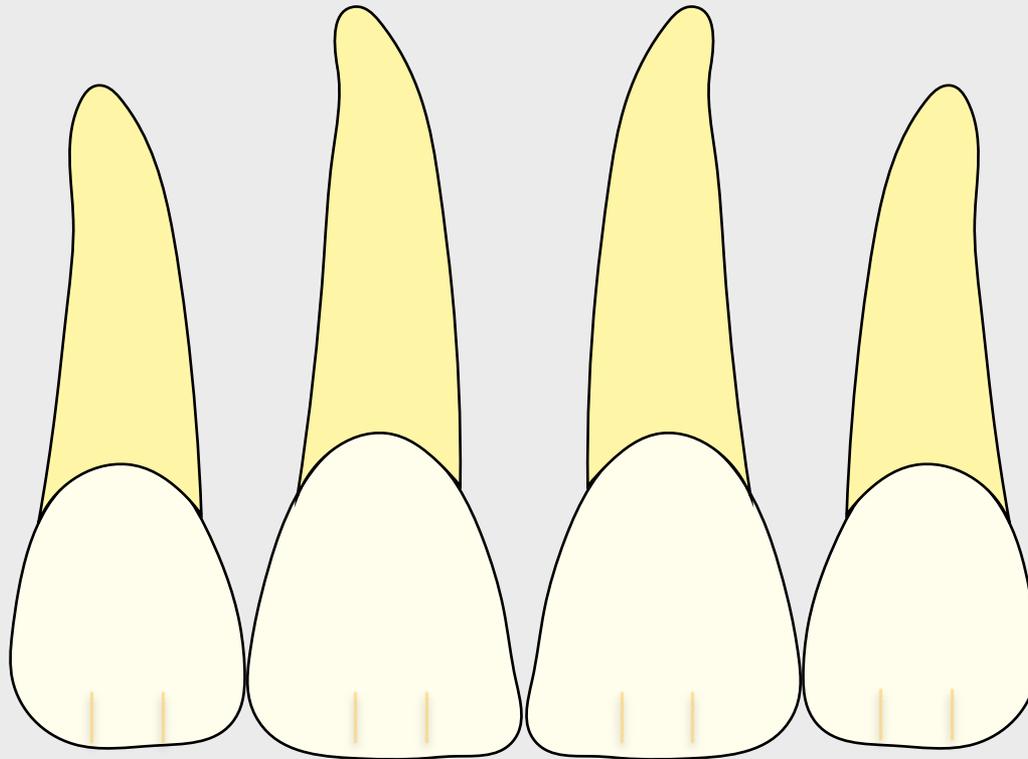


Description of Maxillary Permanent Incisors



Dr Sherif Hassan
2025

Maxillary Permanent Central Incisor

The * Broadest *** Anterior Tooth.**



Chronology

Maxillary permanent central incisor

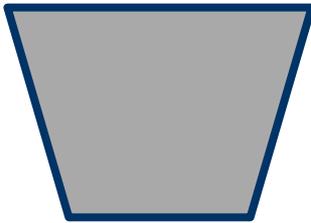
- **Appearance of Dental Organ** **5 MIU.**
- **Beginning of Calcification** **3-4 months**
- **Crown Completed** **4-5 years**
- **Eruption** **7-8 years**
- **Root Completed** **10 years**

Notes:

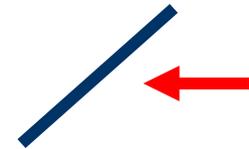
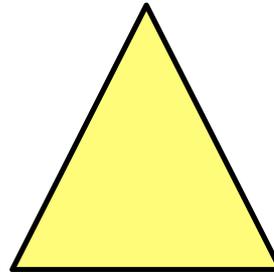
- Eruption begin after formation of cervical root third.
- MIU = month intra-uterine

Geometric outline of crown surfaces

Trapezoid

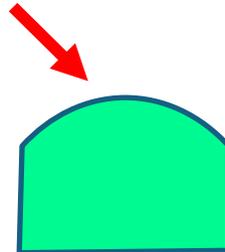


Triangle

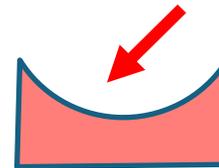


Straight

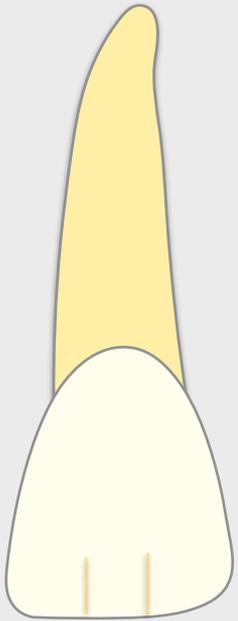
Convex



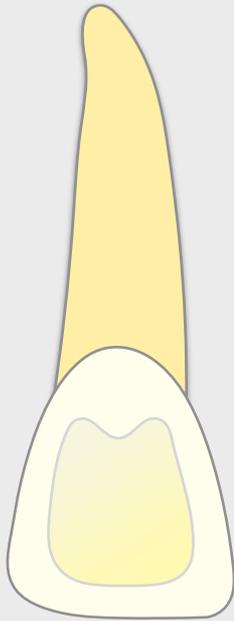
Concave



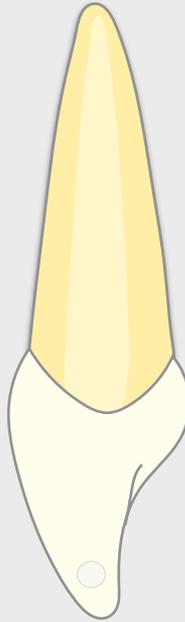
Aspects of Maxillary permanent central incisor



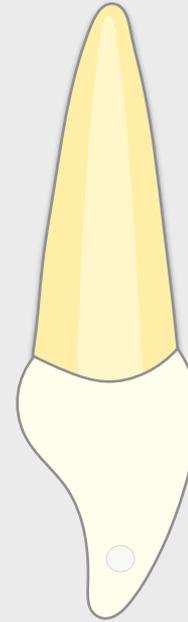
Labial



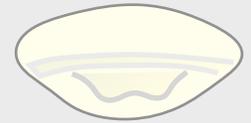
Lingual



Mesial



Distal



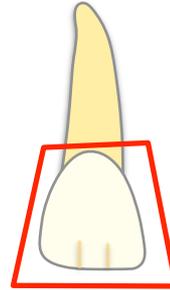
Incisal

Labial Aspect

Geometrical outline of the crown:

Trapezoid

- The Short Side Located Cervically.
- The Long Side Located Incisally.



Mesial outline:

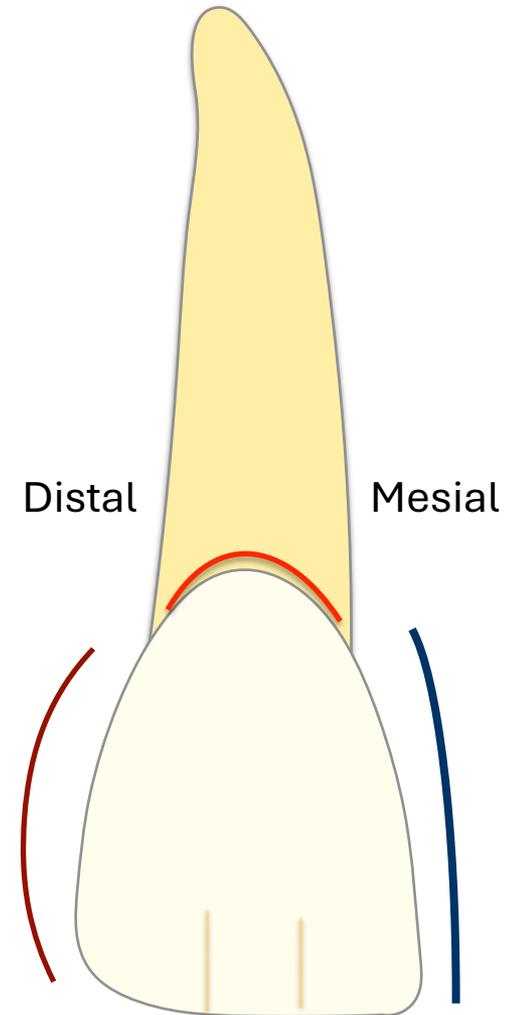
- Slightly convex.
- Maximum of convexity at incisal third.

Distal outline:

- More convex.
- Maximum of convexity lie between incisal and middle thirds.

Cervical line:

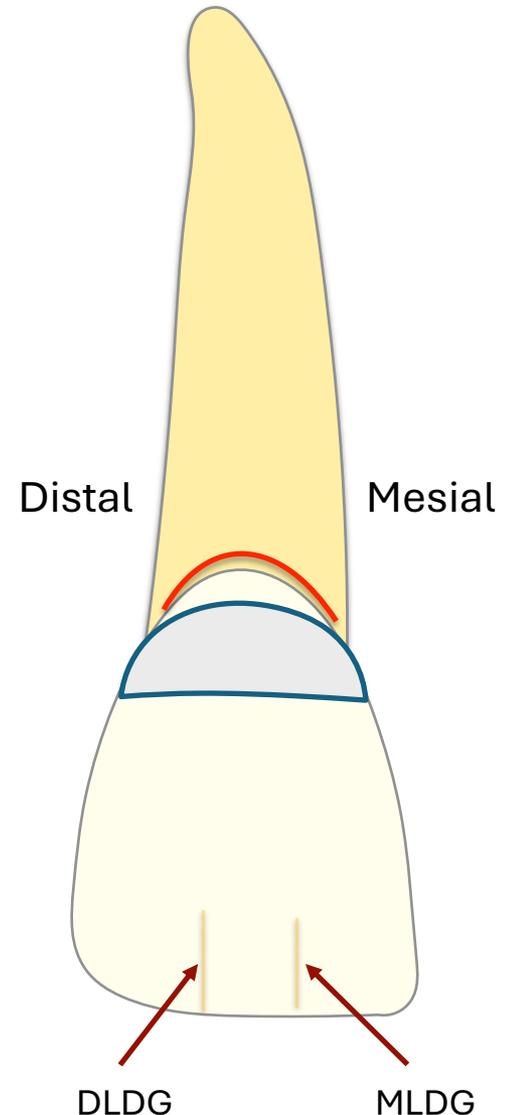
- Convex toward the root.



Labial Aspect

□ Labial Surface Anatomy:

- The surface is smoothly convex at cervical 1/3 forming a ridge termed cervical ridge.
- The labial surface becomes flattened at both middle and incisal 2/3.
- Two labial developmental grooves are found extend from incisal edge at the incisal 1/3 termed:
 1. Mesiolabial developmental groove.
 2. Distolabial developmental groove.



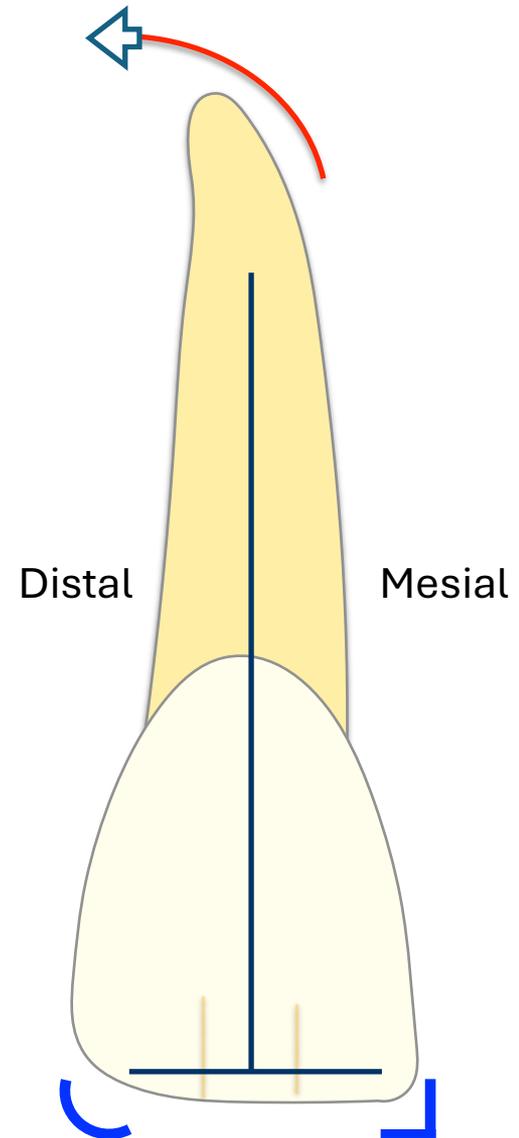
Note: Cervical ridge are found on the facial surface of all teeth.

❑ Incisal outline is straight:

- Perpendicular to the long axis of the tooth.
- The mesio-incisal angle is sharp (right angle).
- The disto-incisal angle is rounded (obtuse angle).
- Newly erupted incisor exhibit three mamelons on its incisal surface.
- Both mesial mamelon and distal mamelon are equal and larger than the middle mamelon.
- These mamelons disappeared gradually by friction of eating.

❑ Root:

- Cone shape Root with blunt apex.
- Root apex is inclined distally.



Lingual Aspect

❑ Lingual convergence:

- The lingual surface is narrower than the labial surface.
- The mesial and distal sides of the crown and root converge lingually.
- This convergence is to accommodate with the horse-shoe shaped dental arch.

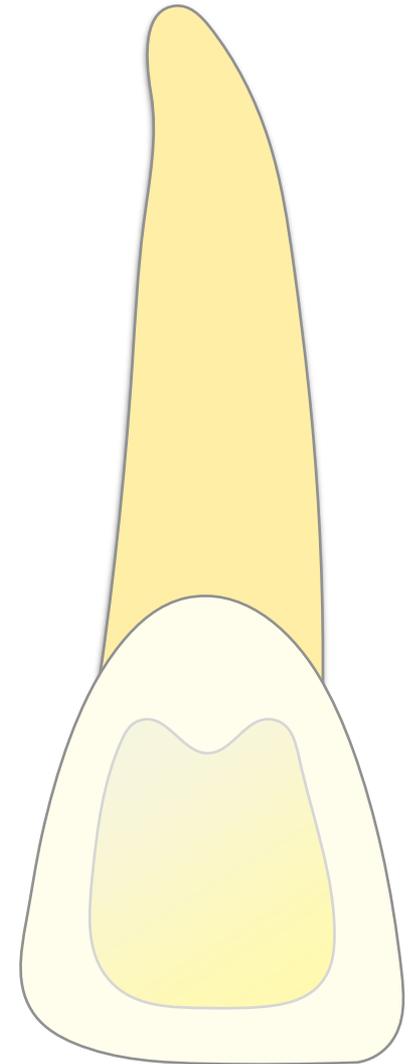
❑ Geometrical outline of the crown:

Trapezoid

- The Short Side Located Cervically.
- The Long Side Located Incisally.

❑ Mesial, distal and incisal outlines:

- Similar to labial aspect.



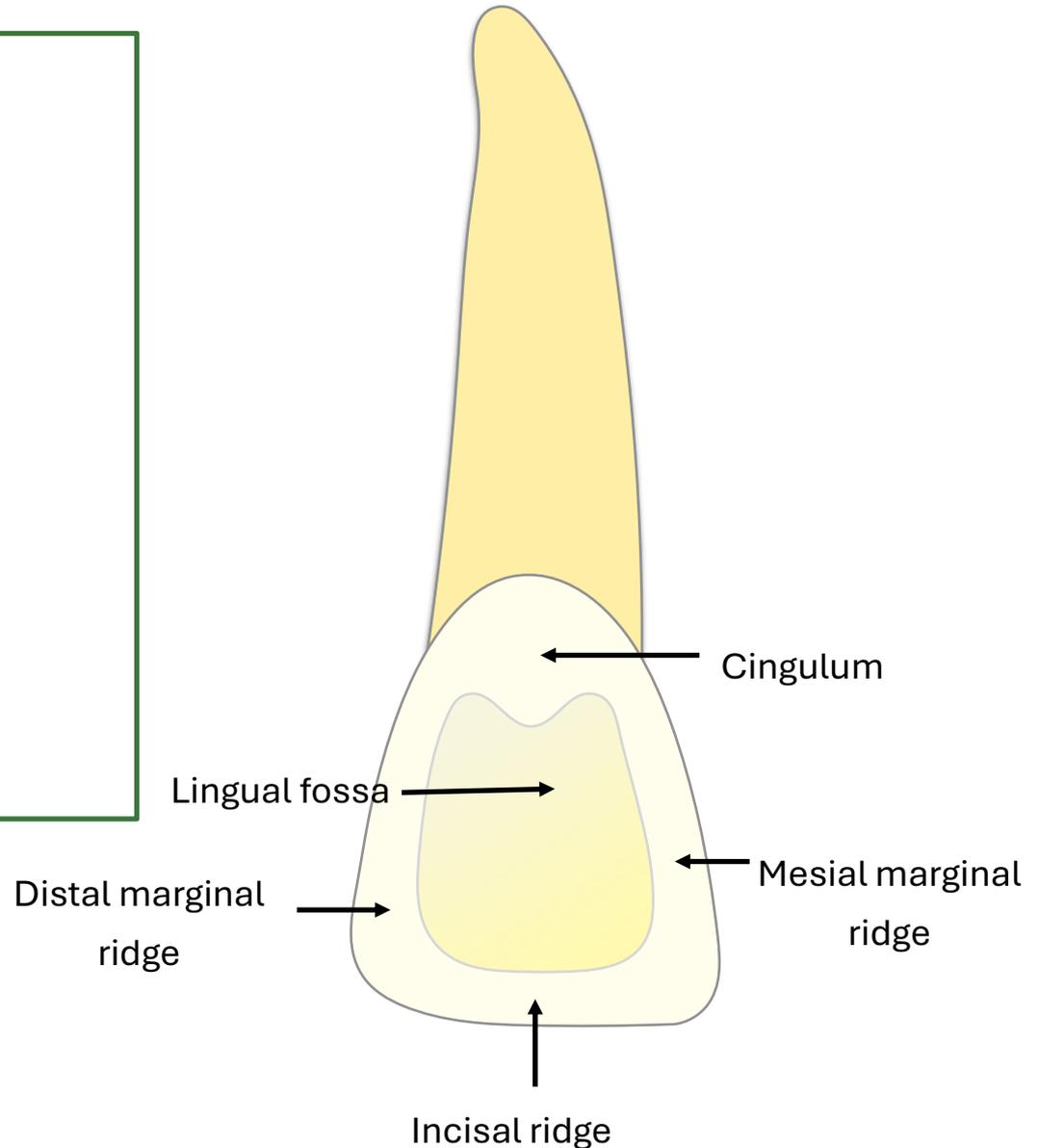
Crown elevations and crown depression of lingual aspect

□ Crown Elevations:

- Incisal ridge.
- Cingulum.
- Mesial marginal ridge.
- Distal marginal ridge.

□ Crown Depression:

- Lingual fossa.

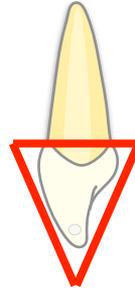


Mesial Aspect

□ Geometrical outline of the crown:

Triangular in shape

- The base of the triangle is located cervically.
- The apex is located incisally.
- The incisal ridge is on a line that bisects the center of the root.

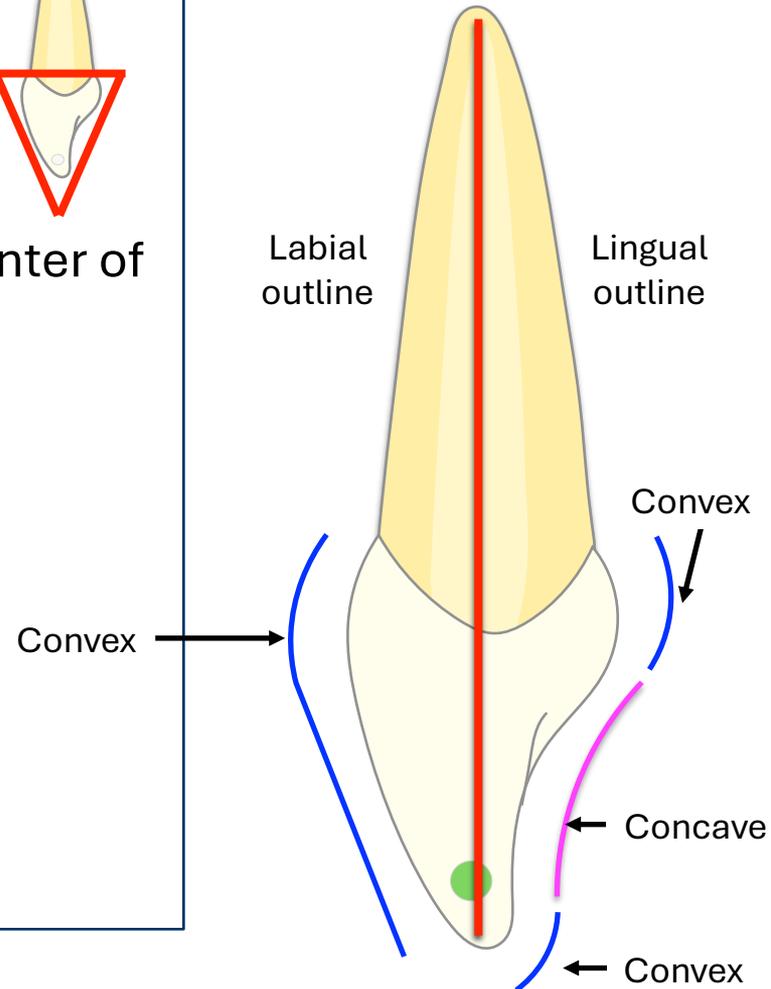


□ Labial outline:

- Convex at cervical 1/3 (cervical ridge).
- Then, become flat to the incisal ridge.

□ Lingual outline:

- Convex at cervical 1/3 (cingulum).
- Then, concave at the lingual fossa.
- Then, slightly convex at incisal ridge.



Cervical line

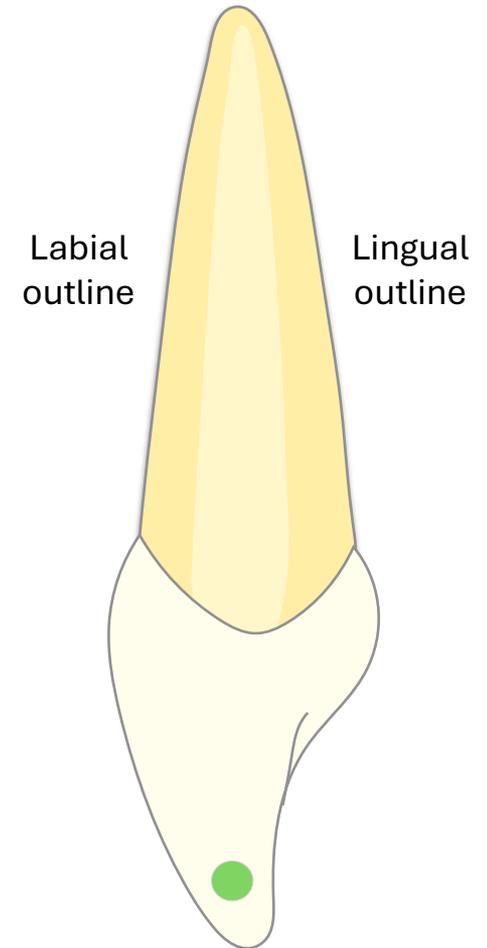
- Convex incisally.
- It is greater than any other teeth in the mouth.

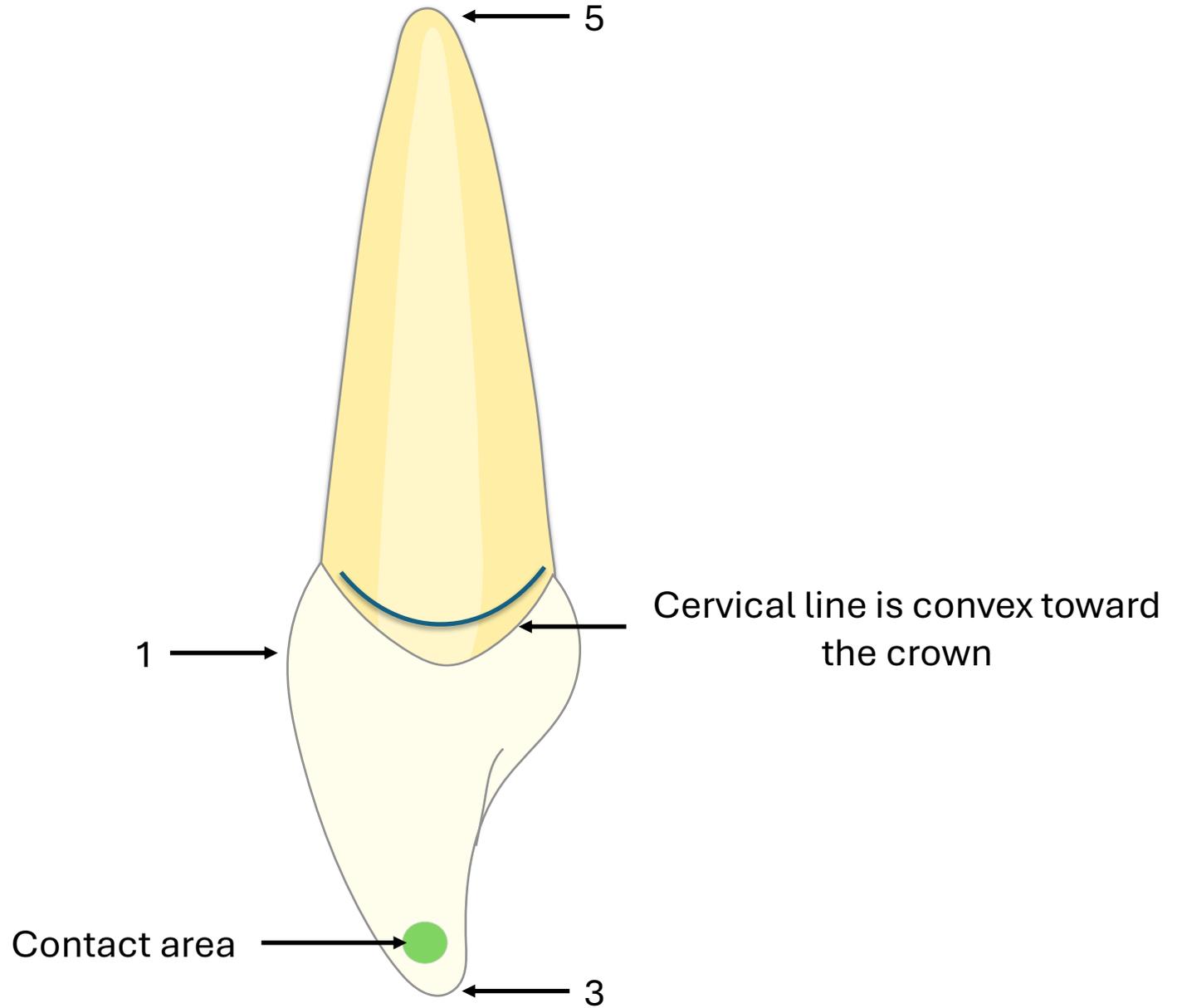
Mesial surface:

- Convex with the maximum convexity at the incisal 1/3
(contact area).

root:

- Cone shaped with blunt apex.



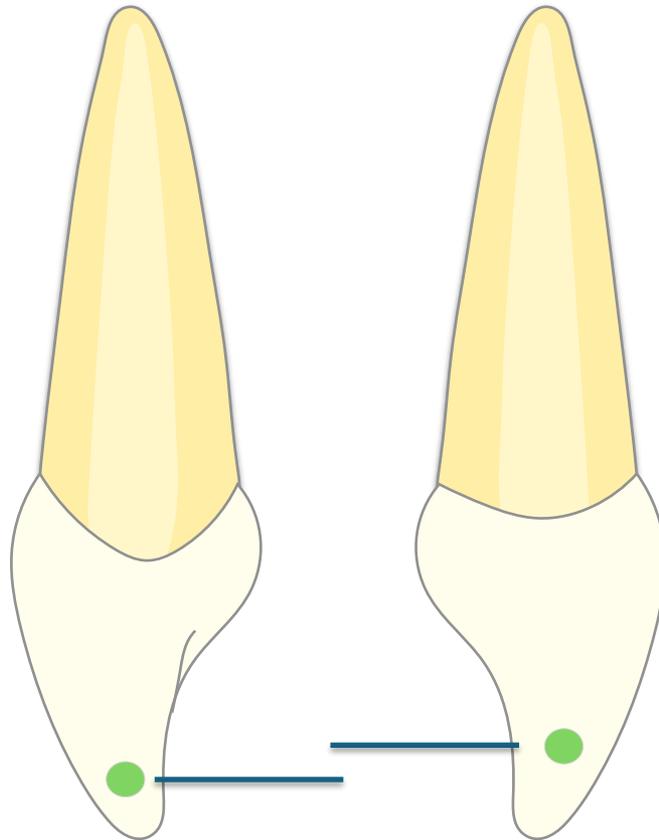


Distal Aspect

□ **Similar to the mesial aspect but differ in:**

- The cervical line curvature is less than mesial (by 1 mm).
- The contact area located at the middle 1/3.

Mesial aspect



Distal aspect

Incisal Aspect

□ Geometrical outline of the crown:

Triangular

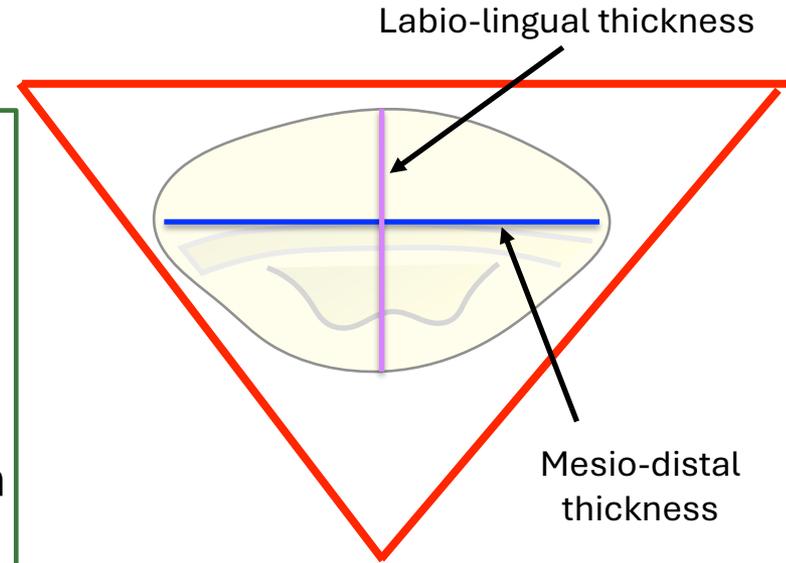
- The base of the triangle is located labially.
- The apex is located lingually.
- The Labio-lingual Thickness is smaller Than Mesio-distal Diameter.

□ Labial outline:

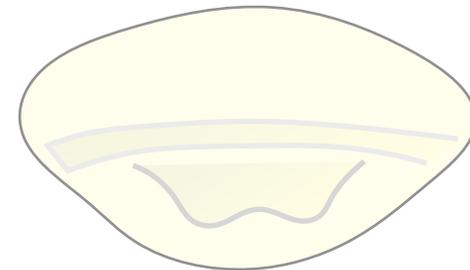
- The labial surface is broad and flat.
- The cervical portion of the crown is convex (cervical ridge).

□ Lingual outline:

- The lingual outline tapers lingually to the cingulum (lingual convergence).

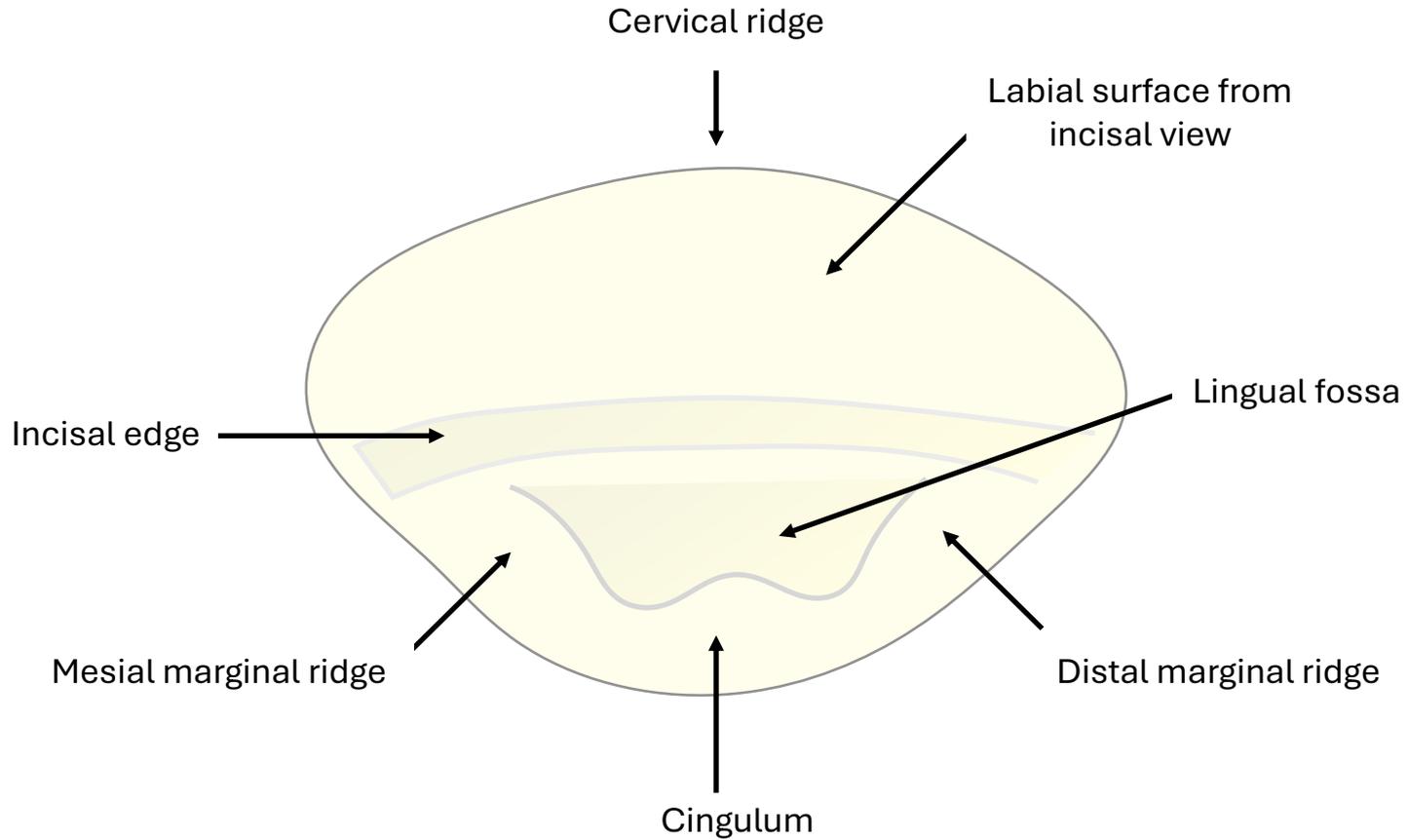


Labial outline



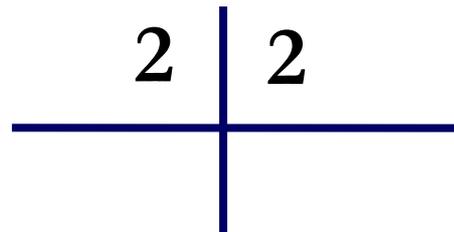
Lingual outline

Labial outline



Lingual outline

Maxillary Permanent Lateral Incisor



Chronology

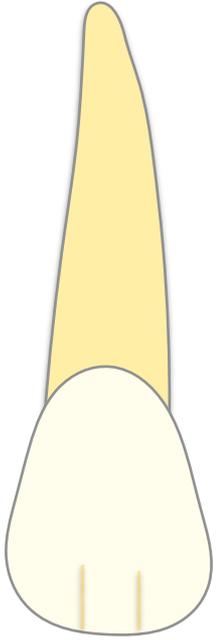
Maxillary Permanent Lateral Incisor

- **Appearance of Dental Organ** 5 MIU.
- **Beginning of Calcification** 1 year
- **Crown Completed** 4-5 years
- **Eruption** 8-9 years
- **Root Completed** 11 years

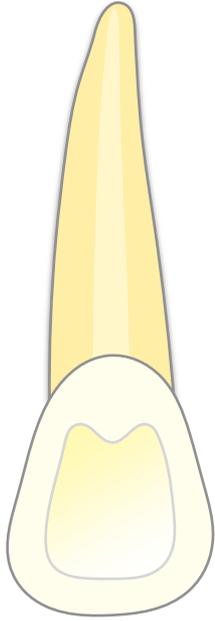
Chronological package for anterior teeth

	<u>1</u>	<u>1</u>	<u>2</u>	<u>2</u>	<u>3</u>	<u>3</u>
Appearance of Dental Organ	5 MIU				6 MIU	
Beginning of Calcification	3:4 M			12M	4:5 M	
Crown Completed	4:5 Y				6:7 Y	
Eruption	6:7 Y	7:8 Y		8:9 Y	9:10 Y	10:11Y
Root Completed	Eruption +3 Y					

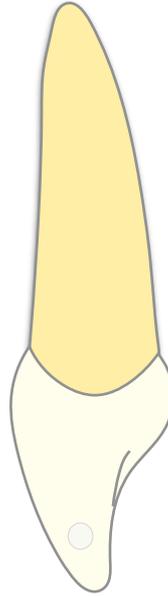
Maxillary permanent lateral incisor



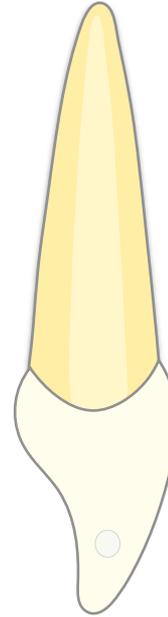
Labial



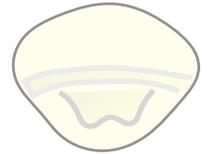
Lingual



Mesial



Distal



Incisal

Labial Aspect

Geometrical Outline: *Trapezoid*

- Short Side Cervically, Long Side Incisally.

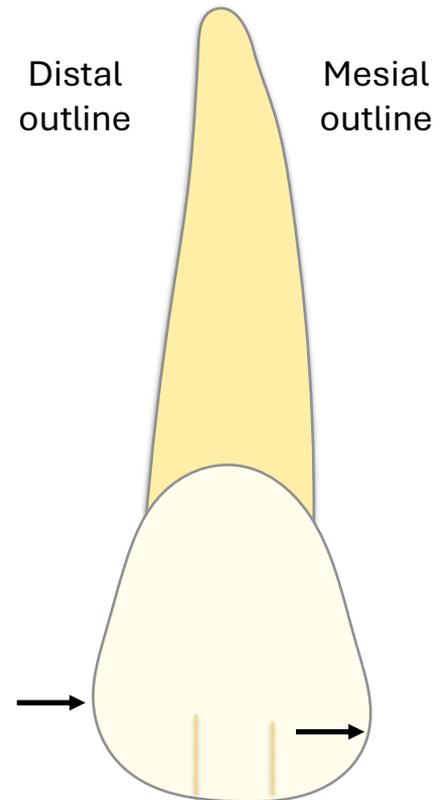
Mesial Outline: **Convex**, with Maximum Of Convexity Is at junction Of Incisal and middle Thirds (**mesial contact area**).

Distal Outline: **More Convex**, with Maximum Convexity Is at Middle Thirds (**distal contact area**).

Incisal outline:

Rounded incisal ridge compared with straight in central incisor.

- The mesio-incisal angle is rounded.
- The disto-incisal angle is more rounded.



Labial Surface Anatomy:

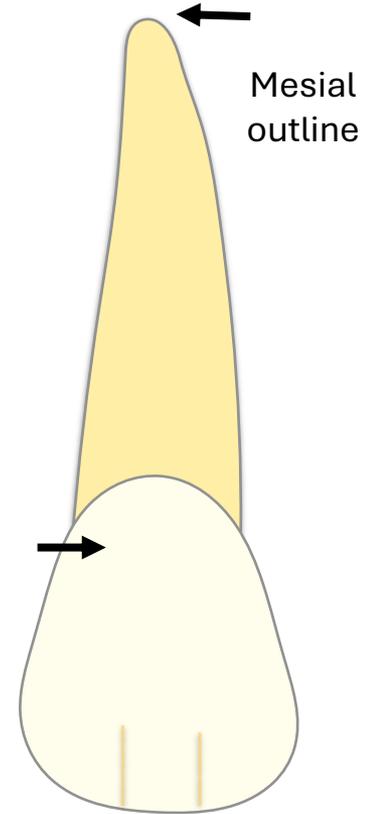
- The surface is more convex than the central incisor.
- Cervical ridge located at cervical third.

Root:

- Single tapered root with pointed apex.
- Curved distally at the apical third.

Cervical line:

Convex toward the root



Lingual Aspect

All Elevations And Depression Are More Developed Than In Maxillary Permanent Incisor.

I- Crown Elevations:

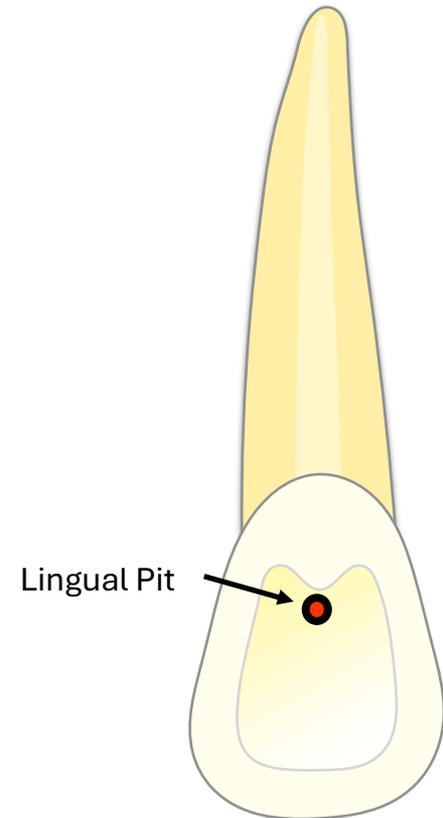
- 1- Cingulum (Cervical 1/3).
- 2- Mesial Marginal Ridges.
- 3- Incisal Ridge.
- 4- Distal Marginal Ridges.

II- Crown Depression:

- 1- Lingual Fossa.
- 2- Lingual Pit May Be present.

Important note:

This tooth is the most common tooth to become carious because the presence of lingual pit.



Mesial Aspect

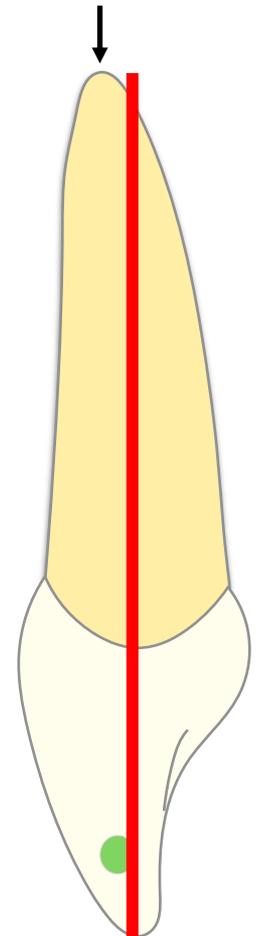
All geometric, labial, lingual , and incisal outlines is the same of the central one except:

The incisal ridge:

- Located lingually to line that bisects the center of the root.
- Contact area is located at the junction between incisal 1/3 and middle 1/3

Root:

- Cone Shape With Blunt Apex.
- Developmental Depression Is present On The Root Surface.
- Appears longer in Relation to crown.

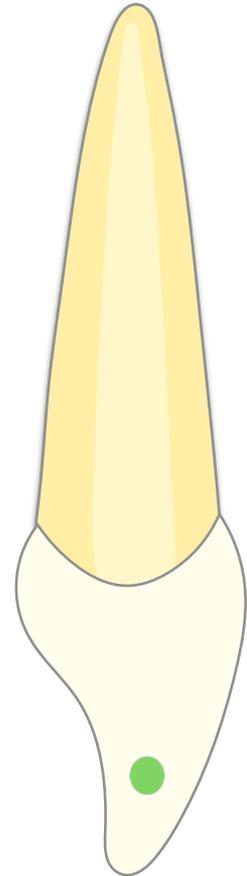


Distal Aspect

☺ Similar To Mesial Aspect

☺ Differ In:

- Smaller And More Convex Than The Mesial.
- Cervical Line Is Less Curved.
- Contact Area Located At The Middle 1/3, (More Cervically).

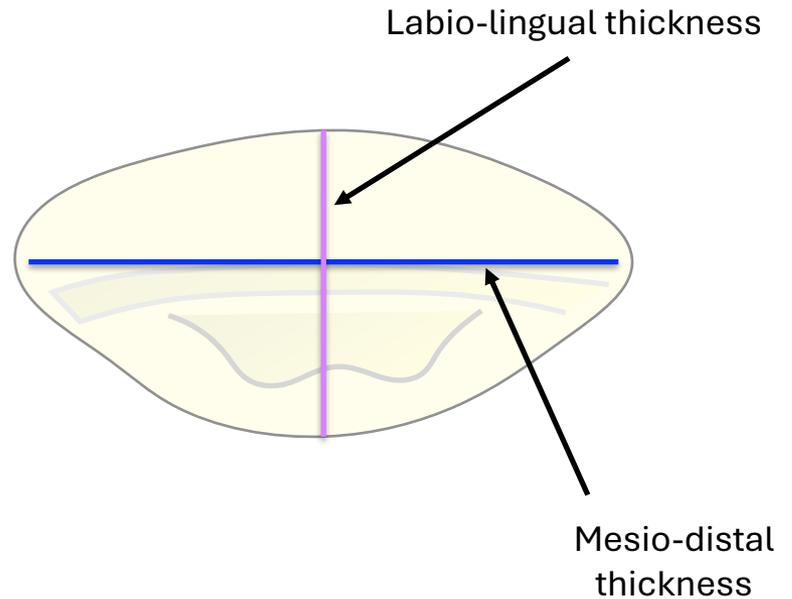
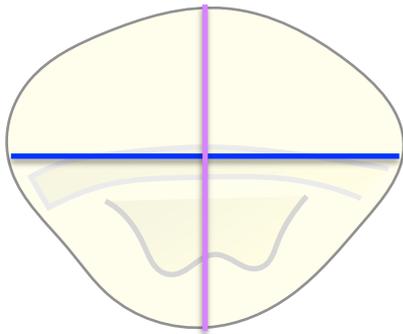


Incisal Aspect

It may resemble either central incisor or small canine.

In Lateral incisor:

The Labio-lingual Thickness is Greater Than Mesio-distal Diameter .



Malformations Of The maxillary Permanent Lateral Incisor.



Smaller lateral incisor



Missing lateral incisor