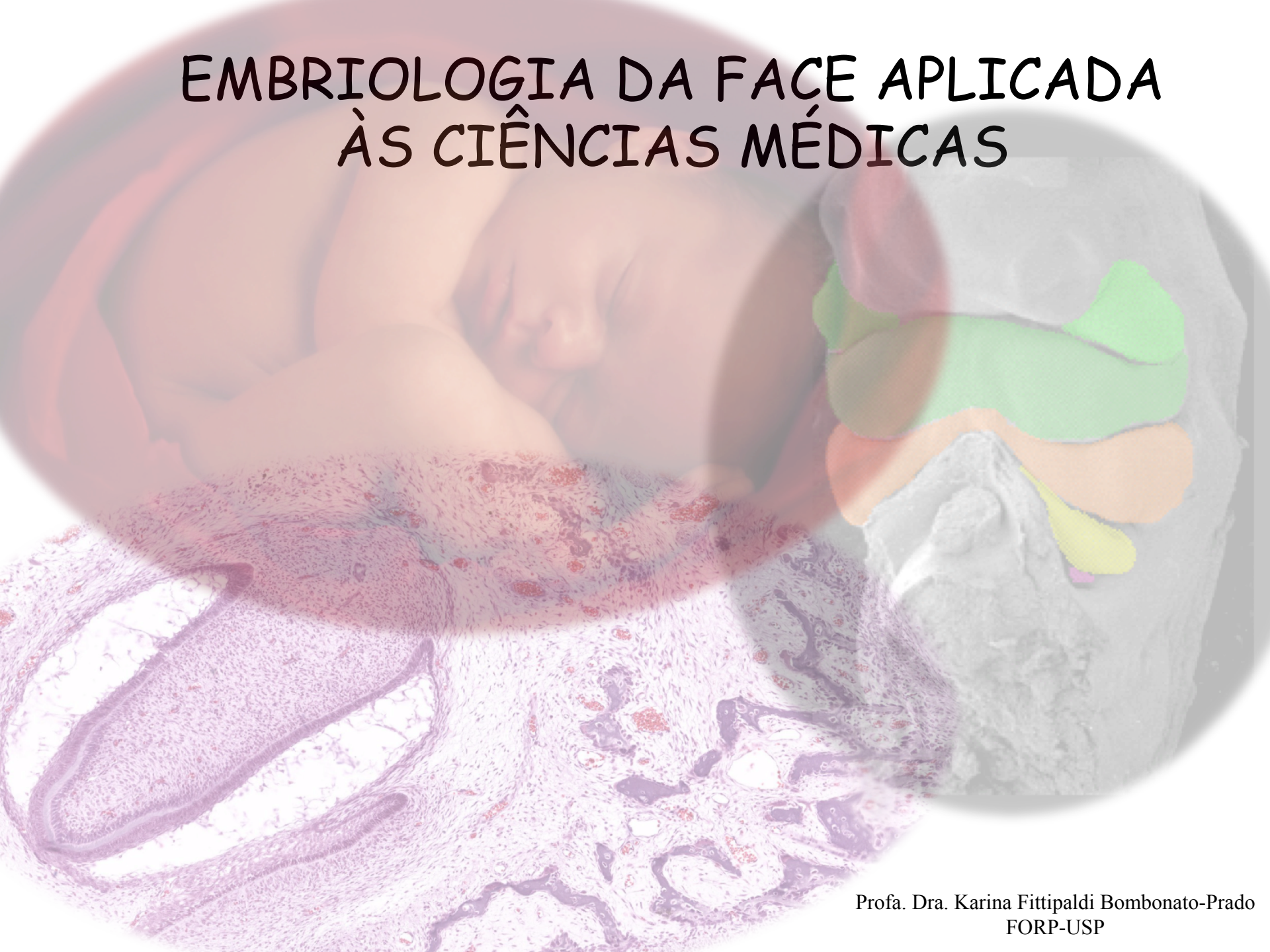


EMBRIOLOGIA DA FACE APLICADA ÀS CIÊNCIAS MÉDICAS





Conceitos importantes

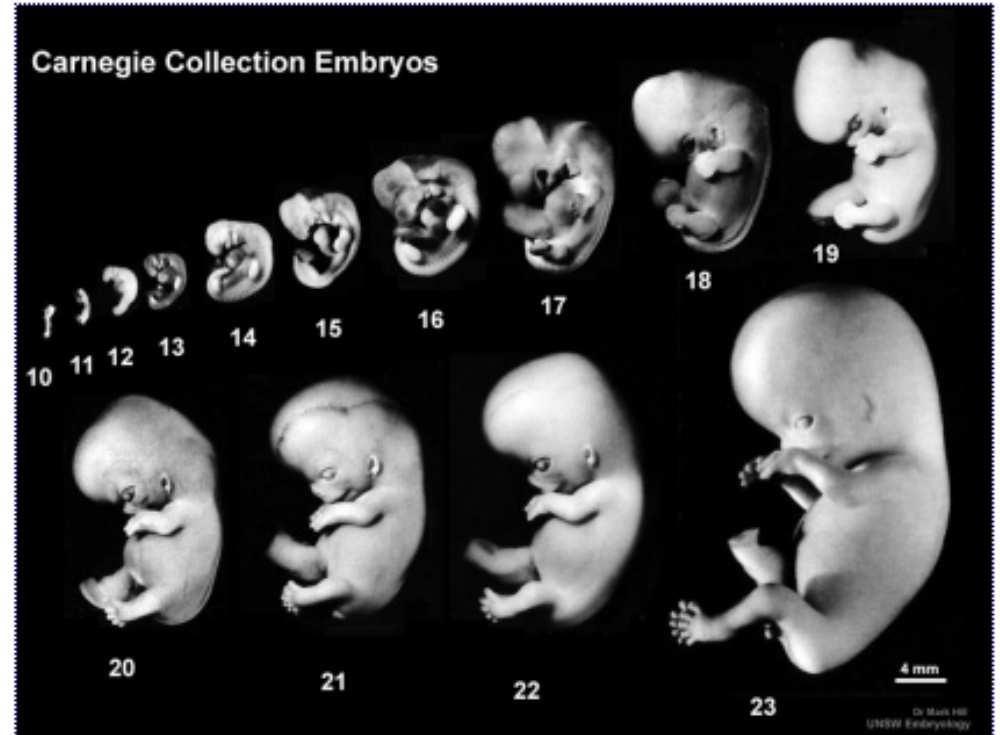
- ◆ Conhecimento da embriologia é a **base** para futuras aplicações clínicas (diagnóstico e tratamento)
- ◆ **Células da crista neural** são essenciais para a formação da face e boca e quase todas as suas estruturas
- ◆ **Arcos faríngeos** contribuem para a formação dos tecidos faciais e orais
- ◆ Desenvolvimento de estruturas da face e da cavidade oral ocorre por meio de **mudanças morfológicas e funcionais** sincronizadas

Estágios de Carnegie

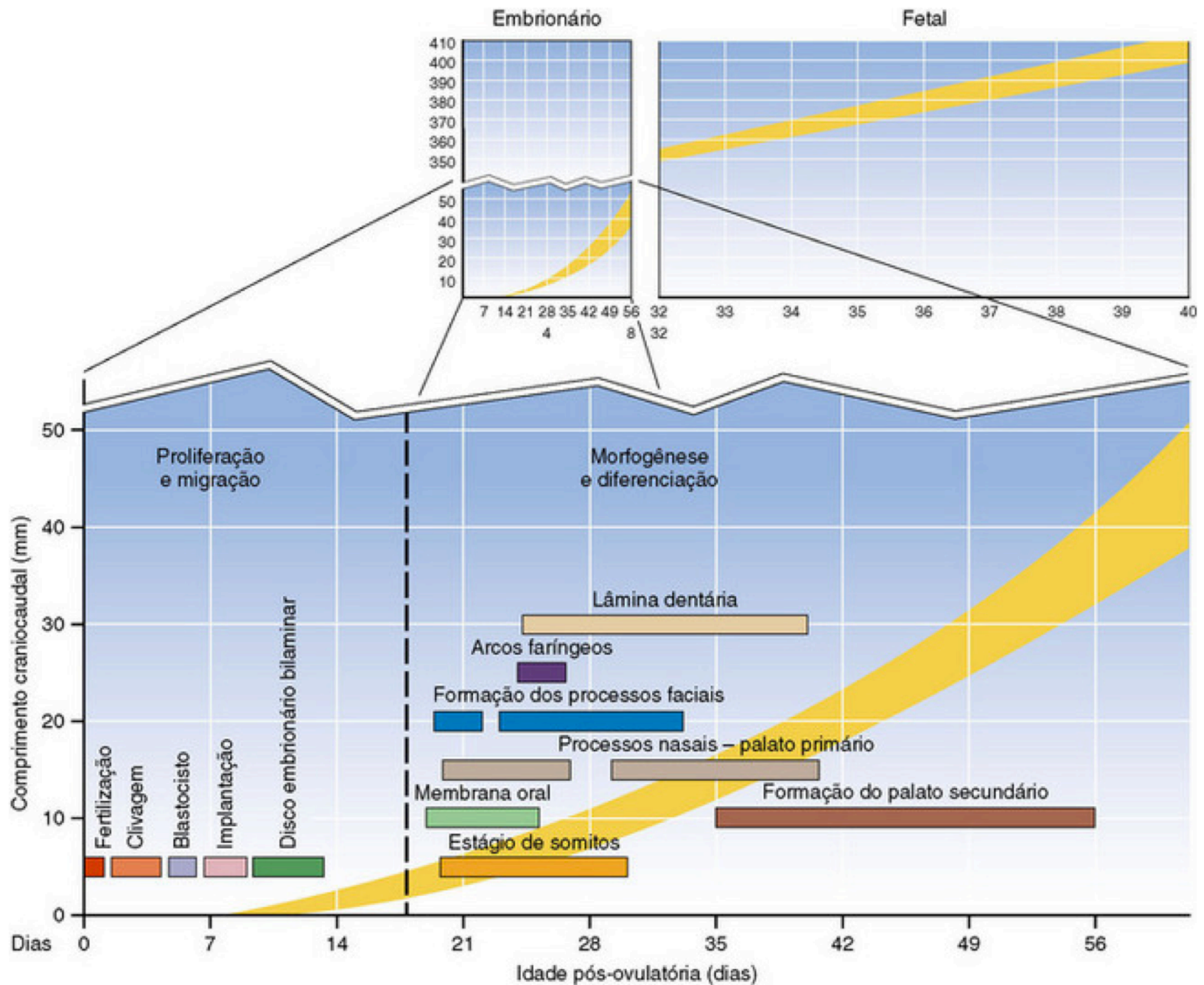
Week:	1	2	3	4	5	6	7	8
Carnegie stage:	1 2	5 6	7 8	10	14	16	18	20
	3 4		9	11	15	17	19	21
			12	13				22
								23

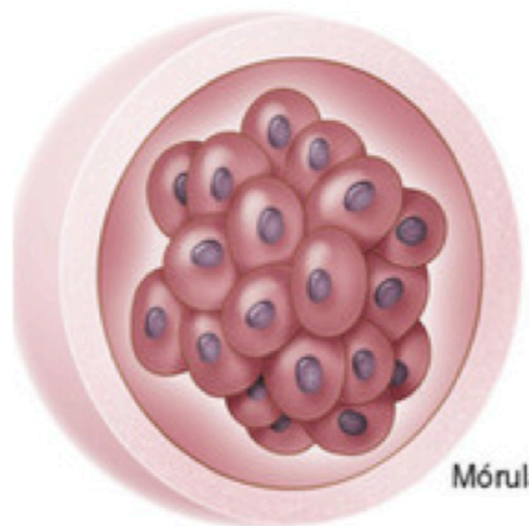


*Formação da
face e cavidade
oral*

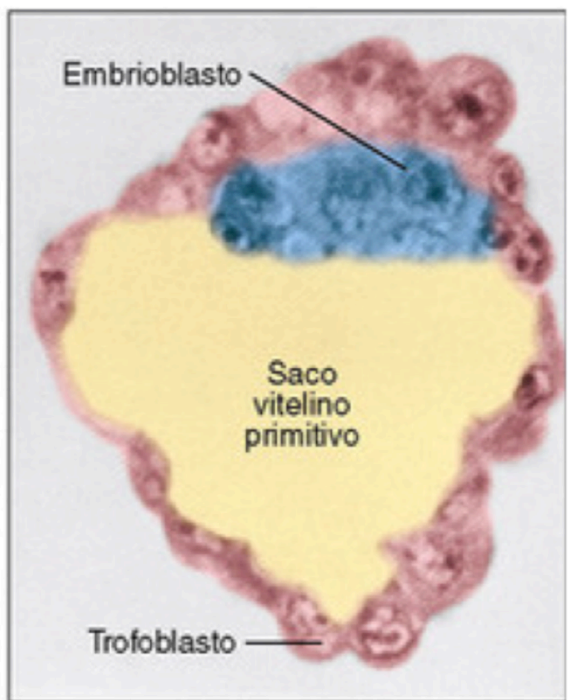
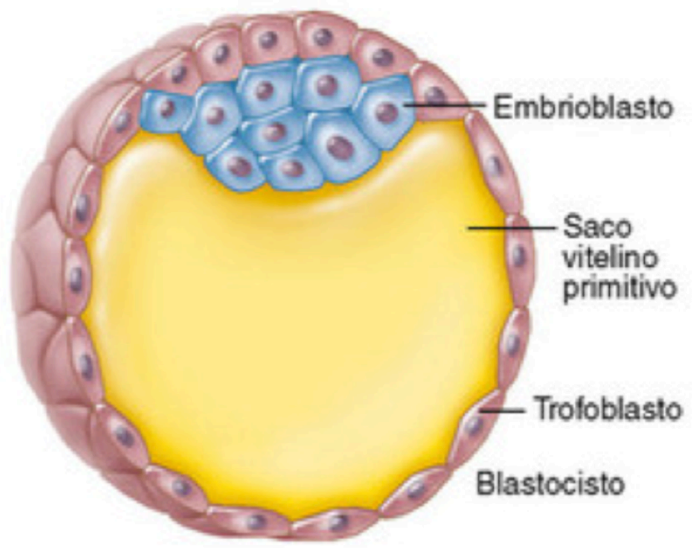


Human Embryo, Carnegie stages 10-23

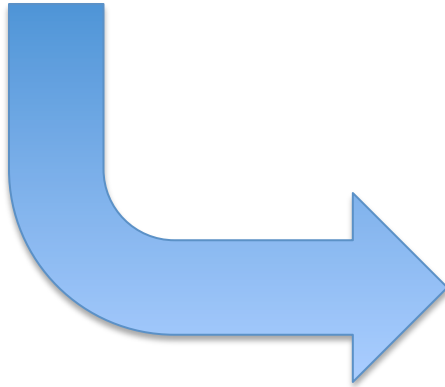




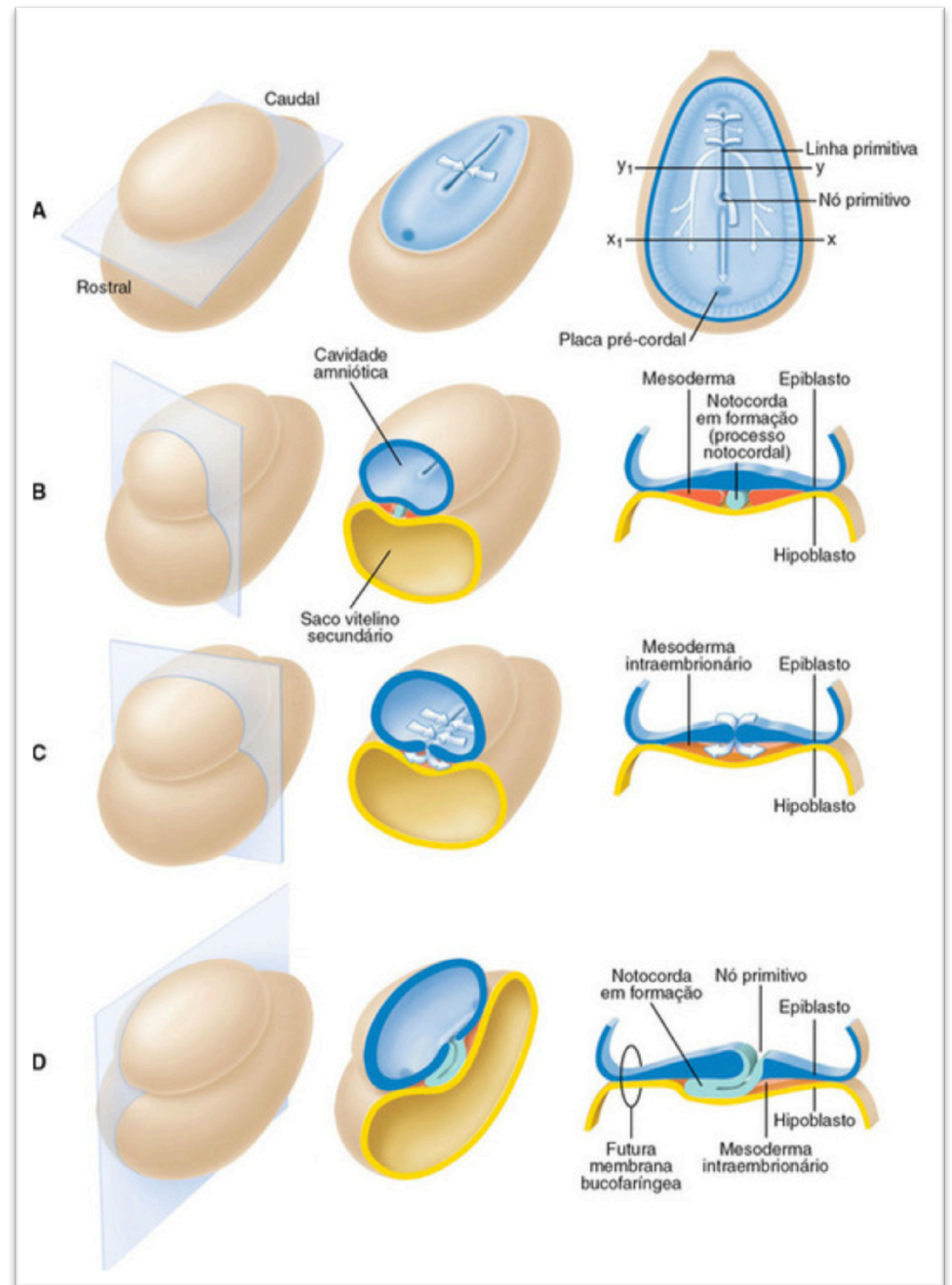
Mórula



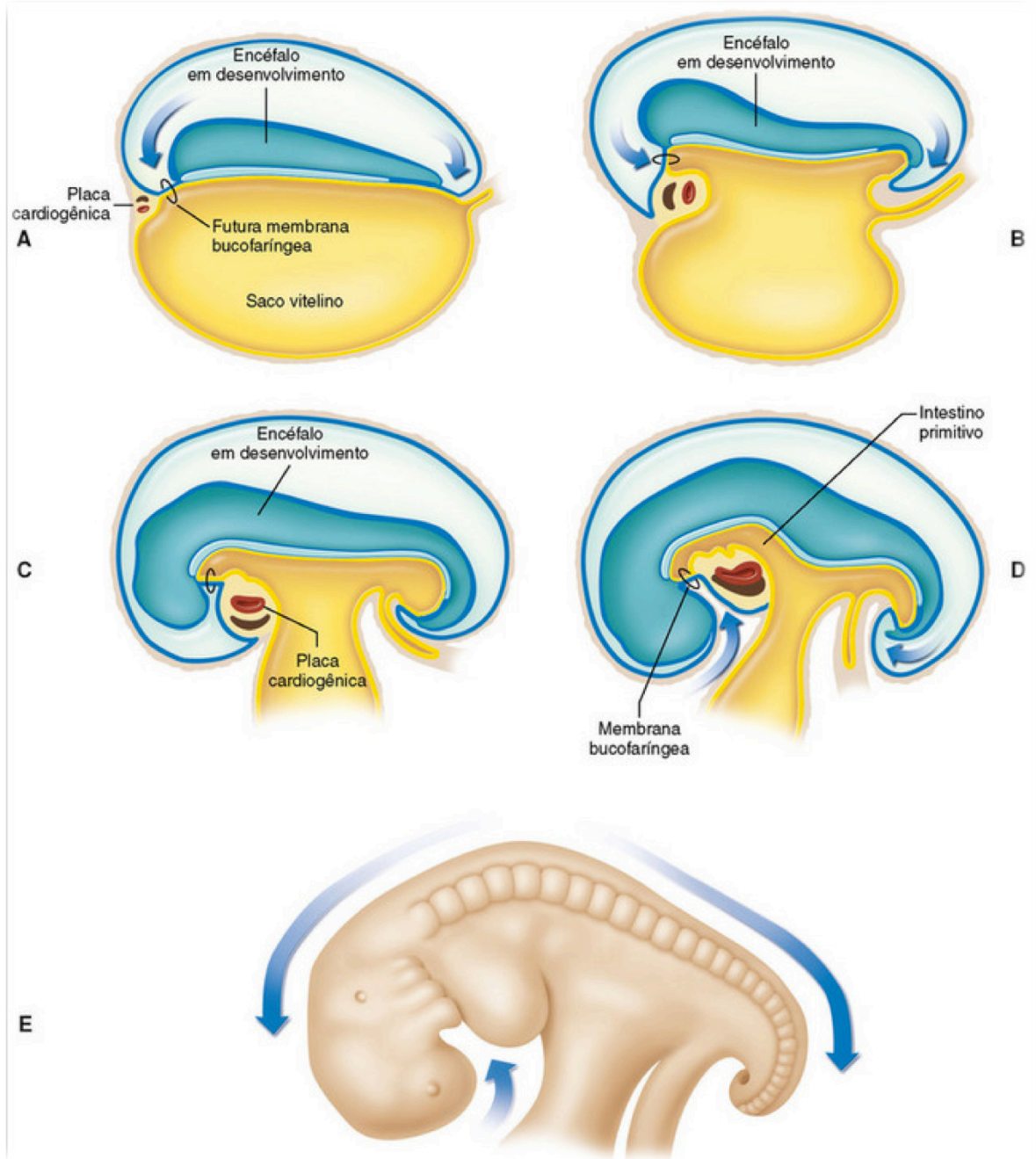
Gastrulação



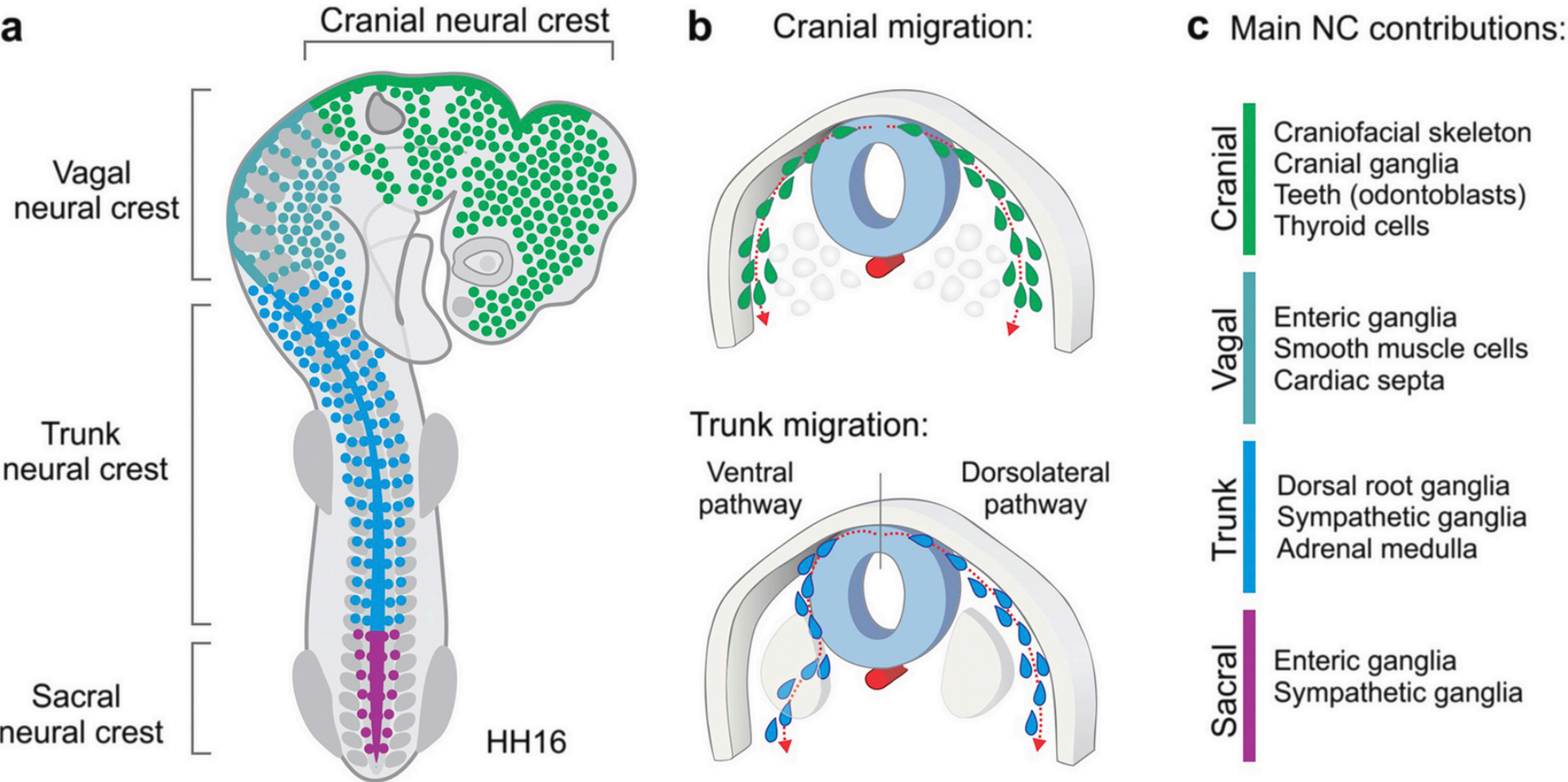
Desenvolvimento e posicionamento dos folhetos germinativos/embrionários



*Estabelecimento
de direcionalidade*



*Importância da crista neural:
Formação do tecido conjuntivo da facial e oral*



*Importância da crista neural:
Formação do tecido conjuntivo facial e oral*

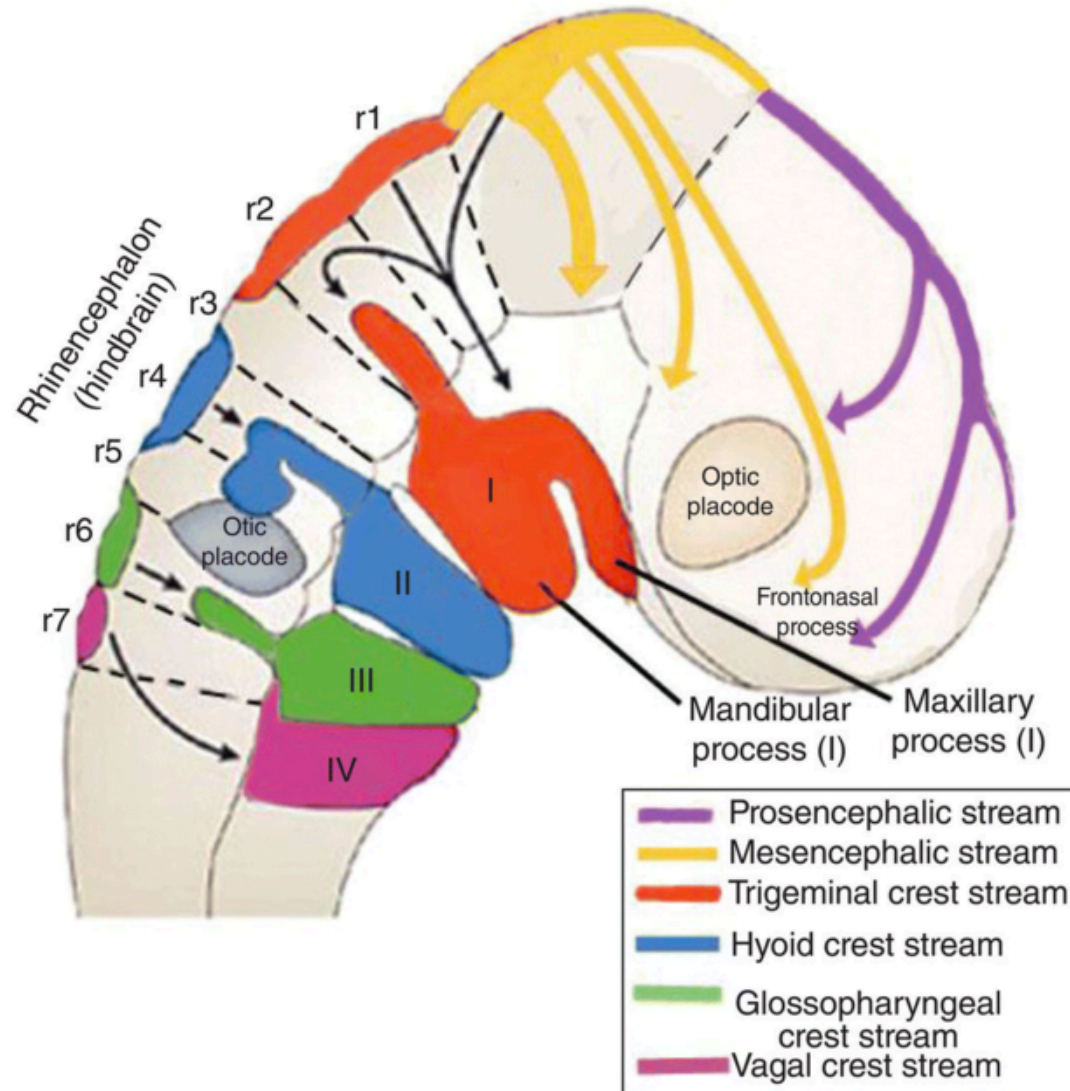
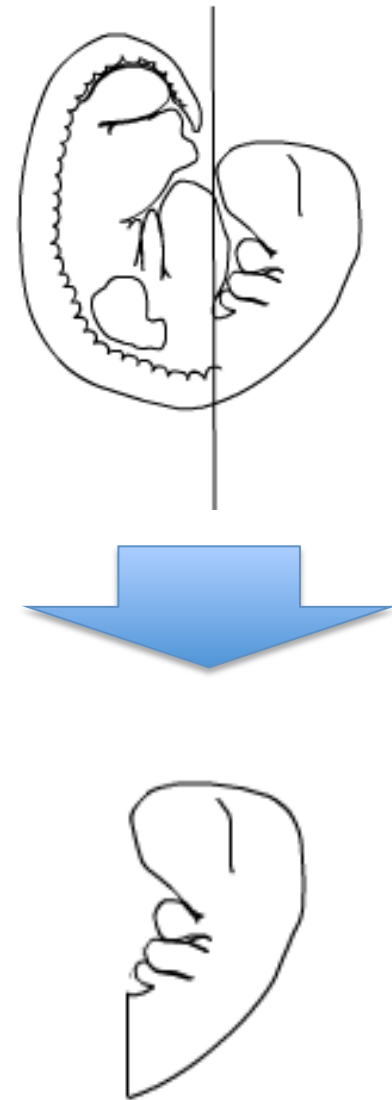
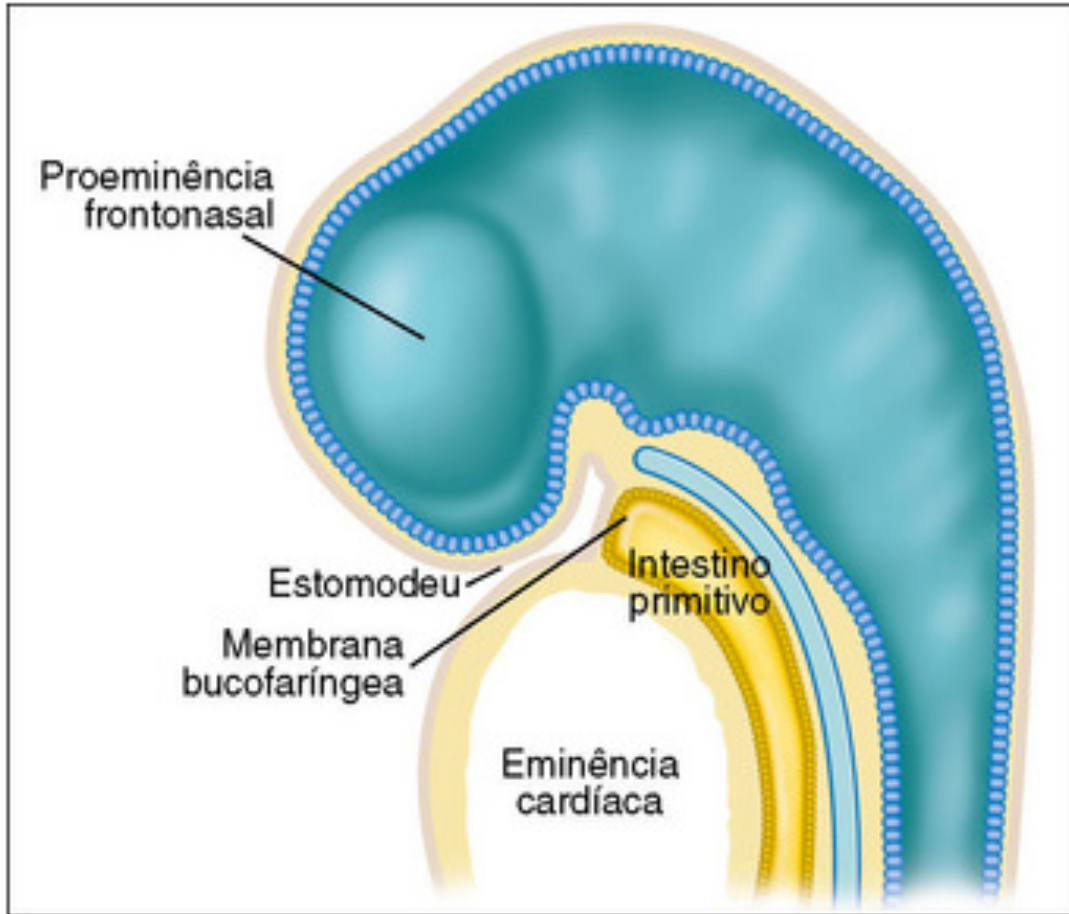
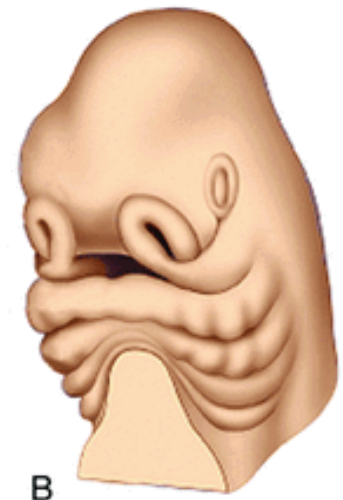


Figure 2.10 Origins and destination of the head neural crest streams.
(Adapted from Carlson, *Human Embryology and Developmental Biology*, 2009.)

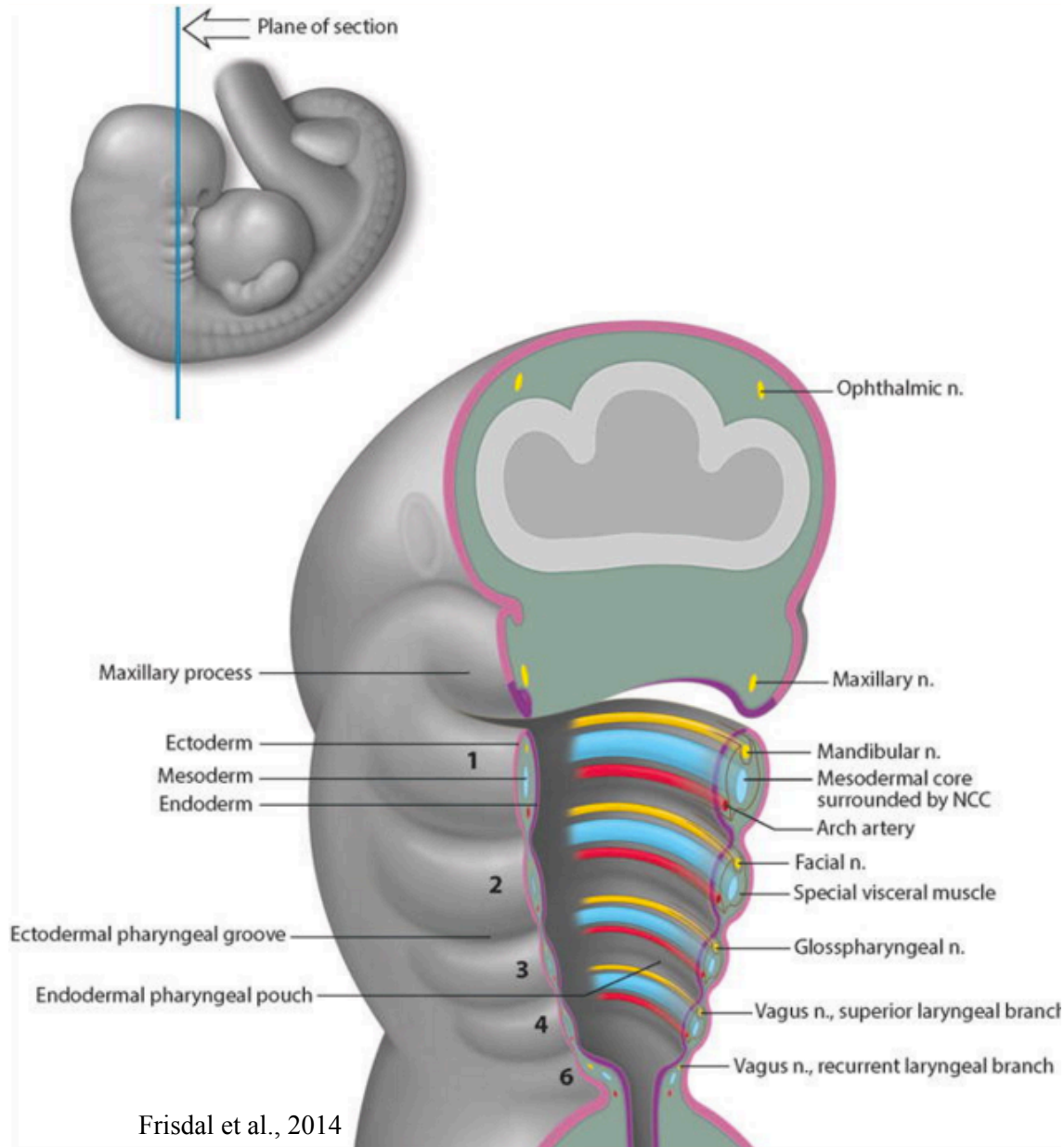


Importância dos arcos faríngeos



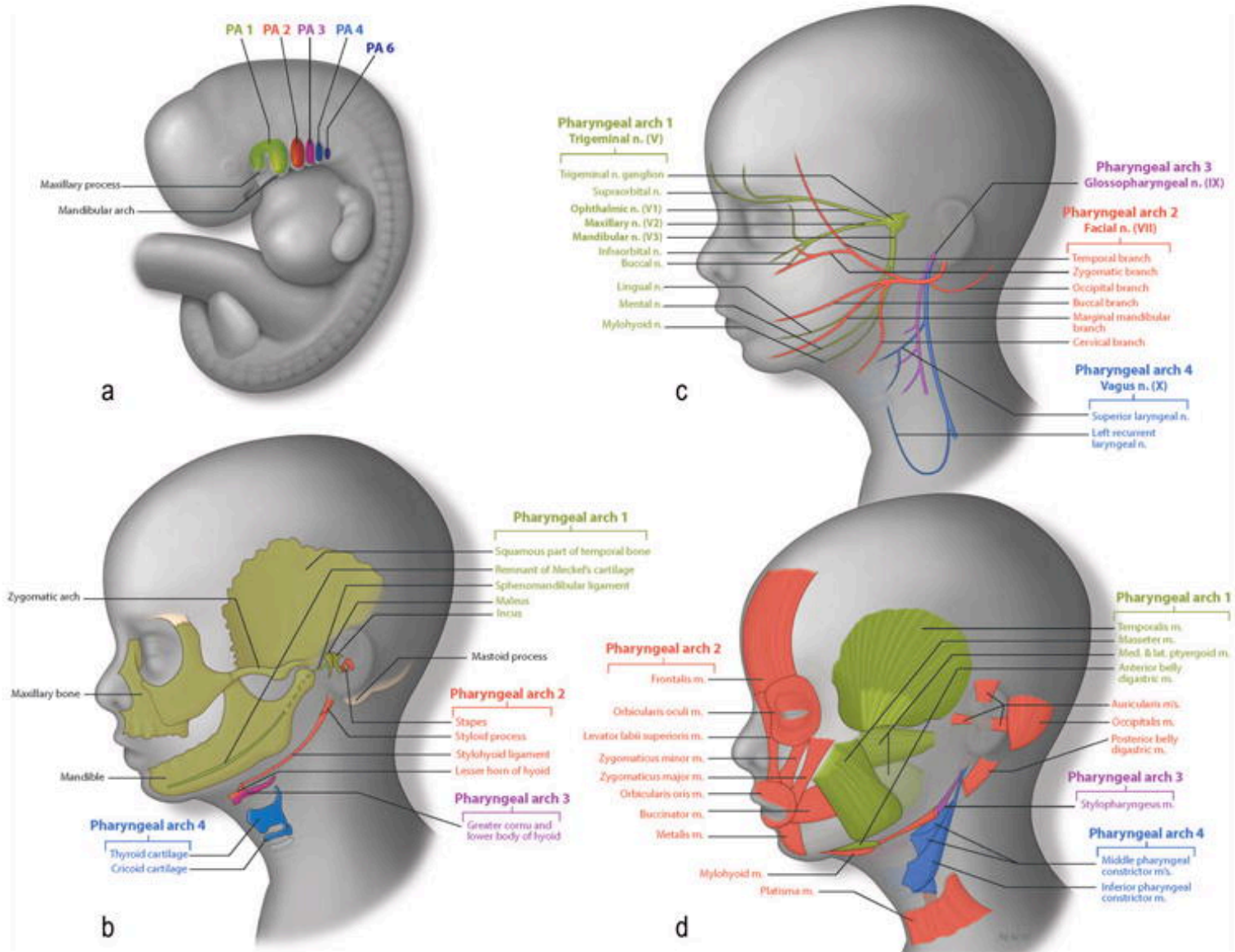
B

Som et al., 2013

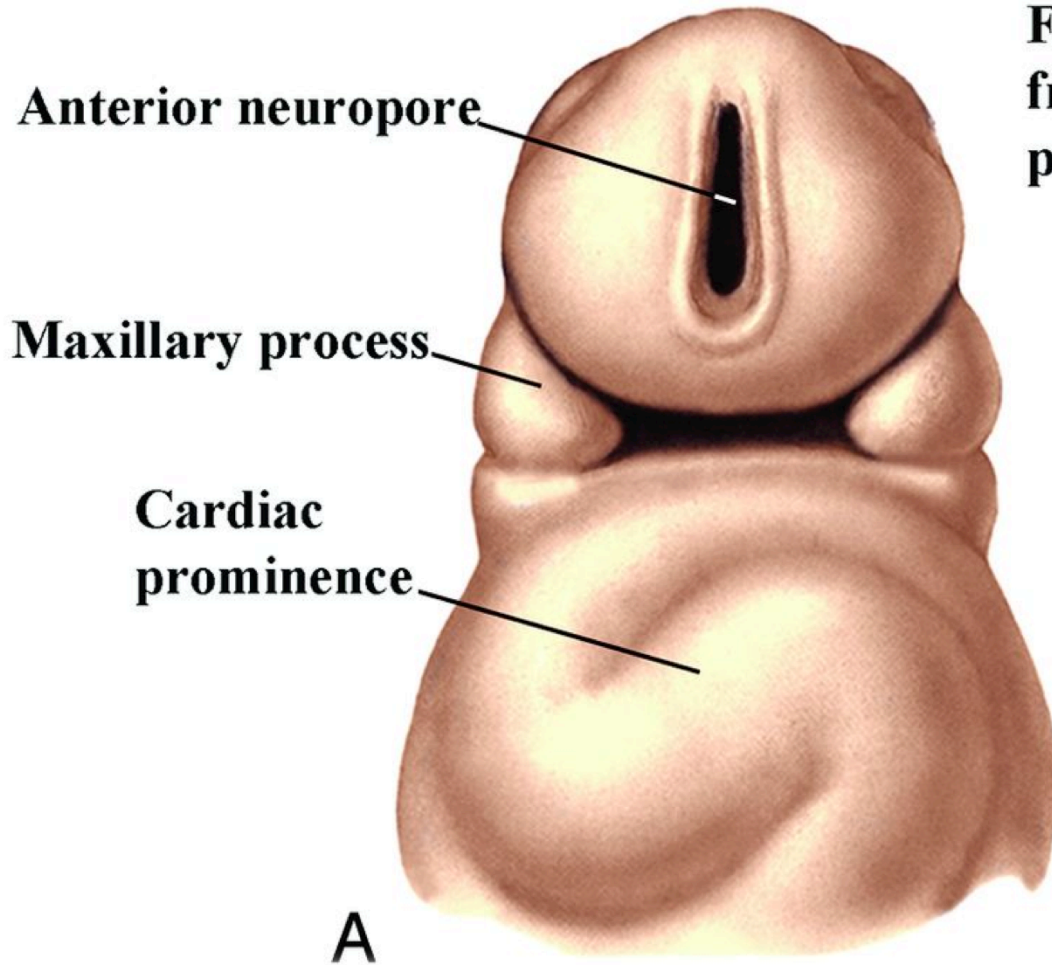


<https://syllabus.med.unc.edu>

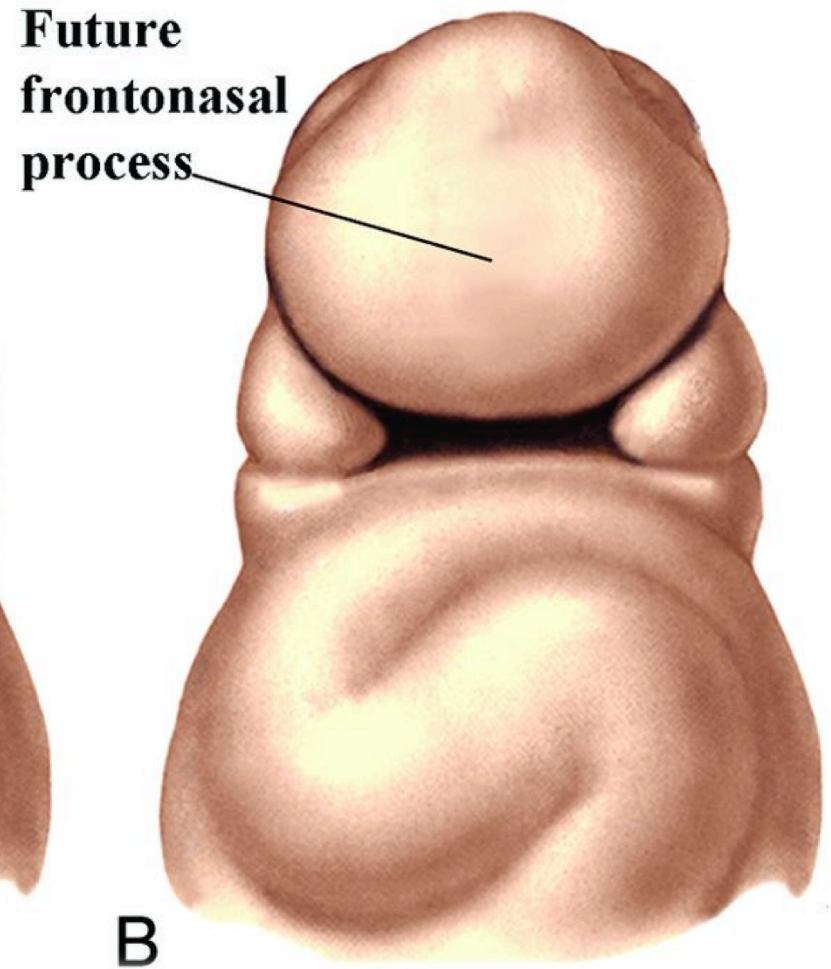
Importância do primeiro arco faríngeo



Formação da proeminência frontonasal



3-4 semanas

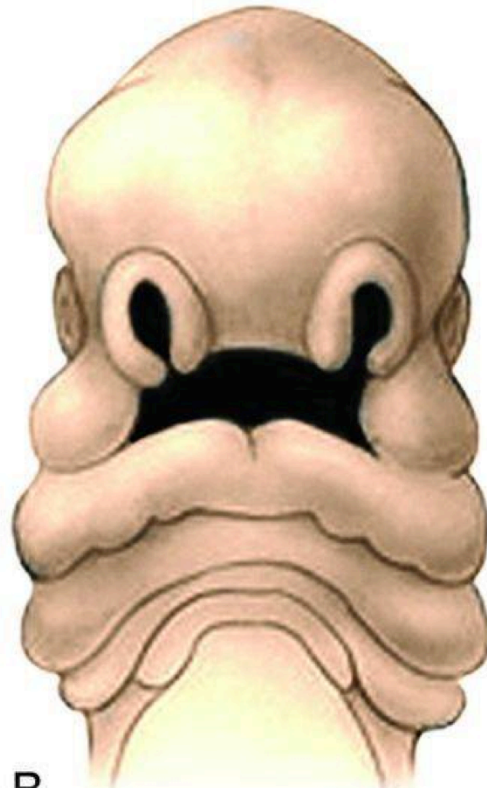


Final 4a. semana

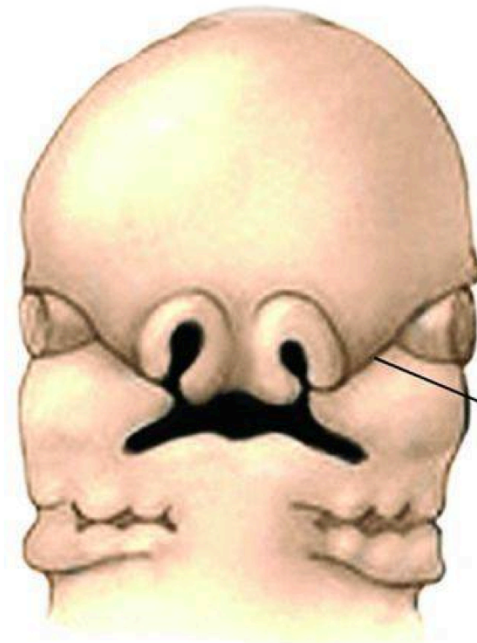
Formação da porção média da face



A
4-5 semanas



B
5-6 semanas



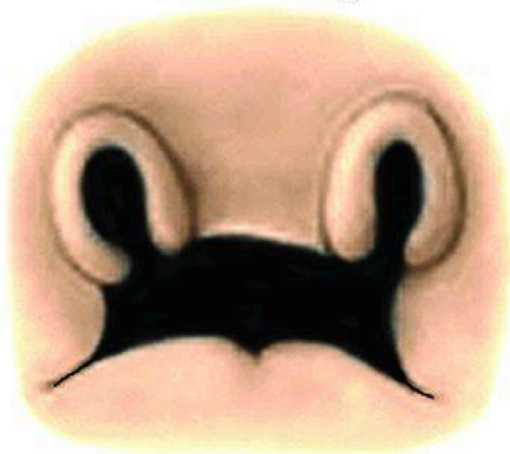
Nasolacrimal groove

C
6-7 semanas

Formação do lábio superior

Globular process of His

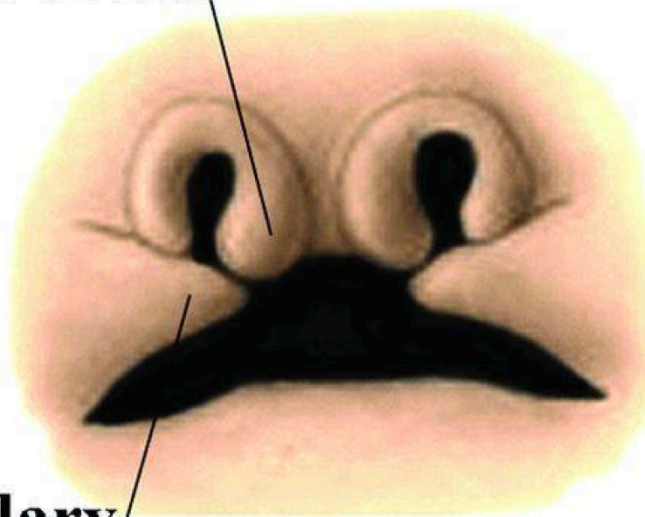
Philtrum



A

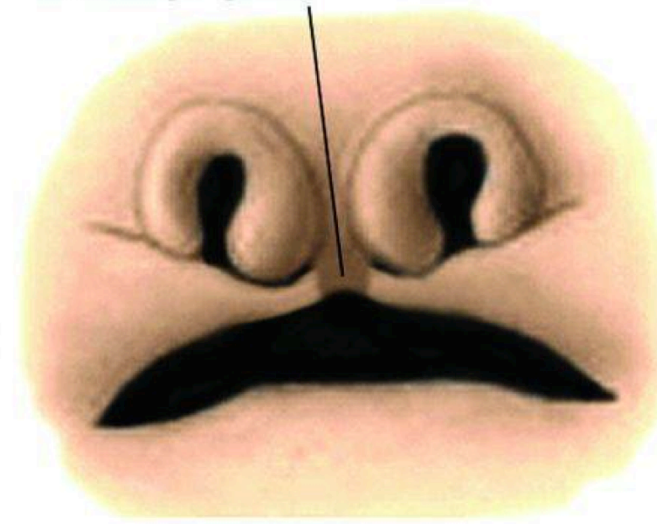
**Maxillary
process**

5 semanas



B

6 semanas



C

7 semanas

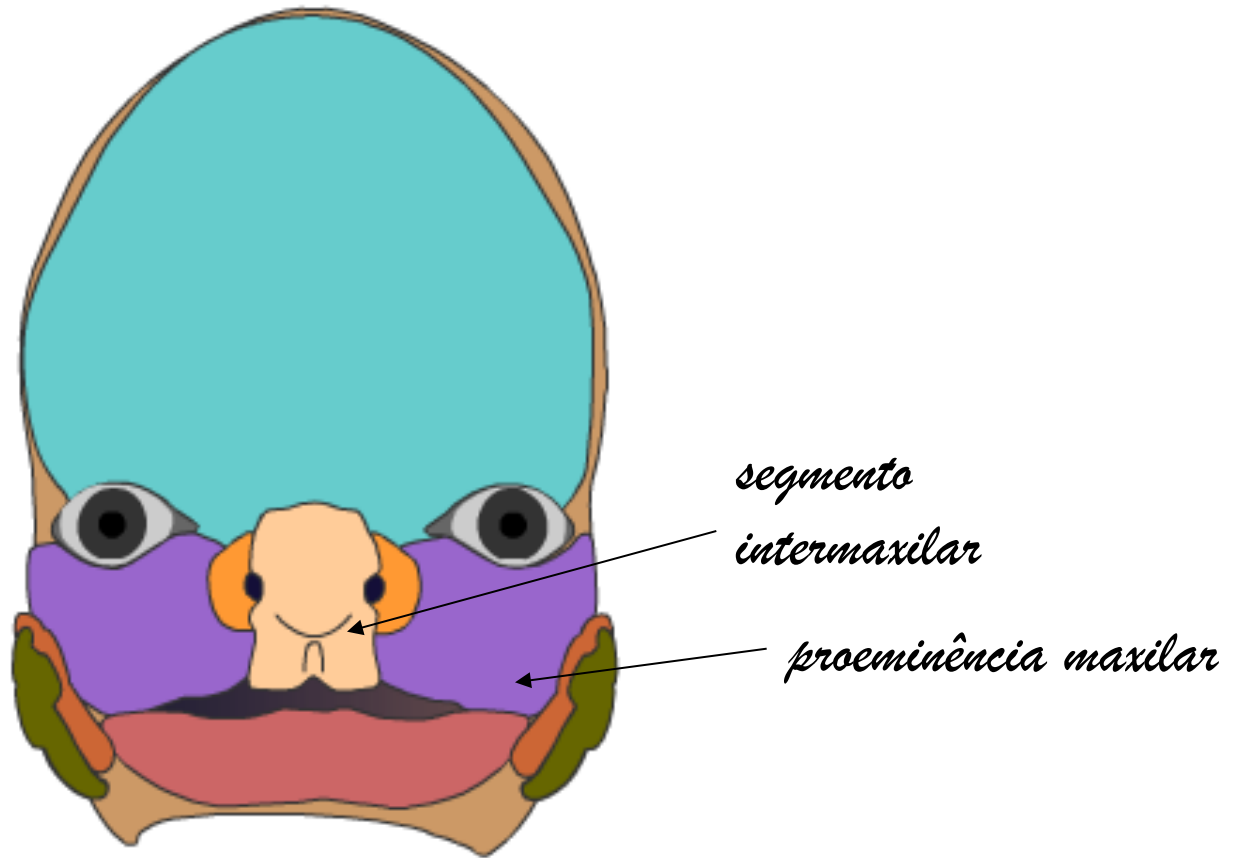


7 semanas



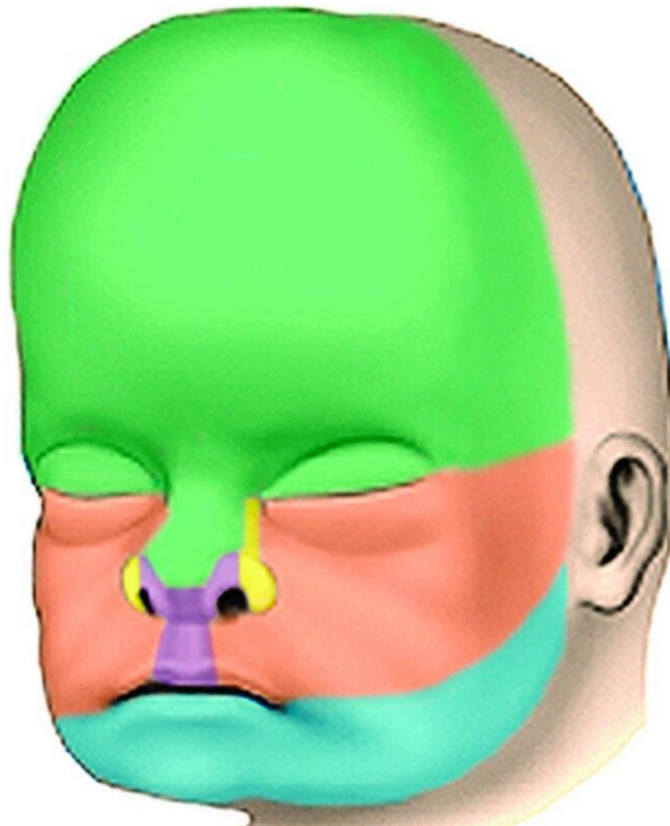
10 semanas

*fusão do segmento intermaxilar e proeminências maxilares, formando o lábio superior e a arquitetura da maxila.



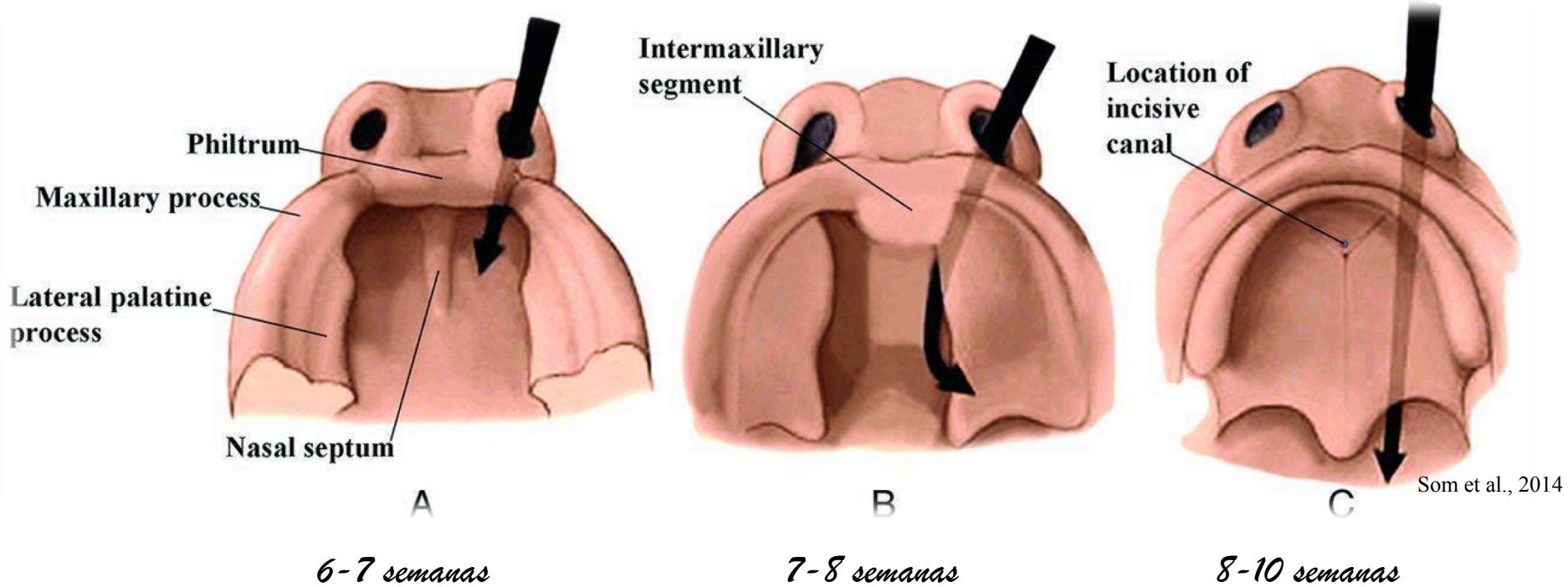
Semana 10

- * características faciais semelhantes ao neonato
- * segmento intermaxilar forma o filtro labial
- * proeminências maxilares formam as bochechas e o maxilar superior



*Desenvolvimento sincronizado
da face e estruturas orais....*

Formação do palato primário e secundário



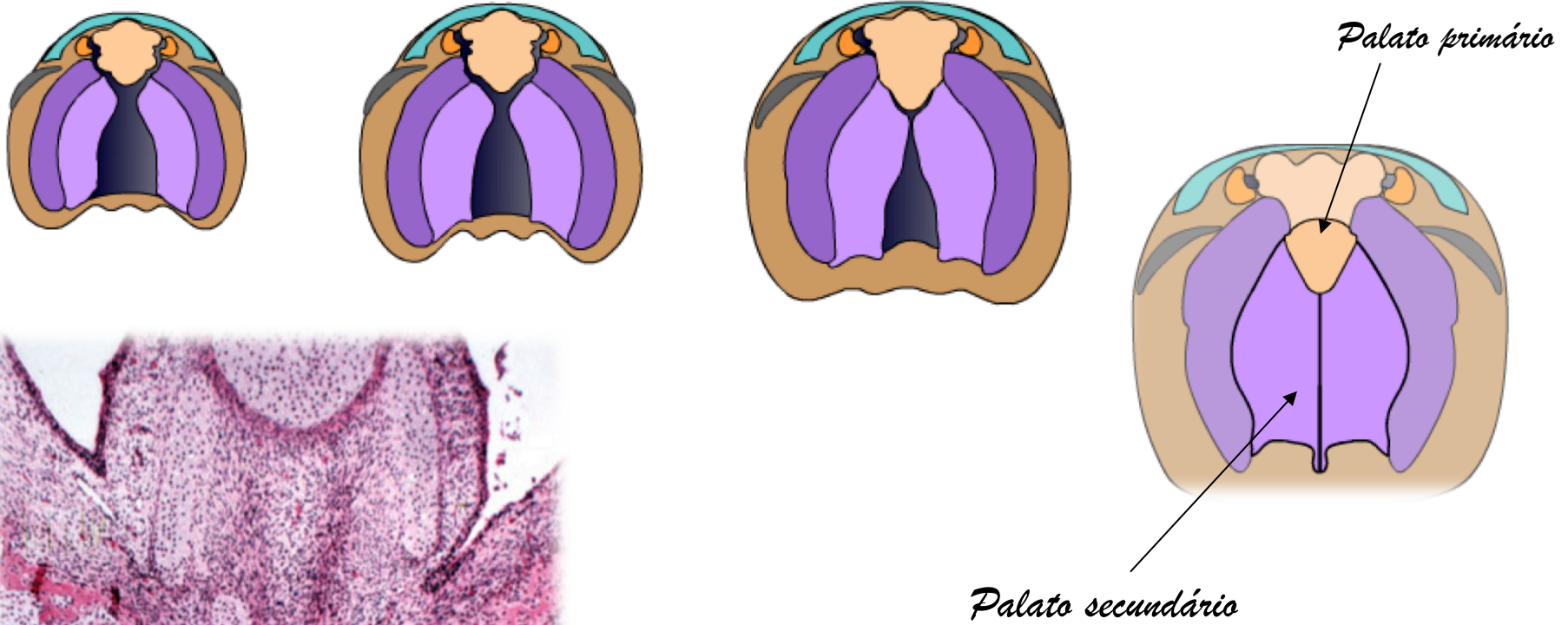
Formação do palato primário e secundário



<https://embryology.iu.edu/>



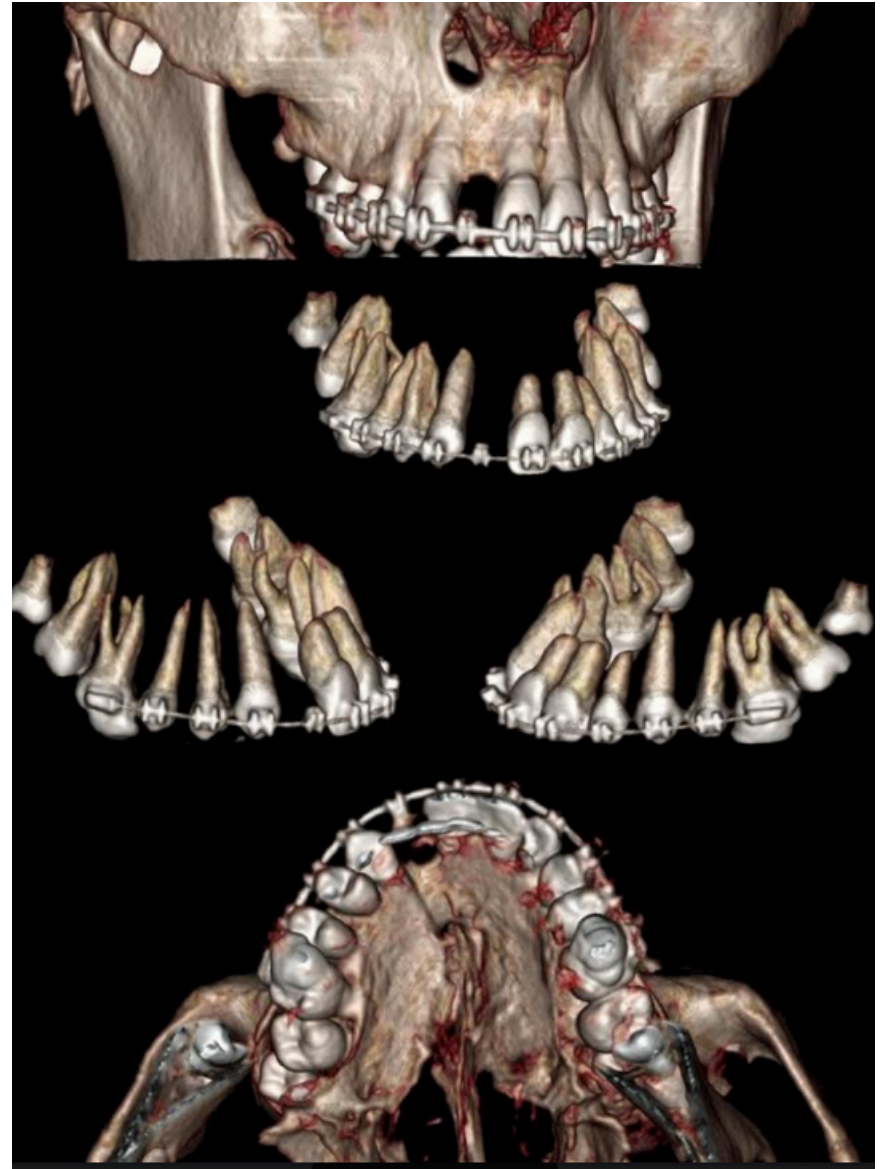
Formação do palato primário e secundário



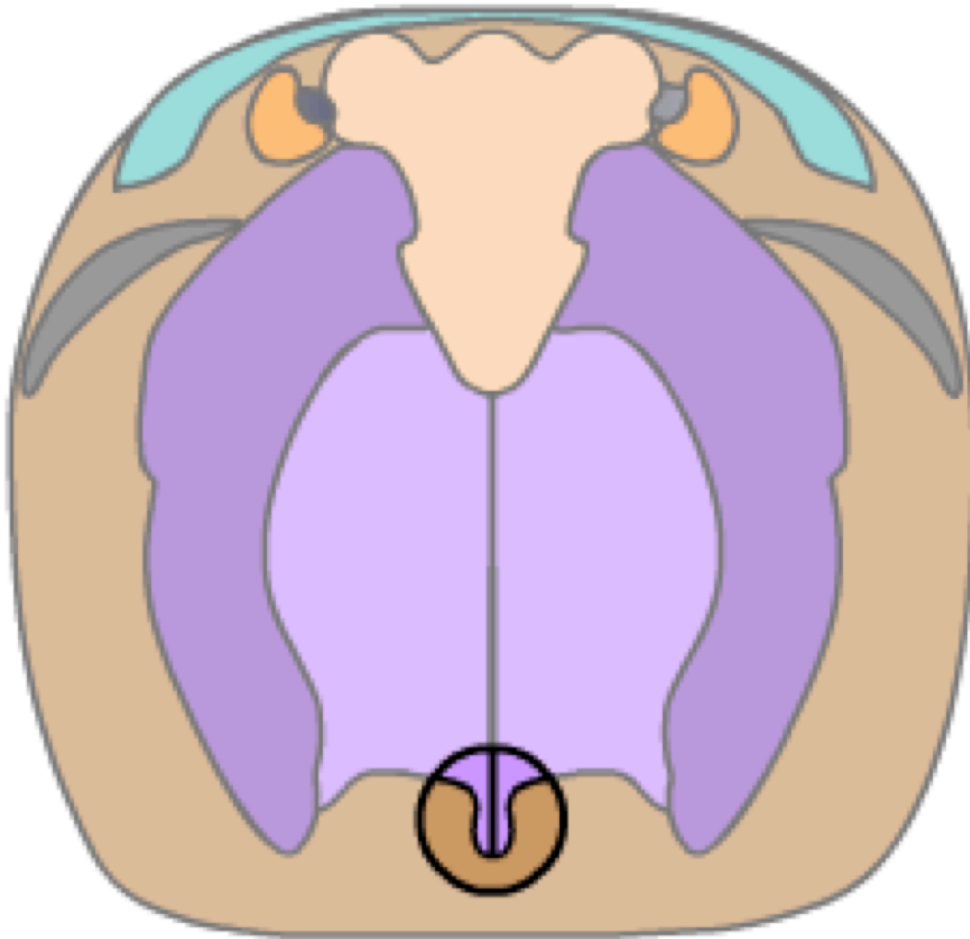
Equipe multiprofissional



Equipe multiprofissional



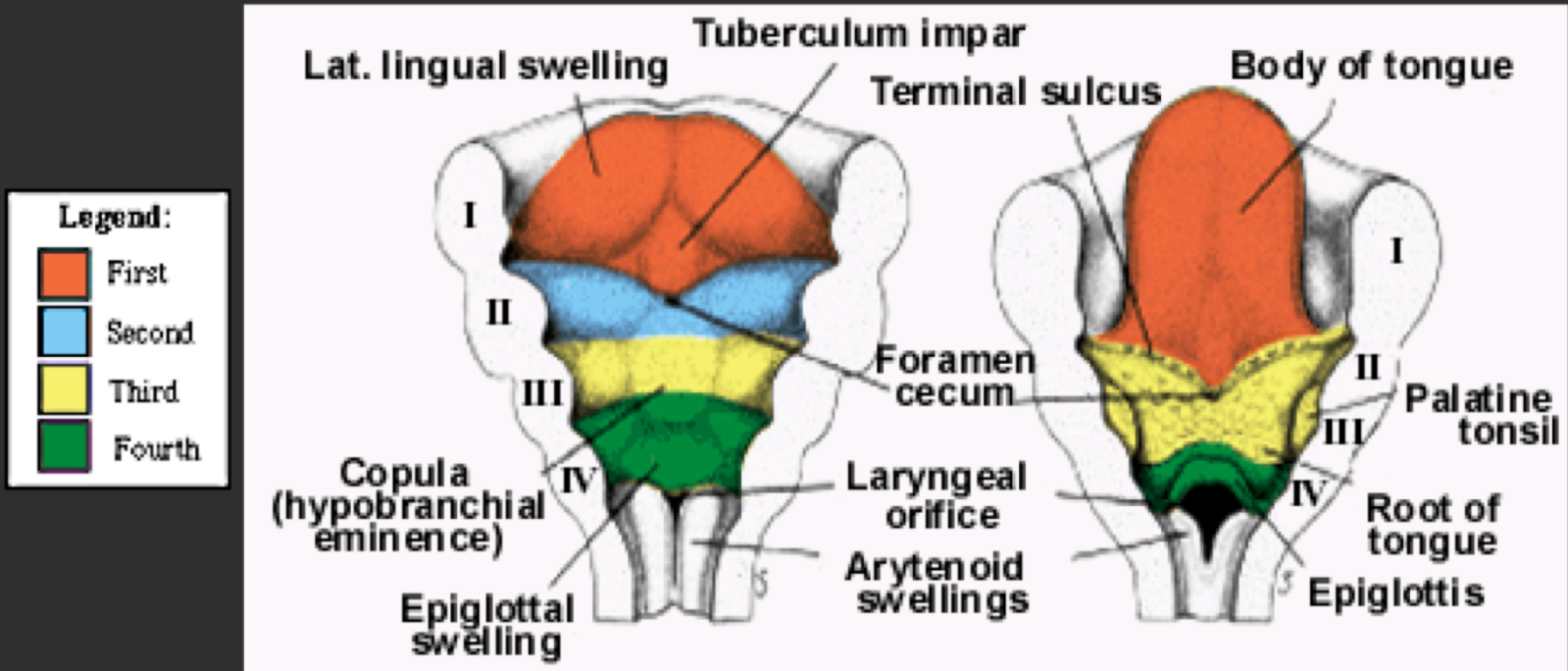
Formação do palato primário e secundário



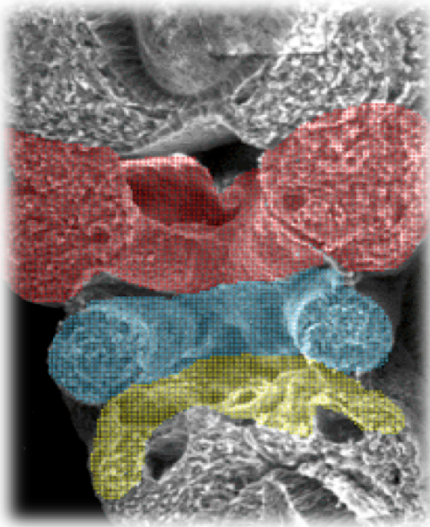
* Úvula



Formação da língua



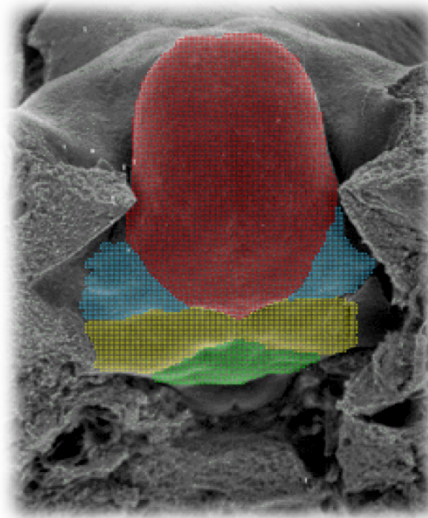
Formação da língua



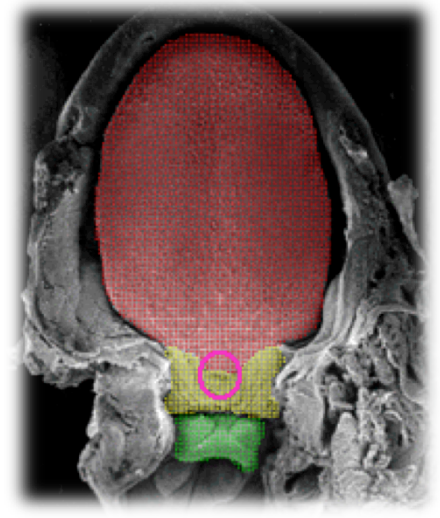
Início 5a. semana



5 semanas

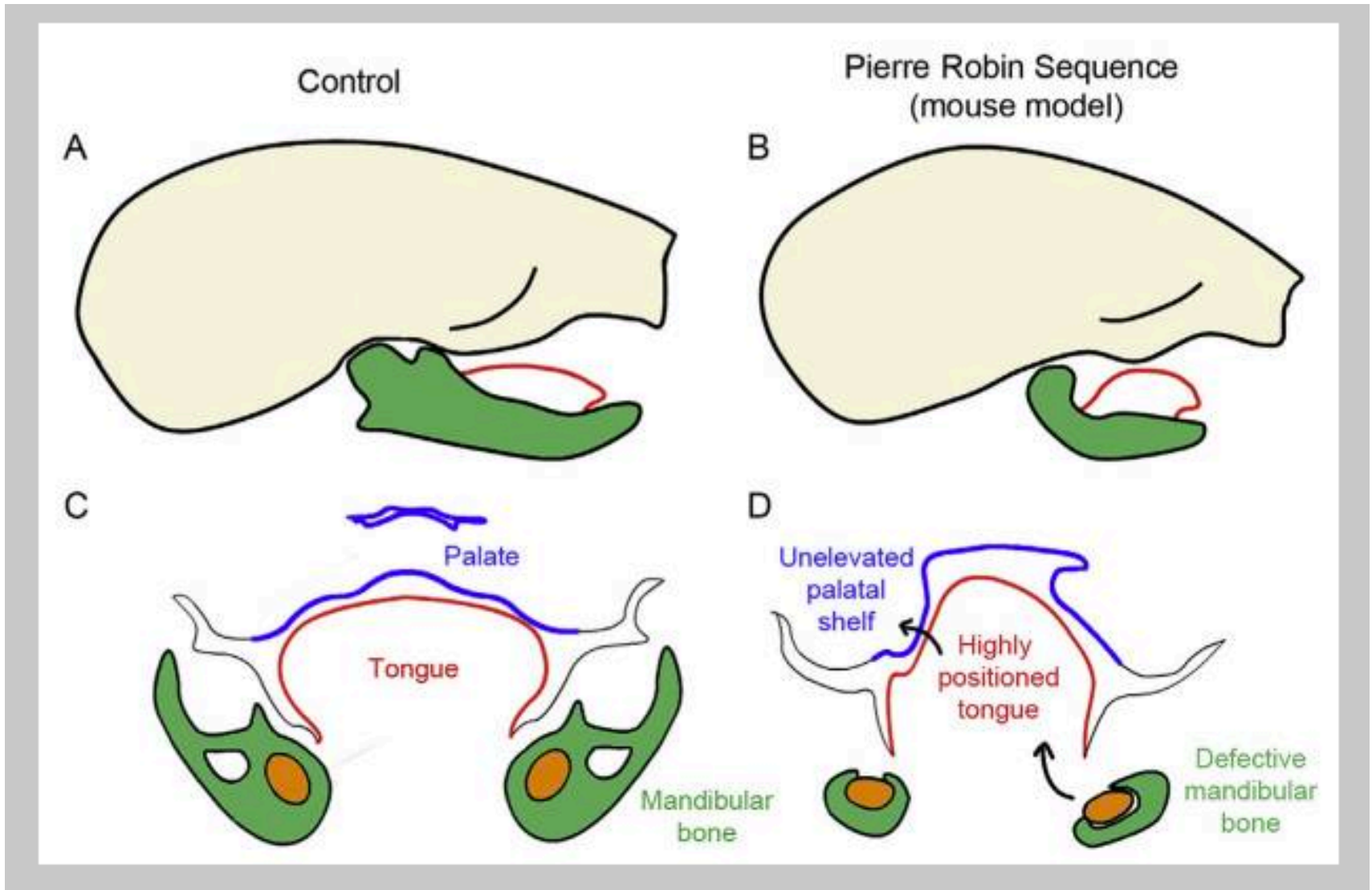


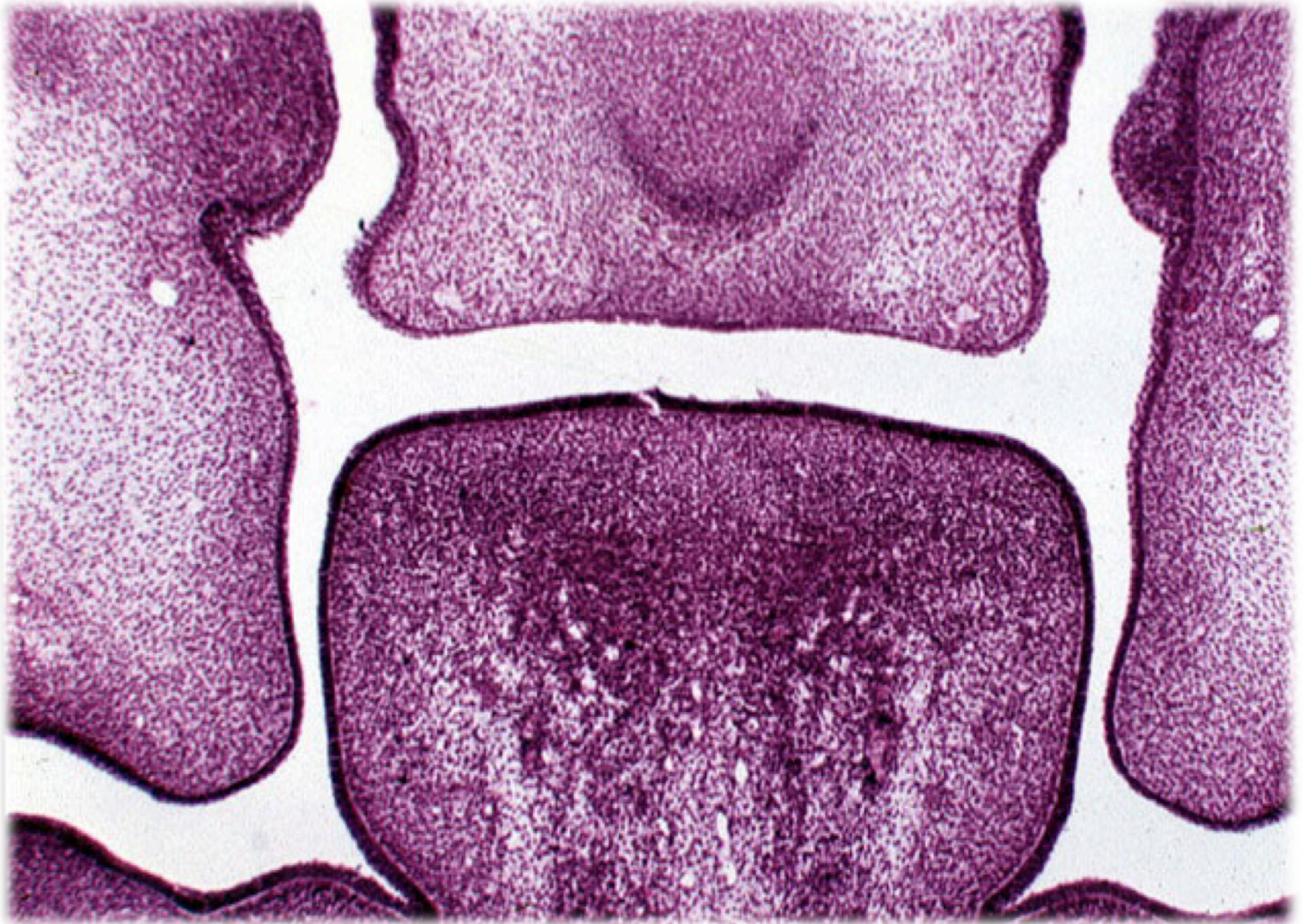
7 semanas



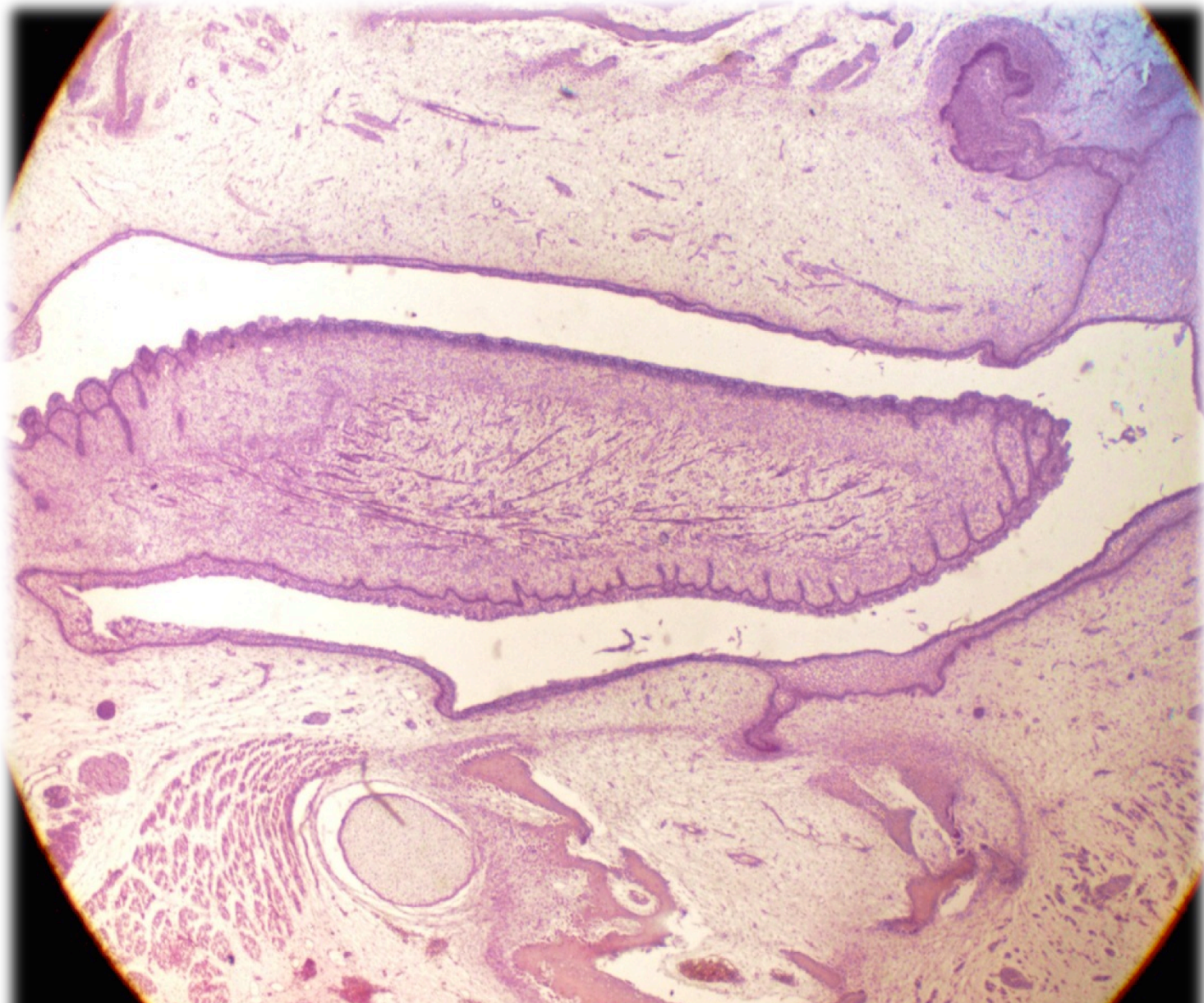
10 semanas

Desenvolvimento coordenado língua/mandíbula





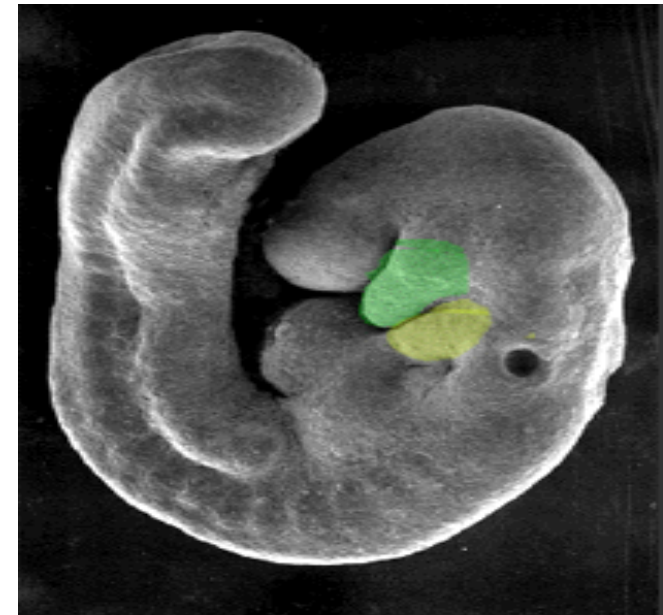
Formação da língua



Formação dos ossos maxilares

DESENVOLVIMENTO DA MANDÍBULA E MAXILA

PRIMEIRO ARCO BRANQUIAL

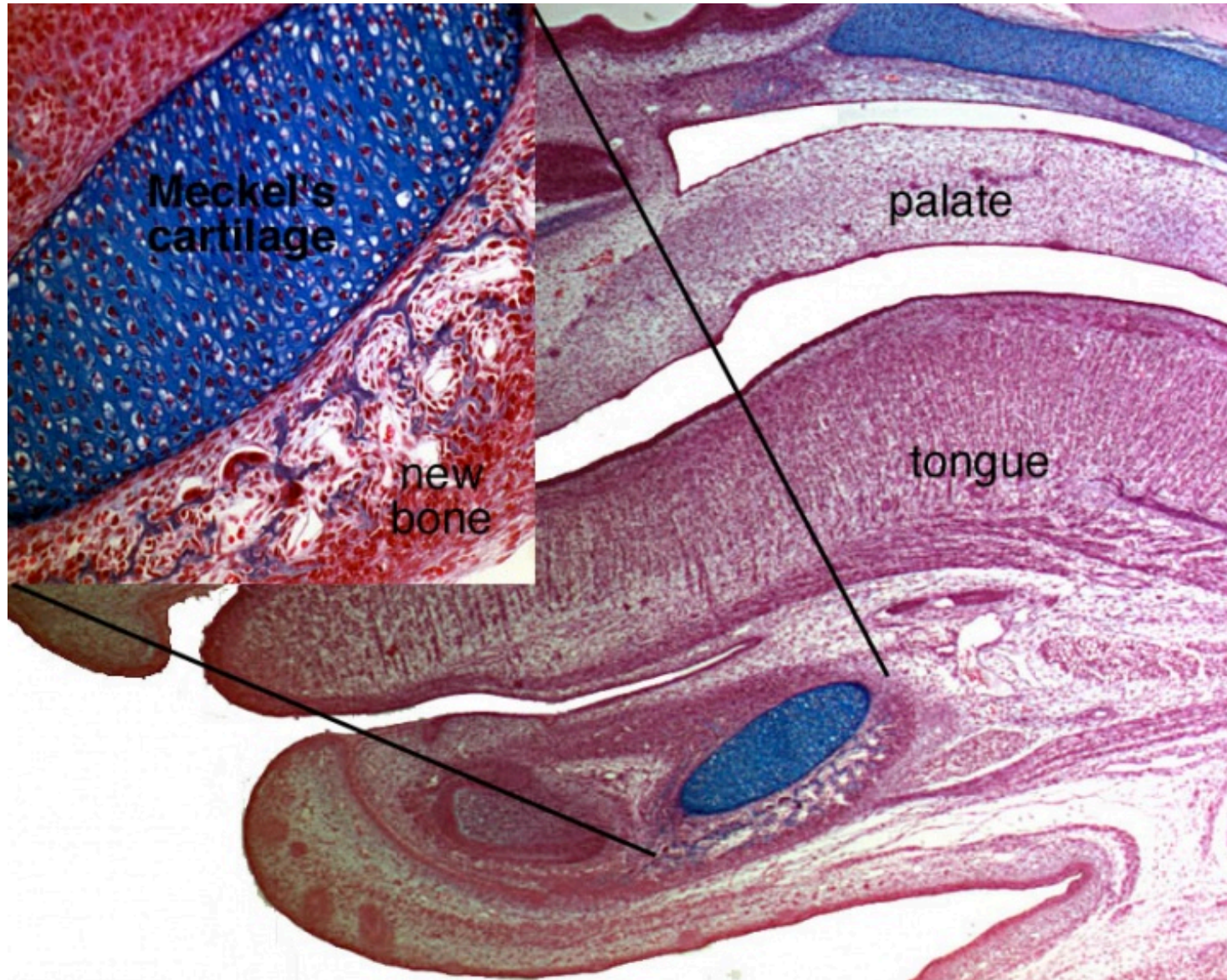


Mandíbula

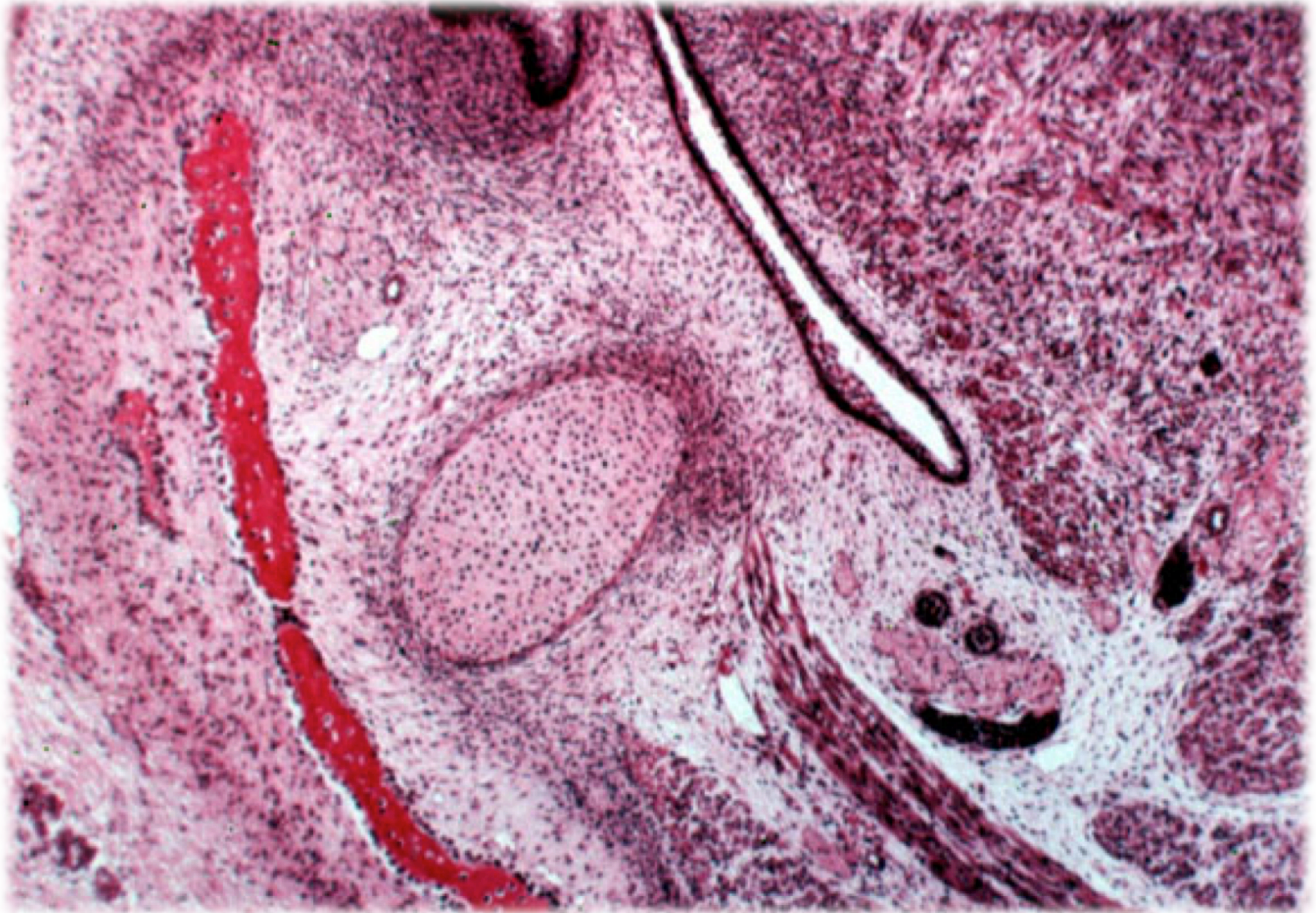
*guia de orientação: CARTILAGEM DE MECKEL (6ª SEMANA)

*OSSIFICAÇÃO INTRAMEMBRANOSA (10ª SEMANA)

Formação dos ossos maxilares



Formação dos ossos maxilares



Formação dos ossos maxilares

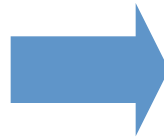
CRESCIMENTO CONTÍNUO DA MANDÍBULA

3 CARTILAGENS:

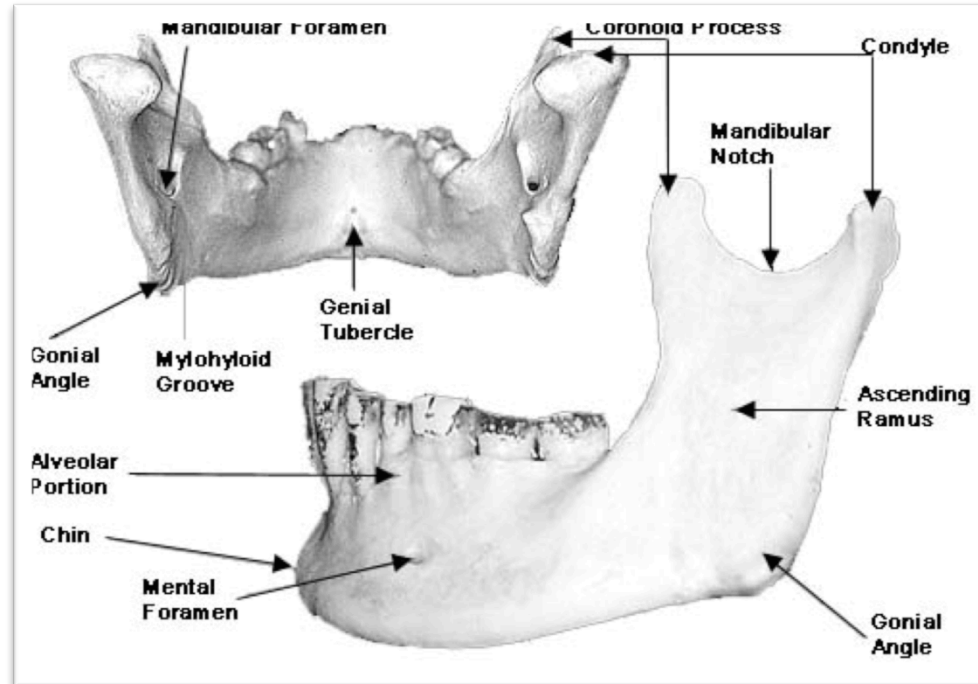
-CONDILAR

-CORONÓIDE

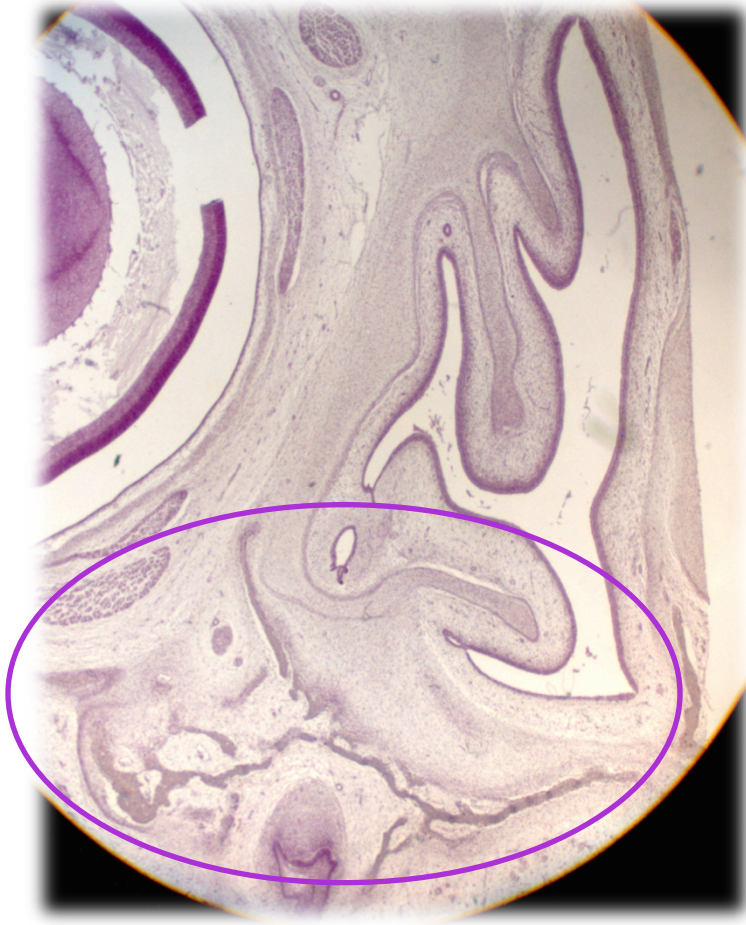
-SMIASÁRIA



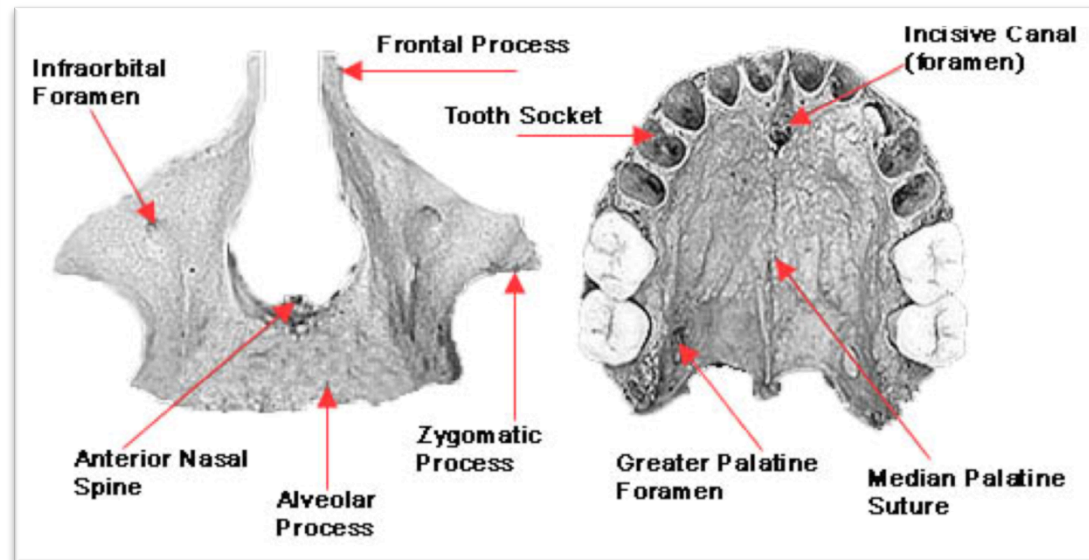
CARTILAGENS SECUNDÁRIAS



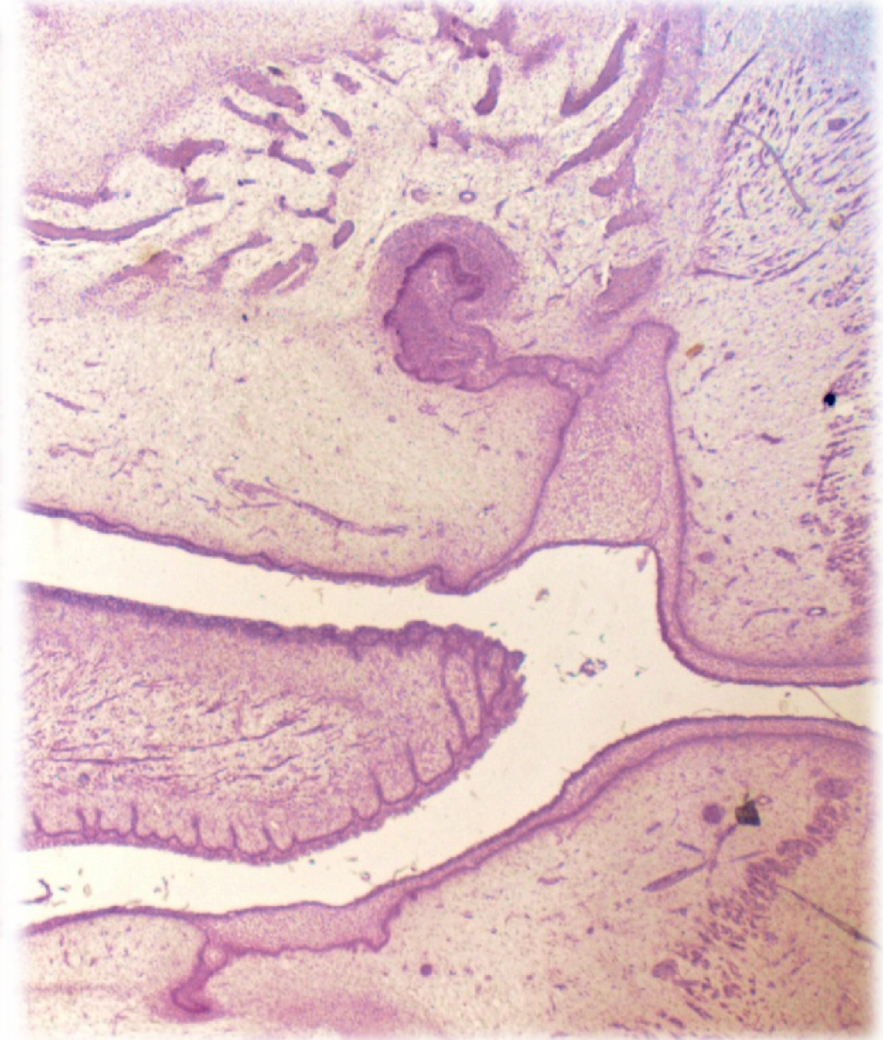
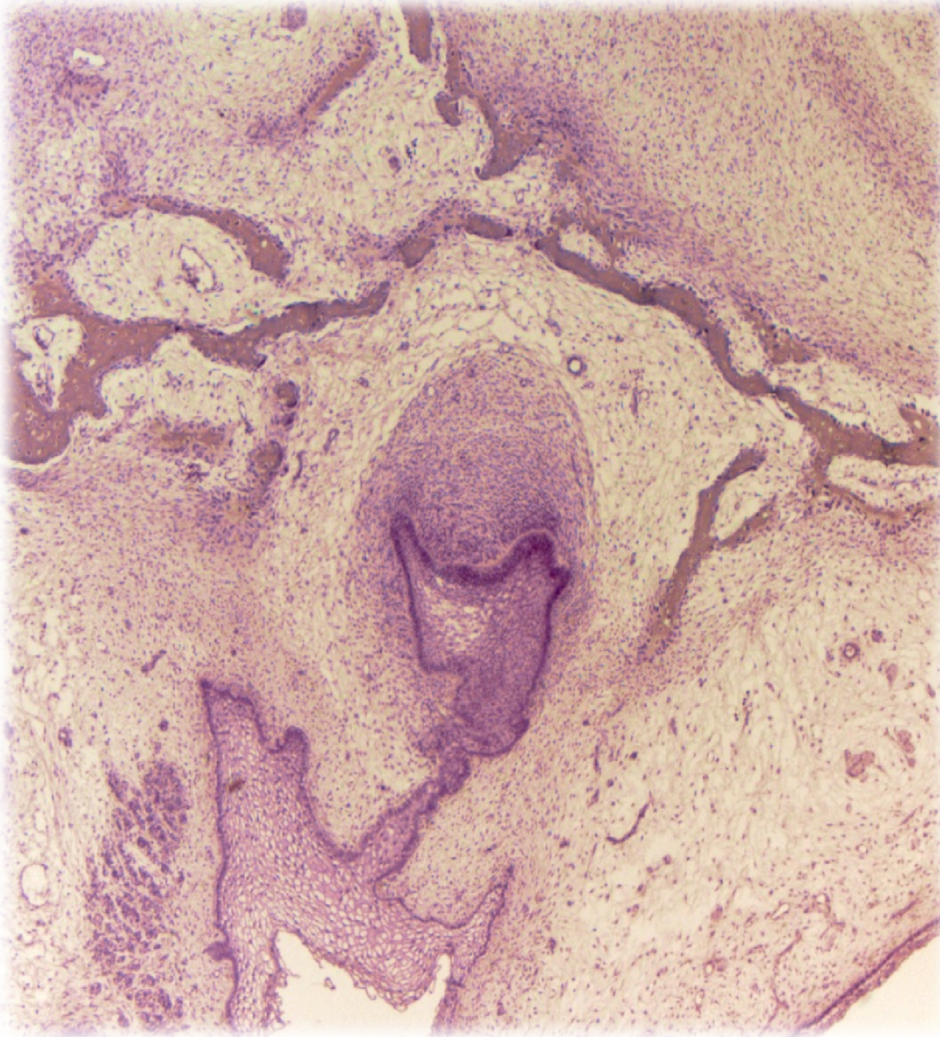
Formação dos ossos maxilares



FORP-USP



Formação do germe dentário





Conceitos revisados

- ◆ Conhecimento da embriologia é a **base** para futuras aplicações clínicas (diagnóstico e tratamento)
- ◆ **Células da crista neural** são essenciais para a formação da face e boca e quase todas as suas estruturas
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- ◆ Desenvolvimento de estruturas da face e da cavidade oral ocorre por meio de **mudanças morfológicas e funcionais** sincronizadas

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- *Ten Cate's Oral Histology - E-Book: Development, Structure, and Function (English Edition) 8th*
- Katchburian, e.; Arana, v. *Histologia e embriologia oral.*

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*Obrigada pela
atenção!*