



SLIDE DISCUSSION CEMENTUM

DR SAJDA GAJDHAR

GOOD MORNING

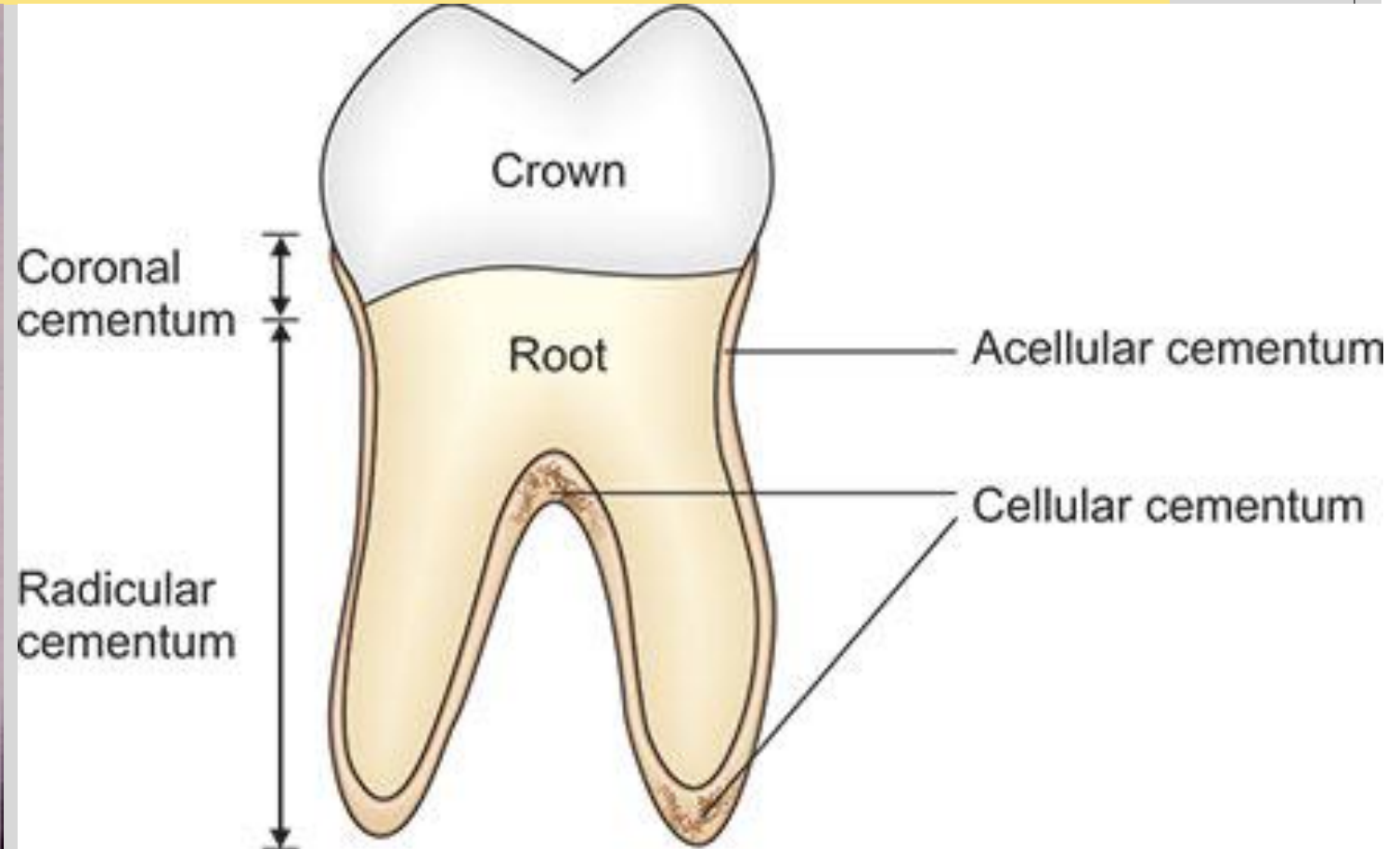


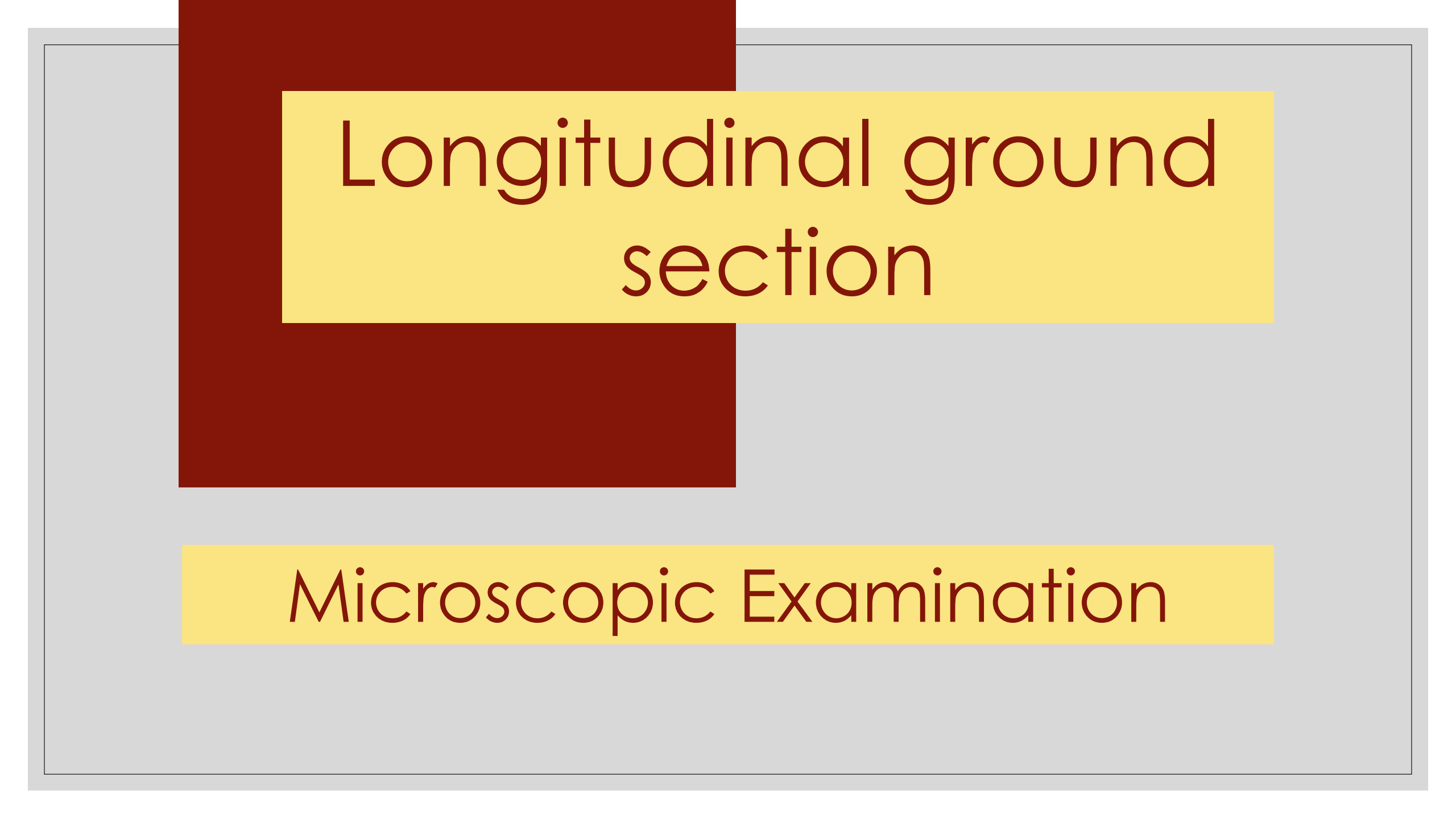
SESSION LERNING OUTCOMES

- | | |
|----|---|
| 1. | Demonstrate the differences in location and structures present in types of cementum under the microscope |
| 2 | Illustrate the types of CEJ and the differences between each under the microscope |

Cementum

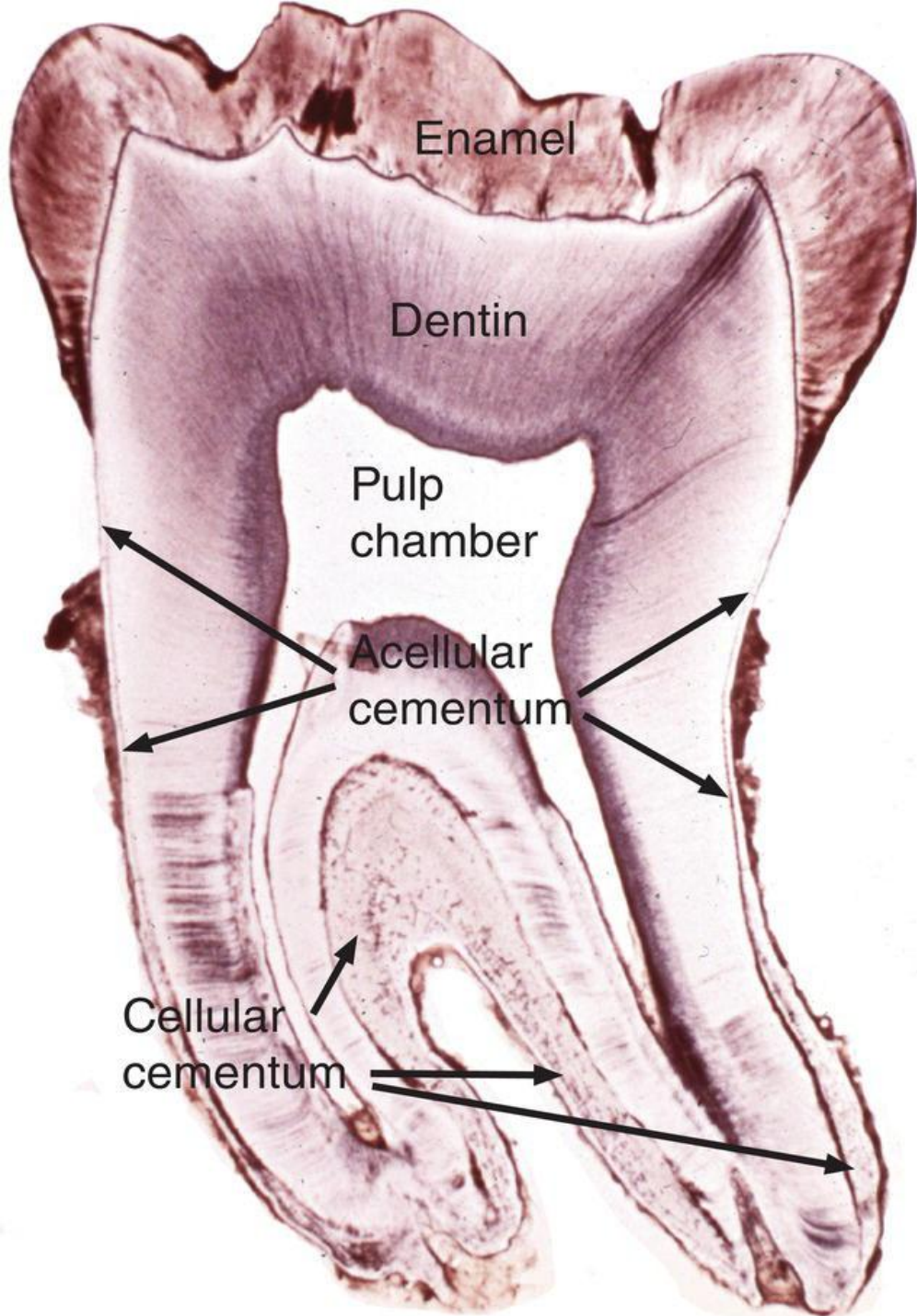
Cementum is a collagen-based mineralized tissue produced by cementoblasts. Acellular cementum covers the dentin of the coronal portion of the root; cellular cementum, containing cementocytes located in lacunae, is present on the apical portion of the root and in the furcation areas of multirooted teeth.



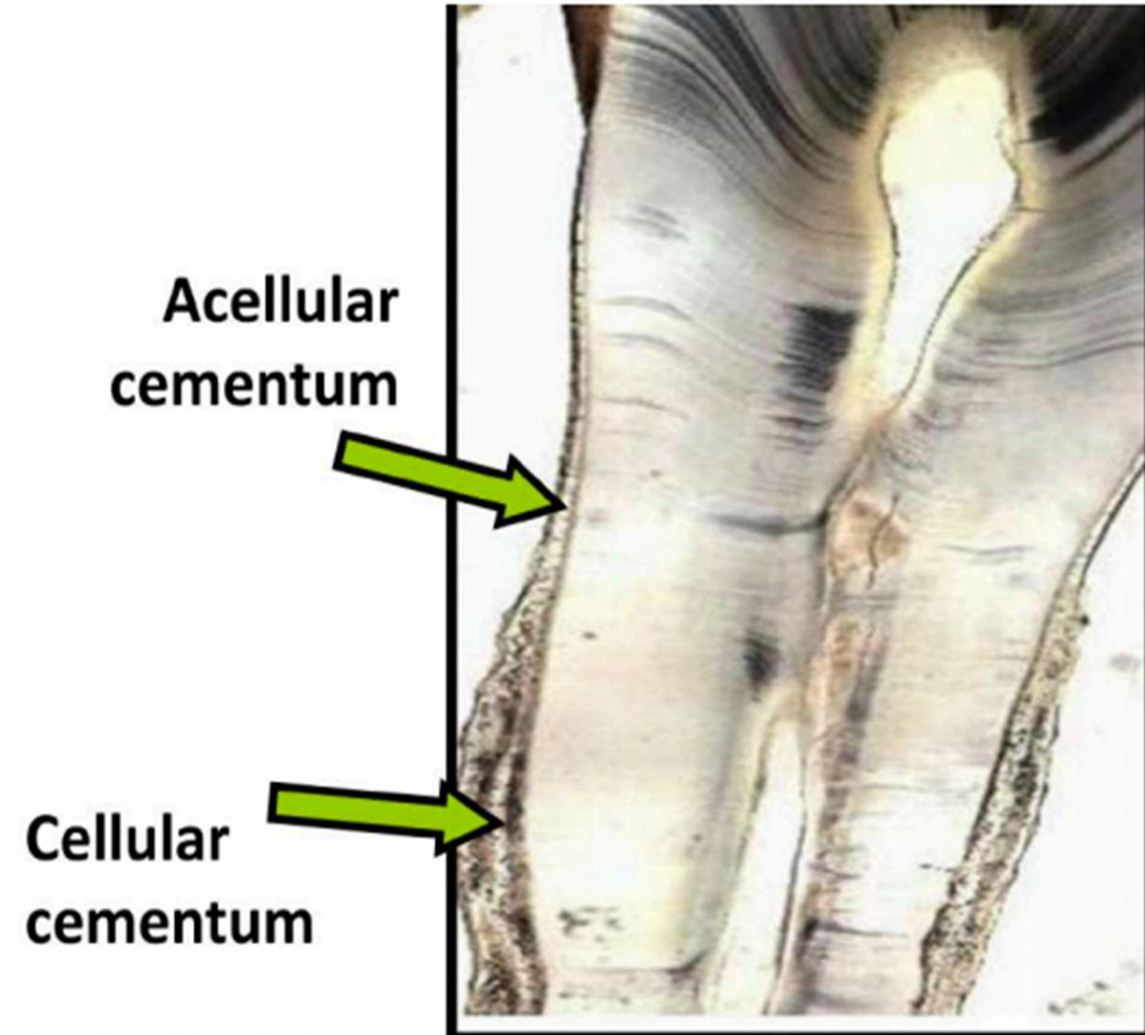


Longitudinal ground
section

Microscopic Examination

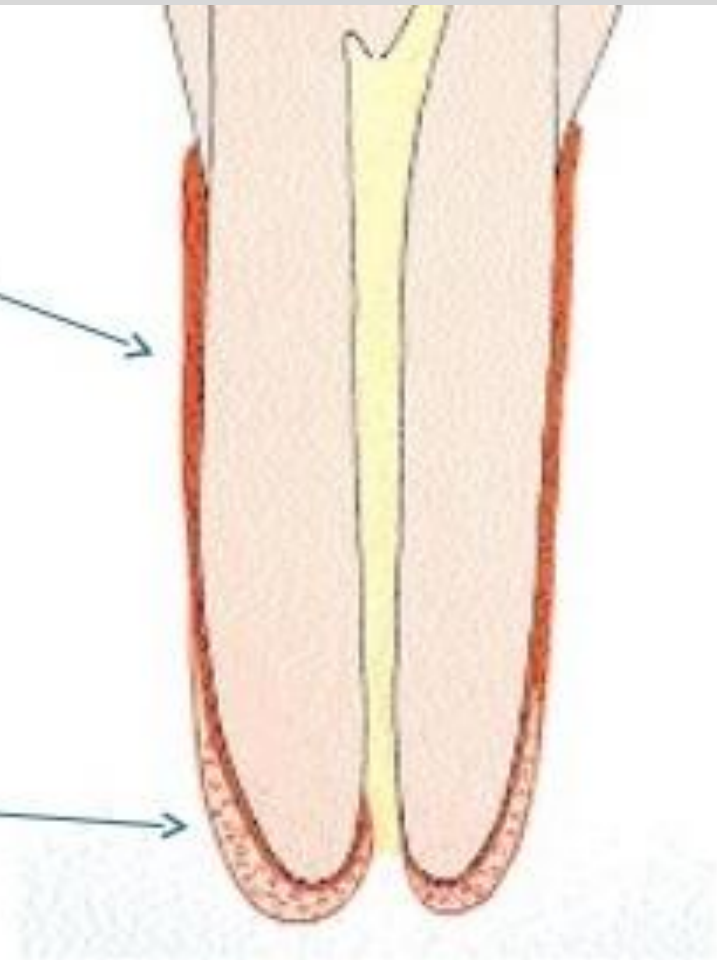


Ground section of a mandibular molar tooth. Cementum covers the surface of the root dentin. Acellular cementum is located on the coronal one-half to two-thirds of the root; cellular cementum is located on the apical one-third to one-half of the root and in the furcation area between the two roots. Note that cellular cementum is considerably thicker than acellular cementum

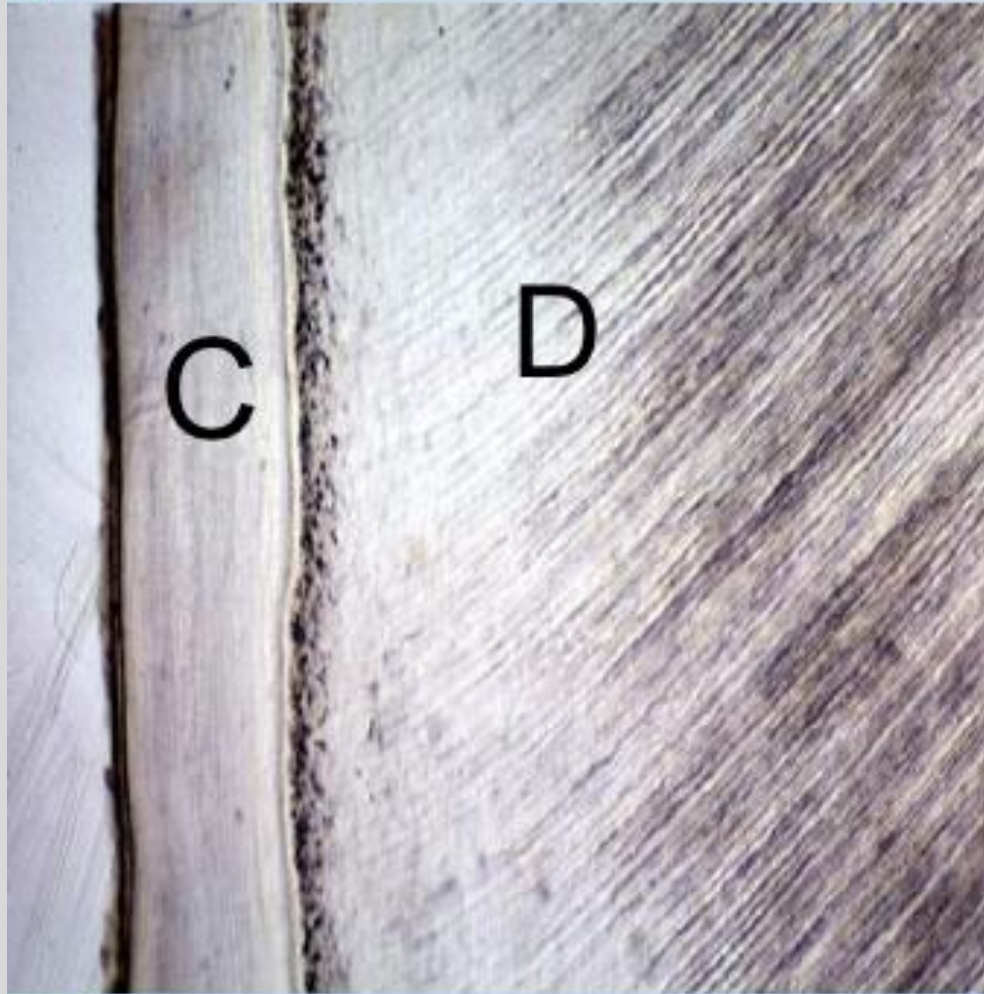


- Acellular cementum

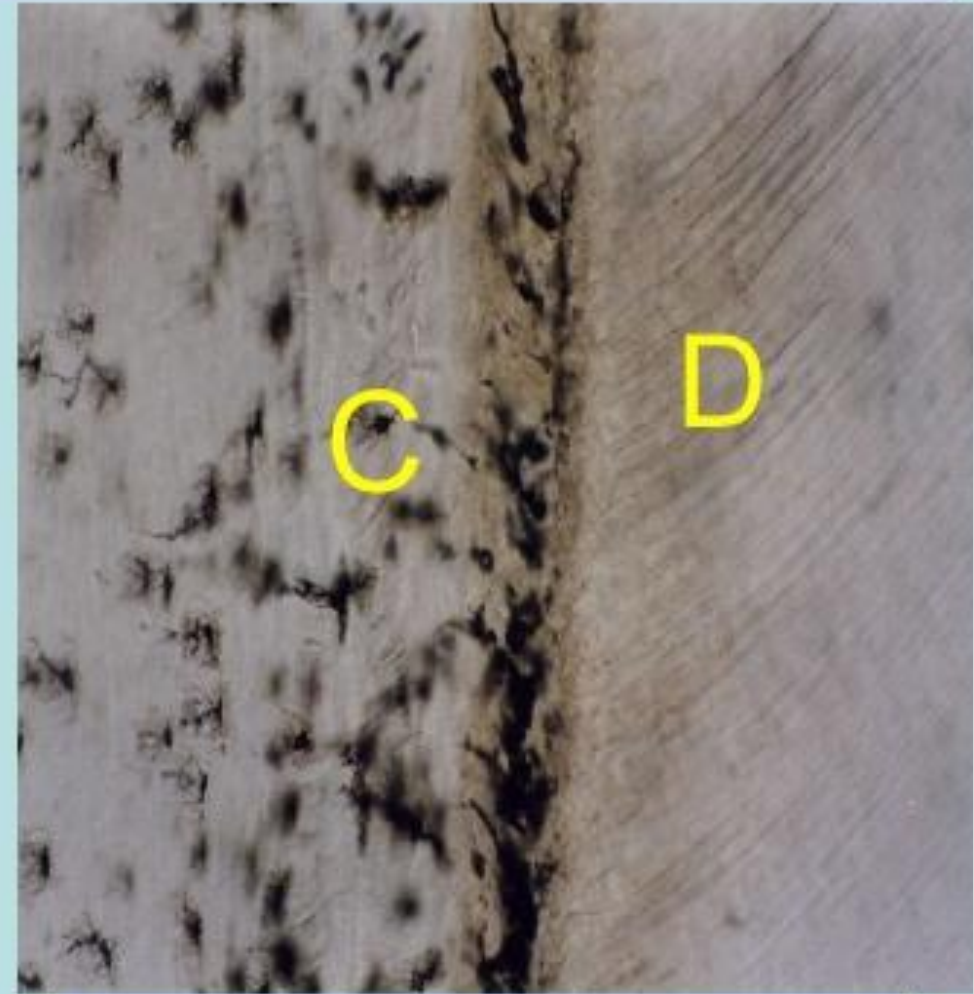
- Cellular cementum



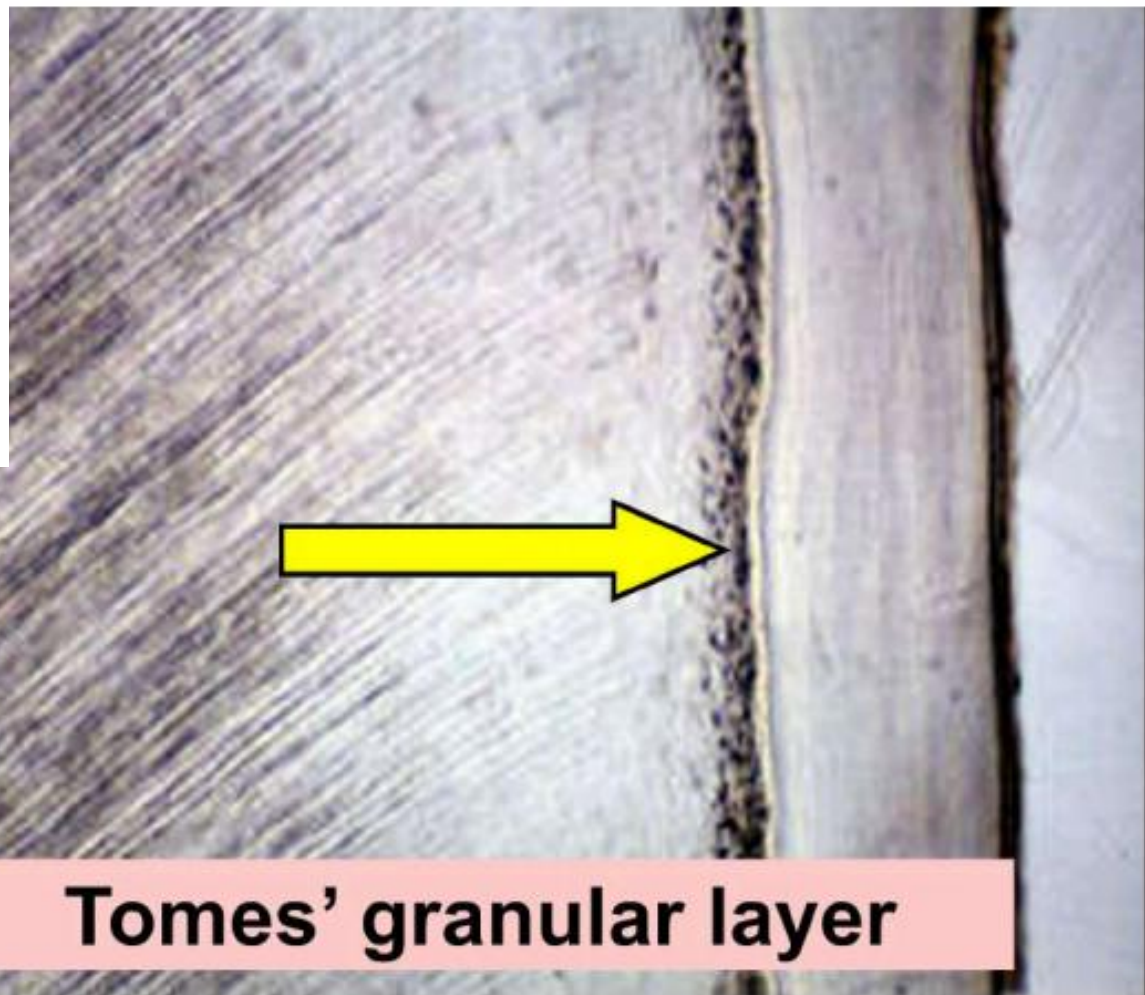
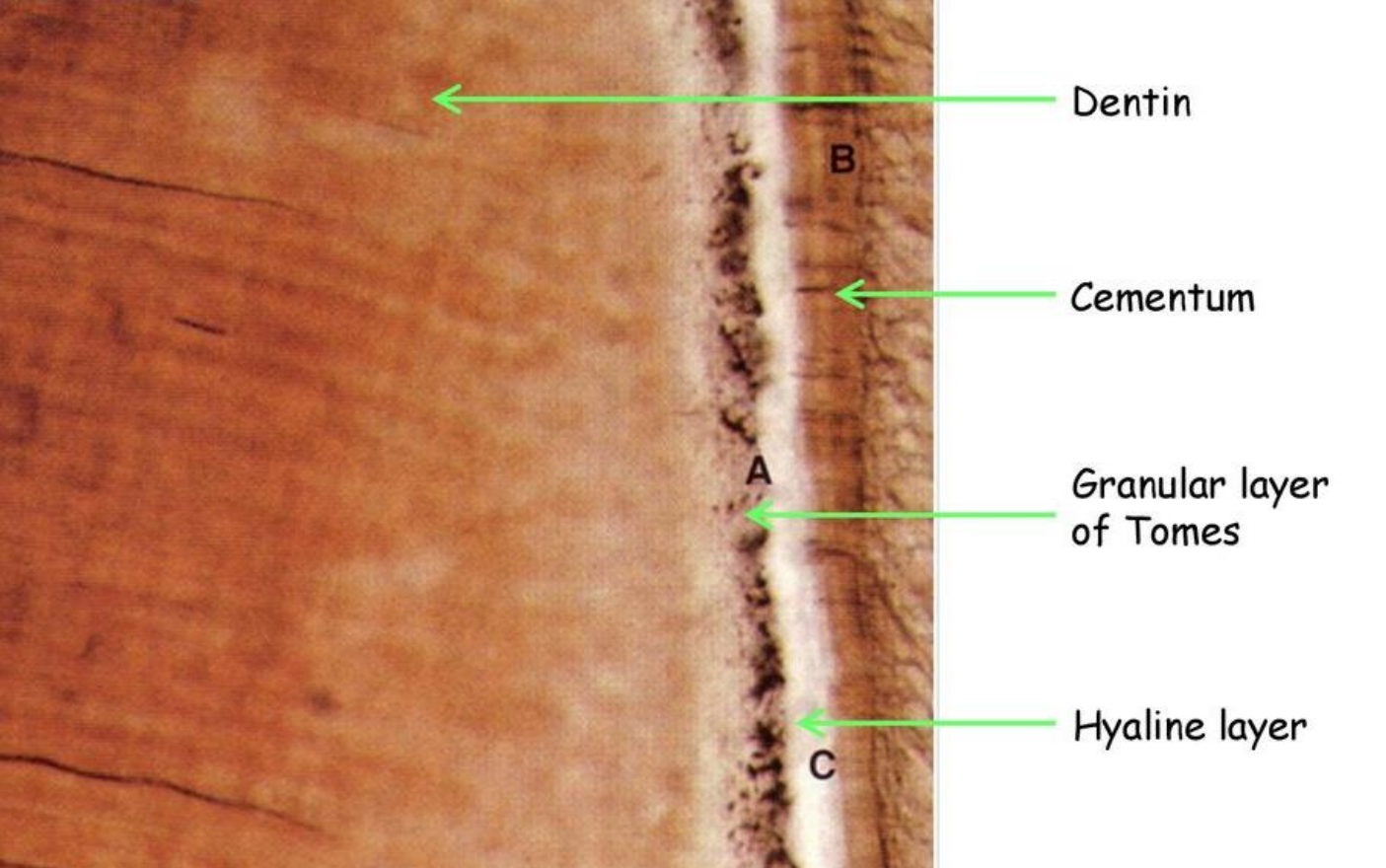
Cementum Structure

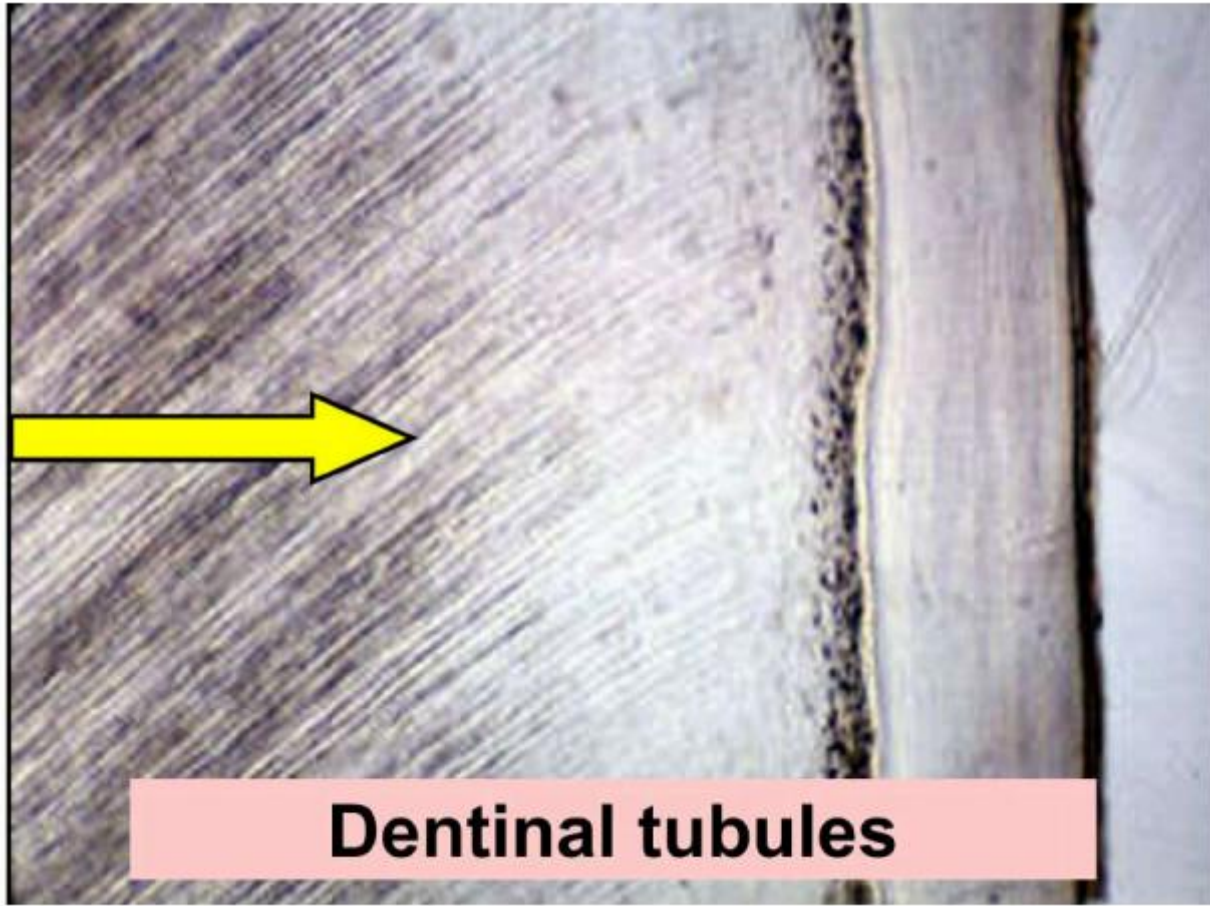


Acellular cementum



Cellular cementum





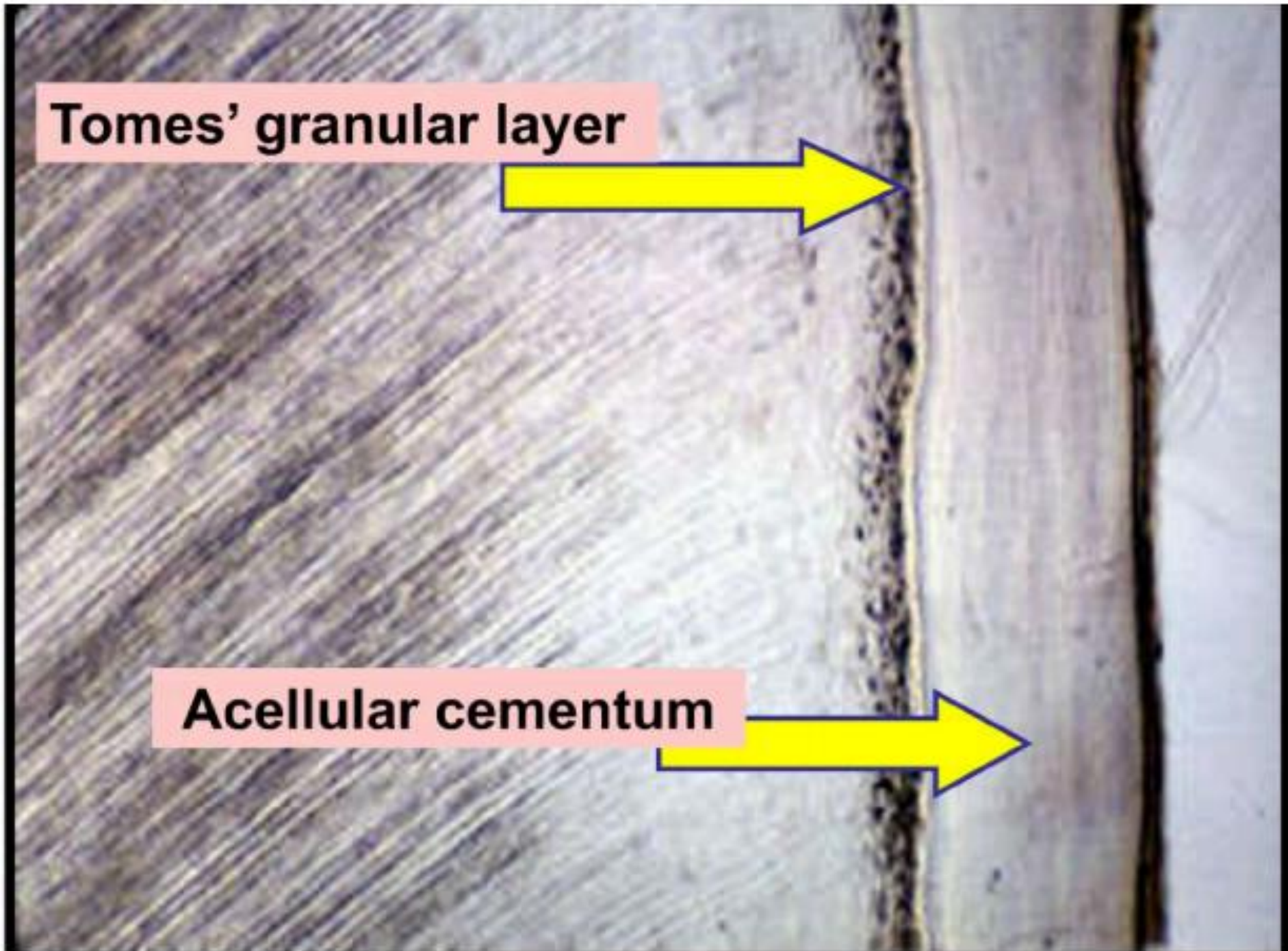
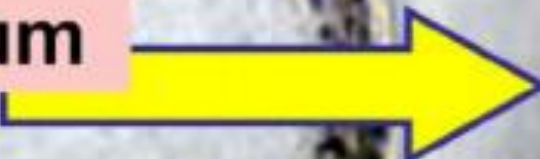
Tomes' granular layer



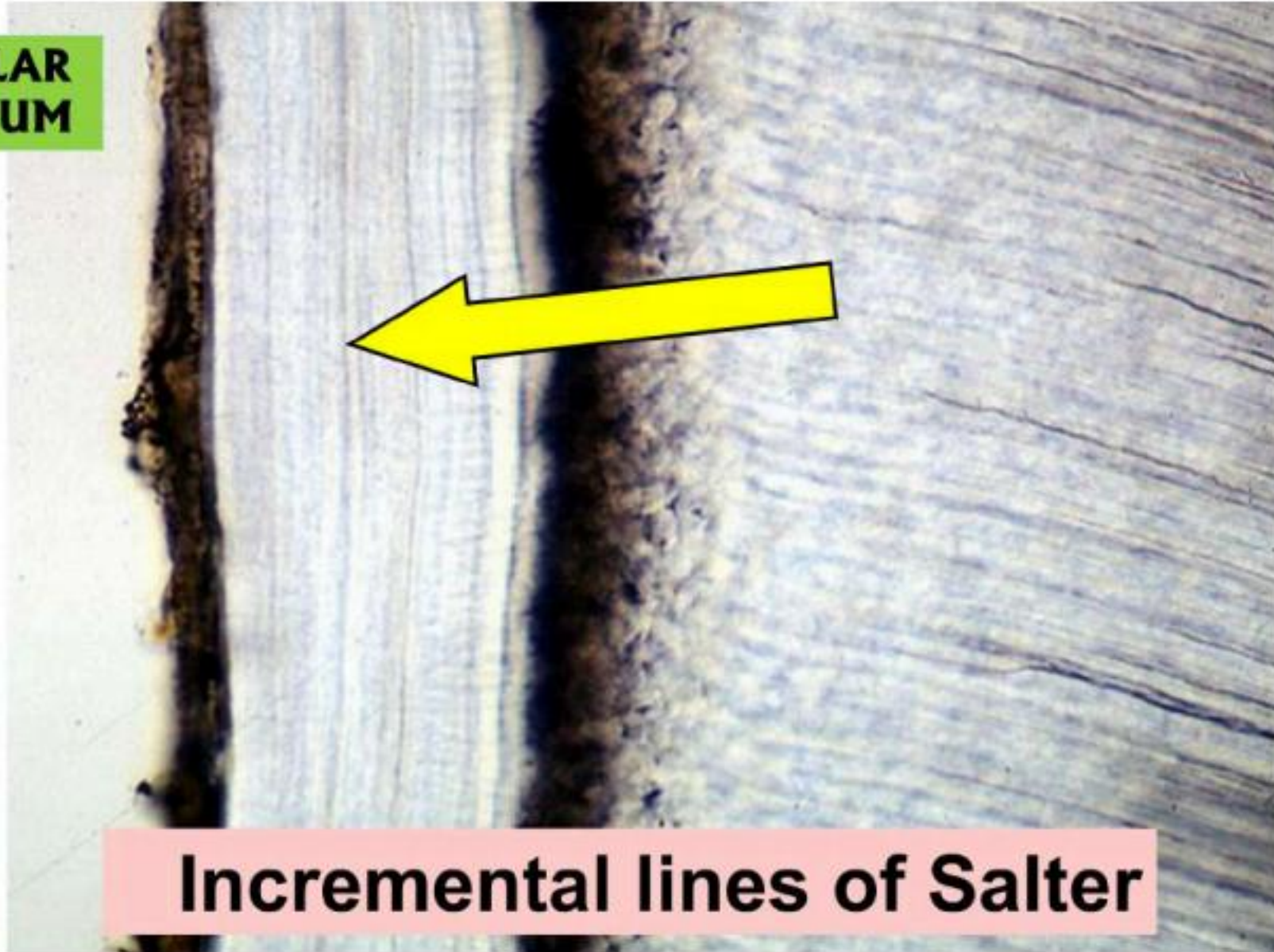
Tomes' granular layer



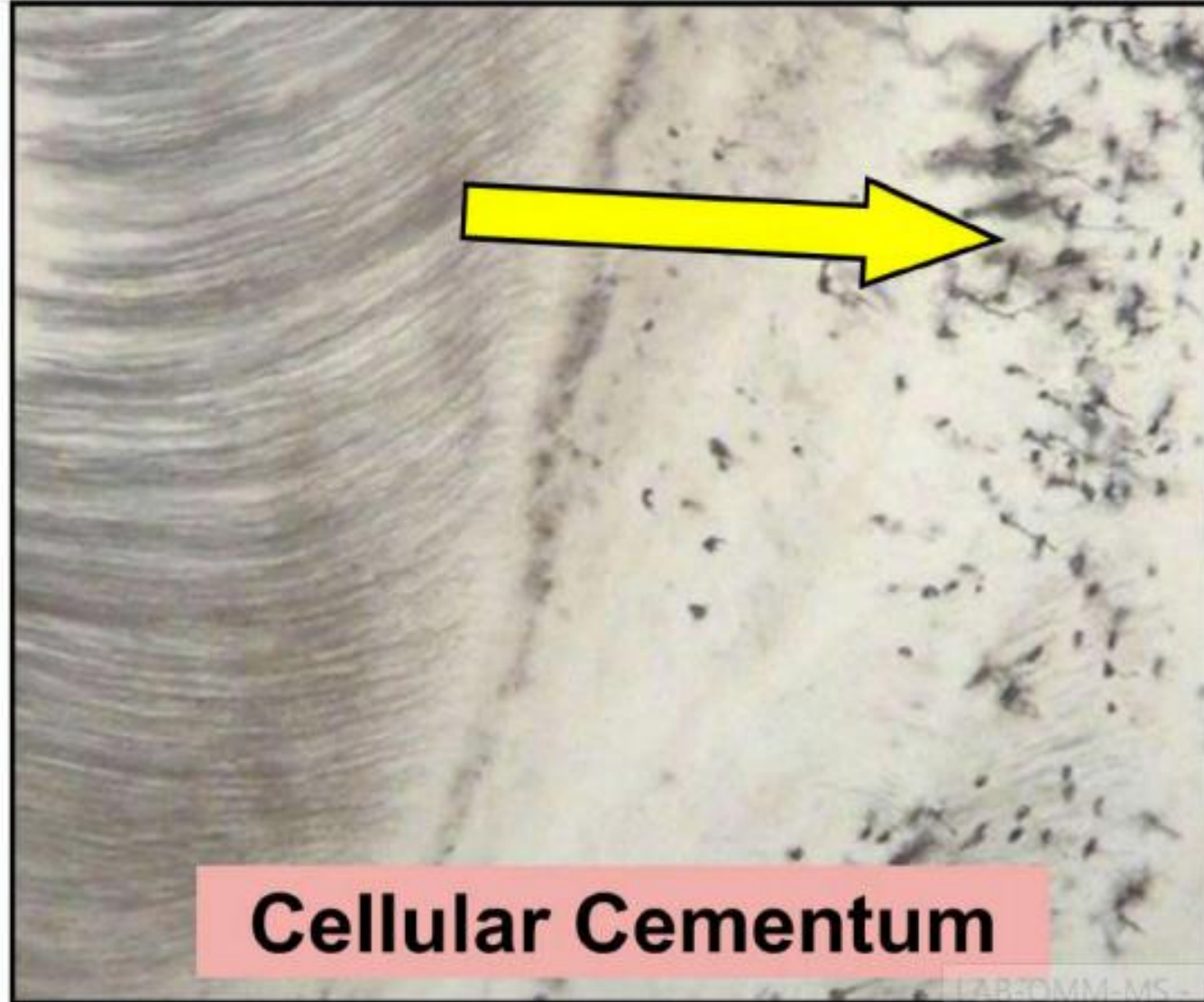
Acellular cementum



**ACELLULAR
CEMENTUM**

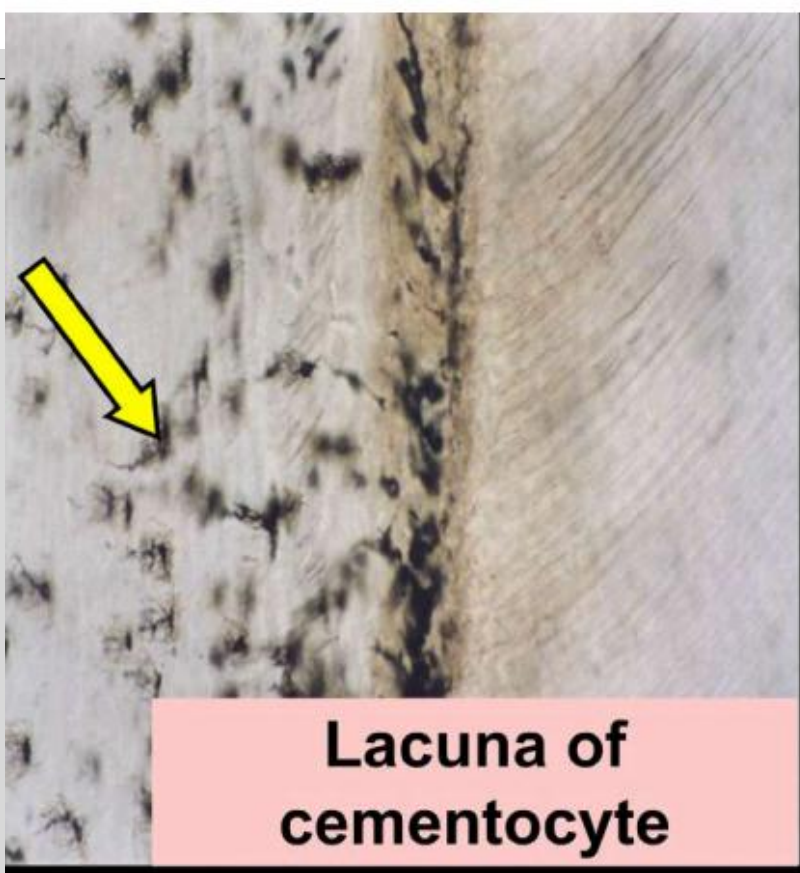


Incremental lines of Salter

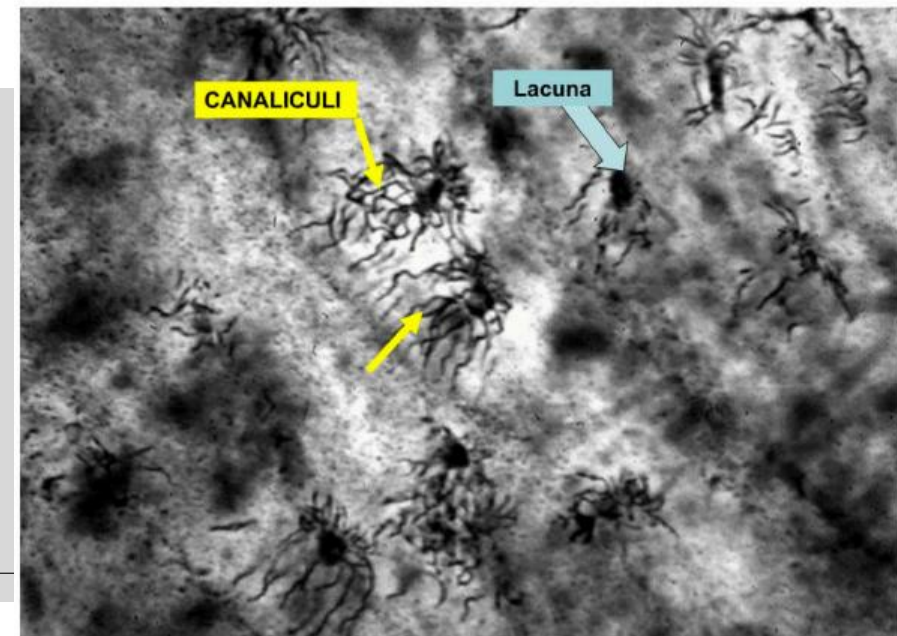


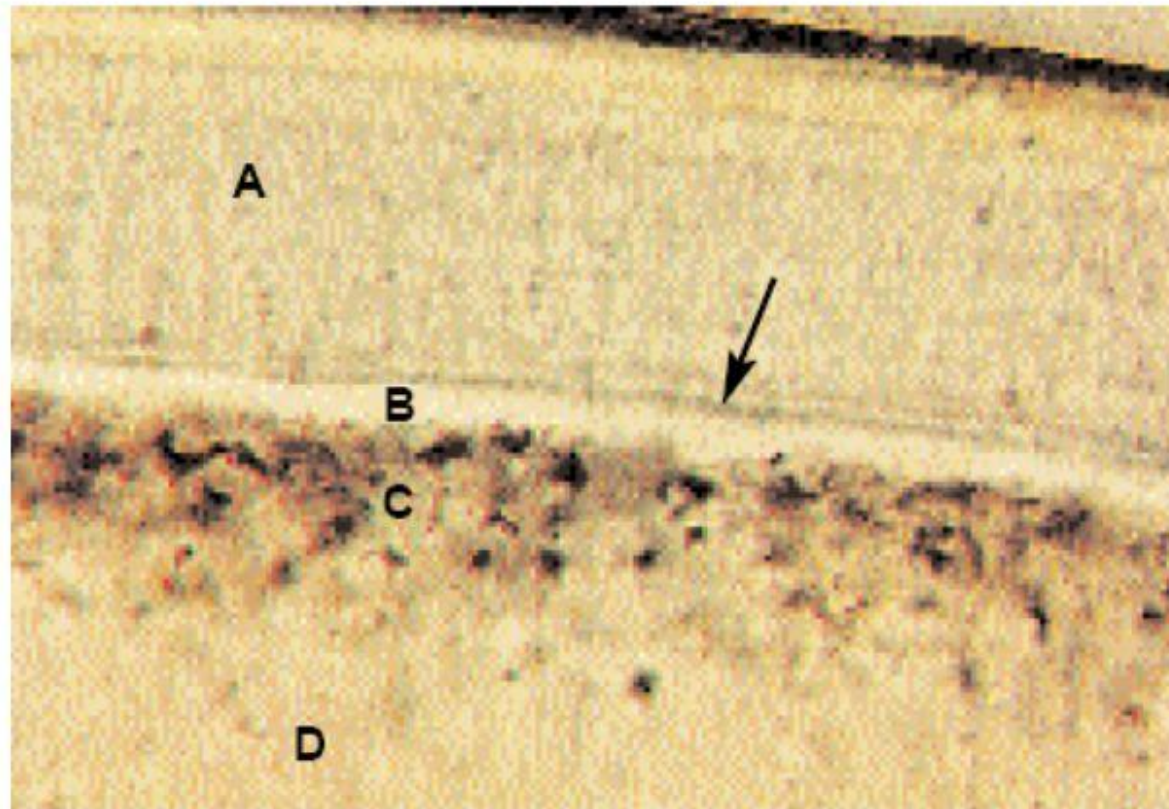
Cellular Cementum

LAB30MM-MS-1



1. Tubular structure
2. Dark dotted area between tubular structure and a thick translucent structure
3. The translucent structure has multiple dark spider-shapes with a body and processes arising from the body





A: Acellular cementum
B: Hyaline layer of Hopwell-Smith
C: Granular layer of Tomes
D: Root dentin

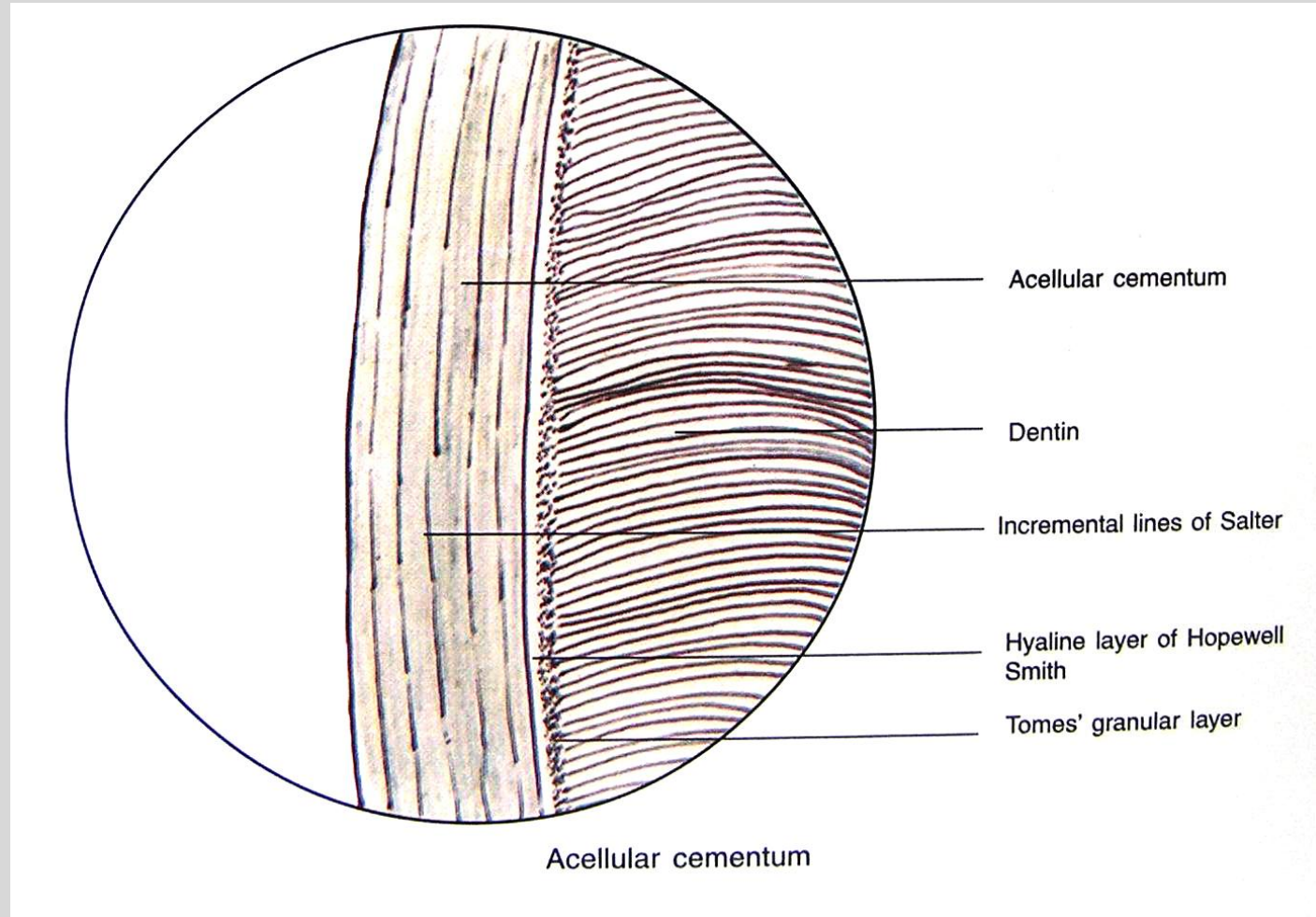
Cellular: Has cells

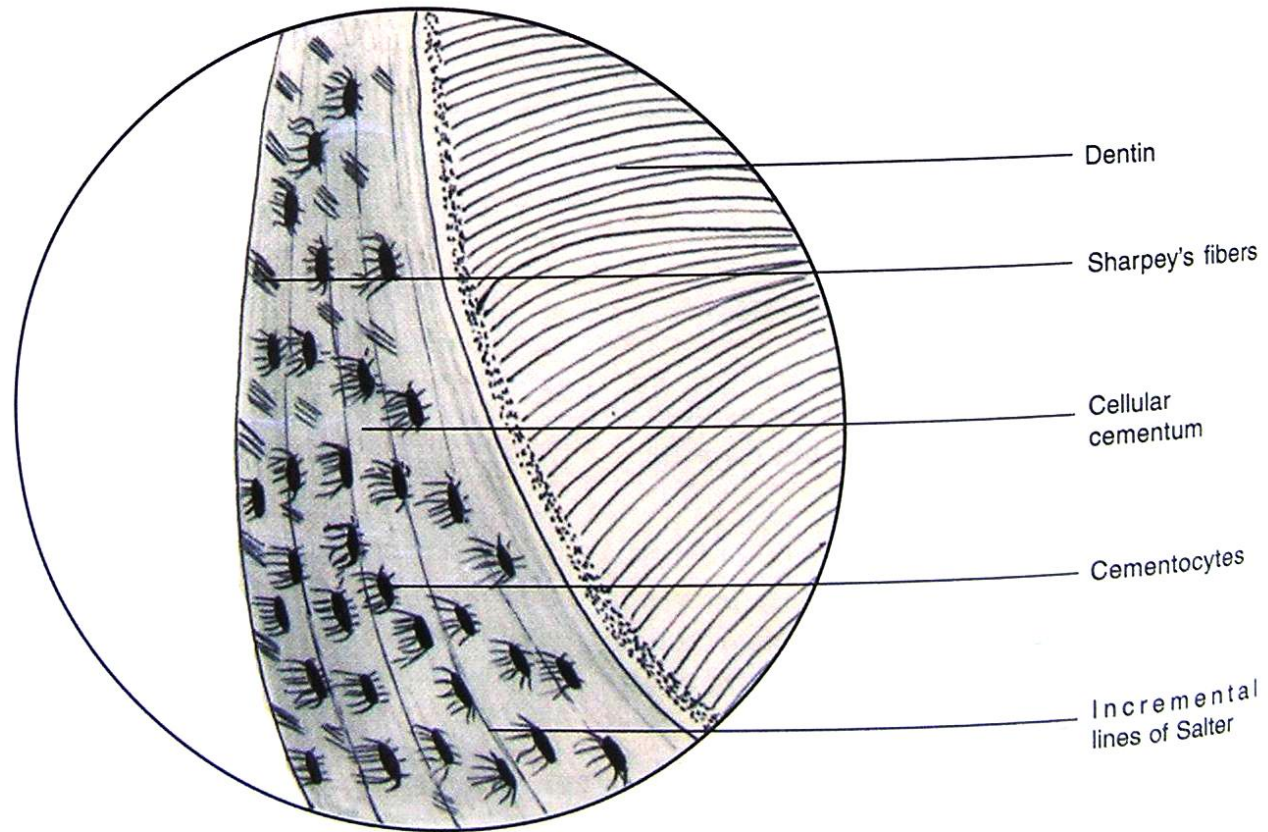
Acellular: No cells and has no structure

Cellular cementum usually overlies acellular cementum

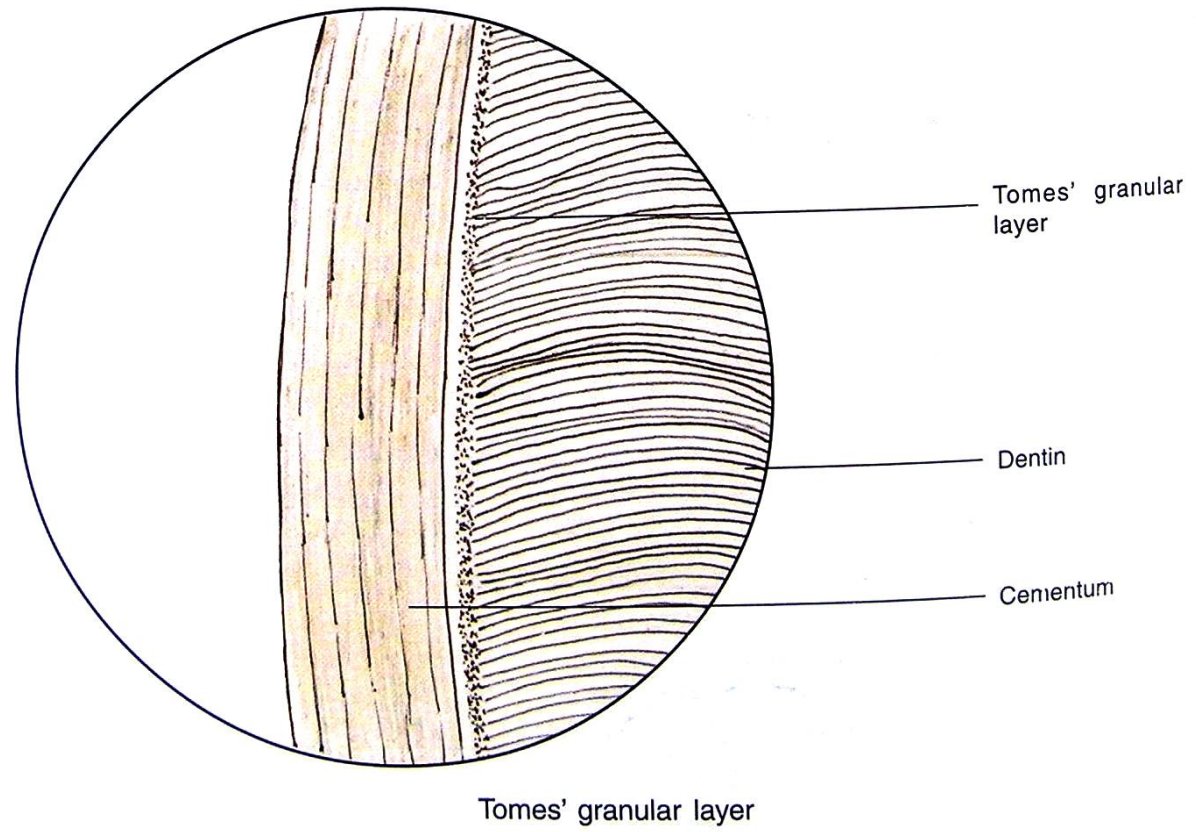
DIGITAL SLIDE DISCUSSION

- CEMENTUM
- **CELLULAR CEMENTUM**
- **ACEELULAR CEMENTUM**



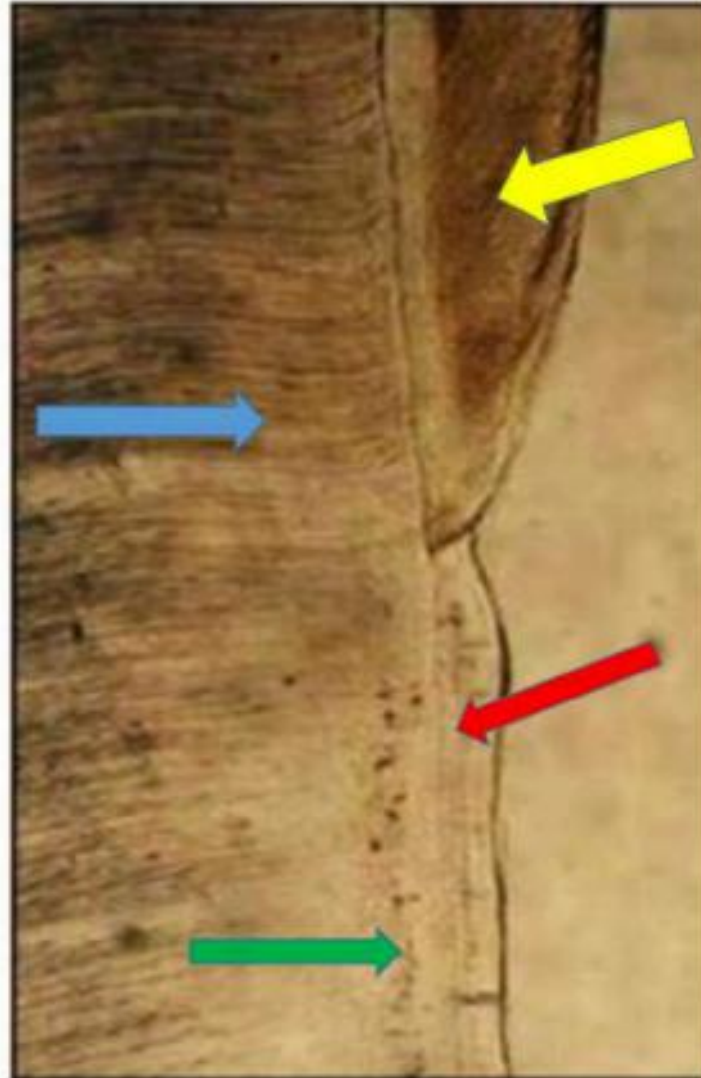


Cellular cementum



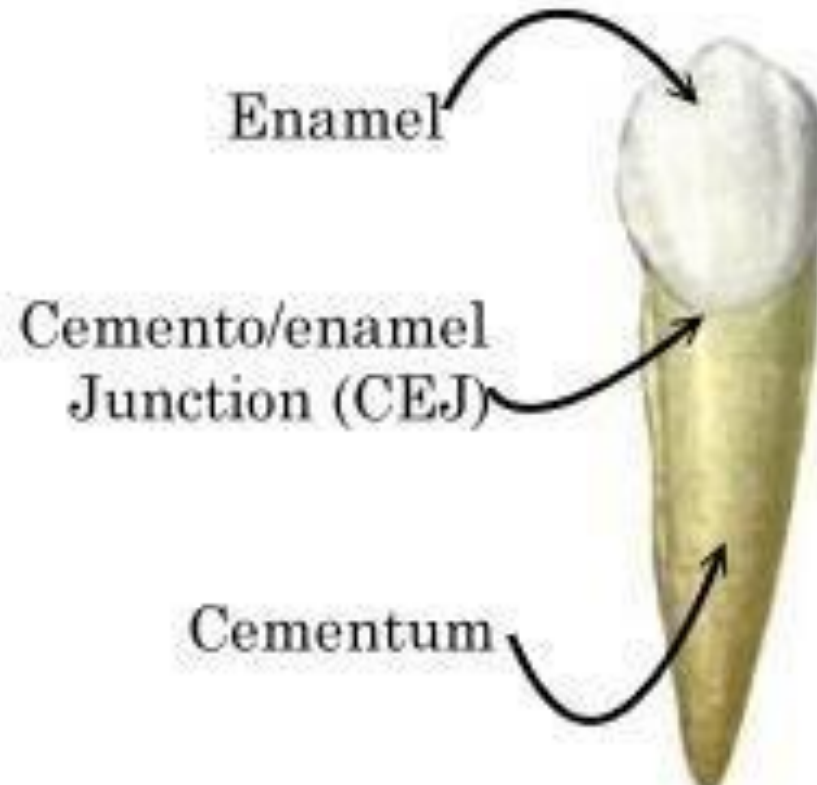
Critical analysis

1. Dentin
2. Enamel
3. A cellular cementum
4. Incremental lines of SALTER
5. Tomes granular layer

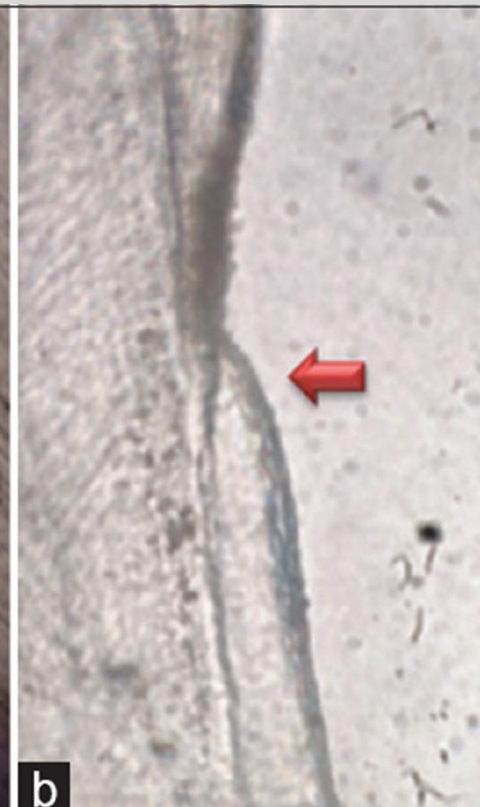
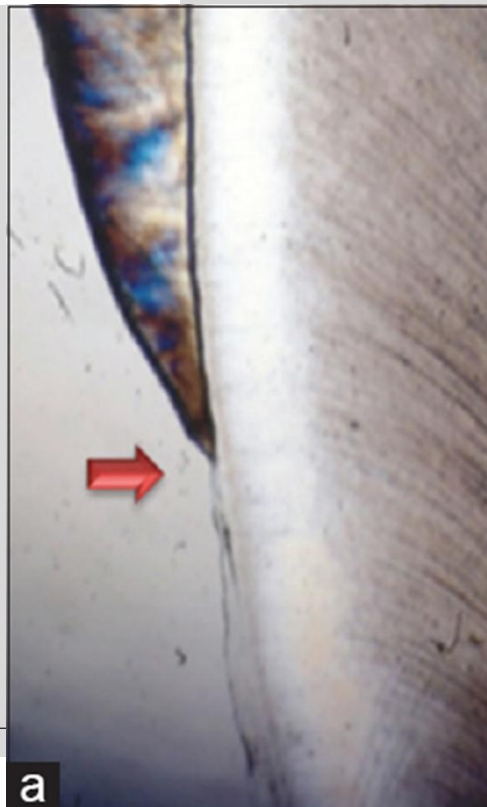
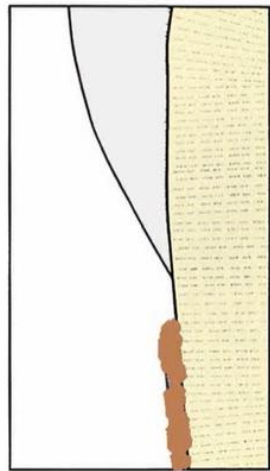
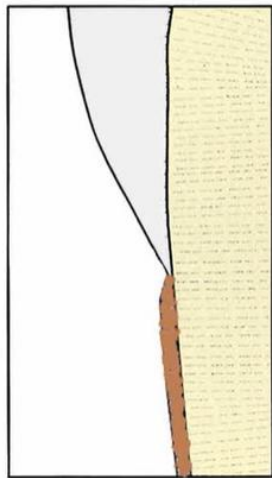
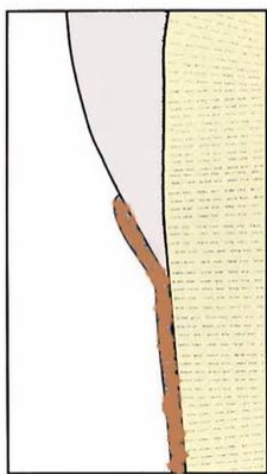


1. Dark tubular structure with S-shape tubules
2. Dark brown structure covering the upper portion of the tubular structure
3. Thin translucent structure covers the lower portion of the tubular structure
4. The translucent structure has longitudinal lines
5. The translucent structure is separated from the tubular structure by multiple dotted area

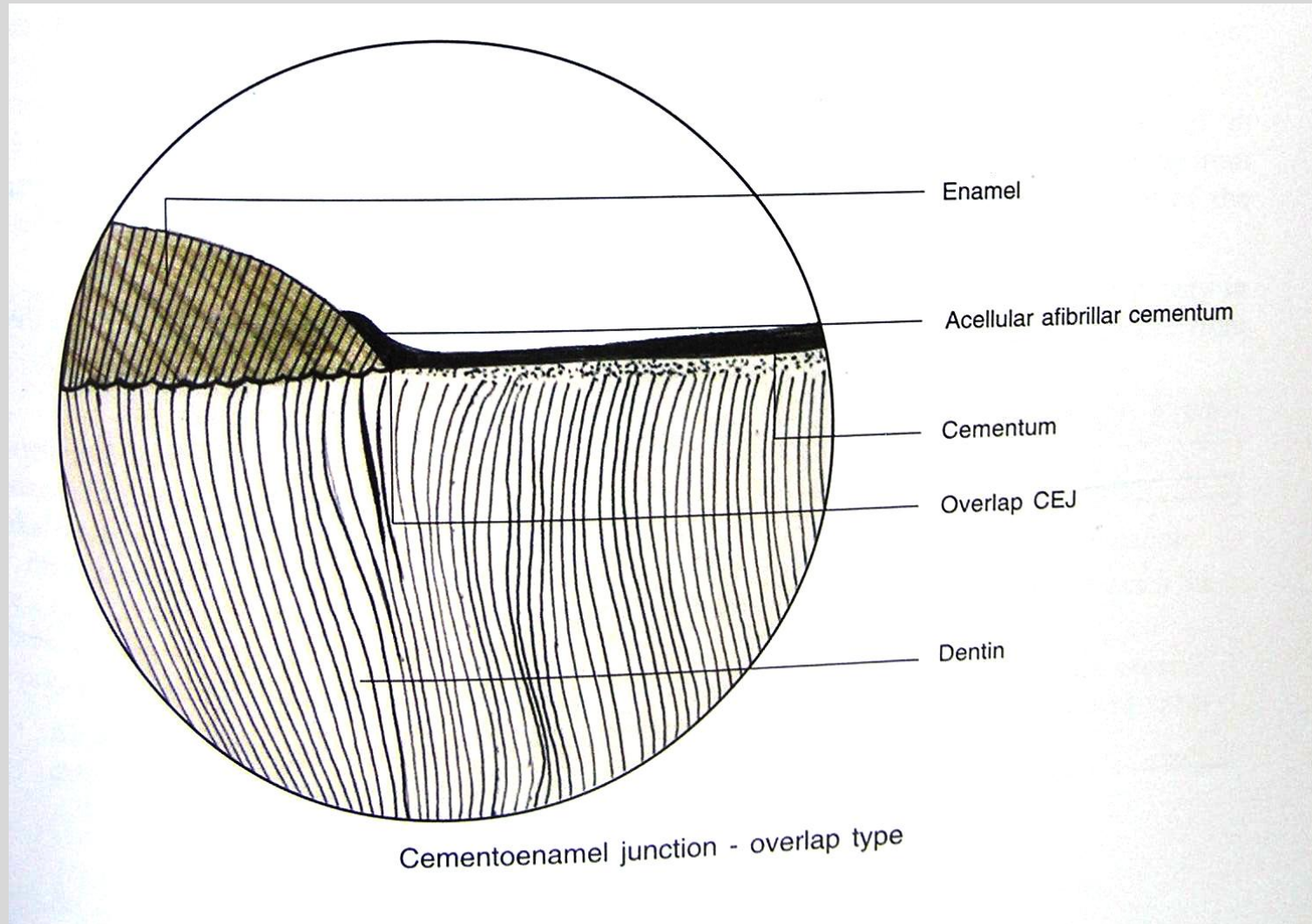
CEMENTOENAMEL JUNCTION

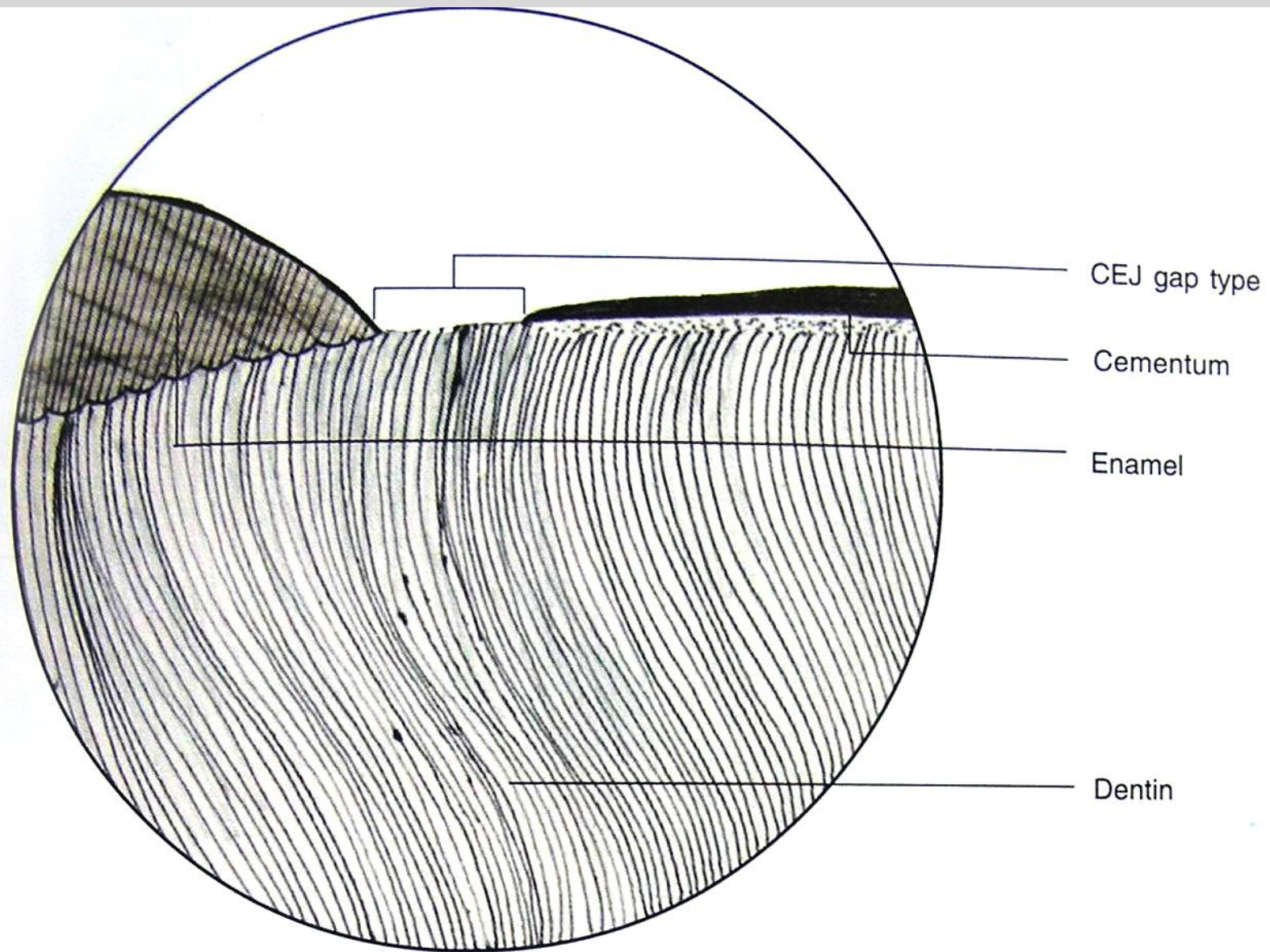


Arrangement of cementsoenamel junction

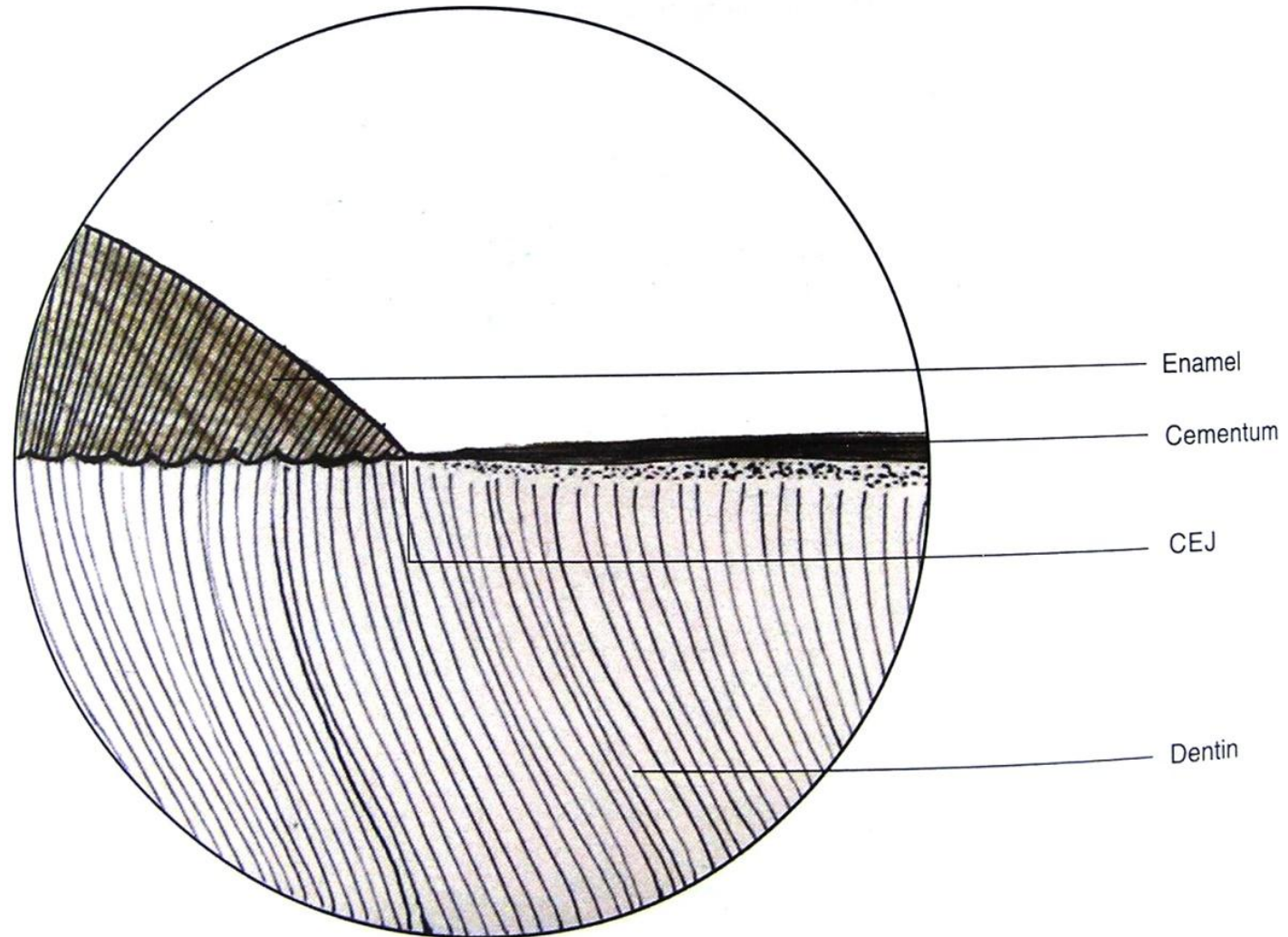


CEMENTOENAMEL JUNCTION



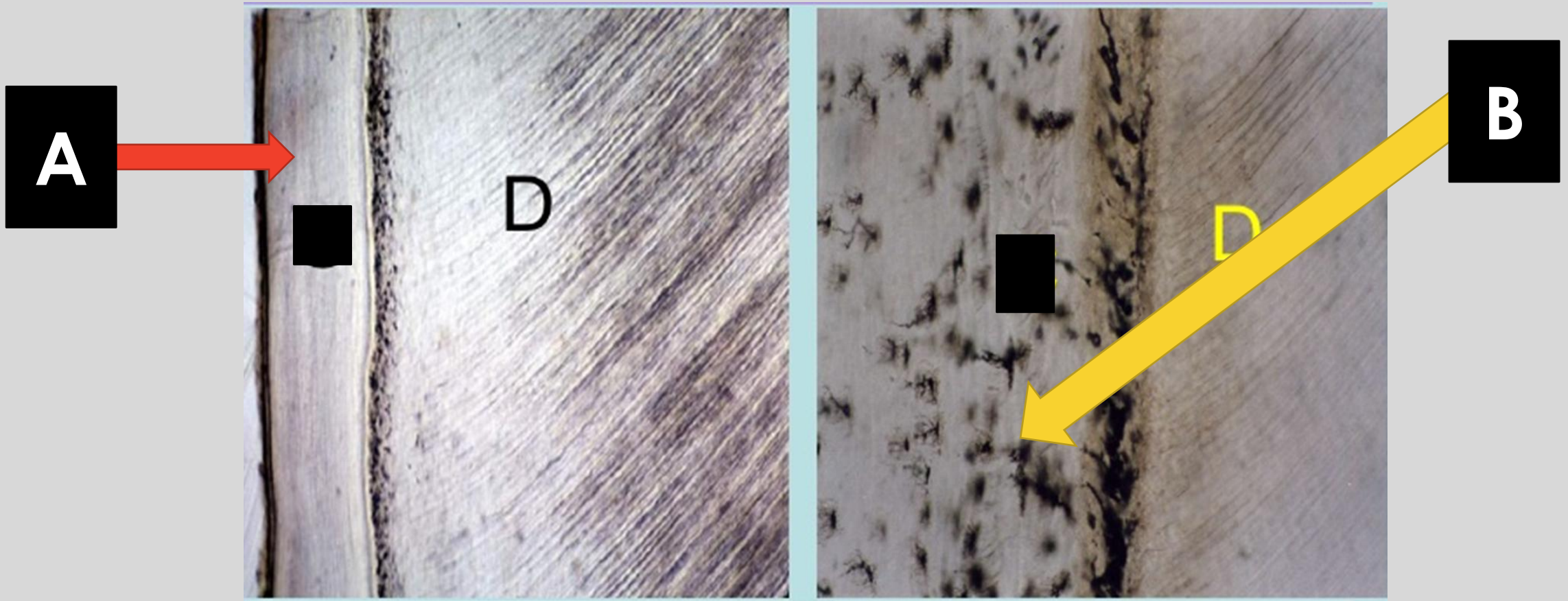


Cemento-enamel junction - Gap type



Cementoenamel junction - Sharp junction

FORMATIVE ASSESSMENT



Exam Instructions and Guidelines for MSE (MCQs 14M SAQs 6M)

- The exam consists of **three blocks**.
- **Block 1** and **Block 2** each contain **16 MCQs**.
 - **Time allotted:** 22.5 minutes per block.
- **Block 3** contains **3 SAQs**, and **each SAQ** has **two sub-questions (A and B)**.
 - **Time allotted:** 16 minutes.
- **Important Notes:**
- Review your answers carefully **before submitting each block**. Once a block is submitted, you **cannot return to it**, and any **unused time will not carry over** to the next block.
- Each student must **enter their academic number and National ID number accurately**.
- Students must **bring an identification card** displaying their **academic number** and **National ID** for verification purposes.

THANK
YOU!