

Supplementary Materials

1. Parameters selection for w^m, w^c, w^s

Table S1. The process of parameters selection.

$0.5 * \mathcal{L}_{cls}$	$0.4 * \mathcal{L}_{seg}$	$0.1 * \mathcal{L}_{mut}$	CLS		SEG			
			<i>ACC</i>	<i>F1</i>	<i>DI_{disc}</i>	<i>ASSD_{disc}</i>	<i>DI_{cup}</i>	<i>ASSD_{cup}</i>
✓			<u>0.840</u>	<u>0.858</u>	0.031	63.992	0.000	78.304
✓	✓		0.805	0.836	<u>0.771</u>	<u>1.925</u>	<u>0.805</u>	<u>3.604</u>
✓	✓	✓	0.853	0.875	0.855	1.560	0.858	1.251

2. More visualizations

2.1 Additional visual results

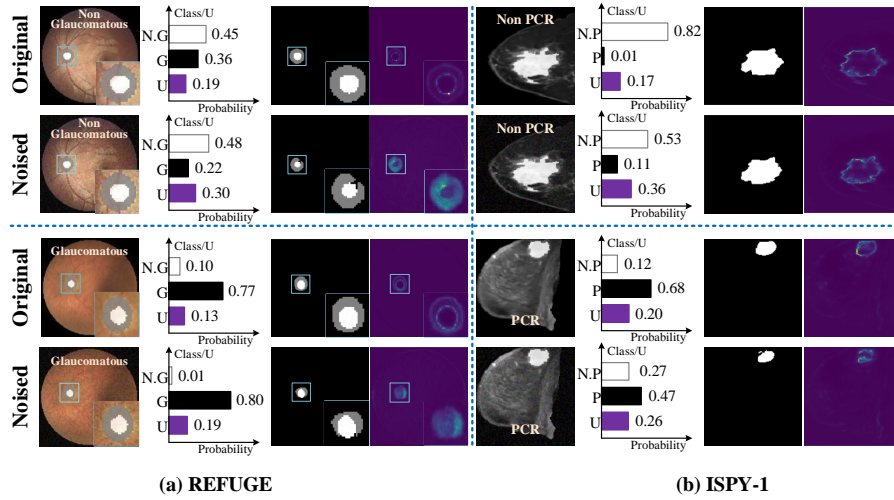


Fig. S1. Four additional visual results of segmentation and classification in REFUGE and ISPY-1. Top is the original image, and bottom is the input with Gaussian noise ($\sigma = 0.05$). From left to right, input (with GT), the result of classification (belief and image-level uncertainty), the result of segmentation, pixel-wise uncertainty).

2.2 Attention maps of classification

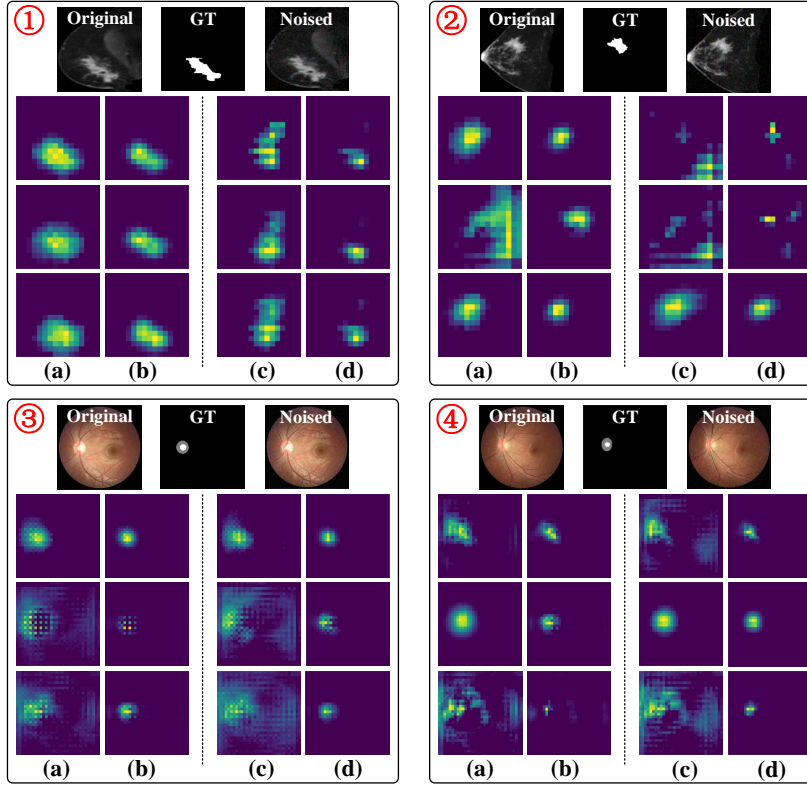


Fig. S2. The attention map of classification in REFUGE and ISPY-1 whose inputs are original or noised ($\sigma = 0.05$) images. ① and ② are in ISPY-1. ③ and ④ are in REFUGE. (a), (b) represent the channel maps of f_c^4 and r^c of the original images. (c), (d) represent the channel maps of f_c^4 and r^c of the noised images. The three channel maps are extracted from 1024 feature maps, randomly.

2.3 Qualitative comparison with multi-task methods.

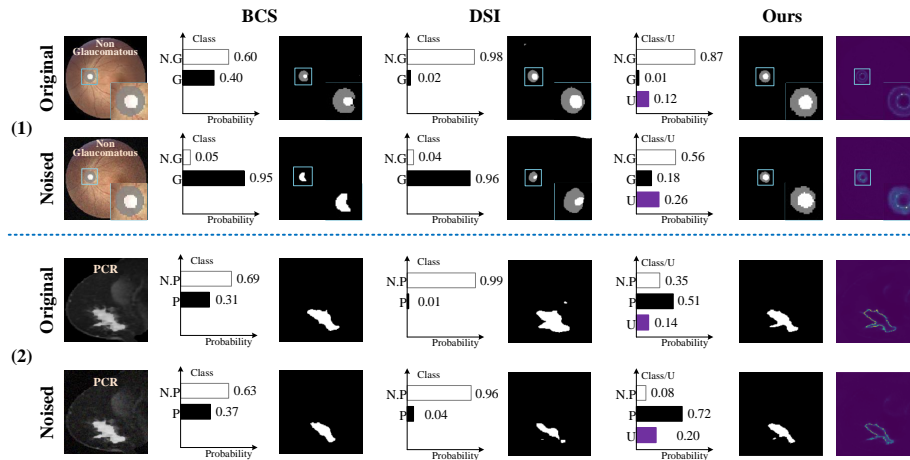


Fig. S3. The visual comparisons of classification and segmentation results in two datasets ((1) is REFUGE and (2) is ISPY-1) with multi-task methods.