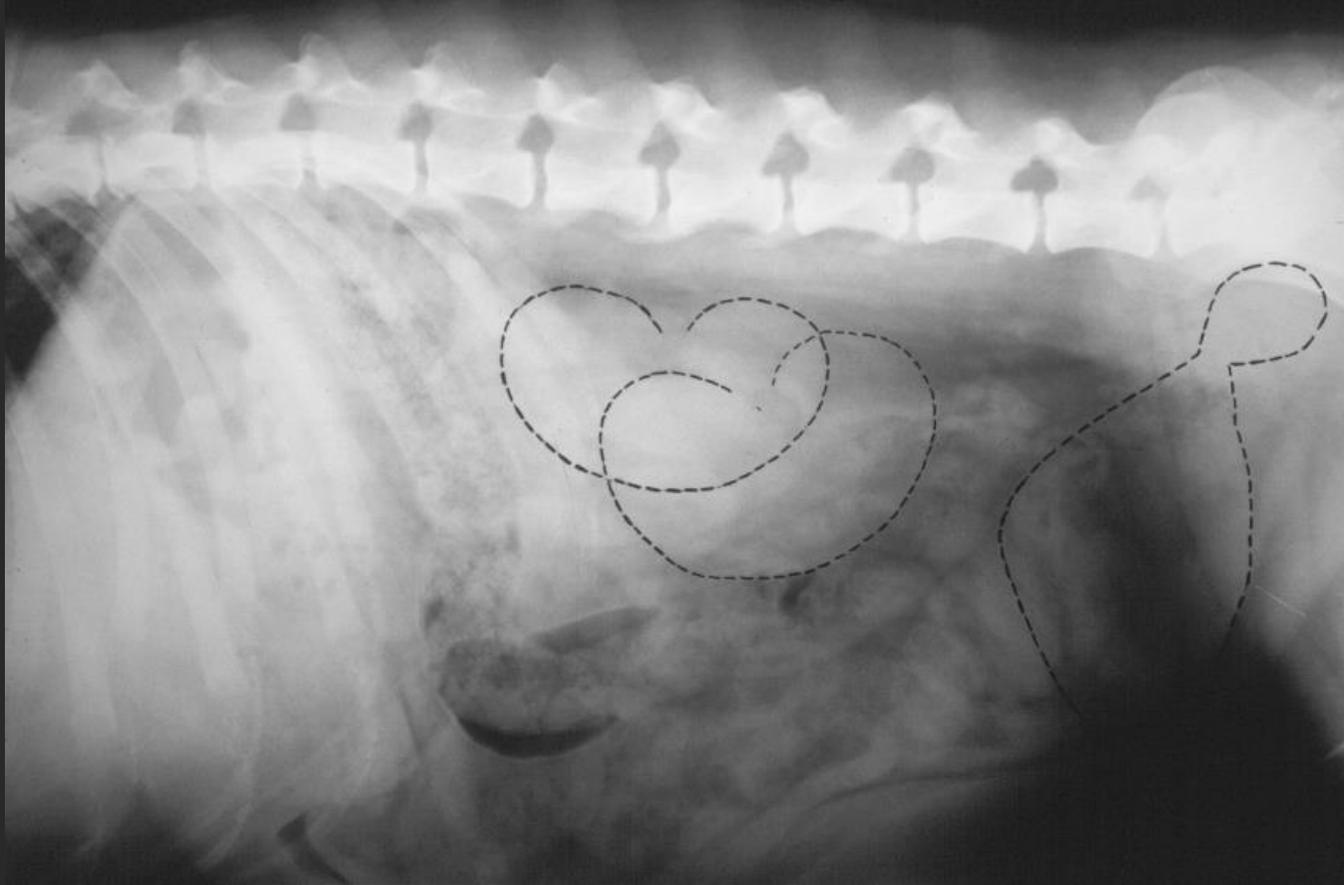


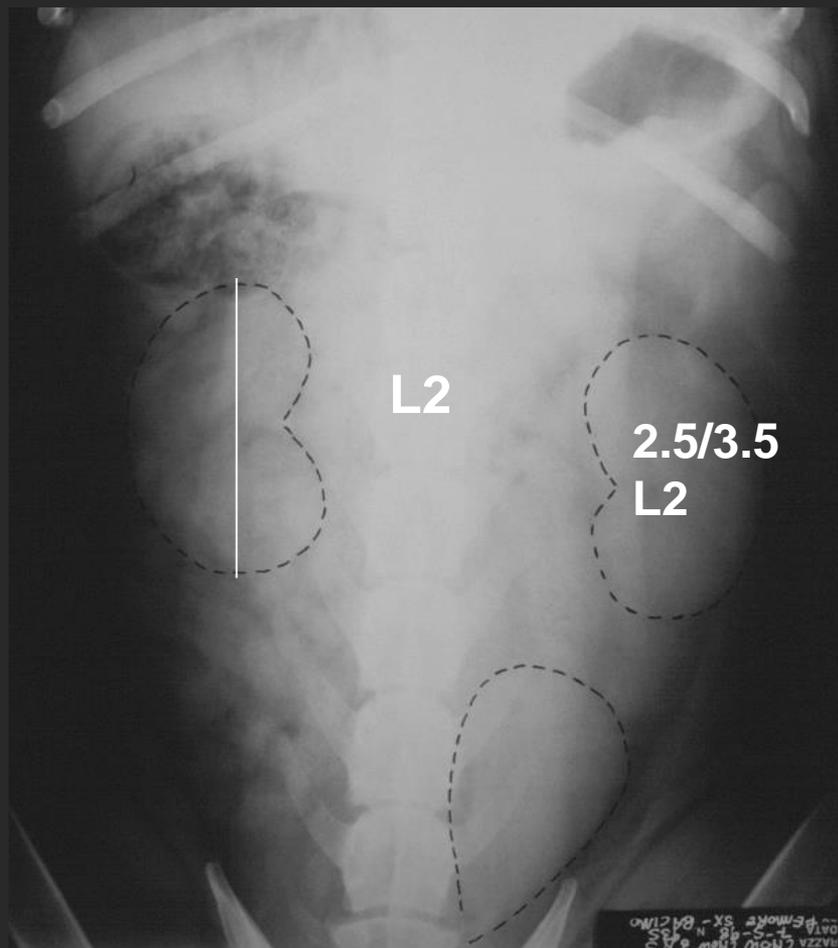
Radiologia dell'apparato urinario

Massimo Vignoli

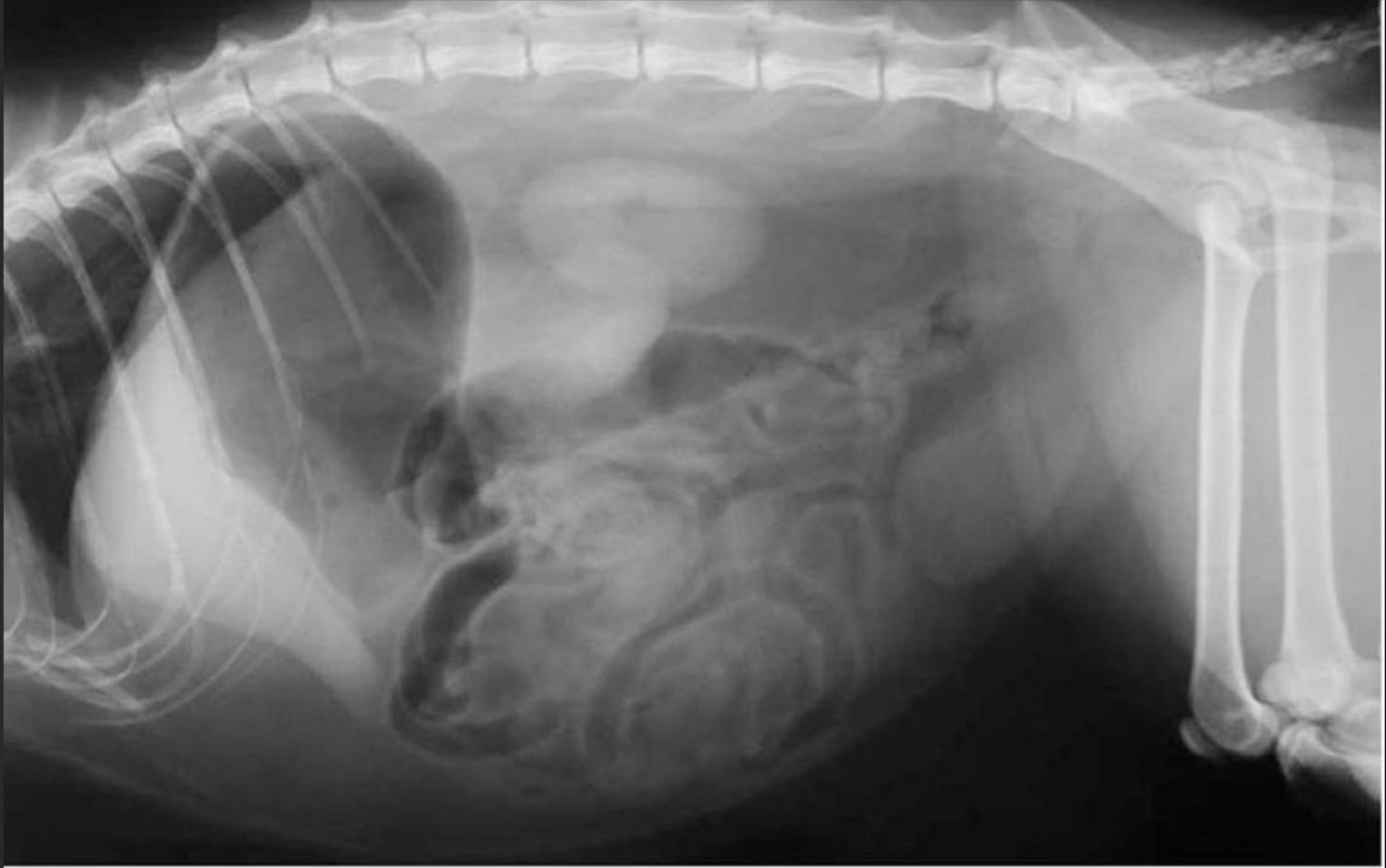
Reni



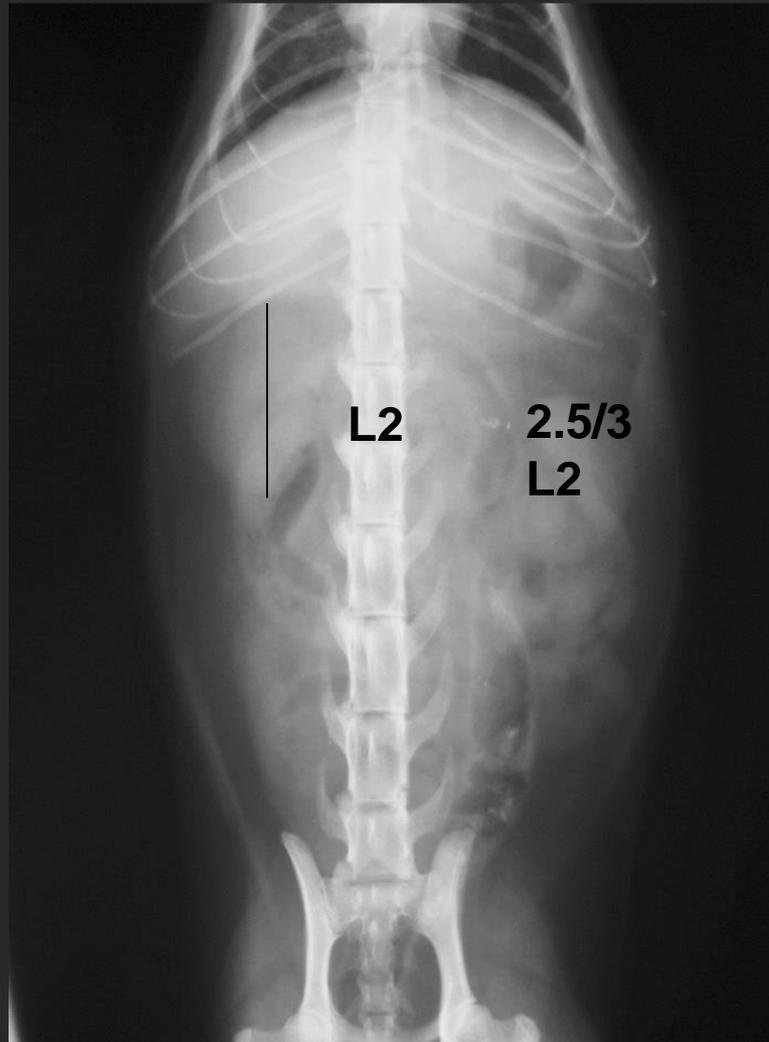
Cane



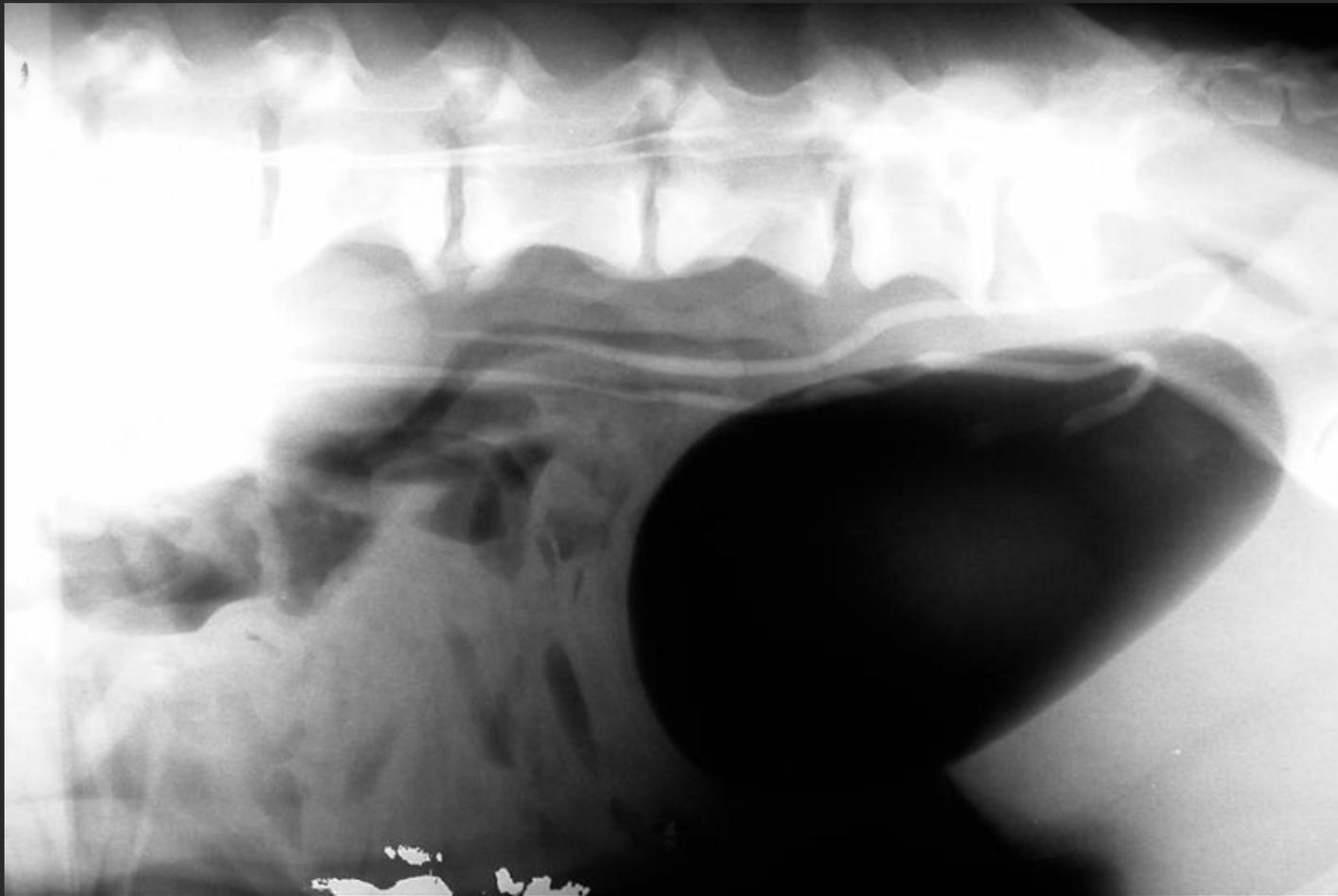
Gatto



Gatto



Ureteri



Rene

- Obiettivi dell'esame radiografico
- Valutazione strutturale
- Correlazione con i segni clinici
- Identificazione di lesioni congenite e/o ereditarie

Urografia escretoria

- Forma
- Posizione
- Dimensione
- Numero
- Valutazione qualitativa della funzionalità renale

Urografia escretoria

- Ematuria
- Piuria
- Disuria
- Sospetto di calcoli renali
- Ureteri ectopici

Controindicazioni

- Insufficienza renale
- Disidratazione necrosi tubulare acuta
- Ipotensione
- insufficienza renale acuta

Mezzi di contrasto

- Iodati idrosolubili ionici
- Iodati idrosolubili non ionici
- Dose 800 mg/kg/I

Effetti collaterali

- Nausea
- Vomito
- Reazioni anafilattoidi

M.d.c. non ionici

- Ioexolo
- Iopamidolo
- Metrizamide
- Bassa frequenza di effetti collaterali
- Alto costo

Preparazione del paziente

- Digiuno (24 ore)
- Clisma
- Esami di laboratorio
- Sedazione /anestesia
- Creatinina
- Azotemia
- Esame

Tecnica

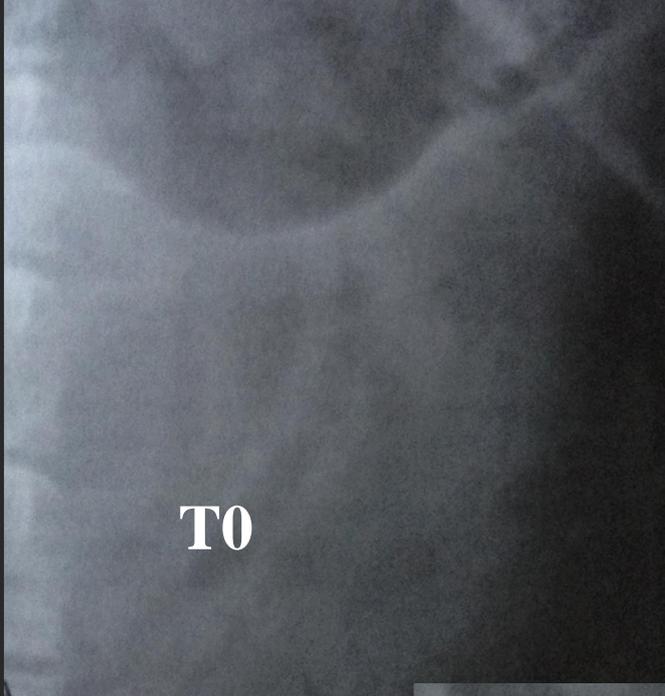
- Digiuno 12-24 ore
- Enema
- Bolo e.v.
- Fase nefrografica dopo 7-10 secondi
- Compressione addominale(?)
- Fase pielografica dopo 3-5- minuti

Quando eseguire le radiografie???

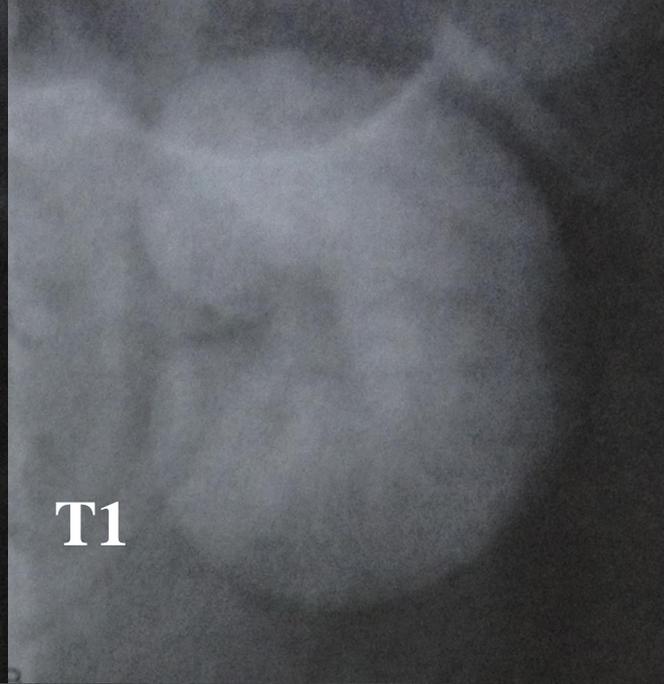
- RX dirette dell'addome (2 proiezioni)
- RX a 5-15 secondi (VD)
- RX a 5-20-40 minuti (VD-Lat-Oblique)
- Se fase nefrografica e pielografica incomplete:
- RX a 30-60 minuti

3 fasi

- Arteriografica (difficile da riprendere, necessaria fluoroscopia digitale)
- Nefrografica
- Pielografica

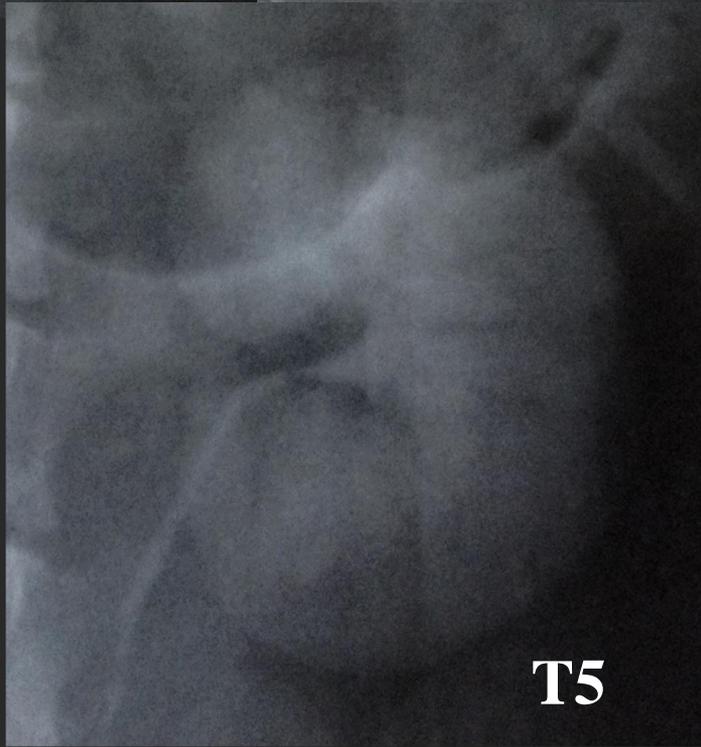


T0



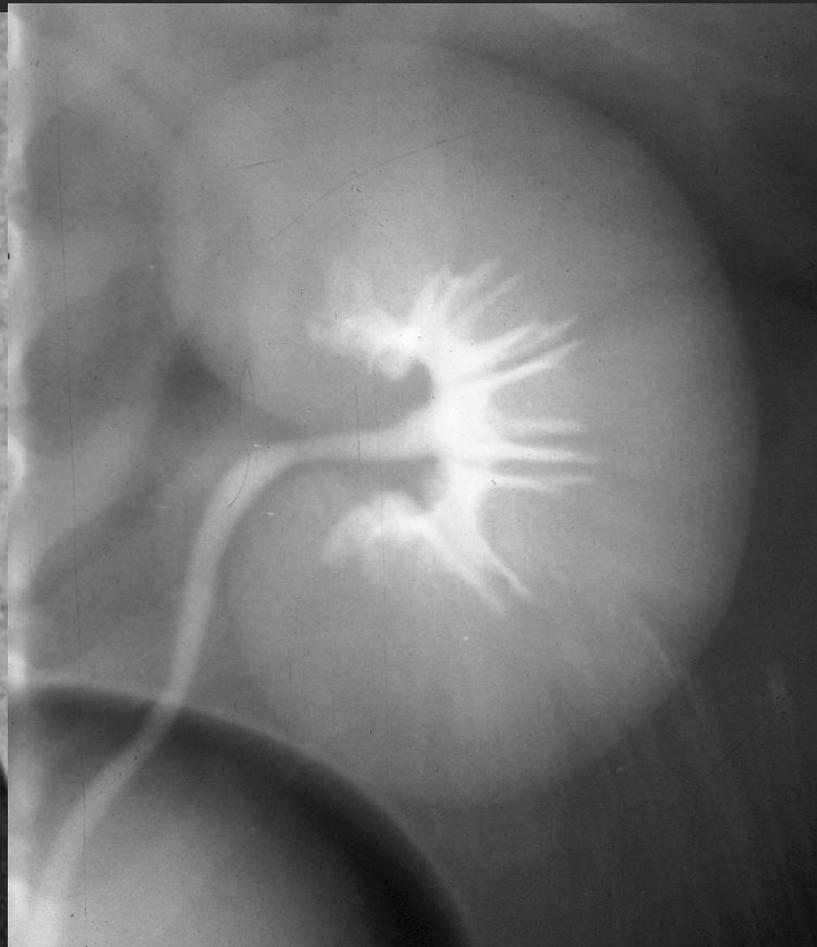
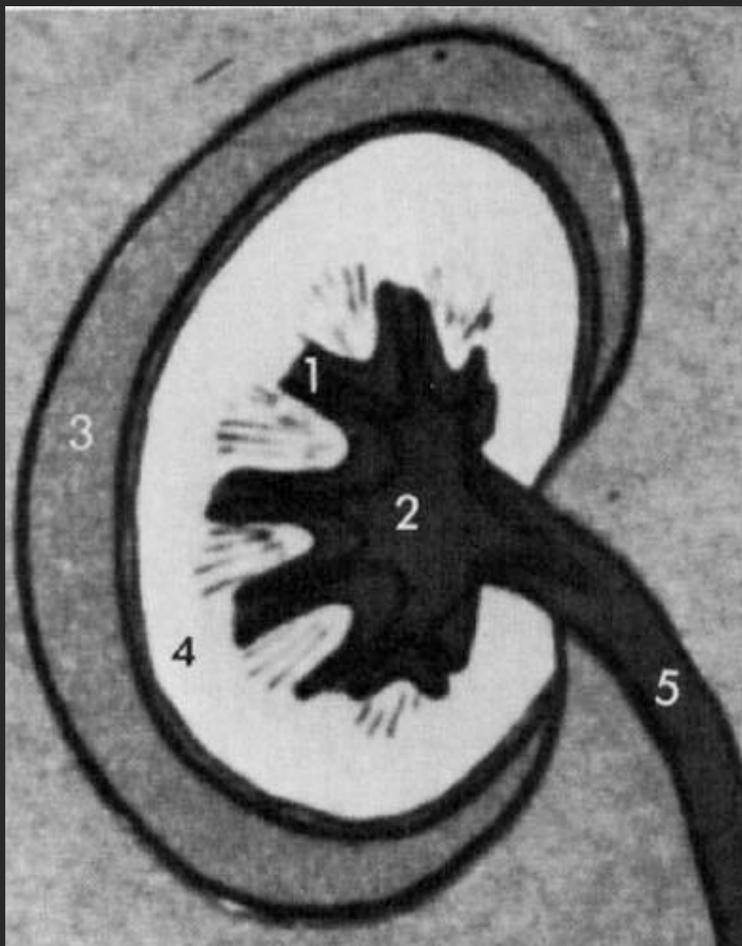
T1

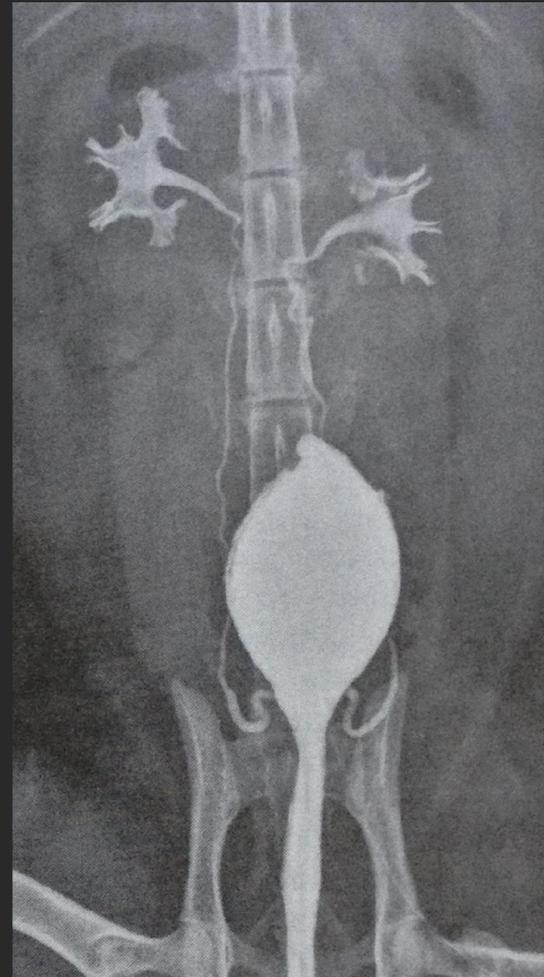
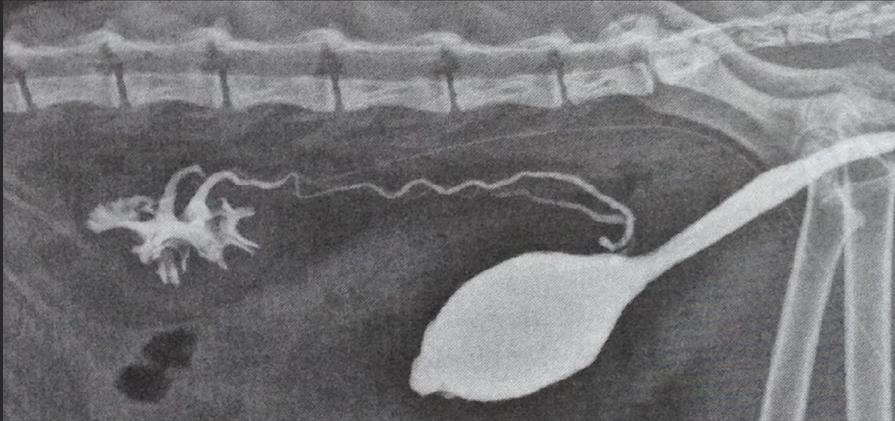
Fase
nefrografica



T5

Fase pielografica





Seiler G., In Thrall, 2013

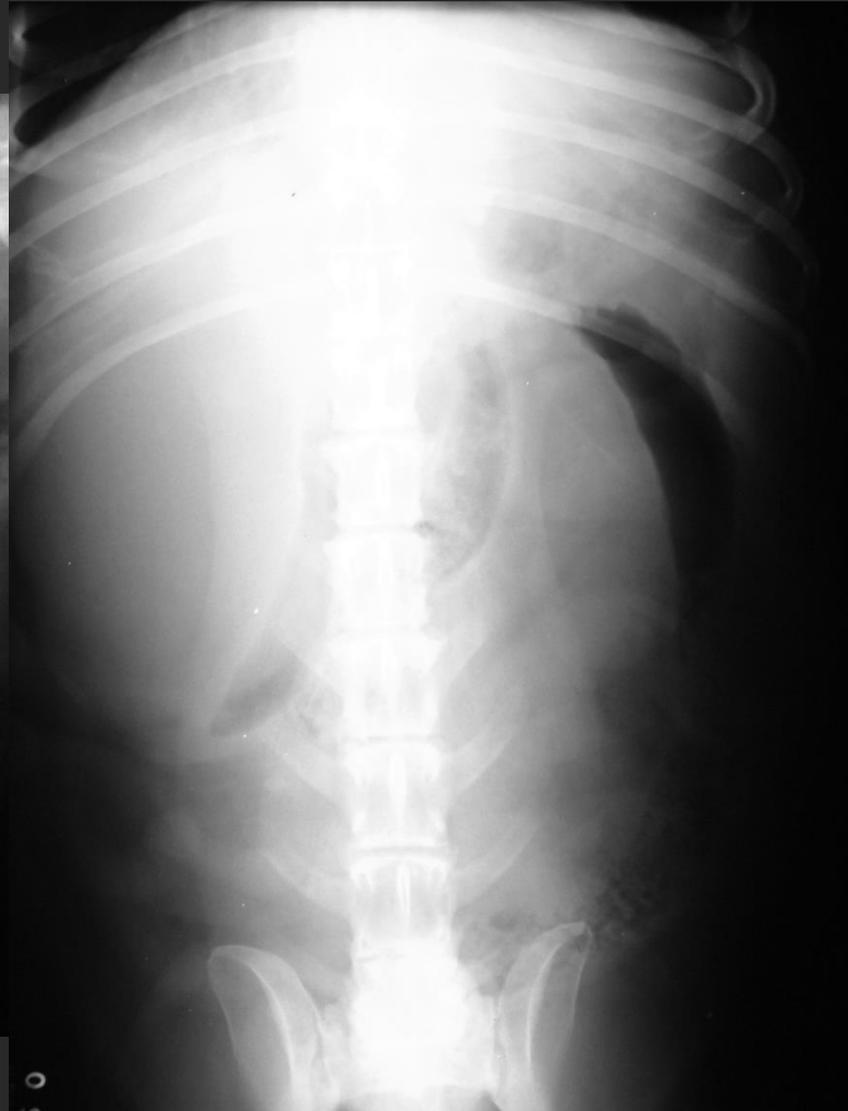
Nefromegalia

Bordi lisci o irregolari?

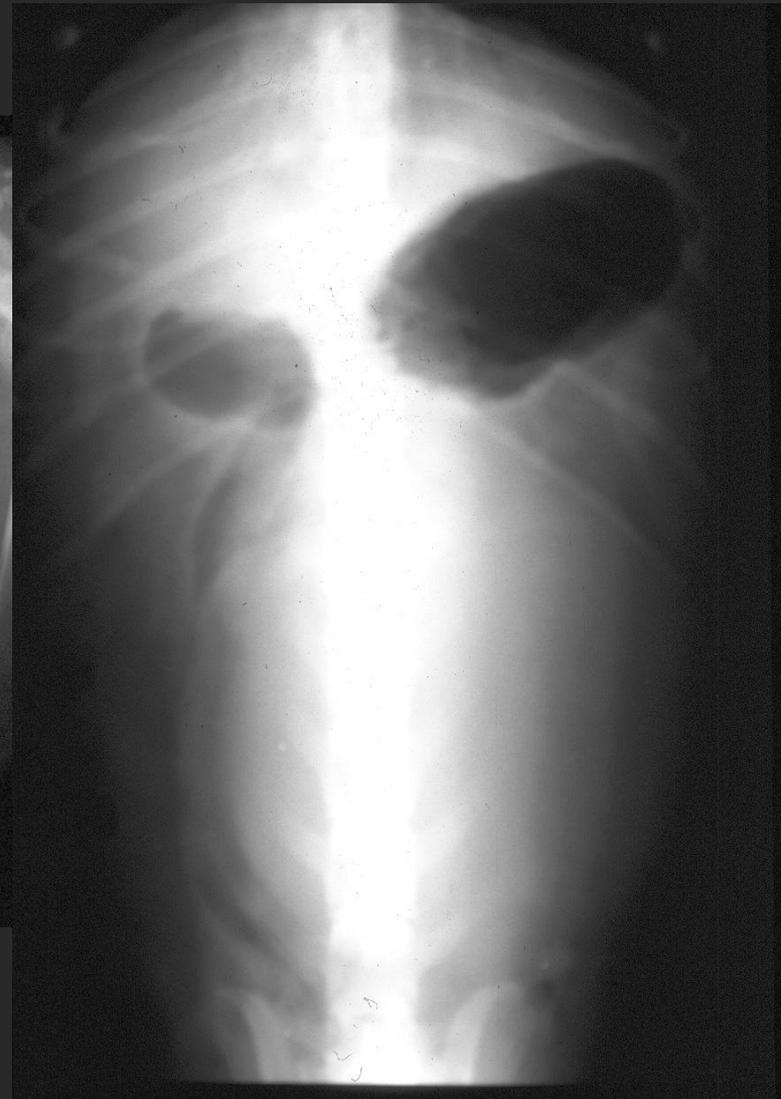
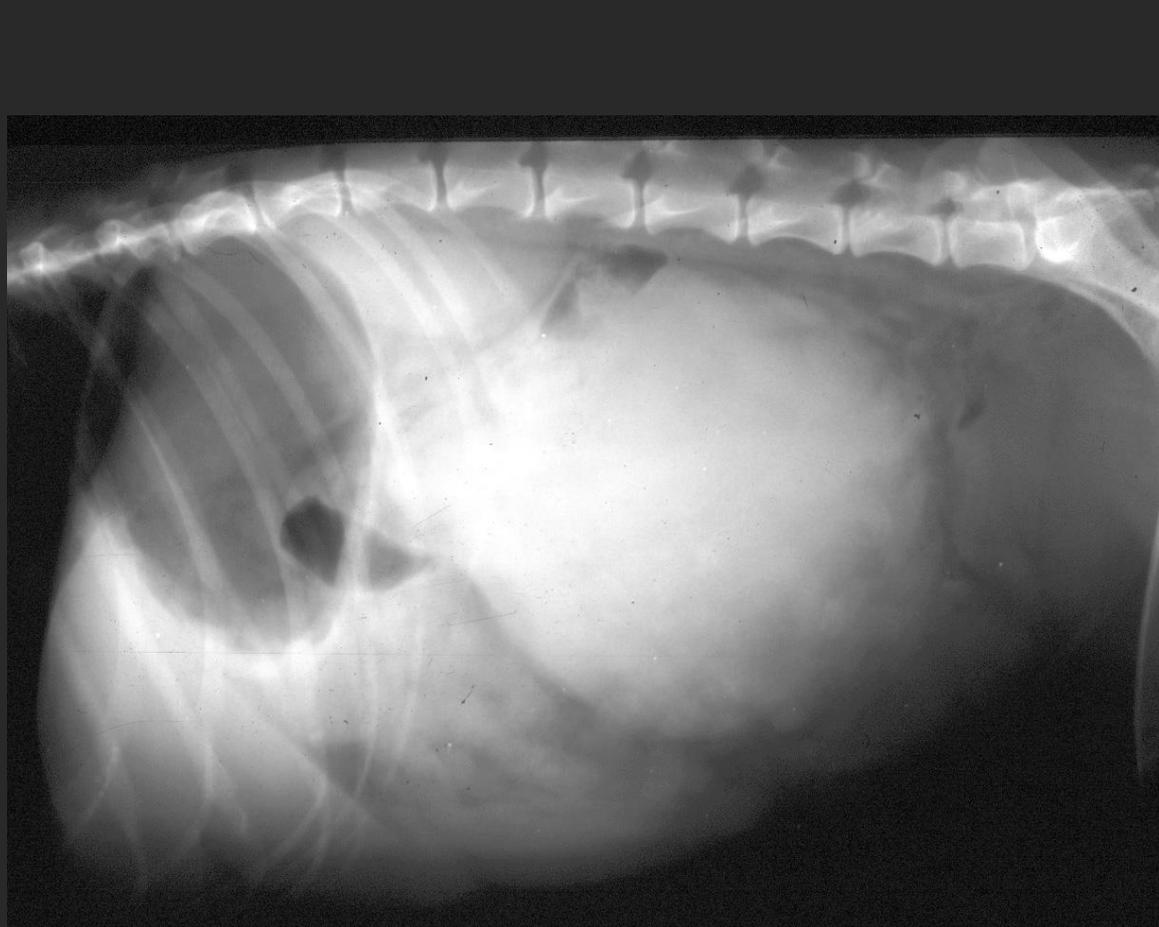
Mono o bilaterale?



Massa rene destro: spostamento ventrale e mediale colon ascendente e trasverso, del duodeno discendente



Massa rene sinistro: spostamento caudale della milza e ventro-mediale del colon trasverso e discendente, mediale del fondo gastrico



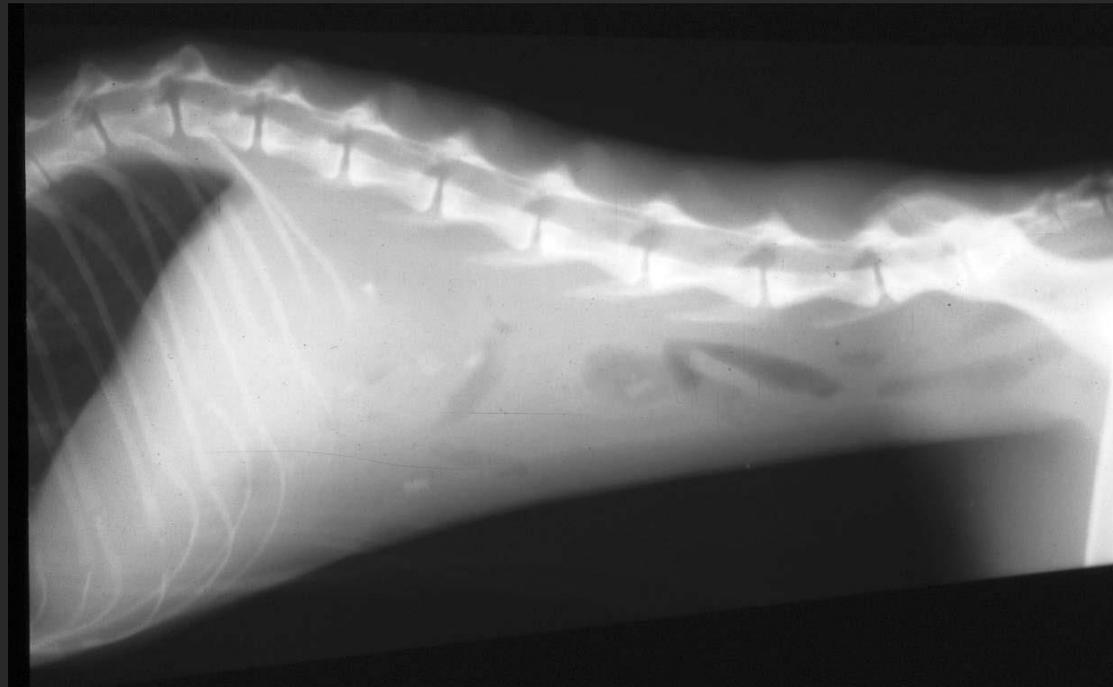
Reni piccoli

Potrebbero non vedersi:

Troppo piccoli

Cachessia da patologia renale
cronica

Forma



Reni piccoli

Bordi lisci:

Displasia congenita

Ipoplasia

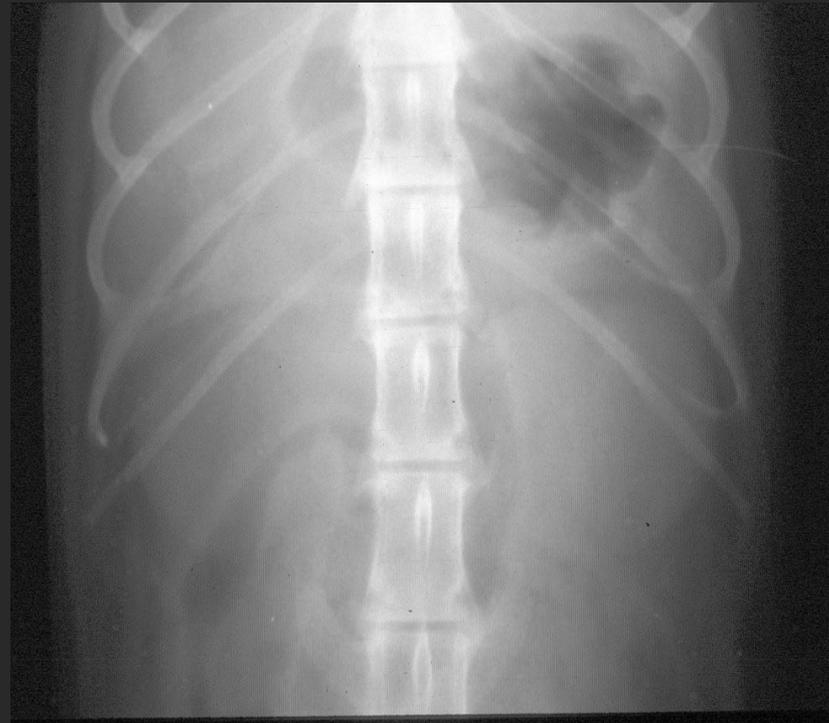
Bordi irregolari:

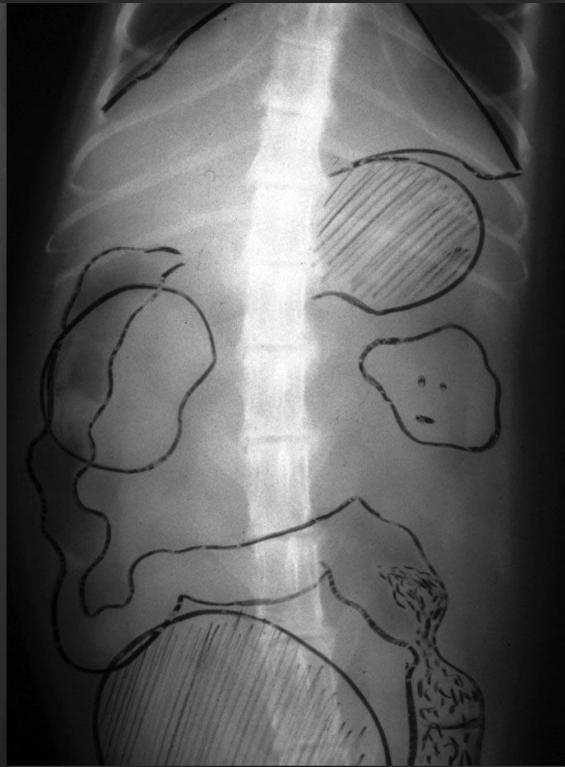
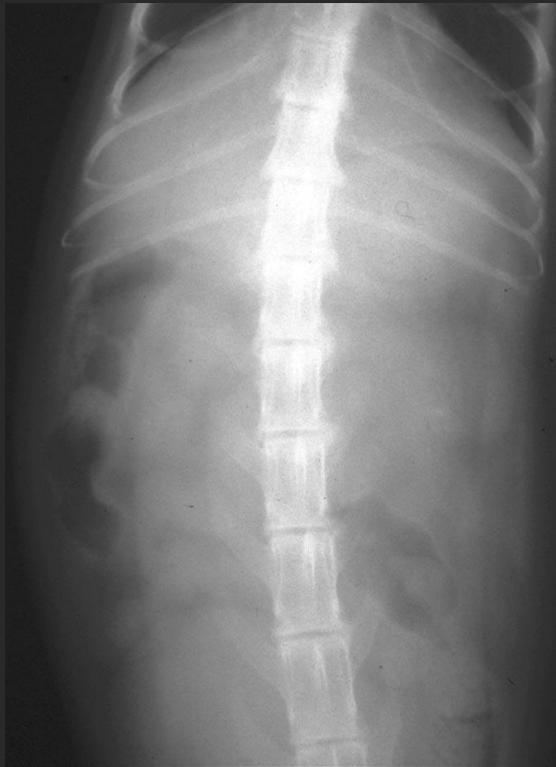
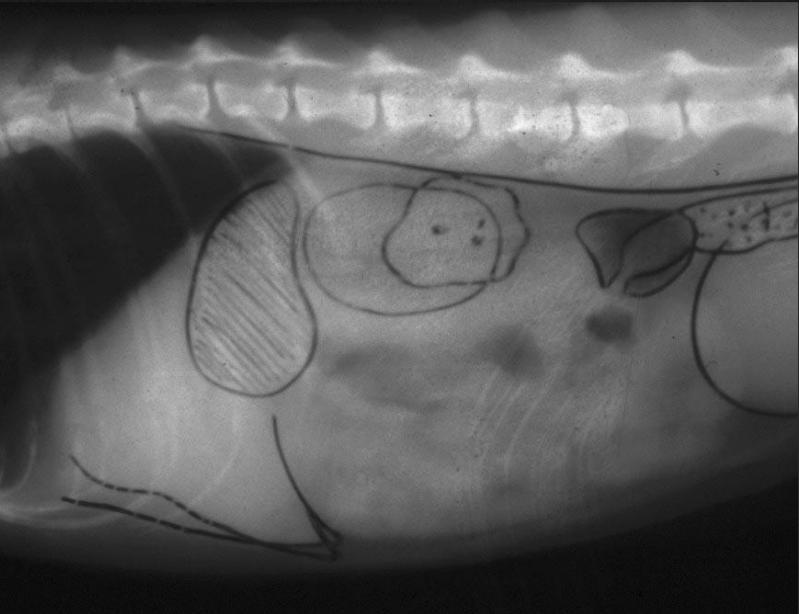
Patologia cronica

Nefrite interstiziale

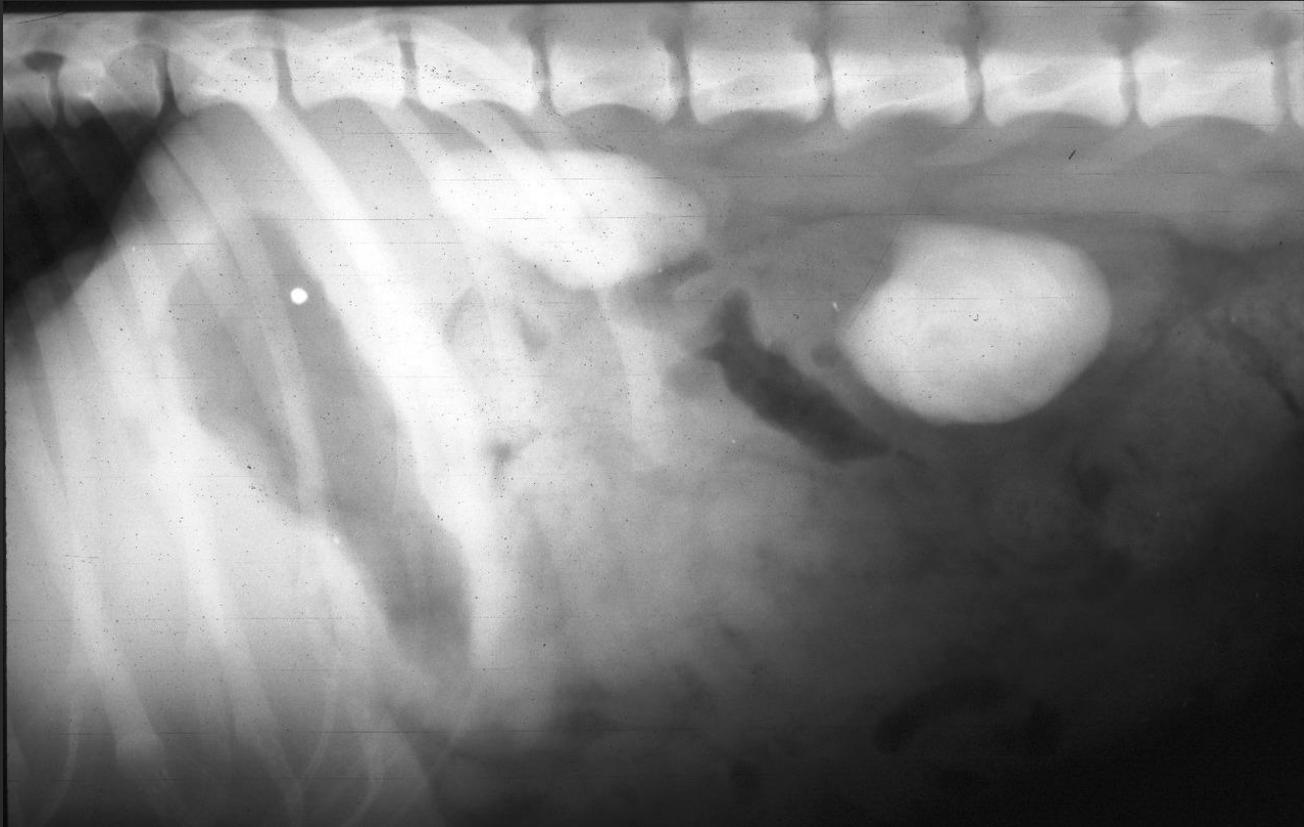
Glomerulonefrite

Pielonefrite





Urolitiasi



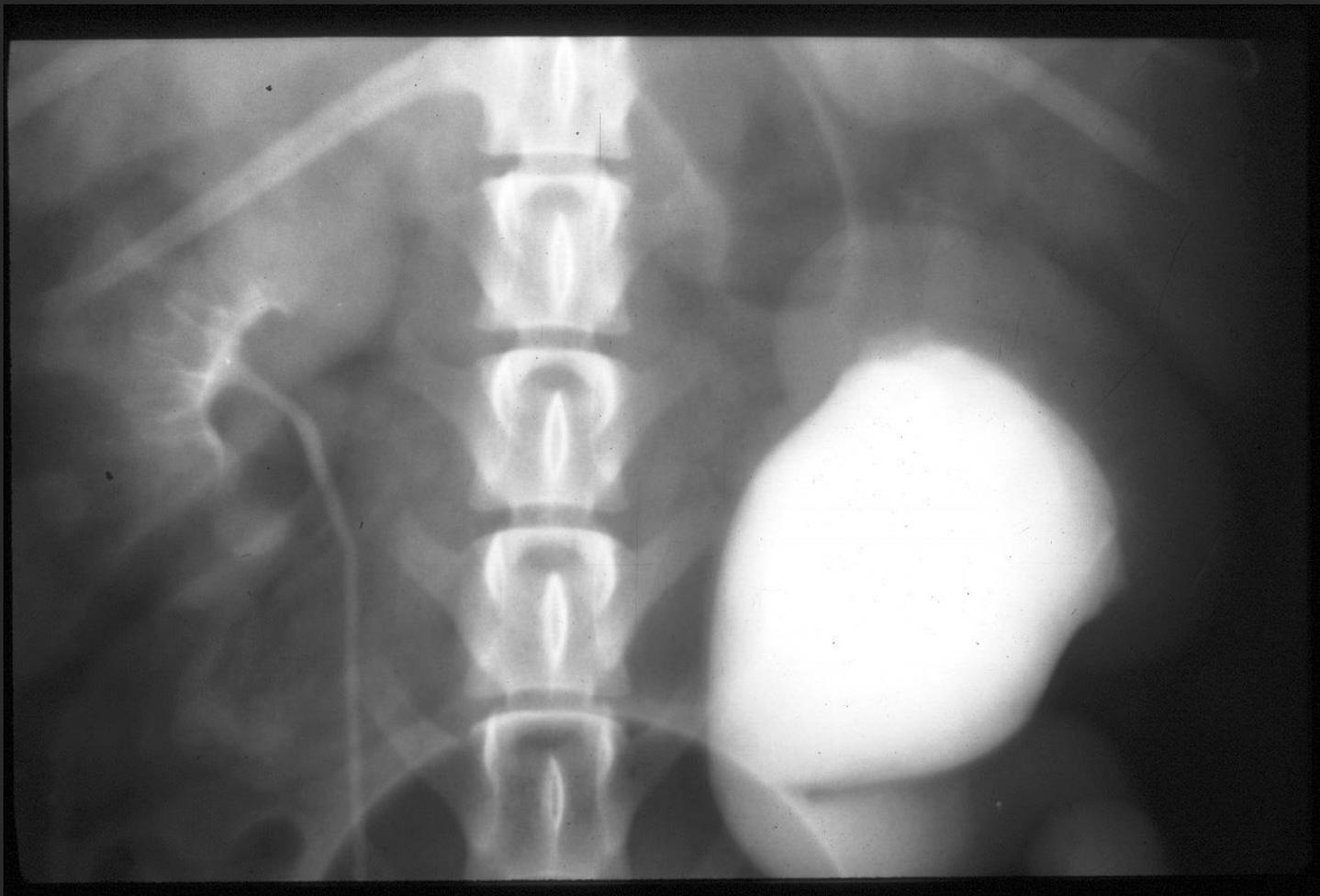
Urolitiasi



Idronefrosi congenita o acquisita

- *Cause:*
- Posizione anomala dei reni
- Ureterocele
- Uretere ectopico
- Calcoli ureterali
- Neoplasie

Idronefrosi



Idronefrosi





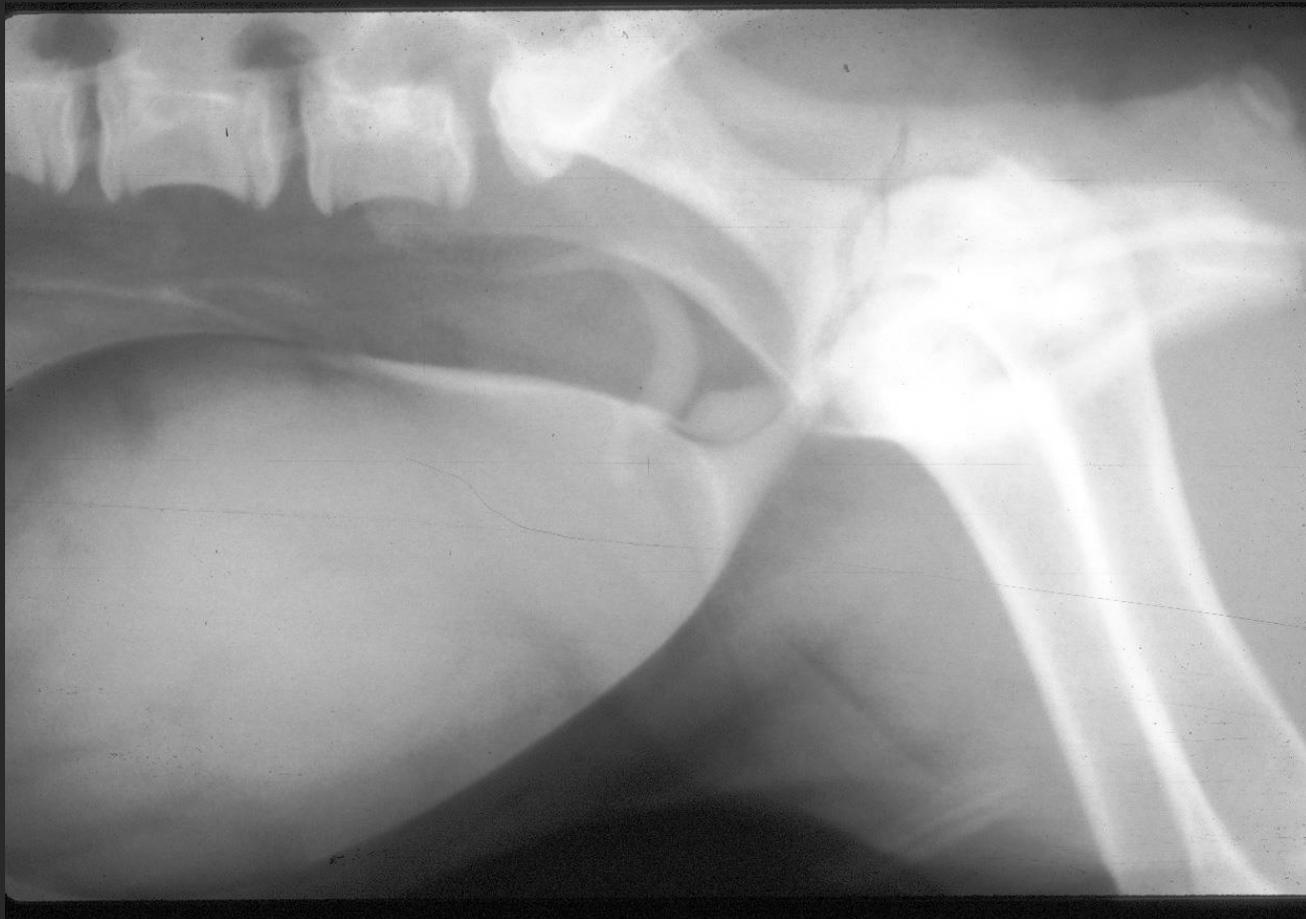


Uretere ectopico

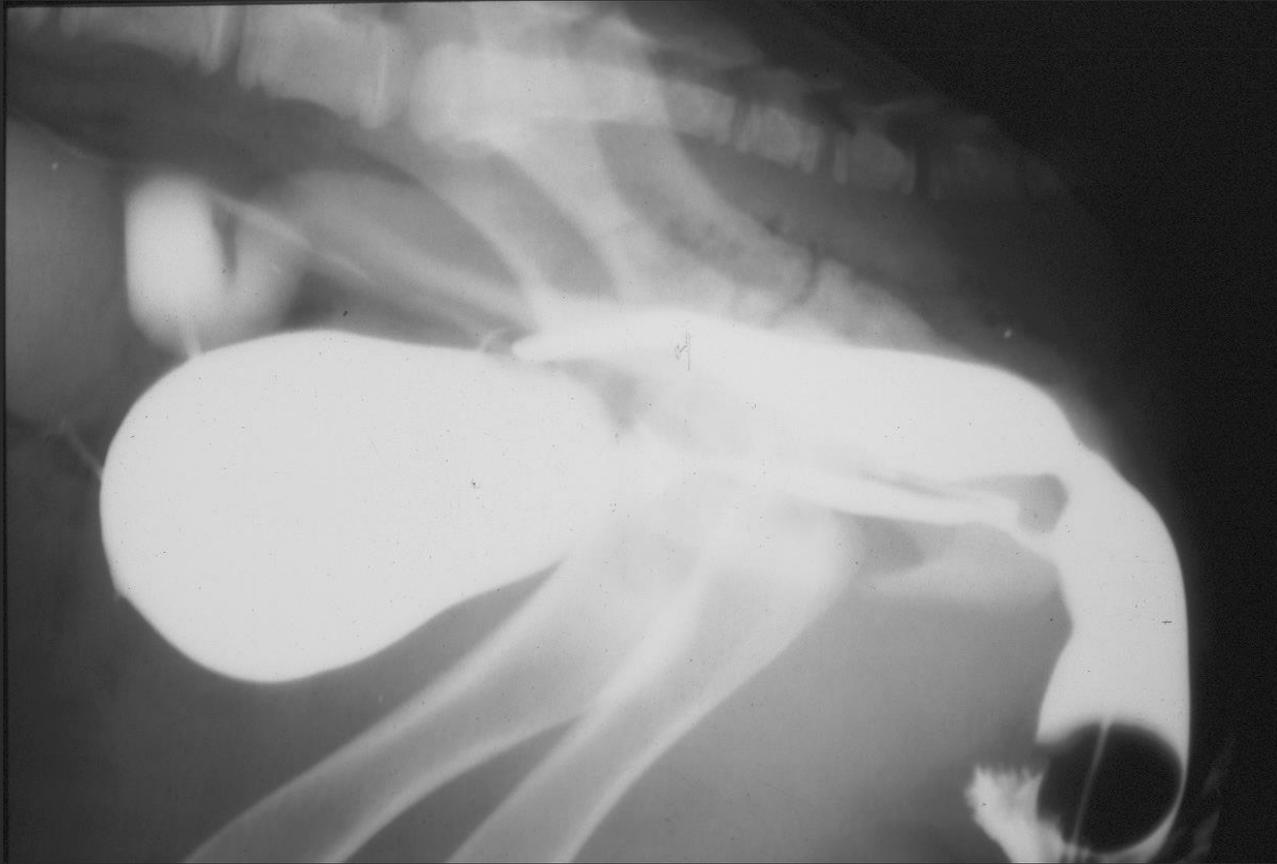
- Uso combinato di urografia retrograda
- catetere di foley pediatrico
- urografia
- cistografia con doppio m.d.c.
- vaginouretrografia



Uretere ectopico



Vaginografia per uretere ectopico



BrightSpeed

Ex: 21

Immagine elaborate

Se: 1002/14 Rendering: No cut

Im: 4/4

FOV: 26,0 cm

STND

ASSOCIAZIONE VETERINARIA PETCARE

PSL

PAPPAS NIKO

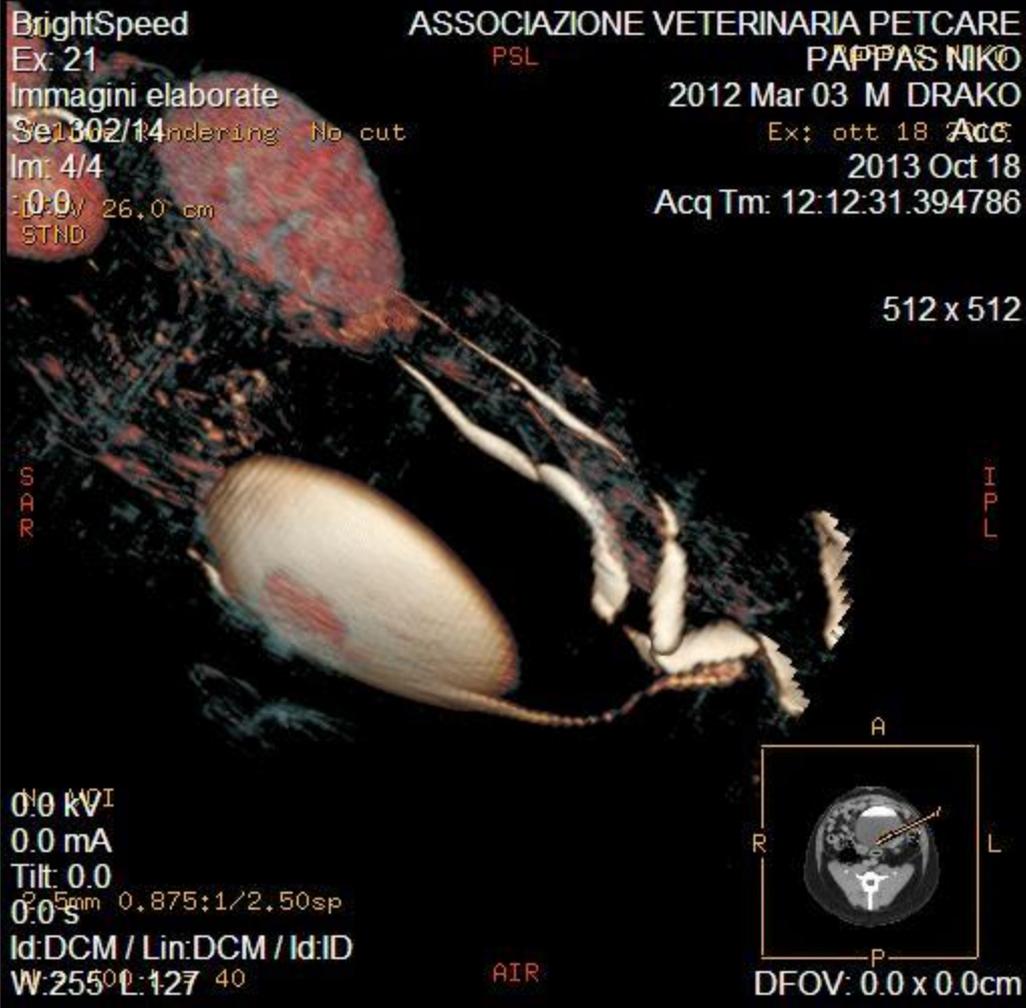
2012 Mar 03 M DRAKO

Ex: ott 18 Acc:

2013 Oct 18

Acq Tm: 12:12:31.394786

512 x 512



010 kV^I

0.0 mA

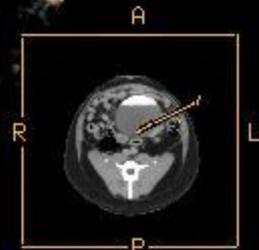
Tilt: 0.0

0.0 s 2.5mm 0.875:1/2.50sp

Id:DCM / Lin:DCM / Id:ID

W:255 L:127 40

AIR



DFOV: 0.0 x 0.0cm