



BONE DENSITY SCAN

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Radiology Equipment Technician I (X-Ray)

Fall semester

Week 10

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Outline

- BONE DENSITY SCAN
- DEXA SCAN

Objectives

The student should be able to do the followings;

- Explain bone density scan
- Mention the idea of dexa scan

BONE DENSITY SCAN

- Dual-energy x-ray absorptiometry (DXA or DEXA) is a scan that is used to determine the density of bone to assess its strength.
- It is a standard method for diagnosing osteoporosis; used in combination with risk factors, it is also considered an accurate way to estimate fracture risk.



BONE DENSITY SCAN

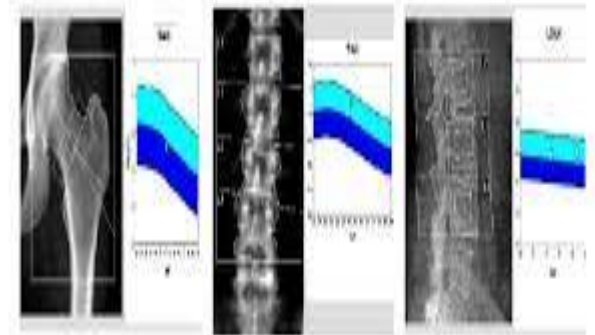
- DEXA works by sending two low-dose X-rays which are absorbed differently by bones and soft tissues.
- The density profiles from these X-rays are used to calculate bone mineral density.
- The lower the density, the greater the risk of fracture.
- DEXA is painless and takes about 10 minutes.
- The amount of radiation is very low, about 10 percent of a normal chest X-ray.



DEXA Scan

- DEXA can determine bone mineral density for any bone but is most commonly used for hip and lumbar (lower) spine.
- The examination can also be used to perform vertebral fracture assessment.
- This screening is used to uncover bone problems of the skeleton, for example in people who have unexplained back pain or who have experienced a loss in height of more than an inch in a year. Vertebral fractures are often asymptomatic.

DXA (DEXA) Scan



References

- Bushong S. C., . (2017). *Radiologic science for technologists*. St. Louis, Missouri: Elsevier.
- Guy C. and Ffytche D. (2005). *An Introduction to The Principles of Medical Imaging*. Imperial College Press
- Hendee W., and Ritenour E.,. (2002). *Medical Imaging Physics*. Willy-Liss,Inc
- **University of California, San Francisco:**

<https://radiology.ucsf.edu/patient-care/services/bone-density-scan-dxa-dexa>