MI 123: Clinical Seminar I
Lecture #2

- Standard Terms

1

Standard Terms

- Anterior (Ventral)
- Posterior (Dorsal)
- Lateral
- Medial
- Superior
- Inferior
- Proximal
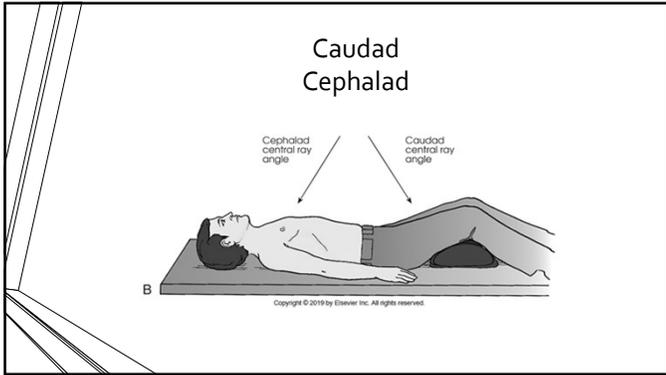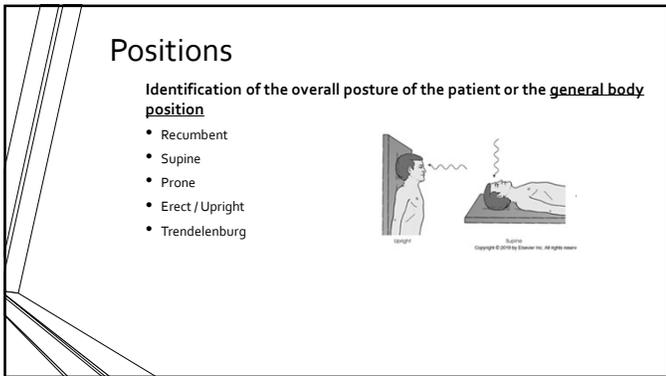- Distal
- Caudad
- Cephalad
- Palmar
- Plantar

2

Hand **Foot**

Dorsal   Palmar   Dorsal   Plantar

3

Caudad
Cephalad

Cephalad central ray angle

Caudad central ray angle

B

4

Positions

Identification of the overall posture of the patient or the <u>general body position</u>

- Recumbent
- Supine
- Prone
- Erect / Upright
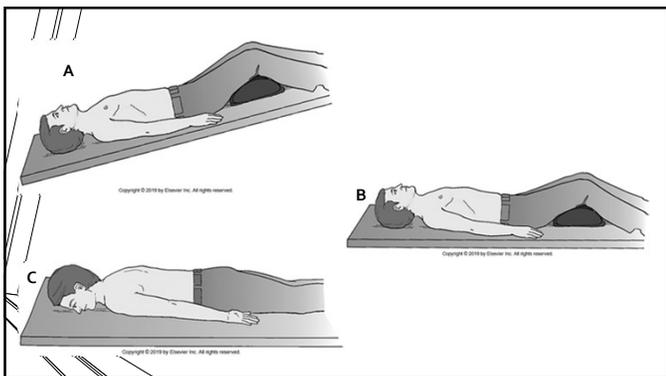- Trendelenburg

Upright

Supine

5

A

B

C

6

Radiographic Body Positions

Placement of the body part in relation to the radiographic table or IR during imaging

- Anterior
- Posterior
- Lordotic

- Lateral
- Decubitus
- Oblique

7

- Lateral
 - Further described as a right or left lateral depending on side against the image receptor

- Oblique
  - Further specified according to patient's relationship to the image receptor.
    - Right Posterior Oblique (RPO)
    - Left Posterior Oblique (LPO)
    - Right Anterior Oblique (RAO)
    - Left Anterior Oblique (LAO)
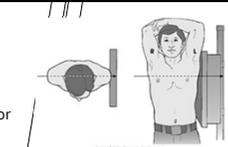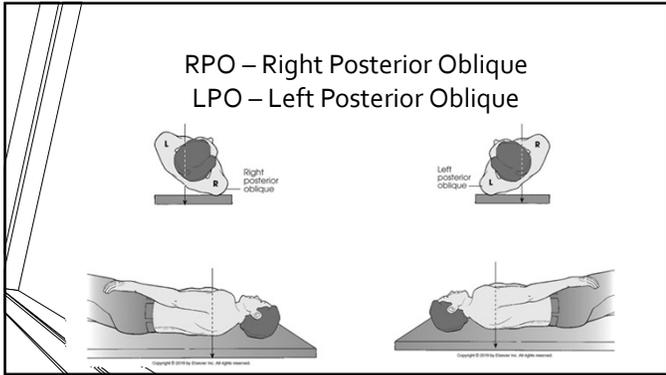
Radiographic Body Positions

8

RAO – Right Anterior Oblique
LAO – Left Anterior Oblique

Left anterior oblique

Right anterior oblique

9

RPO – Right Posterior Oblique
LPO – Left Posterior Oblique

Right posterior oblique

Left posterior oblique

10

Decubitus

A

B

C
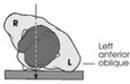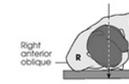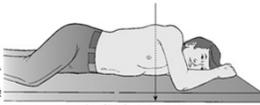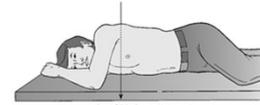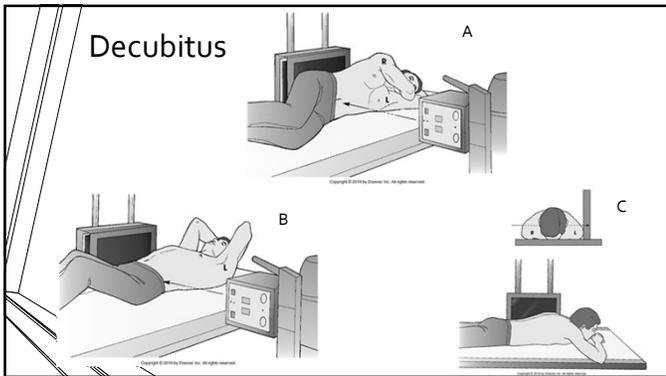
11

Body Movement Terminology

Movement related to limbs used often in positioning description and patient history.

- Supinate
- Pronate
- Abduction
- Adduction
- Eversion
- Inversion
- Extension
- Flexion
- External
- Internal

12

Supinate

Pronate

Pronate   Supinate

13

_____
_____
_____
_____
_____
_____
_____
_____

Abduction

Adduction

Abduction

Adduction

14

_____
_____
_____
_____
_____
_____
_____
_____

Eversion

Inversion

15

_____
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Extension

Flexion

16

External

Internal
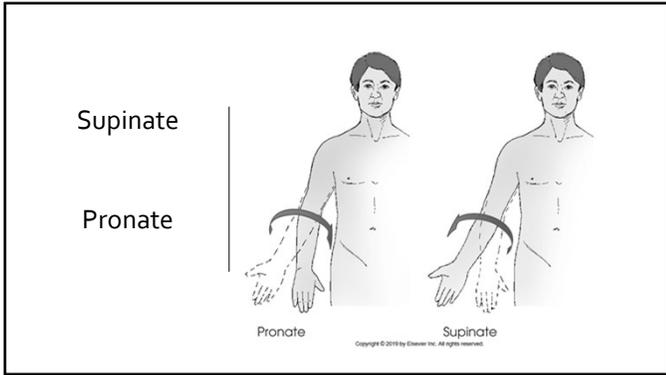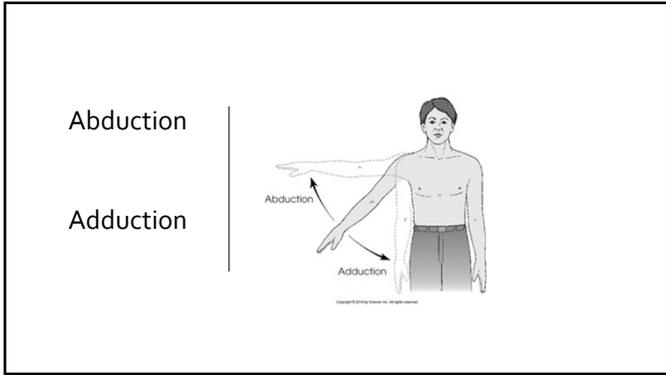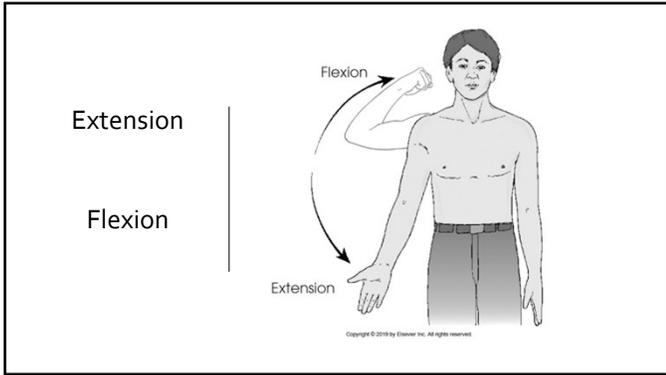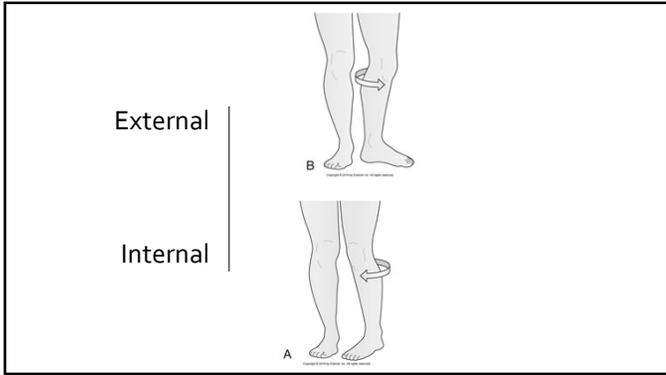
17

Projection

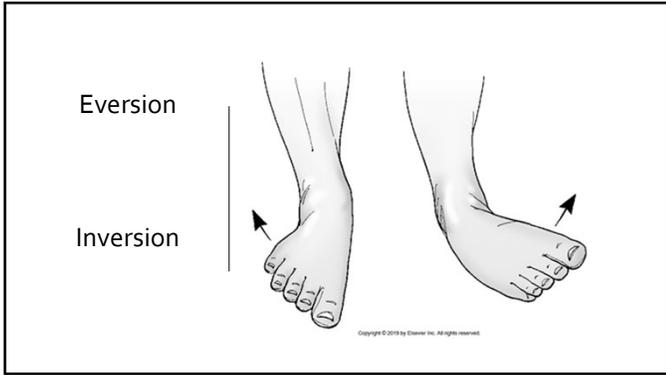Described by the **path of the central ray** as it goes through the patient to the IR

- This is based on entrance and exit points in the body and the patient anatomic position
- Regardless of patient position (erect or recumbent)
  - Anteroposterior (AP)
  - Posteroanterior (PA)
  - Lateral Projection
  - Oblique Projection

18

Projection

A

…But lets also talk about the Position of the patient!!

19

Projection and Position

C

D

R   L

CR

20

Decubitus

… what is the projection and position?

A

R

L

B

L

C

21

Extremity

A

B

Fig. 2.30 Lateromedial projection of forearm. Central ray enters lateral aspect of forearm and exits medial aspect.

22

MI 123: CLINICAL SEMINAR I

❖ *PROCEDURAL ROUTINE*
❖ *DOCUMENTATION/ORDERS*
❖ *HISTORY TAKING*
❖ *POLICIES*:
   • Patient Valuables
   • "Hand Off" Communication – Hall Pass
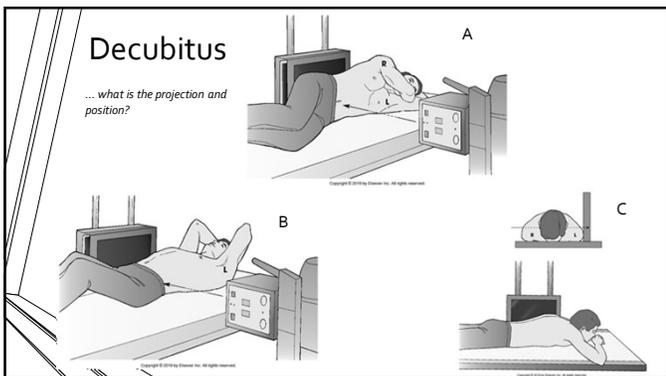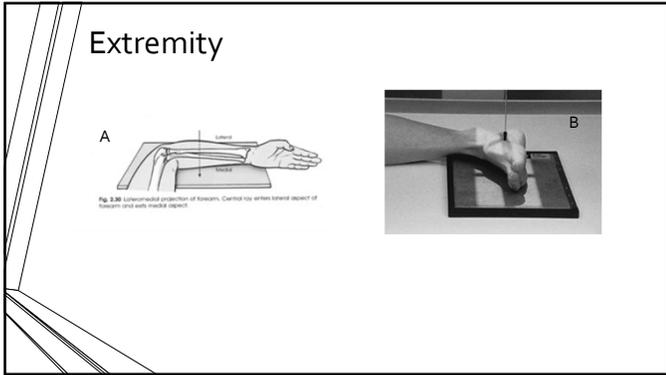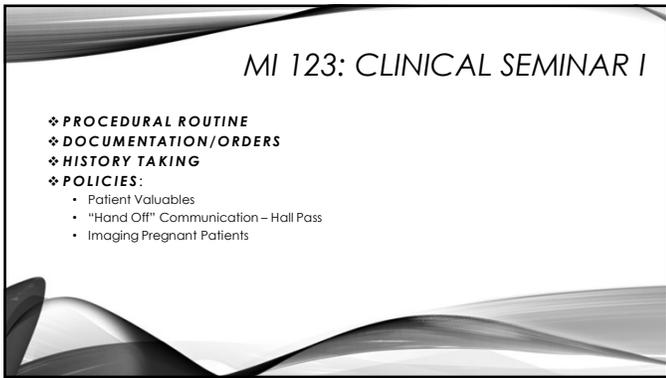   • Imaging Pregnant Patients

23

STEPS OF A PROCEDURAL ROUTINE

24

TYPES OF PATIENTS

Private Out (OP) / Outpatient
- Can have a scheduled appointment or be a walk-in
  - Walk in - a patient that does not have an appointment
- Sent in from a physician's office with an order from a physician
- Could result in the need for a Verbal report / Image check

Inpatient
- Nursing Floors
- Intensive Care Units
  - SICU
  - MICU
  - NICU
  - PACU
- Pre-Admission Testing

Emergency Department

25

PROCEDURAL ROUTINE
PRE-PROCEDURE

Review request/control sheet
- Identify the radiographic procedure requested by the physician
- Review the order to evaluate for accuracy

26

PHYSICIAN ORDER

- A physician orders a certain x-ray for a patient (left hand, right foot, lumbar spine, etc…)
- The physician will:
  - Order the radiographic procedure
    - The order may arrive with the patient (on an order slip/script), be faxed to the facility, or be electronic
    - RH – all radiographic orders expire 14 months after they are prescribed
    - Electronically ordered in EPIC
      - All Inpatients will have orders placed electronically in EPIC

27

ORDERS

CHEST PA & LATERAL [71020]

- CPT Code- Current Procedural Terminology (AMA)
  - Codes that are assigned to every task and service that can be provided to a patient
  - Must be correct for insurance reimbursement/ payments
- ICD-10 Codes- International Statistical Classifications of Diseases
  - Alphanumeric assignments given to diagnosis and symptoms
  - Very detailed and specific

Table 1 – Comparisons of the Diagnosis Code Sets

ICD-9	ICD-10
3-5 characters in length	3-7 characters in length
Approximately 13,000 codes	Approximately 68,000 available codes
First digit may be alpha (E or V) or numeric; digits 2-5 are numeric	Digit 1 is alpha; digits 2 and 3 are numeric; digits 4–7 are alpha or numeric
Limited space for adding new codes	Flexible for adding new codes
Lacks detail	Very specific
Lacks laterality	Has laterality (i.e., codes identifying right vs. left)

28

REQUESTS

"Still, let's do an x-ray just to be sure."

- A paper in which lists:
  - patient name, address, MRN, ordering doctor and phone number, study, codes for charging, numbers to track study in computer (accession number), list of most recent studies performed, etc...
    - Control sheet
    - Requisition
- Can be entered by clerical staff
  - Intake specialist
  - Unit clerks
- Always check the procedure on the request to the physician order to verify procedure
  - If there is a discrepancy, the physician's order is the correct of the two

29

CONTROL SHEET VS REQUEST

30

EXAMPLE:
OUTPATIENT/WRITTEN
ORDER

31

EXAMPLE:
EPIC
INPATIENT
ORDER

32

MILITARY TIME

- Military time is based off a 24 hour clock
- Some healthcare facilities utilize military time in documentation

33

PROCEDURAL ROUTINE
PRE-PROCEDURE

Equipment preparation
- Radiographic room is prepared, with necessary supplies in place before the patient arrives in the room (Sheet is placed on the table, shield, sponges, etc.)
- X-Ray tube in position with applicable equipment readily available

Operating console preparation:
- Verify correct selection of patient name/MRN/accession #
- Enter HS# if applicable
- Select proper study/view within the operation console
- Select and verify appropriate kVp, mA and time/mAs, and ionization chambers (as necessary)

34

PROCEDURAL ROUTINE
PRE-PROCEDURE

Retrieve patient from waiting area
- Introduce self
- Verify patient ID
- Address footwear and question pain meds/stability if applicable

The patient is properly gowned with all unnecessary/interfering clothing, jewelry, dentures, etc. removed

35

PROCEDURAL ROUTINE
PROCEDURE

- ***Escort the patient safely into the room*** – Evaluation of medication/footwear, Patient Valuables (Review policy); Hand-Off Communication (Review policy)

- ***Introduce yourself to the patient as a student as well as introduction of your technologist/Faculty***
  - Permission to participate in study
  - Imaging Minors

- ***Re-confirm patient identification*** – 2 patient identifiers

36

PROCEDURAL ROUTINE PROCEDURE

- **_Obtain LMP/Pregnancy Status_** – (Review policy)
  - Imaging Pregnant Patient Policy
    - Why? Importance?
    - 11-55 years of age
    - 2 part question
      - **First** day of last menstrual period/cycle?
      - Assess for chance of pregnancy – "Is there any chance of pregnancy?"

37

OBTAIN HISTORY

Sacred seven

Localization	Precise area of interest
Chronology (period of time)	Duration, frequency, course
Quality	Character of symptom
Severity	Intensity, quantity, or extent
Onset	Event that caused the symptom
Aggravating or alleviating factors	Helps or hinders symptom
Associated manifestations	Other symptoms accompany chief complaint

38

EFFECTIVE HISTORIES

- Open ended questions
- Probing question to focus on details
- Encourage elaboration
- Give the patient time to collect their thoughts
- Repetition or rewording
- Summarize to verify history

*Includes subjective (perceived)and objective (signs seen) data

39

PROCEDURAL ROUTINE PROCEDURE

- *Procedure explained to the patient*

- *Take precautionary measures to ensure patient safety* - application of brakes, footwear, hall pass reviewed

- *Radiation protection practices applied* – appropriate gonadal shielding based on path of central ray

- *Assistance provided to patient during positioning*

- *Collilmation appropriate for view*

- *Correctly manipulate equipment to obtain designated centering/projection*

- *Communicate breathing or movement instructions*

40

PROCEDURAL ROUTINE

- *Correctly dismiss patient from procedure*
  - Verbal Report/Image Check

- *Verify images sent to PACS with technologist approval*

- *Complete EPIC documentation*

41

QUESTIONS?

42