## Online data supplement

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**Supplementary Table 1:** Association with LDL-cholesterol for the 21 LDL-C lowering variants (1 variant excluded from GRS) used to construct the genetic risk score in the UK Biobank and the GLGC consortium.

| | | | | | | | Change in LDL-C per risk allele (UKB)^ | | | Change in LDL-C per one risk allele (GLGC)^ | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **SNP** | **Gene** | **Chr** | **Effect allele** | **Other allele** | **Missing (UKB)** | **P_HWE (UKB)** | **EAF** | **Beta (mg/dL)** | **SE** | **P** | **EAF** | **Beta (mg/dL)** | **SE** | **P** |
| rs11206510 | PCSK9 | 1 | C | T | 0.00 | 0.05 | 0.19 | -1.538 | 0.108 | <1E-300 | 0.15 | -2.659 | 0.005 | 2.4E-53 |
| rs2479409 | PCSK9 | 1 | A | G | 0.00 | 0.37 | 0.65 | -1.121 | 0.089 | 9.5E-37 | 0.67 | -2.054 | 0.004 | 2.5E-50 |
| rs2149041 | PCSK9 | 1 | C | G | 0.82 | 0.30 | 0.81 | -1.420 | 0.109 | 7.0E-39 | 0.84 | -2.035 | 0.005 | 1.4E-35 |
| rs2479394 | PCSK9 | 1 | A | G | 0.00 | 0.76 | 0.72 | -0.837 | 0.094 | 6.7E-19 | 0.72 | -1.235 | 0.004 | 1.6E-19 |
| rs10888897 | PCSK9 | 1 | T | C | 0.00 | 0.94 | 0.39 | -0.983 | 0.086 | 5.7E-30 | 0.39 | -1.622 | 0.004 | 8.4E-31 |
| rs7552841 | PCSK9 | 1 | C | T | 12.49 | 0.01 | 0.63 | -0.777 | 0.094 | 1.3E-16 | 0.63 | -1.178 | 0.004 | 5.4E-15 |
| rs562556 | PCSK9 | 1 | G | A | 0.00 | 0.75 | 0.18 | -0.842 | 0.110 | 1.8E-14 | 0.19 | -2.048 | 0.007 | 6.2E-21 |
| rs12916 | HMGCR | 5 | T | C | 0.00 | 0.76 | 0.60 | -2.118 | 0.086 | <1E-300 | 0.57 | -2.346 | 0.122 | 7.8E-78 |
| rs17238484 | HMGCR | 5 | G | T | 0.04 | 0.02 | 0.78 | -1.761 | 0.101 | <1E-300 | 0.75 | -2.006 | 0.198 | 1.4E-21 |
| rs5909 | HMGCR | 5 | G | A | 0.00 | 0.59 | 0.91 | -1.582 | 0.145 | 1.1E-27 | 0.90 | -1.974 | 0.282 | 4.9E-13 |
| rs2303152 | HMGCR | 5 | G | A | 0.13 | 0.72 | 0.90 | -1.087 | 0.141 | 1.2E-14 | 0.88 | -1.354 | 0.205 | 1.0E-09 |
| rs10066707 | HMGCR | 5 | G | A | 1.68 | 0.03 | 0.63 | -1.379 | 0.088 | <1E-300 | 0.58 | -1.590 | 0.173 | 3.0E-19 |
| rs2006760 | HMGCR | 5 | C | G | 2.95 | 0.70 | 0.80 | -1.182 | 0.107 | 4.0E-28 | 0.81 | -1.706 | 0.243 | 1.7E-13 |
| rs217386 | NPC1L1 | 7 | A | G | 0.00 | 0.13 | 0.42 | -0.794 | 0.085 | 1.4E-20 | 0.41 | -1.125 | 0.118 | 1.2E-19 |
| rs2073547* | NPC1L1 | 7 | A | G | 0.00 | 7.48E-13 | 0.82 | -1.242 | 0.108 | 2.1E-30 | 0.81 | -1.504 | 0.152 | 1.9E-21 |
| rs7791240 | NPC1L1 | 7 | T | C | 0.01 | 0.63 | 0.91 | -0.861 | 0.146 | 4.1E-09 | 0.91 | -1.318 | 0.202 | 1.8E-10 |
| rs10234070 | NPC1L1 | 7 | C | T | 0.48 | 0.76 | 0.88 | -0.540 | 0.131 | 3.8E-05 | 0.90 | -0.915 | 0.183 | 1.5E-06 |
| rs2300414 | NPC1L1 | 7 | G | A | 0.30 | 0.84 | 0.93 | -0.487 | 0.169 | 4.0E-03 | 0.93 | -1.094 | 0.248 | 5.5E-06 |
| rs6511720 | LDLR | 19 | T | G | 0.00 | 0.51 | 0.12 | -5.945 | 0.130 | <1E-300 | 0.11 | -6.766 | 0.136 | <1E-300 |
| rs1122608 | LDLR | 19 | T | G | 0.00 | 0.74 | 0.25 | -1.819 | 0.097 | <1E-300 | 0.23 | -2.118 | 0.108 | 2.0E-86 |
| rs688 | LDLR | 19 | C | T | 0.11 | 0.12 | 0.55 | -1.100 | 0.085 | 2.7E-38 | 0.56 | -1.728 | 0.118 | 3.0E-48 |

**UKB:** UK Biobank; **GLGC:** Global Lipids Genetics Consortium; **EAF:** Effect allele frequency; and **P_HWE:** P-value for Hardy-Weinberg Equilibrium test

^ Estimates for the UKB were taken from models adjusted for age, sex, assessment centre, type of genotyping array, and 40 principal components; GLGC estimates were adjusted for age, sex and principal components.
* rs2073547 excluded from the NPC1L1 genetic risk score because it deviated from the Hardy-Weinberg equilibrium (P_HWE < 0.05).

**Supplementary Table 2:** Construction of LDL-C lowering genetic risk scores.

| | | | | Association of each GRS with LDL-C | | |
|---|---|---|---|---|---|---|
| | **No of SNPs** | **SNPs** | **% variation in LDL-C in UKB** | **Beta (95% CI)** | **P** | **F-statistic** |
| **PCSK9 genetic risk score** | 7 | rs11206510<br>rs2479409<br>rs2149041<br>rs2479394<br>rs10888897<br>rs7552841<br>rs562556 | 0.12% | -0.01 (-0.01, -0.01) | $8.2 \times 10^{-89}$ | 400.03 |
| **HMGCR genetic risk score** | 6 | rs12916<br>rs17238484<br>rs5909<br>rs2303152<br>rs10066707<br>rs2006760 | 0.15% | -0.01 (-0.01, -0.01) | $1.2 \times 10^{-105}$ | 481.80 |
| **NPC1L1 genetic risk score** | 4 | rs217386<br>rs7791240<br>rs10234070<br>rs2300414 | 0.026% | -0.01 (-0.01, -0.01) | $1.8 \times 10^{-20}$ | 84.42 |
| **LDLR genetic risk score** | 3 | rs6511720<br>rs1122608<br>rs688 | 0.64% | -0.06 (-0.06, -0.06) | $< 1 \times 10^{-300}$ | 2077.99 |

**Supplementary Table 3:** Disease categories and the number of cases with a phecode.

| | | Number of cases with phecodes * | | | |
|---|---|---|---|---|---|
| **Disease categories** | **No of phecodes** | **Minimum** | **Median** | **Mean** | **Maximum** |
| Circulatory system | 116 | 209 | 1509 | 5075 | 75408 |
| Congenital anomalies | 26 | 204 | 428 | 836 | 3002 |
| Dermatologic | 58 | 205 | 1192 | 2075 | 7950 |
| Digestive | 132 | 208 | 1826 | 4980 | 45454 |
| Endocrine/metabolic | 77 | 200 | 631 | 3436 | 35143 |
| Genitourinary | 123 | 200 | 1393 | 2913 | 17536 |
| Hematopoietic | 28 | 200 | 716 | 1888 | 12234 |
| Infectious diseases | 28 | 207 | 1069 | 2157 | 11864 |
| Injuries & poisonings | 70 | 211 | 1403 | 2832 | 18479 |
| Mental disorders | 41 | 248 | 837 | 4115 | 39468 |
| Musculoskeletal | 87 | 204 | 1419 | 4806 | 50335 |
| Neoplasms | 100 | 201 | 1404 | 3344 | 30162 |
| Neurological | 50 | 210 | 514 | 1352 | 11404 |
| Pregnancy complications | 28 | 217 | 1036 | 1317 | 4525 |
| Respiratory | 59 | 203 | 1762 | 2945 | 24896 |
| Sense organs | 74 | 209 | 760 | 1694 | 22347 |
| Symptoms | 22 | 212 | 2140 | 5270 | 37426 |
| Miscellaneous | 16 | 200 | 1293 | 4502 | 16572 |

| | |
|---|---|
| **Total phecodes** | **1135** |

* Number of phecode cases was the same across all genetic risk scores.

**Supplementary Table 4:** List of 1135 phecodes tested in the PheWAS analyses.

| Phecode | Description | Group | Cases | Controls | Phecode | Description | Group | Cases | Controls |
|---|---|---|---|---|---|---|---|---|---|
| 008 | Intestinal infection | infectious diseases | 10361 | 304892 | 507 | Pleurisy; pleural effusion | respiratory | 6979 | 269389 |
| 008.5 | Bacterial enteritis | infectious diseases | 2546 | 304892 | 508 | Pulmonary collapse; interstitial & compensatory emphysema | respiratory | 2447 | 269389 |
| 008.52 | Intestinal infection due to C. difficile | infectious diseases | 673 | 304892 | 509 | Respiratory failure, insufficiency, arrest | respiratory | 3054 | 269389 |
| 008.6 | Viral Enteritis | infectious diseases | 903 | 304892 | 509.1 | Respiratory failure | respiratory | 2479 | 269389 |
| 038 | Septicemia | infectious diseases | 4885 | 304892 | 509.2 | Respiratory insufficiency | respiratory | 2205 | 269389 |
| 038.1 | Gram negative septicemia | infectious diseases | 962 | 304892 | 509.8 | Dependence on respirator [Ventilator] or supplemental oxygen | respiratory | 444 | 269389 |
| 038.2 | Gram positive septicemia | infectious diseases | 506 | 304892 | 510 | Other diseases of lung | respiratory | 1171 | 269389 |
| 041 | Bacterial infection NOS | infectious diseases | 11864 | 304892 | 512 | Other symptoms of respiratory system | respiratory | 9349 | 269389 |
| 041.1 | Staphylococcus infections | infectious diseases | 3057 | 304892 | 512.1 | Wheezing | respiratory | 268 | 269389 |
| 041.11 | Methicillin sensitive Staphylococcus aureus | infectious diseases | 2191 | 304892 | 512.2 | Painful respiration | respiratory | 203 | 269389 |
| 041.2 | Streptococcus infection | infectious diseases | 1659 | 304892 | 512.7 | Shortness of breath | respiratory | 6109 | 269389 |
| 041.4 | E. coli | infectious diseases | 2977 | 304892 | 512.8 | Cough | respiratory | 2986 | 269389 |
| 053 | Herpes zoster | infectious diseases | 426 | 304892 | 512.9 | Other dyspnea | respiratory | 884 | 269389 |
| 054 | Herpes simplex | infectious diseases | 207 | 304892 | 513 | Respiratory abnormalities | respiratory | 603 | 269389 |
| 070 | Viral hepatitis | infectious diseases | 580 | 304892 | 513.4 | Hyperventilation | respiratory | 251 | 269389 |
| 070.3 | Viral hepatitis C | infectious diseases | 237 | 304892 | 514 | Abnormal findings examination of lungs | respiratory | 2607 | 269389 |
| 070.4 | Chronic hepatitis | infectious diseases | 261 | 304892 | 516 | Abnormal sputum | respiratory | 2036 | 269389 |
| 070.9 | Hepatitis NOS | infectious diseases | 476 | 304892 | 516.1 | Hemoptysis | respiratory | 1948 | 269389 |
| 078 | Viral warts & HPV | infectious diseases | 1176 | 304892 | 519 | Other diseases of respiratory system, not elsewhere classified | respiratory | 9890 | 269389 |
| 079 | Viral infection | infectious diseases | 2704 | 304892 | 519.2 | Respiratory complications | respiratory | 323 | 269389 |
| 079.9 | Viremia, NOS | infectious diseases | 1577 | 304892 | 519.8 | Other diseases of respiratory system, NEC | respiratory | 9307 | 269389 |
| 080 | Postoperative infection | infectious diseases | 4201 | 304892 | 519.9 | Symptoms involving respiratory system & other chest symptoms | respiratory | 272 | 269389 |
| 081 | Infection/inflammation of internal prosthetic device; implant; & graft | infectious diseases | 2438 | 304892 | 520 | Disorders of tooth development | digestive | 2122 | 191014 |
| 1000 | Burns | miscellaneous | 511 | 336964 | 520.2 | Disturbances in tooth eruption | digestive | 2041 | 191014 |
| 1001 | Foreign body injury | miscellaneous | 1110 | 336365 | 521 | Diseases of hard tissues of teeth | digestive | 3012 | 191014 |
| 1002 | Symptoms concerning nutrition, metabolism, & development | miscellaneous | 5846 | 331629 | 521.1 | Dental caries | digestive | 2952 | 191014 |
| 1004 | Other signs & symptoms involving emotional state | miscellaneous | 444 | 337031 | 522 | Diseases of pulp & periapical tissues | digestive | 1661 | 191014 |
| 1005 | Other symptoms | miscellaneous | 1476 | 335999 | 522.5 | Periapical abscess | digestive | 1117 | 191014 |
| 1006 | Crushing injury | miscellaneous | 200 | 337275 | 523 | Gingival & periodontal diseases | digestive | 1638 | 191014 |
| 1007 | Injury to blood vessels | miscellaneous | 281 | 337194 | 523.3 | Periodontitis (acute or chronic) | digestive | 1133 | 191014 |
| 1008 | Crushing or internal injury to organs | miscellaneous | 1051 | 336424 | 523.32 | Chronic periodontitis | digestive | 1000 | 191014 |
| 1009 | Injury, NOS | miscellaneous | 7326 | 330149 | 524 | Dentofacial anomalies, including malocclusion | digestive | 309 | 191014 |
| 1010 | Other tests | miscellaneous | 16572 | 320903 | 524.3 | Anomalies of tooth position/malocclusion | digestive | 276 | 191014 |
| 1011 | Complications of surgical & medical procedures | miscellaneous | 10083 | 327392 | 525 | Other diseases of the teeth & supporting structures | digestive | 2546 | 191014 |
| 1013 | Asphyxia & hypoxemia | miscellaneous | 349 | 337126 | 526 | Diseases of the jaws | digestive | 909 | 191014 |
| 1014 | Effects of heat, cold & air pressure | miscellaneous | 254 | 337221 | 526.1 | Cysts of the jaws | digestive | 312 | 191014 |
| 1015 | Effects of other external causes | miscellaneous | 10460 | 327015 | 526.4 | Temporomandibular joint disorders | digestive | 229 | 191014 |
| 1019 | Other ill-defined & unknown causes of morbidity & mortality | miscellaneous | 13786 | 323689 | 526.41 | Temporomandibular joint disorder, unspecified | digestive | 222 | 191014 |
| 110 | Dermatophytosis / Dermatomycosis | infectious diseases | 294 | 304892 | 526.9 | Jaw disease NOS | digestive | 220 | 191014 |
| 110.1 | Dermatophytosis | infectious diseases | 288 | 304892 | 527 | Diseases of the salivary glands | digestive | 663 | 191014 |
| 1100 | Family history of colonic polyps | miscellaneous | 2277 | 335198 | 527.2 | Sialoadenitis | digestive | 340 | 191014 |
| 112 | Candidiasis | infectious diseases | 2400 | 304892 | 528 | Diseases of the oral soft tissues, excluding lesions specific for gingiva & tongue | digestive | 3788 | 191014 |
| 117 | Mycoses | infectious diseases | 307 | 304892 | 528.1 | Stomatitis & mucositis | digestive | 475 | 191014 |
| 136 | Other infectious & parasitic diseases | infectious diseases | 237 | 304892 | 528.11 | Stomatitis & mucositis (ulcerative) | digestive | 406 | 191014 |
| 145 | Cancer of mouth | neoplasms | 627 | 234242 | 528.5 | Diseases of lips | digestive | 644 | 191014 |
| 145.2 | Cancer of tongue | neoplasms | 303 | 234242 | 528.6 | Leukoplakia of oral mucosa | digestive | 298 | 191014 |
| 149 | Cancer of larynx, pharynx, nasal cavities | neoplasms | 630 | 234242 | 528.7 | Sialolithiasis | digestive | 289 | 191014 |
| 149.1 | Cancer of oropharynx | neoplasms | 257 | 234242 | 529 | Diseases & other conditions of the tongue | digestive | 1210 | 191014 |
| 149.4 | Cancer of larynx | neoplasms | 252 | 234242 | 529.1 | Glossitis | digestive | 290 | 191014 |
| 150 | Cancer of esophagus | neoplasms | 817 | 234242 | 530 | Diseases of esophagus | digestive | 34889 | 191014 |
| 151 | Cancer of stomach | neoplasms | 603 | 234242 | 530.1 | Esophagitis, GERD, & related diseases | digestive | 32569 | 191014 |
| 153 | Colorectal cancer | neoplasms | 4541 | 234242 | 530.11 | GERD | digestive | 15750 | 191014 |
| 153.2 | Colon cancer | neoplasms | 3053 | 234242 | 530.12 | Ulcer of esophagus | digestive | 4731 | 191014 |
| 153.3 | Malignant neoplasm of rectum, rectosigmoid junction, & anus | neoplasms | 2169 | 234242 | 530.13 | Barrett's esophagus | digestive | 3105 | 191014 |
| 155 | Cancer of liver & intrahepatic bile duct | neoplasms | 449 | 234242 | 530.14 | Reflux esophagitis | digestive | 10069 | 191014 |
| 157 | Pancreatic cancer | neoplasms | 756 | 234242 | 530.2 | Esophageal bleeding (varices/hemorrhage) | digestive | 1770 | 191014 |
| 158 | Neoplasm of unspecified nature of digestive system | neoplasms | 1091 | 234242 | 530.3 | Stricture & stenosis of esophagus | digestive | 1940 | 191014 |
| 159 | Malignant neoplasm of other & ill-defined sites within the digestive organs & peritoneum | neoplasms | 5580 | 234242 | 530.5 | Disorders of esophageal motility | digestive | 637 | 191014 |
| 159.2 | Malignant neoplasm of small intestine, including duodenum | neoplasms | 204 | 234242 | 530.7 | Gastroesophageal laceration-hemorrhage syndrome | digestive | 303 | 191014 |
| 159.3 | Malignant neoplasm of gallbladder & extrahepatic bile ducts | neoplasms | 233 | 234242 | 530.9 | Heartburn | digestive | 2010 | 191014 |
| 159.4 | Malignant neoplasm of retroperitoneum & peritoneum | neoplasms | 205 | 234242 | 531 | Peptic ulcer (excl. esophageal) | digestive | 7143 | 191014 |
| 165 | Cancer within the respiratory system | neoplasms | 3012 | 234242 | 531.1 | Hemorrhage from gastrointestinal ulcer | digestive | 638 | 191014 |
| 165.1 | Cancer of bronchus; lung | neoplasms | 2617 | 234242 | 531.2 | Gastric ulcer | digestive | 4026 | 191014 |
| 170 | Cancer of bone & connective tissue | neoplasms | 443 | 234242 | 531.3 | Duodenal ulcer | digestive | 2794 | 191014 |
| 170.2 | Cancer of connective tissue | neoplasms | 320 | 234242 | 531.4 | Peptic ulcer, site unspecified | digestive | 404 | 191014 |
| 172 | Skin cancer | neoplasms | 14207 | 234242 | 532 | Dysphagia | digestive | 6669 | 191014 |
| 172.1 | Melanomas of skin, dx or hx | neoplasms | 2739 | 234242 | 535 | Gastritis & duodenitis | digestive | 28094 | 191014 |
| 172.11 | Melanomas of skin | neoplasms | 2739 | 234242 | 535.1 | Acute gastritis | digestive | 1145 | 191014 |
| 172.2 | Other non-epithelial cancer of skin | neoplasms | 11594 | 234242 | 535.2 | Atrophic gastritis | digestive | 372 | 191014 |
| 172.3 | Carcinoma in situ of skin | neoplasms | 741 | 234242 | 535.6 | Duodenitis | digestive | 7254 | 191014 |
| 174 | Breast cancer | neoplasms | 12023 | 232710 | 535.8 | Other specified gastritis | digestive | 8264 | 191014 |
| 174.1 | Breast cancer [female] | neoplasms | 11848 | 120733 | 536 | Disorders of function of stomach | digestive | 11052 | 191014 |
| 174.11 | Malignant neoplasm of female breast | neoplasms | 11108 | 120733 | 536.8 | Dyspepsia & other specified disorders of function of stomach | digestive | 11046 | 191014 |
| 175 | Acquired absence of breast | neoplasms | 3261 | 120184 | 537 | Other disorders of stomach & duodenum | digestive | 3459 | 191014 |
| 180 | Cervical cancer & dysplasia | neoplasms | 3299 | 122212 | 540 | Appendiceal conditions | digestive | 3462 | 191014 |

| Phecode | Description | Group | Cases | Controls | Phecode | Description | Group | Cases | Controls |
|---|---|---|---|---|---|---|---|---|---|
| 180.1 | Cervical cancer | neoplasms | 1622 | 122212 | 540.1 | Appendicitis | digestive | 3299 | 191014 |
| 180.3 | Cervical intraepithelial neoplasia [CIN] [Cervical dysplasia] | neoplasms | 1757 | 122212 | 540.11 | Acute appendicitis | digestive | 2801 | 191014 |
| 182 | Malignant neoplasm of uterus | neoplasms | 1240 | 122251 | 550 | Abdominal hernia | digestive | 45454 | 191014 |
| 184 | Cancer of other female genital organs | neoplasms | 2388 | 122251 | 550.1 | Inguinal hernia | digestive | 15079 | 191014 |
| 184.1 | Malignant neoplasm of ovary & other uterine adnexa | neoplasms | 2091 | 122251 | 550.2 | Diaphragmatic hernia | digestive | 26753 | 191014 |
| 184.11 | Malignant neoplasm of ovary | neoplasms | 2072 | 122251 | 550.3 | Femoral hernia | digestive | 634 | 191014 |
| 184.2 | Cancer of other female genital organs (excluding uterus & ovary) | neoplasms | 281 | 122251 | 550.4 | Umbilical hernia | digestive | 3634 | 191014 |
| 185 | Cancer of prostate | neoplasms | 7072 | 105218 | 550.5 | Ventral hernia | digestive | 3384 | 191014 |
| 187 | Cancer of other male genital organs | neoplasms | 3330 | 111991 | 550.6 | Incisional hernia | digestive | 246 | 191014 |
| 187.1 | Malignant neoplasm of unspecified male genital organ | neoplasms | 3085 | 111991 | 555 | Inflammatory bowel disease & other gastroenteritis & colitis | digestive | 4149 | 191014 |
| 187.2 | Malignant neoplasm of testis | neoplasms | 3194 | 111991 | 555.1 | Regional enteritis | digestive | 1621 | 191014 |
| 189 | Cancer of urinary organs (incl. kidney & bladder) | neoplasms | 4104 | 234242 | 555.2 | Ulcerative colitis | digestive | 2920 | 191014 |
| 189.1 | Cancer of kidney & renal pelvis | neoplasms | 1098 | 234242 | 555.21 | Ulcerative colitis (chronic) | digestive | 541 | 191014 |
| 189.11 | Malignant neoplasm of kidney, except pelvis | neoplasms | 1055 | 234242 | 556 | Ulceration of the lower GI tract | digestive | 1084 | 191014 |
| 189.2 | Cancer of bladder | neoplasms | 2339 | 234242 | 556.1 | Ulceration of intestine | digestive | 711 | 191014 |
| 189.21 | Malignant neoplasm of bladder | neoplasms | 2083 | 234242 | 557 | Intestinal malabsorption (non-celiac) | digestive | 287 | 191014 |
| 191 | Manlignant & unknown neoplasms of brain & nervous system | neoplasms | 702 | 234242 | 557.1 | Celiac disease | digestive | 1764 | 191014 |
| 191.1 | Cancer of brain & nervous system | neoplasms | 579 | 234242 | 558 | Noninfectious gastroenteritis | digestive | 13696 | 191014 |
| 191.11 | Cancer of brain | neoplasms | 539 | 234242 | 559 | Ileostomy status | digestive | 1579 | 191014 |
| 193 | Thyroid cancer | neoplasms | 345 | 234242 | 560 | Intestinal obstruction without mention of hernia | digestive | 4175 | 191014 |
| 195 | Cancer, suspected or other | neoplasms | 17637 | 234242 | 560.1 | Paralytic ileus | digestive | 602 | 191014 |
| 195.1 | Malignant neoplasm, other | neoplasms | 16966 | 234242 | 560.2 | Impaction of intestine | digestive | 282 | 191014 |
| 196 | Radiotherapy | neoplasms | 12225 | 234242 | 560.3 | Peritoneal or intestinal adhesions | digestive | 874 | 191014 |
| 197 | Chemotherapy | neoplasms | 30162 | 234242 | 560.4 | Other intestinal obstruction | digestive | 3467 | 191014 |
| 198 | Secondary malignant neoplasm | neoplasms | 10103 | 234242 | 561 | Symptoms involving digestive system | digestive | 16127 | 191014 |
| 198.1 | Secondary malignancy of lymph nodes | neoplasms | 5504 | 234242 | 561.1 | Diarrhea | digestive | 536 | 191014 |
| 198.2 | Secondary malignancy of respiratory organs | neoplasms | 2544 | 234242 | 561.2 | Flatulence | digestive | 1767 | 191014 |
| 198.3 | Secondary malignant neoplasm of digestive systems | neoplasms | 1757 | 234242 | 562 | Diverticulosis & diverticulitis | digestive | 28363 | 191014 |
| 198.4 | Secondary malignant neoplasm of liver | neoplasms | 2970 | 234242 | 562.1 | Diverticulosis | digestive | 28326 | 191014 |
| 198.5 | Secondary malignancy of brain/spine | neoplasms | 927 | 234242 | 563 |  |  | 10878 | 191014 |
| 198.6 | Secondary malignancy of bone | neoplasms | 2454 | 234242 | 564 | Functional digestive disorders | digestive | 22341 | 191014 |
| 198.7 | Secondary malignant neoplasm of skin | neoplasms | 201 | 234242 | 564.1 | Irritable Bowel Syndrome | digestive | 5580 | 191014 |
| 199 | Neoplasm of uncertain behavior | neoplasms | 1504 | 234242 | 564.8 |  |  | 1743 | 191014 |
| 200 | Myeloproliferative disease | neoplasms | 1054 | 234242 | 564.9 | Personal history of diseases of digestive system | digestive | 15641 | 191014 |
| 200.1 | Polycythemia vera | neoplasms | 408 | 232957 | 565 | Anal & rectal conditions | digestive | 14352 | 191014 |
| 201 | Hodgkin's disease | neoplasms | 252 | 234242 | 565.1 | Anal & rectal polyp | digestive | 7409 | 191014 |
| 202 | Cancer of other lymphoid, histiocytic tissue | neoplasms | 2358 | 234242 | 567 | Peritonitis & retroperitoneal infections | digestive | 949 | 191014 |
| 202.2 | Non-Hodgkins lymphoma | neoplasms | 1853 | 234242 | 568 | Other disorders of peritoneum | digestive | 3567 | 191014 |
| 202.21 | Nodular lymphoma | neoplasms | 358 | 234242 | 568.1 | Peritoneal adhesions (postoperative) (postinfection) | digestive | 3346 | 191014 |
| 202.24 | Large cell lymphoma | neoplasms | 623 | 234242 | 569 | Other disorders of intestine | digestive | 4313 | 191014 |
| 204 | Leukemia | neoplasms | 1774 | 234242 | 569.1 | Toxic gastroenteritis & colitis | digestive | 208 | 191014 |
| 204.1 | Lymphoid leukemia | neoplasms | 612 | 234242 | 569.2 | Gastrointestinal complications | digestive | 515 | 191014 |
| 204.12 | Lymphoid leukemia, chronic | neoplasms | 540 | 234242 | 571 | Chronic liver disease & cirrhosis | digestive | 4206 | 191014 |
| 204.2 | Myeloid leukemia | neoplasms | 507 | 234242 | 571.5 | Other chronic nonalcoholic liver disease | digestive | 3329 | 191014 |
| 204.21 | Myeloid leukemia, acute | neoplasms | 353 | 234242 | 571.51 | Cirrhosis of liver without mention of alcohol | digestive | 749 | 191014 |
| 204.4 | Multiple myeloma | neoplasms | 593 | 234242 | 571.6 | Primary biliary cirrhosis | digestive | 258 | 191014 |
| 208 | Benign neoplasm of colon | neoplasms | 20688 | 234242 | 571.8 | Liver abscess & sequelae of chronic liver disease | digestive | 1140 | 191014 |
| 210 | Benign neoplasm of lip, oral cavity, & pharynx | neoplasms | 911 | 234242 | 571.81 | Portal hypertension | digestive | 589 | 191014 |
| 211 | Benign neoplasm of other parts of digestive system | neoplasms | 5805 | 234242 | 572 | Ascites (nonmalignant) | digestive | 1656 | 191014 |
| 212 | Benign neoplasm of respiratory & intrathoracic organs | neoplasms | 341 | 234242 | 573 | Other disorders of liver | digestive | 1712 | 191014 |
| 213 | Benign neoplasm of bone & articular cartilage | neoplasms | 284 | 234242 | 573.3 | Hepatomegaly | digestive | 295 | 191014 |
| 214 | Lipoma | neoplasms | 5942 | 234242 | 573.5 | Jaundice (not of newborn) | digestive | 914 | 191014 |
| 214.1 | Lipoma of skin & subcutaneous tissue | neoplasms | 4303 | 234242 | 573.7 | Abnormal results of function study of liver | digestive | 3714 | 191014 |
| 215 | Other benign neoplasm of connective & other soft tissue | neoplasms | 1015 | 234242 | 573.9 | Abnormal serum enzyme levels | digestive | 214 | 191014 |
| 216 | Benign neoplasm of skin | neoplasms | 8174 | 234242 | 574 | Cholelithiasis & cholecystitis | digestive | 15179 | 191014 |
| 217 | Vascular hamartomas & non-neoplastic nevi | neoplasms | 592 | 234242 | 574.1 | Cholelithiasis | digestive | 12924 | 191014 |
| 217.1 | Nevus, non-neoplastic | neoplasms | 548 | 234242 | 574.11 | Cholelithiasis with acute cholecystitis | digestive | 1537 | 191014 |
| 218 | Benign neoplasm of uterus | neoplasms | 9233 | 122251 | 574.12 | Cholelithiasis with other cholecystitis | digestive | 5200 | 191014 |
| 218.1 | Uterine leiomyoma | neoplasms | 9007 | 122251 | 574.2 | Calculus of bile duct | digestive | 2550 | 191014 |
| 218.2 | Other benign neoplasm of uterus | neoplasms | 304 | 122251 | 574.3 | Cholecystitis without cholelithiasis | digestive | 2574 | 191014 |
| 220 | Benign neoplasm of ovary | neoplasms | 1320 | 122251 | 575 | Other biliary tract disease | digestive | 3989 | 191014 |
| 225 | Benign neoplasm of brain & other parts of nervous system | neoplasms | 818 | 234242 | 575.1 | Cholangitis | digestive | 599 | 191014 |
| 225.1 | Benign neoplasm of brain, cranial nerves, meninges | neoplasms | 764 | 234242 | 575.2 | Obstruction of bile duct | digestive | 850 | 191014 |
| 226 | Benign neoplasm of thyroid glands | neoplasms | 260 | 234242 | 575.6 | Cholesterolosis of gallbladder | digestive | 437 | 191014 |
| 227 | Benign neoplasm of other endocrine glands & related structures | neoplasms | 895 | 234242 | 575.7 | Other disorders of gallbladder | digestive | 1372 | 191014 |
| 227.2 | Benign neoplasm of parathyroid gland | neoplasms | 377 | 234242 | 575.8 | Other disorders of biliary tract | digestive | 1096 | 191014 |
| 227.3 | Benign neoplasm of pituitary gland & craniopharyngeal duct (pouch) | neoplasms | 319 | 234242 | 575.9 | Nonspecific abnormal findings on radiological & other examination of biliary tract | digestive | 360 | 191014 |
| 228 | Hemangioma & lymphangioma, any site | neoplasms | 1487 | 234242 | 577 | Diseases of pancreas | digestive | 2747 | 191014 |
| 229 | Benign neoplasm of unspecified sites | neoplasms | 2113 | 234242 | 577.1 | Acute pancreatitis | digestive | 1925 | 191014 |
| 240 | Simple & unspecified goiter | endocrine/metabolic | 542 | 261466 | 577.2 | Chronic pancreatitis | digestive | 473 | 191014 |
| 241 | Nontoxic nodular goiter | endocrine/metabolic | 1539 | 261466 | 577.3 | Cyst & pseudocyst of pancreas | digestive | 388 | 191014 |
| 241.1 | Nontoxic uninodular goiter | endocrine/metabolic | 478 | 261466 | 578 | Gastrointestinal hemorrhage | digestive | 19880 | 191014 |
| 241.2 | Nontoxic multinodular goiter | endocrine/metabolic | 631 | 261466 | 578.1 | Hematemesis | digestive | 1882 | 191014 |
| 242 | Thyrotoxicosis with or without goiter | endocrine/metabolic | 1795 | 261466 | 578.2 | Blood in stool | digestive | 2514 | 191014 |
| 242.1 | Graves' disease | endocrine/metabolic | 439 | 261466 | 578.8 | Hemorrhage of rectum & anus | digestive | 11473 | 191014 |
| 242.3 | Exophthalmos | endocrine/metabolic | 210 | 261466 | 578.9 | Hemorrhage of gastrointestinal tract | digestive | 6068 | 191014 |

| Phecode | Description | Group | Cases | Controls | Phecode | Description | Group | Cases | Controls |
|---|---|---|---|---|---|---|---|---|---|
| 244 | Hypothyroidism | endocrine/metabolic | 14603 | 261466 | 579 | Other symptoms involving abdomen & pelvis | digestive | 1543 | 191014 |
| 244.1 | Secondary hypothyroidism | endocrine/metabolic | 1144 | 261466 | 579.2 | Splenomegaly | digestive | 447 | 191014 |
| 244.4 | Hypothyroidism NOS | endocrine/metabolic | 13923 | 261466 | 579.8 | Nonspecific abnormal findings in stool contents | digestive | 1887 | 191014 |
| 245 | Thyroiditis | endocrine/metabolic | 282 | 261466 | 580 | Nephritis; nephrosis; renal sclerosis | genitourinary | 1984 | 234338 |
| 245.2 | Chronic thyroiditis | endocrine/metabolic | 215 | 261466 | 580.1 | Glomerulonephritis | genitourinary | 906 | 234338 |
| 245.21 | Chronic lymphocytic thyroiditis | endocrine/metabolic | 202 | 261466 | 580.14 | Chronic glomerulonephritis, NOS | genitourinary | 723 | 234338 |
| 246 | Other disorders of thyroid | endocrine/metabolic | 386 | 261466 | 580.2 | Nephrotic syndrome without mention of glomerulonephritis | genitourinary | 1042 | 234338 |
| 250 | Diabetes mellitus | endocrine/metabolic | 19441 | 261466 | 580.3 | Nephritis & nephropathy without mention of glomerulonephritis | genitourinary | 301 | 234338 |
| 250.1 | Type 1 diabetes | endocrine/metabolic | 2582 | 261466 | 580.32 | Nephritis & nephropathy with pathological lesion | genitourinary | 286 | 234338 |
| 250.11 | Type 1 diabetes with ketoacidosis | endocrine/metabolic | 212 | 261466 | 585 | Renal failure | genitourinary | 10995 | 234338 |
| 250.13 | Type 1 diabetes with ophthalmic manifestations | endocrine/metabolic | 451 | 261466 | 585.1 | Acute renal failure | genitourinary | 6203 | 234338 |
| 250.2 | Type 2 diabetes | endocrine/metabolic | 18758 | 261466 | 585.2 | Renal failure NOS | genitourinary | 1430 | 234338 |
| 250.22 | Type 2 diabetes with renal manifestations | endocrine/metabolic | 213 | 261466 | 585.3 | Chronic renal failure [CKD] | genitourinary | 5710 | 234338 |
| 250.23 | Type 2 diabetes with ophthalmic manifestations | endocrine/metabolic | 1355 | 261466 | 585.31 | Renal dialysis | genitourinary | 507 | 234338 |
| 250.24 | Type 2 diabetes with neurological manifestations | endocrine/metabolic | 598 | 261466 | 585.32 | End stage renal disease | genitourinary | 426 | 234338 |
| 250.4 | Abnormal glucose | endocrine/metabolic | 678 | 261466 | 585.33 | Chronic Kidney Disease, Stage III | genitourinary | 3054 | 234338 |
| 250.41 | Impaired fasting glucose | endocrine/metabolic | 288 | 261466 | 585.34 | Chronic Kidney Disease, Stage IV | genitourinary | 455 | 234338 |
| 250.42 | Other abnormal glucose | endocrine/metabolic | 391 | 261466 | 585.4 | Chronic kidney disease, Stage I or II | genitourinary | 343 | 234338 |
| 250.6 | Polyneuropathy in diabetes | endocrine/metabolic | 408 | 261466 | 586 | Other disorders of the kidney & ureters | genitourinary | 3536 | 234338 |
| 250.7 | Diabetic retinopathy | endocrine/metabolic | 1398 | 254478 | 586.1 | Anatomical abnormatilies of kidney & ureters | genitourinary | 232 | 234338 |
| 251.1 | Hypoglycemia | endocrine/metabolic | 1024 | 261466 | 586.11 | Small kidney | genitourinary | 200 | 234338 |
| 252 | Disorders of parathyroid gland | endocrine/metabolic | 940 | 261466 | 586.2 | Cyst of kidney, acquired | genitourinary | 1393 | 234338 |
| 252.1 | Hyperparathyroidism | endocrine/metabolic | 830 | 261466 | 586.4 | Stricture/obstruction of ureter | genitourinary | 936 | 234338 |
| 253 | Disorders of the pituitary gland & its hypothalamic control | endocrine/metabolic | 697 | 261466 | 587 | Kidney replaced by transpant | genitourinary | 334 | 234338 |
| 253.2 | Pituitary hypofunction | endocrine/metabolic | 261 | 261466 | 590 | Pyelonephritis | genitourinary | 1361 | 234338 |
| 255 | Disorders of adrenal glands | endocrine/metabolic | 636 | 261466 | 591 | Urinary tract infection | genitourinary | 12543 | 234338 |
| 255.2 | Adrenal hypofunction | endocrine/metabolic | 363 | 261466 | 592 | Cystitis & urethritis | genitourinary | 2885 | 234338 |
| 255.21 | Glucocorticoid deficiency | endocrine/metabolic | 363 | 261466 | 592.1 | Cystitis | genitourinary | 2766 | 234338 |
| 256 | Ovarian dysfunction | endocrine/metabolic | 241 | 143689 | 592.12 | Chronic cystitis | genitourinary | 833 | 234338 |
| 256.4 | Polycystic ovaries | endocrine/metabolic | 200 | 143689 | 592.13 | Chronic interstitial cystitis | genitourinary | 233 | 234338 |
| 260 | Protein-calorie malnutrition | endocrine/metabolic | 275 | 261466 | 593 | Hematuria | genitourinary | 14542 | 234338 |
| 260.6 | Anorexia | endocrine/metabolic | 885 | 261466 | 594 | Urinary calculus | genitourinary | 6165 | 234338 |
| 261 | Vitamin deficiency | endocrine/metabolic | 1684 | 261466 | 594.1 | Calculus of kidney | genitourinary | 3198 | 234338 |
| 261.2 | Vitamin B-complex deficiencies | endocrine/metabolic | 911 | 261466 | 594.2 | Calculus of lower urinary tract | genitourinary | 767 | 234338 |
| 261.4 | Vitamin D deficiency | endocrine/metabolic | 788 | 261466 | 594.3 | Calculus of ureter | genitourinary | 2243 | 234338 |
| 262 | Mineral deficiency NEC | endocrine/metabolic | 298 | 261466 | 594.8 | Renal colic | genitourinary | 1754 | 234338 |
| 269 | Proteinuria | endocrine/metabolic | 324 | 261466 | 595 | Hydronephrosis | genitourinary | 2075 | 234338 |
| 270 | Disorders of protein plasma/amino-acid transport & metabolism | endocrine/metabolic | 365 | 261466 | 596 | Other disorders of bladder | genitourinary | 9275 | 234338 |
| 270.3 | Disorders of plasma protein metabolism | endocrine/metabolic | 321 | 261466 | 596.1 | Bladder neck obstruction | genitourinary | 1831 | 234338 |
| 270.32 | Paraproteinemia | endocrine/metabolic | 246 | 261466 | 596.5 | Functional disorders of bladder | genitourinary | 1431 | 234338 |
| 272 | Disorders of lipoid metabolism | endocrine/metabolic | 35143 | 261466 | 597 | Other disorders of urethra & urinary tract | genitourinary | 3888 | 234338 |
| 272.1 | Hyperlipidemia | endocrine/metabolic | 35033 | 261466 | 597.1 | Urethral stricture (not specified as infectious) | genitourinary | 3159 | 234338 |
| 272.11 | Hypercholesterolemia | endocrine/metabolic | 32554 | 261466 | 598 | Abnormal findings on examination of urine | genitourinary | 3286 | 234338 |
| 272.9 | Unspecified disorder of lipoid metabolism | endocrine/metabolic | 251 | 261466 | 598.9 | Other nonspecific findings on examination of urine | genitourinary | 299 | 234338 |
| 274 | Gout & other crystal arthropathies | endocrine/metabolic | 4155 | 261466 | 599 | Other symptoms/disorders or the urinary system | genitourinary | 17536 | 234338 |
| 274.1 | Gout | endocrine/metabolic | 3587 | 261466 | 599.2 | Retention of urine | genitourinary | 7478 | 234338 |
| 274.2 | Crystal arthropathies | endocrine/metabolic | 628 | 261466 | 599.3 | Dysuria | genitourinary | 1104 | 234338 |
| 274.21 | Chondrocalcinosis | endocrine/metabolic | 557 | 261466 | 599.4 | Urinary incontinence | genitourinary | 8031 | 234338 |
| 275 | Disorders of mineral metabolism | endocrine/metabolic | 2470 | 261466 | 599.5 | Frequency of urination & polyuria | genitourinary | 3626 | 234338 |
| 275.1 | Disorders of iron metabolism | hematopoietic | 661 | 309446 | 599.9 | Other abnormality of urination | genitourinary | 1683 | 234338 |
| 275.3 | Disorders of magnesium metabolism | endocrine/metabolic | 543 | 261466 | 600 | Hyperplasia of prostate | genitourinary | 11447 | 114193 |
| 275.5 | Disorders of calcium/phosphorus metabolism | endocrine/metabolic | 1454 | 261466 | 601 | Inflammatory diseases of prostate | genitourinary | 2119 | 114193 |
| 275.53 | Disorders of phosphorus metabolism | endocrine/metabolic | 273 | 261466 | 601.1 | Prostatitis | genitourinary | 1527 | 114193 |
| 276 | Disorders of fluid, electrolyte, & acid-base balance | endocrine/metabolic | 7916 | 261466 | 601.11 | Acute prostatitis | genitourinary | 231 | 114193 |
| 276.1 | Electrolyte imbalance | endocrine/metabolic | 5081 | 261466 | 601.12 | Chronic prostatitis | genitourinary | 908 | 114193 |
| 276.11 | Hyperosmolality &/or hypernatremia | endocrine/metabolic | 323 | 261466 | 601.4 | Balanoposthitis | genitourinary | 283 | 114193 |
| 276.12 | Hypoosmolality &/or hyponatremia | endocrine/metabolic | 2295 | 261466 | 601.8 | Other inflammatory disorders of male genital organs | genitourinary | 291 | 114193 |
| 276.13 | Hyperpotassemia | endocrine/metabolic | 1176 | 261466 | 602 | Other disorders of prostate | genitourinary | 1292 | 114193 |
| 276.14 | Hypopotassemia | endocrine/metabolic | 1781 | 261466 | 603 | Other disorders of testis | genitourinary | 2075 | 117407 |
| 276.4 | Acid-base balance disorder | endocrine/metabolic | 1421 | 261466 | 603.1 | Hydrocele | genitourinary | 1274 | 117407 |
| 276.41 | Acidosis | endocrine/metabolic | 1278 | 261466 | 604 | Disorders of penis | genitourinary | 3185 | 117407 |
| 276.5 | Hypovolemia | endocrine/metabolic | 3349 | 261466 | 604.1 | Redundant prepuce & phimosis/BXO | genitourinary | 2635 | 117407 |
| 276.6 | Fluid overload | endocrine/metabolic | 615 | 261466 | 604.3 | Peyronie's disease | genitourinary | 752 | 117407 |
| 277 | Other disorders of metabolism | endocrine/metabolic | 1034 | 261466 | 605 | Erectile dysfunction [ED] | genitourinary | 482 | 117407 |
| 277.4 | Disorders of bilirubin excretion | endocrine/metabolic | 383 | 261466 | 608 | Other disorders of male genital organs | genitourinary | 2620 | 117407 |
| 277.5 | Other disorders of lipoid metabolism | endocrine/metabolic | 256 | 261466 | 610 | Benign mammary dysplasias | genitourinary | 2479 | 116931 |
| 278 | Overweight, obesity & other hyperalimentation | endocrine/metabolic | 12786 | 261466 | 610.1 | Cystic mastopathy | genitourinary | 805 | 116931 |
| 278.1 | Obesity | endocrine/metabolic | 12646 | 261466 | 610.2 | Fibro adenosis of breast | genitourinary | 275 | 116931 |
| 279 | Disorders involving the immune mechanism | endocrine/metabolic | 271 | 261466 | 610.3 | Fibrosclerosis of breast | genitourinary | 266 | 116931 |
| 279.1 | Immunity deficiency | endocrine/metabolic | 223 | 261466 | 610.4 | Benign neoplasm of breast | genitourinary | 1353 | 116931 |
| 279.7 | Other immunological findings | endocrine/metabolic | 239 | 261466 | 610.8 | Other specified benign mammary dysplasias | genitourinary | 644 | 116931 |
| 280 | Iron deficiency anemias | hematopoietic | 8403 | 310388 | 611 | Abnormal findings on mammogram or breast exam | genitourinary | 1363 | 234338 |
| 280.1 | Iron deficiency anemias, unspecified or not due to blood loss | hematopoietic | 8022 | 310388 | 611.3 | Lump or mass in breast | genitourinary | 1305 | 234338 |
| 280.2 | Iron deficiency anemia secondary to blood loss (chronic) | hematopoietic | 436 | 310388 | 612 | Breast conditions, congenital or relating to hormones | genitourinary | 788 | 234338 |
| 281 | Other deficiency anemia | hematopoietic | 1150 | 310388 | 612.2 | Hypertrophy of breast (Gynecomastia) | genitourinary | 715 | 234338 |
| 281.1 | Megaloblastic anemia | hematopoietic | 1093 | 310388 | 613 | Other nonmalignant breast conditions | genitourinary | 1712 | 234338 |
| 281.11 | Pernicious anemia | hematopoietic | 769 | 310388 | 613.1 | Inflammatory disease of breast | genitourinary | 615 | 234338 |
| 281.13 | Folate-deficiency anemia | hematopoietic | 200 | 310388 | 613.7 | Other signs & symptoms in breast | genitourinary | 614 | 234338 |
| 284 | Aplastic anemia | hematopoietic | 480 | 310388 | 613.8 | Other specified disorders of breast | genitourinary | 289 | 234338 |

| Phecode | Description | Group | Cases | Controls | Phecode | Description | Group | Cases | Controls |
|---|---|---|---|---|---|---|---|---|---|
| 285 | Other anemias | hematopoietic | 12234 | 310388 | 614 | Inflammatory diseases of female pelvic organs | genitourinary | 5602 | 116931 |
| 285.1 | Acute post hemorrhagic anemia | hematopoietic | 237 | 310388 | 614.1 | Pelvic peritoneal adhesions, female (postoperative) (post infection) | genitourinary | 2293 | 116931 |
| 285.2 | Anemia of chronic disease | hematopoietic | 736 | 310388 | 614.3 | Pelvic inflammatory disease (PID) | genitourinary | 802 | 116931 |
| 285.22 | Anemia in neoplastic disease | hematopoietic | 433 | 310388 | 614.32 | Chronic inflammatory pelvic disease | genitourinary | 352 | 116931 |
| 286 | Coagulation defects | hematopoietic | 1023 | 310388 | 614.33 | Pelvic inflammatory disease, NOS | genitourinary | 308 | 116931 |
| 286.1 | Congenital coagulation defects | hematopoietic | 442 | 310388 | 614.4 | Inflammatory diseases of uterus, except cervix | genitourinary | 245 | 116931 |
| 286.12 | Congenital deficiency of other clotting factors (including factor VII) | hematopoietic | 278 | 310388 | 614.5 | Inflammatory disease of cervix, vagina, & vulva | genitourinary | 2642 | 116931 |
| 286.7 | Other & unspecified coagulation defects | hematopoietic | 411 | 310388 | 614.51 | Cervicitis & endocervicitis | genitourinary | 1116 | 116931 |
| 287 | Purpura & other hemorrhagic conditions | hematopoietic | 1804 | 310388 | 614.52 | Vaginitis & vulvovaginitis | genitourinary | 591 | 116931 |
| 287.3 | Thrombocytopenia | hematopoietic | 1667 | 310388 | 614.53 | Cyst or abscess of Bartholin's gland | genitourinary | 658 | 116931 |
| 287.31 | Primary thrombocytopenia | hematopoietic | 415 | 310388 | 614.54 | Abscess or ulceration of vulva | genitourinary | 228 | 116931 |
| 288 | Diseases of white blood cells | hematopoietic | 697 | 310388 | 615 | Endometriosis | genitourinary | 3495 | 116931 |
| 288.1 | Decreased white blood cell count | hematopoietic | 3267 | 310388 | 617 | Disorders secondary to childbirth, surgery, trauma | genitourinary | 1252 | 234338 |
| 288.11 | Neutropenia | hematopoietic | 3267 | 310388 | 618 | Genital prolapse | genitourinary | 10694 | 116931 |
| 289 | Other diseases of blood & blood-forming organs | hematopoietic | 954 | 310388 | 618.1 | Prolapse of vaginal walls | genitourinary | 6724 | 116931 |
| 289.3 | Personal history of diseases of blood & blood-forming organs | hematopoietic | 318 | 310388 | 618.2 | Uterine/Uterovaginal prolapse | genitourinary | 4836 | 116931 |
| 289.4 | Lymphadenitis | hematopoietic | 2636 | 310388 | 618.5 | Prolapse of vaginal vault after hysterectomy | genitourinary | 459 | 116931 |
| 289.5 | Diseases of spleen | hematopoietic | 514 | 310388 | 618.6 | Vaginal enterocele, congenital or acquired | genitourinary | 629 | 116931 |
| 289.8 | Polycythemia, secondary | hematopoietic | 315 | 310063 | 619 | Noninflammatory female genital disorders | genitourinary | 8298 | 116931 |
| 290 | Delirium dementia & amnestic & other cognitive disorders | mental disorders | 2856 | 262912 | 619.1 | Noninflammatory disorders of ovary, fallopian tube, & broad ligament | genitourinary | 683 | 116931 |
| 290.1 | Dementias | mental disorders | 1583 | 262912 | 619.2 | Disorders of uterus, NEC | genitourinary | 3020 | 116931 |
| 290.11 | Alzheimer's disease | mental disorders | 666 | 262912 | 619.3 | Noninflammatory disorders of cervix | genitourinary | 2536 | 116931 |
| 290.13 | Senile dementia | mental disorders | 847 | 262912 | 619.4 | Noninflammatory disorders of vagina | genitourinary | 1535 | 116931 |
| 290.16 | Vascular dementia | mental disorders | 361 | 262912 | 619.5 | Noninflammatory disorders of vulva & perineum | genitourinary | 1209 | 116931 |
| 290.2 | Delirium due to conditions classified elsewhere | mental disorders | 1157 | 262912 | 621 | Endometrial hyperplasia | genitourinary | 970 | 116931 |
| 291 | Other specified nonpsychotic and/or transient mental disorders | mental disorders | 693 | 262912 | 622 | Polyp of female genital organs | genitourinary | 9429 | 116931 |
| 291.8 | Alteration of consciousness | mental disorders | 484 | 262912 | 622.1 | Polyp of corpus uteri | genitourinary | 6913 | 116931 |
| 292 | Neurological disorders | mental disorders | 5218 | 262912 | 622.2 | Mucous polyp of cervix | genitourinary | 2951 | 116931 |
| 292.1 | Aphasia/speech disturbance | mental disorders | 1626 | 262912 | 623 | Hypertrophy of female genital organs | genitourinary | 1089 | 116931 |
| 292.2 | Mild cognitive impairment | mental disorders | 248 | 262912 | 624 | Symptoms involving female genital tract | genitourinary | 805 | 116931 |
| 292.3 | Memory loss | mental disorders | 730 | 262912 | 624.1 | Dystrophy of female genital tract | genitourinary | 254 | 116931 |
| 292.4 | Altered mental status | mental disorders | 2527 | 262912 | 624.2 | Atrophy of female genital tract | genitourinary | 440 | 116931 |
| 292.6 | Hallucinations | mental disorders | 350 | 262912 | 624.9 | stress incontinence, female | genitourinary | 5074 | 116931 |
| 293 | Symptoms involving head & neck | mental disorders | 1929 | 262912 | 625 | Pain & other symptoms associated with female genital organs | genitourinary | 2526 | 116931 |
| 293.1 | Swelling, mass, or lump in head & neck [Space-occupying lesion, intracranial NOS] | mental disorders | 832 | 262912 | 625.1 | Dyspareunia | genitourinary | 1007 | 116931 |
| 295 | Schizophrenia & other psychotic disorders | mental disorders | 793 | 262912 | 626 | Disorders of menstruation & other abnormal bleeding from female genital tract | genitourinary | 15577 | 116931 |
| 295.1 | Schizophrenia | mental disorders | 513 | 262912 | 626.1 | Irregular menstrual cycle/bleeding | genitourinary | 13278 | 116931 |
| 296 | Mood disorders | mental disorders | 13263 | 262912 | 626.12 | Excessive or frequent menstruation | genitourinary | 8228 | 116931 |
| 296.1 | Bipolar | mental disorders | 1015 | 262912 | 626.13 | Irregular menstrual cycle | genitourinary | 1646 | 116931 |
| 296.2 | Depression | mental disorders | 12701 | 262912 | 626.14 | Irregular menstrual bleeding | genitourinary | 3244 | 116931 |
| 296.22 | Major depressive disorder | mental disorders | 12629 | 262912 | 626.2 | Dysmenorrhea | genitourinary | 1487 | 116931 |
| 297 | Suicidal ideation or attempt | mental disorders | 1529 | 262912 | 626.8 | Infertility, female | genitourinary | 1139 | 116931 |
| 297.2 | Suicide or self-inflicted injury | mental disorders | 1457 | 262912 | 627 | Menopausal & postmenopausal disorders | genitourinary | 9346 | 116931 |
| 300 | Anxiety disorders | mental disorders | 8295 | 262912 | 627.1 | Postmenopausal bleeding | genitourinary | 7915 | 116931 |
| 300.1 | Anxiety disorder | mental disorders | 7701 | 262912 | 627.3 | Postmenopausal atrophic vaginitis | genitourinary | 1078 | 116931 |
| 300.12 | Agoraphobia, social phobia, & panic disorder | mental disorders | 820 | 262912 | 627.4 | Premenopausal menorrhagia | genitourinary | 252 | 116931 |
| 300.13 | Phobia | mental disorders | 649 | 262912 | 628 | Ovarian cyst | genitourinary | 4147 | 116931 |
| 301 | Personality disorders | mental disorders | 338 | 262912 | 634 | Miscarriage; stillbirth | pregnancy complications | 4525 | 169668 |
| 302 | Sexual & gender identity disorders | mental disorders | 279 | 262912 | 634.1 | Missed abortion/Hydatidiform mole | pregnancy complications | 1038 | 169668 |
| 303 | Psychogenic & somatoform disorders | mental disorders | 457 | 262912 | 634.3 | Ectopic pregnancy | pregnancy complications | 272 | 169668 |
| 303.3 | Psychogenic disorder | mental disorders | 339 | 262912 | 635 | Hemorrhage during pregnancy; childbirth & postpartum | pregnancy complications | 1680 | 169668 |
| 304 | Adjustment reaction | mental disorders | 258 | 262912 | 635.2 | Antepartum hemorrhage, abruptio placentae, & placenta previa | pregnancy complications | 739 | 169668 |
| 306 | Other mental disorder | mental disorders | 39468 | 262912 | 635.3 | Placenta previa & abruptio placenta | pregnancy complications | 1054 | 169668 |
| 306.9 | Tension headache | mental disorders | 280 | 262912 | 636 | Early or threatened labor; hemorrhage in early pregnancy | pregnancy complications | 2079 | 169668 |
| 315 | Developmental delays & disorders | mental disorders | 563 | 262912 | 636.2 | Early onset of delivery | pregnancy complications | 508 | 169668 |
| 316 | Substance addiction & disorders | mental disorders | 412 | 262912 | 636.3 | Hemorrhage in early pregnancy | pregnancy complications | 872 | 169668 |
| 317 | Alcohol-related disorders | mental disorders | 12721 | 262912 | 642 | Hypertension complicating pregnancy, childbirth, & the puerperium | pregnancy complications | 946 | 169668 |
| 317.1 | Alcoholism | mental disorders | 10886 | 262912 | 642.1 | Preeclampsia & eclampsia | pregnancy complications | 259 | 169668 |
| 317.11 | Alcoholic liver damage | mental disorders | 837 | 262912 | 644 | Anemia during pregnancy | pregnancy complications | 677 | 169668 |
| 318 | Tobacco use disorder | mental disorders | 18403 | 262912 | 645 | Late pregnancy & failed induction | pregnancy complications | 1054 | 325859 |
| 320 | Meningitis | neurological | 391 | 295570 | 646 | Other complications of pregnancy NEC | pregnancy complications | 1868 | 169668 |
| 323 | Encephalitis | neurological | 349 | 295570 | 647.1 | Infections of genitourinary tract during pregnancy | pregnancy complications | 226 | 169668 |
| 324 | Other CNS infection & poliomyelitis | neurological | 305 | 295570 | 650 | Normal delivery | pregnancy complications | 1568 | 325859 |
| 327 | Sleep disorders | neurological | 1210 | 295570 | 651 | Multiple gestation | pregnancy complications | 299 | 325859 |
| 327.3 | Sleep apnea | neurological | 4435 | 295570 | 652 | Malposition & malpresentation of fetus or obstruction | pregnancy complications | 1428 | 325859 |

| Phecode | Description | Group | Cases | Controls | Phecode | Description | Group | Cases | Controls |
|---|---|---|---|---|---|---|---|---|---|
| 331 | Other cerebral degenerations | neurological | 1287 | 295570 | 653 | Problems associated with amniotic cavity & membranes | pregnancy complications | 1257 | 169668 |
| 331.1 | Hydrocephalus | neurological | 515 | 295570 | 654.1 | Abnormality of organs & soft tissues of pelvis complicating pregnancy, childbirth, or the puerperium | pregnancy complications | 1034 | 169668 |
| 331.9 | Cerebral degeneration, unspecified | neurological | 514 | 295570 | 654.2 | Rhesus isoimmunization in pregnancy | pregnancy complications | 258 | 169668 |
| 332 | Parkinson's disease | neurological | 1345 | 295570 | 655 | Known or suspected fetal abnormality affecting management of mother | pregnancy complications | 3585 | 169668 |
| 333 | Extrapyramidal disease & abnormal movement disorders | neurological | 1094 | 295570 | 656 | Other perinatal conditions of fetus or newborn | pregnancy complications | 499 | 325859 |
| 333.1 | Essential tremor | neurological | 271 | 295570 | 661 | Fetal distress & abnormal forces of labor | | 1819 | 325859 |
| 333.4 | Torsion dystonia | neurological | 265 | 295570 | 663 | Umbilical cord complications during labor & delivery | | 511 | 325859 |
| 334 | Degenerative disease of the spinal cord | neurological | 1896 | 295570 | 665 | Obstetrical/birth trauma | pregnancy complications | 4394 | 325859 |
| 334.2 | Anterior horn cell disease | neurological | 277 | 295570 | 669 | Complications of labor & delivery NEC | pregnancy complications | 2212 | 169668 |
| 335 | Multiple sclerosis | neurological | 1222 | 295570 | 674 | Other complications of the puerperium NEC | pregnancy complications | 217 | 169668 |
| 337 | Disorders of the autonomic nervous system | neurological | 355 | 295570 | 681 | Superficial cellulitis & abscess | dermatologic | 7381 | 289596 |
| 338 | Pain | neurological | 742 | 295570 | 681.1 | Cellulitis & abscess of fingers/toes | dermatologic | 550 | 289596 |
| 338.1 | Acute pain | neurological | 363 | 295570 | 681.2 | Cellulitis & abscess of face/neck | dermatologic | 509 | 289596 |
| 338.2 | Chronic pain | neurological | 387 | 295570 | 681.3 | Cellulitis & abscess of arm/hand | dermatologic | 5521 | 289596 |
| 339 | Other headache syndromes | neurological | 7243 | 295570 | 681.5 | Cellulitis & abscess of leg, except foot | dermatologic | 5524 | 289596 |
| 340 | Migraine | neurological | 2962 | 295570 | 681.6 | Cellulitis & abscess of foot, toe | dermatologic | 5489 | 289596 |
| 340.1 | Migrain with aura | neurological | 217 | 295570 | 681.7 | Cellulitis & abscess of trunk | dermatologic | 623 | 289596 |
| 341 | Other demyelinating diseases of central nervous system | neurological | 221 | 295570 | 686 | Other local infections of skin & subcutaneous tissue | dermatologic | 1364 | 289596 |
| 342 | Hemiplegia | neurological | 1600 | 295570 | 686.1 | Carbuncle & furuncle | dermatologic | 2170 | 289596 |
| 344 | Other paralytic syndromes | neurological | 658 | 295570 | 686.3 | Pilonidal cyst | dermatologic | 510 | 289596 |
| 345 | Epilepsy, recurrent seizures, convulsions | neurological | 4890 | 295570 | 686.4 | Pyogenic granuloma | dermatologic | 337 | 289596 |
| 345.1 | Epilepsy | neurological | 877 | 295570 | 687 | Symptoms affecting skin | dermatologic | 1302 | 289596 |
| 345.11 | Generalized convulsive epilepsy | neurological | 423 | 295570 | 687.1 | Rash & other nonspecific skin eruption | dermatologic | 2100 | 289596 |
| 345.12 | Partial epilepsy | neurological | 273 | 295570 | 687.2 | Localized superficial swelling, mass, or lump | dermatologic | 947 | 289596 |
| 345.3 | Convulsions | neurological | 2204 | 295570 | 687.4 | Disturbance of skin sensation | dermatologic | 2787 | 289596 |
| 348 | Other conditions of brain | neurological | 854 | 295570 | 689 | Disorder of skin & subcutaneous tissue NOS | dermatologic | 5767 | 289596 |
| 348.2 | Cerebral edema & compression of brain | neurological | 280 | 295570 | 690 | Erythematosquamous dermatosis | dermatologic | 3042 | 289596 |
| 348.7 | Coma | neurological | 338 | 295570 | 690.1 | Seborrheic dermatitis | dermatologic | 3024 | 289596 |
| 348.8 | Encephalopathy, not elsewhere classified | neurological | 267 | 295570 | 694 | Dyschromia & Vitiligo | dermatologic | 952 | 289596 |
| 348.9 | Other conditions of brain, NOS | neurological | 440 | 295570 | 694.2 | Other dyschromia | dermatologic | 762 | 289596 |
| 349 | Other & unspecified disorders of the nervous system | neurological | 403 | 295570 | 695 | Erythematous conditions | dermatologic | 2344 | 289596 |
| 350 | Abnormal movement | neurological | 3488 | 295570 | 695.3 | Rosacea | dermatologic | 312 | 289596 |
| 350.1 | Abnormal involuntary movements | neurological | 968 | 295570 | 695.4 | Lupus (localized & systemic) | dermatologic | 391 | 288757 |
| 350.2 | Abnormality of gait | neurological | 2371 | 295570 | 695.42 | Systemic lupus erythematosus | dermatologic | 324 | 288757 |
| 350.3 | Lack of coordination | neurological | 368 | 295570 | 695.7 | Prurigo & Lichen | dermatologic | 724 | 289596 |
| 351 | Other peripheral nerve disorders | neurological | 11404 | 295570 | 695.8 | Other specified erythematous conditions | dermatologic | 231 | 289596 |
| 352 | Disorders of other cranial nerves | neurological | 1378 | 295570 | 695.9 | Unspecified erythematous condition | dermatologic | 486 | 289596 |
| 352.1 | Trigeminal nerve disorders [CN5] | neurological | 485 | 295570 | 696 | Psoriasis & related disorders | dermatologic | 2369 | 286399 |
| 352.2 | Facial nerve disorders [CN7] | neurological | 842 | 295570 | 696.4 | Psoriasis | dermatologic | 2308 | 286399 |
| 353 | Nerve root & plexus disorders | neurological | 2069 | 295570 | 696.41 | Psoriasis vulgaris | dermatologic | 1756 | 286399 |
| 355 | Complex regional/central pain syndrome | neurological | 329 | 295570 | 696.42 | Psoriatic arthropathy | dermatologic | 711 | 286399 |
| 357 | Inflammatory & toxic neuropathy | neurological | 1558 | 295570 | 697 | Sarcoidosis | dermatologic | 522 | 289596 |
| 358 | Myoneural disorders | neurological | 210 | 295570 | 698 | Pruritus & related conditions | dermatologic | 767 | 289596 |
| 359 | Muscular dystrophies & other myopathies | neurological | 439 | 295570 | 700 | Corns & callosities | dermatologic | 280 | 289596 |
| 359.2 | Myopathy | neurological | 337 | 295570 | 701 | Other hypertrophic & atrophic conditions of skin | dermatologic | 4868 | 289596 |
| 360 | Disorders of the globe | sense organs | 315 | 287331 | 701.2 | Scar conditions & fibrosis of skin | dermatologic | 2159 | 289596 |
| 360.2 | Progressive myopia | sense organs | 227 | 287331 | 701.3 | Circumscribed scleroderma | dermatologic | 478 | 289596 |
| 361 | Retinal detachments & defects | sense organs | 3118 | 287331 | 701.4 | Keloid scar | dermatologic | 205 | 289596 |
| 361.1 | Retinal detachment with retinal defect | sense organs | 1401 | 287331 | 701.5 | Abnormal granulation tissue | dermatologic | 447 | 289596 |
| 362 | Other retinal disorders | sense organs | 5021 | 286896 | 702 | Degenerative skin conditions & other dermatoses | dermatologic | 5494 | 289596 |
| 362.2 | Degeneration of macula & posterior pole of retina | sense organs | 2640 | 286896 | 702.1 | Actinic keratosis | dermatologic | 2726 | 289596 |
| 362.29 | Macular degeneration (senile) of retina NOS | sense organs | 2637 | 286896 | 702.2 | Seborrheic keratosis | dermatologic | 2973 | 289596 |
| 362.3 | Other nondiabetic retinopathy | sense organs | 1059 | 286896 | 703 | Diseases of nail, NOS | dermatologic | 345 | 289596 |
| 362.31 | Separation of retinal layers | sense organs | 1003 | 286896 | 703.1 | Ingrown nail | dermatologic | 837 | 289596 |
| 362.4 | Retinal vascular changes & abnomalities | sense organs | 872 | 286896 | 704 | Diseases of hair & hair follicles | dermatologic | 4724 | 289596 |
| 364 | Corneal opacity & other disorders of cornea | sense organs | 751 | 287331 | 705.8 | Hyperhidrosis | dermatologic | 569 | 289596 |
| 364.4 | Corneal degenerations | sense organs | 240 | 287331 | 706 | Diseases of sebaceous glands | dermatologic | 7950 | 289596 |
| 364.5 | Corneal dystrophy | sense organs | 236 | 287331 | 706.2 | Sebaceous cyst | dermatologic | 7878 | 289596 |
| 365 | Glaucoma | sense organs | 4986 | 287331 | 707 | Chronic ulcer of skin | dermatologic | 2310 | 289596 |
| 365.1 | Open-angle glaucoma | sense organs | 1216 | 287331 | 707.1 | Decubitus ulcer | dermatologic | 1184 | 289596 |
| 365.11 | Primary open angle glaucoma | sense organs | 1212 | 287331 | 707.2 | Chronic ulcer of leg or foot | dermatologic | 1199 | 289596 |
| 365.2 | Primary angle-closure glaucoma | sense organs | 742 | 287331 | 709 | Diffuse diseases of connective tissue | dermatologic | 3306 | 289596 |
| 366 | Cataract | sense organs | 22347 | 287331 | 709.2 | Sicca syndrome | dermatologic | 512 | 289596 |
| 366.2 | Senile cataract | sense organs | 9863 | 287331 | 709.7 | Unspecified diffuse connective tissue disease | dermatologic | 2592 | 289596 |
| 367 | Disorders of refraction & accommodation; blindness & low vision | sense organs | 2886 | 287331 | 710 | Osteomyelitis, periostitis, & other infections involving bone | musculoskeletal | 620 | 295120 |
| 367.1 | Myopia | sense organs | 1422 | 287331 | 710.1 | Osteomyelitis | musculoskeletal | 602 | 295120 |
| 367.2 | Astigmatism | sense organs | 225 | 287331 | 710.19 | Unspecified osteomyelitis | musculoskeletal | 444 | 295120 |
| 367.8 | Hypermetropia | sense organs | 278 | 287331 | 711 | Arthropathy associated with infections | musculoskeletal | 433 | 295120 |
| 367.9 | Blindness & low vision | sense organs | 950 | 287331 | 711.1 | Pyogenic arthritis | musculoskeletal | 333 | 295120 |
| 368 | Visual disturbances | sense organs | 3085 | 287331 | 714 | Rheumatoid arthritis & other inflammatory polyarthropathies | musculoskeletal | 4896 | 294409 |
| 368.1 | Amblyopia | sense organs | 607 | 287331 | 714.1 | Rheumatoid arthritis | musculoskeletal | 4369 | 294409 |
| 368.2 | Diplopia & disorders of binocular vision | sense organs | 723 | 287331 | 715 | Other inflammatory spondylopathies | musculoskeletal | 1641 | 294409 |
| 368.4 | Visual field defects | sense organs | 370 | 287331 | 715.2 | Ankylosing spondylitis | musculoskeletal | 399 | 294409 |
| 368.9 | Subjective visual disturbances | sense organs | 635 | 287331 | 716 | Other arthropathies | musculoskeletal | 38203 | 295120 |
| 368.91 | Psychophysical visual disturbances | sense organs | 222 | 287331 | 716.2 | Unspecified monoarthritis | musculoskeletal | 16046 | 295120 |
| 369 | Infection of the eye | sense organs | 574 | 287331 | 716.9 | Arthropathy NOS | musculoskeletal | 38053 | 295120 |

| Phecode | Description | Group | Cases | Controls | Phecode | Description | Group | Cases | Controls |
|---|---|---|---|---|---|---|---|---|---|
| 369.5 | Conjunctivitis, infectious | sense organs | 241 | 287331 | 717 | Polymyalgia Rheumatica | musculoskeletal | 1354 | 336121 |
| 370 | Keratitis | sense organs | 283 | 287331 | 720 | Spinal stenosis | musculoskeletal | 4105 | 322347 |
| 371 | Inflammation of the eye | sense organs | 2760 | 287331 | 721 | Spondylosis & allied disorders | musculoskeletal | 8311 | 322347 |
| 371.1 | Uveitis, noninfectious or NOS | sense organs | 485 | 287331 | 721.1 | Spondylosis without myelopathy | musculoskeletal | 7917 | 322347 |
| 371.3 | Inflammation of eyelids | sense organs | 2161 | 287331 | 721.2 | Spondylosis with myelopathy | musculoskeletal | 204 | 322347 |
| 372 | Disorders of conjunctiva | sense organs | 731 | 287331 | 721.8 | Other allied disorders of spine | musculoskeletal | 384 | 322347 |
| 374 | Other disorders of eyelids | sense organs | 5327 | 287331 | 722 | Intervertebral disc disorders | musculoskeletal | 6764 | 322347 |
| 374.1 | Ectropion or entropion | sense organs | 1101 | 287331 | 722.1 | Displacement of intervertebral disc | musculoskeletal | 495 | 322347 |
| 374.3 | Ptosis of eyelid | sense organs | 1725 | 287331 | 722.6 | Degeneration of intervertebral disc | musculoskeletal | 2865 | 322347 |
| 375 | Disorders of lacrimal system | sense organs | 2085 | 287331 | 722.7 | Intervertebral disc disorder with myelopathy | musculoskeletal | 398 | 322347 |
| 375.2 | Epiphora | sense organs | 840 | 287331 | 722.9 | Other & unspecified disc disorder | musculoskeletal | 4097 | 322347 |
| 377 | Disorders of optic nerve & visual pathways | sense organs | 438 | 287331 | 723 | Other disorders of cervical region | musculoskeletal | 537 | 322347 |
| 377.3 | Optic neuritis/neuropathy | sense organs | 234 | 287331 | 724 | Other & unspecified disorders of back | musculoskeletal | 1156 | 322347 |
| 378 | Strabismus & other disorders of binocular eye movements | sense organs | 1329 | 287331 | 724.1 | Disorders of sacrum | musculoskeletal | 358 | 322347 |
| 378.1 | Strabismus (not specified as paralytic) | sense organs | 836 | 287331 | 724.2 | Disorders of coccyx | musculoskeletal | 361 | 322347 |
| 378.2 | Nystagmus & other irregular eye movements | sense organs | 209 | 287331 | 724.9 | Other unspecified back disorders | musculoskeletal | 723 | 322347 |
| 378.5 | Paralytic strabismus | sense organs | 264 | 287331 | 726 | Peripheral enthesopathies & allied syndromes | musculoskeletal | 14369 | 306383 |
| 379 | Other disorders of eye | sense organs | 4107 | 287331 | 726.1 | Enthesopathy | musculoskeletal | 9643 | 306383 |
| 379.2 | Disorders of vitreous body | sense organs | 1443 | 287331 | 726.2 | Synoviopathy | musculoskeletal | 527 | 306383 |
| 379.3 | Aphakia & other disorders of lens | sense organs | 2166 | 287331 | 726.3 | Bursitis | musculoskeletal | 822 | 306383 |
| 379.5 | Disorders of iris & ciliary body | sense organs | 371 | 287331 | 726.4 | Calcaneal spur; Exostosis NOS | musculoskeletal | 3462 | 306383 |
| 380 | Disorders of external ear | sense organs | 614 | 287331 | 727 | Other disorders of synovium, tendon, & bursa | musculoskeletal | 12755 | 306383 |
| 380.1 | Otitis externa | sense organs | 478 | 287331 | 727.1 | Synovitis & tenosynovitis | musculoskeletal | 5004 | 306383 |
| 380.4 | Impacted cerumen | sense organs | 323 | 287331 | 727.4 | Ganglion & cyst of synovium, tendon, & bursa | musculoskeletal | 2903 | 306383 |
| 381 | Otitis media & Eustachian tube disorders | sense organs | 2003 | 287331 | 727.5 | Rupture of synovium | musculoskeletal | 587 | 306383 |
| 381.1 | Otitis media | sense organs | 1613 | 287331 | 727.6 | Rupture of tendon, nontraumatic | musculoskeletal | 3877 | 306383 |
| 381.11 | Suppurative & unspecified otitis media | sense organs | 739 | 287331 | 728 | Disorders of muscle, ligament, & fascia | musculoskeletal | 832 | 306383 |
| 381.9 | Otorrhea | sense organs | 242 | 287331 | 728.2 | Laxity of ligament or hypermobility syndrome | musculoskeletal | 402 | 306383 |
| 382 | Otalgia | sense organs | 288 | 287331 | 728.7 | Fasciitis | musculoskeletal | 3729 | 306383 |
| 383 | Otosclerosis | sense organs | 275 | 287331 | 728.71 | Contracture of palmar fascia [Dupuytren's disease] | musculoskeletal | 3406 | 306383 |
| 384 | Other disorders of tympanic membrane | sense organs | 1161 | 287331 | 729 | Other disorders of soft tissues | musculoskeletal | 6003 | 306383 |
| 384.4 | Perforation of tympanic membrane | sense organs | 894 | 287331 | 729.1 | Rheumatism, unspecified & fibrositis | musculoskeletal | 835 | 306383 |
| 385 | Other disorders of middle ear & mastoid | sense organs | 768 | 287331 | 731 | Osteitis deformans & osteopathies associated with other disorders classified elsewhere | musculoskeletal | 290 | 320016 |
| 385.3 | Cholesteatoma | sense organs | 521 | 287331 | 731.1 | Osteitis deformans [Paget's disease of bone] | musculoskeletal | 239 | 320016 |
| 386 | Vertiginous syndromes & other disorders of vestibular system | sense organs | 1729 | 287331 | 732 | Osteochondropathies | musculoskeletal | 461 | 320016 |
| 386.1 | Meniere's disease | sense organs | 559 | 287331 | 732.1 | Juvenile osteochondrosis | musculoskeletal | 205 | 320016 |
| 386.2 | Peripheral or central vertigo | sense organs | 464 | 287331 | 733 | Other disorders of bone & cartilage | musculoskeletal | 2100 | 320016 |
| 386.3 | Labyrinthitis | sense organs | 710 | 287331 | 733.2 | Cyst of bone | musculoskeletal | 295 | 320016 |
| 386.9 | Dizziness & giddiness (Light-headedness & vertigo) | sense organs | 4685 | 287331 | 733.4 | Aseptic necrosis of bone | musculoskeletal | 518 | 320016 |
| 389 | Hearing loss | sense organs | 4810 | 287331 | 733.8 | Malunion & nonunion of fracture | musculoskeletal | 1175 | 320016 |
| 389.1 | Sensorineural hearing loss | sense organs | 499 | 287331 | 735 | Acquired foot deformities | musculoskeletal | 8929 | 324005 |
| 389.2 | Conductive hearing loss | sense organs | 412 | 287331 | 735.1 | Flat foot | musculoskeletal | 215 | 324005 |
| 389.4 | Tinnitus | sense organs | 539 | 287331 | 735.2 | Acquired toe deformities | musculoskeletal | 4749 | 324005 |
| 394 | Rheumatic disease of the heart valves | circulatory system | 5564 | 202269 | 735.21 | Hammer toe (acquired) | musculoskeletal | 1813 | 324005 |
| 394.1 | Mitral valve stenosis & aortic valve stenosis | circulatory system | 680 | 202269 | 735.23 | Hallux rigidus | musculoskeletal | 1423 | 324005 |
| 394.2 | Mitral valve disease | circulatory system | 3323 | 202269 | 735.3 | Hallux valgus (Bunion) | musculoskeletal | 6000 | 324005 |
| 394.3 | Aortic valve disease | circulatory system | 1453 | 202269 | 736 | Other acquired deformities of limbs | musculoskeletal | 1764 | 324005 |
| 394.7 | Disease of tricuspid valve | circulatory system | 1335 | 202269 | 736.2 | Acquired deformities of finger | musculoskeletal | 234 | 324005 |
| 395 | Heart valve disorders | circulatory system | 6317 | 202269 | 737 | Curvature of spine | musculoskeletal | 1419 | 324005 |
| 395.1 | Nonrheumatic mitral valve disorders | circulatory system | 3224 | 202269 | 737.1 | Kyphosis (acquired) | musculoskeletal | 213 | 324005 |
| 395.2 | Nonrheumatic aortic valve disorders | circulatory system | 2915 | 202269 | 737.3 | Kyphoscoliosis & scoliosis | musculoskeletal | 1174 | 324005 |
| 395.6 | Heart valve replaced | circulatory system | 1554 | 202269 | 738 | Other acquired musculoskeletal deformity | musculoskeletal | 1991 | 324005 |
| 396 | Abnormal heart sounds | circulatory system | 1382 | 202269 | 738.4 | Acquired spondylolisthesis | musculoskeletal | 1644 | 324005 |
| 401 | Hypertension | circulatory system | 75408 | 202269 | 739 | Contracture of joint | musculoskeletal | 496 | 324005 |
| 401.1 | Essential hypertension | circulatory system | 75160 | 202269 | 740 | Osteoarthrosis | musculoskeletal | 50335 | 287140 |
| 401.2 | Hypertensive heart and/or renal disease | circulatory system | 1667 | 202269 | 740.1 | Osteoarthritis; localized | musculoskeletal | 31034 | 287140 |
| 401.21 | Hypertensive heart disease | circulatory system | 395 | 202269 | 740.11 | Osteoarthrosis, localized, primary | musculoskeletal | 8866 | 287140 |
| 401.22 | Hypertensive chronic kidney disease | circulatory system | 1285 | 202269 | 740.12 | Osteoarthrosis, localized, secondary | musculoskeletal | 634 | 287140 |
| 402 | Elevated blood pressure reading without diagnosis of hypertension | circulatory system | 1464 | 202269 | 740.2 | Osteoarthrosis, generalized | musculoskeletal | 4353 | 287140 |
| 411 | Ischemic Heart Disease | circulatory system | 30489 | 202269 | 740.9 | Osteoarthrosis NOS | musculoskeletal | 28265 | 287140 |
| 411.1 | Unstable angina (intermediate coronary syndrome) | circulatory system | 4478 | 202269 | 741 | Symptoms & disorders of the joints | musculoskeletal | 3744 | 331152 |
| 411.2 | Myocardial infarction | circulatory system | 12033 | 202269 | 741.2 | Stiffness of joint | musculoskeletal | 590 | 331152 |
| 411.3 | Angina pectoris | circulatory system | 15180 | 202269 | 741.4 | Joint effusions | musculoskeletal | 1400 | 331152 |
| 411.4 | Coronary atherosclerosis | circulatory system | 19684 | 202269 | 742 | Derangement of joint, non-traumatic | musculoskeletal | 2856 | 331152 |
| 411.41 | Aneurysm & dissection of heart | circulatory system | 735 | 202269 | 742.1 | Loose body in joint | musculoskeletal | 297 | 331152 |
| 411.8 | Other chronic ischemic heart disease, unspecified | circulatory system | 15139 | 202269 | 742.2 | Pathological, developmental or recurrent dislocation | musculoskeletal | 383 | 331152 |
| 411.9 | Other acute & subacute forms of ischemic heart disease | circulatory system | 1423 | 202269 | 742.8 | Articular cartilage disorder | musculoskeletal | 970 | 331152 |
| 414 | Other forms of chronic heart disease | circulatory system | 2245 | 202269 | 742.9 | Other derangement of joint | musculoskeletal | 2384 | 331152 |
| 415 | Pulmonary heart disease | circulatory system | 4937 | 202269 | 743 | Osteoporosis, osteopenia & pathological fracture | musculoskeletal | 7552 | 329923 |
| 415.2 | Chronic pulmonary heart disease | circulatory system | 976 | 202269 | 743.1 | Osteoporosis | musculoskeletal | 6241 | 329923 |
| 415.21 | Primary pulmonary hypertension | circulatory system | 414 | 202269 | 743.11 | Osteoporosis NOS | musculoskeletal | 6220 | 329923 |
| 416 | Cardiomegaly | circulatory system | 3070 | 202269 | 743.2 | Pathologic fracture | musculoskeletal | 571 | 329923 |
| 418 | Nonspecific chest pain | circulatory system | 26417 | 202269 | 743.21 | Pathologic fracture of vertebrae | musculoskeletal | 325 | 329923 |
| 418.1 | Precordial pain | circulatory system | 3619 | 202269 | 743.9 | Osteopenia or other disorder of bone & cartilage | musculoskeletal | 836 | 329923 |
| 420 | Carditis | circulatory system | 2276 | 202269 | 745 | Pain in joint | musculoskeletal | 7733 | 329742 |
| 420.2 | Pericarditis | circulatory system | 1431 | 202269 | 747 | Cardiac & circulatory congenital anomalies | congenital anomalies | 3002 | 329064 |
| 420.21 | Acute pericarditis | circulatory system | 209 | 202269 | 747.1 | Cardiac congenital anomalies | congenital anomalies | 2826 | 329064 |
| 420.3 | Endocarditis | circulatory system | 764 | 202269 | 747.11 | Cardiac shunt/ heart septal defect | congenital anomalies | 576 | 329064 |
| 425 | Cardiomyopathy | circulatory system | 1363 | 202269 | 747.12 | Valvular heart disease/ heart chambers | congenital anomalies | 270 | 329064 |
| 425.1 | Primary/intrinsic cardiomyopathies | circulatory system | 1307 | 202269 | 747.13 | Congenital anomalies of great vessels | congenital anomalies | 2015 | 329064 |
| 426 | Cardiac conduction disorders | circulatory system | 7651 | 202269 | 749 | Congenital anomalies of face & neck | congenital anomalies | 295 | 329064 |

| Phecode | Description | Group | Cases | Controls | Phecode | Description | Group | Cases | Controls |
|---|---|---|---|---|---|---|---|---|---|
| 426.2 | Atrioventricular [AV] block | circulatory system | 2459 | 202269 | 750 | Digestive congenital anomalies | congenital anomalies | 706 | 329064 |
| 426.21 | First degree AV block | circulatory system | 1220 | 202269 | 750.1 | Upper gastrointestinal congenital anomalies | congenital anomalies | 351 | 329064 |
| 426.23 | Second degree AV block | circulatory system | 508 | 202269 | 750.13 | Congenital anomalies of mouth/tongue | congenital anomalies | 204 | 329064 |
| 426.24 | Atrioventricular block, complete | circulatory system | 659 | 202269 | 750.2 | Lower gastrointestinal congenital anomalies | congenital anomalies | 348 | 329064 |
| 426.3 | Bundle branch block | circulatory system | 3818 | 202269 | 750.21 | Congenital anomalies of intestine | congenital anomalies | 222 | 329064 |
| 426.31 | Right bundle branch block | circulatory system | 1758 | 202269 | 751 | Genitourinary congenital anomalies | congenital anomalies | 1465 | 329064 |
| 426.32 | Left bundle branch block | circulatory system | 2030 | 202269 | 751.1 | Congenital anomalies of genital organs | congenital anomalies | 633 | 329064 |
| 426.4 | Anomalous atrioventricular excitation | circulatory system | 210 | 202269 | 751.11 | Congenital anomalies of female genital organs | congenital anomalies | 392 | 176821 |
| 426.9 | Cardiac pacemaker/device in situ | circulatory system | 2715 | 202269 | 751.12 | Congenital anomalies of male genital organs | congenital anomalies | 205 | 152243 |
| 426.91 | Cardiac pacemaker in situ | circulatory system | 2511 | 202269 | 751.2 | Congenital anomalies of urinary system | congenital anomalies | 801 | 329064 |
| 427 | Cardiac dysrhythmias | circulatory system | 25228 | 202269 | 751.21 | Cystic kidney disease | congenital anomalies | 394 | 329064 |
| 427.1 | Paroxysmal tachycardia, unspecified | circulatory system | 3202 | 202269 | 751.22 | Other specified congenital anomalies of kidney | congenital anomalies | 333 | 329064 |
| 427.11 | Paroxysmal supraventricular tachycardia | circulatory system | 2326 | 202269 | 752 | Nervous system congenital anomalies | congenital anomalies | 1689 | 329064 |
| 427.12 | Paroxysmal ventricular tachycardia | circulatory system | 956 | 202269 | 752.1 | Neural tube defects | congenital anomalies | 1613 | 329064 |
| 427.2 | Atrial fibrillation & flutter | circulatory system | 15491 | 202269 | 754 | Congenital musculoskeletal deformities of spine | congenital anomalies | 1491 | 329064 |
| 427.21 | Atrial fibrillation | circulatory system | 983 | 202269 | 755 | Congenital anomalies of limbs | congenital anomalies | 432 | 329064 |
| 427.3 | Other specified cardiac dysrhythmias | circulatory system | 3400 | 202269 | 755.1 | Congenital deformities of feet | congenital anomalies | 222 | 329064 |
| 427.4 | Cardiac arrest & ventricular fibrillation | circulatory system | 1324 | 202269 | 756 | Other congenital musculoskeletal anomalies | congenital anomalies | 590 | 329064 |
| 427.41 | Ventricular fibrillation & flutter | circulatory system | 365 | 202269 | 756.5 | Congenital osteodystrophy | congenital anomalies | 425 | 329064 |
| 427.42 | Cardiac arrest | circulatory system | 1121 | 202269 | 759 | Other & unspecified congenital anomalies | congenital anomalies | 223 | 329064 |
| 427.5 | Arrhythmia (cardiac) NOS | circulatory system | 998 | 202269 | 760 | Back pain | symptoms | 10889 | 257697 |
| 427.6 | Premature beats | circulatory system | 837 | 202269 | 761 | Cervicalgia | symptoms | 1764 | 257697 |
| 427.7 | Tachycardia NOS | circulatory system | 2398 | 202269 | 764 | Sciatica | symptoms | 2339 | 257697 |
| 427.8 | Sinoatrial node dysfunction (Bradycardia) | circulatory system | 484 | 202269 | 765 | Cervical radiculitis | symptoms | 505 | 257697 |
| 427.9 | Palpitations | circulatory system | 3694 | 202269 | 766 | Neuralgia, neuritis, & radiculitis NOS | symptoms | 1265 | 257697 |
| 428 | Congestive heart failure; nonhypertensive | circulatory system | 6185 | 202269 | 770 | Myalgia & myositis unspecified | symptoms | 1789 | 257697 |
| 428.1 | Congestive heart failure (CHF) NOS | circulatory system | 3650 | 202269 | 771 | Musculoskeletal symptoms referable to limbs | symptoms | 776 | 257697 |
| 428.2 | Heart failure NOS | circulatory system | 4914 | 202269 | 771.1 | Swelling of limb | symptoms | 4680 | 257697 |
| 429 | Ill-defined descriptions & complications of heart disease | circulatory system | 756 | 202269 | 772 | Symptoms of the muscles | symptoms | 676 | 257697 |
| 429.2 | Abnormal function study of cardiovascular system | circulatory system | 553 | 202269 | 773 | Pain in limb | symptoms | 5984 | 257697 |
| 430 | Intracranial hemorrhage | circulatory system | 1984 | 202269 | 780 | Hypothermia/Chills | symptoms | 212 | 257697 |
| 430.1 | Subarachnoid hemorrhage | circulatory system | 816 | 202269 | 781 | Symptoms involving nervous & musculoskeletal systems | symptoms | 9086 | 257697 |
| 430.2 | Intracerebral hemorrhage | circulatory system | 855 | 202269 | 782.3 | Edema | symptoms | 1941 | 257697 |
| 430.3 | Subdural hemorrhage | circulatory system | 308 | 202269 | 783 | Fever of unknown origin | symptoms | 3998 | 257697 |
| 433 | Cerebrovascular disease | circulatory system | 9077 | 202269 | 785 | Abdominal pain | symptoms | 37426 | 257697 |
| 433.1 | Occlusion & stenosis of precerebral arteries | circulatory system | 1354 | 202269 | 788 | Syncope & collapse | symptoms | 9030 | 257697 |
| 433.12 | Cerebral atherosclerosis | circulatory system | 270 | 202269 | 789 | Nausea & vomiting | symptoms | 11420 | 257697 |
| 433.2 | Occlusion of cerebral arteries | circulatory system | 4355 | 202269 | 790.6 | Other abnormal blood chemistry | symptoms | 6857 | 257697 |
| 433.21 | Cerebral artery occlusion, with cerebral infarction | circulatory system | 4193 | 202269 | 791 | Gangrene | symptoms | 645 | 257697 |
| 433.3 | Cerebral ischemia | circulatory system | 3089 | 202269 | 793.2 | Nonspecific abnormal findings on radiological & other examination of other intrathoracic organs | symptoms | 608 | 257697 |
| 433.31 | Transient cerebral ischemia | circulatory system | 2115 | 202269 | 798 | Malaise & fatigue | symptoms | 3438 | 257697 |
| 433.5 | Cerebral aneurysm | circulatory system | 364 | 202269 | 798.1 | Chronic fatigue syndrome | symptoms | 607 | 257697 |
| 433.8 | Late effects of cerebrovascular disease | circulatory system | 1333 | 202269 | 800 | Fracture of lower limb | injuries & poisonings | 6862 | 243043 |
| 440 | Atherosclerosis | circulatory system | 1453 | 202269 | 800.1 | Fracture of neck of femur | injuries & poisonings | 1926 | 243043 |
| 440.2 | Atherosclerosis of the extremities | circulatory system | 848 | 202269 | 800.2 | Fracture of unspecified part of femur | injuries & poisonings | 888 | 243043 |
| 440.9 | Atherosclerosis of aorta | circulatory system | 331 | 202269 | 800.3 | Fracture of tibia & fibula | injuries & poisonings | 1976 | 243043 |
| 441 | Vascular insufficiency of intestine | circulatory system | 701 | 202269 | 800.4 | Fracture of patella | injuries & poisonings | 689 | 243043 |
| 441.1 | Acute vascular insufficiency of intestine | circulatory system | 321 | 202269 | 801 | Fracture of ankle & foot | injuries & poisonings | 1992 | 243043 |
| 442 | Other aneurysm | circulatory system | 2079 | 202269 | 801.1 | Fracture of foot | injuries & poisonings | 1220 | 243043 |
| 442.1 | Aortic aneurysm | circulatory system | 1632 | 202269 | 802 | Fracture of pelvis | injuries & poisonings | 759 | 243043 |
| 442.11 | Abdominal aortic aneurysm | circulatory system | 1047 | 202269 | 803 | Fracture of upper limb | injuries & poisonings | 8356 | 243043 |
| 442.8 | Aneurysm of other specified artery | circulatory system | 218 | 202269 | 803.1 | Fracture of humerus | injuries & poisonings | 1610 | 243043 |
| 443 | Peripheral vascular disease | circulatory system | 4031 | 202269 | 803.2 | Fracture of radius & ulna | injuries & poisonings | 5165 | 243043 |
| 443.1 | Raynaud's syndrome | circulatory system | 1162 | 202269 | 803.3 | Fracture of clavicle or scapula | injuries & poisonings | 1581 | 243043 |
| 443.7 | Peripheral angiopathy in diseases classified elsewhere | circulatory system | 397 | 202269 | 804 | Fracture of hand or wrist | injuries & poisonings | 3156 | 243043 |
| 443.9 | Peripheral vascular disease, unspecified | circulatory system | 2679 | 202269 | 805 | Fracture of vertebral column without mention of spinal cord injury | injuries & poisonings | 1685 | 243043 |
| 444 | Arterial embolism & thrombosis | circulatory system | 903 | 202269 | 807 | Fracture of ribs | injuries & poisonings | 1555 | 243043 |
| 444.1 | Arterial embolism & thrombosis of lower extremity artery | circulatory system | 560 | 202269 | 809 | Fracture of unspecified bones | injuries & poisonings | 10448 | 243043 |
| 446 | Polyarteritis nodosa & allied conditions | circulatory system | 857 | 202269 | 817 | Concussion | injuries & poisonings | 219 | 243043 |
| 446.5 | Giant cell arteritis | circulatory system | 417 | 202269 | 818 | Intracranial hemorrhage (injury) | injuries & poisonings | 667 | 243043 |
| 446.9 | Arteritis NOS | circulatory system | 258 | 202269 | 819 | Skull & face fracture & other intercranial injury | injuries & poisonings | 2986 | 243043 |
| 447 | Other disorders of arteries & arterioles | circulatory system | 1320 | 202269 | 830 | Dislocation | injuries & poisonings | 1954 | 243043 |
| 447.1 | Stricture of artery | circulatory system | 858 | 202269 | 835 | Internal derangement of knee | injuries & poisonings | 13967 | 243043 |
| 450 | Noninfectious disorders of lymphatic channels | circulatory system | 805 | 202269 | 836 | Traumatic arthropathy | injuries & poisonings | 498 | 243043 |
| 451 | Phlebitis & thrombophlebitis | circulatory system | 3916 | 202269 | 840 | Sprains & strains | injuries & poisonings | 866 | 243043 |
| 451.2 | Phlebitis & thrombophlebitis of lower extremities | circulatory system | 3612 | 202269 | 840.3 | Joint/ligament sprain | injuries & poisonings | 457 | 243043 |
| 452 | Other venous embolism & thrombosis | circulatory system | 598 | 202269 | 850 | Hemorrhage or hematoma complicating a procedure | injuries & poisonings | 5032 | 243043 |
| 454 | Varicose veins | circulatory system | 10793 | 202269 | 851 | Complications of transplants & reattached limbs | injuries & poisonings | 17270 | 243043 |
| 454.1 | Varicose veins of lower extremity | circulatory system | 10333 | 202269 | 853 | Complication of colostomy or enterostomy | injuries & poisonings | 494 | 243043 |
| 454.11 | Varicose veins of lower extremity, symptomtic | circulatory system | 716 | 202269 | 854 | Complications of cardiac/vascular device, implant, & graft | injuries & poisonings | 2535 | 243043 |
| 455 | Hemorrhoids | circulatory system | 23176 | 202269 | 857 | Mechanical complication of unspecified genitourinary device, implant, & graft | injuries & poisonings | 1436 | 243043 |
| 456 | Chronic venous insufficiency [CVI] | circulatory system | 224 | 202269 | 858 | Complication of internal orthopedic device | injuries & poisonings | 3502 | 243043 |
| 458 | Hypotension | circulatory system | 6659 | 202269 | 859 | Complication due to other implant & internal device | injuries & poisonings | 3509 | 243043 |

| Phecode | Description | Group | Cases | Controls | Phecode | Description | Group | Cases | Controls |
|---|---|---|---|---|---|---|---|---|---|
| 458.1 | Orthostatic hypotension | circulatory system | 1622 | 202269 | 870 | Open wounds of head; neck; & trunk | injuries & poisonings | 3784 | 243043 |
| 458.2 | Iatrogenic hypotension | circulatory system | 250 | 202269 | 870.1 | Open wound or laceration of eye or eyelid | injuries & poisonings | 522 | 243043 |
| 458.9 | Hypotension NOS | circulatory system | 4073 | 202269 | 870.3 | Other open wound of head & face | injuries & poisonings | 2938 | 243043 |
| 459 | Other disorders of circulatory system | circulatory system | 17142 | 202269 | 870.4 | Open wound of nose & sinus | injuries & poisonings | 247 | 243043 |
| 459.9 | Circulatory disease NEC | circulatory system | 16931 | 202269 | 870.5 | Open wound of lip & mouth | injuries & poisonings | 374 | 243043 |
| 465 | Acute upper respiratory infections of multiple or unspecified sites | respiratory | 2223 | 269389 | 871 | Open wounds of extremities | injuries & poisonings | 4405 | 243043 |
| 465.2 | Acute pharyngitis | respiratory | 841 | 269389 | 872 | Traumatic amputation | injuries & poisonings | 435 | 243043 |
| 470 | Septal Deviations/Turbinate Hypertrophy | respiratory | 4226 | 269389 | 873 | Broken tooth | injuries & poisonings | 250 | 243043 |
| 471 | Nasal polyps | respiratory | 2933 | 269389 | 907 | Injuries to the nervous system | injuries & poisonings | 1285 | 243043 |
| 472 | Chronic pharyngitis & nasopharyngitis | respiratory | 906 | 269389 | 915 | Superficial injury without mention of infection | injuries & poisonings | 4691 | 243043 |
| 473 | Diseases of the larynx & vocal cords | respiratory | 2414 | 269389 | 916 | Contusion | injuries & poisonings | 1533 | 243043 |
| 473.3 | Paralysis/spasm of vocal cords or larynx | respiratory | 263 | 269389 | 938 | Dermatitis due to solar radiation | dermatologic | 368 | 288850 |
| 473.4 | Voice disturbance | respiratory | 972 | 269389 | 938.2 | Chronic dermatitis due to solar radiation | dermatologic | 256 | 288850 |
| 474 | Acute & chronic tonsillitis | respiratory | 1762 | 269389 | 939 | Atopic/contact dermatitis due to other or unspecified | dermatologic | 2227 | 288850 |
| 474.1 | Acute tonsillitis | respiratory | 552 | 269389 | 941 | Adverse reaction to serum or vaccine | injuries & poisonings | 259 | 241796 |
| 474.2 | Chronic tonsillitis & adenoiditis | respiratory | 971 | 269389 | 946 | Anaphylactic shock NOS | injuries & poisonings | 527 | 241796 |
| 475 | Chronic sinusitis | respiratory | 2395 | 269389 | 947 | Urticaria | dermatologic | 541 | 288850 |
| 476 | Allergic rhinitis | respiratory | 1225 | 269389 | 949 | Allergies, other | injuries & poisonings | 397 | 241796 |
| 477 | Epistaxis or throat hemorrhage | respiratory | 2412 | 269389 | 958 | Certain early complications of trauma or procedure | injuries & poisonings | 531 | 243043 |
| 478 | Throat pain | respiratory | 338 | 269389 | 960 | Poisoning by antibiotics | injuries & poisonings | 18479 | 243043 |
| 479 | Other upper respiratory disease | respiratory | 3786 | 269389 | 960.2 | Allergy/adverse effect of penicillin | injuries & poisonings | 16028 | 243043 |
| 480 | Pneumonia | respiratory | 11693 | 269389 | 961 | Poisoning by other anti-infectives | injuries & poisonings | 411 | 243043 |
| 480.1 | Bacterial pneumonia | respiratory | 7555 | 269389 | 961.1 | Poisoning/allergy of sulfonamides | injuries & poisonings | 842 | 243043 |
| 480.11 | Pneumococcal pneumonia | respiratory | 6741 | 269389 | 962 | Poisoning by hormones & synthetic substitutes | injuries & poisonings | 482 | 243043 |
| 480.5 | Bronchopneumonia & lung abscess | respiratory | 894 | 269389 | 962.3 | Hormones & synthetic substitutes causing adverse effects in therapeutic use | injuries & poisonings | 357 | 243043 |
| 481 | Influenza | respiratory | 418 | 269389 | 963 | Poisoning by primarily systemic agents | injuries & poisonings | 2626 | 243043 |
| 483 | Acute bronchitis & bronchiolitis | respiratory | 227 | 269389 | 964 | Poisoning by agents primarily affecting blood constituents | injuries & poisonings | 391 | 243043 |
| 495 | Asthma | respiratory | 24896 | 269389 | 964.1 | Anticoagulants causing adverse effects | injuries & poisonings | 298 | 243043 |
| 495.2 | Asthma with exacerbation | respiratory | 229 | 269389 | 965 | Poisoning by analgesics, antipyretics, & antirheumatics | injuries & poisonings | 6181 | 243043 |
| 496 | Chronic airway obstruction | respiratory | 11361 | 269389 | 965.1 | Opiates & related narcotics causing adverse effects in therapeutic use | injuries & poisonings | 1370 | 243043 |
| 496.1 | Emphysema | respiratory | 1937 | 269389 | 965.3 | Salicylates causing adverse effects in therapeutic use | injuries & poisonings | 378 | 243043 |
| 496.2 | Chronic bronchitis | respiratory | 3258 | 269389 | 966 | Poisoning by anticonvulsants & anti-Parkinsonism drugs | injuries & poisonings | 507 | 243043 |
| 496.21 | Obstructive chronic bronchitis | respiratory | 2997 | 269389 | 967 | Adverse effects of sedatives or other central nervous system depressants & anesthetics | injuries & poisonings | 515 | 243043 |
| 496.3 | Bronchiectasis | respiratory | 2143 | 269389 | 969 | Poisoning by psychotropic agents | injuries & poisonings | 1748 | 243043 |
| 497 | Bronchitis | respiratory | 647 | 269389 | 971 | Poisoning by drugs primarily affecting the autonomic nervous system | injuries & poisonings | 511 | 243043 |
| 500 | Lung disease due to external agents | respiratory | 459 | 269389 | 972 | Poisoning by agents primarily affecting the cardiovascular system | injuries & poisonings | 828 | 243043 |
| 500.2 | Pneumoconiosis | respiratory | 273 | 269389 | 973 | Poisoning by agents primarily affecting the gastrointestinal system | injuries & poisonings | 211 | 243043 |
| 501 | Pneumonitis due to inhalation of food or vomitus | respiratory | 852 | 269389 | 977 | Personal history of allergy to medicinal agents | injuries & poisonings | 5864 | 243043 |
| 502 | Postinflammatory pulmonary fibrosis | respiratory | 1036 | 269389 | 979 | Adverse drug events & drug allergies | injuries & poisonings | 692 | 243043 |
| 503 | Pulmonary congestion & hypostasis | respiratory | 534 | 269389 | 981 | Toxic effect of (non-ethyl) alcohol & petroleum & other solvents | injuries & poisonings | 262 | 243043 |
| 504 | Other alveolar & parietoalveolar pneumonopathy | respiratory | 389 | 269389 | 990 | Effects radiation NOS | injuries & poisonings | 3850 | 243043 |
| 506 | Empyema & pneumothorax | respiratory | 1207 | 269389 | 994 | Sepsis & SIRS | injuries & poisonings | 3970 | 243043 |
| | | | | | 994.2 | Sepsis | injuries & poisonings | 3970 | 243043 |

**Supplementary Table 5:** Power to detect associations with disease outcomes based on available numbers of cases, alpha 5%, instrument strength determined from the UK Biobank (PCSK9 r2=0.12%; HMGCR r2=0.15%; NPC1L1 r2=0.026%; LDLR r2=0.64%) and four different assumed effect sizes per 1mg/dL decrease in LDL-C (beta=0.2; beta=0.5; beta=1.0; beta=1.5). Phenotypes are listed by phecode number, as specified above in Supplementary Table 4.

| | | | PCSK9 | | | | HMGCR | | | | NPC1L1 | | | | LDLR | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Phenotype | Cases, n | Controls, n | Power at beta=0.2 | Power at beta=0.5 | Power at beta=1.0 | Power at beta=1.5 | Power at beta=0.2 | Power at beta=0.5 | Power at beta=1.0 | Power at beta=1.5 | Power at beta=0.2 | Power at beta=0.5 | Power at beta=1.0 | Power at beta=1.5 | Power at beta=0.2 | Power at beta=0.5 | Power at beta=1.0 | Power at beta=1.5 |
| 008 | 10361 | 304892 | 0.10 | 0.42 | 0.94 | 1.00 | 0.12 | 0.48 | 0.97 | 1.00 | 0.05 | 0.13 | 0.37 | 0.69 | 0.36 | 0.98 | 1.00 | 1.00 |
| 008.5 | 2546 | 304892 | 0.05 | 0.14 | 0.42 | 0.75 | 0.06 | 0.16 | 0.49 | 0.82 | 0.04 | 0.06 | 0.13 | 0.23 | 0.12 | 0.52 | 0.98 | 1.00 |
| 008.52 | 673 | 304892 | 0.04 | 0.07 | 0.15 | 0.28 | 0.04 | 0.07 | 0.17 | 0.32 | 0.03 | 0.04 | 0.06 | 0.09 | 0.06 | 0.18 | 0.54 | 0.87 |
| 008.6 | 903 | 304892 | 0.04 | 0.08 | 0.18 | 0.35 | 0.04 | 0.08 | 0.21 | 0.41 | 0.03 | 0.04 | 0.07 | 0.11 | 0.07 | 0.22 | 0.67 | 0.95 |
| 038 | 4885 | 304892 | 0.07 | 0.23 | 0.68 | 0.95 | 0.08 | 0.26 | 0.76 | 0.98 | 0.04 | 0.08 | 0.20 | 0.39 | 0.20 | 0.79 | 1.00 | 1.00 |
| 038.1 | 962 | 304892 | 0.04 | 0.08 | 0.19 | 0.37 | 0.04 | 0.09 | 0.22 | 0.43 | 0.03 | 0.04 | 0.07 | 0.11 | 0.07 | 0.23 | 0.70 | 0.96 |
| 038.2 | 506 | 304892 | 0.04 | 0.06 | 0.12 | 0.22 | 0.04 | 0.06 | 0.14 | 0.25 | 0.03 | 0.04 | 0.06 | 0.08 | 0.05 | 0.14 | 0.43 | 0.77 |
| 041 | 11864 | 304892 | 0.11 | 0.47 | 0.96 | 1.00 | 0.13 | 0.53 | 0.98 | 1.00 | 0.05 | 0.14 | 0.41 | 0.74 | 0.40 | 0.99 | 1.00 | 1.00 |
| 041.1 | 3057 | 304892 | 0.06 | 0.16 | 0.49 | 0.82 | 0.06 | 0.18 | 0.56 | 0.88 | 0.04 | 0.07 | 0.14 | 0.27 | 0.14 | 0.59 | 0.99 | 1.00 |
| 041.11 | 2191 | 304892 | 0.05 | 0.13 | 0.37 | 0.69 | 0.05 | 0.14 | 0.43 | 0.76 | 0.04 | 0.06 | 0.11 | 0.21 | 0.11 | 0.46 | 0.96 | 1.00 |
| 041.2 | 1659 | 304892 | 0.05 | 0.11 | 0.30 | 0.57 | 0.05 | 0.12 | 0.34 | 0.65 | 0.03 | 0.05 | 0.10 | 0.17 | 0.09 | 0.37 | 0.90 | 1.00 |
| 041.4 | 2977 | 304892 | 0.06 | 0.16 | 0.48 | 0.81 | 0.06 | 0.18 | 0.55 | 0.88 | 0.04 | 0.06 | 0.14 | 0.26 | 0.14 | 0.58 | 0.99 | 1.00 |
| 053 | 426 | 304892 | 0.03 | 0.05 | 0.11 | 0.19 | 0.04 | 0.06 | 0.12 | 0.22 | 0.03 | 0.04 | 0.05 | 0.07 | 0.05 | 0.13 | 0.38 | 0.69 |
| 054 | 207 | 304892 | 0.03 | 0.04 | 0.07 | 0.11 | 0.03 | 0.05 | 0.08 | 0.13 | 0.03 | 0.03 | 0.04 | 0.05 | 0.04 | 0.08 | 0.21 | 0.41 |
| 070 | 580 | 304892 | 0.04 | 0.06 | 0.13 | 0.24 | 0.04 | 0.07 | 0.15 | 0.28 | 0.03 | 0.04 | 0.06 | 0.08 | 0.06 | 0.16 | 0.48 | 0.82 |
| 070.3 | 237 | 304892 | 0.03 | 0.05 | 0.08 | 0.12 | 0.03 | 0.05 | 0.09 | 0.14 | 0.03 | 0.03 | 0.04 | 0.06 | 0.04 | 0.09 | 0.23 | 0.45 |
| 070.4 | 261 | 304892 | 0.03 | 0.05 | 0.08 | 0.13 | 0.03 | 0.05 | 0.09 | 0.15 | 0.03 | 0.03 | 0.04 | 0.06 | 0.04 | 0.09 | 0.25 | 0.49 |
| 070.9 | 476 | 304892 | 0.04 | 0.06 | 0.12 | 0.21 | 0.04 | 0.06 | 0.13 | 0.24 | 0.03 | 0.04 | 0.05 | 0.08 | 0.05 | 0.14 | 0.41 | 0.74 |
| 078 | 1176 | 304892 | 0.04 | 0.09 | 0.22 | 0.44 | 0.04 | 0.10 | 0.26 | 0.50 | 0.03 | 0.05 | 0.08 | 0.13 | 0.08 | 0.28 | 0.78 | 0.98 |
| 079 | 2704 | 304892 | 0.06 | 0.15 | 0.44 | 0.78 | 0.06 | 0.17 | 0.51 | 0.84 | 0.04 | 0.06 | 0.13 | 0.24 | 0.13 | 0.54 | 0.99 | 1.00 |
| 079.9 | 1577 | 304892 | 0.05 | 0.10 | 0.28 | 0.55 | 0.05 | 0.11 | 0.33 | 0.62 | 0.03 | 0.05 | 0.09 | 0.16 | 0.09 | 0.35 | 0.89 | 1.00 |
| 080 | 4201 | 304892 | 0.07 | 0.20 | 0.62 | 0.92 | 0.07 | 0.23 | 0.69 | 0.96 | 0.04 | 0.08 | 0.18 | 0.35 | 0.18 | 0.73 | 1.00 | 1.00 |
| 081 | 2438 | 304892 | 0.05 | 0.14 | 0.41 | 0.73 | 0.06 | 0.15 | 0.47 | 0.81 | 0.04 | 0.06 | 0.12 | 0.22 | 0.12 | 0.50 | 0.98 | 1.00 |
| 1000 | 511 | 336964 | 0.04 | 0.06 | 0.12 | 0.22 | 0.04 | 0.06 | 0.14 | 0.25 | 0.03 | 0.04 | 0.06 | 0.08 | 0.05 | 0.14 | 0.44 | 0.77 |
| 1001 | 1110 | 336365 | 0.04 | 0.08 | 0.21 | 0.42 | 0.04 | 0.09 | 0.25 | 0.48 | 0.03 | 0.05 | 0.08 | 0.13 | 0.08 | 0.26 | 0.76 | 0.98 |
| 1002 | 5846 | 331629 | 0.08 | 0.26 | 0.76 | 0.98 | 0.08 | 0.31 | 0.83 | 0.99 | 0.04 | 0.09 | 0.23 | 0.46 | 0.23 | 0.86 | 1.00 | 1.00 |
| 1004 | 444 | 337031 | 0.03 | 0.06 | 0.11 | 0.20 | 0.04 | 0.06 | 0.12 | 0.23 | 0.03 | 0.04 | 0.05 | 0.07 | 0.05 | 0.13 | 0.39 | 0.71 |
| 1005 | 1476 | 335999 | 0.05 | 0.10 | 0.27 | 0.52 | 0.05 | 0.11 | 0.31 | 0.60 | 0.03 | 0.05 | 0.09 | 0.15 | 0.09 | 0.33 | 0.86 | 1.00 |
| 1006 | 200 | 337275 | 0.03 | 0.04 | 0.07 | 0.11 | 0.03 | 0.05 | 0.08 | 0.13 | 0.03 | 0.03 | 0.04 | 0.05 | 0.04 | 0.08 | 0.20 | 0.39 |
| 1007 | 281 | 337194 | 0.03 | 0.05 | 0.08 | 0.14 | 0.03 | 0.05 | 0.09 | 0.16 | 0.03 | 0.03 | 0.05 | 0.06 | 0.05 | 0.10 | 0.27 | 0.52 |
| 1008 | 1051 | 336424 | 0.04 | 0.08 | 0.20 | 0.40 | 0.04 | 0.09 | 0.24 | 0.46 | 0.03 | 0.04 | 0.08 | 0.12 | 0.07 | 0.25 | 0.73 | 0.97 |
| 1009 | 7326 | 330149 | 0.09 | 0.32 | 0.84 | 0.99 | 0.09 | 0.37 | 0.90 | 1.00 | 0.05 | 0.10 | 0.28 | 0.54 | 0.27 | 0.92 | 1.00 | 1.00 |
| 1010 | 16572 | 320903 | 0.14 | 0.59 | 0.99 | 1.00 | 0.16 | 0.67 | 1.00 | 1.00 | 0.06 | 0.17 | 0.53 | 0.87 | 0.52 | 1.00 | 1.00 | 1.00 |
| 1011 | 10083 | 327392 | 0.10 | 0.41 | 0.93 | 1.00 | 0.11 | 0.47 | 0.97 | 1.00 | 0.05 | 0.12 | 0.36 | 0.68 | 0.35 | 0.98 | 1.00 | 1.00 |
| 1013 | 349 | 337126 | 0.03 | 0.05 | 0.10 | 0.16 | 0.03 | 0.05 | 0.11 | 0.19 | 0.03 | 0.04 | 0.05 | 0.07 | 0.05 | 0.11 | 0.32 | 0.61 |
| 1014 | 254 | 337221 | 0.03 | 0.05 | 0.08 | 0.13 | 0.03 | 0.05 | 0.09 | 0.15 | 0.03 | 0.03 | 0.04 | 0.06 | 0.04 | 0.09 | 0.25 | 0.48 |
| 1015 | 10460 | 327015 | 0.10 | 0.42 | 0.94 | 1.00 | 0.12 | 0.49 | 0.97 | 1.00 | 0.05 | 0.13 | 0.37 | 0.69 | 0.36 | 0.98 | 1.00 | 1.00 |
| 1019 | 13786 | 323689 | 0.12 | 0.52 | 0.98 | 1.00 | 0.14 | 0.60 | 0.99 | 1.00 | 0.06 | 0.15 | 0.46 | 0.80 | 0.45 | 1.00 | 1.00 | 1.00 |
| 110 | 294 | 304892 | 0.03 | 0.05 | 0.09 | 0.14 | 0.03 | 0.05 | 0.10 | 0.16 | 0.03 | 0.03 | 0.05 | 0.06 | 0.05 | 0.10 | 0.28 | 0.54 |
| 110.1 | 288 | 304892 | 0.03 | 0.05 | 0.09 | 0.14 | 0.03 | 0.05 | 0.10 | 0.16 | 0.03 | 0.03 | 0.05 | 0.06 | 0.05 | 0.10 | 0.27 | 0.53 |
| 1100 | 2277 | 335198 | 0.05 | 0.13 | 0.38 | 0.71 | 0.06 | 0.15 | 0.44 | 0.78 | 0.04 | 0.06 | 0.12 | 0.21 | 0.11 | 0.48 | 0.97 | 1.00 |
| 112 | 2400 | 304892 | 0.05 | 0.13 | 0.40 | 0.73 | 0.06 | 0.15 | 0.46 | 0.80 | 0.04 | 0.06 | 0.12 | 0.22 | 0.12 | 0.50 | 0.97 | 1.00 |
| 117 | 307 | 304892 | 0.03 | 0.05 | 0.09 | 0.15 | 0.03 | 0.05 | 0.10 | 0.17 | 0.03 | 0.03 | 0.05 | 0.06 | 0.05 | 0.10 | 0.29 | 0.55 |
| 136 | 237 | 304892 | 0.03 | 0.05 | 0.08 | 0.12 | 0.03 | 0.05 | 0.09 | 0.14 | 0.03 | 0.03 | 0.04 | 0.06 | 0.04 | 0.09 | 0.23 | 0.45 |
| 145 | 627 | 234242 | 0.04 | 0.06 | 0.14 | 0.26 | 0.04 | 0.07 | 0.16 | 0.30 | 0.03 | 0.04 | 0.06 | 0.09 | 0.06 | 0.17 | 0.51 | 0.85 |
| 145.2 | 303 | 234242 | 0.03 | 0.05 | 0.09 | 0.15 | 0.03 | 0.05 | 0.10 | 0.17 | 0.03 | 0.03 | 0.05 | 0.06 | 0.05 | 0.10 | 0.28 | 0.55 |
| 149 | 630 | 234242 | 0.04 | 0.06 | 0.14 | 0.26 | 0.04 | 0.07 | 0.16 | 0.30 | 0.03 | 0.04 | 0.06 | 0.09 | 0.06 | 0.17 | 0.52 | 0.85 |
| 149.1 | 257 | 234242 | 0.03 | 0.05 | 0.08 | 0.13 | 0.03 | 0.05 | 0.09 | 0.15 | 0.03 | 0.03 | 0.04 | 0.06 | 0.04 | 0.09 | 0.25 | 0.48 |
| 149.4 | 252 | 234242 | 0.03 | 0.05 | 0.08 | 0.13 | 0.03 | 0.05 | 0.09 | 0.15 | 0.03 | 0.03 | 0.04 | 0.06 | 0.04 | 0.09 | 0.24 | 0.48 |
| 150 | 817 | 234242 | 0.04 | 0.07 | 0.17 | 0.32 | 0.04 | 0.08 | 0.19 | 0.37 | 0.03 | 0.04 | 0.07 | 0.10 | 0.07 | 0.21 | 0.62 | 0.93 |
| 151 | 603 | 234242 | 0.04 | 0.06 | 0.14 | 0.25 | 0.04 | 0.07 | 0.15 | 0.29 | 0.03 | 0.04 | 0.06 | 0.09 | 0.06 | 0.16 | 0.50 | 0.84 |
| 153 | 4541 | 234242 | 0.07 | 0.21 | 0.65 | 0.94 | 0.07 | 0.25 | 0.72 | 0.97 | 0.04 | 0.08 | 0.19 | 0.37 | 0.19 | 0.76 | 1.00 | 1.00 |
| 153.2 | 3053 | 234242 | 0.06 | 0.16 | 0.49 | 0.82 | 0.06 | 0.18 | 0.56 | 0.88 | 0.04 | 0.07 | 0.14 | 0.27 | 0.14 | 0.59 | 0.99 | 1.00 |
| 153.3 | 2169 | 234242 | 0.05 | 0.13 | 0.37 | 0.68 | 0.05 | 0.14 | 0.43 | 0.76 | 0.04 | 0.06 | 0.11 | 0.20 | 0.11 | 0.46 | 0.96 | 1.00 |
| 155 | 449 | 234242 | 0.04 | 0.06 | 0.11 | 0.20 | 0.04 | 0.06 | 0.13 | 0.23 | 0.03 | 0.04 | 0.05 | 0.07 | 0.05 | 0.13 | 0.39 | 0.72 |
| 157 | 756 | 234242 | 0.04 | 0.07 | 0.16 | 0.30 | 0.04 | 0.08 | 0.18 | 0.35 | 0.03 | 0.04 | 0.07 | 0.10 | 0.06 | 0.19 | 0.59 | 0.91 |
| 158 | 1091 | 234242 | 0.04 | 0.08 | 0.21 | 0.41 | 0.04 | 0.09 | 0.24 | 0.47 | 0.03 | 0.05 | 0.08 | 0.12 | 0.08 | 0.26 | 0.75 | 0.98 |
| 159 | 5580 | 234242 | 0.07 | 0.25 | 0.73 | 0.97 | 0.08 | 0.29 | 0.81 | 0.99 | 0.04 | 0.09 | 0.22 | 0.44 | 0.22 | 0.84 | 1.00 | 1.00 |
| 159.2 | 204 | 234242 | 0.03 | 0.04 | 0.07 | 0.11 | 0.03 | 0.05 | 0.08 | 0.13 | 0.03 | 0.03 | 0.04 | 0.05 | 0.04 | 0.08 | 0.21 | 0.40 |
| 159.3 | 233 | 234242 | 0.03 | 0.05 | 0.08 | 0.12 | 0.03 | 0.05 | 0.08 | 0.14 | 0.03 | 0.03 | 0.04 | 0.06 | 0.04 | 0.09 | 0.23 | 0.45 |
| 159.4 | 205 | 234242 | 0.03 | 0.04 | 0.07 | 0.11 | 0.03 | 0.05 | 0.08 | 0.13 | 0.03 | 0.03 | 0.04 | 0.05 | 0.04 | 0.08 | 0.21 | 0.40 |
| 165 | 3012 | 234242 | 0.06 | 0.16 | 0.48 | 0.82 | 0.06 | 0.18 | 0.55 | 0.88 | 0.04 | 0.06 | 0.14 | 0.26 | 0.14 | 0.59 | 0.99 | 1.00 |
| 165.1 | 2617 | 234242 | 0.05 | 0.14 | 0.43 | 0.76 | 0.06 | 0.16 | 0.50 | 0.83 | 0.04 | 0.06 | 0.13 | 0.24 | 0.13 | 0.53 | 0.98 | 1.00 |
| 170 | 443 | 234242 | 0.03 | 0.06 | 0.11 | 0.20 | 0.04 | 0.06 | 0.12 | 0.23 | 0.03 | 0.04 | 0.05 | 0.07 | 0.05 | 0.13 | 0.39 | 0.71 |
| 170.2 | 320 | 234242 | 0.03 | 0.05 | 0.09 | 0.15 | 0.03 | 0.05 | 0.10 | 0.18 | 0.03 | 0.03 | 0.05 | 0.06 | 0.05 | 0.11 | 0.30 | 0.57 |
| 172 | 14207 | 234242 | 0.13 | 0.53 | 0.98 | 1.00 | 0.14 | 0.60 | 0.99 | 1.00 | 0.06 | 0.15 | 0.47 | 0.81 | 0.46 | 1.00 | 1.00 | 1.00 |
| 172.1 | 2739 | 234242 | 0.06 | 0.15 | 0.45 | 0.78 | 0.06 | 0.17 | 0.51 | 0.85 | 0.04 | 0.06 | 0.13 | 0.25 | 0.13 | 0.55 | 0.99 | 1.00 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 172.11 | 2739 | 234242 | 0.06 | 0.15 | 0.45 | 0.78 | 0.06 | 0.17 | 0.51 | 0.85 | 0.04 | 0.06 | 0.13 | 0.25 | 0.13 | 0.55 | 0.99 | 1.00 |
| 172.2 | 11594 | 234242 | 0.11 | 0.45 | 0.96 | 1.00 | 0.12 | 0.52 | 0.98 | 1.00 | 0.05 | 0.13 | 0.40 | 0.73 | 0.39 | 0.99 | 1.00 | 1.00 |
| 172.3 | 741 | 234242 | 0.04 | 0.07 | 0.16 | 0.30 | 0.04 | 0.07 | 0.18 | 0.34 | 0.03 | 0.04 | 0.06 | 0.10 | 0.06 | 0.19 | 0.58 | 0.90 |
| 174 | 12023 | 232710 | 0.11 | 0.47 | 0.96 | 1.00 | 0.13 | 0.53 | 0.98 | 1.00 | 0.05 | 0.14 | 0.41 | 0.74 | 0.40 | 0.99 | 1.00 | 1.00 |
| 174.1 | 11848 | 120733 | 0.11 | 0.44 | 0.95 | 1.00 | 0.12 | 0.51 | 0.98 | 1.00 | 0.05 | 0.13 | 0.39 | 0.72 | 0.38 | 0.99 | 1.00 | 1.00 |
| 174.11 | 11108 | 120733 | 0.11 | 0.42 | 0.94 | 1.00 | 0.12 | 0.49 | 0.97 | 1.00 | 0.05 | 0.13 | 0.37 | 0.69 | 0.36 | 0.98 | 1.00 | 1.00 |
| 175 | 3261 | 120184 | 0.06 | 0.17 | 0.51 | 0.84 | 0.06 | 0.19 | 0.58 | 0.90 | 0.04 | 0.07 | 0.15 | 0.28 | 0.14 | 0.61 | 0.99 | 1.00 |
| 180 | 3299 | 122212 | 0.06 | 0.17 | 0.51 | 0.85 | 0.06 | 0.19 | 0.58 | 0.90 | 0.04 | 0.07 | 0.15 | 0.28 | 0.15 | 0.62 | 0.99 | 1.00 |
| 180.1 | 1622 | 122212 | 0.05 | 0.10 | 0.29 | 0.56 | 0.05 | 0.12 | 0.33 | 0.63 | 0.03 | 0.05 | 0.10 | 0.16 | 0.09 | 0.36 | 0.89 | 1.00 |
| 180.3 | 1757 | 122212 | 0.05 | 0.11 | 0.31 | 0.59 | 0.05 | 0.12 | 0.36 | 0.67 | 0.03 | 0.05 | 0.10 | 0.17 | 0.10 | 0.38 | 0.91 | 1.00 |
| 182 | 1240 | 122251 | 0.04 | 0.09 | 0.23 | 0.45 | 0.05 | 0.10 | 0.27 | 0.52 | 0.03 | 0.05 | 0.08 | 0.13 | 0.08 | 0.29 | 0.80 | 0.99 |
| 184 | 2388 | 122251 | 0.05 | 0.13 | 0.40 | 0.72 | 0.06 | 0.15 | 0.46 | 0.79 | 0.04 | 0.06 | 0.12 | 0.22 | 0.12 | 0.49 | 0.97 | 1.00 |
| 184.1 | 2091 | 122251 | 0.05 | 0.12 | 0.36 | 0.66 | 0.05 | 0.14 | 0.41 | 0.74 | 0.03 | 0.06 | 0.11 | 0.20 | 0.11 | 0.44 | 0.95 | 1.00 |
| 184.11 | 2072 | 122251 | 0.05 | 0.12 | 0.35 | 0.66 | 0.05 | 0.14 | 0.41 | 0.74 | 0.03 | 0.06 | 0.11 | 0.20 | 0.11 | 0.44 | 0.95 | 1.00 |
| 184.2 | 281 | 122251 | 0.03 | 0.05 | 0.08 | 0.14 | 0.03 | 0.05 | 0.09 | 0.16 | 0.03 | 0.03 | 0.05 | 0.06 | 0.05 | 0.10 | 0.27 | 0.52 |
| 185 | 7072 | 105218 | 0.08 | 0.30 | 0.81 | 0.99 | 0.09 | 0.34 | 0.88 | 1.00 | 0.05 | 0.10 | 0.26 | 0.51 | 0.25 | 0.90 | 1.00 | 1.00 |
| 187 | 3330 | 111991 | 0.06 | 0.17 | 0.51 | 0.85 | 0.06 | 0.19 | 0.59 | 0.90 | 0.04 | 0.07 | 0.15 | 0.28 | 0.15 | 0.62 | 1.00 | 1.00 |
| 187.1 | 3085 | 111991 | 0.06 | 0.16 | 0.48 | 0.82 | 0.06 | 0.18 | 0.55 | 0.88 | 0.04 | 0.06 | 0.14 | 0.27 | 0.14 | 0.59 | 0.99 | 1.00 |
| 187.2 | 3194 | 111991 | 0.06 | 0.16 | 0.50 | 0.83 | 0.06 | 0.19 | 0.57 | 0.89 | 0.04 | 0.07 | 0.15 | 0.27 | 0.14 | 0.60 | 0.99 | 1.00 |
| 189 | 4104 | 234242 | 0.06 | 0.20 | 0.60 | 0.92 | 0.07 | 0.23 | 0.68 | 0.95 | 0.04 | 0.07 | 0.18 | 0.34 | 0.17 | 0.72 | 1.00 | 1.00 |
| 189.1 | 1098 | 234242 | 0.04 | 0.08 | 0.21 | 0.41 | 0.04 | 0.09 | 0.24 | 0.48 | 0.03 | 0.05 | 0.08 | 0.12 | 0.08 | 0.26 | 0.75 | 0.98 |
| 189.11 | 1055 | 234242 | 0.04 | 0.08 | 0.20 | 0.40 | 0.04 | 0.09 | 0.24 | 0.46 | 0.03 | 0.04 | 0.08 | 0.12 | 0.07 | 0.25 | 0.73 | 0.97 |
| 189.2 | 2339 | 234242 | 0.05 | 0.13 | 0.39 | 0.72 | 0.06 | 0.15 | 0.45 | 0.79 | 0.04 | 0.06 | 0.12 | 0.22 | 0.12 | 0.48 | 0.97 | 1.00 |
| 189.21 | 2083 | 234242 | 0.05 | 0.12 | 0.36 | 0.67 | 0.05 | 0.14 | 0.41 | 0.74 | 0.03 | 0.06 | 0.11 | 0.20 | 0.11 | 0.44 | 0.95 | 1.00 |
| 191 | 702 | 234242 | 0.04 | 0.07 | 0.15 | 0.28 | 0.04 | 0.07 | 0.17 | 0.33 | 0.03 | 0.04 | 0.06 | 0.09 | 0.06 | 0.18 | 0.56 | 0.89 |
| 191.1 | 579 | 234242 | 0.04 | 0.06 | 0.13 | 0.24 | 0.04 | 0.07 | 0.15 | 0.28 | 0.03 | 0.04 | 0.06 | 0.08 | 0.06 | 0.16 | 0.48 | 0.82 |
| 191.11 | 539 | 234242 | 0.04 | 0.06 | 0.13 | 0.23 | 0.04 | 0.06 | 0.14 | 0.26 | 0.03 | 0.04 | 0.06 | 0.08 | 0.06 | 0.15 | 0.46 | 0.79 |
| 193 | 345 | 234242 | 0.03 | 0.05 | 0.10 | 0.16 | 0.03 | 0.05 | 0.11 | 0.19 | 0.03 | 0.04 | 0.05 | 0.07 | 0.05 | 0.11 | 0.32 | 0.60 |
| 195 | 17637 | 234242 | 0.14 | 0.61 | 0.99 | 1.00 | 0.16 | 0.69 | 1.00 | 1.00 | 0.06 | 0.18 | 0.55 | 0.88 | 0.53 | 1.00 | 1.00 | 1.00 |
| 195.1 | 16966 | 234242 | 0.14 | 0.60 | 0.99 | 1.00 | 0.16 | 0.67 | 1.00 | 1.00 | 0.06 | 0.17 | 0.53 | 0.87 | 0.52 | 1.00 | 1.00 | 1.00 |
| 196 | 12225 | 234242 | 0.11 | 0.47 | 0.97 | 1.00 | 0.13 | 0.54 | 0.98 | 1.00 | 0.05 | 0.14 | 0.42 | 0.75 | 0.41 | 0.99 | 1.00 | 1.00 |
| 197 | 30162 | 234242 | 0.21 | 0.82 | 1.00 | 1.00 | 0.24 | 0.88 | 1.00 | 1.00 | 0.08 | 0.26 | 0.76 | 0.98 | 0.74 | 1.00 | 1.00 | 1.00 |
| 198 | 10103 | 234242 | 0.10 | 0.41 | 0.93 | 1.00 | 0.11 | 0.47 | 0.96 | 1.00 | 0.05 | 0.12 | 0.36 | 0.67 | 0.35 | 0.98 | 1.00 | 1.00 |
| 198.1 | 5504 | 234242 | 0.07 | 0.25 | 0.73 | 0.97 | 0.08 | 0.29 | 0.80 | 0.99 | 0.04 | 0.09 | 0.22 | 0.43 | 0.22 | 0.83 | 1.00 | 1.00 |
| 198.2 | 2544 | 234242 | 0.05 | 0.14 | 0.42 | 0.75 | 0.06 | 0.16 | 0.48 | 0.82 | 0.04 | 0.06 | 0.13 | 0.23 | 0.12 | 0.52 | 0.98 | 1.00 |
| 198.3 | 1757 | 234242 | 0.05 | 0.11 | 0.31 | 0.59 | 0.05 | 0.12 | 0.36 | 0.67 | 0.03 | 0.05 | 0.10 | 0.17 | 0.10 | 0.38 | 0.92 | 1.00 |
| 198.4 | 2970 | 234242 | 0.06 | 0.16 | 0.48 | 0.81 | 0.06 | 0.18 | 0.55 | 0.88 | 0.04 | 0.06 | 0.14 | 0.26 | 0.14 | 0.58 | 0.99 | 1.00 |
| 198.5 | 927 | 234242 | 0.04 | 0.08 | 0.19 | 0.36 | 0.04 | 0.08 | 0.21 | 0.41 | 0.03 | 0.04 | 0.07 | 0.11 | 0.07 | 0.23 | 0.68 | 0.95 |
| 198.6 | 2454 | 234242 | 0.05 | 0.14 | 0.41 | 0.74 | 0.06 | 0.15 | 0.47 | 0.81 | 0.04 | 0.06 | 0.12 | 0.22 | 0.12 | 0.50 | 0.98 | 1.00 |
| 198.7 | 201 | 234242 | 0.03 | 0.04 | 0.07 | 0.11 | 0.03 | 0.05 | 0.08 | 0.13 | 0.03 | 0.03 | 0.04 | 0.05 | 0.04 | 0.08 | 0.20 | 0.40 |
| 199 | 1504 | 234242 | 0.05 | 0.10 | 0.27 | 0.53 | 0.05 | 0.11 | 0.32 | 0.60 | 0.03 | 0.05 | 0.09 | 0.15 | 0.09 | 0.34 | 0.87 | 1.00 |
| 200 | 1054 | 234242 | 0.04 | 0.08 | 0.20 | 0.40 | 0.04 | 0.09 | 0.24 | 0.46 | 0.03 | 0.04 | 0.08 | 0.12 | 0.07 | 0.25 | 0.73 | 0.97 |
| 200.1 | 408 | 232957 | 0.03 | 0.05 | 0.11 | 0.18 | 0.04 | 0.06 | 0.12 | 0.21 | 0.03 | 0.04 | 0.05 | 0.07 | 0.05 | 0.12 | 0.36 | 0.68 |
| 201 | 252 | 234242 | 0.03 | 0.05 | 0.08 | 0.13 | 0.03 | 0.05 | 0.09 | 0.15 | 0.03 | 0.03 | 0.04 | 0.06 | 0.04 | 0.09 | 0.24 | 0.48 |
| 202 | 2358 | 234242 | 0.05 | 0.13 | 0.39 | 0.72 | 0.06 | 0.15 | 0.46 | 0.79 | 0.04 | 0.06 | 0.12 | 0.22 | 0.12 | 0.49 | 0.97 | 1.00 |
| 202.2 | 1853 | 234242 | 0.05 | 0.11 | 0.32 | 0.62 | 0.05 | 0.13 | 0.38 | 0.69 | 0.03 | 0.05 | 0.10 | 0.18 | 0.10 | 0.40 | 0.93 | 1.00 |
| 202.21 | 358 | 234242 | 0.03 | 0.05 | 0.10 | 0.17 | 0.03 | 0.06 | 0.11 | 0.19 | 0.03 | 0.04 | 0.05 | 0.07 | 0.05 | 0.11 | 0.33 | 0.62 |
| 202.24 | 623 | 234242 | 0.04 | 0.06 | 0.14 | 0.26 | 0.04 | 0.07 | 0.16 | 0.30 | 0.03 | 0.04 | 0.06 | 0.09 | 0.06 | 0.17 | 0.51 | 0.85 |
| 204 | 1774 | 234242 | 0.05 | 0.11 | 0.31 | 0.60 | 0.05 | 0.12 | 0.36 | 0.67 | 0.03 | 0.05 | 0.10 | 0.17 | 0.10 | 0.39 | 0.92 | 1.00 |
| 204.1 | 612 | 234242 | 0.04 | 0.06 | 0.14 | 0.25 | 0.04 | 0.07 | 0.16 | 0.29 | 0.03 | 0.04 | 0.06 | 0.09 | 0.06 | 0.17 | 0.50 | 0.84 |
| 204.12 | 540 | 234242 | 0.04 | 0.06 | 0.13 | 0.23 | 0.04 | 0.06 | 0.14 | 0.27 | 0.03 | 0.04 | 0.06 | 0.08 | 0.06 | 0.15 | 0.46 | 0.79 |
| 204.2 | 507 | 234242 | 0.04 | 0.06 | 0.12 | 0.22 | 0.04 | 0.06 | 0.14 | 0.25 | 0.03 | 0.04 | 0.06 | 0.08 | 0.05 | 0.14 | 0.43 | 0.77 |
| 204.21 | 353 | 234242 | 0.03 | 0.05 | 0.10 | 0.17 | 0.03 | 0.05 | 0.11 | 0.19 | 0.03 | 0.04 | 0.05 | 0.07 | 0.05 | 0.11 | 0.32 | 0.61 |
| 204.4 | 593 | 234242 | 0.04 | 0.06 | 0.13 | 0.25 | 0.04 | 0.07 | 0.15 | 0.29 | 0.03 | 0.04 | 0.06 | 0.09 | 0.06 | 0.16 | 0.49 | 0.83 |
| 208 | 20688 | 234242 | 0.16 | 0.68 | 1.00 | 1.00 | 0.18 | 0.75 | 1.00 | 1.00 | 0.07 | 0.20 | 0.61 | 0.92 | 0.60 | 1.00 | 1.00 | 1.00 |
| 210 | 911 | 234242 | 0.04 | 0.08 | 0.18 | 0.35 | 0.04 | 0.08 | 0.21 | 0.41 | 0.03 | 0.04 | 0.07 | 0.11 | 0.07 | 0.22 | 0.67 | 0.95 |
| 211 | 5805 | 234242 | 0.08 | 0.26 | 0.75 | 0.98 | 0.08 | 0.30 | 0.82 | 0.99 | 0.04 | 0.09 | 0.23 | 0.45 | 0.22 | 0.85 | 1.00 | 1.00 |
| 212 | 341 | 234242 | 0.03 | 0.05 | 0.09 | 0.16 | 0.03 | 0.05 | 0.11 | 0.18 | 0.03 | 0.04 | 0.05 | 0.07 | 0.05 | 0.11 | 0.31 | 0.60 |
| 213 | 284 | 234242 | 0.03 | 0.05 | 0.09 | 0.14 | 0.03 | 0.05 | 0.09 | 0.16 | 0.03 | 0.03 | 0.05 | 0.06 | 0.05 | 0.10 | 0.27 | 0.52 |
| 214 | 5942 | 234242 | 0.08 | 0.27 | 0.76 | 0.98 | 0.08 | 0.31 | 0.83 | 0.99 | 0.04 | 0.09 | 0.24 | 0.46 | 0.23 | 0.86 | 1.00 | 1.00 |
| 214.1 | 4303 | 234242 | 0.07 | 0.21 | 0.62 | 0.93 | 0.07 | 0.24 | 0.70 | 0.96 | 0.04 | 0.08 | 0.18 | 0.35 | 0.18 | 0.74 | 1.00 | 1.00 |
| 215 | 1015 | 234242 | 0.04 | 0.08 | 0.20 | 0.39 | 0.04 | 0.09 | 0.23 | 0.45 | 0.03 | 0.04 | 0.07 | 0.12 | 0.07 | 0.24 | 0.72 | 0.97 |
| 216 | 8174 | 234242 | 0.09 | 0.34 | 0.88 | 1.00 | 0.10 | 0.40 | 0.93 | 1.00 | 0.05 | 0.11 | 0.30 | 0.58 | 0.29 | 0.94 | 1.00 | 1.00 |
| 217 | 592 | 234242 | 0.04 | 0.06 | 0.13 | 0.25 | 0.04 | 0.07 | 0.15 | 0.29 | 0.03 | 0.04 | 0.06 | 0.09 | 0.06 | 0.16 | 0.49 | 0.83 |
| 217.1 | 548 | 234242 | 0.04 | 0.06 | 0.13 | 0.23 | 0.04 | 0.07 | 0.14 | 0.27 | 0.03 | 0.04 | 0.06 | 0.08 | 0.06 | 0.15 | 0.46 | 0.80 |
| 218 | 9233 | 122251 | 0.10 | 0.37 | 0.90 | 1.00 | 0.11 | 0.43 | 0.94 | 1.00 | 0.05 | 0.11 | 0.33 | 0.62 | 0.32 | 0.96 | 1.00 | 1.00 |
| 218.1 | 9007 | 122251 | 0.09 | 0.36 | 0.89 | 1.00 | 0.10 | 0.42 | 0.94 | 1.00 | 0.05 | 0.11 | 0.32 | 0.61 | 0.31 | 0.96 | 1.00 | 1.00 |
| 218.2 | 304 | 122251 | 0.03 | 0.05 | 0.09 | 0.15 | 0.03 | 0.05 | 0.10 | 0.17 | 0.03 | 0.03 | 0.05 | 0.06 | 0.05 | 0.10 | 0.28 | 0.55 |
| 220 | 1320 | 122251 | 0.04 | 0.09 | 0.24 | 0.48 | 0.05 | 0.10 | 0.28 | 0.55 | 0.03 | 0.05 | 0.09 | 0.14 | 0.08 | 0.30 | 0.82 | 0.99 |
| 225 | 818 | 234242 | 0.04 | 0.07 | 0.17 | 0.32 | 0.04 | 0.08 | 0.19 | 0.37 | 0.03 | 0.04 | 0.07 | 0.10 | 0.07 | 0.21 | 0.63 | 0.93 |
| 225.1 | 764 | 234242 | 0.04 | 0.07 | 0.16 | 0.31 | 0.04 | 0.08 | 0.18 | 0.35 | 0.03 | 0.04 | 0.07 | 0.10 | 0.06 | 0.20 | 0.60 | 0.91 |
| 226 | 260 | 234242 | 0.03 | 0.05 | 0.08 | 0.13 | 0.03 | 0.05 | 0.09 | 0.15 | 0.03 | 0.03 | 0.04 | 0.06 | 0.04 | 0.09 | 0.25 | 0.49 |
| 227 | 895 | 234242 | 0.04 | 0.08 | 0.18 | 0.35 | 0.04 | 0.08 | 0.21 | 0.40 | 0.03 | 0.04 | 0.07 | 0.11 | 0.07 | 0.22 | 0.66 | 0.95 |
| 227.2 | 377 | 234242 | 0.03 | 0.05 | 0.10 | 0.17 | 0.04 | 0.06 | 0.11 | 0.20 | 0.03 | 0.04 | 0.05 | 0.07 | 0.05 | 0.12 | 0.34 | 0.64 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 227.3 | 319 | 234242 | 0.03 | 0.05 | 0.09 | 0.15 | 0.03 | 0.05 | 0.10 | 0.17 | 0.03 | 0.03 | 0.05 | 0.06 | 0.05 | 0.11 | 0.30 | 0.57 |
| 228 | 1487 | 234242 | 0.05 | 0.10 | 0.27 | 0.52 | 0.05 | 0.11 | 0.31 | 0.60 | 0.03 | 0.05 | 0.09 | 0.15 | 0.09 | 0.34 | 0.87 | 1.00 |
| 229 | 2113 | 234242 | 0.05 | 0.12 | 0.36 | 0.67 | 0.05 | 0.14 | 0.42 | 0.75 | 0.04 | 0.06 | 0.11 | 0.20 | 0.11 | 0.45 | 0.95 | 1.00 |
| 240 | 542 | 261466 | 0.04 | 0.06 | 0.13 | 0.23 | 0.04 | 0.06 | 0.14 | 0.27 | 0.03 | 0.04 | 0.06 | 0.08 | 0.06 | 0.15 | 0.46 | 0.80 |
| 241 | 1539 | 261466 | 0.05 | 0.10 | 0.28 | 0.54 | 0.05 | 0.11 | 0.32 | 0.61 | 0.03 | 0.05 | 0.09 | 0.16 | 0.09 | 0.35 | 0.88 | 1.00 |
| 241.1 | 478 | 261466 | 0.04 | 0.06 | 0.12 | 0.21 | 0.04 | 0.06 | 0.13 | 0.24 | 0.03 | 0.04 | 0.05 | 0.08 | 0.05 | 0.14 | 0.41 | 0.74 |
| 241.2 | 631 | 261466 | 0.04 | 0.06 | 0.14 | 0.26 | 0.04 | 0.07 | 0.16 | 0.30 | 0.03 | 0.04 | 0.06 | 0.09 | 0.06 | 0.17 | 0.52 | 0.85 |
| 242 | 1795 | 261466 | 0.05 | 0.11 | 0.32 | 0.60 | 0.05 | 0.12 | 0.37 | 0.68 | 0.03 | 0.05 | 0.10 | 0.18 | 0.10 | 0.39 | 0.92 | 1.00 |
| 242.1 | 439 | 261466 | 0.03 | 0.06 | 0.11 | 0.20 | 0.04 | 0.06 | 0.12 | 0.22 | 0.03 | 0.04 | 0.05 | 0.07 | 0.05 | 0.13 | 0.39 | 0.71 |
| 242.3 | 210 | 261466 | 0.03 | 0.04 | 0.07 | 0.12 | 0.03 | 0.05 | 0.08 | 0.13 | 0.03 | 0.03 | 0.04 | 0.05 | 0.04 | 0.08 | 0.21 | 0.41 |
| 244 | 14603 | 261466 | 0.13 | 0.54 | 0.98 | 1.00 | 0.14 | 0.61 | 0.99 | 1.00 | 0.06 | 0.16 | 0.48 | 0.82 | 0.47 | 1.00 | 1.00 | 1.00 |
| 244.1 | 1144 | 261466 | 0.04 | 0.09 | 0.22 | 0.43 | 0.04 | 0.09 | 0.25 | 0.49 | 0.03 | 0.05 | 0.08 | 0.13 | 0.08 | 0.27 | 0.77 | 0.98 |
| 244.4 | 13923 | 261466 | 0.12 | 0.52 | 0.98 | 1.00 | 0.14 | 0.60 | 0.99 | 1.00 | 0.06 | 0.15 | 0.46 | 0.80 | 0.45 | 1.00 | 1.00 | 1.00 |
| 245 | 282 | 261466 | 0.03 | 0.05 | 0.09 | 0.14 | 0.03 | 0.05 | 0.09 | 0.16 | 0.03 | 0.03 | 0.05 | 0.06 | 0.05 | 0.10 | 0.27 | 0.52 |
| 245.2 | 215 | 261466 | 0.03 | 0.04 | 0.07 | 0.12 | 0.03 | 0.05 | 0.08 | 0.13 | 0.03 | 0.03 | 0.04 | 0.05 | 0.04 | 0.08 | 0.21 | 0.42 |
| 245.21 | 202 | 261466 | 0.03 | 0.04 | 0.07 | 0.11 | 0.03 | 0.05 | 0.08 | 0.13 | 0.03 | 0.03 | 0.04 | 0.05 | 0.04 | 0.08 | 0.20 | 0.40 |
| 246 | 386 | 261466 | 0.03 | 0.05 | 0.10 | 0.18 | 0.04 | 0.06 | 0.11 | 0.20 | 0.03 | 0.04 | 0.05 | 0.07 | 0.05 | 0.12 | 0.35 | 0.65 |
| 250 | 19441 | 261466 | 0.15 | 0.65 | 1.00 | 1.00 | 0.18 | 0.73 | 1.00 | 1.00 | 0.06 | 0.19 | 0.59 | 0.91 | 0.57 | 1.00 | 1.00 | 1.00 |
| 250.1 | 2582 | 261466 | 0.05 | 0.14 | 0.43 | 0.76 | 0.06 | 0.16 | 0.49 | 0.83 | 0.04 | 0.06 | 0.13 | 0.23 | 0.12 | 0.52 | 0.98 | 1.00 |
| 250.11 | 212 | 261466 | 0.03 | 0.04 | 0.07 | 0.12 | 0.03 | 0.05 | 0.08 | 0.13 | 0.03 | 0.03 | 0.04 | 0.05 | 0.04 | 0.08 | 0.21 | 0.41 |
| 250.13 | 451 | 261466 | 0.04 | 0.06 | 0.11 | 0.20 | 0.04 | 0.06 | 0.13 | 0.23 | 0.03 | 0.04 | 0.05 | 0.07 | 0.05 | 0.13 | 0.40 | 0.72 |
| 250.2 | 18758 | 261466 | 0.15 | 0.64 | 1.00 | 1.00 | 0.17 | 0.72 | 1.00 | 1.00 | 0.06 | 0.19 | 0.58 | 0.90 | 0.56 | 1.00 | 1.00 | 1.00 |
| 250.22 | 213 | 261466 | 0.03 | 0.04 | 0.07 | 0.12 | 0.03 | 0.05 | 0.08 | 0.13 | 0.03 | 0.03 | 0.04 | 0.05 | 0.04 | 0.08 | 0.21 | 0.42 |
| 250.23 | 1355 | 261466 | 0.04 | 0.09 | 0.25 | 0.49 | 0.05 | 0.10 | 0.29 | 0.56 | 0.03 | 0.05 | 0.09 | 0.14 | 0.08 | 0.31 | 0.83 | 0.99 |
| 250.24 | 598 | 261466 | 0.04 | 0.06 | 0.13 | 0.25 | 0.04 | 0.07 | 0.15 | 0.29 | 0.03 | 0.04 | 0.06 | 0.09 | 0.06 | 0.16 | 0.50 | 0.83 |
| 250.4 | 678 | 261466 | 0.04 | 0.07 | 0.15 | 0.28 | 0.04 | 0.07 | 0.17 | 0.32 | 0.03 | 0.04 | 0.06 | 0.09 | 0.06 | 0.18 | 0.55 | 0.88 |
| 250.41 | 288 | 261466 | 0.03 | 0.05 | 0.09 | 0.14 | 0.03 | 0.05 | 0.10 | 0.16 | 0.03 | 0.03 | 0.05 | 0.06 | 0.05 | 0.10 | 0.27 | 0.53 |
| 250.42 | 391 | 261466 | 0.03 | 0.05 | 0.10 | 0.18 | 0.04 | 0.06 | 0.11 | 0.20 | 0.03 | 0.04 | 0.05 | 0.07 | 0.05 | 0.12 | 0.35 | 0.66 |
| 250.6 | 408 | 261466 | 0.03 | 0.05 | 0.11 | 0.18 | 0.04 | 0.06 | 0.12 | 0.21 | 0.03 | 0.04 | 0.05 | 0.07 | 0.05 | 0.12 | 0.36 | 0.68 |
| 250.7 | 1398 | 254478 | 0.04 | 0.10 | 0.26 | 0.50 | 0.05 | 0.11 | 0.30 | 0.57 | 0.03 | 0.05 | 0.09 | 0.15 | 0.09 | 0.32 | 0.85 | 0.99 |
| 251.1 | 1024 | 261466 | 0.04 | 0.08 | 0.20 | 0.39 | 0.04 | 0.09 | 0.23 | 0.45 | 0.03 | 0.04 | 0.07 | 0.12 | 0.07 | 0.25 | 0.72 | 0.97 |
| 252 | 940 | 261466 | 0.04 | 0.08 | 0.19 | 0.36 | 0.04 | 0.08 | 0.22 | 0.42 | 0.03 | 0.04 | 0.07 | 0.11 | 0.07 | 0.23 | 0.69 | 0.96 |
| 252.1 | 830 | 261466 | 0.04 | 0.07 | 0.17 | 0.33 | 0.04 | 0.08 | 0.20 | 0.38 | 0.03 | 0.04 | 0.07 | 0.10 | 0.07 | 0.21 | 0.63 | 0.93 |
| 253 | 697 | 261466 | 0.04 | 0.07 | 0.15 | 0.28 | 0.04 | 0.07 | 0.17 | 0.33 | 0.03 | 0.04 | 0.06 | 0.09 | 0.06 | 0.18 | 0.56 | 0.88 |
| 253.2 | 261 | 261466 | 0.03 | 0.05 | 0.08 | 0.13 | 0.03 | 0.05 | 0.09 | 0.15 | 0.03 | 0.03 | 0.04 | 0.06 | 0.04 | 0.09 | 0.25 | 0.49 |
| 255 | 636 | 261466 | 0.04 | 0.06 | 0.14 | 0.26 | 0.04 | 0.07 | 0.16 | 0.30 | 0.03 | 0.04 | 0.06 | 0.09 | 0.06 | 0.17 | 0.52 | 0.85 |
| 255.2 | 363 | 261466 | 0.03 | 0.05 | 0.10 | 0.17 | 0.03 | 0.06 | 0.11 | 0.19 | 0.03 | 0.04 | 0.05 | 0.07 | 0.05 | 0.12 | 0.33 | 0.63 |
| 255.21 | 363 | 261466 | 0.03 | 0.05 | 0.10 | 0.17 | 0.03 | 0.06 | 0.11 | 0.19 | 0.03 | 0.04 | 0.05 | 0.07 | 0.05 | 0.12 | 0.33 | 0.63 |
| 256 | 241 | 143689 | 0.03 | 0.05 | 0.08 | 0.13 | 0.03 | 0.05 | 0.09 | 0.14 | 0.03 | 0.03 | 0.04 | 0.06 | 0.04 | 0.09 | 0.24 | 0.46 |
| 256.4 | 200 | 143689 | 0.03 | 0.04 | 0.07 | 0.11 | 0.03 | 0.05 | 0.08 | 0.13 | 0.03 | 0.03 | 0.04 | 0.05 | 0.04 | 0.08 | 0.20 | 0.39 |
| 260 | 275 | 261466 | 0.03 | 0.05 | 0.08 | 0.14 | 0.03 | 0.05 | 0.09 | 0.16 | 0.03 | 0.03 | 0.05 | 0.06 | 0.05 | 0.10 | 0.26 | 0.51 |
| 260.6 | 885 | 261466 | 0.04 | 0.07 | 0.18 | 0.35 | 0.04 | 0.08 | 0.21 | 0.40 | 0.03 | 0.04 | 0.07 | 0.11 | 0.07 | 0.22 | 0.66 | 0.94 |
| 261 | 1684 | 261466 | 0.05 | 0.11 | 0.30 | 0.58 | 0.05 | 0.12 | 0.35 | 0.65 | 0.03 | 0.05 | 0.10 | 0.17 | 0.10 | 0.37 | 0.90 | 1.00 |
| 261.2 | 911 | 261466 | 0.04 | 0.08 | 0.18 | 0.35 | 0.04 | 0.08 | 0.21 | 0.41 | 0.03 | 0.04 | 0.07 | 0.11 | 0.07 | 0.22 | 0.67 | 0.95 |
| 261.4 | 788 | 261466 | 0.04 | 0.07 | 0.16 | 0.31 | 0.04 | 0.08 | 0.19 | 0.36 | 0.03 | 0.04 | 0.07 | 0.10 | 0.07 | 0.20 | 0.61 | 0.92 |
| 262 | 298 | 261466 | 0.03 | 0.05 | 0.09 | 0.15 | 0.03 | 0.05 | 0.10 | 0.17 | 0.03 | 0.03 | 0.05 | 0.06 | 0.05 | 0.10 | 0.28 | 0.54 |
| 269 | 324 | 261466 | 0.03 | 0.05 | 0.09 | 0.16 | 0.03 | 0.05 | 0.10 | 0.18 | 0.03 | 0.03 | 0.05 | 0.06 | 0.05 | 0.11 | 0.30 | 0.58 |
| 270 | 365 | 261466 | 0.03 | 0.05 | 0.10 | 0.17 | 0.03 | 0.06 | 0.11 | 0.19 | 0.03 | 0.04 | 0.05 | 0.07 | 0.05 | 0.12 | 0.33 | 0.63 |
| 270.3 | 321 | 261466 | 0.03 | 0.05 | 0.09 | 0.15 | 0.03 | 0.05 | 0.10 | 0.18 | 0.03 | 0.03 | 0.05 | 0.06 | 0.05 | 0.11 | 0.30 | 0.57 |
| 270.32 | 246 | 261466 | 0.03 | 0.05 | 0.08 | 0.13 | 0.03 | 0.05 | 0.09 | 0.14 | 0.03 | 0.03 | 0.04 | 0.06 | 0.04 | 0.09 | 0.24 | 0.47 |
| 272 | 35143 | 261466 | 0.23 | 0.87 | 1.00 | 1.00 | 0.27 | 0.92 | 1.00 | 1.00 | 0.08 | 0.30 | 0.82 | 0.99 | 0.80 | 1.00 | 1.00 | 1.00 |
| 272.1 | 35033 | 261466 | 0.23 | 0.87 | 1.00 | 1.00 | 0.27 | 0.92 | 1.00 | 1.00 | 0.08 | 0.30 | 0.82 | 0.99 | 0.80 | 1.00 | 1.00 | 1.00 |
| 272.11 | 32554 | 261466 | 0.22 | 0.85 | 1.00 | 1.00 | 0.26 | 0.90 | 1.00 | 1.00 | 0.08 | 0.28 | 0.79 | 0.99 | 0.78 | 1.00 | 1.00 | 1.00 |
| 272.9 | 251 | 261466 | 0.03 | 0.05 | 0.08 | 0.13 | 0.03 | 0.05 | 0.09 | 0.15 | 0.03 | 0.03 | 0.04 | 0.06 | 0.04 | 0.09 | 0.24 | 0.47 |
| 274 | 4155 | 261466 | 0.07 | 0.20 | 0.61 | 0.92 | 0.07 | 0.23 | 0.69 | 0.96 | 0.04 | 0.07 | 0.18 | 0.34 | 0.17 | 0.72 | 1.00 | 1.00 |
| 274.1 | 3587 | 261466 | 0.06 | 0.18 | 0.55 | 0.88 | 0.07 | 0.21 | 0.62 | 0.93 | 0.04 | 0.07 | 0.16 | 0.31 | 0.16 | 0.66 | 1.00 | 1.00 |
| 274.2 | 628 | 261466 | 0.04 | 0.06 | 0.14 | 0.26 | 0.04 | 0.07 | 0.16 | 0.30 | 0.03 | 0.04 | 0.06 | 0.09 | 0.06 | 0.17 | 0.52 | 0.85 |
| 274.21 | 557 | 261466 | 0.04 | 0.06 | 0.13 | 0.24 | 0.04 | 0.07 | 0.15 | 0.27 | 0.03 | 0.04 | 0.06 | 0.08 | 0.06 | 0.15 | 0.47 | 0.81 |
| 275 | 2470 | 261466 | 0.05 | 0.14 | 0.41 | 0.74 | 0.06 | 0.16 | 0.47 | 0.81 | 0.04 | 0.06 | 0.12 | 0.23 | 0.12 | 0.51 | 0.98 | 1.00 |
| 275.1 | 661 | 309446 | 0.04 | 0.07 | 0.14 | 0.27 | 0.04 | 0.07 | 0.16 | 0.31 | 0.03 | 0.04 | 0.06 | 0.09 | 0.06 | 0.17 | 0.54 | 0.87 |
| 275.3 | 543 | 261466 | 0.04 | 0.06 | 0.13 | 0.23 | 0.04 | 0.06 | 0.14 | 0.27 | 0.03 | 0.04 | 0.06 | 0.08 | 0.06 | 0.15 | 0.46 | 0.80 |
| 275.5 | 1454 | 261466 | 0.05 | 0.10 | 0.27 | 0.52 | 0.05 | 0.11 | 0.31 | 0.59 | 0.03 | 0.05 | 0.09 | 0.15 | 0.09 | 0.33 | 0.86 | 1.00 |
| 275.53 | 273 | 261466 | 0.03 | 0.05 | 0.08 | 0.14 | 0.03 | 0.05 | 0.09 | 0.16 | 0.03 | 0.03 | 0.05 | 0.06 | 0.04 | 0.10 | 0.26 | 0.51 |
| 276 | 7916 | 261466 | 0.09 | 0.34 | 0.87 | 1.00 | 0.10 | 0.39 | 0.92 | 1.00 | 0.05 | 0.11 | 0.30 | 0.57 | 0.29 | 0.94 | 1.00 | 1.00 |
| 276.1 | 5081 | 261466 | 0.07 | 0.23 | 0.70 | 0.96 | 0.08 | 0.27 | 0.77 | 0.98 | 0.04 | 0.08 | 0.21 | 0.41 | 0.20 | 0.80 | 1.00 | 1.00 |
| 276.11 | 323 | 261466 | 0.03 | 0.05 | 0.09 | 0.15 | 0.03 | 0.05 | 0.10 | 0.18 | 0.03 | 0.03 | 0.05 | 0.06 | 0.05 | 0.11 | 0.30 | 0.58 |
| 276.12 | 2295 | 261466 | 0.05 | 0.13 | 0.39 | 0.71 | 0.06 | 0.15 | 0.45 | 0.78 | 0.04 | 0.06 | 0.12 | 0.21 | 0.12 | 0.48 | 0.97 | 1.00 |
| 276.13 | 1176 | 261466 | 0.04 | 0.09 | 0.22 | 0.44 | 0.04 | 0.10 | 0.26 | 0.50 | 0.03 | 0.05 | 0.08 | 0.13 | 0.08 | 0.28 | 0.78 | 0.98 |
| 276.14 | 1781 | 261466 | 0.05 | 0.11 | 0.31 | 0.60 | 0.05 | 0.12 | 0.36 | 0.68 | 0.03 | 0.05 | 0.10 | 0.18 | 0.10 | 0.39 | 0.92 | 1.00 |
| 276.4 | 1421 | 261466 | 0.04 | 0.10 | 0.26 | 0.51 | 0.05 | 0.11 | 0.30 | 0.58 | 0.03 | 0.05 | 0.09 | 0.15 | 0.09 | 0.32 | 0.85 | 0.99 |
| 276.41 | 1278 | 261466 | 0.04 | 0.09 | 0.24 | 0.47 | 0.05 | 0.10 | 0.28 | 0.54 | 0.03 | 0.05 | 0.08 | 0.14 | 0.08 | 0.30 | 0.81 | 0.99 |
| 276.5 | 3349 | 261466 | 0.06 | 0.17 | 0.52 | 0.86 | 0.06 | 0.20 | 0.60 | 0.91 | 0.04 | 0.07 | 0.15 | 0.29 | 0.15 | 0.63 | 1.00 | 1.00 |
| 276.6 | 615 | 261466 | 0.04 | 0.06 | 0.14 | 0.26 | 0.04 | 0.07 | 0.16 | 0.30 | 0.03 | 0.04 | 0.06 | 0.09 | 0.06 | 0.17 | 0.51 | 0.84 |
| 277 | 1034 | 261466 | 0.04 | 0.08 | 0.20 | 0.39 | 0.04 | 0.09 | 0.23 | 0.45 | 0.03 | 0.04 | 0.08 | 0.12 | 0.07 | 0.25 | 0.73 | 0.97 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 277.4 | 383 | 261466 | 0.03 | 0.05 | 0.10 | 0.18 | 0.04 | 0.06 | 0.11 | 0.20 | 0.03 | 0.04 | 0.05 | 0.07 | 0.05 | 0.12 | 0.35 | 0.65 |
| 277.5 | 256 | 261466 | 0.03 | 0.05 | 0.08 | 0.13 | 0.03 | 0.05 | 0.09 | 0.15 | 0.03 | 0.03 | 0.04 | 0.06 | 0.04 | 0.09 | 0.25 | 0.48 |
| 278 | 12786 | 261466 | 0.12 | 0.49 | 0.97 | 1.00 | 0.13 | 0.56 | 0.99 | 1.00 | 0.05 | 0.14 | 0.44 | 0.77 | 0.42 | 0.99 | 1.00 | 1.00 |
| 278.1 | 12646 | 261466 | 0.12 | 0.49 | 0.97 | 1.00 | 0.13 | 0.56 | 0.99 | 1.00 | 0.05 | 0.14 | 0.43 | 0.76 | 0.42 | 0.99 | 1.00 | 1.00 |
| 279 | 271 | 261466 | 0.03 | 0.05 | 0.08 | 0.14 | 0.03 | 0.05 | 0.09 | 0.16 | 0.03 | 0.03 | 0.05 | 0.06 | 0.04 | 0.10 | 0.26 | 0.50 |
| 279.1 | 223 | 261466 | 0.03 | 0.04 | 0.08 | 0.12 | 0.03 | 0.05 | 0.08 | 0.14 | 0.03 | 0.03 | 0.04 | 0.06 | 0.04 | 0.09 | 0.22 | 0.43 |
| 279.7 | 239 | 261466 | 0.03 | 0.05 | 0.08 | 0.13 | 0.03 | 0.05 | 0.09 | 0.14 | 0.03 | 0.03 | 0.04 | 0.06 | 0.04 | 0.09 | 0.23 | 0.46 |
| 280 | 8403 | 310388 | 0.09 | 0.35 | 0.89 | 1.00 | 0.10 | 0.41 | 0.93 | 1.00 | 0.05 | 0.11 | 0.31 | 0.60 | 0.30 | 0.95 | 1.00 | 1.00 |
| 280.1 | 8022 | 310388 | 0.09 | 0.34 | 0.87 | 1.00 | 0.10 | 0.39 | 0.92 | 1.00 | 0.05 | 0.11 | 0.30 | 0.58 | 0.29 | 0.94 | 1.00 | 1.00 |
| 280.2 | 436 | 310388 | 0.03 | 0.06 | 0.11 | 0.19 | 0.04 | 0.06 | 0.12 | 0.22 | 0.03 | 0.04 | 0.05 | 0.07 | 0.05 | 0.13 | 0.38 | 0.70 |
| 281 | 1150 | 310388 | 0.04 | 0.09 | 0.22 | 0.43 | 0.04 | 0.09 | 0.25 | 0.49 | 0.03 | 0.05 | 0.08 | 0.13 | 0.08 | 0.27 | 0.77 | 0.98 |
| 281.1 | 1093 | 310388 | 0.04 | 0.08 | 0.21 | 0.41 | 0.04 | 0.09 | 0.24 | 0.47 | 0.03 | 0.05 | 0.08 | 0.12 | 0.08 | 0.26 | 0.75 | 0.98 |
| 281.11 | 769 | 310388 | 0.04 | 0.07 | 0.16 | 0.31 | 0.04 | 0.08 | 0.18 | 0.36 | 0.03 | 0.04 | 0.07 | 0.10 | 0.06 | 0.20 | 0.60 | 0.91 |
| 281.13 | 200 | 310388 | 0.03 | 0.04 | 0.07 | 0.11 | 0.03 | 0.05 | 0.08 | 0.13 | 0.03 | 0.03 | 0.04 | 0.05 | 0.04 | 0.08 | 0.20 | 0.39 |
| 284 | 480 | 310388 | 0.04 | 0.06 | 0.12 | 0.21 | 0.04 | 0.06 | 0.13 | 0.24 | 0.03 | 0.04 | 0.05 | 0.08 | 0.05 | 0.14 | 0.42 | 0.75 |
| 285 | 12234 | 310388 | 0.12 | 0.48 | 0.97 | 1.00 | 0.13 | 0.55 | 0.99 | 1.00 | 0.05 | 0.14 | 0.42 | 0.75 | 0.41 | 0.99 | 1.00 | 1.00 |
| 285.1 | 237 | 310388 | 0.03 | 0.05 | 0.08 | 0.12 | 0.03 | 0.05 | 0.09 | 0.14 | 0.03 | 0.03 | 0.04 | 0.06 | 0.04 | 0.09 | 0.23 | 0.45 |
| 285.2 | 736 | 310388 | 0.04 | 0.07 | 0.16 | 0.30 | 0.04 | 0.07 | 0.18 | 0.34 | 0.03 | 0.04 | 0.06 | 0.10 | 0.06 | 0.19 | 0.58 | 0.90 |
| 285.22 | 433 | 310388 | 0.03 | 0.06 | 0.11 | 0.19 | 0.04 | 0.06 | 0.12 | 0.22 | 0.03 | 0.04 | 0.05 | 0.07 | 0.05 | 0.13 | 0.38 | 0.70 |
| 286 | 1023 | 310388 | 0.04 | 0.08 | 0.20 | 0.39 | 0.04 | 0.09 | 0.23 | 0.45 | 0.03 | 0.04 | 0.07 | 0.12 | 0.07 | 0.25 | 0.72 | 0.97 |
| 286.1 | 442 | 310388 | 0.03 | 0.06 | 0.11 | 0.20 | 0.04 | 0.06 | 0.12 | 0.23 | 0.03 | 0.04 | 0.05 | 0.07 | 0.05 | 0.13 | 0.39 | 0.71 |
| 286.12 | 278 | 310388 | 0.03 | 0.05 | 0.08 | 0.14 | 0.03 | 0.05 | 0.09 | 0.16 | 0.03 | 0.03 | 0.05 | 0.06 | 0.05 | 0.10 | 0.26 | 0.51 |
| 286.7 | 411 | 310388 | 0.03 | 0.05 | 0.11 | 0.19 | 0.04 | 0.06 | 0.12 | 0.21 | 0.03 | 0.04 | 0.05 | 0.07 | 0.05 | 0.12 | 0.37 | 0.68 |
| 287 | 1804 | 310388 | 0.05 | 0.11 | 0.32 | 0.61 | 0.05 | 0.13 | 0.37 | 0.68 | 0.03 | 0.05 | 0.10 | 0.18 | 0.10 | 0.39 | 0.92 | 1.00 |
| 287.3 | 1667 | 310388 | 0.05 | 0.11 | 0.30 | 0.57 | 0.05 | 0.12 | 0.34 | 0.65 | 0.03 | 0.05 | 0.10 | 0.17 | 0.10 | 0.37 | 0.90 | 1.00 |
| 287.31 | 415 | 310388 | 0.03 | 0.05 | 0.11 | 0.19 | 0.04 | 0.06 | 0.12 | 0.21 | 0.03 | 0.04 | 0.05 | 0.07 | 0.05 | 0.13 | 0.37 | 0.68 |
| 288 | 697 | 310388 | 0.04 | 0.07 | 0.15 | 0.28 | 0.04 | 0.07 | 0.17 | 0.33 | 0.03 | 0.04 | 0.06 | 0.09 | 0.06 | 0.18 | 0.56 | 0.88 |
| 288.1 | 3267 | 310388 | 0.06 | 0.17 | 0.51 | 0.85 | 0.06 | 0.19 | 0.59 | 0.90 | 0.04 | 0.07 | 0.15 | 0.28 | 0.15 | 0.62 | 1.00 | 1.00 |
| 288.11 | 3267 | 310388 | 0.06 | 0.17 | 0.51 | 0.85 | 0.06 | 0.19 | 0.59 | 0.90 | 0.04 | 0.07 | 0.15 | 0.28 | 0.15 | 0.62 | 1.00 | 1.00 |
| 289 | 954 | 310388 | 0.04 | 0.08 | 0.19 | 0.37 | 0.04 | 0.09 | 0.22 | 0.43 | 0.03 | 0.04 | 0.07 | 0.11 | 0.07 | 0.23 | 0.69 | 0.96 |
| 289.3 | 318 | 310388 | 0.03 | 0.05 | 0.09 | 0.15 | 0.03 | 0.05 | 0.10 | 0.17 | 0.03 | 0.03 | 0.05 | 0.06 | 0.05 | 0.11 | 0.30 | 0.57 |
| 289.4 | 2636 | 310388 | 0.05 | 0.14 | 0.43 | 0.77 | 0.06 | 0.16 | 0.50 | 0.84 | 0.04 | 0.06 | 0.13 | 0.24 | 0.13 | 0.53 | 0.98 | 1.00 |
| 289.5 | 514 | 310388 | 0.04 | 0.06 | 0.12 | 0.22 | 0.04 | 0.06 | 0.14 | 0.25 | 0.03 | 0.04 | 0.06 | 0.08 | 0.05 | 0.15 | 0.44 | 0.77 |
| 289.8 | 315 | 310063 | 0.03 | 0.05 | 0.09 | 0.15 | 0.03 | 0.05 | 0.10 | 0.17 | 0.03 | 0.03 | 0.05 | 0.06 | 0.05 | 0.11 | 0.29 | 0.57 |
| 290 | 2856 | 262912 | 0.06 | 0.15 | 0.46 | 0.80 | 0.06 | 0.17 | 0.53 | 0.86 | 0.04 | 0.06 | 0.14 | 0.25 | 0.13 | 0.56 | 0.99 | 1.00 |
| 290.1 | 1583 | 262912 | 0.05 | 0.10 | 0.28 | 0.55 | 0.05 | 0.11 | 0.33 | 0.62 | 0.03 | 0.05 | 0.09 | 0.16 | 0.09 | 0.35 | 0.89 | 1.00 |
| 290.11 | 666 | 262912 | 0.04 | 0.07 | 0.15 | 0.27 | 0.04 | 0.07 | 0.17 | 0.32 | 0.03 | 0.04 | 0.06 | 0.09 | 0.06 | 0.18 | 0.54 | 0.87 |
| 290.13 | 847 | 262912 | 0.04 | 0.07 | 0.17 | 0.33 | 0.04 | 0.08 | 0.20 | 0.39 | 0.03 | 0.04 | 0.07 | 0.11 | 0.07 | 0.21 | 0.64 | 0.94 |
| 290.16 | 361 | 262912 | 0.03 | 0.05 | 0.10 | 0.17 | 0.03 | 0.06 | 0.11 | 0.19 | 0.03 | 0.04 | 0.05 | 0.07 | 0.05 | 0.11 | 0.33 | 0.62 |
| 290.2 | 1157 | 262912 | 0.04 | 0.09 | 0.22 | 0.43 | 0.04 | 0.10 | 0.25 | 0.50 | 0.03 | 0.05 | 0.08 | 0.13 | 0.08 | 0.27 | 0.77 | 0.98 |
| 291 | 693 | 262912 | 0.04 | 0.07 | 0.15 | 0.28 | 0.04 | 0.07 | 0.17 | 0.33 | 0.03 | 0.04 | 0.06 | 0.09 | 0.06 | 0.18 | 0.56 | 0.88 |
| 291.8 | 484 | 262912 | 0.04 | 0.06 | 0.12 | 0.21 | 0.04 | 0.06 | 0.13 | 0.24 | 0.03 | 0.04 | 0.05 | 0.08 | 0.05 | 0.14 | 0.42 | 0.75 |
| 292 | 5218 | 262912 | 0.07 | 0.24 | 0.71 | 0.96 | 0.08 | 0.28 | 0.78 | 0.98 | 0.04 | 0.08 | 0.21 | 0.42 | 0.21 | 0.81 | 1.00 | 1.00 |
| 292.1 | 1626 | 262912 | 0.05 | 0.10 | 0.29 | 0.56 | 0.05 | 0.12 | 0.34 | 0.64 | 0.03 | 0.05 | 0.10 | 0.16 | 0.09 | 0.36 | 0.89 | 1.00 |
| 292.2 | 248 | 262912 | 0.03 | 0.05 | 0.08 | 0.13 | 0.03 | 0.05 | 0.09 | 0.15 | 0.03 | 0.03 | 0.04 | 0.06 | 0.04 | 0.09 | 0.24 | 0.47 |
| 292.3 | 730 | 262912 | 0.04 | 0.07 | 0.16 | 0.29 | 0.04 | 0.07 | 0.18 | 0.34 | 0.03 | 0.04 | 0.06 | 0.10 | 0.06 | 0.19 | 0.58 | 0.90 |
| 292.4 | 2527 | 262912 | 0.05 | 0.14 | 0.42 | 0.75 | 0.06 | 0.16 | 0.48 | 0.82 | 0.04 | 0.06 | 0.13 | 0.23 | 0.12 | 0.51 | 0.98 | 1.00 |
| 292.6 | 350 | 262912 | 0.03 | 0.05 | 0.10 | 0.16 | 0.03 | 0.05 | 0.11 | 0.19 | 0.03 | 0.04 | 0.05 | 0.07 | 0.05 | 0.11 | 0.32 | 0.61 |
| 293 | 1929 | 262912 | 0.05 | 0.12 | 0.33 | 0.63 | 0.05 | 0.13 | 0.39 | 0.71 | 0.03 | 0.05 | 0.11 | 0.19 | 0.10 | 0.42 | 0.94 | 1.00 |
| 293.1 | 832 | 262912 | 0.04 | 0.07 | 0.17 | 0.33 | 0.04 | 0.08 | 0.20 | 0.38 | 0.03 | 0.04 | 0.07 | 0.10 | 0.07 | 0.21 | 0.63 | 0.93 |
| 295 | 793 | 262912 | 0.04 | 0.07 | 0.16 | 0.31 | 0.04 | 0.08 | 0.19 | 0.37 | 0.03 | 0.04 | 0.07 | 0.10 | 0.07 | 0.20 | 0.61 | 0.92 |
| 295.1 | 513 | 262912 | 0.04 | 0.06 | 0.12 | 0.22 | 0.04 | 0.06 | 0.14 | 0.25 | 0.03 | 0.04 | 0.06 | 0.08 | 0.05 | 0.15 | 0.44 | 0.77 |
| 296 | 13263 | 262912 | 0.12 | 0.50 | 0.98 | 1.00 | 0.14 | 0.58 | 0.99 | 1.00 | 0.06 | 0.15 | 0.45 | 0.78 | 0.43 | 0.99 | 1.00 | 1.00 |
| 296.1 | 1015 | 262912 | 0.04 | 0.08 | 0.20 | 0.39 | 0.04 | 0.09 | 0.23 | 0.45 | 0.03 | 0.04 | 0.07 | 0.12 | 0.07 | 0.24 | 0.72 | 0.97 |
| 296.2 | 12701 | 262912 | 0.12 | 0.49 | 0.97 | 1.00 | 0.13 | 0.56 | 0.99 | 1.00 | 0.05 | 0.14 | 0.43 | 0.77 | 0.42 | 0.99 | 1.00 | 1.00 |
| 296.22 | 12629 | 262912 | 0.12 | 0.49 | 0.97 | 1.00 | 0.13 | 0.56 | 0.99 | 1.00 | 0.05 | 0.14 | 0.43 | 0.76 | 0.42 | 0.99 | 1.00 | 1.00 |
| 297 | 1529 | 262912 | 0.05 | 0.10 | 0.28 | 0.54 | 0.05 | 0.11 | 0.32 | 0.61 | 0.03 | 0.05 | 0.09 | 0.16 | 0.09 | 0.34 | 0.88 | 1.00 |
| 297.2 | 1457 | 262912 | 0.05 | 0.10 | 0.27 | 0.52 | 0.05 | 0.11 | 0.31 | 0.59 | 0.03 | 0.05 | 0.09 | 0.15 | 0.09 | 0.33 | 0.86 | 1.00 |
| 300 | 8295 | 262912 | 0.09 | 0.35 | 0.88 | 1.00 | 0.10 | 0.40 | 0.93 | 1.00 | 0.05 | 0.11 | 0.31 | 0.59 | 0.30 | 0.95 | 1.00 | 1.00 |
| 300.1 | 7701 | 262912 | 0.09 | 0.33 | 0.86 | 1.00 | 0.10 | 0.38 | 0.91 | 1.00 | 0.05 | 0.10 | 0.29 | 0.56 | 0.28 | 0.93 | 1.00 | 1.00 |
| 300.12 | 820 | 262912 | 0.04 | 0.07 | 0.17 | 0.32 | 0.04 | 0.08 | 0.19 | 0.38 | 0.03 | 0.04 | 0.07 | 0.10 | 0.07 | 0.21 | 0.63 | 0.93 |
| 300.13 | 649 | 262912 | 0.04 | 0.07 | 0.14 | 0.27 | 0.04 | 0.07 | 0.16 | 0.31 | 0.03 | 0.04 | 0.06 | 0.09 | 0.06 | 0.17 | 0.53 | 0.86 |
| 301 | 338 | 262912 | 0.03 | 0.05 | 0.09 | 0.16 | 0.03 | 0.05 | 0.10 | 0.18 | 0.03 | 0.04 | 0.05 | 0.07 | 0.05 | 0.11 | 0.31 | 0.59 |
| 302 | 279 | 262912 | 0.03 | 0.05 | 0.08 | 0.14 | 0.03 | 0.05 | 0.09 | 0.16 | 0.03 | 0.03 | 0.05 | 0.06 | 0.05 | 0.10 | 0.27 | 0.52 |
| 303 | 457 | 262912 | 0.04 | 0.06 | 0.11 | 0.20 | 0.04 | 0.06 | 0.13 | 0.23 | 0.03 | 0.04 | 0.05 | 0.08 | 0.05 | 0.13 | 0.40 | 0.73 |
| 303.3 | 339 | 262912 | 0.03 | 0.05 | 0.09 | 0.16 | 0.03 | 0.05 | 0.10 | 0.18 | 0.03 | 0.04 | 0.05 | 0.07 | 0.05 | 0.11 | 0.31 | 0.60 |
| 304 | 258 | 262912 | 0.03 | 0.05 | 0.08 | 0.13 | 0.03 | 0.05 | 0.09 | 0.15 | 0.03 | 0.03 | 0.04 | 0.06 | 0.04 | 0.09 | 0.25 | 0.49 |
| 306 | 39468 | 262912 | 0.25 | 0.90 | 1.00 | 1.00 | 0.29 | 0.94 | 1.00 | 1.00 | 0.09 | 0.33 | 0.85 | 0.99 | 0.84 | 1.00 | 1.00 | 1.00 |
| 306.9 | 280 | 262912 | 0.03 | 0.05 | 0.08 | 0.14 | 0.03 | 0.05 | 0.09 | 0.16 | 0.03 | 0.03 | 0.05 | 0.06 | 0.05 | 0.10 | 0.27 | 0.52 |
| 315 | 563 | 262912 | 0.04 | 0.06 | 0.13 | 0.24 | 0.04 | 0.07 | 0.15 | 0.27 | 0.03 | 0.04 | 0.06 | 0.08 | 0.06 | 0.16 | 0.47 | 0.81 |
| 316 | 412 | 262912 | 0.03 | 0.05 | 0.11 | 0.19 | 0.04 | 0.06 | 0.12 | 0.21 | 0.03 | 0.04 | 0.05 | 0.07 | 0.05 | 0.12 | 0.37 | 0.68 |
| 317 | 12721 | 262912 | 0.12 | 0.49 | 0.97 | 1.00 | 0.13 | 0.56 | 0.99 | 1.00 | 0.05 | 0.14 | 0.43 | 0.77 | 0.42 | 0.99 | 1.00 | 1.00 |
| 317.1 | 10886 | 262912 | 0.11 | 0.43 | 0.95 | 1.00 | 0.12 | 0.50 | 0.97 | 1.00 | 0.05 | 0.13 | 0.38 | 0.70 | 0.37 | 0.98 | 1.00 | 1.00 |
| 317.11 | 837 | 262912 | 0.04 | 0.07 | 0.17 | 0.33 | 0.04 | 0.08 | 0.20 | 0.38 | 0.03 | 0.04 | 0.07 | 0.10 | 0.07 | 0.21 | 0.64 | 0.93 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 318 | 18403 | 262912 | 0.15 | 0.63 | 1.00 | 1.00 | 0.17 | 0.71 | 1.00 | 1.00 | 0.06 | 0.19 | 0.57 | 0.89 | 0.55 | 1.00 | 1.00 | 1.00 |
| 320 | 391 | 295570 | 0.03 | 0.05 | 0.10 | 0.18 | 0.04 | 0.06 | 0.11 | 0.20 | 0.03 | 0.04 | 0.05 | 0.07 | 0.05 | 0.12 | 0.35 | 0.66 |
| 323 | 349 | 295570 | 0.03 | 0.05 | 0.10 | 0.16 | 0.03 | 0.05 | 0.11 | 0.19 | 0.03 | 0.04 | 0.05 | 0.07 | 0.05 | 0.11 | 0.32 | 0.61 |
| 324 | 305 | 295570 | 0.03 | 0.05 | 0.09 | 0.15 | 0.03 | 0.05 | 0.10 | 0.17 | 0.03 | 0.03 | 0.05 | 0.06 | 0.05 | 0.10 | 0.29 | 0.55 |
| 327 | 1210 | 295570 | 0.04 | 0.09 | 0.23 | 0.45 | 0.05 | 0.10 | 0.26 | 0.51 | 0.03 | 0.05 | 0.08 | 0.13 | 0.08 | 0.28 | 0.79 | 0.99 |
| 327.3 | 4435 | 295570 | 0.07 | 0.21 | 0.64 | 0.94 | 0.07 | 0.24 | 0.72 | 0.97 | 0.04 | 0.08 | 0.19 | 0.36 | 0.18 | 0.75 | 1.00 | 1.00 |
| 331 | 1287 | 295570 | 0.04 | 0.09 | 0.24 | 0.47 | 0.05 | 0.10 | 0.28 | 0.54 | 0.03 | 0.05 | 0.08 | 0.14 | 0.08 | 0.30 | 0.82 | 0.99 |
| 331.1 | 515 | 295570 | 0.04 | 0.06 | 0.12 | 0.22 | 0.04 | 0.06 | 0.14 | 0.26 | 0.03 | 0.04 | 0.06 | 0.08 | 0.06 | 0.15 | 0.44 | 0.77 |
| 331.9 | 514 | 295570 | 0.04 | 0.06 | 0.12 | 0.22 | 0.04 | 0.06 | 0.14 | 0.25 | 0.03 | 0.04 | 0.06 | 0.08 | 0.05 | 0.15 | 0.44 | 0.77 |
| 332 | 1345 | 295570 | 0.04 | 0.09 | 0.25 | 0.49 | 0.05 | 0.10 | 0.29 | 0.56 | 0.03 | 0.05 | 0.09 | 0.14 | 0.08 | 0.31 | 0.83 | 0.99 |
| 333 | 1094 | 295570 | 0.04 | 0.08 | 0.21 | 0.41 | 0.04 | 0.09 | 0.24 | 0.47 | 0.03 | 0.05 | 0.08 | 0.12 | 0.08 | 0.26 | 0.75 | 0.98 |
| 333.1 | 271 | 295570 | 0.03 | 0.05 | 0.08 | 0.14 | 0.03 | 0.05 | 0.09 | 0.16 | 0.03 | 0.03 | 0.05 | 0.06 | 0.04 | 0.10 | 0.26 | 0.50 |
| 333.4 | 265 | 295570 | 0.03 | 0.05 | 0.08 | 0.13 | 0.03 | 0.05 | 0.09 | 0.15 | 0.03 | 0.03 | 0.05 | 0.06 | 0.04 | 0.10 | 0.25 | 0.50 |
| 334 | 1896 | 295570 | 0.05 | 0.12 | 0.33 | 0.63 | 0.05 | 0.13 | 0.38 | 0.70 | 0.03 | 0.05 | 0.10 | 0.18 | 0.10 | 0.41 | 0.93 | 1.00 |
| 334.2 | 277 | 295570 | 0.03 | 0.05 | 0.08 | 0.14 | 0.03 | 0.05 | 0.09 | 0.16 | 0.03 | 0.03 | 0.05 | 0.06 | 0.05 | 0.10 | 0.26 | 0.51 |
| 335 | 1222 | 295570 | 0.04 | 0.09 | 0.23 | 0.45 | 0.05 | 0.10 | 0.27 | 0.52 | 0.03 | 0.05 | 0.08 | 0.13 | 0.08 | 0.29 | 0.80 | 0.99 |
| 337 | 355 | 295570 | 0.03 | 0.05 | 0.10 | 0.17 | 0.03 | 0.05 | 0.11 | 0.19 | 0.03 | 0.04 | 0.05 | 0.07 | 0.05 | 0.11 | 0.32 | 0.62 |
| 338 | 742 | 295570 | 0.04 | 0.07 | 0.16 | 0.30 | 0.04 | 0.08 | 0.18 | 0.35 | 0.03 | 0.04 | 0.06 | 0.10 | 0.06 | 0.19 | 0.58 | 0.90 |
| 338.1 | 363 | 295570 | 0.03 | 0.05 | 0.10 | 0.17 | 0.03 | 0.06 | 0.11 | 0.19 | 0.03 | 0.04 | 0.05 | 0.07 | 0.05 | 0.12 | 0.33 | 0.63 |
| 338.2 | 387 | 295570 | 0.03 | 0.05 | 0.10 | 0.18 | 0.04 | 0.06 | 0.11 | 0.20 | 0.03 | 0.04 | 0.05 | 0.07 | 0.05 | 0.12 | 0.35 | 0.65 |
| 339 | 7243 | 295570 | 0.09 | 0.31 | 0.84 | 0.99 | 0.09 | 0.36 | 0.90 | 1.00 | 0.05 | 0.10 | 0.28 | 0.54 | 0.27 | 0.92 | 1.00 | 1.00 |
| 340 | 2962 | 295570 | 0.06 | 0.16 | 0.48 | 0.81 | 0.06 | 0.18 | 0.55 | 0.87 | 0.04 | 0.06 | 0.14 | 0.26 | 0.14 | 0.58 | 0.99 | 1.00 |
| 340.1 | 217 | 295570 | 0.03 | 0.04 | 0.07 | 0.12 | 0.03 | 0.05 | 0.08 | 0.13 | 0.03 | 0.03 | 0.04 | 0.05 | 0.04 | 0.09 | 0.22 | 0.42 |
| 341 | 221 | 295570 | 0.03 | 0.04 | 0.08 | 0.12 | 0.03 | 0.05 | 0.08 | 0.13 | 0.03 | 0.03 | 0.04 | 0.06 | 0.04 | 0.09 | 0.22 | 0.43 |
| 342 | 1600 | 295570 | 0.05 | 0.10 | 0.29 | 0.55 | 0.05 | 0.12 | 0.33 | 0.63 | 0.03 | 0.05 | 0.09 | 0.16 | 0.09 | 0.36 | 0.89 | 1.00 |
| 344 | 658 | 295570 | 0.04 | 0.07 | 0.14 | 0.27 | 0.04 | 0.07 | 0.16 | 0.31 | 0.03 | 0.04 | 0.06 | 0.09 | 0.06 | 0.17 | 0.53 | 0.87 |
| 345 | 4890 | 295570 | 0.07 | 0.23 | 0.68 | 0.95 | 0.08 | 0.26 | 0.76 | 0.98 | 0.04 | 0.08 | 0.20 | 0.39 | 0.20 | 0.79 | 1.00 | 1.00 |
| 345.1 | 877 | 295570 | 0.04 | 0.07 | 0.18 | 0.34 | 0.04 | 0.08 | 0.20 | 0.40 | 0.03 | 0.04 | 0.07 | 0.11 | 0.07 | 0.22 | 0.66 | 0.94 |
| 345.11 | 423 | 295570 | 0.03 | 0.05 | 0.11 | 0.19 | 0.04 | 0.06 | 0.12 | 0.22 | 0.03 | 0.04 | 0.05 | 0.07 | 0.05 | 0.13 | 0.37 | 0.69 |
| 345.12 | 273 | 295570 | 0.03 | 0.05 | 0.08 | 0.14 | 0.03 | 0.05 | 0.09 | 0.16 | 0.03 | 0.03 | 0.05 | 0.06 | 0.04 | 0.10 | 0.26 | 0.51 |
| 345.3 | 2204 | 295570 | 0.05 | 0.13 | 0.37 | 0.69 | 0.05 | 0.14 | 0.43 | 0.77 | 0.04 | 0.06 | 0.12 | 0.21 | 0.11 | 0.46 | 0.96 | 1.00 |
| 348 | 854 | 295570 | 0.04 | 0.07 | 0.17 | 0.34 | 0.04 | 0.08 | 0.20 | 0.39 | 0.03 | 0.04 | 0.07 | 0.11 | 0.07 | 0.21 | 0.64 | 0.94 |
| 348.2 | 280 | 295570 | 0.03 | 0.05 | 0.08 | 0.14 | 0.03 | 0.05 | 0.09 | 0.16 | 0.03 | 0.03 | 0.05 | 0.06 | 0.05 | 0.10 | 0.27 | 0.52 |
| 348.7 | 338 | 295570 | 0.03 | 0.05 | 0.09 | 0.16 | 0.03 | 0.05 | 0.10 | 0.18 | 0.03 | 0.04 | 0.05 | 0.07 | 0.05 | 0.11 | 0.31 | 0.59 |
| 348.8 | 267 | 295570 | 0.03 | 0.05 | 0.08 | 0.14 | 0.03 | 0.05 | 0.09 | 0.15 | 0.03 | 0.03 | 0.05 | 0.06 | 0.04 | 0.10 | 0.26 | 0.50 |
| 348.9 | 440 | 295570 | 0.03 | 0.06 | 0.11 | 0.20 | 0.04 | 0.06 | 0.12 | 0.22 | 0.03 | 0.04 | 0.05 | 0.07 | 0.05 | 0.13 | 0.39 | 0.71 |
| 349 | 403 | 295570 | 0.03 | 0.05 | 0.10 | 0.18 | 0.04 | 0.06 | 0.12 | 0.21 | 0.03 | 0.04 | 0.05 | 0.07 | 0.05 | 0.12 | 0.36 | 0.67 |
| 350 | 3488 | 295570 | 0.06 | 0.18 | 0.54 | 0.87 | 0.07 | 0.20 | 0.61 | 0.92 | 0.04 | 0.07 | 0.16 | 0.30 | 0.15 | 0.65 | 1.00 | 1.00 |
| 350.1 | 968 | 295570 | 0.04 | 0.08 | 0.19 | 0.37 | 0.04 | 0.09 | 0.22 | 0.43 | 0.03 | 0.04 | 0.07 | 0.11 | 0.07 | 0.24 | 0.70 | 0.96 |
| 350.2 | 2371 | 295570 | 0.05 | 0.13 | 0.40 | 0.72 | 0.06 | 0.15 | 0.46 | 0.80 | 0.04 | 0.06 | 0.12 | 0.22 | 0.12 | 0.49 | 0.97 | 1.00 |
| 350.3 | 368 | 295570 | 0.03 | 0.05 | 0.10 | 0.17 | 0.03 | 0.06 | 0.11 | 0.20 | 0.03 | 0.04 | 0.05 | 0.07 | 0.05 | 0.12 | 0.33 | 0.63 |
| 351 | 11404 | 295570 | 0.11 | 0.45 | 0.96 | 1.00 | 0.12 | 0.52 | 0.98 | 1.00 | 0.05 | 0.13 | 0.40 | 0.72 | 0.39 | 0.99 | 1.00 | 1.00 |
| 352 | 1378 | 295570 | 0.04 | 0.09 | 0.25 | 0.49 | 0.05 | 0.11 | 0.29 | 0.57 | 0.03 | 0.05 | 0.09 | 0.15 | 0.09 | 0.32 | 0.84 | 0.99 |
| 352.1 | 485 | 295570 | 0.04 | 0.06 | 0.12 | 0.21 | 0.04 | 0.06 | 0.13 | 0.24 | 0.03 | 0.04 | 0.05 | 0.08 | 0.05 | 0.14 | 0.42 | 0.75 |
| 352.2 | 842 | 295570 | 0.04 | 0.07 | 0.17 | 0.33 | 0.04 | 0.08 | 0.20 | 0.38 | 0.03 | 0.04 | 0.07 | 0.11 | 0.07 | 0.21 | 0.64 | 0.93 |
| 353 | 2069 | 295570 | 0.05 | 0.12 | 0.36 | 0.66 | 0.05 | 0.14 | 0.41 | 0.74 | 0.03 | 0.06 | 0.11 | 0.20 | 0.11 | 0.44 | 0.95 | 1.00 |
| 355 | 329 | 295570 | 0.03 | 0.05 | 0.09 | 0.16 | 0.03 | 0.05 | 0.10 | 0.18 | 0.03 | 0.03 | 0.05 | 0.06 | 0.05 | 0.11 | 0.30 | 0.58 |
| 357 | 1558 | 295570 | 0.05 | 0.10 | 0.28 | 0.54 | 0.05 | 0.11 | 0.33 | 0.62 | 0.03 | 0.05 | 0.09 | 0.16 | 0.09 | 0.35 | 0.88 | 1.00 |
| 358 | 210 | 295570 | 0.03 | 0.04 | 0.07 | 0.12 | 0.03 | 0.05 | 0.08 | 0.13 | 0.03 | 0.03 | 0.04 | 0.05 | 0.04 | 0.08 | 0.21 | 0.41 |
| 359 | 439 | 295570 | 0.03 | 0.06 | 0.11 | 0.20 | 0.04 | 0.06 | 0.12 | 0.22 | 0.03 | 0.04 | 0.05 | 0.07 | 0.05 | 0.13 | 0.39 | 0.71 |
| 359.2 | 337 | 295570 | 0.03 | 0.05 | 0.09 | 0.16 | 0.03 | 0.05 | 0.10 | 0.18 | 0.03 | 0.04 | 0.05 | 0.07 | 0.05 | 0.11 | 0.31 | 0.59 |
| 360 | 315 | 287331 | 0.03 | 0.05 | 0.09 | 0.15 | 0.03 | 0.05 | 0.10 | 0.17 | 0.03 | 0.03 | 0.05 | 0.06 | 0.05 | 0.11 | 0.29 | 0.57 |
| 360.2 | 227 | 287331 | 0.03 | 0.04 | 0.08 | 0.12 | 0.03 | 0.05 | 0.08 | 0.14 | 0.03 | 0.03 | 0.04 | 0.06 | 0.04 | 0.09 | 0.22 | 0.44 |
| 361 | 3118 | 287331 | 0.06 | 0.16 | 0.49 | 0.83 | 0.06 | 0.18 | 0.57 | 0.89 | 0.04 | 0.07 | 0.15 | 0.27 | 0.14 | 0.60 | 0.99 | 1.00 |
| 361.1 | 1401 | 287331 | 0.04 | 0.10 | 0.26 | 0.50 | 0.05 | 0.11 | 0.30 | 0.57 | 0.03 | 0.05 | 0.09 | 0.15 | 0.09 | 0.32 | 0.85 | 0.99 |
| 362 | 5021 | 286896 | 0.07 | 0.23 | 0.69 | 0.96 | 0.08 | 0.27 | 0.77 | 0.98 | 0.04 | 0.08 | 0.21 | 0.40 | 0.20 | 0.80 | 1.00 | 1.00 |
| 362.2 | 2640 | 286896 | 0.05 | 0.14 | 0.43 | 0.77 | 0.06 | 0.16 | 0.50 | 0.84 | 0.04 | 0.06 | 0.13 | 0.24 | 0.13 | 0.53 | 0.98 | 1.00 |
| 362.29 | 2637 | 286896 | 0.05 | 0.14 | 0.43 | 0.77 | 0.06 | 0.16 | 0.50 | 0.84 | 0.04 | 0.06 | 0.13 | 0.24 | 0.13 | 0.53 | 0.98 | 1.00 |
| 362.3 | 1059 | 286896 | 0.04 | 0.08 | 0.21 | 0.40 | 0.04 | 0.09 | 0.24 | 0.46 | 0.03 | 0.04 | 0.08 | 0.12 | 0.07 | 0.25 | 0.74 | 0.97 |
| 362.31 | 1003 | 286896 | 0.04 | 0.08 | 0.20 | 0.38 | 0.04 | 0.09 | 0.23 | 0.44 | 0.03 | 0.04 | 0.07 | 0.12 | 0.07 | 0.24 | 0.71 | 0.97 |
| 362.4 | 872 | 286896 | 0.04 | 0.07 | 0.18 | 0.34 | 0.04 | 0.08 | 0.20 | 0.39 | 0.03 | 0.04 | 0.07 | 0.11 | 0.07 | 0.22 | 0.65 | 0.94 |
| 364 | 751 | 287331 | 0.04 | 0.07 | 0.16 | 0.30 | 0.04 | 0.08 | 0.18 | 0.35 | 0.03 | 0.04 | 0.06 | 0.10 | 0.06 | 0.19 | 0.59 | 0.91 |
| 364.4 | 240 | 287331 | 0.03 | 0.05 | 0.08 | 0.13 | 0.03 | 0.05 | 0.09 | 0.14 | 0.03 | 0.03 | 0.04 | 0.06 | 0.04 | 0.09 | 0.23 | 0.46 |
| 364.5 | 236 | 287331 | 0.03 | 0.05 | 0.08 | 0.12 | 0.03 | 0.05 | 0.09 | 0.14 | 0.03 | 0.03 | 0.04 | 0.06 | 0.04 | 0.09 | 0.23 | 0.45 |
| 365 | 4986 | 287331 | 0.07 | 0.23 | 0.69 | 0.96 | 0.08 | 0.27 | 0.76 | 0.98 | 0.04 | 0.08 | 0.21 | 0.40 | 0.20 | 0.80 | 1.00 | 1.00 |
| 365.1 | 1216 | 287331 | 0.04 | 0.09 | 0.23 | 0.45 | 0.05 | 0.10 | 0.27 | 0.52 | 0.03 | 0.05 | 0.08 | 0.13 | 0.08 | 0.28 | 0.79 | 0.99 |
| 365.11 | 1212 | 287331 | 0.04 | 0.09 | 0.23 | 0.45 | 0.05 | 0.10 | 0.26 | 0.51 | 0.03 | 0.05 | 0.08 | 0.13 | 0.08 | 0.28 | 0.79 | 0.99 |
| 365.2 | 742 | 287331 | 0.04 | 0.07 | 0.16 | 0.30 | 0.04 | 0.08 | 0.18 | 0.35 | 0.03 | 0.04 | 0.06 | 0.10 | 0.06 | 0.19 | 0.58 | 0.90 |
| 366 | 22347 | 287331 | 0.17 | 0.71 | 1.00 | 1.00 | 0.20 | 0.79 | 1.00 | 1.00 | 0.07 | 0.22 | 0.65 | 0.94 | 0.63 | 1.00 | 1.00 | 1.00 |
| 366.2 | 9863 | 287331 | 0.10 | 0.40 | 0.93 | 1.00 | 0.11 | 0.46 | 0.96 | 1.00 | 0.05 | 0.12 | 0.36 | 0.66 | 0.34 | 0.97 | 1.00 | 1.00 |
| 367 | 2886 | 287331 | 0.06 | 0.15 | 0.47 | 0.80 | 0.06 | 0.17 | 0.53 | 0.87 | 0.04 | 0.06 | 0.14 | 0.26 | 0.13 | 0.57 | 0.99 | 1.00 |
| 367.1 | 1422 | 287331 | 0.04 | 0.10 | 0.26 | 0.51 | 0.05 | 0.11 | 0.30 | 0.58 | 0.03 | 0.05 | 0.09 | 0.15 | 0.09 | 0.32 | 0.85 | 0.99 |
| 367.2 | 225 | 287331 | 0.03 | 0.04 | 0.08 | 0.12 | 0.03 | 0.05 | 0.08 | 0.14 | 0.03 | 0.03 | 0.04 | 0.06 | 0.04 | 0.09 | 0.22 | 0.43 |
| 367.8 | 278 | 287331 | 0.03 | 0.05 | 0.08 | 0.14 | 0.03 | 0.05 | 0.09 | 0.16 | 0.03 | 0.03 | 0.05 | 0.06 | 0.05 | 0.10 | 0.26 | 0.51 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 367.9 | 950 | 287331 | 0.04 | 0.08 | 0.19 | 0.37 | 0.04 | 0.09 | 0.22 | 0.42 | 0.03 | 0.04 | 0.07 | 0.11 | 0.07 | 0.23 | 0.69 | 0.96 |
| 368 | 3085 | 287331 | 0.06 | 0.16 | 0.49 | 0.83 | 0.06 | 0.18 | 0.56 | 0.89 | 0.04 | 0.07 | 0.14 | 0.27 | 0.14 | 0.60 | 0.99 | 1.00 |
| 368.1 | 607 | 287331 | 0.04 | 0.06 | 0.14 | 0.25 | 0.04 | 0.07 | 0.15 | 0.29 | 0.03 | 0.04 | 0.06 | 0.09 | 0.06 | 0.16 | 0.50 | 0.84 |
| 368.2 | 723 | 287331 | 0.04 | 0.07 | 0.15 | 0.29 | 0.04 | 0.07 | 0.18 | 0.34 | 0.03 | 0.04 | 0.06 | 0.10 | 0.06 | 0.19 | 0.57 | 0.90 |
| 368.4 | 370 | 287331 | 0.03 | 0.05 | 0.10 | 0.17 | 0.03 | 0.06 | 0.11 | 0.20 | 0.03 | 0.04 | 0.05 | 0.07 | 0.05 | 0.12 | 0.34 | 0.63 |
| 368.9 | 635 | 287331 | 0.04 | 0.06 | 0.14 | 0.26 | 0.04 | 0.07 | 0.16 | 0.30 | 0.03 | 0.04 | 0.06 | 0.09 | 0.06 | 0.17 | 0.52 | 0.85 |
| 368.91 | 222 | 287331 | 0.03 | 0.04 | 0.08 | 0.12 | 0.03 | 0.05 | 0.08 | 0.13 | 0.03 | 0.03 | 0.04 | 0.06 | 0.04 | 0.09 | 0.22 | 0.43 |
| 369 | 574 | 287331 | 0.04 | 0.06 | 0.13 | 0.24 | 0.04 | 0.07 | 0.15 | 0.28 | 0.03 | 0.04 | 0.06 | 0.08 | 0.06 | 0.16 | 0.48 | 0.82 |
| 369.5 | 241 | 287331 | 0.03 | 0.05 | 0.08 | 0.13 | 0.03 | 0.05 | 0.09 | 0.14 | 0.03 | 0.03 | 0.04 | 0.06 | 0.04 | 0.09 | 0.24 | 0.46 |
| 370 | 283 | 287331 | 0.03 | 0.05 | 0.09 | 0.14 | 0.03 | 0.05 | 0.09 | 0.16 | 0.03 | 0.03 | 0.05 | 0.06 | 0.05 | 0.10 | 0.27 | 0.52 |
| 371 | 2760 | 287331 | 0.06 | 0.15 | 0.45 | 0.78 | 0.06 | 0.17 | 0.52 | 0.85 | 0.04 | 0.06 | 0.13 | 0.25 | 0.13 | 0.55 | 0.99 | 1.00 |
| 371.1 | 485 | 287331 | 0.04 | 0.06 | 0.12 | 0.21 | 0.04 | 0.06 | 0.13 | 0.24 | 0.03 | 0.04 | 0.05 | 0.08 | 0.05 | 0.14 | 0.42 | 0.75 |
| 371.3 | 2161 | 287331 | 0.05 | 0.13 | 0.37 | 0.68 | 0.05 | 0.14 | 0.43 | 0.76 | 0.04 | 0.06 | 0.11 | 0.20 | 0.11 | 0.46 | 0.96 | 1.00 |
| 372 | 731 | 287331 | 0.04 | 0.07 | 0.16 | 0.29 | 0.04 | 0.07 | 0.18 | 0.34 | 0.03 | 0.04 | 0.06 | 0.10 | 0.06 | 0.19 | 0.58 | 0.90 |
| 374 | 5327 | 287331 | 0.07 | 0.24 | 0.72 | 0.97 | 0.08 | 0.28 | 0.79 | 0.99 | 0.04 | 0.09 | 0.22 | 0.42 | 0.21 | 0.82 | 1.00 | 1.00 |
| 374.1 | 1101 | 287331 | 0.04 | 0.08 | 0.21 | 0.41 | 0.04 | 0.09 | 0.24 | 0.48 | 0.03 | 0.05 | 0.08 | 0.12 | 0.08 | 0.26 | 0.75 | 0.98 |
| 374.3 | 1725 | 287331 | 0.05 | 0.11 | 0.31 | 0.59 | 0.05 | 0.12 | 0.35 | 0.66 | 0.03 | 0.05 | 0.10 | 0.17 | 0.10 | 0.38 | 0.91 | 1.00 |
| 375 | 2085 | 287331 | 0.05 | 0.12 | 0.36 | 0.67 | 0.05 | 0.14 | 0.41 | 0.74 | 0.04 | 0.06 | 0.11 | 0.20 | 0.11 | 0.44 | 0.95 | 1.00 |
| 375.2 | 840 | 287331 | 0.04 | 0.07 | 0.17 | 0.33 | 0.04 | 0.08 | 0.20 | 0.38 | 0.03 | 0.04 | 0.07 | 0.10 | 0.07 | 0.21 | 0.64 | 0.93 |
| 377 | 438 | 287331 | 0.03 | 0.06 | 0.11 | 0.19 | 0.04 | 0.06 | 0.12 | 0.22 | 0.03 | 0.04 | 0.05 | 0.07 | 0.05 | 0.13 | 0.39 | 0.71 |
| 377.3 | 234 | 287331 | 0.03 | 0.05 | 0.08 | 0.12 | 0.03 | 0.05 | 0.08 | 0.14 | 0.03 | 0.03 | 0.04 | 0.06 | 0.04 | 0.09 | 0.23 | 0.45 |
| 378 | 1329 | 287331 | 0.04 | 0.09 | 0.25 | 0.48 | 0.05 | 0.10 | 0.29 | 0.55 | 0.03 | 0.05 | 0.09 | 0.14 | 0.08 | 0.31 | 0.83 | 0.99 |
| 378.1 | 836 | 287331 | 0.04 | 0.07 | 0.17 | 0.33 | 0.04 | 0.08 | 0.20 | 0.38 | 0.03 | 0.04 | 0.07 | 0.10 | 0.07 | 0.21 | 0.63 | 0.93 |
| 378.2 | 209 | 287331 | 0.03 | 0.04 | 0.07 | 0.12 | 0.03 | 0.05 | 0.08 | 0.13 | 0.03 | 0.03 | 0.04 | 0.05 | 0.04 | 0.08 | 0.21 | 0.41 |
| 378.5 | 264 | 287331 | 0.03 | 0.05 | 0.08 | 0.13 | 0.03 | 0.05 | 0.09 | 0.15 | 0.03 | 0.03 | 0.04 | 0.06 | 0.04 | 0.09 | 0.25 | 0.49 |
| 379 | 4107 | 287331 | 0.07 | 0.20 | 0.61 | 0.92 | 0.07 | 0.23 | 0.68 | 0.95 | 0.04 | 0.07 | 0.18 | 0.34 | 0.17 | 0.72 | 1.00 | 1.00 |
| 379.2 | 1443 | 287331 | 0.05 | 0.10 | 0.26 | 0.51 | 0.05 | 0.11 | 0.31 | 0.59 | 0.03 | 0.05 | 0.09 | 0.15 | 0.09 | 0.33 | 0.86 | 1.00 |
| 379.3 | 2166 | 287331 | 0.05 | 0.13 | 0.37 | 0.68 | 0.05 | 0.14 | 0.43 | 0.76 | 0.04 | 0.06 | 0.11 | 0.20 | 0.11 | 0.46 | 0.96 | 1.00 |
| 379.5 | 371 | 287331 | 0.03 | 0.05 | 0.10 | 0.17 | 0.03 | 0.06 | 0.11 | 0.20 | 0.03 | 0.04 | 0.05 | 0.07 | 0.05 | 0.12 | 0.34 | 0.63 |
| 380 | 614 | 287331 | 0.04 | 0.06 | 0.14 | 0.26 | 0.04 | 0.07 | 0.16 | 0.30 | 0.03 | 0.04 | 0.06 | 0.09 | 0.06 | 0.17 | 0.51 | 0.84 |
| 380.1 | 478 | 287331 | 0.04 | 0.06 | 0.12 | 0.21 | 0.04 | 0.06 | 0.13 | 0.24 | 0.03 | 0.04 | 0.05 | 0.08 | 0.05 | 0.14 | 0.41 | 0.74 |
| 380.4 | 323 | 287331 | 0.03 | 0.05 | 0.09 | 0.15 | 0.03 | 0.05 | 0.10 | 0.18 | 0.03 | 0.03 | 0.05 | 0.06 | 0.05 | 0.11 | 0.30 | 0.58 |
| 381 | 2003 | 287331 | 0.05 | 0.12 | 0.35 | 0.65 | 0.05 | 0.13 | 0.40 | 0.73 | 0.03 | 0.06 | 0.11 | 0.19 | 0.11 | 0.43 | 0.95 | 1.00 |
| 381.1 | 1613 | 287331 | 0.05 | 0.10 | 0.29 | 0.56 | 0.05 | 0.12 | 0.33 | 0.63 | 0.03 | 0.05 | 0.10 | 0.16 | 0.09 | 0.36 | 0.89 | 1.00 |
| 381.11 | 739 | 287331 | 0.04 | 0.07 | 0.16 | 0.30 | 0.04 | 0.07 | 0.18 | 0.34 | 0.03 | 0.04 | 0.06 | 0.10 | 0.06 | 0.19 | 0.58 | 0.90 |
| 381.9 | 242 | 287331 | 0.03 | 0.05 | 0.08 | 0.13 | 0.03 | 0.05 | 0.09 | 0.14 | 0.03 | 0.03 | 0.04 | 0.06 | 0.04 | 0.09 | 0.24 | 0.46 |
| 382 | 288 | 287331 | 0.03 | 0.05 | 0.09 | 0.14 | 0.03 | 0.05 | 0.10 | 0.16 | 0.03 | 0.03 | 0.05 | 0.06 | 0.05 | 0.10 | 0.27 | 0.53 |
| 383 | 275 | 287331 | 0.03 | 0.05 | 0.08 | 0.14 | 0.03 | 0.05 | 0.09 | 0.16 | 0.03 | 0.03 | 0.05 | 0.06 | 0.05 | 0.10 | 0.26 | 0.51 |
| 384 | 1161 | 287331 | 0.04 | 0.09 | 0.22 | 0.43 | 0.04 | 0.10 | 0.26 | 0.50 | 0.03 | 0.05 | 0.08 | 0.13 | 0.08 | 0.27 | 0.77 | 0.98 |
| 384.4 | 894 | 287331 | 0.04 | 0.08 | 0.18 | 0.35 | 0.04 | 0.08 | 0.21 | 0.40 | 0.03 | 0.04 | 0.07 | 0.11 | 0.07 | 0.22 | 0.66 | 0.95 |
| 385 | 768 | 287331 | 0.04 | 0.07 | 0.16 | 0.31 | 0.04 | 0.08 | 0.18 | 0.36 | 0.03 | 0.04 | 0.07 | 0.10 | 0.06 | 0.20 | 0.60 | 0.91 |
| 385.3 | 521 | 287331 | 0.04 | 0.06 | 0.12 | 0.22 | 0.04 | 0.06 | 0.14 | 0.26 | 0.03 | 0.04 | 0.06 | 0.08 | 0.06 | 0.15 | 0.44 | 0.78 |
| 386 | 1729 | 287331 | 0.05 | 0.11 | 0.31 | 0.59 | 0.05 | 0.12 | 0.35 | 0.66 | 0.03 | 0.05 | 0.10 | 0.17 | 0.10 | 0.38 | 0.91 | 1.00 |
| 386.1 | 559 | 287331 | 0.04 | 0.06 | 0.13 | 0.24 | 0.04 | 0.07 | 0.15 | 0.27 | 0.03 | 0.04 | 0.06 | 0.08 | 0.06 | 0.15 | 0.47 | 0.81 |
| 386.2 | 464 | 287331 | 0.04 | 0.06 | 0.11 | 0.20 | 0.04 | 0.06 | 0.13 | 0.23 | 0.03 | 0.04 | 0.05 | 0.08 | 0.05 | 0.14 | 0.40 | 0.73 |
| 386.3 | 710 | 287331 | 0.04 | 0.07 | 0.15 | 0.29 | 0.04 | 0.07 | 0.17 | 0.33 | 0.03 | 0.04 | 0.06 | 0.10 | 0.06 | 0.18 | 0.57 | 0.89 |
| 386.9 | 4685 | 287331 | 0.07 | 0.22 | 0.66 | 0.95 | 0.07 | 0.25 | 0.74 | 0.97 | 0.04 | 0.08 | 0.20 | 0.38 | 0.19 | 0.77 | 1.00 | 1.00 |
| 389 | 4810 | 287331 | 0.07 | 0.23 | 0.67 | 0.95 | 0.08 | 0.26 | 0.75 | 0.98 | 0.04 | 0.08 | 0.20 | 0.39 | 0.19 | 0.78 | 1.00 | 1.00 |
| 389.1 | 499 | 287331 | 0.04 | 0.06 | 0.12 | 0.22 | 0.04 | 0.06 | 0.13 | 0.25 | 0.03 | 0.04 | 0.06 | 0.08 | 0.05 | 0.14 | 0.43 | 0.76 |
| 389.2 | 412 | 287331 | 0.03 | 0.05 | 0.11 | 0.19 | 0.04 | 0.06 | 0.12 | 0.21 | 0.03 | 0.04 | 0.05 | 0.07 | 0.05 | 0.13 | 0.37 | 0.68 |
| 389.4 | 539 | 287331 | 0.04 | 0.06 | 0.13 | 0.23 | 0.04 | 0.06 | 0.14 | 0.27 | 0.03 | 0.04 | 0.06 | 0.08 | 0.06 | 0.15 | 0.46 | 0.79 |
| 394 | 5564 | 202269 | 0.07 | 0.25 | 0.73 | 0.97 | 0.08 | 0.29 | 0.80 | 0.99 | 0.04 | 0.09 | 0.22 | 0.43 | 0.22 | 0.84 | 1.00 | 1.00 |
| 394.1 | 680 | 202269 | 0.04 | 0.07 | 0.15 | 0.28 | 0.04 | 0.07 | 0.17 | 0.32 | 0.03 | 0.04 | 0.06 | 0.09 | 0.06 | 0.18 | 0.55 | 0.88 |
| 394.2 | 3323 | 202269 | 0.06 | 0.17 | 0.52 | 0.85 | 0.06 | 0.19 | 0.59 | 0.91 | 0.04 | 0.07 | 0.15 | 0.29 | 0.15 | 0.63 | 1.00 | 1.00 |
| 394.3 | 1453 | 202269 | 0.05 | 0.10 | 0.26 | 0.51 | 0.05 | 0.11 | 0.31 | 0.59 | 0.03 | 0.05 | 0.09 | 0.15 | 0.09 | 0.33 | 0.86 | 1.00 |
| 394.7 | 1335 | 202269 | 0.04 | 0.09 | 0.25 | 0.48 | 0.05 | 0.10 | 0.29 | 0.55 | 0.03 | 0.05 | 0.09 | 0.14 | 0.08 | 0.31 | 0.83 | 0.99 |
| 395 | 6317 | 202269 | 0.08 | 0.28 | 0.78 | 0.98 | 0.09 | 0.32 | 0.85 | 0.99 | 0.04 | 0.09 | 0.25 | 0.48 | 0.24 | 0.88 | 1.00 | 1.00 |
| 395.1 | 3224 | 202269 | 0.06 | 0.17 | 0.51 | 0.84 | 0.06 | 0.19 | 0.58 | 0.90 | 0.04 | 0.07 | 0.15 | 0.28 | 0.14 | 0.61 | 0.99 | 1.00 |
| 395.2 | 2915 | 202269 | 0.06 | 0.15 | 0.47 | 0.80 | 0.06 | 0.18 | 0.54 | 0.87 | 0.04 | 0.06 | 0.14 | 0.26 | 0.13 | 0.57 | 0.99 | 1.00 |
| 395.6 | 1554 | 202269 | 0.05 | 0.10 | 0.28 | 0.54 | 0.05 | 0.11 | 0.32 | 0.62 | 0.03 | 0.05 | 0.09 | 0.16 | 0.09 | 0.35 | 0.88 | 1.00 |
| 396 | 1382 | 202269 | 0.04 | 0.09 | 0.25 | 0.50 | 0.05 | 0.11 | 0.29 | 0.57 | 0.03 | 0.05 | 0.09 | 0.15 | 0.09 | 0.32 | 0.84 | 0.99 |
| 401 | 75408 | 202269 | 0.38 | 0.98 | 1.00 | 1.00 | 0.43 | 0.99 | 1.00 | 1.00 | 0.12 | 0.48 | 0.97 | 1.00 | 0.96 | 1.00 | 1.00 | 1.00 |
| 401.1 | 75160 | 202269 | 0.37 | 0.98 | 1.00 | 1.00 | 0.43 | 0.99 | 1.00 | 1.00 | 0.12 | 0.48 | 0.97 | 1.00 | 0.96 | 1.00 | 1.00 | 1.00 |
| 401.2 | 1667 | 202269 | 0.05 | 0.11 | 0.30 | 0.57 | 0.05 | 0.12 | 0.34 | 0.65 | 0.03 | 0.05 | 0.10 | 0.17 | 0.09 | 0.37 | 0.90 | 1.00 |
| 401.21 | 395 | 202269 | 0.03 | 0.05 | 0.10 | 0.18 | 0.04 | 0.06 | 0.12 | 0.21 | 0.03 | 0.04 | 0.05 | 0.07 | 0.05 | 0.12 | 0.35 | 0.66 |
| 401.22 | 1285 | 202269 | 0.04 | 0.09 | 0.24 | 0.47 | 0.05 | 0.10 | 0.28 | 0.54 | 0.03 | 0.05 | 0.08 | 0.14 | 0.08 | 0.30 | 0.81 | 0.99 |
| 402 | 1464 | 202269 | 0.05 | 0.10 | 0.27 | 0.52 | 0.05 | 0.11 | 0.31 | 0.59 | 0.03 | 0.05 | 0.09 | 0.15 | 0.09 | 0.33 | 0.86 | 1.00 |
| 411 | 30489 | 202269 | 0.21 | 0.81 | 1.00 | 1.00 | 0.24 | 0.88 | 1.00 | 1.00 | 0.08 | 0.26 | 0.75 | 0.98 | 0.74 | 1.00 | 1.00 | 1.00 |
| 411.1 | 4478 | 202269 | 0.07 | 0.21 | 0.64 | 0.94 | 0.07 | 0.24 | 0.72 | 0.97 | 0.04 | 0.08 | 0.19 | 0.37 | 0.18 | 0.75 | 1.00 | 1.00 |
| 411.2 | 12033 | 202269 | 0.11 | 0.46 | 0.96 | 1.00 | 0.13 | 0.53 | 0.98 | 1.00 | 0.05 | 0.14 | 0.41 | 0.74 | 0.40 | 0.99 | 1.00 | 1.00 |
| 411.3 | 15180 | 202269 | 0.13 | 0.55 | 0.99 | 1.00 | 0.15 | 0.62 | 1.00 | 1.00 | 0.06 | 0.16 | 0.49 | 0.83 | 0.48 | 1.00 | 1.00 | 1.00 |
| 411.4 | 19684 | 202269 | 0.15 | 0.65 | 1.00 | 1.00 | 0.18 | 0.73 | 1.00 | 1.00 | 0.06 | 0.19 | 0.59 | 0.90 | 0.57 | 1.00 | 1.00 | 1.00 |
| 411.41 | 735 | 202269 | 0.04 | 0.07 | 0.16 | 0.30 | 0.04 | 0.07 | 0.18 | 0.34 | 0.03 | 0.04 | 0.06 | 0.10 | 0.06 | 0.19 | 0.58 | 0.90 |
| 411.8 | 15139 | 202269 | 0.13 | 0.55 | 0.99 | 1.00 | 0.15 | 0.62 | 1.00 | 1.00 | 0.06 | 0.16 | 0.49 | 0.83 | 0.47 | 1.00 | 1.00 | 1.00 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 411.9 | 1423 | 202269 | 0.04 | 0.10 | 0.26 | 0.51 | 0.05 | 0.11 | 0.30 | 0.58 | 0.03 | 0.05 | 0.09 | 0.15 | 0.09 | 0.32 | 0.85 | 0.99 |
| 414 | 2245 | 202269 | 0.05 | 0.13 | 0.38 | 0.70 | 0.05 | 0.15 | 0.44 | 0.77 | 0.04 | 0.06 | 0.12 | 0.21 | 0.11 | 0.47 | 0.96 | 1.00 |
| 415 | 4937 | 202269 | 0.07 | 0.23 | 0.68 | 0.95 | 0.08 | 0.26 | 0.76 | 0.98 | 0.04 | 0.08 | 0.20 | 0.40 | 0.20 | 0.79 | 1.00 | 1.00 |
| 415.2 | 976 | 202269 | 0.04 | 0.08 | 0.19 | 0.37 | 0.04 | 0.09 | 0.22 | 0.43 | 0.03 | 0.04 | 0.07 | 0.12 | 0.07 | 0.24 | 0.70 | 0.96 |
| 415.21 | 414 | 202269 | 0.03 | 0.05 | 0.11 | 0.19 | 0.04 | 0.06 | 0.12 | 0.21 | 0.03 | 0.04 | 0.05 | 0.07 | 0.05 | 0.13 | 0.37 | 0.68 |
| 416 | 3070 | 202269 | 0.06 | 0.16 | 0.49 | 0.82 | 0.06 | 0.18 | 0.56 | 0.88 | 0.04 | 0.07 | 0.14 | 0.27 | 0.14 | 0.59 | 0.99 | 1.00 |
| 418 | 26417 | 202269 | 0.19 | 0.76 | 1.00 | 1.00 | 0.21 | 0.83 | 1.00 | 1.00 | 0.07 | 0.24 | 0.70 | 0.96 | 0.68 | 1.00 | 1.00 | 1.00 |
| 418.1 | 3619 | 202269 | 0.06 | 0.18 | 0.55 | 0.88 | 0.07 | 0.21 | 0.63 | 0.93 | 0.04 | 0.07 | 0.16 | 0.31 | 0.16 | 0.66 | 1.00 | 1.00 |
| 420 | 2276 | 202269 | 0.05 | 0.13 | 0.38 | 0.70 | 0.06 | 0.15 | 0.44 | 0.78 | 0.04 | 0.06 | 0.12 | 0.21 | 0.11 | 0.47 | 0.97 | 1.00 |
| 420.2 | 1431 | 202269 | 0.04 | 0.10 | 0.26 | 0.51 | 0.05 | 0.11 | 0.30 | 0.58 | 0.03 | 0.05 | 0.09 | 0.15 | 0.09 | 0.32 | 0.85 | 0.99 |
| 420.21 | 209 | 202269 | 0.03 | 0.04 | 0.07 | 0.11 | 0.03 | 0.05 | 0.08 | 0.13 | 0.03 | 0.03 | 0.04 | 0.05 | 0.04 | 0.08 | 0.21 | 0.41 |
| 420.3 | 764 | 202269 | 0.04 | 0.07 | 0.16 | 0.31 | 0.04 | 0.08 | 0.18 | 0.35 | 0.03 | 0.04 | 0.07 | 0.10 | 0.06 | 0.20 | 0.60 | 0.91 |
| 425 | 1363 | 202269 | 0.04 | 0.09 | 0.25 | 0.49 | 0.05 | 0.10 | 0.29 | 0.56 | 0.03 | 0.05 | 0.09 | 0.14 | 0.08 | 0.31 | 0.84 | 0.99 |
| 425.1 | 1307 | 202269 | 0.04 | 0.09 | 0.24 | 0.47 | 0.05 | 0.10 | 0.28 | 0.54 | 0.03 | 0.05 | 0.08 | 0.14 | 0.08 | 0.30 | 0.82 | 0.99 |
| 426 | 7651 | 202269 | 0.09 | 0.32 | 0.85 | 0.99 | 0.10 | 0.38 | 0.91 | 1.00 | 0.05 | 0.10 | 0.29 | 0.55 | 0.28 | 0.93 | 1.00 | 1.00 |
| 426.2 | 2459 | 202269 | 0.05 | 0.14 | 0.41 | 0.74 | 0.06 | 0.15 | 0.47 | 0.81 | 0.04 | 0.06 | 0.12 | 0.22 | 0.12 | 0.50 | 0.98 | 1.00 |
| 426.21 | 1220 | 202269 | 0.04 | 0.09 | 0.23 | 0.45 | 0.05 | 0.10 | 0.27 | 0.52 | 0.03 | 0.05 | 0.08 | 0.13 | 0.08 | 0.28 | 0.79 | 0.99 |
| 426.23 | 508 | 202269 | 0.04 | 0.06 | 0.12 | 0.22 | 0.04 | 0.06 | 0.14 | 0.25 | 0.03 | 0.04 | 0.06 | 0.08 | 0.05 | 0.14 | 0.44 | 0.77 |
| 426.24 | 659 | 202269 | 0.04 | 0.07 | 0.14 | 0.27 | 0.04 | 0.07 | 0.16 | 0.31 | 0.03 | 0.04 | 0.06 | 0.09 | 0.06 | 0.17 | 0.53 | 0.87 |
| 426.3 | 3818 | 202269 | 0.06 | 0.19 | 0.57 | 0.90 | 0.07 | 0.22 | 0.65 | 0.94 | 0.04 | 0.07 | 0.17 | 0.32 | 0.16 | 0.69 | 1.00 | 1.00 |
| 426.31 | 1758 | 202269 | 0.05 | 0.11 | 0.31 | 0.59 | 0.05 | 0.12 | 0.36 | 0.67 | 0.03 | 0.05 | 0.10 | 0.17 | 0.10 | 0.38 | 0.92 | 1.00 |
| 426.32 | 2030 | 202269 | 0.05 | 0.12 | 0.35 | 0.65 | 0.05 | 0.14 | 0.40 | 0.73 | 0.03 | 0.06 | 0.11 | 0.19 | 0.11 | 0.43 | 0.95 | 1.00 |
| 426.4 | 210 | 202269 | 0.03 | 0.04 | 0.07 | 0.12 | 0.03 | 0.05 | 0.08 | 0.13 | 0.03 | 0.03 | 0.04 | 0.05 | 0.04 | 0.08 | 0.21 | 0.41 |
| 426.9 | 2715 | 202269 | 0.06 | 0.15 | 0.44 | 0.78 | 0.06 | 0.17 | 0.51 | 0.84 | 0.04 | 0.06 | 0.13 | 0.24 | 0.13 | 0.54 | 0.99 | 1.00 |
| 426.91 | 2511 | 202269 | 0.05 | 0.14 | 0.42 | 0.74 | 0.06 | 0.16 | 0.48 | 0.82 | 0.04 | 0.06 | 0.13 | 0.23 | 0.12 | 0.51 | 0.98 | 1.00 |
| 427 | 25228 | 202269 | 0.18 | 0.75 | 1.00 | 1.00 | 0.21 | 0.82 | 1.00 | 1.00 | 0.07 | 0.23 | 0.68 | 0.95 | 0.67 | 1.00 | 1.00 | 1.00 |
| 427.1 | 3202 | 202269 | 0.06 | 0.16 | 0.50 | 0.84 | 0.06 | 0.19 | 0.58 | 0.90 | 0.04 | 0.07 | 0.15 | 0.28 | 0.14 | 0.61 | 0.99 | 1.00 |
| 427.11 | 2326 | 202269 | 0.05 | 0.13 | 0.39 | 0.71 | 0.06 | 0.15 | 0.45 | 0.79 | 0.04 | 0.06 | 0.12 | 0.21 | 0.12 | 0.48 | 0.97 | 1.00 |
| 427.12 | 956 | 202269 | 0.04 | 0.08 | 0.19 | 0.37 | 0.04 | 0.09 | 0.22 | 0.43 | 0.03 | 0.04 | 0.07 | 0.11 | 0.07 | 0.23 | 0.69 | 0.96 |
| 427.2 | 15491 | 202269 | 0.13 | 0.56 | 0.99 | 1.00 | 0.15 | 0.63 | 1.00 | 1.00 | 0.06 | 0.16 | 0.50 | 0.83 | 0.48 | 1.00 | 1.00 | 1.00 |
| 427.21 | 983 | 202269 | 0.04 | 0.08 | 0.19 | 0.38 | 0.04 | 0.09 | 0.22 | 0.44 | 0.03 | 0.04 | 0.07 | 0.12 | 0.07 | 0.24 | 0.70 | 0.96 |
| 427.3 | 3400 | 202269 | 0.06 | 0.17 | 0.53 | 0.86 | 0.06 | 0.20 | 0.60 | 0.91 | 0.04 | 0.07 | 0.15 | 0.29 | 0.15 | 0.64 | 1.00 | 1.00 |
| 427.4 | 1324 | 202269 | 0.04 | 0.09 | 0.25 | 0.48 | 0.05 | 0.10 | 0.28 | 0.55 | 0.03 | 0.05 | 0.09 | 0.14 | 0.08 | 0.30 | 0.83 | 0.99 |
| 427.41 | 365 | 202269 | 0.03 | 0.05 | 0.10 | 0.17 | 0.03 | 0.06 | 0.11 | 0.19 | 0.03 | 0.04 | 0.05 | 0.07 | 0.05 | 0.12 | 0.33 | 0.63 |
| 427.42 | 1121 | 202269 | 0.04 | 0.08 | 0.21 | 0.42 | 0.04 | 0.09 | 0.25 | 0.48 | 0.03 | 0.05 | 0.08 | 0.13 | 0.08 | 0.27 | 0.76 | 0.98 |
| 427.5 | 998 | 202269 | 0.04 | 0.08 | 0.20 | 0.38 | 0.04 | 0.09 | 0.23 | 0.44 | 0.03 | 0.04 | 0.07 | 0.12 | 0.07 | 0.24 | 0.71 | 0.97 |
| 427.6 | 837 | 202269 | 0.04 | 0.07 | 0.17 | 0.33 | 0.04 | 0.08 | 0.20 | 0.38 | 0.03 | 0.04 | 0.07 | 0.10 | 0.07 | 0.21 | 0.63 | 0.93 |
| 427.7 | 2398 | 202269 | 0.05 | 0.13 | 0.40 | 0.73 | 0.06 | 0.15 | 0.46 | 0.80 | 0.04 | 0.06 | 0.12 | 0.22 | 0.12 | 0.49 | 0.97 | 1.00 |
| 427.8 | 484 | 202269 | 0.04 | 0.06 | 0.12 | 0.21 | 0.04 | 0.06 | 0.13 | 0.24 | 0.03 | 0.04 | 0.05 | 0.08 | 0.05 | 0.14 | 0.42 | 0.75 |
| 427.9 | 3694 | 202269 | 0.06 | 0.18 | 0.56 | 0.89 | 0.07 | 0.21 | 0.64 | 0.93 | 0.04 | 0.07 | 0.16 | 0.31 | 0.16 | 0.67 | 1.00 | 1.00 |
| 428 | 6185 | 202269 | 0.08 | 0.27 | 0.77 | 0.98 | 0.09 | 0.32 | 0.84 | 0.99 | 0.04 | 0.09 | 0.24 | 0.47 | 0.23 | 0.87 | 1.00 | 1.00 |
| 428.1 | 3650 | 202269 | 0.06 | 0.18 | 0.56 | 0.88 | 0.07 | 0.21 | 0.63 | 0.93 | 0.04 | 0.07 | 0.16 | 0.31 | 0.16 | 0.67 | 1.00 | 1.00 |
| 428.2 | 4914 | 202269 | 0.07 | 0.23 | 0.68 | 0.95 | 0.08 | 0.26 | 0.76 | 0.98 | 0.04 | 0.08 | 0.20 | 0.39 | 0.20 | 0.79 | 1.00 | 1.00 |
| 429 | 756 | 202269 | 0.04 | 0.07 | 0.16 | 0.30 | 0.04 | 0.08 | 0.18 | 0.35 | 0.03 | 0.04 | 0.07 | 0.10 | 0.06 | 0.19 | 0.59 | 0.91 |
| 429.2 | 553 | 202269 | 0.04 | 0.06 | 0.13 | 0.23 | 0.04 | 0.07 | 0.14 | 0.27 | 0.03 | 0.04 | 0.06 | 0.08 | 0.06 | 0.15 | 0.47 | 0.80 |
| 430 | 1984 | 202269 | 0.05 | 0.12 | 0.34 | 0.64 | 0.05 | 0.13 | 0.40 | 0.72 | 0.03 | 0.05 | 0.11 | 0.19 | 0.11 | 0.42 | 0.94 | 1.00 |
| 430.1 | 816 | 202269 | 0.04 | 0.07 | 0.17 | 0.32 | 0.04 | 0.08 | 0.19 | 0.37 | 0.03 | 0.04 | 0.07 | 0.10 | 0.07 | 0.21 | 0.62 | 0.93 |
| 430.2 | 855 | 202269 | 0.04 | 0.07 | 0.17 | 0.34 | 0.04 | 0.08 | 0.20 | 0.39 | 0.03 | 0.04 | 0.07 | 0.11 | 0.07 | 0.21 | 0.64 | 0.94 |
| 430.3 | 308 | 202269 | 0.03 | 0.05 | 0.09 | 0.15 | 0.03 | 0.05 | 0.10 | 0.17 | 0.03 | 0.03 | 0.05 | 0.06 | 0.05 | 0.10 | 0.29 | 0.56 |
| 433 | 9077 | 202269 | 0.10 | 0.37 | 0.90 | 1.00 | 0.11 | 0.43 | 0.95 | 1.00 | 0.05 | 0.11 | 0.33 | 0.62 | 0.32 | 0.96 | 1.00 | 1.00 |
| 433.1 | 1354 | 202269 | 0.04 | 0.09 | 0.25 | 0.49 | 0.05 | 0.10 | 0.29 | 0.56 | 0.03 | 0.05 | 0.09 | 0.14 | 0.08 | 0.31 | 0.83 | 0.99 |
| 433.12 | 270 | 202269 | 0.03 | 0.05 | 0.08 | 0.14 | 0.03 | 0.05 | 0.09 | 0.15 | 0.03 | 0.03 | 0.05 | 0.06 | 0.04 | 0.10 | 0.26 | 0.50 |
| 433.2 | 4355 | 202269 | 0.07 | 0.21 | 0.63 | 0.93 | 0.07 | 0.24 | 0.71 | 0.96 | 0.04 | 0.08 | 0.18 | 0.36 | 0.18 | 0.74 | 1.00 | 1.00 |
| 433.21 | 4193 | 202269 | 0.07 | 0.20 | 0.61 | 0.92 | 0.07 | 0.23 | 0.69 | 0.96 | 0.04 | 0.08 | 0.18 | 0.35 | 0.17 | 0.73 | 1.00 | 1.00 |
| 433.3 | 3089 | 202269 | 0.06 | 0.16 | 0.49 | 0.83 | 0.06 | 0.18 | 0.56 | 0.89 | 0.04 | 0.07 | 0.14 | 0.27 | 0.14 | 0.60 | 0.99 | 1.00 |
| 433.31 | 2115 | 202269 | 0.05 | 0.12 | 0.36 | 0.67 | 0.05 | 0.14 | 0.42 | 0.75 | 0.04 | 0.06 | 0.11 | 0.20 | 0.11 | 0.45 | 0.95 | 1.00 |
| 433.5 | 364 | 202269 | 0.03 | 0.05 | 0.10 | 0.17 | 0.03 | 0.06 | 0.11 | 0.19 | 0.03 | 0.04 | 0.05 | 0.07 | 0.05 | 0.12 | 0.33 | 0.63 |
| 433.8 | 1333 | 202269 | 0.04 | 0.09 | 0.25 | 0.48 | 0.05 | 0.10 | 0.29 | 0.55 | 0.03 | 0.05 | 0.09 | 0.14 | 0.08 | 0.31 | 0.83 | 0.99 |
| 440 | 1453 | 202269 | 0.05 | 0.10 | 0.26 | 0.51 | 0.05 | 0.11 | 0.31 | 0.59 | 0.03 | 0.05 | 0.09 | 0.15 | 0.09 | 0.33 | 0.86 | 1.00 |
| 440.2 | 848 | 202269 | 0.04 | 0.07 | 0.17 | 0.33 | 0.04 | 0.08 | 0.20 | 0.39 | 0.03 | 0.04 | 0.07 | 0.11 | 0.07 | 0.21 | 0.64 | 0.94 |
| 440.9 | 331 | 202269 | 0.03 | 0.05 | 0.09 | 0.16 | 0.03 | 0.05 | 0.10 | 0.18 | 0.03 | 0.03 | 0.05 | 0.06 | 0.05 | 0.11 | 0.31 | 0.59 |
| 441 | 701 | 202269 | 0.04 | 0.07 | 0.15 | 0.28 | 0.04 | 0.07 | 0.17 | 0.33 | 0.03 | 0.04 | 0.06 | 0.09 | 0.06 | 0.18 | 0.56 | 0.89 |
| 441.1 | 321 | 202269 | 0.03 | 0.05 | 0.09 | 0.15 | 0.03 | 0.05 | 0.10 | 0.18 | 0.03 | 0.03 | 0.05 | 0.06 | 0.05 | 0.11 | 0.30 | 0.57 |
| 442 | 2079 | 202269 | 0.05 | 0.12 | 0.36 | 0.66 | 0.05 | 0.14 | 0.41 | 0.74 | 0.03 | 0.06 | 0.11 | 0.20 | 0.11 | 0.44 | 0.95 | 1.00 |
| 442.1 | 1632 | 202269 | 0.05 | 0.10 | 0.29 | 0.56 | 0.05 | 0.12 | 0.34 | 0.64 | 0.03 | 0.05 | 0.10 | 0.16 | 0.09 | 0.36 | 0.89 | 1.00 |
| 442.11 | 1047 | 202269 | 0.04 | 0.08 | 0.20 | 0.40 | 0.04 | 0.09 | 0.23 | 0.46 | 0.03 | 0.04 | 0.08 | 0.12 | 0.07 | 0.25 | 0.73 | 0.97 |
| 442.8 | 218 | 202269 | 0.03 | 0.04 | 0.07 | 0.12 | 0.03 | 0.05 | 0.08 | 0.13 | 0.03 | 0.03 | 0.04 | 0.05 | 0.04 | 0.09 | 0.22 | 0.42 |
| 443 | 4031 | 202269 | 0.06 | 0.20 | 0.60 | 0.91 | 0.07 | 0.22 | 0.67 | 0.95 | 0.04 | 0.07 | 0.17 | 0.34 | 0.17 | 0.71 | 1.00 | 1.00 |
| 443.1 | 1162 | 202269 | 0.04 | 0.09 | 0.22 | 0.43 | 0.04 | 0.10 | 0.26 | 0.50 | 0.03 | 0.05 | 0.08 | 0.13 | 0.08 | 0.27 | 0.77 | 0.98 |
| 443.7 | 397 | 202269 | 0.03 | 0.05 | 0.10 | 0.18 | 0.04 | 0.06 | 0.12 | 0.21 | 0.03 | 0.04 | 0.05 | 0.07 | 0.05 | 0.12 | 0.36 | 0.66 |
| 443.9 | 2679 | 202269 | 0.05 | 0.14 | 0.44 | 0.77 | 0.06 | 0.16 | 0.50 | 0.84 | 0.04 | 0.06 | 0.13 | 0.24 | 0.13 | 0.54 | 0.98 | 1.00 |
| 444 | 903 | 202269 | 0.04 | 0.08 | 0.18 | 0.35 | 0.04 | 0.08 | 0.21 | 0.41 | 0.03 | 0.04 | 0.07 | 0.11 | 0.07 | 0.22 | 0.67 | 0.95 |
| 444.1 | 560 | 202269 | 0.04 | 0.06 | 0.13 | 0.24 | 0.04 | 0.07 | 0.15 | 0.27 | 0.03 | 0.04 | 0.06 | 0.08 | 0.06 | 0.15 | 0.47 | 0.81 |
| 446 | 857 | 202269 | 0.04 | 0.07 | 0.17 | 0.34 | 0.04 | 0.08 | 0.20 | 0.39 | 0.03 | 0.04 | 0.07 | 0.11 | 0.07 | 0.21 | 0.65 | 0.94 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 446.5 | 417 | 202269 | 0.03 | 0.05 | 0.11 | 0.19 | 0.04 | 0.06 | 0.12 | 0.22 | 0.03 | 0.04 | 0.05 | 0.07 | 0.05 | 0.13 | 0.37 | 0.69 |
| 446.9 | 258 | 202269 | 0.03 | 0.05 | 0.08 | 0.13 | 0.03 | 0.05 | 0.09 | 0.15 | 0.03 | 0.03 | 0.04 | 0.06 | 0.04 | 0.09 | 0.25 | 0.48 |
| 447 | 1320 | 202269 | 0.04 | 0.09 | 0.24 | 0.48 | 0.05 | 0.10 | 0.28 | 0.55 | 0.03 | 0.05 | 0.09 | 0.14 | 0.08 | 0.30 | 0.82 | 0.99 |
| 447.1 | 858 | 202269 | 0.04 | 0.07 | 0.17 | 0.34 | 0.04 | 0.08 | 0.20 | 0.39 | 0.03 | 0.04 | 0.07 | 0.11 | 0.07 | 0.21 | 0.65 | 0.94 |
| 450 | 805 | 202269 | 0.04 | 0.07 | 0.17 | 0.32 | 0.04 | 0.08 | 0.19 | 0.37 | 0.03 | 0.04 | 0.07 | 0.10 | 0.07 | 0.20 | 0.62 | 0.92 |
| 451 | 3916 | 202269 | 0.06 | 0.19 | 0.58 | 0.90 | 0.07 | 0.22 | 0.66 | 0.95 | 0.04 | 0.07 | 0.17 | 0.33 | 0.17 | 0.70 | 1.00 | 1.00 |
| 451.2 | 3612 | 202269 | 0.06 | 0.18 | 0.55 | 0.88 | 0.07 | 0.21 | 0.63 | 0.93 | 0.04 | 0.07 | 0.16 | 0.31 | 0.16 | 0.66 | 1.00 | 1.00 |
| 452 | 598 | 202269 | 0.04 | 0.06 | 0.13 | 0.25 | 0.04 | 0.07 | 0.15 | 0.29 | 0.03 | 0.04 | 0.06 | 0.09 | 0.06 | 0.16 | 0.50 | 0.83 |
| 454 | 10793 | 202269 | 0.11 | 0.43 | 0.94 | 1.00 | 0.12 | 0.49 | 0.97 | 1.00 | 0.05 | 0.13 | 0.38 | 0.70 | 0.37 | 0.98 | 1.00 | 1.00 |
| 454.1 | 10333 | 202269 | 0.10 | 0.41 | 0.94 | 1.00 | 0.11 | 0.48 | 0.97 | 1.00 | 0.05 | 0.12 | 0.36 | 0.68 | 0.35 | 0.98 | 1.00 | 1.00 |
| 454.11 | 716 | 202269 | 0.04 | 0.07 | 0.15 | 0.29 | 0.04 | 0.07 | 0.17 | 0.34 | 0.03 | 0.04 | 0.06 | 0.10 | 0.06 | 0.19 | 0.57 | 0.89 |
| 455 | 23176 | 202269 | 0.17 | 0.71 | 1.00 | 1.00 | 0.20 | 0.79 | 1.00 | 1.00 | 0.07 | 0.22 | 0.65 | 0.94 | 0.63 | 1.00 | 1.00 | 1.00 |
| 456 | 224 | 202269 | 0.03 | 0.04 | 0.08 | 0.12 | 0.03 | 0.05 | 0.08 | 0.14 | 0.03 | 0.03 | 0.04 | 0.06 | 0.04 | 0.09 | 0.22 | 0.43 |
| 458 | 6659 | 202269 | 0.08 | 0.29 | 0.80 | 0.99 | 0.09 | 0.34 | 0.87 | 1.00 | 0.04 | 0.10 | 0.26 | 0.50 | 0.25 | 0.89 | 1.00 | 1.00 |
| 458.1 | 1622 | 202269 | 0.05 | 0.10 | 0.29 | 0.56 | 0.05 | 0.12 | 0.34 | 0.63 | 0.03 | 0.05 | 0.10 | 0.16 | 0.09 | 0.36 | 0.89 | 1.00 |
| 458.2 | 250 | 202269 | 0.03 | 0.05 | 0.08 | 0.13 | 0.03 | 0.05 | 0.09 | 0.15 | 0.03 | 0.03 | 0.04 | 0.06 | 0.04 | 0.09 | 0.24 | 0.47 |
| 458.9 | 4073 | 202269 | 0.06 | 0.20 | 0.60 | 0.91 | 0.07 | 0.23 | 0.68 | 0.95 | 0.04 | 0.07 | 0.18 | 0.34 | 0.17 | 0.71 | 1.00 | 1.00 |
| 459 | 17142 | 202269 | 0.14 | 0.60 | 0.99 | 1.00 | 0.16 | 0.67 | 1.00 | 1.00 | 0.06 | 0.17 | 0.53 | 0.87 | 0.52 | 1.00 | 1.00 | 1.00 |
| 459.9 | 16931 | 202269 | 0.14 | 0.59 | 0.99 | 1.00 | 0.16 | 0.67 | 1.00 | 1.00 | 0.06 | 0.17 | 0.53 | 0.86 | 0.51 | 1.00 | 1.00 | 1.00 |
| 465 | 2223 | 269389 | 0.05 | 0.13 | 0.38 | 0.69 | 0.05 | 0.14 | 0.44 | 0.77 | 0.04 | 0.06 | 0.12 | 0.21 | 0.11 | 0.47 | 0.96 | 1.00 |
| 465.2 | 841 | 269389 | 0.04 | 0.07 | 0.17 | 0.33 | 0.04 | 0.08 | 0.20 | 0.38 | 0.03 | 0.04 | 0.07 | 0.11 | 0.07 | 0.21 | 0.64 | 0.93 |
| 470 | 4226 | 269389 | 0.07 | 0.20 | 0.62 | 0.92 | 0.07 | 0.23 | 0.69 | 0.96 | 0.04 | 0.08 | 0.18 | 0.35 | 0.18 | 0.73 | 1.00 | 1.00 |
| 471 | 2933 | 269389 | 0.06 | 0.15 | 0.47 | 0.81 | 0.06 | 0.18 | 0.54 | 0.87 | 0.04 | 0.06 | 0.14 | 0.26 | 0.14 | 0.58 | 0.99 | 1.00 |
| 472 | 906 | 269389 | 0.04 | 0.08 | 0.18 | 0.35 | 0.04 | 0.08 | 0.21 | 0.41 | 0.03 | 0.04 | 0.07 | 0.11 | 0.07 | 0.22 | 0.67 | 0.95 |
| 473 | 2414 | 269389 | 0.05 | 0.14 | 0.40 | 0.73 | 0.06 | 0.15 | 0.47 | 0.80 | 0.04 | 0.06 | 0.12 | 0.22 | 0.12 | 0.50 | 0.97 | 1.00 |
| 473.3 | 263 | 269389 | 0.03 | 0.05 | 0.08 | 0.13 | 0.03 | 0.05 | 0.09 | 0.15 | 0.03 | 0.03 | 0.04 | 0.06 | 0.04 | 0.09 | 0.25 | 0.49 |
| 473.4 | 972 | 269389 | 0.04 | 0.08 | 0.19 | 0.37 | 0.04 | 0.09 | 0.22 | 0.43 | 0.03 | 0.04 | 0.07 | 0.11 | 0.07 | 0.24 | 0.70 | 0.96 |
| 474 | 1762 | 269389 | 0.05 | 0.11 | 0.31 | 0.59 | 0.05 | 0.12 | 0.36 | 0.67 | 0.03 | 0.05 | 0.10 | 0.17 | 0.10 | 0.39 | 0.92 | 1.00 |
| 474.1 | 552 | 269389 | 0.04 | 0.06 | 0.13 | 0.23 | 0.04 | 0.07 | 0.14 | 0.27 | 0.03 | 0.04 | 0.06 | 0.08 | 0.06 | 0.15 | 0.47 | 0.80 |
| 474.2 | 971 | 269389 | 0.04 | 0.08 | 0.19 | 0.37 | 0.04 | 0.09 | 0.22 | 0.43 | 0.03 | 0.04 | 0.07 | 0.11 | 0.07 | 0.24 | 0.70 | 0.96 |
| 475 | 2395 | 269389 | 0.05 | 0.13 | 0.40 | 0.73 | 0.06 | 0.15 | 0.46 | 0.80 | 0.04 | 0.06 | 0.12 | 0.22 | 0.12 | 0.49 | 0.97 | 1.00 |
| 476 | 1225 | 269389 | 0.04 | 0.09 | 0.23 | 0.45 | 0.05 | 0.10 | 0.27 | 0.52 | 0.03 | 0.05 | 0.08 | 0.13 | 0.08 | 0.29 | 0.80 | 0.99 |
| 477 | 2412 | 269389 | 0.05 | 0.13 | 0.40 | 0.73 | 0.06 | 0.15 | 0.46 | 0.80 | 0.04 | 0.06 | 0.12 | 0.22 | 0.12 | 0.50 | 0.97 | 1.00 |
| 478 | 338 | 269389 | 0.03 | 0.05 | 0.09 | 0.16 | 0.03 | 0.05 | 0.10 | 0.18 | 0.03 | 0.04 | 0.05 | 0.07 | 0.05 | 0.11 | 0.31 | 0.59 |
| 479 | 3786 | 269389 | 0.06 | 0.19 | 0.57 | 0.89 | 0.07 | 0.21 | 0.65 | 0.94 | 0.04 | 0.07 | 0.17 | 0.32 | 0.16 | 0.68 | 1.00 | 1.00 |
| 480 | 11693 | 269389 | 0.11 | 0.46 | 0.96 | 1.00 | 0.13 | 0.53 | 0.98 | 1.00 | 0.05 | 0.14 | 0.41 | 0.73 | 0.39 | 0.99 | 1.00 | 1.00 |
| 480.1 | 7555 | 269389 | 0.09 | 0.32 | 0.85 | 0.99 | 0.10 | 0.37 | 0.91 | 1.00 | 0.05 | 0.10 | 0.29 | 0.55 | 0.28 | 0.93 | 1.00 | 1.00 |
| 480.11 | 6741 | 269389 | 0.08 | 0.29 | 0.81 | 0.99 | 0.09 | 0.34 | 0.87 | 1.00 | 0.04 | 0.10 | 0.26 | 0.51 | 0.25 | 0.90 | 1.00 | 1.00 |
| 480.5 | 894 | 269389 | 0.04 | 0.08 | 0.18 | 0.35 | 0.04 | 0.08 | 0.21 | 0.40 | 0.03 | 0.04 | 0.07 | 0.11 | 0.07 | 0.22 | 0.66 | 0.95 |
| 481 | 418 | 269389 | 0.03 | 0.05 | 0.11 | 0.19 | 0.04 | 0.06 | 0.12 | 0.22 | 0.03 | 0.04 | 0.05 | 0.07 | 0.05 | 0.13 | 0.37 | 0.69 |
| 483 | 227 | 269389 | 0.03 | 0.04 | 0.08 | 0.12 | 0.03 | 0.05 | 0.08 | 0.14 | 0.03 | 0.03 | 0.04 | 0.06 | 0.04 | 0.09 | 0.22 | 0.44 |
| 495 | 24896 | 269389 | 0.18 | 0.75 | 1.00 | 1.00 | 0.21 | 0.82 | 1.00 | 1.00 | 0.07 | 0.23 | 0.69 | 0.96 | 0.67 | 1.00 | 1.00 | 1.00 |
| 495.2 | 229 | 269389 | 0.03 | 0.05 | 0.08 | 0.12 | 0.03 | 0.05 | 0.08 | 0.14 | 0.03 | 0.03 | 0.04 | 0.06 | 0.04 | 0.09 | 0.23 | 0.44 |
| 496 | 11361 | 269389 | 0.11 | 0.45 | 0.96 | 1.00 | 0.12 | 0.52 | 0.98 | 1.00 | 0.05 | 0.13 | 0.40 | 0.72 | 0.38 | 0.99 | 1.00 | 1.00 |
| 496.1 | 1937 | 269389 | 0.05 | 0.12 | 0.34 | 0.64 | 0.05 | 0.13 | 0.39 | 0.71 | 0.03 | 0.05 | 0.11 | 0.19 | 0.10 | 0.42 | 0.94 | 1.00 |
| 496.2 | 3258 | 269389 | 0.06 | 0.17 | 0.51 | 0.85 | 0.06 | 0.19 | 0.58 | 0.90 | 0.04 | 0.07 | 0.15 | 0.28 | 0.15 | 0.62 | 0.99 | 1.00 |
| 496.21 | 2997 | 269389 | 0.06 | 0.16 | 0.48 | 0.82 | 0.06 | 0.18 | 0.55 | 0.88 | 0.04 | 0.06 | 0.14 | 0.26 | 0.14 | 0.58 | 0.99 | 1.00 |
| 496.3 | 2143 | 269389 | 0.05 | 0.12 | 0.37 | 0.68 | 0.05 | 0.14 | 0.42 | 0.75 | 0.04 | 0.06 | 0.11 | 0.20 | 0.11 | 0.45 | 0.96 | 1.00 |
| 497 | 647 | 269389 | 0.04 | 0.06 | 0.14 | 0.27 | 0.04 | 0.07 | 0.16 | 0.31 | 0.03 | 0.04 | 0.06 | 0.09 | 0.06 | 0.17 | 0.53 | 0.86 |
| 500 | 459 | 269389 | 0.04 | 0.06 | 0.11 | 0.20 | 0.04 | 0.06 | 0.13 | 0.23 | 0.03 | 0.04 | 0.05 | 0.08 | 0.05 | 0.13 | 0.40 | 0.73 |
| 500.2 | 273 | 269389 | 0.03 | 0.05 | 0.08 | 0.14 | 0.03 | 0.05 | 0.09 | 0.16 | 0.03 | 0.03 | 0.05 | 0.06 | 0.04 | 0.10 | 0.26 | 0.51 |
| 501 | 852 | 269389 | 0.04 | 0.07 | 0.17 | 0.33 | 0.04 | 0.08 | 0.20 | 0.39 | 0.03 | 0.04 | 0.07 | 0.11 | 0.07 | 0.21 | 0.64 | 0.94 |
| 502 | 1036 | 269389 | 0.04 | 0.08 | 0.20 | 0.39 | 0.04 | 0.09 | 0.23 | 0.45 | 0.03 | 0.04 | 0.08 | 0.12 | 0.07 | 0.25 | 0.73 | 0.97 |
| 503 | 534 | 269389 | 0.04 | 0.06 | 0.12 | 0.23 | 0.04 | 0.06 | 0.14 | 0.26 | 0.03 | 0.04 | 0.06 | 0.08 | 0.06 | 0.15 | 0.45 | 0.79 |
| 504 | 389 | 269389 | 0.03 | 0.05 | 0.10 | 0.18 | 0.04 | 0.06 | 0.11 | 0.20 | 0.03 | 0.04 | 0.05 | 0.07 | 0.05 | 0.12 | 0.35 | 0.66 |
| 506 | 1207 | 269389 | 0.04 | 0.09 | 0.23 | 0.45 | 0.05 | 0.10 | 0.26 | 0.51 | 0.03 | 0.05 | 0.08 | 0.13 | 0.08 | 0.28 | 0.79 | 0.99 |
| 507 | 6979 | 269389 | 0.08 | 0.30 | 0.82 | 0.99 | 0.09 | 0.35 | 0.88 | 1.00 | 0.05 | 0.10 | 0.27 | 0.52 | 0.26 | 0.91 | 1.00 | 1.00 |
| 508 | 2447 | 269389 | 0.05 | 0.14 | 0.41 | 0.74 | 0.06 | 0.15 | 0.47 | 0.81 | 0.04 | 0.06 | 0.12 | 0.22 | 0.12 | 0.50 | 0.98 | 1.00 |
| 509 | 3054 | 269389 | 0.06 | 0.16 | 0.49 | 0.82 | 0.06 | 0.18 | 0.56 | 0.88 | 0.04 | 0.07 | 0.14 | 0.27 | 0.14 | 0.59 | 0.99 | 1.00 |
| 509.1 | 2479 | 269389 | 0.05 | 0.14 | 0.41 | 0.74 | 0.06 | 0.16 | 0.48 | 0.81 | 0.04 | 0.06 | 0.12 | 0.23 | 0.12 | 0.51 | 0.98 | 1.00 |
| 509.2 | 2205 | 269389 | 0.05 | 0.13 | 0.37 | 0.69 | 0.05 | 0.14 | 0.43 | 0.77 | 0.04 | 0.06 | 0.12 | 0.21 | 0.11 | 0.46 | 0.96 | 1.00 |
| 509.8 | 444 | 269389 | 0.03 | 0.06 | 0.11 | 0.20 | 0.04 | 0.06 | 0.12 | 0.23 | 0.03 | 0.04 | 0.05 | 0.07 | 0.05 | 0.13 | 0.39 | 0.71 |
| 510 | 1171 | 269389 | 0.04 | 0.09 | 0.22 | 0.43 | 0.04 | 0.10 | 0.26 | 0.50 | 0.03 | 0.05 | 0.08 | 0.13 | 0.08 | 0.28 | 0.78 | 0.98 |
| 512 | 9349 | 269389 | 0.10 | 0.38 | 0.91 | 1.00 | 0.11 | 0.44 | 0.95 | 1.00 | 0.05 | 0.12 | 0.34 | 0.64 | 0.33 | 0.97 | 1.00 | 1.00 |
| 512.1 | 268 | 269389 | 0.03 | 0.05 | 0.08 | 0.14 | 0.03 | 0.05 | 0.09 | 0.15 | 0.03 | 0.03 | 0.05 | 0.06 | 0.04 | 0.10 | 0.26 | 0.50 |
| 512.2 | 203 | 269389 | 0.03 | 0.04 | 0.07 | 0.11 | 0.03 | 0.05 | 0.08 | 0.13 | 0.03 | 0.03 | 0.04 | 0.05 | 0.04 | 0.08 | 0.21 | 0.40 |
| 512.7 | 6109 | 269389 | 0.08 | 0.27 | 0.77 | 0.98 | 0.09 | 0.32 | 0.84 | 0.99 | 0.04 | 0.09 | 0.24 | 0.47 | 0.23 | 0.87 | 1.00 | 1.00 |
| 512.8 | 2986 | 269389 | 0.06 | 0.16 | 0.48 | 0.82 | 0.06 | 0.18 | 0.55 | 0.88 | 0.04 | 0.06 | 0.14 | 0.26 | 0.14 | 0.58 | 0.99 | 1.00 |
| 512.9 | 884 | 269389 | 0.04 | 0.07 | 0.18 | 0.34 | 0.04 | 0.08 | 0.21 | 0.40 | 0.03 | 0.04 | 0.07 | 0.11 | 0.07 | 0.22 | 0.66 | 0.94 |
| 513 | 603 | 269389 | 0.04 | 0.06 | 0.14 | 0.25 | 0.04 | 0.07 | 0.15 | 0.29 | 0.03 | 0.04 | 0.06 | 0.09 | 0.06 | 0.16 | 0.50 | 0.84 |
| 513.4 | 251 | 269389 | 0.03 | 0.05 | 0.08 | 0.13 | 0.03 | 0.05 | 0.09 | 0.15 | 0.03 | 0.03 | 0.04 | 0.06 | 0.04 | 0.09 | 0.24 | 0.47 |
| 514 | 2607 | 269389 | 0.05 | 0.14 | 0.43 | 0.76 | 0.06 | 0.16 | 0.49 | 0.83 | 0.04 | 0.06 | 0.13 | 0.24 | 0.13 | 0.53 | 0.98 | 1.00 |
| 516 | 2036 | 269389 | 0.05 | 0.12 | 0.35 | 0.66 | 0.05 | 0.14 | 0.41 | 0.73 | 0.03 | 0.06 | 0.11 | 0.19 | 0.11 | 0.43 | 0.95 | 1.00 |
| 516.1 | 1948 | 269389 | 0.05 | 0.12 | 0.34 | 0.64 | 0.05 | 0.13 | 0.39 | 0.71 | 0.03 | 0.05 | 0.11 | 0.19 | 0.10 | 0.42 | 0.94 | 1.00 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 519 | 9890 | 269389 | 0.10 | 0.40 | 0.93 | 1.00 | 0.11 | 0.46 | 0.96 | 1.00 | 0.05 | 0.12 | 0.36 | 0.66 | 0.34 | 0.97 | 1.00 | 1.00 |
| 519.2 | 323 | 269389 | 0.03 | 0.05 | 0.09 | 0.15 | 0.03 | 0.05 | 0.10 | 0.18 | 0.03 | 0.03 | 0.05 | 0.06 | 0.05 | 0.11 | 0.30 | 0.58 |
| 519.8 | 9307 | 269389 | 0.10 | 0.38 | 0.91 | 1.00 | 0.11 | 0.44 | 0.95 | 1.00 | 0.05 | 0.12 | 0.34 | 0.64 | 0.33 | 0.97 | 1.00 | 1.00 |
| 519.9 | 272 | 269389 | 0.03 | 0.05 | 0.08 | 0.14 | 0.03 | 0.05 | 0.09 | 0.16 | 0.03 | 0.03 | 0.05 | 0.06 | 0.04 | 0.10 | 0.26 | 0.51 |
| 520 | 2122 | 191014 | 0.05 | 0.12 | 0.36 | 0.67 | 0.05 | 0.14 | 0.42 | 0.75 | 0.04 | 0.06 | 0.11 | 0.20 | 0.11 | 0.45 | 0.96 | 1.00 |
| 520.2 | 2041 | 191014 | 0.05 | 0.12 | 0.35 | 0.66 | 0.05 | 0.14 | 0.41 | 0.73 | 0.03 | 0.06 | 0.11 | 0.19 | 0.11 | 0.43 | 0.95 | 1.00 |
| 521 | 3012 | 191014 | 0.06 | 0.16 | 0.48 | 0.82 | 0.06 | 0.18 | 0.55 | 0.88 | 0.04 | 0.06 | 0.14 | 0.26 | 0.14 | 0.58 | 0.99 | 1.00 |
| 521.1 | 2952 | 191014 | 0.06 | 0.16 | 0.47 | 0.81 | 0.06 | 0.18 | 0.54 | 0.87 | 0.04 | 0.06 | 0.14 | 0.26 | 0.14 | 0.58 | 0.99 | 1.00 |
| 522 | 1661 | 191014 | 0.05 | 0.11 | 0.30 | 0.57 | 0.05 | 0.12 | 0.34 | 0.64 | 0.03 | 0.05 | 0.10 | 0.17 | 0.09 | 0.37 | 0.90 | 1.00 |
| 522.5 | 1117 | 191014 | 0.04 | 0.08 | 0.21 | 0.42 | 0.04 | 0.09 | 0.25 | 0.48 | 0.03 | 0.05 | 0.08 | 0.13 | 0.08 | 0.26 | 0.76 | 0.98 |
| 523 | 1638 | 191014 | 0.05 | 0.10 | 0.29 | 0.56 | 0.05 | 0.12 | 0.34 | 0.64 | 0.03 | 0.05 | 0.10 | 0.16 | 0.09 | 0.36 | 0.90 | 1.00 |
| 523.3 | 1133 | 191014 | 0.04 | 0.09 | 0.22 | 0.42 | 0.04 | 0.09 | 0.25 | 0.49 | 0.03 | 0.05 | 0.08 | 0.13 | 0.08 | 0.27 | 0.76 | 0.98 |
| 523.32 | 1000 | 191014 | 0.04 | 0.08 | 0.20 | 0.38 | 0.04 | 0.09 | 0.23 | 0.44 | 0.03 | 0.04 | 0.07 | 0.12 | 0.07 | 0.24 | 0.71 | 0.97 |
| 524 | 309 | 191014 | 0.03 | 0.05 | 0.09 | 0.15 | 0.03 | 0.05 | 0.10 | 0.17 | 0.03 | 0.03 | 0.05 | 0.06 | 0.05 | 0.10 | 0.29 | 0.56 |
| 524.3 | 276 | 191014 | 0.03 | 0.05 | 0.08 | 0.14 | 0.03 | 0.05 | 0.09 | 0.16 | 0.03 | 0.03 | 0.05 | 0.06 | 0.05 | 0.10 | 0.26 | 0.51 |
| 525 | 2546 | 191014 | 0.05 | 0.14 | 0.42 | 0.75 | 0.06 | 0.16 | 0.48 | 0.82 | 0.04 | 0.06 | 0.13 | 0.23 | 0.12 | 0.52 | 0.98 | 1.00 |
| 526 | 909 | 191014 | 0.04 | 0.08 | 0.18 | 0.35 | 0.04 | 0.08 | 0.21 | 0.41 | 0.03 | 0.04 | 0.07 | 0.11 | 0.07 | 0.22 | 0.67 | 0.95 |
| 526.1 | 312 | 191014 | 0.03 | 0.05 | 0.09 | 0.15 | 0.03 | 0.05 | 0.10 | 0.17 | 0.03 | 0.03 | 0.05 | 0.06 | 0.05 | 0.10 | 0.29 | 0.56 |
| 526.4 | 229 | 191014 | 0.03 | 0.05 | 0.08 | 0.12 | 0.03 | 0.05 | 0.08 | 0.14 | 0.03 | 0.03 | 0.04 | 0.06 | 0.04 | 0.09 | 0.23 | 0.44 |
| 526.41 | 222 | 191014 | 0.03 | 0.04 | 0.08 | 0.12 | 0.03 | 0.05 | 0.08 | 0.13 | 0.03 | 0.03 | 0.04 | 0.06 | 0.04 | 0.09 | 0.22 | 0.43 |
| 526.9 | 220 | 191014 | 0.03 | 0.04 | 0.07 | 0.12 | 0.03 | 0.05 | 0.08 | 0.13 | 0.03 | 0.03 | 0.04 | 0.06 | 0.04 | 0.09 | 0.22 | 0.43 |
| 527 | 663 | 191014 | 0.04 | 0.07 | 0.14 | 0.27 | 0.04 | 0.07 | 0.16 | 0.31 | 0.03 | 0.04 | 0.06 | 0.09 | 0.06 | 0.18 | 0.54 | 0.87 |
| 527.2 | 340 | 191014 | 0.03 | 0.05 | 0.09 | 0.16 | 0.03 | 0.05 | 0.10 | 0.18 | 0.03 | 0.04 | 0.05 | 0.07 | 0.05 | 0.11 | 0.31 | 0.60 |
| 528 | 3788 | 191014 | 0.06 | 0.19 | 0.57 | 0.89 | 0.07 | 0.21 | 0.65 | 0.94 | 0.04 | 0.07 | 0.17 | 0.32 | 0.16 | 0.68 | 1.00 | 1.00 |
| 528.1 | 475 | 191014 | 0.04 | 0.06 | 0.12 | 0.21 | 0.04 | 0.06 | 0.13 | 0.24 | 0.03 | 0.04 | 0.05 | 0.08 | 0.05 | 0.14 | 0.41 | 0.74 |
| 528.11 | 406 | 191014 | 0.03 | 0.05 | 0.10 | 0.18 | 0.04 | 0.06 | 0.12 | 0.21 | 0.03 | 0.04 | 0.05 | 0.07 | 0.05 | 0.12 | 0.36 | 0.67 |
| 528.5 | 644 | 191014 | 0.04 | 0.06 | 0.14 | 0.26 | 0.04 | 0.07 | 0.16 | 0.31 | 0.03 | 0.04 | 0.06 | 0.09 | 0.06 | 0.17 | 0.52 | 0.86 |
| 528.6 | 298 | 191014 | 0.03 | 0.05 | 0.09 | 0.15 | 0.03 | 0.05 | 0.10 | 0.17 | 0.03 | 0.03 | 0.05 | 0.06 | 0.05 | 0.10 | 0.28 | 0.54 |
| 528.7 | 289 | 191014 | 0.03 | 0.05 | 0.09 | 0.14 | 0.03 | 0.05 | 0.10 | 0.16 | 0.03 | 0.03 | 0.05 | 0.06 | 0.05 | 0.10 | 0.27 | 0.53 |
| 529 | 1210 | 191014 | 0.04 | 0.09 | 0.23 | 0.45 | 0.05 | 0.10 | 0.26 | 0.51 | 0.03 | 0.05 | 0.08 | 0.13 | 0.08 | 0.28 | 0.79 | 0.99 |
| 529.1 | 290 | 191014 | 0.03 | 0.05 | 0.09 | 0.14 | 0.03 | 0.05 | 0.10 | 0.16 | 0.03 | 0.03 | 0.05 | 0.06 | 0.05 | 0.10 | 0.27 | 0.53 |
| 530 | 34889 | 191014 | 0.22 | 0.85 | 1.00 | 1.00 | 0.26 | 0.91 | 1.00 | 1.00 | 0.08 | 0.29 | 0.80 | 0.99 | 0.78 | 1.00 | 1.00 | 1.00 |
| 530.1 | 32569 | 191014 | 0.21 | 0.83 | 1.00 | 1.00 | 0.25 | 0.89 | 1.00 | 1.00 | 0.08 | 0.27 | 0.77 | 0.98 | 0.76 | 1.00 | 1.00 | 1.00 |
| 530.11 | 15750 | 191014 | 0.13 | 0.56 | 0.99 | 1.00 | 0.15 | 0.64 | 1.00 | 1.00 | 0.06 | 0.16 | 0.50 | 0.84 | 0.49 | 1.00 | 1.00 | 1.00 |
| 530.12 | 4731 | 191014 | 0.07 | 0.22 | 0.66 | 0.95 | 0.07 | 0.25 | 0.74 | 0.97 | 0.04 | 0.08 | 0.20 | 0.38 | 0.19 | 0.77 | 1.00 | 1.00 |
| 530.13 | 3105 | 191014 | 0.06 | 0.16 | 0.49 | 0.83 | 0.06 | 0.18 | 0.56 | 0.89 | 0.04 | 0.07 | 0.14 | 0.27 | 0.14 | 0.60 | 0.99 | 1.00 |
| 530.14 | 10069 | 191014 | 0.10 | 0.40 | 0.93 | 1.00 | 0.11 | 0.47 | 0.96 | 1.00 | 0.05 | 0.12 | 0.36 | 0.67 | 0.35 | 0.97 | 1.00 | 1.00 |
| 530.2 | 1770 | 191014 | 0.05 | 0.11 | 0.31 | 0.60 | 0.05 | 0.12 | 0.36 | 0.67 | 0.03 | 0.05 | 0.10 | 0.17 | 0.10 | 0.39 | 0.92 | 1.00 |
| 530.3 | 1940 | 191014 | 0.05 | 0.12 | 0.34 | 0.63 | 0.05 | 0.13 | 0.39 | 0.71 | 0.03 | 0.05 | 0.11 | 0.19 | 0.10 | 0.42 | 0.94 | 1.00 |
| 530.5 | 637 | 191014 | 0.04 | 0.06 | 0.14 | 0.26 | 0.04 | 0.07 | 0.16 | 0.30 | 0.03 | 0.04 | 0.06 | 0.09 | 0.06 | 0.17 | 0.52 | 0.85 |
| 530.7 | 303 | 191014 | 0.03 | 0.05 | 0.09 | 0.15 | 0.03 | 0.05 | 0.10 | 0.17 | 0.03 | 0.03 | 0.05 | 0.06 | 0.05 | 0.10 | 0.28 | 0.55 |
| 530.9 | 2010 | 191014 | 0.05 | 0.12 | 0.35 | 0.65 | 0.05 | 0.13 | 0.40 | 0.73 | 0.03 | 0.06 | 0.11 | 0.19 | 0.11 | 0.43 | 0.95 | 1.00 |
| 531 | 7143 | 191014 | 0.08 | 0.31 | 0.83 | 0.99 | 0.09 | 0.36 | 0.89 | 1.00 | 0.05 | 0.10 | 0.27 | 0.53 | 0.26 | 0.91 | 1.00 | 1.00 |
| 531.1 | 638 | 191014 | 0.04 | 0.06 | 0.14 | 0.26 | 0.04 | 0.07 | 0.16 | 0.30 | 0.03 | 0.04 | 0.06 | 0.09 | 0.06 | 0.17 | 0.52 | 0.86 |
| 531.2 | 4026 | 191014 | 0.06 | 0.19 | 0.60 | 0.91 | 0.07 | 0.22 | 0.67 | 0.95 | 0.04 | 0.07 | 0.17 | 0.33 | 0.17 | 0.71 | 1.00 | 1.00 |
| 531.3 | 2794 | 191014 | 0.06 | 0.15 | 0.45 | 0.79 | 0.06 | 0.17 | 0.52 | 0.85 | 0.04 | 0.06 | 0.13 | 0.25 | 0.13 | 0.55 | 0.99 | 1.00 |
| 531.4 | 404 | 191014 | 0.03 | 0.05 | 0.10 | 0.18 | 0.04 | 0.06 | 0.12 | 0.21 | 0.03 | 0.04 | 0.05 | 0.07 | 0.05 | 0.12 | 0.36 | 0.67 |
| 532 | 6669 | 191014 | 0.08 | 0.29 | 0.80 | 0.99 | 0.09 | 0.34 | 0.87 | 1.00 | 0.04 | 0.10 | 0.26 | 0.50 | 0.25 | 0.89 | 1.00 | 1.00 |
| 535 | 28094 | 191014 | 0.19 | 0.78 | 1.00 | 1.00 | 0.22 | 0.85 | 1.00 | 1.00 | 0.07 | 0.25 | 0.72 | 0.97 | 0.70 | 1.00 | 1.00 | 1.00 |
| 535.1 | 1145 | 191014 | 0.04 | 0.09 | 0.22 | 0.43 | 0.04 | 0.09 | 0.25 | 0.49 | 0.03 | 0.05 | 0.08 | 0.13 | 0.08 | 0.27 | 0.77 | 0.98 |
| 535.2 | 372 | 191014 | 0.03 | 0.05 | 0.10 | 0.17 | 0.03 | 0.06 | 0.11 | 0.20 | 0.03 | 0.04 | 0.05 | 0.07 | 0.05 | 0.12 | 0.34 | 0.64 |
| 535.6 | 7254 | 191014 | 0.08 | 0.31 | 0.83 | 0.99 | 0.09 | 0.36 | 0.89 | 1.00 | 0.05 | 0.10 | 0.27 | 0.53 | 0.27 | 0.92 | 1.00 | 1.00 |
| 535.8 | 8264 | 191014 | 0.09 | 0.34 | 0.88 | 1.00 | 0.10 | 0.40 | 0.93 | 1.00 | 0.05 | 0.11 | 0.30 | 0.58 | 0.29 | 0.94 | 1.00 | 1.00 |
| 536 | 11052 | 191014 | 0.11 | 0.43 | 0.95 | 1.00 | 0.12 | 0.50 | 0.97 | 1.00 | 0.05 | 0.13 | 0.38 | 0.70 | 0.37 | 0.98 | 1.00 | 1.00 |
| 536.8 | 11046 | 191014 | 0.11 | 0.43 | 0.95 | 1.00 | 0.12 | 0.50 | 0.97 | 1.00 | 0.05 | 0.13 | 0.38 | 0.70 | 0.37 | 0.98 | 1.00 | 1.00 |
| 537 | 3459 | 191014 | 0.06 | 0.17 | 0.53 | 0.87 | 0.07 | 0.20 | 0.61 | 0.92 | 0.04 | 0.07 | 0.16 | 0.30 | 0.15 | 0.64 | 1.00 | 1.00 |
| 540 | 3462 | 191014 | 0.06 | 0.17 | 0.53 | 0.87 | 0.07 | 0.20 | 0.61 | 0.92 | 0.04 | 0.07 | 0.16 | 0.30 | 0.15 | 0.64 | 1.00 | 1.00 |
| 540.1 | 3299 | 191014 | 0.06 | 0.17 | 0.51 | 0.85 | 0.06 | 0.19 | 0.59 | 0.91 | 0.04 | 0.07 | 0.15 | 0.28 | 0.15 | 0.62 | 1.00 | 1.00 |
| 540.11 | 2801 | 191014 | 0.06 | 0.15 | 0.45 | 0.79 | 0.06 | 0.17 | 0.52 | 0.85 | 0.04 | 0.06 | 0.13 | 0.25 | 0.13 | 0.55 | 0.99 | 1.00 |
| 550 | 45454 | 191014 | 0.27 | 0.92 | 1.00 | 1.00 | 0.31 | 0.96 | 1.00 | 1.00 | 0.09 | 0.34 | 0.88 | 1.00 | 0.86 | 1.00 | 1.00 | 1.00 |
| 550.1 | 15079 | 191014 | 0.13 | 0.54 | 0.99 | 1.00 | 0.15 | 0.62 | 0.99 | 1.00 | 0.06 | 0.16 | 0.49 | 0.82 | 0.47 | 1.00 | 1.00 | 1.00 |
| 550.2 | 26753 | 191014 | 0.19 | 0.77 | 1.00 | 1.00 | 0.22 | 0.83 | 1.00 | 1.00 | 0.07 | 0.24 | 0.70 | 0.96 | 0.69 | 1.00 | 1.00 | 1.00 |
| 550.3 | 634 | 191014 | 0.04 | 0.06 | 0.14 | 0.26 | 0.04 | 0.07 | 0.16 | 0.30 | 0.03 | 0.04 | 0.06 | 0.09 | 0.06 | 0.17 | 0.52 | 0.85 |
| 550.4 | 3634 | 191014 | 0.06 | 0.18 | 0.55 | 0.88 | 0.07 | 0.21 | 0.63 | 0.93 | 0.04 | 0.07 | 0.16 | 0.31 | 0.16 | 0.66 | 1.00 | 1.00 |
| 550.5 | 3384 | 191014 | 0.06 | 0.17 | 0.52 | 0.86 | 0.06 | 0.20 | 0.60 | 0.91 | 0.04 | 0.07 | 0.15 | 0.29 | 0.15 | 0.63 | 1.00 | 1.00 |
| 550.6 | 246 | 191014 | 0.03 | 0.05 | 0.08 | 0.13 | 0.03 | 0.05 | 0.09 | 0.14 | 0.03 | 0.03 | 0.04 | 0.06 | 0.04 | 0.09 | 0.24 | 0.47 |
| 555 | 4149 | 191014 | 0.07 | 0.20 | 0.61 | 0.92 | 0.07 | 0.23 | 0.68 | 0.96 | 0.04 | 0.07 | 0.18 | 0.34 | 0.17 | 0.72 | 1.00 | 1.00 |
| 555.1 | 1621 | 191014 | 0.05 | 0.10 | 0.29 | 0.56 | 0.05 | 0.12 | 0.34 | 0.63 | 0.03 | 0.05 | 0.10 | 0.16 | 0.09 | 0.36 | 0.89 | 1.00 |
| 555.2 | 2920 | 191014 | 0.06 | 0.15 | 0.47 | 0.80 | 0.06 | 0.18 | 0.54 | 0.87 | 0.04 | 0.06 | 0.14 | 0.26 | 0.13 | 0.57 | 0.99 | 1.00 |
| 555.21 | 541 | 191014 | 0.04 | 0.06 | 0.13 | 0.23 | 0.04 | 0.06 | 0.14 | 0.27 | 0.03 | 0.04 | 0.06 | 0.08 | 0.06 | 0.15 | 0.46 | 0.79 |
| 556 | 1084 | 191014 | 0.04 | 0.08 | 0.21 | 0.41 | 0.04 | 0.09 | 0.24 | 0.47 | 0.03 | 0.05 | 0.08 | 0.12 | 0.08 | 0.26 | 0.75 | 0.98 |
| 556.1 | 711 | 191014 | 0.04 | 0.07 | 0.15 | 0.29 | 0.04 | 0.07 | 0.17 | 0.33 | 0.03 | 0.04 | 0.06 | 0.10 | 0.06 | 0.18 | 0.57 | 0.89 |
| 557 | 287 | 191014 | 0.03 | 0.05 | 0.09 | 0.14 | 0.03 | 0.05 | 0.09 | 0.16 | 0.03 | 0.03 | 0.05 | 0.06 | 0.05 | 0.10 | 0.27 | 0.53 |
| 557.1 | 1764 | 191014 | 0.05 | 0.11 | 0.31 | 0.59 | 0.05 | 0.12 | 0.36 | 0.67 | 0.03 | 0.05 | 0.10 | 0.17 | 0.10 | 0.39 | 0.92 | 1.00 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 558 | 13696 | 191014 | 0.12 | 0.51 | 0.98 | 1.00 | 0.14 | 0.58 | 0.99 | 1.00 | 0.06 | 0.15 | 0.45 | 0.79 | 0.44 | 0.99 | 1.00 | 1.00 |
| 559 | 1579 | 191014 | 0.05 | 0.10 | 0.28 | 0.55 | 0.05 | 0.11 | 0.33 | 0.62 | 0.03 | 0.05 | 0.09 | 0.16 | 0.09 | 0.35 | 0.88 | 1.00 |
| 560 | 4175 | 191014 | 0.07 | 0.20 | 0.61 | 0.92 | 0.07 | 0.23 | 0.69 | 0.96 | 0.04 | 0.07 | 0.18 | 0.34 | 0.17 | 0.72 | 1.00 | 1.00 |
| 560.1 | 602 | 191014 | 0.04 | 0.06 | 0.14 | 0.25 | 0.04 | 0.07 | 0.15 | 0.29 | 0.03 | 0.04 | 0.06 | 0.09 | 0.06 | 0.16 | 0.50 | 0.83 |
| 560.2 | 282 | 191014 | 0.03 | 0.05 | 0.09 | 0.14 | 0.03 | 0.05 | 0.09 | 0.16 | 0.03 | 0.03 | 0.05 | 0.06 | 0.05 | 0.10 | 0.27 | 0.52 |
| 560.3 | 874 | 191014 | 0.04 | 0.07 | 0.18 | 0.34 | 0.04 | 0.08 | 0.20 | 0.40 | 0.03 | 0.04 | 0.07 | 0.11 | 0.07 | 0.22 | 0.65 | 0.94 |
| 560.4 | 3467 | 191014 | 0.06 | 0.17 | 0.53 | 0.87 | 0.07 | 0.20 | 0.61 | 0.92 | 0.04 | 0.07 | 0.16 | 0.30 | 0.15 | 0.64 | 1.00 | 1.00 |
| 561 | 16127 | 191014 | 0.13 | 0.57 | 0.99 | 1.00 | 0.15 | 0.65 | 1.00 | 1.00 | 0.06 | 0.17 | 0.51 | 0.85 | 0.49 | 1.00 | 1.00 | 1.00 |
| 561.1 | 536 | 191014 | 0.04 | 0.06 | 0.13 | 0.23 | 0.04 | 0.06 | 0.14 | 0.26 | 0.03 | 0.04 | 0.06 | 0.08 | 0.06 | 0.15 | 0.45 | 0.79 |
| 561.2 | 1767 | 191014 | 0.05 | 0.11 | 0.31 | 0.59 | 0.05 | 0.12 | 0.36 | 0.67 | 0.03 | 0.05 | 0.10 | 0.17 | 0.10 | 0.39 | 0.92 | 1.00 |
| 562 | 28363 | 191014 | 0.20 | 0.79 | 1.00 | 1.00 | 0.22 | 0.85 | 1.00 | 1.00 | 0.07 | 0.25 | 0.72 | 0.97 | 0.71 | 1.00 | 1.00 | 1.00 |
| 562.1 | 28326 | 191014 | 0.20 | 0.79 | 1.00 | 1.00 | 0.22 | 0.85 | 1.00 | 1.00 | 0.07 | 0.25 | 0.72 | 0.97 | 0.71 | 1.00 | 1.00 | 1.00 |
| 563 | 10878 | 191014 | 0.11 | 0.43 | 0.94 | 1.00 | 0.12 | 0.49 | 0.97 | 1.00 | 0.05 | 0.13 | 0.38 | 0.70 | 0.37 | 0.98 | 1.00 | 1.00 |
| 564 | 22341 | 191014 | 0.17 | 0.70 | 1.00 | 1.00 | 0.19 | 0.77 | 1.00 | 1.00 | 0.07 | 0.21 | 0.63 | 0.93 | 0.62 | 1.00 | 1.00 | 1.00 |
| 564.1 | 5580 | 191014 | 0.07 | 0.25 | 0.73 | 0.97 | 0.08 | 0.29 | 0.80 | 0.99 | 0.04 | 0.09 | 0.22 | 0.44 | 0.22 | 0.84 | 1.00 | 1.00 |
| 564.8 | 1743 | 191014 | 0.05 | 0.11 | 0.31 | 0.59 | 0.05 | 0.12 | 0.36 | 0.67 | 0.03 | 0.05 | 0.10 | 0.17 | 0.10 | 0.38 | 0.91 | 1.00 |
| 564.9 | 15641 | 191014 | 0.13 | 0.56 | 0.99 | 1.00 | 0.15 | 0.63 | 1.00 | 1.00 | 0.06 | 0.16 | 0.50 | 0.84 | 0.48 | 1.00 | 1.00 | 1.00 |
| 565 | 14352 | 191014 | 0.13 | 0.53 | 0.98 | 1.00 | 0.14 | 0.60 | 0.99 | 1.00 | 0.06 | 0.15 | 0.47 | 0.81 | 0.45 | 1.00 | 1.00 | 1.00 |
| 565.1 | 7409 | 191014 | 0.09 | 0.32 | 0.84 | 0.99 | 0.09 | 0.37 | 0.90 | 1.00 | 0.05 | 0.10 | 0.28 | 0.54 | 0.27 | 0.92 | 1.00 | 1.00 |
| 567 | 949 | 191014 | 0.04 | 0.08 | 0.19 | 0.37 | 0.04 | 0.09 | 0.22 | 0.42 | 0.03 | 0.04 | 0.07 | 0.11 | 0.07 | 0.23 | 0.69 | 0.96 |
| 568 | 3567 | 191014 | 0.06 | 0.18 | 0.55 | 0.88 | 0.07 | 0.20 | 0.62 | 0.92 | 0.04 | 0.07 | 0.16 | 0.30 | 0.16 | 0.66 | 1.00 | 1.00 |
| 568.1 | 3346 | 191014 | 0.06 | 0.17 | 0.52 | 0.85 | 0.06 | 0.19 | 0.59 | 0.91 | 0.04 | 0.07 | 0.15 | 0.29 | 0.15 | 0.63 | 1.00 | 1.00 |
| 569 | 4313 | 191014 | 0.07 | 0.21 | 0.62 | 0.93 | 0.07 | 0.24 | 0.70 | 0.96 | 0.04 | 0.08 | 0.18 | 0.35 | 0.18 | 0.74 | 1.00 | 1.00 |
| 569.1 | 208 | 191014 | 0.03 | 0.04 | 0.07 | 0.11 | 0.03 | 0.05 | 0.08 | 0.13 | 0.03 | 0.03 | 0.04 | 0.05 | 0.04 | 0.08 | 0.21 | 0.41 |
| 569.2 | 515 | 191014 | 0.04 | 0.06 | 0.12 | 0.22 | 0.04 | 0.06 | 0.14 | 0.26 | 0.03 | 0.04 | 0.06 | 0.08 | 0.06 | 0.15 | 0.44 | 0.77 |
| 571 | 4206 | 191014 | 0.07 | 0.20 | 0.61 | 0.92 | 0.07 | 0.23 | 0.69 | 0.96 | 0.04 | 0.08 | 0.18 | 0.35 | 0.17 | 0.73 | 1.00 | 1.00 |
| 571.5 | 3329 | 191014 | 0.06 | 0.17 | 0.52 | 0.85 | 0.06 | 0.19 | 0.59 | 0.91 | 0.04 | 0.07 | 0.15 | 0.29 | 0.15 | 0.63 | 1.00 | 1.00 |
| 571.51 | 749 | 191014 | 0.04 | 0.07 | 0.16 | 0.30 | 0.04 | 0.08 | 0.18 | 0.35 | 0.03 | 0.04 | 0.06 | 0.10 | 0.06 | 0.19 | 0.59 | 0.91 |
| 571.6 | 258 | 191014 | 0.03 | 0.05 | 0.08 | 0.13 | 0.03 | 0.05 | 0.09 | 0.15 | 0.03 | 0.03 | 0.04 | 0.06 | 0.04 | 0.09 | 0.25 | 0.48 |
| 571.8 | 1140 | 191014 | 0.04 | 0.09 | 0.22 | 0.42 | 0.04 | 0.09 | 0.25 | 0.49 | 0.03 | 0.05 | 0.08 | 0.13 | 0.08 | 0.27 | 0.77 | 0.98 |
| 571.81 | 589 | 191014 | 0.04 | 0.06 | 0.13 | 0.25 | 0.04 | 0.07 | 0.15 | 0.28 | 0.03 | 0.04 | 0.06 | 0.09 | 0.06 | 0.16 | 0.49 | 0.83 |
| 572 | 1656 | 191014 | 0.05 | 0.11 | 0.29 | 0.57 | 0.05 | 0.12 | 0.34 | 0.64 | 0.03 | 0.05 | 0.10 | 0.17 | 0.09 | 0.37 | 0.90 | 1.00 |
| 573 | 1712 | 191014 | 0.05 | 0.11 | 0.30 | 0.58 | 0.05 | 0.12 | 0.35 | 0.66 | 0.03 | 0.05 | 0.10 | 0.17 | 0.10 | 0.38 | 0.91 | 1.00 |
| 573.3 | 295 | 191014 | 0.03 | 0.05 | 0.09 | 0.15 | 0.03 | 0.05 | 0.10 | 0.16 | 0.03 | 0.03 | 0.05 | 0.06 | 0.05 | 0.10 | 0.28 | 0.54 |
| 573.5 | 914 | 191014 | 0.04 | 0.08 | 0.18 | 0.35 | 0.04 | 0.08 | 0.21 | 0.41 | 0.03 | 0.04 | 0.07 | 0.11 | 0.07 | 0.22 | 0.67 | 0.95 |
| 573.7 | 3714 | 191014 | 0.06 | 0.18 | 0.56 | 0.89 | 0.07 | 0.21 | 0.64 | 0.93 | 0.04 | 0.07 | 0.16 | 0.31 | 0.16 | 0.67 | 1.00 | 1.00 |
| 573.9 | 214 | 191014 | 0.03 | 0.04 | 0.07 | 0.12 | 0.03 | 0.05 | 0.08 | 0.13 | 0.03 | 0.03 | 0.04 | 0.05 | 0.04 | 0.08 | 0.21 | 0.42 |
| 574 | 15179 | 191014 | 0.13 | 0.55 | 0.99 | 1.00 | 0.15 | 0.62 | 1.00 | 1.00 | 0.06 | 0.16 | 0.49 | 0.82 | 0.47 | 1.00 | 1.00 | 1.00 |
| 574.1 | 12924 | 191014 | 0.12 | 0.49 | 0.97 | 1.00 | 0.13 | 0.56 | 0.99 | 1.00 | 0.05 | 0.14 | 0.43 | 0.77 | 0.42 | 0.99 | 1.00 | 1.00 |
| 574.11 | 1537 | 191014 | 0.05 | 0.10 | 0.28 | 0.54 | 0.05 | 0.11 | 0.32 | 0.61 | 0.03 | 0.05 | 0.09 | 0.16 | 0.09 | 0.34 | 0.88 | 1.00 |
| 574.12 | 5200 | 191014 | 0.07 | 0.24 | 0.70 | 0.96 | 0.08 | 0.27 | 0.78 | 0.98 | 0.04 | 0.08 | 0.21 | 0.41 | 0.20 | 0.81 | 1.00 | 1.00 |
| 574.2 | 2550 | 191014 | 0.05 | 0.14 | 0.42 | 0.75 | 0.06 | 0.16 | 0.48 | 0.82 | 0.04 | 0.06 | 0.13 | 0.23 | 0.12 | 0.52 | 0.98 | 1.00 |
| 574.3 | 2574 | 191014 | 0.05 | 0.14 | 0.42 | 0.75 | 0.06 | 0.16 | 0.49 | 0.82 | 0.04 | 0.06 | 0.13 | 0.23 | 0.12 | 0.52 | 0.98 | 1.00 |
| 575 | 3989 | 191014 | 0.06 | 0.19 | 0.59 | 0.91 | 0.07 | 0.22 | 0.67 | 0.95 | 0.04 | 0.07 | 0.17 | 0.33 | 0.17 | 0.70 | 1.00 | 1.00 |
| 575.1 | 599 | 191014 | 0.04 | 0.06 | 0.13 | 0.25 | 0.04 | 0.07 | 0.15 | 0.29 | 0.03 | 0.04 | 0.06 | 0.09 | 0.06 | 0.16 | 0.50 | 0.83 |
| 575.2 | 850 | 191014 | 0.04 | 0.07 | 0.17 | 0.33 | 0.04 | 0.08 | 0.20 | 0.39 | 0.03 | 0.04 | 0.07 | 0.11 | 0.07 | 0.21 | 0.64 | 0.94 |
| 575.6 | 437 | 191014 | 0.03 | 0.06 | 0.11 | 0.19 | 0.04 | 0.06 | 0.12 | 0.22 | 0.03 | 0.04 | 0.05 | 0.07 | 0.05 | 0.13 | 0.38 | 0.71 |
| 575.7 | 1372 | 191014 | 0.04 | 0.09 | 0.25 | 0.49 | 0.05 | 0.11 | 0.29 | 0.56 | 0.03 | 0.05 | 0.09 | 0.14 | 0.09 | 0.31 | 0.84 | 0.99 |
| 575.8 | 1096 | 191014 | 0.04 | 0.08 | 0.21 | 0.41 | 0.04 | 0.09 | 0.24 | 0.47 | 0.03 | 0.05 | 0.08 | 0.12 | 0.08 | 0.26 | 0.75 | 0.98 |
| 575.9 | 360 | 191014 | 0.03 | 0.05 | 0.10 | 0.17 | 0.03 | 0.06 | 0.11 | 0.19 | 0.03 | 0.04 | 0.05 | 0.07 | 0.05 | 0.11 | 0.33 | 0.62 |
| 577 | 2747 | 191014 | 0.06 | 0.15 | 0.45 | 0.78 | 0.06 | 0.17 | 0.51 | 0.85 | 0.04 | 0.06 | 0.13 | 0.25 | 0.13 | 0.55 | 0.99 | 1.00 |
| 577.1 | 1925 | 191014 | 0.05 | 0.12 | 0.33 | 0.63 | 0.05 | 0.13 | 0.39 | 0.71 | 0.03 | 0.05 | 0.11 | 0.19 | 0.10 | 0.41 | 0.94 | 1.00 |
| 577.2 | 473 | 191014 | 0.04 | 0.06 | 0.12 | 0.21 | 0.04 | 0.06 | 0.13 | 0.24 | 0.03 | 0.04 | 0.05 | 0.08 | 0.05 | 0.14 | 0.41 | 0.74 |
| 577.3 | 388 | 191014 | 0.03 | 0.05 | 0.10 | 0.18 | 0.04 | 0.06 | 0.11 | 0.20 | 0.03 | 0.04 | 0.05 | 0.07 | 0.05 | 0.12 | 0.35 | 0.65 |
| 578 | 19880 | 191014 | 0.15 | 0.65 | 1.00 | 1.00 | 0.18 | 0.73 | 1.00 | 1.00 | 0.06 | 0.19 | 0.59 | 0.91 | 0.57 | 1.00 | 1.00 | 1.00 |
| 578.1 | 1882 | 191014 | 0.05 | 0.11 | 0.33 | 0.62 | 0.05 | 0.13 | 0.38 | 0.70 | 0.03 | 0.05 | 0.10 | 0.18 | 0.10 | 0.41 | 0.93 | 1.00 |
| 578.2 | 2514 | 191014 | 0.05 | 0.14 | 0.42 | 0.74 | 0.06 | 0.16 | 0.48 | 0.82 | 0.04 | 0.06 | 0.13 | 0.23 | 0.12 | 0.51 | 0.98 | 1.00 |
| 578.8 | 11473 | 191014 | 0.11 | 0.45 | 0.95 | 1.00 | 0.12 | 0.51 | 0.98 | 1.00 | 0.05 | 0.13 | 0.39 | 0.72 | 0.38 | 0.99 | 1.00 | 1.00 |
| 578.9 | 6068 | 191014 | 0.08 | 0.27 | 0.77 | 0.98 | 0.08 | 0.31 | 0.84 | 0.99 | 0.04 | 0.09 | 0.24 | 0.46 | 0.23 | 0.86 | 1.00 | 1.00 |
| 579 | 1543 | 191014 | 0.05 | 0.10 | 0.28 | 0.54 | 0.05 | 0.11 | 0.32 | 0.61 | 0.03 | 0.05 | 0.09 | 0.16 | 0.09 | 0.35 | 0.88 | 1.00 |
| 579.2 | 447 | 191014 | 0.03 | 0.06 | 0.11 | 0.20 | 0.04 | 0.06 | 0.12 | 0.23 | 0.03 | 0.04 | 0.05 | 0.07 | 0.05 | 0.13 | 0.39 | 0.72 |
| 579.8 | 1887 | 191014 | 0.05 | 0.11 | 0.33 | 0.62 | 0.05 | 0.13 | 0.38 | 0.70 | 0.03 | 0.05 | 0.10 | 0.18 | 0.10 | 0.41 | 0.93 | 1.00 |
| 580 | 1984 | 234338 | 0.05 | 0.12 | 0.34 | 0.64 | 0.05 | 0.13 | 0.40 | 0.72 | 0.03 | 0.05 | 0.11 | 0.19 | 0.11 | 0.42 | 0.94 | 1.00 |
| 580.1 | 906 | 234338 | 0.04 | 0.08 | 0.18 | 0.35 | 0.04 | 0.08 | 0.21 | 0.41 | 0.03 | 0.04 | 0.07 | 0.11 | 0.07 | 0.22 | 0.67 | 0.95 |
| 580.14 | 723 | 234338 | 0.04 | 0.07 | 0.15 | 0.29 | 0.04 | 0.07 | 0.18 | 0.34 | 0.03 | 0.04 | 0.06 | 0.10 | 0.06 | 0.19 | 0.57 | 0.90 |
| 580.2 | 1042 | 234338 | 0.04 | 0.08 | 0.20 | 0.39 | 0.04 | 0.09 | 0.23 | 0.46 | 0.03 | 0.04 | 0.08 | 0.12 | 0.07 | 0.25 | 0.73 | 0.97 |
| 580.3 | 301 | 234338 | 0.03 | 0.05 | 0.09 | 0.15 | 0.03 | 0.05 | 0.10 | 0.17 | 0.03 | 0.03 | 0.05 | 0.06 | 0.05 | 0.10 | 0.28 | 0.55 |
| 580.32 | 286 | 234338 | 0.03 | 0.05 | 0.09 | 0.14 | 0.03 | 0.05 | 0.09 | 0.16 | 0.03 | 0.03 | 0.05 | 0.06 | 0.05 | 0.10 | 0.27 | 0.53 |
| 585 | 10995 | 234338 | 0.11 | 0.43 | 0.95 | 1.00 | 0.12 | 0.50 | 0.98 | 1.00 | 0.05 | 0.13 | 0.38 | 0.71 | 0.37 | 0.98 | 1.00 | 1.00 |
| 585.1 | 6203 | 234338 | 0.08 | 0.28 | 0.78 | 0.98 | 0.09 | 0.32 | 0.85 | 0.99 | 0.04 | 0.09 | 0.24 | 0.48 | 0.24 | 0.87 | 1.00 | 1.00 |
| 585.2 | 1430 | 234338 | 0.04 | 0.10 | 0.26 | 0.51 | 0.05 | 0.11 | 0.30 | 0.58 | 0.03 | 0.05 | 0.09 | 0.15 | 0.09 | 0.32 | 0.85 | 0.99 |
| 585.3 | 5710 | 234338 | 0.08 | 0.26 | 0.74 | 0.98 | 0.08 | 0.30 | 0.82 | 0.99 | 0.04 | 0.09 | 0.23 | 0.45 | 0.22 | 0.85 | 1.00 | 1.00 |
| 585.31 | 507 | 234338 | 0.04 | 0.06 | 0.12 | 0.22 | 0.04 | 0.06 | 0.14 | 0.25 | 0.03 | 0.04 | 0.06 | 0.08 | 0.05 | 0.14 | 0.43 | 0.77 |
| 585.32 | 426 | 234338 | 0.03 | 0.05 | 0.11 | 0.19 | 0.04 | 0.06 | 0.12 | 0.22 | 0.03 | 0.04 | 0.05 | 0.07 | 0.05 | 0.13 | 0.38 | 0.69 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 585.33 | 3054 | 234338 | 0.06 | 0.16 | 0.49 | 0.82 | 0.06 | 0.18 | 0.56 | 0.88 | 0.04 | 0.07 | 0.14 | 0.27 | 0.14 | 0.59 | 0.99 | 1.00 |
| 585.34 | 455 | 234338 | 0.04 | 0.06 | 0.11 | 0.20 | 0.04 | 0.06 | 0.13 | 0.23 | 0.03 | 0.04 | 0.05 | 0.07 | 0.05 | 0.13 | 0.40 | 0.72 |
| 585.4 | 343 | 234338 | 0.03 | 0.05 | 0.09 | 0.16 | 0.03 | 0.05 | 0.11 | 0.18 | 0.03 | 0.04 | 0.05 | 0.07 | 0.05 | 0.11 | 0.31 | 0.60 |
| 586 | 3536 | 234338 | 0.06 | 0.18 | 0.54 | 0.87 | 0.07 | 0.20 | 0.62 | 0.92 | 0.04 | 0.07 | 0.16 | 0.30 | 0.15 | 0.65 | 1.00 | 1.00 |
| 586.1 | 232 | 234338 | 0.03 | 0.05 | 0.08 | 0.12 | 0.03 | 0.05 | 0.08 | 0.14 | 0.03 | 0.03 | 0.04 | 0.06 | 0.04 | 0.09 | 0.23 | 0.45 |
| 586.11 | 200 | 234338 | 0.03 | 0.04 | 0.07 | 0.11 | 0.03 | 0.05 | 0.08 | 0.13 | 0.03 | 0.03 | 0.04 | 0.05 | 0.04 | 0.08 | 0.20 | 0.39 |
| 586.2 | 1393 | 234338 | 0.04 | 0.10 | 0.26 | 0.50 | 0.05 | 0.11 | 0.30 | 0.57 | 0.03 | 0.05 | 0.09 | 0.15 | 0.09 | 0.32 | 0.84 | 0.99 |
| 586.4 | 936 | 234338 | 0.04 | 0.08 | 0.19 | 0.36 | 0.04 | 0.08 | 0.21 | 0.42 | 0.03 | 0.04 | 0.07 | 0.11 | 0.07 | 0.23 | 0.68 | 0.96 |
| 587 | 334 | 234338 | 0.03 | 0.05 | 0.09 | 0.16 | 0.03 | 0.05 | 0.10 | 0.18 | 0.03 | 0.04 | 0.05 | 0.06 | 0.05 | 0.11 | 0.31 | 0.59 |
| 590 | 1361 | 234338 | 0.04 | 0.09 | 0.25 | 0.49 | 0.05 | 0.10 | 0.29 | 0.56 | 0.03 | 0.05 | 0.09 | 0.14 | 0.08 | 0.31 | 0.84 | 0.99 |
| 591 | 12543 | 234338 | 0.12 | 0.48 | 0.97 | 1.00 | 0.13 | 0.55 | 0.99 | 1.00 | 0.05 | 0.14 | 0.43 | 0.76 | 0.41 | 0.99 | 1.00 | 1.00 |
| 592 | 2885 | 234338 | 0.06 | 0.15 | 0.46 | 0.80 | 0.06 | 0.17 | 0.53 | 0.87 | 0.04 | 0.06 | 0.14 | 0.26 | 0.13 | 0.57 | 0.99 | 1.00 |
| 592.1 | 2766 | 234338 | 0.06 | 0.15 | 0.45 | 0.78 | 0.06 | 0.17 | 0.52 | 0.85 | 0.04 | 0.06 | 0.13 | 0.25 | 0.13 | 0.55 | 0.99 | 1.00 |
| 592.12 | 833 | 234338 | 0.04 | 0.07 | 0.17 | 0.33 | 0.04 | 0.08 | 0.20 | 0.38 | 0.03 | 0.04 | 0.07 | 0.10 | 0.07 | 0.21 | 0.63 | 0.93 |
| 592.13 | 233 | 234338 | 0.03 | 0.05 | 0.08 | 0.12 | 0.03 | 0.05 | 0.08 | 0.14 | 0.03 | 0.03 | 0.04 | 0.06 | 0.04 | 0.09 | 0.23 | 0.45 |
| 593 | 14542 | 234338 | 0.13 | 0.54 | 0.98 | 1.00 | 0.14 | 0.61 | 0.99 | 1.00 | 0.06 | 0.16 | 0.48 | 0.81 | 0.46 | 1.00 | 1.00 | 1.00 |
| 594 | 6165 | 234338 | 0.08 | 0.27 | 0.78 | 0.98 | 0.09 | 0.32 | 0.84 | 0.99 | 0.04 | 0.09 | 0.24 | 0.47 | 0.24 | 0.87 | 1.00 | 1.00 |
| 594.1 | 3198 | 234338 | 0.06 | 0.16 | 0.50 | 0.84 | 0.06 | 0.19 | 0.58 | 0.90 | 0.04 | 0.07 | 0.15 | 0.28 | 0.14 | 0.61 | 0.99 | 1.00 |
| 594.2 | 767 | 234338 | 0.04 | 0.07 | 0.16 | 0.31 | 0.04 | 0.08 | 0.18 | 0.35 | 0.03 | 0.04 | 0.07 | 0.10 | 0.06 | 0.20 | 0.60 | 0.91 |
| 594.3 | 2243 | 234338 | 0.05 | 0.13 | 0.38 | 0.70 | 0.05 | 0.15 | 0.44 | 0.77 | 0.04 | 0.06 | 0.12 | 0.21 | 0.11 | 0.47 | 0.96 | 1.00 |
| 594.8 | 1754 | 234338 | 0.05 | 0.11 | 0.31 | 0.59 | 0.05 | 0.12 | 0.36 | 0.67 | 0.03 | 0.05 | 0.10 | 0.17 | 0.10 | 0.38 | 0.91 | 1.00 |
| 595 | 2075 | 234338 | 0.05 | 0.12 | 0.36 | 0.66 | 0.05 | 0.14 | 0.41 | 0.74 | 0.03 | 0.06 | 0.11 | 0.20 | 0.11 | 0.44 | 0.95 | 1.00 |
| 596 | 9275 | 234338 | 0.10 | 0.38 | 0.91 | 1.00 | 0.11 | 0.44 | 0.95 | 1.00 | 0.05 | 0.12 | 0.34 | 0.64 | 0.33 | 0.96 | 1.00 | 1.00 |
| 596.1 | 1831 | 234338 | 0.05 | 0.11 | 0.32 | 0.61 | 0.05 | 0.13 | 0.37 | 0.69 | 0.03 | 0.05 | 0.10 | 0.18 | 0.10 | 0.40 | 0.93 | 1.00 |
| 596.5 | 1431 | 234338 | 0.04 | 0.10 | 0.26 | 0.51 | 0.05 | 0.11 | 0.30 | 0.58 | 0.03 | 0.05 | 0.09 | 0.15 | 0.09 | 0.32 | 0.85 | 0.99 |
| 597 | 3888 | 234338 | 0.06 | 0.19 | 0.58 | 0.90 | 0.07 | 0.22 | 0.66 | 0.94 | 0.04 | 0.07 | 0.17 | 0.33 | 0.17 | 0.69 | 1.00 | 1.00 |
| 597.1 | 3159 | 234338 | 0.06 | 0.16 | 0.50 | 0.84 | 0.06 | 0.19 | 0.57 | 0.89 | 0.04 | 0.07 | 0.15 | 0.28 | 0.14 | 0.61 | 0.99 | 1.00 |
| 598 | 3286 | 234338 | 0.06 | 0.17 | 0.51 | 0.85 | 0.06 | 0.19 | 0.59 | 0.90 | 0.04 | 0.07 | 0.15 | 0.28 | 0.15 | 0.62 | 1.00 | 1.00 |
| 598.9 | 299 | 234338 | 0.03 | 0.05 | 0.09 | 0.15 | 0.03 | 0.05 | 0.10 | 0.17 | 0.03 | 0.03 | 0.05 | 0.06 | 0.05 | 0.10 | 0.28 | 0.54 |
| 599 | 17536 | 234338 | 0.14 | 0.61 | 0.99 | 1.00 | 0.16 | 0.69 | 1.00 | 1.00 | 0.06 | 0.18 | 0.55 | 0.88 | 0.53 | 1.00 | 1.00 | 1.00 |
| 599.2 | 7478 | 234338 | 0.09 | 0.32 | 0.85 | 0.99 | 0.10 | 0.37 | 0.90 | 1.00 | 0.05 | 0.10 | 0.28 | 0.55 | 0.27 | 0.92 | 1.00 | 1.00 |
| 599.3 | 1104 | 234338 | 0.04 | 0.08 | 0.21 | 0.41 | 0.04 | 0.09 | 0.24 | 0.48 | 0.03 | 0.05 | 0.08 | 0.12 | 0.08 | 0.26 | 0.75 | 0.98 |
| 599.4 | 8031 | 234338 | 0.09 | 0.34 | 0.87 | 1.00 | 0.10 | 0.39 | 0.92 | 1.00 | 0.05 | 0.11 | 0.30 | 0.58 | 0.29 | 0.94 | 1.00 | 1.00 |
| 599.5 | 3626 | 234338 | 0.06 | 0.18 | 0.55 | 0.88 | 0.07 | 0.21 | 0.63 | 0.93 | 0.04 | 0.07 | 0.16 | 0.31 | 0.16 | 0.66 | 1.00 | 1.00 |
| 599.9 | 1683 | 234338 | 0.05 | 0.11 | 0.30 | 0.57 | 0.05 | 0.12 | 0.35 | 0.65 | 0.03 | 0.05 | 0.10 | 0.17 | 0.10 | 0.37 | 0.90 | 1.00 |
| 600 | 11447 | 114193 | 0.11 | 0.43 | 0.95 | 1.00 | 0.12 | 0.50 | 0.97 | 1.00 | 0.05 | 0.13 | 0.38 | 0.70 | 0.37 | 0.98 | 1.00 | 1.00 |
| 601 | 2119 | 114193 | 0.05 | 0.12 | 0.36 | 0.67 | 0.05 | 0.14 | 0.42 | 0.75 | 0.04 | 0.06 | 0.11 | 0.20 | 0.11 | 0.44 | 0.95 | 1.00 |
| 601.1 | 1527 | 114193 | 0.05 | 0.10 | 0.27 | 0.53 | 0.05 | 0.11 | 0.32 | 0.61 | 0.03 | 0.05 | 0.09 | 0.16 | 0.09 | 0.34 | 0.87 | 1.00 |
| 601.11 | 231 | 114193 | 0.03 | 0.05 | 0.08 | 0.12 | 0.03 | 0.05 | 0.08 | 0.14 | 0.03 | 0.03 | 0.04 | 0.06 | 0.04 | 0.09 | 0.23 | 0.44 |
| 601.12 | 908 | 114193 | 0.04 | 0.08 | 0.18 | 0.35 | 0.04 | 0.08 | 0.21 | 0.41 | 0.03 | 0.04 | 0.07 | 0.11 | 0.07 | 0.22 | 0.67 | 0.95 |
| 601.4 | 283 | 114193 | 0.03 | 0.05 | 0.09 | 0.14 | 0.03 | 0.05 | 0.09 | 0.16 | 0.03 | 0.03 | 0.05 | 0.06 | 0.05 | 0.10 | 0.27 | 0.52 |
| 601.8 | 291 | 114193 | 0.03 | 0.05 | 0.09 | 0.14 | 0.03 | 0.05 | 0.10 | 0.16 | 0.03 | 0.03 | 0.05 | 0.06 | 0.05 | 0.10 | 0.27 | 0.53 |
| 602 | 1292 | 114193 | 0.04 | 0.09 | 0.24 | 0.47 | 0.05 | 0.10 | 0.28 | 0.54 | 0.03 | 0.05 | 0.08 | 0.14 | 0.08 | 0.30 | 0.81 | 0.99 |
| 603 | 2075 | 117407 | 0.05 | 0.12 | 0.35 | 0.66 | 0.05 | 0.14 | 0.41 | 0.74 | 0.03 | 0.06 | 0.11 | 0.20 | 0.11 | 0.44 | 0.95 | 1.00 |
| 603.1 | 1274 | 117407 | 0.04 | 0.09 | 0.24 | 0.46 | 0.05 | 0.10 | 0.27 | 0.53 | 0.03 | 0.05 | 0.08 | 0.14 | 0.08 | 0.29 | 0.81 | 0.99 |
| 604 | 3185 | 117407 | 0.06 | 0.16 | 0.50 | 0.83 | 0.06 | 0.19 | 0.57 | 0.89 | 0.04 | 0.07 | 0.15 | 0.27 | 0.14 | 0.60 | 0.99 | 1.00 |
| 604.1 | 2635 | 117407 | 0.05 | 0.14 | 0.43 | 0.76 | 0.06 | 0.16 | 0.49 | 0.83 | 0.04 | 0.06 | 0.13 | 0.24 | 0.13 | 0.53 | 0.98 | 1.00 |
| 604.3 | 752 | 117407 | 0.04 | 0.07 | 0.16 | 0.30 | 0.04 | 0.08 | 0.18 | 0.35 | 0.03 | 0.04 | 0.06 | 0.10 | 0.06 | 0.19 | 0.59 | 0.91 |
| 605 | 482 | 117407 | 0.04 | 0.06 | 0.12 | 0.21 | 0.04 | 0.06 | 0.13 | 0.24 | 0.03 | 0.04 | 0.05 | 0.08 | 0.05 | 0.14 | 0.42 | 0.75 |
| 608 | 2620 | 117407 | 0.05 | 0.14 | 0.43 | 0.76 | 0.06 | 0.16 | 0.49 | 0.83 | 0.04 | 0.06 | 0.13 | 0.23 | 0.12 | 0.52 | 0.98 | 1.00 |
| 610 | 2479 | 116931 | 0.05 | 0.14 | 0.41 | 0.74 | 0.06 | 0.15 | 0.47 | 0.81 | 0.04 | 0.06 | 0.12 | 0.22 | 0.12 | 0.50 | 0.98 | 1.00 |
| 610.1 | 805 | 116931 | 0.04 | 0.07 | 0.17 | 0.32 | 0.04 | 0.08 | 0.19 | 0.37 | 0.03 | 0.04 | 0.07 | 0.10 | 0.07 | 0.20 | 0.62 | 0.92 |
| 610.2 | 275 | 116931 | 0.03 | 0.05 | 0.08 | 0.14 | 0.03 | 0.05 | 0.09 | 0.16 | 0.03 | 0.03 | 0.05 | 0.06 | 0.04 | 0.10 | 0.26 | 0.51 |
| 610.3 | 266 | 116931 | 0.03 | 0.05 | 0.08 | 0.13 | 0.03 | 0.05 | 0.09 | 0.15 | 0.03 | 0.03 | 0.05 | 0.06 | 0.04 | 0.10 | 0.25 | 0.50 |
| 610.4 | 1353 | 116931 | 0.04 | 0.09 | 0.25 | 0.49 | 0.05 | 0.10 | 0.29 | 0.56 | 0.03 | 0.05 | 0.09 | 0.14 | 0.08 | 0.31 | 0.83 | 0.99 |
| 610.8 | 644 | 116931 | 0.04 | 0.06 | 0.14 | 0.26 | 0.04 | 0.07 | 0.16 | 0.31 | 0.03 | 0.04 | 0.06 | 0.09 | 0.06 | 0.17 | 0.52 | 0.86 |
| 611 | 1363 | 234338 | 0.04 | 0.09 | 0.25 | 0.49 | 0.05 | 0.10 | 0.29 | 0.56 | 0.03 | 0.05 | 0.09 | 0.14 | 0.09 | 0.31 | 0.84 | 0.99 |
| 611.3 | 1305 | 234338 | 0.04 | 0.09 | 0.24 | 0.47 | 0.05 | 0.10 | 0.28 | 0.54 | 0.03 | 0.05 | 0.08 | 0.14 | 0.08 | 0.30 | 0.82 | 0.99 |
| 612 | 788 | 234338 | 0.04 | 0.07 | 0.16 | 0.31 | 0.04 | 0.08 | 0.19 | 0.36 | 0.03 | 0.04 | 0.07 | 0.10 | 0.07 | 0.20 | 0.61 | 0.92 |
| 612.2 | 715 | 234338 | 0.04 | 0.07 | 0.15 | 0.29 | 0.04 | 0.07 | 0.17 | 0.33 | 0.03 | 0.04 | 0.06 | 0.10 | 0.06 | 0.19 | 0.57 | 0.89 |
| 613 | 1712 | 234338 | 0.05 | 0.11 | 0.30 | 0.58 | 0.05 | 0.12 | 0.35 | 0.66 | 0.03 | 0.05 | 0.10 | 0.17 | 0.10 | 0.38 | 0.91 | 1.00 |
| 613.1 | 615 | 234338 | 0.04 | 0.06 | 0.14 | 0.26 | 0.04 | 0.07 | 0.16 | 0.30 | 0.03 | 0.04 | 0.06 | 0.09 | 0.06 | 0.17 | 0.51 | 0.84 |
| 613.7 | 614 | 234338 | 0.04 | 0.06 | 0.14 | 0.25 | 0.04 | 0.07 | 0.16 | 0.30 | 0.03 | 0.04 | 0.06 | 0.09 | 0.06 | 0.17 | 0.51 | 0.84 |
| 613.8 | 289 | 234338 | 0.03 | 0.05 | 0.09 | 0.14 | 0.03 | 0.05 | 0.10 | 0.16 | 0.03 | 0.03 | 0.05 | 0.06 | 0.05 | 0.10 | 0.27 | 0.53 |
| 614 | 5602 | 116931 | 0.07 | 0.25 | 0.73 | 0.97 | 0.08 | 0.29 | 0.80 | 0.99 | 0.04 | 0.09 | 0.22 | 0.43 | 0.21 | 0.83 | 1.00 | 1.00 |
| 614.1 | 2293 | 116931 | 0.05 | 0.13 | 0.38 | 0.70 | 0.06 | 0.15 | 0.44 | 0.78 | 0.04 | 0.06 | 0.12 | 0.21 | 0.11 | 0.47 | 0.97 | 1.00 |
| 614.3 | 802 | 116931 | 0.04 | 0.07 | 0.17 | 0.32 | 0.04 | 0.08 | 0.19 | 0.37 | 0.03 | 0.04 | 0.07 | 0.10 | 0.07 | 0.20 | 0.62 | 0.92 |
| 614.32 | 352 | 116931 | 0.03 | 0.05 | 0.10 | 0.16 | 0.03 | 0.05 | 0.11 | 0.19 | 0.03 | 0.04 | 0.05 | 0.07 | 0.05 | 0.11 | 0.32 | 0.61 |
| 614.33 | 308 | 116931 | 0.03 | 0.05 | 0.09 | 0.15 | 0.03 | 0.05 | 0.10 | 0.17 | 0.03 | 0.03 | 0.05 | 0.06 | 0.05 | 0.10 | 0.29 | 0.56 |
| 614.4 | 245 | 116931 | 0.03 | 0.05 | 0.08 | 0.13 | 0.03 | 0.05 | 0.09 | 0.14 | 0.03 | 0.03 | 0.04 | 0.06 | 0.04 | 0.09 | 0.24 | 0.47 |
| 614.5 | 2642 | 116931 | 0.05 | 0.14 | 0.43 | 0.76 | 0.06 | 0.16 | 0.49 | 0.83 | 0.04 | 0.06 | 0.13 | 0.24 | 0.13 | 0.53 | 0.98 | 1.00 |
| 614.51 | 1116 | 116931 | 0.04 | 0.08 | 0.21 | 0.42 | 0.04 | 0.09 | 0.25 | 0.48 | 0.03 | 0.05 | 0.08 | 0.13 | 0.08 | 0.26 | 0.76 | 0.98 |
| 614.52 | 591 | 116931 | 0.04 | 0.06 | 0.13 | 0.25 | 0.04 | 0.07 | 0.15 | 0.29 | 0.03 | 0.04 | 0.06 | 0.09 | 0.06 | 0.16 | 0.49 | 0.83 |
| 614.53 | 658 | 116931 | 0.04 | 0.07 | 0.14 | 0.27 | 0.04 | 0.07 | 0.16 | 0.31 | 0.03 | 0.04 | 0.06 | 0.09 | 0.06 | 0.17 | 0.53 | 0.87 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 614.54 | 228 | 116931 | 0.03 | 0.04 | 0.08 | 0.12 | 0.03 | 0.05 | 0.08 | 0.14 | 0.03 | 0.03 | 0.04 | 0.06 | 0.04 | 0.09 | 0.22 | 0.44 |
| 615 | 3495 | 116931 | 0.06 | 0.17 | 0.53 | 0.86 | 0.07 | 0.20 | 0.61 | 0.92 | 0.04 | 0.07 | 0.16 | 0.30 | 0.15 | 0.64 | 1.00 | 1.00 |
| 617 | 1252 | 234338 | 0.04 | 0.09 | 0.23 | 0.46 | 0.05 | 0.10 | 0.27 | 0.53 | 0.03 | 0.05 | 0.08 | 0.14 | 0.08 | 0.29 | 0.80 | 0.99 |
| 618 | 10694 | 116931 | 0.10 | 0.41 | 0.93 | 1.00 | 0.11 | 0.47 | 0.97 | 1.00 | 0.05 | 0.12 | 0.36 | 0.68 | 0.35 | 0.98 | 1.00 | 1.00 |
| 618.1 | 6724 | 116931 | 0.08 | 0.29 | 0.80 | 0.99 | 0.09 | 0.33 | 0.86 | 1.00 | 0.04 | 0.09 | 0.25 | 0.49 | 0.25 | 0.89 | 1.00 | 1.00 |
| 618.2 | 4836 | 116931 | 0.07 | 0.22 | 0.67 | 0.95 | 0.08 | 0.26 | 0.74 | 0.97 | 0.04 | 0.08 | 0.20 | 0.38 | 0.19 | 0.78 | 1.00 | 1.00 |
| 618.5 | 459 | 116931 | 0.04 | 0.06 | 0.11 | 0.20 | 0.04 | 0.06 | 0.13 | 0.23 | 0.03 | 0.04 | 0.05 | 0.08 | 0.05 | 0.13 | 0.40 | 0.73 |
| 618.6 | 629 | 116931 | 0.04 | 0.06 | 0.14 | 0.26 | 0.04 | 0.07 | 0.16 | 0.30 | 0.03 | 0.04 | 0.06 | 0.09 | 0.06 | 0.17 | 0.51 | 0.85 |
| 619 | 8298 | 116931 | 0.09 | 0.34 | 0.87 | 1.00 | 0.10 | 0.39 | 0.92 | 1.00 | 0.05 | 0.11 | 0.30 | 0.57 | 0.29 | 0.94 | 1.00 | 1.00 |
| 619.1 | 683 | 116931 | 0.04 | 0.07 | 0.15 | 0.28 | 0.04 | 0.07 | 0.17 | 0.32 | 0.03 | 0.04 | 0.06 | 0.09 | 0.06 | 0.18 | 0.55 | 0.88 |
| 619.2 | 3020 | 116931 | 0.06 | 0.16 | 0.48 | 0.81 | 0.06 | 0.18 | 0.55 | 0.88 | 0.04 | 0.06 | 0.14 | 0.26 | 0.14 | 0.58 | 0.99 | 1.00 |
| 619.3 | 2536 | 116931 | 0.05 | 0.14 | 0.42 | 0.75 | 0.06 | 0.16 | 0.48 | 0.82 | 0.04 | 0.06 | 0.13 | 0.23 | 0.12 | 0.51 | 0.98 | 1.00 |
| 619.4 | 1535 | 116931 | 0.05 | 0.10 | 0.28 | 0.53 | 0.05 | 0.11 | 0.32 | 0.61 | 0.03 | 0.05 | 0.09 | 0.16 | 0.09 | 0.34 | 0.87 | 1.00 |
| 619.5 | 1209 | 116931 | 0.04 | 0.09 | 0.23 | 0.44 | 0.05 | 0.10 | 0.26 | 0.51 | 0.03 | 0.05 | 0.08 | 0.13 | 0.08 | 0.28 | 0.79 | 0.99 |
| 621 | 970 | 116931 | 0.04 | 0.08 | 0.19 | 0.37 | 0.04 | 0.09 | 0.22 | 0.43 | 0.03 | 0.04 | 0.07 | 0.11 | 0.07 | 0.24 | 0.70 | 0.96 |
| 622 | 9429 | 116931 | 0.10 | 0.37 | 0.91 | 1.00 | 0.11 | 0.43 | 0.95 | 1.00 | 0.05 | 0.12 | 0.33 | 0.63 | 0.32 | 0.96 | 1.00 | 1.00 |
| 622.1 | 6913 | 116931 | 0.08 | 0.29 | 0.81 | 0.99 | 0.09 | 0.34 | 0.87 | 1.00 | 0.04 | 0.10 | 0.26 | 0.50 | 0.25 | 0.90 | 1.00 | 1.00 |
| 622.2 | 2951 | 116931 | 0.06 | 0.15 | 0.47 | 0.81 | 0.06 | 0.18 | 0.54 | 0.87 | 0.04 | 0.06 | 0.14 | 0.26 | 0.13 | 0.57 | 0.99 | 1.00 |
| 623 | 1089 | 116931 | 0.04 | 0.08 | 0.21 | 0.41 | 0.04 | 0.09 | 0.24 | 0.47 | 0.03 | 0.05 | 0.08 | 0.12 | 0.08 | 0.26 | 0.75 | 0.98 |
| 624 | 805 | 116931 | 0.04 | 0.07 | 0.17 | 0.32 | 0.04 | 0.08 | 0.19 | 0.37 | 0.03 | 0.04 | 0.07 | 0.10 | 0.07 | 0.20 | 0.62 | 0.92 |
| 624.1 | 254 | 116931 | 0.03 | 0.05 | 0.08 | 0.13 | 0.03 | 0.05 | 0.09 | 0.15 | 0.03 | 0.03 | 0.04 | 0.06 | 0.04 | 0.09 | 0.25 | 0.48 |
| 624.2 | 440 | 116931 | 0.03 | 0.06 | 0.11 | 0.20 | 0.04 | 0.06 | 0.12 | 0.22 | 0.03 | 0.04 | 0.05 | 0.07 | 0.05 | 0.13 | 0.39 | 0.71 |
| 624.9 | 5074 | 116931 | 0.07 | 0.23 | 0.69 | 0.96 | 0.08 | 0.27 | 0.76 | 0.98 | 0.04 | 0.08 | 0.20 | 0.40 | 0.20 | 0.79 | 1.00 | 1.00 |
| 625 | 2526 | 116931 | 0.05 | 0.14 | 0.41 | 0.74 | 0.06 | 0.16 | 0.48 | 0.81 | 0.04 | 0.06 | 0.12 | 0.23 | 0.12 | 0.51 | 0.98 | 1.00 |
| 625.1 | 1007 | 116931 | 0.04 | 0.08 | 0.20 | 0.38 | 0.04 | 0.09 | 0.23 | 0.44 | 0.03 | 0.04 | 0.07 | 0.12 | 0.07 | 0.24 | 0.71 | 0.97 |
| 626 | 15577 | 116931 | 0.13 | 0.54 | 0.98 | 1.00 | 0.14 | 0.61 | 0.99 | 1.00 | 0.06 | 0.16 | 0.48 | 0.82 | 0.46 | 1.00 | 1.00 | 1.00 |
| 626.1 | 13278 | 116931 | 0.12 | 0.48 | 0.97 | 1.00 | 0.13 | 0.55 | 0.99 | 1.00 | 0.05 | 0.14 | 0.43 | 0.76 | 0.41 | 0.99 | 1.00 | 1.00 |
| 626.12 | 8228 | 116931 | 0.09 | 0.34 | 0.87 | 1.00 | 0.10 | 0.39 | 0.92 | 1.00 | 0.05 | 0.11 | 0.30 | 0.57 | 0.29 | 0.94 | 1.00 | 1.00 |
| 626.13 | 1646 | 116931 | 0.05 | 0.10 | 0.29 | 0.56 | 0.05 | 0.12 | 0.34 | 0.64 | 0.03 | 0.05 | 0.10 | 0.16 | 0.09 | 0.36 | 0.90 | 1.00 |
| 626.14 | 3244 | 116931 | 0.06 | 0.16 | 0.50 | 0.84 | 0.06 | 0.19 | 0.58 | 0.90 | 0.04 | 0.07 | 0.15 | 0.28 | 0.14 | 0.61 | 0.99 | 1.00 |
| 626.2 | 1487 | 116931 | 0.05 | 0.10 | 0.27 | 0.52 | 0.05 | 0.11 | 0.31 | 0.60 | 0.03 | 0.05 | 0.09 | 0.15 | 0.09 | 0.33 | 0.86 | 1.00 |
| 626.8 | 1139 | 116931 | 0.04 | 0.09 | 0.22 | 0.42 | 0.04 | 0.09 | 0.25 | 0.49 | 0.03 | 0.05 | 0.08 | 0.13 | 0.08 | 0.27 | 0.76 | 0.98 |
| 627 | 9346 | 116931 | 0.10 | 0.37 | 0.90 | 1.00 | 0.11 | 0.43 | 0.95 | 1.00 | 0.05 | 0.11 | 0.33 | 0.62 | 0.32 | 0.96 | 1.00 | 1.00 |
| 627.1 | 7915 | 116931 | 0.09 | 0.33 | 0.85 | 0.99 | 0.10 | 0.38 | 0.91 | 1.00 | 0.05 | 0.10 | 0.29 | 0.56 | 0.28 | 0.93 | 1.00 | 1.00 |
| 627.3 | 1078 | 116931 | 0.04 | 0.08 | 0.21 | 0.40 | 0.04 | 0.09 | 0.24 | 0.47 | 0.03 | 0.05 | 0.08 | 0.12 | 0.08 | 0.26 | 0.74 | 0.97 |
| 627.4 | 252 | 116931 | 0.03 | 0.05 | 0.08 | 0.13 | 0.03 | 0.05 | 0.09 | 0.15 | 0.03 | 0.03 | 0.04 | 0.06 | 0.04 | 0.09 | 0.24 | 0.48 |
| 628 | 4147 | 116931 | 0.06 | 0.20 | 0.60 | 0.91 | 0.07 | 0.23 | 0.68 | 0.95 | 0.04 | 0.07 | 0.18 | 0.34 | 0.17 | 0.71 | 1.00 | 1.00 |
| 634 | 4525 | 169668 | 0.07 | 0.21 | 0.64 | 0.94 | 0.07 | 0.25 | 0.72 | 0.97 | 0.04 | 0.08 | 0.19 | 0.37 | 0.18 | 0.75 | 1.00 | 1.00 |
| 634.1 | 1038 | 169668 | 0.04 | 0.08 | 0.20 | 0.39 | 0.04 | 0.09 | 0.23 | 0.45 | 0.03 | 0.04 | 0.08 | 0.12 | 0.07 | 0.25 | 0.73 | 0.97 |
| 634.3 | 272 | 169668 | 0.03 | 0.05 | 0.08 | 0.14 | 0.03 | 0.05 | 0.09 | 0.16 | 0.03 | 0.03 | 0.05 | 0.06 | 0.04 | 0.10 | 0.26 | 0.51 |
| 635 | 1680 | 169668 | 0.05 | 0.11 | 0.30 | 0.57 | 0.05 | 0.12 | 0.35 | 0.65 | 0.03 | 0.05 | 0.10 | 0.17 | 0.10 | 0.37 | 0.90 | 1.00 |
| 635.2 | 739 | 169668 | 0.04 | 0.07 | 0.16 | 0.30 | 0.04 | 0.07 | 0.18 | 0.34 | 0.03 | 0.04 | 0.06 | 0.10 | 0.06 | 0.19 | 0.58 | 0.90 |
| 635.3 | 1054 | 169668 | 0.04 | 0.08 | 0.20 | 0.40 | 0.04 | 0.09 | 0.24 | 0.46 | 0.03 | 0.04 | 0.08 | 0.12 | 0.07 | 0.25 | 0.73 | 0.97 |
| 636 | 2079 | 169668 | 0.05 | 0.12 | 0.36 | 0.66 | 0.05 | 0.14 | 0.41 | 0.74 | 0.03 | 0.06 | 0.11 | 0.20 | 0.11 | 0.44 | 0.95 | 1.00 |
| 636.2 | 508 | 169668 | 0.04 | 0.06 | 0.12 | 0.22 | 0.04 | 0.06 | 0.14 | 0.25 | 0.03 | 0.04 | 0.06 | 0.08 | 0.05 | 0.14 | 0.44 | 0.77 |
| 636.3 | 872 | 169668 | 0.04 | 0.07 | 0.18 | 0.34 | 0.04 | 0.08 | 0.20 | 0.39 | 0.03 | 0.04 | 0.07 | 0.11 | 0.07 | 0.22 | 0.65 | 0.94 |
| 642 | 946 | 169668 | 0.04 | 0.08 | 0.19 | 0.36 | 0.04 | 0.08 | 0.22 | 0.42 | 0.03 | 0.04 | 0.07 | 0.11 | 0.07 | 0.23 | 0.69 | 0.96 |
| 642.1 | 259 | 169668 | 0.03 | 0.05 | 0.08 | 0.13 | 0.03 | 0.05 | 0.09 | 0.15 | 0.03 | 0.03 | 0.04 | 0.06 | 0.04 | 0.09 | 0.25 | 0.49 |
| 644 | 677 | 169668 | 0.04 | 0.07 | 0.15 | 0.28 | 0.04 | 0.07 | 0.17 | 0.32 | 0.03 | 0.04 | 0.06 | 0.09 | 0.06 | 0.18 | 0.55 | 0.87 |
| 645 | 1054 | 325859 | 0.04 | 0.08 | 0.20 | 0.40 | 0.04 | 0.09 | 0.24 | 0.46 | 0.03 | 0.04 | 0.08 | 0.12 | 0.07 | 0.25 | 0.73 | 0.97 |
| 646 | 1868 | 169668 | 0.05 | 0.11 | 0.33 | 0.62 | 0.05 | 0.13 | 0.38 | 0.69 | 0.03 | 0.05 | 0.10 | 0.18 | 0.10 | 0.40 | 0.93 | 1.00 |
| 647.1 | 226 | 169668 | 0.03 | 0.04 | 0.08 | 0.12 | 0.03 | 0.05 | 0.08 | 0.14 | 0.03 | 0.03 | 0.04 | 0.06 | 0.04 | 0.09 | 0.22 | 0.44 |
| 650 | 1568 | 325859 | 0.05 | 0.10 | 0.28 | 0.55 | 0.05 | 0.11 | 0.33 | 0.62 | 0.03 | 0.05 | 0.09 | 0.16 | 0.09 | 0.35 | 0.88 | 1.00 |
| 651 | 299 | 325859 | 0.03 | 0.05 | 0.09 | 0.15 | 0.03 | 0.05 | 0.10 | 0.17 | 0.03 | 0.03 | 0.05 | 0.06 | 0.05 | 0.10 | 0.28 | 0.54 |
| 652 | 1428 | 325859 | 0.04 | 0.10 | 0.26 | 0.51 | 0.05 | 0.11 | 0.30 | 0.58 | 0.03 | 0.05 | 0.09 | 0.15 | 0.09 | 0.32 | 0.85 | 0.99 |
| 653 | 1257 | 169668 | 0.04 | 0.09 | 0.24 | 0.46 | 0.05 | 0.10 | 0.27 | 0.53 | 0.03 | 0.05 | 0.08 | 0.14 | 0.08 | 0.29 | 0.81 | 0.99 |
| 654.1 | 1034 | 169668 | 0.04 | 0.08 | 0.20 | 0.39 | 0.04 | 0.09 | 0.23 | 0.45 | 0.03 | 0.04 | 0.08 | 0.12 | 0.07 | 0.25 | 0.73 | 0.97 |
| 654.2 | 258 | 169668 | 0.03 | 0.05 | 0.08 | 0.13 | 0.03 | 0.05 | 0.09 | 0.15 | 0.03 | 0.03 | 0.04 | 0.06 | 0.04 | 0.09 | 0.25 | 0.48 |
| 655 | 3585 | 169668 | 0.06 | 0.18 | 0.55 | 0.88 | 0.07 | 0.20 | 0.62 | 0.93 | 0.04 | 0.07 | 0.16 | 0.30 | 0.16 | 0.66 | 1.00 | 1.00 |
| 656 | 499 | 325859 | 0.04 | 0.06 | 0.12 | 0.22 | 0.04 | 0.06 | 0.13 | 0.25 | 0.03 | 0.04 | 0.06 | 0.08 | 0.05 | 0.14 | 0.43 | 0.76 |
| 661 | 1819 | 325859 | 0.05 | 0.11 | 0.32 | 0.61 | 0.05 | 0.13 | 0.37 | 0.69 | 0.03 | 0.05 | 0.10 | 0.18 | 0.10 | 0.40 | 0.92 | 1.00 |
| 663 | 511 | 325859 | 0.04 | 0.06 | 0.12 | 0.22 | 0.04 | 0.06 | 0.14 | 0.25 | 0.03 | 0.04 | 0.06 | 0.08 | 0.05 | 0.14 | 0.44 | 0.77 |
| 665 | 4394 | 325859 | 0.07 | 0.21 | 0.64 | 0.93 | 0.07 | 0.24 | 0.71 | 0.97 | 0.04 | 0.08 | 0.19 | 0.36 | 0.18 | 0.75 | 1.00 | 1.00 |
| 669 | 2212 | 169668 | 0.05 | 0.13 | 0.37 | 0.69 | 0.05 | 0.14 | 0.43 | 0.77 | 0.04 | 0.06 | 0.12 | 0.21 | 0.11 | 0.46 | 0.96 | 1.00 |
| 674 | 217 | 169668 | 0.03 | 0.04 | 0.07 | 0.12 | 0.03 | 0.05 | 0.08 | 0.13 | 0.03 | 0.03 | 0.04 | 0.05 | 0.04 | 0.08 | 0.22 | 0.42 |
| 681 | 7381 | 289596 | 0.09 | 0.32 | 0.84 | 0.99 | 0.10 | 0.37 | 0.90 | 1.00 | 0.05 | 0.10 | 0.28 | 0.54 | 0.27 | 0.92 | 1.00 | 1.00 |
| 681.1 | 550 | 289596 | 0.04 | 0.06 | 0.13 | 0.23 | 0.04 | 0.07 | 0.14 | 0.27 | 0.03 | 0.04 | 0.06 | 0.08 | 0.06 | 0.15 | 0.46 | 0.80 |
| 681.2 | 509 | 289596 | 0.04 | 0.06 | 0.12 | 0.22 | 0.04 | 0.06 | 0.14 | 0.25 | 0.03 | 0.04 | 0.06 | 0.08 | 0.05 | 0.14 | 0.44 | 0.77 |
| 681.3 | 5521 | 289596 | 0.07 | 0.25 | 0.73 | 0.97 | 0.08 | 0.29 | 0.80 | 0.99 | 0.04 | 0.09 | 0.22 | 0.44 | 0.22 | 0.84 | 1.00 | 1.00 |
| 681.5 | 5524 | 289596 | 0.07 | 0.25 | 0.73 | 0.97 | 0.08 | 0.29 | 0.80 | 0.99 | 0.04 | 0.09 | 0.22 | 0.44 | 0.22 | 0.84 | 1.00 | 1.00 |
| 681.6 | 5489 | 289596 | 0.07 | 0.25 | 0.73 | 0.97 | 0.08 | 0.29 | 0.80 | 0.99 | 0.04 | 0.09 | 0.22 | 0.43 | 0.22 | 0.83 | 1.00 | 1.00 |
| 681.7 | 623 | 289596 | 0.04 | 0.06 | 0.14 | 0.26 | 0.04 | 0.07 | 0.16 | 0.30 | 0.03 | 0.04 | 0.06 | 0.09 | 0.06 | 0.17 | 0.51 | 0.85 |
| 686 | 1364 | 289596 | 0.04 | 0.09 | 0.25 | 0.49 | 0.05 | 0.10 | 0.29 | 0.56 | 0.03 | 0.05 | 0.09 | 0.14 | 0.09 | 0.31 | 0.84 | 0.99 |
| 686.1 | 2170 | 289596 | 0.05 | 0.13 | 0.37 | 0.68 | 0.05 | 0.14 | 0.43 | 0.76 | 0.04 | 0.06 | 0.11 | 0.20 | 0.11 | 0.46 | 0.96 | 1.00 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 686.3 | 510 | 289596 | 0.04 | 0.06 | 0.12 | 0.22 | 0.04 | 0.06 | 0.14 | 0.25 | 0.03 | 0.04 | 0.06 | 0.08 | 0.05 | 0.14 | 0.44 | 0.77 |
| 686.4 | 337 | 289596 | 0.03 | 0.05 | 0.09 | 0.16 | 0.03 | 0.05 | 0.10 | 0.18 | 0.03 | 0.04 | 0.05 | 0.07 | 0.05 | 0.11 | 0.31 | 0.59 |
| 687 | 1302 | 289596 | 0.04 | 0.09 | 0.24 | 0.47 | 0.05 | 0.10 | 0.28 | 0.54 | 0.03 | 0.05 | 0.08 | 0.14 | 0.08 | 0.30 | 0.82 | 0.99 |
| 687.1 | 2100 | 289596 | 0.05 | 0.12 | 0.36 | 0.67 | 0.05 | 0.14 | 0.42 | 0.75 | 0.04 | 0.06 | 0.11 | 0.20 | 0.11 | 0.45 | 0.95 | 1.00 |
| 687.2 | 947 | 289596 | 0.04 | 0.08 | 0.19 | 0.37 | 0.04 | 0.09 | 0.22 | 0.42 | 0.03 | 0.04 | 0.07 | 0.11 | 0.07 | 0.23 | 0.69 | 0.96 |
| 687.4 | 2787 | 289596 | 0.06 | 0.15 | 0.45 | 0.79 | 0.06 | 0.17 | 0.52 | 0.85 | 0.04 | 0.06 | 0.13 | 0.25 | 0.13 | 0.55 | 0.99 | 1.00 |
| 689 | 5767 | 289596 | 0.08 | 0.26 | 0.75 | 0.98 | 0.08 | 0.30 | 0.82 | 0.99 | 0.04 | 0.09 | 0.23 | 0.45 | 0.22 | 0.85 | 1.00 | 1.00 |
| 690 | 3042 | 289596 | 0.06 | 0.16 | 0.49 | 0.82 | 0.06 | 0.18 | 0.56 | 0.88 | 0.04 | 0.07 | 0.14 | 0.27 | 0.14 | 0.59 | 0.99 | 1.00 |
| 690.1 | 3024 | 289596 | 0.06 | 0.16 | 0.48 | 0.82 | 0.06 | 0.18 | 0.55 | 0.88 | 0.04 | 0.06 | 0.14 | 0.27 | 0.14 | 0.59 | 0.99 | 1.00 |
| 694 | 952 | 289596 | 0.04 | 0.08 | 0.19 | 0.37 | 0.04 | 0.09 | 0.22 | 0.42 | 0.03 | 0.04 | 0.07 | 0.11 | 0.07 | 0.23 | 0.69 | 0.96 |
| 694.2 | 762 | 289596 | 0.04 | 0.07 | 0.16 | 0.30 | 0.04 | 0.08 | 0.18 | 0.35 | 0.03 | 0.04 | 0.07 | 0.10 | 0.06 | 0.20 | 0.60 | 0.91 |
| 695 | 2344 | 289596 | 0.05 | 0.13 | 0.39 | 0.72 | 0.06 | 0.15 | 0.45 | 0.79 | 0.04 | 0.06 | 0.12 | 0.22 | 0.12 | 0.49 | 0.97 | 1.00 |
| 695.3 | 312 | 289596 | 0.03 | 0.05 | 0.09 | 0.15 | 0.03 | 0.05 | 0.10 | 0.17 | 0.03 | 0.03 | 0.05 | 0.06 | 0.05 | 0.10 | 0.29 | 0.56 |
| 695.4 | 391 | 288757 | 0.03 | 0.05 | 0.10 | 0.18 | 0.04 | 0.06 | 0.11 | 0.20 | 0.03 | 0.04 | 0.05 | 0.07 | 0.05 | 0.12 | 0.35 | 0.66 |
| 695.42 | 324 | 288757 | 0.03 | 0.05 | 0.09 | 0.16 | 0.03 | 0.05 | 0.10 | 0.18 | 0.03 | 0.03 | 0.05 | 0.06 | 0.05 | 0.11 | 0.30 | 0.58 |
| 695.7 | 724 | 289596 | 0.04 | 0.07 | 0.15 | 0.29 | 0.04 | 0.07 | 0.18 | 0.34 | 0.03 | 0.04 | 0.06 | 0.10 | 0.06 | 0.19 | 0.57 | 0.90 |
| 695.8 | 231 | 289596 | 0.03 | 0.05 | 0.08 | 0.12 | 0.03 | 0.05 | 0.08 | 0.14 | 0.03 | 0.03 | 0.04 | 0.06 | 0.04 | 0.09 | 0.23 | 0.44 |
| 695.9 | 486 | 289596 | 0.04 | 0.06 | 0.12 | 0.21 | 0.04 | 0.06 | 0.13 | 0.24 | 0.03 | 0.04 | 0.05 | 0.08 | 0.05 | 0.14 | 0.42 | 0.75 |
| 696 | 2369 | 286399 | 0.05 | 0.13 | 0.40 | 0.72 | 0.06 | 0.15 | 0.46 | 0.80 | 0.04 | 0.06 | 0.12 | 0.22 | 0.12 | 0.49 | 0.97 | 1.00 |
| 696.4 | 2308 | 286399 | 0.05 | 0.13 | 0.39 | 0.71 | 0.06 | 0.15 | 0.45 | 0.78 | 0.04 | 0.06 | 0.12 | 0.21 | 0.12 | 0.48 | 0.97 | 1.00 |
| 696.41 | 1756 | 286399 | 0.05 | 0.11 | 0.31 | 0.59 | 0.05 | 0.12 | 0.36 | 0.67 | 0.03 | 0.05 | 0.10 | 0.17 | 0.10 | 0.39 | 0.92 | 1.00 |
| 696.42 | 711 | 286399 | 0.04 | 0.07 | 0.15 | 0.29 | 0.04 | 0.07 | 0.17 | 0.33 | 0.03 | 0.04 | 0.06 | 0.10 | 0.06 | 0.18 | 0.57 | 0.89 |
| 697 | 522 | 289596 | 0.04 | 0.06 | 0.12 | 0.22 | 0.04 | 0.06 | 0.14 | 0.26 | 0.03 | 0.04 | 0.06 | 0.08 | 0.06 | 0.15 | 0.45 | 0.78 |
| 698 | 767 | 289596 | 0.04 | 0.07 | 0.16 | 0.31 | 0.04 | 0.08 | 0.18 | 0.36 | 0.03 | 0.04 | 0.07 | 0.10 | 0.06 | 0.20 | 0.60 | 0.91 |
| 700 | 280 | 289596 | 0.03 | 0.05 | 0.08 | 0.14 | 0.03 | 0.05 | 0.09 | 0.16 | 0.03 | 0.03 | 0.05 | 0.06 | 0.05 | 0.10 | 0.27 | 0.52 |
| 701 | 4868 | 289596 | 0.07 | 0.23 | 0.68 | 0.95 | 0.08 | 0.26 | 0.75 | 0.98 | 0.04 | 0.08 | 0.20 | 0.39 | 0.20 | 0.79 | 1.00 | 1.00 |
| 701.2 | 2159 | 289596 | 0.05 | 0.13 | 0.37 | 0.68 | 0.05 | 0.14 | 0.43 | 0.76 | 0.04 | 0.06 | 0.11 | 0.20 | 0.11 | 0.46 | 0.96 | 1.00 |
| 701.3 | 478 | 289596 | 0.04 | 0.06 | 0.12 | 0.21 | 0.04 | 0.06 | 0.13 | 0.24 | 0.03 | 0.04 | 0.05 | 0.08 | 0.05 | 0.14 | 0.41 | 0.74 |
| 701.4 | 205 | 289596 | 0.03 | 0.04 | 0.07 | 0.11 | 0.03 | 0.05 | 0.08 | 0.13 | 0.03 | 0.03 | 0.04 | 0.05 | 0.04 | 0.08 | 0.21 | 0.40 |
| 701.5 | 447 | 289596 | 0.04 | 0.06 | 0.11 | 0.20 | 0.04 | 0.06 | 0.12 | 0.23 | 0.03 | 0.04 | 0.05 | 0.07 | 0.05 | 0.13 | 0.39 | 0.72 |
| 702 | 5494 | 289596 | 0.07 | 0.25 | 0.73 | 0.97 | 0.08 | 0.29 | 0.80 | 0.99 | 0.04 | 0.09 | 0.22 | 0.43 | 0.22 | 0.83 | 1.00 | 1.00 |
| 702.1 | 2726 | 289596 | 0.06 | 0.15 | 0.44 | 0.78 | 0.06 | 0.17 | 0.51 | 0.85 | 0.04 | 0.06 | 0.13 | 0.24 | 0.13 | 0.55 | 0.99 | 1.00 |
| 702.2 | 2973 | 289596 | 0.06 | 0.16 | 0.48 | 0.81 | 0.06 | 0.18 | 0.55 | 0.88 | 0.04 | 0.06 | 0.14 | 0.26 | 0.14 | 0.58 | 0.99 | 1.00 |
| 703 | 345 | 289596 | 0.03 | 0.05 | 0.10 | 0.16 | 0.03 | 0.05 | 0.11 | 0.19 | 0.03 | 0.04 | 0.05 | 0.07 | 0.05 | 0.11 | 0.32 | 0.60 |
| 703.1 | 837 | 289596 | 0.04 | 0.07 | 0.17 | 0.33 | 0.04 | 0.08 | 0.20 | 0.38 | 0.03 | 0.04 | 0.07 | 0.10 | 0.07 | 0.21 | 0.64 | 0.93 |
| 704 | 4724 | 289596 | 0.07 | 0.22 | 0.67 | 0.95 | 0.08 | 0.26 | 0.74 | 0.97 | 0.04 | 0.08 | 0.20 | 0.38 | 0.19 | 0.78 | 1.00 | 1.00 |
| 705.8 | 569 | 289596 | 0.04 | 0.06 | 0.13 | 0.24 | 0.04 | 0.07 | 0.15 | 0.28 | 0.03 | 0.04 | 0.06 | 0.08 | 0.06 | 0.16 | 0.48 | 0.81 |
| 706 | 7950 | 289596 | 0.09 | 0.34 | 0.87 | 1.00 | 0.10 | 0.39 | 0.92 | 1.00 | 0.05 | 0.11 | 0.30 | 0.57 | 0.29 | 0.94 | 1.00 | 1.00 |
| 706.2 | 7878 | 289596 | 0.09 | 0.34 | 0.87 | 1.00 | 0.10 | 0.39 | 0.92 | 1.00 | 0.05 | 0.11 | 0.30 | 0.57 | 0.29 | 0.94 | 1.00 | 1.00 |
| 707 | 2310 | 289596 | 0.05 | 0.13 | 0.39 | 0.71 | 0.06 | 0.15 | 0.45 | 0.79 | 0.04 | 0.06 | 0.12 | 0.21 | 0.12 | 0.48 | 0.97 | 1.00 |
| 707.1 | 1184 | 289596 | 0.04 | 0.09 | 0.22 | 0.44 | 0.04 | 0.10 | 0.26 | 0.50 | 0.03 | 0.05 | 0.08 | 0.13 | 0.08 | 0.28 | 0.78 | 0.98 |
| 707.2 | 1199 | 289596 | 0.04 | 0.09 | 0.23 | 0.44 | 0.05 | 0.10 | 0.26 | 0.51 | 0.03 | 0.05 | 0.08 | 0.13 | 0.08 | 0.28 | 0.79 | 0.99 |
| 709 | 3306 | 289596 | 0.06 | 0.17 | 0.52 | 0.85 | 0.06 | 0.19 | 0.59 | 0.91 | 0.04 | 0.07 | 0.15 | 0.29 | 0.15 | 0.63 | 1.00 | 1.00 |
| 709.2 | 512 | 289596 | 0.04 | 0.06 | 0.12 | 0.22 | 0.04 | 0.06 | 0.14 | 0.25 | 0.03 | 0.04 | 0.06 | 0.08 | 0.05 | 0.15 | 0.44 | 0.77 |
| 709.7 | 2592 | 289596 | 0.05 | 0.14 | 0.43 | 0.76 | 0.06 | 0.16 | 0.49 | 0.83 | 0.04 | 0.06 | 0.13 | 0.23 | 0.12 | 0.53 | 0.98 | 1.00 |
| 710 | 620 | 295120 | 0.04 | 0.06 | 0.14 | 0.26 | 0.04 | 0.07 | 0.16 | 0.30 | 0.03 | 0.04 | 0.06 | 0.09 | 0.06 | 0.17 | 0.51 | 0.85 |
| 710.1 | 602 | 295120 | 0.04 | 0.06 | 0.14 | 0.25 | 0.04 | 0.07 | 0.15 | 0.29 | 0.03 | 0.04 | 0.06 | 0.09 | 0.06 | 0.16 | 0.50 | 0.84 |
| 710.19 | 444 | 295120 | 0.03 | 0.06 | 0.11 | 0.20 | 0.04 | 0.06 | 0.12 | 0.23 | 0.03 | 0.04 | 0.05 | 0.07 | 0.05 | 0.13 | 0.39 | 0.71 |
| 711 | 433 | 295120 | 0.03 | 0.06 | 0.11 | 0.19 | 0.04 | 0.06 | 0.12 | 0.22 | 0.03 | 0.04 | 0.05 | 0.07 | 0.05 | 0.13 | 0.38 | 0.70 |
| 711.1 | 333 | 295120 | 0.03 | 0.05 | 0.09 | 0.16 | 0.03 | 0.05 | 0.10 | 0.18 | 0.03 | 0.04 | 0.05 | 0.06 | 0.05 | 0.11 | 0.31 | 0.59 |
| 714 | 4896 | 294409 | 0.07 | 0.23 | 0.68 | 0.95 | 0.08 | 0.26 | 0.76 | 0.98 | 0.04 | 0.08 | 0.20 | 0.40 | 0.20 | 0.79 | 1.00 | 1.00 |
| 714.1 | 4369 | 294409 | 0.07 | 0.21 | 0.63 | 0.93 | 0.07 | 0.24 | 0.71 | 0.96 | 0.04 | 0.08 | 0.19 | 0.36 | 0.18 | 0.75 | 1.00 | 1.00 |
| 715 | 1641 | 294409 | 0.05 | 0.11 | 0.29 | 0.57 | 0.05 | 0.12 | 0.34 | 0.64 | 0.03 | 0.05 | 0.10 | 0.17 | 0.09 | 0.36 | 0.90 | 1.00 |
| 715.2 | 399 | 294409 | 0.03 | 0.05 | 0.10 | 0.18 | 0.04 | 0.06 | 0.12 | 0.21 | 0.03 | 0.04 | 0.05 | 0.07 | 0.05 | 0.12 | 0.36 | 0.67 |
| 716 | 38203 | 295120 | 0.25 | 0.90 | 1.00 | 1.00 | 0.29 | 0.94 | 1.00 | 1.00 | 0.09 | 0.32 | 0.85 | 0.99 | 0.84 | 1.00 | 1.00 | 1.00 |
| 716.2 | 16046 | 295120 | 0.14 | 0.58 | 0.99 | 1.00 | 0.15 | 0.66 | 1.00 | 1.00 | 0.06 | 0.17 | 0.52 | 0.85 | 0.50 | 1.00 | 1.00 | 1.00 |
| 716.9 | 38053 | 295120 | 0.25 | 0.90 | 1.00 | 1.00 | 0.29 | 0.94 | 1.00 | 1.00 | 0.09 | 0.32 | 0.85 | 0.99 | 0.83 | 1.00 | 1.00 | 1.00 |
| 717 | 1354 | 336121 | 0.04 | 0.09 | 0.25 | 0.49 | 0.05 | 0.10 | 0.29 | 0.56 | 0.03 | 0.05 | 0.09 | 0.14 | 0.08 | 0.31 | 0.83 | 0.99 |
| 720 | 4105 | 322347 | 0.07 | 0.20 | 0.61 | 0.92 | 0.07 | 0.23 | 0.68 | 0.96 | 0.04 | 0.07 | 0.18 | 0.34 | 0.17 | 0.72 | 1.00 | 1.00 |
| 721 | 8311 | 322347 | 0.09 | 0.35 | 0.88 | 1.00 | 0.10 | 0.41 | 0.93 | 1.00 | 0.05 | 0.11 | 0.31 | 0.59 | 0.30 | 0.95 | 1.00 | 1.00 |
| 721.1 | 7917 | 322347 | 0.09 | 0.34 | 0.87 | 1.00 | 0.10 | 0.39 | 0.92 | 1.00 | 0.05 | 0.11 | 0.30 | 0.57 | 0.29 | 0.94 | 1.00 | 1.00 |
| 721.2 | 204 | 322347 | 0.03 | 0.04 | 0.07 | 0.11 | 0.03 | 0.05 | 0.08 | 0.13 | 0.03 | 0.03 | 0.04 | 0.05 | 0.04 | 0.08 | 0.21 | 0.40 |
| 721.8 | 384 | 322347 | 0.03 | 0.05 | 0.10 | 0.18 | 0.04 | 0.06 | 0.11 | 0.20 | 0.03 | 0.04 | 0.05 | 0.07 | 0.05 | 0.12 | 0.35 | 0.65 |
| 722 | 6764 | 322347 | 0.08 | 0.30 | 0.81 | 0.99 | 0.09 | 0.34 | 0.88 | 1.00 | 0.05 | 0.10 | 0.26 | 0.51 | 0.25 | 0.90 | 1.00 | 1.00 |
| 722.1 | 495 | 322347 | 0.04 | 0.06 | 0.12 | 0.21 | 0.04 | 0.06 | 0.13 | 0.25 | 0.03 | 0.04 | 0.05 | 0.08 | 0.05 | 0.14 | 0.43 | 0.76 |
| 722.6 | 2865 | 322347 | 0.06 | 0.15 | 0.46 | 0.80 | 0.06 | 0.17 | 0.53 | 0.86 | 0.04 | 0.06 | 0.14 | 0.25 | 0.13 | 0.57 | 0.99 | 1.00 |
| 722.7 | 398 | 322347 | 0.03 | 0.05 | 0.10 | 0.18 | 0.04 | 0.06 | 0.12 | 0.21 | 0.03 | 0.04 | 0.05 | 0.07 | 0.05 | 0.12 | 0.36 | 0.67 |
| 722.9 | 4097 | 322347 | 0.06 | 0.20 | 0.61 | 0.92 | 0.07 | 0.23 | 0.68 | 0.95 | 0.04 | 0.07 | 0.18 | 0.34 | 0.17 | 0.72 | 1.00 | 1.00 |
| 723 | 537 | 322347 | 0.04 | 0.06 | 0.13 | 0.23 | 0.04 | 0.06 | 0.14 | 0.26 | 0.03 | 0.04 | 0.06 | 0.08 | 0.06 | 0.15 | 0.46 | 0.79 |
| 724 | 1156 | 322347 | 0.04 | 0.09 | 0.22 | 0.43 | 0.04 | 0.10 | 0.25 | 0.50 | 0.03 | 0.05 | 0.08 | 0.13 | 0.08 | 0.27 | 0.77 | 0.98 |
| 724.1 | 358 | 322347 | 0.03 | 0.05 | 0.10 | 0.17 | 0.03 | 0.06 | 0.11 | 0.19 | 0.03 | 0.04 | 0.05 | 0.07 | 0.05 | 0.11 | 0.33 | 0.62 |
| 724.2 | 361 | 322347 | 0.03 | 0.05 | 0.10 | 0.17 | 0.03 | 0.06 | 0.11 | 0.19 | 0.03 | 0.04 | 0.05 | 0.07 | 0.05 | 0.11 | 0.33 | 0.62 |
| 724.9 | 723 | 322347 | 0.04 | 0.07 | 0.15 | 0.29 | 0.04 | 0.07 | 0.18 | 0.34 | 0.03 | 0.04 | 0.06 | 0.10 | 0.06 | 0.19 | 0.57 | 0.90 |
| 726 | 14369 | 306383 | 0.13 | 0.54 | 0.98 | 1.00 | 0.14 | 0.61 | 0.99 | 1.00 | 0.06 | 0.16 | 0.48 | 0.82 | 0.46 | 1.00 | 1.00 | 1.00 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 726.1 | 9643 | 306383 | 0.10 | 0.40 | 0.92 | 1.00 | 0.11 | 0.46 | 0.96 | 1.00 | 0.05 | 0.12 | 0.35 | 0.66 | 0.34 | 0.97 | 1.00 | 1.00 |
| 726.2 | 527 | 306383 | 0.04 | 0.06 | 0.12 | 0.23 | 0.04 | 0.06 | 0.14 | 0.26 | 0.03 | 0.04 | 0.06 | 0.08 | 0.06 | 0.15 | 0.45 | 0.78 |
| 726.3 | 822 | 306383 | 0.04 | 0.07 | 0.17 | 0.32 | 0.04 | 0.08 | 0.19 | 0.38 | 0.03 | 0.04 | 0.07 | 0.10 | 0.07 | 0.21 | 0.63 | 0.93 |
| 726.4 | 3462 | 306383 | 0.06 | 0.17 | 0.54 | 0.87 | 0.07 | 0.20 | 0.61 | 0.92 | 0.04 | 0.07 | 0.16 | 0.30 | 0.15 | 0.65 | 1.00 | 1.00 |
| 727 | 12755 | 306383 | 0.12 | 0.49 | 0.97 | 1.00 | 0.13 | 0.56 | 0.99 | 1.00 | 0.05 | 0.14 | 0.44 | 0.77 | 0.42 | 0.99 | 1.00 | 1.00 |
| 727.1 | 5004 | 306383 | 0.07 | 0.23 | 0.69 | 0.96 | 0.08 | 0.27 | 0.77 | 0.98 | 0.04 | 0.08 | 0.21 | 0.40 | 0.20 | 0.80 | 1.00 | 1.00 |
| 727.4 | 2903 | 306383 | 0.06 | 0.15 | 0.47 | 0.80 | 0.06 | 0.18 | 0.54 | 0.87 | 0.04 | 0.06 | 0.14 | 0.26 | 0.13 | 0.57 | 0.99 | 1.00 |
| 727.5 | 587 | 306383 | 0.04 | 0.06 | 0.13 | 0.25 | 0.04 | 0.07 | 0.15 | 0.28 | 0.03 | 0.04 | 0.06 | 0.09 | 0.06 | 0.16 | 0.49 | 0.83 |
| 727.6 | 3877 | 306383 | 0.06 | 0.19 | 0.58 | 0.90 | 0.07 | 0.22 | 0.66 | 0.94 | 0.04 | 0.07 | 0.17 | 0.33 | 0.17 | 0.69 | 1.00 | 1.00 |
| 728 | 832 | 306383 | 0.04 | 0.07 | 0.17 | 0.33 | 0.04 | 0.08 | 0.20 | 0.38 | 0.03 | 0.04 | 0.07 | 0.10 | 0.07 | 0.21 | 0.63 | 0.93 |
| 728.2 | 402 | 306383 | 0.03 | 0.05 | 0.10 | 0.18 | 0.04 | 0.06 | 0.12 | 0.21 | 0.03 | 0.04 | 0.05 | 0.07 | 0.05 | 0.12 | 0.36 | 0.67 |
| 728.7 | 3729 | 306383 | 0.06 | 0.19 | 0.57 | 0.89 | 0.07 | 0.21 | 0.64 | 0.94 | 0.04 | 0.07 | 0.17 | 0.32 | 0.16 | 0.68 | 1.00 | 1.00 |
| 728.71 | 3406 | 306383 | 0.06 | 0.17 | 0.53 | 0.86 | 0.06 | 0.20 | 0.60 | 0.92 | 0.04 | 0.07 | 0.15 | 0.29 | 0.15 | 0.64 | 1.00 | 1.00 |
| 729 | 6003 | 306383 | 0.08 | 0.27 | 0.77 | 0.98 | 0.08 | 0.31 | 0.84 | 0.99 | 0.04 | 0.09 | 0.24 | 0.47 | 0.23 | 0.86 | 1.00 | 1.00 |
| 729.1 | 835 | 306383 | 0.04 | 0.07 | 0.17 | 0.33 | 0.04 | 0.08 | 0.20 | 0.38 | 0.03 | 0.04 | 0.07 | 0.10 | 0.07 | 0.21 | 0.63 | 0.93 |
| 731 | 290 | 320016 | 0.03 | 0.05 | 0.09 | 0.14 | 0.03 | 0.05 | 0.10 | 0.16 | 0.03 | 0.03 | 0.05 | 0.06 | 0.05 | 0.10 | 0.27 | 0.53 |
| 731.1 | 239 | 320016 | 0.03 | 0.05 | 0.08 | 0.13 | 0.03 | 0.05 | 0.09 | 0.14 | 0.03 | 0.03 | 0.04 | 0.06 | 0.04 | 0.09 | 0.23 | 0.46 |
| 732 | 461 | 320016 | 0.04 | 0.06 | 0.11 | 0.20 | 0.04 | 0.06 | 0.13 | 0.23 | 0.03 | 0.04 | 0.05 | 0.08 | 0.05 | 0.13 | 0.40 | 0.73 |
| 732.1 | 205 | 320016 | 0.03 | 0.04 | 0.07 | 0.11 | 0.03 | 0.05 | 0.08 | 0.13 | 0.03 | 0.03 | 0.04 | 0.05 | 0.04 | 0.08 | 0.21 | 0.40 |
| 733 | 2100 | 320016 | 0.05 | 0.12 | 0.36 | 0.67 | 0.05 | 0.14 | 0.42 | 0.75 | 0.04 | 0.06 | 0.11 | 0.20 | 0.11 | 0.45 | 0.95 | 1.00 |
| 733.2 | 295 | 320016 | 0.03 | 0.05 | 0.09 | 0.15 | 0.03 | 0.05 | 0.10 | 0.17 | 0.03 | 0.03 | 0.05 | 0.06 | 0.05 | 0.10 | 0.28 | 0.54 |
| 733.4 | 518 | 320016 | 0.04 | 0.06 | 0.12 | 0.22 | 0.04 | 0.06 | 0.14 | 0.26 | 0.03 | 0.04 | 0.06 | 0.08 | 0.06 | 0.15 | 0.44 | 0.78 |
| 733.8 | 1175 | 320016 | 0.04 | 0.09 | 0.22 | 0.44 | 0.04 | 0.10 | 0.26 | 0.50 | 0.03 | 0.05 | 0.08 | 0.13 | 0.08 | 0.28 | 0.78 | 0.98 |
| 735 | 8929 | 324005 | 0.10 | 0.37 | 0.90 | 1.00 | 0.11 | 0.43 | 0.95 | 1.00 | 0.05 | 0.11 | 0.33 | 0.62 | 0.32 | 0.96 | 1.00 | 1.00 |
| 735.1 | 215 | 324005 | 0.03 | 0.04 | 0.07 | 0.12 | 0.03 | 0.05 | 0.08 | 0.13 | 0.03 | 0.03 | 0.04 | 0.05 | 0.04 | 0.08 | 0.21 | 0.42 |
| 735.2 | 4749 | 324005 | 0.07 | 0.22 | 0.67 | 0.95 | 0.08 | 0.26 | 0.75 | 0.98 | 0.04 | 0.08 | 0.20 | 0.39 | 0.19 | 0.78 | 1.00 | 1.00 |
| 735.21 | 1813 | 324005 | 0.05 | 0.11 | 0.32 | 0.61 | 0.05 | 0.13 | 0.37 | 0.68 | 0.03 | 0.05 | 0.10 | 0.18 | 0.10 | 0.40 | 0.92 | 1.00 |
| 735.23 | 1423 | 324005 | 0.04 | 0.10 | 0.26 | 0.51 | 0.05 | 0.11 | 0.30 | 0.58 | 0.03 | 0.05 | 0.09 | 0.15 | 0.09 | 0.32 | 0.85 | 0.99 |
| 735.3 | 6000 | 324005 | 0.08 | 0.27 | 0.77 | 0.98 | 0.08 | 0.31 | 0.84 | 0.99 | 0.04 | 0.09 | 0.24 | 0.47 | 0.23 | 0.87 | 1.00 | 1.00 |
| 736 | 1764 | 324005 | 0.05 | 0.11 | 0.31 | 0.60 | 0.05 | 0.12 | 0.36 | 0.67 | 0.03 | 0.05 | 0.10 | 0.17 | 0.10 | 0.39 | 0.92 | 1.00 |
| 736.2 | 234 | 324005 | 0.03 | 0.05 | 0.08 | 0.12 | 0.03 | 0.05 | 0.08 | 0.14 | 0.03 | 0.03 | 0.04 | 0.06 | 0.04 | 0.09 | 0.23 | 0.45 |
| 737 | 1419 | 324005 | 0.04 | 0.10 | 0.26 | 0.51 | 0.05 | 0.11 | 0.30 | 0.58 | 0.03 | 0.05 | 0.09 | 0.15 | 0.09 | 0.32 | 0.85 | 0.99 |
| 737.1 | 213 | 324005 | 0.03 | 0.04 | 0.07 | 0.12 | 0.03 | 0.05 | 0.08 | 0.13 | 0.03 | 0.03 | 0.04 | 0.05 | 0.04 | 0.08 | 0.21 | 0.42 |
| 737.3 | 1174 | 324005 | 0.04 | 0.09 | 0.22 | 0.44 | 0.04 | 0.10 | 0.26 | 0.50 | 0.03 | 0.05 | 0.08 | 0.13 | 0.08 | 0.28 | 0.78 | 0.98 |
| 738 | 1991 | 324005 | 0.05 | 0.12 | 0.34 | 0.65 | 0.05 | 0.13 | 0.40 | 0.72 | 0.03 | 0.06 | 0.11 | 0.19 | 0.11 | 0.43 | 0.94 | 1.00 |
| 738.4 | 1644 | 324005 | 0.05 | 0.11 | 0.29 | 0.57 | 0.05 | 0.12 | 0.34 | 0.64 | 0.03 | 0.05 | 0.10 | 0.17 | 0.09 | 0.36 | 0.90 | 1.00 |
| 739 | 496 | 324005 | 0.04 | 0.06 | 0.12 | 0.21 | 0.04 | 0.06 | 0.13 | 0.25 | 0.03 | 0.04 | 0.06 | 0.08 | 0.05 | 0.14 | 0.43 | 0.76 |
| 740 | 50335 | 287140 | 0.31 | 0.95 | 1.00 | 1.00 | 0.35 | 0.98 | 1.00 | 1.00 | 0.10 | 0.39 | 0.92 | 1.00 | 0.91 | 1.00 | 1.00 | 1.00 |
| 740.1 | 31034 | 287140 | 0.22 | 0.83 | 1.00 | 1.00 | 0.25 | 0.89 | 1.00 | 1.00 | 0.08 | 0.27 | 0.78 | 0.98 | 0.76 | 1.00 | 1.00 | 1.00 |
| 740.11 | 8866 | 287140 | 0.10 | 0.37 | 0.90 | 1.00 | 0.11 | 0.43 | 0.94 | 1.00 | 0.05 | 0.11 | 0.33 | 0.62 | 0.32 | 0.96 | 1.00 | 1.00 |
| 740.12 | 634 | 287140 | 0.04 | 0.06 | 0.14 | 0.26 | 0.04 | 0.07 | 0.16 | 0.30 | 0.03 | 0.04 | 0.06 | 0.09 | 0.06 | 0.17 | 0.52 | 0.85 |
| 740.2 | 4353 | 287140 | 0.07 | 0.21 | 0.63 | 0.93 | 0.07 | 0.24 | 0.71 | 0.96 | 0.04 | 0.08 | 0.19 | 0.36 | 0.18 | 0.74 | 1.00 | 1.00 |
| 740.9 | 28265 | 287140 | 0.20 | 0.80 | 1.00 | 1.00 | 0.23 | 0.87 | 1.00 | 1.00 | 0.08 | 0.26 | 0.74 | 0.97 | 0.73 | 1.00 | 1.00 | 1.00 |
| 741 | 3744 | 331152 | 0.06 | 0.19 | 0.57 | 0.89 | 0.07 | 0.21 | 0.64 | 0.94 | 0.04 | 0.07 | 0.17 | 0.32 | 0.16 | 0.68 | 1.00 | 1.00 |
| 741.2 | 590 | 331152 | 0.04 | 0.06 | 0.13 | 0.25 | 0.04 | 0.07 | 0.15 | 0.29 | 0.03 | 0.04 | 0.06 | 0.09 | 0.06 | 0.16 | 0.49 | 0.83 |
| 741.4 | 1400 | 331152 | 0.04 | 0.10 | 0.26 | 0.50 | 0.05 | 0.11 | 0.30 | 0.57 | 0.03 | 0.05 | 0.09 | 0.15 | 0.09 | 0.32 | 0.85 | 0.99 |
| 742 | 2856 | 331152 | 0.06 | 0.15 | 0.46 | 0.80 | 0.06 | 0.17 | 0.53 | 0.86 | 0.04 | 0.06 | 0.14 | 0.25 | 0.13 | 0.57 | 0.99 | 1.00 |
| 742.1 | 297 | 331152 | 0.03 | 0.05 | 0.09 | 0.15 | 0.03 | 0.05 | 0.10 | 0.17 | 0.03 | 0.03 | 0.05 | 0.06 | 0.05 | 0.10 | 0.28 | 0.54 |
| 742.2 | 383 | 331152 | 0.03 | 0.05 | 0.10 | 0.18 | 0.04 | 0.06 | 0.11 | 0.20 | 0.03 | 0.04 | 0.05 | 0.07 | 0.05 | 0.12 | 0.35 | 0.65 |
| 742.8 | 970 | 331152 | 0.04 | 0.08 | 0.19 | 0.37 | 0.04 | 0.09 | 0.22 | 0.43 | 0.03 | 0.04 | 0.07 | 0.11 | 0.07 | 0.24 | 0.70 | 0.96 |
| 742.9 | 2384 | 331152 | 0.05 | 0.13 | 0.40 | 0.72 | 0.06 | 0.15 | 0.46 | 0.80 | 0.04 | 0.06 | 0.12 | 0.22 | 0.12 | 0.49 | 0.97 | 1.00 |
| 743 | 7552 | 329923 | 0.09 | 0.32 | 0.85 | 0.99 | 0.10 | 0.38 | 0.91 | 1.00 | 0.05 | 0.10 | 0.29 | 0.55 | 0.28 | 0.93 | 1.00 | 1.00 |
| 743.1 | 6241 | 329923 | 0.08 | 0.28 | 0.78 | 0.98 | 0.09 | 0.32 | 0.85 | 0.99 | 0.04 | 0.09 | 0.25 | 0.48 | 0.24 | 0.88 | 1.00 | 1.00 |
| 743.11 | 6220 | 329923 | 0.08 | 0.28 | 0.78 | 0.98 | 0.09 | 0.32 | 0.85 | 0.99 | 0.04 | 0.09 | 0.25 | 0.48 | 0.24 | 0.88 | 1.00 | 1.00 |
| 743.2 | 571 | 329923 | 0.04 | 0.06 | 0.13 | 0.24 | 0.04 | 0.07 | 0.15 | 0.28 | 0.03 | 0.04 | 0.06 | 0.08 | 0.06 | 0.16 | 0.48 | 0.82 |
| 743.21 | 325 | 329923 | 0.03 | 0.05 | 0.09 | 0.16 | 0.03 | 0.05 | 0.10 | 0.18 | 0.03 | 0.03 | 0.05 | 0.06 | 0.05 | 0.11 | 0.30 | 0.58 |
| 743.9 | 836 | 329923 | 0.04 | 0.07 | 0.17 | 0.33 | 0.04 | 0.08 | 0.20 | 0.38 | 0.03 | 0.04 | 0.07 | 0.10 | 0.07 | 0.21 | 0.64 | 0.93 |
| 745 | 7733 | 329742 | 0.09 | 0.33 | 0.86 | 1.00 | 0.10 | 0.38 | 0.91 | 1.00 | 0.05 | 0.11 | 0.29 | 0.56 | 0.28 | 0.93 | 1.00 | 1.00 |
| 747 | 3002 | 329064 | 0.06 | 0.16 | 0.48 | 0.82 | 0.06 | 0.18 | 0.55 | 0.88 | 0.04 | 0.06 | 0.14 | 0.26 | 0.14 | 0.59 | 0.99 | 1.00 |
| 747.1 | 2826 | 329064 | 0.06 | 0.15 | 0.46 | 0.79 | 0.06 | 0.17 | 0.53 | 0.86 | 0.04 | 0.06 | 0.14 | 0.25 | 0.13 | 0.56 | 0.99 | 1.00 |
| 747.11 | 576 | 329064 | 0.04 | 0.06 | 0.13 | 0.24 | 0.04 | 0.07 | 0.15 | 0.28 | 0.03 | 0.04 | 0.06 | 0.08 | 0.06 | 0.16 | 0.48 | 0.82 |
| 747.12 | 270 | 329064 | 0.03 | 0.05 | 0.08 | 0.14 | 0.03 | 0.05 | 0.09 | 0.15 | 0.03 | 0.03 | 0.05 | 0.06 | 0.04 | 0.10 | 0.26 | 0.50 |
| 747.13 | 2015 | 329064 | 0.05 | 0.12 | 0.35 | 0.65 | 0.05 | 0.13 | 0.40 | 0.73 | 0.03 | 0.06 | 0.11 | 0.19 | 0.11 | 0.43 | 0.95 | 1.00 |
| 749 | 295 | 329064 | 0.03 | 0.05 | 0.09 | 0.15 | 0.03 | 0.05 | 0.10 | 0.17 | 0.03 | 0.03 | 0.05 | 0.06 | 0.05 | 0.10 | 0.28 | 0.54 |
| 750 | 706 | 329064 | 0.04 | 0.07 | 0.15 | 0.29 | 0.04 | 0.07 | 0.17 | 0.33 | 0.03 | 0.04 | 0.06 | 0.09 | 0.06 | 0.18 | 0.56 | 0.89 |
| 750.1 | 351 | 329064 | 0.03 | 0.05 | 0.10 | 0.16 | 0.03 | 0.05 | 0.11 | 0.19 | 0.03 | 0.04 | 0.05 | 0.07 | 0.05 | 0.11 | 0.32 | 0.61 |
| 750.13 | 204 | 329064 | 0.03 | 0.04 | 0.07 | 0.11 | 0.03 | 0.05 | 0.08 | 0.13 | 0.03 | 0.03 | 0.04 | 0.05 | 0.04 | 0.08 | 0.21 | 0.40 |
| 750.2 | 348 | 329064 | 0.03 | 0.05 | 0.10 | 0.16 | 0.03 | 0.05 | 0.11 | 0.19 | 0.03 | 0.04 | 0.05 | 0.07 | 0.05 | 0.11 | 0.32 | 0.61 |
| 750.21 | 222 | 329064 | 0.03 | 0.04 | 0.08 | 0.12 | 0.03 | 0.05 | 0.08 | 0.13 | 0.03 | 0.03 | 0.04 | 0.06 | 0.04 | 0.09 | 0.22 | 0.43 |
| 751 | 1465 | 329064 | 0.05 | 0.10 | 0.27 | 0.52 | 0.05 | 0.11 | 0.31 | 0.59 | 0.03 | 0.05 | 0.09 | 0.15 | 0.09 | 0.33 | 0.86 | 1.00 |
| 751.1 | 633 | 329064 | 0.04 | 0.06 | 0.14 | 0.26 | 0.04 | 0.07 | 0.16 | 0.30 | 0.03 | 0.04 | 0.06 | 0.09 | 0.06 | 0.17 | 0.52 | 0.85 |
| 751.11 | 392 | 176821 | 0.03 | 0.05 | 0.10 | 0.18 | 0.04 | 0.06 | 0.11 | 0.20 | 0.03 | 0.04 | 0.05 | 0.07 | 0.05 | 0.12 | 0.35 | 0.66 |
| 751.12 | 205 | 152243 | 0.03 | 0.04 | 0.07 | 0.11 | 0.03 | 0.05 | 0.08 | 0.13 | 0.03 | 0.03 | 0.04 | 0.05 | 0.04 | 0.08 | 0.21 | 0.40 |
| 751.2 | 801 | 329064 | 0.04 | 0.07 | 0.17 | 0.32 | 0.04 | 0.08 | 0.19 | 0.37 | 0.03 | 0.04 | 0.07 | 0.10 | 0.07 | 0.20 | 0.62 | 0.92 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 751.21 | 394 | 329064 | 0.03 | 0.05 | 0.10 | 0.18 | 0.04 | 0.06 | 0.11 | 0.21 | 0.03 | 0.04 | 0.05 | 0.07 | 0.05 | 0.12 | 0.35 | 0.66 |
| 751.22 | 333 | 329064 | 0.03 | 0.05 | 0.09 | 0.16 | 0.03 | 0.05 | 0.10 | 0.18 | 0.03 | 0.04 | 0.05 | 0.06 | 0.05 | 0.11 | 0.31 | 0.59 |
| 752 | 1689 | 329064 | 0.05 | 0.11 | 0.30 | 0.58 | 0.05 | 0.12 | 0.35 | 0.65 | 0.03 | 0.05 | 0.10 | 0.17 | 0.10 | 0.37 | 0.91 | 1.00 |
| 752.1 | 1613 | 329064 | 0.05 | 0.10 | 0.29 | 0.56 | 0.05 | 0.12 | 0.34 | 0.63 | 0.03 | 0.05 | 0.10 | 0.16 | 0.09 | 0.36 | 0.89 | 1.00 |
| 754 | 1491 | 329064 | 0.05 | 0.10 | 0.27 | 0.53 | 0.05 | 0.11 | 0.31 | 0.60 | 0.03 | 0.05 | 0.09 | 0.15 | 0.09 | 0.34 | 0.87 | 1.00 |
| 755 | 432 | 329064 | 0.03 | 0.06 | 0.11 | 0.19 | 0.04 | 0.06 | 0.12 | 0.22 | 0.03 | 0.04 | 0.05 | 0.07 | 0.05 | 0.13 | 0.38 | 0.70 |
| 755.1 | 222 | 329064 | 0.03 | 0.04 | 0.08 | 0.12 | 0.03 | 0.05 | 0.08 | 0.13 | 0.03 | 0.03 | 0.04 | 0.06 | 0.04 | 0.09 | 0.22 | 0.43 |
| 756 | 590 | 329064 | 0.04 | 0.06 | 0.13 | 0.25 | 0.04 | 0.07 | 0.15 | 0.29 | 0.03 | 0.04 | 0.06 | 0.09 | 0.06 | 0.16 | 0.49 | 0.83 |
| 756.5 | 425 | 329064 | 0.03 | 0.05 | 0.11 | 0.19 | 0.04 | 0.06 | 0.12 | 0.22 | 0.03 | 0.04 | 0.05 | 0.07 | 0.05 | 0.13 | 0.38 | 0.69 |
| 759 | 223 | 329064 | 0.03 | 0.04 | 0.08 | 0.12 | 0.03 | 0.05 | 0.08 | 0.14 | 0.03 | 0.03 | 0.04 | 0.06 | 0.04 | 0.09 | 0.22 | 0.43 |
| 760 | 10889 | 257697 | 0.11 | 0.43 | 0.95 | 1.00 | 0.12 | 0.50 | 0.97 | 1.00 | 0.05 | 0.13 | 0.38 | 0.70 | 0.37 | 0.98 | 1.00 | 1.00 |
| 761 | 1764 | 257697 | 0.05 | 0.11 | 0.31 | 0.60 | 0.05 | 0.12 | 0.36 | 0.67 | 0.03 | 0.05 | 0.10 | 0.17 | 0.10 | 0.39 | 0.92 | 1.00 |
| 764 | 2339 | 257697 | 0.05 | 0.13 | 0.39 | 0.72 | 0.06 | 0.15 | 0.45 | 0.79 | 0.04 | 0.06 | 0.12 | 0.22 | 0.12 | 0.48 | 0.97 | 1.00 |
| 765 | 505 | 257697 | 0.04 | 0.06 | 0.12 | 0.22 | 0.04 | 0.06 | 0.14 | 0.25 | 0.03 | 0.04 | 0.06 | 0.08 | 0.05 | 0.14 | 0.43 | 0.77 |
| 766 | 1265 | 257697 | 0.04 | 0.09 | 0.24 | 0.46 | 0.05 | 0.10 | 0.27 | 0.53 | 0.03 | 0.05 | 0.08 | 0.14 | 0.08 | 0.29 | 0.81 | 0.99 |
| 770 | 1789 | 257697 | 0.05 | 0.11 | 0.31 | 0.60 | 0.05 | 0.12 | 0.36 | 0.68 | 0.03 | 0.05 | 0.10 | 0.18 | 0.10 | 0.39 | 0.92 | 1.00 |
| 771 | 776 | 257697 | 0.04 | 0.07 | 0.16 | 0.31 | 0.04 | 0.08 | 0.19 | 0.36 | 0.03 | 0.04 | 0.07 | 0.10 | 0.06 | 0.20 | 0.60 | 0.91 |
| 771.1 | 4680 | 257697 | 0.07 | 0.22 | 0.66 | 0.95 | 0.07 | 0.25 | 0.74 | 0.97 | 0.04 | 0.08 | 0.20 | 0.38 | 0.19 | 0.77 | 1.00 | 1.00 |
| 772 | 676 | 257697 | 0.04 | 0.07 | 0.15 | 0.28 | 0.04 | 0.07 | 0.17 | 0.32 | 0.03 | 0.04 | 0.06 | 0.09 | 0.06 | 0.18 | 0.54 | 0.87 |
| 773 | 5984 | 257697 | 0.08 | 0.27 | 0.76 | 0.98 | 0.08 | 0.31 | 0.83 | 0.99 | 0.04 | 0.09 | 0.24 | 0.46 | 0.23 | 0.86 | 1.00 | 1.00 |
| 780 | 212 | 257697 | 0.03 | 0.04 | 0.07 | 0.12 | 0.03 | 0.05 | 0.08 | 0.13 | 0.03 | 0.03 | 0.04 | 0.05 | 0.04 | 0.08 | 0.21 | 0.41 |
| 781 | 9086 | 257697 | 0.10 | 0.38 | 0.91 | 1.00 | 0.11 | 0.43 | 0.95 | 1.00 | 0.05 | 0.12 | 0.33 | 0.63 | 0.32 | 0.96 | 1.00 | 1.00 |
| 782.3 | 1941 | 257697 | 0.05 | 0.12 | 0.34 | 0.64 | 0.05 | 0.13 | 0.39 | 0.71 | 0.03 | 0.05 | 0.11 | 0.19 | 0.10 | 0.42 | 0.94 | 1.00 |
| 783 | 3998 | 257697 | 0.06 | 0.19 | 0.59 | 0.91 | 0.07 | 0.22 | 0.67 | 0.95 | 0.04 | 0.07 | 0.17 | 0.33 | 0.17 | 0.71 | 1.00 | 1.00 |
| 785 | 37426 | 257697 | 0.24 | 0.89 | 1.00 | 1.00 | 0.28 | 0.93 | 1.00 | 1.00 | 0.09 | 0.31 | 0.84 | 0.99 | 0.82 | 1.00 | 1.00 | 1.00 |
| 788 | 9030 | 257697 | 0.10 | 0.37 | 0.91 | 1.00 | 0.11 | 0.43 | 0.95 | 1.00 | 0.05 | 0.12 | 0.33 | 0.63 | 0.32 | 0.96 | 1.00 | 1.00 |
| 789 | 11420 | 257697 | 0.11 | 0.45 | 0.96 | 1.00 | 0.12 | 0.52 | 0.98 | 1.00 | 0.05 | 0.13 | 0.40 | 0.72 | 0.39 | 0.99 | 1.00 | 1.00 |
| 790.6 | 6857 | 257697 | 0.08 | 0.30 | 0.82 | 0.99 | 0.09 | 0.35 | 0.88 | 1.00 | 0.05 | 0.10 | 0.26 | 0.51 | 0.26 | 0.90 | 1.00 | 1.00 |
| 791 | 645 | 257697 | 0.04 | 0.06 | 0.14 | 0.27 | 0.04 | 0.07 | 0.16 | 0.31 | 0.03 | 0.04 | 0.06 | 0.09 | 0.06 | 0.17 | 0.53 | 0.86 |
| 793.2 | 608 | 257697 | 0.04 | 0.06 | 0.14 | 0.25 | 0.04 | 0.07 | 0.15 | 0.29 | 0.03 | 0.04 | 0.06 | 0.09 | 0.06 | 0.16 | 0.50 | 0.84 |
| 798 | 3438 | 257697 | 0.06 | 0.17 | 0.53 | 0.86 | 0.07 | 0.20 | 0.61 | 0.92 | 0.04 | 0.07 | 0.16 | 0.30 | 0.15 | 0.64 | 1.00 | 1.00 |
| 798.1 | 607 | 257697 | 0.04 | 0.06 | 0.14 | 0.25 | 0.04 | 0.07 | 0.15 | 0.29 | 0.03 | 0.04 | 0.06 | 0.09 | 0.06 | 0.16 | 0.50 | 0.84 |
| 800 | 6862 | 243043 | 0.08 | 0.30 | 0.82 | 0.99 | 0.09 | 0.35 | 0.88 | 1.00 | 0.05 | 0.10 | 0.26 | 0.51 | 0.26 | 0.90 | 1.00 | 1.00 |
| 800.1 | 1926 | 243043 | 0.05 | 0.12 | 0.33 | 0.63 | 0.05 | 0.13 | 0.39 | 0.71 | 0.03 | 0.05 | 0.11 | 0.19 | 0.10 | 0.41 | 0.94 | 1.00 |
| 800.2 | 888 | 243043 | 0.04 | 0.08 | 0.18 | 0.35 | 0.04 | 0.08 | 0.21 | 0.40 | 0.03 | 0.04 | 0.07 | 0.11 | 0.07 | 0.22 | 0.66 | 0.95 |
| 800.3 | 1976 | 243043 | 0.05 | 0.12 | 0.34 | 0.64 | 0.05 | 0.13 | 0.40 | 0.72 | 0.03 | 0.05 | 0.11 | 0.19 | 0.11 | 0.42 | 0.94 | 1.00 |
| 800.4 | 689 | 243043 | 0.04 | 0.07 | 0.15 | 0.28 | 0.04 | 0.07 | 0.17 | 0.32 | 0.03 | 0.04 | 0.06 | 0.09 | 0.06 | 0.18 | 0.55 | 0.88 |
| 801 | 1992 | 243043 | 0.05 | 0.12 | 0.34 | 0.65 | 0.05 | 0.13 | 0.40 | 0.72 | 0.03 | 0.05 | 0.11 | 0.19 | 0.11 | 0.43 | 0.94 | 1.00 |
| 801.1 | 1220 | 243043 | 0.04 | 0.09 | 0.23 | 0.45 | 0.05 | 0.10 | 0.27 | 0.52 | 0.03 | 0.05 | 0.08 | 0.13 | 0.08 | 0.28 | 0.79 | 0.99 |
| 802 | 759 | 243043 | 0.04 | 0.07 | 0.16 | 0.30 | 0.04 | 0.08 | 0.18 | 0.35 | 0.03 | 0.04 | 0.07 | 0.10 | 0.06 | 0.19 | 0.59 | 0.91 |
| 803 | 8356 | 243043 | 0.09 | 0.35 | 0.88 | 1.00 | 0.10 | 0.41 | 0.93 | 1.00 | 0.05 | 0.11 | 0.31 | 0.59 | 0.30 | 0.95 | 1.00 | 1.00 |
| 803.1 | 1610 | 243043 | 0.05 | 0.10 | 0.29 | 0.56 | 0.05 | 0.12 | 0.33 | 0.63 | 0.03 | 0.05 | 0.10 | 0.16 | 0.09 | 0.36 | 0.89 | 1.00 |
| 803.2 | 5165 | 243043 | 0.07 | 0.24 | 0.70 | 0.96 | 0.08 | 0.27 | 0.78 | 0.98 | 0.04 | 0.08 | 0.21 | 0.41 | 0.20 | 0.81 | 1.00 | 1.00 |
| 803.3 | 1581 | 243043 | 0.05 | 0.10 | 0.28 | 0.55 | 0.05 | 0.11 | 0.33 | 0.62 | 0.03 | 0.05 | 0.09 | 0.16 | 0.09 | 0.35 | 0.89 | 1.00 |
| 804 | 3156 | 243043 | 0.06 | 0.16 | 0.50 | 0.84 | 0.06 | 0.19 | 0.57 | 0.89 | 0.04 | 0.07 | 0.15 | 0.28 | 0.14 | 0.61 | 0.99 | 1.00 |
| 805 | 1685 | 243043 | 0.05 | 0.11 | 0.30 | 0.58 | 0.05 | 0.12 | 0.35 | 0.65 | 0.03 | 0.05 | 0.10 | 0.17 | 0.10 | 0.37 | 0.90 | 1.00 |
| 807 | 1555 | 243043 | 0.05 | 0.10 | 0.28 | 0.54 | 0.05 | 0.11 | 0.32 | 0.62 | 0.03 | 0.05 | 0.09 | 0.16 | 0.09 | 0.35 | 0.88 | 1.00 |
| 809 | 10448 | 243043 | 0.10 | 0.42 | 0.94 | 1.00 | 0.12 | 0.48 | 0.97 | 1.00 | 0.05 | 0.13 | 0.37 | 0.69 | 0.36 | 0.98 | 1.00 | 1.00 |
| 817 | 219 | 243043 | 0.03 | 0.04 | 0.07 | 0.12 | 0.03 | 0.05 | 0.08 | 0.13 | 0.03 | 0.03 | 0.04 | 0.05 | 0.04 | 0.09 | 0.22 | 0.43 |
| 818 | 667 | 243043 | 0.04 | 0.07 | 0.15 | 0.27 | 0.04 | 0.07 | 0.17 | 0.32 | 0.03 | 0.04 | 0.06 | 0.09 | 0.06 | 0.18 | 0.54 | 0.87 |
| 819 | 2986 | 243043 | 0.06 | 0.16 | 0.48 | 0.81 | 0.06 | 0.18 | 0.55 | 0.88 | 0.04 | 0.06 | 0.14 | 0.26 | 0.14 | 0.58 | 0.99 | 1.00 |
| 830 | 1954 | 243043 | 0.05 | 0.12 | 0.34 | 0.64 | 0.05 | 0.13 | 0.39 | 0.72 | 0.03 | 0.05 | 0.11 | 0.19 | 0.10 | 0.42 | 0.94 | 1.00 |
| 835 | 13967 | 243043 | 0.12 | 0.52 | 0.98 | 1.00 | 0.14 | 0.59 | 0.99 | 1.00 | 0.06 | 0.15 | 0.46 | 0.80 | 0.45 | 1.00 | 1.00 | 1.00 |
| 836 | 498 | 243043 | 0.04 | 0.06 | 0.12 | 0.22 | 0.04 | 0.06 | 0.13 | 0.25 | 0.03 | 0.04 | 0.06 | 0.08 | 0.05 | 0.14 | 0.43 | 0.76 |
| 840 | 866 | 243043 | 0.04 | 0.07 | 0.18 | 0.34 | 0.04 | 0.08 | 0.20 | 0.39 | 0.03 | 0.04 | 0.07 | 0.11 | 0.07 | 0.22 | 0.65 | 0.94 |
| 840.3 | 457 | 243043 | 0.04 | 0.06 | 0.11 | 0.20 | 0.04 | 0.06 | 0.13 | 0.23 | 0.03 | 0.04 | 0.05 | 0.08 | 0.05 | 0.13 | 0.40 | 0.72 |
| 850 | 5032 | 243043 | 0.07 | 0.23 | 0.69 | 0.96 | 0.08 | 0.27 | 0.77 | 0.98 | 0.04 | 0.08 | 0.21 | 0.40 | 0.20 | 0.80 | 1.00 | 1.00 |
| 851 | 17270 | 243043 | 0.14 | 0.60 | 0.99 | 1.00 | 0.16 | 0.68 | 1.00 | 1.00 | 0.06 | 0.18 | 0.54 | 0.87 | 0.53 | 1.00 | 1.00 | 1.00 |
| 853 | 494 | 243043 | 0.04 | 0.06 | 0.12 | 0.21 | 0.04 | 0.06 | 0.13 | 0.25 | 0.03 | 0.04 | 0.05 | 0.08 | 0.05 | 0.14 | 0.43 | 0.76 |
| 854 | 2535 | 243043 | 0.05 | 0.14 | 0.42 | 0.75 | 0.06 | 0.16 | 0.48 | 0.82 | 0.04 | 0.06 | 0.13 | 0.23 | 0.12 | 0.52 | 0.98 | 1.00 |
| 857 | 1436 | 243043 | 0.05 | 0.10 | 0.26 | 0.51 | 0.05 | 0.11 | 0.30 | 0.58 | 0.03 | 0.05 | 0.09 | 0.15 | 0.09 | 0.33 | 0.85 | 0.99 |
| 858 | 3502 | 243043 | 0.06 | 0.18 | 0.54 | 0.87 | 0.07 | 0.20 | 0.61 | 0.92 | 0.04 | 0.07 | 0.16 | 0.30 | 0.15 | 0.65 | 1.00 | 1.00 |
| 859 | 3509 | 243043 | 0.06 | 0.18 | 0.54 | 0.87 | 0.07 | 0.20 | 0.61 | 0.92 | 0.04 | 0.07 | 0.16 | 0.30 | 0.15 | 0.65 | 1.00 | 1.00 |
| 870 | 3784 | 243043 | 0.06 | 0.19 | 0.57 | 0.89 | 0.07 | 0.21 | 0.65 | 0.94 | 0.04 | 0.07 | 0.17 | 0.32 | 0.16 | 0.68 | 1.00 | 1.00 |
| 870.1 | 522 | 243043 | 0.04 | 0.06 | 0.12 | 0.22 | 0.04 | 0.06 | 0.14 | 0.26 | 0.03 | 0.04 | 0.06 | 0.08 | 0.06 | 0.15 | 0.45 | 0.78 |
| 870.3 | 2938 | 243043 | 0.06 | 0.15 | 0.47 | 0.81 | 0.06 | 0.18 | 0.54 | 0.87 | 0.04 | 0.06 | 0.14 | 0.26 | 0.14 | 0.58 | 0.99 | 1.00 |
| 870.4 | 247 | 243043 | 0.03 | 0.05 | 0.08 | 0.13 | 0.03 | 0.05 | 0.09 | 0.15 | 0.03 | 0.03 | 0.04 | 0.06 | 0.04 | 0.09 | 0.24 | 0.47 |
| 870.5 | 374 | 243043 | 0.03 | 0.05 | 0.10 | 0.17 | 0.03 | 0.06 | 0.11 | 0.20 | 0.03 | 0.04 | 0.05 | 0.07 | 0.05 | 0.12 | 0.34 | 0.64 |
| 871 | 4405 | 243043 | 0.07 | 0.21 | 0.64 | 0.93 | 0.07 | 0.24 | 0.71 | 0.97 | 0.04 | 0.08 | 0.19 | 0.36 | 0.18 | 0.75 | 1.00 | 1.00 |
| 872 | 435 | 243043 | 0.03 | 0.06 | 0.11 | 0.19 | 0.04 | 0.06 | 0.12 | 0.22 | 0.03 | 0.04 | 0.05 | 0.07 | 0.05 | 0.13 | 0.38 | 0.70 |
| 873 | 250 | 243043 | 0.03 | 0.05 | 0.08 | 0.13 | 0.03 | 0.05 | 0.09 | 0.15 | 0.03 | 0.03 | 0.04 | 0.06 | 0.04 | 0.09 | 0.24 | 0.47 |
| 907 | 1285 | 243043 | 0.04 | 0.09 | 0.24 | 0.47 | 0.05 | 0.10 | 0.28 | 0.54 | 0.03 | 0.05 | 0.08 | 0.14 | 0.08 | 0.30 | 0.81 | 0.99 |
| 915 | 4691 | 243043 | 0.07 | 0.22 | 0.66 | 0.95 | 0.07 | 0.25 | 0.74 | 0.97 | 0.04 | 0.08 | 0.20 | 0.38 | 0.19 | 0.77 | 1.00 | 1.00 |
| 916 | 1533 | 243043 | 0.05 | 0.10 | 0.28 | 0.54 | 0.05 | 0.11 | 0.32 | 0.61 | 0.03 | 0.05 | 0.09 | 0.16 | 0.09 | 0.34 | 0.88 | 1.00 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 938 | 368 | 288850 | 0.03 | 0.05 | 0.10 | 0.17 | 0.03 | 0.06 | 0.11 | 0.20 | 0.03 | 0.04 | 0.05 | 0.07 | 0.05 | 0.12 | 0.33 | 0.63 |
| 938.2 | 256 | 288850 | 0.03 | 0.05 | 0.08 | 0.13 | 0.03 | 0.05 | 0.09 | 0.15 | 0.03 | 0.03 | 0.04 | 0.06 | 0.04 | 0.09 | 0.25 | 0.48 |
| 939 | 2227 | 288850 | 0.05 | 0.13 | 0.38 | 0.70 | 0.05 | 0.14 | 0.44 | 0.77 | 0.04 | 0.06 | 0.12 | 0.21 | 0.11 | 0.47 | 0.96 | 1.00 |
| 941 | 259 | 241796 | 0.03 | 0.05 | 0.08 | 0.13 | 0.03 | 0.05 | 0.09 | 0.15 | 0.03 | 0.03 | 0.04 | 0.06 | 0.04 | 0.09 | 0.25 | 0.49 |
| 946 | 527 | 241796 | 0.04 | 0.06 | 0.12 | 0.23 | 0.04 | 0.06 | 0.14 | 0.26 | 0.03 | 0.04 | 0.06 | 0.08 | 0.06 | 0.15 | 0.45 | 0.78 |
| 947 | 541 | 288850 | 0.04 | 0.06 | 0.13 | 0.23 | 0.04 | 0.06 | 0.14 | 0.27 | 0.03 | 0.04 | 0.06 | 0.08 | 0.06 | 0.15 | 0.46 | 0.79 |
| 949 | 397 | 241796 | 0.03 | 0.05 | 0.10 | 0.18 | 0.04 | 0.06 | 0.12 | 0.21 | 0.03 | 0.04 | 0.05 | 0.07 | 0.05 | 0.12 | 0.36 | 0.66 |
| 958 | 531 | 243043 | 0.04 | 0.06 | 0.12 | 0.23 | 0.04 | 0.06 | 0.14 | 0.26 | 0.03 | 0.04 | 0.06 | 0.08 | 0.06 | 0.15 | 0.45 | 0.79 |
| 960 | 18479 | 243043 | 0.15 | 0.63 | 1.00 | 1.00 | 0.17 | 0.71 | 1.00 | 1.00 | 0.06 | 0.19 | 0.57 | 0.89 | 0.55 | 1.00 | 1.00 | 1.00 |
| 960.2 | 16028 | 243043 | 0.14 | 0.57 | 0.99 | 1.00 | 0.15 | 0.65 | 1.00 | 1.00 | 0.06 | 0.17 | 0.51 | 0.85 | 0.50 | 1.00 | 1.00 | 1.00 |
| 961 | 411 | 243043 | 0.03 | 0.05 | 0.11 | 0.19 | 0.04 | 0.06 | 0.12 | 0.21 | 0.03 | 0.04 | 0.05 | 0.07 | 0.05 | 0.12 | 0.37 | 0.68 |
| 961.1 | 842 | 243043 | 0.04 | 0.07 | 0.17 | 0.33 | 0.04 | 0.08 | 0.20 | 0.38 | 0.03 | 0.04 | 0.07 | 0.11 | 0.07 | 0.21 | 0.64 | 0.93 |
| 962 | 482 | 243043 | 0.04 | 0.06 | 0.12 | 0.21 | 0.04 | 0.06 | 0.13 | 0.24 | 0.03 | 0.04 | 0.05 | 0.08 | 0.05 | 0.14 | 0.42 | 0.75 |
| 962.3 | 357 | 243043 | 0.03 | 0.05 | 0.10 | 0.17 | 0.03 | 0.05 | 0.11 | 0.19 | 0.03 | 0.04 | 0.05 | 0.07 | 0.05 | 0.11 | 0.33 | 0.62 |
| 963 | 2626 | 243043 | 0.05 | 0.14 | 0.43 | 0.76 | 0.06 | 0.16 | 0.50 | 0.83 | 0.04 | 0.06 | 0.13 | 0.24 | 0.13 | 0.53 | 0.98 | 1.00 |
| 964 | 391 | 243043 | 0.03 | 0.05 | 0.10 | 0.18 | 0.04 | 0.06 | 0.11 | 0.20 | 0.03 | 0.04 | 0.05 | 0.07 | 0.05 | 0.12 | 0.35 | 0.66 |
| 964.1 | 298 | 243043 | 0.03 | 0.05 | 0.09 | 0.15 | 0.03 | 0.05 | 0.10 | 0.17 | 0.03 | 0.03 | 0.05 | 0.06 | 0.05 | 0.10 | 0.28 | 0.54 |
| 965 | 6181 | 243043 | 0.08 | 0.27 | 0.78 | 0.98 | 0.09 | 0.32 | 0.84 | 0.99 | 0.04 | 0.09 | 0.24 | 0.47 | 0.24 | 0.87 | 1.00 | 1.00 |
| 965.1 | 1370 | 243043 | 0.04 | 0.09 | 0.25 | 0.49 | 0.05 | 0.11 | 0.29 | 0.56 | 0.03 | 0.05 | 0.09 | 0.14 | 0.09 | 0.31 | 0.84 | 0.99 |
| 965.3 | 378 | 243043 | 0.03 | 0.05 | 0.10 | 0.17 | 0.04 | 0.06 | 0.11 | 0.20 | 0.03 | 0.04 | 0.05 | 0.07 | 0.05 | 0.12 | 0.34 | 0.64 |
| 966 | 507 | 243043 | 0.04 | 0.06 | 0.12 | 0.22 | 0.04 | 0.06 | 0.14 | 0.25 | 0.03 | 0.04 | 0.06 | 0.08 | 0.05 | 0.14 | 0.43 | 0.77 |
| 967 | 515 | 243043 | 0.04 | 0.06 | 0.12 | 0.22 | 0.04 | 0.06 | 0.14 | 0.26 | 0.03 | 0.04 | 0.06 | 0.08 | 0.06 | 0.15 | 0.44 | 0.77 |
| 969 | 1748 | 243043 | 0.05 | 0.11 | 0.31 | 0.59 | 0.05 | 0.12 | 0.36 | 0.67 | 0.03 | 0.05 | 0.10 | 0.17 | 0.10 | 0.38 | 0.91 | 1.00 |
| 971 | 511 | 243043 | 0.04 | 0.06 | 0.12 | 0.22 | 0.04 | 0.06 | 0.14 | 0.25 | 0.03 | 0.04 | 0.06 | 0.08 | 0.05 | 0.14 | 0.44 | 0.77 |
| 972 | 828 | 243043 | 0.04 | 0.07 | 0.17 | 0.33 | 0.04 | 0.08 | 0.19 | 0.38 | 0.03 | 0.04 | 0.07 | 0.10 | 0.07 | 0.21 | 0.63 | 0.93 |
| 973 | 211 | 243043 | 0.03 | 0.04 | 0.07 | 0.12 | 0.03 | 0.05 | 0.08 | 0.13 | 0.03 | 0.03 | 0.04 | 0.05 | 0.04 | 0.08 | 0.21 | 0.41 |
| 977 | 5864 | 243043 | 0.08 | 0.26 | 0.76 | 0.98 | 0.08 | 0.30 | 0.83 | 0.99 | 0.04 | 0.09 | 0.23 | 0.45 | 0.23 | 0.86 | 1.00 | 1.00 |
| 979 | 692 | 243043 | 0.04 | 0.07 | 0.15 | 0.28 | 0.04 | 0.07 | 0.17 | 0.33 | 0.03 | 0.04 | 0.06 | 0.09 | 0.06 | 0.18 | 0.55 | 0.88 |
| 981 | 262 | 243043 | 0.03 | 0.05 | 0.08 | 0.13 | 0.03 | 0.05 | 0.09 | 0.15 | 0.03 | 0.03 | 0.04 | 0.06 | 0.04 | 0.09 | 0.25 | 0.49 |
| 990 | 3850 | 243043 | 0.06 | 0.19 | 0.58 | 0.90 | 0.07 | 0.22 | 0.65 | 0.94 | 0.04 | 0.07 | 0.17 | 0.32 | 0.16 | 0.69 | 1.00 | 1.00 |
| 994 | 3970 | 243043 | 0.06 | 0.19 | 0.59 | 0.91 | 0.07 | 0.22 | 0.67 | 0.95 | 0.04 | 0.07 | 0.17 | 0.33 | 0.17 | 0.70 | 1.00 | 1.00 |
| 994.2 | 3970 | 243043 | 0.06 | 0.19 | 0.59 | 0.91 | 0.07 | 0.22 | 0.67 | 0.95 | 0.04 | 0.07 | 0.17 | 0.33 | 0.17 | 0.70 | 1.00 | 1.00 |
| **Total no of phecodes with power >80%** | | | 0 | 17 | 151 | 319 | 0 | 24 | 178 | 367 | 0 | 0 | 10 | 60 | 10 | 186 | 557 | 801 |

**Supplementary Table 6:** Associations of each genetic instrument (PCSK9, HMGCR, NPC1L1, and LDLR) with cardiovascular related biomarkers (from the IVWMR analyses).

| | PCSK9 genetic instrument | | | HMGCR genetic instrument | | | NPC1L1 genetic instrument | | | LDLR genetic instrument | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **beta (95% CI)** | **P** | **F-statistic** | **beta (95% CI)** | **P** | **F-statistic** | **beta (95% CI)** | **P** | **F-statistic** | **beta (95% CI)** | **P** | **F-statistic** |
| **Cholesterol (mmol/L)** | -0.02 (-0.02, -0.02) | 3.3E-62 | 324.08 | -0.03 (-0.03, -0.03) | 1.7E-132 | 421.95 | -0.02 (-0.02, -0.02) | 4.2E-27 | 61.88 | -0.03 (-0.03, -0.02) | 6.1E-38 | 1649.14 |
| **Direct Low-Density Lipoprotein (mmol/L)** | -0.02 (-0.02, -0.01) | 1.8E-61 | 400.03 | -0.02 (-0.02, -0.02) | 4.6E-170 | 481.80 | -0.02 (-0.02, -0.01) | 2.8E-36 | 84.42 | -0.02 (-0.02, -0.02) | 4.4E-58 | 2077.99 |
| **HDL-Cholesterol (mmol/L)** | 0.00 (-0.00, 0.00) | 0.21 | 1.16 | -0.00 (-0.00, -0.00) | 7.5E-07 | 8.77 | 0.00 (0.00, 0.00) | 2.3E-03 | 4.97 | 0.00 (-0.00, 0.00) | 0.57 | 1.21 |
| **Triglyceride (mmol/L)** | 0.00 (-0.00, 0.00) | 0.06 | 2.99 | -0.00 (-0.00, 0.00) | 0.17 | 1.50 | -0.00 (-0.01, 0.00) | 0.05 | 5.81 | -0.00 (-0.00, 0.00) | 0.32 | 0.99 |
| **Apolipoprotein A (g/L)** | 0.00 (0.00, 0.00) | 1.6E-05 | 5.70 | 0.00 (0.00, 0.00) | 2.7E-03 | 2.07 | 0.00 (0.00, 0.00) | 2.1E-04 | 6.05 | 0.00 (0.00, 0.00) | 7.2E-09 | 47.04 |
| **Apolipoprotein B (g/L)** | -0.00 (-0.00, -0.00) | 9.7E-57 | 378.48 | -0.01 (-0.01, -0.00) | 5.3E-154 | 371.08 | -0.00 (-0.00, -0.00) | 1.9E-26 | 61.09 | -0.01 (-0.01, -0.01) | 6.5E-67 | 2011.47 |
| **C-reactive Protein (mg/L)** | 0.01 (0.00, 0.02) | 4.7E-03 | 6.35 | 0.00 (-0.00, 0.01) | 0.19 | 0.57 | 0.01 (-0.02, 0.04) | 0.42 | 2.38 | -0.00 (-0.00, 0.00) | 0.88 | 0.18 |
| **Lipoprotein (a) (nmol/L)** | -0.05 (-0.11, 0.02) | 0.15 | 1.24 | -0.11 (-0.18, -0.04) | 2.5E-03 | 3.37 | -0.00 (-0.17, 0.17) | 0.98 | 0.05 | -0.09 (-0.14, -0.04) | 1.0E-03 | 9.54 |

**Supplementary Table 7:** Associations between each LDL-C lowering genetic risk score and known confounders.

| | PCSK9 GRS | | HMGCR GRS | | NPC1L1 GRS | | LDLR GRS | |
|---|---|---|---|---|---|---|---|---|
| | **OR/beta (95% CI)** | **P** | **OR/beta (95% CI)** | **P** | **OR/beta (95% CI)** | **P** | **OR/beta (95% CI)** | **P** |
| **Age**[a] | -0.002 (-0.013, 0.009) | 0.76 | -0.015 (-0.025, -0.004)[c] | 0.007/ 0.049[b] | -0.005 (-0.025, 0.015) | 0.64 | -0.027 (-0.050, -0.004) | 0.023 |
| **Sex** | -0.002 (-0.005, 0.0004) | 0.091 | 0.0005 (-0.002, 0.003) | 0.74 | -0.002 (-0.007, 0.003) | 0.54 | 0.0006 (-0.005, 0.007) | 0.83 |
| **Smoking** | -0.0009 (-0.004, 0.002) | 0.56 | 0.002 (-0.001, 0.004) | 0.31 | -0.0004 (-0.006, 0.005) | 0.88 | 0.004 (-0.002, 0.010) | 0.20 |
| **Alcohol** | 0.003 (-0.003, 0.008) | 0.34 | 0.002 (-0.003, 0.008) | 0.38 | 0.003 (-0.007, 0.014) | 0.51 | 0.0002 (-0.012, 0.012) | 0.98 |
| **Physical activity** | 0.001 (-0.001, 0.004) | 0.34 | -0.001 (-0.004, 0.002) | 0.51 | -0.001 (-0.006, 0.005) | 0.81 | -0.003 (-0.009, 0.003) | 0.27 |
| **Education** | 0.0001 (-0.003, 0.003) | 0.97 | -0.002 (-0.005, 0.0003) | 0.08 | -0.002 (-0.007, 0.003) | 0.45 | -0.004 (-0.010, 0.002) | 0.17 |
| **Townsend deprivation index** | 0.004 (0.0008, 0.006) | 0.01 / 0.07[b] | -0.0003 (-0.003, 0.002) | 0.82 | 0.003 (-0.002, 0.008) | 0.29 | 0.003 (-0.003, 0.009) | 0.40 |

[a] Effect estimate for models with age is from linear regression· All other estimates from logistic regression where variables were grouped as: Smoking (never vs. ex-or current smoker). Alcohol consumption (never vs. ex- or current drinker), physical activity (below vs. above the median MET/week), education (College or University degree vs. other levels including none), and Townsend deprivation index (less deprived vs more deprived; using a median). All adjusted for assessment center, types of SNP array, 15 principal components.

[b] Bonferroni corrected. Bonferroni threshold = 0.007.

[c] Odds per one allele higher, adjusted for LDL-C = -0.009 (-0.020, 0.002), P = 0.1

**Supplementary Table 8:** MR analyses using MR IVW, weighted medium, weighted mode, MR-Egger and MR-PRESSO approaches, for 13 disease outcomes identified in the PheWAS of LDL-C lowering variants under FDR corrected thresholds.

| | | | | | | MR IVW | | Weighted median | | Weighted mode | | MR-Egger | | MR-PRESSO | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **GRS** | **Phecode** | **Description** | **Cases, n** | **Controls, n** | **P_PheWAS** | **OR (95% CI)** | **P** | **OR (95% CI)** | **P** | **OR (95% CI)** | **P** | **OR (95% CI)** | **P** | **OR (95% CI)** | **P** | **$P_{pleiotropy}$** | **$P_{distortion}$** |
| PCSK9 | 272 | Disorders of lipoid metabolism | 35143 | 261466 | 1.0E-11 | 0.98 (0.98, 0.98) | 4.3E-25 | 0.98 (0.97, 0.98) | 1.4E-16 | 0.98 (0.97, 0.99) | 1.2E-03 | 0.99 (0.95, 1.02) | 1.5E-01 | 0.98 (0.98, 0.98) | 4.2E-06 | 0.38 | |
| | 272.1 | Hyperlipidemia | 35033 | 261466 | 6.6E-12 | 0.98 (0.98, 0.98) | 1.7E-25 | 0.98 (0.97, 0.98) | 1.6E-17 | 0.98 (0.97, 0.99) | 1.0E-03 | 0.99 (0.95, 1.02) | 1.4E-01 | 0.98 (0.98, 0.98) | 4.2E-06 | 0.38 | |
| | 272.11 | Hypercholesterolemia | 32554 | 261466 | 4.2E-11 | 0.98 (0.98, 0.98) | 3.3E-24 | 0.98 (0.98, 0.99) | 3.2E-16 | 0.98 (0.97, 0.99) | 8.2E-04 | 0.99 (0.96, 1.02) | 2.2E-01 | 0.98 (0.97, 0.98) | 1.4E-05 | 0.27 | |
| | 401.2 | Hypertensive heart and/or renal disease | 1667 | 202269 | 1.6E-04 | 0.96 (0.94, 0.97) | 9.7E-08 | 0.96 (0.94, 0.98) | 8.8E-05 | 0.97 (0.92, 1.02) | 7.2E-02 | 0.95 (0.82, 1.09) | 1.7E-01 | 0.96 (0.93, 0.98) | 1.1E-03 | 0.80 | |
| | 411 | Ischemic Heart Disease | 30489 | 202269 | 3.3E-06 | 0.99 (0.98, 0.99) | 9.7E-10 | 0.99 (0.98, 0.99) | 1.1E-07 | 0.98 (0.97, 1.00) | 8.5E-03 | 0.99 (0.96, 1.03) | 4.5E-01 | 0.99 (0.98, 0.99) | 8.4E-04 | 0.50 | |
| | 411.1 | Unstable angina (intermediate coronary syndrome) | 4478 | 202269 | 7.5E-01 | 1.00 (0.99, 1.01) | 9.8E-01 | 1.00 (0.99, 1.02) | 4.6E-01 | 1.01 (0.98, 1.04) | 5.1E-01 | 1.02 (0.93, 1.12) | 4.4E-01 | 1.00 (0.98, 1.02) | 9.9E-01 | 0.42 | |
| | 411.2 | Myocardial infarction | 12033 | 202269 | 1.3E-02 | 0.99 (0.98, 1.00) | 6.7E-03 | 0.99 (0.98, 1.00) | 1.3E-02 | 0.99 (0.97, 1.01) | 1.5E-01 | 1.01 (0.96, 1.07) | 3.9E-01 | 0.99 (0.98, 1.00) | 3.5E-02 | 0.13 | |
| | 411.3 | Angina pectoris | 15180 | 202269 | 8.6E-06 | 0.98 (0.98, 0.99) | 5.6E-10 | 0.98 (0.97, 0.99) | 9.2E-08 | 0.98 (0.97, 0.99) | 4.7E-03 | 0.99 (0.94, 1.04) | 2.8E-01 | 0.98 (0.98, 0.99) | 6.1E-05 | 0.71 | |
| | 411.4 | Coronary atherosclerosis | 19684 | 202269 | 9.4E-04 | 0.99 (0.98, 0.99) | 1.6E-05 | 0.99 (0.98, 0.99) | 1.7E-04 | 0.99 (0.97, 1.00) | 3.2E-02 | 1.00 (0.95, 1.04) | 7.6E-01 | 0.99 (0.98, 1.00) | 2.8E-03 | 0.45 | |
| | 411.8 | Other chronic ischemic heart disease, unspecified | 15139 | 202269 | 2.0E-04 | 0.99 (0.98, 0.99) | 8.9E-07 | 0.99 (0.98, 0.99) | 1.2E-04 | 0.98 (0.96, 1.00) | 1.0E-02 | 1.00 (0.95, 1.05) | 7.0E-01 | 0.99 (0.98, 0.99) | 2.9E-04 | 0.42 | |
| | 442.11 | Abdominal aortic aneurysm | 1047 | 202269 | 2.4E-01 | 0.98 (0.96, 1.01) | 2.9E-01 | 0.99 (0.96, 1.02) | 4.6E-01 | 1.00 (0.92, 1.08) | 8.8E-01 | 0.94 (0.73, 1.21) | 3.3E-01 | 0.98 (0.94, 1.03) | 3.3E-01 | 0.43 | |
| | 443 | Peripheral vascular disease | 4031 | 202269 | 1.6E-01 | 0.99 (0.98, 1.00) | 8.7E-02 | 0.99 (0.98, 1.00) | 1.2E-01 | 0.99 (0.96, 1.02) | 2.2E-01 | 0.98 (0.90, 1.08) | 4.6E-01 | 0.99 (0.98, 1.00) | 3.1E-02 | 0.72 | |
| | 561.1 | Diarrhea | 536 | 191014 | 6.8E-01 | 1.01 (0.98, 1.04) | 6.8E-01 | 0.99 (0.96, 1.03) | 7.9E-01 | 1.00 (0.93, 1.06) | 8.6E-01 | 0.93 (0.72, 1.18) | 2.3E-01 | 1.01 (0.97, 1.04) | 6.2E-01 | 0.19 | |
| HMGCR | 272 | Disorders of lipoid metabolism | 35143 | 261466 | 2.2E-08 | 0.98 (0.97, 0.98) | 3.1E-26 | 0.98 (0.97, 0.98) | 3.3E-17 | 0.98 (0.97, 0.99) | 9.4E-04 | 0.97 (0.92, 1.02) | 6.5E-02 | 0.98 (0.97, 0.98) | 3.5E-06 | 0.51 | |
| | 272.1 | Hyperlipidemia | 35033 | 261466 | 2.2E-08 | 0.98 (0.97, 0.98) | 2.2E-26 | 0.98 (0.97, 0.98) | 1.5E-16 | 0.98 (0.97, 0.99) | 8.2E-04 | 0.97 (0.92, 1.02) | 6.4E-02 | 0.98 (0.97, 0.98) | 3.4E-06 | 0.50 | |
| | 272.11 | Hypercholesterolemia | 32554 | 261466 | 1.5E-08 | 0.98 (0.97, 0.98) | 9.0E-26 | 0.98 (0.97, 0.98) | 8.9E-16 | 0.98 (0.96, 0.99) | 1.2E-03 | 0.97 (0.91, 1.03) | 7.1E-02 | 0.98 (0.97, 0.98) | 1.0E-05 | 0.55 | |
| | 401.2 | Hypertensive heart and/or renal disease | 1667 | 202269 | 4.9E-01 | 0.98 (0.96, 1.00) | 6.7E-02 | 0.98 (0.96, 1.00) | 1.1E-01 | 0.98 (0.94, 1.03) | 2.3E-01 | 0.94 (0.73, 1.21) | 3.4E-01 | 0.98 (0.95, 1.01) | 1.3E-01 | 0.47 | |
| | 411 | Ischemic Heart Disease | 30489 | 202269 | 4.9E-02 | 0.99 (0.98, 1.00) | 6.7E-03 | 0.99 (0.99, 1.00) | 1.8E-02 | 0.99 (0.98, 1.00) | 6.3E-02 | 0.97 (0.88, 1.06) | 2.2E-01 | 0.99 (0.98, 1.00) | 4.2E-02 | 0.38 | |
| | 411.1 | Unstable angina (intermediate coronary syndrome) | 4478 | 202269 | 5.9E-01 | 0.99 (0.98, 1.00) | 2.5E-01 | 0.99 (0.98, 1.01) | 2.8E-01 | 0.99 (0.96, 1.02) | 3.3E-01 | 0.98 (0.85, 1.14) | 6.6E-01 | 0.99 (0.98, 1.01) | 2.5E-01 | 0.79 | |
| | 411.2 | Myocardial infarction | 12033 | 202269 | 3.0E-01 | 0.99 (0.98, 1.00) | 1.0E-01 | 0.99 (0.98, 1.00) | 1.9E-01 | 0.99 (0.98, 1.01) | 3.5E-01 | 0.97 (0.86, 1.08) | 2.4E-01 | 0.99 (0.98, 1.01) | 1.7E-01 | 0.33 | |
| | 411.3 | Angina pectoris | 15180 | 202269 | 5.0E-03 | 0.98 (0.97, 0.99) | 3.4E-08 | 0.98 (0.97, 0.99) | 4.8E-06 | 0.98 (0.97, 1.00) | 1.3E-02 | 0.97 (0.88, 1.05) | 1.6E-01 | 0.98 (0.97, 0.99) | 2.7E-03 | 0.46 | |
| | 411.4 | Coronary atherosclerosis | 19684 | 202269 | 1.5E-02 | 0.99 (0.98, 0.99) | 1.9E-05 | 0.99 (0.98, 1.00) | 1.6E-03 | 0.99 (0.97, 1.00) | 4.2E-02 | 0.96 (0.89, 1.04) | 1.0E-01 | 0.99 (0.98, 1.00) | 7.9E-03 | 0.26 | |
| | 411.8 | Other chronic ischemic heart disease, unspecified | 15139 | 202269 | 1.5E-01 | 0.99 (0.98, 1.00) | 4.9E-03 | 0.99 (0.98, 1.00) | 4.3E-02 | 0.99 (0.98, 1.01) | 1.3E-01 | 0.98 (0.89, 1.08) | 4.2E-01 | 0.99 (0.98, 1.00) | 3.7E-02 | 0.67 | |
| | 442.11 | Abdominal aortic aneurysm | 1047 | 202269 | 8.2E-02 | 0.96 (0.94, 0.99) | 1.3E-03 | 0.96 (0.94, 0.99) | 4.0E-03 | 0.96 (0.91, 1.02) | 8.0E-02 | 0.98 (0.73, 1.31) | 7.9E-01 | 0.96 (0.94, 0.99) | 6.4E-03 | 0.80 | |
| | 443 | Peripheral vascular disease | 4031 | 202269 | 6.5E-01 | 0.99 (0.98, 1.01) | 3.0E-01 | 1.00 (0.98, 1.01) | 6.9E-01 | 1.00 (0.97, 1.02) | 6.3E-01 | 0.95 (0.80, 1.14) | 3.1E-01 | 0.99 (0.97, 1.02) | 3.4E-01 | 0.38 | |
| | 561.1 | Diarrhea | 536 | 191014 | 1.1E-01 | 0.96 (0.93, 0.99) | 5.1E-03 | 0.97 (0.93, 1.01) | 1.7E-01 | 0.97 (0.90, 1.05) | 2.9E-01 | 1.06 (0.71, 1.58) | 5.6E-01 | 0.96 (0.91, 1.00) | 2.5E-02 | 0.32 | |
| NPC1L1 | 272 | Disorders of lipoid metabolism | 35143 | 261466 | 3.4E-03 | 0.98 (0.97, 0.99) | 1.4E-03 | 0.98 (0.97, 1.00) | 7.5E-03 | 0.98 (0.96, 1.01) | 1.1E-01 | 1.03 (0.84, 1.27) | 5.7E-01 | 0.98 (0.97, 1.00) | 4.5E-02 | 0.41 | |
| | 272.1 | Hyperlipidemia | 35033 | 261466 | 3.4E-03 | 0.98 (0.97, 0.99) | 1.3E-03 | 0.98 (0.97, 1.00) | 6.3E-03 | 0.98 (0.96, 1.01) | 9.5E-02 | 1.03 (0.84, 1.27) | 6.0E-01 | 0.98 (0.97, 1.00) | 3.9E-02 | 0.43 | |
| | 272.11 | Hypercholesterolemia | 32554 | 261466 | 2.1E-03 | 0.98 (0.97, 0.99) | 7.4E-04 | 0.98 (0.97, 1.00) | 7.7E-03 | 0.98 (0.96, 1.01) | 9.2E-02 | 1.02 (0.83, 1.26) | 7.1E-01 | 0.98 (0.97, 1.00) | 2.4E-02 | 0.50 | |
| | 401.2 | Hypertensive heart and/or renal disease | 1667 | 202269 | 8.1E-02 | 0.95 (0.91, 0.99) | 1.1E-02 | 0.94 (0.89, 0.99) | 1.5E-02 | 0.98 (0.89, 1.07) | 4.9E-01 | 0.96 (0.39, 2.33) | 8.6E-01 | 0.95 (0.89, 1.00) | 6.1E-02 | 0.96 | |
| | 411 | Ischemic Heart Disease | 30489 | 202269 | 3.8E-02 | 0.98 (0.96, 1.00) | 1.0E-01 | 0.97 (0.96, 0.99) | 3.6E-03 | 0.97 (0.94, 1.00) | 5.3E-02 | 1.06 (0.69, 1.62) | 6.3E-01 | 0.98 (0.95, 1.02) | 2.0E-01 | 0.54 | |
| | 411.1 | Unstable angina (intermediate coronary syndrome) | 4478 | 202269 | 3.9E-01 | 0.98 (0.93, 1.03) | 4.9E-01 | 0.95 (0.92, 0.99) | 1.8E-02 | 0.95 (0.90, 1.01) | 7.6E-02 | 1.20 (0.40, 3.59) | 5.5E-01 | 0.98 (0.90, 1.07) | 5.4E-01 | 0.51 | |
| | 411.2 | Myocardial infarction | 12033 | 202269 | 9.8E-02 | 0.98 (0.96, 1.01) | 1.4E-01 | 0.99 (0.97, 1.02) | 4.2E-01 | 0.96 (0.92, 1.00) | 6.3E-02 | 1.00 (0.57, 1.78) | 9.9E-01 | 0.98 (0.94, 1.02) | 2.4E-01 | 0.89 | |
| | 411.3 | Angina pectoris | 15180 | 202269 | 1.2E-01 | 0.98 (0.97, 1.00) | 8.0E-02 | 0.97 (0.96, 0.99) | 1.1E-02 | 0.97 (0.94, 1.01) | 9.4E-02 | 1.07 (0.74, 1.54) | 5.4E-01 | 0.98 (0.95, 1.01) | 1.8E-01 | 0.45 | |
| | 411.4 | Coronary atherosclerosis | 19684 | 202269 | 2.1E-02 | 0.98 (0.96, 1.00) | 5.8E-02 | 0.97 (0.95, 0.99) | 1.8E-03 | 0.96 (0.93, 1.00) | 4.4E-02 | 1.06 (0.65, 1.74) | 6.6E-01 | 0.98 (0.94, 1.02) | 1.5E-01 | 0.55 | |
| | 411.8 | Other chronic ischemic heart disease, unspecified | 15139 | 202269 | 4.7E-02 | 0.98 (0.96, 1.00) | 4.2E-02 | 0.98 (0.96, 1.00) | 3.8E-02 | 0.97 (0.93, 1.01) | 8.3E-02 | 1.09 (0.75, 1.58) | 4.1E-01 | 0.98 (0.95, 1.01) | 1.3E-01 | 0.32 | |
| | 442.11 | Abdominal aortic aneurysm | 1047 | 202269 | 1.4E-01 | 0.95 (0.90, 1.01) | 1.0E-01 | 0.95 (0.89, 1.02) | 1.6E-01 | 0.95 (0.84, 1.07) | 2.6E-01 | 1.00 (0.34, 2.95) | 1.0E+00 | 0.95 (0.94, 0.97) | 4.9E-03 | 0.87 | |
| | 443 | Peripheral vascular disease | 4031 | 202269 | 5.5E-01 | 1.01 (0.98, 1.04) | 4.6E-01 | 1.02 (0.98, 1.05) | 3.8E-01 | 1.02 (0.96, 1.08) | 3.8E-01 | 1.13 (0.64, 1.98) | 4.6E-01 | 1.01 (0.98, 1.04) | 3.2E-01 | 0.49 | |
| | 561.1 | Diarrhea | 536 | 191014 | 1.0E-04 | 1.23 (1.14, 1.33) | 4.0E-07 | 1.23 (1.12, 1.35) | 2.0E-05 | 1.23 (1.03, 1.47) | 3.4E-02 | 1.62 (0.31, 8.35) | 3.3E-01 | 1.23 (1.14, 1.33) | 3.6E-03 | 0.54 | |
| LDLR | 272 | Disorders of lipoid metabolism | 35143 | 261466 | 1.7E-51 | 0.97 (0.97, 0.97) | 4.2E-67 | 0.97 (0.97, 0.97) | 9.5E-50 | 0.97 (0.96, 0.98) | 5.8E-03 | 0.97 (0.96, 0.99) | 7.8E-02 | | | 0.99 | |
| | 272.1 | Hyperlipidemia | 35033 | 261466 | 2.1E-51 | 0.97 (0.97, 0.97) | 5.6E-67 | 0.97 (0.97, 0.97) | 1.3E-52 | 0.97 (0.96, 0.98) | 4.7E-03 | 0.97 (0.96, 0.99) | 7.6E-02 | | | 0.99 | |
| | 272.11 | Hypercholesterolemia | 32554 | 261466 | 2.8E-53 | 0.97 (0.97, 0.97) | 1.7E-69 | 0.97 (0.97, 0.97) | 8.4E-55 | 0.97 (0.96, 0.98) | 5.2E-03 | 0.97 (0.95, 0.99) | 8.3E-02 | | | 0.96 | |
| | 401.2 | Hypertensive heart and/or renal disease | 1667 | 202269 | 2.8E-01 | 0.99 (0.98, 1.00) | 2.0E-01 | 0.99 (0.98, 1.00) | 1.8E-01 | 0.99 (0.97, 1.02) | 3.3E-01 | 0.99 (0.94, 1.04) | 5.1E-01 | | | 0.81 | |
| | 411 | Ischemic Heart Disease | 30489 | 202269 | 1.0E-12 | 0.98 (0.98, 0.99) | 3.6E-14 | 0.99 (0.98, 0.99) | 6.4E-13 | 0.99 (0.98, 0.99) | 2.1E-02 | 0.99 (0.97, 1.01) | 2.1E-01 | | | 0.85 | |
| | 411.1 | Unstable angina (intermediate coronary syndrome) | 4478 | 202269 | 9.3E-05 | 0.98 (0.97, 0.99) | 3.8E-03 | 0.98 (0.97, 0.99) | 3.4E-05 | 0.98 (0.97, 1.00) | 8.2E-02 | 0.99 (0.96, 1.03) | 5.9E-01 | | | 0.27 | |
| | 411.2 | Myocardial infarction | 12033 | 202269 | 7.2E-10 | 0.98 (0.97, 0.99) | 1.3E-12 | 0.98 (0.98, 0.99) | 4.0E-09 | 0.98 (0.97, 0.99) | 3.2E-02 | 0.98 (0.96, 1.01) | 2.2E-01 | | | 0.71 | |
| | 411.3 | Angina pectoris | 15180 | 202269 | 9.1E-08 | 0.98 (0.98, 0.99) | 7.2E-10 | 0.98 (0.98, 0.99) | 6.3E-09 | 0.99 (0.98, 0.99) | 3.6E-02 | 0.99 (0.97, 1.01) | 2.0E-01 | | | 0.73 | |
| | 411.4 | Coronary atherosclerosis | 19684 | 202269 | 1.2E-15 | 0.98 (0.97, 0.98) | 3.7E-20 | 0.98 (0.98, 0.98) | 2.2E-17 | 0.98 (0.97, 0.99) | 1.6E-02 | 0.98 (0.96, 1.00) | 1.3E-01 | | | 0.66 | |
| | 411.8 | Other chronic ischemic heart disease, unspecified | 15139 | 202269 | 8.5E-10 | 0.98 (0.98, 0.99) | 2.2E-12 | 0.98 (0.98, 0.99) | 1.2E-10 | 0.98 (0.97, 0.99) | 2.9E-02 | 0.98 (0.96, 1.00) | 1.7E-01 | | | 0.85 | |
| | 442.11 | Abdominal aortic aneurysm | 1047 | 202269 | 6.1E-05 | 0.96 (0.94, 0.98) | 4.4E-06 | 0.96 (0.94, 0.97) | 4.2E-06 | 0.95 (0.92, 0.99) | 5.4E-02 | 0.95 (0.88, 1.03) | 2.4E-01 | | | 0.78 | |
| | 443 | Peripheral vascular disease | 4031 | 202269 | 7.6E-05 | 0.98 (0.97, 0.99) | 5.5E-04 | 0.98 (0.97, 0.99) | 4.3E-05 | 0.98 (0.97, 1.00) | 8.9E-02 | 0.99 (0.96, 1.03) | 4.9E-01 | | | 0.32 | |
| | 561.1 | Diarrhea | 536 | 191014 | 3.9E-01 | 0.99 (0.96, 1.01) | 3.2E-01 | 0.98 (0.96, 1.01) | 1.9E-01 | 0.98 (0.94, 1.03) | 3.4E-01 | 0.97 (0.88, 1.07) | 3.9E-01 | | | 0.49 | |

* MR-PRESSO estimates could not be calculated for the LDLR genetic risk score because there are only 3 genes.

**Supplementary Table 9:** Replication of MR analyses for disease phenotypes available in the MR-Base repository.

| | | | | | | MR IVW | | Weighted median | Weighted mode | MR-Egger | MR-PRESSO | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GRS | Disease phenotype | Consortium | Harmonized SNP, n | Cases, n | Controls, n | OR (95% CI) | P | OR (95% CI) | OR (95% CI) | OR (95% CI) | Outliers | OR (95% CI) $_{\text{outliers removed}}$ | $P_{pleiotropy}$ | $P_{distortion}$ |
| PCSK9 | Pure hypercholesterolaemia | FinnGen* | 4 | 3262 | 91366 | 0.97 (0.95, 1.00) | 0.03 | 0.96 (0.94, 0.99) | 0.96 (0.91, 1.02) | 1.02 (0.78, 1.35) | None | 0.97 (0.94, 1.01) | 0.11 | NA |
| | Hyperlipidaemia, other/unspecified | FinnGen | 4 | 1539 | 91366 | 0.98 (0.95, 1.02) | 0.42 | 0.98 (0.94, 1.01) | 0.96 (0.88, 1.05) | 1.12 (0.80, 1.59) | None | 0.98 (0.92, 1.05) | 0.13 | NA |
| | Angina pectoris | FinnGen | 4 | 6382 | 85760 | 0.99 (0.97, 1.01) | 0.33 | 0.99 (0.98, 1.01) | 1.00 (0.96, 1.04) | 1.07 (0.90, 1.27) | None | 0.99 (0.96, 1.02) | 0.07 | NA |
| | Hypertensive heart and/or renal disease | FinnGen | 4 | 1798 | 74345 | 0.98 (0.95, 1.01) | 0.22 | 0.97 (0.94, 1.00) | 0.96 (0.89, 1.05) | 1.02 (0.69, 1.53) | None | 0.98 (0.93, 1.03) | 0.16 | NA |
| | Ischemic heart diseases | FinnGen | 4 | 10739 | 85760 | 0.98 (0.97, 1.00) | 0.01 | 0.99 (0.97, 1.00) | 0.99 (0.96, 1.03) | 1.04 (0.90, 1.20) | None | 0.98 (0.96, 1.01) | 0.06 | NA |
| HMGCR | Pure hypercholesterolaemia | FinnGen | 5 | 3262 | 91366 | 0.96 (0.95, 0.98) | 3.5E-05 | 0.97 (0.95, 0.98) | 0.97 (0.93, 1.00) | 0.97 (0.71, 1.33) | None | 0.96 (0.96, 0.97) | 0.92 | NA |
| | Hyperlipidaemia, other/unspecified | FinnGen | 5 | 1539 | 91366 | 0.97 (0.95, 1.00) | 0.04 | 0.97 (0.95, 1.00) | 0.98 (0.93, 1.03) | 1.04 (0.66, 1.62) | None | 0.97 (0.95, 1.00) | 0.59 | NA |
| LDLR | Pure hypercholesterolaemia | FinnGen | 3 | 3262 | 91366 | 0.96 (0.94, 0.98) | 1.7E-04 | 0.97 (0.95, 0.98) | 0.97 (0.95, 0.99) | 0.98 (0.94, 1.02) | Insufficient no. of SNPs | NA | 0.24 | NA |
| | Hyperlipidaemia, other/unspecified | FinnGen | 3 | 1539 | 91366 | 0.97 (0.96, 0.99) | 3.6E-04 | 0.97 (0.95, 0.99) | 0.97 (0.94, 1.00) | 0.96 (0.90, 1.02) | Insufficient no. of SNPs | NA | 0.49 | NA |
| | Angina pectoris | FinnGen | 3 | 6382 | 85760 | 0.99 (0.98, 1.00) | 0.01 | 0.99 (0.98, 1.00) | 0.99 (0.98, 1.01) | 0.99 (0.96, 1.03) | Insufficient no. of SNPs | NA | 0.75 | NA |
| | Aortic aneurysm | FinnGen | 3 | 791 | 92349 | 1.00 (0.98, 1.02) | 0.79 | 1.00 (0.98, 1.03) | 1.01 (0.97, 1.05) | 1.02 (0.94, 1.11) | Insufficient no. of SNPs | NA | 0.49 | NA |
| | Coronary atherosclerosis | FinnGen | 3 | 7661 | 85760 | 0.99 (0.98, 1.00) | 0.003 | 0.99 (0.98, 0.99) | 0.99 (0.98, 1.00) | 1.00 (0.97, 1.03) | Insufficient no. of SNPs | NA | 0.34 | NA |
| | Hypertensive heart and/or renal disease | FinnGen | 3 | 1798 | 74345 | 1.00 (0.98, 1.01) | 0.51 | 0.99 (0.98, 1.01) | 0.99 (0.96, 1.02) | 0.99 (0.93, 1.05) | Insufficient no. of SNPs | NA | 0.59 | NA |
| | Ischemic heart diseases | FinnGen | 3 | 10739 | 85760 | 0.99 (0.98, 1.00) | 0.02 | 0.99 (0.98, 1.00) | 0.99 (0.98, 1.01) | 1.00 (0.97, 1.02) | Insufficient no. of SNPs | NA | 0.55 | NA |
| | Myocardial infarction | FinnGen | 3 | 4065 | 85760 | 0.98 (0.97, 1.00) | 0.06 | 0.99 (0.97, 1.00) | 0.99 (0.97, 1.01) | 1.00 (0.96, 1.04) | Insufficient no. of SNPs | NA | 0.27 | NA |
| | Unstable angina pectoris | FinnGen | 3 | 2296 | 89324 | 0.98 (0.97, 0.99) | 0.002 | 0.98 (0.97, 0.99) | 0.98 (0.96, 1.00) | 0.98 (0.93, 1.03) | Insufficient no. of SNPs | NA | 0.83 | NA |

**NA:** not applicable

* The FinnGen study contains genome information (from Finnish biobanks) and linked digital healthcare data (from national health registries), collected from >300,000 participants in Finland.

**Supplementary Table 10:** List of 52 serum, cardiac imaging, brain imaging and clinical biomarkers.

| | Biomarker | Unit | Sample type | Method of Data Collection or Analysis |
|---|---|---|---|---|
| **Serum biomarkers** | Cholesterol | mmol/L | Serum | CHO-POD |
| | Direct Low-Density Lipoprotein | mmol/L | Serum | Enzymatic selective protection |
| | HDL-Cholesterol | mmol/L | Serum | Enzyme immuno-inhibition |
| | Triglyceride | mmol/L | Serum | GPO-POD |
| | Apolipoprotein A | g/L | Serum | Immunoturbidimetric |
| | Apolipoprotein B | g/L | Serum | Immunoturbidimetric |
| | C-reactive Protein | mg/L | Serum | Immunoturbidimetric - high sensitivity |
| | Lipoprotein (a) | nmol/L | Serum | Immunoturbidimetric |
| | Vitamin D | nmol/L | Serum | CLIA |
| | Rheumatoid factor | IU/mL | Serum | Immunoturbidimetric |
| | Alkaline Phosphatase | U/L | Serum | AMP (IFCC) |
| | Calcium | $\mu$mol/L | Serum | Arsenazo III |
| | SHBG | nmol/L | Serum | Two-step sandwich immunoassay |
| | Testosterone | pmol/L | Serum | One step competitive |
| | Oestradiol | pmol/L | Serum | Two-step competitive |
| | IGF-1 | pmol/L | Serum | CLIA |
| | Glycated Haemoglobin (HbA1c) | mmol/mol | Red blood cells (RBC) | HPLC |
| | Glucose | mg/dL | Serum | Hexokinase |
| | Cystatin C | mg/L | Serum | Latex enhanced immunoturbidimetric |
| | Creatinine | $\mu$mol/L | Serum | Enzymatic |
| | Total protein | g/L | Serum | Biuret |
| | Urea | mmol/L | Serum | GLDH, kinetic |
| | Phosphate | mmol/L | Serum | Phophomolybdate complex |
| | Urate | $\mu$mol/L | Serum | Uricase PAP |
| | Creatinine (urine) | mmol/L | Urine | Enzymatic |
| | Sodium (urine) | mmol/L | Urine | ISE |
| | Potassium (urine) | mmol/L | Urine | ISE |
| | Albumin | g/L | Serum | BCG |
| | Direct Bilirubin | nmol/L | Serum | DPD |
| | Total Bilirubin | $\mu$mol/L | Serum | Photometric colour |
| | Gamma Glutamyltransferase | U/L | Serum | IFCC |
| | Alanine aminotransferase | U/L | Serum | IFCC |
| | Aspartate aminotransferase | U/L | Serum | IFCC |
| **Cardiac imaging biomarkers** | Augmentation index for PWA | % | Cardiac imaging | Pulse wave analysis |
| | Central augmentation pressure during PWA | mmHg | Cardiac imaging | Pulse wave analysis |
| | Mean carotid IMT (intima-medial thickness) at 240 degrees | micrometres | Cardiac imaging | Carotid ultrasound |
| | Cardiac output | L/min | Cardiac imaging | Left ventricular size and function derived from Heart MRI data |
| | LV end systolic volume | mL | Cardiac imaging | Left ventricular size and function derived from Heart MRI data |
| | LV end diastolic volume | mL | Cardiac imaging | Left ventricular size and function derived from Heart MRI data |
| | LV ejection fraction | % | Cardiac imaging | Left ventricular size and function derived from Heart MRI data |
| **Brain imaging biomarkers** | Total brain volume | $cm^3$ | Brain imaging | T1 structural brain MRI |
| | Grey matter volume | $cm^3$ | Brain imaging | T1 structural brain MRI |
| | White matter volume | $cm^3$ | Brain imaging | T1 structural brain MRI |
| | Hippocampal volume | $mm^3$ | Brain imaging | T1 structural brain MRI |
| | White matter hyperintensity volume | $mm^3$ | Brain imaging | T1 + T2_FLAIR brain MRI |
| **Clinical** | Body mass index (BMI) | $kg/m^2$ | Anthropometric | Baseline impedance measures |
| | Body fat percentage (%) | % | Anthropometric | Baseline impedance measures |
| | Forced expiratory volume (FEV1) | mL | Spirometry | Vitalograph Pneumotrac 6800 breath spirometry |
| | Forced vital capacity (FVC) | mL | Spirometry | Vitalograph Pneumotrac 6800 breath spirometry |
| | FEV1/FVC ratio | | Spirometry | Vitalograph Pneumotrac 6800 breath spirometry |
| | Systolic blood pressure | mmHg | Clinical | Automated reading on an Omron device |
| | Diastolic blood pressure | mmHg | Clinical | Automated reading on an Omron device |

**Supplementary Table 11:** MR analyses using MR IVW, weighted medium, weighted mode, MR-Egger and MR-PRESSO approaches, for all 52 serum, urine, cardiac imaging, brain imaging and clinical biomarkers, using the PCSK9 genetic instrument.

| | | | MR IVW | | Weighted median | | Weighted mode | | MR-Egger | | MR-PRESSO | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **GRS** | **Biomarker** | **Sample size, n** | **beta (95% CI)** | **P** | **beta (95% CI)** | **P** | **beta (95% CI)** | **P** | **beta (95% CI)** | **P** | **beta (95% CI)** | **P** | **$P_{pleiotropy}$** | **$P_{distortion}$** |
| PCSK9 | Cholesterol | 321,748 | -0.02 (-0.02, -0.02) | 3.3E-62 | -0.02 (-0.02, -0.02) | 7.3E-81 | -0.02 (-0.02, -0.01) | 7.2E-06 | -0.01 (-0.03, 0.00) | 0.02 | -0.02 (-0.02, -0.01) | 3.0E-06 | 0.24 | NA |
| | Direct Low-Density Lipoprotein | 321,141 | -0.02 (-0.02, -0.01) | 1.8E-61 | -0.02 (-0.02, -0.01) | 8.7E-101 | -0.02 (-0.02, -0.01) | 3.3E-06 | -0.01 (-0.03, 0.00) | 0.02 | -0.02 (-0.02, -0.01) | 3.1E-06 | 0.40 | 0.17 |
| | HDL-Cholesterol | 294,531 | 0.00 (-0.00, 0.00) | 0.21 | 0.00 (-0.00, 0.00) | 0.21 | 0.00 (-0.00, 0.00) | 0.28 | 0.00 (-0.00, 0.00) | 0.90 | 0.00 (-0.00, 0.00) | 0.26 | 0.68 | NA |
| | Triglyceride | 321,484 | 0.00 (-0.00, 0.00) | 0.06 | 0.00 (-0.00, 0.00) | 0.19 | 0.00 (-0.00, 0.00) | 0.48 | 0.00 (-0.01, 0.01) | 0.98 | 0.00 (-0.00, 0.00) | 0.11 | 0.64 | NA |
| | Apolipoprotein A | 292,911 | 0.00 (0.00, 0.00) | 1.6E-05 | 0.00 (0.00, 0.00) | 2.4E-03 | 0.00 (-0.00, 0.00) | 0.11 | 0.00 (-0.00, 0.00) | 0.25 | 0.00 (0.00, 0.00) | 4.5E-03 | 0.81 | NA |
| | Apolipoprotein B | 320,189 | -0.00 (-0.00, -0.00) | 9.7E-57 | -0.00 (-0.00, -0.00) | 6.1E-102 | -0.00 (-0.00, -0.00) | 2.9E-06 | -0.00 (-0.01, 0.00) | 0.02 | -0.00 (-0.00, -0.00) | 4.0E-06 | 0.47 | 0.12 |
| | C-reactive Protein | 321,051 | 0.01 (0.00, 0.02) | 4.7E-03 | 0.01 (0.00, 0.02) | 0.01 | 0.01 (-0.01, 0.02) | 0.22 | 0.02 (-0.04, 0.08) | 0.28 | 0.01 (-0.00, 0.02) | 0.03 | 0.61 | NA |
| | Lipoprotein (a) | 255,820 | -0.05 (-0.11, 0.02) | 0.15 | -0.03 (-0.11, 0.05) | 0.44 | -0.01 (-0.19, 0.16) | 0.81 | 0.05 (-0.50, 0.60) | 0.73 | -0.05 (-0.11, 0.01) | 0.04 | 0.48 | NA |
| | Vitamin D | 307,609 | 0.04 (0.01, 0.06) | 2.0E-03 | 0.03 (0.00, 0.06) | 0.04 | 0.03 (-0.05, 0.11) | 0.25 | 0.07 (-0.14, 0.28) | 0.20 | 0.04 (0.00, 0.07) | 0.01 | 0.50 | NA |
| | Rheumatoid factor | 28,705 | 0.06 (-0.01, 0.14) | 0.09 | 0.07 (-0.02, 0.16) | 0.12 | 0.07 (-0.12, 0.26) | 0.27 | 0.15 (-0.50, 0.80) | 0.37 | 0.06 (-0.00, 0.13) | 0.02 | 0.59 | NA |
| | Alkaline Phosphatase | 321,762 | 0.03 (-0.00, 0.06) | 0.08 | 0.02 (-0.02, 0.06) | 0.28 | 0.02 (-0.08, 0.12) | 0.52 | 0.07 (-0.19, 0.33) | 0.32 | 0.03 (-0.02, 0.07) | 0.12 | 0.52 | NA |
| | Calcium | 294,549 | -0.00 (-0.00, -0.00) | 0.04 | -0.00 (-0.00, 0.00) | 0.10 | -0.00 (-0.00, 0.00) | 0.28 | -0.00 (-0.00, 0.00) | 0.67 | -0.00 (-0.00, 0.00) | 0.08 | 0.96 | NA |
| | SHBG | 291,824 | 0.03 (0.00, 0.07) | 0.03 | 0.04 (-0.00, 0.08) | 0.06 | 0.04 (-0.05, 0.12) | 0.23 | 0.04 (-0.23, 0.30) | 0.59 | 0.03 (0.00, 0.07) | 0.02 | 0.99 | NA |
| | Testosterone | 291,707 | 0.00 (-0.00, 0.01) | 0.23 | 0.00 (-0.00, 0.01) | 0.62 | 0.00 (-0.01, 0.01) | 0.90 | 0.01 (-0.02, 0.04) | 0.16 | 0.00 (-0.00, 0.01) | 0.28 | 0.23 | NA |
| | Oestradiol | 50,478 | 0.86 (-0.34, 2.07) | 0.16 | 1.26 (-0.32, 2.84) | 0.12 | 1.37 (-2.46, 5.21) | 0.30 | -2.74 (-13.05, 7.57) | 0.30 | 0.86 (-1.08, 2.80) | 0.21 | 0.18 | NA |
| | IGF-1 | 320,022 | -0.01 (-0.02, -0.00) | 6.0E-03 | -0.01 (-0.01, 0.00) | 0.14 | -0.01 (-0.02, 0.01) | 0.32 | -0.01 (-0.07, 0.04) | 0.42 | -0.01 (-0.02, 0.00) | 0.02 | 0.87 | NA |
| | Glycated Haemoglobin (HbA1c) | 321,610 | -0.00 (-0.01, 0.00) | 0.46 | -0.00 (-0.01, 0.01) | 0.38 | -0.01 (-0.02, 0.01) | 0.36 | -0.02 (-0.08, 0.04) | 0.21 | -0.00 (-0.01, 0.01) | 0.44 | 0.26 | NA |
| | Glucose | 294,346 | -0.00 (-0.01, 0.00) | 0.46 | -0.00 (-0.01, 0.01) | 0.38 | -0.01 (-0.02, 0.01) | 0.36 | -0.02 (-0.08, 0.04) | 0.21 | -0.00 (-0.01, 0.01) | 0.44 | 0.10 | NA |
| | Cystatin C | 321,727 | -0.00 (-0.00, 0.00) | 0.05 | -0.00 (-0.00, 0.00) | 0.13 | -0.00 (-0.00, 0.00) | 0.35 | 0.00 (-0.00, 0.00) | 0.68 | -0.00 (-0.00, 0.00) | 0.06 | 0.38 | NA |
| | Creatinine | 321,583 | -0.00 (-0.00, 0.00) | 0.28 | -0.00 (-0.00, 0.00) | 0.79 | 0.00 (-0.00, 0.00) | 0.93 | 0.00 (-0.00, 0.00) | 1.00 | -0.00 (-0.00, 0.00) | 0.32 | 0.80 | NA |
| | Total protein | 294,331 | -0.01 (-0.02, -0.00) | 0.02 | -0.01 (-0.01, -0.00) | 8.0E-03 | -0.01 (-0.02, 0.00) | 0.06 | -0.02 (-0.09, 0.05) | 0.25 | -0.01 (-0.02, 0.00) | 0.06 | 0.48 | NA |
| | Urea | 321,537 | -0.00 (-0.00, 0.00) | 0.08 | -0.00 (-0.00, 0.00) | 0.06 | -0.00 (-0.01, 0.00) | 0.35 | 0.00 (-0.02, 0.02) | 0.82 | -0.00 (-0.01, 0.00) | 0.14 | 0.53 | NA |
| | Phosphate | 294,096 | -0.00 (-0.00, 0.00) | 0.65 | -0.00 (-0.00, 0.00) | 0.50 | -0.00 (-0.00, 0.00) | 0.65 | 0.00 (-0.00, 0.00) | 0.18 | -0.00 (-0.00, 0.00) | 0.62 | 0.15 | NA |
| | Urate | 321,334 | 0.13 (0.05, 0.21) | 1.3E-03 | 0.13 (0.04, 0.23) | 7.8E-03 | 0.18 (-0.04, 0.40) | 0.04 | 0.20 (-0.47, 0.88) | 0.25 | 0.13 (0.05, 0.21) | 2.7E-03 | 0.65 | NA |
| | Creatinine (urine) | 327,791 | -7.95 (-14.13, -1.77) | 0.01 | -10.01 (-17.81, -2.21) | 0.01 | -12.01 (-28.66, 4.63) | 0.06 | -11.88 (-64.86, 41.11) | 0.38 | -7.95 (-16.63, 0.73) | 0.03 | 0.75 | NA |
| | Sodium (urine) | 327,096 | -0.02 (-0.07, 0.03) | 0.44 | -0.04 (-0.09, 0.02) | 0.23 | -0.04 (-0.16, 0.09) | 0.36 | -0.03 (-0.44, 0.38) | 0.78 | -0.02 (-0.08, 0.05) | 0.40 | 0.92 | NA |
| | Potassium (urine) | 327,082 | -0.04 (-0.09, 0.01) | 0.15 | -0.03 (-0.08, 0.02) | 0.23 | -0.02 (-0.12, 0.09) | 0.64 | -0.08 (-0.57, 0.41) | 0.50 | -0.04 (-0.12, 0.05) | 0.20 | 0.71 | NA |
| | Albumin | 294,657 | -0.00 (-0.00, 0.00) | 0.88 | 0.00 (-0.00, 0.01) | 0.73 | 0.00 (-0.01, 0.01) | 0.76 | 0.00 (-0.04, 0.04) | 0.87 | -0.00 (-0.01, 0.01) | 0.88 | 0.84 | NA |
| | Direct Bilirubin | 273,743 | 0.00 (0.00, 0.00) | 5.6E-03 | 0.00 (0.00, 0.00) | 0.05 | 0.00 (-0.00, 0.00) | 0.28 | 0.00 (-0.01, 0.01) | 0.79 | 0.00 (0.00, 0.00) | 5.4E-03 | 0.67 | NA |
| | Total Bilirubin | 320,401 | -0.00 (-0.01, 0.00) | 0.31 | -0.00 (-0.01, 0.00) | 0.31 | -0.00 (-0.02, 0.01) | 0.39 | -0.00 (-0.05, 0.04) | 0.64 | -0.00 (-0.01, 0.00) | 0.14 | 0.82 | NA |
| | Gamma Glutamyltransferase | 321,588 | 0.07 (0.02, 0.12) | 8.8E-03 | 0.06 (0.00, 0.12) | 0.05 | 0.06 (-0.05, 0.16) | 0.15 | -0.09 (-0.50, 0.31) | 0.38 | 0.07 (-0.01, 0.15) | 0.04 | 0.14 | NA |
| | Alanine aminotransferase | 321,623 | 0.03 (0.01, 0.04) | 7.9E-04 | 0.03 (0.01, 0.05) | 0.01 | 0.03 (-0.02, 0.07) | 0.09 | 0.01 (-0.13, 0.15) | 0.78 | 0.03 (0.00, 0.05) | 0.01 | 0.60 | NA |
| | Aspartate aminotransferase | 320,556 | 0.01 (-0.00, 0.02) | 0.12 | 0.01 (-0.00, 0.03) | 0.17 | 0.01 (-0.02, 0.04) | 0.26 | -0.01 (-0.11, 0.09) | 0.72 | 0.01 (-0.01, 0.03) | 0.14 | 0.45 | NA |
| | Augmentation index for PWA | 20,387 | 0.02 (-0.01, 0.06) | 0.23 | 0.04 (-0.01, 0.09) | 0.11 | 0.05 (-0.07, 0.17) | 0.23 | 0.07 (-0.26, 0.40) | 0.39 | 0.02 (-0.03, 0.08) | 0.24 | 0.54 | NA |
| | Central augmentation pressure during PWA | 20,169 | 0.03 (-0.00, 0.06) | 0.08 | 0.04 (-0.00, 0.08) | 0.08 | 0.05 (-0.05, 0.14) | 0.19 | 0.09 (-0.18, 0.37) | 0.21 | 0.03 (-0.02, 0.07) | 0.09 | 0.36 | NA |
| | Mean carotid IMT (intima-medial thickness) at 240° | 17,863 | -0.81 (-1.50, -0.11) | 0.02 | -0.93 (-1.74, -0.12) | 0.02 | -0.81 (-2.84, 1.23) | 0.25 | -1.60 (-7.90, 4.70) | 0.33 | -0.81 (-1.93, 0.32) | 0.06 | 0.60 | NA |
| | Cardiac output (L/min) | 3,350 | -0.00 (-0.01, 0.01) | 0.46 | -0.01 (-0.02, 0.01) | 0.45 | -0.01 (-0.04, 0.02) | 0.46 | -0.03 (-0.13, 0.06) | 0.18 | -0.00 (-0.02, 0.01) | 0.40 | 0.22 | NA |
| | LV end systolic volume (mL) | 3,358 | 0.05 (-0.15, 0.25) | 0.61 | 0.03 (-0.21, 0.26) | 0.82 | 0.02 (-0.46, 0.50) | 0.90 | -0.67 (-2.28, 0.95) | 0.14 | 0.05 (-0.27, 0.38) | 0.63 | 0.10 | NA |
| | LV end diastolic volume (mL) | 3,362 | -0.10 (-0.44, 0.24) | 0.55 | -0.14 (-0.54, 0.27) | 0.51 | -0.14 (-0.90, 0.62) | 0.57 | -1.20 (-3.89, 1.49) | 0.11 | -0.10 (-0.65, 0.45) | 0.57 | 0.13 | NA |
| | LV ejection fraction (%) | 3,331 | -0.05 (-0.12, 0.01) | 0.09 | -0.03 (-0.10, 0.04) | 0.37 | -0.03 (-0.18, 0.12) | 0.51 | 0.11 (-0.43, 0.65) | 0.42 | -0.05 (-0.13, 0.02) | 0.05 | 0.23 | NA |
| | Total brain volume | 27,117 | 0.01 (-0.22, 0.24) | 0.93 | 0.16 (-0.14, 0.45) | 0.30 | 0.19 (-0.40, 0.79) | 0.35 | 0.44 (-1.55, 2.44) | 0.38 | 0.01 (-0.35, 0.37) | 0.93 | 0.38 | NA |
| | Grey matter volume | 27,117 | -0.05 (-0.19, 0.09) | 0.46 | -0.11 (-0.29, 0.07) | 0.23 | -0.19 (-0.69, 0.30) | 0.26 | -0.09 (-1.35, 1.17) | 0.77 | -0.05 (-0.27, 0.16) | 0.47 | 0.91 | NA |
| | White matter volume | 27,117 | 0.06 (-0.10, 0.23) | 0.44 | 0.07 (-0.13, 0.27) | 0.49 | 0.07 (-0.43, 0.58) | 0.67 | 0.53 (-0.75, 1.82) | 0.13 | 0.06 (-0.20, 0.33) | 0.47 | 0.17 | NA |
| | Hippocampal volume | 27,106 | -0.00 (-0.01, 0.00) | 0.44 | -0.00 (-0.01, 0.00) | 0.07 | -0.00 (-0.01, 0.01) | 0.30 | -0.01 (-0.05, 0.04) | 0.60 | -0.00 (-0.01, 0.01) | 0.47 | 0.71 | NA |
| | White matter hyperintensity volume | 26,783 | 0.04 (0.01, 0.07) | 0.02 | 0.05 (0.01, 0.09) | 0.02 | 0.06 (-0.05, 0.17) | 0.13 | -0.01 (-0.28, 0.26) | 0.88 | 0.04 (-0.01, 0.08) | 0.03 | 0.47 | NA |
| | Body mass index (BMI) | 336,381 | 0.00 (-0.00, 0.01) | 0.14 | 0.00 (-0.00, 0.01) | 0.17 | 0.00 (-0.01, 0.02) | 0.33 | 0.01 (-0.04, 0.05) | 0.63 | 0.00 (0.00, 0.01) | 4.5E-04 | 0.90 | NA |
| | Body fat percentage (%) | 331,383 | 0.01 (0.00, 0.02) | 2.2E-03 | 0.01 (0.00, 0.02) | 0.03 | 0.01 (-0.01, 0.03) | 0.22 | 0.01 (-0.05, 0.07) | 0.38 | 0.01 (0.00, 0.02) | 1.2E-03 | 0.86 | NA |
| | Forced expiratory volume (FEV1) | 255,647 | -1.49 (-2.21, -0.78) | 4.3E-05 | -1.49 (-2.31, -0.67) | 3.6E-04 | -1.47 (-3.33, 0.40) | 0.05 | -1.13 (-7.26, 5.00) | 0.46 | -1.49 (-1.97, -1.02) | 5.8E-05 | 0.80 | NA |
| | Forced vital capacity (FVC) | 255,647 | -1.42 (-2.29, -0.54) | 1.5E-03 | -1.40 (-2.51, -0.30) | 0.01 | -1.33 (-3.63, 0.98) | 0.12 | -0.93 (-8.45, 6.58) | 0.62 | -1.42 (-2.65, -0.19) | 0.01 | 0.79 | NA |
| | FEV1/FVC ratio | 255,647 | -0.00 (-0.00, 0.00) | 0.11 | -0.00 (-0.00, -0.00) | 0.04 | -0.00 (-0.00, 0.00) | 0.16 | -0.00 (-0.00, 0.00) | 0.64 | -0.00 (-0.00, 0.00) | 0.16 | 0.91 | NA |
| | Systolic blood pressure | 307,868 | 0.00 (-0.02, 0.03) | 0.77 | 0.02 (-0.01, 0.05) | 0.20 | 0.02 (-0.03, 0.08) | 0.26 | 0.04 (-0.21, 0.29) | 0.54 | 0.00 (-0.04, 0.05) | 0.78 | 0.57 | NA |
| | Diastolic blood pressure | 307,876 | -0.00 (-0.02, 0.02) | 0.94 | 0.01 (-0.01, 0.02) | 0.54 | 0.01 (-0.03, 0.04) | 0.60 | 0.02 (-0.13, 0.18) | 0.57 | -0.00 (-0.03, 0.03) | 0.94 | 0.55 | NA |

**Supplementary Table 12:** MR analyses using MR IVW, weighted medium, weighted mode, MR-Egger and MR-PRESSO approaches, for all 52 serum, urine, cardiac imaging, brain imaging and clinical biomarkers, using the HMGCR genetic instrument.

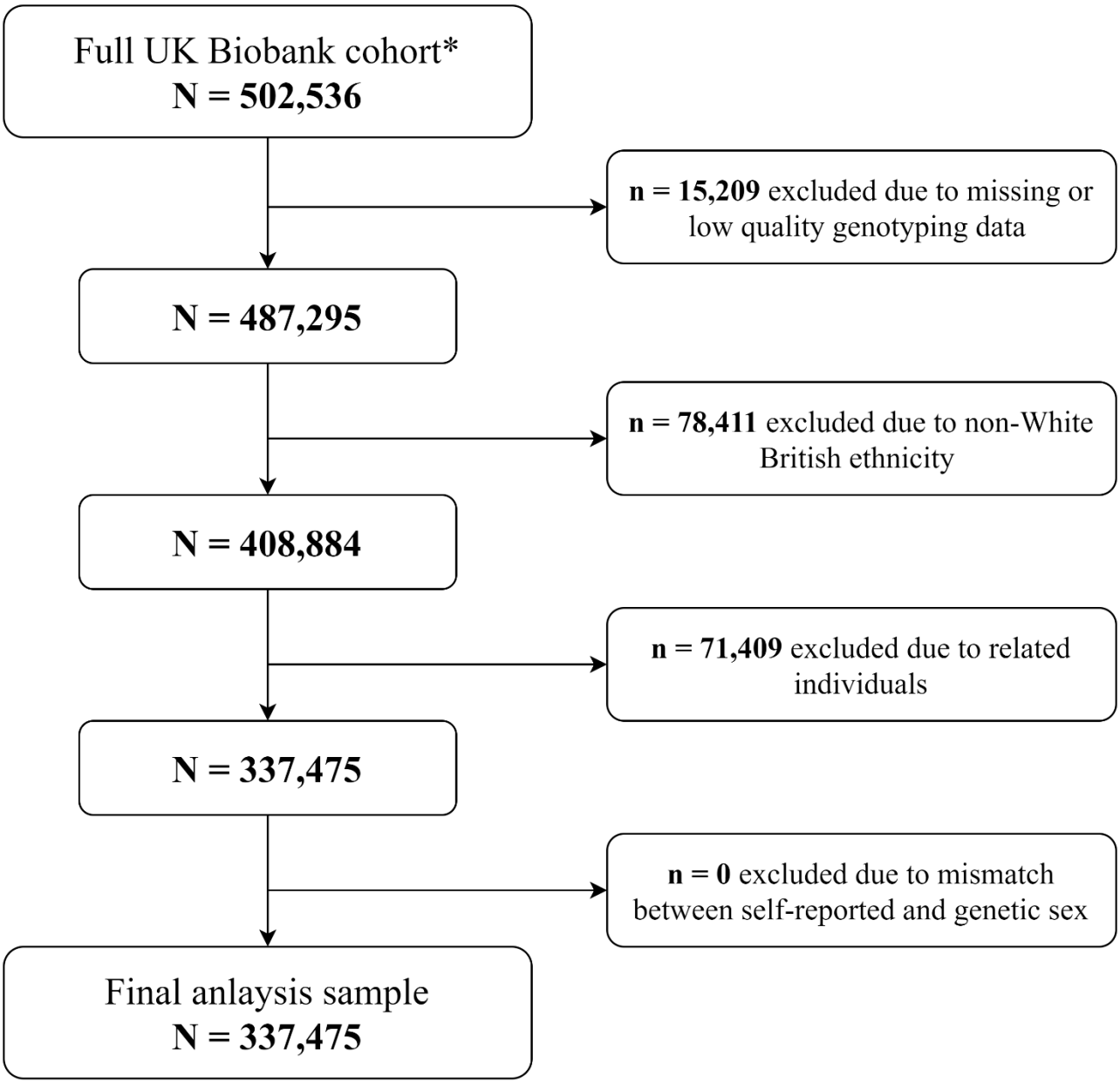
| | | | MR IVW | | Weighted median | | Weighted mode | | MR-Egger | | MR-PRESSO | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **GRS** | **Biomarker** | **Sample size, n** | **beta (95% CI)** | **P** | **beta (95% CI)** | **P** | **beta (95% CI)** | **P** | **beta (95% CI)** | **P** | **beta (95% CI)** | **P** | **$P_{pleiotropy}$** | **$P_{distortion}$** |
| HMGCR | Cholesterol | 321,748 | -0.03 (-0.03, -0.03) | 1.7E-132 | -0.03 (-0.03, -0.03) | 1.6E-73 | -0.03 (-0.03, -0.02) | 1.7E-05 | -0.04 (-0.06, -0.01) | 4.3E-03 | -0.03 (-0.03, -0.02) | 2.1E-06 | 0.25 | NA |
| | Direct Low-Density Lipoprotein | 321,141 | -0.02 (-0.02, -0.02) | 4.6E-170 | -0.02 (-0.03, -0.02) | 5.8E-75 | -0.02 (-0.03, -0.02) | 1.5E-05 | -0.03 (-0.05, -0.01) | 3.0E-03 | -0.02 (-0.02, -0.02) | 1.1E-06 | 0.25 | NA |
| | HDL-Cholesterol | 294,531 | -0.00 (-0.00, -0.00) | 7.5E-07 | -0.00 (-0.00, -0.00) | 1.0E-05 | -0.00 (-0.00, -0.00) | 0.01 | -0.00 (-0.01, 0.01) | 0.73 | -0.00 (-0.00, -0.00) | 4.3E-03 | 0.71 | NA |
| | Triglyceride | 321,484 | -0.00 (-0.00, 0.00) | 0.17 | -0.00 (-0.00, 0.00) | 0.13 | -0.00 (-0.00, 0.00) | 0.14 | -0.01 (-0.03, 0.01) | 0.05 | -0.00 (-0.00, 0.00) | 0.22 | 0.07 | NA |
| | Apolipoprotein A | 292,911 | 0.00 (0.00, 0.00) | 2.7E-03 | 0.00 (0.00, 0.00) | 0.04 | 0.00 (-0.00, 0.00) | 0.20 | -0.00 (-0.00, 0.00) | 0.92 | 0.00 (0.00, 0.00) | 0.01 | 0.57 | NA |
| | Apolipoprotein B | 320,189 | -0.01 (-0.01, -0.00) | 5.3E-154 | -0.01 (-0.01, -0.00) | 1.8E-62 | -0.01 (-0.01, -0.00) | 2.1E-05 | -0.01 (-0.01, -0.00) | 1.8E-03 | -0.01 (-0.01, -0.00) | 1.4E-06 | 0.14 | NA |
| | C-reactive Protein | 321,051 | 0.00 (-0.00, 0.01) | 0.19 | 0.00 (-0.00, 0.01) | 0.46 | 0.00 (-0.01, 0.01) | 0.54 | -0.02 (-0.09, 0.05) | 0.32 | 0.00 (-0.00, 0.01) | 0.22 | 0.24 | NA |
| | Lipoprotein (a) | 255,820 | -0.11 (-0.18, -0.04) | 2.5E-03 | -0.11 (-0.19, -0.02) | 0.01 | -0.11 (-0.28, 0.06) | 0.10 | -0.06 (-0.98, 0.86) | 0.78 | -0.11 (-0.14, -0.09) | 2.6E-05 | 0.83 | NA |
| | Vitamin D | 307,609 | -0.04 (-0.07, -0.01) | 3.5E-03 | -0.04 (-0.07, 0.00) | 0.03 | -0.04 (-0.11, 0.02) | 0.09 | 0.00 (-0.35, 0.35) | 0.97 | -0.04 (-0.08, -0.00) | 0.02 | 0.61 | NA |
| | Rheumatoid factor | 28,705 | 0.04 (-0.04, 0.13) | 0.34 | 0.05 (-0.06, 0.17) | 0.35 | 0.06 (-0.15, 0.28) | 0.38 | 0.22 (-0.92, 1.37) | 0.44 | 0.04 (-0.10, 0.18) | 0.38 | 0.52 | NA |
| | Alkaline Phosphatase | 321,762 | -0.07 (-0.11, -0.04) | 1.9E-05 | -0.07 (-0.11, -0.02) | 2.4E-03 | -0.06 (-0.15, 0.02) | 0.06 | -0.06 (-0.50, 0.37) | 0.56 | -0.07 (-0.12, -0.03) | 2.6E-03 | 0.92 | NA |
| | Calcium | 294,549 | -0.00 (-0.00, -0.00) | 2.1E-15 | -0.00 (-0.00, -0.00) | 1.4E-09 | -0.00 (-0.00, -0.00) | 3.2E-03 | -0.00 (-0.00, 0.00) | 0.14 | -0.00 (-0.00, -0.00) | 1.4E-04 | 0.66 | NA |
| | SHBG | 291,824 | -0.11 (-0.14, -0.08) | 3.9E-10 | -0.13 (-0.17, -0.09) | 3.0E-09 | -0.13 (-0.22, -0.05) | 4.7E-03 | -0.18 (-0.62, 0.26) | 0.15 | -0.11 (-0.16, -0.06) | 1.1E-03 | 0.53 | NA |
| | Testosterone | 291,707 | -0.01 (-0.01, -0.01) | 9.0E-09 | -0.01 (-0.01, -0.01) | 1.8E-05 | -0.01 (-0.02, -0.00) | 0.02 | -0.01 (-0.06, 0.04) | 0.47 | -0.01 (-0.01, -0.01) | 2.2E-05 | 0.86 | NA |
| | Oestradiol | 50,478 | -1.57 (-2.92, -0.22) | 0.02 | -1.78 (-3.40, -0.16) | 0.03 | -1.95 (-5.31, 1.41) | 0.12 | -3.16 (-20.48, 14.15) | 0.48 | -1.57 (-2.70, -0.44) | 6.8E-03 | 0.71 | NA |
| | IGF-1 | 320,022 | -0.01 (-0.02, -0.00) | 0.01 | -0.01 (-0.02, 0.00) | 0.10 | -0.01 (-0.02, 0.01) | 0.24 | -0.01 (-0.10, 0.08) | 0.74 | -0.01 (-0.02, 0.00) | 0.04 | 0.95 | NA |
| | Glycated Haemoglobin (HbA1c) | 321,610 | 0.03 (0.01, 0.04) | 3.7E-06 | 0.03 (0.02, 0.04) | 1.4E-06 | 0.03 (0.01, 0.04) | 6.0E-03 | 0.01 (-0.15, 0.16) | 0.89 | 0.03 (0.01, 0.04) | 5.7E-03 | 0.58 | NA |
| | Glucose | 294,346 | 0.00 (-0.00, 0.00) | 0.08 | 0.00 (-0.00, 0.00) | 0.16 | 0.00 (-0.00, 0.01) | 0.29 | -0.00 (-0.02, 0.02) | 0.90 | 0.00 (0.00, 0.00) | 6.4E-03 | 0.68 | NA |
| | Cystatin C | 321,727 | 0.00 (-0.00, 0.00) | 0.19 | 0.00 (-0.00, 0.00) | 0.14 | 0.00 (-0.00, 0.00) | 0.22 | -0.00 (-0.00, 0.00) | 0.94 | 0.00 (-0.00, 0.00) | 0.25 | 0.78 | NA |
| | Creatinine | 321,583 | 0.00 (0.00, 0.00) | 0.02 | 0.00 (0.00, 0.00) | 0.01 | 0.00 (-0.00, 0.00) | 0.06 | 0.00 (-0.00, 0.00) | 0.26 | 0.00 (-0.00, 0.00) | 0.07 | 0.41 | NA |
| | Total protein | 294,331 | -0.01 (-0.01, 0.00) | 0.06 | -0.01 (-0.01, -0.00) | 0.02 | -0.01 (-0.02, 0.00) | 0.09 | -0.03 (-0.10, 0.04) | 0.11 | -0.01 (-0.02, 0.00) | 0.12 | 0.17 | NA |
| | Urea | 321,537 | 0.00 (-0.00, 0.00) | 0.25 | 0.00 (-0.00, 0.00) | 0.22 | 0.00 (-0.00, 0.01) | 0.25 | 0.00 (-0.02, 0.03) | 0.50 | 0.00 (-0.00, 0.00) | 0.06 | 0.61 | NA |
| | Phosphate | 294,096 | 0.00 (-0.00, 0.00) | 0.92 | -0.00 (-0.00, 0.00) | 0.92 | -0.00 (-0.00, 0.00) | 0.81 | -0.00 (-0.00, 0.00) | 0.25 | 0.00 (-0.00, 0.00) | 0.89 | 0.24 | NA |
| | Urate | 321,334 | -0.06 (-0.15, 0.03) | 0.17 | -0.05 (-0.15, 0.05) | 0.35 | -0.05 (-0.25, 0.15) | 0.48 | -0.11 (-1.24, 1.02) | 0.69 | -0.06 (-0.16, 0.04) | 0.10 | 0.86 | NA |
| | Creatinine (urine) | 327,791 | 13.74 (6.74, 20.74) | 1.2E-04 | 14.81 (5.88, 23.75) | 1.2E-03 | 16.82 (-0.16, 33.80) | 0.03 | 53.32 (-35.74, 142.38) | 0.06 | 13.74 (2.37, 25.11) | 0.01 | 0.12 | NA |
| | Sodium (urine) | 327,096 | 0.18 (0.13, 0.23) | 6.4E-11 | 0.17 (0.10, 0.23) | 1.9E-06 | 0.16 (0.04, 0.29) | 9.0E-03 | 0.06 (-0.63, 0.75) | 0.73 | 0.18 (0.12, 0.24) | 2.3E-04 | 0.49 | NA |
| | Potassium (urine) | 327,082 | 0.05 (0.01, 0.10) | 0.02 | 0.04 (-0.02, 0.09) | 0.17 | 0.04 (-0.06, 0.13) | 0.25 | 0.25 (-0.31, 0.80) | 0.13 | 0.05 (-0.02, 0.12) | 0.07 | 0.20 | NA |
| | Albumin | 294,657 | -0.00 (-0.01, -0.00) | 0.02 | -0.00 (-0.01, -0.00) | 0.05 | -0.00 (-0.01, 0.00) | 0.15 | -0.00 (-0.05, 0.04) | 0.70 | -0.00 (-0.01, -0.00) | 2.9E-03 | 0.98 | NA |
| | Direct Bilirubin | 273,743 | 0.00 (0.00, 0.00) | 1.2E-06 | 0.00 (0.00, 0.00) | 1.7E-04 | 0.00 (-0.00, 0.01) | 0.03 | 0.00 (-0.01, 0.02) | 0.70 | 0.00 (0.00, 0.00) | 2.2E-03 | 0.70 | NA |
| | Total Bilirubin | 320,401 | -0.00 (-0.01, 0.00) | 0.13 | -0.00 (-0.01, 0.00) | 0.21 | -0.00 (-0.02, 0.01) | 0.32 | -0.00 (-0.07, 0.07) | 1.00 | -0.00 (-0.01, 0.00) | 0.07 | 0.81 | NA |
| | Gamma Glutamyltransferase | 321,588 | 0.01 (-0.04, 0.07) | 0.60 | 0.01 (-0.05, 0.08) | 0.69 | 0.01 (-0.11, 0.14) | 0.76 | -0.10 (-0.79, 0.58) | 0.55 | 0.01 (-0.04, 0.07) | 0.45 | 0.49 | NA |
| | Alanine aminotransferase | 321,623 | 0.01 (-0.01, 0.03) | 0.33 | 0.01 (-0.01, 0.03) | 0.34 | 0.01 (-0.03, 0.05) | 0.49 | 0.00 (-0.22, 0.23) | 0.99 | 0.01 (0.00, 0.01) | 5.3E-03 | 0.88 | NA |
| | Aspartate aminotransferase | 320,556 | -0.02 (-0.04, -0.01) | 4.5E-04 | -0.02 (-0.04, -0.01) | 8.1E-03 | -0.02 (-0.05, 0.02) | 0.15 | 0.02 (-0.16, 0.19) | 0.67 | -0.02 (-0.04, -0.01) | 2.0E-03 | 0.34 | NA |
| | Augmentation index for PWA | 20,387 | -0.02 (-0.07, 0.02) | 0.27 | -0.02 (-0.07, 0.03) | 0.41 | -0.01 (-0.11, 0.09) | 0.78 | 0.06 (-0.50, 0.61) | 0.69 | -0.02 (-0.07, 0.02) | 0.11 | 0.56 | NA |
| | Central augmentation pressure during PWA | 20,169 | 0.02 (-0.02, 0.06) | 0.27 | 0.02 (-0.03, 0.06) | 0.50 | 0.02 (-0.07, 0.10) | 0.52 | -0.04 (-0.51, 0.43) | 0.72 | 0.02 (-0.03, 0.07) | 0.21 | 0.59 | NA |
| | Mean carotid IMT (intima-medial thickness) at 240° | 17,863 | -0.54 (-1.26, 0.18) | 0.14 | -0.61 (-1.48, 0.25) | 0.16 | -0.64 (-2.45, 1.18) | 0.31 | -1.43 (-10.67, 7.81) | 0.54 | -0.54 (-1.16, 0.09) | 0.04 | 0.69 | NA |
| | Cardiac output (L/min) | 3,350 | -0.01 (-0.02, 0.00) | 0.05 | -0.01 (-0.02, 0.01) | 0.34 | -0.01 (-0.03, 0.02) | 0.46 | 0.04 (-0.11, 0.19) | 0.32 | -0.01 (-0.03, 0.00) | 0.06 | 0.21 | NA |
| | LV end systolic volume (mL) | 3,358 | 0.15 (-0.06, 0.36) | 0.16 | 0.12 (-0.14, 0.37) | 0.36 | 0.12 (-0.37, 0.61) | 0.47 | -0.33 (-3.01, 2.35) | 0.62 | 0.15 (-0.14, 0.44) | 0.15 | 0.47 | NA |
| | LV end diastolic volume (mL) | 3,362 | 0.10 (-0.25, 0.45) | 0.58 | 0.14 (-0.30, 0.57) | 0.53 | 0.14 (-0.66, 0.93) | 0.61 | -0.04 (-4.51, 4.43) | 0.97 | 0.10 (-0.29, 0.49) | 0.45 | 0.90 | NA |
| | LV ejection fraction (%) | 3,331 | -0.06 (-0.14, 0.01) | 0.10 | -0.03 (-0.12, 0.05) | 0.44 | -0.03 (-0.18, 0.12) | 0.56 | 0.22 (-0.66, 1.11) | 0.34 | -0.06 (-0.18, 0.06) | 0.16 | 0.23 | NA |
| | Total brain volume | 27,117 | 0.31 (-0.02, 0.65) | 0.07 | 0.15 (-0.19, 0.49) | 0.38 | 0.11 (-0.45, 0.66) | 0.57 | -0.90 (-4.94, 3.13) | 0.39 | 0.31 (-0.24, 0.86) | 0.13 | 0.26 | NA |
| | Grey matter volume | 27,117 | 0.14 (-0.01, 0.30) | 0.07 | 0.11 (-0.09, 0.31) | 0.26 | 0.08 (-0.31, 0.47) | 0.56 | 0.09 (-2.09, 2.28) | 0.86 | 0.14 (-0.10, 0.39) | 0.12 | 0.92 | NA |
| | White matter volume | 27,117 | 0.17 (-0.05, 0.39) | 0.13 | 0.01 (-0.21, 0.23) | 0.93 | 0.04 (-0.34, 0.41) | 0.77 | -1.00 (-3.16, 1.17) | 0.12 | 0.17 (-0.19, 0.53) | 0.19 | 0.08 | NA |
| | Hippocampal volume | 27,106 | 0.01 (0.00, 0.01) | 6.1E-03 | 0.00 (-0.00, 0.01) | 0.13 | 0.00 (-0.01, 0.01) | 0.29 | -0.00 (-0.06, 0.05) | 0.92 | 0.01 (0.00, 0.01) | 0.02 | 0.59 | NA |
| | White matter hyperintensity volume | 26,783 | 0.02 (-0.02, 0.05) | 0.30 | 0.02 (-0.02, 0.06) | 0.34 | 0.02 (-0.06, 0.10) | 0.42 | -0.02 (-0.47, 0.43) | 0.89 | 0.02 (-0.03, 0.06) | 0.24 | 0.76 | NA |
| | Body mass index (BMI) | 336,381 | 0.04 (0.03, 0.06) | 1.3E-10 | 0.04 (0.03, 0.05) | 3.5E-19 | 0.04 (0.02, 0.06) | 6.3E-04 | 0.01 (-0.17, 0.18) | 0.90 | 0.04 (0.02, 0.07) | 1.3E-03 | 0.38 | NA |
| | Body fat percentage (%) | 331,383 | 0.05 (0.03, 0.07) | 2.0E-07 | 0.05 (0.03, 0.06) | 1.4E-13 | 0.05 (0.02, 0.07) | 1.0E-03 | -0.01 (-0.24, 0.23) | 0.92 | 0.05 (0.02, 0.08) | 3.5E-03 | 0.37 | NA |
| | Forced expiratory volume (FEV1) | 255,647 | -0.32 (-1.24, 0.60) | 0.50 | -0.23 (-1.18, 0.72) | 0.64 | -0.24 (-2.18, 1.71) | 0.71 | -2.40 (-14.77, 9.98) | 0.45 | -0.32 (-1.81, 1.18) | 0.53 | 0.50 | NA |
| | Forced vital capacity (FVC) | 255,647 | -0.74 (-1.91, 0.43) | 0.22 | -0.46 (-1.68, 0.76) | 0.46 | -0.29 (-2.66, 2.08) | 0.71 | -1.62 (-18.31, 15.08) | 0.70 | -0.74 (-2.65, 1.17) | 0.27 | 0.83 | NA |
| | FEV1/FVC ratio | 255,647 | 0.00 (-0.00, 0.00) | 0.14 | 0.00 (-0.00, 0.00) | 0.27 | 0.00 (-0.00, 0.00) | 0.57 | -0.00 (-0.00, 0.00) | 0.36 | 0.00 (-0.00, 0.00) | 0.10 | 0.26 | NA |
| | Systolic blood pressure | 307,868 | 0.02 (-0.01, 0.05) | 0.11 | 0.03 (-0.00, 0.06) | 0.06 | 0.03 (-0.03, 0.09) | 0.21 | -0.13 (-0.42, 0.17) | 0.14 | 0.02 (-0.02, 0.07) | 0.17 | 0.09 | NA |
| | Diastolic blood pressure | 307,876 | -0.00 (-0.02, 0.01) | 0.77 | -0.01 (-0.03, 0.01) | 0.31 | -0.01 (-0.04, 0.02) | 0.32 | -0.06 (-0.26, 0.14) | 0.26 | -0.00 (-0.03, 0.02) | 0.78 | 0.27 | NA |

**Supplementary Table 13:** MR analyses using MR IVW, weighted medium, weighted mode, MR-Egger and MR-PRESSO approaches, for all 52 serum, urine, cardiac imaging, brain imaging and clinical biomarkers, using the NPC1L1 genetic instrument.

| | | | MR IVW | | Weighted median | | Weighted mode | | MR-Egger | | MR-PRESSO | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **GRS** | **Biomarker** | **Sample size, n** | **beta (95% CI)** | **P** | **beta (95% CI)** | **P** | **beta (95% CI)** | **P** | **beta (95% CI)** | **P** | **beta (95% CI)** | **P** | **$P_{pleiotropy}$** | **$P_{distortion}$** |
| NPC1L1 | Cholesterol | 321,748 | -0.02 (-0.02, -0.02) | 4.2E-27 | -0.02 (-0.03, -0.01) | 9.2E-14 | -0.02 (-0.03, -0.01) | 7.8E-03 | -0.03 (-0.09, 0.04) | 0.25 | -0.02 (-0.02, -0.02) | 2.9E-04 | 0.74 | NA |
| | Direct Low-Density Lipoprotein | 321,141 | -0.02 (-0.02, -0.01) | 2.8E-36 | -0.02 (-0.02, -0.01) | 1.3E-16 | -0.02 (-0.03, -0.01) | 5.2E-03 | -0.02 (-0.08, 0.03) | 0.25 | -0.02 (-0.02, -0.01) | 6.9E-04 | 0.84 | NA |
| | HDL-Cholesterol | 294,531 | 0.00 (0.00, 0.00) | 2.3E-03 | 0.00 (0.00, 0.00) | 3.1E-04 | 0.00 (-0.00, 0.01) | 0.07 | -0.00 (-0.03, 0.02) | 0.72 | 0.00 (-0.00, 0.00) | 0.05 | 0.53 | NA |
| | Triglyceride | 321,484 | -0.00 (-0.01, 0.00) | 0.05 | -0.00 (-0.01, 0.00) | 0.08 | -0.00 (-0.01, 0.00) | 0.18 | 0.03 (-0.03, 0.09) | 0.18 | -0.00 (-0.01, 0.00) | 0.15 | 0.15 | NA |
| | Apolipoprotein A | 292,911 | 0.00 (0.00, 0.00) | 2.1E-04 | 0.00 (0.00, 0.00) | 8.7E-04 | 0.00 (-0.00, 0.00) | 0.05 | 0.00 (-0.01, 0.02) | 0.78 | 0.00 (0.00, 0.00) | 0.01 | 0.93 | NA |
| | Apolipoprotein B | 320,189 | -0.00 (-0.00, -0.00) | 1.9E-26 | -0.00 (-0.01, -0.00) | 4.7E-14 | -0.00 (-0.01, -0.00) | 8.1E-03 | -0.00 (-0.02, 0.01) | 0.30 | -0.00 (-0.00, -0.00) | 6.0E-04 | 0.85 | NA |
| | C-reactive Protein | 321,051 | 0.01 (-0.02, 0.04) | 0.42 | 0.00 (-0.01, 0.02) | 0.63 | -0.00 (-0.03, 0.03) | 0.82 | 0.05 (-0.67, 0.77) | 0.80 | 0.01 (-0.04, 0.06) | 0.48 | 0.85 | NA |
| | Lipoprotein (a) | 255,820 | -0.00 (-0.17, 0.17) | 0.98 | 0.03 (-0.18, 0.24) | 0.78 | 0.02 (-0.35, 0.39) | 0.85 | 1.00 (-2.41, 4.41) | 0.34 | -0.00 (-0.24, 0.23) | 0.98 | 0.33 | NA |
| | Vitamin D | 307,609 | -0.01 (-0.10, 0.08) | 0.81 | -0.05 (-0.13, 0.03) | 0.24 | 0.06 (-0.09, 0.22) | 0.27 | 0.04 (-2.04, 2.12) | 0.94 | -0.01 (-0.15, 0.13) | 0.82 | 0.93 | NA |
| | Rheumatoid factor | 28,705 | -0.01 (-0.21, 0.20) | 0.93 | 0.04 (-0.20, 0.27) | 0.76 | 0.05 (-0.38, 0.48) | 0.72 | 0.17 (-3.89, 4.24) | 0.87 | -0.01 (-0.28, 0.26) | 0.92 | 0.86 | NA |
| | Alkaline Phosphatase | 321,762 | -0.09 (-0.23, 0.04) | 0.17 | -0.07 (-0.19, 0.05) | 0.23 | -0.20 (-0.40, -0.01) | 0.05 | 0.06 (-3.10, 3.23) | 0.94 | -0.09 (-0.31, 0.12) | 0.26 | 0.85 | NA |
| | Calcium | 294,549 | -0.00 (-0.00, 0.00) | 0.53 | -0.00 (-0.00, 0.00) | 0.81 | -0.00 (-0.00, 0.00) | 0.07 | -0.00 (-0.01, 0.01) | 0.98 | -0.00 (-0.00, 0.00) | 0.57 | 0.98 | NA |
| | SHBG | 291,824 | -0.08 (-0.24, 0.08) | 0.34 | -0.11 (-0.22, -0.01) | 0.03 | -0.10 (-0.28, 0.08) | 0.17 | -1.20 (-2.96, 0.57) | 0.10 | -0.08 (-0.34, 0.18) | 0.41 | 0.11 | NA |
| | Testosterone | 291,707 | -0.01 (-0.02, 0.01) | 0.34 | -0.01 (-0.02, 0.00) | 0.15 | -0.01 (-0.03, 0.01) | 0.25 | -0.11 (-0.28, 0.06) | 0.11 | -0.01 (-0.03, 0.02) | 0.41 | 0.12 | NA |
| | Oestradiol | 50,478 | -0.65 (-4.41, 3.12) | 0.74 | 0.27 (-3.64, 4.18) | 0.89 | 1.03 (-5.66, 7.72) | 0.66 | 20.60 (-43.42, 84.62) | 0.30 | -0.65 (-6.77, 5.47) | 0.76 | 0.29 | NA |
| | IGF-1 | 320,022 | 0.01 (-0.03, 0.05) | 0.58 | 0.01 (-0.01, 0.04) | 0.42 | 0.04 (-0.00, 0.08) | 0.06 | 0.10 (-0.77, 0.98) | 0.67 | 0.01 (-0.05, 0.07) | 0.62 | 0.70 | NA |
| | Glycated Haemoglobin (HbA1c) | 321,610 | 0.05 (0.03, 0.08) | 2.5E-05 | 0.04 (0.02, 0.07) | 5.4E-04 | 0.04 (-0.00, 0.08) | 0.06 | 0.18 (-0.29, 0.65) | 0.25 | 0.05 (0.01, 0.09) | 0.02 | 0.37 | NA |
| | Glucose | 294,346 | 0.00 (-0.00, 0.01) | 0.57 | 0.00 (-0.00, 0.01) | 0.83 | -0.00 (-0.01, 0.01) | 0.76 | 0.04 (-0.04, 0.12) | 0.16 | 0.00 (-0.01, 0.01) | 0.61 | 0.17 | NA |
| | Cystatin C | 321,727 | -0.00 (-0.00, 0.00) | 0.57 | 0.00 (-0.00, 0.00) | 0.99 | 0.00 (-0.00, 0.00) | 0.78 | 0.00 (-0.01, 0.01) | 0.93 | -0.00 (-0.00, 0.00) | 0.53 | 0.88 | NA |
| | Creatinine | 321,583 | 0.00 (-0.00, 0.00) | 0.73 | 0.00 (-0.00, 0.00) | 0.33 | 0.00 (-0.00, 0.00) | 0.18 | -0.00 (-0.00, 0.00) | 0.73 | 0.00 (-0.00, 0.00) | 0.75 | 0.71 | NA |
| | Total protein | 294,331 | -0.00 (-0.02, 0.02) | 0.97 | 0.00 (-0.02, 0.02) | 0.92 | -0.02 (-0.05, 0.01) | 0.16 | -0.02 (-0.52, 0.48) | 0.87 | -0.00 (-0.03, 0.03) | 0.97 | 0.87 | NA |
| | Urea | 321,537 | 0.00 (-0.00, 0.01) | 0.09 | 0.00 (-0.00, 0.01) | 0.10 | 0.00 (-0.00, 0.01) | 0.18 | 0.01 (-0.07, 0.09) | 0.59 | 0.00 (-0.00, 0.01) | 0.08 | 0.70 | NA |
| | Phosphate | 294,096 | -0.00 (-0.00, 0.00) | 0.50 | -0.00 (-0.00, 0.00) | 0.72 | 0.00 (-0.00, 0.00) | 0.74 | 0.00 (-0.01, 0.01) | 0.65 | -0.00 (-0.00, 0.00) | 0.52 | 0.61 | NA |
| | Urate | 321,334 | 0.28 (0.07, 0.49) | 0.01 | 0.28 (0.03, 0.53) | 0.03 | 0.32 (-0.16, 0.79) | 0.13 | 0.52 (-3.67, 4.71) | 0.65 | 0.28 (0.05, 0.51) | 0.03 | 0.83 | NA |
| | Creatinine (urine) | 327,791 | 17.07 (0.37, 33.76) | 0.05 | 20.24 (0.59, 39.89) | 0.04 | 20.81 (-17.38, 59.01) | 0.18 | -44.09 (-373.59, 285.41) | 0.62 | 17.07 (-0.93, 35.06) | 0.06 | 0.51 | NA |
| | Sodium (urine) | 327,096 | -0.05 (-0.18, 0.08) | 0.45 | -0.08 (-0.23, 0.07) | 0.31 | -0.08 (-0.38, 0.22) | 0.45 | -0.72 (-3.26, 1.82) | 0.35 | -0.05 (-0.21, 0.11) | 0.41 | 0.37 | NA |
| | Potassium (urine) | 327,082 | 0.06 (-0.04, 0.17) | 0.24 | 0.07 (-0.05, 0.18) | 0.26 | 0.07 (-0.15, 0.30) | 0.38 | -0.26 (-2.30, 1.78) | 0.63 | 0.06 (-0.03, 0.15) | 0.11 | 0.56 | NA |
| | Albumin | 294,657 | -0.01 (-0.02, 0.01) | 0.37 | -0.00 (-0.02, 0.01) | 0.52 | -0.02 (-0.03, 0.00) | 0.08 | -0.01 (-0.31, 0.29) | 0.88 | -0.01 (-0.03, 0.01) | 0.44 | 0.94 | NA |
| | Direct Bilirubin | 273,743 | 0.00 (-0.00, 0.00) | 0.99 | -0.00 (-0.00, 0.00) | 0.61 | -0.00 (-0.01, 0.01) | 0.66 | 0.01 (-0.04, 0.07) | 0.43 | 0.00 (-0.00, 0.00) | 0.99 | 0.43 | NA |
| | Total Bilirubin | 320,401 | -0.01 (-0.02, 0.01) | 0.24 | -0.01 (-0.02, 0.01) | 0.50 | -0.01 (-0.03, 0.02) | 0.61 | 0.01 (-0.25, 0.28) | 0.84 | -0.01 (-0.02, 0.00) | 0.14 | 0.75 | NA |
| | Gamma Glutamyltransferase | 321,588 | -0.06 (-0.21, 0.09) | 0.44 | -0.02 (-0.17, 0.13) | 0.79 | -0.04 (-0.31, 0.23) | 0.68 | 1.01 (-1.51, 3.53) | 0.23 | -0.06 (-0.30, 0.18) | 0.49 | 0.21 | NA |
| | Alanine aminotransferase | 321,623 | -0.05 (-0.14, 0.05) | 0.32 | -0.04 (-0.10, 0.03) | 0.24 | -0.09 (-0.21, 0.03) | 0.10 | 0.50 (-0.91, 1.92) | 0.27 | -0.05 (-0.19, 0.10) | 0.40 | 0.23 | NA |
| | Aspartate aminotransferase | 320,556 | -0.00 (-0.06, 0.06) | 0.99 | -0.03 (-0.07, 0.02) | 0.25 | -0.04 (-0.10, 0.03) | 0.17 | 0.19 (-1.25, 1.64) | 0.62 | -0.00 (-0.11, 0.10) | 0.99 | 0.62 | NA |
| | Augmentation index for PWA | 20,387 | 0.01 (-0.11, 0.12) | 0.88 | 0.06 (-0.07, 0.18) | 0.38 | 0.07 (-0.15, 0.28) | 0.40 | -0.24 (-2.87, 2.39) | 0.73 | 0.01 (-0.18, 0.19) | 0.89 | 0.72 | NA |
| | Central augmentation pressure during PWA | 20,169 | -0.04 (-0.13, 0.05) | 0.38 | -0.01 (-0.11, 0.10) | 0.91 | -0.00 (-0.19, 0.18) | 0.97 | -0.25 (-1.97, 1.47) | 0.60 | -0.04 (-0.15, 0.07) | 0.33 | 0.65 | NA |
| | Mean carotid IMT (intima-medial thickness) at 240° | 17,863 | 0.35 (-1.39, 2.08) | 0.69 | 0.50 (-1.42, 2.42) | 0.61 | 0.63 (-3.12, 4.38) | 0.63 | 3.28 (-31.01, 37.57) | 0.72 | 0.35 (-0.64, 1.33) | 0.35 | 0.75 | NA |
| | Cardiac output (L/min) | 3,350 | 0.00 (-0.04, 0.04) | 0.86 | 0.01 (-0.03, 0.04) | 0.73 | -0.03 (-0.09, 0.04) | 0.25 | -0.03 (-1.02, 0.96) | 0.91 | 0.00 (-0.06, 0.07) | 0.87 | 0.90 | NA |
| | LV end systolic volume (mL) | 3,358 | -0.64 (-1.15, -0.12) | 0.01 | -0.57 (-1.15, 0.02) | 0.06 | -0.47 (-1.56, 0.63) | 0.27 | -2.68 (-12.84, 7.48) | 0.37 | -0.64 (-1.38, 0.11) | 0.07 | 0.48 | NA |
| | LV end diastolic volume (mL) | 3,362 | -0.69 (-1.55, 0.16) | 0.11 | -0.84 (-1.82, 0.14) | 0.09 | -0.84 (-2.72, 1.04) | 0.25 | -4.06 (-21.01, 12.90) | 0.41 | -0.69 (-1.47, 0.09) | 0.07 | 0.48 | NA |
| | LV ejection fraction (%) | 3,331 | 0.13 (-0.14, 0.39) | 0.35 | 0.04 (-0.16, 0.25) | 0.67 | 0.01 (-0.36, 0.38) | 0.95 | 0.60 (-5.75, 6.95) | 0.72 | 0.13 (-0.31, 0.56) | 0.42 | 0.78 | NA |
| | Total brain volume | 27,117 | -0.14 (-0.83, 0.55) | 0.70 | 0.01 (-0.74, 0.77) | 0.97 | 0.19 (-1.15, 1.53) | 0.68 | -1.21 (-17.51, 15.08) | 0.78 | -0.14 (-1.26, 0.98) | 0.72 | 0.80 | NA |
| | Grey matter volume | 27,117 | 0.05 (-0.33, 0.42) | 0.82 | 0.15 (-0.30, 0.59) | 0.52 | 0.24 (-0.56, 1.03) | 0.41 | -0.94 (-8.41, 6.53) | 0.64 | 0.05 (-0.45, 0.54) | 0.79 | 0.63 | NA |
| | White matter volume | 27,117 | -0.18 (-0.59, 0.23) | 0.38 | -0.13 (-0.63, 0.36) | 0.60 | 0.01 (-0.84, 0.86) | 0.98 | -0.28 (-10.14, 9.59) | 0.91 | -0.18 (-0.85, 0.48) | 0.45 | 0.97 | NA |
| | Hippocampal volume | 27,106 | 0.00 (-0.01, 0.01) | 0.77 | 0.00 (-0.01, 0.01) | 0.78 | 0.01 (-0.01, 0.03) | 0.34 | 0.02 (-0.19, 0.23) | 0.73 | 0.00 (-0.01, 0.02) | 0.76 | 0.75 | NA |
| | White matter hyperintensity volume | 26,783 | -0.03 (-0.13, 0.07) | 0.54 | -0.00 (-0.10, 0.10) | 0.98 | 0.00 (-0.18, 0.19) | 0.95 | 0.69 (-0.97, 2.34) | 0.22 | -0.03 (-0.19, 0.13) | 0.58 | 0.20 | NA |
| | Body mass index (BMI) | 336,381 | -0.01 (-0.05, 0.03) | 0.68 | -0.01 (-0.03, 0.01) | 0.26 | -0.02 (-0.05, 0.02) | 0.23 | 0.18 (-0.60, 0.95) | 0.43 | -0.01 (-0.07, 0.06) | 0.71 | 0.41 | NA |
| | Body fat percentage (%) | 331,383 | -0.01 (-0.06, 0.04) | 0.59 | -0.02 (-0.05, 0.01) | 0.18 | -0.03 (-0.08, 0.02) | 0.15 | 0.21 (-0.80, 1.22) | 0.46 | -0.01 (-0.10, 0.07) | 0.63 | 0.44 | NA |
| | Forced expiratory volume (FEV1) | 255,647 | -1.17 (-4.22, 1.88) | 0.45 | -0.09 (-2.38, 2.20) | 0.94 | -0.08 (-3.93, 3.78) | 0.95 | 18.56 (-23.75, 60.87) | 0.20 | -1.17 (-6.13, 3.79) | 0.51 | 0.18 | NA |
| | Forced vital capacity (FVC) | 255,647 | -0.93 (-3.88, 2.02) | 0.54 | 0.06 (-2.73, 2.84) | 0.97 | 0.08 (-4.86, 5.03) | 0.96 | 19.09 (-27.65, 65.83) | 0.22 | -0.93 (-5.72, 3.86) | 0.58 | 0.20 | NA |
| | FEV1/FVC ratio | 255,647 | -0.00 (-0.00, 0.00) | 0.67 | 0.00 (-0.00, 0.00) | 0.93 | 0.00 (-0.00, 0.00) | 0.92 | 0.00 (-0.00, 0.01) | 0.27 | -0.00 (-0.00, 0.00) | 0.70 | 0.25 | NA |
| | Systolic blood pressure | 307,868 | -0.05 (-0.11, -0.00) | 0.06 | -0.04 (-0.11, 0.02) | 0.21 | -0.04 (-0.16, 0.08) | 0.34 | 0.18 (-0.90, 1.27) | 0.54 | -0.05 (-0.11, 0.00) | 0.06 | 0.44 | NA |
| | Diastolic blood pressure | 307,876 | 0.03 (-0.02, 0.09) | 0.25 | 0.02 (-0.02, 0.08) | 0.23 | 0.07 (-0.02, 0.15) | 0.09 | -0.28 (-1.33, 0.77) | 0.37 | -0.03 (-0.77, 1.33) | 0.33 | 0.32 | NA |

**Supplementary Table 14:** MR analyses using MR IVW, weighted medium, weighted mode, MR-Egger and MR-PRESSO approaches, for all 52 serum, urine, cardiac imaging, brain imaging and clinical biomarkers, using the LDLR genetic instrument.

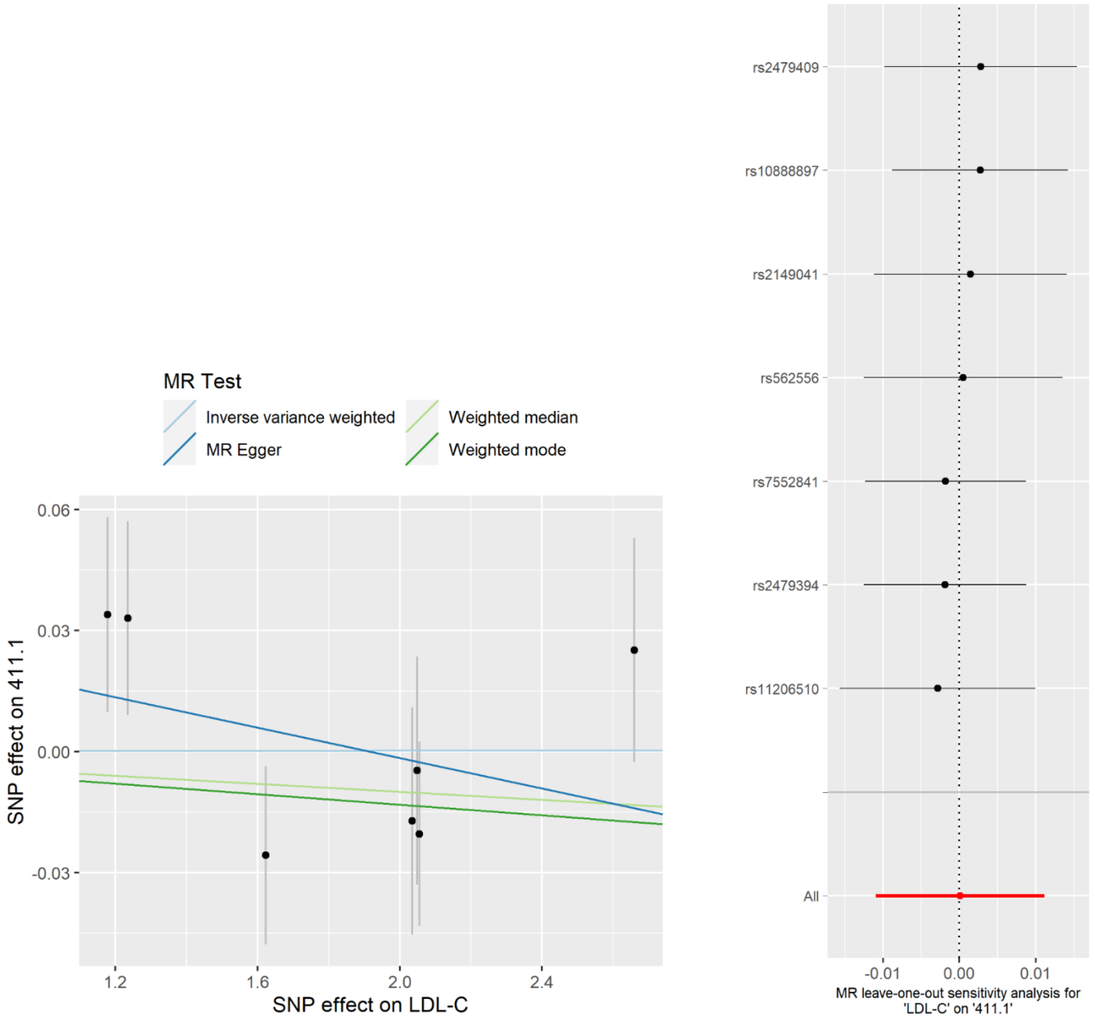
| | | | MR IVW | | Weighted median | | Weighted mode | | MR-Egger | | MR-PRESSO | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **GRS** | **Biomarker** | **Sample size, n** | **beta (95% CI)** | **P** | **beta (95% CI)** | **P** | **beta (95% CI)** | **P** | **beta (95% CI)** | **P** | **beta (95% CI)** | **P** | **$P_{pleiotropy}$** | **$P_{distortion}$** |
| LDLR | Cholesterol | 321,748 | -0.03 (-0.03, -0.02) | 6.1E-38 | -0.03 (-0.03, -0.03) | 2.0E-246 | -0.03 (-0.03, -0.02) | 8.2E-04 | -0.03 (-0.04, -0.02) | 0.07 | NA | NA | 0.42 | NA |
| | Direct Low-Density Lipoprotein | 321,141 | -0.02 (-0.02, -0.02) | 4.4E-58 | -0.02 (-0.02, -0.02) | 1.2E-289 | -0.02 (-0.02, -0.02) | 6.9E-04 | -0.02 (-0.03, -0.02) | 0.06 | NA | NA | 0.43 | NA |
| | HDL-Cholesterol | 294,531 | 0.00 (-0.00, 0.00) | 0.57 | 0.00 (-0.00, 0.00) | 0.52 | 0.00 (-0.00, 0.00) | 0.97 | -0.00 (-0.00, 0.00) | 0.37 | NA | NA | 0.23 | NA |
| | Triglyceride | 321,484 | -0.00 (-0.00, 0.00) | 0.32 | -0.00 (-0.00, 0.00) | 0.26 | -0.00 (-0.00, 0.00) | 0.36 | -0.00 (-0.00, 0.00) | 0.45 | NA | NA | 0.60 | NA |
| | Apolipoprotein A | 292,911 | 0.00 (0.00, 0.00) | 7.2E-09 | 0.00 (0.00, 0.00) | 1.1E-14 | 0.00 (0.00, 0.00) | 0.03 | 0.00 (-0.00, 0.00) | 0.20 | NA | NA | 0.29 | NA |
| | Apolipoprotein B | 320,189 | -0.01 (-0.01, -0.01) | 6.5E-67 | -0.01 (-0.01, -0.01) | 7.9E-280 | -0.01 (-0.01, -0.01) | 8.7E-04 | -0.01 (-0.01, -0.00) | 0.06 | NA | NA | 0.55 | NA |
| | C-reactive Protein | 321,051 | -0.00 (-0.00, 0.00) | 0.88 | -0.00 (-0.00, 0.00) | 0.95 | 0.00 (-0.01, 0.01) | 1.00 | -0.00 (-0.02, 0.02) | 0.98 | NA | NA | 0.97 | NA |
| | Lipoprotein (a) | 255,820 | -0.09 (-0.14, -0.04) | 1.0E-03 | -0.10 (-0.15, -0.04) | 6.4E-04 | -0.10 (-0.20, 0.00) | 0.09 | -0.11 (-0.32, 0.10) | 0.26 | NA | NA | 0.68 | NA |
| | Vitamin D | 307,609 | 0.07 (0.03, 0.12) | 1.4E-03 | 0.08 (0.06, 0.11) | 1.4E-13 | 0.09 (0.05, 0.12) | 0.02 | 0.11 (-0.04, 0.26) | 0.20 | NA | NA | 0.42 | NA |
| | Rheumatoid factor | 28,705 | 0.03 (-0.03, 0.09) | 0.36 | 0.04 (-0.02, 0.11) | 0.21 | 0.04 (-0.07, 0.16) | 0.35 | 0.06 (-0.19, 0.31) | 0.51 | NA | NA | 0.68 | NA |
| | Alkaline Phosphatase | 321,762 | -0.03 (-0.06, -0.00) | 0.03 | -0.02 (-0.05, 0.00) | 0.07 | -0.02 (-0.07, 0.02) | 0.25 | -0.01 (-0.15, 0.12) | 0.72 | NA | NA | 0.63 | NA |
| | Calcium | 294,549 | 0.00 (-0.00, 0.00) | 0.33 | 0.00 (-0.00, 0.00) | 0.42 | 0.00 (-0.00, 0.00) | 0.57 | 0.00 (-0.00, 0.00) | 0.90 | NA | NA | 0.72 | NA |
| | SHBG | 291,824 | 0.02 (-0.01, 0.05) | 0.13 | 0.02 (-0.01, 0.05) | 0.21 | 0.02 (-0.03, 0.06) | 0.37 | 0.01 (-0.09, 0.11) | 0.70 | NA | NA | 0.75 | NA |
| | Testosterone | 291,707 | 0.00 (-0.00, 0.00) | 0.29 | 0.00 (-0.00, 0.00) | 0.21 | 0.00 (-0.00, 0.01) | 0.34 | 0.00 (-0.01, 0.01) | 0.49 | NA | NA | 0.69 | NA |
| | Oestradiol | 50,478 | 0.50 (-0.57, 1.56) | 0.36 | 0.32 (-0.71, 1.35) | 0.54 | 0.21 (-1.53, 1.94) | 0.74 | -0.54 (-4.48, 3.41) | 0.66 | NA | NA | 0.40 | NA |
| | IGF-1 | 320,022 | -0.02 (-0.03, 0.00) | 0.07 | -0.02 (-0.02, -0.01) | 1.0E-07 | -0.02 (-0.03, -0.01) | 0.04 | -0.02 (-0.11, 0.07) | 0.53 | NA | NA | 0.87 | NA |
| | Glycated Haemoglobin (HbA1c) | 321,610 | 0.00 (-0.00, 0.01) | 0.54 | 0.00 (-0.00, 0.01) | 0.44 | 0.00 (-0.01, 0.01) | 0.55 | 0.00 (-0.02, 0.03) | 0.63 | NA | NA | 0.77 | NA |
| | Glucose | 294,346 | 0.00 (-0.00, 0.00) | 0.46 | 0.00 (-0.00, 0.00) | 0.50 | 0.00 (-0.00, 0.00) | 0.75 | -0.00 (-0.00, 0.00) | 0.96 | NA | NA | 0.67 | NA |
| | Cystatin C | 321,727 | -0.00 (-0.00, 0.00) | 0.87 | -0.00 (-0.00, 0.00) | 0.83 | -0.00 (-0.00, 0.00) | 0.84 | -0.00 (-0.00, 0.00) | 0.84 | NA | NA | 0.87 | NA |
| | Creatinine | 321,583 | 0.00 (-0.00, 0.00) | 0.07 | 0.00 (-0.00, 0.00) | 0.11 | 0.00 (-0.00, 0.00) | 0.32 | 0.00 (-0.00, 0.00) | 0.69 | NA | NA | 0.83 | NA |
| | Total protein | 294,331 | -0.00 (-0.01, 0.00) | 0.23 | -0.00 (-0.01, 0.00) | 0.12 | -0.01 (-0.01, 0.00) | 0.13 | -0.01 (-0.03, 0.01) | 0.23 | NA | NA | 0.29 | NA |
| | Urea | 321,537 | 0.00 (-0.00, 0.00) | 0.76 | -0.00 (-0.00, 0.00) | 0.92 | -0.00 (-0.00, 0.00) | 0.84 | -0.00 (-0.01, 0.01) | 0.83 | NA | NA | 0.71 | NA |
| | Phosphate | 294,096 | 0.00 (-0.00, 0.00) | 0.66 | 0.00 (-0.00, 0.00) | 0.78 | 0.00 (-0.00, 0.00) | 0.84 | -0.00 (-0.00, 0.00) | 0.97 | NA | NA | 0.79 | NA |
| | Urate | 321,334 | 0.06 (-0.01, 0.12) | 0.09 | 0.06 (-0.00, 0.13) | 0.07 | 0.07 (-0.05, 0.19) | 0.20 | 0.11 (-0.15, 0.37) | 0.32 | NA | NA | 0.48 | NA |
| | Creatinine (urine) | 327,791 | 6.04 (-2.16, 14.23) | 0.15 | 4.38 (-1.19, 9.94) | 0.12 | 3.63 (-5.65, 12.92) | 0.34 | -0.23 (-31.60, 31.15) | 0.98 | NA | NA | 0.49 | NA |
| | Sodium (urine) | 327,096 | 0.08 (0.03, 0.13) | 0.00 | 0.07 (0.02, 0.11) | 3.8E-03 | 0.06 (-0.01, 0.14) | 0.12 | 0.05 (-0.19, 0.29) | 0.54 | NA | NA | 0.67 | NA |
| | Potassium (urine) | 327,082 | -0.01 (-0.04, 0.02) | 0.49 | -0.01 (-0.04, 0.02) | 0.55 | -0.02 (-0.08, 0.04) | 0.37 | -0.03 (-0.16, 0.09) | 0.44 | NA | NA | 0.51 | NA |
| | Albumin | 294,657 | 0.00 (-0.00, 0.00) | 0.10 | 0.00 (-0.00, 0.01) | 0.09 | 0.00 (-0.00, 0.01) | 0.27 | 0.00 (-0.01, 0.01) | 0.46 | NA | NA | 0.86 | NA |
| | Direct Bilirubin | 273,743 | 0.00 (0.00, 0.00) | 9.8E-09 | 0.00 (0.00, 0.00) | 2.6E-07 | 0.00 (0.00, 0.00) | 0.05 | 0.00 (-0.00, 0.01) | 0.25 | NA | NA | 0.52 | NA |
| | Total Bilirubin | 320,401 | -0.00 (-0.01, 0.00) | 0.36 | -0.00 (-0.01, 0.00) | 0.38 | -0.00 (-0.01, 0.00) | 0.27 | -0.01 (-0.02, 0.01) | 0.34 | NA | NA | 0.39 | NA |
| | Gamma Glutamyltransferase | 321,588 | 0.03 (-0.05, 0.12) | 0.45 | 0.02 (-0.02, 0.06) | 0.38 | 0.01 (-0.06, 0.08) | 0.67 | -0.05 (-0.22, 0.12) | 0.42 | NA | NA | 0.24 | NA |
| | Alanine aminotransferase | 321,623 | 0.01 (0.00, 0.03) | 0.04 | 0.01 (0.00, 0.03) | 0.05 | 0.01 (-0.01, 0.04) | 0.27 | 0.01 (-0.04, 0.06) | 0.63 | NA | NA | 0.67 | NA |
| | Aspartate aminotransferase | 320,556 | 0.01 (-0.00, 0.02) | 0.13 | 0.01 (-0.00, 0.02) | 0.14 | 0.01 (-0.01, 0.02) | 0.40 | -0.00 (-0.04, 0.04) | 0.90 | NA | NA | 0.38 | NA |
| | Augmentation index for PWA | 20,387 | 0.01 (-0.02, 0.04) | 0.56 | 0.01 (-0.03, 0.04) | 0.62 | 0.01 (-0.05, 0.07) | 0.69 | 0.01 (-0.12, 0.13) | 0.86 | NA | NA | 0.92 | NA |
| | Central augmentation pressure during PWA | 20,169 | 0.01 (-0.02, 0.04) | 0.46 | 0.01 (-0.02, 0.03) | 0.73 | 0.00 (-0.04, 0.05) | 0.80 | -0.01 (-0.11, 0.10) | 0.81 | NA | NA | 0.54 | NA |
| | Mean carotid IMT (intima-medial thickness) at 240° | 17,863 | -0.54 (-1.08, -0.01) | 0.05 | -0.53 (-1.08, 0.02) | 0.06 | -0.52 (-1.52, 0.48) | 0.24 | -0.50 (-2.60, 1.60) | 0.49 | NA | NA | 0.93 | NA |
| | Cardiac output (L/min) | 3,350 | -0.00 (-0.01, 0.01) | 0.71 | -0.01 (-0.02, 0.00) | 0.31 | -0.01 (-0.02, 0.01) | 0.39 | -0.01 (-0.07, 0.05) | 0.62 | NA | NA | 0.65 | NA |
| | LV end systolic volume (mL) | 3,358 | -0.09 (-0.24, 0.07) | 0.29 | -0.09 (-0.26, 0.07) | 0.28 | -0.11 (-0.40, 0.19) | 0.37 | -0.15 (-0.77, 0.48) | 0.50 | NA | NA | 0.71 | NA |
| | LV end diastolic volume (mL) | 3,362 | -0.10 (-0.36, 0.17) | 0.48 | -0.11 (-0.38, 0.15) | 0.41 | -0.14 (-0.63, 0.36) | 0.47 | -0.22 (-1.26, 0.81) | 0.52 | NA | NA | 0.64 | NA |
| | LV ejection fraction (%) | 3,331 | 0.01 (-0.04, 0.06) | 0.65 | 0.01 (-0.05, 0.06) | 0.85 | 0.01 (-0.10, 0.11) | 0.89 | -0.00 (-0.21, 0.20) | 0.97 | NA | NA | 0.78 | NA |
| | Total brain volume | 27,117 | 0.10 (-0.21, 0.41) | 0.53 | 0.03 (-0.18, 0.24) | 0.78 | 0.01 (-0.34, 0.36) | 0.93 | -0.12 (-1.38, 1.13) | 0.75 | NA | NA | 0.53 | NA |
| | Grey matter volume | 27,117 | -0.03 (-0.18, 0.12) | 0.73 | -0.04 (-0.17, 0.08) | 0.49 | -0.07 (-0.29, 0.15) | 0.41 | -0.16 (-0.63, 0.31) | 0.38 | NA | NA | 0.37 | NA |
| | White matter volume | 27,117 | 0.13 (-0.04, 0.29) | 0.14 | 0.09 (-0.05, 0.23) | 0.22 | 0.08 (-0.16, 0.32) | 0.41 | 0.04 (-0.77, 0.84) | 0.87 | NA | NA | 0.67 | NA |
| | Hippocampal volume | 27,106 | 0.00 (-0.00, 0.00) | 0.39 | 0.00 (-0.00, 0.00) | 0.56 | 0.00 (-0.01, 0.01) | 0.70 | 0.00 (-0.01, 0.01) | 0.85 | NA | NA | 0.81 | NA |
| | White matter hyperintensity volume | 26,783 | -0.02 (-0.05, 0.00) | 0.06 | -0.02 (-0.05, 0.01) | 0.16 | -0.02 (-0.07, 0.03) | 0.34 | -0.02 (-0.12, 0.09) | 0.64 | NA | NA | 0.71 | NA |
| | Body mass index (BMI) | 336,381 | 0.00 (-0.00, 0.01) | 0.43 | 0.00 (-0.00, 0.01) | 0.05 | 0.01 (-0.00, 0.01) | 0.15 | 0.01 (-0.01, 0.03) | 0.24 | NA | NA | 0.28 | NA |
| | Body fat percentage (%) | 331,383 | 0.00 (-0.00, 0.01) | 0.33 | 0.01 (-0.00, 0.01) | 0.09 | 0.01 (-0.00, 0.02) | 0.18 | 0.01 (-0.01, 0.04) | 0.25 | NA | NA | 0.30 | NA |
| | Forced expiratory volume (FEV1) | 255,647 | 0.95 (-0.53, 2.44) | 0.21 | 0.58 (-0.06, 1.22) | 0.07 | 0.52 (-0.53, 1.58) | 0.26 | -0.04 (-6.40, 6.31) | 0.98 | NA | NA | 0.56 | NA |
| | Forced vital capacity (FVC) | 255,647 | 1.23 (-0.47, 2.92) | 0.16 | 1.13 (0.35, 1.91) | 4.5E-03 | 0.64 (-0.80, 2.07) | 0.29 | -0.42 (-4.16, 3.31) | 0.71 | NA | NA | 0.26 | NA |
| | FEV1/FVC ratio | 255,647 | -0.00 (-0.00, 0.00) | 0.97 | 0.00 (-0.00, 0.00) | 0.65 | 0.00 (-0.00, 0.00) | 0.63 | 0.00 (-0.00, 0.00) | 0.79 | NA | NA | 0.73 | NA |
| | Systolic blood pressure | 307,868 | -0.02 (-0.05, 0.01) | 0.14 | -0.02 (-0.04, 0.00) | 0.05 | -0.02 (-0.05, 0.01) | 0.21 | -0.02 (-0.16, 0.12) | 0.63 | NA | NA | 0.95 | NA |
| | Diastolic blood pressure | 307,876 | 0.99 (-0.00, 0.02) | 0.12 | 0.99 (0.00, 0.02) | 0.07 | 0.99 (-0.00, 0.03) | 0.22 | 0.99 (-0.02, 0.05) | 0.50 | NA | NA | 0.77 | NA |




* Excludes any participants who withdrew consent after participation in the study.

**Supplementary Figure 1:** Participant flowchart showing the sample restriction from the full UK Biobank cohort to the final analysis sample for the MR-PheWAS analysis.

## Unstable angina (411.1)




**Plot A**

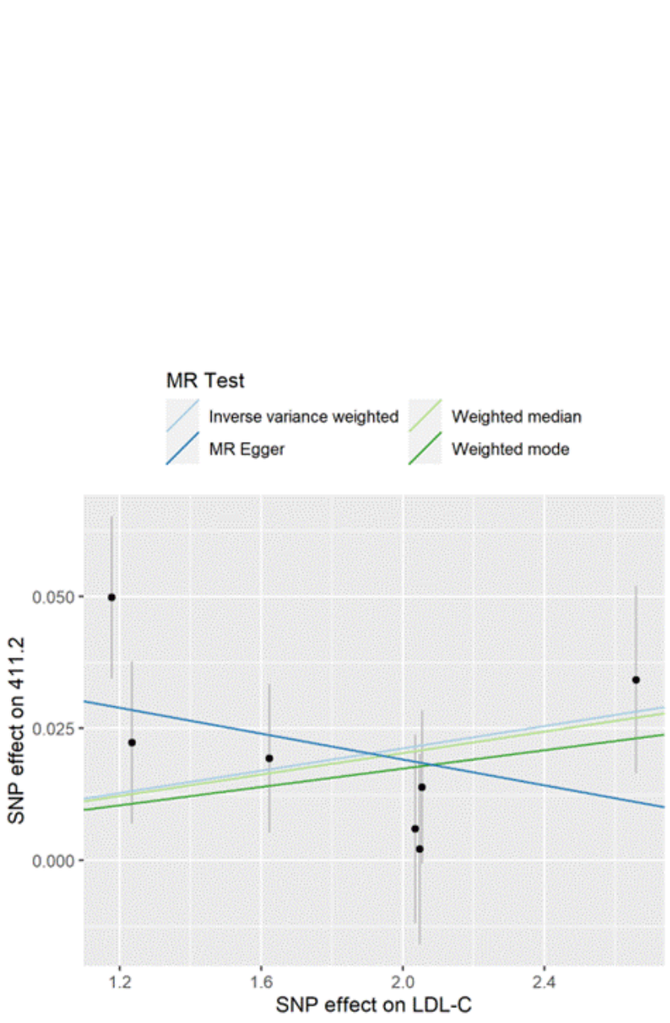



**Plot B**

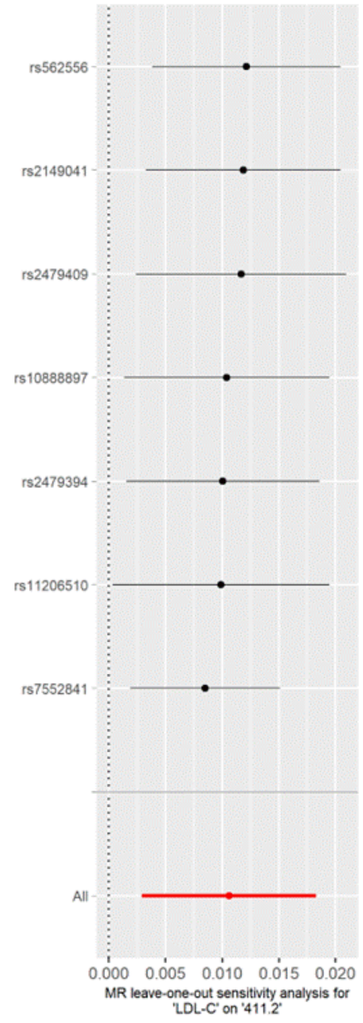
**Plot A** shows the scatter plot of the variant-outcome association estimates for each genetic variant, against the overall estimates for the variant-exposure (i.e. LDL-C lowering) association using different MR methods.

**Plot B** displays the leave-one-out analysis, which compares the effect estimates when excluding each of the genetic variants in the GRS, one at a time, to the overall estimate including all variants.

## Myocardial infarction (411.2)




**Plot A**

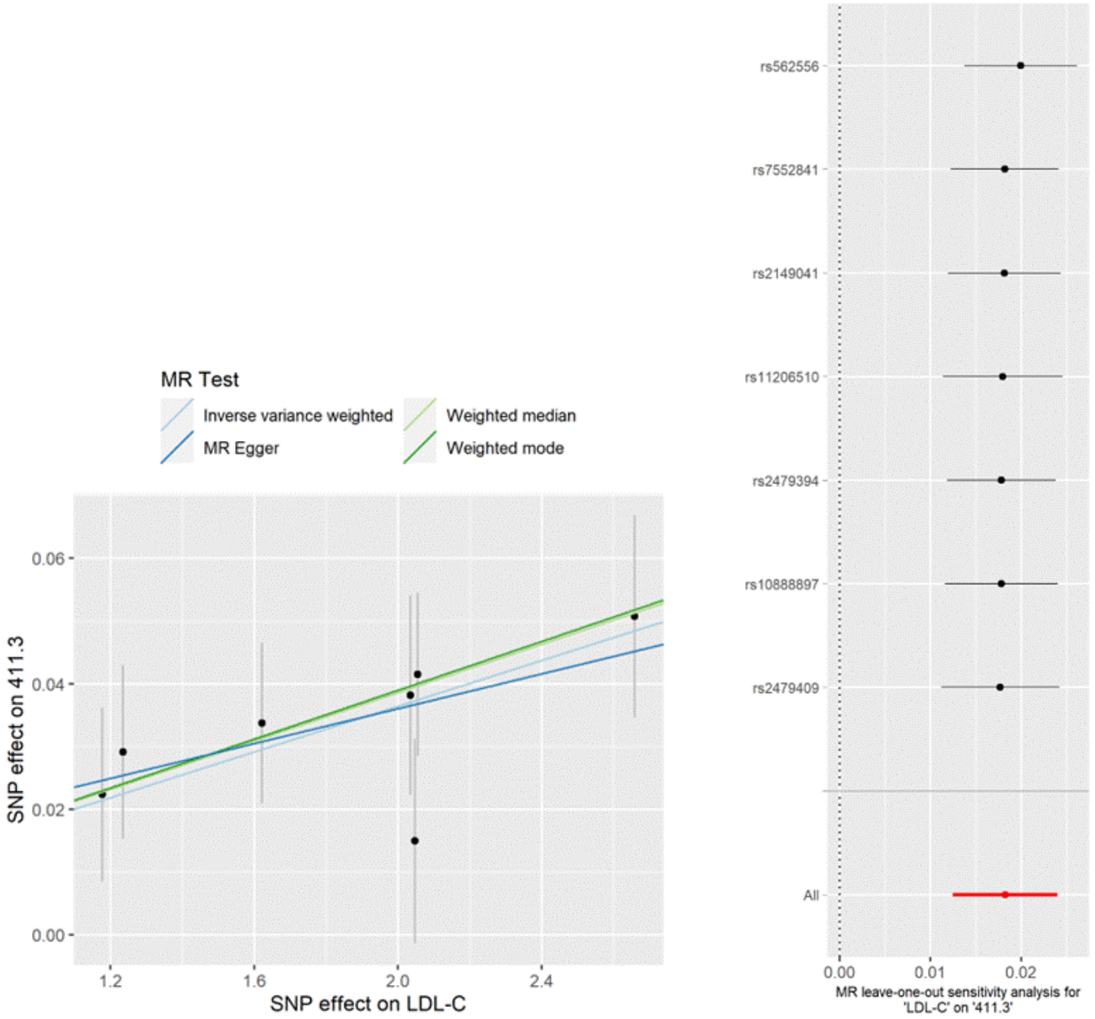



**Plot B**

**Plot A** shows the scatter plot of the variant-outcome association estimates for each genetic variant, against the overall estimates for the variant-exposure (i.e. LDL-C lowering) association using different MR methods.

**Plot B** displays the leave-one-out analysis, which compares the effect estimates when excluding each of the genetic variants in the GRS, one at a time, to the overall estimate including all variants.

## Angina pectoris (411.3)




**Plot A**

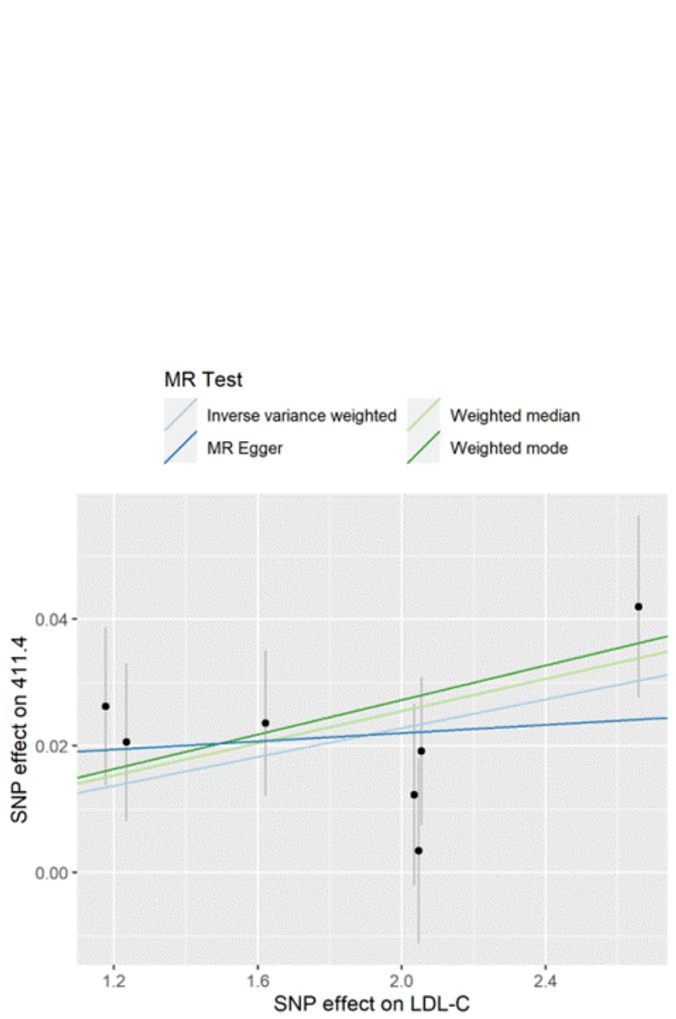



**Plot B**

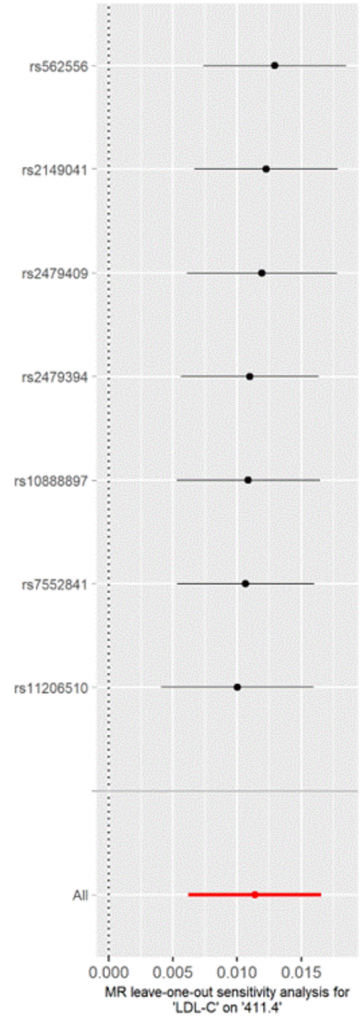
**Plot A** shows the scatter plot of the variant-outcome association estimates for each genetic variant, against the overall estimates for the variant-exposure (i.e. LDL-C lowering) association using different MR methods.

**Plot B** displays the leave-one-out analysis, which compares the effect estimates when excluding each of the genetic variants in the GRS, one at a time, to the overall estimate including all variants.

## Coronary atherosclerosis (411.4)




**Plot A**

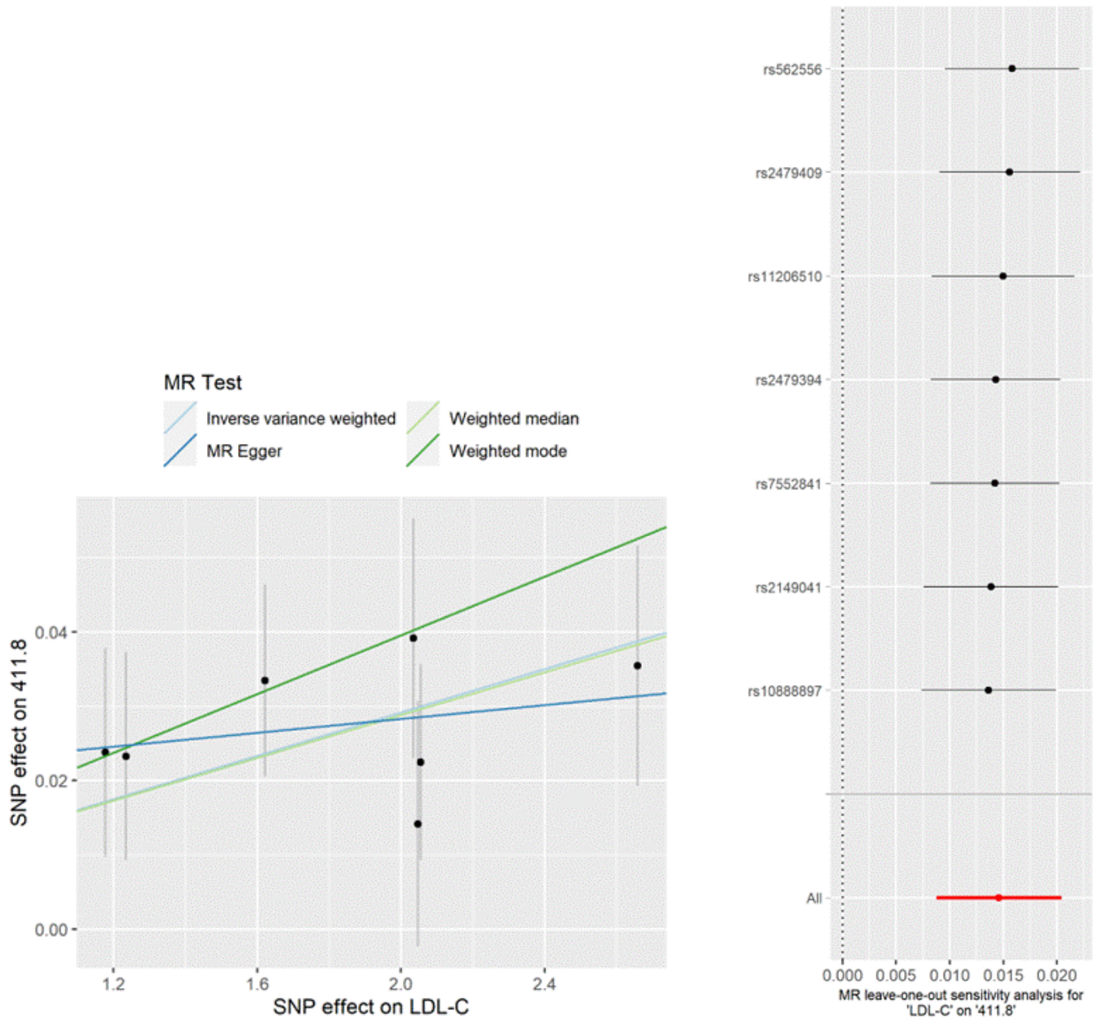



**Plot B**

**Plot A** shows the scatter plot of the variant-outcome association estimates for each genetic variant, against the overall estimates for the variant-exposure (i.e. LDL-C lowering) association using different MR methods.

**Plot B** displays the leave-one-out analysis, which compares the effect estimates when excluding each of the genetic variants in the GRS, one at a time, to the overall estimate including all variants.

**Other chronic ischemic heart diseases (411.8)**







**Plot A**

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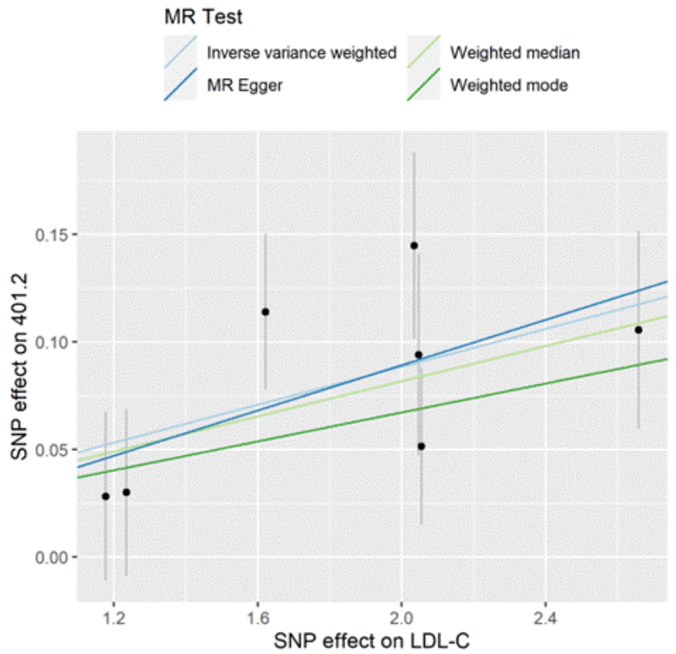


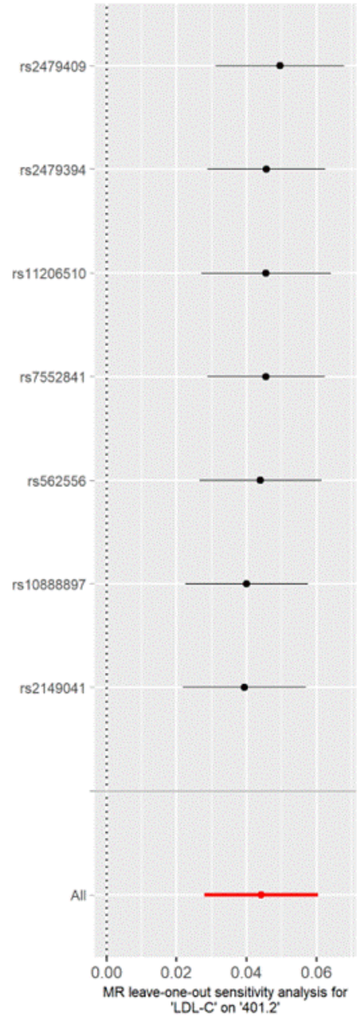


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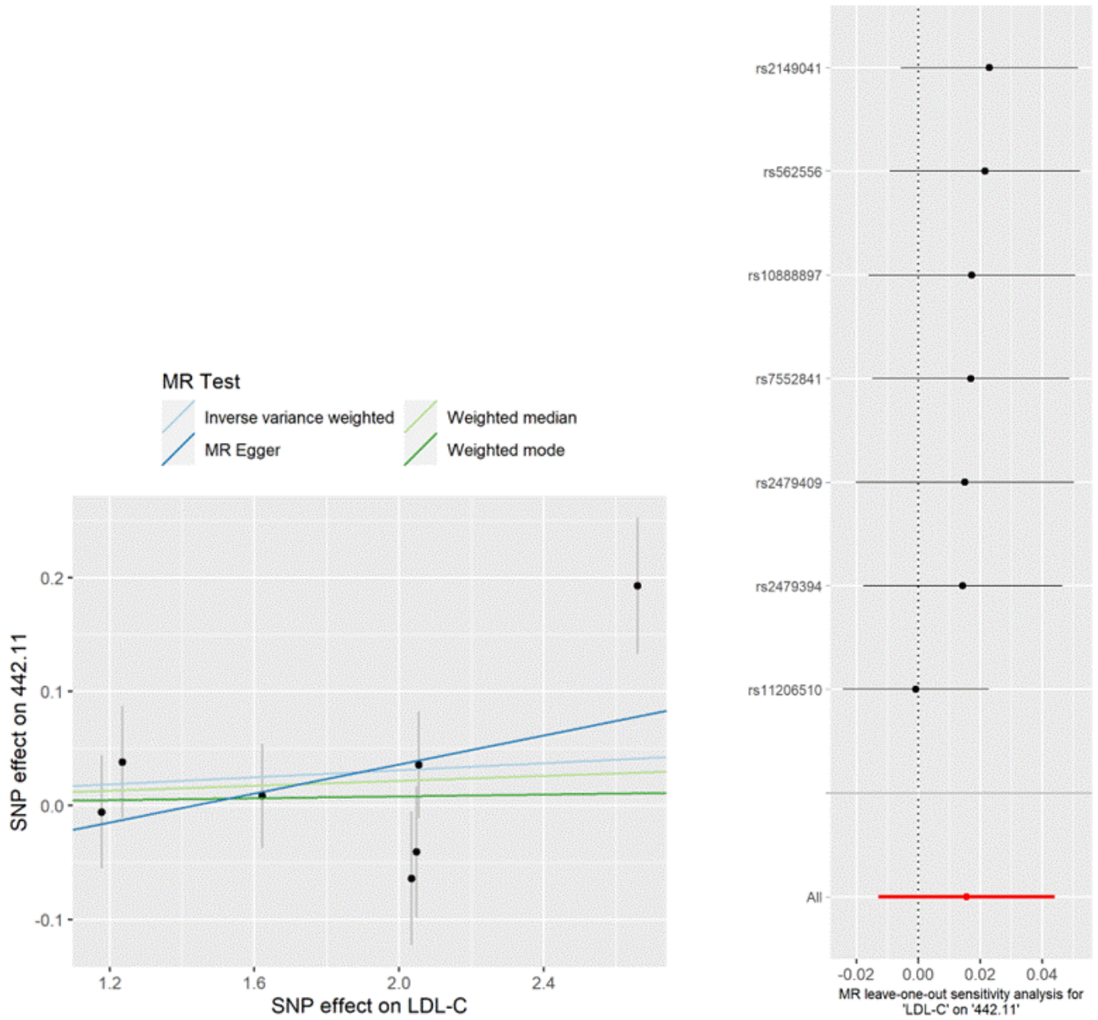


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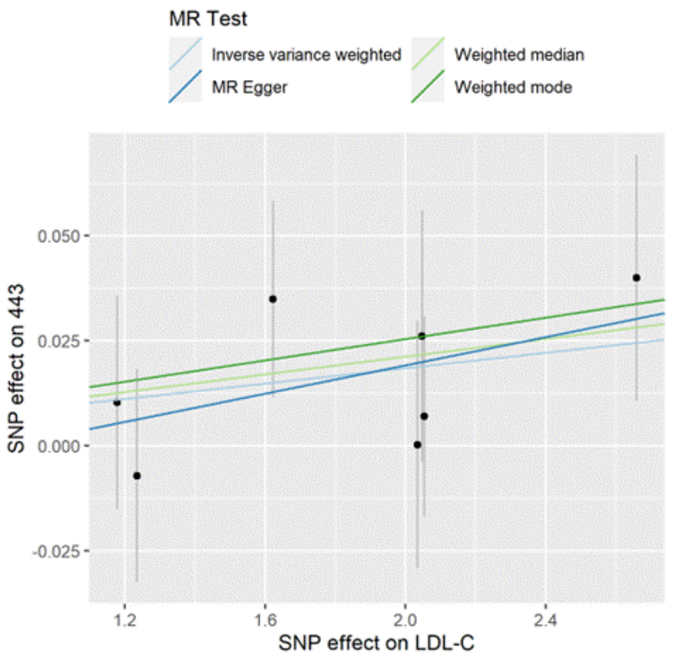
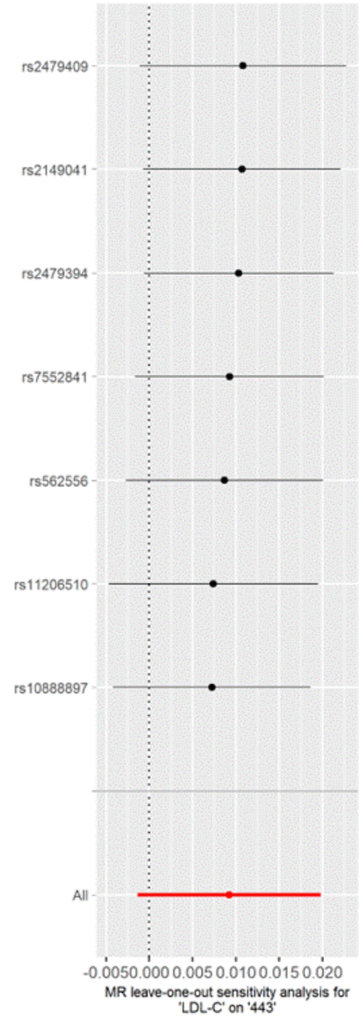



**Plot A**

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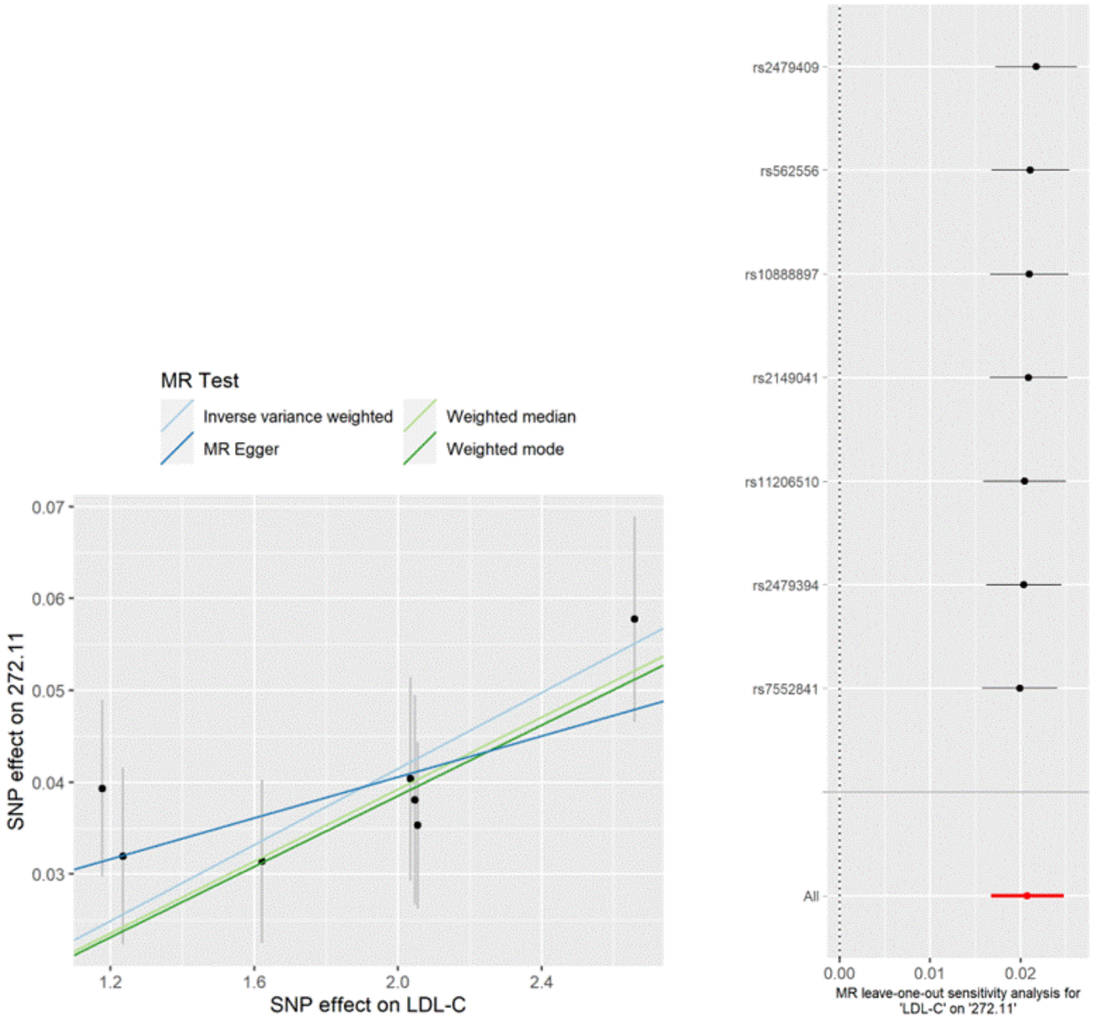


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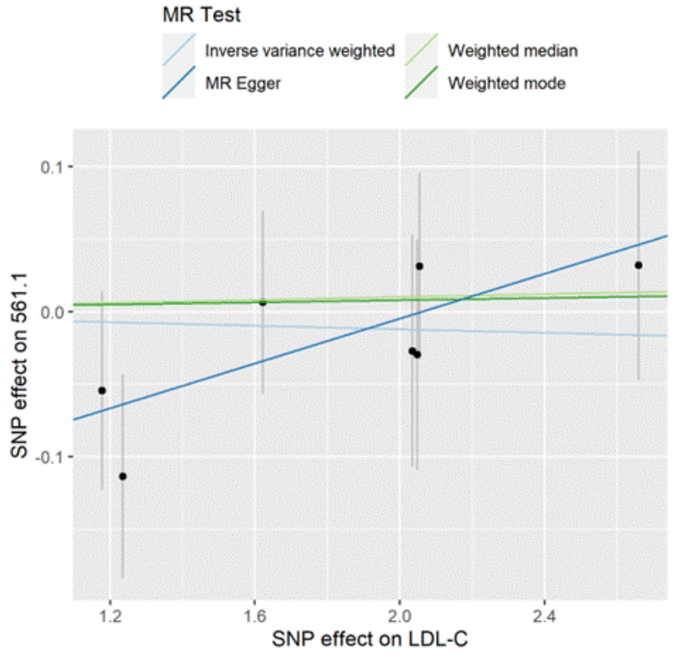
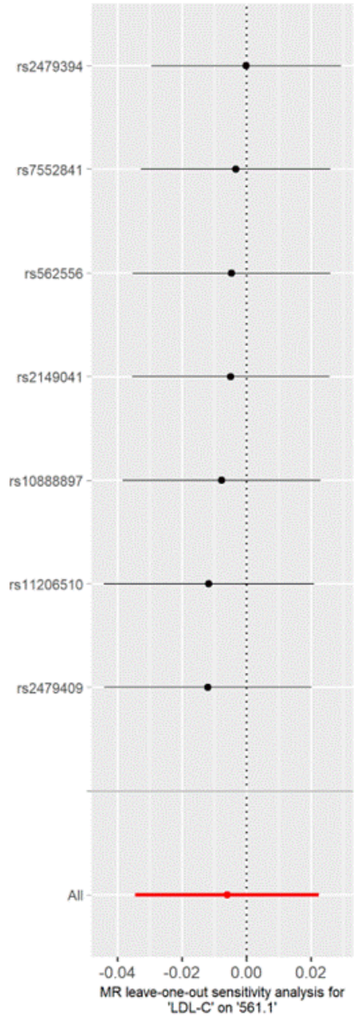
**Diarrhea (561.1)**




**Plot A**

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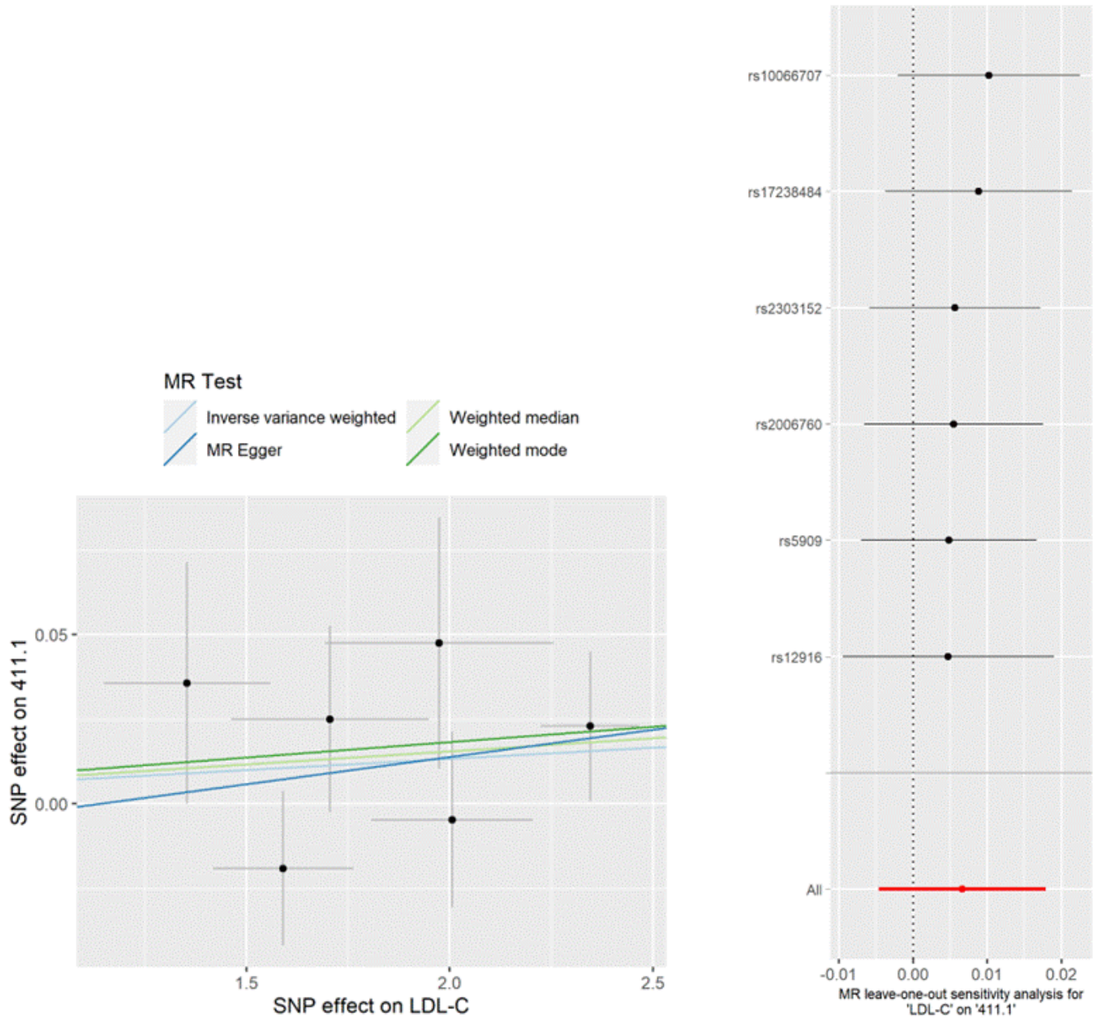
**Supplementary Figure 2:** Plots for the 10 distinct LDL-C-disease associations significant under FDR correction, for the PCSK9 genetic risk score.

**Unstable angina (411.1)**

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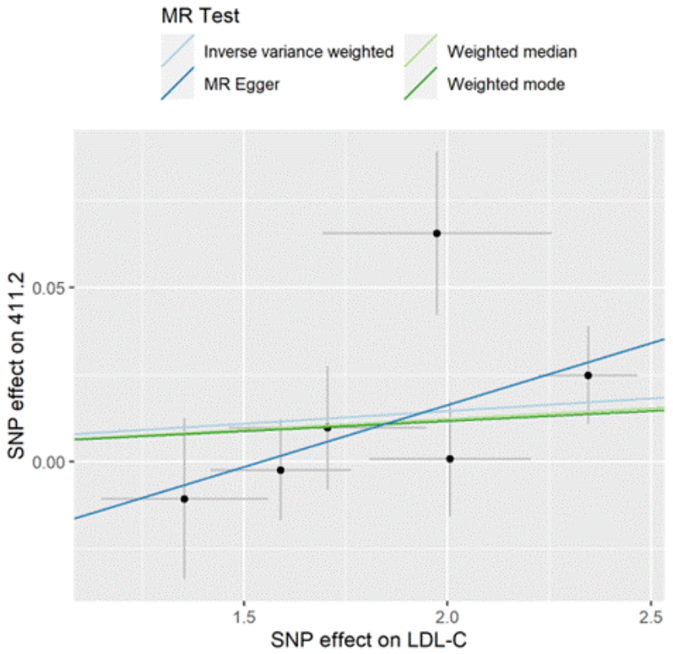
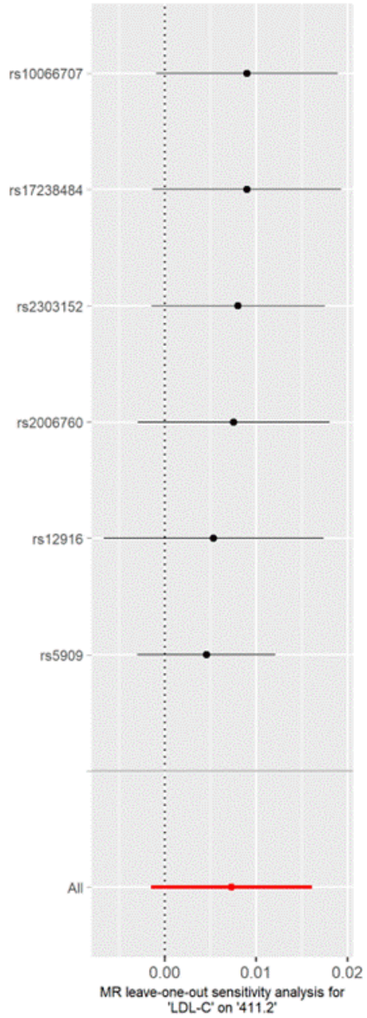
**Myocardial infarction (411.2)**




**Plot A**




**Plot B**

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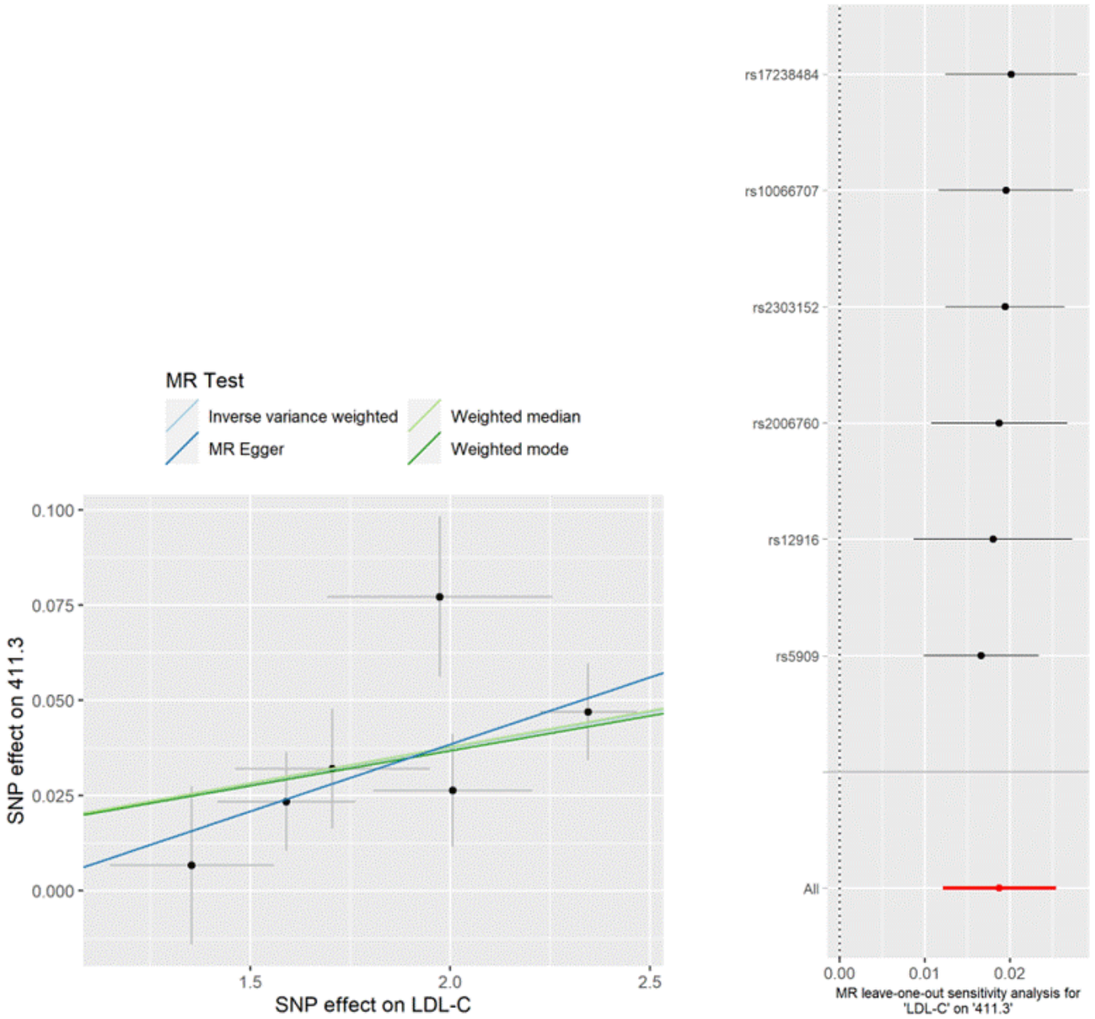
## Angina pectoris (411.3)

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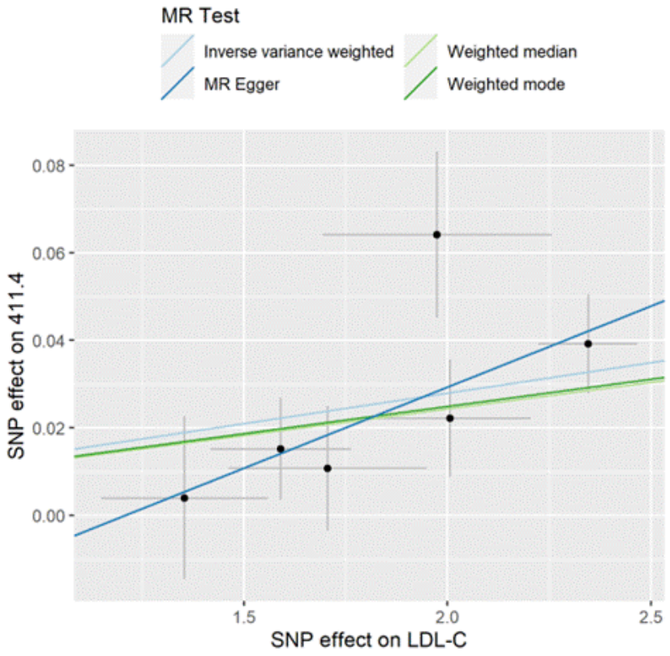
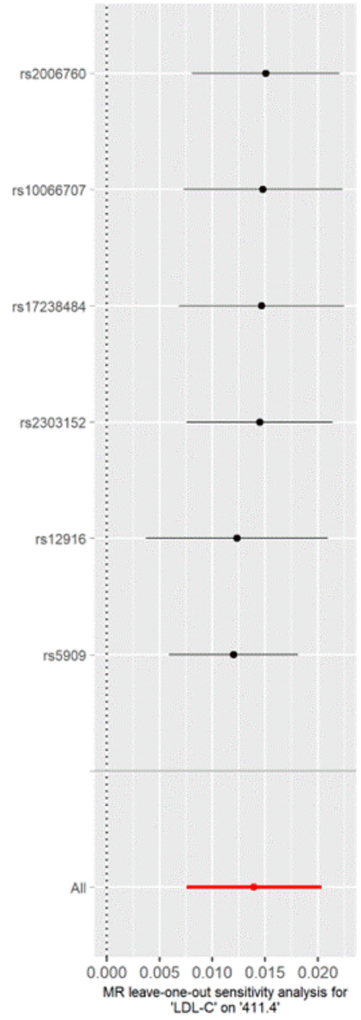
## Coronary atherosclerosis (411.4)




**Plot A**




**Plot B**

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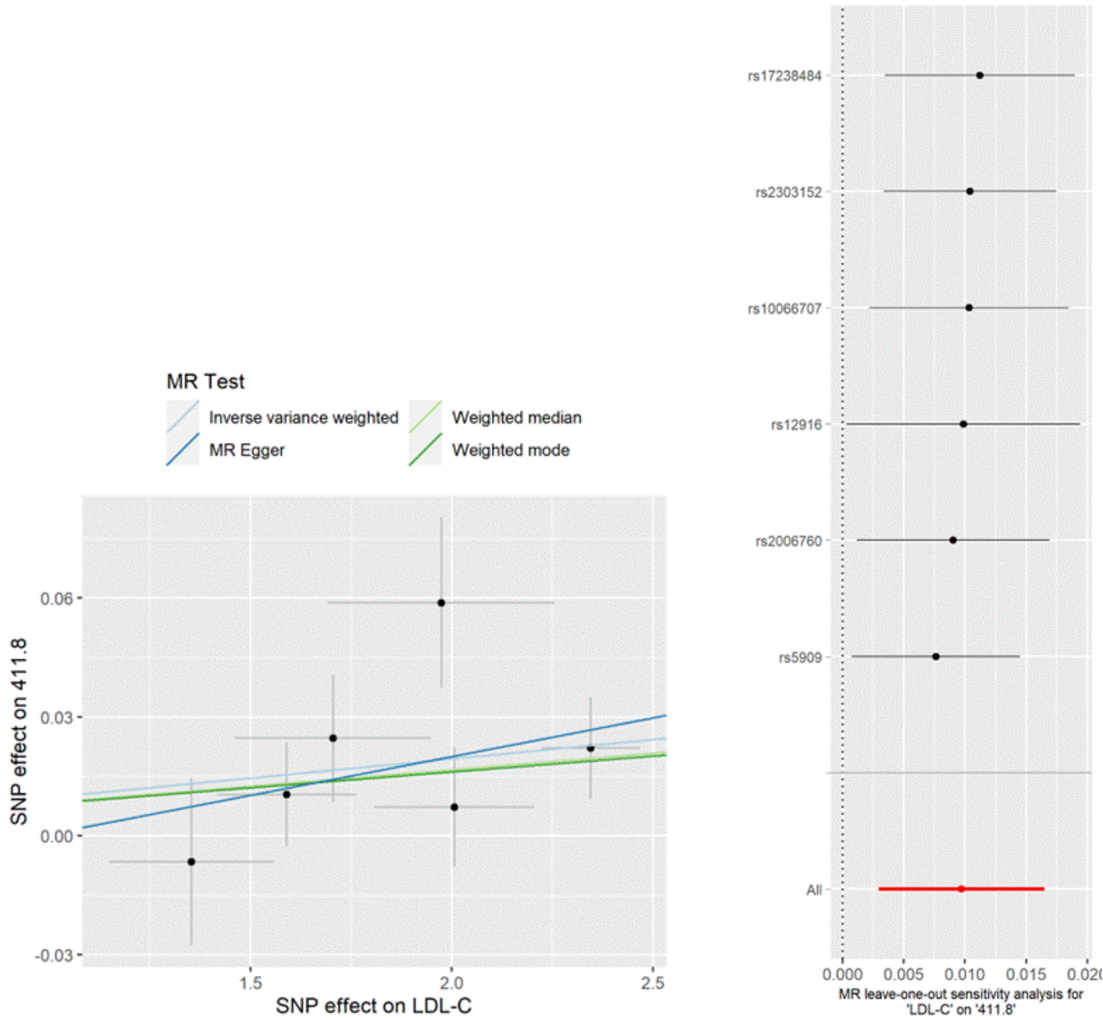
**Other chronic ischemic heart diseases (411.8)**

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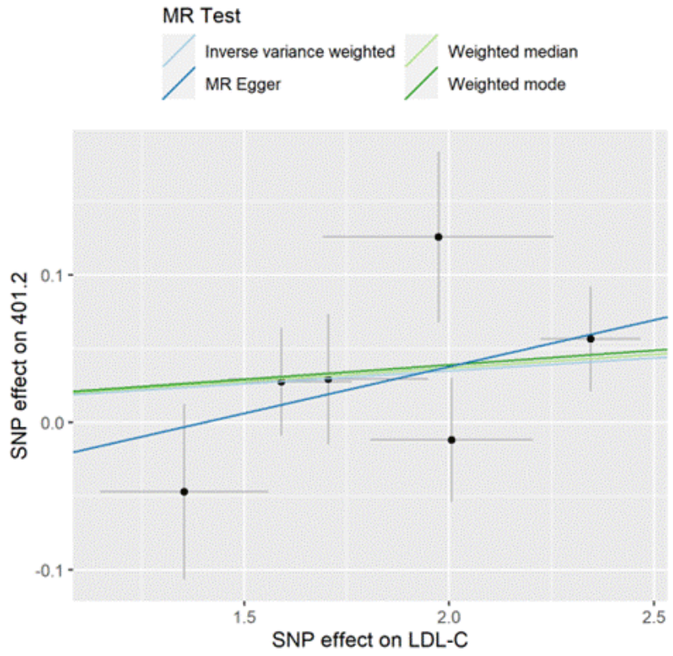


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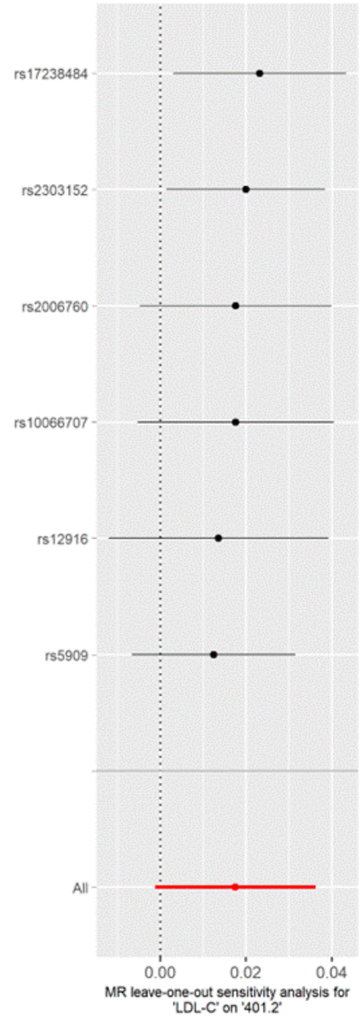


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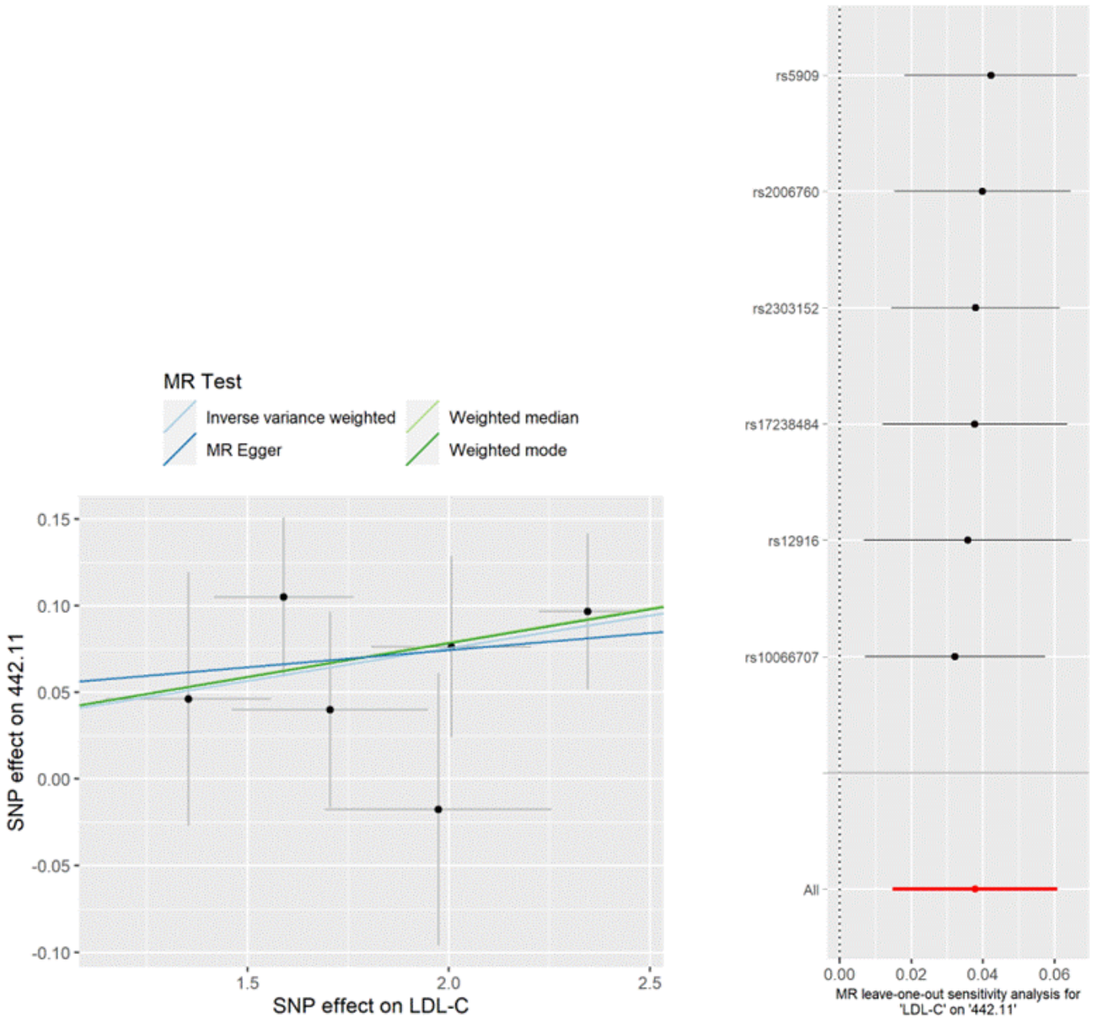





**Plot A**

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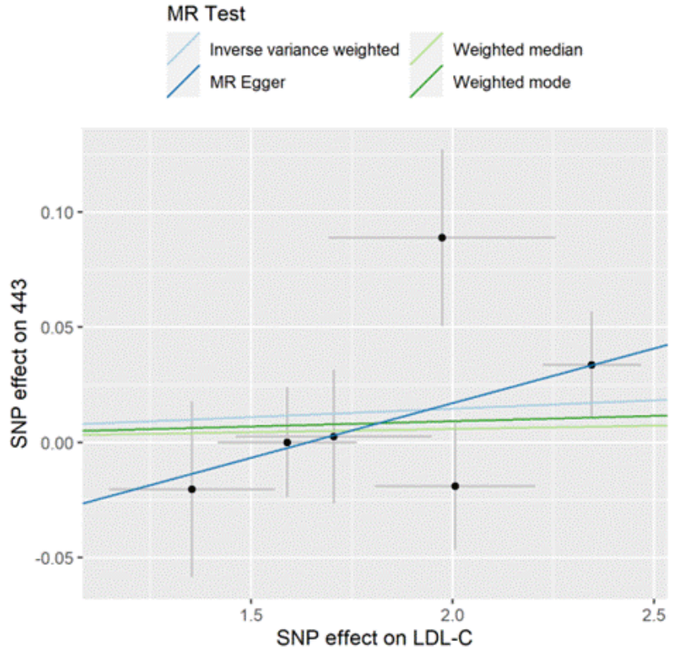


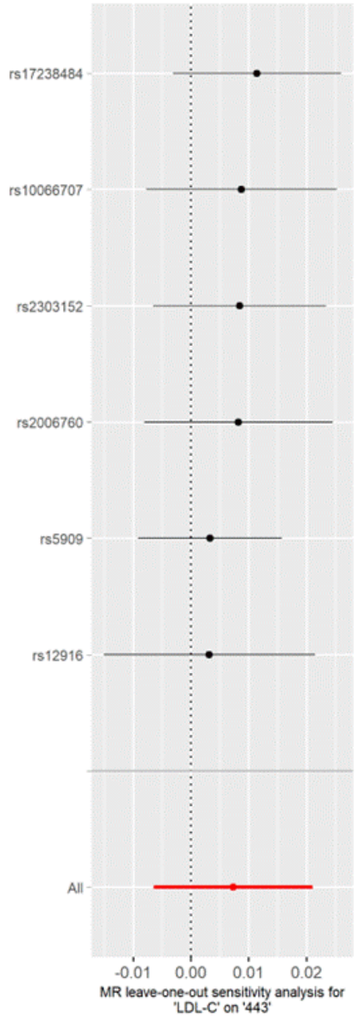


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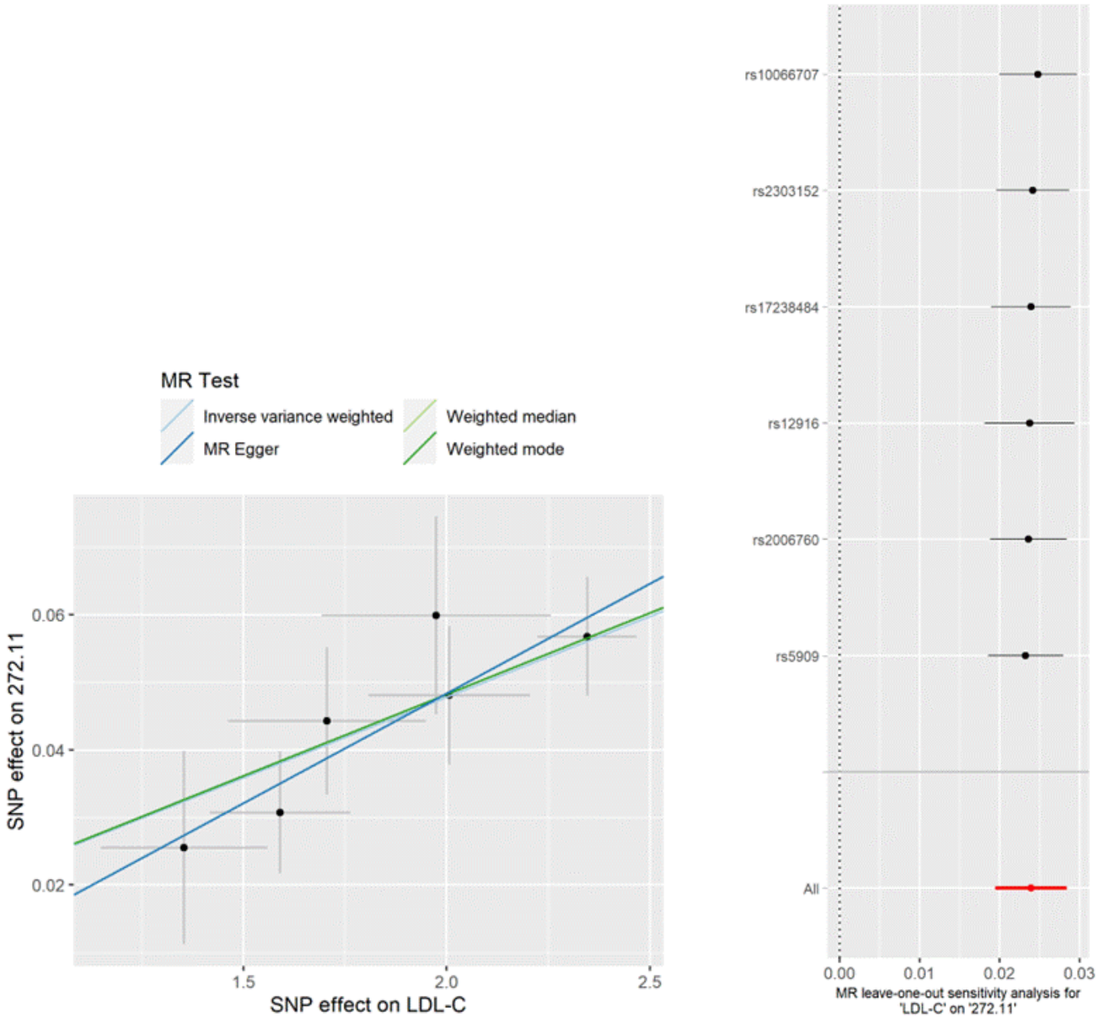


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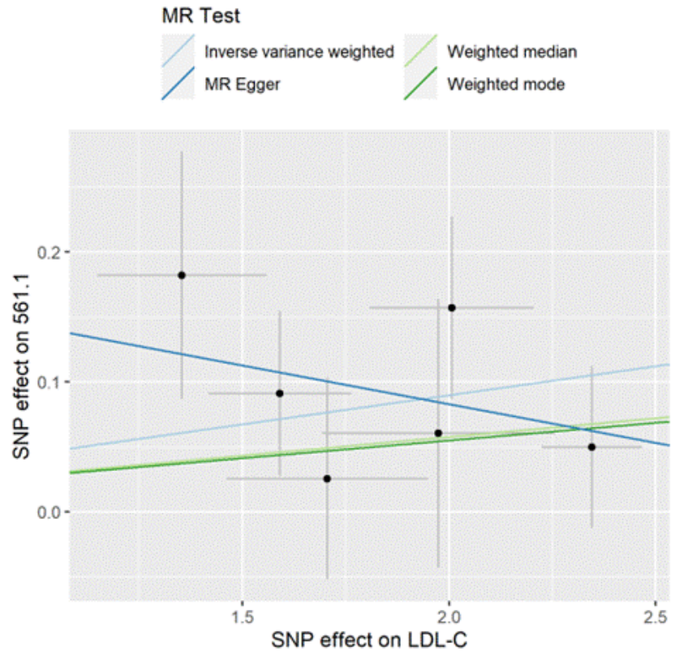


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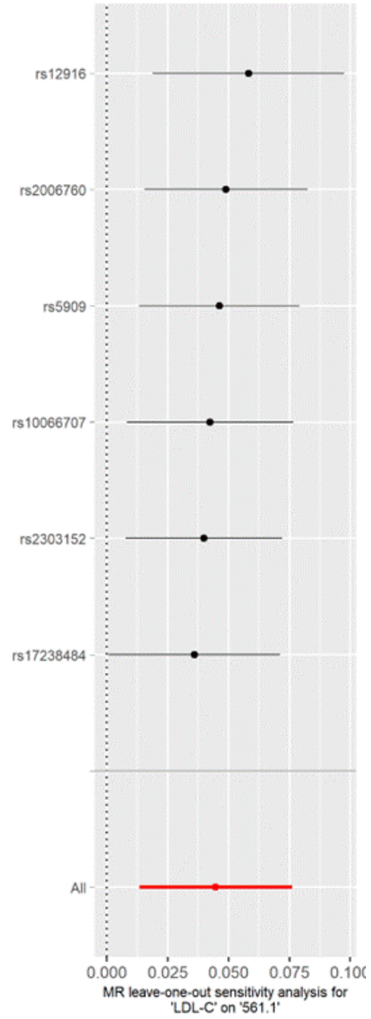


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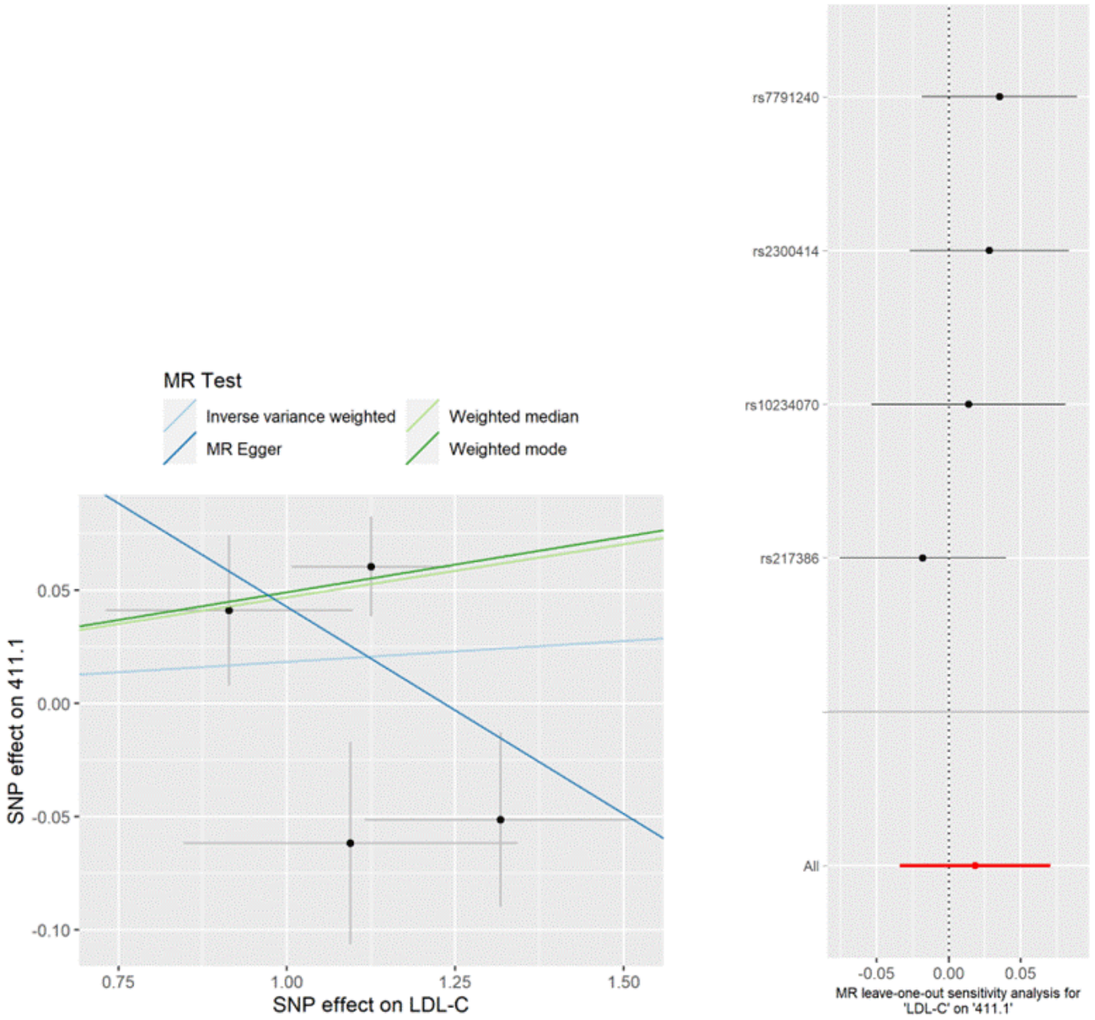
**Supplementary Figure 3:** Plots for the 10 distinct LDL-C-disease associations significant under FDR correction, for the HMGCR genetic risk score.

**Unstable angina (411.1)**

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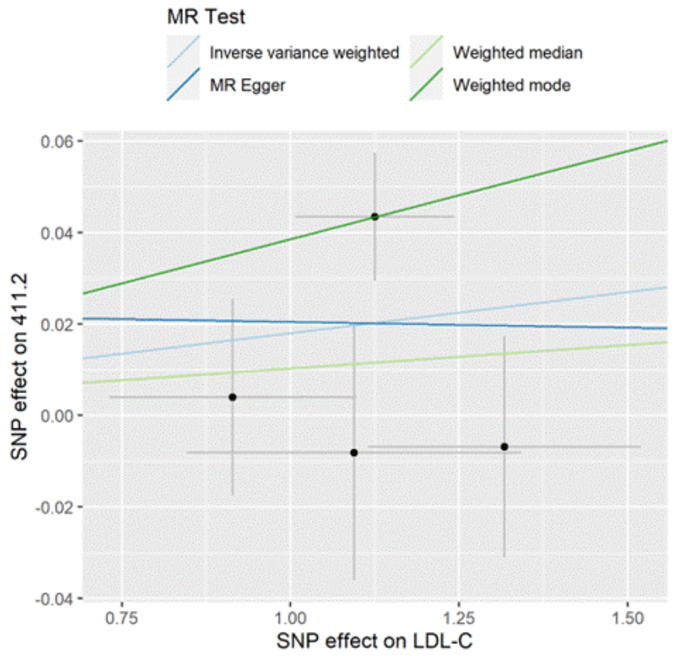
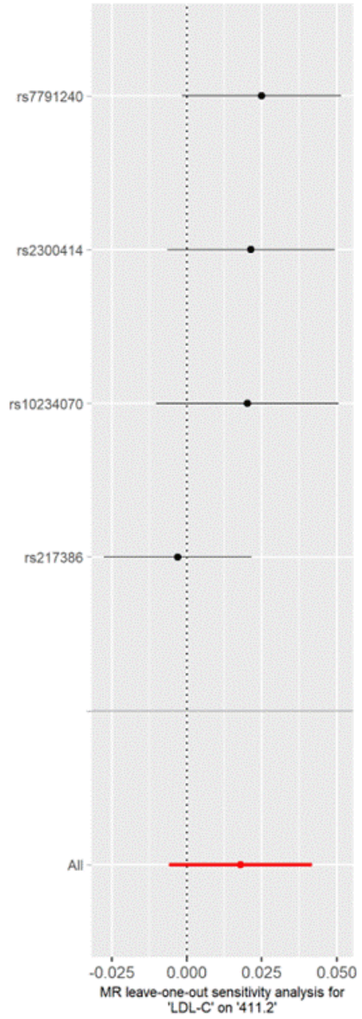
**Myocardial infarction (411.2)**




**Plot A**

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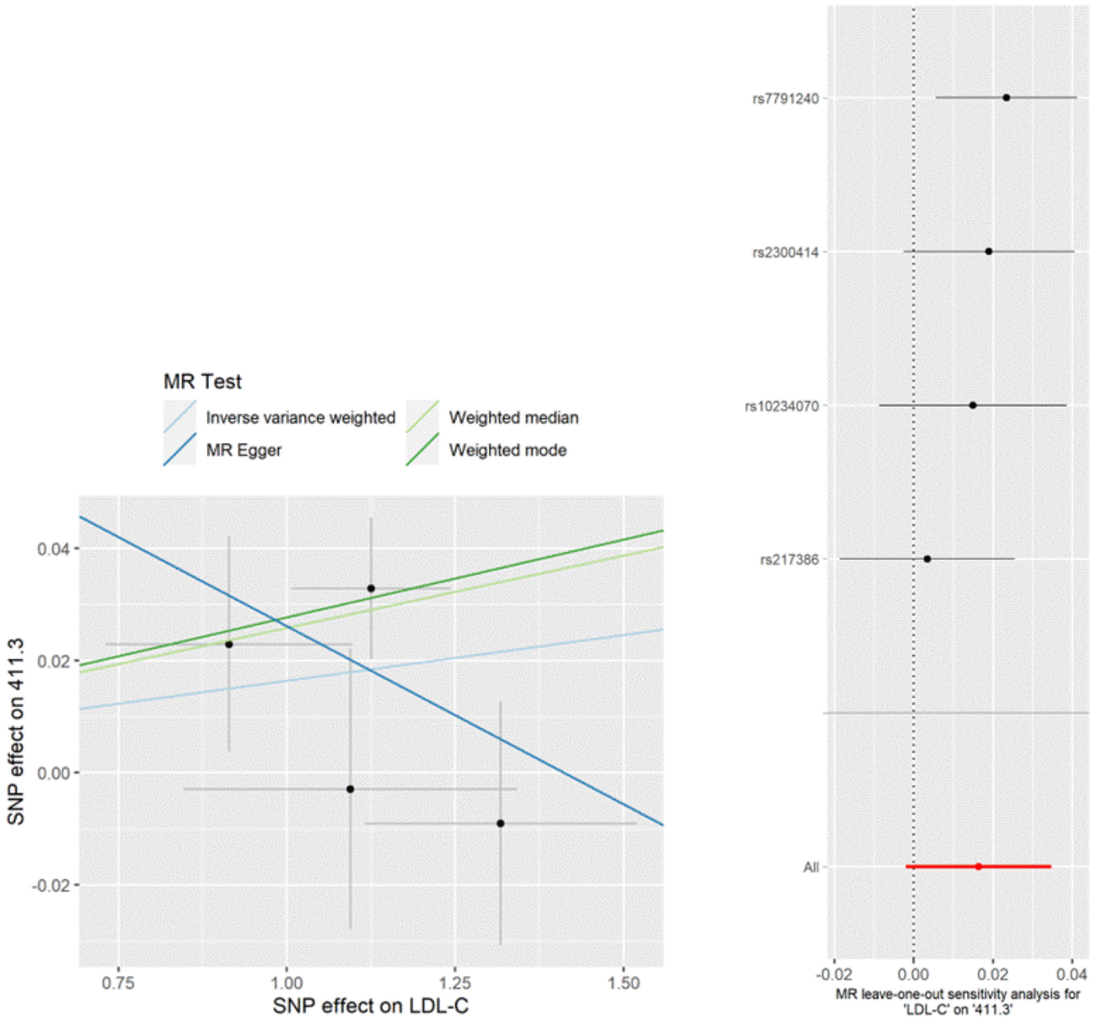


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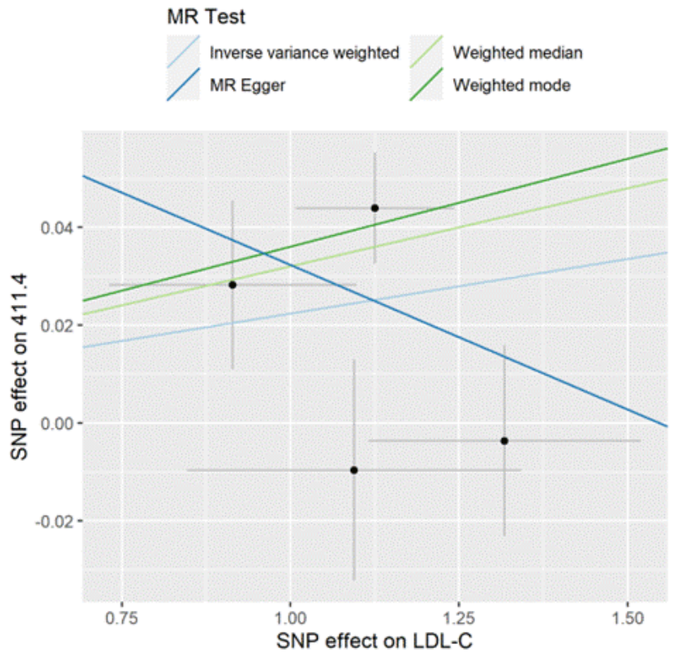
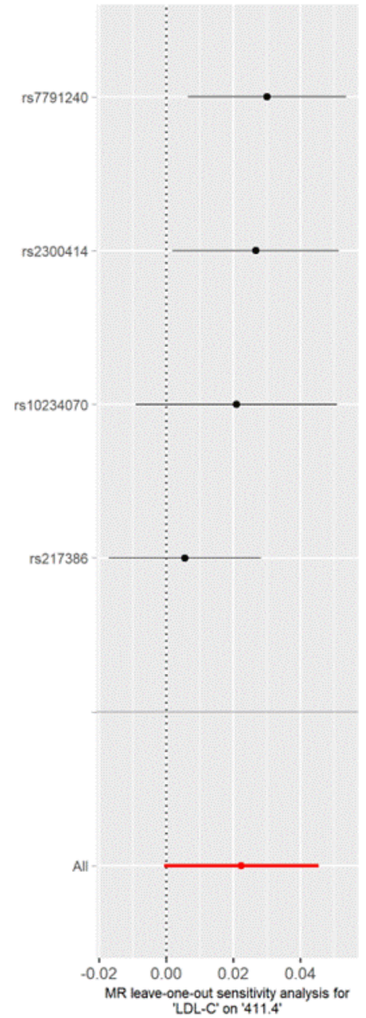



**Plot A**




**Plot B**

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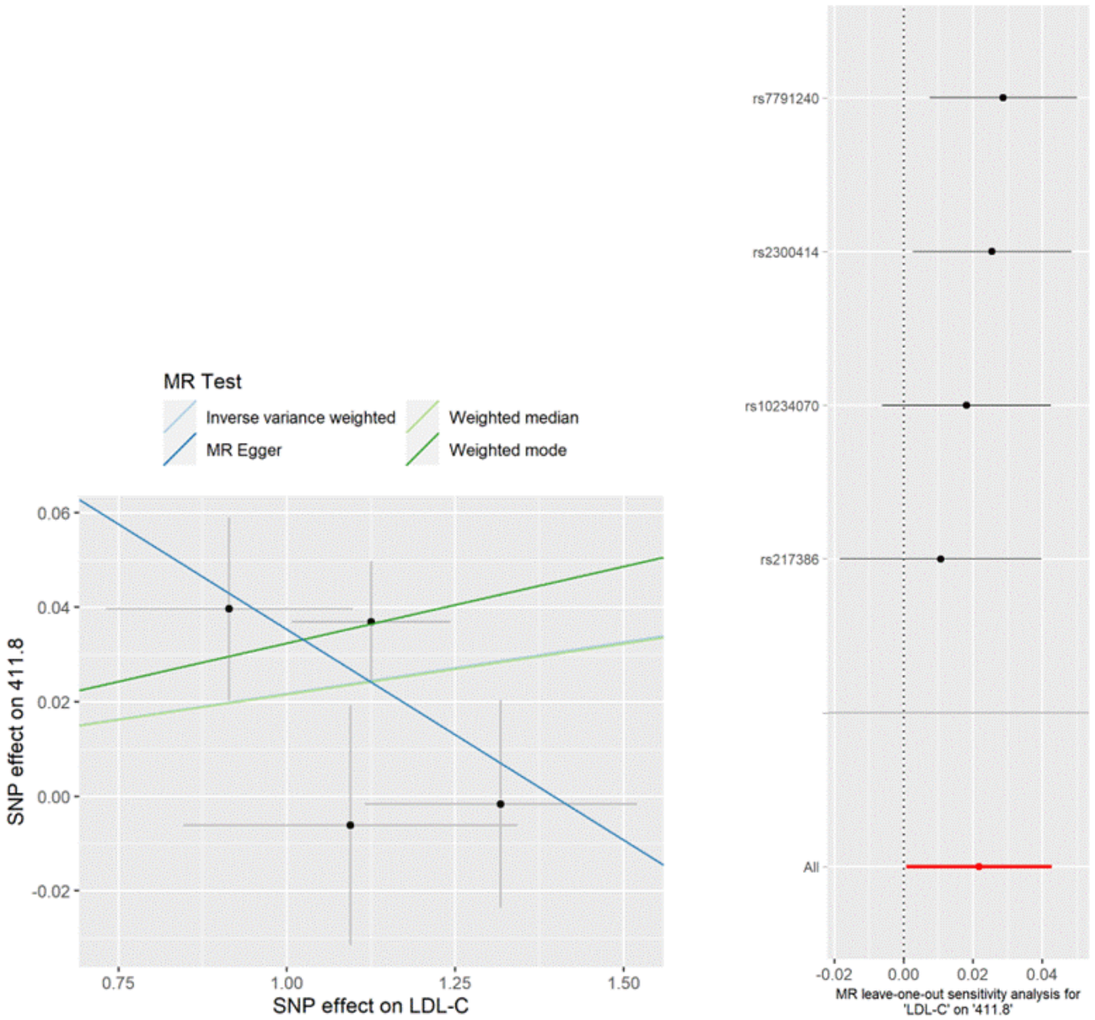


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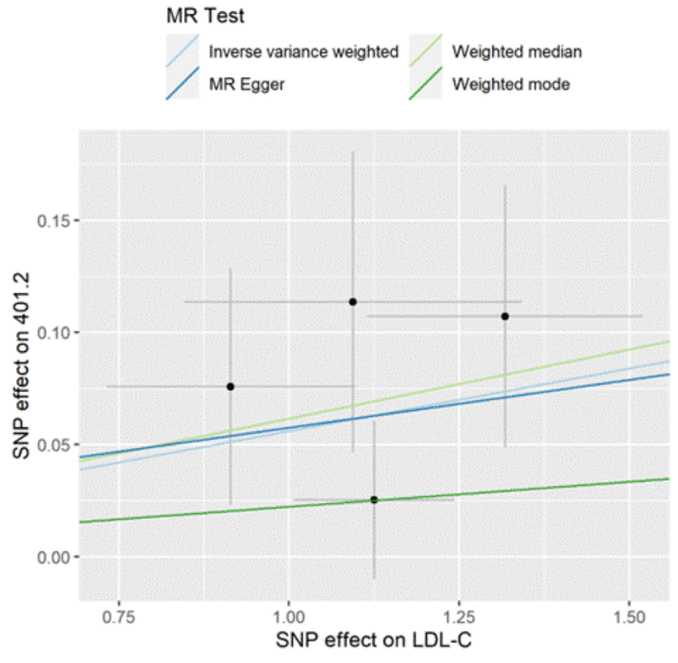
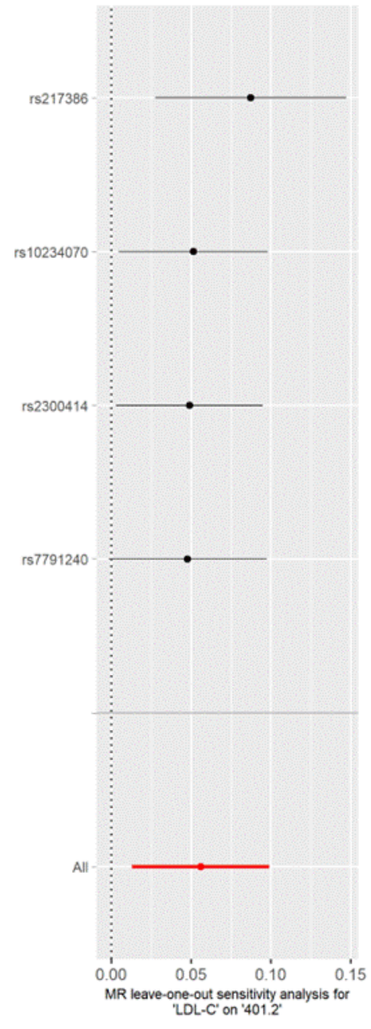



**Plot A**

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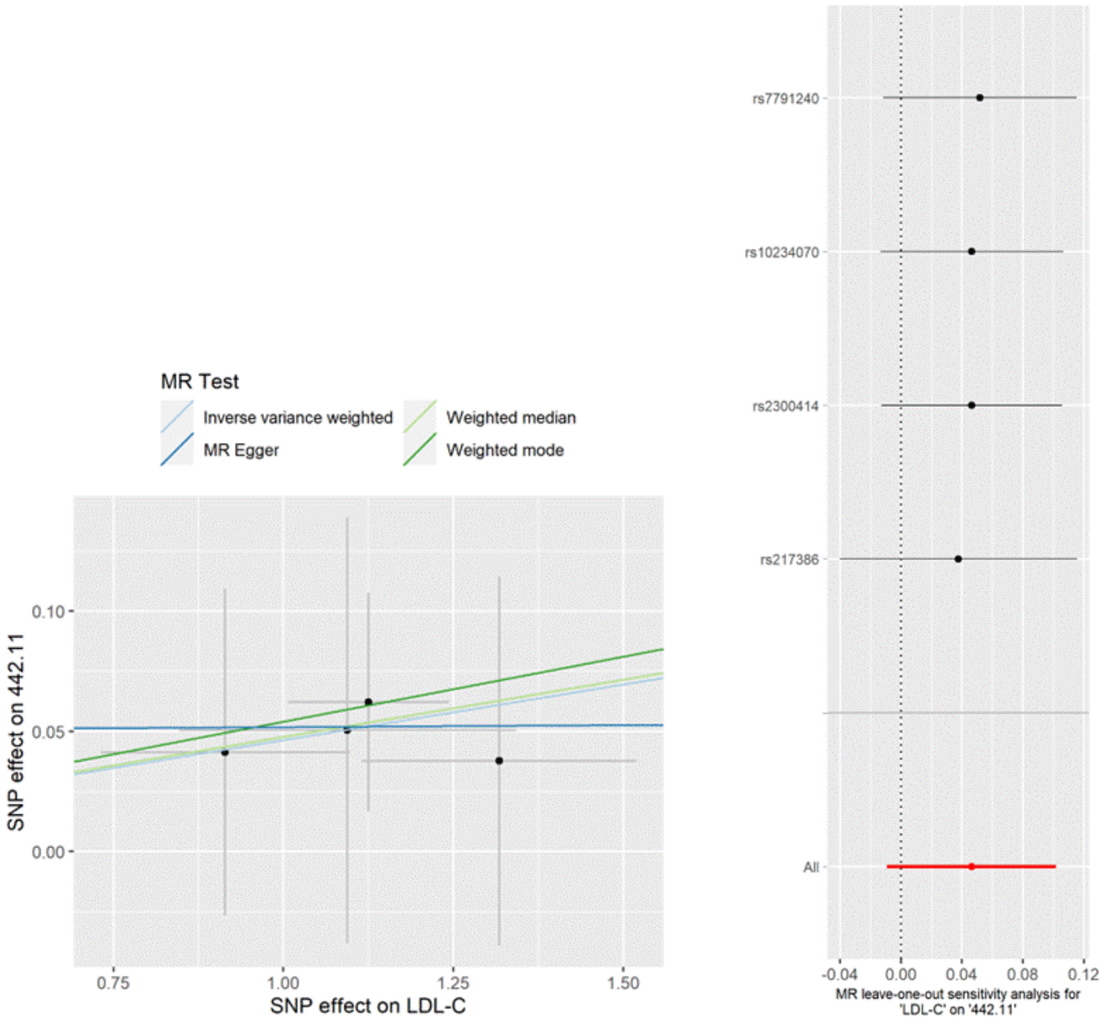
**Abdominal aortic aneurysm (442.11)**

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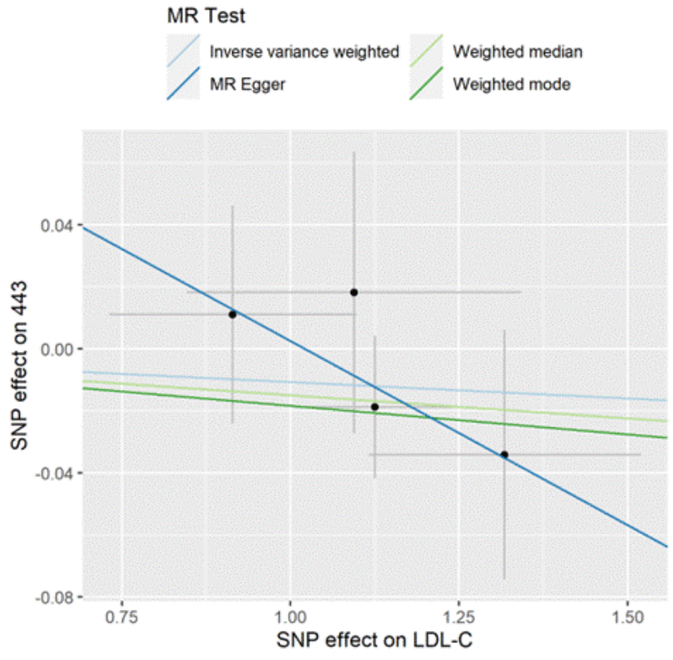
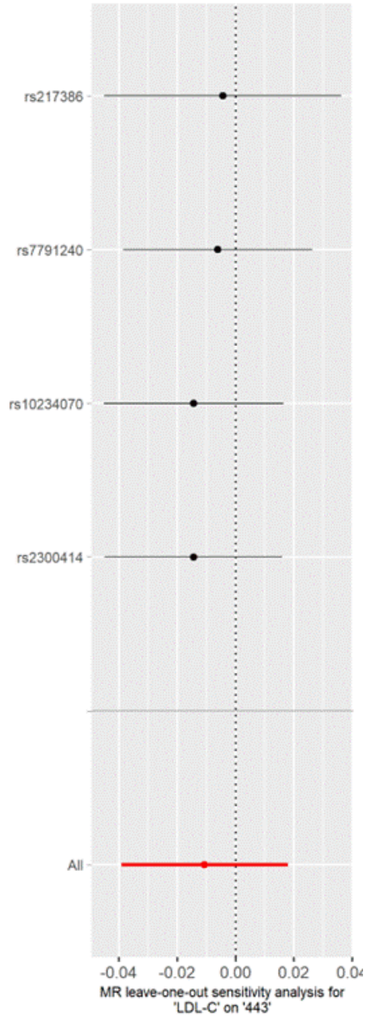



**Plot A**




**Plot B**

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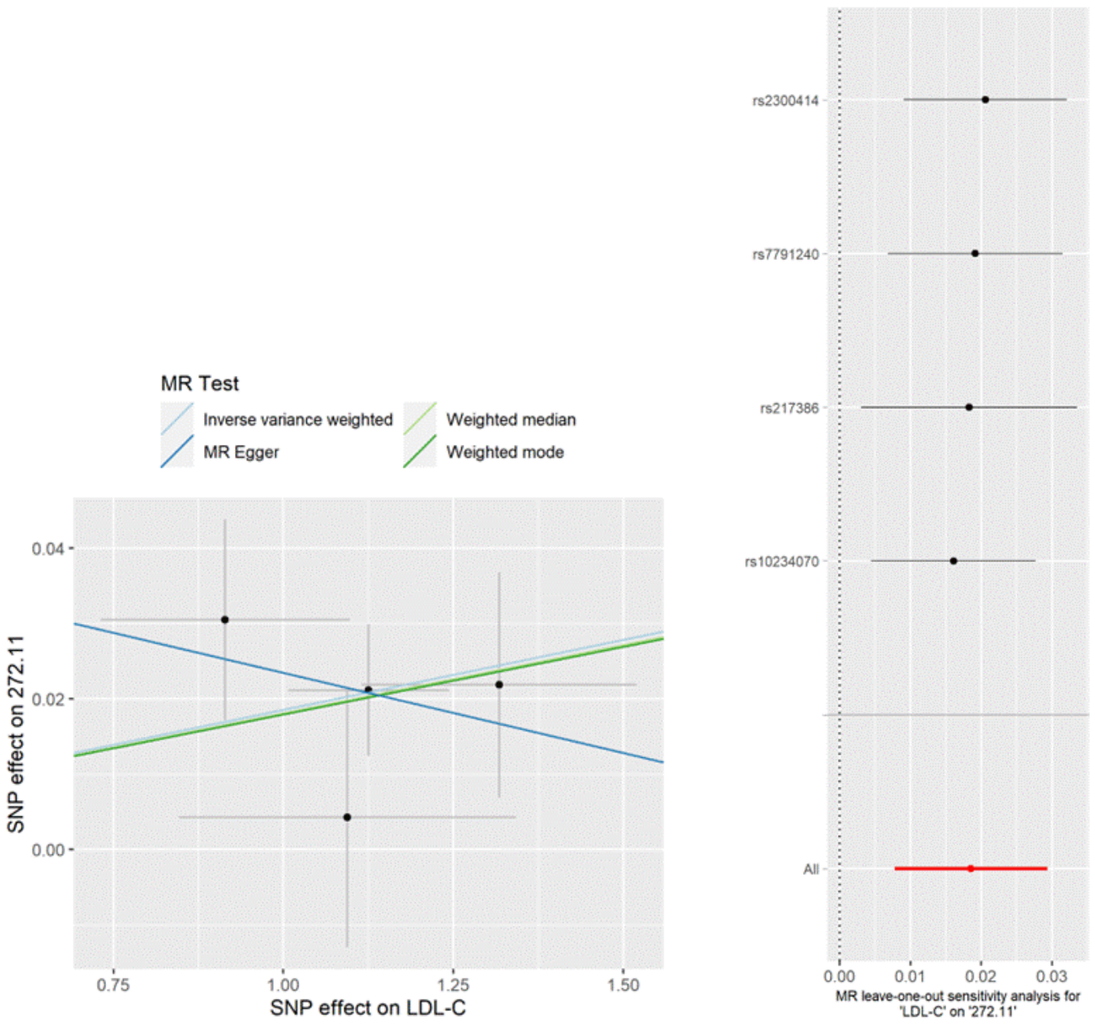
**Hypercholesterolemia (272.11)**

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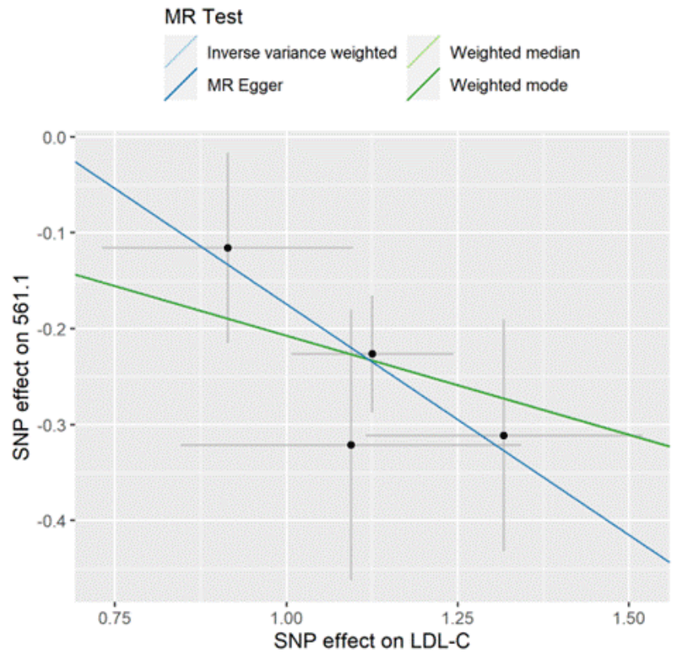
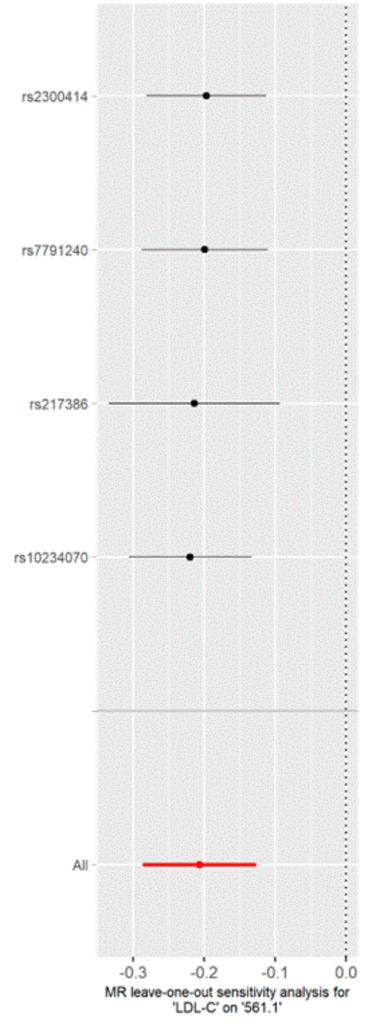



**Plot A**



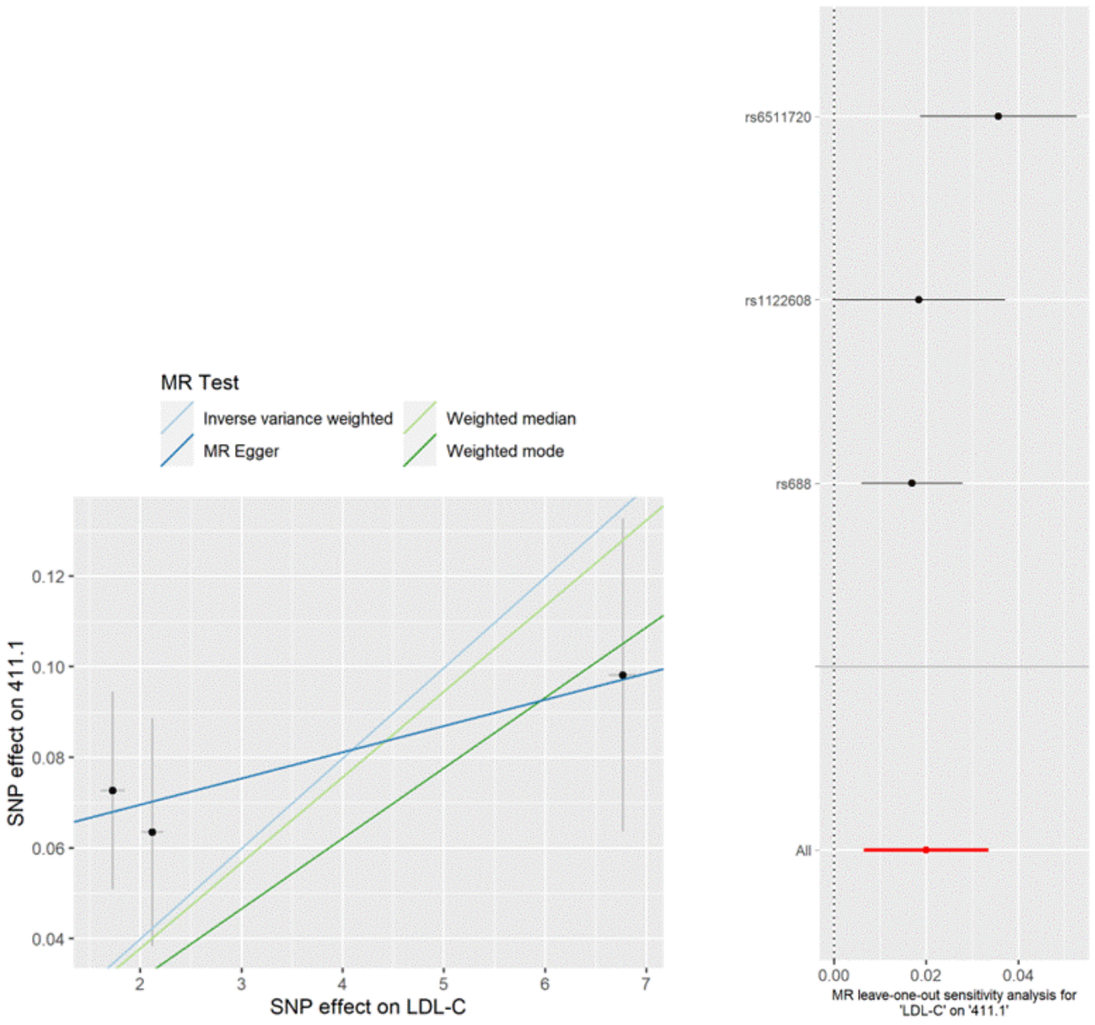

**Plot B**

**Plot A** shows the scatter plot of the variant-outcome association estimates for each genetic variant, against the overall estimates for the variant-exposure (i.e. LDL-C lowering) association using different MR methods.

**Plot B** displays the leave-one-out analysis, which compares the effect estimates when excluding each of the genetic variants in the GRS, one at a time, to the overall estimate including all variants.

**Supplementary Figure 4:** Plots for the 10 distinct LDL-C-disease associations significant under FDR correction, for the NPC1L1 genetic risk score.

**Unstable angina (411.1)**




**Plot A**

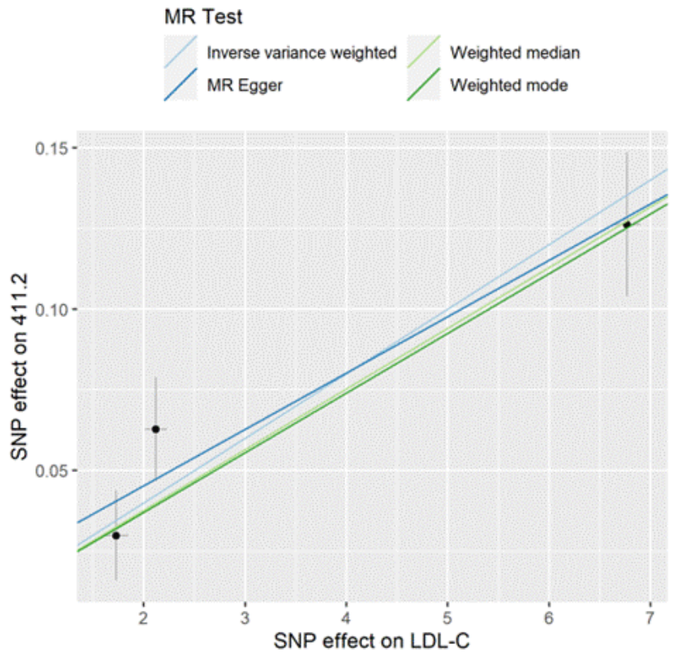



**Plot B**

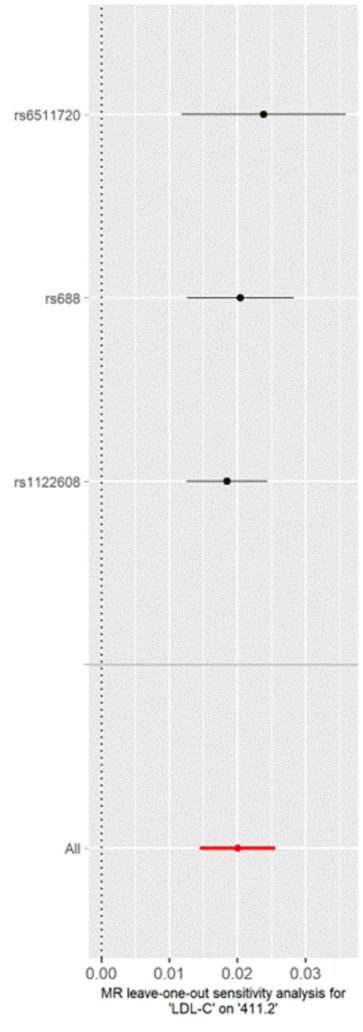
**Plot A** shows the scatter plot of the variant-outcome association estimates for each genetic variant, against the overall estimates for the variant-exposure (i.e. LDL-C lowering) association using different MR methods.

**Plot B** displays the leave-one-out analysis, which compares the effect estimates when excluding each of the genetic variants in the GRS, one at a time, to the overall estimate including all variants.

**Myocardial infarction (411.2)**




**Plot A**

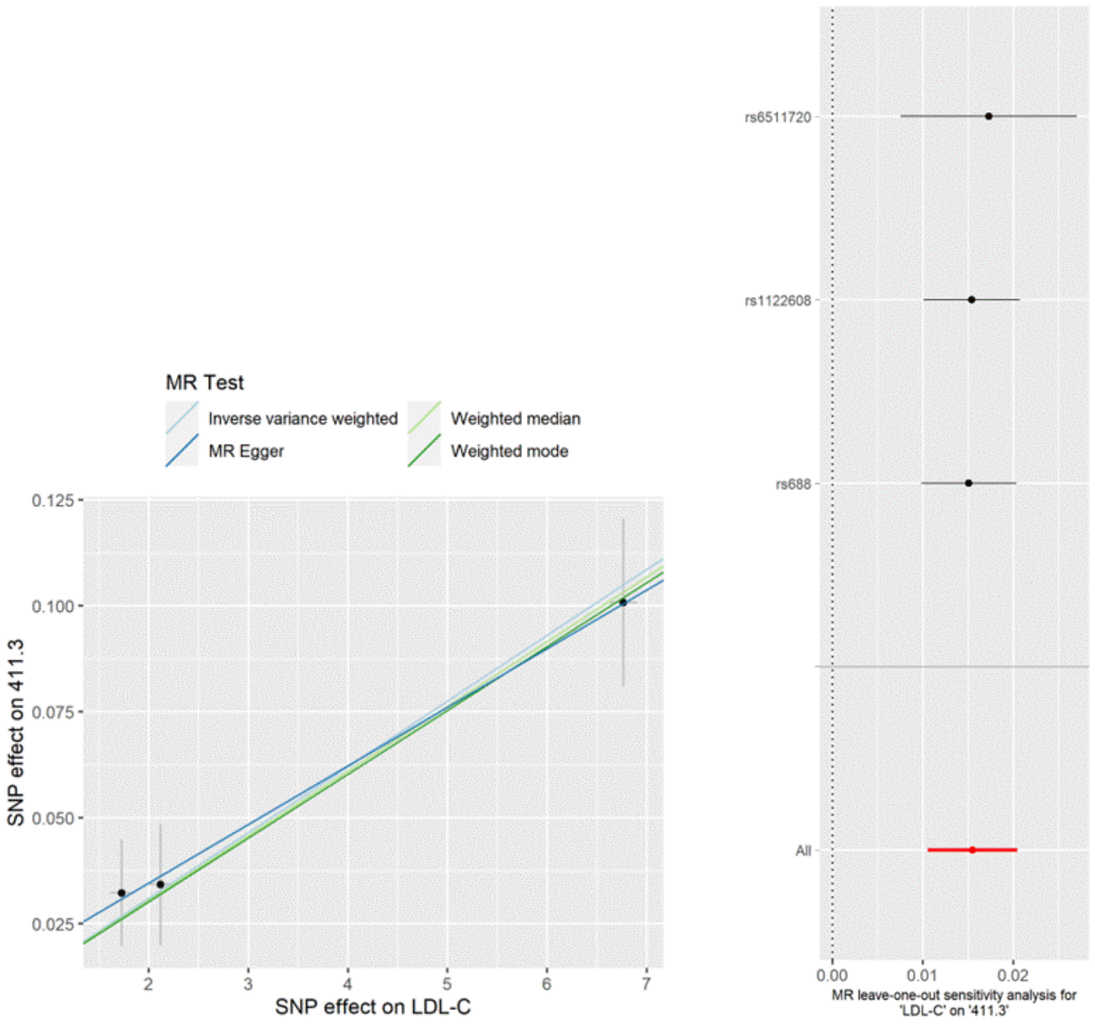



**Plot B**

**Plot A** shows the scatter plot of the variant-outcome association estimates for each genetic variant, against the overall estimates for the variant-exposure (i.e. LDL-C lowering) association using different MR methods.

**Plot B** displays the leave-one-out analysis, which compares the effect estimates when excluding each of the genetic variants in the GRS, one at a time, to the overall estimate including all variants.

**Angina pectoris (411.3)**




**Plot A**

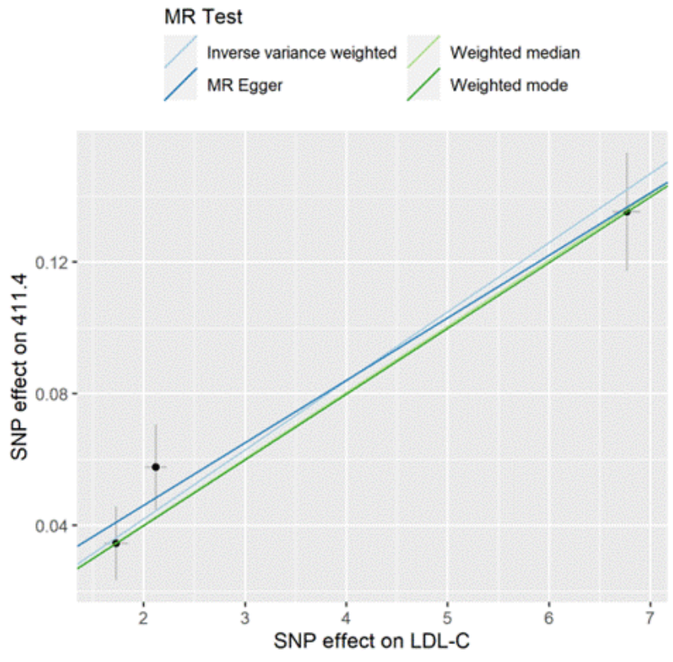



**Plot B**

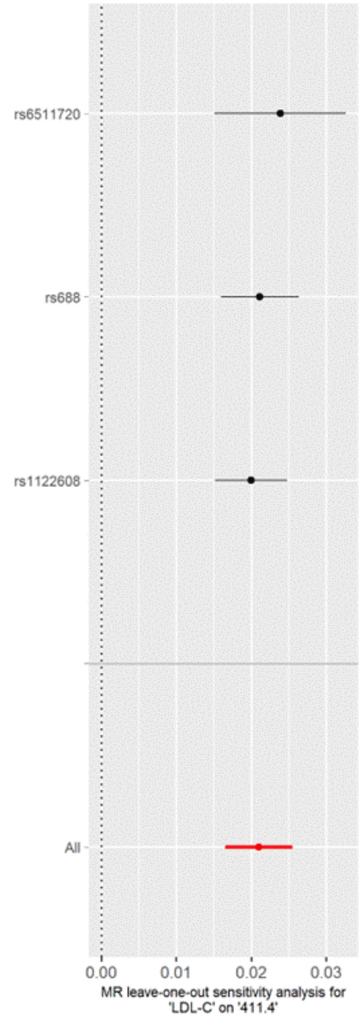
**Plot A** shows the scatter plot of the variant-outcome association estimates for each genetic variant, against the overall estimates for the variant-exposure (i.e. LDL-C lowering) association using different MR methods.

**Plot B** displays the leave-one-out analysis, which compares the effect estimates when excluding each of the genetic variants in the GRS, one at a time, to the overall estimate including all variants.

**Coronary atherosclerosis (411.4)**




**Plot A**

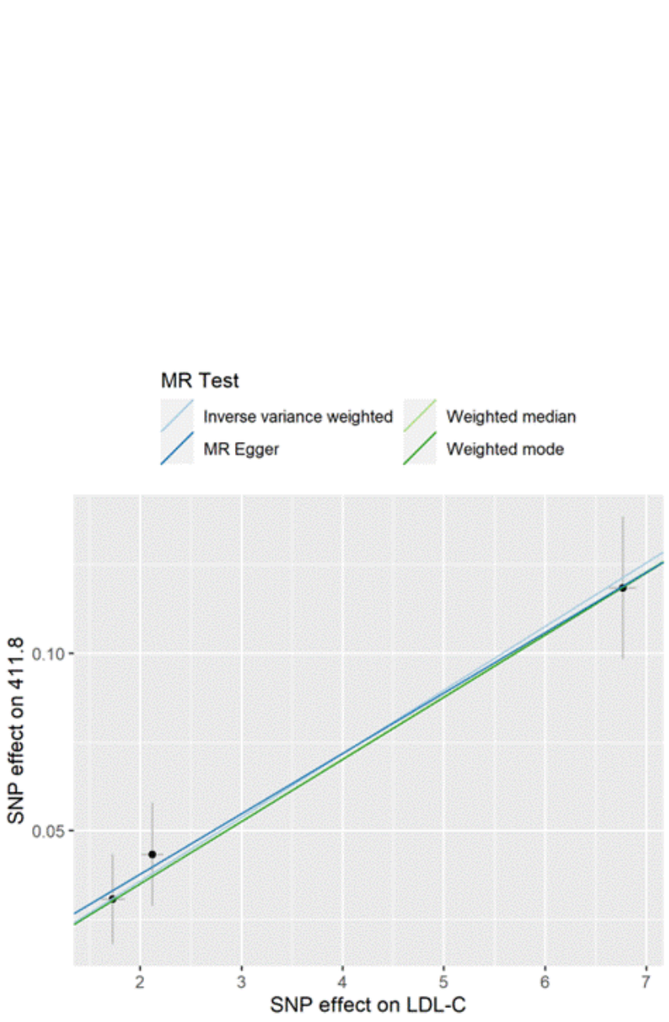



**Plot B**

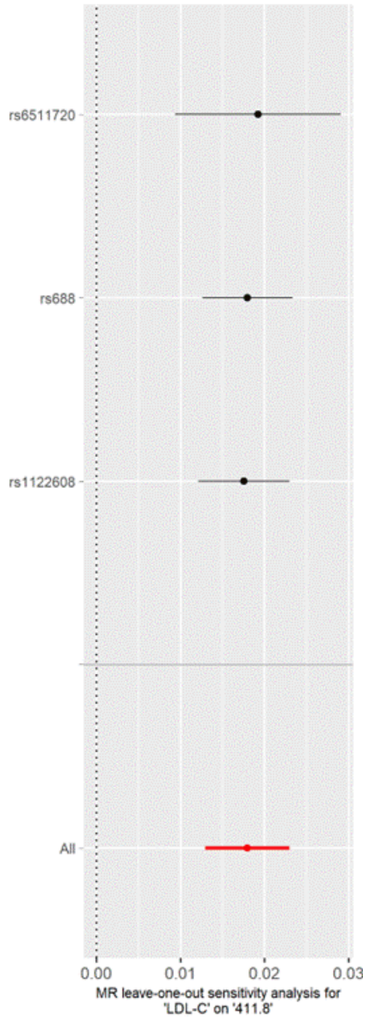
**Plot A** shows the scatter plot of the variant-outcome association estimates for each genetic variant, against the overall estimates for the variant-exposure (i.e. LDL-C lowering) association using different MR methods.

**Plot B** displays the leave-one-out analysis, which compares the effect estimates when excluding each of the genetic variants in the GRS, one at a time, to the overall estimate including all variants.

**Other chronic ischemic heart disease (411.8)**




**Plot A**

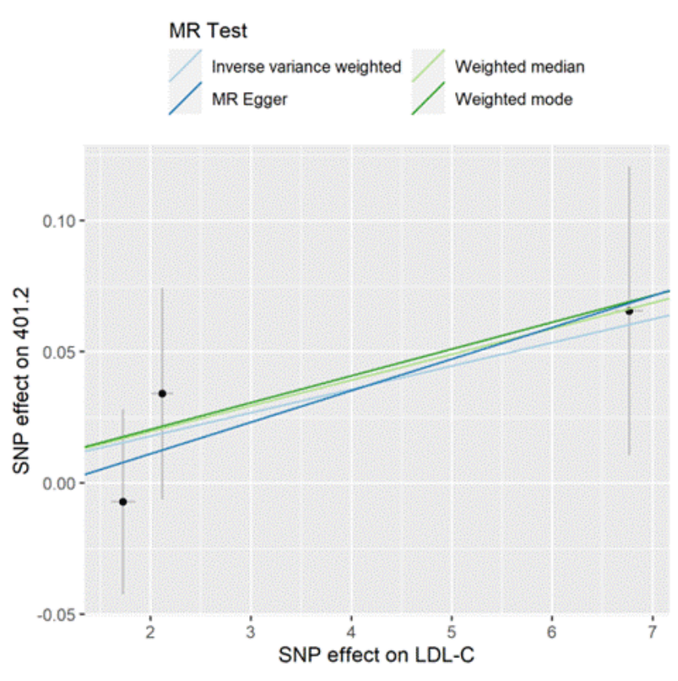



**Plot B**

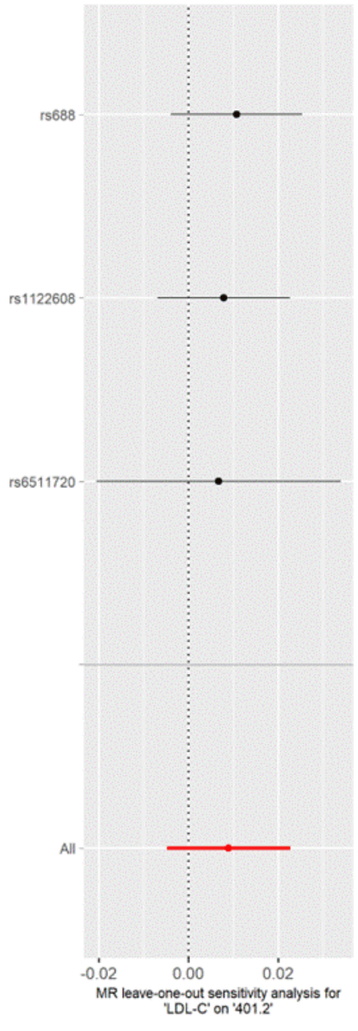
**Plot A** shows the scatter plot of the variant-outcome association estimates for each genetic variant, against the overall estimates for the variant-exposure (i.e. LDL-C lowering) association using different MR methods.

**Plot B** displays the leave-one-out analysis, which compares the effect estimates when excluding each of the genetic variants in the GRS, one at a time, to the overall estimate including all variants.

**Hypertensive heart and/or renal disease (401.2)**




**Plot A**

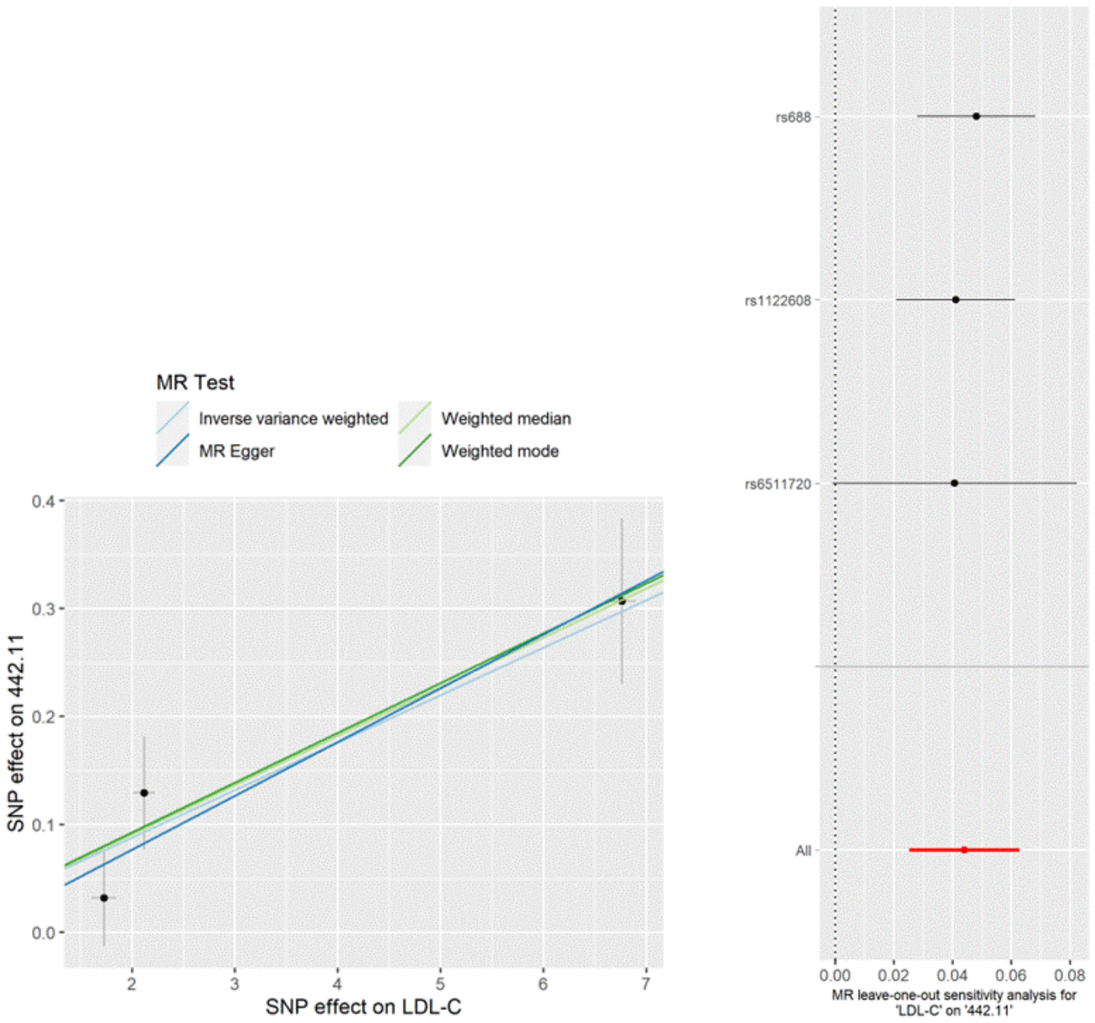



**Plot B**

**Plot A** shows the scatter plot of the variant-outcome association estimates for each genetic variant, against the overall estimates for the variant-exposure (i.e. LDL-C lowering) association using different MR methods.

**Plot B** displays the leave-one-out analysis, which compares the effect estimates when excluding each of the genetic variants in the GRS, one at a time, to the overall estimate including all variants.

## Abdominal aortic aneurysm (442.11)




**Plot A**

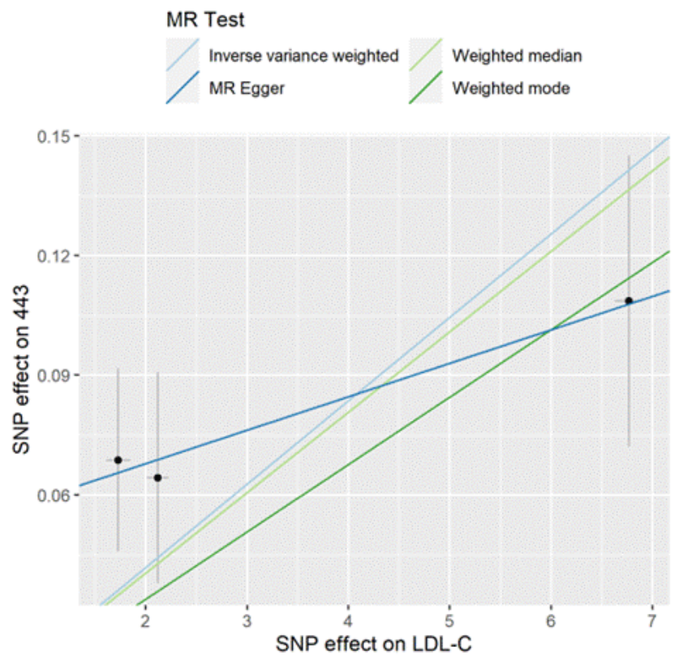



**Plot B**

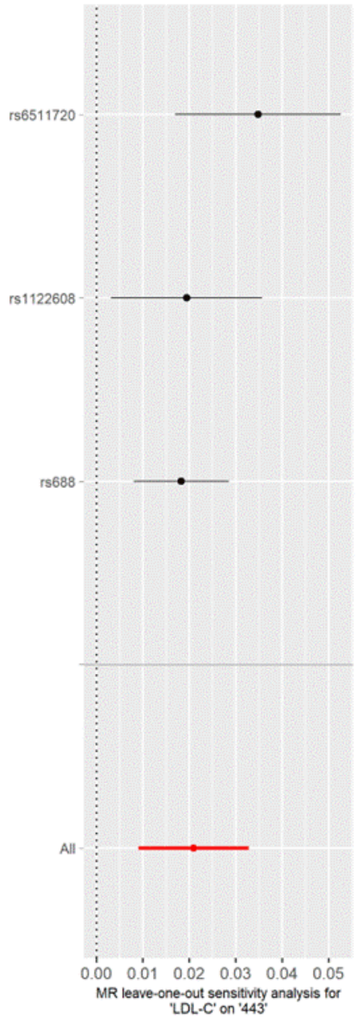
**Plot A** shows the scatter plot of the variant-outcome association estimates for each genetic variant, against the overall estimates for the variant-exposure (i.e. LDL-C lowering) association using different MR methods.

**Plot B** displays the leave-one-out analysis, which compares the effect estimates when excluding each of the genetic variants in the GRS, one at a time, to the overall estimate including all variants.

## Peripheral vascular disease (443)




**Plot A**

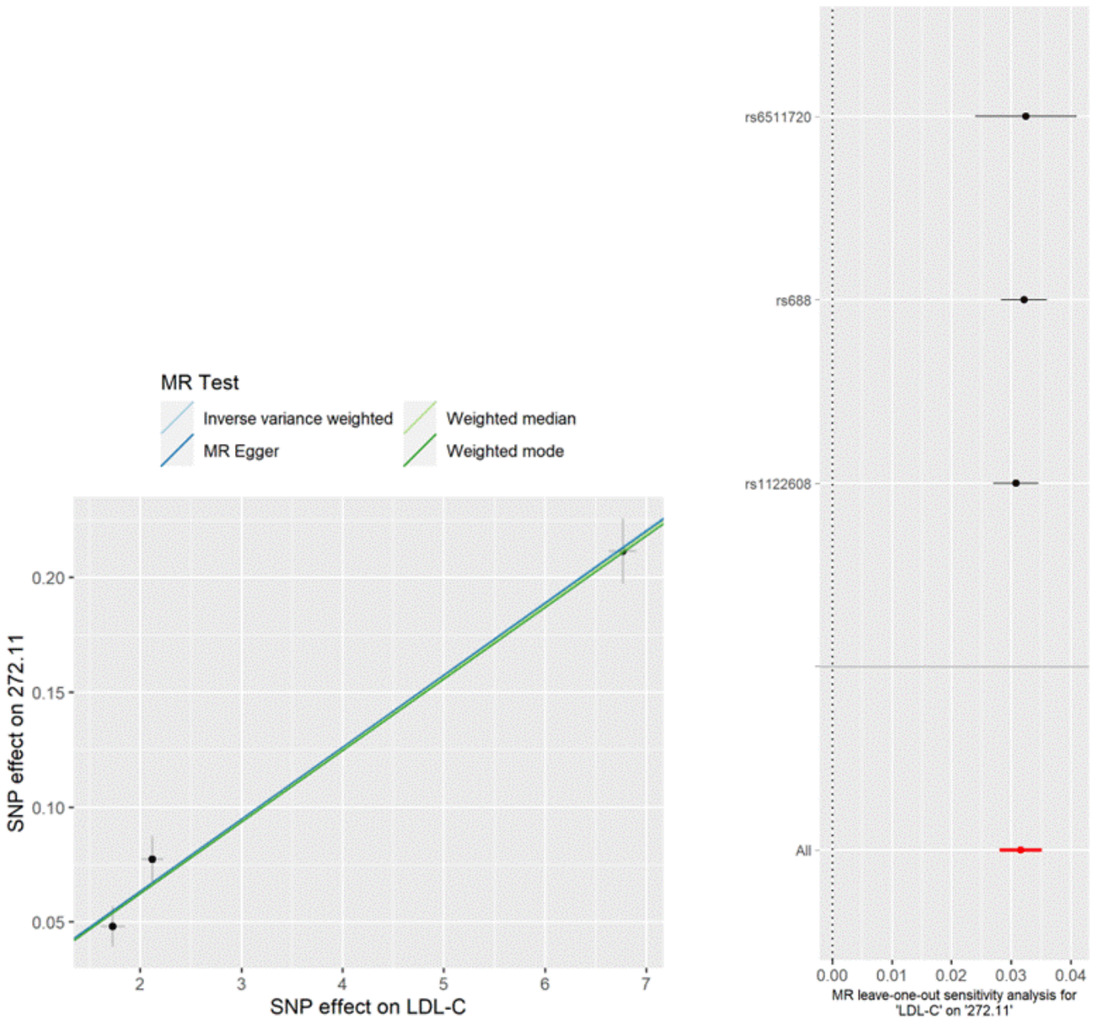



**Plot B**

**Plot A** shows the scatter plot of the variant-outcome association estimates for each genetic variant, against the overall estimates for the variant-exposure (i.e. LDL-C lowering) association using different MR methods.

**Plot B** displays the leave-one-out analysis, which compares the effect estimates when excluding each of the genetic variants in the GRS, one at a time, to the overall estimate including all variants.

**Hypercholesterolemia (272.11)**




**Plot A**

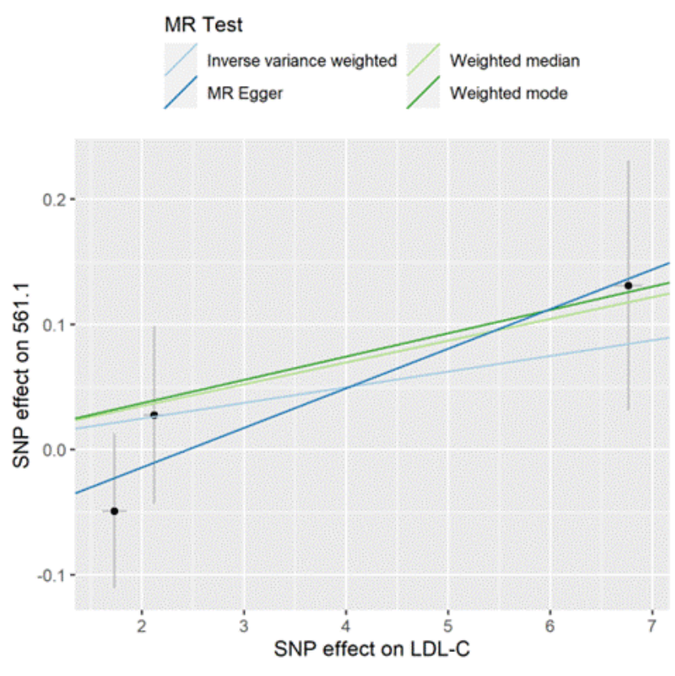



**Plot B**

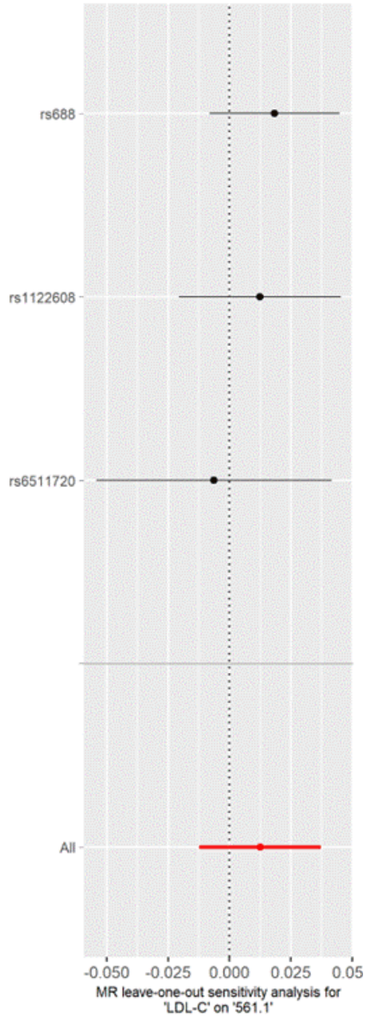
**Plot A** shows the scatter plot of the variant-outcome association estimates for each genetic variant, against the overall estimates for the variant-exposure (i.e. LDL-C lowering) association using different MR methods.

**Plot B** displays the leave-one-out analysis, which compares the effect estimates when excluding each of the genetic variants in the GRS, one at a time, to the overall estimate including all variants.

**Diarrhea (561.1)**




**Plot A**




**Plot B**

**Plot A** shows the scatter plot of the variant-outcome association estimates for each genetic variant, against the overall estimates for the variant-exposure (i.e. LDL-C lowering) association using different MR methods.

**Plot B** displays the leave-one-out analysis, which compares the effect estimates when excluding each of the genetic variants in the GRS, one at a time, to the overall estimate including all variants.

**Supplementary Figure 5:** Plots for the 10 distinct LDL-C-disease associations significant under FDR correction, for the LDLR genetic risk score.

**Supplementary Figure 6:** Forest plots for the mendelian randomisation analyses on 5 LDL-C lowering hormone biomarker associations, using the LDL-C lowering genetic instruments and stratified by sex. Analyses using inverse-variance weighted mendelian randomisation (IVWMR) are shown. Estimates are odds ratios (OR 95% CI) per 1mg/dL lower LDL-cholesterol.