Supplemental Document

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Annotation-efficient learning for OCT segmentation: supplement

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K-fold cross-validation of our results

For SRF and PED, we list the number of images in each case, as shown in Fig. Fig. 1. Due to the different size and location of the lesions, significant differences in the number can be seen, which is unfair to divide the K-fold subset for validation We randomly selected two-fifths of the cases as test data and the rest as training data for a total of three times. For Choroid, we divided 16 cases into 4-fold cross-validation. The detailed results are shown in Tables Table 1, Table 2, and Table 3 below, and the average results are shown in Fig. Fig. 2. These results remain consistent with our original manuscript: compared to the widely used U-Net model with 100% training data, our method requires only 10% of the data to achieve the same segmentation accuracy. However, the number of B-sans varies due to the division of the random data set, and we cannot fairly compare the training times. Of course, the training time does decrease accordingly due to the use of less data in training.

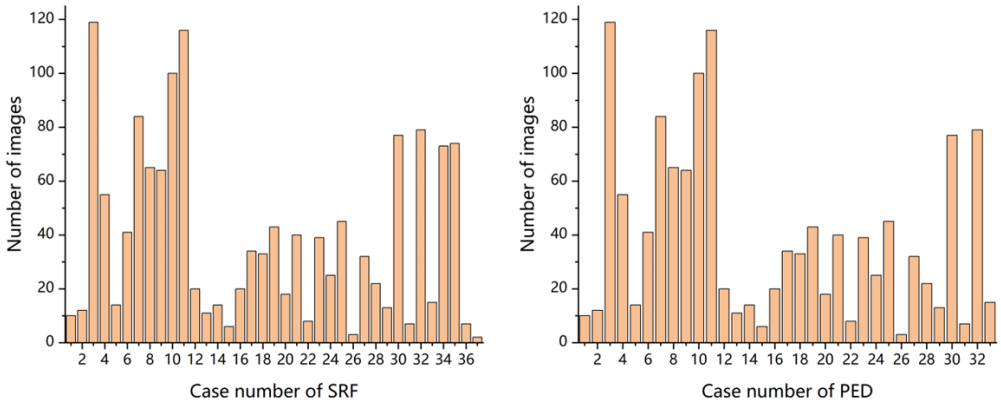

Fig. 1. The number of images in each case of SRF (left) and PED (right) tasks.

Table 1. Comparison of segmentation accuracy (DSC) with the U-Net results using 3 times random dataset division under 5%, 10%, 100% data budgets for **SRF** task.

Data budget	Method	1	2	3	Mean (STD)
100%	Ours	**0.824**	**0.755**	**0.781**	**0.787 (0.035)**
	U-Net	0.789	0.722	0.756	0.756 (0.033)
10%	Ours	**0.795**	**0.711**	**0.739**	**0.748 (0.043)**
	U-Net	0.418	0.583	0.647	0.549 (0.118)
5%	Ours	**0.776**	**0.689**	**0.692**	**0.719 (0.049)**
	U-Net	0.384	0.457	0.576	0.472 (0.097)

Table 2. Comparison of segmentation accuracy (DSC) with the U-Net results using 3 times random dataset division under 5%, 10%, 100% data budgets for **PED** task.

Data budget	Method	1	2	3	Mean (STD)
100%	Ours	**0.724**	**0.701**	**0.634**	**0.686 (0.047)**
	U-Net	0.673	0.642	0.622	0.646 (0.026)
10%	Ours	**0.676**	**0.664**	**0.619**	**0.653 (0.030)**
	U-Net	0.153	0.487	0.386	0.342 (0.171)
5%	Ours	**0.646**	**0.634**	**0.600**	**0.627 (0.024)**
	U-Net	0.038	0.196	0.333	0.189 (0.148)

Table 3. Comparison of segmentation accuracy (DSC) with the U-Net results using 4-fold cross-validation under 5%, 10%, 100% data budgets for **Choroid** task.

Data budget	Method	1	2	3	4	Mean (STD)
100%	Ours	**0.908**	**0.905**	**0.912**	**0.870**	**0.900 (0.019)**
	U-Net	0.889	0.893	0.896	0.861	0.885 (0.016)
10%	Ours	**0.908**	**0.894**	**0.904**	**0.869**	**0.894 (0.018)**
	U-Net	0.883	0.860	0.887	0.843	0.868 (0.021)
5%	Ours	**0.904**	**0.892**	**0.894**	**0.863**	**0.888 (0.018)**
	U-Net	0.812	0.849	0.748	0.744	0.788 (0.051)

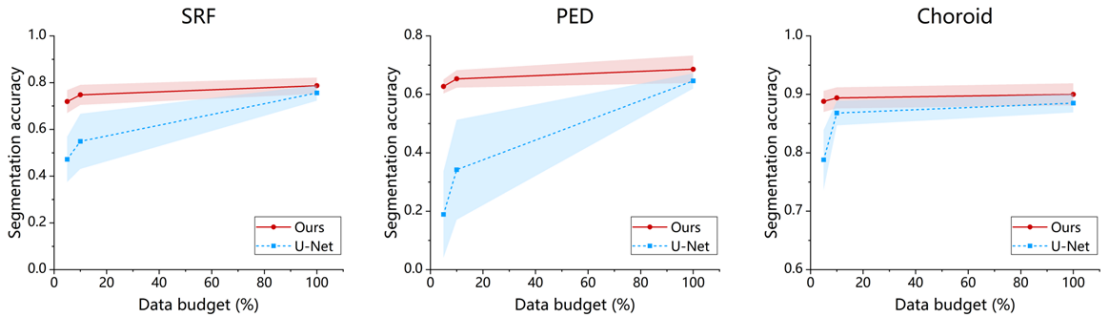

Fig. 2. Comparison of segmentation accuracy (DSC) with the U-Net results under 5%, 10%, 100% data budgets.