Clinical technique for Direct Class III and CL IV for composite restoration

- Three design of tooth preparation for composite restorations :
- 1- Conventional
- 2-beveled conventional
- 3- modified

Cl III tooth preparation

Indication for lingual approach

1- to conserve facial enamel for enhanced esthetics .

2-carious lesion lingually

3- color matching of composite is not as critical

4- discoloration or deterioration of the restoration is less visible .

Indication for facial approach

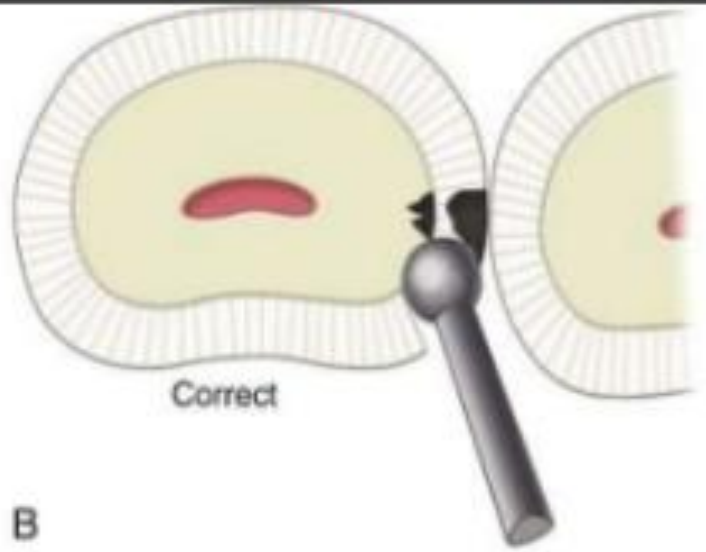
1- the carious lesion in positional facially

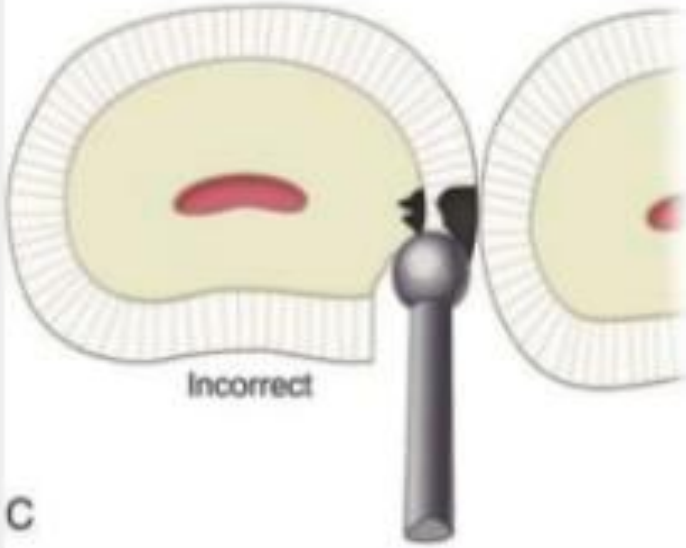
2- teeth are irregularly aligned , making lingual access undesirable

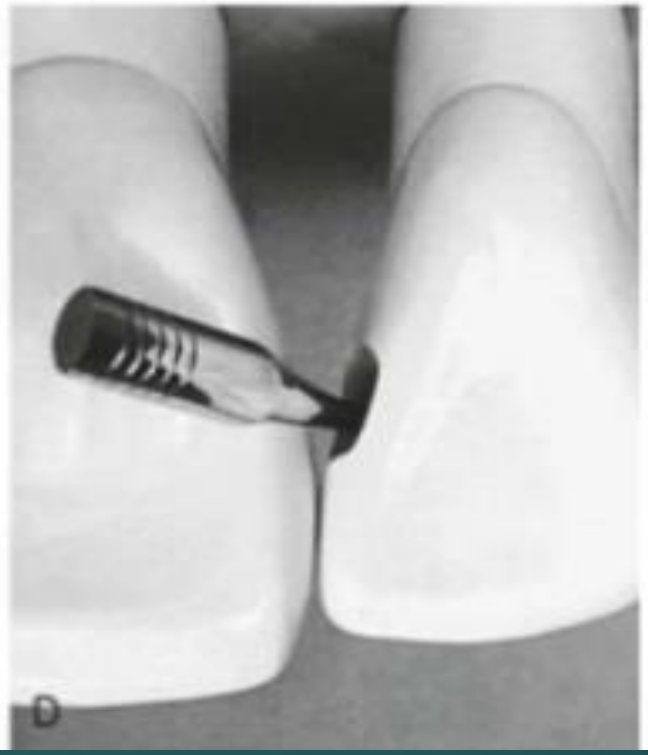
3- extensive caries extend to facial surface.

Conventional Cl III

1- using round bur to prepare outline form
2- extend the preparation into sound wall
3-extend pulpally 0.75mm
4- box like design
5- continuous groove retention can be prepared 0.25mm







Beginning class III tooth preparation(lingual):

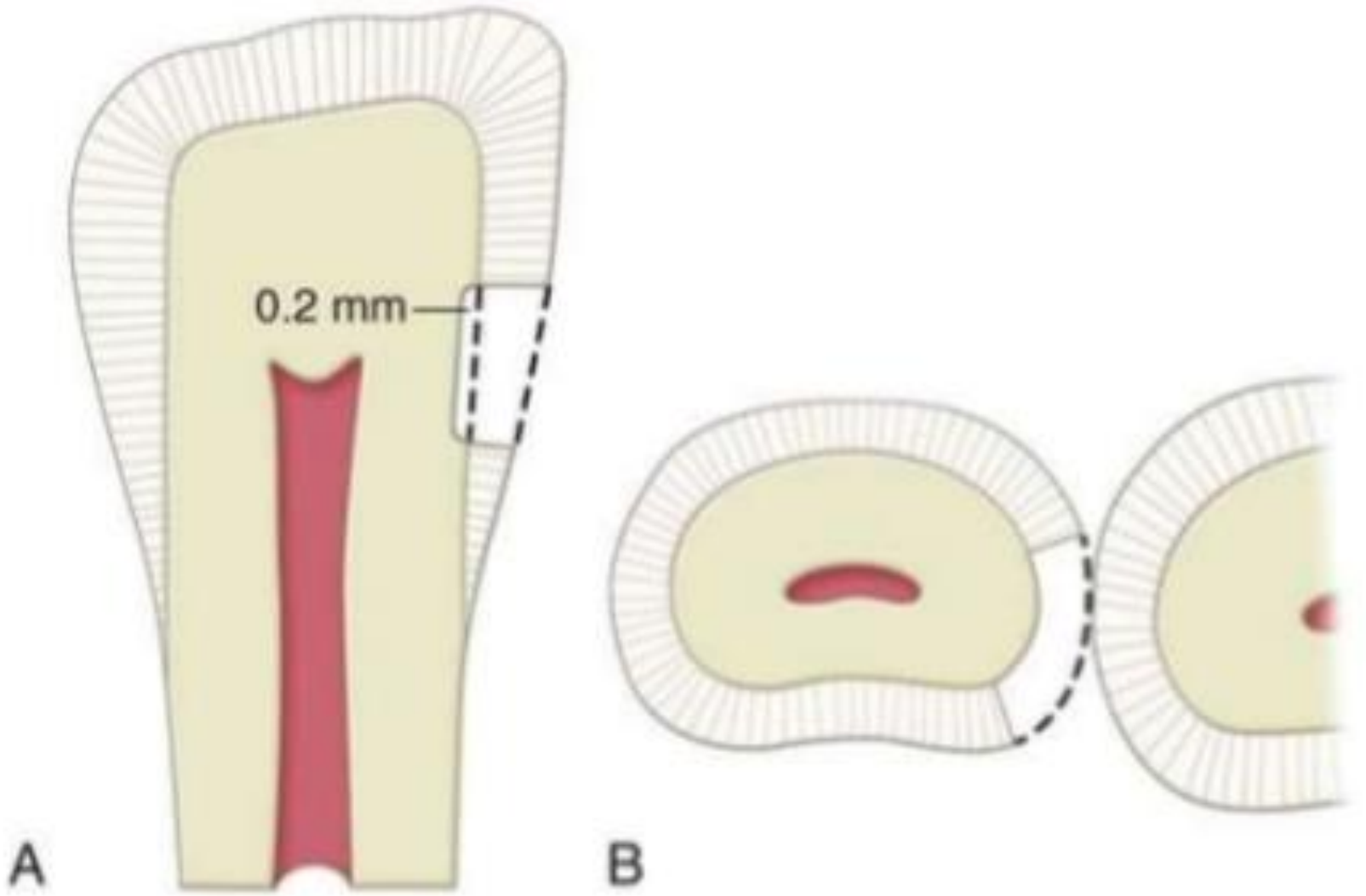
A. Bur held perpendicular to enamel surface and initial opening made close to adjacent tooth at incisogingival level of caries.

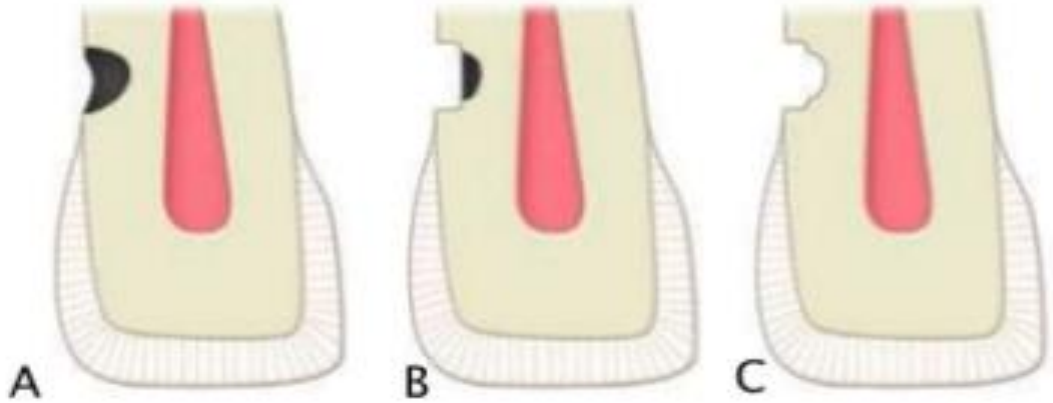
B. Contact angle of entry is parallel to enamel rods on mesiolingual angle of tooth.

C. Incorrect entry overextends the lingual outline.

D. Same bur used to enlarge opening for caries removal and convenience form while establishing initial axial wall depth.

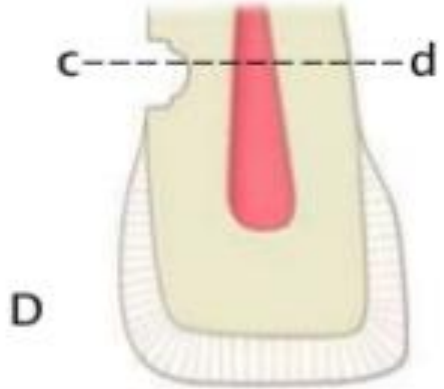
Many class III preparations are done to an **initial axial wall depth of 0.2mm int**
dentin.





Lingual

E



Class III tooth preparation for lesion entirely on root surface.

A. Mesiodistal longitudinal section illustrating a carious lesion.

B. Initial tooth preparation.

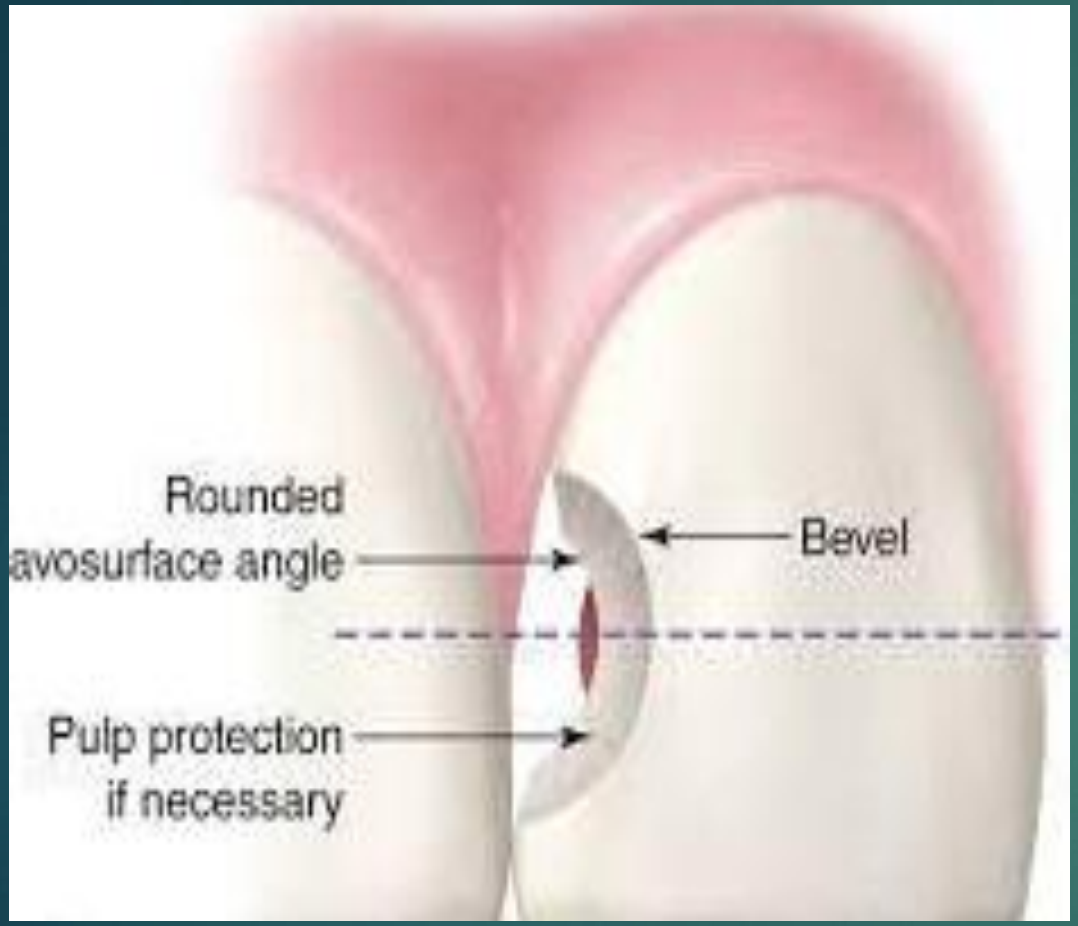
C. Tooth preparation with infected caries dentin remove

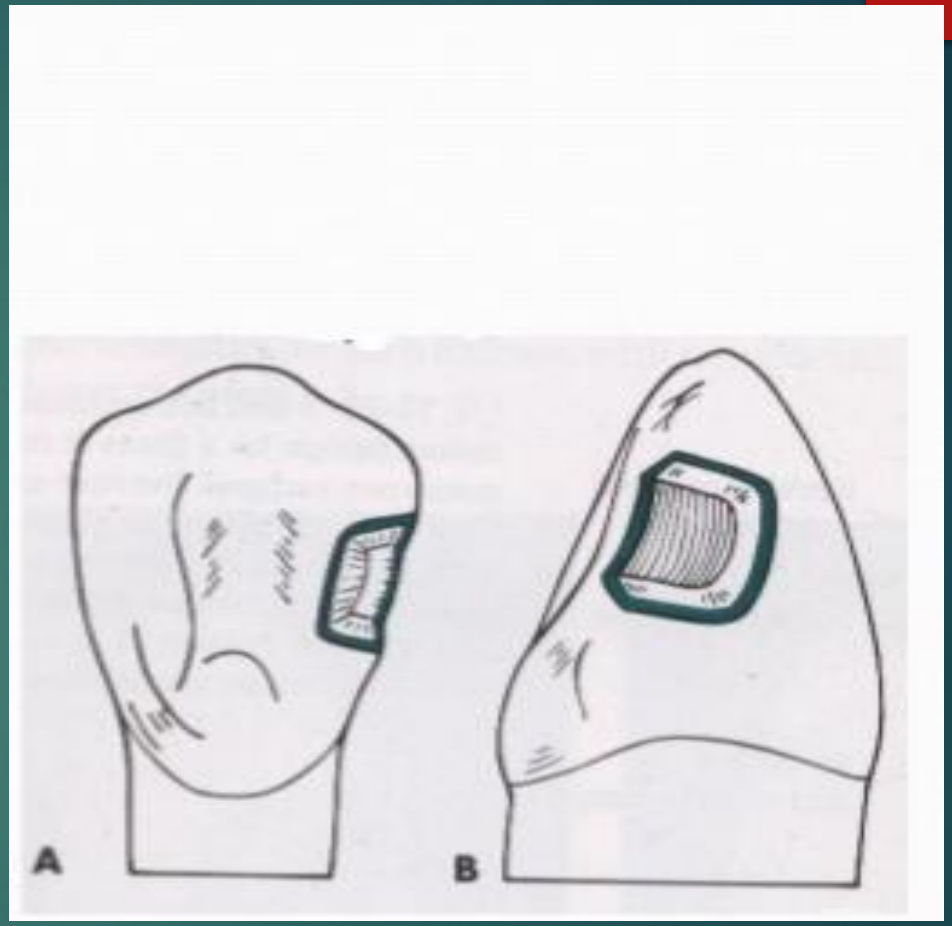
D. Retention grooves shown in longitudinal section. Transverse section through plane cd illustrates contour o the axial wall and direction o facial and lingual walls.

E. Preparing the retention form complete the tooth preparatio

Bevelled conventional CL III

- Indicated for replacing an existing defective restoration
- When restoring a large carious lesion to increase retention and resistance form.


Rounded
avosurface angle
Bevel
Pulp protection
if necessary


A
B

Modified CL III

1- most used type of cavity preparation

2- indicated for small or moderated lesion

3-designed to be conservative as possible

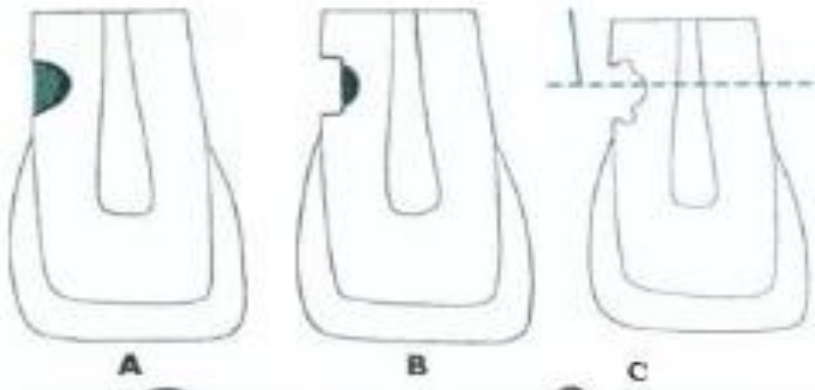
4- preparation wall have no specific shapes

5- preparation design appears to be scooped or concave .

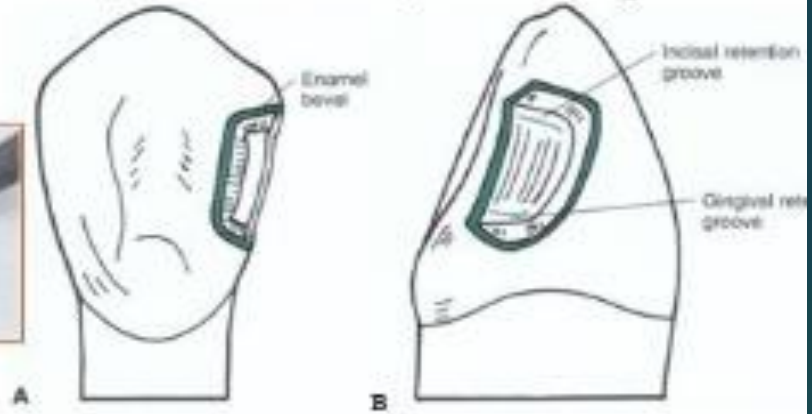
Class III cavity preparation

- Cavity Designs:

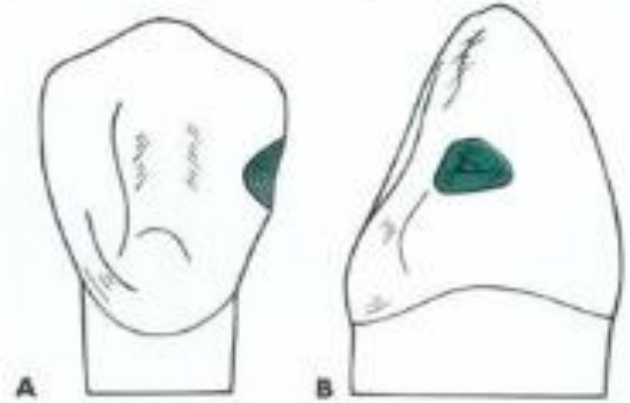
A. **Conventional**- when caries is entirely on root surface



B. **Beveled Conventional**- When the cavity is large & have enamel margins. Bevel is given at an angle of 45° to the cavosurface



C. **Modified**- When the carious lesion is small & easily accessible



CL IV tooth preperation

- Preparation is similar to CL III except the preparation extended to the incisor edge
- For fracture : if no caries or pulpal involvement a bevel is the only preparation necessary 1.0-2 mm enamel bevel should be placed around the cavity

- Retentive pins are not needed because the adhesive technique provides sufficient retention for the restoration.

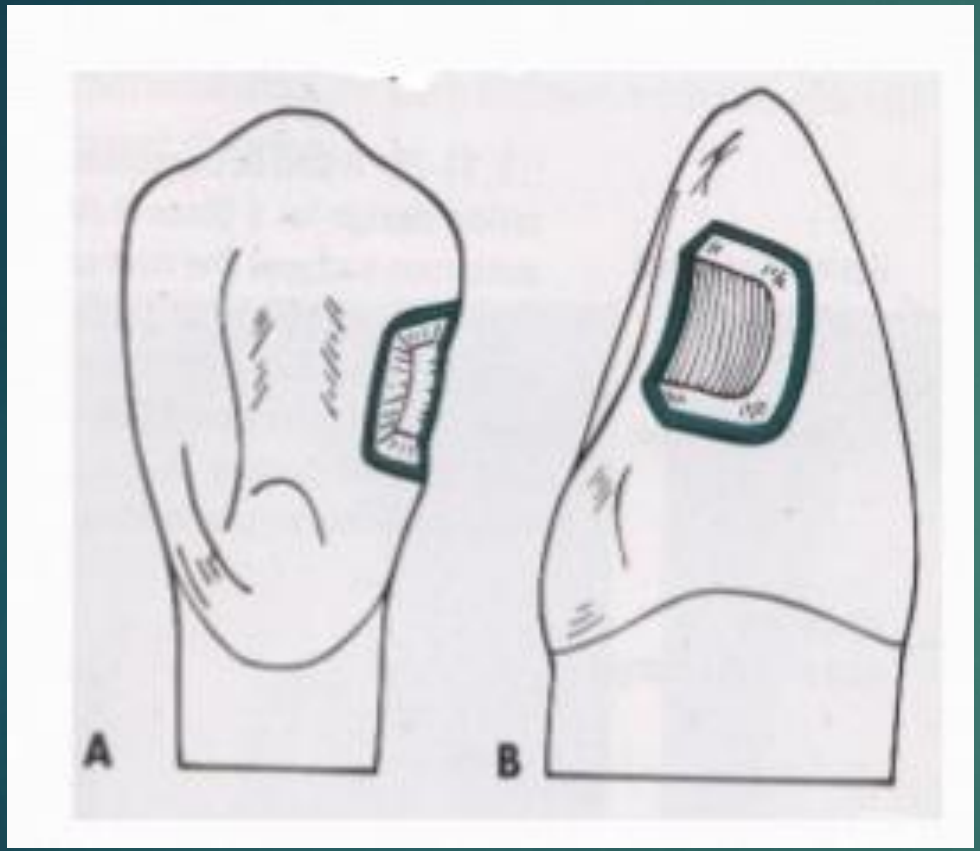
Class V tooth preparation for composite restoration

- Conventional : 90 degree cavosurface angle ,uniform depth of axial line angle
- Its indicated only portioin of lesion extend onto root surface.

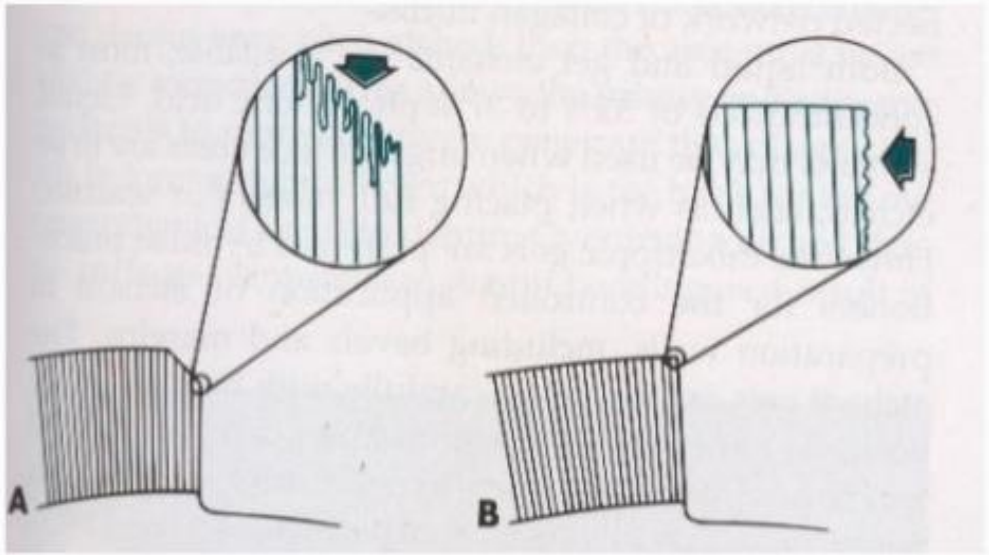
indications

1- replacement of defect class V restorations

2- LARGE CARIES LESION

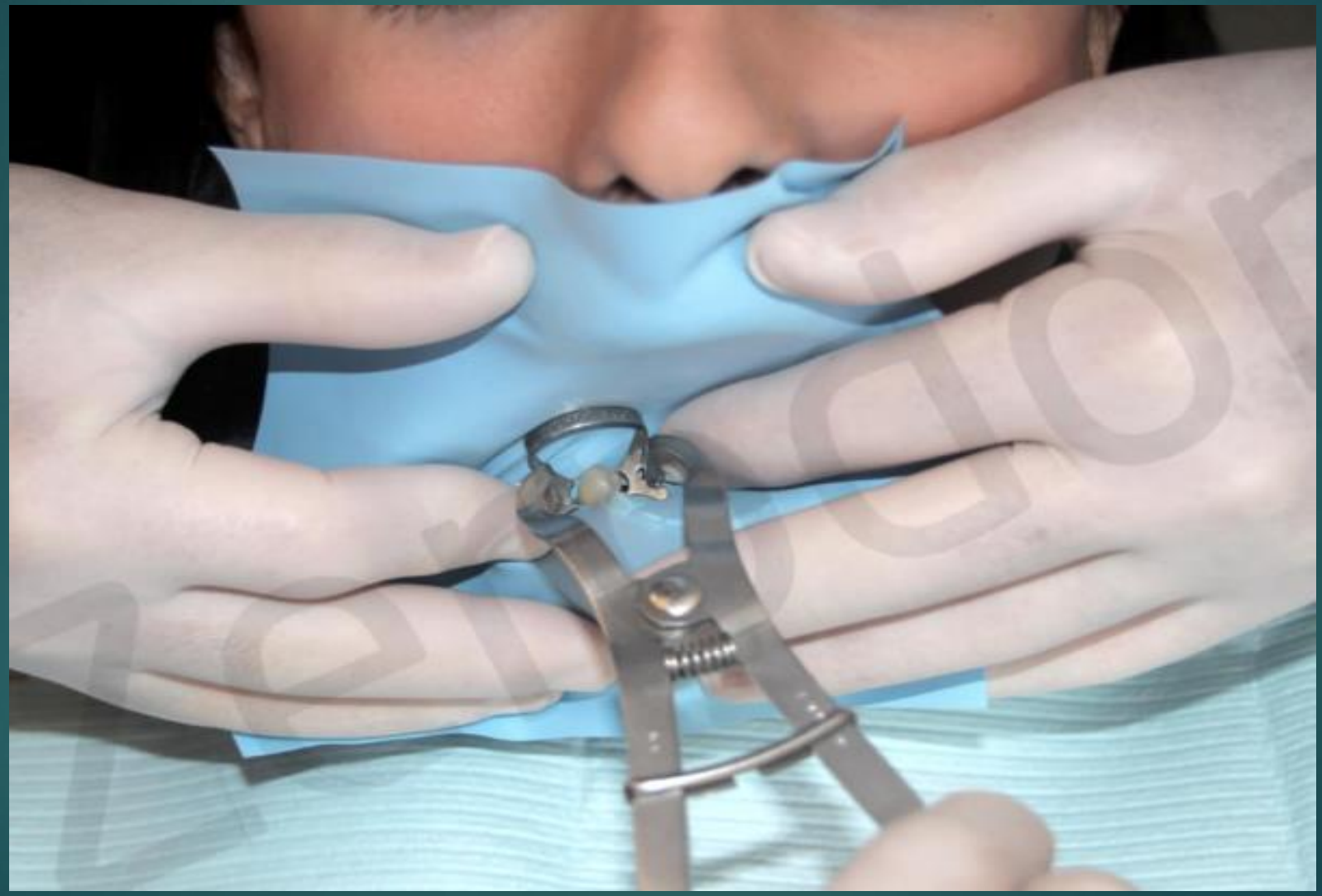


- Advantage of enamel bevel-ends of enamel rods are more effectively etched producing deeper microundercuts than when only the sides of enamel rods are etched.



Restorative technique

- 1- determine shade of tooth
- 2- clean the tooth preparation by polishing cap
- 3- isolated the tooth by rubber dam or cotton roll to keep the teeth from saliva , blood .




STYLEITALIANO
SHADE GUIDES

Bulk fill composite

Tetric EvoCeram
conventional technique

VS.

Tetric EvoCeram Bulk Fill
Bulk Fill technique

Source: 32 dentists from 21 countries

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Thank you