

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: 2026-10-10 03:00:13. Filters applied: disease name contains "Vertical talus" (12 matching pairs). · Rows: 12 · Generated: 2026-10-10 19:08:34

| Disease A                                  | Disease B                           | Shared Genes | Corroborated Shared Genes | Shared Gene Names | Similarity Score | Overlap Coefficient | P-value  | FDR Q-value | Shared Cluster |
|--------------------------------------------|-------------------------------------|--------------|---------------------------|-------------------|------------------|---------------------|----------|-------------|----------------|
| Amyotrophic lateral sclerosis              | Bilateral congenital vertical talus | 1            | 1                         | HOXD10 (2)        | 0.00300          | 1.00000             | 2.156e-2 | 2.336e-2    |                |
| Amyotrophic lateral sclerosis              | Vertical talus                      | 1            | 1                         | HOXD10 (3)        | 0.00300          | 1.00000             | 2.156e-2 | 2.336e-2    |                |
| Bilateral congenital vertical talus        | Charcot-marie-tooth disease         | 1            | 1                         | HOXD10 (2)        | 0.00752          | 1.00000             | 8.573e-3 | 9.903e-3    |                |
| Charcot-marie-tooth disease                | Vertical talus                      | 1            | 1                         | HOXD10 (3)        | 0.00752          | 1.00000             | 8.573e-3 | 9.903e-3    |                |
| Congenital vertical talus                  | Mouth neoplasms                     | 1            | 1                         | HOXD10 (5)        | 0.01538          | 0.50000             | 8.166e-3 | 9.476e-3    |                |
| Bilateral congenital vertical talus        | Mouth neoplasms                     | 1            | 1                         | HOXD10 (2)        | 0.01563          | 1.00000             | 4.091e-3 | 5.162e-3    |                |
| Mouth neoplasms                            | Vertical talus                      | 1            | 1                         | HOXD10 (2)        | 0.01563          | 1.00000             | 4.091e-3 | 5.162e-3    |                |
| Congenital aural atresia                   | Congenital vertical talus           | 1            | 1                         | TSHZ1 (7)         | 0.25000          | 0.50000             | 2.598e-4 | 6.509e-4    |                |
| Bilateral congenital vertical talus        | Congenital vertical talus           | 1            | 1                         | HOXD10 (4)        | 0.33333          | 1.00000             | 1.299e-4 | 3.931e-4    |                |
| Congenital external auditory canal atresia | Congenital vertical talus           | 1            | 1                         | TSHZ1 (2)         | 0.33333          | 1.00000             | 1.299e-4 | 3.931e-4    |                |
| Congenital vertical talus                  | Vertical talus                      | 1            | 1                         | HOXD10 (6)        | 0.33333          | 1.00000             | 1.299e-4 | 3.931e-4    |                |
| Bilateral congenital vertical talus        | Vertical talus                      | 1            | 1                         | HOXD10 (3)        | 0.50000          | 1.00000             | 6.494e-5 | 2.331e-4    |                |