Appendix

Besides k-means, we have tested hierarchical clustering with various linkage techniques, including single, complete, average, and ward. Due to the limitation of space, we present here only the Cancer cohort clusters formed using k-means and hierarchical clustering using different linkage techniques as an example. Fig. A1 shows the T-SNE plot of the cohort clusters with different colors showing representing different clusters. Hierarchical clustering with average linkage generated two major clusters and three minor clusters with single members (Fig. A1c). With complete linkage, there were three distinct clusters, however, there exist overlapping and minor clusters with relatively inadequate size (Fig. A1d). The worst distribution was presented by single linkage (Fig. A1e). There are one major cluster and four single-member clusters. The clustering by ward linkage (Fig. A1f) was close to the clustering by k-means (Fig. A1a), however, there are still overlaps. The T-SNE plot for the deep learning method (Fig. A1b suffers from dimensionality corruption since the clusters were generated using the actual BMI trajectories using temporal nodes. The embedding we are presenting was generated using the non-temporal features (engineered features). Thus, an amalgamation of clusters is visible here. Observing the Silhouette and Calinski-Harabasz scores (Table. A1) we can see k-means clustering performs better than the agglomerative and deep learning clustering methods.

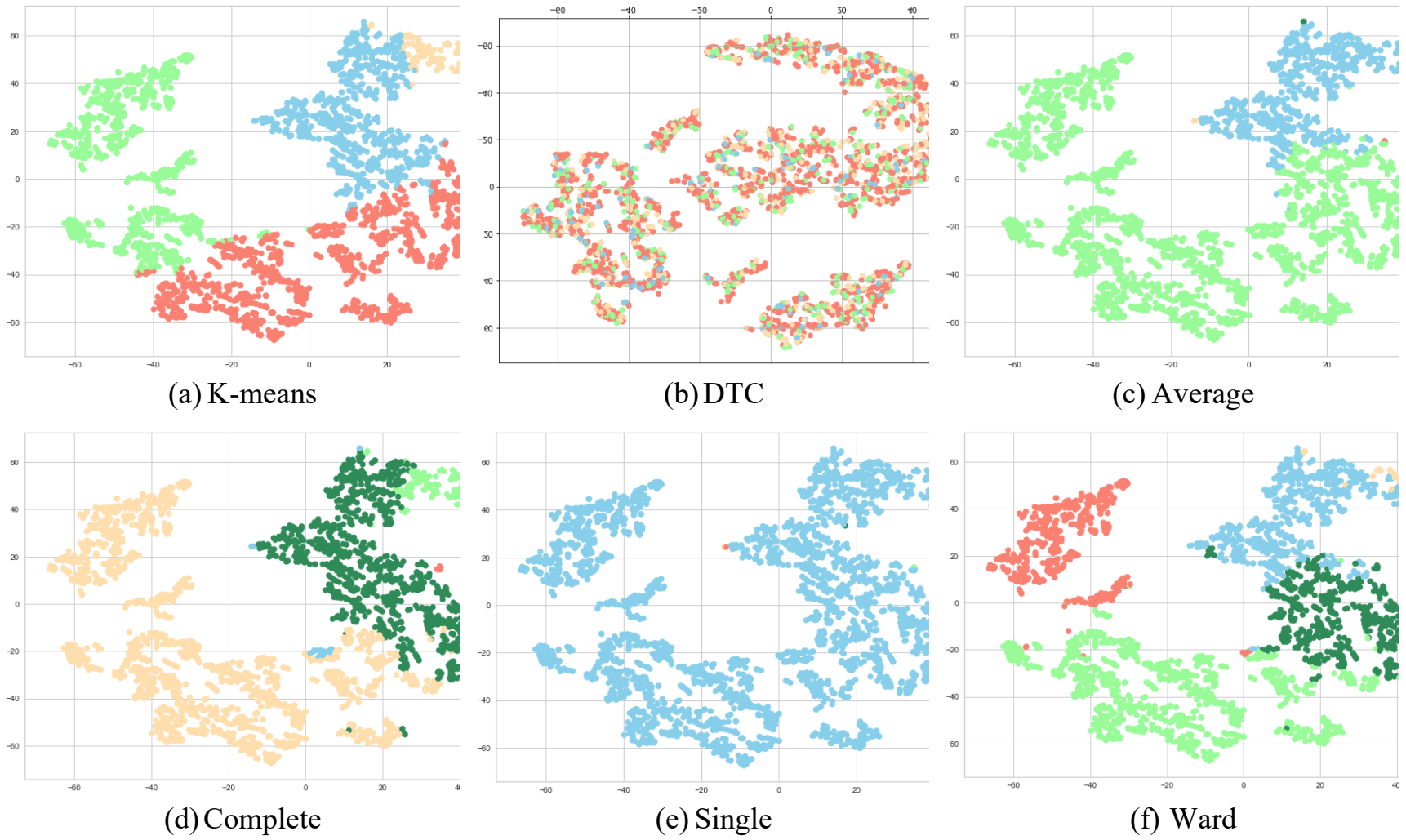

Figure A1. T-SNE plot for cluster distributions of Cancer cohort using k-means, DTC and agglomerative clustering with different techniques for linkage

Table A1 Evaluation of different clustering methods used. The best values in each row for the corresponding metric are marked in bold for identification.

Disease	Hierarchical								DTC		K-means	
	Single		Average		Complete		Ward					
	S	CH	S	CH	S	CH	S	CH	S	CH	S	CH
Diabetes	0.41	69.3	0.41	66.5	0.41	62.4	**0.46**	69.3	**0.46**	66.88	**0.46**	**69.34**
Cancer	0.43	75	0.41	69	0.41	74.2	0.43	75	**0.45**	73.3	**0.45**	**75**
BPH	0.41	**7.14**	0.43	6.92	0.43	6.92	0.43	**7.14**	**0.45**	7.03	**0.45**	**7.14**
Osteoporosis	0.42	8.31	0.42	8.76	0.42	8.94	0.43	8.76	0.44	8.69	**0.46**	**9.13**
Hypertension	0.41	8.76	0.42	8.22	**0.44**	8.76	0.41	9.04	0.42	8.7	**0.44**	**9.13**
Alzheimer's	0.48	1.13	0.47	106	**0.51**	111	0.49	108	0.5	81.53	**0.51**	**113**
Stroke	0.4	3.68	0.4	3.41	0.41	3.72	0.42	3.53	0.42	3.59	**0.44**	**3.75**
Obesity	0.42	3.14	0.43	3.04	0.45	3.27	0.44	3.24	0.44	3.17	**0.46**	**3.31**

S: Silhouette Score. CH: Calinski-Harabasz score ($\times 10^3$)