Class III:

Smooth surface, involves proximal surface of anterior tooth

\* it is an aesthetic restoration.

-There are two approaches Depending on caries location, extent of caries, access to carious lesion:

1) Facial approach depends on:

a) Caries location

b) Alignment of teeth

c) Replacement of restorations

2) Lingual approach:

 more esthetic, conserves facial enamel

use unless it would remove excessive amount of tooth structure

staining less visible if it occurs

\*\*\*cavity preparation\*\*\*

-We have 3 types of class III cavity preparation:

1) Conventional, gives us mechanical retention.

2) Beveled conventional.

3) Modified conventional.

* Conventional
* Indication: restoration of root surface.
* Why? No enamel margin
* Design: Butt Joint margins.
* Walls = walls for amalgam
* Cavosurface margin=90˚
* External walls ┴ root surface.
* Uniform depth.

Note : for retention in this form we use retention grooves

Retention grooves can:

1. increase retention,
2. decrease effect of polymerization shrinkage,
3. increase marginal seal by resisting tooth flexural forces.
* Beveled conventional
* Indication: restoration of large carious lesion or replacing defective restoration in the crown.
* Why? More retention/resistance are needed
* Design: some beveled enamel margins with conventional wall design.
* Cavosurface margin=45˚ on beveled, 90˚ on non beveled margins.
* External walls ┴ enamel surface

Note: undermined enamel can be left in non-stress area.

Retention is increased by:

1. Enamel bevel or flare : All accessible enamel margin **except gingival margin**

**, Avoid** on **lingual margin** if the margin is **subjected to occlusion**

1. Retention groves
* Modified conventional
* Indications: small and moderate lesions or faults designed to be as conservative as possible in the crown.
* Why? All enamel margins
* Design: scooped or concaved
* Cavosurface margin ≥ 90˚
* External walls = no shape.
* Only include caries or defective restoration
* **Axial wall not uniform in depth.**

Class IV

Involves **incisal edge** of **anterior tooth.**

\*\*\*cavity preparation\*\*\*

-We have 3 types of class IV cavity preparation:

1) Conventional.

2) Beveled conventional.

3) Modified conventional.

• Conventional

* Minimum clinical application.
* Indication: Restoring the portion of a cavity that extend to root surface.
* Why? More retention and resistance needed.
* Design: Butt Joint margins.
* Walls = walls for amalgam
* F and L Cavosurface margin=90˚
* Gingival floor ┴ long axis of the tooth.
* Uniform depth.

• Beveled conventional

* Indication: restoration of large carious lesion or replacing defective restoration in the crown.
* Why? More retention/resistance are needed
* Design: some beveled enamel margins with conventional wall design.
* Cavosurface margin=45˚ on beveled, 90˚ on non beveled margins.
* External walls ┴ enamel surface

Retention:

1. Enamel bevel or flare:

Deep bevel for more retention (0.25-2mm).

1. Retention groves.
2. Undercuts.
3. Dovetail
4. Pins
* Modified conventional
* Indications: small and moderate lesions or faults designed to be as conservative as possible in the crown.
* Why? All enamel margins
* Design: No specific shape
* Cavosurface margin ≥ 90˚
* External walls = no shape.
* Only include caries or defective restoration.