**Supplementary Table S6:** Patient Demographics Segmented by Expert Panel FA Infection Statuses (Table 1 extended)

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **All  n = 312 (100%)** | | **Non-Infected n = 32 (10.3%)** | | **p-value Non-infected vs. Bacterial** | **Only Bacterial n = 194 (62.2%)** | | **p-value, Bacterial  vs. Viral** | **Only Viral n = 41 (13.1%)** | | **p-value Non-infected  vs. Viral** | **Co-Infected n = 45 (14.4%)** | |
| Age [years] Median/IQR | 73 | 57-80 | 74 | 61-81 | 0.34 | 74 | 61-81 | **<0.01** | 57 | 38-67 | **0.02** | 77 | 67-80 |
| Sex [female] n/% | 132 | 42.3 | 15 | 46.9 | 0.55 | 80 | 41.2 | 0.98 | 17 | 41.5 | 0.64 | 20 | 44.4 |
| **Vital Signs at presentation** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Temp. [°C] Median/IQR | 38.1 | 36.8-39.0 | 37.9 | 36.7-38.55 | 0.06 | 38.3 | 37.1-39.1 | 0.99 | 38.45 | 37.3-38.9 | 0.07 | 38.2 | 37.2-39.1 |
| Heartrate [1/min] Median/IQR | 99 | 84-119 | 99 | 78-121 | 0.66 | 98 | 84-118 | 0.92 | 99 | 86-115 | 0.73 | 105 | 88-121 |
| Resp. Rate [1/min] Median/IQR | 21 | 18-26 | 18 | 16-20 | **<0.01** | 22 | 18-26 | **0.04** | 20 | 16-24 | 0.16 | 23 | 18-28 |
| SBP [mmHg] Median/IQR | 123 | 104-138 | 135 | 116.5-151 | **0.02** | 121.5 | 100-137 | 0.08 | 124 | 111-138 | 0.31 | 123 | 115-136 |
| Altered mentation/GCS<15 n/% | 59 | 18.9 | 5 | 15.6 | 0.44 | 42 | 21.6 | **0.03** | 3 | 7.3 | 0.26 | 9 | 20.0 |
| qSOFA>=2 n/% | 76 | 24.4 | 3 | 9.4 | **0.01** | 59 | 30.4 | **<0.01** | 3 | 7.3 | 0.75 | 11 | 24.4 |
| **Comorbidity** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Malignancy n/% | 86 | 27.7 | 7 | 21.9 | 0.27 | 61 | 31.6 | **<0.01** | 3 | 7.3 | 0.07 | 15 | 33.3 |
| T2D n/% | 63 | 20.2 | 4 | 12.5 | 0.17 | 45 | 23.2 | **0.05** | 4 | 9.8 | 0.71 | 10 | 22.2 |
| COPD n/% | 40 | 12.8 | 2 | 6.3 | 0.28 | 25 | 12.9 | 0.32 | 3 | 7.3 | 0.86 | 10 | 22.2 |
| Neurological Disease n/% | 48 | 15.4 | 3 | 9.4 | 0.22 | 35 | 18.0 | 0.37 | 5 | 12.2 | 0.70 | 5 | 11.1 |
| Immunocompromised n/% | 65 | 20.8 | 9 | 28.1 | 0.34 | 40 | 20.6 | **0.02** | 2 | 4.9 | **0.01** | 14 | 31.1 |
| previous antibiotics n/% | 39 | 13.1 | 4 | 12.5 | 0.58 | 17 | 9.3 | 0.13 | 7 | 17.5 | 0.56 | 11 | 25.0 |
| **Biomarkers** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| WBC [10e9cells/L] Median/IQR | 11.1 | 8.0-15.3 | 9.34 | 7.16-13.26 | **<0.01** | 12.41 | 9.38-16.71 | **<0.01** | 7.76 | 5.34-10.11 | **0.05** | 9.86 | 7.16-14.6 |
| Neutropenic n/% | 5 | 1.6 | 0 | 0.0 | 0.41 | 4 | 2.1 | 0.88 | 1 | 2.4 | 0.37 | 0 | 0.0 |
| CRP [mg/L] Median/IQR | 70.8 | 21.6-178.3 | 11 | 1.95-74.75 | **<0.01** | 104.85 | 34.9-201.8 | **<0.01** | 20.3 | 6.2-43.2 | 0.55 | 76.9 | 50.1-183.7 |
| PCT [µg/L] Median/IQR | 0.30 | 0.11-1.09 | 0.09 | 0.04-0.21 | **<0.01** | 0.52 | 0.17-2.12 | **<0.01** | 0.09 | 0.06-0.25 | 0.60 | 0.22 | 0.13-1.5 |
| BVN2 Bacterial Median/IQR | 0.38 | 0.22-0.58 | 0.29 | 0.15-0.45 | **<0.01** | 0.49 | 0.33-0.68 | **<0.01** | 0.06 | 0.03-0.21 | **<0.01** | 0.35 | 0.12-0.58 |
| BVN2 Viral Median/IQR | 0.14 | 0.05-0.37 | 0.13 | 0.07-0.33 | **0.03** | 0.08 | 0.04-0.23 | **<0.01** | 0.76 | 0.33-0.92 | **<0.01** | 0.41 | 0.18-0.73 |
| BVN2 Non-Infected Median/IQR | 0.30 | 0.14-0.48 | 0.43 | 0.36-0.59 | **<0.01** | 0.34 | 0.19-0.48 | **<0.01** | 0.13 | 0.04-0.41 | **<0.01** | 0.15 | 0.07-0.24 |

SBP = Systolic Blood Pressure, T2D = Type 2 Diabetes, COPD = Chronic Obstructive Pulmonary Disease, WBC = White Blood Cell, CRP = C-reactive protein, PCT = Procalcitonin

**Supplementary Table S7.** Patient Demographics Segmented by Expert Panel Bacterial CA Infection Statuses

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **All n = 312 (100%)** | | | **Bacterial Infection Absent n = 26 (8.3%)** | | | **p-value Absent vs. Inconclusive Bacterial Infection** | | **Bacterial Infection Inconclusive n = 112 (35.9%)** | | | **p-value Inconclusive vs. Present Bacterial Infection** | | **Bacterial Infection Present n = 174 (55.8%)** | | **p-value Present vs. Absent Bacterial Infection** | |
| Age [years] Median/IQR | 73 | 57-80 | 53 | | 29-72 | **<0.01** | | 71.5 | | 56.5-78 | **0.01** | | 74.5 | | 62-82 | **<0.01** |
| Sex [female] n/% | 132 | 42.3 | 10 | | 38.5 | 0.57 | | 50 | | 44.6 | 0.59 | | 72 | | 41.4 | 0.78 |
| **Vital Signs at presentation** |  |  |  | |  |  | |  | |  |  | |  | |  |  |
| Temp. [°C] Median/IQR | 38.1 | 36.8-39.0 | 38.3 | | 37-38.9 | 0.99 | | 38.2 | | 37-39 | 0.41 | | 38.3 | | 37.1-39.1 | 0.59 |
| Heartrate [1/min] Median/IQR | 99 | 84-119 | 97.5 | | 80-122 | 0.82 | | 95.5 | | 83-118.5 | 0.12 | | 103 | | 87-118 | 0.50 |
| Resp. Rate [1/min] Median/IQR | 21 | 18-26 | 20 | | 16-24 | 0.50 | | 20 | | 17-24.5 | **0.01** | | 22 | | 18-27 | **0.04** |
| SBP [mmHg] Median/IQR | 123 | 104-138 | 125 | | 113-138 | 0.60 | | 129 | | 114-145 | **<0.01** | | 120 | | 100-136 | 0.17 |
| Altered mentation/GCS<15 n/% | 59 | 18.9 | 1 | | 3.8 | 0.10 | | 18 | | 16.1 | 0.16 | | 40 | | 23.0 | **0.02** |
| qSOFA>=2 n/% | 76 | 24.4 | 2 | | 7.7 | 0.24 | | 19 | | 17.0 | **0.01** | | 55 | | 31.6 | **0.01** |
| **Comorbidity** |  |  |  | |  |  | |  | |  |  | |  | |  |  |
| Malignancy n/% | 86 | 27.7 | 4 | | 15.4 | 0.26 | | 29 | | 25.9 | 0.39 | | 53 | | 30.6 | 0.11 |
| T2D n/% | 63 | 20.2 | 1 | | 3.8 | **0.04** | | 23 | | 20.5 | 0.71 | | 39 | | 22.4 | **0.03** |
| COPD n/% | 40 | 12.8 | 2 | | 7.7 | 0.65 | | 12 | | 10.7 | 0.30 | | 26 | | 14.9 | 0.32 |
| Neurological Disease n/% | 48 | 15.4 | 4 | | 15.4 | 0.33 | | 10 | | 8.9 | **0.02** | | 34 | | 19.5 | 0.61 |
| Immunocompromised n/% | 65 | 20.8 | 1 | | 3.8 | **0.01** | | 31 | | 27.7 | 0.08 | | 33 | | 19.0 | 0.06 |
| Previous Antibiotics n/% | 39 | 13.1 | 2 | | 7.7 | 0.15 | | 21 | | 19.6 | **0.02** | | 16 | | 9.7 | 0.75 |
| **Biomarkers** |  |  |  | |  |  | |  | |  |  | |  | |  |  |
| WBC [10e9cells/L] Median/IQR | 11.1 | 8.0-15.3 | 7.87 | | 6.3-10.11 | **0.02** | | 9.88 | | 7.11-14.64 | **<0.01** | | 12.37 | | 9.23-17.62 | **<0.01** |
| Neutropenic n/% | 5 | 1.6 | 0 | | 0.0 | 0.63 | | 1 | | 0.9 | 0.38 | | 4 | | 2.3 | 0.43 |
| CRP [mg/L] Median/IQR | 70.8 | 21.6-178.3 | 13.65 | | 4.3-37.8 | **<0.01** | | 49.3 | | 9.95-105.5 | **<0.01** | | 118.9 | | 46-231.5 | **<0.01** |
| PCT [µg/L] Median/IQR | 0.3 | 0.11-1.09 | 0.06 | | 0.03-0.15 | **<0.01** | | 0.16 | | 0.07-0.35 | **<0.01** | | 0.67 | | 0.22-3.02 | **<0.01** |
| BVN2 Bacterial Median/IQR | 0.38 | 0.22-0.58 | 0.09 | | 0.03-0.18 | **<0.01** | | 0.28 | | 0.14-0.46 | **<0.01** | | 0.5 | | 0.33-0.69 | **<0.01** |
| BVN2 Viral Median/IQR | 0.14 | 0.05-0.37 | 0.6 | | 0.22-0.92 | **0.01** | | 0.25 | | 0.10-0.58 | **<0.01** | | 0.08 | | 0.04-0.24 | **<0.01** |
| BVN2 Non-Infected Median/IQR | 0.30 | 0.14-0.48 | 0.31 | | 0.05-0.45 | **0.29** | | 0.347 | | 0.14-0.48 | 0.46 | | 0.29 | | 0.15-0.48 | 0.47 |

SBP = Systolic Blood Pressure, T2D = Type 2 Diabetes, COPD = Chronic Obstructive Pulmonary Disease, WBC = White Blood Cell, CRP = C-Reactive Protein, PCT = Procalcitonin

**Supplementary Table S8.** Patient Demographics Segmented by Expert Panel Viral CA Infection Statuses

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **All n = 312 (100%)** | | **Viral Infection Absent n = 203 (65.1%)** | | **p-value Absent vs. Inconclusive Viral Infection** | **Inconclusive n = 34 (10.9%)** | | **p-value Inconclusive vs. Present Viral Infection** | **Viral Infection Present n = 75 (24.0%)** | | **p-value Absent vs. Present Viral Infection** |
| Age [years] Median/IQR | 73 | 57-80 | 74 | 61-81 | **<0.01** | 60.5 | 33-77 | 0.12 | 69 | 56-79 | 0.08 |
| Sex [female] n/% | 132 | 42.3 | 87 | 42.9 | 0.07 | 9 | 26.5 | **0.03** | 36 | 48.0 | 0.44 |
| Vital Signs at presentation |  |  |  |  |  |  |  |  |  |  |  |
| Temp. [°C] Median/IQR | 38.1 | 36.8-39.0 | 38.2 | 36.9-39 | 0.10 | 38.3 | 38-39.2 | 0.25 | 38.3 | 37.1-39 | 0.60 |
| Heartrate [1/min] Median/IQR | 99 | 84-119 | 98 | 84-118 | 0.66 | 98.5 | 80-120 | 0.28 | 104 | 88-121 | 0.24 |
| Resp. Rate [1/min] Median/IQR | 21 | 18-26 | 22 | 18-26 | 0.21 | 20 | 16.5-24 | 0.22 | 22 | 18-26 | 0.86 |
| SBP [mmHg] Median/IQR | 123 | 104-138 | 123 | 101-138 | 0.45 | 122 | 109-145 | 0.73 | 126 | 114-138 | 0.19 |
| Altered mentation/GCS<15 n/% | 59 | 18.9 | 39 | 19.2 | 0.17 | 10 | 29.4 | 0.04 | 10 | 13.3 | 0.25 |
| qSOFA>=2 n/% | 76 | 24.4 | 56 | 27.6 | 0.39 | 7 | 20.6 | 0.68 | 13 | 17.3 | 0.08 |
| Comorbidity |  |  |  |  |  |  |  |  |  |  |  |
| Malignancy n/% | 86 | 27.7 | 63 | 31.2\* | 0.11 | 6 | 17.6 | 0.55 | 17 | 22.7 | 0.16 |
| T2D n/% | 63 | 20.2 | 45 | 22.2 | 0.32 | 5 | 14.7 | 0.73 | 13 | 17.3 | 0.38 |
| COPD n/% | 40 | 12.8 | 25 | 12.3 | 0.54 | 3 | 8.8 | 0.31 | 12 | 16.0 | 0.42 |
| Neurological Disease n/% | 48 | 15.4 | 35 | 17.2 | 0.43 | 4 | 11.8 | 0.97 | 9 | 12.0 | 0.29 |
| Immunocompromised n/% | 65 | 20.8 | 42 | 20.7 | 0.71 | 8 | 23.5 | 0.68 | 15 | 20.0 | 0.90 |
| Previous Antibiotics n/% | 39 | 13.1 | 18 | 9.4 | 0.58 | 4 | 12.5 | 0.21 | 17 | 23.0\* | **<0.01** |
| Biomarkers |  |  |  |  |  |  |  |  |  |  |  |
| WBC [10e9cells/L] Median/IQR | 11.1 | 8.0-15.3 | 12.27 | 9.02-16.43 | **0.05** | 10.465 | 7.43-14.67 | 0.26 | 8.51 | 7.05-14.04 | **<0.01** |
| Neutropenic n/% | 5 | 1.6 | 4 | 2.0 | 0.41 | 0 | 0 | 0.50 | 1 | 1.3 | 0.72 |
| CRP [mg/L] Median/IQR | 70.8 | 21.6-178.3 | 101.8 | 26.4-201.8 | **<0.01** | 33 | 9.1-85.4 | 0.14 | 51.6 | 18-111.1 | **<0.01** |
| PCT [µg/L] Median/IQR | 0.3 | 0.11-1.09 | 0.43 | 0.15-1.46 | **<0.01** | 0.155 | 0.07-0.37 | 0.68 | 0.2 | 0.07-0.52 | **<0.01** |
| BVN2 Bacterial Median/IQR | 0.38 | 0.22-0.58 | 0.46 | 0.31-0.67 | **<0.01** | 0.318 | 0.14-0.47 | **0.03** | 0.18 | 0.05-0.44 | **<0.01** |
| BVN2 Viral Median/IQR | 0.14 | 0.05-0.37 | 0.09 | 0.04-0.23 | **<0.01** | 0.1635 | 0.08-0.57 | **<0.01** | 0.59 | 0.25-0.91 | **<0.01** |
| BVN2 Non-Infected Median/IQR | 0.30 | 0.14-0.48 | 0.36 | 0.19-0.49 | 0.625 | 0.41 | 0.19-0.48 | **<0.01** | 0.14 | 0.04-0.3 | **<0.01** |

SBP = Systolic Blood Pressure, T2D = Type 2 Diabetes, COPD = Chronic Obstructive Pulmonary Disease, WBC = White Blood Cell, CRP = C-Reactive Protein, PCT = Procalcitonin.