

| | Datasets | O->N | N->O | Fold | p-values ^{#1} | p-values ^{#2} |
|--------------------|-----------------------------------|-------|-------|-------|------------------------|------------------------|
| Back-ground | Ortholog-Poly | 1,856 | 1,754 | 1.06 | | |
| | SNP-Poly | 426 | 341 | 1.25 | | |
| CSM | Colon_Adenocarcinoma | 1,819 | 617 | 2.95 | 9.16E-74 | 6.031E-24 |
| | Ovarian_Serous_Cystadenocarcinoma | 973 | 247 | 3.94 | 1.31E-67 | 1.156E-30 |
| | Liver_Cancer | 859 | 336 | 2.56 | 3.69E-35 | 1.087E-13 |
| | Rectum_Adenocarcinoma | 398 | 148 | 2.69 | 6.00E-21 | 1.453E-10 |
| | Breast_Carcinoma | 216 | 39 | 5.54 | 6.82E-25 | 6.931E-17 |
| | Breast_Invasive_Carcinoma | 203 | 31 | 6.55 | 8.25E-26 | 5.224E-18 |
| | Pancreatic_Cancer | 112 | 33 | 3.39 | 1.02E-09 | 1.104E-06 |
| | Acute_Myeloid_Leukemia | 90 | 15 | 6.00 | 3.99E-12 | 3.644E-09 |
| | Lung_Adenocarcinoma | 66 | 3 | 22.00 | 3.15E-13 | 8.857E-11 |
| | Gastric_Cancer | 57 | 35 | 1.63 | 0.045 | 0.241 |
| | Glioblastoma_Multiforme | 42 | 8 | 5.25 | 4.64E-06 | 8.093E-05 |
| | Chronic_Lymphocytic_Leukemia | 40 | 15 | 2.67 | 0.0016922 | 0.0129654 |
| | Pediatric_Brain_Tumors | 37 | 8 | 4.63 | 3.94E-05 | 0.0004417 |
| | Breast_Cancer | 26 | 5 | 5.20 | 0.000317 | 0.0018057 |
| | Malignant_Lymphoma | 22 | 10 | 2.20 | 0.050 | 0.140 |
| | Colorectal_Cancer | 16 | 9 | - | - | - |
| | Prostate_Cancer | 16 | 8 | - | - | - |
| | Small_Cell_Lung_Carcinoma | 11 | 1 | - | - | - |
| | Malignant_Melanoma | 7 | 2 | - | - | - |
| | Lung_Squamous_Cell_Carcinoma | 5 | 3 | - | - | - |
| | Myeloproliferative_Disorders | 2 | 0 | - | - | - |

The p-values^{#1} were obtained from the comparison in folds of O->N/N->O between the CSM and Ortholog-Poly, the p-values^{#2} were obtained from the comparison in folds of O->N/N->O between the CSM and SNP-Poly. The datasets with a total number of O->N and N->O larger than 30 were analyzed, the p-values ≤ 0.05 were represented by red color and indicate significant higher number of O->N than N->O in CSM considering the distribution from the control datasets.