

GeDiPNet Shared-Gene Disease Pairs

Similarity: Jaccard index on shared curated genes (disease\_gdp). Significance: upper-tail hypergeometric test ( $P(X \geq k)$ ), Benjamini-Hochberg FDR-corrected across all tested pairs. Corroborated Shared Genes: count of shared genes backed by  $\geq 2$  distinct disease\_gdp.main\_source values combined across both diseases (e.g. GWAS-backed for one, ClinVar-backed for the other still counts); Shared Gene Names lists each gene's own source count in parentheses. Overlap Coefficient: shared genes / MIN(each disease's own total gene count) -- complements the Jaccard-based Similarity Score by showing how much of the SMALLER disease's entire known gene-set is covered by this pair, which Jaccard (dividing by the union) can understate. Shared Cluster: cluster id if both diseases fall in the same label-propagation cluster (scripts/build\_disease\_clusters.php), blank otherwise. See scripts/build\_related.php on gedipnet.bicnirrh.res.in. Data as of: 2026-10-11 03:00:14. Filters applied: disease name contains "Gastrointestinal disease" (9 matching pairs). · Rows: 9 · Generated: 2026-10-11 02:05:31

| Disease A                                                       | Disease B                                             | Shared Genes | Corroborated Shared Genes | Shared Gene Names                                                                                                           | Similarity Score | Overlap Coefficient | P-value   | FDR Q-value | Shared Cluster |
|-----------------------------------------------------------------|-------------------------------------------------------|--------------|---------------------------|-----------------------------------------------------------------------------------------------------------------------------|------------------|---------------------|-----------|-------------|----------------|
| Digestive system disease                                        | Gastrointestinal disease                              | 16           | 13                        | CHD8 (2), CRT1 (1), FOXP1 (1), MTHFR (2), NFE2L2 (2), POMC (2), CSF3 (2), KEAP1 (2), CCK (2), MYLK (2), EDN1 (2), ABCC2 (2) | 0.14545          | 0.50000             | 4.481e-28 | 1.273e-26   |                |
| Gastrointestinal disease                                        | Hematologic disease                                   | 3            | 2                         | MTHFR (2), JAK2 (1), MTR (2)                                                                                                | 0.06250          | 0.16667             | 6.513e-6  | 3.313e-5    |                |
| Gastrointestinal disease                                        | Polycythemia, primary familial and congenital         | 2            | 2                         | SH2B3 (2), JAK2 (2)                                                                                                         | 0.05882          | 0.66667             | 1.254e-5  | 6.123e-5    |                |
| Familial polycythemia                                           | Gastrointestinal disease                              | 2            | 2                         | SH2B3 (2), JAK2 (2)                                                                                                         | 0.05882          | 0.66667             | 1.254e-5  | 6.123e-5    |                |
| Gastrointestinal disease                                        | Hepatic vein thrombosis                               | 2            | 2                         | MTHFR (2), JAK2 (2)                                                                                                         | 0.05882          | 0.66667             | 1.254e-5  | 6.123e-5    |                |
| Chromodomain helicase dna binding protein 8 overgrowth syndrome | Gastrointestinal disease                              | 1            | 1                         | CHD8 (2)                                                                                                                    | 0.03030          | 1.00000             | 2.078e-3  | 2.969e-3    |                |
| Dubin-johnson syndrome                                          | Gastrointestinal disease                              | 1            | 1                         | ABCC2 (5)                                                                                                                   | 0.03030          | 1.00000             | 2.078e-3  | 2.969e-3    |                |
| Esophageal adenocarcinoma                                       | Gastrointestinal disease                              | 2            | 0                         | CRT1 (1), FOXP1 (1)                                                                                                         | 0.03030          | 0.06250             | 2.385e-3  | 3.309e-3    |                |
| Gastrointestinal disease                                        | Intellectual developmental disorder autism dysmorphic | 1            | 1                         | CHD8 (5)                                                                                                                    | 0.02941          | 0.50000             | 4.152e-3  | 5.234e-3    |                |