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| **Supplemental Table 1. Protein concentrations in patients with and without severe aortic stenosis.** | | | |
| **Proteins** | **With Severe AS (n=80)** | **Without Severe AS (n=1165)** | **P value** |
| Adiponectin (ug/mL) | 5 (3.58, 9.4) | 3.7 (2.4, 5.73) | <0.001 |
| Alpha-1-Antitrypsin (AAT) (mg/mL) | 1.8 (1.6, 2.1) | 1.8 (1.5, 2.1) | 0.22 |
| Alpha-2-Macroglobulin (A2Macro) (mg/mL) | 2.25 (1.87, 2.52) | 1.9 (1.5, 2.3) | <0.001 |
| Angiopoietin-1 (ANG-1) (ng/mL) | 6.4 (4.8, 8.65) | 6.6 (4.8, 9.5) | 0.58 |
| Angiotensin-Converting Enzyme (ACE) (ng/mL) | 79.5 (60.75, 98.75) | 80 (61, 107) | 0.68 |
| Apolipoprotein(a) (Lp(a)) (ug/mL) | 257 (84.5, 615.75) | 187 (66, 489.75) | 0.17 |
| Apolipoprotein A-I (Apo A-I) (mg/mL) | 1.8 (1.6, 2.3) | 1.8 (1.5, 2.1) | 0.09 |
| Apolipoprotein A-II (Apo A-II) (ng/mL) | 289 (218.75, 376.25) | 314 (257, 382) | 0.05 |
| Apolipoprotein B (Apo B) (ug/mL) | 1315 (1020, 1732.5) | 1400 (1090, 1812.5) | 0.25 |
| Apolipoprotein C-I (Apo C-I) (ng/mL) | 317.5 (257, 378) | 317 (262, 381.25) | 0.88 |
| Apolipoprotein C-III (Apo C-III) (ug/mL) | 224.5 (154.75, 267.25) | 214 (163, 276) | 0.87 |
| Apolipoprotein H (Apo H) (ug/mL) | 327 (263.75, 377.25) | 334 (271.75, 391.25) | 0.58 |
| Beta-2-Microglobulin (B2M) (ug/mL) | 1.9 (1.5, 2.6) | 1.7 (1.4, 2.3) | 0.01 |
| Brain-Derived Neurotrophic Factor (BDNF) (ng/mL) | 2.2 (1.06, 3.45) | 2.05 (0.94, 4.3) | 0.85 |
| C-Reactive Protein (CRP) (ug/mL) | 3.75 (1.58, 12.25) | 3.5 (1.4, 8.7) | 0.36 |
| Calbindin (ng/mL) | 8 (8, 18) | 8 (8, 8) | 0.02 |
| Carbonic anhydrase 9 (CA-9) (ng/mL) | 0.15 (0.09, 0.22) | 0.14 (0.09, 0.25) | 0.83 |
| Carcinoembryonic antigen-related cell adhesion molecule 1 (CEACAM1) (ng/mL) | 23 (20.75, 29) | 24 (20, 28) | 0.91 |
| CD5 Antigen-like (CD5L) (ng/mL) | 3970 (2735, 5090) | 3750 (2860, 5170) | 0.74 |
| Decorin (ng/mL) | 2.35 (2, 2.9) | 2.3 (1.9, 3.2) | 0.84 |
| E-Selectin (ng/mL) | 5 (3.7, 6.43) | 5.3 (3.7, 7.2) | 0.66 |
| EN-RAGE (ng/mL) | 31.5 (17.75, 57.75) | 27 (16, 49) | 0.19 |
| Eotaxin-1 (pg/mL) | 104 (42.5, 143.5) | 98 (42.5, 145) | 0.6 |
| Factor VII (ng/mL) | 473.5 (329, 598.5) | 471.5 (361, 597.25) | 0.57 |
| Fatty Acid-Binding Protein, heart (FABP, heart) (ng/mL) | 4.6 (4.6, 4.6) | 4.6 (4.6, 4.6) | 0.09 |
| Ferritin (FRTN) (ng/mL) | 140.5 (80.25, 240) | 128.5 (67, 233) | 0.17 |
| Fetuin-A (ug/mL) | 620.5 (512.25, 787.25) | 700 (585, 832.25) | 0.002 |
| Fibrinogen (mg/mL) | 4.4 (3.77, 5.5) | 4.3 (3.5, 5.3) | 0.24 |
| Follicle-Stimulating Hormone (FSH) (mIU/mL) | 11 (5.5, 38.5) | 6.75 (3.7, 27) | 0.003 |
| Glucagon-like Peptide 1, total (GLP-1 total) (pg/mL) | 3.45 (3.45, 3.45) | 3.45 (3.45, 3.45) | 0.39 |
| Granulocyte-Macrophage Colony-Stimulating Factor (GM-CSF) (pg/mL) | 10.5 (10.5, 10.5) | 10.5 (10.5, 10.5) | 0.21 |
| Growth Hormone (GH) (ng/mL) | 0.26 (0.07, 0.69) | 0.32 (0.07, 0.89) | 0.19 |
| Haptoglobin (mg/mL) | 1.2 (0.46, 2.1) | 1.2 (0.6, 2) | 0.74 |
| Immunoglobulin A (IgA) (mg/mL) | 2.45 (1.8, 3.7) | 2.3 (1.5, 3.3) | 0.15 |
| Immunoglobulin M (IgM) (mg/mL) | 1.5 (0.92, 2.42) | 1.4 (0.92, 2.1) | 0.25 |
| Insulin (uIU/mL) | 0.48 (0.11, 1.2) | 0.86 (0.11, 2.2) | 0.005 |
| Intercellular Adhesion Molecule 1 (ICAM-1) (ng/mL) | 103 (82.5, 130.75) | 105 (85.75, 132.25) | 0.4 |
| Interferon gamma (IFN-gamma) (pg/mL) | 1.25 (1.25, 1.25) | 1.25 (1.25, 1.25) | 0.71 |
| Interferon gamma Induced Protein 10 (IP-10) (pg/mL) | 331.5 (247.75, 475.25) | 301.5 (228, 409.25) | 0.09 |
| Interleukin-1 alpha (IL-1 alpha) (ng/mL) | 0 (0, 0) | 0 (0, 0) | 0.21 |
| Interleukin-1 beta (IL-1 beta) (pg/mL) | 6.8 (3.3, 8.4) | 6.7 (3.3, 8.7) | 0.78 |
| Interleukin-1 receptor antagonist (IL-1ra) (pg/mL) | 116.5 (76.75, 150.75) | 114 (88, 147) | 0.92 |
| Interleukin-2 (IL-2) (pg/mL) | 20.5 (20.5, 20.5) | 20.5 (20.5, 20.5) | 0.01 |
| Interleukin-3 (IL-3) (ng/mL) | 0 (0, 0) | 0 (0, 0) | 0.65 |
| Interleukin-4 (IL-4) (pg/mL) | 17.5 (17.5, 17.5) | 17.5 (17.5, 17.5) | 0.65 |
| Interleukin-5 (IL-5) (pg/mL) | 2.35 (2.35, 2.35) | 2.35 (2.35, 2.35) | 0.49 |
| Interleukin-6 (IL-6) (pg/mL) | 2.25 (2.25, 2.25) | 2.25 (2.25, 2.25) | 0.36 |
| Interleukin-6 receptor (IL-6r) (ng/mL) | 21 (17, 27) | 24 (19, 29) | 0.009 |
| Interleukin-7 (IL-7) (pg/mL) | 16 (16, 16) | 16 (16, 16) | 0.65 |
| Interleukin-8 (IL-8) (pg/mL) | 7.2 (4.8, 10.25) | 6.5 (4.5, 9.9) | 0.2 |
| Interleukin-10 (IL-10) (pg/mL) | 3.4 (3.4, 3.4) | 3.4 (3.4, 3.4) | 0.98 |
| Interleukin-12 Subunit p40 (IL-12p40) (ng/mL) | 0.65 (0.47, 0.75) | 0.58 (0.47, 0.73) | 0.32 |
| Interleukin-12 Subunit p70 (IL-12p70) (pg/mL) | 25 (25, 25) | 25 (25, 25) | 0.65 |
| Interleukin-15 (IL-15) (ng/mL) | 0.57 (0.45, 0.71) | 0.56 (0.46, 0.69) | 0.95 |
| Interleukin-17 (IL-17) (pg/mL) | 1.45 (1.45, 1.45) | 1.45 (1.45, 1.45) | 0.39 |
| Interleukin-18 (IL-18) (pg/mL) | 162.5 (130, 217) | 201 (150, 269.5) | <0.001 |
| Interleukin-18-binding protein (IL-18bp) (ng/mL) | 9.4 (7.3, 13) | 9.3 (7.2, 13) | 0.65 |
| Interleukin-23 (IL-23) (ng/mL) | 2.55 (1.9, 3.3) | 2.6 (2, 3.2) | 0.74 |
| Kidney Injury Molecule-1 (KIM-1) (ng/mL) | 0.04 (0.01, 0.07) | 0.04 (0.01, 0.07) | 0.43 |
| Lectin-Like Oxidized LDL Receptor 1 (LOX-1) (ng/mL) | 0.32 (0.32, 0.66) | 0.32 (0.32, 0.32) | 0.06 |
| Leptin (ng/mL) | 7.2 (3.6, 17) | 9.3 (4.4, 21) | 0.06 |
| Luteinizing Hormone (LH) (mIU/mL) | 6.25 (3.8, 15) | 4.8 (3.3, 9.43) | 0.009 |
| Macrophage Colony-Stimulating Factor 1 (M-CSF) (ng/mL) | 0.46 (0.16, 0.67) | 0.42 (0.16, 0.68) | 0.8 |
| Macrophage Inflammatory Protein-1 alpha (MIP-1 alpha) (pg/mL) | 30 (14.5, 40) | 14.5 (14.5, 35) | 0.02 |
| Macrophage Inflammatory Protein-1 beta (MIP-1 beta) (pg/mL) | 246 (186.25, 342.25) | 266 (195.5, 360) | 0.23 |
| Macrophage Inflammatory Protein-3 alpha (MIP-3 alpha) (pg/mL) | 21 (10, 31) | 10 (10, 28) | 0.22 |
| Matrix Metalloproteinase-1 (MMP-1) (ng/mL) | 0.28 (0.28, 0.28) | 0.28 (0.28, 0.28) | 0.88 |
| Matrix Metalloproteinase-2 (MMP-2) (ng/mL) | 1555 (1300, 1797.5) | 1320 (1110, 1620) | <0.001 |
| Matrix Metalloproteinase-3 (MMP-3) (ng/mL) | 7.95 (5.38, 11) | 6.8 (4.8, 10) | 0.03 |
| Matrix Metalloproteinase-7 (MMP-7) (ng/mL) | 0.39 (0.26, 0.56) | 0.36 (0.24, 0.56) | 0.31 |
| Matrix Metalloproteinase-9 (MMP-9) (ng/mL) | 126 (80.75, 183.75) | 122 (87, 174) | 0.56 |
| Matrix Metalloproteinase-9, total (MMP-9, total) (ng/mL) | 565 (401, 787.75) | 555 (402.75, 797) | 0.92 |
| Matrix Metalloproteinase-10 (MMP-10) (ng/mL) | 0.14 (0.14, 0.14) | 0.14 (0.14, 0.14) | 0.02 |
| Midkine (ng/mL) | 18 (12, 24.25) | 14 (10, 21) | <0.001 |
| Monocyte Chemotactic Protein 1 (MCP-1) (pg/mL) | 112 (76.5, 147.5) | 110 (78, 158) | 0.96 |
| Monocyte Chemotactic Protein 2 (MCP-2) (pg/mL) | 22.5 (16.75, 31.25) | 23 (17, 30) | 0.92 |
| Monocyte Chemotactic Protein 4 (MCP-4) (pg/mL) | 2165 (1602.5, 2862.5) | 2210 (1617.5, 3232.5) | 0.4 |
| Monokine Induced by Gamma Interferon (MIG) (pg/mL) | 1110 (685.5, 2402.5) | 952 (581.75, 1710) | 0.05 |
| Myeloid Progenitor Inhibitory Factor 1 (MPIF-1) (ng/mL) | 1.3 (1.1, 1.6) | 1.2 (0.93, 1.6) | 0.05 |
| Myoglobin (ng/mL) | 34.5 (24, 57) | 32 (22, 47) | 0.07 |
| N-terminal pro-B type natriuretic peptide (NT-proBNP) (pg/mL) | 4095 (1692.5, 15975) | 1385 (523.75, 3732.5) | <0.001 |
| Osteopontin (ng/mL) | 32 (22.75, 54) | 28 (20, 41) | 0.01 |
| Pancreatic Polypeptide (PPP) (pg/mL) | 128 (83.25, 240.5) | 86 (48, 168) | <0.001 |
| Plasminogen Activator Inhibitor 1 (PAI-1) (ng/mL) | 40 (24, 60.25) | 44 (25, 69.25) | 0.29 |
| Platelet endothelial cell adhesion molecule (PECAM-1) (ng/mL) | 55.5 (46, 64.25) | 54 (46, 64) | 0.89 |
| Prolactin (PRL) (ng/mL) | 7.4 (5.45, 12.25) | 8 (5.5, 13) | 0.89 |
| Pulmonary and Activation-Regulated Chemokine (PARC) (ng/mL) | 108 (84, 152.25) | 98.5 (72, 136.25) | 0.04 |
| Pulmonary surfactant-associated protein D (SP-D) (ng/mL) | 5.95 (4.07, 11) | 5.1 (3.3, 8.1) | 0.001 |
| Resistin (ng/mL) | 2.35 (1.9, 3.25) | 2.4 (1.8, 3.4) | 0.84 |
| Serotransferrin (Transferrin) (mg/dl) | 263.5 (232.5, 287.5) | 272 (233, 314) | 0.07 |
| Serum Amyloid P-Component (SAP) (ug/mL) | 13.5 (10, 16.25) | 13 (9.9, 16) | 0.66 |
| Stem Cell Factor (SCF) (pg/mL) | 348.5 (250.5, 508.75) | 373 (284, 475) | 0.64 |
| T-Cell-Specific Protein RANTES (RANTES) (ng/mL) | 6.5 (3.68, 15) | 7.85 (3.7, 16) | 0.38 |
| Tamm-Horsfall Urinary Glycoprotein (THP) (ug/mL) | 0.03 (0.02, 0.04) | 0.03 (0.02, 0.04) | 0.07 |
| Thrombomodulin (TM) (ng/mL) | 3.9 (3.08, 5.3) | 3.8 (3.1, 4.62) | 0.51 |
| Thrombospondin-1 (ng/mL) | 4120 (2117.5, 6212.5) | 4200 (2050, 7197.5) | 0.64 |
| Thyroid-Stimulating Hormone (TSH) (uIU/mL) | 1.2 (0.86, 1.72) | 1.2 (0.8, 1.8) | 0.82 |
| Thyroxine-Binding Globulin (TBG) (ug/mL) | 35 (31, 42) | 37 (31, 44) | 0.14 |
| Tissue Inhibitor of Metalloproteinases 1 (TIMP-1) (ng/mL) | 80.5 (69, 99.25) | 72 (58, 91) | 0.001 |
| Transthyretin (TTR) (mg/dl) | 24 (20, 30) | 26 (21, 30) | 0.12 |
| Tumor Necrosis Factor alpha (TNF-alpha) (pg/mL) | 6.5 (6.5, 6.5) | 6.5 (6.5, 6.5) | 0.37 |
| Tumor Necrosis Factor beta (TNF-beta) (pg/mL) | 20 (20, 20) | 20 (20, 20) | >0.99 |
| Tumor necrosis factor receptor 2 (TNFR2) (ng/mL) | 6.65 (4.65, 8.98) | 6.4 (4.8, 9.1) | 0.76 |
| Vascular Cell Adhesion Molecule-1 (VCAM-1) (ng/mL) | 548 (456, 768.75) | 559 (453.5, 706) | 0.59 |
| Vascular Endothelial Growth Factor (VEGF) (pg/mL) | 102 (72, 135.25) | 98 (68.75, 135) | 0.79 |
| Vitamin D-Binding Protein (VDBP) (ug/mL) | 249.5 (197, 299.25) | 248 (186, 313) | 0.92 |
| Vitamin K-Dependent Protein S (VKDPS) (ug/mL) | 13 (11, 16) | 14 (11, 16) | 0.84 |
| Vitronectin (ug/mL) | 430 (328.5, 548.75) | 462 (352, 575.75) | 0.18 |
| von Willebrand Factor (vWF) (ug/mL) | 124 (91.25, 175) | 130 (95, 179) | 0.4 |