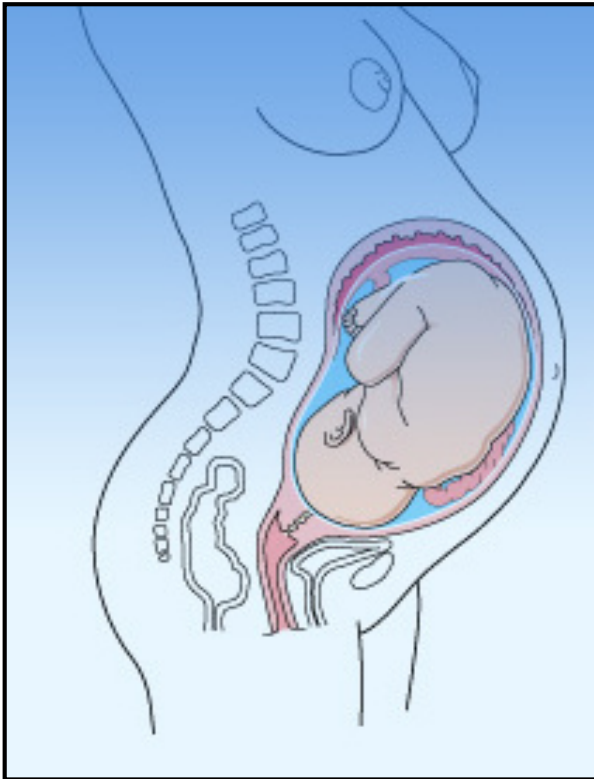


# **ORGANA GENITALIA FEMININA**

# ORGANA GENITALIA FEMININA



## Funkce:

produkce pohlavních buněk (oocyty)

produkce ženských pohlavních hormonů  
(progesteron, estrogen)

vývoj embrya a plodu (od oplození do porodu)

## Rozdělení:

organa genitalia feminina interna

organa genitalia feminina interna

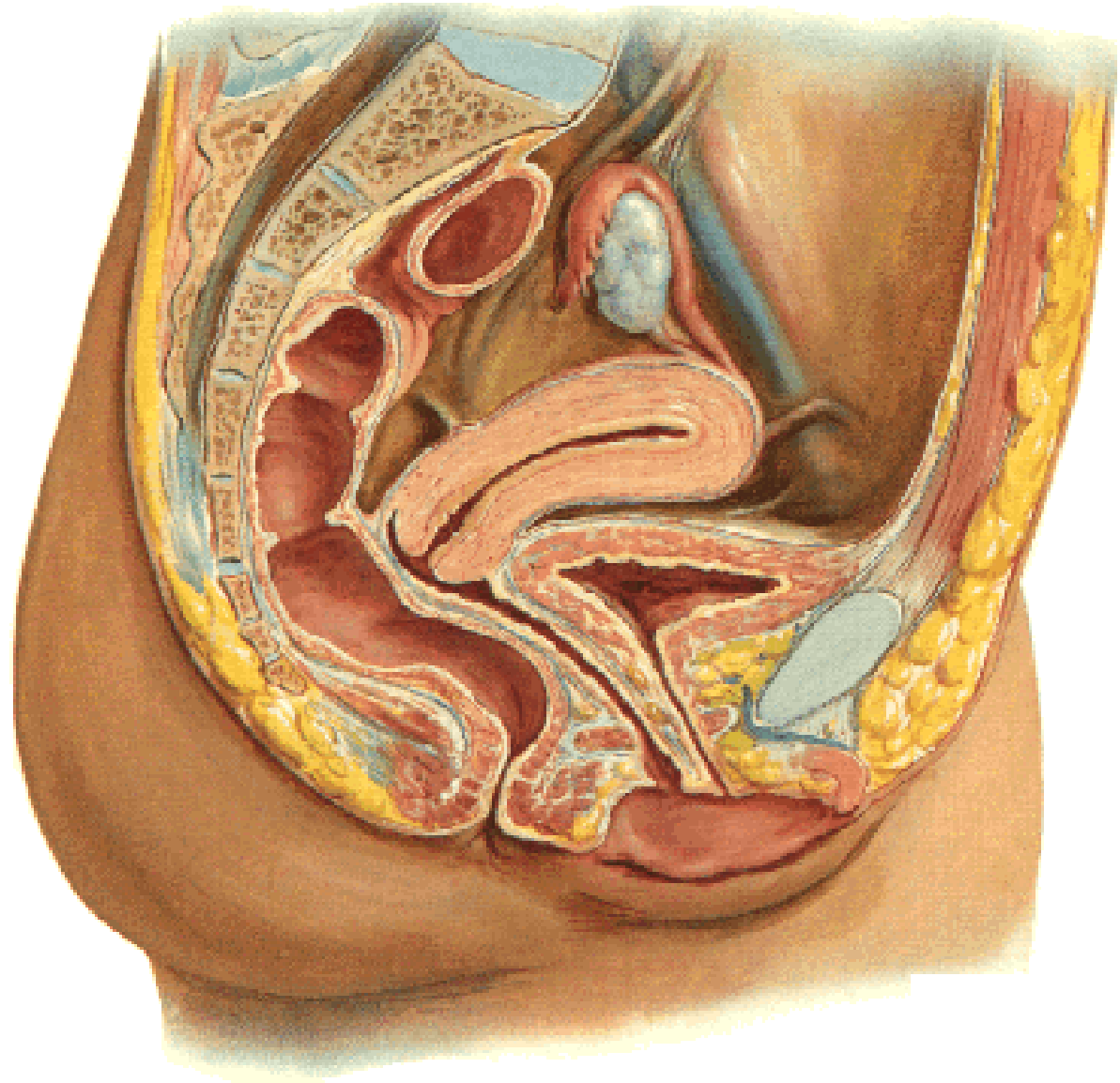
## Organa genitalia feminina interna

Ovarium (vaječník)

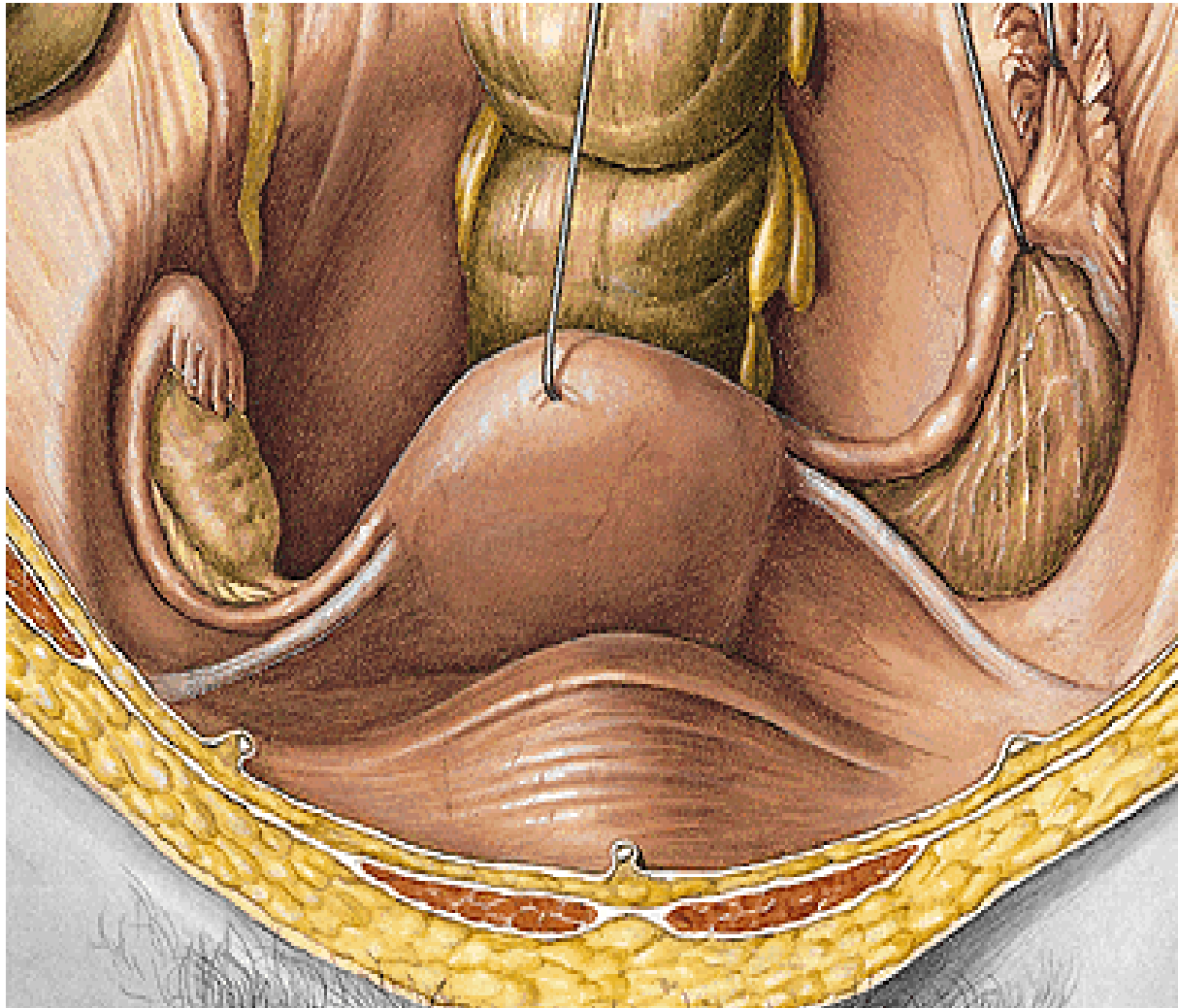
Tuba uterina (vejcovod)

Uterus (děloha)

Vagina (pochva)



# OVARIIUM



**Extremitas tubaria  
(superior)**

**Extremitas uterina  
(inferior)**

**Facies medialis**

**Facies lateralis**

**Margo mesovaricus  
(anterior)**

**Margo liber  
(posterior)**

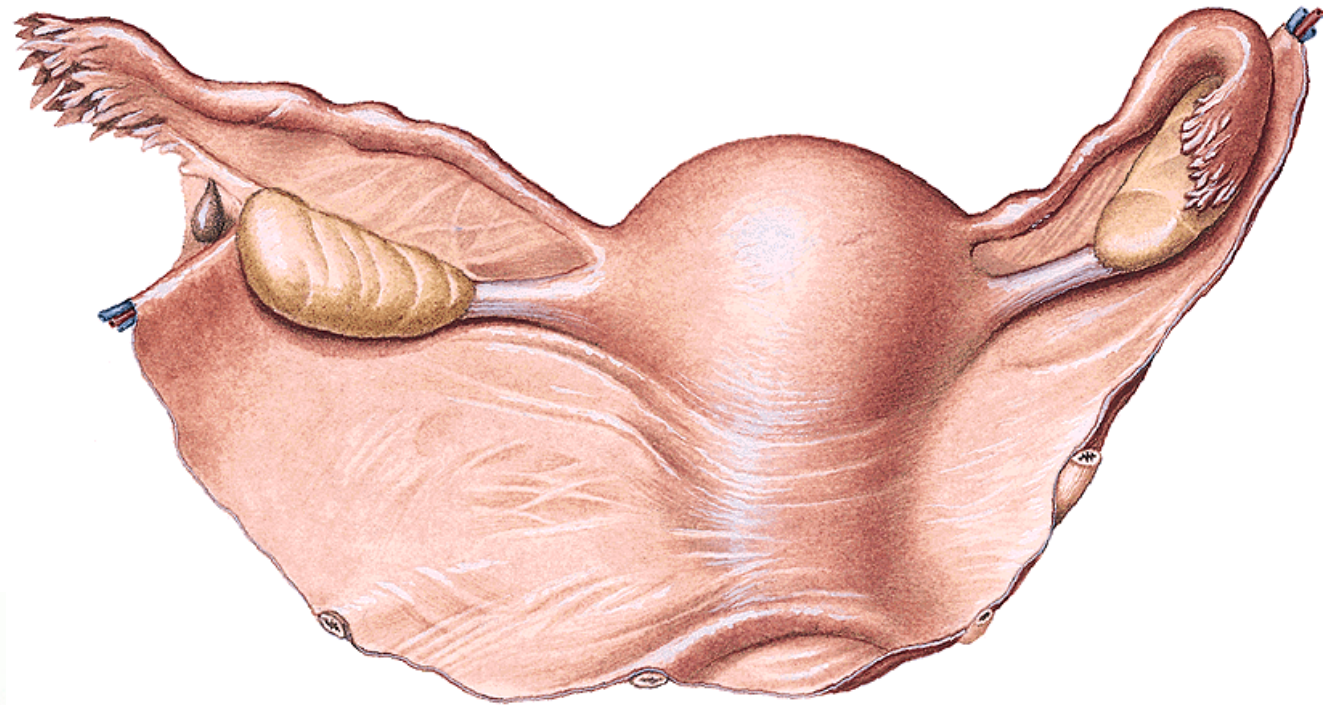
**Lig. suspensorium ovarii (vasa ovarica)**

**Lig. ovarii proprium**

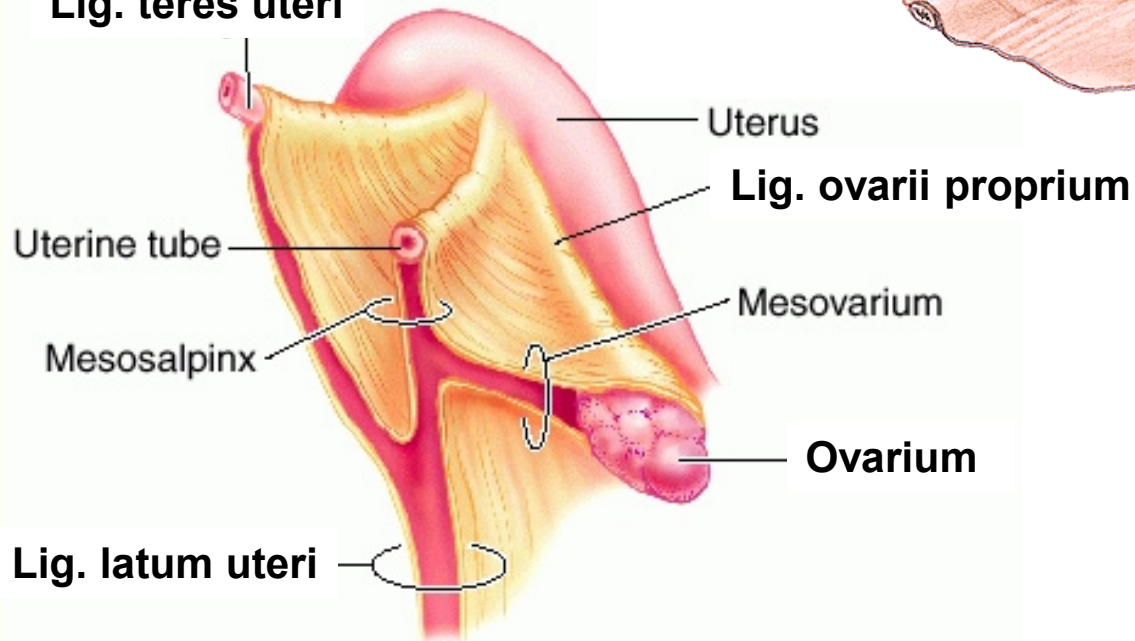
**Hilus ovarii**

**Mesovarium**

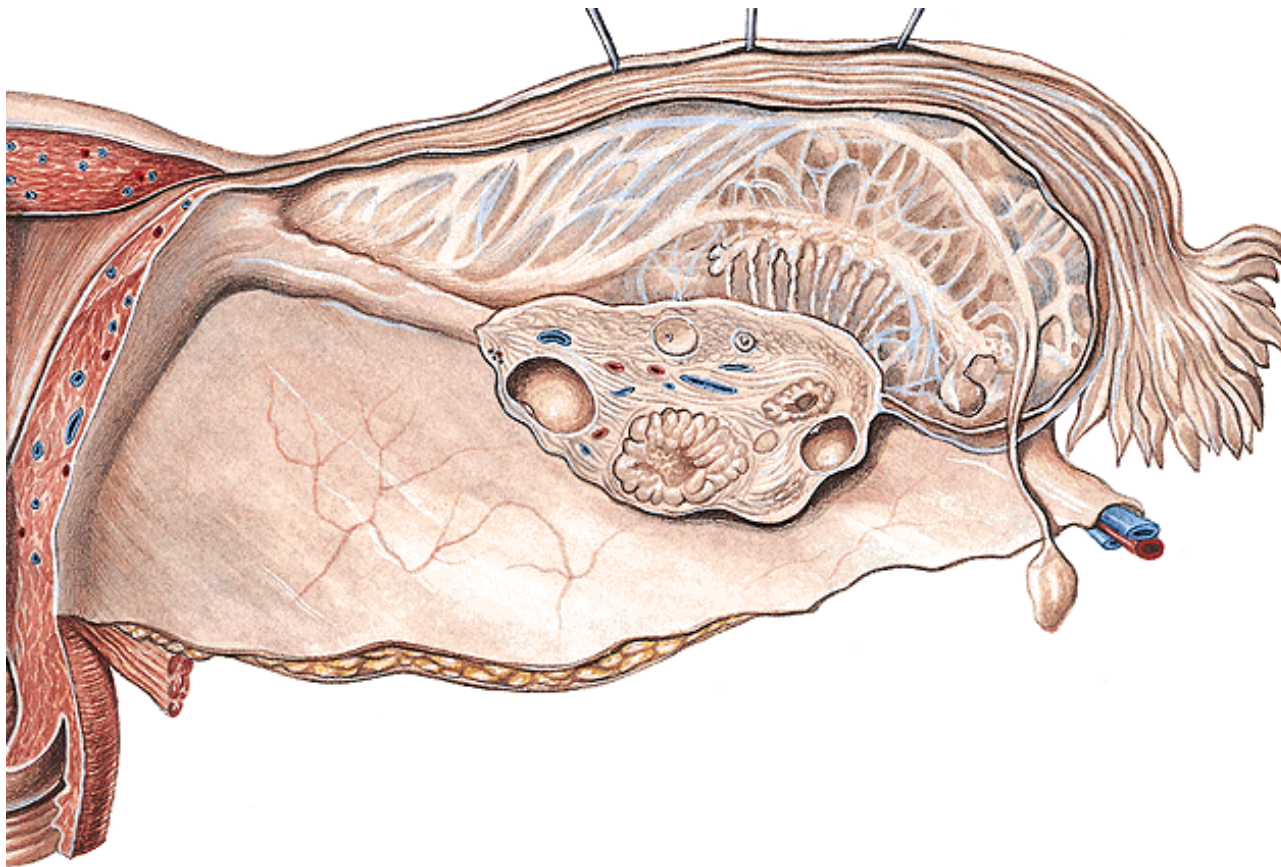
**Lig. latum uteri**



**Lig. teres uteri**



## STAVBA OVARIA



**Zárodečný epitel**

**Tunica albuginea**

**Cortex ovarii**

**folliculi ovarici**

**corpora lutea**

**Medulla ovarii**

**Folliculi ovarici primarii (300 000- 400 000)**

**Folliculus ovaricus vesiculosus (Graafův)**

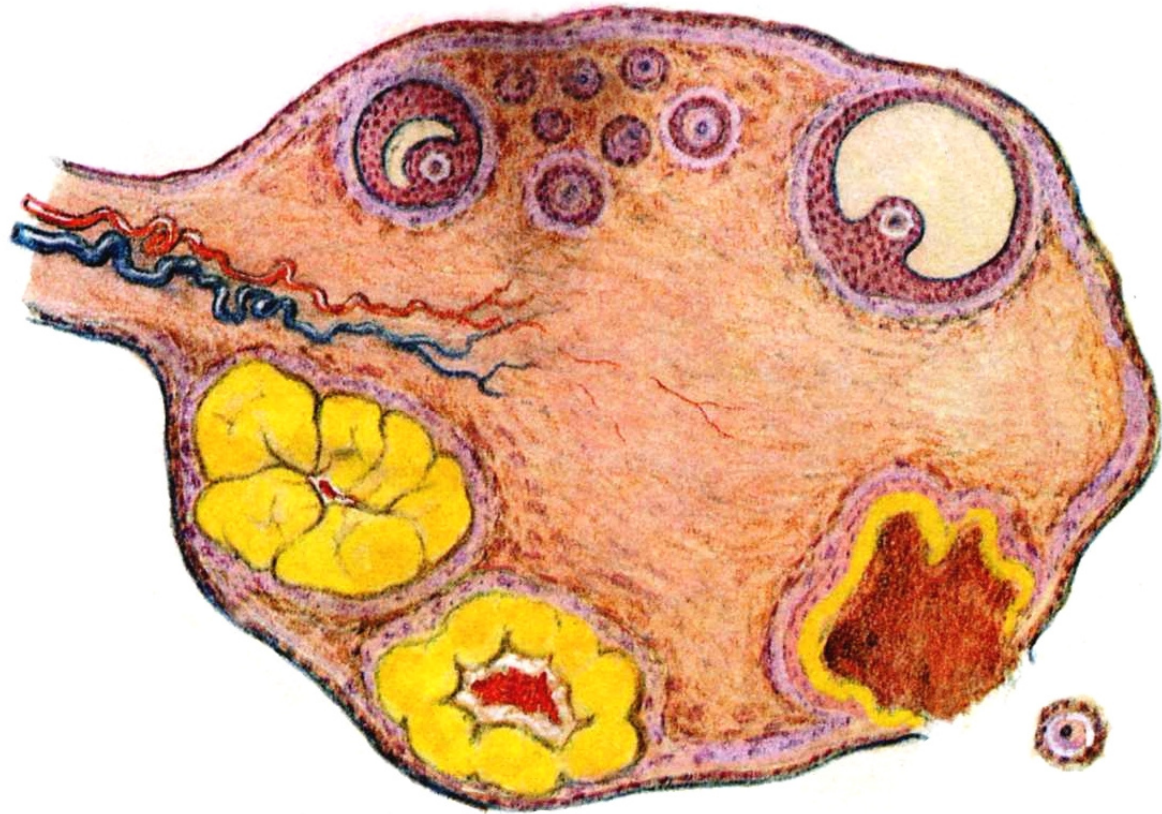
**Ovulace**

**Corpus luteum**

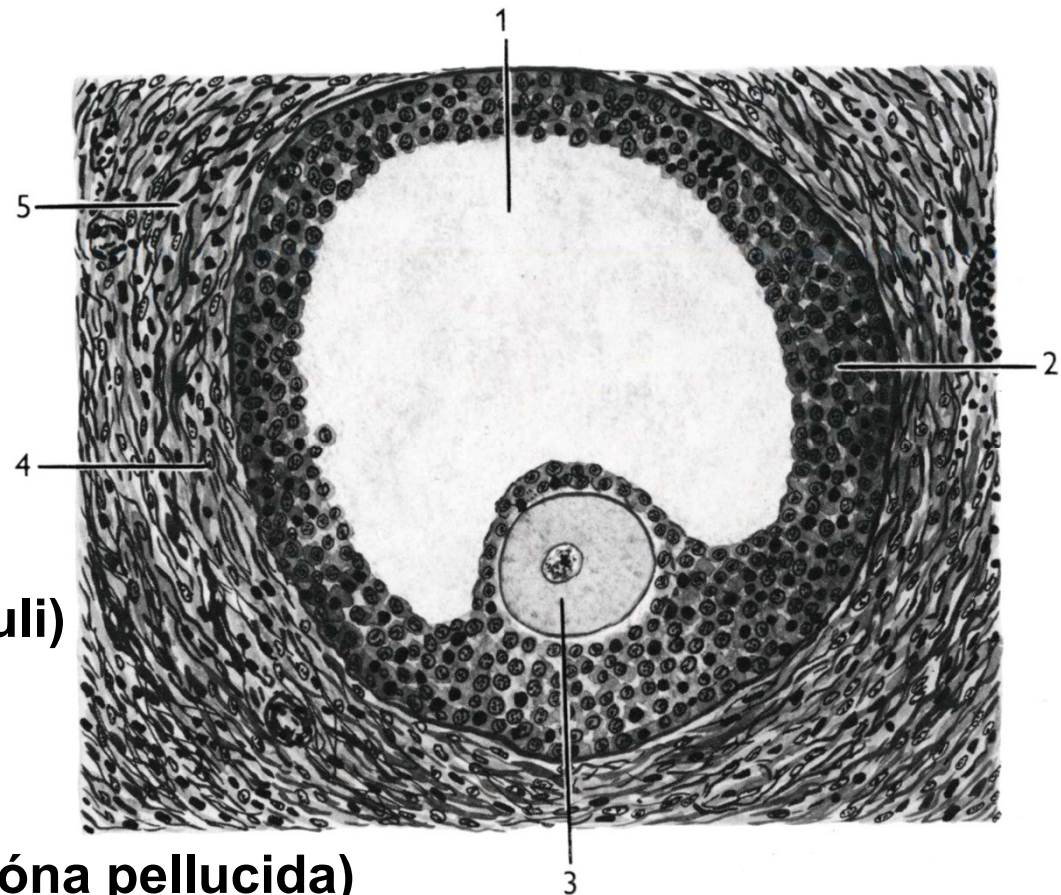
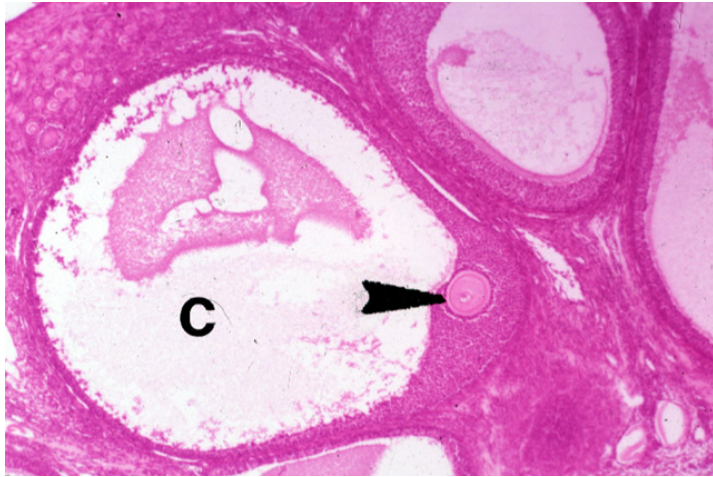
**menstruationis**

**graviditatis**

**Corpus albicans**



## Folliculus ovaricus vesiculosus (Graafův)

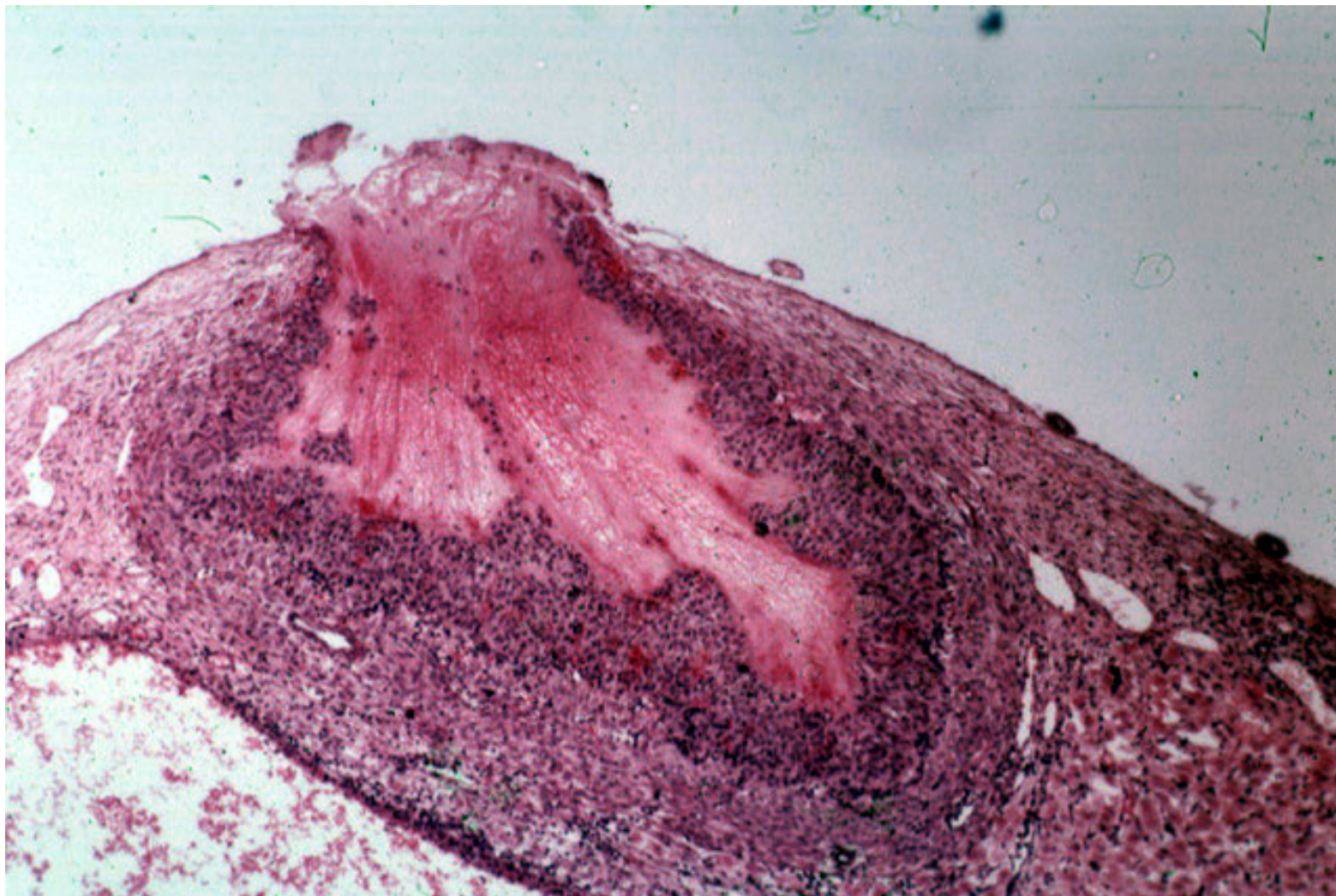


1. antrum folliculi (liquor folliculi)
2. membrana granulosa
3. oocyt (cumulus oophorus, zóna pellucida)
4. theca folliculi interna
5. theca folliculi externa

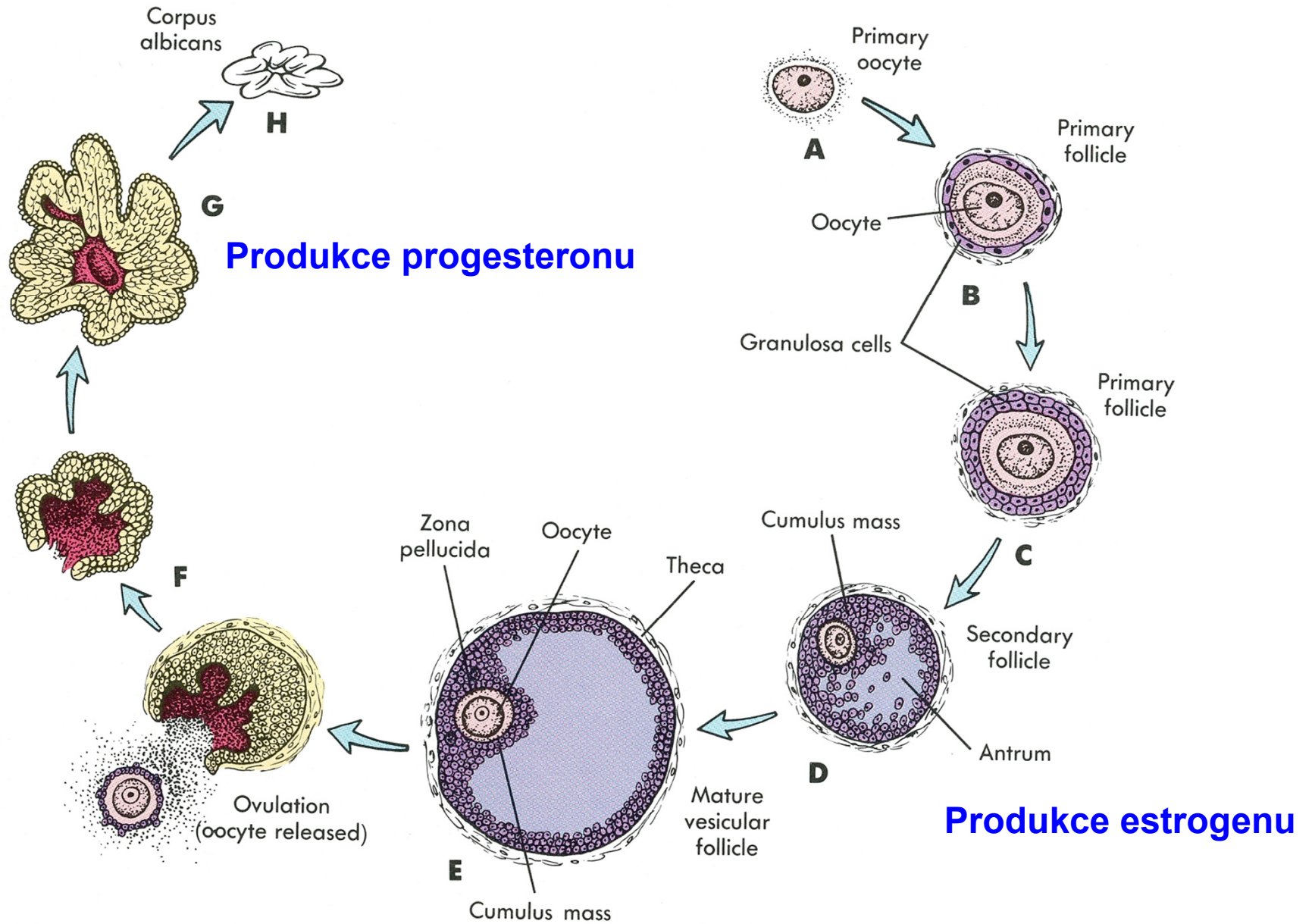


# Ovulace

14-15 den menstruačního cyklu



# OVARIÁLNÍ CYKLUS



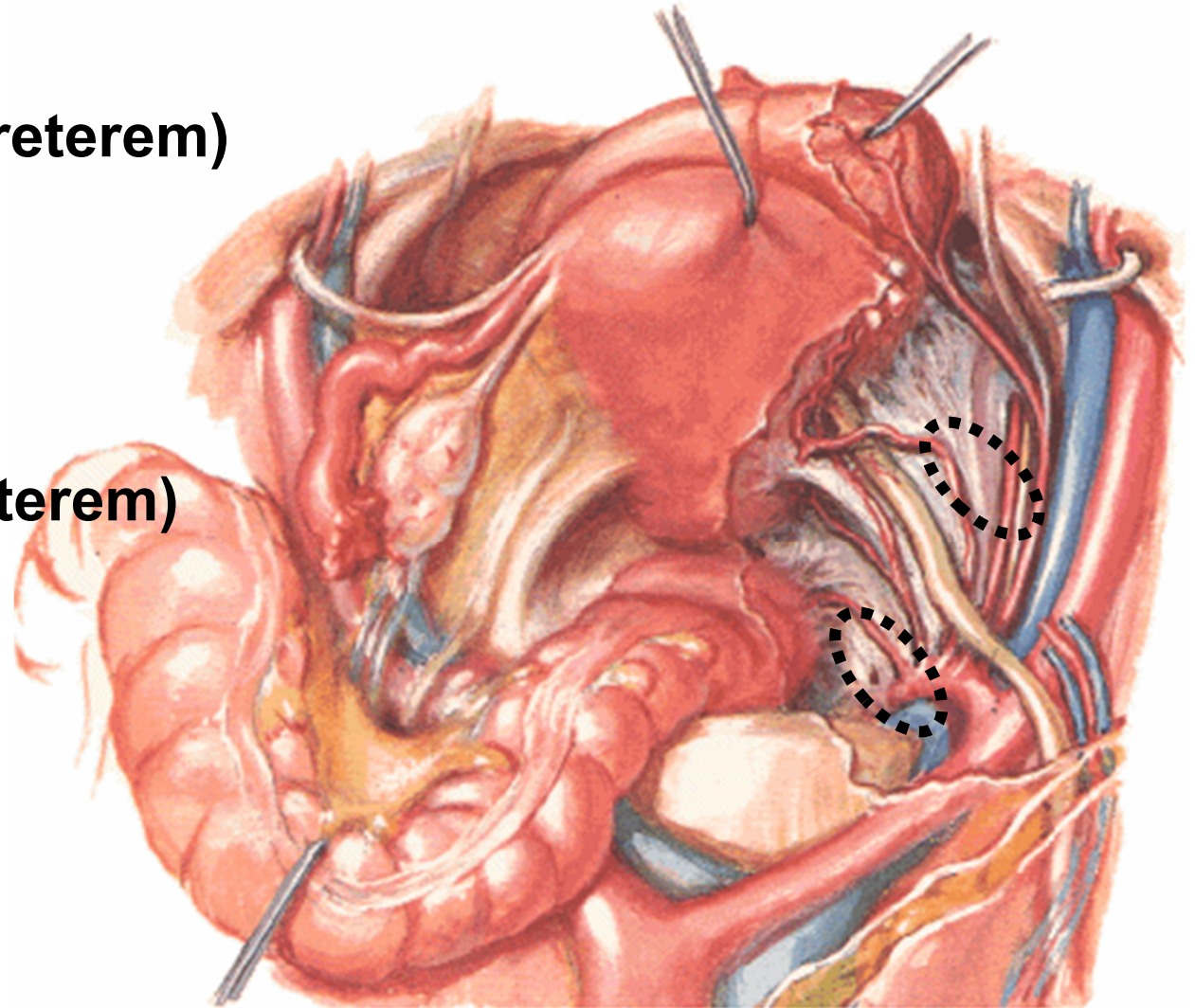
## POLOHA OVARIA

**Nullipara**

**fossa ovarica  
(před a. iliaca int. a ureterem)**

**Multipara**

**Claudiova jamka  
(za a. iliaca int. a ureterem)**



## TUBA UTERINA (SALPINX)

10-15 cm, transport 4-5 dní

Infundibulum tubae uterinae

ostium abdominale tubae

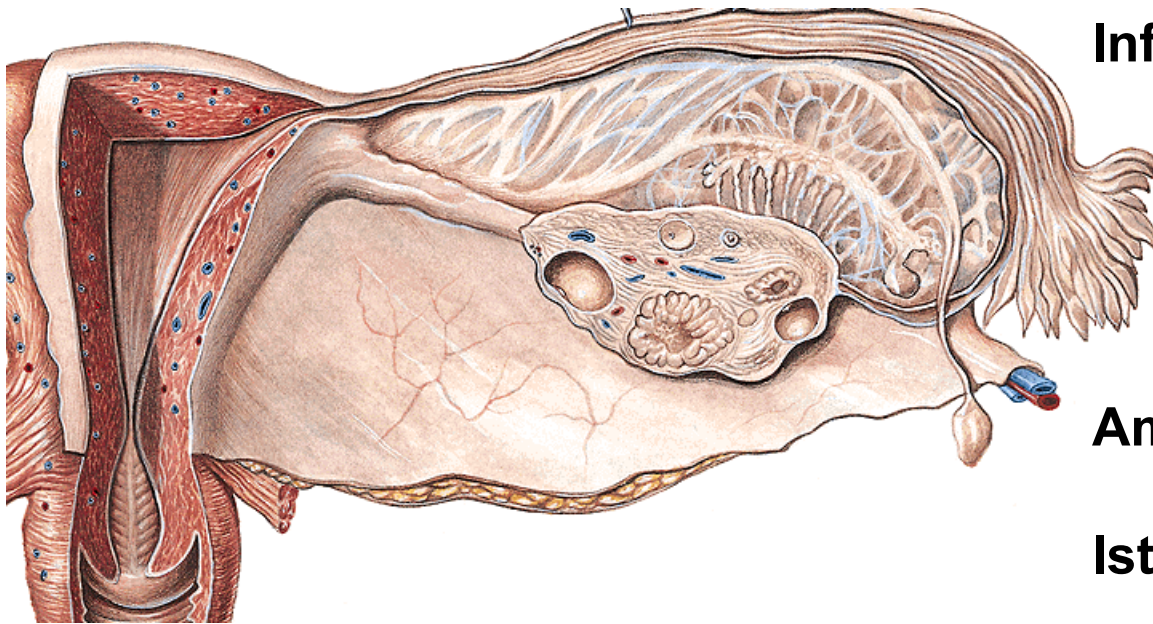
fimbriae (fimbria ovarica)

Ampulla tubae uterinae

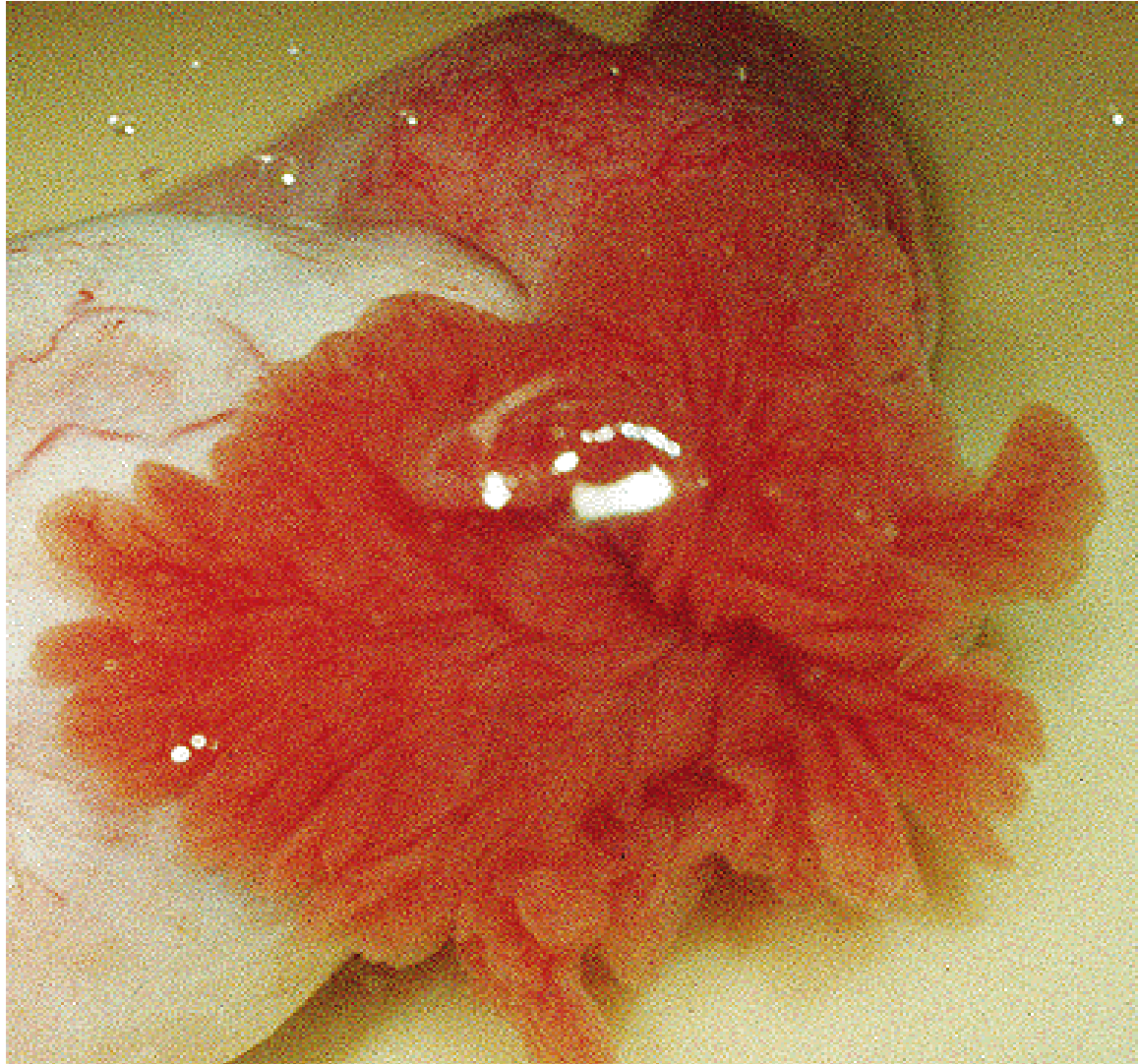
Isthmus tubae uterinae

Pars uterina tubae uterinae

ostium uterinum tubae

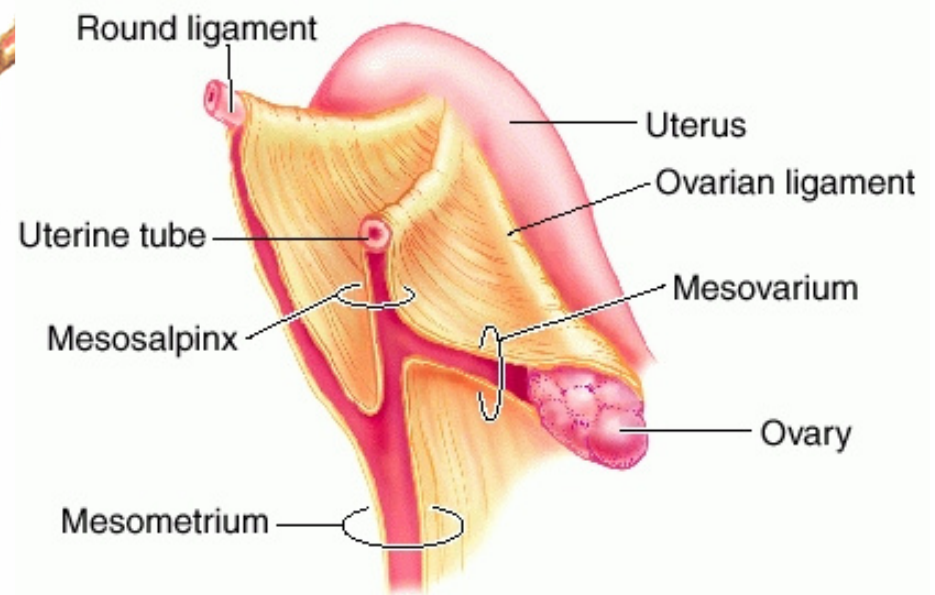
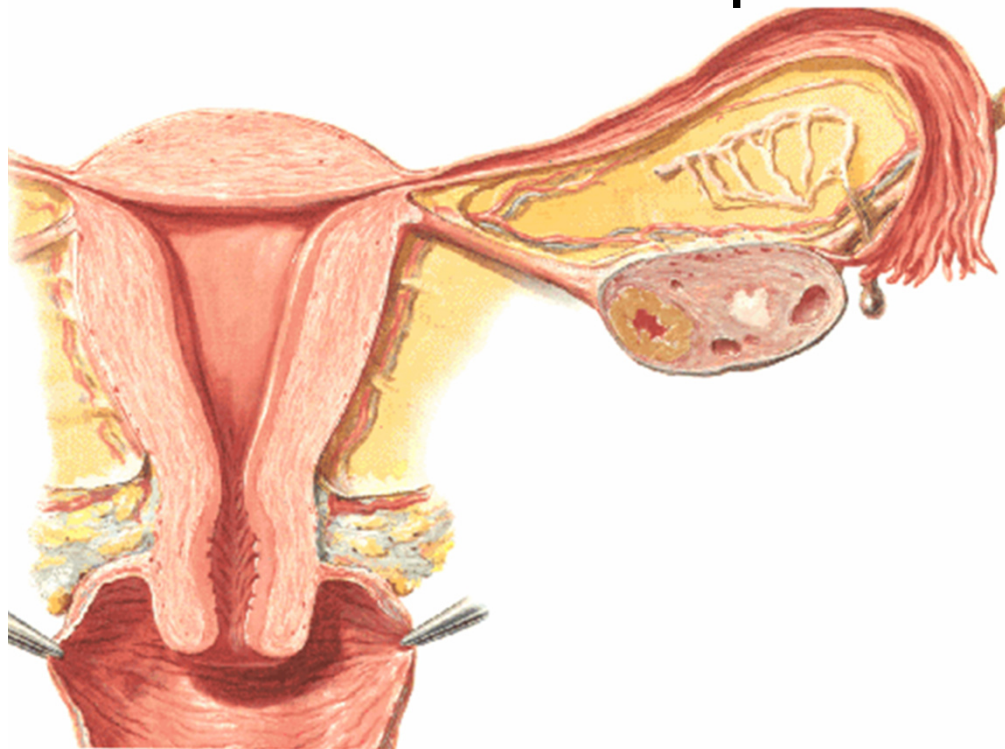
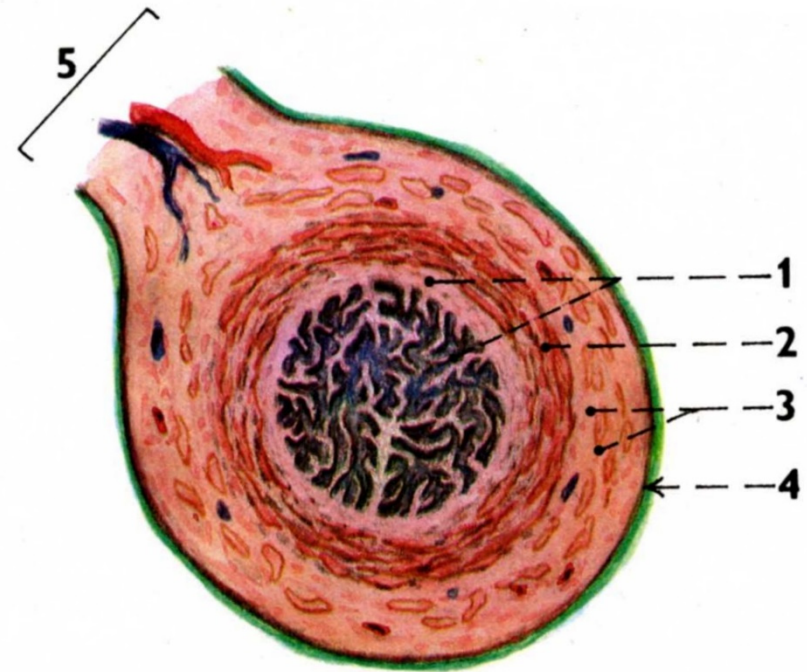


# OSTIUM ABDOMINALE TUBAE UTERINAE



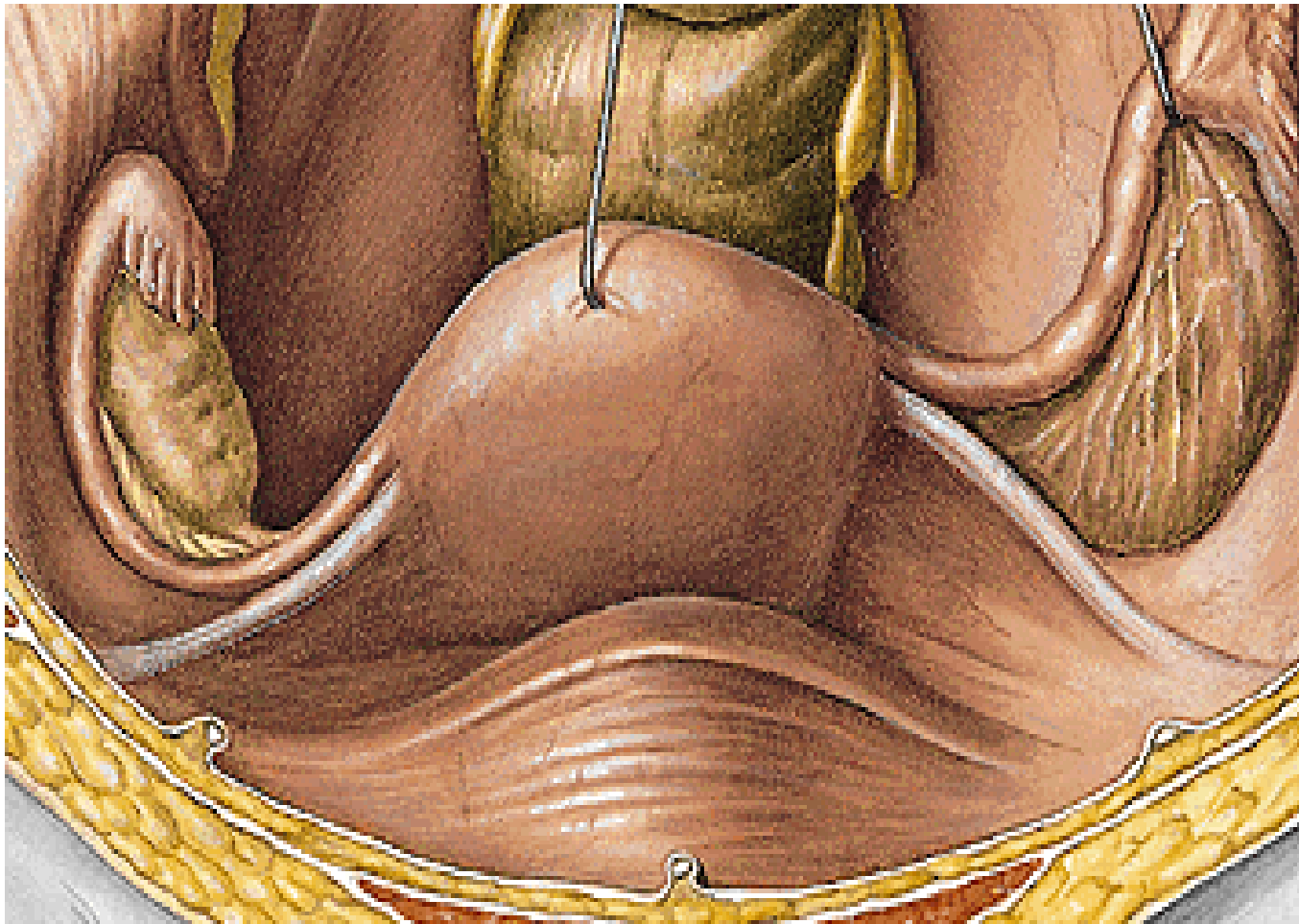
## STAVBA STĚNY VEJCOVODU

1. sliznice složená v řasy  
(cylind. epitel s řasinkami)
2. cirkulární svalovina
3. longitudinální svalovina
4. tunica serosa - mesosalpinx

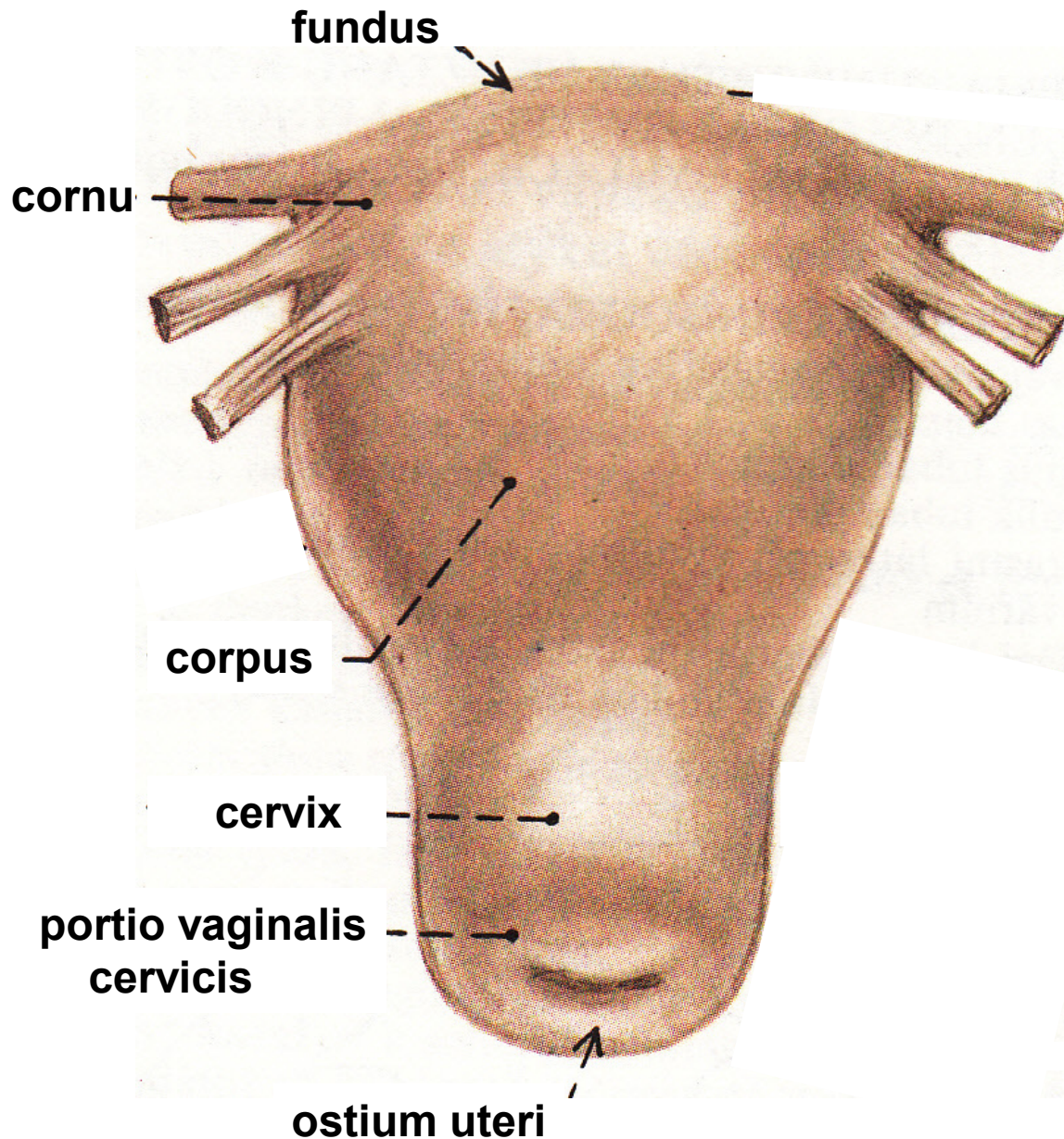


## PRŮBĚH VEJCOVODU

- od dělohy běží laterálně ke stěně pánevní
- vystupuje dorsokraniálně k hornímu pólu ovaria
- fimbriae se stáčí k facies medialis ovarii



# UTERUS (HYSTERA, METRA)



Corpus uteri

fundus uteri

facies vesicalis

facies intestinalis

Cervix

Isthmus uteri

Margines uteri dx. et sin.

Cornua uteri dx. et sin.

lig. teres uteri

lig. ovarii proprium



**Cavum s. cavitas uteri (3 ml)**

**Canalis isthmi**

**Ostium internum canalis cervicis**

**Canalis cervicis (plicae palmatae)**

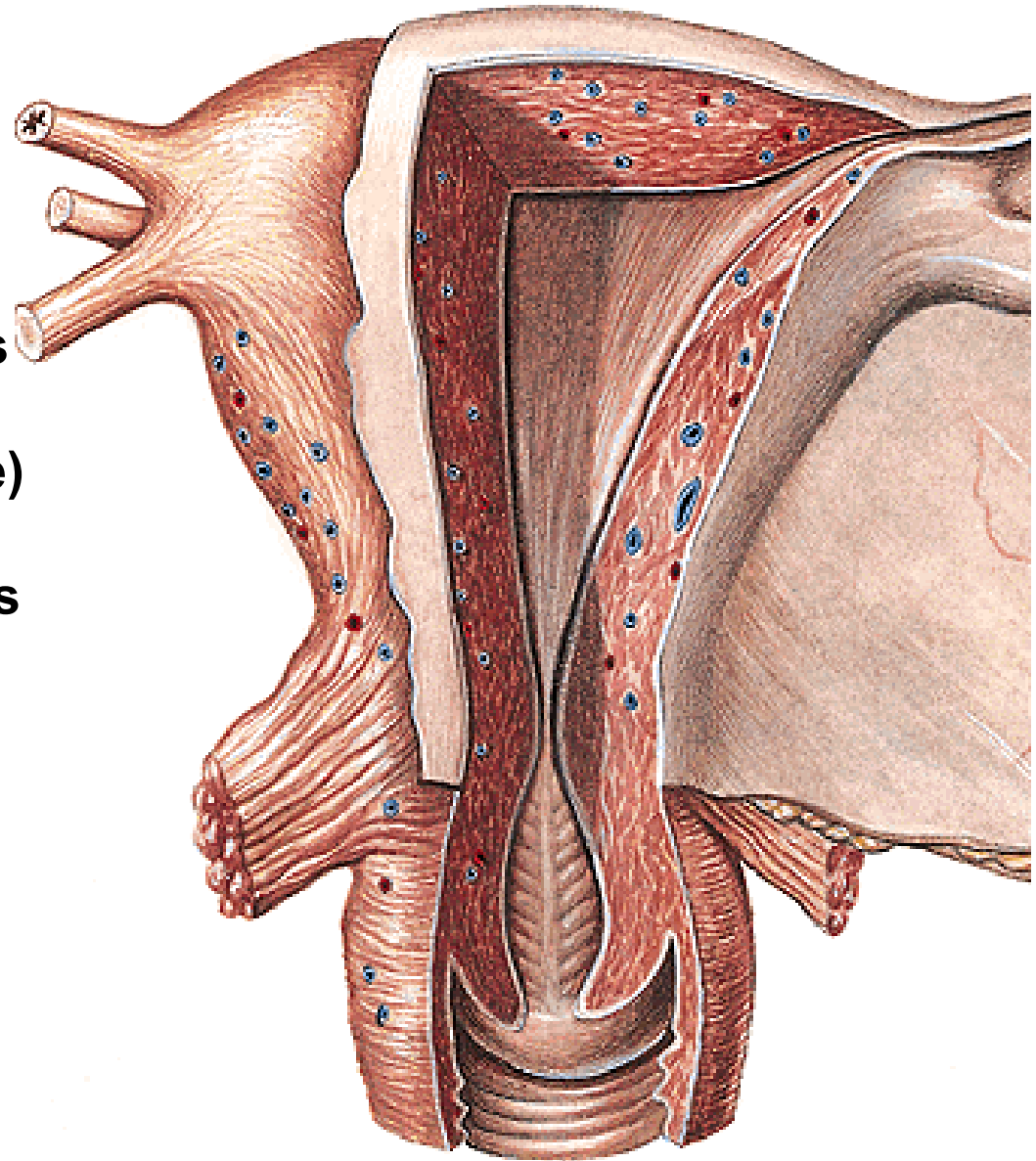
**Ostium externum canalis cervicis  
(= ostium uteri, branka děložní)**

**Cervix**

**portio supravaginalis**

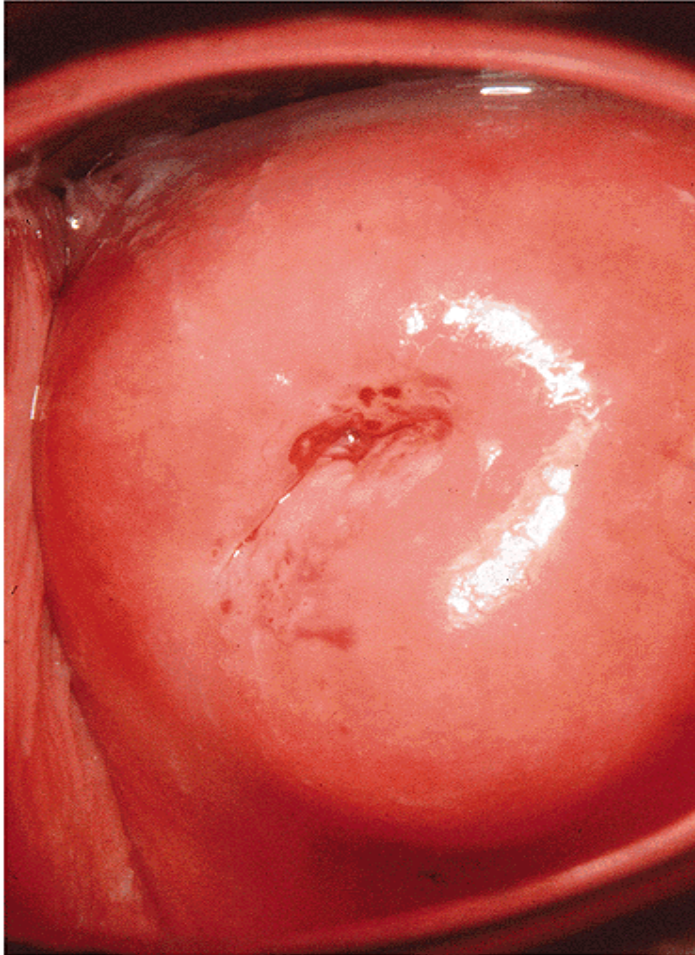
**portio vaginalis**

**Fornix vaginae**

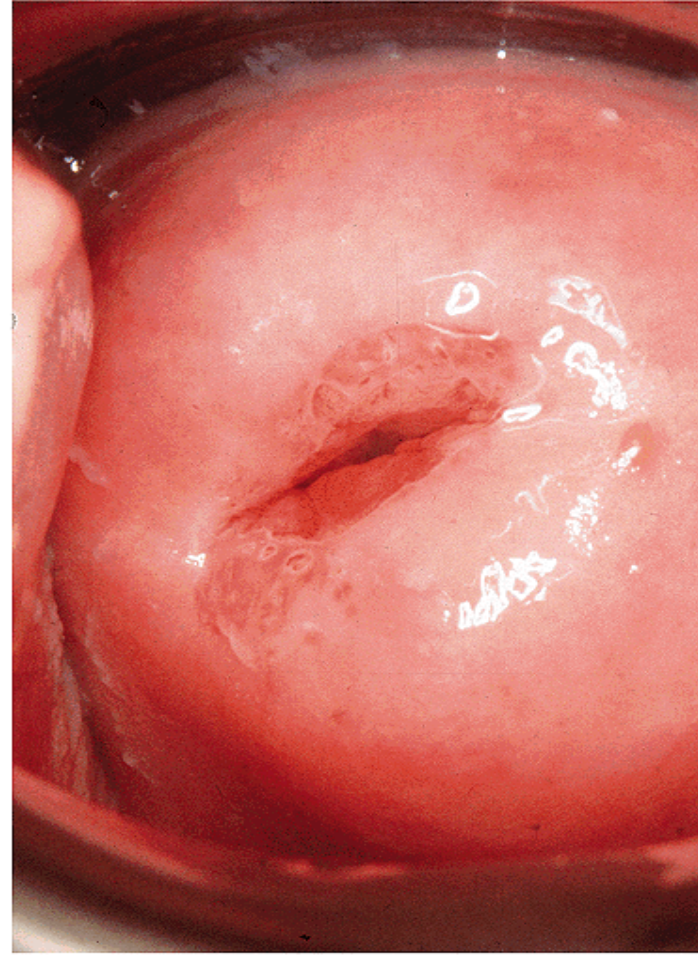


# OSTIUM UTERI (OSTIUM EXTERNUM CANALIS CERVICIS)

**NULLIPARA**



**MULTIPARA**



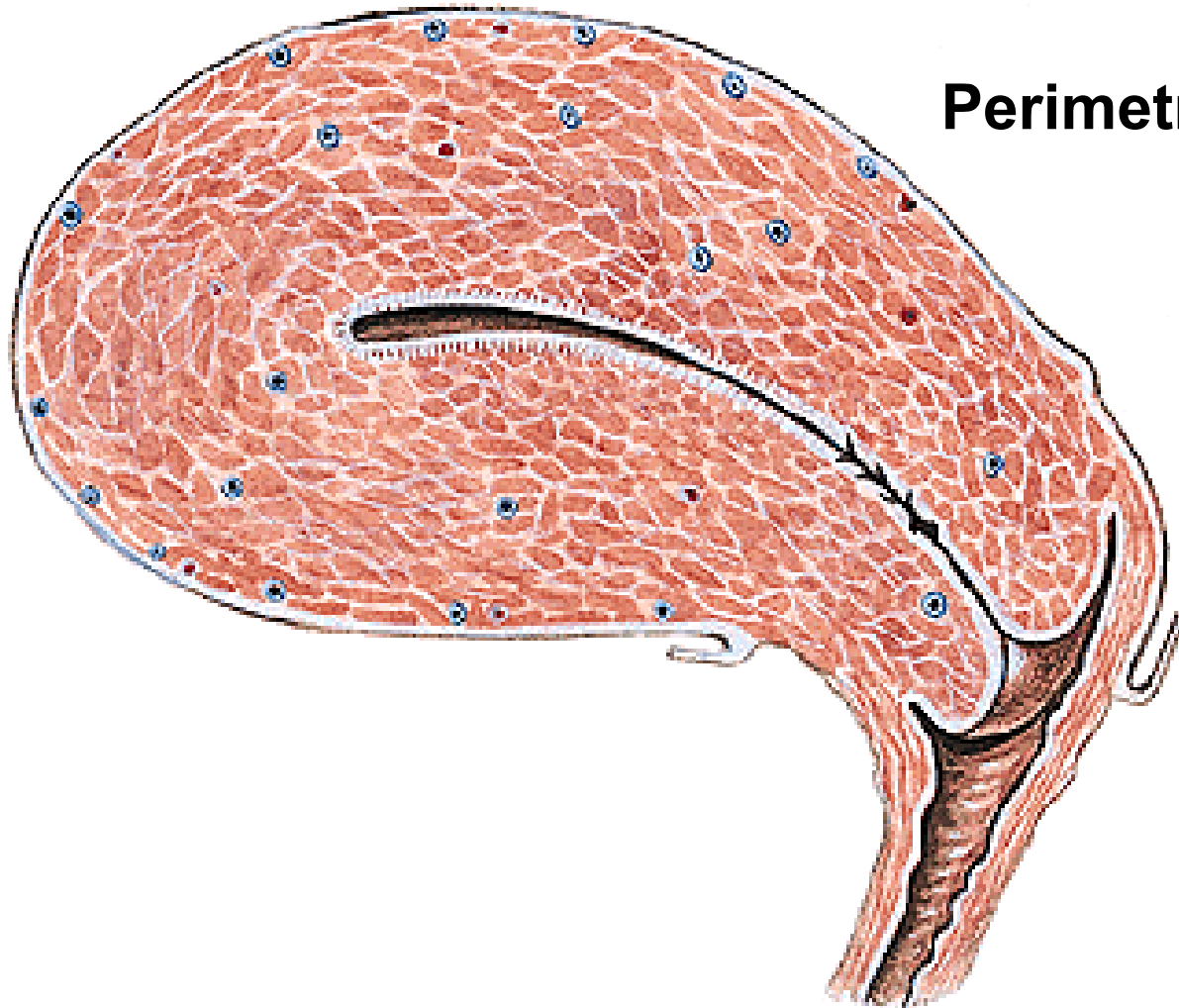
**Labium anterius et posterius**

## STAVBA STĚNY DĚLOHY

**Endometrium (sliznice)**

**Myometrium (svalovina)**

**Perimetrium (peritoneum)**



# ENDOMETRIUM

**jednovrstevný cylindrický epitel**

**glandulae uterinae**

**glandulae cervicales (hlenová zátka)**

**zóna basalis**

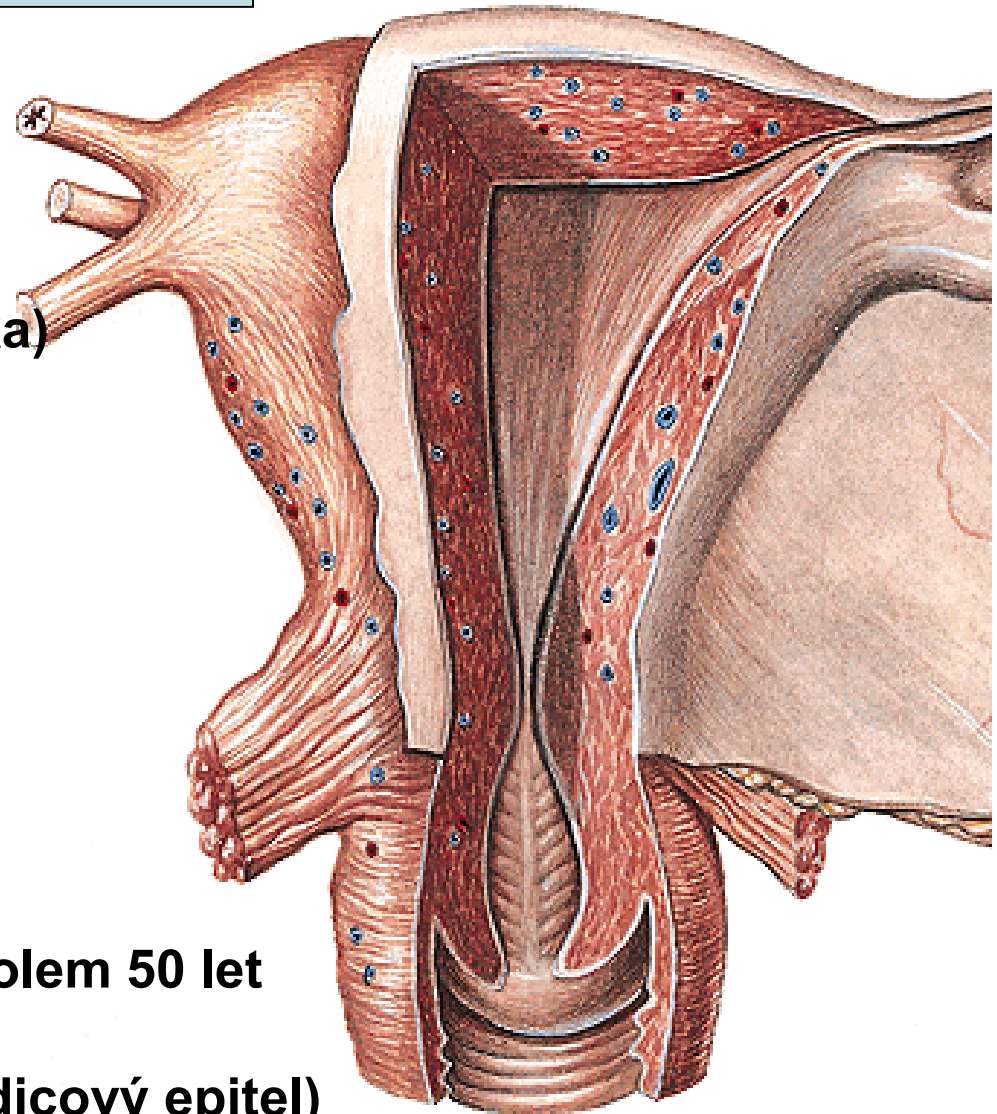
**zóna functionalis**

**menstruační cyklus**

**menarche - 12-14 let**

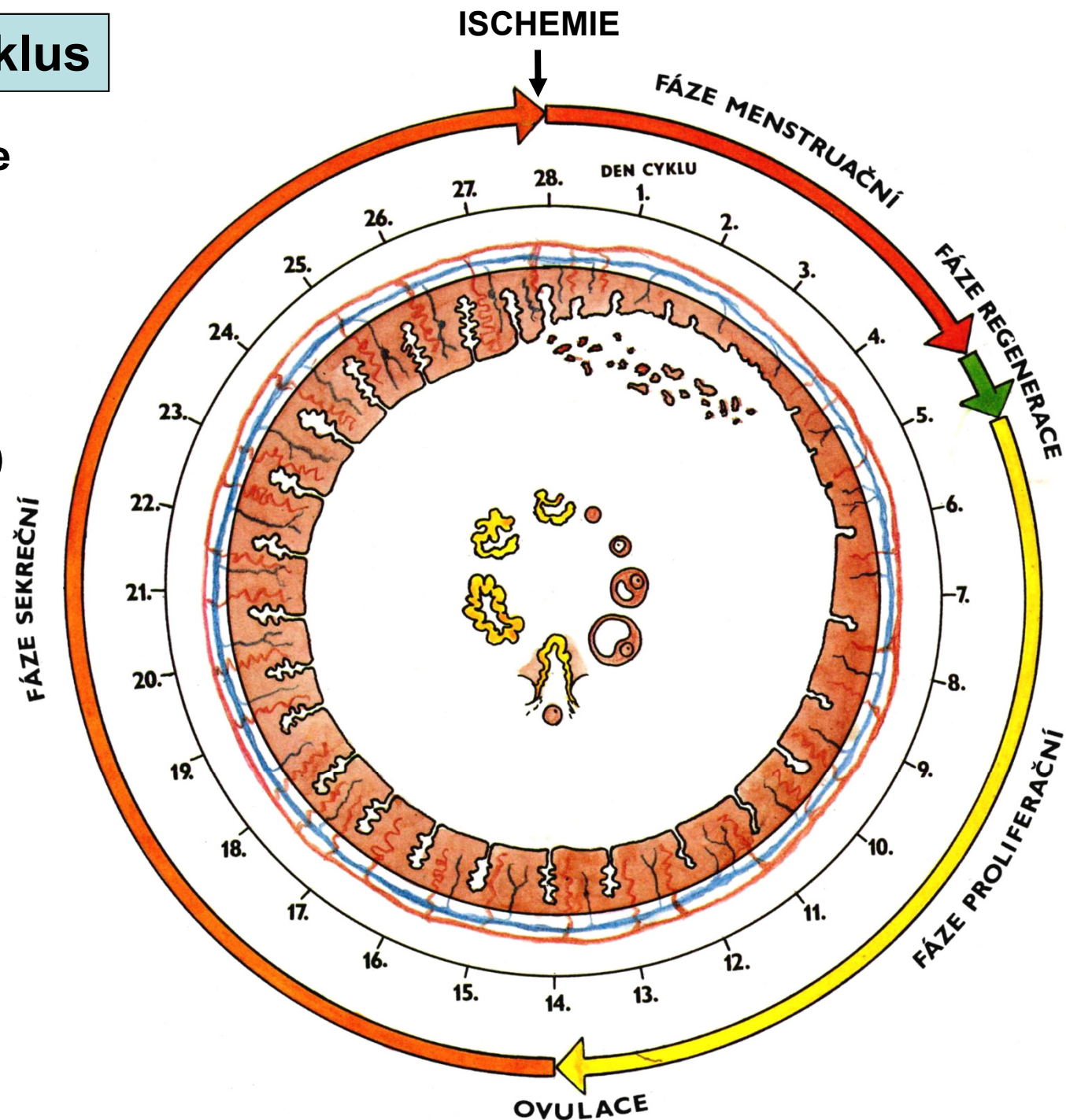
**menopausa (climacterium) – kolem 50 let**

**ostium uteri (mnohovrstevný dlaždicový epitel)**



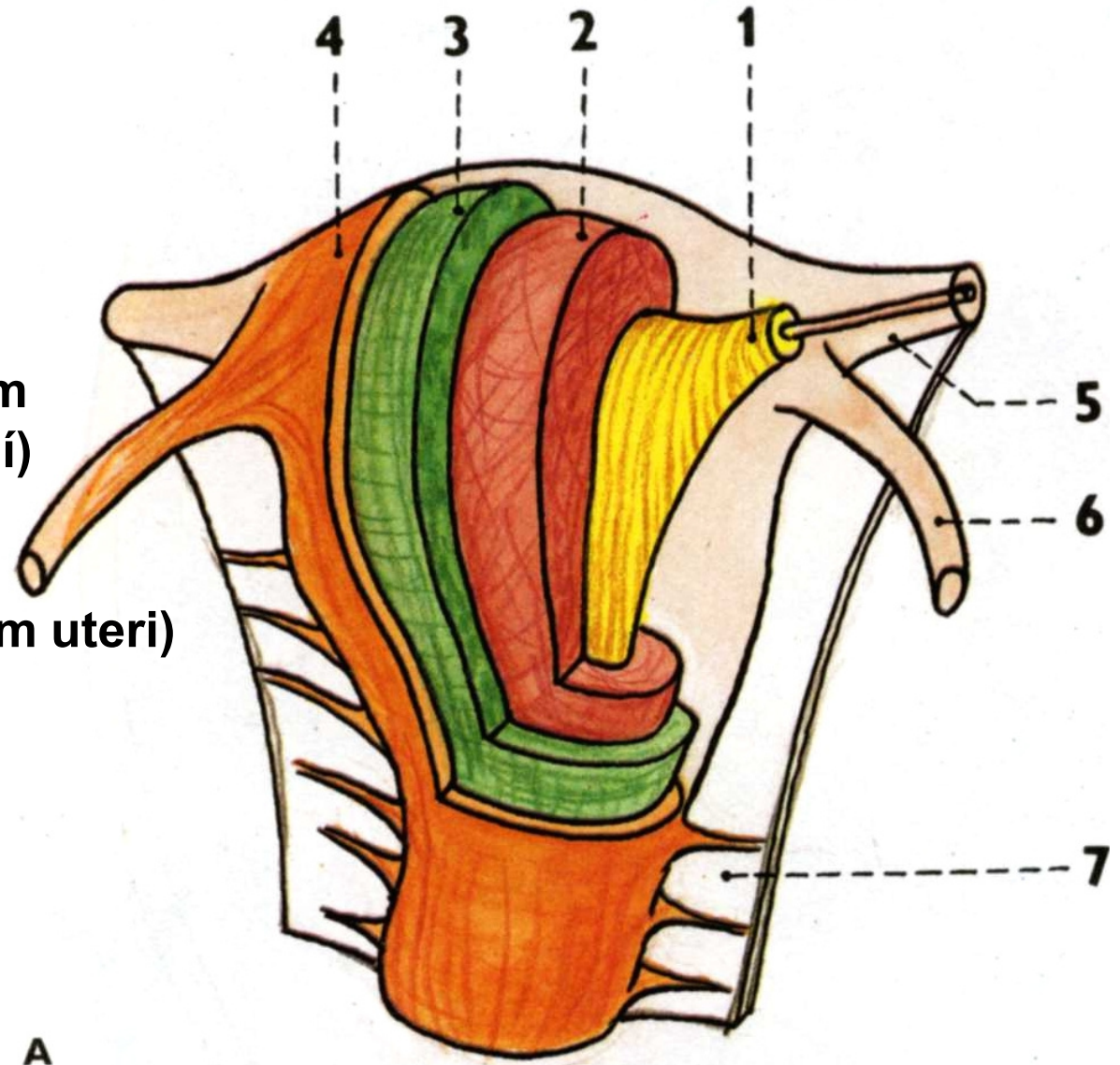
# Menstruační cyklus

1. Menstruační fáze
2. Proliferační fáze (estrogenová)
3. Sekreční fáze (progesteronová)
4. Ischemie

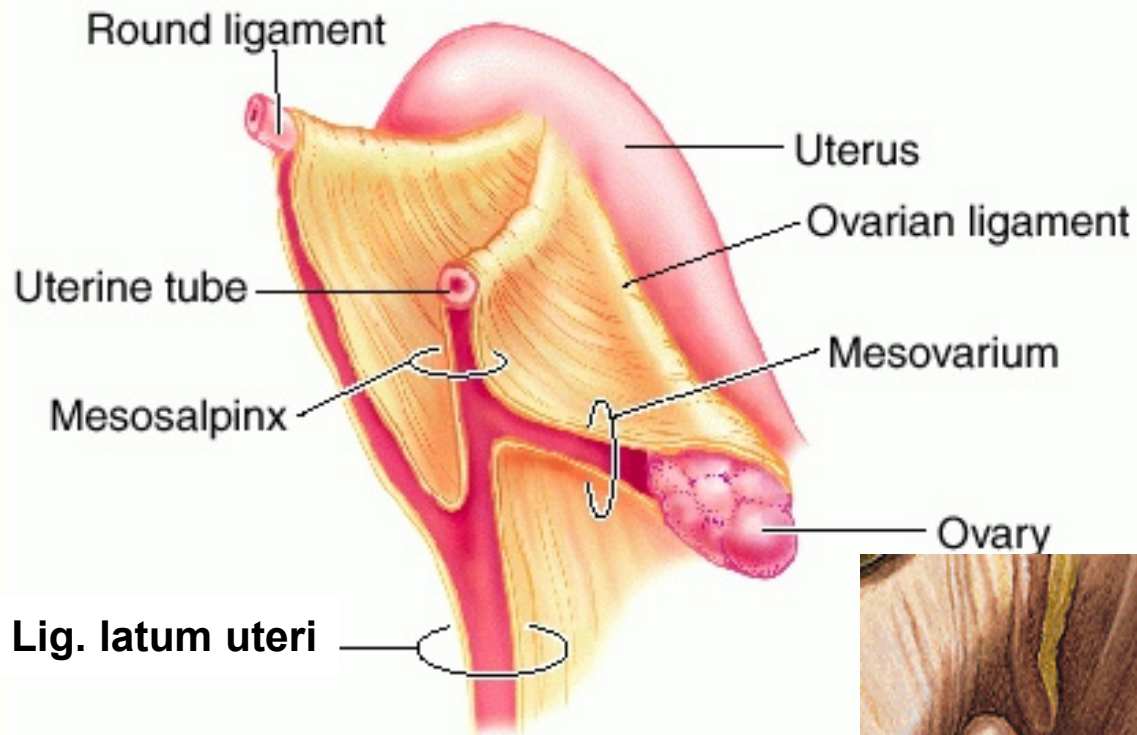


# MYOMETRIUM

1. **stratum submucosum**  
(longitudinální, svěrače)
2. **stratum vasculosum**  
(síťovitě uspořádaná)
3. **stratum supravasculosum**  
(longitudinální i cirkulární)
4. **stratum subserosum**  
(longitudinální, k lig. latum uteri)



# PERIMETRIUM (VISCERÁLNI PERITONEUM)

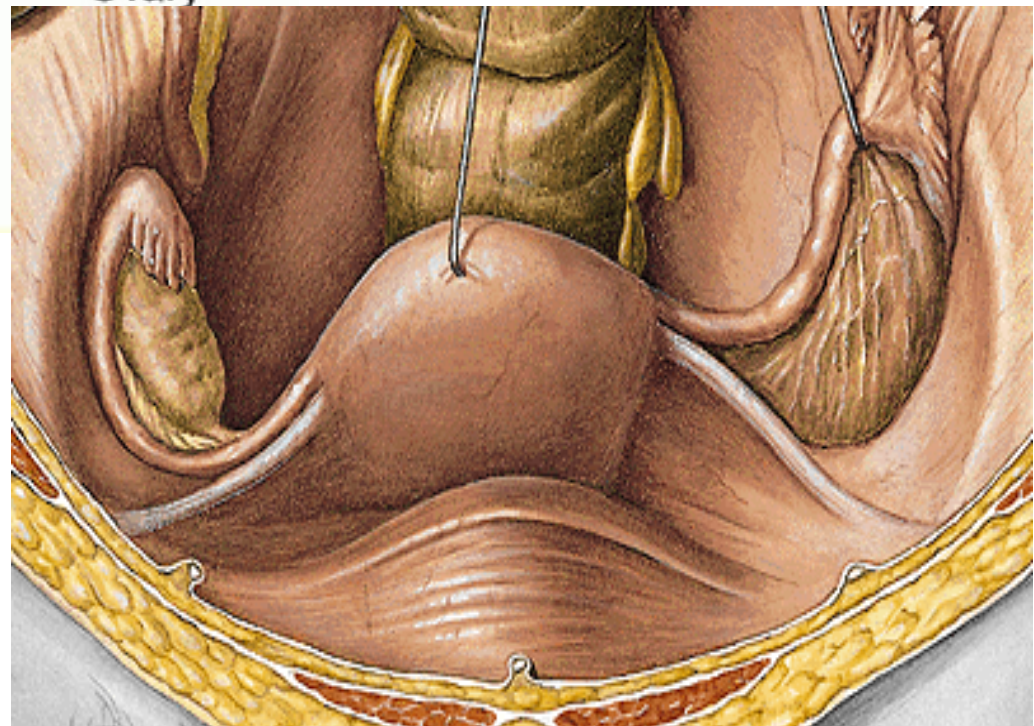


**Lig. latum uteri**

**Mesosalpinx**

**Mesovarium**

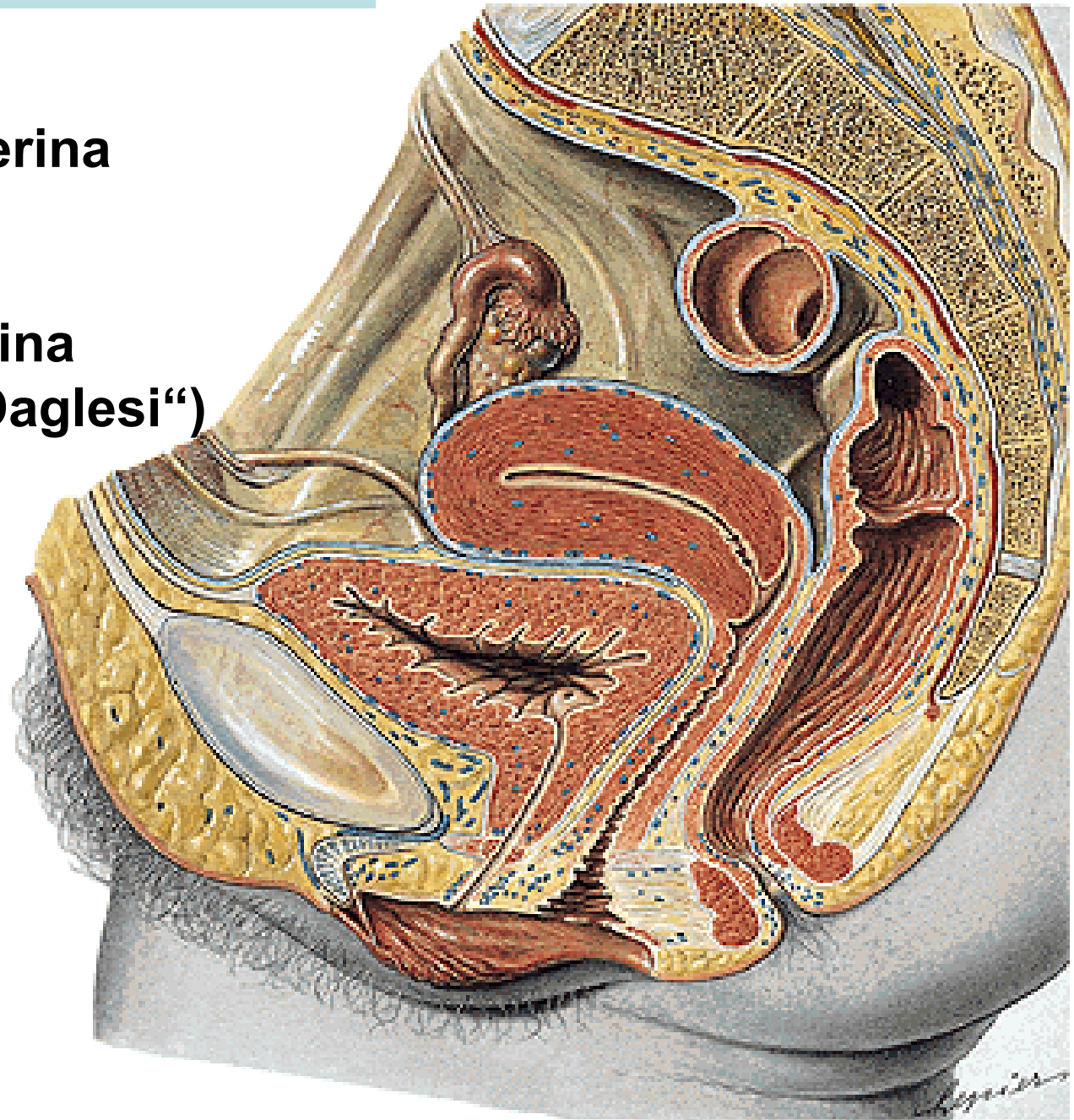
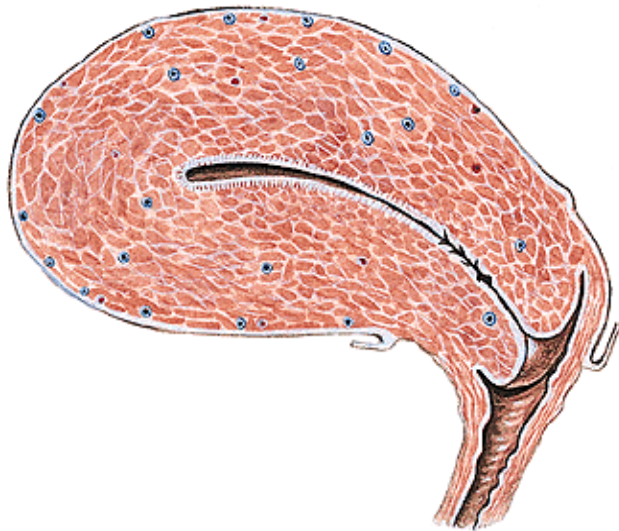
**Lig. teres uteri**



# PERIMETRIUM

**Excavatio vesicouterina**

**Excavatio rectouterina  
(cavum Douglasi „Daglesi“)**





# PARAMETRIUM

**Lig. pubouterinum**

**lig. pubovesicale**

**lig. vesicouterinum**

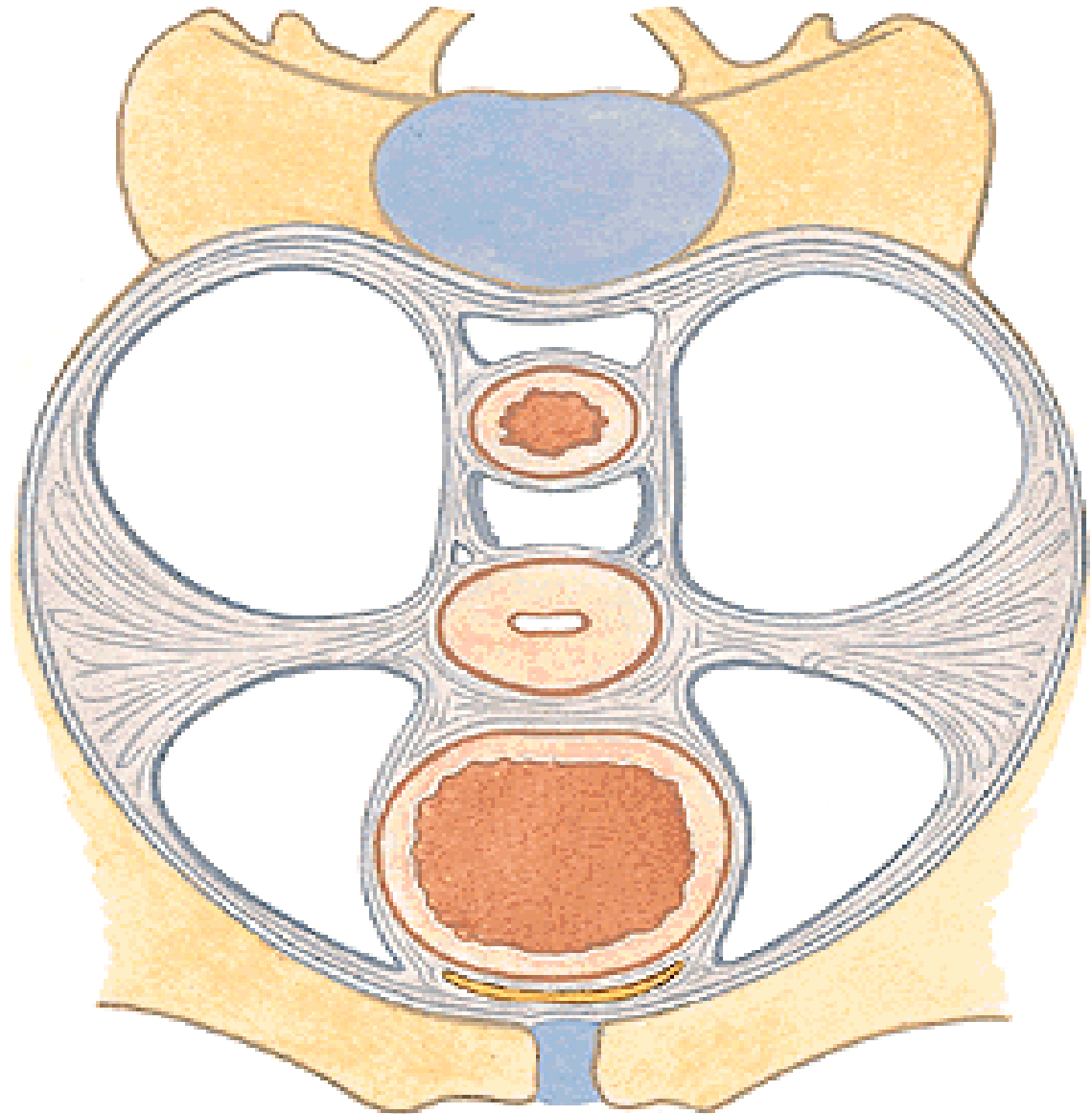
**Lig. cardinale uteri**

**Lig. sacrouterinum**

**plica sacrouterina**

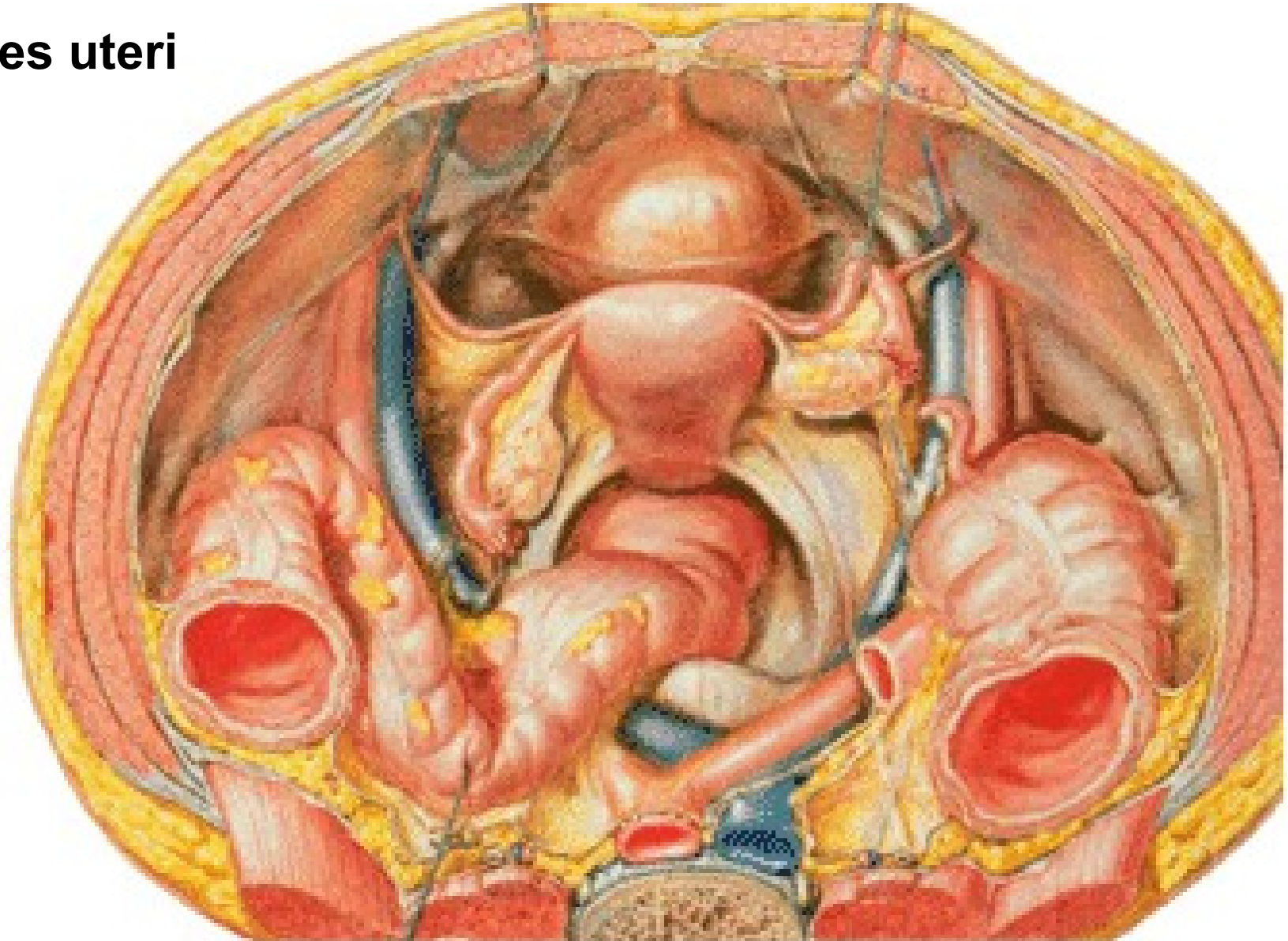
**m. rectouterinus**

**Lig. teres uteri**



**Plica sacrouterina**

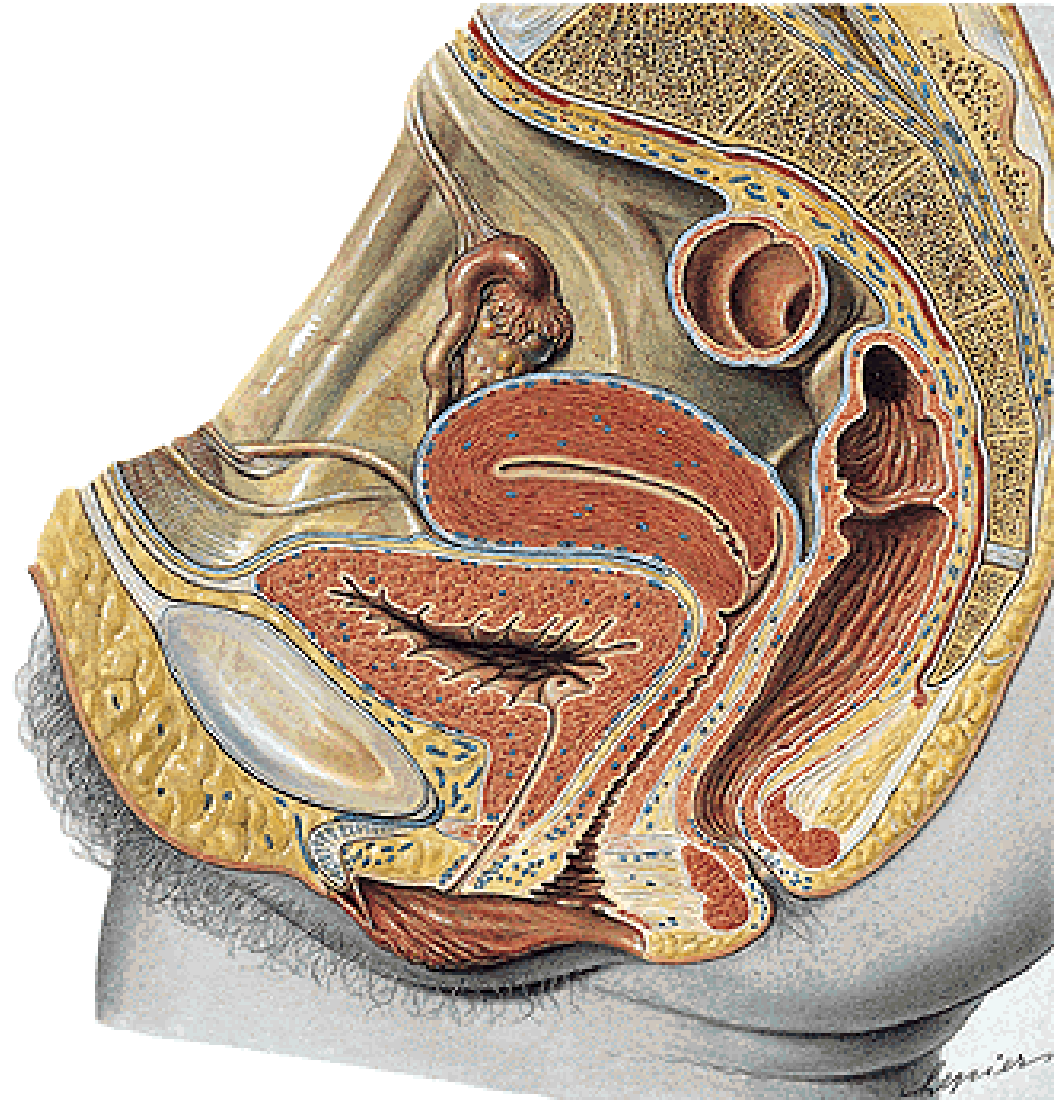
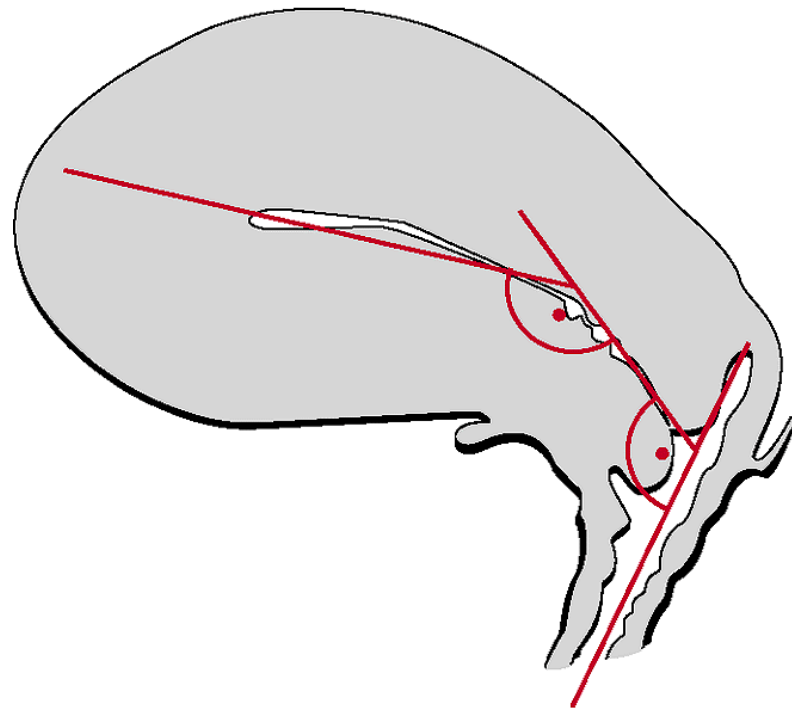
**Lig. teres uteri**



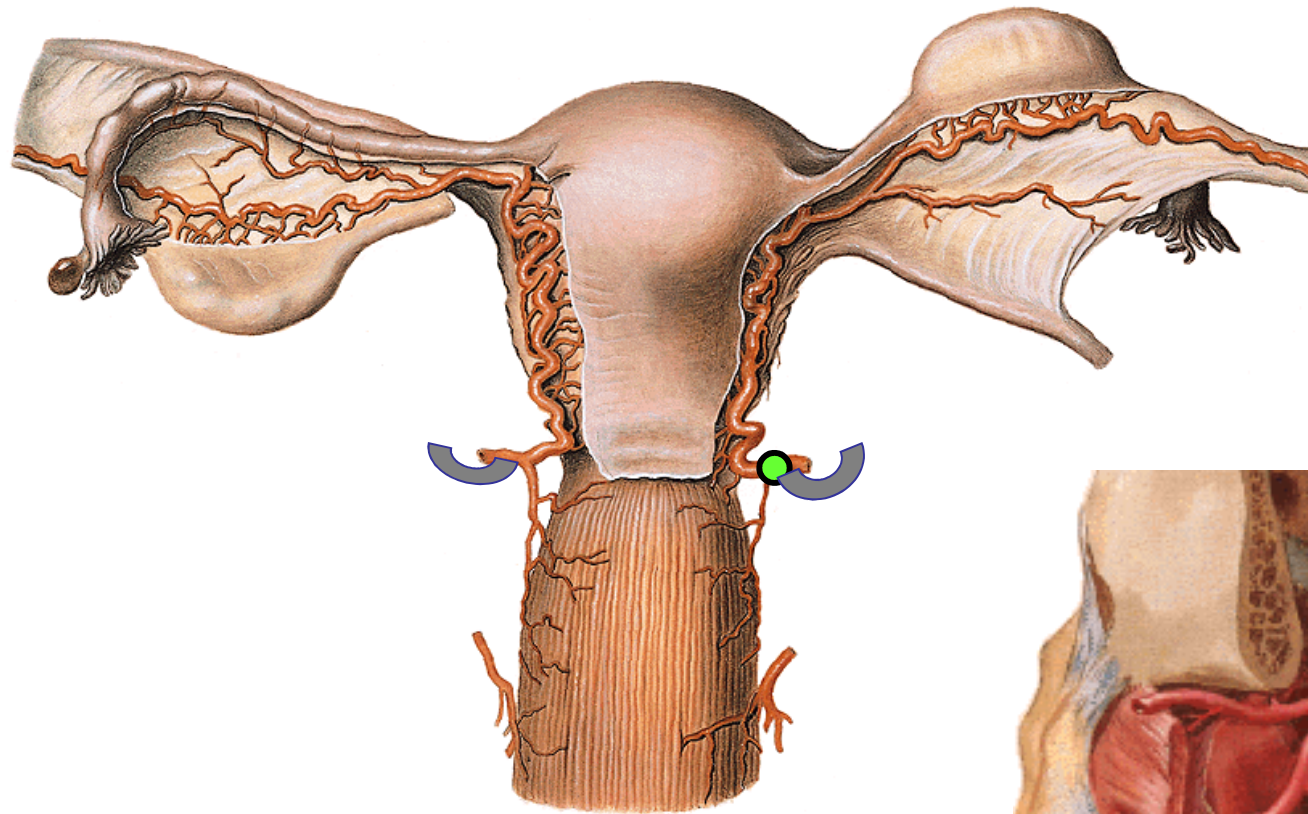
## POLOHA DĚLOHY

**Anteversio ( $70^{\circ} - 100^{\circ}$ )**

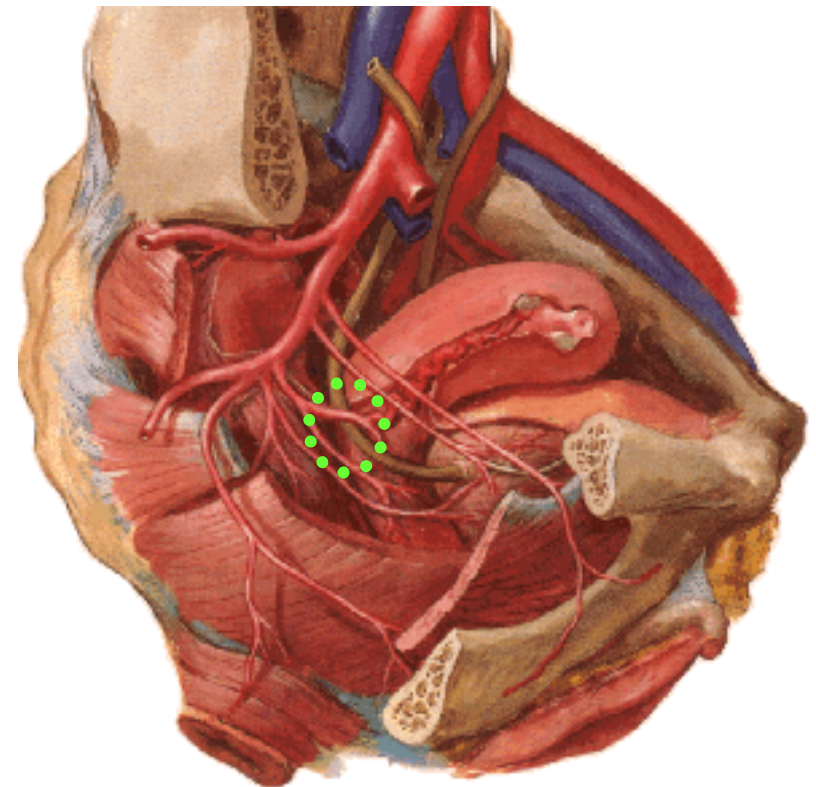
**Anteflexio ( $100^{\circ}$ )**



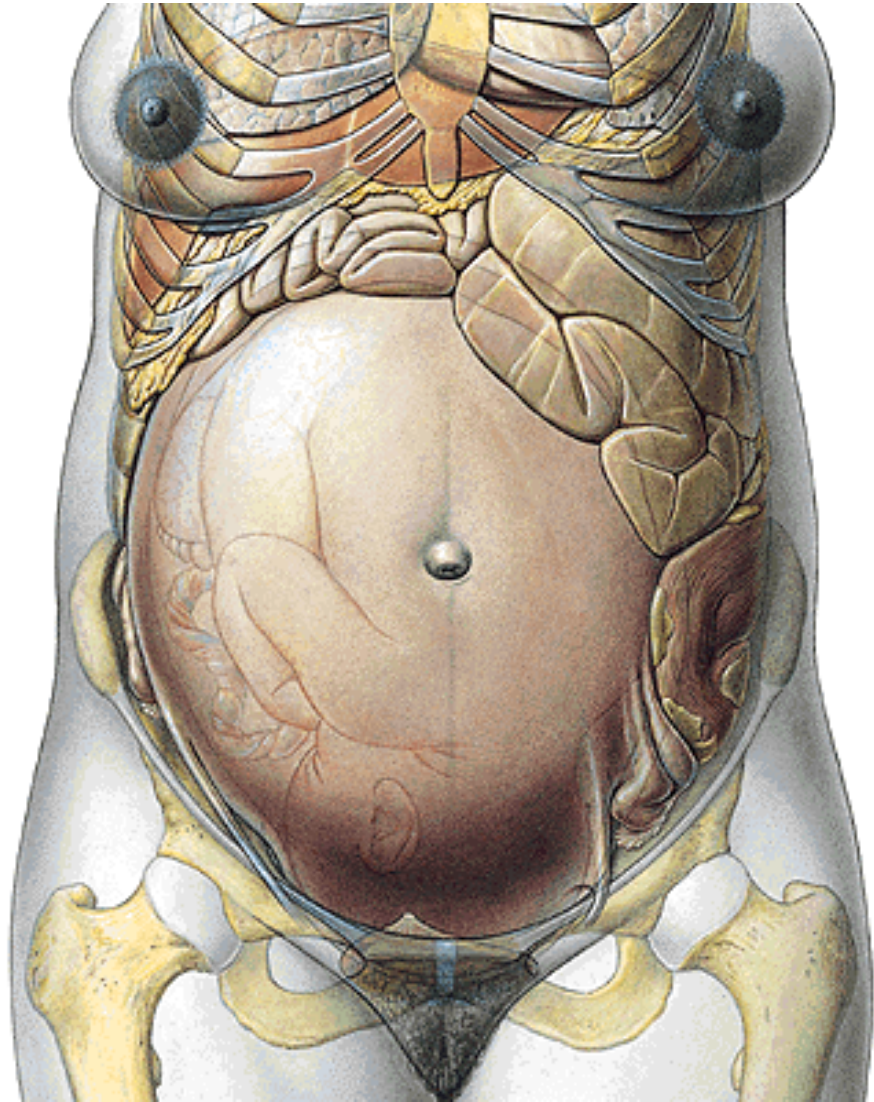
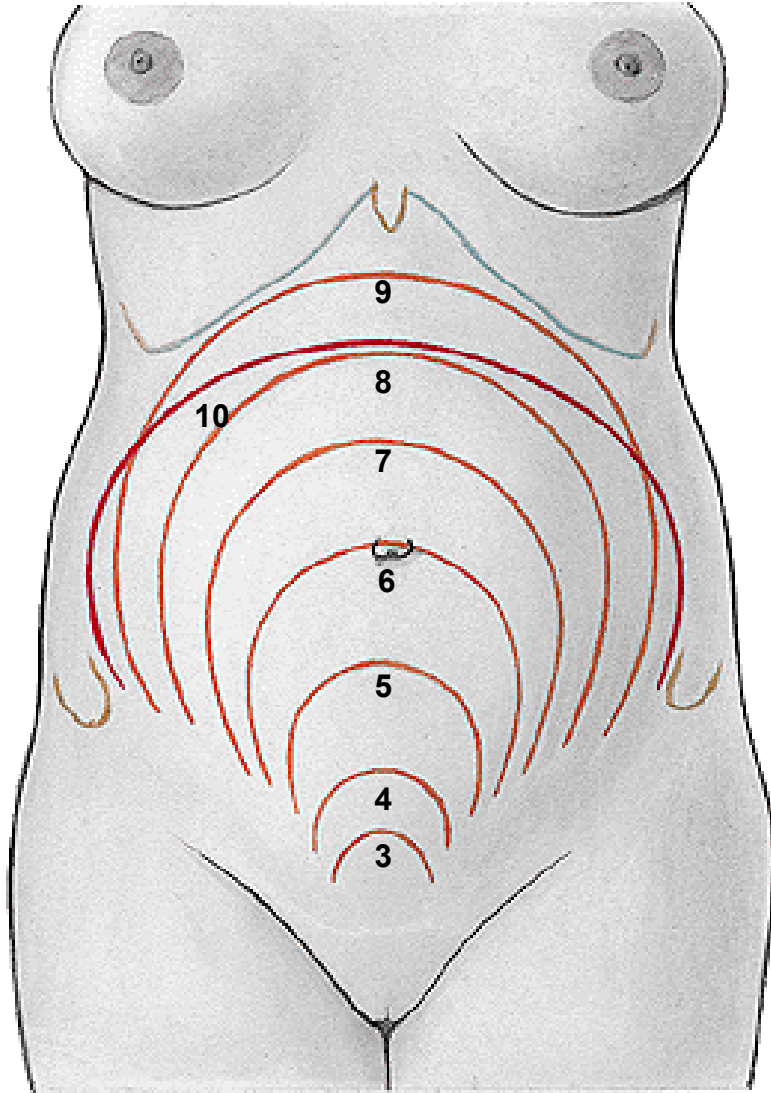
## Arteria uterina - anastomóza s a. ovarica (ovariální arkáda)

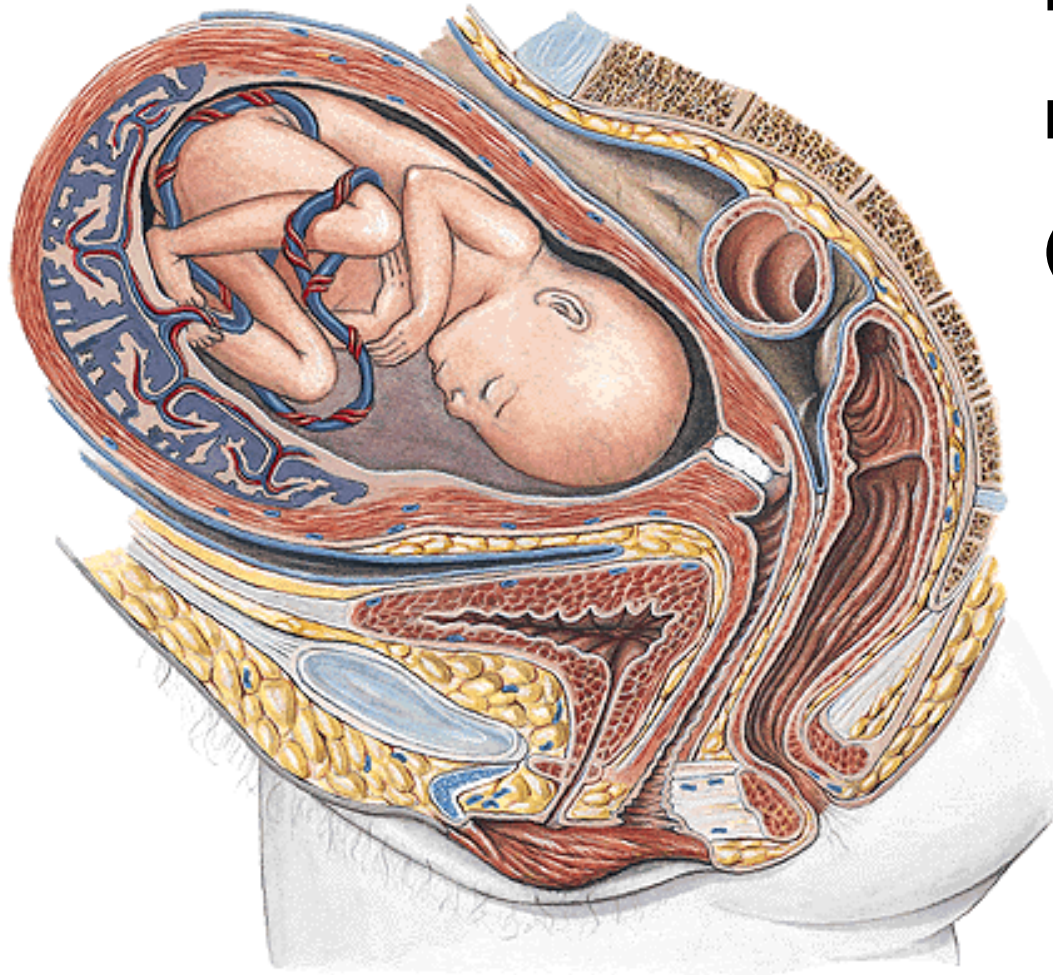


**Překřížení a. uterina s ureterem  
(2 cm od hrany děložní  
1,5 cm od klenby poševní)**



# GRAVIDITA



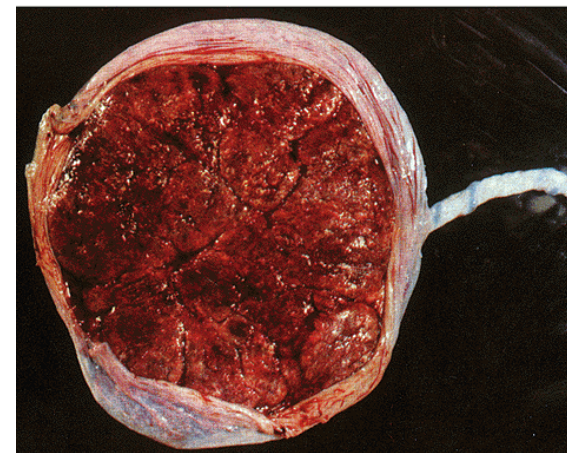


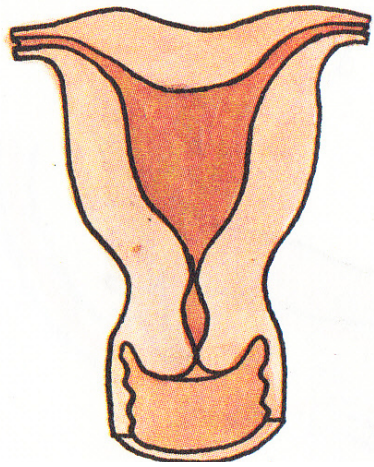
**uterus graviditatis – až 1000 g**

**Placenta (500 g, průměr 17 cm)**

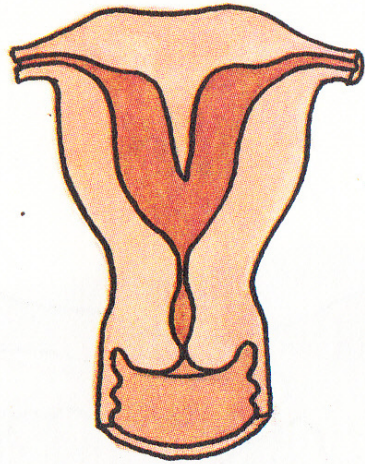
**Funiculus umbilicalis – 50 cm**

**(v.umbilicalis, aa. umbilicales)**

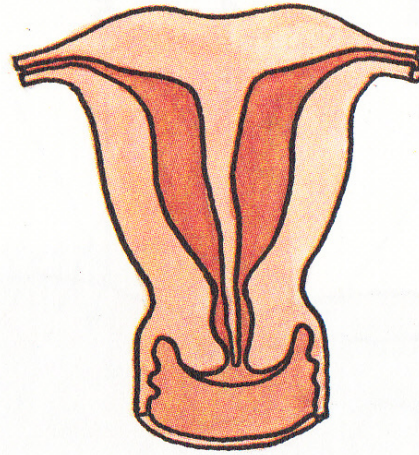




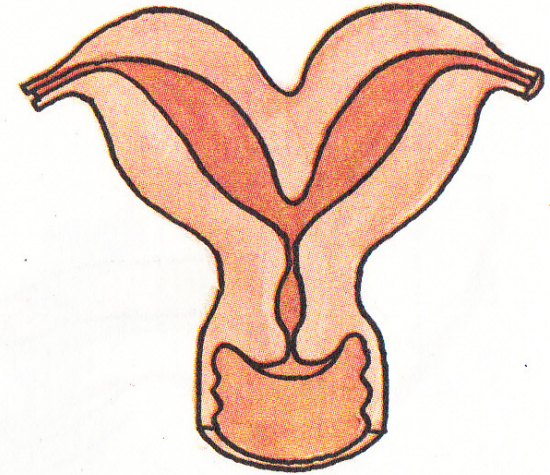
**uterus arcuatus**



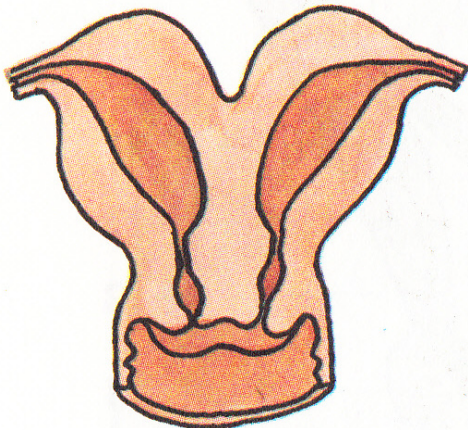
**uterus subseptus**



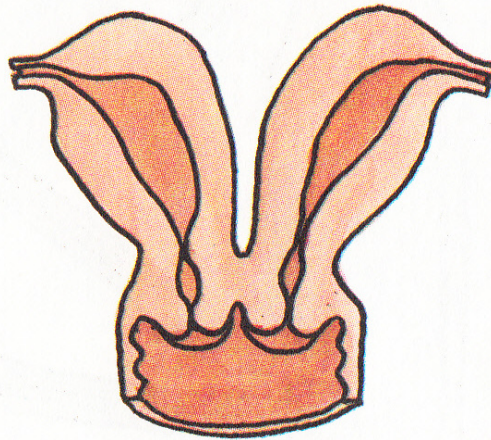
**uterus septus**



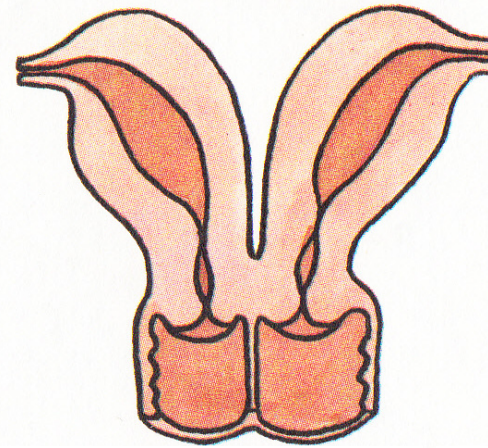
**uterus bipartitus**



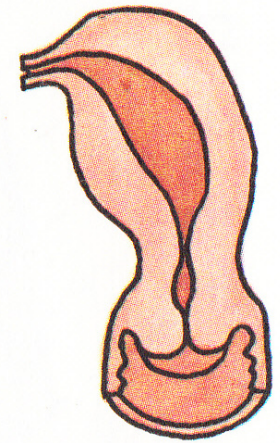
**uterus duplex**



**uterus duplex**

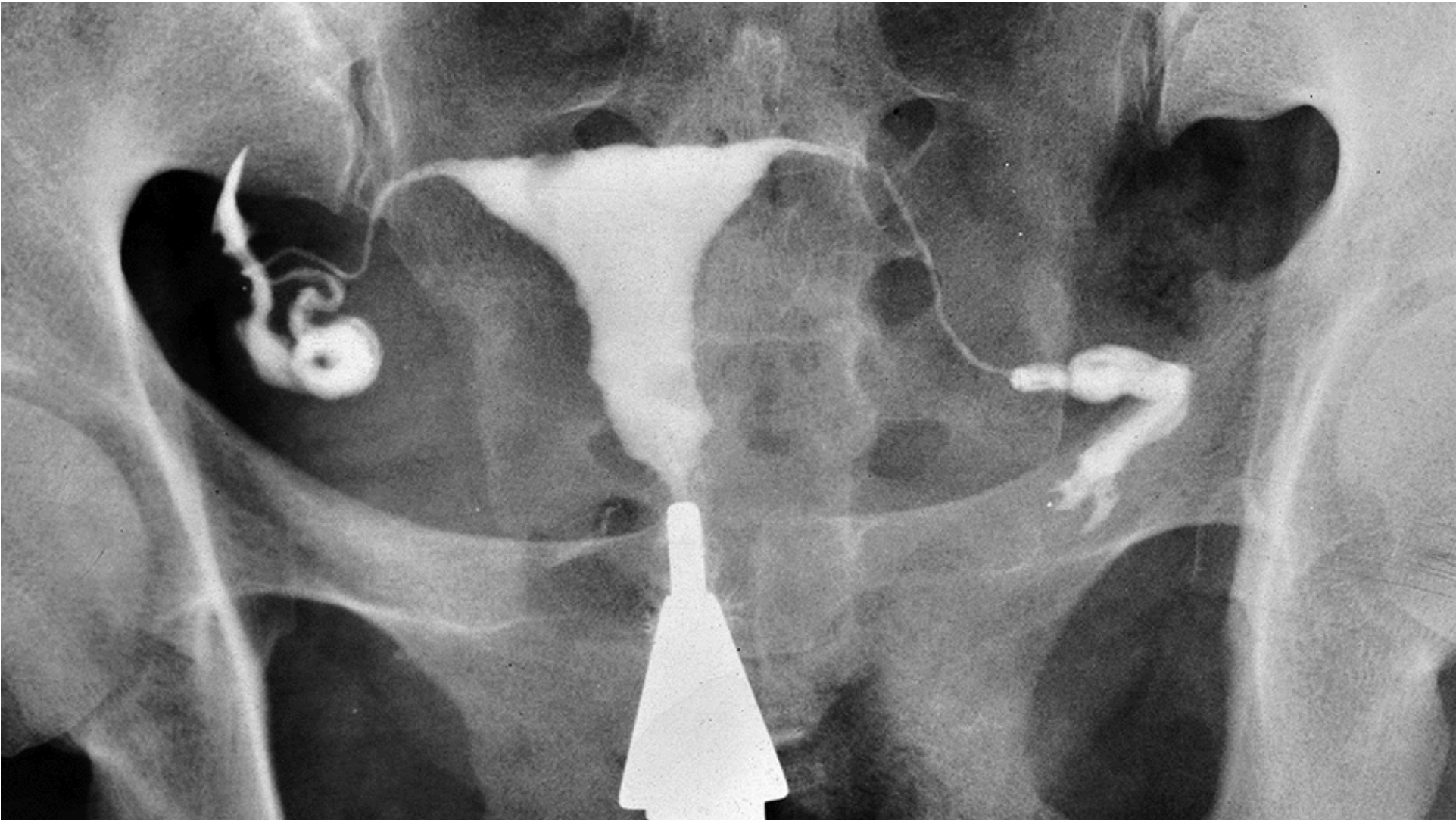


**uterus duplex  
cum vagina septa**



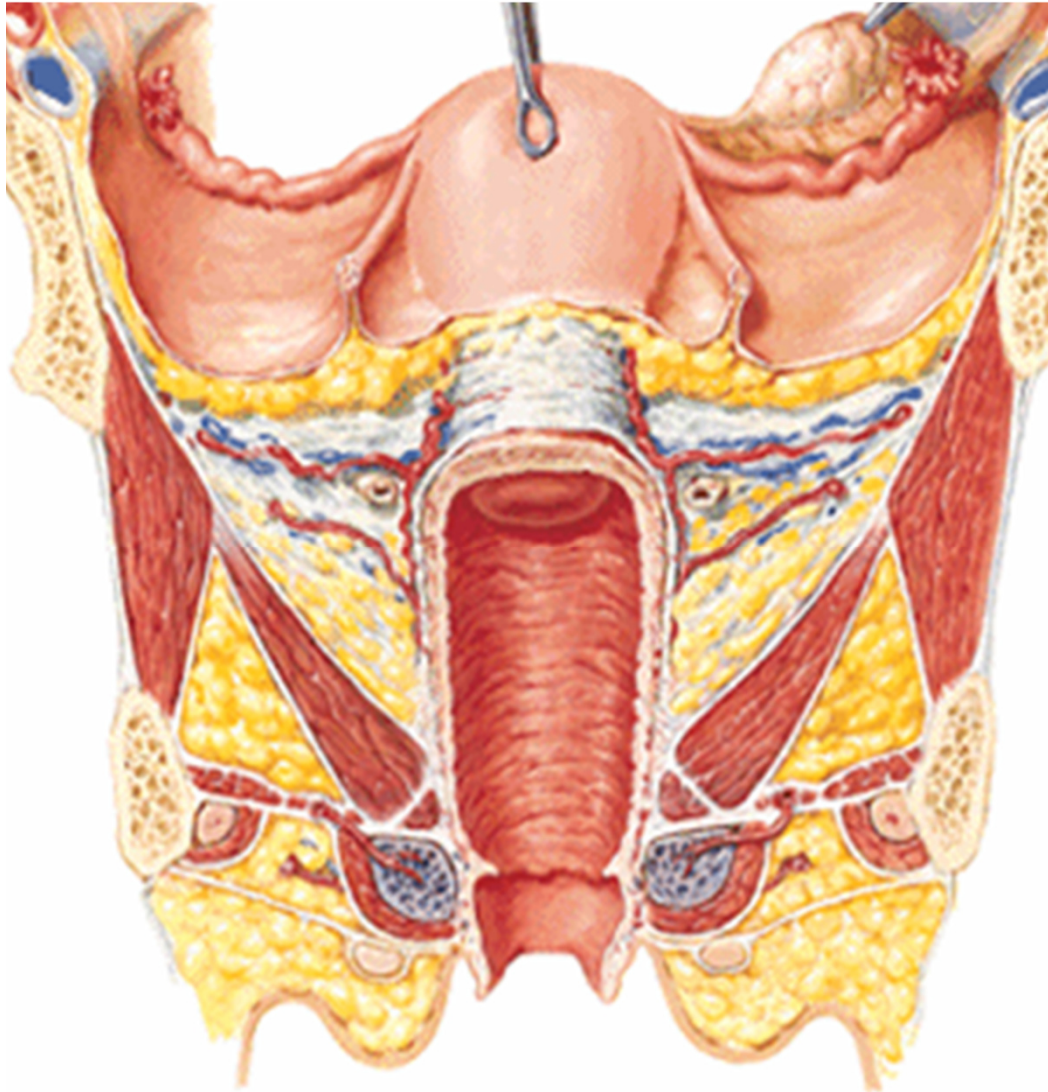
**uterus unicornis**

# HYSTEOSALPINGOGRAFIE





## VAGINA (KOLPOS)



**Fornix vaginae**

**pars anterior et posterior**

**receptaculum seminis**

**Paries anterior**

**crista (carina) urethralis**

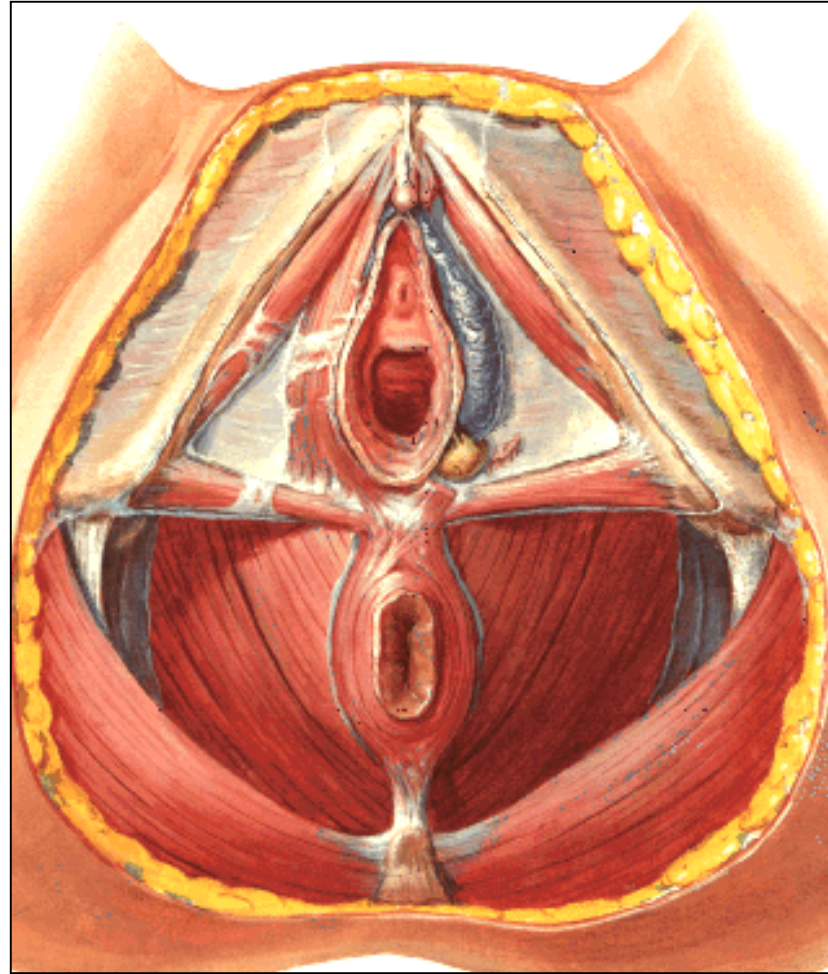
**area trigonalis vaginae**

**Paries posterior**

**Rugae vaginales**

**Columna rugarum ant. et post.**

**Ostium vaginae  
(vestibulum vaginae)**



## Ostium vaginae - hymen



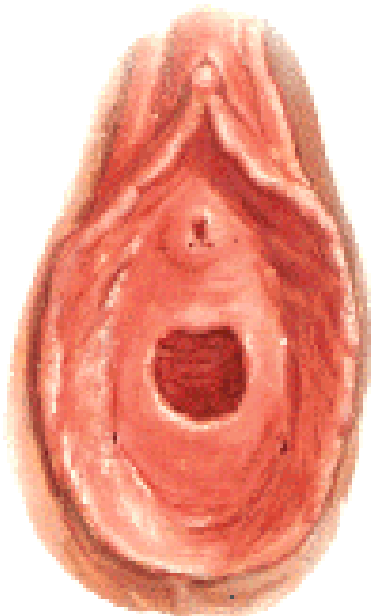
*Ostium urethrae ext.*

*Ostium vaginae*

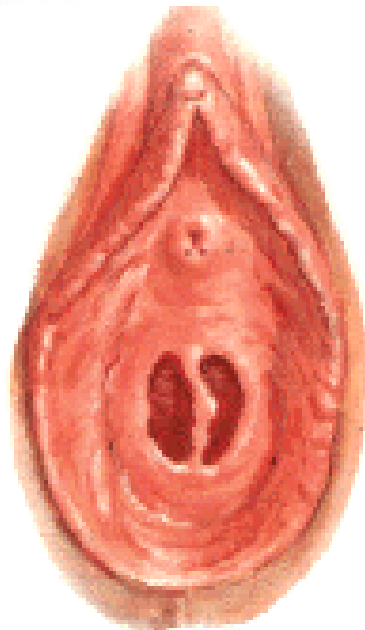
**Defloratio**

**Carunculae hymenales**

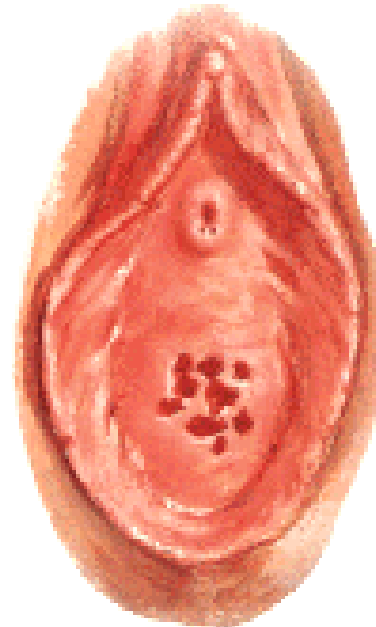
**Carunculae myrtiformes**



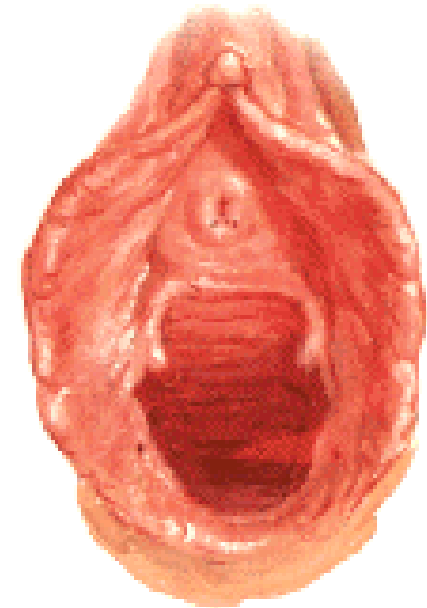
**Hymen anularis**



**Hymen septus**



**Hymen cribriformis**



**Carunculae hym.**

## Stavba stěny pochvy



### Sliznice

mnohovrstevný dlaždicový epitel

nemá žlázy !!!

slizniční vazivo – venózní pleteně

### Svalovina

vnitřní vrstva - cirkulární

zevní vrstva - longitudinální

### Adventicie (parakolpium)

Seróza – excavatio rectouterina

## POLOHA POCHVY

**Ventrokaudální směr**

**Ventrálně:**

**močový měchýř (area trigonalis)**

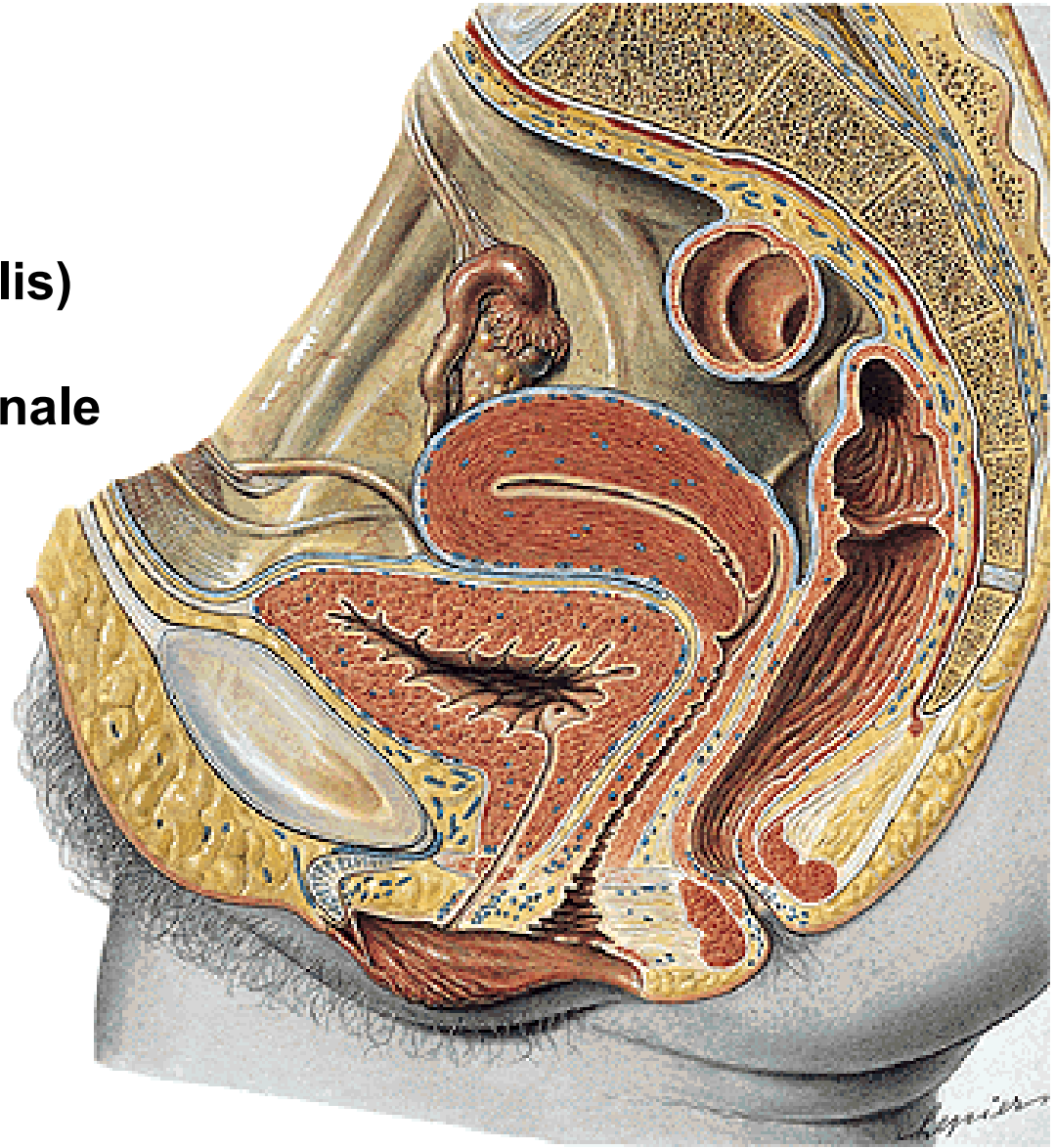
**urethra - septum urethrovaginale**

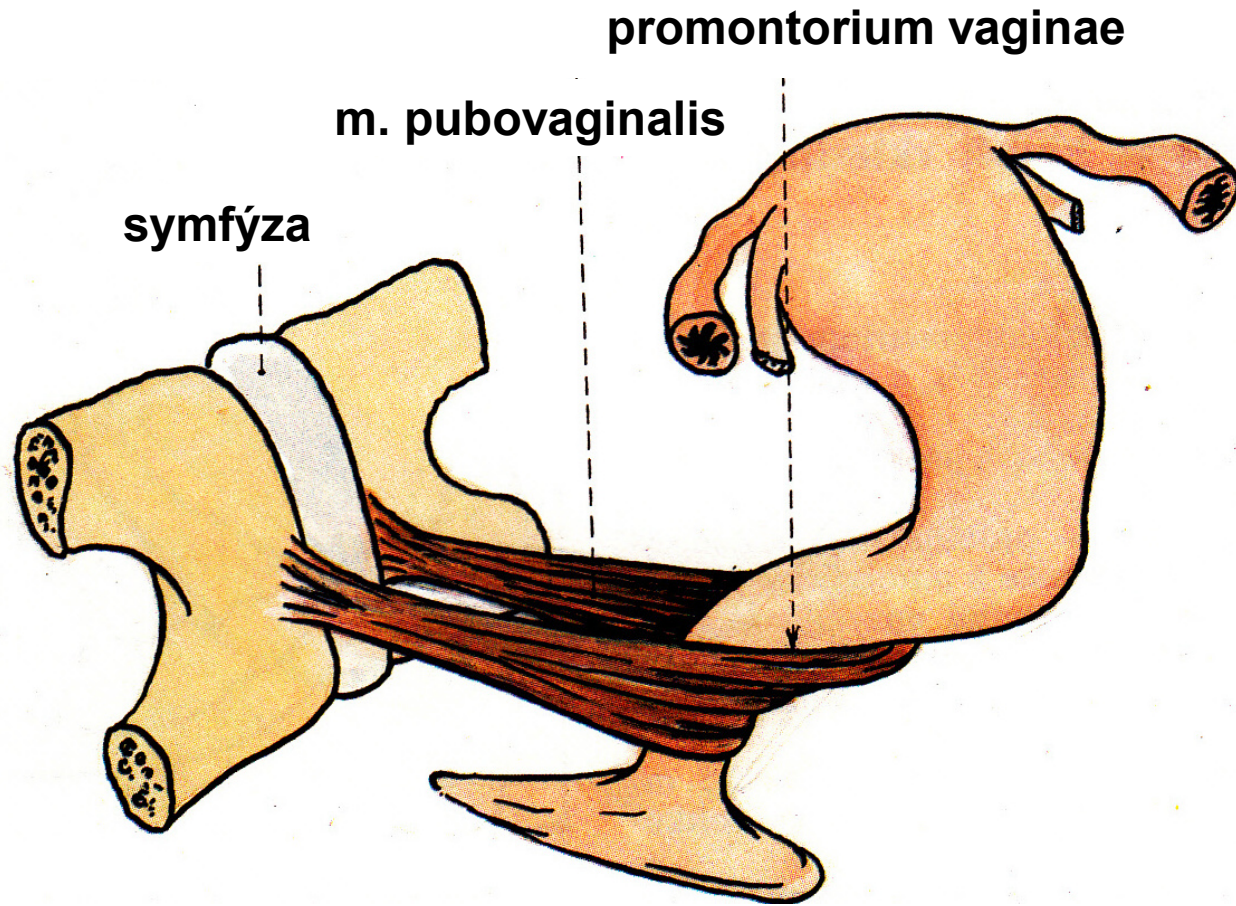
**Dorsálně:**

**excavatio rectouterina**

**rectum - septum rectovaginale**

**centrum perineale**





## **Organa genitalia feminina externa (pudendum femininum, vulva, cunnus)**

**Labia majora pudendi**

**Labia minora pudendi**

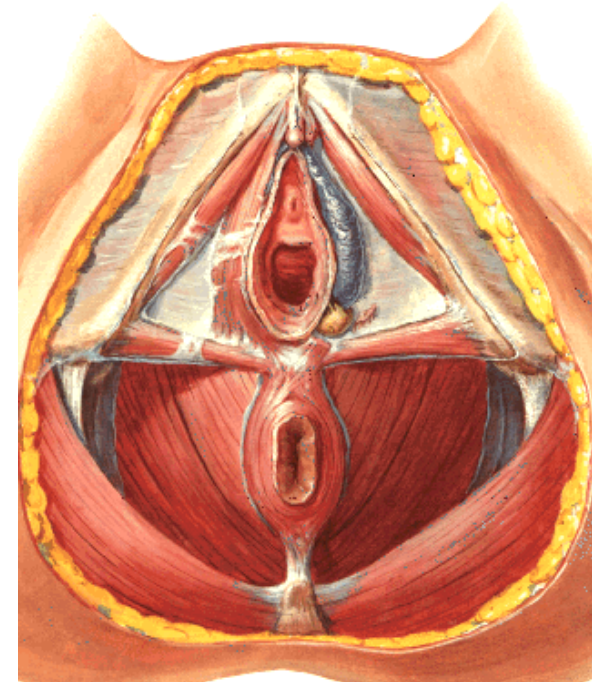
**Mons pubis**

**Vestibulum vaginae**

**Clitoris**

**Glandulae vestibulares**

**Bulbi vestibuli**



## **MONS PUBIS (mons Veneris)**



**hypogastrium**

**pubes**

**mazové a potní žlázy**

**tuková tkáň**



## **Labia majora pudendi**

**Sulcus genitofemoralis**

**Sulcus interlabialis**

**Rima pudendi**

**Commissura labiorum ant.**

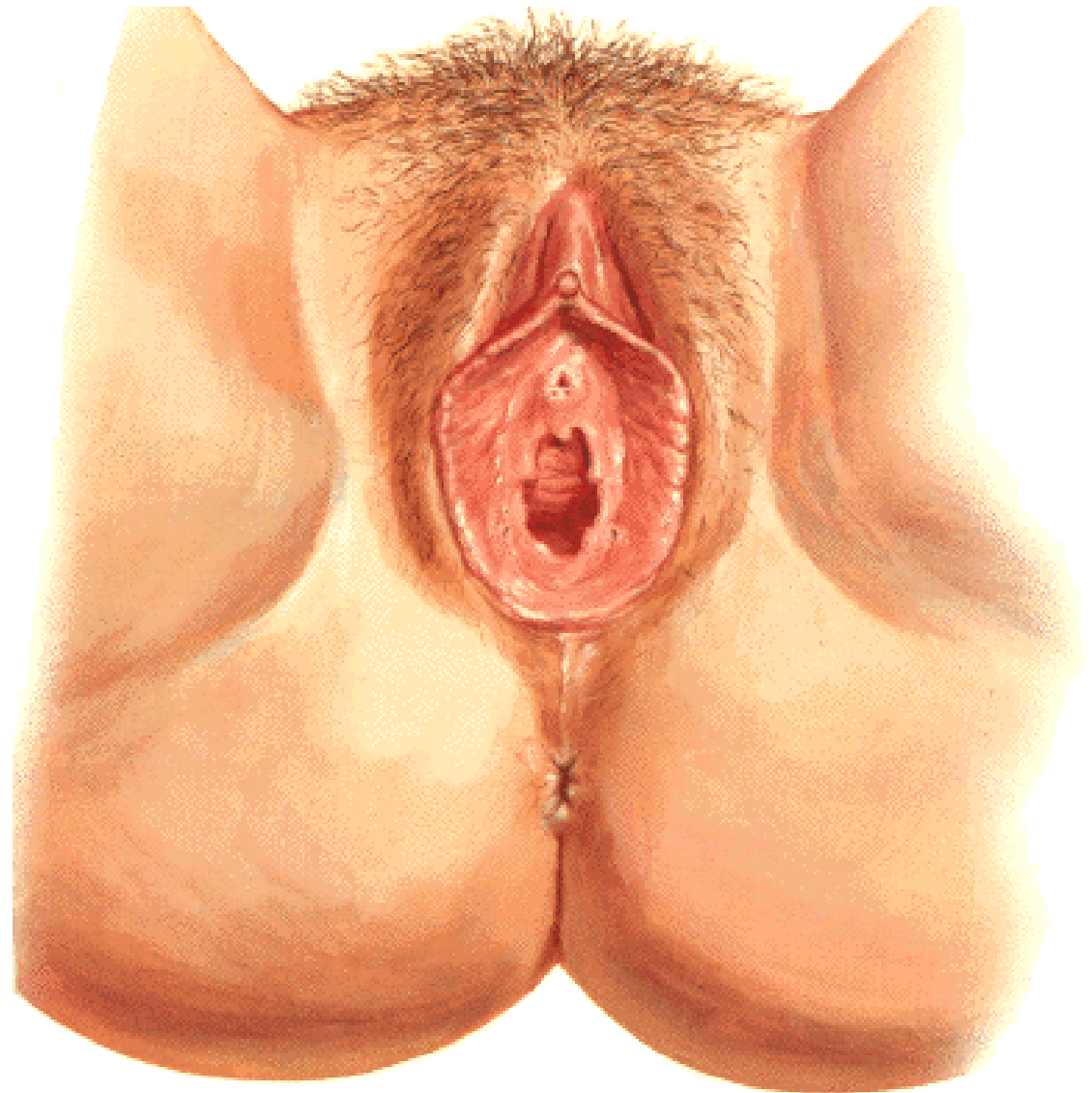
**Mons pubis**

**Commissura labiorum post.**

**Pubes**

**Perineum (raphe perinei)**

**Lig. teres uteri**



## **Labia minora pudendi**



**Sulcus interlabialis**

**Vestibulum vaginae**

**Smegma**

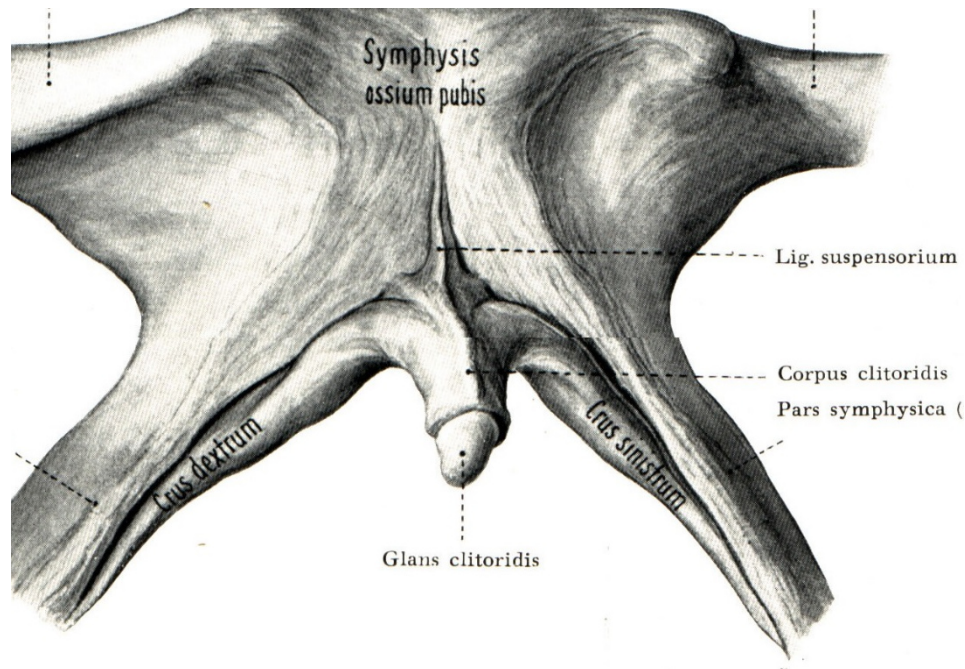
**Frenulum labiorum pudendi**

**Fossa vestibuli vaginae (navicularis)**

**Praeputium clitoridis**

**Frenulum clitoridis**





# CLITORIS

**Crura clitoridis (crista phallica)**

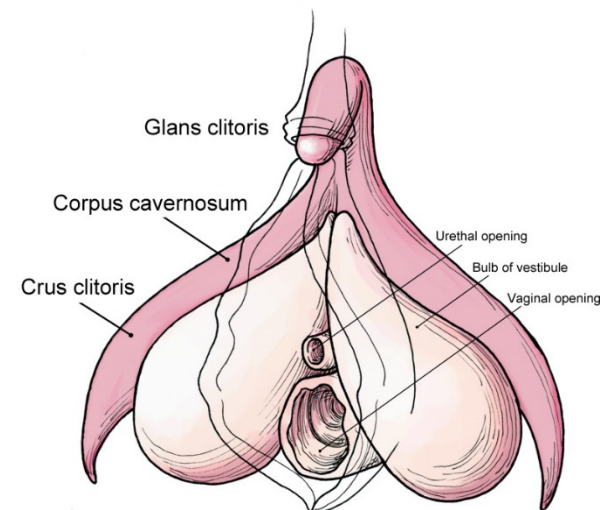
**Corpus clitoridis**

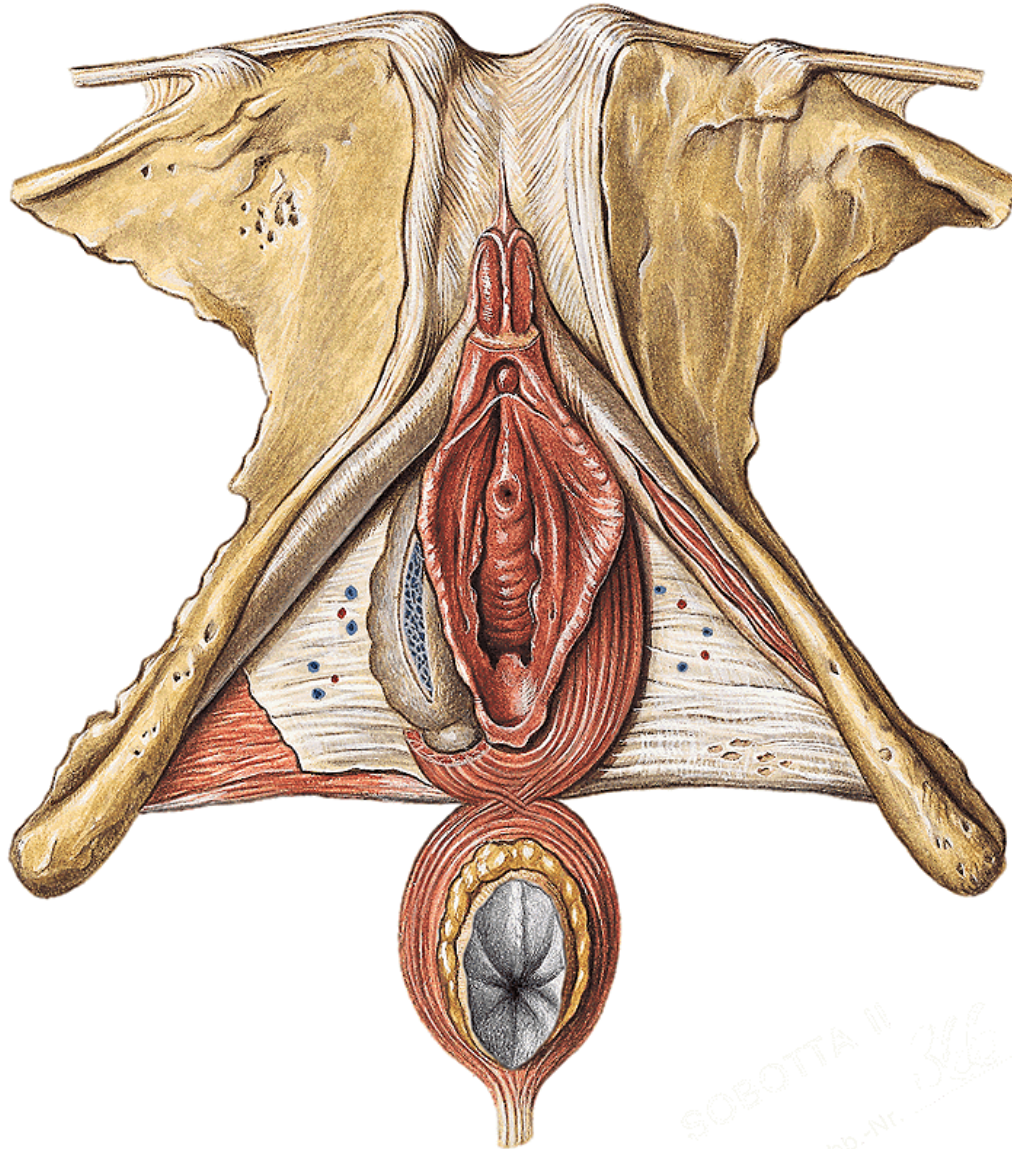
**Glans clitoridis**

**Praeputium clitoridis**

**Frenulum clitoridis**

**Corpora cavernosa clitoridis**



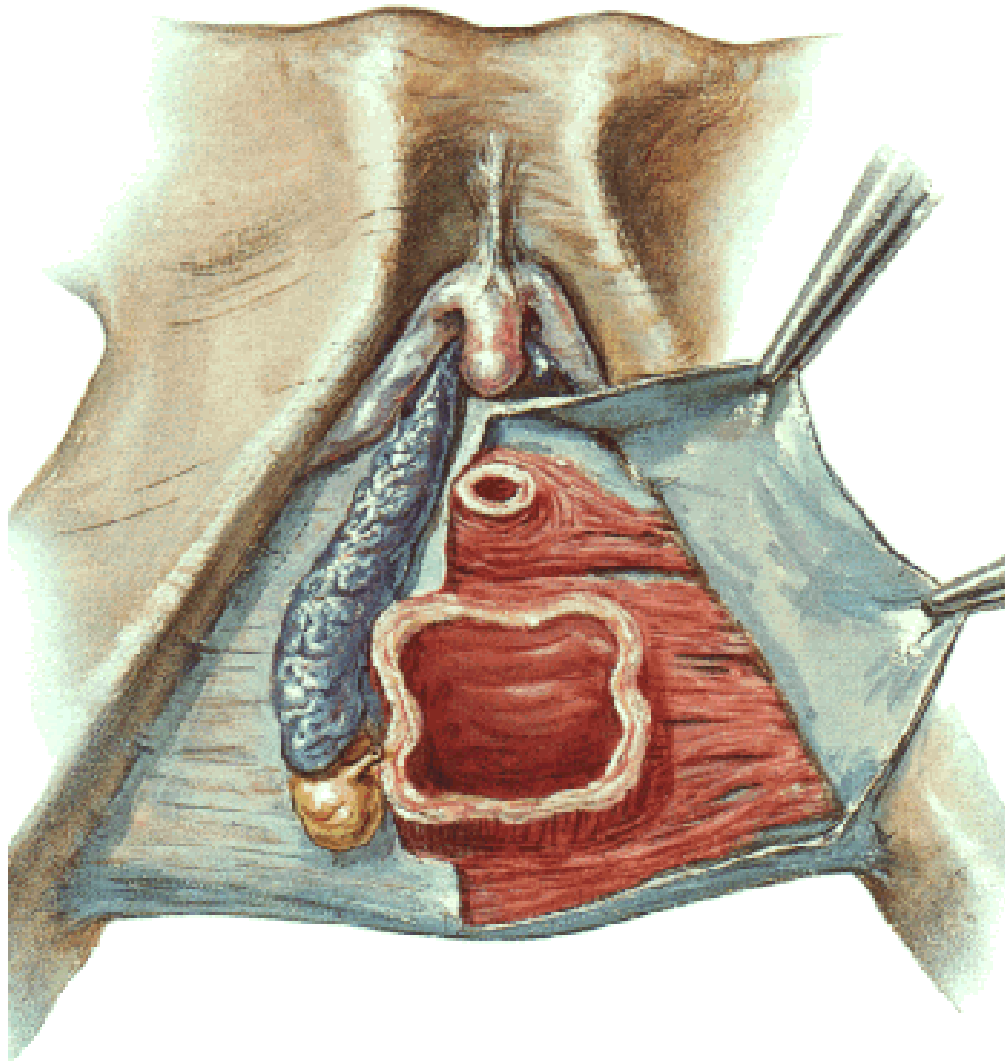


**Lig. fundiforme clitoridis**

**Lig. suspensorium clitoridis**

**M. ischiocavernosus**

## BULBI VESTIBULI

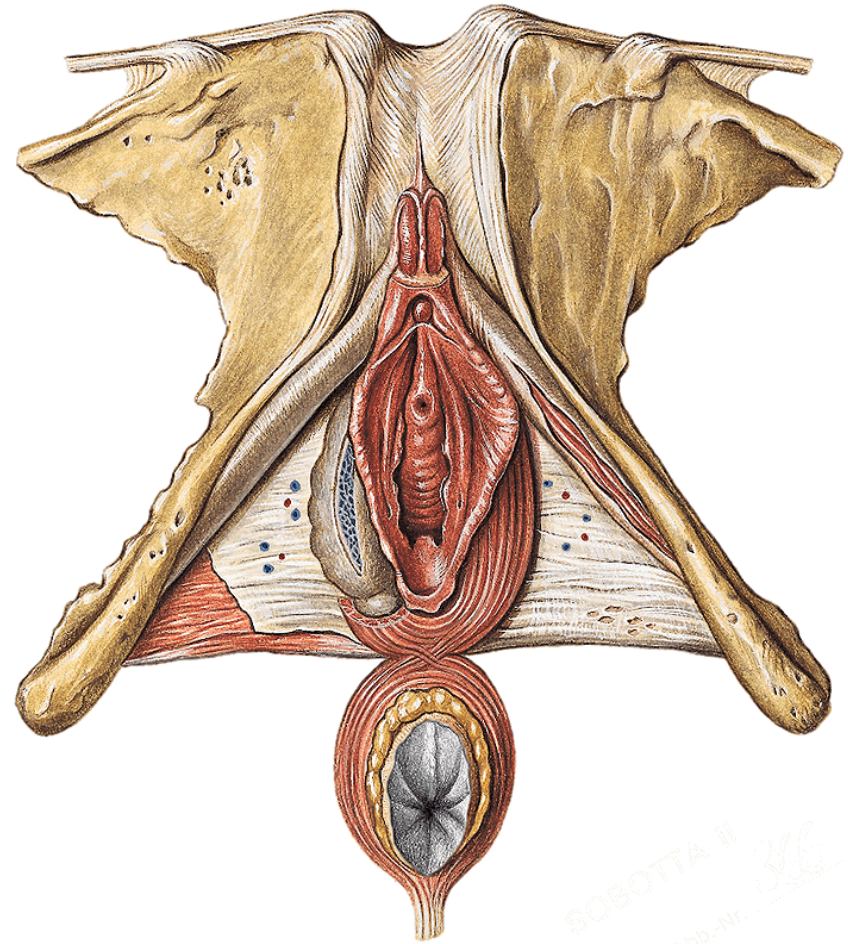
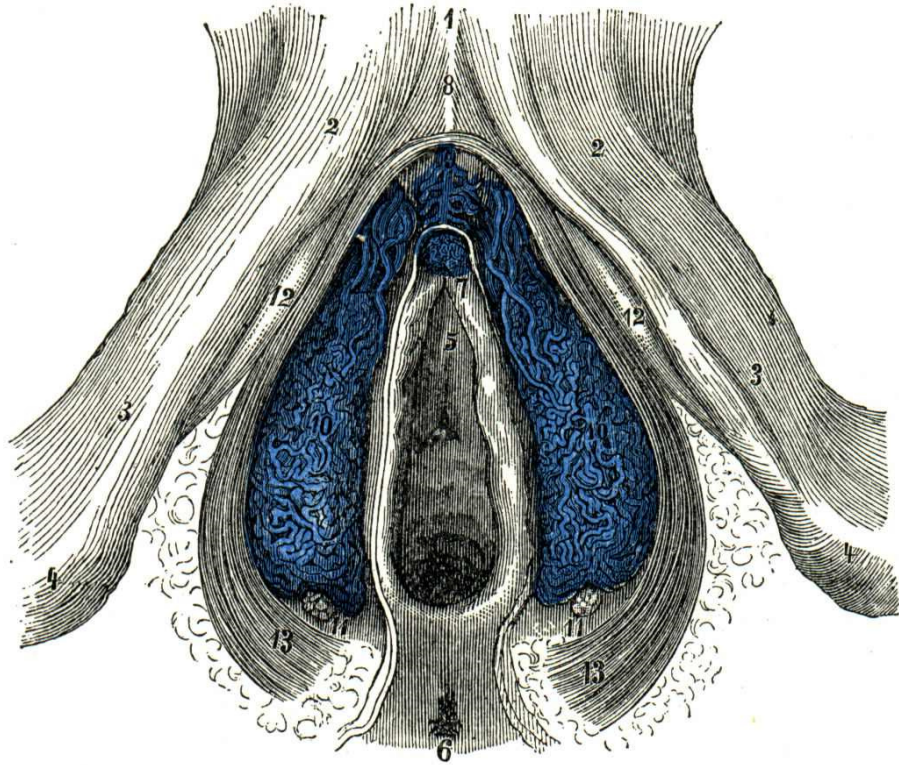


**erektilní tělesa  
(corpus spongiosum)**

**na diaphragma urogenitale**

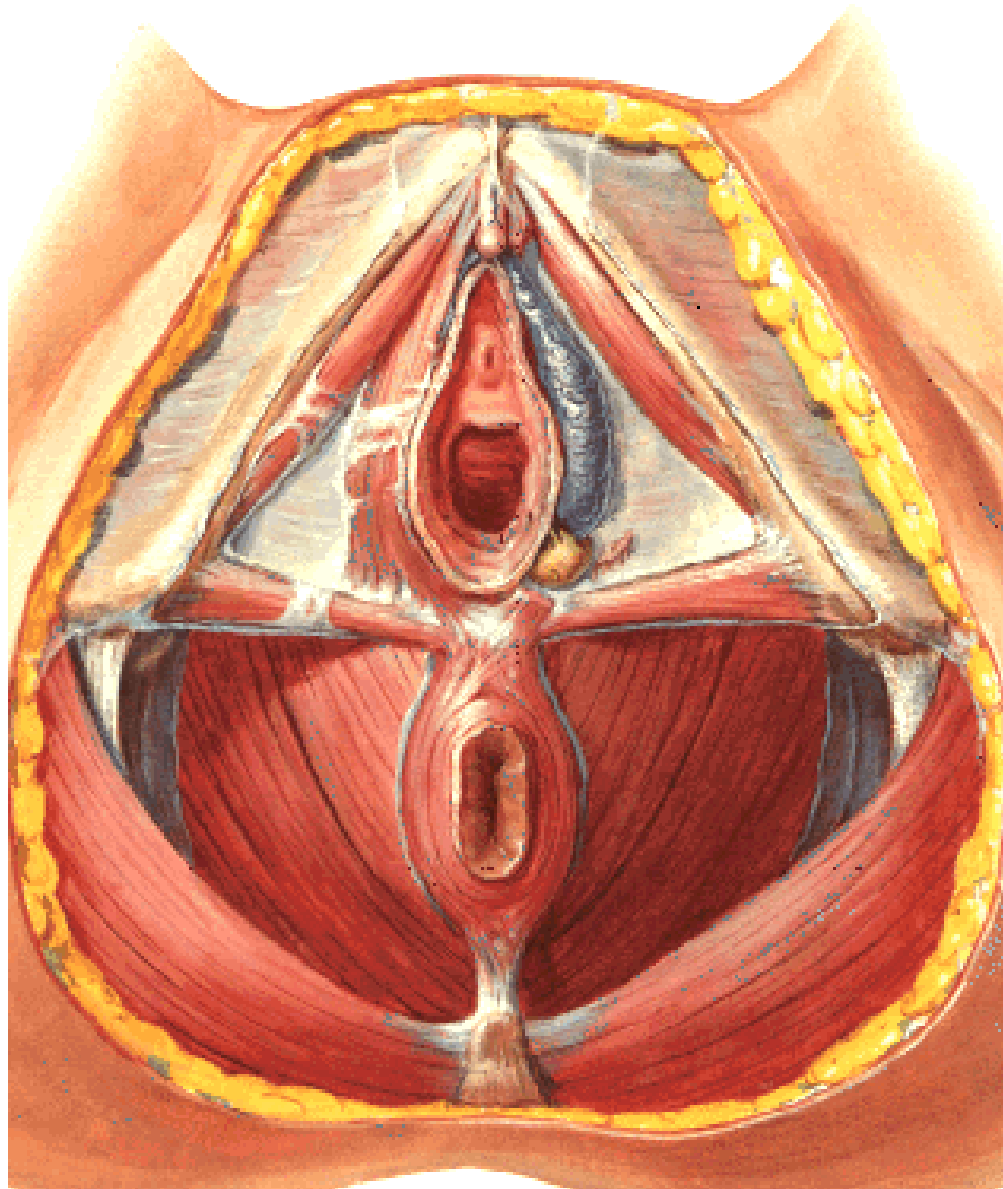
**m. bulbospongiosus  
(od centrum tendineum  
perinei na dorsum clitoridis)**

**commisura bulborum  
(mezi glans clitoridis a  
ostium urethrae ext.)**



SOBOTTA II  
Abb. Nr. 32

# GLANDULAE VESTIBULARES MAJORES (BARTHOLINI)

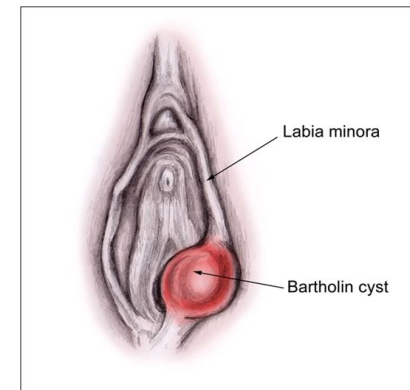


**1cm**

**na diaphragma urogenitale  
dorsálně od bulbi vestibuli**

**m. bulbospongiosus**

**ústí do vestibulum vaginae**



**Mezi labia minora pudendi**

**VESTIBULUM VAGINAE**

**Glans clitoridis  
(praeputium et frenulum clitoridis)**

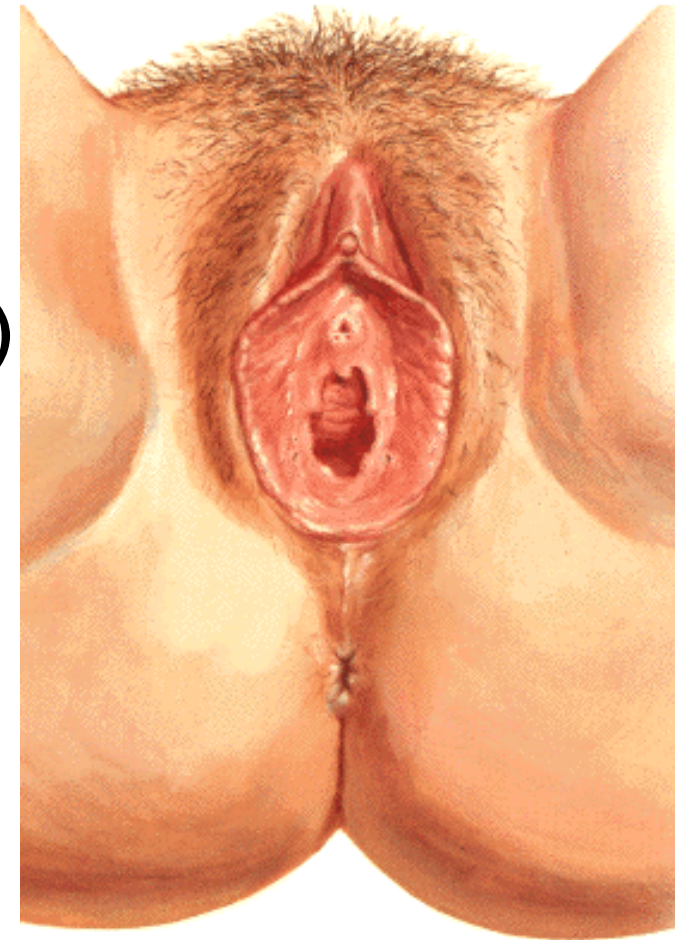
**Ostium urethrae externum  
(papilla urethralis, gl. vestib. minores)**

**Ostium vaginae (hymen)**

**Fossa navicularis**

**Frenulum labiorum pudendi  
(commisura labiorum pudendi)**

**Glandulae vestibulares minores et majores**





## Ostium vaginae - hymen



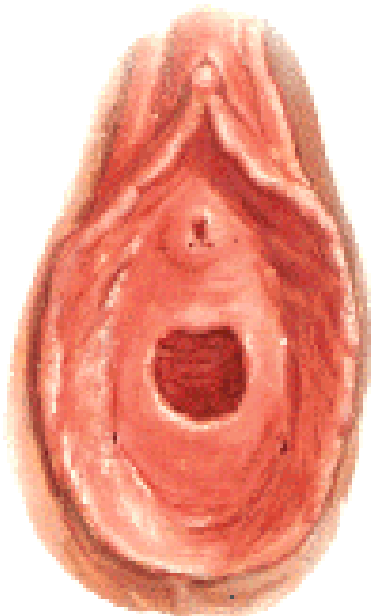
*Ostium urethrae ext.*

*Ostium vaginae*

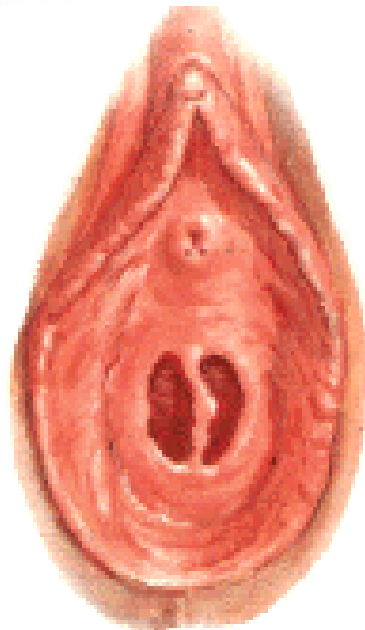
**Defloratio**

**Carunculae hymenales**

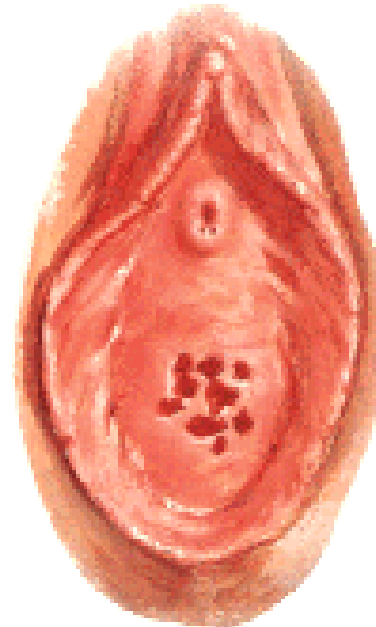
**Carunculae myrtiformes**



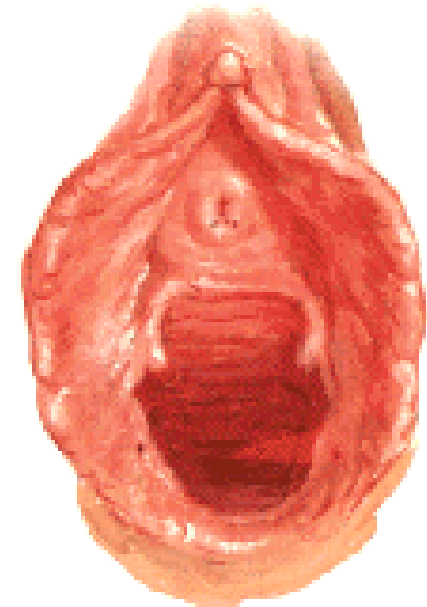
**Hymen anularis**



**Hymen septus**

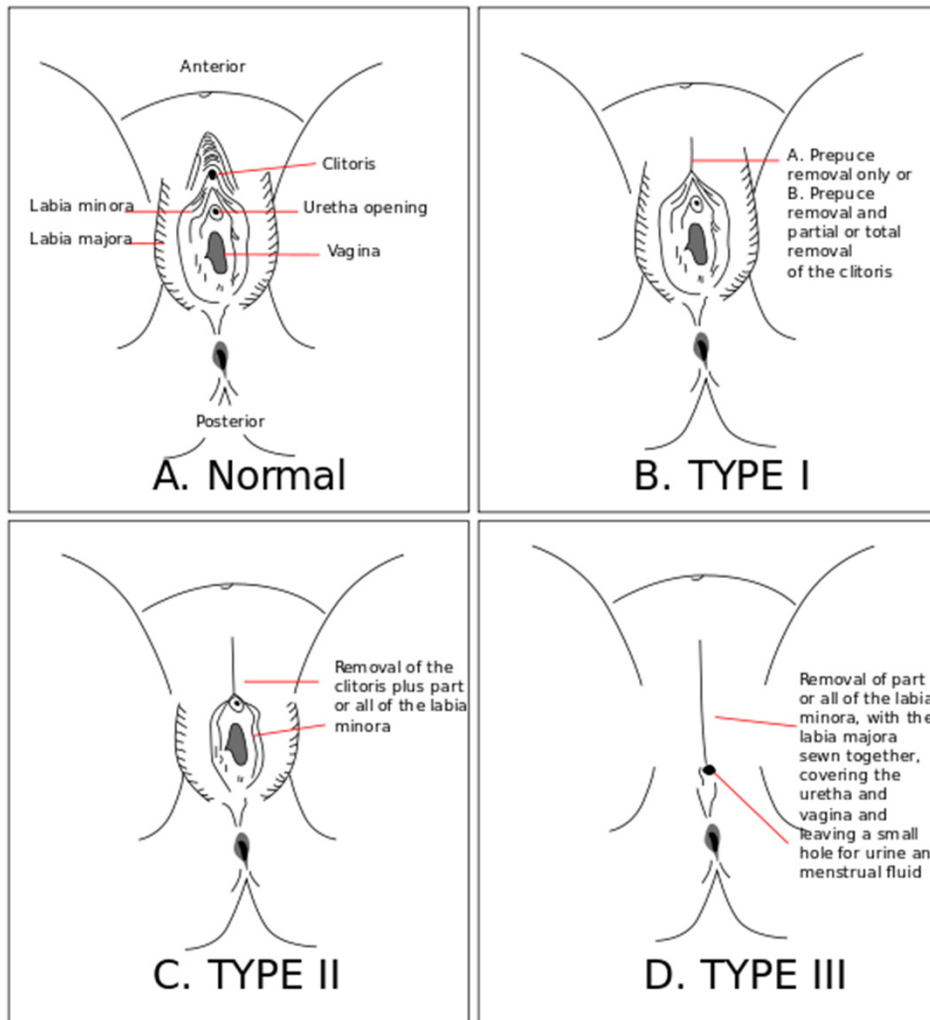


**Hymen cribriformis**



**Carunculae hym.**

# Ženská obřízka



## Klasifikace WHO:

**Typ I - klitoridektomie**  
odstranění poštvěváčku, výjimečně jen jeho předkožky

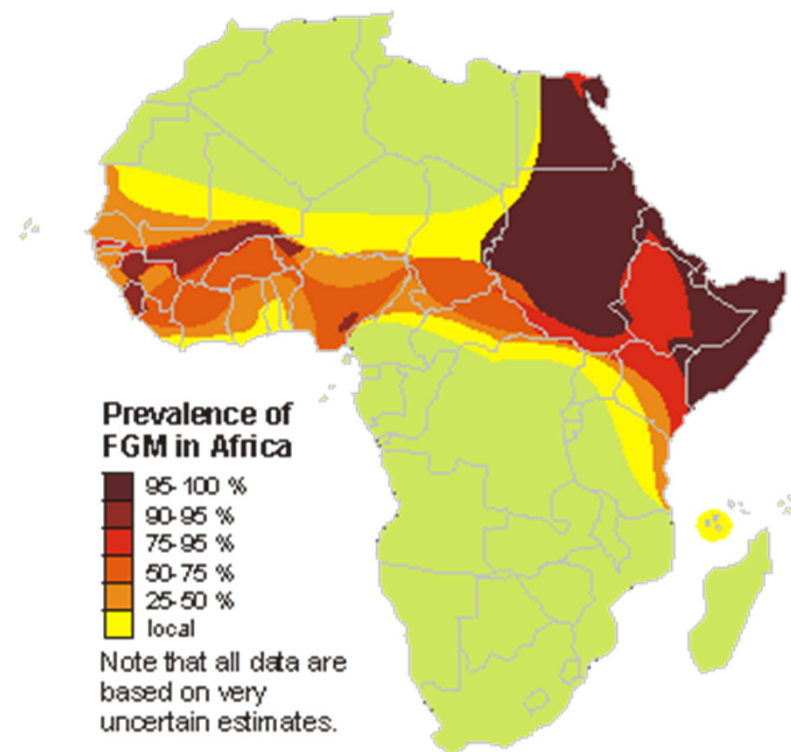
**Typ II, excize:**  
odstranění poštvěváčku a malých stydkých pysků

**Typ III, infibulace:**  
zúžení poševního otvoru  
vytvořením kryjícího uzávěru  
přemístěním velkých nebo malých stydkých pysků

**Typ IV, další:** propichování, piercing, nařezávání a vyškrabování, rovněž kauterizaci ženských rodidel

# Ženská obřízka

rezoluce OSN z listopadu 2012 – porušování lidských práv



## Diaphragma pelvis

**Musculus levator ani (arcus tendineus m. levatoris ani)**

**musculus pubococcygeus**

**musculus iliococcygeus**

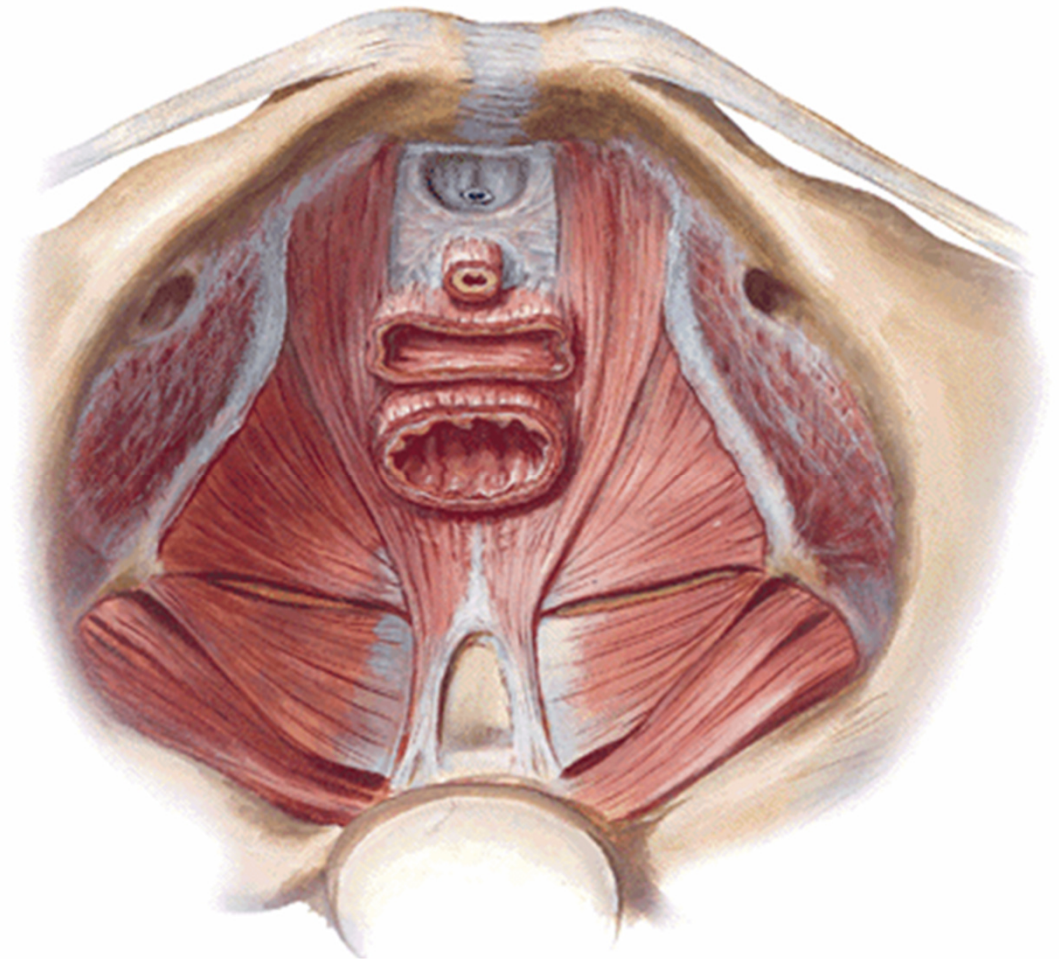
**Musculus coccygeus**

**Hiatus urogenitalis**

**Lig. anococcygeum**

**Fascia diaphragmatis pelvis**

**superior et inferior**



## Diaphragma urogenitale

**Lig. transversum perinei**

**M. transversus perinei profundus**

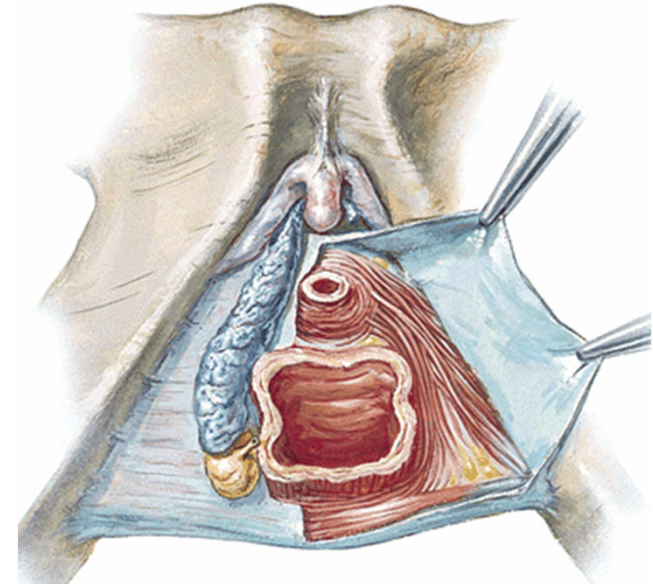
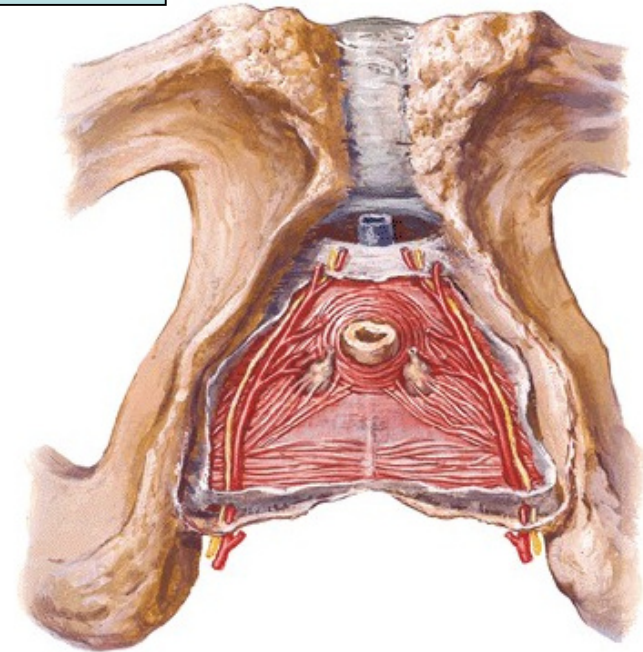
**M. transversus perinei superficialis**

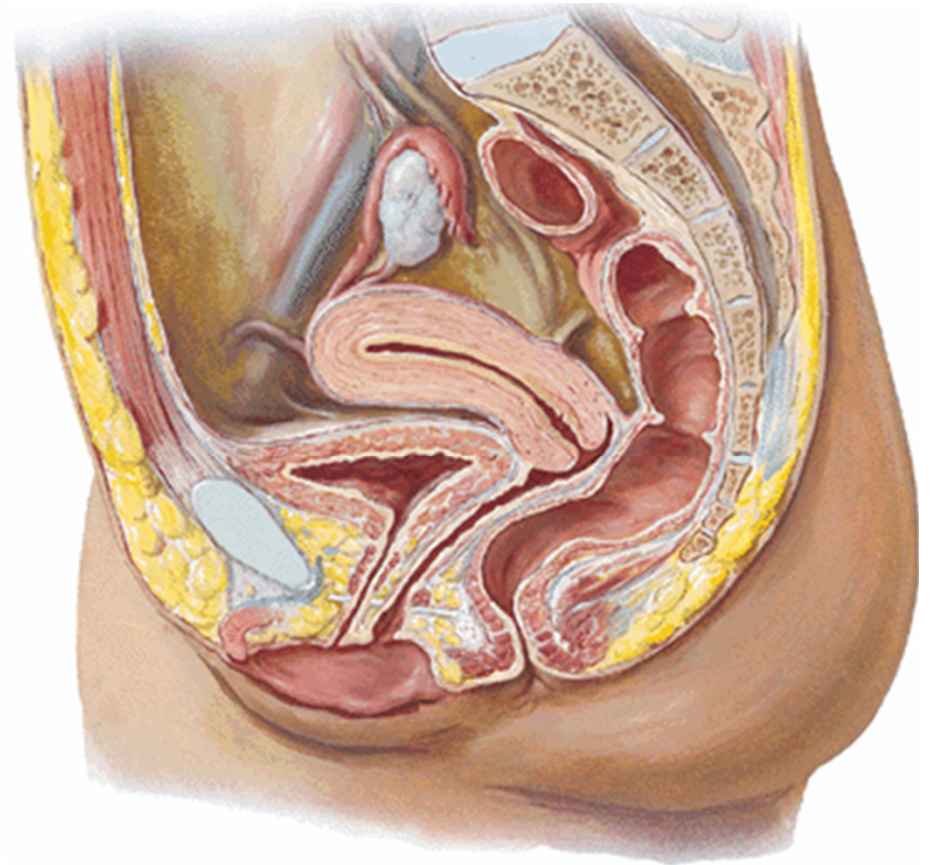
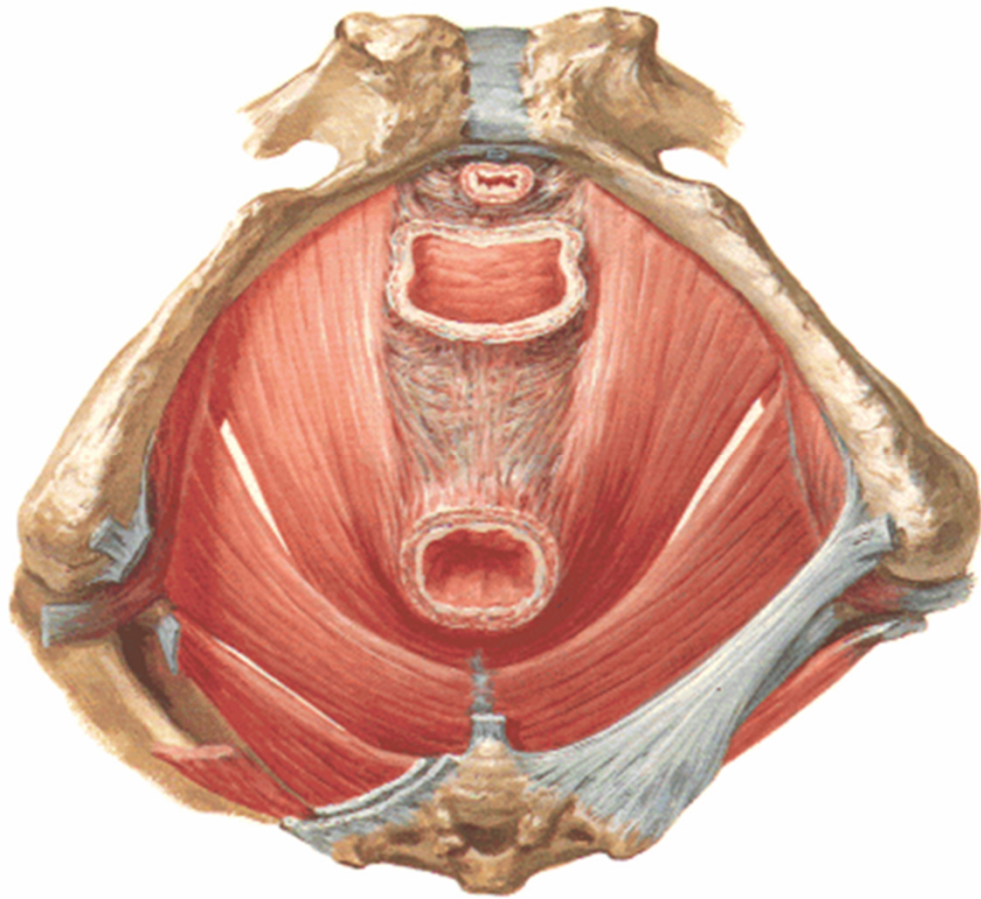
**M. sphincter urethrae**

**Nervus pudendus**

**Fascia diaphragmatis urogenitalis**

**superior et inferior**

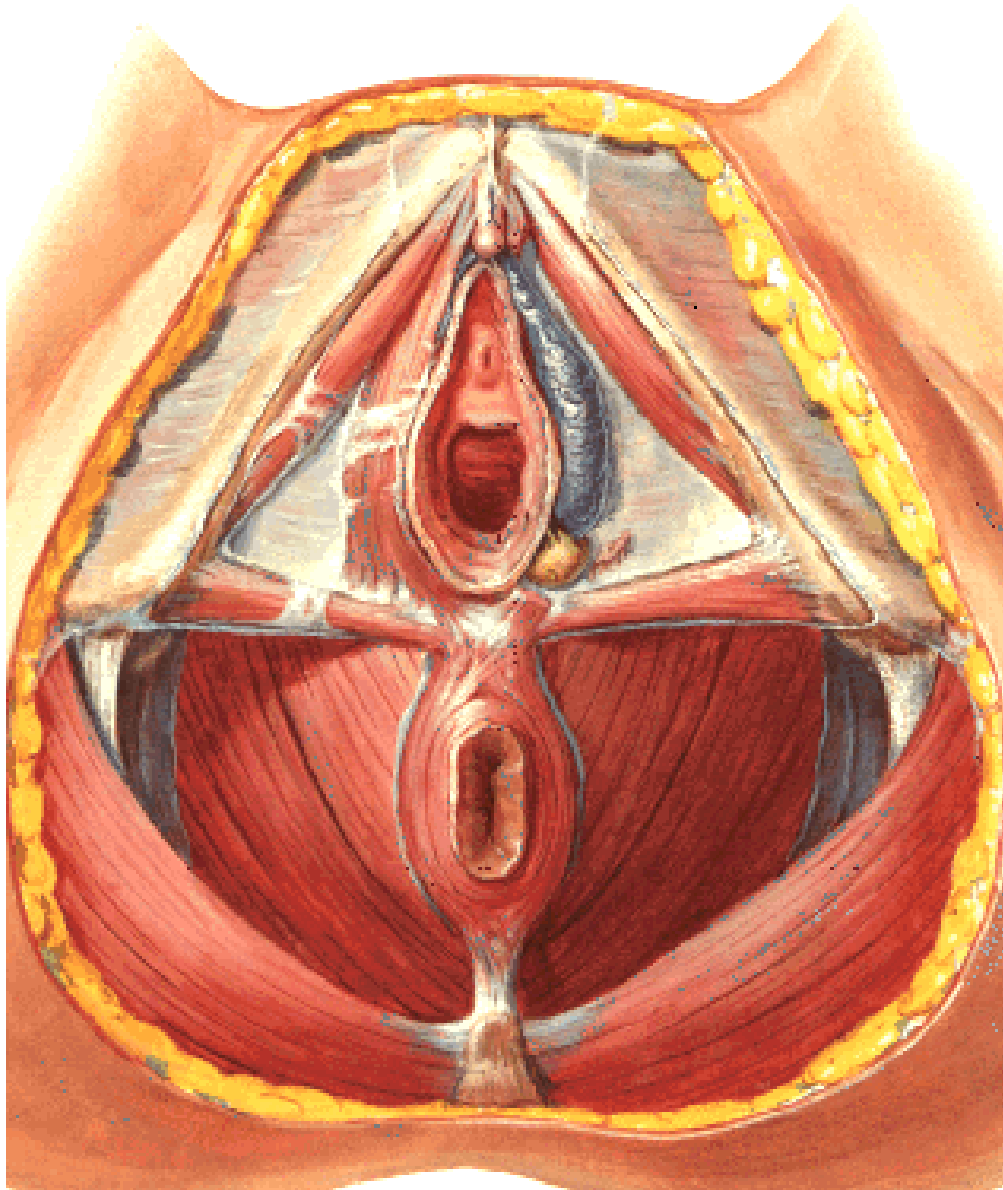




**m. pubovaginalis (m. compressor vaginae), m. puborectalis**

**centrum perineale (mezi vaginou a konečníkem),**

**septum rectovaginale, perineální klín**



**Musculus ischiocavernosus**

**Musculus bulbospongiosus**

**(musculus constrictor cunni)**

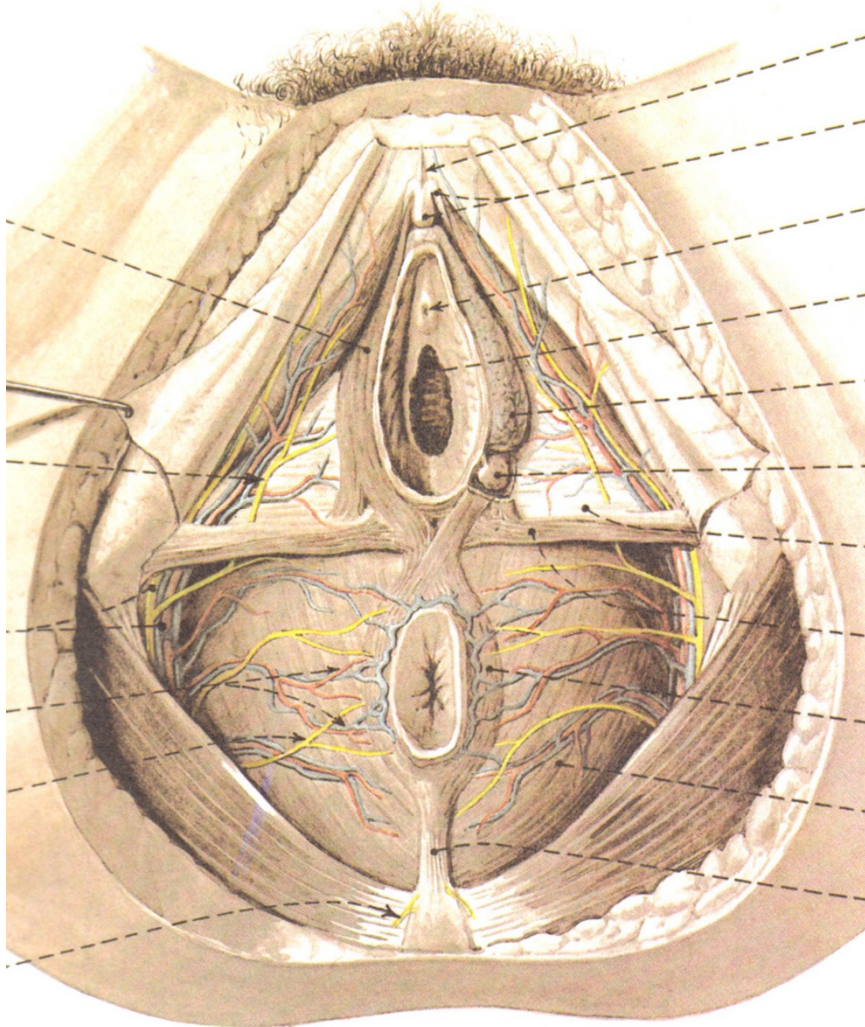
**Musculus sphincter ani ext.**

**Fascia perinei superficialis**

**Spatium perinei profundum**

**Spatium perinei superficiale**

# Spatium perinei superficiale



fascia diaphragmatis urogenitalis inf.

fascia perinei superficialis

Obsah:

crura clitoridis (crura penis)

bulbi vestibuli (bulbus penis)

glandulae vestibulares majores

m. bulbospongiosus, m. ischiocavernosus

vasa pudenda interna, nervus pudendus



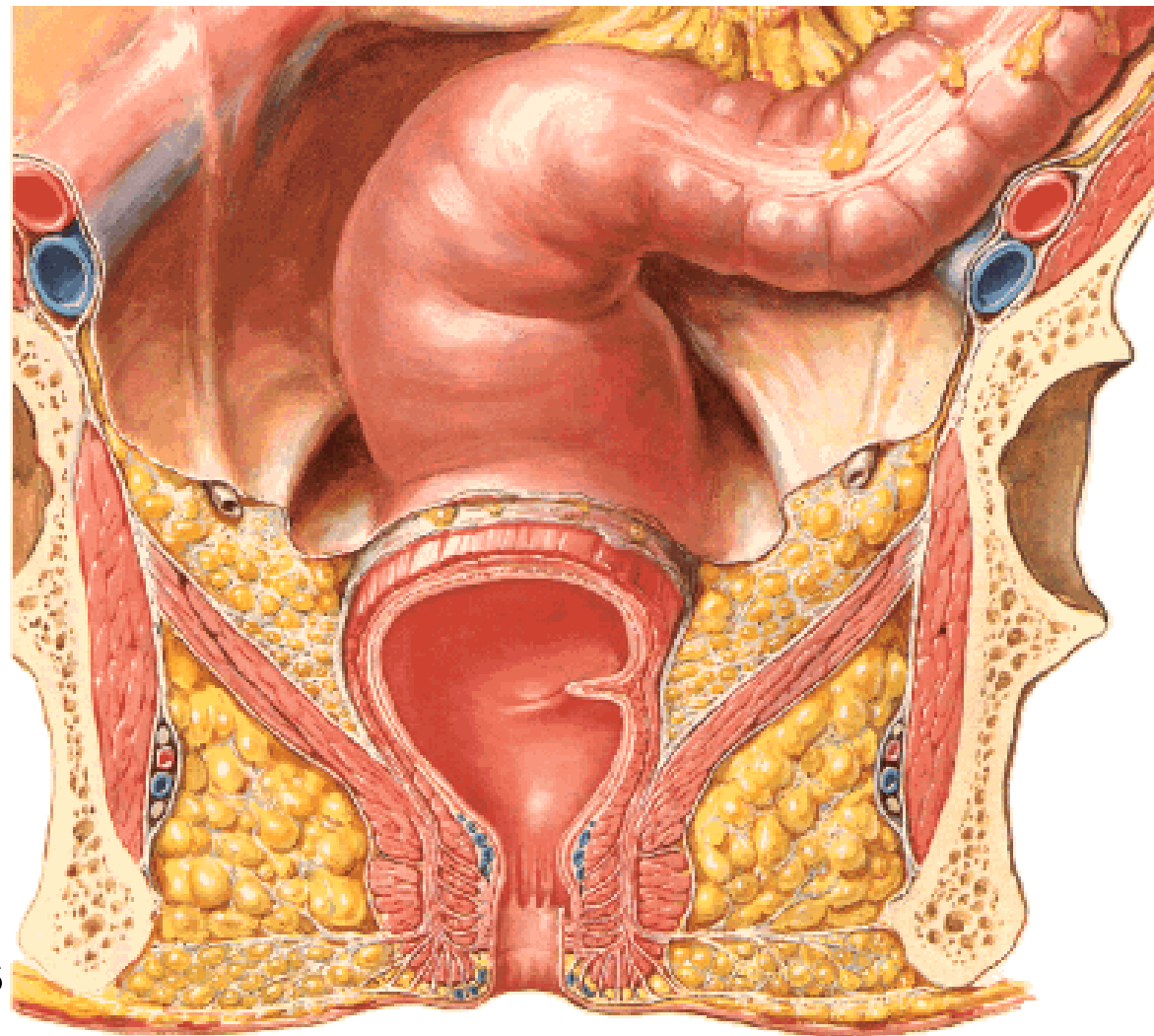
## FOSSA ISCHIORECTALIS

**Mediokraniálně:**  
diaphragma pelvis

**Laterálně:**  
m. obturatorius int.  
fascia obturatoria  
(canalis pudendalis)

**Ventrálně:**  
recessus pubicus

**Dorsálně:**  
m. glutaeeus maximus



## Použitá literatura:

Čihák R: Anatomie 2 (Splanchnologia). Avicenum, zdravotnické nakladatelství, Praha, 1988.

Netter F. H.: Interactive Atlas of Clinical Anatomy. Illinois, 1997

Atlas der Anatomie des Menschen/Sobotta.

Putz, R., und Pabst, R. 20. Auflage. München: Urban & Schwarzenberg, 1993