**Supplementary table 1. Result of the path model.**

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| --- | --- | --- | --- | --- | --- |
| **Clinical factor** | **Estimated value** | **Standard error** | **Statistic value** | **P value** | **Standardized estimates** |
| Cholesterol absorption | **←** | Age | -0.019 | 0.081 | -0.235 | 0.815 | -0.018 |
| **←** | Male | -0.012 | 0.193 | -0.061 | 0.951 | -0.005 |
| **←** | Hypertension | -0.202 | 0.169 | -1.192 | 0.233 | -0.088 |
| **←** | Diabetes | -0.023 | 0.152 | -0.153 | 0.879 | -0.011 |
| **←** | Dyslipidemia | 0.554 | 0.252 | 2.197 | 0.028 | 0.163 |
| **←** | Smoking | -0.033 | 0.173 | -0.188 | 0.851 | -0.014 |
| **←** | Statin usage | 0.379 | 0.159 | 2.379 | 0.017 | 0.175 |
| **←** | hs-CRP | -0.123 | 0.079 | -1.565 | 0.118 | -0.129 |
| Cholesterol synthesis | **←** | Age | -0.128 | 0.082 | -1.560 | 0.119 | -0.117 |
| **←** | Male | -0.239 | 0.195 | 1.222 | 0.222 | 0.091 |
| **←** | Hypertension | -0.286 | 0.171 | -1.671 | 0.095 | -0.12 |
| **←** | Diabetes | -0.137 | 0.154 | -0.887 | 0.375 | -0.063 |
| **←** | Dyslipidemia | 0.288 | 0.253 | 1.139 | 0.255 | 0.082 |
| **←** | Smoking | -0.137 | 0.175 | -0.784 | 0.433 | -0.058 |
| **←** | Statin usage | 0.588 | 0.162 | 3.626 | <0.001 | 0.261 |
| **←** | hs-CRP | -0.113 | 0.079 | -1.428 | 0.153 | -0.114 |
| Campesterol | **←** | Cholesterol absorption | 0.113 | 0.030 | 3.726 | <0.001 | 0.273 |
| TRIOL | **←** | 0.4 | 0.054 | 7.398 | <0.001 | 0.542 |
| 4β-OHC | **←** | 0.566 | 0.051 | 11.034 | <0.001 | 0.958 |
| 24-OH-C | **←** | 0.12 | 0.051 | 2.336 | 0.019 | 0.153 |
| 25-OH-C | **←** | 0.294 | 0.053 | 5.589 | <0.001 | 0.355 |
| 7α-OH-C | **←** | 0.124 | 0.039 | 3.159 | 0.002 | 0.196 |
| 7β-OH-C | **←** | 0.208 | 0.045 | 4.615 | <0.001 | 0.277 |
| 7-keto-C | **←** | 0.053 | 0.043 | 1.238 | 0.216 | 0.07 |
| Lathosterol | **←** | -0.019 | 0.014 | -1.383 | 0.167 | -0.099 |
| Campesterol | **←** | Cholesterol synthesis | 0.005 | 0.029 | 0.187 | 0.852 | 0.013 |
| 24-OH-C | **←** | 0.459 | 0.049 | 9.447 | <0.001 | 0.609 |
| 25-OH-C | **←** | 0.529 | 0.046 | 11.421 | <0.001 | 0.665 |
| 27-OH-C | **←** | 0.071 | 0.022 | 3.28 | 0.001 | 0.236 |
| 7α-OH-C | **←** | 0.436 | 0.036 | 11.948 | <0.001 | 0.72 |
| 7β-OH-C | **←** | 0.561 | 0.041 | 13.733 | <0.001 | 0.775 |
| 7-keto-C | **←** | 0.658 | 0.041 | 15.984 | <0.001 | 0.897 |
| β-EPOX | **←** | 0.443 | 0.042 | 10.579 | <0.001 | 0.678 |
| Lathosterol | **←** | 0.058 | 0.013 | 4.347 | <0.001 | 0.312 |
| Age | **↔** | Male | -0.131 | 0.03 | -4.346 | <0.001 | -0.318 |
| **↔** | Hypertension | 0.08 | 0.032 | 2.476 | 0.013 | 0.175 |
| **↔** | Diabetes | -0.004 | 0.035 | -0.124 | 0.902 | -0.009 |
| **↔** | Dyslipidemia | 0.0001 | 0.021 | 0.019 | 0.985 | 0.001 |
| **↔** | Smoking | -0.149 | 0.034 | -4.416 | <0.001 | -0.323 |
| **↔** | Statin usage | -0.011 | 0.034 | -0.34 | 0.734 | -0.024 |
| **↔** | hs-CRP | 0.058 | 0.084 | 0.691 | 0.489 | 0.053 |
| Male | **↔** | Hypertension | -0.021 | 0.013 | -1.562 | 0.118 | -0.109 |
| **↔** | Diabetes | 0.005 | 0.014 | 0.366 | 0.714 | 0.026 |
| **↔** | Dyslipidemia | -0.018 | 0.009 | -2.042 | 0.041 | -0.144 |
| **↔** | Smoking | 0.048 | 0.014 | 3.497 | <0.001 | 0.251 |
| **↔** | Statin usage | 0.011 | 0.014 | 0.785 | 0.432 | 0.055 |
| **↔** | hs-CRP | -0.053 | 0.035 | -1.505 | 0.132 | -0.116 |
| Hypertension | **↔** | Diabetes | 0.046 | 0.016 | 2.862 | 0.004 | 0.204 |
| **↔** | Dyslipidemia | 0.017 | 0.01 | 1.723 | 0.085 | 0.121 |
| **↔** | Smoking | -0.02 | 0.015 | -1.356 | 0.175 | -0.095 |
| **↔** | Statin usage | -0.013 | 0.015 | -0.845 | 0.398 | -0.059 |
| **↔** | hs-CRP | 0.06 | 0.039 | 1.549 | 0.121 | 0.12 |
| Diabetes | **↔** | Dyslipidemia | 0.006 | 0.011 | 0.59 | 0.555 | 0.041 |
| **↔** | Smoking | 0.019 | 0.016 | 1.201 | 0.23 | 0.084 |
| **↔** | Statin usage | 0.02 | 0.017 | 1.17 | 0.242 | 0.082 |
| **↔** | hs-CRP | 0.075 | 0.042 | 1.759 | 0.078 | 0.136 |
| Dyslipidemia | **↔** | Smoking | 0.014 | 0.01 | 1.358 | 0.175 | 0.095 |
| **↔** | Statin usage | 0.009 | 0.01 | 0.844 | 0.399 | 0.059 |
| **↔** | hs-CRP | 0.064 | 0.026 | 2.417 | 0.016 | 0.188 |
| Smoking | **↔** | Statin usage | 0.028 | 0.016 | 1.788 | 0.074 | 0.126 |
| **↔** | hs-CRP | 0.03 | 0.039 | 0.763 | 0.445 | 0.059 |

T-Chol=total cholesterol, TG=triglyceride, HDL-C=high-density lipoprotein cholesterol, LDL-C=low-density cholesterol, β-epoxy-C=β-epoxy-cholesterol, TRIOL=cholestan-3β,5α,6β-triol, 7-keto-C=7-keto-cholesterol, 4β-OH-C=4β-hydroxy-cholesterol, 27-OH-C=27-hydroxy-cholesterol