**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.