

LESSON 3

- **Microscopic Anatomy of Bone**

Microscopic Anatomy of Bone

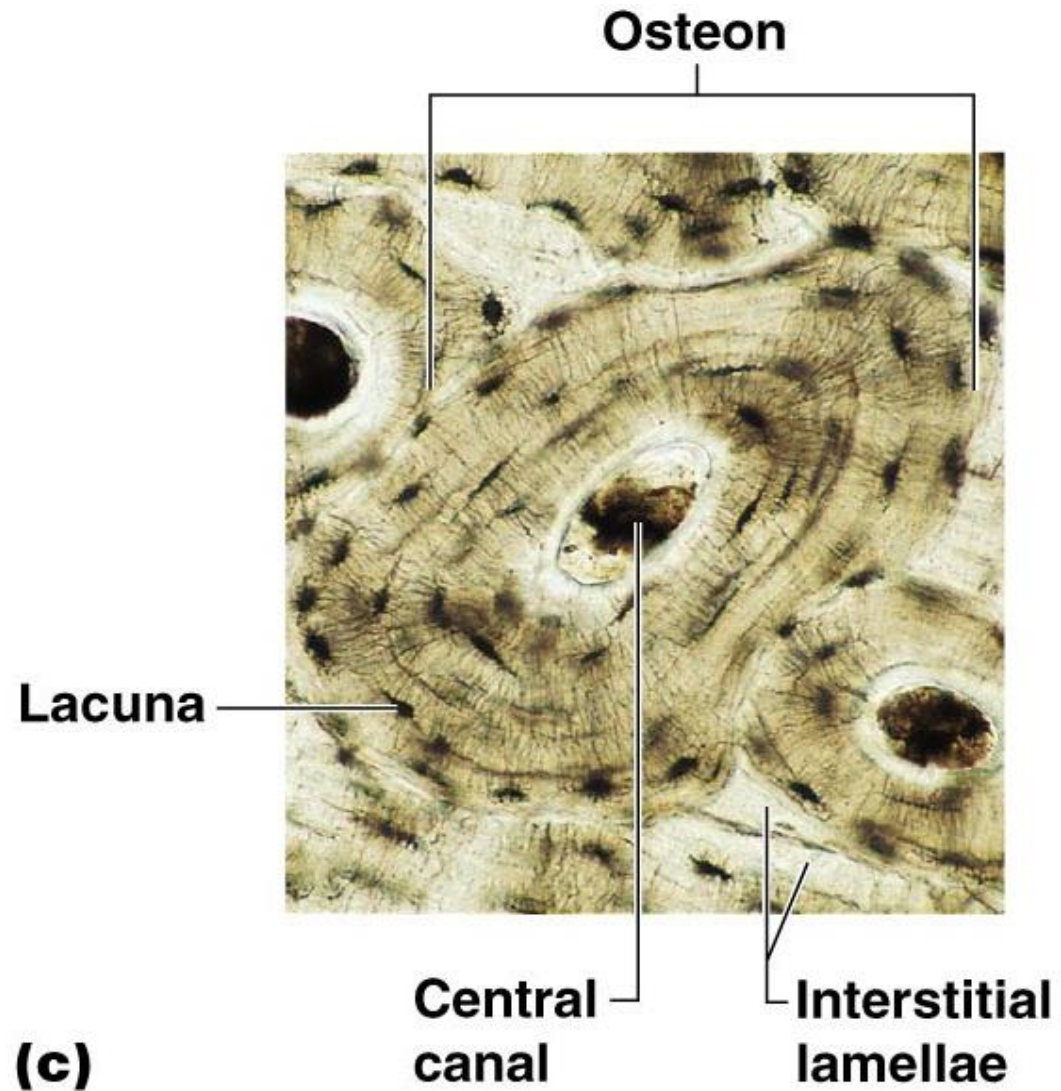


Figure 5.3c

Microscopic Anatomy of Bone

- **Osteon (Haversian system)**
 - A unit of bone containing a **central canal** and **matrix rings**
- **Central (Haversian) canal**
 - Opening in the **center** of an **osteon**
 - Carries **blood vessels** and **nerves**
- **Perforating (Volkman's) canal**
 - Canal **perpendicular** to the central canal
 - Carries **blood vessels** and **nerves**

Microscopic Anatomy of Bone

- **Lacunae**
 - Cavities containing bone cells (**osteocytes**)
 - Arranged in **concentric rings**
- **Lamellae**
 - **Rings** around the central canal
 - Sites of lacunae

Microscopic Anatomy of Bone

- **Canaliculi**
 - **Tiny canals** that radiate from the central canal to lacunae
 - Form a **transport system** connecting all bone cells to a nutrient supply

Microscopic Anatomy of Bone

[Video: Microscopic Anatomy of Compact Bone](#)

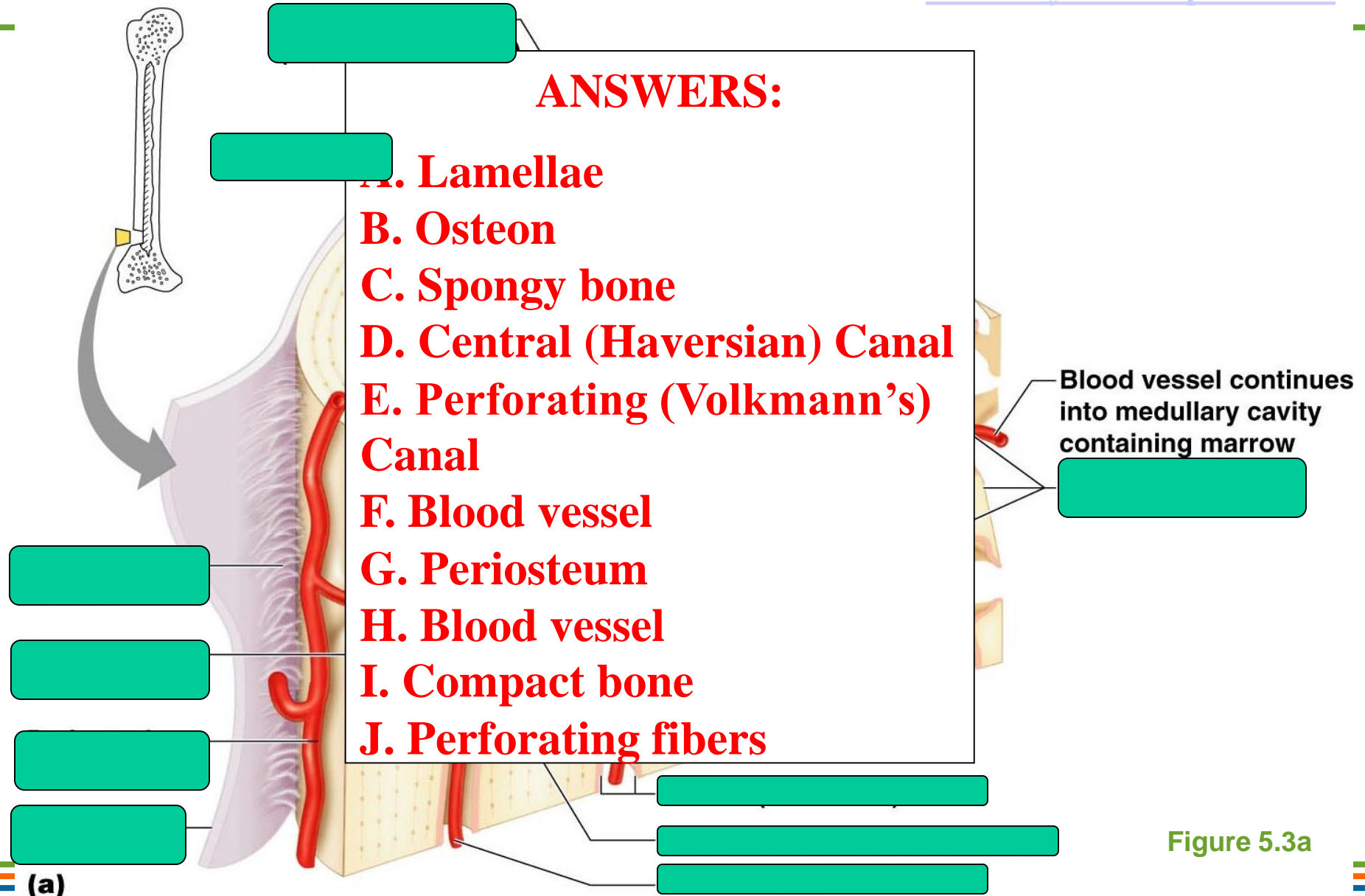


Figure 5.3a

Microscopic Anatomy of Bone

[Video: Microscopic Anatomy of Compact Bone](#)

ANSWERS:

- A. Lamellae**
- B. Osteon**
- C. Spongy bone**
- D. Central (Haversian) Canal**
- E. Perforating (Volkmann's) Canal**
- F. Blood vessel**
- G. Periosteum**
- H. Blood vessel**
- I. Compact bone**
- J. Perforating fibers**

Figure 5.3a

Microscopic Anatomy of Bone

[Video: Microscopic Anatomy of Compact Bone](#)

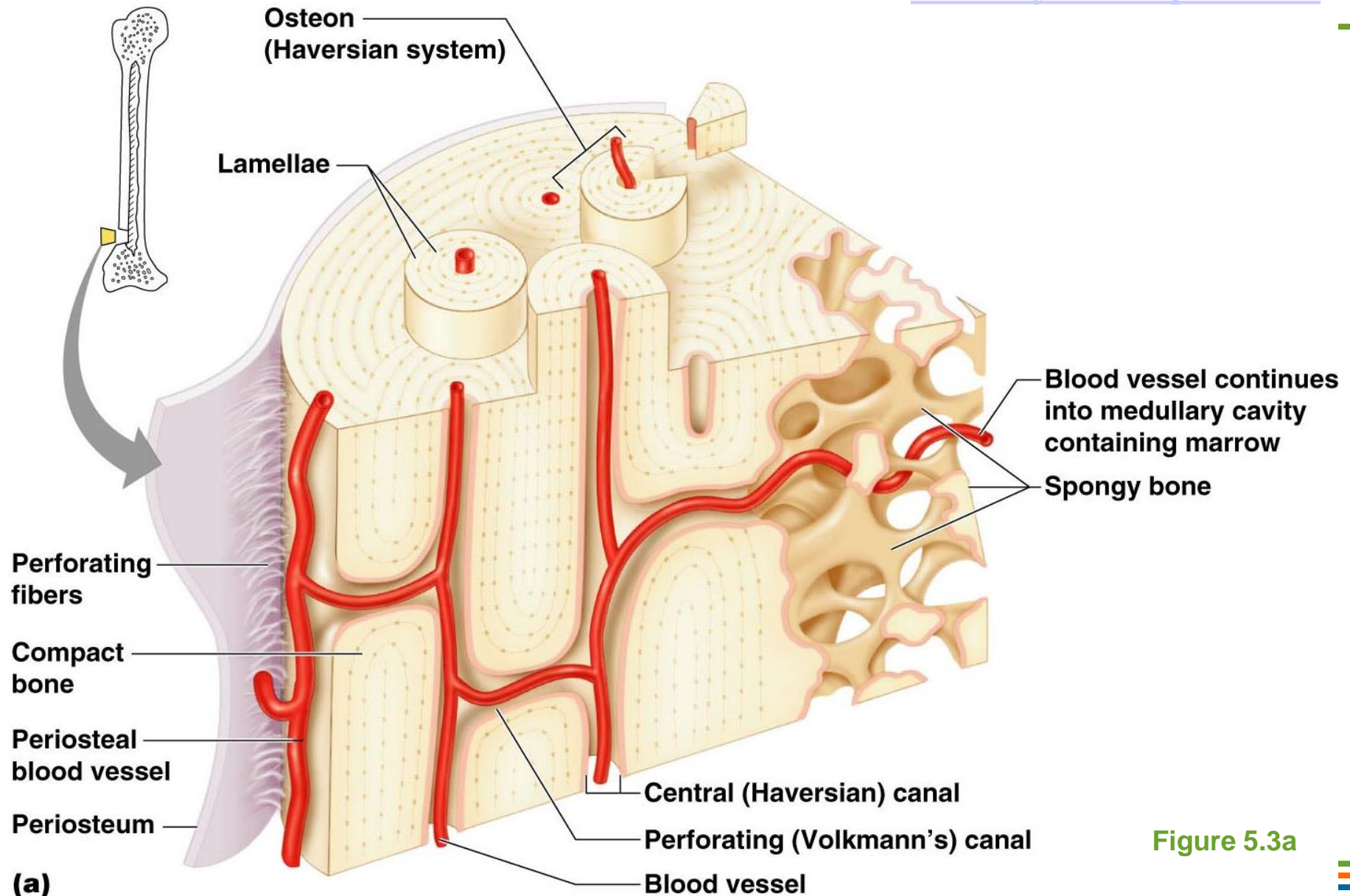
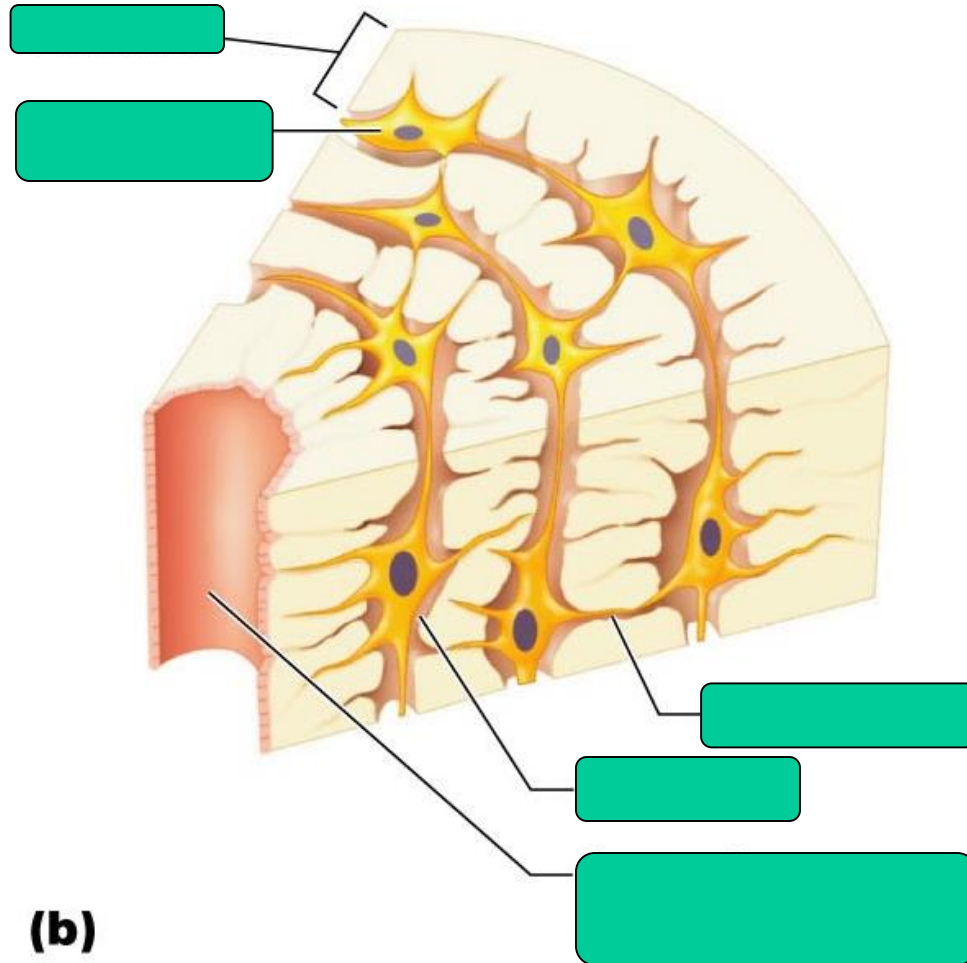


Figure 5.3a

Microscopic Anatomy of Bone

[Video: Osteon Model](#)
(compact bone)



(b)

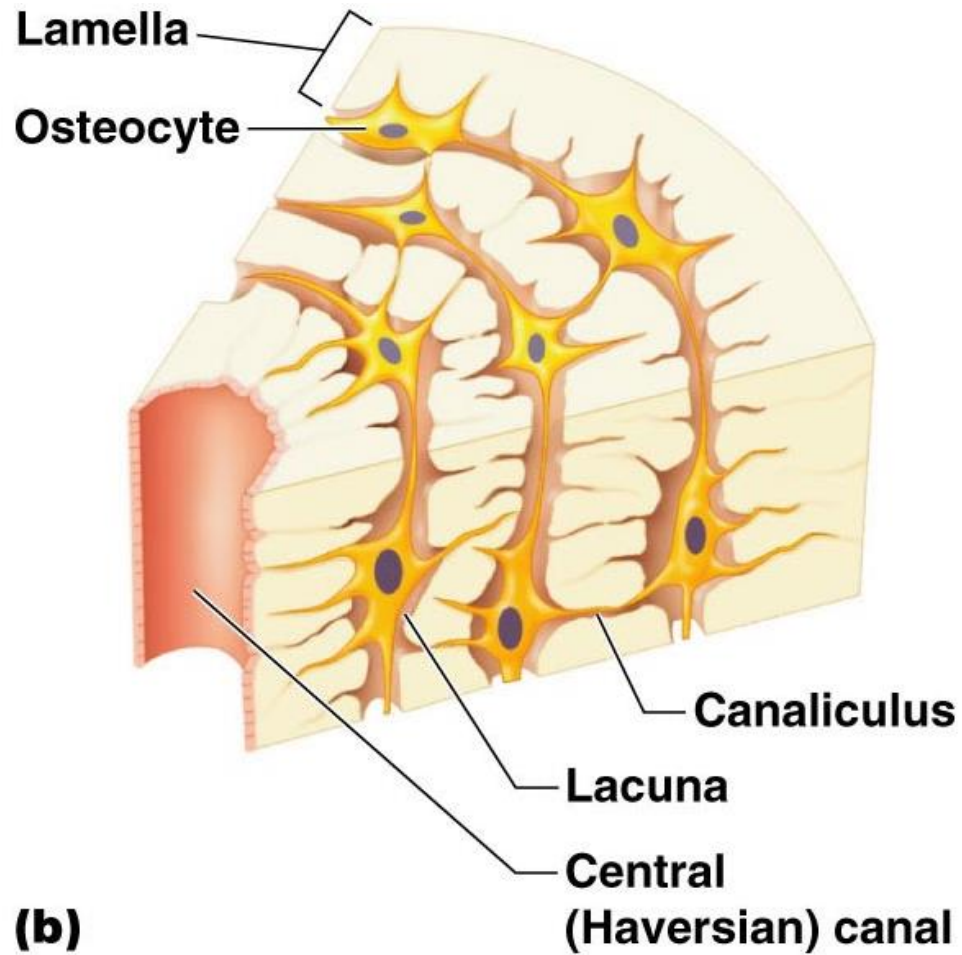
Figure 5.3b

Answers:

- A. Lamella**
- B. Osteocyte**
- C. Canaliculus**
- D. Lacuna**
- E. Central Haversian Canal**

Microscopic Anatomy of Bone

[Video: Osteon Model](#)
(compact bone)



(b)

Figure 5.3b

Answers:

- A. Lamella**
- B. Osteocyte**
- C. Canaliculus**
- D. Lacuna**
- E. Central
Haversian Canal**