

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 "BRCA2-related cancer predisposition" (6 matching pairs). · Rows: 6 · Generated: 2026-10-11 12:01:17

| Disease A                           | Disease B                                 | Shared Genes | Corroborated Shared Genes | Shared Gene Names | Similarity Score | Overlap Coefficient | P-value  | FDR Q-value | Shared Cluster |
|-------------------------------------|-------------------------------------------|--------------|---------------------------|-------------------|------------------|---------------------|----------|-------------|----------------|
| BRCA2-related cancer predisposition | Tumor predisposition syndrome             | 1            | 1                         | BRCA2 (2)         | 0.14286          | 1.00000             | 3.897e-4 | 8.665e-4    |                |
| BRCA2-related cancer predisposition | Hereditary breast-ovarian cancer syndrome | 1            | 1                         | BRCA2 (4)         | 0.16667          | 1.00000             | 3.247e-4 | 7.709e-4    |                |
| BRCA2-related cancer predisposition | Bronchus cancer                           | 1            | 1                         | BRCA2 (2)         | 0.16667          | 1.00000             | 3.247e-4 | 7.709e-4    |                |
| BRCA2-related cancer predisposition | Chordoma                                  | 1            | 1                         | BRCA2 (2)         | 0.16667          | 1.00000             | 3.247e-4 | 7.709e-4    |                |
| BRCA2-related cancer predisposition | Respiratory system cancer                 | 1            | 1                         | BRCA2 (2)         | 0.16667          | 1.00000             | 3.247e-4 | 7.709e-4    |                |
| BRCA2-related cancer predisposition | fanconi anemia complementation group d1   | 1            | 0                         | BRCA2 (1)         | 0.50000          | 1.00000             | 6.494e-5 | 2.331e-4    |                |