



# **CHEST X RAY**

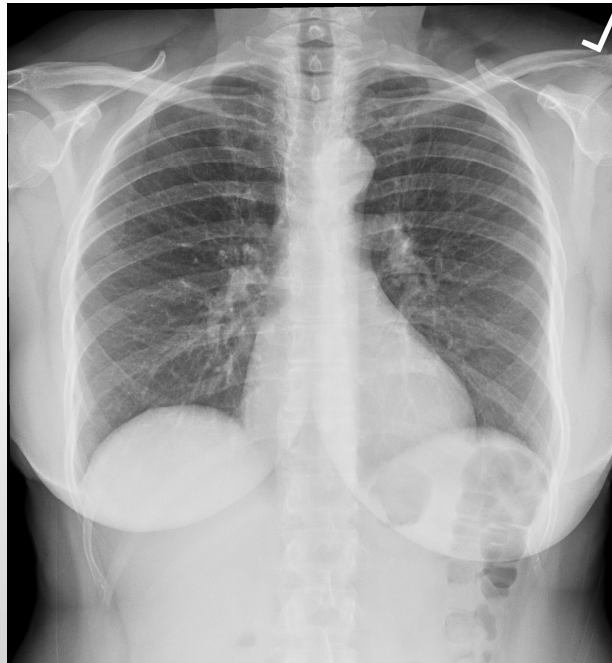
**BY**

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# CHEST X RAY

- CHEST AP
- CHEST PA
- CHEST RIGHT LATEAL
- CHEST LEFT LATERAL



# CHEST X RAY PA VIEW INDICATIONS

- CHEST PAIN
- FEVER
- INJURIES OF CHEST
- A BAD PERISTENT COUGH
- BREATHING DIFFICULTIES LIKE ASTHMA.
- TUBERCULOSIS ( TB OF LUNG )
- HEART FAILURE AND OTHER HEART PROBLEMS LIKE CARDIOMEGALY.
- POSITIONING OF ALL MEDICAL DEVICES LIKE RYLE'S TUBE, STENTS, PACEMAKERS, ANAESTHESIA EQUIPMENTS, INTUBATION, VALVES REPLACEMENT
- ALL PRE OP AND POST OP CASES.
- PREANESTHETIC SUPPORT.

- **TRAUMA CASES**
- **FRACTURES**
- **BONY ABNORMALITIES LIKE LYTIC LESIONS**
- **PLEURAL EFFUSION : FLUID CAN ACCUMULATE AROUND LUNGS.**
- **PNEUMOTHORAX : CONDITION WHERE AIR LEAKS INTO SPACE BETWEEN THE LUNGS AND CHEST WALL.**
- **PNEUMONIA : ALVEOLI FILLED WITH FLUID OR PUS.**
- **COPD: CHRONIC OBSTRUCTIVE PULMONARY DISEASE LIKE EMPHYSEMA AND CHRONIC BRONCHITIS.**  
**SYMPTOMES LIKE SHORTNESS OF BREATH , WHEEZING AND CHRONIC COUGH.**
- **TUMOURS OF LUNGS.**
- **MASTER HEALTH CHECK UP.**

# CHEST AP INDICATIONS

- **TRAUMA CASES.**
- **MULTIPLE RIB FRACTURES.**
- **FLAIL CHEST : IS A LIFE THREATENING SITUATION THAT OCCURS WHEN A SEGMENT OF THE RIB CAGE BREAKS DUE TO TRAUMA AND DETACHED FROM REST OF THE CHESTWALL. THE FLAIL SEGMENT MOVES IN OPP DIRECTION. ADVISE CT CHEST.**
- **POST OP CASES WHO ARE UNABLE TO WALK.**

# **CHEST LATERAL INDICATIONS**

- **CONFIRM LUNG PATHOLOGY LIKE,**
  - 1.OVERFILLING OF CHEST**
  - 2.PNEUMONIA**
  - 3.PNEUMOTHORAX**
  - 4.PLEURAAL EFFUSION.**



# CONTRAINDICATIONS OF X RAY

- **PREGNANCY**



## **PREPARATION**

- **COLLECT HISTORY FROM PATIENT.**
- **PATIENT IS ASKED TO REMOVE ALL RADIOPAQUE MATERIALS.**
- **WEAR HOSPITAL GOWN.**
- **SHIELDING IS PROVIDED TO PATIENT.**
- **AT THE TIME OF EXPOSURE , PATIENT IS ASKED TO TAKE BREATH. EXPOSURE TAKE DURING ARRESTED INSPIRATION**
- **IF FEMALE PATIENT COME TO X RAY , CHAPERONE IS NECESSARY.**

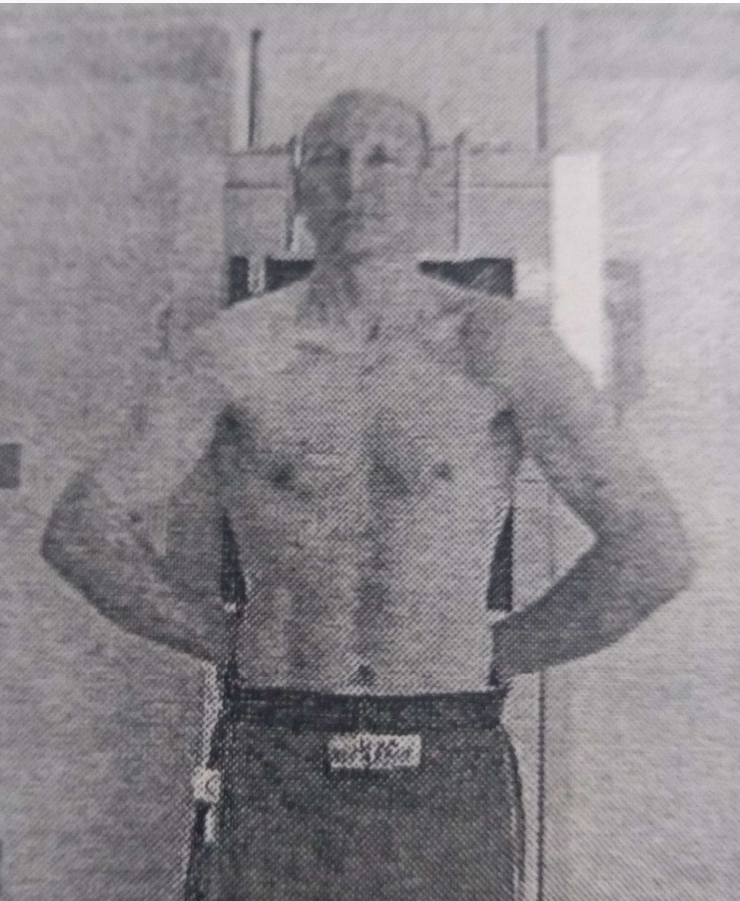


# CHEST X RAY PA POSITIONING

- PATIENT STANDS IN FRONT OF THE CHEST STAND.
- HIS NECK IS EXTENDED AND CHIN PLACED ON THE CHIN REST.
- HIS HANDS ARE PLACED ON THE BACK SIDE OF THE CHEST STAND. SHOULDERS ARE PRESSED FORWARDS AGAINST THE CASSETTE.
- PATIENT IS ASKED TO REMAIN MOTIONLESS.
- SIDE IS MARKED AND BEAM IS COLLIMATED.
- EXPOSURE DONE DURING ARRESTED INSPIRATION.



# CHEST X RAY AP POSITIONING



1. ERECT
2. SUPINE

**AP**



Supine AP (anteriorposterior) position, the x-ray tube is 40 inches from the patient.

# CHEST X RAY LATERAL POSITIONING

- PATIENT STANDS ERECT IN TRUE LATERAL POSITION, IN FRONT OF CHEST STAND.
- HIS SHOULDERS AND HANDS RAISED ABOVE HIS HEAD.
- PATIENT IS ASKED TO REMAIN MOTIONLESS.
- SIDE IS MARKED AND BEAM IS COLLIMATED.
- EXPOSURE DONE IN ARRESSTED INSPIRATION.



# CENTERING

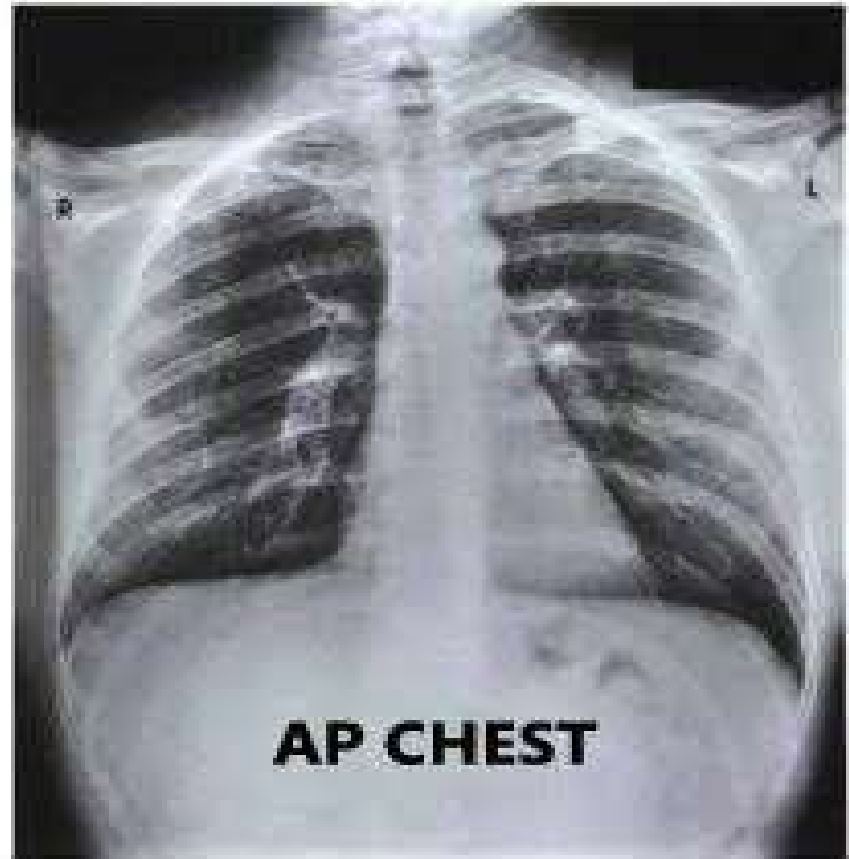
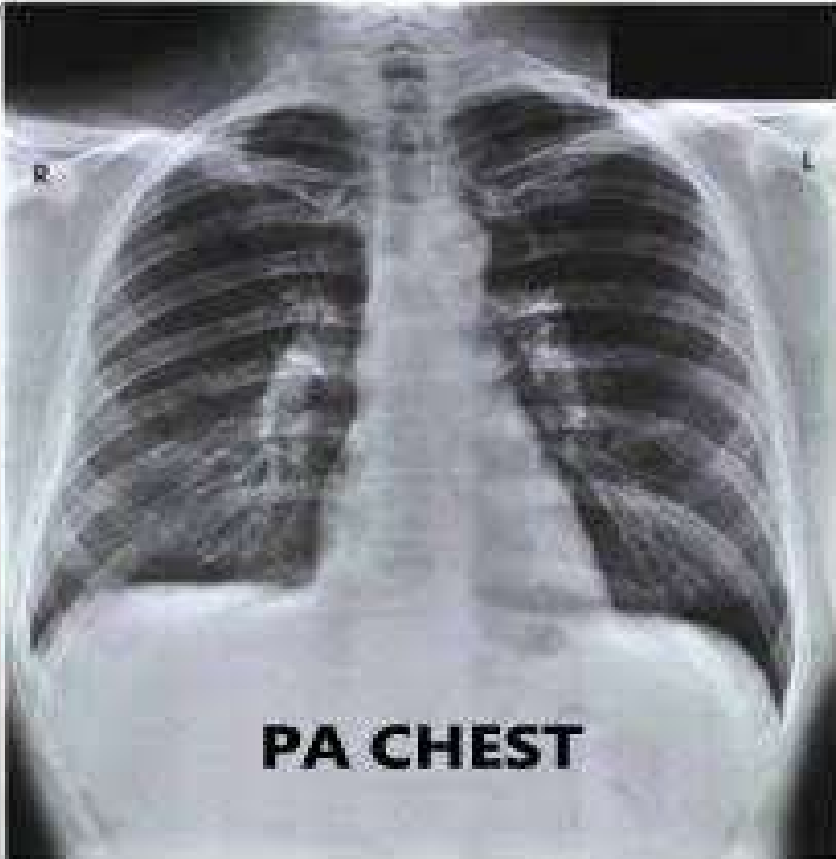
**CHEST X RAY PA :** CENTRAL RAY IS PASSED THROUGH THE LOWER BORDER OF SCAPULA OR D 8 VERTEBRA.

**CHEST X RAY AP:** CENTRAL RAY IS PASSED THROUGH THE STERNAL NOTCH.

**CHEST X RAY LATERAL:** CENTRAL RAY PASSED THROUGH MID AXILLARY LINE TO THE CENTRE OF CASEETTE.

# TECHNIQUE

1. **KVP : 66**
2. **MAS : 16**
3. **CASEETTE SIZE : 12" \* 10" OR 14" \* 17"**
4. **WITH OR WITHOUT GRID**
5. **FSS : LARGE ( FOCAL SPOT SIZE )**
6. **CAUTION**
7. **FFD : 150 CMS. ( FILM FOCAL DISTANCE)**





## ADDITIONAL VIEWS

### 1. DECUBITUS VIEW

### 2. LORDOTIC VIEW

### 3. EXPIRATORY VIEW

### 4. OBLIQUE VIEW.

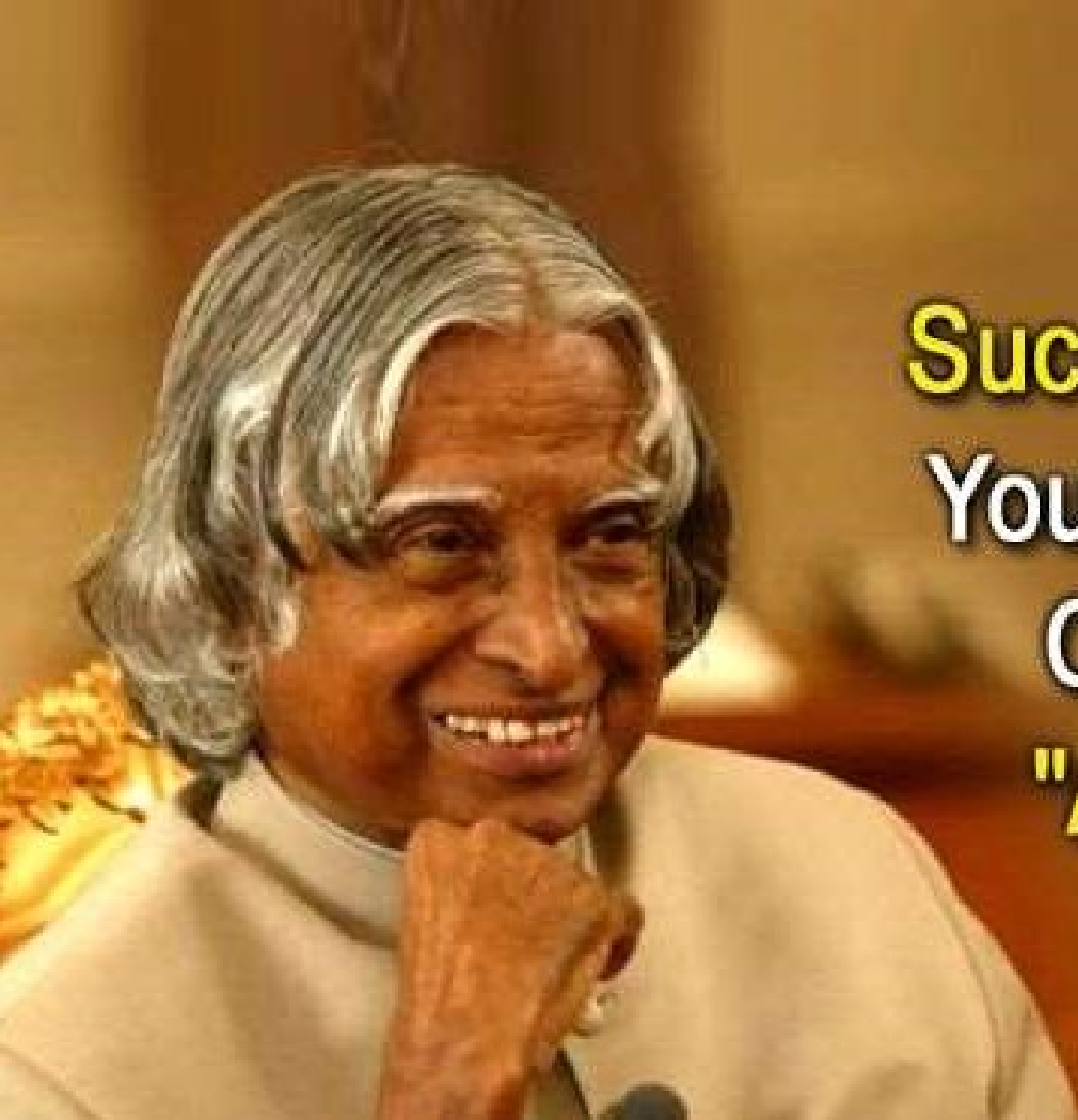
- **Decubitus** – taken while the patient is lying down, typically on his or her side. Useful for differentiating **pleural effusions** from consolidation (e.g. pneumonia) and loculated effusions from free fluid in the **pleural space**. In effusions, the fluid *layers out* (by comparison to an up-right view, when it often accumulates in the **costophrenic angles**).
- **Lordotic** view – used to visualize the **apex of the lung**, to pick up abnormalities such as a **Pancoast tumour**.
- **Expiratory** view – helpful for the diagnosis of **pneumothorax**.
- **Oblique** view – useful for the visualization of the ribs and sternum. Although it's necessary to do the appropriate adaptations to the x-ray dosage to be used.





# Apical view





Success Is When  
Your "Signature"  
Changes to  
"Autograph"

*-A P J Abdul Kalam*