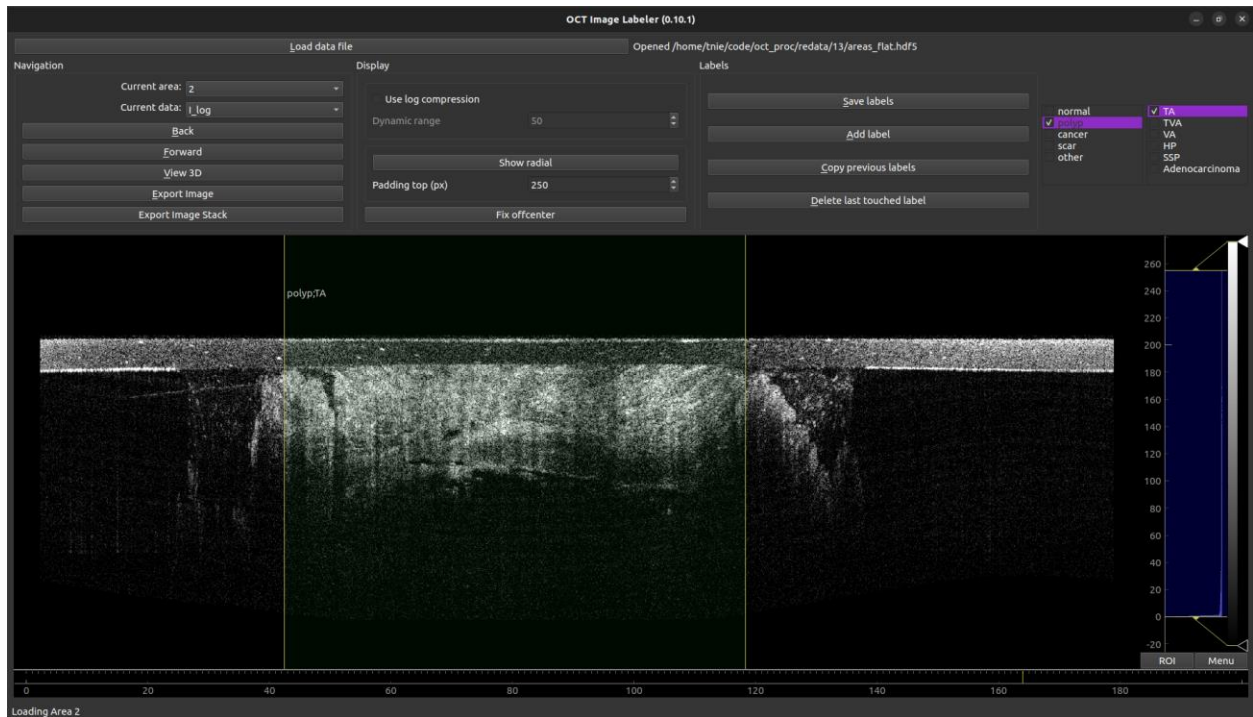
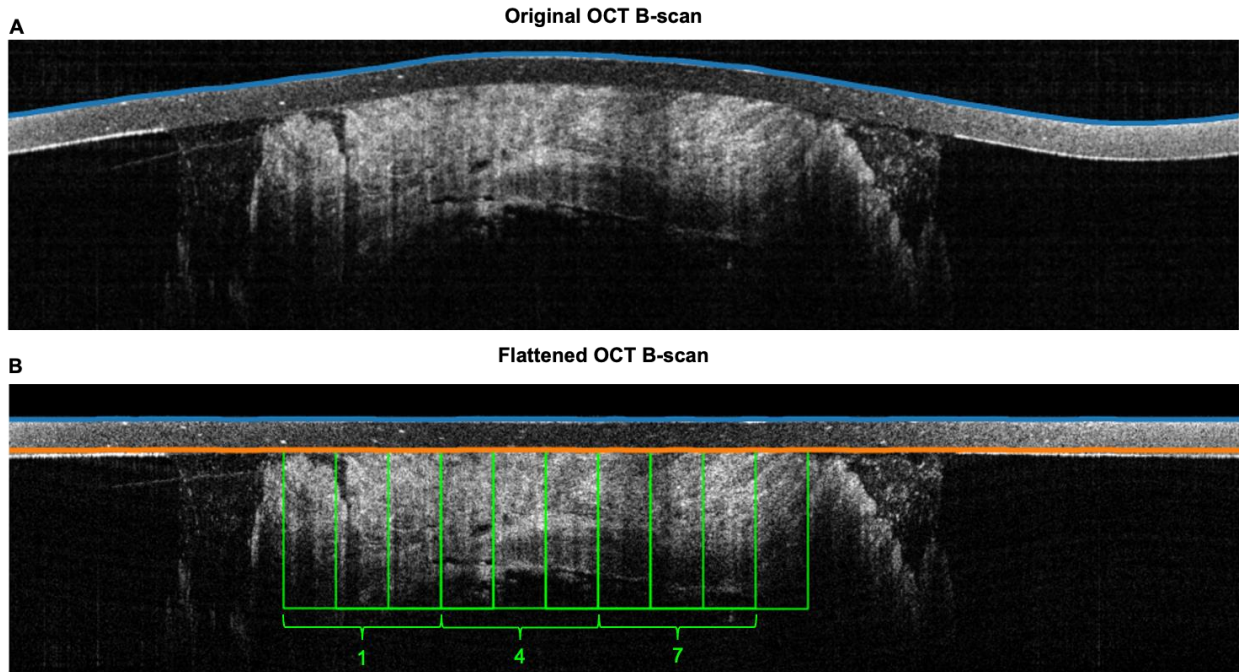


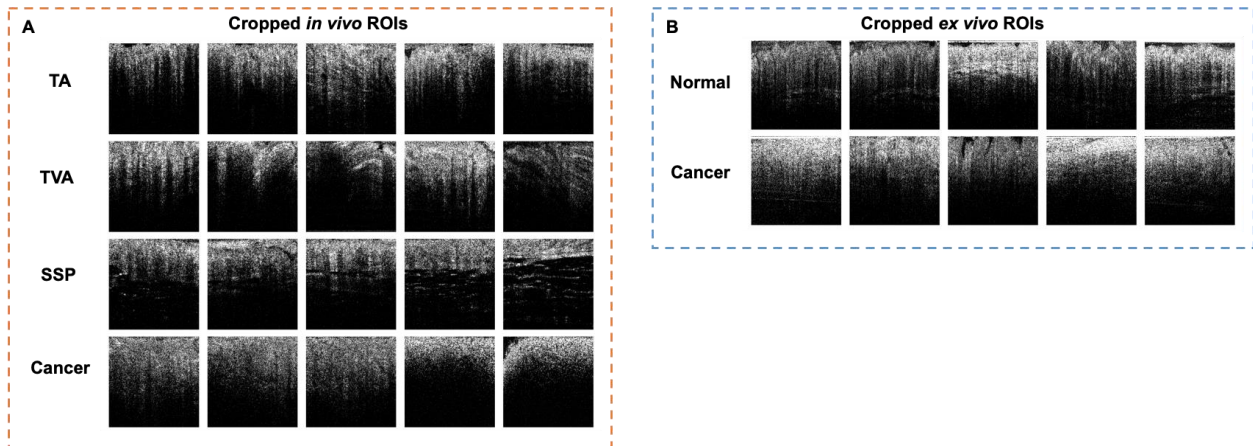
Supplementary



Supplementary Figure 1. Screenshot of the OCT Image Labeler GUI software. Histology labels are marked as a horizontal span on the image. The B-scan images are displayed in rectangular form by default, and a radial version of the same image can be displayed in a floating window to assist visualization.



Supplementary Figure 2. OCT image preprocessing for classification. **a.** Original OCT B-scan, with the blue line visualizing the detected tubing surface. **b.** Flattened OCT B-scan with the blue line showing the PTFE tubing inner surface, and orange line showing the tubing outer surface. The bounding boxes representing cropped ROIs are visualized in green. Bounding boxes overlap, and boxes 1, 4, and 7 are marked.



Supplementary Figure 3. Example regions of interest (ROIs) cropped from the labeled OCT B-scan images, grouped by histological findings. a In vivo ROIs. Significant intraclass variation is observed among polyps of the same histological classification. **b** Ex vivo ROIs

Supplementary Table 1. Location in colon where the OCT catheter was used.

Location in colon OCT probe used (n = 35)	
Rectosigmoid	13
Descending colon	3
Transverse colon	3
Hepatic flexure	2
Ascending colon	10
Cecum	4

Supplementary Table 2. Paris classification of lesions imaged with OCT.

Paris classification of lesions (n = 35)	
Ip	10
Is	12
Ila	4
Ilb	6
Ila+c	3