

## **Description of Additional Supplementary Files**

File Name: Supplementary Data 1

Description: Number of interactions between ICD9 categories observed in the Phenotypic Disease Network (PMID:19360091).

File Name: Supplementary Data 2

Description: Number of interactions between ICD10 categories observed in the Temporal Disease Trajectories (PMID:24959948).

File Name: Supplementary Data 3

Description: Coordinately deregulated genes in each molecularly homogeneous patient-subgroup. "0", "-", and "+" denote that the gene is either not coordinately deregulated, coordinately down-regulated or coordinately up-regulated in the patient-subgroup.

File Name: Supplementary Data 4

Description: Datasets analyzed during the study, with the number of associated case and control samples.