

Chapter 119

Normal Bone Anatomy



Justin Guan

Name the outer, dense, and compact portion of the bone that completely envelopes the inner cancellous portion.	Cortex
What does this portion of the bone look like when viewed in tangent on conventional radiograph?	A dense white band/solid line along the outer margin
Name the inner portion of the bone that is cancellous and arranged in a trabecular pattern.	Medullary cavity
What does this inner portion of the bone look like on conventional radiograph?	A core of gray with fine network of bony trabecular markings that appear less dense than the outer cortex

(continued)

J. Guan (✉)

Department of Radiology, University of Iowa Hospitals and Clinics,
Iowa City, IA, USA

e-mail: justin-guan@uiowa.edu

What is the corticomedullary junction?	The region where the inner medullary cavity meets the outer cortex
What is the name of the two views directed at 90 degrees from each other, which is included in almost all conventional radiographic evaluations?	Orthogonal views
Name the region at the end of a long bone that is formed from a secondary center of ossification?	Epiphysis
Name the region forming the shaft of a long bone that is formed from a primary center of ossification?	Diaphysis
Name the narrow region of the bone between the diaphysis and epiphysis containing the growth plate.	Metaphysis
Name the region of hyaline cartilage, located between the epiphysis and metaphysis of growing bones that ossifies and adds length to the bone.	Epiphyseal plate/physeal plate/physis/growth plate

Further Reading

- Brant WE, Helms CA. *Fundamentals of diagnostic radiology*. Philadelphia: Lippincott Williams & Wilkins; 2012.
- Greenspan A. *Orthopedic radiology: a practical approach*. 6th ed. Philadelphia: Wolters Kluwer Health-Lippincott Williams; 2014.
- Harris JH, Harris WH. *The radiology of emergency medicine*. 5th ed. Philadelphia: Wolters Kluwer Health-Lippincott Williams; 2013.
- Herring W. *Learning radiology: recognizing the basics*. 2nd ed. Philadelphia: Mosby; 2012.

Manaster BJ, May DA, Disler DG. Musculoskeletal imaging: the requisites. 4th ed. Philadelphia: Saunders; 2013.

Resnick D. Diagnosis of bone and joint disorders. 4th ed. Philadelphia: Saunders; 2002.