## DisGeNET Top pathways by non-permulation

Geneset	stat	num.genes	pval	p.adj	gene.vals
Leukopenia	0.095622174	200	3.369e-06	3.305e-02	BRCA2:10 MCPH1:16 USB1:64 TG:68 ERCC6L2:102 LYST:233
hypopigmented skin patch	0.149858976	64	3.439e-05	1.124e-01	BRCA2:10 USB1:64 FAS:113 SLX4:285 BRIP1:308 TSC2:403
Thrombocytopenia	0.072465305	286	2.710e-05	1.124e-01	ITGA2B:8 BRCA2:10 USB1:64 ERCC6L2:102 NAAA:103 FAS:113
Pyridoxine-responsive sideroblastic anem	0.250798831	21	6.955e-05	1.706e-01	BRCA2:10 SLX4:285 BRIP1:308 FANCM:491 FANCA:568 FANCL:738
Pre-Eclampsia	0.098433430	129	1.168e-04	2.291e-01	ADAMTS13:174 ENG:183 TNFRSF8:194 NOD2:241 LBR:275 CPB2:282
Anemia	0.055702188	397	1.547e-04	2.421e-01	ITGA2B:8 F11:24 NPHP4:36 USB1:64 TP53BP1:67 LIPA:70
Tracheoesophageal Fistula	0.167585484	42	1.728e-04	2.421e-01	BRCA2:10 CYBA:37 USB1:64 SLX4:285 BRIP1:308 CTC1:479
Chromosome Breakage	0.167629355	39	2.939e-04	3.129e-01	BRCA2:10 SLX4:285 BRIP1:308 ATM:475 FANCM:491 FANCA:568
Ciliopathies	0.080473134	169	3.189e-04	3.129e-01	EVC2:11 PKHD1:27 NPHP4:36 NME8:38 CCDC151:42 C2CD3:78
Decreased platelet count	0.089447282	138	2.948e-04	3.129e-01	BRCA2:10 USB1:64 ERCC6L2:102 ADAMTS13:174 ABL1:189 LYST:233
Pancytopenia	0.101964114	100	4.349e-04	3.879e-01	CD48:53 GLB1:79 ERCC6L2:102 WRN:120 TNFRSF8:194 SLX4:285
Almond-shaped palpebral fissure	0.203000661	23	7.536e-04	6.161e-01	BRCA2:10 SLX4:285 BRIP1:308 FANCM:491 FANCA:568 FANCL:738
Longevity	0.200844228	23	8.576e-04	6.472e-01	SUSD3:80 WRN:120 TCF19:138 TTC6:235 MFRP:451 ECHS1:558
Autoimmune Primary Adrenal Insufficiency	0.165917156	31	1.393e-03	9.047e-01	DDC:198 CXCL10:628 CIITA:761 TPO:771 CD274:907 HLA-DOA:984
Cherry red spot of the macula	0.327180741	8	1.353e-03	9.047e-01	GLB1:79 HEXB:433 ASAH1:498 GM2A:626 HEXA:1095 NEU1:1376
Renal Insufficiency	0.061082839	230	1.476e-03	9.047e-01	PKHD1:27 CYBA:37 CD5L:101 RASAL1:140 ROS1:144 BBS10:168
Carotid Artery Plaque	0.190155013	22	2.023e-03	9.450e-01	CX3CR1:311 TLR4:382 CCR2:520 ADIPOQ:596 F3:1353 STAT1:1696
Common atrium	0.365002385	6	1.960e-03	9.450e-01	EVC2:11 MMP21:410 GDF1:460 EVC:492 ZIC3:2570 PITX2:8960.5
Confusion	0.144633167	39	1.785e-03	9.450e-01	BRCA2:10 FAS:113 ADAMTS13:174 TLR4:382 IL10:553 CUBN:841
Fever	0.073241049	151	1.943e-03	9.450e-01	CYBA:37 FAS:113 ADAMTS13:174 ABL1:189 LYST:233 NOD2:241
Irregular hyperpigmentation	0.150738940	36	1.757e-03	9.450e-01	BRCA2:10 LBR:275 SLX4:285 BRIP1:308 TNFRSF1B:442 FANCM:491
Chronic stable plaque psoriasis	0.441096979	4	2.248e-03	9.586e-01	CYP1A1:344 UGT1A1:795 EPHX1:885 CYP1B1:1799 NA NA
Familial Thrombotic Thrombocytopenic Pur	0.441693164	4	2.217e-03	9.586e-01	ADAMTS13:174 TFPI:760 F3:1353 THBD:1521 NA NA
Cystic Kidney Diseases	0.106515425	68	2.411e-03	9.854e-01	PKHD1:27 NPHP4:36 BBS10:168 TMEM231:217 PKD1:227 CEP41:325
Gastrointestinal pain	0.084210426	105	2.915e-03	9.875e-01	BRCA2:10 ECE1:75 FAS:113 PMS2:350 TLR4:382 TSC2:403
Hemoglobin low	0.070789158	147	3.121e-03	9.875e-01	ITGA2B:8 NPHP4:36 USB1:64 LIPA:70 ERCC6L2:102 FASTKD2:158
Infection	0.044336420	387	2.935e-03	9.875e-01	IL10RA:51 TG:68 FAS:113 LAMA5:176 ENG:183 ABL1:189
Molar tooth sign on MRI	0.172722351	25	2.803e-03	9.875e-01	C2CD3:78 CPLANE1:216 TMEM231:217 CEP41:325 OFD1:427 KIF7:707
Renal failure in adulthood	0.090973445	90	2.893e-03	9.875e-01	PKHD1:27 BBS10:168 PKD1:227 WDR73:320 SMARCAL1:343 ABCC6:507
Sexually Transmitted Diseases	0.220794547	15	3.073e-03	9.875e-01	APRT:513 CXCL10:628 IFNE:767 CD38:966 IL1B:1532 EMB:1747
Stricture of artery	0.304270038	8	2.881e-03	9.875e-01	ABCC6:507 SLC2A10:622 YY1AP1:1070 ENPP1:1081 ADA2:1823 ATP7A:1959
46, XX Testicular Disorders of Sex Devel	-0.127880826	7	2.413e-01	9.993e-01	NR5A1:47 SOX3:6810.5 RSPO1:6810.5 SOX9:6810.5 FOXL2:6810.5 NR0B1:6810.5
46, XY Disorders of Sex Development	0.064807595	15	3.849e-01	9.993e-01	CYP11A1:476 SRD5A2:601 MAMLD1:1763 HSD17B13:1909 HSD17B7:2257 SOX9:8960.5
46, XY female	-0.033224260	16	6.455e-01	9.993e-01	SOX9:6810.5 NR0B1:6810.5 HSD17B3:6810.5 DMRT2:6810.5 DMRT1:6810.5 UBL4A:6810.5
46,XY partial gonadal dysgenesis	-0.109424209	10	2.309e-01	9.993e-01	NR5A1:47 SOX9:6810.5 NR0B1:6810.5 MAP3K1:6810.5 WT1:6810.5 ZFPM2:6810.5
5,10-Methylenetetrahydrofolate reductase	-0.009222417	18	8.923e-01	9.993e-01	SERPINE1:396 GPX3:6810.5 ABCB1:6810.5 XRCC3:6810.5 XRCC4:6810.5 MTHFR:6810.5
Abnormalities, Drug-Induced	0.061804452	4	6.686e-01	9.993e-01	EPHX1:885 WNT11:8960.5 CAT:8960.5 CRBN:8960.5 NA NA
Abortion, Habitual	-0.066255962	4	6.463e-01	9.993e-01	MTHFR:6810.5 F2:6810.5 F5:6810.5 VEGFA:6810.5 NA NA
Abortion, Tubal	0.026780272	91	3.779e-01	9.993e-01	CD69:223 HSD17B1:330 CYP1A1:344 ECM2:366 CYP24A1:580 CXCL10:628
Achondrogenesis, type IB (disorder)	-0.066261229	5	6.079e-01	9.993e-01	SLC26A3:6810.5 SLC26A2:6810.5 SLC26A5:6810.5 SLC26A4:6810.5 DCN:6810.5 NA