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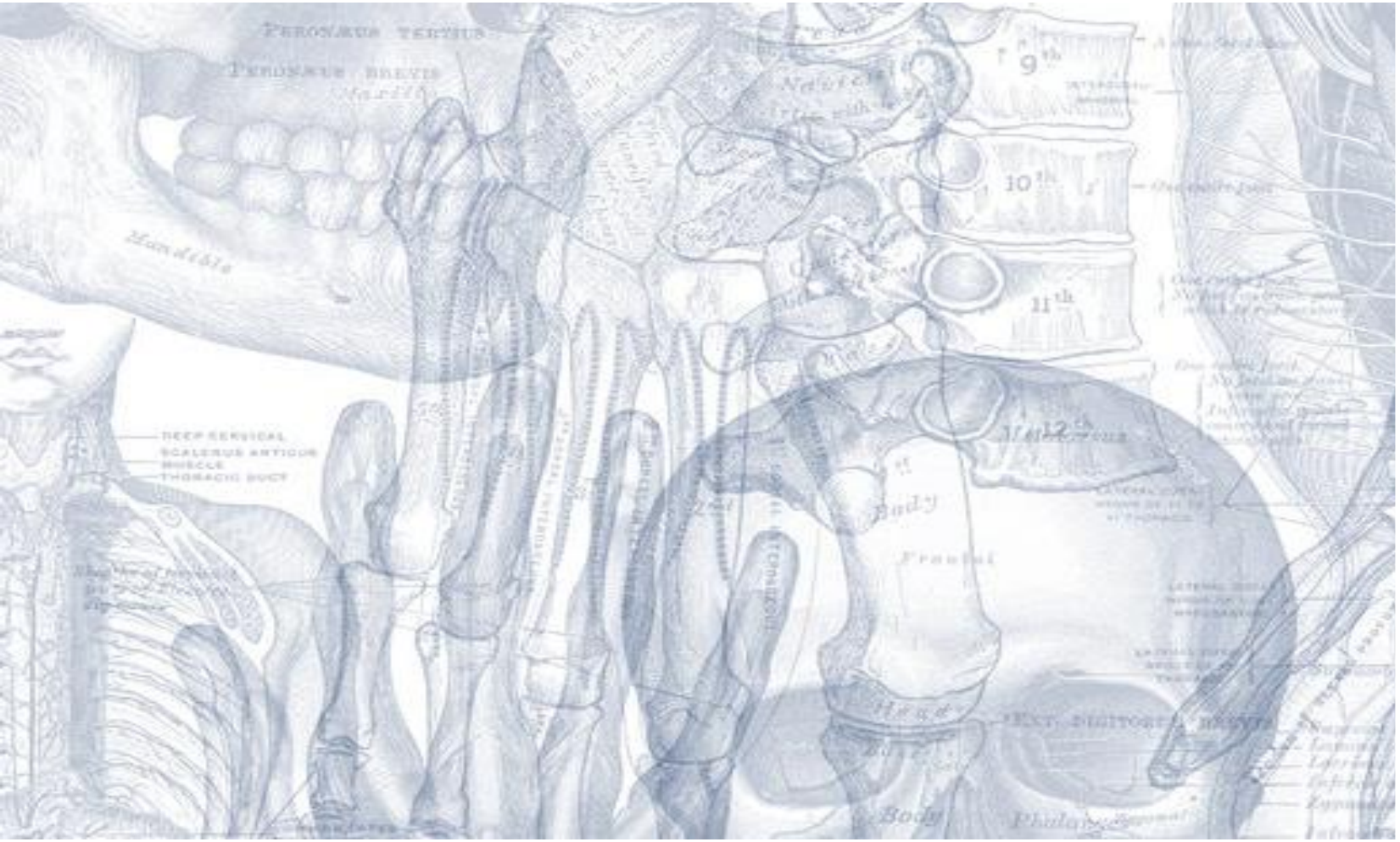


ANATOMY
TEAM 436

436
MEDICINE
KING SAUD UNIVERSITY

OSPE

ENDOCRINE BLOCK

Color Code

- Nerves
- Arteries
- Veins
- Lymph
- Muscles
- Extra

اللهم لا سهل إلا ما جعلته سهل وأنت تجعل الحزن إذا شئت سهل

Important Points

1. Don’t forget to mention **right** and **left**.
2. Read the questions **carefully.**
3. Make sure your write the FULL name of the structures with the correct **spelling.**

   Example: IVC ✗→ Inferior Vena Cava ✓

   Aorta ✗→ Abdominal aorta ✓

4. There is NO guarantee whether or not the exam will go out of this file.

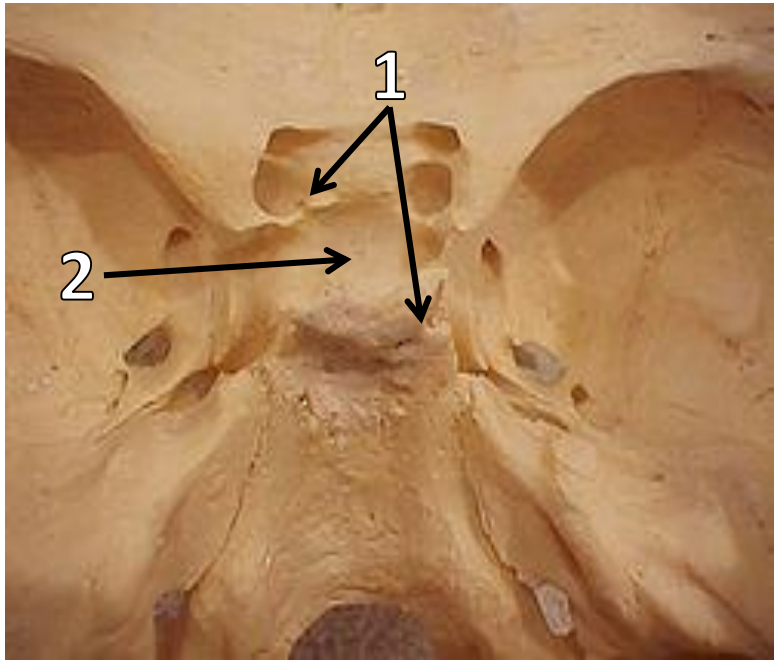
ممكن يأشرون على أجزاء مو معلمه فراح نحط بيانات إضافية حاولوا تمرون عليها كلها

Good luck!

Pituitary gland

Identify:

1. Anterior and posterior clinoidal process of sella turcica.
2. Hypophyseal fossa (sella turcica)



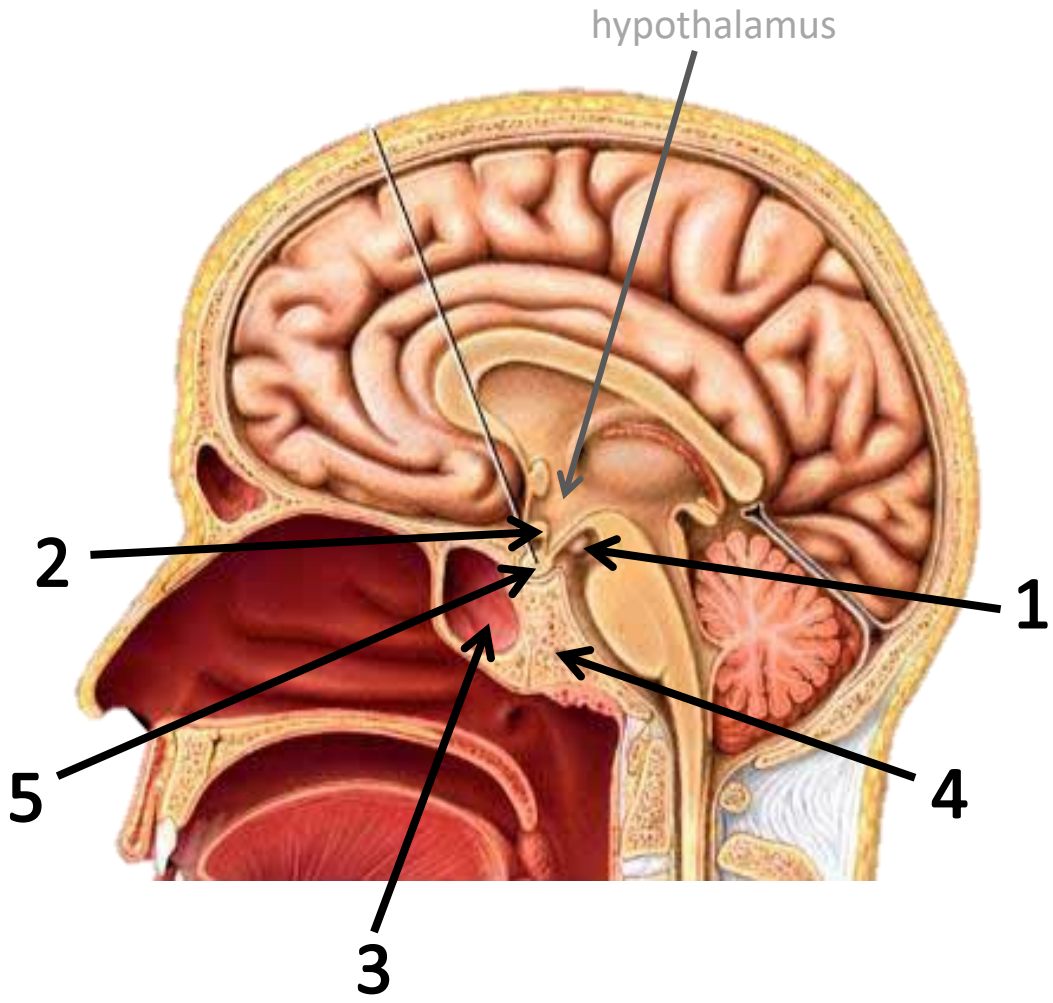
Theory

- The pituitary gland is located in **middle cranial fossa** and protected in sella turcica (hypophyseal fossa) of body of **sphenoid**.

Relations Of Pituitary Gland

Identify:

1. Mamillary body *(posteriorly)*
2. Optic chiasma *(anteriorly)*
3. Sphenoidal air sinuses *(inferior)*
4. Body of sphenoid
5. Pituitary gland



Theory

- If pituitary gland became enlarged (e.g adenoma) it will cause pressure on **optic chiasma** and lead to bilateral temporal eye field blindness (**bilateral hemianopia**)

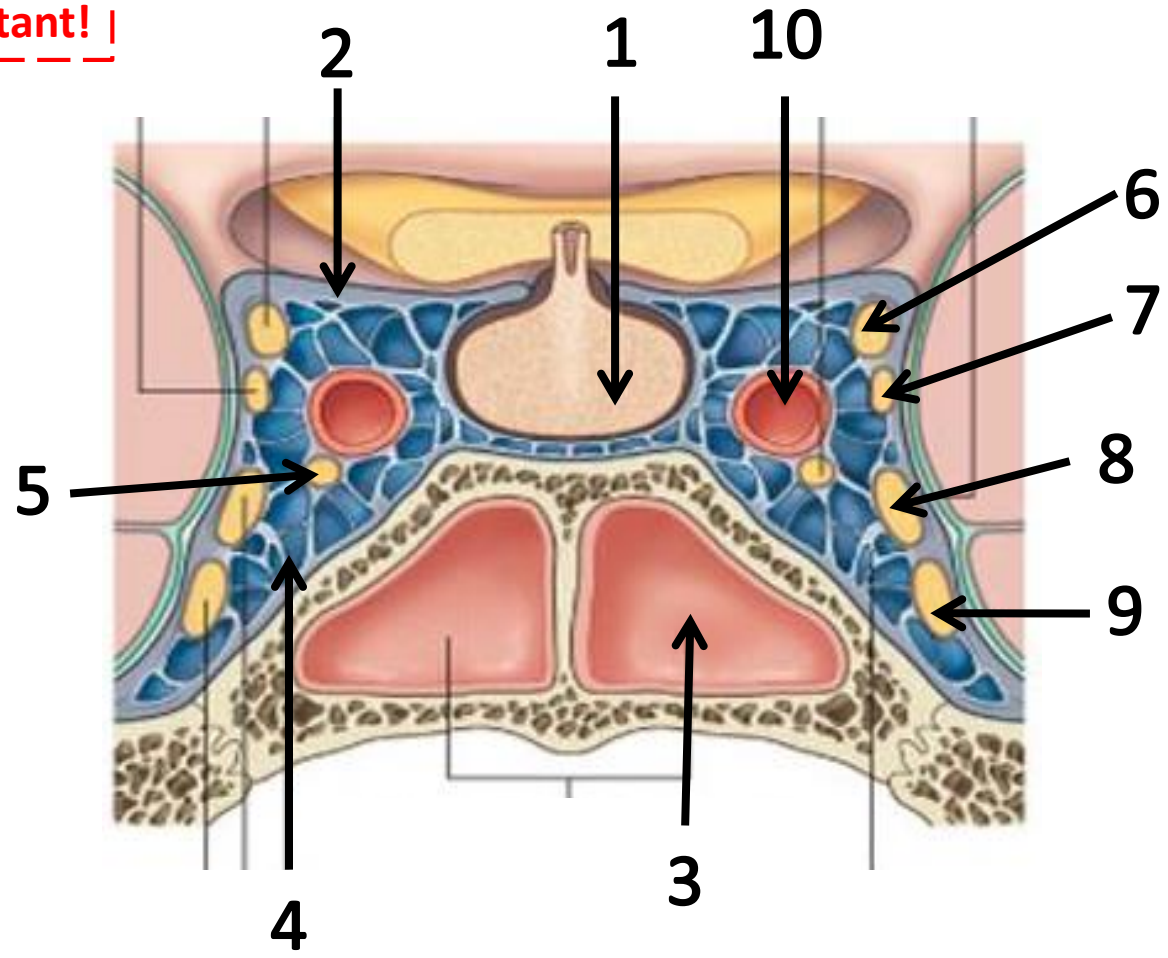
Relations Of Pituitary Gland

Important!

Identify:

1. Pituitary gland.
2. Diaphragma sellae *(superior)*
3. Sphenoidal air sinuses *(inferior)*
4. Cavernous sinuses *(lateral)*
5. Abducent nerve
6. Oculomotor nerve
7. Trochlear nerve
8. Ophthalmic nerve
9. Trigeminal (Maxillary) nerve
10. Internal carotid artery

Structures of lateral wall

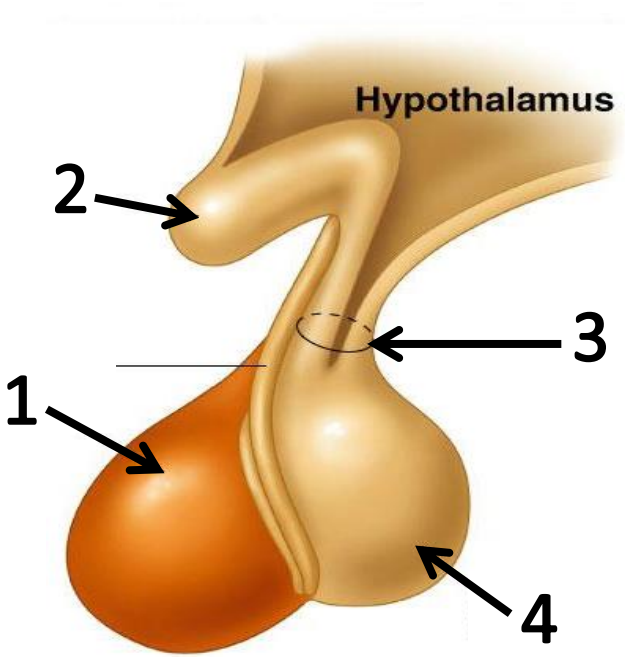


Note: Ophthalmic and maxillary are both branches of the trigeminal nerve

Divisions of Pituitary Gland

Identify:

1. Anterior lobe (Adenohypophysis)
2. Optic chiasma
3. Infundibulum
4. Posterior lobe (Neurohypophysis)



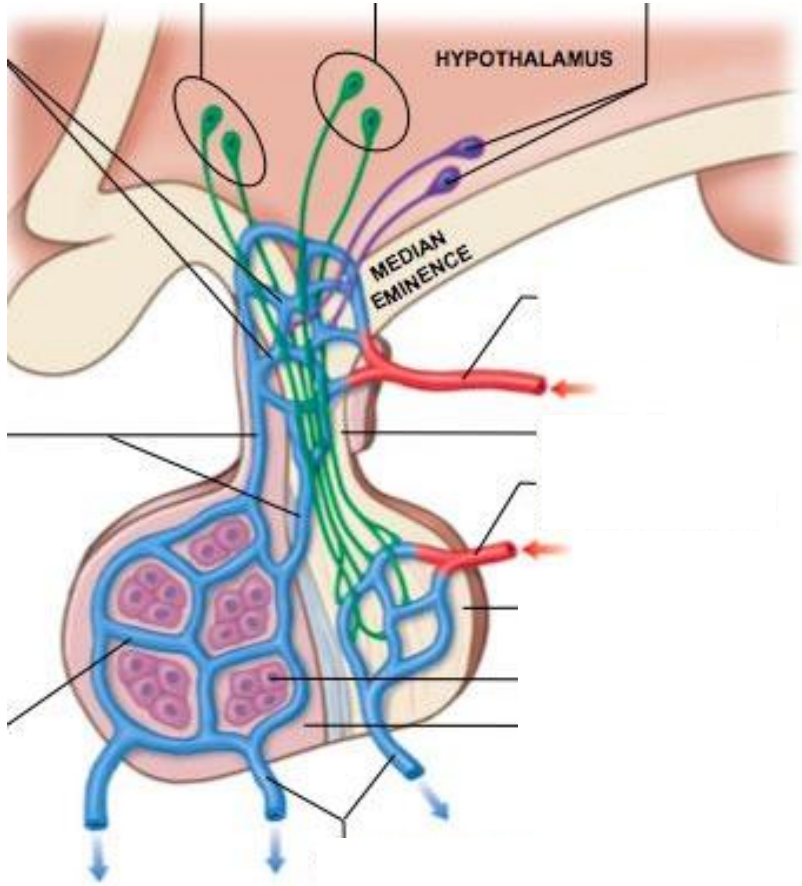
Theory

Subdivisions	Anterior Lobe	Posterior Lobe
	• Adenohypophysis • Secretes hormones • **Vascular** connection to hypothalamus by **hypophyseal portal system** (from superior hypophyseal artery)	• Neurohypophysis • Stores hormones • **Neural** connection to hypothalamus by **hypothalamo-hypophyseal tract** from supraoptic and paraventricular nuclei.

Blood Supply Of Pituitary Gland

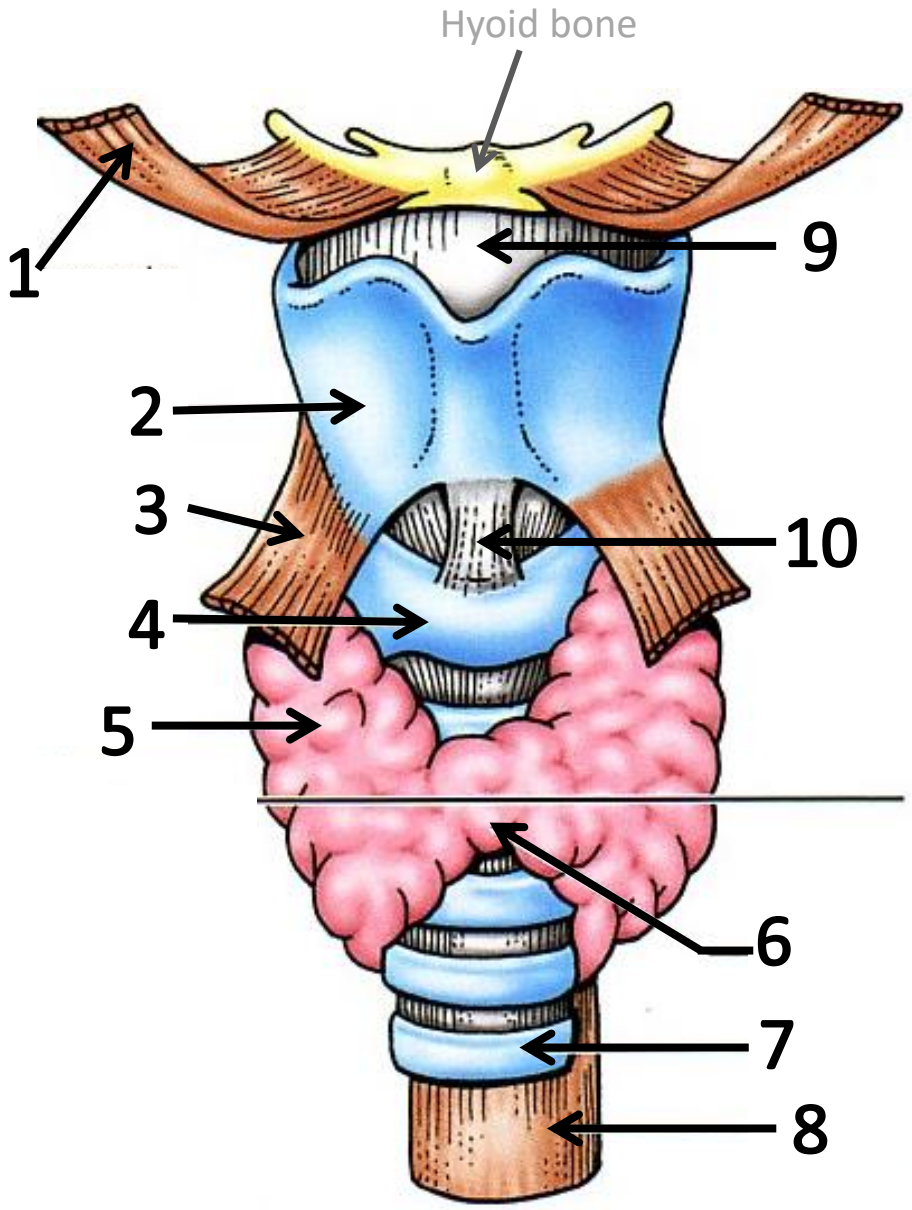
Theory

- Superior hypophyseal artery supplies infundibulum and anterior lobe. It also forms hypophyseal portal system.
- Inferior hypophyseal artery supplies posterior lobe.
- Superior and inferior hypophyseal arteries are branches of internal carotid artery.
- Hypophyseal veins drain into cavernous sinuses.

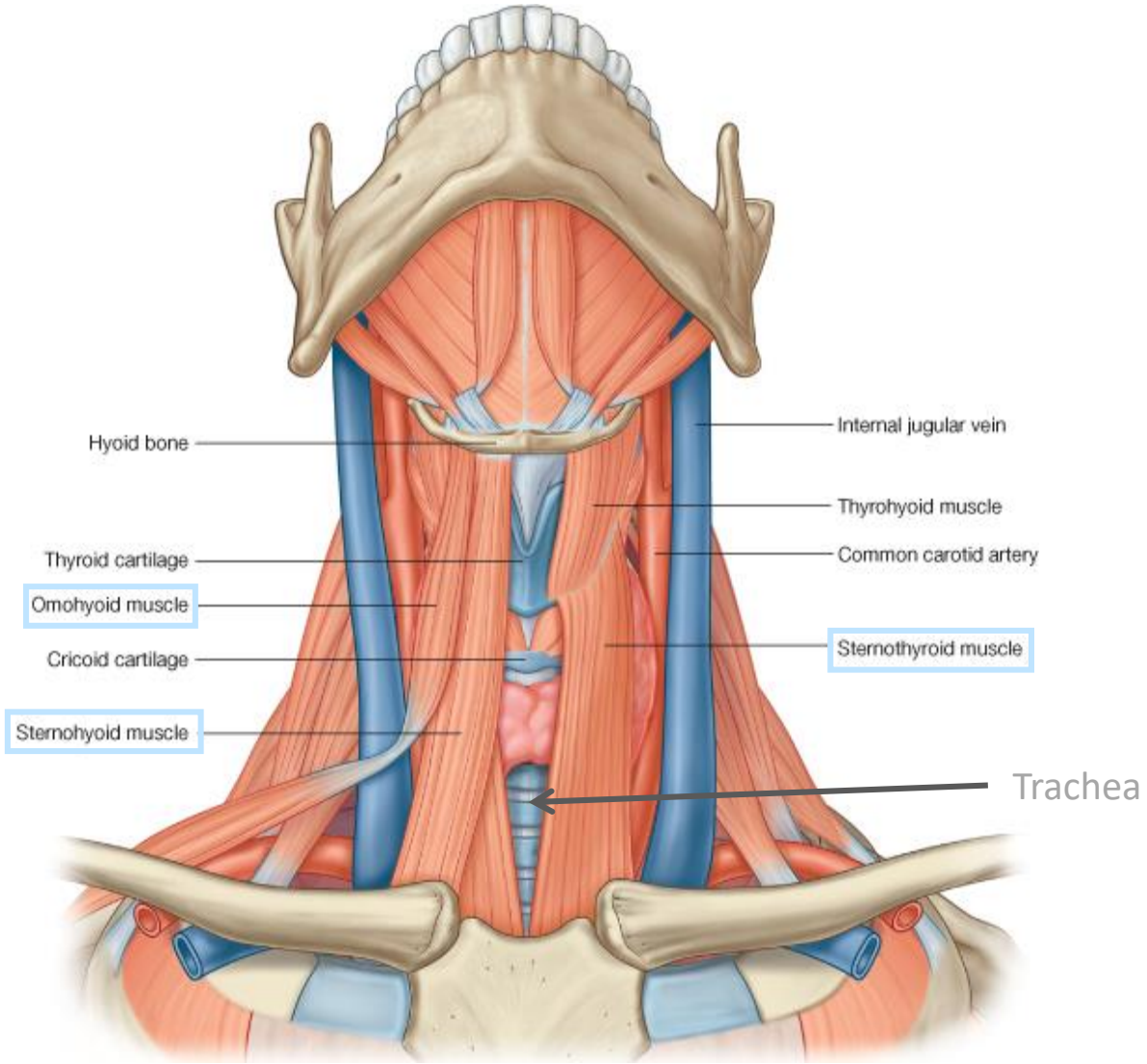


Identify:

1. Sternohyoid muscle
2. Thyroid cartilage
3. Sternothyroid muscle
4. Cricoid cartilage
5. Thyroid gland (lobe)
6. Isthmus of thyroid
7. Trachea
8. Esophagus
9. Thyrohyoid membrane
10. Cricothyroid ligament



Relations Of Thyroid Gland



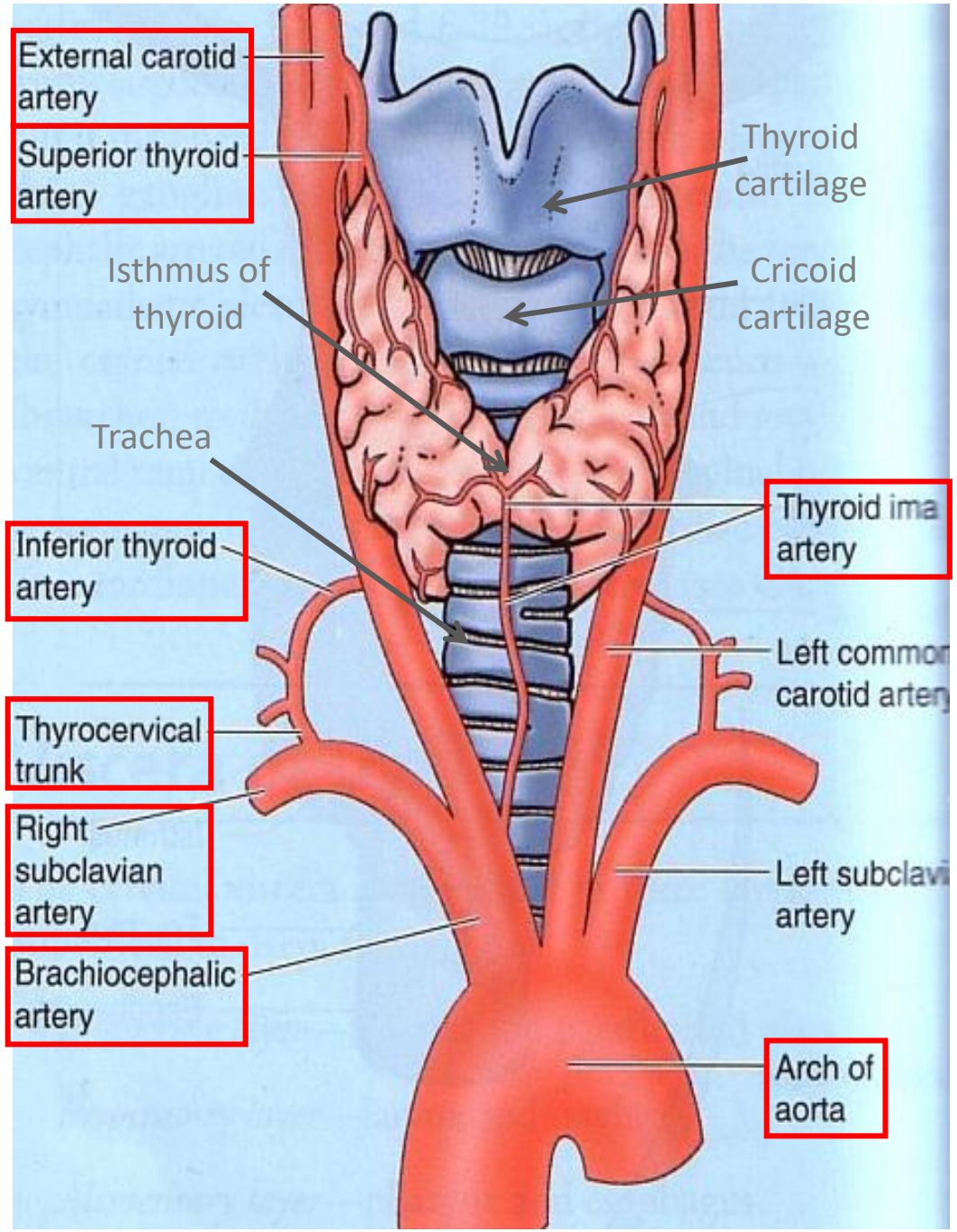
Theory

Relations		
Anterolaterally		1. Sternohyoid. 2. Sternothyroid 3. Superior belly of omohyoid 4. Sternomastoid (4S)
Posteriorly		Carotid sheath and its contents: 1- common carotid artery 2- internal carotid artery 3- internal jugular vein 4- vagus nerve (CN X)
Medially	*Above*	1- Larynx 2- Pharynx
	Below	1- Trachea 2- Esophagus 3- Recurrent laryngeal nerve 4- Cricothyroid muscle 5- External laryngeal nerve

Arterial Supply Of Thyroid Gland

Theory

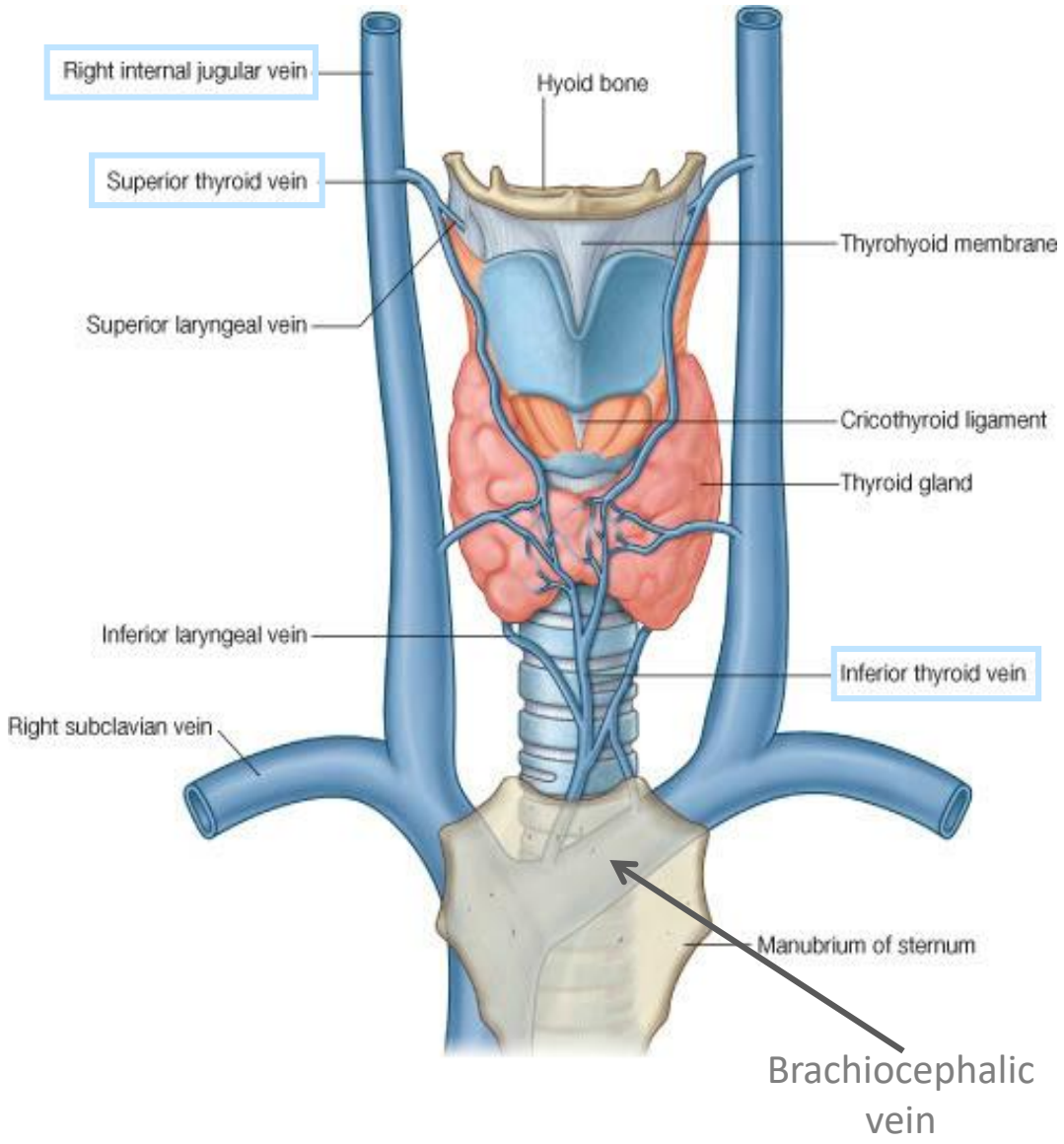
Artery	*Origin*	*Course*
Superior thyroid artery	From the external carotid artery	It descends to the upper pole of the lobe, with the external laryngeal nerve.
Thyroidea ima artery	If present, it arises from aortic arch or from brachiocephalic artery.	It ascends in front of the trachea to reach the isthmus.
Inferior thyroid artery	From the thyrocervical trunk of 1st part of subclavian artery.	The recurrent laryngeal nerve crosses either in front or behind it.

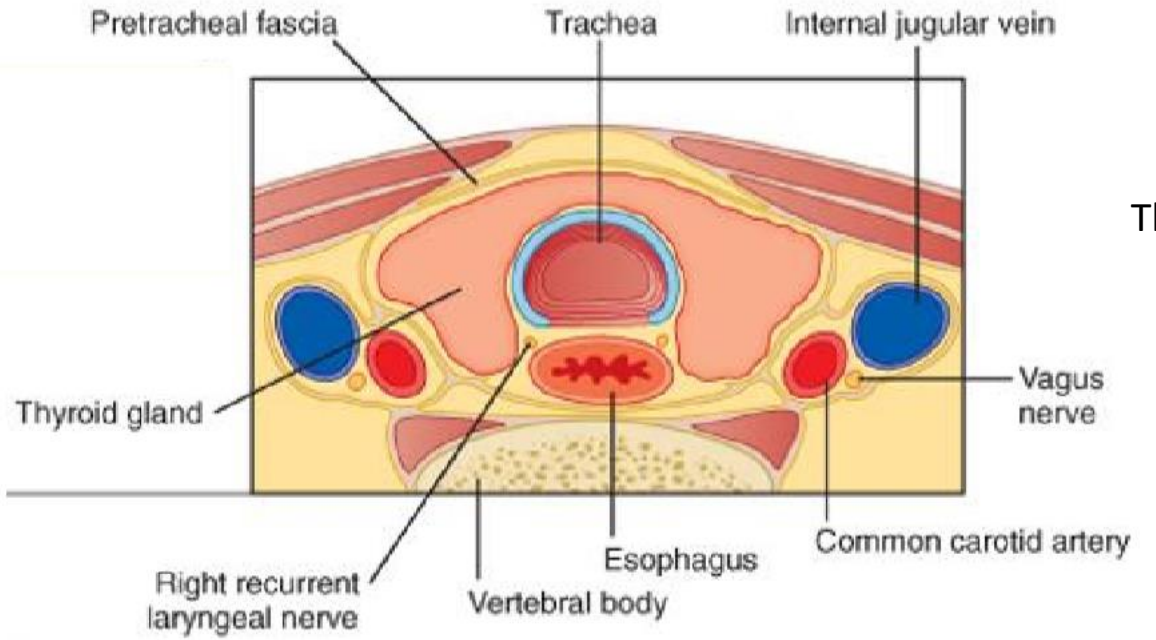


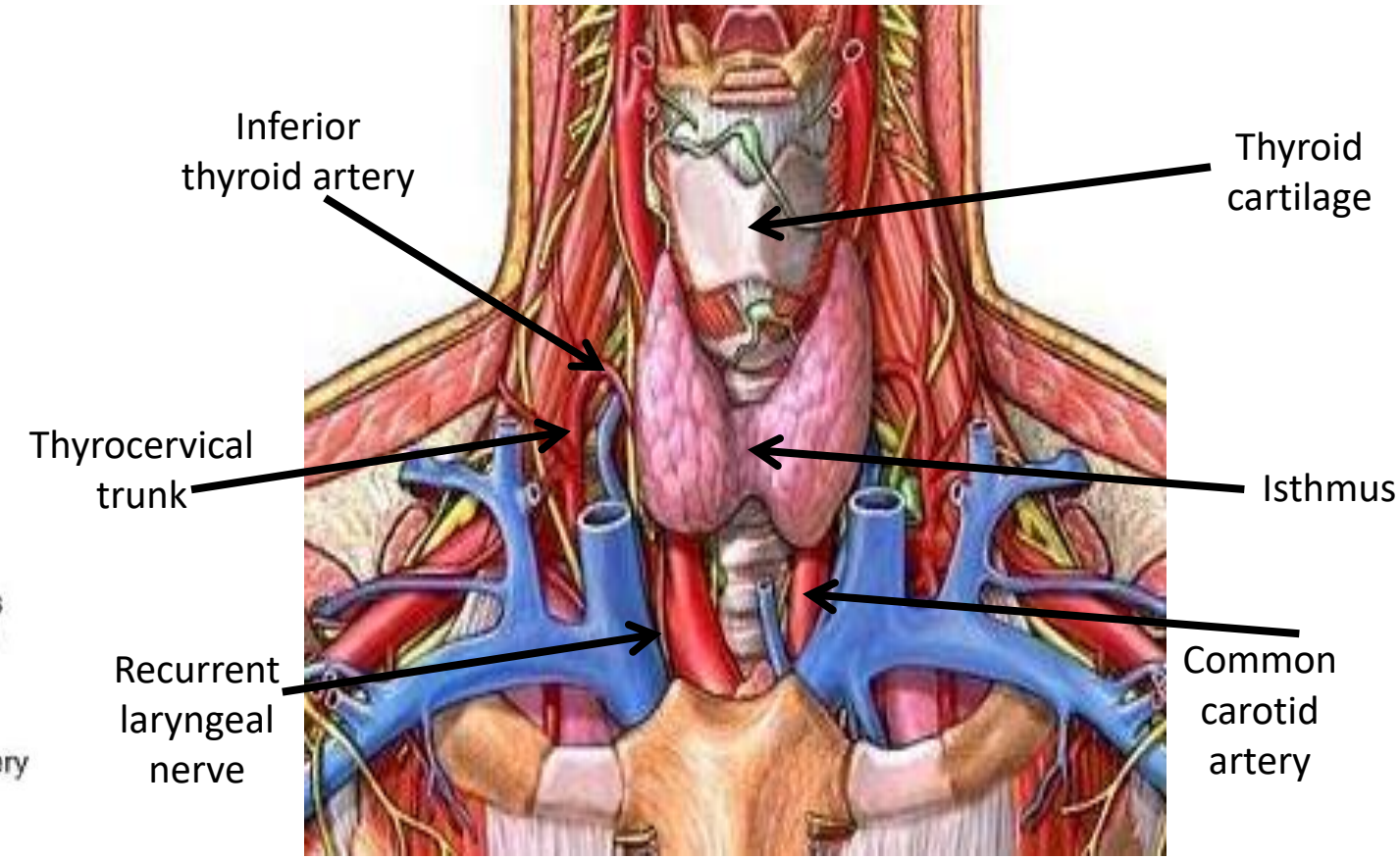
Veins of Thyroid Gland

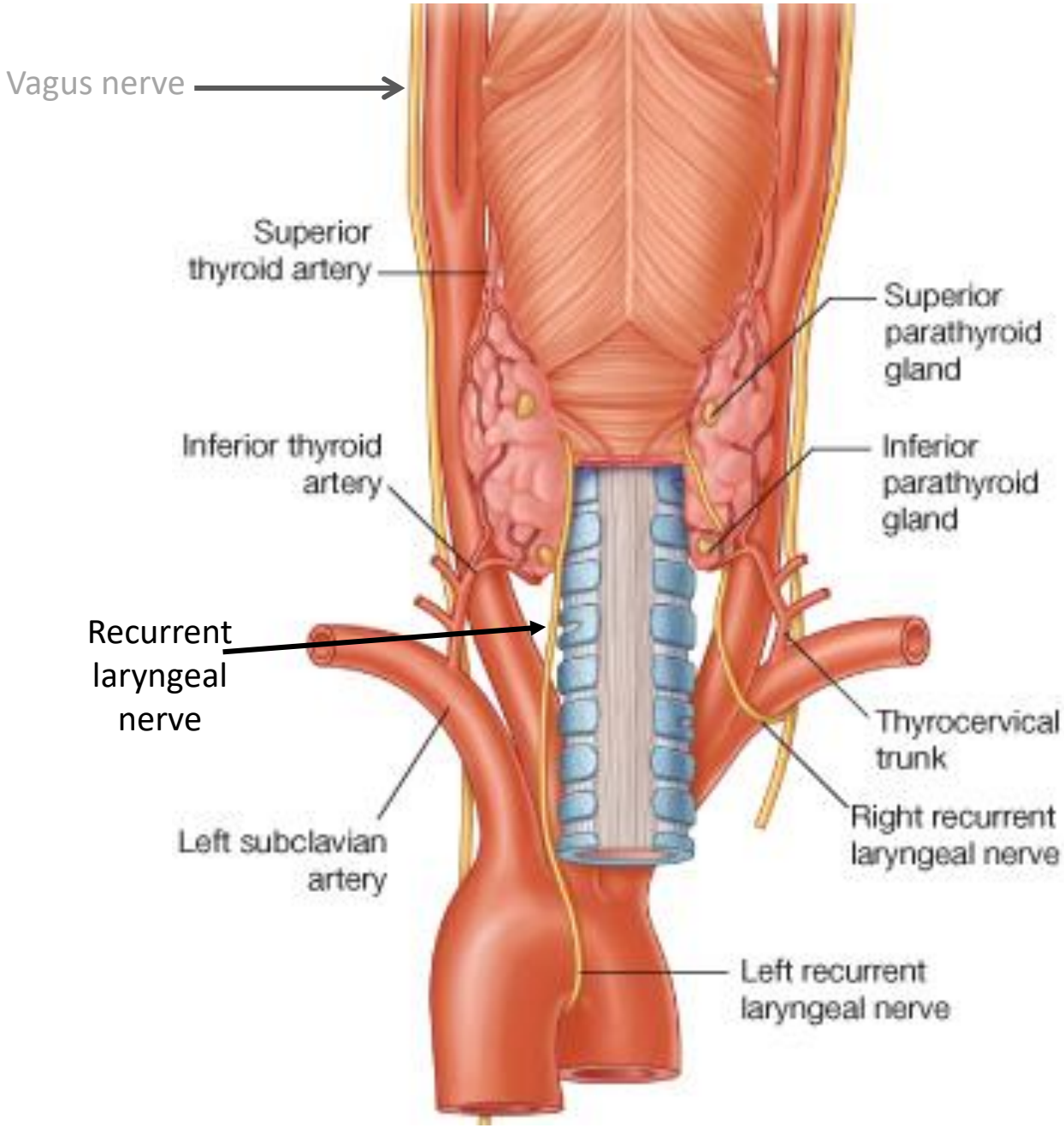
Theory

Vein	*Drains into*
Superior thyroid vein	**internal jugular** vein
Middle thyroid vein	
Inferior thyroid vein	**left brachiocephalic** vein




Pretracheal fascia
Trachea
Internal jugular vein
Thyroid gland
Vagus nerve
Right recurrent laryngeal nerve
Vertebral body
Esophagus
Common carotid artery


Inferior thyroid artery
Thyroid cartilage
Thyrocervical trunk
Isthmus
Recurrent laryngeal nerve
Common carotid artery


Vagus nerve
Superior thyroid artery
Superior parathyroid gland
Inferior thyroid artery
Inferior parathyroid gland
Recurrent laryngeal nerve
Thyrocervical trunk
Right recurrent laryngeal nerve
Left subclavian artery
Left recurrent laryngeal nerve

Clinical Points

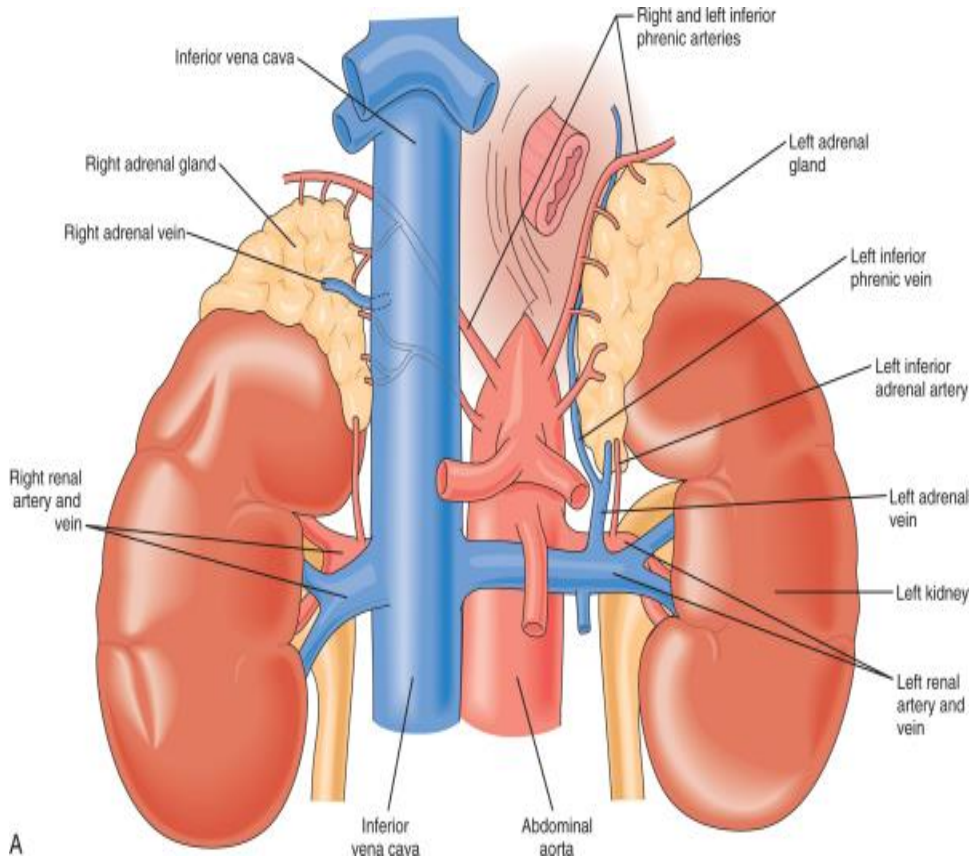
Theory

- When ligating thyroid arteries during thyroidectomy 2 nerves are **at risk**: external laryngeal nerve & recurrent laryngeal nerve.
- Superior thyroid artery on each side is related to the external laryngeal nerve, which supplies the cricothyroid muscle. Damage to external laryngeal nerve results in an inability to tense the vocal folds and hoarseness.
- Inferior thyroid artery is closely associated with the recurrent laryngeal nerve . Damage to recurrent laryngeal nerve results in impaired breathing & speech.
- **Relation** to Recurrent laryngeal nerve:
  - *Medially*: Trachea
  - *Laterally*: common carotid artery
  - *Superior*: thyroid lobe

Adrenal (suprarenal) Glands

Theory

Right Gland		
Notes		The right gland is **pyramid** shaped and caps the upper pole of the right kidney.
Relations	*Anterior*	1. **Right** lobe of liver 2. Inferior vena cava
	Posterior	Diaphragm
	Medial	Celiac plexus and ganglia



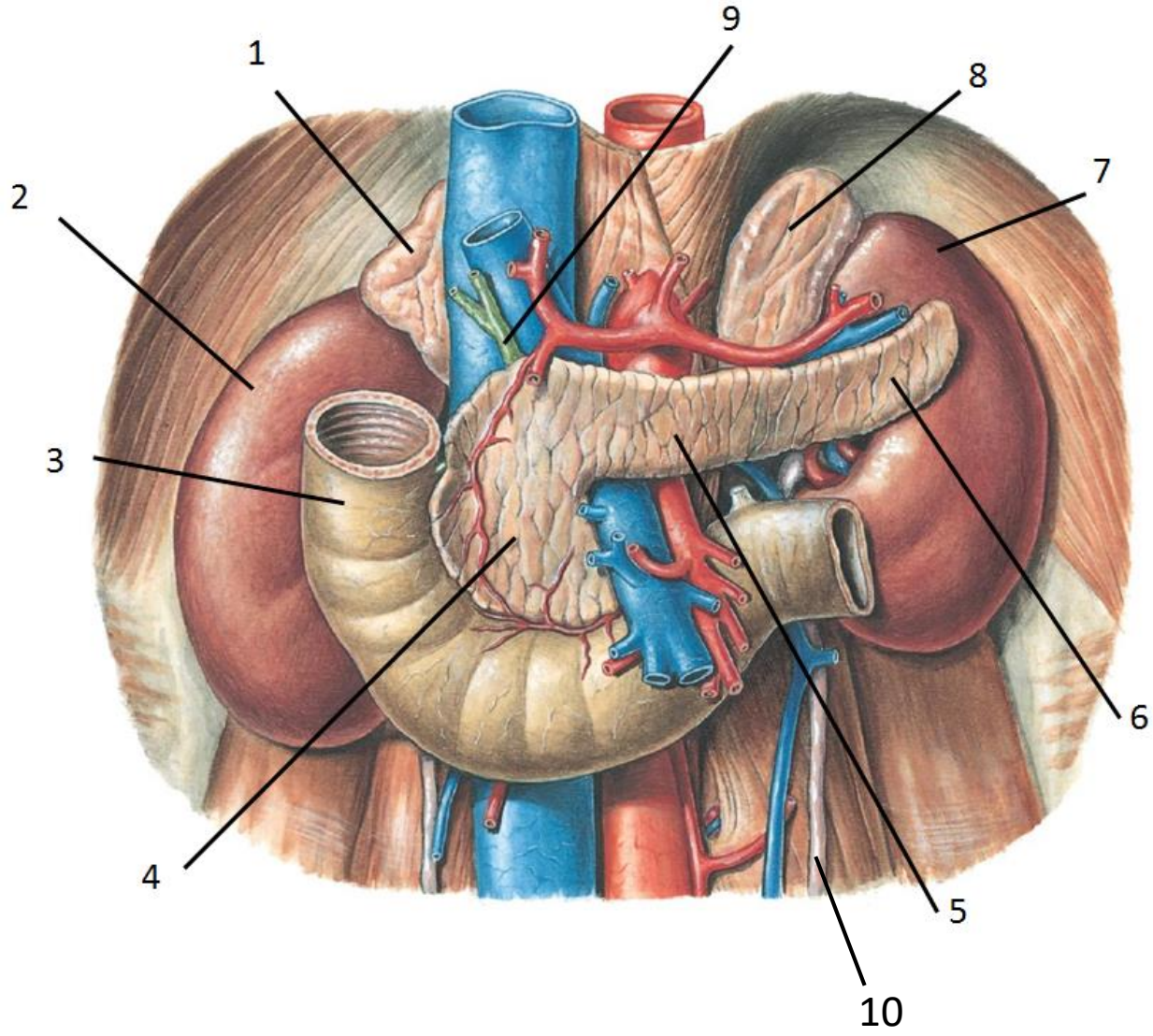
Theory

Left Gland		
Notes		The left gland is **crescentic** in shape and extends along the medial border of the left kidney from the upper pole to the hilus.
Relations	*Anterior*	1. Pancreas 2. Lesser sac 3. Stomach
	Posterior	Diaphragm
	Medial	Celiac plexus and ganglia

*This slide was added by the **female** doctor*
*(the **male** doctor cancelled it)*

Identify:

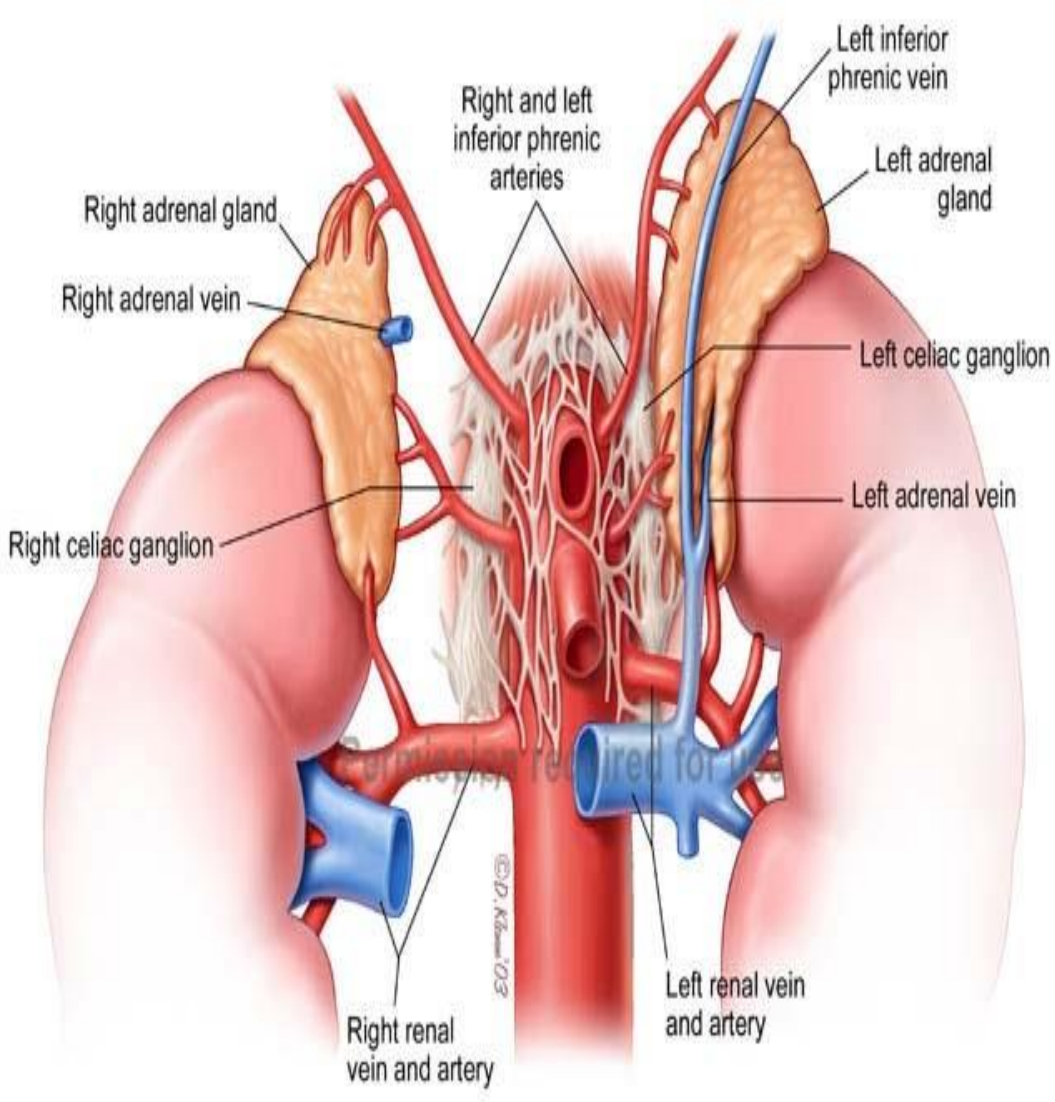
1. Right suprarenal gland
2. Right kidney
3. Duodenum
4. Head of pancreas
5. Neck of pancreas
6. Tail of pancreas
7. Left kidney
8. Left suprarenal gland
9. Common bile duct
10. Left Ureter

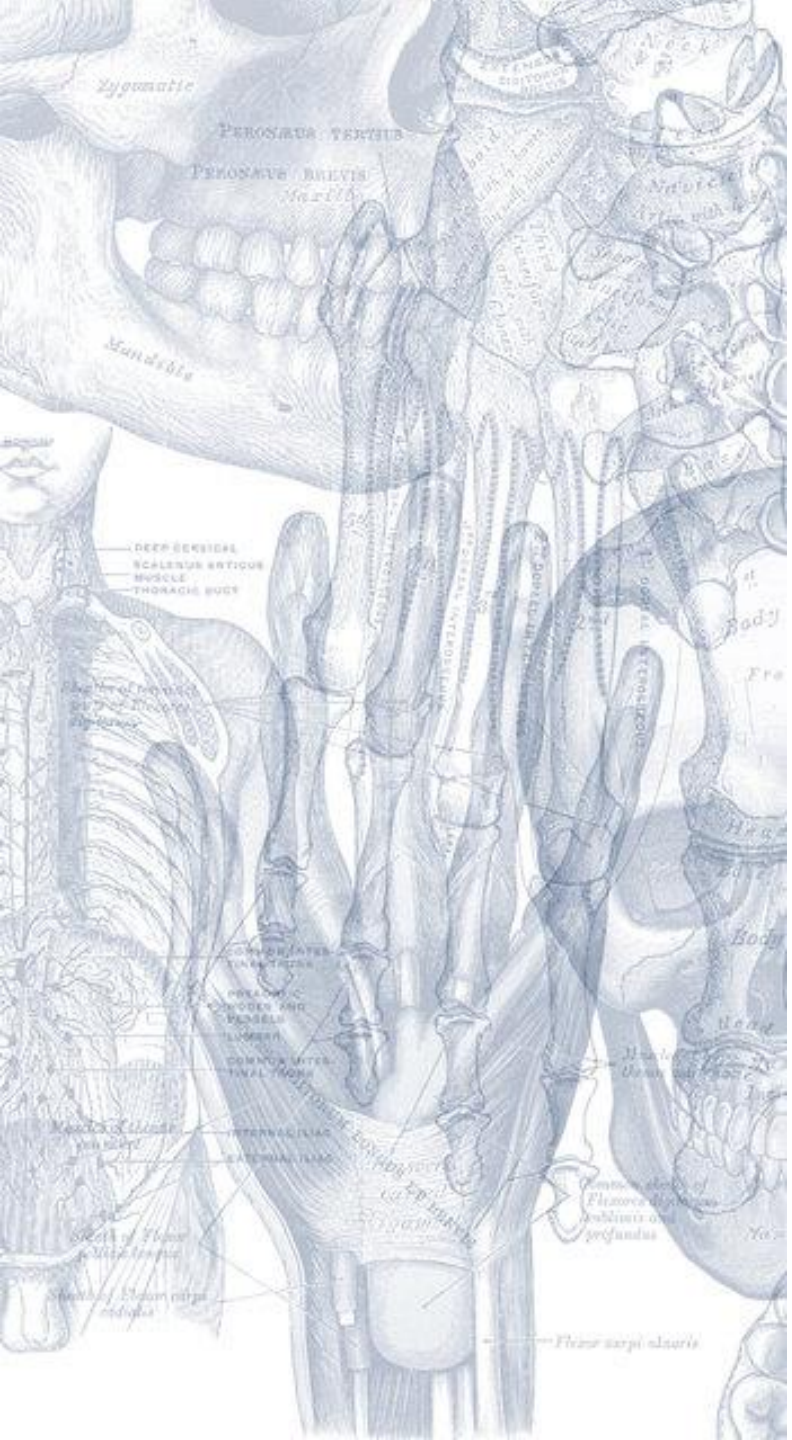


Adrenal (suprarenal) Glands

Theory

Supply	
Arteries	Inferior phrenic → Superior suprarenal artery. Abdominal Aorta → Middle suprarenal artery. Renal artery → Inferior suprarenal artery.
Veins	A single vein emerges from the **hilum** of each gland and drains into: Inferior vena cava on the **right** & Renal vein on the **left**.
Nerves	**Preganglionic sympathetic** fibers derived from the splanchnic nerves. (Most of the nerves end in the medulla of the gland)
Lymphatics	The lymph drains into the lateral aortic nodes.





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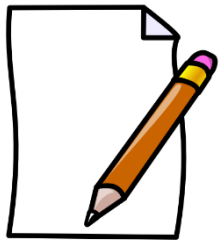

Practice Test

Extra Pictures For Practice

Feedback

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References:

1- Team 435

2- Greys Anatomy for Students