DR. FELIX ATTENDED THE UNIVERSITY OF ARIZONA AND GRADUATED IN MAY 2010 FOR UNDERGRAD - (BEAR DOWN WILDCATS!) SHE WENT ON TO THE UNIVERSITY OF WISCONSIN - MADISON FOR VETERINARY SCHOOL GRADUATING IN 2015. THEN COMPLETING HER ROTATING INTERNSHIP AT THE VETERINARY SPECIALTY HOSPITALS OF THE CAROLINAS IN CARY, RALEIGH, AND DURHAM FROM JUNE 2015 - JULY 2016; ON TO HER EMERGENCY & CRITICAL CARE RESIDENCY AT MASSACHUSETTS VETERINARY REFERRAL HOSPITAL IN WOBURN, MA. DR. FELIX WORKED OUTSIDE OF BOSTON WITH MVRH AND BOSTON WEST VETERINARY EMERGENCY AND SPECIALTY FOR ABOUT 1.5 YEARS BEFORE MOVING TO LA AND WORKING AT ASEC FOR ABOUT THREE YEARS. SHE NOW IS PROVIDING RELIEF CRITICAL CARE COVERAGE. SHE AUTHORED A CASE REPORT OF CHOLECALCIFEROL TOXICITY AND TREATMENT IN A PUPPY, AND PROFESSIONAL INTERESTS INCLUDE TREATING SEPSIS, TRAUMA, AND HEATSTROKE.

DR. FELIX GREW UP PLAYING SOCCER AND STILL LOVES TO CATCH A GAME IN HER FREE TIME. SHE ENJOYS COOKING, GOING KAYAKING, PLAYING VOLLEYBALL... AND ANYTHING ELSE OUTDOORS BY THE OCEAN. SHE ALSO IS A FANATIC ABOUT ALL THINGS ARIZONA WILDCATS!

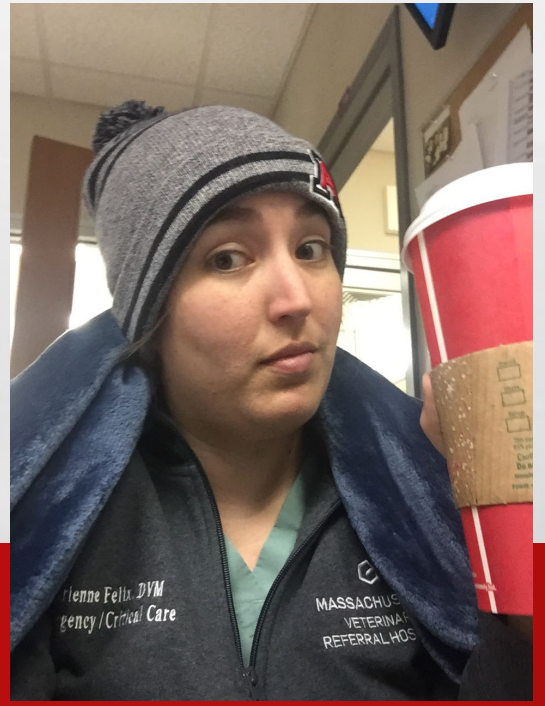
EMERGENCY PROCEDURES FOR VETERINARIANS

ADRIENNE FELIX, DVM, DACVECC

10/6/20224

ASEC SYMPOSIUM 2024

QUICK BIT ABOUT ME

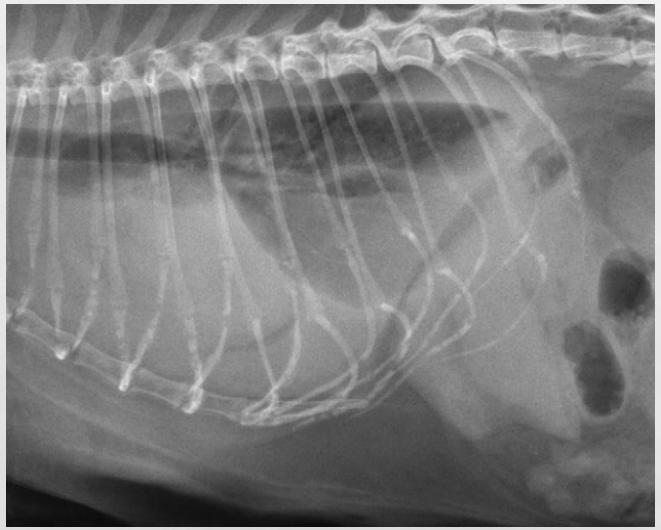


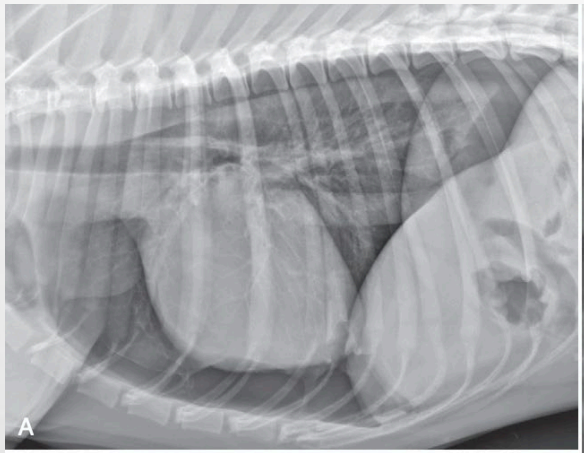
THORACIC PROCEDURES

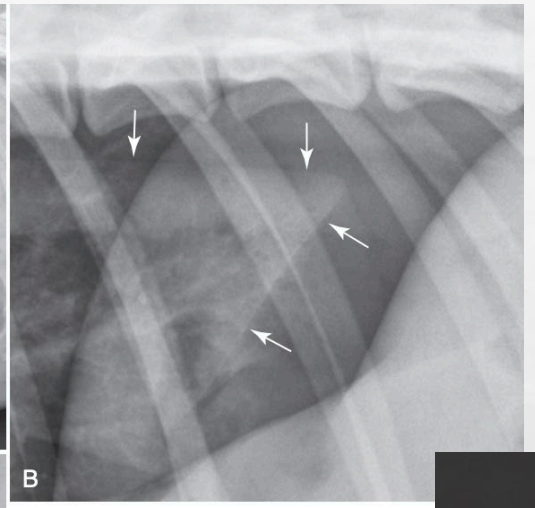
THORACOCENTESIS

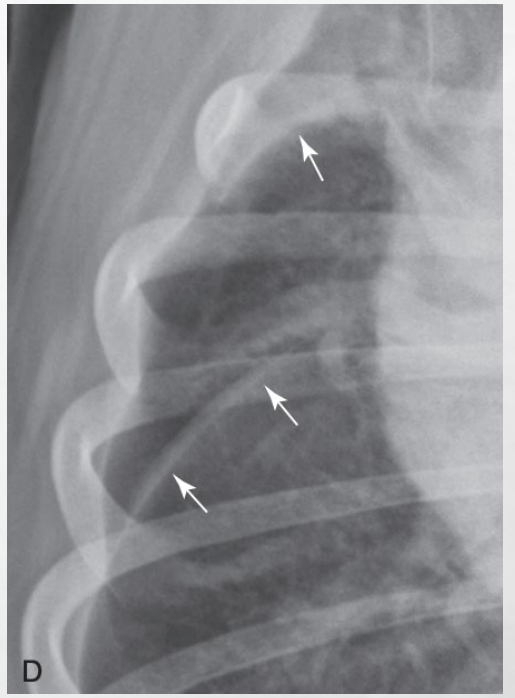
PERICARDIOCENTESIS

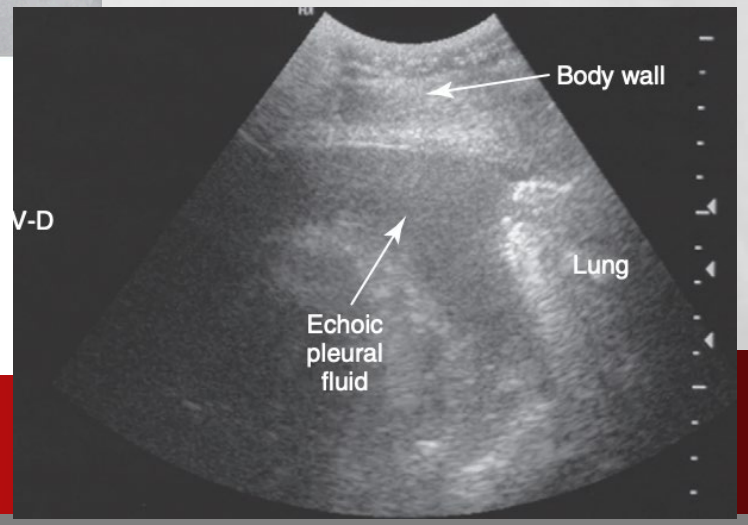
THORACOCENTESIS











Thrall, Donald. (2013). The Pleural Space. In D. Thrall (Ed). *Textbook of Veterinary Diagnostic Radiology.* (6th ed., pp. 571 584). St Louis, MO: Elseveir.

THORACOCENTESIS

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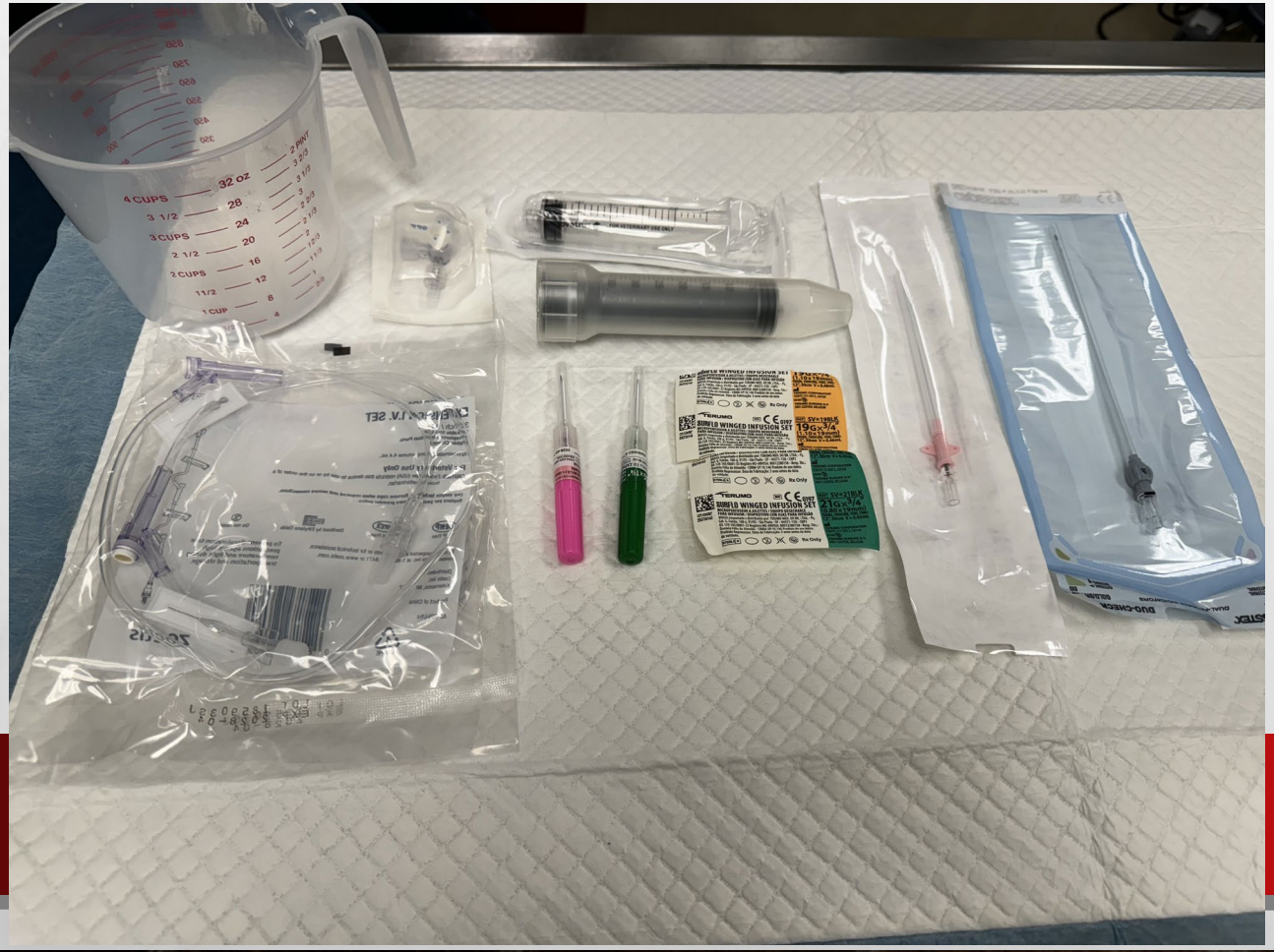
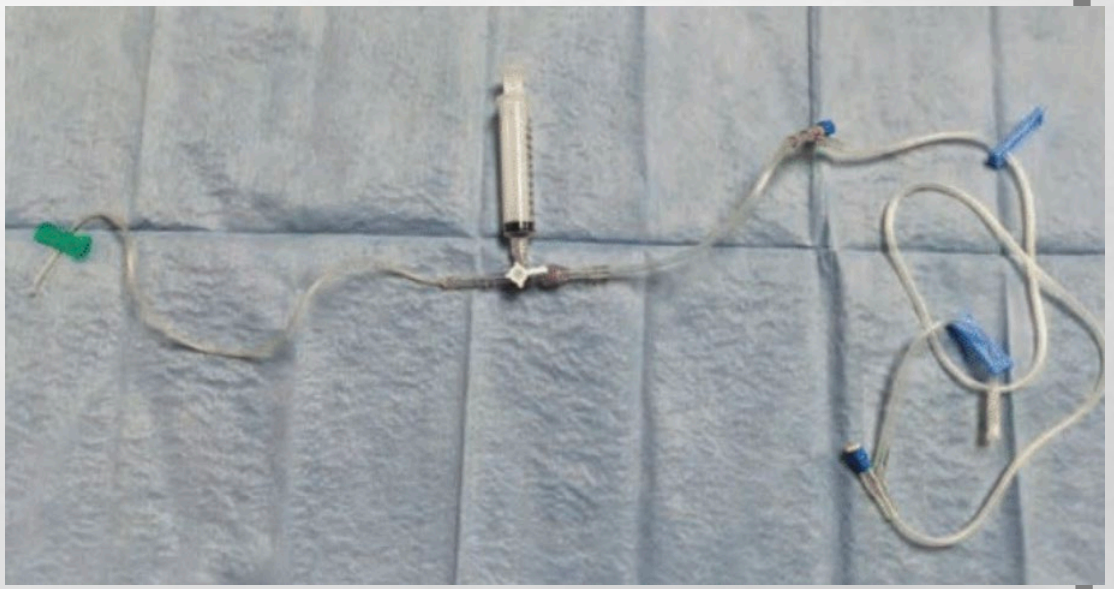




Textbook of Small Animal Emergency Medicine
by Drobatz, Hopper, Rozanski, Silverstein

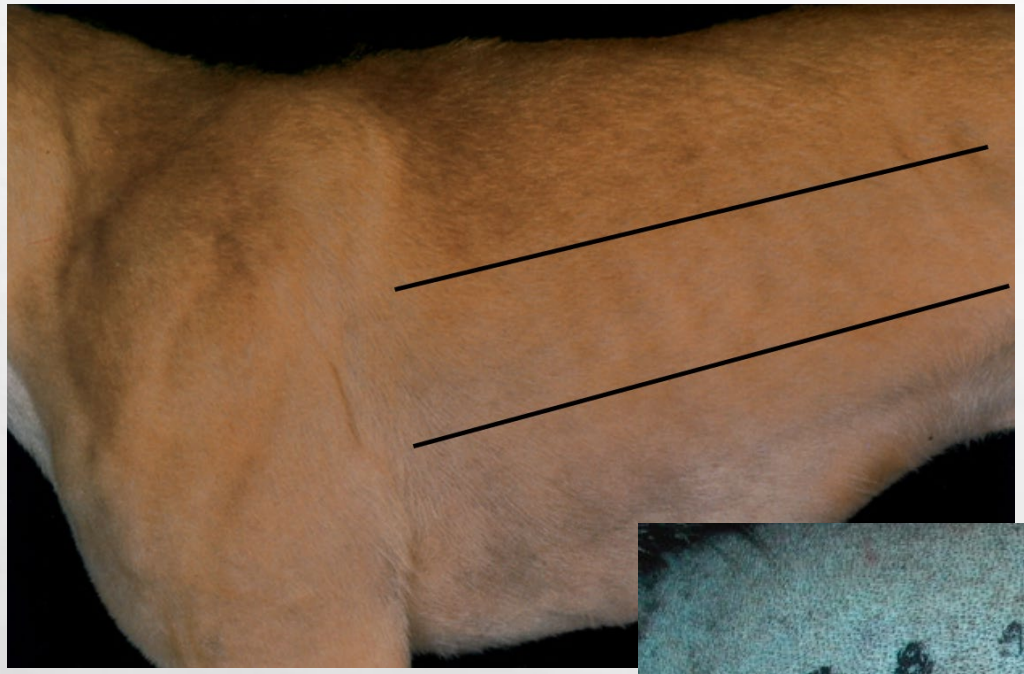
THORACOCENTESIS

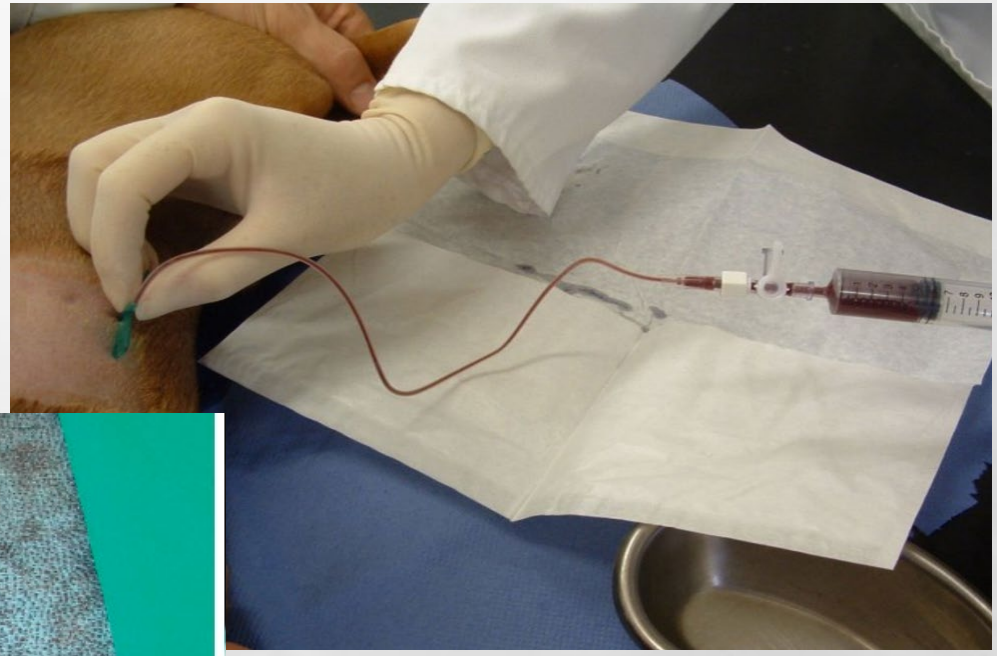
- FOR SMALLER PATIENTS (SMALL DOGS/CATS) – CAN UTILIZE BUTTERFLY IV CATHETERS
- FOR LARGER DOGS WILL NEED AN OVER THE NEEDLE CATHETER
- DEPENDING ON TYPE OF EFFUSION, CAN UTILIZE CATHETER WITH FENESTRATIONS
- UTILIZING EXTENSION SET/THREE WAY STOP COCK COLLECTION SYSTEM

THORACOCENTESIS

- PERFORMED IN ANY POSITION (PATIENT COMFORT)
- ULTRASOUND GUIDANCE OR BLIND THORACOCENTESIS (PERFORMED AT 7TH TO 9TH RIBS)
- CLIP/ASEPTIC PREP IF PATIENT STABILITY ALLOWS
- INSERT NEEDLE ON CRANIAL ASPECT OF RIBS (OR MIDDLE) TO AVOID INTERCOSTAL VESSELS AND NERVES
  - AVOID INTERNAL THORACIC ARTERIES ALONG STERNUM

THORACOCENTESIS

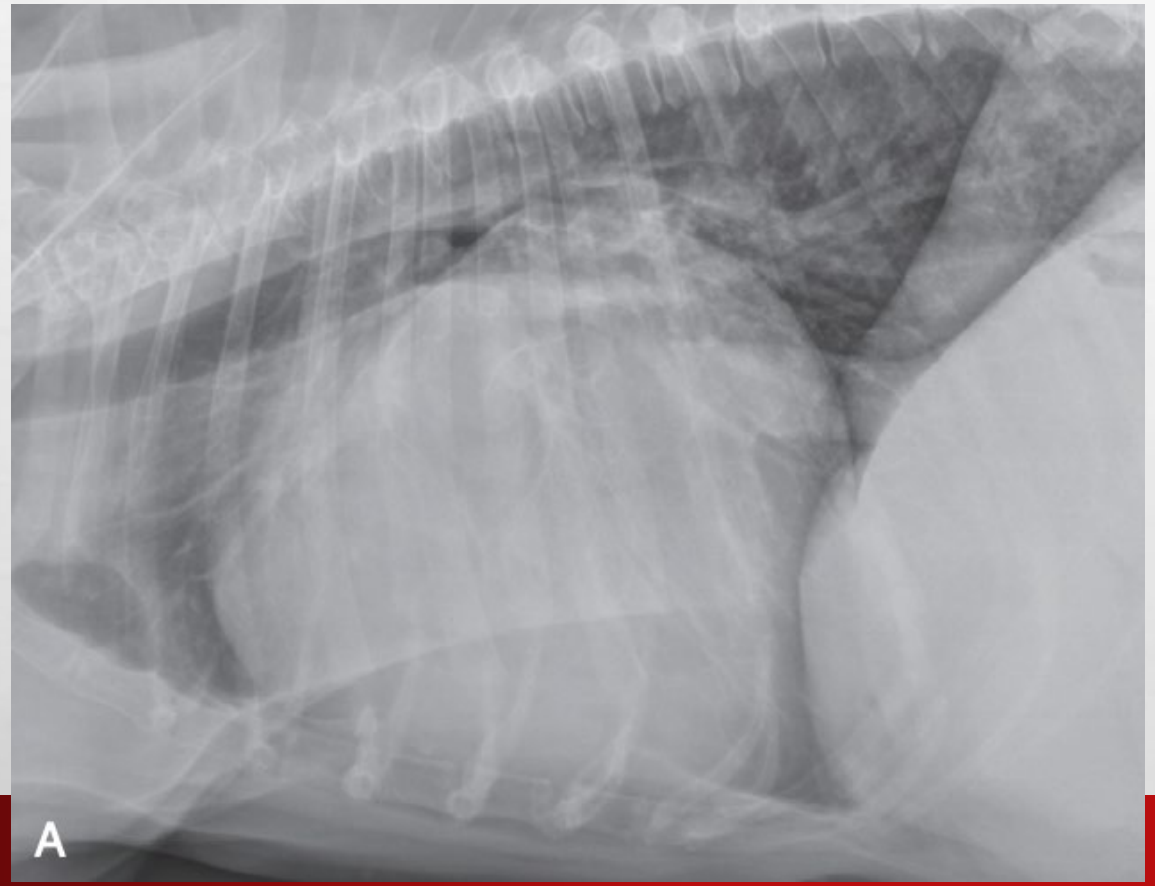


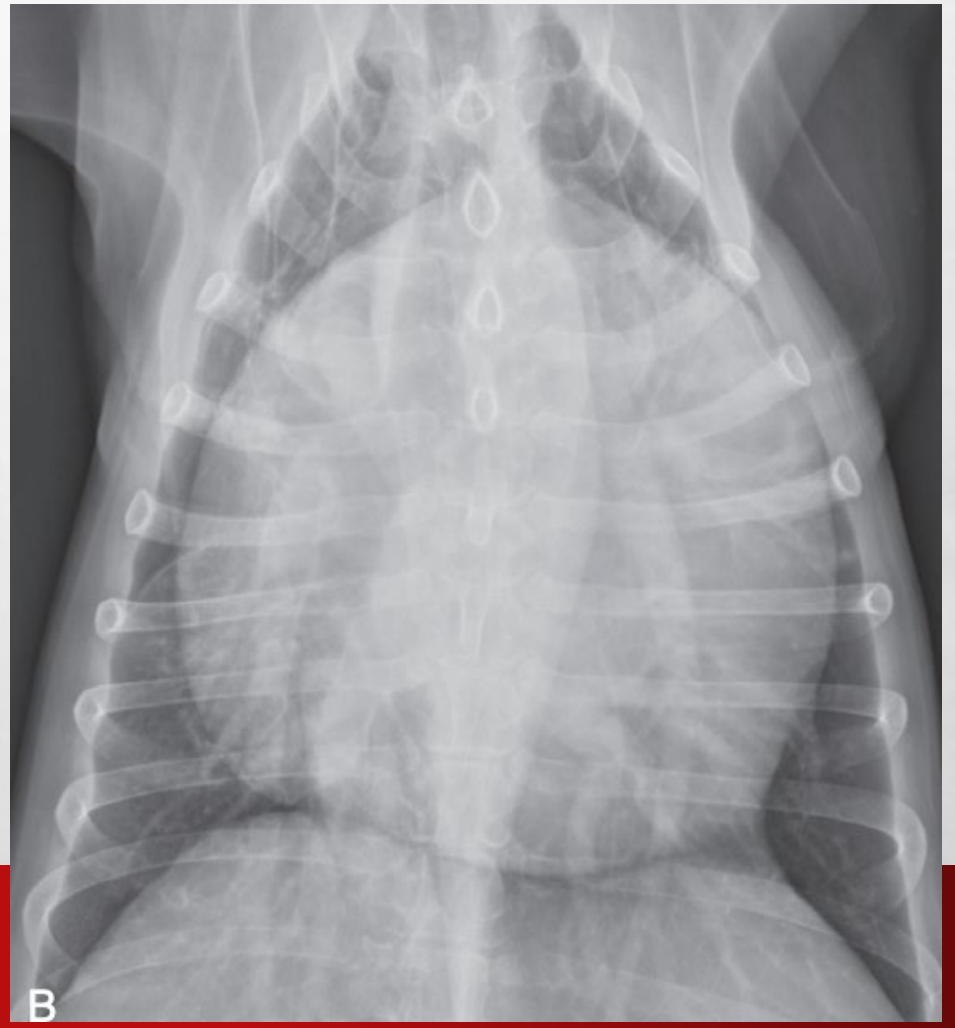


https://www.vetlexicon.com/canis/diagnostic-imaging/images/hemothorax-partial-drainage/

Small Animal Critical Care Medicine by Silverstein and Hopper

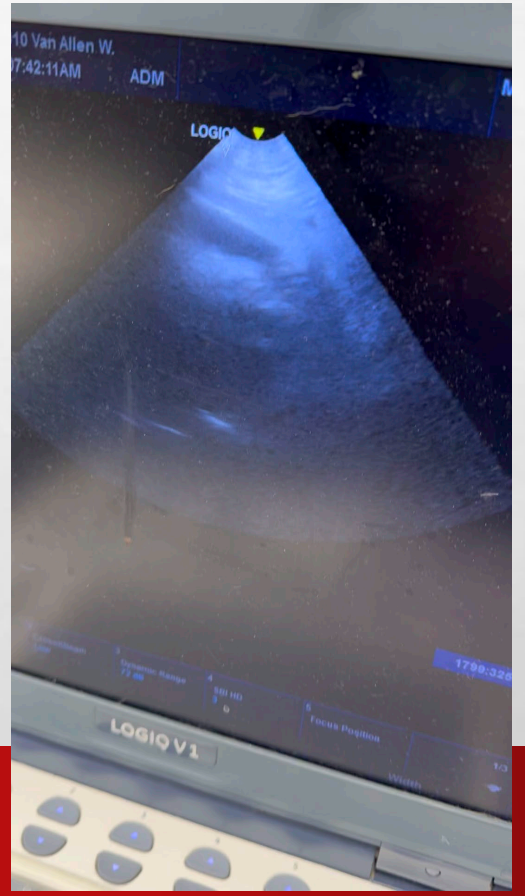
PERICARDIOCENTESIS





Bahr, Robert. (2013). The Heart and Pulmonary Vessels. In D. Thrall (Ed). *Textbook of Veterinary Diagnostic Radiology.* (6th ed., pp. 585 - 607). St Louis, MO: Elseveir.

PERICARDIOCENTESIS



PERICARDIOCENTESIS

- SEDATION AS INDICATED BASED ON PATIENT VS LOCAL ANESTHETIC
- PATIENT PLACED IN STERNAL OR LATERAL RECUMBENCY
- ECG TO MONITOR FOR VENTRICULAR ARRHYTHMIAS USE TFAST GUIDANCE TO FIND GOOD WINDOW OR RIGHT LATERAL THORAX

PERICARDIOCENTESIS

- USE AN OVER THE NEEDLE CATHETER
- TYPICAL CATHETER SIZE
  - 16 TO 18 GAUGE, 1.5 – 2 IN LONG CATHETER USUALLY SUFFICIENT
  - 12 TO 14 GAUGE, 4 – 6 IN LONG ALLOWS FOR FASTER REMOVAL OF FLUID
- UTILIZING EXTENSION SET/THREE WAY STOP COCK COLLECTION SYSTEM
- HAVE LIDOCAINE READY IF ANY ARRHYTHMIAS DEVELOP

PERICARDIOCENTESIS

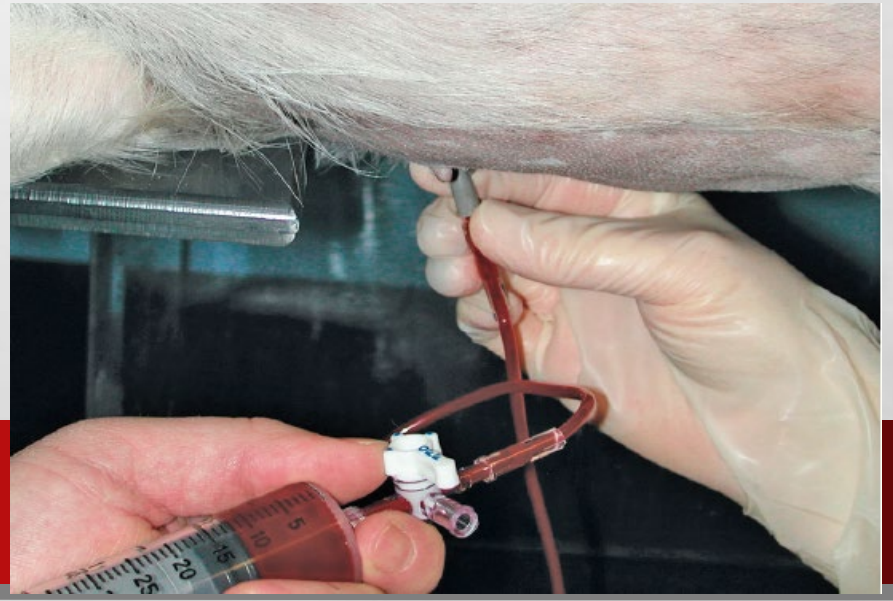
- PREP HEMITHORAX FROM 3-7TH ICS FROM STERNUM TO COSTOCHONDRAL JUNCTION
- PALPATE CARDIAC IMPULSE USUALLY 4TH TO 6TH ICS JUST LATERAL TO STERNUM
- PLACE LOCAL ANESTHETIC (USUALLY MARK SKIN A LITTLE TO FIND BLEB ONCE RE-PREPPED)
- PUNCTURE CRANIAL TO RIBS TO AVOID INTERCOSTAL VESSELS/NERVES
- AFTER ENTERING PLEURAL SPACE, AIM NEEDLE TOWARDS OPPOSITE SHOULDER
- IF CONTACT WITH HEART, SCRATCHING/TAPPING SENSATION

PERICARDIOCENTESIS

- AS FLUID DRAINED → ECG COMPLEXES INCREASE IN AMPLITUDE, RATE WILL START TO NORMALIZE, BREATHING IMPROVES
- FLUID TYPICALLY IS HEMORRHAGIC
- FLUID SHOULD NOT CLOT
- ALWAYS PLACE A STERILE SAMPLE IN EDTA AND NO ADDS TUBES

PERICARDIOCENTESIS

Textbook of Small Animal Emergency Medicine by Drobatz, Hopper, Rozanski and Silverstein



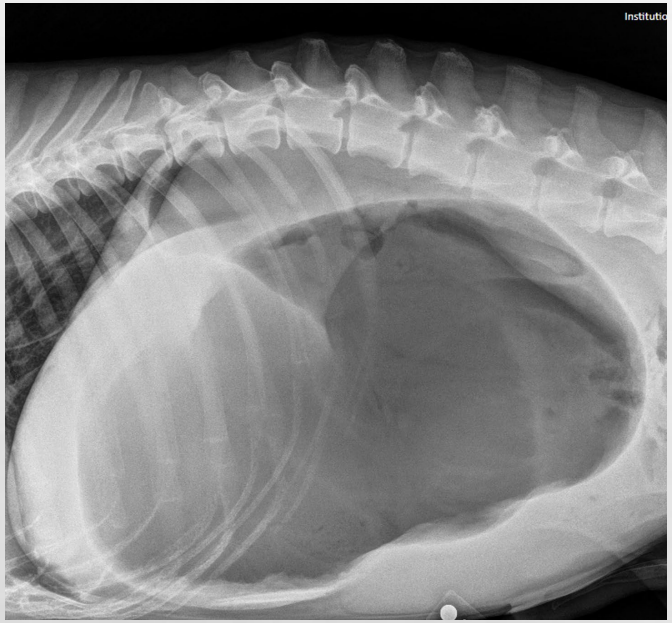
https://www.cliniciansbrief.com/article/pericardiocentesis

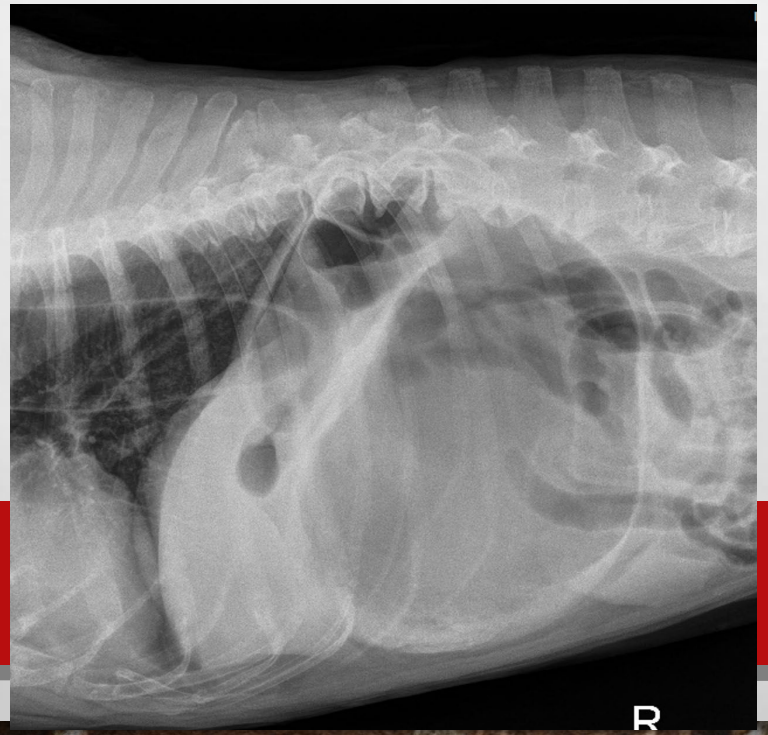
Small Animal Emergency and Critical Care Medicine by Silverstein and Hopper

ABDOMINAL PROCEDURES

GASTRIC TROCARIZATION

GASTRIC TROCARIZATION





GASTRIC TROCARIZATION

- PERFORMED ONLY IF PATIENT IS GOING TO SURGERY FOLLOWING DECOMPRESSION
- LARGE GAUGE, SHORT OVER THE NEEDLE CATHETER
- SITE OF GREATEST TYMPANY, IN CRANIAL DORSOLATERAL ABDOMEN
- LARGE CLIP/CLEAN AT INSERTION SITE
- TYPICALLY GIVEN PAIN MEDICATION AS PART OF PREMED PRIOR TO TROCAR

GASTRIC TROCARIZATION

- HISSING SOUND IS HEARD ONCE CATHETER IS SUCCESSFULLY PENETRATED INTO ABDOMEN
- CAN CONNECT TO AN EXTENSION LINE AND PLACE IN WATER TO SEE BUBBLES

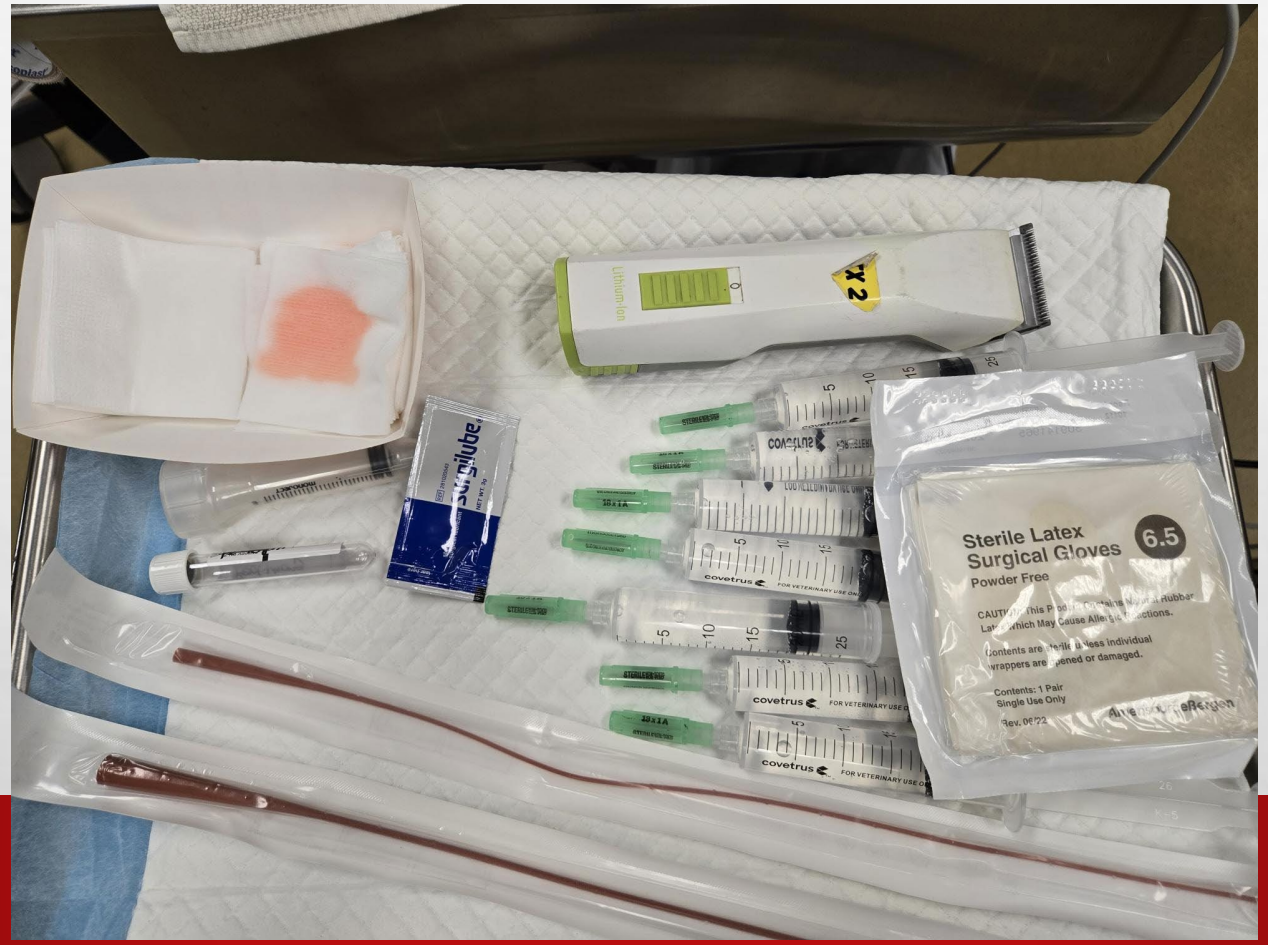
Advanced Monitoring and Procedures for Small Animal Emergency and Critical Care by Burkitt Creedon and H. Davis

Textbook of Small Animal Emergency Medicine by Drobtaz, Hopper, Rozanski and Silverstein

UROGENITAL

MALE FELINE URINARY CATHETER

MALE FELINE URINARY CATHETER



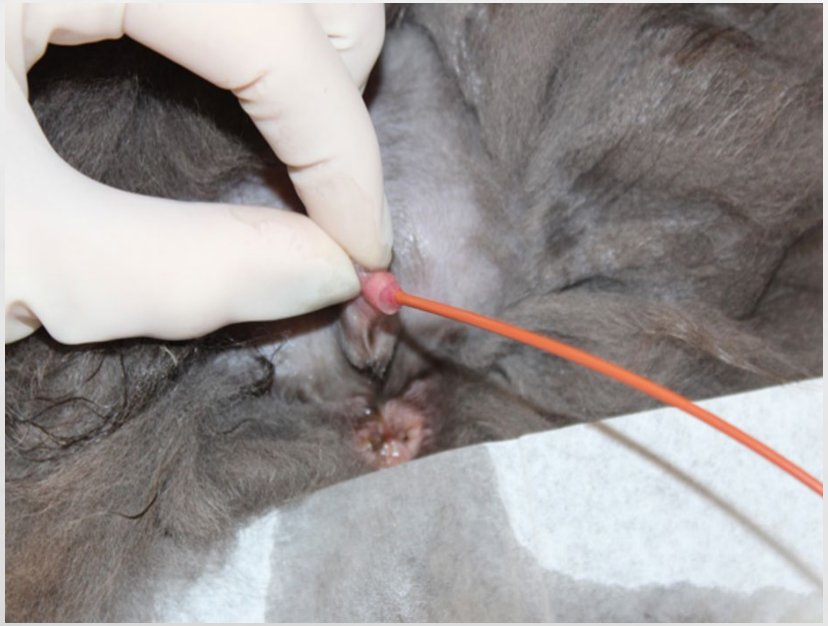
MALE FELINE URINARY CATHETER

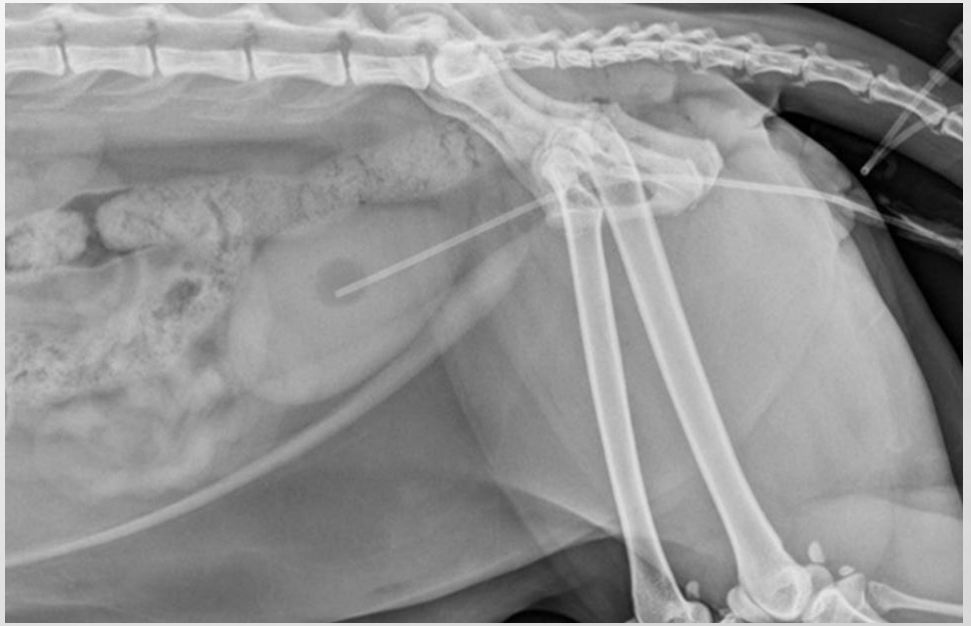
- HEAVILY SEDATED OR ANESTETHIZED (DEPENDING ON PATIENT STABILITY)
- I ALWAYS GIVE A BENZODIAZEPINE
- PLACED IN DORSAL RECUMBENCY WITH LEGS SECURED FORWARD
- PREPUCIAL REGION ASEPTICALLY CLIPPED/PREPPED
- USING INDEX FINGER AND THUMB EXTRUDE PENIS

MALE FELINE URINARY CATHETER

- CATHETERS:
  - I LIKE TO START WITH A LONG 20G IV CATHETER (WITHOUT STYLET)
  - OTHER OPTIONS:
    - TOM CAT CATHETER, OLIVE TIP, SLIPPERY SAM OR RED RUBBER
  - USE RETROPULSION WITH STERILE SALINE
- ONCE OBSTRUCTION ALLEVIATED, WILL PLACE INDWELLING 3.5 OR 5 F RED RUBBER OR SLIPPERY SAM
- SECURE DIRECTLY TO PREPUCE
- PERFORM RADIOGRAPH AFTER PLACEMENT TO CONFIRM LOCATION

MALE FELINE URINARY CATHETER





https://www.cliniciansbrief.com/article/urinary-catheter-placement-feline-urethral-obstruction

MALE FELINE URINARY CATHETER

- IF DIFFICULT UNBLOCK CAN PERFORM DECOMPRESSIVE CYSTOCENTESIS OR CONSIDER COCCYGEAL BLOCK
- CONSIDER RADIOGRAPH DURING PROCEDURE IF CONCERNED UROLITH CAUSING OBSTRUCTION

O'Hearn, A.K. and Wright, B.D. (2011), Coccygeal epidural with local anesthetic for catheterization and pain management in the treatment of feline urethral obstruction. Journal of Veterinary Emergency and Critical Care, 21: 50-52.

MALE FELINE URINARY CATHETER

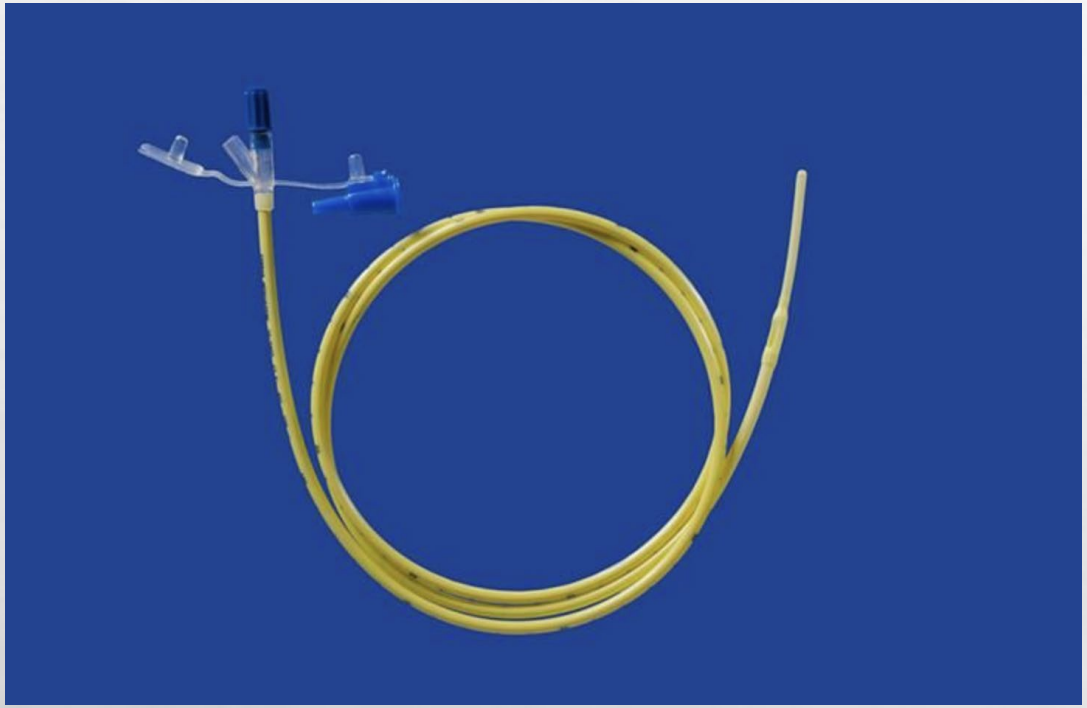
https://www.cliniciansbrief.com/article/urinary-catheter-placement-feline-urethral-obstruction

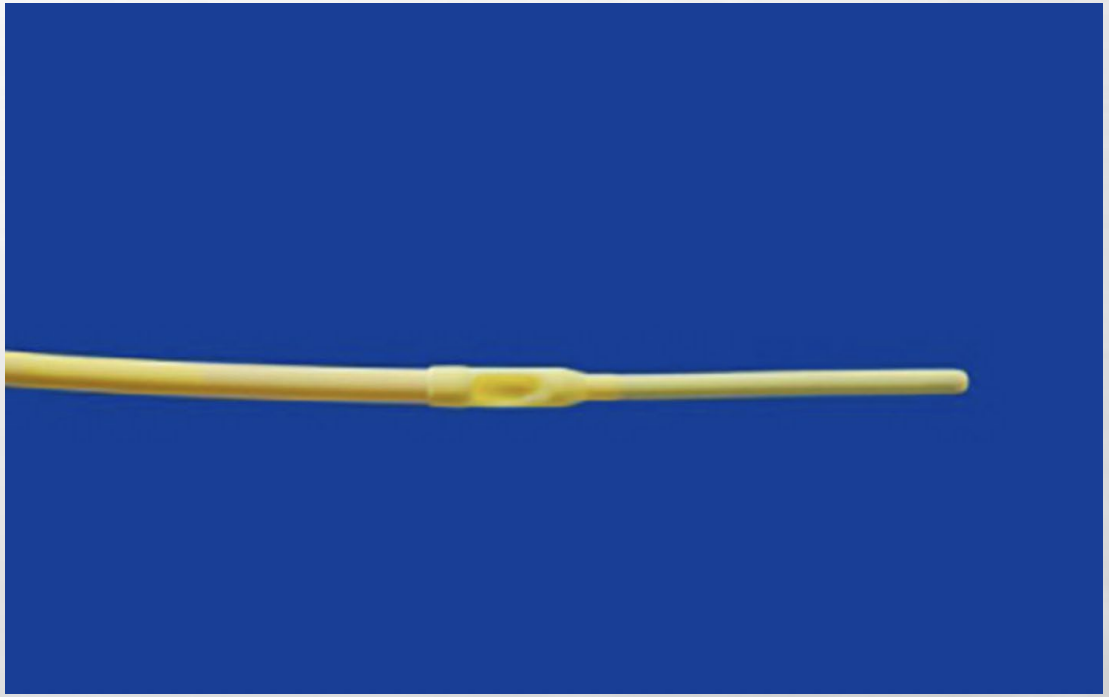
BONUS PROCEDURES!

NASOGASTRIC TUBE

NASOGASTRIC TUBES

NASOGASTRIC TUBE



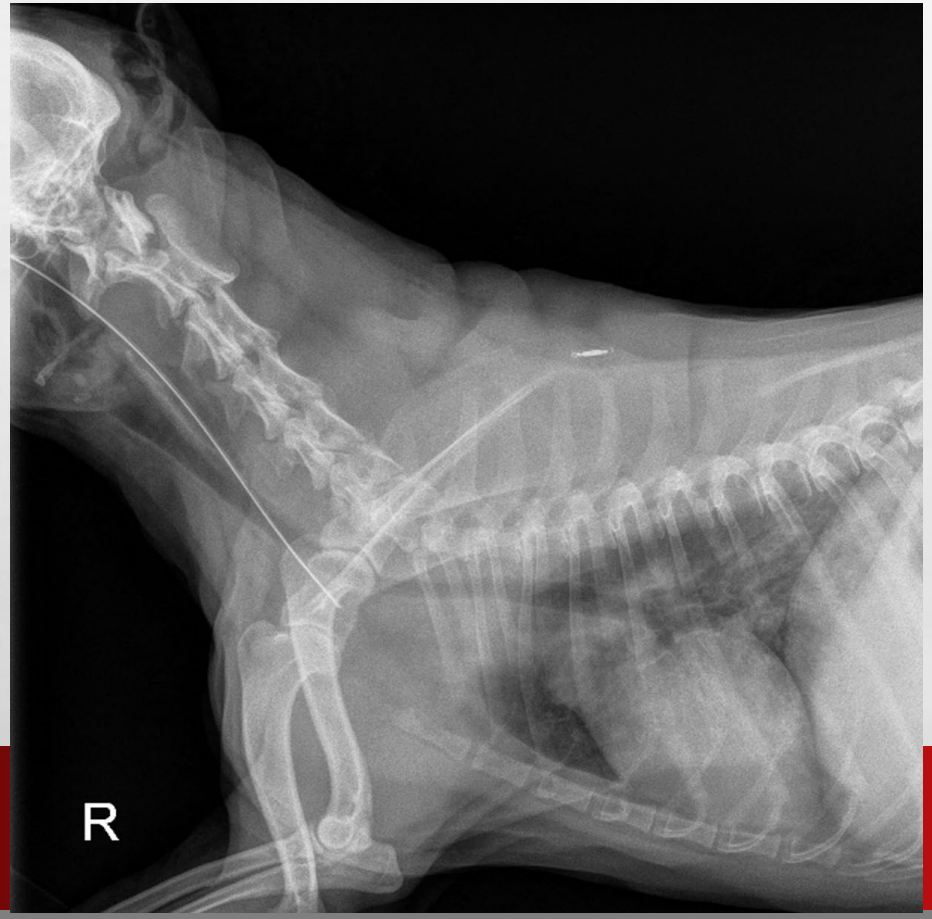


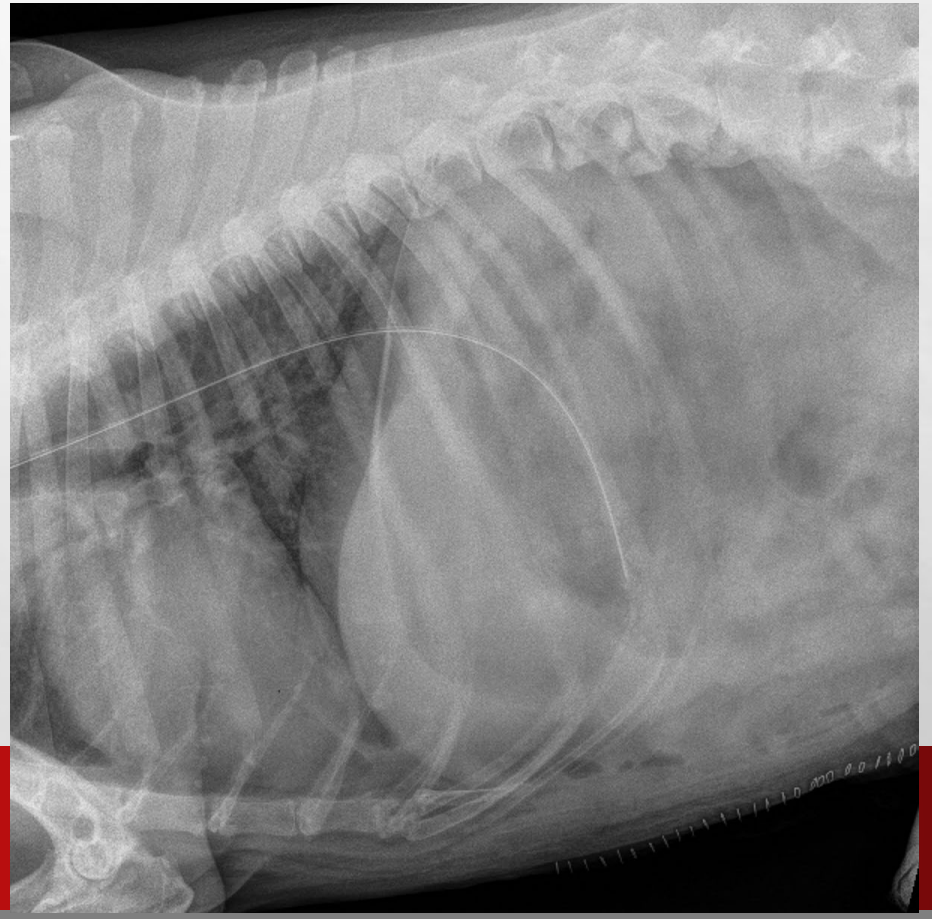
https://www.milainternational.com/

NASOGASTRIC

- SEDATION TYPICALLY NEEDED
- NASAL PASSAGE LOCALLY ANESTHETIZED WITH TOPICAL 2% LIDOCAINE OR PROPARACAINE
- MEASURE FROM NOSE TO THORACIC INLET AND JUST CAUDAL TO THE LAST RIB.
- LUBRICATE THE TIP OF THE TUBE AND PUSH NASAL PLANUM UP TO STRAIGHTEN THE OPENING OF THE NARES. FEED TUBE INTO VENTROMEDIAL NASAL PASSAGE. IF RESISTANCE NOTED, STOP AND WITHDRAW TUBE AND ATTEMPT TO REPLACE.
- ADVANCE TO THORACIC INLET AND ASPIRATE. IF NEGATIVE PRESSURE CONTINUE WITH FEEDING TUBE TO PREMEASURED MARK. IF COUGHING IS NOTED, STOP AS YOU MAY BE IN A LUNG…
- WHEN AT PREMEASURED MARK, ASPIRATE THE TUBE IF NEGATIVE PRESSURE OR STOMACH CONTENTS NOTED, THAN LIKELY IN ESOPHAGUS OR STOMACH. IF REPEATED VOLUMES OF AIR THEN LIKELY IN LUNG AND SHOULD REPLACE TUBE.
- PERFORM POST PROCEDURE RADIOGRAPH TO CONFIRM PLACEMENT AND HAVE RADIOLOGIST EVALUATE BEFORE FEEDING PATIENT.

NASOGASTRIC TUBES





THANKS! QUESTIONS? CONFUSION?