

**Table S1. Plasma concentration of TMAO, choline and betaine ( $\mu$ M) in first-time myocardial infarction (cases) and controls measured at four time points.**

|             | Cases            | Controls         | P     |
|-------------|------------------|------------------|-------|
| TMAO-T1     | 3.71 (2.42-5.48) | 3.29 (1.96-4.74) | 0.093 |
| TMAO-T2     | 3.59 (2.63-6.04) | 3.70 (2.55-5.37) | 0.503 |
| TMAO-T3     | 4.00 (2.89-6.16) | 4.19 (2.40-6.35) | 0.619 |
| TMAO-T4     | 3.63 (2.74-7.60) | 4.16 (2.67-6.31) | 0.701 |
| AUC TMAO    | 13.1 (9.61-19.3) | 12.9 (8.93-18.0) | 0.519 |
| Choline-T1  | 8.16 (7.01-9.87) | 8.47 (7.15-10.2) | 0.596 |
| Choline-T2  | 9.33 (8.26-11.1) | 9.66 (8.27-11.2) | 0.727 |
| Choline-T3  | 9.85 (8.13-12.5) | 10.1 (8.55-12.9) | 0.424 |
| Choline-T4  | 10.8 (8.59-11.9) | 10.8 (8.89-12.7) | 0.773 |
| AUC Choline | 29.2 (26.4-34.3) | 29.9 (26.7-35.2) | 0.556 |
| Betaine-T1  | 33.7 (27.2-45.2) | 38.5 (28.1-47.8) | 0.155 |
| Betaine-T2  | 29.9 (24.2-38.5) | 32.2 (25.0-40.3) | 0.583 |
| Betaine-T3  | 29.6 (23.3-37.7) | 31.7 (25.5-39.6) | 0.113 |
| Betaine-T4  | 29.9 (22.8-34.8) | 32.2 (25.9-40.0) | 0.052 |
| AUC Betaine | 95.4 (78.4-114)  | 101 (83.4-121)   | 0.139 |

Data as medians (interquartile range), compared with Mann Whitney U test. Time points (T): 1: Before initiation of ART, 2: Three months after initiation of ART, 3: One year before the case's MI or similar time point for controls, and 4: The last sample available (sample collected median 51, range 0-239 days before MI) or similar time point for controls. AUC, area under the curve.