

Faculté de Médecine Paris Diderot

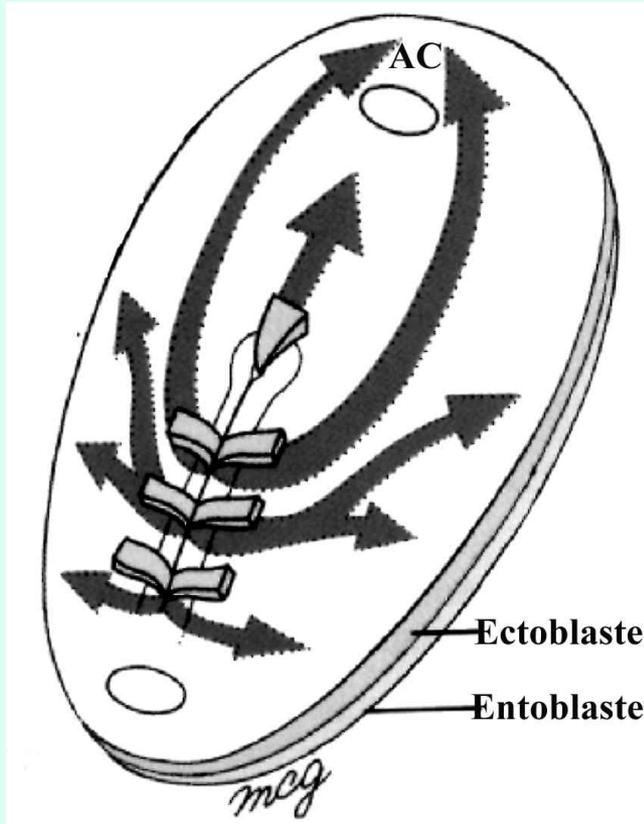
Embryologie cardio-vasculaire

PCEM2

Module de Cardiologie



J16 (gastrulation) à J50 (cœur « 4 cavités »)



< 5 sem

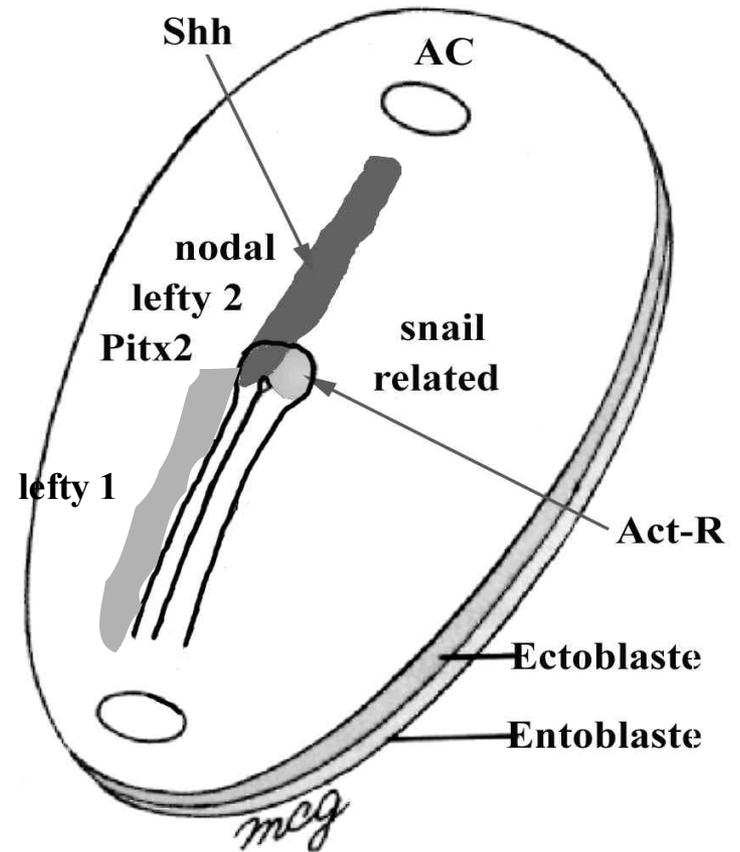
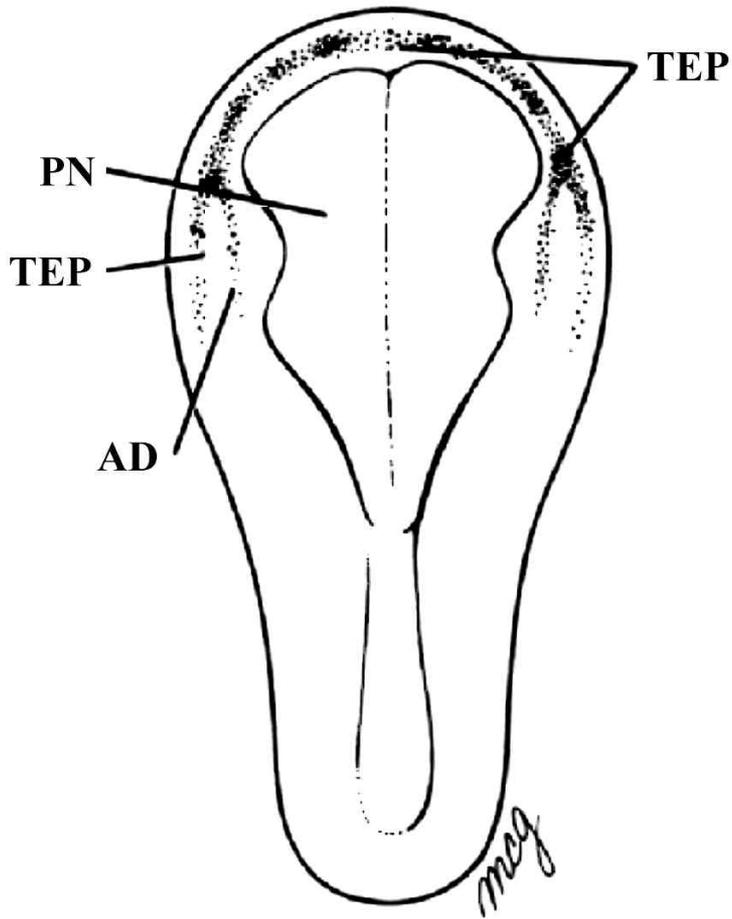


WL Larsen,
Churchill Livingstone

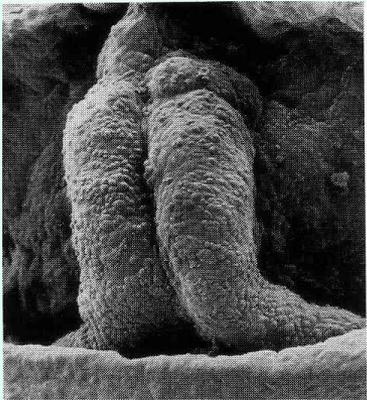
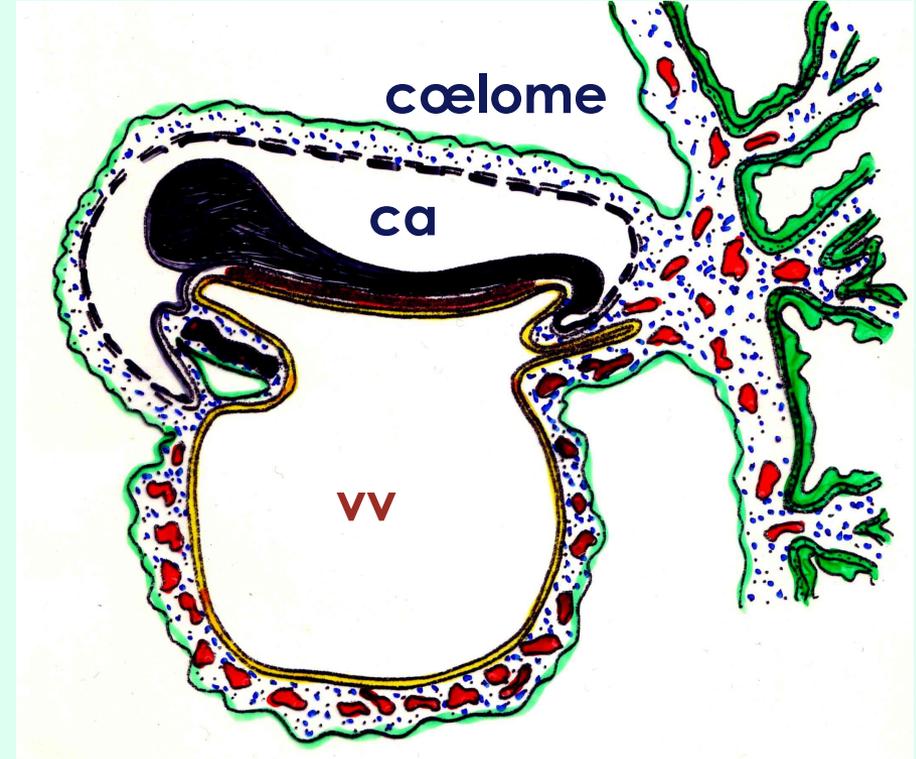
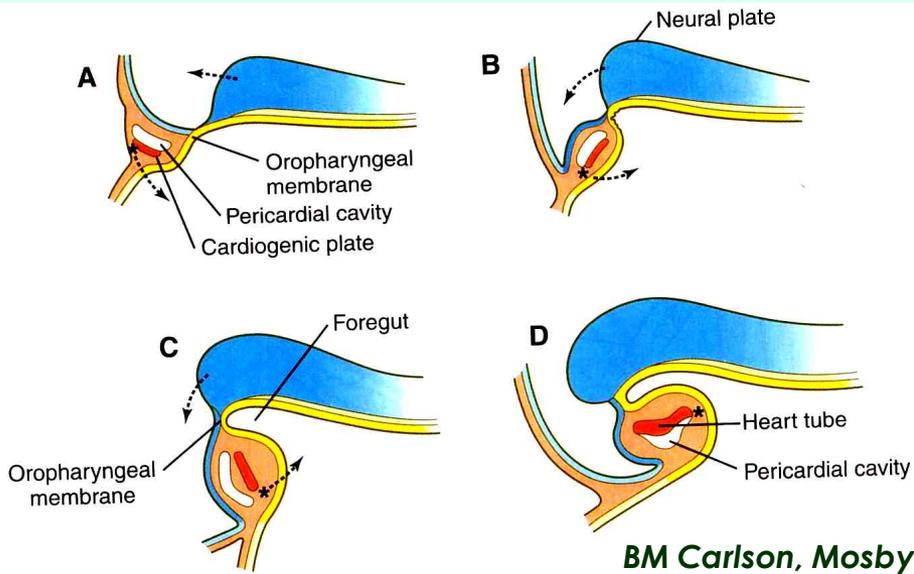
Formation des tubes endocardiques primitifs

Détermination du situs viscéral

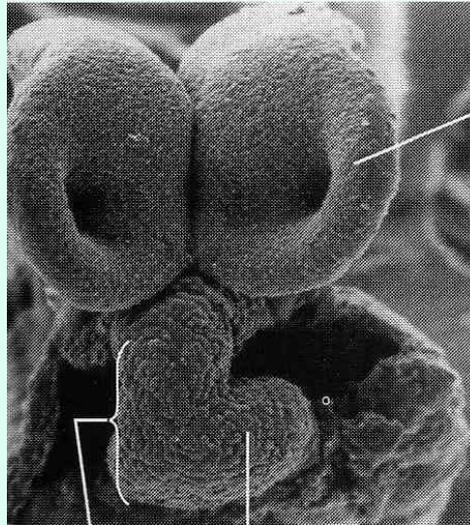
WL Larsen,
Churchill Livingstone



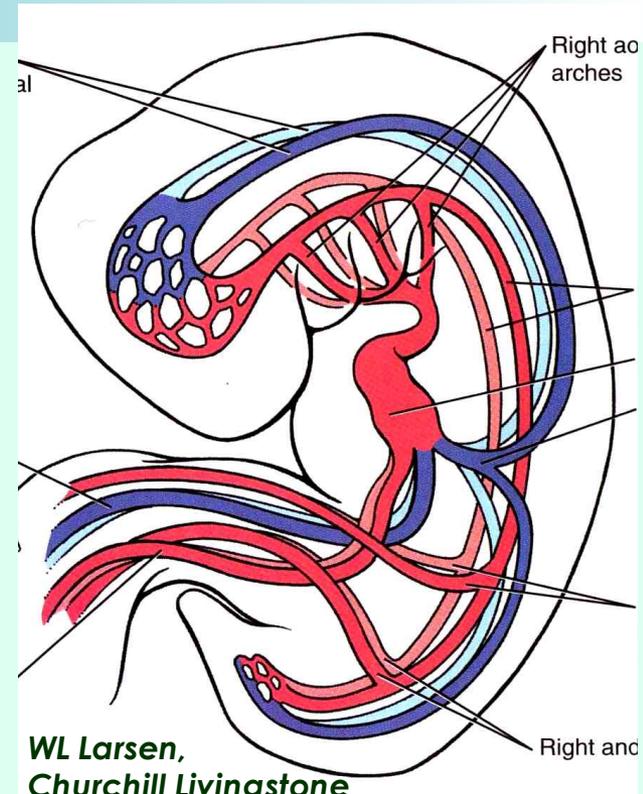
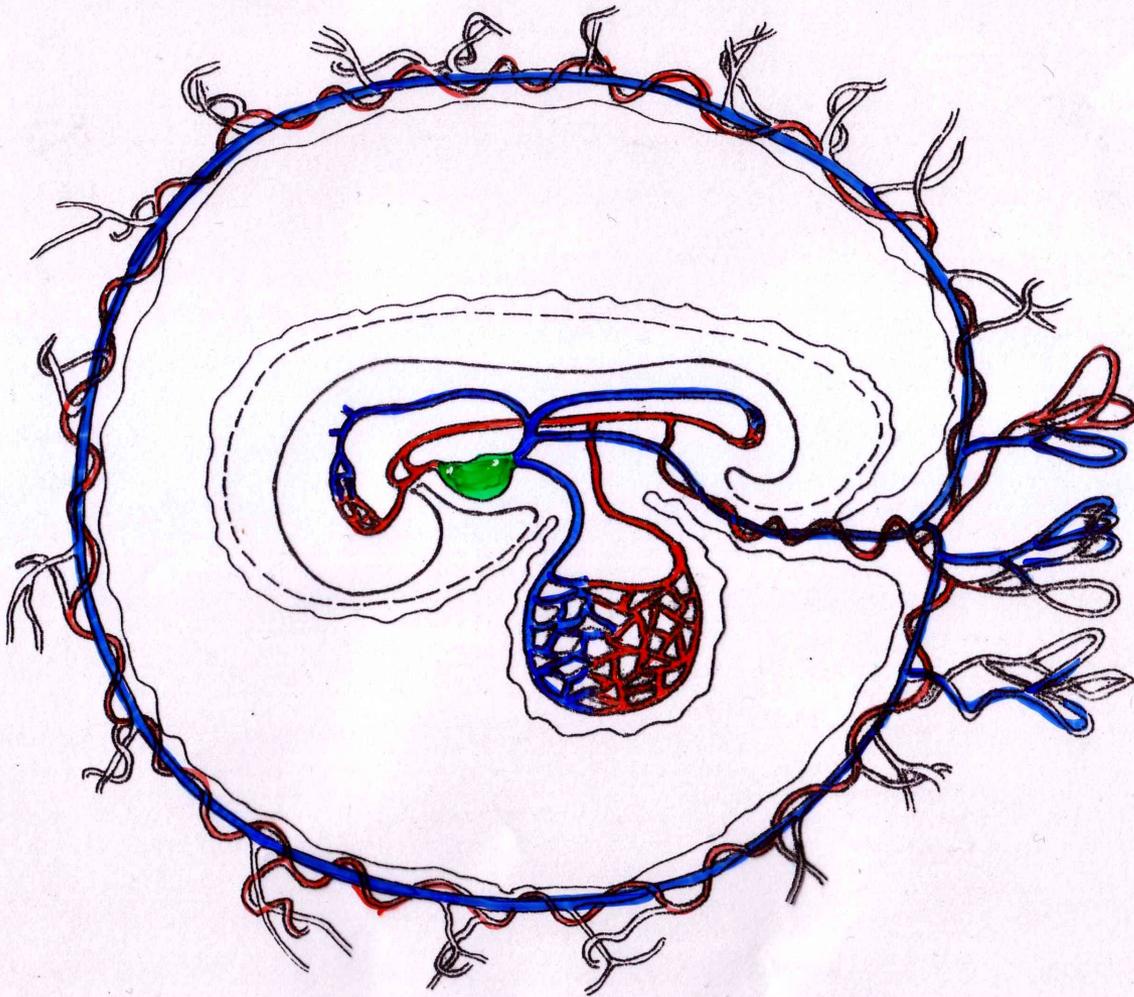
Délimitation : bascule ventrale des TEP



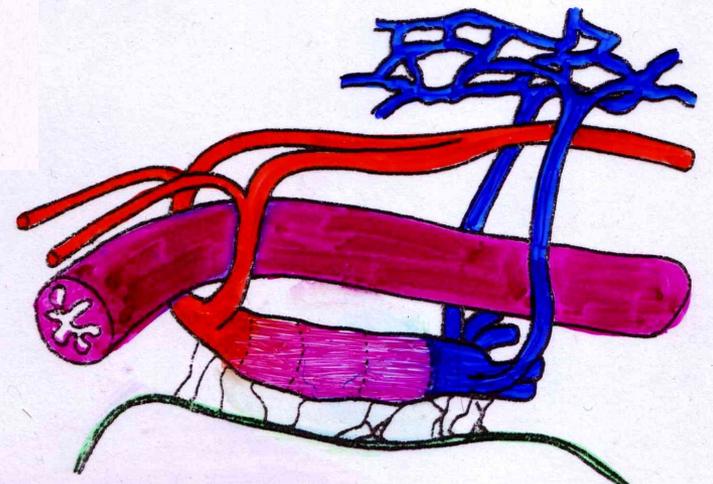
*WL Larsen,
Churchill Livingstone*



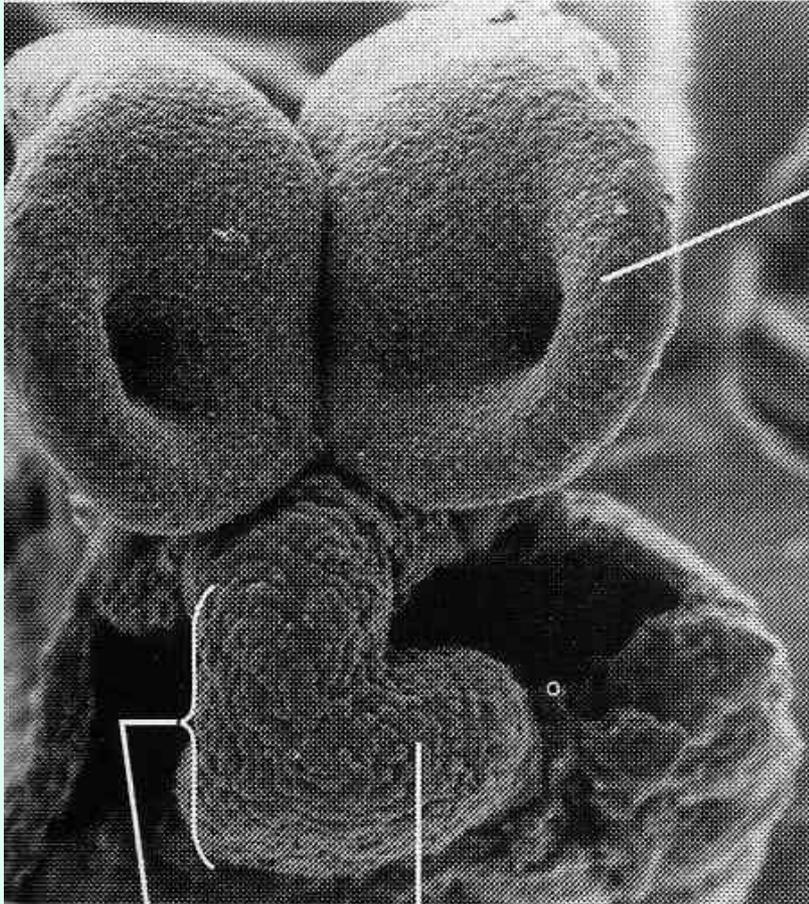
**Fusion des TEP :
tube cardiaque (J22)**



Réseaux ovulaires
et tube cardiaque



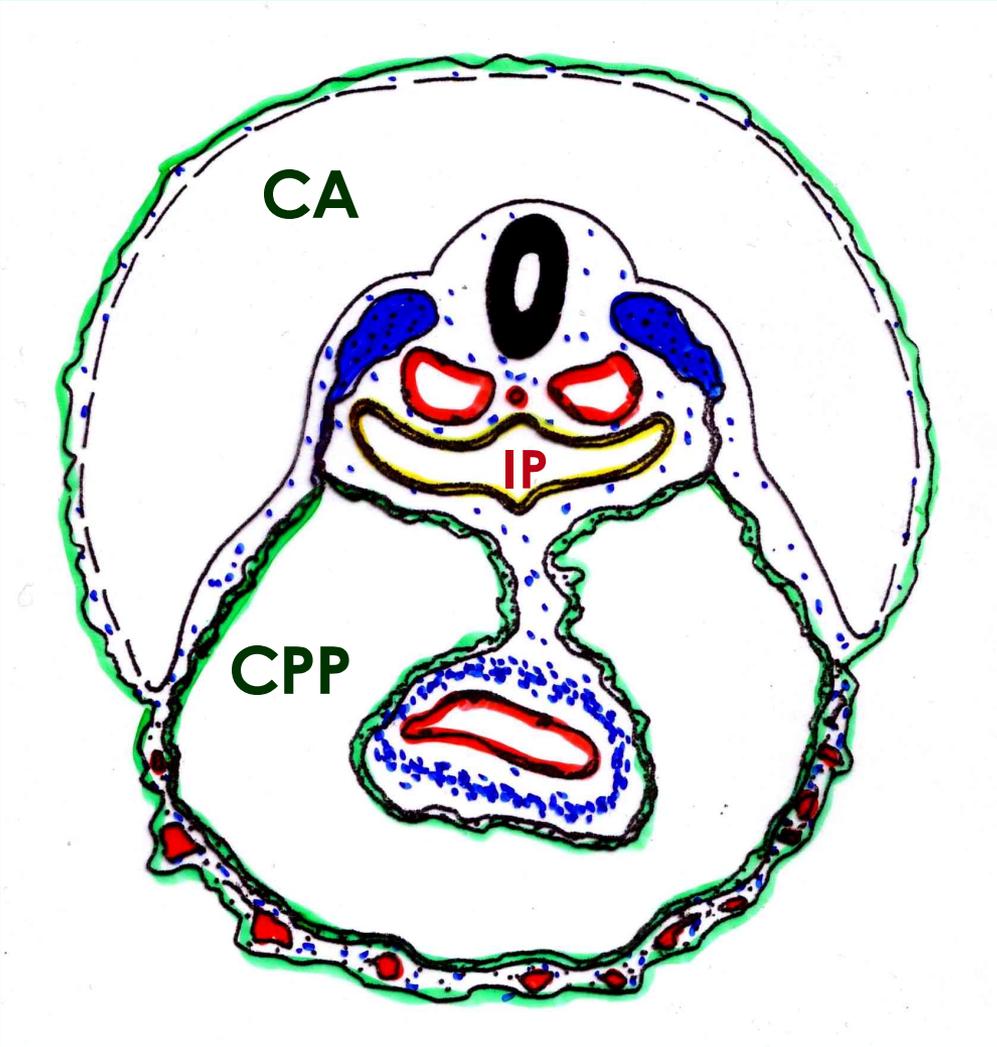
Structure du TC

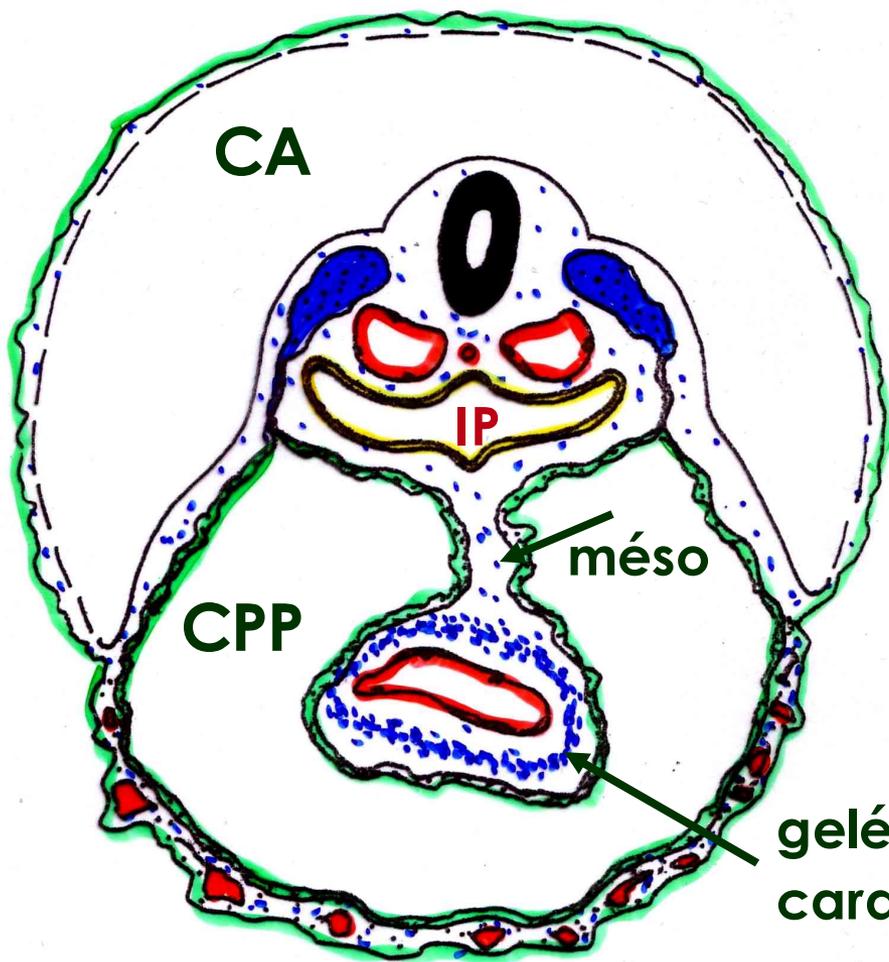


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Churchill Livingstone



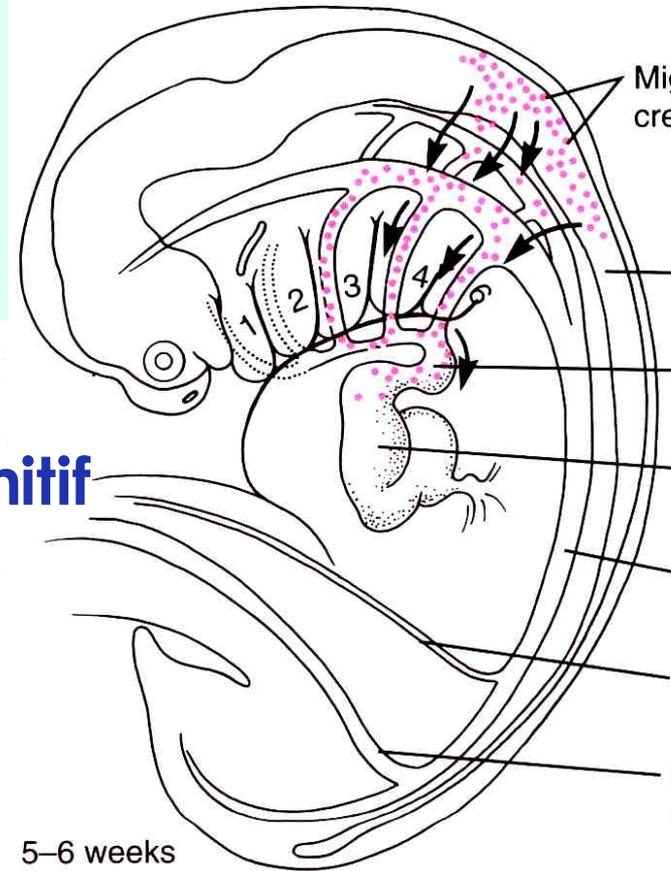
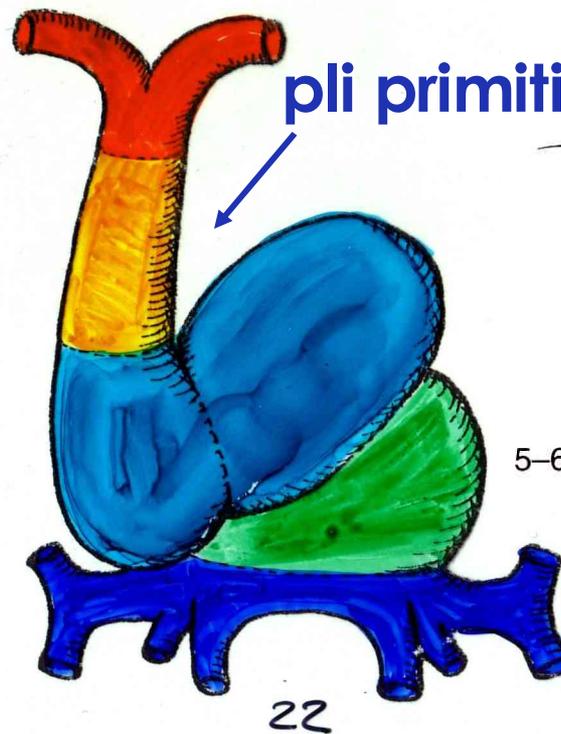
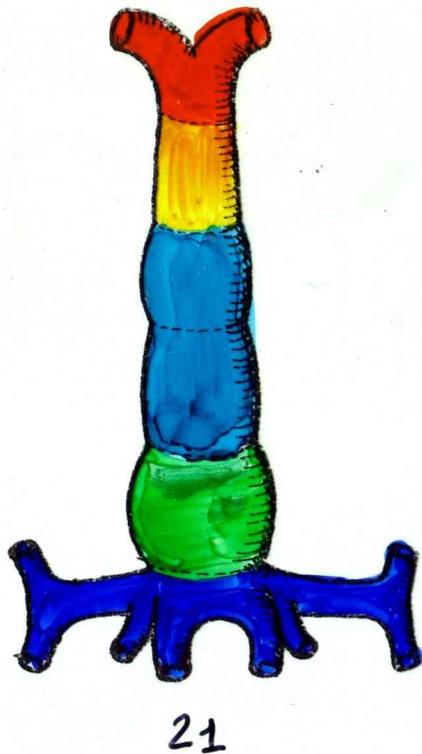
J21-22





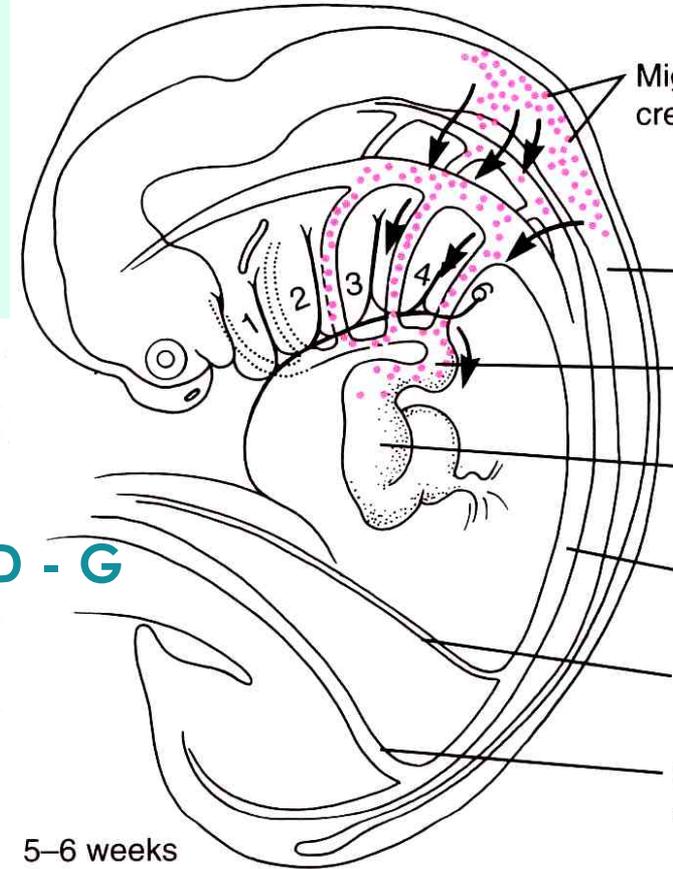
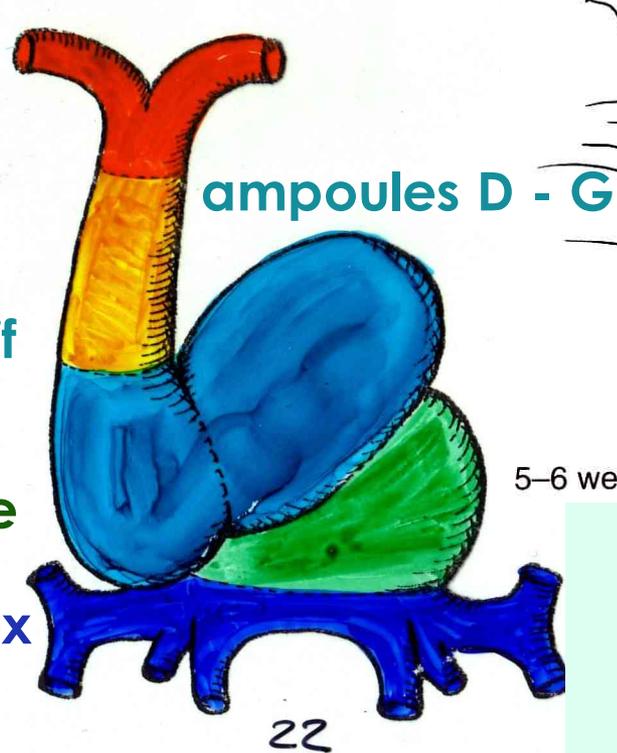
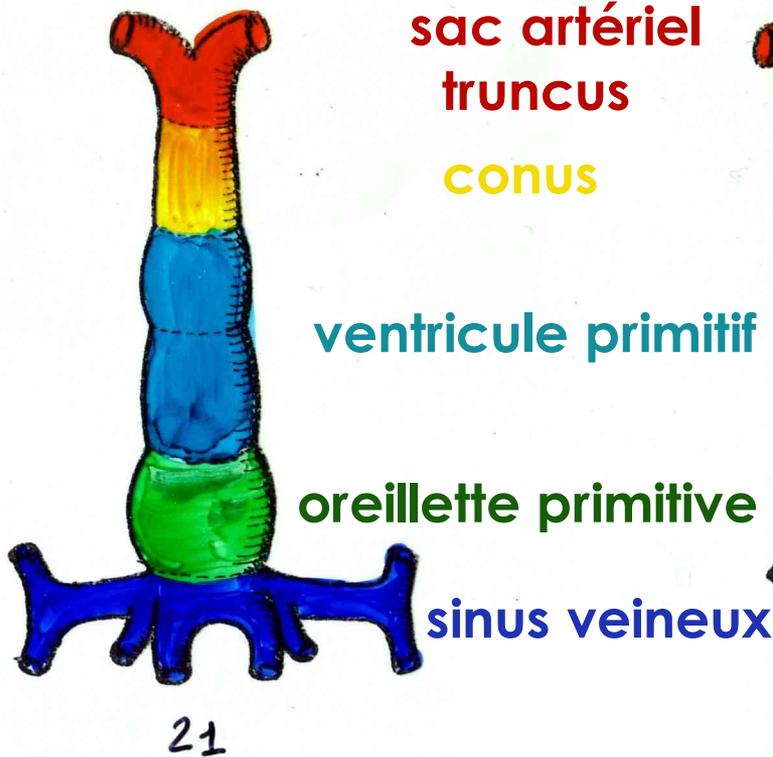
Evolution du tube cardiaque (J21-J40)

- allongement
(champ cardiaque antérieur)
- plicature : boucle droite



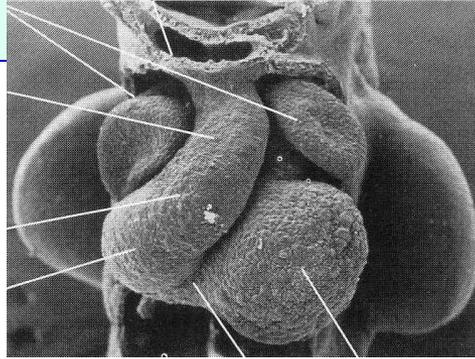
Evolution du tube cardiaque (J21-J40)

- allongement
(champ cardiaque antérieur)
- plicature : boucle droite

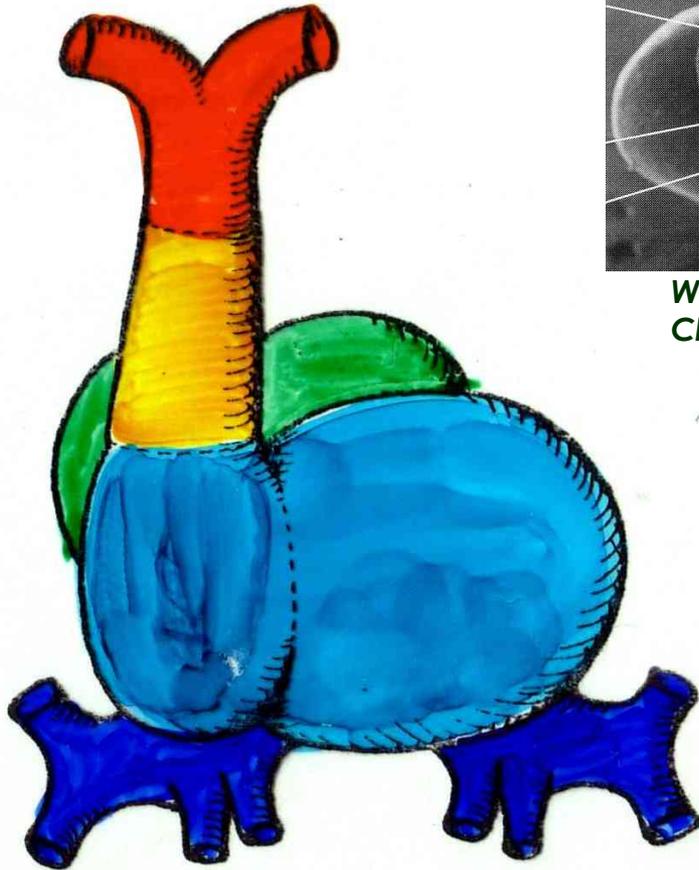


Evolution du tube cardiaque (J21-J40)

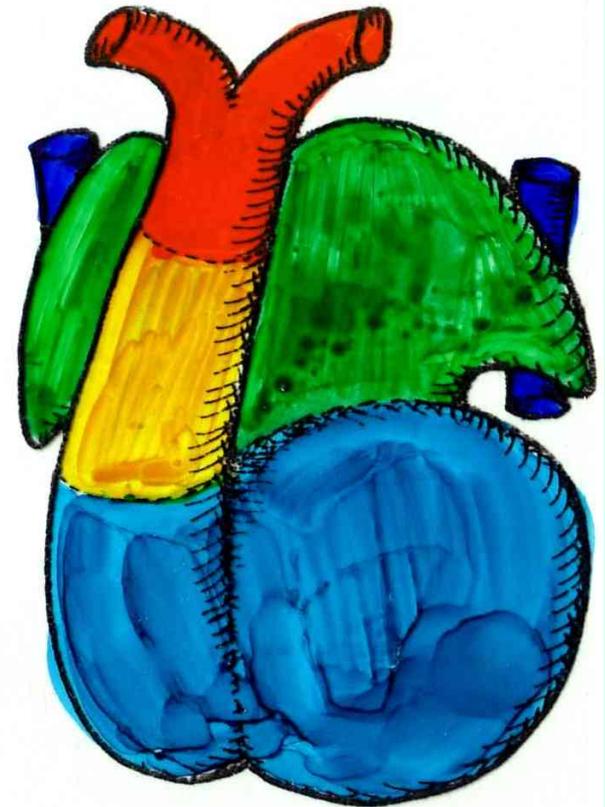
- convergence



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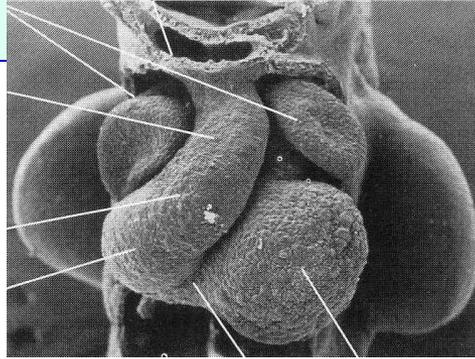
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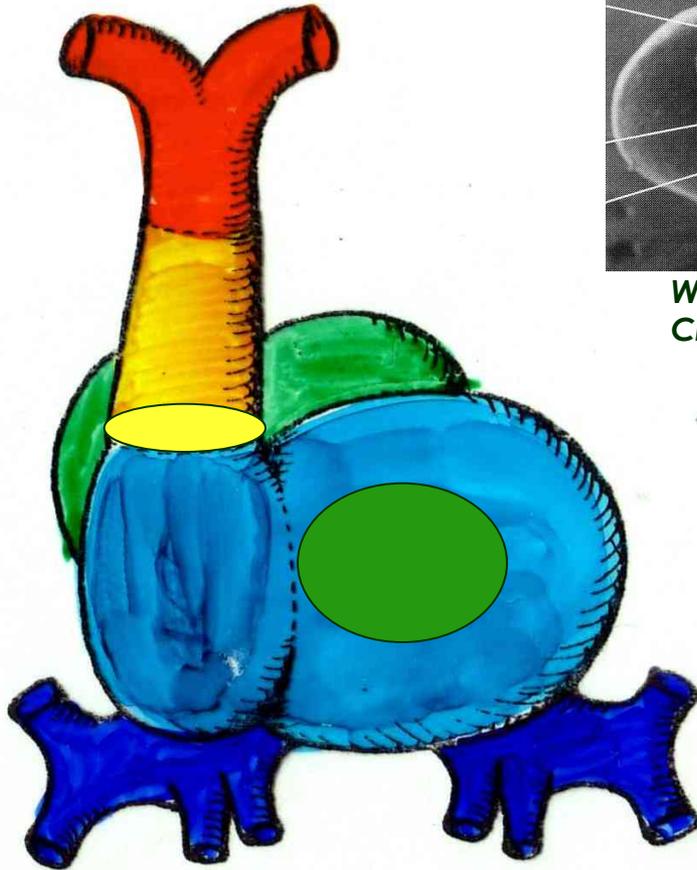
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Evolution du tube cardiaque (J21-J40)

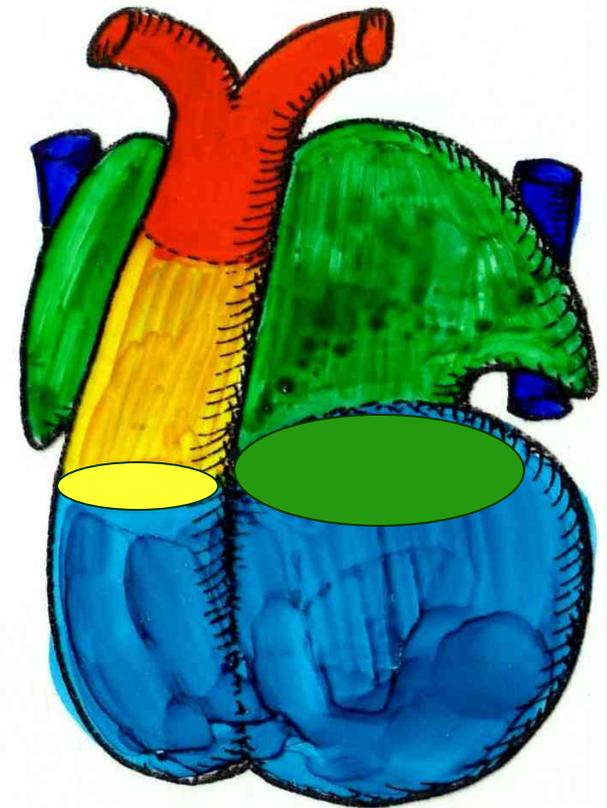
- convergence



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Churchill Livingstone

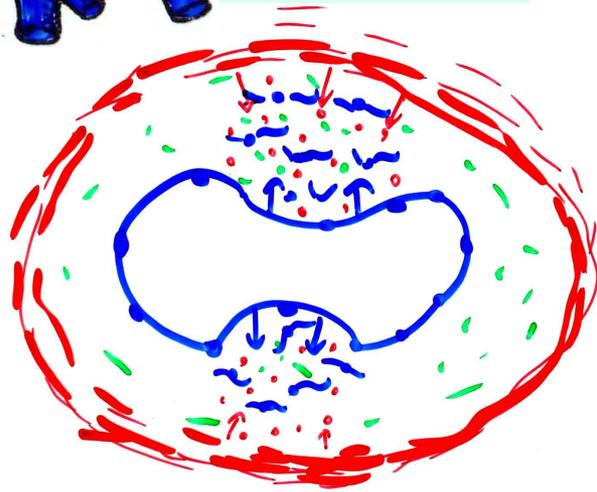
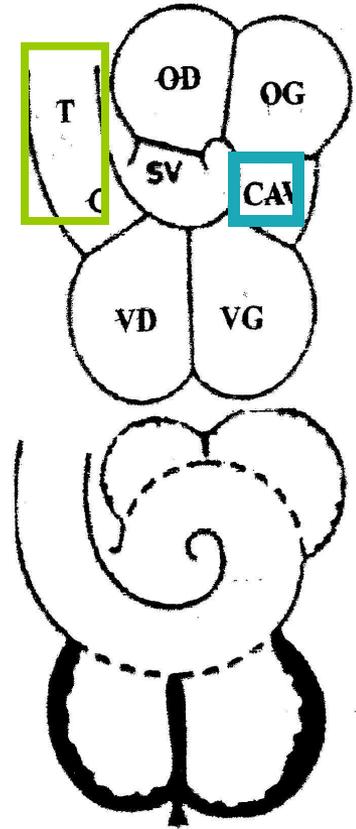
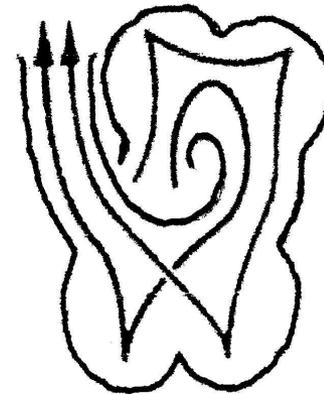
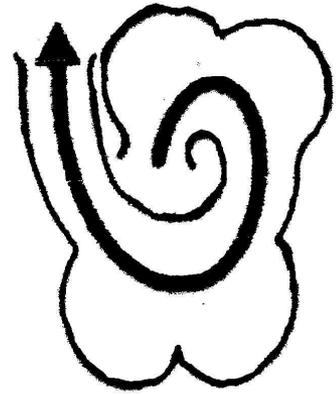


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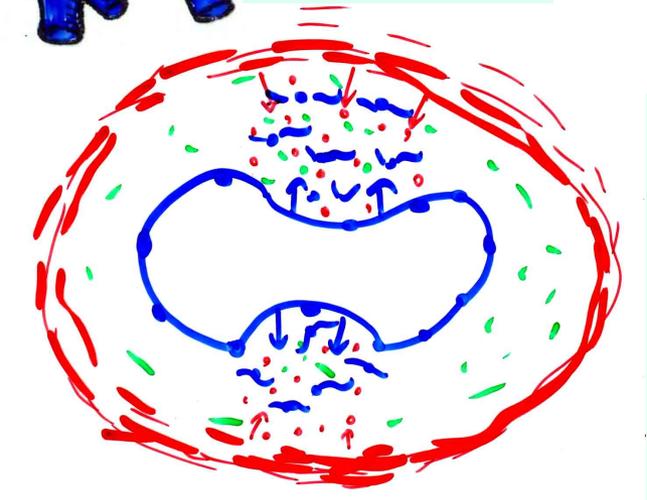
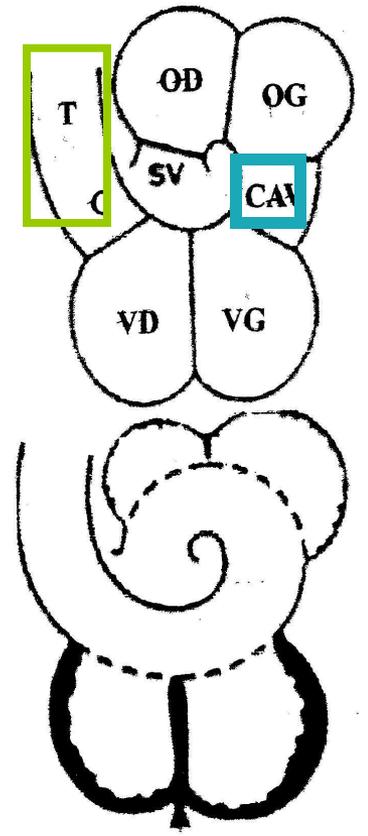
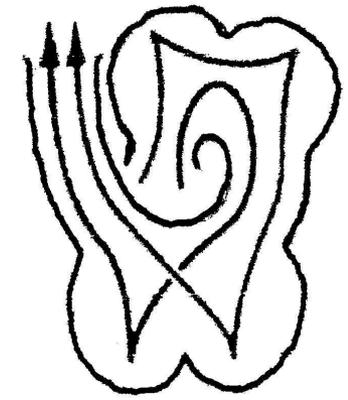
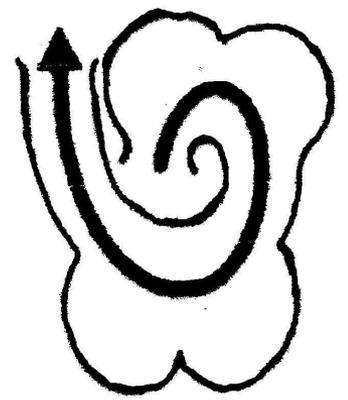


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Cloisonnement (S5-S7)



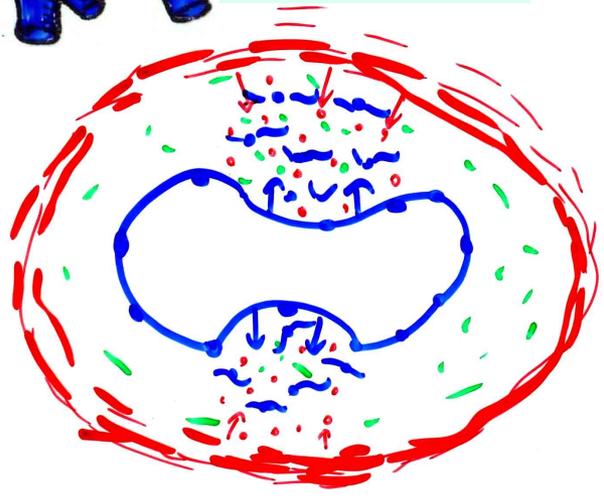
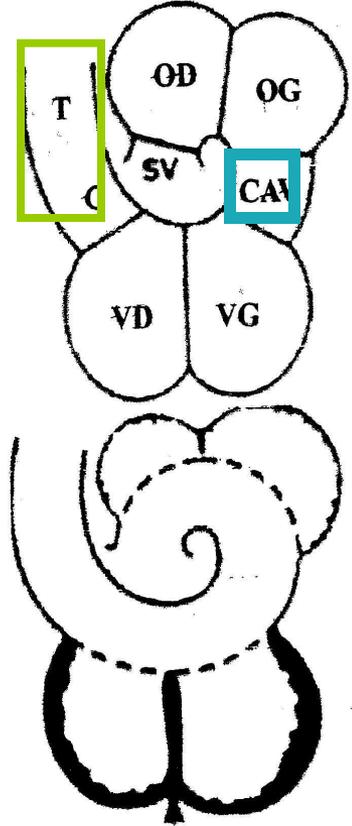
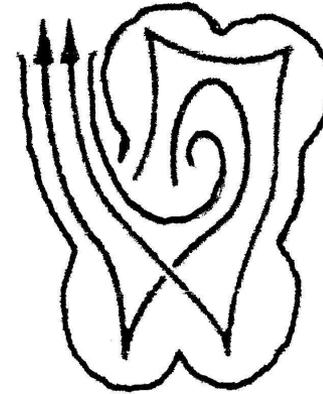
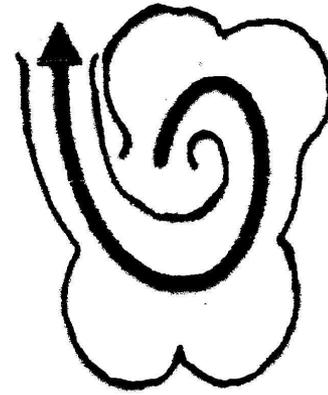
Cloisonnement (S5-S7)



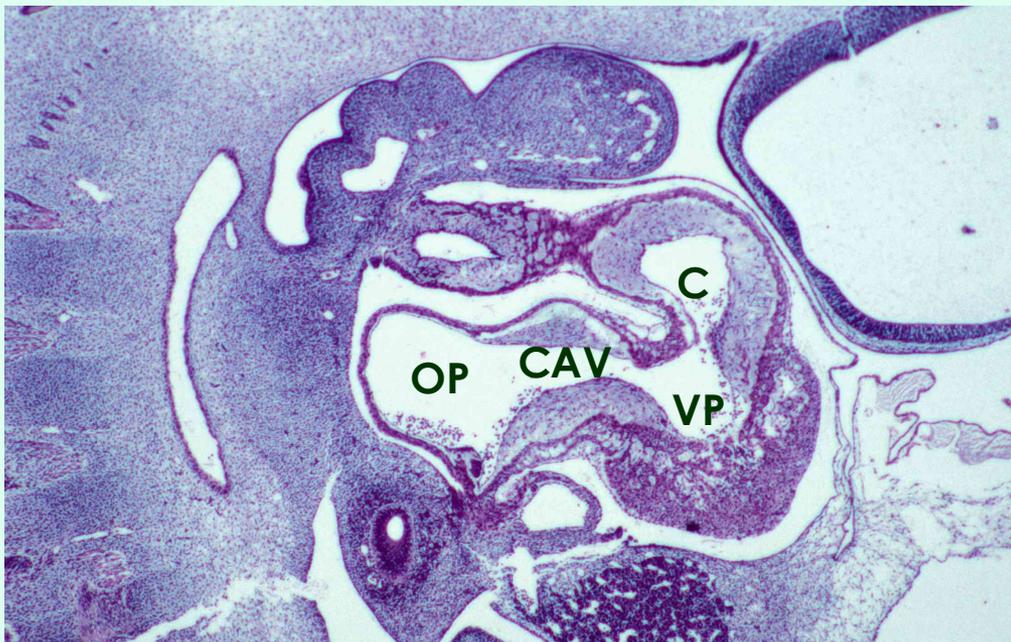
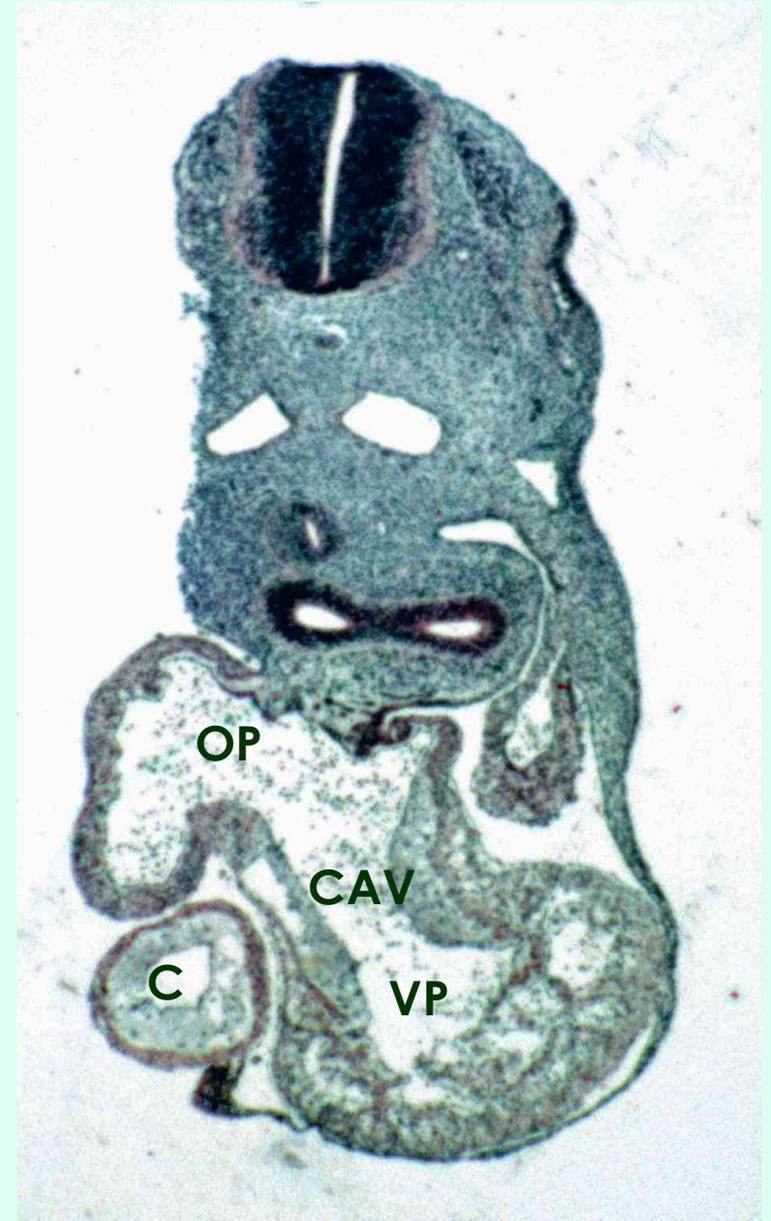
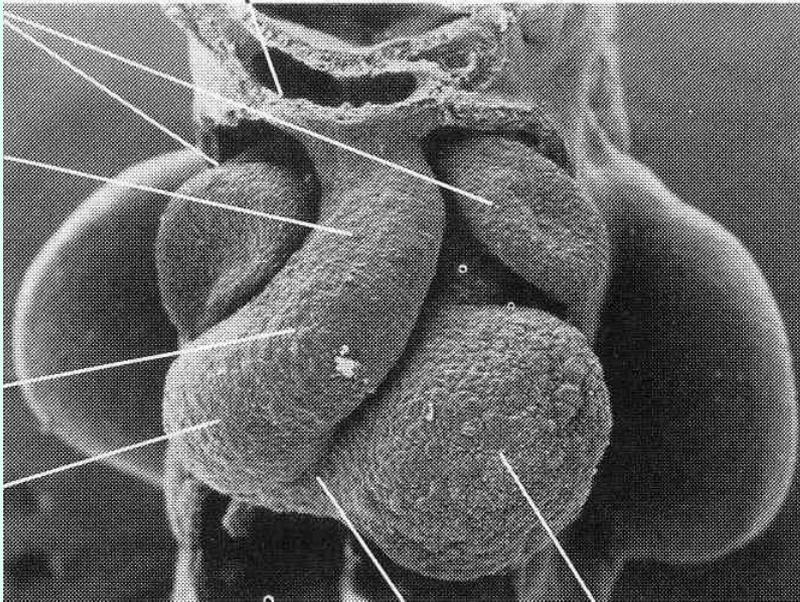
adhérones

TGF bêta,
protéases

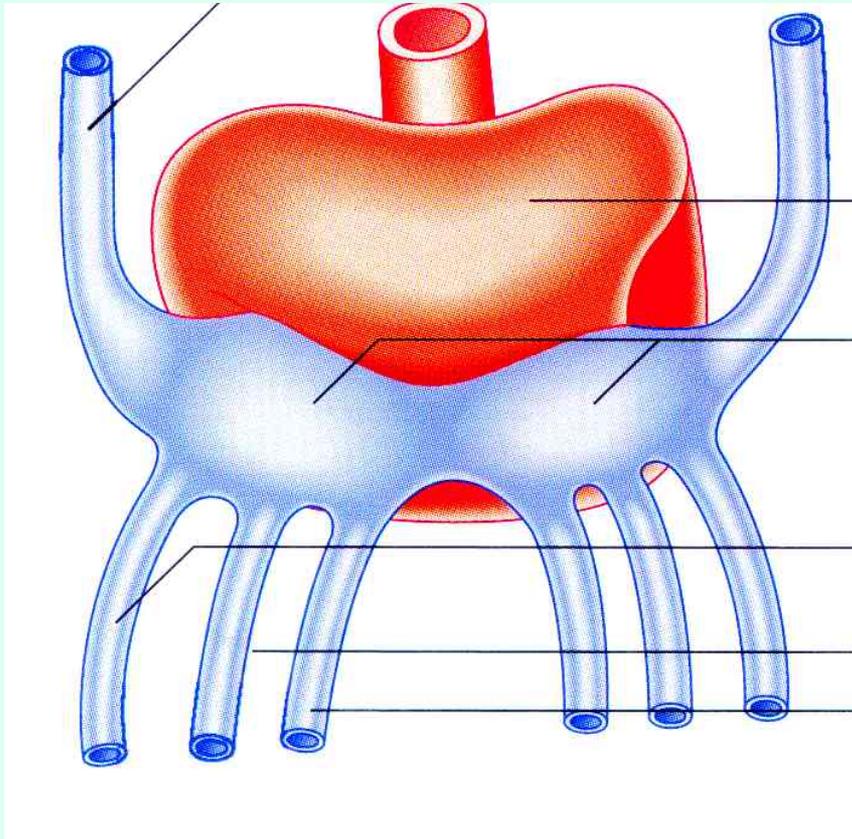
Cloisonnement (S5-S7)



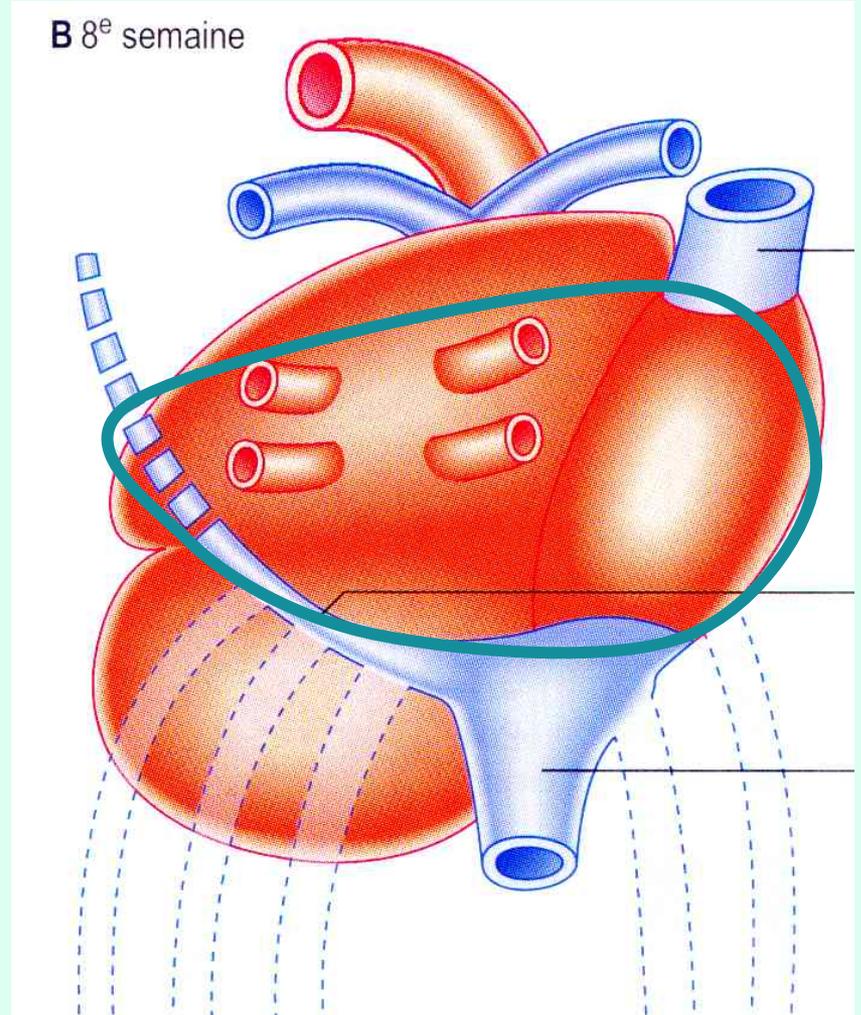
- courbures → crêtes
- délamination du flux
- fin du cloisonnement et alignement des cloisons



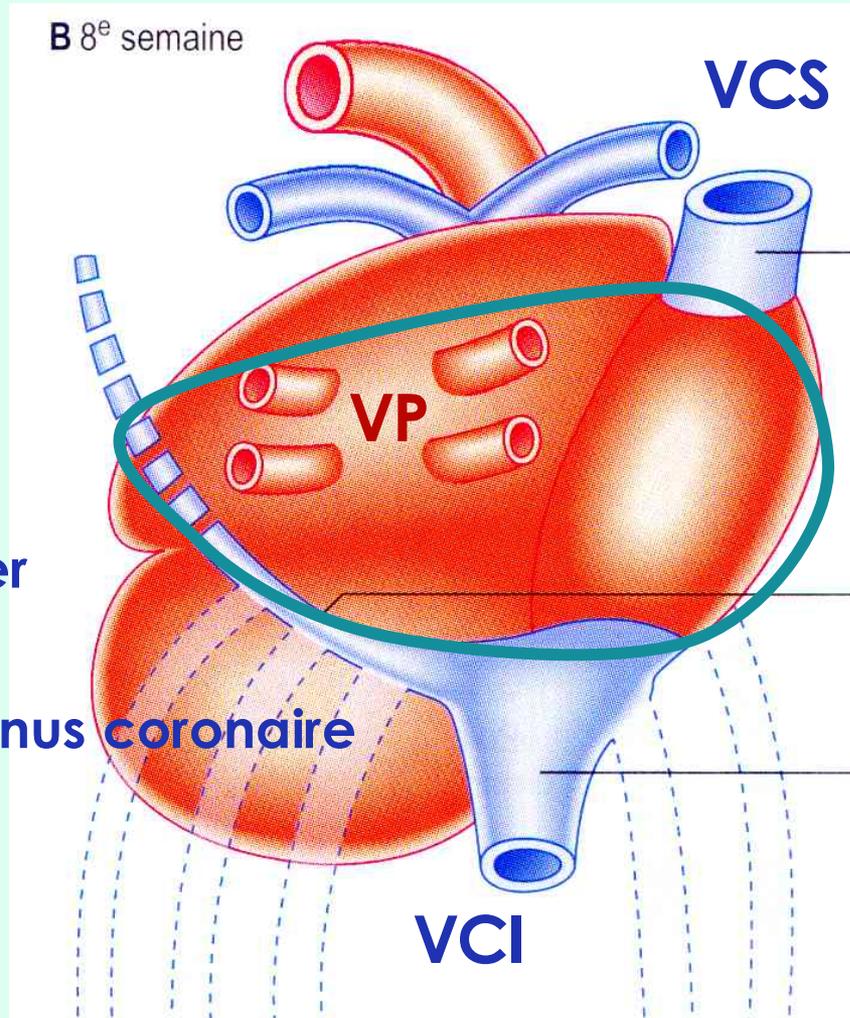
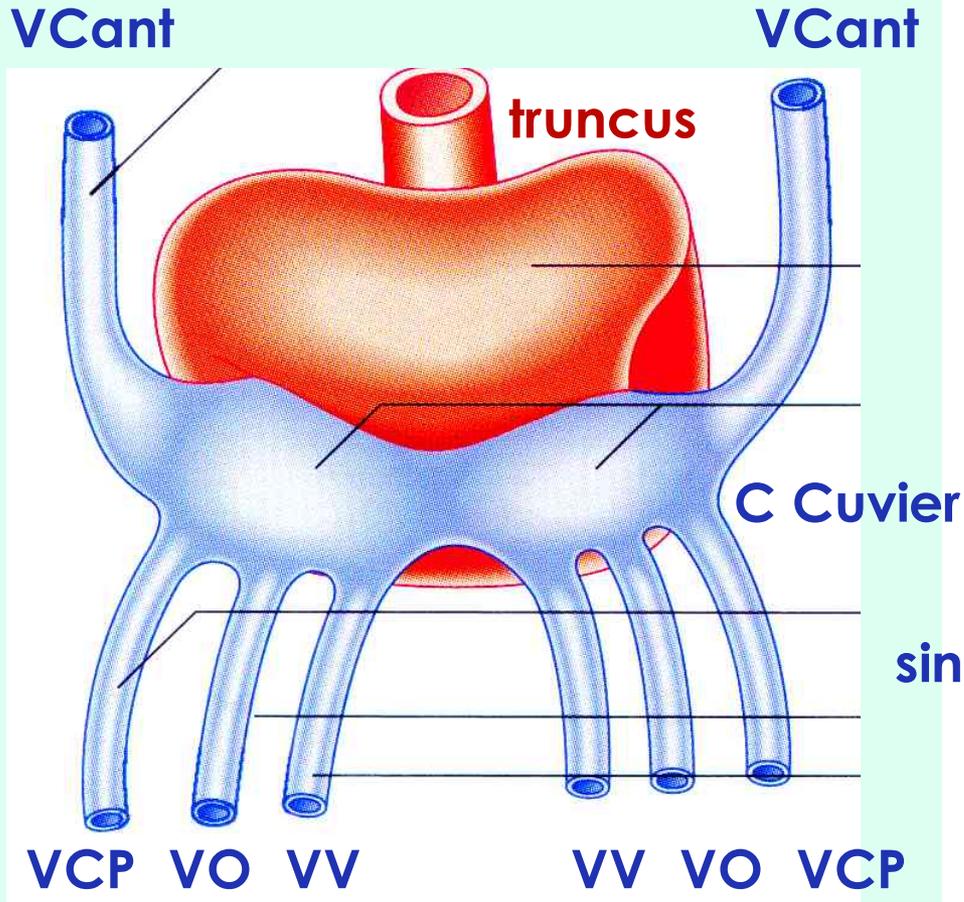
sinus veineux

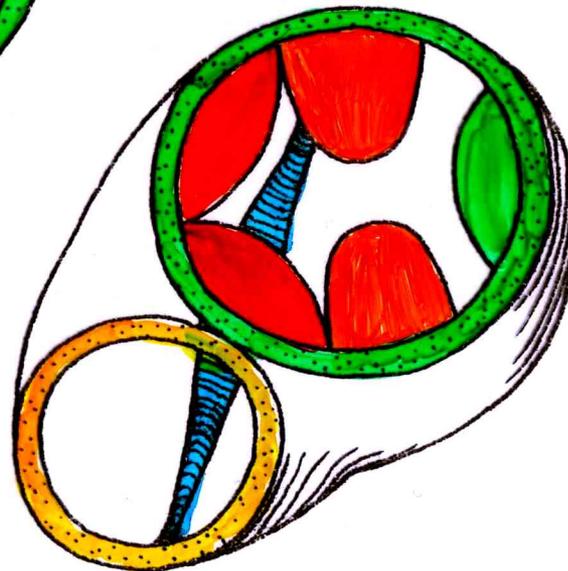
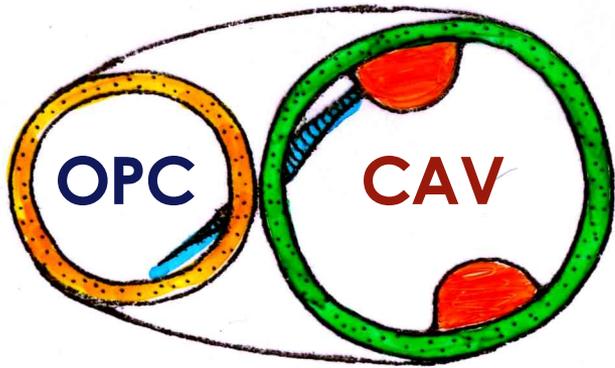


B 8^e semaine



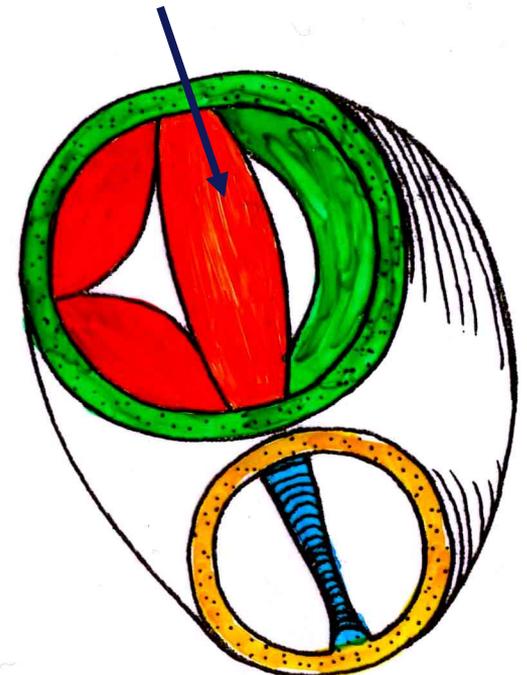
sinus veineux

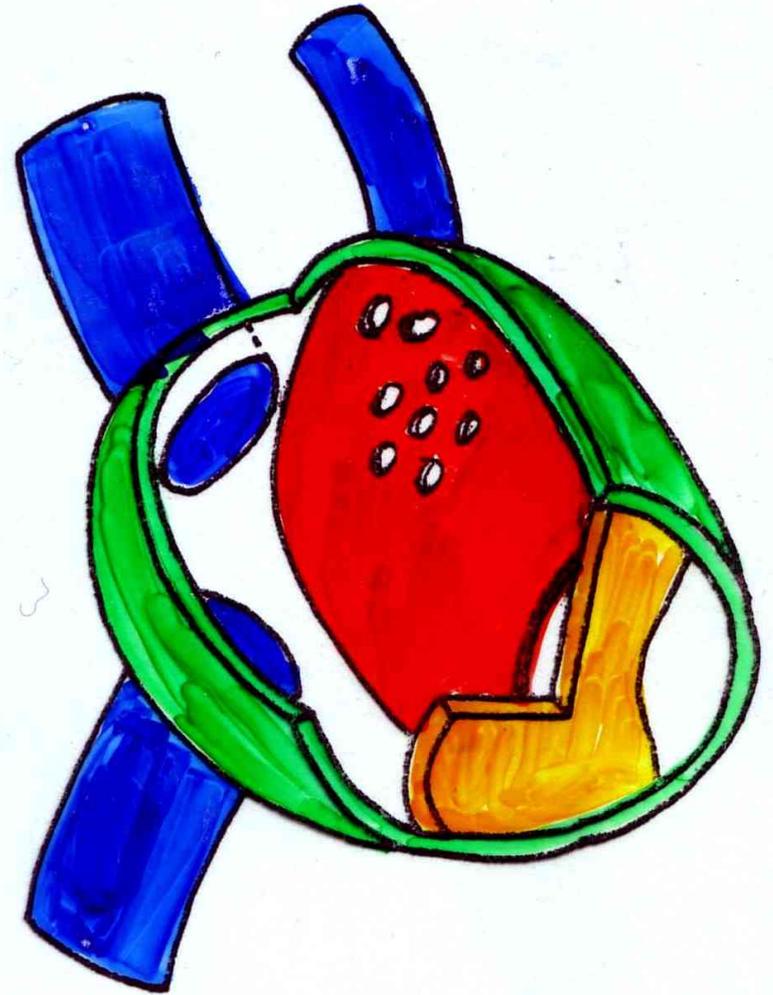
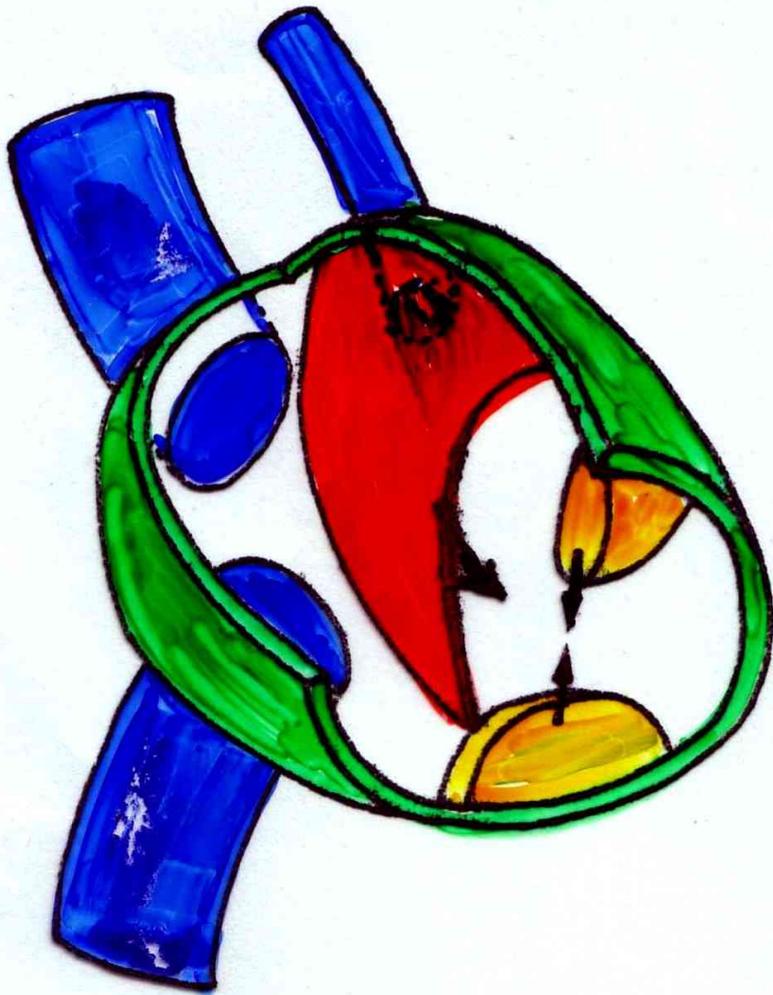




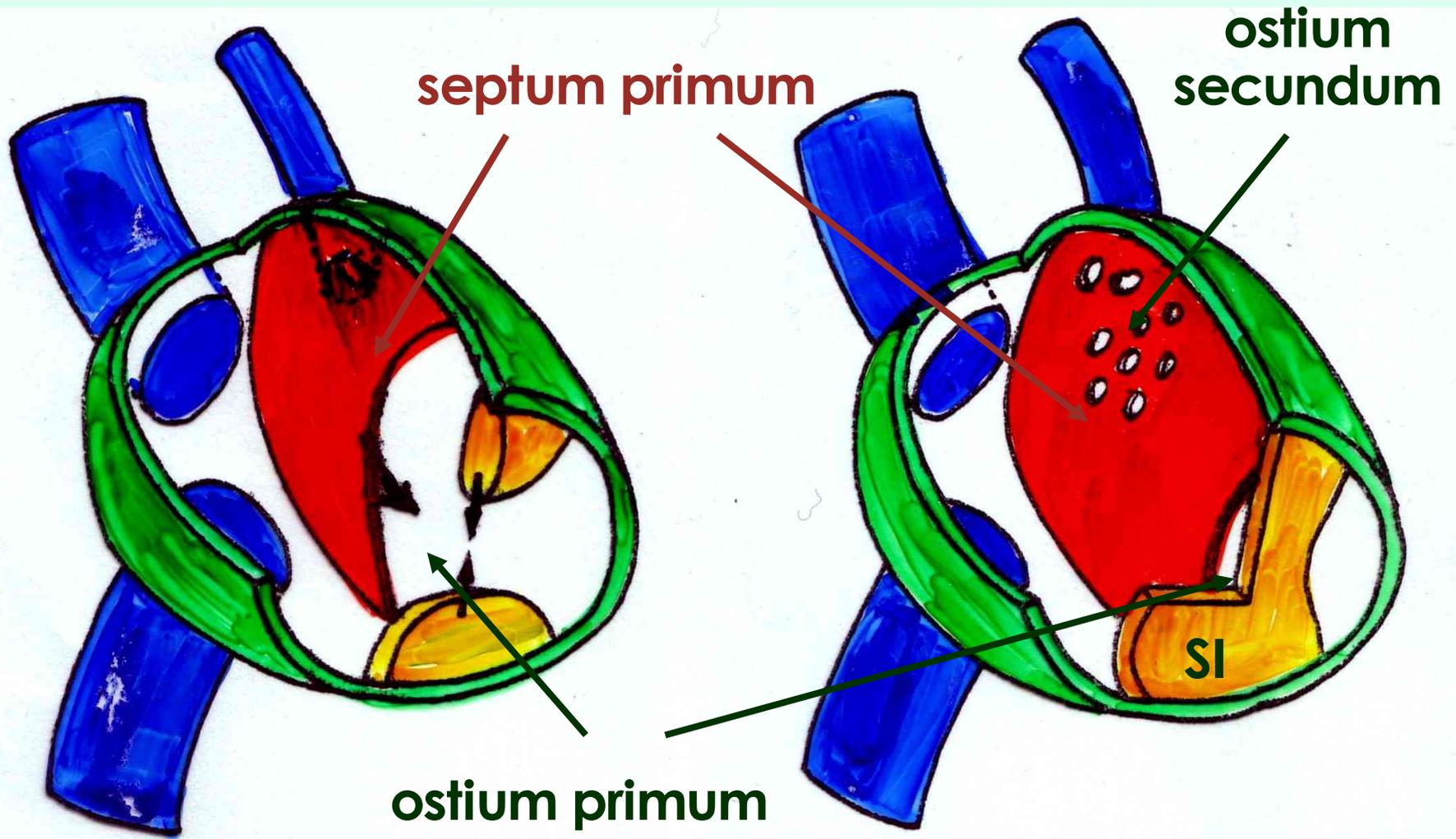
Cloisonnement du CAV

septum
intermedium





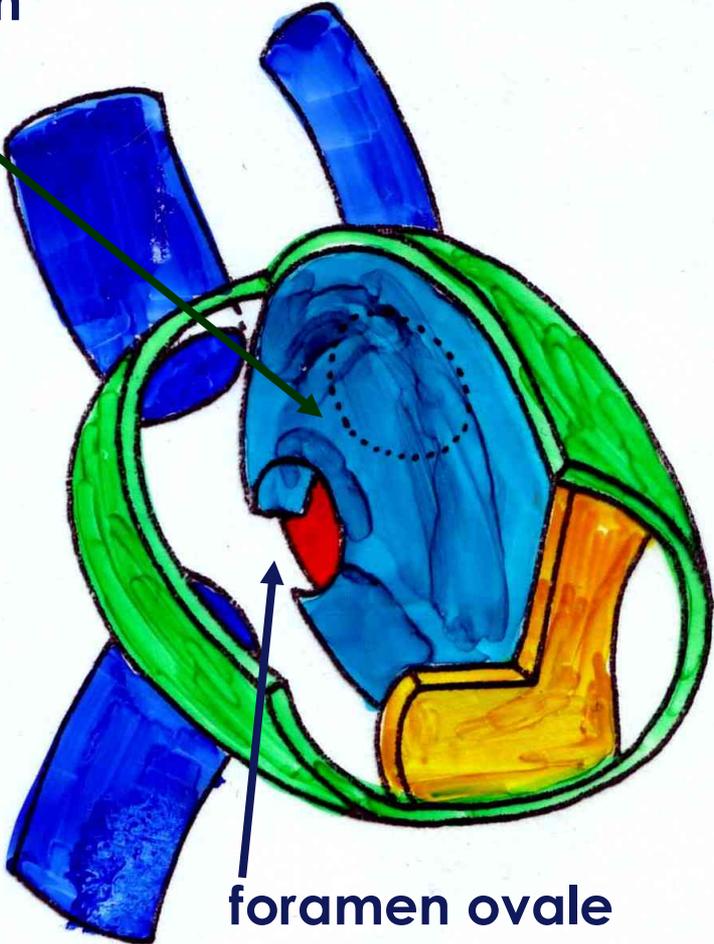
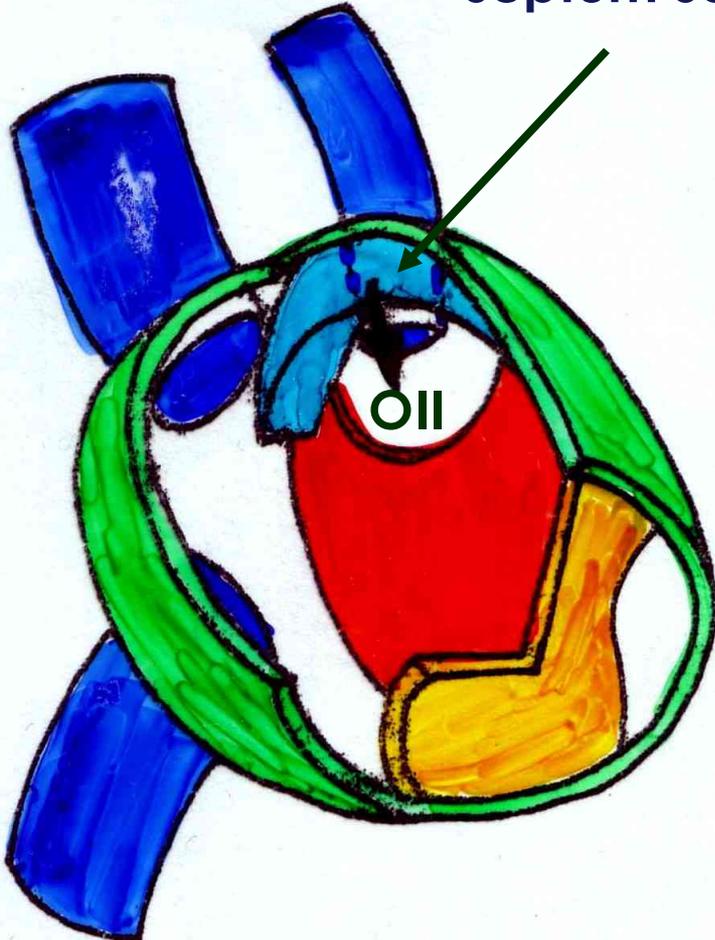
Cloisonnement de l'oreillette primitive

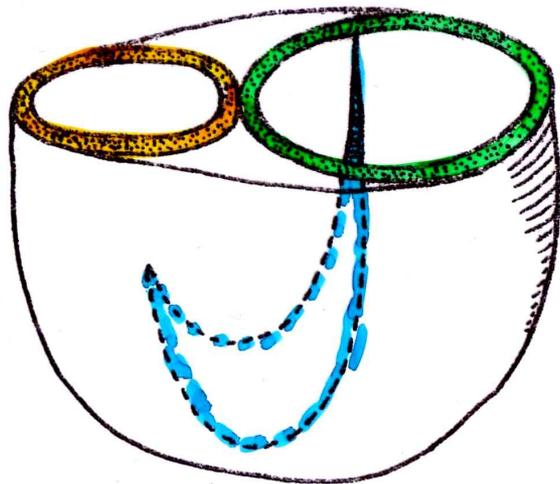


Cloisonnement de l'oreillette primitive

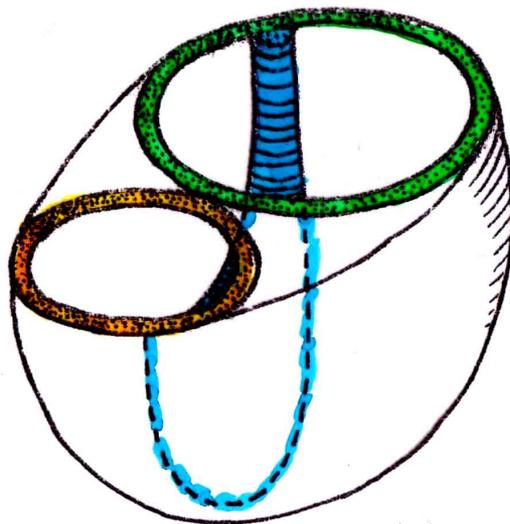
Cloisonnement de l'oreillette primitive

septum secundum

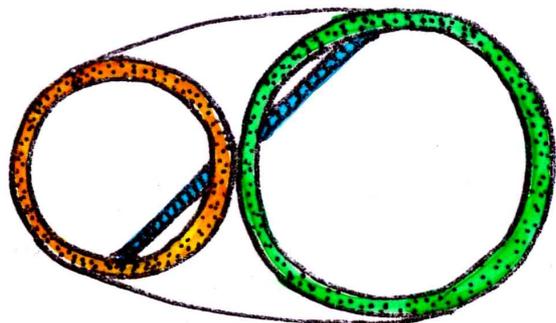
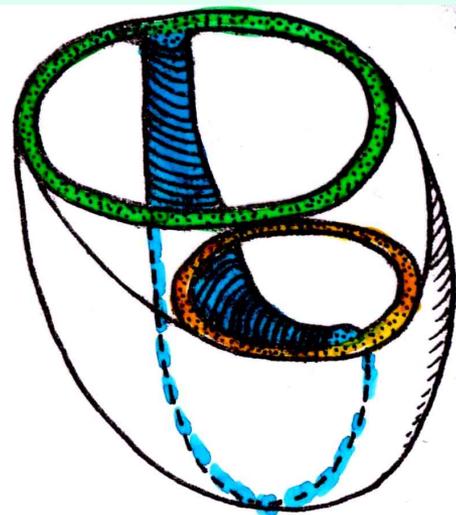




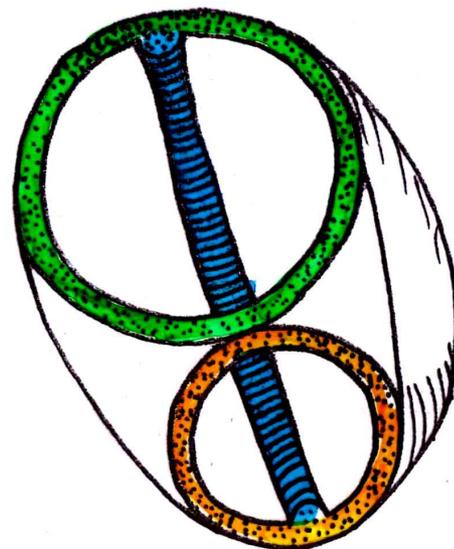
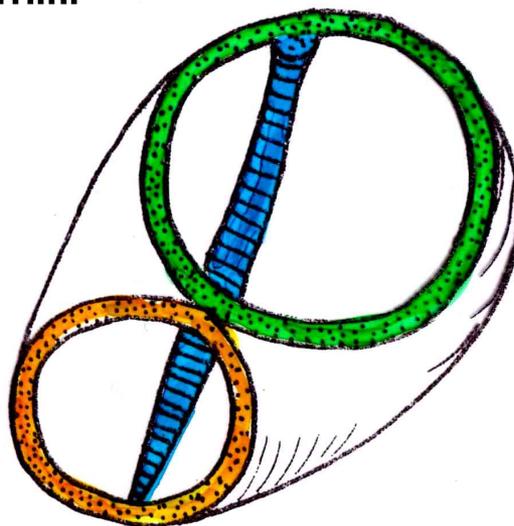
Cloisonnement du ventricule primitif



septum musculaire, trabéculé, inferius

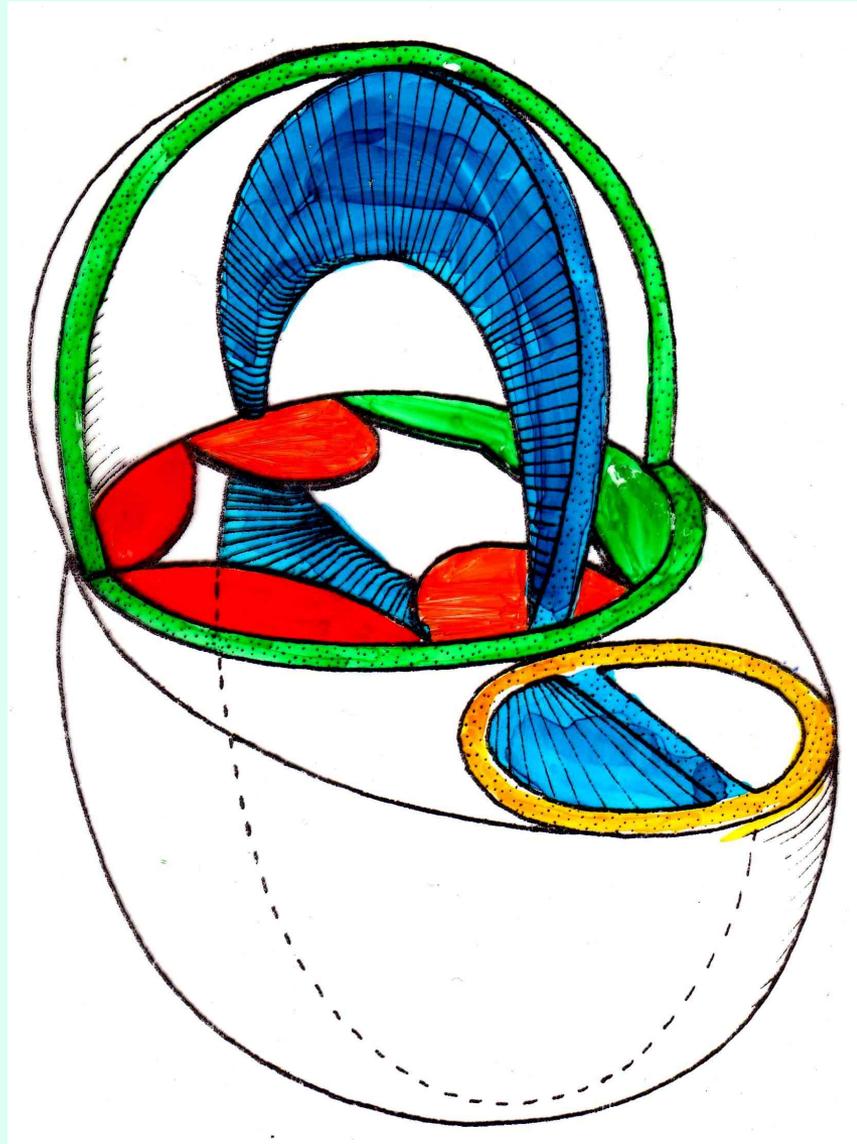


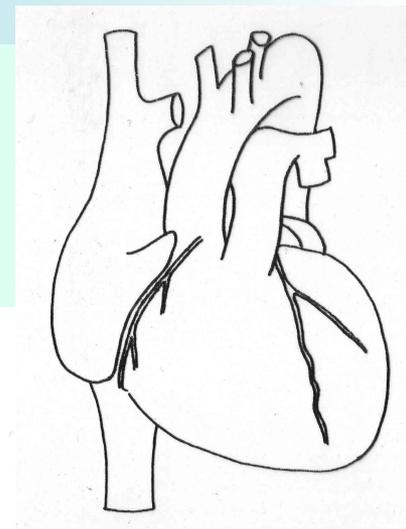
fin 6e s.



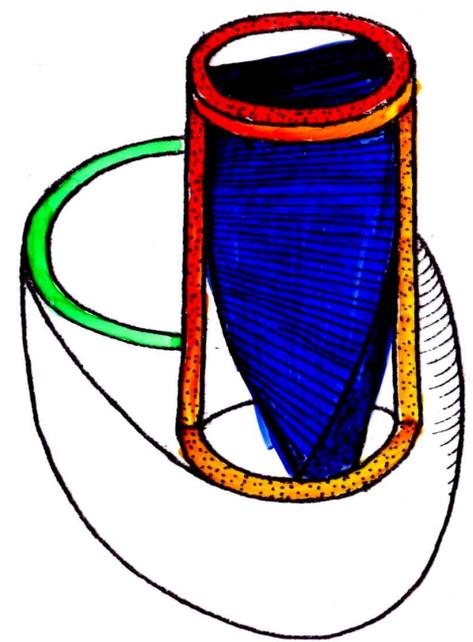
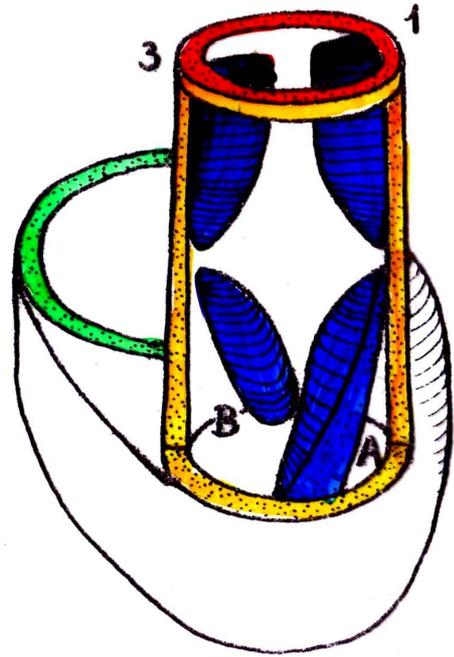
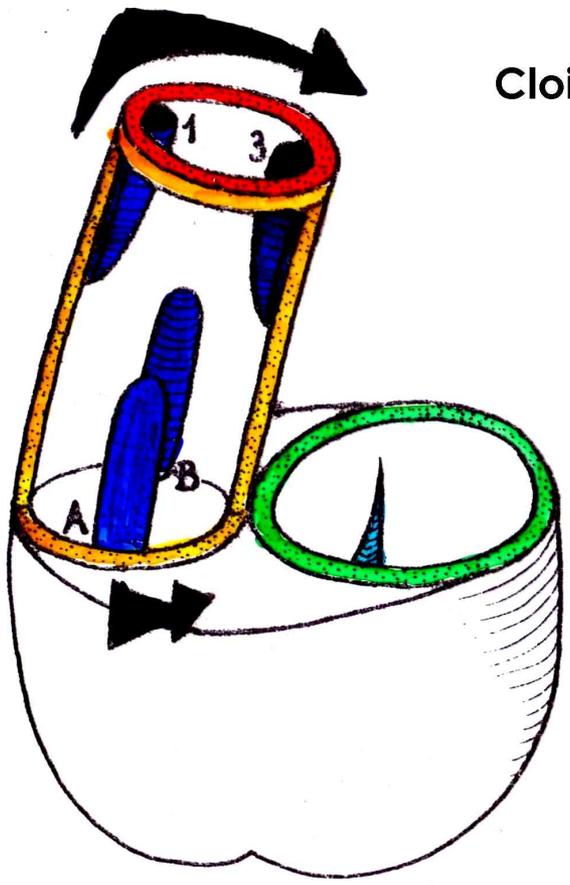
« migration » conus = alignement des septa

fin 6e s.



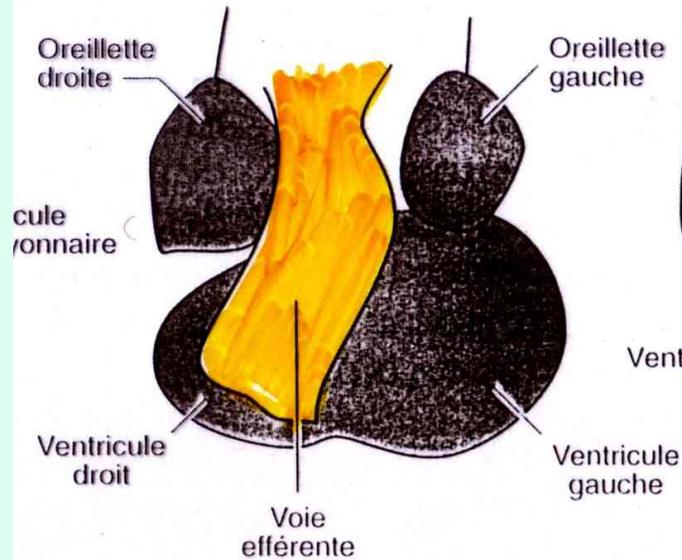


Cloisonnement du conus

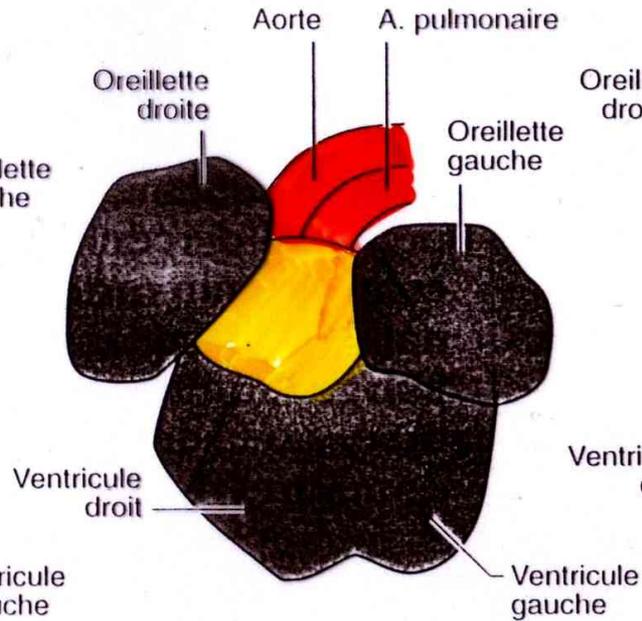


incorporation du conus D au VD : infundibulum régression du conus G : continuité mitro-sigmoïdienne

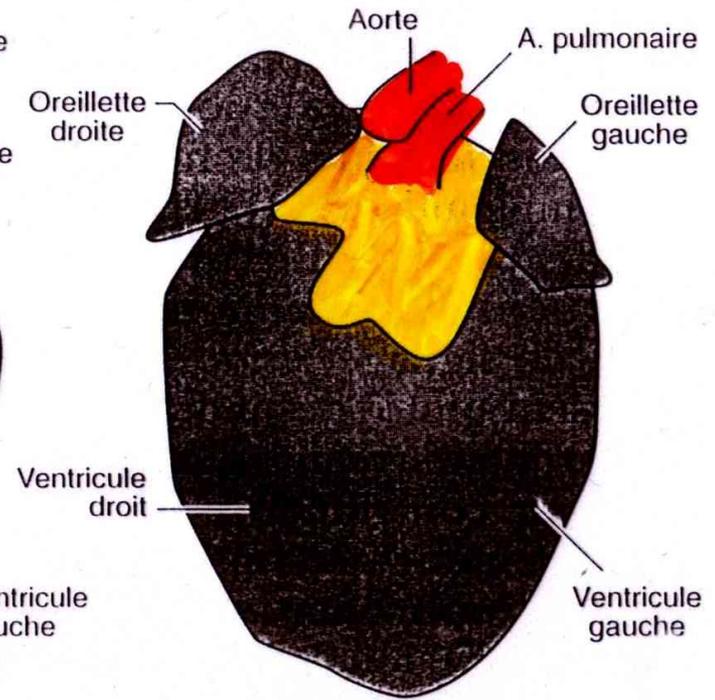
pli céphalique



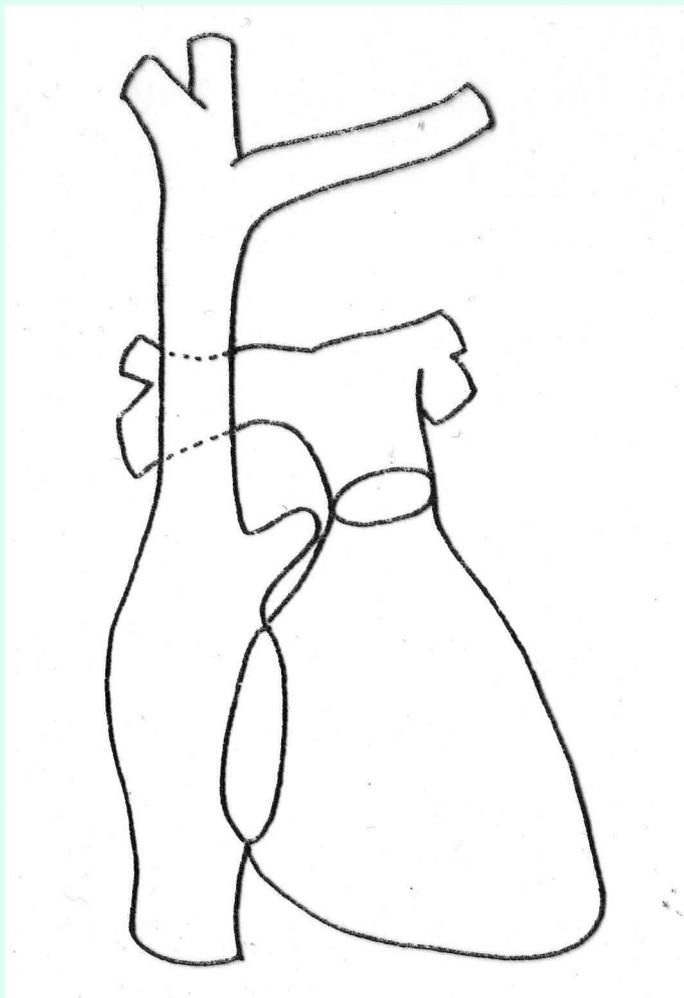
E10,5



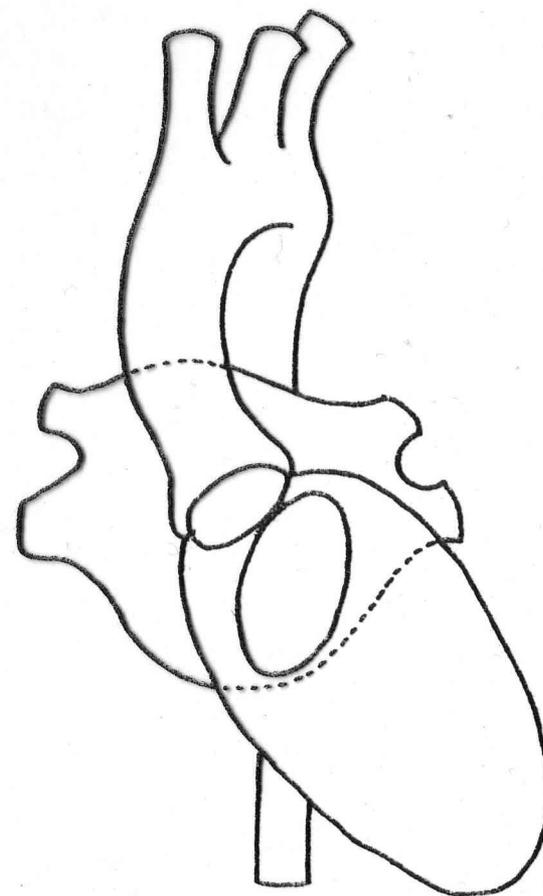
E14,5



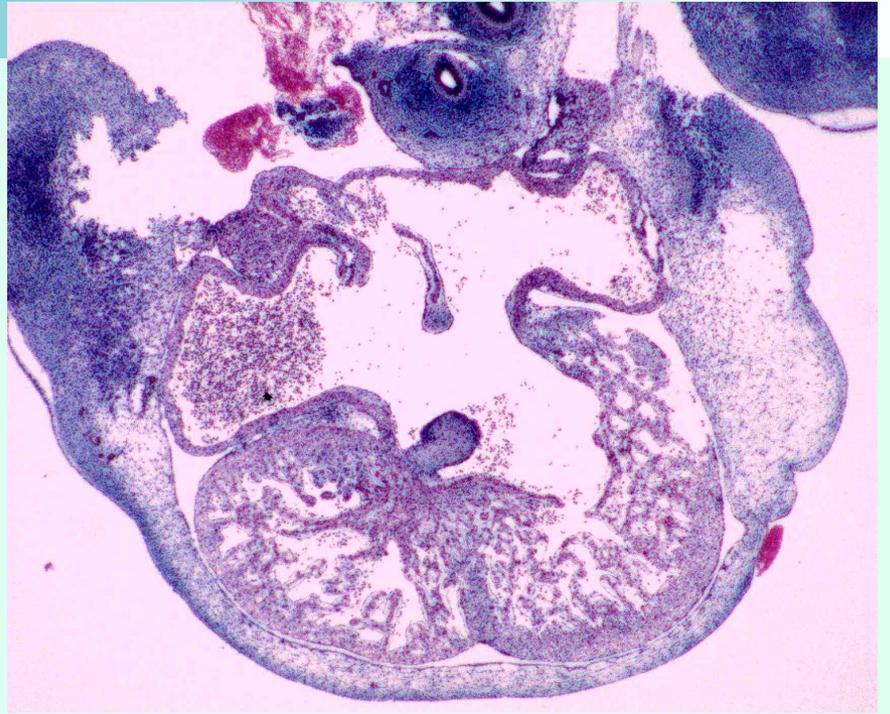
Adulte



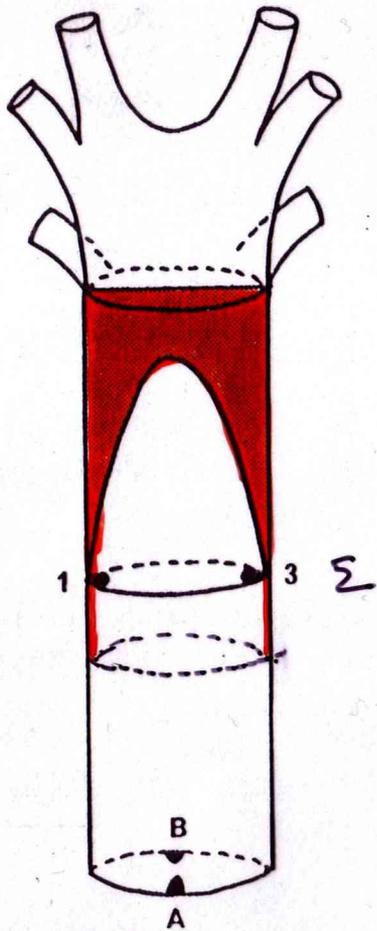
cavités D



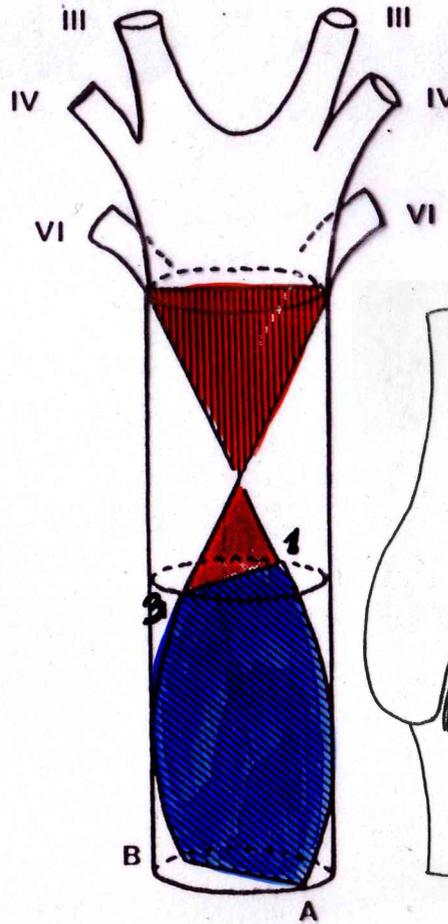
cavités G



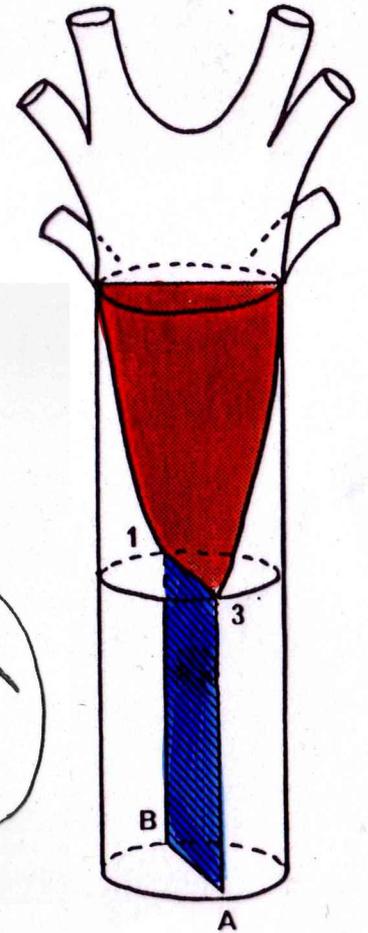
Cloisonnement du tronc



STADE PRECOCE



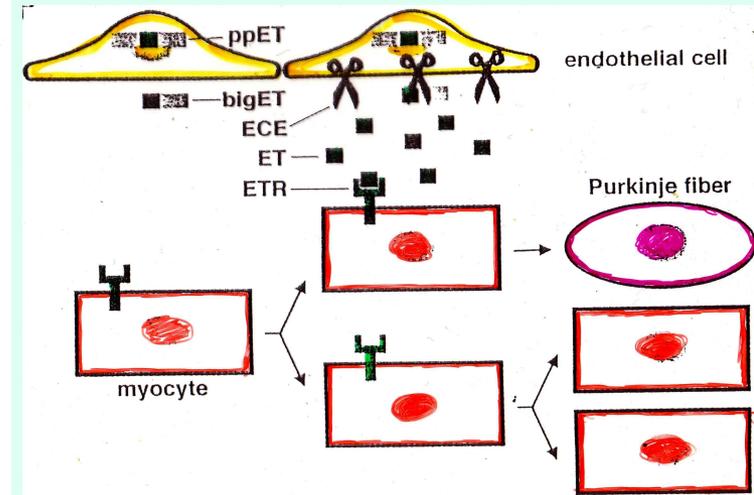
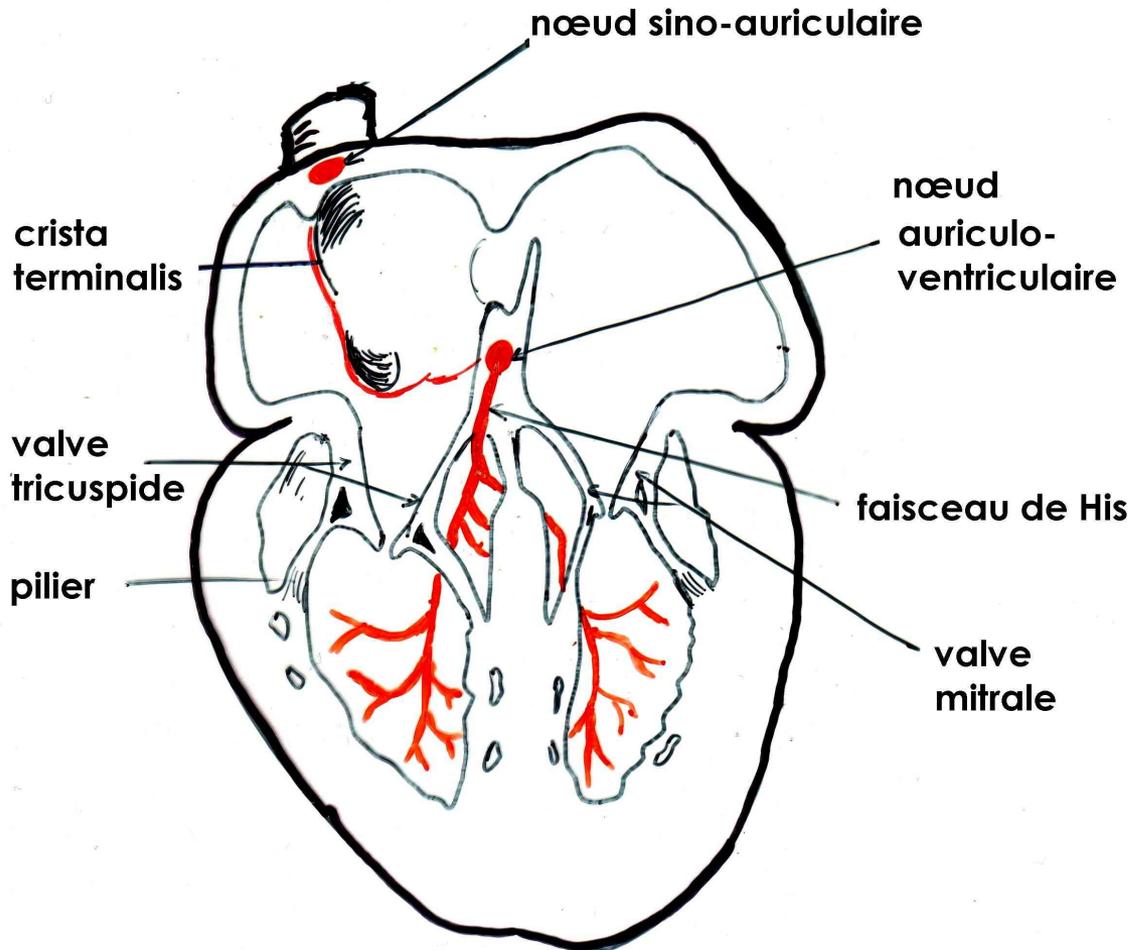
COEUR NORMAL



TRANSPOSITION

Histogenèse cardiaque

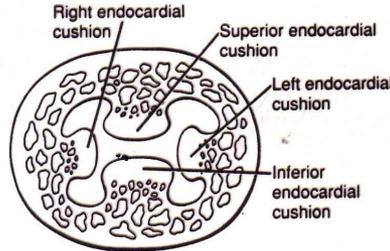
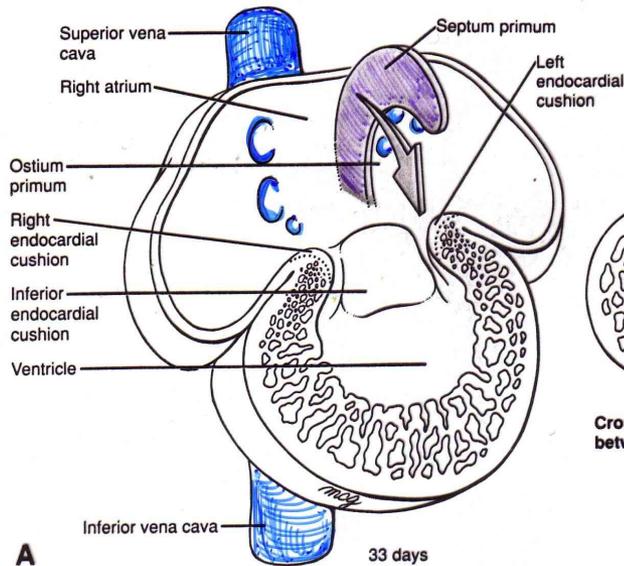
1- système de conduction



Histogenèse cardiaque

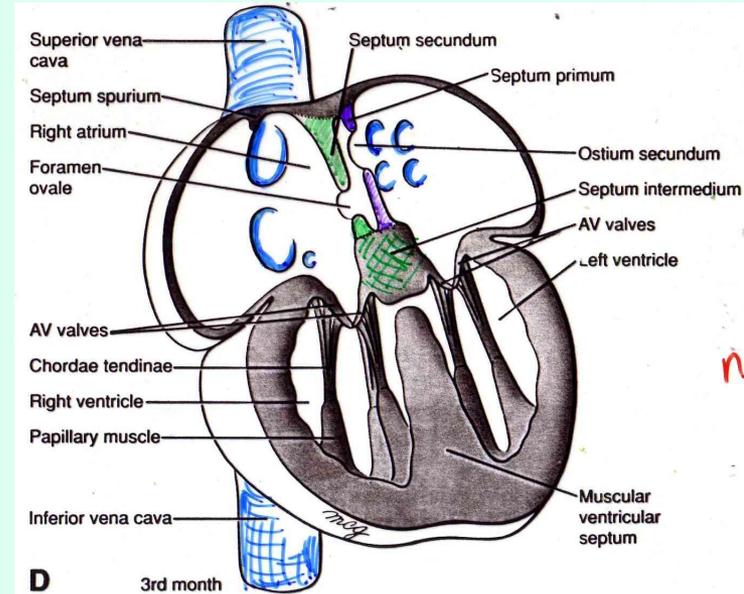
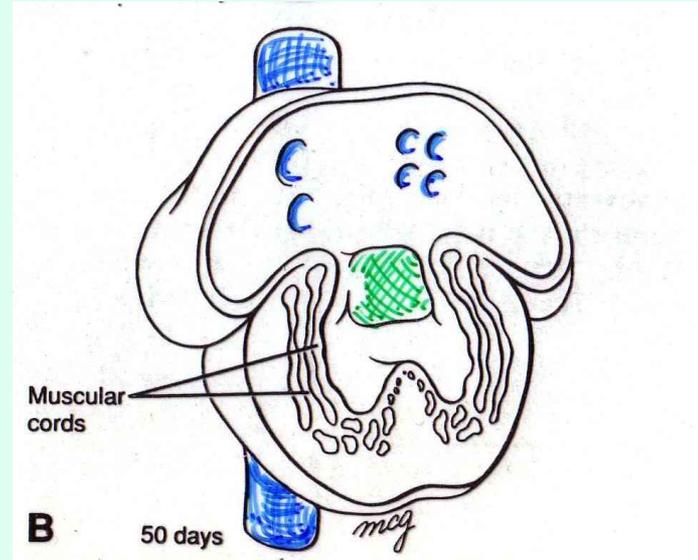
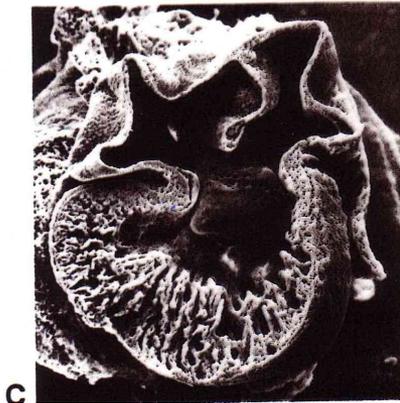
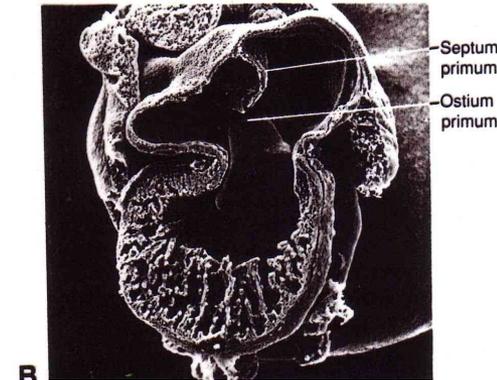
2- compaction

- formation des valves AV

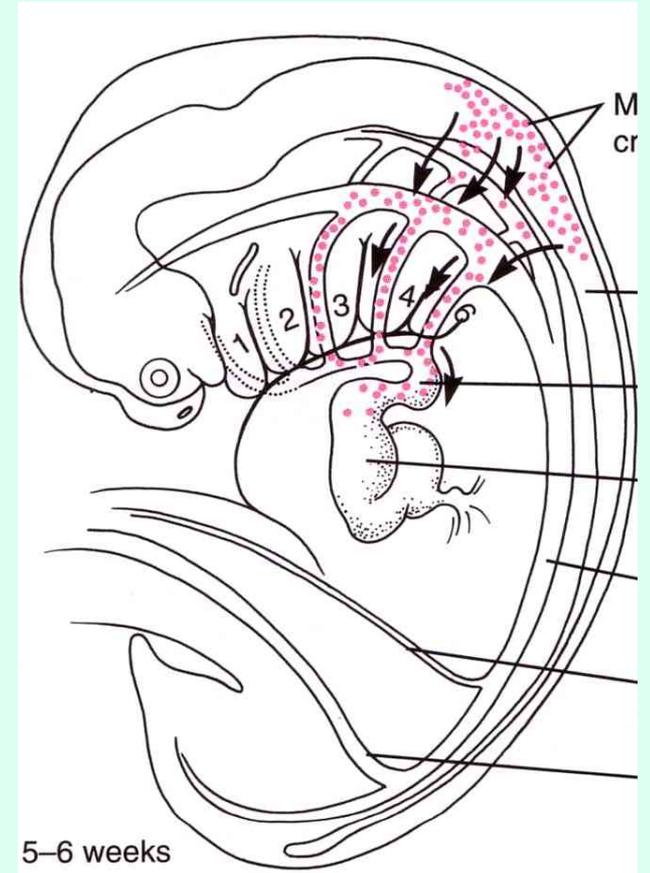
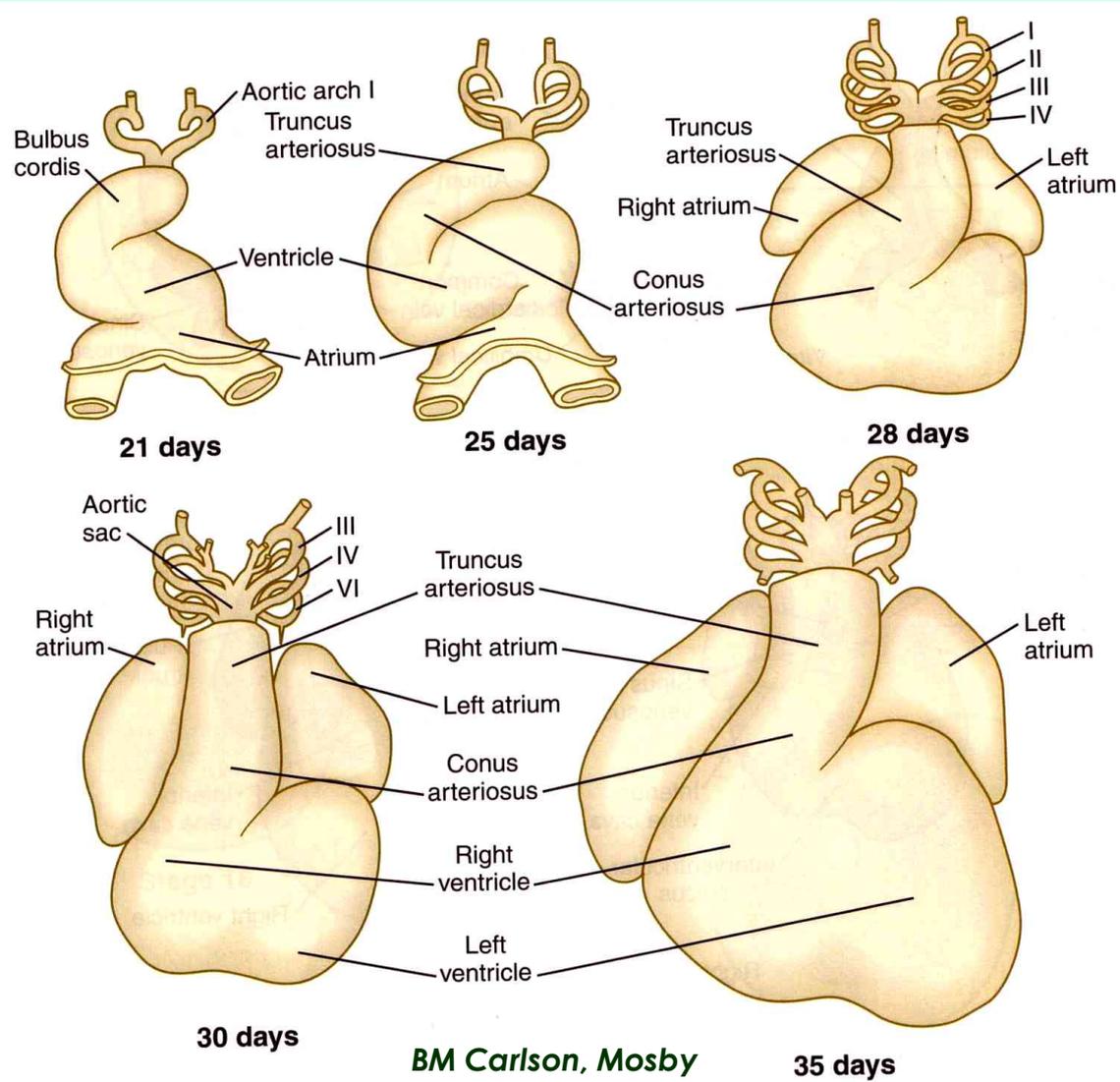


Cross section of heart between atrium and ventricle

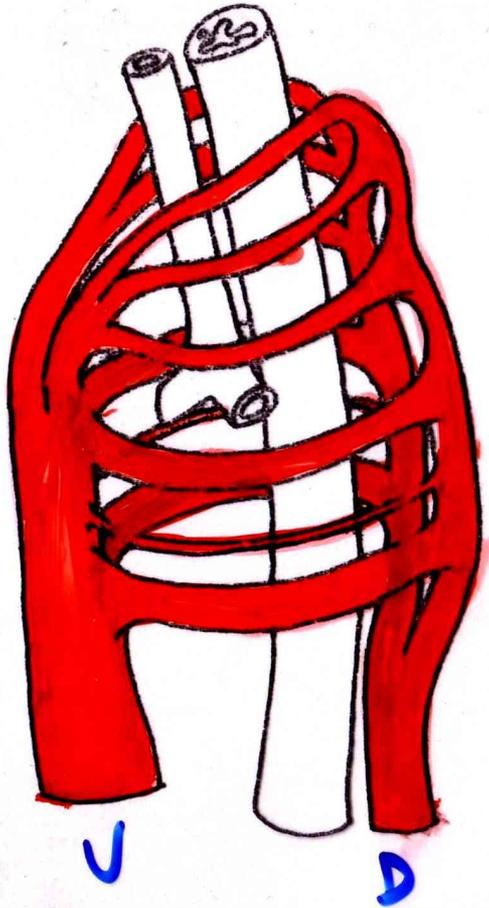
WL Larsen,
Churchill Livingstone



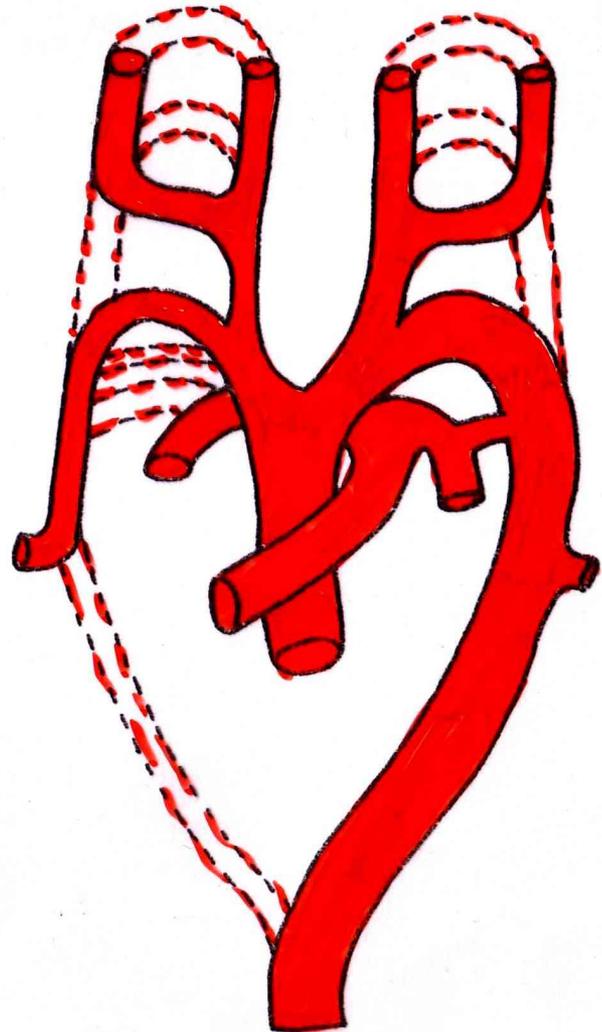
Arcs aortiques

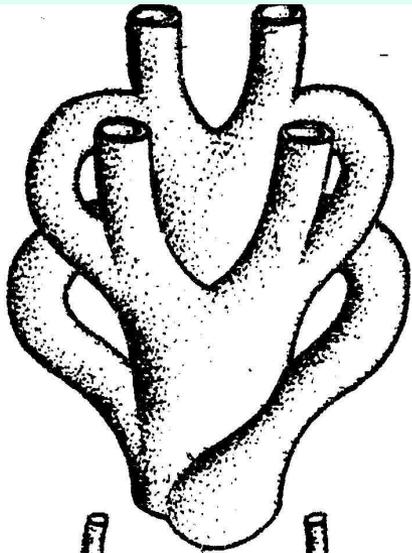


Evolution des arcs aortiques



D V V D
I E E I



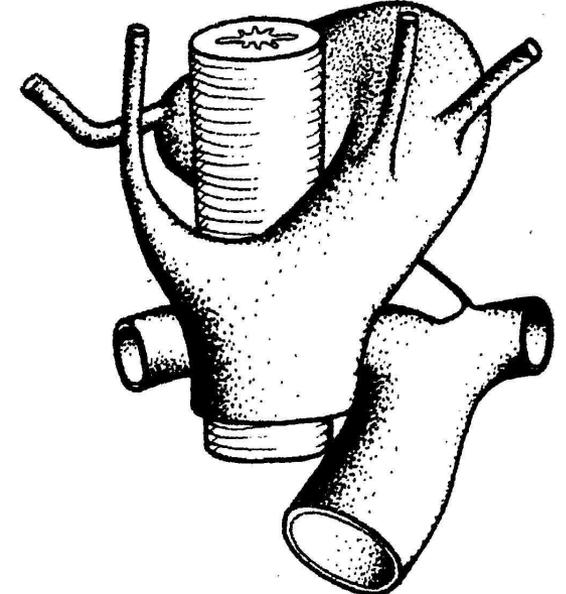
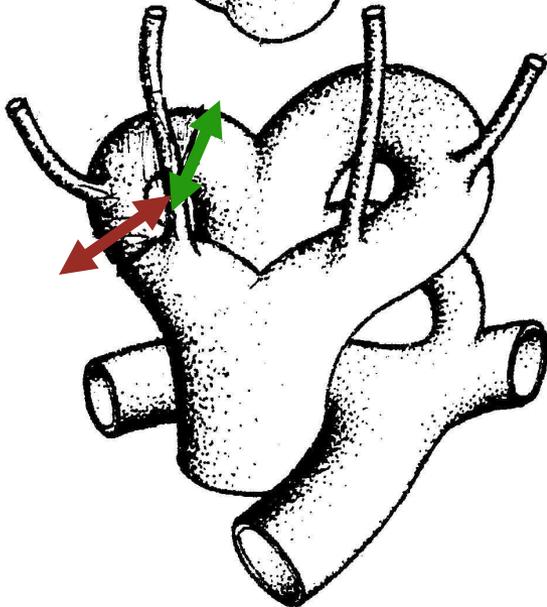


4ème arc

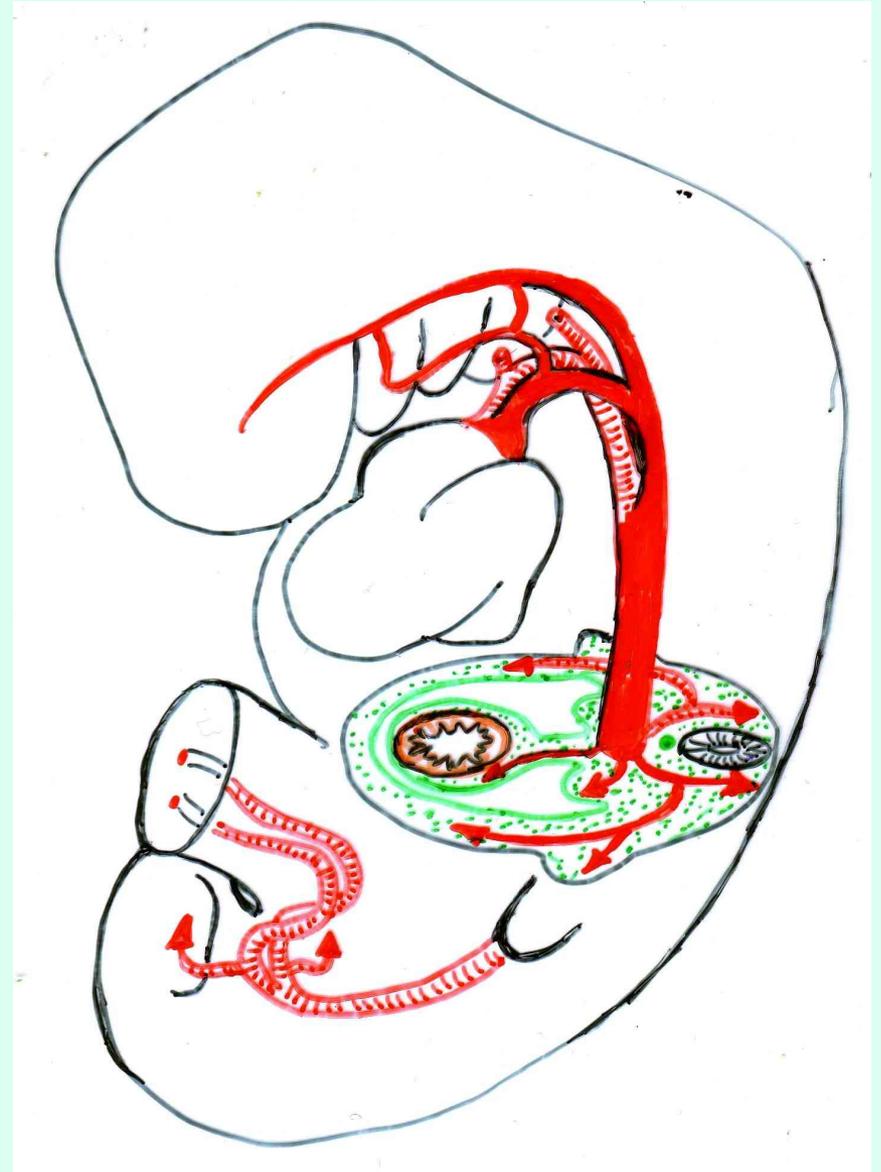
6ème arc

normal

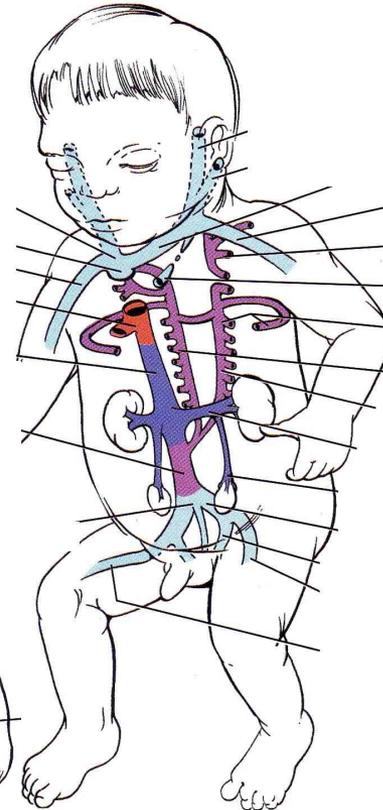
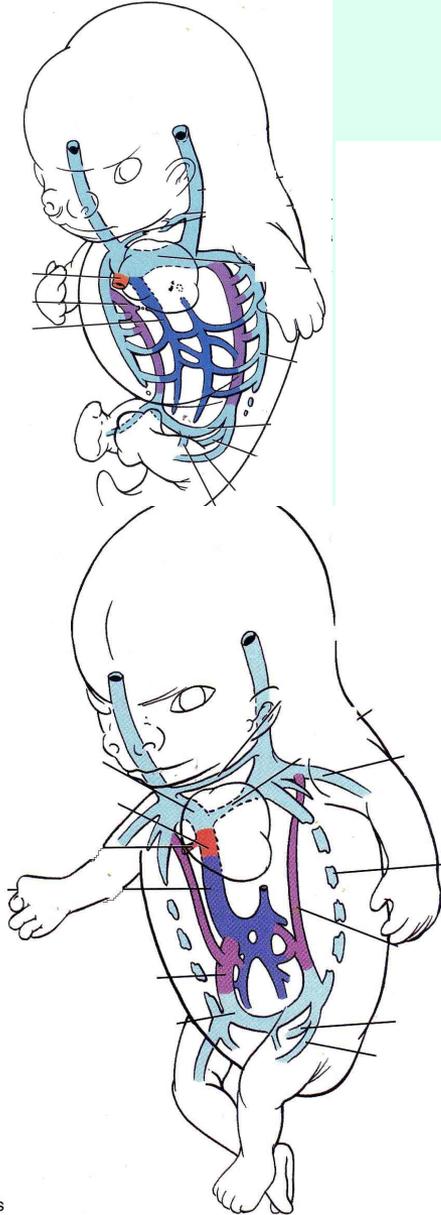
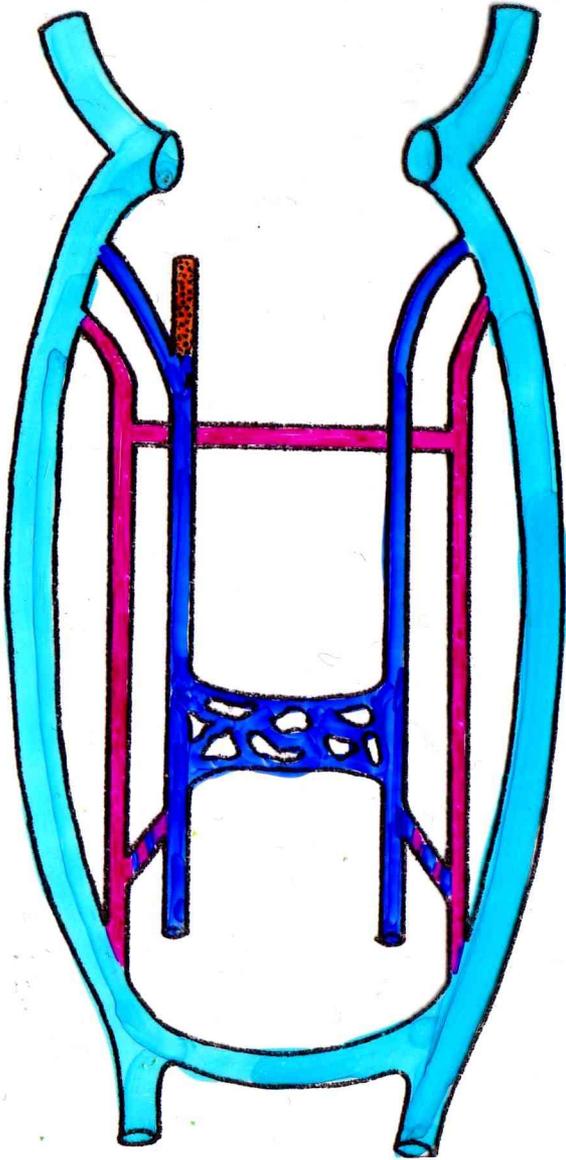
SCDRO



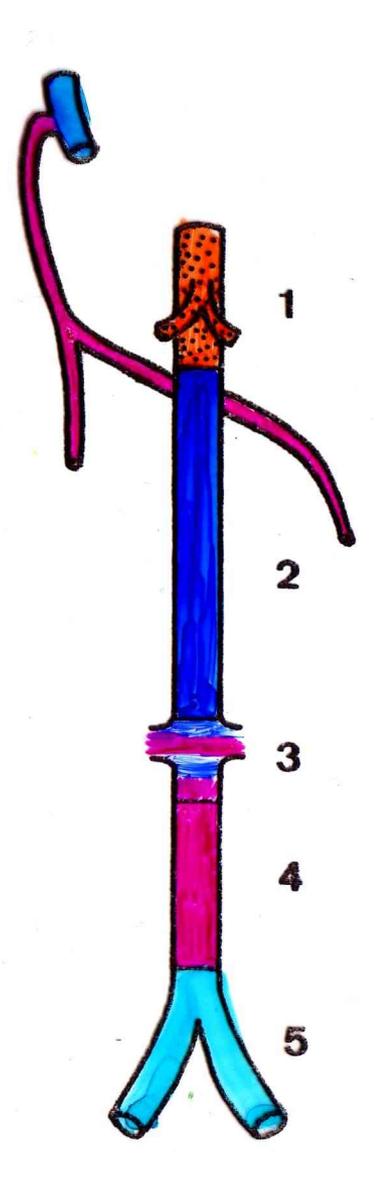
Systeme artériel



Systeme veineux



WL Larsen,
Churchill Livingstone



FIN





Faculté de Médecine Paris VII



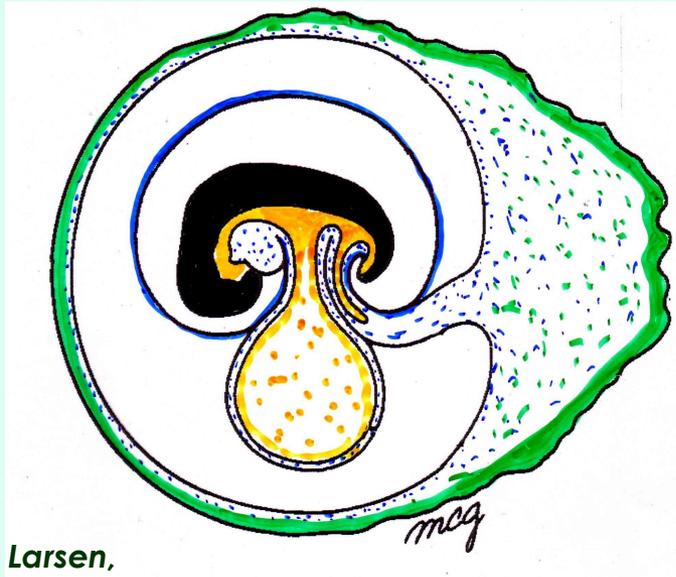
Hématopoïèse

PCEM2

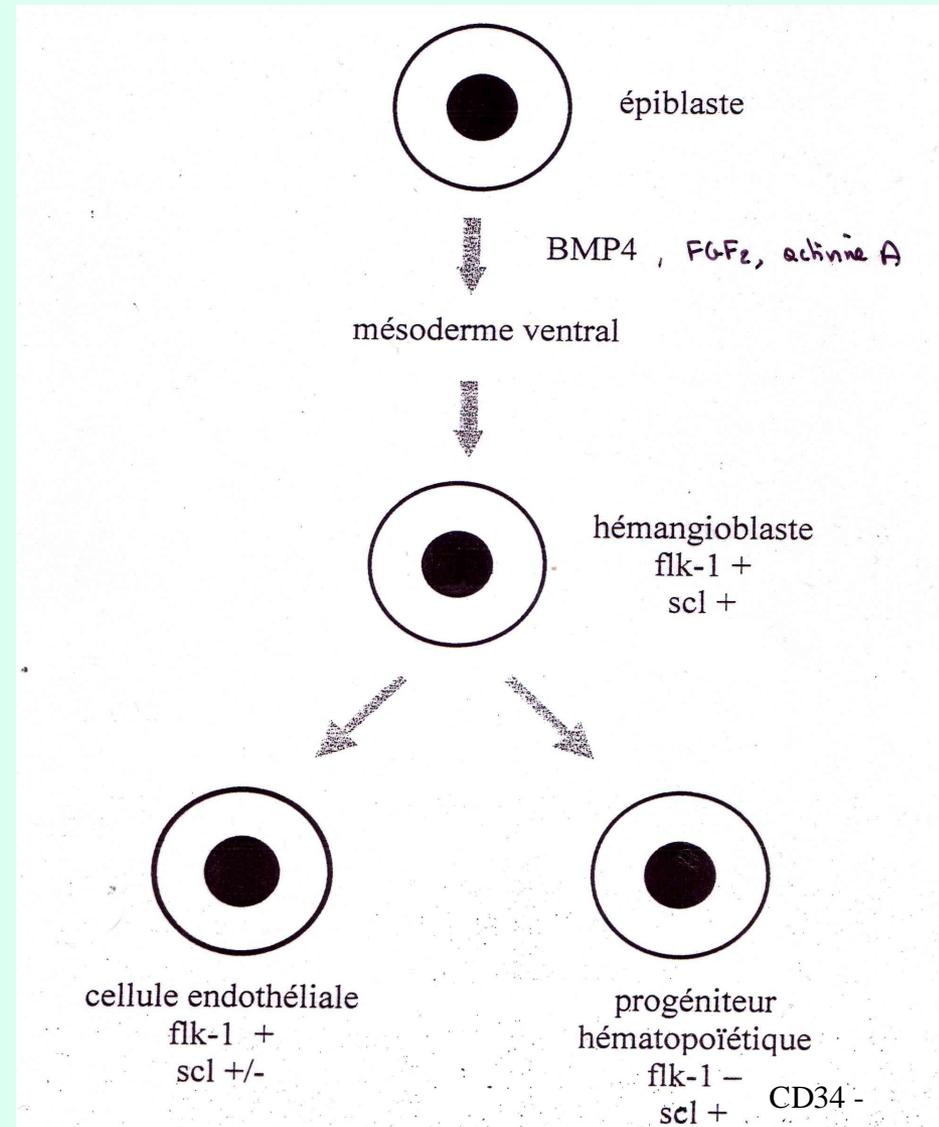
Module
Génétique
Biologie du Développement

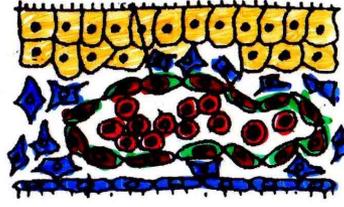
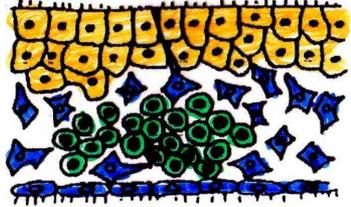
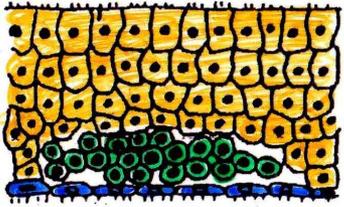
Organes hématopoïétiques primaires

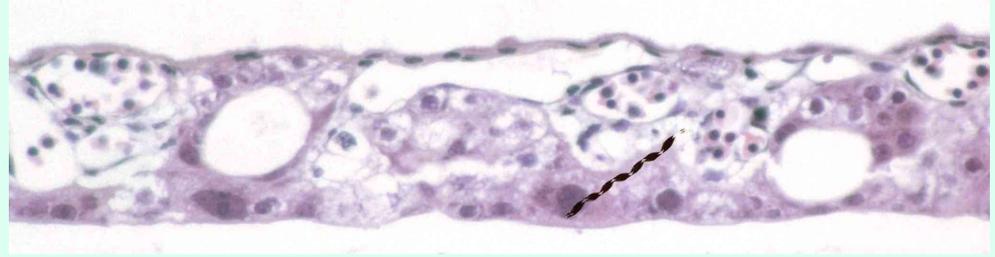
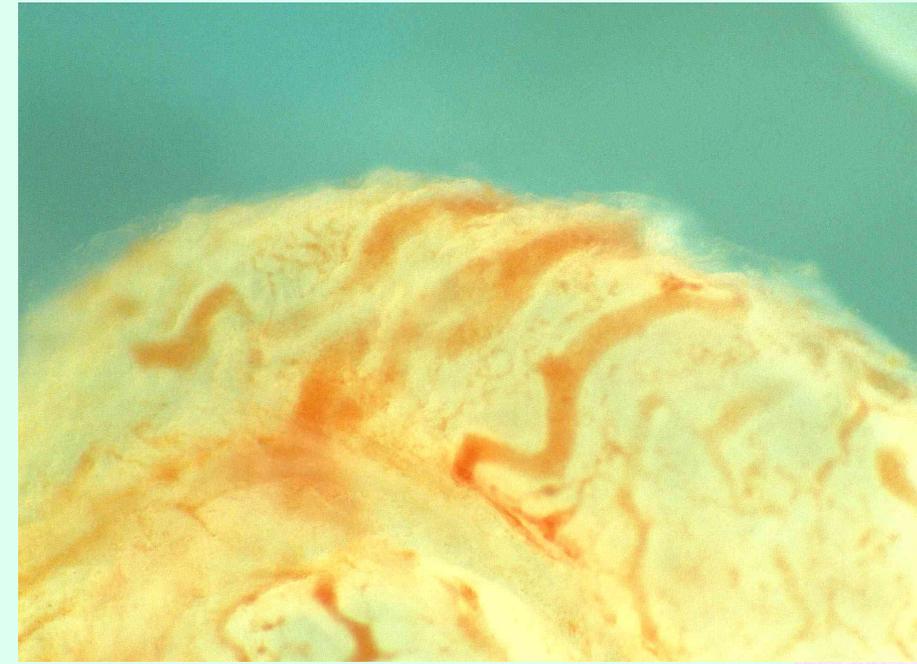
1- vésicule vitelline



WL Larsen,
Churchill Livingstone

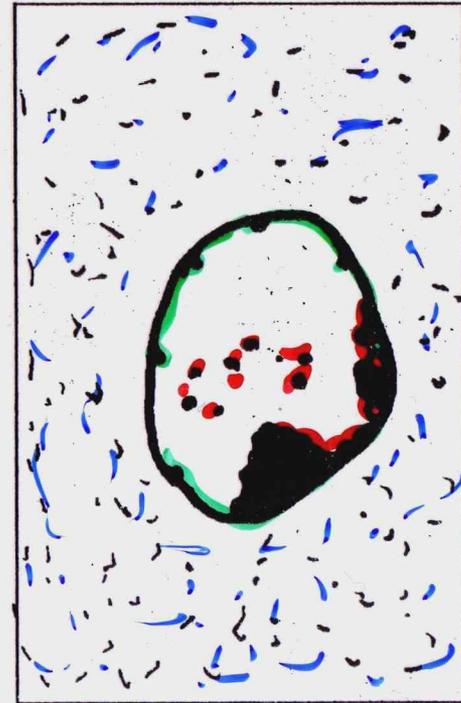
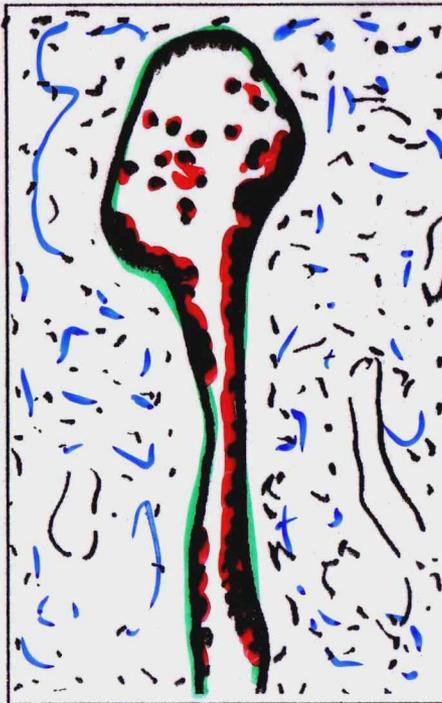
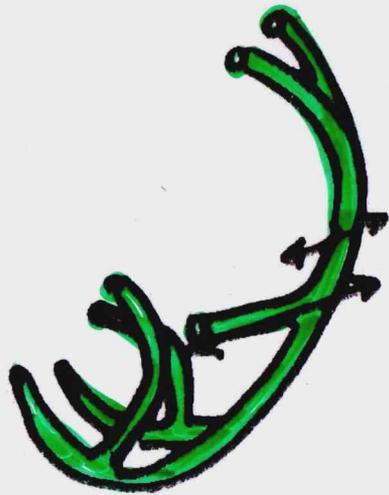






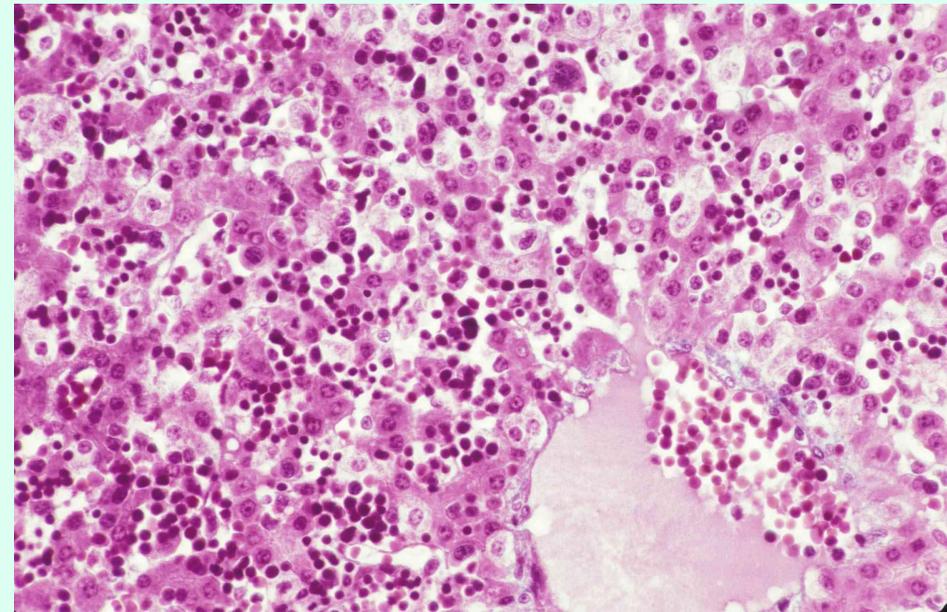
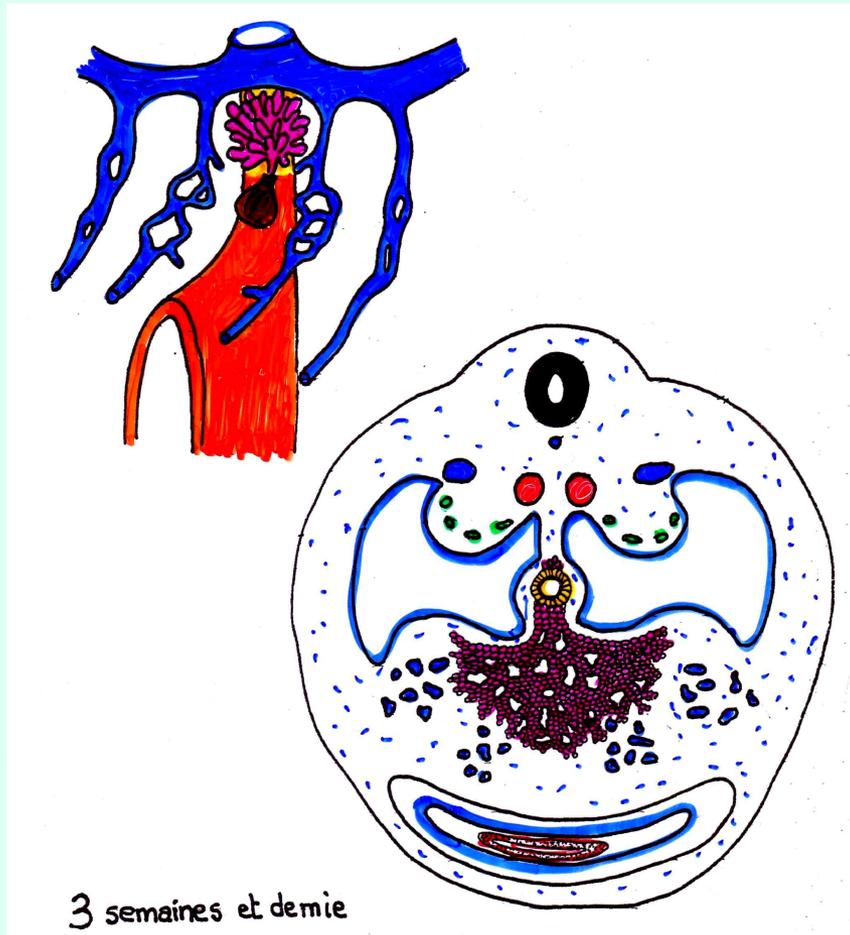
Organes hématopoïétiques primaires

1-plancher de l'aorte dorsale (J27 à J40)



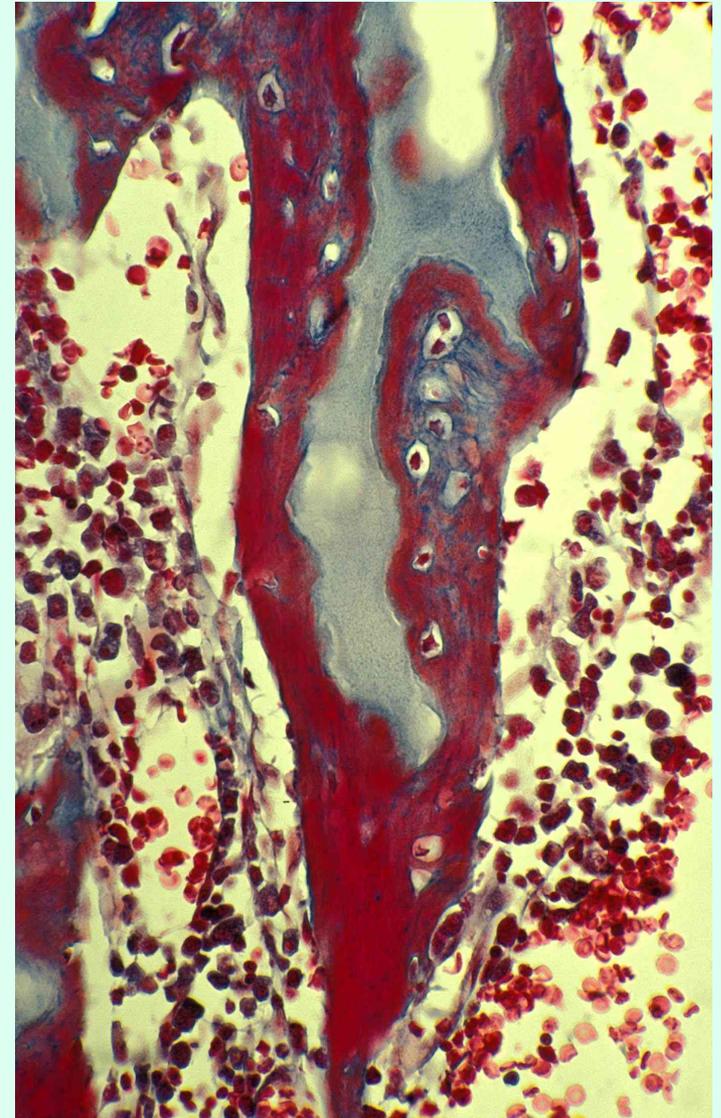
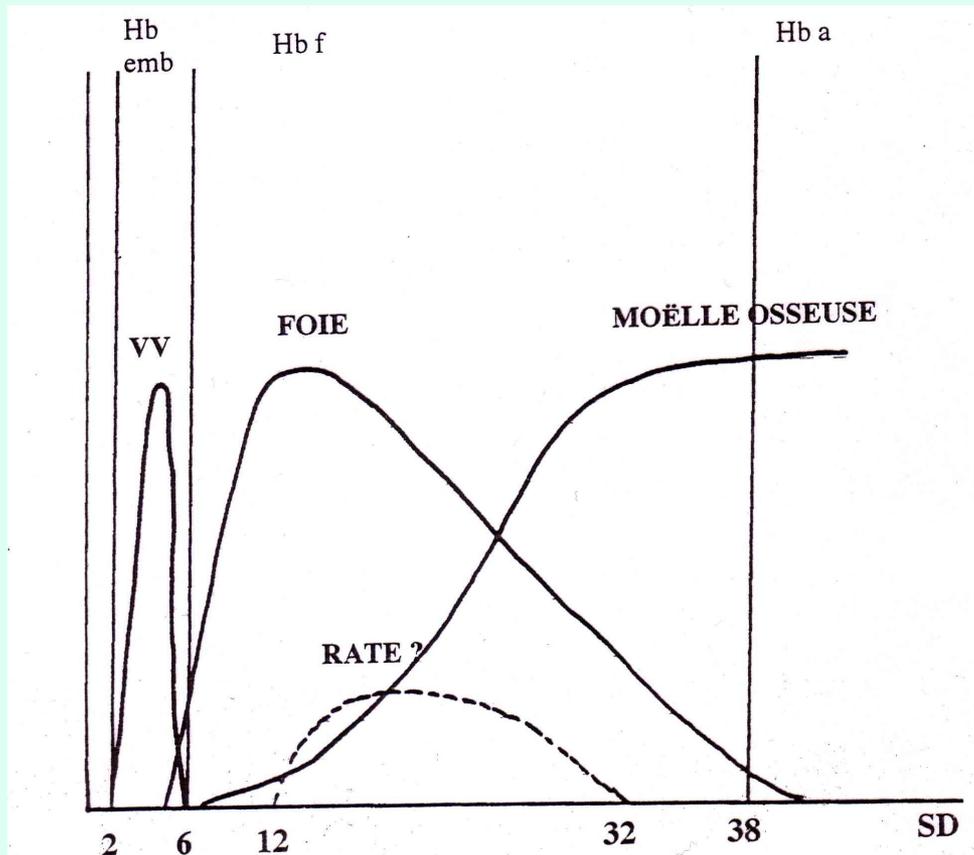
Organes hématopoïétiques secondaires

1- foie



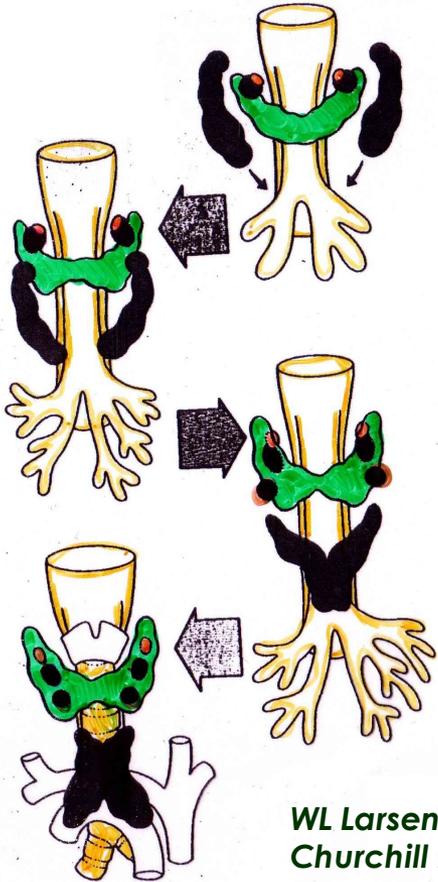
Organes hématopoïétiques secondaires

1- moëlle osseuse

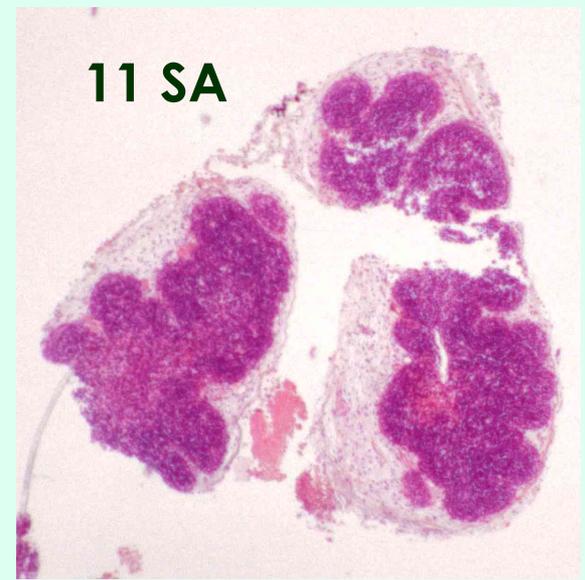
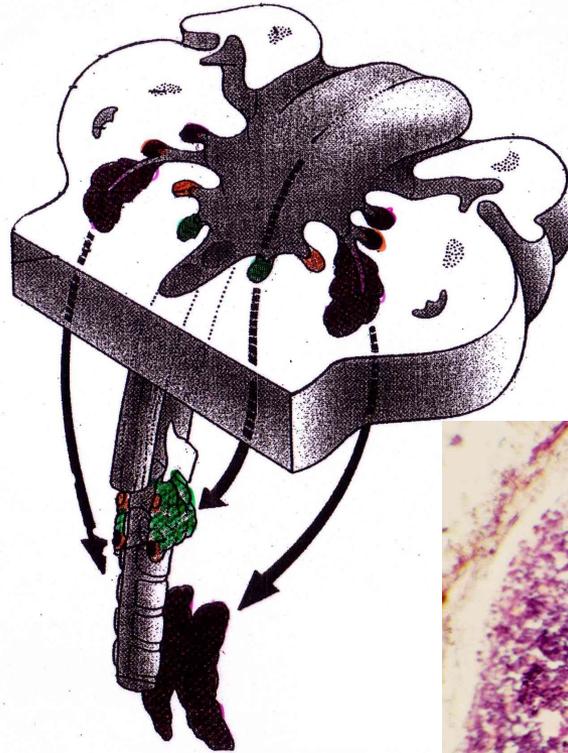


Organes lymphoïdes

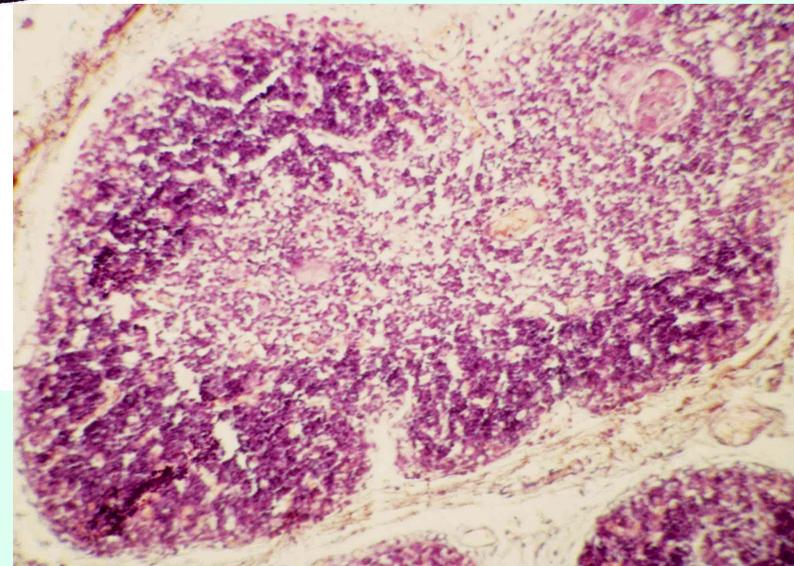
1- thymus



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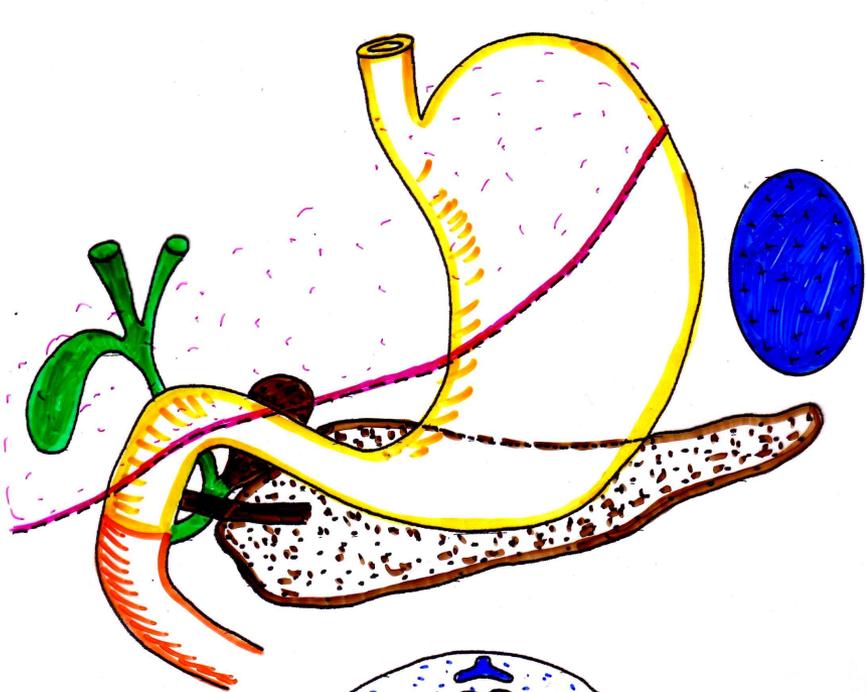


22 SA

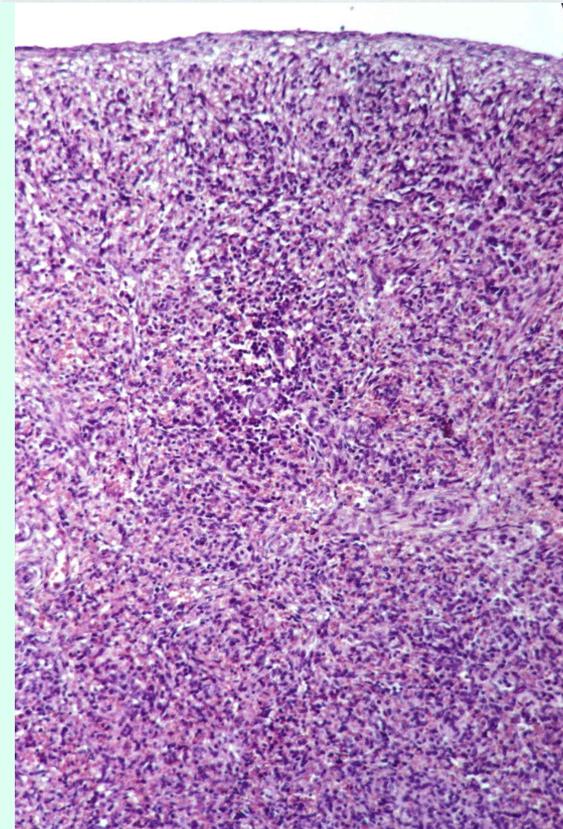
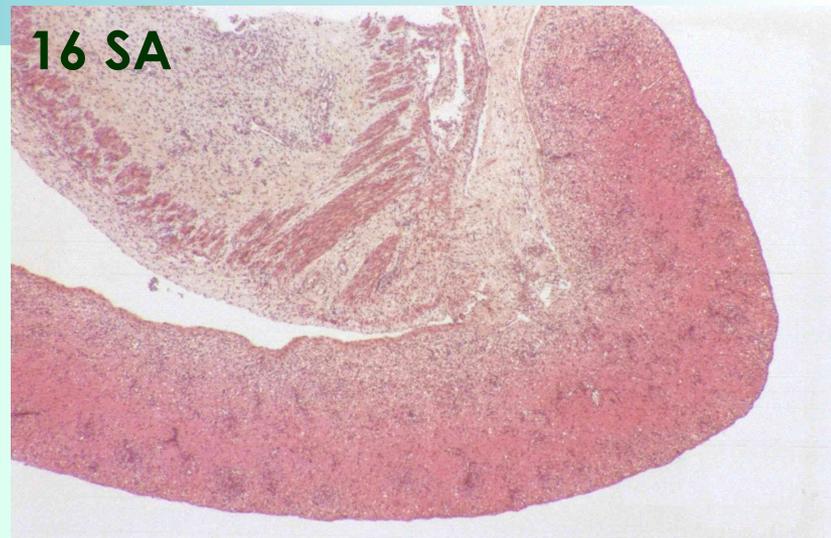


Organes lymphoïdes

2- rate



5 semaines



20 SA