

| Supplemental Table 3. Characteristics of NMR features changes between baseline and 1-yr (N=2,067). | | | | | |
|---|---------------|---------------|----------------|---------------|---------|
| | All | placebo | metformin | lifestyle | P value |
| Treatment | 2067 | 688 | 682 | 697 | |
| ApoB (mg/dL) | -2.6 (18.1) | -1.6 (16.8) | -4.8 (18.9) | -1.6 (17.7) | <0.001 |
| ApoA1 (mg/dL) | 3.2 (21) | 2 (19.8) | 3.4 (21.5) | 4.4 (21.1) | 0.039 |
| Large HDL (umol/L) | 0.2 (0.8) | 0.1 (0.7) | 0.3 (0.8) | 0.2 (0.8) | <0.001 |
| Medium HDL (umol/L) | 0 (2.5) | -0.1 (2.3) | 0.3 (2.7) | -0.3 (2.7) | <0.001 |
| Small HDL (umol/L) | 0 (3.6) | 0.3 (3.5) | -0.7 (3.4) | 0.5 (3.7) | <0.001 |
| H7P (umol/L) | 0 (0.2) | 0 (0.2) | 0 (0.2) | 0 (0.2) | 0.022 |
| H6P (umol/L) | 0.1 (0.5) | 0 (0.5) | 0.1 (0.6) | 0.1 (0.6) | <0.001 |
| H5P (umol/L) | 0.1 (0.7) | 0.1 (0.7) | 0.1 (0.8) | 0.1 (0.7) | 0.013 |
| H4P (umol/L) | 0 (1.2) | 0 (1.2) | 0 (1.3) | -0.1 (1.2) | 0.061 |
| H3P (umol/L) | 0 (2.7) | 0 (2.6) | 0.2 (2.7) | -0.3 (2.8) | <0.001 |
| H2P (umol/L) | 0.1 (3.7) | 0.3 (3.7) | -0.5 (3.6) | 0.7 (3.6) | <0.001 |
| H1P (umol/L) | -0.2 (2) | -0.1 (2.2) | -0.2 (1.9) | -0.2 (1.9) | 0.242 |
| Large LDL (nmol/L) | 0 (176.1) | -8.2 (174.6) | 11.1 (177.6) | -2.1 (188.3) | 0.002 |
| Medium LDL (nmol/L) | 0 (375.2) | 0 (356.9) | 3.1 (408.4) | 0 (356.4) | 0.303 |
| Small LDL (nmol/L) | -56.9 (512.6) | -17.8 (513.2) | -107.3 (532.6) | -35.1 (477.2) | <0.001 |
| Very large TRL (nmol/L) | 0 (0.2) | 0 (0.2) | 0 (0.2) | 0 (0.2) | 0.001 |
| Large TRL (nmol/L) | -0.1 (4.6) | 0.1 (4.5) | -0.6 (4.3) | 0 (4.4) | <0.001 |
| Medium TRL (nmol/L) | -0.4 (17.5) | 0.1 (18.3) | -1.9 (16.5) | 0.3 (17) | 0.002 |
| Small TRL (nmol/L) | -0.8 (43.9) | -0.6 (44.5) | -0.9 (41) | -1 (46.2) | 0.642 |
| Very small TRL (nmol/L) | -2.1 (51.3) | -0.3 (51.2) | -4.2 (50.3) | -2.2 (51.3) | 0.146 |
| HDL Size (nm) | 0.1 (0.3) | 0 (0.2) | 0.1 (0.3) | 0 (0.3) | <0.001 |
| LDL Size (nm) | 0 (0.5) | 0 (0.5) | 0.1 (0.5) | 0 (0.5) | <0.001 |
| TRL size (nm) | -0.6 (8.7) | 0 (8.7) | -1.7 (8.9) | -0.5 (8.7) | <0.001 |
| TRL-TG (mg/dL) | -3.9 (63.2) | 0.6 (65) | -12.8 (59.7) | -1.6 (62.7) | <0.001 |
| TRL-C (mg/dL) | -2.3 (29.7) | -1.3 (28.2) | -4.5 (30.6) | -1.2 (28.3) | 0.026 |
| LDL PPD (1) | 0 (0.04) | 0 (0.04) | 0 (0.03) | 0 (0.04) | <0.001 |
| Valine (umol/L) | 0.3 (45.2) | 1.2 (43.9) | -5.7 (48.9) | 3.9 (43.2) | <0.001 |
| Leucine (umol/L) | 0.1 (42.4) | 0.3 (42.7) | -6.7 (40.5) | 4.3 (42.1) | <0.001 |
| Isoleucine (umol/L) | -1 (23) | -2 (22.4) | -3.8 (23.2) | 1.8 (23.3) | <0.001 |
| Alanine (umol/L) | -9.8 (119) | -14.2 (106.3) | -29.5 (119.2) | 12.6 (120.5) | <0.001 |
| GlycA (umol/L) | -2.4 (58.4) | 1.7 (59.7) | -15.3 (59.6) | 2.3 (51.9) | <0.001 |
| Citrate (umol/L) | 1.5 (33.1) | -1.5 (33.2) | 0 (33.1) | 5.2 (31.1) | <0.001 |
| Ketone bodies (umol/L) | 4.4 (107.4) | 4.1 (102.9) | -7.7 (111.2) | 14.8 (101.9) | <0.001 |
| BHB (umol/L) | 3.5 (79.2) | 2.9 (75) | -5.3 (79) | 11.6 (79.9) | <0.001 |
| AcAc (umol/L) | 2.6 (36.5) | 3.7 (34.4) | 1 (36.7) | 3.7 (37.5) | 0.162 |
| Acetone (umol/L) | -0.8 (20.2) | -0.8 (20) | -0.7 (20.9) | -0.8 (19.3) | 0.923 |
| Glycine (umol/L) | 2.8 (52.2) | -2.5 (49.9) | 5.6 (53.3) | 4.4 (53.2) | 0.001 |