**Supplementary Table 1**: Associations of genetic instruments for NAFLD with osteoporosis.

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 　 | 　 | 　 | 　 | 　 | 　 | 　 | SNP-exposure (NAFLD) | 　 | SNP-outcome (Osteoporosis) |
| SNP | Gene | Sample size | EA | OA | EAF |  | Beta | SE | P |  | Beta | SE | P |
| rs10401969 | TRIB1 | 462933 | C | T | 0.07 |  | 0.274 | 0.032 | 7.58E-18 |  | 0.00091  | 0.00050  | 0.06500  |
| rs2980854 | APOE | 462933 | C | T | 0.55 |  | 0.101 | 0.016 | 6.22E-10 |  | -0.00001  | 0.00026  | 0.98000  |
| rs429358 | SUGP1 | 462933 | T | C | 0.84 |  | 0.137 | 0.024 | 1.14E-08 |  | 0.00016  | 0.00036  | 0.66000  |
| rs5764430 | PNPLA3 | 462933 | C | A | 0.89 |  | 0.136 | 0.02 | 7.19E-12 |  | 0.00018  | 0.00031  | 0.57000  |
| rs738409 | SAMM50 | 462933 | G | C | 0.23 | 　 | 0.287 | 0.02 | 1.23E-47 | 　 | 0.00069  | 0.00032  | 0.03000  |

***P* value < 5×10-8 for reporting genome-wide significance. Abbreviations: EA, effect allele. OA, other allele, EAF effect allele frequency. MR, Mendelian randomization. SE, standard error; SNP, single nucleotide polymorphism. NAFLD, non-alcoholic fatty liver disease.**