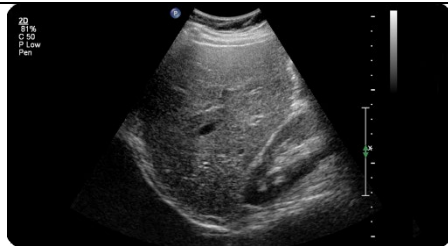




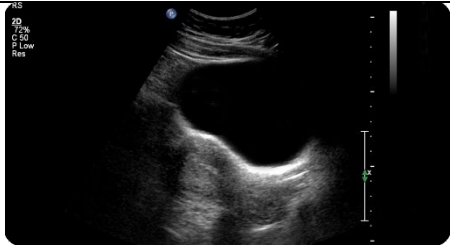
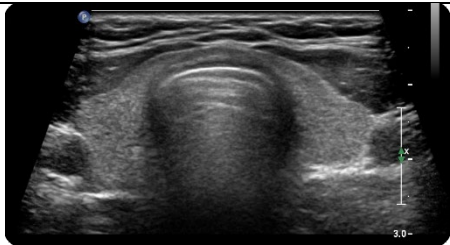
ULTRASOUND PROTOCOLS

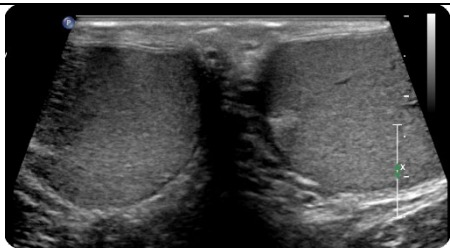
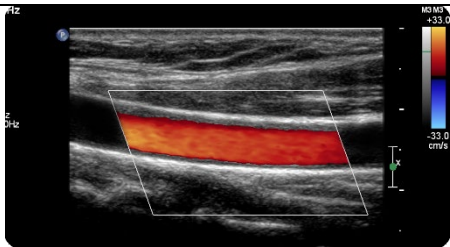
(Please note that ultrasound protocols can vary significantly between sonographers and across institutions)

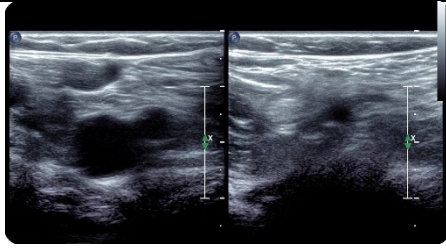


ABDOMINAL ULTRASOUND

- Pancreas head and body transverse
- Pancreas tail transverse
- Pancreas longitudinal
- Aorta transverse
- Aorta longitudinal proximal with measurement
- Aorta longitudinal distal
- Left lobe liver longitudinal left to right (flag, with aorta, with IVC/caudate lobe)
- Left lobe liver transverse (left portal vein, left hepatic vein)
- Right and left iliac fossa
- Left kidney longitudinal with measurement
- Left kidney longitudinal with colour Doppler
- Dual left kidney longitudinal upper pole/spleen interface and lower pole
- Left kidney transverse superior to inferior
- Dual left kidney mid with and without colour Doppler
- Spleen longitudinal
- Spleen transverse
- Gallbladder decubitus longitudinal
- Gallbladder transverse with wall measurement
- Common bile duct with colour Doppler and measurement
- Distal common bile duct/head of pancreas
- Portal vein measurement
- Portal vein intercostal with colour and pulsed wave Doppler
- Right lobe liver longitudinal left to right (with IVC, with right kidney and measurement, meat shot)
- Right lobe liver transverse inferior to superior (with right kidney, right portal vein, right hepatic vein)
- Liver mid transverse inferior to superior (right and left portal vein, 3 hepatic veins)
- Right kidney longitudinal with measurement
- Right kidney longitudinal with colour Doppler
- Dual right kidney longitudinal upper pole/liver interface and lower pole
- Right kidney transverse superior to inferior
- Dual right kidney mid with and without colour Doppler

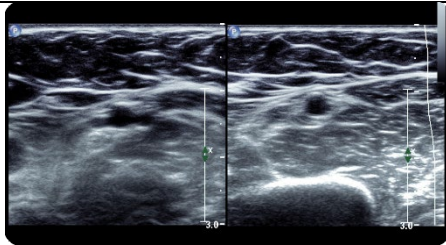
	• Gallbladder erect
	TRANSABDOMINAL PELVIS, BLADDER AND KIDNEYS • Bladder transverse superior to inferior with measurement for volume • Bladder longitudinal right to left with measurement for volume • Ureteric jets with colour Doppler • Pelvis longitudinal right to left extending to the right and left iliac fossae • Pelvis transverse inferior to superior • Uterus longitudinal right to left with measurement for volume • Uterus transverse inferior to superior with measurement for volume • Endometrium measurement • Endometrium with colour Doppler • Left adnexa • Left ovary dual longitudinal and transverse with volume measurement • Left ovary with colour or power Doppler • Left ovary follicle count • Right adnexa • Right ovary dual longitudinal and transverse with volume measurement • Right ovary with colour or power Doppler • Right ovary follicle count • Cervix/ pouch of Douglas/ vagina • Left kidney longitudinal with measurement • Left kidney longitudinal with colour Doppler • Dual left kidney longitudinal upper pole/spleen interface and lower pole • Left kidney transverse superior to inferior • Dual left kidney mid with and without colour Doppler • Right kidney longitudinal with measurement • Right kidney longitudinal with colour Doppler • Dual right kidney longitudinal upper pole/liver interface and lower pole • Right kidney transverse superior to inferior • Dual right kidney mid with and without colour Doppler
	THYROID AND NECK • Thyroid transverse • Isthmus measurement • Right lobe thyroid longitudinal lateral to medial with measurement for volume • Right lobe longitudinal with colour Doppler • Right lobe transverse superior to inferior with measurement for volume • Left lobe thyroid longitudinal lateral to medial with measurement for volume • Left lobe longitudinal with colour Doppler • Left lobe transverse superior to inferior with measurement for volume • Regions to assess for the parathyroid glands

	• Cervical lymph nodes • Right and left submandibular glands and ducts • Right and left parotid glands and ducts
	SCROTAL SCAN • Bilateral scrotum in transverse • Right testis longitudinal lateral to medial with measurement for volume • Right testis colour/ power Doppler assessment • Right testis pulsed wave Doppler assessment • Right testis transverse superior to inferior with measurement for volume • Right epididymal head with and without colour Doppler • Right epididymal body • Right epididymal tail with and without colour Doppler • Right distal inguinal canal dual to assess for hernia • Left testis longitudinal lateral to medial with measurement for volume • Left testis colour/ power Doppler assessment • Left testis pulsed wave Doppler assessment • Left testis transverse superior to inferior with measurement for volume • Left epididymal head with and without colour Doppler • Left epididymal body • Left epididymal tail with and without colour Doppler • Left distal inguinal canal dual to assess for hernia • Assessment of left kidney if left sided varicocele detected
	CAROTID SCAN B-mode • Common carotid artery transverse proximal, mid and distal • Carotid bulb transverse • Carotid bifurcation transverse into internal and external carotid arteries • Common carotid artery longitudinal proximal and distal • Carotid bulb longitudinal • Internal carotid artery longitudinal • External carotid artery longitudinal Colour Doppler • Common carotid artery longitudinal proximal and distal • Carotid bulb • Internal carotid artery longitudinal • External carotid artery longitudinal Pulsed wave Doppler • Common carotid artery longitudinal proximal and distal • Carotid bulb • Internal carotid artery longitudinal proximal, mid and distal • External carotid artery longitudinal • Vertebral arteries B-mode, color Doppler and pulsed wave Doppler • Subclavian arteries pulsed wave Doppler



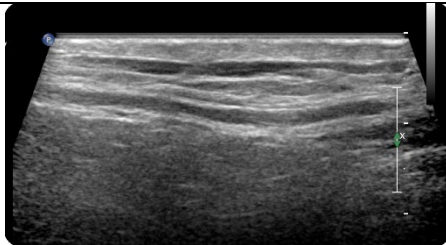
LEG DEEP VEIN THROMBOSIS ASSESSMENT

- External iliac vein dual compression
- Saphenofemoral junction dual compression
- Common femoral vein compression
- Common femoral vein longitudinal pulsed wave assessment for phasicity
- Femoral vein proximal, mid and distal compressions
- Great saphenous vein dual compression in thigh and calf
- Medial popliteal fossa
- Popliteal vein dual with compress
- Popliteal vein longitudinal pulsed wave with augmentation
- Medial gastrocnemius veins dual with compression
- Lateral gastrocnemius veins dual with compression
- Short saphenous vein dual with compression
- Soleal vein dual with compression
- Tibio-peroneal trunk dual with compression
- Posterior tibial and peroneal veins dual with compression
- Anterior tibial vein dual with compression or augmentation



ARM DEEP VEIN THROMBOSIS ASSESSMENT

- Internal jugular vein with colour and pulsed Doppler
- Subclavian vein with colour and pulsed Doppler
- Axillary vein dual with compression
- Brachial veins dual with compression
- Cephalic vein dual with compression upper arm and forearm
- Basilic vein dual with compression upper arm and forearm
- Median cubital vein with augmentation
- Radial veins dual with compression
- Ulnar veins dual with compression



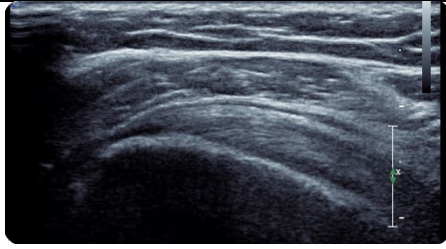
ABDOMINAL WALL AND GROIN SCAN

Abdominal wall

- Linea alba transverse superior to inferior from sternum to pelvis
- Umbilical transverse dual with and without strain
- Umbilical longitudinal dual with and without strain
- Right and left transverse Linea semilunaris superior to inferior
- Erect reassessment

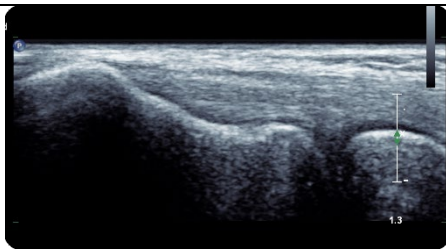
Groin

- Femoral canal transverse dual with and without strain
- Inguinal canal transverse superficial ring dual with and without strain
- Identification of the deep ring and longitudinal assessment for indirect hernias with and without strain
- Assessment of the length of the inguinal canal for direct hernias
- Assessment in transverse of the inguinal canal
- Assessment of the groin lymph nodes
- Anterior hip joint assessment for possibility of referred pain
- Erect reassessment of the inguinal canal



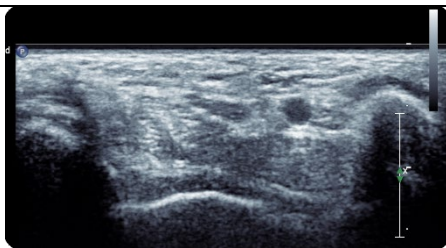
SHOULDER SCAN

- Clinical assessment
- Biceps tendon long head transverse
- Biceps tendon long head longitudinal
- Biceps tendon short head longitudinal
- Biceps long and short head muscles
- Subscapularis tendon longitudinal
- Subscapularis tendon transverse
- Coracoacromial ligament
- Acromioclavicular joint
- Suprascapular notch
- Supraspinatus tendon in longitudinal anterior, mid and posterior
- Rotator interval
- Supraspinatus tendon in transverse
- Supraspinatus muscle
- Subacromial bursa
- Infraspinatus tendon
- Teres minor tendon
- Posterior muscles of infraspinatus and teres minor
- Posterior glenohumeral joint and labrum
- Spinoglenoid notch
- Impingement assessment
- Inferior glenohumeral ligament and axillary recess



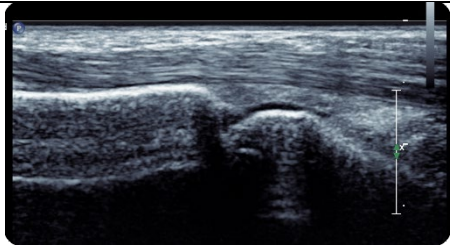
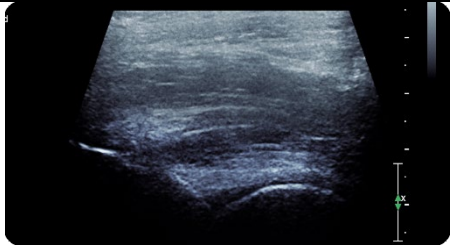
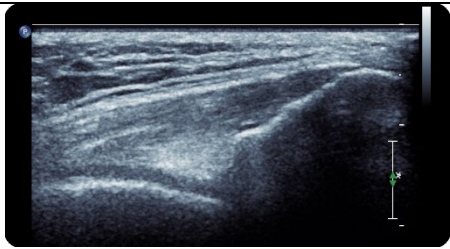
ELBOW SCAN

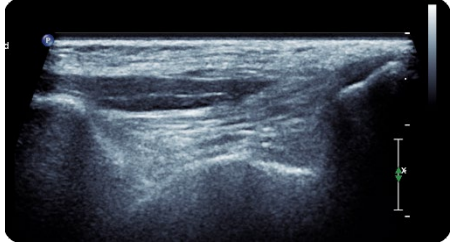
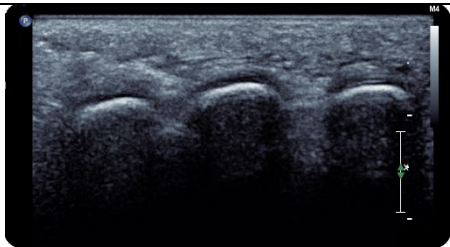
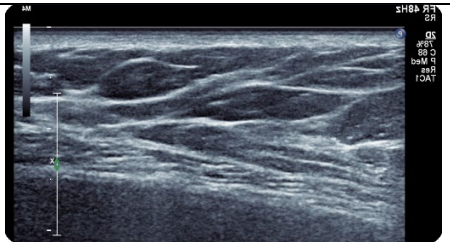
- Clinical assessment
- Common extensor tendon with and without colour/power Doppler
- Radial collateral ligament
- Anterior elbow joint in longitudinal and transverse
- Posterior interosseous nerve
- Biceps insertion and musculotendinous junction
- Common flexor origin
- Ulnar collateral ligament
- Ulnar nerve
- Triceps insertion
- Olecranon fossa
- Olecranon bursa



WRIST SCAN

- Clinical assessment
- Dorsal wrist
- Compartment 1 transverse, longitudinal and colour Doppler
 - Compartment 2 to 5 transverse
 - Scapholunate ligament
 - Compartment 6 transverse, longitudinal and colour Doppler
 - Triangular fibrocartilage complex
 - Dorsal radiocarpal joint
- Volar wrist
- First carpometacarpal joint
 - Flexor carpi radialis
 - Flexor pollicis longus
 - Flexor digitorum tendons
 - Median nerve

	• Guyon's canal and ulnar nerve • Flexor carpi ulnaris
	HAND, THUMB AND FINGER SCAN • Clinical assessment Hand • Volar hand flexor tendons • Dorsal hand extensor hood Thumb • First carpometacarpal joint • Dorsal compartment 1 and compartment 3 tendons • Volar flexor pollicis longus tendon • Dorsal and volar joints • Flexor and extensor tendons • A1 and A2 annular pulleys • Ulnar and radial collateral ligaments Fingers • Dorsal and volar joints • Flexor and extensor tendons • A1 to A5 annular pulleys • Ulnar and radial collateral ligaments
	HIP SCAN • Clinical assessment Anterior hip • Anterior hip joint • Anterior hip joint capsule with measurement • Iliopsoas tendon longitudinal • Iliopsoas tendon transverse • Rectus femoris direct head • Rectus femoris indirect head • Sartorius origin Lateral hip • Greater trochanter • Gluteus minimus transverse • Gluteus minimus longitudinal • Gluteus medius transverse • Gluteus medius longitudinal anterior to posterior • Trochanteric bursa • Iliotibial band • Tensor fascia latae Posterior hip • Quadratus femoris • Hamstrings origin and muscles • Sciatic nerve • Piriformis muscle
	KNEE SCAN • Clinical assessment • Quadriceps tendon • Suprapatellar recess • Pre-patellar bursa • Patellar tendon proximal and distal • Medial meniscus • Medial collateral ligament

	• Pes anserine tendons and bursa • Lateral meniscus • Iliotibial band • Lateral collateral ligament • Medial popliteal fossa • Popliteal artery and vein • Posterior joint
	ANKLE SCAN • Clinical assessment Anterior • Anterior ankle joint • Talonavicular ligament • Calcaneocuboid ligament • Anterior tibialis tendon • Extensor hallucis longus • Extensor digitorum longus • Anterior inferior tibiofibular ligament • Anterior talofibular ligament Lateral • Sinus tarsi • Peroneal retinaculum • Peroneal longus and brevis tendons • Calcaneofibular ligament Medial • Sinus tarsi • Posterior tibialis tendon • Flexor digitorum longus tendon • Flexor hallucis longus tendon • Deltoid ligament • Spring ligament Posterior • Achilles tendon • Retrocalcaneal bursa Plantar • Plantar fascia
	FOREFOOT SCAN • Clinical assessment • Dorsal first to fifth metatarsophalangeal joints • Extensor tendons • Plantar first to fifth metatarsophalangeal joints • Webspaces • Plantar fascia
	BREASTS SCAN • Axillary assessment • Survey of breasts • Imaging of breasts