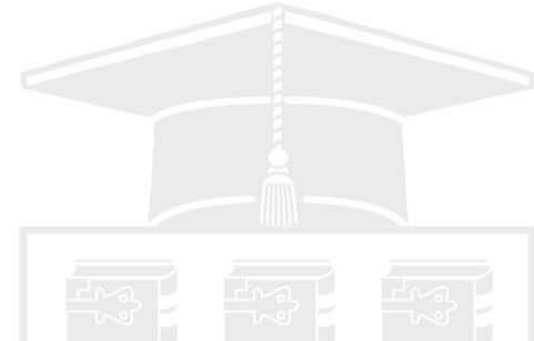


STATE UNIVERSITY OF MEDICINE AND PHARMACY “N.TESTEMIȚANU”
DEPARTMENT OF PROSTHODONTICS

Teeth mounting



- **Criteria for frontal teeth selection:**
 - a. **Size**
 - b. **Shape**
 - c. **Shade**
 - d. **Material**

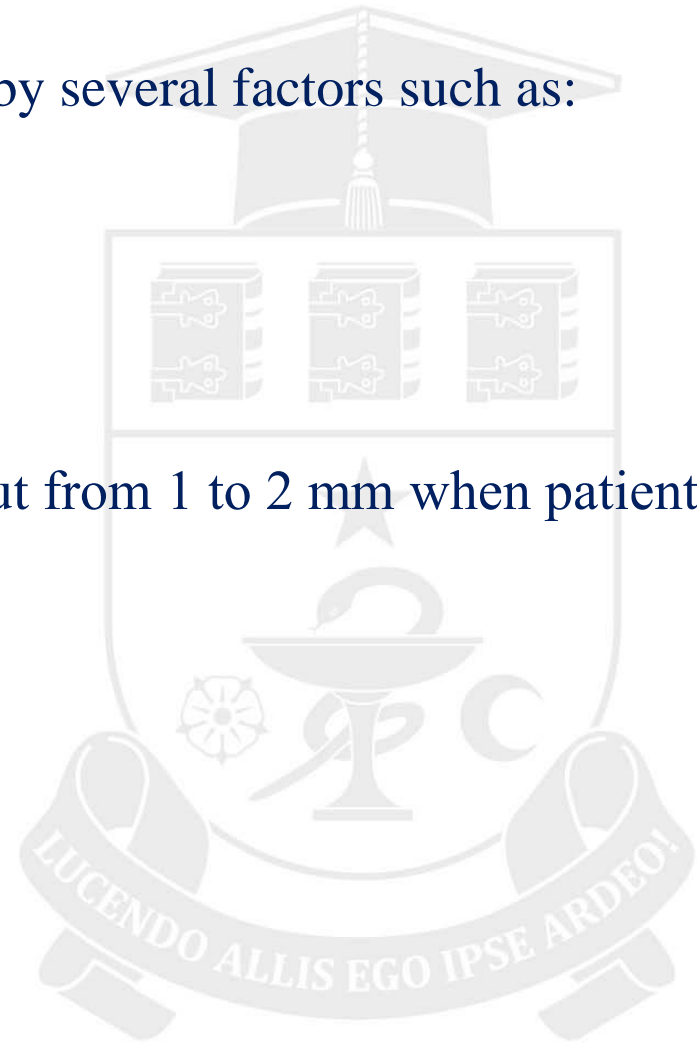




Incisal edge position

- Incisal edge position will be dictated by several factors such as:
 1. Sex
 2. Age
 3. Lip length

Usually the incisor edge is exposed about from 1 to 2 mm when patient's mandible is in rest position.





1-2 mm of incisal edge exposure



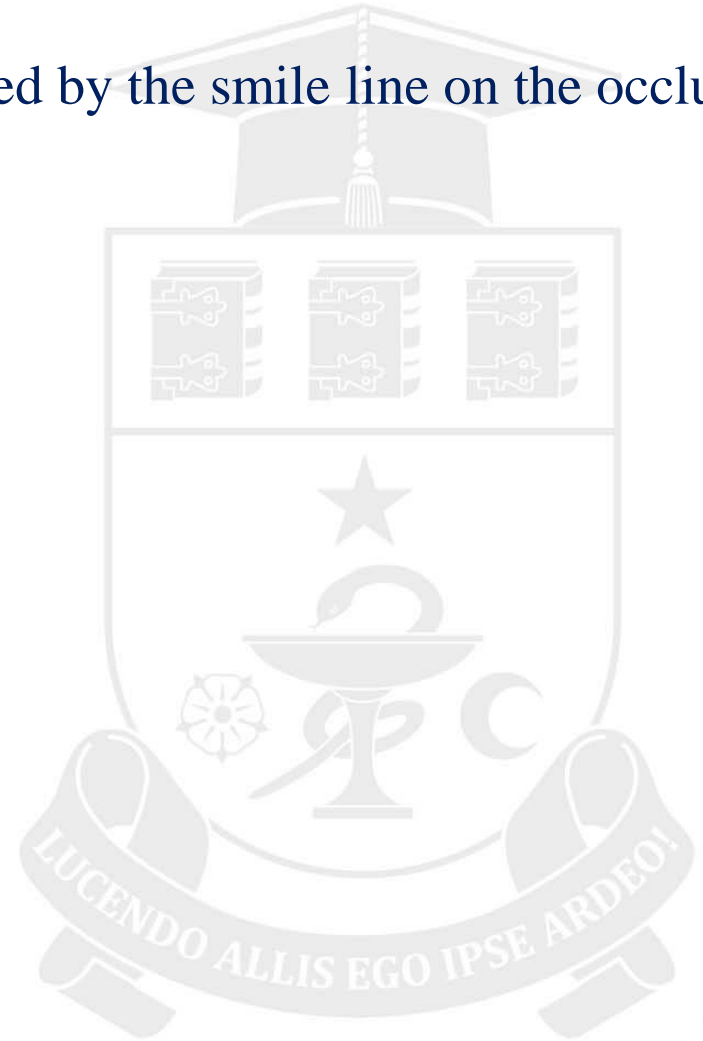


Incisal teeth length

The length of incisal teeth will be dictated by the smile line on the occlusal rims.

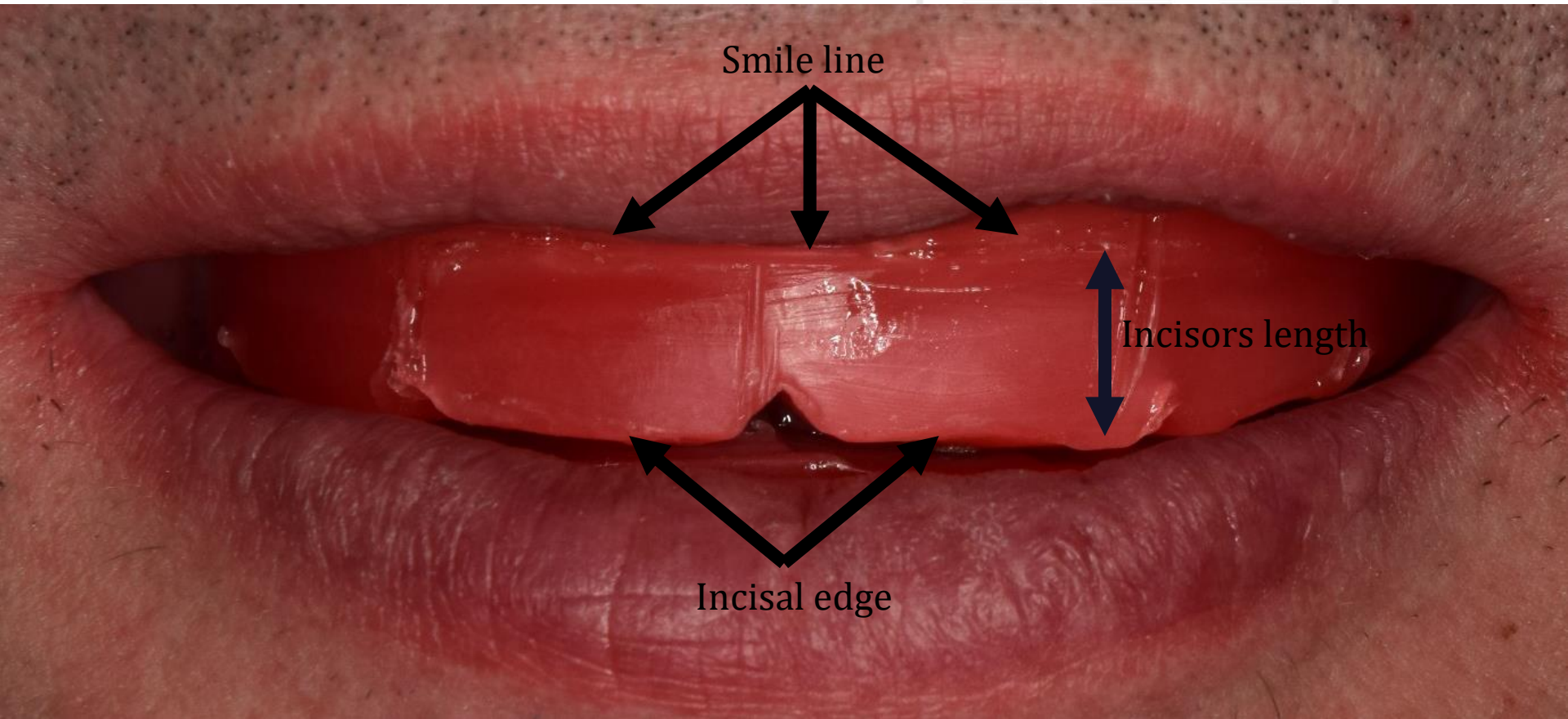
Three types of smile line are known:

1. Low
2. Medium
3. High





The distance between the incisal edge and smile line will be the length of the central incisors, however, it must be considered also the lip length, mobility of the lip during smile and patient's skeletal class.

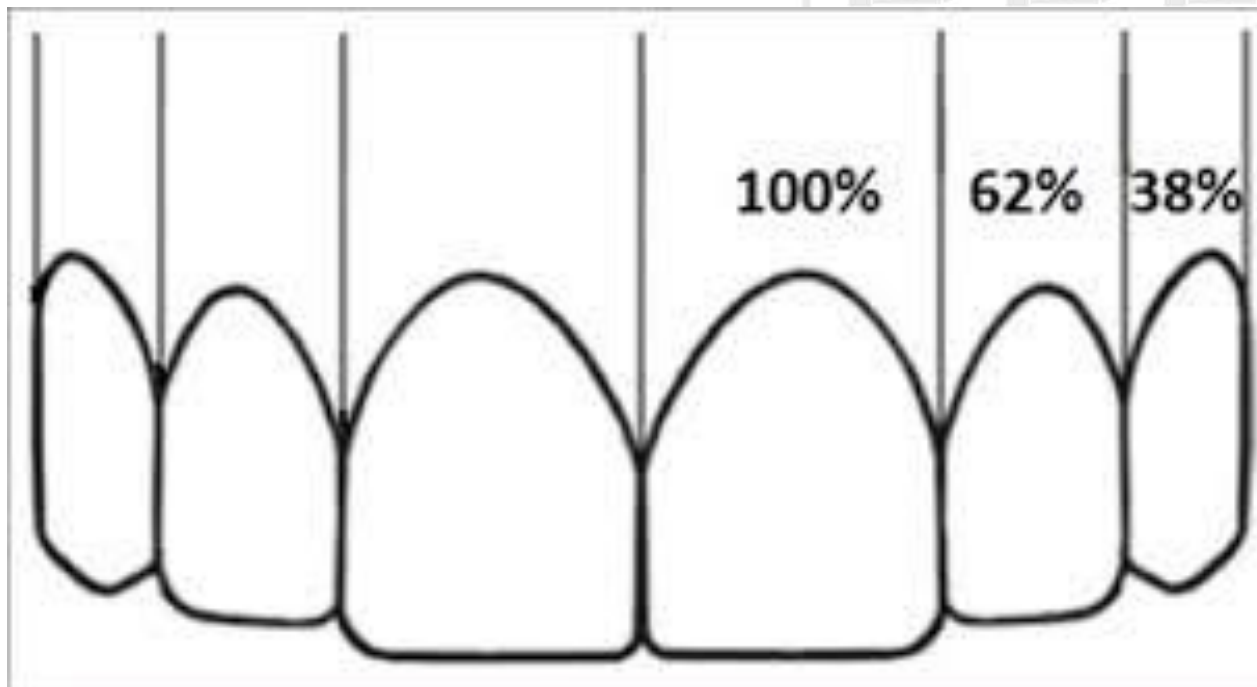




Anterior teeth width

The width of anterior teeth will be dictated by the available space between the two canine lines. Different rules and laws can be applied for calculating the width of anterior teeth.

Golden Proportion by Levin

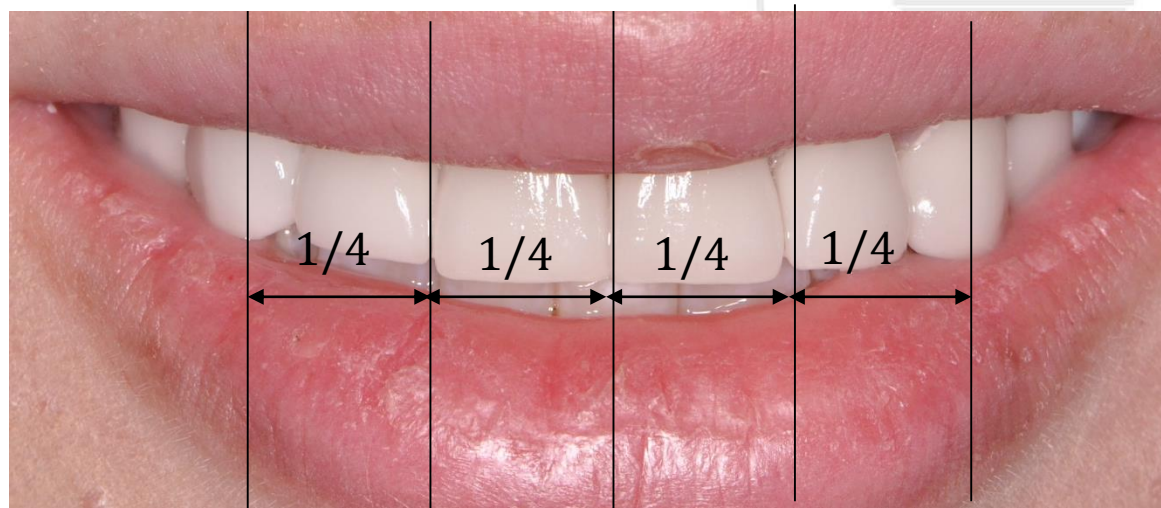




Size of Anterior teeth

- Size of face and Head:
 - a. Bizygomatic Width/3.3 – maxillary anteriors
 - b. Bizygomatic width /16 – maxillary centrals
 - c. Length of face/16 maxillary central
 - d. 10.1 ratio of cranial circumference to upper anterior incisors.

Lee indexes





Shape of anterior teeth

There are many articles which are showing that the shape of anterior teeth is depending on several factors:

1. Facial architecture
2. Soft tissue contour
3. Sex
4. Age
5. Constitutional type of patient's body
6. Patient's personality

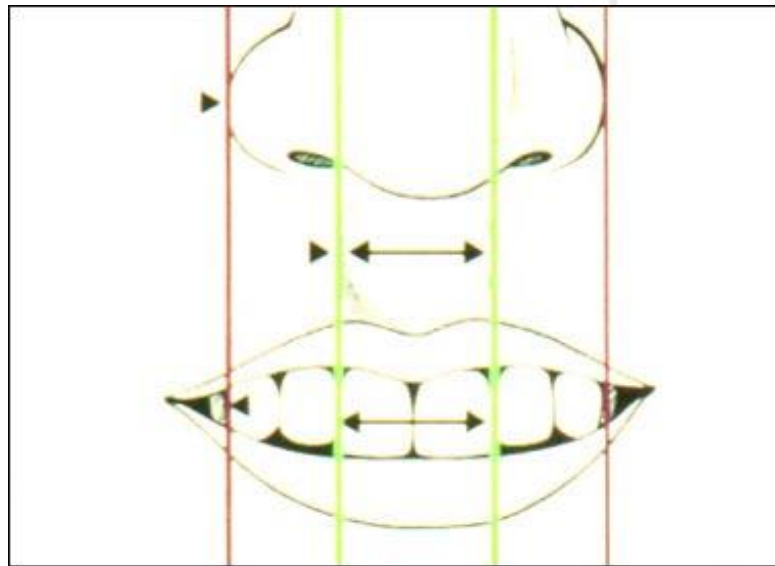




Criteria for frontal teeth selection:

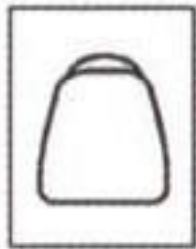
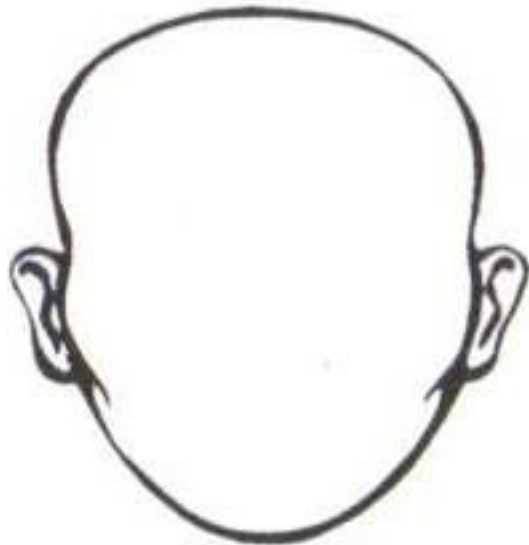
Shape

- 2.1. **Williams principle** - harmony between the face and teeth shape.
- 2.2. **Nelson principle** - Nelson is aiming at harmony between shape of the face, alveolar process and teeth shape.
- 2.3. **Sears principle** - harmony between the Sex, personality and age (S.P.A).

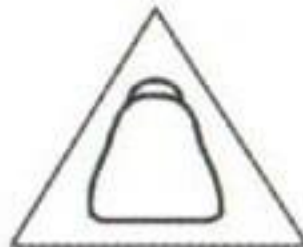
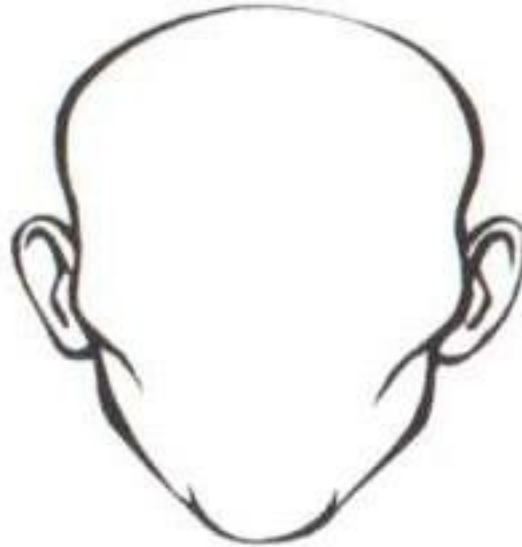




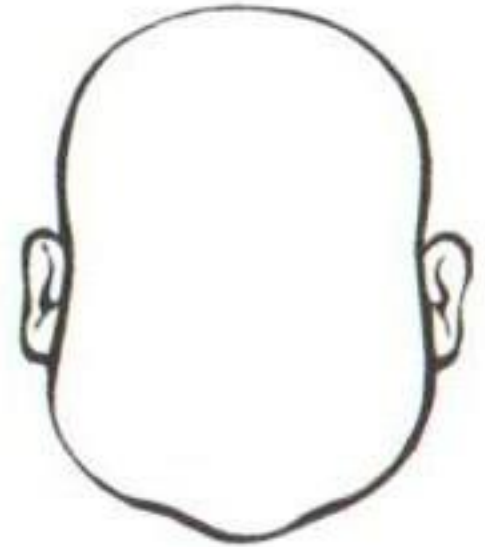
Williams principle - harmony between the face and teeth shape.



Square



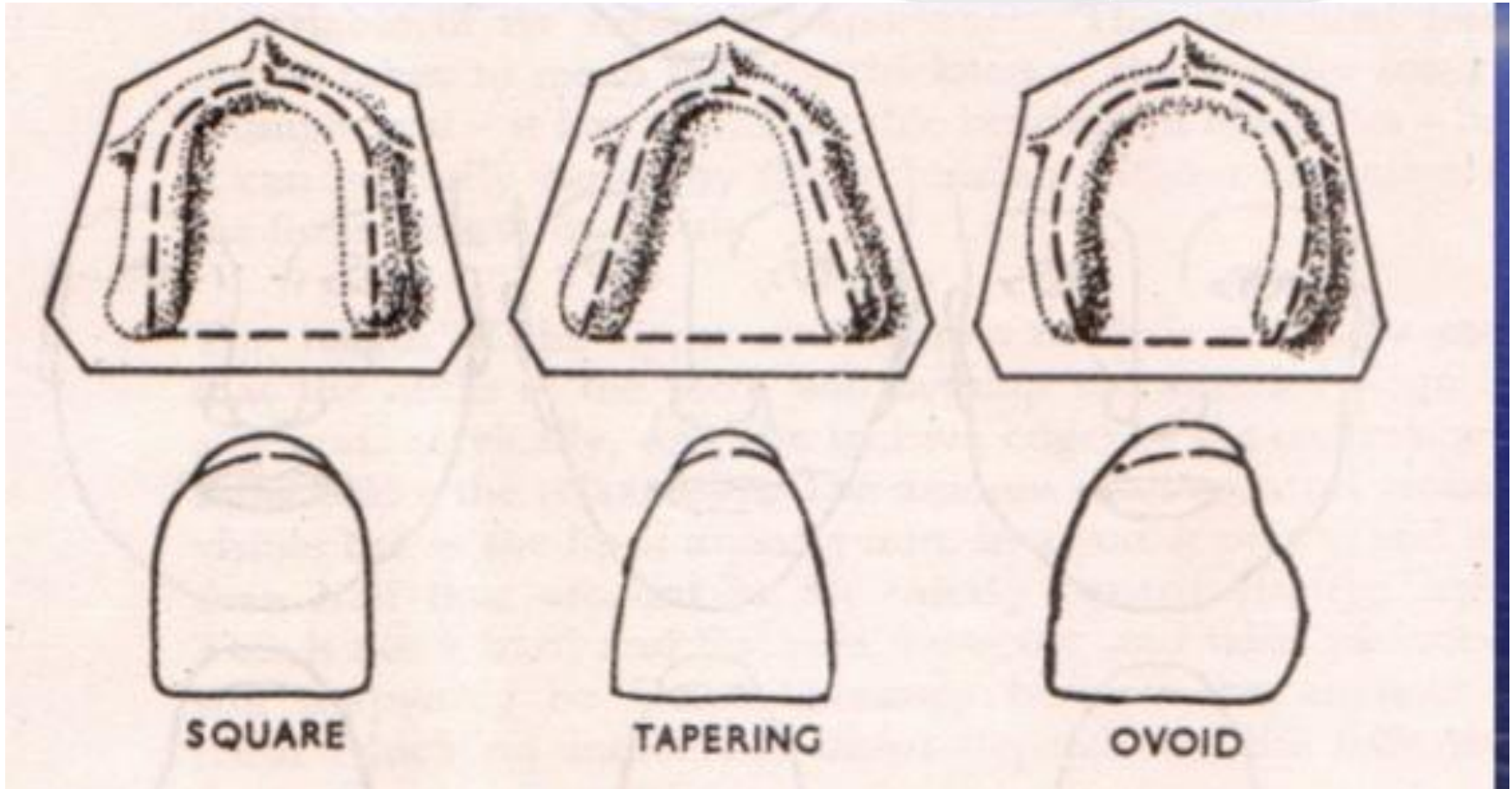
Triangular



Ovoid



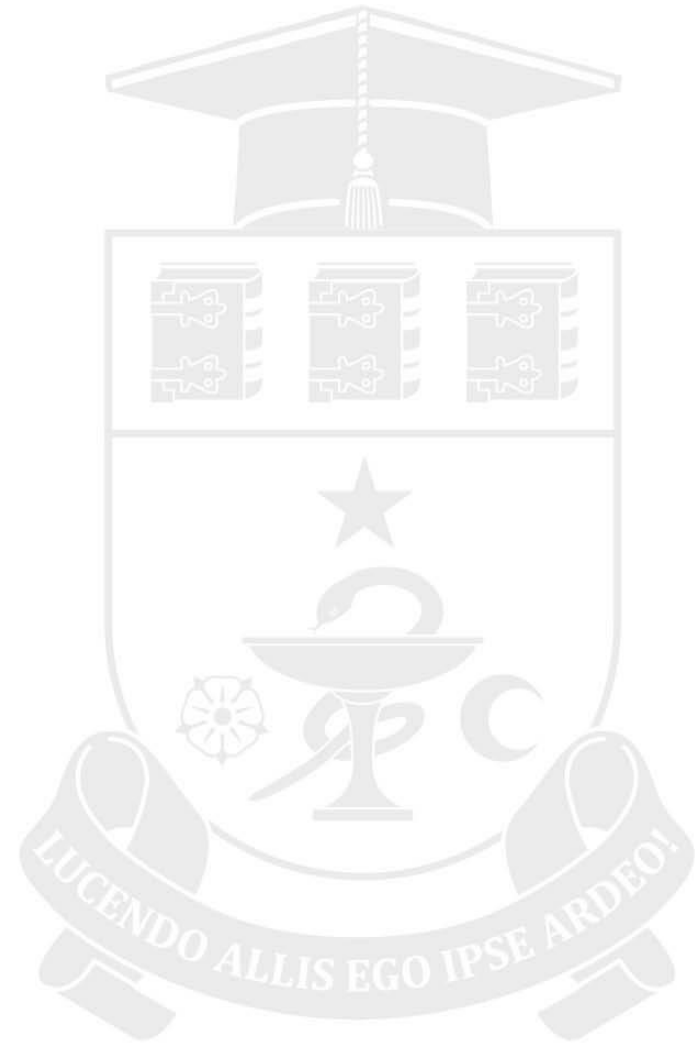
Nelson principle - Nelson is aiming at harmony between shape of the face, alveolar process and teeth shape.





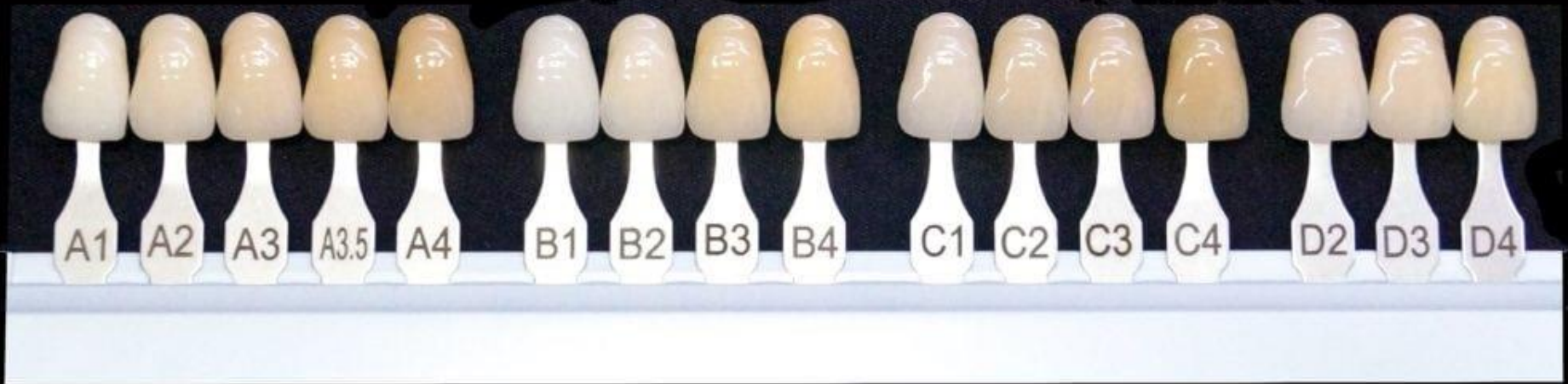
Dentogenic Concept (Frush and Fisher)

- Sex factor:
 - a. feminine soft
 - b. masculine hardness
- Personality factor:
 - a. vigorous type
 - b. medium type and delicate
- Age factor
 - a. incisal edge
 - b. erosion
 - c. diastema
 - d. stippling of interdental papilla





Teeth color





Criteria for anterior teeth selection

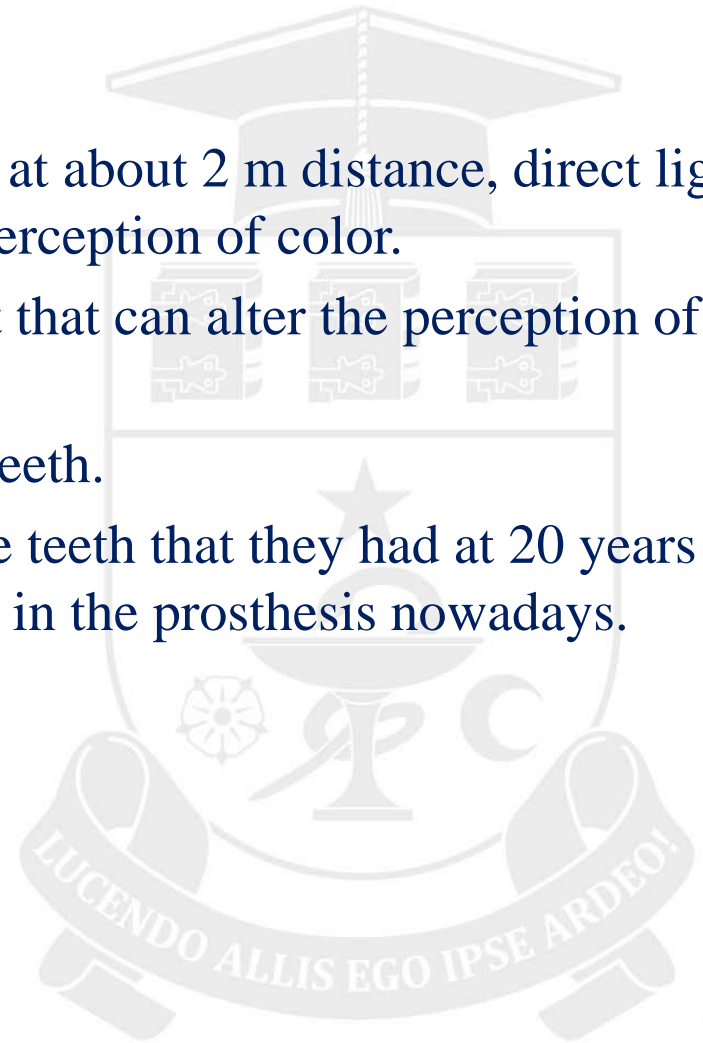
- Patients preferences*
- Age: it determines the degree of translucency. The older the patients is, the more saturated is the color and less translucent.
- Sex: Women have generally whiter teeth.
- Ethnicity: the Caucasian type has usually whiter teeth.
- Personality: Carbonic type has whiter teeth; phosphoric type has yellower teeth and fluoric one usually has grayish teeth (according to De Nevreze)
- Constitutional types: the more vigorous patient is the more colored and pigmented teeth he has.

*Patients preferences must not dictate doctor's choice but taking into consideration the modern trade of "Hollywood" smile, this might be a turning point in decision making.



Tips for color selection

- The color must be taken at day light.
- Patient is placed in front of a window at about 2 m distance, direct light will be avoided as it can change the perception of color.
- Cover the bright clothes of the patient that can alter the perception of color.
- Select the color not only for anterior teeth.
- Remember that most patients want the teeth that they had at 20 years old, which may not be the best choice in the prosthesis nowadays.





Posterior Teeth

Criteria for posterior teeth selection

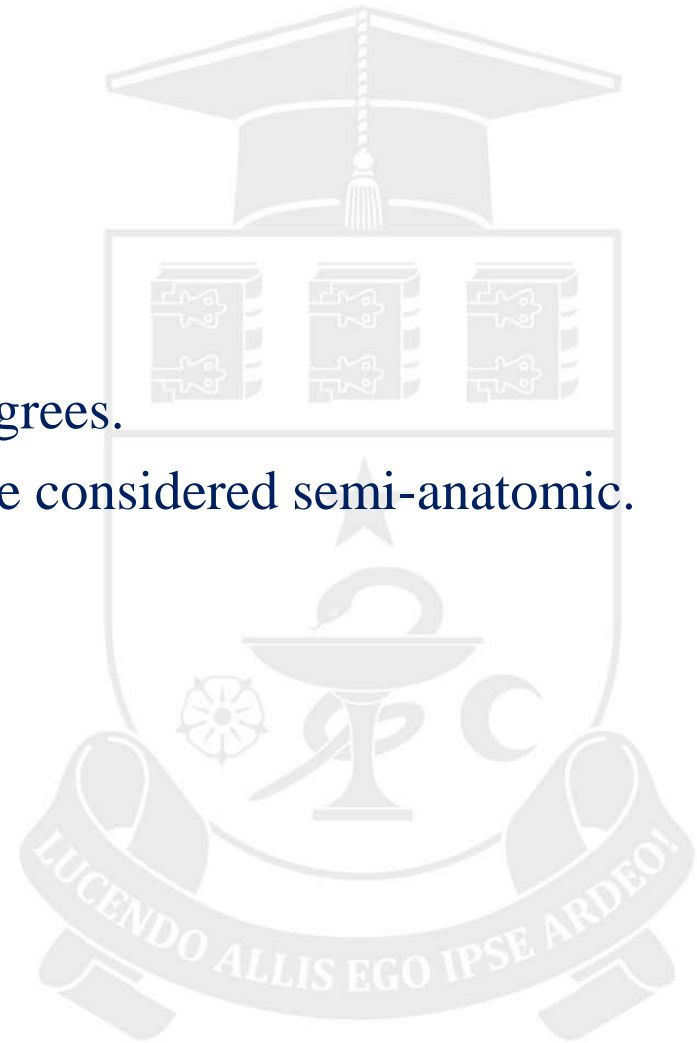
1. Size – will be selected depending on the restorative space.
2. Shape will be chosen depending on the mounting concept and the masticatory type.





Parameters of posterior teeth

- Anatomic Teeth
 - a. Cusp teeth
 - b. Simulate occlusal surface
 - c. Have different inclination degrees.
 - d. Standard cuspal inclination is 33 degrees.
 - e. Cusp incline less than 33 degrees are considered semi-anatomic.



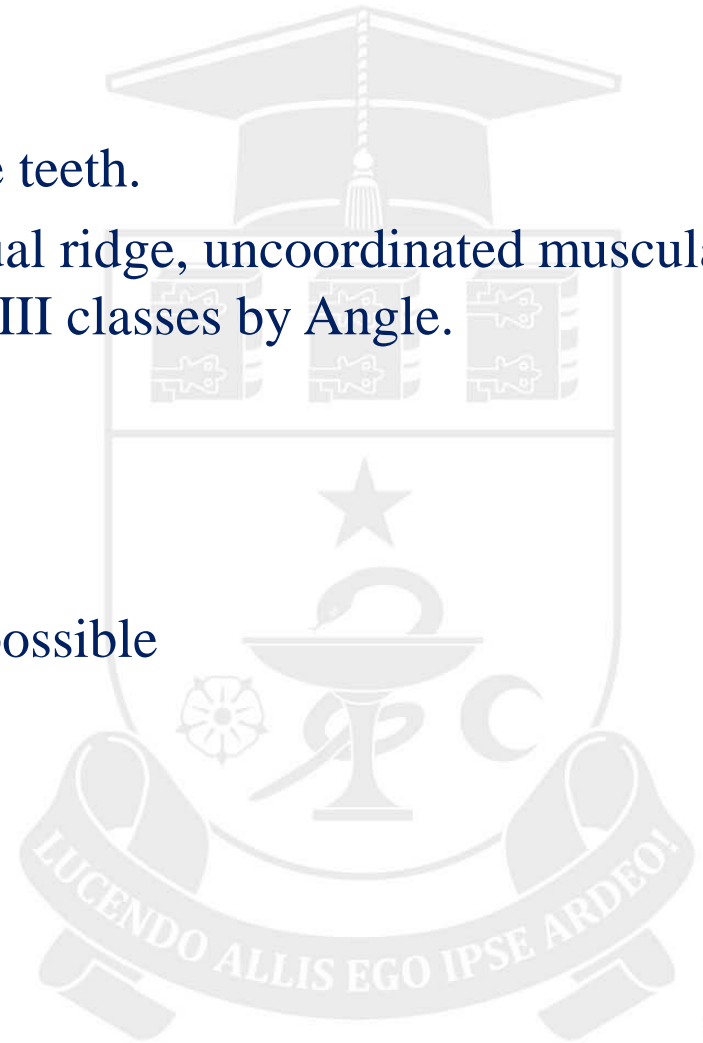


Parameters of posterior teeth

- Non-anatomic teeth
 - a. Cuspless, monoplane or zero degree teeth.
 - b. Usually used in bruxers, poor residual ridge, uncoordinated muscular activity, mal-relationships of II and III classes by Angle.

Disadvantages

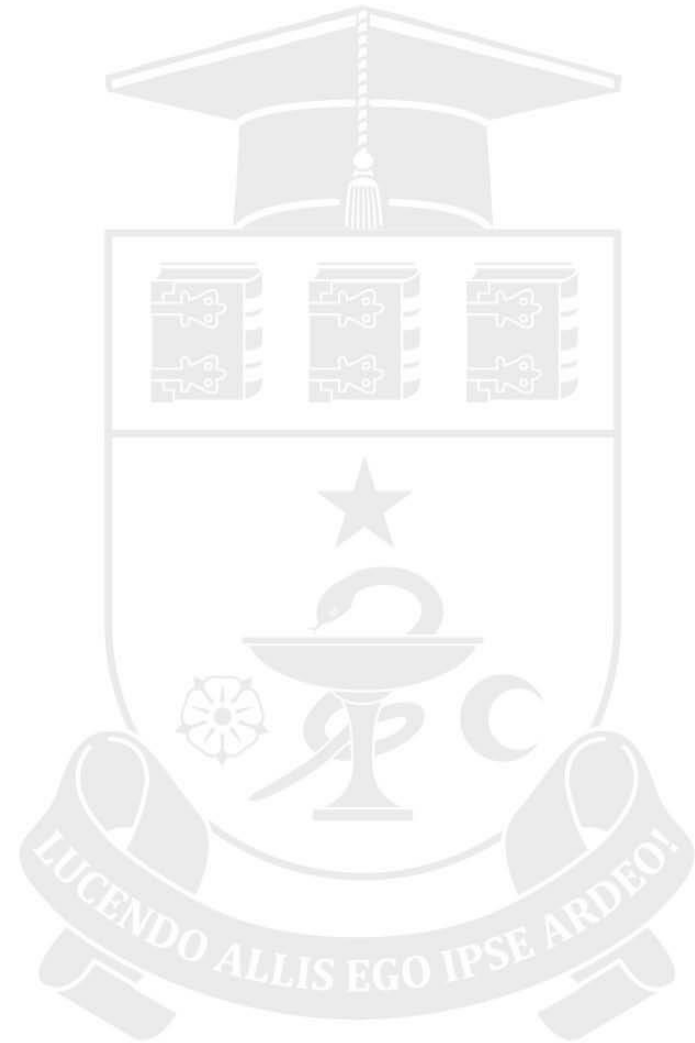
- a. Shearing efficiency
- b. Poor esthetics
- c. Lateral and protrusive balance not possible





Parameters of posterior teeth

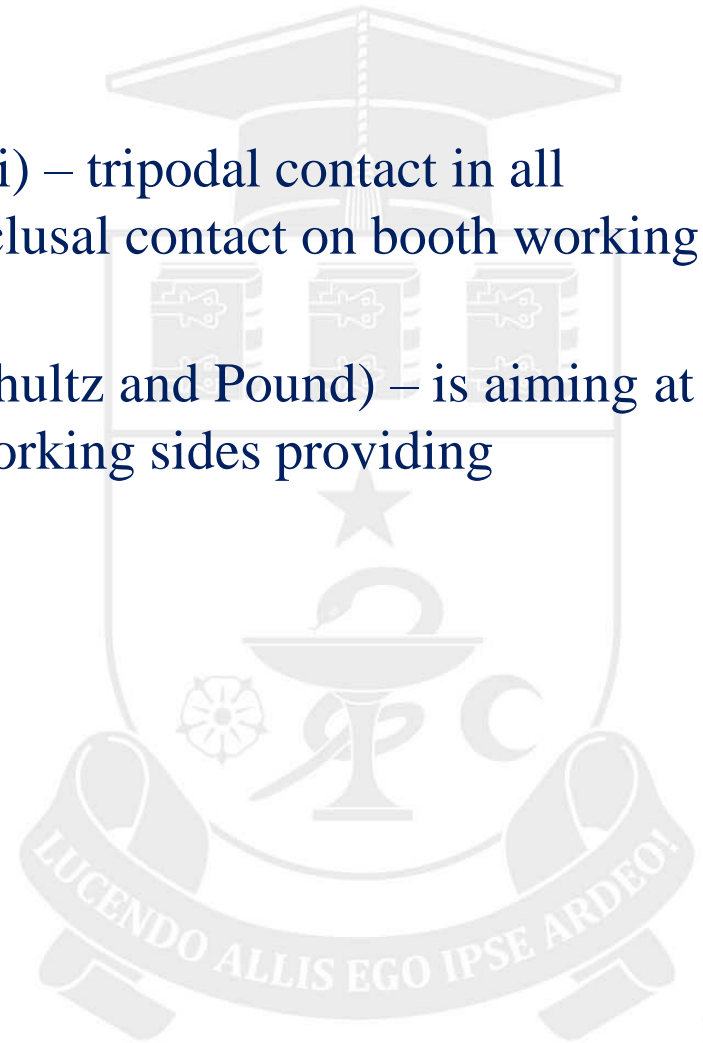
- Material selection
 - a. Acrylic resin
 - Monolithic
 - Cross-linked
 - IPN linked
 - b. Composite teeth
 - c. Porcelain teeth





Types of Teeth mounting:

1. Bilaterally balanced occlusion (Gysi) – tripodal contact in all mandibular movements keeping occlusal contact on both working and non-working side.
2. Unilaterally balanced occlusion (Schultz and Pound) – is aiming at creating occlusal contacts just on working sides providing disocclusion on non-working sides.
3. Gerber's lingualized occlusion.



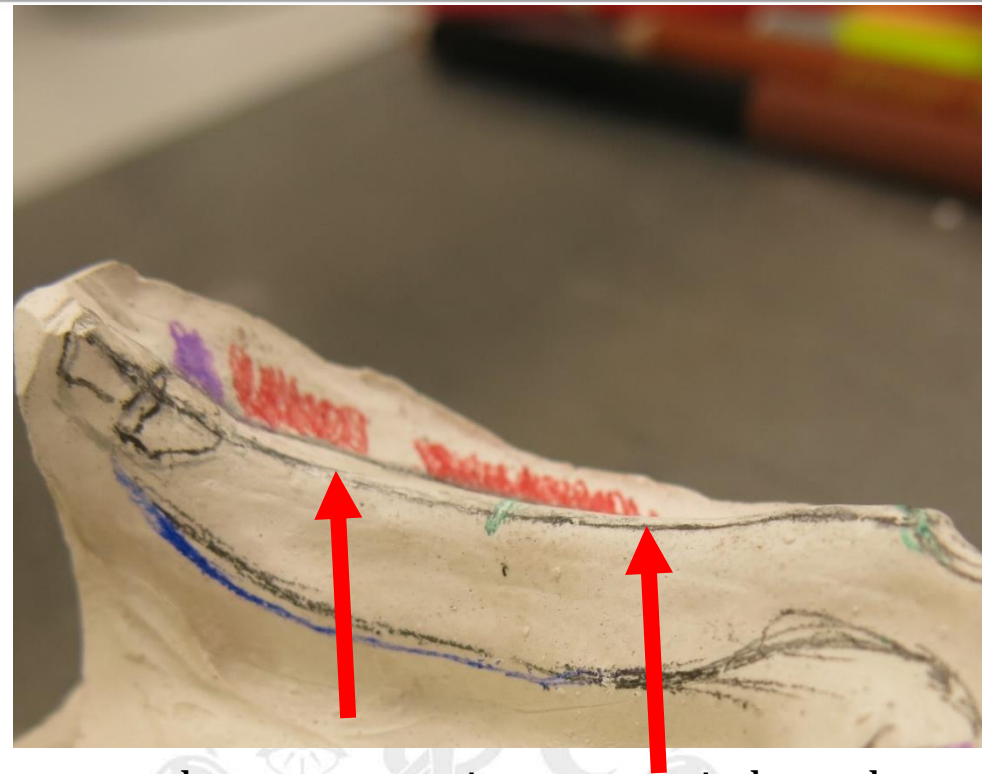


Model analysis

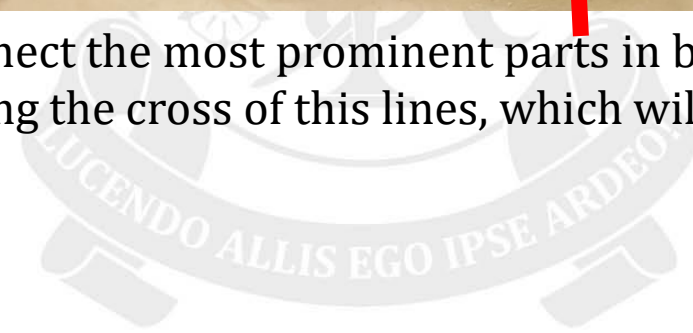
The outlines on lower jaw:

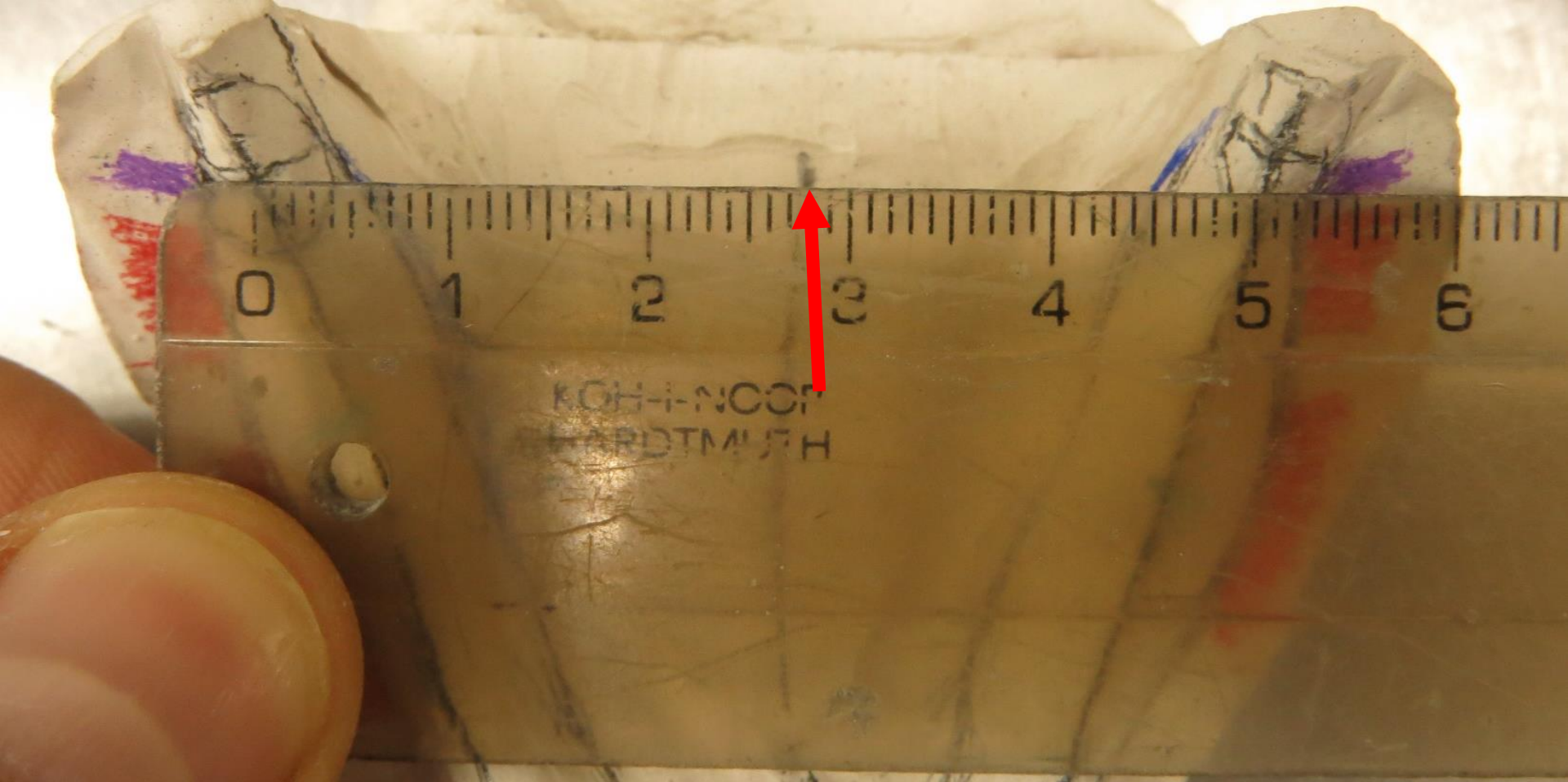
1. The retromolar pads
2. Center of retromolar pads
3. Center of alveolar ridge
4. Buccal frenulum
5. Inner and outer mounting limits.



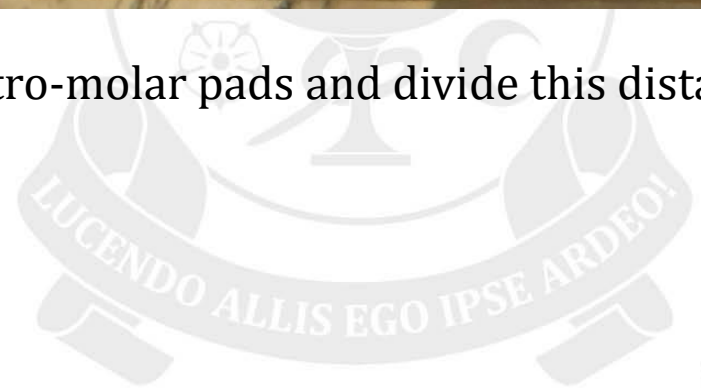


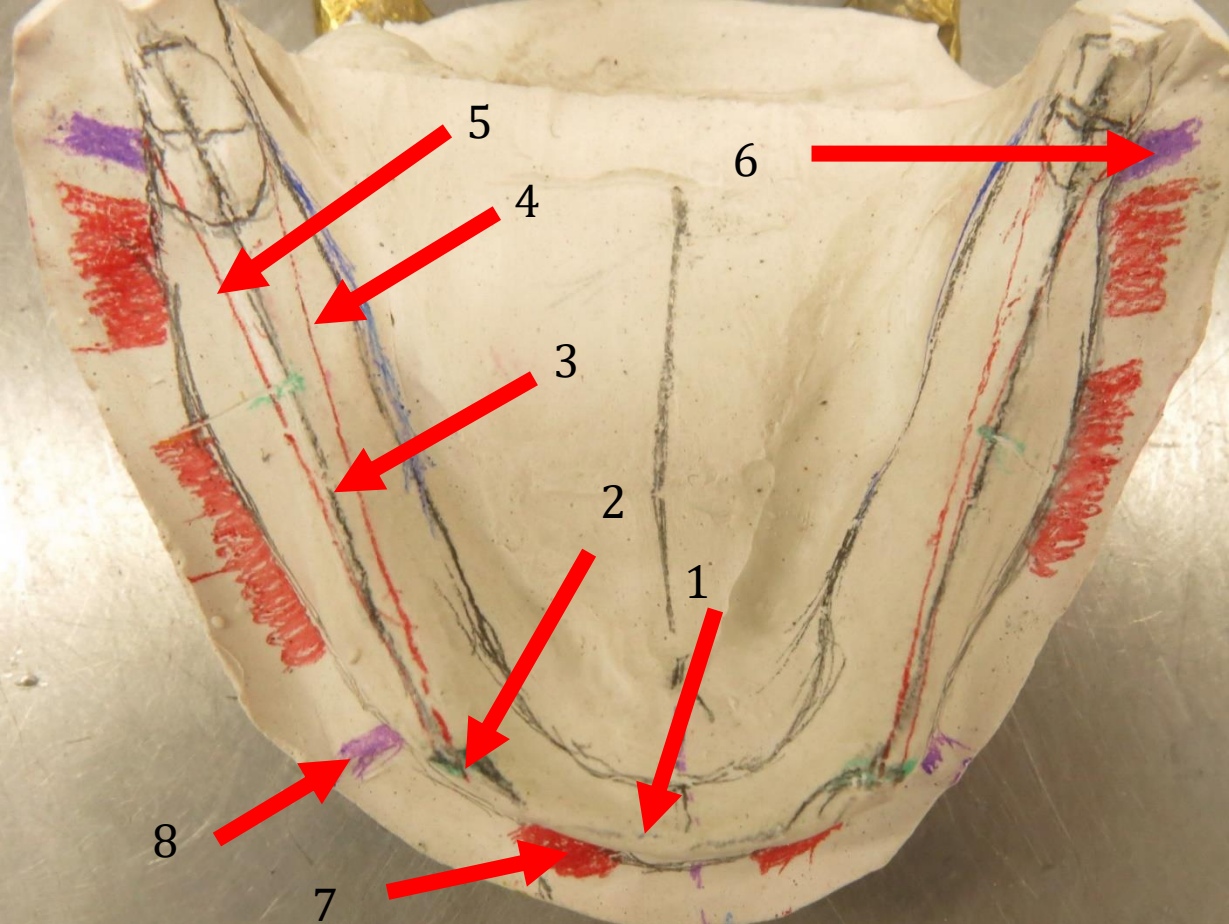
The retromolar pads must be marked, then connect the most prominent parts in buccal-lingual direction and mesial-distal, thus obtaining the cross of this lines, which will be the center of retro-molar pad.





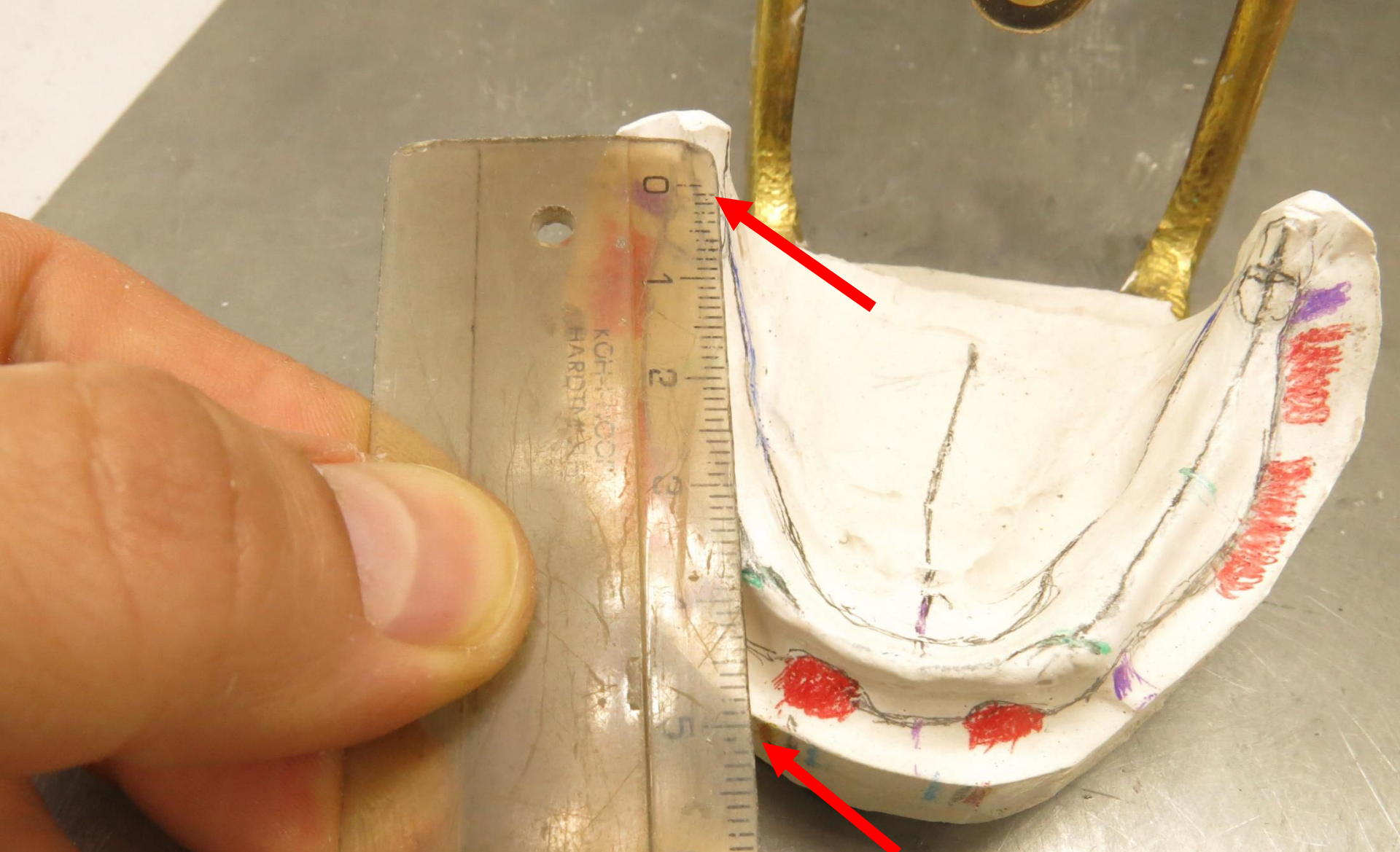
Calculate the distance between two centers of retro-molar pads and divide this distance in a half, by this we find the center of the cast.





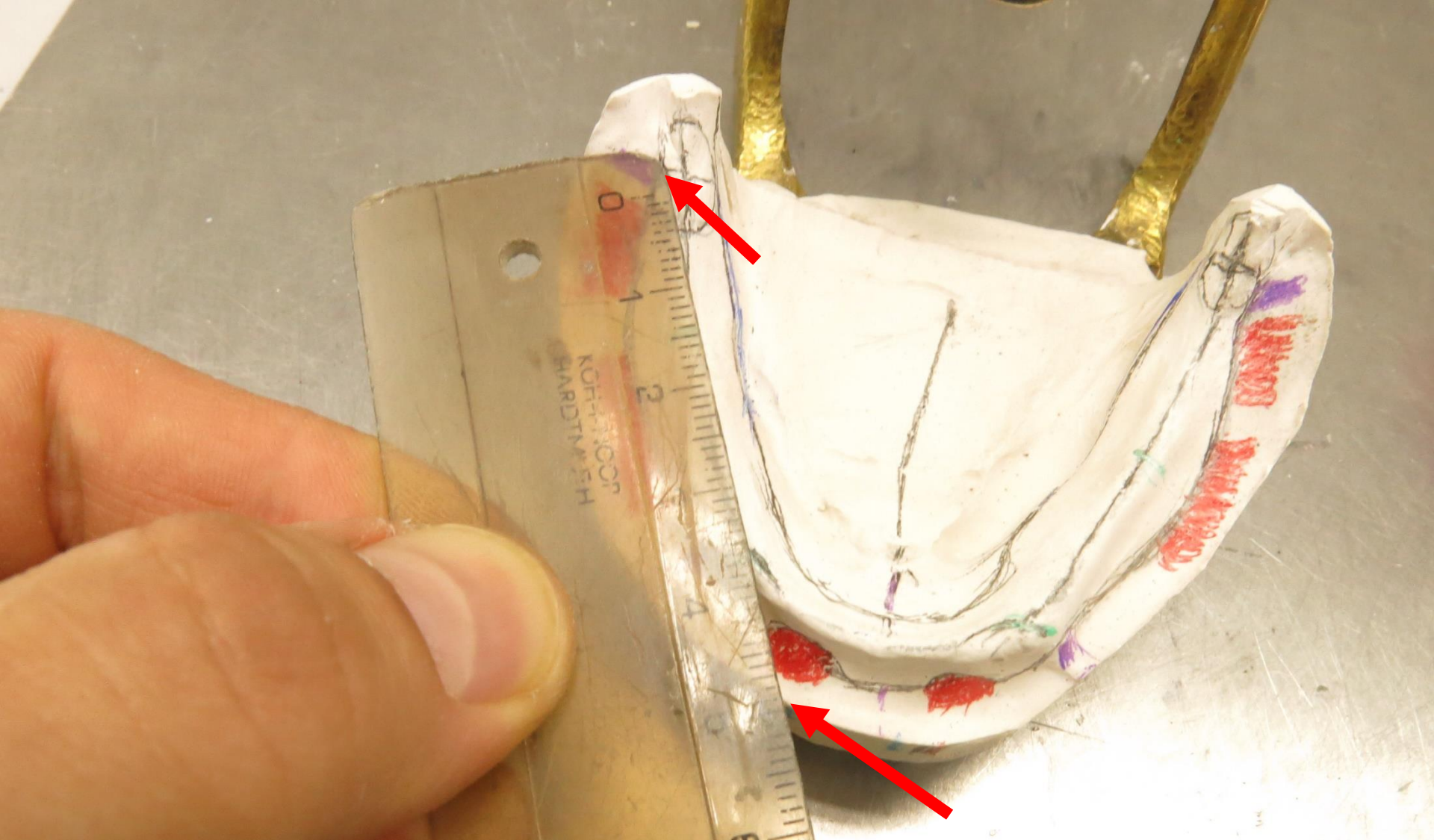
- A straight line is made on the anterior crest, when the crest starts to curve, this will be the position of the canine (2).
- A straight line is drawn from the center of retromolar pad to the point of the canine marking the center of the crest (3)

- A line is drawn from the inner part of retromolar pad to the canine marking the inner correction line, teeth contact must not be beyond this line to lingual (4)
- A line is drawn from outer part of the retromolar pad to the canine marking the outer correction line, no teeth contact must be beyond this line (5).
- The Someya sinew string is band of collagen fibers inserted behind the 7th tooth that must not be covered (6).
- Avoid the buccal frenulum and mentalis muscles (7,8).



Drawing of inner correction line.

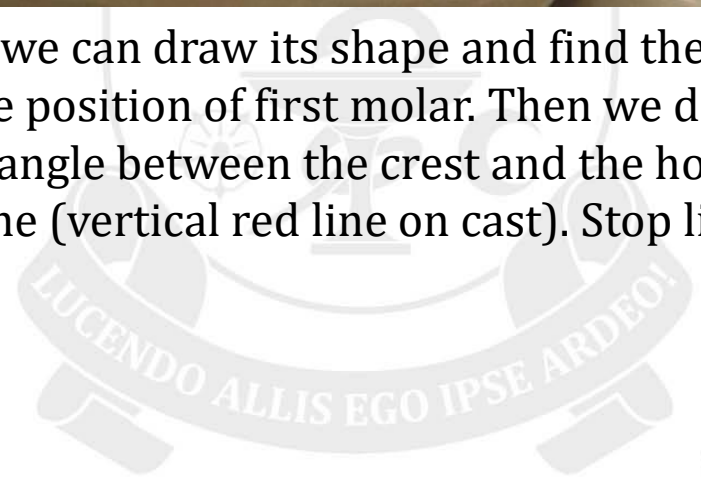


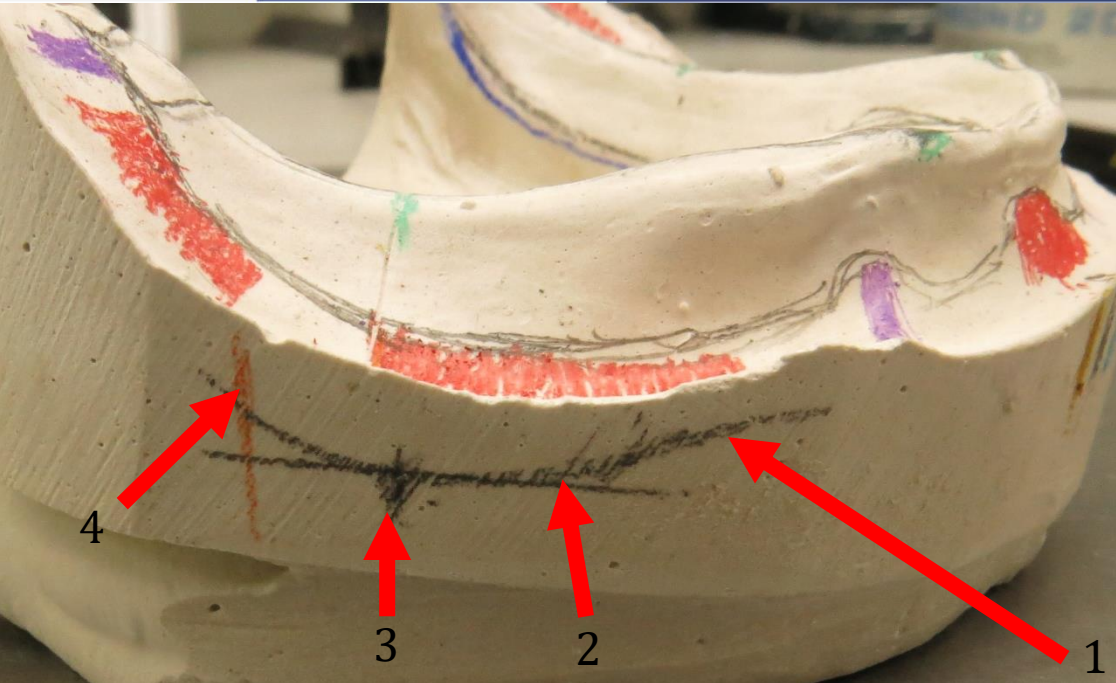


Drawing of outer correction line.

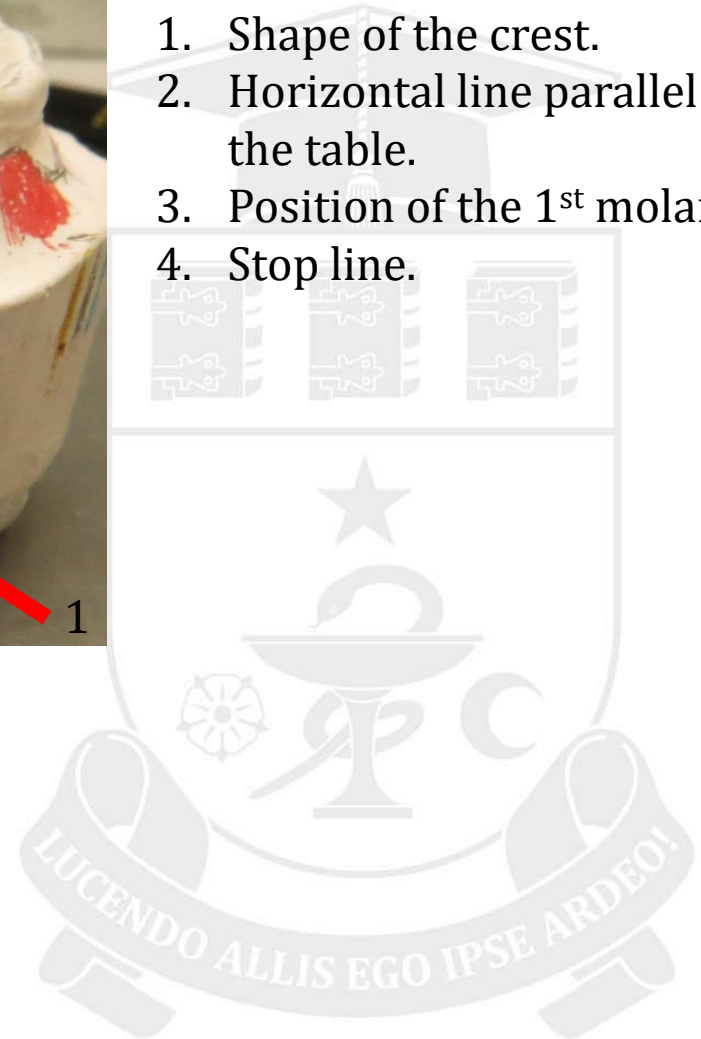


- By placing a compass and sliding on the crest, we can draw its shape and find the deepest point on the crest which will correspond to the position of first molar. Then we draw the horizontal line, parallel to the table, when the angle between the crest and the horizontal line reaches 22.5 degrees, we mark the stop line (vertical red line on cast). Stop line means no teeth beyond this line.





1. Shape of the crest.
2. Horizontal line parallel to the table.
3. Position of the 1st molar.
4. Stop line.

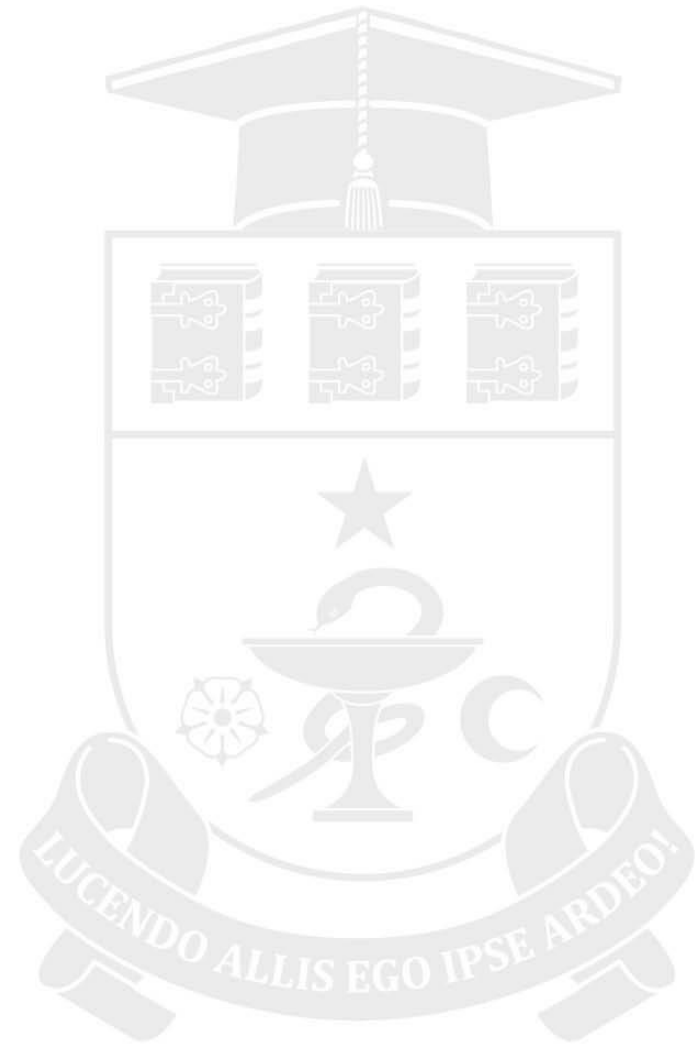


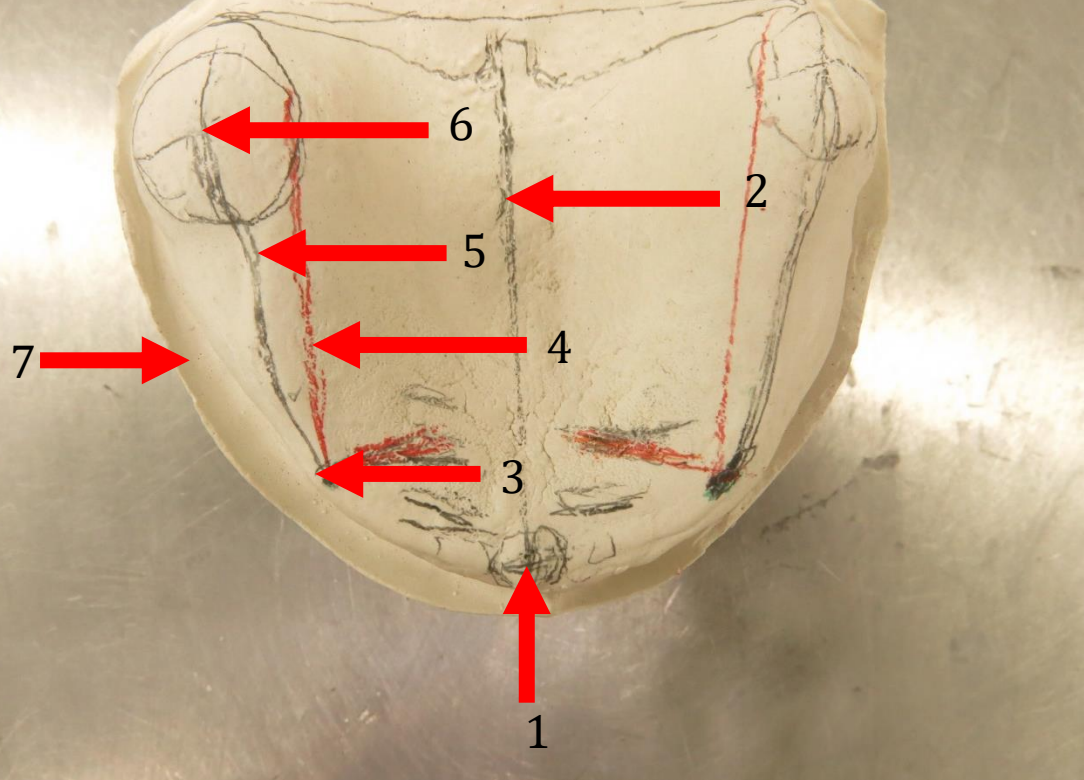


Upper jaw model analysis

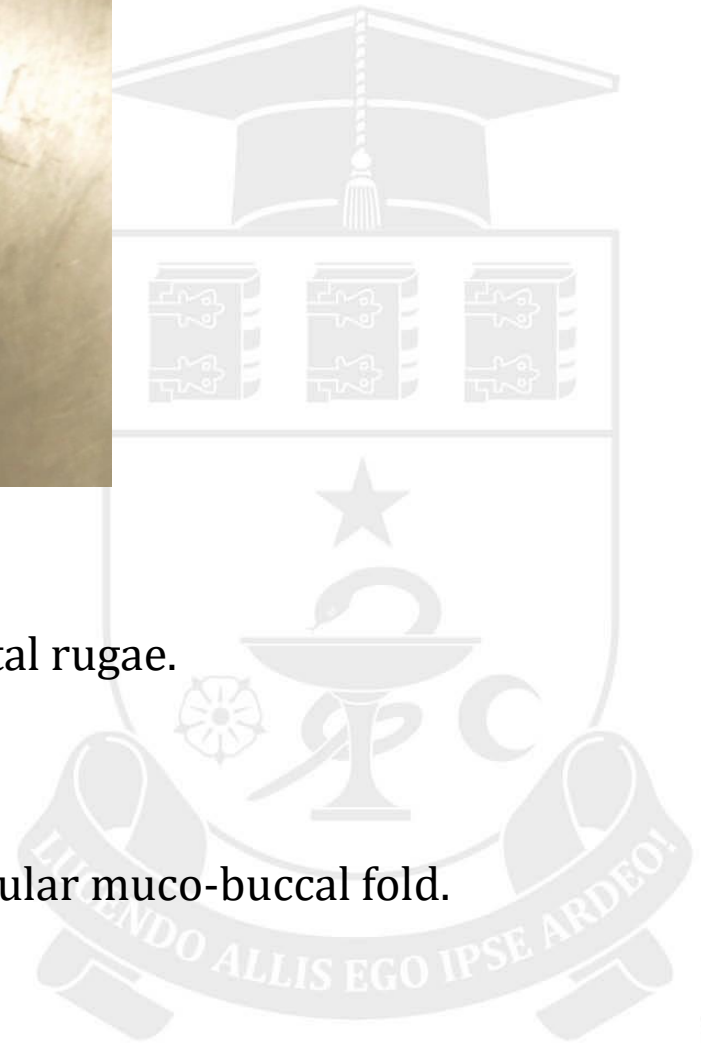
The upper jaw landmarks:

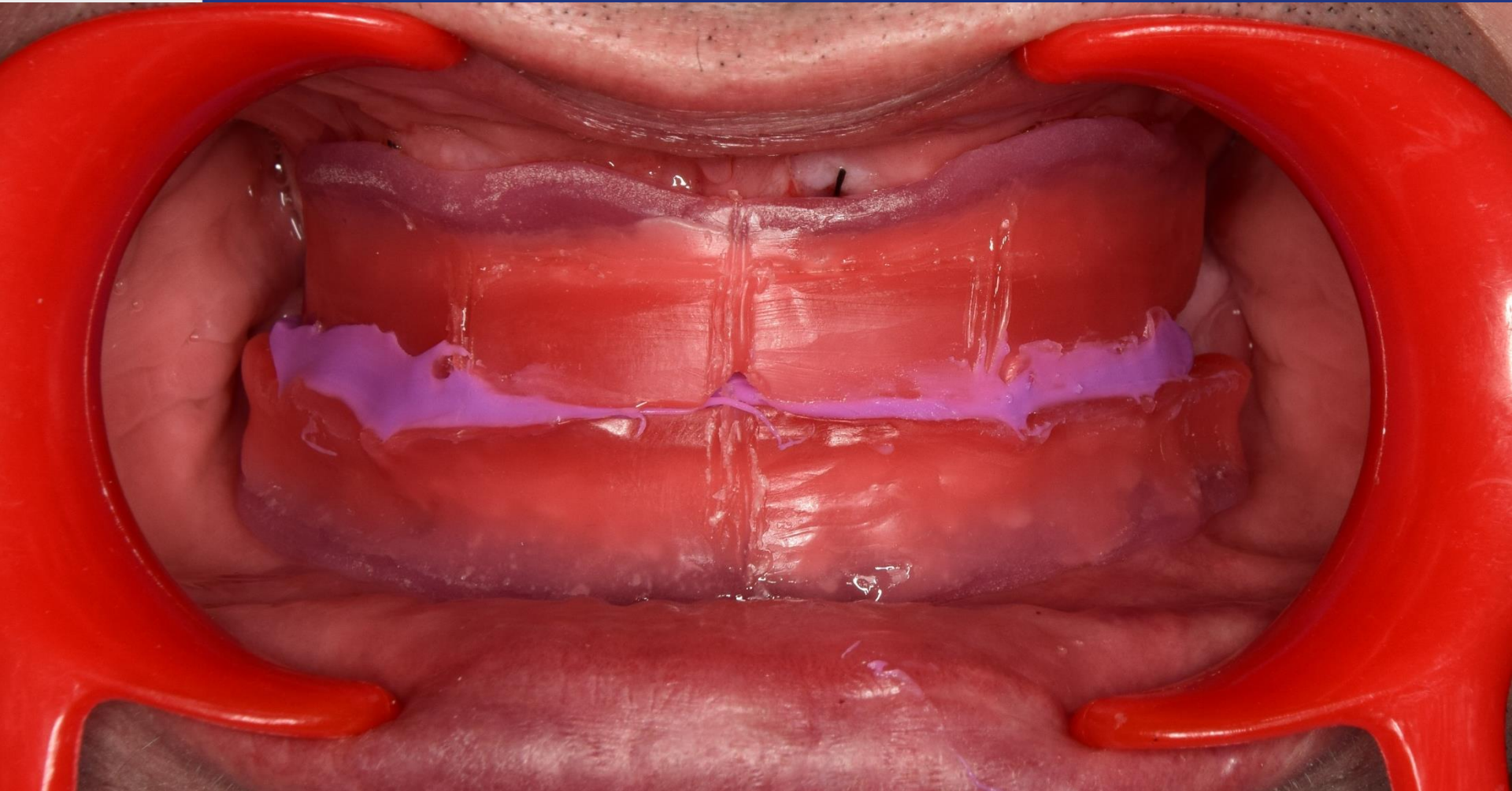
1. Tuberosities
2. Incisive papilla
3. Fovea palatine
4. Ah line
5. Third palatal rugae



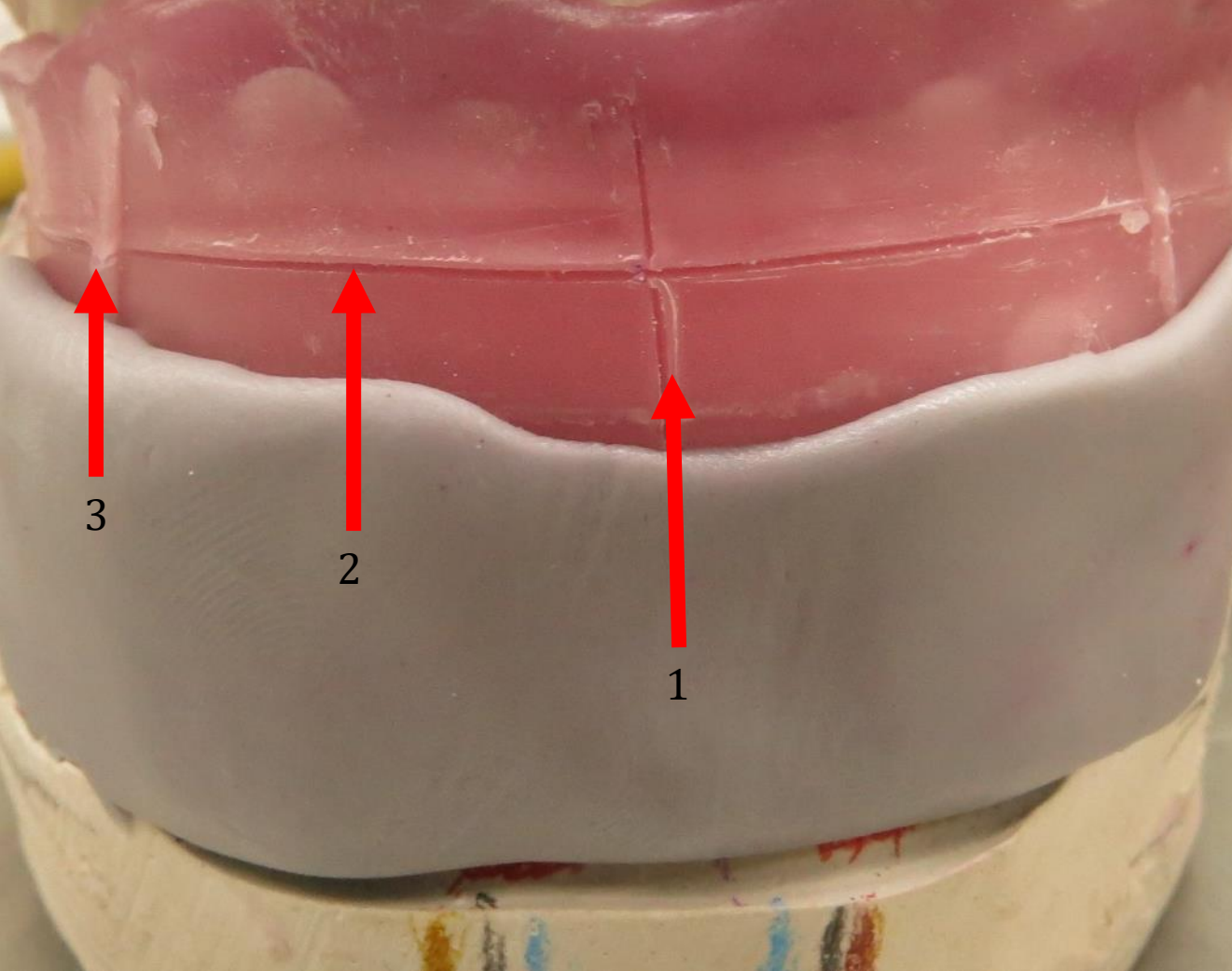


1. Incisive papilla.
2. The anatomical middle of the maxilla.
3. Canine positions, corresponds to the 1st palatal rugae.
4. Inner correction line.
5. Middle of the crest.
6. Middle of tuberosities.
7. Outer external line corresponds to the vestibular muco-buccal fold.





The cold method of bite registration



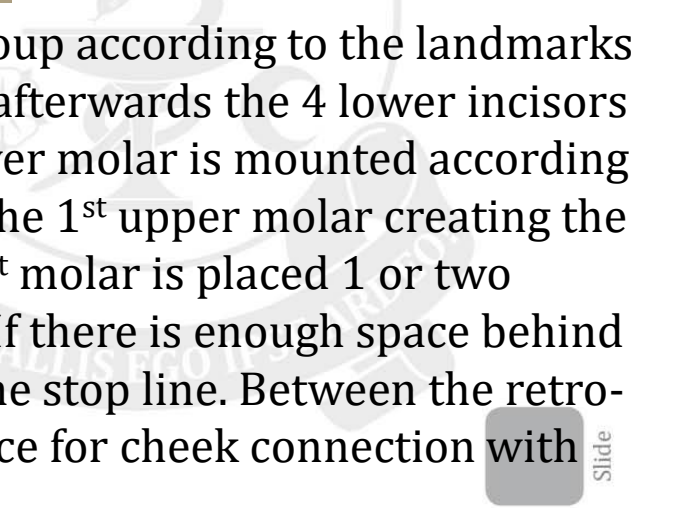
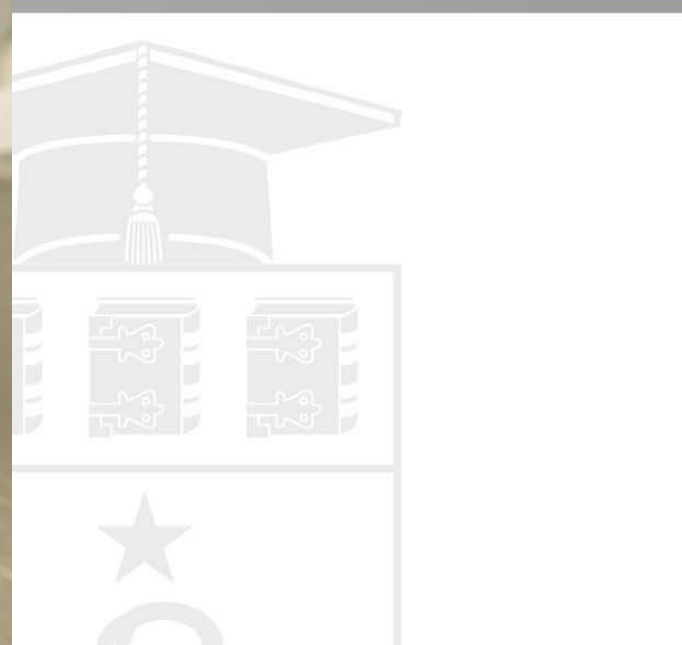
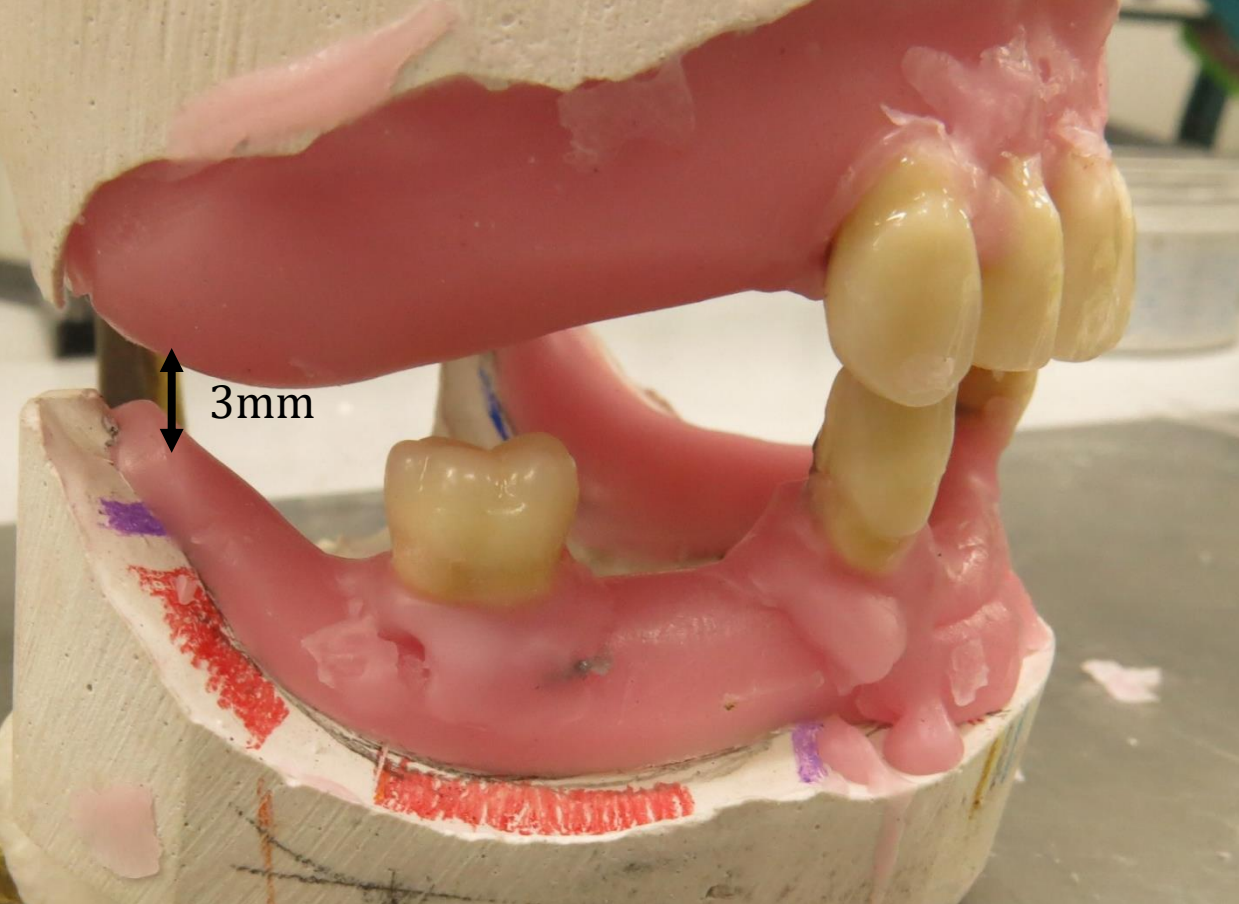
1. The midline.
2. The smile line
3. The canine line.

NB! The edge of upper occlusal rim is embedded in impression material for making a silicone key which will serve as reference for mounting.

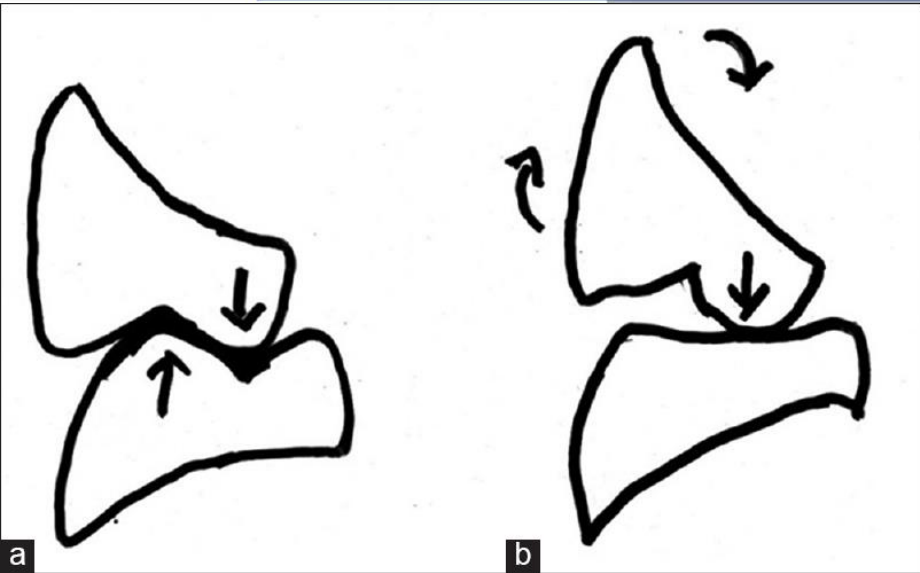




Upper silicone key is providing information about the incisal edge position so the teeth will not be mounted buccally or below this edge of silicone key, which corresponds to the edge of occlusal rims.



The mounting procedures starts with the upper anterior group according to the landmarks from the occlusal rims, then followed by the lower canines, afterwards the 4 lower incisors are mounted. After the completion of anterior teeth, the lower molar is mounted according to the landmark on the cast done before. Then followed by the 1st upper molar creating the key of occlusion. In the space left between the canine and 1st molar is placed 1 or two premolars, the second one might be slightly trimmed to fit. If there is enough space behind the 1st molar, then the 7th tooth is placed without crossing the stop line. Between the retro-molar pad and tuberosity must be left more than 3 mm space for cheek connection with tongue.





- Ideas of Lingual concept.

The setting is performed until the first molar.

If there is no space for second premolar, it is not used or it is trimmed.

The second molar is not used

All the contacts come on center of alveolar ridge.

The patient have frontal teeth disocclusion.

Only contacts that tend to bring the denture inside matters in dynamic occlusion.

