

# Surgical Solutions to Biological Abnormalities

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# [ Background ]

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- Belfast, Northern Ireland
- Queens University Belfast
- Basic Surgical Training
- Research – Higher degree
- Higher Specialist Training
- Clinical Fellowship
- Academic Appointment
- Clinical, Research, Education (UG/PG)



# [ Advantages of being a doctor ]

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- Varied career opportunities
- Job security
- Pay
- Job Satisfaction
- Travel
- Research
- Teaching

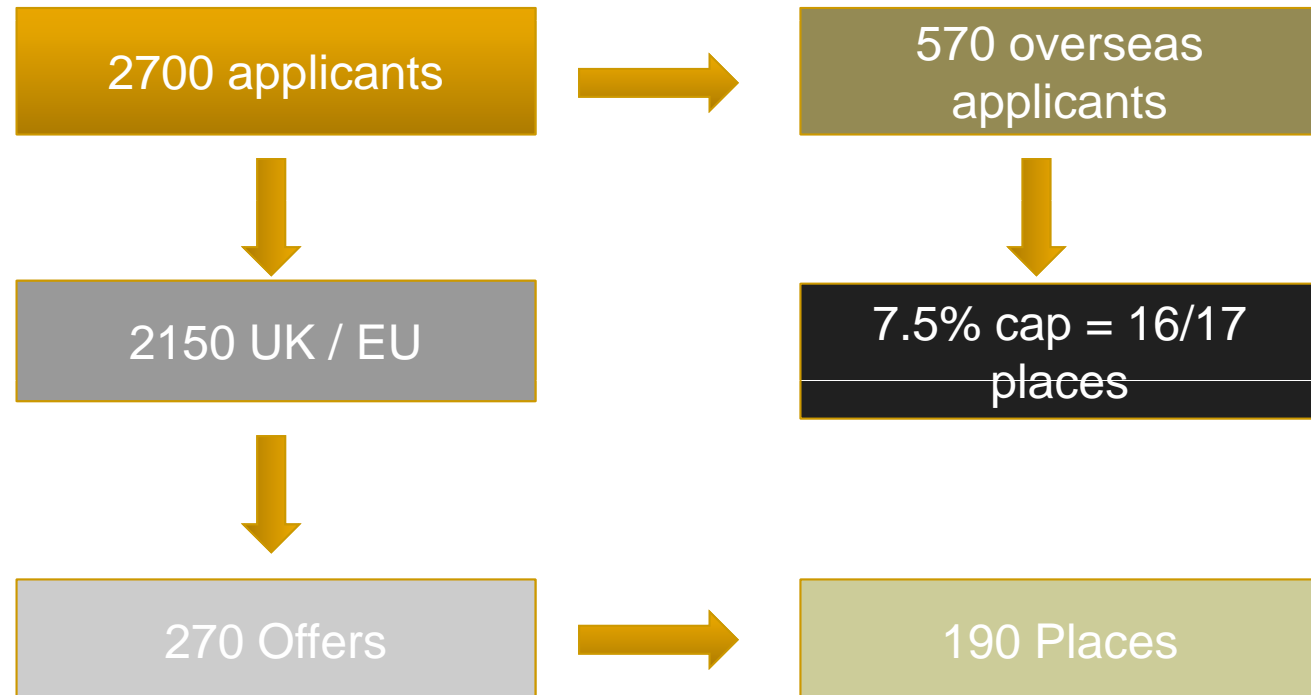
# [ Disadvantages ]

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- Opportunity to study medicine difficult
- Hard work to succeed
- Long hours
- Can be antisocial

# Getting in to study Medicine

- Edinburgh University Medical School



Offer acceptance @ 65%

# [ Edinburgh University ]

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- No quota for Scottish or other British Regional applicants
- 55-60% of places are taken by students resident in Scotland
- 10-15% mature students
- 85-90% school leavers

# [ Application ]

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- Weighting of nonacademic and academic components of UCAS application varies between the 28 UK medical schools
- e.g. Edinburgh currently 50: 50 weighting of non-academic and academic components
- Oxbridge virtually no weighting for non-academic component

# [ Personal statement ]

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- Important as a means to get invited for interview
- UK CAT similarly important for interview selection



# [ Interview ]

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- No interview e.g. Edinburgh, Southampton
- Traditional e.g. St Andrews
- OSCE type e.g. Dundee, Glasgow, Aberdeen

# [Advice]

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- Be aware of the selection policies and procedures of all the medical schools and pick ones that suit your strengths.
- If not successful but committed consider biomedical science and graduate entry.

# [ General Surgery Emergencies ]

- Unscheduled
- Unselected
- Detective
- Anatomy
- Judgements
- Clinical skill



# [ Abdominal Pain ]

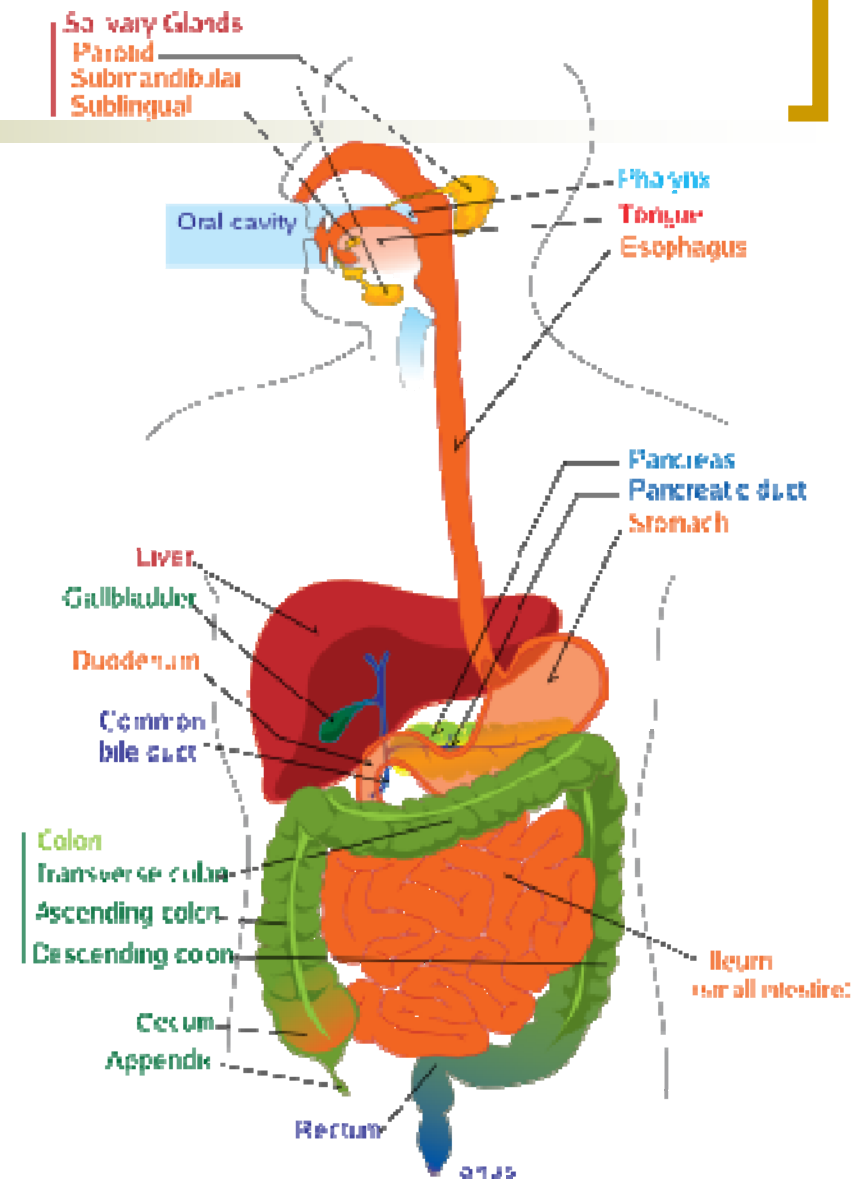
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- Numerous potential diagnoses
- Can be life threatening
- Many do not require surgery
- Observation
- Emergency surgery



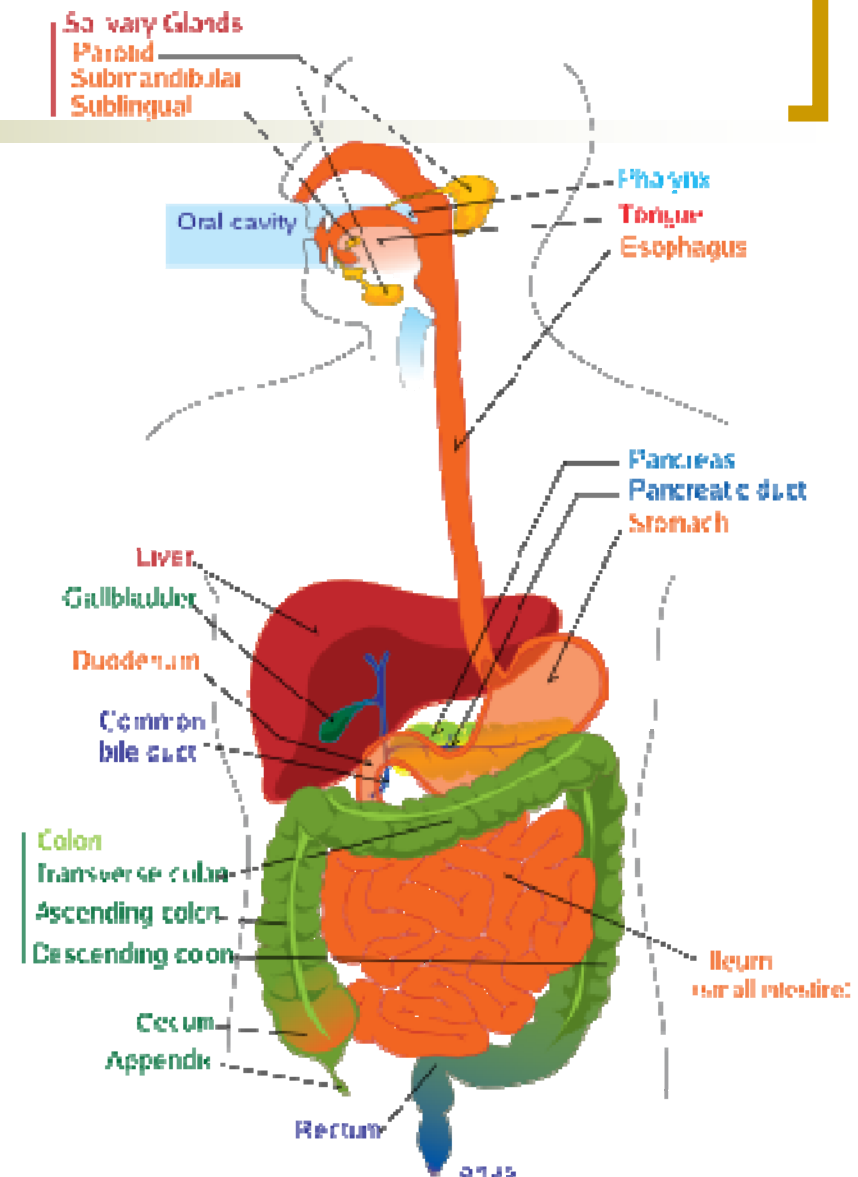
# [ Visceral pain ]

- Autonomic



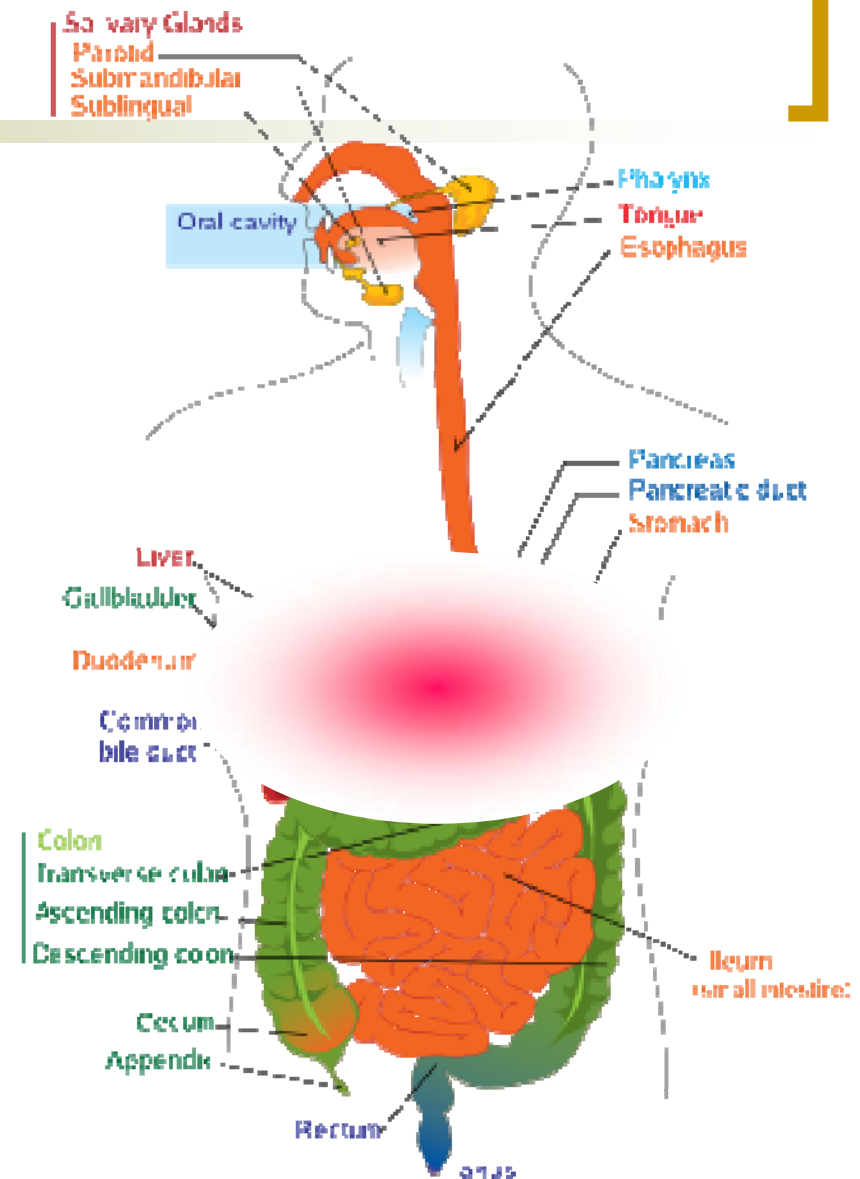
# Visceral pain

- Autonomic
- Dull ache
- Poorly localised
- Distension
- Inflammation
- Ischaemia



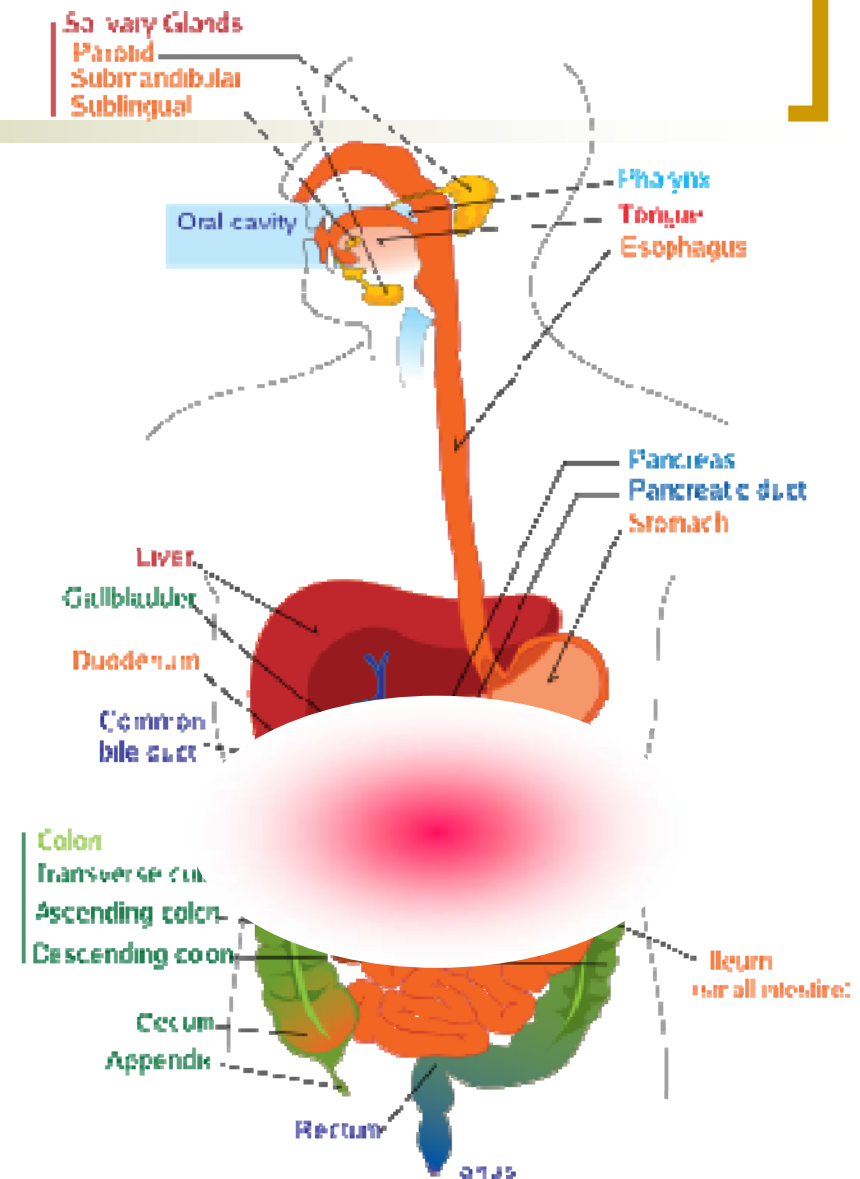
# [ Visceral pain ]

- Autonomic
- Foregut



# [ Visceral pain ]

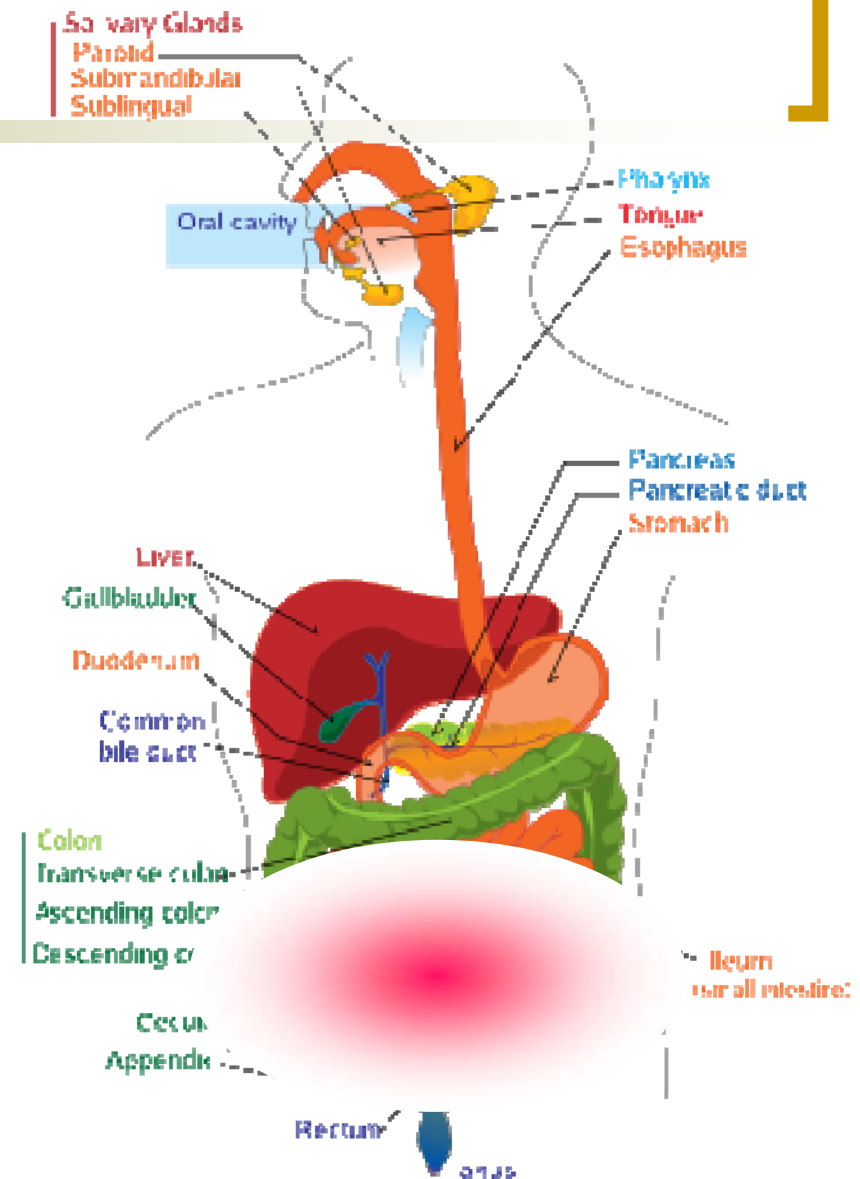
- Autonomic
- Foregut
- Midgut





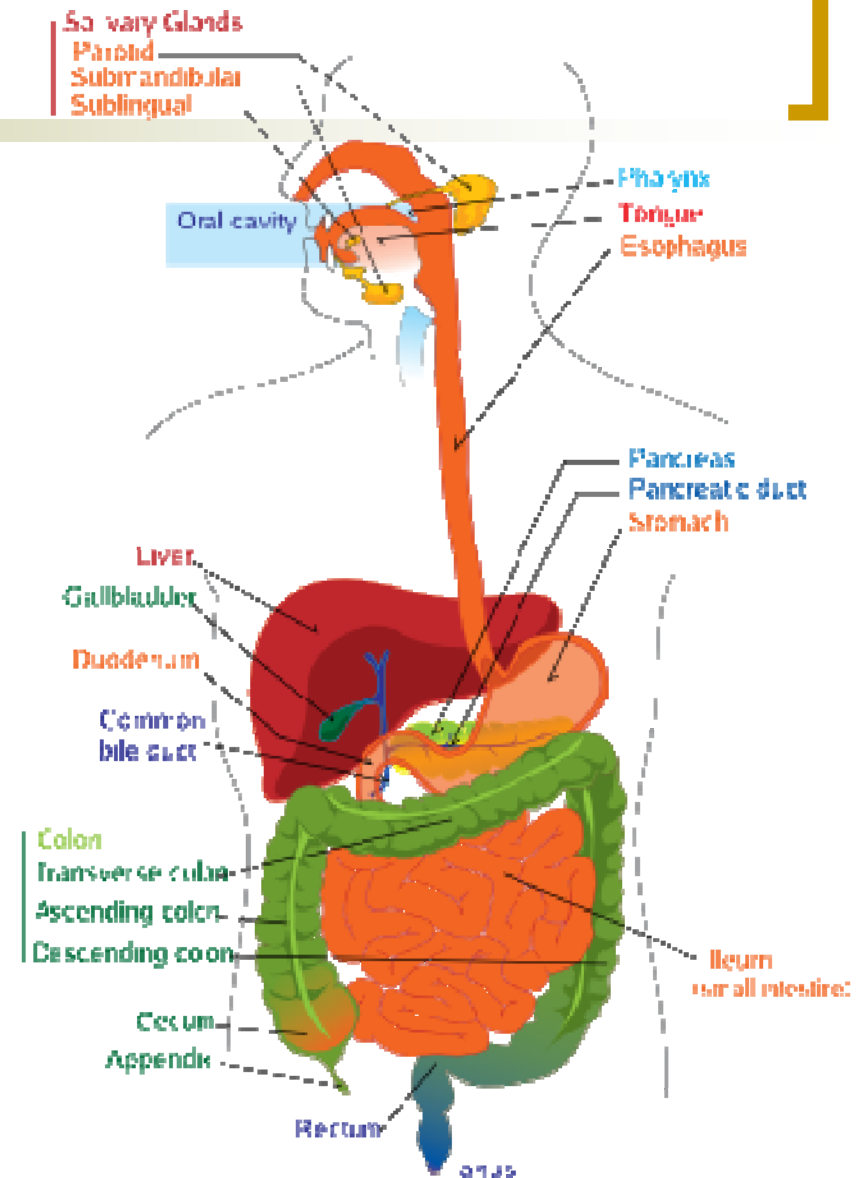
# Visceral pain

- Autonomic
- Foregut
- Midgut
- Hindgut



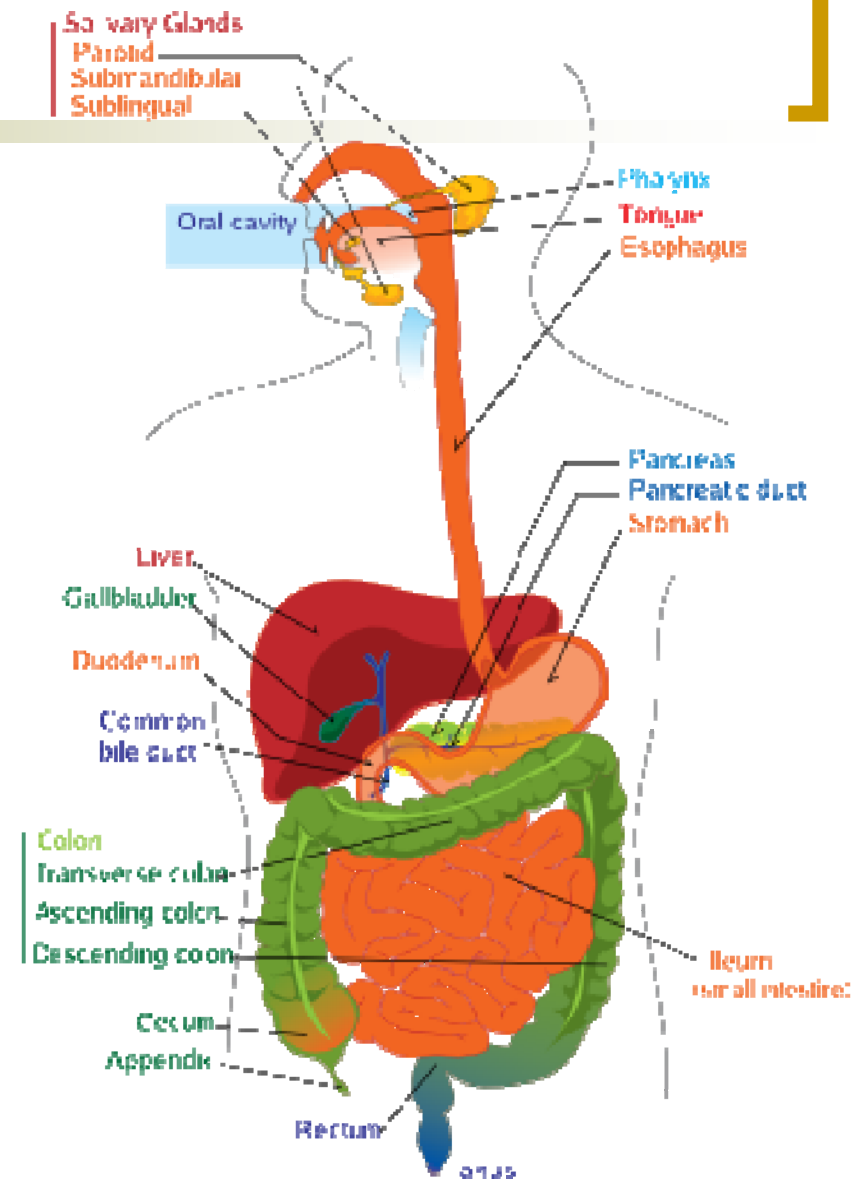
# [ Somatic pain ]

- Parietal pain
- Peritoneal irritation
- Severe
- Persistent
- Localised to anatomy



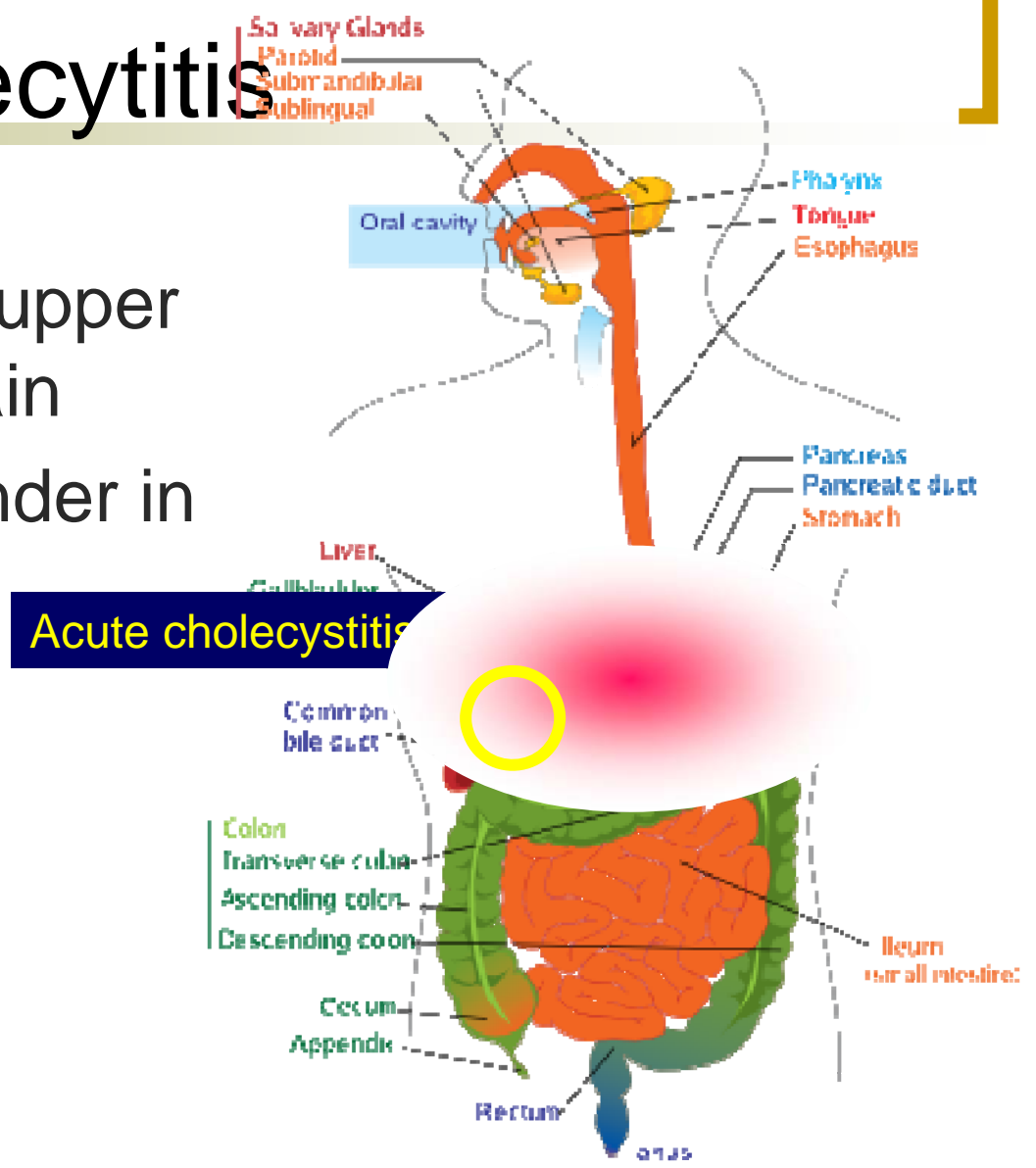
# [ Somatic pain ]

- Parietal pain
- Peritoneal irritation
- Severe
- Persistent
- Localised to anatomy



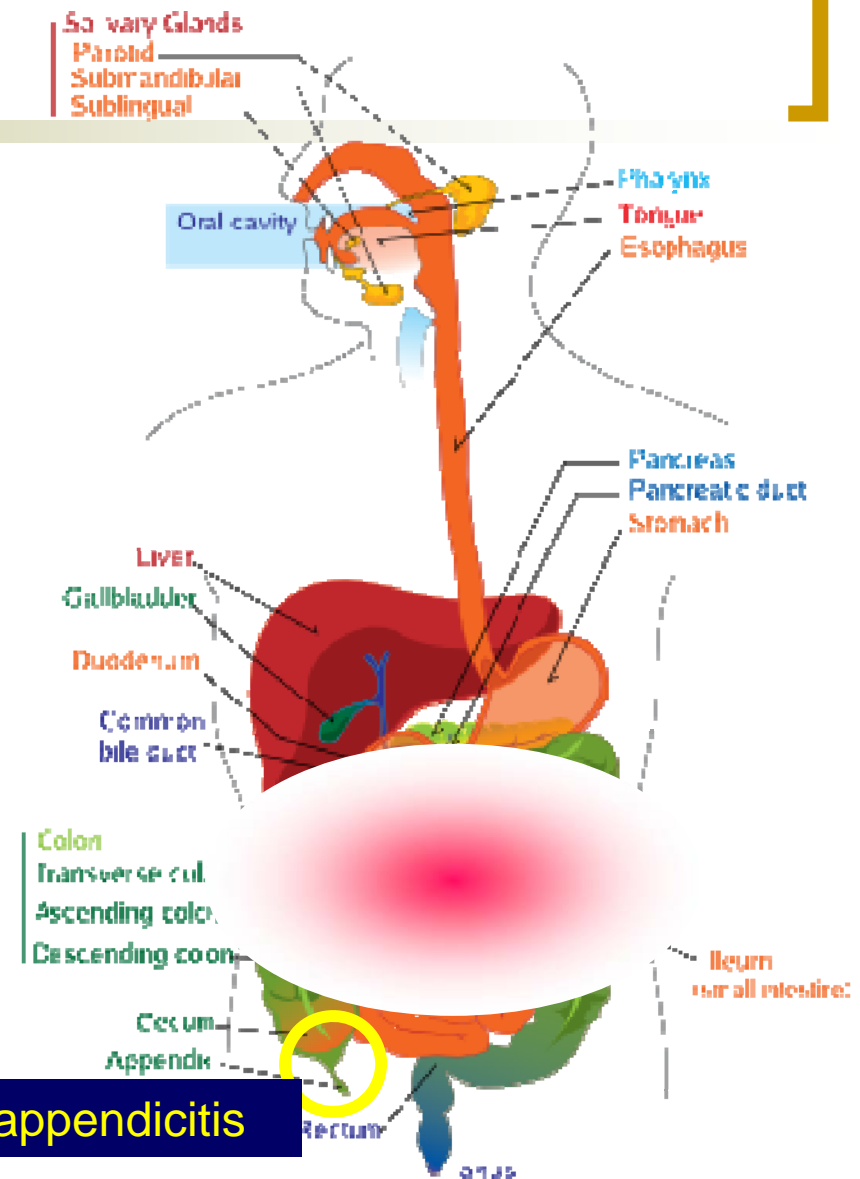
# [ Acute cholecystitis ]

- Epigastric or upper abdominal pain
- Maximally tender in RUQ



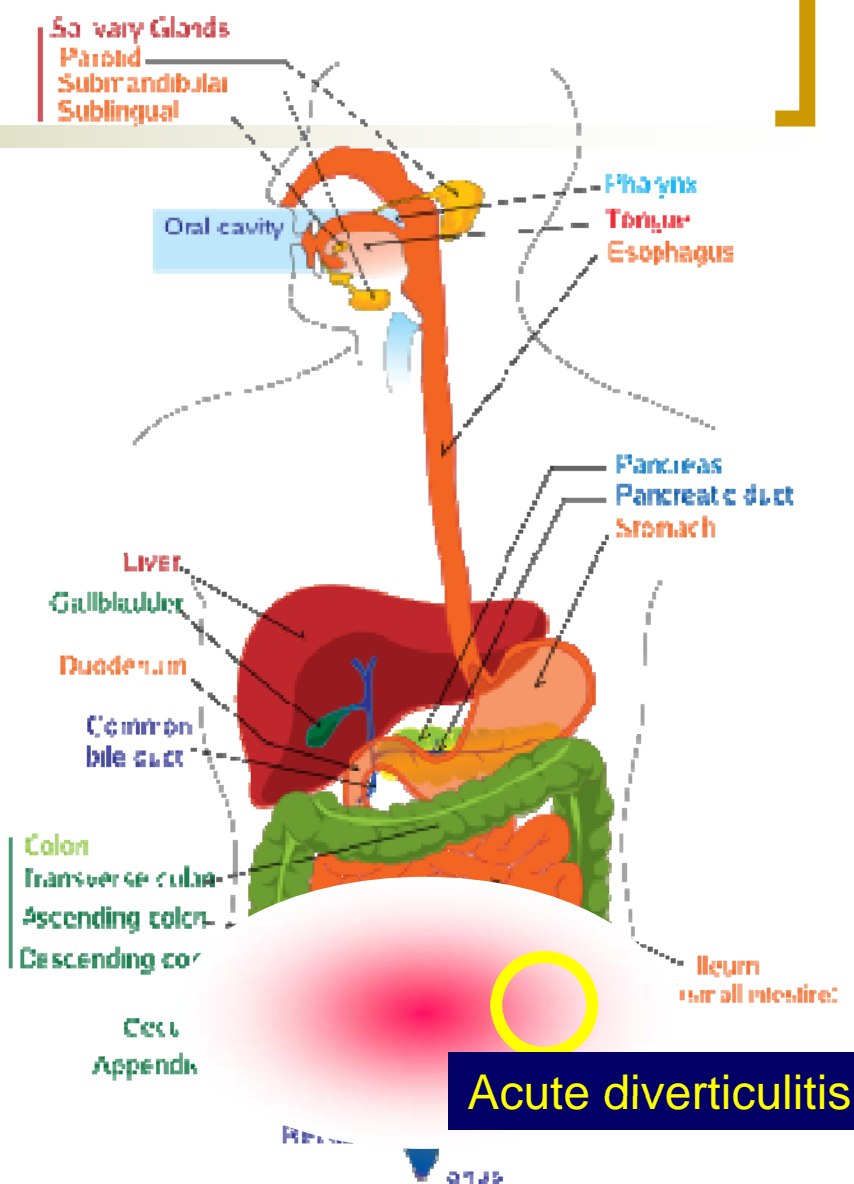
# [ Appendicitis ]

- Central or periumbilical pain
- Migrating to right iliac fossa



# [ Diverticulitis ]

- Lower abdominal pain
- Maximally tender in left iliac fossa

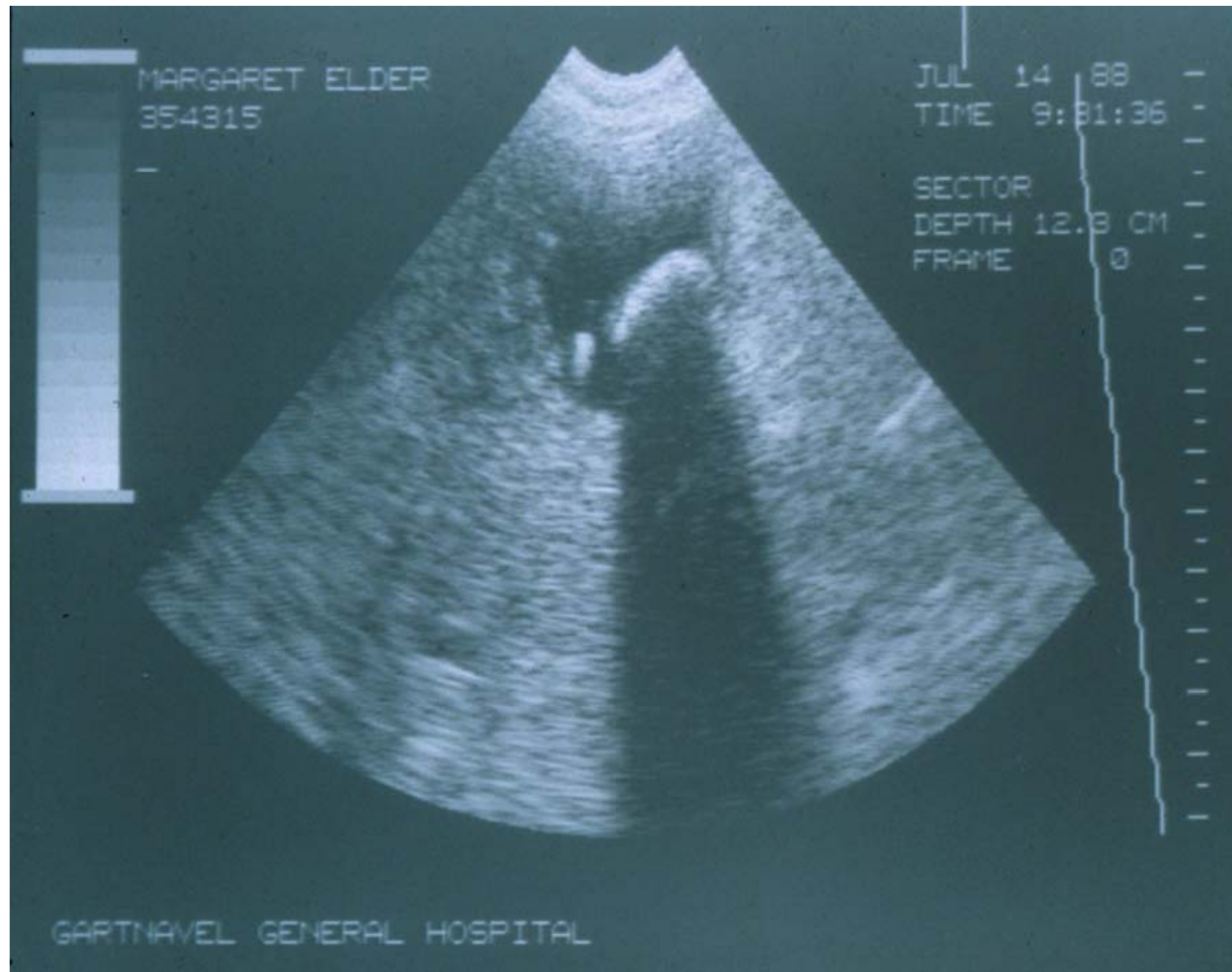


# [ Emergency Admission 1 ]

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- 42 year old female
- Intermittent upper abdominal pain - years
- 36 hour severe RUQ pain
- Nausea
- Fever
- Tender RUQ

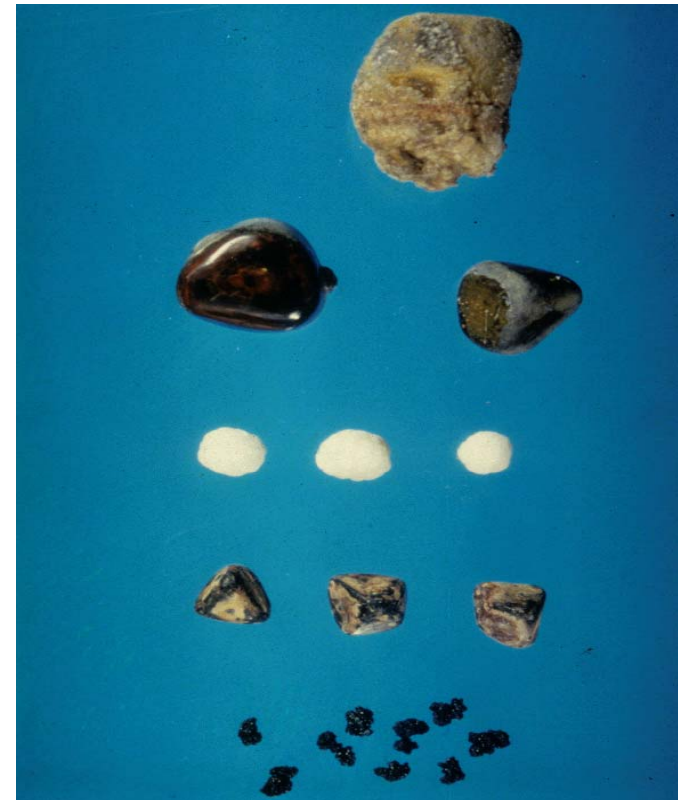
# [ Investigation ]



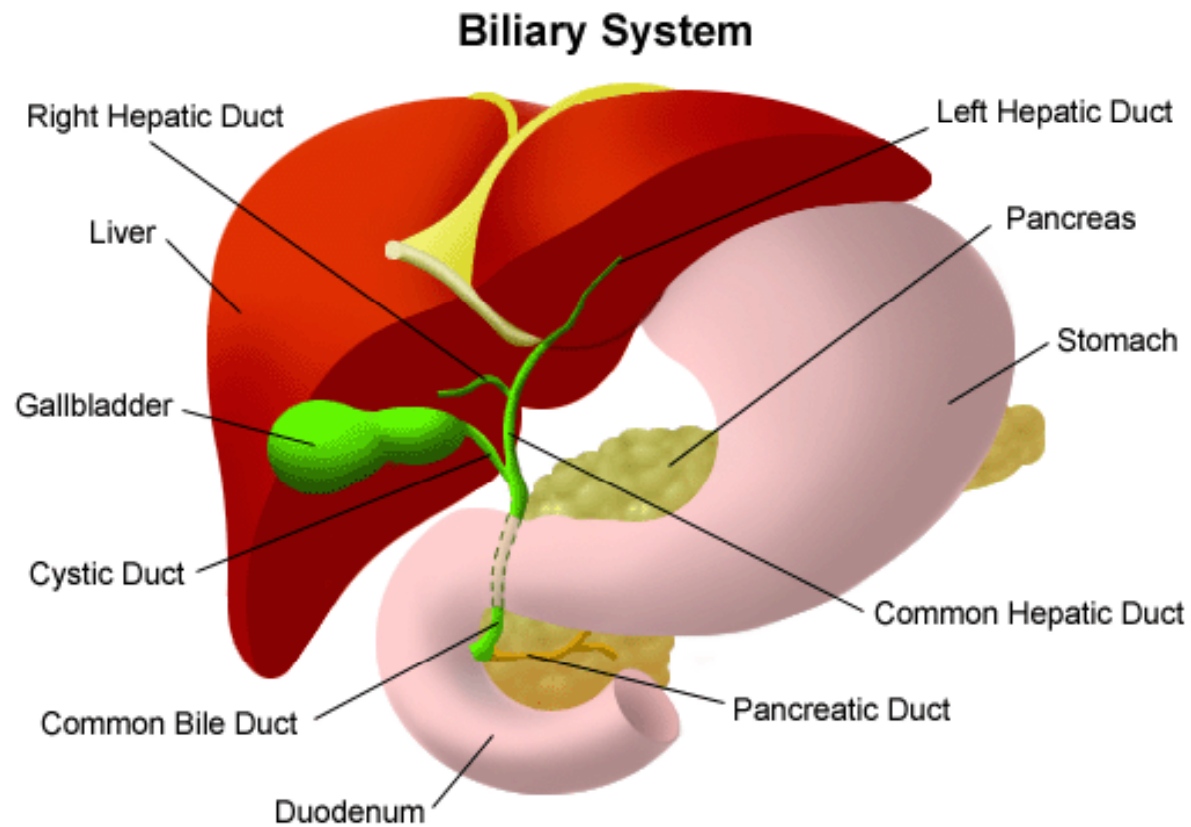


# [ Gallstones ]

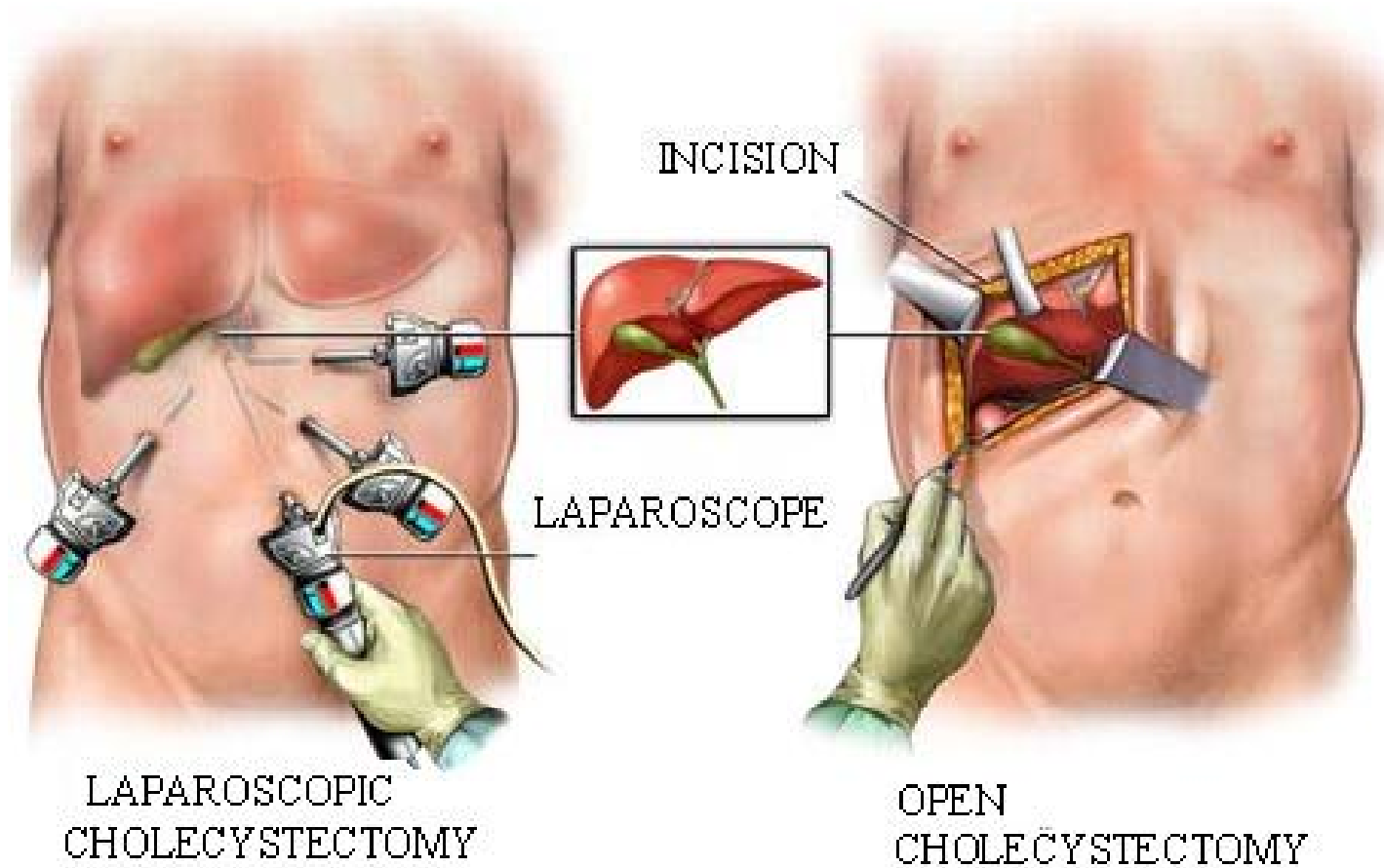
- Biliary colic
- Acute cholecystitis
- Jaundice
- Pancreatitis
- Gallstone ileus



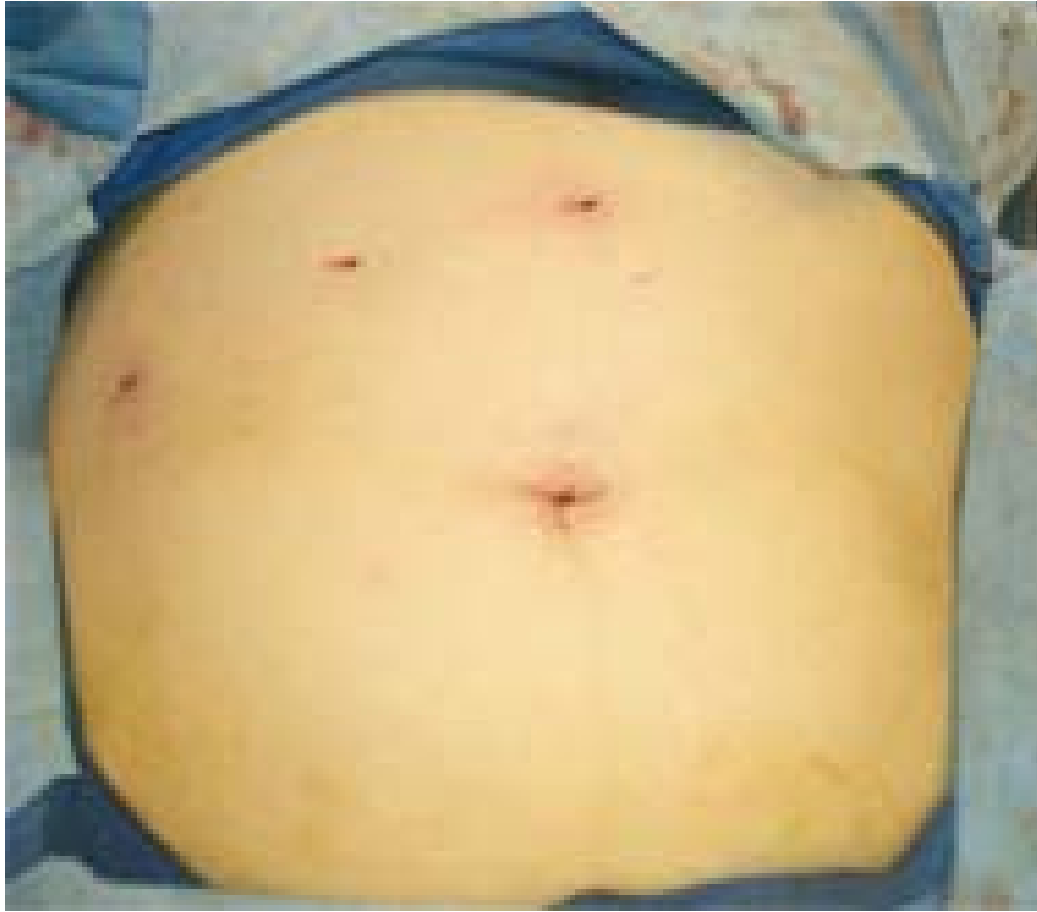
# [Anatomy



# [ Surgery ]



# [ Minimal scarring ]

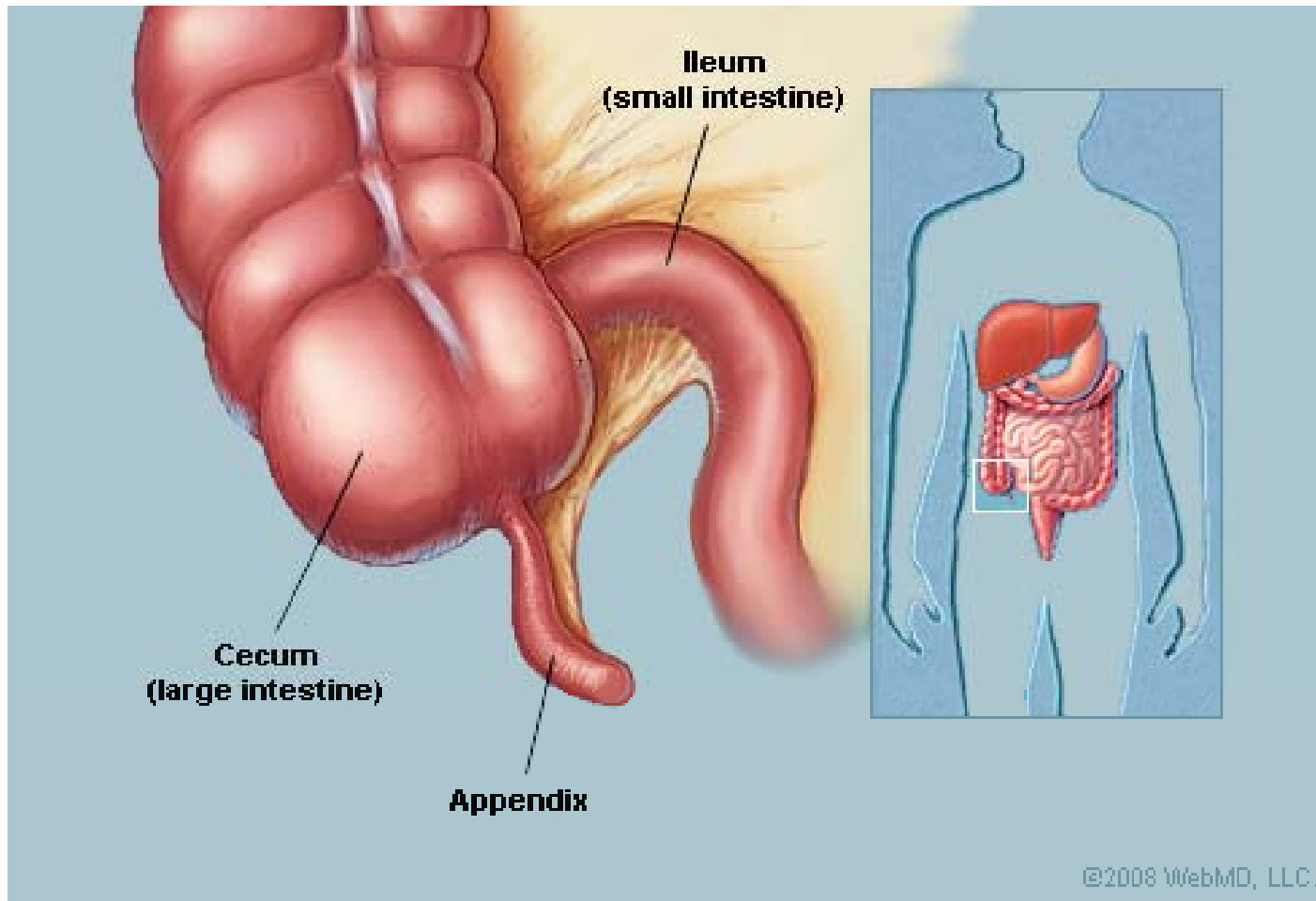


# [ Emergency Admission 2 ]

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- 18 year old female
- 12 hours abdominal pain
- Vomited x 3
- Tachycardia
- Tender RIF

# [Anatomy

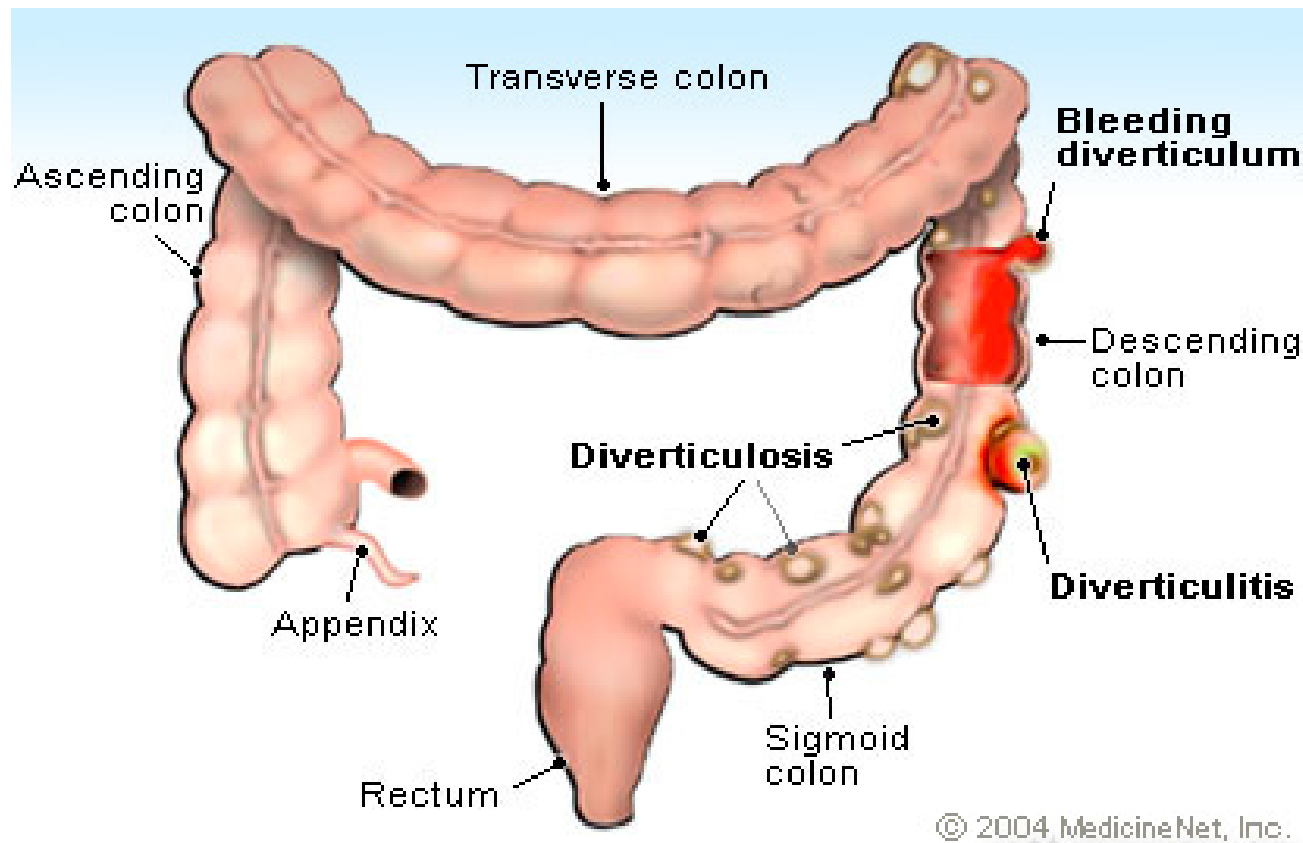


# [ Emergency Admission 3 ]

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- 75 year old male
- Longstanding irregular bowel habit
- Acute onset generalised abd. pain
- Hypotensive
- Collapse
- Rigid abdomen

# [ Pathology ]

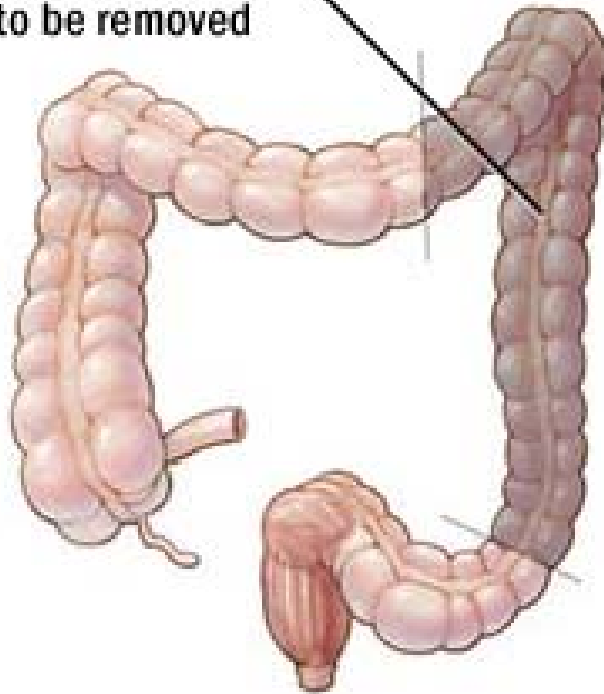


## Diverticular Disease

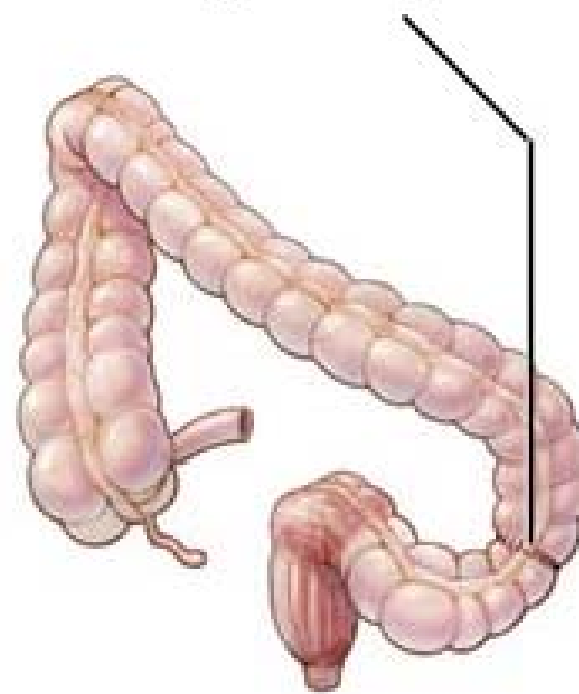


# [ Resection and anastomosis ]

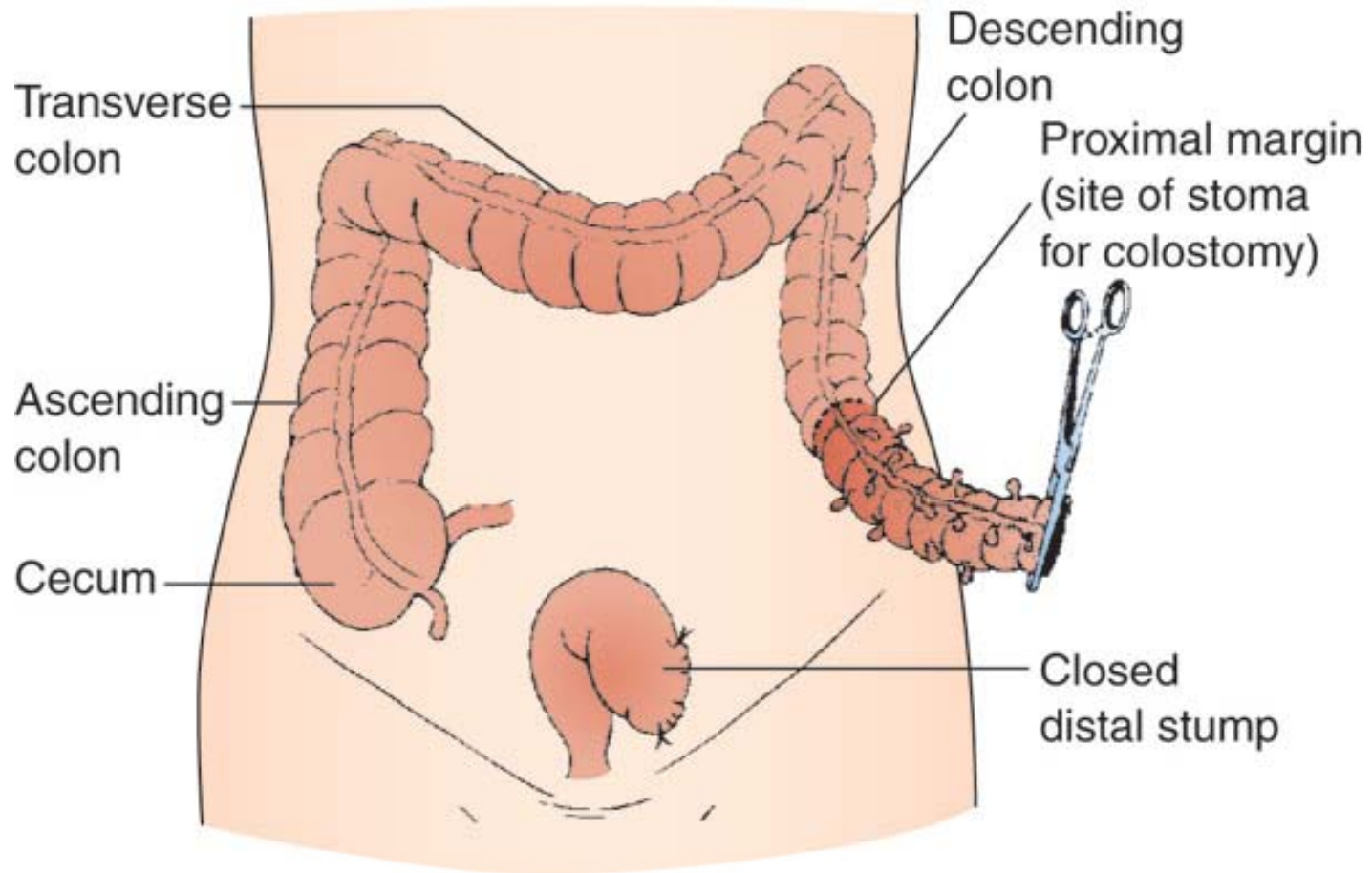
Portion of colon  
to be removed



Remaining sections joined



# [ Temporary Stoma ]



# [ Specialist Surgery ]

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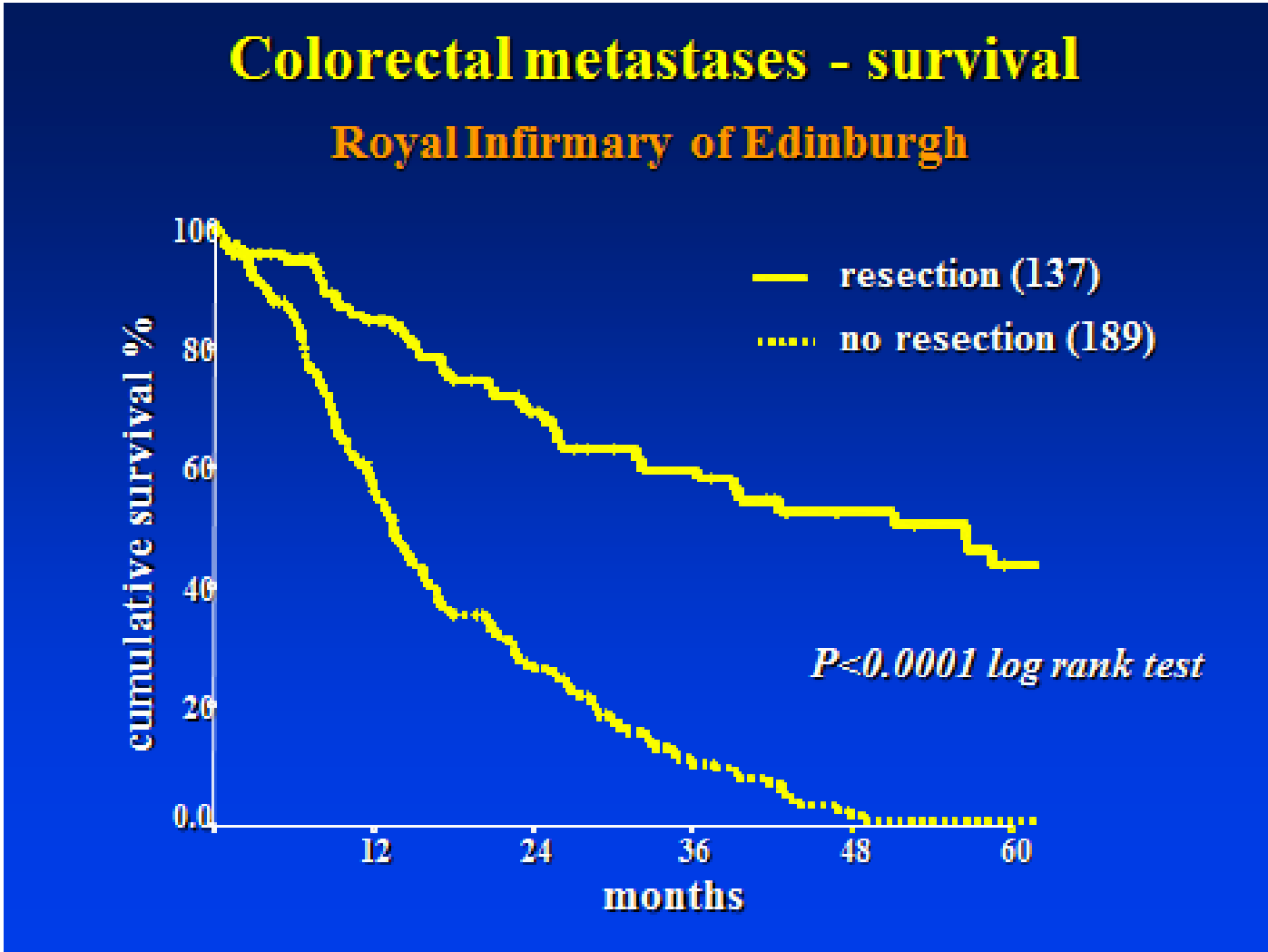
- Cancer Surgery
  - Improved survival
  - Symptom control
  - Emergency complication
- Multidisciplinary Team
  - Radiologist
  - Oncologist
  - Pathologist
  - Nursing staff

# [ Colorectal Cancer ]

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- Most common GI malignancy
- 2<sup>nd</sup> commonest cause of cancer death
  - (1<sup>st</sup> is lung cancer)
- 36,000 cases per annum in UK
- Lifetime risk – 5%
- Spread to liver

# [ Survival ]

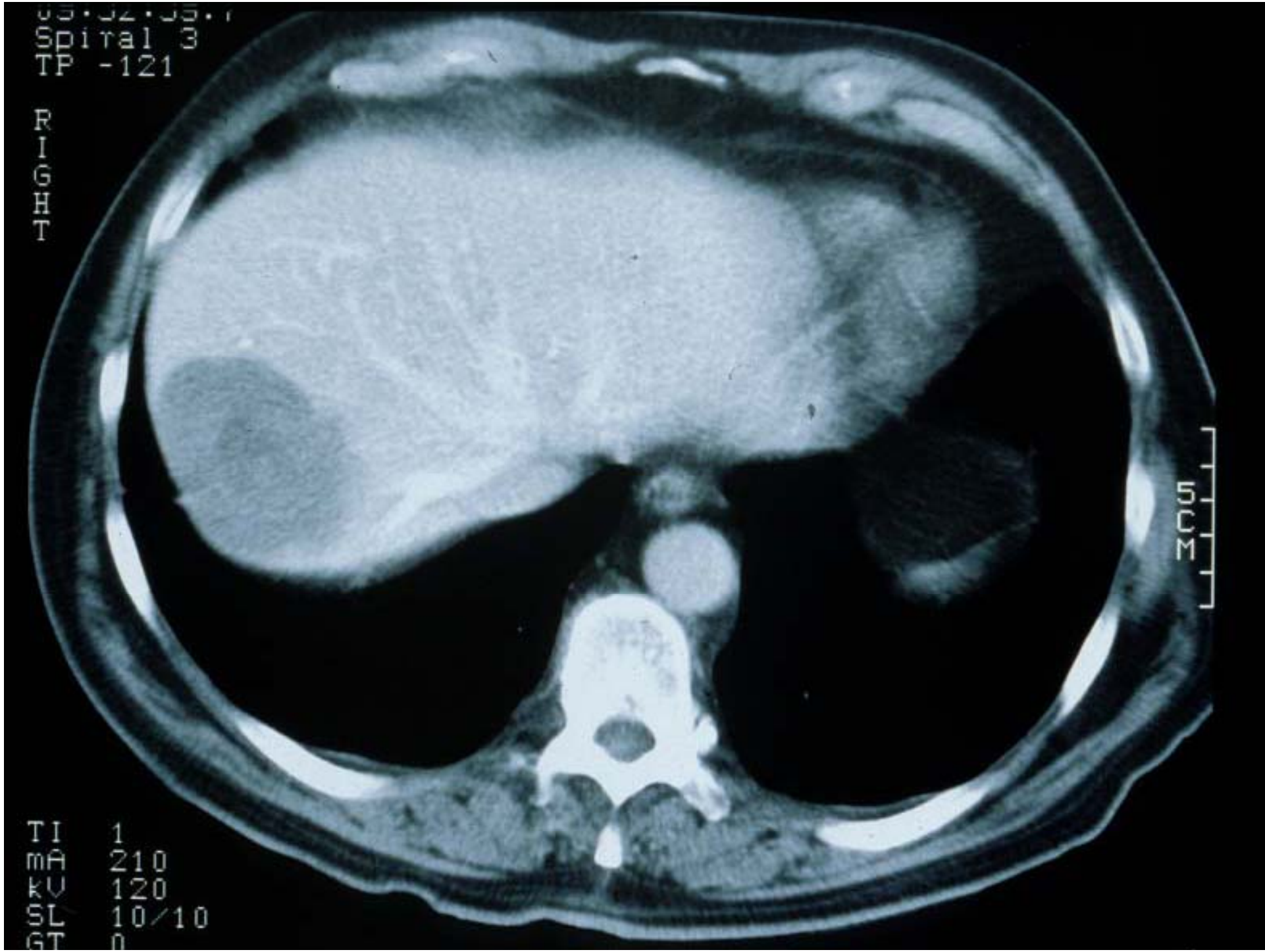


05.02.05.1  
Spiral 3  
TP -121

R  
I  
G  
H  
T

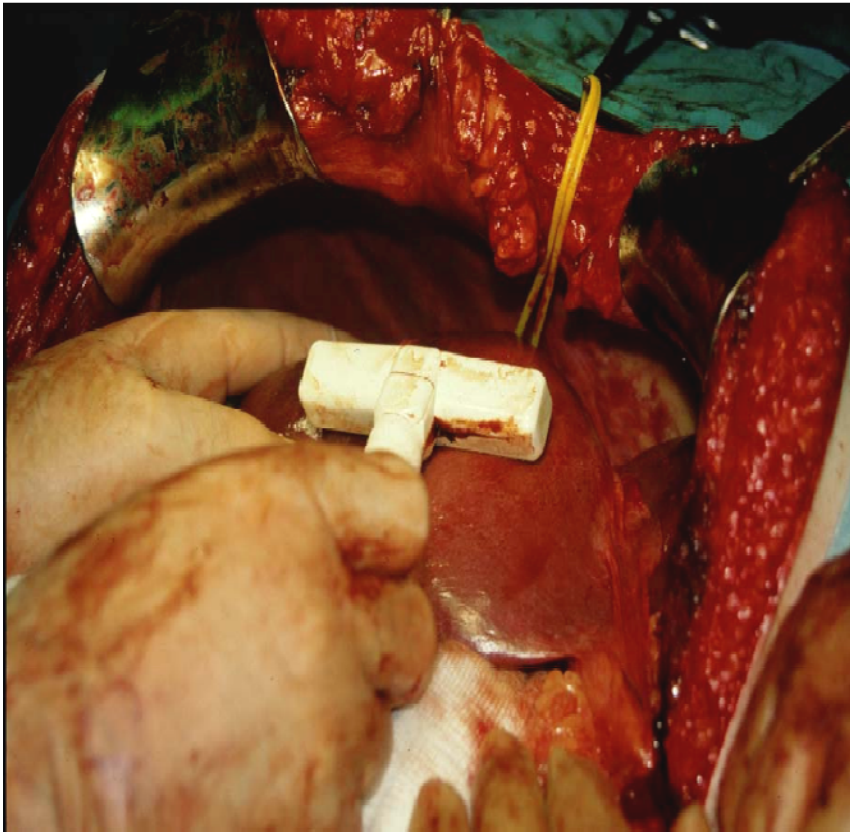
TI 1  
MA 210  
KV 120  
SL 10/10  
GT 0

100

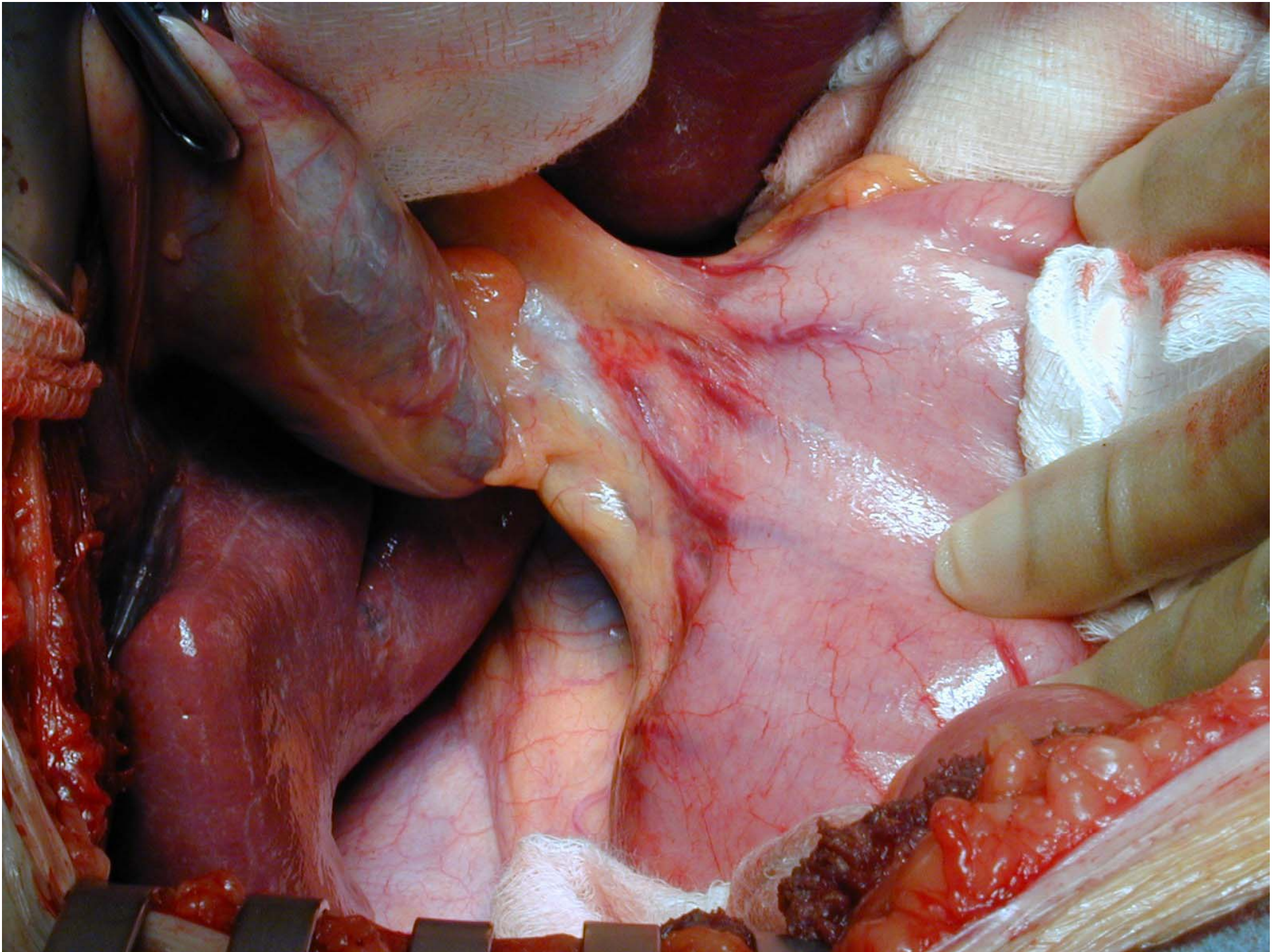




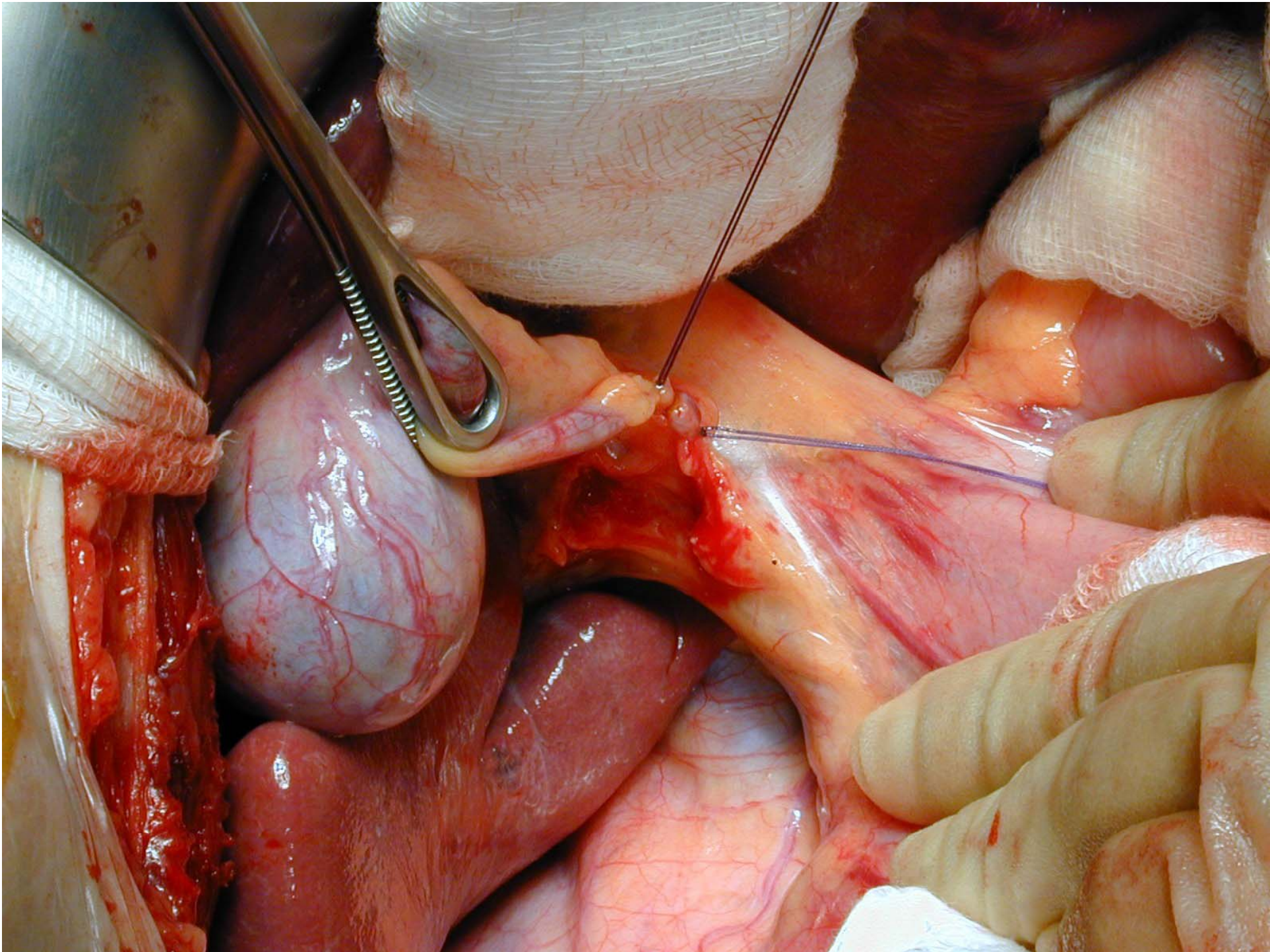
# [ Intraoperative Ultrasonography ]



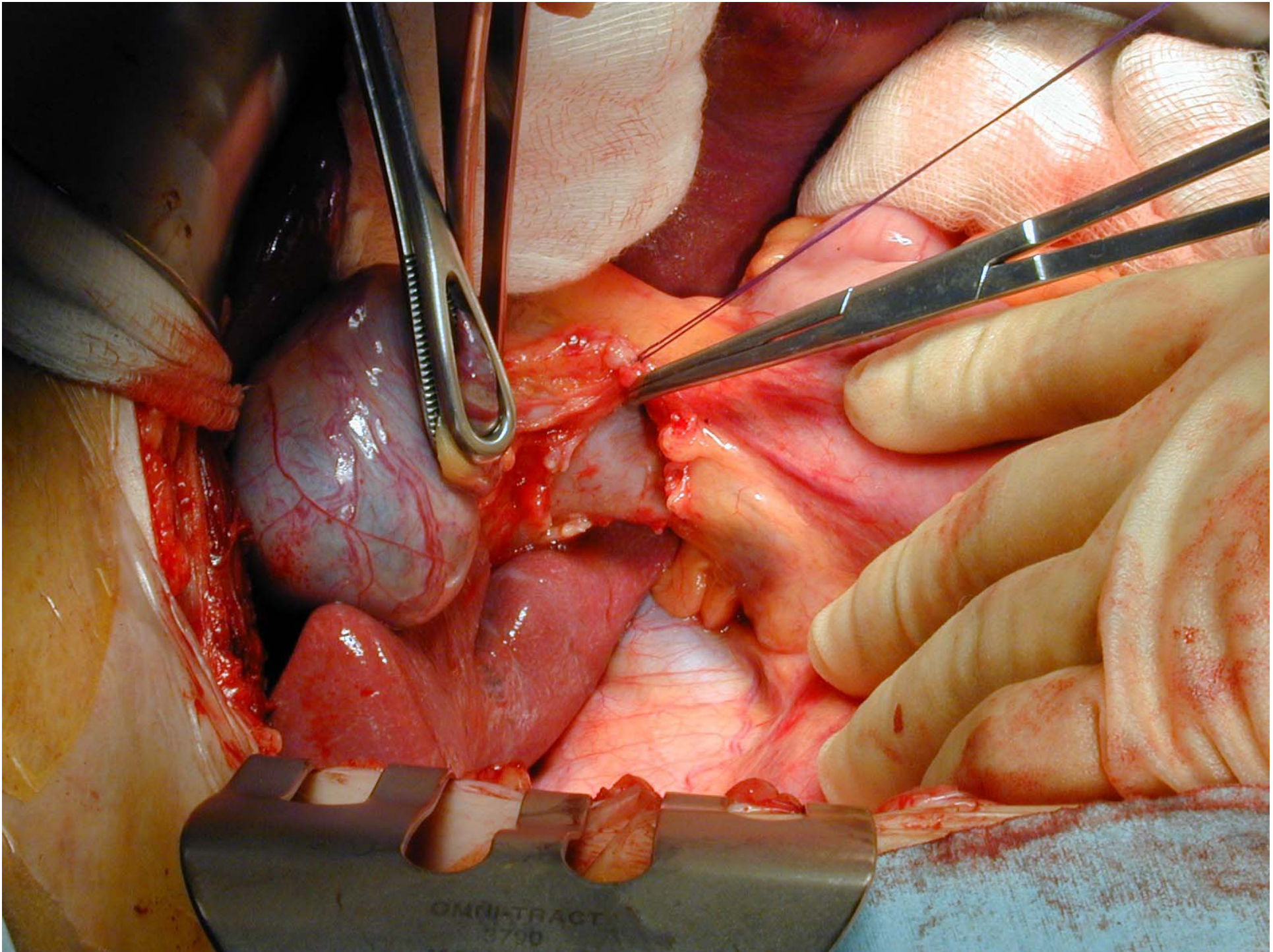




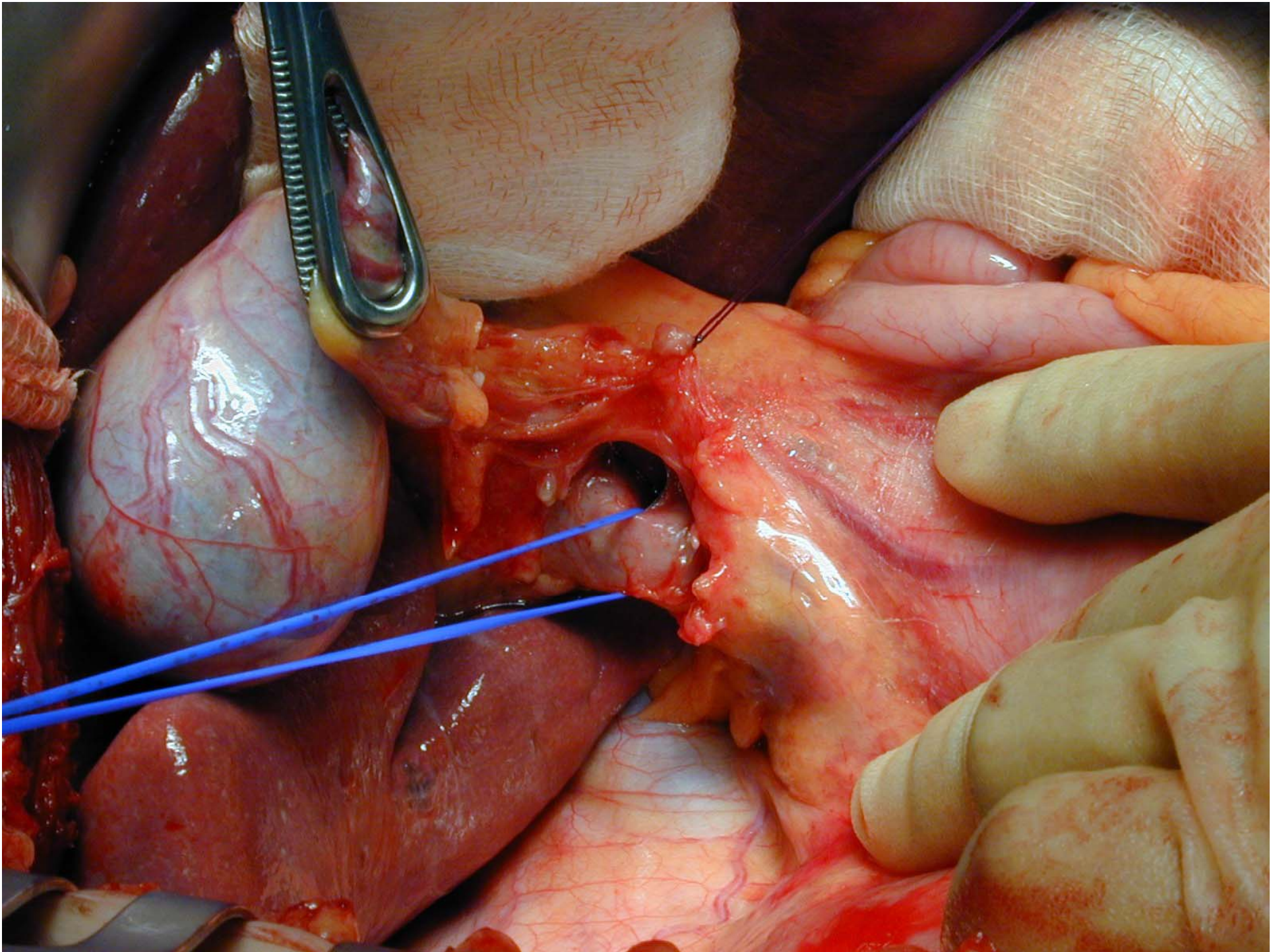




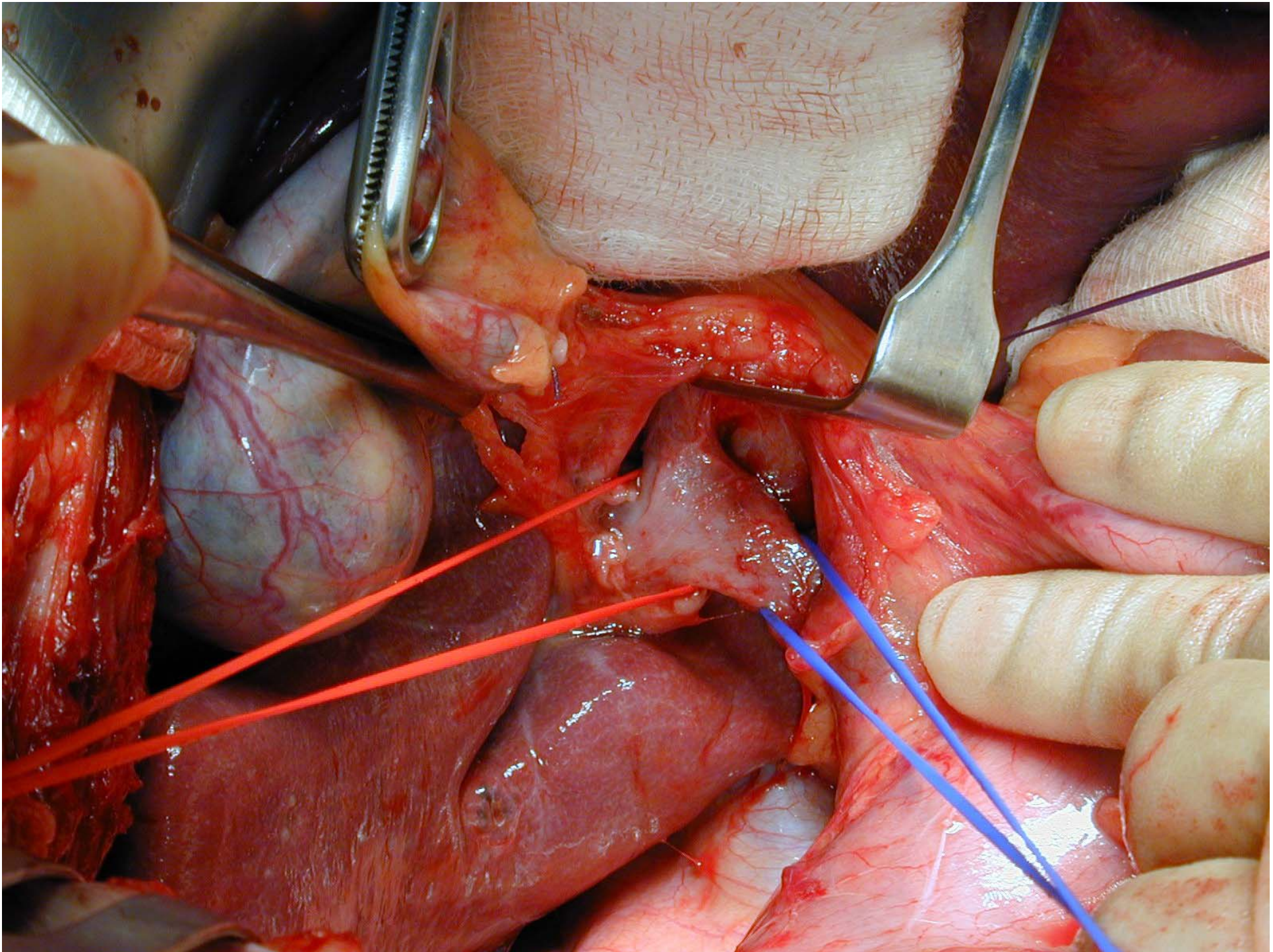




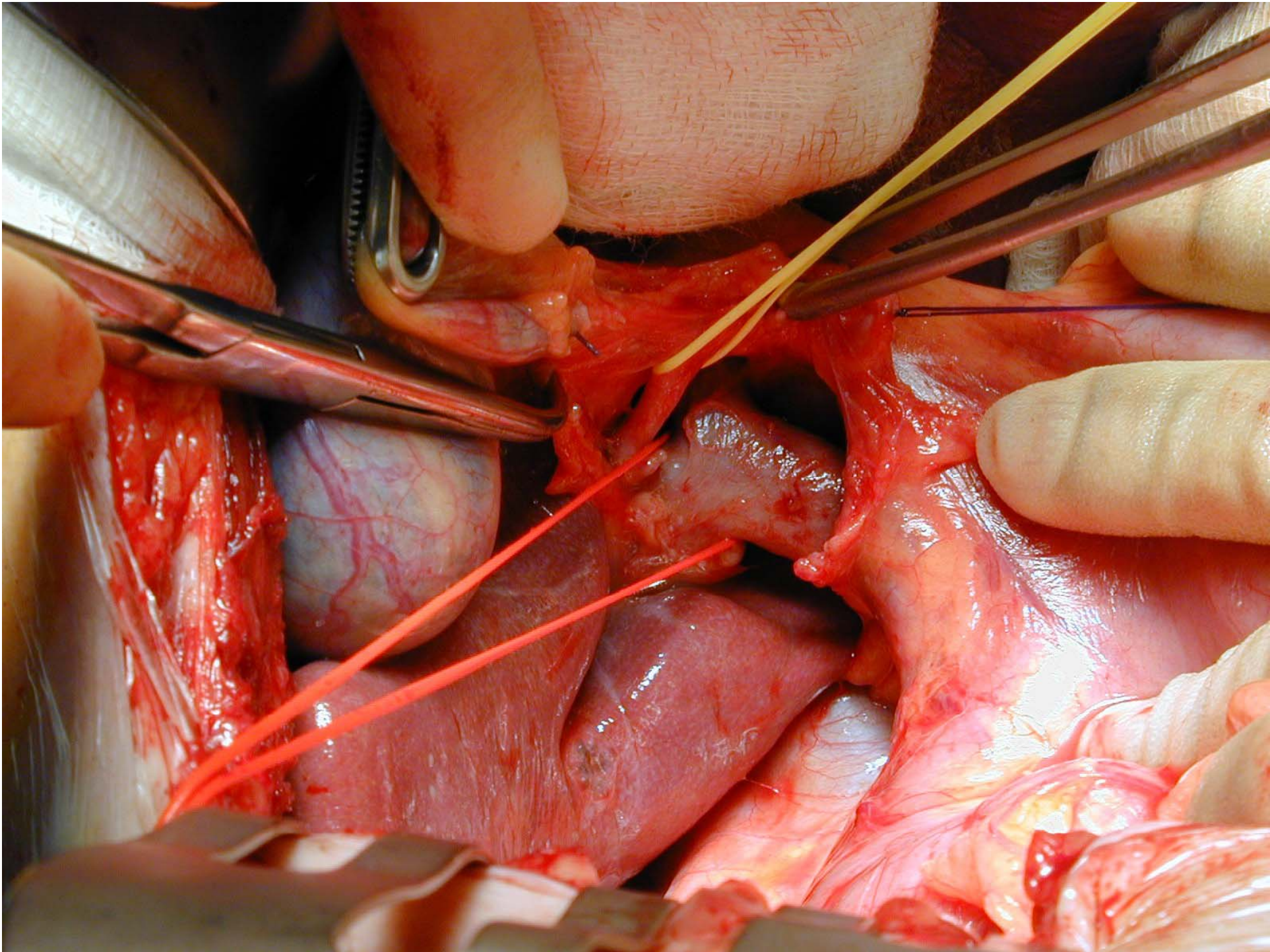




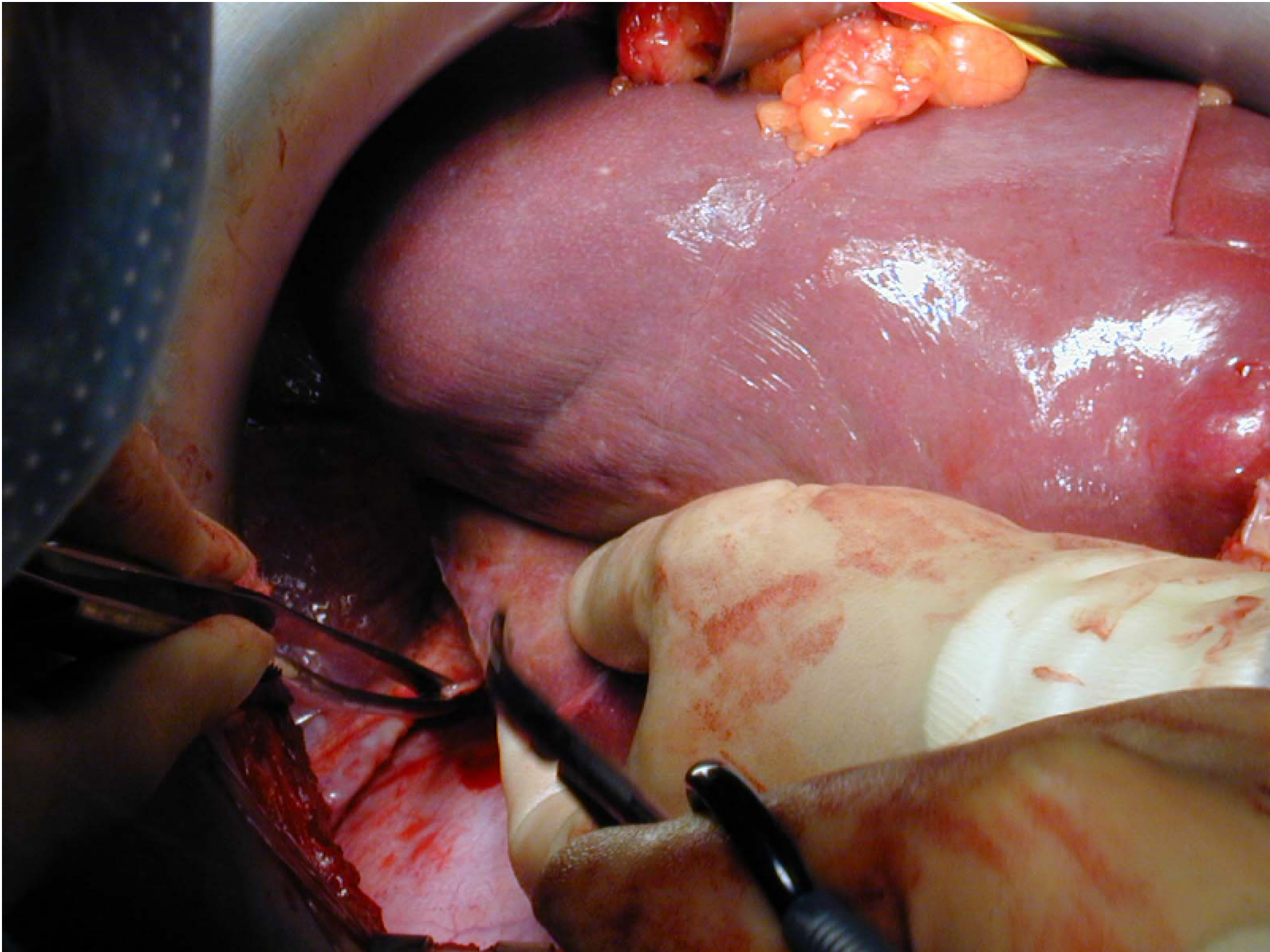




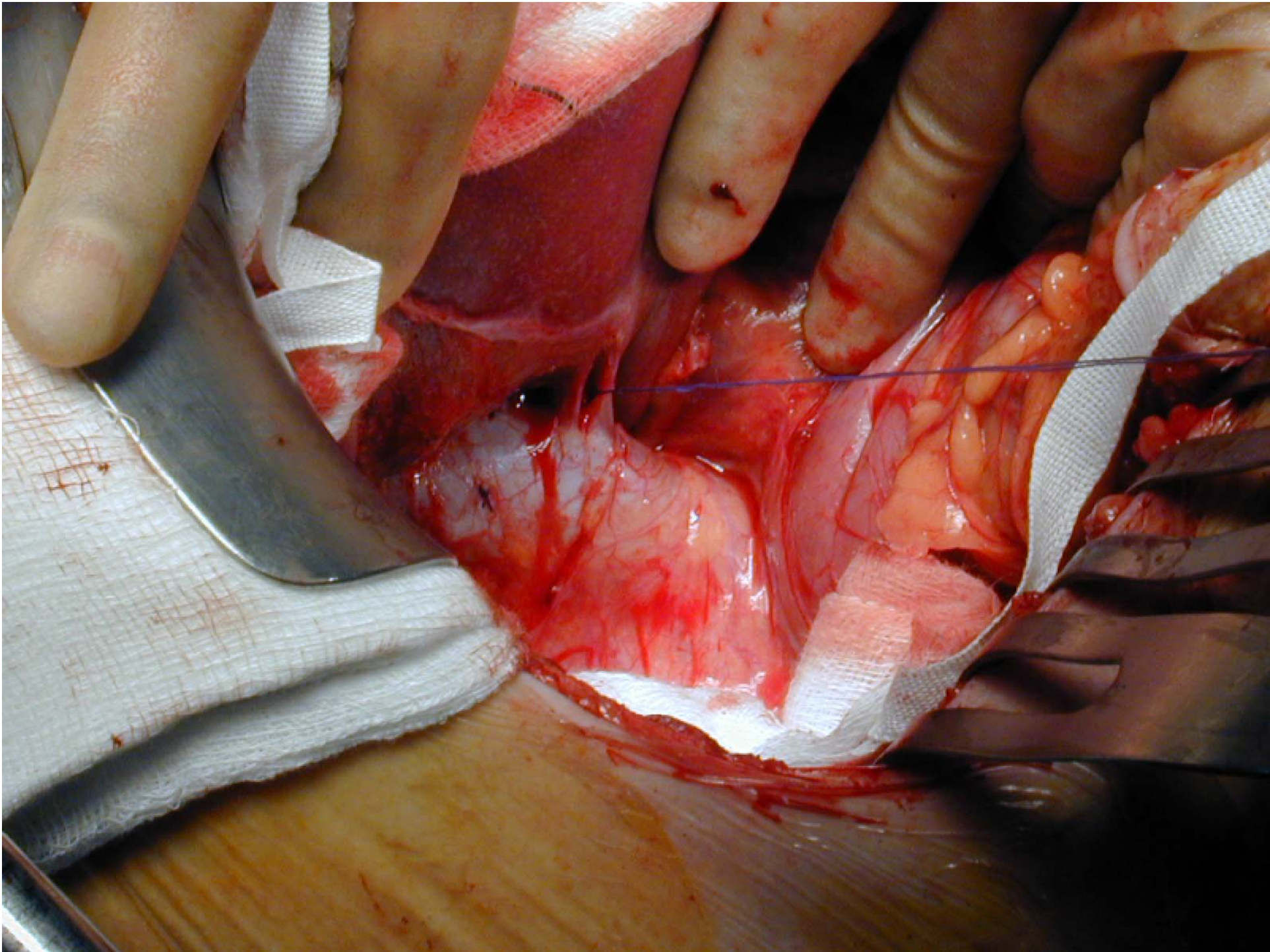




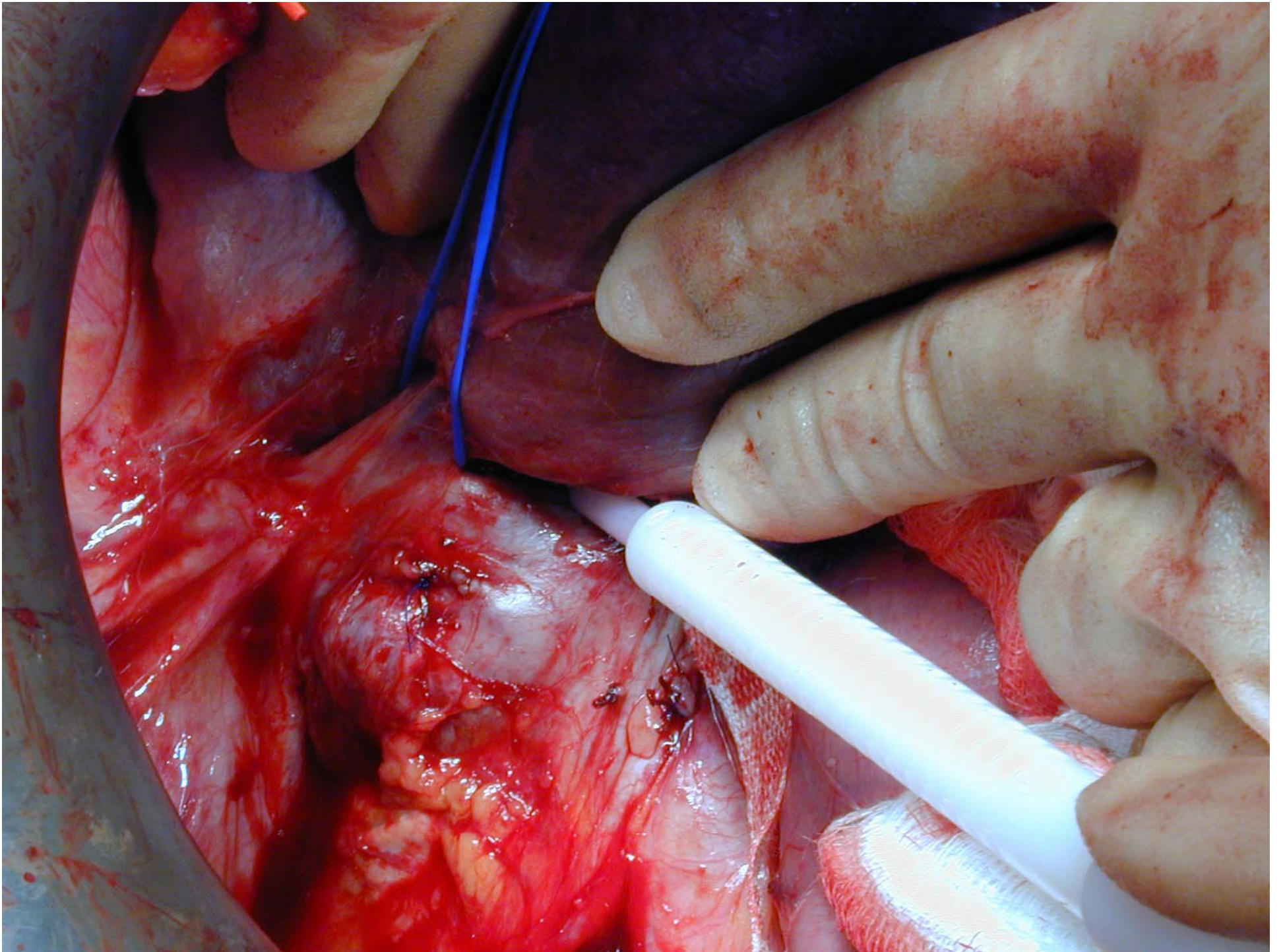




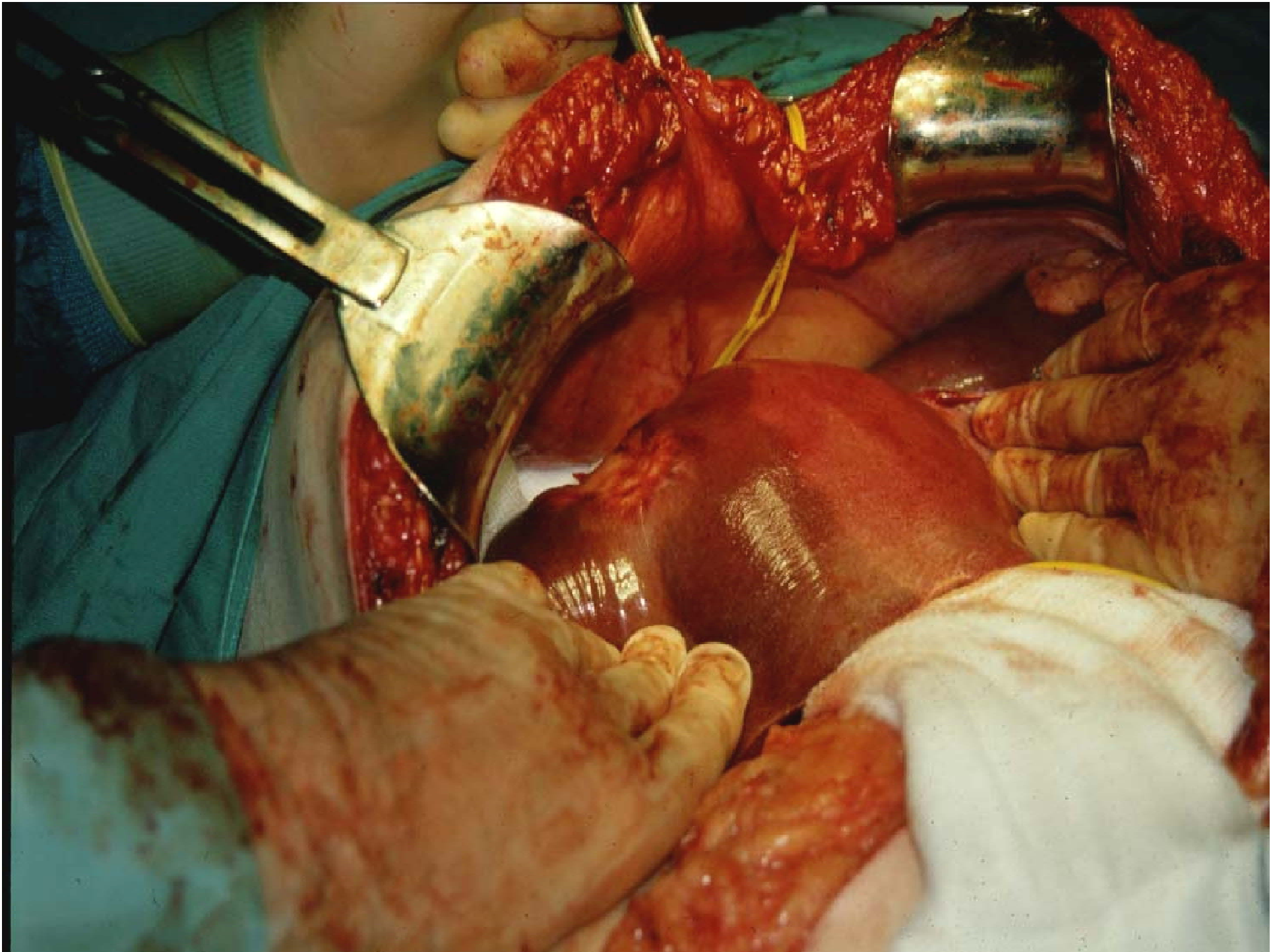


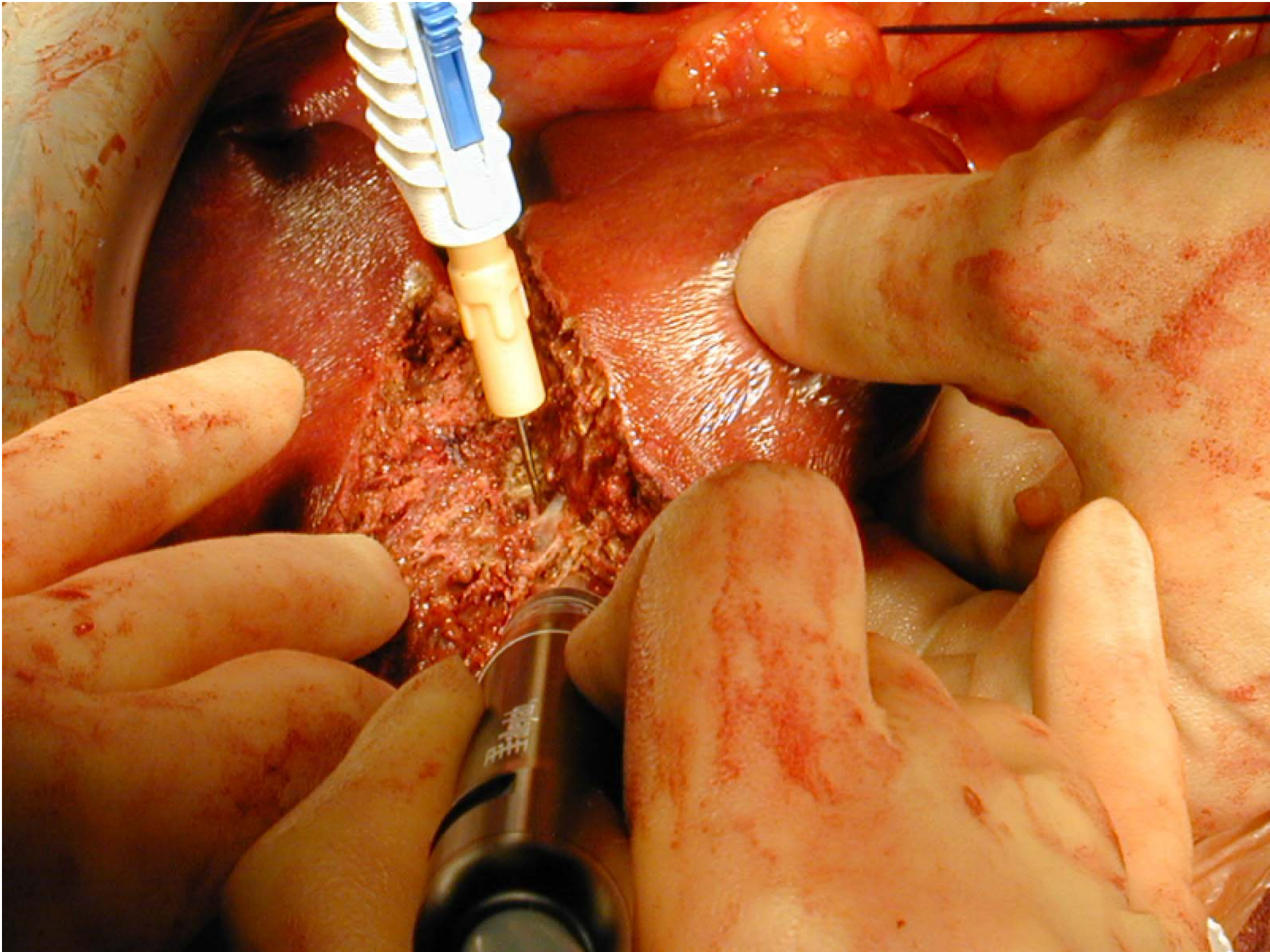




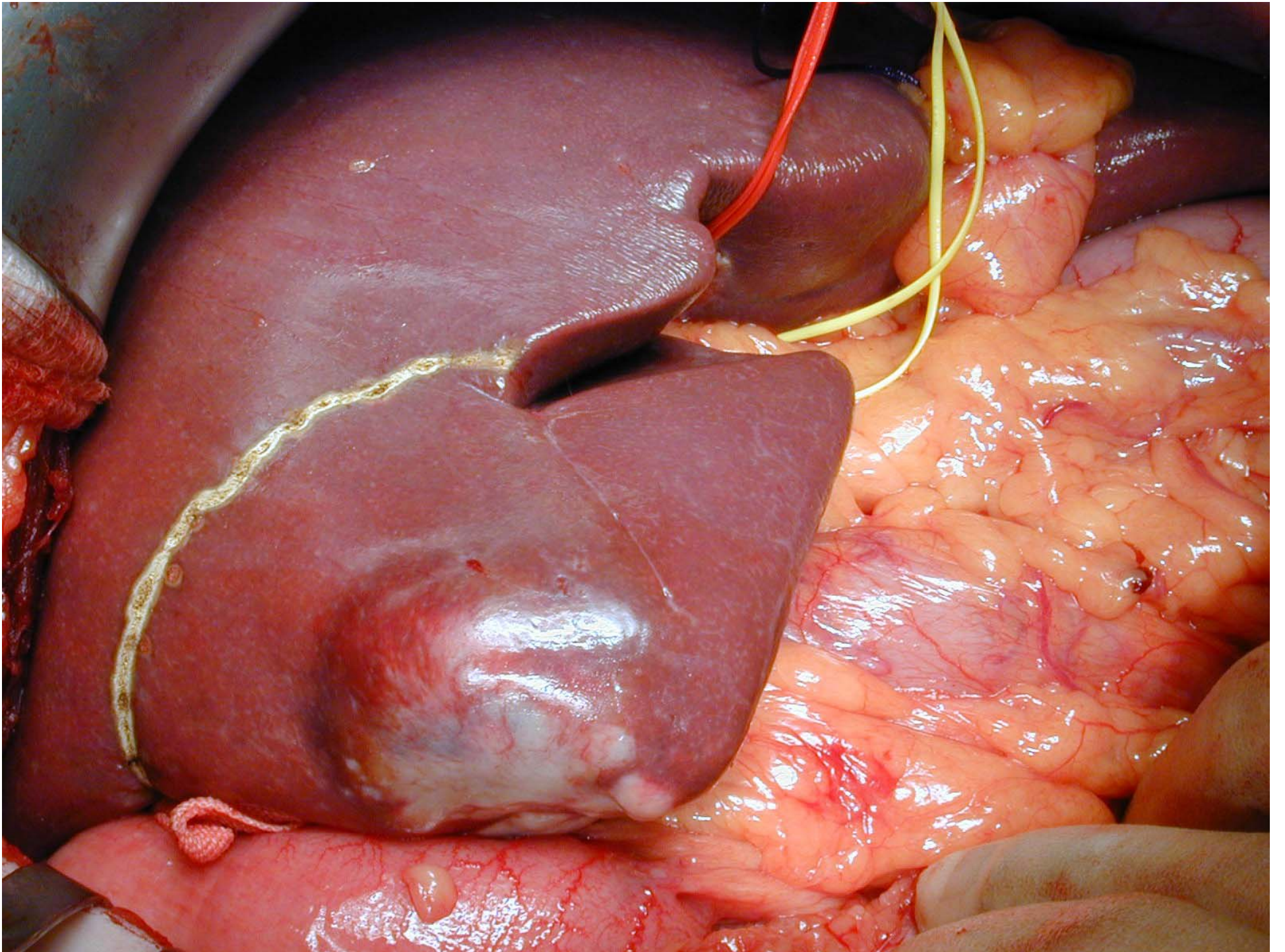




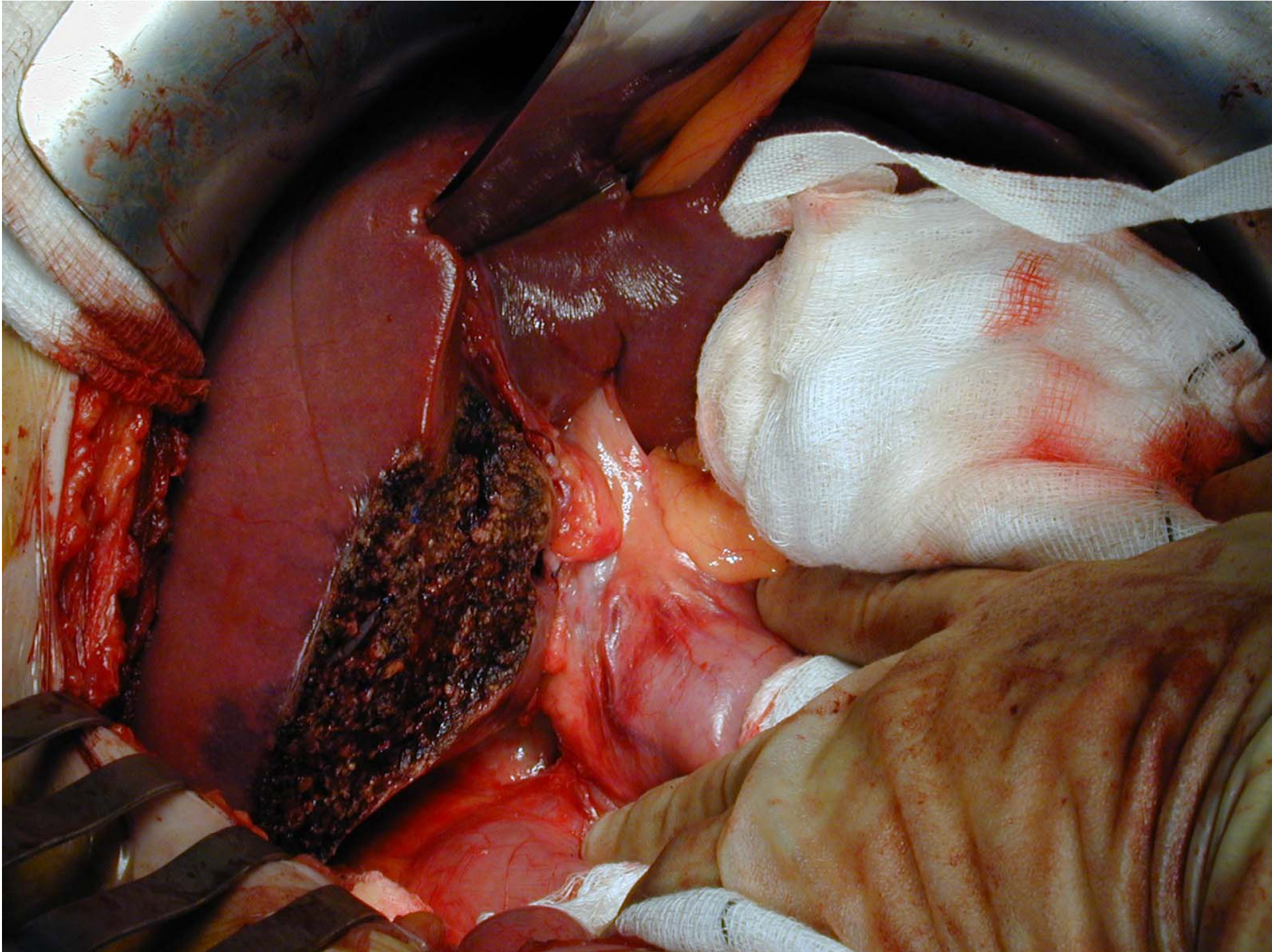








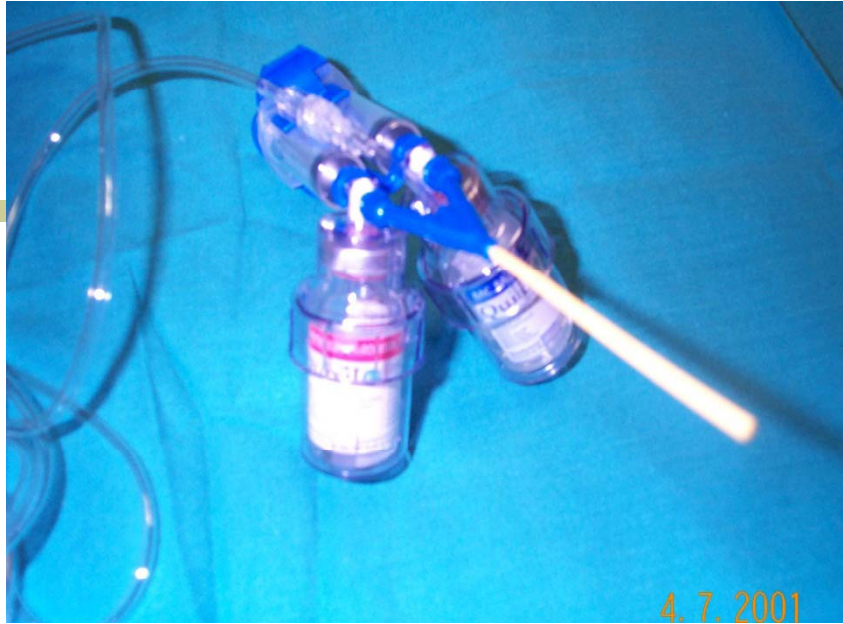




# Argon Beam Coagulation

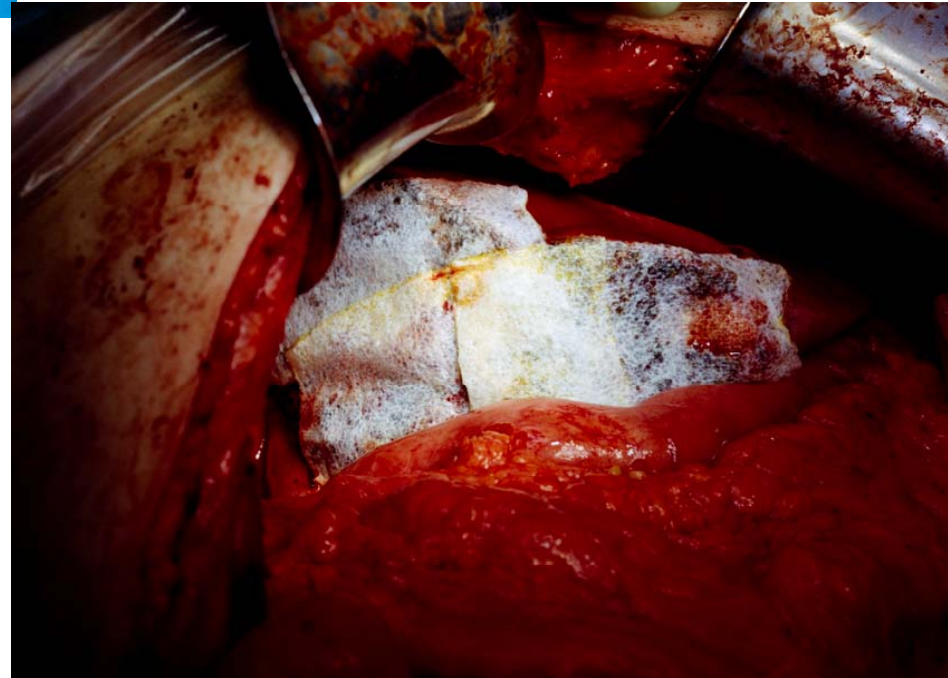






# Fibrin Glue

# Tissue Fleeces

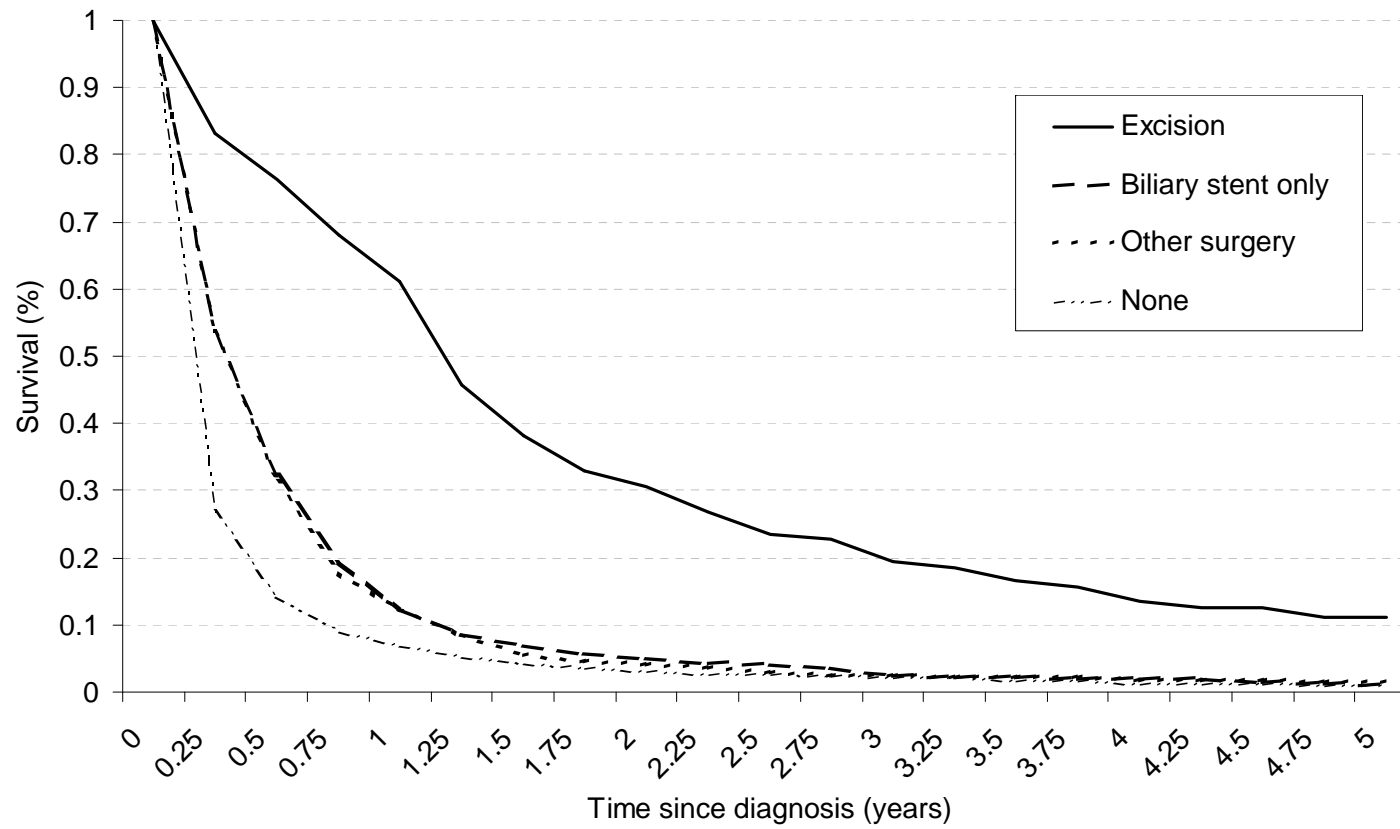


# [ Pancreatic Cancer ]

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- 10<sup>th</sup> most common cancer
- 5<sup>th</sup> most common cause of cancer death
- 7600 cases per year in UK
- Only 15-20% are resectable
- 20% 5 year survival

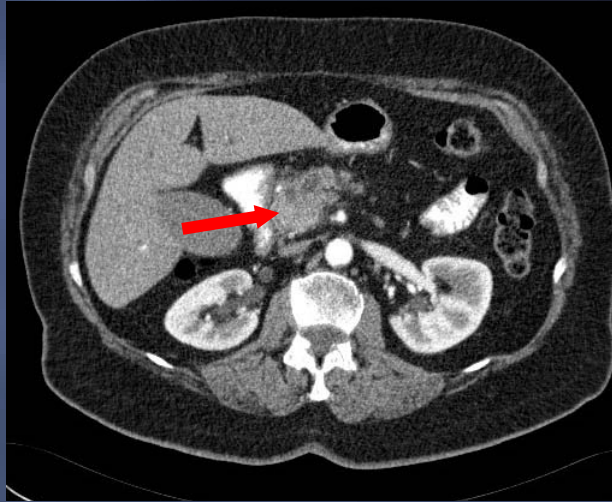
# [ Pancreatic Cancer ]



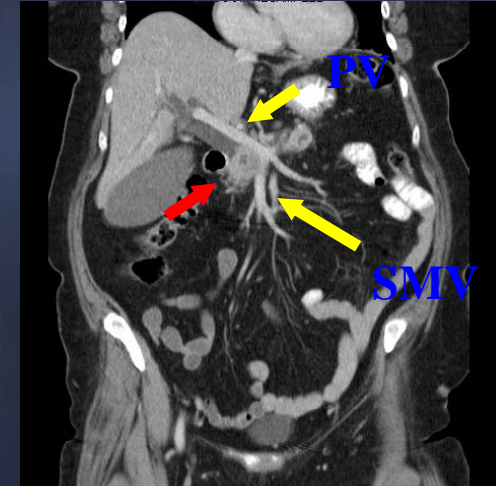


# Utility of MDR-CT

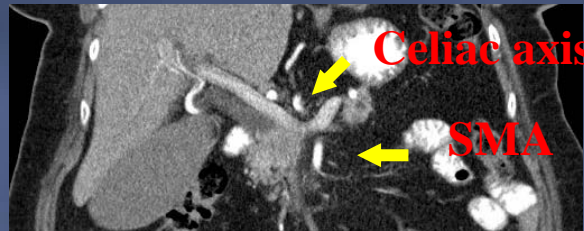
## Primary Tumor



## Venous Anatomy



## Arterial Anatomy



Sensitivity/specificity for vascular disease approx 90%+

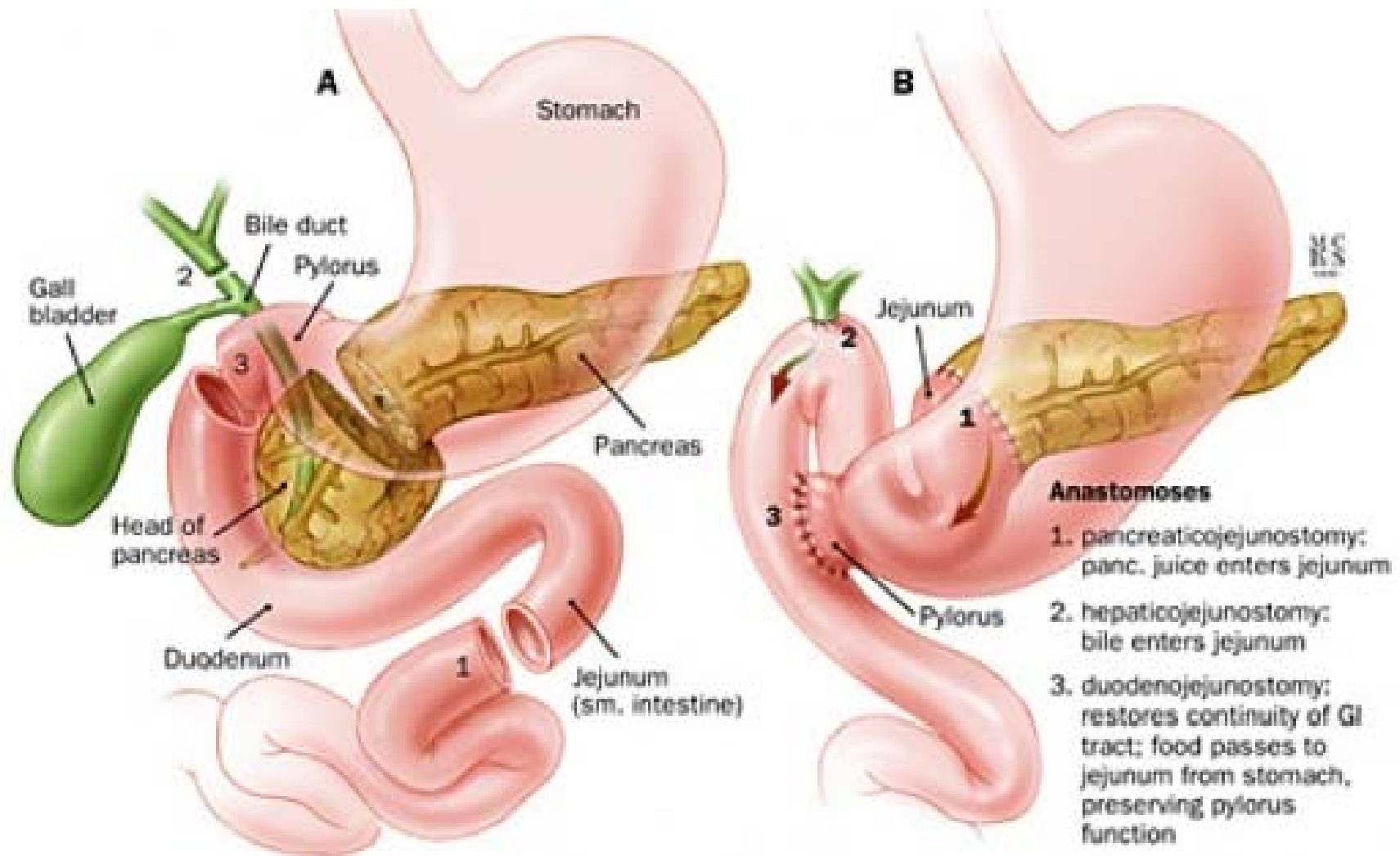
But poorer for small volume Liver and peritoneal disease



# [ Staging Laparoscopy ]

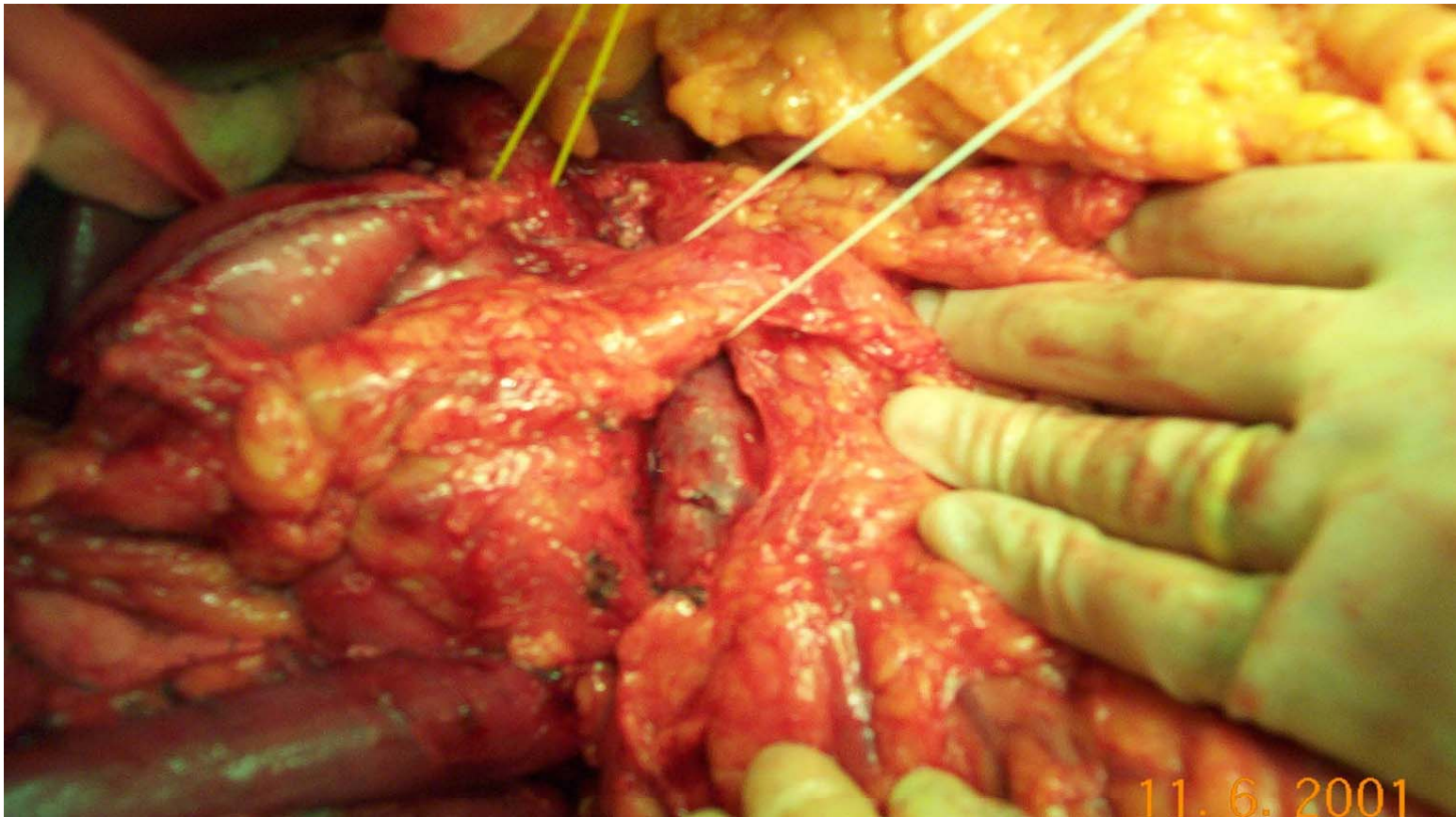


# [ Pancreatic Resection ]

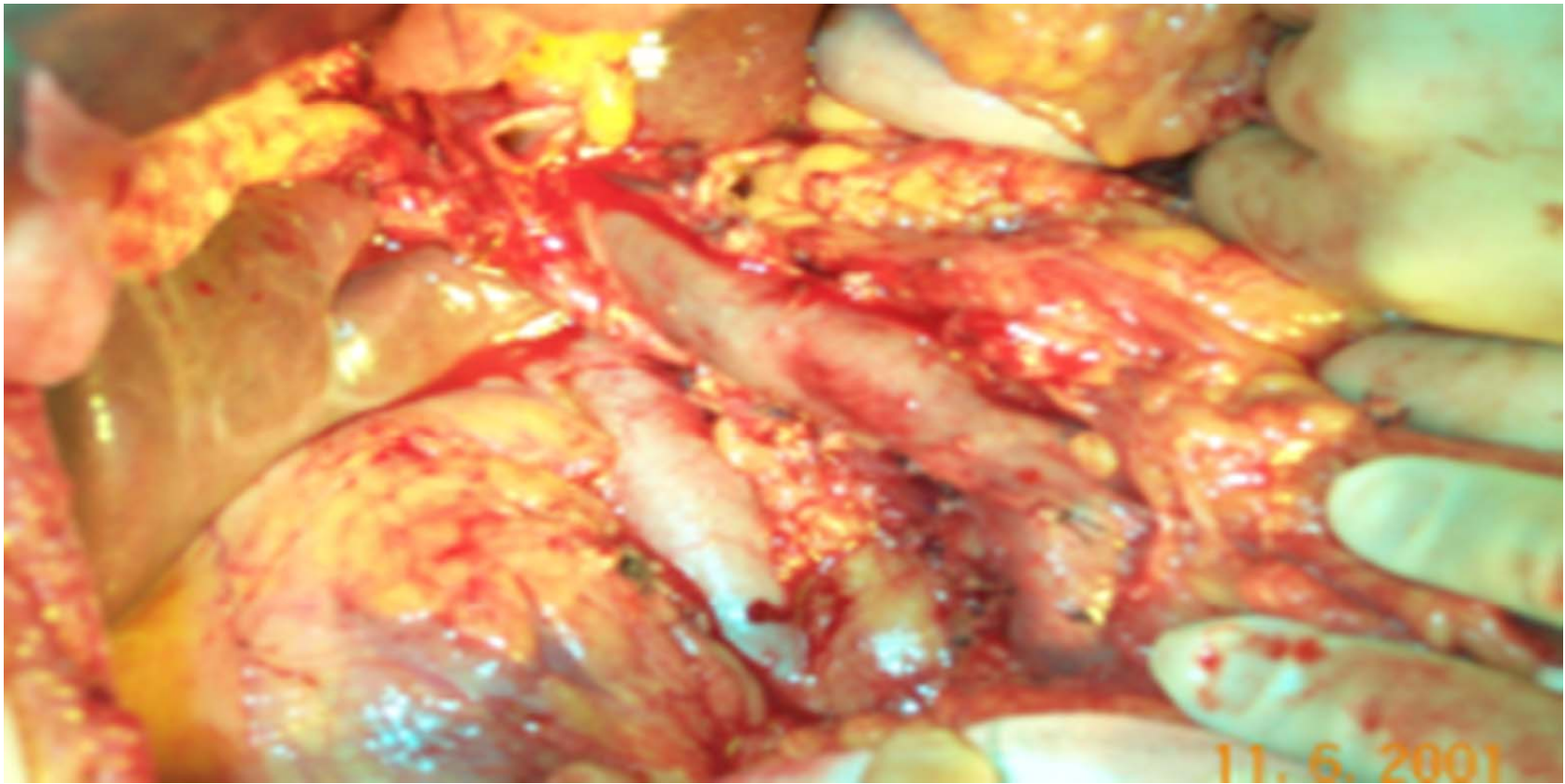




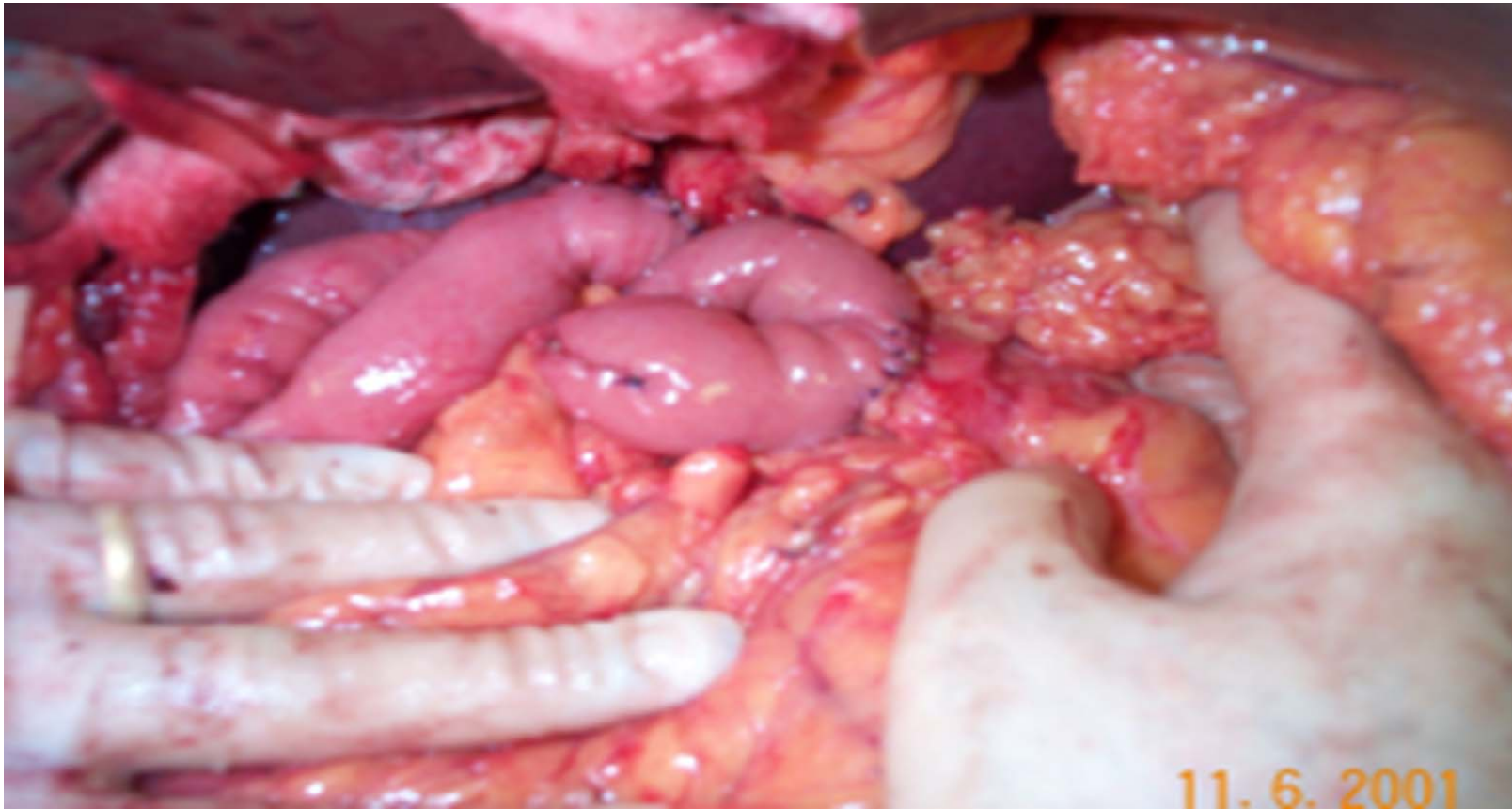
# [ Mobilisation ]



# [ Tumour Excised ]



# [ Reconstruction ]





# [ Summary ]

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- Surgical solutions to biological abnormalities
  - Inflammatory processes
  - Cancer
- Emergency & Elective presentations
- Surgeon is just one member of the multidisciplinary team