Reading Hospital School of Health Sciences

Medical Imaging Program

Clinical Case Study-Routine Chest

Student Name: CYNTIERA SWEEPER LATERAL PROJECTION

Due Date: 10/16/2020

Each student will be assigned clinical a seminar case study for each procedure taught within the semester. Case study review will allow demonstration of knowledge, practice of image critique skills, anatomical structure identification and pathology identification. Submit answers to the below questions for each projection within the case study in a Word.doc (*Each* projection assigned must have the below answers completed: Routine Chest will have 2 projections –PA and Lateral). Within the attached PPT, identify the required anatomy by sliding the corresponding arrow/letter to the anatomy requested. Completed answers to the questions below and anatomical structure labeling within the PowerPoint must be uploaded into the Edvance 360 dropbox under that designated body section. *Please be sure to **fully** answer each line item identified within the assignment below.*

Answer #1-#9 for <u>each</u> assigned projection

1. Is orientation of the image correct? YES
    a. If orientation is incorrect, explain why.
    b. State how to modify the orientation. (flip, rotate, etc)
2. Is all necessary anatomy included? YES
    a. Explain the anatomy required by evaluation criteria. And if it is all included in the image Hilum, ribs, vertebral column, sternum, trachea. All anatomy is included
    b. Drag the arrows with letters on the Case Study slides to identify anatomical structures within each slide.
3. Is the body part centered appropriately? yes it is centered
    a. Where should the central ray enter for this projection? Central ray should be at T-7, top of IR should be about 1.5-2'' above shoulders
    b. If centering is incorrect, explain how you would move the central ray to achieve proper centering. (inferiorly, laterally, etc.)
4. Is the body part positioned accurately? No, the body is rotated
    a. If the body part is not positioned accurately:
        i. Explain what anatomy demonstrates inaccurate positioning (over or under-rotation etc). the ribs are rotated posterior showing elongation, and the diaphragm shadow shows the hip being not straight
        ii. State the modification of positioning necessary to meet evaluation criteria. Rotate the patient to shift the right side forward making them straight. Make sure hips are forward and even.
5. Is the collimation and IR orientation as required? yes
    a. State the proper collimation size to be used. 14 x 17 portrait
    b. State how the IR should be oriented to the patient. perpendicular to the patient, on their left side
6. Is the proper marker(s)/annotation(s) utilized on the image? yes
    a. State if the marker was placed in the proper location. left marker is in the top right corner of the image
    b. State if any additional marker(s)/annotation(s) are required. beads are present
7. Is the exposure within the appropriate EI range? yes
    a. Identify the correct technique. 120 kvp, AEC center cell on, 72 SID
    b. If not within the appropriate EI range, explain specifically how to adjust the technical factors to bring the EI into range.
8. Are there any artifacts present on the image? yes

     a.   If an artifact is present, list which artifact(s) would make the image not acceptable and an additional exposure to the patient necessary. the patients arm needs to be raised higher

9. Overall, is this image ACCEPTABLE or NOT ACCEPTABLE? Not acceptable

     a.   State the reasons this image will require the patient to have a second exposure. Deep breaths taken, so 10 ribs can be seen, rotation is off and its hard to see the intervertebral foramina standing straight will help and also move the arms out of the image as well