**SCV\_xml**

**X-ray images**, based on the column names.

1. **Image Index**
   * A unique filename or identifier for each X-ray image.
2. **Finding Labels**
   * Medical conditions detected in the X-ray, such as pneumonia, tuberculosis, or "No Finding" (if nothing abnormal is detected).
3. **Patient ID**
   * A unique ID assigned to each patient, allowing tracking of multiple X-rays for the same person over time.
4. **Patient Age**
   * The age of the patient when the X-ray was taken.
5. **Patient Gender**
   * The gender of the patient, typically Male or Female.
6. **View Position**
   * The X-ray imaging position used when taking the scan.
   * Common positions:
     + **AP (Anteroposterior)**: The X-ray beam moves from front to back.
     + **PA (Posteroanterior)**: The beam moves from back to front (common for chest X-rays).
     + **Lateral**: Taken from the side.
7. **Original Image**
   * Likely metadata about the original X-ray image source (could be the dataset name or file location).
8. **Pixel Spacing [x, y]**
   * Represents the real-world distance (in millimeters) covered by each pixel in the image.
   * Helps in calculating actual sizes of organs, abnormalities, etc.
   * Example: [0.1, 0.1] (each pixel represents 0.1 mm in both X and Y directions)

**Page on data,** based on the images present in the DB

1. **1,12,121**
   * Total images present in DB
     + **No finding-**60361
     + **Cardiomegaly-** 2776
     + **Emphysema-** 2515
     + **Effusion-** 13316
     + **Hernia-**225
     + **Infiltration-**19893
     + **Mass-**5781
     + **Nodule-**6330
     + **Atelectasis-**11558
     + **Pneumothorax-**5301
     + **Pleural\_Thickening-**3384
     + **Pneumonia-**1430
     + **Fibrosis-**1685
     + **Edema-**2302
     + **Consolidation-**4666
2. **Desease**
   * **Atelectasis:**
     + Atelectasis is a condition where part or all of a lung collapses.
     + Understanding the importance of deep breathing exercises, coughing, and getting up and moving around after surgery or prolonged bed rest can help prevent atelectasis. Following post-operative care instructions closely is crucial.
   * **Cardiomegaly:**
     + Cardiomegaly refers to an enlarged heart.
     + Patients should focus on lifestyle modifications such as maintaining a healthy diet, regular exercise, managing stress, and adhering to prescribed medications to manage underlying conditions like high blood pressure or heart disease.
   * **Consolidation:**
     + Consolidation occurs when the airspaces in the lungs fill with fluid.
     + It's important for patients to understand the importance of completing antibiotic courses if prescribed, staying hydrated, and getting plenty of rest. In severe cases, hospitalization may be necessary.
   * **Edema:**
     + Edema is swelling caused by excess fluid trapped in body tissues.
     + Patients should monitor their salt intake, elevate affected limbs, wear compression garments if appropriate, and adhere to prescribed medications such as diuretics as directed by their healthcare provider.
   * Effusion:
     + Effusion refers to an abnormal accumulation of fluid in a body cavity, often seen in the lungs or abdomen.
     + Understanding the underlying cause of the effusion is important for appropriate management. Treatment may include draining the fluid, treating the underlying condition, or both.
   * **Emphysema:**
     + Emphysema is a type of chronic obstructive pulmonary disease (COPD) characterized by damage to the air sacs in the lungs.
     + Smoking cessation is crucial to slow down the progression of emphysema. Patients should also focus on maintaining good nutrition, staying active within their limits, and using inhalers or other medications as prescribed.
   * **Fibrosis:**
     + Fibrosis involves the thickening and scarring of connective tissue, often seen in the lungs.
     + Patients should understand the importance of avoiding exposure to environmental toxins, managing underlying conditions, and participating in pulmonary rehabilitation programs to maintain lung function.
   * **Hernia:**
     + A hernia occurs when an organ pushes through an opening in the muscle or tissue that holds it in place.
     + Treatment may involve lifestyle changes such as weight loss, avoiding heavy lifting, and wearing supportive garments. In some cases, surgical intervention may be necessary.
   * **Infiltration:**
     + Infiltration refers to the abnormal accumulation of substances such as cells, fluids, or foreign bodies within tissues or organs.
     + Treatment depends on the underlying cause of the infiltration. Patients should follow their healthcare provider's recommendations closely, which may include medication, drainage procedures, or monitoring for resolution.
   * **Mass:**
     + A mass refers to a lump or growth of tissue that may be benign or malignant.
     + Prompt evaluation by a healthcare provider is essential to determine the nature of the mass and appropriate treatment. This may involve imaging tests, biopsies, or surgical removal.
   * **Nodule:**
     + A nodule is a small, abnormal growth or lump.
     + Depending on the location and characteristics of the nodule, treatment may include monitoring for changes over time, further imaging or biopsy, or surgical removal.
   * **Pleural Thickening:**
     + Pleural thickening involves the thickening and scarring of the pleura, the membrane that surrounds the lungs.
     + Treatment may focus on managing underlying causes such as asbestos exposure or previous infections. In some cases, symptomatic relief with pain management may be necessary.
   * **Pneumonia:**
     + Pneumonia is an infection that inflames the air sacs in one or both lungs.
     + Patients should complete the full course of prescribed antibiotics, stay hydrated, get plenty of rest, and follow up with their healthcare provider as needed for monitoring.
   * **Pneumothorax:**
     + Pneumothorax occurs when air leaks into the space between the lungs and the chest wall, causing the lung to collapse partially or fully.
     + Depending on the severity, treatment may involve rest and observation, needle aspiration to remove air, or placement of a chest tube to drain the air and allow the lung to reinflate.