

Supplementary of BOTM: Echocardiography Segmentation via Bi-directional Optimal Token Matching

BMVC 2025 Submission # 121

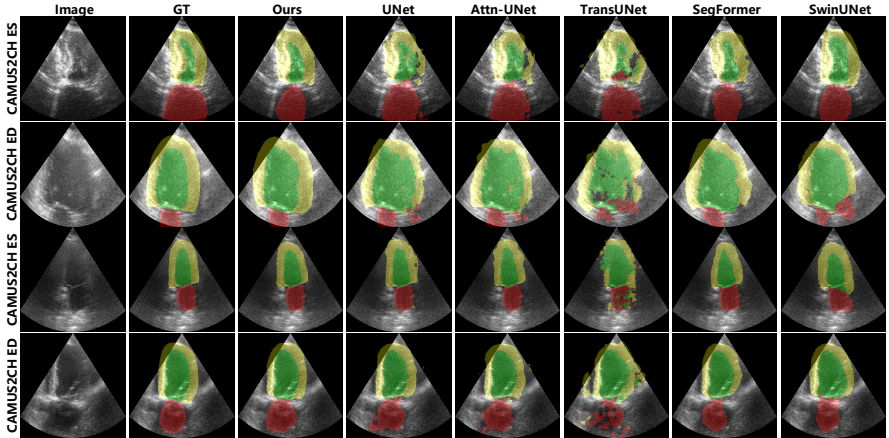


Figure S1: Additional aualitative results on CAMUS apical two chamber view.

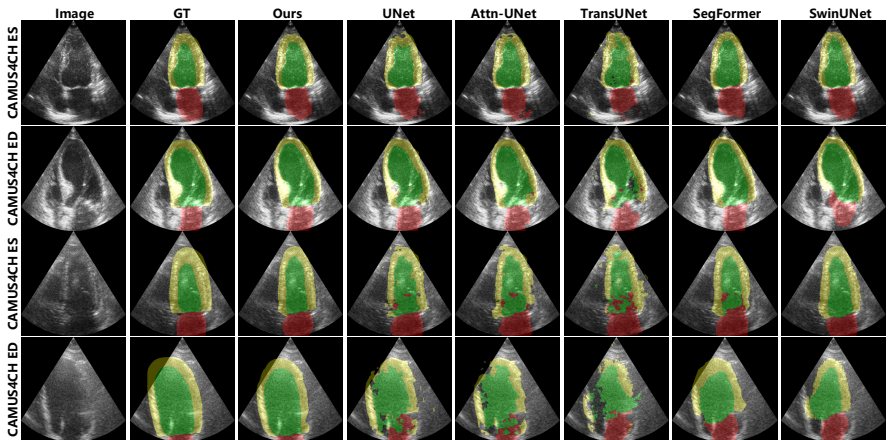


Figure S2: Additional aualitative results on CAMUS apical four chamber view.

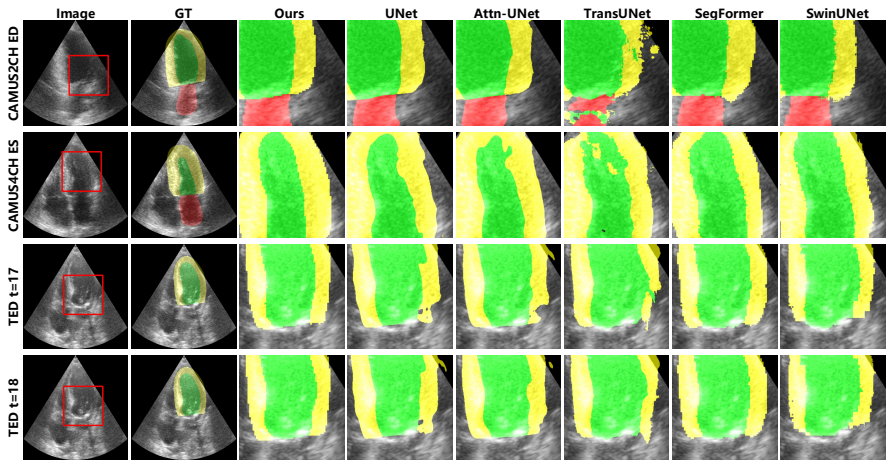


Figure S3: **Additional qualitative results on the CAMUS and TED dataset:** We present zoomed-in image patches for detailed comparison. BOTM consistently produces accurate and anatomically coherent segmentations, while baseline methods are adversely affected by various types of noise, leading to anatomically degraded masks.

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Table S1: Quantitative result breakdowns on CAMUS and TED. For results on CAMUS2CH and CAMUS4CH, we report the average score on [Left] end-diastolic (ED) frame and [Right] end-systolic (ES) frame. For results on TED, we report the average score across all video frames among testset patients.

		CAMUS 2CH				
Methods		mDice \uparrow	mHD \downarrow	mIoU \uparrow	Spe \uparrow	MAE \downarrow
LV	UNet	0.924/0.905	9.309/7.187	0.881/0.861	0.992/0.991	0.017/0.013
	Attn-UNet	0.922/0.908	11.069/12.238	0.878/0.866	0.992/0.9911	0.018/0.013
	TransUNet	0.896/0.891	10.906/13.593	0.841/0.834	0.983/0.988	0.034/0.031
	SegFormer	0.907/0.876	15.657/17.714	0.832/0.782	0.992/0.992	0.020/0.017
	SwinUNet	0.918/0.902	6.054/9.600	0.869/0.878	0.990/0.990	0.022/0.018
	BOTM(Ours)	0.926/0.945	5.841/5.967	0.894/0.893	0.994/0.994	0.013/0.013
Myo	UNet	0.884/0.900	8.162/6.222	0.820/0.873	0.980/0.984	0.039/0.033
	Attn-UNet	0.872/0.904	10.613/7.535	0.808/0.879	0.980/0.984	0.039/0.032
	TransUNet	0.874/0.874	9.198/11.797	0.774/0.845	0.965/0.962	0.065/0.062
	SegFormer	0.797/0.809	23.087/22.575	0.669/0.684	0.982/0.983	0.045/0.041
	SwinUNet	0.866/0.878	9.347/10.877	0.792/0.831	0.976/0.981	0.046/0.040
	BOTM(Ours)	0.899/0.937	9.074/6.980	0.873/0.885	0.988/0.980	0.029/0.022
LA	UNet	0.870/0.896	12.866/9.118	0.866/0.817	0.996/0.996	0.011/0.012
	Attn-UNet	0.887/0.892	9.403/10.499	0.830/0.812	0.996/0.996	0.011/0.012
	TransUNet	0.897/0.860	9.050/11.550	0.881/0.632	0.987/0.987	0.027/0.027
	SegFormer	0.830/0.835	17.480/19.902	0.722/0.728	0.997/0.997	0.013/0.018
	SwinUNet	0.884/0.896	9.488/8.066	0.867/0.754	0.992/0.993	0.015/0.017
	BOTM(Ours)	0.901/0.920	7.088/4.636	0.894/0.875	0.998/0.997	0.009/0.009
		CAMUS 4CH				
LV	UNet	0.931/0.901	7.742/12.273	0.902/0.859	0.995/0.993	0.012/0.011
	Attn-UNet	0.918/0.922	6.214/8.694	0.902/0.877	0.994/0.992	0.012/0.011
	TransUNet	0.887/0.867	12.575/15.851	0.803/0.727	0.990/0.985	0.025/0.023
	SegFormer	0.929/0.905	8.579/8.363	0.869/0.829	0.994/0.993	0.015/0.013
	SwinUNet	0.918/0.897	7.111/11.064	0.852/0.848	0.988/0.985	0.018/0.018
	BOTM(Ours)	0.949/0.923	4.209/4.035	0.912/0.893	0.998/0.993	0.010/0.011
Myo	UNet	0.867/0.861	11.362/13.606	0.867/0.860	0.987/0.988	0.024/0.024
	Attn-UNet	0.865/0.866	14.419/9.996	0.864/0.865	0.987/0.989	0.024/0.023
	TransUNet	0.875/0.849	18.995/19.510	0.839/0.717	0.984/0.983	0.037/0.038
	SegFormer	0.831/0.832	23.986/15.461	0.715/0.728	0.985/0.987	0.029/0.027
	SwinUNet	0.888/0.853	9.174/14.995	0.874/0.834	0.982/0.983	0.033/0.034
	BOTM(Ours)	0.909/0.894	8.323/9.912	0.894/0.877	0.990/0.986	0.015/0.025
LA	UNet	0.876/0.919	12.477/7.201	0.850/0.874	0.996/0.996	0.009/0.009
	Attn-UNet	0.875/0.918	19.885/10.615	0.830/0.872	0.996/0.996	0.009/0.010
	TransUNet	0.816/0.824	20.997/17.966	0.727/0.709	0.988/0.987	0.027/0.022
	SegFormer	0.865/0.917	14.792/8.451	0.802/0.849	0.995/0.994	0.011/0.010
	SwinUNet	0.862/0.903	11.991/9.557	0.854/0.887	0.995/0.995	0.012/0.013
	BOTM(Ours)	0.901/0.920	7.435/5.901	0.884/0.895	0.997/0.997	0.009/0.009
		TED				
LV	UNet	0.913	9.731	0.878	0.991	0.015
	Attn-UNet	0.915	8.825	0.850	0.991	0.016
	TransUNet	0.853	12.646	0.755	0.990	0.027
	SegFormer	0.901	11.409	0.824	0.991	0.017
	SwinUNet	0.875	10.532	0.789	0.984	0.022
	BOTM(Ours)	0.940	6.387	0.890	0.994	0.012
Myo	UNet	0.889	12.901	0.811	0.982	0.028
	Attn-UNet	0.893	10.314	0.866	0.983	0.028
	TransUNet	0.845	14.609	0.793	0.984	0.036
	SegFormer	0.871	17.170	0.649	0.984	0.031
	SwinUNet	0.869	15.767	0.794	0.983	0.037
	BOTM(Ours)	0.907	8.652	0.895	0.991	0.016