

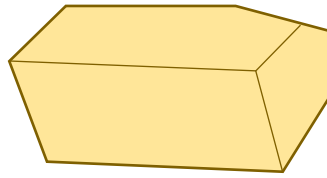
## **Bringing the pancreas patient back to the bench: *Ex vivo* culture of intact human patient derived pancreatic tumour tissue**

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### **Supplementary Figures**

1. Dissect away any regions of normal pancreas or fat tissue. Tumour tissue can be identified due to its more solid texture.



Tumour sample received from surgery.

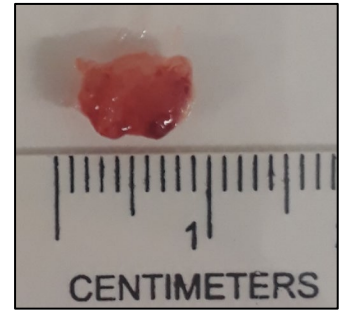
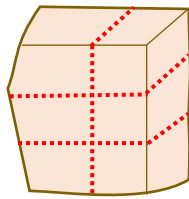
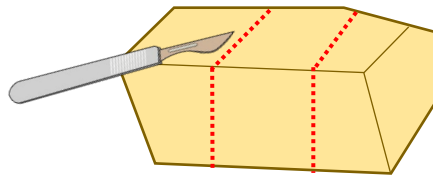
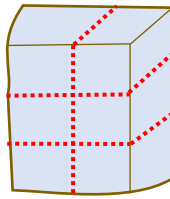


Photo of tumour sample received from surgery.

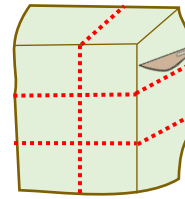
2. Cut tumour tissue into 3 pieces of equal size, and designate 3 pieces as “L”, “M” and “R”.



L

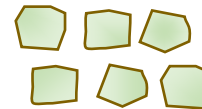
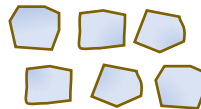
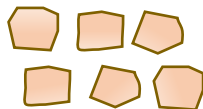


M

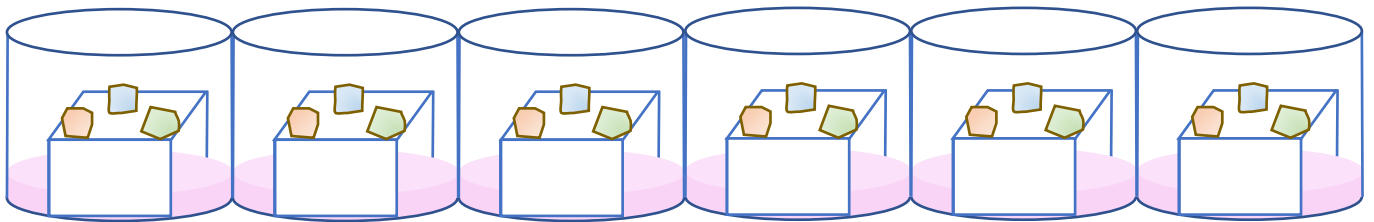


R

3. Cut each piece into explants measuring approximately 2x2x2mm



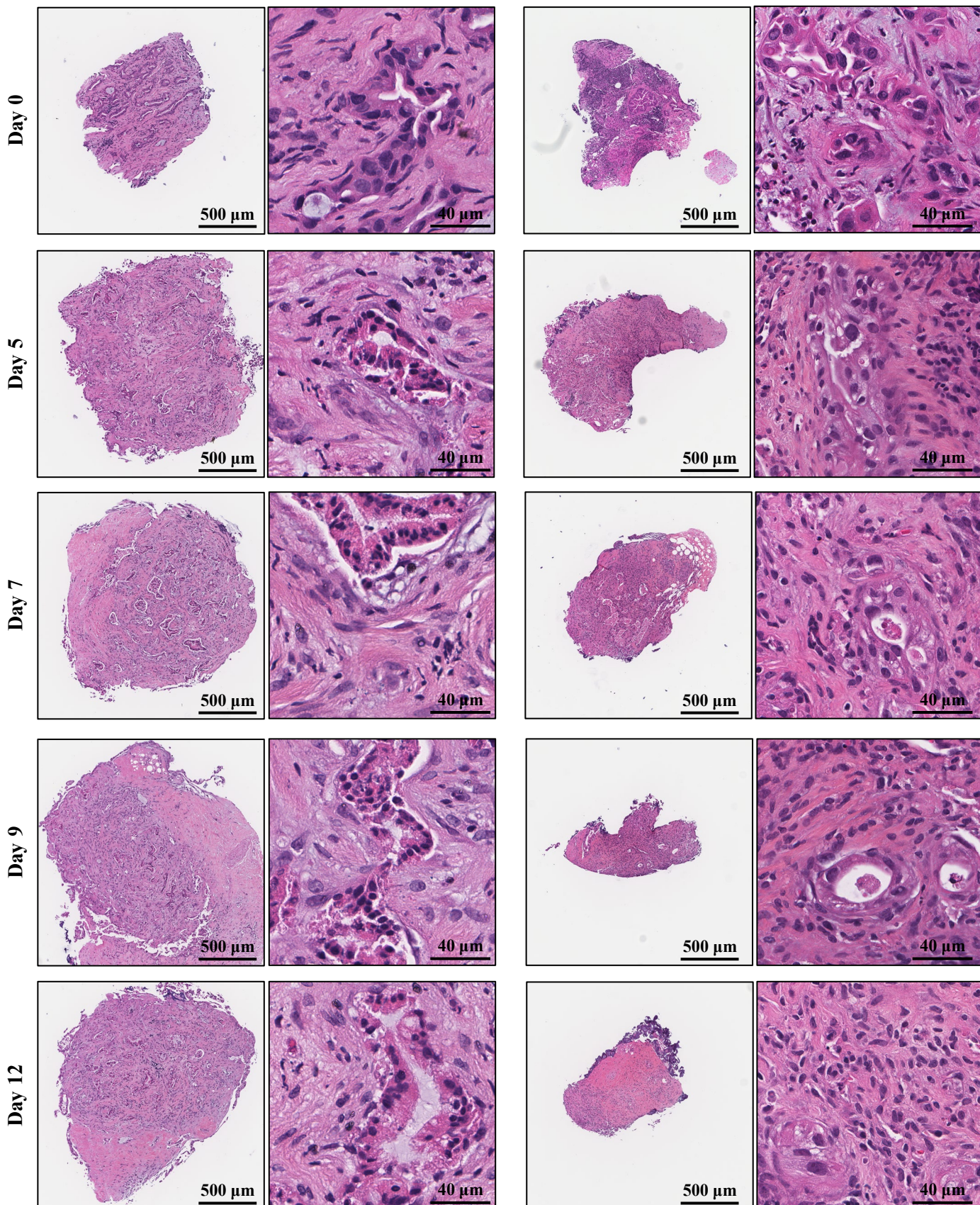
4. Carefully place explants on pre-soaked gelatin sponges in 24-well plate. “L” explants are placed on the left corner of each sponge, “M” in the middle, and “R” on the right corner.



**Supplementary Figure S1. Preparation of patient derived PDAC tumour explants from surgically resected tissue.** Workflow diagram showing how PDAC tumour tissue is prepared and cut for explant culture.

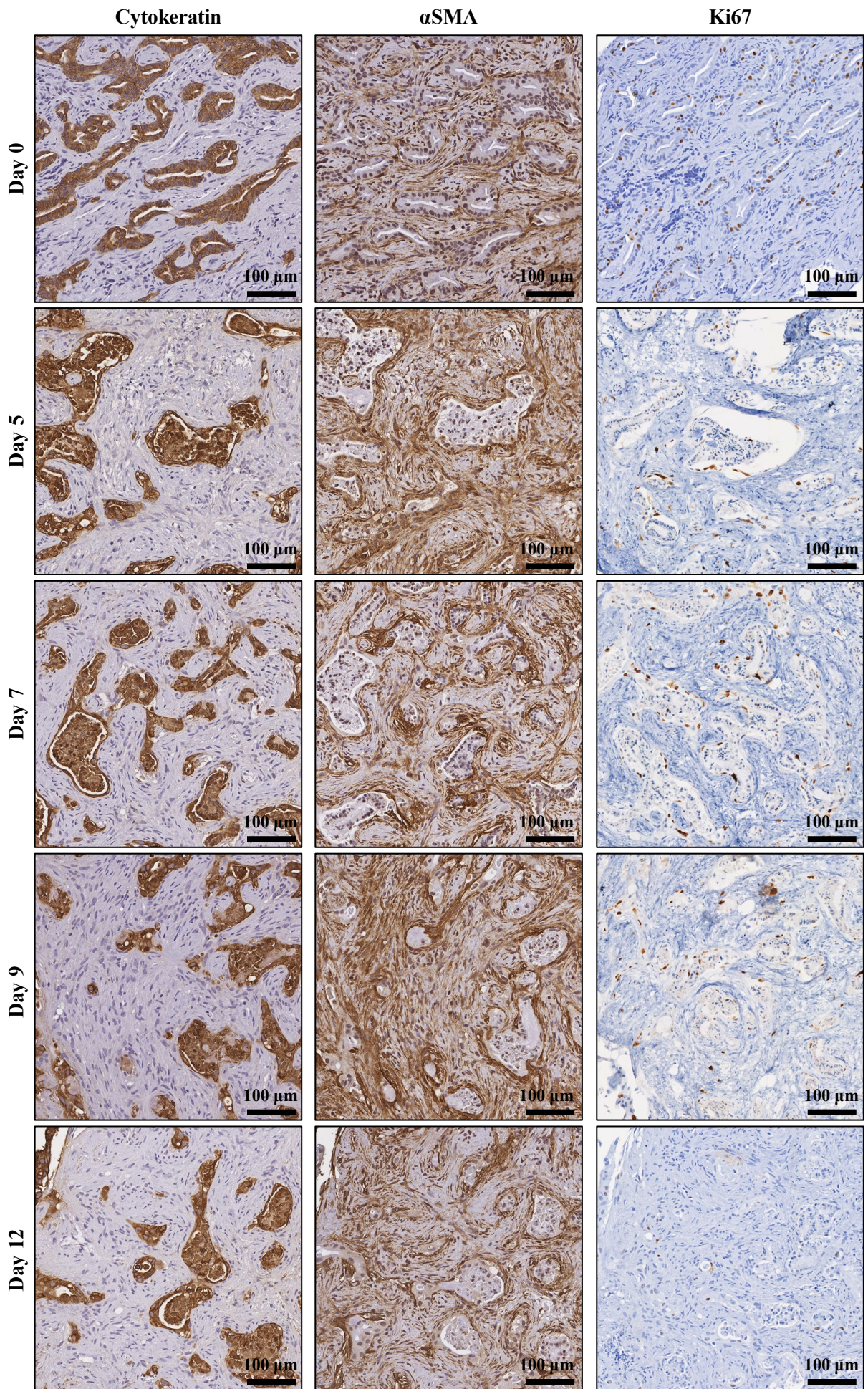
Patient 2

Patient 3



**Supplementary Figure S2. H&E staining of human PDAC explants from patients 2 and 3.** Representative H&E images of patient 2 and 3 explants at low and high magnification from days 0-12.



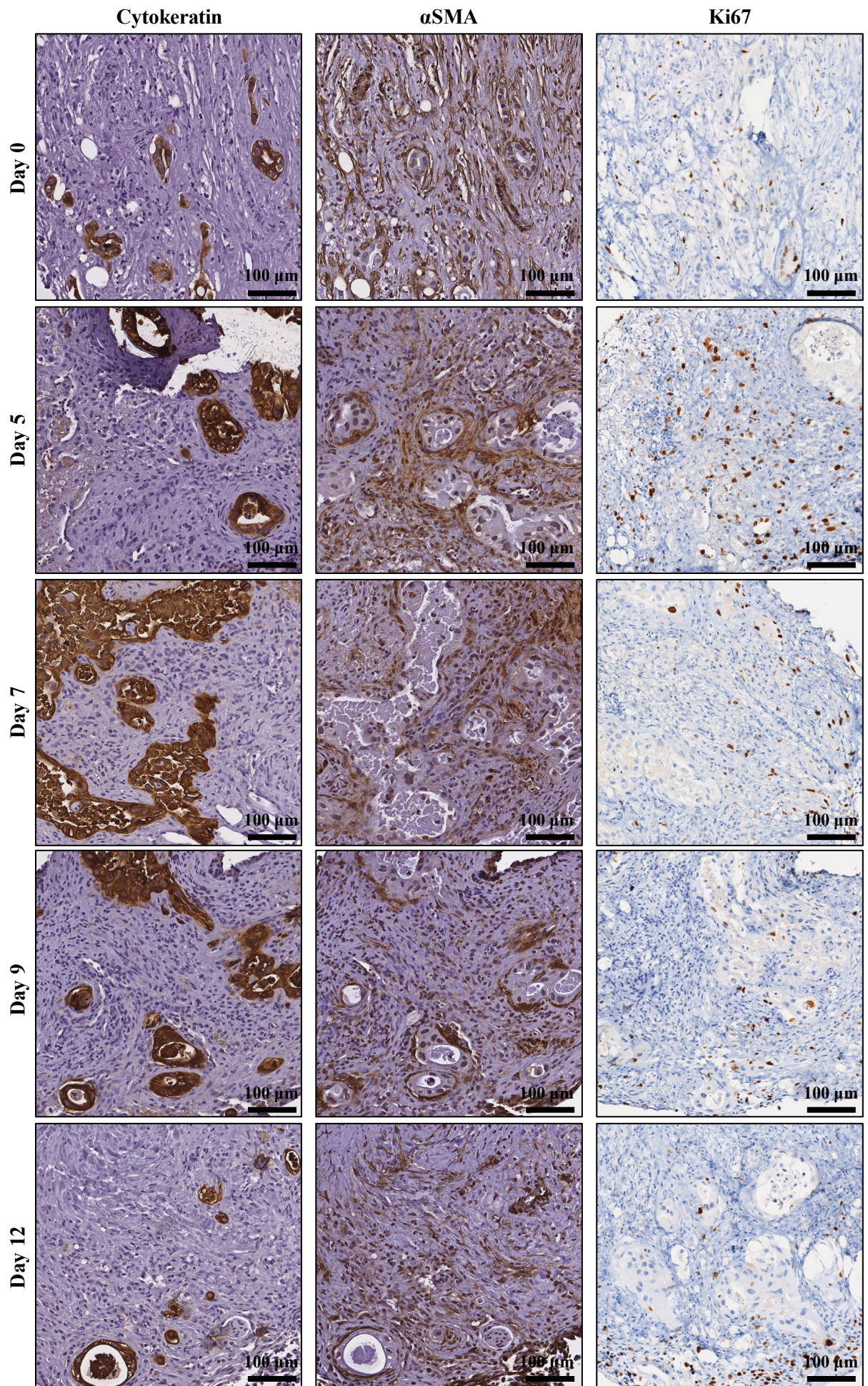


**Supplementary Figure S3. Characterisation of patient 2 human PDAC explants from days 0-12.**



**Supplementary Figure S3. Characterisation of patient 2 human PDAC explants from days 0-12.** Immunohistochemistry was performed for cytokeratin,  $\alpha$ -smooth muscle actin ( $\alpha$ SMA) and Ki67 on patient 2 PDAC explants from days 0-12.



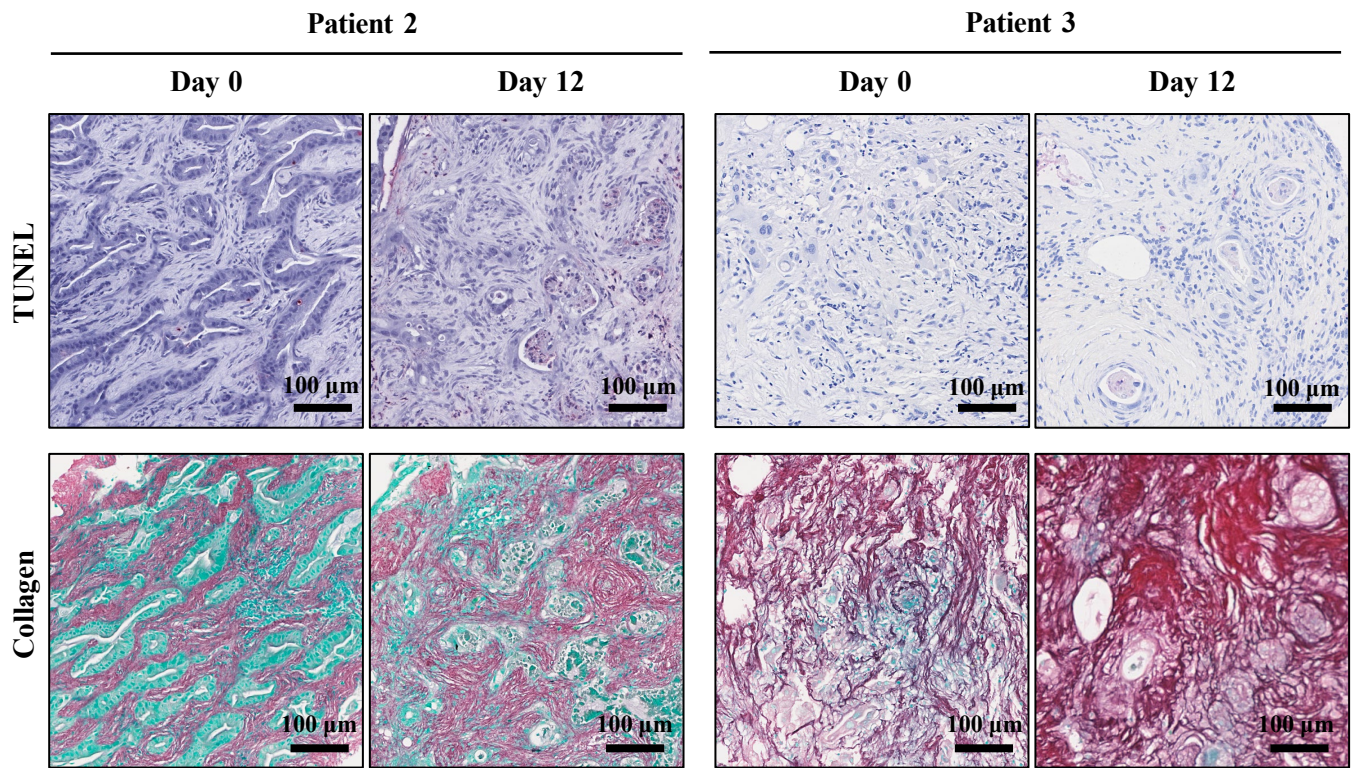


**Supplementary Figure S4. Characterisation of patient 3 human PDAC explants from days 0-12.**

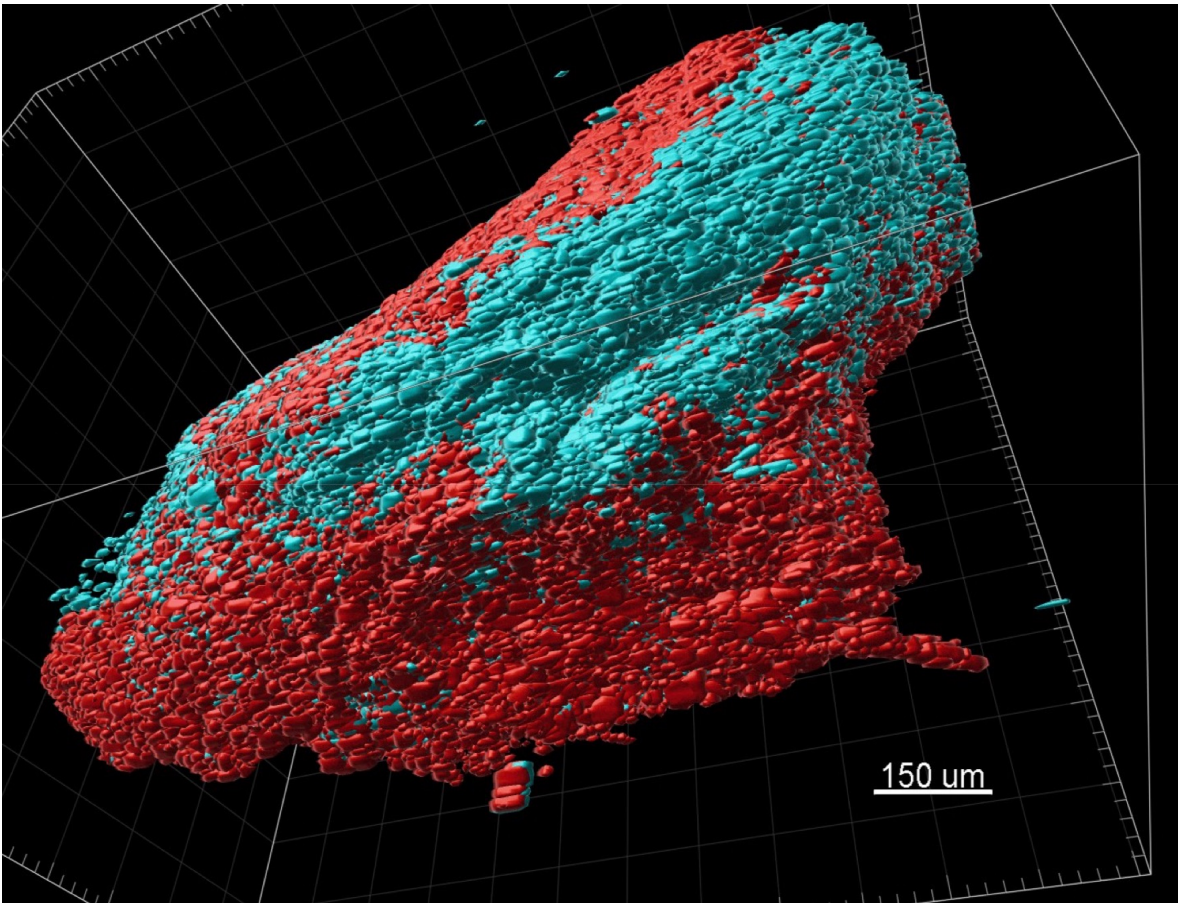


**Supplementary Figure S4. Characterisation of patient 3 human PDAC explants from days 0-12.** Immunohistochemistry was performed for cytokeratin,  $\alpha$ -smooth muscle actin ( $\alpha$ SMA) and Ki67 on patient 3 PDAC explants from days 0-12.





**Supplementary Figure S5. TUNEL and collagen staining of patient 2 and 3 human PDAC explants at day 0 and 12.** TUNEL and collagen (picosirius red/methyl green) staining was performed on patient 2 and 3 PDAC explants at days 0 and 12. All scale bars represent 100  $\mu\text{m}$ .



**Supplementary Figure S6. 3D light-sheet microscopy imaging of a human PDAC explant.** 3D reconstruction of the whole-tissue explant showing single cell nuclei (cyan) and F-actin (red) rich stromal cells.

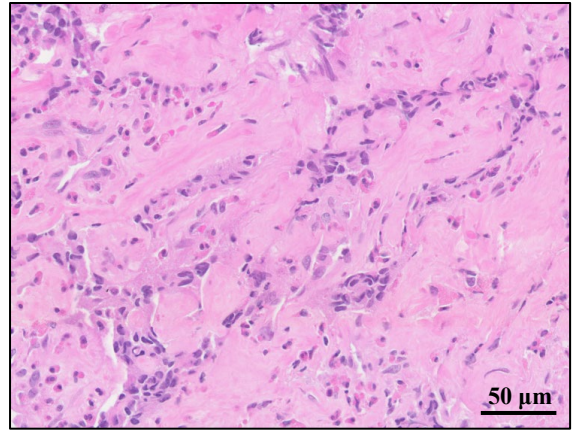
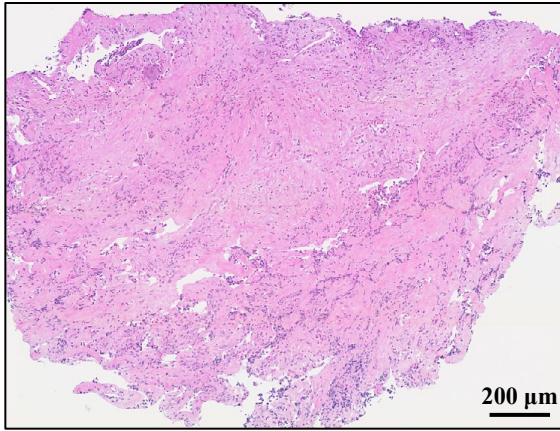


Patient 4

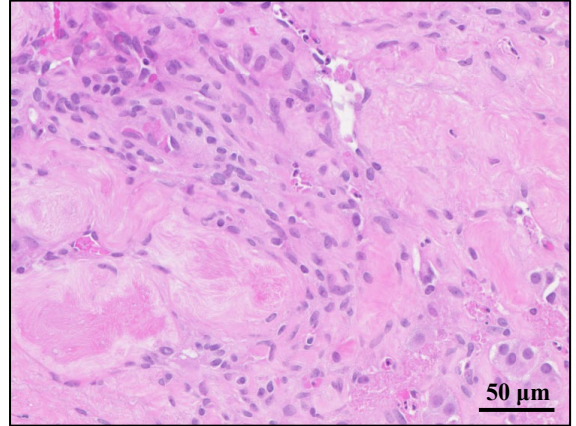
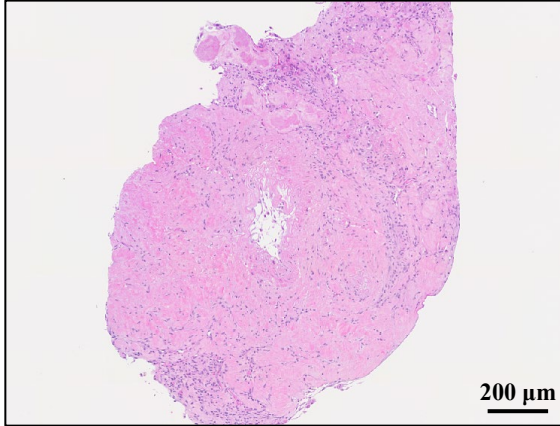
4x

20x

Day 0

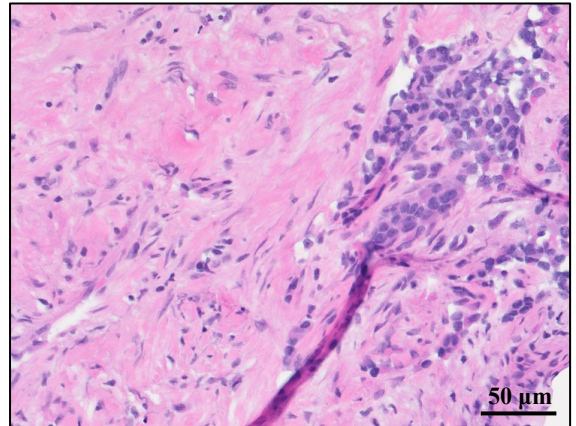
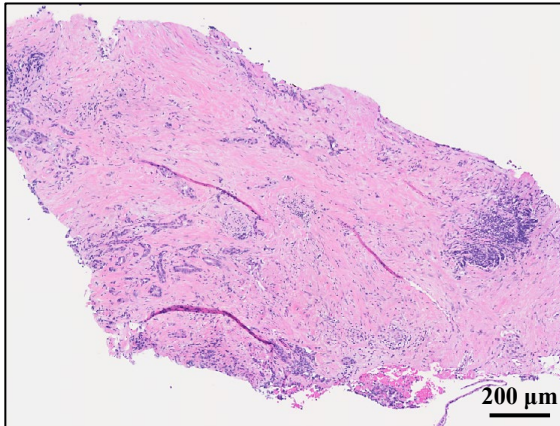


Day 12

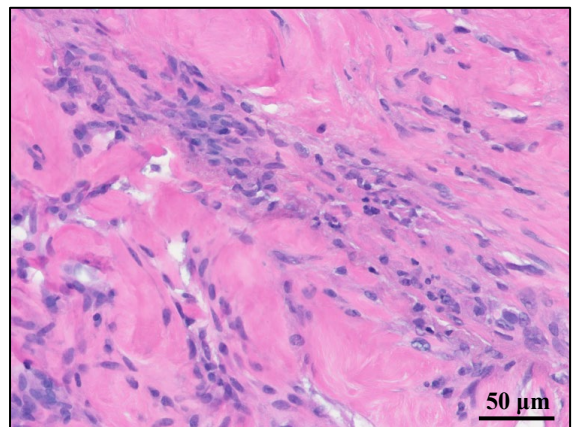
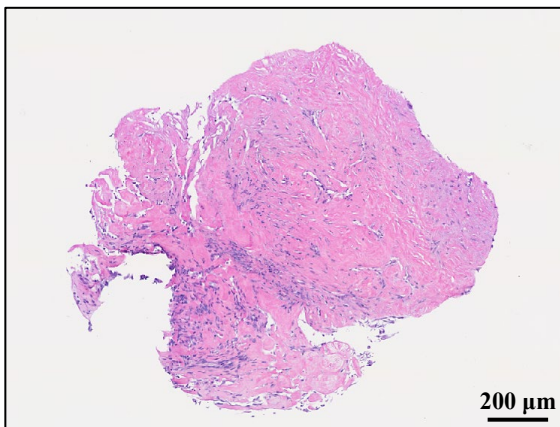


Patient 5

Day 0



Day 12



**Supplementary Figure S7. Human explant culture of pancreatic neuroendocrine tumours from 2 patients.** Representative images of H&E staining of pancreatic neuroendocrine tumours at day 0 and day 12 of culture.

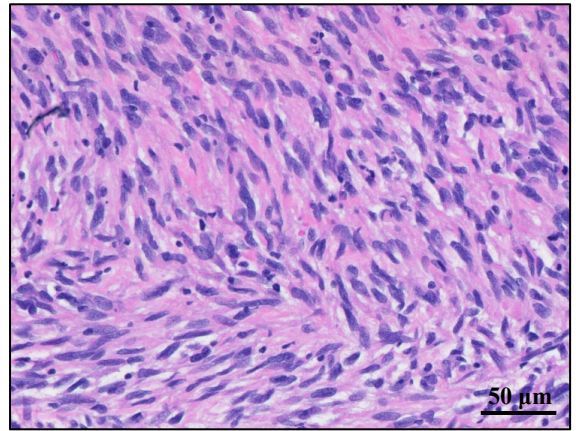
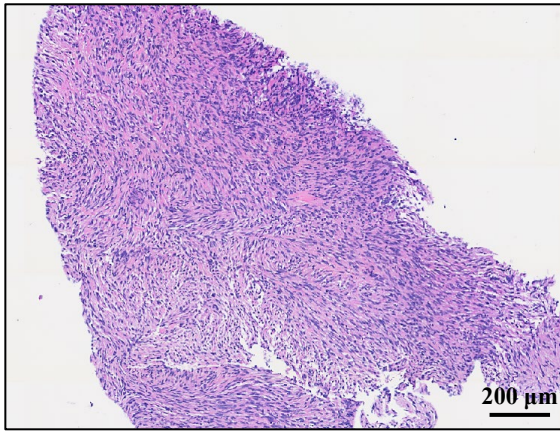


Patient 6

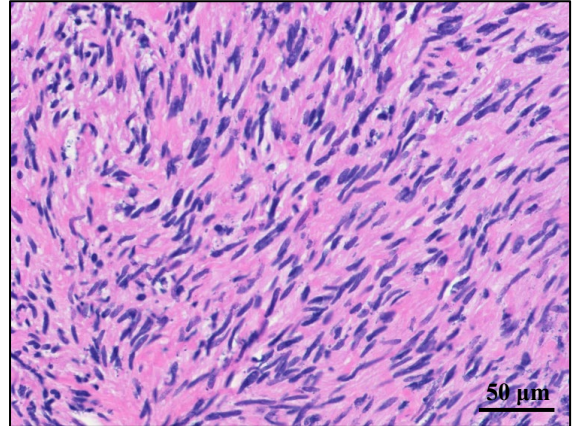
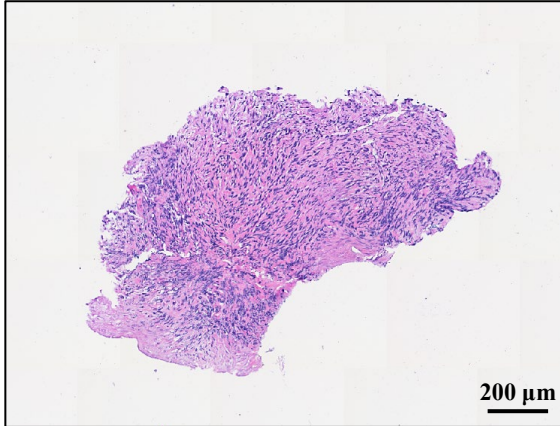
4x

20x

Day 0



Day 12



**Supplementary Figure S8. Human explant culture of a rare metastatic leiomyosarcoma metastasis to the pancreas.** Low and high magnification representative images of H&E staining of a metastatic leiomyosarcoma to the pancreas at day 0 and day 12 of culture.