

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ



FINAL | Lab 2

Inguinal Canal

Written by: Waleed Darawad
Qais Alqaisy

Reviewed by: Waleed Darawad

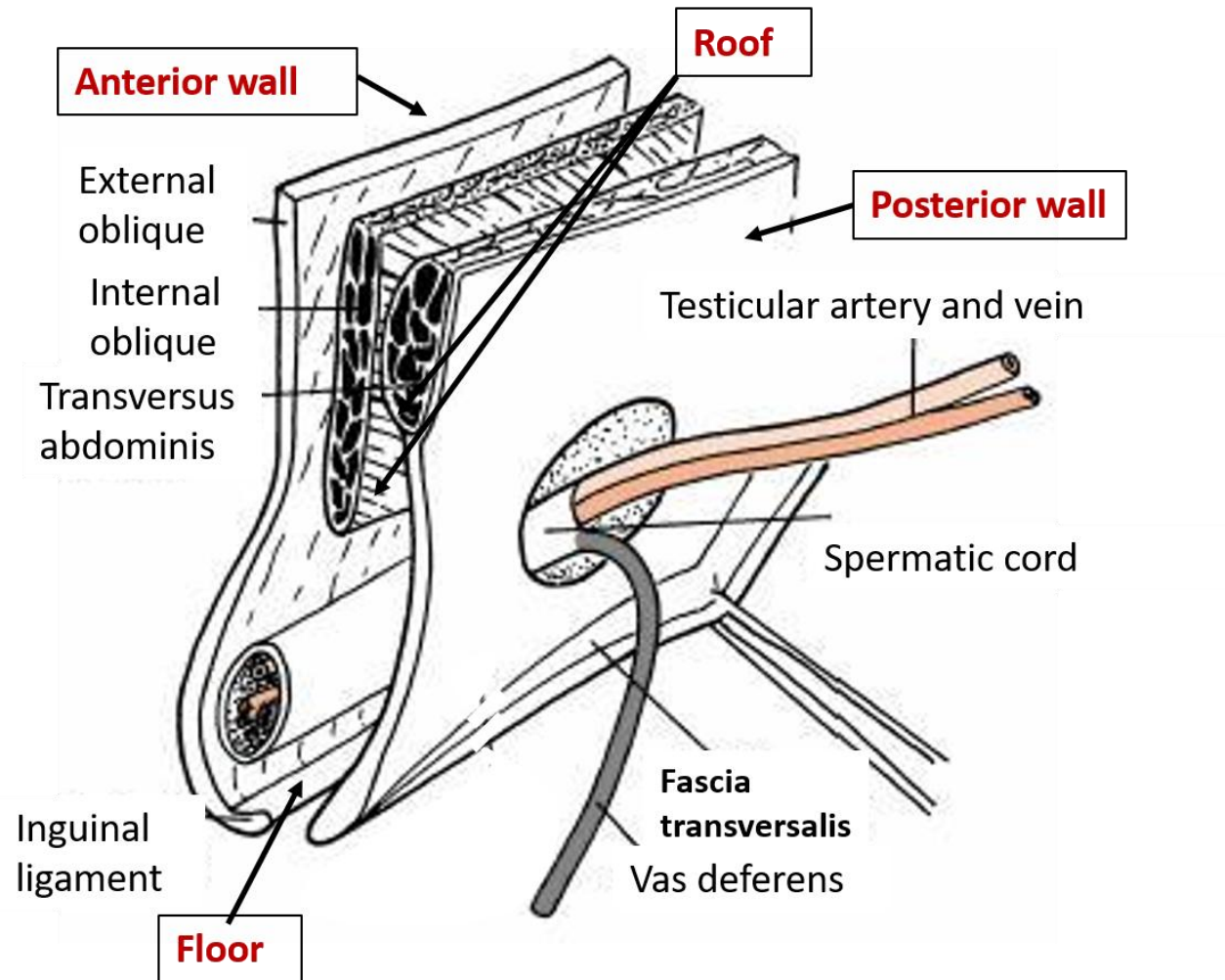


وَإِنْ تَتَوَلَّوْا يَسْتَبَدِلْ قَوْمًا غَيْرَكُمْ ثُمَّ لَا يَكُونُوا أَمْثَلَكُمْ

اللهم استعملنا ولا تستبدلنا



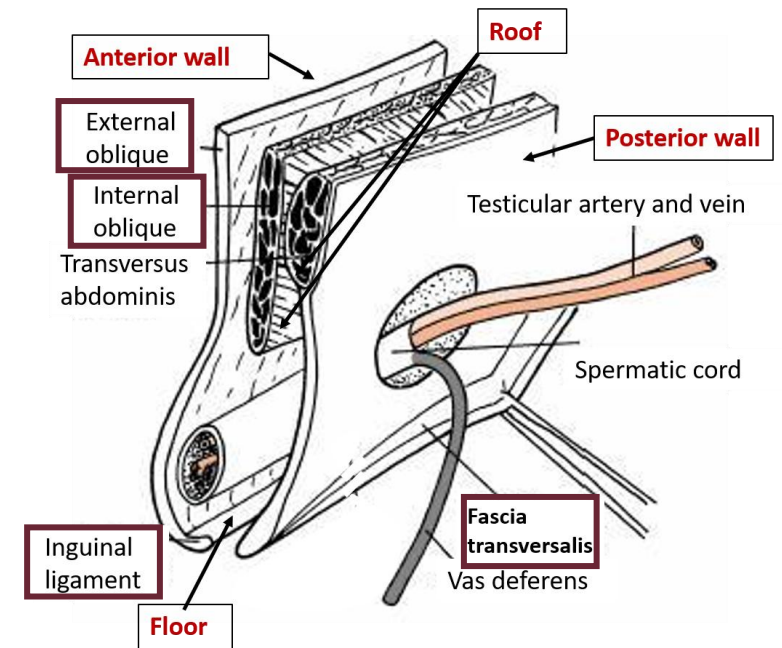
Inguinal Canal



Inguinal Canal

Key boundaries:

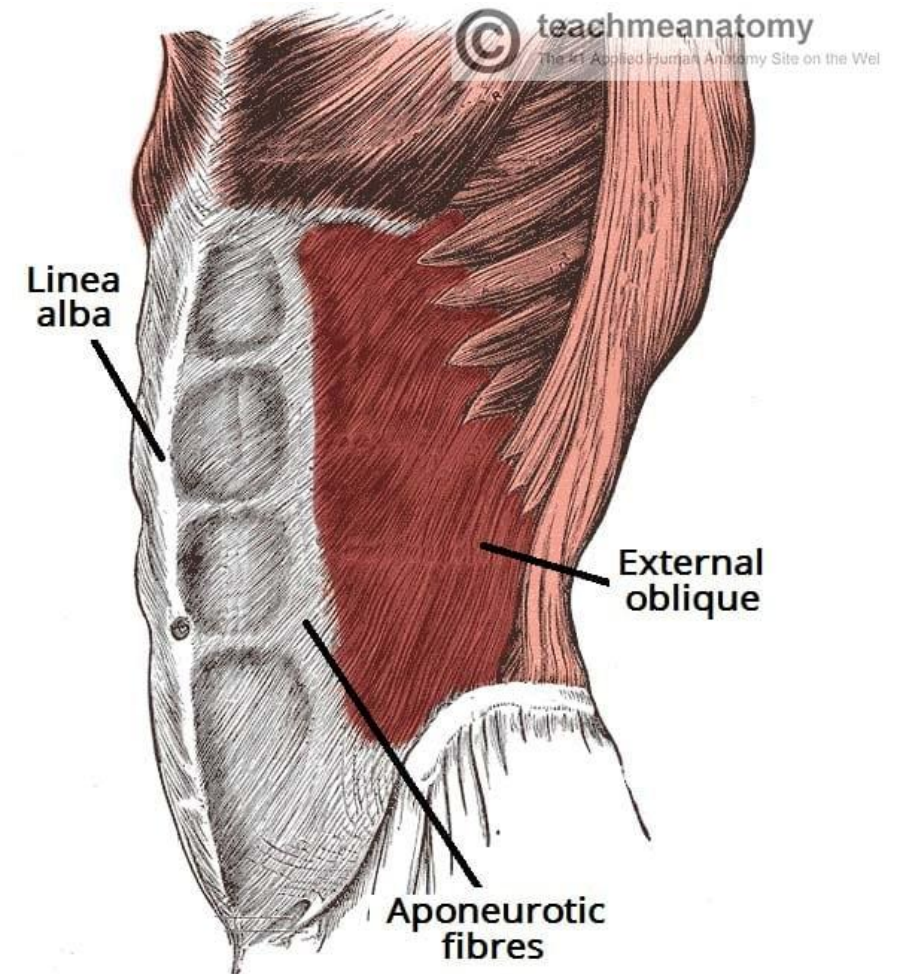
1. Floor: **Inguinal Ligament** and medially, **lacunar ligament**.
2. Roof: Arching fibers of **internal oblique** and **transversus abdominis** muscles.
3. Anterior wall: **aponeurosis of external oblique muscle**.
4. Posterior wall: **transversalis fascia**.
5. Openings: **Deep inguinal ring** in transversalis fascia. **Superficial inguinal ring** in external oblique muscle



Aponeurosis of External oblique

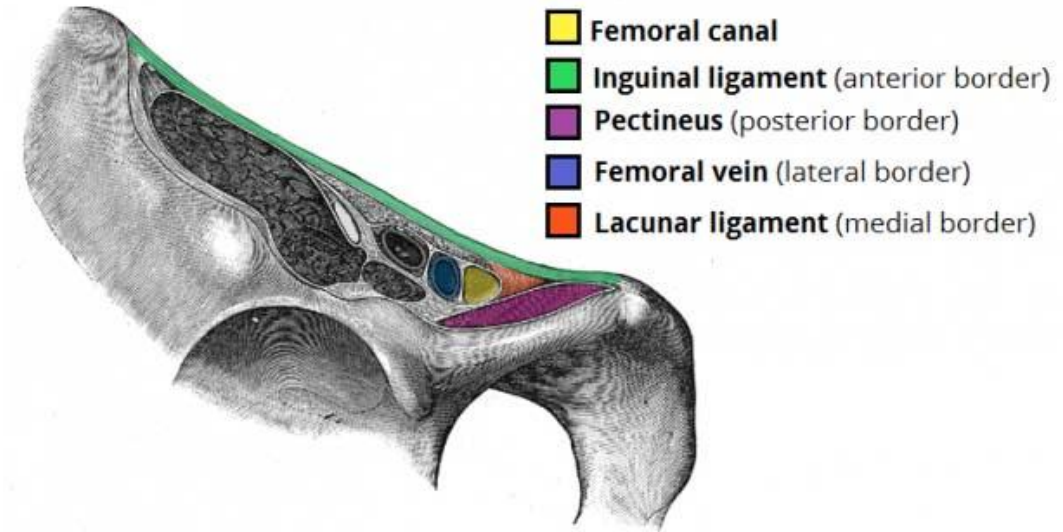
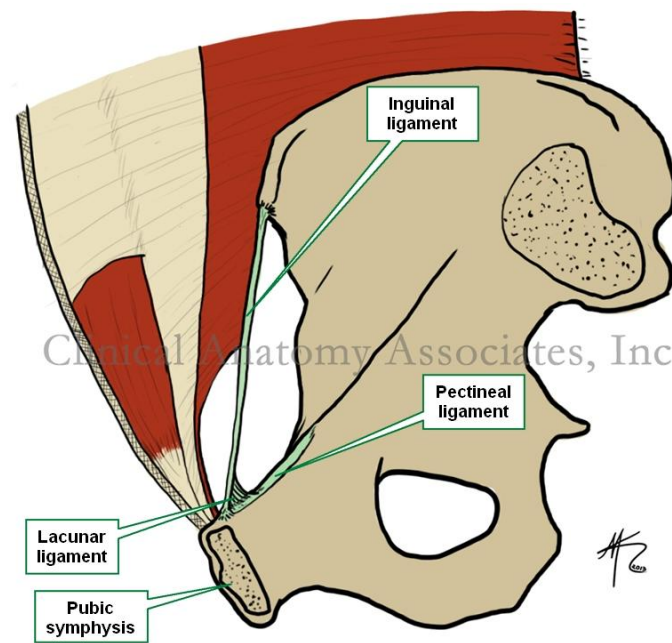
It forms 4 structures:

1. **Inguinal ligament** (between ASIS and Pubic tubercle)
2. **Lacunar ligament** (backward and upward to pectineal line)
3. **Superficial inguinal ring** (above and medial to pubic tubercle)
4. **Pectineal ligament** (continuation of lacunar ligament at pectineal line)



ASIS - Anterior superior iliac spine

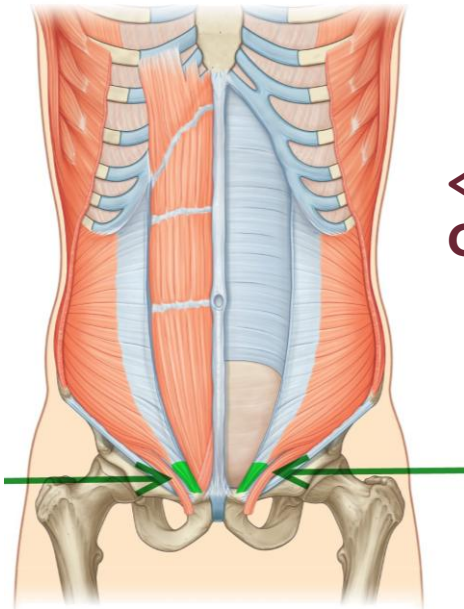
The ligaments



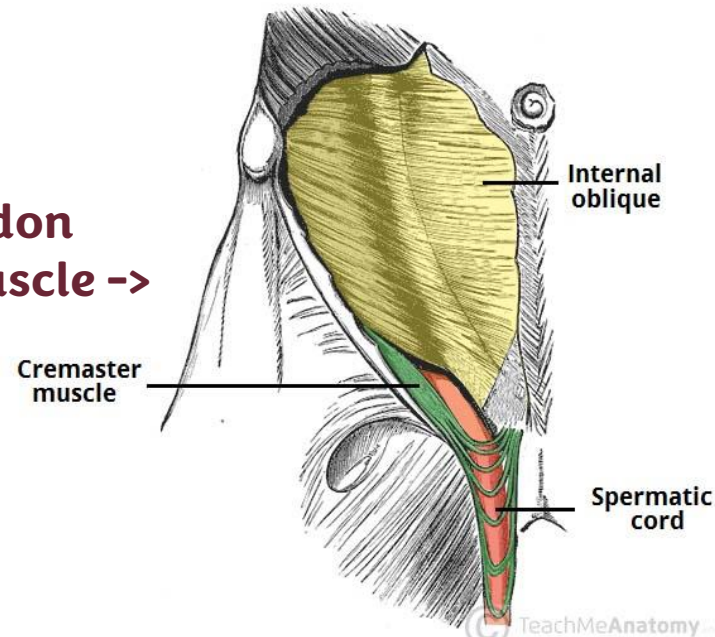
Aponeurosis of internal oblique

It forms 2 structures:

1. **Conjoint tendon** (internal oblique + transversalis abdominis)
2. **Cremasteric fascia**

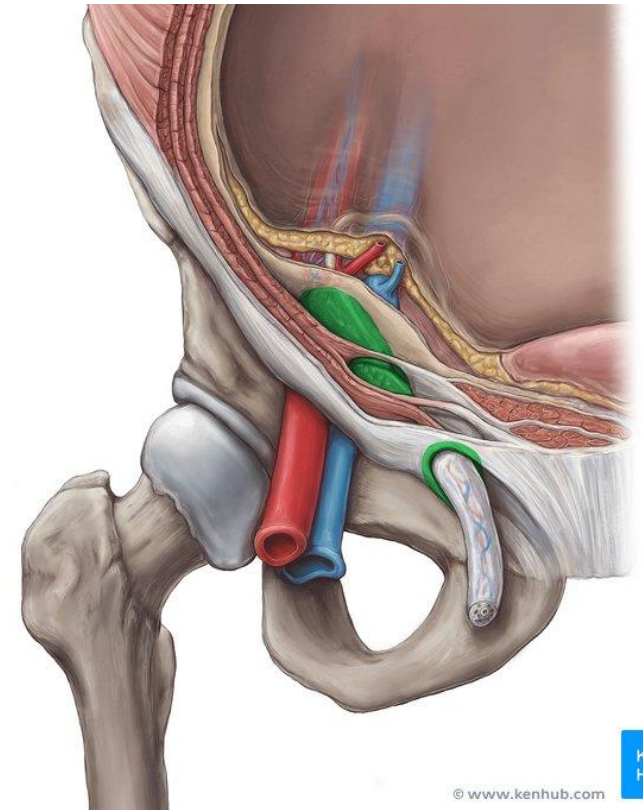


<- Conjoint tendon
Cremasteric muscle ->



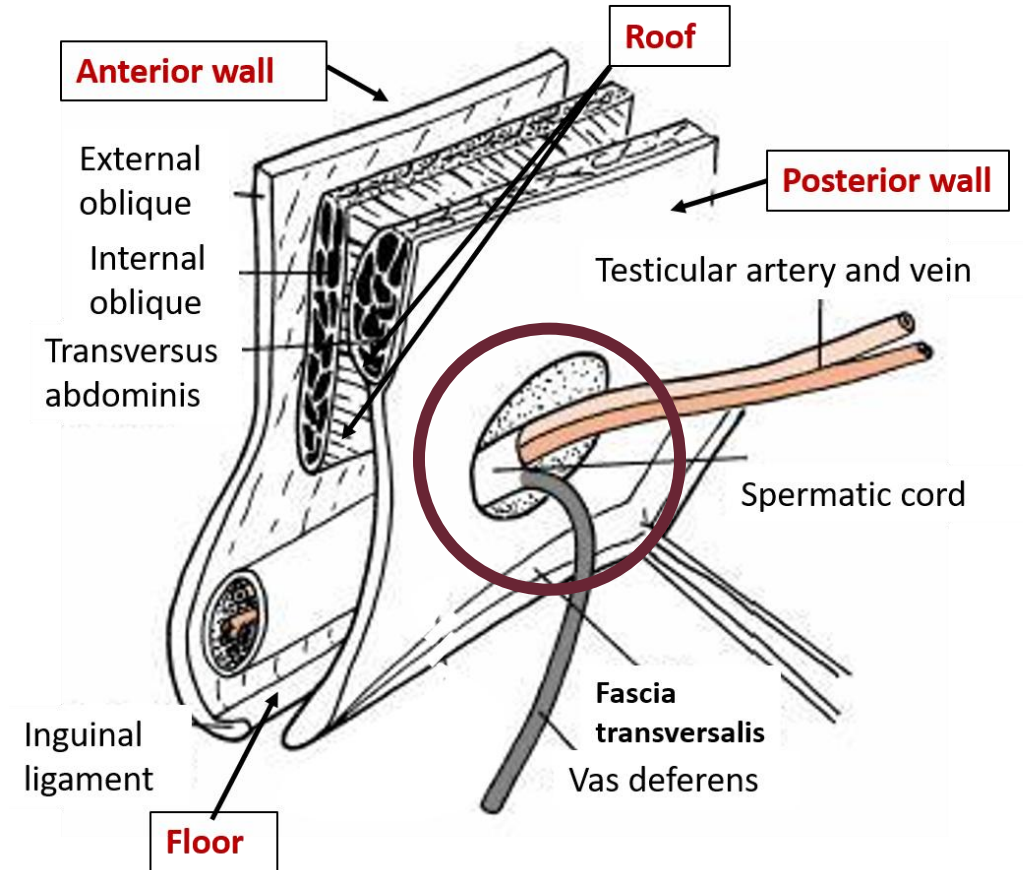
Inguinal Canal

- It is **4cm** long.
- It extends from the deep inguinal ring **downward and medially** to superficial inguinal ring.
- It lies above the inguinal ligament



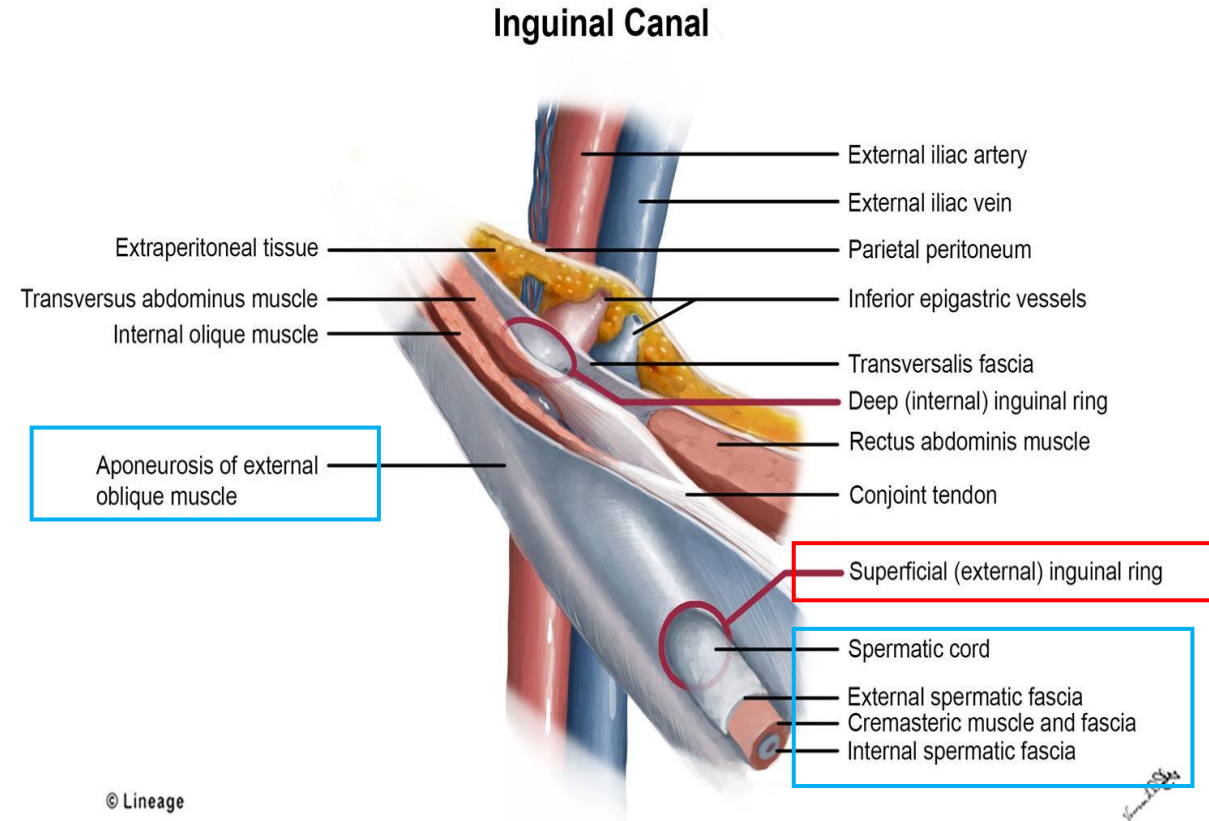
Deep inguinal ring

- Oval opening in fascia transversalis.
- On its edge, it gives attachment to internal spermatic fascia.
- It is 0.5 inch above inguinal ligament.



Superficial Inguinal Ring

- Formed within a triangular defect in external oblique aponeurosis.
- Attachment: external spermatic fascia.

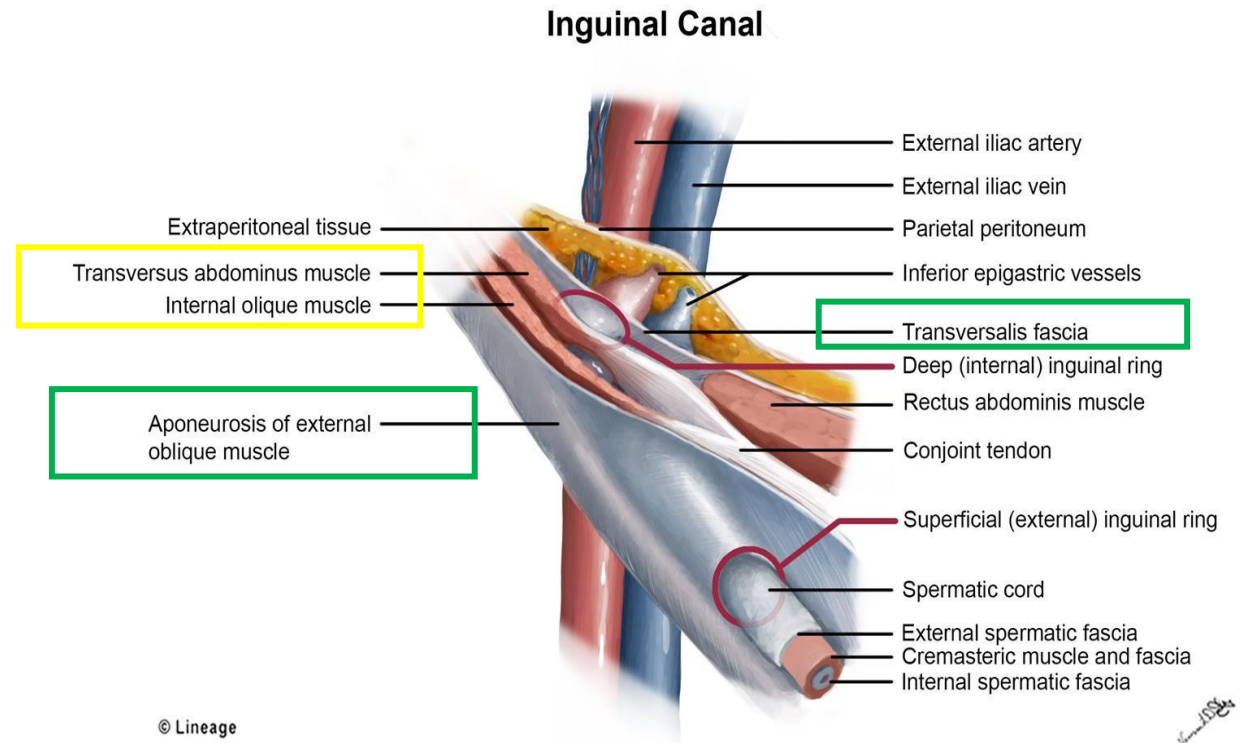




Aponeurosis of external oblique muscle

Boundaries of Inguinal Canal

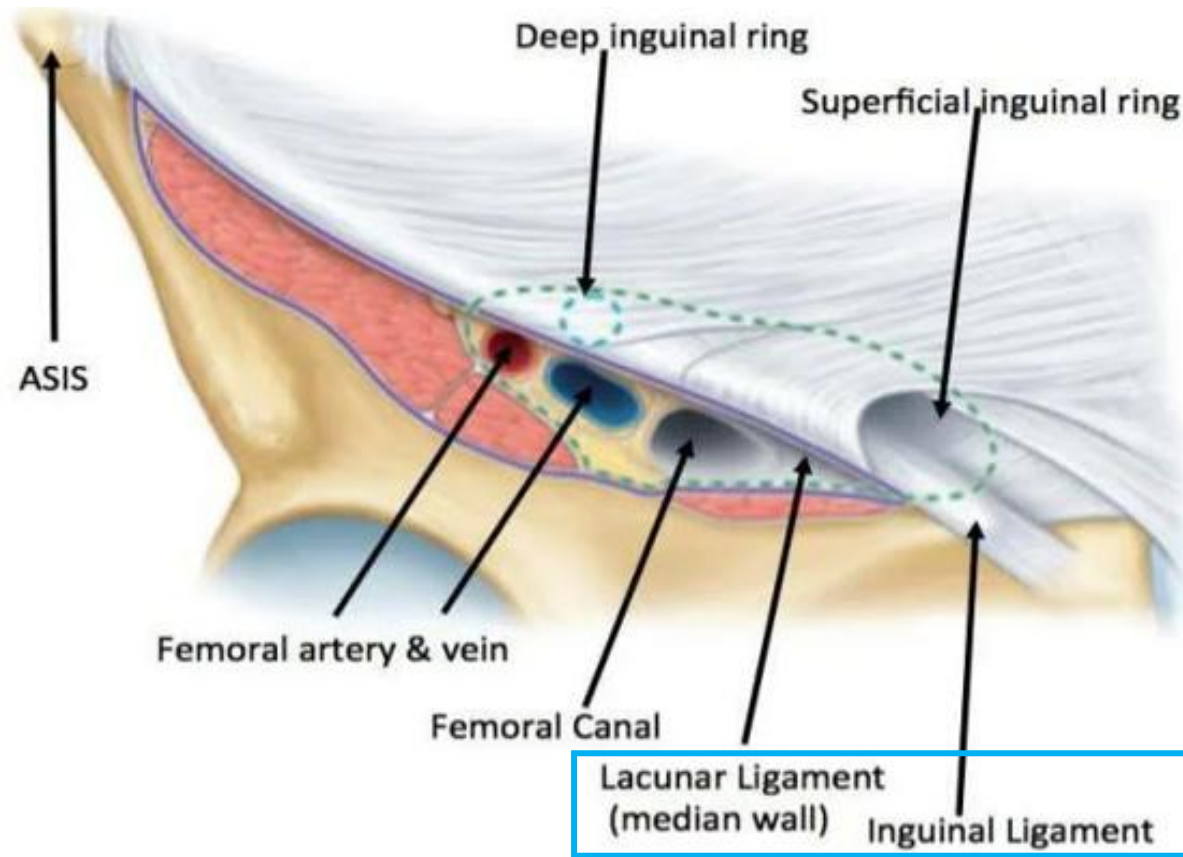
- **Anterior wall:** External Oblique Aponeurosis.
- **Posterior wall:** Fascia Transversalis.



Continue to next slide

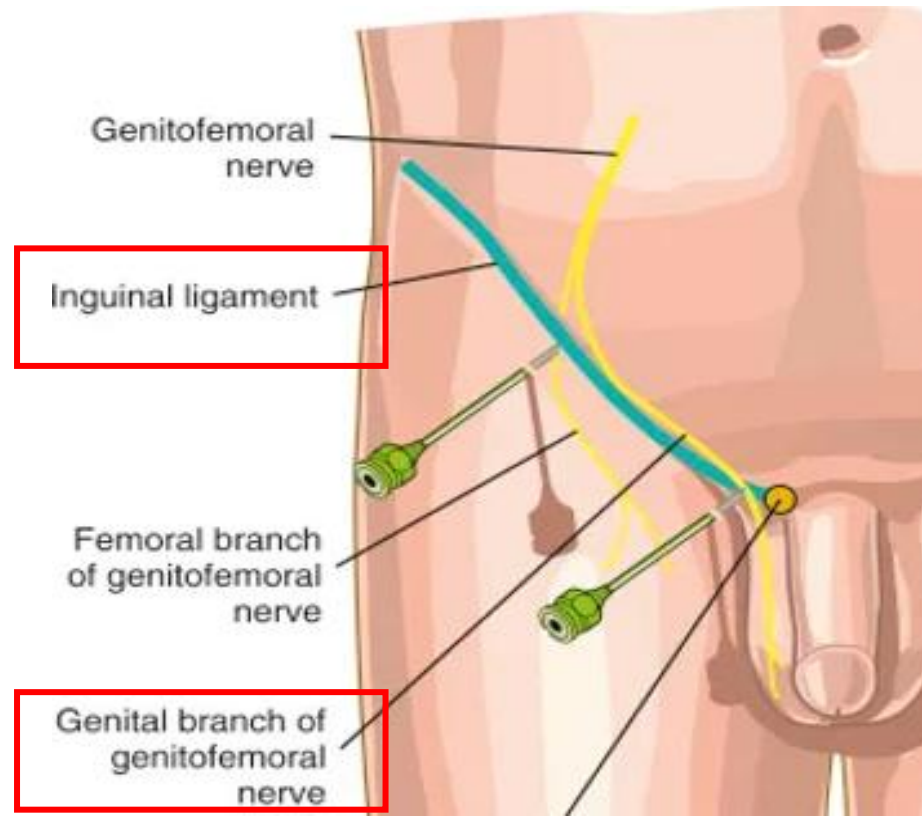
Boundaries of Inguinal Canal

- **Floor:** Inguinal Ligament & Lacunar Ligament.
- **Roof:** Internal Oblique & Transversus Abdominis. (in yellow box previous slide).



Contents of Inguinal Canal

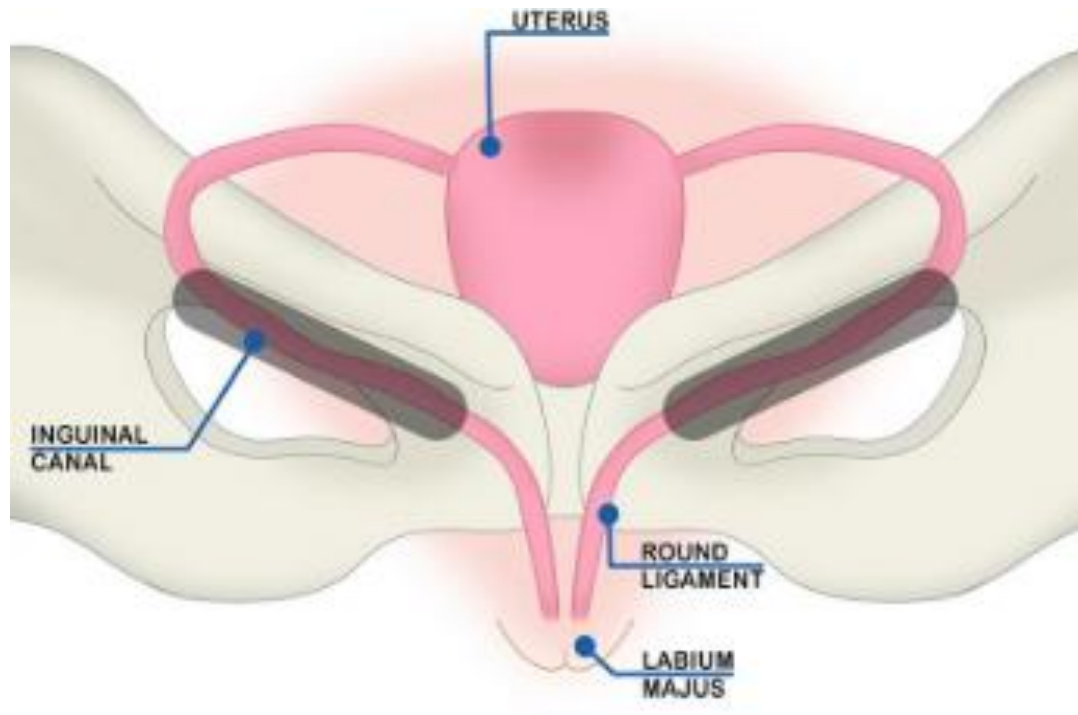
1. Genital branch of genitofemoral nerve.
2. Ilioinguinal nerve (enters through posterior wall).



Continue to next slide

Contents of Inguinal Canal

3. Spermatic cord (**males**)/ Round Ligament (**females**).



(Females)

Inguinal Hernia

Inguinal Hernia		
	Direct	Indirect
Age	Common on old	young
Bilaterally	Usually bilateral	unilateral
Shape	Hemispherical	Oval
Reaches scrotum	never	Can reach the scrotum
Direction of descent	Forwards	Downwards , forwards medially
Reduction	backward	Upward, backward laterally
Relation to inf. epigastric art.	Medially	Laterally
Superficial inguinal ring test	Feel impulse on the side finger	Feel an impulse on the tip of the finger
Deep ring test Reduction of hernia, put thumb over deep ring, ask patient to cough	Hernia appears	Hernia does not appear
Coverings	1- Lat. To lat. Umbilical lig Same as indirection 2. Med. To lat	Skin, superficial fascia, Ex.sp.fascia, cremastic muscle & fascia. Int spermatic fascia

The doctor refers to this table in the last lecture of mid exam material, too. (6th lec). The table was cropped too :(

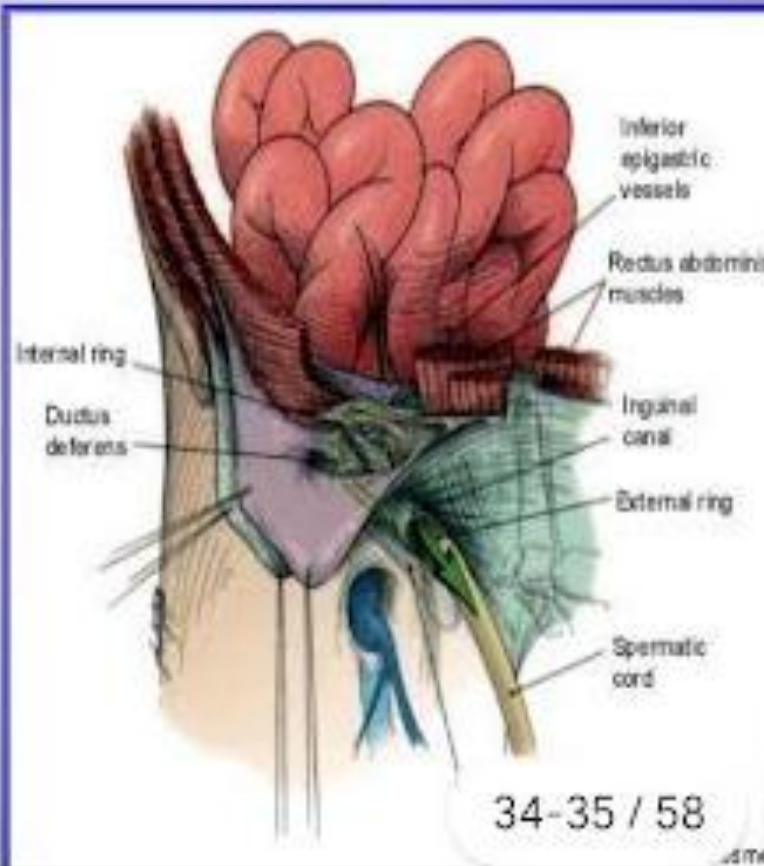
Inguinal Hernia: Direct vs Indirect.

From doctor's mid material slides (6th lec)

Direct Hernia Route

Note:

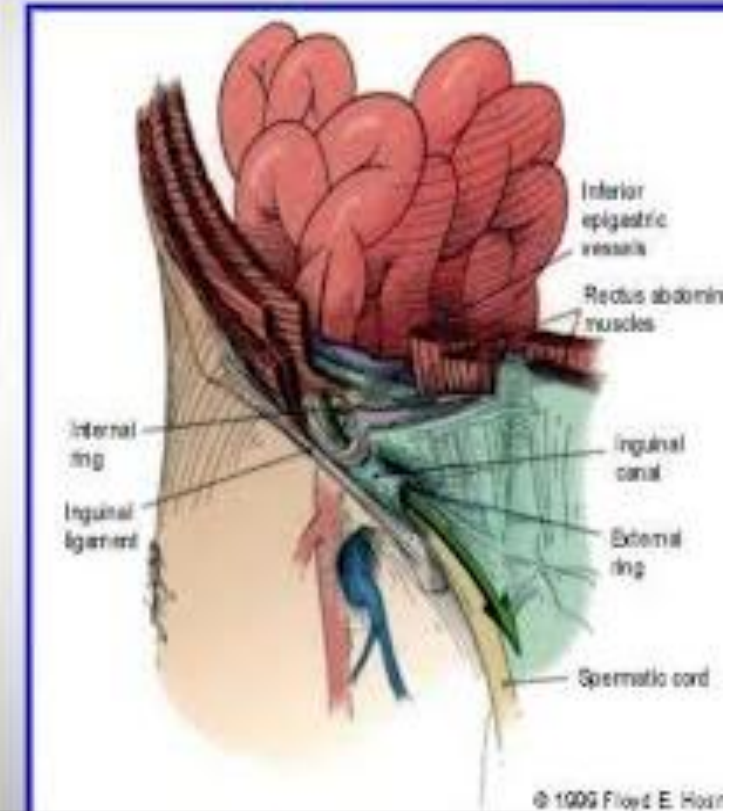
The hernia sac passes directly through inguinal triangle and may disrupt the floor of the inguinal canal.



Indirect Hernia Route

Note:

The hernia sac passes outside the boundaries of Hesselbach's triangle (inguinal triangle) and follows the course of the spermatic cord.



For any feedback, scan the code or click on it.



Corrections from previous versions:

Versions	Slide # and Place of Error	Before Correction	After Correction
V0 → V1			
V1 → V2			

رسالة من الفريق العلمي:



فكل كائنٍ على الدنيا زائل، والدنيا زخارف مصيرها الزوال
والمؤمن الفطن الذي لا تغرّه الفانية حين يوقن بالباقية، يدّخر له ما يجده
في يوم لا ينفعه إلا عمله بعد رحمة الله..

اللهم لا تجعل الدنيا أكبر همنا، واجعل الدنيا في أيدينا ولا تجعلها في
قلوبنا