

Dual Energy Imaging

Background:

Dual energy imaging enables the acquisition of two posterior-anterior (PA) images of the chest separated by approximately 150 milliseconds. These two acquisitions provide the radiologist with:

1. The standard PA radiograph
2. A PA image of the chest with the bones removed (known as the soft-tissue image)
3. An image of the skeletal system of the chest (referred to as the bone image).



Chest pathology is frequently missed because structures such as bones obstruct the detection, however the pathology is often visible in retrospect. Dual energy images improve the conspicuity of chest pathology by removing the bone structures and provide calcification information in the bone image, potentially improving specificity.

Additional Information:

A dual energy exam is longer than a standard chest X-ray exam by approximately 150 ms and a slightly increased dose in order to get the maximum benefits from dual energy.

The advantages of providing **more clinical information** to the radiologist and the potential **reduction in follow-up procedures** far exceed this minor dose increase to the patient.

Procedure:

1. Dual energy exams may be performed on AP/PA CXR.
2. Dual Energy studies may be performed in the Ambulatory Care Clinic at the request of any ordering physician.
3. Patients from the FWCC may be transferred to the ACC with any physician order for the procedure.
4. Dual Energy MAY be performed in the Emergency Room Radiology Suites after an order is placed on Net Access and upon approval from the ER staff radiologist or resident.

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5. In-patients will be done in the ER and must receive approval from the Radiology Chest service.
6. There are no additional charges for the dual energy imaging.
7. There are no additional ICD-9 codes.
8. The order should be entered as a Dual Energy CXR through the hospital computer system.

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