

Carlson College of Veterinary Medicine

FURst Aid: Reproductive Care for Large Animals

(The presentation will begin shortly.)



**Oregon State
University**

Carlson College of Veterinary Medicine

**FURst AID:
REPRODUCTIVE CARE
FOR LARGE ANIMALS**



Oregon State
University

Society for
Theriogenology
Veterinarians Dedicated to Animal Reproduction

WARNING!

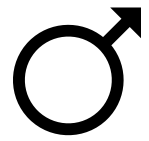
This presentation will have explicit use of terminology that some people might find embarrassing, comical or offensive but unfortunately that is the nature of our jobs!

Topics to Cover Tonight

- Male
 - Scrotum/testicle issues
 - Penile Issues
- Female
 - Parturition (Labor)
 - Perineal issues
 - Uterine Issues
 - Mammary Gland Issues

Topics to Cover Tonight

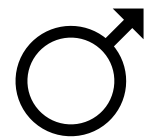
- Mechanical injury (may or may not be related to breeding) and infectious disease
 - Complications of delivery
 - Complications of pregnancy
 - Complications of the puerperium (the time after delivery)
-
- Problem as opposed to a species approach so chances are eventually we will cover your species of interest



Swelling with Trauma



- Prompt care results in greater likelihood of maintaining fertility
- Ruminants love to make excessive scar tissue
- Nerve damage possible even after heals
 - Reduces or eliminates sensation so that breeding act not possible
 - May require collection and artificial insemination
- Hydrotherapy, anti-inflammatories, antibiotics initial treatment in most if not all cases but might depend on salvage options for production species
- Testes normally cooler than body
 - Swelling affects cooling
 - Sperm need 6-8 weeks to recover



Swelling w/o Obvious Trauma

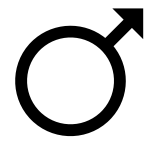


- Hernia
 - May or may not be emergency
 - Painful?
 - Hot?
 - Acute vs chronic
 - Rapid onset or slow progression?
- Hernia
 - Acute, strangulating (bowel cuts off blood supply), more emergent
 - Chronic (intestines, omentum-fat) less likely to be emergent BUT CAN CHANGE!

♂ Swelling w/o Obvious Trauma



- Abscess
- Orchitis (infection of the testicle)
 - Sheep- *Brucella ovis*
- Torsion
 - < 180 degrees, less emergent
 - >180 degrees, more emergent
- Hydrocoele
 - Fluid in scrotum
- Varicocele



Swelling w/o Obvious Trauma

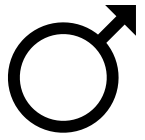


- Preputial laceration
 - If found early, good prognosis
 - If found later, worse prognosis
- Penile hematoma
 - “broken penis”
 - Looks similar to laceration
 - Location different
 - Surgical options have to be done in first week or prognosis much worse
 - 50:50 with conservative therapy for return to service

Swelling w/o ♂ Obvious Trauma



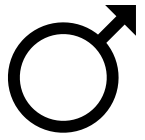
- Not to be confused with ruptured urethra secondary to bladder stones
- Most commonly ruminants, rare in horses, pigs
- Most commonly associated with high grain diets in cattle
- Associated with early castration in small ruminants
 - Removal of urethral process in SR does not significantly affect fertility
 - Perineal urethrostomy will not allow either natural breeding or semen collection



Swelling w/o Obvious Trauma



- Paraphimosis is the inability to retract the penis into the prepuce
- It needs to be addressed promptly to avoid worsening trauma due to gravity dependent swelling
- Therapy might include a support sling, purse-string suture
- Hydrotherapy, anti-inflammatories can be initiated
- Can be associated with sedatives, neurological conditions

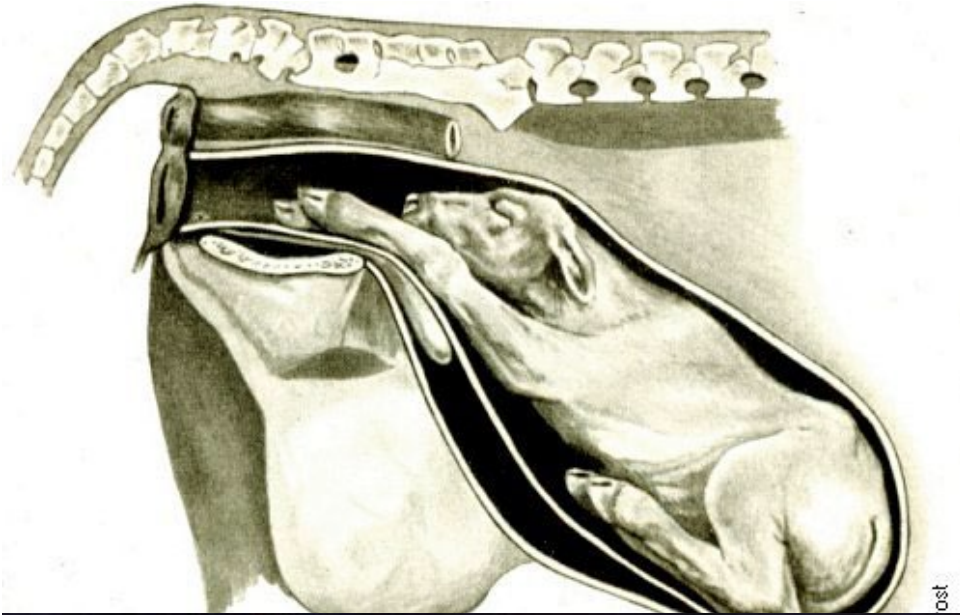


Swelling w/o Obvious Trauma



- “Beans” in geldings
- Blood in urine/semen
 - Sometimes secondary to passing stone
 - Urethral tear
 - Blood in urine in geldings
 - Blood in semen of stallion

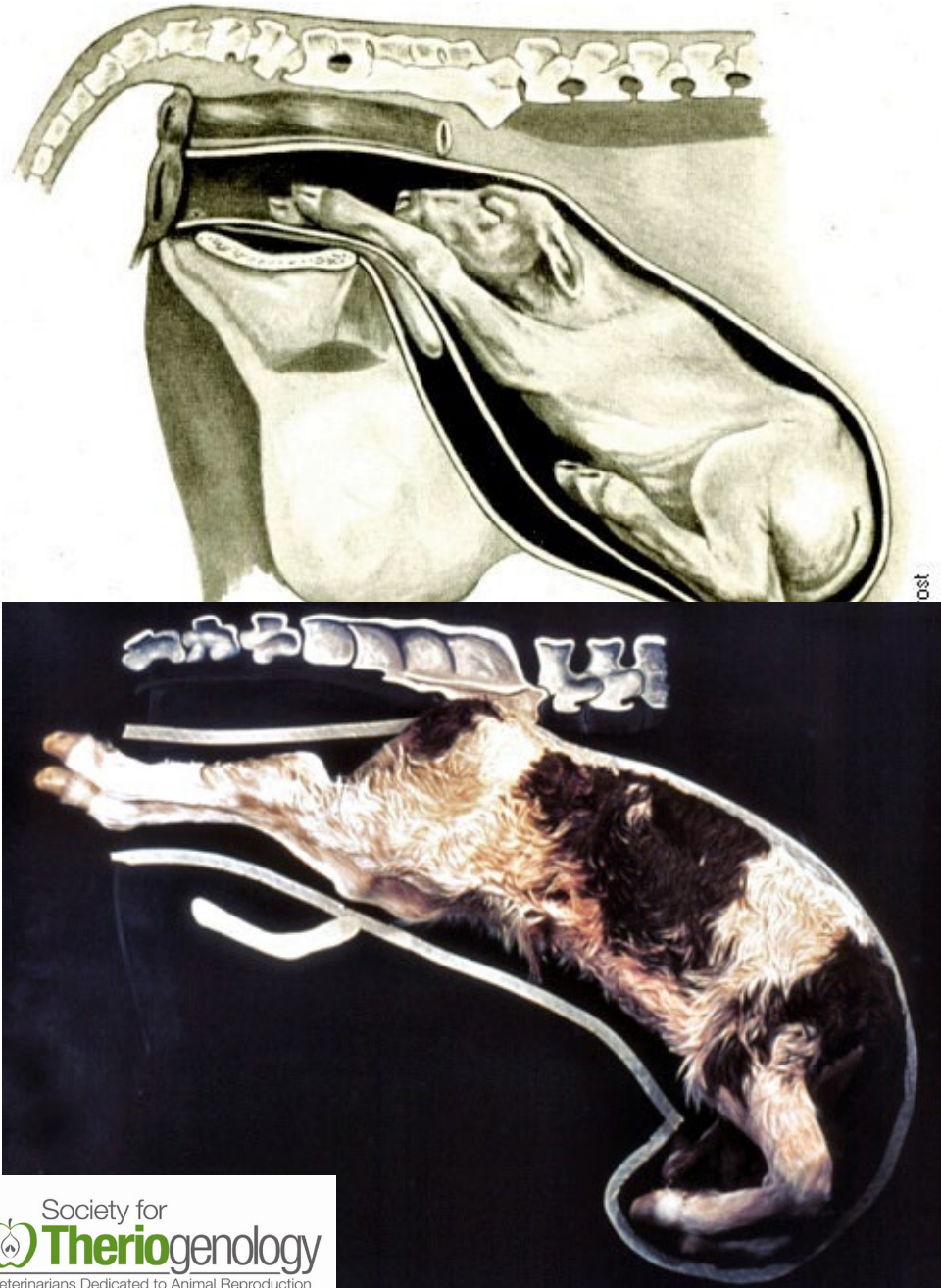
Parturition (Labor)



- Normal delivery (except in pigs)
 - Cranial (head first) or Caudal (butt first) with legs (either front or hind extended completely with neck and nose extended as well and “right side up” relative to dam
 - Therefore, if cranial, palms of feet face down, soles of feet will be facing up!
 - ANY deviation from this is abnormal
 - With elbows extended, nose of calf/foal/kid/lamb should be roughly at the level of the middle of the cannon bones
 - If the nose is at the level of the fetlock/ankle or foot, most likely the elbows are flexed and the legs need to be fully extended before traction can be applied (elbow lock)
 - Normally this means pushing the head back in slightly.

Parturition (continued)

- How to tell if cranial or caudal?
 - Elbow and hock feel the same
 - If you feel something that feels like an elbow, follow the leg towards the foot. If an elbow, will feel the knee (carpus) then the fetlock and foot. If the hock, will NOT feel the carpus, only the fetlock and foot
 - You might feel the tail
 - If you think it is a cranial delivery and you cannot find the head, professional evaluation is recommended before applying traction
 - Pulling with the head off to the side just makes it worse
 - If there is not a nose but only the top of the head (ears may be felt) do not apply traction until the head position is corrected (poll presentation)



Parturition: Be Prepared!



- Usually you have had months to prepare (unless accidental breeding)
- Internet can be good or bad
- Does anyone use the library anymore?
- Clean the perineum with non drying or disinfecting soap
- Wear gloves, sleeves or at a minimum wash your arms thoroughly

Parturition: Be Prepared! (cont')



- Use plenty of lube
- Oil based (Vaseline, Crisco)
 - More protective of mucous membranes
 - Messier
 - Mineral oil possibly but if pumped into uterus and c-section necessary can spill into abdomen so not recommended
- Soaps are drying but better than nothing
- Water based (KY, etc) okay but not as protective
- Polymers (J-lube)
 - Excellent lubrication but if pumped into uterus can be fatal if c-section or uterine rupture

Parturition: worst case scenerio



- Small ruminant and mare uterus not very tough
- Overzealous manipulation can result in serious and commonly fatal vaginal and/or uterine tears
- Especially in small ruminants, sometimes in cattle and rarely in mares, legs in the birth canal can be either from more than one fetus or both front and rear at the same time
- Every year we see several of these

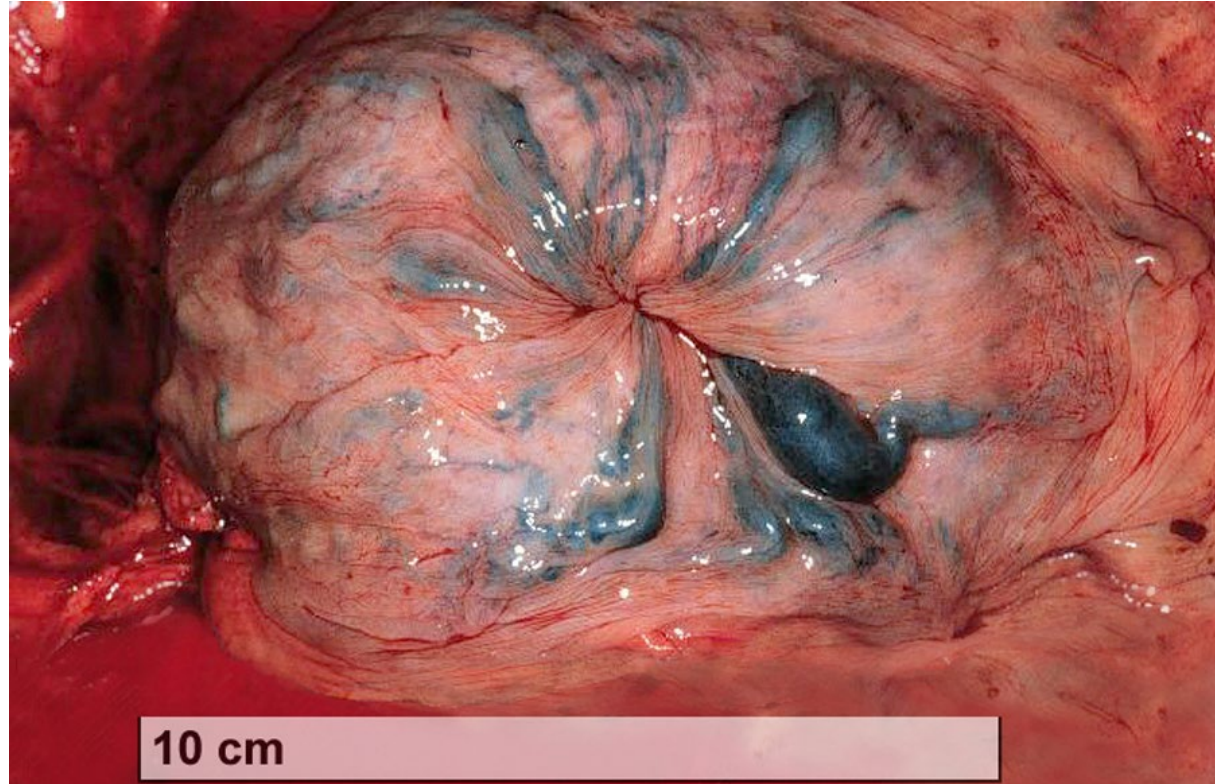
Female Parts ♀

- Perineum
- Vestibule/Vagina
- Uterus
- Mammary Gland



Perineum/Vagina/Vestibule ♀

- Trauma
 - Breeding
 - Other
- Pre Partum
 - Prolapsed Vagina
 - Hemorrhage
 - Varicose Veins
- Post Partum
 - Partial
 - Complete

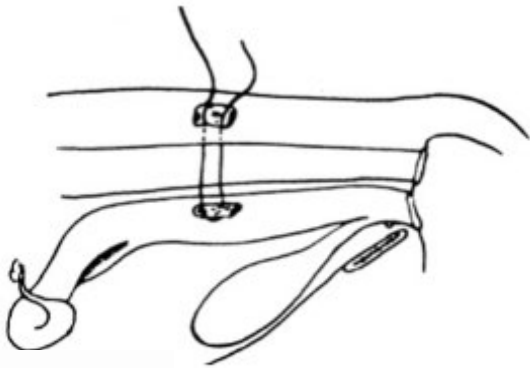


Perineum/Vagina/Vestibule Pre-Partum



- Prolapsed vagina
 - Pre Partum
 - Mild
 - Comes out when lying down, goes back in when stands
 - Keep clean, emollients
 - More Severe
 - Stays out when standing
 - Most Severe
 - Involves Cervix
 - May involve bladder

Perineum/Vagina/Vestibule ♀ Pre-Partum



- Prolapsed Vagina
 - Continued exposure
 - Dries out
 - Frost bite
 - Continued straining
 - May progress to prolapsed rectum as well
- Replace
 - Suture
 - Needs to be opened at birthing
 - Retainer (small ruminant)
 - Will deliver with in place
 - “Minchev”/Pro Fix Pins
 - Allows calving to occur
 - Retention suture of cervix
 - Most invasive

Uterus ♀

- Pre Partum (or not pregnant)
 - Infection
 - Mare vs others
 - Neoplasia
 - Older pigs, small ruminants
- Post Partum
 - Uterine infection (metritis)
 - Retained fetal membranes (placenta)
 - Prolapsed uterus



Uterus ♀

- Abortion/Stillbirth
 - Dystocia
 - Contagious if infectious
- Placentitis
 - Premature lactation (especially mare)
 - Need prompt evaluation (not necessarily emergent)



Uterus ♀



- Prolapsed uterus
- Infection
 - Ruminant
 - Post obstetrical assistance
 - Retained placenta
- Mare
 - Post obstetrical assistance
 - Retained placenta
 - Any stall confinement
 - Sick foal
 - Lameness

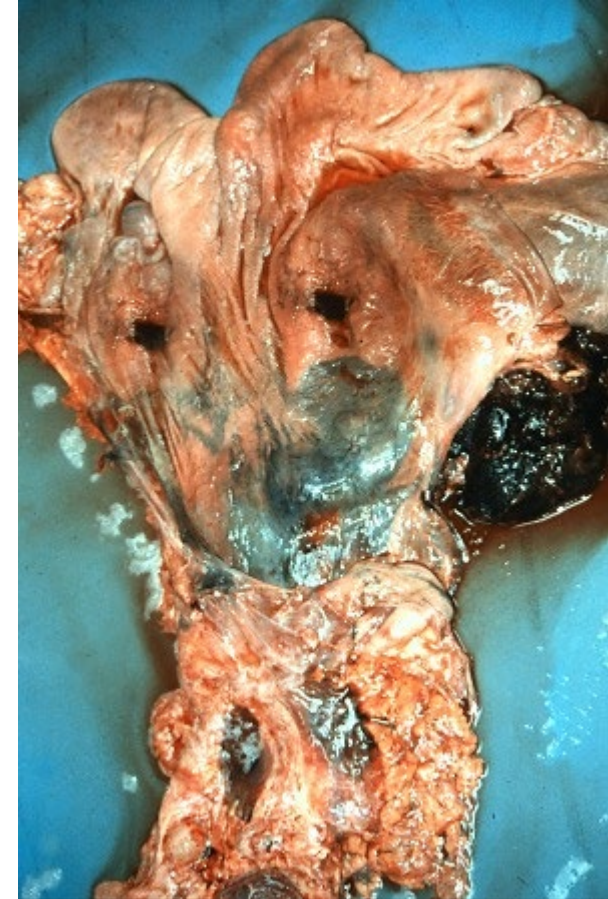
Puerperium

- Retained fetal membranes
 - Emergency in mare due to risk of infection and laminitis (founder)
 - Less emergent in ruminants especially if nursing offspring (except Dairy cows)
 - If in beef cattle, small ruminants and pigs, unless sick no treatment likely necessary but watchful waiting.



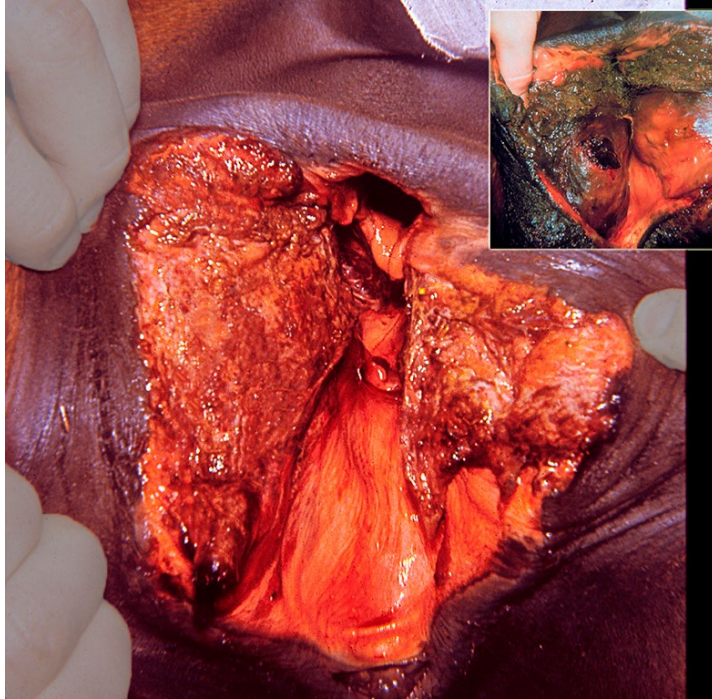
Puerperium

- Broad ligament hematoma (bleeding)
 - Mare
 - Post foaling, colic, pale, high heartrate
 - Cow
 - Mostly post prolapse
- Mostly keep quiet, sedate
 - Surgery generally unsuccessful



Puerperium

- Perineal lacerations
- First, second and third degree and recto-vaginal fistula
- Minor ones corrected early
 - Many fail however
 - Severe ones, wait until heals and perform some kind of corrective surgery

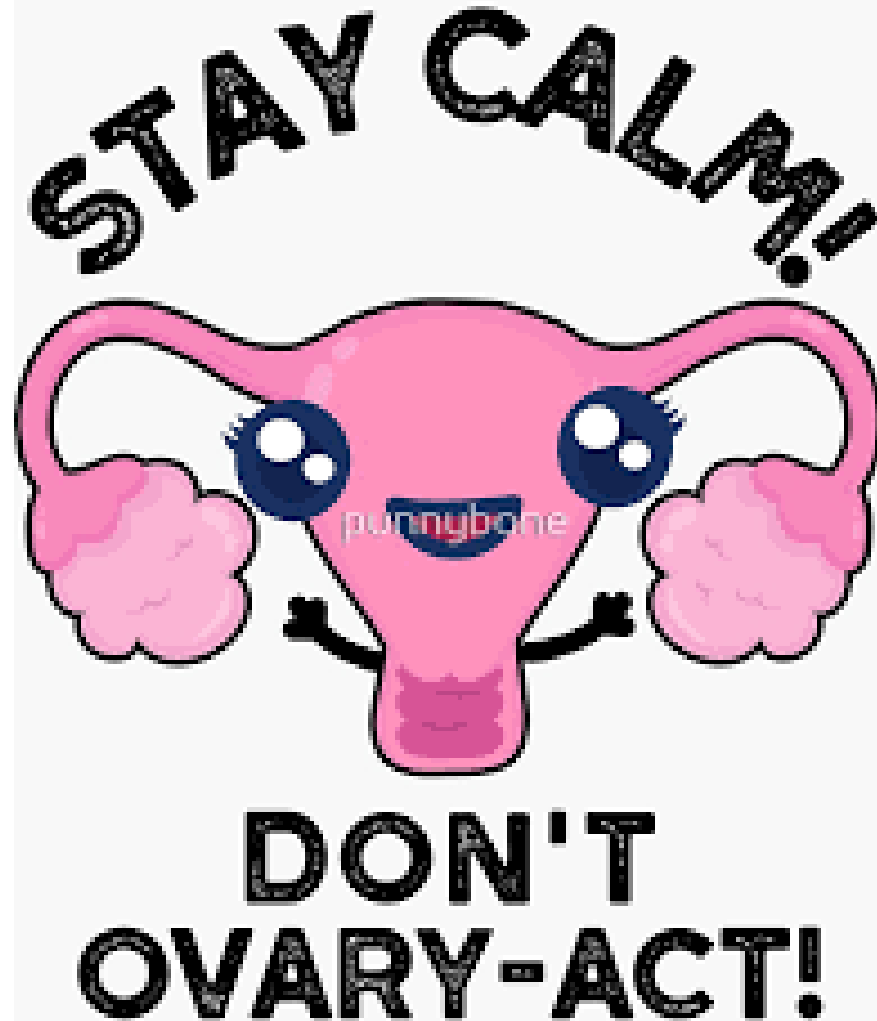


Mammary Gland(s)



- Mastitis
 - Occasionally in non pregnant animals
 - Hot, painful, sick
 - If not, likely not emergency
 - Reduce feed at weaning
- Neoplasia
- Precocious udder
 - “Witches milk”
 - Pet goats

Questions?



Contact Information

**LOIS BATES ACHESON VETERINARY TEACHING HOSPITAL
LARGE ANIMAL CLINIC**

541-737-2858
LA.RECEPTION@OREGONSTATE.EDU



Contact Information

EVENT FEEDBACK/QUESTIONS

VET_EDITOR@OREGONSTATE.EDU



FUTURE FURST AID

VETMED.OREGONSTATE.EDU/FURST-AID



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