
بسم الله الرحمن الرحيم

Radiography Positioning “3”

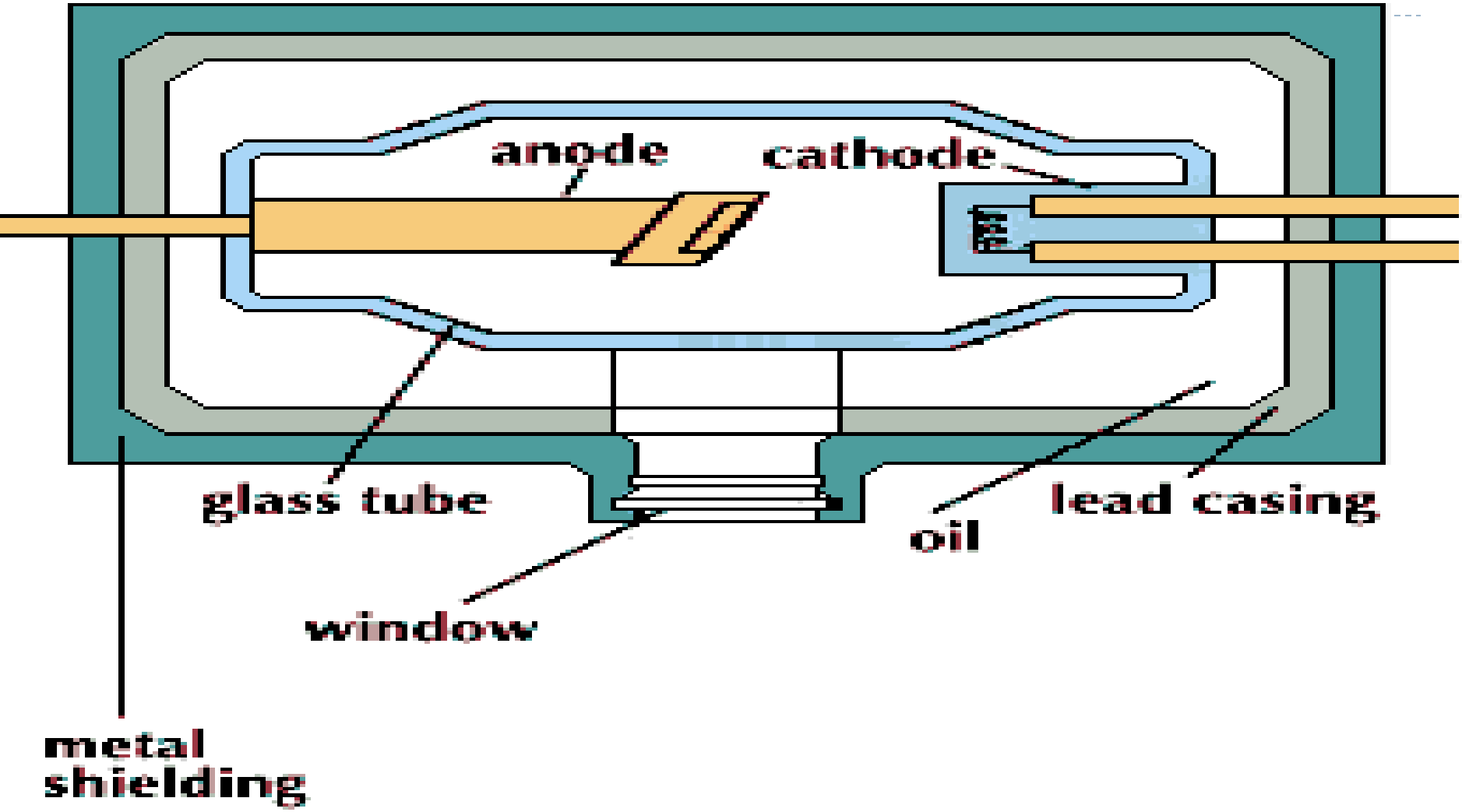
Basics & Terms

By

Dr. Ahmad Mokhtar Abodahab - MD

In the previous lecture :

- Q1.Mention The structure of X ray Tube ?


anode
cathode
glass tube
lead casing
oil
window
metal
shielding

- **Q2. Why glass envelop of X ray Tube is Pyrex ?**

To resist overheat

Q3. What is the role of 2 Clicks ?

- **1st Click – Preparation →**
  - Cathode filament : heat
  - Anode disc : rotate
- **2nd Click : X ray Production**

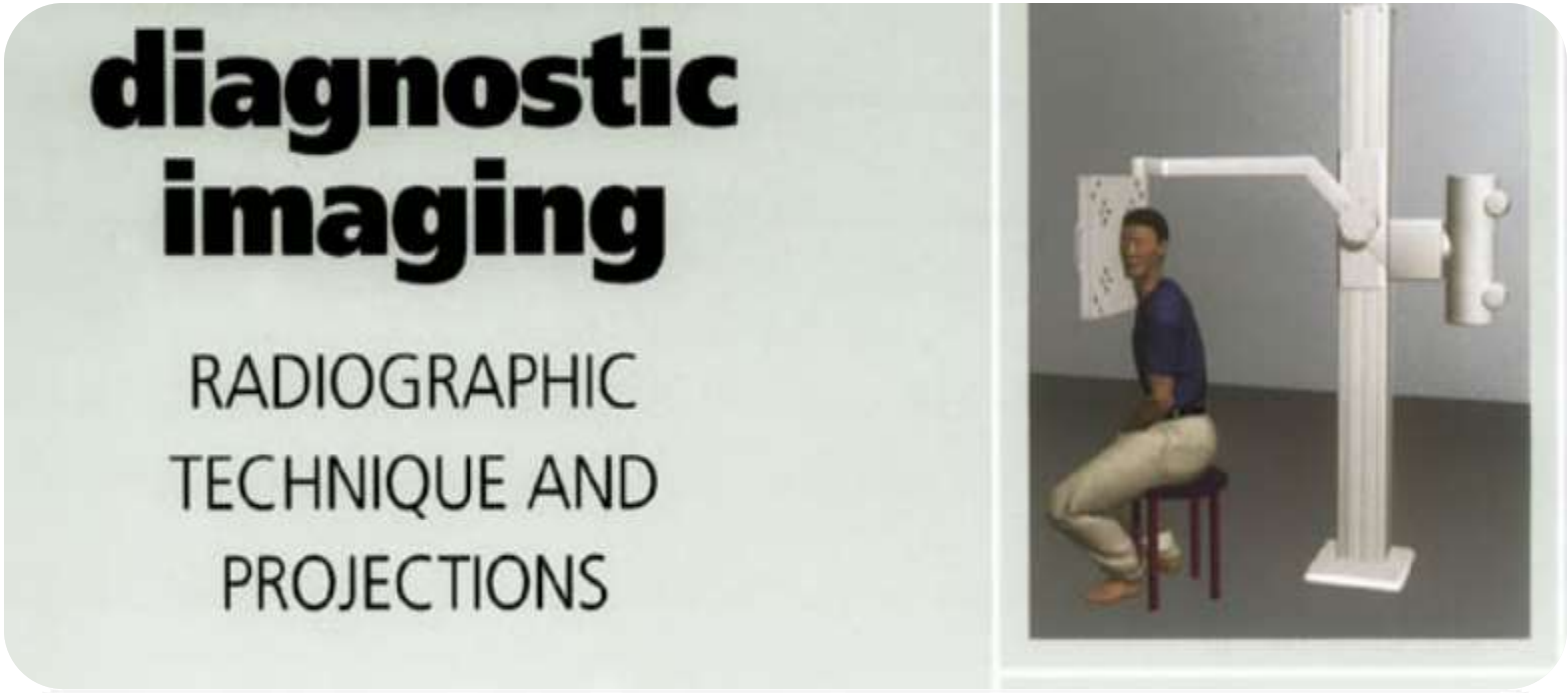
Q4. Mention Role of these Structures ?

Why vacuum ?
Why lead envelop ?
Why Oil around ?
Why Steel envelop ?
Why Aluminum filter ?

Why vacuum ?	**No O2** , avoid more heat & oxidation of cathode
Why Pyrex glass envelop ?	To resist over heat
Why lead envelop ?	to avoid **X ray scattering** in all direction
Why Oil around ?	For **good cooling**
Why Steel envelop ? **Why Aluminum filter ?**	For **good protection** For **Filtering of low energy** rays

TERMS

- **Technique** = تقنية
  - **Technician** = تقنى او فنى



X-ray Imaging Techniques:

BASIC or **ADDITIONAL**

Imaging Techniques:

BASIC or **ADDITIONAL**

- **BASIC views**:

must be taken whenever an Examination is ordered.

- **ADDITIONAL views :**

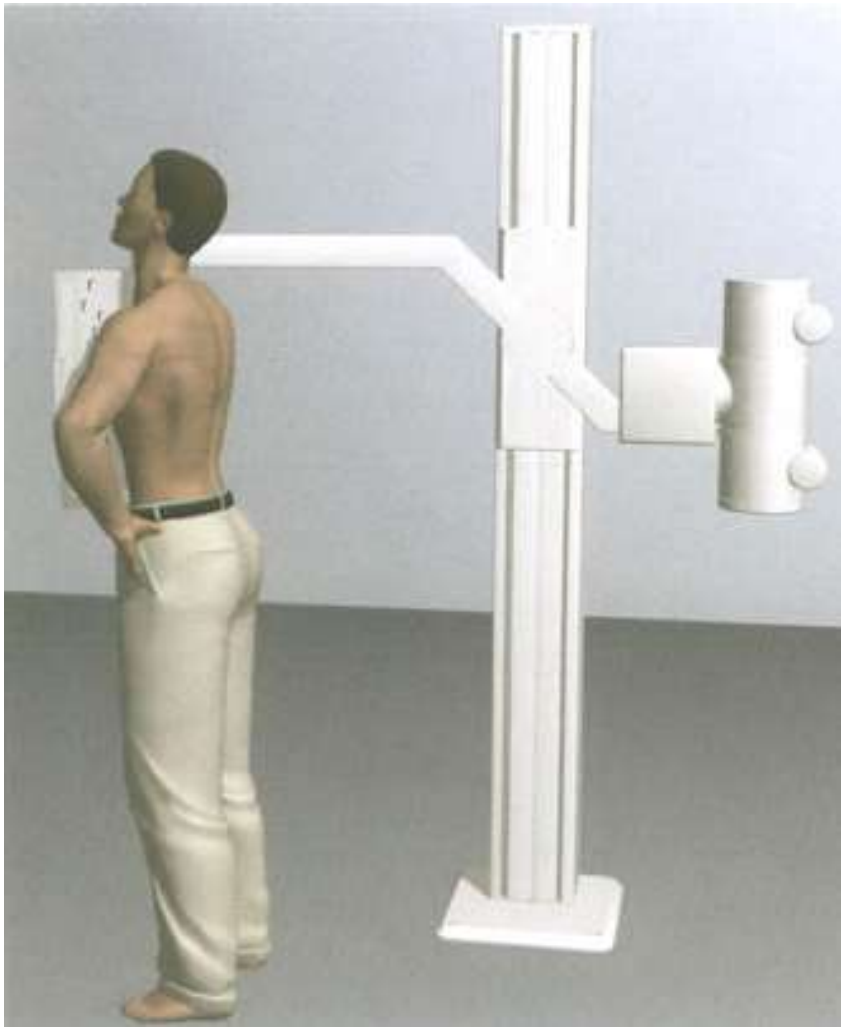
Are taken only when:

(a) Patient condition doesn't Permit a basic view; or

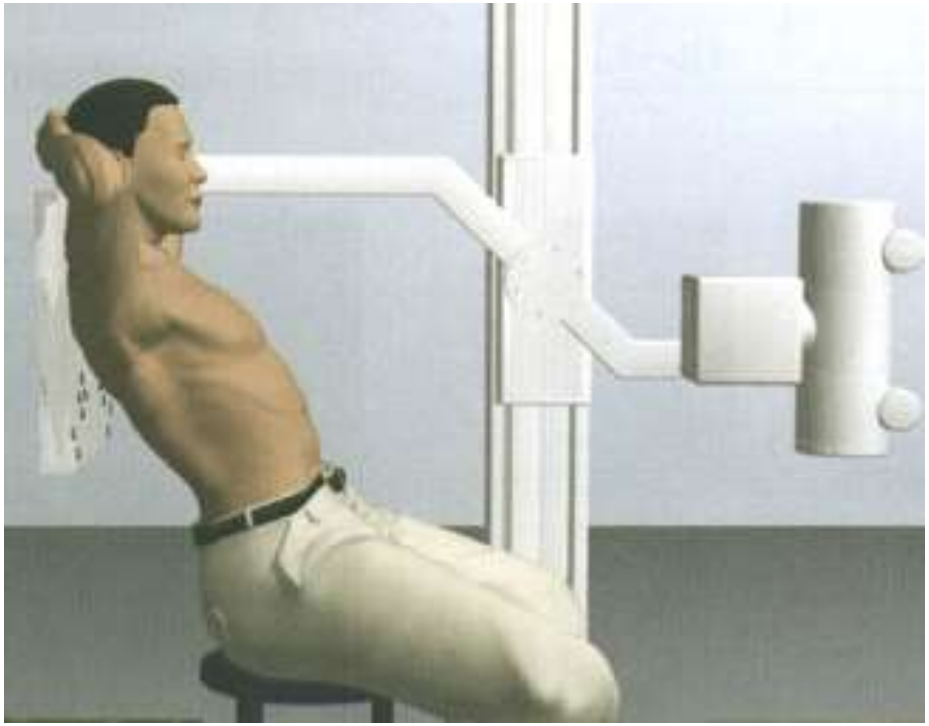
(b) Diagnostic information provided by the basic view is insufficient.

- **BASIC** = اساسي **Insufficient** = غير كافى **ADDITIONAL** = اضافي

CHEST PA Standing erect / BASIC



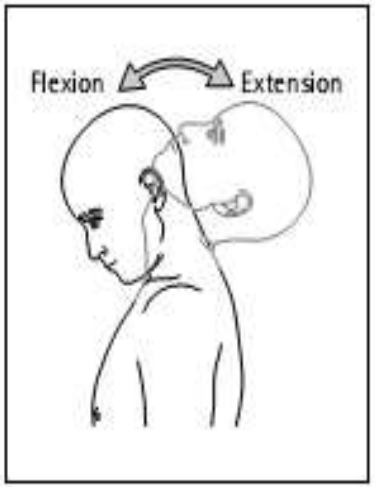
CHEST APICAL(LORDOTIC)AP / Additional



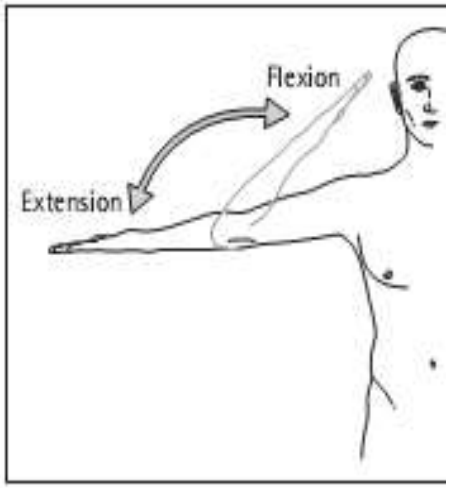
Positions of the patient

ERECT	standing or sitting up,
SUPINE	lying on the back,
PRONE	lying on the stomach,
DECUBITUS	lying on the side,
OBLIQUE	turned a little, usually at a given angle,
LATERAL	standing or sitting or lying with one side close to the cassette or cassette holder.

FLEXION & EXTENSION

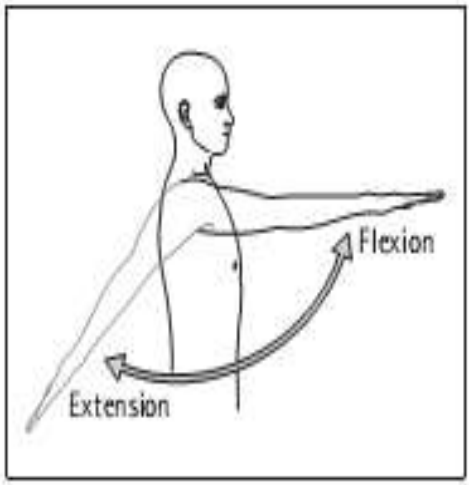


Flexion and extension of neck



Flexion and extension of elbow

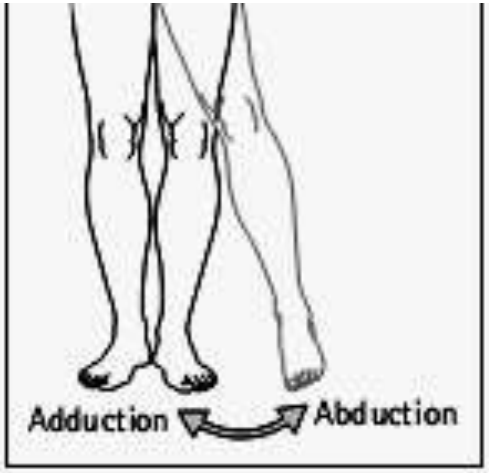
Dorsiflexion and plantarflexion of foot



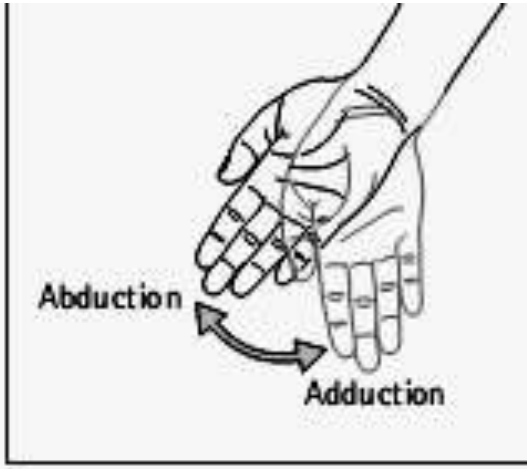
Flexion and extension of shoulder

Abduction and adduction of hip

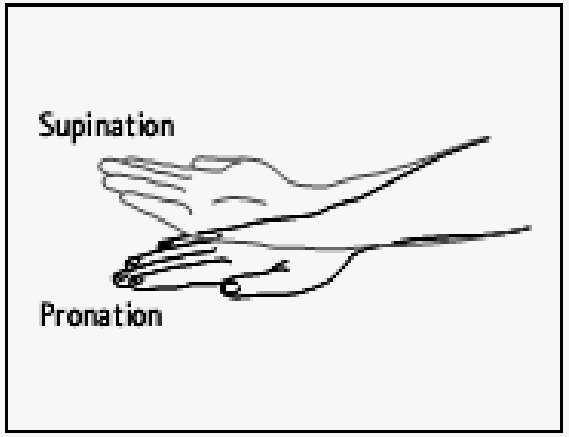
Abduction and adduction of wrist



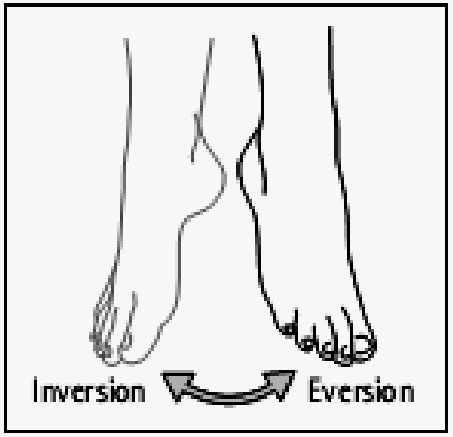
Abduction and adduction of hip



Abduction and adduction of wrist



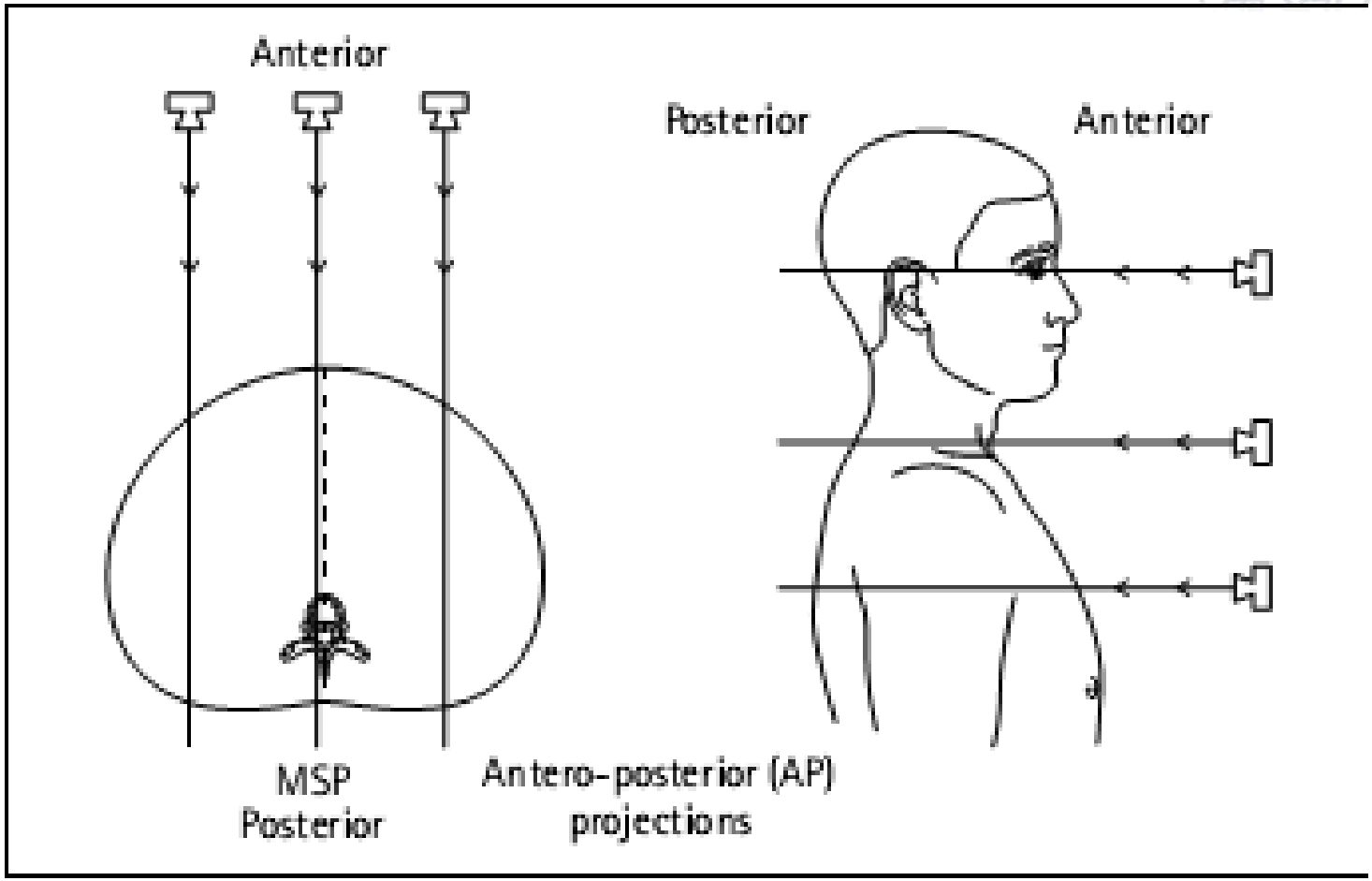
Pronation and supination of hand/forearm

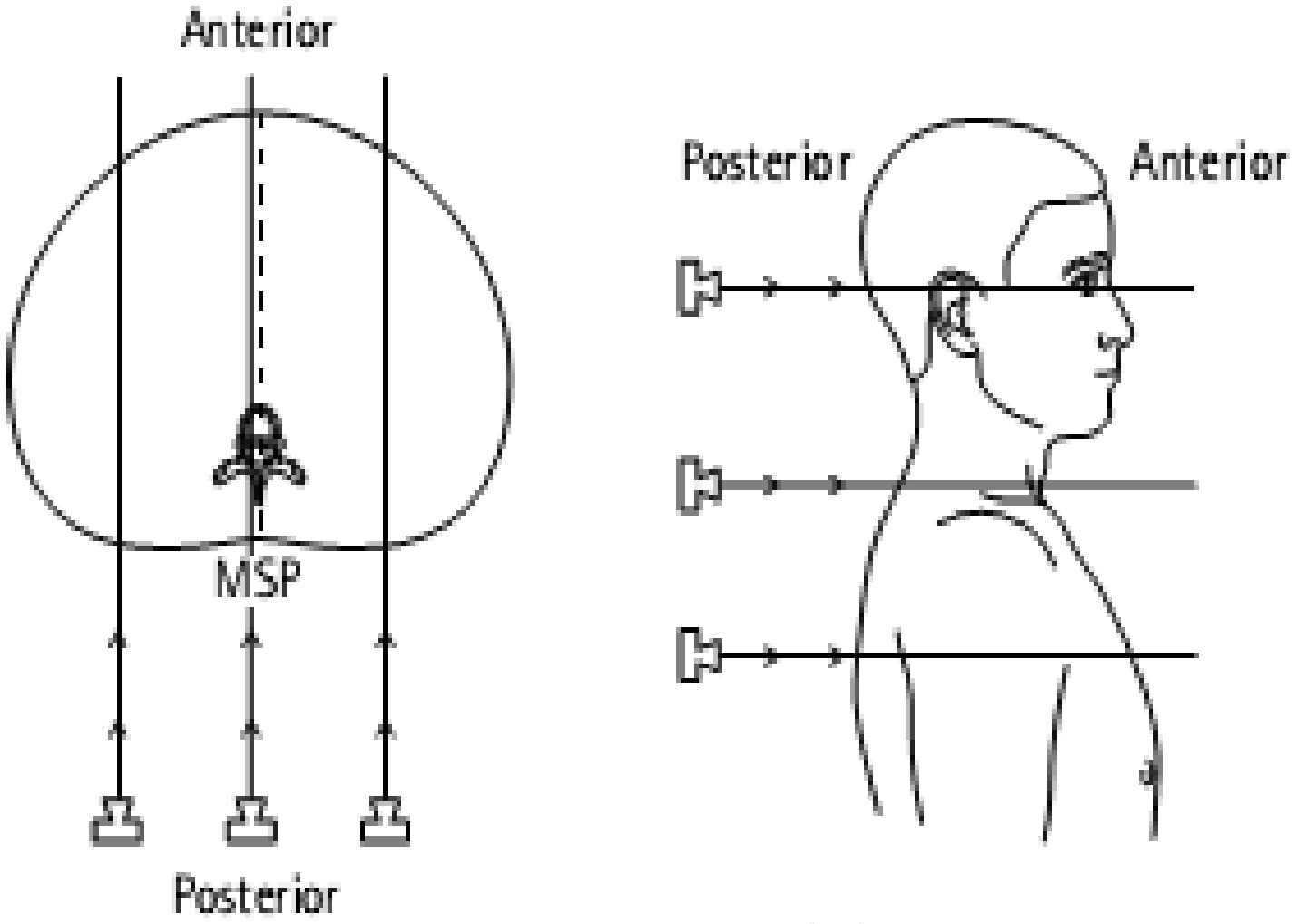


Inversion and eversion of foot

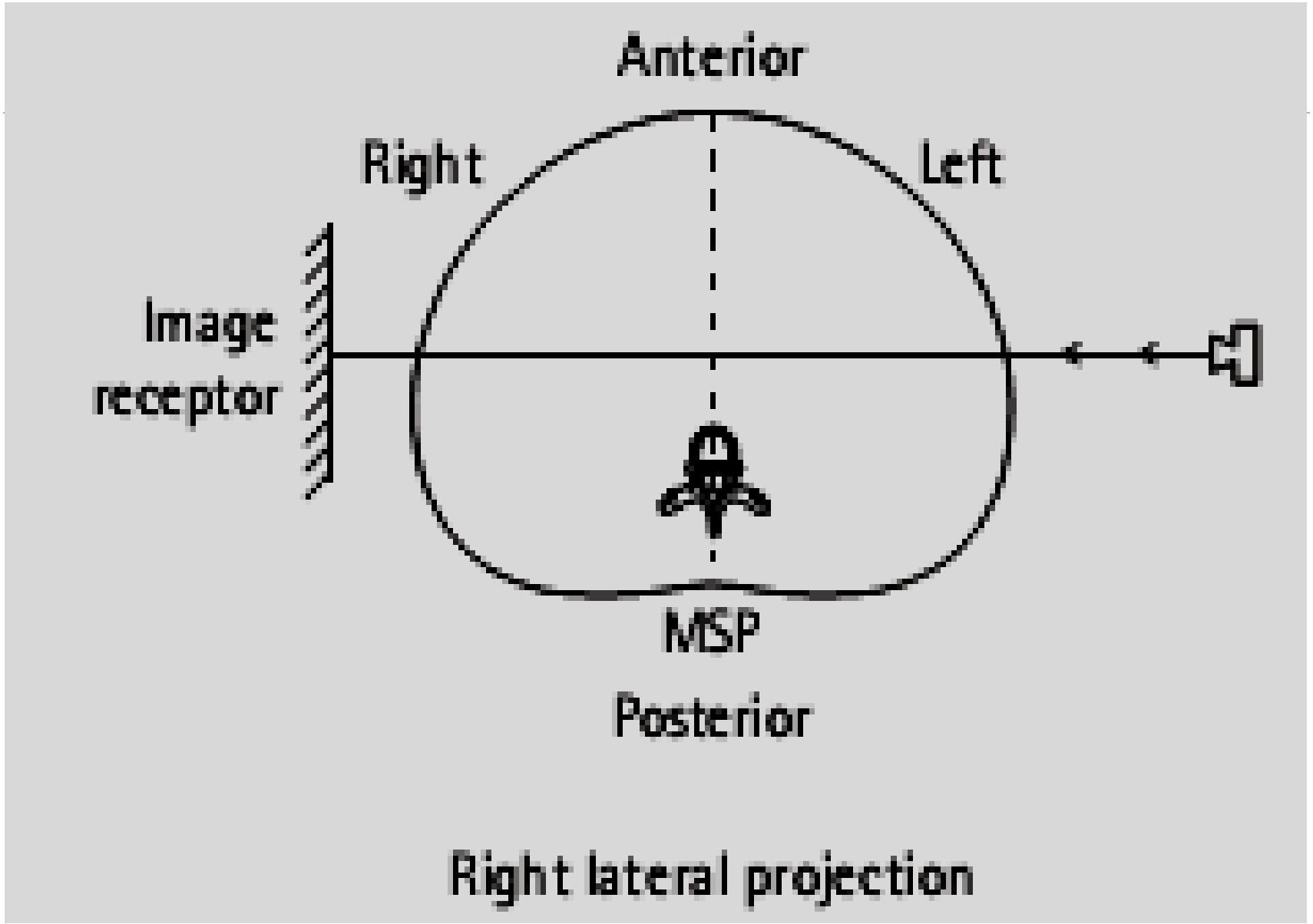
X ray Direction

جاي منين و رايح فين





Postero-anterior (PA) projections

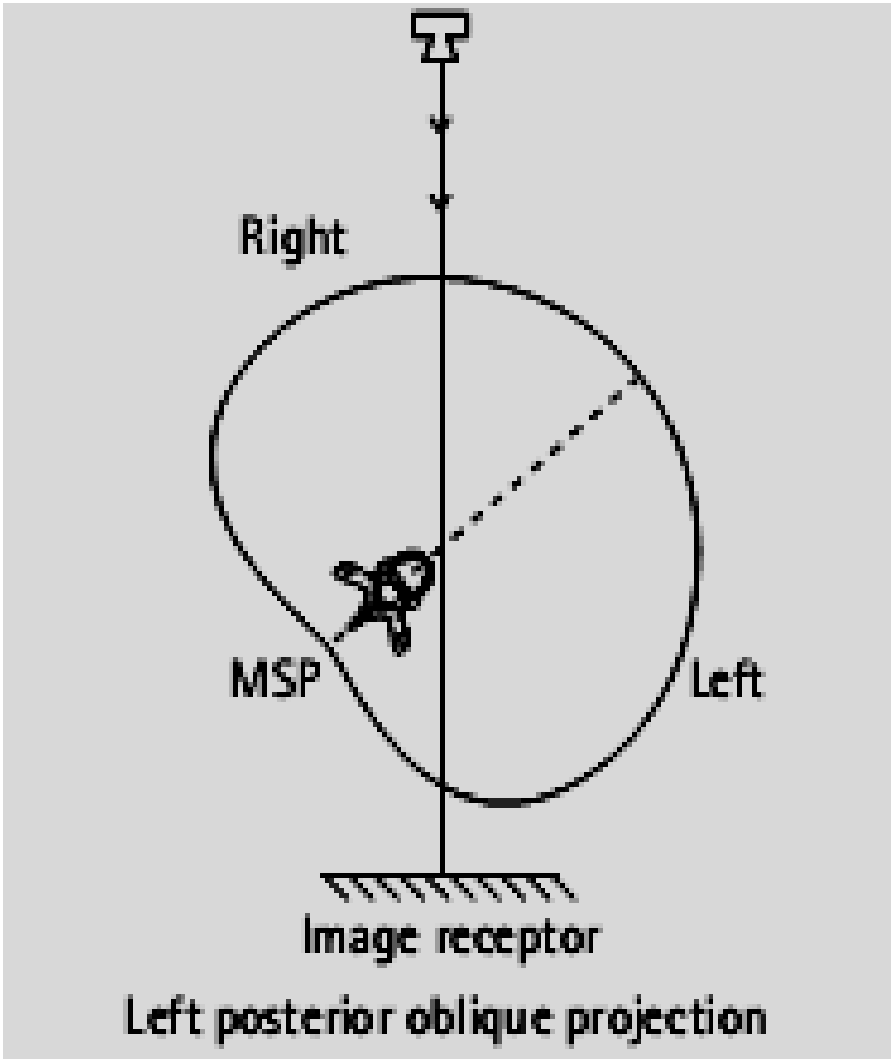


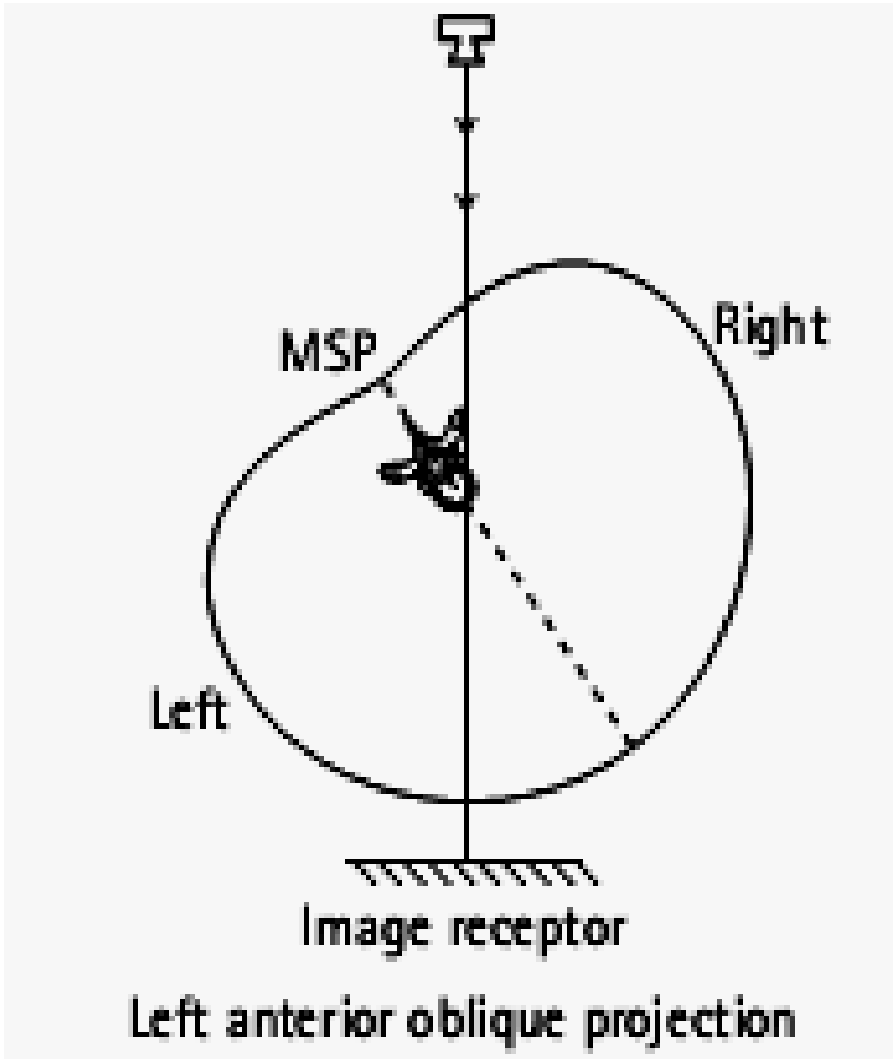
Lateral Position , Named on the side near Film

X-ray beam direction: AP or PA

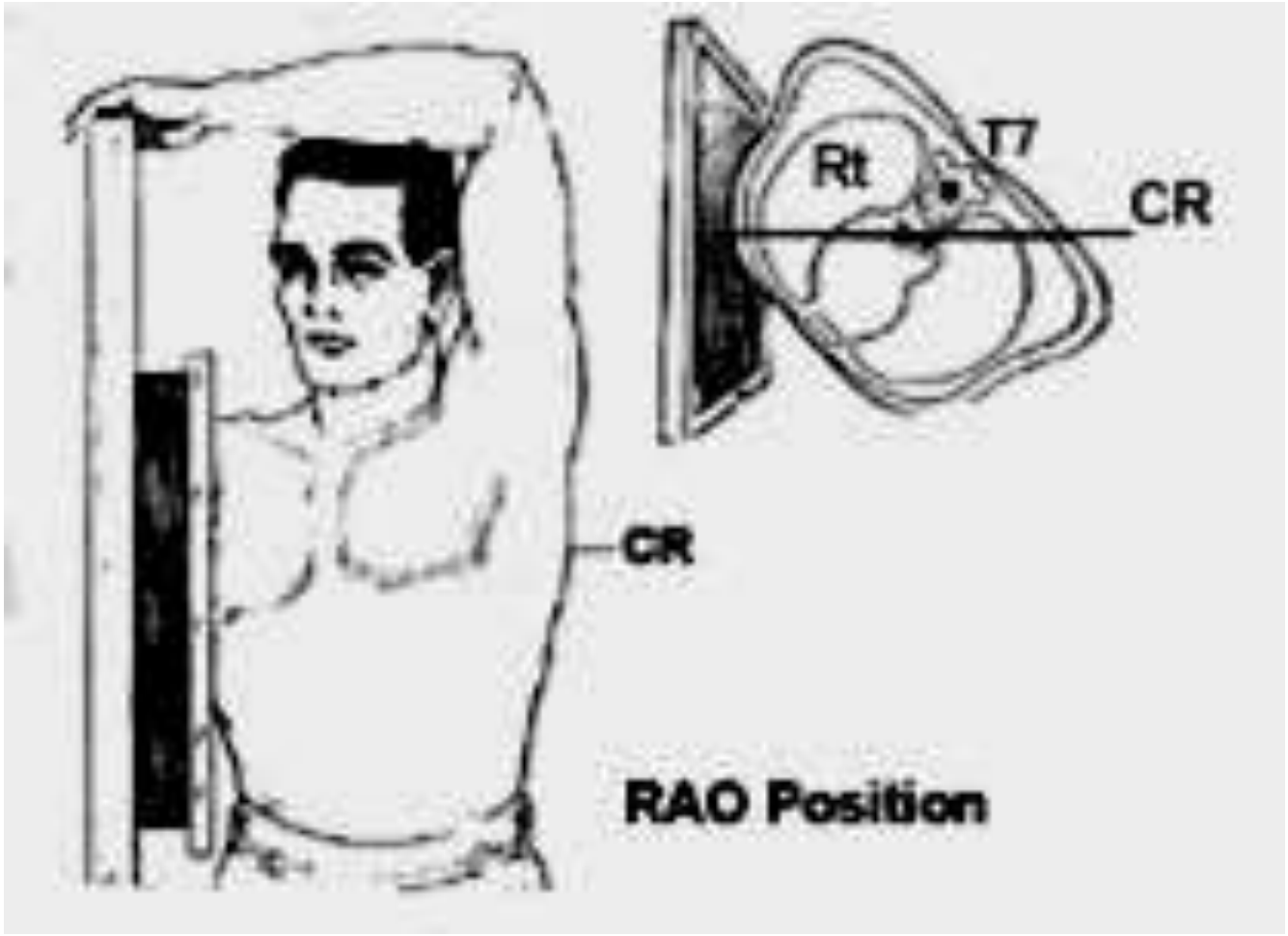
AP = Antero–Posterior (front to back) and
PA = Posterior–Anterior (back to front)
indicates the direction of the X-ray beam through the patient onto the cassette.

Oblique Position also , Named on the side near Film

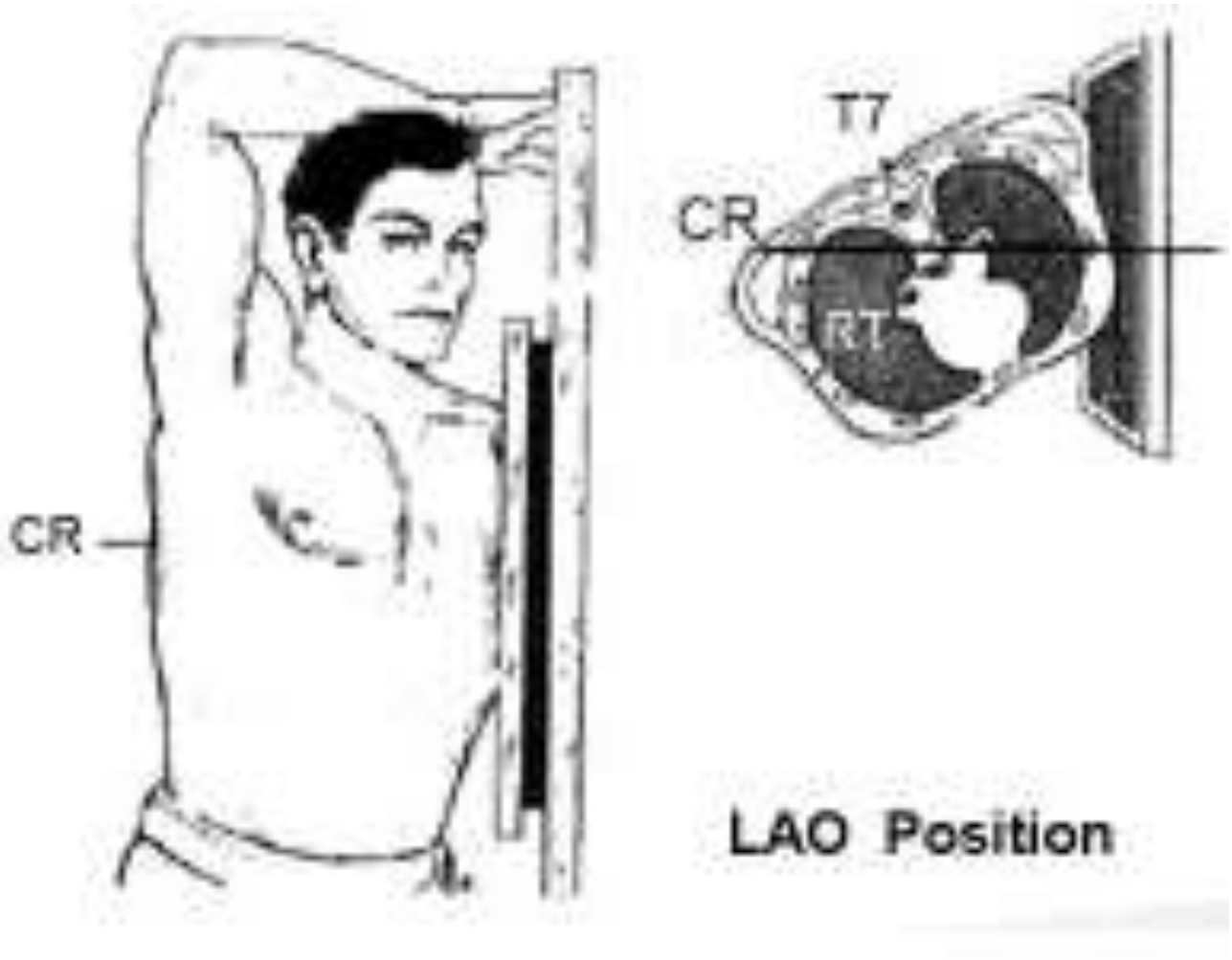




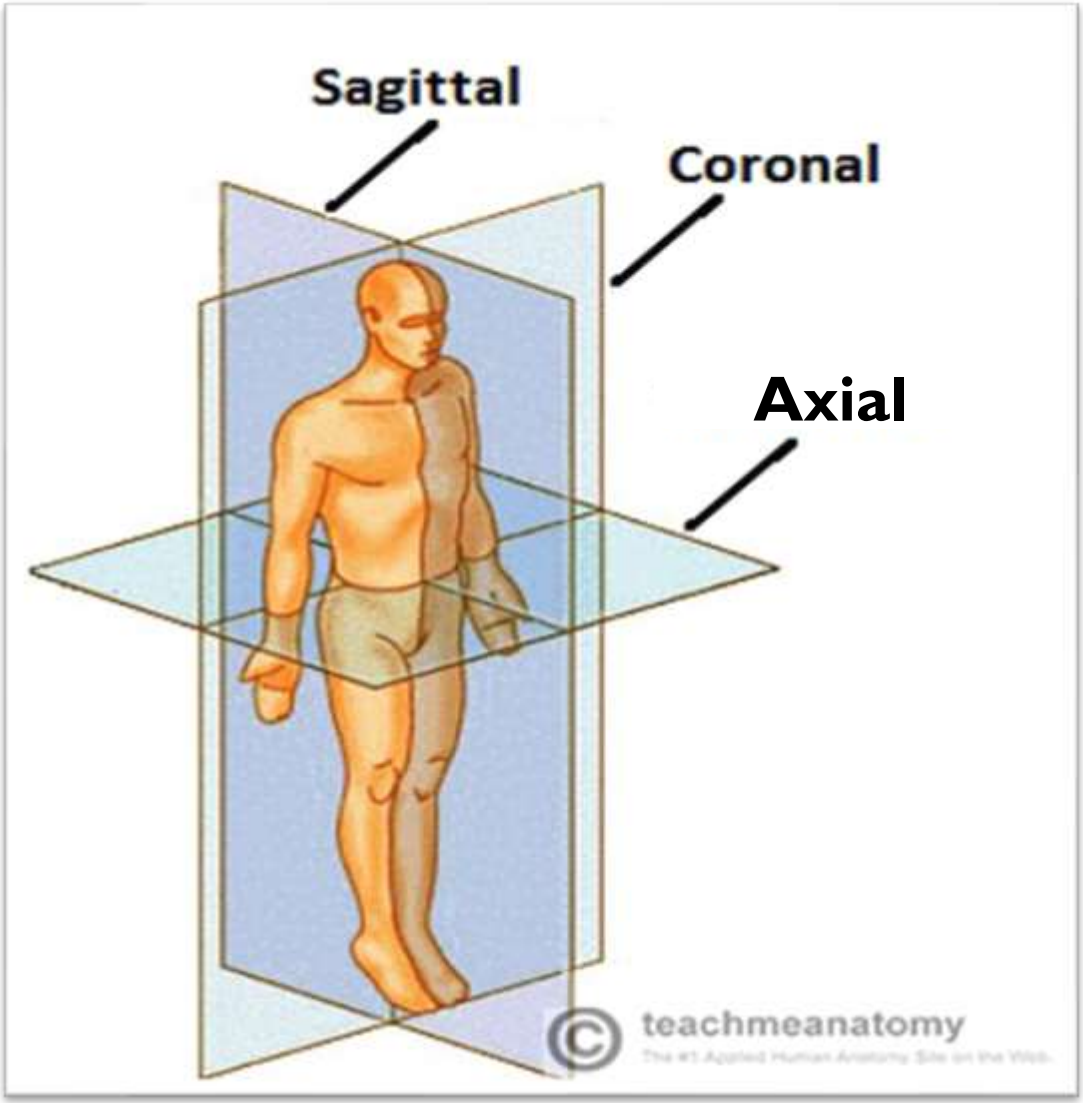
RAO = Right Anterior Oblique



LAO = Left Anterior Oblique



Planes of the body



Equipments

& Dark Room

X ray tube

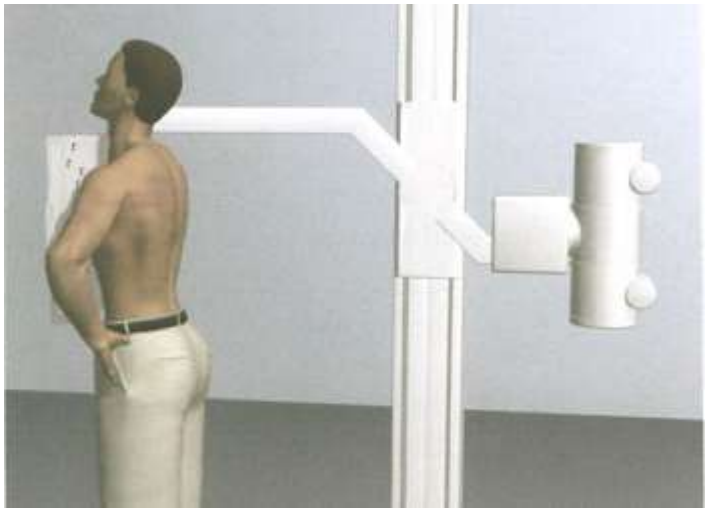
Cassette

Adjust

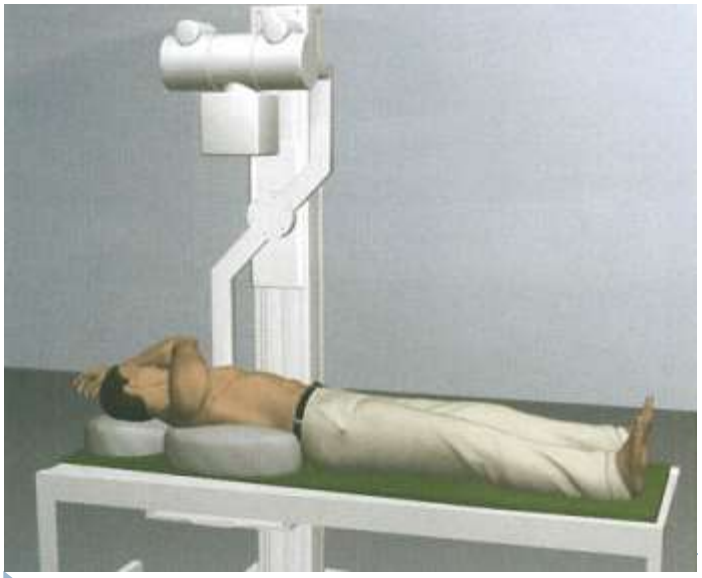
Position & Collimation

Adjust
kV – mA - & Time mAs

& ….On
(of 2 Clicks !!)

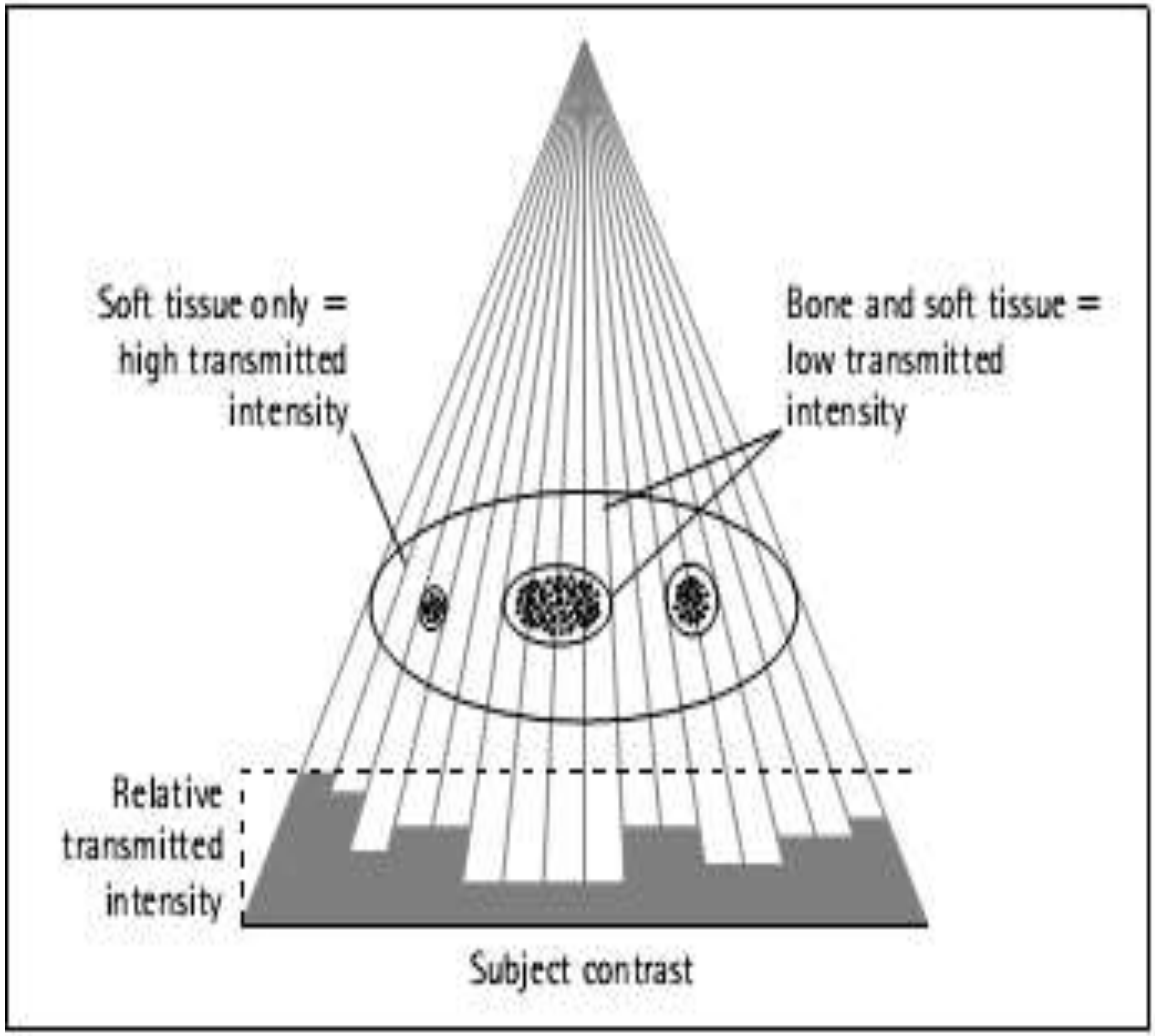


- Stand Bucky

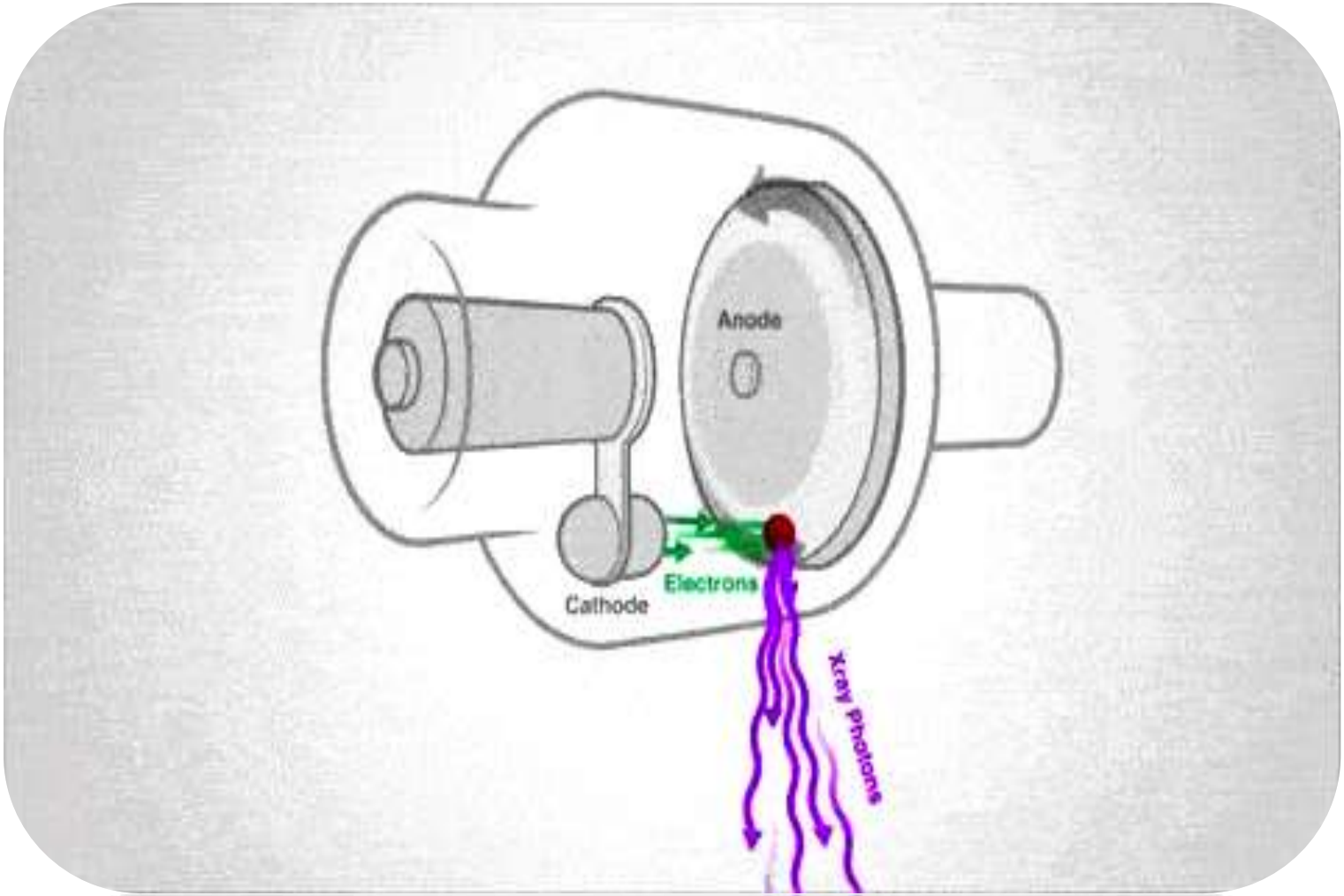


- Table Bucky

How & Why X ray Image Formed ?



Source : X ray Tube

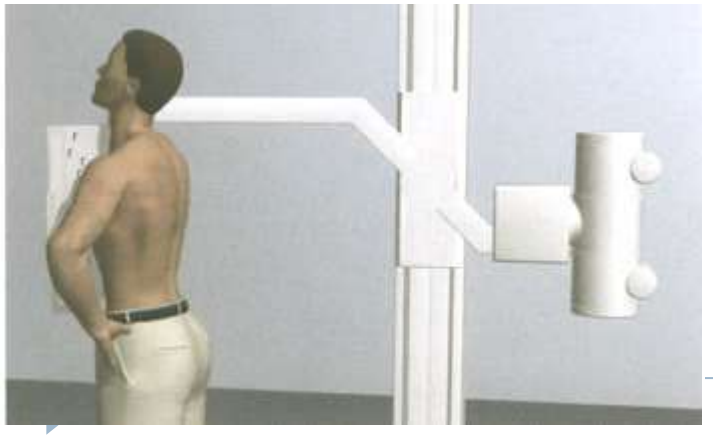


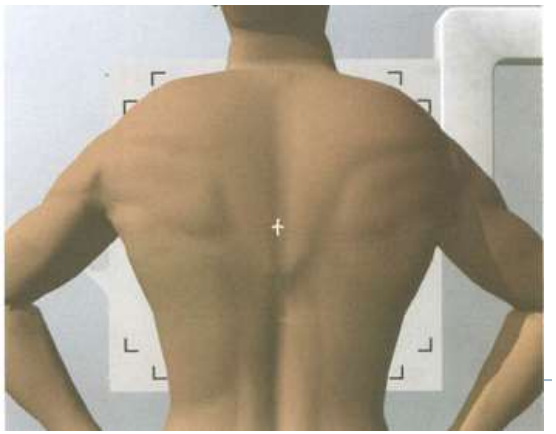
Steps of Imaiging X-ray Film

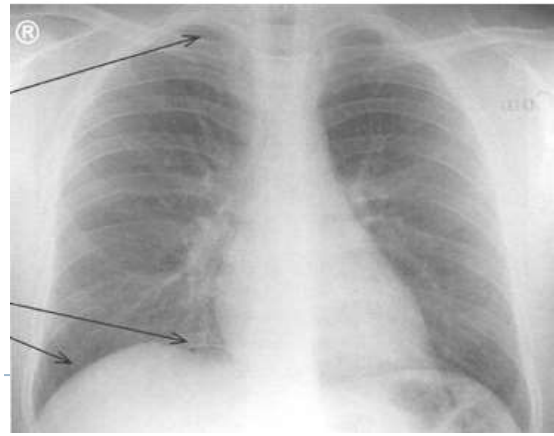
- The **cassette (Film)** size
- **Marker** : Right or Left.
- **Collimate** (the X-ray field).
- **Exposure factors : kV , mAs**
- **The projection** of the patient.

The projection of the patient

- **Position**
- **Central Ray** (center of the film)
- **Exposure factors** : kV, mAs
- **Limits** of the film: upper & lower
- **Bucky:** used or Not







& Now Mention Patient Position

Erect – AP

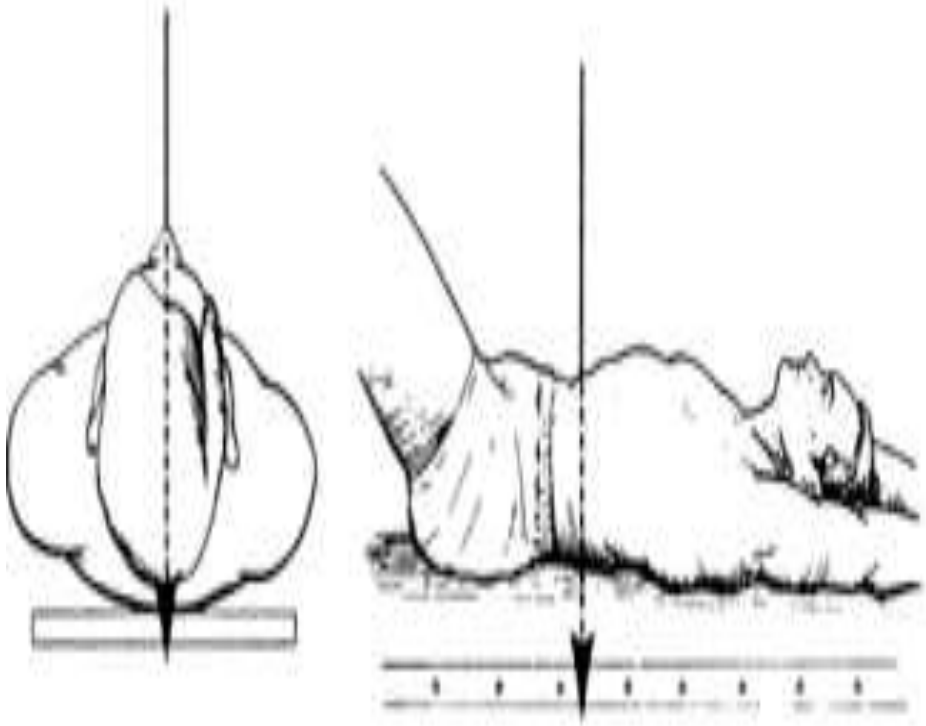
Erect – Rt lateral

Erect PA

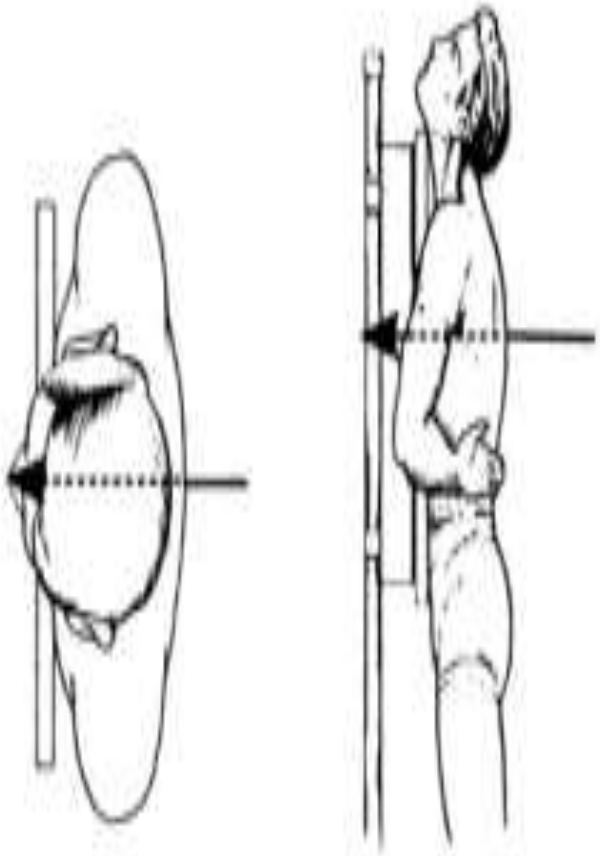
Supine AP

Summary

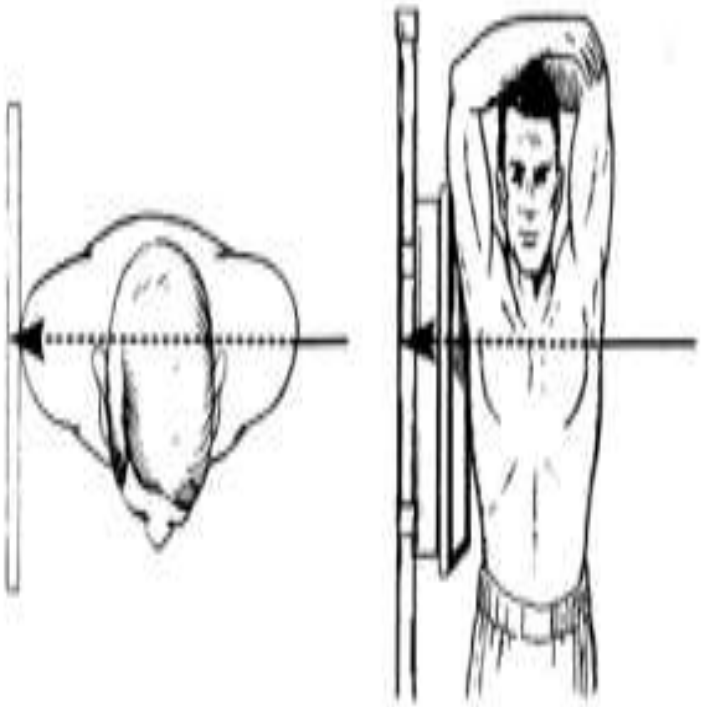
Anteroposterior Projection



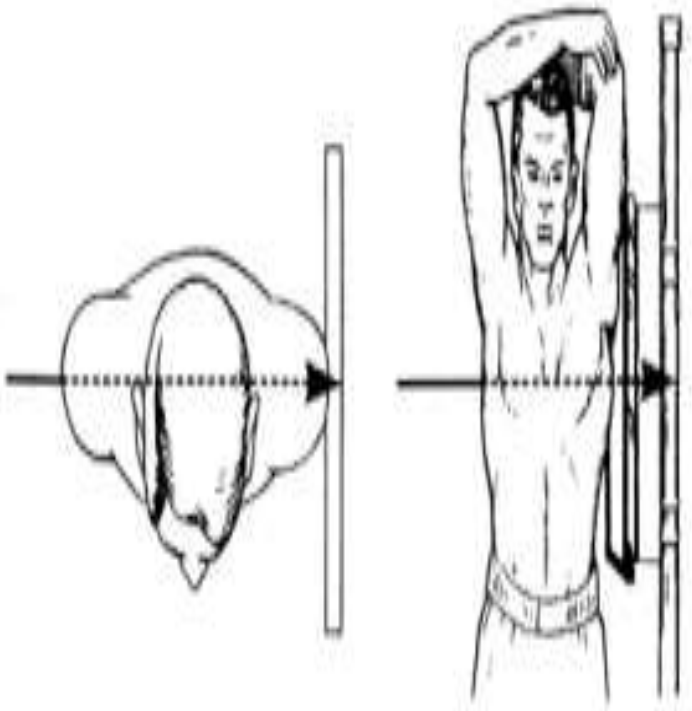
Posteroanterior Projection



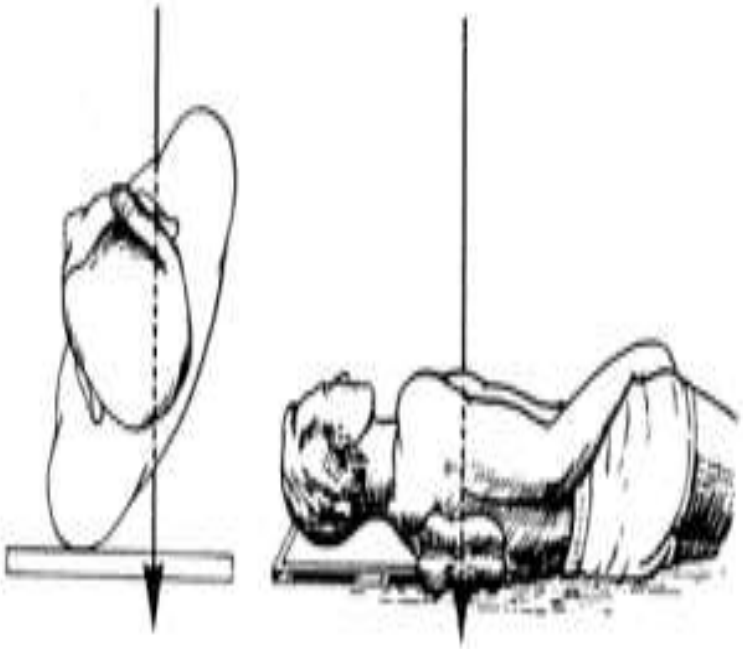
Right Lateral Position



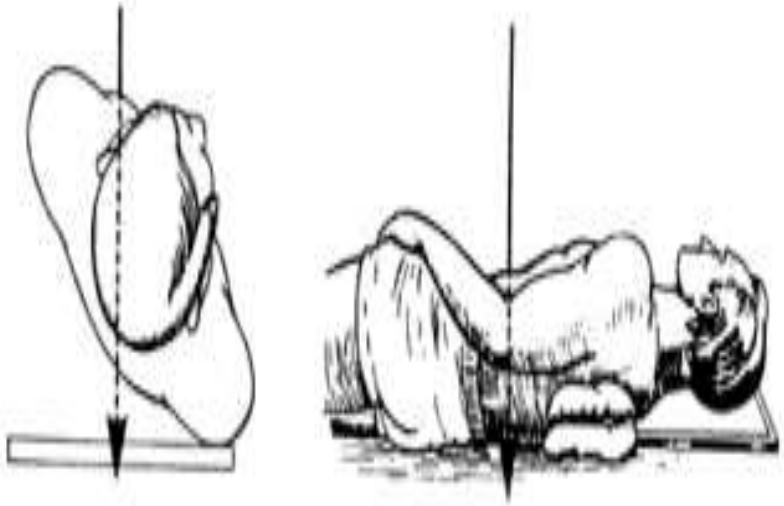
Left Lateral Position



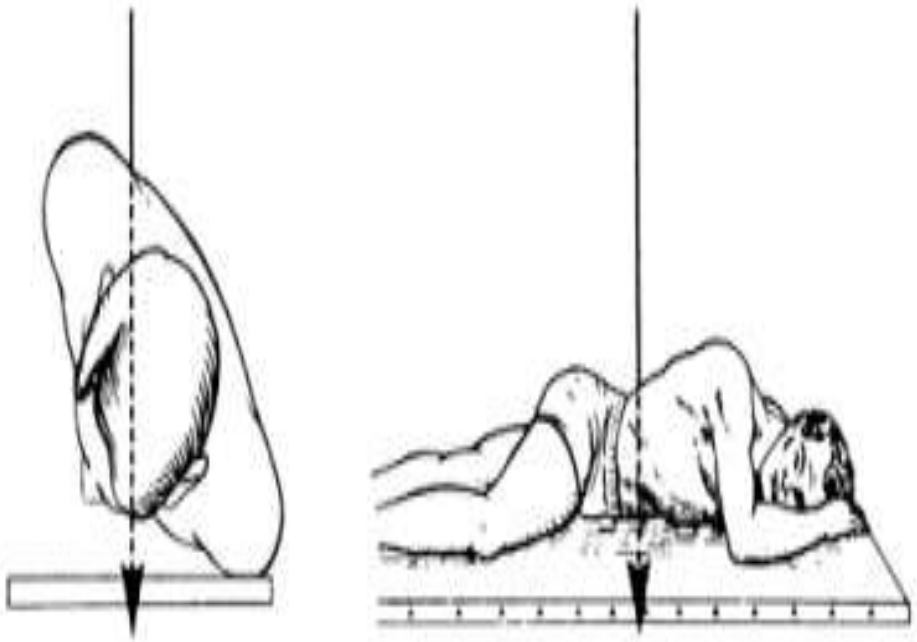
Left Posterior Oblique Position



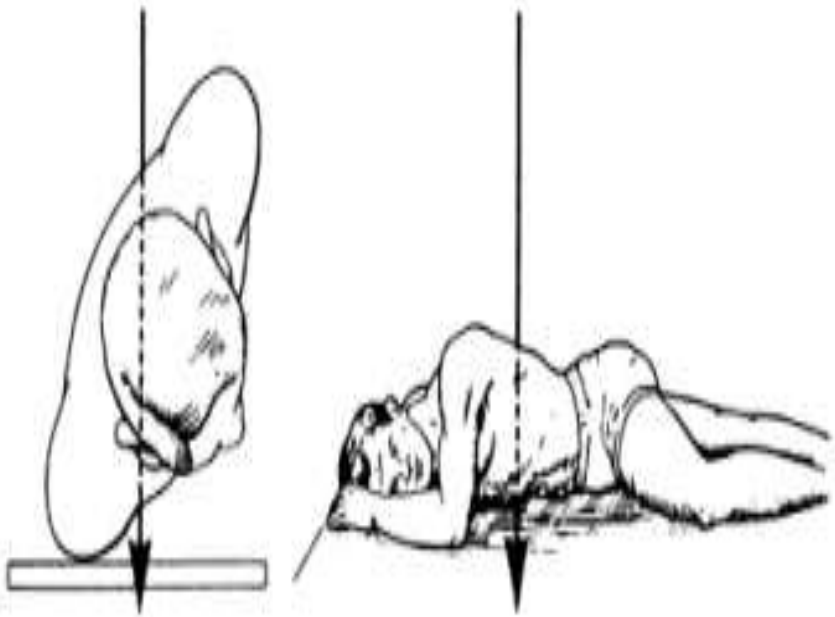
Right Posterior Oblique Position



Left Anterior Oblique Position



Right Anterior Oblique Position



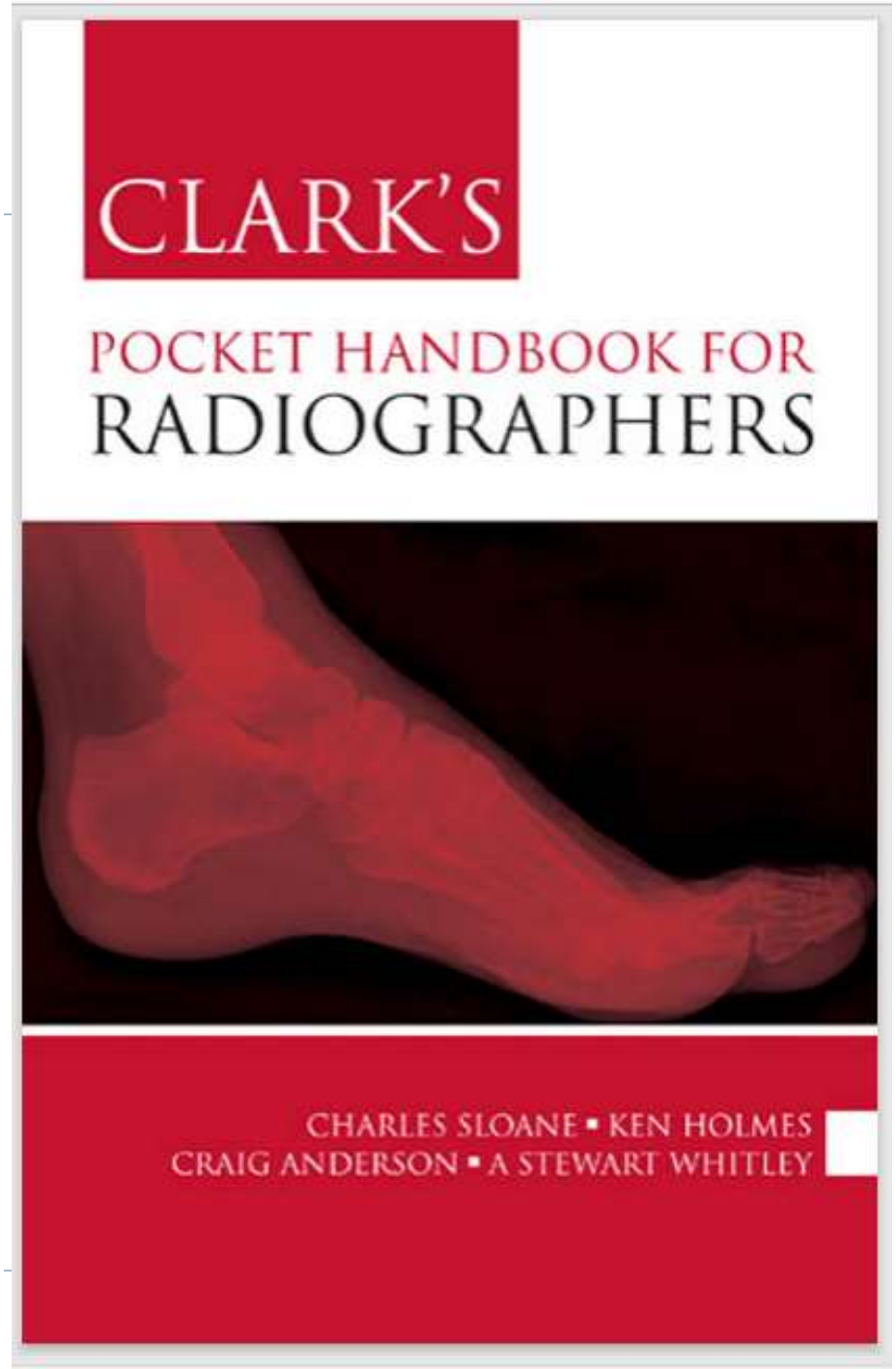
In any position :

- **Cassette size**
- **Position**
- **Central Ray** (center of the film)
- **Exposure factors** : kV, mAs
- **Limits** of the film: upper & lower
- **Bucky:** used or Not

CLARK'S POSITIONING IN RADIOGRAPHY

12TH EDITION

A. STEWART WHITLEY • CHARLES SLOANE • GRAHAM HOADLEY
ADRIAN D. MOORE • CHRISSIE W. ALSOP


CLARK'S
POCKET HANDBOOK FOR
RADIOGRAPHERS
CHARLES SLOANE ▪ KEN HOLMES
CRAIG ANDERSON ▪ A STEWART WHITLEY

The WHO manual of diagnostic imaging

RADIOGRAPHIC TECHNIQUE AND PROJECTIONS

World Health Organization
Geneva

ЗНАНИЕ

Dr. A.M.Abodahab - MD

2025