**Supplementary Table 1:** Breakdown of sample collection by time of cancer diagnosis

|  |  |
| --- | --- |
|  | Year of Cancer Diagnosis |
| Timepoint Sample Taken | **T0** N (%) | **T1** N (%) | **T2** N (%) |
| T0 | 57 (22%) | 29 (11%) | 48 (19%) |
| T1 | 3 (1%) | 31 (12%) | 45 (17%) |
| T2 | 1 (<1%) | 2(<1%) | 46 (17%) |

|  |  |
| --- | --- |
| Summary of Timepoint Sample Taken | N (%) |
| At Diagnosis | 134 (51%) |
| Before Diagnosis | 122 (47%) |
| After Diagnosis | 6 (2%) |

**Supplementary Table 2:** C.V.s for inflammation proteins

|  |  |  |  |
| --- | --- | --- | --- |
| **Controls** |  |  |  |
| **plex** | **analyte** | **CV intraplate** | **CV total** |
| **Chem** | **Eotaxin** | 11.11 | 10.06 |
| **Chem** | **Eotaxin-3** | 22.11 | 20.85 |
| **Chem** | **IP-10** | 8.38 | 7.58 |
| **Chem** | **MCP-1** | 6.34 | 5.87 |
| **Chem** | **MCP-4** | 7.96 | 7.22 |
| **Chem** | **MDC** | 3.67 | 3.36 |
| **Chem** | **MIP-1a** | 12.81 | 14.27 |
| **Chem** | **MIP-1b** | 7.18 | 6.53 |
| **Chem** | **TARC** | 18.59 | 16.93 |
| **Cyto** | **IL-12/IL-23p40** | 8.28 | 7.48 |
| **Cyto** | **IL-15** | 31.60 | 30.26 |
| **Cyto** | **IL-16** | 4.21 | 3.83 |
| **Cyto** | **IL-17A** | 211.01 | 197.06 |
| **Cyto** | **IL-1a** | 97.00 | 88.47 |
| **Cyto** | **IL-7** | 88.62 | 85.31 |
| **Cyto** | **TNFb** | 46.24 | 56.26 |
| **Cyto** | **VEGF** | 35.12 | 31.79 |
| **Pro** | **IFNg** | 36.92 | 34.49 |
| **Pro** | **IL-10** | 77.92 | 70.80 |
| **Pro** | **IL-12p70** | 44.10 | 47.70 |
| **Pro** | **IL-6** | 146.41 | 144.65 |
| **Pro** | **IL-8\_Pro** | 196.38 | 177.93 |
| **Pro** | **TNFa** | 46.63 | 43.28 |
| **CRP** | **CRP** | 6.46 | 5.83 |
| **Cases** |  |  |  |
| **plex** | **analyte** | **CV intraplate (MA)** | **CV total (MA)** |
| **Chem** | **Eotaxin** | 10.03 | 10.18 |
| **Chem** | **Eotaxin-3** | 36.59 | 35.89 |
| **Chem** | **IP-10** | 10.39 | 10.49 |
| **Chem** | **MCP-1** | 7.21 | 7.40 |
| **Chem** | **MCP-4** | 11.40 | 11.44 |
| **Chem** | **MDC** | 5.79 | 5.89 |
| **Chem** | **MIP-1b** | 13.91 | 14.34 |
| **Chem** | **TARC** | 20.63 | 21.17 |
| **Cyto** | **IL-12/IL-23p40** | 13.69 | 13.67 |
| **Cyto** | **IL-15** | 40.01 | 41.04 |
| **Cyto** | **IL-16** | 7.64 | 7.71 |
| **Cyto** | **IL-17A** | 420.42 | 439.20 |
| **Cyto** | **IL-7** | 104.46 | 107.32 |
| **Cyto** | **VEGF** | 24.23 | 25.03 |
| **Pro** | **IFNg** | 54.89 | 55.04 |
| **Pro** | **IL-10** | 46.82 | 46.62 |
| **Pro** | **IL-6** | 257.82 | 258.70 |
| **Pro** | **IL-8\_Pro** | 40.17 | 41.08 |
| **Pro** | **TNFa** | 75.67 | 75.94 |
| **CRP** | **CRP** | 8.53 | 8.53 |

**Supplementary Table 3:** Summary of concentrations within the detection range of the assay

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Assay** | **Above Fit Curve Range** | **Below Detection Range** | **Below Fit Curve Range** | **In Detection Range** | **% In Detection Range** | **Grand Total** |
| **Chemokine** |  |  |  |  |  |  |
| *Eotaxin* | 0 | 2 | 0 | 823 | 99.8 | 825 |
| *Eotaxin-3* | 0 | 128 | 83 | 614 | 74.4 | 825 |
| *IL-8 Chem* | 0 | 162 | 483 | 180 | 21.8 | 825 |
| *IP-10* | 0 | 1 | 0 | 824 | 99.9 | 825 |
| *MCP-1* | 0 | 0 | 0 | 825 | 100.0 | 825 |
| *MCP-4* | 0 | 1 | 0 | 824 | 99.9 | 825 |
| *MDC* | 0 | 1 | 0 | 824 | 99.9 | 825 |
| *MIP-1α* | 0 | 301 | 126 | 398 | 48.2 | 825 |
| *MIP-1b* | 0 | 1 | 0 | 824 | 99.9 | 825 |
| *TARC* | 0 | 1 | 0 | 824 | 99.9 | 825 |
| **Cytokine** |  |  |  |  |  |  |
| *GM-CSF* | 0 | 382 | 244 | 199 | 24.1 | 825 |
| *IL-12/IL-23p40* | 0 | 0 | 0 | 825 | 100.0 | 825 |
| *IL-15* | 0 | 3 | 0 | 822 | 99.6 | 825 |
| *IL-16* | 0 | 0 | 0 | 825 | 100.0 | 825 |
| *IL-17A* | 0 | 204 | 30 | 591 | 71.6 | 825 |
| *IL1-a* | 0 | 247 | 308 | 270 | 32.7 | 825 |
| *IL-5* | 0 | 252 | 349 | 224 | 27.2 | 825 |
| *IL-7* | 0 | 48 | 3 | 774 | 93.8 | 825 |
| *TNF-b* | 0 | 255 | 127 | 443 | 53.7 | 825 |
| *VEGF* | 0 | 3 | 0 | 822 | 99.6 | 825 |
| **Pro-Inflammatory** |  |  |  |  |  |  |
| *IFN-γ* | 0 | 23 | 6 | 796 | 96.5 | 825 |
| *IL-10* | 0 | 138 | 38 | 649 | 78.7 | 825 |
| *IL-12p70* | 0 | 462 | 160 | 203 | 24.6 | 825 |
| *IL-13* | 0 | 270 | 435 | 120 | 14.5 | 825 |
| *IL-1b* | 0 | 10 | 802 | 13 | 1.6 | 825 |
| *IL-2* | 0 | 258 | 326 | 241 | 29.2 | 825 |
| *IL-4* | 0 | 332 | 369 | 124 | 15.0 | 825 |
| *IL-6* | 0 | 27 | 13 | 785 | 95.2 | 825 |
| *IL-8\_Inflam* | 0 | 0 | 0 | 825 | 100.0 | 825 |
| *TNF-a* | 0 | 1 | 0 | 824 | 99.9 | 825 |
| *CRP* |  |  |  |  |  |  |

**Supplementary Table 4:** Upper and lower limits of detection for each plate

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Assay** | **LLOD** | **ULOD** | **LLOD** | **ULOD** | **LLOD** | **ULOD** | **LLOD** | **ULOD** | **LLOD** | **ULOD** | **LLOD** | **ULOD** | **LLOD** | **ULOD** | **LLOD** | **ULOD** | **LLOD** | **ULOD** | **LLOD** | **ULOD** | **LLOD** | **ULOD** | **Range** |
|  | **Plate 1** |  | **Plate 2** |  | **Plate 3** |  | **Plate 4** |  | **Plate 5** |  | **Plate 6** |  | **Plate 7** |  | **Plate 8** |  | **Plate 9** |  | **Plate 10** |  | **Plate 11** |  |  |
| **Chemokine** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| *Eotaxin* | 2.94 | 1510 | 2.66 | 1510 | 1.55 | 1510 | 1.66 | 1510 | 2.82 | 1510 | 3.43 | 1510 | 3.56 | 1510 | 2.27 | 1510 | 6.37 | 1510 | 3.33 | 1510 | 3.09 | 1510 | (1.55-1510) |
| *Eotaxin-3* | 20.95 | 5020 | 2.67 | 5020 | 0.85 | 5020 | 0.85 | 5020 | 15.79 | 5020 | 0.83 | 5020 | 5.57 | 5020 | 0.81 | 5020 | 15.65 | 5020 | 1.15 | 5020 | 0.68 | 5020 | (0.68-5020) |
| *IL-8* | 803.77 | 93700 | 309.19 | 93700 | 146.74 | 93700 | 150.46 | 93700 | 814.17 | 93700 | 200.78 | 93700 | 975.91 | 93700 | 137.27 | 93700 | 219.9 | 93700 | 245.81 | 93700 | 152.89 | 93700 | (137.27-93700) |
| *IP-10* | 0.13 | 2650 | 0.26 | 2650 | 0.06 | 2650 | 0.04 | 2650 | 0.13 | 2650 | 0.06 | 2650 | 0.86 | 2650 | 0.04 | 2650 | 0.34 | 2650 | 0.05 | 2650 | 0.06 | 2650 | (0.04-2650) |
| *MCP-1* | 0.13 | 488 | 0.25 | 488 | 0.08 | 488 | 0.05 | 488 | 0.08 | 488 | 0.05 | 488 | 0.42 | 488 | 0.07 | 488 | 0.66 | 488 | 0.07 | 488 | 0.04 | 488 | (0.04-488) |
| *MCP-4* | 1.31 | 645 | 1.93 | 645 | 1.05 | 645 | 1.16 | 645 | 1.48 | 645 | 1.11 | 645 | 3.27 | 645 | 1.1 | 645 | 3.21 | 645 | 1.05 | 645 | 1.08 | 645 | (1.05-645) |
| *MDC* | 8.56 | 10100 | 12.76 | 10100 | 2.19 | 10100 | 1.97 | 10100 | 7.66 | 10100 | 2.61 | 10100 | 11.61 | 10100 | 1.99 | 10100 | 5.62 | 10100 | 2.44 | 10100 | 2.09 | 10100 | (1.97-10100) |
| *MIP-1a* | 3.55 | 1040 | 2.89 | 1040 | 1.87 | 1040 | 2.4 | 1040 | 3.13 | 1040 | 2.2 | 1040 | 3.18 | 1040 | 2.65 | 1040 | 10.53 | 1040 | 2.49 | 1040 | 2.46 | 1040 | (1.87-1040) |
| *MIP-1ß* | 3.22 | 1050 | 1.07 | 1050 | 0.49 | 1050 | 0.35 | 1050 | 1.44 | 1050 | 0.52 | 1050 | 1.93 | 1050 | 0.43 | 1050 | 1.17 | 1050 | 0.46 | 1050 | 0.36 | 1050 | (0.35-1050) |
| *TARC* | 0.45 | 1470 | 0.25 | 1470 | 0.14 | 1470 | 0.16 | 1470 | 0.77 | 1470 | 0.12 | 1470 | 0.34 | 1470 | 0.66 | 1470 | 1.31 | 1470 | 0.09 | 1470 | 0.1 | 1470 | (0.09-1470) |
| **Cytokine** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| *GM-CSF* | 0.2 | 950 | 0.15 | 950 | 0.07 | 950 | 0.17 | 950 | 0.06 | 950 | 0.07 | 950 | 0.18 | 950 | 0.08 | 950 | 0.14 | 950 | 0.07 | 950 | 0.61 | 950 | (0.06-950) |
| *IL-12/IL-23p40* | 0.45 | 3070 | 0.22 | 3070 | 0.19 | 3070 | 1.13 | 3070 | 0.19 | 3070 | 0.22 | 3070 | 2.81 | 3070 | 0.45 | 3070 | 0.47 | 3070 | 0.2 | 3070 | 0.73 | 3070 | (0.19-3070) |
| *IL-15* | 0.19 | 683 | 0.08 | 683 | 0.08 | 683 | 0.53 | 683 | 0.08 | 683 | 0.17 | 683 | 0.37 | 683 | 0.09 | 683 | 0.15 | 683 | 0.09 | 683 | 0.47 | 683 | (0.08-683) |
| *IL-16* | 1.3 | 2810 | 0.45 | 2810 | 0.49 | 2810 | 7.17 | 2810 | 0.38 | 2810 | 0.51 | 2810 | 12.14 | 2810 | 0.53 | 2810 | 1.77 | 2810 | 0.84 | 2810 | 4.06 | 2810 | (0.38-2810) |
| *IL-17A* | 1.86 | 5670 | 0.23 | 5670 | 0.21 | 5670 | 0.51 | 5670 | 0.24 | 5670 | 0.22 | 5670 | 1.12 | 5670 | 0.22 | 5670 | 0.44 | 5670 | 0.19 | 5670 | 0.79 | 5670 | (0.19-5670) |
| *IL1-a* | 0.15 | 358 | 0.09 | 358 | 0.05 | 358 | 0.17 | 358 | 0.04 | 358 | 3.44 | 358 | 0.78 | 358 | 0.07 | 358 | 0.11 | 358 | 0.24 | 358 | 0.23 | 358 | (0.04-358) |
| *IL-5* | 0.54 | 817 | 0.05 | 817 | 0.04 | 817 | 0.08 | 817 | 0.06 | 817 | 0.19 | 817 | 1.18 | 817 | 0.05 | 817 | 0.09 | 817 | 0.29 | 817 | 0.12 | 817 | (0.04-817) |
| *IL-7* | 0.18 | 628 | 0.06 | 628 | 0.06 | 628 | 0.11 | 628 | 0.11 | 628 | 0.07 | 628 | 0.9 | 628 | 0.06 | 628 | 0.13 | 628 | 0.09 | 628 | 0.56 | 628 | (0.06-628) |
| *TNF-b* | 0.06 | 581 | 0.03 | 581 | 0.05 | 581 | 0.06 | 581 | 0.02 | 581 | 0.03 | 581 | 0.78 | 581 | 0.03 | 581 | 0.06 | 581 | 0.03 | 581 | 0.24 | 581 | (0.02-581) |
| *VEGF* | 2.64 | 996 | 0.19 | 996 | 0.24 | 996 | 0.68 | 996 | 0.18 | 996 | 0.24 | 996 | 1.55 | 996 | 0.24 | 996 | 1.85 | 996 | 0.45 | 996 | 0.48 | 996 | (0.18-996) |
| **Pro-Inflammatory** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| *IFN-γ* | 0.15 | 1510 | 1.14 | 1510 | 0.19 | 1510 | 0.32 | 1510 | 0.17 | 1510 | 0.64 | 1510 | 0.2 | 1510 | 0.91 | 1510 | 0.22 | 1510 | 0.17 | 1510 | 0.15 | 1510 | (0.15-1510) |
| *IL-10* | 0.04 | 313 | 0.06 | 313 | 0.02 | 313 | 0.15 | 313 | 0.02 | 313 | 0.14 | 313 | 0.03 | 313 | 0.08 | 313 | 0.01 | 313 | 0.02 | 313 | 0.02 | 313 | (0.01-313) |
| *IL-12p70* | 0.05 | 404 | 0.09 | 404 | 0.06 | 404 | 0.54 | 404 | 0.06 | 404 | 0.15 | 404 | 0.06 | 404 | 0.38 | 404 | 0.07 | 404 | 0.06 | 404 | 0.05 | 404 | (0.05-404) |
| *IL-13* | 0.32 | 489 | 0.7 | 489 | 0.54 | 489 | 1.26 | 489 | 0.42 | 489 | 1.2 | 489 | 0.53 | 489 | 0.96 | 489 | 0.61 | 489 | 0.59 | 489 | 0.38 | 489 | (0.32-489) |
| *IL-1b* | 0.28 | 520 | 0.23 | 520 | 0.39 | 520 | 0.06 | 520 | 0.22 | 520 | 0.25 | 520 | 0.14 | 520 | 0.35 | 520 | 0.06 | 520 | 0.48 | 520 | 0.17 | 520 | (0.06-520) |
| *IL-2* | 0.04 | 1460 | 0.08 | 1460 | 0.05 | 1460 | 0.13 | 1460 | 0.05 | 1460 | 0.18 | 1460 | 0.07 | 1460 | 0.08 | 1460 | 0.02 | 1460 | 0.05 | 1460 | 0.04 | 1460 | (0.02-1460) |
| *IL-4* | 0.01 | 207 | 0.04 | 207 | 0.02 | 207 | 0.04 | 207 | 0.02 | 207 | 0.07 | 207 | 0.02 | 207 | 0.05 | 207 | 0.01 | 207 | 0.01 | 207 | 0.01 | 207 | (0.01-207) |
| *IL-6* | 0.05 | 749 | 0.09 | 749 | 0.07 | 749 | 0.13 | 749 | 0.1 | 749 | 0.11 | 749 | 0.05 | 749 | 0.11 | 749 | 0.05 | 749 | 0.09 | 749 | 0.04 | 749 | (0.04-749) |
| *IL-8\_Inflam* | 0.06 | 546 | 0.16 | 546 | 0.05 | 546 | 0.12 | 546 | 0.04 | 546 | 0.08 | 546 | 0.05 | 546 | 0.1 | 546 | 0.05 | 546 | 0.04 | 546 | 0.04 | 546 | (0.04-546) |
| *TNF-a* | 0.04 | 311 | 0.29 | 311 | 0.05 | 311 | 0.22 | 311 | 0.04 | 311 | 0.06 | 311 | 0.05 | 311 | 0.17 | 311 | 0.14 | 311 | 0.04 | 311 | 0.04 | 311 | (0.04-311) |
| *CRP* |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

**Supplementary Table 5:** Mean circulating inflammation protein concentrations among lung cancer cases, controls with a negative LDCT scan and controls with a positive LDCT scan.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Cases****(n=262)** |  | **Controls (scan -)** **(n=418)** |  |  | **Controls (scan +)****(n=110)** |  |
| **Inflammation Protein** | **Mean (± SD)** |  | **Mean (± SD)** | ***P*** |  | **Mean (± SD)** | ***P*** |
| CRP | 21.27 (1.60) |  | 20.98 (1.79) | 0.03 |  | 21.46 (1.88) | 0.33 |
| Eotaxin | 7.54 (0.85) |  | 7.52 (0.68) | 0.67 |  | 7.45 (0.69) | 0.29 |
| Eotaxin-3 | 4.39 (1.76) |  | 4.43 (1.52) | 0.75 |  | 4.29 (1.09) | 0.60 |
| IFN-g | 2.11 (1.13) |  | 1.89 (1.08) | 0.01 |  | 1.98 (1.80) | 0.32 |
| IL-10 | -2.64 (1.20) |  | -2.74 (1.20) | 0.34 |  | -2.53 (1.24) | 0.47 |
| IL-23p40 | 6.07 (0.80) |  | 5.96 (0.82) | 0.09 |  | 6.13 (0.82) | 0.50 |
| IL-15 | 0.95 (0.37) |  | 0.94 (0.40) | 0.70 |  | 0.89 (0.33) | 0.16 |
| IL-16 | 7.07 (0.48) |  | 7.03 (0.58) | 0.36 |  | 7.15 (0.47) | 0.15 |
| IL-17A | 0.32 (1.23) |  | 0.23 (1.36) | 0.37 |  | 0.36 (1.19) | 0.80 |
| IL-6 | -0.43 (1.28) |  | -0.60 (1.14) | 0.09 |  | -0.40 (1.04) | 0.81 |
| IL-7 | 1.01 (1.04) |  | 0.95 (1.09) | 0.47 |  | 1.00 (1.03) | 0.97 |
| IL-8 | 2.00 (0.80) |  | 1.83 (0.72) | 0.005 |  | 1.85 (0.62) | 0.08 |
| IP-10 | 7.78 (0.88) |  | 7.70 (0.75) | 0.23 |  | 7.91 (0.76) | 0.19 |
| MCP-1 | 7.04 (0.62) |  | 7.01 (0.43) | 0.49 |  | 7.07 (0.42) | 0.63 |
| MCP-4 | 6.24 (0.72) |  | 6.22 (0.65) | 0.69 |  | 6.19 (0.70) | 0.53 |
| MDC | 9.18 (0.57) |  | 9.15 (0.49) | 0.61 |  | 9.20 (0.47) | 0.75 |
| MIP-1b | 5.14 (0.71) |  | 5.12 (0.71) | 0.72 |  | 5.22 (0.78) | 0.28 |
| TARC | 5.46 (1.08) |  | 5.36 (1.09) | 0.21 |  | 5.63 (1.18) | 0.20 |
| TNF-a | 0.67 (0.59) |  | 0.69 (0.48) | 0.53 |  | 0.73 (0.49) | 0.31 |
| VEGF | 3.95 (0.92) |  | 3.86 (0.94) | 0.19 |  | 3.93 (0.87) | 0.86 |

**Supplementary Table 6:** Relationship between inflammation proteins with lung cancer diagnosis among scan negative individuals

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Univariable Scan Negative**  |  | **Multivariable Scan Negative** |  | **Multivariable Scan Positive** |
| **Protein** | **Control****(N)** | **Case** **(N)** | **OR** | **LCI** |  | **UCI** | **P** |  | **Control****(N)** | **Case****(N)** | **OR** | **LCI** |  | **UCI** | **P** |  | **Control** **(N)** | **Case** **(N)** | **OR** | **LCI** |  | **UCI** | **P** |
| **Eotaxin** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  < median | 209 | 121 | Reference |  |  |  |  |  | 184 | 108 | Reference |  |  |  |  |  | 54 | 108 | Reference |  |  |  |  |
|  >=median | 209 | 141 | 1.17 | 0.86 | - | 1.59 | 0.333 |  | 185 | 130 | 1.12 | 0.79 | - | 1.60 | 0.525 |  | 98 | 130 | 1.31 | 1.05 | - | 1.65 | 0.019 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  <25th Percentile | 105 | 64 | Reference |  |  |  |  |  | 92 | 54 | Reference |  |  |  |  |  | 37 | 54 | Reference |  |  |  |  |
|  25th - 50th Percentile | 104 | 57 | 0.90 | 0.57 | - | 1.41 | 0.642 |  | 92 | 54 | 1.09 | 0.66 | - | 1.82 | 0.735 |  | 17 | 54 | 2.00 | 0.96 | - | 4.16 | 0.065 |
|  50th-75th Percentile | 105 | 57 | 0.89 | 0.57 | - | 1.39 | 0.612 |  | 94 | 54 | 0.93 | 0.55 | - | 1.55 | 0.771 |  | 21 | 54 | 1.69 | 0.82 | - | 3.48 | 0.152 |
|  >=75th Percentile | 104 | 84 | 1.33 | 0.87 | - | 2.02 | 0.193 |  | 91 | 76 | 1.46 | 0.88 | - | 2.41 | 0.141 |  | 23 | 76 | 2.51 | 1.23 | - | 5.10 | 0.011 |
|  Trend |  |  |  |  |  |  | 0.193 |  |  |  |  |  |  |  | 0.204 |  |  |  |  |  |  |  | 0.019 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Eotaxin-3** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  < median | 188 | 125 | Reference |  |  |  |  |  | 168 | 115 | Reference |  |  |  |  |  | 43 | 115 | Reference |  |  |  |  |
|  >=median | 187 | 114 | 0.92 | 0.66 | - | 1.27 | 0.600 |  | 329 | 106 | 0.97 | 0.67 | - | 1.41 | 0.888 |  | 42 | 106 | 1.01 | 0.79 | - | 1.29 | 0.928 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  <25th Percentile | 94 | 61 | Reference |  |  |  |  |  | 84 | 57 | Reference |  |  |  |  |  | 22 | 57 | Reference |  |  |  |  |
|  25th - 50th Percentile | 94 | 64 | 1.05 | 0.67 | - | 1.65 | 0.835 |  | 84 | 58 | 1.01 | 0.61 | - | 1.69 | 0.958 |  | 21 | 58 | 1.26 | 0.59 | - | 2.69 | 0.545 |
|  50th-75th Percentile | 94 | 53 | 0.87 | 0.55 | - | 1.38 | 0.554 |  | 79 | 49 | 0.91 | 0.53 | - | 1.56 | 0.731 |  | 21 | 49 | 1.00 | 0.47 | - | 2.15 | 0.996 |
|  >=75th Percentile | 93 | 61 | 1.01 | 0.64 | - | 1.60 | 0.963 |  | 82 | 57 | 1.05 | 0.62 | - | 1.76 | 0.864 |  | 21 | 57 | 1.12 | 0.52 | - | 2.42 | 0.763 |
|  Trend |  |  |  |  |  |  | 0.838 |  |  |  |  |  |  |  | 0.958 |  |  |  |  |  |  |  | 0.928 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **IL-10** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  < median | 199 | 139 | Reference |  |  |  |  |  | 173 | 125 | Reference |  |  |  |  |  | 46 | 125 | Reference |  |  |  |  |
|  >=median | 199 | 112 | 0.81 | 0.59 | - | 1.11 | 0.182 |  | 176 | 102 | 0.78 | 0.54 | - | 1.12 | 0.183 |  | 46 | 102 | 0.95 | 0.75 | - | 1.21 | 0.684 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  <25th Percentile | 100 | 52 | Reference |  |  |  |  |  | 84 | 50 | Reference |  |  |  |  |  | 22 | 50 | Reference |  |  |  |  |
|  25th - 50th Percentile | 99 | 87 | 1.69 | 1.09 | - | 2.63 | 0.020 |  | 89 | 75 | 1.52 | 0.92 | - | 2.50 | 0.103 |  | 24 | 75 | 1.48 | 0.71 | - | 3.07 | 0.296 |
|  50th-75th Percentile | 100 | 50 | 0.96 | 0.60 | - | 1.55 | 0.872 |  | 89 | 45 | 0.93 | 0.55 | - | 1.60 | 0.804 |  | 18 | 45 | 1.23 | 0.54 | - | 2.80 | 0.626 |
|  >=75th Percentile | 99 | 62 | 1.20 | 0.76 | - | 1.91 | 0.430 |  | 87 | 57 | 1.05 | 0.62 | - | 1.78 | 0.858 |  | 28 | 57 | 0.97 | 0.46 | - | 2.05 | 0.930 |
|  Trend |  |  |  |  |  |  | 0.898 |  |  |  |  |  |  |  | 0.610 |  |  |  |  |  |  |  | 0.684 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **IL-15** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  < median | 209 | 129 | Reference |  |  |  |  |  | 181 | 119 | Reference |  |  |  |  |  | 60 | 119 | Reference |  |  |  |  |
|  >=median | 209 | 133 | 1.03 | 0.76 | - | 1.40 | 0.846 |  | 188 | 119 | 1.04 | 0.73 | - | 1.48 | 0.830 |  | 38 | 119 | 1.25 | 1.00 | - | 1.57 | 0.054 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  <25th Percentile | 105 | 67 | Reference |  |  |  |  |  | 93 | 64 | Reference |  |  |  |  |  | 33 | 64 | Reference |  |  |  |  |
|  25th - 50th Percentile | 104 | 62 | 0.93 | 0.60 | - | 1.45 | 0.762 |  | 88 | 55 | 1.06 | 0.65 | - | 1.73 | 0.823 |  | 27 | 55 | 1.13 | 0.57 | - | 2.23 | 0.734 |
|  50th-75th Percentile | 105 | 60 | 0.90 | 0.58 | - | 1.39 | 0.624 |  | 93 | 56 | 1.05 | 0.64 | - | 1.72 | 0.846 |  | 22 | 56 | 1.38 | 0.69 | - | 2.75 | 0.365 |
|  >=75th Percentile | 104 | 73 | 1.10 | 0.72 | - | 1.69 | 0.663 |  | 95 | 63 | 1.09 | 0.67 | - | 1.77 | 0.740 |  | 16 | 63 | 2.02 | 0.97 | - | 4.22 | 0.062 |
|  Trend |  |  |  |  |  |  | 0.711 |  |  |  |  |  |  |  | 0.759 |  |  |  |  |  |  |  | 0.054 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **IL-16** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  < median | 209 | 122 | Reference |  |  |  |  |  | 182 | 109 | Reference |  |  |  |  |  | 36 | 109 | Reference |  |  |  |  |
|  >=median | 209 | 140 | 1.15 | 0.84 | - | 1.56 | 0.383 |  | 187 | 129 | 1.26 | 0.89 | - | 1.78 | 0.202 |  | 62 | 129 | 0.88 | 0.70 | - | 1.11 | 0.288 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  <25th Percentile | 105 | 58 | Reference |  |  |  |  |  | 92 | 51 | Reference |  |  |  |  |  | 16 | 51 | Reference |  |  |  |  |
|  25th - 50th Percentile | 104 | 64 | 1.11 | 0.71 | - | 1.74 | 0.636 |  | 90 | 58 | 1.35 | 0.81 | - | 2.27 | 0.250 |  | 20 | 58 | 0.89 | 0.40 | - | 1.99 | 0.775 |
|  50th-75th Percentile | 105 | 61 | 1.05 | 0.67 | - | 1.65 | 0.826 |  | 97 | 56 | 1.15 | 0.68 | - | 1.93 | 0.608 |  | 34 | 56 | 0.44 | 0.20 | - | 0.94 | 0.034 |
|  >=75th Percentile | 104 | 79 | 1.38 | 0.89 | - | 2.12 | 0.150 |  | 90 | 73 | 1.87 | 1.13 | - | 3.09 | 0.015 |  | 28 | 73 | 0.78 | 0.36 | - | 1.68 | 0.522 |
|  Trend |  |  |  |  |  |  | 0.188 |  |  |  |  |  |  |  | 0.031 |  |  |  |  |  |  |  | 0.288 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **IL-17A** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  < median | 202 | 121 | Reference |  |  |  |  |  | 178 | 109 | Reference |  |  |  |  |  | 49 | 109 | Reference |  |  |  |  |
|  >=median | 201 | 131 | 1.09 | 0.79 | - | 1.49 | 0.600 |  | 179 | 121 | 1.17 | 0.82 | - | 1.66 | 0.392 |  | 44 | 121 | 1.15 | 0.90 | - | 1.46 | 0.270 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  <25th Percentile | 102 | 55 | Reference |  |  |  |  |  | 90 | 50 | Reference |  |  |  |  |  | 18 | 50 | Reference |  |  |  |  |
|  25th - 50th Percentile | 100 | 66 | 1.22 | 0.78 | - | 1.92 | 0.381 |  | 88 | 59 | 1.33 | 0.80 | - | 2.21 | 0.270 |  | 31 | 59 | 0.65 | 0.31 | - | 1.38 | 0.267 |
|  50th-75th Percentile | 101 | 72 | 1.32 | 0.85 | - | 2.07 | 0.220 |  | 92 | 67 | 1.44 | 0.87 | - | 2.37 | 0.155 |  | 29 | 67 | 0.77 | 0.37 | - | 1.62 | 0.494 |
|  >=75th Percentile | 100 | 59 | 1.09 | 0.69 | - | 1.73 | 0.701 |  | 87 | 54 | 1.27 | 0.76 | - | 2.13 | 0.362 |  | 15 | 54 | 1.53 | 0.67 | - | 3.52 | 0.316 |
|  Trend |  |  |  |  |  |  | 0.636 |  |  |  |  |  |  |  | 0.344 |  |  |  |  |  |  |  | 0.270 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **IL-7** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  < median | 209 | 116 | Reference |  |  |  |  |  | 184 | 107 | Reference |  |  |  |  |  | 52 | 107 | Reference |  |  |  |  |
|  >=median | 208 | 145 | 1.26 | 0.92 | - | 1.71 | 0.150 |  | 184 | 131 | 1.25 | 0.88 | - | 1.78 | 0.209 |  | 45 | 131 | 1.17 | 0.92 | - | 1.48 | 0.195 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  <25th Percentile | 105 | 65 | Reference |  |  |  |  |  | 96 | 58 | Reference |  |  |  |  |  | 27 | 58 | Reference |  |  |  |  |
|  25th - 50th Percentile | 104 | 51 | 0.79 | 0.50 | - | 1.25 | 0.317 |  | 88 | 49 | 0.77 | 0.46 | - | 1.28 | 0.312 |  | 25 | 49 | 1.03 | 0.51 | - | 2.09 | 0.928 |
|  50th-75th Percentile | 104 | 77 | 1.20 | 0.78 | - | 1.83 | 0.412 |  | 92 | 74 | 1.21 | 0.75 | - | 1.95 | 0.429 |  | 20 | 74 | 2.18 | 1.05 | - | 4.55 | 0.038 |
|  >=75th Percentile | 104 | 68 | 1.06 | 0.68 | - | 1.63 | 0.805 |  | 92 | 57 | 1.00 | 0.61 | - | 1.63 | 0.992 |  | 25 | 57 | 1.30 | 0.63 | - | 2.67 | 0.482 |
|  Trend |  |  |  |  |  |  | 0.425 |  |  |  |  |  |  |  | 0.585 |  |  |  |  |  |  |  | 0.195 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **IP-10** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  < median | 209 | 118 | Reference |  |  |  |  |  | 189 | 101 | Reference |  |  |  |  |  | 46 | 101 | Reference |  |  |  |  |
|  >=median | 209 | 144 | 1.22 | 0.90 | - | 1.66 | 0.208 |  | 180 | 137 | 1.50 | 1.03 | - | 2.16 | 0.033 |  | 52 | 137 | 0.99 | 0.78 | - | 1.26 | 0.916 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  <25th Percentile | 105 | 59 | Reference |  |  |  |  |  | 94 | 48 | Reference |  |  |  |  |  | 18 | 48 | Reference |  |  |  |  |
|  25th - 50th Percentile | 104 | 59 | 1.01 | 0.64 | - | 1.59 | 0.967 |  | 95 | 53 | 1.21 | 0.72 | - | 2.04 | 0.481 |  | 28 | 53 | 0.78 | 0.36 | - | 1.69 | 0.524 |
|  50th-75th Percentile | 105 | 64 | 1.08 | 0.69 | - | 1.69 | 0.720 |  | 90 | 61 | 1.47 | 0.86 | - | 2.50 | 0.157 |  | 21 | 61 | 1.20 | 0.52 | - | 2.72 | 0.670 |
|  >=75th Percentile | 104 | 80 | 1.37 | 0.89 | - | 2.11 | 0.154 |  | 90 | 76 | 1.86 | 1.10 | - | 3.15 | 0.020 |  | 31 | 76 | 0.84 | 0.39 | - | 1.81 | 0.651 |
|  Trend |  |  |  |  |  |  | 0.137 |  |  |  |  |  |  |  | 0.015 |  |  |  |  |  |  |  | 0.916 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **MCP-1** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  < median | 209 | 133 | Reference |  |  |  |  |  | 186 | 119 | Reference |  |  |  |  |  | 51 | 119 | Reference |  |  |  |  |
|  >=median | 209 | 129 | 0.97 | 0.71 | - | 1.32 | 0.846 |  | 95 | 119 | 1.07 | 0.76 | - | 1.51 | 0.699 |  | 47 | 119 | 1.04 | 0.83 | - | 1.30 | 0.740 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  <25th Percentile | 105 | 59 | Reference |  |  |  |  |  | 96 | 53 | Reference |  |  |  |  |  | 20 | 53 | Reference |  |  |  |  |
|  25th - 50th Percentile | 104 | 74 | 1.27 | 0.82 | - | 1.96 | 0.289 |  | 90 | 66 | 1.62 | 0.99 | - | 2.67 | 0.055 |  | 31 | 66 | 0.82 | 0.40 | - | 1.69 | 0.594 |
|  50th-75th Percentile | 105 | 43 | 0.73 | 0.45 | - | 1.17 | 0.194 |  | 95 | 39 | 0.82 | 0.48 | - | 1.39 | 0.459 |  | 19 | 39 | 0.78 | 0.35 | - | 1.76 | 0.550 |
|  >=75th Percentile | 104 | 86 | 1.47 | 0.96 | - | 2.26 | 0.077 |  | 88 | 80 | 2.09 | 1.27 | - | 3.42 | 0.004 |  | 28 | 80 | 1.07 | 0.52 | - | 2.21 | 0.851 |
|  Trend |  |  |  |  |  |  | 0.275 |  |  |  |  |  |  |  | 0.040 |  |  |  |  |  |  |  | 0.740 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **MCP-4** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  < median | 209 | 131 | Reference |  |  |  |  |  | 182 | 116 | Reference |  |  |  |  |  | 47 | 116 | Reference |  |  |  |  |
|  >=median | 209 | 131 | 1.00 | 0.73 | - | 1.36 | 1.000 |  | 187 | 122 | 0.99 | 0.70 | - | 1.42 | 0.969 |  | 51 | 122 | 1.05 | 0.83 | - | 1.34 | 0.668 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  <25th Percentile | 105 | 71 | Reference |  |  |  |  |  | 90 | 63 | Reference |  |  |  |  |  | 30 | 63 | Reference |  |  |  |  |
|  25th - 50th Percentile | 104 | 60 | 0.85 | 0.55 | - | 1.32 | 0.477 |  | 92 | 53 | 0.91 | 0.55 | - | 1.49 | 0.696 |  | 17 | 53 | 1.67 | 0.80 | - | 3.49 | 0.171 |
|  50th-75th Percentile | 105 | 64 | 0.90 | 0.58 | - | 1.39 | 0.638 |  | 93 | 61 | 0.96 | 0.59 | - | 1.57 | 0.872 |  | 30 | 61 | 0.99 | 0.50 | - | 1.95 | 0.974 |
|  >=75th Percentile | 104 | 67 | 0.95 | 0.62 | - | 1.46 | 0.825 |  | 94 | 61 | 0.93 | 0.56 | - | 1.54 | 0.776 |  | 21 | 61 | 1.39 | 0.65 | - | 3.01 | 0.398 |
|  Trend |  |  |  |  |  |  | 0.885 |  |  |  |  |  |  |  | 0.839 |  |  |  |  |  |  |  | 0.668 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **MDC** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  < median | 209 | 124 | Reference |  |  |  |  |  | 183 | 111 | Reference |  |  |  |  |  | 44 | 111 | Reference |  |  |  |  |
|  >=median | 209 | 137 | 1.10 | 0.81 | - | 1.51 | 0.528 |  | 94 | 127 | 1.19 | 0.83 | - | 1.70 | 0.346 |  | 54 | 127 | 1.01 | 0.80 | - | 1.28 | 0.941 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  <25th Percentile | 105 | 58 | Reference |  |  |  |  |  | 89 | 50 |  |  |  |  |  |  | 25 | 50 | Reference |  |  |  |  |
|  25th - 50th Percentile | 104 | 66 | 1.15 | 0.74 | - | 1.79 | 0.541 |  | 94 | 61 | Reference | 0.79 | - | 2.18 | 0.286 |  | 19 | 61 | 1.77 | 0.82 | - | 3.78 | 0.144 |
|  50th-75th Percentile | 105 | 74 | 1.28 | 0.82 | - | 1.98 | 0.275 |  | 94 | 68 | 1.46 | 0.88 | - | 2.43 | 0.145 |  | 29 | 68 | 1.19 | 0.58 | - | 2.42 | 0.642 |
|  >=75th Percentile | 104 | 63 | 1.10 | 0.70 | - | 1.72 | 0.687 |  | 92 | 59 | 1.30 | 0.77 | - | 2.22 | 0.325 |  | 25 | 59 | 1.21 | 0.58 | - | 2.52 | 0.619 |
|  Trend |  |  |  |  |  |  | 0.594 |  |  |  |  |  |  |  | 0.306 |  |  |  |  |  |  |  | 0.941 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **MIP-1B** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  < median | 209 | 129 | Reference |  |  |  |  |  | 185 | 117 | Reference |  |  |  |  |  | 44 | 117 | Reference |  |  |  |  |
|  >=median | 209 | 133 | 1.03 | 0.76 | - | 1.40 | 0.846 |  | 184 | 121 | 1.08 | 0.76 | - | 1.53 | 0.654 |  | 54 | 121 | 0.89 | 0.70 | - | 1.12 | 0.322 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  <25th Percentile | 105 | 58 | Reference |  |  |  |  |  | 92 | 53 | Reference |  |  |  |  |  | 20 | 53 | Reference |  |  |  |  |
|  25th - 50th Percentile | 104 | 71 | 1.24 | 0.80 | - | 1.92 | 0.346 |  | 93 | 64 | 1.25 | 0.76 | - | 2.05 | 0.379 |  | 24 | 64 | 0.98 | 0.46 | - | 2.07 | 0.951 |
|  50th-75th Percentile | 105 | 58 | 1.00 | 0.64 | - | 1.57 | 1.000 |  | 97 | 54 | 0.88 | 0.53 | - | 1.47 | 0.626 |  | 20 | 54 | 0.89 | 0.41 | - | 1.96 | 0.772 |
|  >=75th Percentile | 104 | 75 | 1.31 | 0.84 | - | 2.02 | 0.232 |  | 87 | 67 | 1.65 | 1.00 | - | 2.71 | 0.049 |  | 34 | 67 | 0.71 | 0.34 | - | 1.50 | 0.374 |
|  Trend |  |  |  |  |  |  | 0.396 |  |  |  |  |  |  |  | 0.143 |  |  |  |  |  |  |  | 0.322 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **TARC** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  < median | 209 | 123 | Reference |  |  |  |  |  | 184 | 109 | Reference |  |  |  |  |  | 42 | 109 | Reference |  |  |  |  |
|  >=median | 209 | 138 | 1.12 | 0.82 | - | 1.53 | 0.466 |  | 185 | 129 | 1.25 | 0.88 | - | 1.78 | 0.208 |  | 56 | 129 | 0.92 | 0.72 | - | 1.16 | 0.480 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  <25th Percentile | 105 | 54 | Reference |  |  |  |  |  | 93 | 48 | Reference |  |  |  |  |  | 19 | 48 | Reference |  |  |  |  |
|  25th - 50th Percentile | 104 | 69 | 1.29 | 0.82 | - | 2.02 | 0.265 |  | 91 | 61 | 1.32 | 0.80 | - | 2.20 | 0.278 |  | 23 | 61 | 1.13 | 0.53 | - | 2.43 | 0.752 |
|  50th-75th Percentile | 105 | 72 | 1.33 | 0.85 | - | 2.08 | 0.205 |  | 89 | 69 | 1.64 | 0.99 | - | 2.70 | 0.055 |  | 20 | 69 | 1.43 | 0.66 | - | 3.09 | 0.359 |
|  >=75th Percentile | 104 | 66 | 1.23 | 0.79 | - | 1.94 | 0.360 |  | 96 | 60 | 1.28 | 0.77 | - | 2.14 | 0.340 |  | 36 | 60 | 0.75 | 0.36 | - | 1.56 | 0.440 |
|  Trend |  |  |  |  |  |  | 0.376 |  |  |  |  |  |  |  | 0.255 |  |  |  |  |  |  |  | 0.480 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **TNF-a** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  < median | 209 | 137 | Reference |  |  |  |  |  | 188 | 120 | Reference |  |  |  |  |  | 43 | 120 | Reference |  |  |  |  |
|  >=median | 209 | 125 | 0.91 | 0.67 | - | 1.24 | 0.561 |  | 181 | 118 | 1.25 | 0.88 | - | 1.79 | 0.217 |  | 55 | 118 | 0.90 | 0.70 | - | 1.15 | 0.380 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  <25th Percentile | 105 | 70 | Reference |  |  |  |  |  | 96 | 59 | Reference |  |  |  |  |  | 19 | 59 | Reference |  |  |  |  |
|  25th - 50th Percentile | 104 | 67 | 0.97 | 0.63 | - | 1.49 | 0.876 |  | 92 | 61 | 1.38 | 0.84 | - | 2.29 | 0.207 |  | 24 | 61 | 0.80 | 0.36 | - | 1.76 | 0.573 |
|  50th-75th Percentile | 105 | 71 | 1.01 | 0.66 | - | 1.55 | 0.948 |  | 92 | 65 | 1.56 | 0.94 | - | 2.60 | 0.084 |  | 33 | 65 | 0.57 | 0.28 | - | 1.19 | 0.137 |
|  >=75th Percentile | 104 | 54 | 0.78 | 0.50 | - | 1.22 | 0.273 |  | 89 | 53 | 1.42 | 0.84 | - | 2.38 | 0.192 |  | 22 | 53 | 0.78 | 0.35 | - | 1.77 | 0.557 |
|  Trend |  |  |  |  |  |  | 0.350 |  |  |  |  |  |  |  | 0.171 |  |  |  |  |  |  |  | 0.380 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **VEGF** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  < median | 209 | 117 | Reference |  |  |  |  |  | 189 | 109 | Reference |  |  |  |  |  | 46 | 109 | Reference |  |  |  |  |
|  >=median | 209 | 145 | 1.24 | 0.91 | - | 1.69 | 0.175 |  | 180 | 129 | 1.28 | 0.90 | - | 1.82 | 0.162 |  | 52 | 129 | 1.10 | 0.87 | - | 1.39 | 0.426 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  <25th Percentile | 105 | 57 | Reference |  |  |  |  |  | 95 | 56 | Reference |  |  |  |  |  | 23 | 56 | Reference |  |  |  |  |
|  25th - 50th Percentile | 104 | 60 | 1.06 | 0.68 | - | 1.67 | 0.792 |  | 94 | 53 | 0.96 | 0.58 | - | 1.58 | 0.864 |  | 23 | 53 | 1.10 | 0.52 | - | 2.33 | 0.798 |
|  50th-75th Percentile | 106 | 72 | 1.25 | 0.81 | - | 1.94 | 0.318 |  | 91 | 61 | 1.19 | 0.73 | - | 1.95 | 0.480 |  | 28 | 61 | 1.09 | 0.52 | - | 2.24 | 0.825 |
|  >=75th Percentile | 103 | 73 | 1.31 | 0.84 | - | 2.03 | 0.235 |  | 89 | 68 | 1.32 | 0.81 | - | 2.16 | 0.261 |  | 24 | 68 | 1.38 | 0.66 | - | 2.89 | 0.399 |
|  Trend |  |  |  |  |  |  | 0.175 |  |  |  |  |  |  |  | 0.183 |  |  |  |  |  |  |  | 0.426 |

**Supplementary Table 7:** Relationship between inflammation proteins with lung cancer diagnosis 1-2 years before a lung cancer diagnosis among screen-negative individuals

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Control/Case** |  | **Multivariable** **(LDCT scan negative)** | **Control/Case** | **Multivariable** **(LDCT scan negative)****(Samples taken before diagnosis)** |
|  |  |  | **OR (95% C.I.)** | ***P\**** |  | **OR (95% C.I.)** | ***P\**** |
| ***IL-6*** <25th Percentile 25th – 50th Percentile 50th – 75th Percentile >75th Percentile  *Trend* | 103/42103/58103/73103/83 |  | Reference1.48 (0.87-2.53)1.88 (1.11-3.21)2.82 (1.64-4.86)*1.40 (1.18-1.66)* | 0.150.02<0.001*<0.001* | 103/21103/26103/35103/36 | Reference1.32 (0.65-2.66)1.58 (0.78-3.19)1.99 (0.98-4.06)*1.25 (1.00-1.57)* | 0.450.210.06*0.05* |
| ***IL-8*** <25th Percentile 25th – 50th Percentile 50th – 75th Percentile >75th Percentile  *Trend* | 105/50104/69105/52104/91 |  | Reference1.57 (0.95-2.60)1.08 (0.63-1.86)2.25 (1.37-3.71)*1.25 (1.06-1.46)* | 0.080.770.001*0.006* | 105/28104/30105/24104/40 | Reference1.08 (0.56-2.08)0.81 (0.40-1.66)1.71 (0.91-3.22)*1.17 (0.95-1.44)* | 0.810.570.10*0.14* |
| ***CRP*** <25th Percentile 25th – 50th Percentile 50th – 75th Percentile >75th Percentile  *Trend* | 105/50104/69105/52104/91 |  | Reference1.65 (0.96-2.83)2.18 (1.28-3.71)2.46 (1.43-4.23)1.33 (1.13-1.58) | 0.070.0040.001*0.001* | 105/23104/30104/35101/34 | Reference1.20 (0.60-2.43)1.70 (0.86-3.36)1.82 (0.90-3.70)*1.24 (0.99-1.55)* | 0.610.130.10*0.06* |
| ***IFN-γ*** <25th Percentile 25th – 50th Percentile 50th – 75th Percentile >75th Percentile  *Trend* | 104/50103/57104/64103/91 |  | Reference1.11 (0.65-1.87)1.28 (0.76-2.13)1.89 (1.16-3.09)1.24 (1.06-1.45) | 0.720.350.01*0.007* | 101/19103/35104/25104/43 | Reference2.00 (0.98-4.08)1.55 (0.75-3.21)2.50 (1.27-4.92)*1.27 (1.04-1.56)* | 0.060.230.008*0.02* |
| ***IL-12/IL-23p40*** <25th Percentile 25th – 50th Percentile 50th – 75th Percentile >75th Percentile  *Trend* | 105/50104/65105/62104/85 |  | Reference1.25 (0.73-2.12)1.59 (0.93-2.72)2.49 (1.46-4.23)1.36 (1.15-1.61) | 0.420.090.001*0.001* | 105/27104/28105/32104/35 | Reference1.04 (0.51-2.11)1.75 (0.88-3.50)2.12 (1.06-4.26)*1.32 (1.06-1.65)* | 0.920.110.04*0.01* |

***P\**** adjusted for age, gender, smoking status, pack-years of smoking, race, bmi, history of COPD, childhood asthma, adulthood asthma, asbestosis, chronic bronchitis, bronchiectasis, emphysema, fibrosis of the lung, pneumonia, sarcoidosis, silicosis, tuberculosis, diabetes, family history of lung cancer

**Suppelemtary Table 8:** Relationship between inflammation proteins with lung cancer diagnosis among screen negative individuals with stage I disease.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Control/Case** | **Participants with a negative LDCT scan** | **Control/Case** | **Participants with a negative LDCT scan (cases stage I only)** |
|  |  | **OR (95% C.I.)** | ***P*** |  | **OR (95% C.I.)** | ***P\**** |
| ***IL-6*** <25th Percentile 25th – 50th Percentile 50th – 75th Percentile >75th Percentile  *Trend* <Median >Median | 103/42103/58103/73103/83206/100205/156 | Reference1.38 (0.85-2.24)1.74 (1.09-2.77)2.00 (1.26-3.16)*1.40 (1.18-1.66)*Reference1.57 (1.14-2.15) | 0.190.020.003*0.002*0.005 | 103/24103/41103/41102/48206/65205/89 | Reference1.96 (1.03-3.72)2.26 (1.17-4.38)3.52 (1.80-6.88)*1.47 (1.19-1.81)*Reference1.92 (1.22-3.02) | 0.040.02<0.001*<0.001*0.005 |
| ***IL-8*** <25th Percentile 25th – 50th Percentile 50th – 75th Percentile >75th Percentile  *Trend* <Median >Median | 105/50104/69105/52104/91209/119209/143 | Reference1.40 (0.88-2.19)1.04 (0.65-1.67)1.84 (1.18-2.85)*1.18 (1.02-1.35)*Reference1.20 (0.88-1.63) | 0.150.870.007*0.02*0.25 | 105/30104/40105/39104/51209/70209/90 | Reference1.42 (0.77-2.62)1.54 (0.83-2.86)2.38 (1.30-4.38)*1.32 (1.08-1.59)*Reference1.67 (1.08-2.58) | 0.270.170.005*0.006*0.02 |
| ***CRP*** <25th Percentile 25th – 50th Percentile 50th – 75th Percentile >75th Percentile  *Trend* <Median >Median | 105/50104/69105/52104/91209/119209/143 | Reference1.57 (0.98-2.52)1.81 (1.14-2.87)1.76 (1.11-2.80)*1.19 (1.03-1.37)*Reference1.39 (1.02-1.90) | 0.060.010.02*0.02*0.04 | 105/27104/45105/50104/38209/72209/88 | Reference1.83 (0.97-3.44)2.49 (1.33-4.64)2.18 (1.12-4.25)*1.29 (1.06-1.58)*Reference1.73 (1.20-2.49) | 0.060.0040.02*0.01*0.003 |
| ***IFN-g*** <25th Percentile 25th – 50th Percentile 50th – 75th Percentile >75th Percentile  *Trend* <Median >Median | 104/50103/57104/64103/91207/107207/155 | Reference1.15 (0.72-1.84)1.28 (0.81-2.03)1.84 (1.18-2.85)*1.22 (1.06-1.40)*Reference1.45 (1.06-1.98) | 0.560.290.007*0.005*0.02 | 104/25103/38104/37103/60207/163207/97 | Reference1.37 (0.71-2.65)1.31 (0.68-2.51)2.40 (1.31-4.29)*1.31 (1.09-1.59)*Reference1.50 (1.06-2.14) | 0.340.420.004*0.005*0.04 |
| ***IL-12/IL-23p40*** <25th Percentile 25th – 50th Percentile 50th – 75th Percentile >75th Percentile  *Trend* <Median >Median | 105/50104/65105/62104/85209/115209/147 | Reference1.31 (0.83-2.07)1.24 (0.78-1.97)1.72 (1.10-2.67)*1.17 (1.02-1.35)*Reference1.27 (0.94-1.74) | 0.240.360.02*0.03*0.12 | 105/32104/42105/36104/50209/74209/86 | Reference1.27 (0.68-2.41)1.62 (0.84-3.11)2.40 (1.26-4.56)*1.34 (1.09-1.64)*Reference1.73 (1.11-2.70) | 0.470.150.008*0.001*0.02 |

***P\**** adjusted for age, gender, smoking status, pack-years of smoking, race, BMI, history of COPD, childhood asthma, adulthood asthma, asbestosis, chronic bronchitis, bronchiectasis, emphysema, fibrosis of the lung, pneumonia, sarcoidosis, silicosis, tuberculosis, diabetes, family history of lung cancer