Table S1. Correlations between cardiovascular biomarkers and epicardial adipose tissue (EAT), pulse wave velocity (PWV) and left ventricular mass index (LVMI)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Biomarkers** | **EAT (cm²)** | | **PWV (m/s)** | | **LVMI (g/m²)** | |
| **r** | **p value** | **r** | **p value** | **r** | **p value** |
| **IL-8**  Interleukin-8 | 0.004 | 0.97 | 0.07 | 0.42 | -0.01 | 0.95 |
| **CD40L**  CD40 ligand | -0.021 | **0.01** | -0.2 | **0.03** | -0.05 | 0.57 |
| **GDF15**  Growth/differentiation factor-15 | 0.12 | 0.15 | 0.38 | **<0.001** | 0.16 | 0.06 |
| **SELE**  selectin | 0.6 | 0.55 | 0.14 | 0.13 | 0.03 | 0.72 |
| **OPG**  Osteoprotegerin | -0.08 | 0.36 | 0.15 | 0.09 | -0.12 | 0.16 |
| **IL-1ra**  Interleukin-1Ra | 0.19 | **0.02** | 0.15 | 0.09 | 0.03 | 0.74 |
| **IL-6**  Interleukin-6 | 0.2 | **0.02** | 0.25 | **0.01** | 0.15 | 0.80 |
| **MCP1**  Monocyte chemoattractant protein-1 | 0.07 | 0.41 | 0.16 | 0.07 | -0.05 | 0.52 |
| **PAR1**  protease-activated receptors-1 | -0.09 | 0.30 | 0.02 | 0.79 | -0.09 | 0.31 |
| **TRAIL**  Apo2 ligand | 0.01 | 0.91 | 0.06 | 0.51 | -0.03 | 0.73 |
| **TNFR1**  tumour necrosis factor receptor 2 | 0.13 | 0.11 | 0.25 | **0.01** | 0.07 | 0.43 |
| **IL-27A**  Interleukin-27A | 0.02 | 0.78 | 0.18 | **0.04** | 0.003 | 0.97 |
| **CSF1**  colony stimulating factor 1 | 0.02 | 0.82 | 0.11 | 0.23 | -0.04 | 0.66 |
| **CXCL1**  chemokine (C-X-C motif) ligand 1 | -0.11 | 0.20 | -0.2 | **0.03** | -0.02 | 0.83 |
| **LOX1**  Lectin-like oxidized LDL receptor 1 | 0.09 | 0.28 | 0.14 | 0.11 | 0.11 | 0.21 |
| **TRAILR2**  Apo2 ligand R2 | 0.07 | 0.39 | 0.19 | **0.04** | 0.07 | 0.41 |
| **IL-18**  Interleukin-18 | 0.1 | 0.24 | 0.07 | 0.43 | -0.01 | 0.93 |
| **IL-6RA**  Interleukin-6RA | 0.005 | 0.95 | -0.01 | 0.90 | -0.16 | 0.05 |
| **TNFR2**  tumour necrosis factor receptor 2 | 0.09 | 0.30 | 0.22 | **0.02** | 0.04 | 0.60 |
| **MMP3**  matrix metalloproteinase-3 | 0.04 | 0.67 | 0.08 | 0.37 | 0.25 | **0.003** |
| **TNFSF14**  tumor necrosis factor superfamily member 14 | -0.1 | 0.24 | -0.003 | 0.98 | 0.09 | 0.29 |
| **MPO**  Myeloperoxidase | -0.01 | 0.88 | 0.07 | 0.45 | -0.47 | 0.64 |
| **MMP1**  Matrix metalloproteinases 1 | 0.004 | 0.96 | 0.15 | 0.11 | 0.04 | 0.68 |
| **FAS**  Tumor necrosis factor receptor superfamily member 6 | 0.17 | 0.05 | 0.3 | 0.001 | -0.03 | 0.73 |
| **PTX3**  Pentraxin-related protein | 0.002 | 0.99 | 0.22 | **0.04** | 0.50 | 0.62 |
| **REN**  Renin | 0.12 | 0.16 | 0.08 | 0.40 | 0.29 | **<0.001** |
| **CHI3L1**  Chitinase-3-like protein 1 | 0.13 | 0.12 | 0.19 | **0.03** | -0.02 | 0.78 |
| **ST2**  ST2 protein | -0.02 | 0.79 | 0.05 | 0.58 | 0.16 | 0.06 |
| **TRANCE**  Tumor necrosis factor related activation-induced cytokine | 0.1 | 0.25 | -0.02 | 0.79 | 0.03 | 0.70 |
| **PSGL1**  P-selectin glycoprotein ligand-1 | -0.02 | 0.83 | 0.1 | 0.34 | -0.16 | 0.10 |
| **IL-16**  Interleukin-16 | -0.02 | 0.84 | 0.09 | 0.35 | -0.02 | 0.78 |
| **MMP10**  Matrix metalloproteinase 10 | 0.05 | 0.53 | 0.19 | **0.03** | 0.07 | 0.40 |
| **CCL4**  C-C motif chemokine-4 | 0.08 | 0.37 | 0.18 | 0.05 | 0.06 | 0.50 |
| **RAGE**  Receptor of Advanced glycation end products | -0.05 | 0.57 | -0.07 | 0.41 | -0.06 | 0.45 |
| **CCL3**  C-C motif chemokine-3 | 0.03 | 0.74 | 0.02 | 0.80 | -0.09 | 0.30 |
| **MMP7**  Matrix metalloproteinase-7 | 0.03 | 0.73 | 0.06 | 0.50 | 0.06 | 0.45 |
| **CXCL6**  Chemokine (C-X-C motif) ligand-6 | -0.04 | 0.63 | 0.06 | 0.54 | -0.09 | 0.30 |
| **CXCL16**  Chemokine (C-X-C motif) ligand-16 | -0.004 | 0.96 | 0.19 | **0.04** | -0.09 | 0.31 |
| **ENRAGE**  Receptor of Advanced glycation end products ligand | 0.04 | 0.67 | -0.05 | 0.60 | 0.10 | 0.30 |
| **CD40**  CD40 receptor | -0.15 | 0.08 | -0.07 | 0.45 | -0.05 | 0.52 |
| **HB-EGF**  Heparin-binding EGF-like growth factor | -0.15 | 0.08 | -0.06 | 0.52 | -0.01 | 0.91 |
| **ESM1**  Endothelial cell-specific molecule 1 | -0.17 | 0.05 | -0.06 | 0.53 | -0.13 | 0.11 |
| **MMP12**  Matrix metalloproteinase-12 | 0.08 | 0.34 | 0.25 | **0.01** | 0.18 | **0.03** |
| **CTSL1**  Cathepsin L1 | 0.02 | 0.83 | 0.14 | 0.13 | 0.08 | 0.36 |
| **CX3CL1**  chemokine (C-X3-C motif) ligand-1 | -0.07 | 0.43 | 0.003 | 0.97 | -0.05 | 0.60 |
| **BNP**  B-type natriuretic peptide | -0.06 | 0.55 | 0.08 | 0.52 | 0.23 | **0.03** |
| **CCL20**  C-C motif chemokine-20 | 0.02 | 0.85 | 0.06 | 0.49 | -0.07 | 0.42 |
| **NEMO**  NF-kappa-B essential modulator | -0.15 | 0.09 | -0.15 | 0.1 | 0.04 | 0.64 |
| **FS**  Follistatin | -0.05 | 0.56 | 0.07 | 0.46 | -0.08 | 0.36 |
| **PECAM1**  Platelet endothelial cell adhesion molecule 1 | -0.14 | 0.09 | 0.02 | 0.83 | -0.17 | **0.04** |
| **NT-pro-BNP**  N-terminal pro-B-type natriuretic peptide | -0.02 | 0.84 | 0.24 | 0.01 | 0.24 | **0.007** |

Table S2. Univariable Linear Regression of Clinical Variables and EAT with Pulse Wave Velocity and LV Mass Index.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | **PWV (m/s)** | | |  | **LVMI (g/m2)** | | |
|  | **β** | **95% CI** | **β (S)** | **p value** | **β** | **95% CI** | **β (S)** | **p value** |
| **Age (years)** | 0.15 | 0.10 - 0.20 | 0.46 | **<0.001** | 0.01 | -0.21 – 0.22 | 0.004 | 0.97 |
| **Male** | -0.50 | -1.46 - 0.46 | -0.1 | 0.31 | -11.83 | -14.76 - -8.91 | -0.66 | **<0.001** |
| **BMI (kg/m²)** | 0.07 | -0.05 – 0.18 | 0.10 | 0.27 | 0.32 | -0.07 – 0.72 | 0.14 | 0.11 |
| **Systolic BP (mmHg)** | 0.08 | 0.05 - 0.11 | 0.46 | **<0.001** | 0.06 | -0.06 – 0.17 | 0.08 | 0.32 |
| **Diabetes** | -0.81 | -1.75 – 0.14 | - 0.15 | 0.09 | -1.72 | -5.22 – 1.78 | -0.08 | 0.33 |
| **Creatinine (µmol/l)** | 0.02 | -0.004 – 0.45 | 0.15 | 0.11 | 0.16 | 0.08 – 0.25 | 0.30 | **<0.001** |
| **Total Cholesterol** | -0.26 | -0.75 – 0.24 | -0.09 | 0.31 | -3.17 | -4.94 - -1.40 | -0.29 | **<0.001** |
| **LDL-Cholesterol (mmol/l)** | -0.44 | -1.05 – 0.17 | -0.14 | 0.16 | -2.77 | -5.00 - -0.50 | -0.21 | **0.017** |
| **HDL-Cholesterol (mmol/l)** | -0.93 | -2.11 – 0.25 | -0.14 | 0.12 | -6.92 | -11.11 - -2.74 | -0.27 | **0.001** |
| **Triglycerides (mmol/l)** | 0.33 | -0.20 – 0.86 | 0.11 | 0.22 | 0.38 | -1.52 – 2.28 | 0.03 | 0.69 |
| **Smoker/Ex-smoker** | 0.94 | -0.001 – 1.87 | 0.18 | **0.05** | 1.74 | -1.72 – 5.20 | 0.08 | 0.32 |
| **Hypertension** | 0.59 | -0.37 – 1.54 | 0.11 | 0.23 | 6.71 | 3.31 – 10.11 | 0.31 | **<0.001** |
| **CAD** | 0.71 | -0.31 – 1.72 | 0.12 | 0.17 | 5.39 | 1.79 – 8.98 | 0.24 | **0.004** |
| **LEAD** | 2.16 | 0.49 – 3.83 | 0.23 | **0.012** | 7.02 | 1.17 – 12.88 | 0.17 | **0.019** |
| **Stroke** | -0.12 | -2.53 – 2.28 | -0.01 | 0.92 | 7.15 | -0.74 – 15.04 | 0.15 | 0.08 |
| **Atrial Fibrillation** | 3.49 | 0.88 – 6.09 | 0.23 | **0.009** | -4.98 | -14.31 – 4.35 | -0.09 | 0.29 |
| **ACE Inhibitor** | 0.18 | -.079 – 1.15 | 0.04 | 0.70 | 5.18 | 1.76 – 8.60 | 0.24 | **0.004** |
| **Beta Blocker** | 0.91 | 3.17 – 10.91 | 0.14 | 0.12 | 7.04 | -0.24 – 2.06 | 0.29 | **0.001** |
| **Statins** | 0.62 | -.037 – 1.60 | 0.12 | 0.20 | 4.15 | 0.55 – 7.74 | 0.18 | **0.033** |
| **EAT(cm²)** | 0.17 | 0.07 – 0.28 | 0.28 | **0.002** | 0.60 | 0.22 – 0.97 | 0.33 | **0.002** |

*PWV* pulse wave velocity, *LVMI* left ventricular mass index, *BMI* body mass index, *BP* blood pressure, *CAD* coronary artery disease, *LEAD* lower extremity arterial disease, *ACE* angiotensin converting enzyme, *EAT* epicardial adipose tissue

Table S3. Multivariable Associations with LV Mass Index

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Clinical** | | | | **Clinical + EAT** | | | |
|  | **β** | **95% CI** | **β (S)** | **p value** | **β** | **CI 95%** | **β (S)** | **p value** |
| **Male** | -10.99 | -14.06 - -7.93 | -0.52 | **<0.001** | -10.73 | -13.67- -7.80 | -0.51 | **<0.001** |
| **Hypertension** | 4.88 | 1.72 – 8.04 | 0.22 | **0.003** | 4.44 | 1.41-7.46 | 0.21 | **0.004** |
| **EAT** |  |  |  | | 0.16 | -0.17 – 0.49 | 0.07 | 0.34 |

*EAT* epicardial adipose tissue, *BMI* body mass index, *CAD* coronary artery disease, *LEAD* lower extremity arterial disease

Figure S1. Correlations between EAT and IL-6 (A) and CD40L (B).

