

## Practical Obstetrics-5<sup>th</sup> Stage



# Pregnancy diagnosis in Bovine

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# INDICATED OF PREGNANCY DIAGNOSIS:

- 1) **To identify non-pregnant animals soon after breeding or insemination .**
- 2) **Early detection of pregnancy allows early recognition and treatment of problems.**
- 3) **To certify animals for sale or insurance.**
- 4) **To reduce waste in breeding programs using expensive hormonal techniques.**
- 5) **To assist in economic management of livestock.**
- 6) **Allows for identification of twins early in gestation which allows manager to make the decision to eliminate one twin before gestation is too far along. Twins are not desirable in horses.**

# Methods of pregnancy detection:-

1-Managemental m.

2-Clinical m.(Rectal P. ,US, Radiology)

3-Labarotary m.



# 1- Management al m .

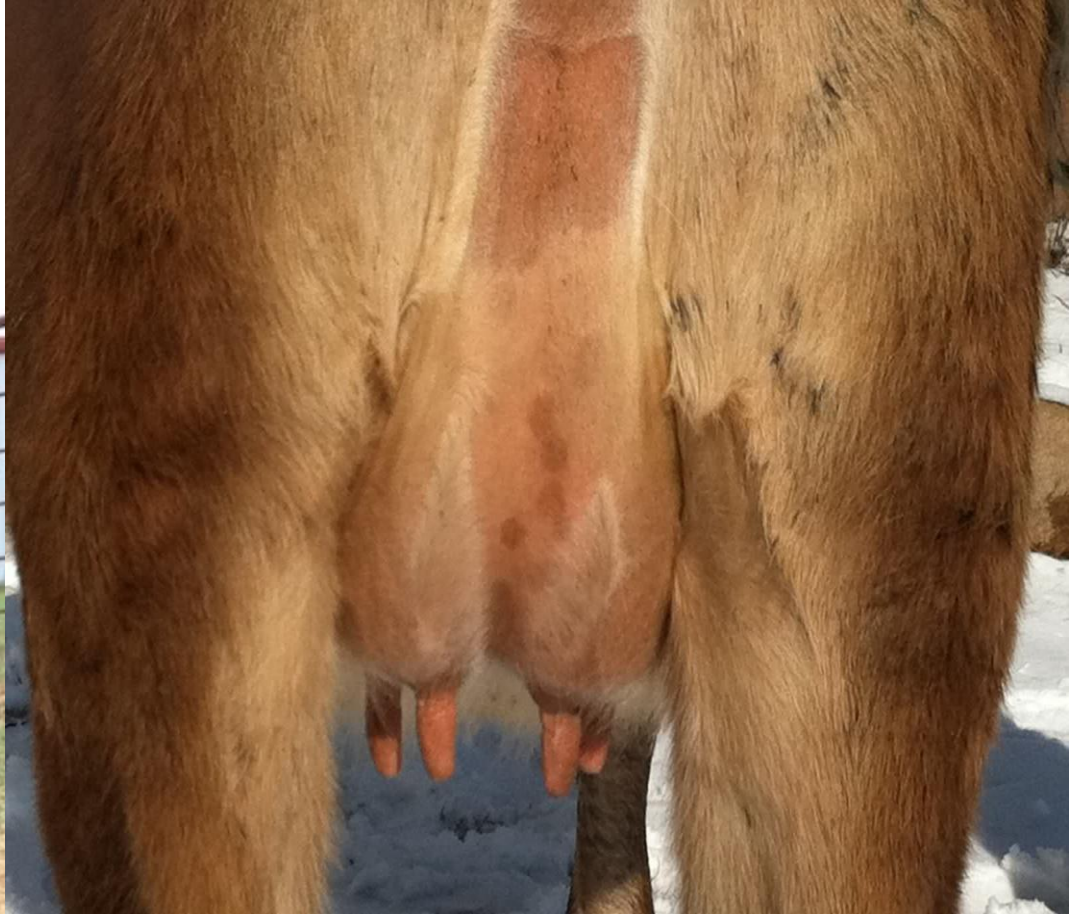
- **Non- return to estrus is an unreliable procedure for pregnancy diagnosis in most domestic animal species.**

- **Increase in the size of the abdomen.**

- **Development of the udder specially in dairy heifers (4months onwards), slight vaginal discharge (from 4-5 months onward in dairy cows).**

- **Movements of the fetus visible externally (specially in fed cows on the right side of abdomen ,6 months onwards).**











# 2-RECTAL PALPATION

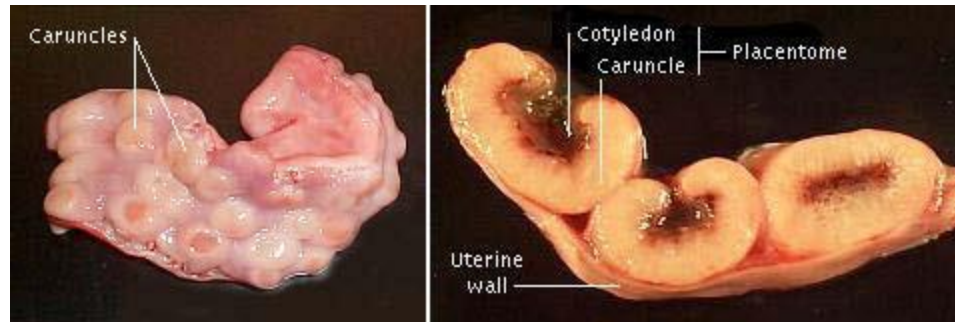
## Cow & Buffalo

- **First month:** fully developed C.L, quiescent uterus.
- **Second month :** Enlargement & bulging of gravid (pregnant) horn ,amniotic vesicle .
- **Third m.:** Fetus is palpable , descent uterus commence. *Slipping of the fetal membranes.*

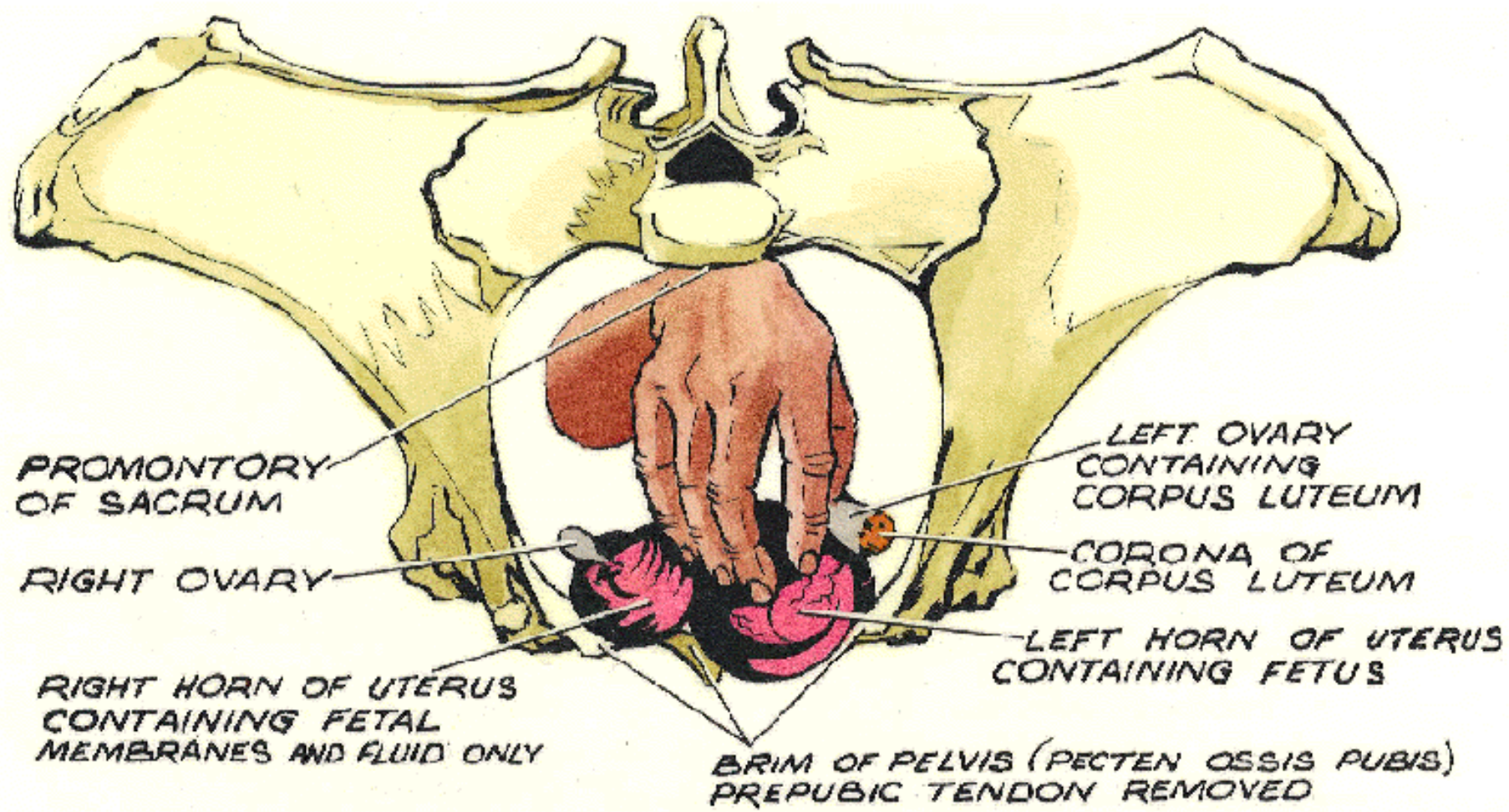




- **Fourth to seven m.** : Uterus on abdominal floor and Cotyledon 2-5cm , *fetus difficult to palpate* , M.U.A.hyperatrophy & pulse change to **fremitus** .

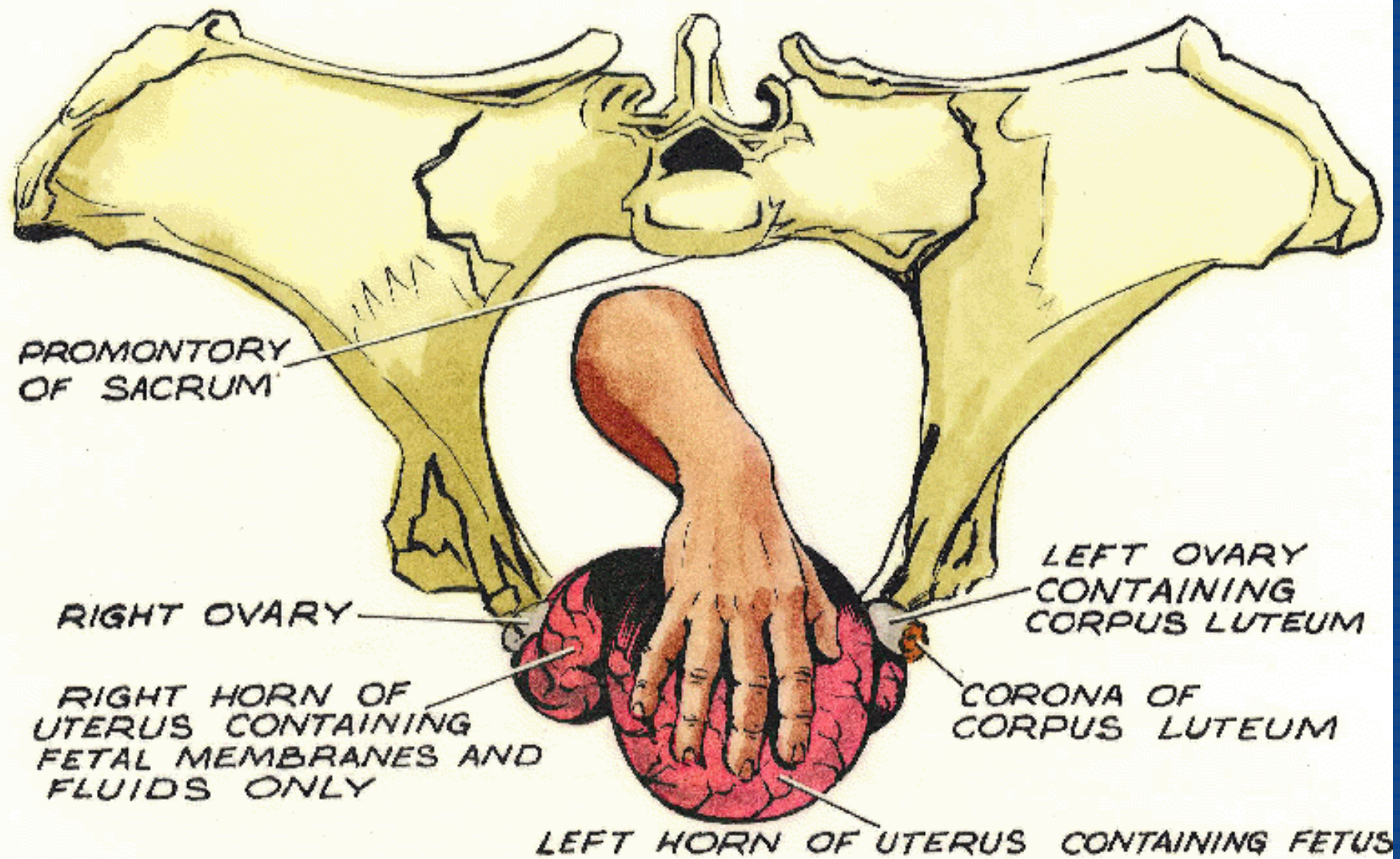


- **Seven m. to term:** Cotyledons, fremitus & fetal parts are palpable.



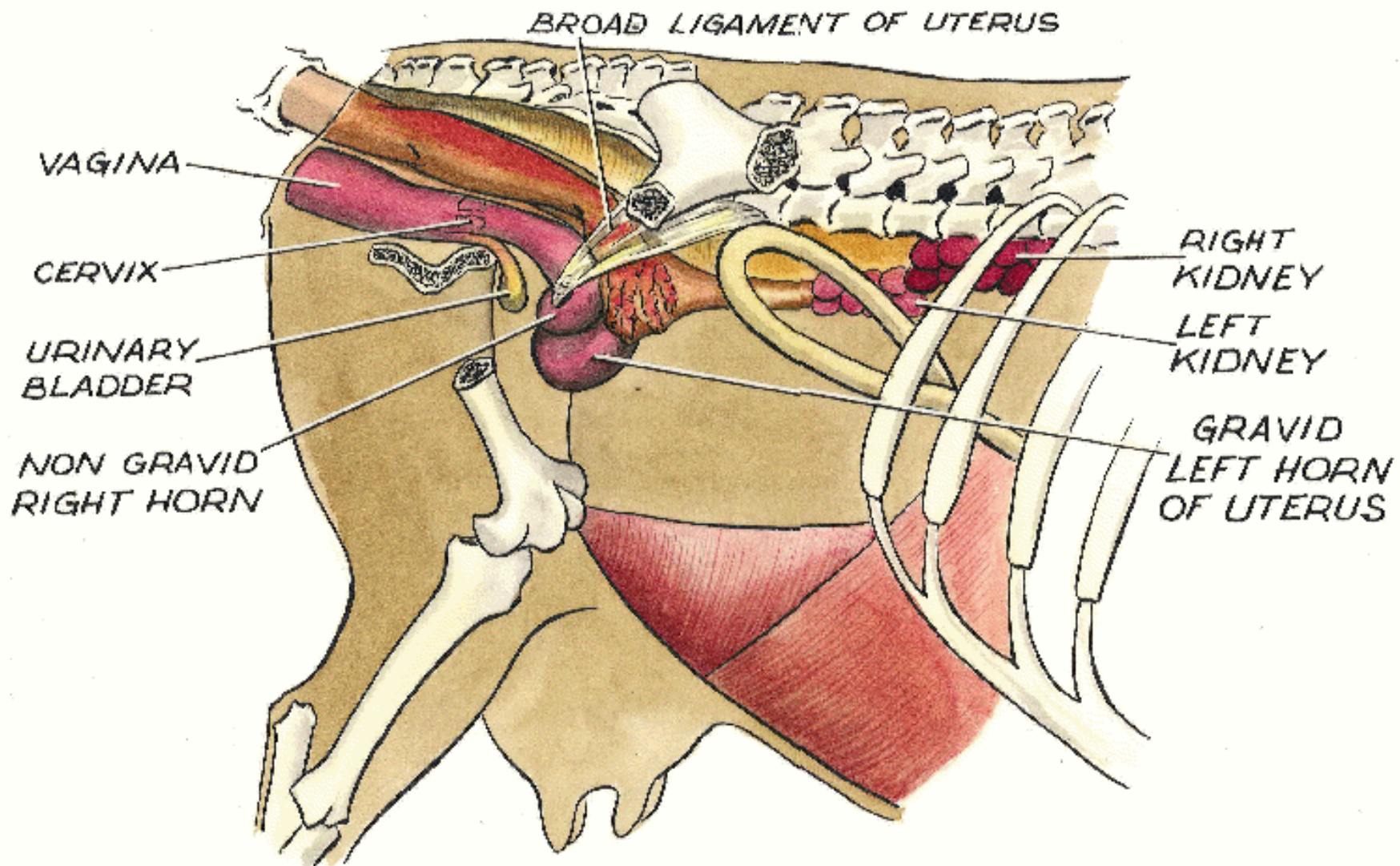
**RECTAL EXAMINATION OF PREGNANT COW.  
GRAVID UTERUS - 70 DAYS.**



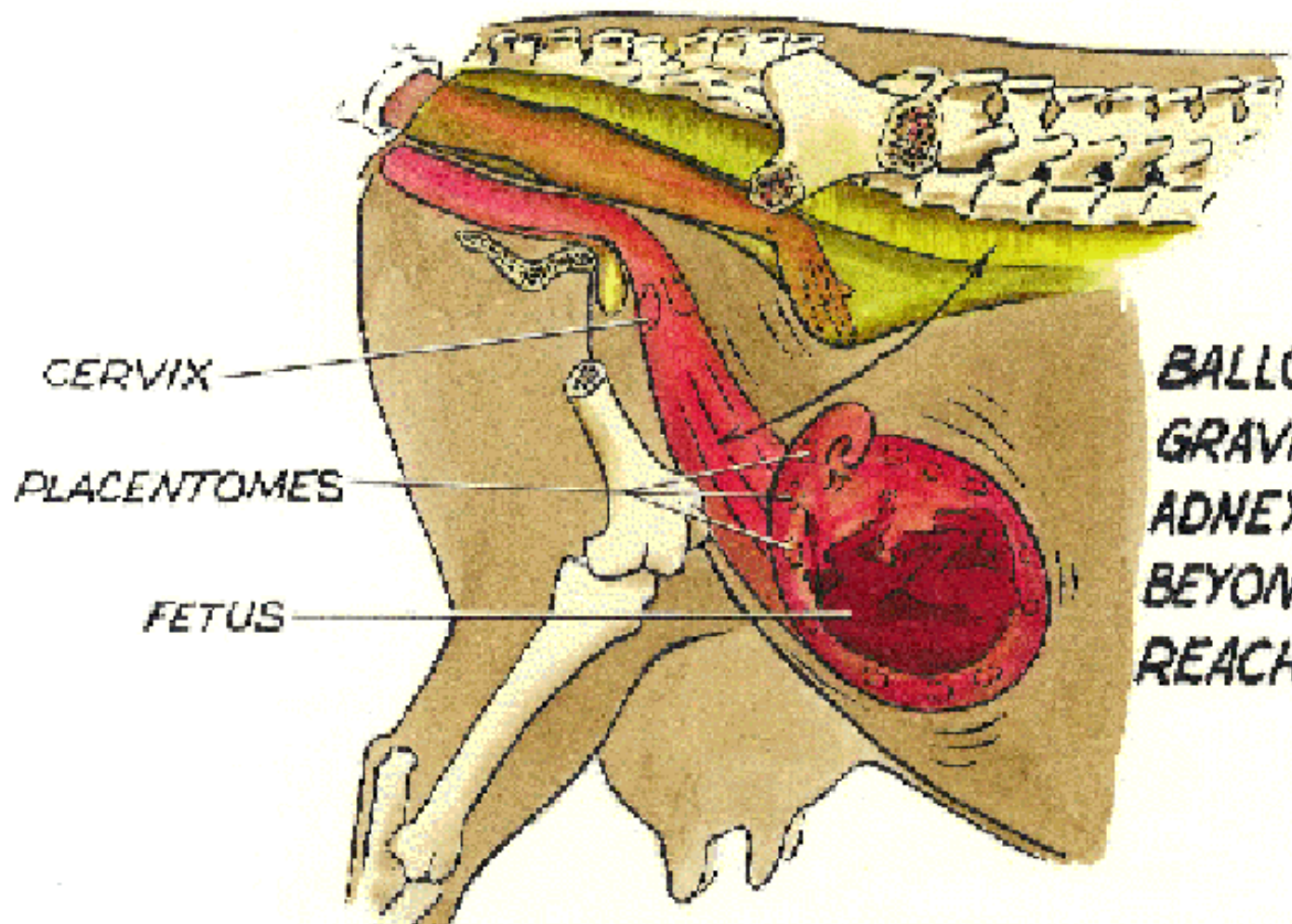


**RECTAL EXAMINATION OF PREGNANT COW.  
GRAVID UTERUS - 90 DAYS.**





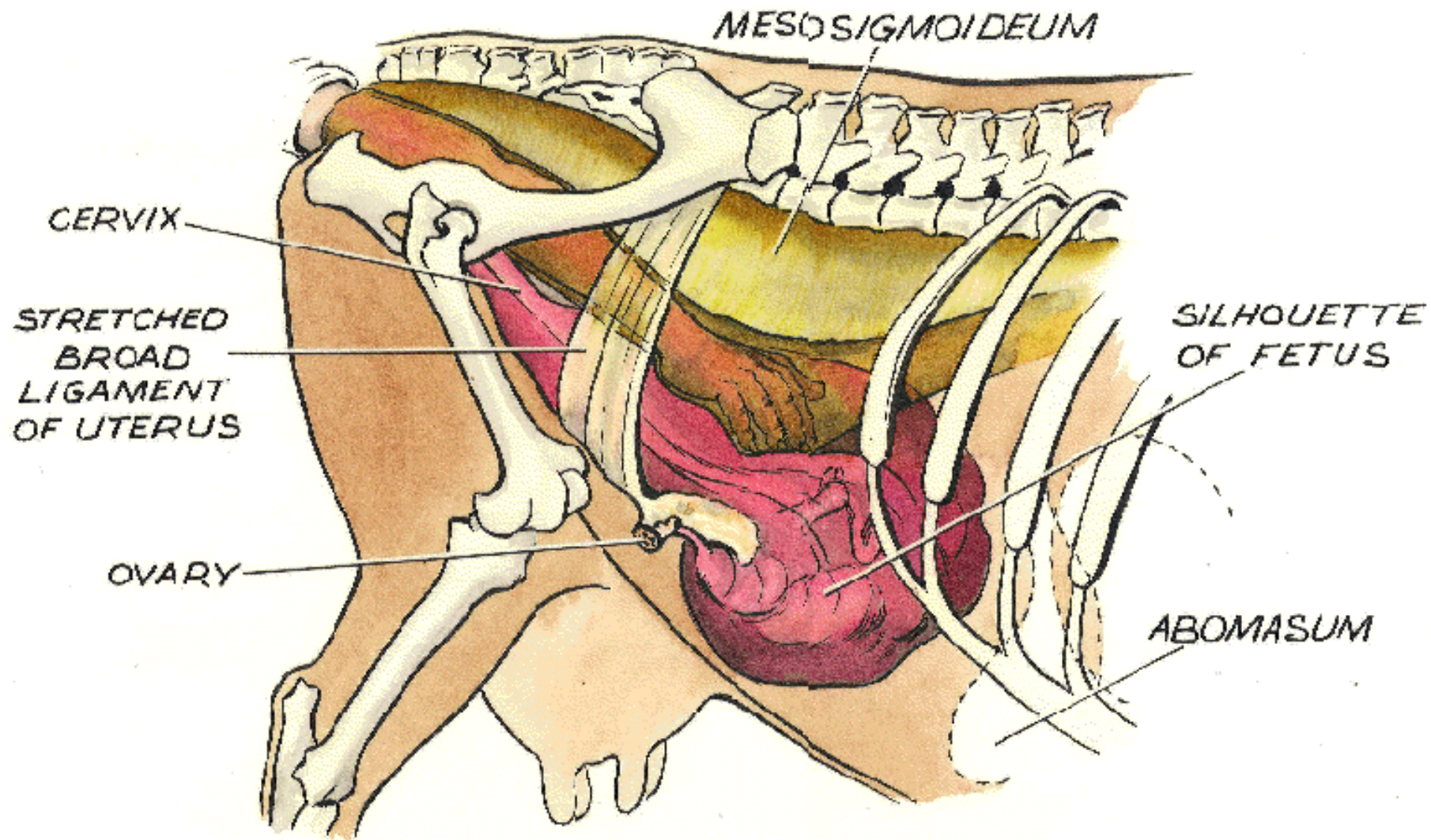
**RECTAL EXAMINATION OF A COW AT THE END OF THE THIRD MONTH OF GESTATION.**



**BALLOTTEMENT OF GRAVID UTERUS AND ADNEXA NORMALLY BEYOND MANUAL REACH.**

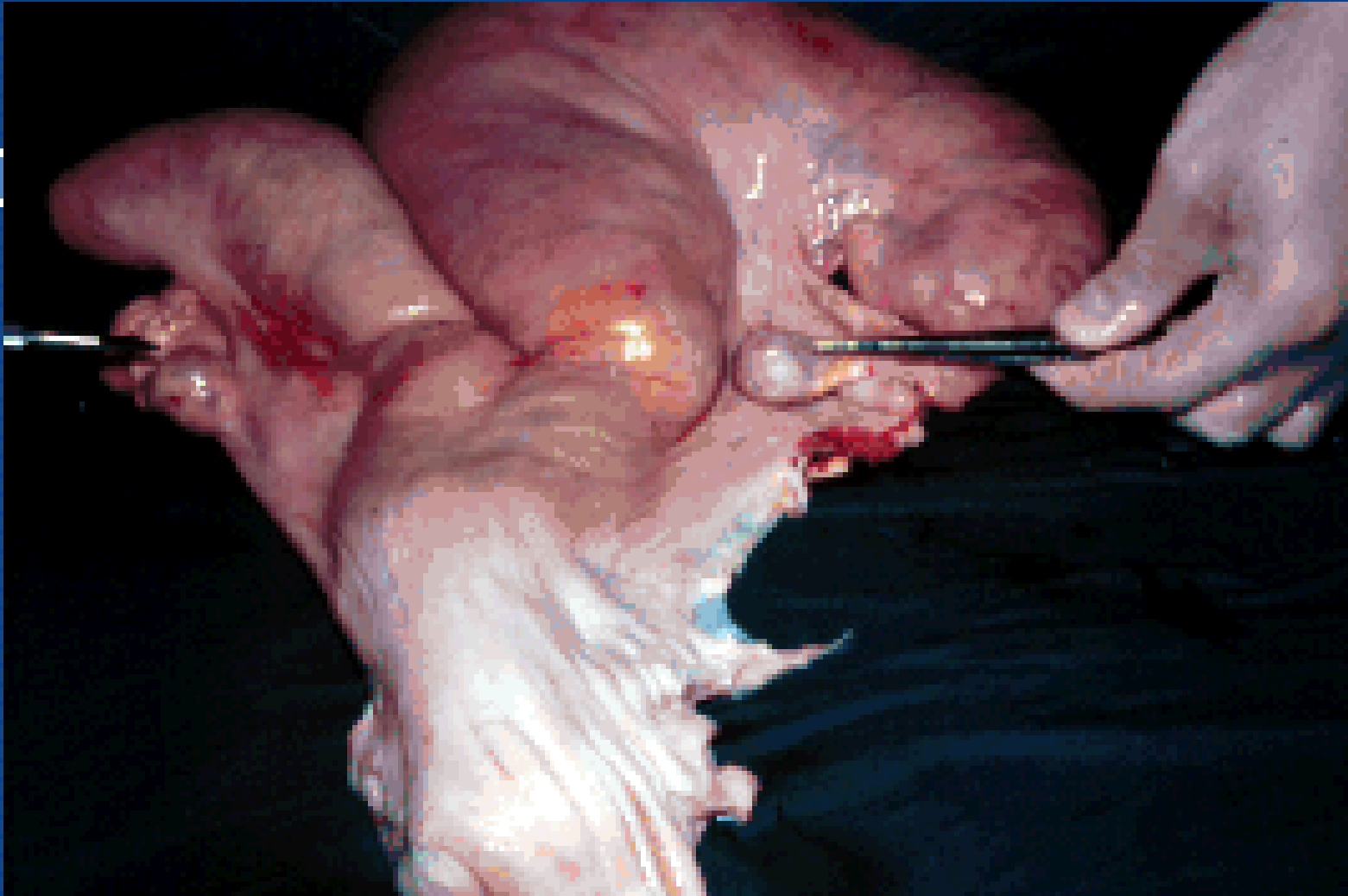
**RECTAL EXAMINATION OF A COW AT THE FIFTH MONTH OF GESTATION.**





**RECTAL EXAMINATION OF A COW AT THE SIXTH MONTH OF GESTATION.**

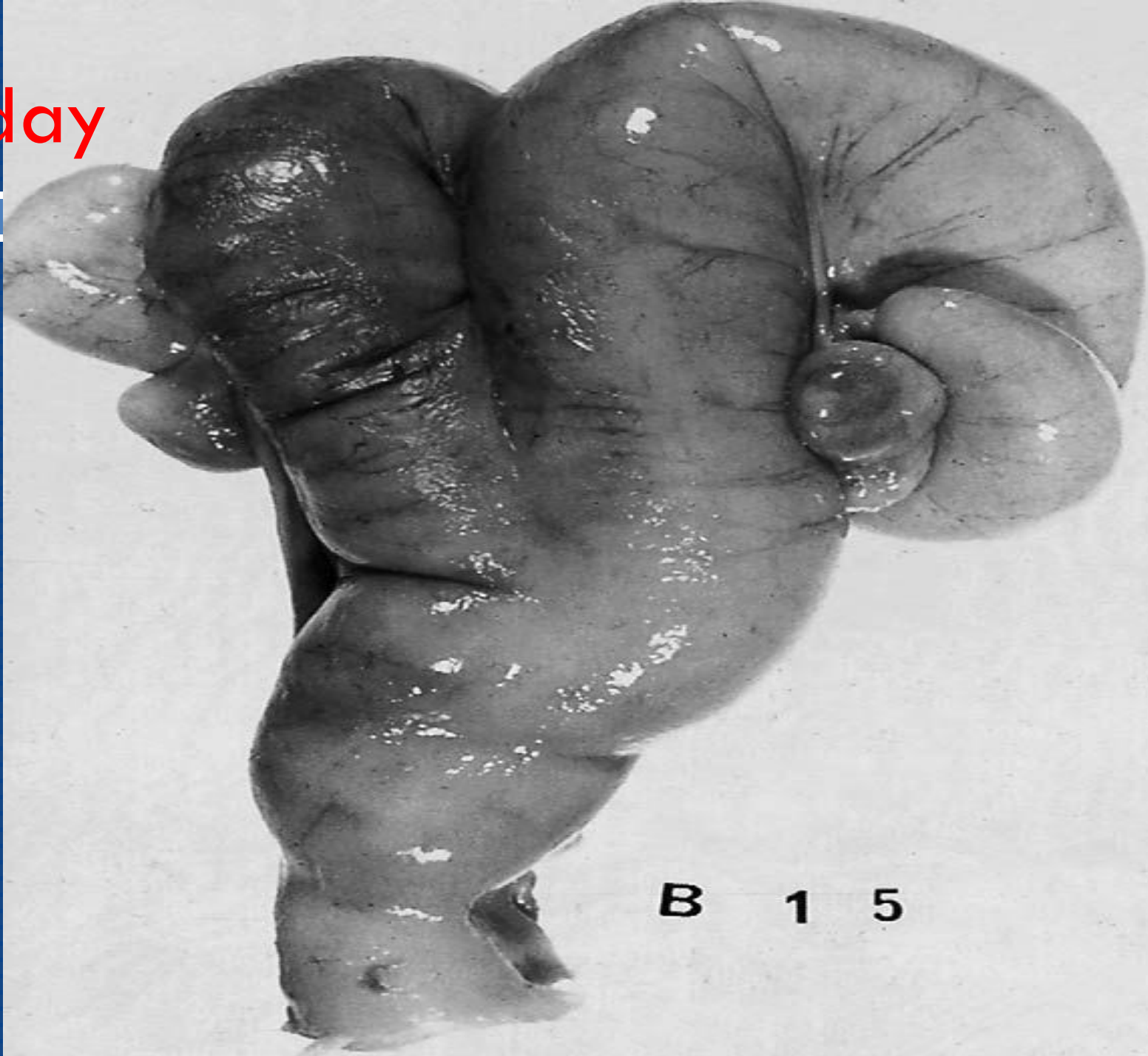




**Pregnant cow in 35 day**

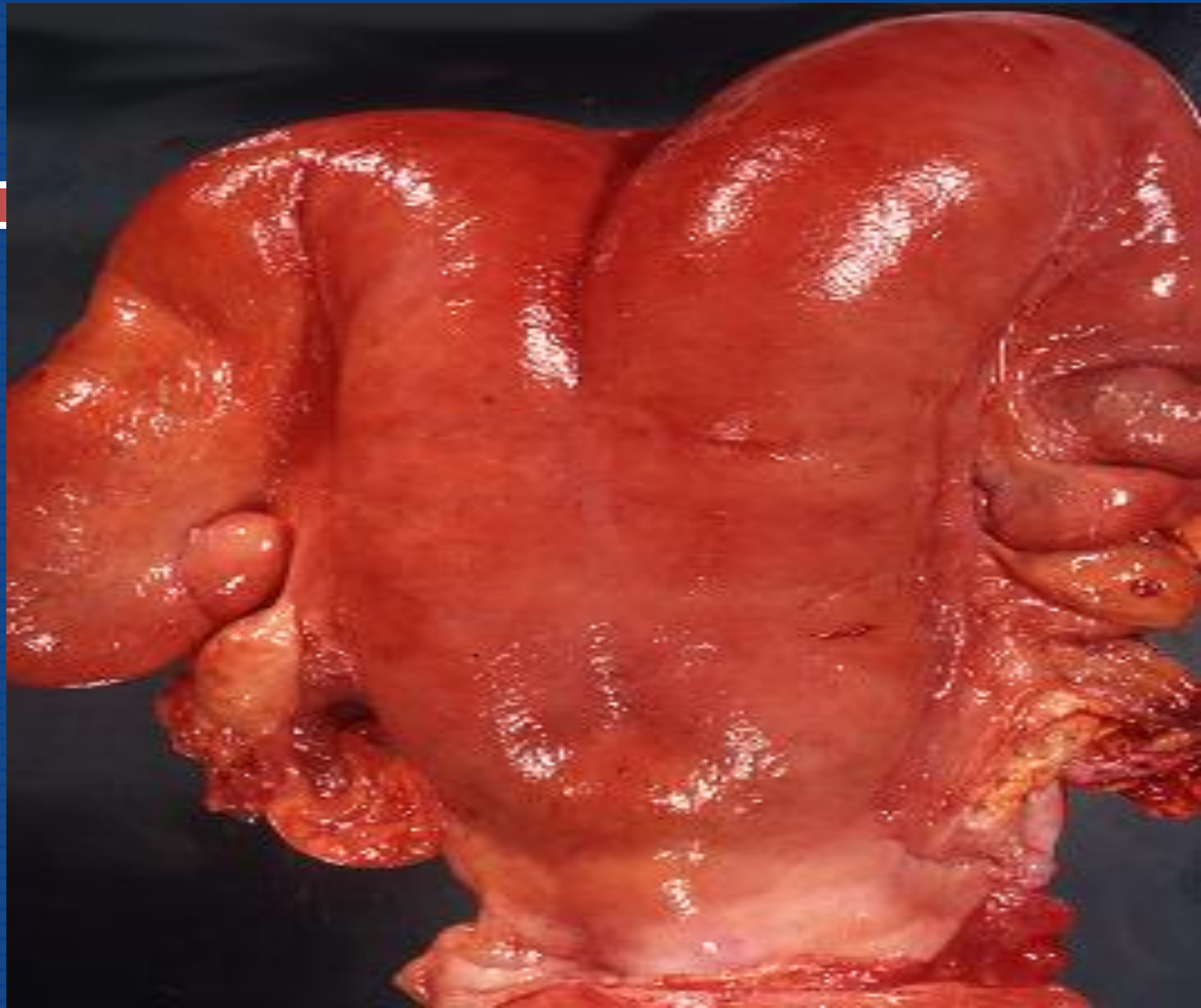


40 day

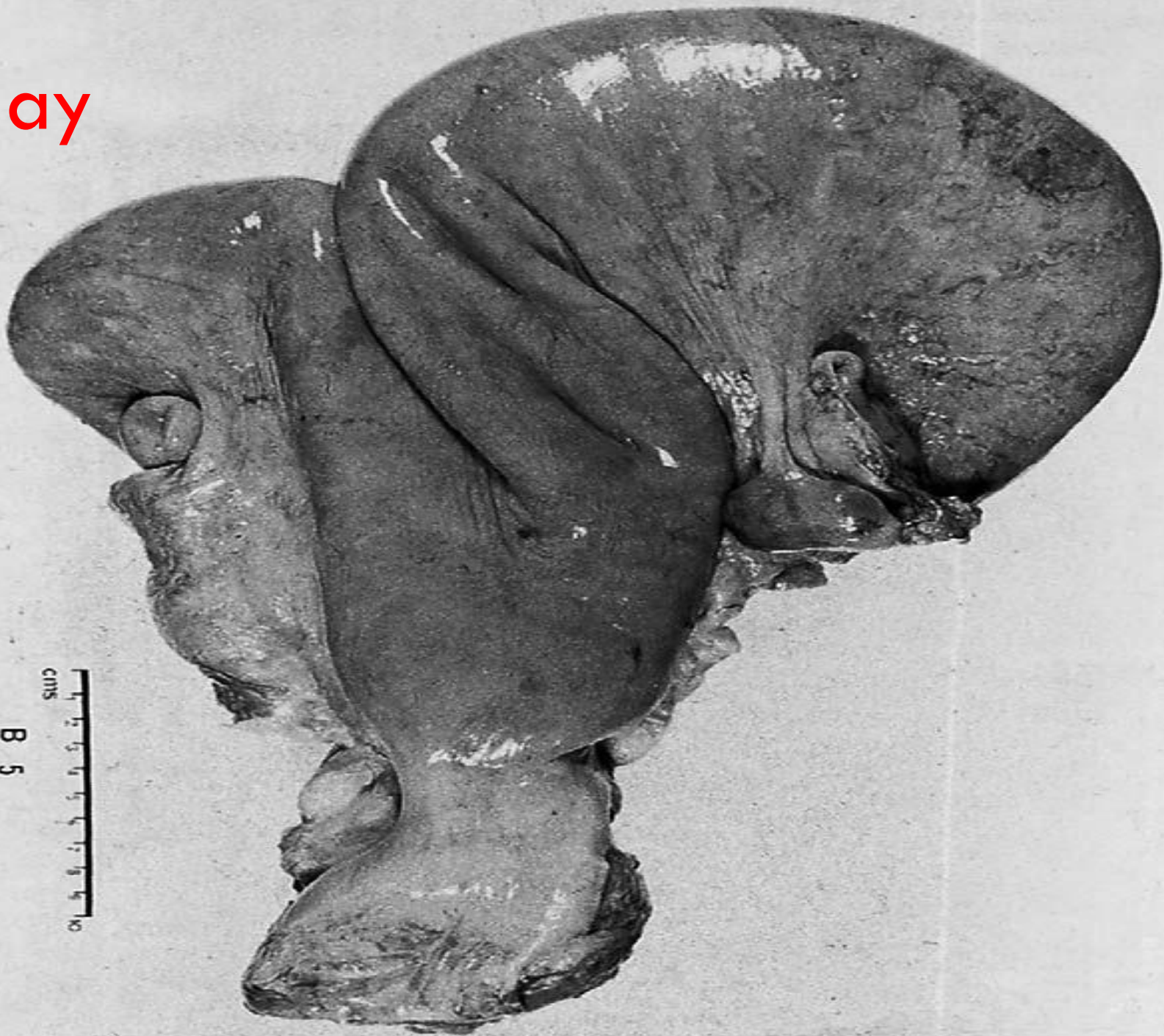


B 1 5



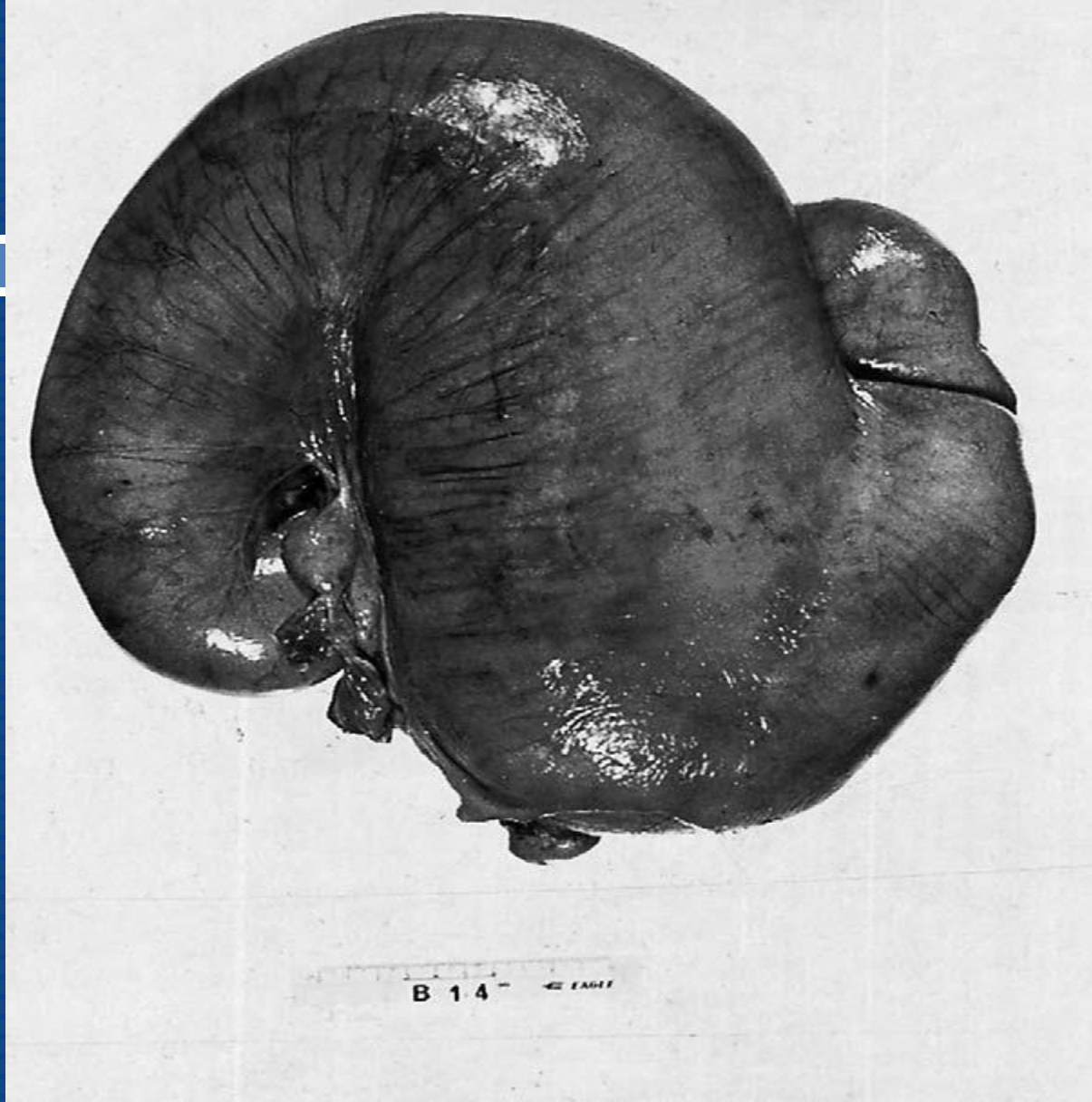


85 day



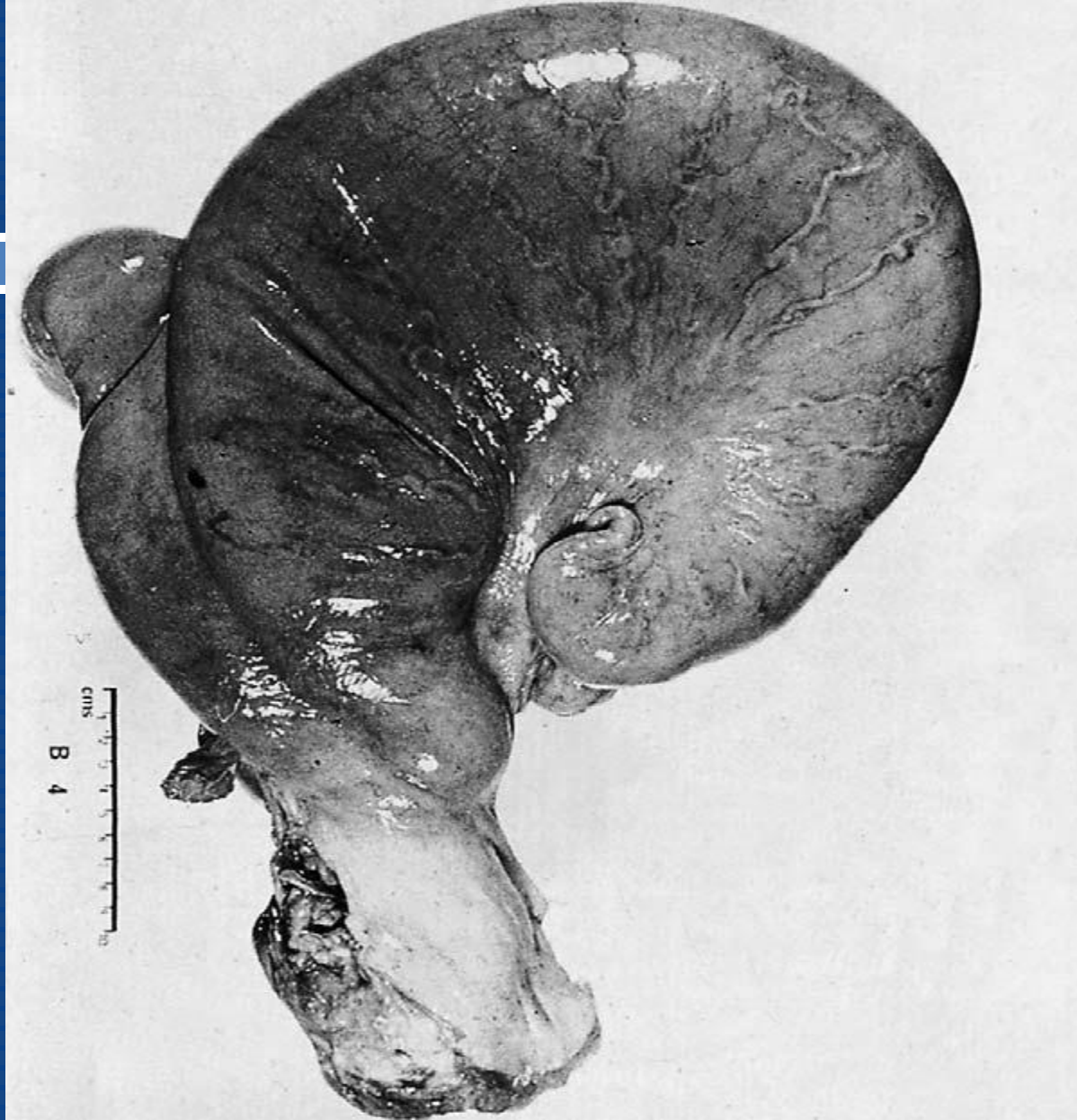
10  
9  
8  
7  
6  
5  
4  
3  
2  
1  
0  
cm

B 5



4 month

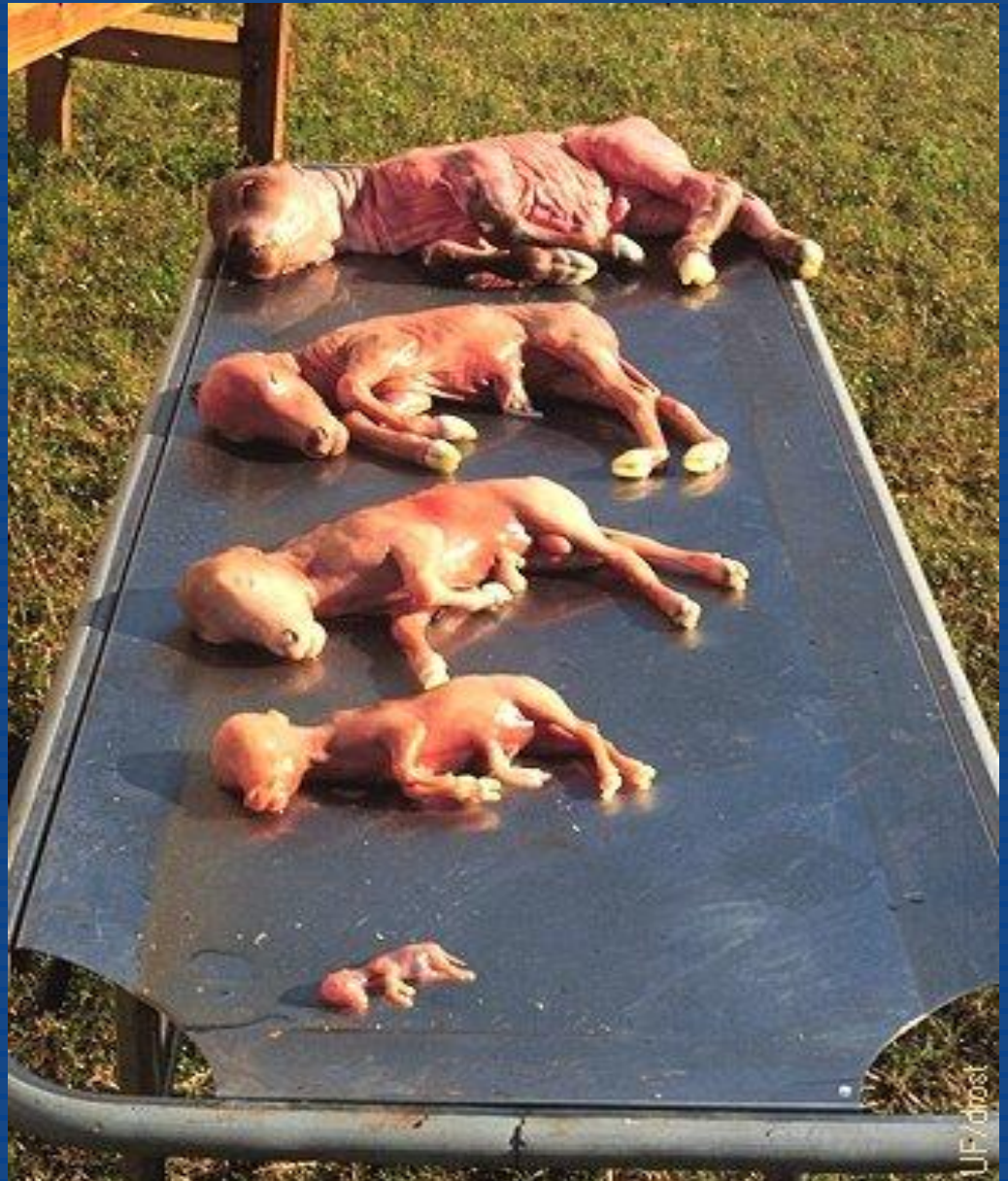


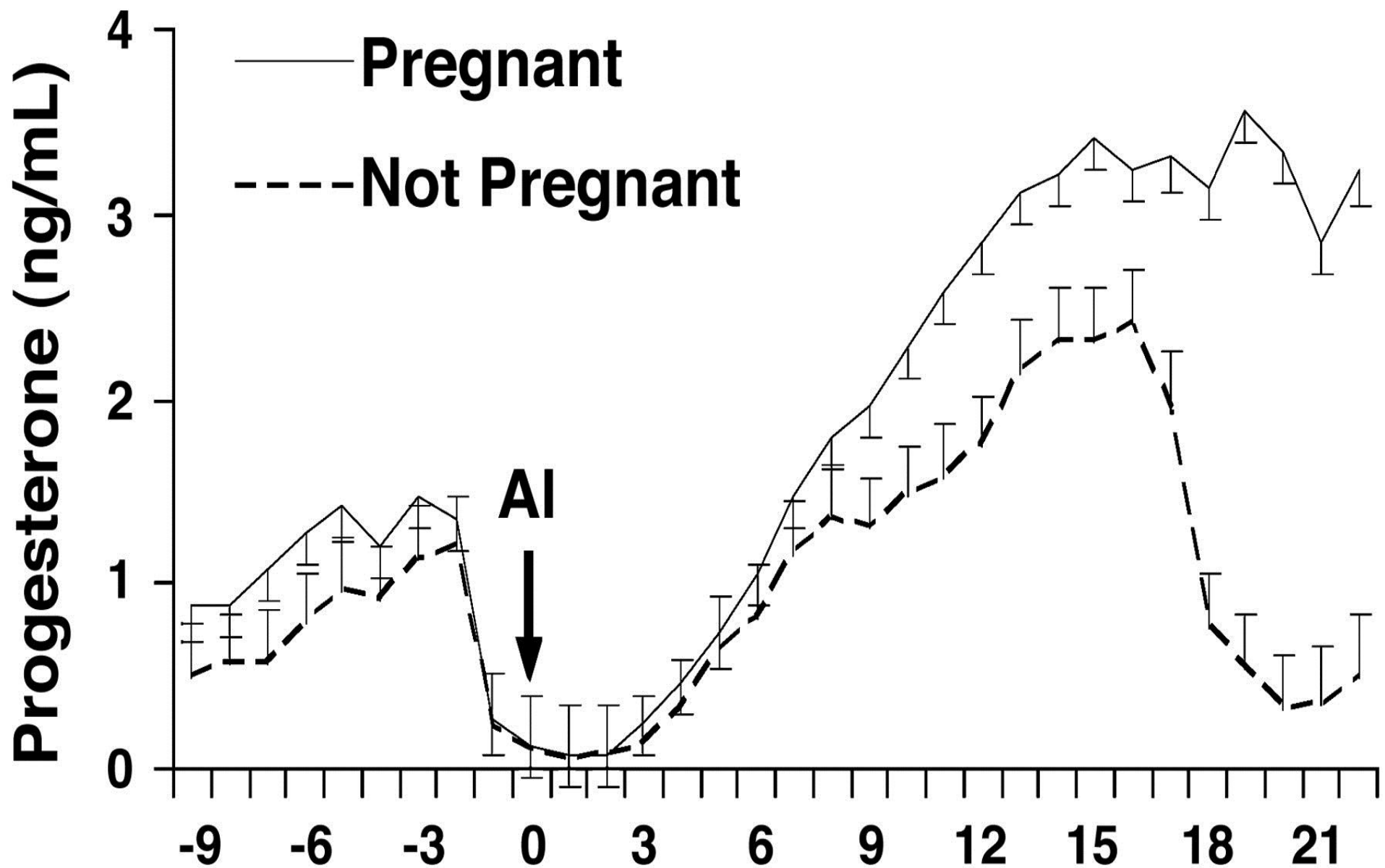


4.5 month of pregnancy

# Fetus

- ✓ 2 months mouse
- ✓ 3 months rat
- ✓ 4 months small cat
- ✓ 5 months large cat
- ✓ 6 months beagle dog







# 3-Ultrasonographic technique . (Sonar)



**Linear Array Probe  
(Transducer) 5-7.5  
MHz**



**Curved Array Probe  
(Sector probe) - 2.5-5MHz**

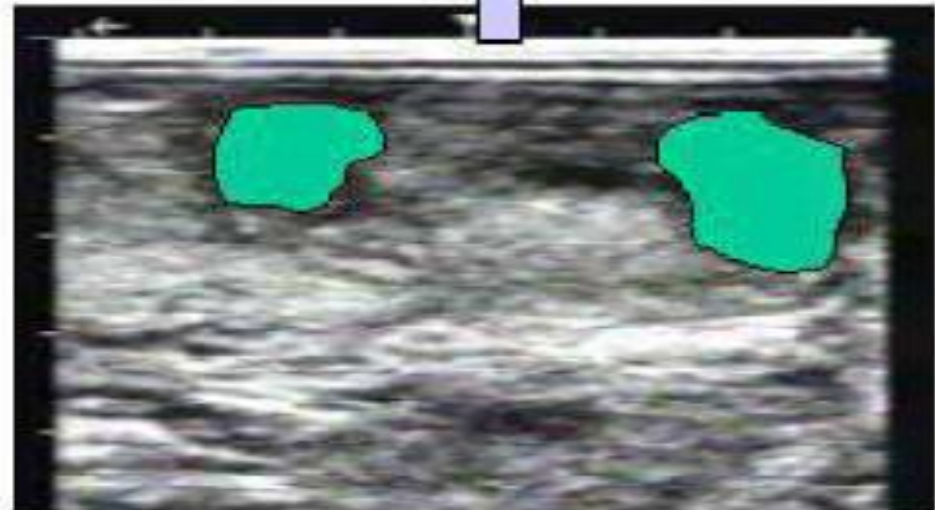
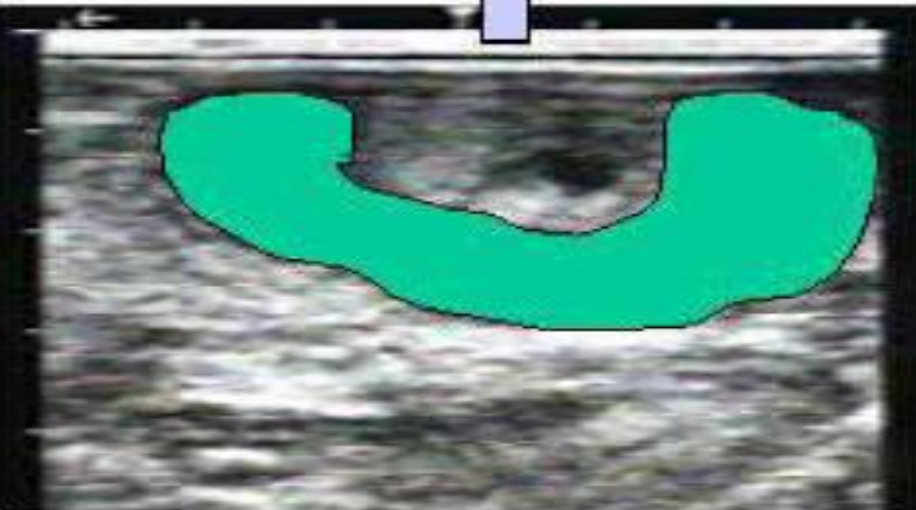
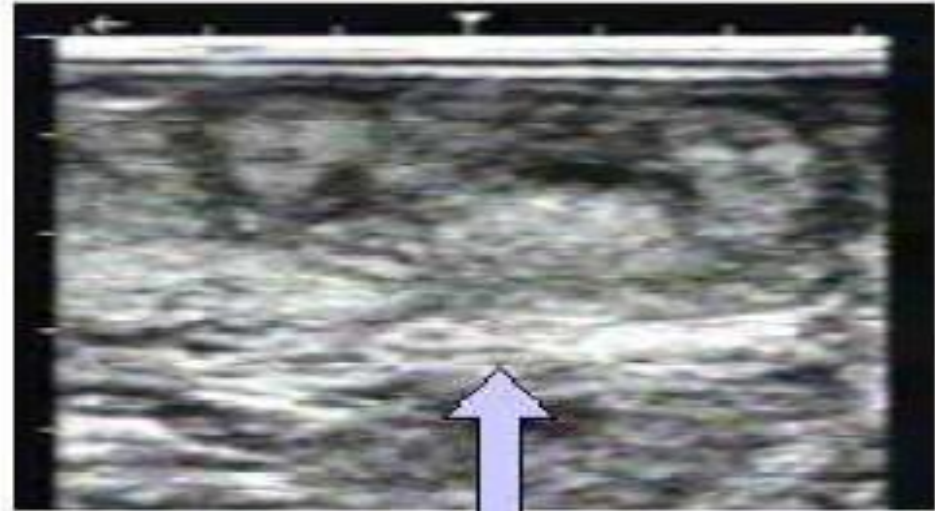
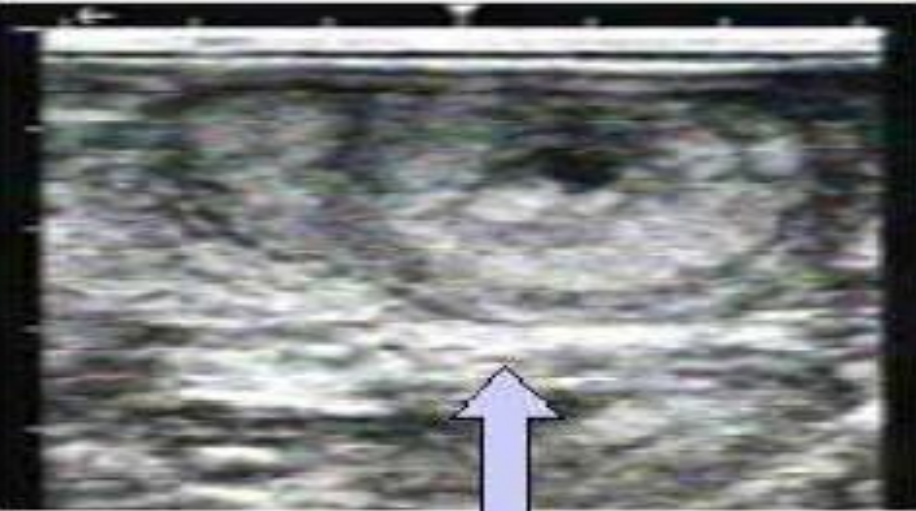



# Trans-rectal ultrasonography

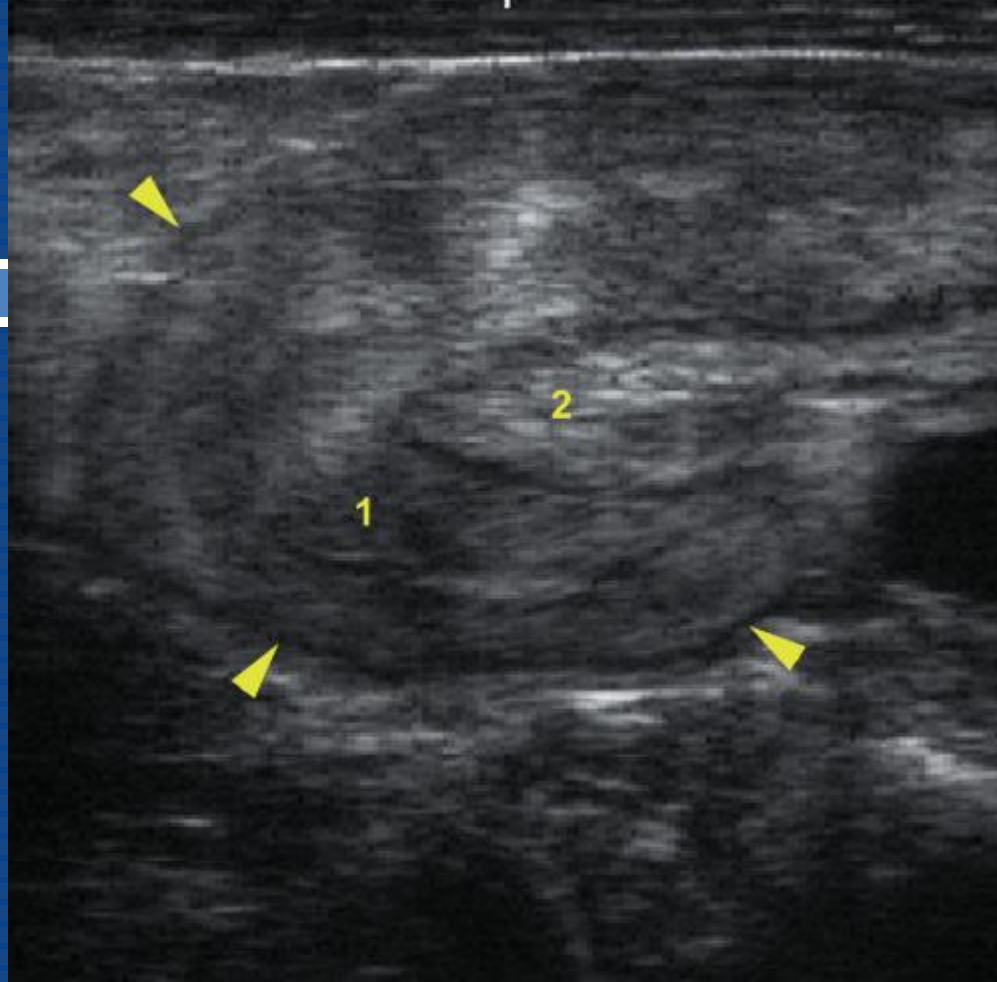
The earliest sonographic finding for pregnancy in most animals is the **appearance of anechoic fluid within the uterine lumen, With functional CL .**



# Trans-rectal Ultrasonography

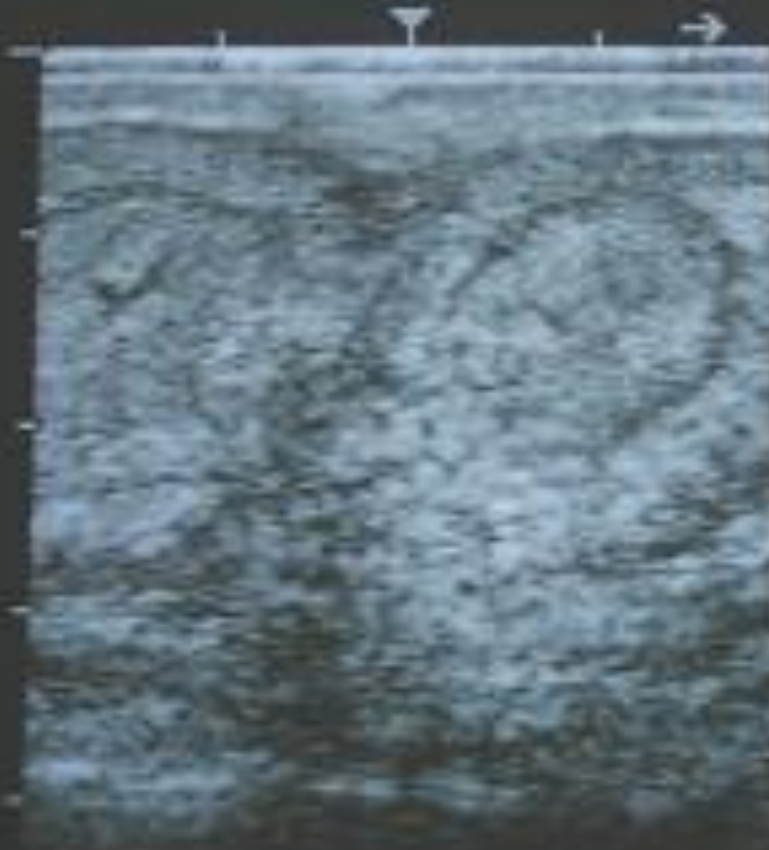


 = uterine body



**Ultrasonographic image of a longitudinal section of the uterine horn (probe 8 MHz; depth 6 cm).**

**1: Endometrium; 2: Myometrium; Arrowheads: Edge of the uterus.**



ALOKA

01/09/05

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ID:



FOCUS:

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**25 Day Pregnancy**



**30 Day Pregnancy**



**35 Day Pregnancy**



**43 Day Pregnancy**



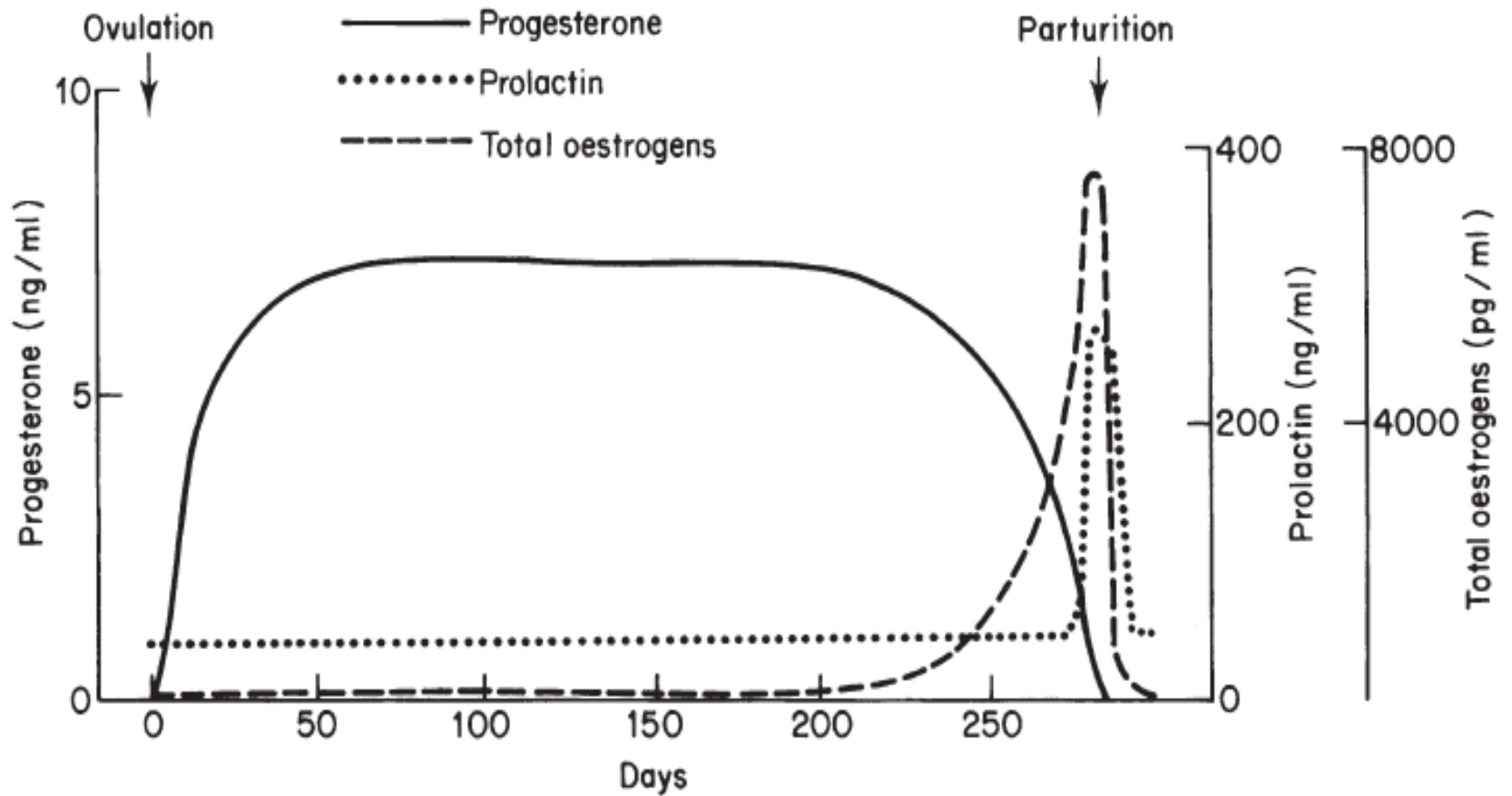
**50 Day Pregnancy**



**100 Day Pregnancy**

# Ultrasonographic features of early pregnancy in various species

Sonographic Structure Appearance (days post breeding)	Mare	Cow and Buffalo	Sheep and Goat	Bitch	Cat	Camel
<b>Fetal fluid</b>	10-16	18-22	20-25	18-20	10-16	17-18
<b>Fetal heart beat</b>	24-25	24-30	21-23	24	16-18	28-30
<b>Fetus</b>	20-22	28-30	25-30	-	16-20	23-25
<b>Allantois/Cotyledons</b>	40-50	35-40	40-50	-	25	-
<b>Fetal buds</b>	-	57-70	70	42-50	30-33	40
<b>Fetal gender</b>	50-70	60-70	60-90	-	38-43	-
<b>Fetal movement</b>	40-45	42-50	50-60	-	30-34	-



**Fig. 3.3** Schematic representation of the trends in hormone concentrations in the peripheral circulation of a cow during pregnancy and at parturition.