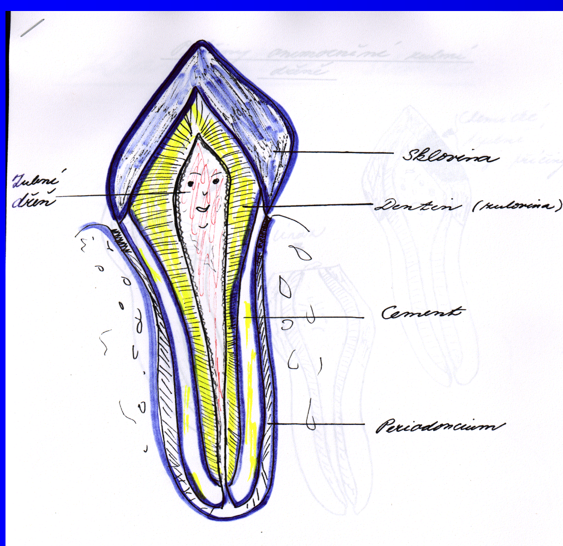
Class V. Cavity Preparation

Characteristic

- Cervical defects

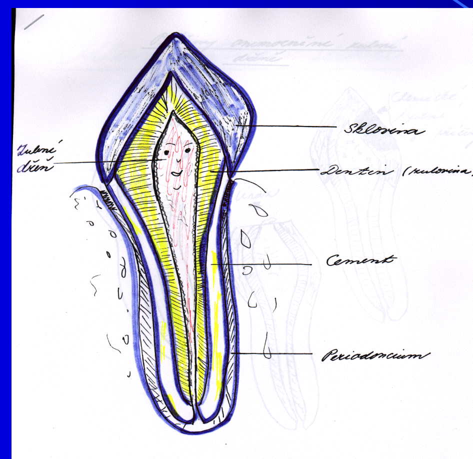


Anatomical x Clinical crown

Anatomical x clinical crown

- Anatomical crown - cementum- enamel junction
- Clinical crown – gingival border

anatomická x klinická korunka



Cervical area

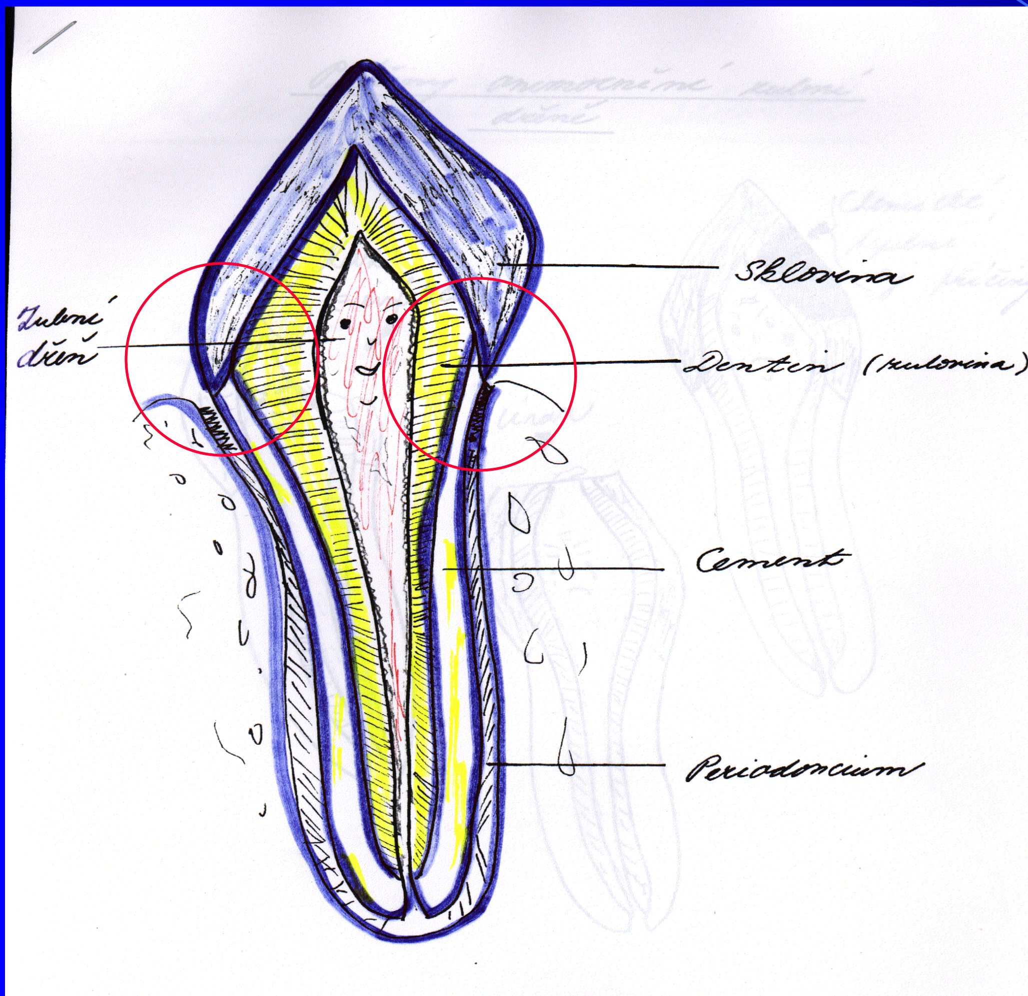
- Caries danger area
- Gingiva - possibility of its injury, bleeding.
- Flow of the sulcular liquid

→ Difficulties with the maintenance of the dry field

- Specific ordering of the hard dental tissues

→ Také into account

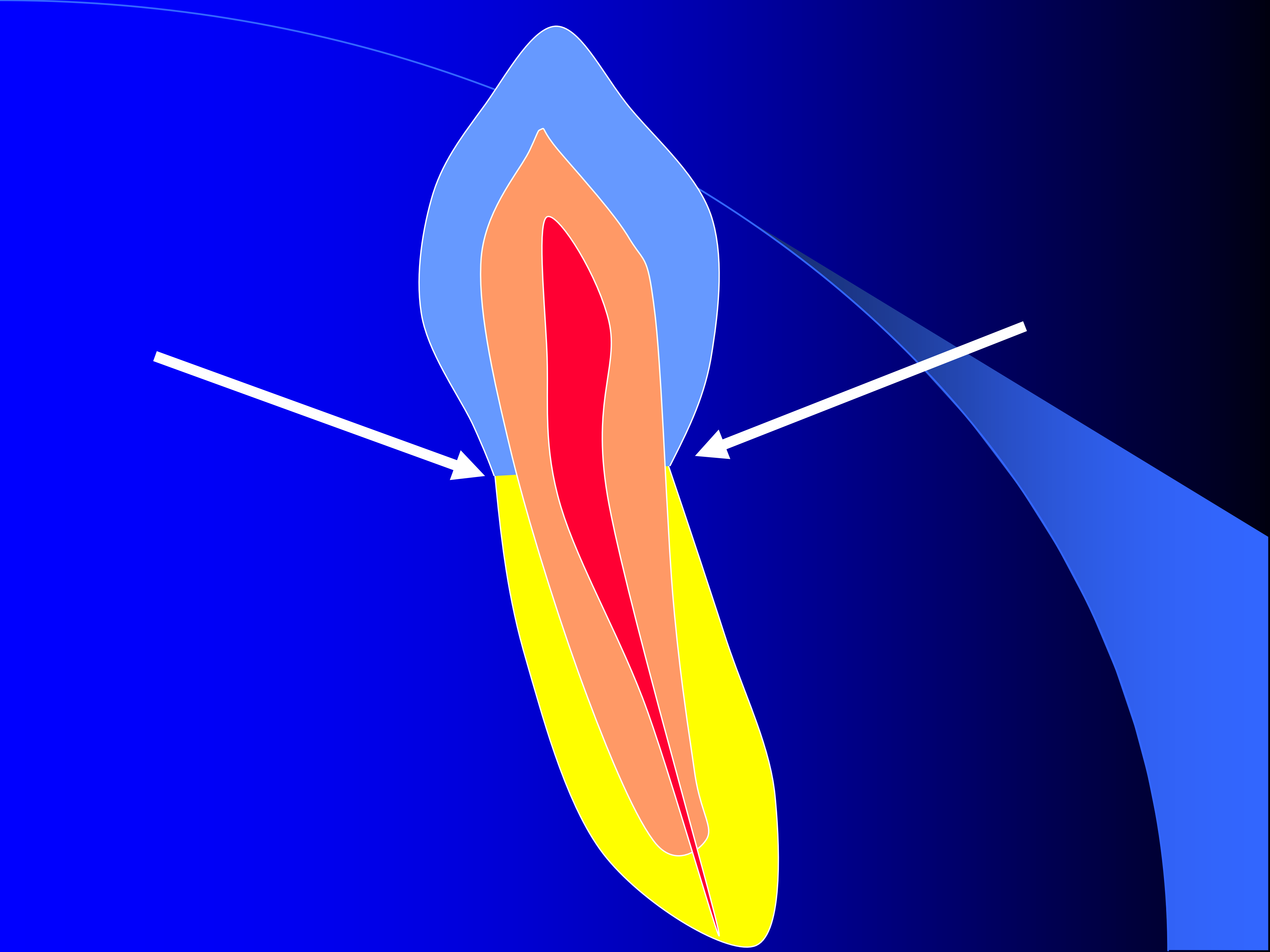
Ordering of the dental tissues

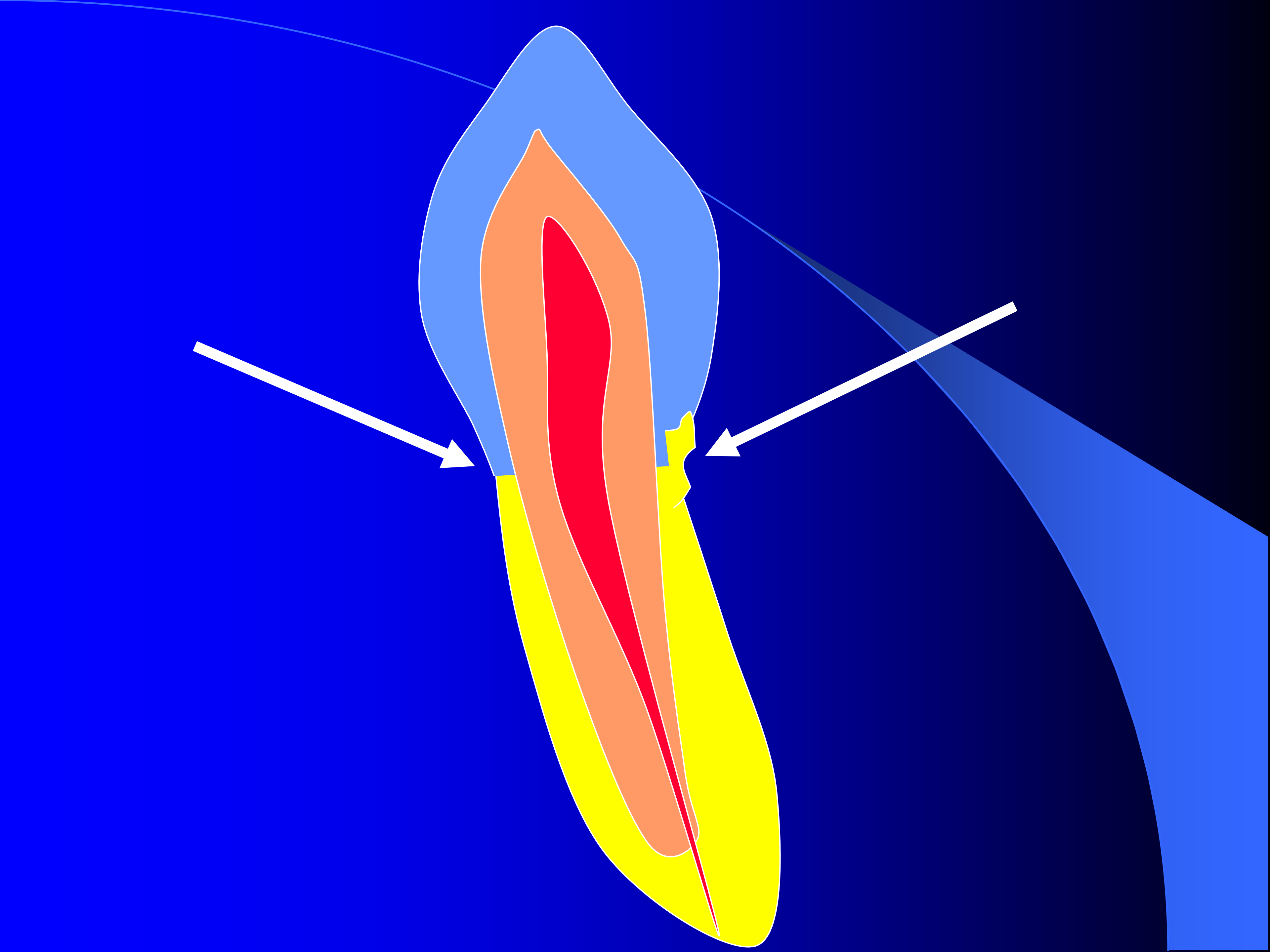


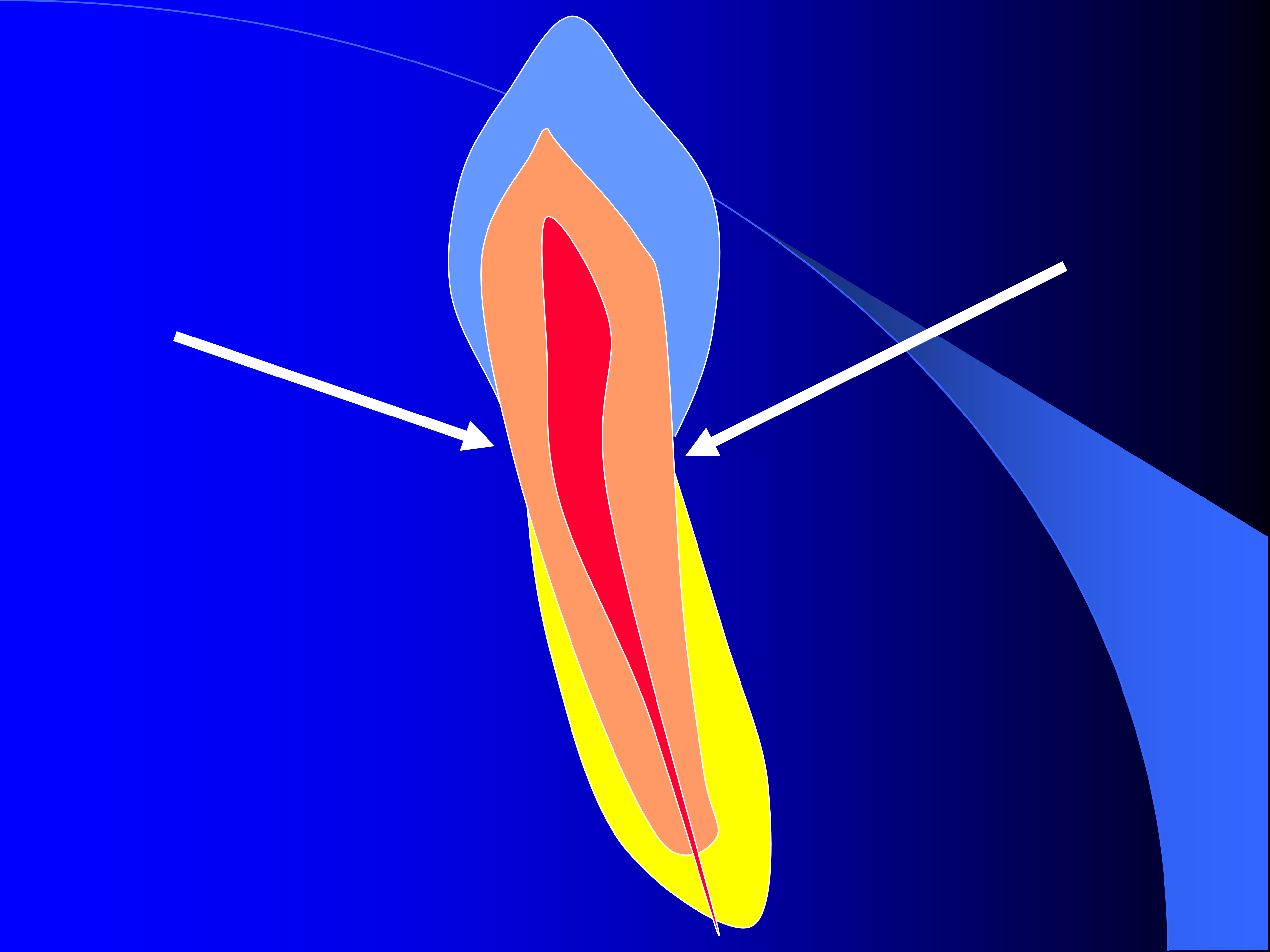
On the surface can be

Enamel
Cementum
Dentin

Risk of opening of the pulp chamber

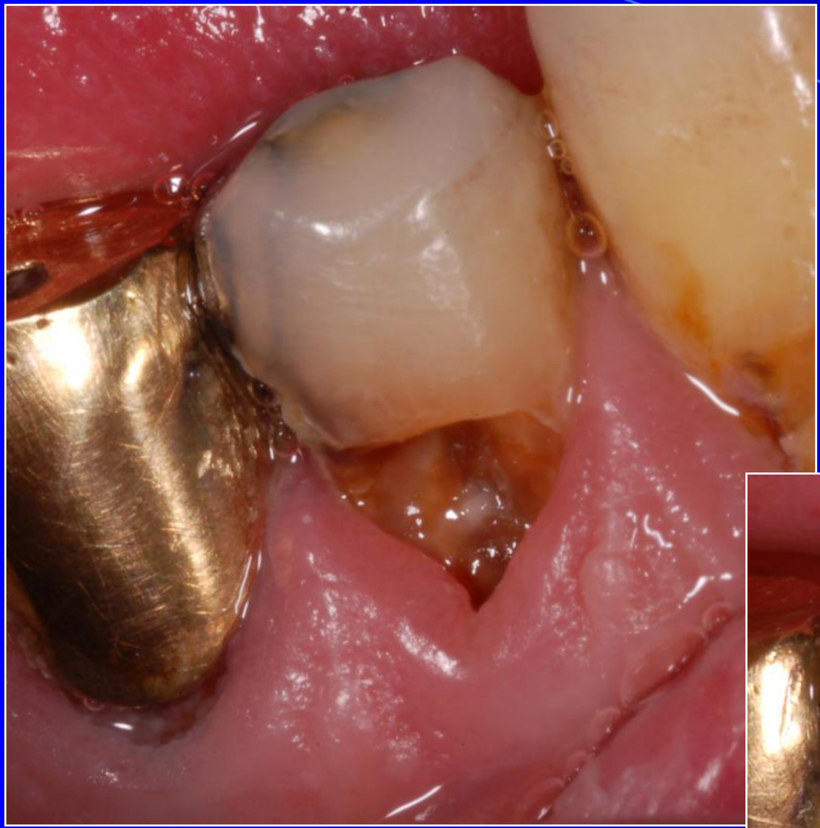







Access Into The Cavity

- Elimination od the undermined enamel
- Burs or diamonds (pear), tapered fissure bur
- Separation of the gingiva– temporary filling guttapercha, fermit, clip, zinkoxidsulfate cement, cavit, provimat).
- Ablation of ingrown gingiva – surgical (scalpel, laser, high frequency current)




V.Class Amalgam

- Posterior area

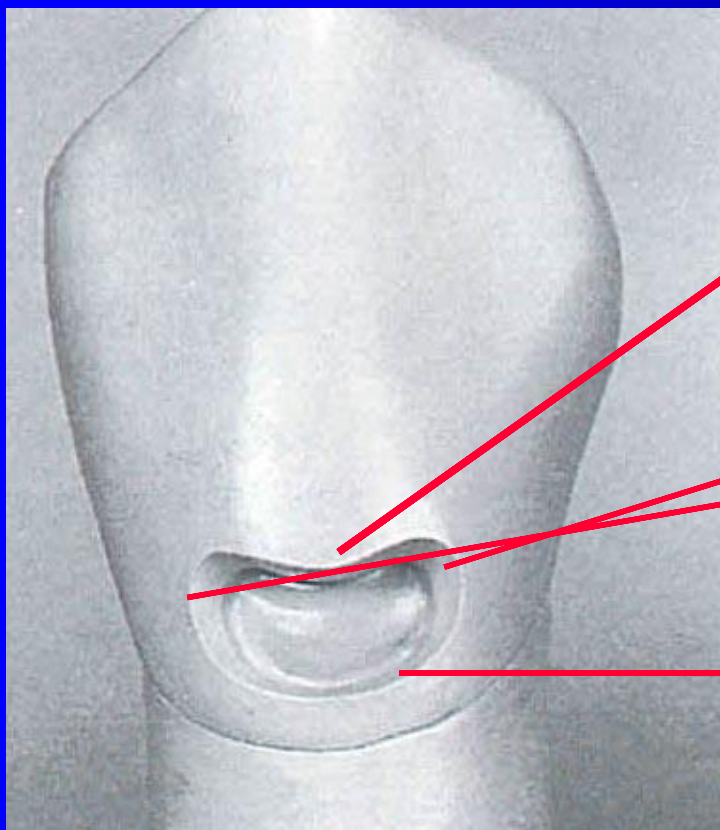
Determination of cavity borders and extention for prevention

We do not follow Black´s rules exactly!

Gingival: axial dephth of 0,5 mm inside the DEJ.

Extention of the preparation incisally, gingivally, mesially and distally untill the cavosurface margins are positioned in sound dental structure. Total dephth: 1 – 1.25 mm. If on root surface -0,75 mm


Incisal border
Mesial
snd distal
border
Gingival border



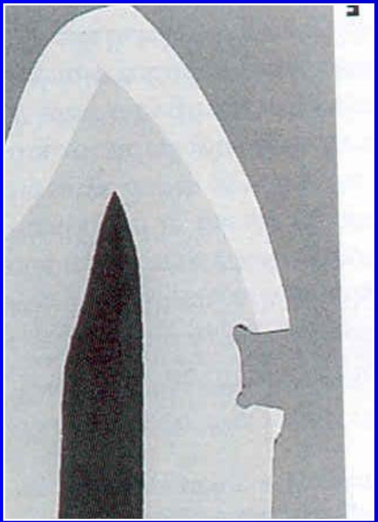
Occlusal border

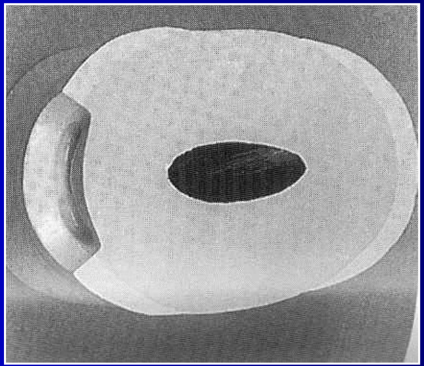
mesial and distal border

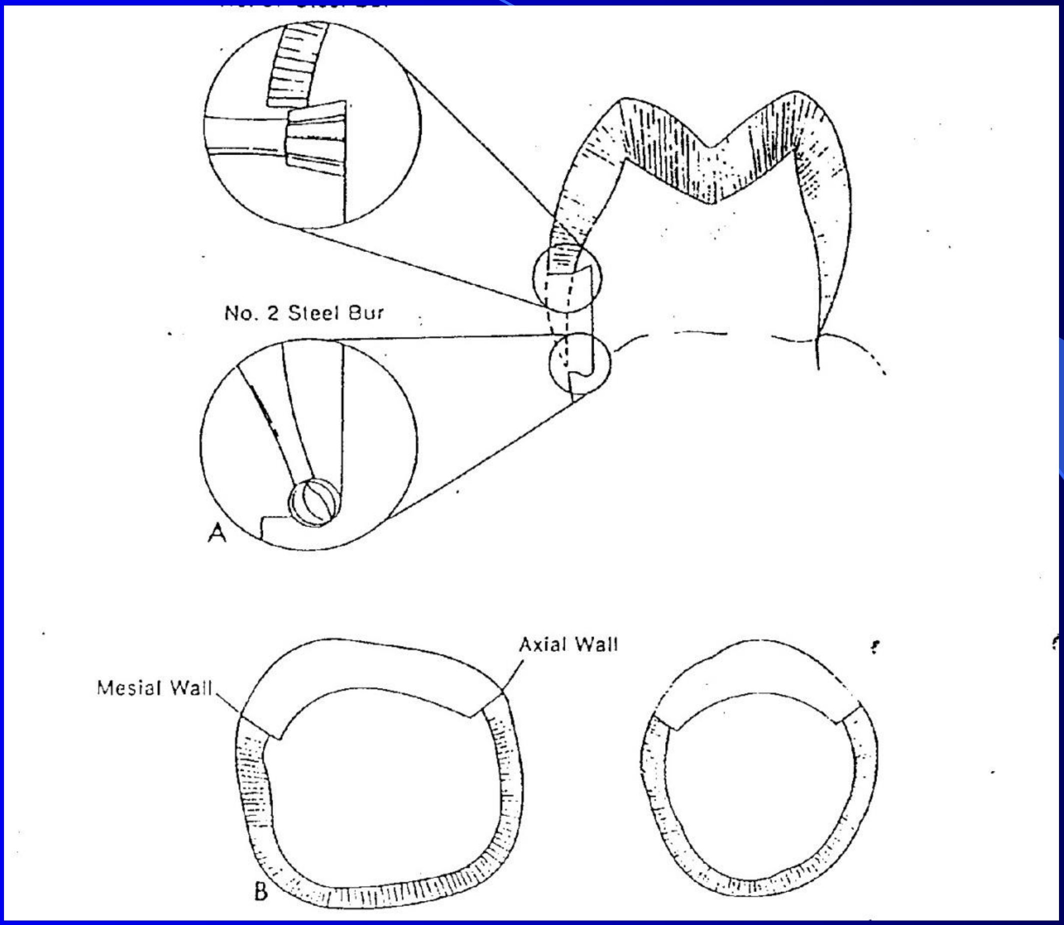
Gingival border

Retention

- Box 0,75 – 1,25 mm deep, undercuts, coves (larger cavities)

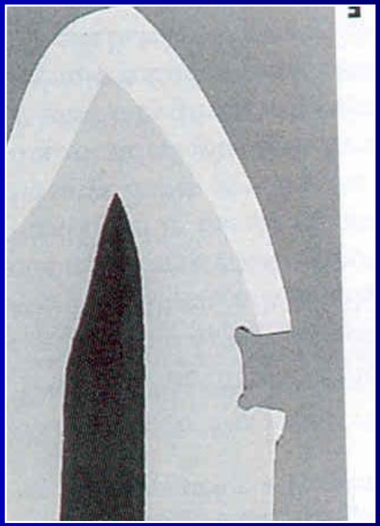





No. 2 Steel Bur
A
Mesial Wall
Axial Wall
B

Resistance

Elastic deformation during the biting



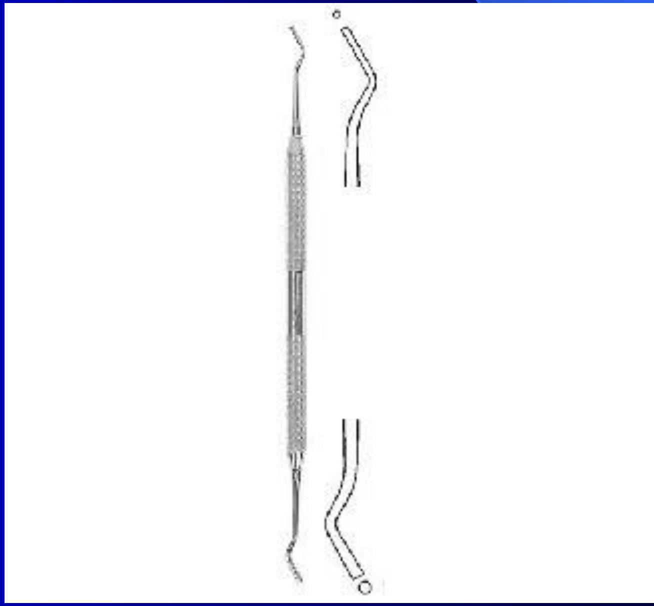
Excavation of carious dentin

Round bur

Excavator

Finishing of cavity borders

- Fine diamond bur of a chisel



Filling

- Portion of amalgam are condensed using a condensor (stamen) and finished using a spatula or a carver.

Class five - composïte

- Aesthetic reasons

Contraindication of composites

- Bad hagiene
- Subgingival cavities
- Root caries (outside of enamel)

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Composite must not be subgingival!!!!

Determination of cavity borders

Cavity is limited on the caries defect only – no extention!!!!

The depth usually 1 mm

Retention

- Micromechanical retention

Enamel: Retentive border – 1 – 2 mm wide and the angle 45°

Cementum: only finishing with the fine diamond bur.

Retention

Retentive border:

- removing of the aprismatic enamel

– better condition for micromechanical retention

- better aesthetics

Retention

Acid etching (phosphoric acid): 30 s dentin, 30 s enamel

Rinsing (washing off) 30s

Priming, bonding, light curing.

Filling

Spatula

Matrix

- Polyester strip, wooden wedges
- Special cervical matrix

Matrix

Anatomical form

Class five - glasionomer

- Cavity outside of enamel

Properties

- Chemical fixation to tooth structure
- Fluoride release
- Favorable thermal expansion
- Aceptable aesthetics

Determination of cavity borders

Cavity is limited on the caries defect only – no extention!!!!

The depth usually 1 mm

Retention

- Box
- Chemical

Finishing of cavity borders

Fine diamond bur

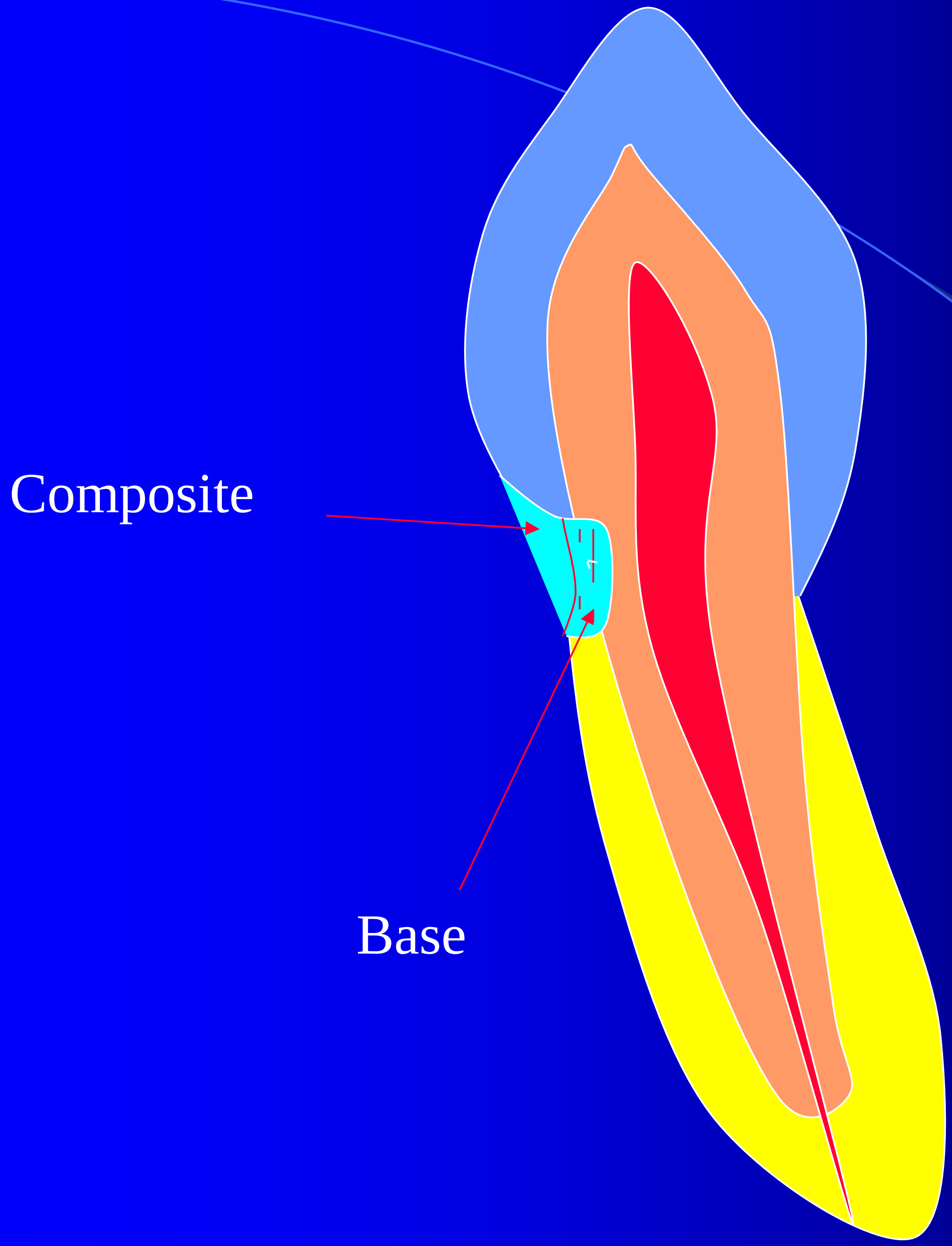
Filling

- Conditioner 20 s
- Washing off
- Wet cavity
- Filling material
- Matrix
- Varnish

Class V. – Sandwich principle

Base of galsionomer – replace of the lost dentin

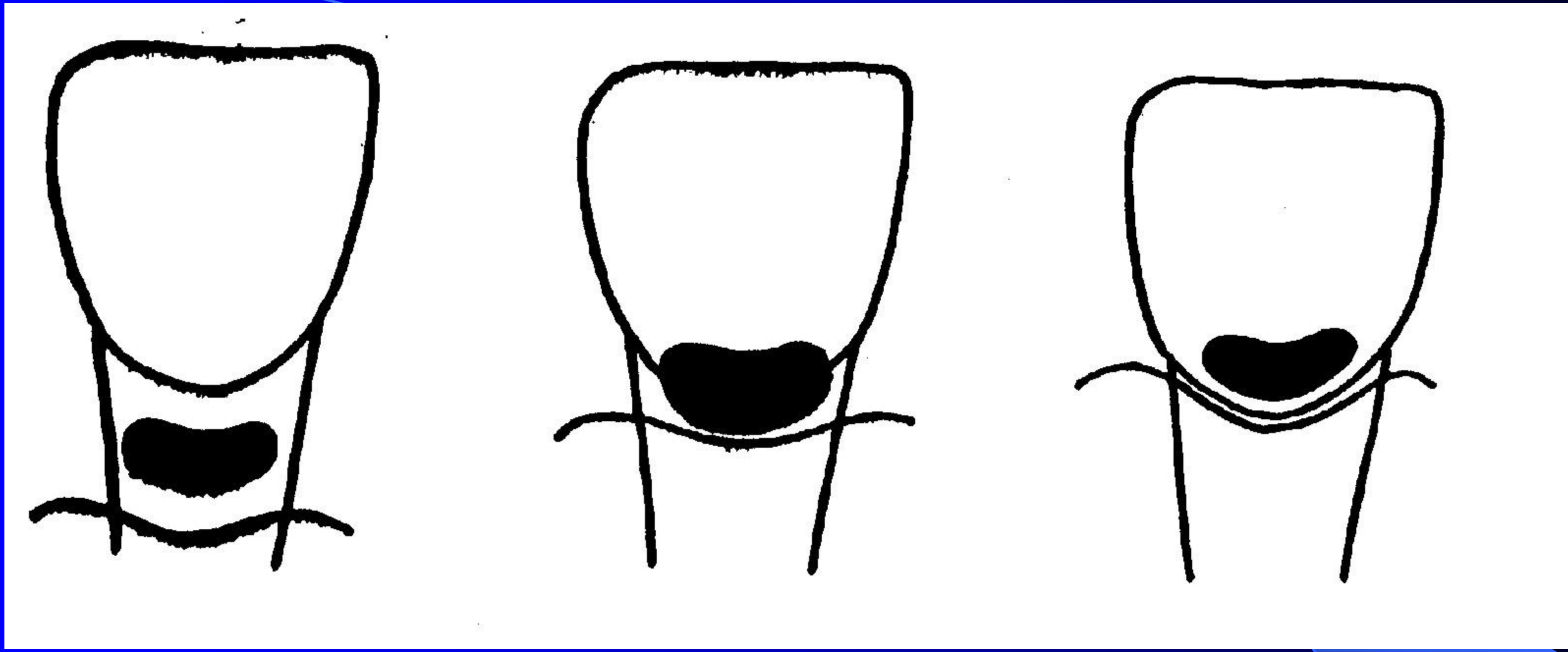
Thin layer of composite – replace of the lost enamel

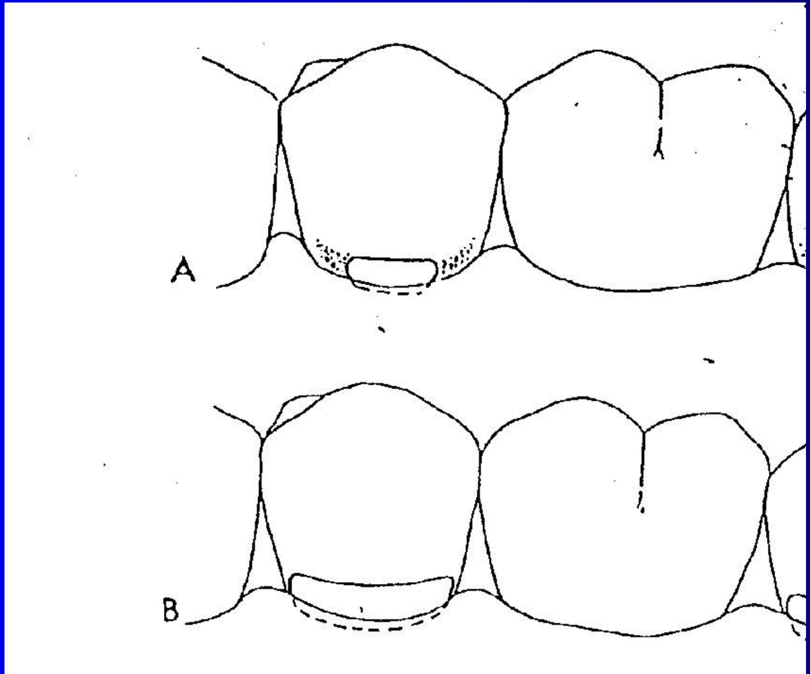


Bond:
GIC - Tooth
Chemical

Composite – Tooth
Micromechanical

Composite - GIC
Micromechanical




A
B