**Supplemental material**

Supplemental table 1. Linear regression models for IGFBP-3, 5, and 6 for NAFLD stage

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | **IGFBP-3** | | **IGFBP-5** | | **IGFBP-6** | |
|  |  | Crude | Adjusted | Crude | Adjusted | Crude | Adjusted |
| Liver tissue | Exposure | -3.715  (-15.16,  7.73) | -0.815  (-13.831, 12.202) | 76.984  (-63.239, 217.208) | 136.507  (-27.673, 300.688) | -0.422  (-2.525, 1.681) | 0.008  (-2.468, 2.484) |
| SS | -23.496  (-53.157, 6.165) | -11.909  (-53.183, 29.365) | -386.005  (-749.416,  -22.595) | -187.589  (-708.187, 333.009) | 4.352  1.334, 10.037)**\*** | 6.655  (-1.455, 14.764) |
| bNASH | 15.938  (-6.126, 38.003) | 41.29  (2.566, 80.015)**\*** | -182.584  (-452.916, 87.748) | -282.957  (-771.391, 205.477) | -2.981  (-7.061, 1.099) | -6.176  (-12.78, 0.428) |
| NASH | -22.531  (-47.735, 2.674) | -0.305  (-43.34, 42.73) | -356.795  (-665.605,  -47.985) | -472.947  (-1015.752, 69.857) | -0.029  (-4.868,  4.81)**\*** | -3.533  (-11.497, 4.431) |
| Serum | Exposure | -9.517  (-29.987, 10.952) | -0.101  (-21.689, 21.487) | -1.875  (-8.7,  4.951) | -4.819  (-13.316, 3.677) | 6.172  (-2.785, 15.129) | 5.418  (-2.948, 13.785) |
| SS | 4.093  (-49.118, 57.305) | 66.479  (-8.477, 141.436) | -2.262  (-20.006, 15.482) | -5.376  (-34.876, 24.125) | 32.021  (8.737, 55.306) | 38.226  (9.177, 67.274)**\*** |
| bNASH | 28.051  (-13.596, 69.698) | 75.253  (21.3, 129.205)**\*\*** | 3.007  (-10.881, 16.894) | -8.289  (-29.523, 12.945) | 20.915  (2.691, 39.139) | 3.526  (-17.383, 24.435) |
| NASH | 42.14  (-5.264, 89.543) | 103  (34.311, 171.689)**\*\*** | -1.025  (-16.832, 14.782) | -11.586  (-38.619, 15.448) | 9.488  (-11.255, 30.231) | -7.947  (-34.567, 18.673) |

SS: Simple steatosis; bNASH: borderline non-alcoholic steatohepatitis; NASH: non-alcoholic steatohepatitits. Data is shown as Coefficient (95% CI). **\***p<0.05; **\*\***p<0.01; **\*\*\***p<0.001

Supplemental table 2. Linear regression models for IGFBP-3, 5, and 6 for fibrosis

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | **IGFBP-3** | | **IGFBP-5** | | **IGFBP-6** | |
|  |  | Crude | Adjusted | Crude | Adjusted | Crude | Adjusted |
| Liver tissue | Exposure | 1.76  (-11.326, 14.847) | 10.339 (-4.35, 25.029) | 48.258 (-88.794, 185.309) | 81.978 (-82.828, 246.785) | -1.22  (-3.691, 1.252) | -0.796  (-3.911,  2.32) |
| F0 | 11.072  (-21.955, 44.098) | 38.395  (-1.464, 78.254) | -451.667  (-797.543,  -105.79)**\*** | -347.092  (-794.291, 100.107) | 0.318  (-5.979, 6.614) | 0.643  (-7.954, 9.239) |
| F1C | -19.236  (-45.968, 7.496) | -24.178  (-66.154, 17.798) | -422.031  (-701.985,  -142.076)**\*\*** | -442.473  (-913.421, 28.475) | -1.589  (-6.509, 3.331) | -3.587  (-11.421, 4.247) |
| F2 | -1.361  (-26.244, 23.523) | -1.856  (-41.915, 38.203) | -130.341  (-390.936, 130.254) | -70.778  (-520.213, 378.656) | -0.368  (-5.279, 4.543) | -1.576  (-9.655, 6.503) |
| Serum | Exposure | -6.794  (-29.925, 16.338) | -2.283  (-27.045, 22.48) | 0.207  (-7.036, 7.451) | -0.136  (-8.803, 8.531) | 2.626  (-7.432, 12.684) | 3.855  (-6.841, 14.551) |
| F0 | 24.852  (-35.245, 84.95) | 63.512  (-4.81, 131.834) | 12.847  5.972,  31.666) | 7.361  (-16.552, 31.274) | 10.92  (-15.212, 37.052) | 8.859  (-20.651, 38.37) |
| F1C | 33.866  (-11.831, 79.564) | 88.928 (26.663, 151.193) | 0.08  (-14.23, 14.39) | -10.923  (-32.716, 10.87) | 14.748  (-5.122, 34.619) | 1.335  (-25.56, 28.229) |
| F2 | 21.98  (-23.26, 67.219) | 75.661 (11.446, 139.876) | -3.752  (-17.918, 10.415) | -21.603  (-44.078, 0.872) | 28.017  (8.346, 47.689)**\*\*** | 19.274  (-8.462, 47.011) |

Data is shown as Coefficient (95% CI). \*p<0.05; \*\*p<0.01; \*\*\*p<0.001.