ASIF SAJJAD KHATTAK.

Date: 6967 (BS RAD).

SAADAT

Q4)-----?

PROTOCOL FOR TARSAL COALITION

INDICATION:

- Indicated in tarsal coalition, talar(or) calcaneal pathology, ankle joint pathology, loose bodies.

PATIENT POSITION:

- Supine/Feet first, ankle of interest at centre of FOV while other leg bent up.

(=) Ankle/Foot immobilized.

IMAGING PROTOCOL: ankle/Foot 2mm (0.5mm)

(1) Scan slice thickness (0.5mm x 64)

(2) Pitch (Detail)

(3) KV (120)

(4) MA (100)

(5) Rotation time (0.5s)

SCAN RANGE: (1) Start (above ankle joint)

(2) End (below calcaneum)

(3) Plane (Straight-gently)

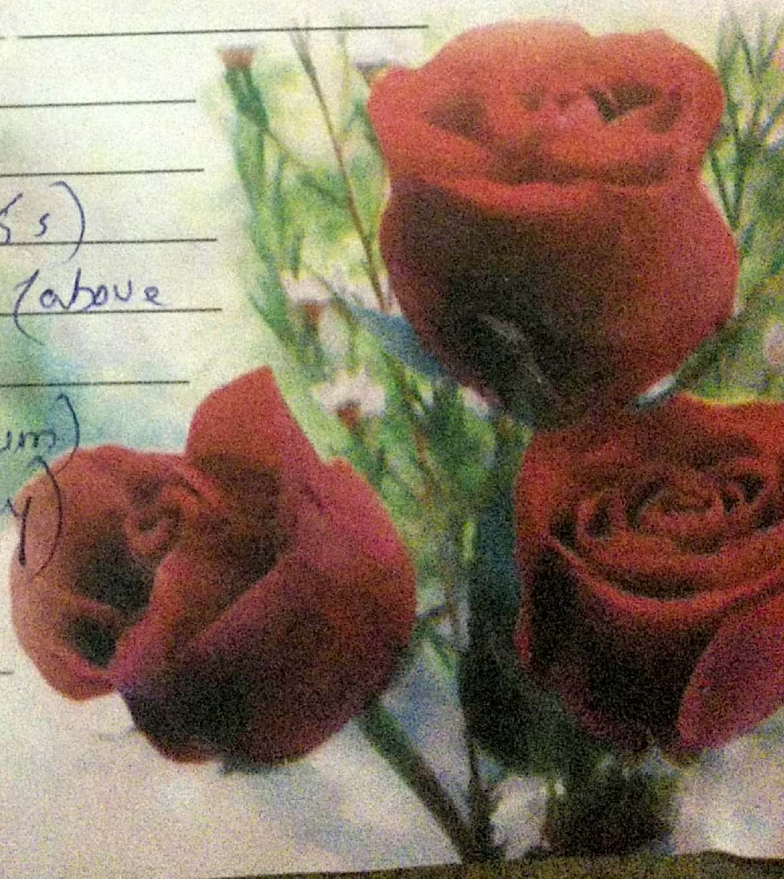


IMAGE RECONSTRUCTION:

2/3 mm (bone sharp)

Volume (bone sharp)

Volume for 3D (soft tissues standard)

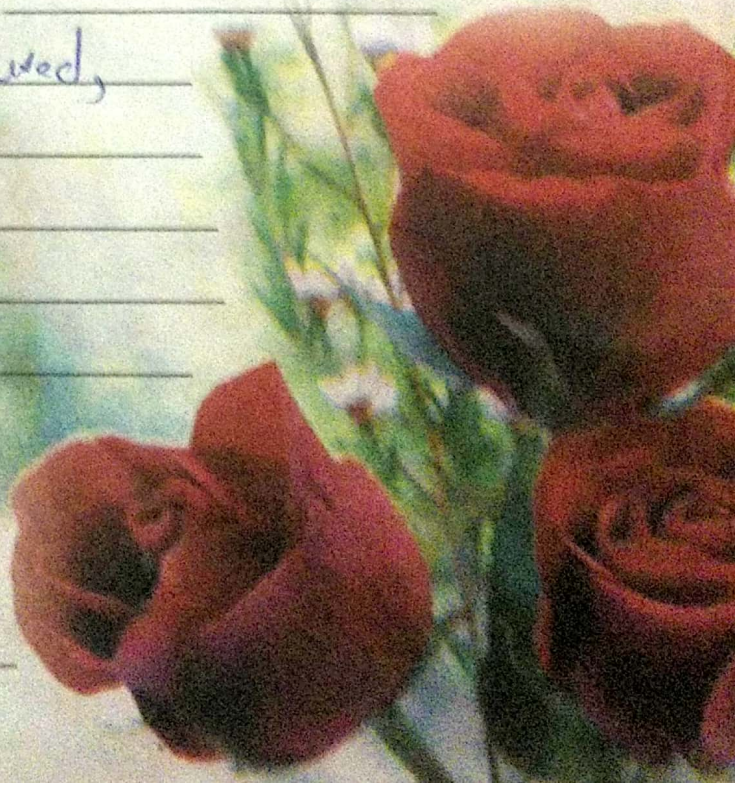
REFORMING

REFORMATTING:

	Coronal	Sagittal
Plane	True coronal	True sagittal
Start	Posterior to calcaneum	Lateral to fibula
End	Anterior to navicular	Medial to tibia
Thickness	2mm	2mm
Spacing	2mm	2mm

COMMENTS:

If fractured, then 3D is required.



Date:

05) - - - ?

CT-ANGIOGRAPHY FOR CORONARY HEART DISEASE

INTRODUCTION:

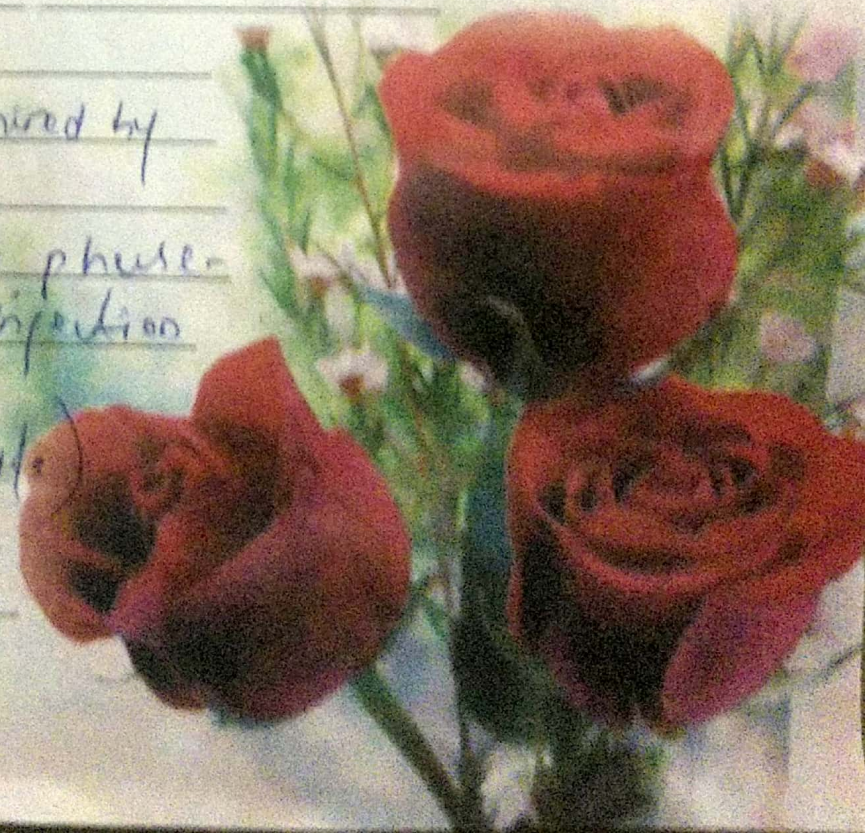
- Cardiac-CTA is performed for coronary artery disease.
  - ⇒ CAD investigation, coronary stents, we recommend our LO-step guide to coronary CTA for detailed instructions.

PROTOCOLS:

- Cardiac-CTA (0.5mm)
  - ⇒ scan slice thickness (0.5mm x 64)
  - ⇒ Pitch (determined by cardiorm)
  - ⇒ KV (120)
  - ⇒ mA (400)
  - ⇒ Rotation time (determined by cardio)

SCAN RANGE: single phase-contrast-injection protocol

1) Phase 1 (XXml @ 4-5ml/s)
2) Phase 2 (saline)
   [50ml @ 4.5 ml/s]



XX = (scan time + 10) x injection rate

SURE (Start on descending aorta at level of pulmonary trunk.

⇒ Trigger at 180 HU.

IMAGE-RECONSTRUCTION:-

Image Xact to determine the optimal phase for motion free images.

Volume Cardiac CTA

COMMENTS

SURE Cardio should be used to ensure that the pitch, rotation, speed & reconstruction method are optimized for scan.

Q2) ----- ?

CT- PROCEDURE:

° CT- head & neck and sinuses is done in cases of patient having anosmia (absence of sense of smell)

INDICATIONS:

° CT- head & neck is indicated in conditions like sinusitis, nasal polyps, post-nasal-drips, anosmia (no smell)

PROTOCOLS:

° sinuses HCT 5mm (0.5mm)

=) scan slice thickness (0.5mm x 64)

=) Pitch (Detail)

=) KV (120)

=) mA (150)

=) Rotation time (0.5s)

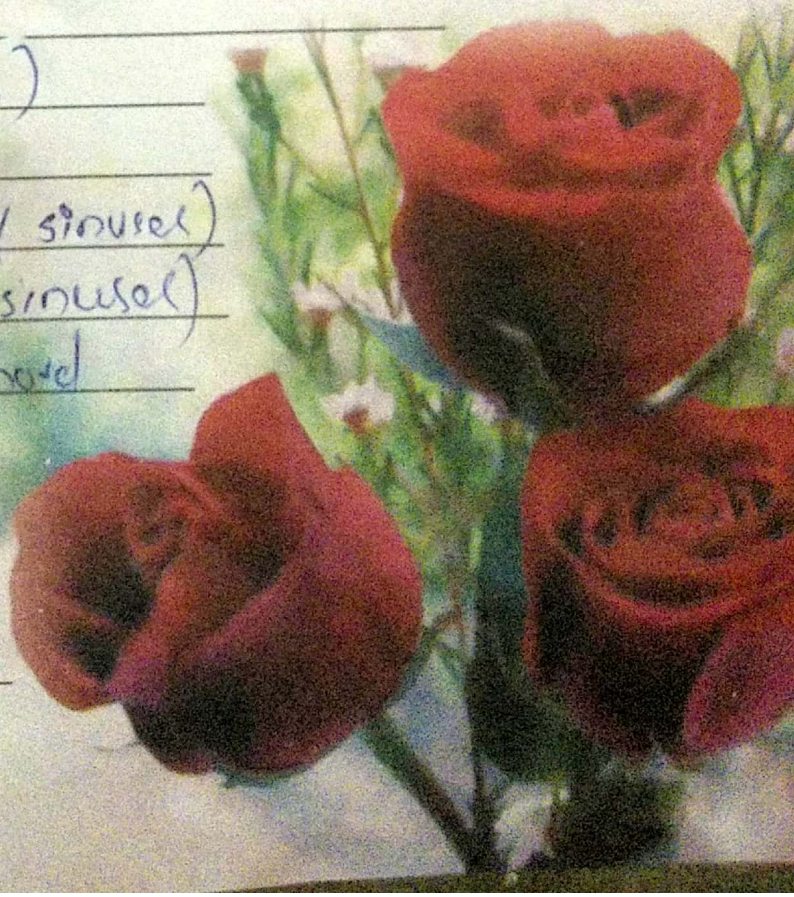
SCAN-RANGE:

(1) Start (below maxillary sinuses)

(2) End (above frontal sinuses)

(3) Plane (parallel to hard palate)

IMAGE-RECONSTRUCTION:



REFORMATTING:

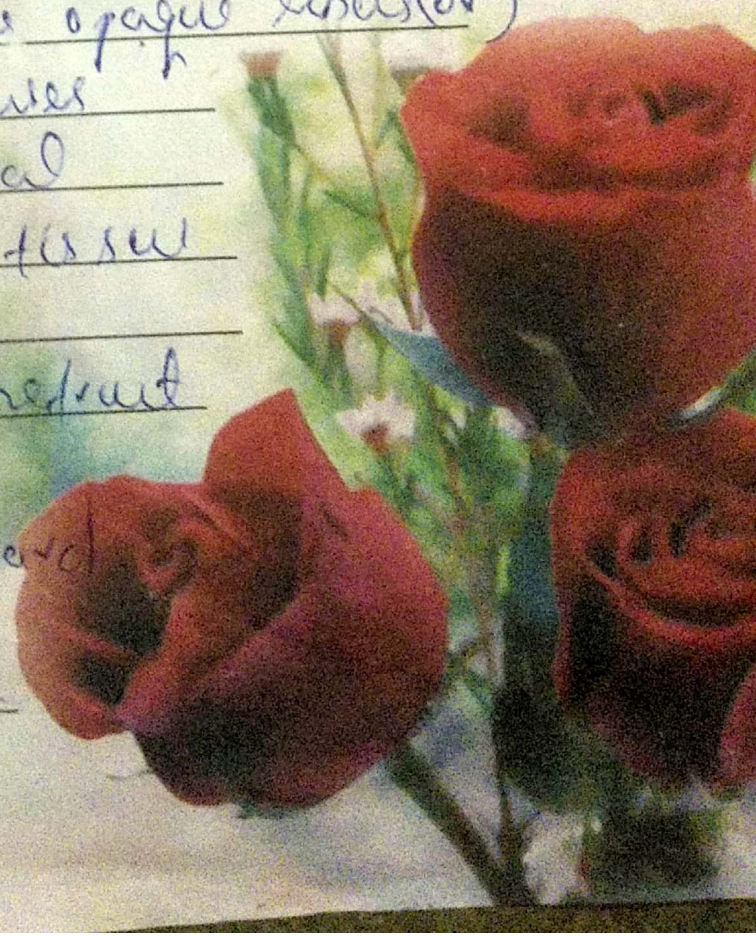
	Coronal	Sagittal
(1) Plane	Perpendicular to hard palate	Perpendicular to hard palate
(2) Start	Anterior to condyles	medial wall of left orbit
(3) End	posterior to sphenoid	medial wall of right orbit
(4) Thickness	2mm	2mm
(5) Spacing	2mm	2mm

Reformatting may be performed manually for correct anatomical position if patient is not straight.

COMMENTS:

(1) If single opaque sinus (or) completely opaque sinuses reconstruct 5/5mm axial section SURETQ™ soft tissue standard.

(2) If Anosmia, reconstruct 5/5mm axial section, SURETQ - Soft Tissue Standard and also check for anterior cranial fossa for lesions.



GD---- ?

IMAGE RECONSTRUCTION:

① 5/5 mm bone sheep

② Volume bone sharp

NOTE: scanning for a lung is palate, scan patient with mouth open.

INTRODUCTION

CT- musculoskeletal, LUMBAR Spine will be done for that patient

INDICATION

Lumbar spine - CT is indicated in Low back pain, sciatica, spinal canal stenosis, femoral neurological.

PROTOCOLS Lumbar spine 3mm (0.5mm)

⇒ Scan slice thickness (0.5mm x 64)
⇒ Pitch (Detail)
⇒ kV (135)
⇒ mA (SURE-Exposure - 3D High-quality)
⇒ Rotation time (1.0s)

SCAN-RANGE : Levels specified, otherwise

⇒ L-2 - S1 (If patient is ≥ 30 then L-3 - S1 unless specific symptoms @ L2-L3)

⇒ Start (above pedicle of L2)
⇒ End (below S1)

IMAGE-RECONSTRUCTION

⇒ 3/3 mm (Spine - thoracic - lumbar)
⇒ 2/3 mm (bone - standard)
⇒ Volume (Spine - thoracic - Lumbar)

REFORMATTING

Use spine-programme in MPR.

01)----?

LIVER-TRIPHASIC EXAMINATION & PROTOCOLS

INTRODUCTION: Triphasic CT-scan is a non-invasive imaging modality used for differentiating benign and malignant liver lesions.

EXAMPLE Haemangioma (benign lesion) can be differentiate from malignant liver lesions so extra, unnecessaries biopsies can be avoided.

=> Triphasic liver CT-scan is basically done to differentiate benign liver lesions from malignant liver lesions.

INDICATIONS Primary liver tumours, renal cell carcinomas, leiomyosarcomas, thyroid tumours, neuroendocrine tumours.

PROTOCOLS

(2 Phase - Liver 5mm (or 5mm))

(Lung 2 Phase - Liver 5mm (1mm))

=) scan slice thickness (0.5mm x 64) (1mm x 32)

=) Pitch (standard)

=) kV (120)

=) mA (SURE Exposure - 3D standard)

=) Rotation Time (0.5 s (0.75 s))

SCAN-RANGE

	Arterial Phase	Portal Venous Phase
Start	Top of higher hemidiaphragm	Top of higher hemidiaphragm.
End	Iliac crests	Below ischium
Plane	straight gantry	straight gantry

CONTRAST

=) Volume 70-120ml (depending on patient weight)

=) Rate 4ml/s

=) Delay (SURE Start™ 120 HU in abdominal aorta + 10 s

Portal venous @ 65 s fixed delay.

IMAGE RECONSTRUCTION

5/5 mm (body standard axial)

Volume (body standard volume)

Q1)-----?

REFORMATTING:

Multiview	Coronal	Sagittal
Stard	Posterior	Left
End	enterior	right
Thickness	4mm	4mm
Spacing	4mm	4mm