

**Supplemental Digital Content S4 Figure. Clustering of IBD patients. A)** Hierarchical clustering for UC and CD patients using the Ward method. Tree was cut where 6 clusters were generated for UC and 3 for CD. **B)** K-means clustering of UC and CD patients. **C)** Hierarchical clustering for UC and CD patient data in UMAP projections of CD patients using Ward method. Tree was cut where 3 clusters were generated. KUC = 5, KCD = 3. nUC = 173, nCD = 92.