IL CUORE: LA SUA ANATOMIA, LE SUE FUNZIONI.

Palazzo Tadea, 19 settembre 2013

Relatore: Dottor *Stefano Zavagno*

Apparato Cardiovascolare

Generalità

CUORE

VASI SANGUIGNI → **Arterie**

Vene

Capillari

Apparato Cardiovascolare
Generalità

Funzioni principali

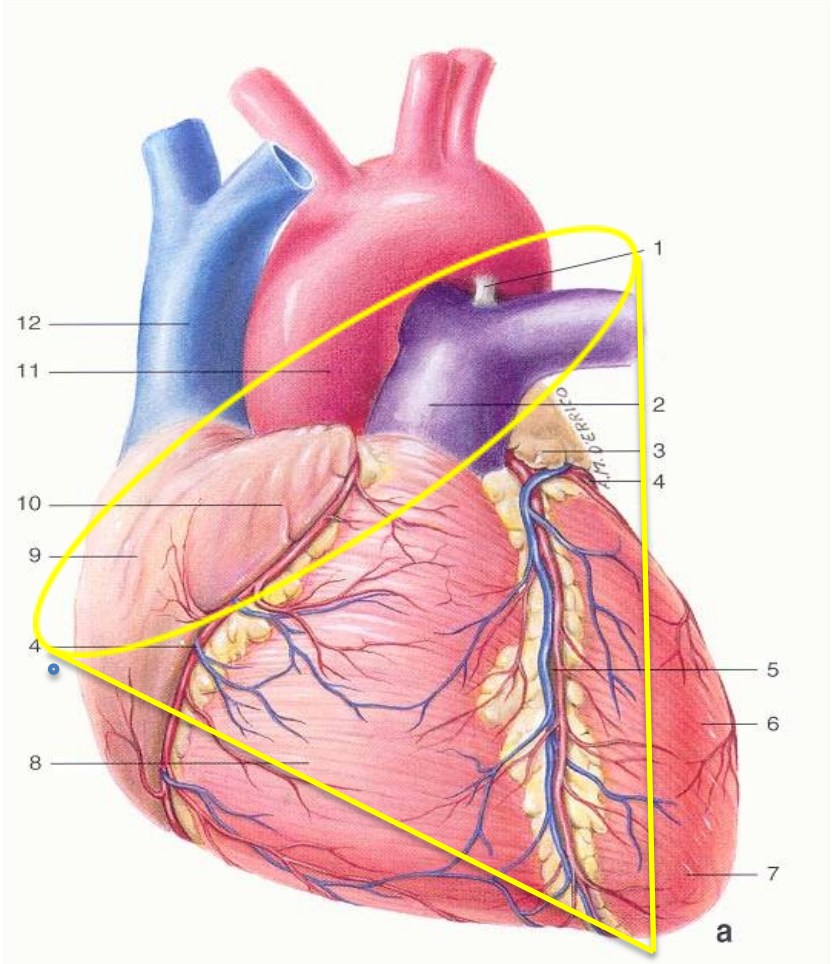
dell'apparato Cardiovascolare

- Trasporto dell'ossigeno e di sostanze nutrienti ai tessuti
- Rimozione dell'anidride carbonica e di cataboliti dai tessuti

IL CUORE

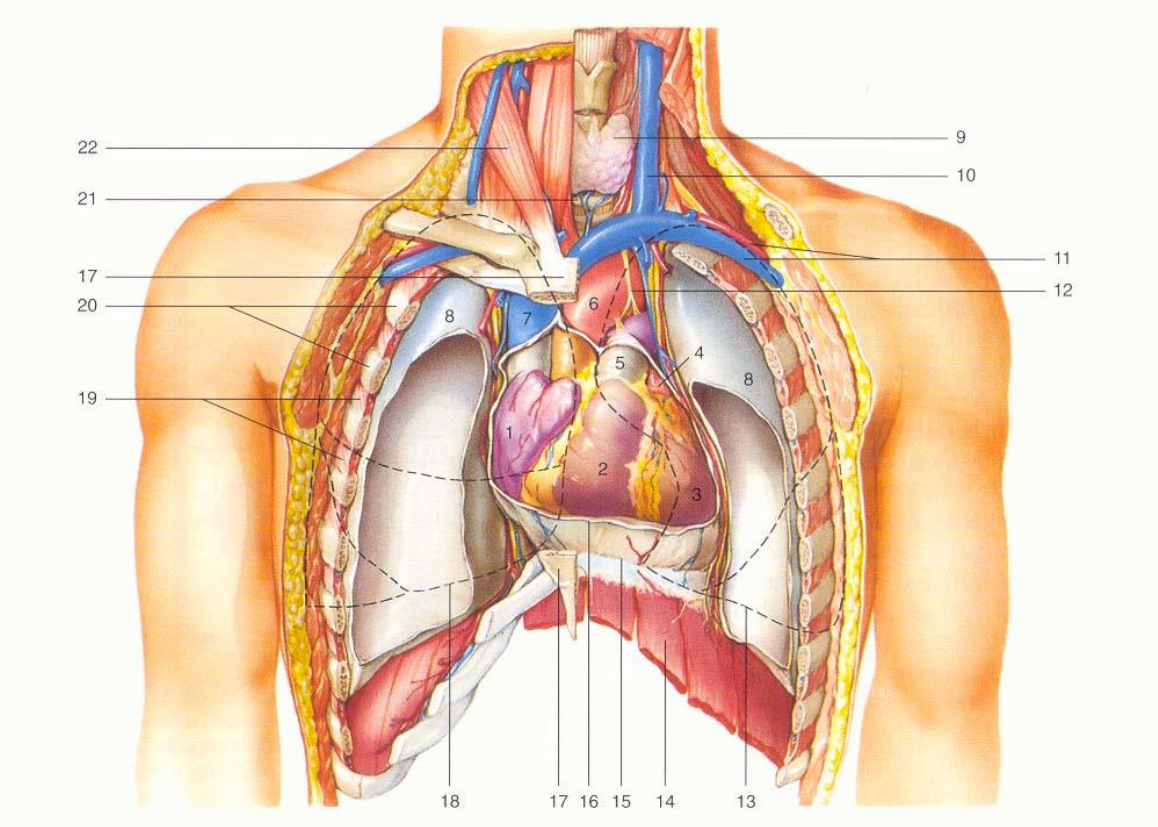
Definizione: organo centrale dell'apparato circolatorio, che fa scorrere il sangue all'interno dei vasi sanguigni con le sue contrazioni ritmiche. È un organo cavo, impari, a struttura prevalentemente muscolare.

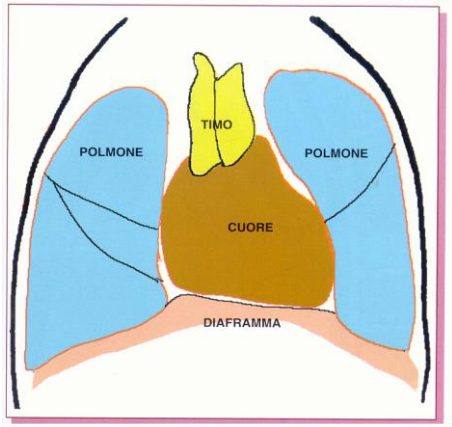
Aspetto macroscopico: ha la forma di un cono, con la base rivolta in alto, a destra è all'interno, e l'apice in basso, a sinistra è in avanti

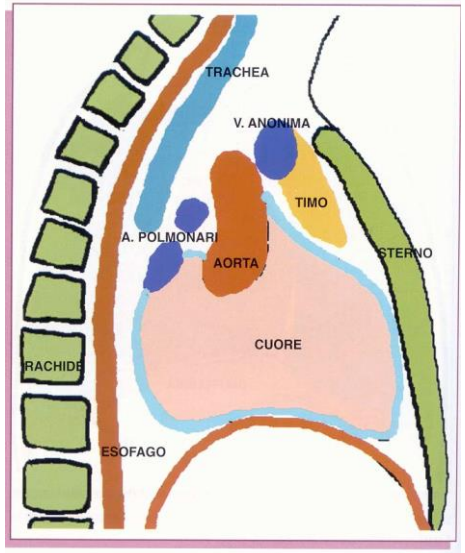


IL CUORE

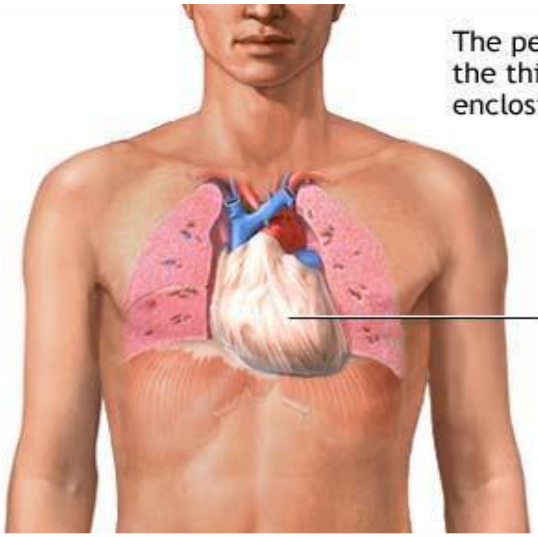
Posizione e rapporti

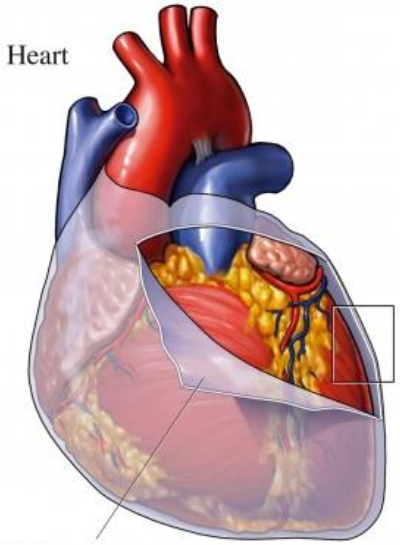


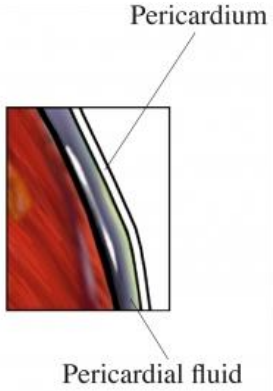




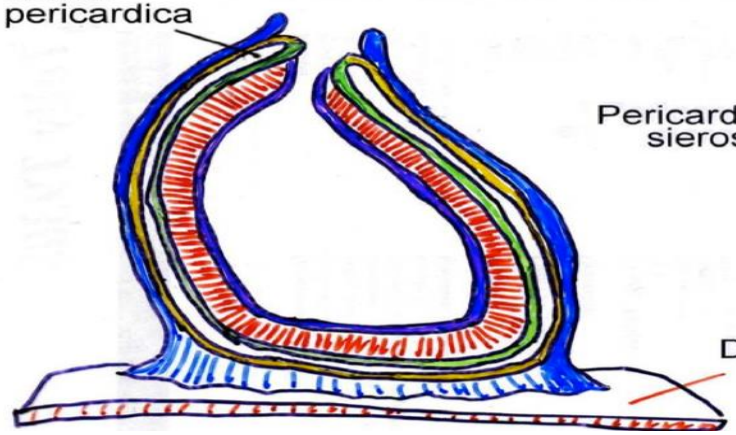
IL CUORE
Pericardio







Parete del cuore e Pericardio

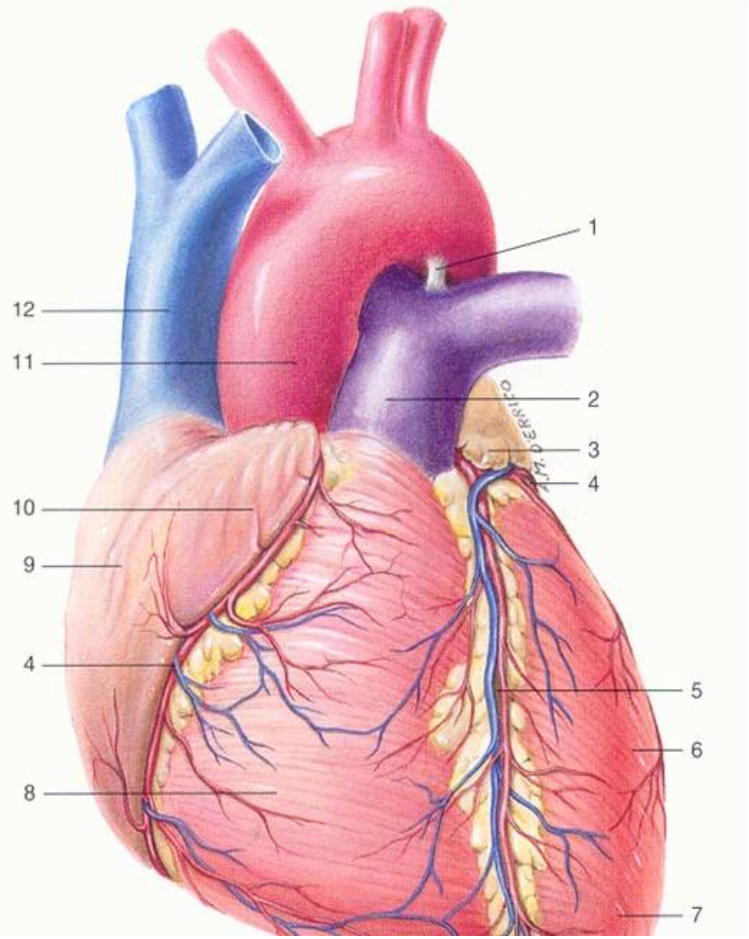


Pericardio sieroso

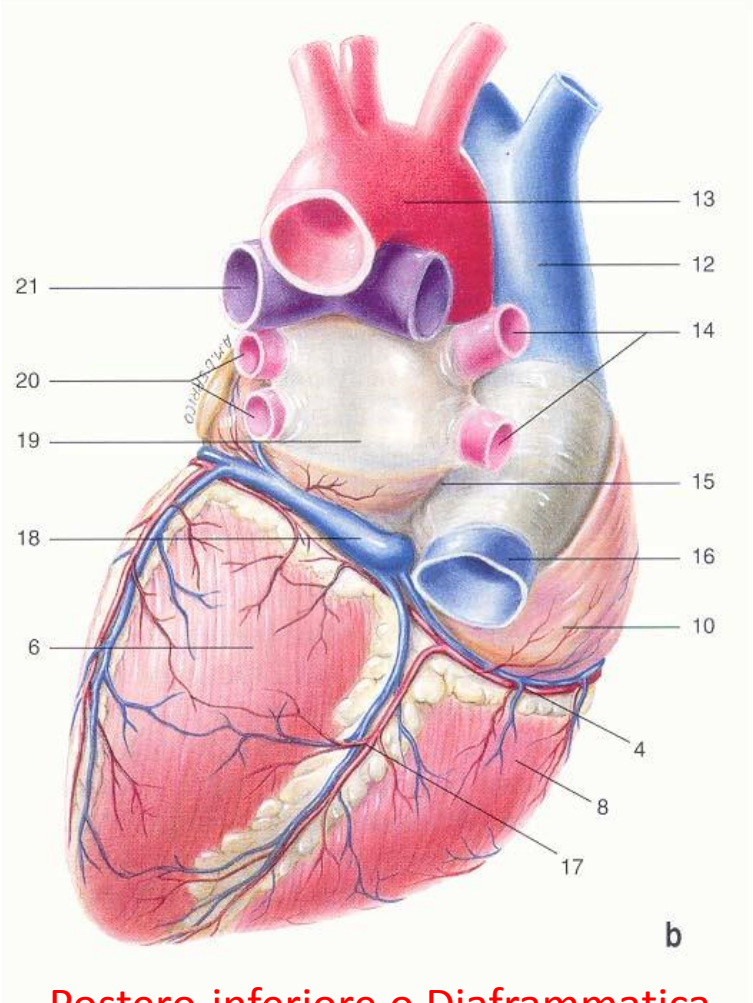
Pericardio { Pericardio fibroso / Pericardio parietale / Pericardio viscerale (Epicardio) / Miocardio / Endocardio } Parete del cuore

IL CUORE

Facce



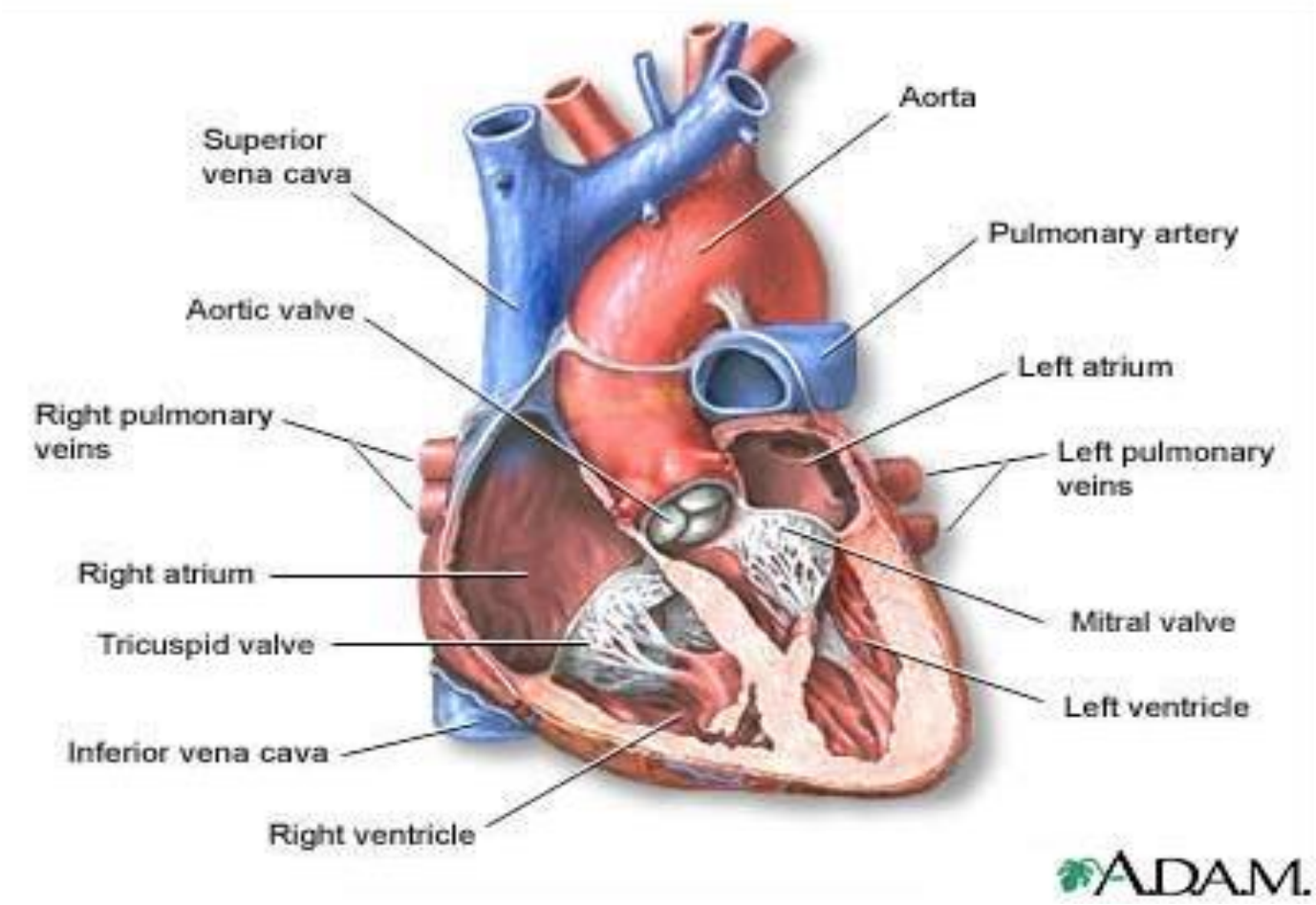
Anteriore o Sternocostale



Postero-inferiore o Diaframmatica

IL CUORE

Conformazione interna del cuore



IL CUORE

Conformazione interna del cuore

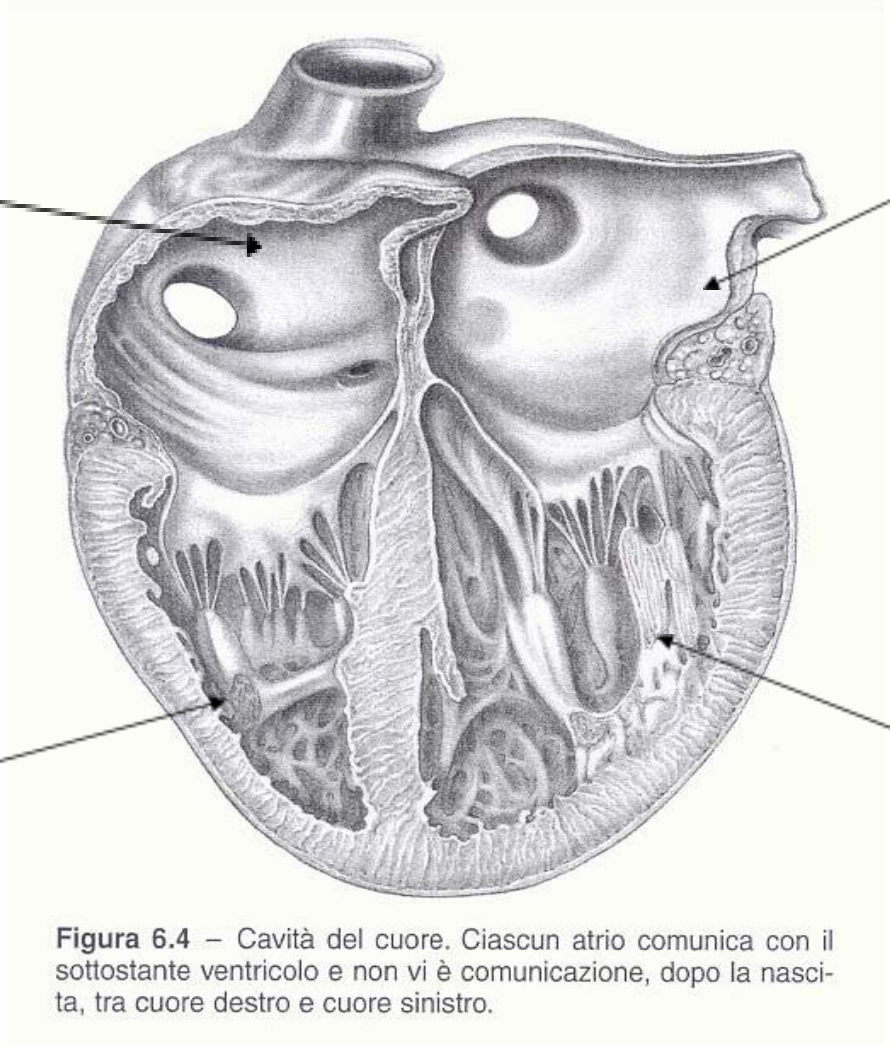
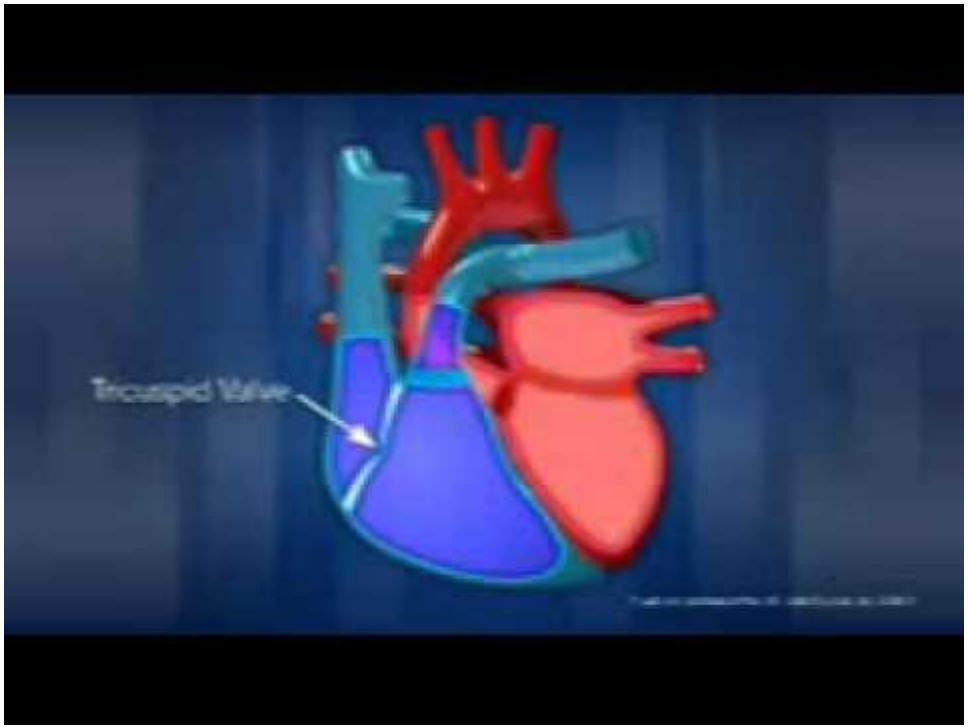
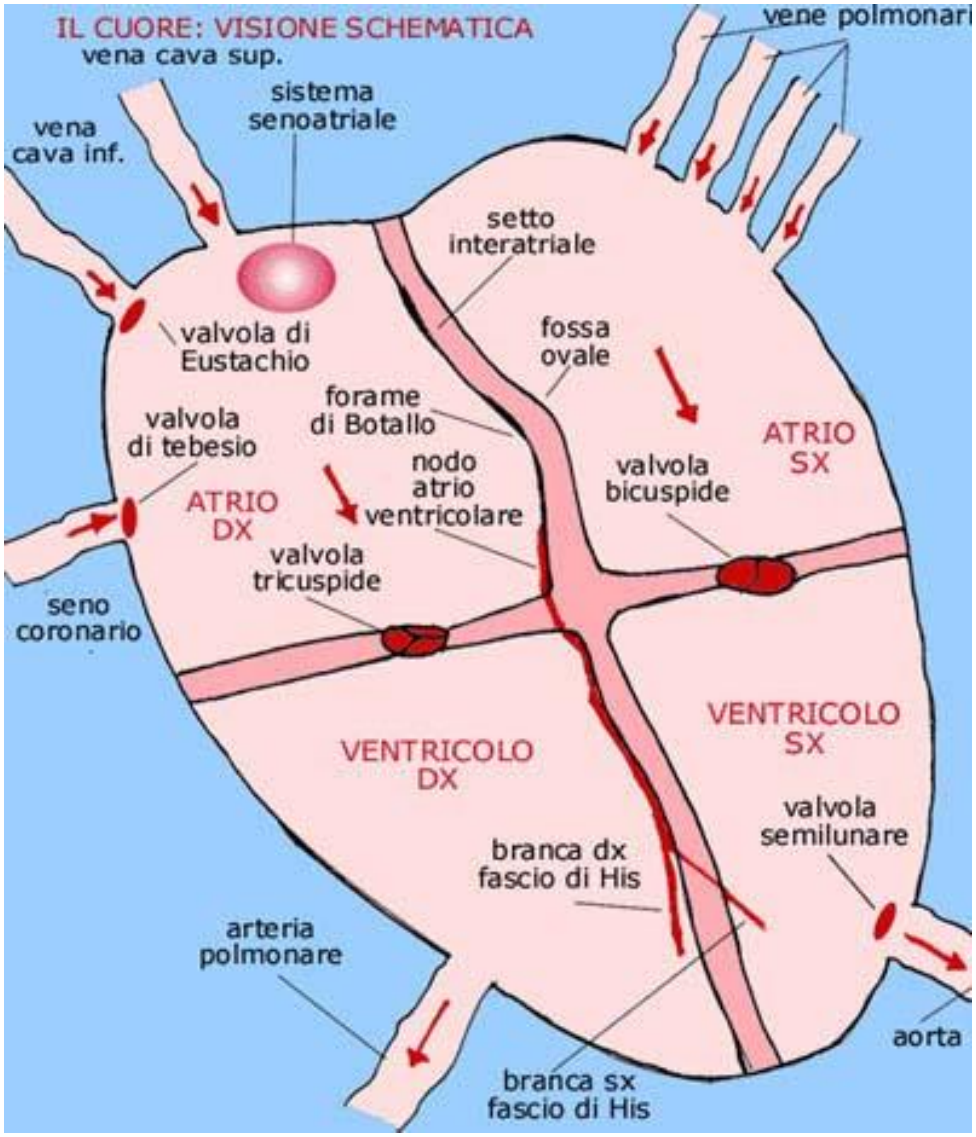
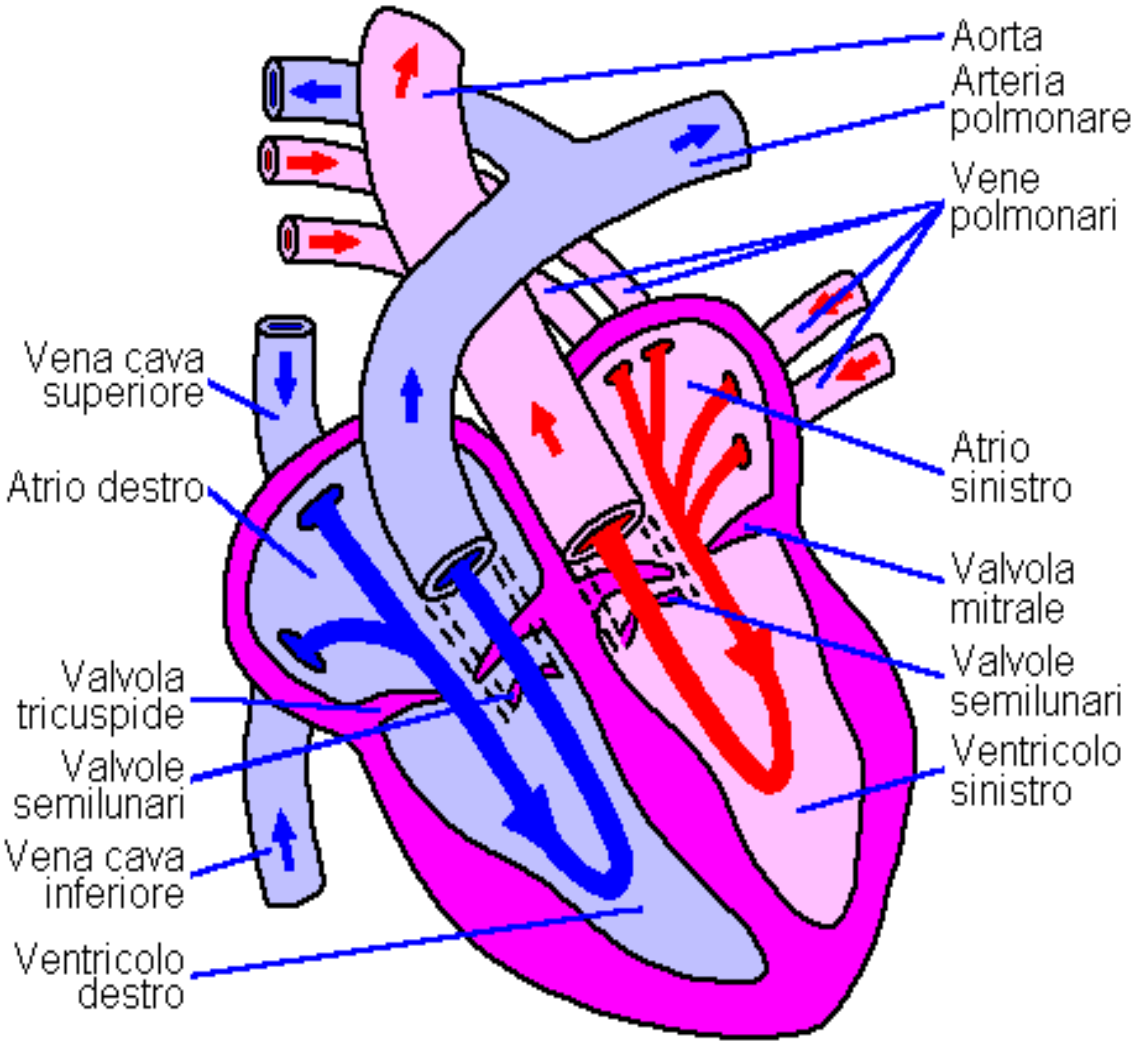


Figura 6.4 – Cavità del cuore. Ciascun atrio comunica con il sottostante ventricolo e non vi è comunicazione, dopo la nascita, tra cuore destro e cuore sinistro.

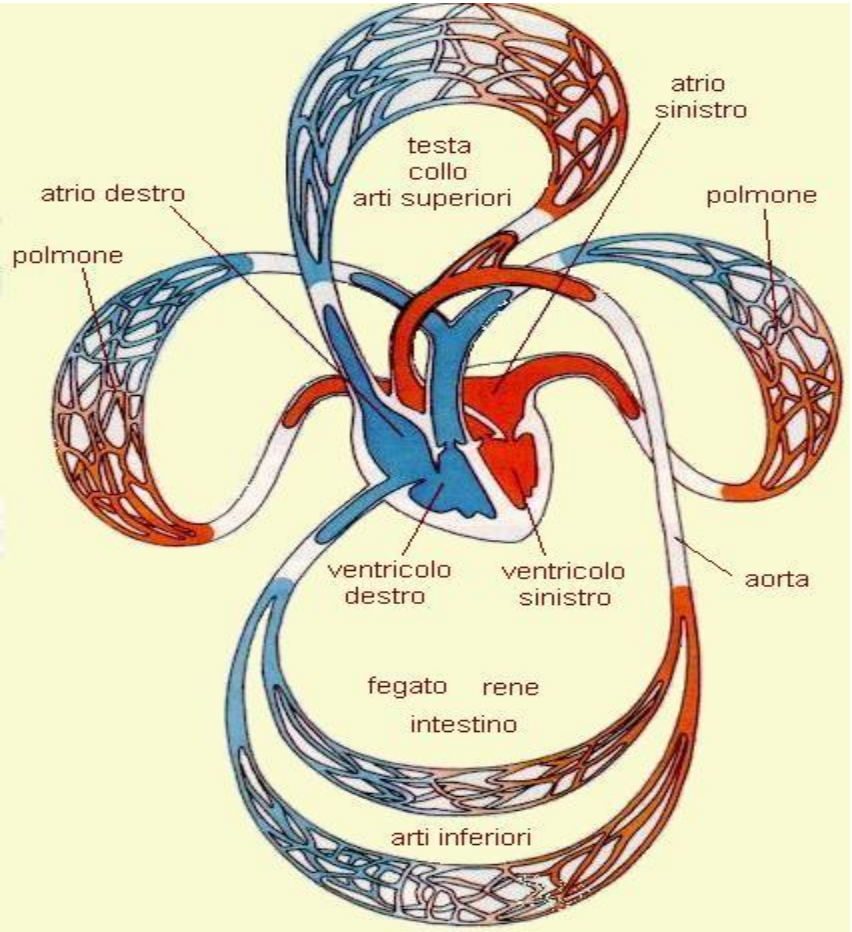

Tricuspid Valve


IL CUORE: VISIONE SCHEMATICA
vena cava sup.
vene polmonari
sistema senoatriale
vena cava inf.
setto interatriale
valvola di Eustachio
fossa ovale
forame di Botallo
valvola di tebesio
ATRIO SX
nodo atrio ventricolare
valvola bicuspide
ATRIO DX
valvola tricuspide
seno coronario
VENTRICOLO SX
VENTRICOLO DX
valvola semilunare
branca dx fascio di His
arteria polmonare
aorta
branca sx fascio di His


Aorta
Arteria polmonare
Vene polmonari
Vena cava superiore
Atrio destro
Atrio sinistro
Valvola mitrale
Valvole semilunari
Valvola tricuspide
Valvole semilunari
Ventricolo sinistro
Vena cava inferiore
Ventricolo destro

Apparato Cardiovascolare
Generalità

Cuore → Arterie → Organi
↑ Vene ← del corpo



CIRCOLAZIONE SISTEMICA o GRANDE CIRCOLAZIONE :

1: Ventricolo sinistro
2: Aorta
3: Capillari (organi)
4: Vene
5: Vena cava sup., inf., e seno aortico
6: Atrio destro

CIRCOLAZIONE POLMONARE o PICCOLA CIRCOLAZIONE :

1: Ventricolo destro
2: Arteria polmonare
3: Capillari (polmoni)
4: 4 vene polmonari
5: Atrio sinistro

IL CUORE

Valvole semilunari (arteria polmonare e aorta)

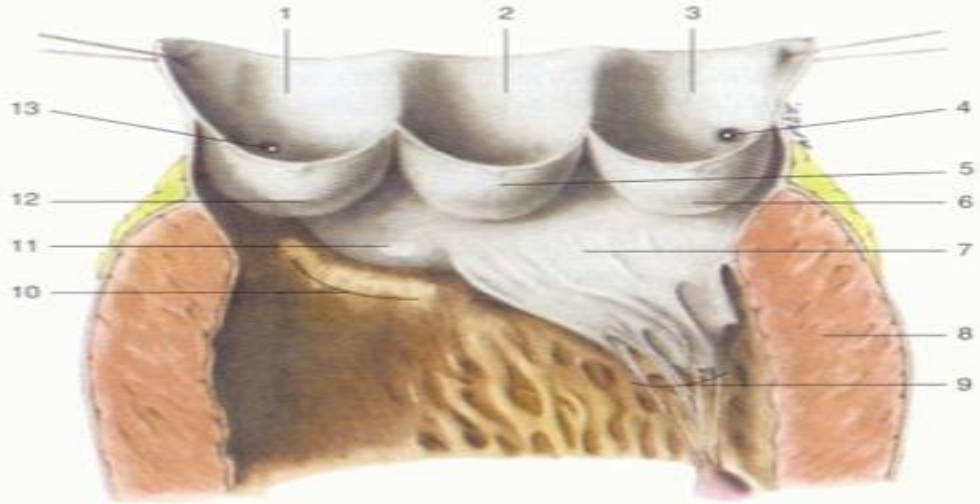
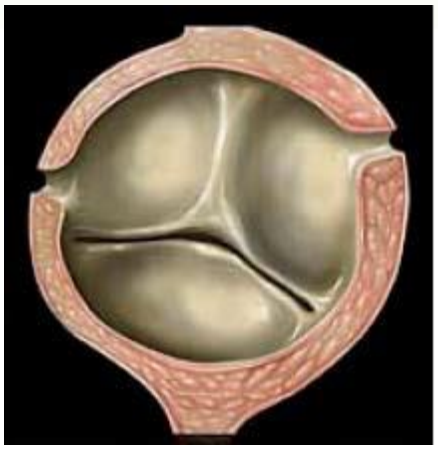


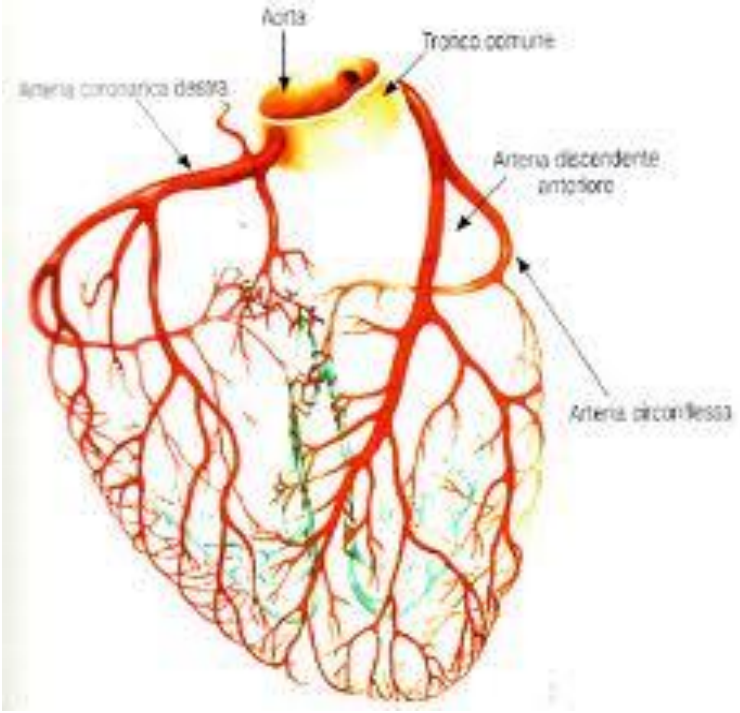
Figura 6.8 – Valvole semilunari aortiche aperte per dimostrare la disposizione dei lembi valvolari. **1**, Seno aortico destro; **2**, seno aortico posteriore; **3**, seno aortico sinistro; **4**, origine dell'arteria coronaria sinistra; **5**, valvola semilunare posteriore; **6**, valvola semilunare sinistra; **7**, lembo anteriore della valvola mitrale; **8**, miocardio; **9**, corde tendinee; **10**, vestibolo aortico; **11**, parte membranacea del setto interventricolare; **12**, valvola semilunare destra; **13**, origine dell'arteria coronaria destra.



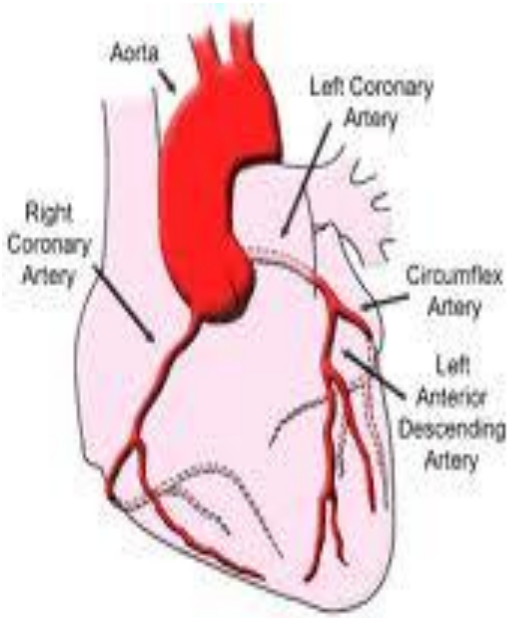
Closed

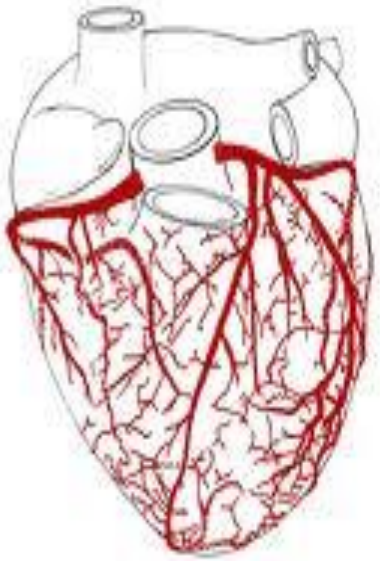
Open

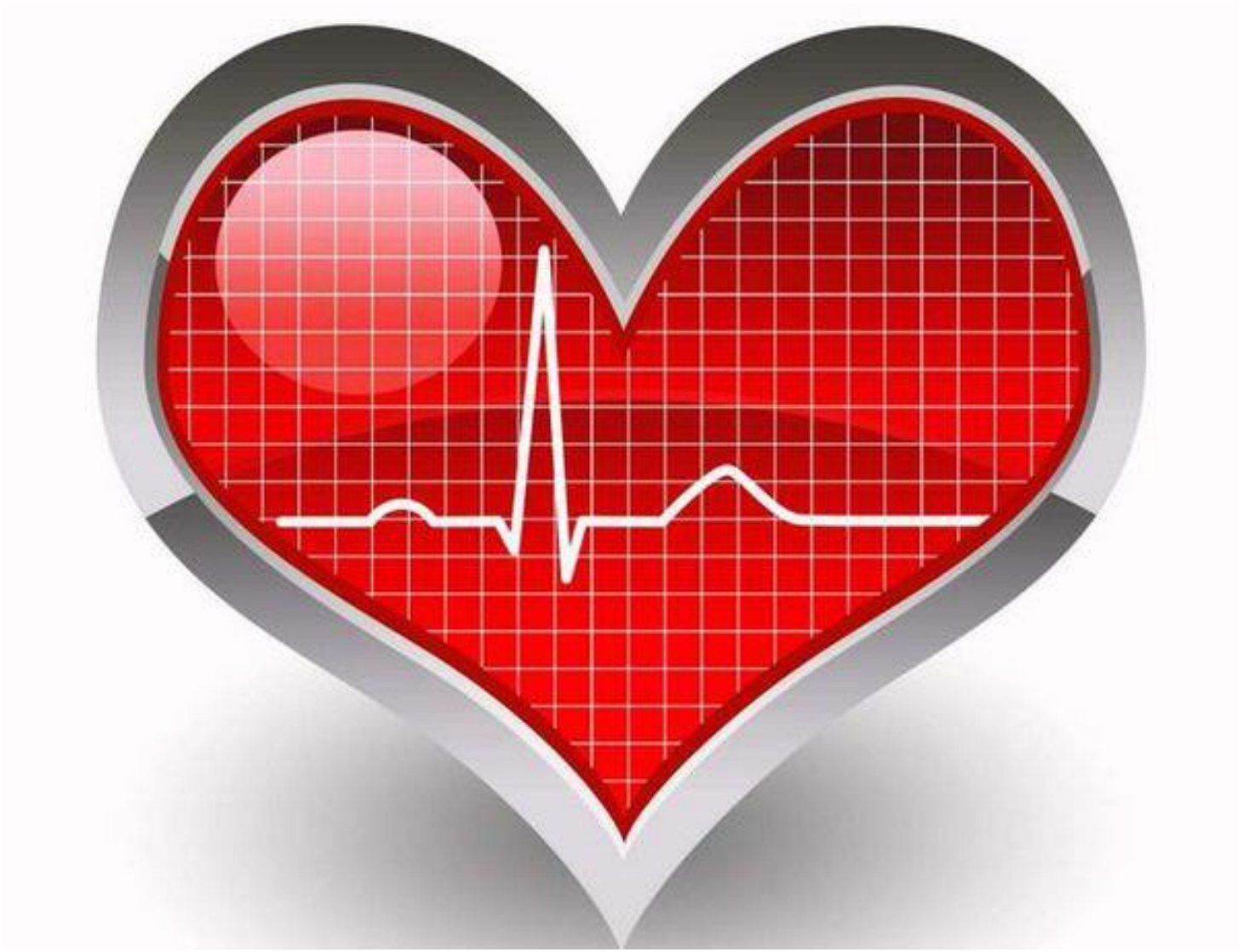
IL CUORE - Le Coronarie



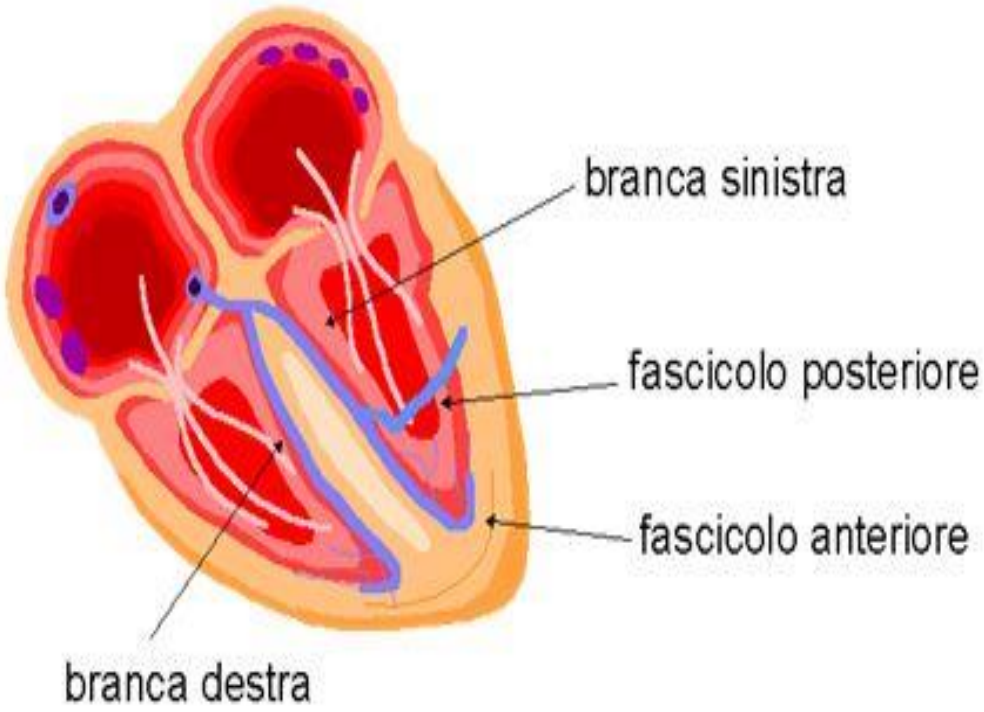
IL CUORE - Le Coronarie







Sistema di conduzione del cuore
Contrazioni ritmiche


branca sinistra
fascicolo posteriore
fascicolo anteriore
branca destra

IL CUORE

Sistema di conduzione

SISTEMA SENOATRIALE e ATRIOVENTRICOLARE

NODO SENOATRIALE

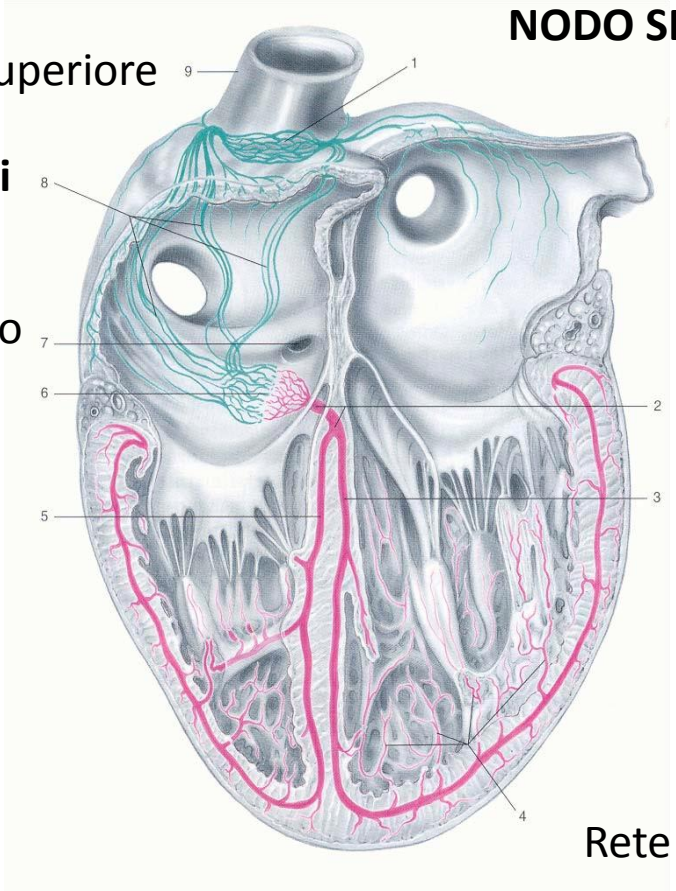
Vena cava superiore

Tratti internodali

Sblocco del seno coronarico

NODO ATRIOVENTRICOLARE

Branca destra
del fascio di His



Tronco del fascio di His

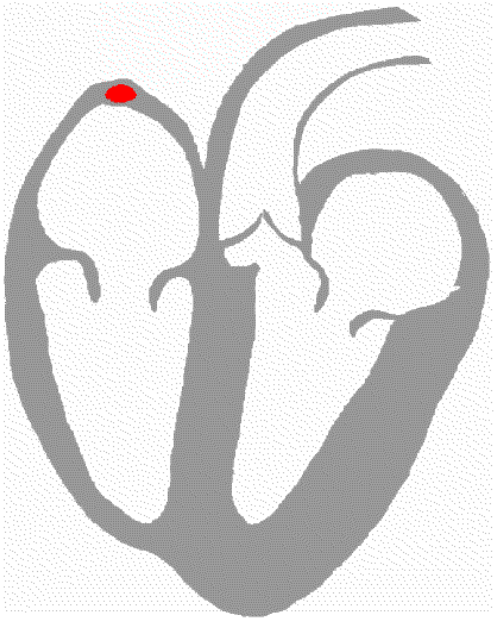
Branca sinistra
del fascio di His

Rete di Purkinje

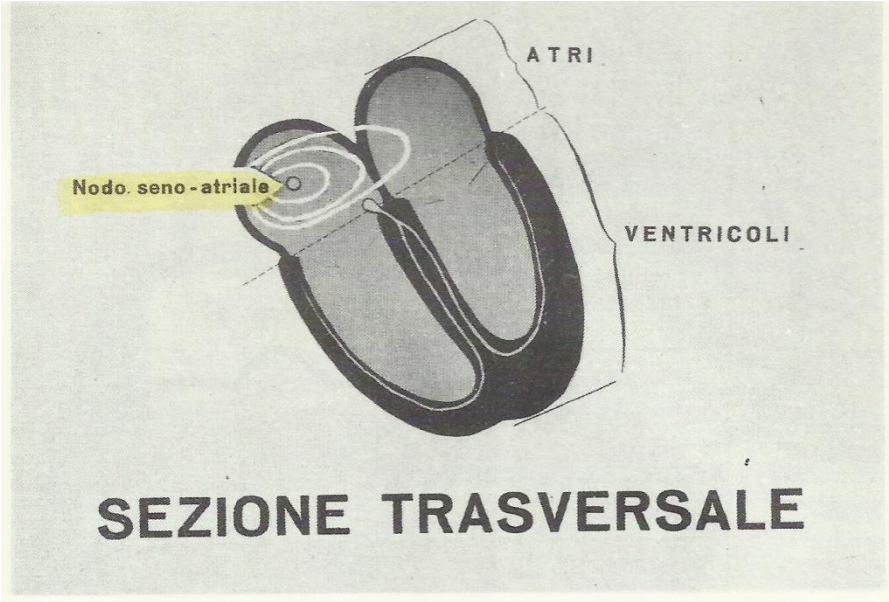
IL CUORE

Sistema di conduzione

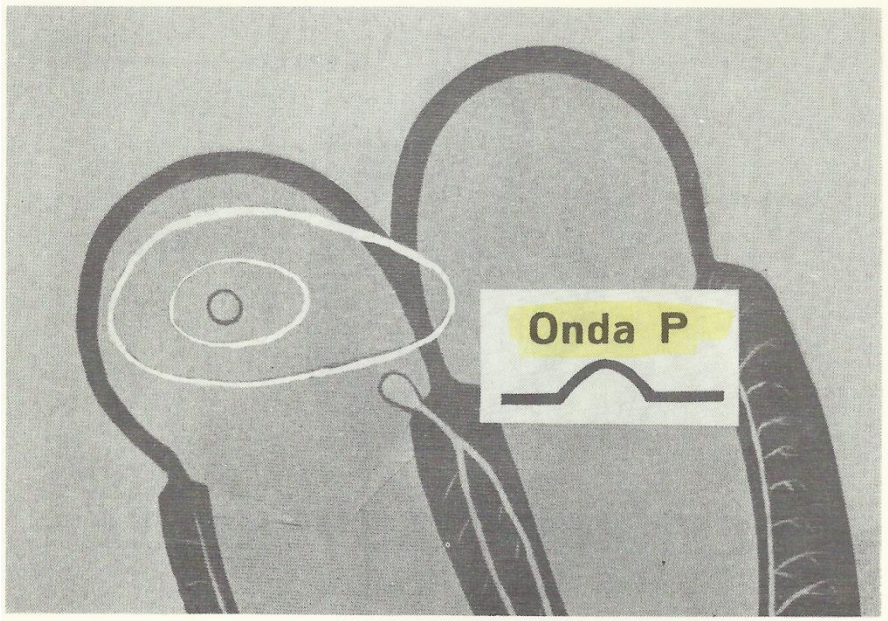
PROPAGAZIONE dell'IMPULSO

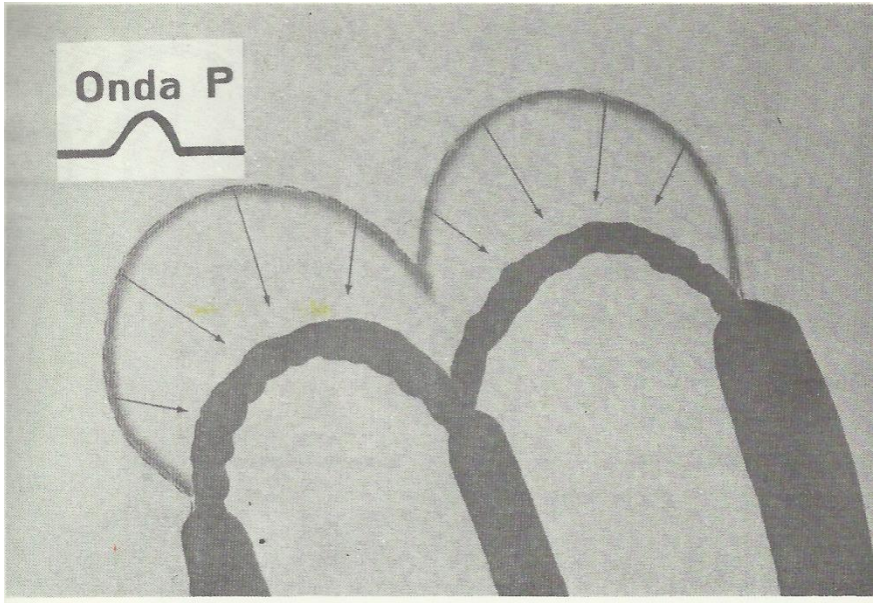


IL CUORE – l'impulso elettrico

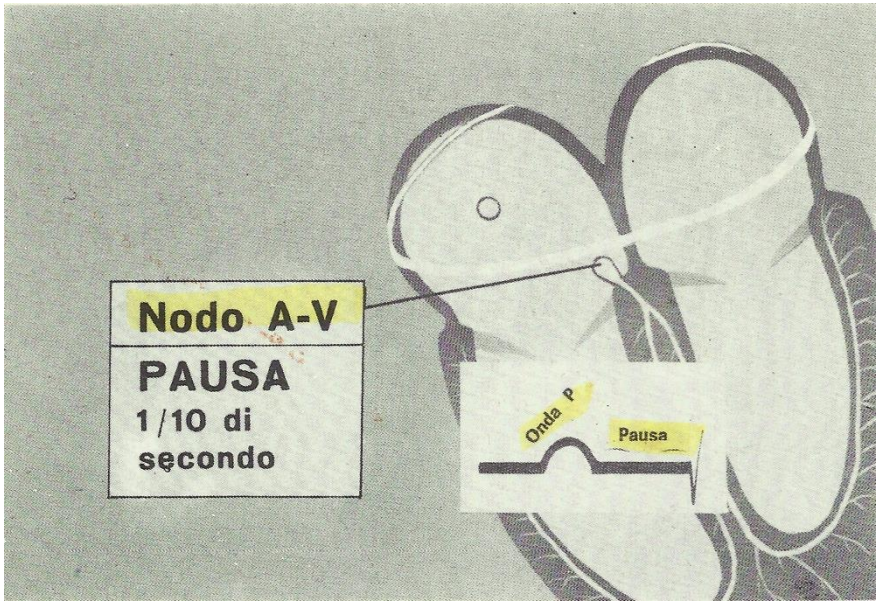


IL CUORE – l'impulso elettrico





IL CUORE - l'impulso elettrico



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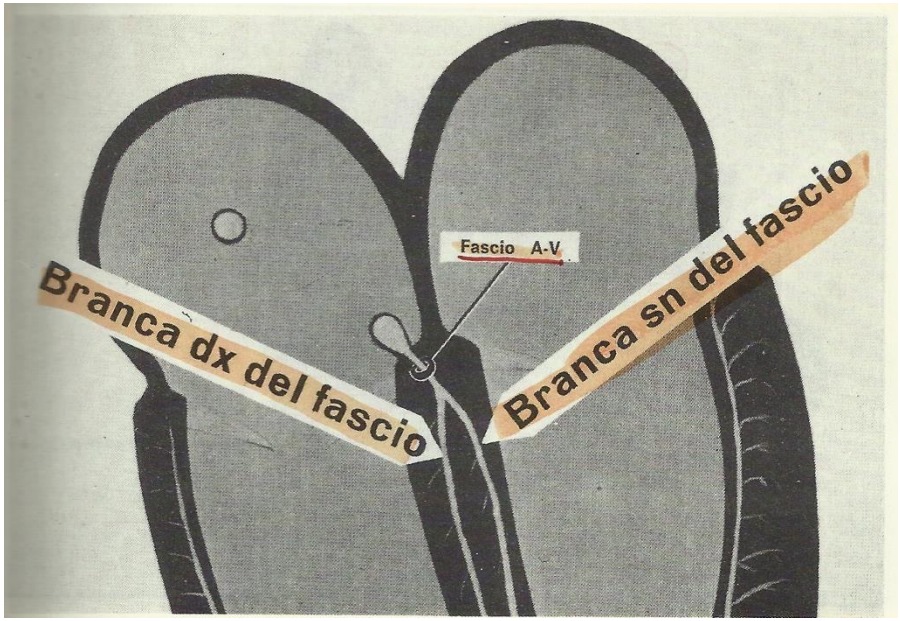

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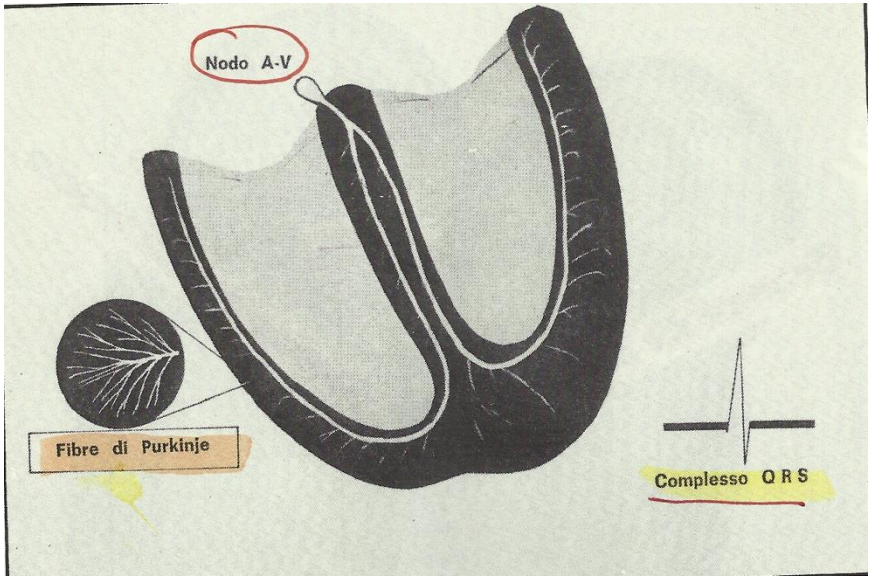

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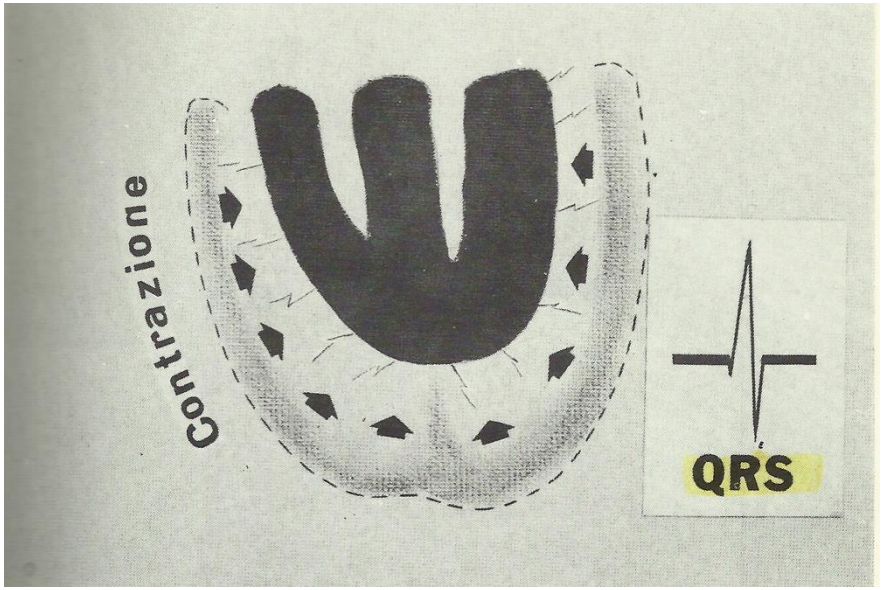
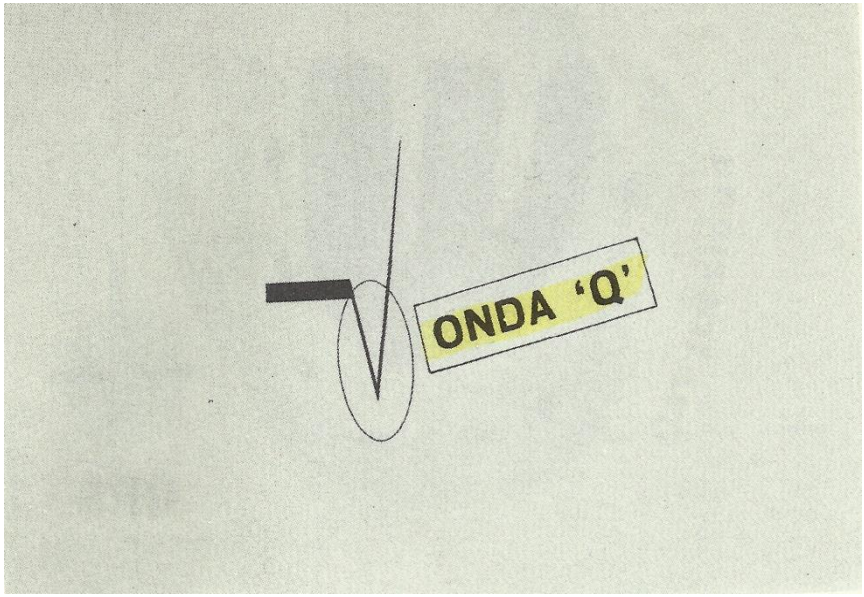
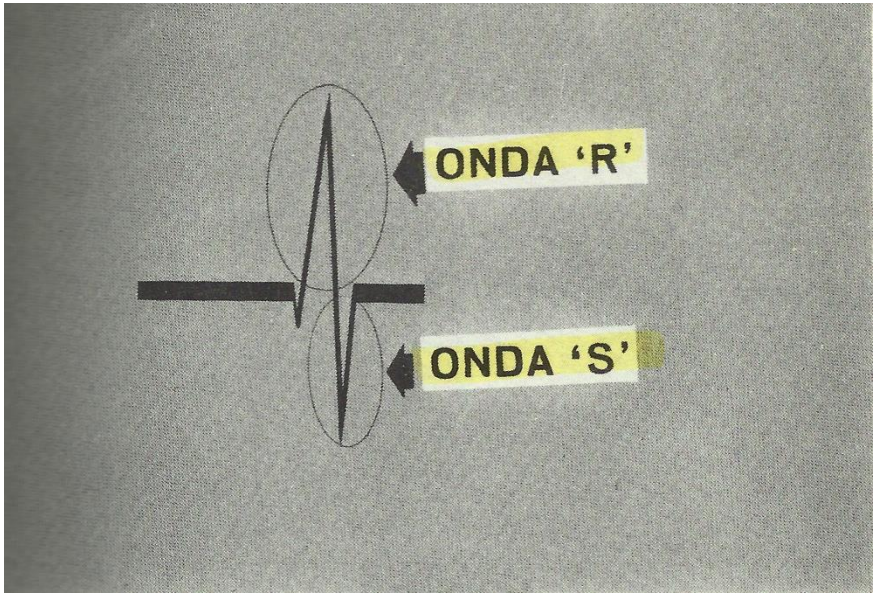


IL CUORE – l'impulso elettrico
Il complesso "QRS"





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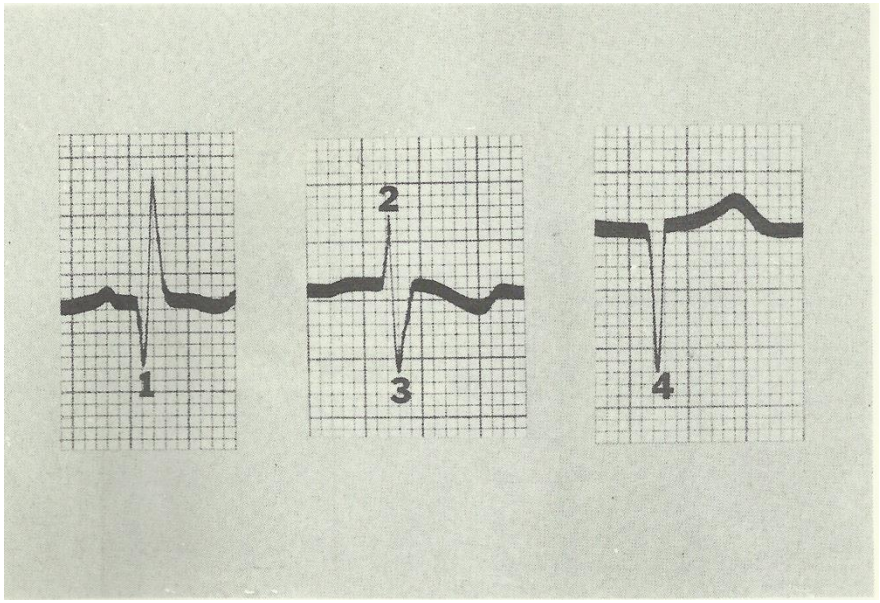

IL CUORE – l'impulso elettrico
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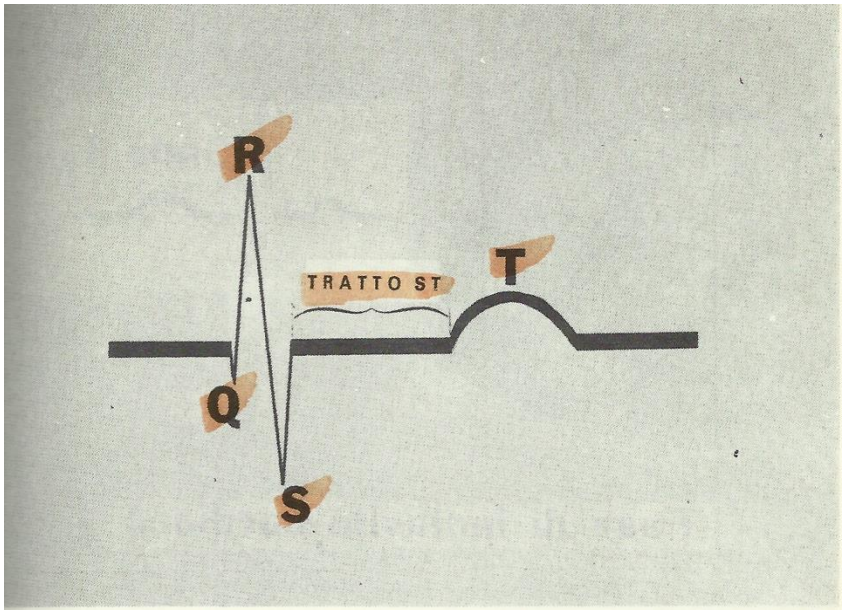
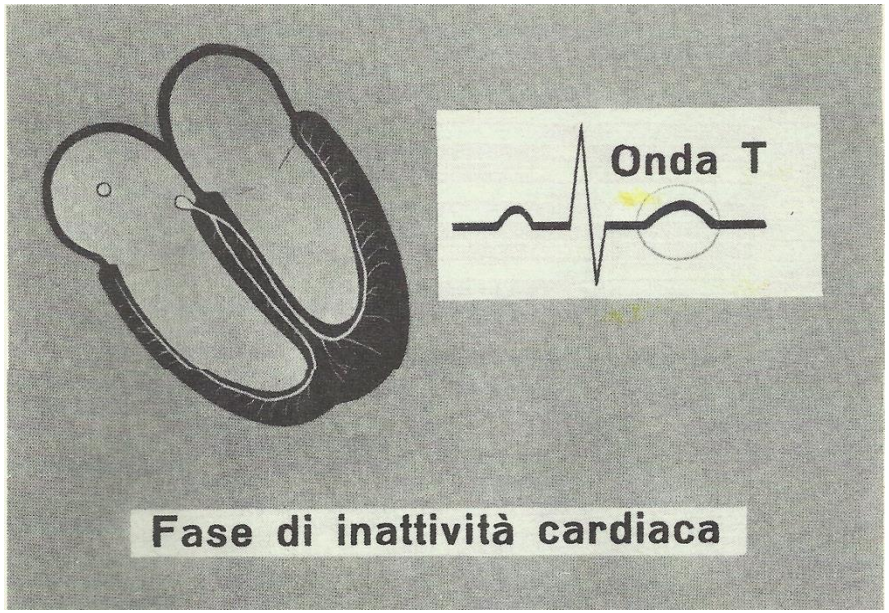
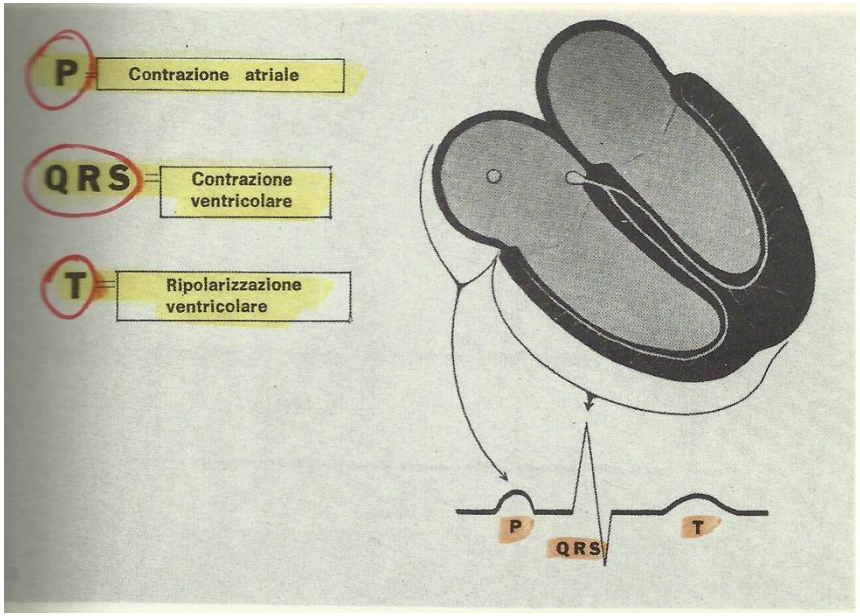




IL CUORE – l'impulso elettrico
Il Ciclo Cardiaco



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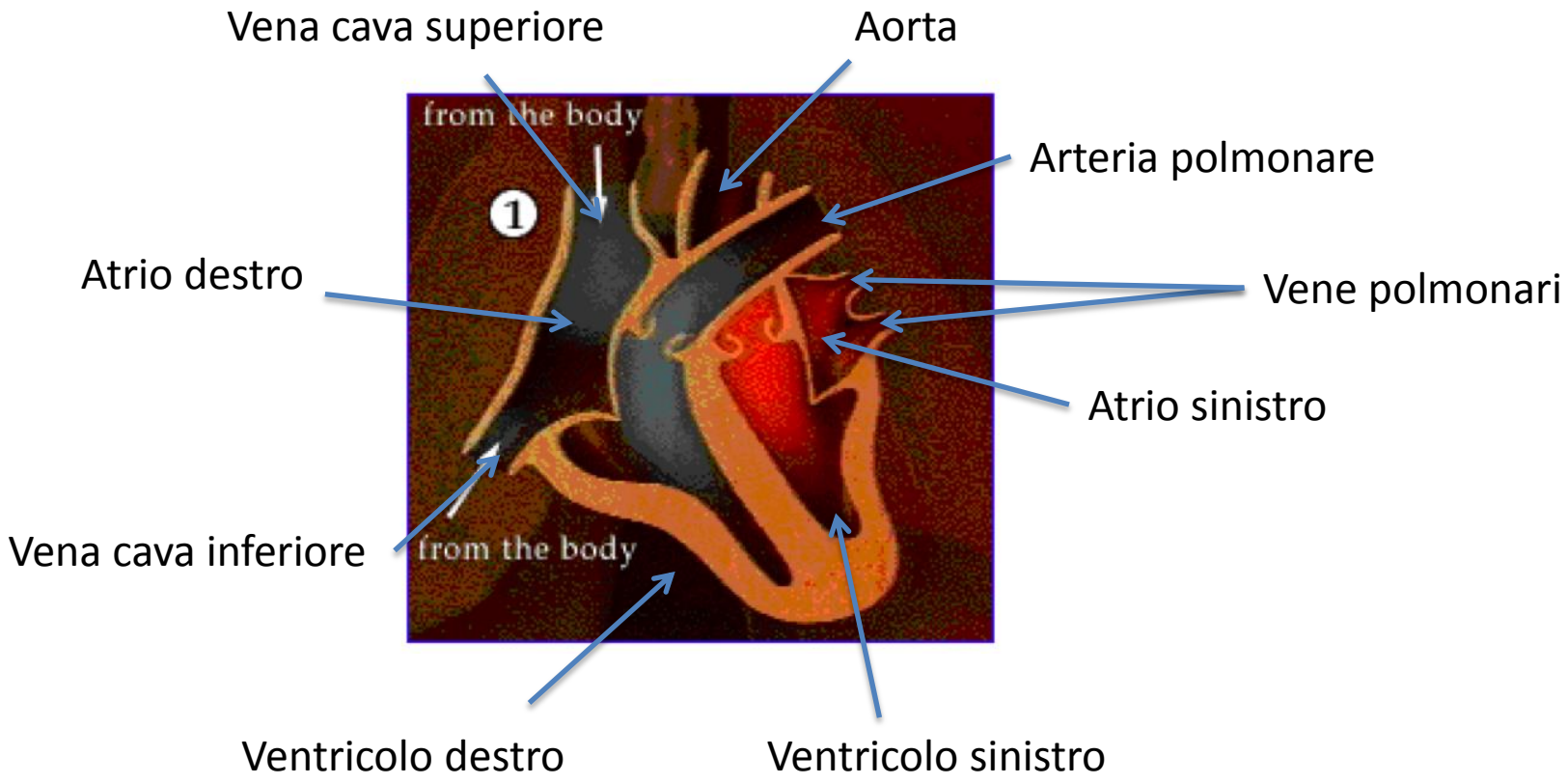

IL CUORE – l'impulso elettrico
ECG

RITMO SINUSALE

RITMO NODALE

BLOCCO COMPLETO

FLUTTER ATRIALE

FIBRILLAZIONE ATRIALE

FIBRILLAZIONE VENTRICOLARE