SLIMS,PONDICHERRY

Date **05.05.2020**

From

DR.R.CHIDHAMBARAM,
Professor and Head,
Dept.of radio-diagnosis and Imaging Sciences ,
SLIMS,PONDICHERRY
Bharath Institute of Higher Education and Research,
Chennai.

To

The Dean,
SLIMS
Bharath Institute of Higher Education and Research,
Chennai.

Sub: Permission to conduct value-added course: INTEGRATED ANATOMY TEACHING-OSTEOLOGY

Dear Sir,

With reference to the subject mentioned above, the department proposes to conduct a value-added course titled: **INTEGRATED ANATOMY TEACHING OSTEOLOGY**. We solicit your kind permission for the same.

Kind Regards

R. Chidhambaram

Dr..R.CHIDHAMBARAM

FOR THE USE OF DEANS OFFICE

Names of Committee members for evaluating the course:

The Dean: Dr. Rajasekaran

The HOD: Dr. R. Chidhambaram

The Expert: Dr. S. Shanmuganathan

The committee has discussed about the course and is approved.

Dean	Subject Expert	HOD
(Sign & Seal)	(Sign & Seal)	(Sign & Seal)

DEAN
SRI LAKSHMI NARAYANA INSTITUTE OF MEDICAL SCIENCES
OSUDU, AGARAM VILLAGE,
KOODAPAKKAM POST,
PUDUCHERRY - 605 502

DEPARTMENT OF RADIOLOGY
SRI LAKSHMINARAYANA
INSTITUTE OF MEDICAL SCIENCE
PUDUCHERRY - 605 002.

DEPARTMENT OF RADIOLOGY
SRI LAKSHMINARAYANA
INSTITUTE OF MEDICAL SCIENCE
PUDUCHERRY - 605 002.

BIHER SLIMS

OFFICE OF THE DEAN

Sri Lakshmi Narayana Institute of Medical Sciences

OSUDU, AGARAM VILLAGE, VILLIANUR COMMUNE, KUDAPAKKAM POST,
PUDUCHERRY - 605 502.
[Recognised by Medical Council of India, Ministry of Health letter No. U/12012/249/2005-ME (P -II) dt. 11/07/2011]
[Affiliated to Bharath University, Chennai - TN]

Circular

07.05.2020

Sub: Organizing Value-added Course: INTEGRATED ANATOMY TEACHING-OSTEOLOGY reg

With reference to the above mentioned subject, it is to bring to your notice that Sri Lakshmi Narayana Institute of Medical Sciences, **Bharath Institute of Higher Education and Research** is organizing **INTEGRATED ANATOMY TEACHING-OSTEOLOGY.** The course content and registration form is enclosed below.

The application must reach the institution along with all the necessary documents as mentioned. The hard copy of the application should be sent to the institution by registered/ speed post only so as to reach on or before May to June 2020. Applications received after the mentioned date shall not be entertained under any circumstances.

Dean

Encl: Copy of Course content

DEAN
SRI LAKSHMI NARAYANA INSTITUTE OF MEDICAL SCIENCES
OSUDU, AGARAM VILLAGE,
KOODAPAKKAM POST,
PUDUCHERRY - 605 502

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Course Proposal

Course Title: INTEGRATED ANATOMY TEACHING

Course Objective: TO DEMONSTRATE SKELETAL SYSTEM AS SEEN IN SKELETON AND X-RAYS

Course Outcome: BETTER UNDERSTANDING OF BONE MORPHOLOGY

Course Audience: ANY MEDICAL STUDENT

Course Coordinator: PROF.DR.R.CHIDHAMBARAM,M.B.B.S,MDRD.,

Course Faculties with Qualification and Designation:

1. DR.R.CHIDHAMBARAM,MBBS,MDRD.PROF. AND HOD
2. DR.SHRINUVASAN,MBBS,DNB,ASST PROFESSOR
3. DR.JYOTI BASU,MBBS,DNB,SENIOR RESIDENT

Course Curriculum/Topics with schedule (Min of 30 hours)-ENCLOSED

SlNo	Date	Topic	Time	Hours
1	01-11-2020	INTRO	2:00 PM	2 hours
2	02-11-2020	UPPER LIMB BONES	2:00 PM	2 hours
3	03-11-2020	LOWER LIMB BONES	2:00 PM	2 hours
4	04-11-2020	SHOULDER GIRDLE- BONES	2:00 PM	2 hours
5	05-11-2020	PELVIC GIRDLE BONES	2:00 PM	2 hours
6	06-11-2020	CERVICAL SPINE- BONES	2:00 PM	2 hours
7	07-11-2020	THORACIC SPINE- BONES	2:00 PM	2 hours
8	08-11-2020	LUMBOSACRAL SPINE- BONES	2:00 PM	2 hours
9	09-11-2020	CHEST WALL-BONES	2:00 PM	2 hours
10	10-11-2020	SKULL -BONE	2:00 PM	2 hours
11	11-11-2020	PNS, MASTOIDS	2:00 PM	2 hours
12	12-11-2020	TEMPORAL BONE	2:00 PM	2 hours
13	13-11-2020	ORBITS,FACIAL BONE	2:00 PM	2 hours
14	14-11-2020	MANDIBLE	2:00 PM	2 hours
15	15-11-2020	RECAP	2:00 PM	2 hours
			Total Hours	30

REFERENCE BOOKS: (Minimum 2)
1.GRAY'S ANATOMY
2.ANATOMY IN DIAGNOSTIC IMAGING

VALUE ADDED COURSE

1. Name of the programme & Code :

Integrated anatomy teaching-osteology & RAD 01

2. Duration & Period

30 hrs & September 2020– January 2021

3. Information Brochure and Course Content of Value Added Courses

Enclosed as Annexure- I

4. List of students enrolled

Enclosed as Annexure- II

5. Assessment procedures:

Multiple choice questions- *Enclosed as Annexure- III*

6. Certificate model

Enclosed as Annexure- IV

7. No. of times offered during the same year:

September 2020– January 2021

8. Year of discontinuation: 2021

9. Summary report of each program year-wise

Value Added Course					
Sl. No	**Course Code**	**Course Name**	**Resource Persons**	**Target Students**	**Strength & Year**
1	**RAD 01-1**	**Integrated anatomy teaching-osteology**	Dr. Jothibasu	1st MBBS	20 (Sep 20 – Jan 21)
2	**RAD 01-2**	**Integrated anatomy teaching-osteology**	Dr. Shrinuvasan	1st MBBS	20 (Feb 21-Aug-21)

10. Course Feed Back

Enclosed as Annexure- V

RESOURCE PERSON

COORDINATOR

DEPARTMENT OF RADIOLOGY
SRI LAKSHMINARAYANA
INSTITUTE OF MEDICAL SCIENCE
PUDUCHERRY - 605 002.

BIHER

DEPARTMENT OF RADIOLOGY
SRI LAKSHMINARAYANA
INSTITUTE OF MEDICAL SCIENCE
PUDUCHERRY - 605 002.

SLIMS

Course Name: **INTEGRATED ANATOMY TEACHING-OSTEOLOGY**

Subject Code: VAC1

Name of Student: ARSHYAR Roll No.: U16MB25T

We are constantly looking to improve our classes and deliver the best training to you. Your evaluations, comments and suggestions will help us to improve our performance

Sl. NO	Particulars	1	2	3	4	5
1	Objective of the course is clear				✓	
2	Course contents met with your expectations				✓	
3	Lecturer sequence was well planned				✓	
4	Lectures were clear and easy to understand				✓	
5	Teaching aids were effective					✓
6	Instructors encourage interaction and were helpful				✓	
7	The level of the course					✓
8	Overall rating of the course	1	2	3	4	(5)

** Rating: 5 – Outstanding; 4 - Excellent; 3 – Good; 2– Satisfactory; 1 - Not-Satisfactory*

Suggestions if any:

Good presentation

Date:

Signature

Course Name: **INTEGRATED ANATOMY TEACHING-OSTEOLOGY**

Subject Code: VAC 1

Name of Student: Ajay.N Roll No.: U1GMA256

We are constantly looking to improve our classes and deliver the best training to you. Your evaluations, comments and suggestions will help us to improve our performance

Sl. NO	Particulars	1	2	3	4	5
1	Objective of the course is clear					✓
2	Course contents met with your expectations				✓	
3	Lecturer sequence was well planned					✓
4	Lectures were clear and easy to understand				✓	✓
5	Teaching aids were effective				✓	
6	Instructors encourage interaction and were helpful					✓
7	The level of the course					✓
8	Overall rating of the course	1	2	3	(4)	5

** Rating: 5 – Outstanding; 4 - Excellent; 3 – Good; 2– Satisfactory; 1 - Not-Satisfactory*

Suggestions if any:

Good presentation

Ajay
Signature

Date:

Abitha Raj Lin U16MBR253

OSTEOLOGY

1. The following are true:
(a) The supraspinatus tendon passes above the acromion process.
(b) The clavicle has a medullary cavity.
(c) The rhomboid fossa marks the site of origin of the costo-clavicular ligament.
(d) The clavicle is the last bone to ossify.
(e) A distance of less than 5 mm between the humerus and the acromion indicates likely supraspinatus tendon impingement.

2. Regarding the shoulder joint:
(a) The capsule of the shoulder joint is lax inferiorly.
(b) The long head of the biceps runs under the transverse humeral ligament.
(c) The subscapularis bursa is a herniation of the shoulder joint synovial membrane deep to the subscapularis muscle, through a defect in the glenohumeral ligament.
(d) Teres major forms part of the rotator cuff.
(e) During shoulder arthrography contrast passes normally into the subacromial bursa.

3. Regarding the shoulder joint:
(a) CT arthrography is of value in the assessment of the glenoidlabrum.
(b) T2-W images and STIR (short tau inversion recovery) sequences with fat suppression can identify tears in the supraspinatus tendon.
(c) On ultrasound, the supraspinatus tendon is echobright.
(d) In anterior dislocation of the shoulder, cortical defects may occur in the anterior aspect of the head of the humerus
(e) All the rotator cuff muscles are attached to the greater tubercle of the humerus.

4. Regarding the upper limb:
(a) The radial groove is situated in the radius.
(b) The capitulum articulates with the ulna.
(c) The ligament of Struthers may compress the median nerve.
(d) The capitulum is the first secondary ossification centre to appear in the elbow.
(e) A prominent posterior fat pad in a lateral radiograph of the elbow is seen in cases of joint effusion.

5. In the upper limb:
(a) The annular ligament of the elbow blends with the ulnar collateral ligament.
(b) The bicipitalaponeurosis separates the superficial median cubital vein from the deeper brachial artery.
(c) The ulna articulates with the carpal bones.
(d) The distal radio-ulnar joint has no communication with the carpal joints.
(e) The ulna articulates with the triquetral only during ulnar deviation of the wrist.

6. Concerning the wrist and carpus:
(a) The mid-carpal joint does not communicate with the radiocarpal joint.
(b) On a lateral wrist radiograph the distal radius has a slight volar tilt.

(c) The lunate articulates proximally with the radius and distally with the capitate.
(d) The flexor retinaculum is attached to the pisiform, hook of hamate, scaphoid tubercle and ridge of the trapezium.
(e) Flexor carpi-radialis attaches to the pisiform.

7. In the hand and wrist:
(a) In most cases two views are enough to exclude scaphoid fractures.
(b) In 15% of cases blood supply is from the distal to the proximal portion of the scaphoid.
(c) The scaphoid ossifies in the sixth year.
(d) All the metacarpals articulate with each other and with the corresponding carpal bones.
(e) The commonest supernumerary bone of the wrist joint is the os radiale.

8. In skeletal imaging:
(a) Phased array surface detection coils greatly improve the signal to noise ratio in MRI of bone joint and soft tissue.
(b) Abnormalities of cortical bone and calcification are usually not detected by MRI.
(c) Meniscal abnormalities of the knee are best demonstrated on T1-weighted scans.
(d) A fat fluid level within the suprapatellar bursa of the knee joint indicates a fracture within the joint.
(e) Bone scans using 99mTc MDP are very specific for pathology.

9. In the bony pelvis:
(a) thetriradiate cartilage is seen as a Y-shaped lucency at the acetabulum in an immature skeleton in a plain radiograph.
(b) the iliac crest has a separate ossification centre.
(c) the rectus femoris originates at the anterior superior iliac spine.
(d) theobturator foramen is bounded inferiorly by the sacro-spinous ligaments.
(e) thesacrotuberous ligament defines the posterior limit of the lesser sciatic foramen.

10. In the pelvis:
(a) The iliopsoas muscle passes anterior to the inguinal ligament.
(b) The aponeurosis of the external oblique has a thickening, which runs from the pubic tubercle to the anterior superior iliac spine as the inguinal ligament.
(c) The sacroiliac joint does not have a synovial component.
(d) The intersosseous sacroiliac ligament is a strong ligament.
(e) Each half of the vertebral arch of the sacrum appears at 16–20 weeks of fetal life.

Student Feedback Form

Course Name: INTEGRATED ANATOMY TEACHING-OSTEOLOGY

Subject Code: VOC1

Name of Student: ARShyaR Roll No.: 21GM0257

We are constantly looking to improve our classes and deliver the best training to you. Your evaluations, comments and suggestions will help us to improve our performance

Sl. NO	Particulars	1	2	3	4	5
1	Objective of the course is clear				✓	
2	Course contents met with your expectations				✓	
3	Lecture sequence was well planned				✓	
4	Lectures were clear and easy to understand				✓	
5	Teaching aids were effective				✓	
6	Instructors encourage interaction and were helpful				✓	
7	The level of the course				✓	
8	Overall rating of the course	1	2	3	4	(5)

* Rating: 5 - Outstanding, 4 - Excellent, 3 - Good, 2 - Satisfactory, 1 - Not Satisfactory

Suggestions if any:

Good presentation

Date:

Signature

Student Feedback Form

Course Name: INTEGRATED ANATOMY TEACHING-OSTEOLOGY

Subject Code: VOC1

Name of Student: Ajay.N Roll No.: 21GM0256

We are constantly looking to improve our classes and deliver the best training to you. Your evaluations, comments and suggestions will help us to improve our performance

Sl. NO	Particulars	1	2	3	4	5
1	Objective of the course is clear					✓
2	Course contents met with your expectations				✓	
3	Lecture sequence was well planned					✓
4	Lectures were clear and easy to understand				✓	✓
5	Teaching aids were effective				✓	✓
6	Instructors encourage interaction and were helpful					✓
7	The level of the course					✓
8	Overall rating of the course	1	2	3	(4)	5

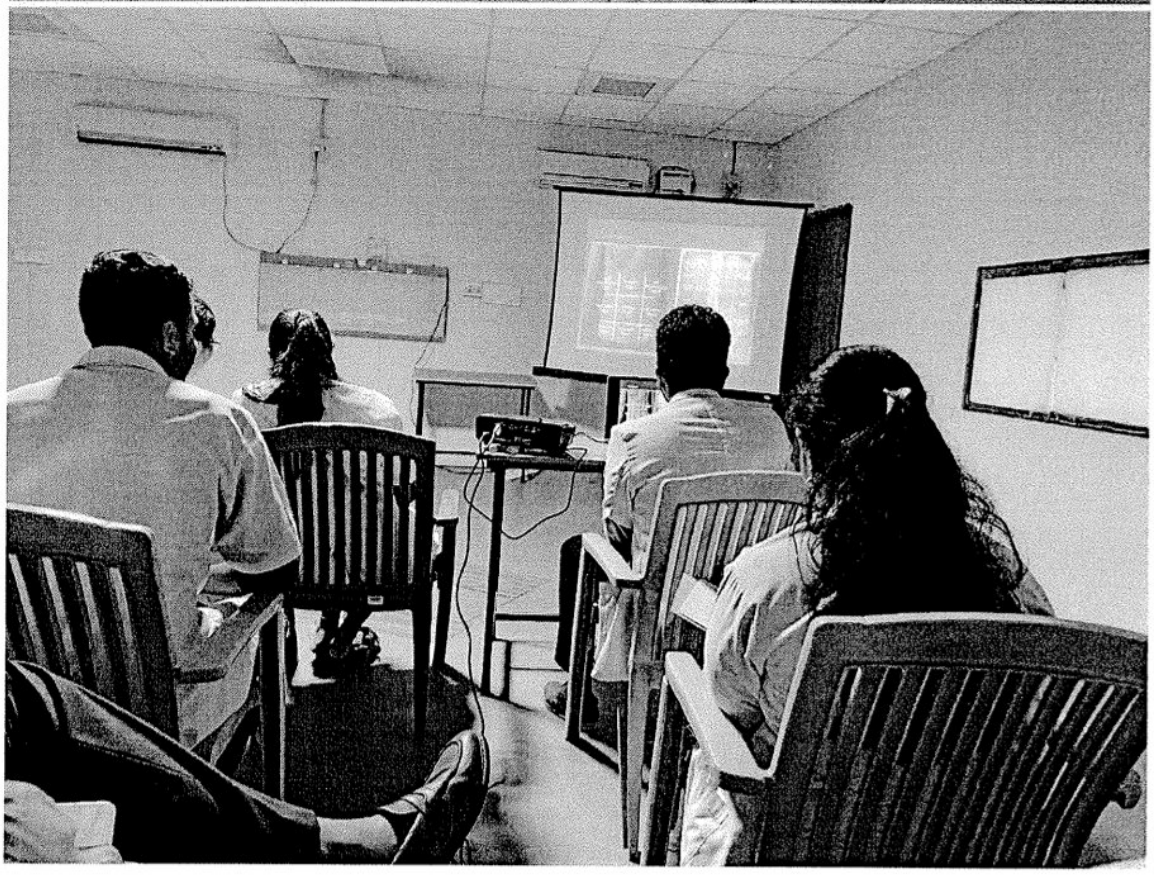
* Rating: 5 - Outstanding, 4 - Excellent, 3 - Good, 2 - Satisfactory, 1 - Not Satisfactory

Suggestions if any:

Good presentation

Date

Signature



From

Dr.R.Chidhambaram
Professor and Head,
Department of Radiology and imaging sciences,
Sri Lakshmi Narayana Institute of Medical Sciences
Bharath Institute of Higher Education and Research,
Chennai.

Through Proper channel

To

The Dean,
Sri Lakshmi Narayana Institute of Medical Sciences
Bharath Institute of Higher Education and Research,
Chennai.

Sub: Completion of value-added course: : INTEGRATED ANATOMY TEACHING-OSTEOLOGY

Dear Sir,

With reference to the subject mentioned above, the department has conducted the value-added course titled: : **: INTEGRATED ANATOMY TEACHING-OSTEOLOGY** for 20 medical students (batch 2) .
We solicit your kind action to send certificates for the participants, that is attached with this letter. Also, I am attaching the photographs captured during the conduct of the course.

Kind Regards,

Dr.R.Chidhambaram.

DEPARTMENT OF RADIOLOGY
SRI LAKSHMINARAYANA
INSTITUTE OF MEDICAL SCIENCE
PUDUCHERRY - 605 002.

Encl: Certificates

Photographs

SRI LAKSHMI NARAYANA

INSTITUTE OF MEDICAL SCIENCES

DEPARTMENT OF RADIOLOGY AND IMAGING SCIENCES

SLIMS PONDY

INTEGRATED

ANATOMY TEACHING

OSTEOLOGY

VENUE:

COURSE CONTENTS

1.BASIC VIEWS IN MUSCULOSKELETAL SYSTEM

2.BASIC IDENTIFICATION OF NORMAL BONES

3.BASIC IDENTIFIACTION OF NORMAL JOINTS

Classification of bones

According to their position:

1.) Axial Skeleton

2.) Appendicular skeleton

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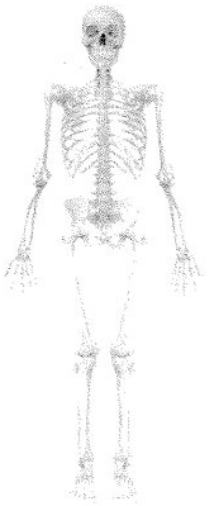
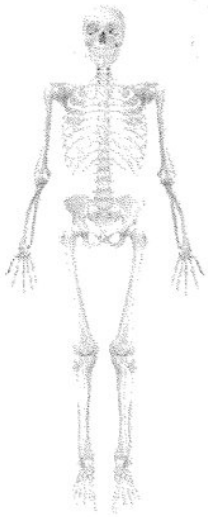
Axial skeleton



Appendicular skeleton



According to their shape:

1.) Long bones (Eg, Femur, humerus, tibia etc).

2.)Short bones (E.g. Carpal and Tarsal bones)

3.) Flat bones (E.g. Occipital, Parietal, frontal etc).

4.) Irregular bones (e.g. Sacrum,coccyx, Ethmoid maxilla etc).

5.)Sesamoid bones (Eg: Patella)

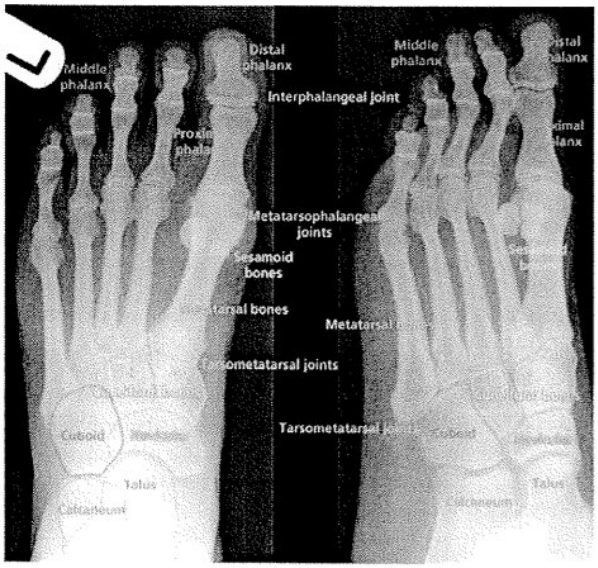


Figure 20b. Normal foot, AP and oblique views

Figure 19. Normal ankle, lateral view.

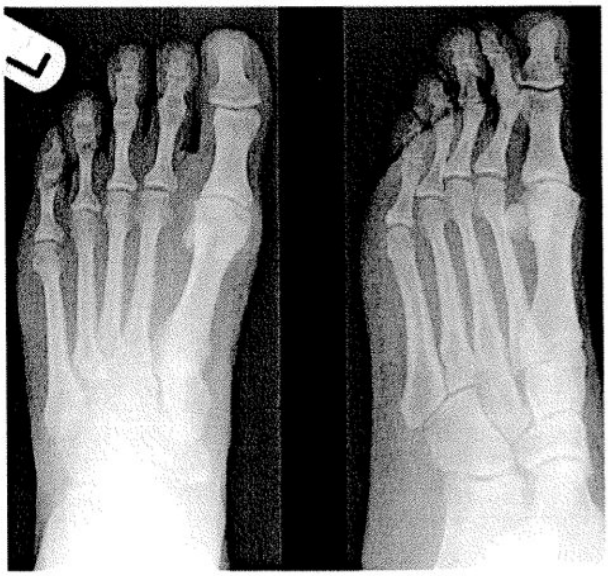


Figure 20a. Normal foot, AP and oblique views

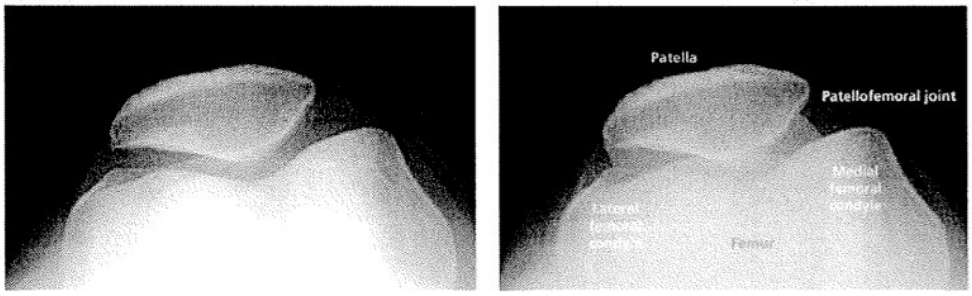


Figure 17. Normal knee, sky-line patella view.

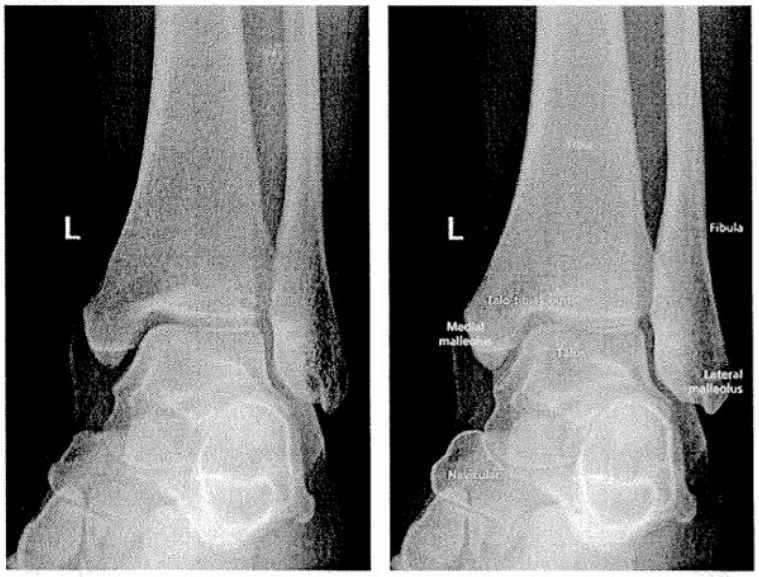


Figure 18. Normal ankle, AP view.

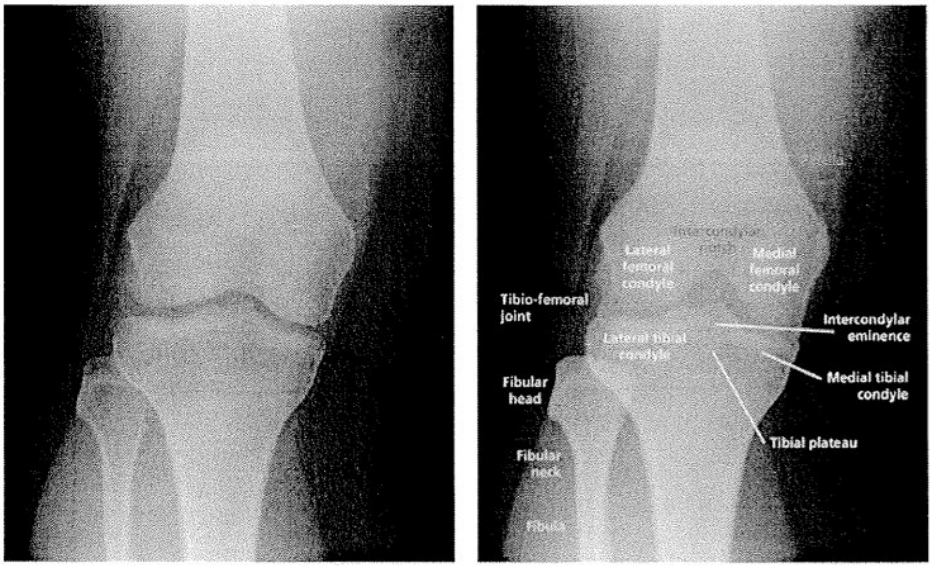


Figure 15. Normal knee, AP view

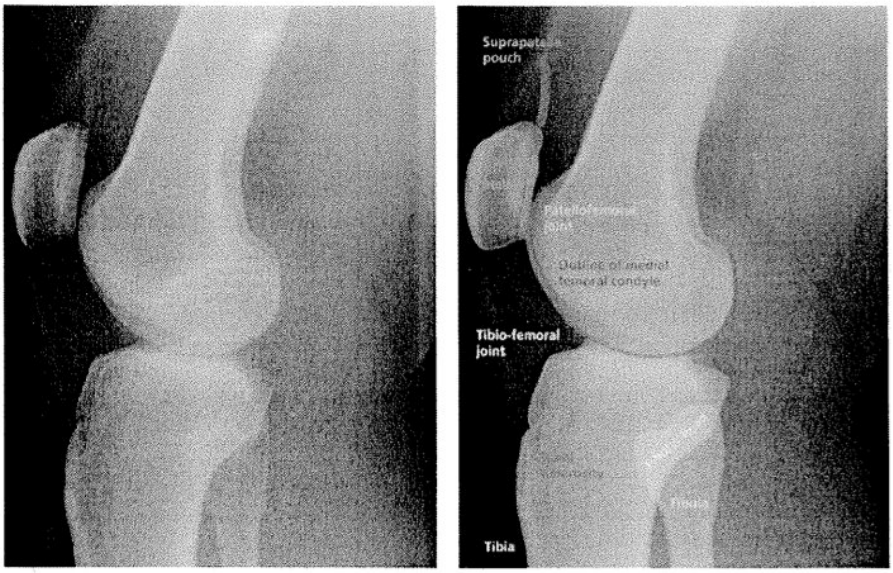


Figure 16. Normal knee, lateral view.

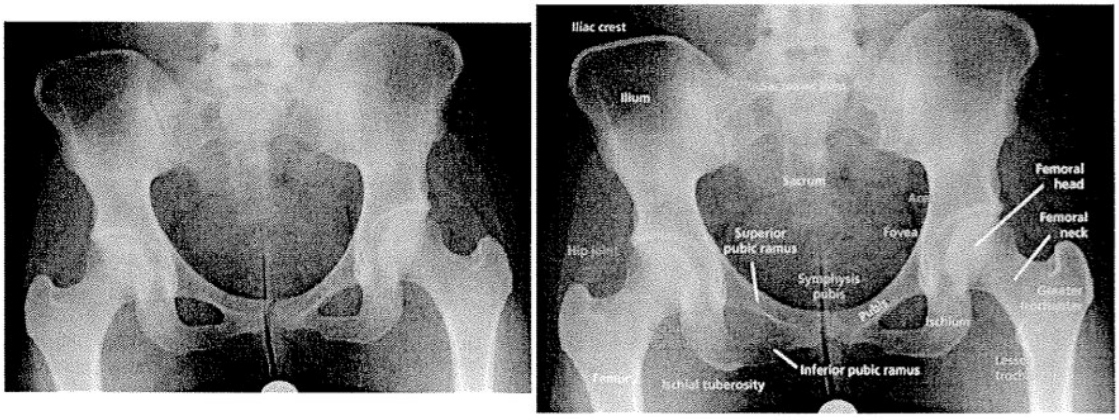


Figure 13 Normal pelvis, AP view.

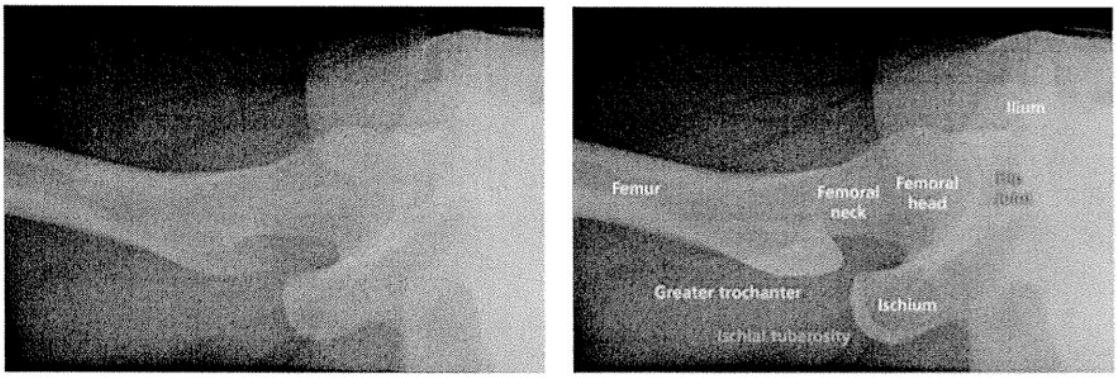


Figure 14. Normal hip, lateral view.

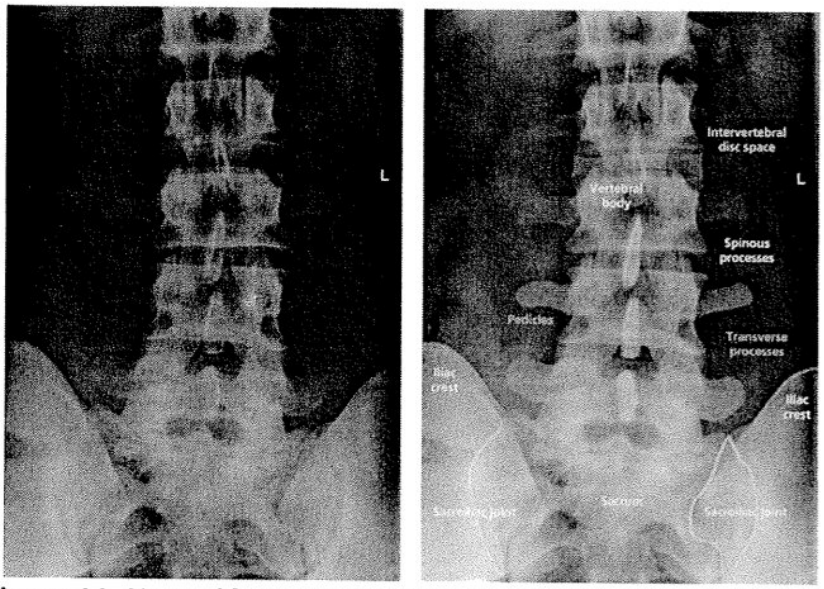


Figure 11. Normal lumbar spine and sacroiliac joints, AP view.

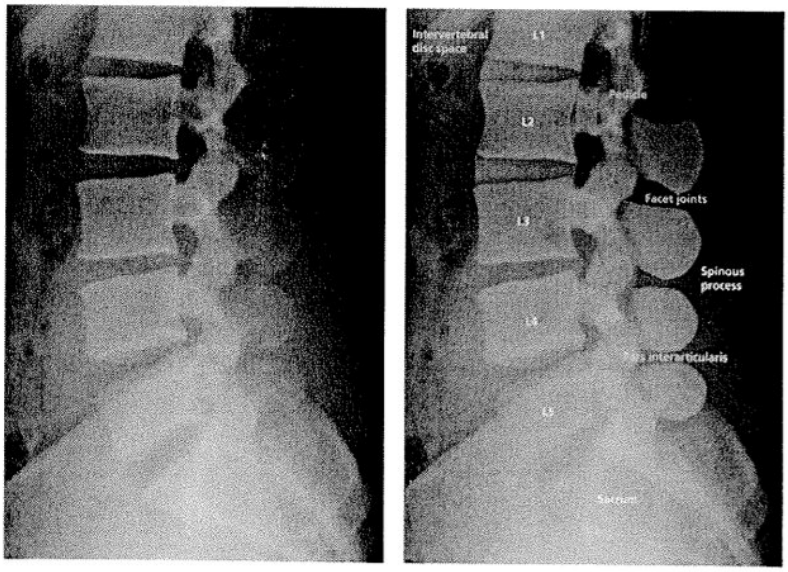


Figure 12 Normal lumbar spine, lateral view.

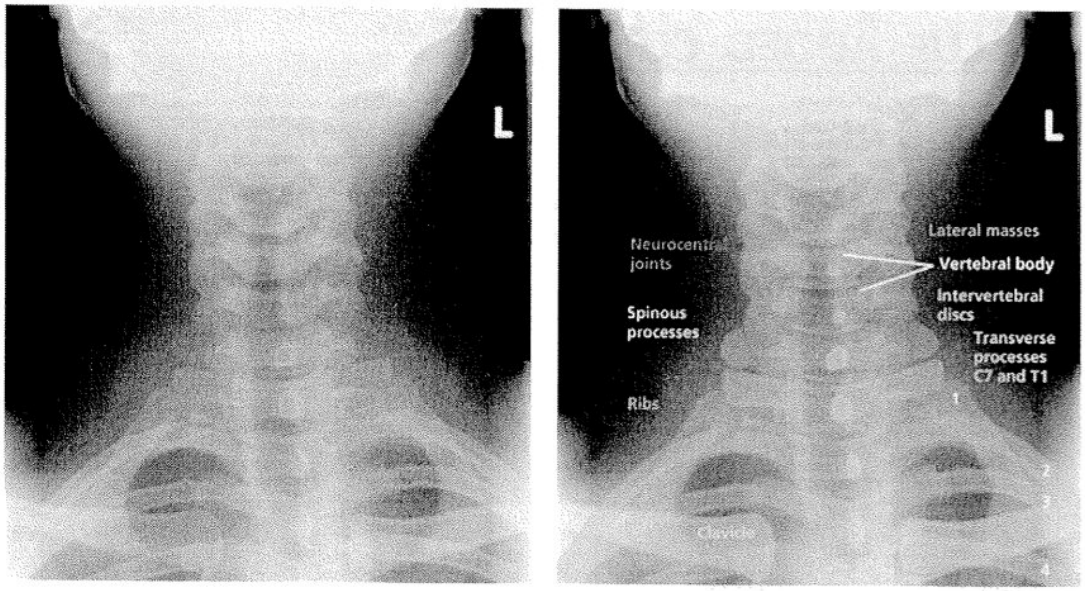


Figure 9. Normal cervical spine, AP view.

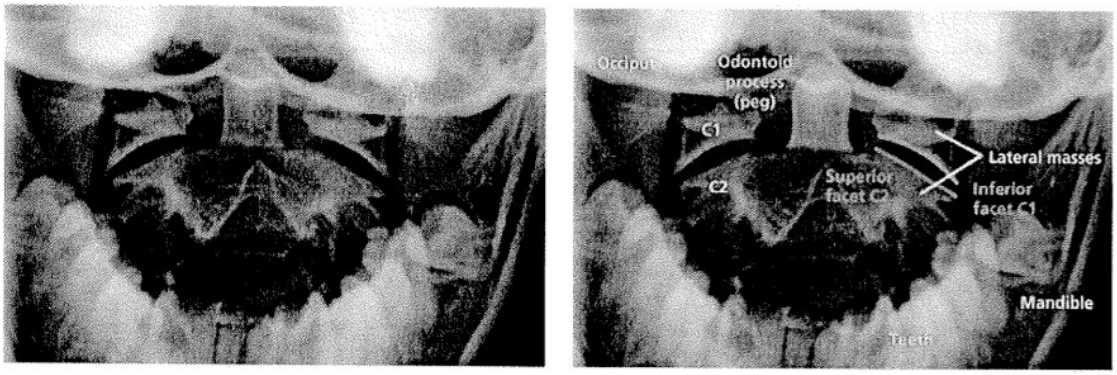


Figure 10. Normal cervical spine, through-mouth view

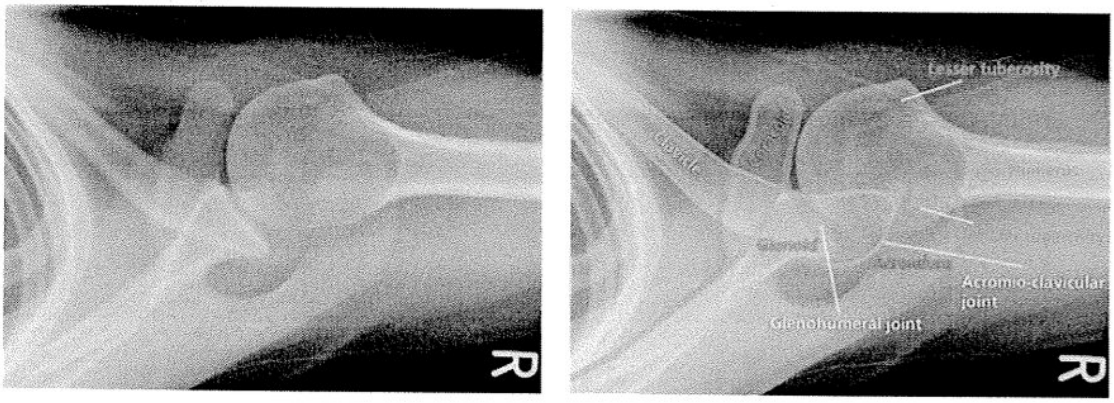


Figure 7 Normal shoulder, axial view.

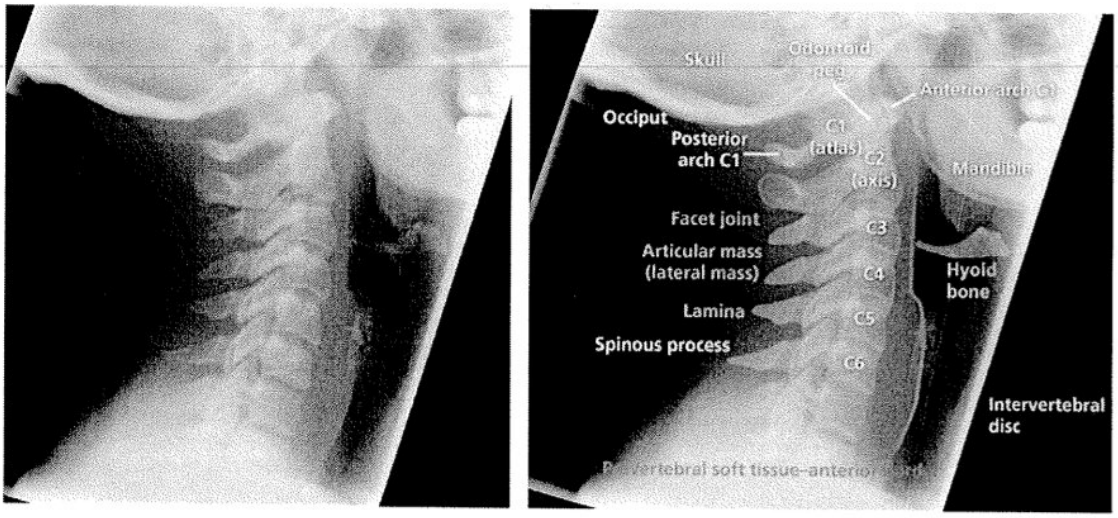


Figure 8 Normal cervical spine, lateral view.

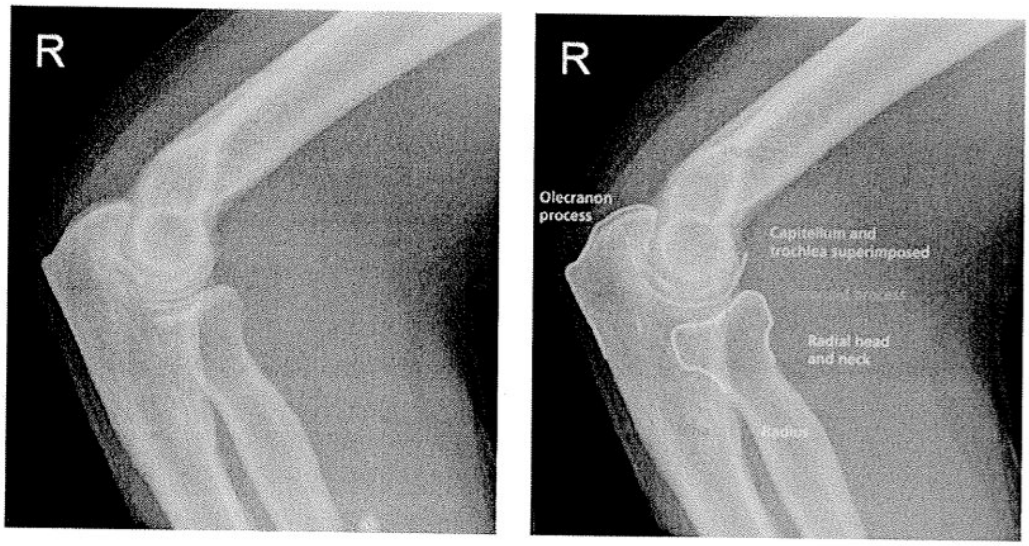


Figure 5 Normal elbow, lateral view.

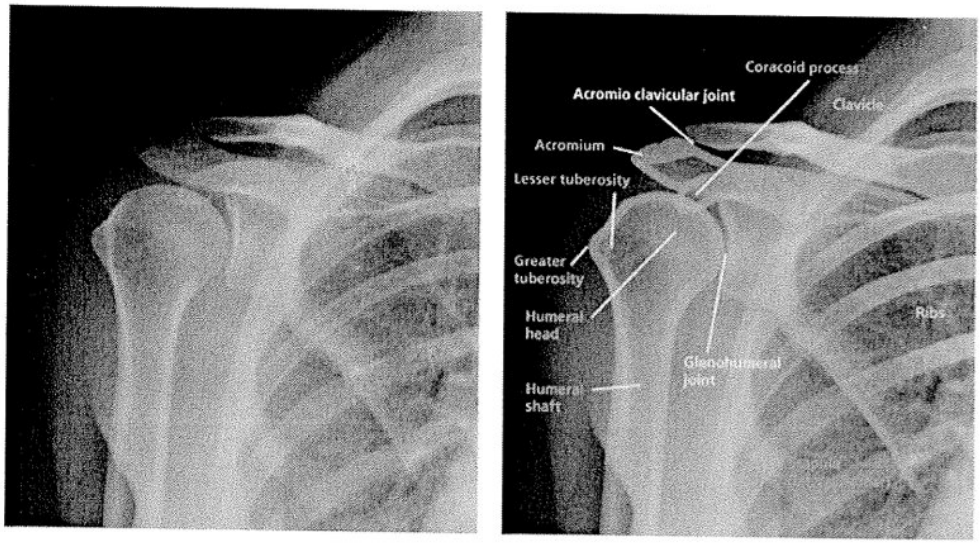


Figure 6. Normal shoulder, AP view.

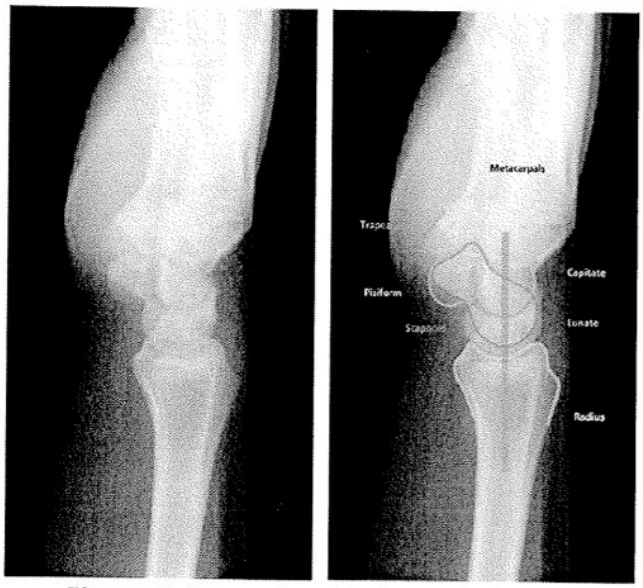


Figure 3. Normal wrist, lateral view

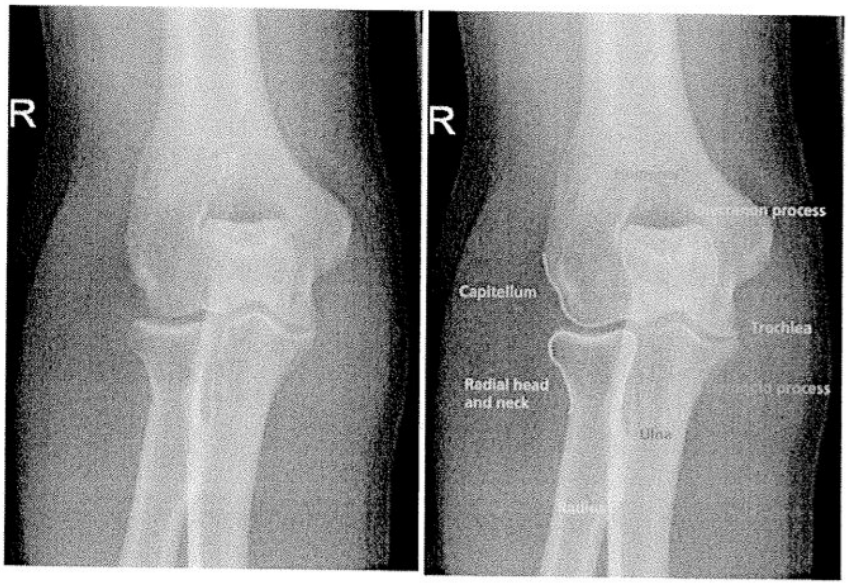


Fig 4.Normal Elbow, AP view

Normal anatomy on musculoskeletal X-rays

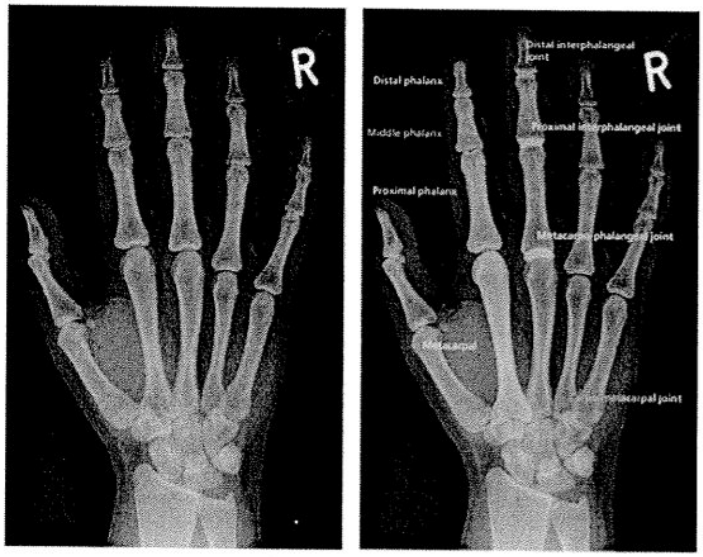


Fig 1. Normal Hand

Remember trapezi *um* is adjacent to the th*umb*.

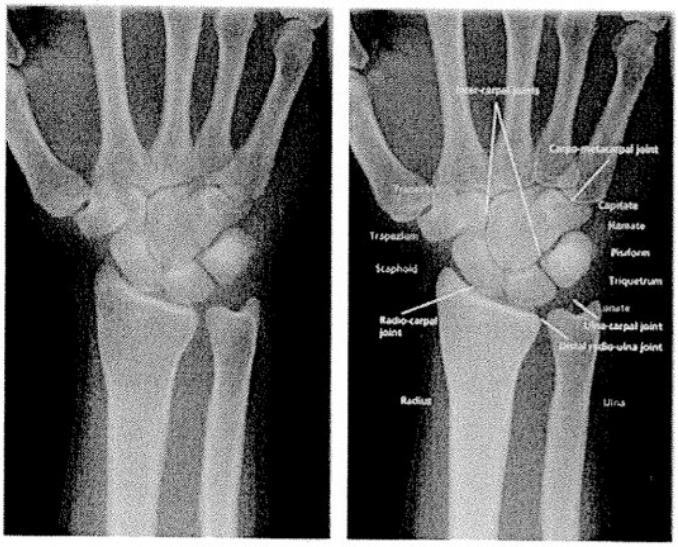


Fig 2. Normal Wrist, PA view

SRI LAKSHMI NARAYANA

INSTITUTE OF MEDICAL SCIENCES

DEPARTMENT OF RADIOLOGY AND IMAGING SCIENCES

INTEGRATED

ANATOMY TEACHING

CARDIAC ANATOMY

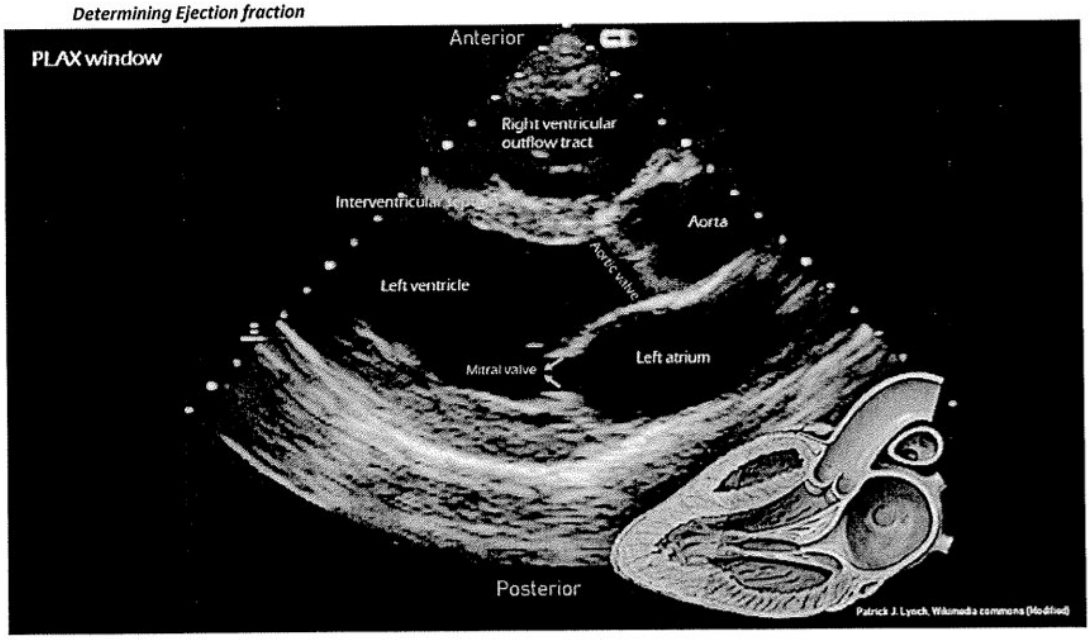
COURSE CONTENTS

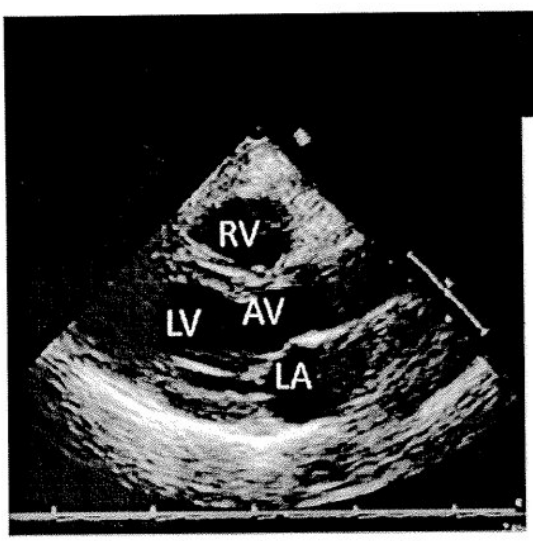
Basic views

Identifying Atria and Ventricles

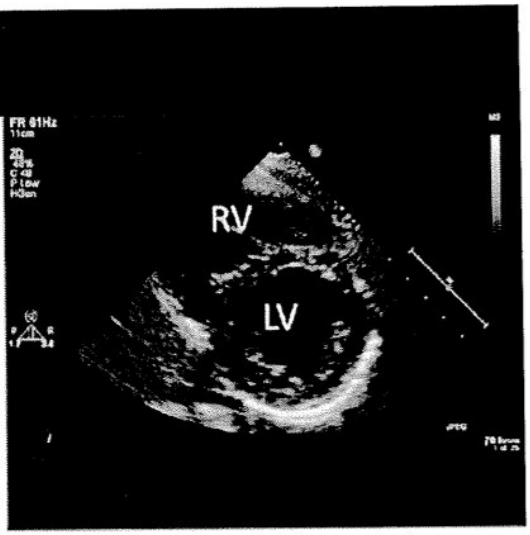
Identifying AV valves

Determining Ejection fraction



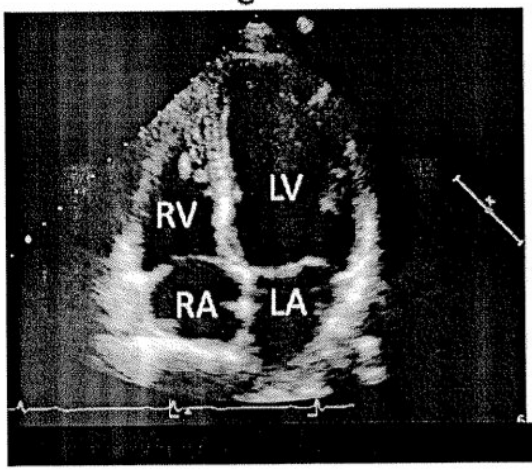


Parasternal Long Axis

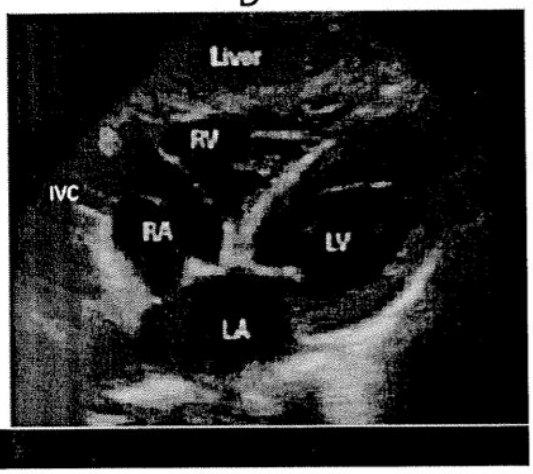


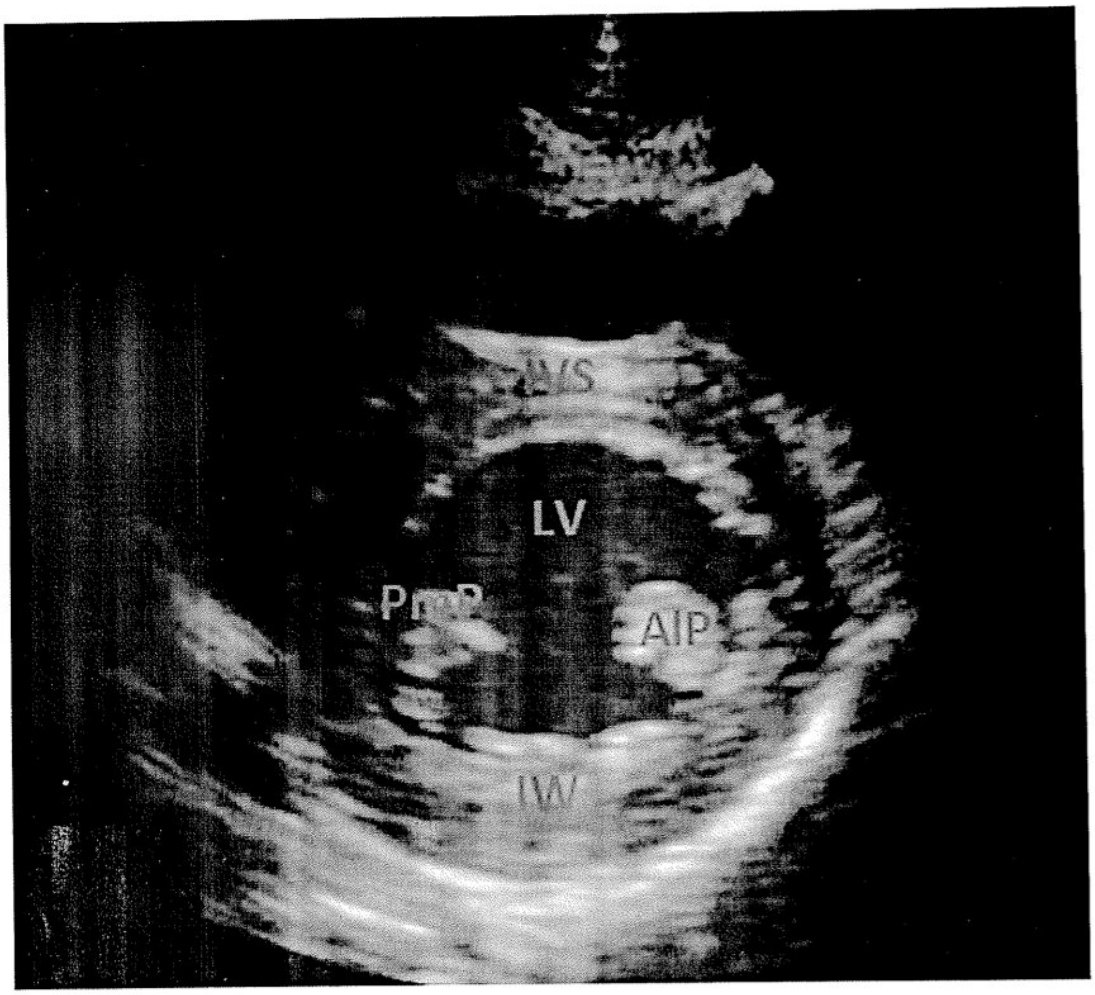
Parasternal Short Axis

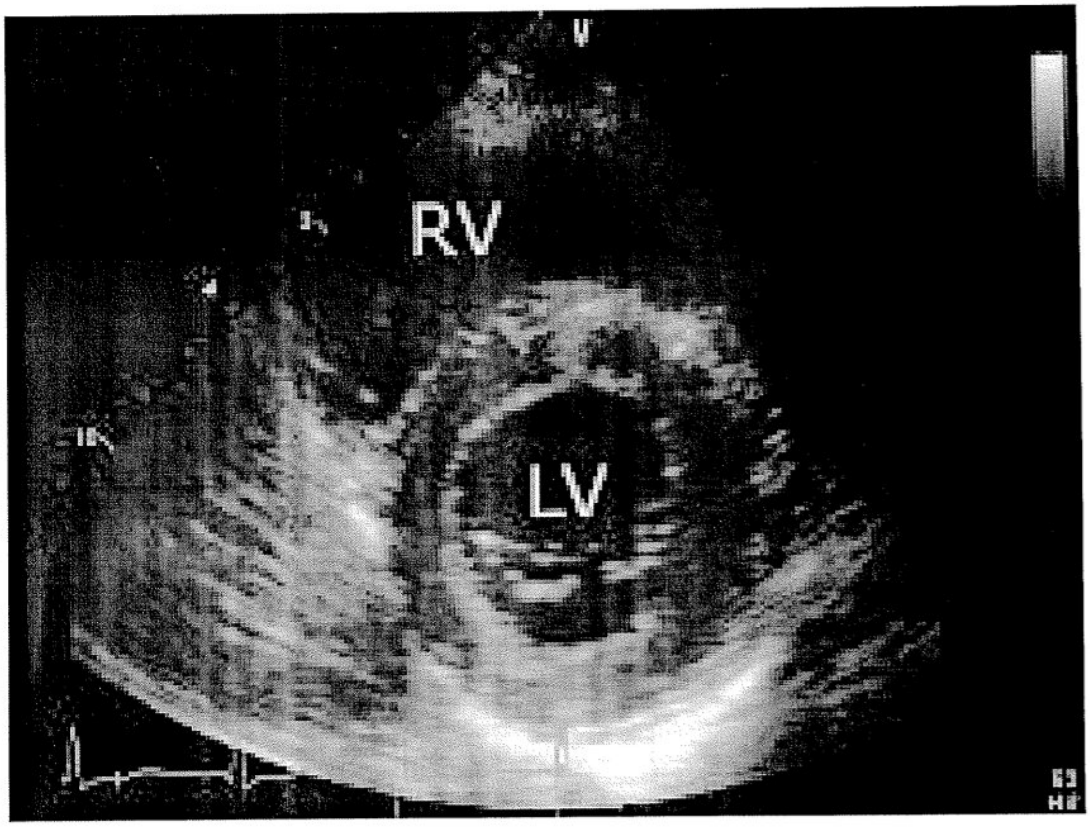
C

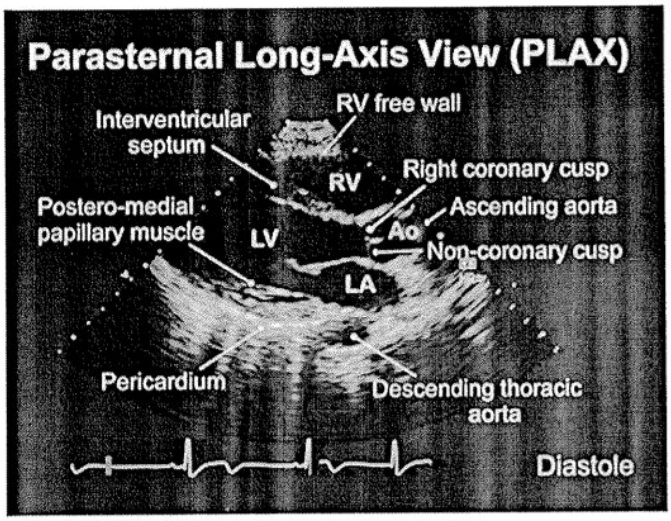


D




IVS
LV
AIP
IW





VENUE:

LECTURE HALL:II

TIME : SAT 2 TO 4 PM.