



## **Female Reproductive Tract Anatomy and physiology**



- To learn the different structures and nomenclatures for the parts of the female reproductive system.
- To learn the basic functions for the different parts of the tract and how they work together.

## Equine - Horse

Male → Stallion

Female → Mare



Updated: 10/5/2016

## Bovine - Cattle

Male → Bull

Female → Cow



Updated: 10/5/2016

## Ovine - Sheep

Male → Ram



Female → Ewe



Updated: 10/3/2016

## caprine - goat

• Male → Buck



• Female → doe



Updated 10/3/2016



## Canine - dog

• Male → dog



• Female → Bitch



Updated 10/3/2015

## Feline - cats

• Male → tom



©Warner Photography

• Female → queen



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Updated 10/3/2015

## Porcine - Swine - Pig

Male → Boar

Female → Sow



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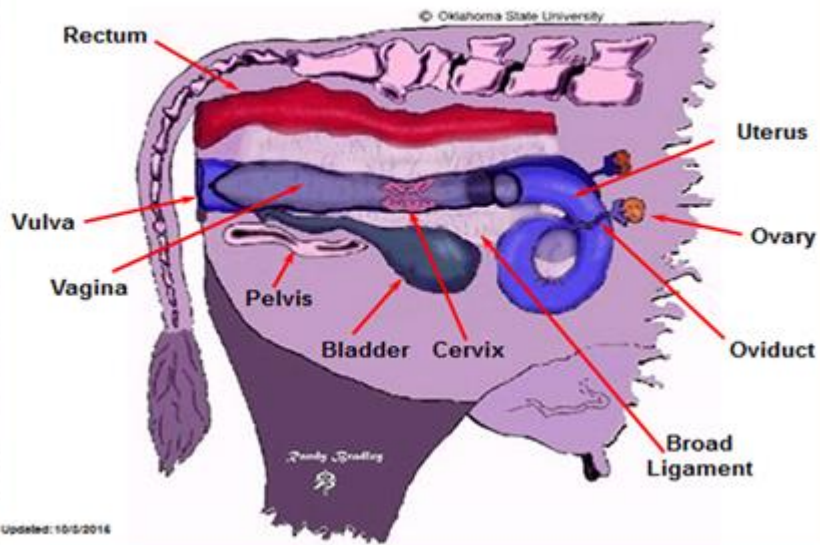
## Avian - Chicken

Male → Rooster

Female → Hen

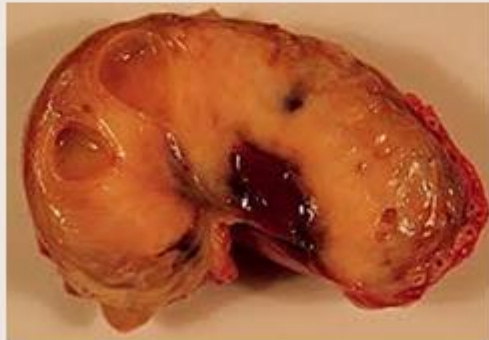


## Female Tract



## Female Reproductive System

- Ovary in mare kidney shape



## Cow ovary oval shape

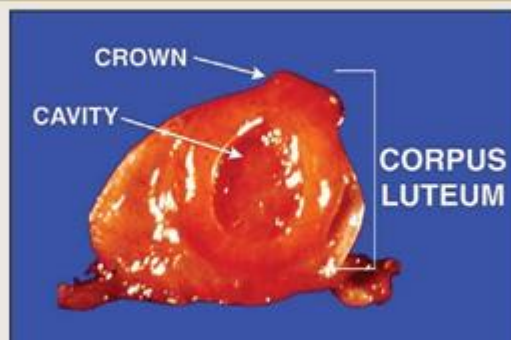
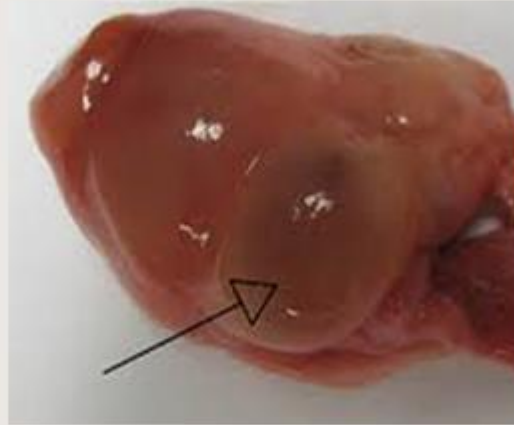


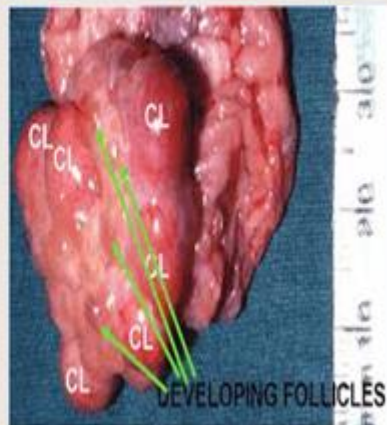
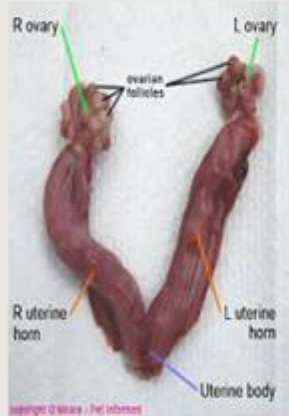
Figure 9. Cross section of bovine ovary with corpus luteum.



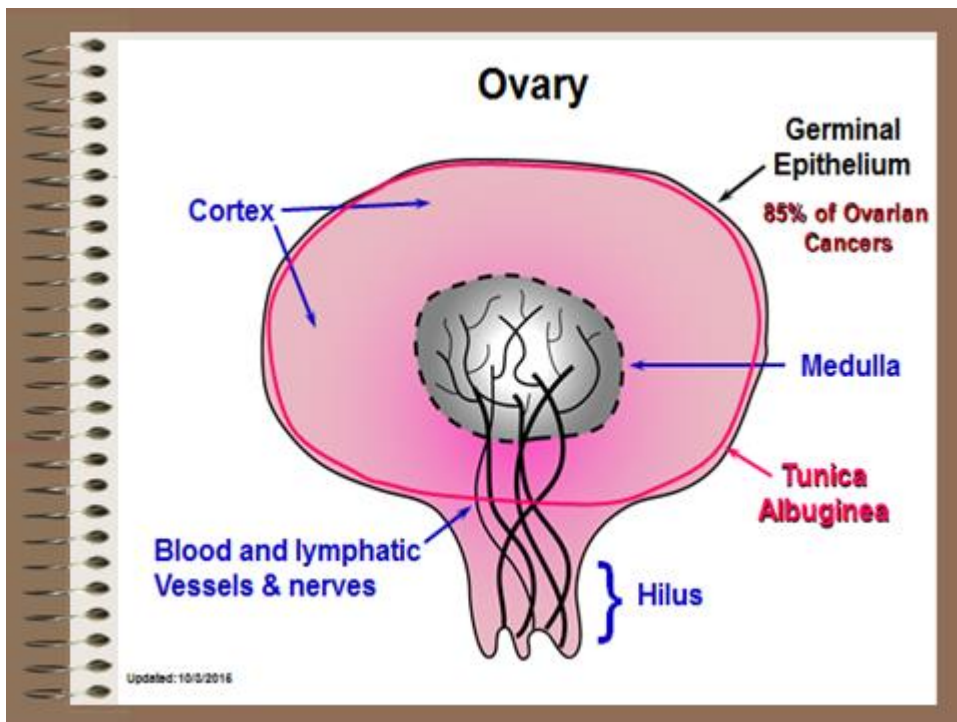
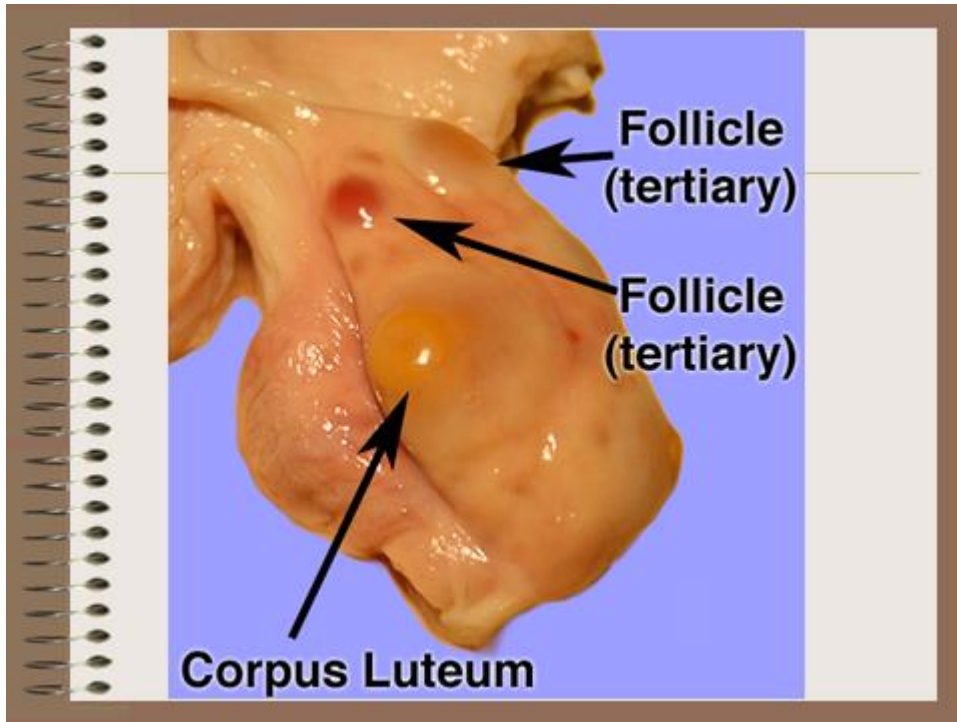
## Sow ovary cluster grapes

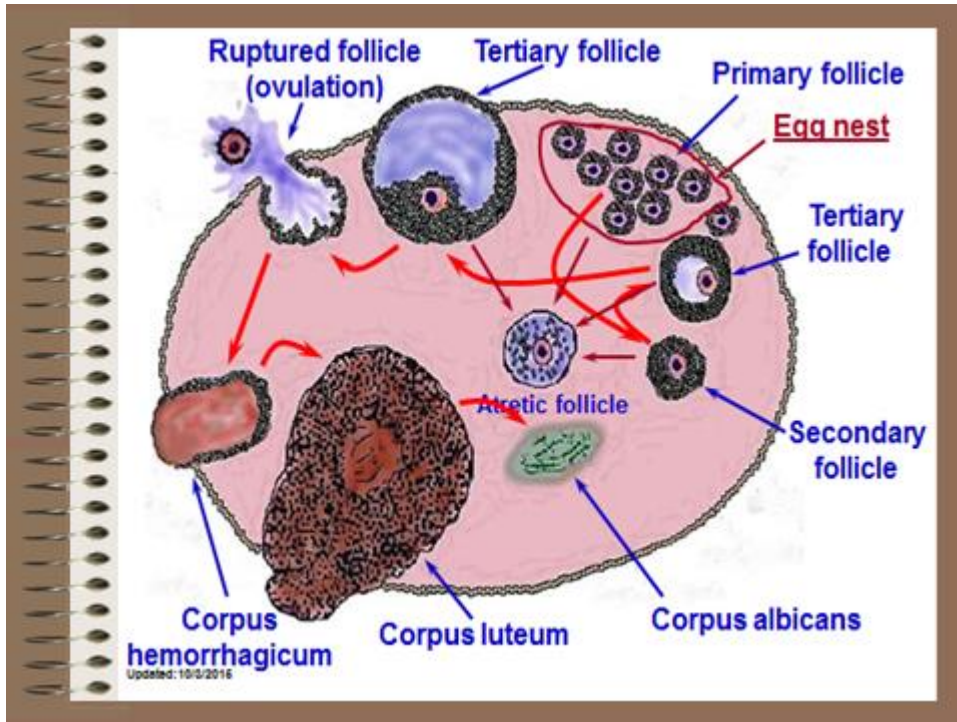


- Ovary in queen and bitch cluster grapes









**Primordial Follicle**  
 • Flattened cells surround oocyte

**Primary Follicle**  
 • Increase in size of oocyte and height of follicular cells

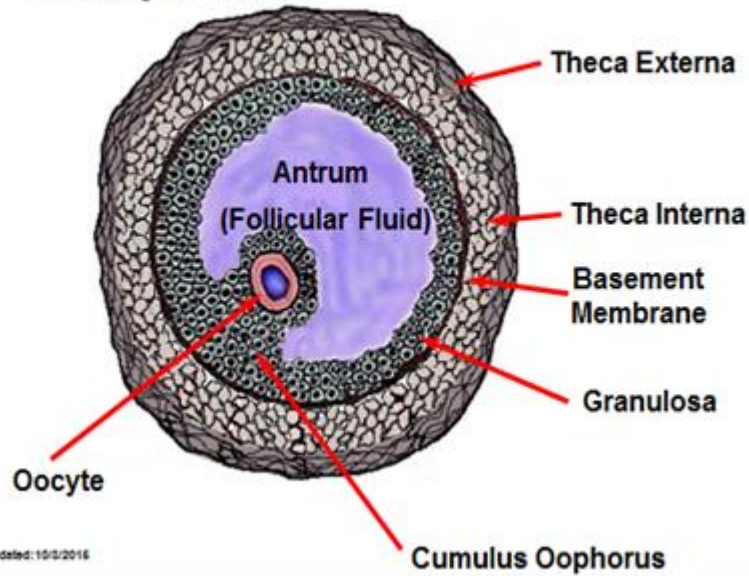
**Secondary follicle**  
 • Surrounded by several layers of follicular cells

**Tertiary follicle**  
 • Follicle forms a fluid filled cavity  
 • Differentiation of cell layers in the follicle wall

The microscopic images show the following structures:

- Primordial Follicle:** Shows flattened follicular cells surrounding a small oocyte. Labels include **Follicle Cells** and **Nucleus**.
- Primary Follicle:** Shows a larger oocyte with visible **Ooplasm** and a single layer of **Follicular Cells**.
- Secondary follicle:** Shows a large oocyte surrounded by multiple layers of **Follicular Cells**.
- Tertiary follicle:** Shows a large oocyte within a fluid-filled **Antrum**, surrounded by a thick wall of differentiated cell layers.

## Tertiary Follicle



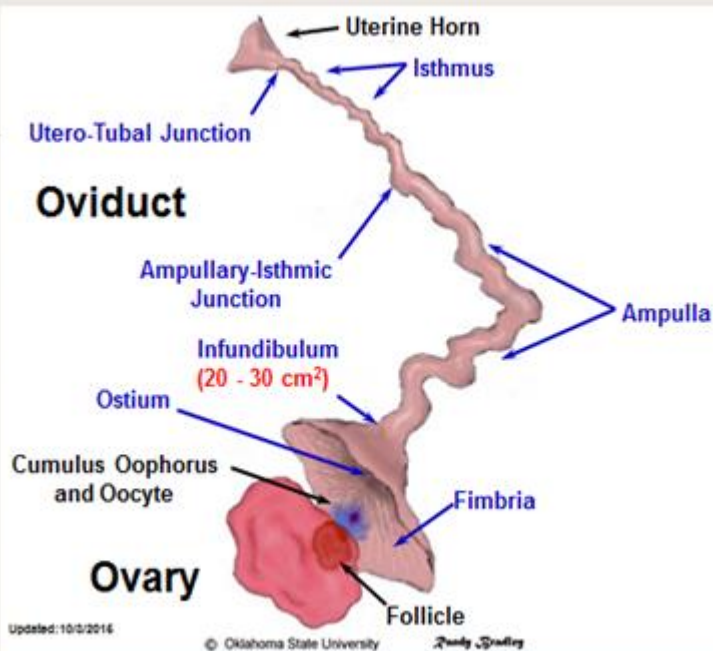
## Function of ovary

- » Hormonal function so called endocrine gland
  - Estrogen
  - Progesterone
- » Female gamete releasing so called exocrine gland
  - Oocyte

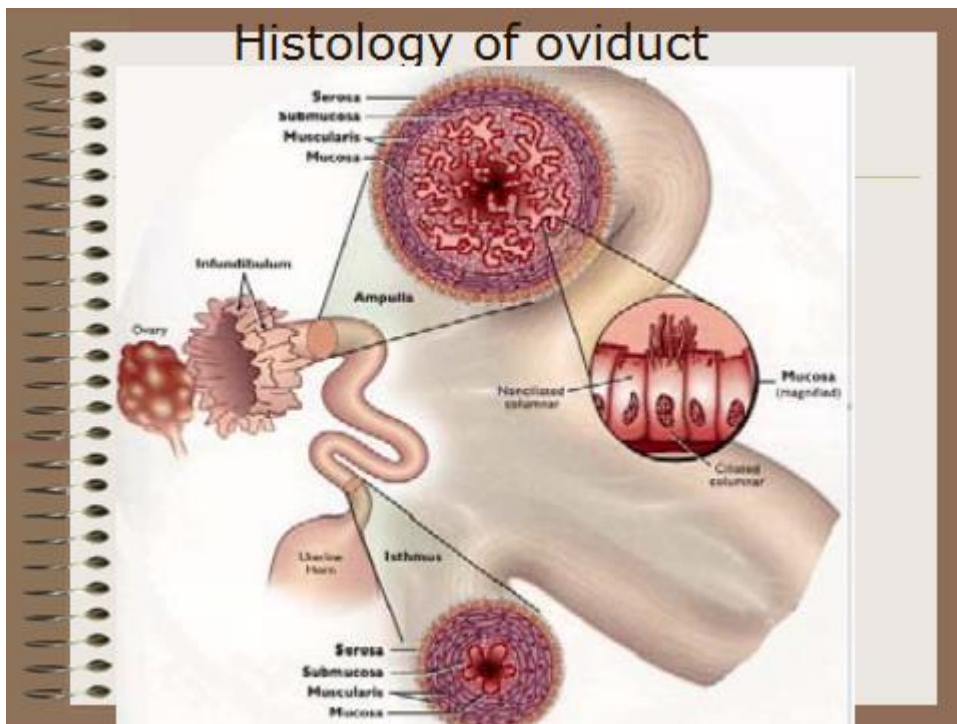
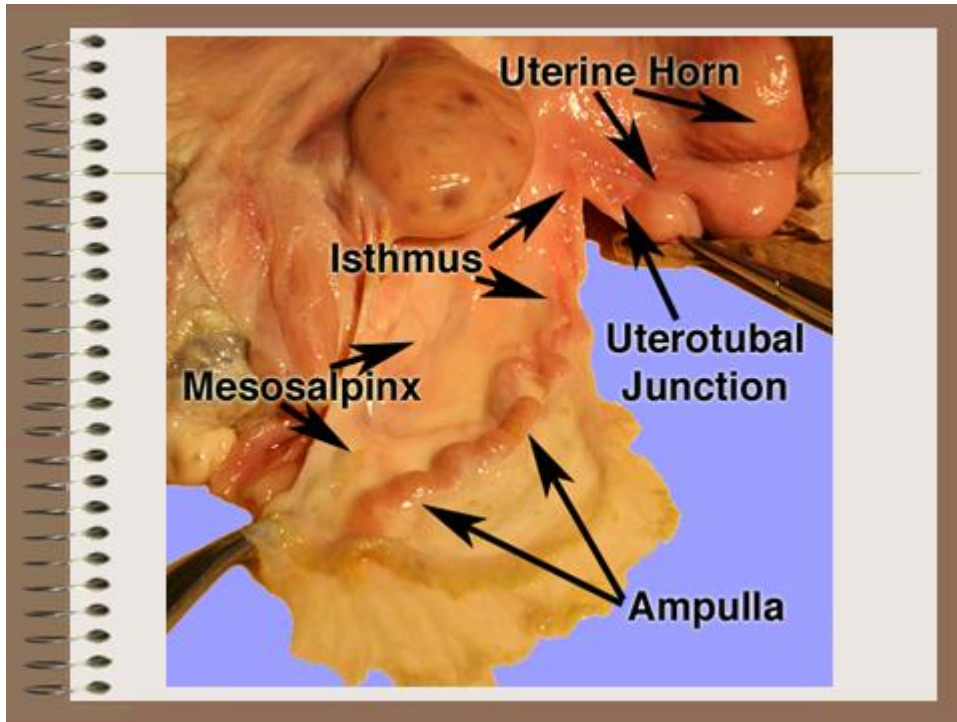


## Female Reproductive System

- **Fallopian Tubes (or Oviducts)** - pair of small tubes leading from the ovaries to the horns of the uterus (5 - 6 inches).
  - Fertilization occurs in the oviduct.
  - Egg travels from ovary to uterine horn in 3 - 4 days.
- **Infundibulum** - the funnel shaped portion of the fallopian tube near the ovary that catches the ovulated egg.







# Female Reproductive System

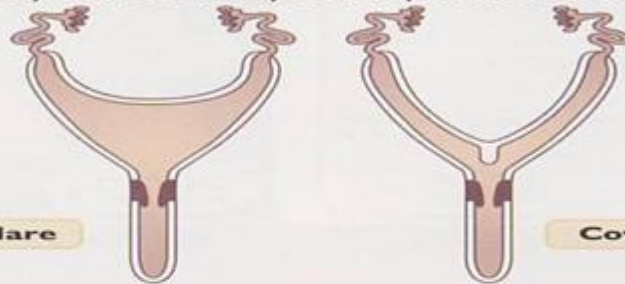
## Functions of Oviduct

- Gamete Transport
  - » Sperm
  - » Oocyte
- Site of fertilization
- Supports early embryo development
- Transport of embryo to uterus

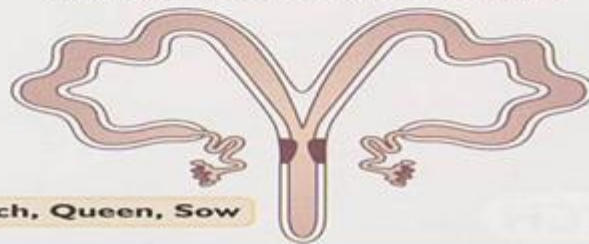
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## Bicornuate

(Poorly to moderately developed uterine horns)

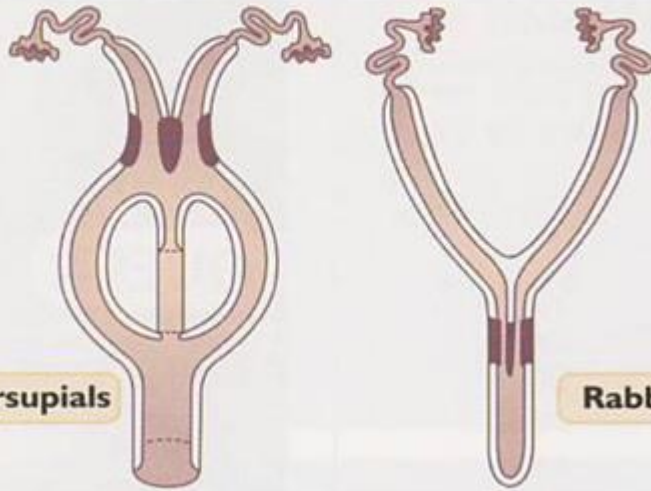


Highly developed uterine horns



Bitch, Queen, Sow

## Duplex (Two cervixes)



Marsupials

Rabbit

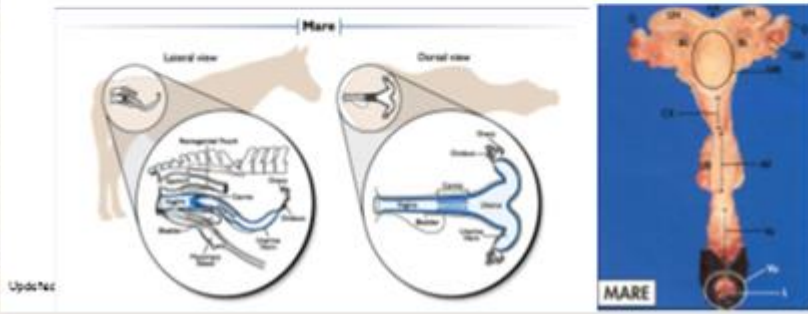
## Uterine classified depending development horns

### Simplex (No uterine horns)

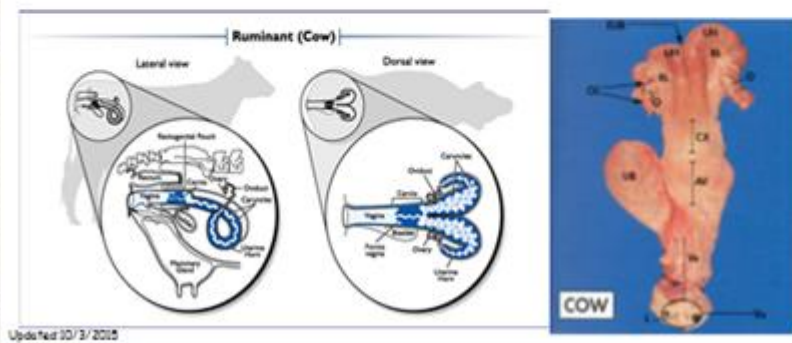


Primate

- 1- equine reproductive system be located in pelvic cavity
- 2- the uterine shape - T shape
- 3- the ovary shape – kidney shape
- 4- the cervix longitudinal fold

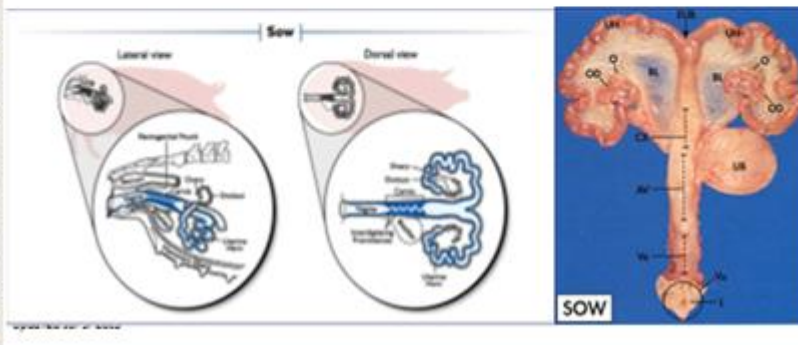


- 1- cow reproductive system found in pelvic cavity
- 2- the uterine shape: horn like shape
- 3- ovary oval shape and size double size in ewe
- 4- cervix annular ring shape 4-5 rings

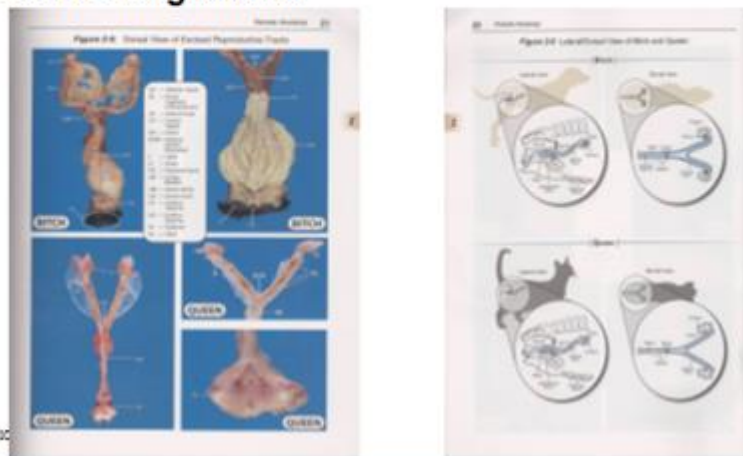




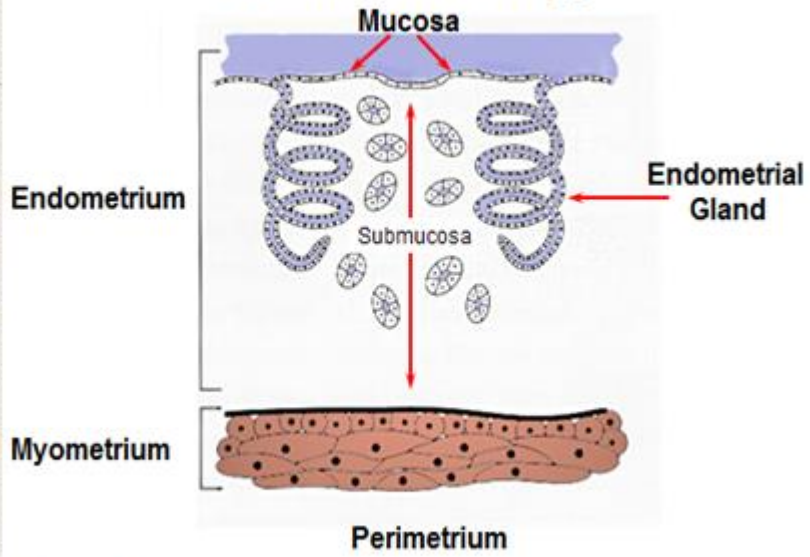
- 1-sow reproductive system found in abdominal cavity
- 2- the uterine shape-intestinal like shape
- 3- ovary shape - cluster grapes shape and
- 4- cervix spiral shape



- 1-queen and bitch reproductive system found in abdominal cavity
- 2- the uterine shape-Y - like shape
- 3- ovary shape - cluster grapes shape
- 4- cervix longitudinal



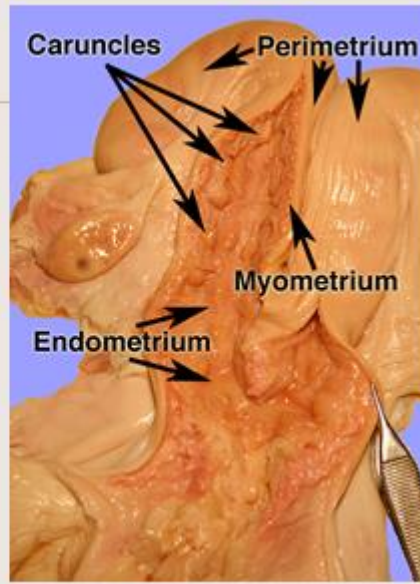
# Uterine Histology



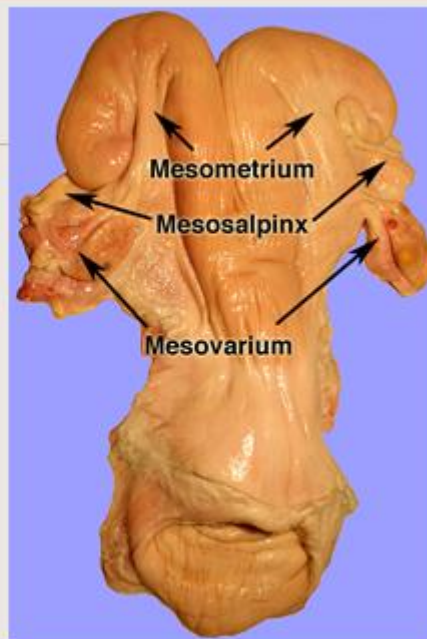
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## Uterus



## Broad Ligament



## Functions of the Uterus

- Muscle contractions
  - » Transport sperm
  - » Expel fetus and placenta
- Absorption and phagocytosis
- Partially prepares sperm for fertilization
  - » capacitation
- Provides environment for embryo and fetal growth
- Hormone production
  - » Prostaglandin F<sub>2α</sub> production



Updated: 10/5/2016

## Sow Reproductive Tract

