

Supplementary Materials for Paper Titled "MetaAD: Metabolism-Aware Anomaly Detection for Parkinson's Disease in 3D ^{18}F -FDG PET"

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Table 1. Quantitative comparison between the proposed MetaAD and other UAD methods based on different anomaly scores. The best results for each anomaly score are shown in bold fonts while the best results across all anomaly scores are underlined.

Score	Method	Accuracy	Sensitivity	Specificity	F1-Score	AUC
AMC	AE [1]	33.87 \pm 5.73	2.17 \pm 2.15	<u>100.00\pm0.00</u>	4.04 \pm 4.02	38.48 \pm 7.59
	U-Net [2]	46.98 \pm 6.02	21.54 \pm 6.11	<u>100.00\pm0.00</u>	35.47 \pm 8.30	56.67 \pm 7.24
	CycleGAN [3]	57.28 \pm 5.96	50.07 \pm 7.37	72.25 \pm 9.77	60.93 \pm 6.76	61.14 \pm 7.22
	MetaAD (Ours)	68.74\pm5.64	76.09\pm6.20	54.23 \pm 10.74	76.57\pm4.62	65.78\pm7.26
HMA	AE [1]	57.74 \pm 6.22	60.82 \pm 7.17	50.28 \pm 11.03	65.39 \pm 5.89	51.42 \pm 7.53
	U-Net [2]	48.43 \pm 5.93	34.97 \pm 7.19	77.13\pm9.12	47.24 \pm 7.46	50.36 \pm 7.38
	CycleGAN [3]	66.35 \pm 5.91	62.95 \pm 7.23	72.73 \pm 9.74	71.30 \pm 5.68	66.84 \pm 7.47
	MetaAD (Ours)	68.99\pm5.62	69.52\pm7.08	68.05 \pm 10.14	75.40\pm4.99	70.00\pm7.26
LMA	AE [1]	79.22 \pm 4.77	86.89 \pm 5.04	63.65 \pm 10.25	84.77 \pm 3.91	77.05 \pm 6.80
	U-Net [2]	73.17 \pm 5.40	78.20 \pm 6.22	63.45 \pm 10.68	79.66 \pm 4.64	74.43 \pm 6.51
	CycleGAN [3]	73.66 \pm 5.58	71.69 \pm 6.61	77.39\pm8.97	78.32 \pm 4.89	79.65 \pm 5.75
	MetaAD (Ours)	83.82\pm4.48	91.44\pm4.13	67.92 \pm 10.09	88.17\pm3.59	83.97\pm5.54
AMR	AE [1]	67.85 \pm 5.64	60.79 \pm 7.04	81.91 \pm 7.97	71.50 \pm 5.98	70.01 \pm 7.49
	U-Net [2]	58.71 \pm 5.85	50.05 \pm 7.41	77.55 \pm 8.89	61.89 \pm 6.71	65.71 \pm 7.26
	CycleGAN [3]	74.75\pm5.35	76.11\pm6.12	72.69 \pm 9.40	80.22\pm4.76	73.41 \pm 7.34
	MetaAD (Ours)	73.51 \pm 5.36	69.45 \pm 6.61	82.01\pm8.24	77.96 \pm 5.00	79.82\pm5.66

References

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