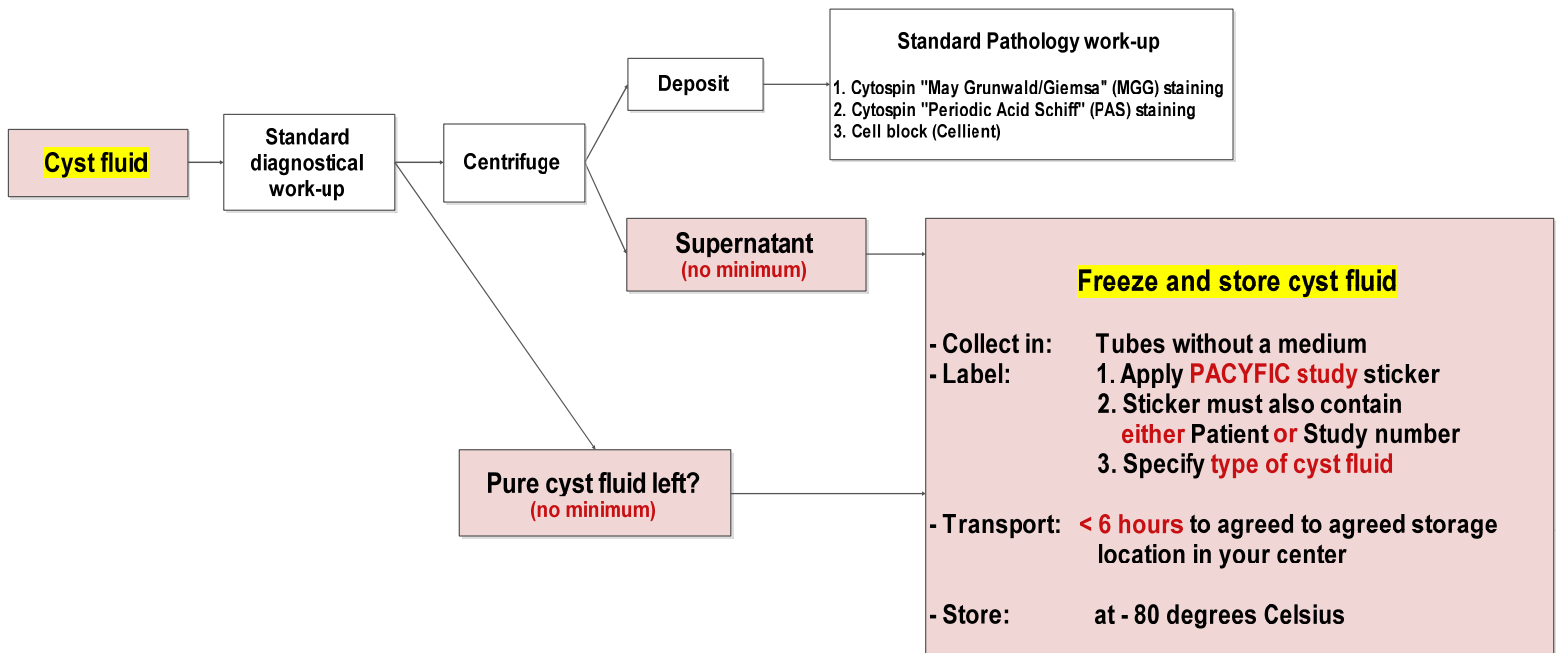


Pathology protocol

- PACYFIC study –

This protocol describes how to handle and store cyst fluid and resection specimens that are obtained as a result of the PACYFIC study.

1. Handling of cyst fluid specimen



2. Pathological evaluation

The pathologist should be informed about the clinical findings and test results (radiology/EUS, biochemical analysis), prior to cytological evaluation.

- 2.1 Determine presence of Mucin
- 2.2 Determine presence and grade of dysplasia/malignancy
- 2.3 Diagnose cyst (if possible)

3. Cyst resection specimens

After cyst resection, all glass slides (or a histological samples, preserved in formalin) should be sent to the pathology department of the Erasmus Medical Center in Rotterdam.

Please include the following information;

1. Relevant clinical information (i.e. medical background, symptoms)
2. Pathology report

Address:

Dr. K. Biermann
Institute of Pathology
Erasmus University Medical Center
P.O. box 2040, 3000 CA Rotterdam
The Netherlands

Additional information for histological evaluation of pancreatic cysts

Table 1. *Cytological findings in pancreatic cysts*

Cyst type	Cytologic characteristics
Pseudocyst	Macrophages containing hemosiderin , inflammatory cells, proteinaceous cyst background No epithelial cells
Serous Cystic Neoplasm	Clean or proteinaceous cyst background (be aware, some thin mucin might come from gastric contamination) Hemosiderin-laden macrophages and lymphocytes might be seen If epithelial cells are present: flat sheets, uniform cuboidal cells, no atypia
Mucinous cyst (MCN and IPMN) without malignancy	Extracellular mucin Mucinous epithelium with slightly polymorphic cells No necrosis in background Macrophages and inflammation may be present (especially in MCN)
Mucinous cyst (MCN and IPMN) with malignancy	Extracellular mucin Mucinous epithelium with highly polymorphic cells/increased nuclear-cytoplasmic ratio/hyperchromasia Inflammation and necrosis in background
Solid Pseudopapillary Neoplasm (SPN)	Dense cellular areas with monotonous neoplastic cells (differential diagnosis neuroendocrine tumor); papillary epithelial fragments, sometimes with a fine capillary vessel in the center, surrounded by neoplastic cells

Cytology of a **Mucinous Cystic Neoplasm (MCN)**

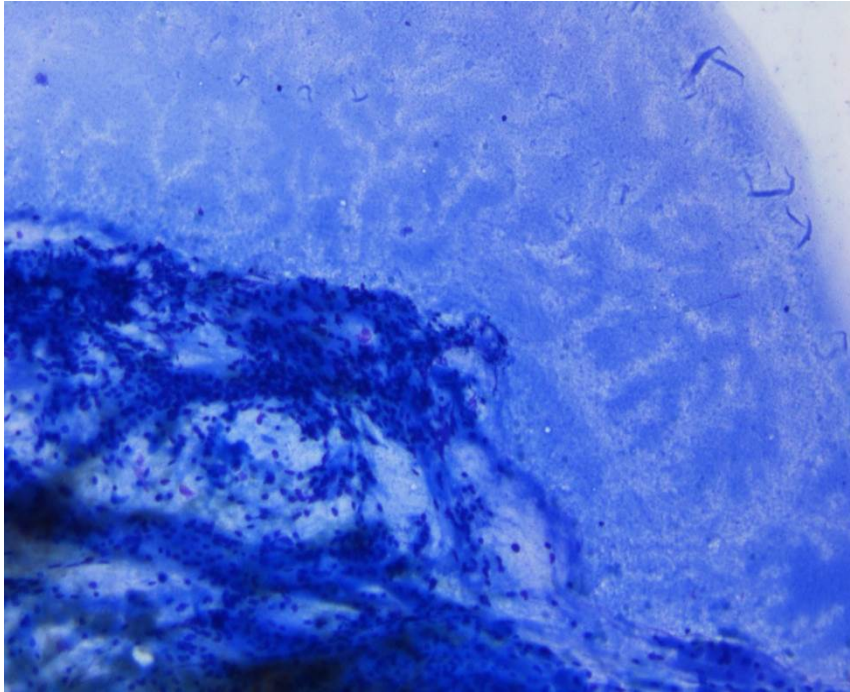


Figure 1: Thick mucin and inflammatory cells

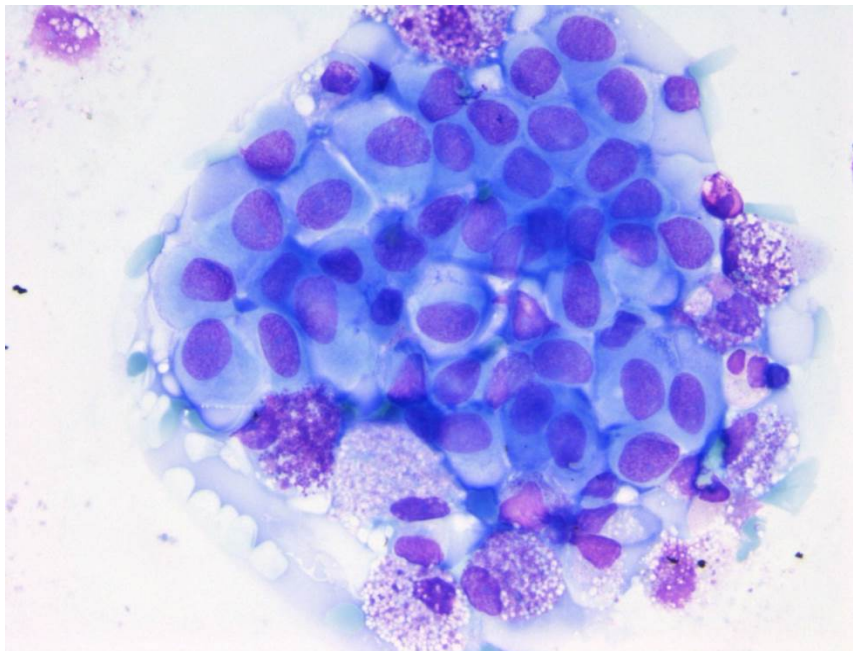


Figure 2: Epithelial cells might be present, in this case slightly atypical sheet of epithelial cells (low grade), macrophages

Intraductal Papillary Mucinous Neoplasm (IPMN)

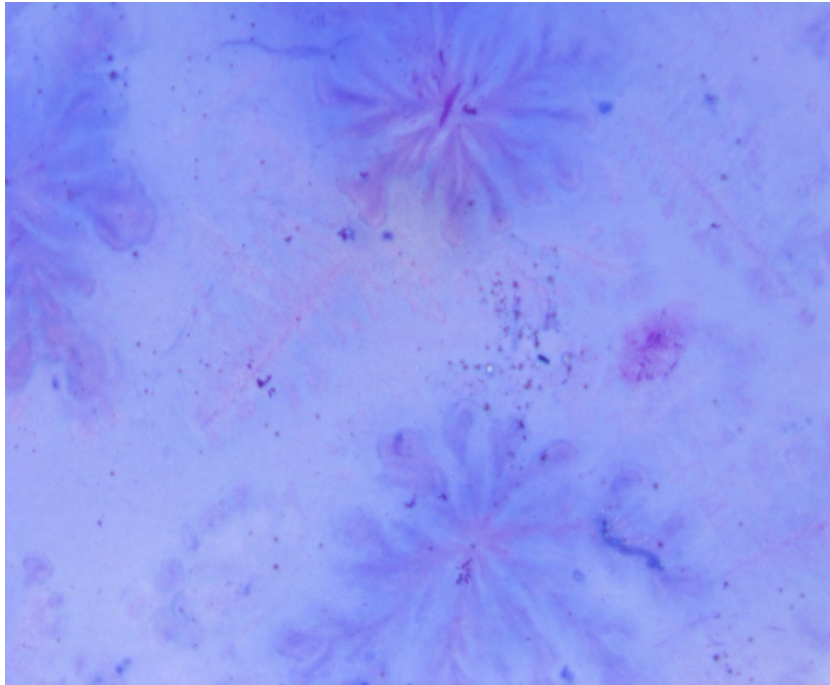


Figure 3: Mucin, in this case no epithelium

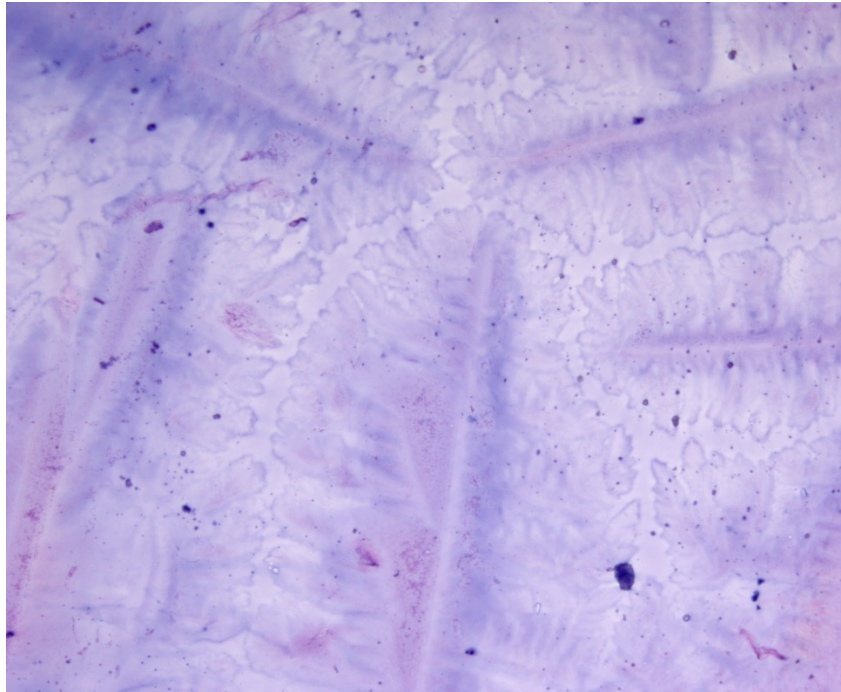


Figure 4: Higher magnification: mucin, in this case no epithelium

Pseudocyst

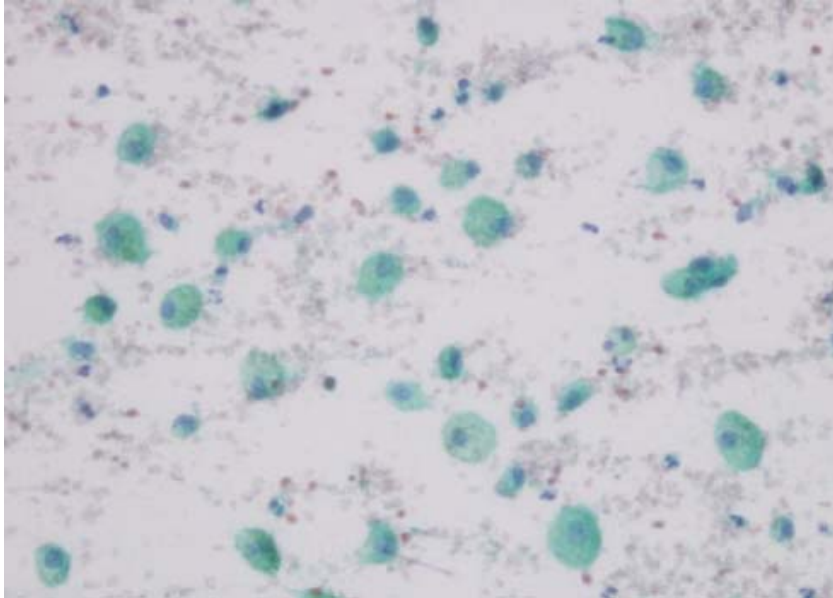


Figure 5: Proteinaceous background, macrophages

Serous Cystic Neoplasm (SCN)

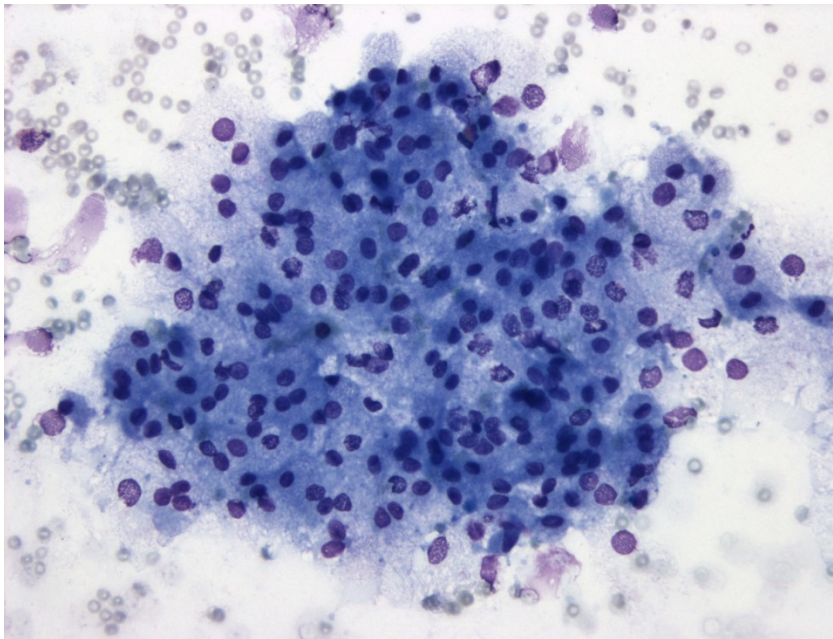


Figure 6: Clear background, sheet of uniform not atypical cells

Solid Pseudopapillary Neoplasm

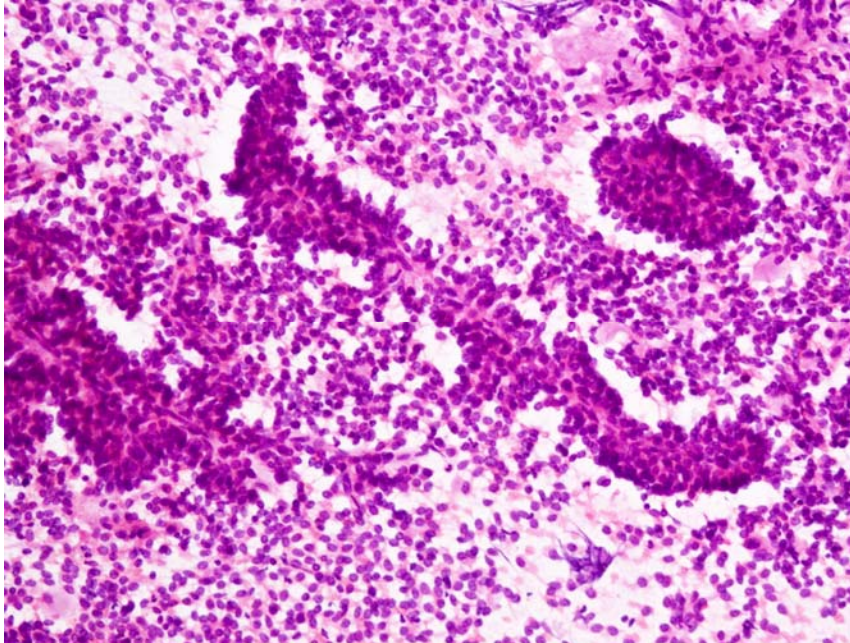


Figure 7: Dense cellular area with monotonous neoplastic cells, long delicate structures with fibrous core

Contact information

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