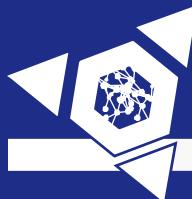


# Examination of the Genitourinary System



Sandia is a multiprogram laboratory operated by Sandia Corporation, a Lockheed Martin Company, for the United States Department of Energy's National Nuclear Security Administration under contract DE-AC04-94AL85000.

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# Examination from Afar: Genitourinary System

- **Information collected during an examination from a distance**

- General body condition
- Posture
  - **Urination**
- Gender
- Age
- Vaginal/urethral discharge
- Prepuce
- Edema
- Abdominal contour – pregnancy
- Accompanying calf
- Urination
- Abnormal odors





# Collecting a Meaningful History: Genitourinary System Females

- **Historical information related to the evaluation of the genitourinary system**
  - Duration of illness
  - Ease and frequency of urination
  - Reproductive history
    - **Pregnancy**
    - **Calves produced**
  - Calving history
    - **Normal, abortions, postpartum complications**
  - Milk production
  - Food/water consumption
  - Vaccinations
  - Previous treatments
- **Historical information related to the herd**
  - Other animals affected
  - Duration and similarities of signs
  - Deaths associated with the illness
  - Changes in food and/or water
  - New additions to the herd





# Collecting a Meaningful History: Genitourinary System Males

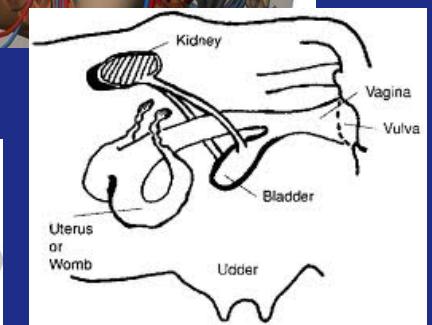
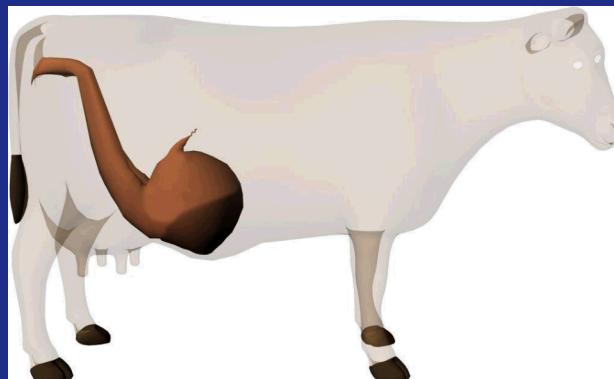
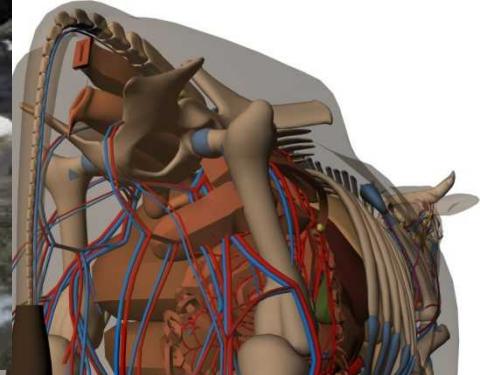
- **Historical information related to the evaluation of the genitourinary system**
  - Duration of illness
  - Castration
    - **Approximate age at castration**
  - Ease and frequency of urination
  - Reproductive history if relevant
  - Food/water consumption
  - Vaccinations
  - Previous treatments
- **Historical information related to the herd**
  - Other animals affected
  - Duration of signs
  - Similarity of signs
  - Deaths associated with the illness
  - Changes in food and/or water
  - New additions to the herd





# Examination: Genitourinary System Females

- **Mucous membranes**
  - Color
  - Ulceration
- **Vulva/vaginal wall**
  - Discharge
  - Erosions
  - Color
- **Abdominal palpation – small ruminants**
  - Bladder
- **Rectal palpation**
  - Kidney
  - Reproductive tract
  - Bladder
- **Urine collection**





# Examination: Genitourinary System Males

- **Abdominal palpation – small ruminants**

- Palpate bladder

- **Palpation of ventral abdomen**

- **Prepuce**

- Discharge
- Swelling

- **Penis**

- Lesions
- Malformations

- **Rectal palpation**

- Bladder
- Kidney
- Seminal vesicles

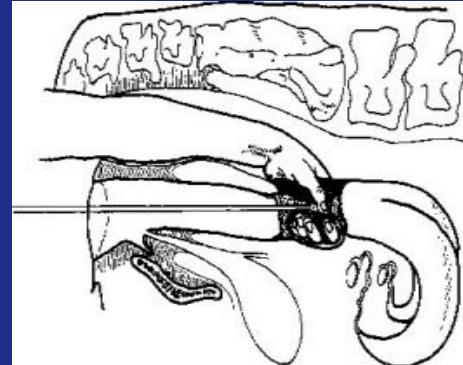
- **Fertility examination**

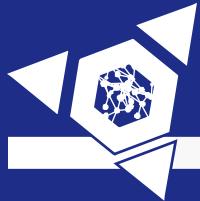




# Artificial Insemination

- **Considerations**
  - Sire selection
  - Desired traits
- **Synchronization of estrus**
- **Detection of estrus**
- **Tools required**
- **Semen handling**
- **Insemination techniques**
- **Complications**





# Interpretation of Results: Genitourinary System

- **Abnormal findings: Genitourinary system - females**
- **Abnormal findings: Genitourinary system - males**



# Ancillary Tests: Genitourinary System

- **Urinalysis**
- **Ultrasound examination**
- **Endoscopy**
- **Radiography**
- **Microbiology**
- **Hematology**
- **Semen evaluation**

