**Supplementary Table 4.** PERMANOVA results of the comparisons between the IT and CZ cohorts.

|  |  |  |  |
| --- | --- | --- | --- |
|  | microbiome | serum metabolome | serum lipidome |
| VG\_CZ vs OM\_CZ | ˂ 0.001 | ˂ 0.001 | ˂ 0.001 |
| VG\_CZ vs OM\_IT | ˂ 0.001 | ˂ 0.001 | ˂ 0.001 |
| VG\_CZ vs VG\_IT | ˂ 0.001 | ˂ 0.001 | ˂ 0.001 |
| OM\_CZ vs OM\_IT | ˂ 0.001 | ˂ 0.001 | ˂ 0.001 |
| OM\_CZ vs VG\_IT | ˂ 0.001 | ˂ 0.001 | ˂ 0.001 |
| OM\_IT vs VG\_IT | 0.015 | ˂ 0.001 | ˂ 0.001 |

The data represents p-values after correction for multiple comparisons.