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Summary

# A PILOT STUDY FOR SINGLE CELL RNA-SEQUENCING OF PATIENT-DERIVED PANCREATOBILIARY CANCER ORGANOID

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**Single-cell RNA sequencing of patient-derived organoids from pancreatic and gallbladder cancers demonstrates that most cells are malignant and suggests EUS-FNB as a viable sampling method.**

## KEY POINTS

- Study analyzed patient-derived organoids from three pancreatic cancer and one gallbladder cancer patient using samples obtained via surgical specimen, EUS-FNB, and ERCP-guided biopsy.
- Histologically, PDOs showed well-visualized malignant glandular epithelium with architecture similar to cancer tissue samples.
- Single-cell RNA sequencing identified 13 cell-type clusters and confirmed that most PDO-derived cells were malignant ductal cells based on KRT19 and RGS5 marker expression consistent with existing PDAC transcriptome studies.
- Authors identified heterogeneous gene expression patterns in ductal cells depending on both pathological positivity and biopsy method, and concluded that EUS-FNB could be a good sampling method for PDOs, though further analysis is needed.

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