**Table S1. Dynamic changes of cytokine levels among blunt trauma patients.**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Parameter** | **D1** | **D3** | **D5** | **D7** | **D14** | **P** |
| IL-6 | 37.36 (10.13-102.97) | 11.76 (2.85-65.85) | 23.33 (8.50-54.41) | 29.56 (9.62-58.88) | 9.63 (3.28-22.79) | 0.007 |
| IL-8 | 28.35 (15.25-50.10) | 18.83 (8.46-34.04) | 26.41 (11.93-40.48) | 24.01 (11.65-40.67) | 22.93 (11.56-39.79) | 0.41 |
| IL-10 | 17.34 (4.06-72.39) | 4.06 (1.59-13.06) | 4.06 (2.71-9.06) | 4.06 (3.54-13.59) | 4.06 (1.78-5.66) | 0.02 |
| IL-15 | 2.78 (2.50-4.13) | 3.07 (2.78-8.11) | 3.87 (2.78-7.74) | 3.27 (2.78-6.88) | 2.78 (2.17-4.50) | 0.12 |
| TNF-α | 10.68 (5.85-19.56) | 9.28 (4.32-20.68) | 10.63 (5.00-22.75) | 11.48 (5.33-17.41) | 11.51 (6.44-17.40) | 0.98 |
| MCP-1 | 602.90 (227.59-1097.00) | 297.23 (174.16-618.97) | 384.96 (215.72-635.77) | 315.93 (196.46-483.07) | 323.66 (213.51-508.76) | 0.18 |
| MDC | 401.75 (275.15-508.29) | 283.78 (227.94-468.83) | 315.63 (205.73-446.42) | 312.81 (204.40-436.15) | 364.63 (267.14-555.30) | 0.11 |
| IP-10 | 468.92 (282.07-678.83) | 447.94 (303.25-773.99) | 557.71 (388.22-1089.00) | 593.51 (404.32-983.26) | 792.21 (563.48-1087.00) | 0.003 |
| Eotaxin | 173.89 (113.35-324.61) | 182.03 (86.35-304.81) | 196.96 (104.60-407.83) | 150.36 (79.51-275.40) | 203.48 (103.48-328.46) | 0.61 |
| sCD40L | 198.54 (69.91-406.58) | 295.60 (181.18-570.15) | 431.98 (174.97-814.59) | 343.63 (276.93-754.81) | 805.63 (525.85-1533.75) | 0.0001 |
| GRO | 1185.00 (186.88-2396.50) | 827.62 (218.56-1798.50) | 960.71 (415.52-2267.00) | 1031.02 (369.52-2432.00) | 1902.00 (853.70-3286.00) | 0.03 |
| MIP-1β | 58.20 (35.00-92.36) | 46.47 (24.02-82.90) | 53.09 (33.18-76.24) | 45.93 (29.60-72.82) | 48.77 (33.82-83.01) | 0.81 |
| GM-CSF | 6.59 (1.51-13.84) | 8.71 (2.68-16.01) | 9.18 (3.74-17.48) | 8.49 (3.62-26.78) | 11.95 (3.62-47.13) | 0.14 |
| G-CSF | 86.46 (38.15-267.22) | 47.53 (23.71-124.41) | 43.49 (6.16-90.32) | 47.98 (12.52-90.71) | 32.43 (13.90-75.08) | 0.01 |
| FGF-2 | 61.88 (22.52-113.80) | 78.06 (30.77-126.18) | 77.71 (30.77-127.73) | 74.85 (22.69-130.29) | 75.07 (42.96-150.31) | 0.61 |

**Table S2. Differences in cytokine levels between sepsis and non-sepsis among trauma patients.**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Parameter** | **Sepsis** | **D1** | **D3** | **D5** | **D7** | **D14** |
| IL-6 | Yes | 57 (10.72-168.49) | 41.81 (3.55-80.35) | 29.56 (9.20-71.44) | 35.34 (14.43-70.60) | 17.54 (5.57-34.64) |
|  | No | 16.15 (6.47-80.30) | 5.01 (2.85-19.87) | 17.65 (6.28-38.86) | 25.22 (9.32-47.18) | 5.79 (2.85-10.85) |
|  | P |  | 0.04 |  |  | 0.01 |
| IL-8 | Yes | 33.44 (14.87-51.47) | 23.02 (15.37-45.56) | 31.72 (13.43-52.75) | 26.82 (12.41-47.55) | 28.10 (12.88-43.29) |
|  | No | 28.31 (11.73-46.89) | 15.35 (4.50-25.82) | 14.30 (9.71-31.84) | 23.18 (11.02-35.84) | 19.90 (7.38-33.61) |
| IL-10 | Yes | 44.39 (4.06-187.17) | 10.33 (4.06-17.20) | 7.13 (3.73-19.59) | 5.21 (4.06-14.82) | 4.06 (3.45-13.65) |
|  | No | 8.18 (1.72-33.08) | 2.40 (1.29-4.06) | 4.06 (1.57-4.44) | 4.06 (1.31-6.71) | 4.06 (1.29-4.06) |
|  | P | 0.04 | 0.003 |  |  |  |
| IL-15 | Yes | 2.78 (2.34-3.45) | 5.31 (2.78-10.05) | 5.95 (2.78-11.61) | 4.23 (2.78-9.19) | 2.78 (2.78-5.58) |
|  | No | 2.98 (2.54-4.95) | 2.78 (1.93-5.19) | 2.78 (1.94-4.83) | 3.00 (1.38-6.10) | 2.78 (1.56-2.78) |
|  | P |  | 0.02 | 0.007 |  | 0.03 |
| TNF-α | Yes | 14.52 (5.63-23.10) | 10.61 (4.53-25.51) | 10.04 (4.91-23.97) | 12.64 (5.24-22.19) | 13.24 (5.56-20.17) |
|  | No | 7.90 (5.62-16.41) | 8.42 (4.08-15.69) | 10.87 (5.29-22.06) | 9.20 (5.43-16.34) | 10.23 (6.97-16.64) |
| MCP-1 | Yes | 647.19 (372.47-1884.00) | 358.33 (209.90-849.76) | 456.74 (215.72-665.57) | 372.16 (203.52-566.12) | 403.07 (245.85-649.12) |
|  | No | 293.33 (217.90-902.41) | 247.78 (170.27-528.65) | 318.31 (213.58-549.42) | 221.41 (191.01-441.51) | 322.82 (205.54-456.86) |
| MDC | Yes | 403.73 (280.39-573.70) | 277.41 (232.09-467.31) | 268.39 (184.16-398.27) | 276.83 (188.75-335.49) | 312.19 (246.45-398.13) |
|  | No | 378.88 (244.40-491.87) | 339.60 (204.21-479.05) | 352.57 (213.71-601.26) | 362.20 (254.01-632.74) | 494.87 (311.43-669.87) |
|  | P |  |  |  | 0.036 | 0.02 |
| IP-10 | Yes | 546.18 (341.56-862.79) | 480.57 (288.34-757.88) | 655.42 (351.45-1220.50) | 647.58 (365.66-1104.50) | 792.21 (594.45-1636.00) |
|  | No | 400.27 (246.63-610.27) | 434.41 (332.09-878.91) | 535.85 (443.12-1105.00) | 593.51 (463.1-693.07) | 745.27 (543.34-993.36) |
| Eotaxin | Yes | 149.08 (110.84-316.80) | 116.51 (70.78-318.12) | 158.54 (86.73-393.08) | 131.42 (65.75-319.44) | 150.95 (89.07-306.57) |
|  | No | 234.71 (146.62-337.57) | 194.94 (107.46-277.35) | 233.73 (163.85-439.69) | 212.42 (95.68-270.1) | 235.38 (178.51-366.65) |
| sCD40L | Yes | 124.32 (62.39-213.16) | 269.87 (133.63-413.27) | 431.98 (123.61-550.60) | 340.66 (257.72-733.04) | 688.44 (388.90-1077.00) |
|  | No | 267.71 (72.67-1382.50) | 545.09 (214.73-1689) | 449.51 (202.62-1016.35) | 396.90 (288.68-756.77) | 1398.00 (780.39-1968.00) |
|  | P |  |  |  |  | 0.006 |
| GRO | Yes | 620.00 (99.70-2324.25) | 318.09 (211.34-1484.00) | 610.79 (377.13-1894) | 671.62 (276.89-2721.50) | 912.35 (501.03-1789.25) |
|  | No | 1239.00 (331.17-2603.00) | 1674.00 (254.98-2320.00) | 1190.50 (462.09-2309.25) | 1281.00 (487.43-2040.50) | 3088.00 (1902.00-4853.00) |
|  | P |  | 0.046 |  |  | 0.002 |
| MIP-1β | Yes | 55.93 (37.63-93.33) | 46.47 (22.59-68.40) | 49.94 (28.29-76.45) | 45.21 (29.60-72.82) | 46.95 (35.70-94.96) |
|  | No | 61.24 (28.26-99.30) | 45.75 (27.23-104.94) | 54.76 (40.98-82.04) | 45.93 (33.02-96.20) | 57.29 (28.21-74.44） |
| GM-CSF | Yes | 8.26 (2.33-23.72) | 10.10 (4.495-17.73) | 11.95 (4.82-22.25) | 11.95 (6.53-28.34) | 11.95 (3.62-52.20) |
|  | No | 4.18 (1.2-11.51) | 3.62 (2.08-10.77) | 5.84 (3.47-12.42) | 4.45 (1.34-18.94) | 11.47 (3.425-46.62) |
| G-CSF | Yes | 183.8 (49.12-483.68) | 95.36 (50.03-182.59) | 78.9 (15.16-109.38) | 68.94 (30.89-198.13) | 37.24 (19.93-75.08) |
|  | No | 55.53 (37.24-97.60) | 31.27 (17.91-41.92) | 14.84 (4.4-49.53) | 16.73 (6.72-61.23) | 28.04 (9.22-82.20) |
|  | P |  | 1.23×10-4 | 0.005 | 0.01 |  |
| FGF-2 | Yes | 68.76 (32.05-115.66) | 86.26 (44.63-143.88) | 91.58 (40.82-152.33) | 103.41 (34.49-126.59) | 80.00 (53.57-133.37) |
|  | No | 35.91 (15.40-100.03) | 38.21 (13.14-101.21) | 55.69 (11.91-104.77) | 34.57 (8.27-149.64) | 67.57 (12.37-233.60) |
|  | P |  | 0.04 |  |  |  |

**Table S3. Receiver operating characteristic curve analysis of eight cytokines for prediction of traumatic sepsis.**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **D1** | | **D3** | | **D5** | | **D7** | | **D14** | |
| **Parameter** | **AUC (95%CI)** | **P** | **AUC (95%CI)** | **P** | **AUC (95%CI)** | **P** | **AUC (95%CI)** | **P** | **AUC (95%CI)** | **P** |
| IL-6 | 0.67 (0.47-0.88) | 0.126 | 0.70 (0.53-0.87) | 0.037 | 0.65 (0.48-0.83) | 0.110 | 0.61 (0.43-0.80) | 0.247 | 0.75 (0.58-0.92) | 0.015 |
| IL-10 | 0.74 (0.55-0.93) | 0.040 | 0.78 (0.63-0.93) | 0.004 | 0.69 (0.51-0.86) | 0.053 | 0.67 (0.49-0.85) | 0.082 | 0.68 (0.50-0.86) | 0.080 |
| IL-15 | 0.63 (0.41-0.84) | 0.264 | 0.72 (0.57-0.88) | 0.016 | 0.75 (0.60-0.90) | 0.007 | 0.62 (0.44-0.81) | 0.202 | 0.72 (0.55-0.89) | 0.032 |
| MDC | 0.56 (0.34-0.78) | 0.596 | 0.53 (0.34-0.71) | 0.786 | 0.63 (0.45-0.81) | 0.166 | 0.70 (0.53-0.88) | 0.035 | 0.74 (0.56-0.92) | 0.021 |
| sCD40L | 0.71 (0.50-0.92) | 0.069 | 0.68 (0.49-0.87) | 0.066 | 0.58 (0.40-0.77) | 0.397 | 0.52 (0.32-0.72) | 0.828 | 0.78 (0.62-0.95) | 0.007 |
| GRO | 0.61 (0.39-0.83) | 0.352 | 0.70 (0.50-0.89) | 0.045 | 0.61 (0.41-0.80) | 0.289 | 0.57 (0.38-0.76) | 0.484 | 0.82 (0.67-0.98) | 0.003 |
| G-CSF | 0.69 (0.47-0.91) | 0.119 | 0.85 (0.73-0.98) | 0.0003 | 0.77 (0.62-0.92) | 0.006 | 0.74 (0.58-0.90) | 0.012 | 0.56 (0.35-0.77) | 0.584 |
| FGF-2 | 0.59 (0.37-0.82) | 0.423 | 0.69 (0.53-0.86) | 0.040 | 0.67 (0.51-0.84) | 0.061 | 0.63 (0.44-0.83) | 0.163 | 0.55 (0.33-0.76) | 0.654 |
| Combined |  |  | 0.90 (0.79-1.00) | 0.00002 |  |  |  |  |  |  |