Pathology of Treated GI Neoplasia

Pathology section seminar
Liverpool DDF meeting

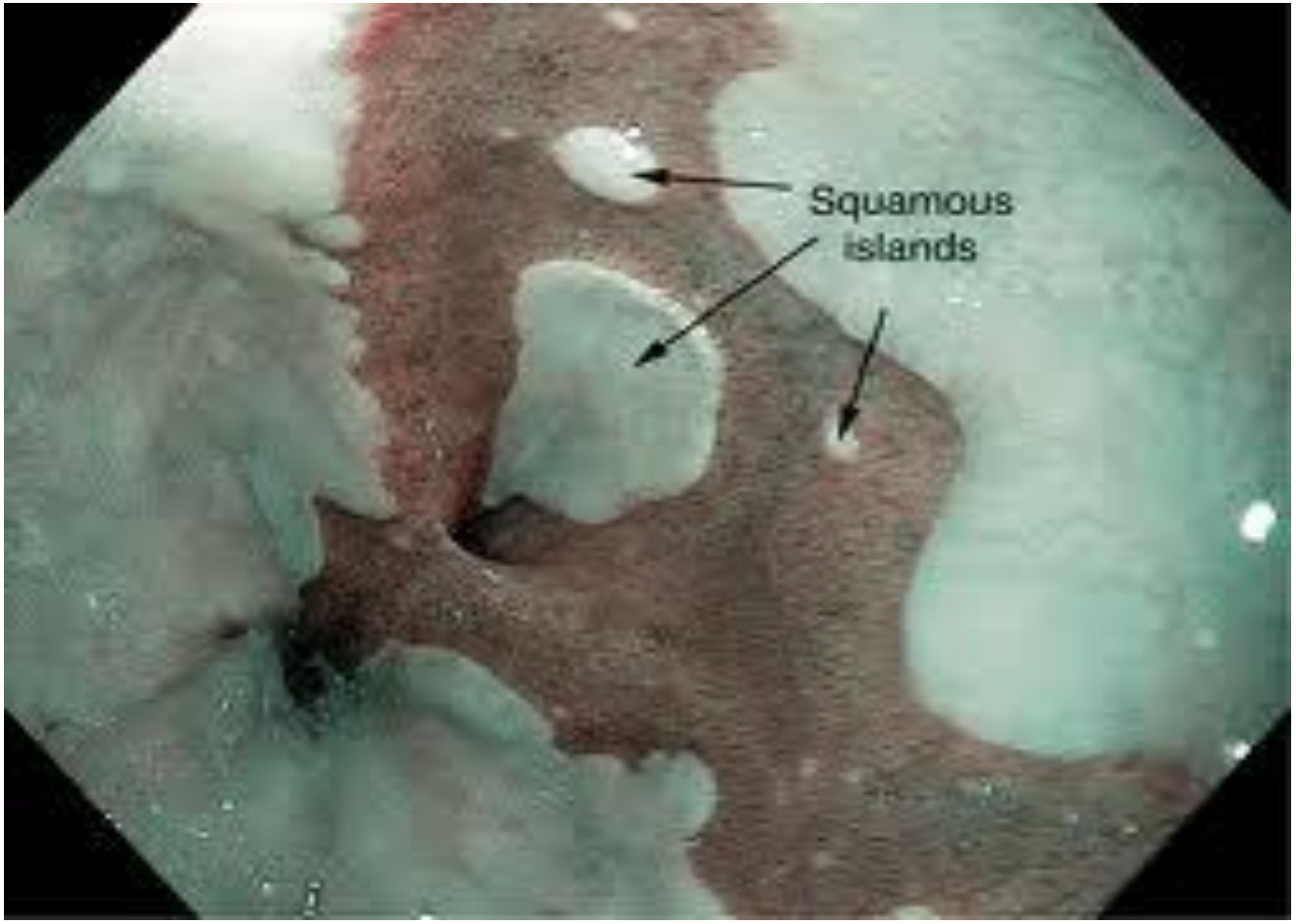
Tuesday 19th June 2012 at14:00-15:15
Venue: Hall 11c in the ACC

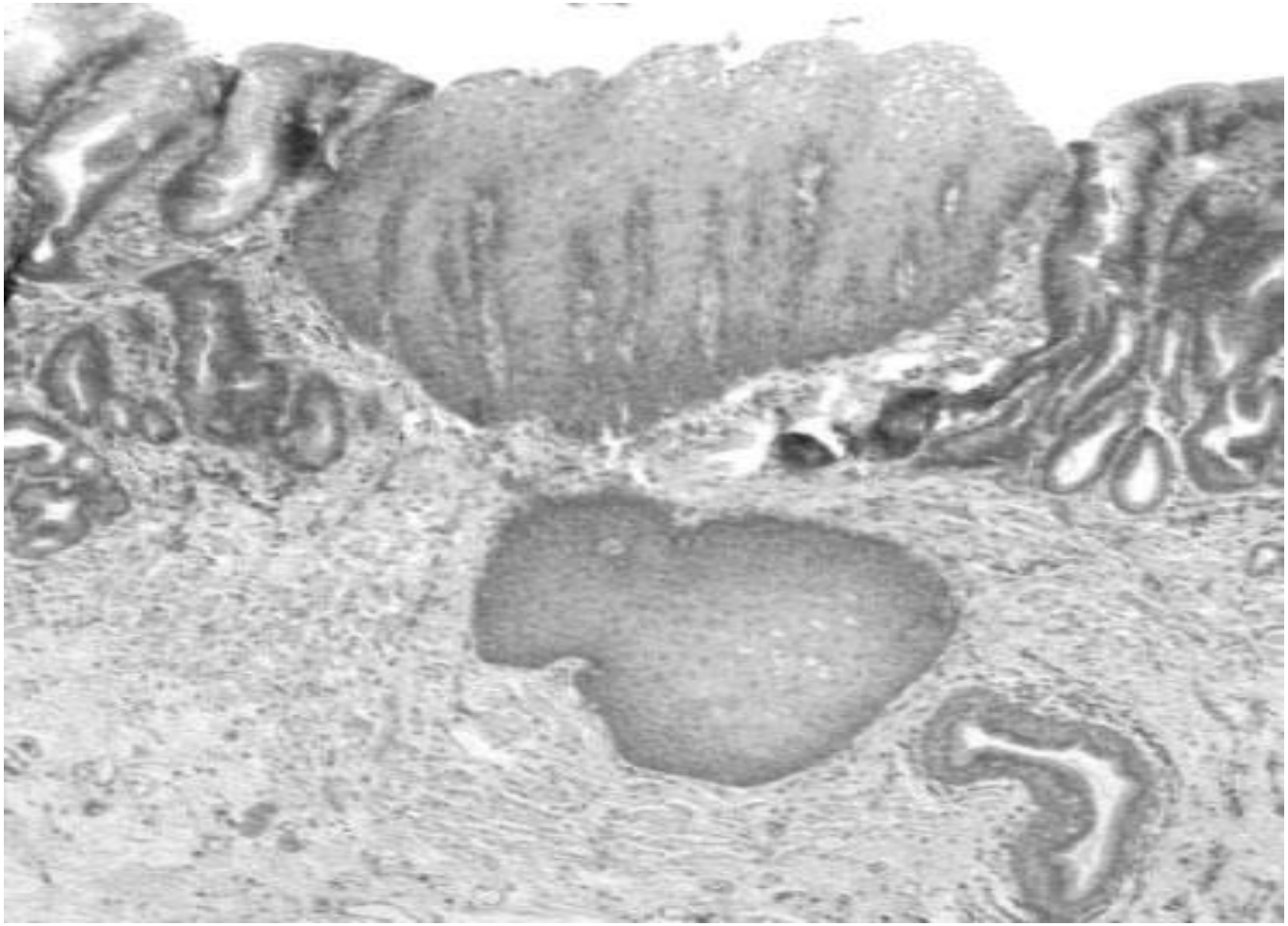
Presenters:
Phillip Kaye, Adrian Bateman,
Shaun Walsh, Norman Carr, Judy Wyatt

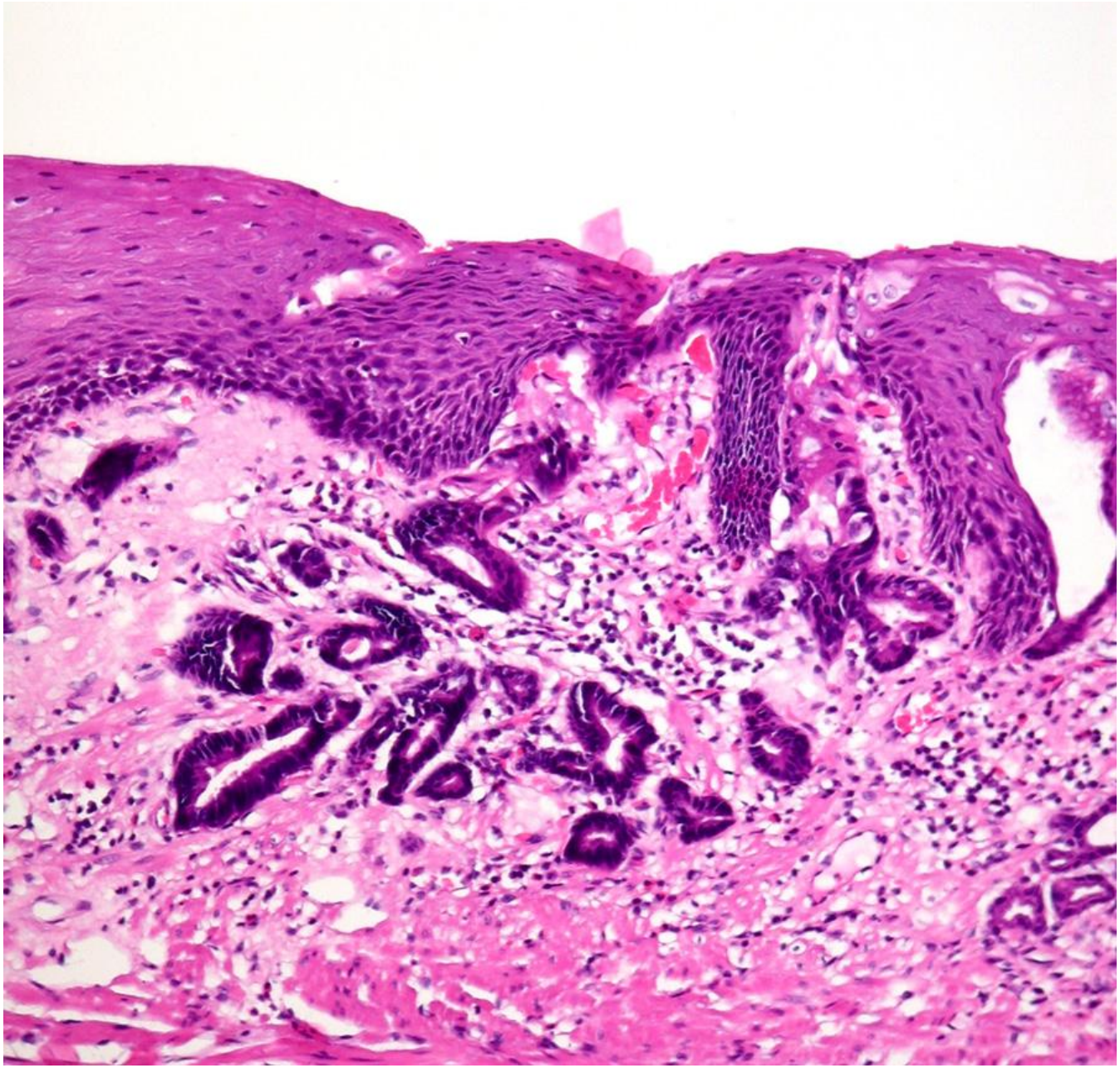
Treated Barrett’s

Philip Kaye
NUH

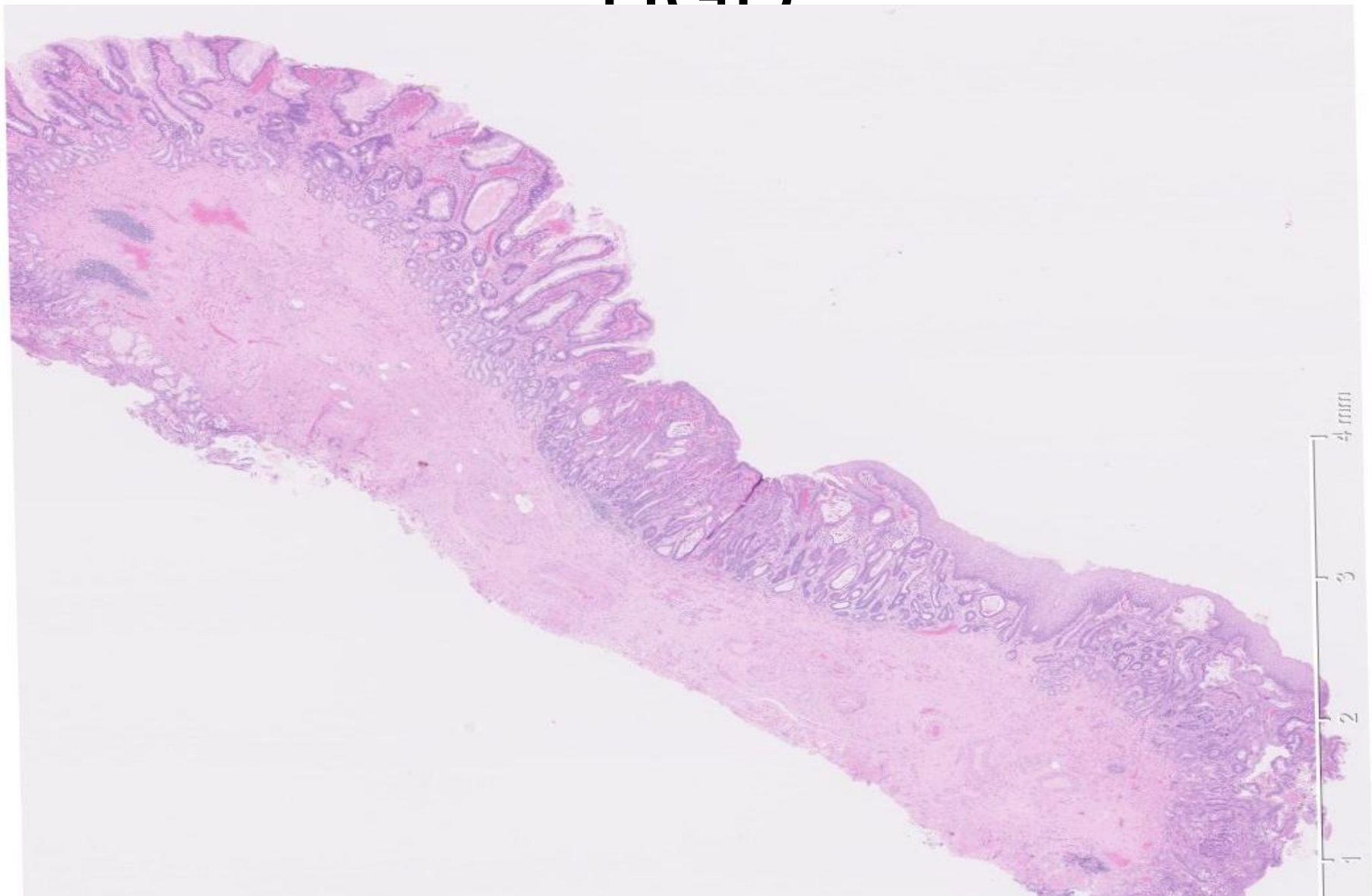
55 year old man on long standing Barrett's surveillance

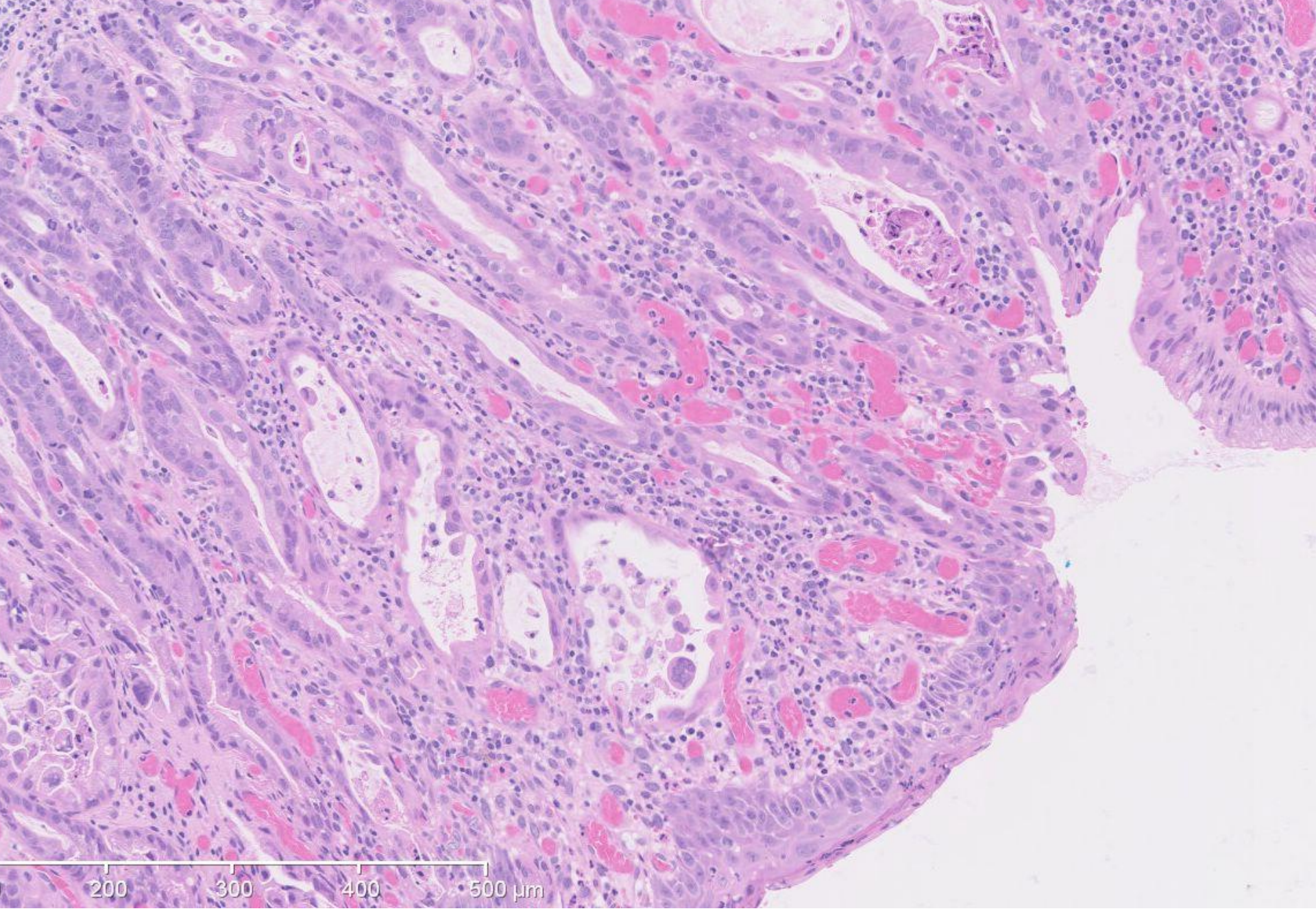






62 year old man – EMR for HGD




200
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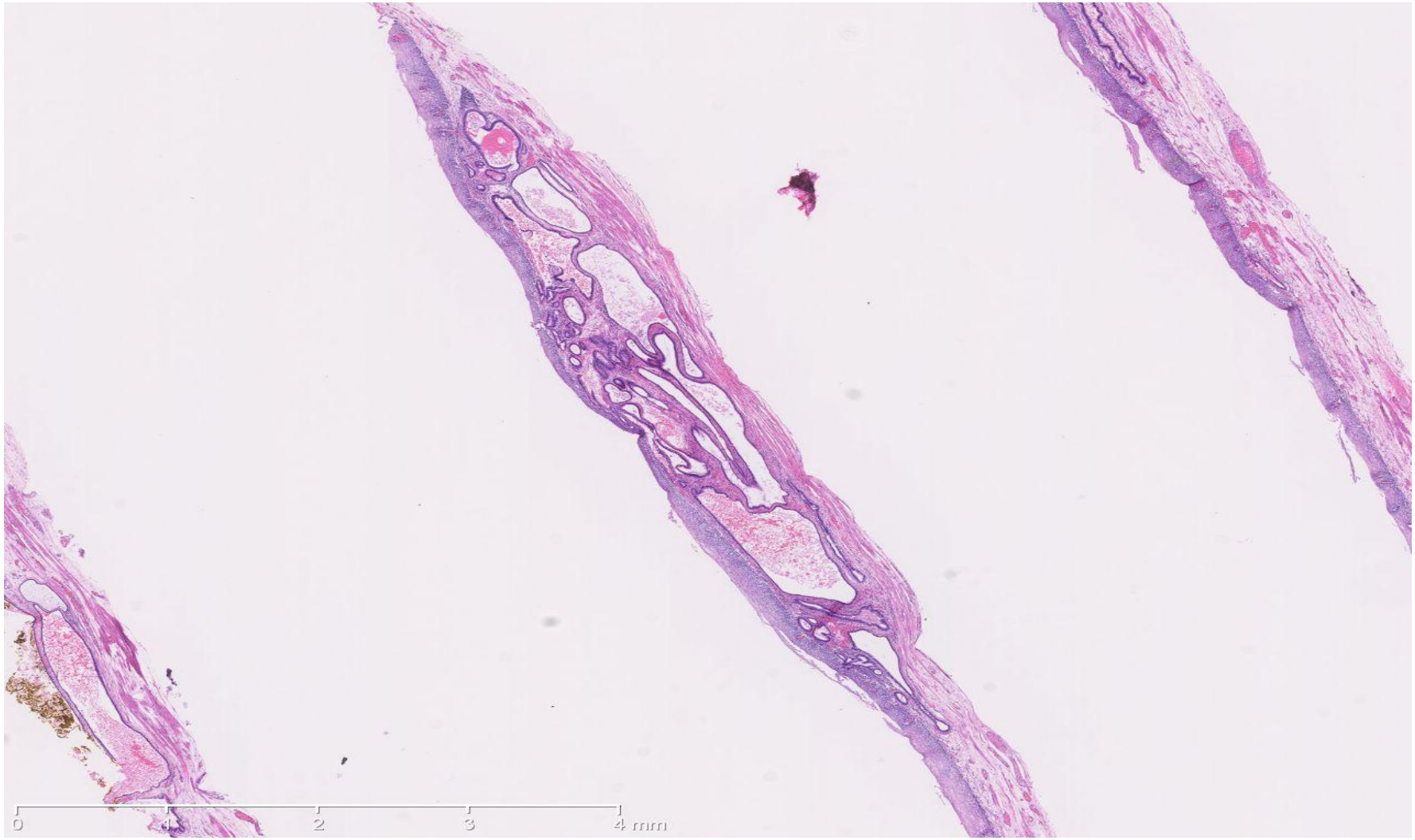
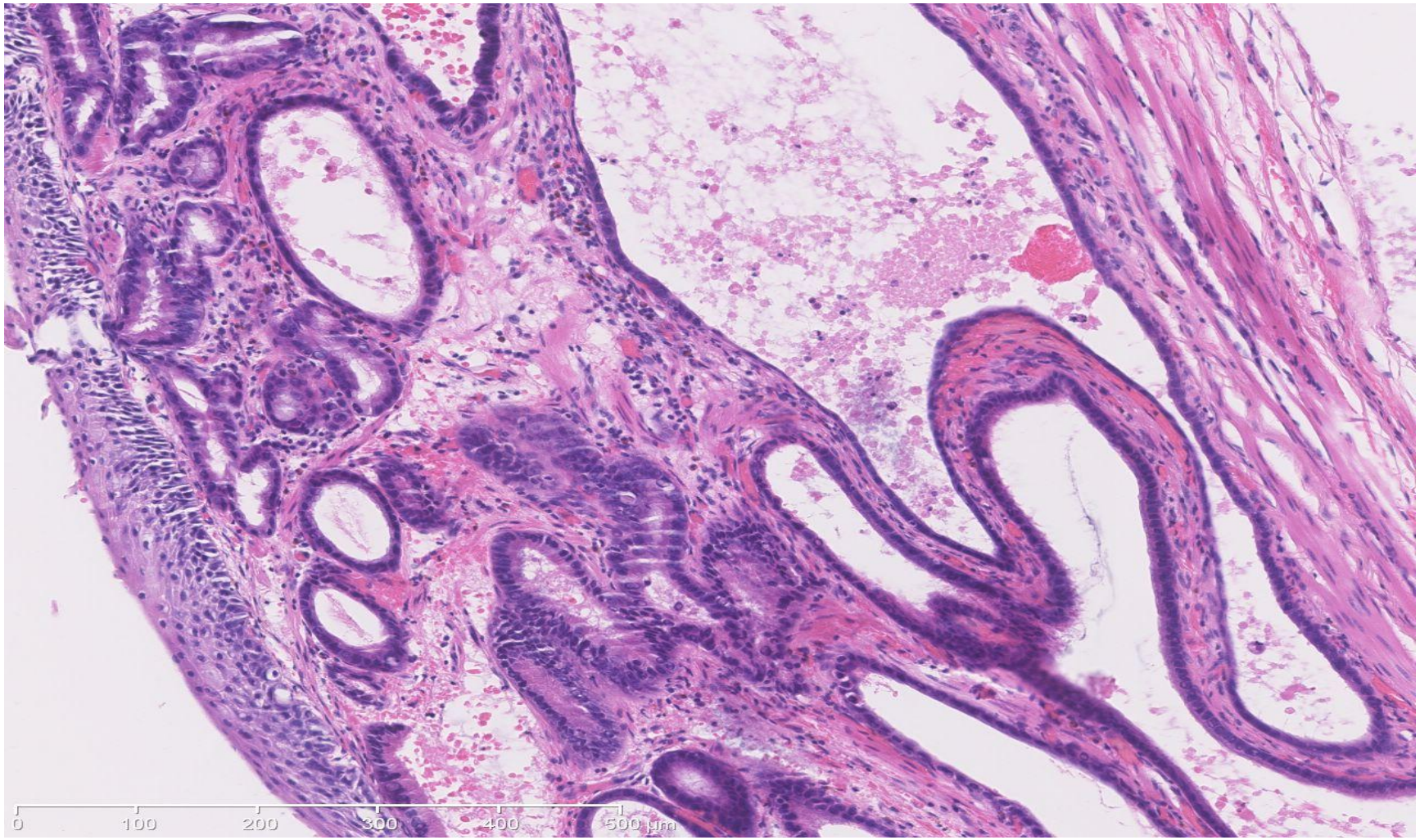
400
500 µm

50 year old man- nodule post RFA for LGD

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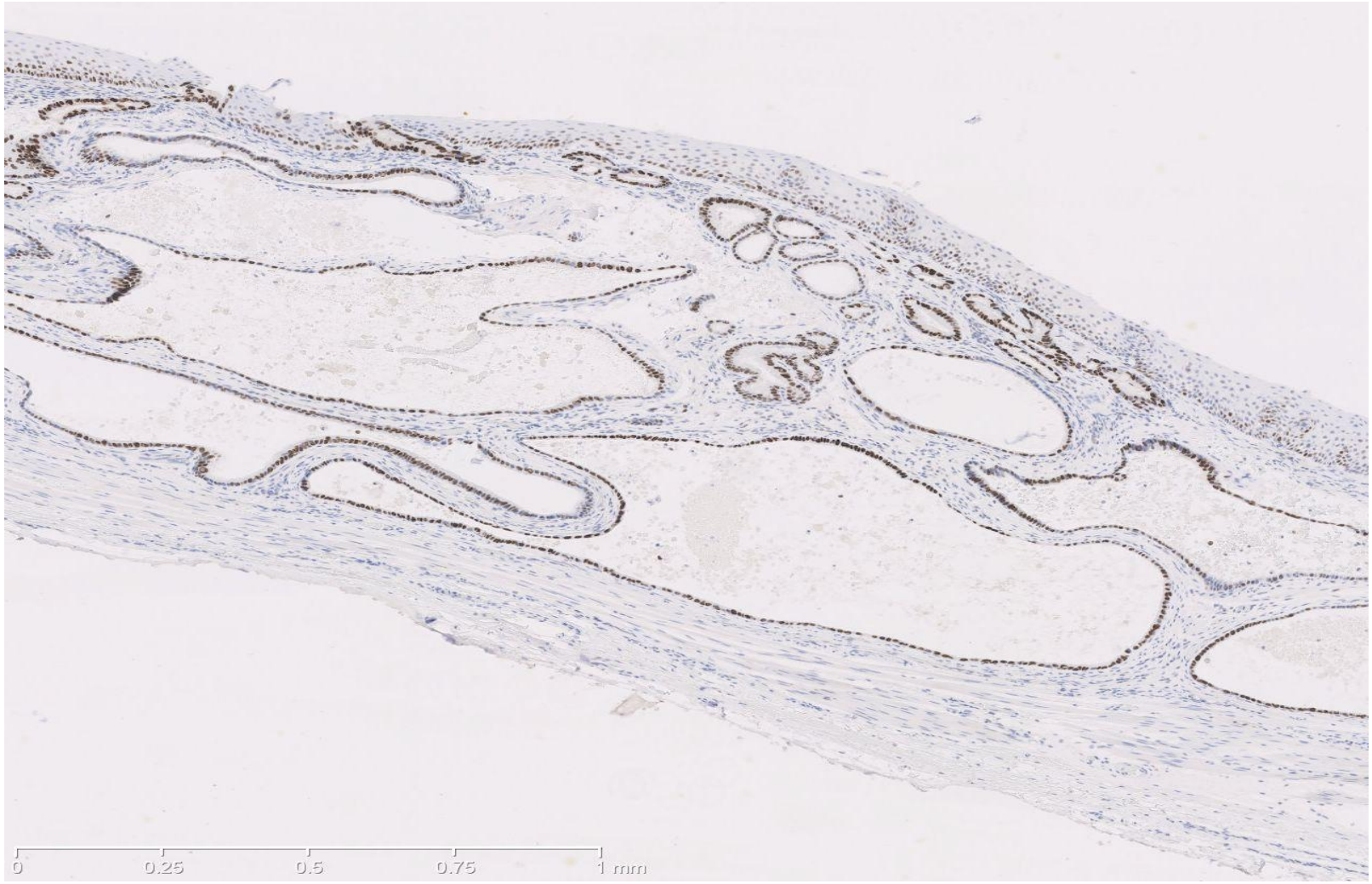
p53



BSG/DDF 2012
Pathology Slide Seminar

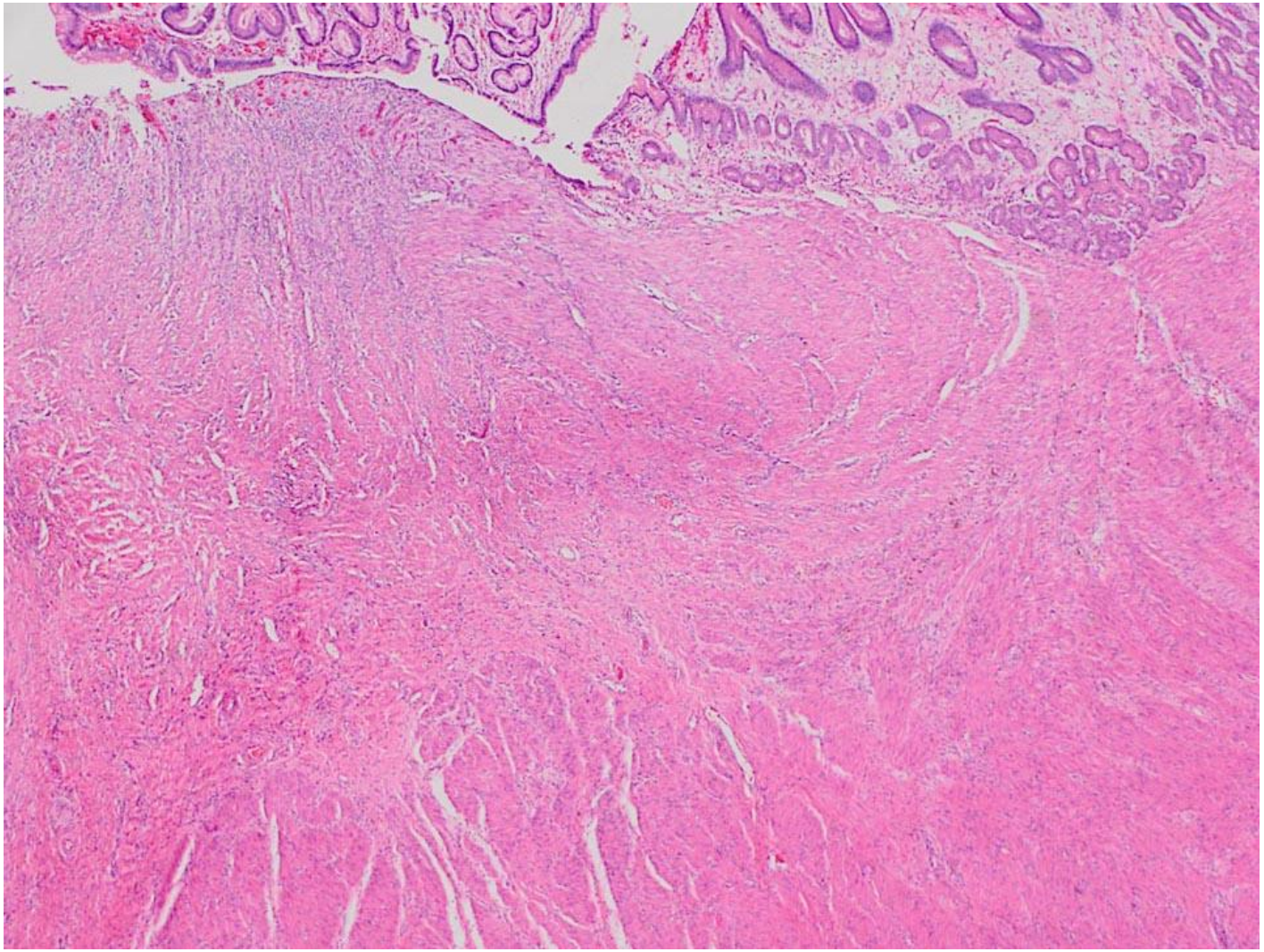
Dr Adrian C Bateman

Southampton University Hospitals
NHS Foundation Trust

History

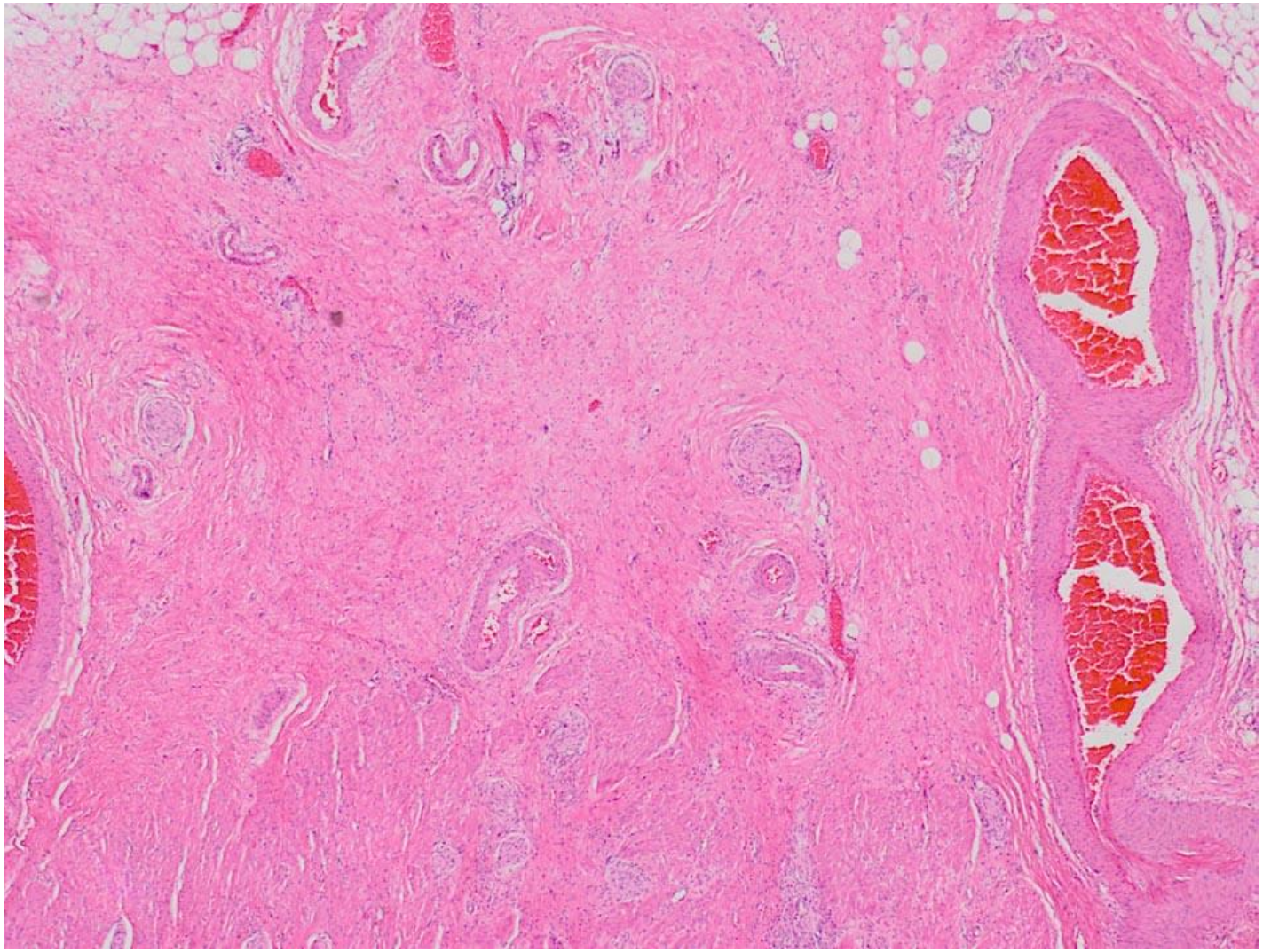
- 56 year old man
- Refractory dysphagia following treatment for upper GI malignancy
- Gastrectomy performed
- Sections are from stomach wall

Mucosal aspect



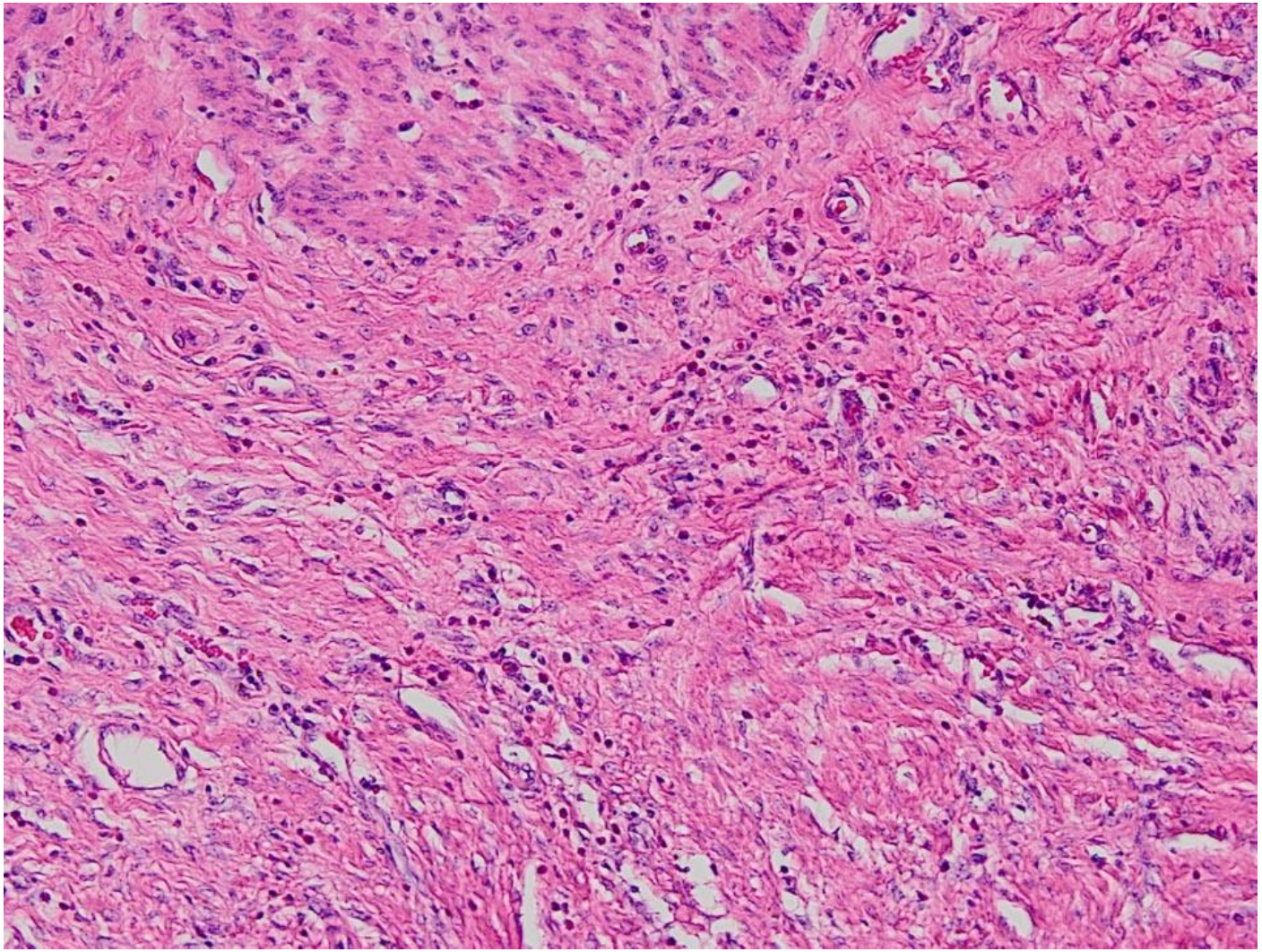
Southampton Cellular Pathology

Serosal aspect



Southampton Cellular Pathology

Muscularis propria



Southampton Cellular Pathology

GIST treated with TKIs
Three cases

Dr Shaun Walsh

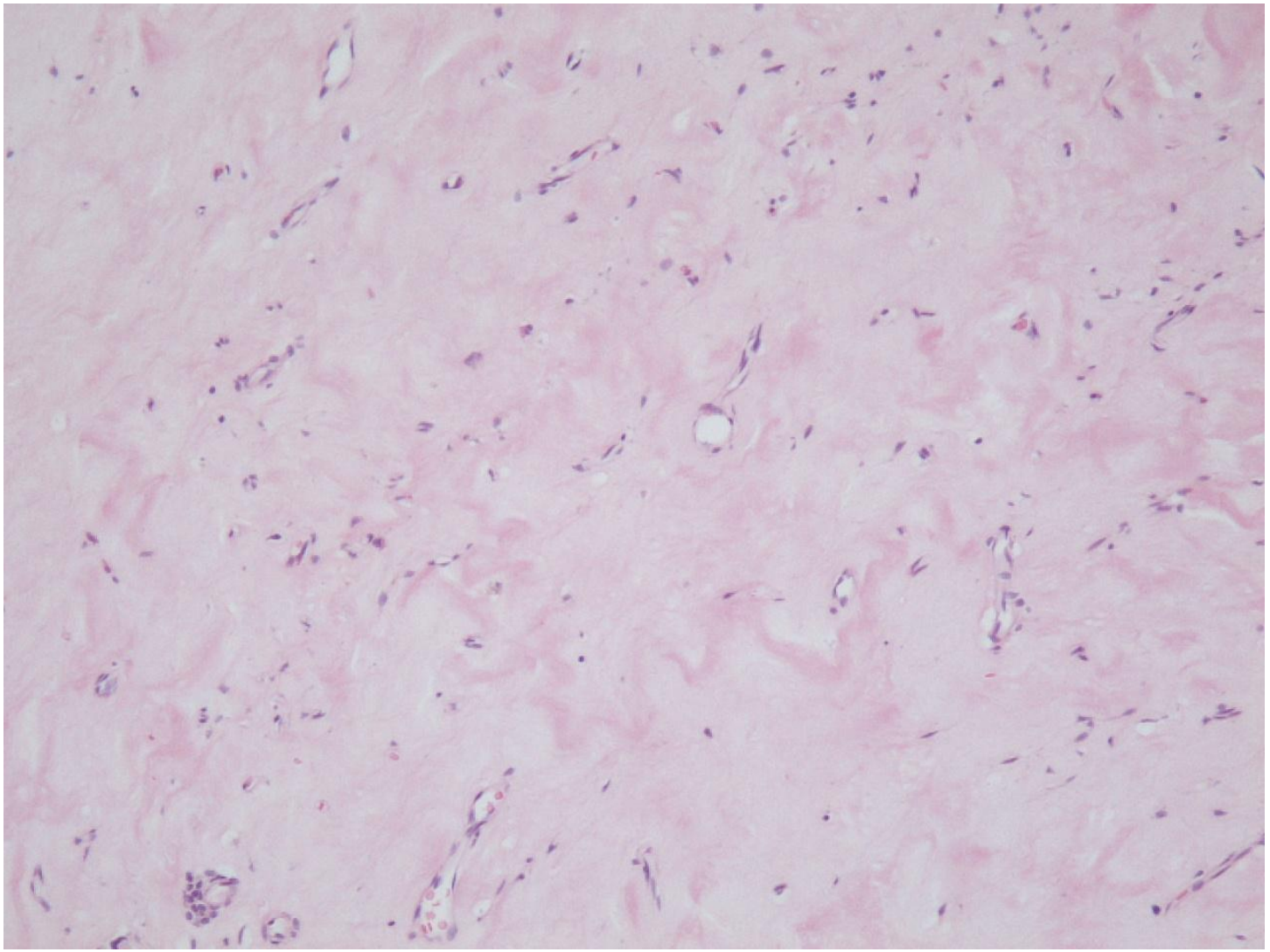
Ninewells Hospital

Dundee

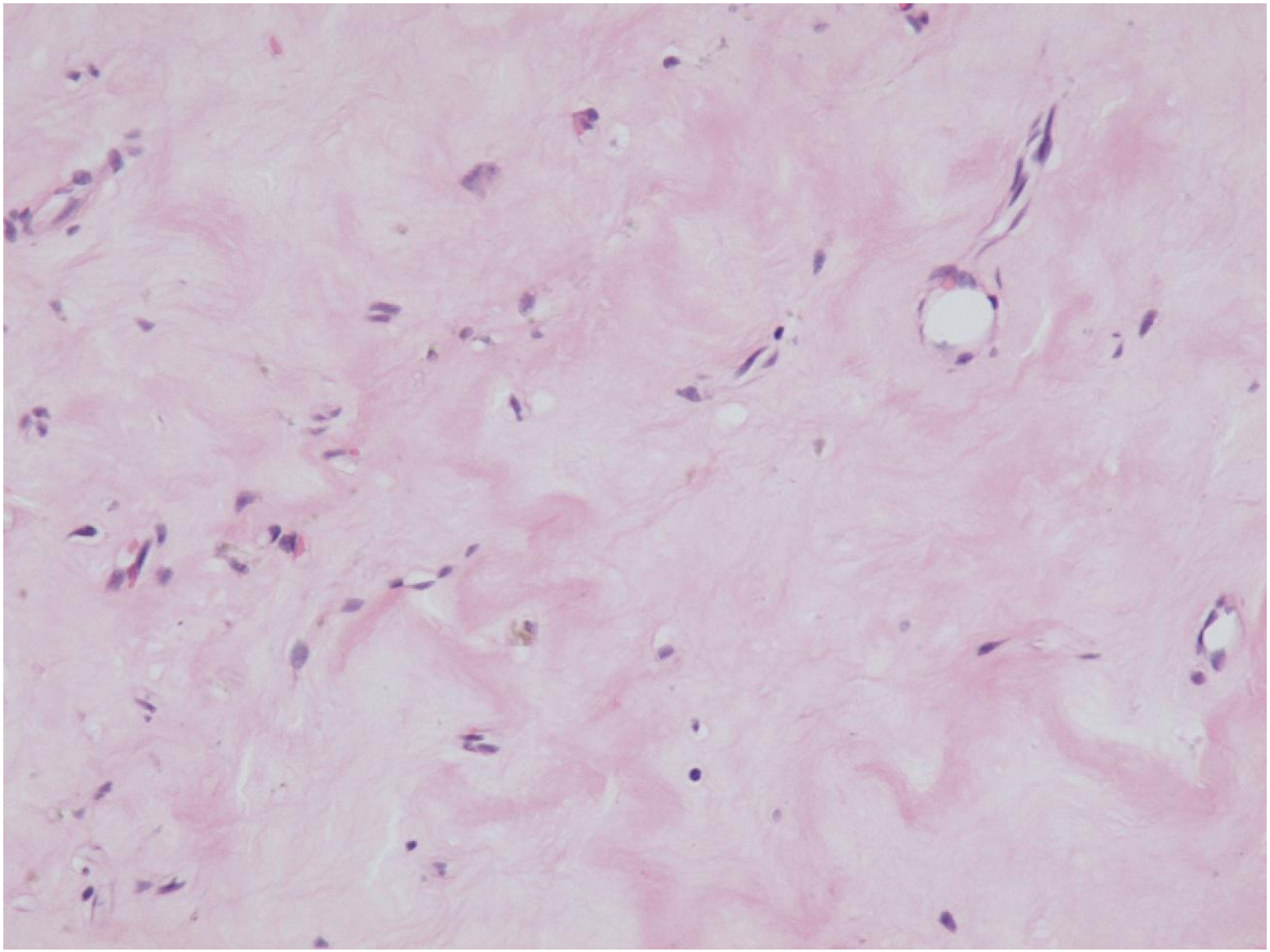
Case 1

- Male patient, age 43 yrs.
- Dx with gastric GIST 1 year ago
- KIT positive on biopsy.
- Tyrosine kinase therapy for 10 months to ‘shrink tumour’ and avoid total gastrectomy
- Tumour decreased very little in size but limited gastrectomy achieved
- Any evidence of response and can you do mutation analysis now please?

Resected tumour after TKI



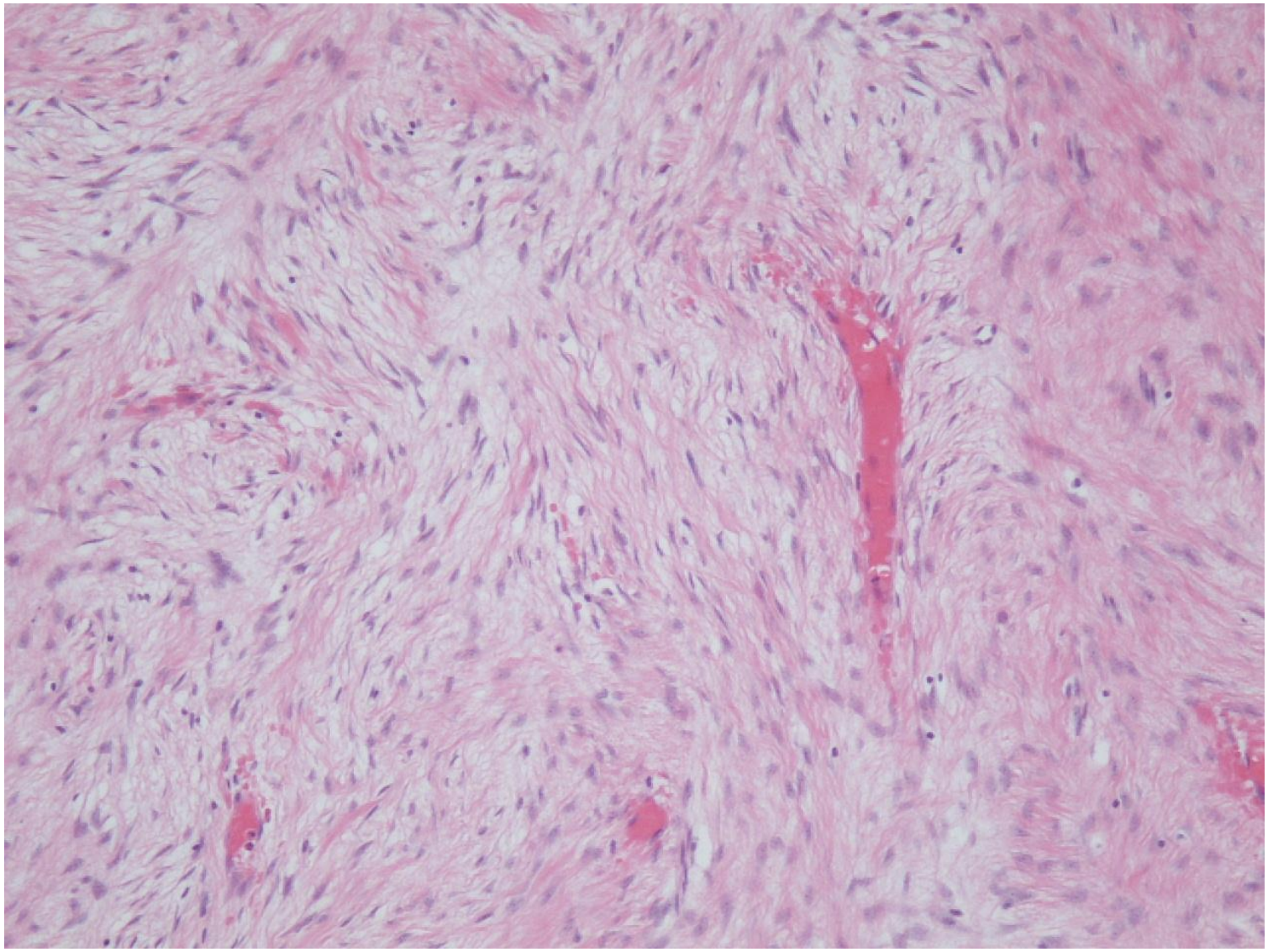
Resected tumour after TKI



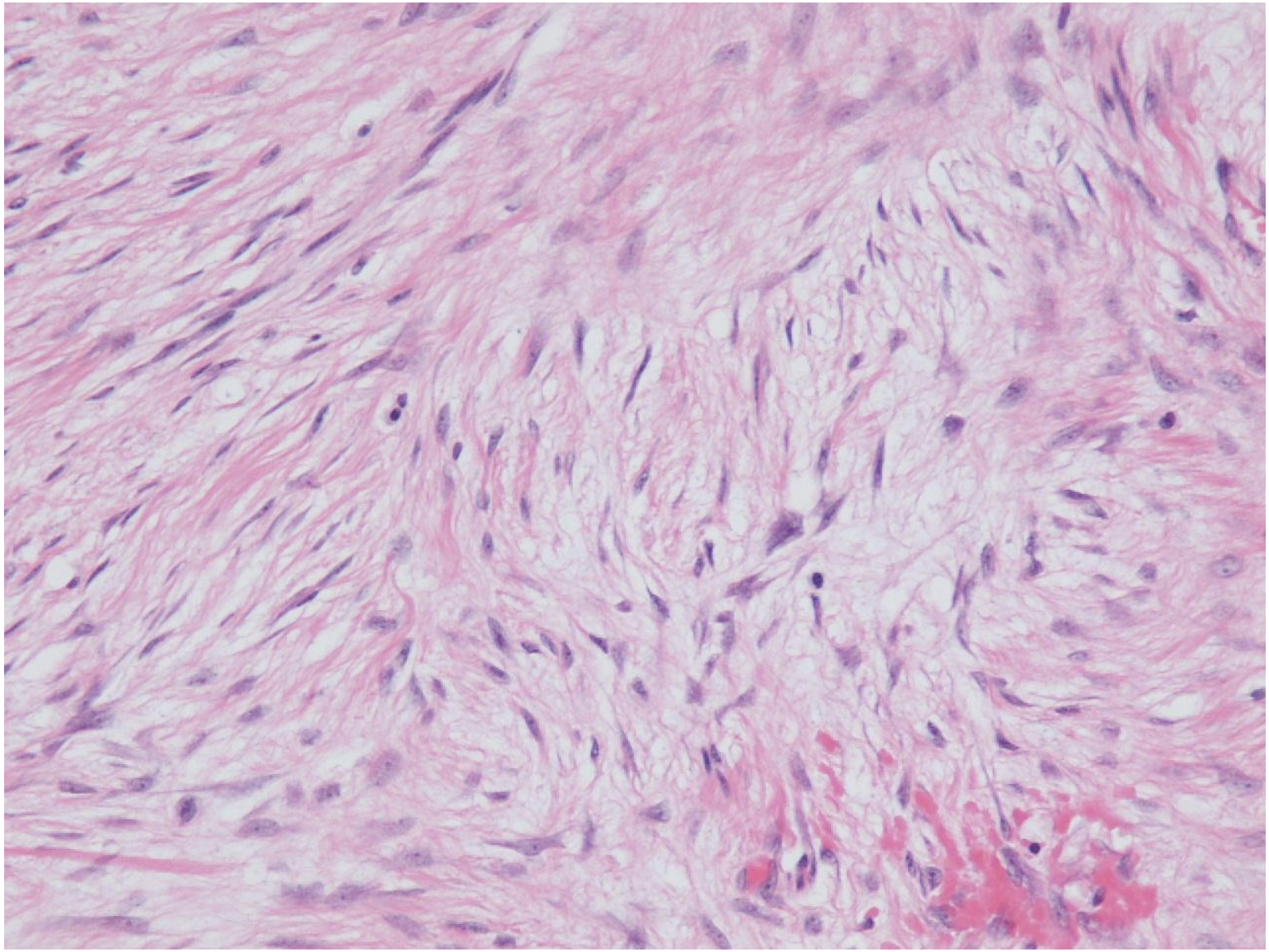
Case 2

- Female age 49yrs.
- Dx. with small bowel GIST 1 yr. ago
- R0 resection. Tumour focally KIT positive.
- Tx. with Tyrosine Kinase inhibitor for one yr.
- Now has recurrence
- Can you do mutation analysis please?

Resected tumour after TKI



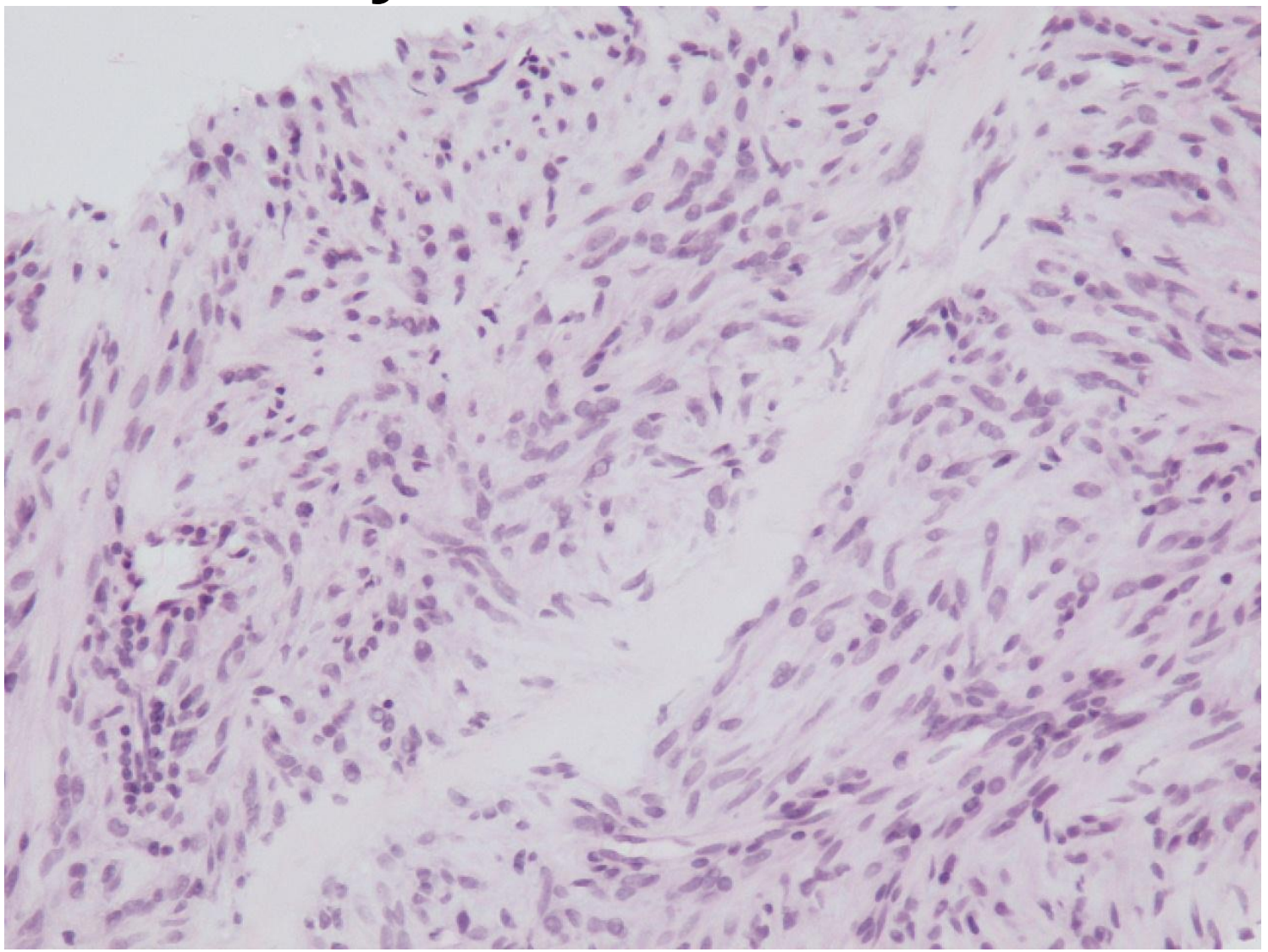
Resected tumour after TKI



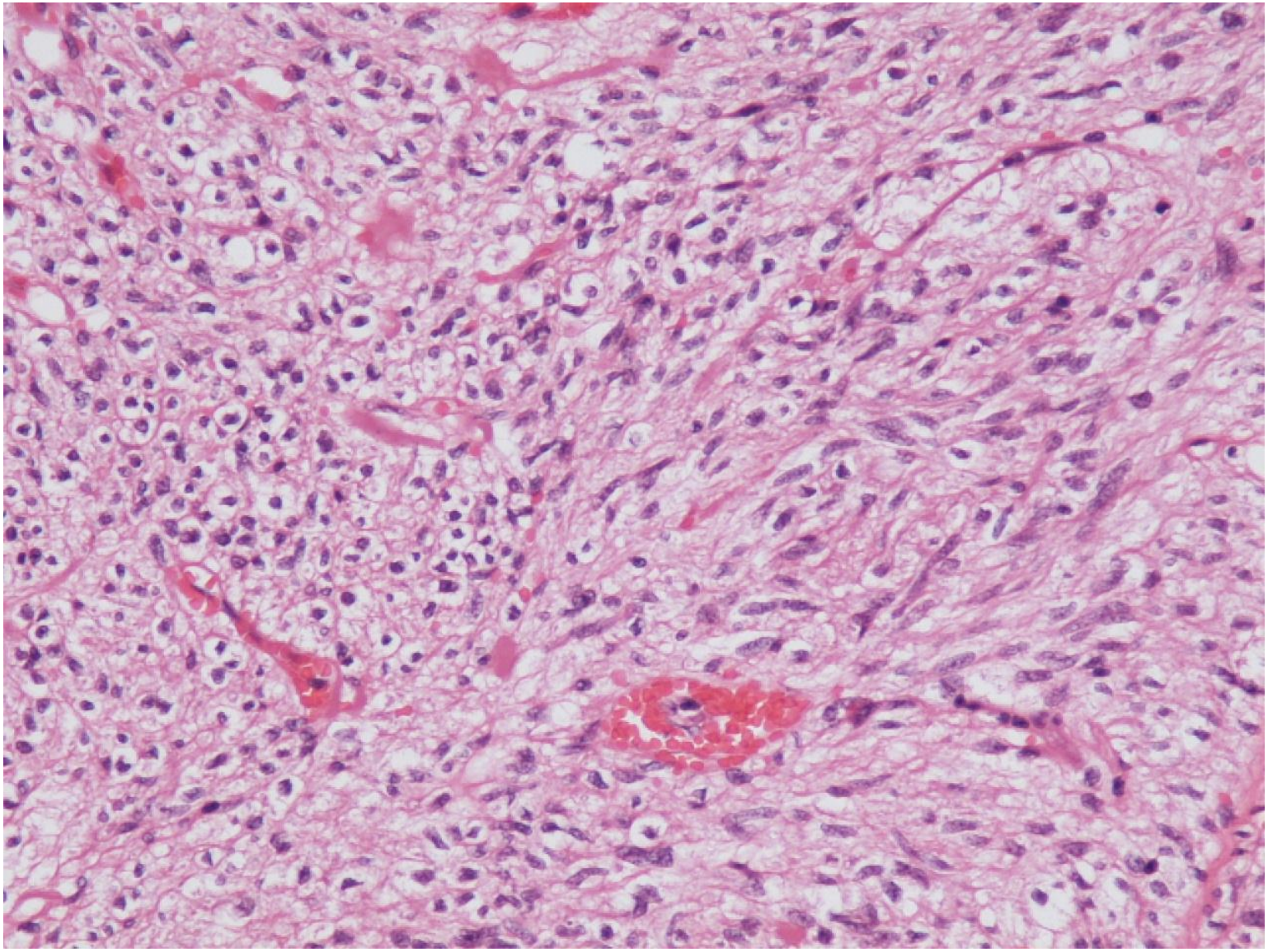
Case 3

- Female age 62 yrs.
- Large Gastric GIST. Liver metastases.
- KIT, DOG-1 positive core biopsy.
- Treated with TKI’s 6 months, no response
- New peritoneal metastases sampled
- Any evidence of response?

Primary tumour untreated

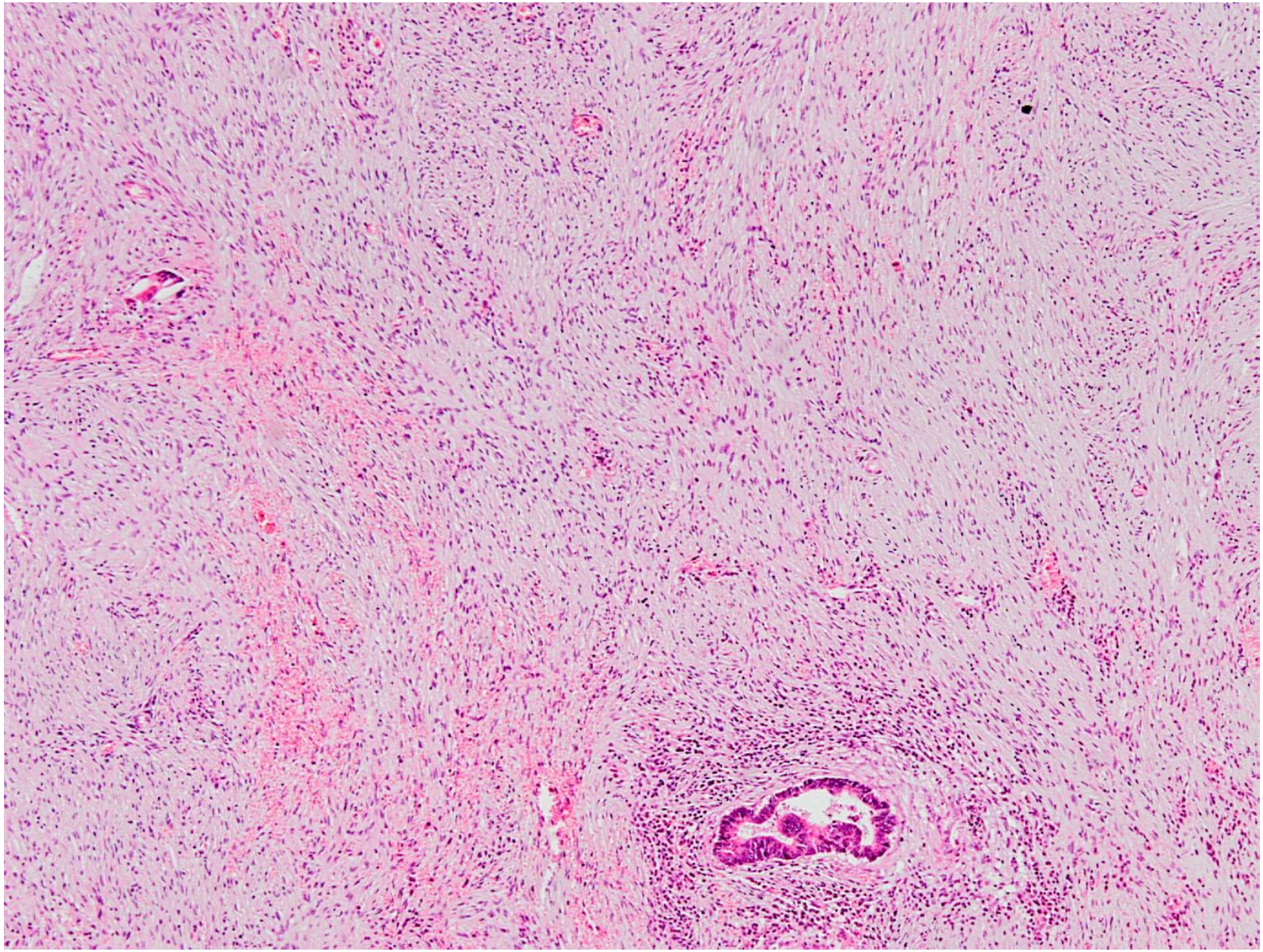


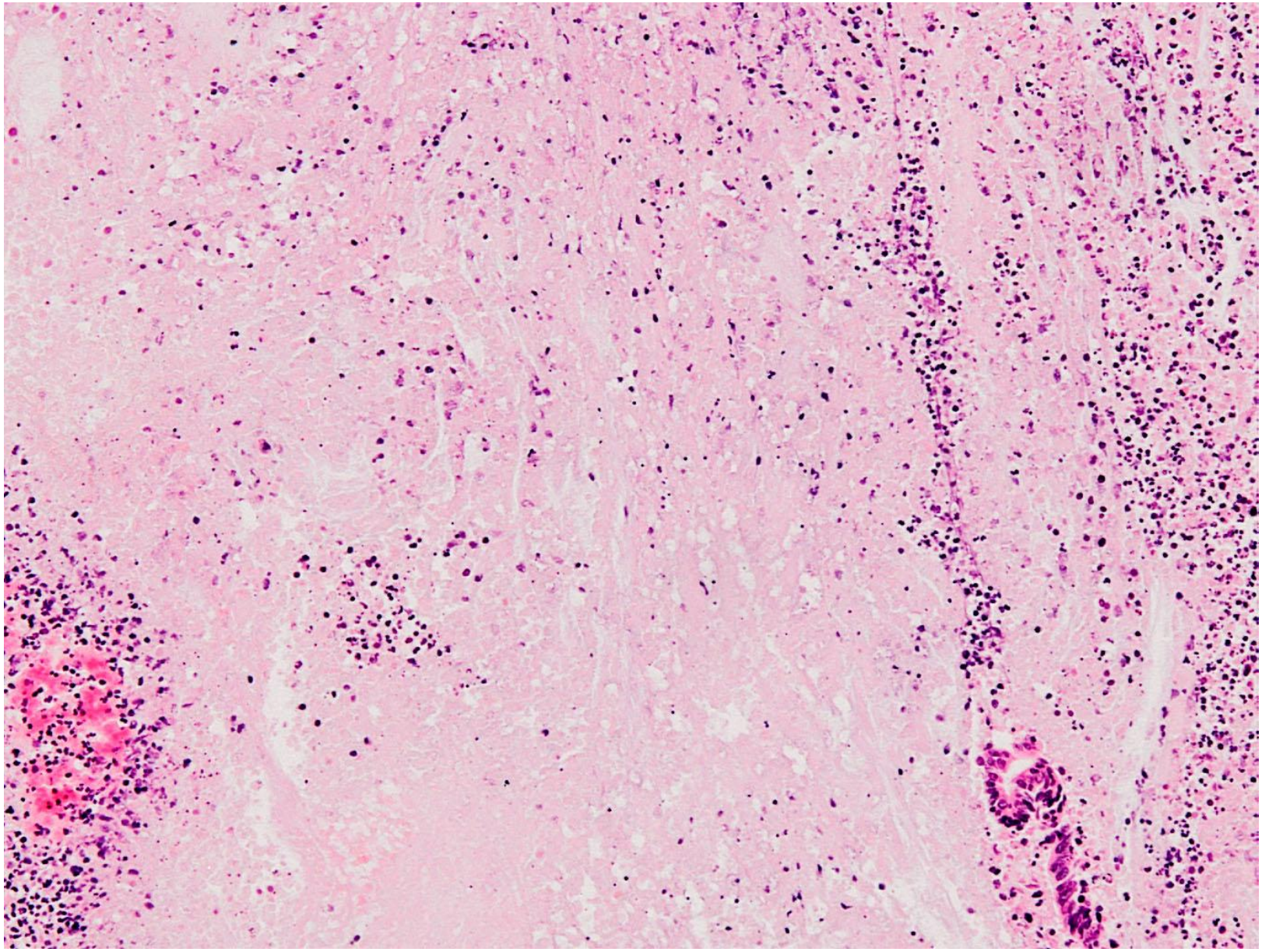
New peritoneal metastasis

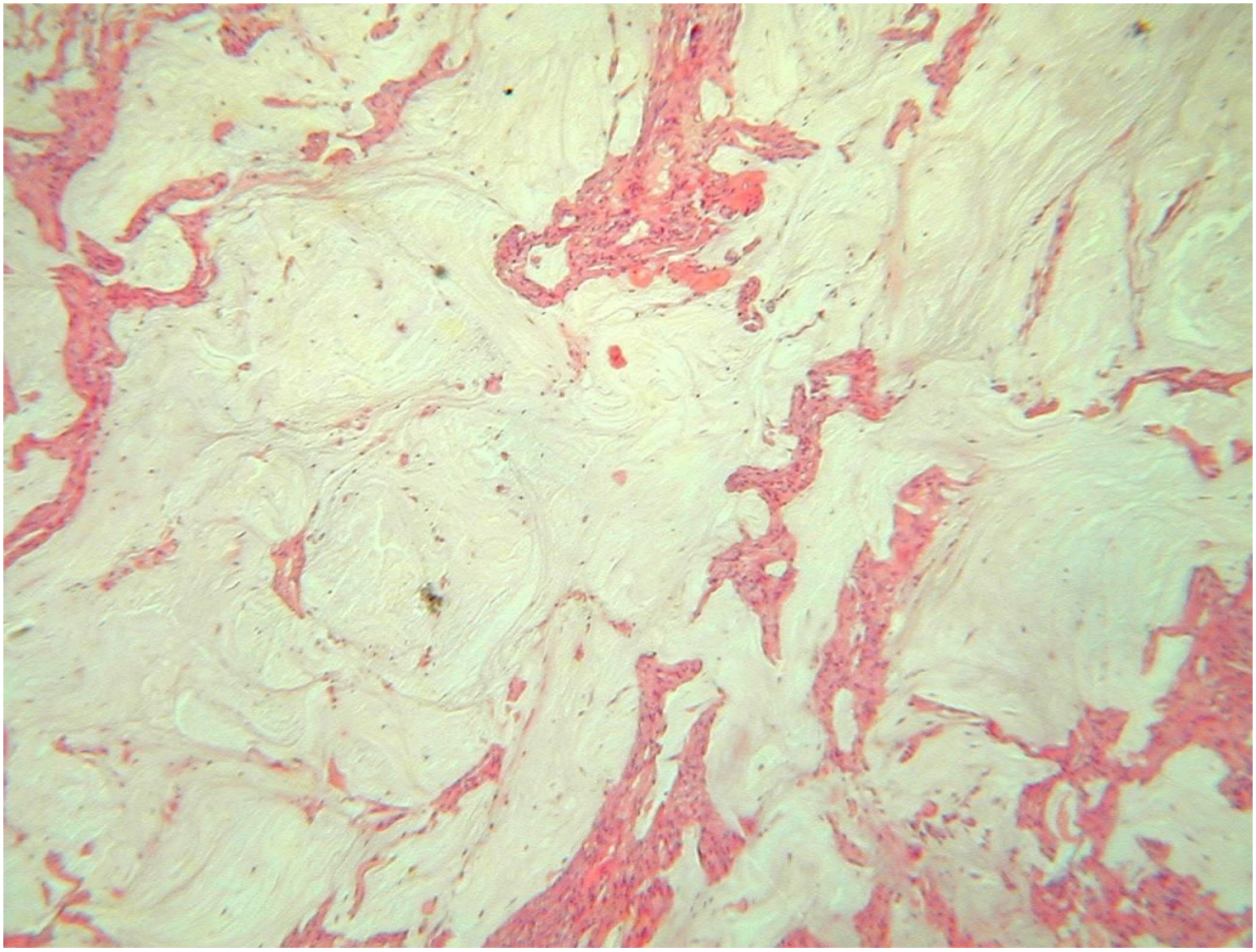


Pathology of treated colorectal carcinoma

Norman Carr







Chemoradiation effects

- Fibrosis
- Necrosis
- Acellular mucin
- Calcification

Virchows Arch (2012) 460:151–155
DOI 10.1007/s00428-012-1193-3

ORIGINAL ARTICLE

A multi-centre pathologist survey on pathological processing and regression grading of colorectal cancer resection specimens treated by neoadjuvant chemoradiation

Runjan Chetty · Pelvender Gill · Dhirendra Govender · Adrian Bateman · Hee Jin Chang · David Driman · Fraser Duthie · Marisa Gomez · Eleanor Jaynes · Cheok Soon Lee · Michael Locketz · Claudia Mescoli · Corwyn Rowsell · Anne Rullier · Stefano Serra · Neil Shepherd · Eva Szentgyorgyi · Rajkumar Vajpeyi · Lai Mun Wang

Received: 21 October 2011 / Revised: 12 December 2011 / Accepted: 3 January 2012 / Published online: 13 January 2012

Abstract To ascertain the approach and degree of consensus of pathologists in the handling and regression grading of colorectal cancer resection specimens treated with neoadjuvant chemoradiation, a ten-part questionnaire was circulated to 18 gastrointestinal pathologists in eight countries. The questions were specific and addressed pertinent issues related to colorectal cancer with neoadjuvant chemoradiation. There is a lack of consensus on how to handle the specimen, number of sections taken, correlation with pre- and post-operative radiological imaging, and especially, regression grading schema employed. Consensus in the form of guidelines is required so that the pathological assessment

Modified RCRG grading system (Bateman AC et al)

1. Malignant epithelium <5%
2. Malignant epithelium 5 to 50%
3. Malignant epithelium >50%

RCPath guidelines – staging

- “For tumour staging following neoadjuvant therapy, only the presence of tumour cells in the surgical specimen is taken to determine the stage. Fibrosis, haemorrhage, necrosis, inflammation and acellular mucus are ignored. Cases with complete regression are therefore recorded as … ypT0”

References

- Bateman AC et al. Rectal cancer staging post neoadjuvant therapy – how should the changes be assessed? Histopathology 2009; 54:713-21
- Chetty R et al. A multi-centre pathologist survey on pathological processing and regression grading of colorectal cancer resection specimens treated by neoadjuvant chemoradiation. Virchows Arch 2012; 460:151-5
- Dworak O et al. Pathological features of rectal cancer after preoperative radiotherapy. Int J Colorectal Dis 1997; 12:19-23
- Williams GT et al. Dataset for Colorectal Cancer (2nd edition). London: Royal College of Pathologists, 2007

Pathology of treated liver tumours

Judy Wyatt

Mrs KM 28F

Presented with bulky liver metastases,

CK20+ve subsequently sigmoid primary identified.

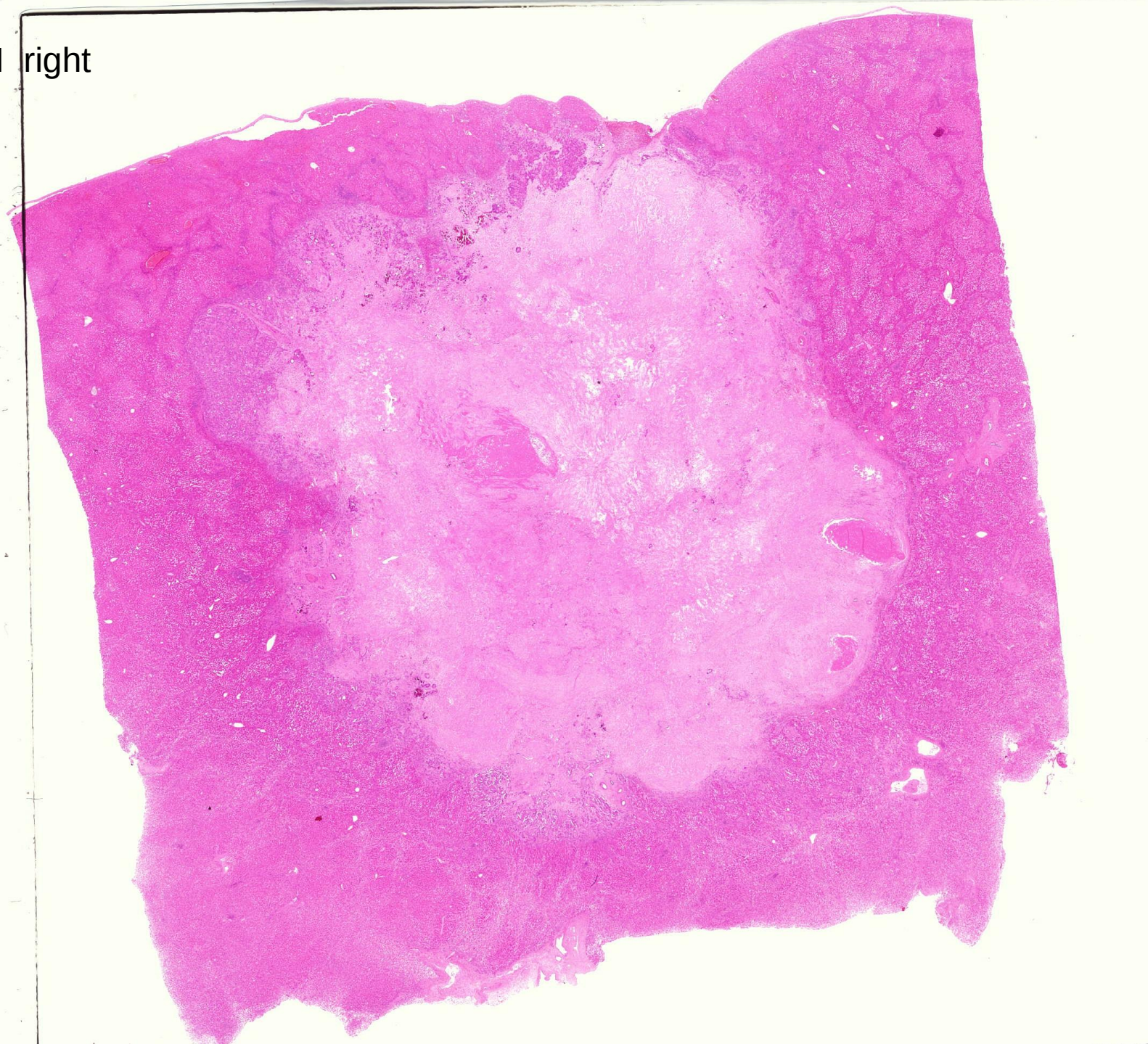
Treated with FOLFOXIRI – irinotecan, oxaliplatin, 5FU very good response.

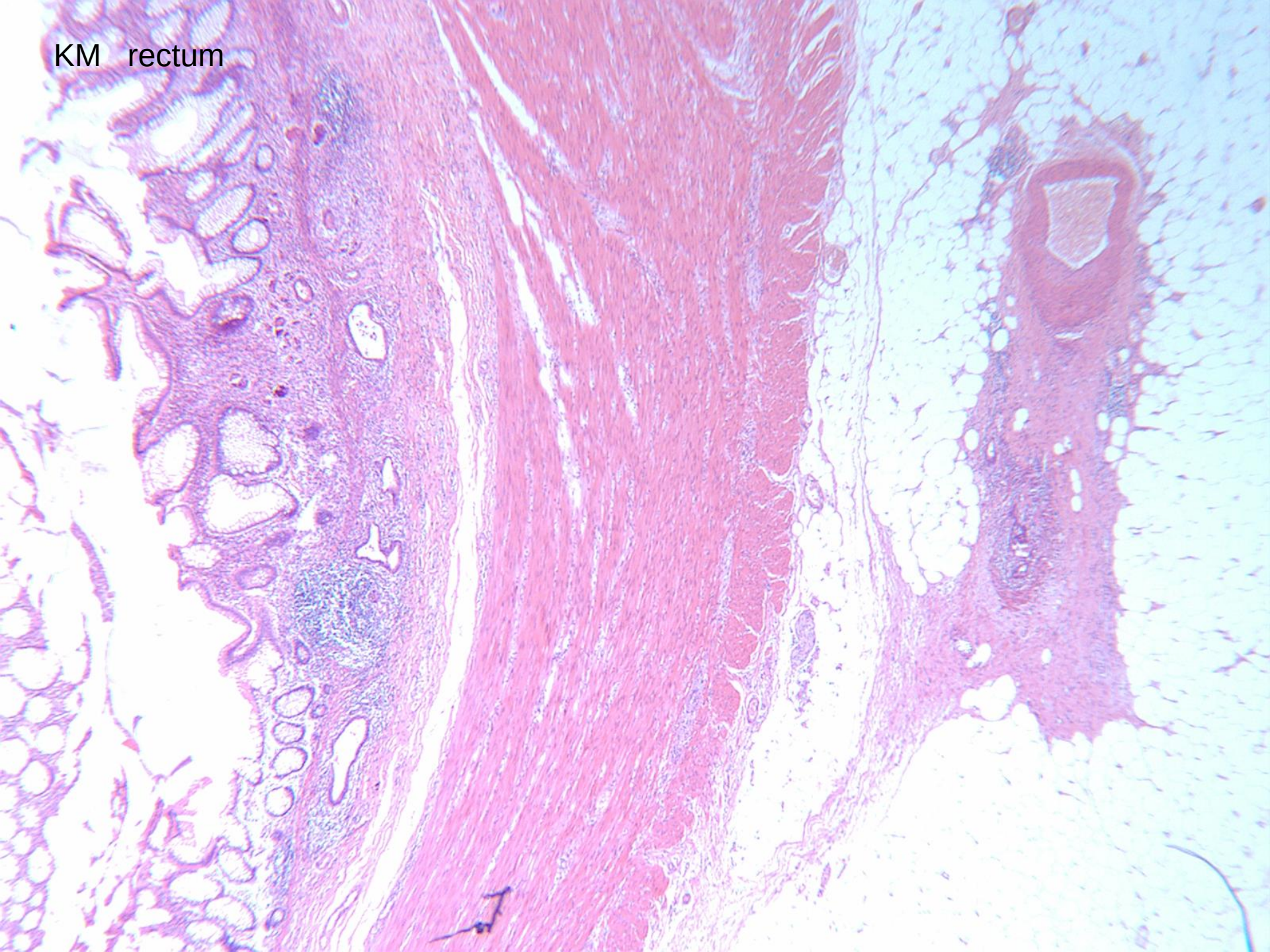
Right trisectionectomy and segment 2&3 metastasectomies performed at same time as anterior resection of rectum ypT3, ypN1, ypV1, ypR0, TRG2

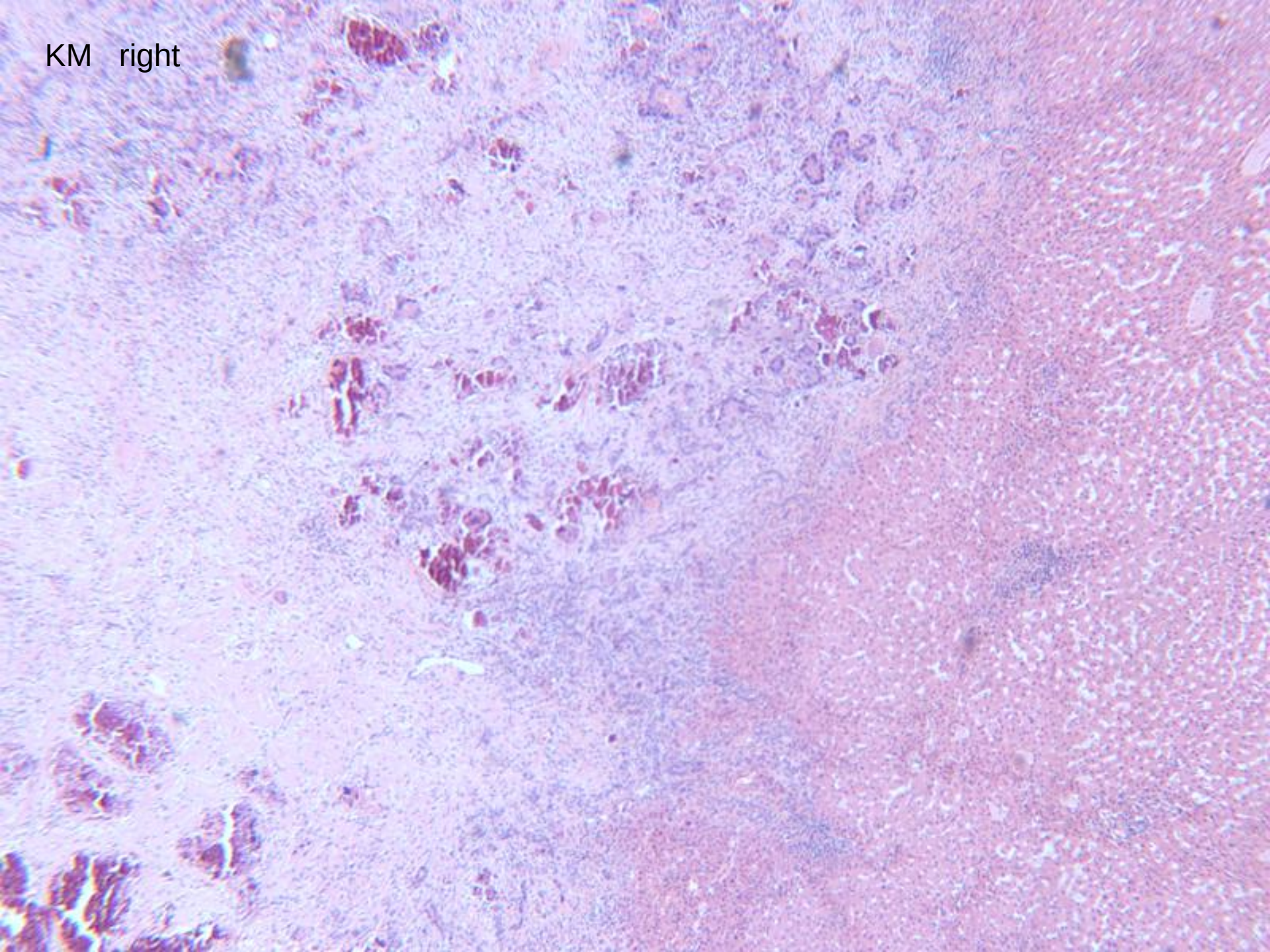
Liver: Right trisectionectomy, segments 4-8, 1,170kg,
7 tumours 5-70mm.

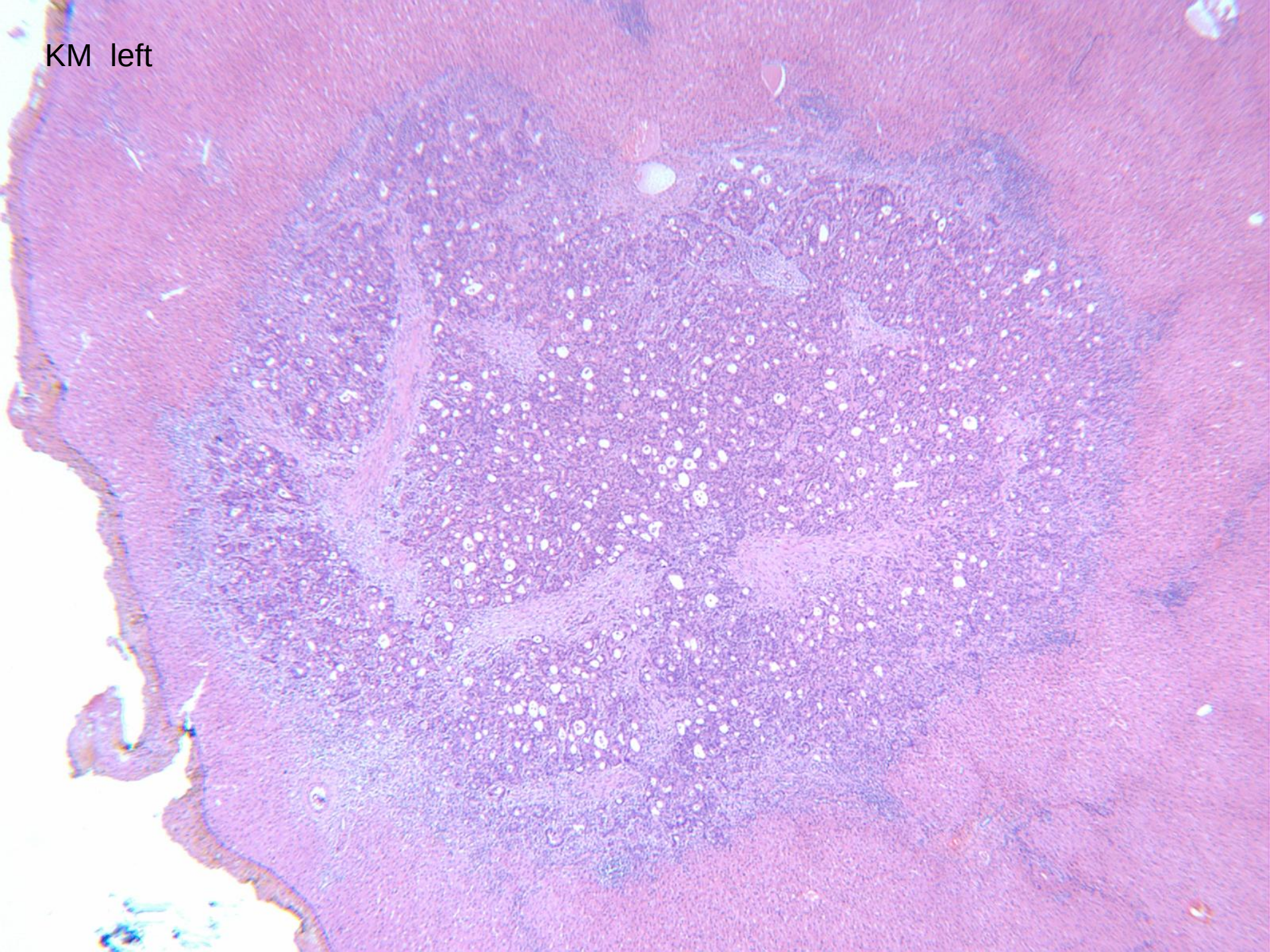
Left metastasectomies x2, 1.2g and2.1g,
2 tumours, 7mm and 10mm lesions

KM right

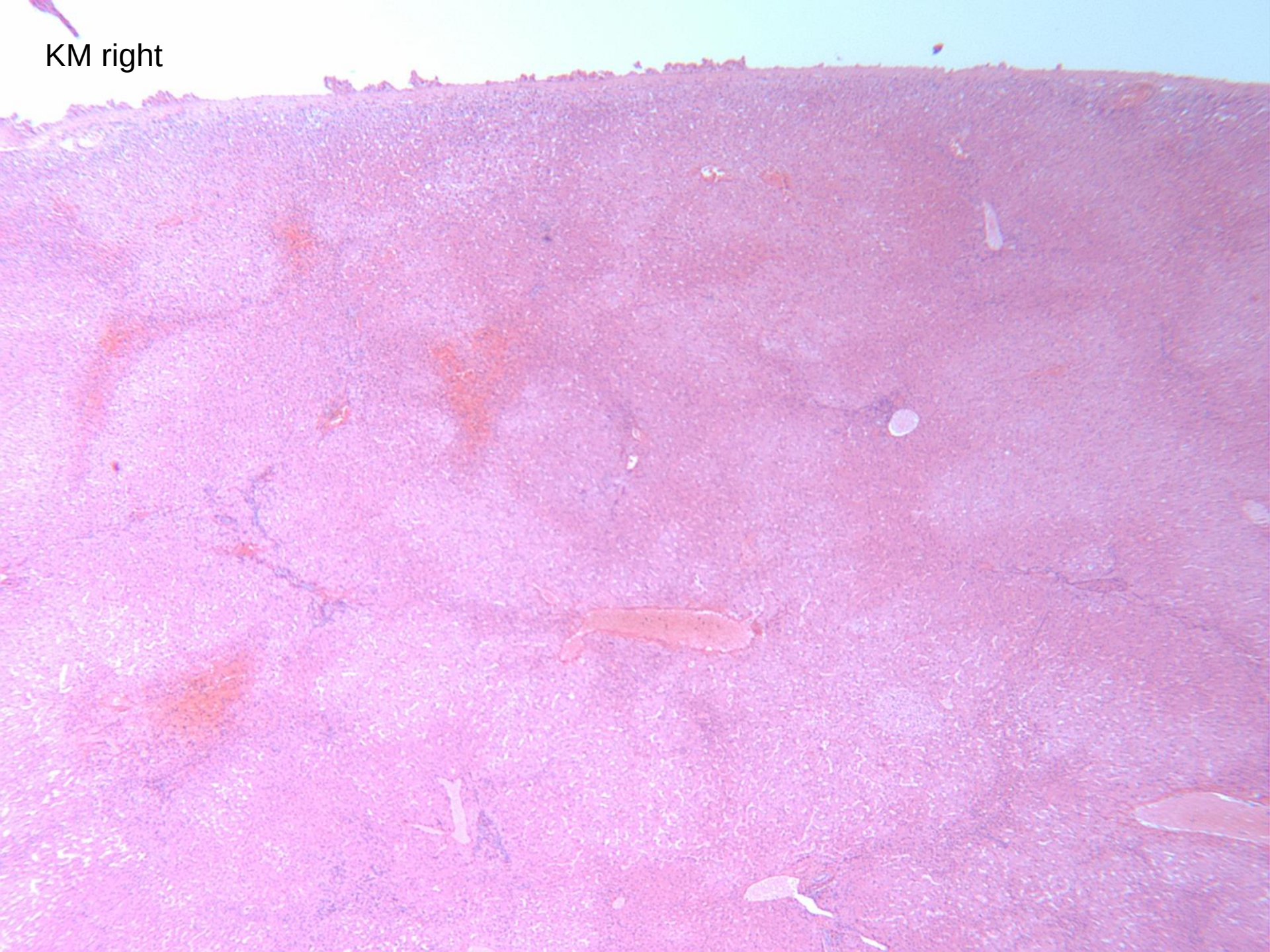


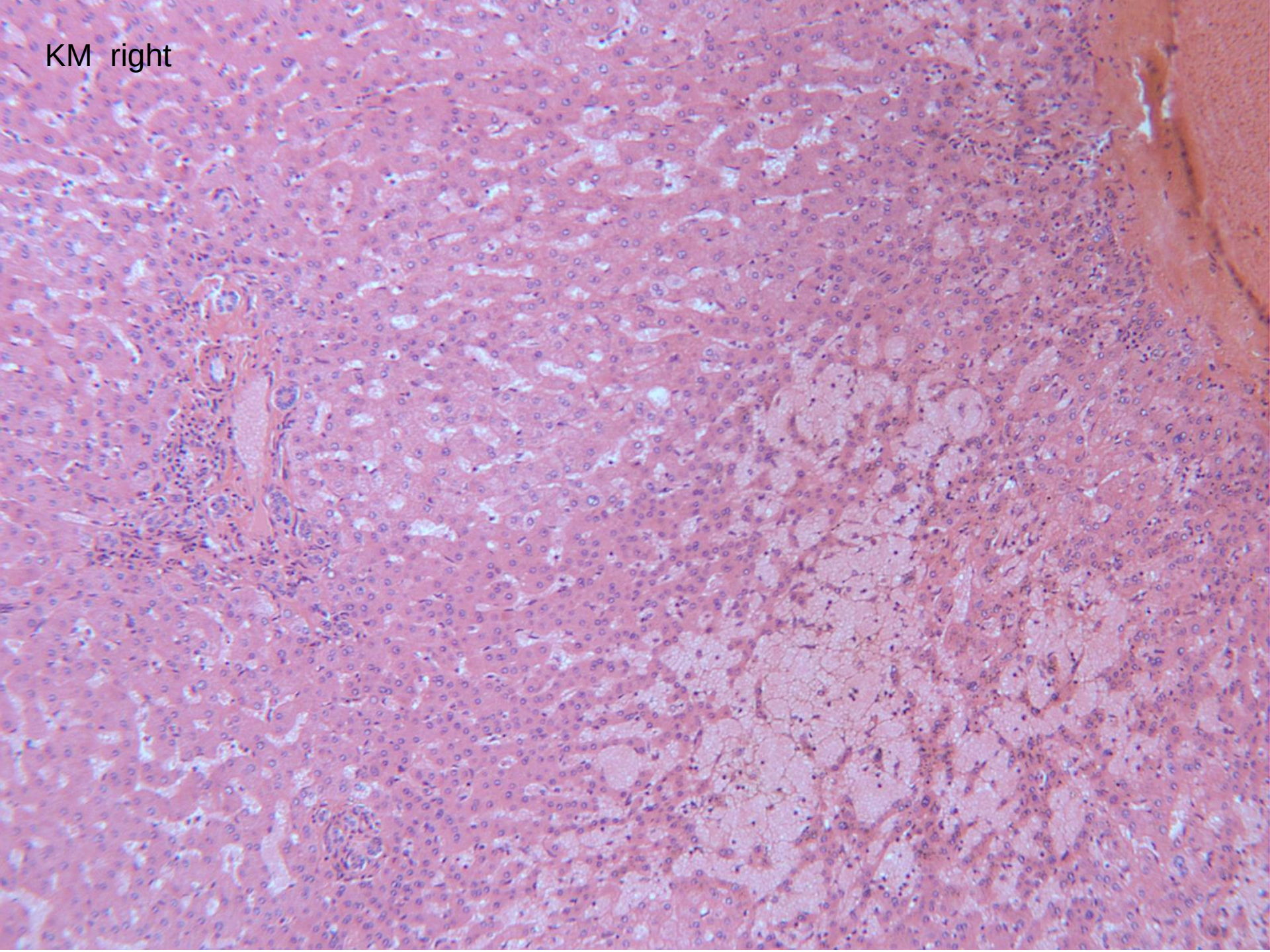

KM rectum


KM right


KM left

KM right

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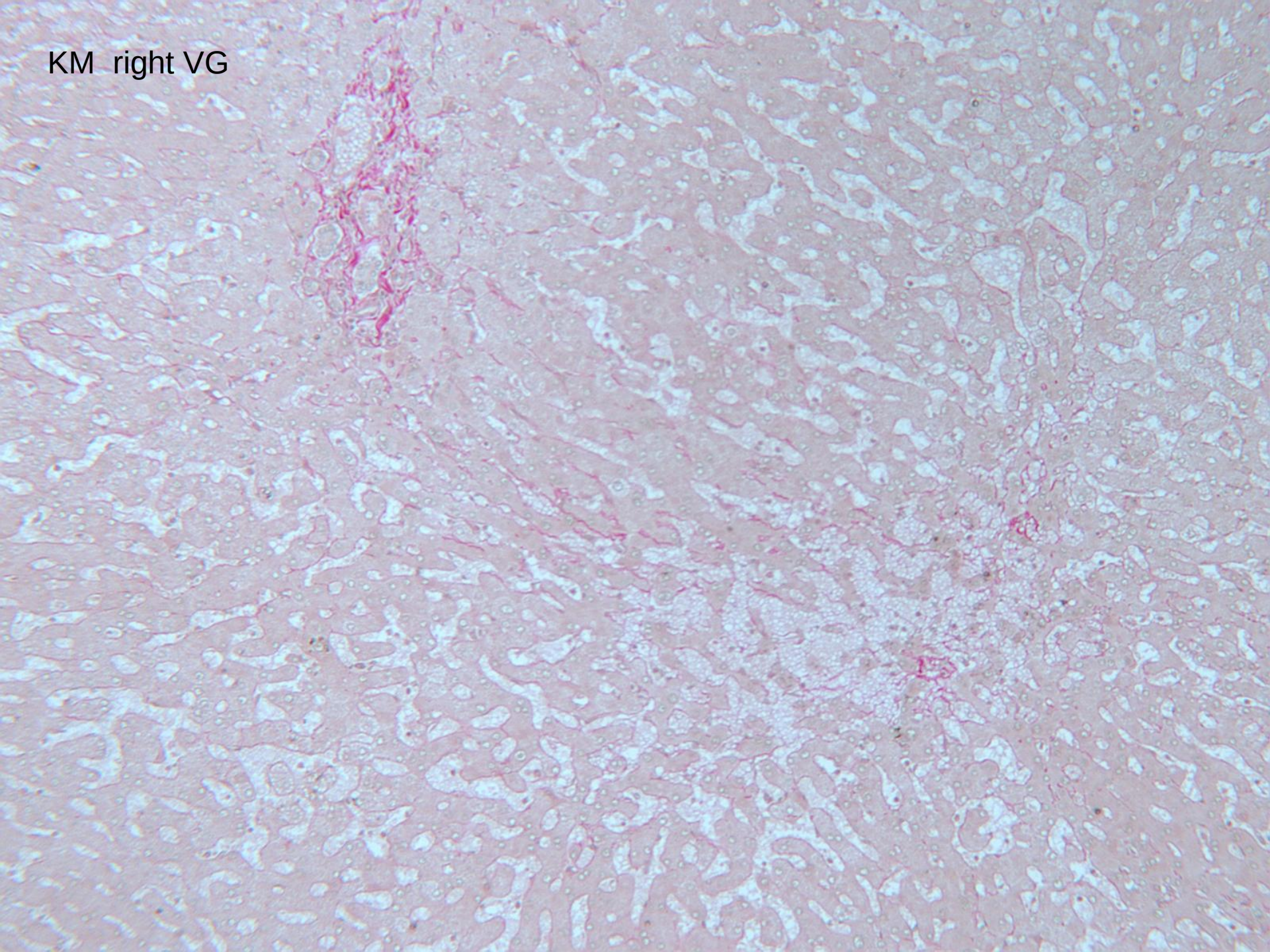

KM right VG

Mr PE, 27M

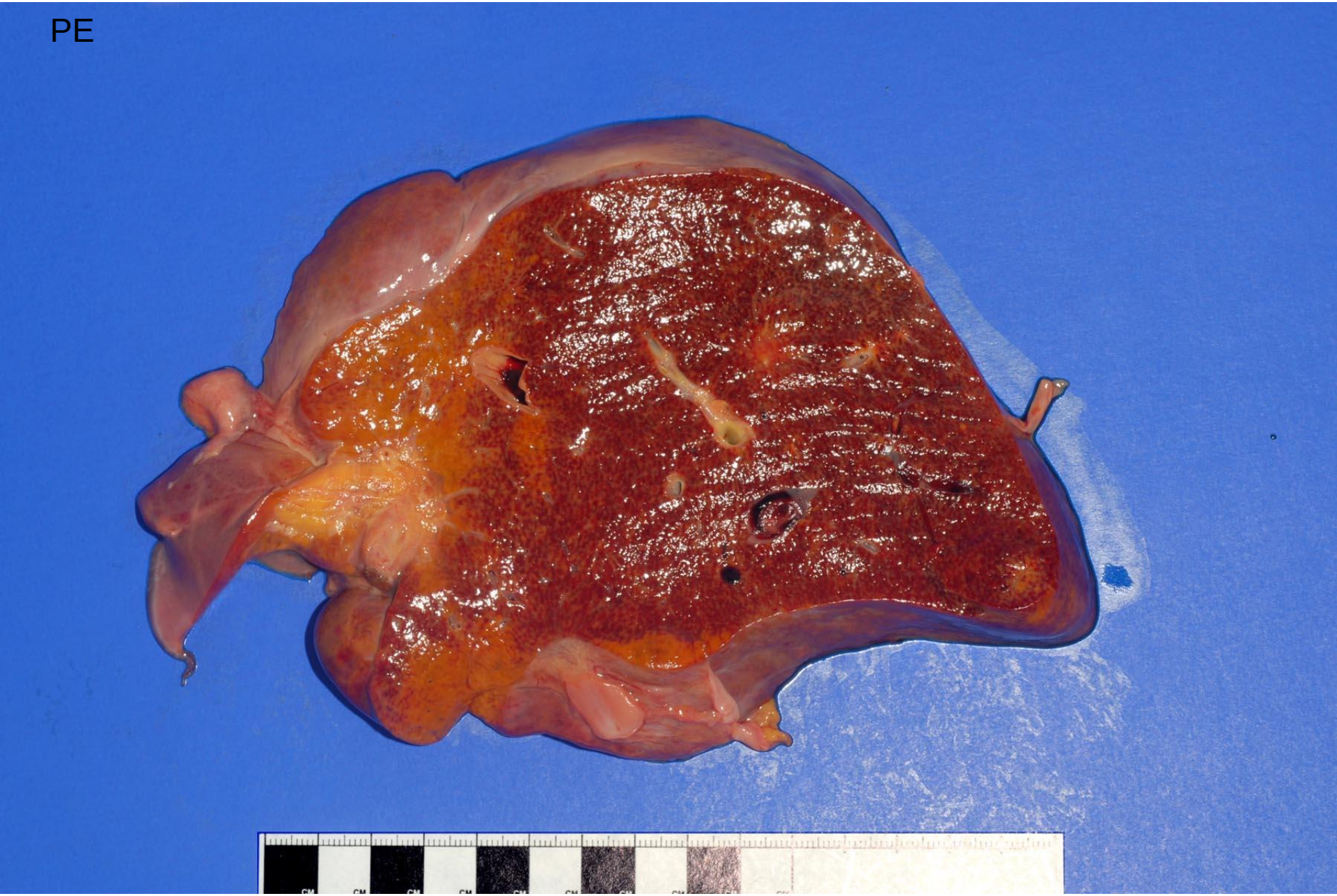
- August 2008: inoperable carcinoma of upper rectum with bulky bilateral liver metastases.

- Sept – Feb 2008:Treated with oxaliplatin and cetuximab. Good response but still inoperable.

- March 2009: Candidate for SIRT treatment with aim of surgery if further response.

- June 2009: SIRT
- July 2009: nausea, vomiting, ascites, 3 weeks after treatment. Deteriorated and died 3 weeks later.

- Consent autopsy: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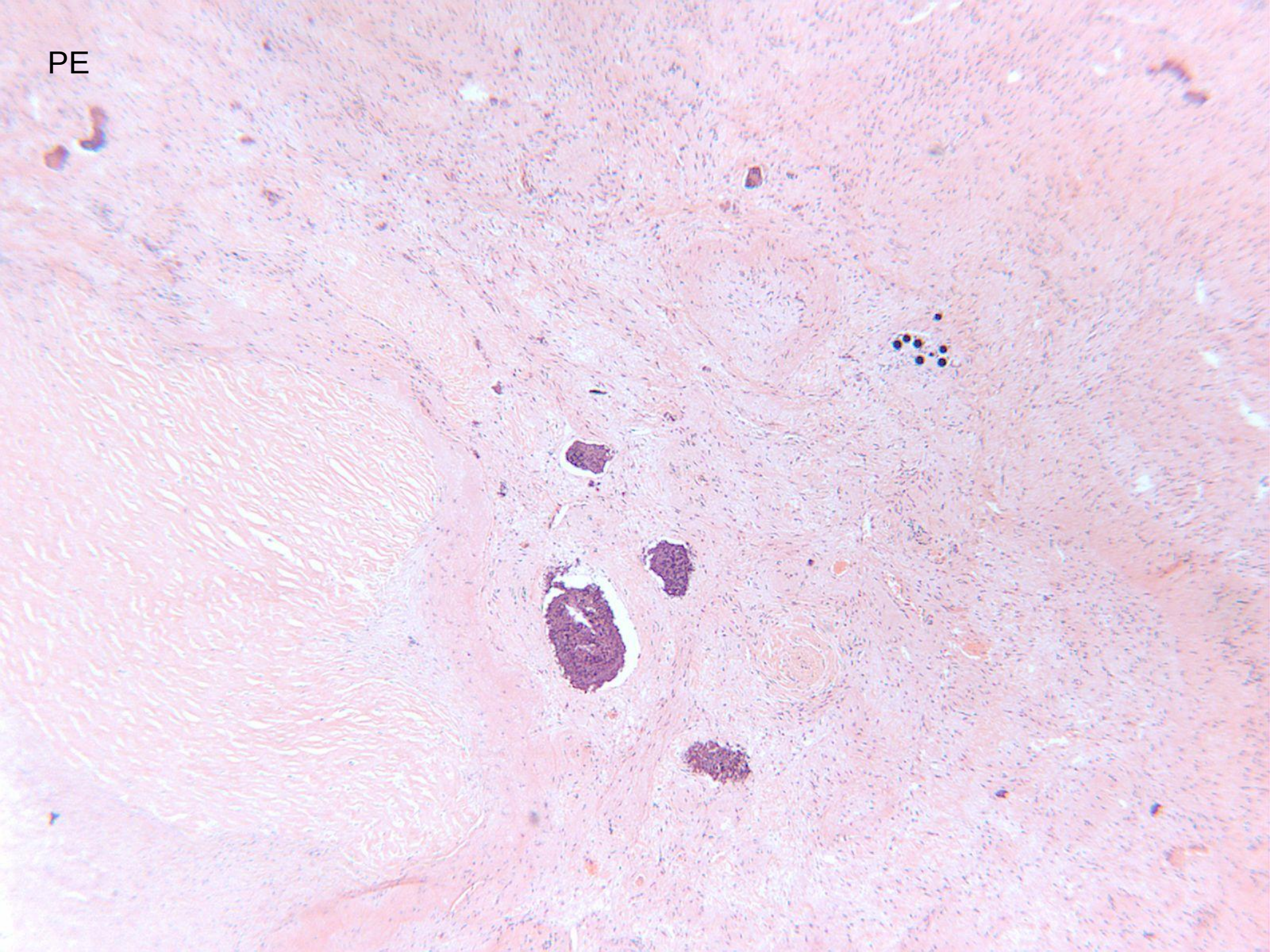
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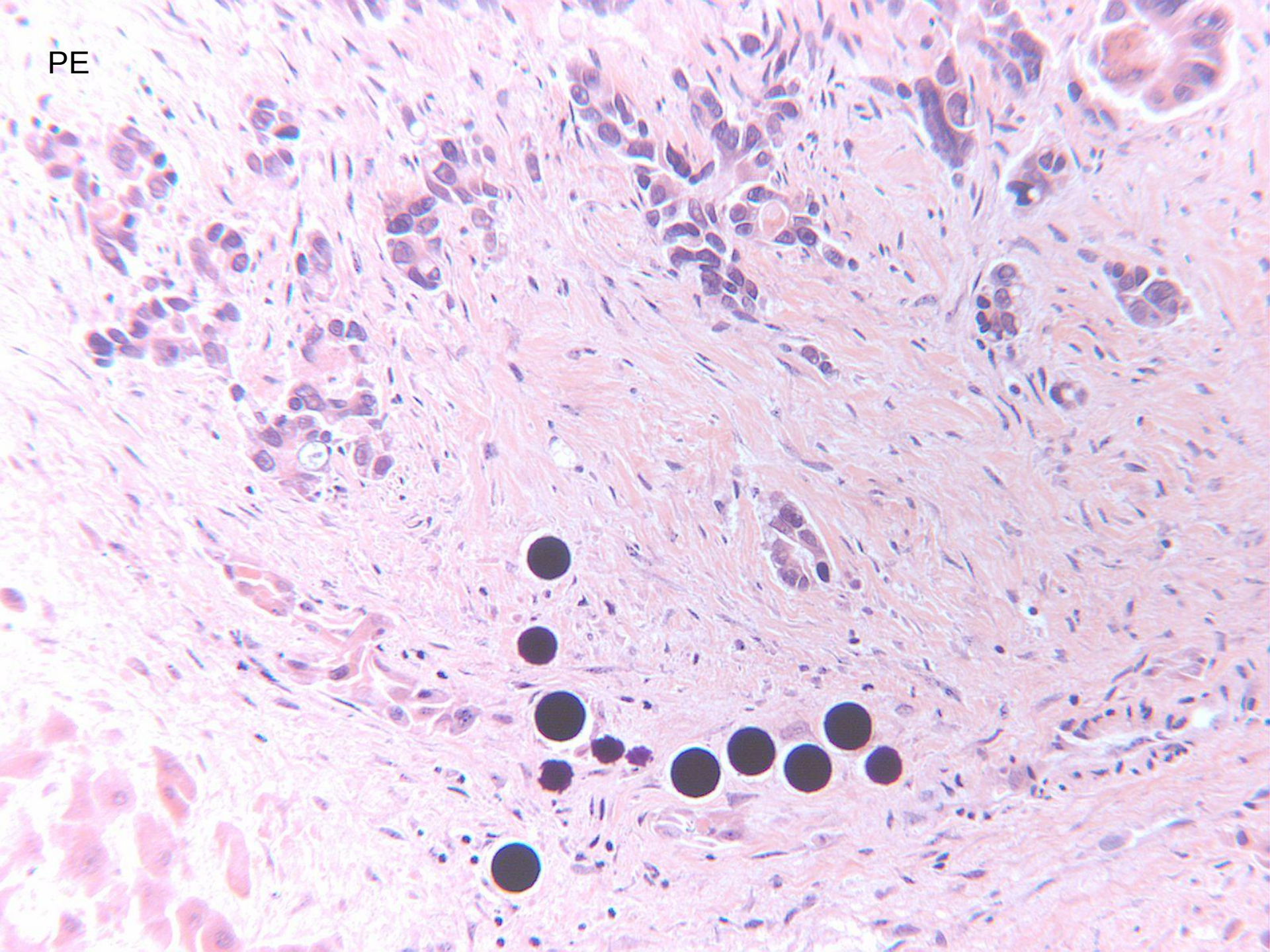
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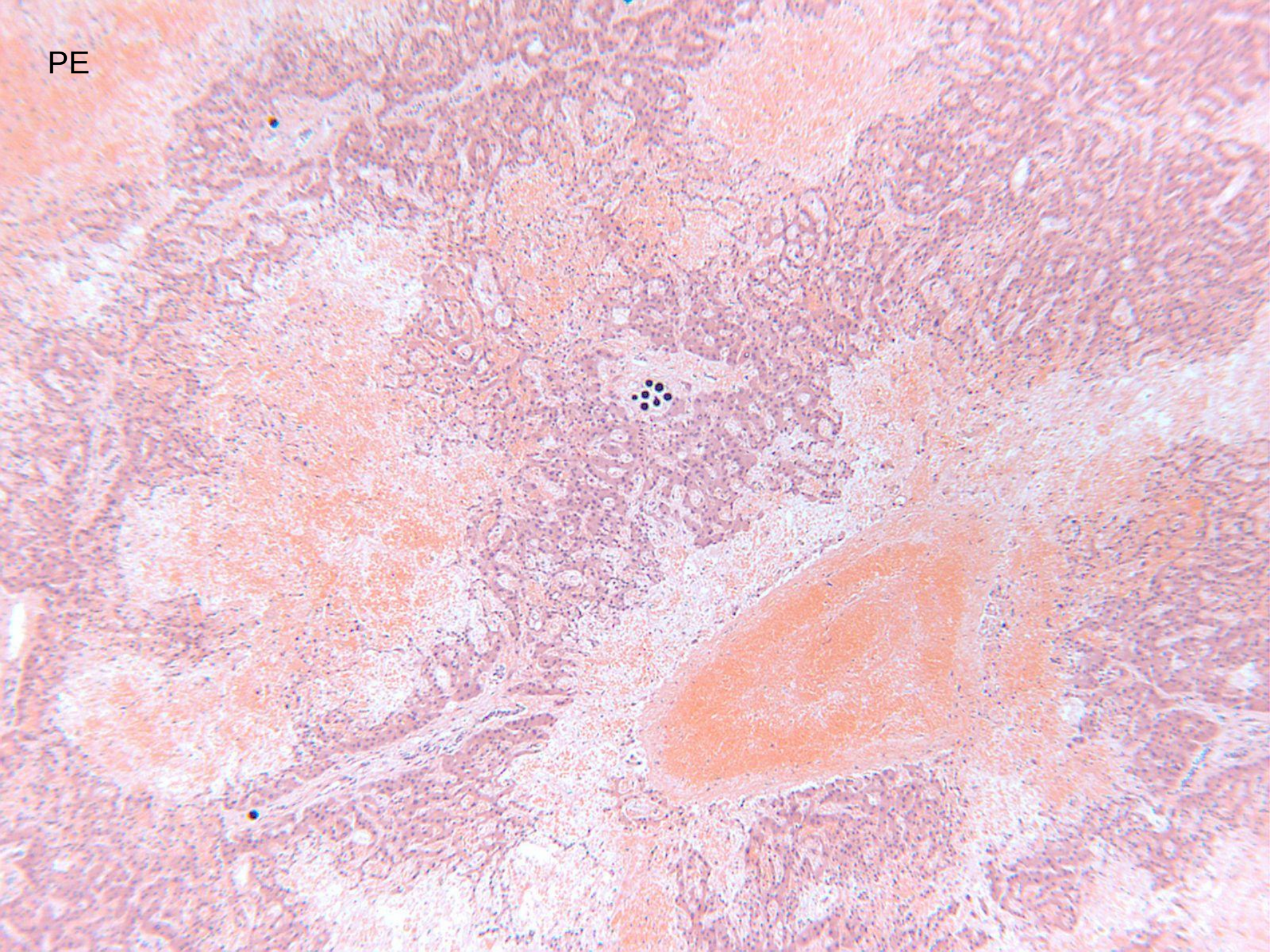
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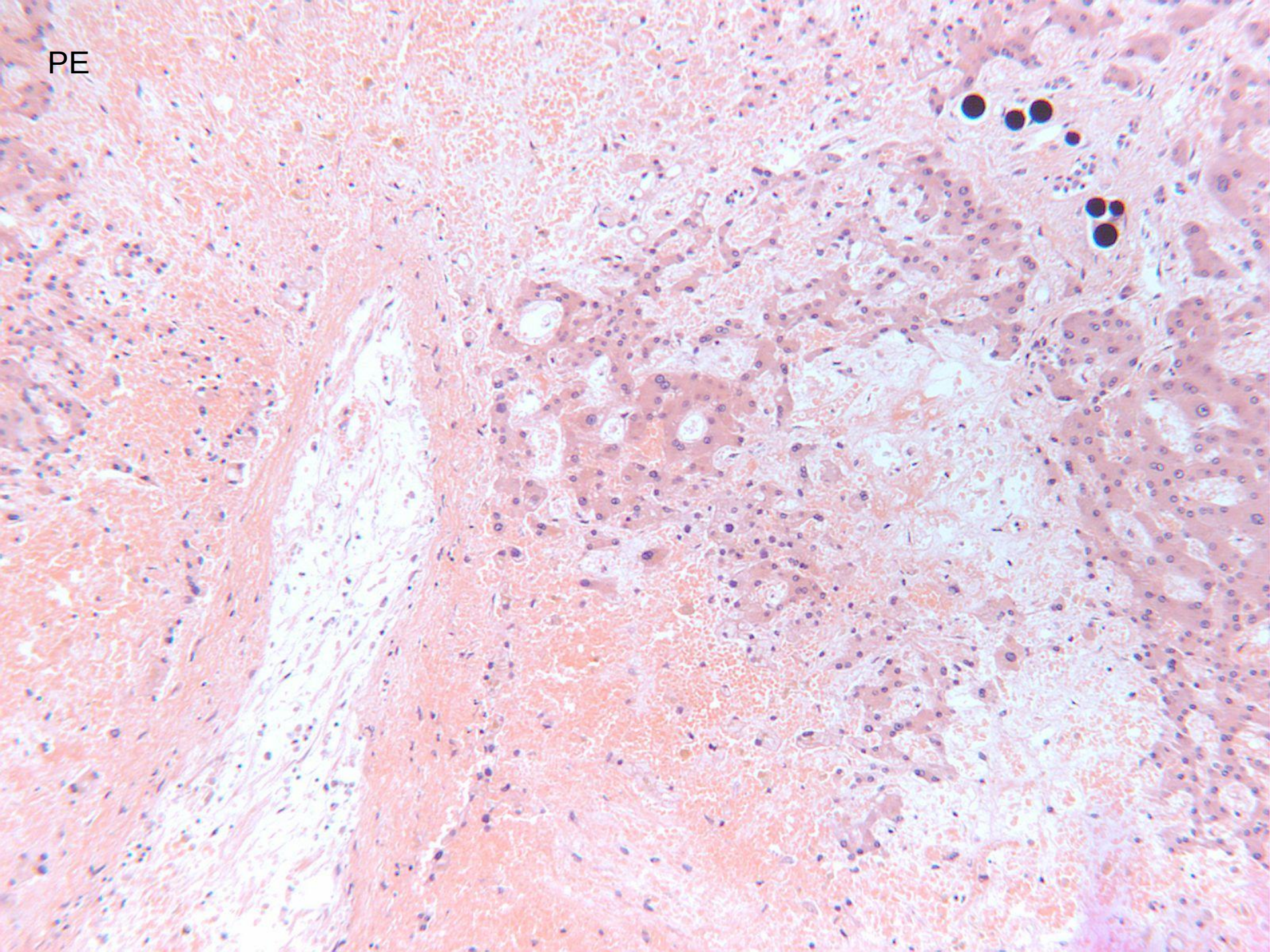
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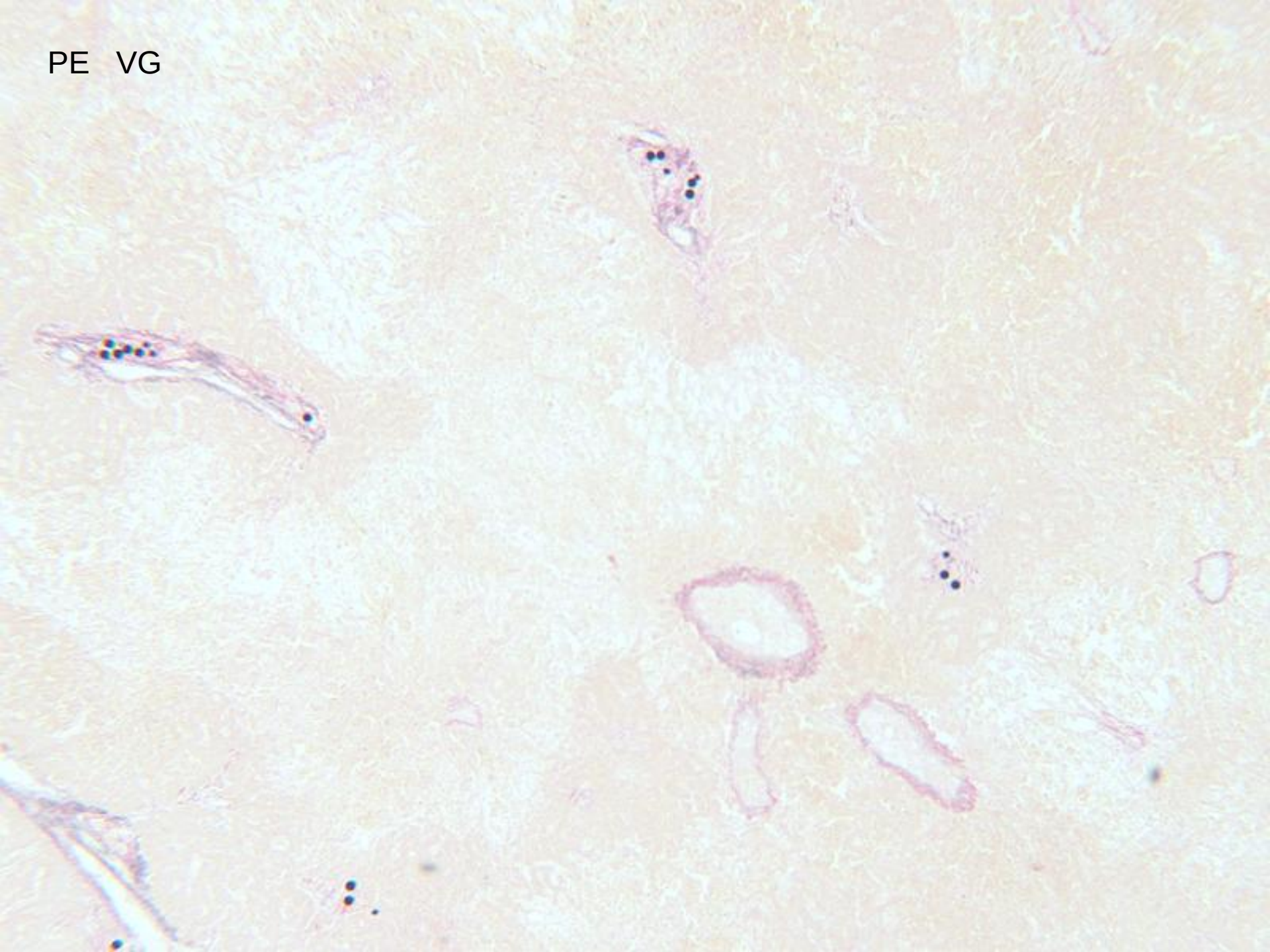
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