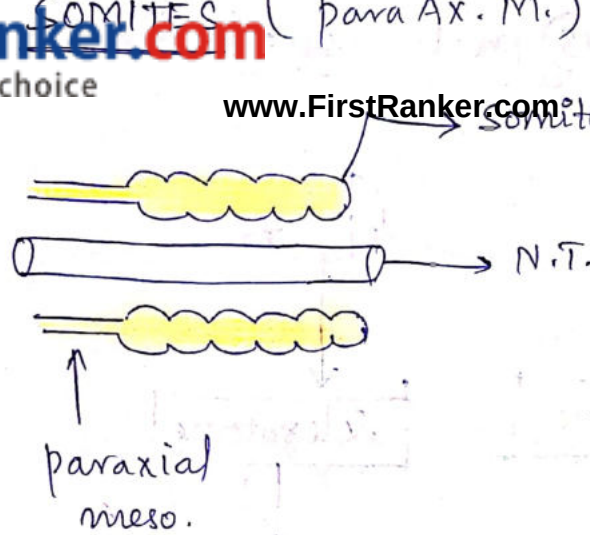




Somites are formed from

$$D_{20} - D_{30}$$

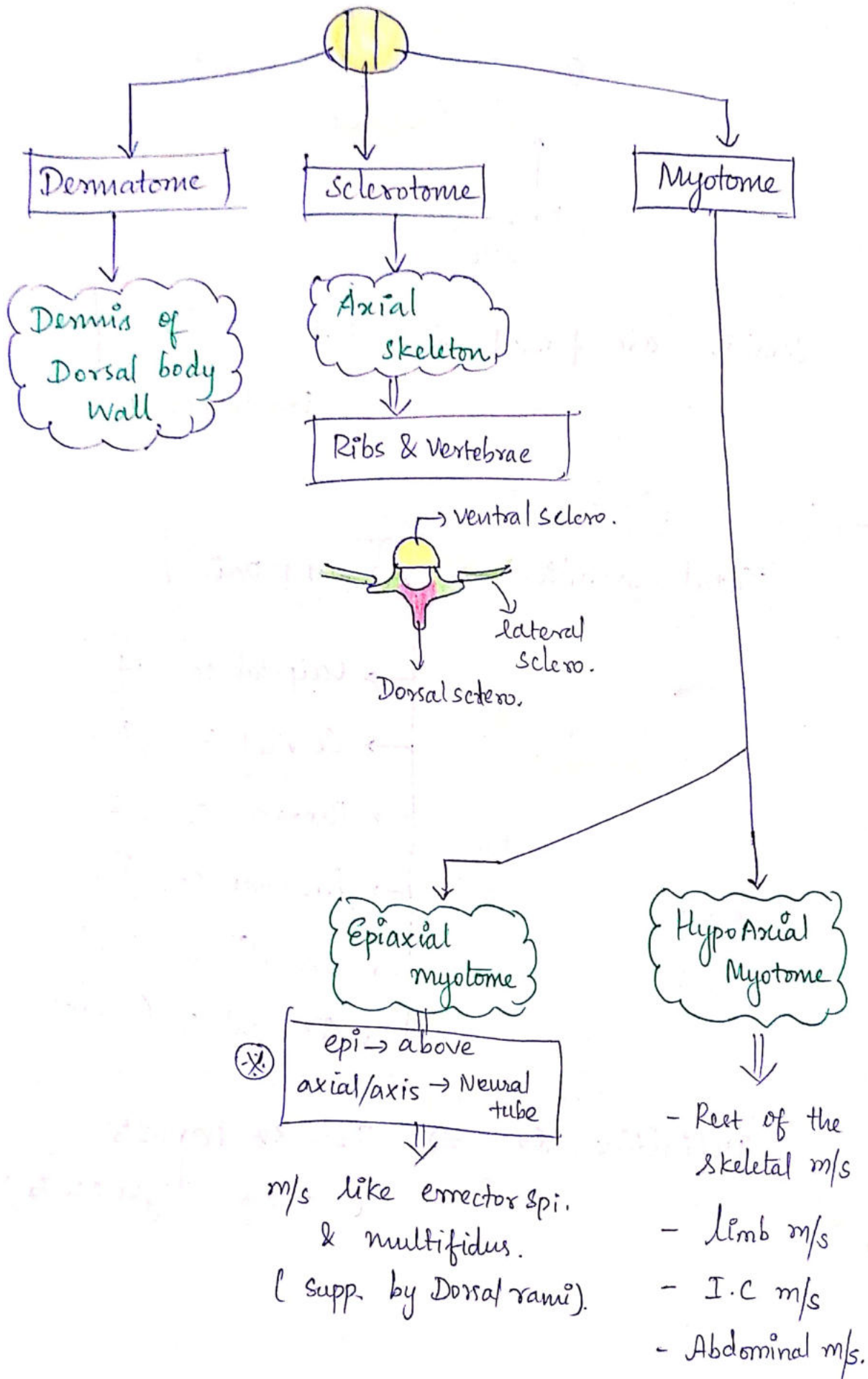
Somite period

Total Somites →

42 - 44 pairs

- Occipital so. (4)
- Cervical so. (8)
- Thoracic so. (12)
- Lumbar so. (5)
- Sacral so. (5)
- Coccygeal so. (8-10)

Definitive so. ⇒ 36 - 38 persists
(others degenerate)



They have to be derived from LPM

Para axial M.
(Somites)

LPM $\left\{ \begin{array}{l} \text{So. LPM} \\ \text{Sp. LPM} \end{array} \right.$

* Dermis of Dorsal body wall

---- Ventral body wall & limb

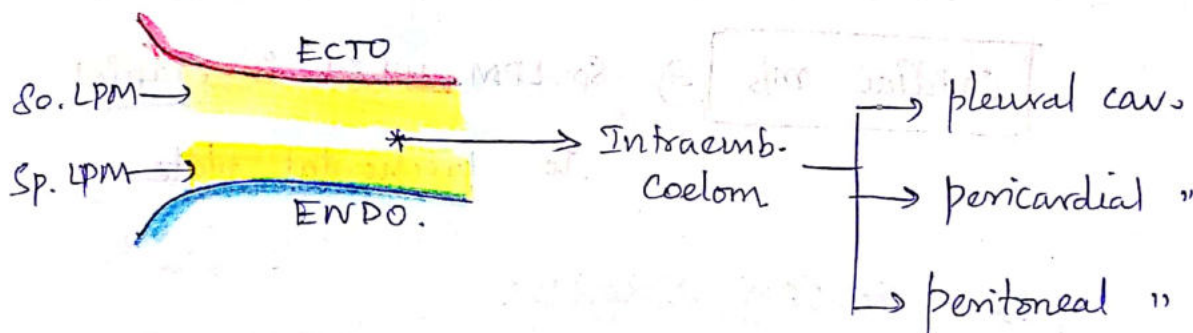
* Skeletal m/s

Smooth m/s.
& cardiac m/s

* Axial skeleton

Appendicular skeleton

LPM (lat-plate meso.)



So. LPM.

Sp. LPM

* ^{All} Parietal layers.
(for all cav.).

* All Visceral layers.

* Dermis of ventral
body wall & limbs

* Smooth m/s (except...)

* Appendicular skeleton

* Cardiac m/s (CRANIAL end)

1) pupillary m/s. → Neuroectoderm

2) Ciliaris m/s → NCC

3) Smooth m/s of
asc. aorta, pulm. T.
coronary v/s, outflowing
part of Heart } → NCC

4) Smooth m/s of sweat gl.,
mamm. gl. & myoepithelial cells
(modif. sweat gl.) } → Surface ectoderm

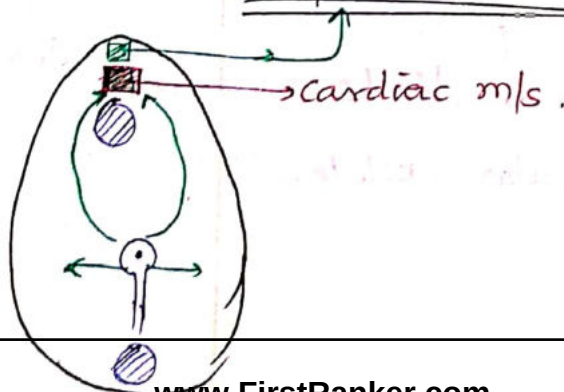
Cardiac m/s ⇒ Sp. LPM which is cranial
to prochordal plate.

~~Sp. LPM~~ ~~Sp. LPM~~

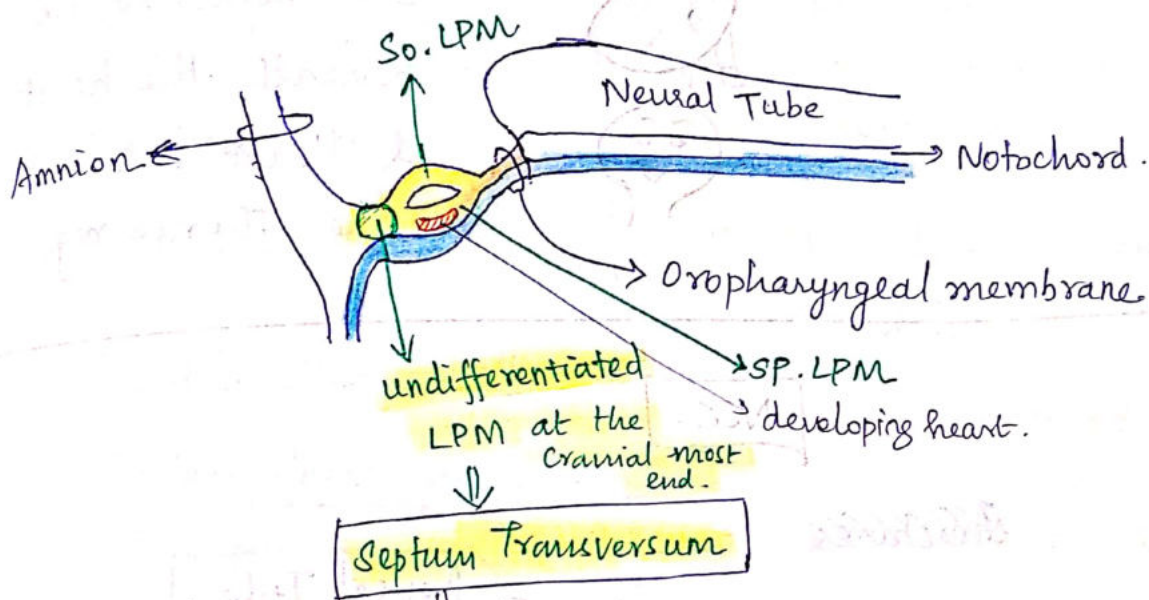
* Sp. LPM cranial to the proch. plate → Cardiac m/s.

* LPM most cranial is "UNDIFFERENTIATED" (ie)

(not) diff. into Sp. LPM & sp. LPM. This LPM
is known as. "Septum Transversum"



(Midline section).



* most cranial struc. in emb. plate
(before folding).

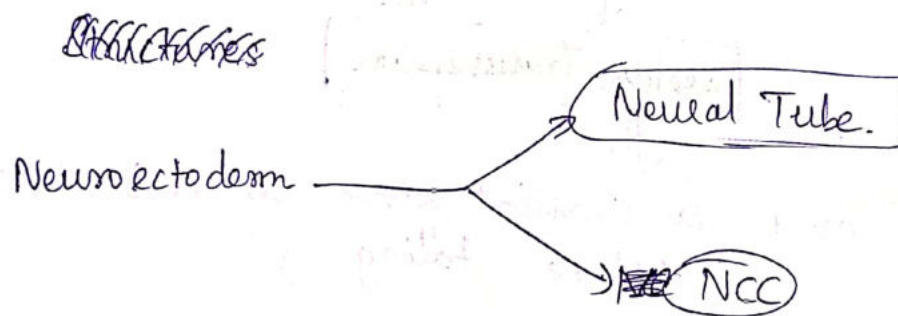
* DERIVATIVES:

- 1) Central Tendon of Diaphragm
- 2) Fibrous pericardium
- 3) Stroma of liver including Kupffer cells.
(Hepatocytes not from meso, its from Endo).
- 4) Ventral mesogastrium. → Lesser Omentum



only after folding
S.T. comes to lie
beneath the heart
& Heart enters
the Thorax reg.

NCC.



Neural Tube : Derivatives (CNS)

1) Brain & sp. cord

2) Oligodendrocytes

3) Astrocytes

4) Ependymal cells.

5) Retina



Neural Derivatives (PNS)

- 1) All ganglions.
- 2) All Enteric plexus.
(myenteric, meissner)
- 3) Schwann cells.
- 4) Adrenal Medulla.
- 5) Parafollicular c-cells.
- 6) Melanoblasts/cytes (X)
(all pigment epithelium
except Retina is
derived from NCC).

Mesenchymal Derivatives

Trick: Majority of the
struc. which has to be
developed from Mesoderm
in H & N. have to
developed from NCC.

- 1) Skull bones except
Sphenoid & ~~occipital~~
- 2) Dermis of head & ~~face~~
- 3) Ph. Arch Cartilages.
- 4) Arach. & Pia (leptomeninges)
- 5) Odontoblast (Dentine).
- 6) Cranotrunical septum