

S4 Table. Comparison of different objective functions and pre-processing techniques.

Dataset	J_{MVIB-T}		J_{MVIB}	
	D	J	D	J
IBD	0.922 (0.020)	0.936 (0.014)	0.915 (0.018)	0.915 (0.018)
EW-T2D	0.859 (0.023)	0.853 (0.025)	0.859 (0.024)	0.855 (0.027)
C-T2D	0.750 (0.009)	0.758 (0.012)	0.754 (0.014)	0.756 (0.015)
Obesity	0.662 (0.024)	0.666 (0.027)	0.673 (0.028)	0.672 (0.030)
Cirrhosis	0.925 (0.005)	0.924 (0.005)	0.930 (0.002)	0.928 (0.002)
Colorectal	0.780 (0.071)	0.777 (0.069)	0.788 (0.059)	0.796 (0.055)
Obesity-Joint	0.815 (0.019)	0.818 (0.018)	0.825 (0.019)	0.825 (0.018)
Colorectal-EMBL	0.811 (0.010)	0.814 (0.013)	0.827 (0.012)	0.830 (0.011)
Early-Colorectal-EMBL	0.535 (0.050)	0.543 (0.048)	0.525 (0.051)	0.533 (0.053)
Hypertension	0.602 (0.045)	0.608 (0.043)	0.622 (0.048)	0.624 (0.049)