Surgical Treatment of special Tumours

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Hepatocellular Tumours

Hepatocellular Carcinoma, hepatocellular adenoma, and hepatoblastoma

- HCC is the most common primary liver tumor in dogs, with 50% of cases
- hepatocellular adenoma is usually an incidental finding and rarely causes clinical signs

- hepatocellular adenoma is the most common in cats,
  HCC the 2nd most common

Clinical Symptoms

in 50% of cats and 75% of dogs

inappetence, weight loss, lethargy, vomiting, polydipsia-polyuria, ascites

- seizures caused by hepatic encephalopathy are uncommon
- icterus is more commonly seen in dogs with extrahepatic bile duct carcinomas and diffuse neuroendocrine tumors

- cranial abdominal mass is palpable in up to 75% of cats and dogs with liver tumors

Laboratory changes

Usually non-specific

Hematology

- leukocytosis, anemia, and thrombocytosis
- leukocytosis is probably caused by inflammation and necrosis associated with large liver masses
- prolonged coagulation times and clotting factor abnormalities are rarely clinically relevant

↳ BMBT

Serum Biochemistry

liver enzymes are commonly elevated in dogs with hepatobiliary tumours

↳this may provide an indication of the type of tumour, and differentiate primary and metastatic liver tumors

•ALP and ALT are commonly increased in dogs with primary hepatic tumours
•AST and bilirubin are more consistently elevated in dogs with metastatic liver tumors

Unspecific changes
hypoglycemia, hypoalbuminemia, hyperglobulinemia, and increased pre- and post-prandial bile acids

•azotemia might be the abnormality in cats
ALT, AST and total bilirubin are also common and are significantly higher in cats with malignant tumors


B GEN-M V ---
T 98mm XV 9
PRC 12/7/2 PER 6
POST 4 K 4
3 9
ABDO GR. CA123
LEBER
0
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B PEN-N V 59%
T 91mm XV 9
PRC 17/7/2 PER 6
POST 4 K 3
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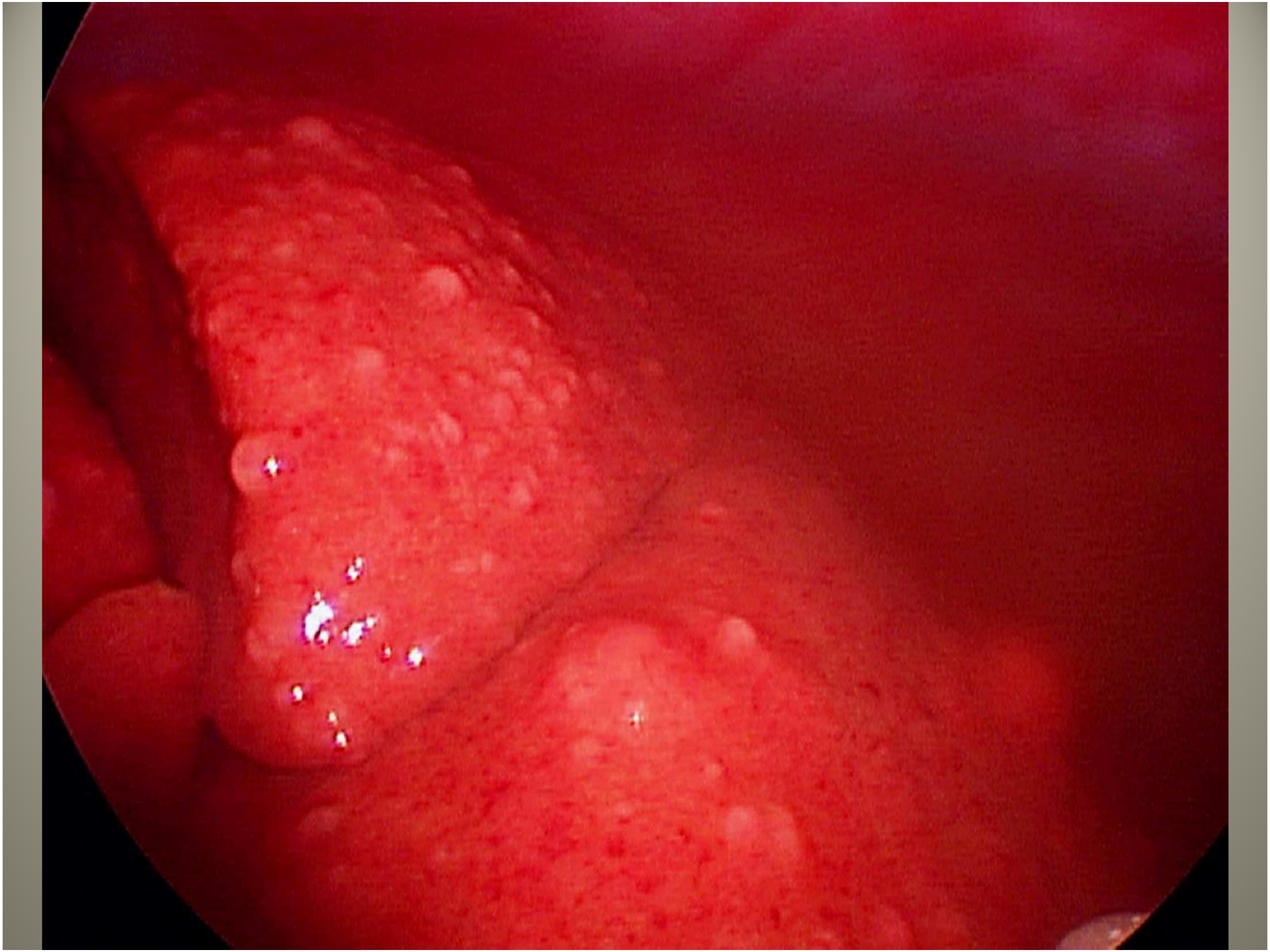
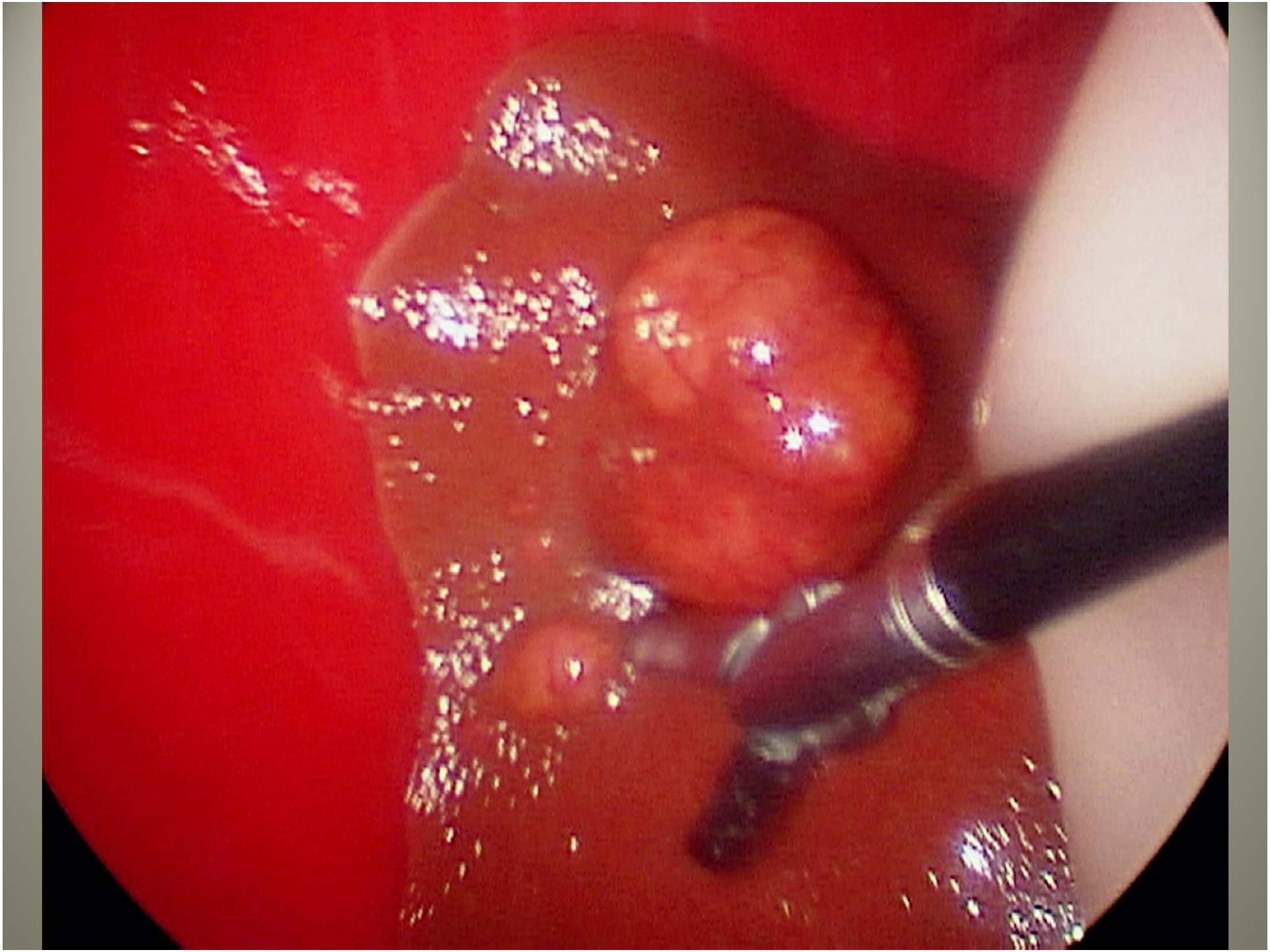
MICROCON CA123
PV
CVC

Abdominal CT scan

Laparoscopy





Hepatocellular Carcinoma

More commen in Miniature Schnauzers and male dogs

53%-83% of HCC are massive
16%-25% are nodular
up to 19% are diffuse

left liver lobes are involved in > 67% of dogs with massive HCC

metastatic rate varies from 0%-37% for dogs with massive HCC and 93%-100% with nodular and diffuse HCC

•metastasis to regional lymph nodes, peritoneum, and lungs (heart, kidneys, adrenal gland, pancreas, intestines, spleen, and urinary bladder)

Treatment

Liver Lobectomy for massive HCC

complications: hemorrhage
vascular compromise to adjacent liver lobes, hypoglycemia, reduced hepatic function

no effective treatment for nodular and diffuse HCC
HCC is considered chemoresistant

embolization and chemoembolization have been reported with moderate success in the palliation of 4 dogs with HCC

Prognosis

good for dogs with massive HCC
MST > 1,460 days, 0%-6% local tumor recurrence rate, and 0%-37% distant metastatic rate

poor for dogs with nodular and diffuse HCC is poor

Bile duct Adenoma and Carcinoma

accounting for > 50% of all feline hepatobiliary tumors in cats
single and multiple lesions

aggressive biologic behavior
metastasis in 67%-80% of cats, up to 88% in dogs

surgical resection is recommended for cats and dogs with massive bile duct carcinoma
MST < 6 months due to local tumor recurrence and metastatic disease

Myelolipoma

benign hepatobiliary tumour in cats
with excellent survival times after resection

Sarcomas

primary hepatic sarcomas (leiomyosarcoma, HSA, and FSA) are rare

only 4%-6% HSA are of primary hepatic origin in dogs
liver is a common site for metastatic HSA

metastasis to the spleen and lungs in 86%-100% cases
liver lobectomy can be attempted for solitary and massive sarcomas
prognosis is poor as metastatic disease is often present at the time of surgery
chemotherapy response rates are likely to be poor

Transitional cell carcinoma of the dog

Clinical Presentation

hematuria, pollakiuria, and dysuria
urinary obstruction or incontinence

sex predisposition in dogs: female

TCC should occur in the
•proximal 3rd of the urethra in females
•in the entire urethra in males

first metastasis to the regional lymph node

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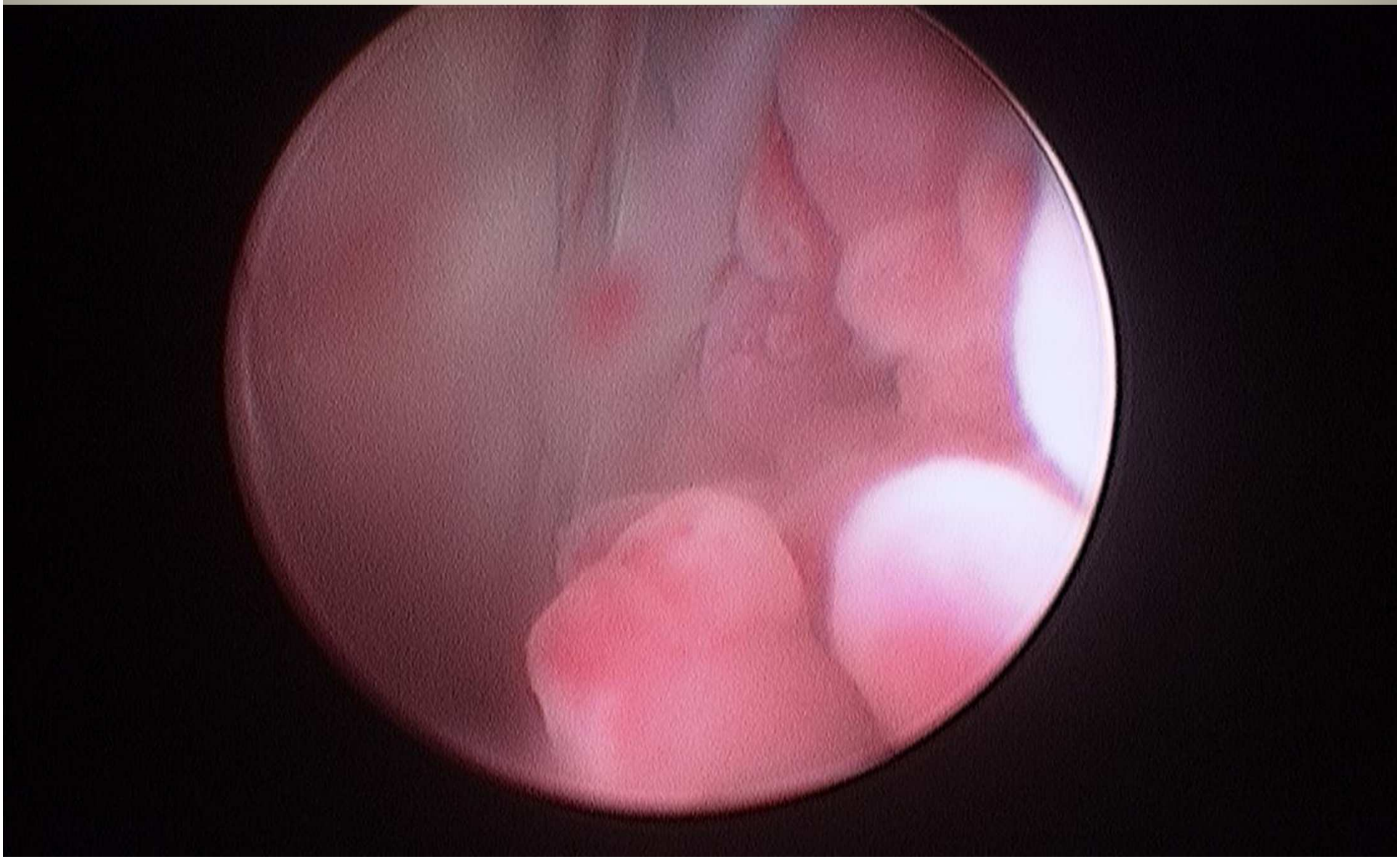
Cystoscopy



Chemotherapy

- MST 181 days with piroxicam alone
- MST 220 days with cisplatin alone

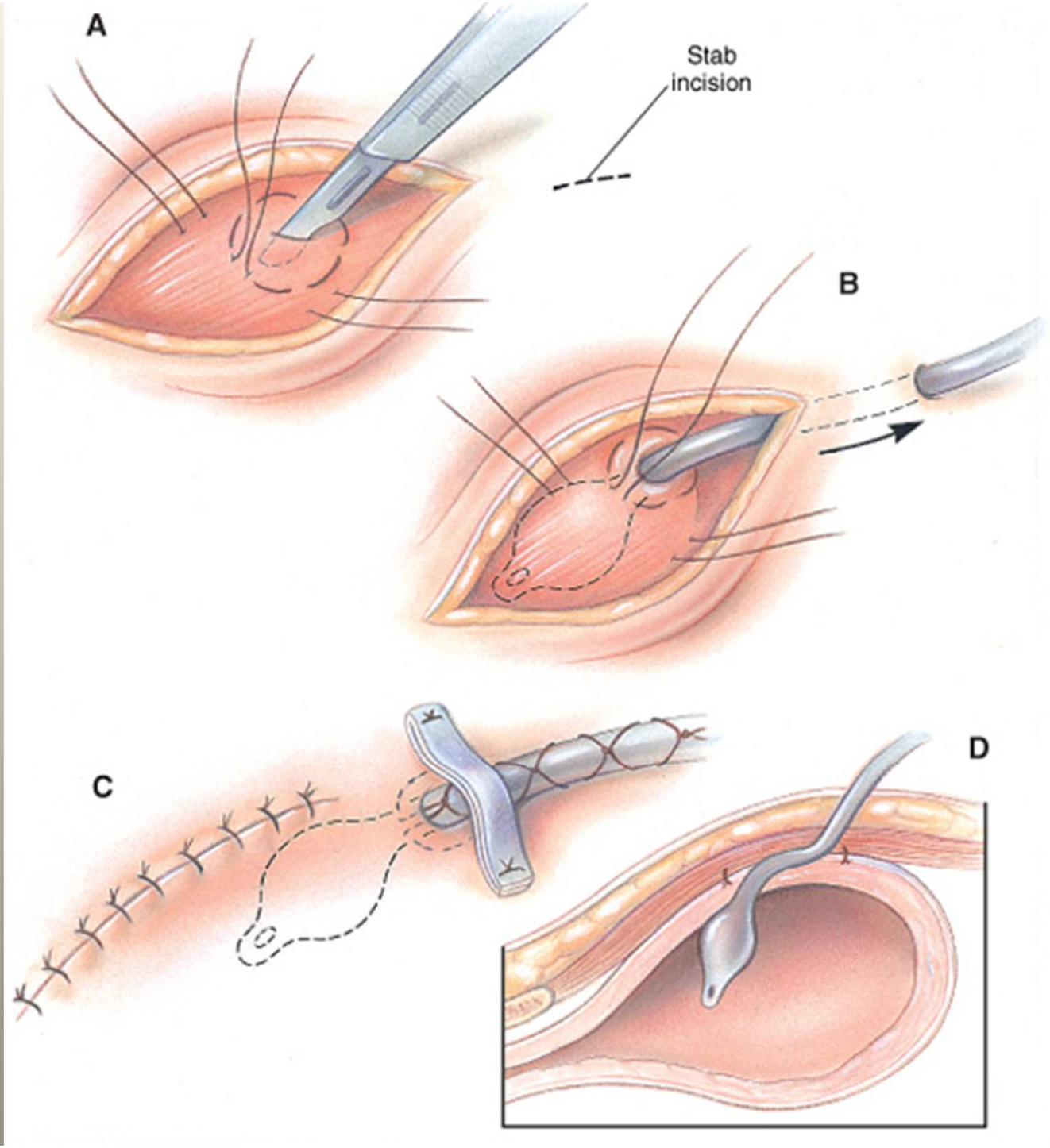
Surgical Treatment

small, localized and benign lesions can be excised
end-to-end anastomosis, healing over an urethral catheter

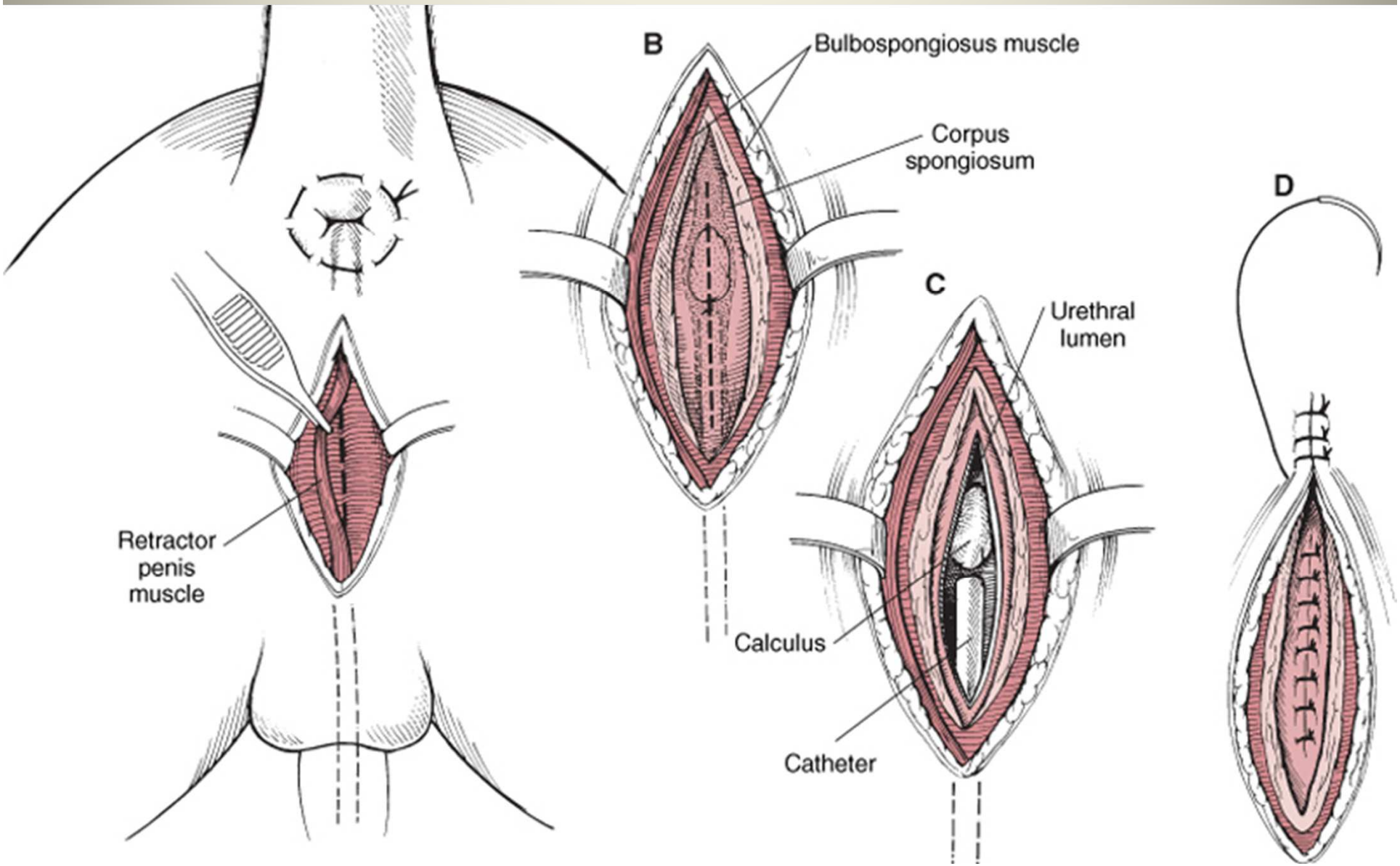
urinary diversion techniques for lesions in the proximal urethra
ureterocolonic or trigonal-colonic anastomosis

↳ permanent tube cystostomy
survival times range from 2-22 months

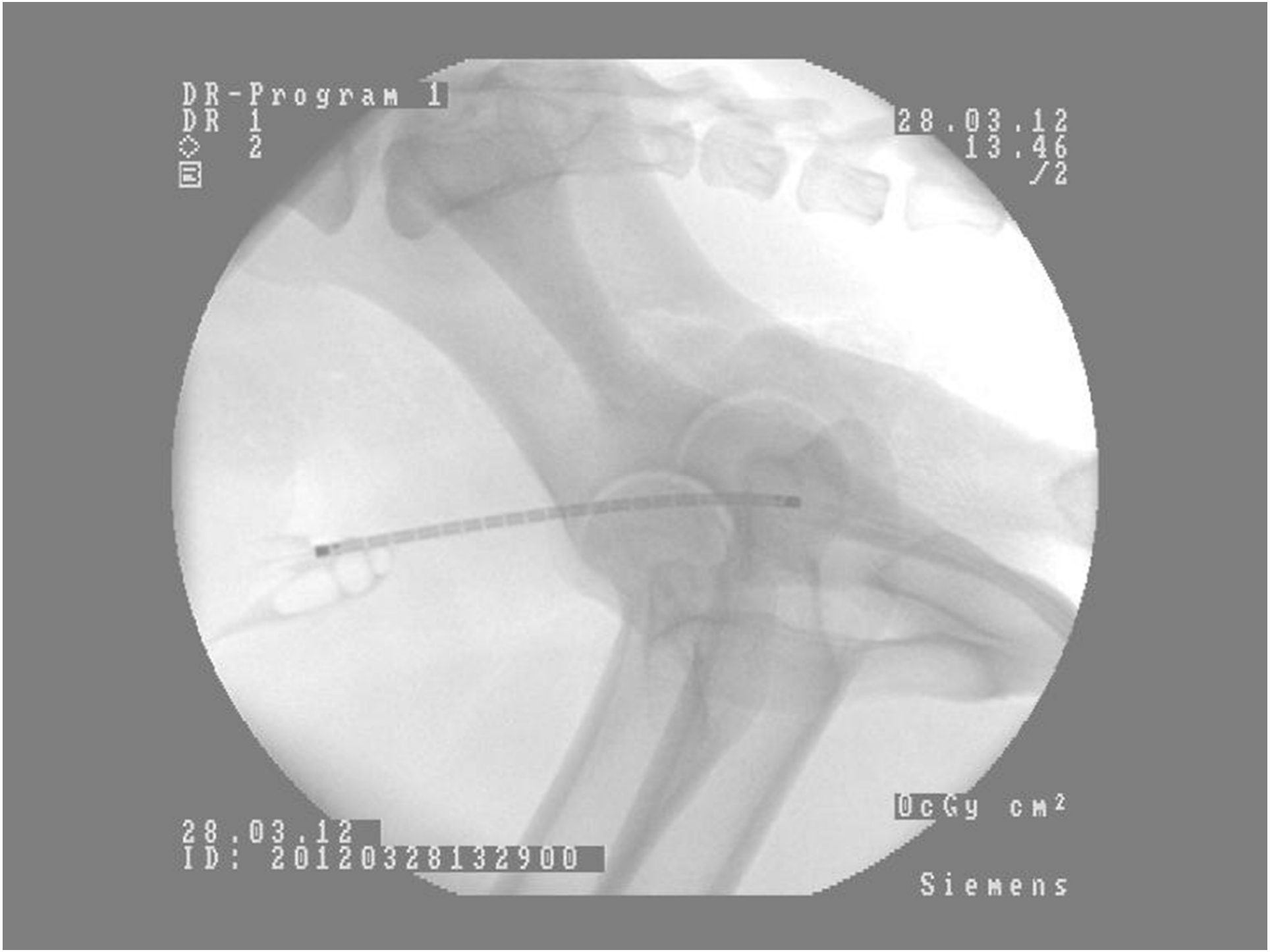
Cystostomy Tube



Permanent Prescrotal Fistula



Interventional Radiology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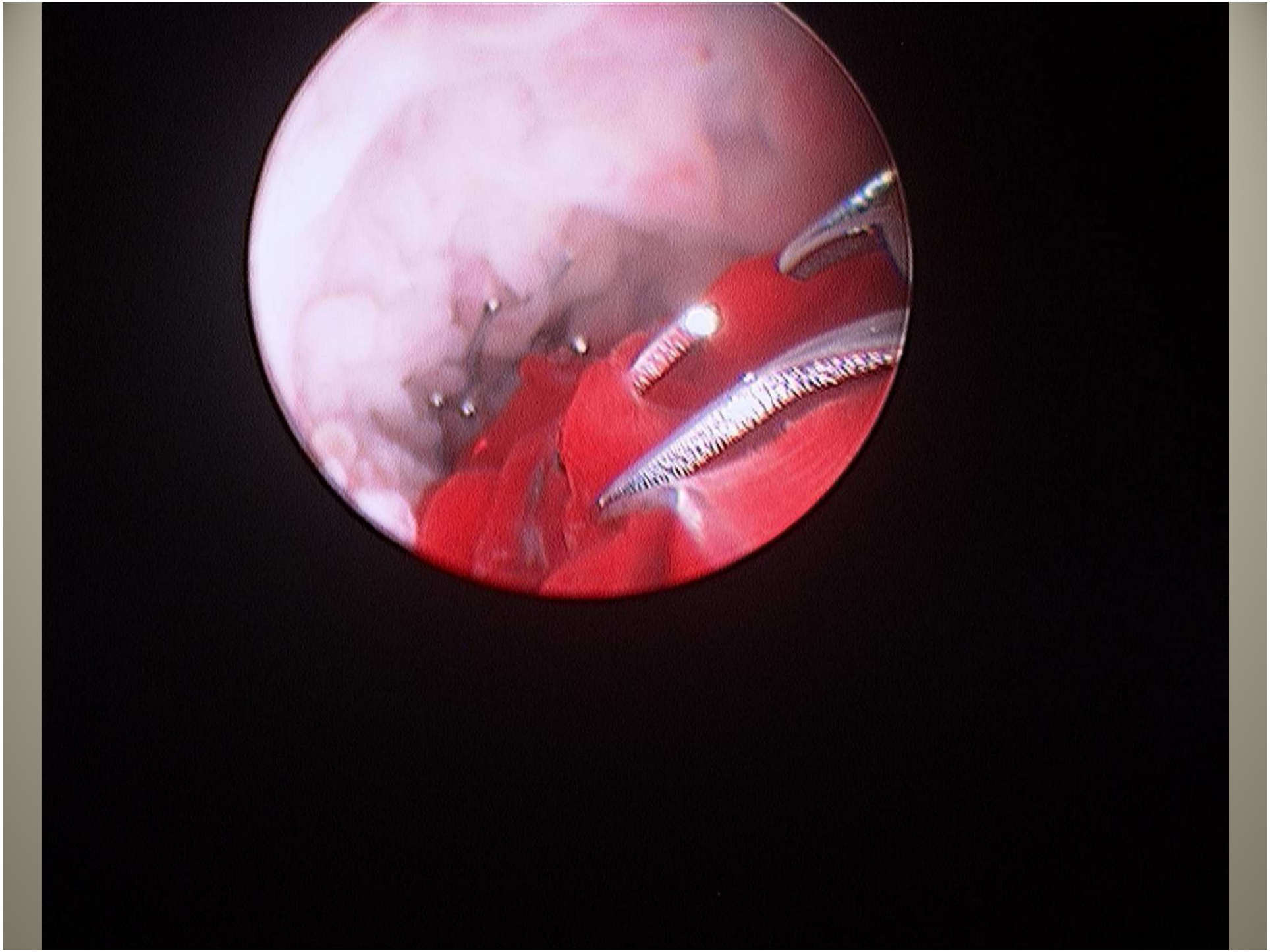


Spinal Cord Tumours

- 90% of spinal tumors occur in large breed dogs
- 28% of spinal tumors occur in cats and dogs < 3 years

Extradural Spinal Cord Tumours

meningioma and peripheral nerve sheath tumors are the most common

spinal meningioma has a predilection for the cervical spinal cord:
- 40%-77% cervical spinal cord
- 0%-32% thoracic spinal cord
- 23%-28% lumbar spinal cord

56% dogs with spinal meningioma alive > 6 months

peripheral nerve sheath tumors involve the spinal cord in 65% cases

compleate resection is usually curative

further: primary vertebral tumors and multiple myeloma

Intradural-Extramedullary Spinal Cord Tumour of Young Dogs

•synonyms:
ependymoma, neuroepithelioma, spinal cord blastoma, medulloepithelioma, hamartoma, and nephroblastoma

•age: 6 months to 3 years

•breed predisposition: GSD, Labrador Retriever, and Golden Retriever
•clinical signs: lateralized with vast majority of lesions between T10-L2

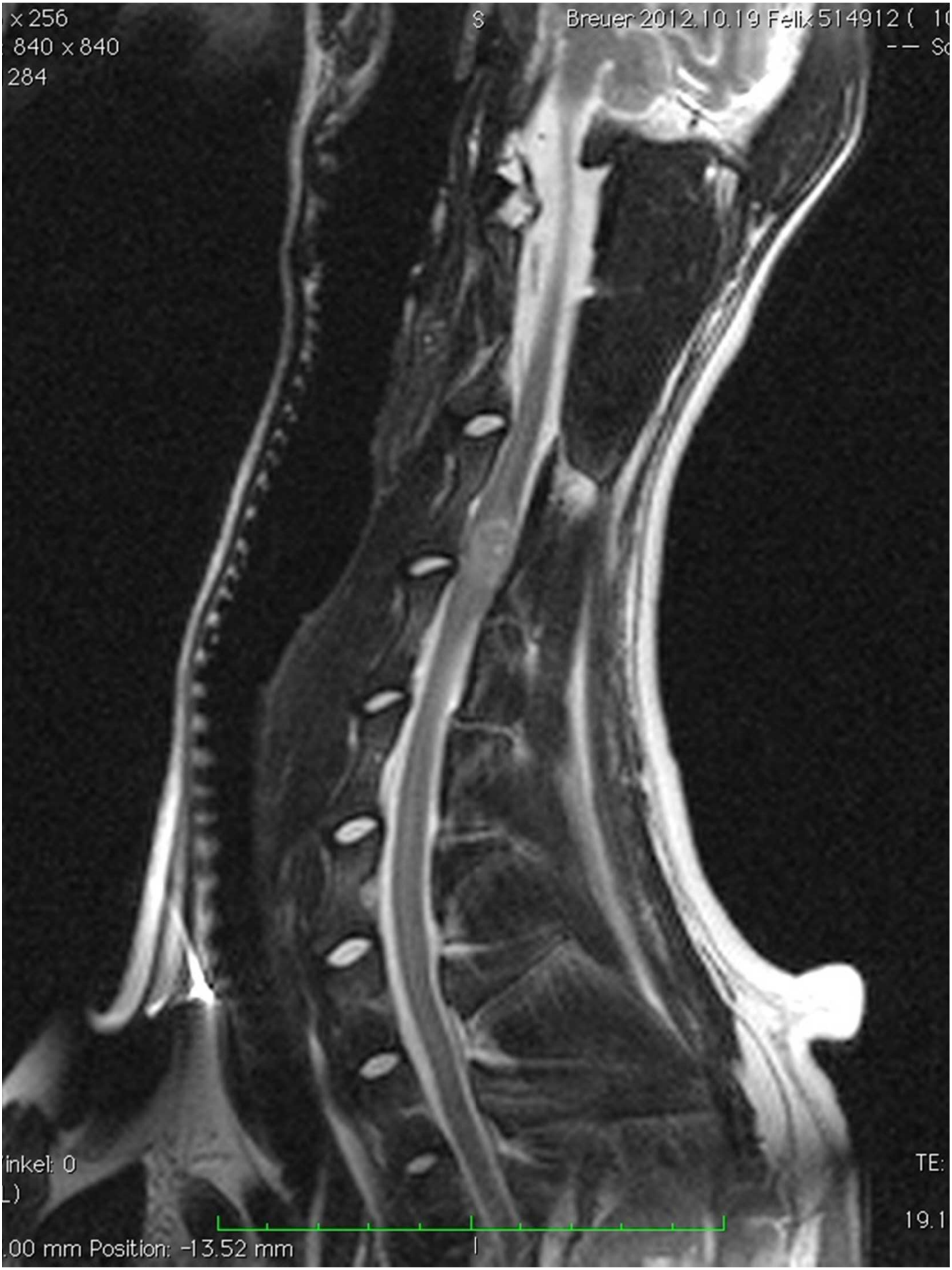
•treatment
Surgical removal associated with long-term survival 4 months and > 3 years
± radiation therapy for incompletely excised tumours

Intramedullary Spinal Cord Tumours

are rare and mostly of glial cell origin
astrocytoma, oligodendroglioma, ependymoma, choroid plexus papilloma
most commonly located between C6-T2

often already with intramedullary spinal cord metastasis
before evidence of the primary tumour

metastasis HSA and LSA ± mammary ADC and malignant melanoma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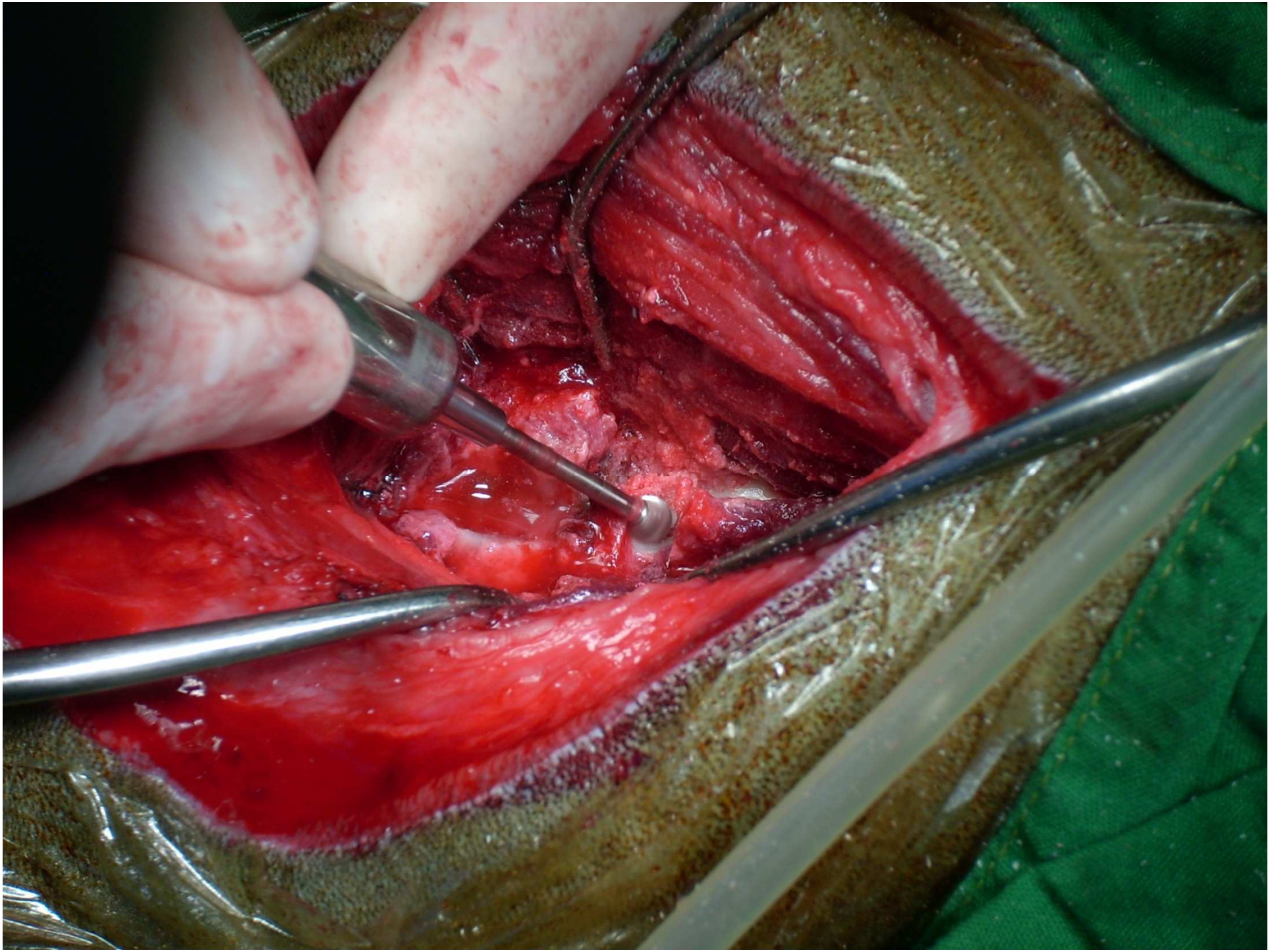

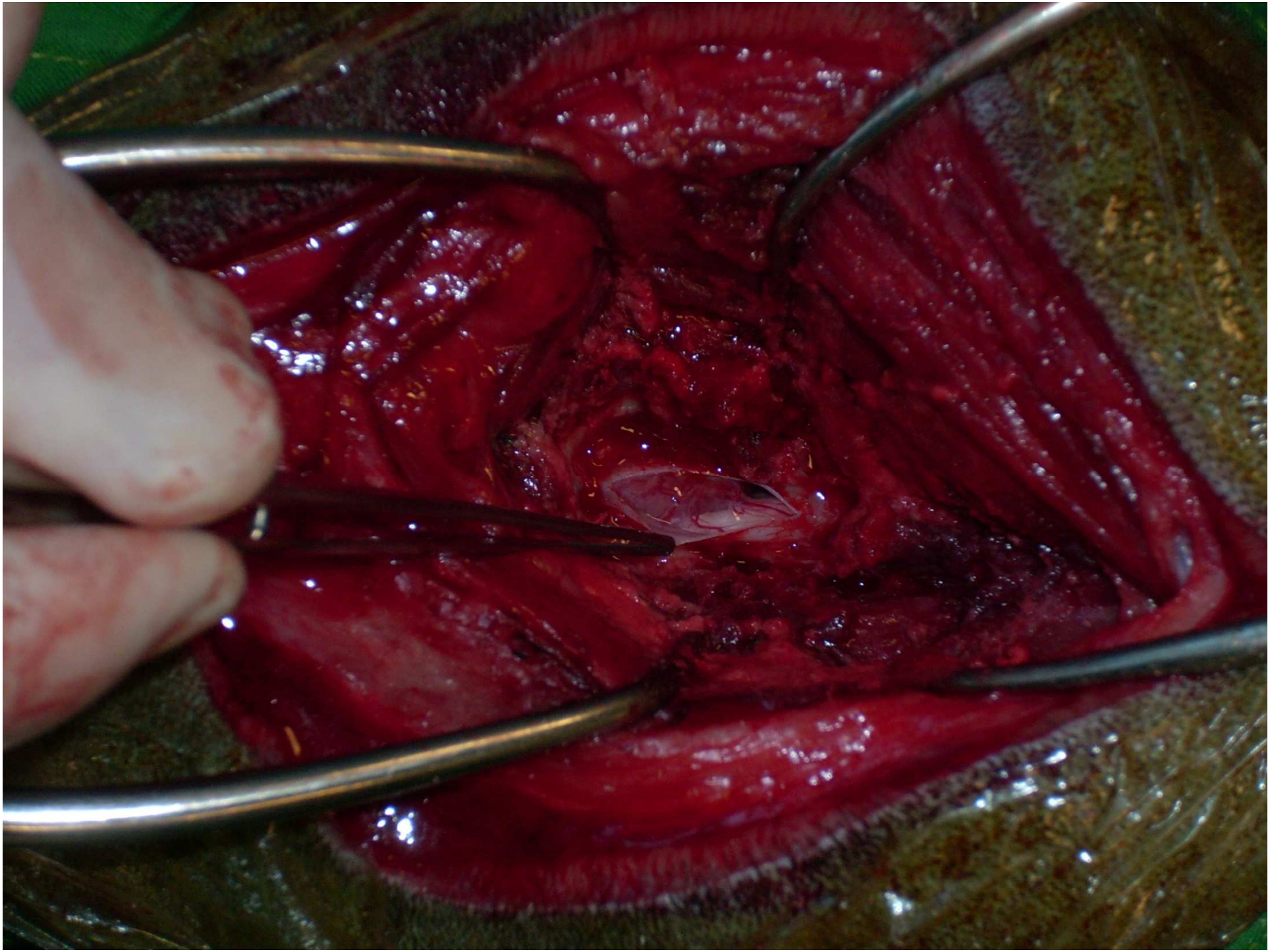

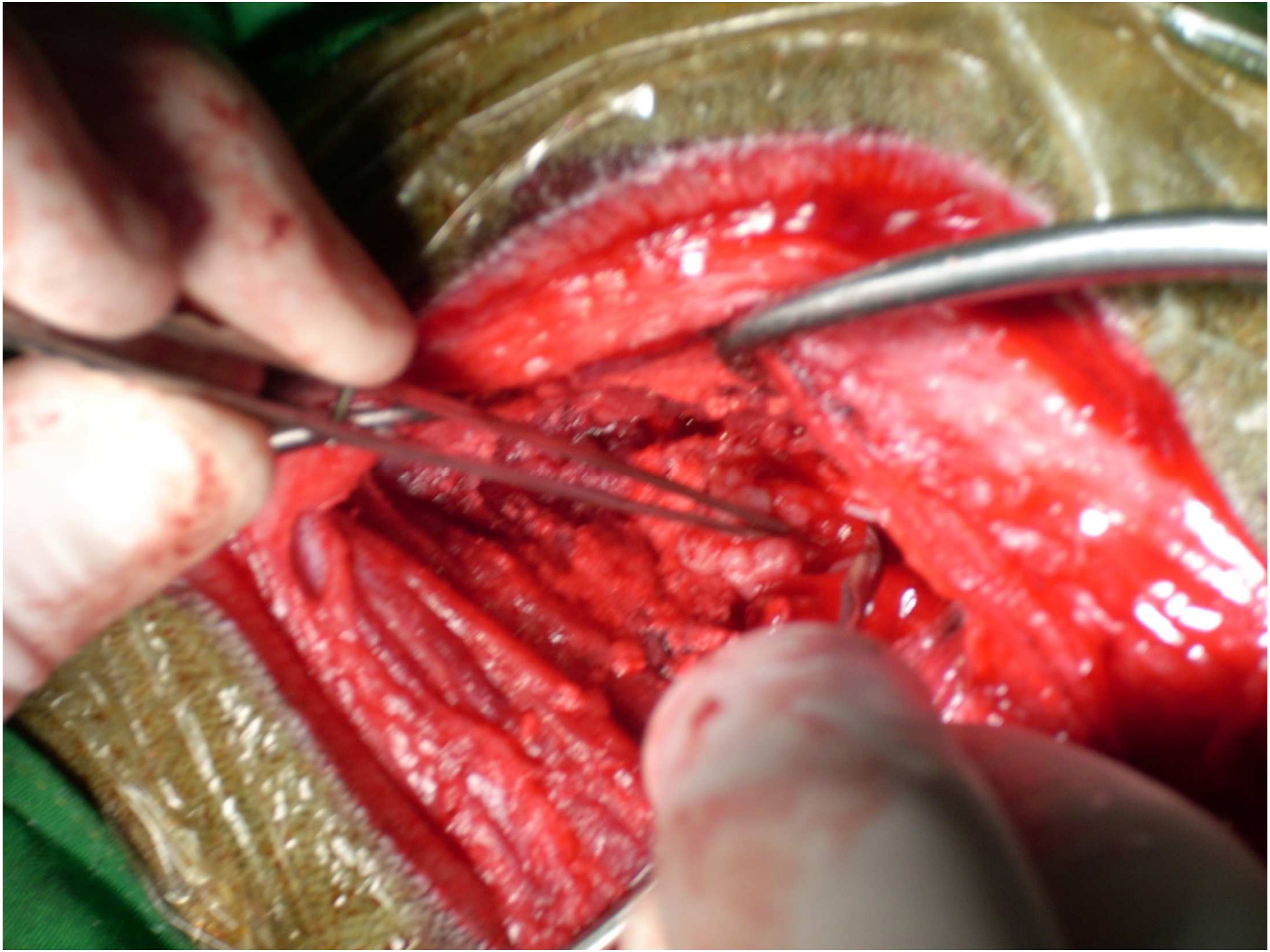


Zentimeter 1 2 3 4 5 6 7 8
Patient: Felix Brewer 51491
Datum: 19.10.2012
Tierklinik Hollabrunn

Questions?