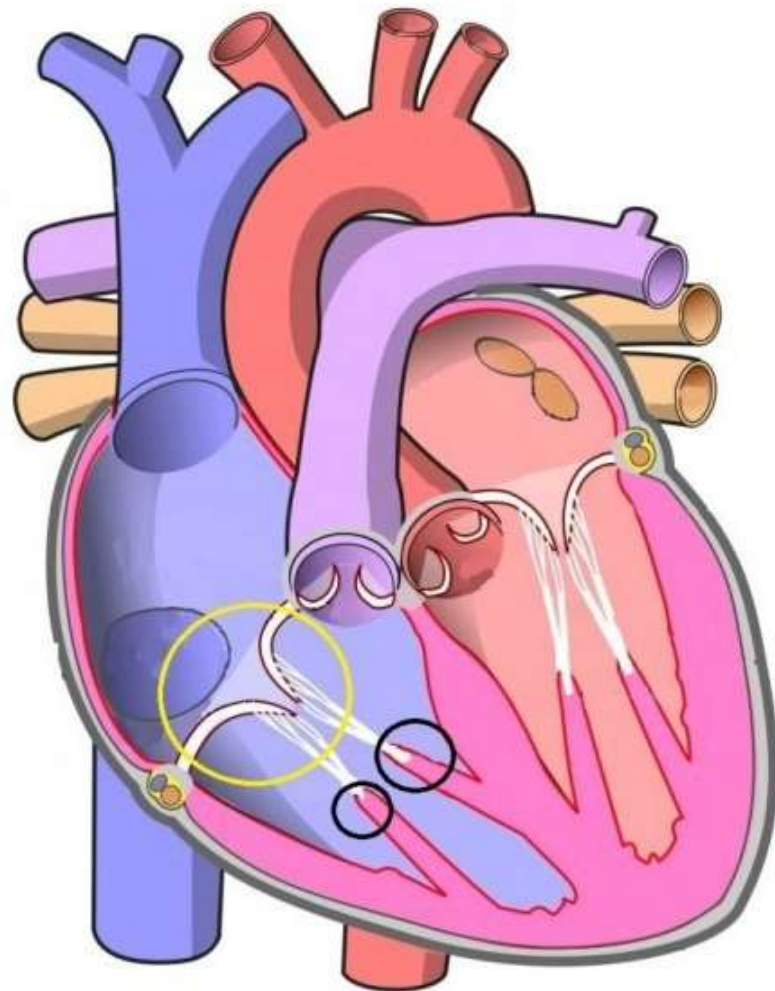


ANATOMIYA

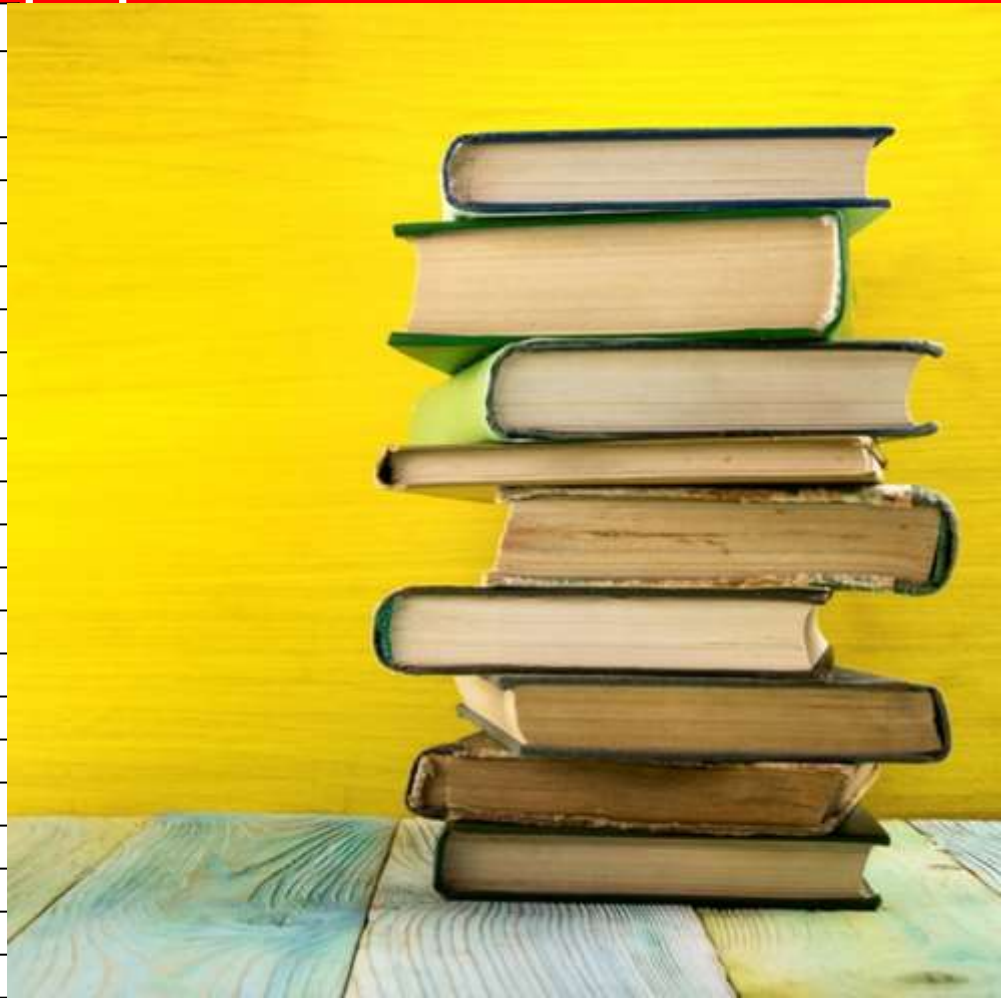
Angiologiya

Dars 1



Anatomik qisqartmalar

<i>Singularis</i>		<i>Pluralis</i>	
<i>qisqartma</i>	<i>To'liq formasi</i>	<i>qisqartma</i>	<i>To'liq formasi</i>
<i>A.</i>	arteria	<i>Aa.</i>	arteriae
<i>B.</i>	bursa	<i>Bb.</i>	bursae
<i>Fasc.</i>	fasciculus	<i>Fascc.</i>	fasciculi
<i>For.</i>	foramen	<i>Forr.</i>	foramina
<i>Gangl.</i>	ganglion	<i>Gangll.</i>	ganglia
<i>Gl.</i>	glandula	<i>Gll.</i>	glandulae
<i>Lam.</i>	lamina	<i>Lamm.</i>	laminae
<i>Lig.</i>	ligamentum	<i>Ligg.</i>	ligamenta
<i>M.</i>	musculus	<i>Mm.</i>	musculi
<i>N.</i>	nervus	<i>Nn.</i>	nervi
<i>Nucl.</i>	nucleus	<i>Nucll.</i>	nuclei
<i>R.</i>	ramus	<i>Rr.</i>	rami
<i>Reg.</i>	regio	<i>Regg.</i>	regiones
<i>Seg.</i>	segmentum	<i>Segg.</i>	segmenta
<i>Sul.</i>	sulcus	<i>Sull.</i>	sulci
<i>Sut.</i>	sutura	<i>Sutt.</i>	suturae
<i>Tr.</i>	tractus	<i>Trr.</i>	tractus
<i>Tun.</i>	tunica	<i>Tunn.</i>	tunicae
<i>V.</i>	vena	<i>Vv.</i>	venae
<i>Vag.</i>	vagina	<i>Vagg.</i>	vaginae



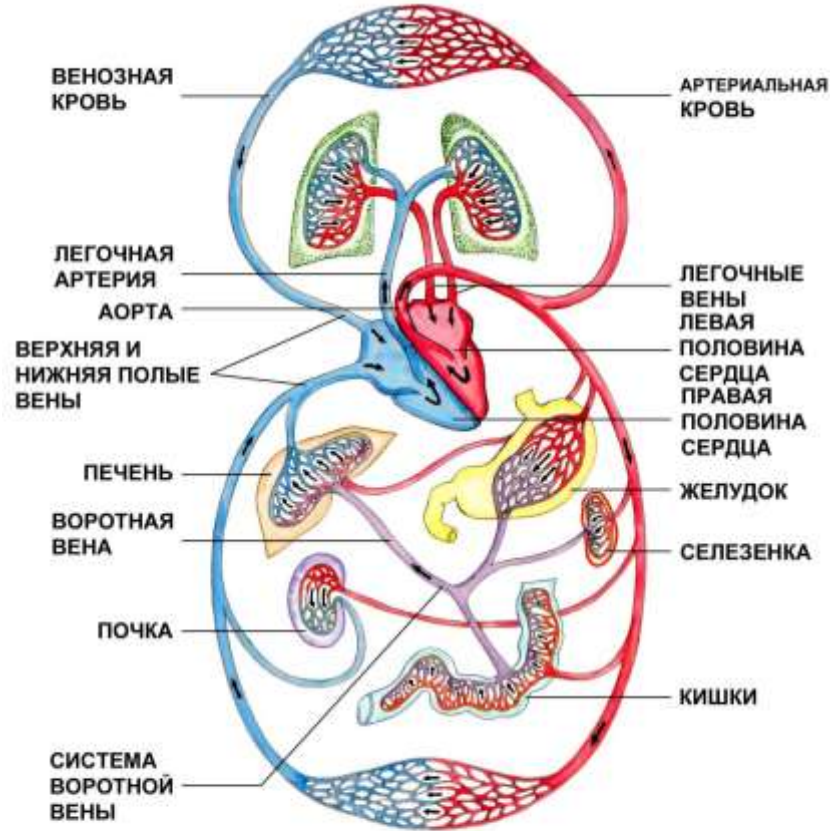
Angiologiya

□ **Angiologiya** (angio-tomir, logos- ta'limot).

➤ **Systema sanguineum** (qon aylanish sistemasi)

➤ **Systema lymphaticum** (limfa sistemasi)

- ✓ **Cor**
- ✓ **Arteriae**
- ✓ **Arteriolae**
- ✓ **Precapillare**
- ✓ **Postcapillare**
- ✓ **Venulae**
- ✓ **Venae**
- ✓ **Cor**



Angiologiya

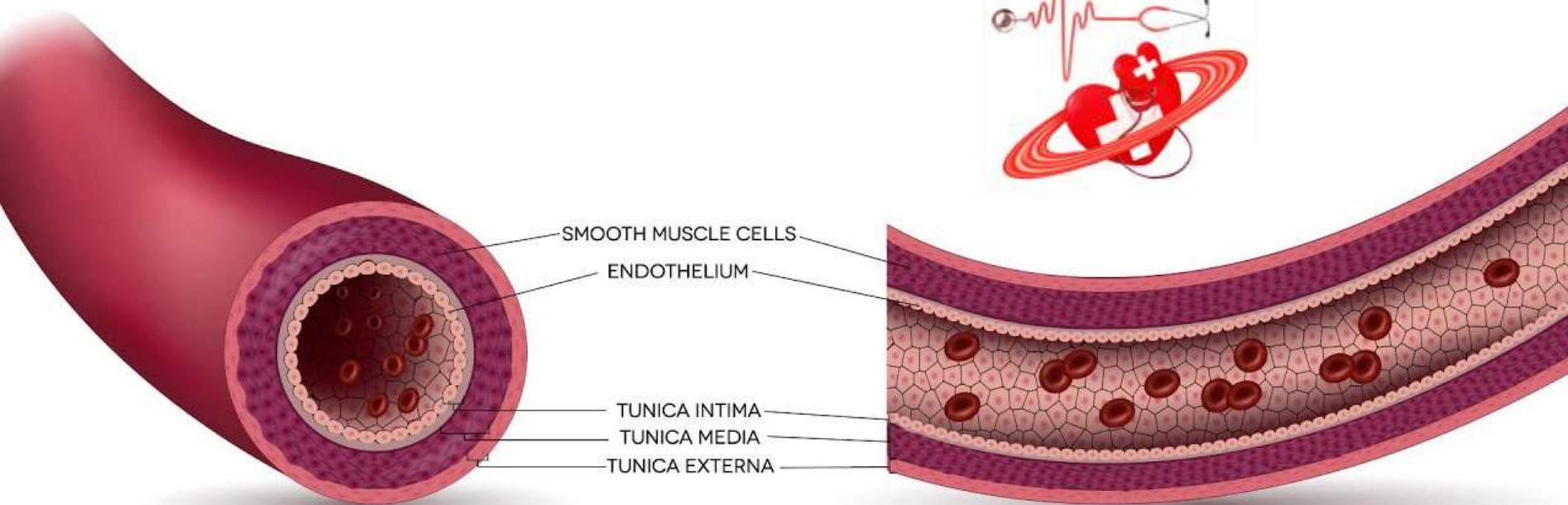
❑ **Tomir devorlari** (arteriya, vena, limfa)

✓ **Tunica intima** (endoteliy dan ib.)

✓ **Tunica media** (sirkulyar muskullar dan ib.)

✓ **Tunica externa** (kollagen va elastik tolalardan ib.)

❑ **Note!** o'xshashliklardan tashqari farqlar ham bor:
arteriya q.t.lar devori qalinroq, shuningdek yirik
venalarda qonni faqat bir tomonga harakatini
ta'minlaydigan **klapanlar** bo'ladi.



Angiologiya

❑ Qon aylanish sistemasi

✓ Kichik qon aylanish sistemasi

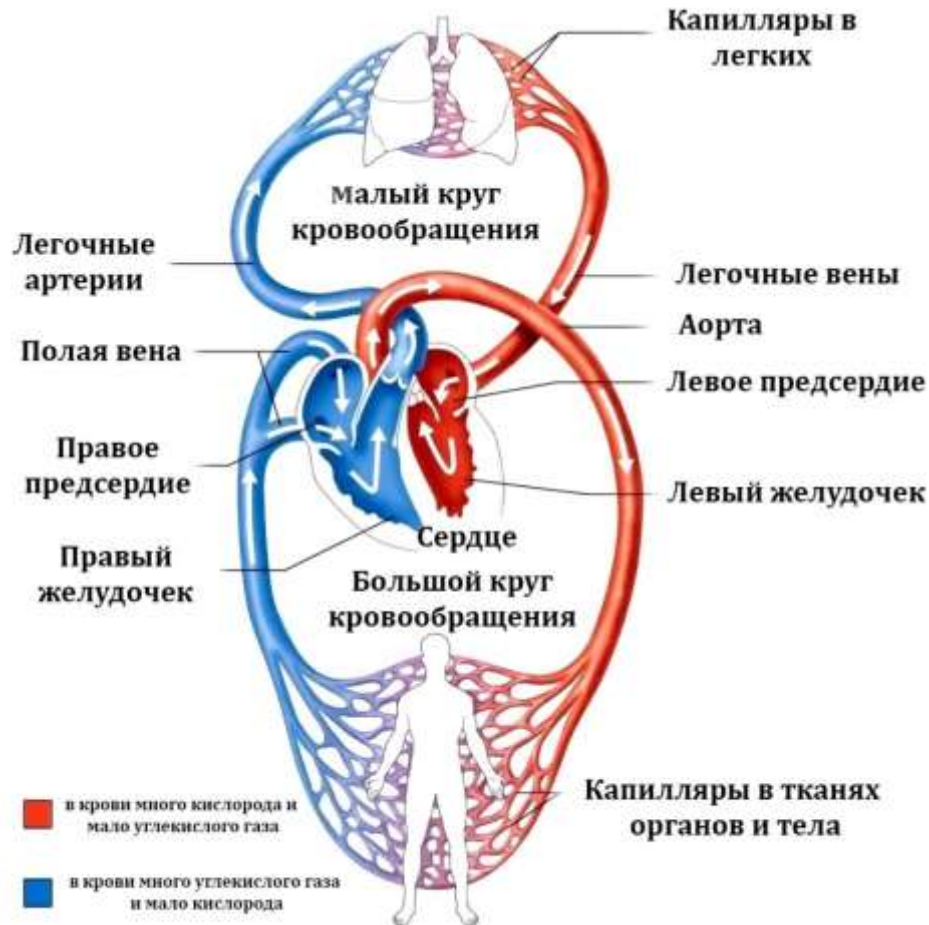
(circulus sanguinis minor)

✓ Katta qon aylanish sistemasi

(circulus sanguinis major)

✓ Yurakning xususiy qon aylanish sistemasi

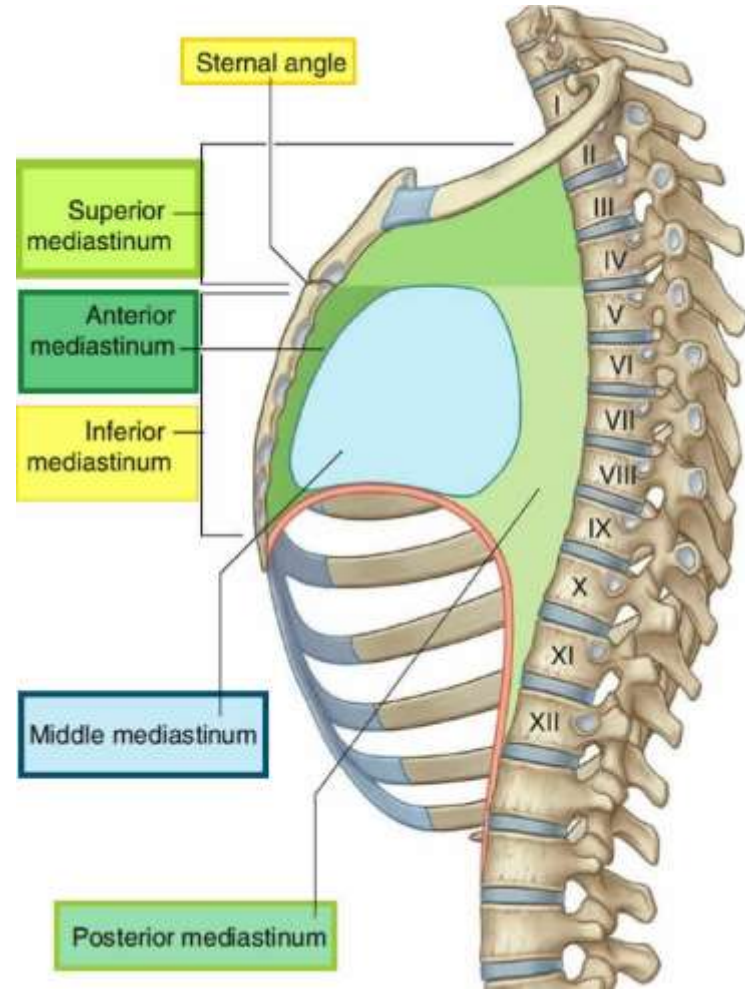
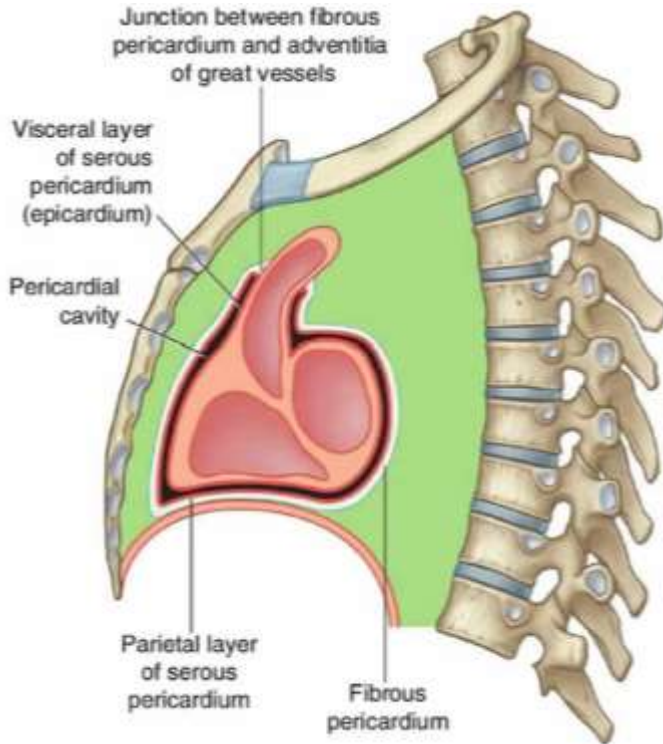
(circulus cardiaca propria)



Cor (grek. Cardia)

❑ Golotopiya

❖ Pastki ko'ks oralig'ining o'rta qismida



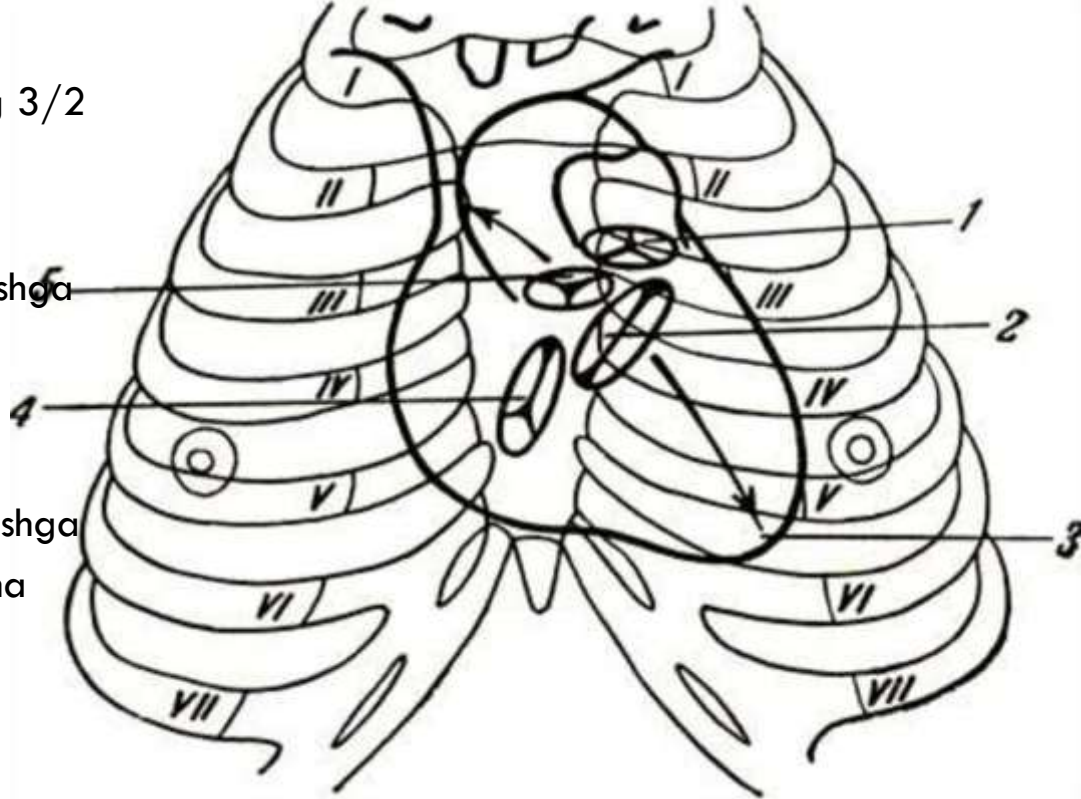
Cor (grek. Cardia)

❑ Skeletotopiya

➤ **Linea mediana anterior** bo'yicha yurakning 3/2 qismi chap tomonda, 3/1 qismi o'ng tomonda.

➤ **Yurakning o'ng bo'lagi** 3-qovurg'aning to'shga birikish sohasidan boshlanib, 5- qovurg'agacha davom etadi va chapga pastga tomon buriladi.

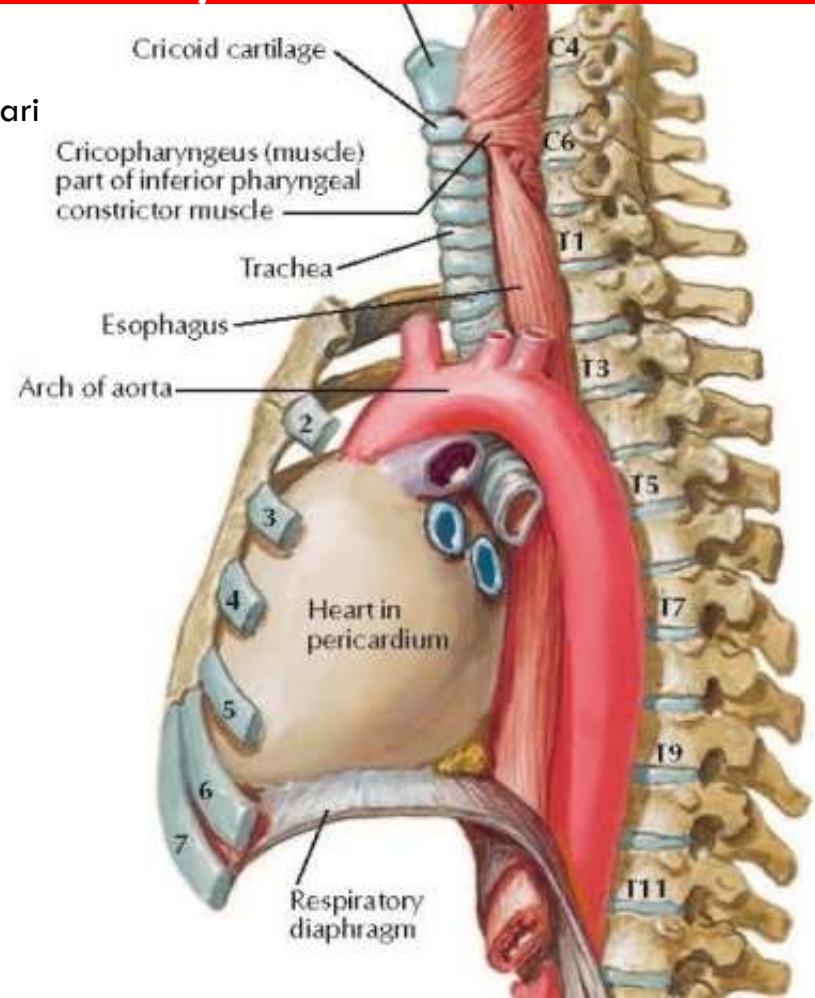
➤ **Yurakning chap bo'lagi** 3-qovurg'aning to'shga birikish sohasidan boshlanib, 5-6- qovurg'agacha davom etadi va linea medioclavicularis sinistra soxasida apex qism bo'lib tugaydi.



Cor (grek. Cardia)

❑ Sintopiya

- **Oldidan** – to'sh suyagi va unga birikkan qovurg'a tog'ay qismlari
- **Orqadan** – qizilo'ngacha va aortaning tushuvchi qismi
- **Pastdan** – diafragma
- **Yondan** – o'pkalar



Cor (grek. Cardia)

- Katta yoshli insonlarda uzunligi 12-15 sm, ko'ndalangiga 8-11 sm, qalinligi 6-8 sm
- Og'irligi 220-300 g

➤ Qismlari:

Basis

Apex

➤ Quloqlar

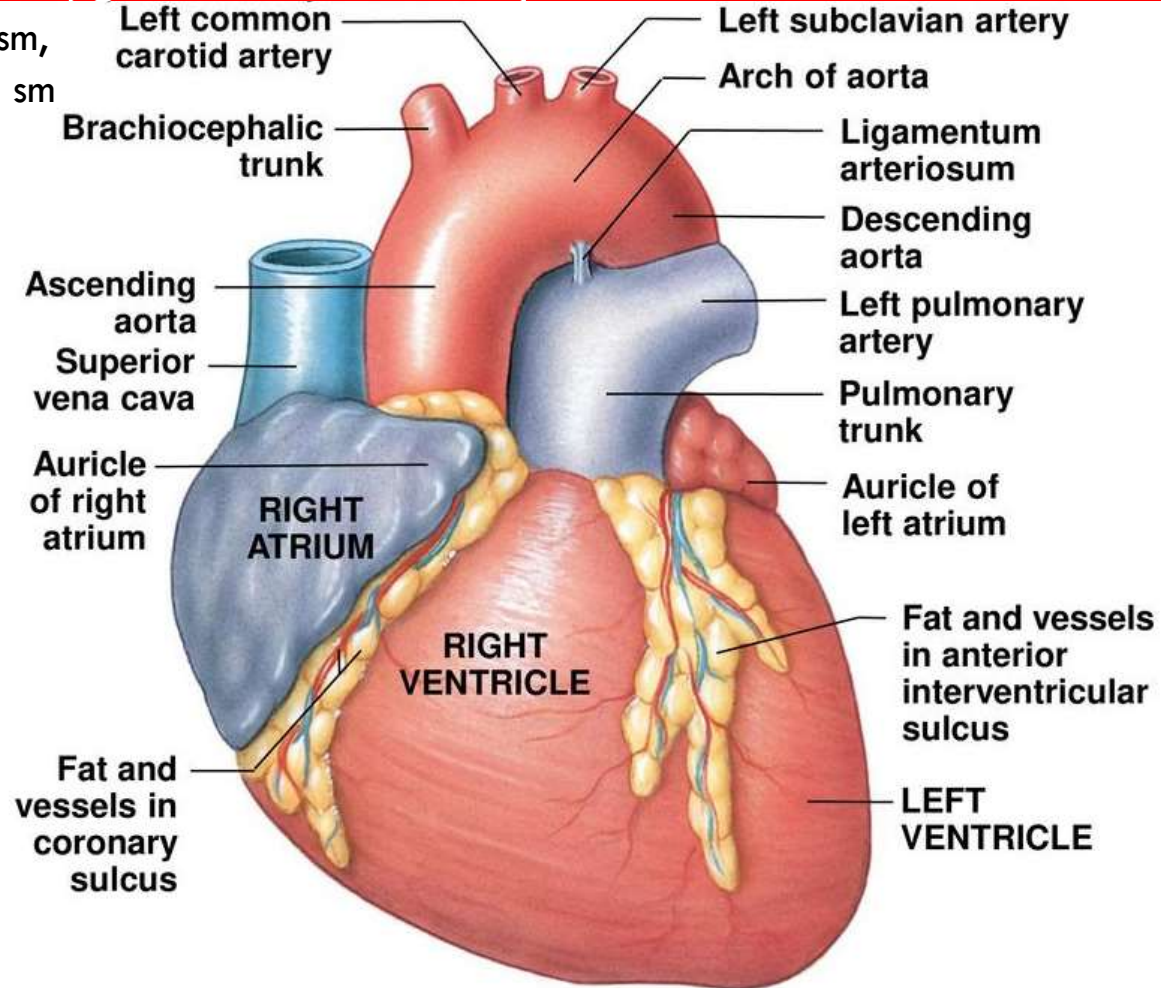
Auricula dextra

Auricula sinistra

➤ Qirralari:

Margo dexter

Margo sinister



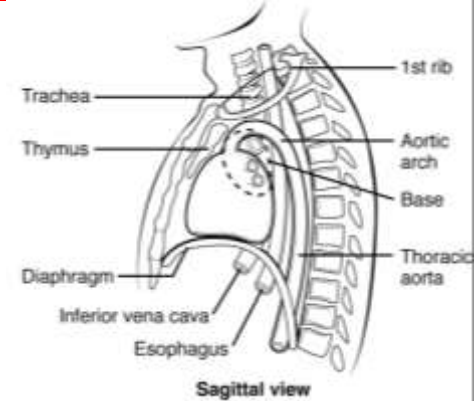
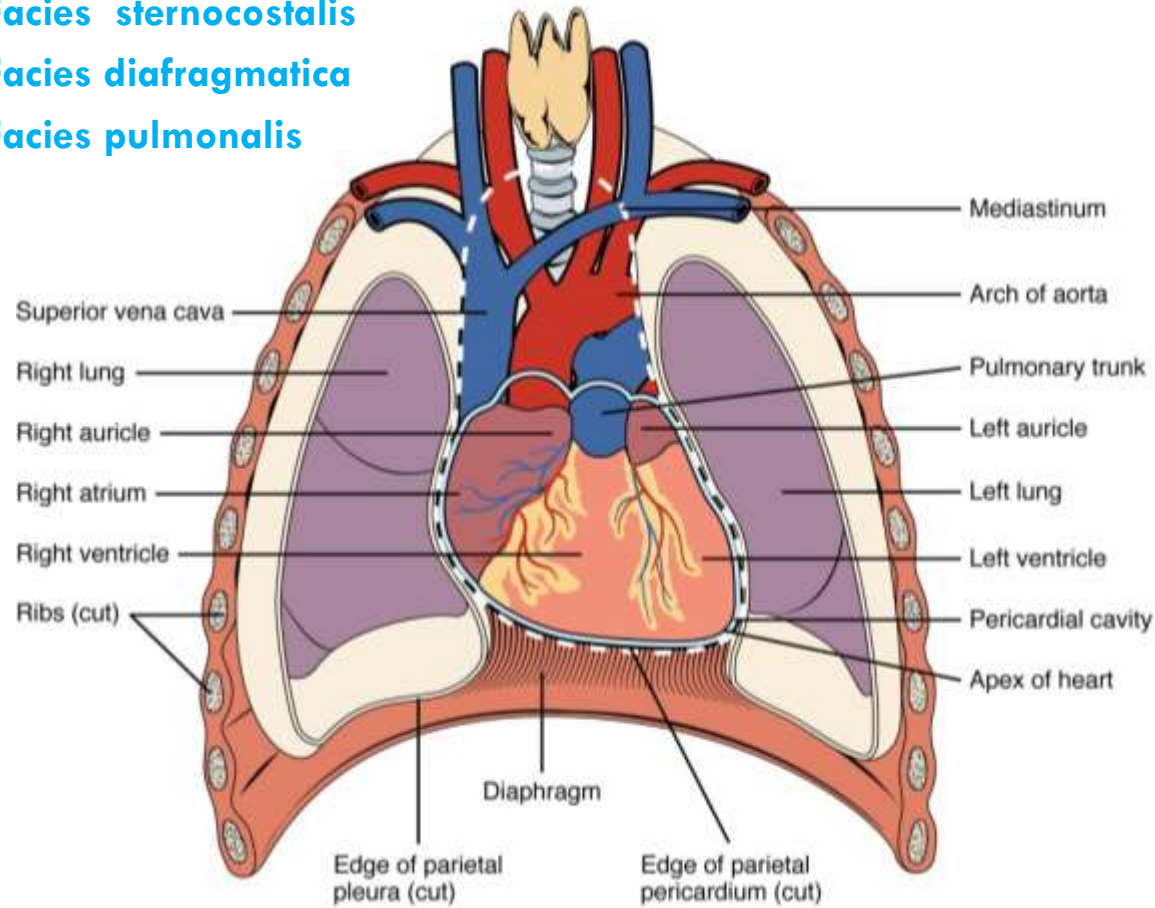
Cor (grek. Cardia)

➤ Yuzalari:

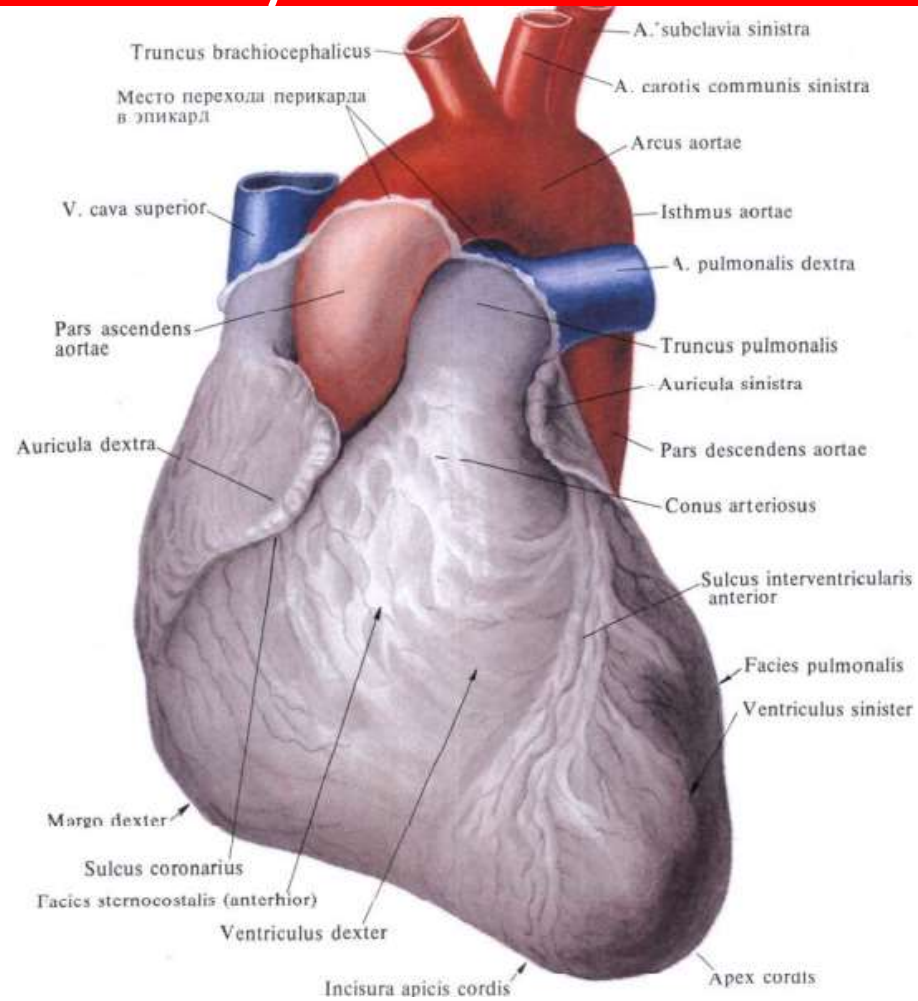
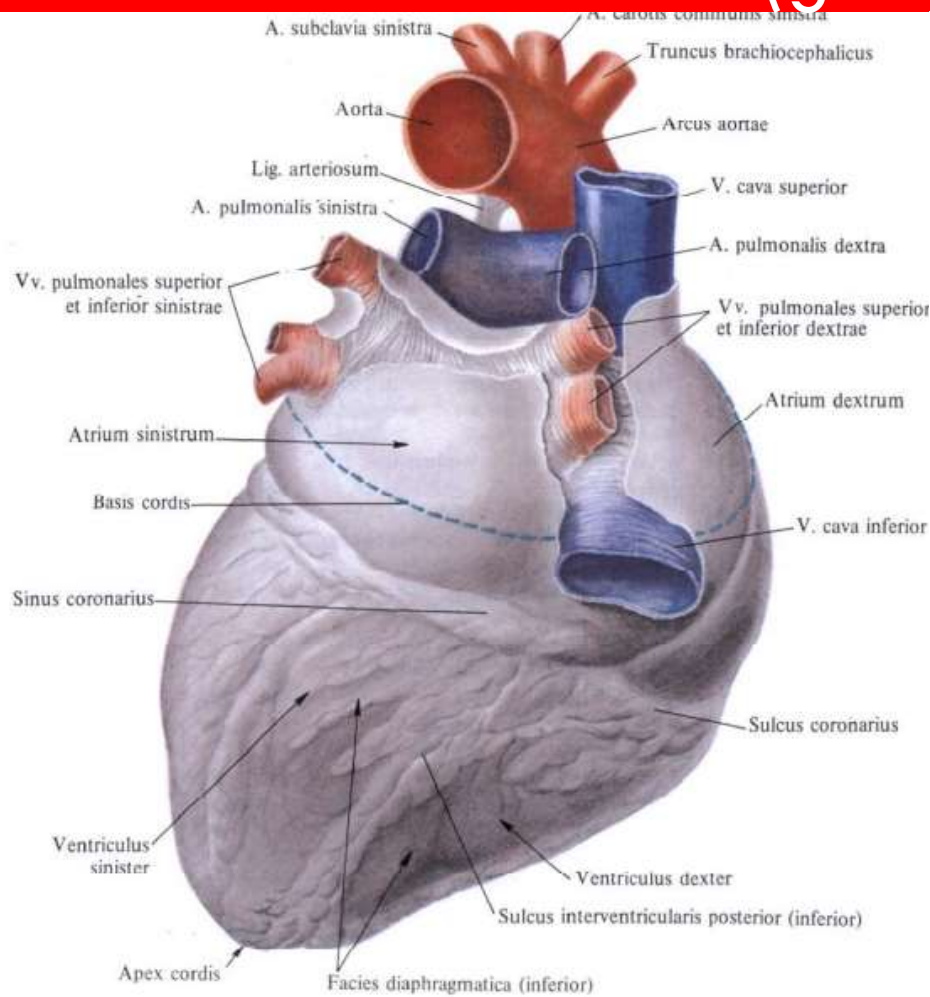
Facies sternocostalis

Facies diafragmatica

Facies pulmonalis



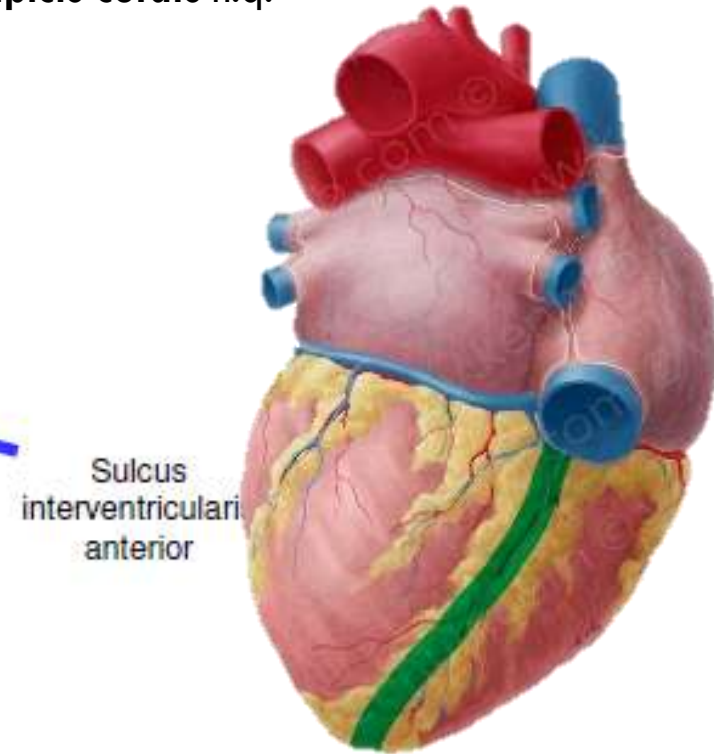
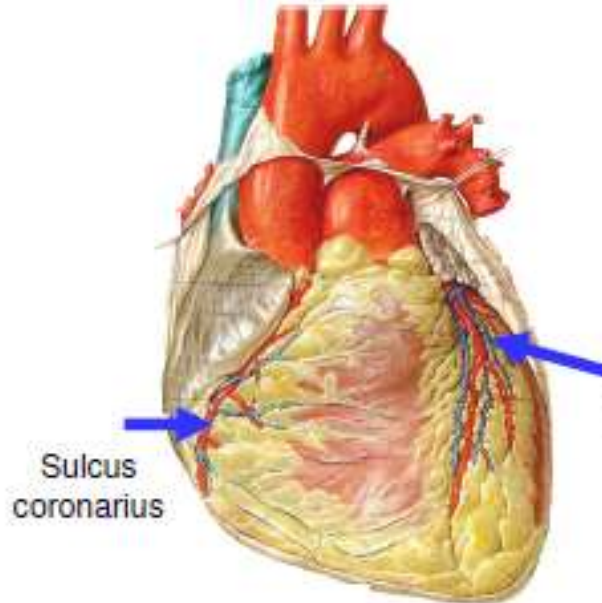
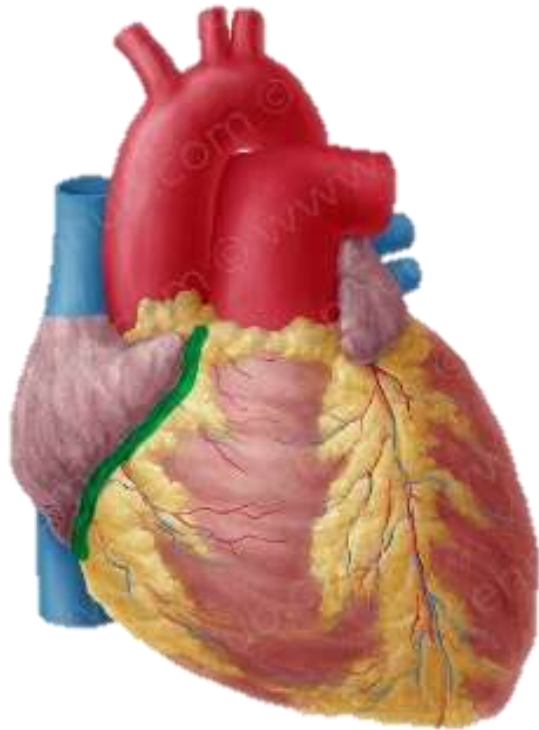
Cor (grek. Cardia)



Cor (grek. Cardia)

➤ Egatlari :

- ✓ **Sulcus coronarius** (qorincha va bo'lmacha orasida joylashgan)
 - ✓ **Sulcus interventriculares anterior**
 - ✓ **Sulcus interventriculares posterior**
- } Qorinchalarni o'zaro ajratishda qatnashadi va apex cordis soxasida **incisura apicis cordis** h.q.



Cor (grek. Cardia)

❑ Makroskopiya (ichki tuzilishi)

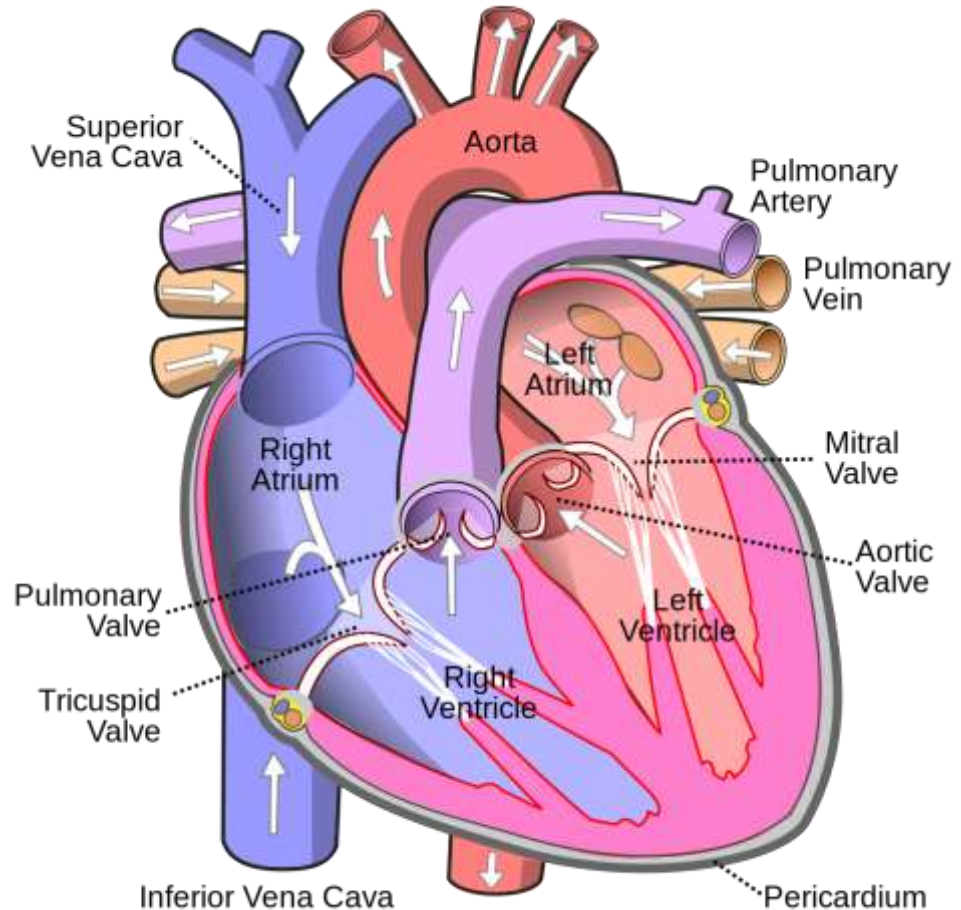
- **Atrium dextrum** (o'ng bo'lmacha)
- **Ventriculus dextrum** (o'ng qorincha)
- **Atrium sinistrum** (chap bo'lmacha)
- **Ventriculus sinistrum** (chap qorincha)

✓ **Septum interatriale**

✓ **Septum interventriculare**

○ **Ostium atrioventriculare sinistrum**

○ **Ostium atrioventriculare dextrum**



Cor (grek. Cardia)

□ Atrium dextrum (o'ng bo'lmacha)

Vena cava superior (yuqori kovak vena)

Ostium v. cava superioris (yuqori kovak vena teshigi)

Vena cava inferior (pastki kovak vena)

Ostium v. cava inferioris (pastki kovak vena teshigi)

Fossa ovale (foramen ovale) (oval chuqurcha)

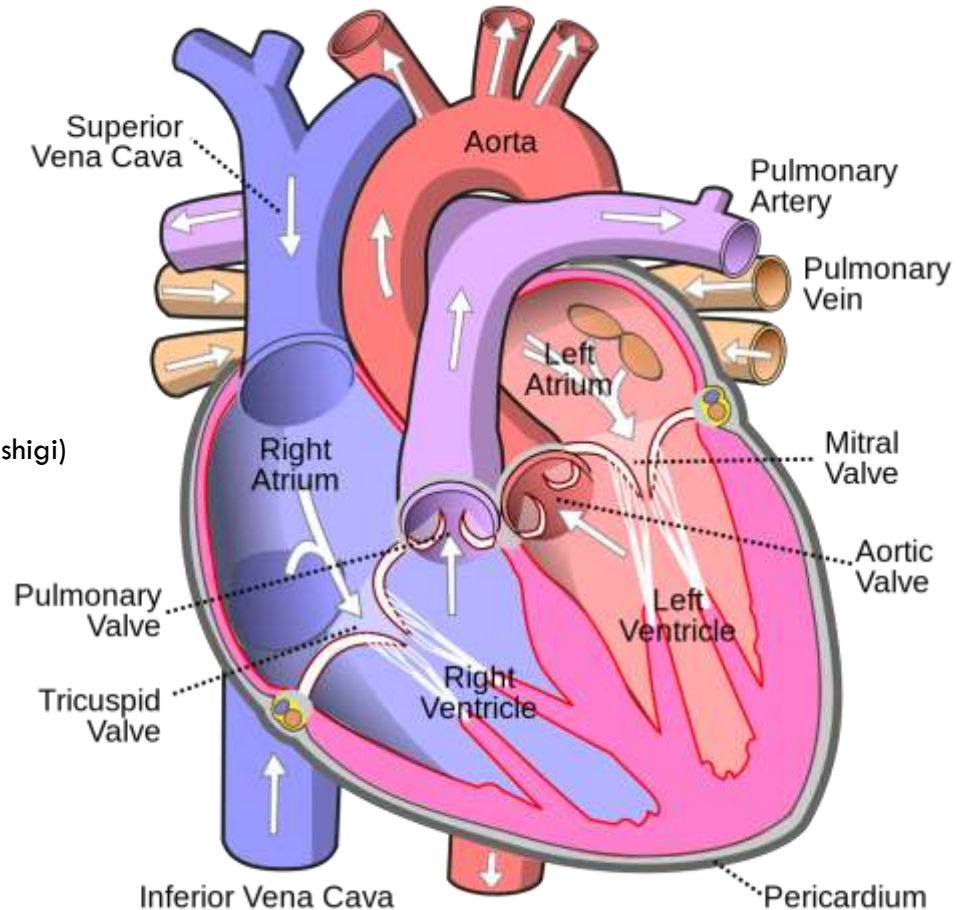
Sinus coronarius (foramen sinus coronarii) (toj tomir teshigi)

Ostium atrioventricularis dextra (bo'lma-qorin teshigi)

Auricula dextra (o'ng quloqcha)

Mm. pectinati (taroqsimon muskullar)

Septum interatriale (bo'lmachalararo to'siq)



Cor (grek. Cardia)

❑ **Atrium dextrum** (o'ng bo'lmacha)

Vena cava superior (yuqori kovak vena)

Ostium v. cava superioris (yuqori kovak vena teshigi)

Vena cava inferior (pastki kovak vena)

Ostium v. cava inferioris (pastki kovak vena teshigi)

Fossa ovale (foramen ovale) (oval chuqurcha)

Sinus coronarius (foramen sinus coronarii) (toj tomir teshigi)

Ostium atrioventricularis dextra (bo'lma-qorin teshigi)

Auricula dextra (o'ng quloqcha)

Mm. pectinati (taroqsimon muskullar)

Septum interatriale (bo'lmachalararo to'siq)

Cor (grek. Cardia)

□ Atrium dextrum (o'ng bo'lmacha)

Vena cava superior (yuqori kovak vena)

Ostium v. cava superioris (yuqori kovak vena teshigi)

Vena cava inferior (pastki kovak vena)

Ostium v. cava inferioris (pastki kovak vena teshigi)

Fossa ovale (foramen ovale) (oval chuqurcha)

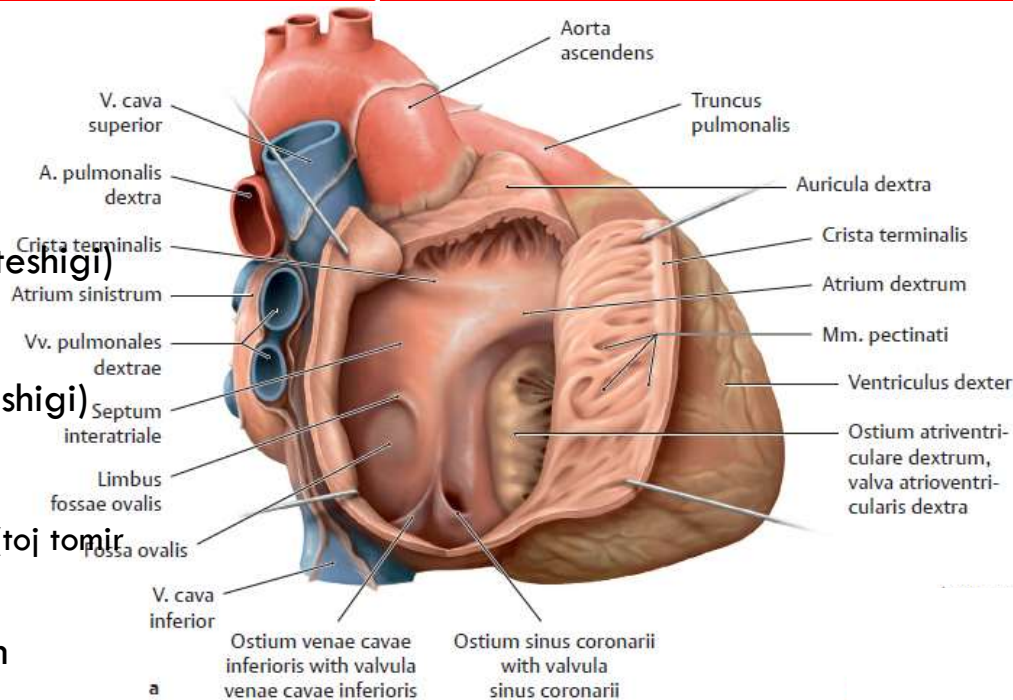
Sinus coronarius (foramen sinus coronarii) (toj tomir teshigi)

Ostium atrioventricularis dextra (bo'lma-qorin teshigi)

Auricula dextra (o'ng quloqcha)

Mm. pectinati (taroqsimon muskullar)

Septum interatriale (bo'lmachalararo to'siq)



Cor (grek. Cardia)

□ Atrium dextrum (o'ng bo'lmacha)

Vena cava superior (yuqori kovak vena)

Ostium v. cava superioris (yuqori kovak vena teshig)

Vena cava inferior (pastki kovak vena)

Ostium v. cava inferioris (pastki kovak vena teshigi)

Fossa ovale (foramen ovale) (oval chuqurcha)

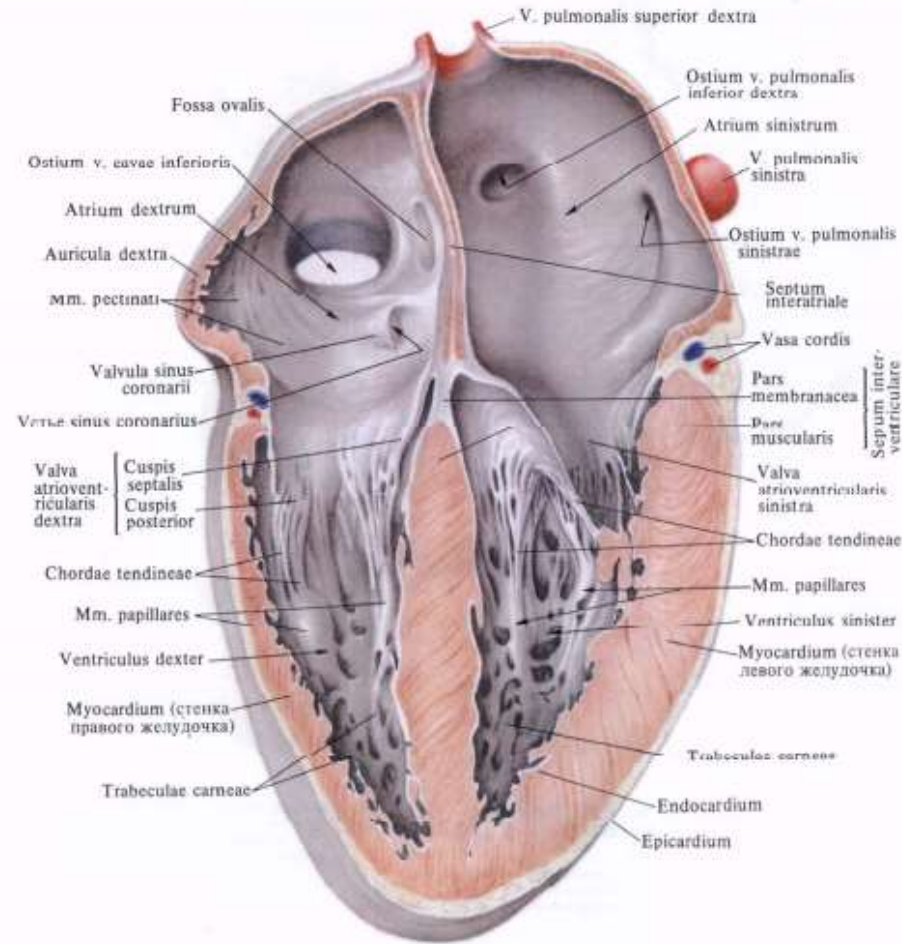
Sinus coronarius (foramen sinus coronarii) (toj tor teshigi)

Ostium atrioventricularis dextra (bo'lma-qorin teshigi)

Auricula dextra (o'ng quloqcha)

Mm. pectinati (taroqsimon muskullar)

Septum interatriale (bo'lmachalararo to'siq)



Cor (grek. Cardia)

❑ Atrium dextrum (o'ng bo'lmacha)

Vena cava superior (yuqori kovak vena)

Ostium v. cava superioris (yuqori kovak vena teshigi)

Vena cava inferior (pastki kovak vena)

Ostium v. cava inferioris (pastki kovak vena teshigi)

Fossa ovale (foramen ovale) (oval chuqurcha)

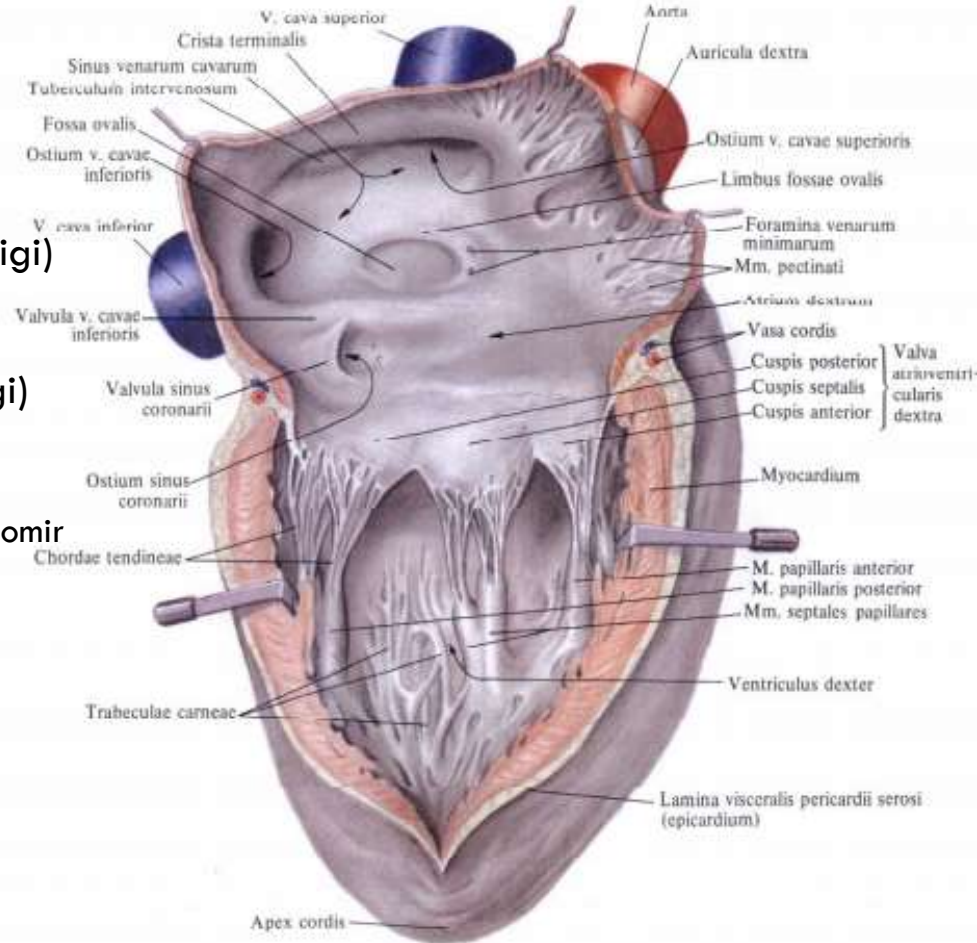
Sinus coronarius (foramen sinus coronarii) (toj tomir teshigi)

Ostium atrioventricularis dextra (bo'lma-qorin teshigi)

Auricula dextra (o'ng quloqcha)

Mm. pectinati (taroqsimon muskullar)

Septum interatriale (bo'lmachalararo to'siq)



Cor (grek. Cardia)

❑ Ventriculus dextrum (o'ng qorincha)

Septum interventriculare

Ostium atrioventriculare dextra

Ostium trunci pulmonalis

Truncus pulmonalis

Valva atrioventricularis dextra (tricuspidus)

1. **Cuspid posterior**

2. **Cuspid septalis**

3. **Cuspid anterior**

chordae tendinae (mushak payining tolasi)

1. **M. papilaris posterior**

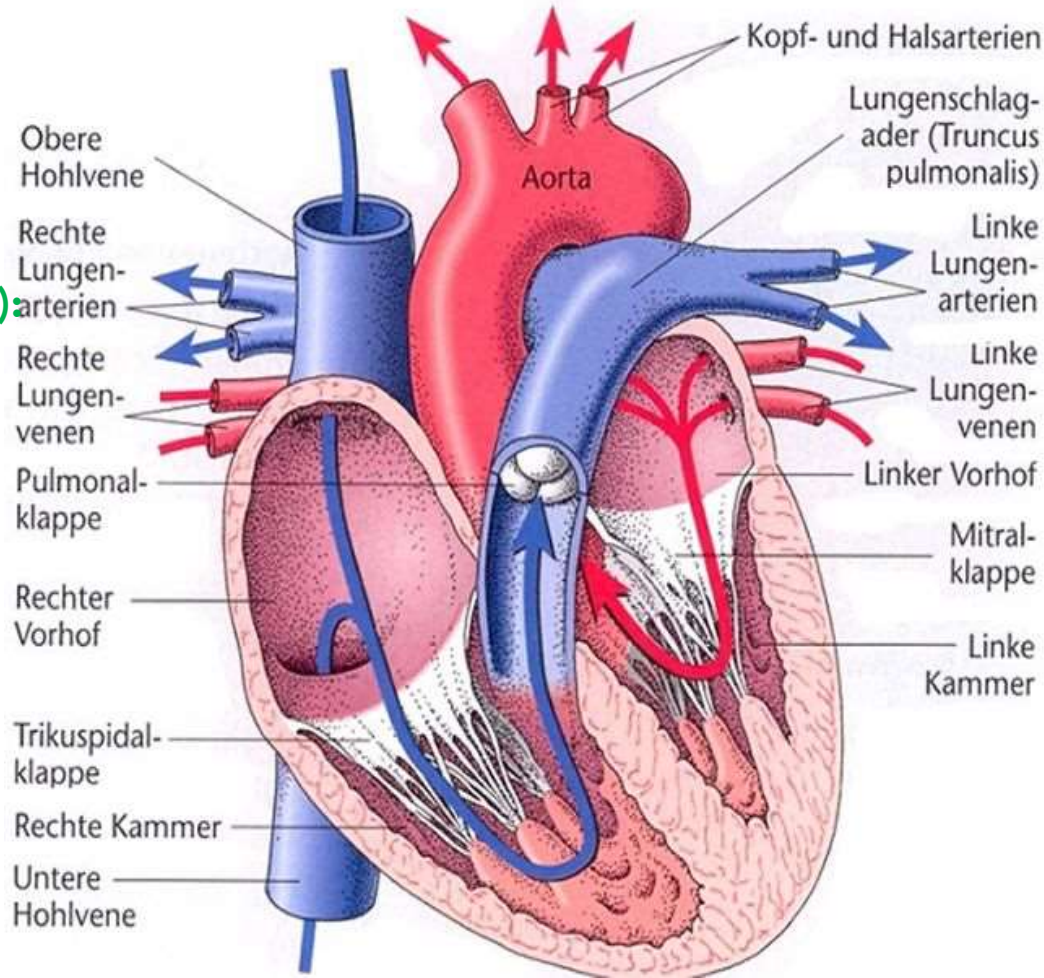
2. **M. papilaris septalis**

3. **M. papilaris anterior**

Valva semilunaris anterior

Valva semilunaris dextra

Valva semilunaris sinistra



Cor (grek. Cardia)

❑ Ventriculus dextrum (o'ng qorincha)

Septum interventriculare

Ostium atrioventriculare dextra

Ostium trunci pulmonalis

Truncus pulmonalis

Valva atrioventricularis dextra (tricuspidus):

1. Cuspis posterior

2. Cuspis septalis

3. Cuspis anterior

chordae tendinae (mushak payining tolası)

1. M. papilaris posterior

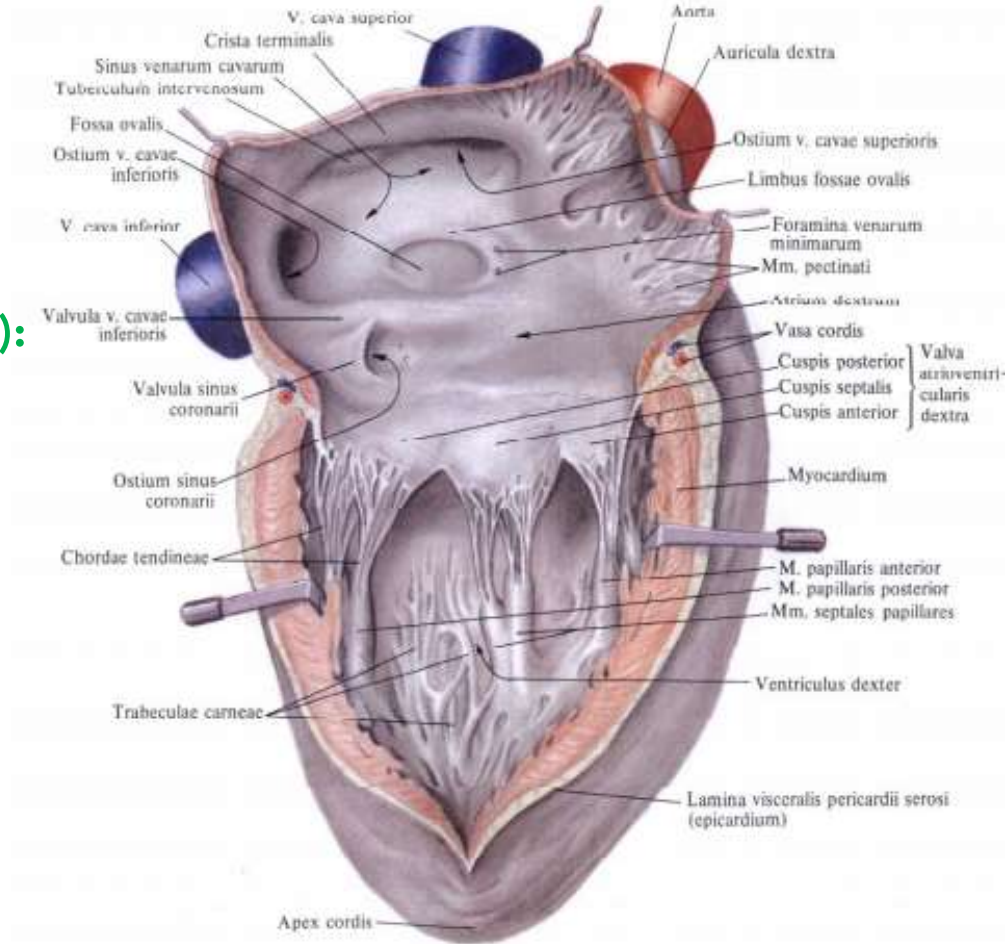
2. M. papilaris septalis

3. M. papilaris anterior

Valva semilunaris anterior

Valva semilunaris dextra

Valva semilunaris sinistra



Cor (grek. Cardia)

❑ Ventriculus dextrum (o'ng qorincha)

Septum interventriculare

Ostium atrioventriculare dextra

Ostium trunci pulmonalis

Truncus pulmonalis

Valva atrioventricularis dextra (tricuspidus):

1. Cuspis posterior

2. Cuspis septalis

3. Cuspis anterior

chordae tendinae (mushak payining tolasi)

1. M. papilaris posterior

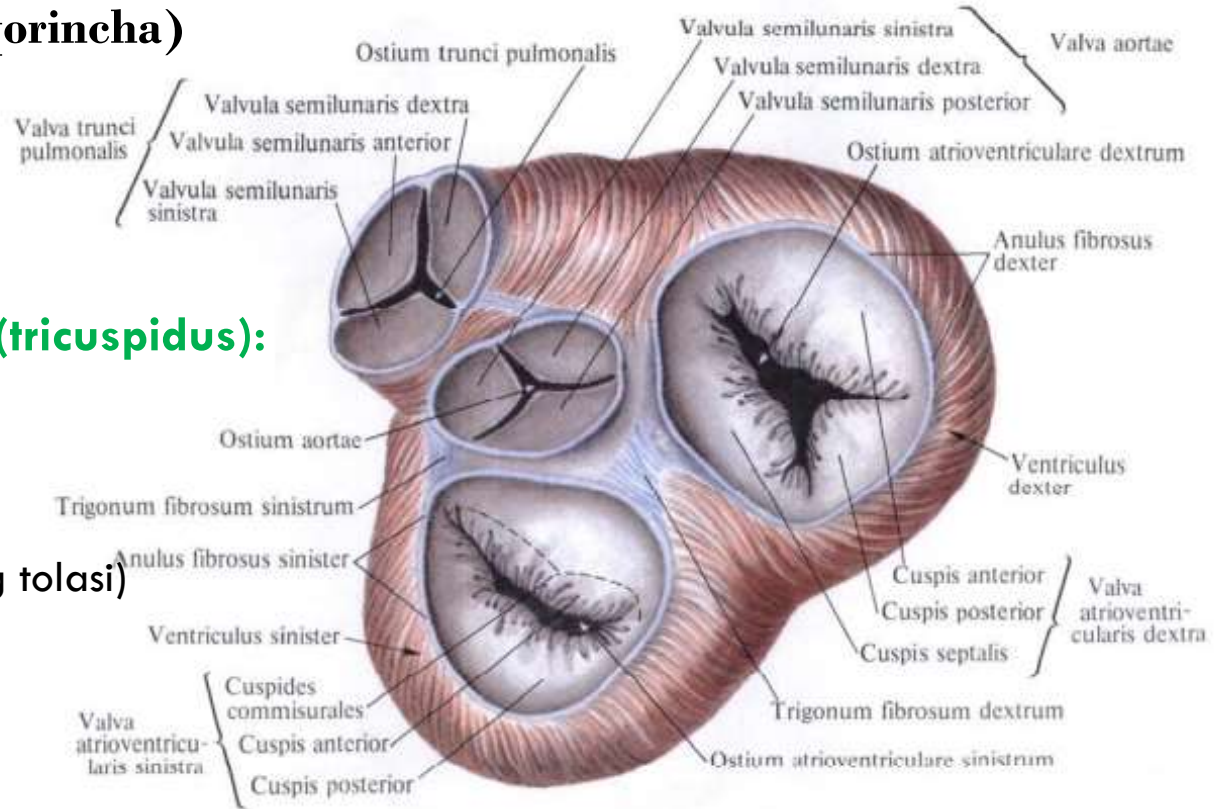
2. M. papilaris septalis

3. M. papilaris anterior

Valva semilunaris anterior

Valva semilunaris dextra

Valva semilunaris sinistra



Cor (grek. Cardia)

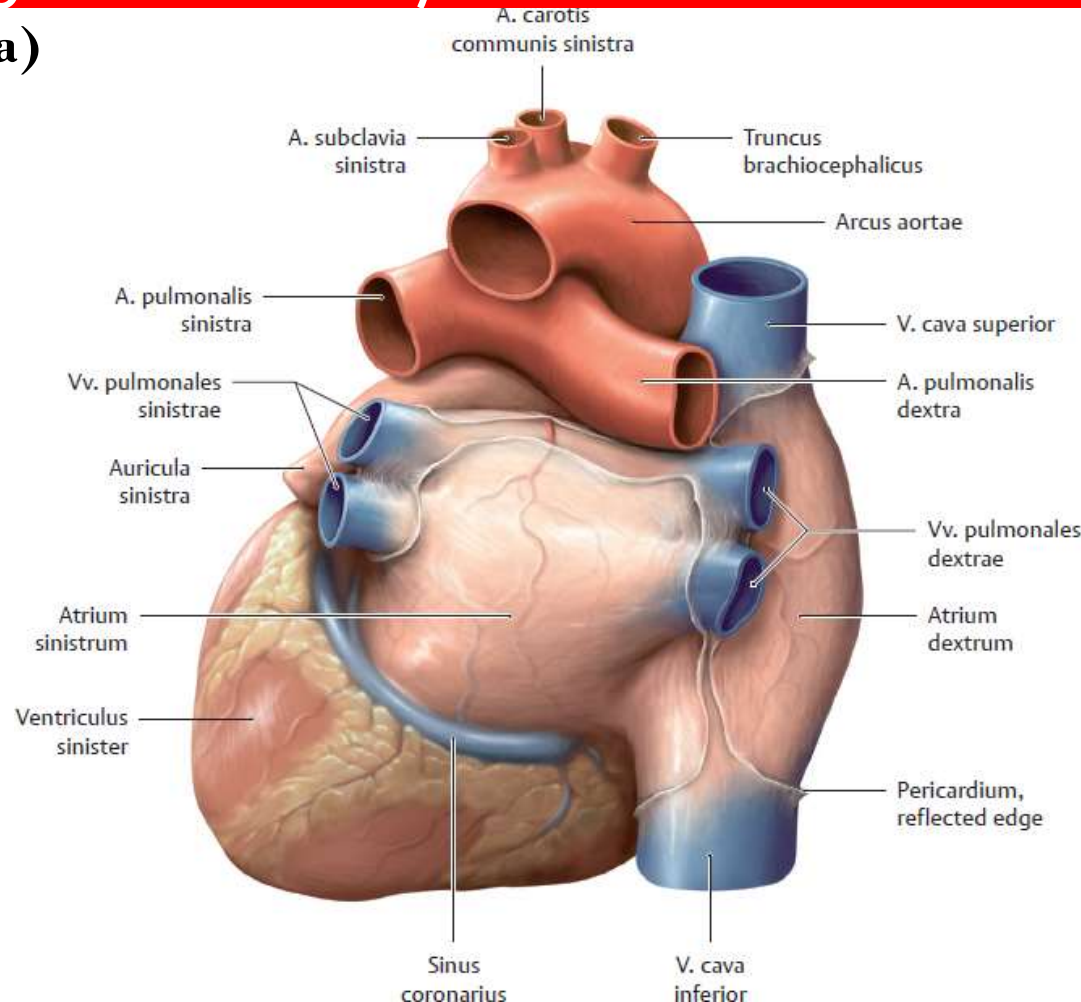
□ Atrium sinistrum (chap bo'lmacha)

Auricula sinistra

mm. pectinati

Ostium venarum pulmonalium (4 ta)

Ostium atrioventriculare sinistrum



Cor (grek. Cardia)

□ Atrium sinistrum (chap bo'lmacha)

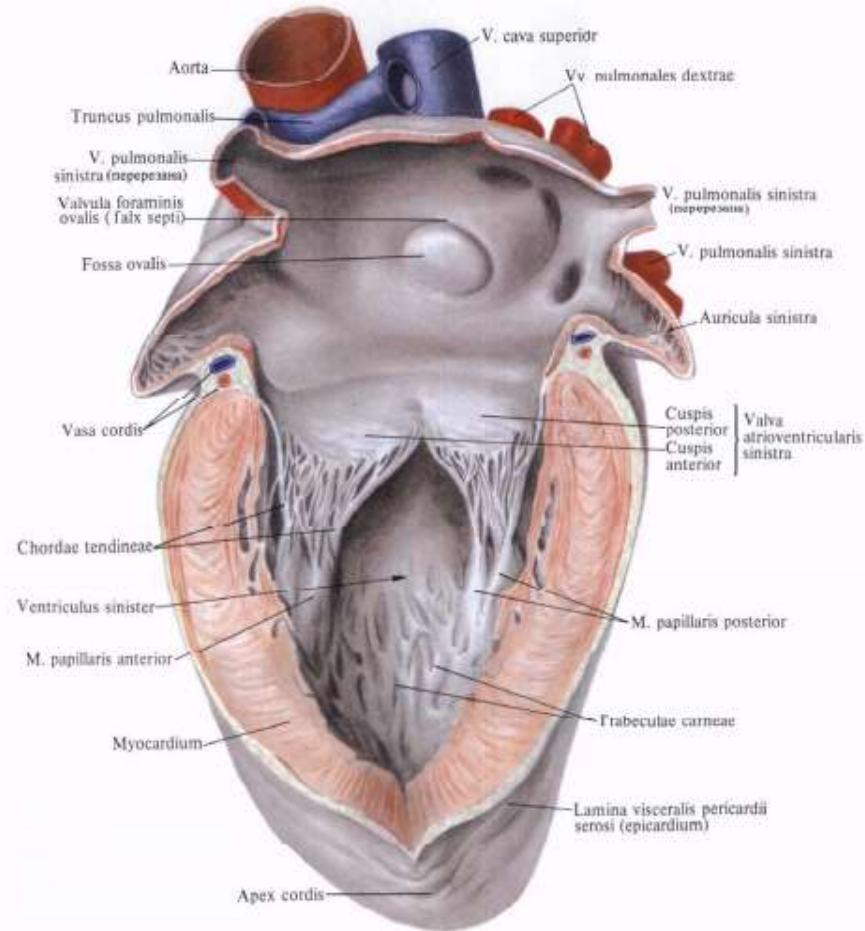
Auricula sinistra

mm. pectinati

Ostium venarum pulmonalium (4 ta)

Ostium atrioventriculare sinistrum

Fossa ovalis (valvula for. ovalis)



Cor (grek. Cardia)

❑ Ventriculus sinistrum (chap qorincha)

Ostium atrioventriculare sinistrum

Valva atrioventricularis sinistra (mitral valva):

1. **Cuspid posterior**

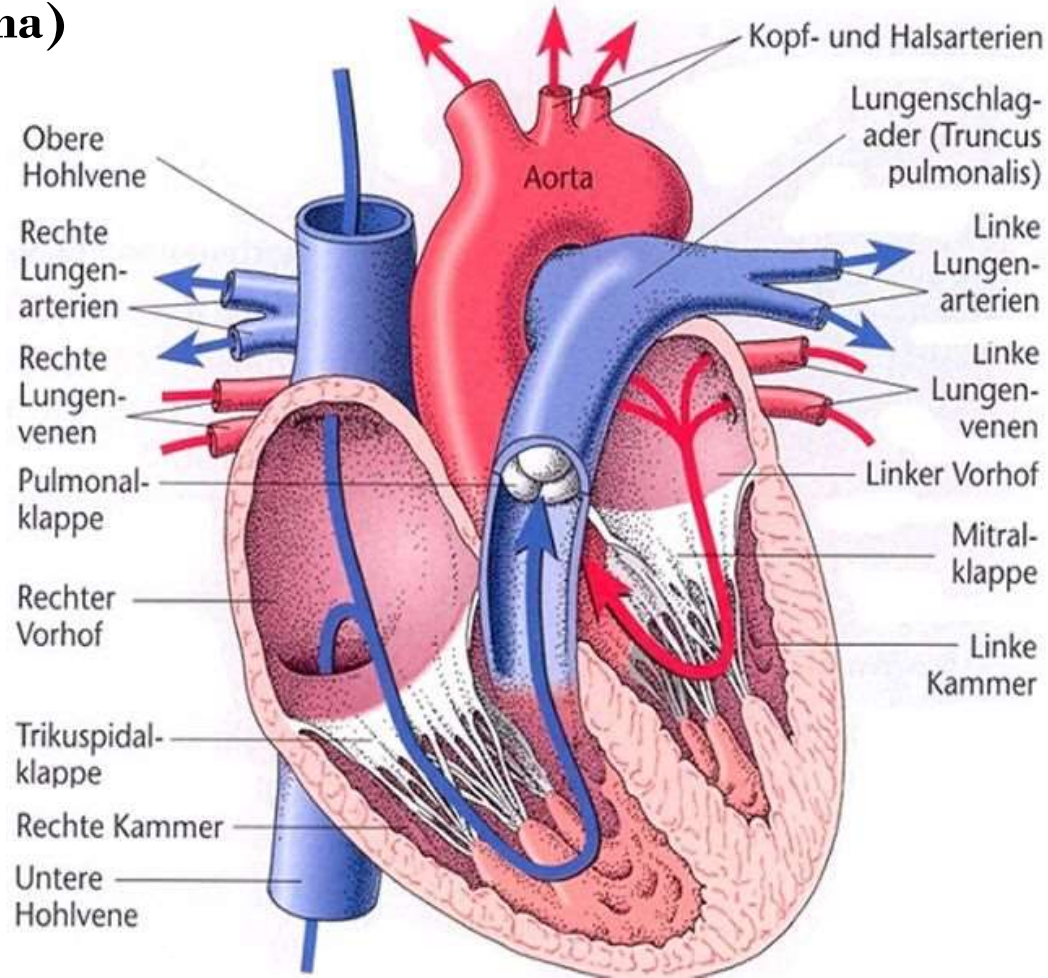
2. **Cuspid anterior**

chordae tendinae (mushak payining tolasi)

1. **M. papilaris posterior**

2. **M. papilaris anterior**

Ostium aortae



Cor (grek. Cardia)

❑ Ventriculus sinistrum (chap qorincha)

Ostium atrioventriculare sinistrum

Valva atrioventricularis sinistra (mitral valva):

1. Cuspis posterior

2. Cuspis anterior

chordae tendinae (mushak payining tolasi)

1. M. papilaris posterior

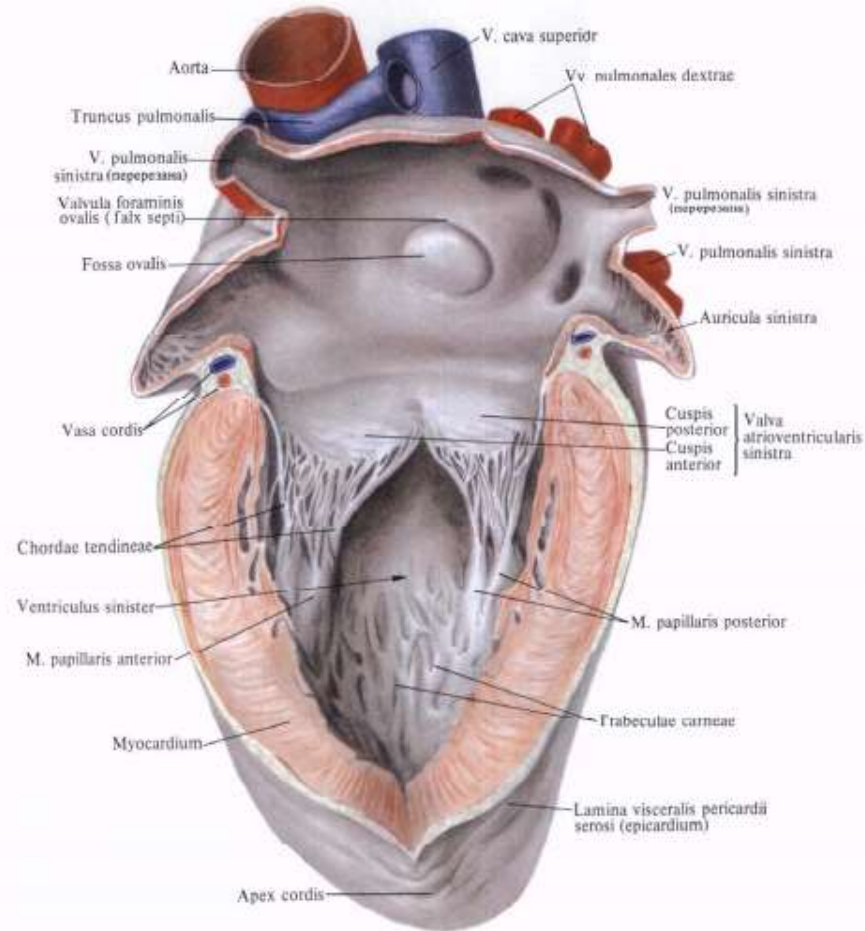
2. M. papilaris anterior

Ostium aortae

Valva semilunaris posterior

Valva semilunaris dextra

Valva semilunaris sinistra



Cor (grek. Cardia)

❑ Ventriculus sinistrum (chap qorincha)

Ostium atrioventriculare sinistrum

Valva atrioventricularis sinistra (mitral valva):

1. Cuspis posterior

2. Cuspis anterior

chordae tendinae (mushak payining tolasi)

1. M. papilaris posterior

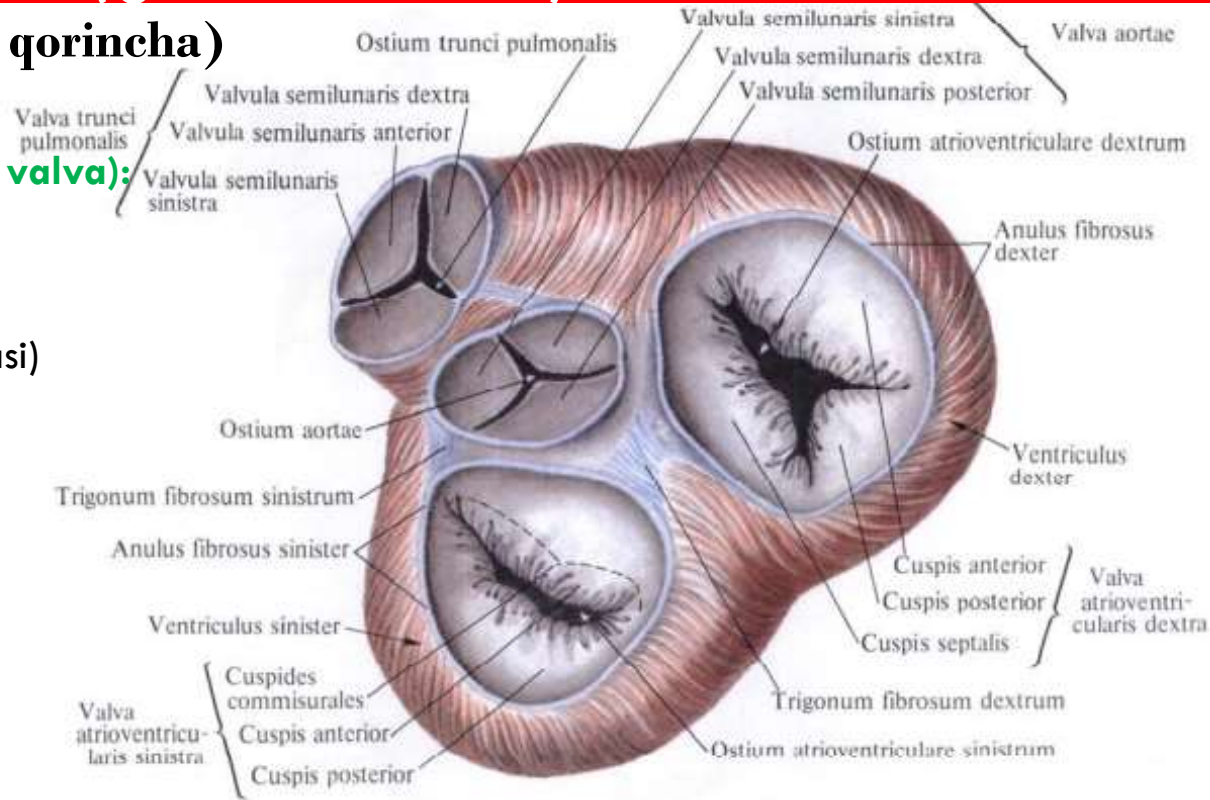
2. M. papilaris anterior

Ostium aortae

Valva semilunaris posterior

Valva semilunaris dextra

Valva semilunaris sinistra



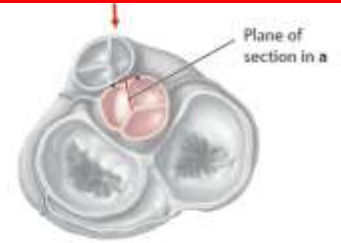
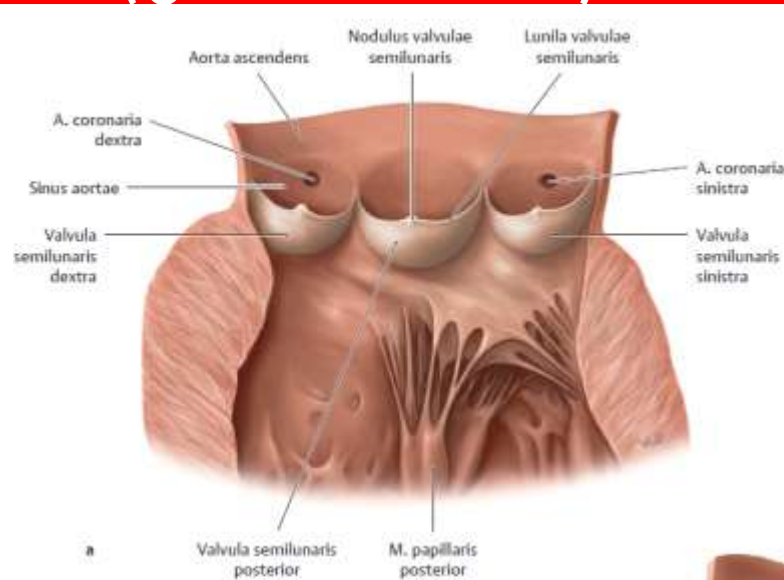
Cor (grek. Cardia)

Ostium aortae

Valva semilunares posterior

Valva semilunares dextra

Valva semilunares sinistra

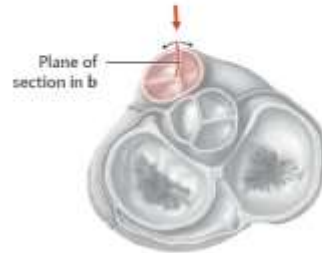
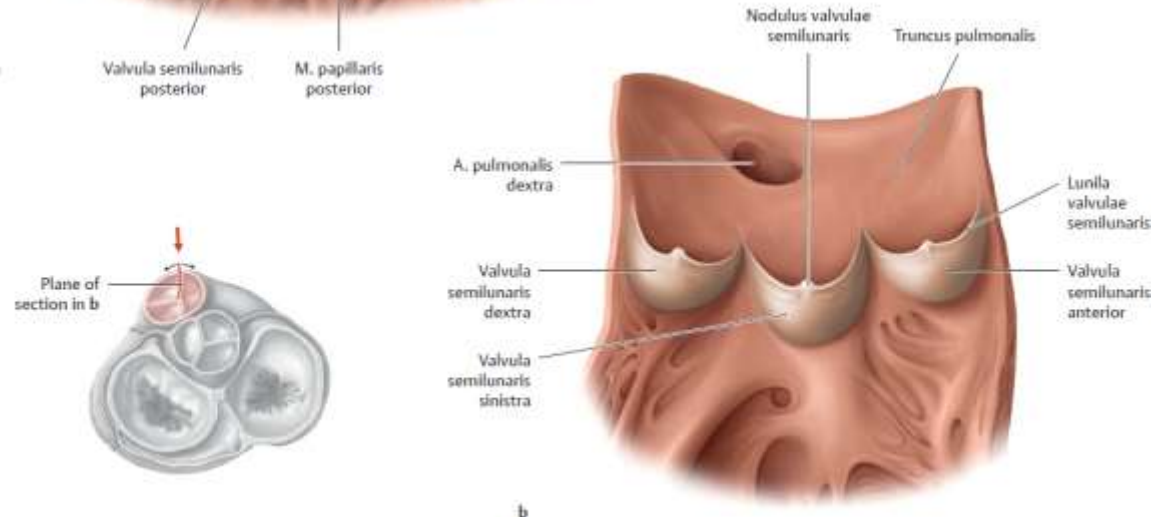


Ostium trunci pulmonalis

Valva semilunaris anterior

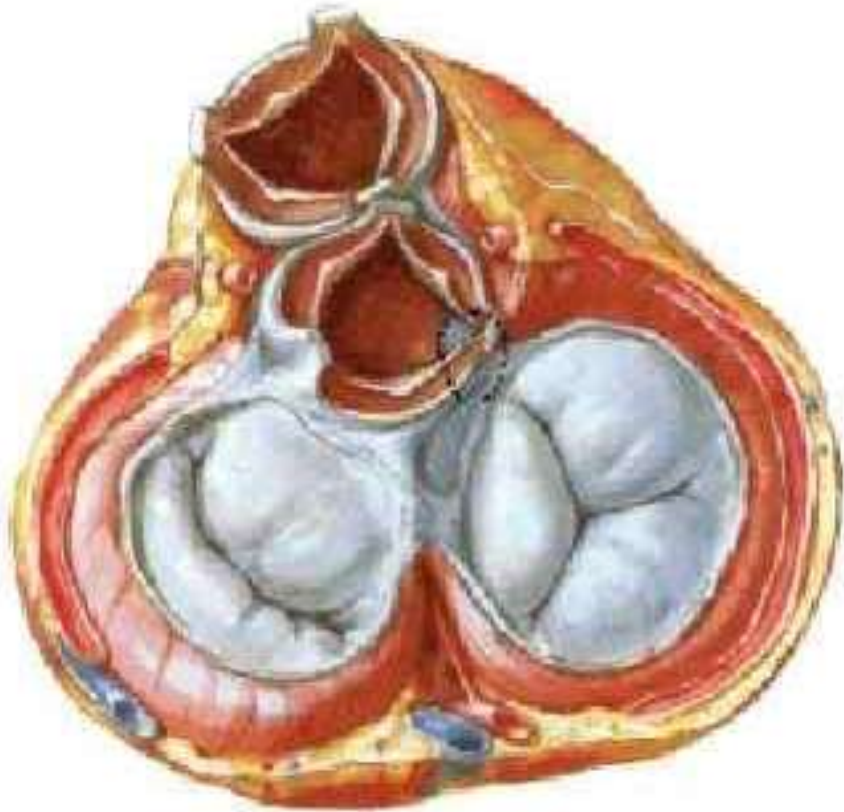
Valva semilunaris dextra

Valva semilunaris sinistra

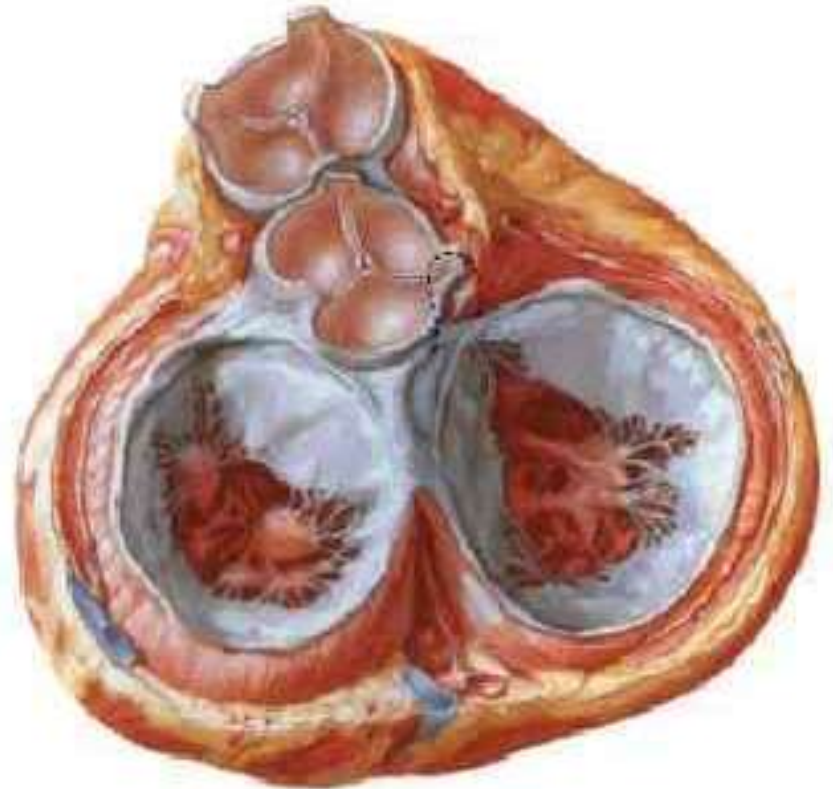


Cor (grek. Cardia)

- sistola



- diastola

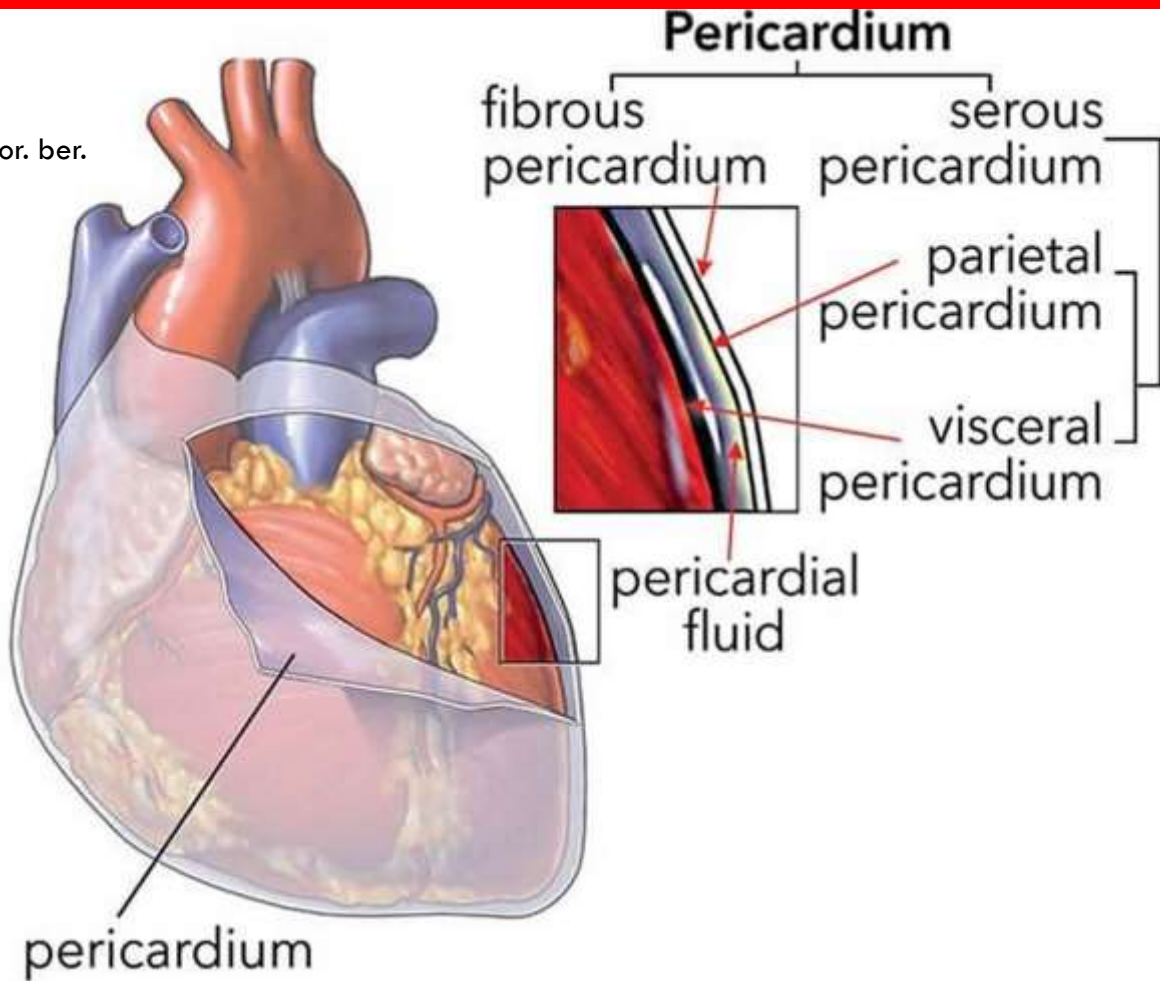
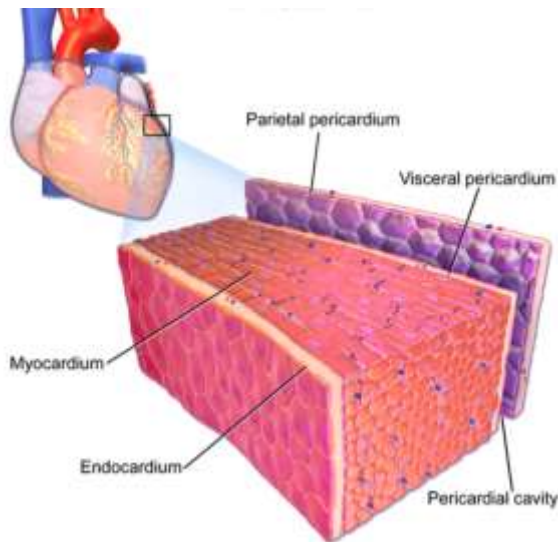


Perikard- Pericardium

- yurakni yirik yurak tomirlariga mahkamlaydi
- yurakni himoya qiladi
- ishqalanishni kamaytiradi
- diastola vaqtida yurak kamalarining kengayishiga yor. ber.

Yurak devori

1. **Endokard**
2. **Miokard**
3. **Epikard (visceral pericardium)**



Cor (grek. Cardia)

☐ Miocard

✓ **Anulus fibrosus dexter**

- ostium atrioventriculare ni o'raydi

✓ **Anulus fibrosus sinister**

- klapanlar uchun tayanch

✓ **Anulus fibrosus aorticus**

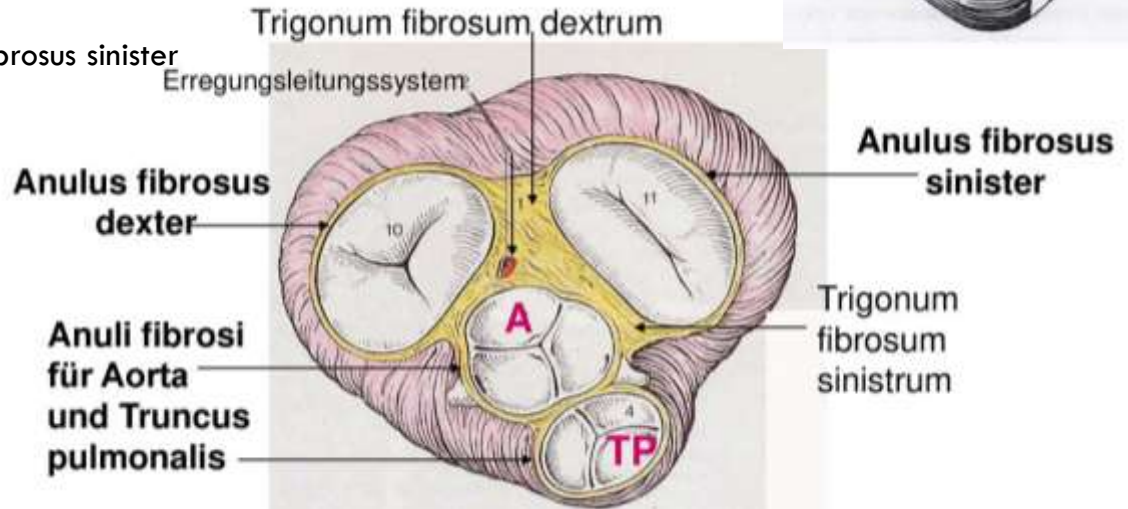
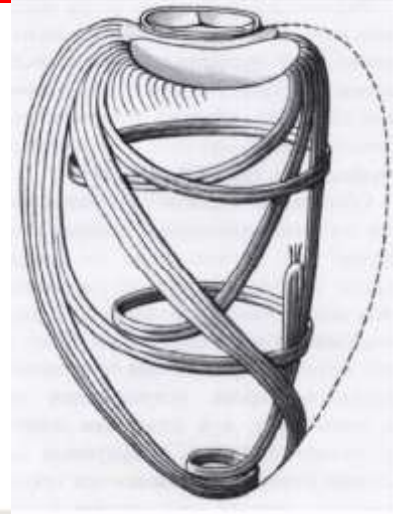
- aorta va o'pkaning truncus ining ochilish qismida

✓ **Anulus fibrosus trunci pulmonalis**

- klapanlar uchun tayanch

✓ **Trigonum fibrosum dextrum** (anulus fibrosus dexter, sinister va aorticus ni o'zaro bog'laydi)

✓ **Trigonum fibrosum sinister** (annulus fibrosus sinister sohasida)



Cor (grek. Cardia)

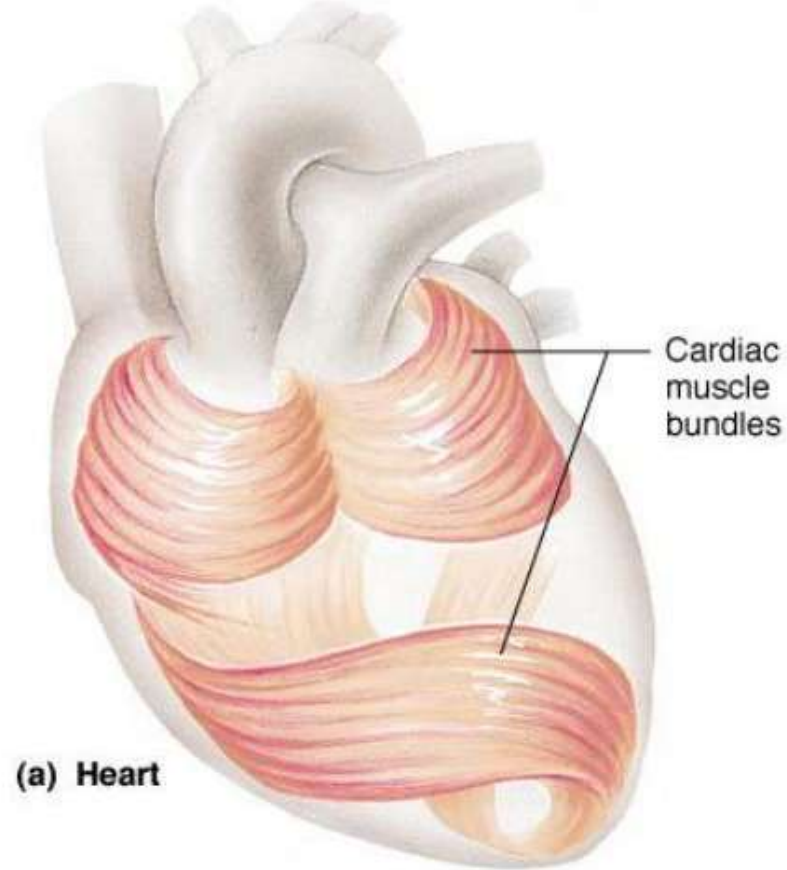
☐ Miocard

✓ Bo'lmachalar

- **Yuza** (ko'ndalang yo'naladi va ikkala bo'lmachalarda umumiy bo'ladi)
- **Chuqur** (ayalana va vertikal yo'nalib bo'lmachalarni alohida alohida o'raydi)

✓ Qorinchalar

- **Yuza** (qiyshgiq yo'nalishda qorinchalarni umumiy o'raydi va apex cordis qismiga yetganda vortex cordis (yurak cho'qqisi burmasi)ni h.q.
- **O'rta** (ko'ndalang holda yunalib qorinchalarni alohida alohida o'raydi)
- **Chuqur** (aylana va ovalsimon holda qorinchalarni umumiy o'raydi)



Cor (grek. Cardia)

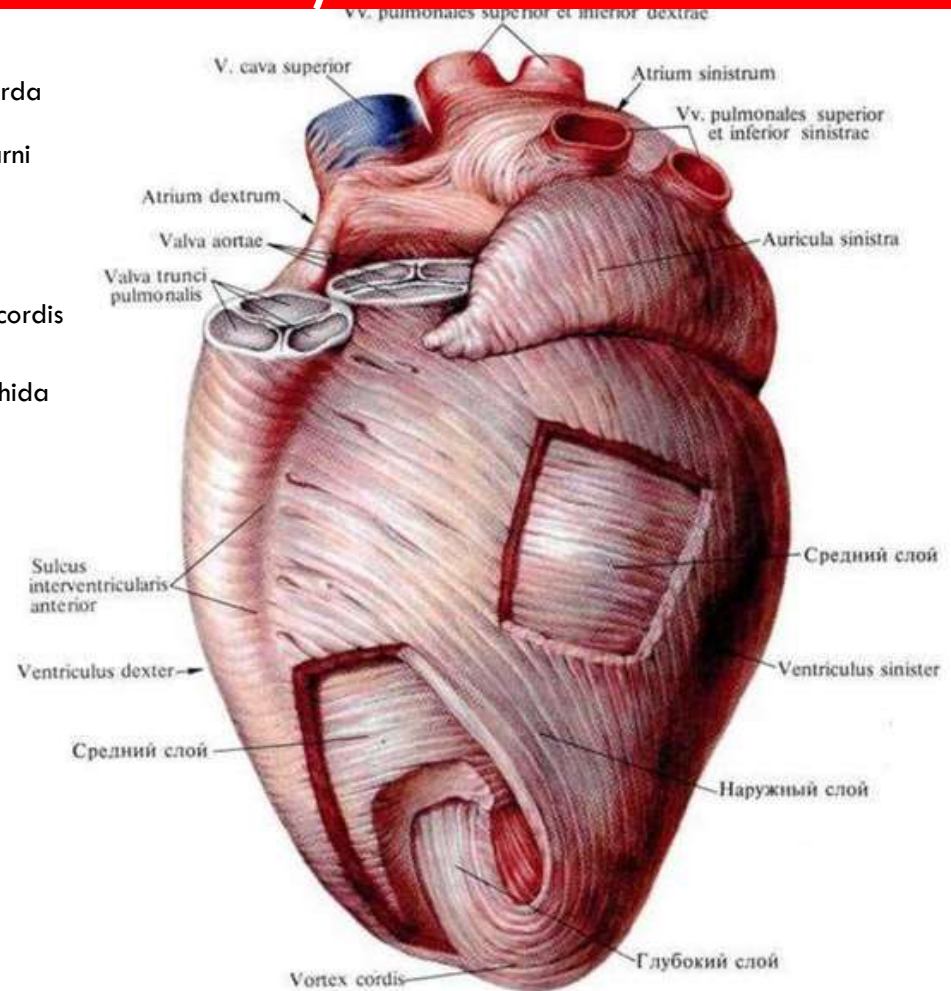
☐ Miocard

✓ Bo'lmachalar

- **Yuza** (ko'ndalang yo'naladi va ikkala bo'lmachalarda umumiy bo'ladi)
- **Chuqur** (ayalana va vertikal yo'nalib bo'lmachalarni alohida alohida o'raydi)

✓ Qorinchalar

- **Yuza** (qiyshgiq yo'nalishda qorinchalarni umumiy o'raydi va apex cordis qismiga yetganda vortex cordis (yurak cho'qqisi burmasi)ni h.q.)
- **O'rta** (ko'ndalang holda yunalib qorinchalarni alohida alohida o'raydi)
- **Chuqur** (aylana va ovalsimon holda qorinchalarni umumiy o'raydi)



Cor (grek. Cardia)

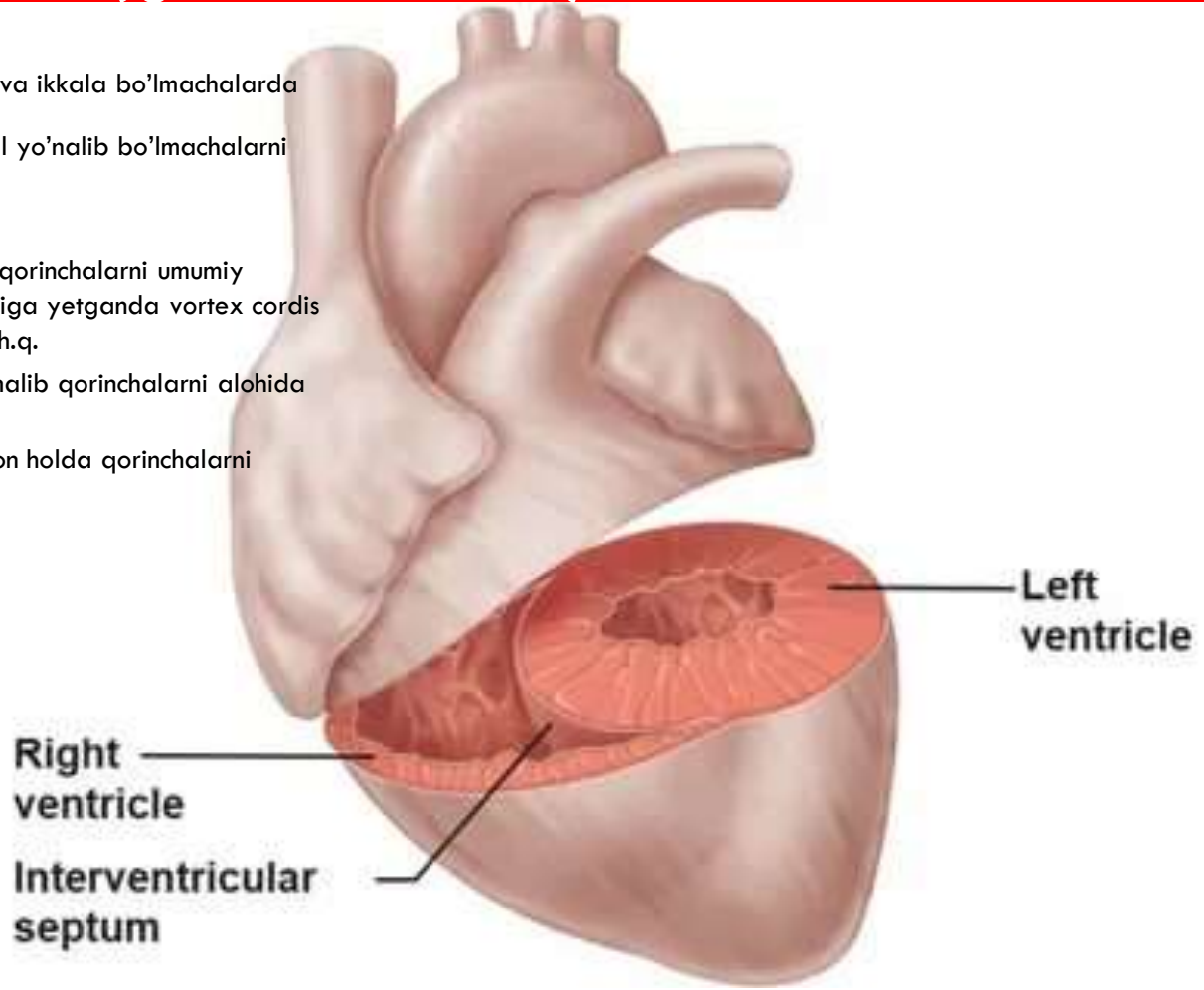
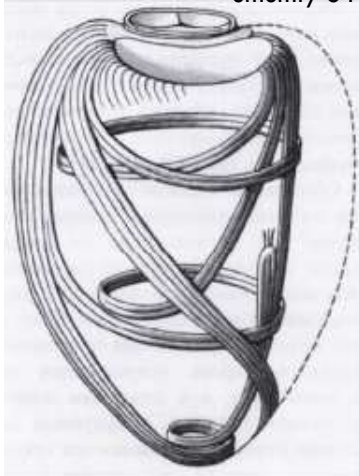
☐ Miocard

✓ Bo'lmachalar

- **Yuza** (ko'ndalang yo'naladi va ikkala bo'lmachalarda umumiy bo'ladi)
- **Chuqur** (ayalana va vertikal yo'nalib bo'lmachalarni alohida alohida o'raydi)

✓ Qorinchalar

- **Yuza** (qiyshgic yo'nalishda qorinchalarni umumiy o'raydi va apex cordis qismiga yetganda vortex cordis (yurak cho'qqisi burmasi)ni h.q.
- **O'rta** (ko'ndalang holda yunalib qorinchalarni alohida alohida o'raydi)
- **Chuqur** (aylana va ovalsimon holda qorinchalarni umumiy o'raydi)



Systema conducens cordis –Yurakning o'tkazuv sistemasi

1. Nodus sinuatrialis (Kis-Flek)

- (v. cava superior ning ochilish qismi va auricula dextra orasida joylashgan)

2. Ramus dexter et sinister nodi sinuatrialis

- o'ng va chap bo'lmacha miokardiga yo'nalgan.

3. Fasciculus interatrialis (Baxman tolasi)

- sinoatrial tugundan atrioventrikulyar tugunga tortilgan

4. Nodus atrioventricularis (Ashoff-Tovar)

- septum interatriale ning pastki qismida joylashgan

5. Fasciculus atrioventricularis (Gis tutami)

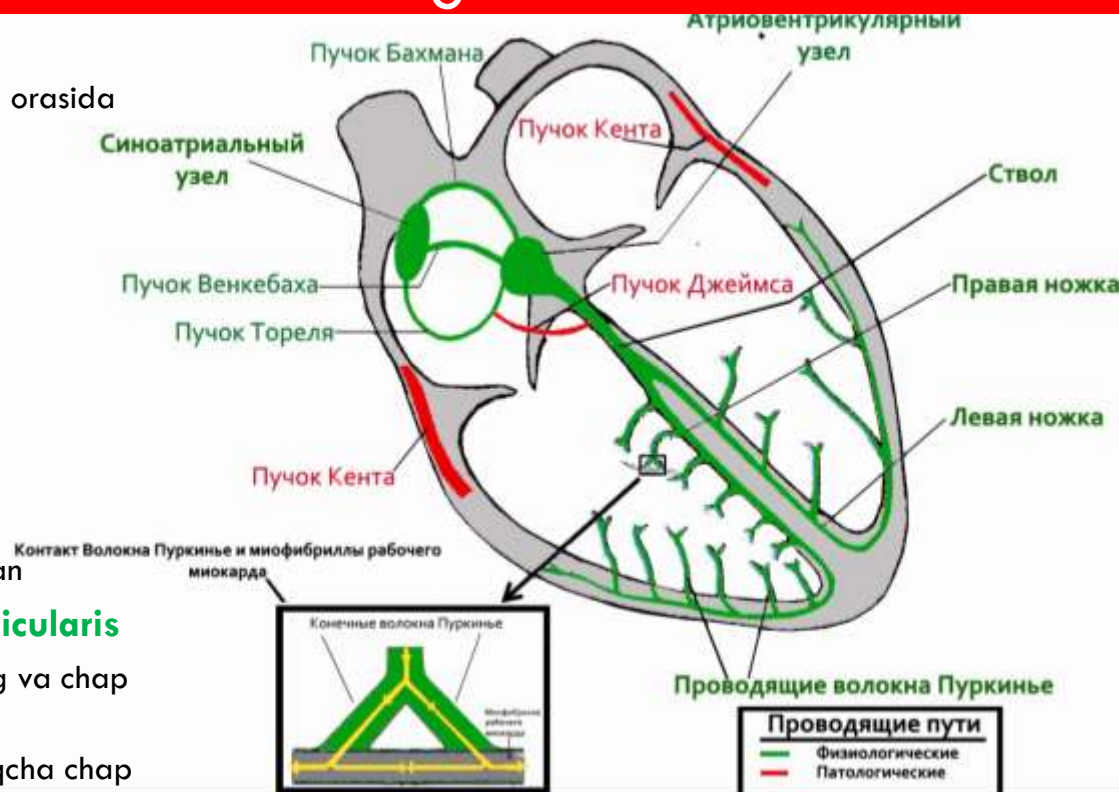
- pars membranacea septi interventricularis da joylashgan

6. Crus dextrum et sinistrum fasciculi atrioventricularis

- dastlab pars muscularis septi interventricularis ning o'ng va chap tomonida joylashadi
- so'ng o'ng oyoqcha o'ng qorincha devoriga, chap oyoqcha chap qorincha devoriga o'tadi

7. Purkinye tolalari

- Gis tutami oyoqchalaridan kardiomotsitlarga impuls yetkazadi

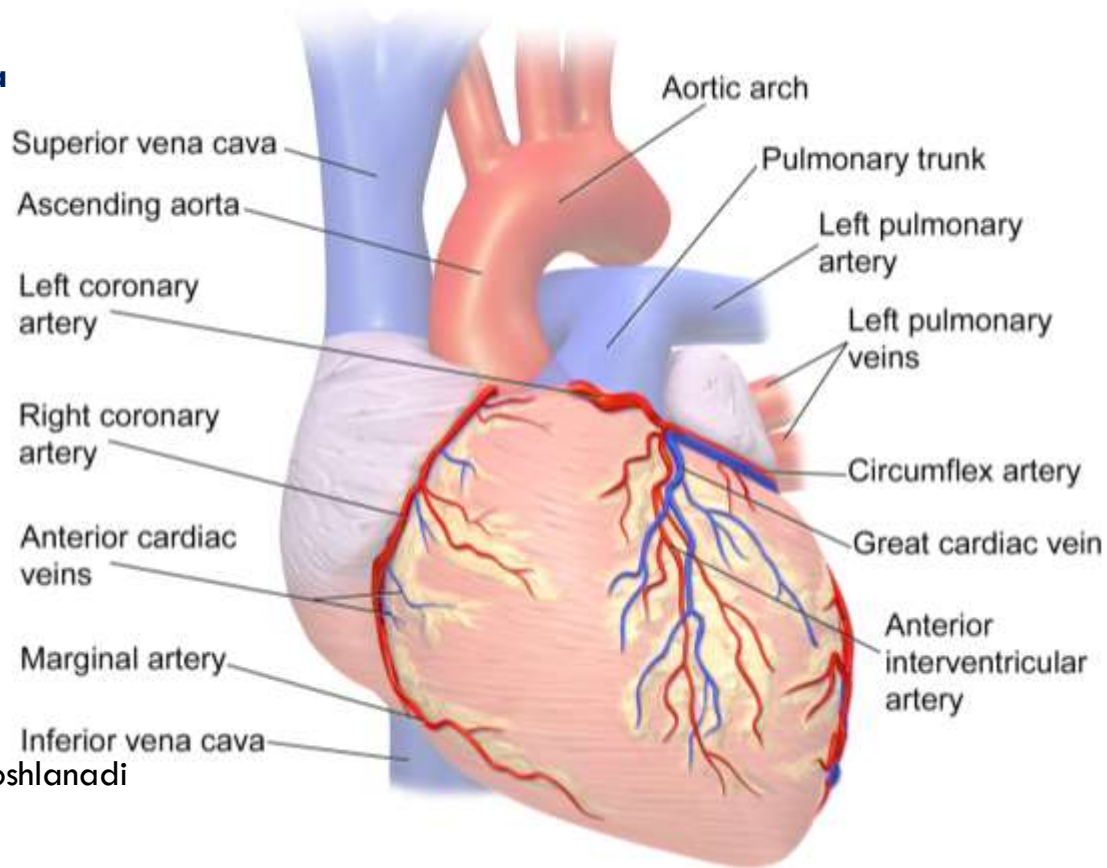


Circulus cardiaca propria- yurakning hususiy q.a.s.

Boshlanadi: chap qorincha => **a. coronaria dextra**

a. coronaria sinistra

Tugaydi: o'ng bo'lmacha => **sinus coronarius**



❑ **Arteriya coronaria dextra**

- pars ascendens aortae dan
- auricula dexter et truncus pulmonalis oralig;idan boshlanadi

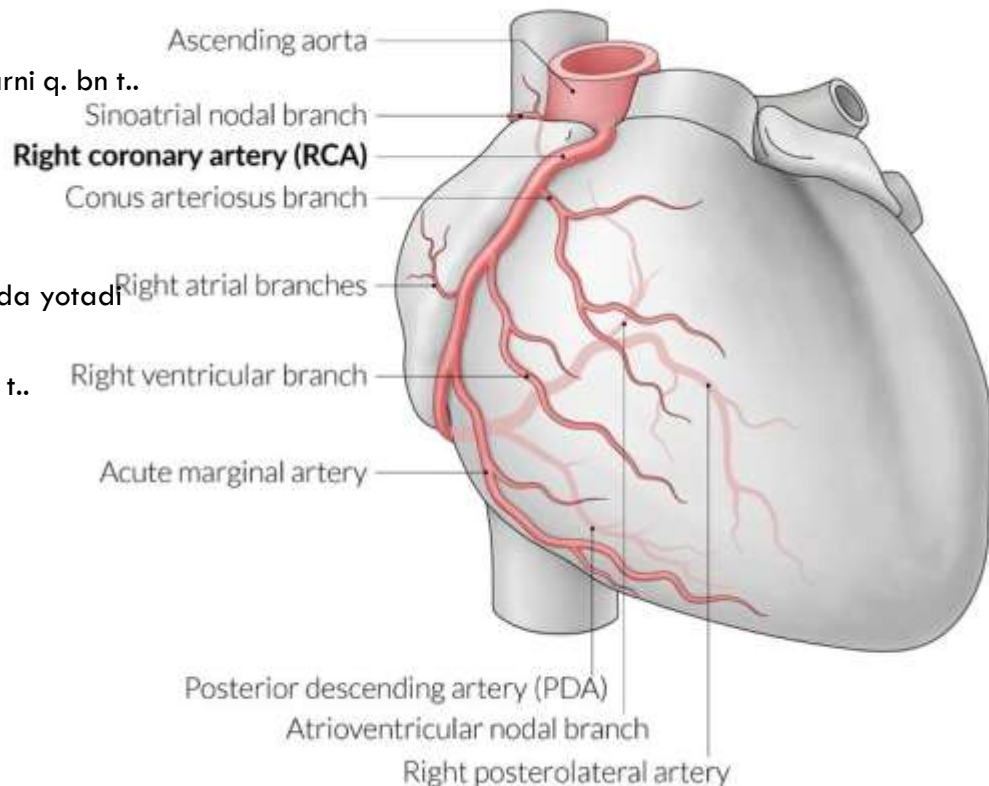
❑ **Arteriya coronaria sinistra**

- pars ascendens aortae dan
- auricula sinistra va truncus pulmonalis orasidan boshlanadi

Circulus cardiaca propria- yurakning hususiy q.a.s.

Arteriya coronaria dextra

- **r. nodi sinuatrialis va atrioventricularis** - shu nomdagi tugunlarni q. bn t..
- **r. coni arteriosi** – conus arteriosus ni q. bn t..
- **r. atrialis dextra** – o'ng bo'lmacha devorini q. bn t..
- **r. ventricularis dextra** – o'ng qorincha devorini q. bn t..
- **r. interventricularis posterior** – sulcus interventricularis posterior da yotadi
- **r. marginalis dexter** – o'ng qirra bo'ylab tushib boradi
- **rr. interventriculares septales** – septum interventriculare ni q. bn t..



Circulus cardiaca propria- yurakning hususiy q.a.s.

Arteriya coronaria sinistra

• r. circumflexus

- a. coronaria sinistra boshlanishidan 0,5-1,0 sm o'tib ajraladi
- orqa yuzaga o'tadi va sulcus coronarius ning chap qismida yotadi

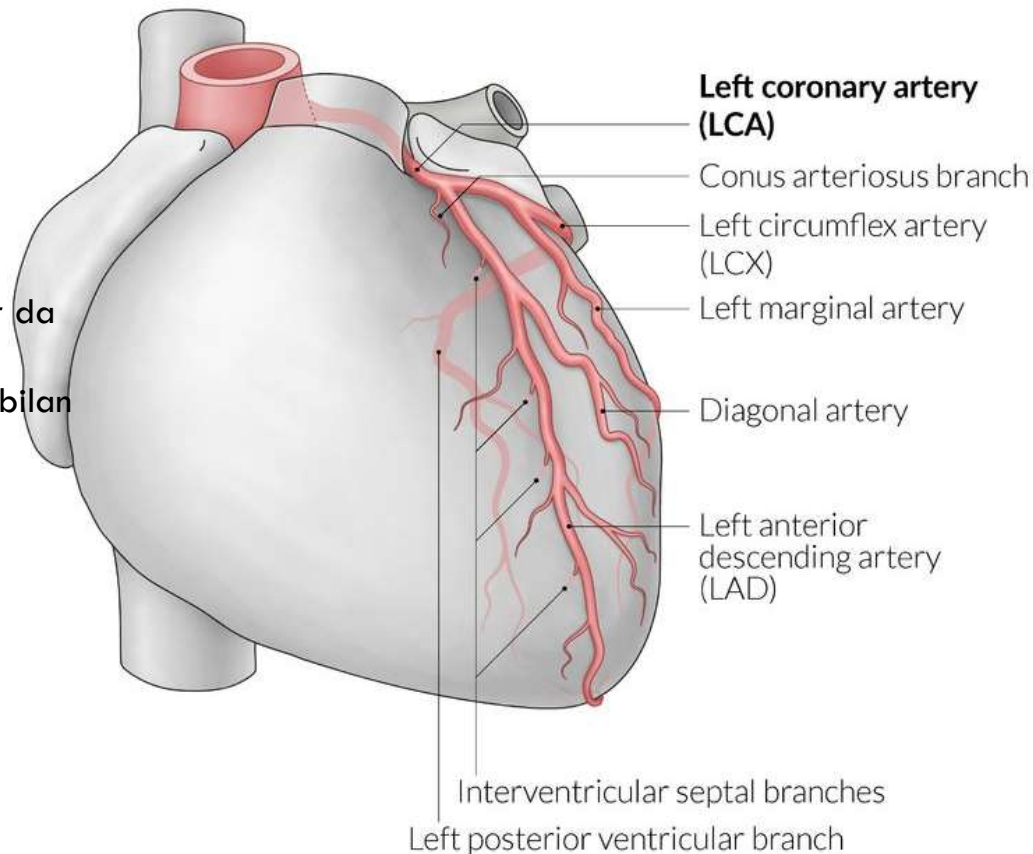
• r. coni arteriosi — conus arteriosus ni q. bn t..

• r. interventricularis ant — sulcus interventricularis anterior da yotadi

• r. lateralis sin — chap qorinchaning oldingi yuzasini qon bilan ta'min.

• r. marginalis sinistra — o'ng qirra bo'ylab tushib boradi

• r. atrioventricularis — a. coronaria dextra ning r. atrioventricularis i bilan anastomoz hosil qiladi



Circulus cardiaca propria- yurakning hususiy q.a.s.

☐ Yurak venalari:

• v. cordis magna

- sulcus interventricularis anterior da yotadi
- orqa yuzaga o'tib sinus coronarius ga quyiladi

• v. cordis parva

- oldinga-lateral yuza venalari (vv. cordis anteriores) qo'shilishidan hosil bo'ladi
- sinus coronarius ga quyiladi

• v. cordis media

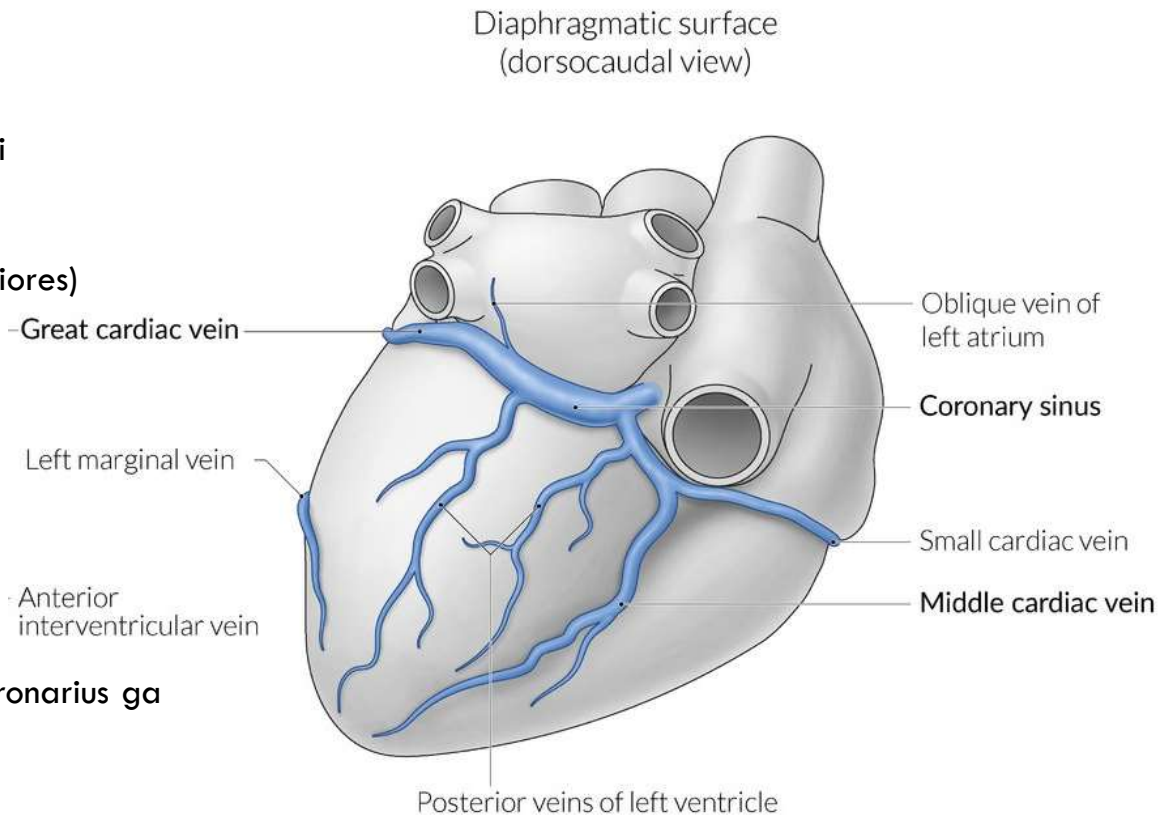
- sulcus interventricularis posterior da yotadi
- sinus coronarius ga quyiladi

• v. obliqua atrii sinistri

- chap bo'lmacha orqa yuzasidan boshlanadi
- v. cordis magna yoki to'g'ridan-to'g'ri sinus coronarius ga quyiladi

• v. posterior ventriculi sinistri

- chap qorincha orqa yuzasidan boshlanadi
- v. cordis coronarius ga quyiladi



Circulus cardiaca propria- yurakning hususiy q.a.s.

☐ Yurak venalari:

• v. cordis magna

- sulcus interventricularis anterior da yotadi
- orqa yuzaga o'tib sinus coronarius ga quyiladi

• v. cordis parva

- oldinga-lateral yuza venalari (vv. cordis anteriores) qo'shilishidan hosil bo'ladi
- sinus coronarius ga quyiladi

• v. cordis media

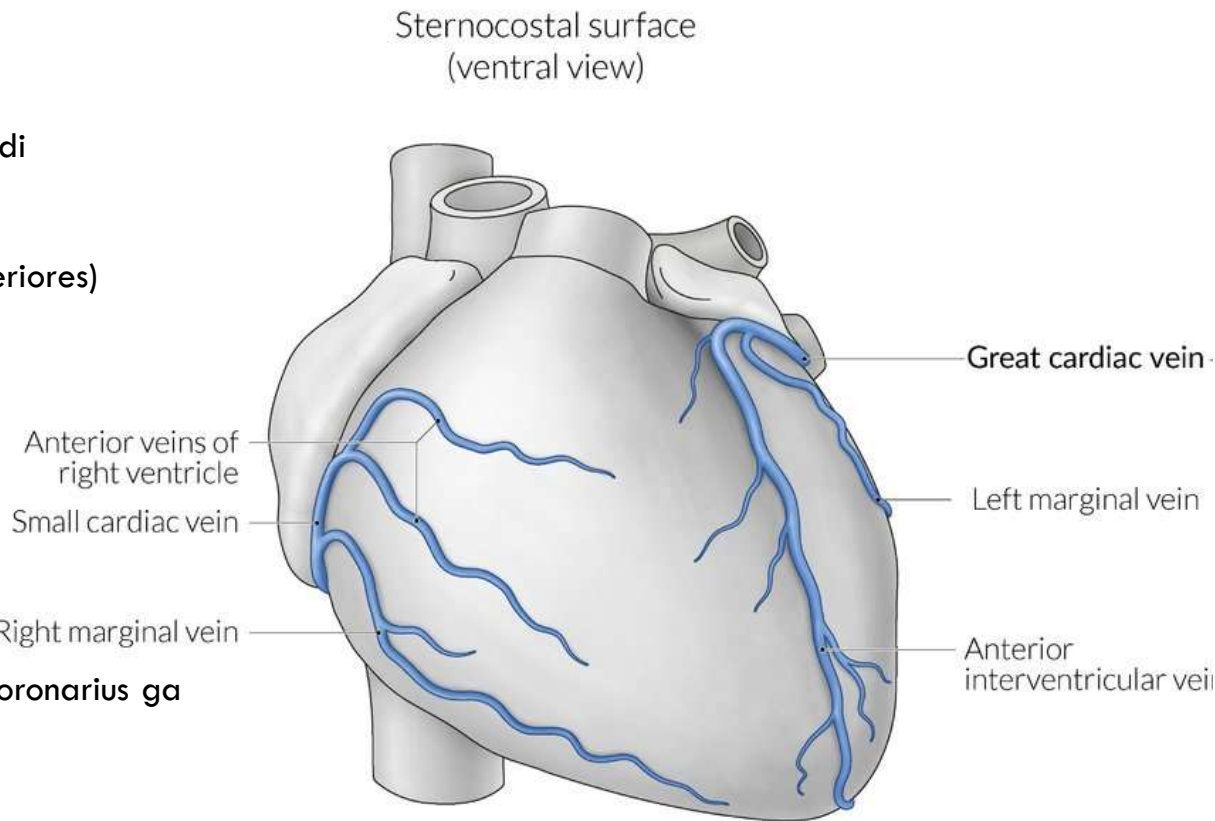
- sulcus interventricularis posterior da yotadi
- sinus coronarius ga quyiladi

• v. obliqua atrii sinistri

- chap bo'lmacha orqa yuzasidan boshlanadi
- v. cordis magna yoki to'g'ridan-to'g'ri sinus coronarius ga quyiladi

• v. posterior ventriculi sinistri

- chap qorincha orqa yuzasidan boshlanadi
- v. cordis coronarius ga quyiladi





E'TIBORINGIZ UCHUN RAXMAT

