

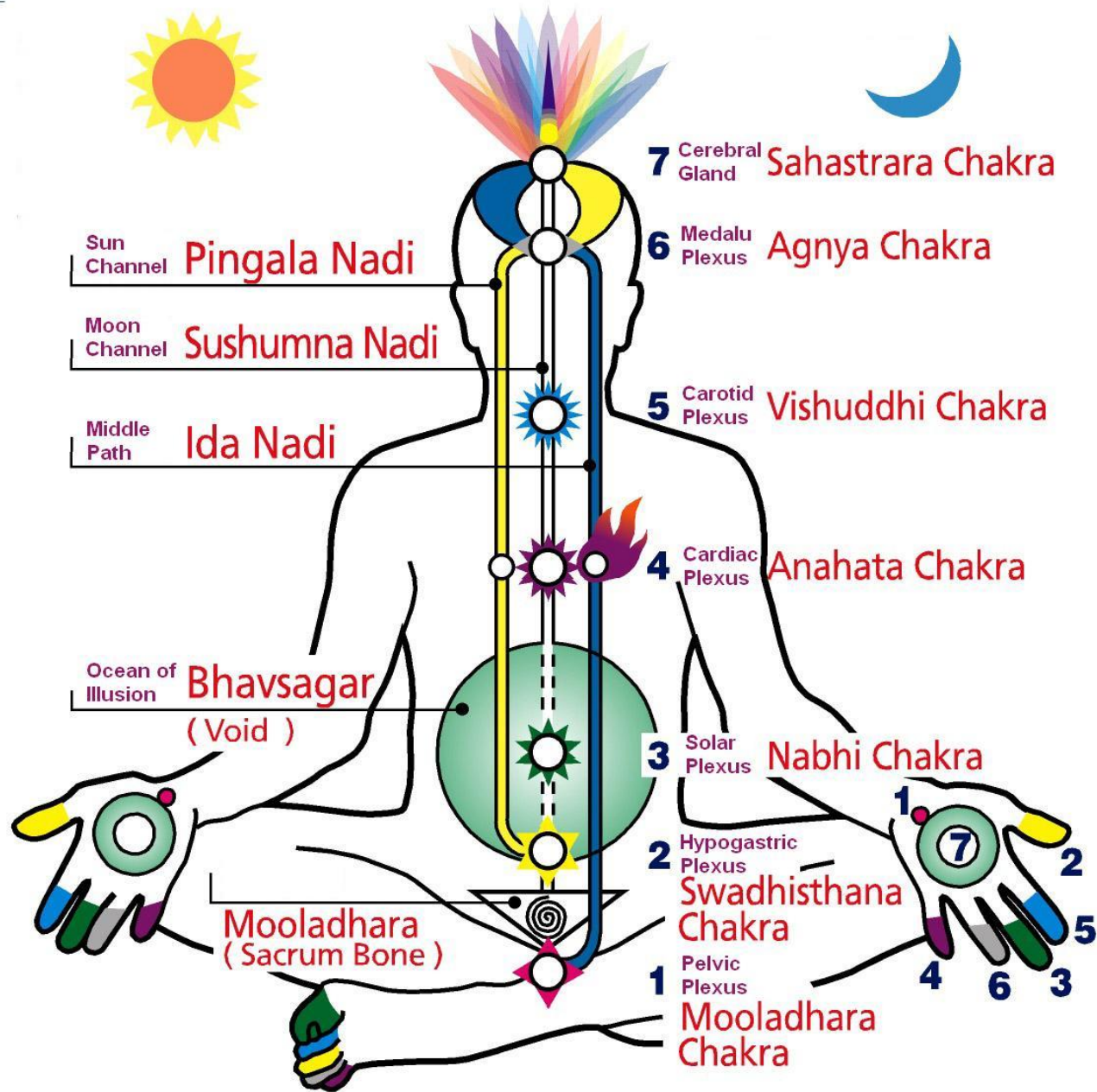


Universidade Federal do Espírito Santo  
Programa de Pós Graduação em Ciências Fisiológicas  
Laboratório de Oncologia Clínica e Experimental

# **Anatomia do Sistema Respiratório**

Vitória  
2018

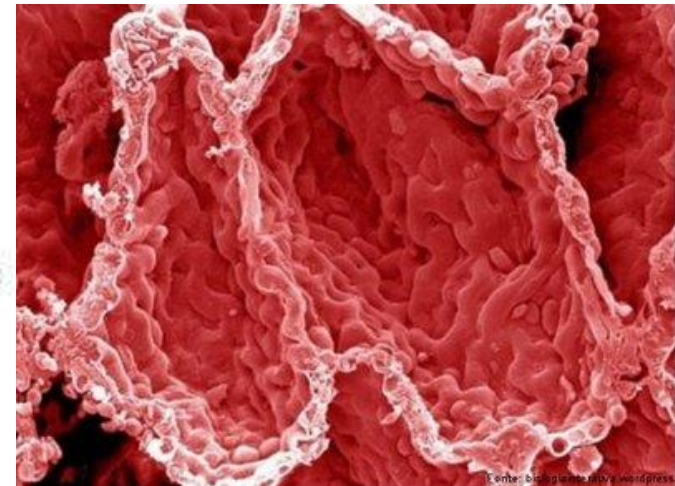
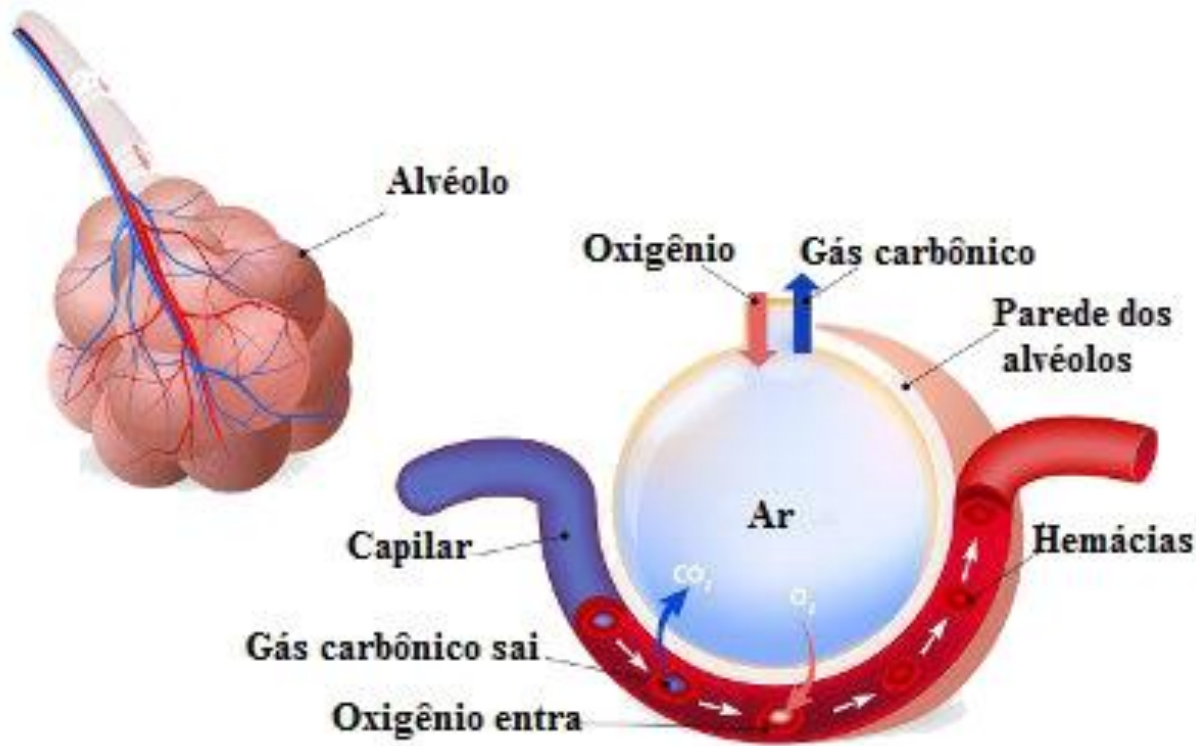
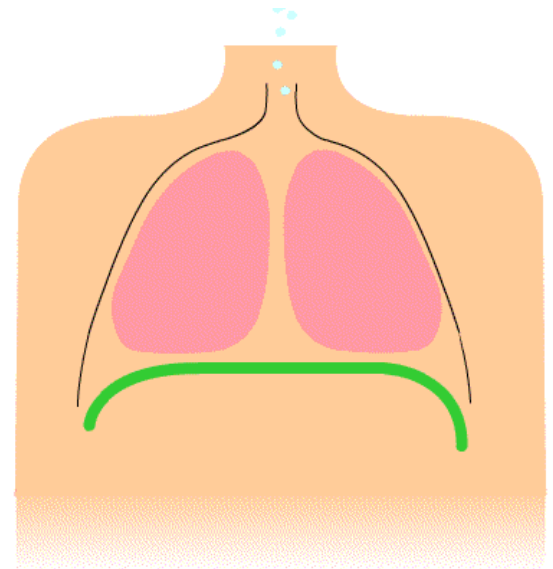
# Yoga Pranayama Awakens Kundalini Powers



**Energy Centres & The Subtle System**

# Função

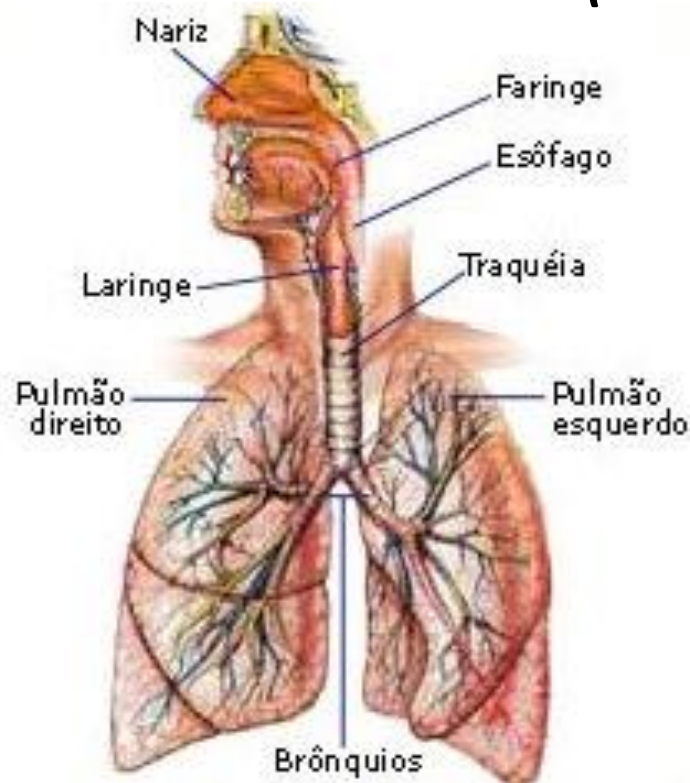
✓ *Hematose*



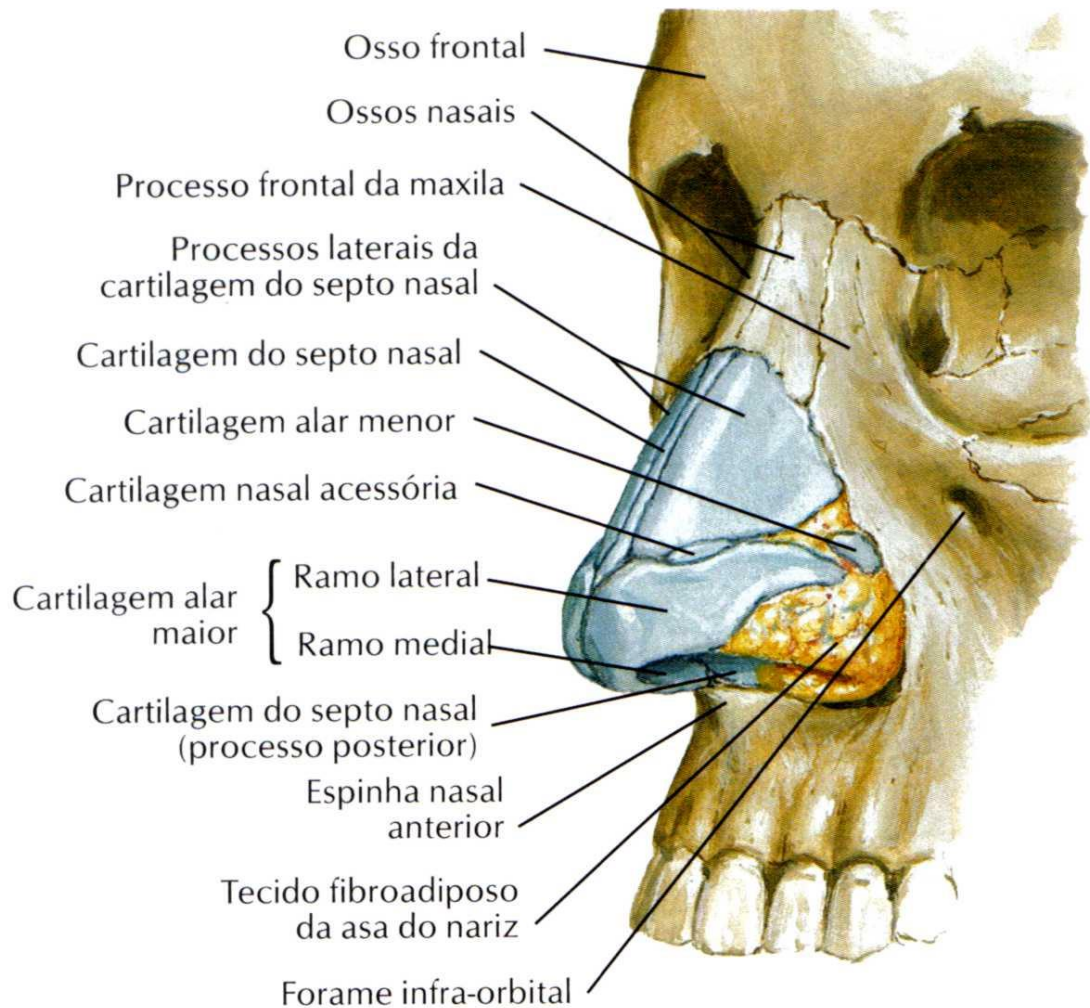
# Classificação Anatômica

*Vias Aéreas  
Superiores  
(condutoras)*

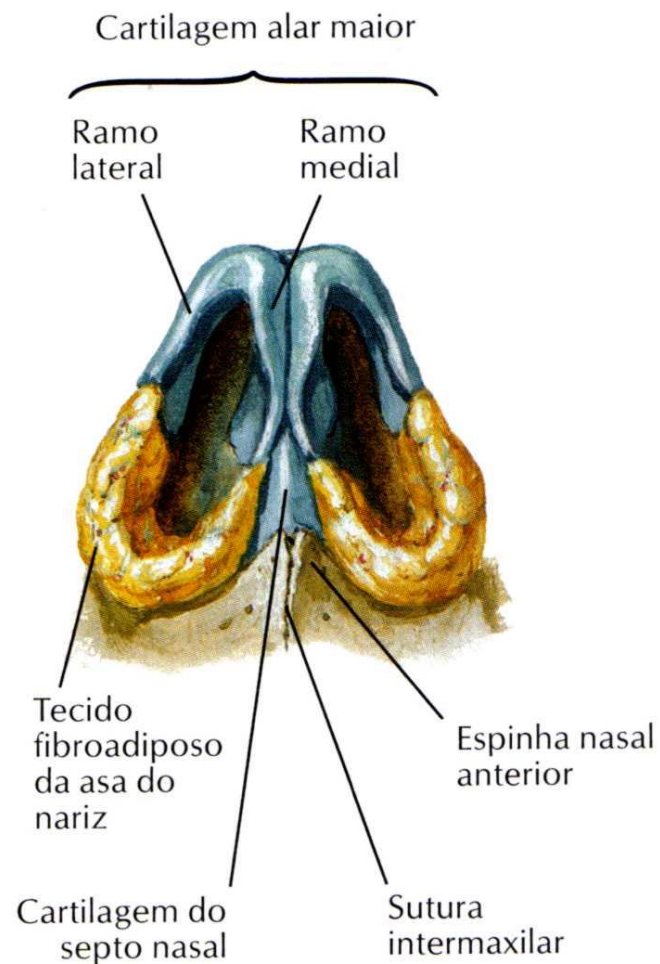
*Vias Aéreas  
Inferiores  
(Respiratória)*



## Vista ântero-lateral



## Vista inferior



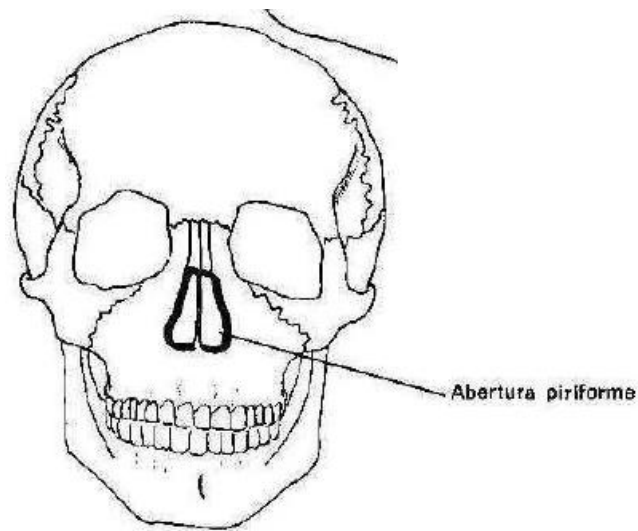


Fig. 9.2 — Abertura piriforme, em vistas lateral e anterior do crânio

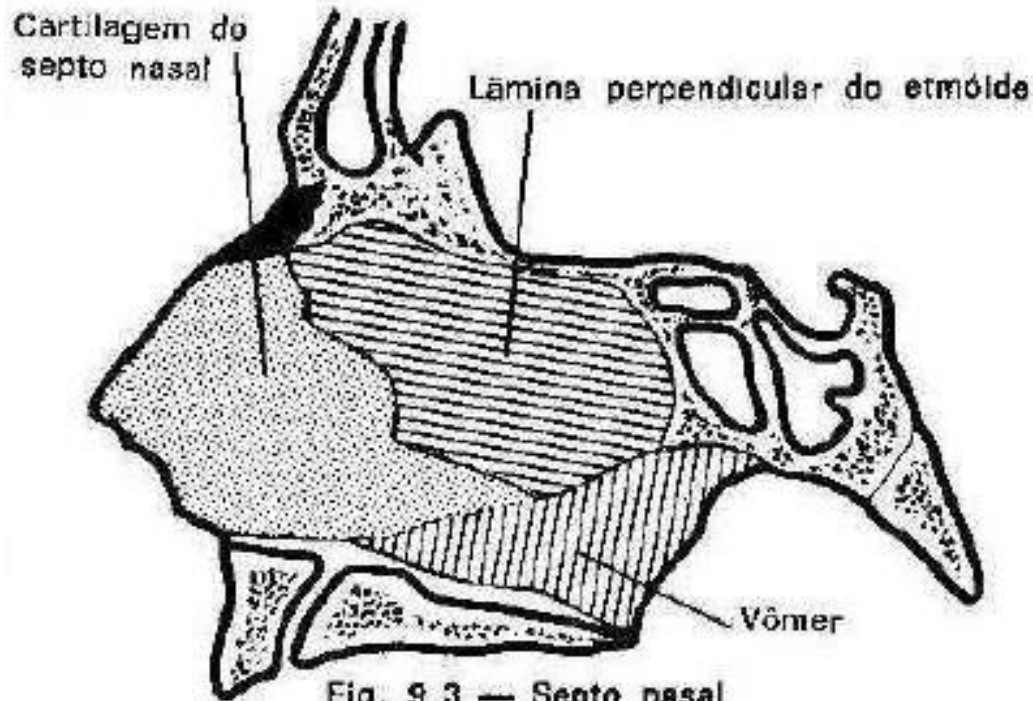


Fig. 9.3 — Septo nasal

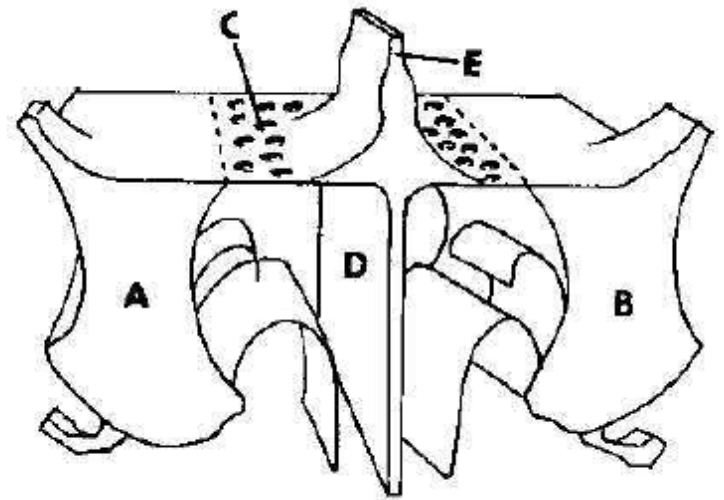
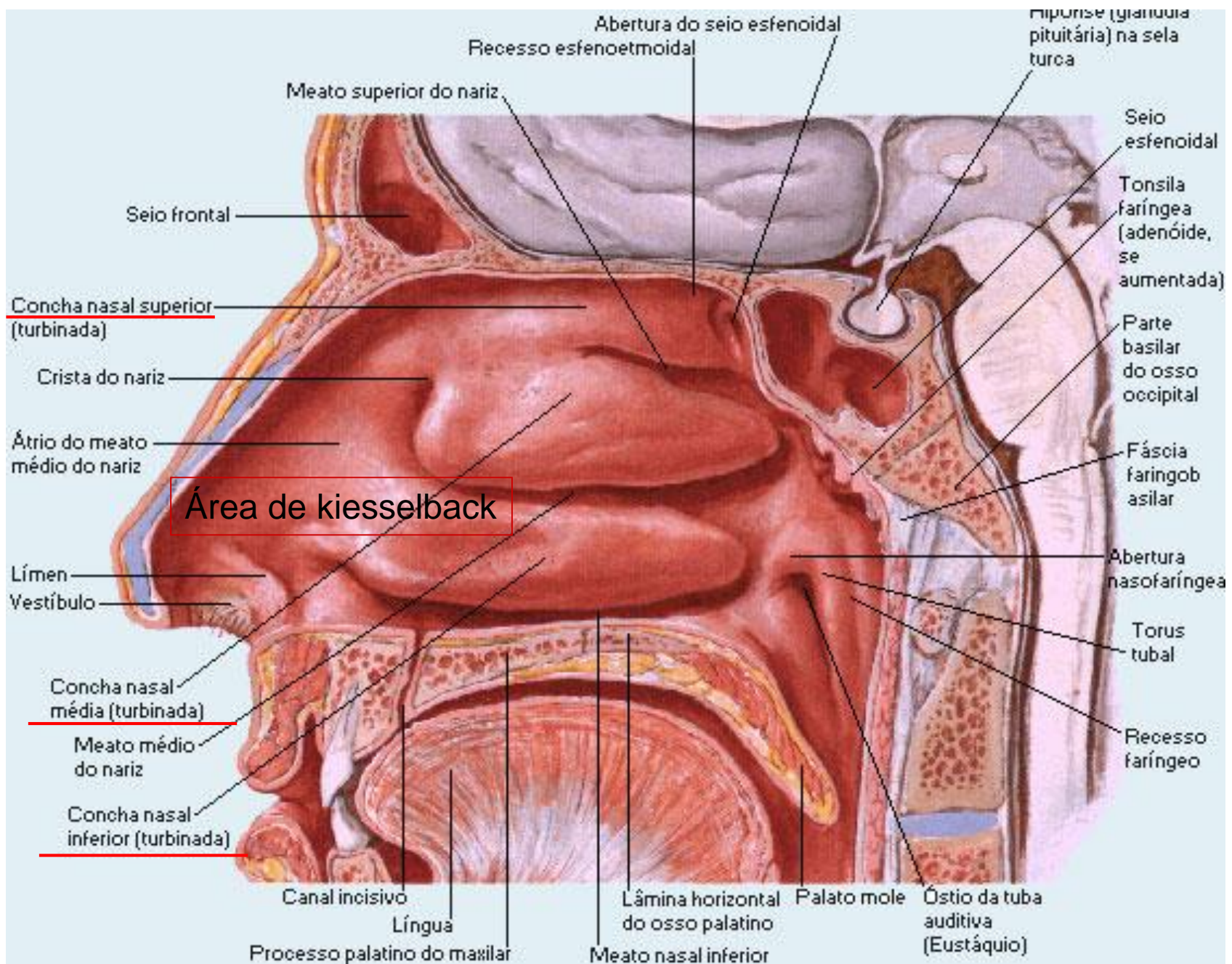
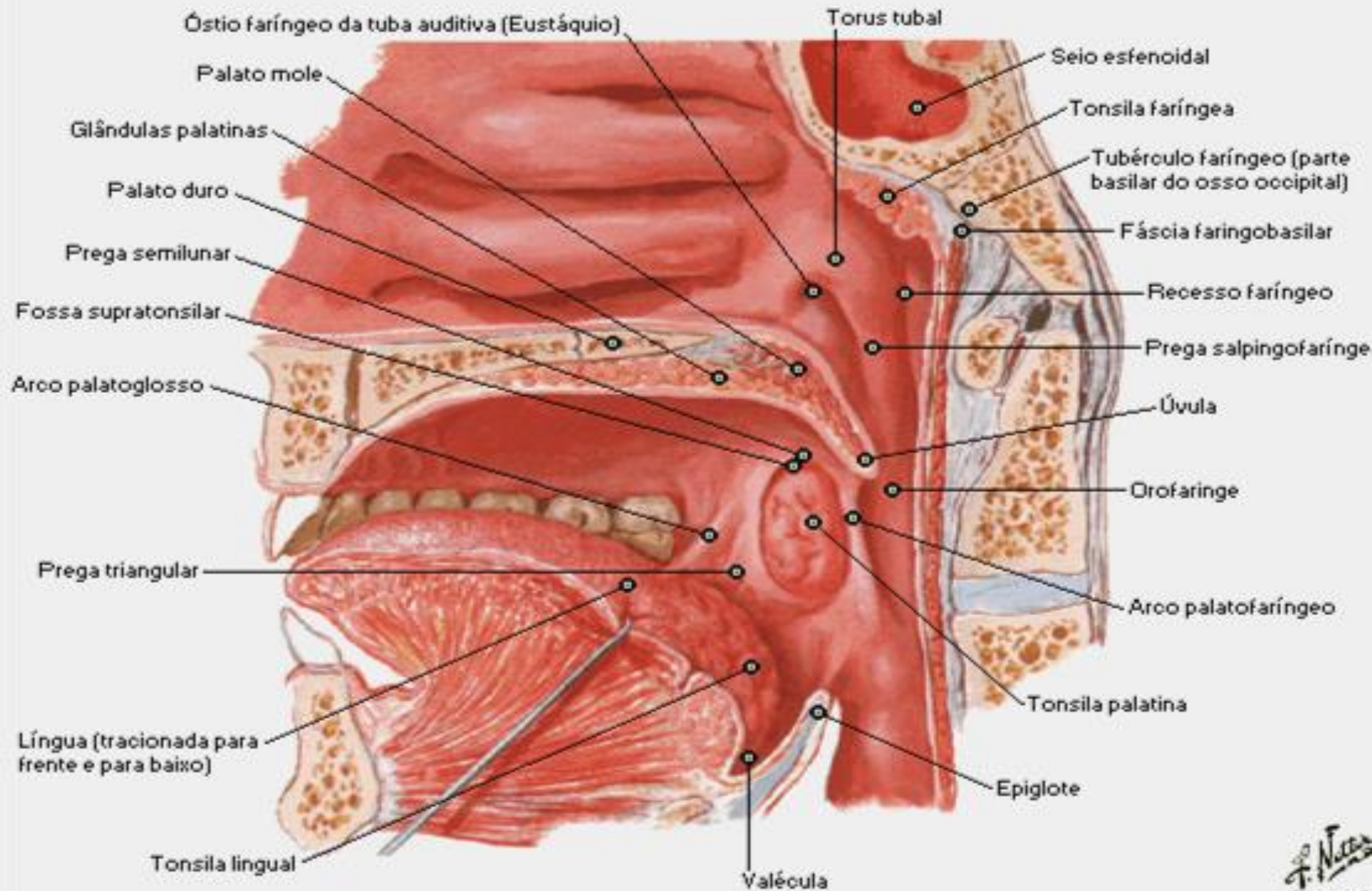


Fig. 9.4 — Osso etmóide, visto anteriormente (esquemático)

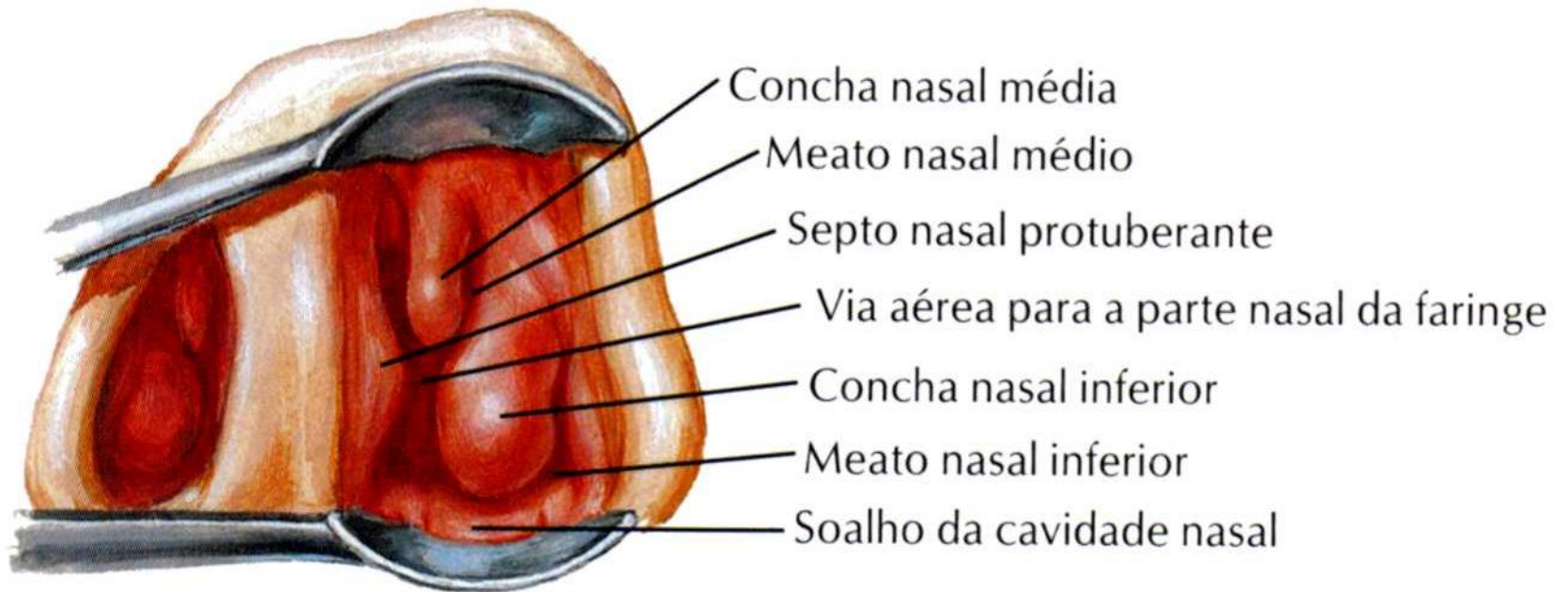


# Fauces

## Vista Sagital Medial



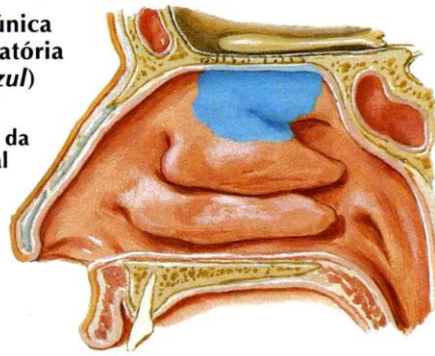




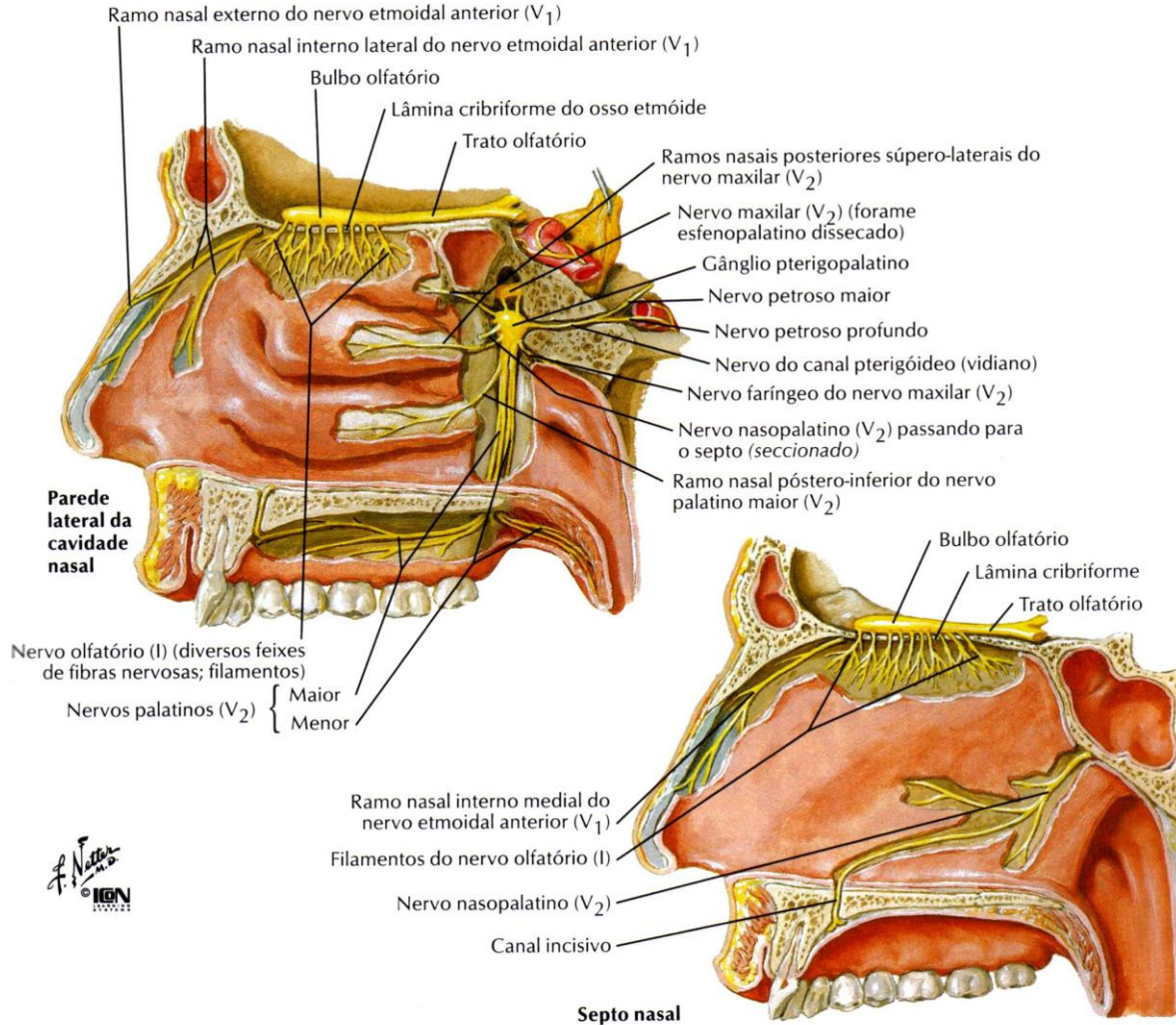
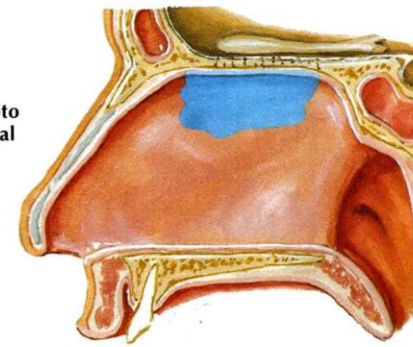
**Vista especular**

**Distribuição da túnica mucosa, parte olfatória (sombreado de azul)**

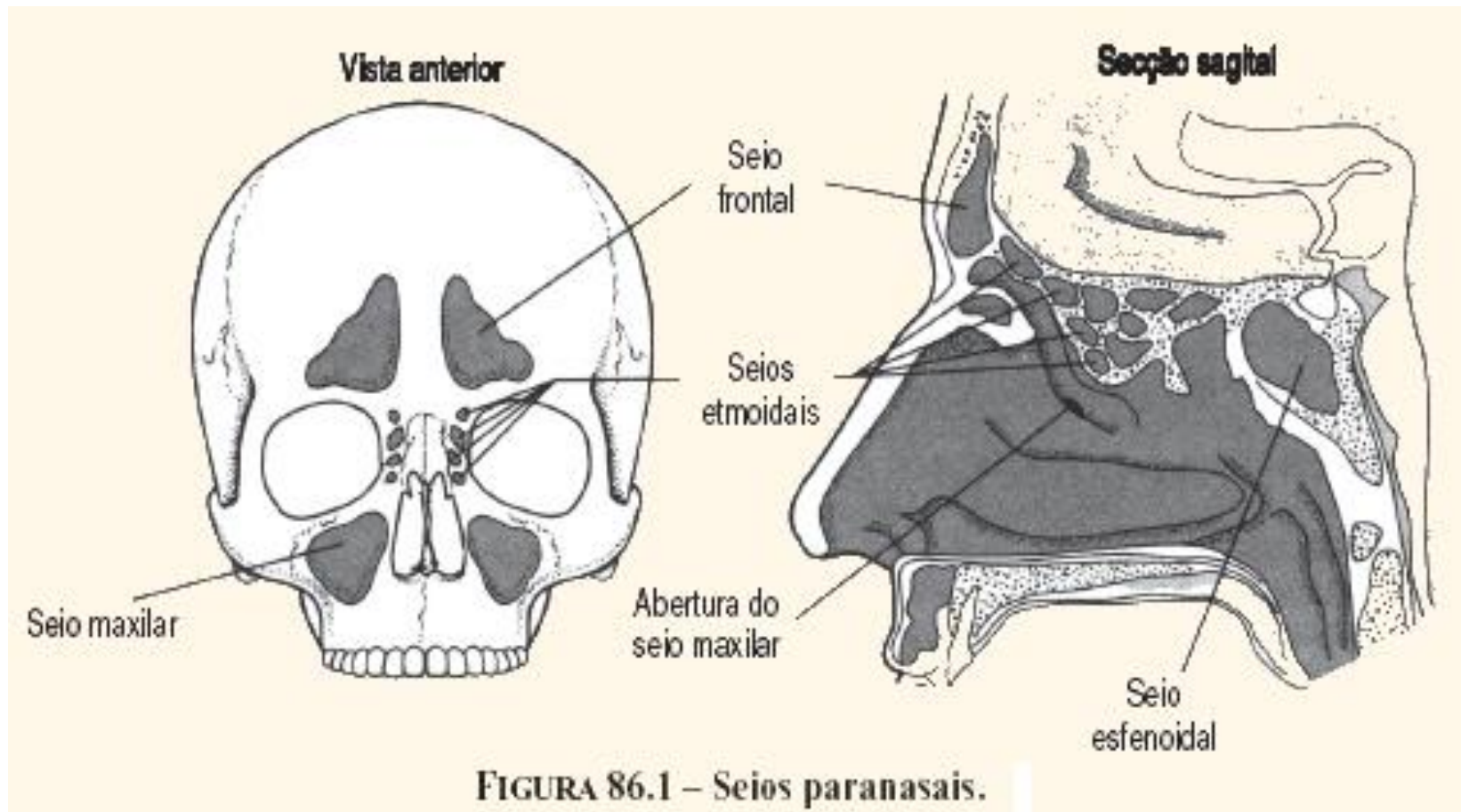
**Parede lateral da cavidade nasal**



**Septo nasal**

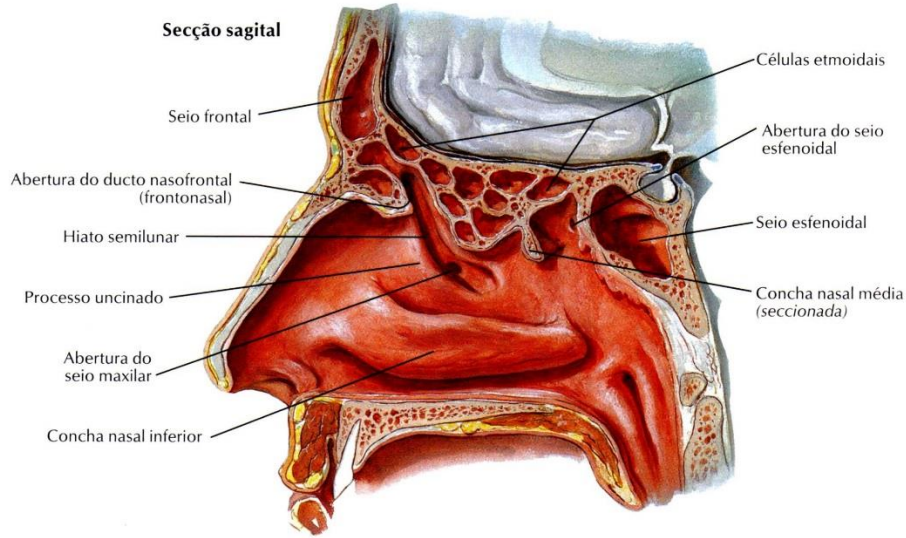


# SEIOS PARANASAIS

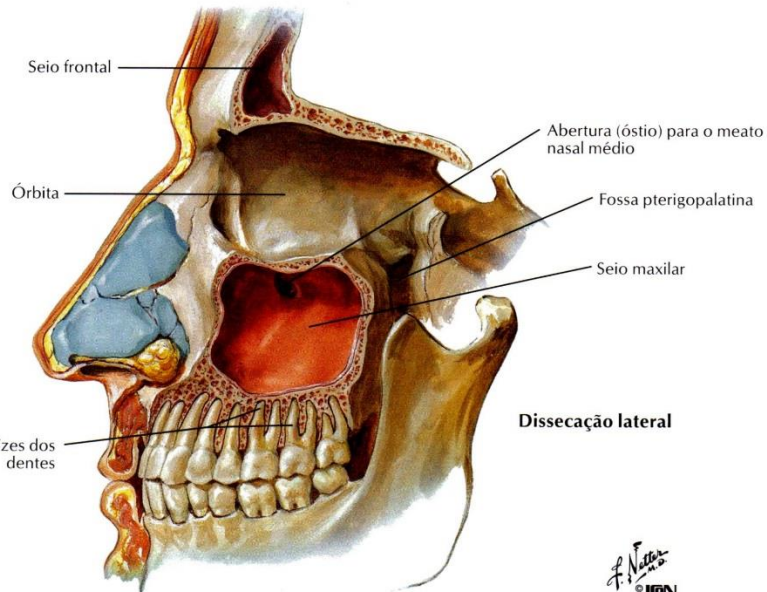
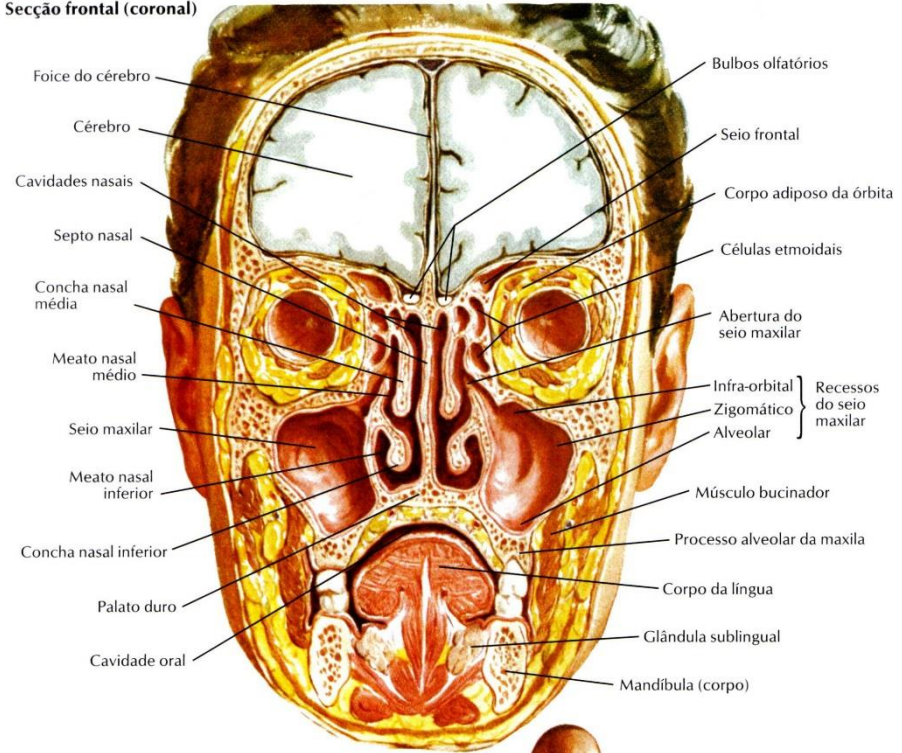


# SEIOS PARANASAIS

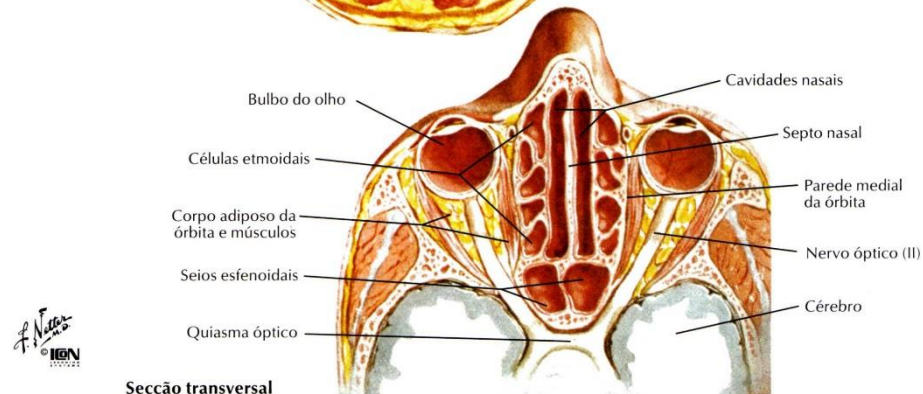
Secção sagital



Secção frontal (coronal)

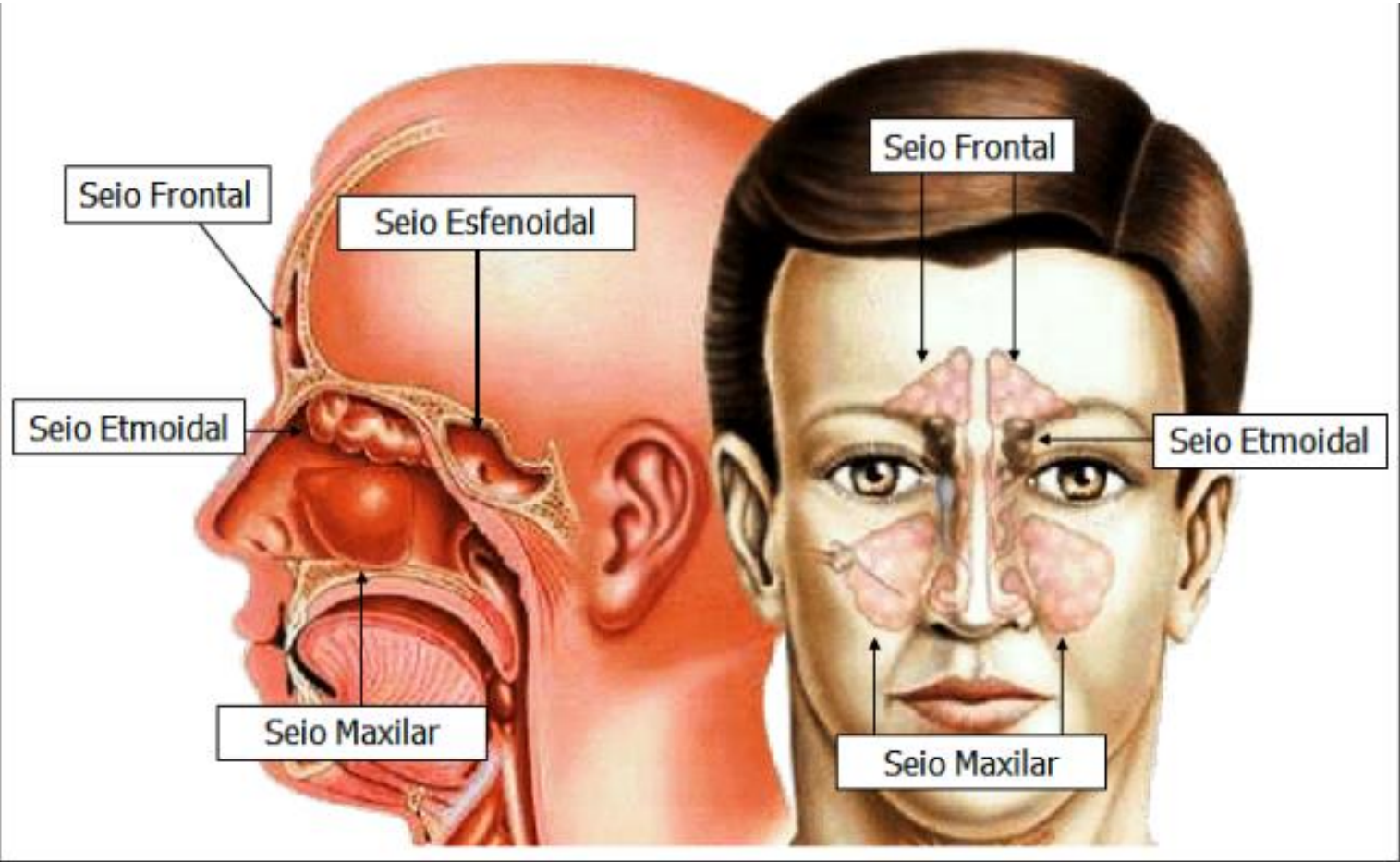


Dissecação lateral



Secção transversal (horizontal)

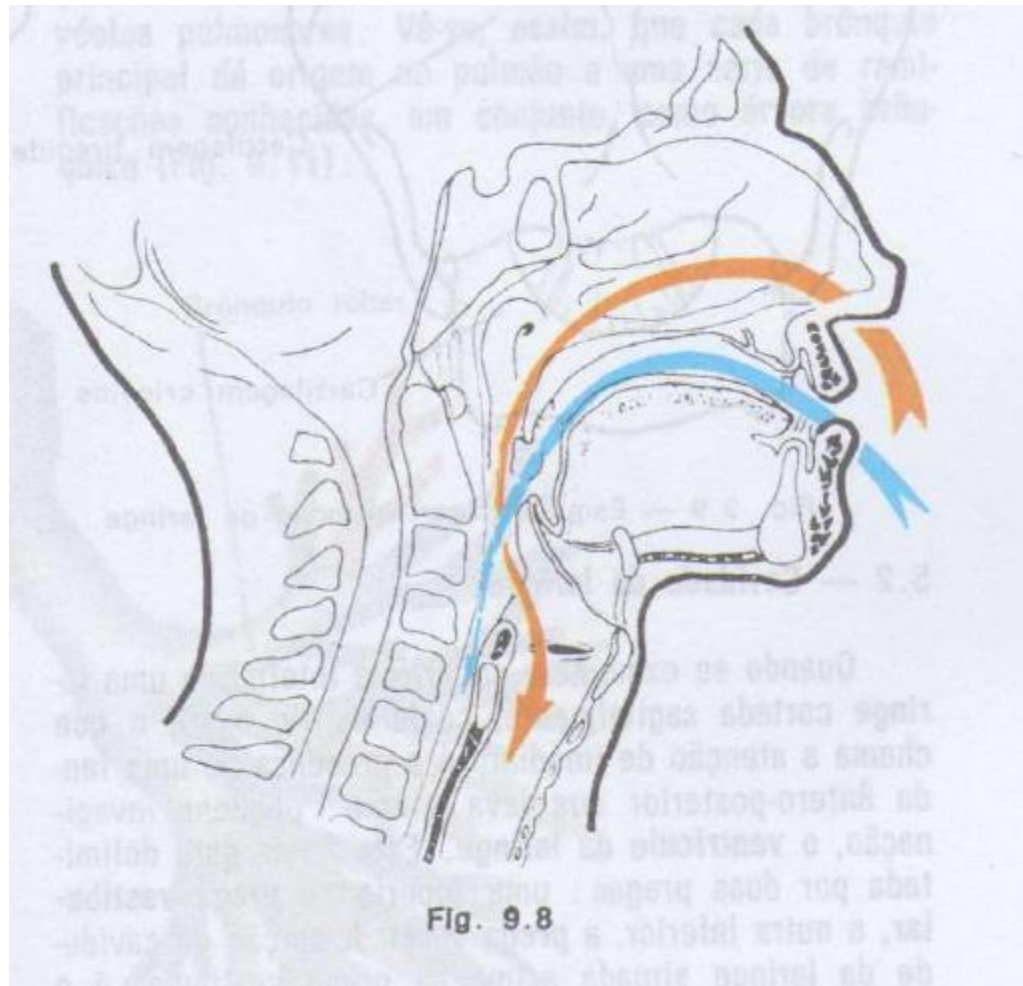
# SEIOS PARANASAIS



# Faringe

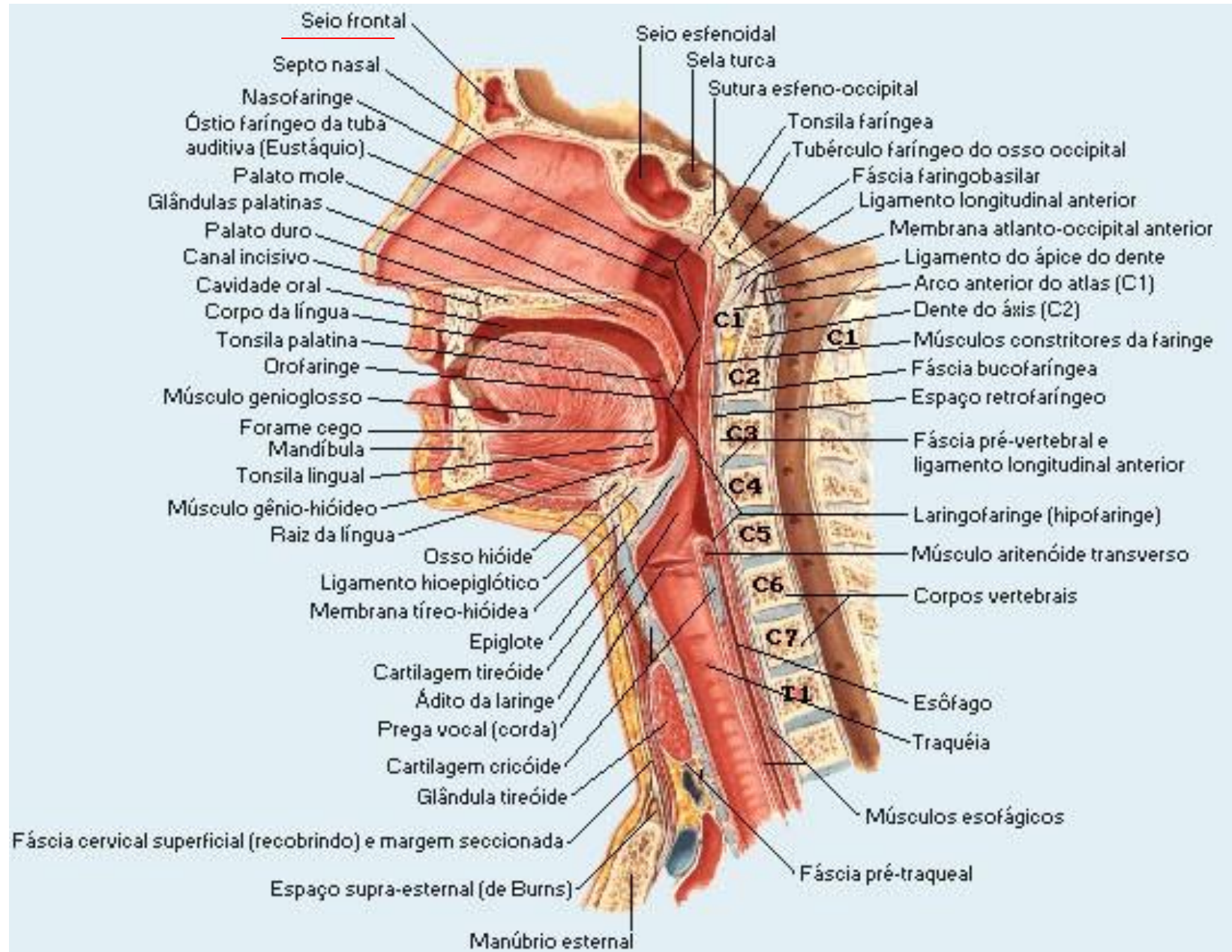
## Partes:

- Nasais
- Média
- Inferior



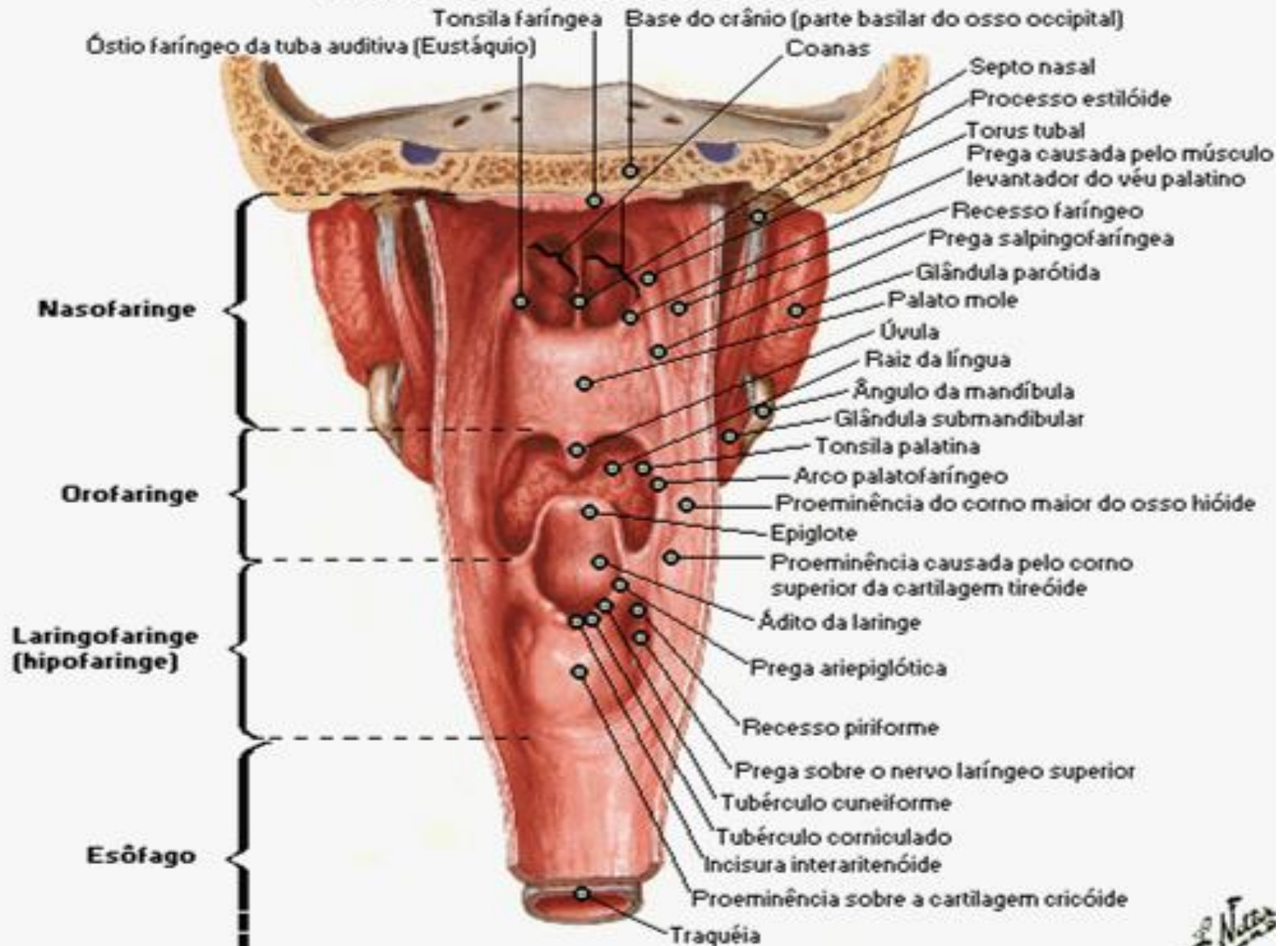
*Obs: Óstio Faringico da Tuba Auditiva*

# Faringe



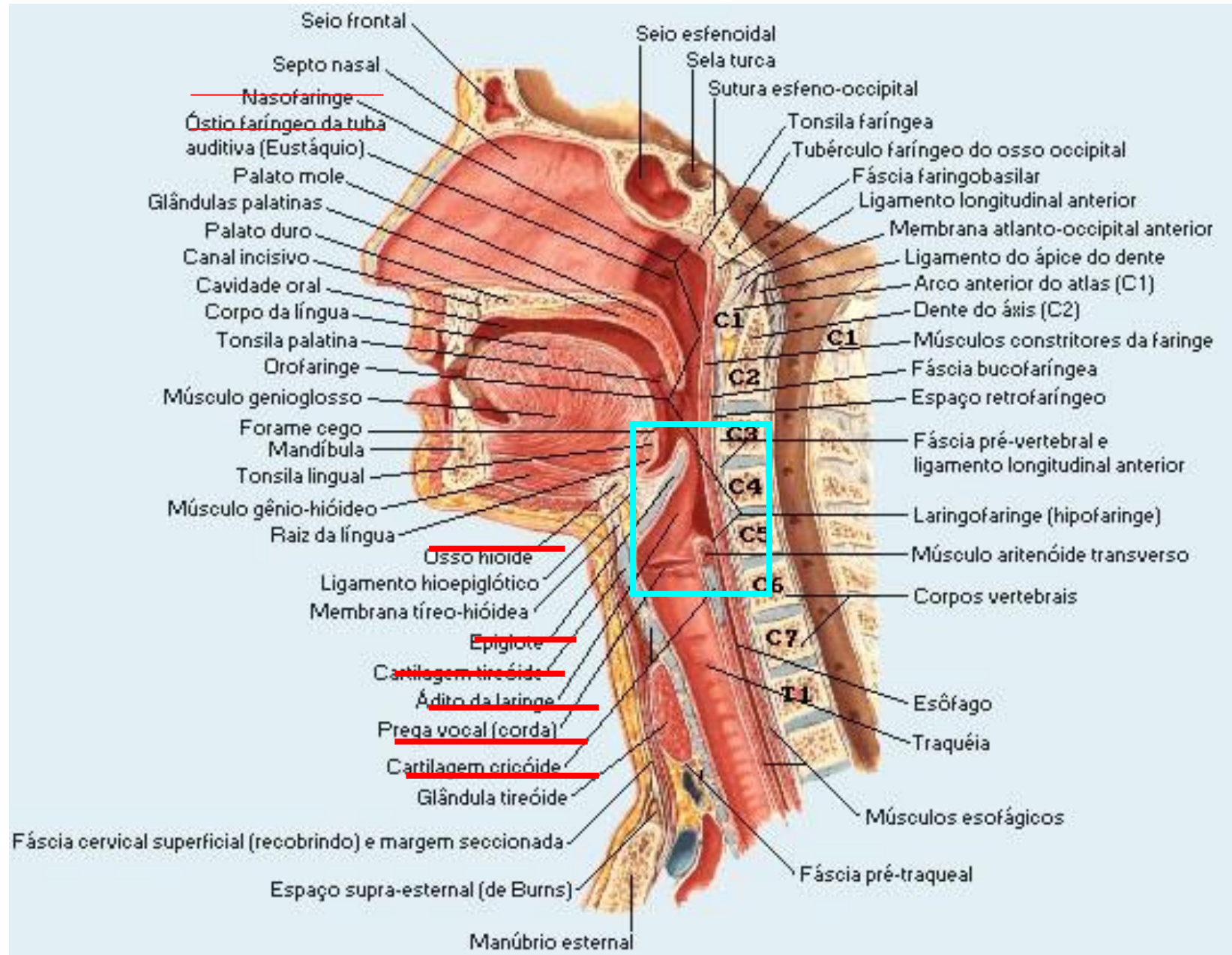
# Faringe

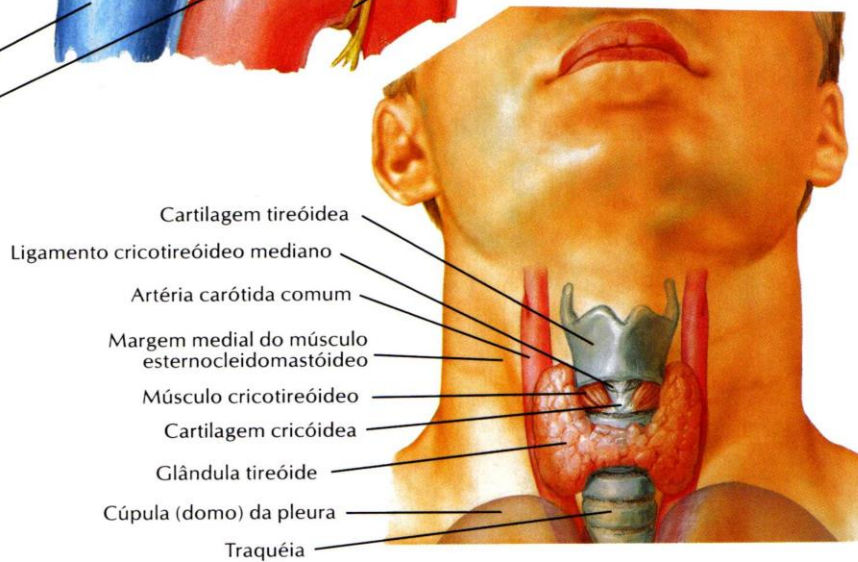
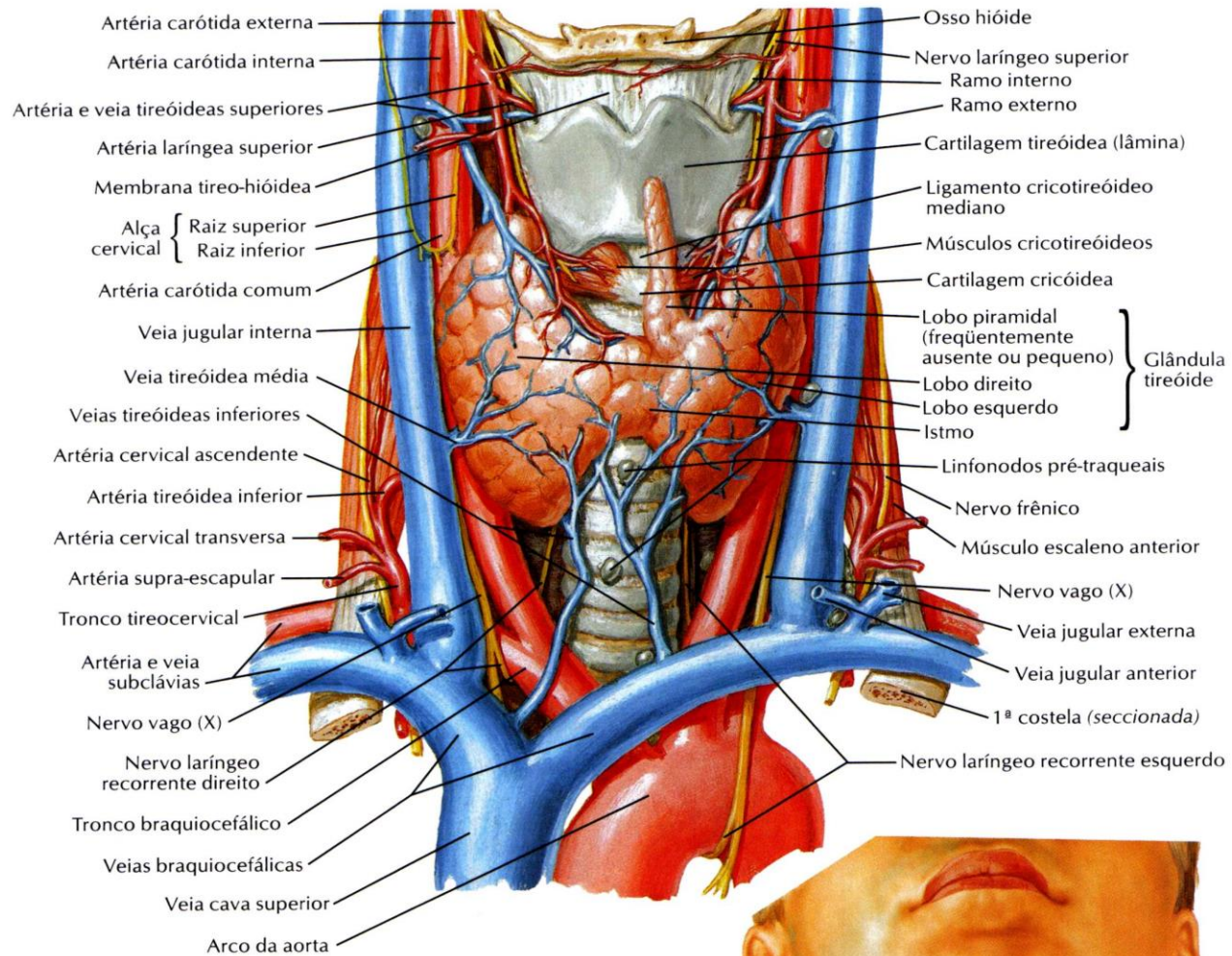
## Vista Posterior Seccionada



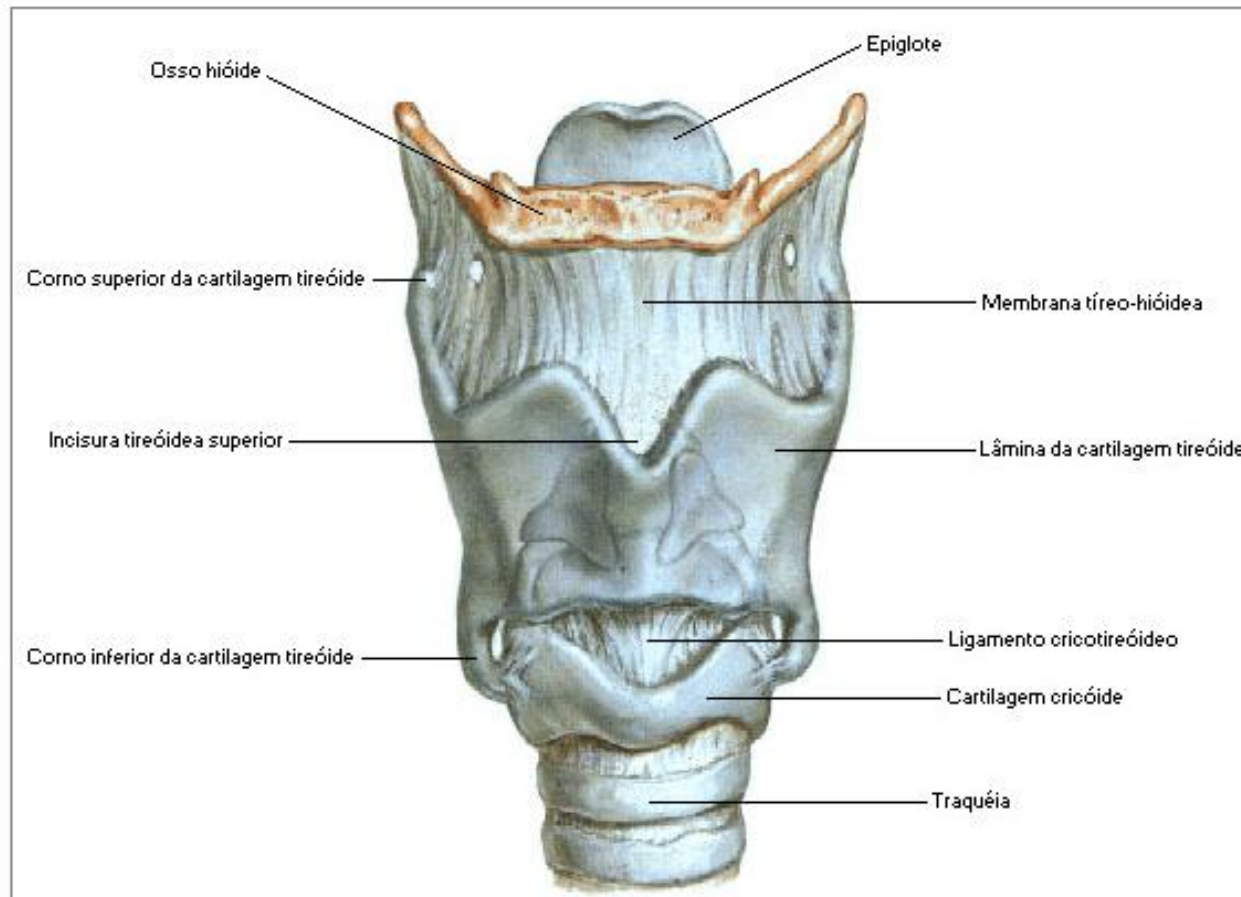


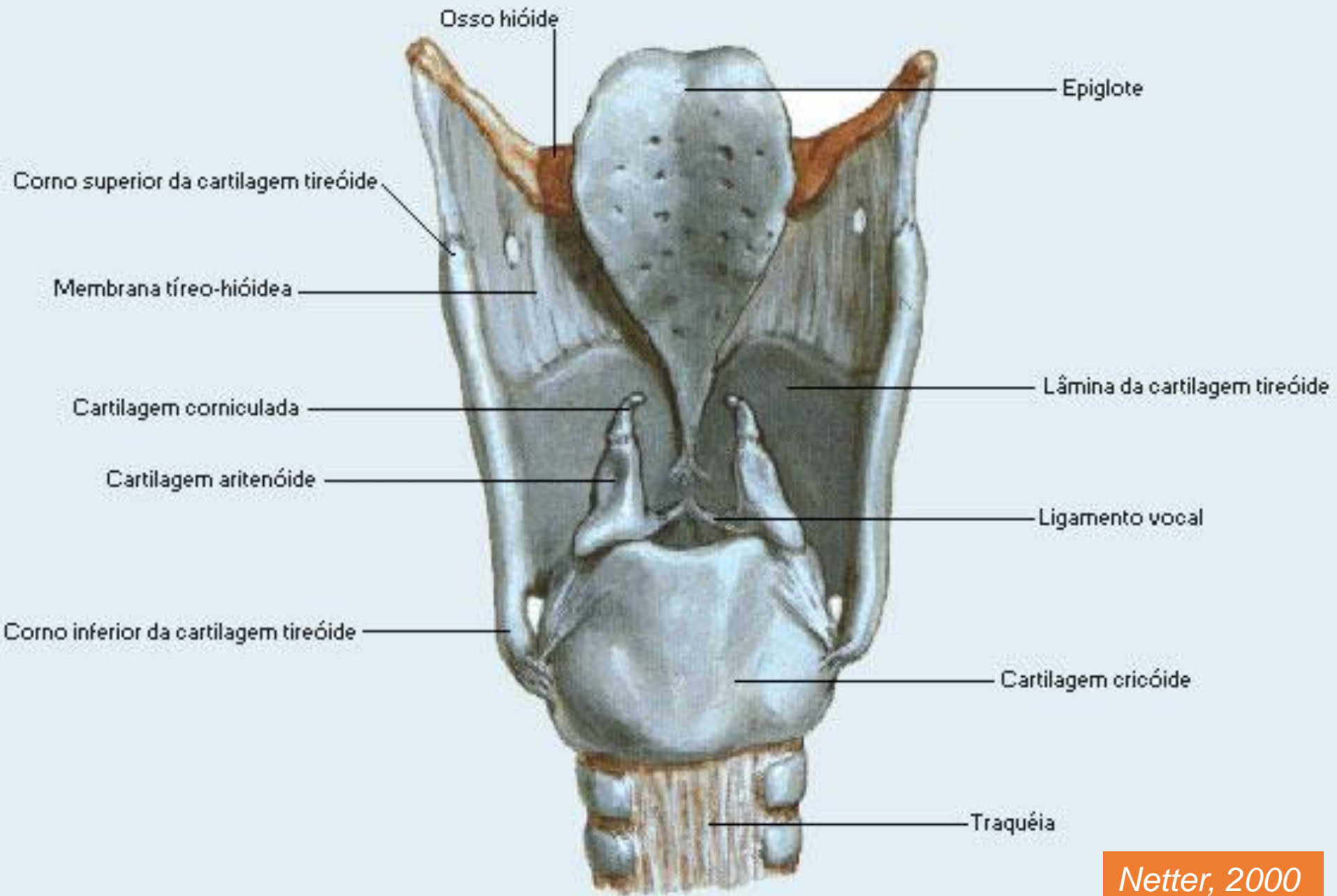
# Laringe

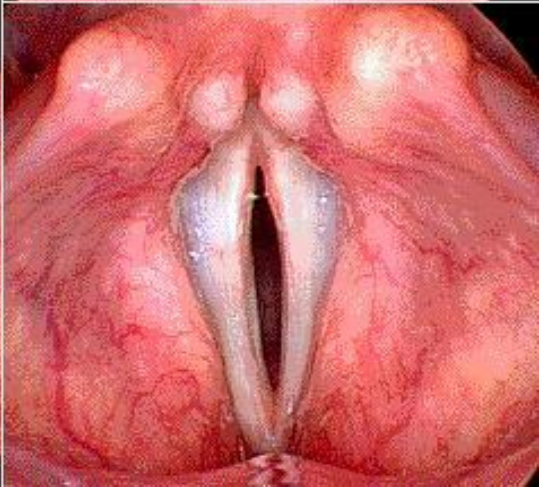
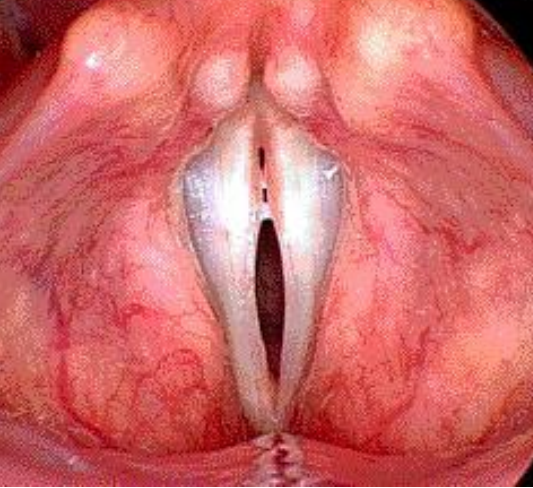
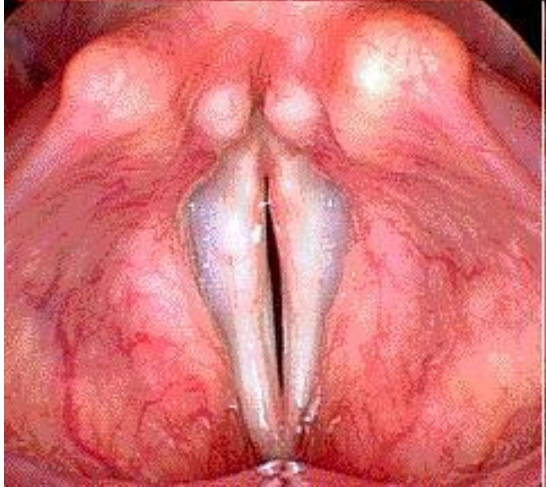
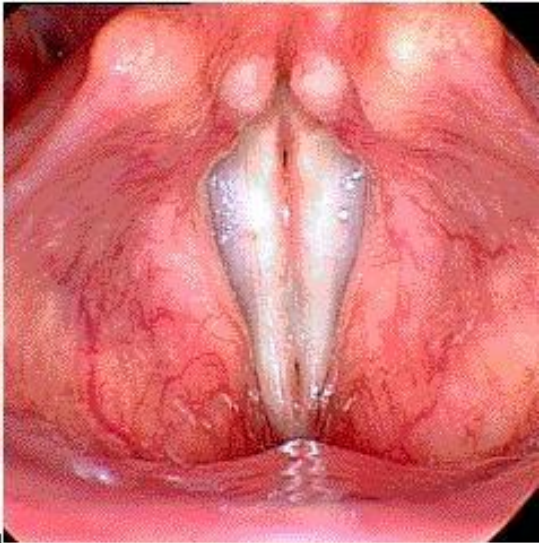
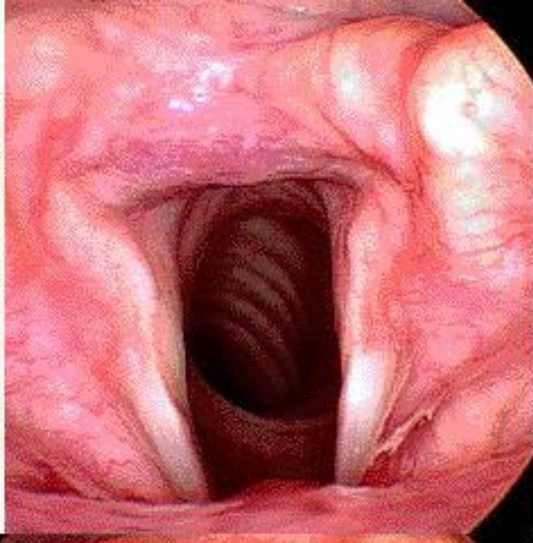
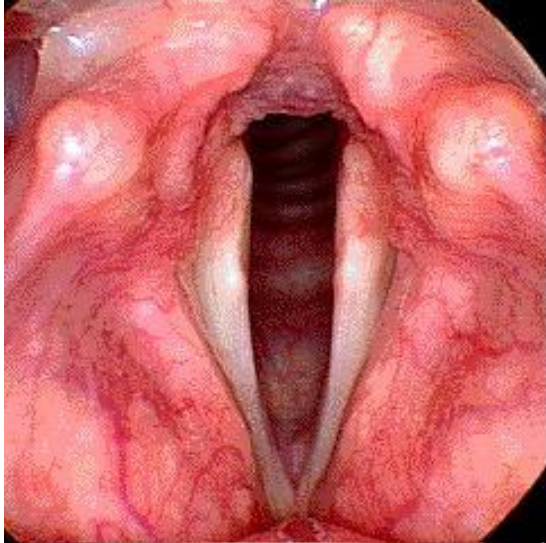


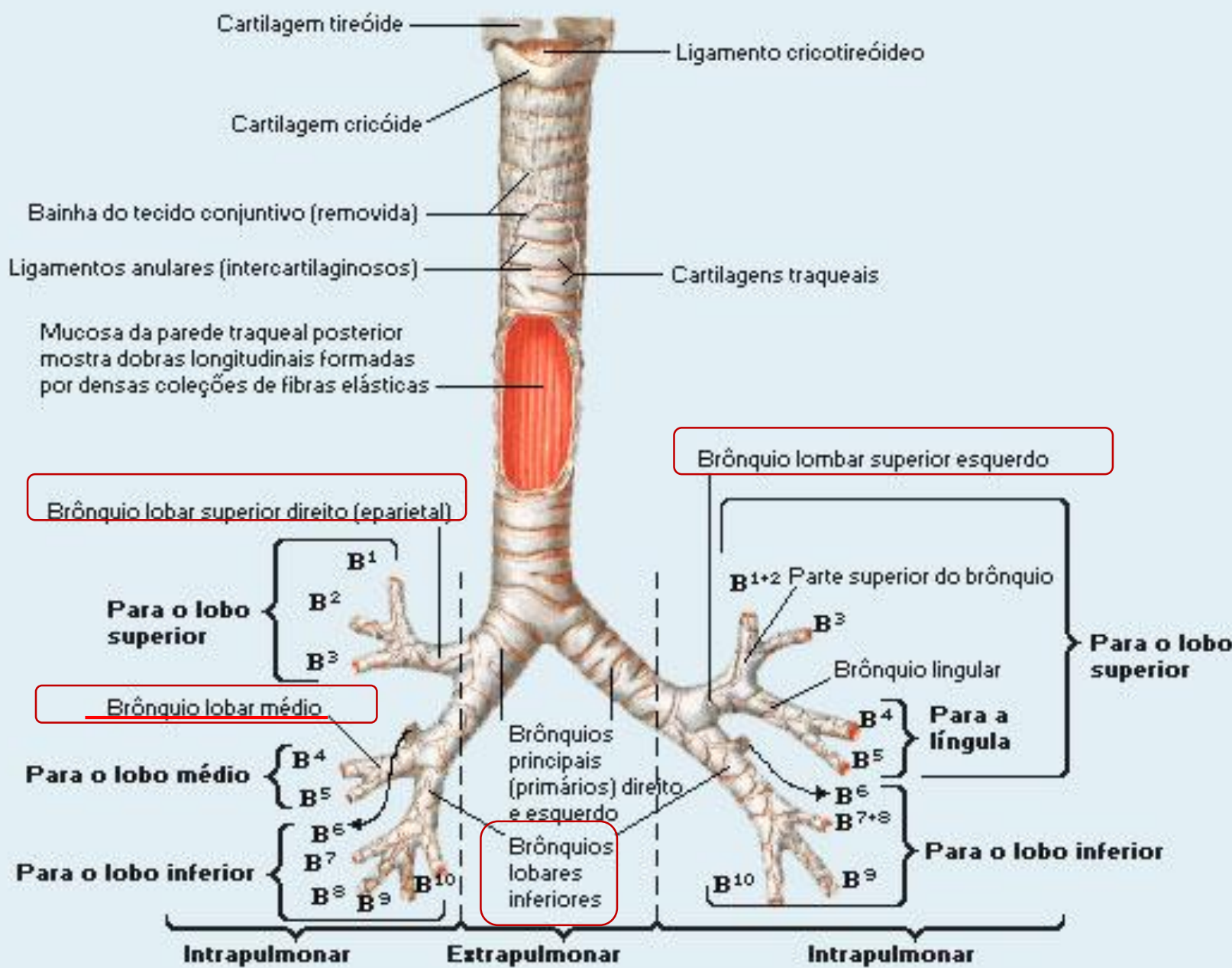


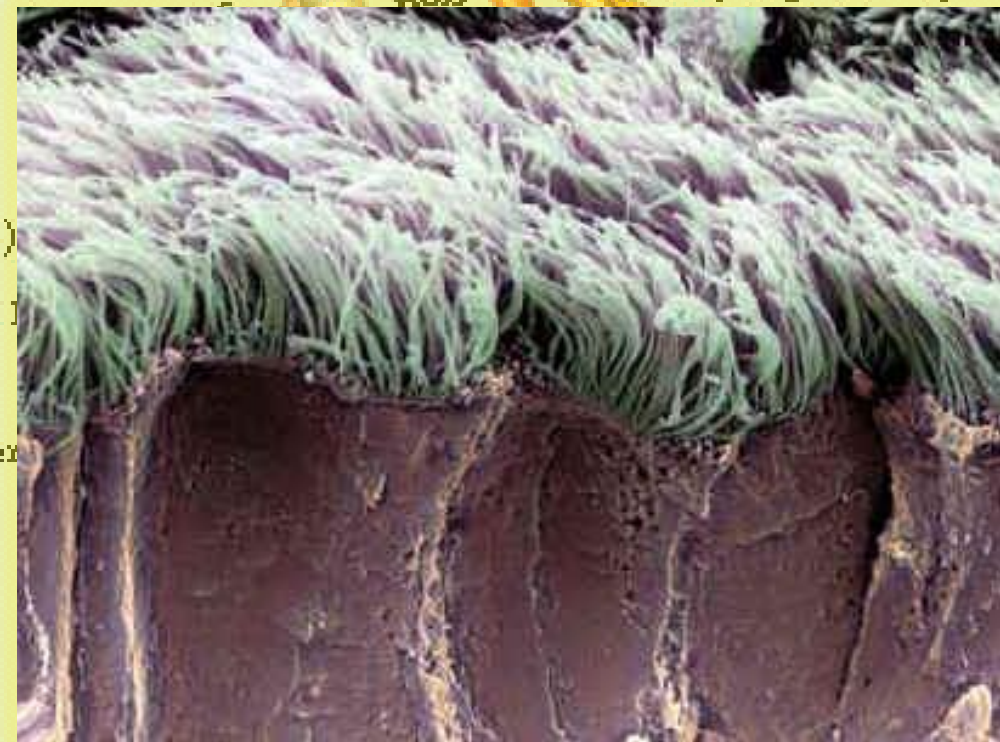
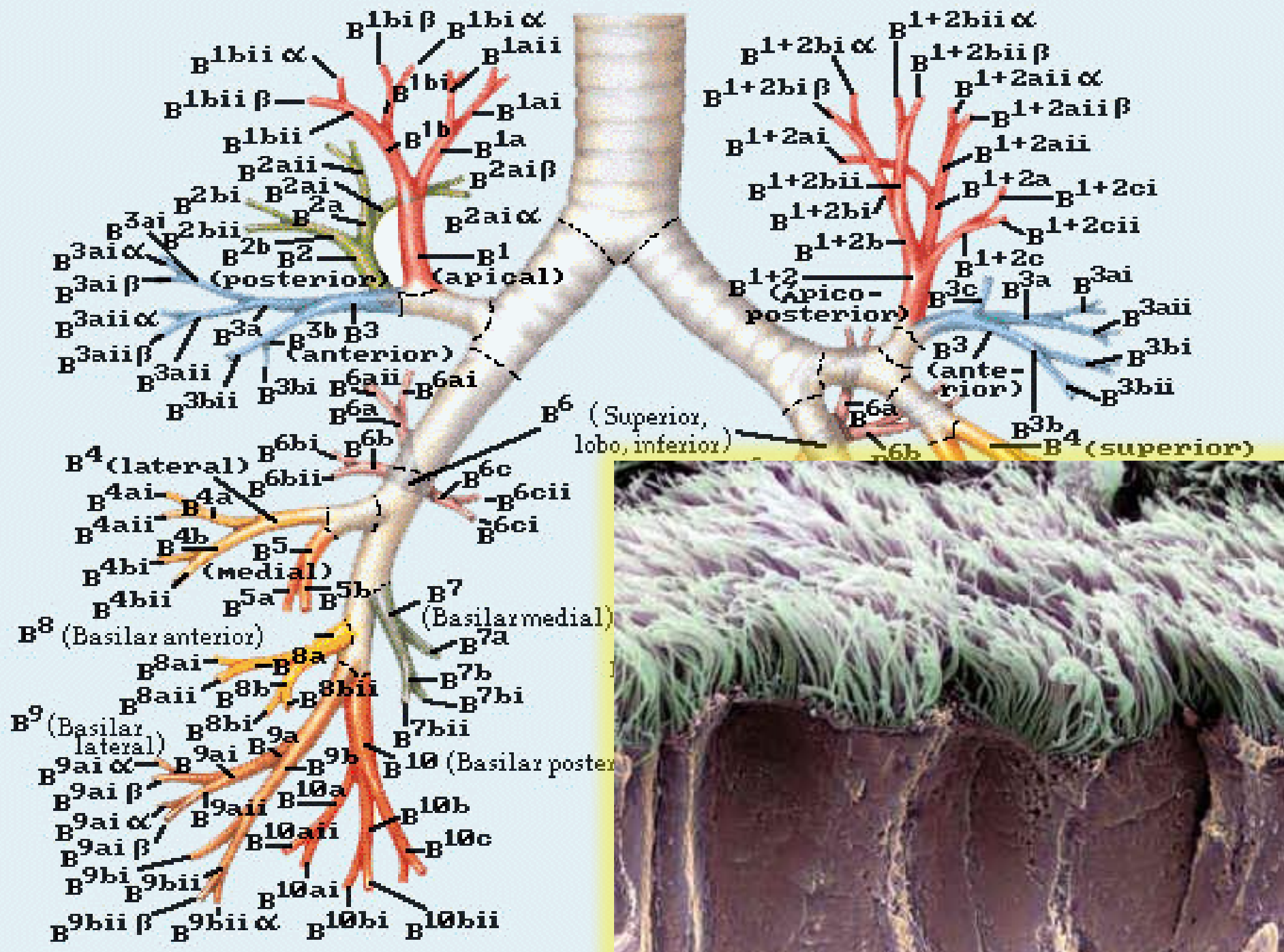
# Laringe





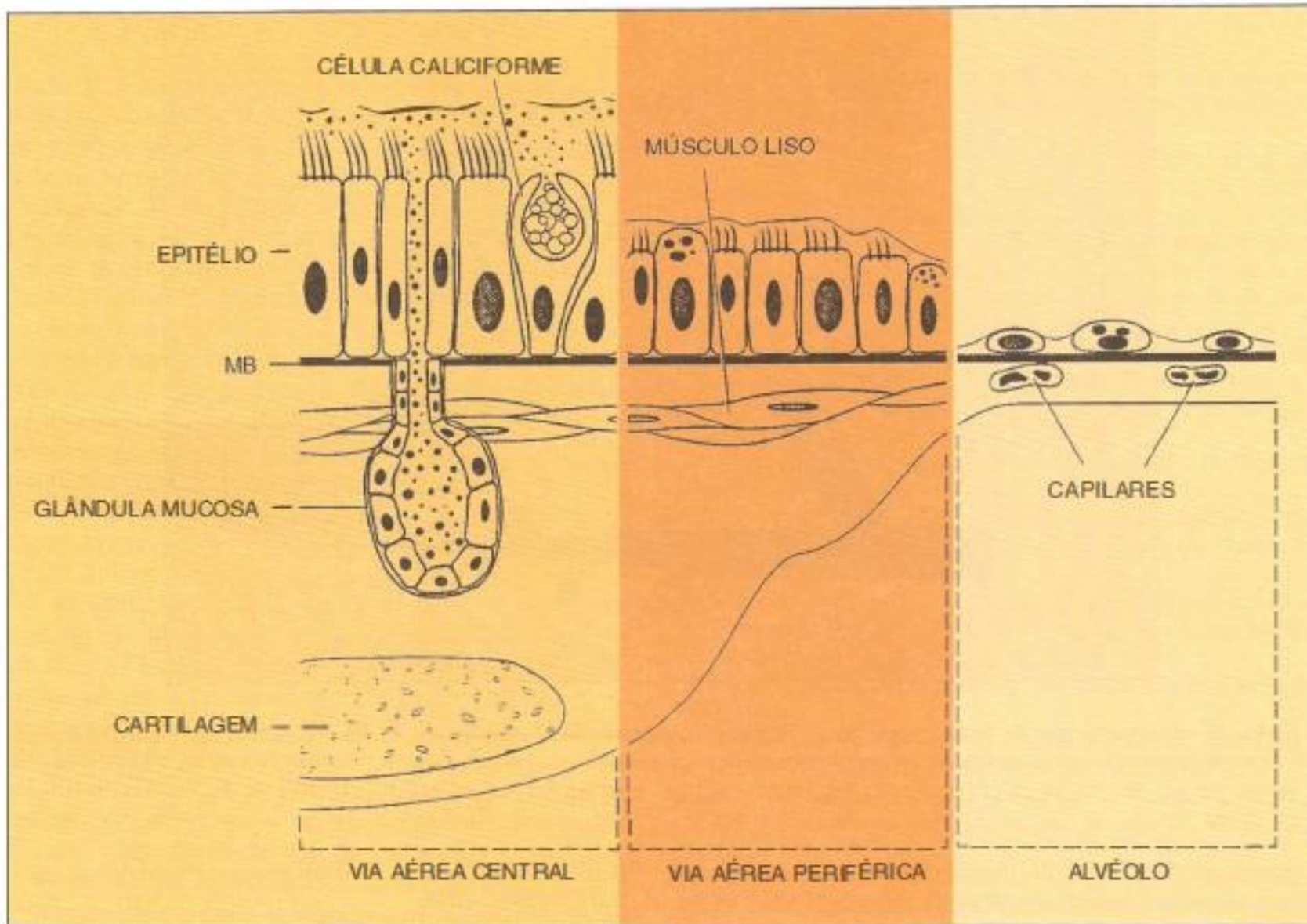


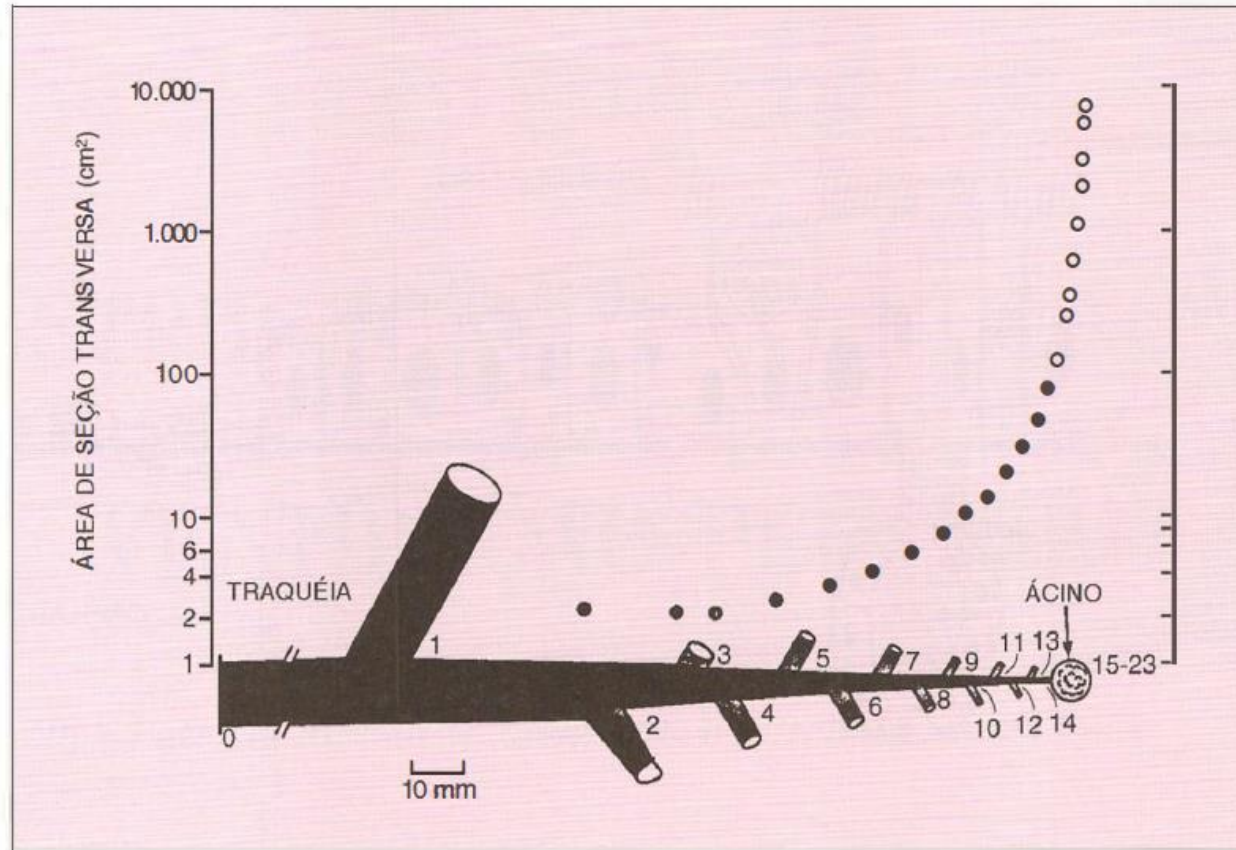




REGIÕES DAS VIAS AÉREAS	SEGMENTAÇÃO	ORDEM DE GERAÇÃO	ZONA
TRAQUÉIA		0	TRANSPORTES
BRÔNQUIO FONTE		1	
BRÔNQUIO LOBAR		2	
BRÔNQUIO SEGMENTAR		3	
BRÔNQUIO SUBSEGMENTAR		4	
BRONQUÍOLO		10	TRANSIÇÃO
BRONQUÍOLO TERMINAL		16	
BRONQUÍOLOS RESPIRATÓRIOS		17	
		18	
	19		
DUCTOS ALVEOLARES		20	RESPIRATORIA
		21	
		22	
SACOS ALVEOLARES	23		

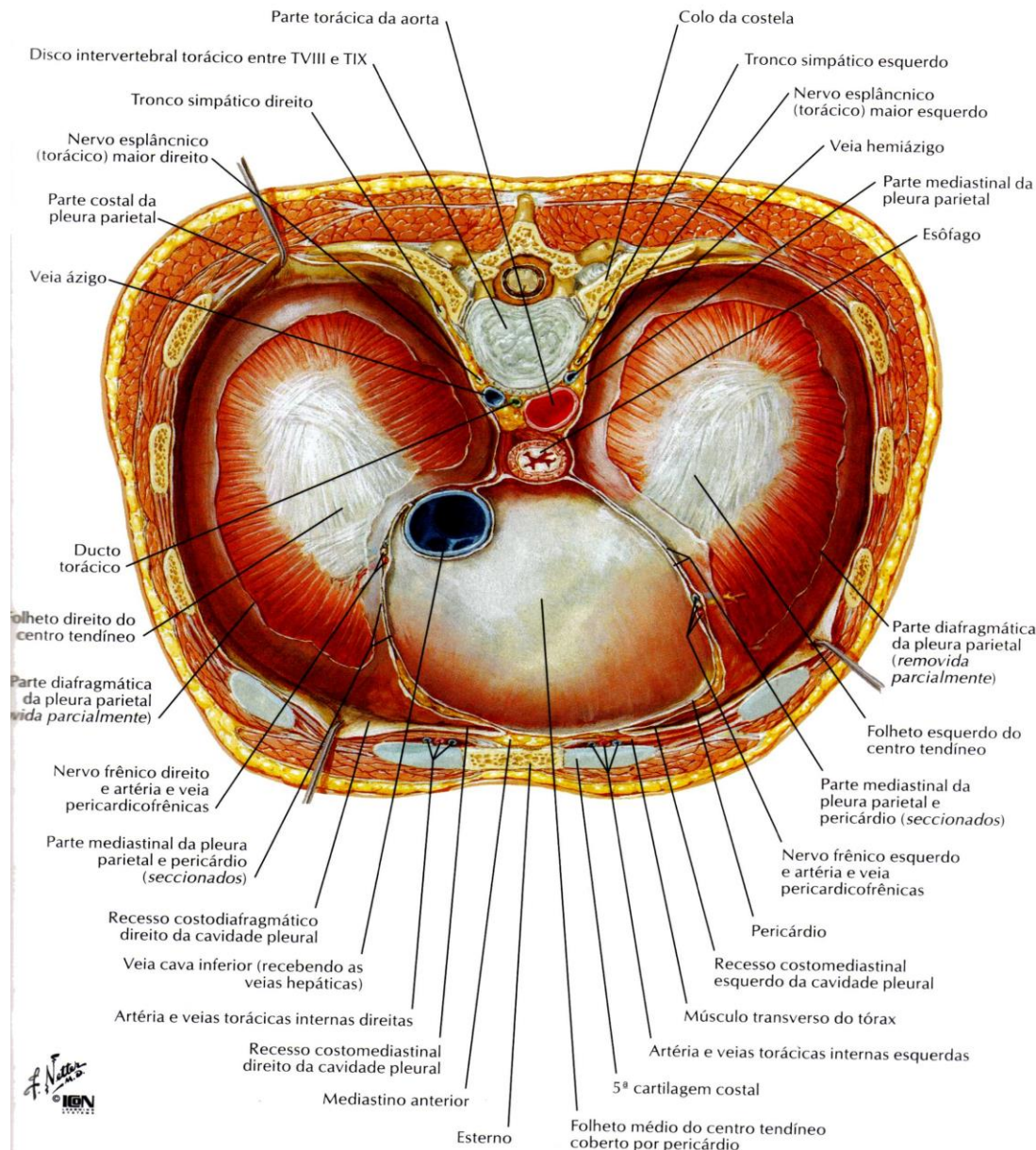




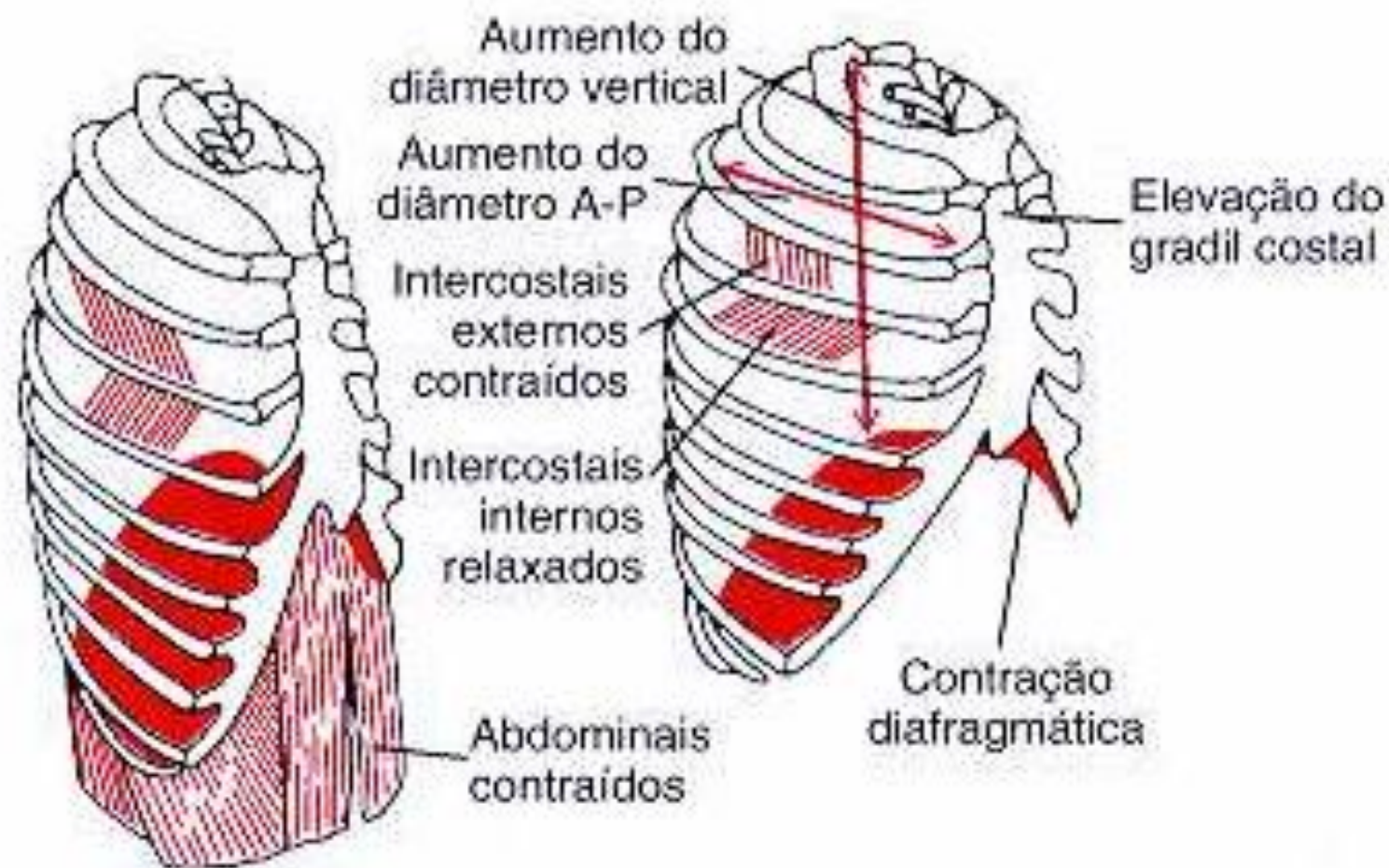


**Fig. 38.3** Área de seção transversa da árvore respiratória. Embora o calibre de cada via aérea seja menor do que o ramo que lhe deu origem, área total de seção transversa aumenta devido ao maior número de vias aéreas.

# Diafragma

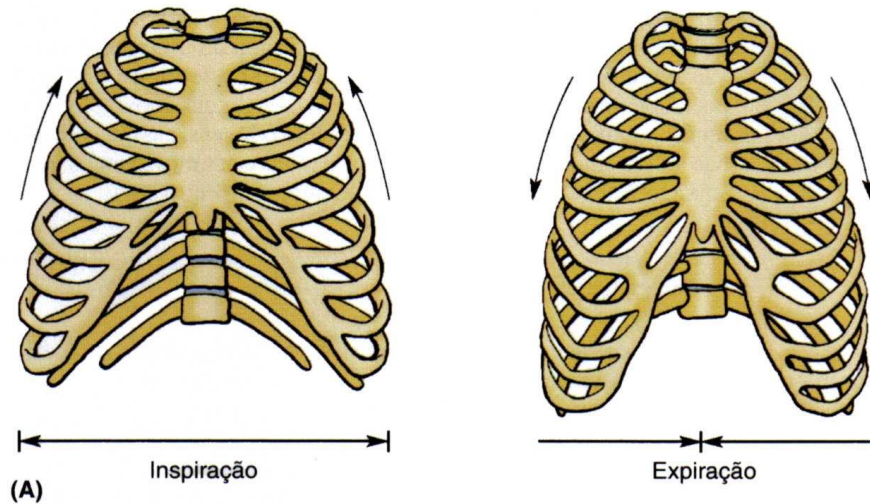


- Centro tendíneo;
- Porção muscular (presa às 6 últimas costelas, esterno e coluna vertebral);
- Hiato aórtico;
- Forame da veia cava;
- Hiato esofágico.

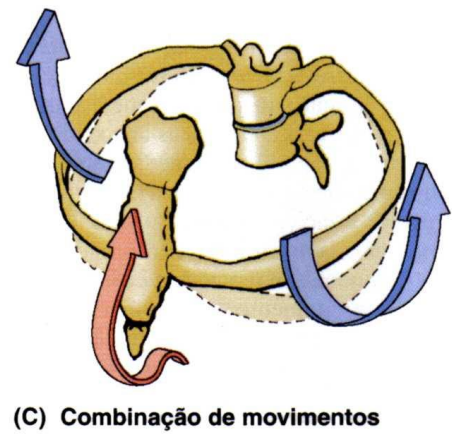
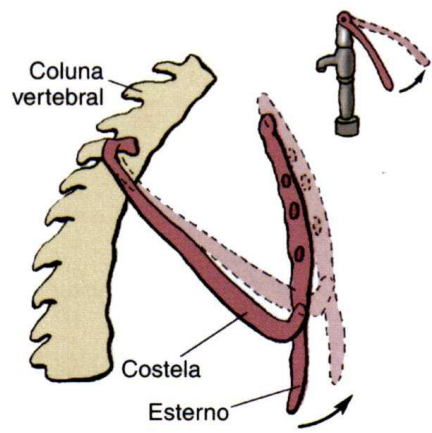
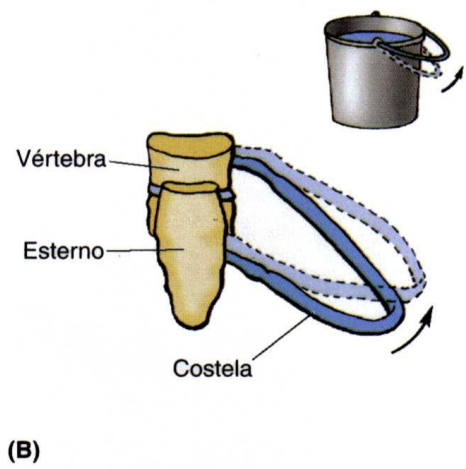


**Fig. 37.1** Retração e expansão da caixa torácica durante a expiração e a inspiração, demonstrando-se especialmente a contração diafragmática, a elevação do gradil costal e a função dos músculos intercostais.

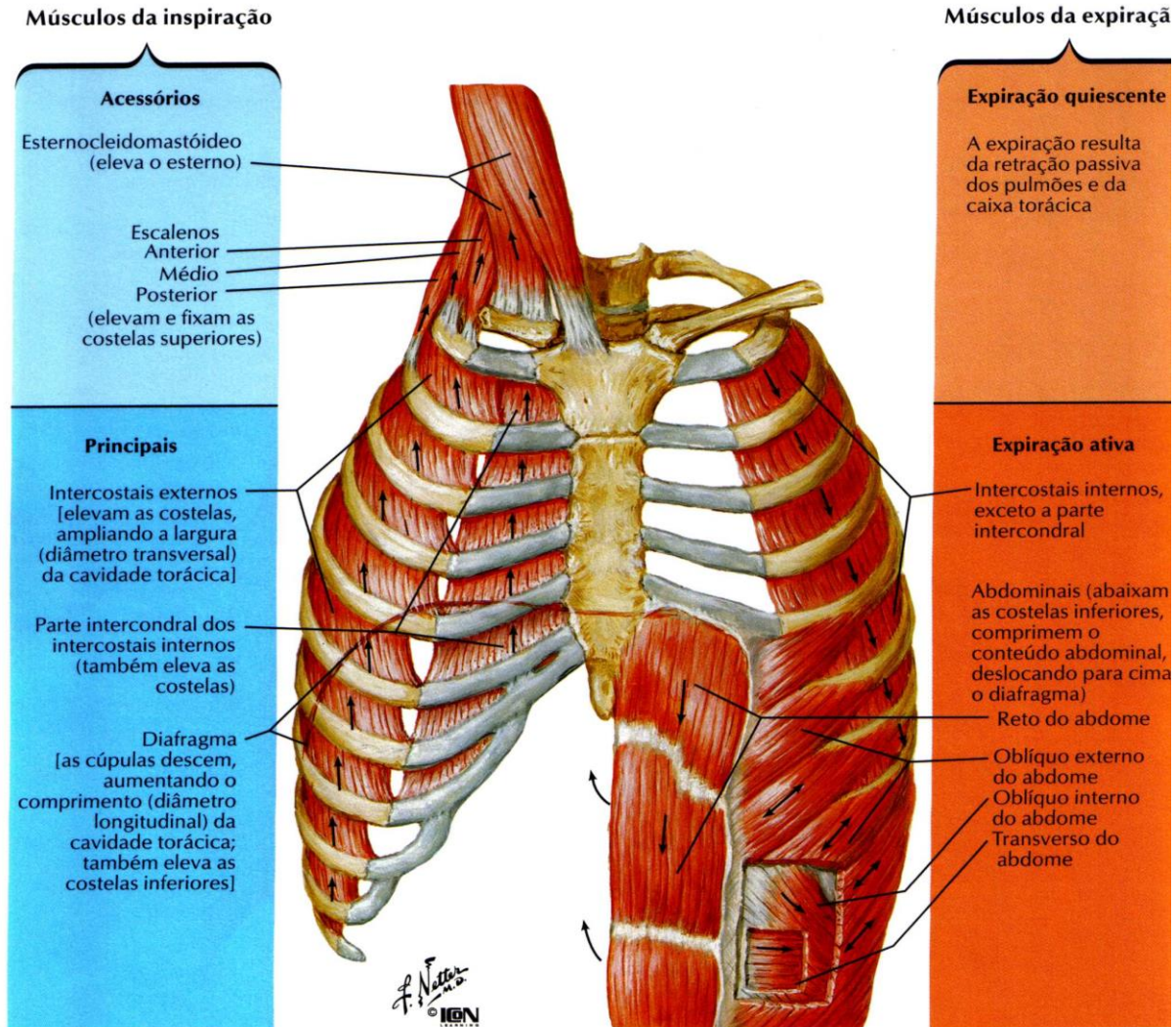
# Músculos da Respiração



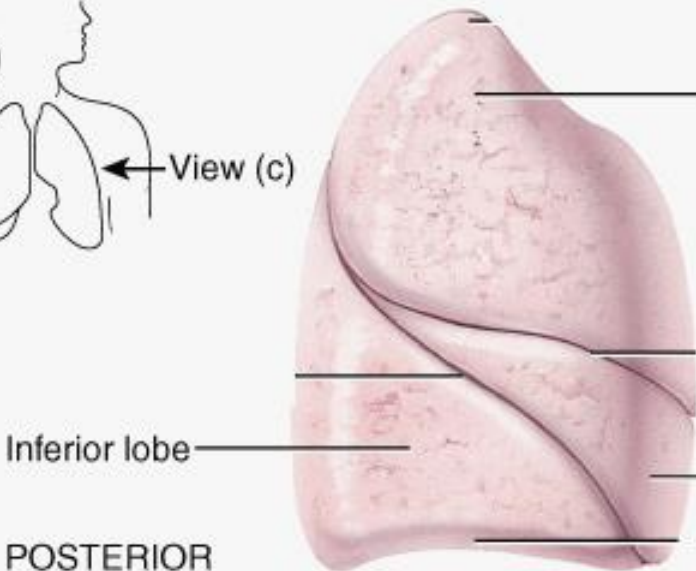
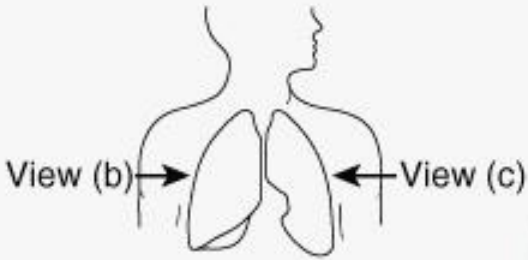
**Fig. 1.8 Movimentos da parede torácica.** A. Durante a inspiração e a expiração, observe como o tórax se amplia durante a inspiração, quando as costelas são elevadas. B. As partes médias das costelas inferiores movem-se lateralmente quando elas são elevadas (movimento em "alça de balde"). Quando as costelas superiores são elevadas, o diâmetro ântero-posterior (AP) do tórax é aumentado (movimento em "cabo de bomba") com uma excursão maior (aumento) ocorrendo inferiormente. C. A combinação de movimentos que ocorrem durante a inspiração aumenta os diâmetros AP e transversos da caixa torácica.



# Músculos da Respiração



# Pulmões



(b) Lateral view of right lung

Superior lobe

ANTERIOR

Middle lobe

Inferior lobe

POSTERIOR



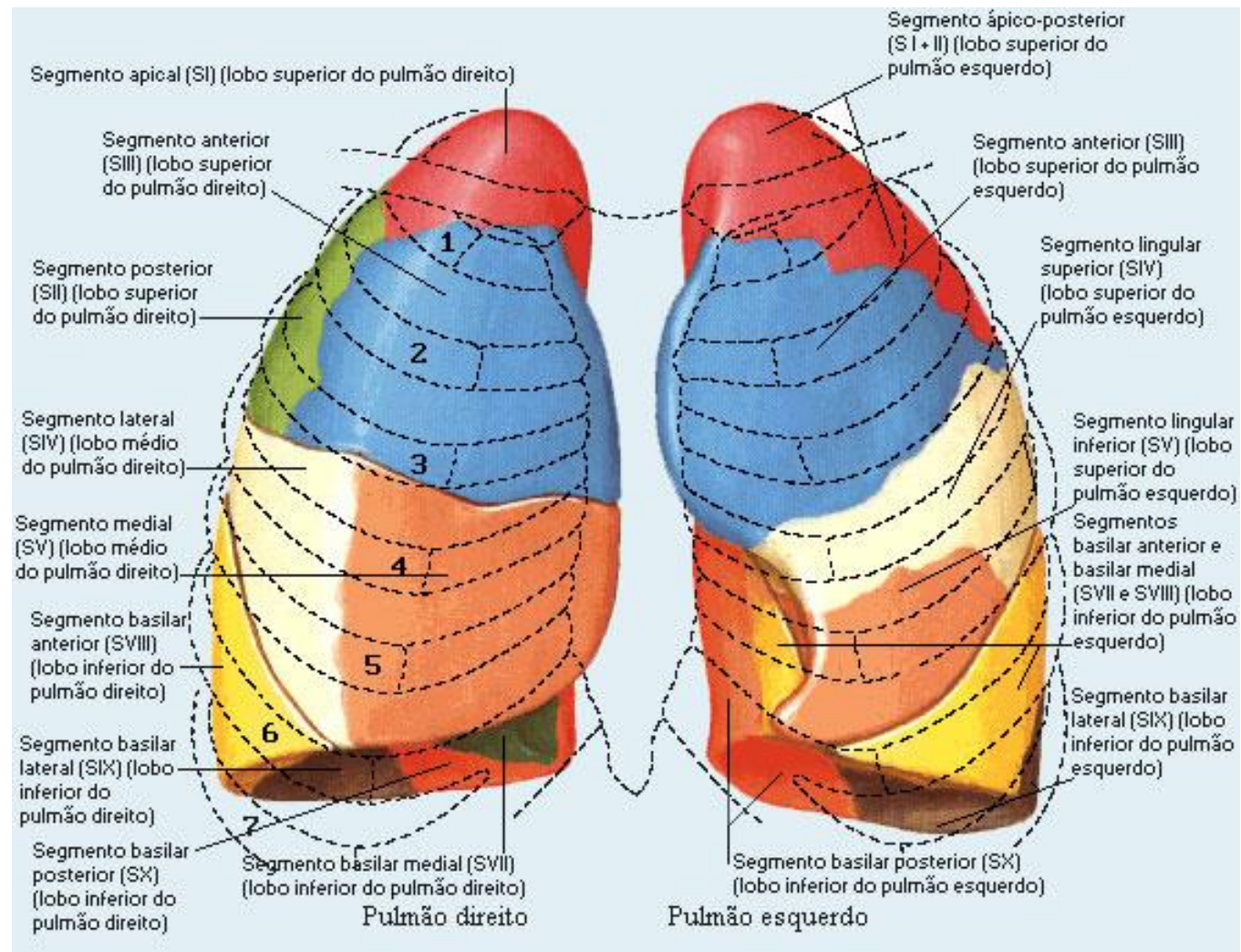
(c) Lateral view of left lung

Inferior lobe

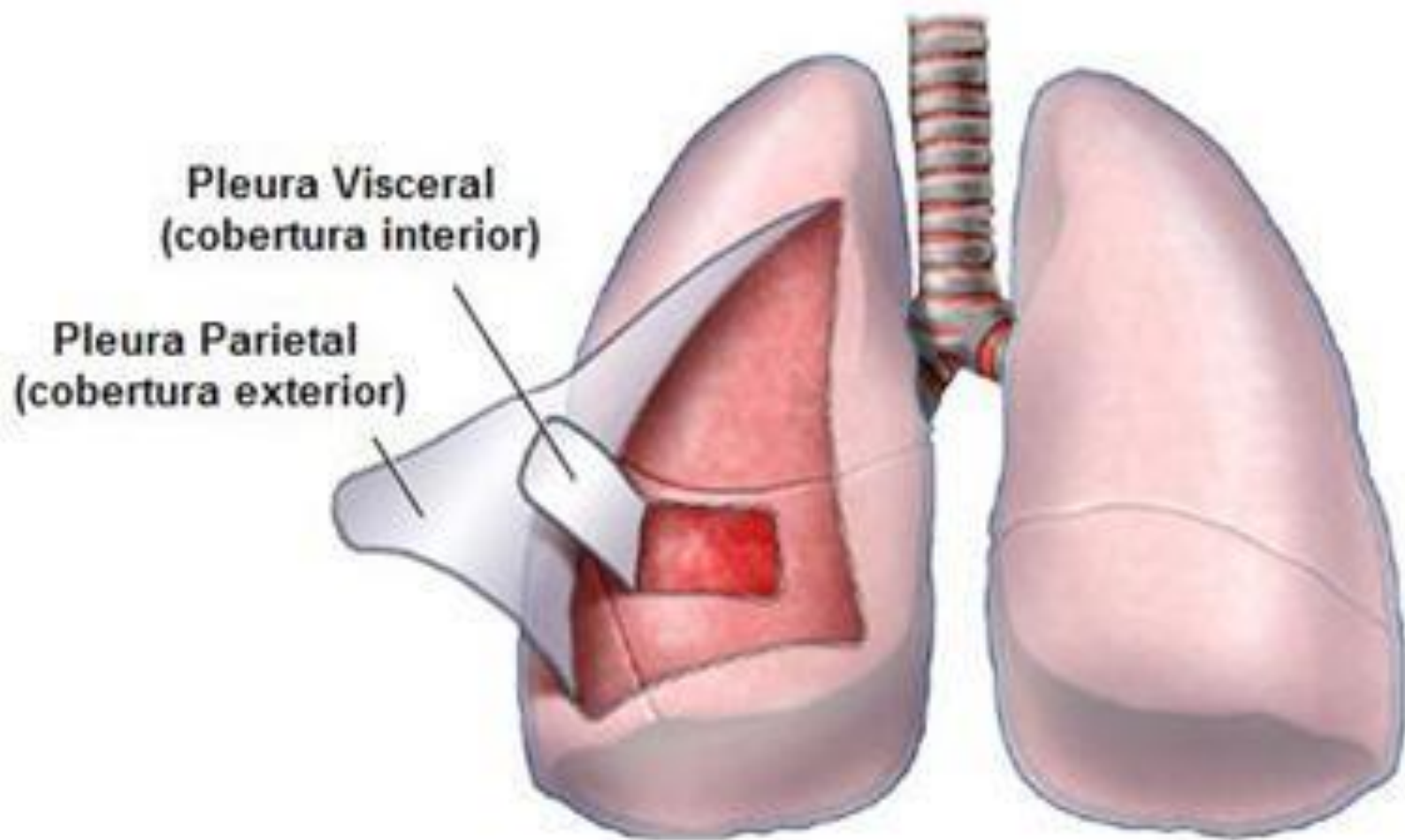
POSTERIOR

# Segmento Bronco-pulmonar

- **Brônquios Principais**
- **Brônquios Secundários (Lobares)**
- **Brônquios Segmentares (terciários)**







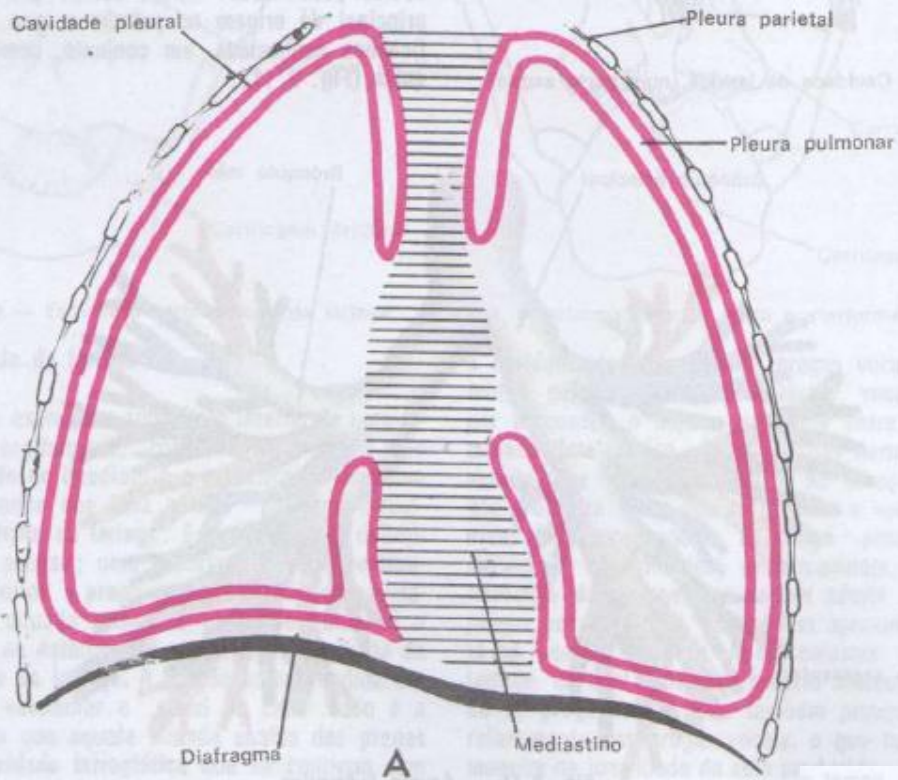
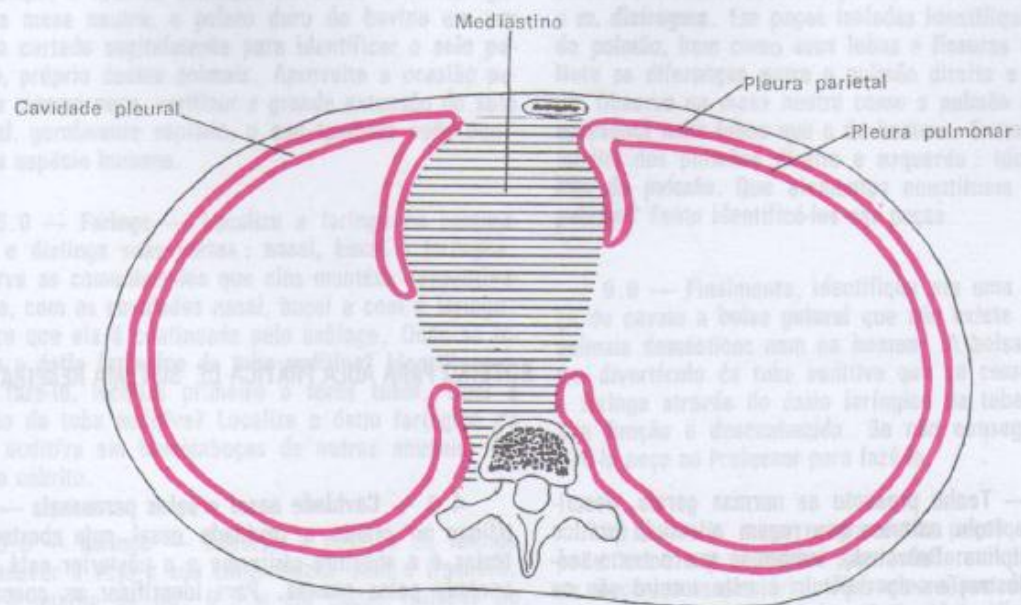
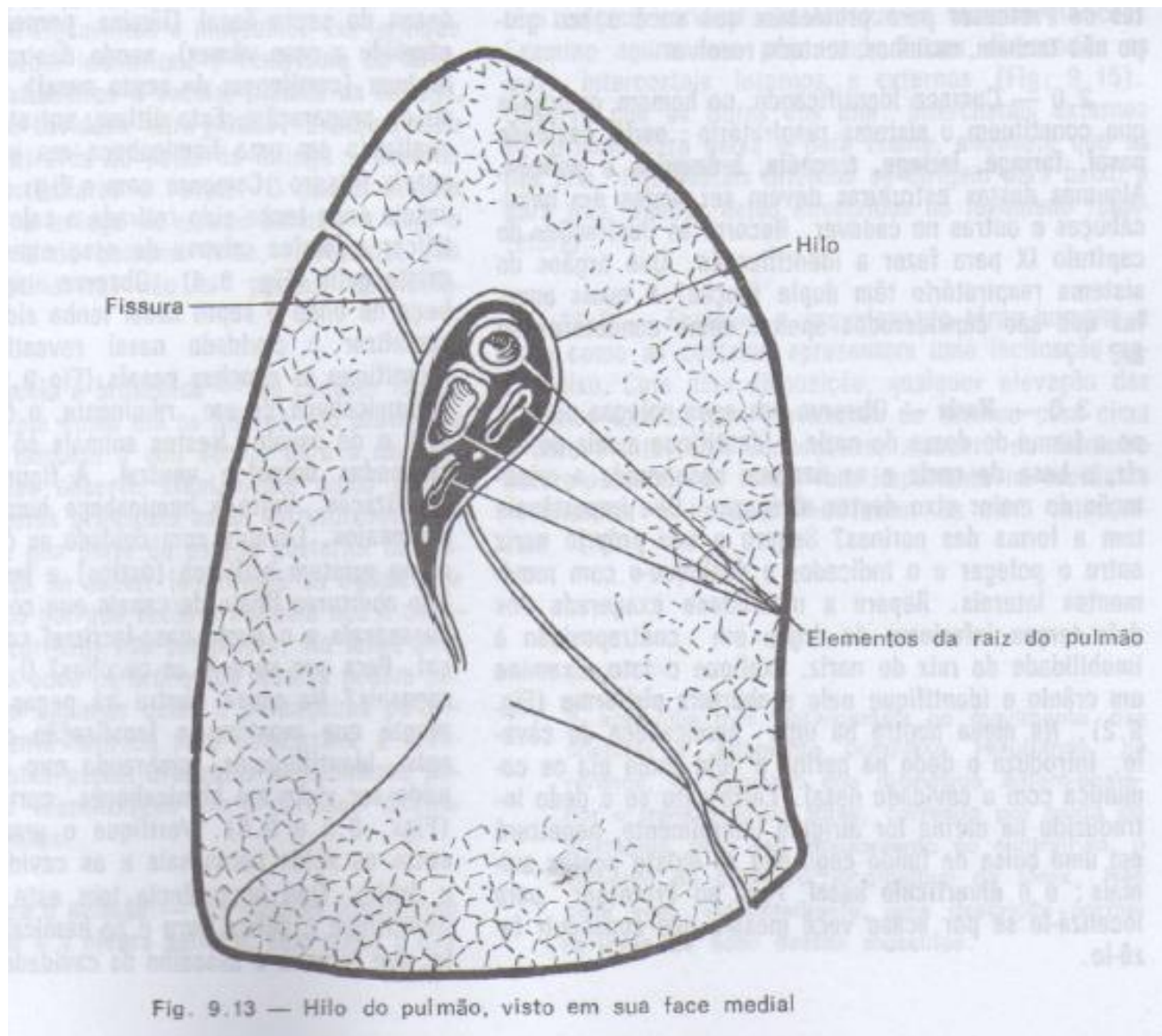
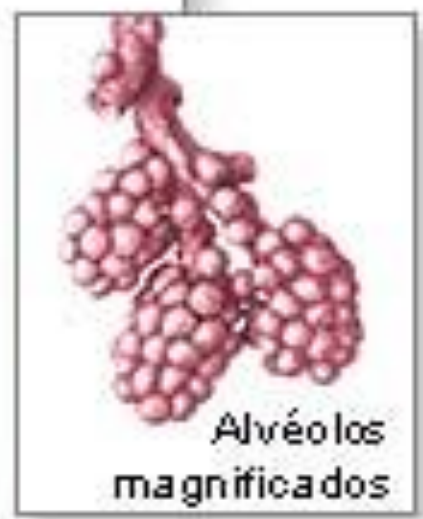
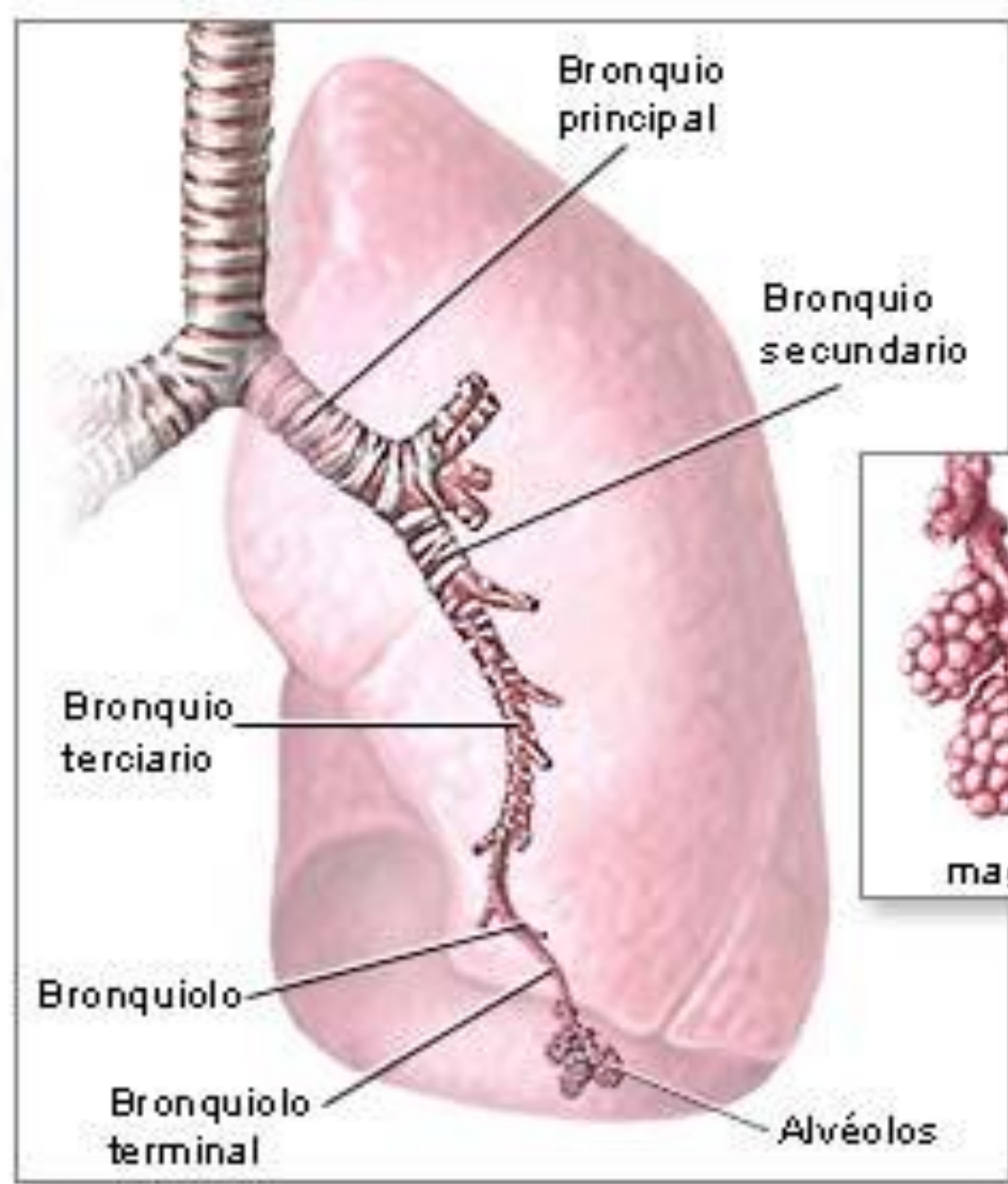


Fig. 9.12.A — Esquema das pleuras e mediastino, corte frontal

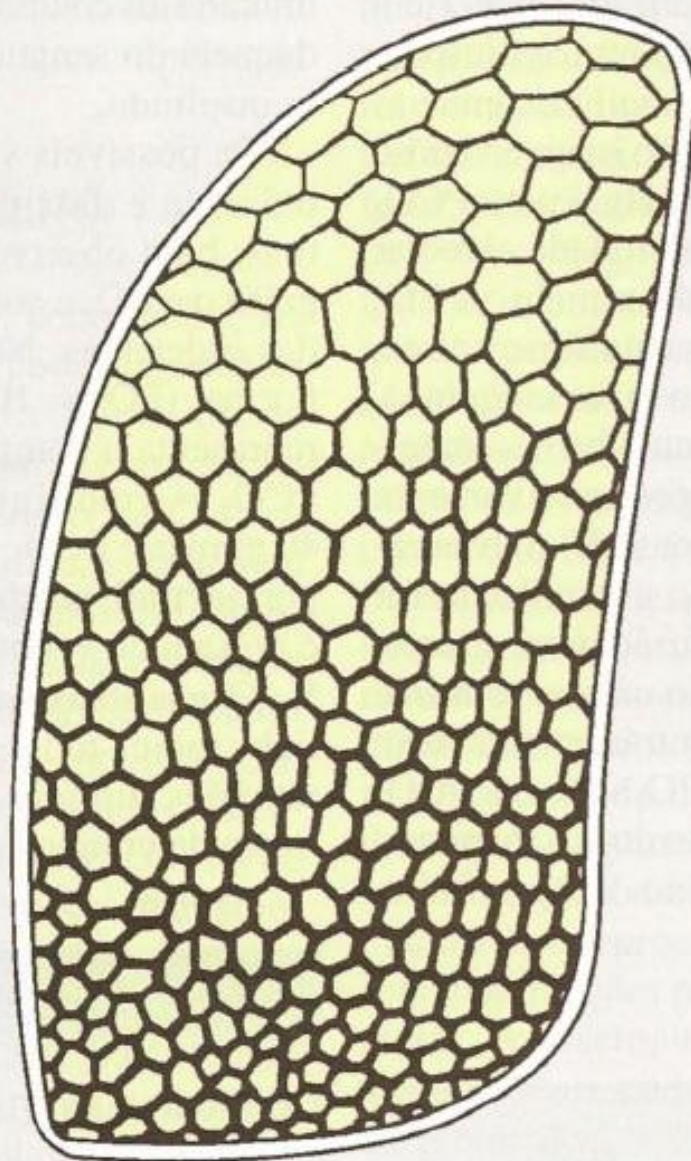






### VENTILAÇÃO

Pressão intrapleural  
mais negativa  
Maior gradiente de  
pressão transmural  
Alvéolos grandes e  
menos complacentes  
Menor ventilação

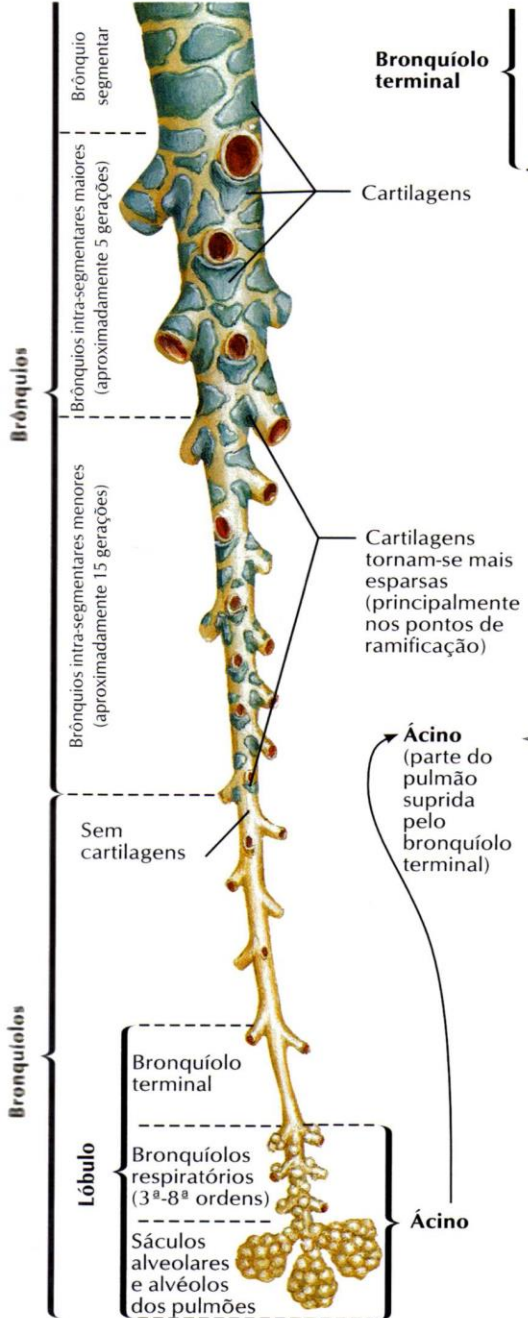


### PERFUSÃO

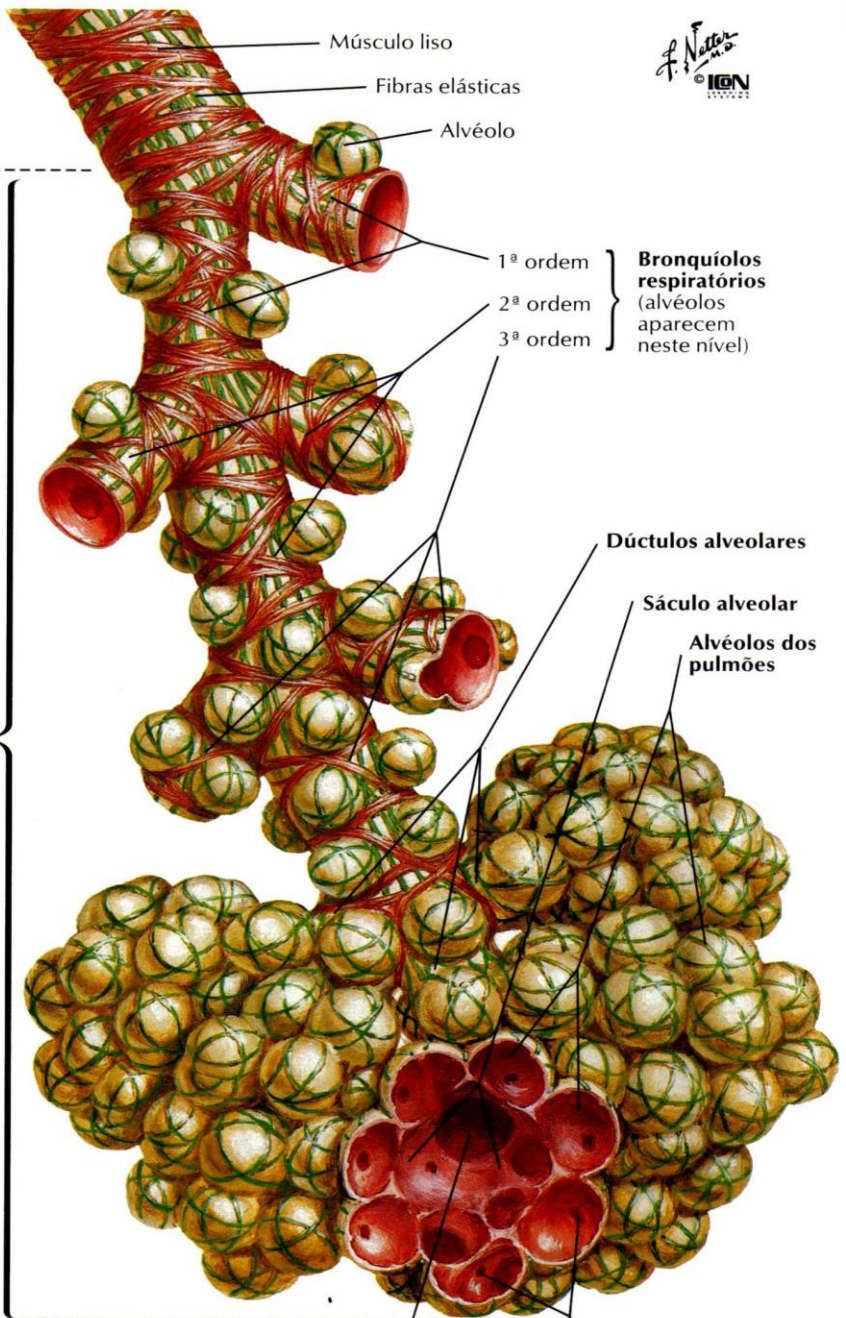
Menor pressão  
intravascular  
Menor recrutamento  
e distensão  
Maior resistência  
Menor fluxo  
sanguíneo

Pressão intrapleural  
menos negativa  
Menor gradiente de  
pressão transmural  
Alvéolos pequenos e  
mais complacentes  
Maior ventilação

Maior pressão  
intravascular  
Maior recrutamento  
e distensão  
Menor resistência  
Maior fluxo  
sanguíneo

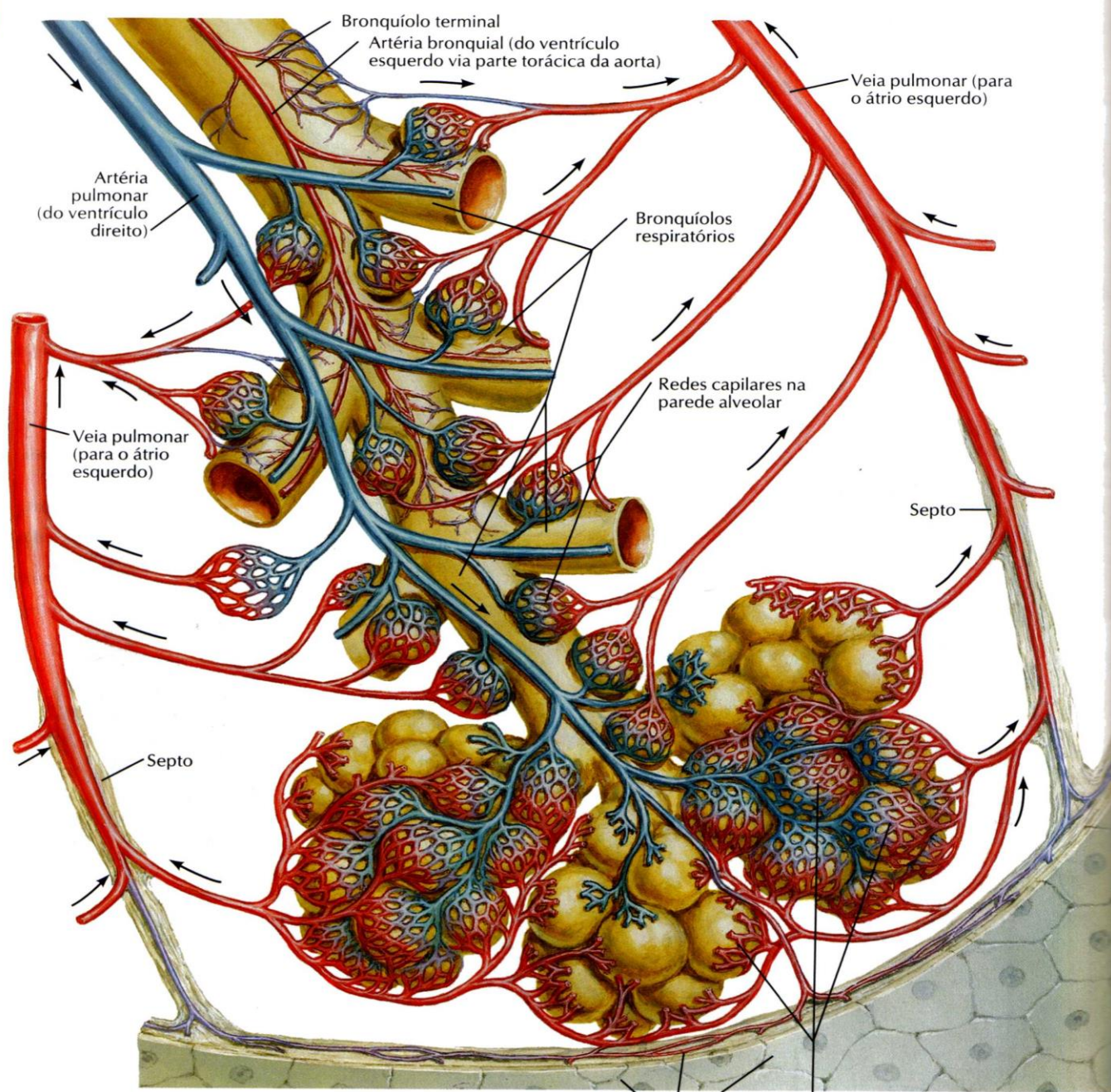


Subdivisões das vias aéreas intrapulmonares



Estrutura das vias aéreas intrapulmonares



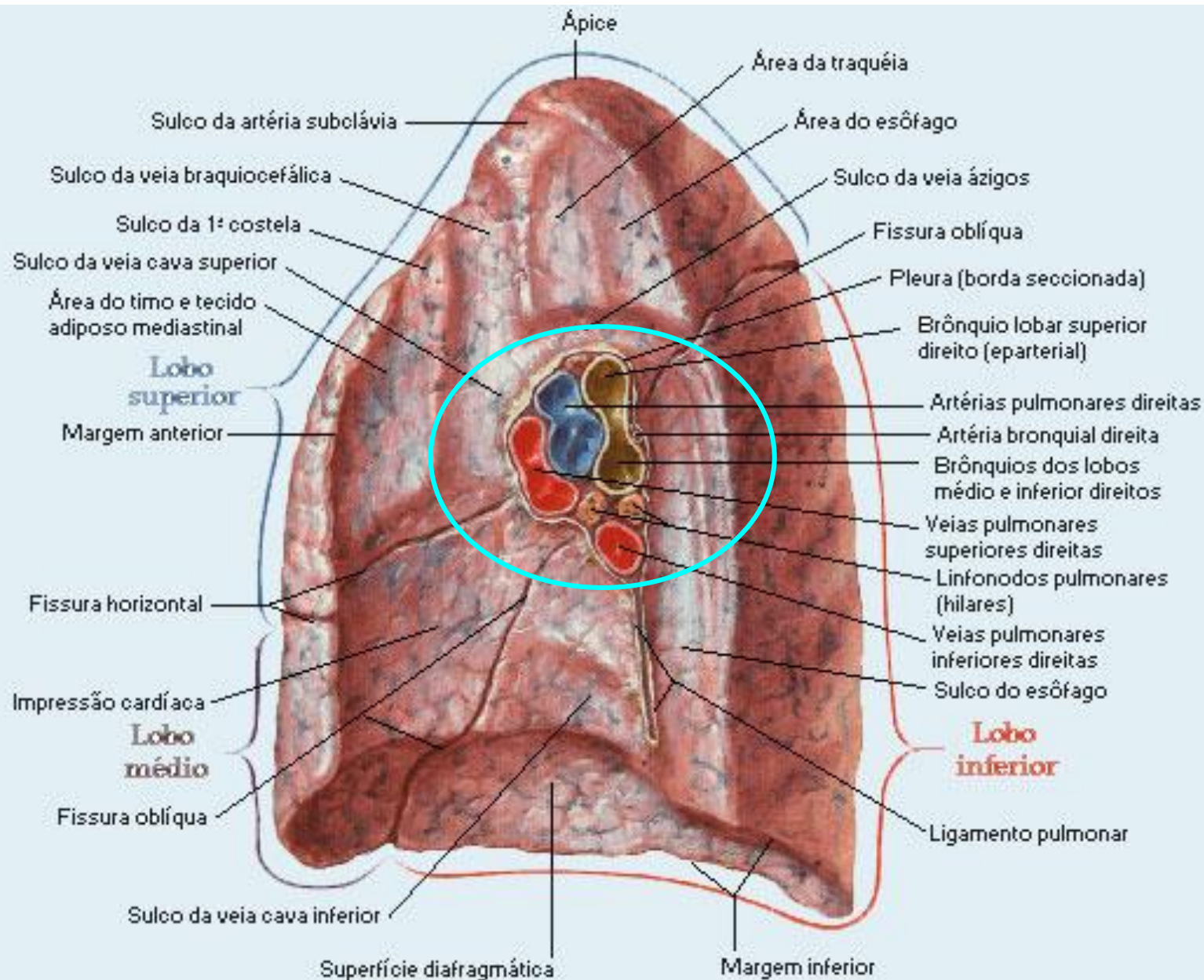


Pleura visceral e vasos capilares subpleurais

Redes capilares na parede alveolar (removidas parcialmente dos locais)

F. Netter  
M.D.

# Pulmões

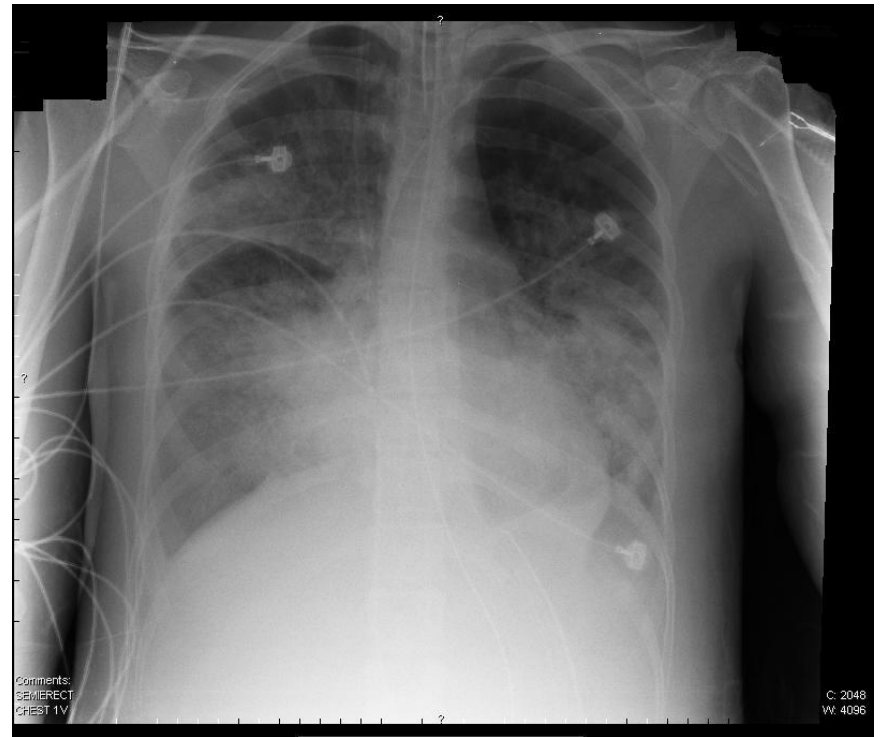




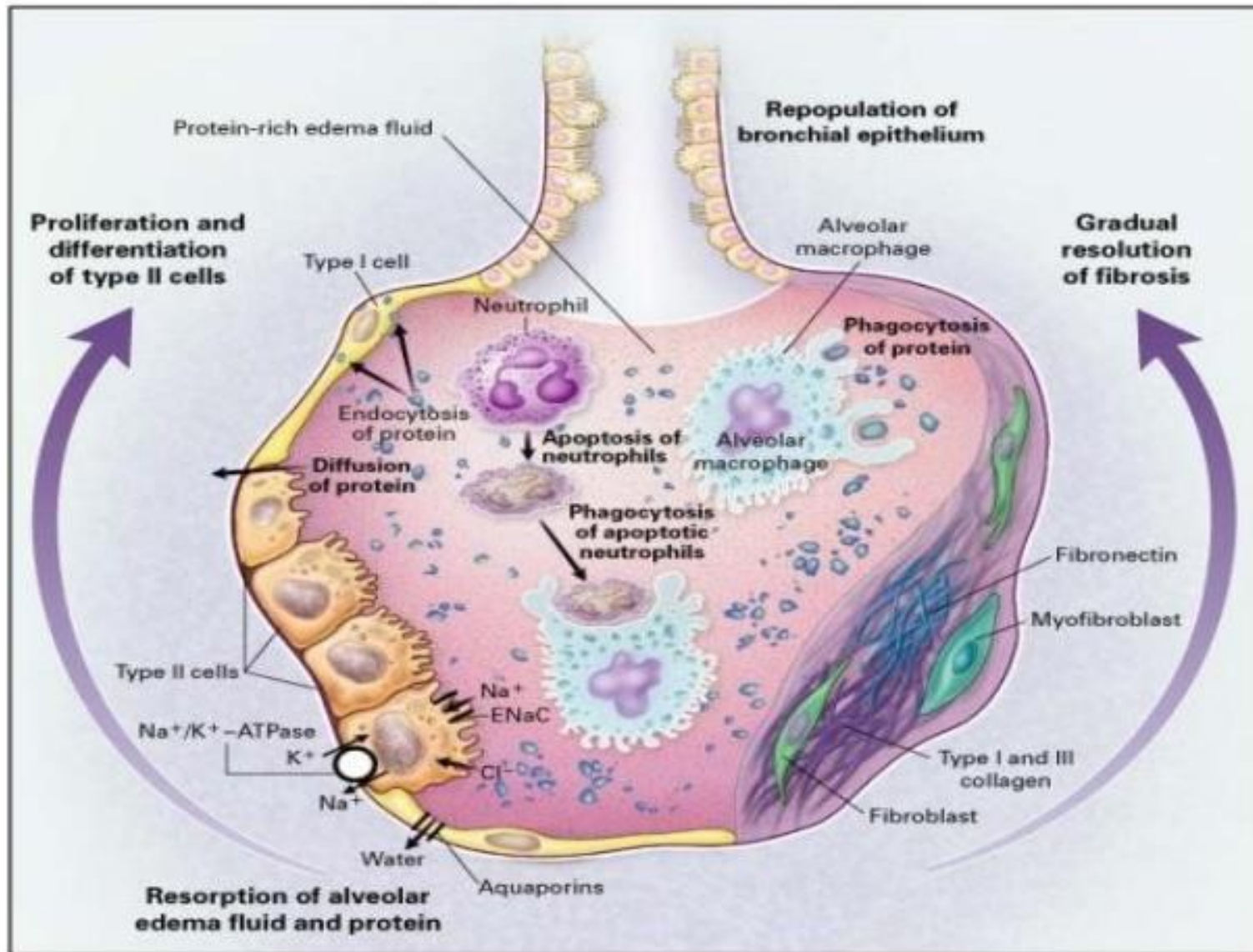
# Radiografia Normal



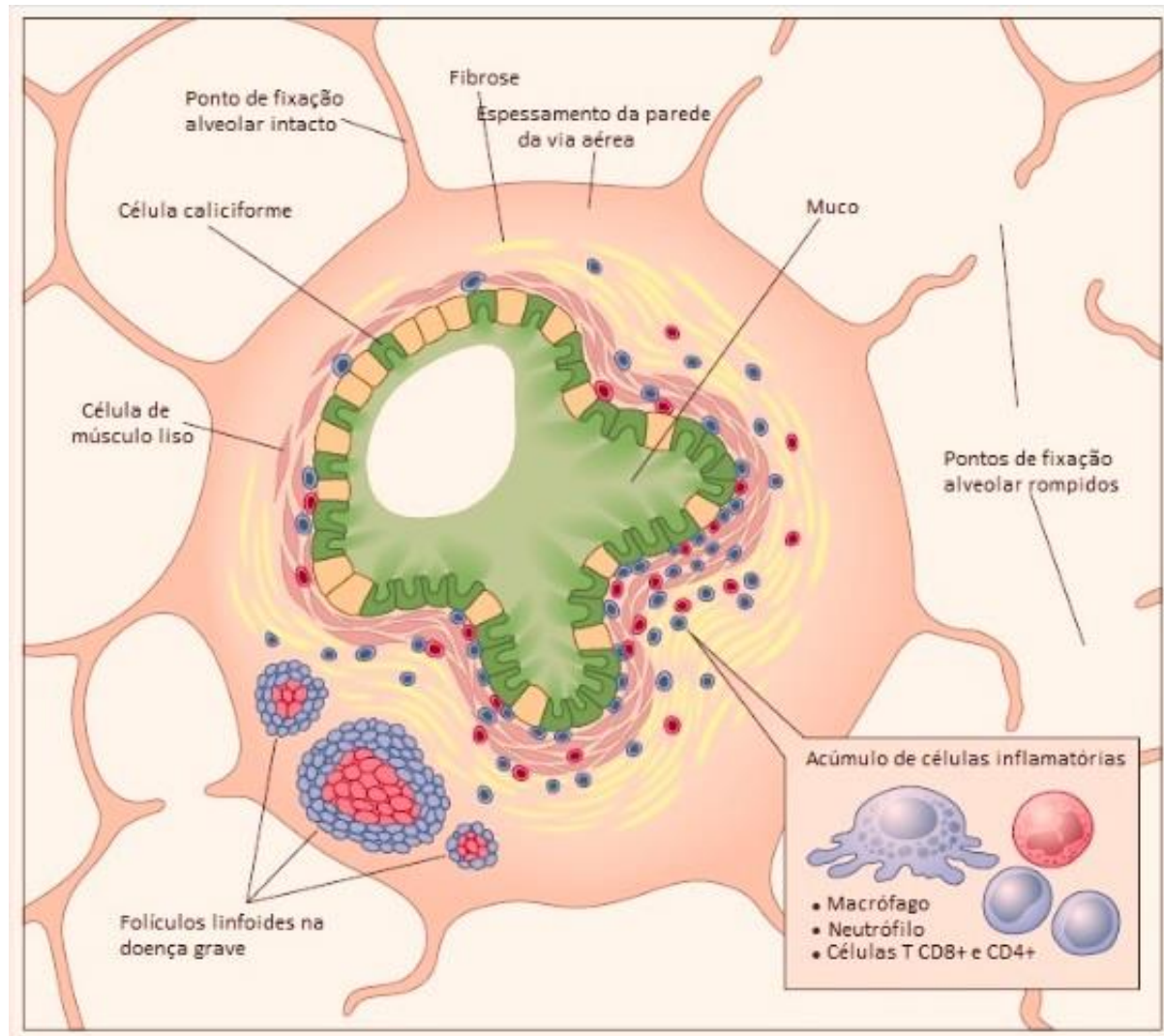
# SARA



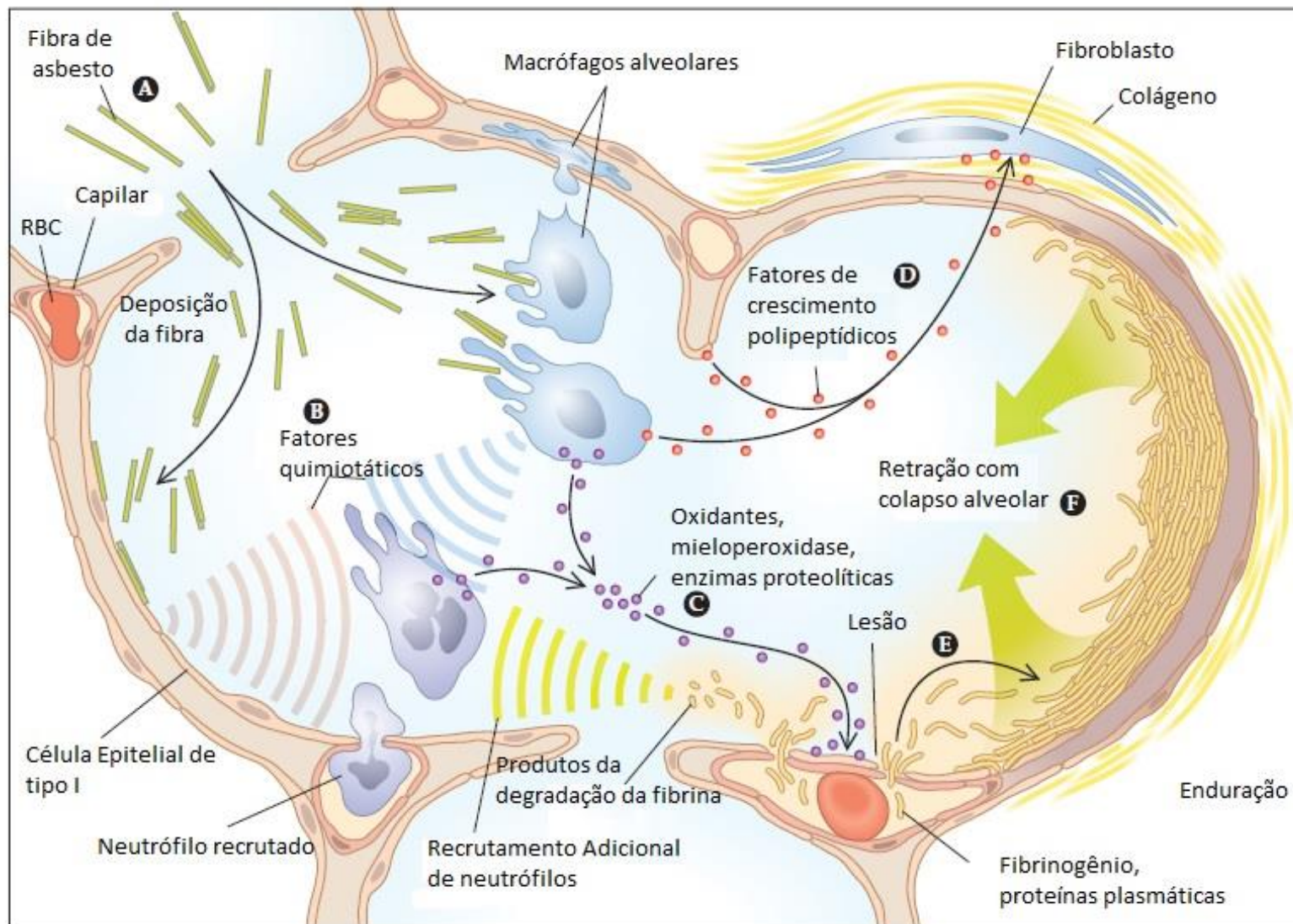
# SARA



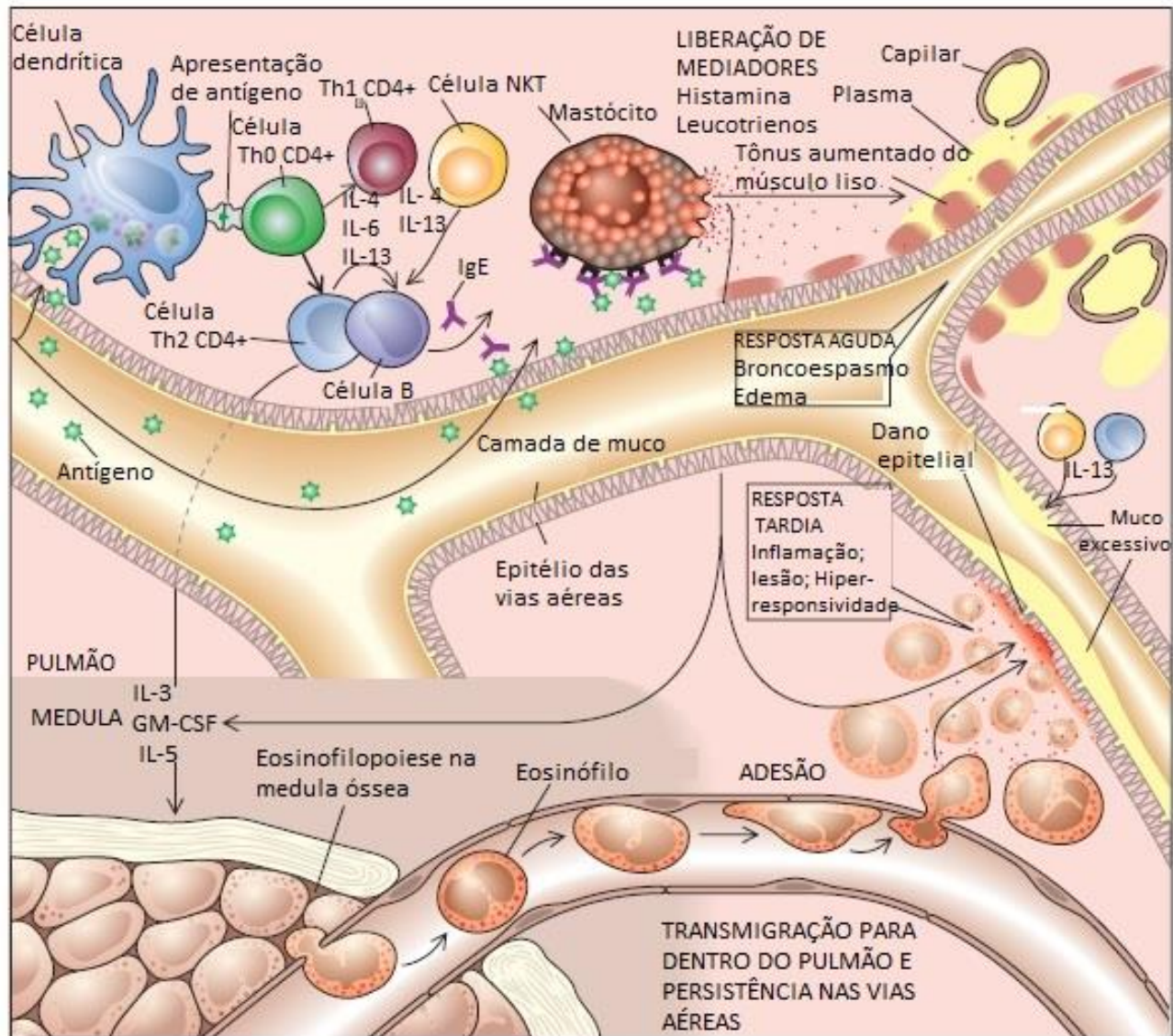
# DPOC



# DPOC



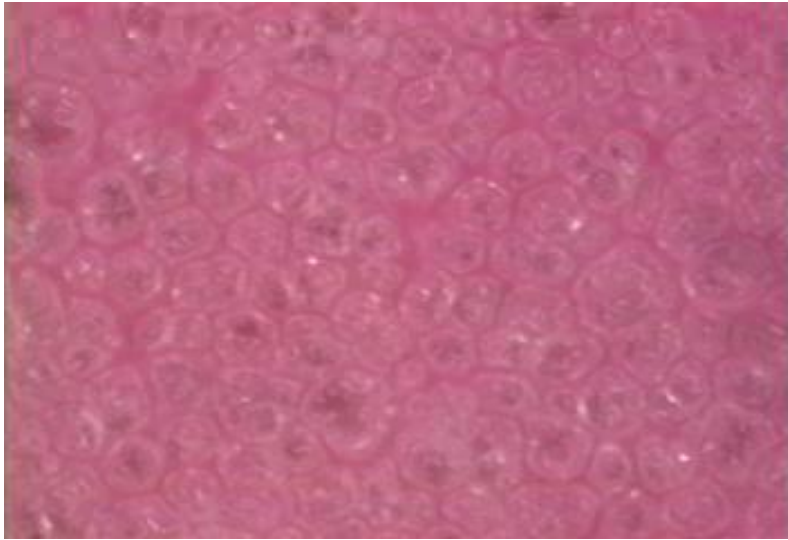
# Asma



## Non smoker lungs VS Smoker lungs



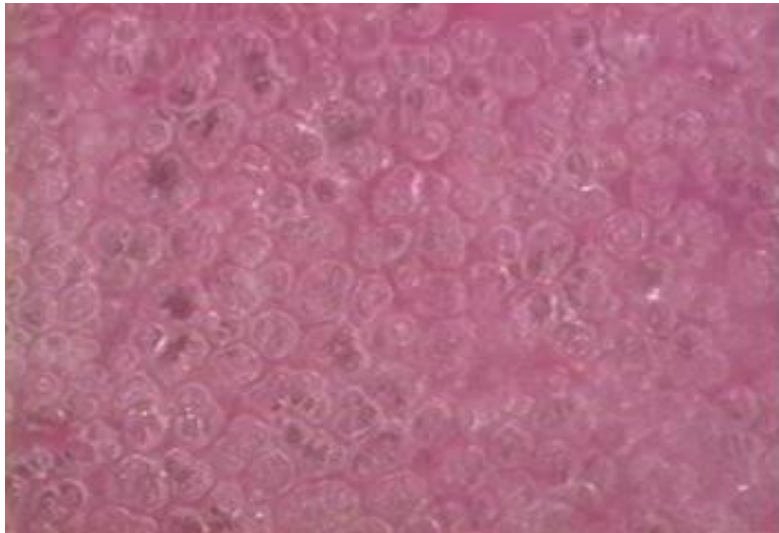
**Ventilação Normal**



**Injúria Alveolar**



**Injúria + Baixo PEEP**



**Injúria + Alto PEEP**

