

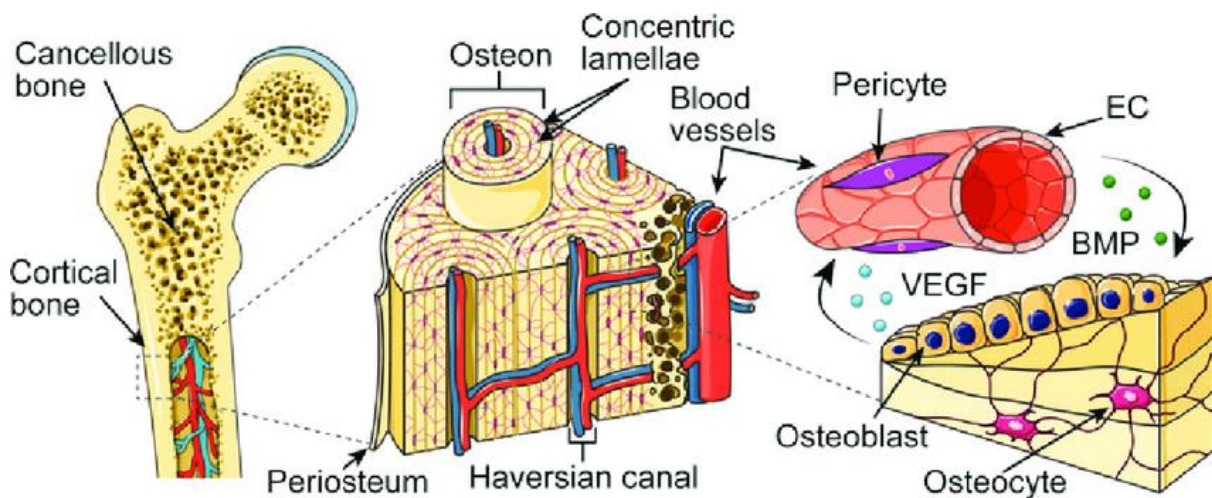
Puzzle Questions (Solve in Groups):

1. **True/False:** Bone is defined as a soft connective tissue that provides support to the body. (True or False?)
2. **Fill in the Blank:** In anatomy, bone is a specialized _____ tissue that forms the skeleton, providing support, protection, and mineral storage.
3. **Multiple Choice:** Which of the following best defines bone according to the BPT syllabus context? a) A fluid-filled organ for circulation b) Hard connective tissue forming the skeletal framework c) A type of muscle for movement d) Nervous tissue for signaling
4. **Short Answer:** What are the main functions of bone in relation to physiotherapy? (Hint: Include support, protection, and relevance to movement.)
5. **True/False:** Bones are classified into five main types: long, short, flat, irregular, and sesamoid. (True or False?)
6. **Fill in the Blank:** _____ bones are longer than they are wide and are found in limbs, such as the femur.
7. **Multiple Choice:** Which bone classification includes examples like the vertebrae and facial bones? a) Long bones b) Short bones c) Flat bones d) Irregular bones
8. **Short Answer:** List the classifications of bones with one example each.
9. **True/False:** Microscopic anatomy of bone includes structures like osteons, which are found in compact bone. (True or False?)
10. **Fill in the Blank:** In microscopic anatomy, _____ are bone-forming cells, while osteoclasts are involved in bone resorption.
11. **Multiple Choice:** In the BPT syllabus, microscopic anatomy is part of bone study. Which structure is the basic unit of compact bone? a) Trabeculae b) Haversian system (osteon) c) Periosteum d) Medullary cavity
12. **Short Answer:** Describe the two main types of bone tissue in microscopic anatomy and their locations.
13. **True/False:** The blood supply to bones comes solely from arteries entering through the nutrient foramen. (True or False?)
14. **Fill in the Blank:** Bones receive blood supply from periosteal, nutrient, and _____ arteries.
15. **Multiple Choice:** Which aspect of bone would be most relevant when considering healing after a fracture in a physiotherapy case? a) Classification only b) Blood supply (for nutrient delivery to repair site) c) Definition only d) Examples of bones

Discussion (Post-Puzzle):

- How can ignoring bone blood supply lead to complications in rehabilitation (e.g., delayed union)?
- Apply to a case: A patient with a femoral fracture—how does microscopic anatomy guide recovery timelines?
- Debate: Should BPT curriculum integrate more imaging for bone blood supply beyond basics?

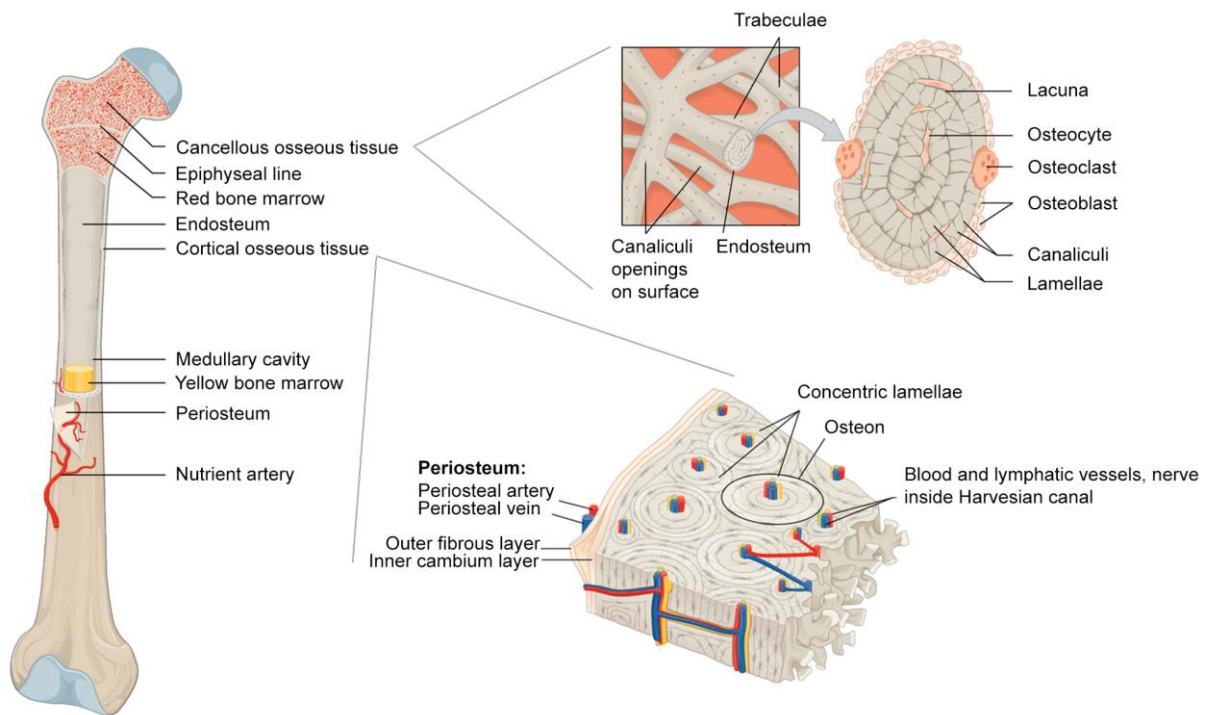
Here is a diagram illustrating bone classification and microscopic anatomy:



[researchgate.net](https://www.researchgate.net)

General anatomy of bone. A macroscopic-to-microscopic schematic.

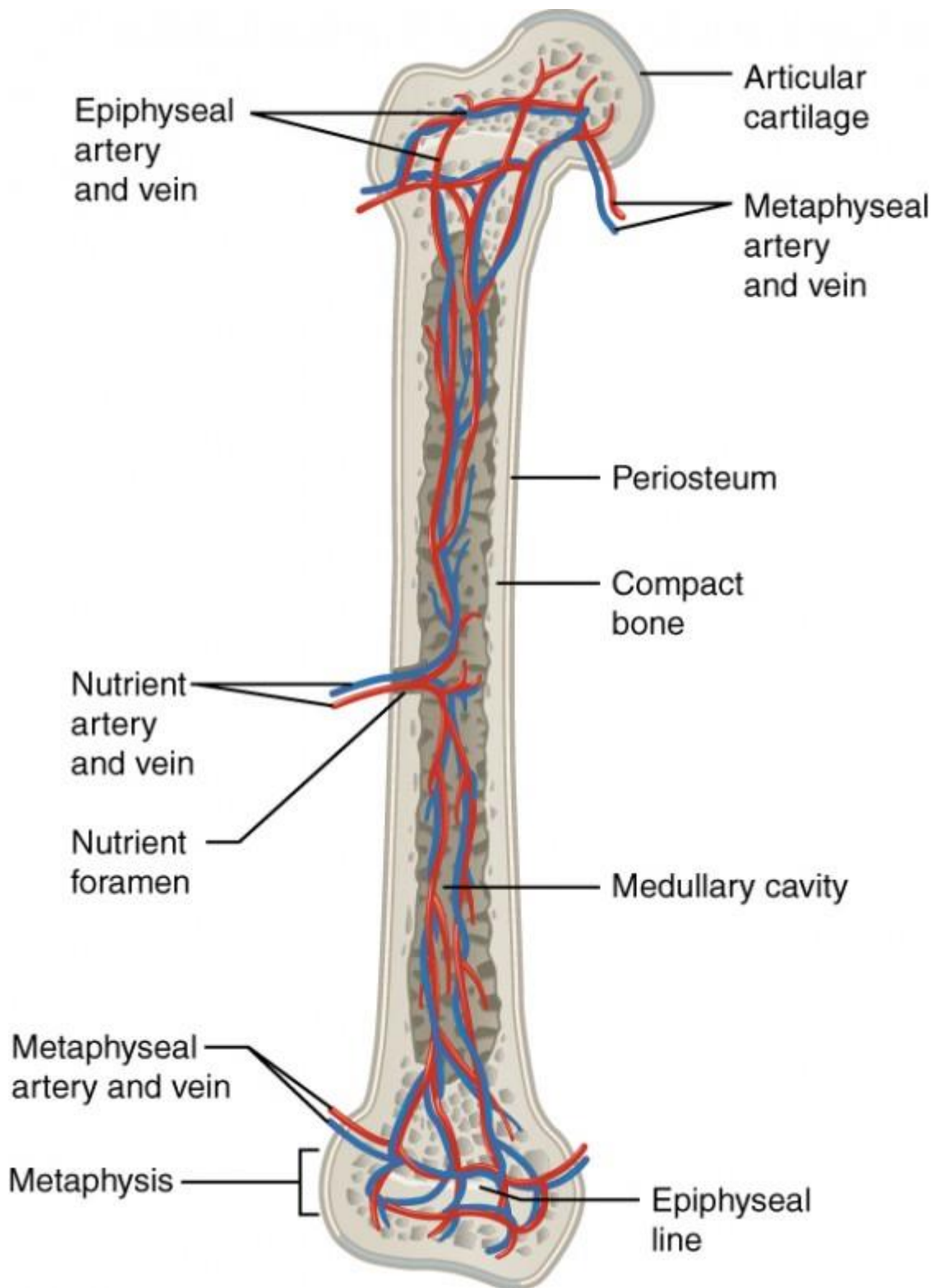
And here is a diagram of bone components:



mdpi.com

The Components of Bone and What They Can Teach Us about Regeneration

Finally, a diagram focusing on blood supply to bone:



courses.lumenlearning.com

Bone Structure | Anatomy

Answers:

1. False (Bone is hard connective tissue, not soft.)
2. Connective
3. b) Hard connective tissue forming the skeletal framework
4. Provides support and protection, enables movement via joints, stores minerals, produces blood cells; in physiotherapy, essential for assessing fractures and load-bearing capacity.
5. True
6. Long
7. d) Irregular bones
8. Long (e.g., femur), Short (e.g., carpals), Flat (e.g., scapula), Irregular (e.g., vertebrae), Sesamoid (e.g., patella).
9. True
10. Osteoblasts
11. b) Haversian system (osteon)
12. Compact bone (dense, outer layer with osteons) and spongy (cancellous) bone (inner, trabecular structure for lightness and strength).
13. False (It includes periosteal, nutrient, metaphyseal, and epiphyseal arteries.)
14. Metaphyseal (or epiphyseal)
15. b) Blood supply (for nutrient delivery to repair site)