Uncertainty-aware meta-weighted optimization framework for domain-generalized medical image segmentation

1 Supplementary A. Dataset configuration

Table 1. Composition of the train and test dataset

	Dataset name	Annotated label	Dataset Configuration	
			# of train dataset	# of test dataset
Anonymous	Echonet -dynamic	$y_{\text{LVbloodpool}}$	18,000	2,060
	HMC-QU	y_{LVwall}	2,000	349
	Camus A2C	$y_{\text{LVbloodpool}}, y_{\text{LVwall}}, y_{\text{LA}}$	900	100
	Camus A4C	$y_{\text{LVbloodpool}}, y_{\text{LVwall}}, y_{\text{LA}}$	900	100
Synthetic	EDM	$y_{\text{LVbloodpool}}, y_{\text{LVwall}}, y_{\text{LA}}$	570,000	-
Out-of-Distribution	OOD Anonymous	$y_{\text{LVbloodpool}}, y_{\text{LVwall}}, y_{\text{LA}}$	-	237

2 Supplementary B. Ablation study with diverse backbone network

Table 2. Ablation study employing Deeplab v3, PSP-net, Seg-net, and Seg-former as backbone network

MIOU												
		In-distribution								Out-of-distribution		
		Echo	MHC	Camus A2C			Camus A4C			Anonymous		
Model	Proposed Scheme	LV pool	LV pool	LV pool	LV wall	LA	LV pool	LV wall	LA	LV pool	LV wall	LA
Deeplab v3 [2]		0.8685	0.8835	0.8603	0.7406	0.8283	0.8385	0.7324	0.8256	0.7696	0.3617	0.5727
	✓	0.9153	0.8929	0.8682	0.7480	0.8380	0.8539	0.7536	0.8296	0.7994	0.3628	0.6259
PSP-net [4]		0.8632	0.8715	0.8649	0.7311	0.8287	0.8257	0.7226	0.8199	0.7467	0.4381	0.5897
	✓	0.9303	0.9057	0.8790	0.7688	0.8585	0.8452	0.7533	0.8300	0.7622	0.4287	0.6024
Seg-net [1]		0.8448	0.8819	0.8021	0.6577	0.8357	0.7572	0.6574	0.7701	0.7872	0.3506	0.6371
	✓	0.8891	0.9051	0.8746	0.7550	0.8422	0.8469	0.7387	0.8147	0.7997	0.3735	0.6834
Seg-former [3]		0.8459	0.8804	0.8584	0.7329	0.8029	0.8520	0.7450	0.7846	0.7785	0.3644	0.5612
	✓	0.8495	0.8842	0.8640	0.7162	0.8498	0.8624	0.7412	0.8116	0.7991	0.3897	0.6789

3 Supplementary C. Qualitative assessment of the comparative studies

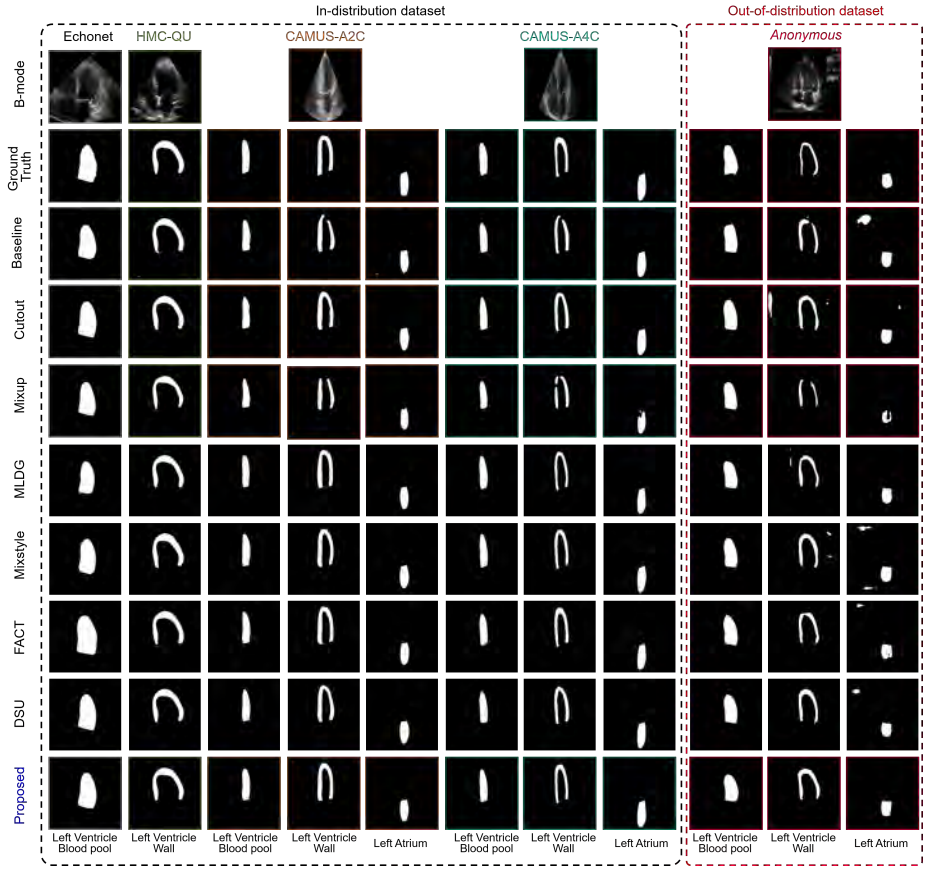

Fig. 1. Qualitative assessment of the comparative study.

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