Come approcciare il paziente con neoplasia gastroenterica

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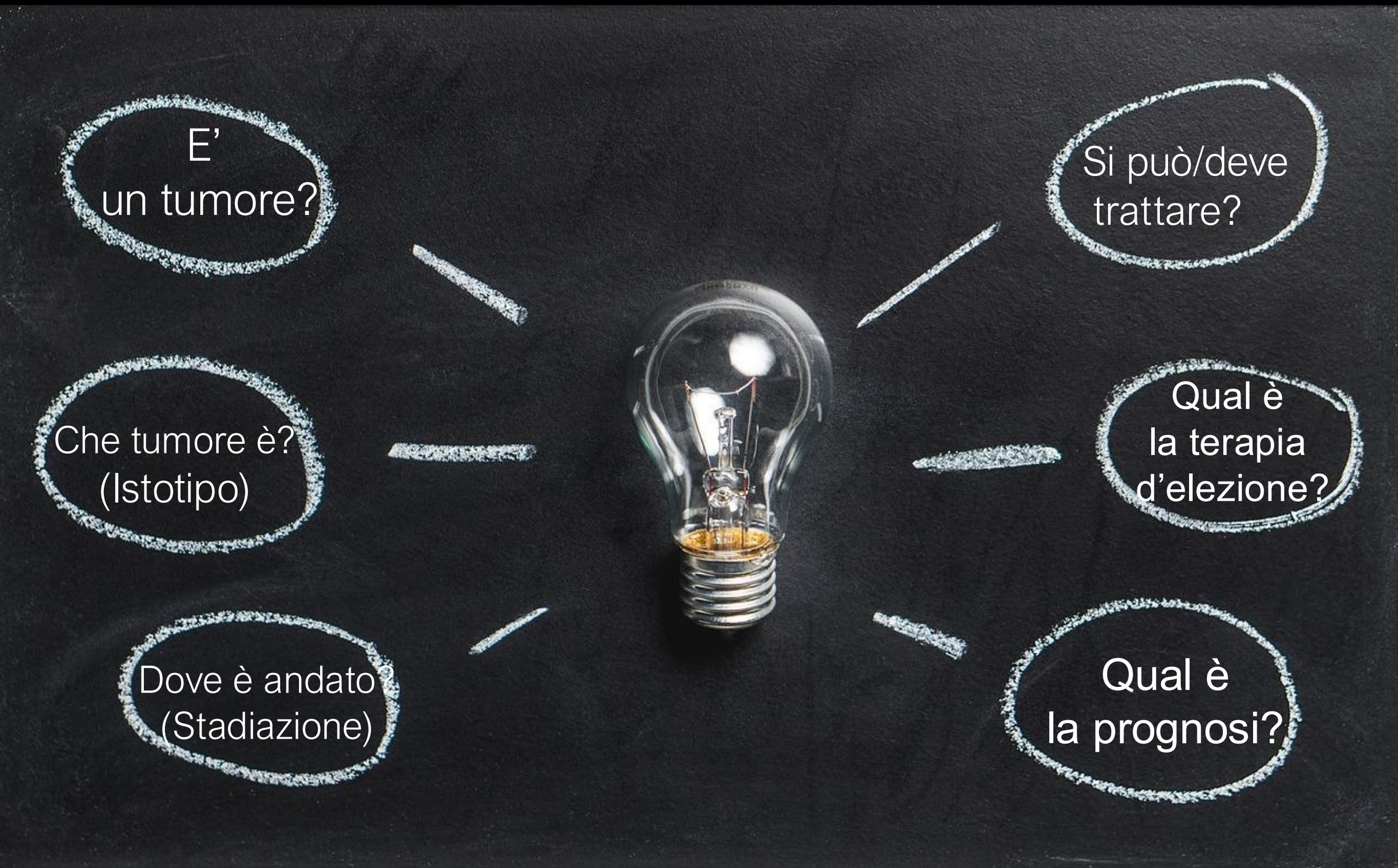
DECVIM- CA (Oncology)

Candioli PHARMA

AniCura
CLINICA VETERINARIA MALPENSA

A quali domande dobbiamo rispondere?



Quando sospettare un tumore del tratto gastroenterico?

SEGNI DIRETTI

«PALPABILI»

Organomegalia (20- 50%)

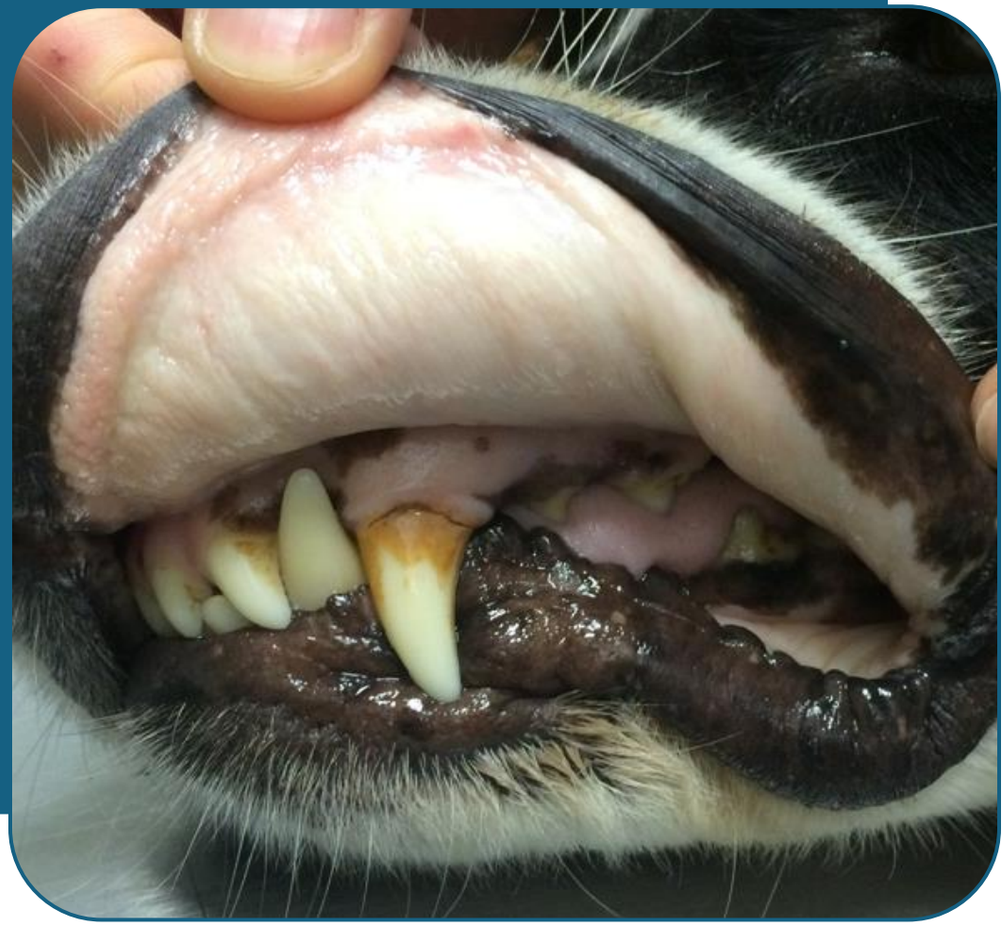
Quando sospettare un tumore del tratto gastroenterico?

SINTOMI

Perdita di peso, cachessia, vomito, diarrea, ematemesi, ematochezia, tenesmo

Quando sospettare un tumore del tratto gastroenterico?

SEGNI CLINICI:
MUCOSE PALLIDE

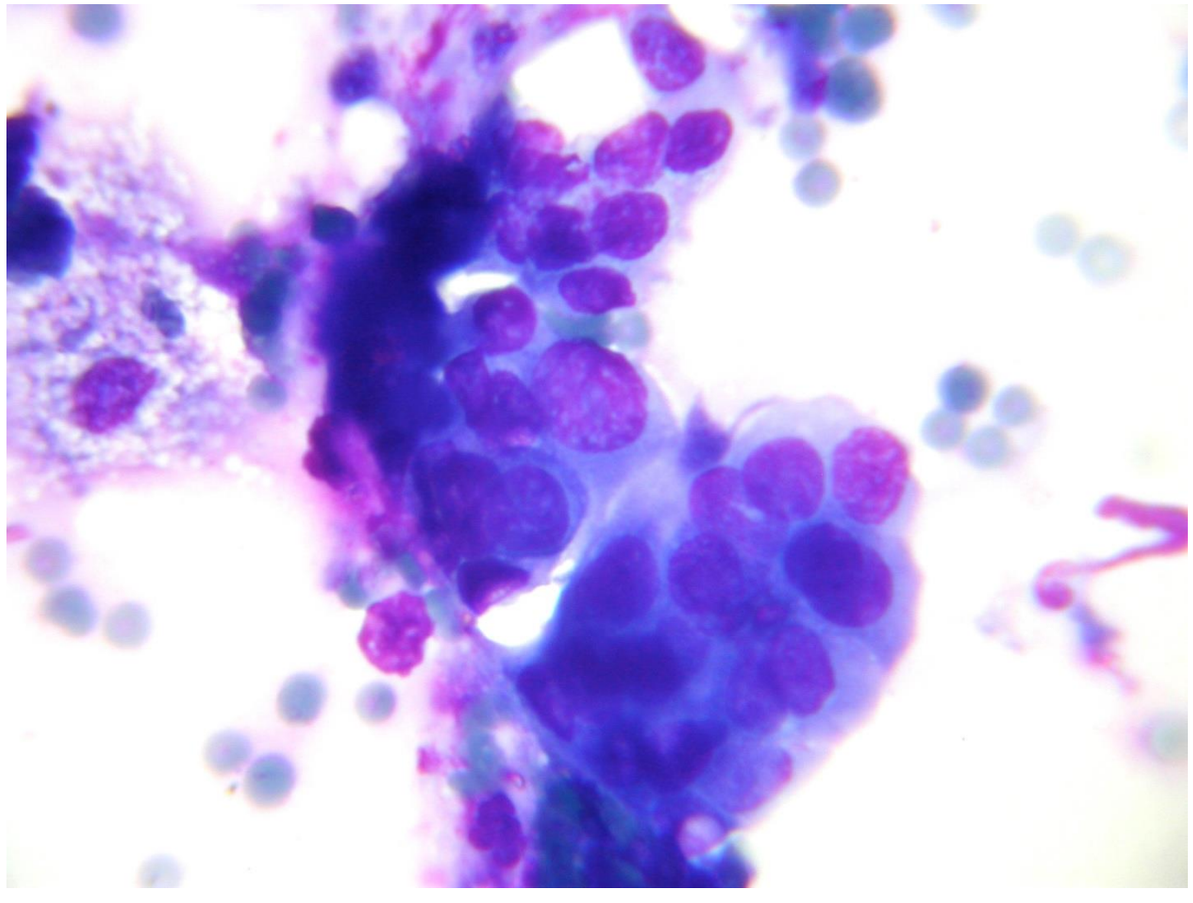


Quando sospettare un tumore del tratto gastroenterico?

SEGNI CLINICI:
MUCOSE
ITTERICHE

Quando sospettare un tumore del tratto gastroenterico?

SEGNI CLINICI: VERSAMENTO ADDOMINALE



Importanza della visita

Condizioni generali

(stato di nutrizione, idratazione)

Parametri vitali

Valutazione dei linfonodi

Valutazione della cute

Esplorazione transrettale

E’ un tumore?


1
2
3
4
5
6
7
8
9
10


∞/0.17/D
N PLAN
20x/0.40
HCX

Diagnostic value of cytologic examination of gastrointestinal tract tumors in dogs and cats: 83 cases (2001–2004)

Ugo Bonfanti, DVM; Walter Bertazzolo, DVM; Enrico Bottero, DVM; Davide De Lorenzi, DVM; Laura Marconato, DVM; Carlo Masserdotti, DVM; Andrea Zatelli, DVM; Eric Zini, DVM, PhD

Objective—To determine results of cytologic examination of fine-needle aspirates and impression smears of gastrointestinal tract tumors in dogs and cats.

Design—Retrospective case series.

Animals—38 dogs and 44 cats with histologically confirmed gastrointestinal tract tumors.

Procedures—Results of cytologic examination of fine-needle aspirates (n = 67) or impression smears (31) were compared with the histologic diagnosis, and extent of agreement was classified as complete, partial, none, or undetermined.

Results—For 48 of the 67 (72%) fine-needle aspirates, there was complete or partial agreement between the cytologic and histologic diagnoses. For 12 (18%) aspirates, the extent of agreement could not be determined because the cytologic specimen was considered unsatisfactory. For 29 of the 31 (94%) impression smears, there was complete agreement between the cytologic and histologic diagnoses, and for 2 (6%), there was partial agreement. None of the impression smears were considered unsatisfactory. Proportion of samples with complete agreement and proportion of samples with complete or partial agreement were significantly higher for impression smears than for fine-needle aspirates.

Conclusions and Clinical Relevance—Results suggest that there was moderate agreement between results of cytologic examination of fine-needle aspirates from dogs and cats with gastrointestinal tract neoplasia and the definitive histologic diagnosis. The agreement between results of cytologic examination of impression smears and the histologic diagnosis appeared to be higher. (*J Am Vet Med Assoc* 2006; 229:1130–1133)

Table 1—Extent of agreement between results of histologic examination in dogs and cats with gastrointestinal tract tumors and results of cytologic examination of impression smears and fine-needle aspirates.

	Extent of agreement							
	Complete		Complete or partial		None		Undetermined	
Group	FNA	IS	FNA	IS	FNA	IS	FNA	IS
All animals	43 (64)	29 (94)	48 (72)	31 (100)	7 (10)	0 (0)	12 (18)	0 (0)
Animals with gastric neoplasia	7 (50)	2 (ND)	8 (57)	3 (ND)	2 (14)	0 (ND)	4 (29)	0 (ND)
Cats with gastric neoplasia	2 (ND)	1 (ND)	2 (ND)	1 (ND)	0 (ND)	0 (ND)	1 (ND)	0 (ND)
Dogs with gastric neoplasia	5 (46)	1 (ND)	6 (55)	2 (ND)	2 (18)	0 (ND)	3 (27)	0 (ND)
Animals with intestinal neoplasia	36 (68)	27 (96)	40 (76)	28 (100)	5 (9)	0 (0)	8 (15)	0 (0)
Cats with intestinal neoplasia	26 (70)	11 (92)	29 (78)	12 (100)	4 (11)	0 (0)	4 (11)	0 (0)
Dogs with intestinal neoplasia	10 (63)	16 (100)	11 (69)	16 (100)	1 (6)	0 (0)	4 (25)	0 (0)

Data are given as number (%) of cases.

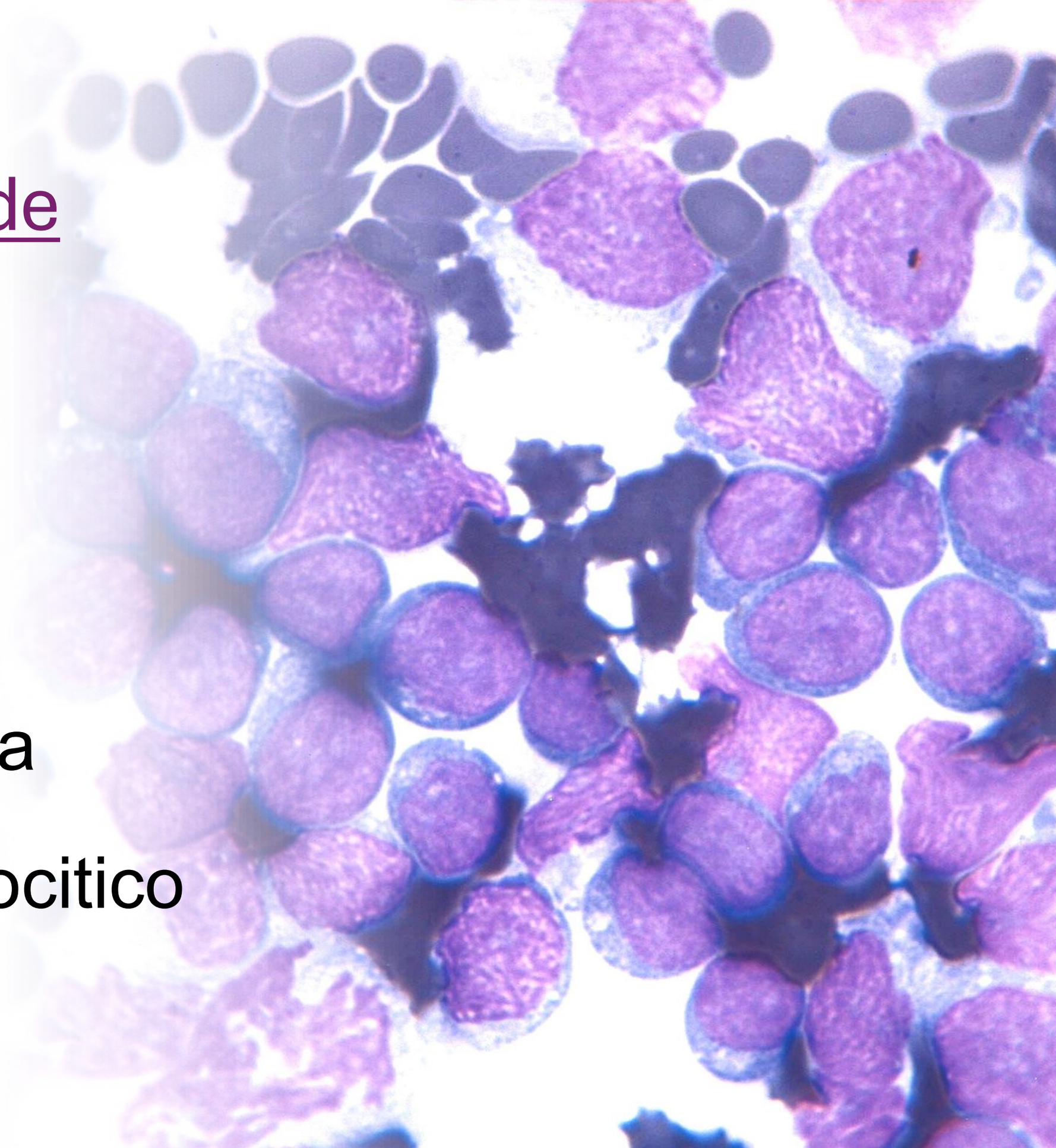
FNA = Fine-needle aspirates. IS = Impression smears. ND = Not determined because there were < 10 cases.

Complete agreement was defined as agreement in regard to both cell lineage and cell type. Partial agreement was defined as agreement in regard to cell lineage but a lack of agreement in regard to cell type or an inability to characterize cell type. No agreement was defined as a lack of agreement in regard to cell lineage or a cytologic diagnosis of any non-neoplastic lesion (eg, inflammation). Extent of agreement was classified as undetermined if the cytologic specimen was unsatisfactory because of hypocellularity, hemodilution, or necrosis.

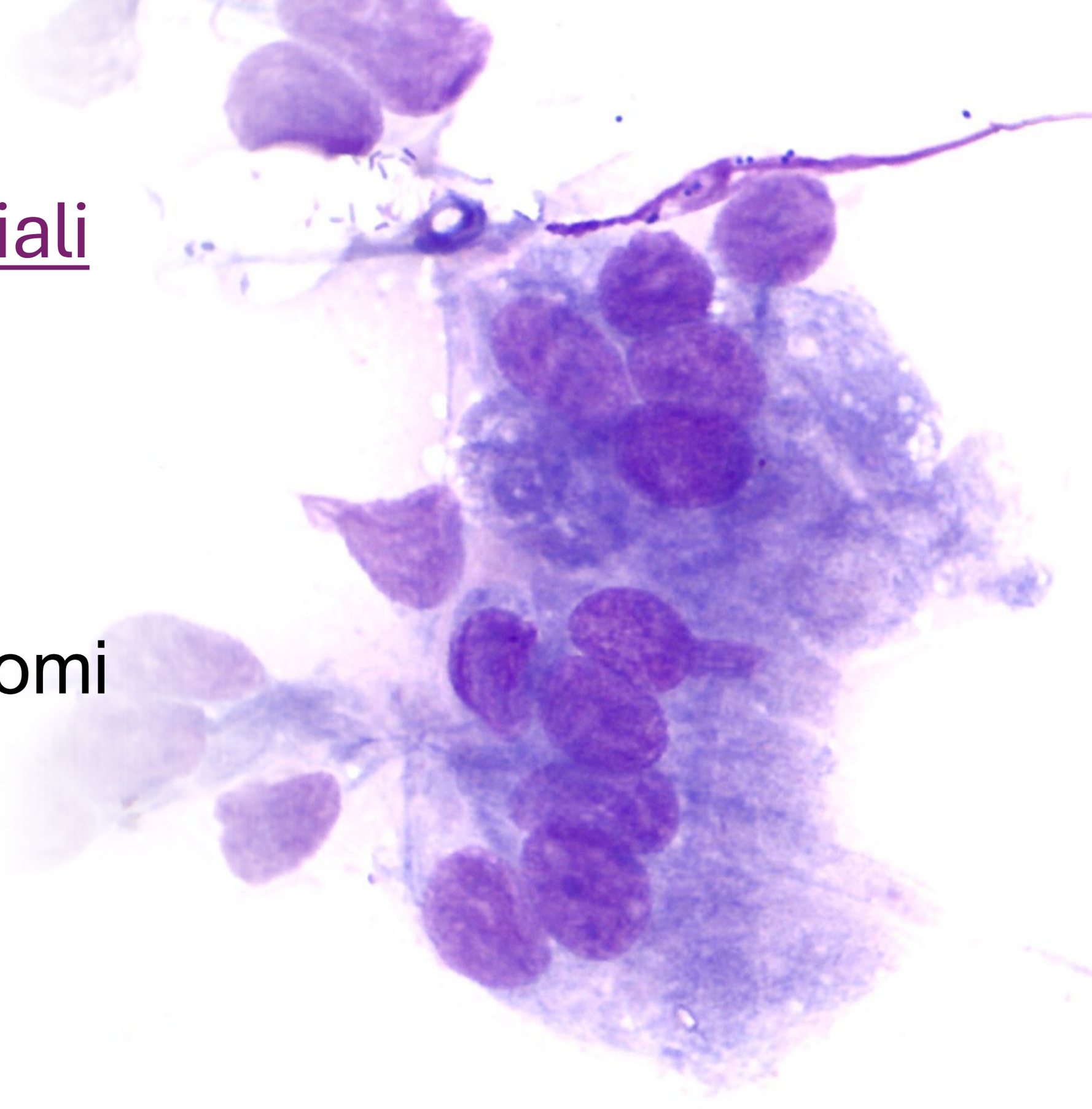
Che tipo di tumore è?

Cellule rotonde

- Linfoma
- Mastocitoma
- Plasmocitoma
- Sarcoma istiocitico



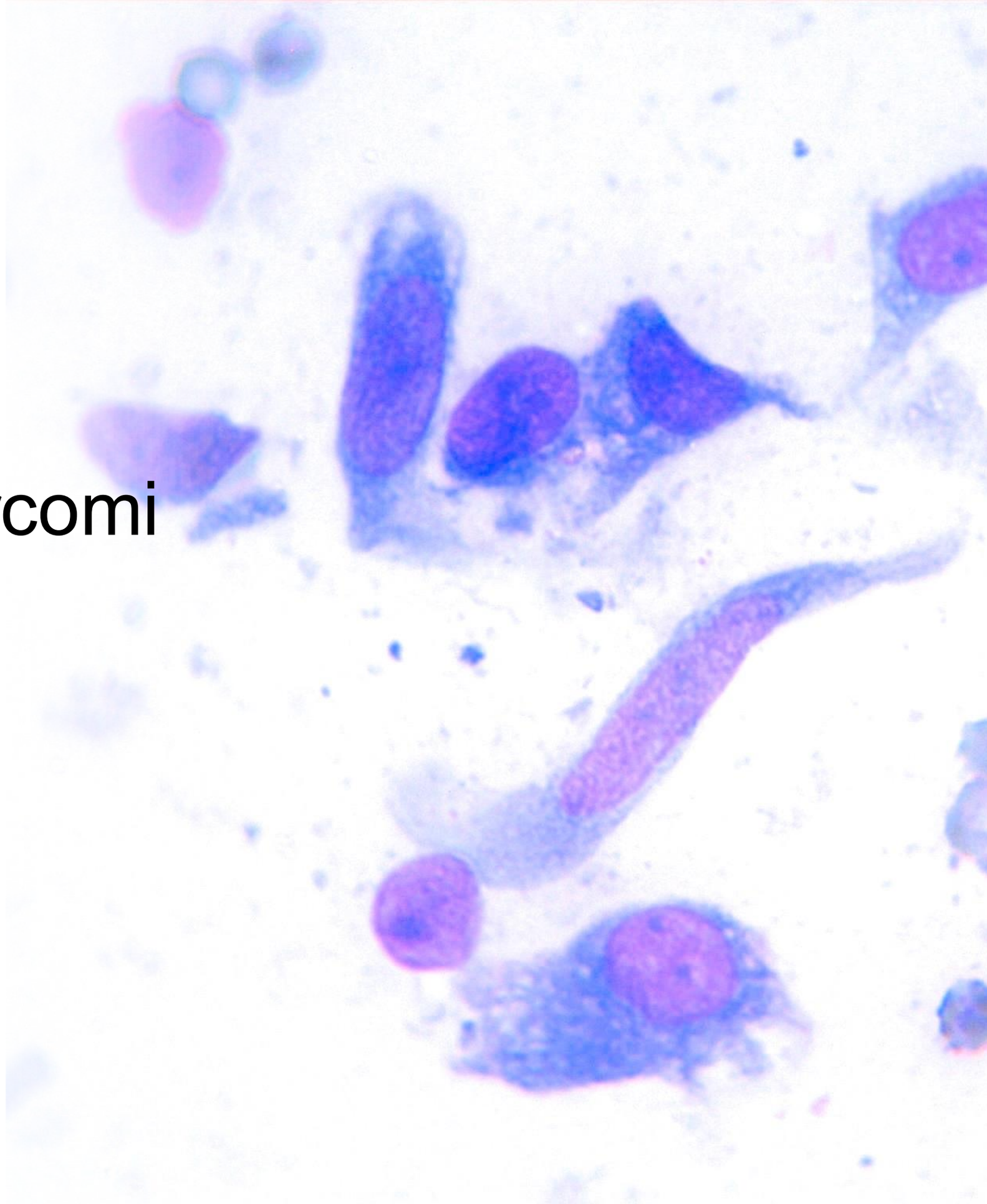
Cellule epiteliali



- Carcinomi
- Adenocarcinomi
- Adenomi

Cellule mesenchimali

- Leiomiomi/sarcomi
- GIST



Dove è andato?

SITUAZIONE LOCALE

SITUAZIONE A DISTANZA

Stadiazione

Perché la stadiazione ?

Indirizza la tipologia di trattamento

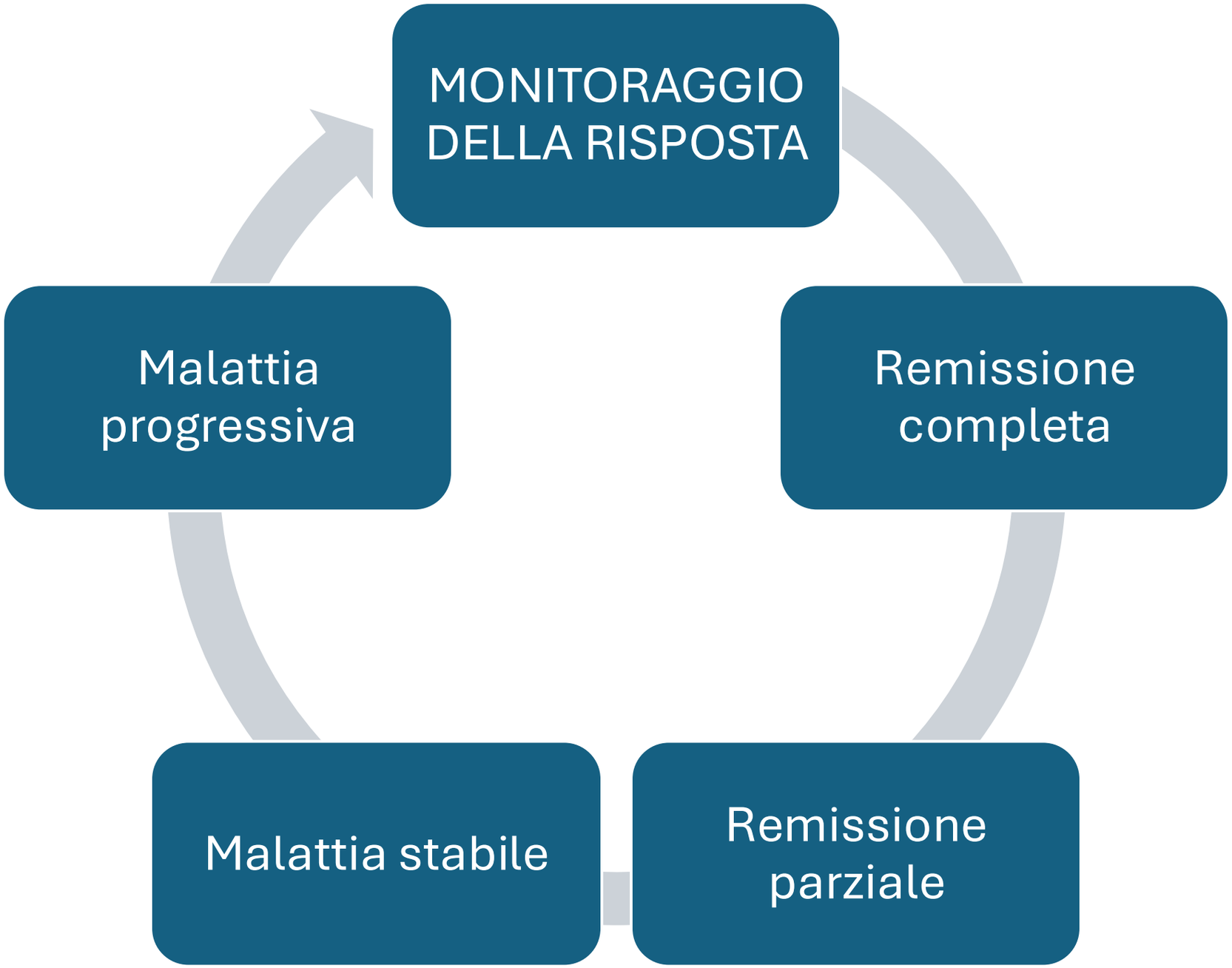
Chirurgia

Radioterapia

Chemioterapia

Trattamento multimodale

Perché la stadiazione ?



World Health Organization

Appendix V, Table 3. Definition of best response according to WHO or RECIST criteria*

Best response	WHO change in sum of products	RECIST change in sums longest diameters
CR	Disappearance; confirmed at 4 wks†	Disappearance; confirmed at 4 wks†
PR	50% decrease; confirmed at 4 wks†	30% decrease; confirmed at 4 wks†
SD	Neither PR nor PD criteria met	Neither PR nor PD criteria met
PD	25% increase; no CR, PR, or SD documented before increased disease	20% increase; no CR, PR, or SD documented before increased disease

Esami di laboratorio

Presenza di sindromi paraneoplastiche

Stato di salute

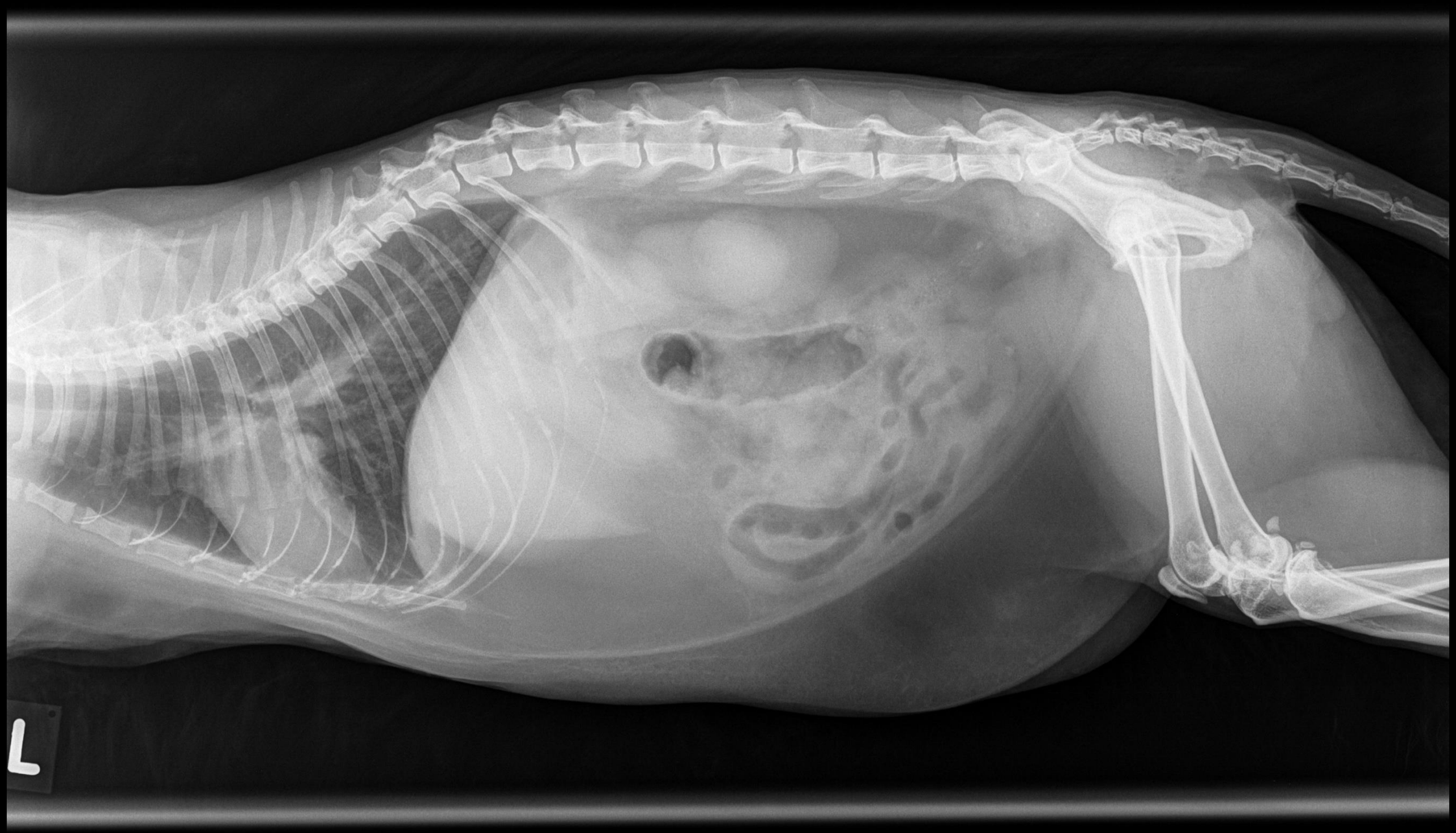
Diagnostica per immagini

Base: radiografia, ecografia

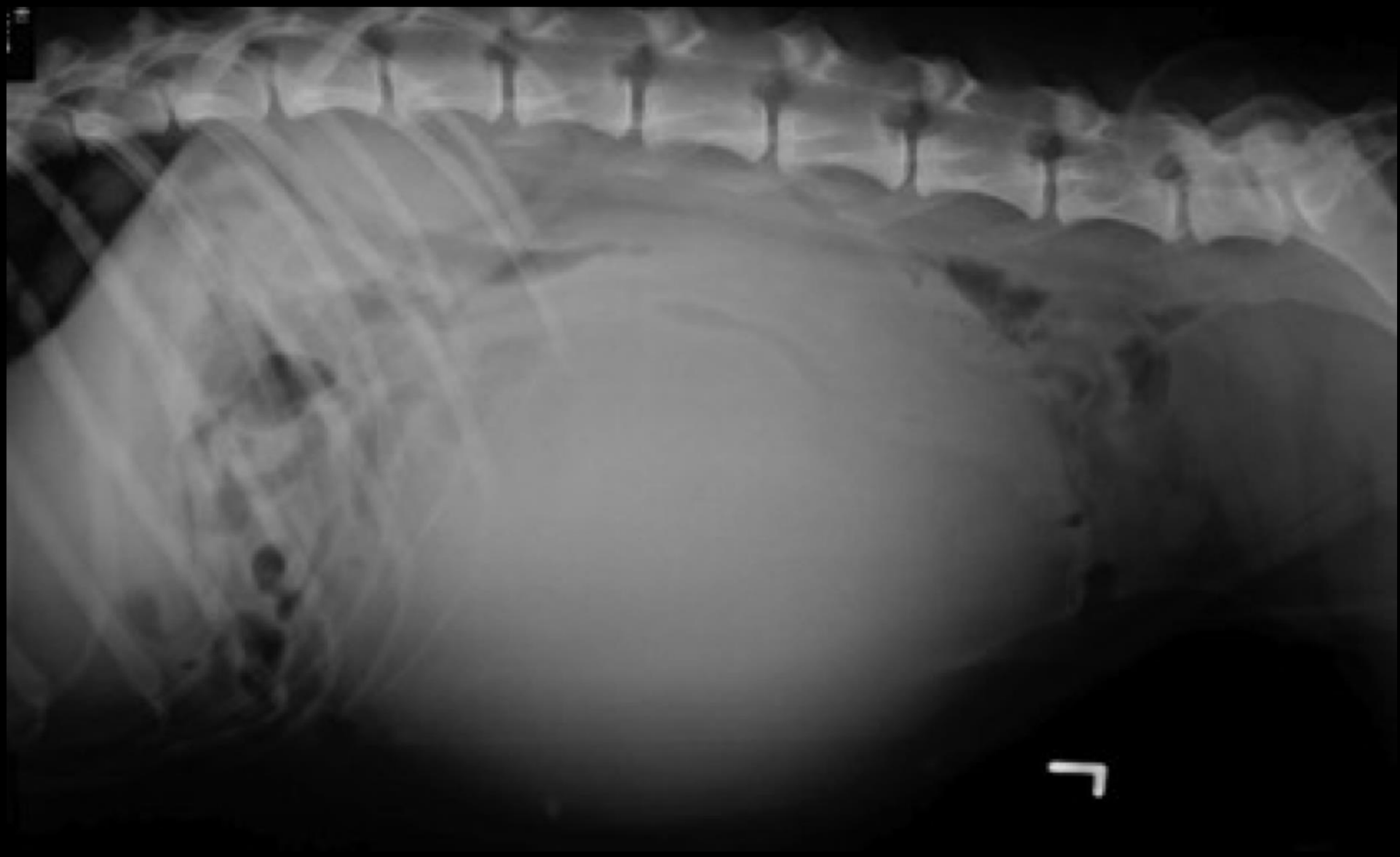
Avanzata: TC

Radiografie

Presenza di massa

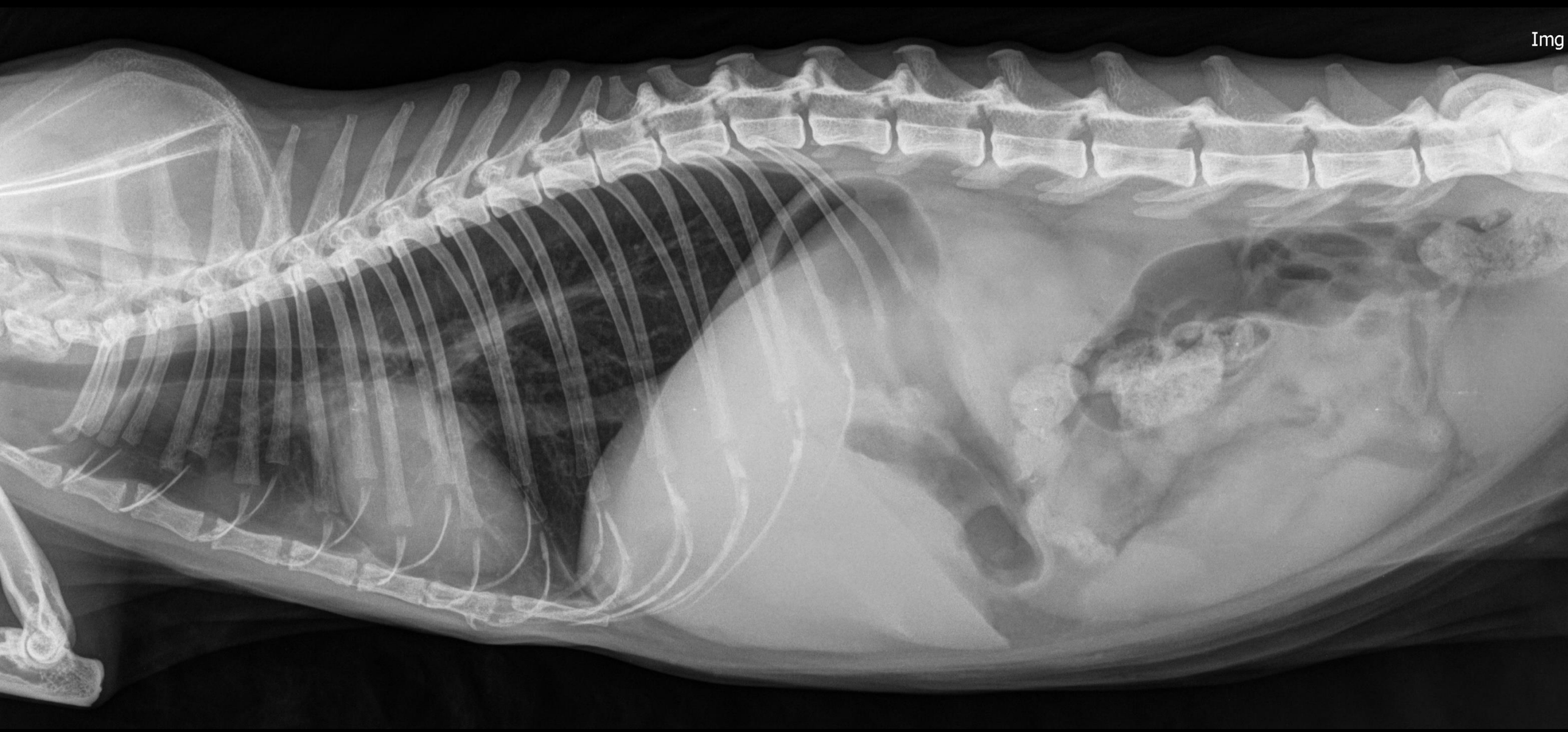


Radiografie



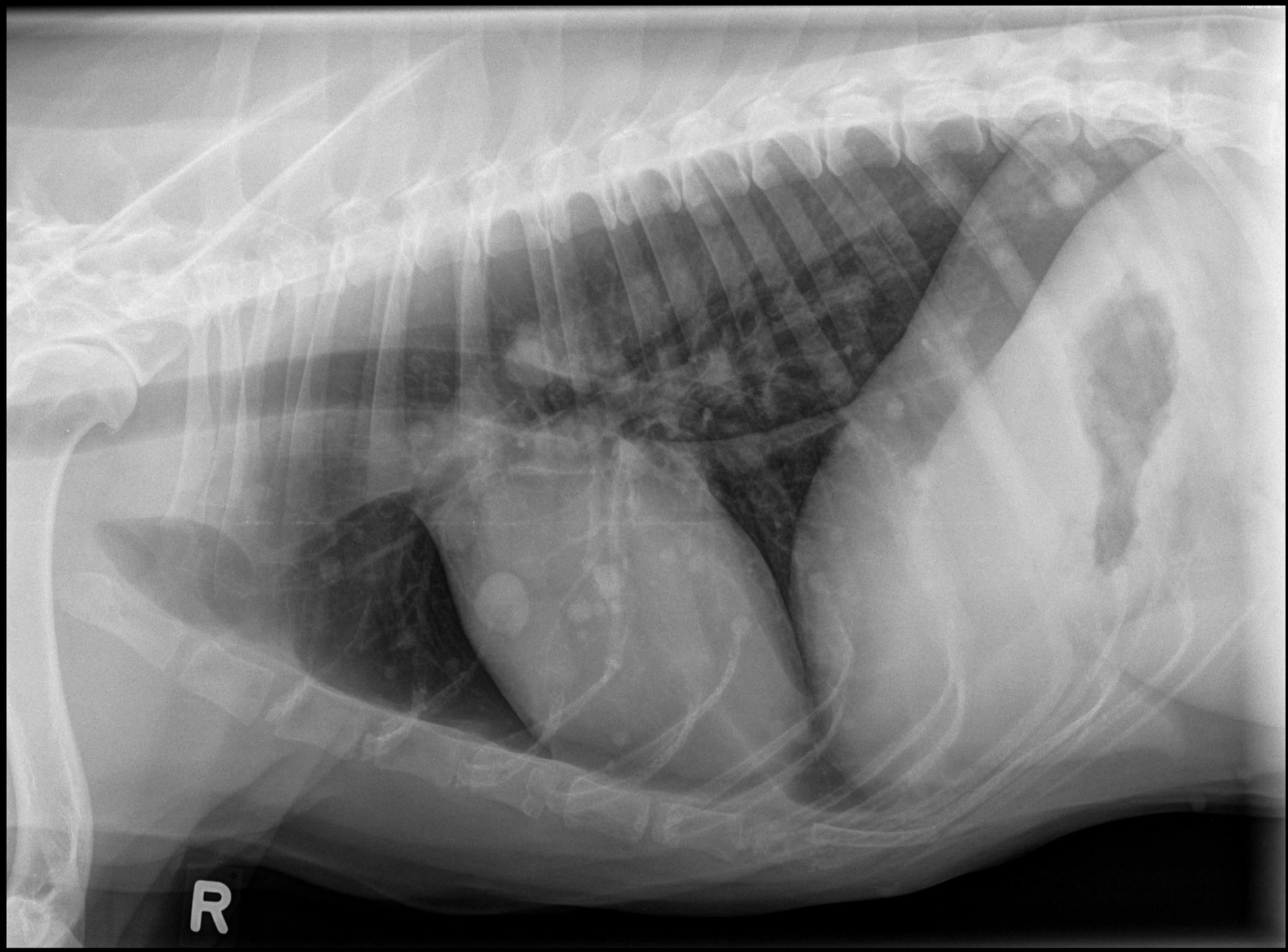
Radiografie

Organomegalia



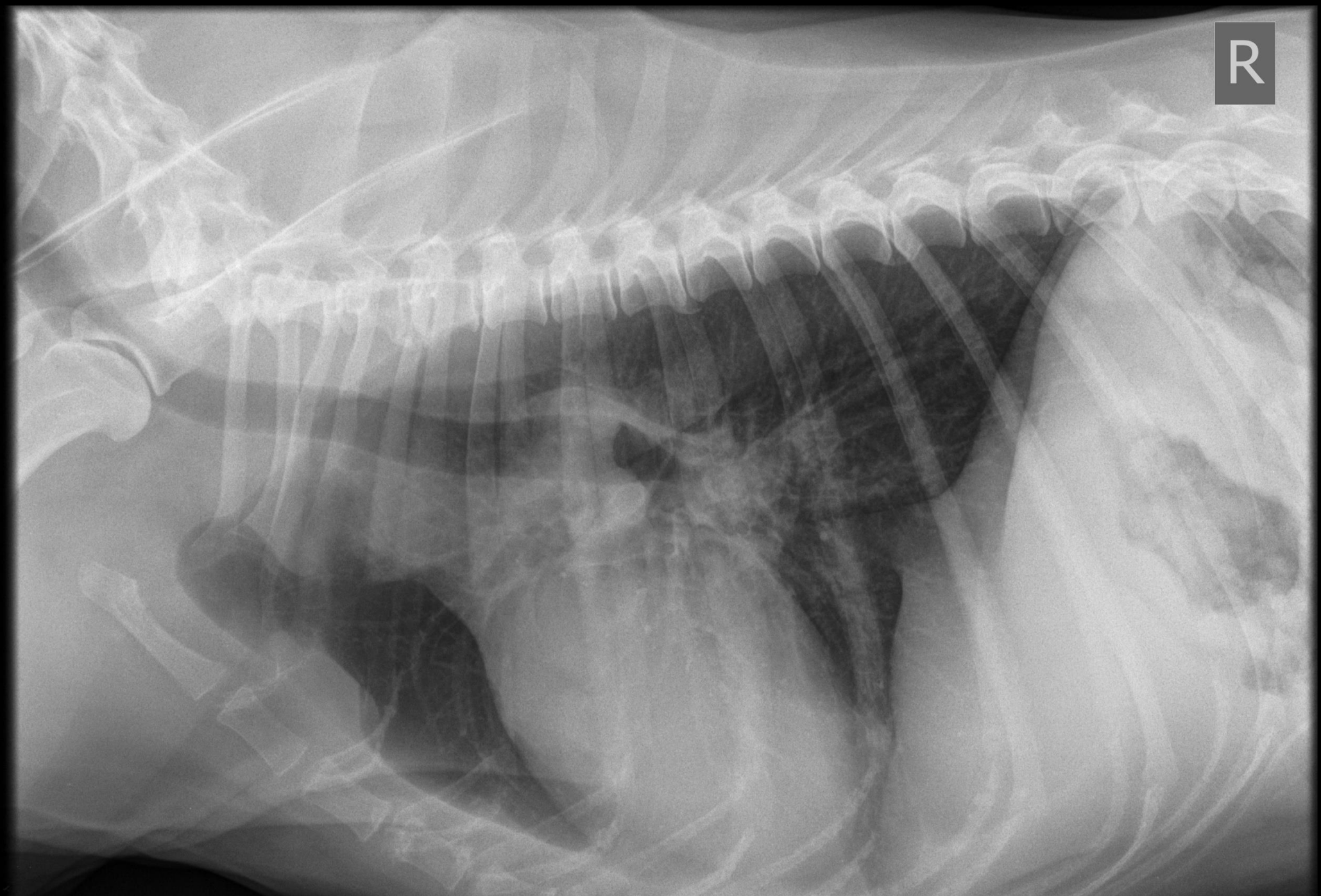
Radiografie

Ricerca metastasi



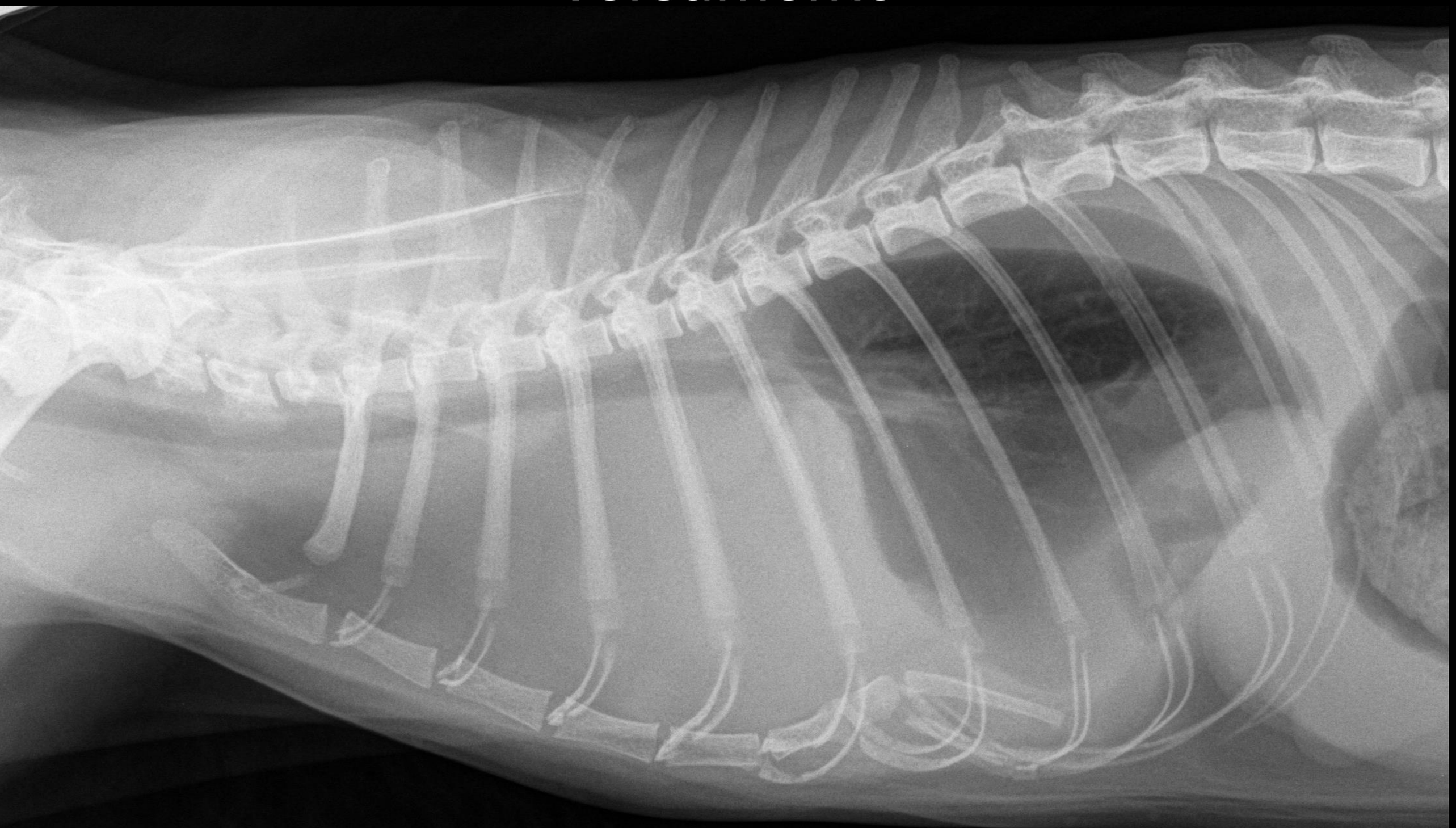
Radiografie

Linfoadenomegalia



Radiografie

Versamento



Ultrasonography of Small Intestinal Inflammatory and Neoplastic Diseases in Dogs and Cats

Lorrie Gaschen, PhD, DVM, Dr med vet

KEYWORDS

- Inflammatory bowel disease • Food allergy • Lymphoma
- Intestinal hemodynamics • Intestinal neoplasia
- Fungal infection

Ultrasonography has become a mainstay of diagnosing intestinal diseases in dogs and cats. Using ultrasonography to differentiate inflammatory from neoplastic infiltrative disease has been the focus of recent investigations.[1–5] Abdominal radiography remains an important part of screening patients with vomiting and diarrhea, and should be performed in conjunction with the ultrasonographic examination in most instances. Barium studies of the gastrointestinal tract remain important for the diagnosis of foreign bodies in vomiting animals and for assessing gastrointestinal emptying and transit times. However, for detecting infiltrative intestinal diseases the ultrasonographic examination is superior. Computed tomography and magnetic resonance imaging for the detection of infiltrative small intestinal diseases in dogs and cats have not yet been investigated.

Differentiating inflammatory from neoplastic infiltration of the small intestine is crucial to choosing appropriate treatment strategies in dogs and cats. Ultrasonography is often one of the first diagnostic tools used for that purpose. Although overlap in the sonographic appearances of inflammatory and neoplastic infiltration make a definitive diagnosis difficult, awareness of features of both diseases is important for the accurate interpretation of the sonographic findings. Full-thickness intestinal biopsy remains the gold standard for differentiating inflammatory from neoplastic disease of the small intestine.

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0195-5616/11/$ – see front matter. Published by Elsevier Inc.

Valutazione di:

spessore della parete

stratigrafia

ecogenicità

motilità

ecogenicità peri- intestinale

fluido libero

linfonodi

distribuzione

(focale, multifocale, diffusa)

Neoplasie

1. Ispessimento parietale statisticamente > nelle forme neoplastiche (0.5–7.9 mm vs 0.2–2.9 mm)

2. perdita della stratigrafia

3. ispessimento eccentrico o concentrico

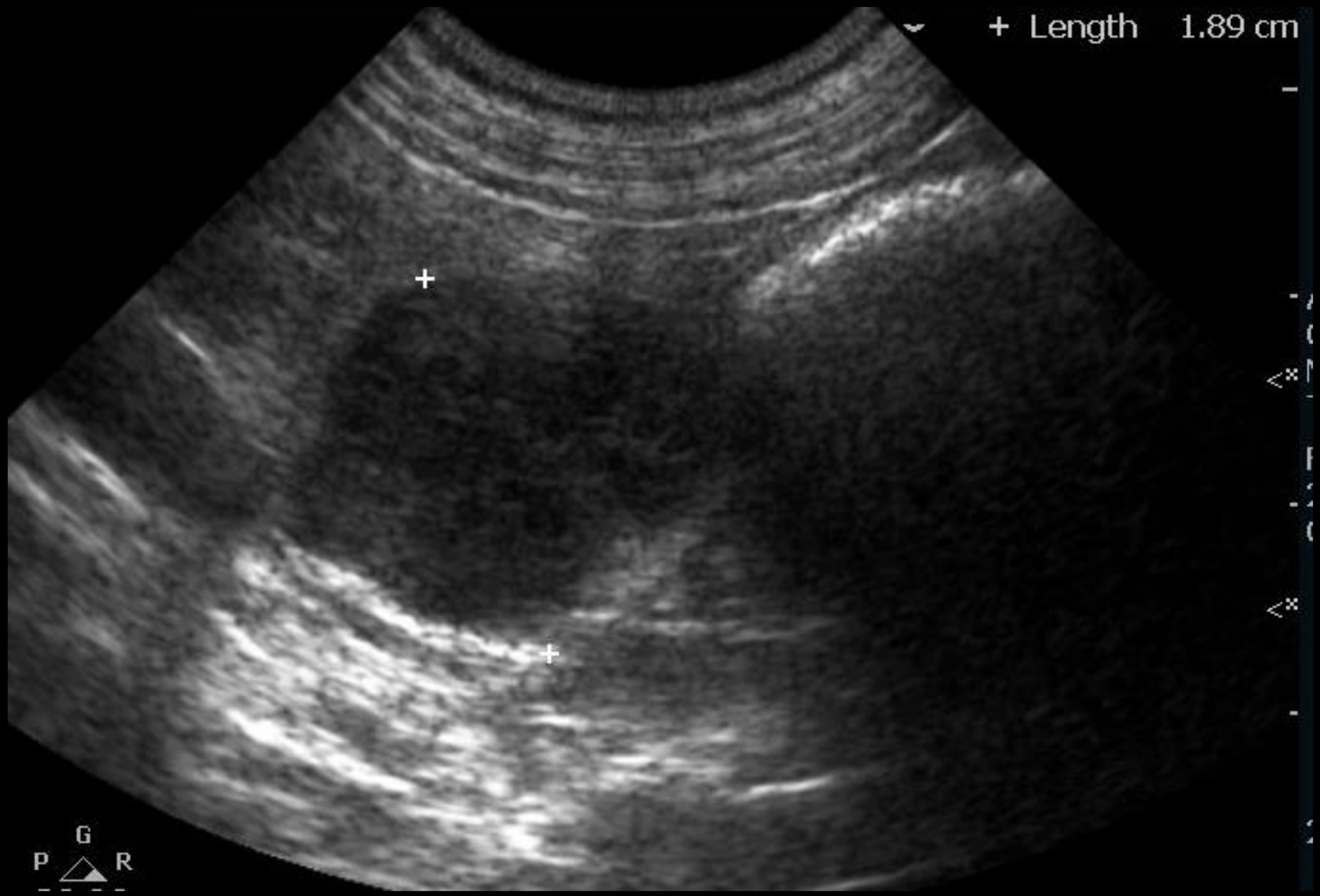
forme focali + comuni delle diffuse

Ecografia

Presenza di massa

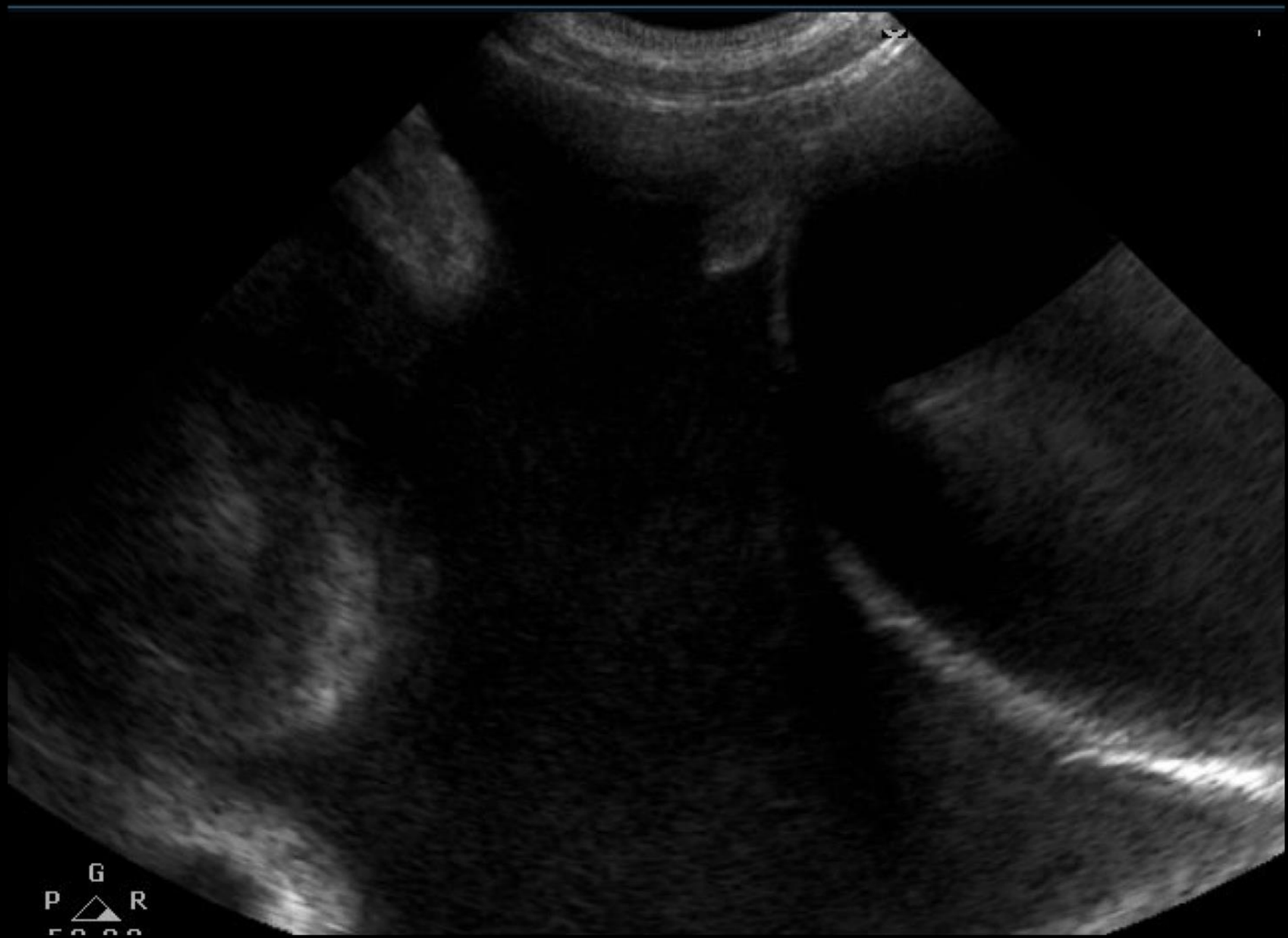
Ecografia

Presenza di linfoadenomegalia



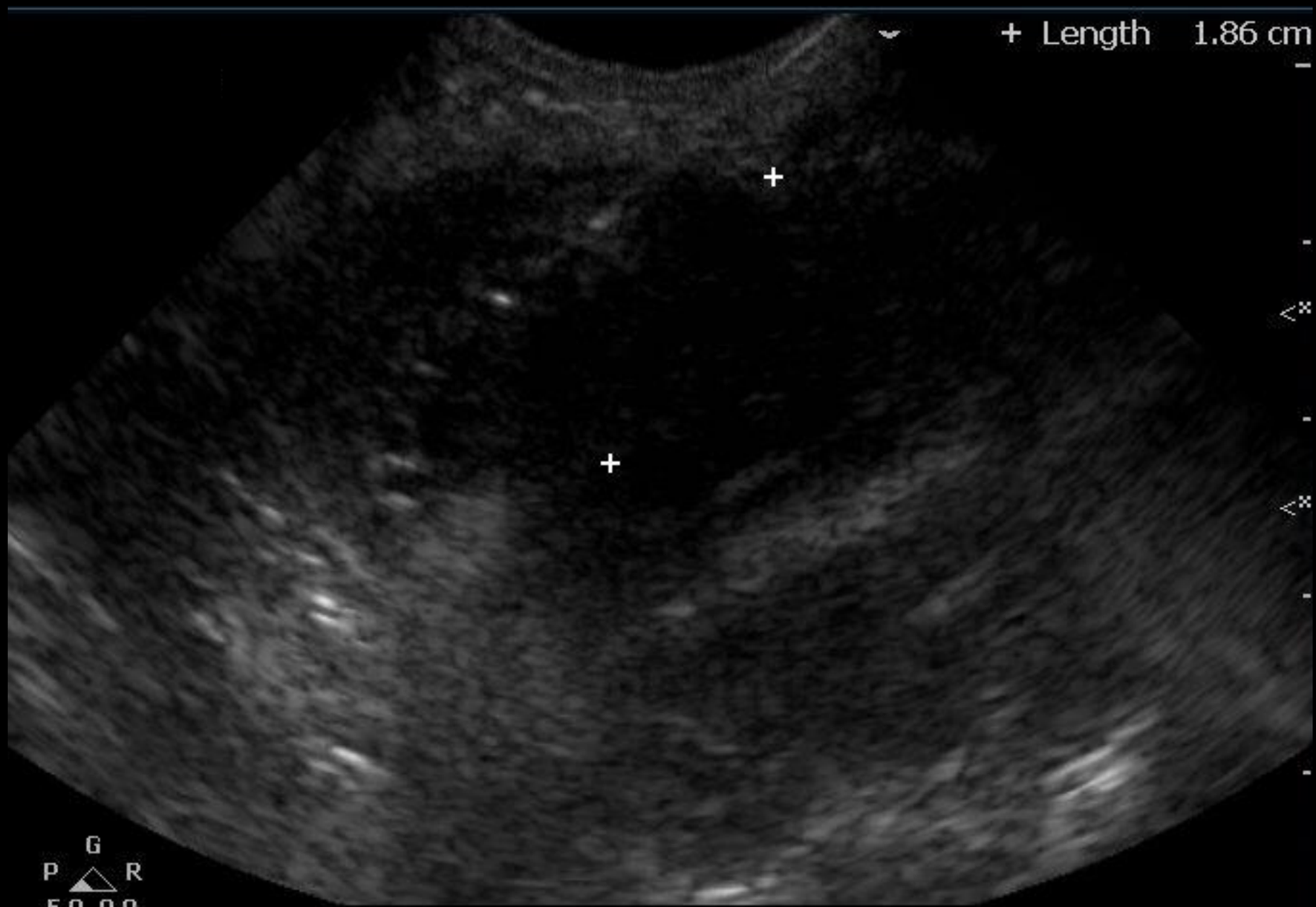
Ecografia

Presenza di versamento

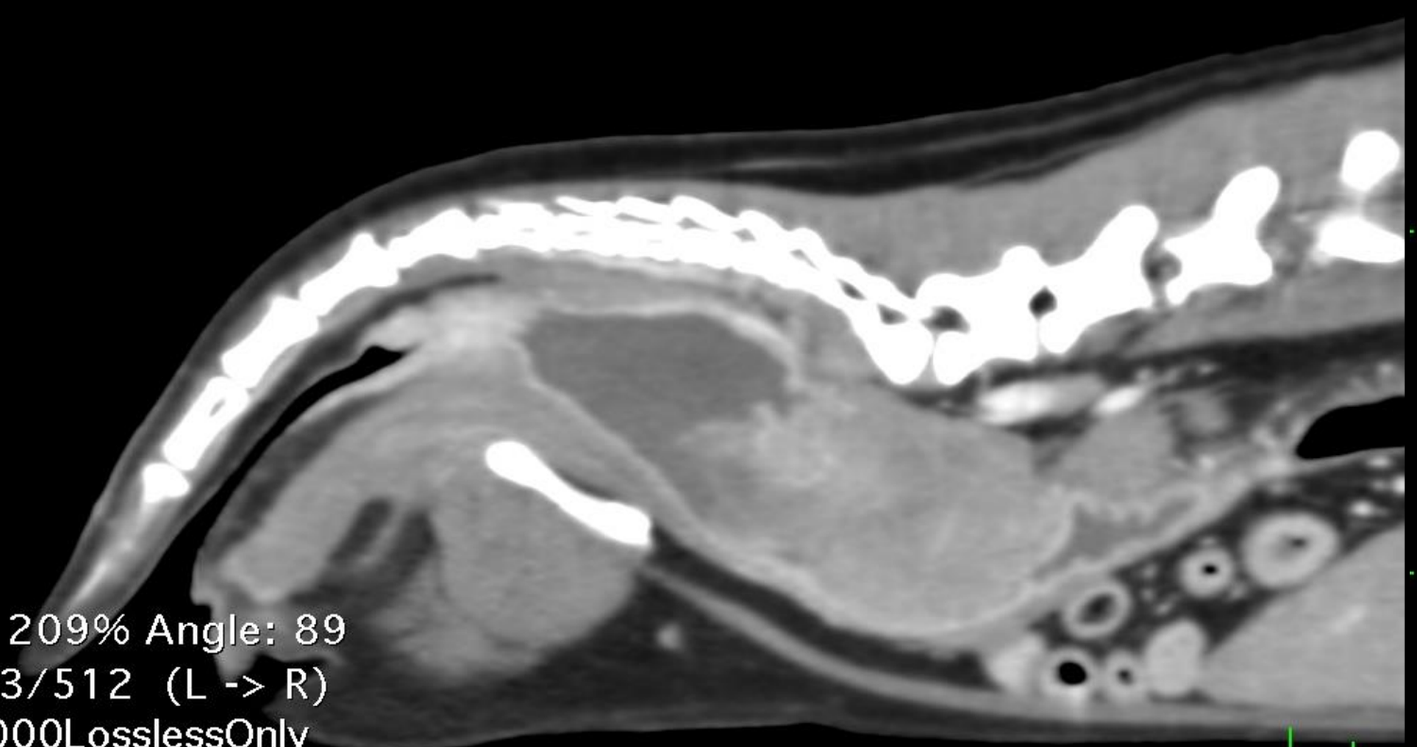


Ecografia

Campionamenti



TC


209% Angle: 89
3/512 (L -> R)
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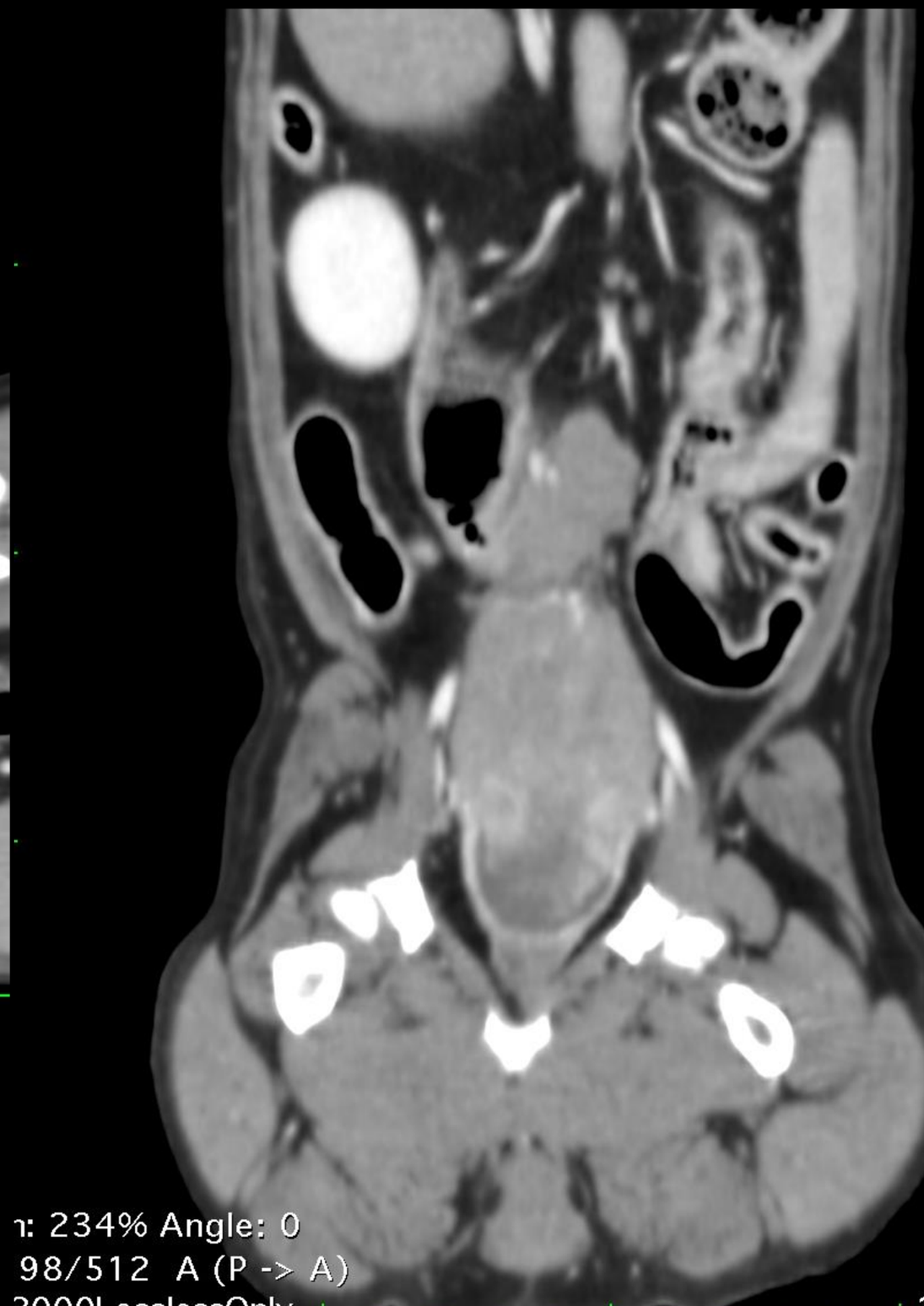
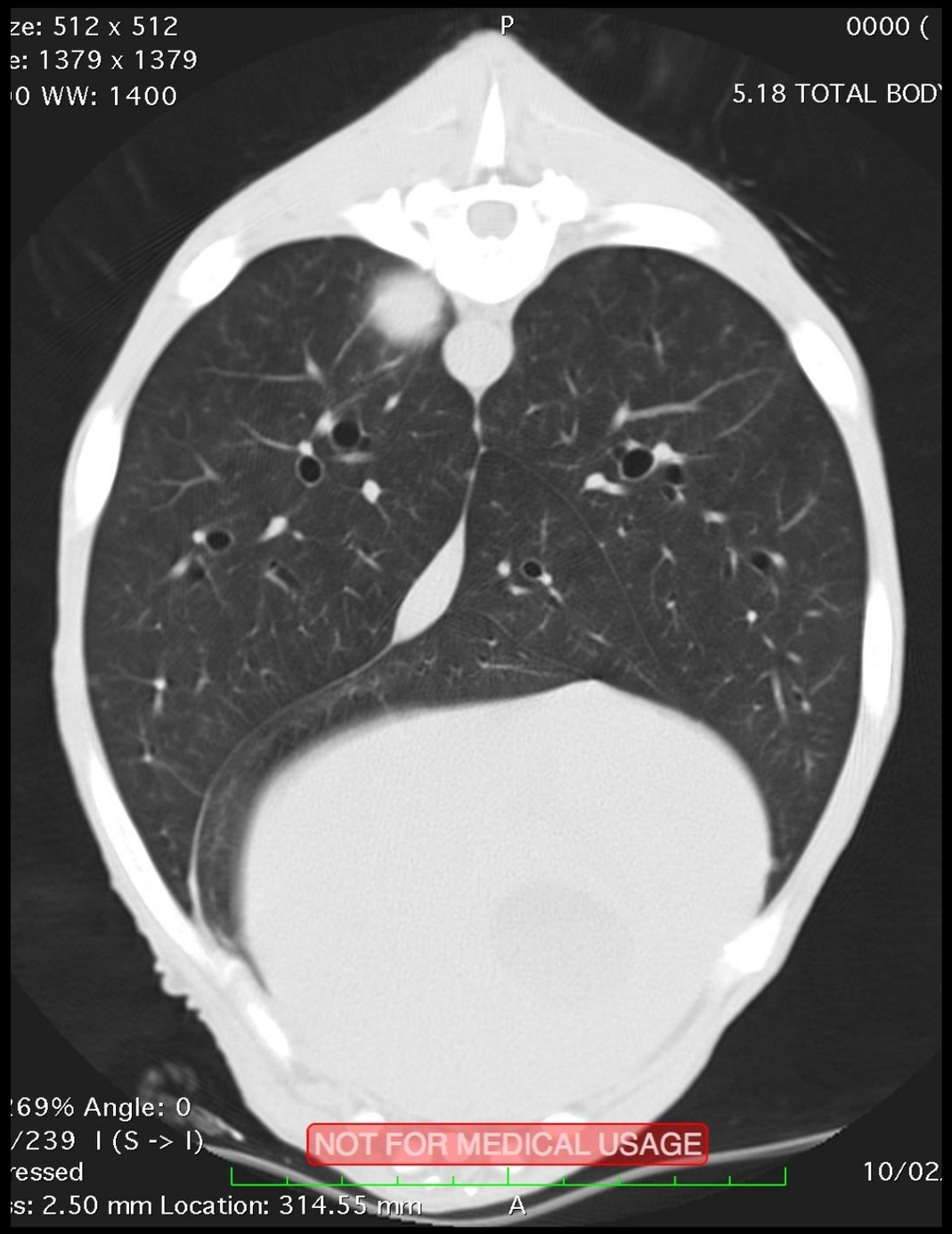
ess: 468.00 μm Location: 16.10 mm


ı: 234% Angle: 0
98/512 A (P -> A)

TC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e: 1379 x 1379
0 WW: 1400
P
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5.18 TOTAL BOD
69% Angle: 0
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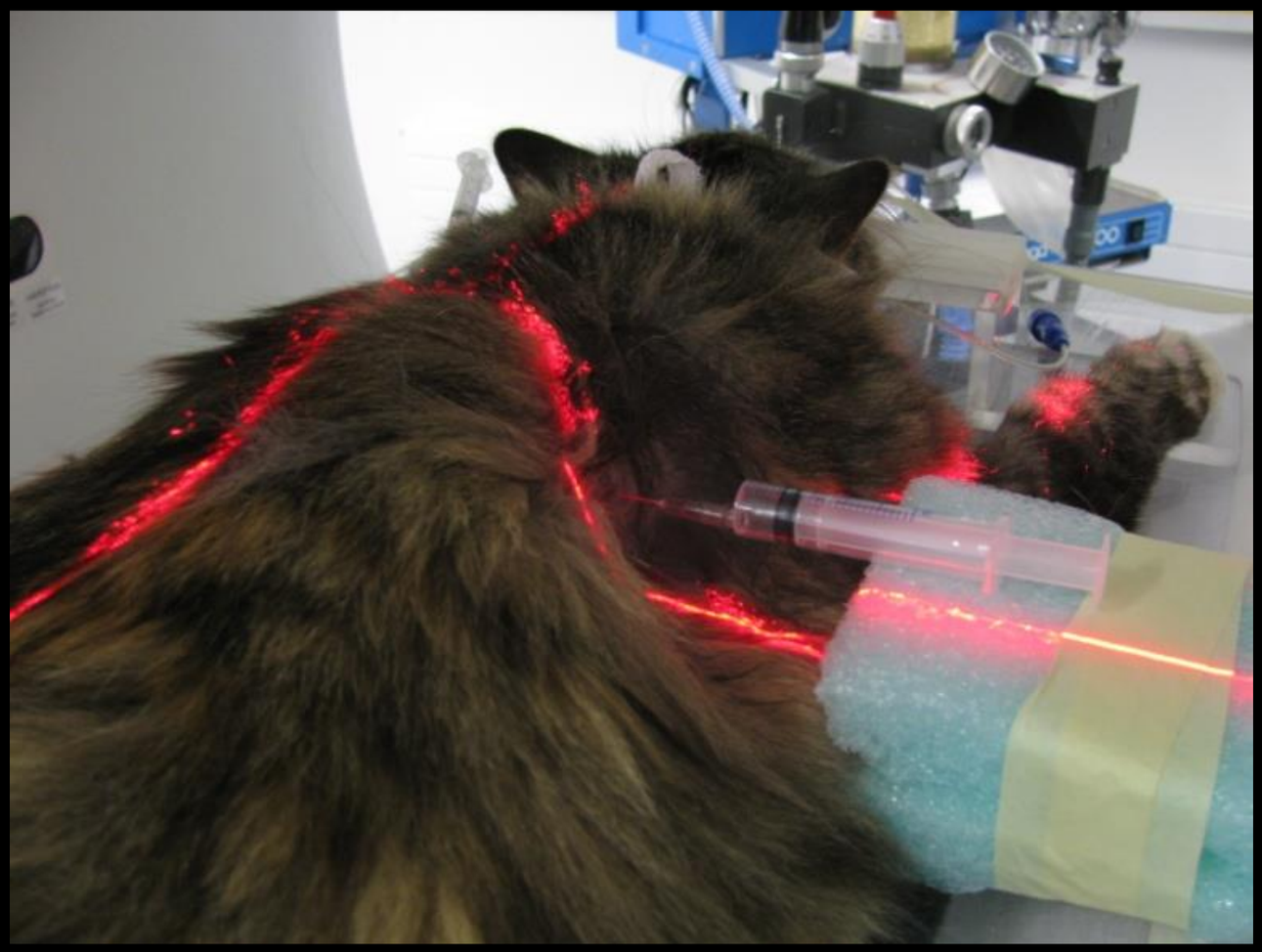
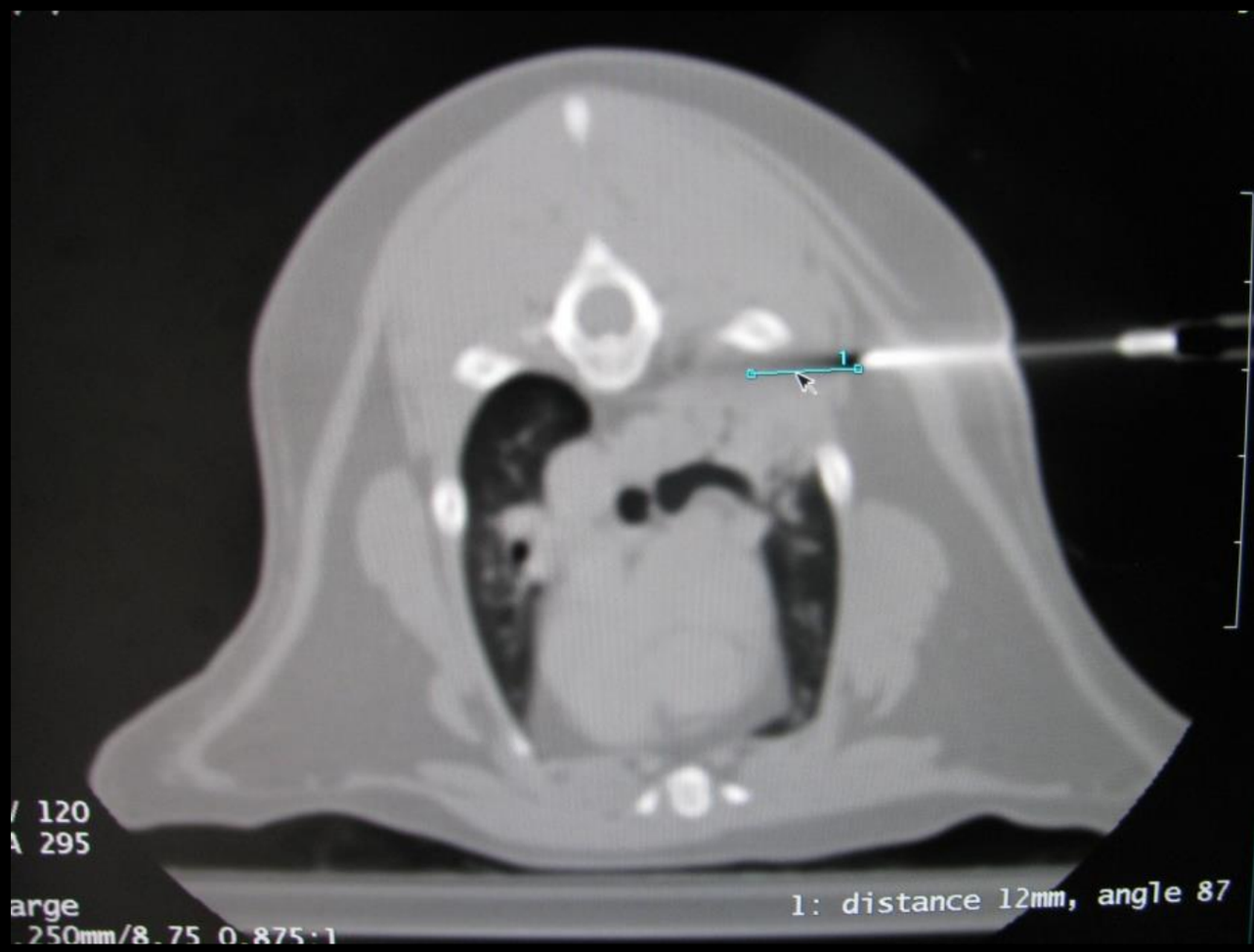
essed
s: 2.50 mm Location: 314.55 mm
A
NOT FOR MEDICAL USAGE
10/02

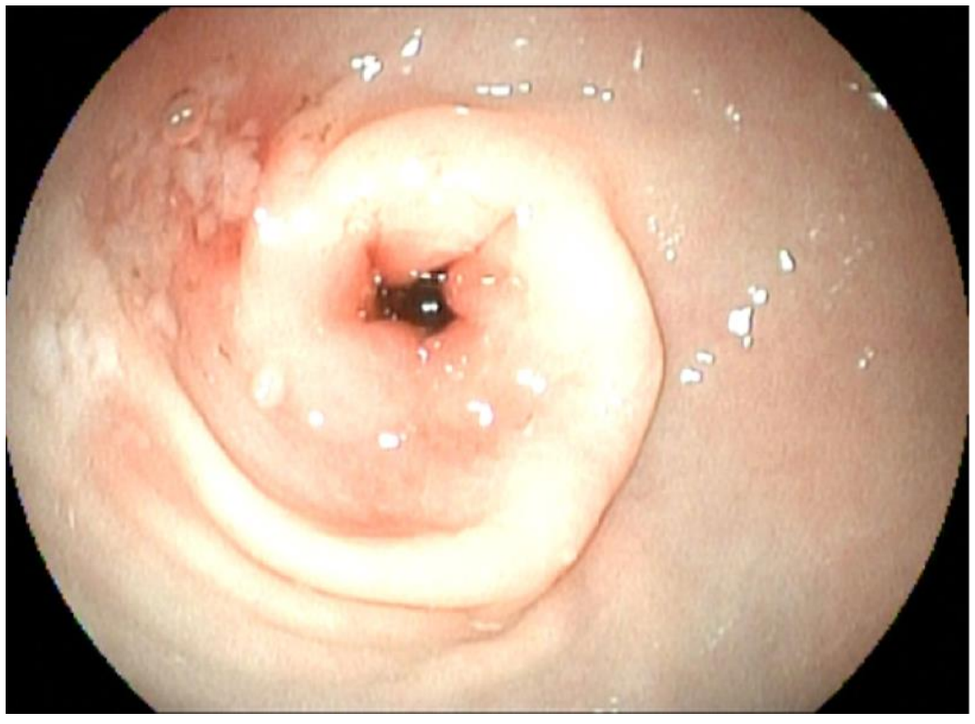
TC

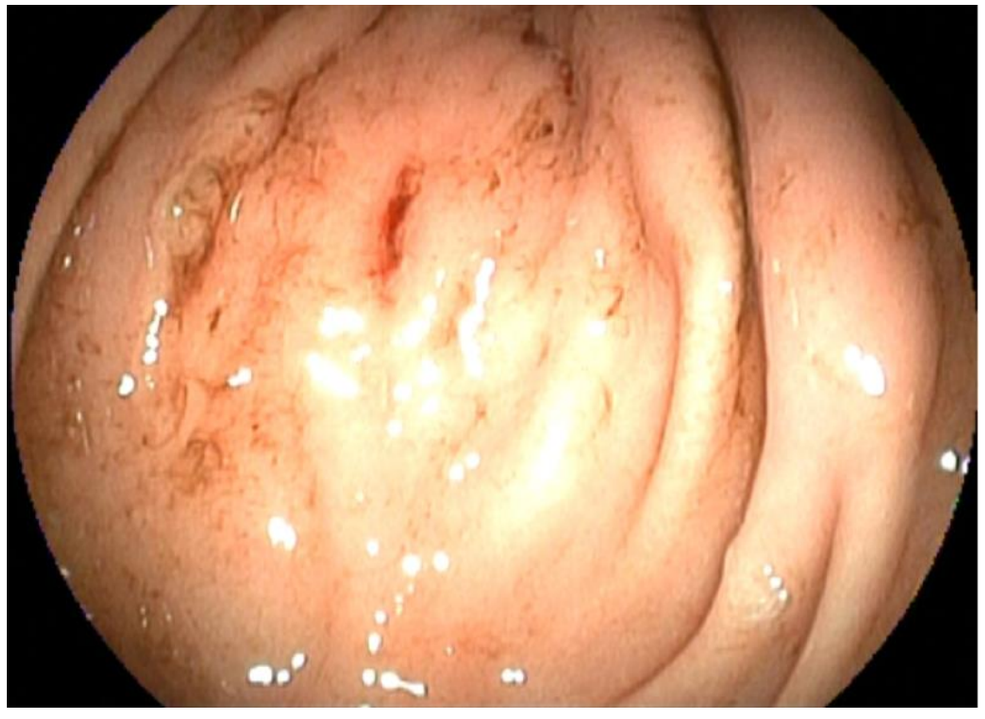
Campionamenti





Endoscopia





Visualizzazione diretta del tratto gastroenterico

Raccolta di campioni

Non adatta a lesioni profonde (strato muscolare)

E la terapia?

- Dipendente da:
  - Istotipo
  - Stadio
  - Paziente
  - Proprietario

Tumori solidi (carcinomi, sarcomi)

CHIRURGIA

RADIOTERAPIA

CHEMIOTERAPIA

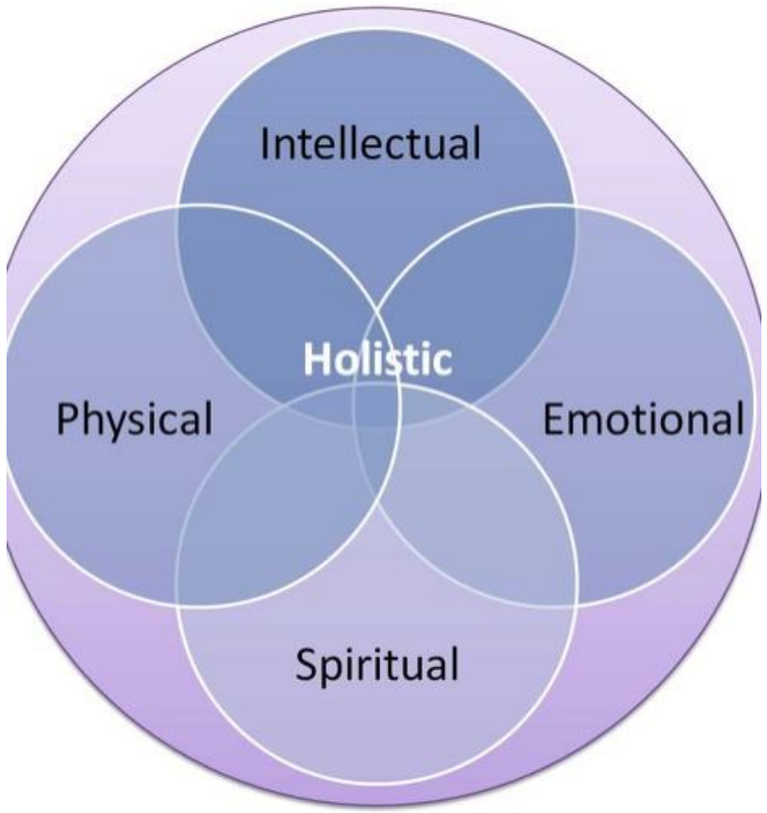
Tumori “liquidi” (linfomi)

CHEMIOTERAPIA

RADIOTERAPIA

CHIRURGIA

Paziente oncologico



Terapie di supporto

- Stimolanti dell’appetito
- Antinausea
- Probiotici
- Terapia del dolore

Modificazioni dell’appetito

ANORESSIA: PERDITA COMPLETA DI APPETITO/ASSUNZIONE DI ALIMENTO

IPORESSIA: RIDOTTO APPETITO, INADEGUATA COPERTURA DEL FABBISOGNO ENERGETICO

DISORESSIA: ANOMALIE DEL COMPORTAMENTO ALIMENTARE, CAMBIO DI GUSTI

Journal of Feline Medicine and Surgery (2022) 24, 614–640

SPECIAL ARTICLE

2022 ISFM Consensus Guidelines on Management of the Inappetent Hospitalised Cat

Table 2 Commonly used antiemetics, prokinetics and appetite stimulants for the management of inappetence in cats*

Drug	Dosage	Indications	Adverse effects
Maropitant[39–41]	1 mg/kg SC, IV or PO q24h	Prevention and treatment of nausea and vomiting	Pain on SC injection, lethargy, rare hypersensitivity reactions
Metoclopramide[42–45]	0.25–0.5 mg/kg IV, IM, SC or PO q8h 1–2 mg/kg IV over 24 h as a CRI	Prevention and treatment of nausea and vomiting Management of ileus and delayed gastric emptying	Excitation and disorientation
Ondansetron[44,46,47]	0.1–1 mg/kg IV (slowly), IM, SC or PO q6–12h (SC has higher bioavailability; use higher end of dosage orally)	Prevention and treatment of nausea and vomiting	GI effects, constipation, rare hypersensitivity reactions; increased liver enzymes reported in humans
Mirtazapine[48–52]	2 mg/cat PO or transdermal q24h (q48h with renal/hepatic disease)	Prevention and treatment of nausea and vomiting, appetite stimulant	Vocalisation, agitation; erythema at application site with transdermal use
Cisapride[36,42,45,53]	2.5 mg/cat PO q12h; dose titrated to effect and can be increased to q8h Dosages of up to 7.5 mg/cat q8h have been used in large domestic cats	Management of ileus and delayed gastric emptying	GI effects; cardiac arrhythmias reported in humans
Erythromycin[42,43,53]	0.5–1 mg/kg PO or IV q8h	Management of ileus and delayed gastric emptying	GI effects
Ranitidine[45,53,54]	2.5 mg/kg IV (slowly) q12h, or 3.5 mg/kg PO q12h	Management of delayed gastric emptying	IV boluses can cause vomiting and hypotension; oral suspension is bitter
Capromorelin[35,55–57]	2 mg/kg PO q24h	Appetite stimulant	Hyperglycaemia, vomiting, hypersalivation, lethargy, bradycardia, hypotension
Cyproheptadine[58,59]	1–4 mg/cat q12–24h	Appetite stimulant	Sedation; not recommended for use in cats with hepatic lipidosis

*Information contained in this table represents a consensus of opinion and experience of the guidelines panel members. Treatment is at the discretion of the attending veterinary surgeon. See text for further discussion of these agents
CRI = constant rate infusion; IV = intravenous; IM = intramuscular; SC = subcutaneous; PO = oral; GI = gastrointestinal

Journal of Feline Medicine and Surgery (2014) **16**, 749–756

PHARMACOLOGICAL APPETITE STIMULATION
Rational choices in the inappetent cat

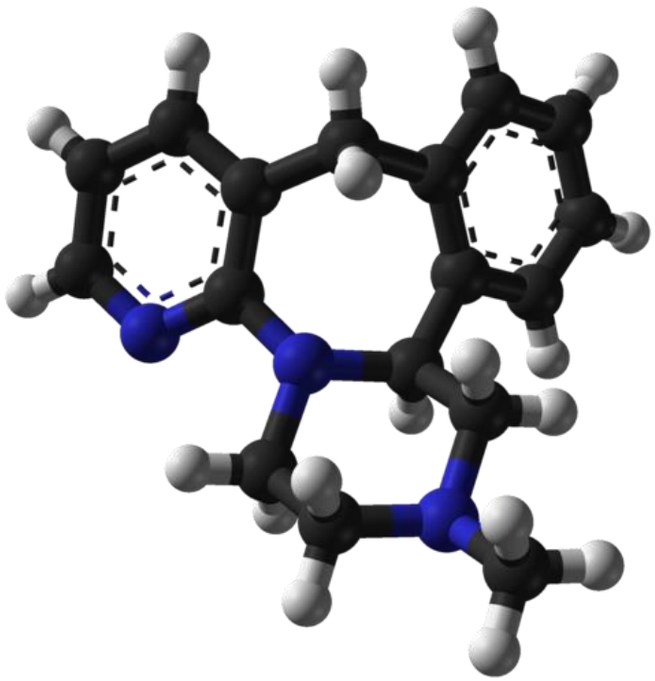
Wendy Agnew and Rachel Korman

Table 1 **Appetite stimulants used in cats**

Drug	Class/mechanism of action	Dosage	Renal insufficiency dosing changes	Hepatic disease dosing changes	Other notes
Cyproheptadine	Serotonin antagonist antihistamine	✣ 1–4 mg/cat q12–24h[4,13,15,17,31,32,36,43–45] ✣ 0.2–1.0 mg/kg PO q12h[1,27,46]	1 mg/cat PO q12h[47] Elimination is reduced in renal failure[21]	Not recommended for use in presence of hepatic lipidosis[7]	Possible agitation, haemolysis
Diazepam*	Benzodiazepine	✣ 0.2 mg/kg slow IV once[1,4,27,43,44] ✣ 0.05–0.50 mg/kg slow IV once[13,15,17,31,32,36] ✣ 0.5–1.0 mg/kg IV once[48]	Caution if renal disease[21]	Contraindicated in presence of hepatic dysfunction.[21,27] Reduce dose by 25–50% if used with significant hepatic failure.[26] Not recommended for use in hepatic lipidosis[7]	Avoid oral dosing due to risk of acute hepatic necrosis
Megestrol acetate*	Synthetic progestin	✣ 1 mg/kg PO q12–24h[4,13] ✣ 2.5 mg q24h for 4 days, then q48–72h thereafter[17] ✣ 0.25–0.50 mg/kg q24h PO for 3–5 days, then q48–72h[31,46]	No published reference dose alterations	Undergoes hepatic metabolism. Consider dosage reduction of 25–50%[21]	Used for palliation only. Not for prolonged use
Mirtazapine	Pre-synaptic α_2-receptor antagonism resulting in norepinephrine increase. Also serotonin receptor antagonism	✣ 1.88 mg/cat PO q12–24h to 3.5 mg/cat PO q72h[36,37,44,45]	1.88 mg/cat q24–48h[18] to 3 mg/cat q72h.[16,47] Renal impairment may reduce elimination by 30–50%[21]	Hepatic impairment may reduce clearance by up to 30%[21]	Mirtazapine has been associated with blood dyscrasias in humans, and subclinical ALT elevations in both feline and human patients. Do not use with cyproheptadine for appetite stimulation
Nandrolone*	Anabolic steroid	✣ 2.5 mg/kg IM every 2–3 weeks[4,15]	Contraindicated in nephrotic stage of nephritis[21]	Contraindicated in presence of hepatic dysfunction[21]	Used for palliation only
Oxazepam*	Benzodiazepine	✣ 0.25–0.50 mg/kg PO q12–24h[1,13,27,49] ✣ 2.0–2.5 mg/cat PO q12h[4,15,32,36,43,44]	Caution in renal disease[21]	Use with caution in presence of hepatic dysfunction.[21,27] Reduce dose by 25–50% if used with significant hepatic failure.[26] Not recommended for use in hepatic lipidosis[7]	Anecdotally associated with fulminant hepatic failure
Prednisolone*	Glucocorticoid	✣ 0.25–0.50 mg/kg PO q24–48h[4]	No published reference dose alterations	No published reference dose alterations	Used for palliation only

*Historically used appetite stimulant, no longer recommended
IM = intramuscular; IV = intravascular, PO = oral; ALT = alanine aminotransferase

Mirtazapina



Mirtazapine as an appetite stimulant and anti-emetic in cats with chronic kidney disease: A masked placebo-controlled crossover clinical trial

J.M. Quimby [a,*], K.F. Lunn [b]

- Antidepressivo tetraciclico
- Potenzia i neurotrasmettitori norepinefrinici e serotoninici
- Potente antagonista dei recettori 5-HT3
- Stimolante dell’appetito

Mirtazapina

J Vet Intern Med 2011;25:985–989

The Pharmacokinetics of Mirtazapine in Cats with Chronic Kidney Disease and In Age-Matched Control Cats

J.M. Quimby, D.L. Gustafson, and K.F. Lunn

- Dosaggio in gatti sani: 1.88 mg/24 h
- Dosaggio in gatti con CKD: 1.88 mg/48 h

JOURNAL OF
Veterinary Pharmacology and Therapeutics

J. vet. Pharmacol. Therap. **34**, 388–396. doi: 10.1111/j.1365-2885.2010.01244.x.

Studies on the pharmacokinetics and pharmacodynamics of mirtazapine in healthy young cats

Mirtazapina

The Veterinary Journal 192 (2012) 239–241

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The Veterinary Journal

journal homepage: www.elsevier.com/locate/tvjl

Short Communication

Pharmacokinetics of mirtazapine and its main metabolites in Beagle dogs: A pilot study

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Metabolismo più rapido

2 volte al giorno

0.6 mg/kg/2 volte al giorno

Mirtazapina

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ORIGINAL ARTICLE

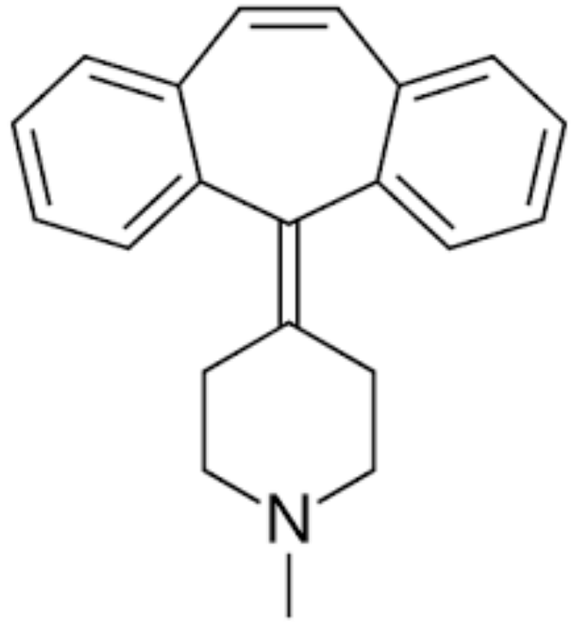
WILEY JOURNAL OF Veterinary Pharmacology and Therapeutics

A double-blind, placebo-controlled, randomized study to evaluate the weight gain drug, mirtazapine transdermal ointment, in cats with unintended weight loss

Melinda Poole[1] | Jessica M. Quimby[2] | Tianhua Hu[1] | Daizie Labelle[1] | William Buhles[1]

- 2 mg/cat/24/14 gg
- 11.3% vocalizzazioni
- 11.3 % vomito
- 10.4% eritema nel sito di applicazione

Ciproeptadina



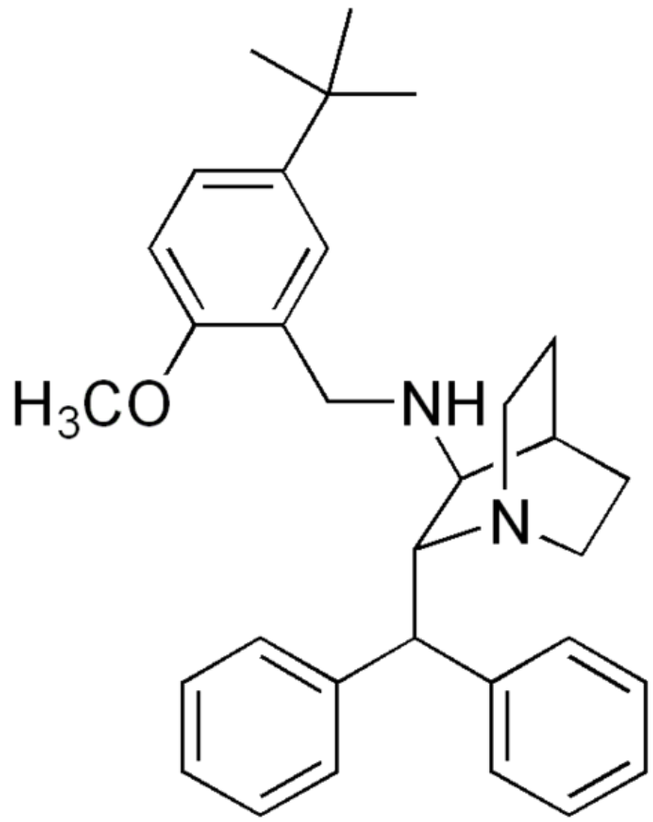
- Antiistaminico antagonista della serotonina
- Può impiegare giorni ad agire
- Effetti collaterali: sedazione, ipereccitabilità, effetti anticolinergici
- Metabolismo epatico, escrezione renale
- Riduzione di dose in caso di nefro o epatopatia
- 1-4 mg/gatto/12-24 h
- Non utilizzare insieme alla mirtazapina

Nausea e vomito indotti da chemio

- ACUTO entro 24 ore
- TARDIVO 24-120 ore

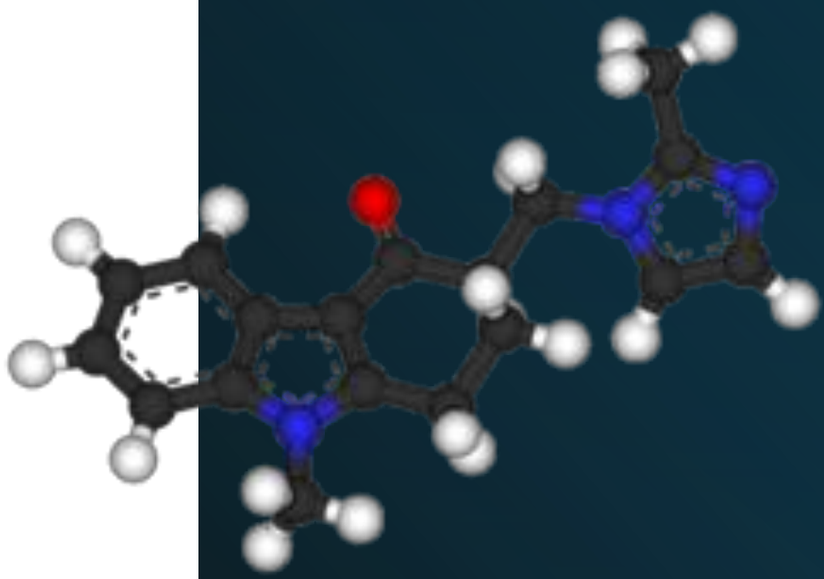
Maropitant

- Antagonistca recettori Neurokinina (NK1)
- Blocca l’azione della sostanza P
- Azione periferica e centrale
- Analgesia viscerale
- 24h
- SC, IV, orale



Ondansetron

- Antagonista recettori 5-HT_3
- Azione sui recettori serotoninergici di tipo 3 e centralmente a livello di CTZ
- IV, orale
- 2 volte al giorno
- 0.5 to 1 mg/kg ogni -12 ore



Probiotici?

Value of Probiotics in Canine and Feline Gastroenterology

Silke Salavati Schmitz, Drmedvet, PhD, FHEA, MRCVS

KEYWORDS

• Synbiotics • Prebiotics • Probiotics • Gastrointestinal • Microbiota
• Mucosal immunity • Chronic enteropathy • Inflammatory bowel disease

KEY POINTS

- Probiotics are live microbial organisms with a proven health benefit to the host and can be regulated as food supplement, medical food, or drugs.
- Evidence of health promoting or disease preventing effects of probiotics or synbiotics in healthy dogs and cats is scarce.
- Probiotics or synbiotics are likely to be beneficial in some acute or infectious gastrointestinal conditions in dogs and cats (eg, acute hemorrhagic diarrhea syndrome or parvovirus infection).
- Probiotics or synbiotics add little benefit when treating food- or antibiotic-responsive canine chronic enteropathies, but could be promising adjunctive treatments in canine inflammatory bowel disease.
- Specific probiotics might be beneficial in feline *Tritrichomonas fetus* infection and feline chronic constipation.

Cos’ è un probiotico?

Definizione secondo FDA e WHO

“alive microorganisms which when administered in adequate amounts confer a health benefit on the host”

Differenze

Prebiotico: Sostanze non digeribili (fibre, carboidrati) che stimolano in modo selettivo la crescita e/o l'attività di microorganismi normalmente residenti

Postbiotico: Prodotti non vitali di derivazione batterica che esercitano un effetto benefico sull'ospite

Sinbiotico: Prodotto che contiene sia pre che probiotico

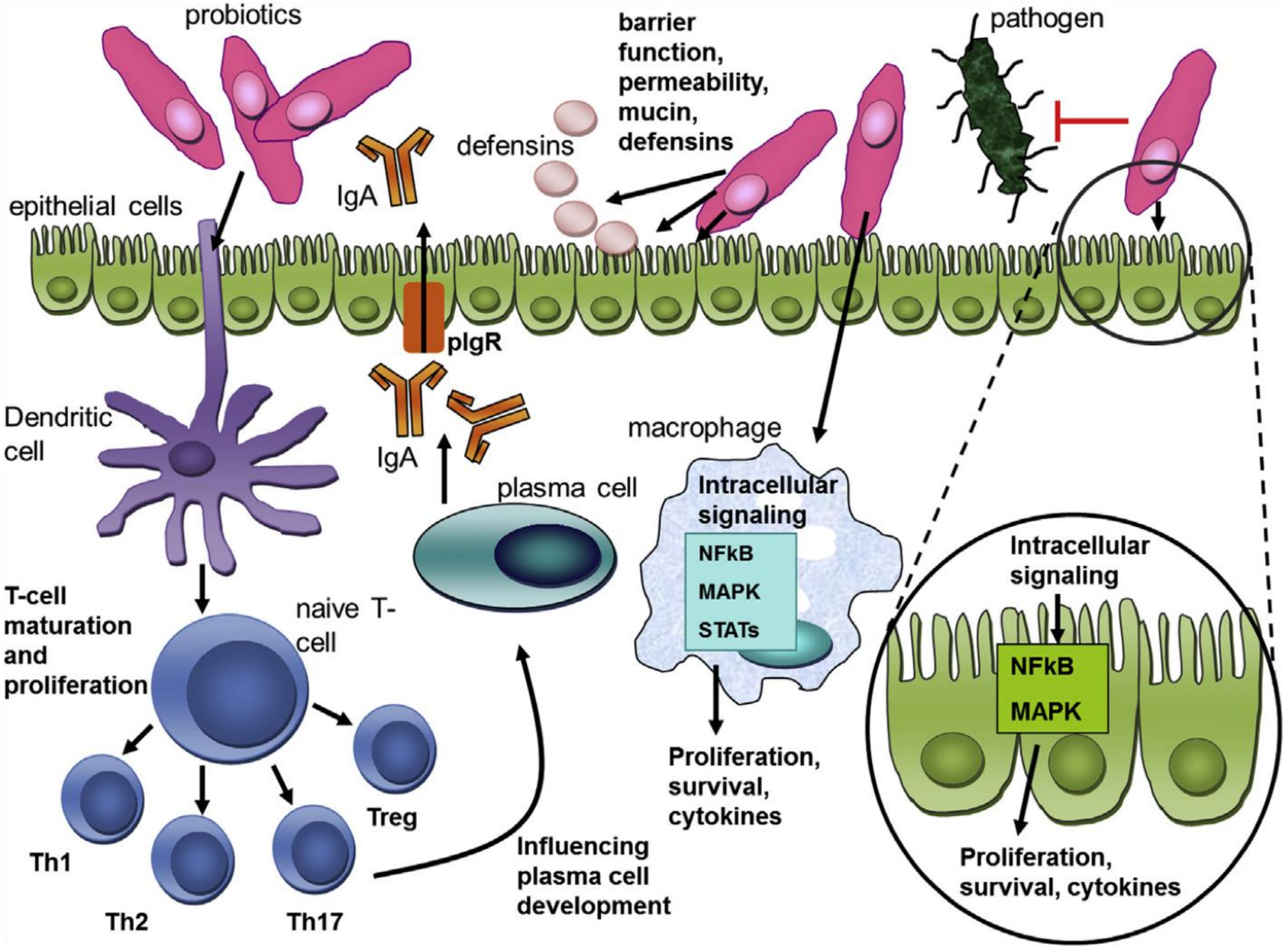


Fig. 2. Proposed mechanisms of action of probiotics on the intestinal mucosa (intestinal epithelial cells in green) and the associated local immune system. *Arrows* indicate direct promoting effects, red "T"-shaped bars indicate inhibitory effects. MAPK, mitogen-activated protein kinase; NFκB, nuclear factor kappa B; pIgR, polymeric immune globulin receptor; STAT, signal transducer and activator of transcription; Th, T-helper lymphocyte cell. (*Data from* Oelschlaeger TA. Mechanisms of probiotic actions - A review. *Int J Med Microbiol*. 2010;300(1):57-62.)

Preliminary evaluation of probiotic effects on gastrointestinal signs in dogs with multicentric lymphoma undergoing multi-agent chemotherapy: A randomised, placebo-controlled study

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Abstract

Background: Gastrointestinal (GI) toxicity is a major dose-limiting factor in dogs undergoing chemotherapy. A proposed mechanism of GI toxicity includes chemotherapy-driven GI dysbiosis. This study was designed to determine the effects of probiotic administration on GI side-effects in dogs receiving multi-agent chemotherapy.
Methods: Ten client-owned dogs with multicentric lymphoma were enrolled in a prospective, randomised, placebo-controlled single-blinded study. On the first day of the cyclophosphamide doxorubicin vincristine prednisone (CHOP)-based chemotherapy protocol, dogs were randomised to receive either daily oral probiotic at a dose of 200×10^9 cfu/10 kg (n = 5) or daily oral placebo (n = 5). Complete blood count, faecal score (FS), faecal microbiome analysis (qPCR) and adverse events scores were performed at baseline and on the day of each subsequent chemotherapy dose, as well as 3 days after doxorubicin (days 0, 7, 14, 21, 24 and 28).
Results: Overall, 40% of dogs had an abnormal GI microbiome at baseline, specifically decreased faecal *C. hiranonis* and *Fusobacterium* abundances. Dogs receiving probiotics had increased faecal *Streptococcus* ($p = 0.02$) and *E. coli.* ($p = 0.01$). No dogs receiving probiotics experienced diarrhoea ($FS \geq 3.5$) compared to four of five receiving placebo. (F 2.895; $p = 0.13$)
Conclusion: GI microbiome dysbiosis was common in this group of dogs with multicentric lymphoma. Probiotics were well-tolerated, with no negative side effects. Further studies are needed to explore broader microbiome and metabolome changes, as well as clinical benefit.