Soft Tissue Surgery Through the Lens of Spectrum Of Care

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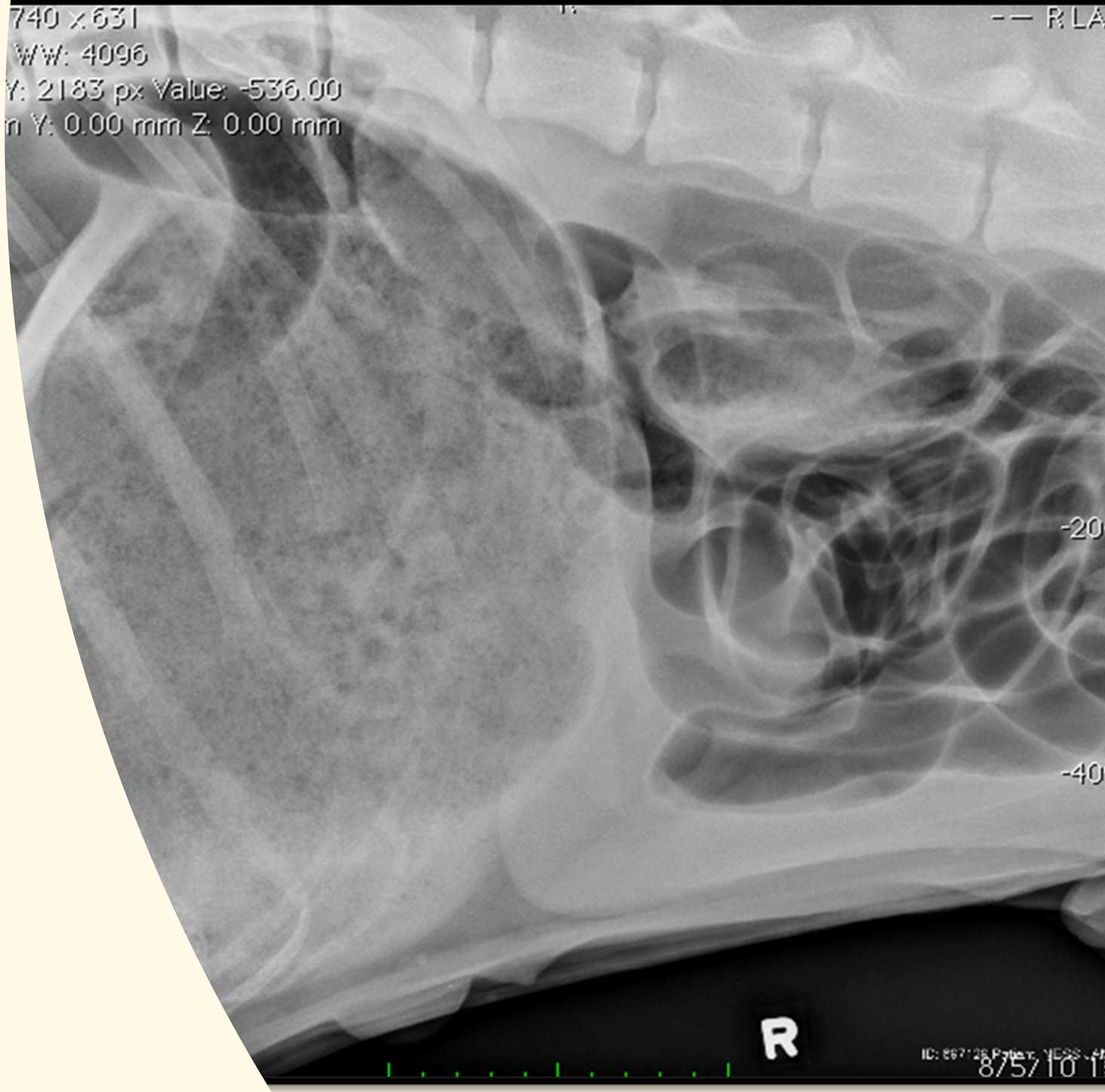
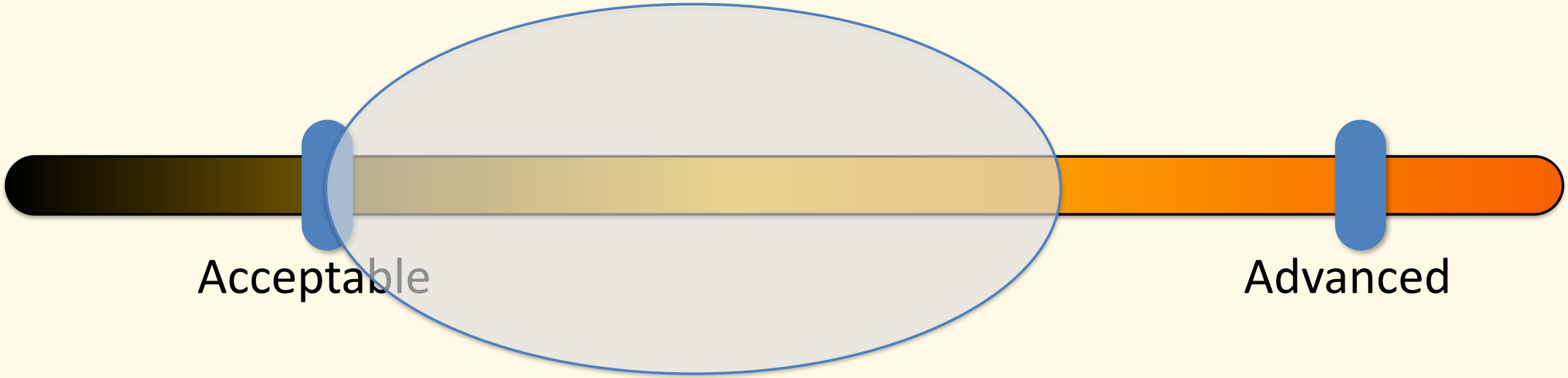


AVC – Soft Tissue Surgery

Gold Standard of Care

"The standard required of and practiced by the average, reasonably prudent and competent veterinarian"



AVC – Soft Tissue Surgery

Surgery in an AVC Setting is about courage to:

Trust your ability to DO

Say “Let’s Try!”

Accept that nothing is ever 0 or 100%

Analyze your failures and complications

Focus on the things that move the needle the most and let go of marginal gains

Agenda

GI Surgical Disease

GI foreign body
GDV

Feline Urinary Tract Obstruction

Medical treatment
Surgical treatment

(Non-Traumatic Hemoabdomen)

GI Foreign Body (Vomiting)

Physical Exam

Not a slam dunk diagnosis
Palpable FB or intussusception?
Mass?
Evidence of septic peritonitis

Signalment
History
Chronicity

Cats:

Oral examination – up to 50% of linear FB fixed at base of tongue

Dogs:

87% of inear FB fixed at pylorus – rarely under tongue

Clinical Context!

How sick is this patient?

Linear GI FB – Medical Treatment

Cats: Not recommended, but:

- Option if fixed at base of tongue – Release and monitor
- 47% resolve, 53% worsen → 1/3 will have perforation at time of Sx

- Good option if it's between this and euthanasia
- Surgery is always recommended for linear foreign bodies

Dogs: Not recommended

- Nothing to release…

GI Foreign Body - Imaging

Radiographs – May give you a diagnosis

Easy

- Radiopaque FB
- Gorrilla Glue
- Non-radiopaque, but distinct FB
- Evidence of septic peritonitis

Hmm, I think there is foreign material

- Non-radiopaque FB
- Evidence of obstruction
- Evidence of linear foreign body

Who the heck knows?

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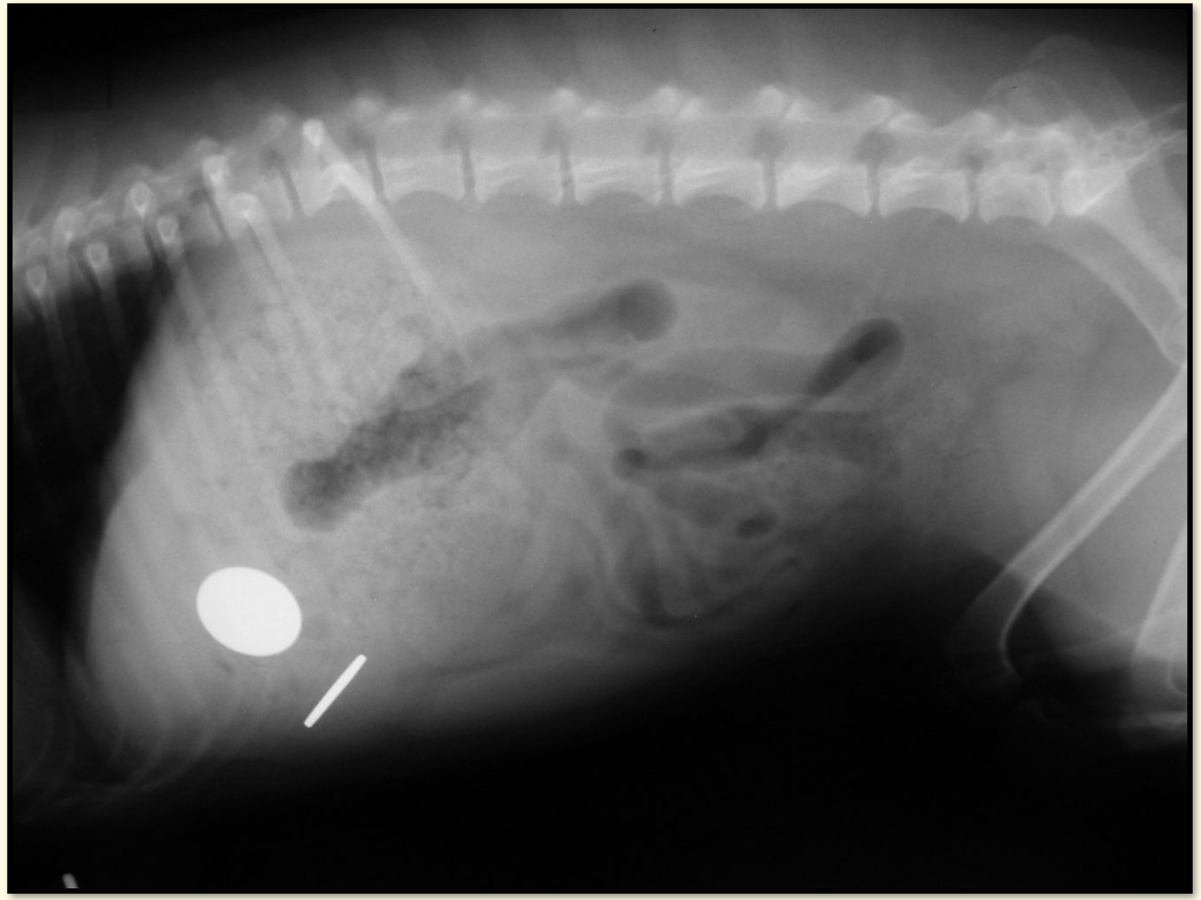

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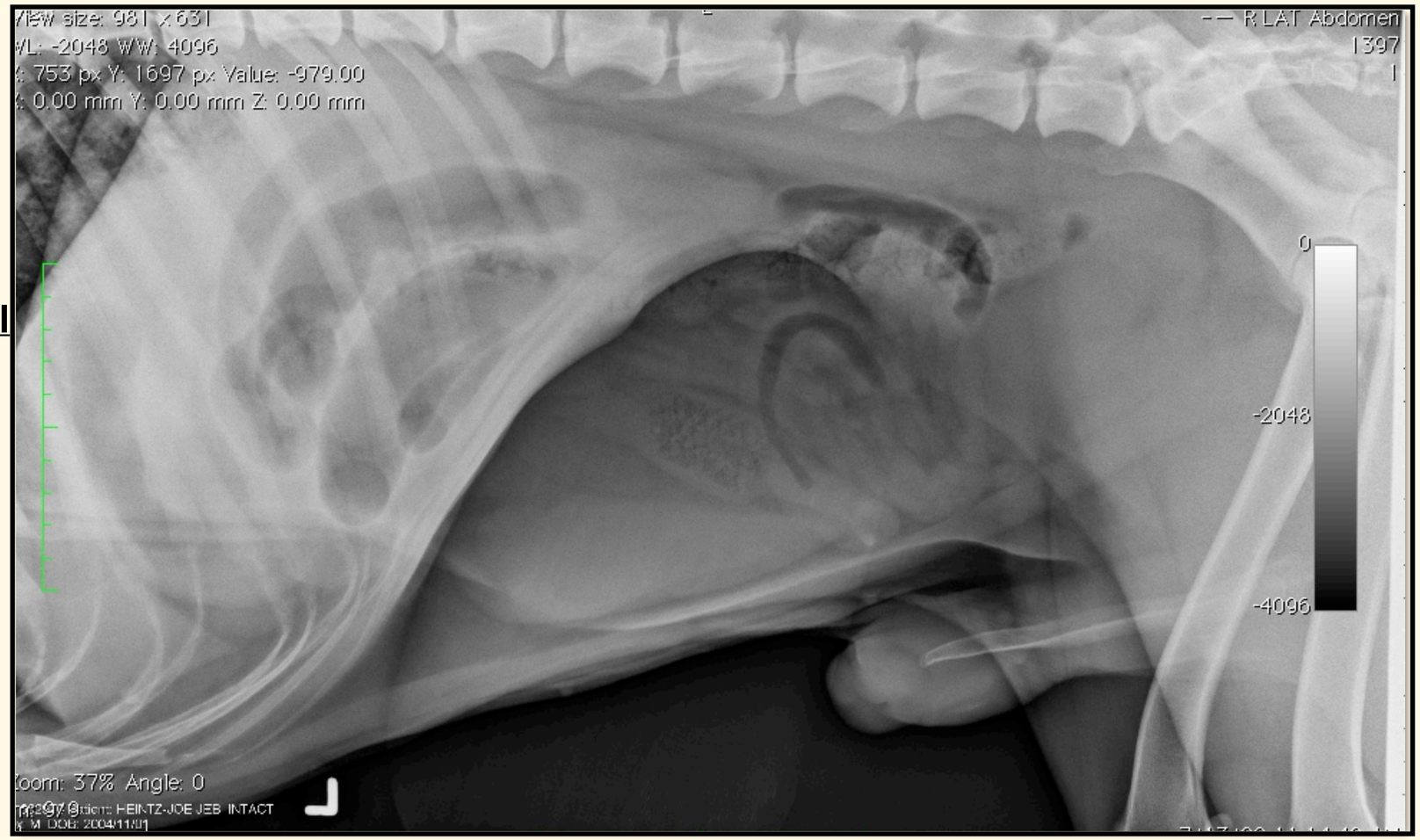

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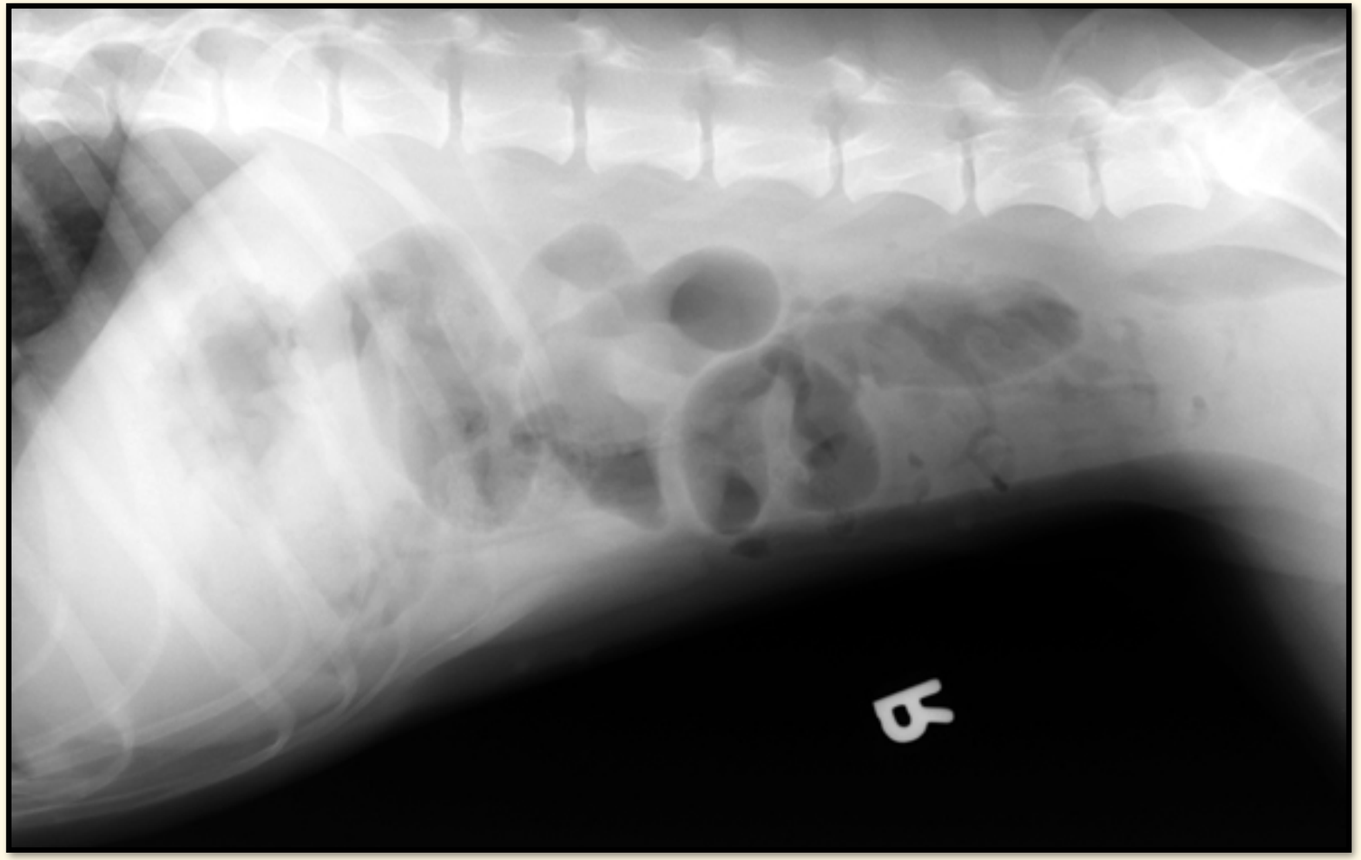

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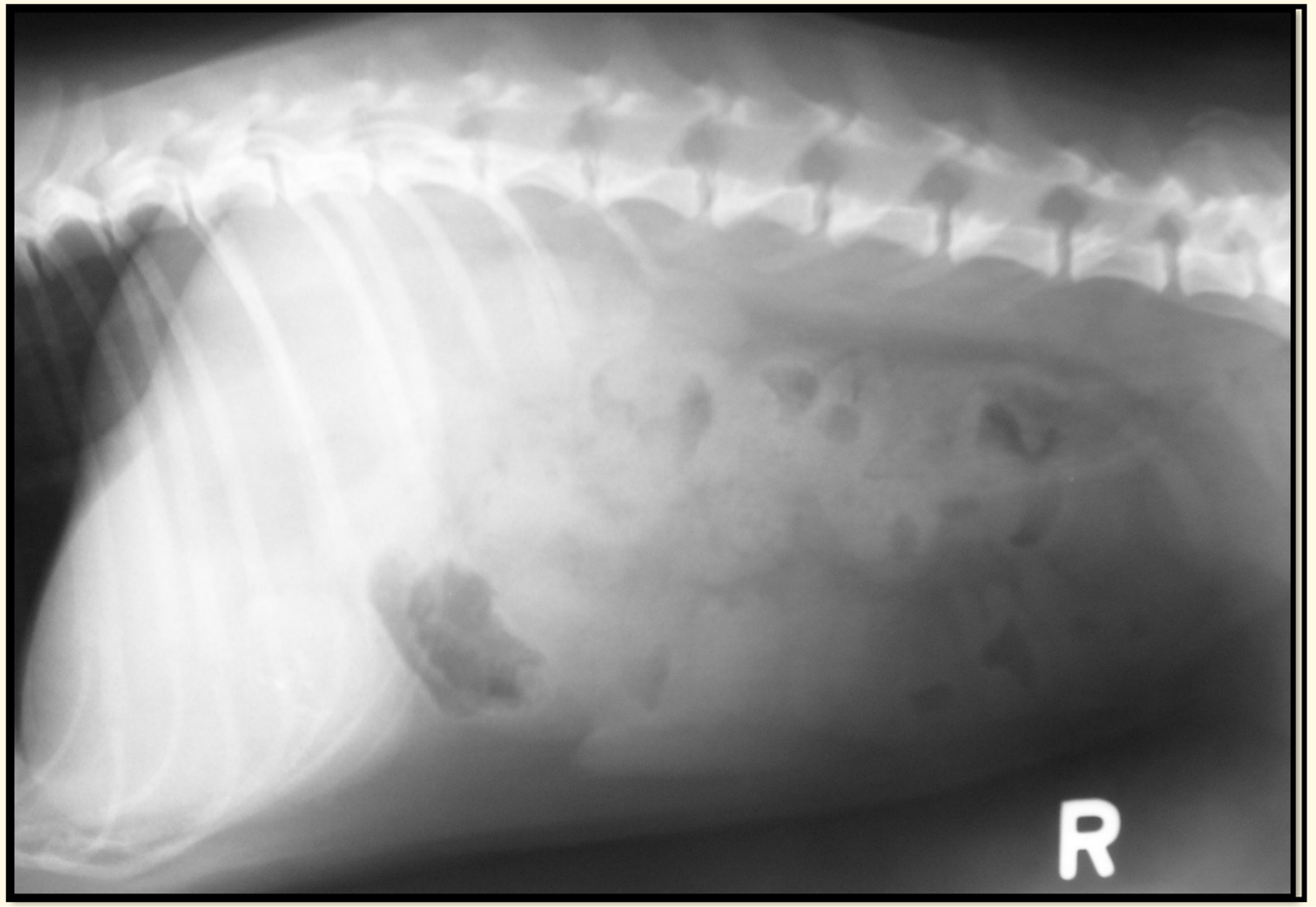

GI Foreign Body - Imaging

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GI Foreign Body - Imaging

Radiographs – 70% Sensitive to detect OBSTRUCTION

- Linear FB tends to NOT be obstructive
- Serial radiographs may not be helpful if not obvious on original study
- Know your parameters for obstructive patterns and plication of bowel

Gold Standard: US

- Not if I did the US…

GI Foreign Body - Imaging

Ultrasound

- Definitive results in 98%
- Greater confidence – user dependent

Things even I could figure out:
- Evidence of effusion – FAST scan
- This would tell us a lot of things

If you are good at ultrasounds – do THAT, skip the rads
If you are bad at ultrasound or don't have one, don't sweat it

CT

- Excellent at figuring our if there is a GI FB
- Not exactly AVC, though

Eyeballs (exploratory surgery) are also a great imaging tool

GI Foreign Body - Bloodwork

What does it change

- Decision to cut
- Differentiating prognosis

Minimal movement of the needle

CBC

- Left shift – higher risk of anastomotic leakage
- Neutropenia indicative of sepsis

Marginal prognosis/risk worsening
Doesn’t change what you do
Doesn’t help with the diagnosis of the primary problem

GI Foreign Body - Bloodwork

Chemistry

- Low albumin – higher risk of anastomotic leakage
- Electrolyte abnormalities do not help to determine if GI FB obstruction is present

Marginal prognosis/risk worsening
Doesn’t change what you do

Main risk: missing comorbidities

Do you need it all the time or mainy if the clinical presentation is worrisome?

In an AVC Setting, consider PCV, TS, Glu as a minimum database

GI Foreign Body - Bloodwork

Urinalysis

- USG to determine presence of dehydration?
- USG to determine broad renal function if clinically dehydrated?

Screening test value, but do we need a full UA?

GI FB – Medical Treatment – No Sx

Interesting…

- Tendency to run all the tests on vomiting dogs and cats, but:

- Symptomatic treatment is a great first-line option for acutely vomiting dogs
- Straight metallic objects may pass
- If a GI FB is present, symptomatic treatment with antiemetics fro a few days does not worsen the outcome
- ~50% of cases resolve with medical treatment

Medical Treatment ≠ Ignoring

- Monitor at home +/- rechecks
- +/- Monitor resolution of obstructive pattern or dilation with radiographs

Front Vet Sci. 2023 Feb 2:10:1063080.
Utility of diagnostic tests in vomiting dogs presented to an internal medicine emergency service
Bettina Holzmann[1], Melanie Werner[1,2], Stefan Unterer[1,2], René Dörfelt

J Vet Emerg Crit Care (San Antonio). 2023 Jul-Aug;33(4):442-446.
Delay of definitive care in cats and dogs with gastrointestinal foreign body obstruction following antiemetic administration: 537 cases (2012-2020)
Claire E Puzio[1], Elke Rudloff[1], Armi M Pigott[1]

J Small Anim Pract. 2023 Aug;64(8):522-526
Conservative management of metallic sharp-pointed straight gastric and intestinal foreign bodies in dogs and cats: 17 cases (2003-2021)
C Crinò[1], K Humm[1], S Cortellini[1]

J Am Vet Med Assoc. 2024 May 31;262(9):1251-1258.
Clinical features and outcomes of dogs with attempted medical management for discrete gastrointestinal foreign material: 68 cases (2018-2023)
Alyssa J Carrillo, Morgan A McCord, Vanna M Dickerson

https://avmajournals.avma.org/view/journals/javma/262/9/

GI FB – Medical Treatment – No Sx

1) Discussion

Based on this investigation, general recommendations concerning the diagnostic approach for patients with vomiting could not be provided. **For dogs who have exclusively vomiting as a clinical sign, and present in good mentation, further investigations might not be beneficial, and these dogs may recover with symptomatic treatment alone**. Additional diagnostics could be indicated in dogs with additional clinical signs other than diarrhea.

2) Clinical relevance

Conservative management of GIFB provides a feasible treatment option and may be considered based on presentation, foreign body location, hemodynamic stability of the patient, diagnostic imaging, and type of foreign body.

It’s OK to NOT jump into surgery or run a bunch of diagnostic tests

Notice how things change if the clinical presentation is worse

GI FB – Medical Treatment – No Sx

I am NOT comfortable with that approach

- Client communication about risk, cost, etc.
- Share the decision-making burden

Can I interest you in a different approach?

- Emesis with apomorphine or Ropinorole (Clevor) – 80% will produce all suspected material

J Am Vet Med Assoc. 2019 Aug 15;255(4):459-465.
Efficacy of intravenous administration of apomorphine for removal of gastric foreign material in dogs: 495 cases (2010-2015)
Kevin S Kirchofer, Gary Block, Justine A Johnson

J Am Vet Med Assoc. 2023 Apr 18;261(8):1140-1146.
Ropinirole has similar efficacy to apomorphine for induction of emesis and removal of foreign and toxic gastric material in dogs
Natalie A Rosenstein, Justine A Johnson, Kevin S Kirchofer

J Vet Emerg Crit Care (San Antonio). 2020 Mar;30(2):209-212.
Retrospective evaluation of the induction of emesis with apomorphine as treatment for gastric foreign bodies in dogs (2010-2014): 61 cases
Kristin M Zersen [1], Nathan Peterson [1], Philip J Bergman [2]

GI FB – Medical Treatment – Sx Prep

No need to rush

- Several hours delay is fine

- Prep for Sx is NOT inactivity

Prepare the patient

- Rehydration!

Prepare yourself and the team

- Set up for successful and efficient surgery
- Set up for outpatient surgery

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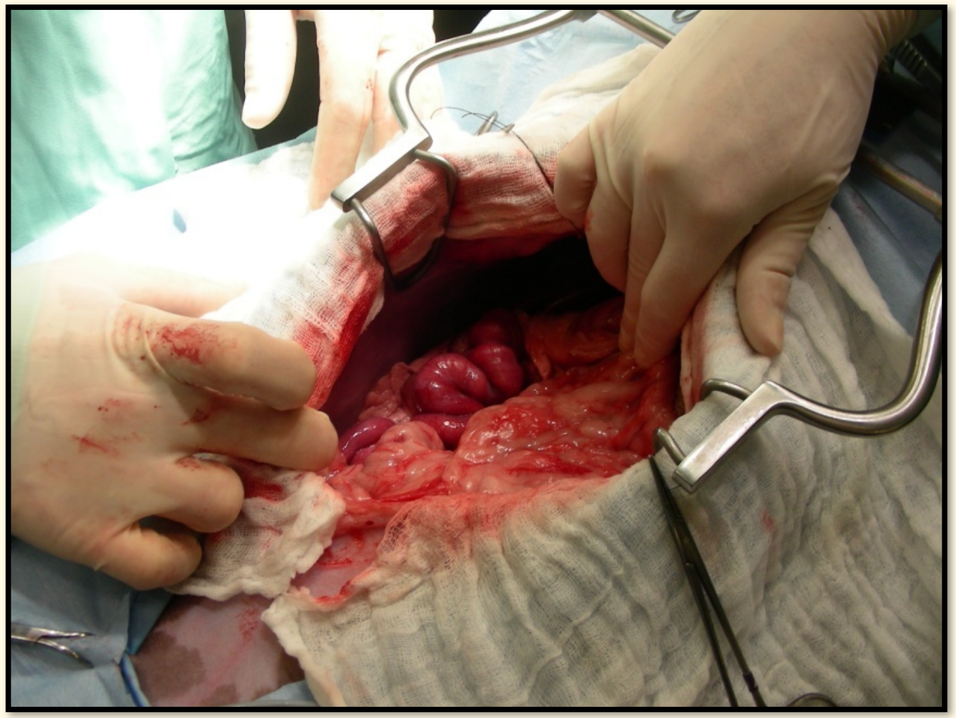
GI FB – Surgery



Perioperative Antibiotics

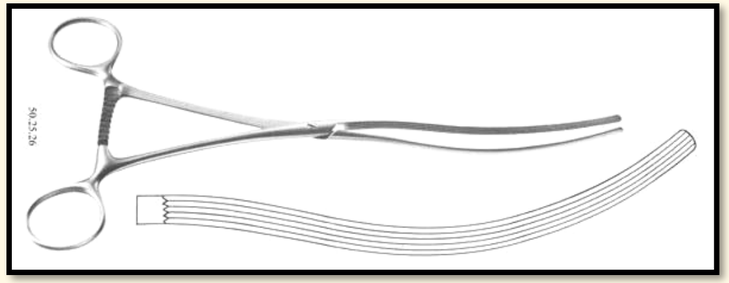
- Cefazolin 30 minutes prior to Sx, every 2 hours intraop OR:
- Ampicillin 90 minutes prior to Sx, every 90 minutes intraop

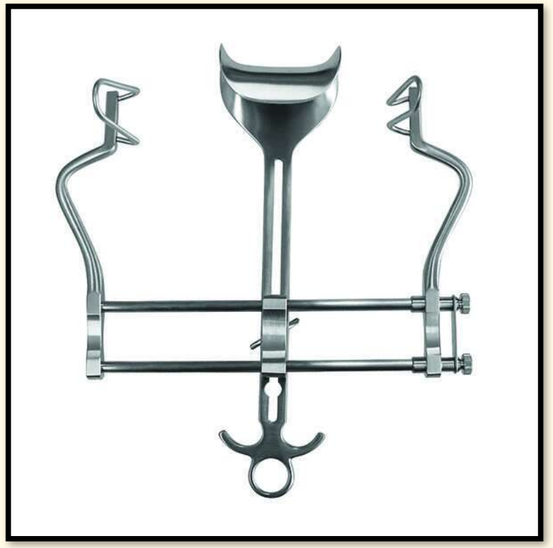
Minimize Contamination, maximize efficiency

- Large incision
- Large sterile field
- Laparotomy sponges or surgical towels
- Self-retaining retractor

Make sure you have all the instruments you need

- Polydioxanone suture
- Doyen intestinal forceps
- Suction





GI FB – Surgery

Stabile Patient

- Outpatient surgery is fine

Sick Patient

- Get creative
- Hybrid approach
  - 1) Transfer to 24 hr care facility
  - 2) Home tonight, come back first thing tomorrow

Surgical decision making – Enterotomy vs. R&A

- R&A has a higher dehiscence rate
- The intestine has amazing capacity to recover

- Don’t hesitate to do an R&A if that’s what you think is needed
- Avoid multiple R&As – can you combine into one?
  - Time
  - Risk multiplier

J Am Vet Med Assoc. 2025 Apr 1:1-6.

Outpatient gastrointestinal foreign body surgeries performed in a nonspecialized setting have good outcomes for dogs and cats

Arik Smith [1], Dylan Whitaker [1], Delaney McGrath [2], Sylvia M Lesnikowski [3], Margaret R Slater [4]

GI FB – Acceptable SOC

Workup

PE
Symptomatic treatment without workup
Diagnostics if indicated:

- PCV, TS, Glu
- Radiographs or US

Medical Treatment

Emesis, +/- SQ fluids – outpatient
Antiemetics, IV lfuids in prep for Sx

Client Communication

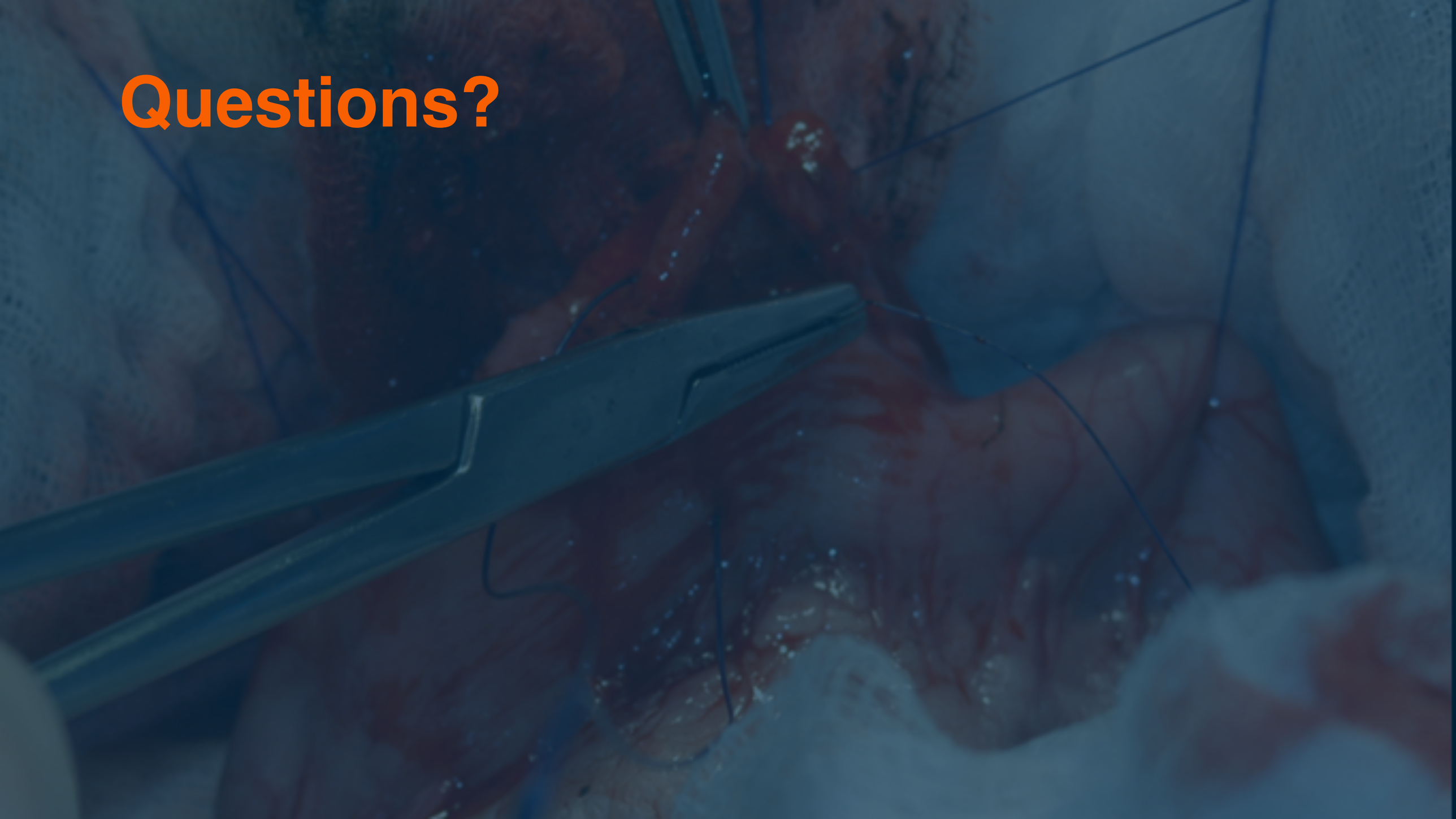
Depends on decision making tree
Depsends on how definitive the diagnosis is
Good prognosis unless septic peritonitis
Waiting could lead to perforation – especially with linear FB
Going to surgery could lead to negative explore

Surgery

Perioperative antibiotics
Minimize contamination
Outpatient post-op care is acceptable

Referral Considerations

Really sick cases
Hybrid approach


Questions?

GDV - PE

Essential and gives you high index of suspicion

- Signalment, history
- Overall assessment – walking in (uncomfortable but alert) → Recumbent → DOA

May need to act fast

PE

- TPR
- CV system evaluation → Pulse rate and quality, mm, CRT. Pulse deficits?
- Abdominal palpation and percussion

GDV - Imaging

These are the cases you can kill with diagnostics!

- Patient should be at least somewhat stable prior to imaging

Goal: Diagnostic imaging ≠ Perfect imaging

- Right lateral radiograph. Do NOT do VD view (aspiration pneumonia, CV compromise)
- Pathognomonic findings – didn't get the entire abdomen? Who cares as long as you have a diagnosis?
- No other imaging needed → decision making time

GDV - Imaging

What if it's just dilation and no volvulus?

- Congratulations, this is a great case to do surgery on
- Hemodynamically stable
- Anesthesia should be easier
- Anatomy all normal

What if the patient is not stable enough for imaging?

- If it is the right breed/dog type, recommend surgery to PREVENT a GDV
- Semi-elective – do it sooner than later

GDV – Medical Treatment

GDV cases are often “all hands on deck”

- Surgical treatment is easy
- Medical management and anesthesia can be very tricky – Are you prepared for this?
- Logistically?
- Emotionally?

Treatment

1) Address the underlying pathophysiology → Hypovolemia, shock, CV collapse, crappy venous return (make it better initially, fix permanently later)
   - IV fluids – lots of them
2) Decompress that stomach

GDV – Medical Treatment

Decompression

1) Orogastric tube – I don't love this (or am good at it) – stress, struggle, uncomfortable for patient
2) Catheter decompression – My preferred way

- Largest bore and longest catheter you have
- Ping and pop
- Multiple!
- Pressure on body wall to keep it against the stomach

- Neither method will remove **ALL** the air but will achieve the clinical goal

- Fluid resuscitation and decompression will calm things down and buy you time

GDV - ECG

⭐⭐⭐⭐⭐ **- Highly recommended**

- High incidence of ventricular arrhythmias
- Need to know rate, rhythm, presence of pulse deficits (auscultation and pulse palpation)

- Treat with lidocaine if needed

GDV - Bloodwork

The important stuff:

- PCV/TS → Evidence of massive hemorrhage (rare) and baseline
- (Lactate) → good information to have, but not essential, can help determine prognosis
- Glucose

That's it.

- What would a CBC, chemistry, coags change?
- Clinical evaluation is probably worth more to give you an accurate position of this patient on the "worry scale".

There is only one way to fix a GDV.

- If the patient leaves the hospital post-op, prognosis is excellent

GDV - Bloodwork

Lactate – The value proposition

- Initial lactate evaluation:
- Cutoff values determine 54-58% vs 90-99% survival

This is awesome! So why do I not care if you do lactate evaluations?

- Limited utility in an AVC setting otherwise (vs. advanced ER/CC setting)
- If I had a fixable problem with a 40-54% survival chance, I'd want you to give me that chance

What does it change? High lactate is not automatic doom. Might as well try!

GDV - Referral

Fair – lots of post-op management involved

- Can you do some medical management first to stabilize? IV fluids, decompression, etc.

Consider a hybrid approach - Patients are usually not quite ready to go home the same day, need more fluids, pain meds

1) Do surgery and then transfer for monitoring – safest for the patient and you – “Everyone sleeps better” concept
2) Do surgery and send home, then return the next morning for additional treatment – there is no literature out on this, but what’s the alternative?

Client must understand that they are sharing the risk

GDV – Surgical Treatment

Derotation and gastropexy

- Gastropexy is non-negotiable
- Do the one you prefer. But I prefer that you prefer the incisional/muscular flap gastropexy.

Be efficient and avoid struggling and complications

- Perioperative antibiotics
- Large sterile field
- Large incision
- Repeat intra-operative decompression – orogastric tube
- Derotate first, then explore

GDV – Surgical Treatment

Abdominal Explore – things that make you want to call it quits:

- Hemoabdomen – usually rupture of short gastric vessels – just ligate – Keep going
- Enlarged spleen – usually very congested because of decreased venous return. Give it some time, then reevaluate. Rare that it needs to leave. Keep going.
- Ventricular tachycardia – very common. Often treatable or can be ignored. If significant, post-op management is more involved. Keep going.
- Stomach looks dead – this is the one thing that's hard to fix unless it's local and easily resectable → If it is extensive: Intra-op call to client, consider euthanasia

Gastropexy

- Have to do it correctly – location, length, pexy technique

GDV – Acceptable SOC

Workup

- PE
- PCV/TS, +/- Glu, +/-BUN,
- Imaging – Right lateral diagnostic radiograph
- (ECG)

Treatment

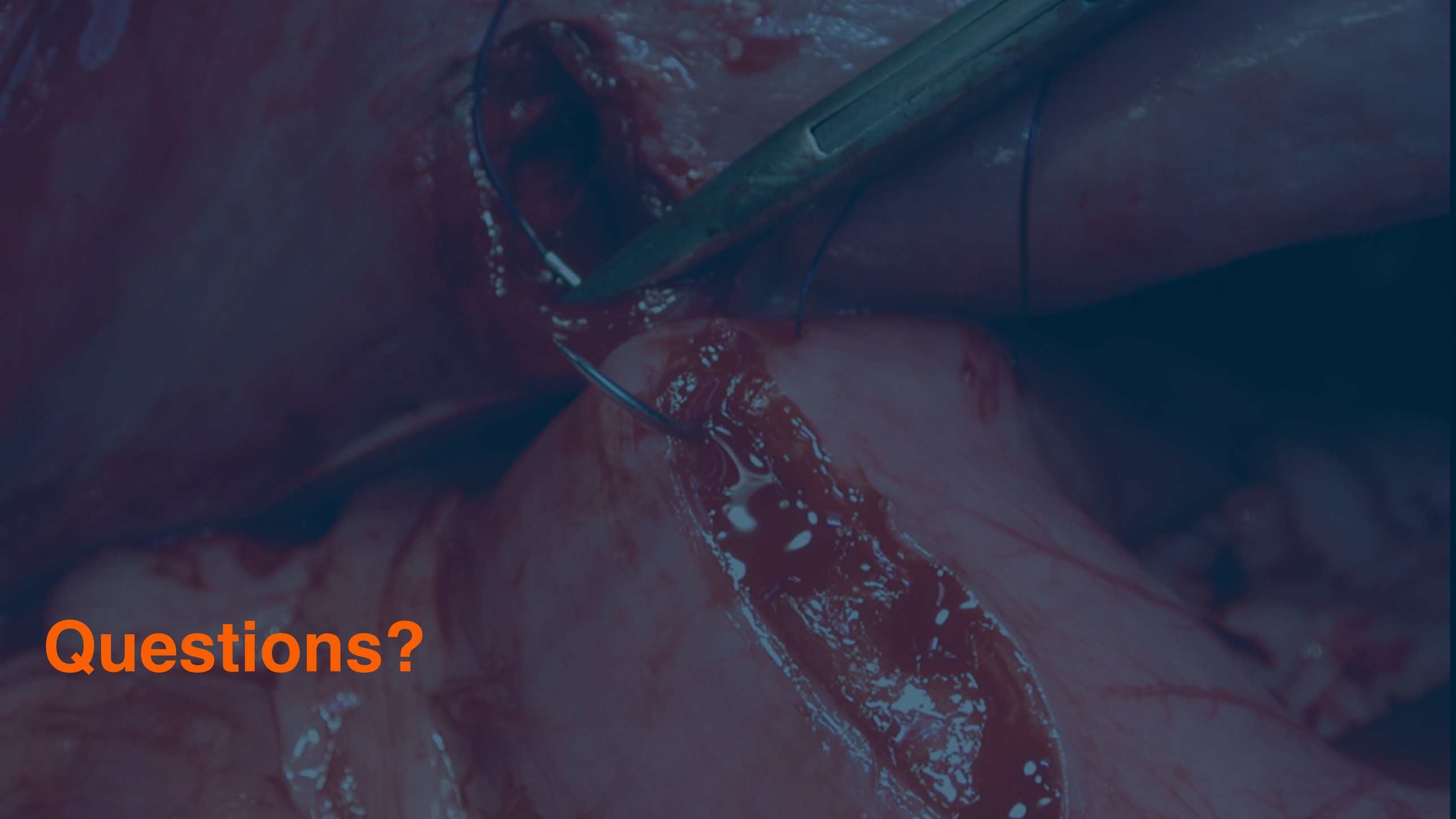
- Aggressive fluid resuscitation
- Percutaneous or orogastric decompression
- Surgery to correct GDV – derotation and gastropexy of choice

Client communication

- Life-threatening, there is only one way forward
- Death is possible at any time – 75% overall survival rate (take clinical picture into consideration).
- If it works, this will not happen again, and your dog will have a normal QOL.
- Post-op management can be involved. Let's talk about options

Referral considerations:

- Always offer
- Only after triage and stabilization
- Post-op monitoring



Questions?

Feline UO - PE

Essential for initial decision making and diagnosis

- Signalment, History, PE usually give you the diagnosis → Feline UO
- Firm, painful bladder

General attitude and clinical assessment

- BAR → recumbent and non-responsive

- Red flags:
- Bradycardia (HR < 120 bpm)
- Hypothermia (BT < 96F)
- Unresponsive mentation

Feline UO - PE

Client Communication:

- Inform of tentative diagnosis, basic overview of condition, next steps

Checkpoint

- How bad is this?
- Can we handle this here?

Feline UO – Basic Imaging

What does it change? → prognosis, treatment

Radiographs

- Easy to do, cost effective
- Determine if stones are present → Cystotomy indicated ~10% of cases
- Part of acceptable standard of care
- Can be helpful for determining uroperitoneum → massive effusion
- But: 93% of cats have some degree of abdominal effusion
- Not needed to meet acceptable standard of care

Ultrasound

Feline UO - Bloodwork

What does it change?

CBC

- Usually normal WBC count
- Usually normal HCT
- PCV sufficient as standard

Chemistry & Electrolytes

- Azotemia in ~30% of cats – post-renal
- Hyperkalemia – correlates with clinical signs – Mentation, bradycardia, hypothermia

Value	Degree of Hyperkalemia	% of cases
< 6 mmol/L	Mild	76%
6-7.9 mmol/L	Moderate	12%
>8 mmol/L	Severe	12%

Feline UO - Bloodwork

Combination of bradycardia (<120 bpm) and hypothermia (<96% F) → 98% specific for hyperkalemia

- ECG
- Consider electrolyte analysis
- Client communication!

- Survival rate is still high (90%)
- Medical treatment is more involved/complicated/expensive

Stable cat workup minimum

- PCV/TS
- (+/-) BUN

Feline UO - ECG

Changes associated with hyperkalemia:

- Flattened P waves
- Prolonged PR interval
- Widened QRS complex
- Tall T waves

Always perform when hyperkalemia is suspected

Always evaluate if going to surgery

YouTube video about hyperkalemia and the ECG:
https://www.youtube.com/watch?v=jLTBMmej3hY

Feline UO - UA

USG – typically high

- Can decrease as result of tubular dysfunction

Sediment analysis

- Lots of schmutz
- Careful in calling it a UTI
- Struvite crystals – chicken or egg?

Culture

- How did you get the sample?
- What is it going to change?
- I don’t do them anymore unless I have a good reason to
  → urolithiasis, old cat with chronic urinary signs, etc.

Feline UO – Medical Treatment

1. Stabilize/Triage
2. Medical management of UO

- Inpatient
- Prep for Sx

Therapeutic cystocentesis angst?

- Risk for bladder rupture is low
- Do it correctly

Stabilization/Triage

- Wide range, clinical presentation informs urgency
- IV access is never a bad idea
- Decompressive cystocentesis will buy you time – go for it!

If you start looking up calcium gluconate, dextrose, sodium bicarb, and insulin doses this may not be a great case for you…

Feline UO – Medical Treatment

Inpatient, Aggressive

- Current default
- Indwelling catheter placement, keep in place for 24-72 hrs – 48ish?
- Measure ins & outs, monitor electrolytes, etc.

Inpatient, Low Cost

Inpatient/Outpatient

- Catheterization and deobstruction
- Immediate removal
- Supportive care

J Am Vet Med Assoc.2010 Dec 1;237(11):1261-6.
A protocol for managing urethral obstruction in male cats without urethral catheterization
Edward S Cooper[1], Tammy J Owens, Dennis J Chew, C A Tony Buffington

https://pmc.ncbi.nlm.nih.gov/articles/PMC4511701/pdf/nihms707928.pdf

Feline UO – Medical Treatment

Success rate

- Survival to discharge 91-94%
- Reobstruction rates vary wildly – 15-74%
- ~20% reobstruct within 24 hrs of u-cath removal
- 30-40% reobstruct within 2 weeks
- 2 weeks out? Feel good about it – 75% of reobstructions occur within 2 weeks

Low-cost inpatient and non-indwelling catheter treatments have slightly higher failure/reobstruction rates

JVIM 2021 Occurrence and clinical management of urethral obstruction in male cats under primary veterinary care in the UK in 2016

https://pmc.ncbi.nlm.nih.gov/articles/PMC8965234/pdf/JVIM-36-599.pdf

Feline UO – Medical Treatment

AVC perspective

- Good option if the cost is low and we are not spending all the money on medical treatment
- At what point do we do surgery?

Feline UO – Surgical Treatment

Perineal urethrostomy in cats
(Scrotal urethrostomy in dogs)

Traditional "Three strikes" approach – why? → financial exhaustion before definitive treatment is done

What kills UO cats?

- Cardiopulmonary arrest – very sick
- Cost of care
- Up to 25% euthanasia rate for reobstruction
- 88% of UO deaths due to euthanasia

Feline UO – Surgical Treatment

Benefits of Sx:

1) Fixes the problem permanently and immediately
2) Overall outcome is excellent:

- Normal Life with good or very good QOL
- 94% owner satisfaction, 90% have good QOL
- Death following PU is not typically PU-related

Risks of Sx – complications

- **1) <u>Minor, long-term</u>**
- Urinary signs or trouble (not UO) – similar to medical treatment: 25-40%
- Cystic calculi (not PU related)
- PU site inflammation
- UTI (PU or underlying uropathy?)

- **2) <u>Minor, short-term</u> – 20-25%**
- Dehiscence!

- **3) <u>Major</u>**
- Stricture or stenosis – 2-18%
- 75% are the result of inadequate stoma size

Feline UO – Surgical Treatment

PU is an invasive procedure with great outcome, but it MUST be done correctly

- PU is a salvage procedure – what does that mean
- At what point do we “salvage”?

- Consider PU early, before all the money is spent on medical treatment
- PU surgery is doable in a GP setting

- Case selection!

Cystotomy if there are distinct stones. If there is sand, no cystotomy is needed

Flush, flush, flush through a catheter post-PU

JFMS Welfare of cats 5-29 months after perineal urethrostomy: 74 cases (2015-2017)

https://pmc.ncbi.nlm.nih.gov/articles/PMC10814341/pdf/10.1177_1098612X19867777.pdf

Feline UO - Referral

Smart thing to do - Always part of the conversation

Clinical approach will change to advanced care with resultant $$$ increase

Document the conversation and you have officially covered your back

Feline PU – Acceptable SOC

Workup:

- PE
- PCV/TS
- Radiographs
- +/- UA
- +/- Electrolytes
- +/- ECG

Medical Treatment:

- Decompressive cystocentesis or urinary catheterization
- OP treatment, inpatient treatment or low-cost inpatient treatment
- Consider surgery with any UO case

Client Communication:

- Recurrence risk with medical treatment: ~40%
- Monitor closely for 2 weeks
- Surgery is an option at any time

Surgery – PU

- Great long-term outcome - <5% major complications
- Must be performed correctly
- Good QOL
- Can be done at any UO episode
- You can do this procedure with proper preparation

Referral Considerations:

- Really sick cases

Neutering is NOT associated with early-onset urethral obstruction in cats

De Oliveira Sampaio et al. JFMS 2022

Questions?

Non-Traumatic Hemoabdomen - PE

Presenting Complaint

- Wide range: ADR - weakness - lethargy - collapse, recumbency, shock
- Signalment and History!
- Abdominal palpation
  - Fluid distention or wave
  - Palpable mass

PE

- How bad is the CV compromise?
  - HR & rhythm
  - Pulse quality and deficits
  - Overall clinical picture

Non-Traumatic Hemoabdomen - Diagnosis

Rapid Diagnostics

- BP
- ECG
- PCV/TS
- Signalment and History!
- Abdominal palpation
  - Fluid distention or wave
  - Palpable mass

Treatment

- May need to start treatment sooner than later
- Urgency can make case management and communication very tricky

Non-Traumatic Hemoabdomen - Initial Communication

Need for additional diagnostics and cost

- Imaging
- Additional laboratory tests
  - CBC, chem, coats - what do they change?
  - Abdominocentesis - confirmation of diagnosis
- Imaging
  - Primary diagnosis confirmation?
  - Overt metastasis

Treatment options

- Have to start talking about likely disease process and prognosis
- Can spend a lot of money fast for treatment
- Rapid decision to “go all in” often needed

Non-Traumatic Hemoabdomen - Initial Communication

Prognosis

- 67-80% neoplasia
- Majority hemangiosarcoma
  - Impossible to tell if it is benign or malignant prep — have to play the odds
- Poor prognosis long-term with HSA
  - <10-20% alive at 12 months
  - Sx only 19-90 day MST
  - Sx + Chemo - 172-202 day MST
- Good long-term prognosis with benign masses
  - Splenectomy curative
  - Small subset of “benign” histopath cases still die (misdiagnosis)

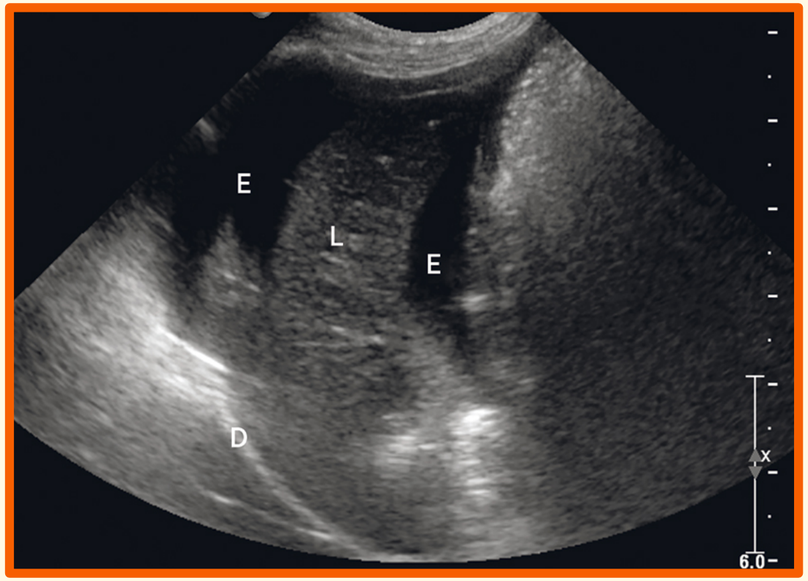
Treatment options

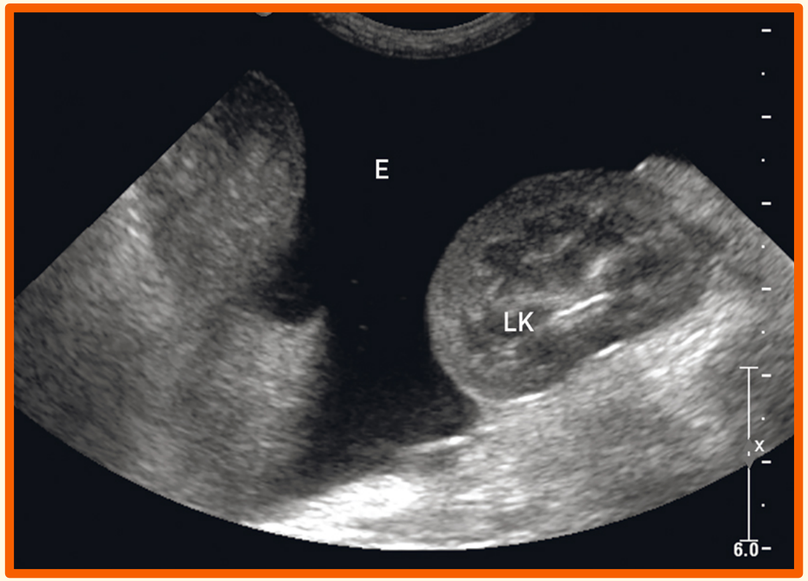
- Only one way forward if we want to try - surgery
- Euthanasia as main other option
- Palliative care in soem patients

Non-Traumatic Hemoabdomen - Imaging

What imaging?

- Abdominal radiographs not that helpful
  - Origin
  - Type of mass
- US - Abdomen
  - Confirm free fluid, guide sailing
  - May determine origin - can be difficult with large masses
- US - cardiac
  - If pericardial effusion is present, most likely metastatic HSA
- Advanced imaging - excellent for determining origin
  - What does it change?
  - Cannot determine benign vs. malignant
- Chest radiographs
  - Overt metastasis
  - Pericardial effusion often not obvious in acute cases





Non-Traumatic Hemoabdomen - Treatment

Stabilize aggressively

- Volume issue - BP, perfusion
- Oxygen carrying capacity issue
- Combo = oxygen delivery issue
- Treat symptomatically

Surgery is usually urgent, not always emergent

- Consider low volume resuscitation
- Blood products
- Autotransfusion is fine

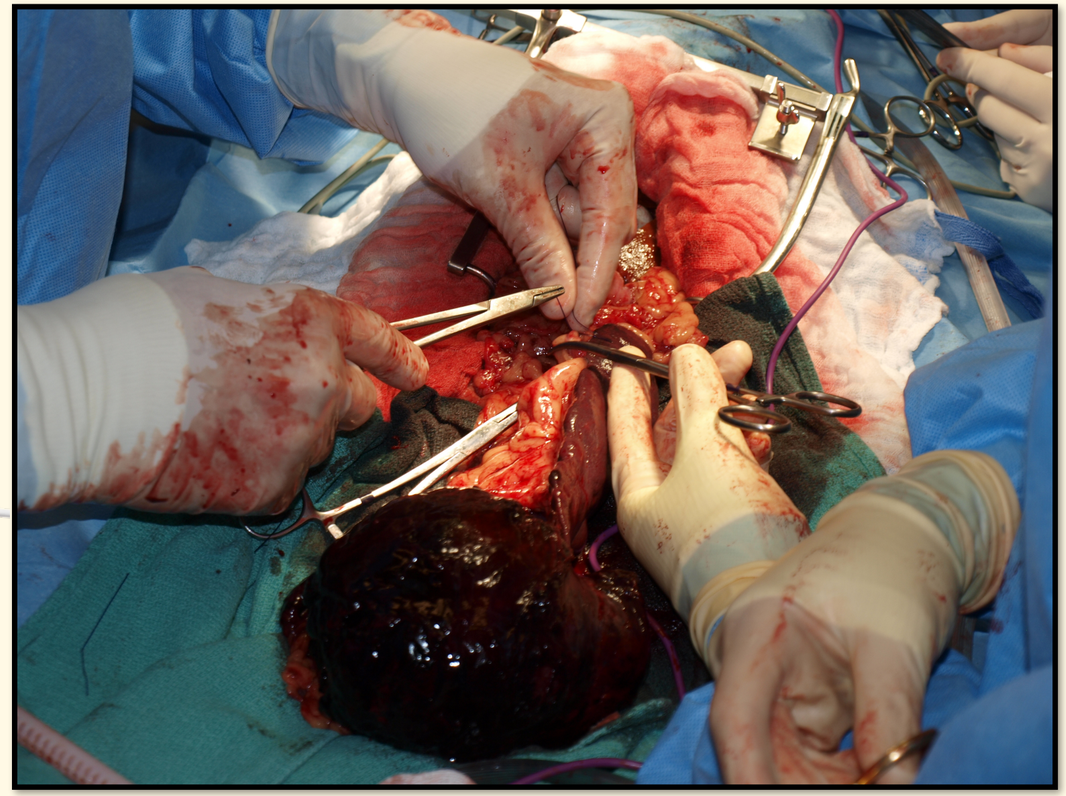
Non-Traumatic Hemoabdomen - Treatment

Surgical Treatment

- Normal splenectomy is straightforward
- Large mass splenectomy can be tricky
- Must submit for histopathology

Anesthesia can be harrowing

- **Autotransfusion!**
- Arrhythmias
- Unstable patient



Non-Traumatic Hemoabdomen - Treatment

Post-op Management

- High incidence of arrhythmias
- Likely to require close monitoring and care
- Great for Hybrid approach
  - What if that is not an option?

Non-Traumatic Hemoabdomen - Acceptable SOC

Workup

- PCV, TS
- Abdominocentesis and PCV comparison
- FAST US - abdomen, pericardial effusion check
- Chest radiographs

Medical Treatment

- Stabilize
  - Fluids
  - Autotransfusion or other transfusion

Client Communication!

- Clear and honest
- “Bail-out-points”
- Urgency is very difficult to navigate
- Permission to quit

Surgical Treatment

- Splenectomy
- Post-op monitoring

Referral

- Always offer
- Post-op referral recommended if possible
- It’s not the surgery, it’s all the other things…