Supplementary materials

Supplementary Table 1. Testing results for un-masked images.

| Model       | Total accuracy (%) | IoU (%)       | Per-class accuracy (%) |
|-------------|--------------------|---------------|------------------------|
|             |                    |               | Lumen | Interstitial | Sclera          |
| U-Net       | 92.47 ± 3.65       | 86.28 ± 8.39  | 94.07 ± 5.38 | 84.42 ± 5.91  | 98.94 ± 1.10   |
| DeepLabV3   | 89.91 ± 2.76       | 81.53 ± 6.57  | 90.45 ± 3.98 | 81.48 ± 4.72  | 97.79 ± 2.15   |
| ResNet18    | 89.97 ± 2.88       | 81.72 ± 6.82  | 90.85 ± 4.25 | 81.03 ± 4.90  | 98.04 ± 1.85   |
| ResNet50    | 92.47 ± 3.65       | 86.28 ± 8.39  | 91.06 ± 4.51 | 80.35 ± 5.15  | 97.72 ± 1.72   |
| MobileNetV2 | 91.93 ± 2.76       | 84.22 ± 6.67  | 92.78 ± 4.37 | 86.51 ± 4.48  | 96.52 ± 2.51   |

Supplementary Table 2. Repeatability testing for un-masked images.

| Model       | Lumen (%) | Interstitial (%) | Sclera (%) |
|-------------|-----------|------------------|------------|
| U-Net       | 0.59 ± 0.55 | 0.57 ± 0.67    | 0.75 ± 0.69 |
| DeepLabV3   |           |                 |            |
| ResNet18    | 0.75 ± 0.80 | 0.57 ± 0.57    | 0.78 ± 0.85 |
| ResNet50    | 0.75 ± 0.84 | 0.61 ± 0.56    | 0.90 ± 0.98 |
| MobileNetV2 | 0.70 ± 0.72 | 0.79 ± 0.75    | 0.81 ± 0.95 |
| SegNet      | 0.76 ± 0.80 | 0.66 ± 0.65    | 1.03 ± 0.98 |
Supplementary Figure 1. Comparison of mean accuracy of a fixed window size approach (red) versus the U-Net (blue) performance. The values are reported as mean +/- one standard deviation.