

UNITE

UNIVERSITÀ
DEGLI STUDI
DI TERAMO

CENNI DI ECOGRAFIA ADDOMINALE

Elettra Febo
DVM, PhD student



ECOGENICITA'

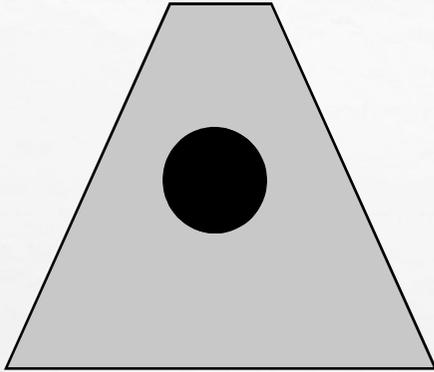
Proprietà di generare echi

Ecogenicità relativa: confronto tra l'ecogenicità della zona considerata e le zone adiacenti apparentemente normali dello stesso organo o di organi adiacenti

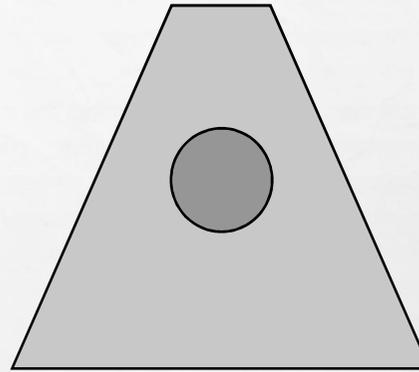
FATTORI CHE LA INFLUENZANO:

- ❖ **Contenuto di acqua**
- ❖ **Contenuto di connettivo**

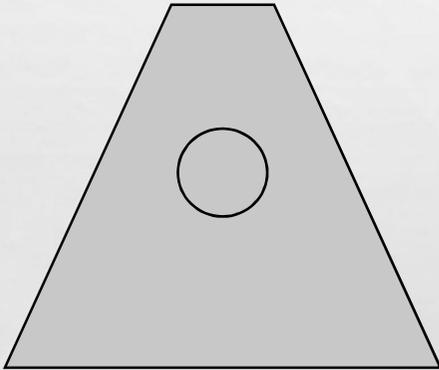
ANECOGENO



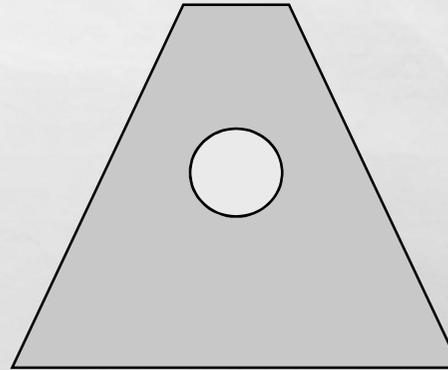
IPOECOGENO



ISOECOGENO



IPERECOGENO



ECOGENICITA' DEGLI ORGANI

BILE, URINA

MIDOLLARE RENALE

MUSCOLO

CORTICARE RENALE

FEGATO

GRASSO DI DEPOSITO

MILZA

PROSTATA

ILO RENALE

GRASSO STRUTTURALE, PARETI VASCOLARI

OSSO, GAS

ECOSTRUTTURA

Caratteristiche dei singoli echi che nell'insieme formano la trama della struttura esplorata

GRANDEZZA DEI PUNTI:

- **piccola (fine)**
- **media**
- **grande (grossolana)**

OMOGENEITA':

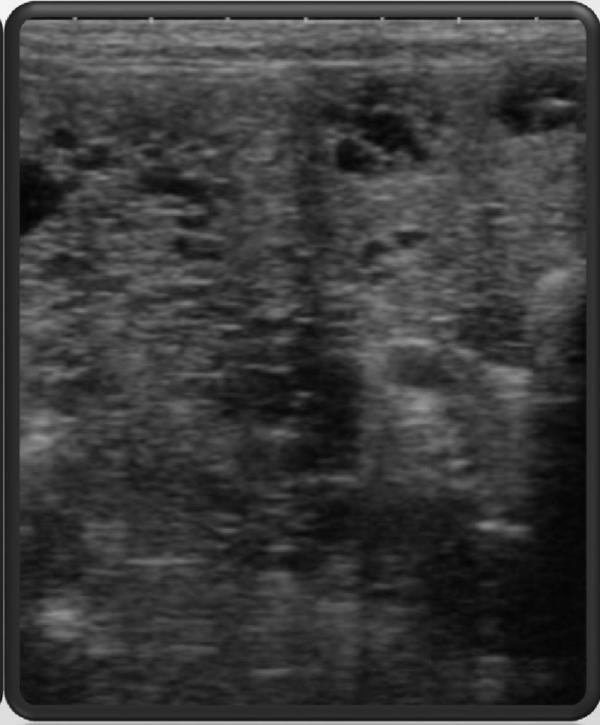
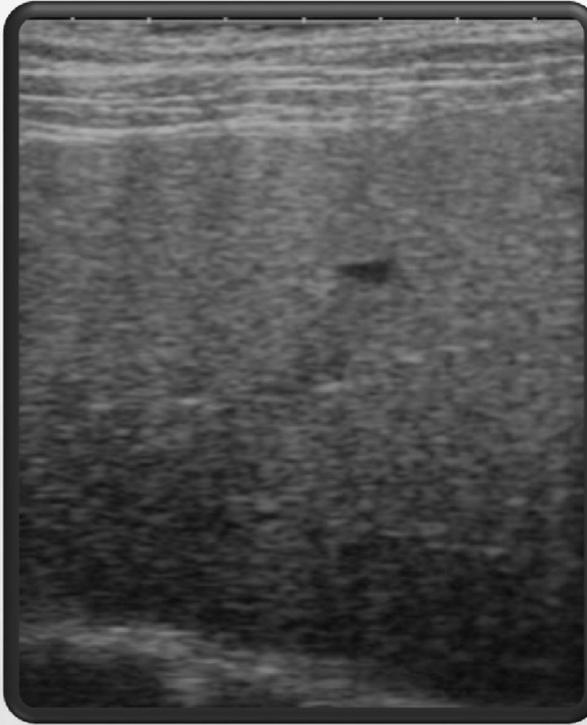
- **omogenea**
- **disomogenea**

GRANDEZZA DEI PUNTI

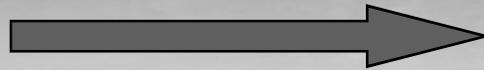
Piccola (fine)

Media

Grande(grossolana)



Omogenea

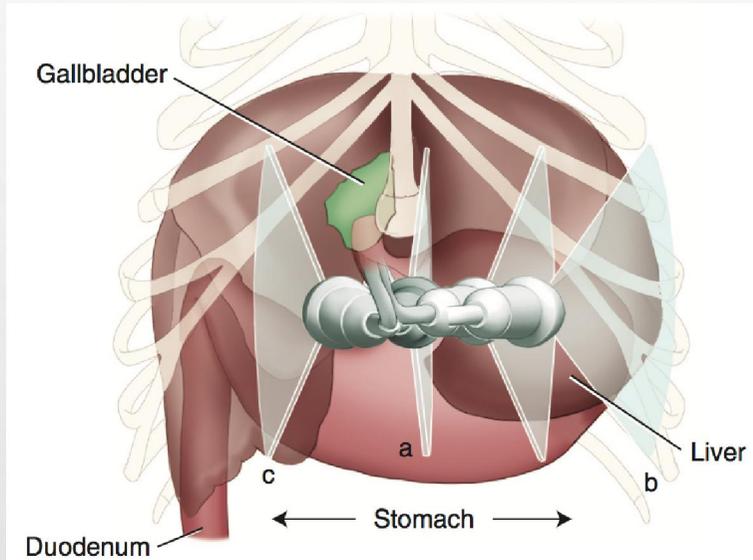


Disomogenea

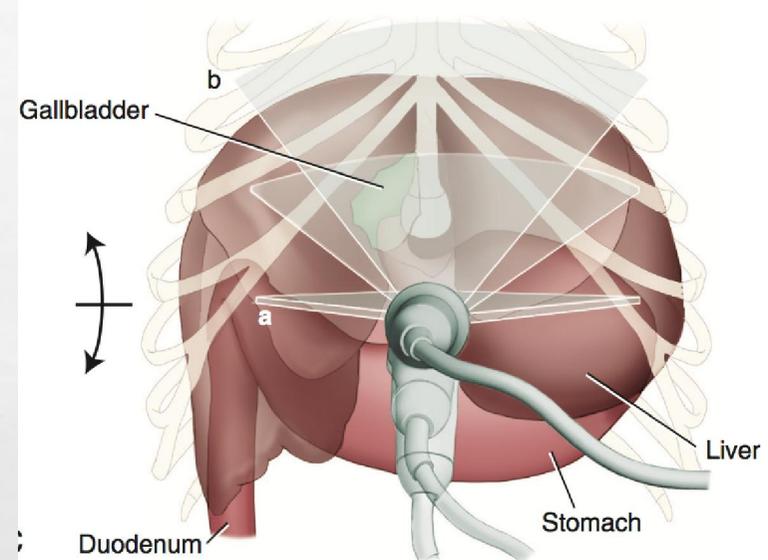


FEGATO

Scansione sagittale



Scansione trasversale



Nyland & Mattoon, 2015

FEGATO

Uniforme

Ecogenicità media (< della milza)

Ecostruttura leggermente grossolana (< uniforme della milza)

Vasi epatici ipo/anecogeni

Pareti vasi portalì iperecogene

Doppler a volte utile per differenziare vasi da dotto biliare

Aumento dimensioni quando :

Aumenta distanza tra diaframma e stomaco

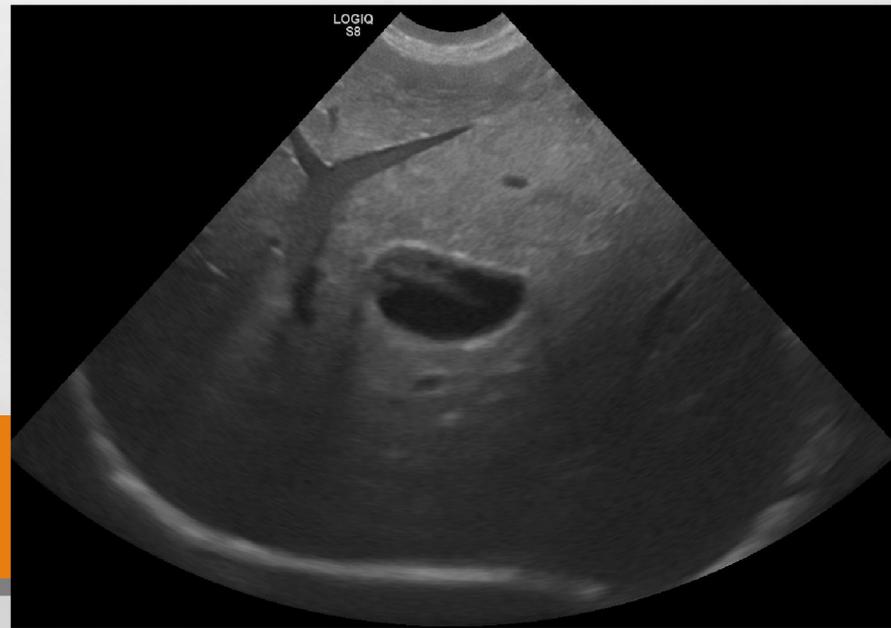
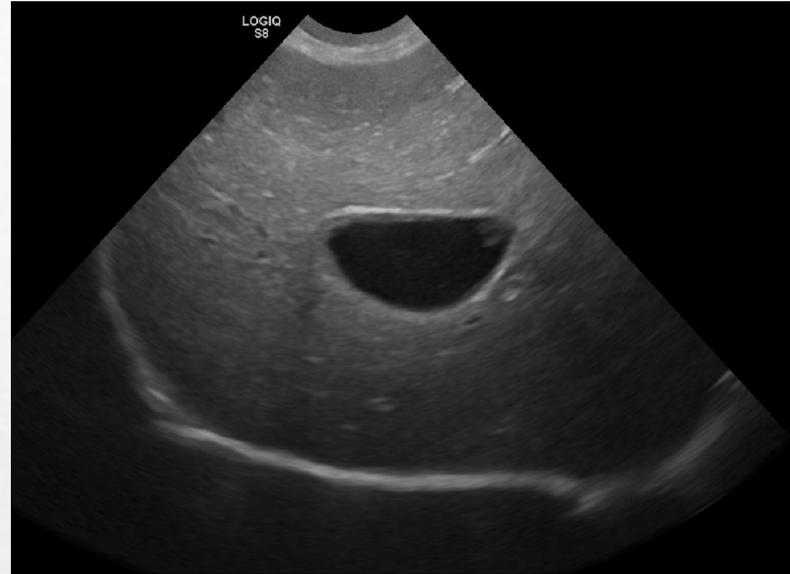
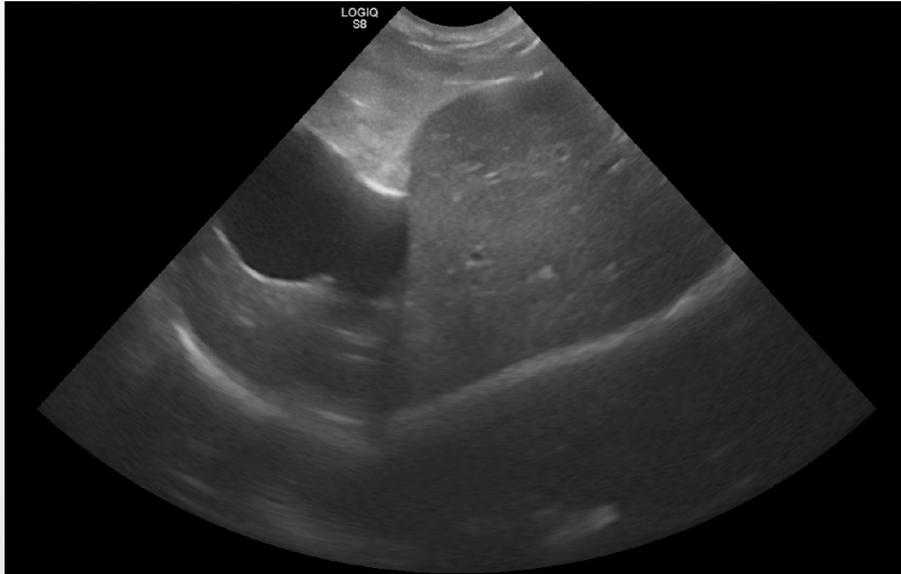
Arrotondamento margini

Riduzione dimensioni quando :

Scarsa visualizzazione anche a stomaco vuoto

Diminuisce distanza tra diaframma e stomaco

FEGATO



Alterazioni diffuse del parenchima

Epatomegalia

- Fegato iperecogeno:**
- **Lipidosi/steatosi**
 - **Diabete mellito**
 - **Epatopatia steroidea**
 - **Linfoma**
 - **Mastocitoma**

- Fegato ipoecogeno:**
- **Congestione**
 - **Epatite/colangioepatite**
 - **Leucemie/linfoma**
 - **Neoplasia istiocitaria**

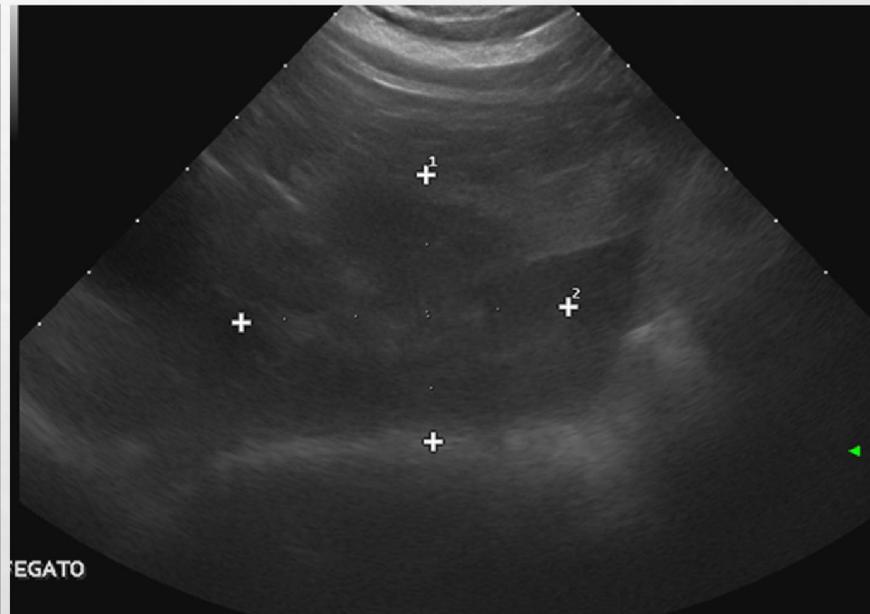
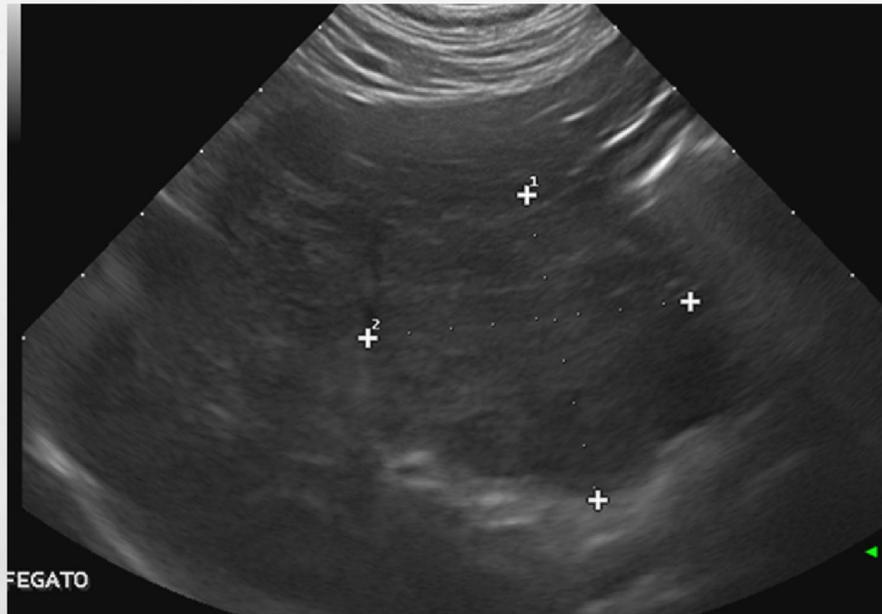
- Fegato eterogeneo:**
- **Epatite cronica attiva**
 - **Neoplasia**
 - **Amiloidosi**
 - **Sindrome epatocutanea**

Dimensioni normali o microepatia

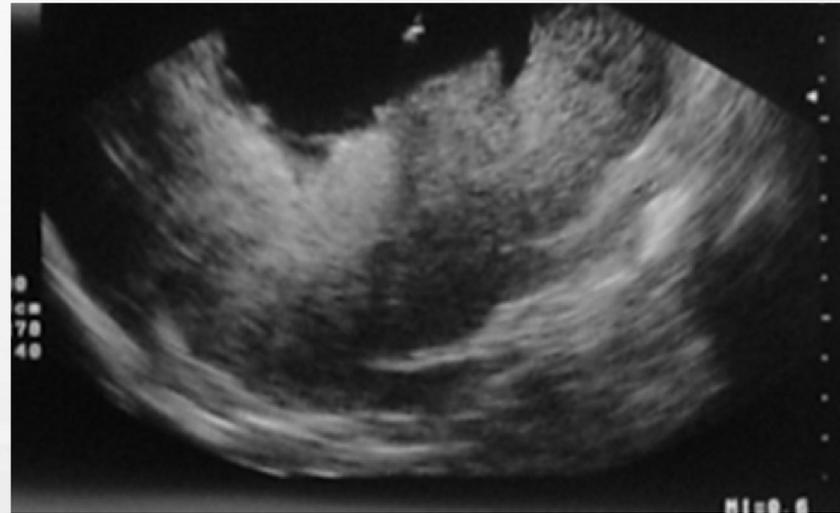
- **Fibrosi/Cirrosi**

- **Epatite cronica**

CIRROSI

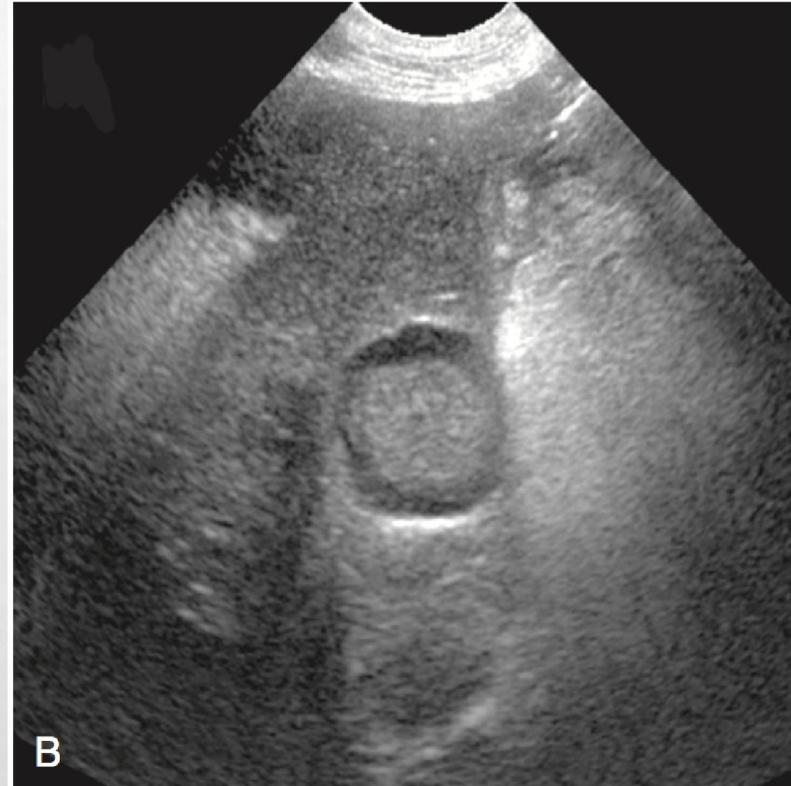
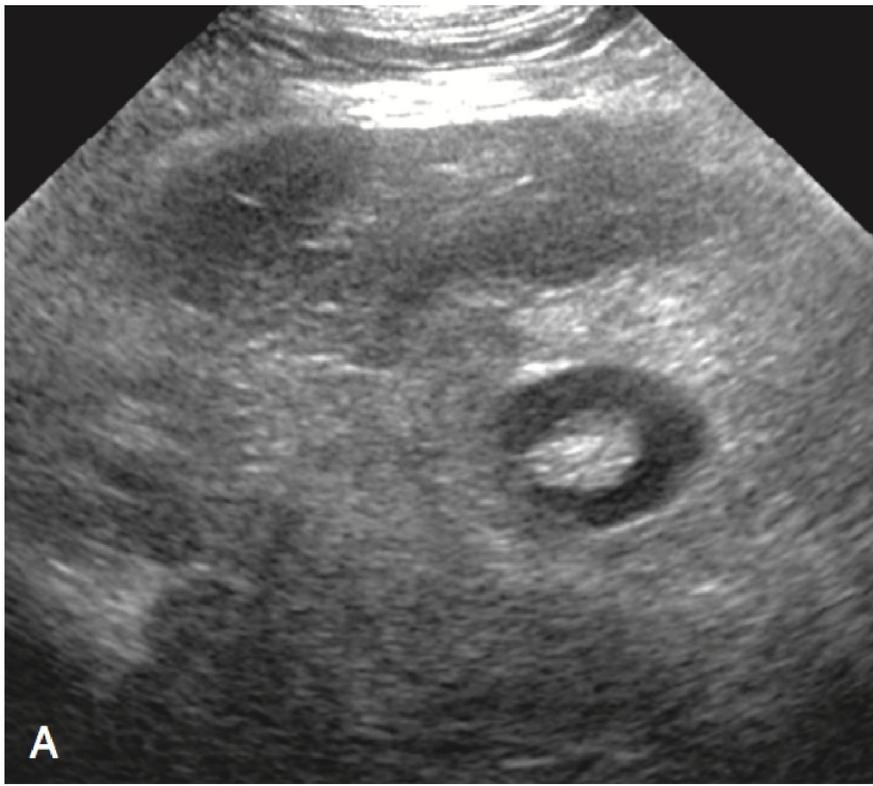


NEOPLASIA PRIMARIA



METASTASI

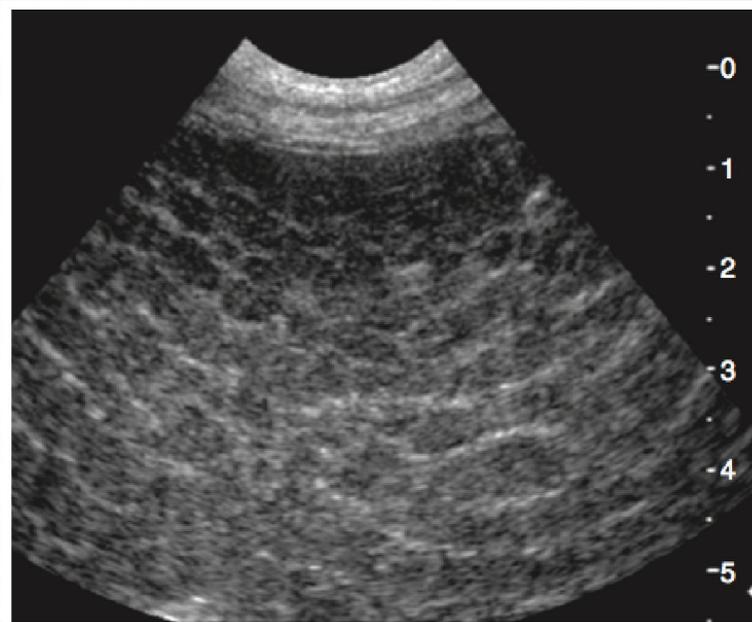
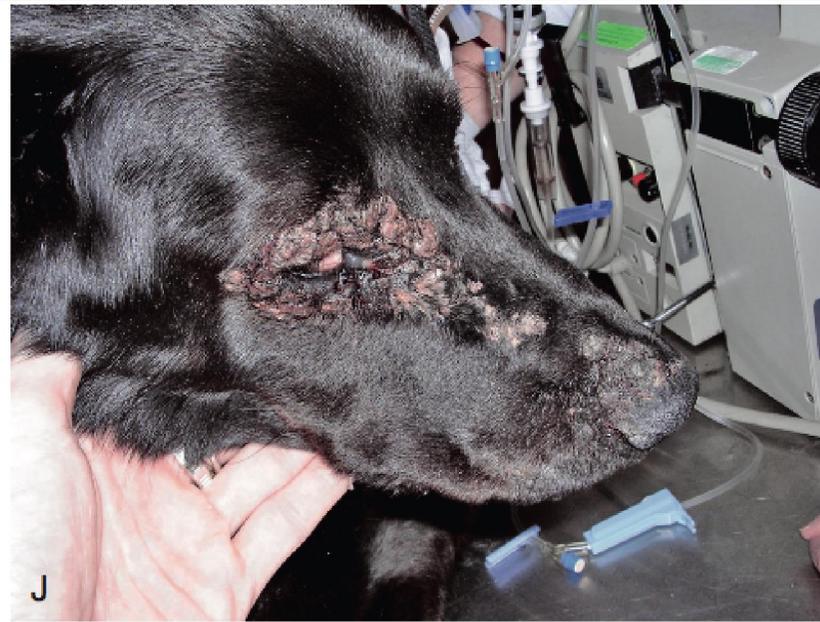
TARGET LESION



Nyland & Mattoon, 2015

SINDROME EPATOCUTANEA

HONEYCOMB o SWISS CHEESE-LIKE



Nyland & Mattoon, 2015

Alterazioni focali del parenchima

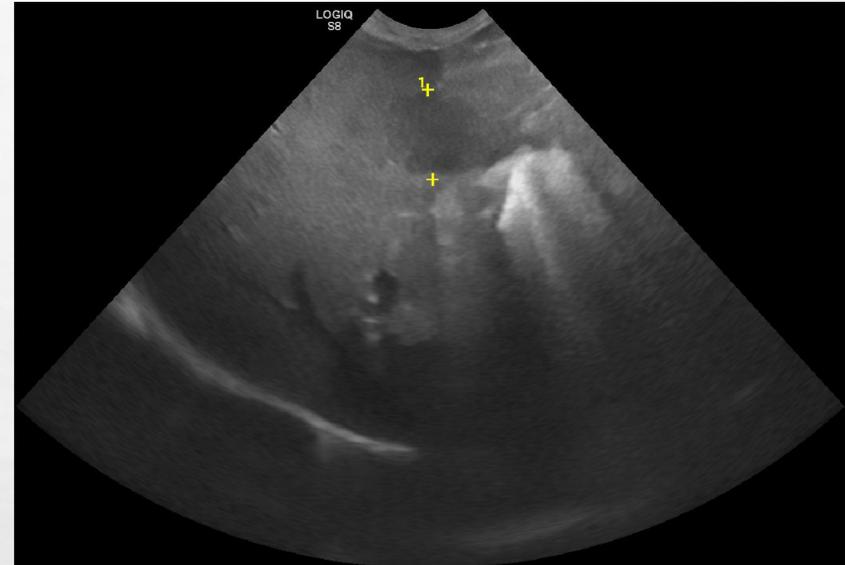
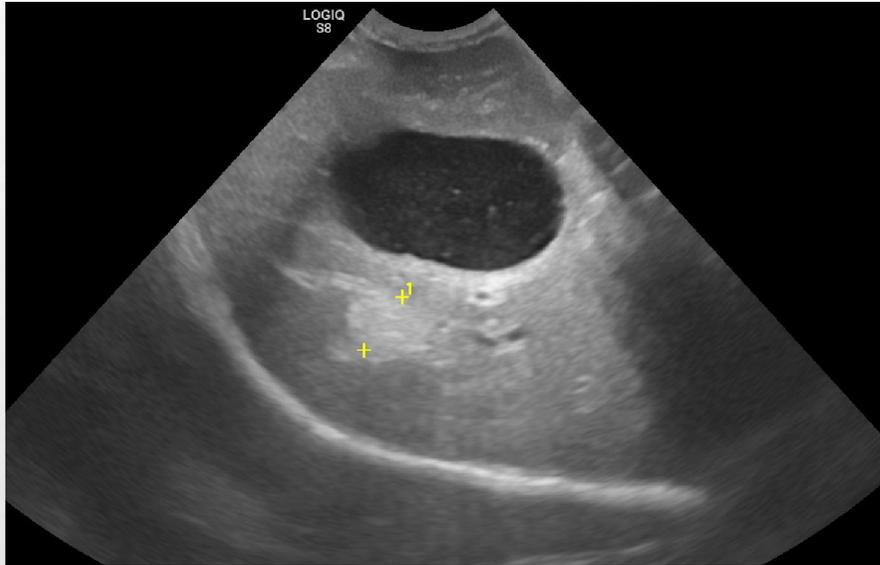
Lesioni epatiche focali sono di frequente riscontro soprattutto nei soggetti anziani e spesso hanno natura benigna

Anche se i rilievi ecografici possono suggerire la natura di una lesione, l'ecografia ha una bassa specificità nella differenziazione delle varie lesioni focali

Prelievo dalla lesione per diagnosi finale!!!!

- **Iperplasia nodulare**
- **Cisti**
- **Ascessi**
- **Ematomi**
- **Neoplasie primarie**
- **Metastasi**

NODULI



MILZA

Dimensioni variabili nel cane

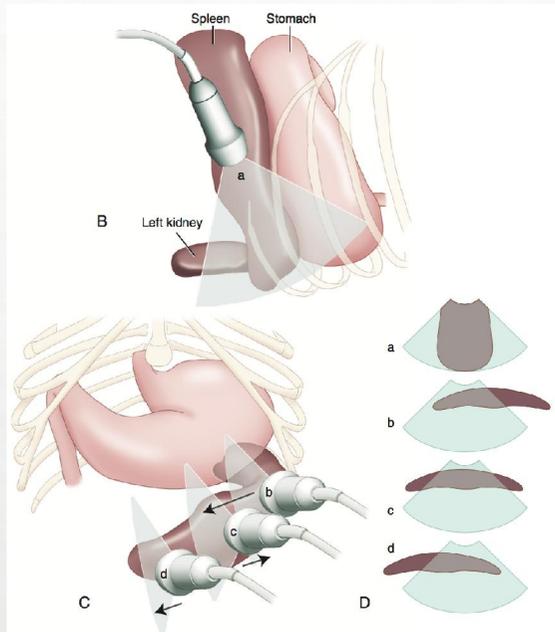
Nel gatto spessore circa 10 mm

> dimensioni in sedazione/anestesia

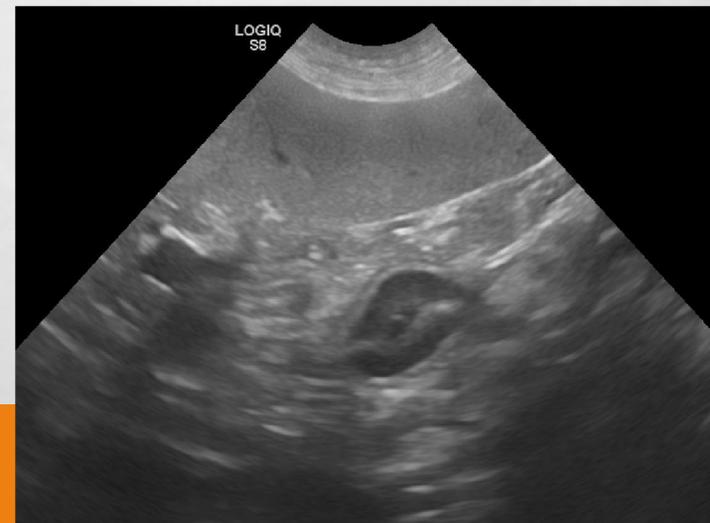
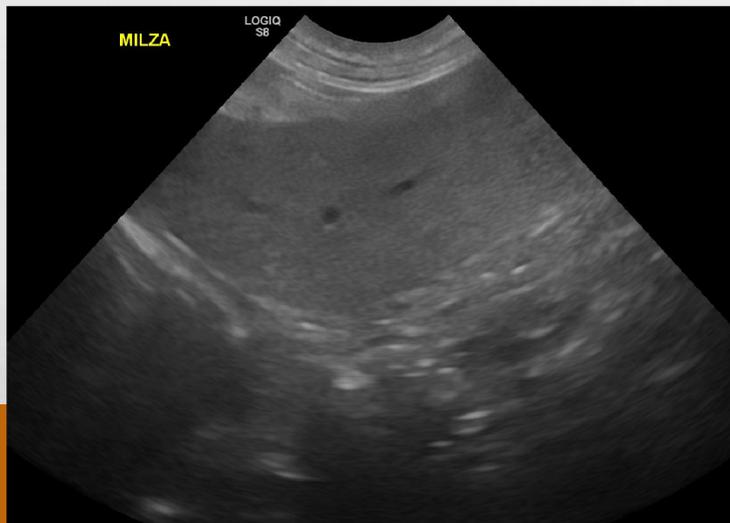
Parenchima omogeneo

Ecostruttura fine

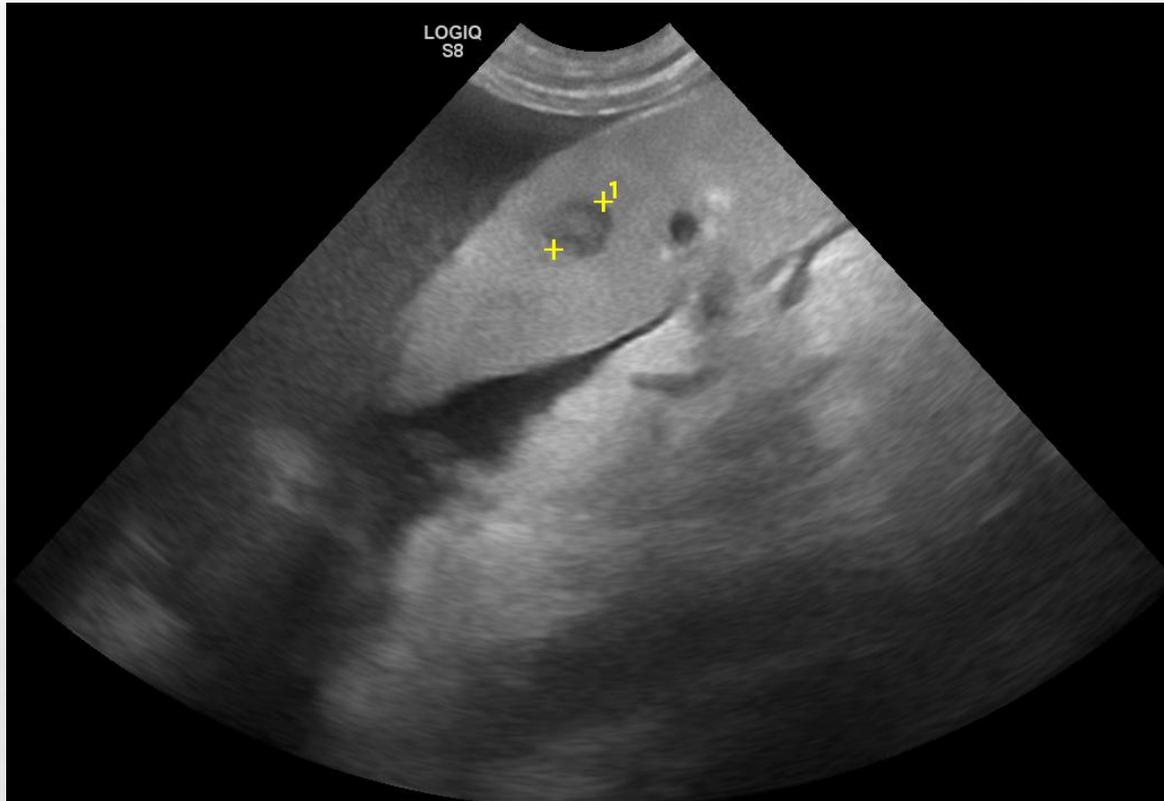
Ecogenicità da media ad elevata



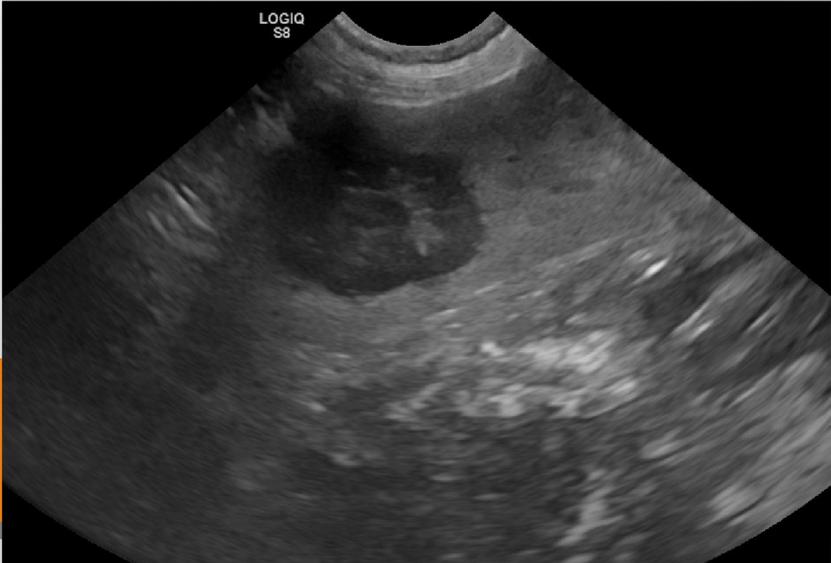
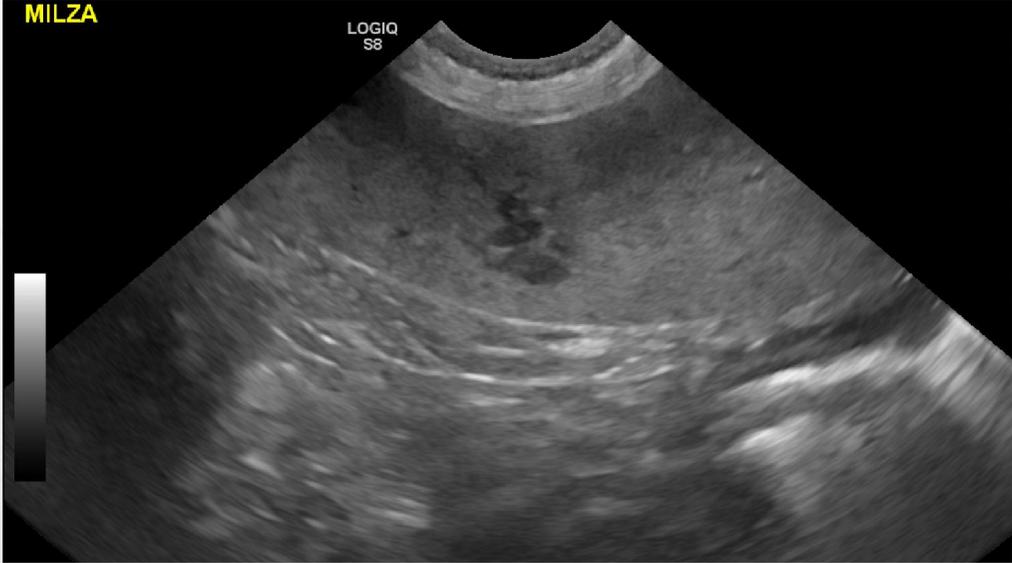
Nyland & Mattoon, 2015



NODULI



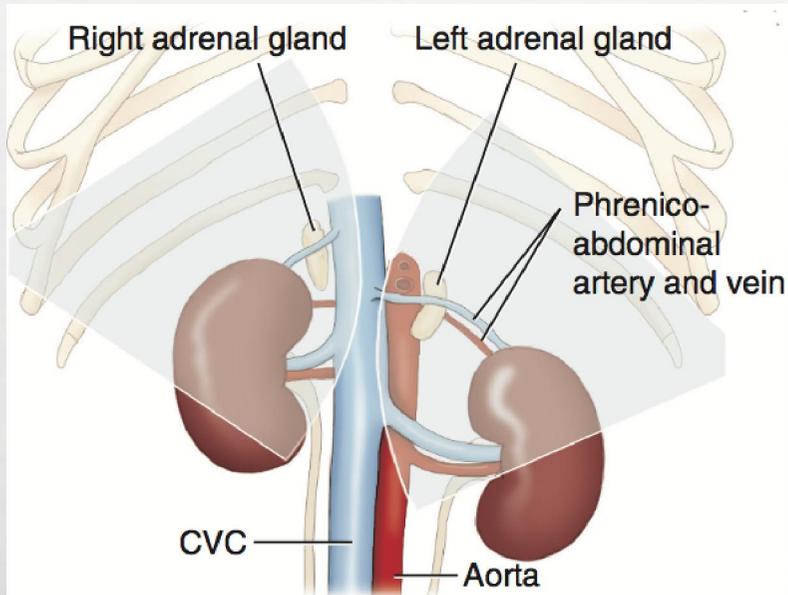
NODULI



RENI

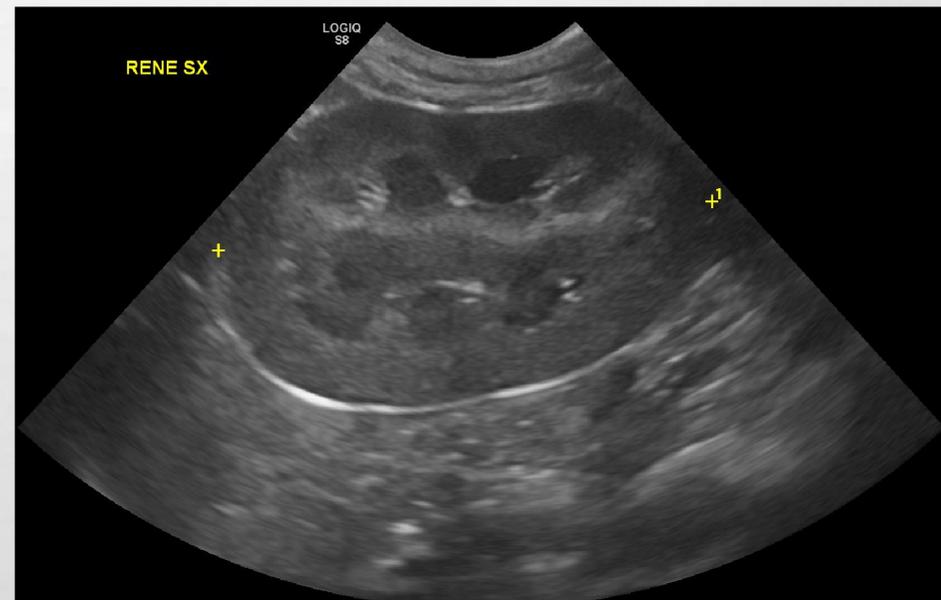
Rene sinistro più caudale e facilmente visualizzabile

Rene destro più craniale, spesso necessaria scansione intercostale



Nyland & Mattoon, 2015

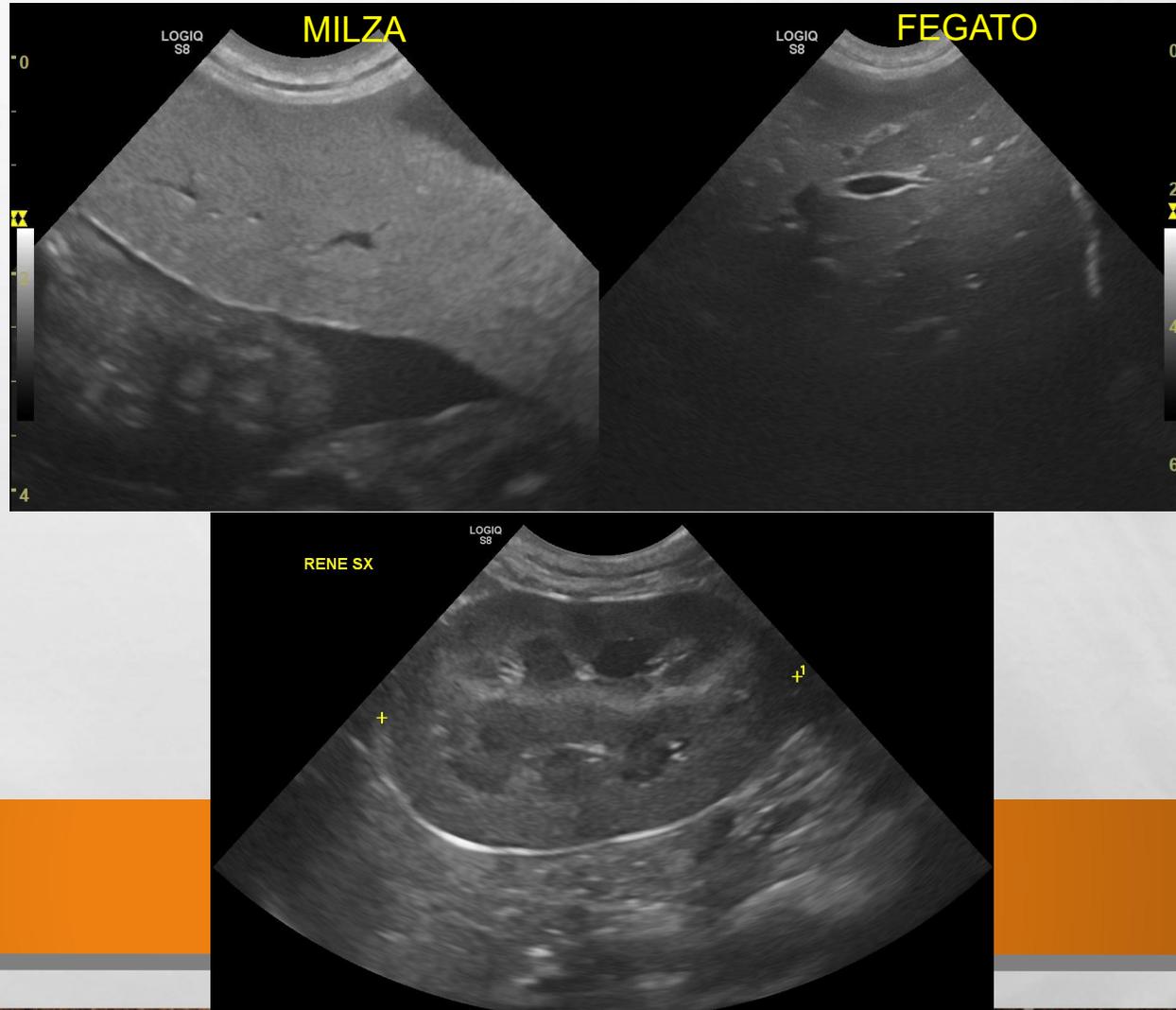
Capsula – Corticale – Midollare – Pelvi renale



RENI

Ecogenicità:

Corticale renale iperecogena rispetto a midollare ed ipoecogena rispetto a grasso, milza e fegato



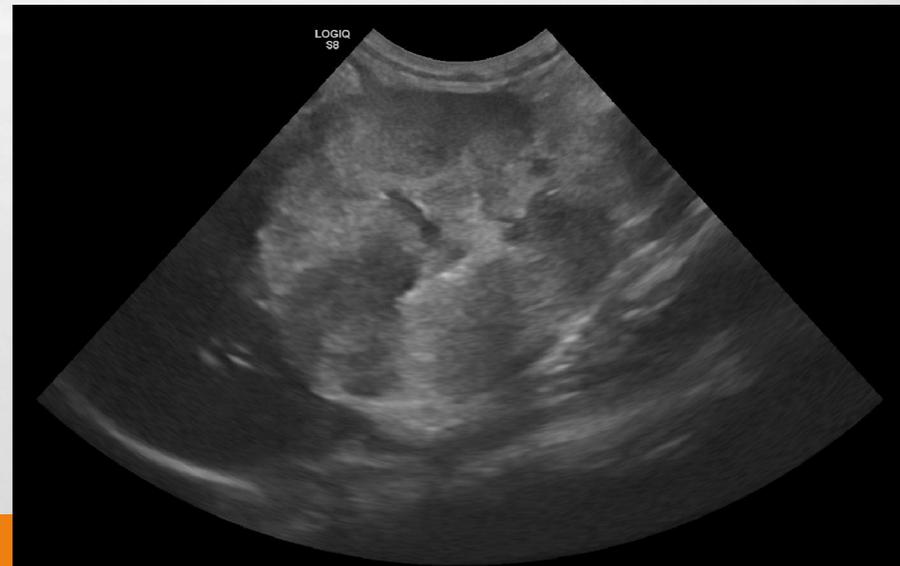
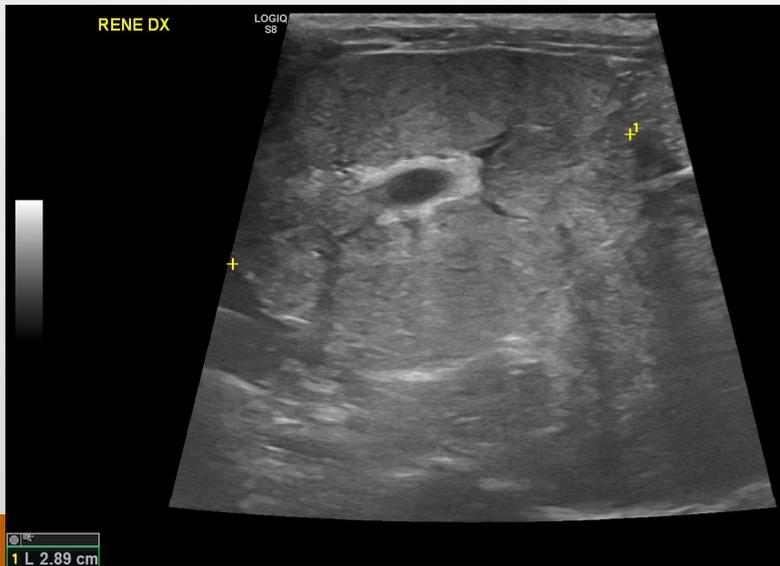
NEFROPATIA CRONICA END-STAGE KIDNEY

Renii piccoli e forma irregolare

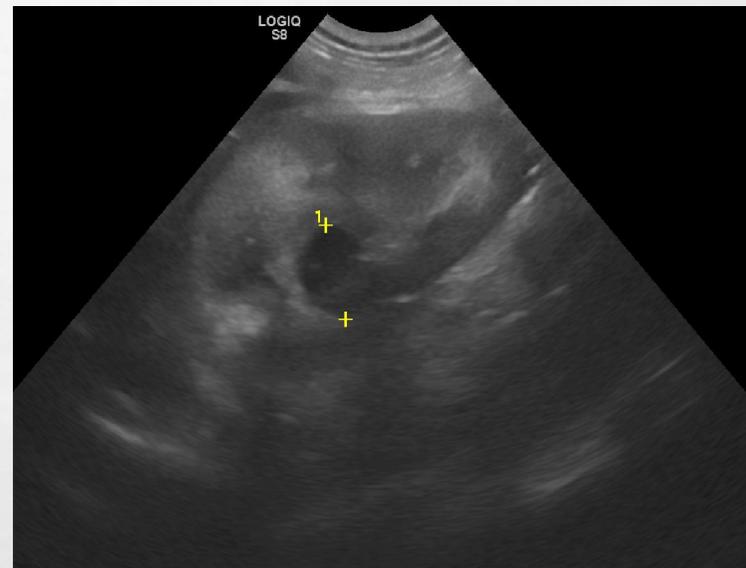
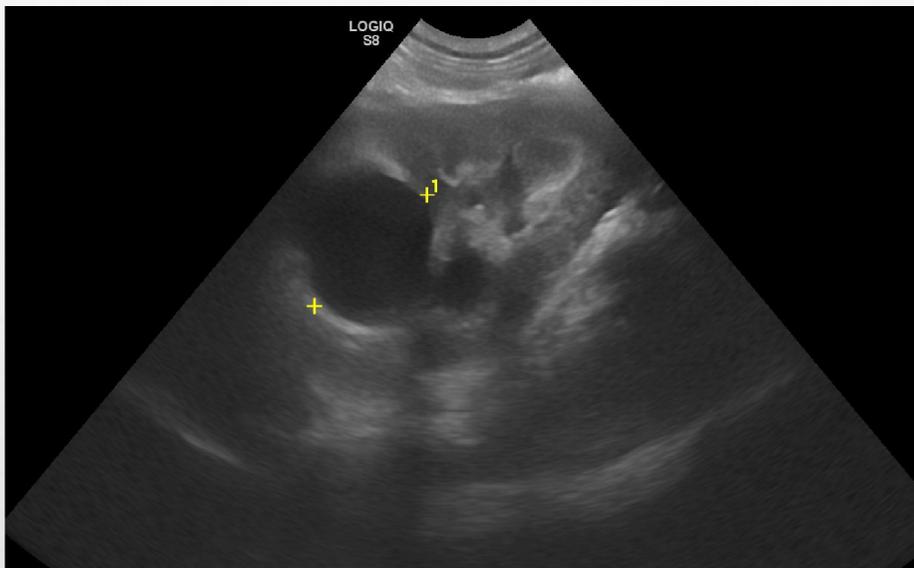
Aumento generalizzato dell'ecogenicit 

Perdita della normale architettura renale

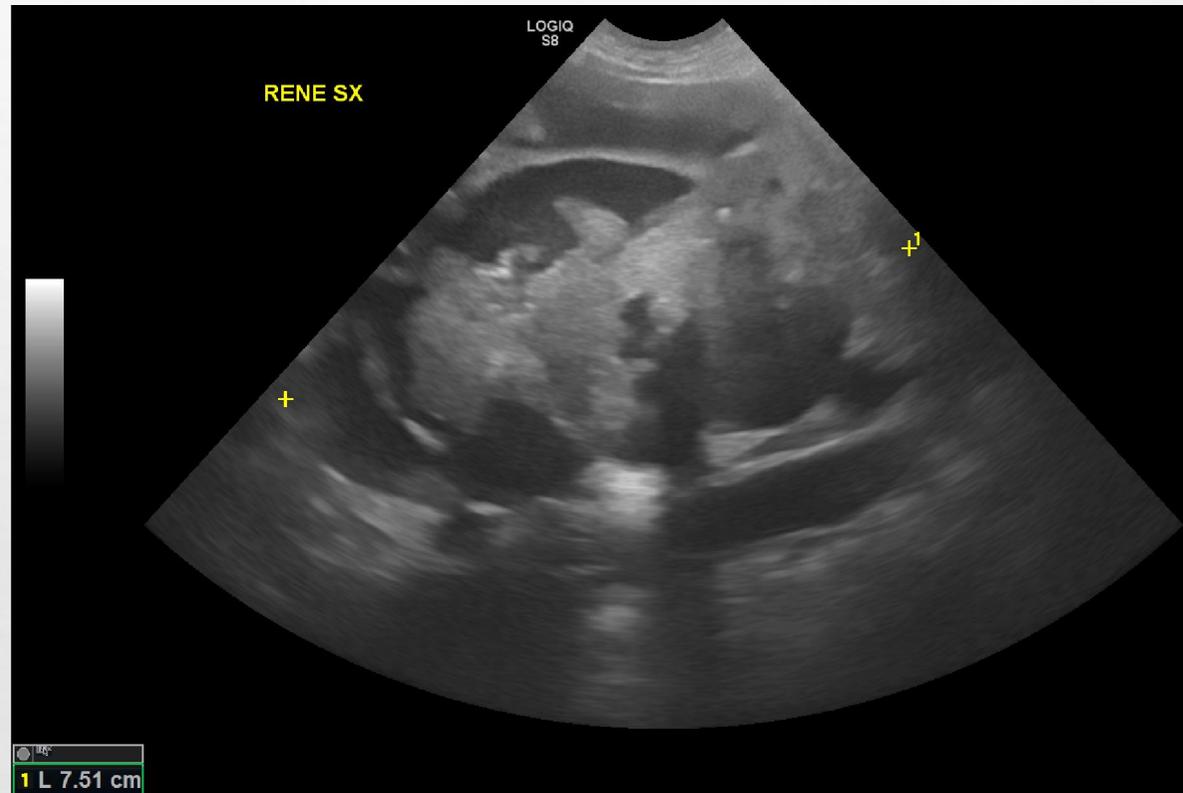
Perdita definizione della giunzione corticomidollare



CISTI



NEOPLASIE

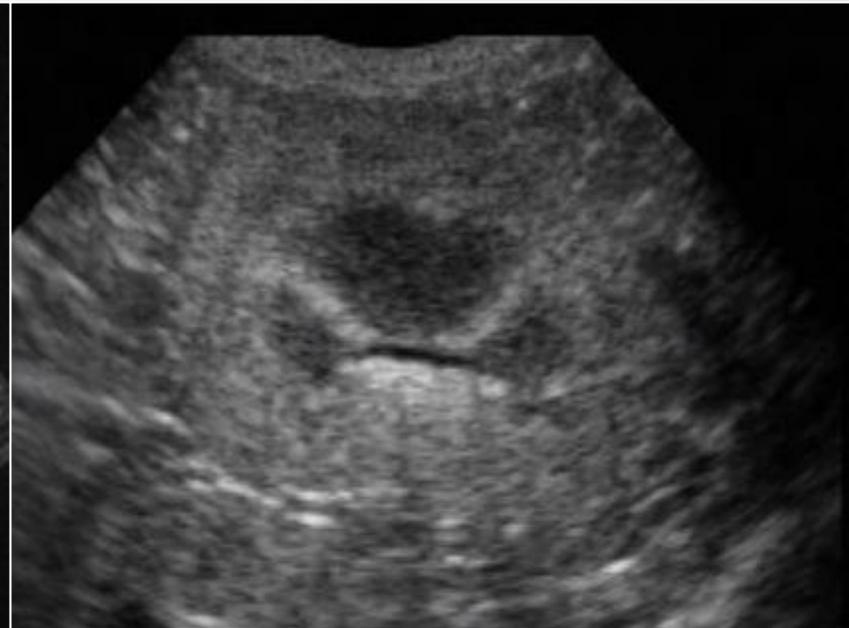


PIELONEFRITE

Dilatazione della pelvi renale ed eventualmente dell'uretere prossimale

Contenuto iperecogeno nella pelvi

Midollare e corticale renale disomogenee



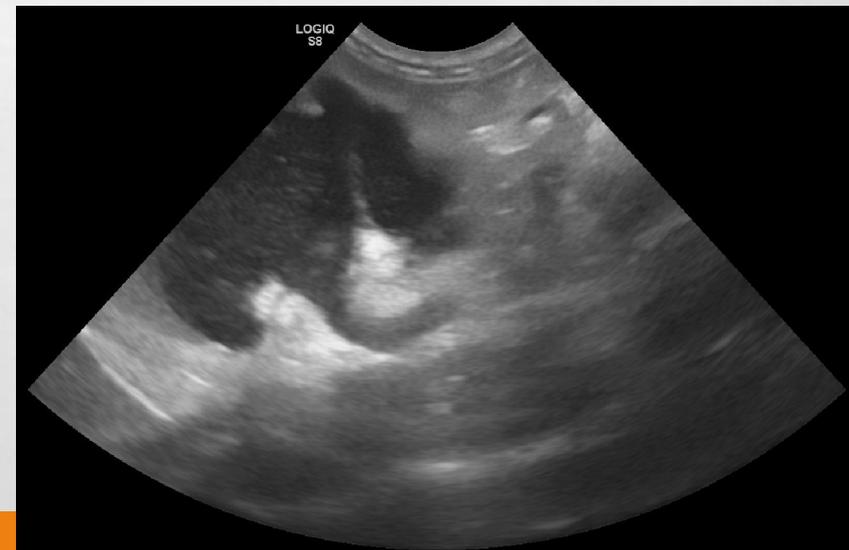
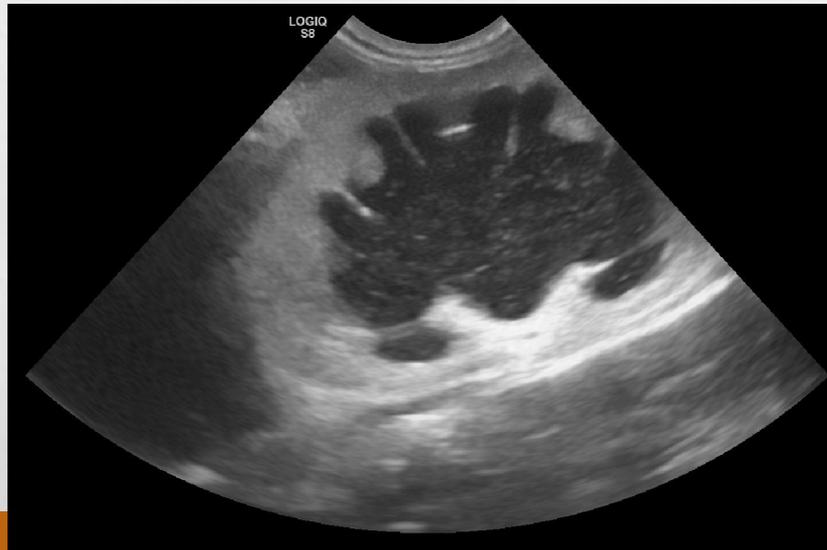
IDRONEFROSI

CAUSE

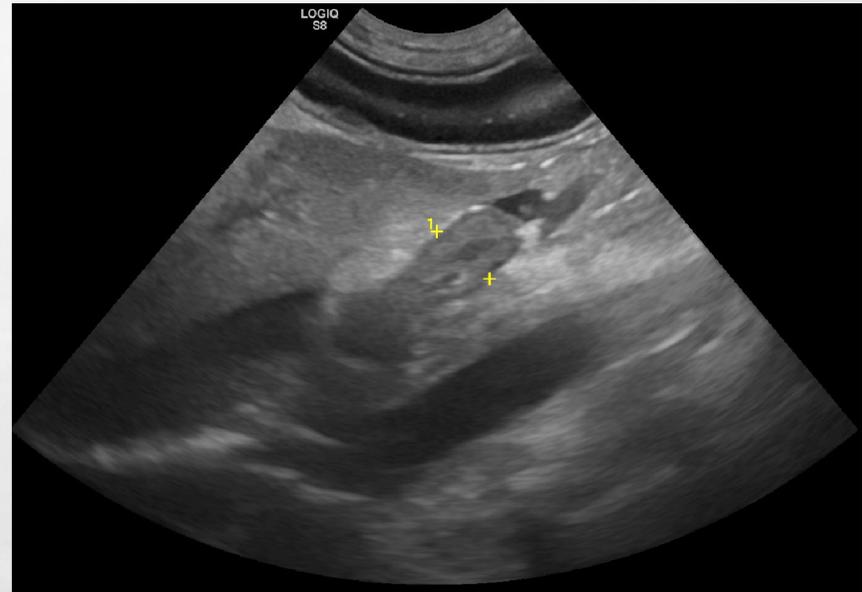
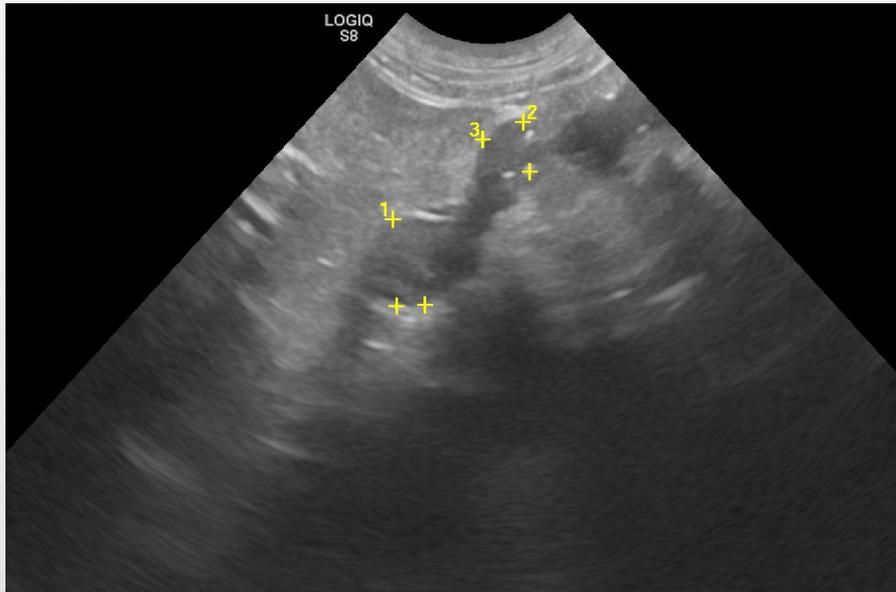
Ostruzioni endopieliche o endoureterali

Compressioni estrinseche sugli ureteri (masse addominali o pelviche, masse vescicali nel trigono, iatrogene)

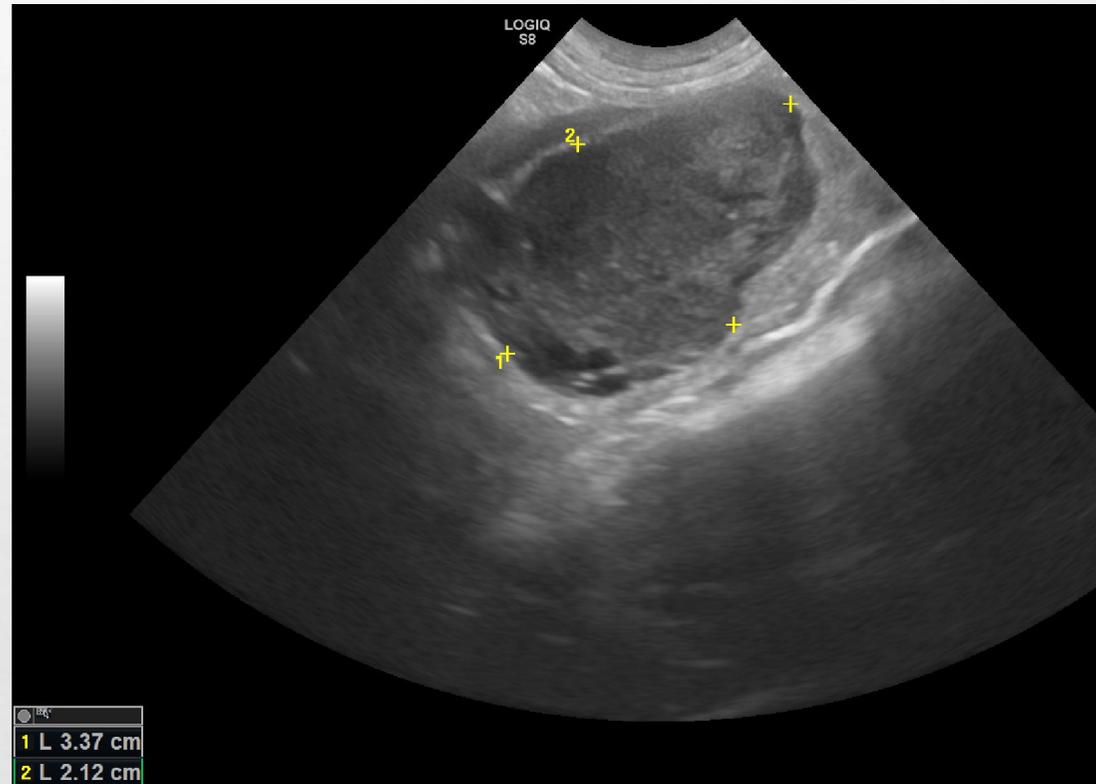
Uretere ectopico



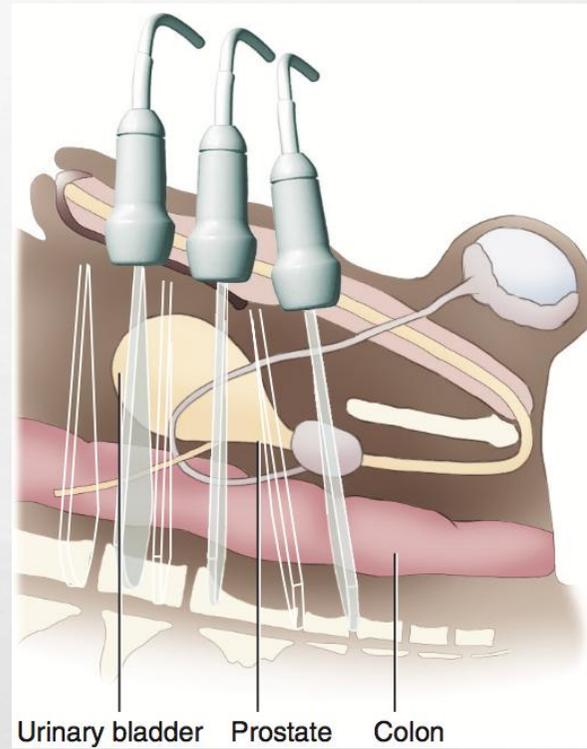
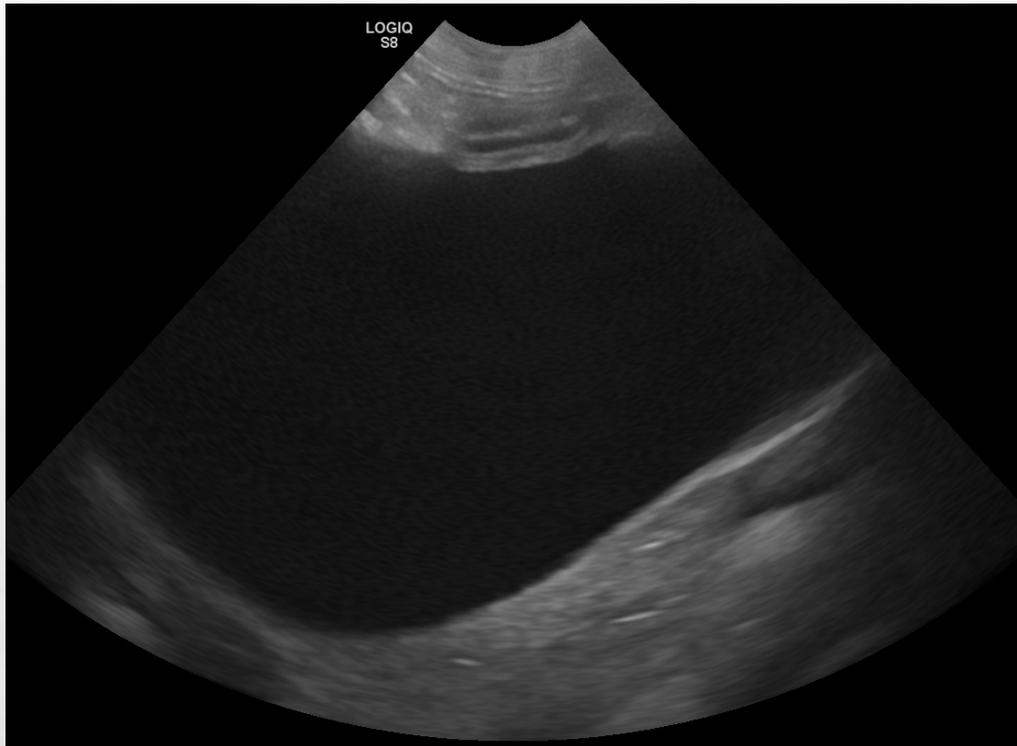
SURRENI



NEOPLASIA



VESCICA



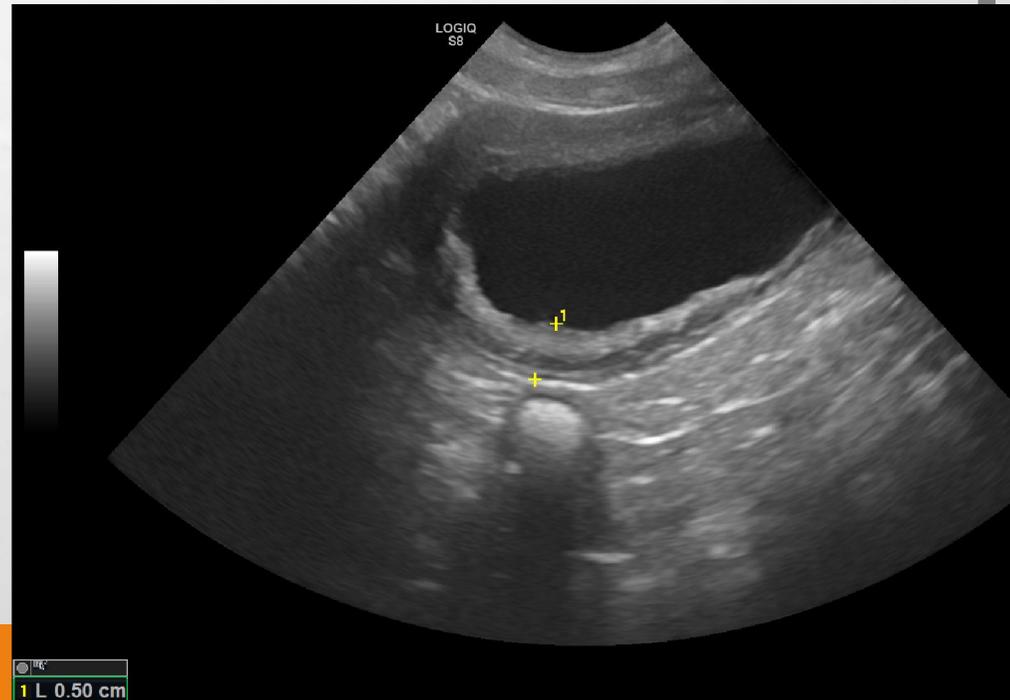
Nyland & Mattoon, 2015

CISTITE

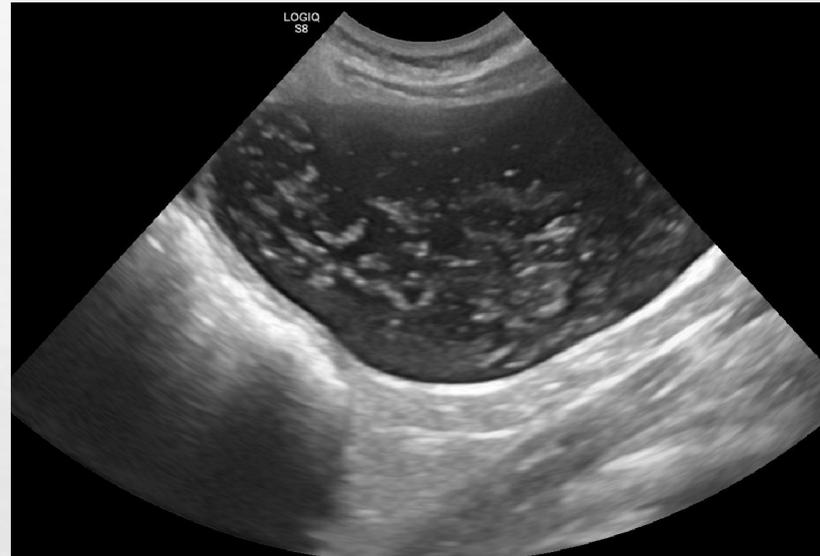
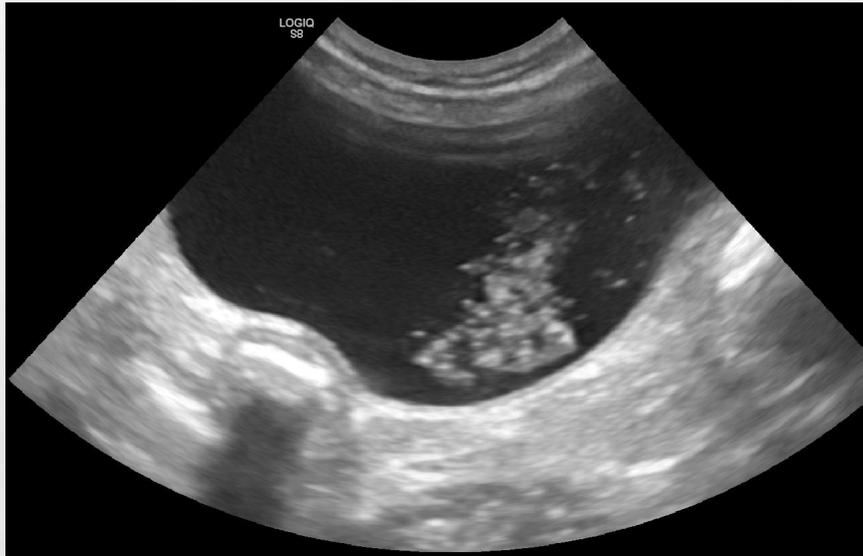
Valutazione con vescica distesa, spessore parete 1-2 mm

Ispessimento parietale più pronunciato cranioventralmente, generalizzato nei casi gravi

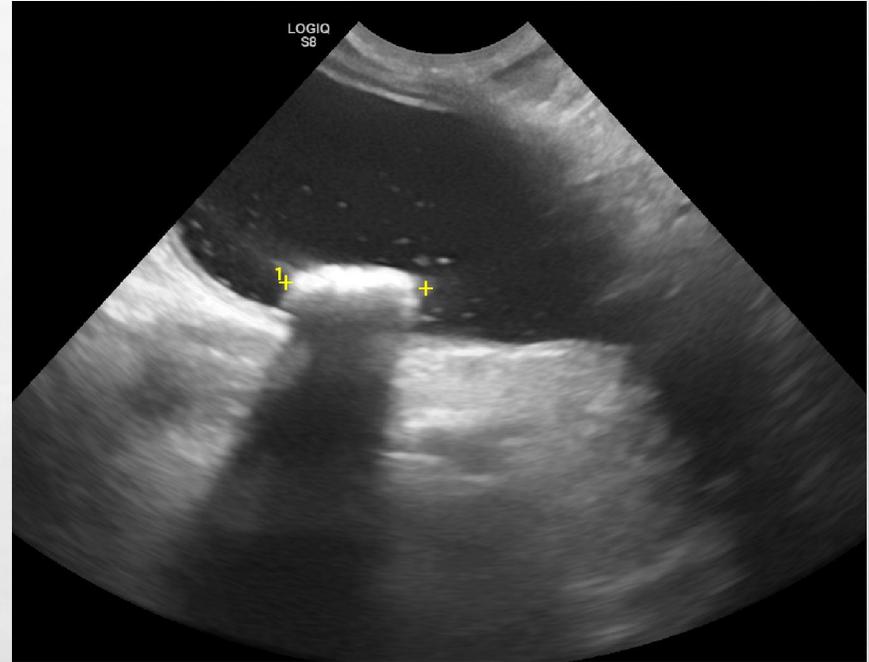
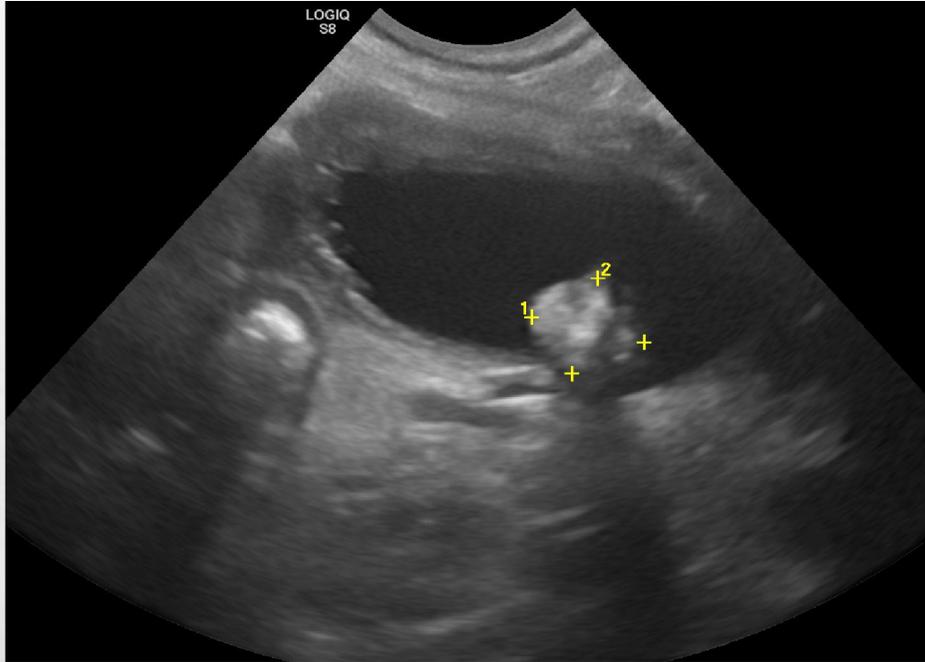
Sedimento iperecogeno



SEDIMENTO URINARIO



CALCOLI



NEOPLASIE

Ispessimento focale o generalizzato della parete vescicale (regione del trigono)

Maggior frequenza in cagne e gatti maschi

Carcinoma delle cellule di transizione più comune:

Massa sessile che protrude nel lume, superficie più irregolare

Perdita normale stratificazione della parete

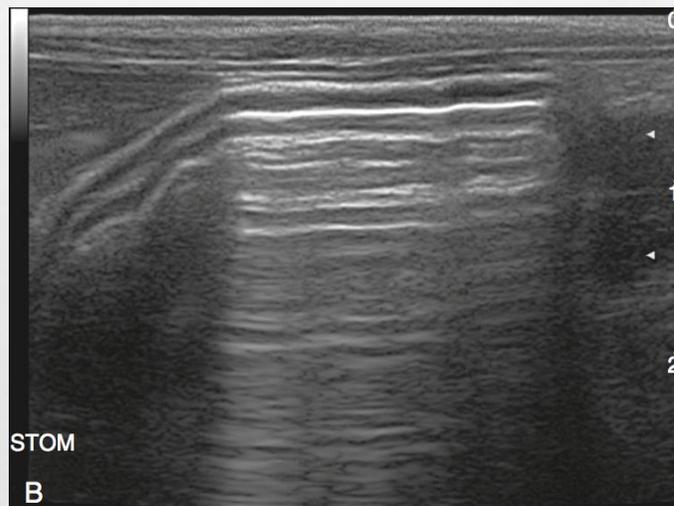


APPARATO GASTROENTERICO

Digiuno!!!!!!!

Artefatti:

Riverbero



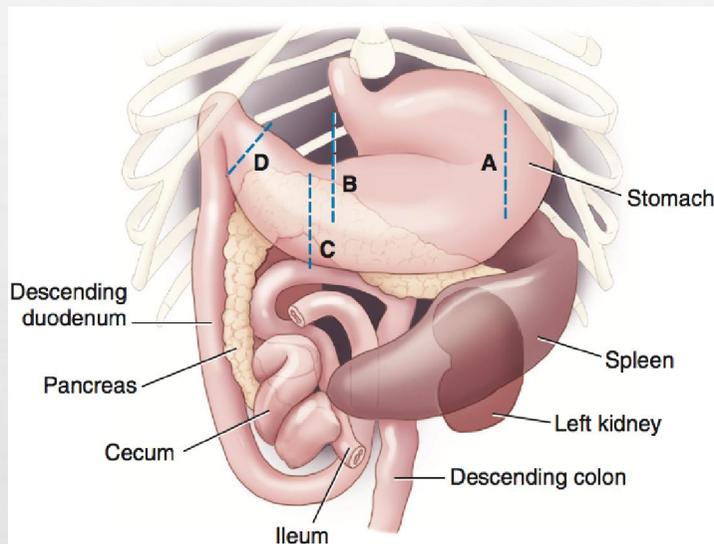
Nyland & Mattoon, 2015

Cono d'ombra

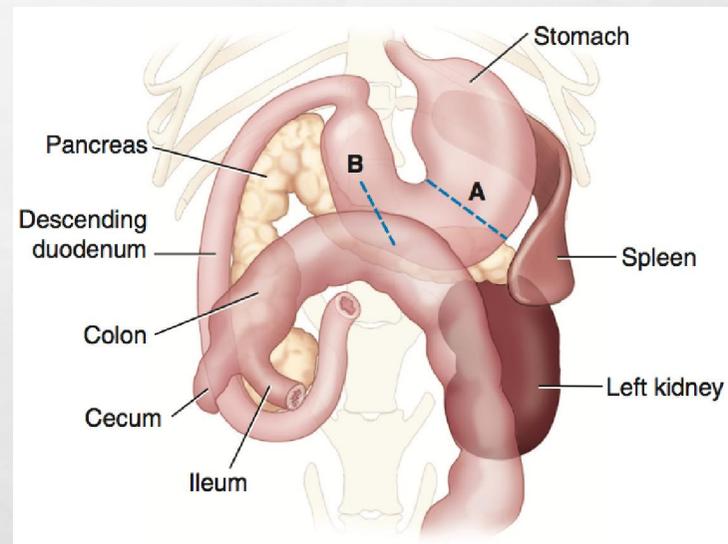


APPARATO GASTROENTERICO

CANE



GATTO

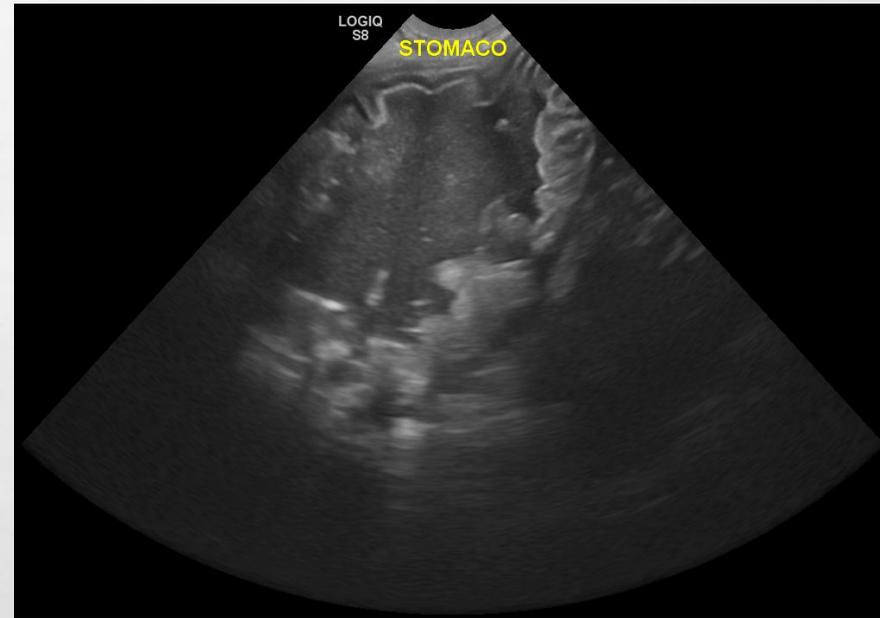
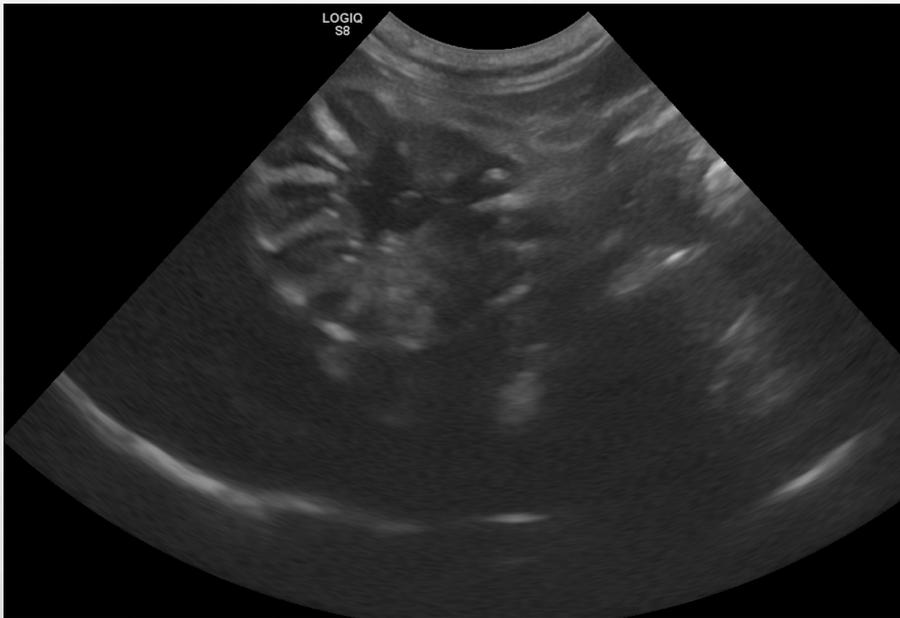


Nyland & Mattoon, 2015

STOMACO

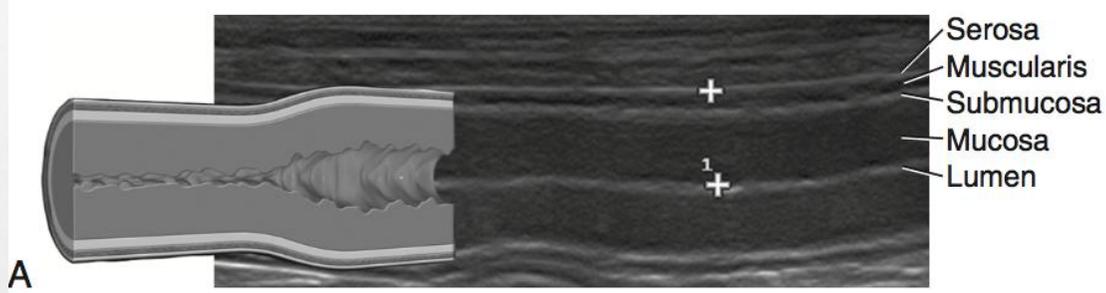
Circa 5 contrazioni peristaltiche al minuto

Spessore normale 3-5 mm (cane), 2-4,4 (gatto)

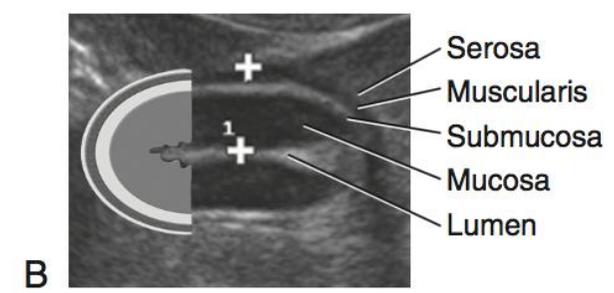


PICCOLO INTESTINO

Scansione longitudinale



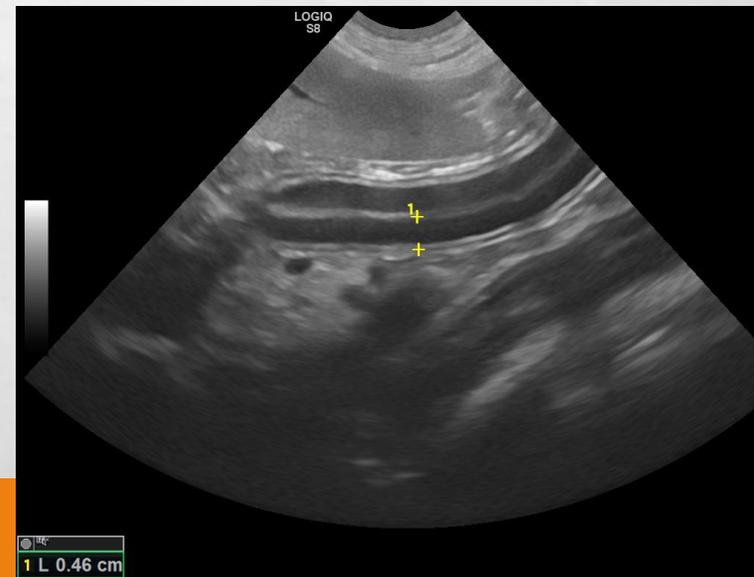
Scansione trasversale



Nyland & Mattoon, 2015

Circa 1-3 contrazioni peristaltiche al minuto

Spessore normale 2-3 mm (fino 5 mm nel cane)

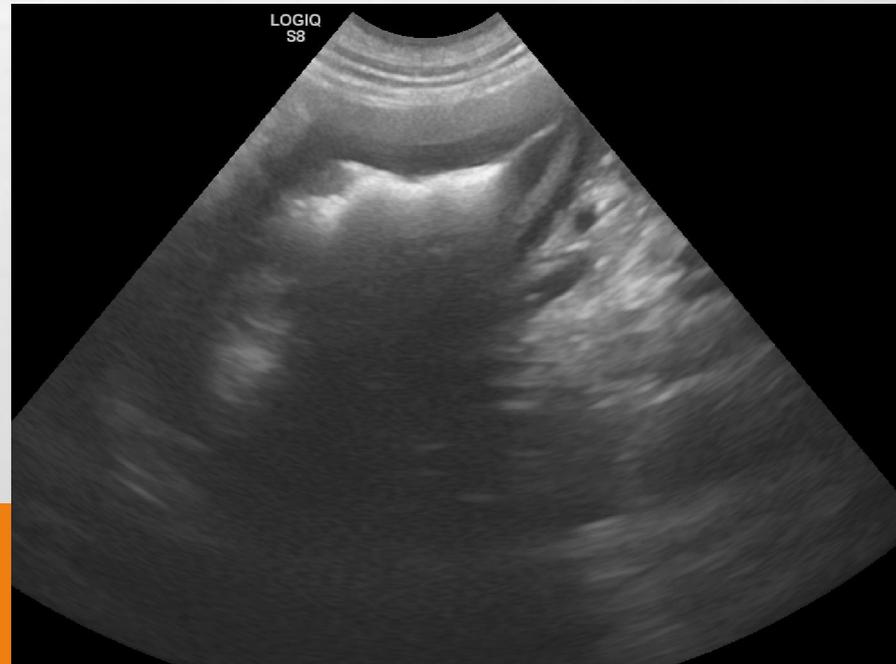
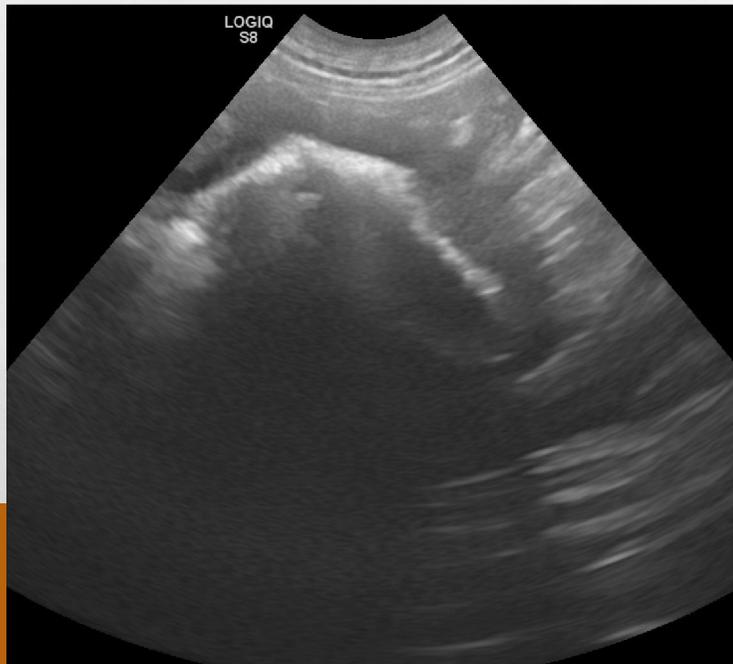


CORPI ESTRANEI ILEO MECCANICO

In fase iniziale dilatazione focale e peristalsi aumentata prossimalmente all'ostruzione

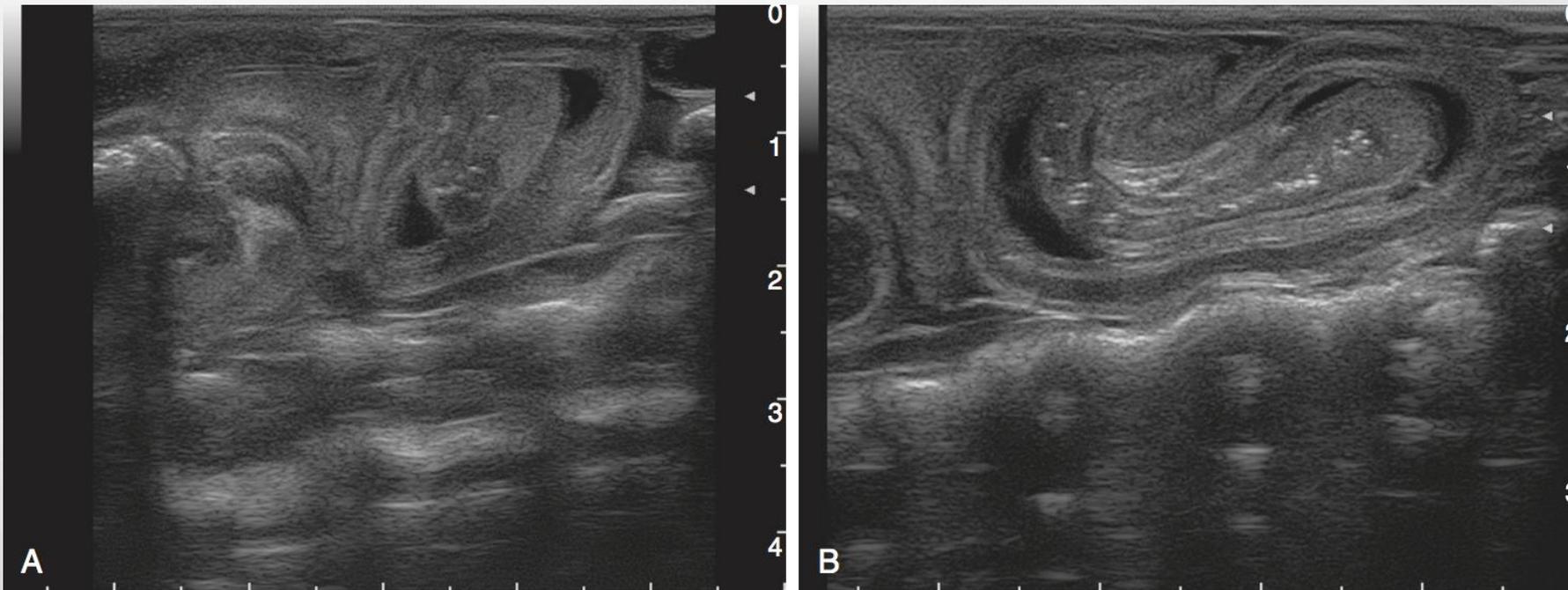
In fase cronica atonia e dilatazione generalizzata (ileo funzionale)

Visualizzazione diretta del CE spesso possibile: struttura a superficie altamente riflettente, che produce un cono d'ombra posteriore pulito



INTUSSUSCEZIONE

Aspetto ad “anelli concentrici”

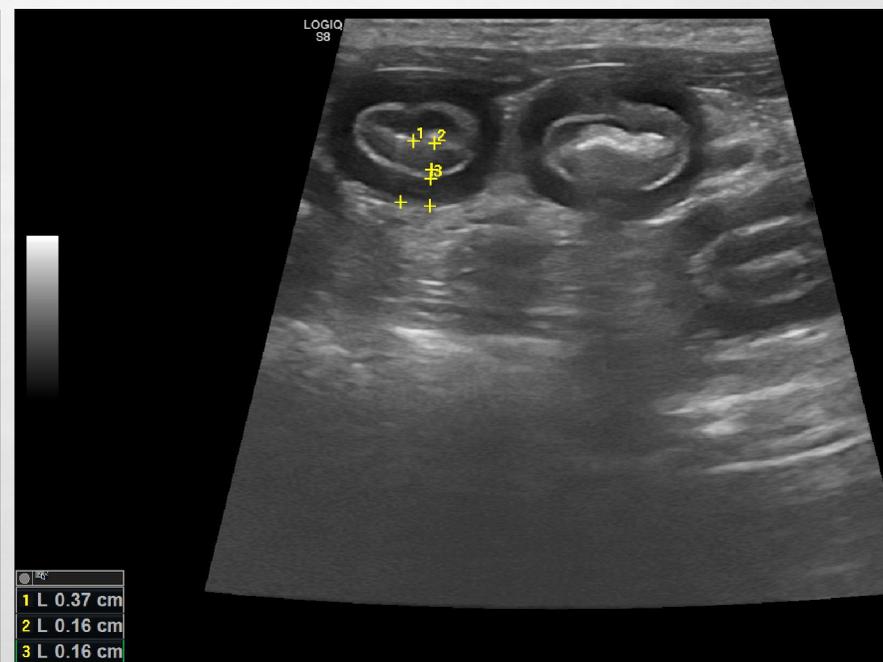
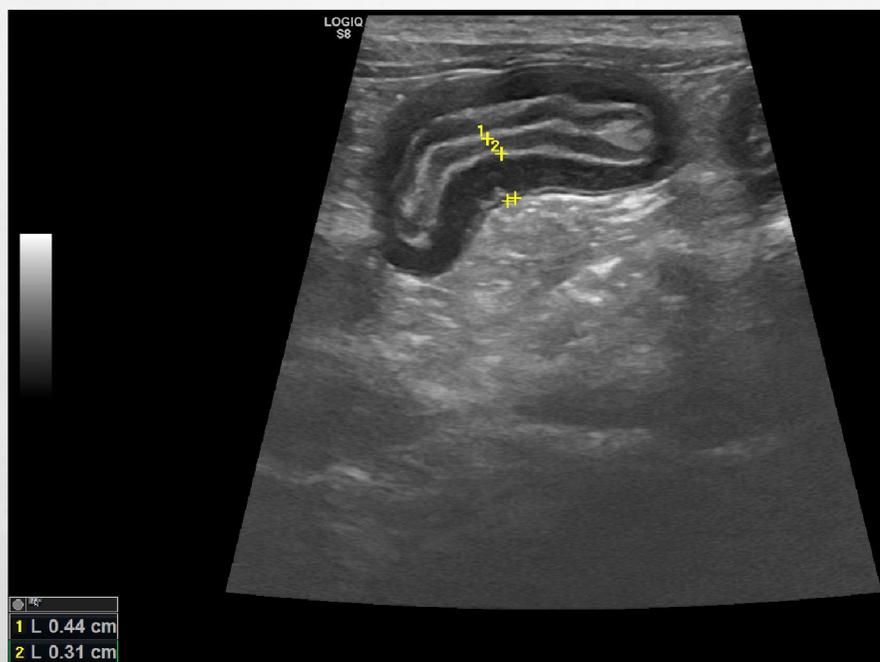


Nyland & Mattoon, 2015

ENTEROPATIA INFIAMMATORIA

Ispessimento parietale diffuso

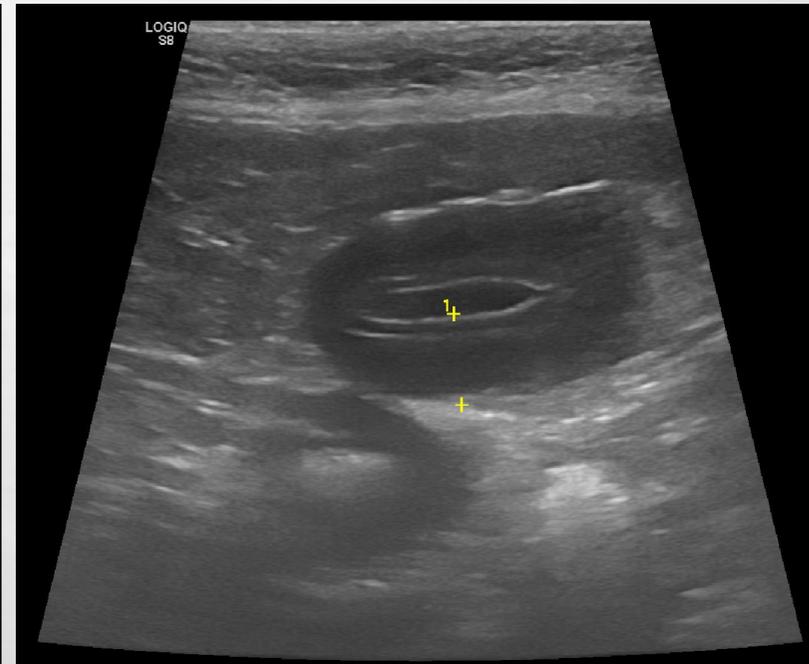
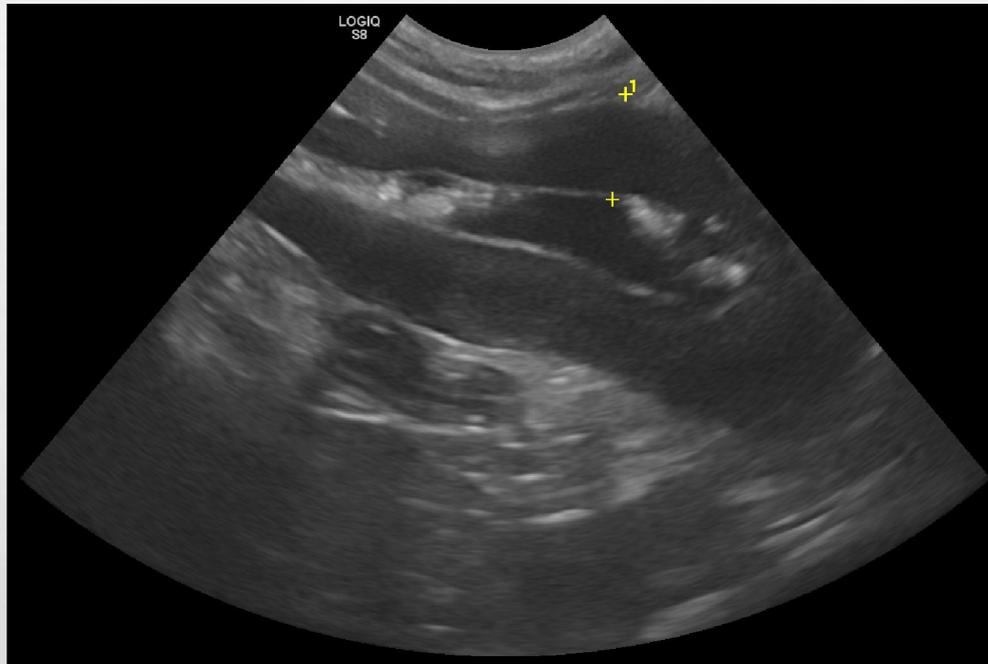
Stratigrafia mantenuta



NEOPLASIA

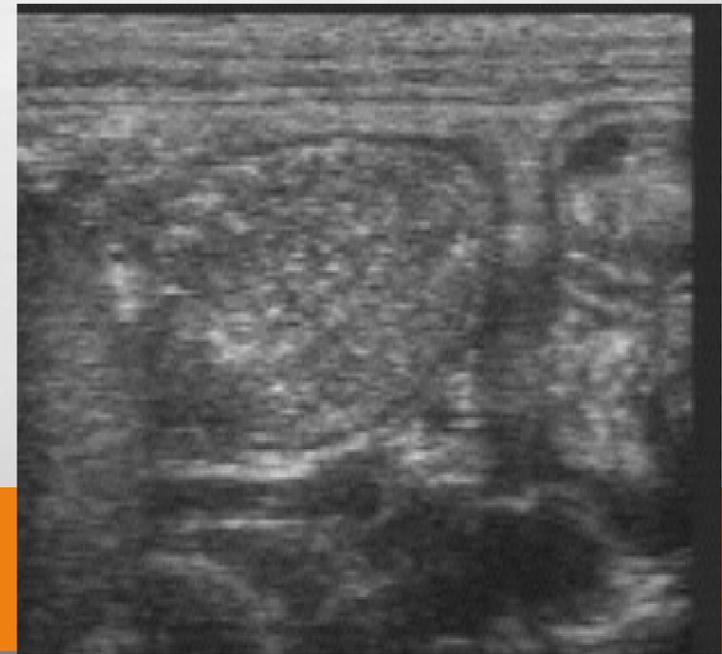
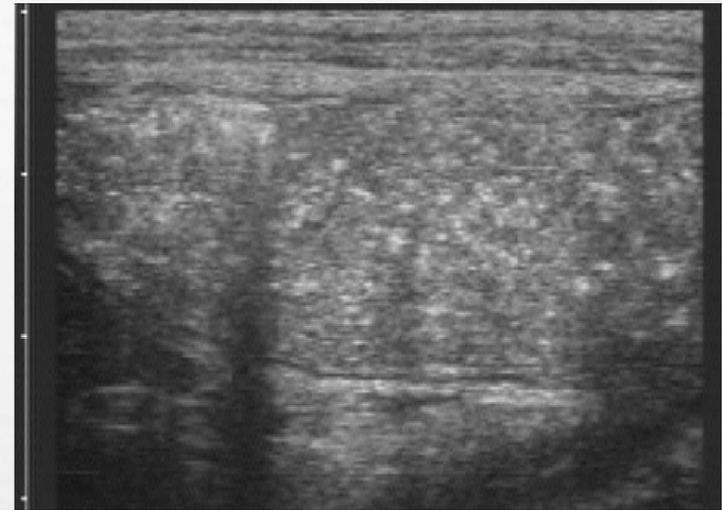
Ispessimento parietale focale o massa

Stratigrafia alterata



COLON

Parete sottile 1-2 mm , assenza di stratificazione
Presenza di gas e feci





The end

