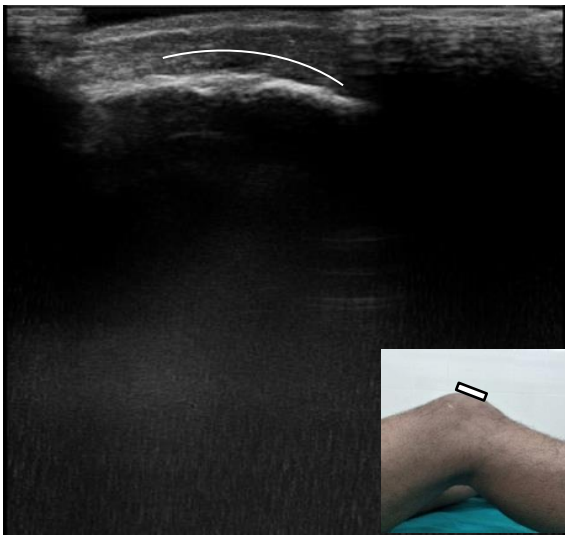
3. MEDIAL AND LATERAL PATELLAR RETINACULA (white arrowheads): Evaluated on either side of the patella. They appear as bilayered structures.



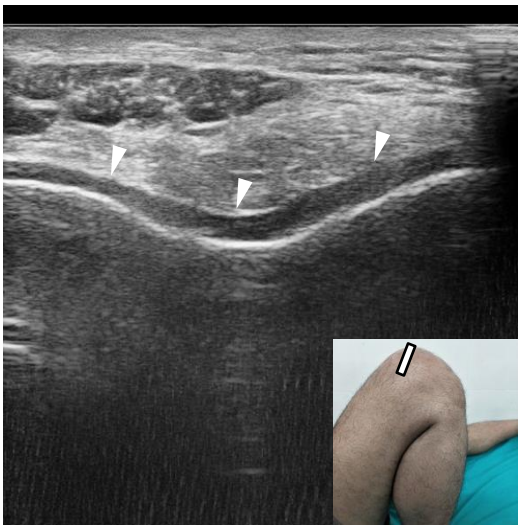
4. PATELLAR TENDON (P): Probe is moved caudally with the proximal edge placed over the lower end of patella and the probe is traced inferiorly till its insertion at the tibial tuberosity. Tendon is also evaluated in short axis.
5. HOFFA FAT PAD (H): Triangular fat pad deep to the patellar tendon.
6. INFRAPATELLAR BURSA (White star): Sandwiched between Patellar tendon and Hoffa's fat pad. May contain small amount of fluid.



7. PREPATELLAR BURSA
   Copious amount of ultrasound jelly is applied over the patella (Jelly stand-off) and probe in placed longitudinally over the patella with minimal pressure to avoid compression of the bursa.

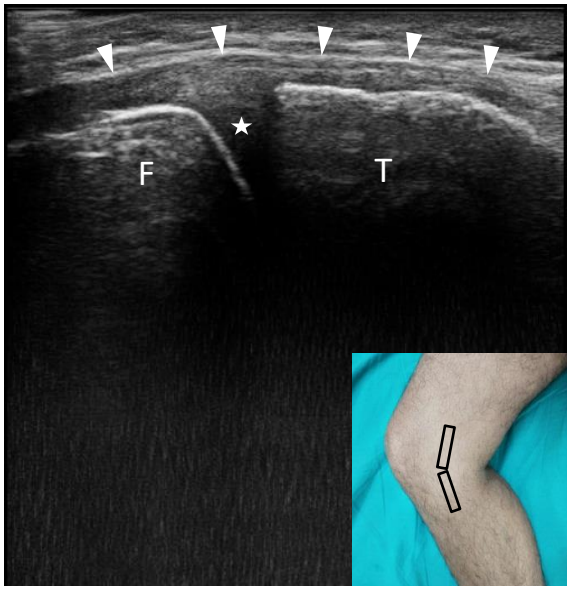


8. FEMORAL TROCHLEAR CARTILAGE (white arrowheads): Knee is placed in complete flexion and the femoral trochear cartilage is evaluated in transverse plane.

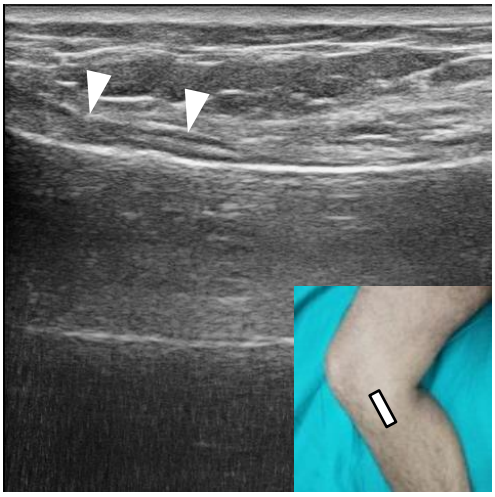


B) MEDIAL

1. MEDIAL COLLATERAL LIGAMENT (MCL): Patient in supine position. Knee is externally rotated with 20^{o} flexion. Transducer placed longitudinally to trace the entire extent of medial collateral ligament, till its tibial attachment. Medial meniscus is seen deep to the MCL as a hyperechoic triangular structure (white star).

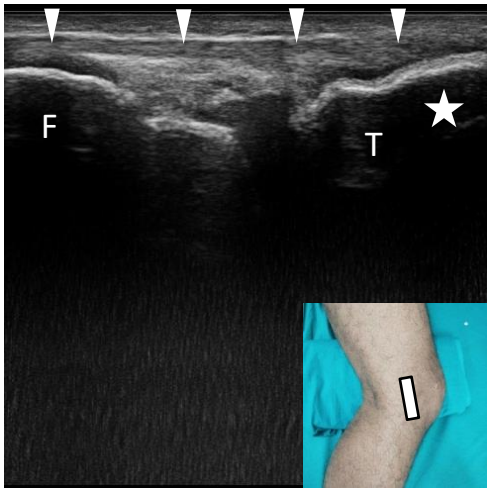


2. PES ANSERINUS TENDONS (white arrowheads): Probe is rotated approximately 15 º anteriorly at the level of lower end of MCL to evaluate the Pes Anserinus tendons in long axis.

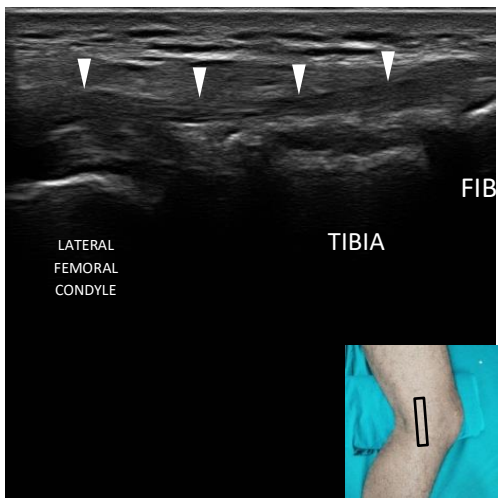


C) LATERAL

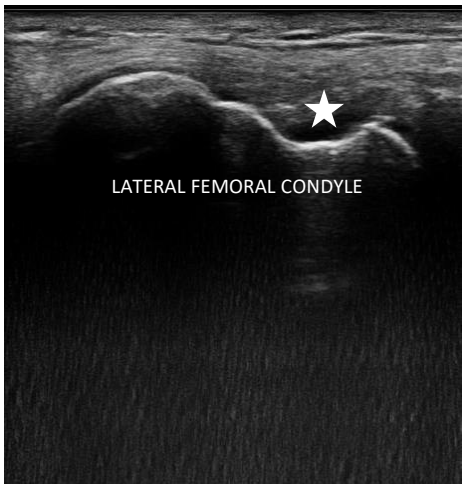
1. ILIOTIBIAL BAND (white arrowheads): Patient in supine position. Knee is internally rotated with 20º flexion. The Gerdy's tubercle (white star) is palpated and probe is placed longitudinally to trace the Iliotibial band.



2. LATERAL COLLATERAL LIGAMENT (LCL): Fibular head is palpated and the lower edge of probe is placed in the longitudinal plane and rotated anteriorly to demonstrate the LCL.



3. POPLITEUS TENDON (white star): Probe is moved cranially to demonstrate a bony groove in femoral condyle with the popliteus tendon within.



D) POSTERIOR

1. MEDIAL TENDONS: Patient in prone position. Knee in extension. Scanning transversely along posteromedial aspect demonstrates Sartorius, gracilis tendon and semitendinosus tendon. The semitendinosus tendon (ST) lying over the semimembranosus (SM).

2. SEMIMEMBRANOSUS-GASTROCNEMIUS BURSA (star): Probe is moved inferiorly in transverse plane to trace the bursa between the medial head of Gastrocnemius (MHG) and semimembranosus tendon.

3. POPLITEAL NEUROVASCULAR BUNDLE: Probe is moved medially in axial plane to trace the popliteal neurovascular bundle. Arranged from deep to superficial are the popliteal artery, popliteal vein and the tibial nerve (AVN).