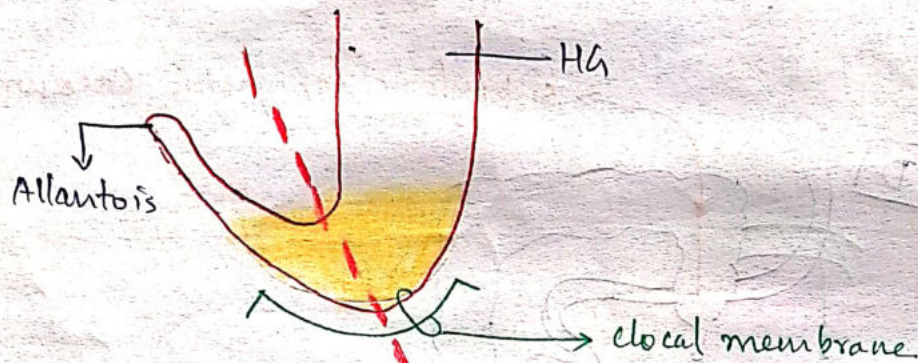
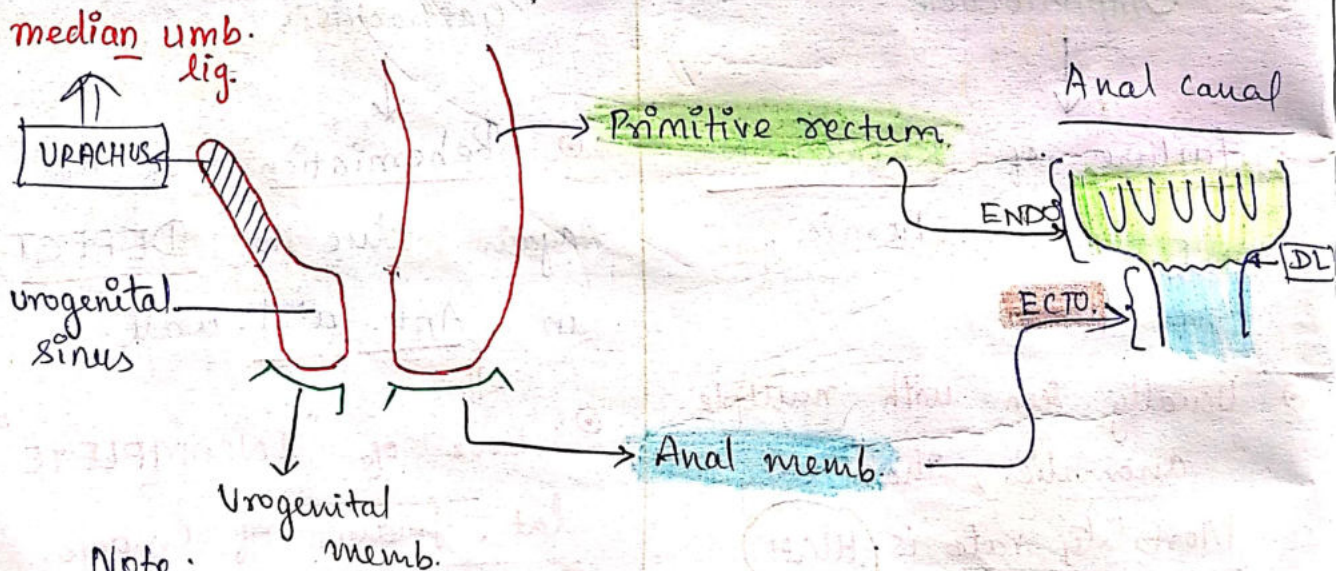


Refer HG & allantois in F4 intro



Note:

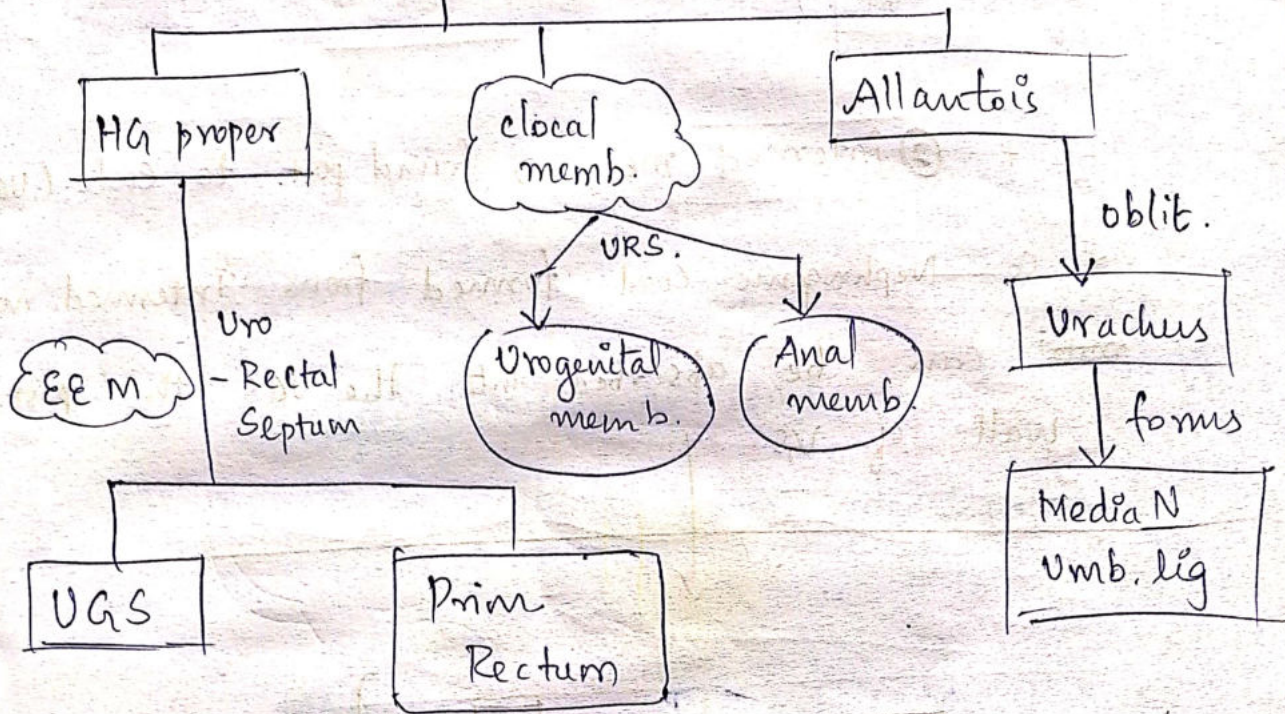
Allantois $\xrightarrow{\text{forms}}$ In lower animals, the bladder



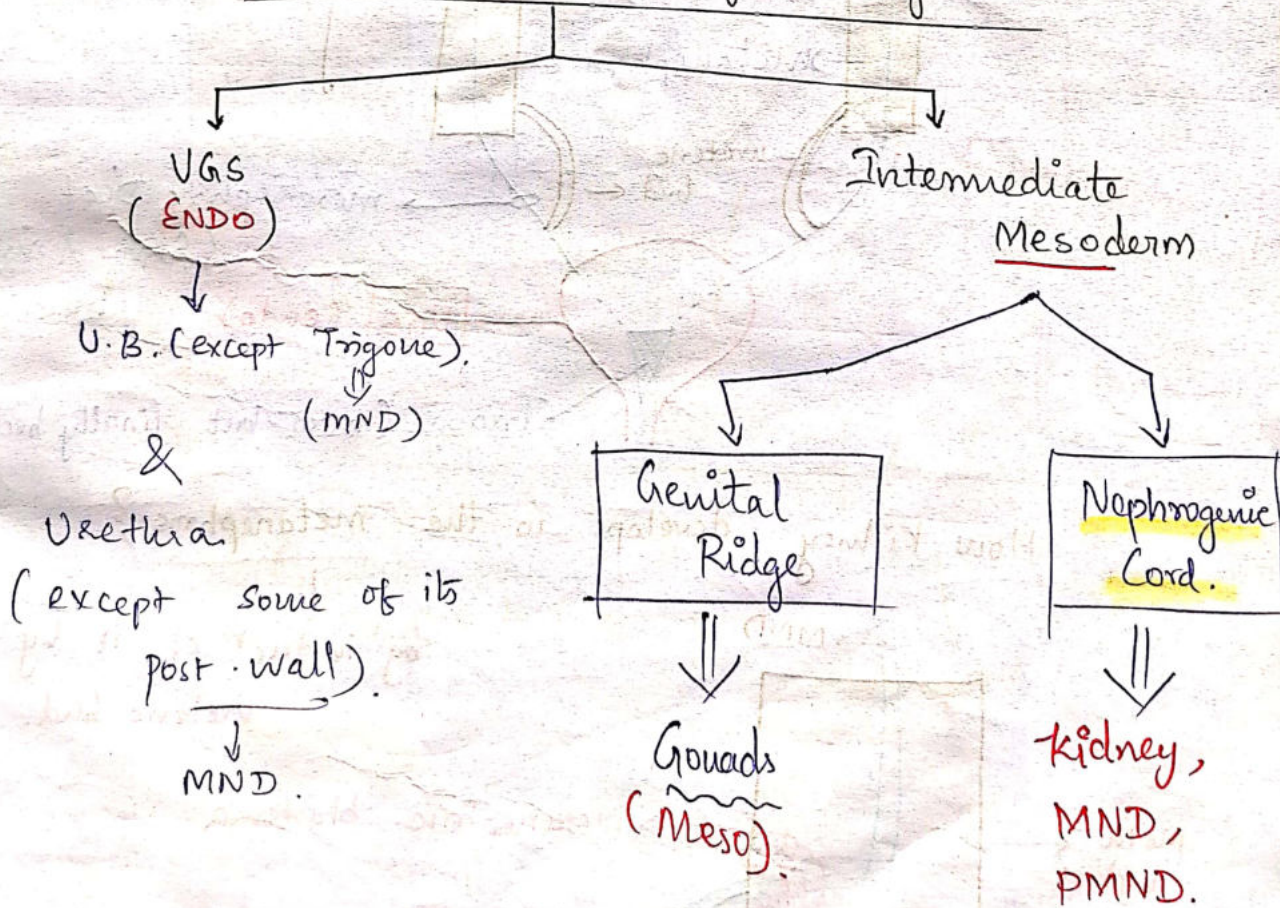
Note:

Allantois $\xrightarrow{\text{obliter.}}$ Urachus $\xrightarrow{\text{forms}}$ Median umb. lig.

if persists $\rightarrow$ weeping ~~bladder~~ umbilicus



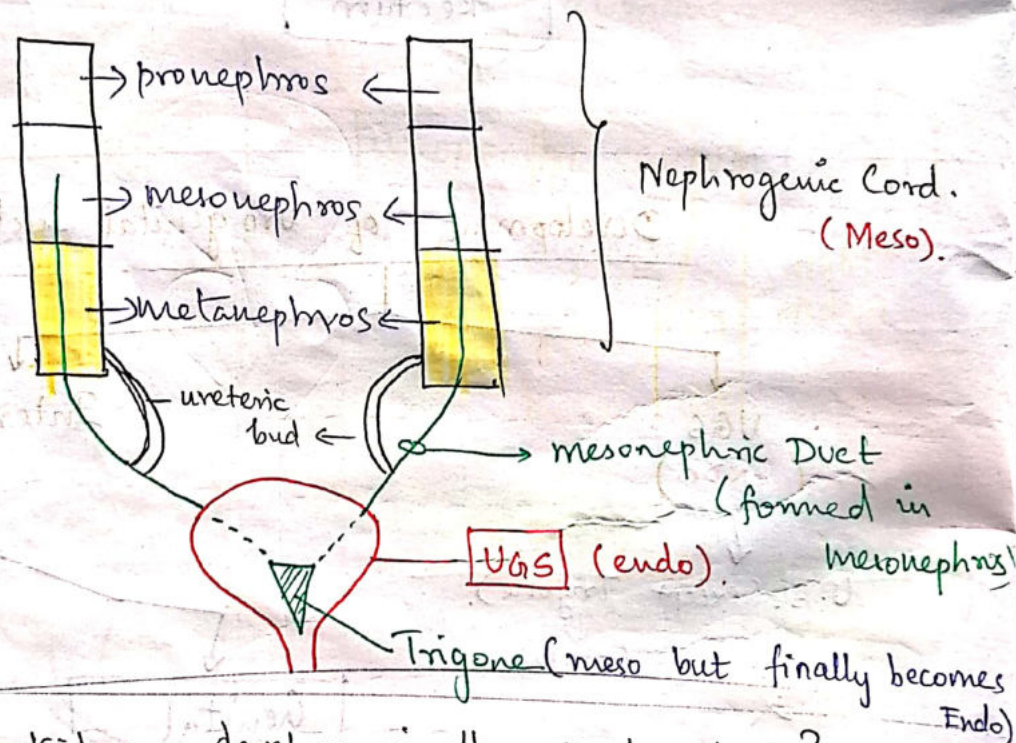
Development of Urogenital System



of VB why?

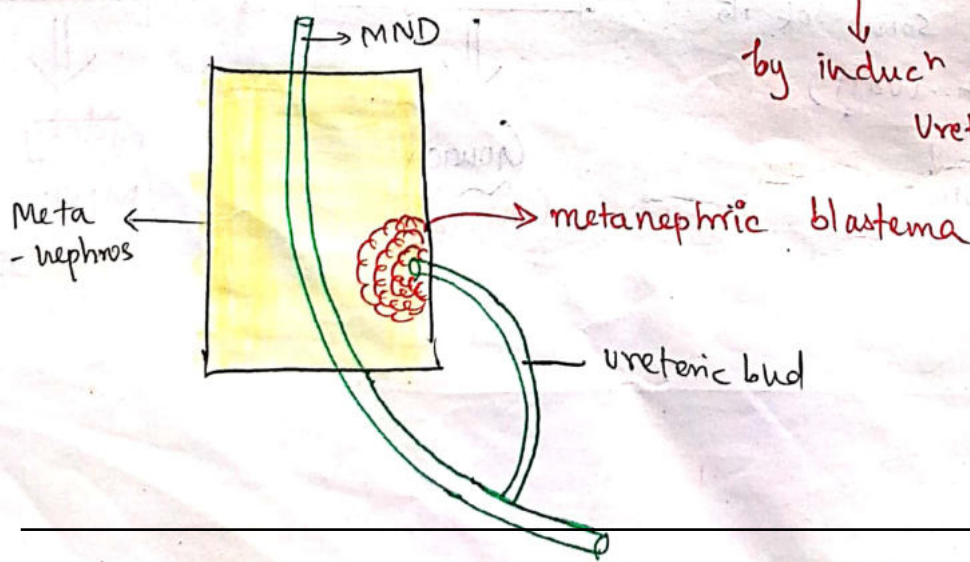
* ② interned. meso $\Rightarrow$ found post. to endo. (Vas).

* So Nephrogenic Cord formed from Interned. meso.
~~met~~ can be absorbed into the Vas thro' post. wall of Vas



How Kidney develops in the metanephros?

$\downarrow$
 by induct of it by Ureteric bud.



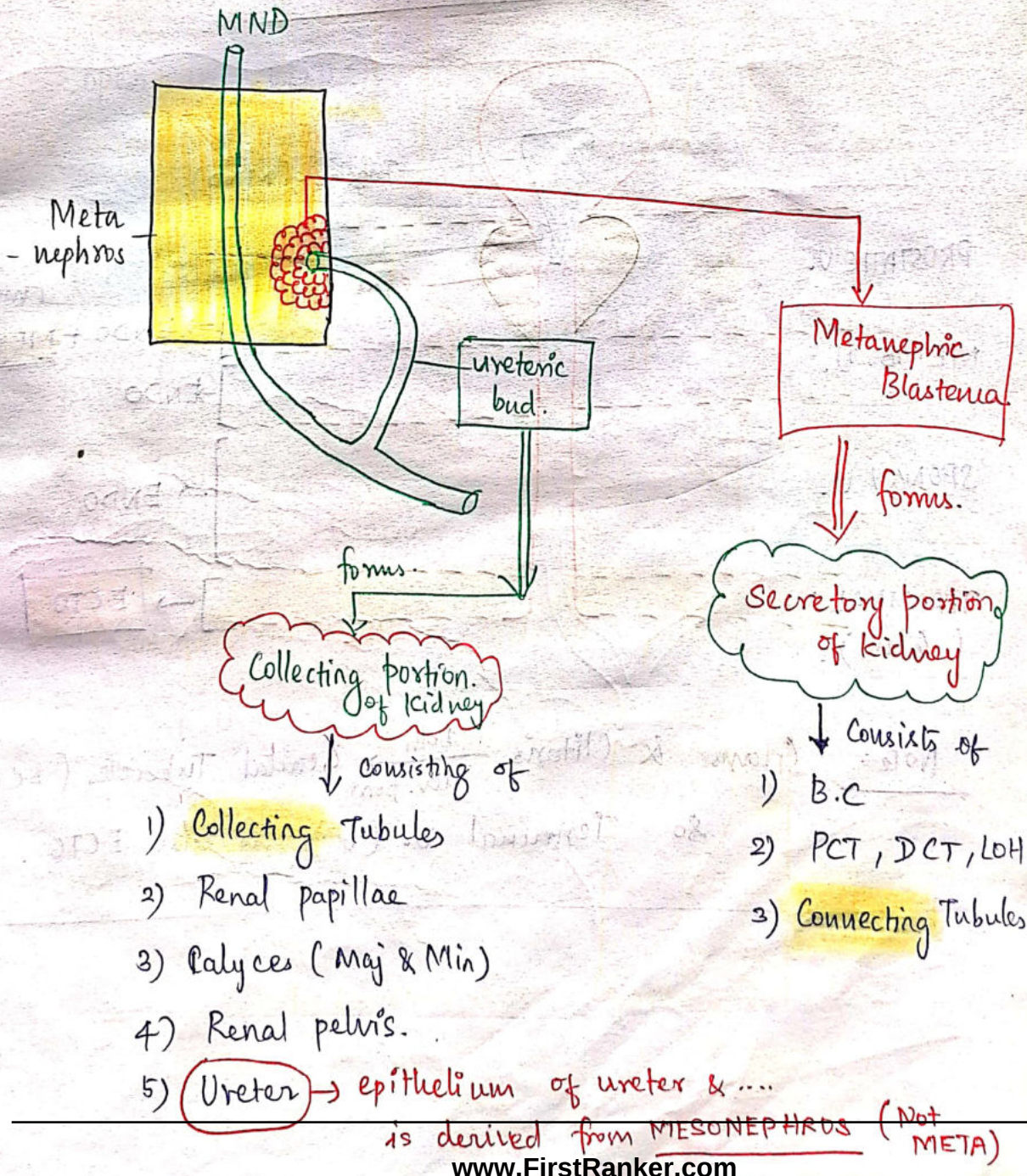
Recapitulation Theory:

- PHYLOGENY.

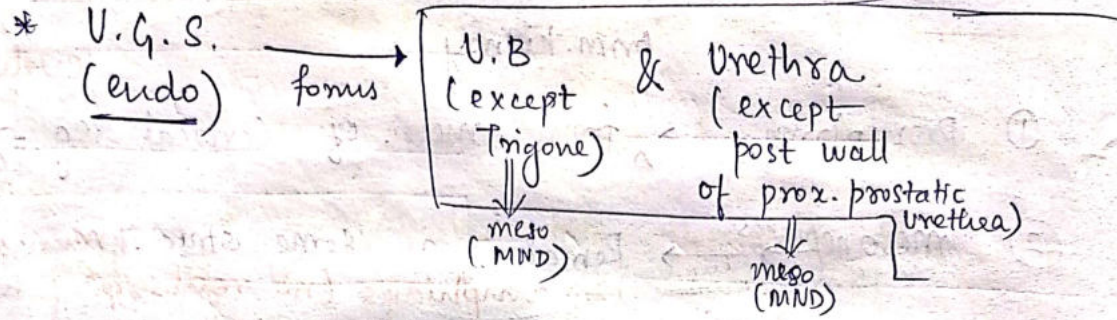
↓
evolution

prim. kidney

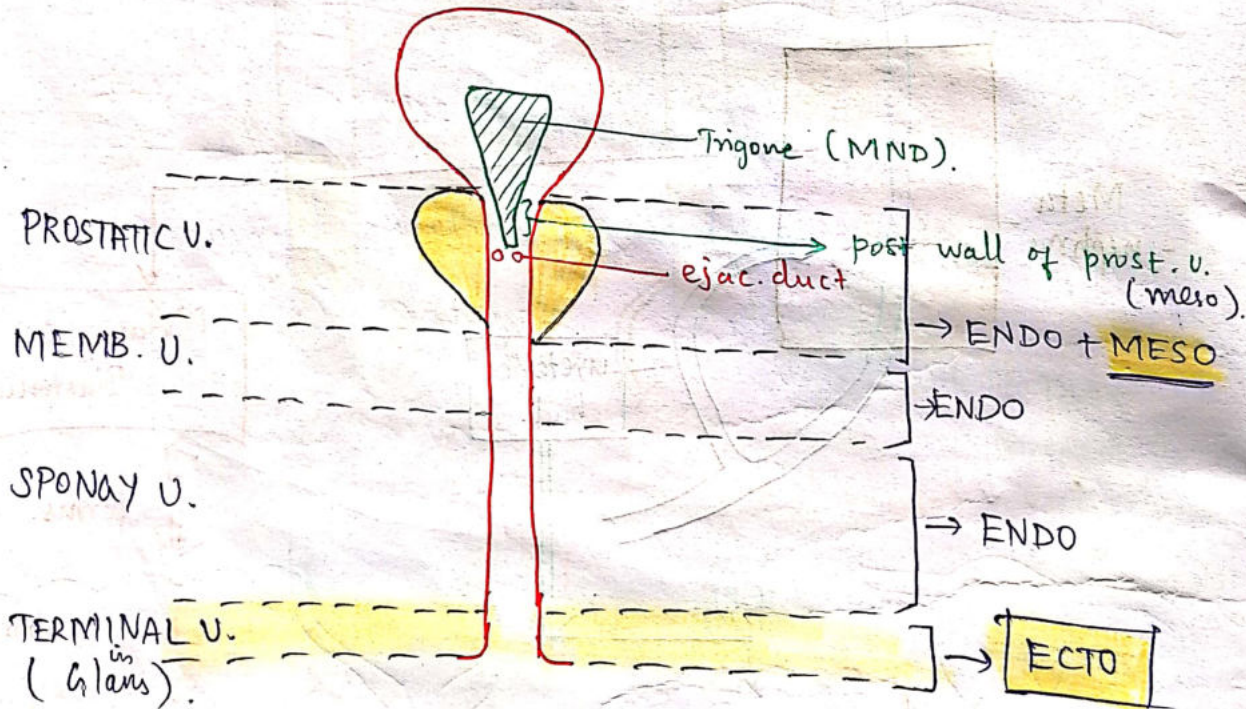
- ① pronephros → from meso. of cervical reg. ⇒ completely disappears
- ② mesonephros → Remains as some struc. (remnants)
(Thoracocoelomic) ⇒ amphioxys (no reabsorpⁿ possible)
- ③ metanephros → Human kidney (develops in pelvic fossa & ascends up)



* Everything related to KIDNEY is derived from MESODERM.



Development of ♂ Urethra



Note: Glans & Clitoris $\xrightarrow{\text{both dev. from}}$ Genital Tubercles (ECTO)
So Terminal U. (♂) is also ECTO.

♂ Urethra is mainly derived from ENDO (UGS)
with post^{wall} of prost. urethra (MESO) & Terminal
Urethra from ECTO

♀ Urethra:

only ENDO + MESO
(UGS) (MND) but
Ant wall post wall of Urethra.

✗ ECTO will be absent bcz it doesn't
open in CLITORIS.
(ecto).

♂ Urethra:

prostatic U. → ENDO + meso
(post-wall)

Memb. U. → ENDO.

Spongy U. → ENDO.

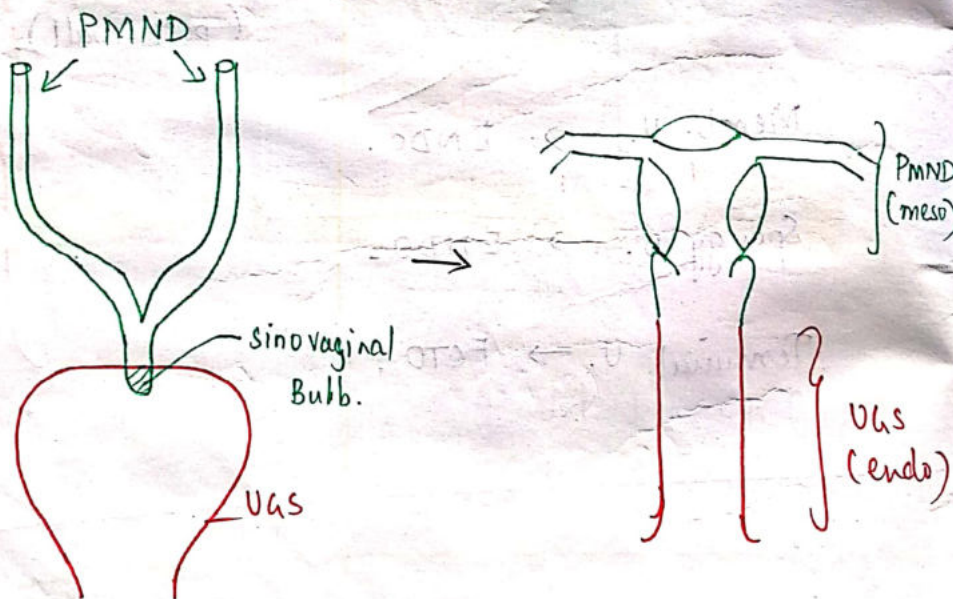
Terminal U. → ECTO.

all ③
germ
layers.

- 1) GENITAL RIDGES → Gonads. (Testis/Ovary)
- 2) GENITAL TUBERCLE → Glans / Clitoris
- 3) GENITAL SWELLING → Scrotum / Labium Majora
- 4) GENITAL FOLDS. (Urethral folds) → Ventral aspect of Penis. / Labia Minora.

Fate of PMND → main duct for ♀
Mullerian duct

* invades VAS. after fusing, unlike MND
in which Ⓐ & Ⓑ MND separately invade VGS.



PMND → fallop. T., Fundus, Body, ..., Upper vag. wall

VAS → Lower vaginal wall

→ But also req. for ♀ bcoz it forms 1) Trigone of VB.

2) Ureteric bud
(collecting part)

3) post wall of
Urethra

MND (Wolffian Duct).

♂

1) post wall of prost. V.
(till ejac. duct).

2) Ureteric bud & its
derivatives

3) Trigone

4) Spermatic pathway

i) Vas - deferens.

ii) Ejaculatory duct
(Vas + Sem. vesicle).

iii) Epididymis.

iv) Seminal Vesicles.

5) Appendix of
Epididymis.



♀

1) post wall of urethra

2) Ureteric bud & its
derivatives

3) Trigone

4) Gartner's
Duct
(D. of Epooophoron)

b/n 2 Layers of
Broad lig.

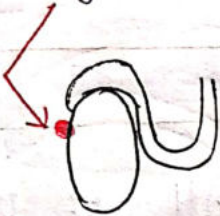
Note: Gartner cyst

↓
Upper vaginal
wall.

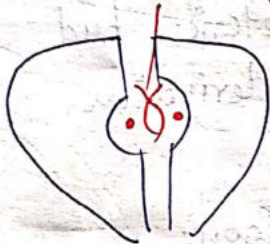
♂

♀

- 1) Appendix of testis.
(Hyatid of Morgagni).



- 2) prostatic Utricle
(aka male Vagina).



- 1) Fallopian Tube
- 2) Uterus.
- 3) Upper part of Vagina.

Summary:

- 1) Gonads → mesodermal (Intemed.)
(Genital Ridge)
- 2) Kidneys & its struc. ass → mesodermal
(Nephrogenic cord)
- 3) Urethra → endo (V.G.S)
+ meso (MND)
+ ecto (only in ♂).