**Supplemental Tables: Performance of Individual Urinalysis Parameters for Predicting Significant Bacteriuria for Different Sub-populations (Inpatient vs Outpatient, Catheterized vs Non catheterized, Based on Age/Sex)**

**Table S1: Single Parameter Estimates by Setting - Inpatient**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Leukocyte Esterase\***  **N=142,484** | ≥**Trace** | | ≥**1+** | ≥**2+** |
| **Sensitivity** | 0.87 | | 0.79 | 0.62 |
| **Specificity** | 0.53 | | 0.65 | 0.81 |
| **PPV** | 0.41 | | 0.45 | 0.54 |
| **NPV** | 0.92 | | 0.89 | 0.85 |
| **WBC Count/hpf\***  **N=104,422** | ≥5 | ≥10 | | ≥20 |
| **Sensitivity** | 0.86 | 0.73 | | 0.57 |
| **Specificity** | 0.46 | 0.65 | | 0.79 |
| **PPV** | 0.37 | 0.43 | | 0.50 |
| **NPV** | 0.90 | 0.87 | | 0.83 |
| **Nitrite\***  **N=142,331** | Positive |  | |  |
| **Sensitivity** | 0.39 |  | |  |
| **Specificity** | 0.94 |  | |  |
| **PPV** | 0.70 |  | |  |
| **NPV** | 0.81 |  | |  |
| **Bacteria Count/hpf\***  **N=116,987** | 5-50 | >50 | |  |
| **Sensitivity** | 0.93 | 0.77 | |  |
| **Specificity** | 0.34 | 0.72 | |  |
| **PPV** | 0.39 | 0.55 | |  |
| **NPV** | 0.91 | 0.87 | |  |

**\*Note that n may vary by parameter as different UA panels may or may not include all**

**Table S2: Single Parameter Estimates by Setting - Outpatient**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Leukocyte Esterase\***  **N=79,425** | ≥Trace | | ≥1+ | ≥2+ |
| **Sensitivity** | 0.89 | | 0.78 | 0.55 |
| **Specificity** | 0.55 | | 0.69 | 0.85 |
| **PPV** | 0.48 | | 0.54 | 0.64 |
| **NPV** | 0.91 | | 0.87 | 0.80 |
| **WBC Count/hpf\***  **N=30,258** | ≥5 | ≥10 | | ≥20 |
| **Sensitivity** | 0.82 | 0.70 | | 0.56 |
| **Specificity** | 0.66 | 0.79 | | 0.88 |
| **PPV** | 0.44 | 0.53 | | 0.60 |
| **NPV** | 0.92 | 0.89 | | 0.86 |
| **Nitrite\***  **N=79,383** | Positive |  | |  |
| **Sensitivity** | 0.43 |  | |  |
| **Specificity** | 0.96 |  | |  |
| **PPV** | 0.83 |  | |  |
| **NPV** | 0.78 |  | |  |
| **Bacteria Count/hpf\***  **N=34,315** | 5-50 | >50 | |  |
| **Sensitivity** | 0.93 | 0.76 | |  |
| **Specificity** | 0.47 | 0.82 | |  |
| **PPV** | 0.42 | 0.65 | |  |
| **NPV** | 0.94 | 0.89 | |  |

\*Note that n may vary by parameter as different UA panels may or may not include all

**Table S3: Single Parameter Estimates based on presence of catheter – Non-Catheterized Samples**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Leukocyte Esterase\***  **N=180,516** | ≥**Trace** | | ≥**1+** | ≥**2+** |
| Sensitivity | 0.86 | | 0.76 | 0.56 |
| Specificity | 0.57 | | 0.70 | 0.85 |
| PPV | 0.42 | | 0.48 | 0.58 |
| NPV | 0.92 | | 0.89 | 0.84 |
| **WBC Count/hpf\***  **N=101,554** | **≥5** | **≥10** | | **≥20** |
| Sensitivity | 0.83 | 0.70 | | 0.55 |
| Specificity | 0.56 | 0.72 | | 0.84 |
| PPV | 0.37 | 0.45 | | 0.52 |
| NPV | 0.91 | 0.88 | | 0.85 |
| **Nitrite\***  **N=180,373** | **Positive** |  | |  |
| Sensitivity | 0.41 |  | |  |
| Specificity | 0.96 |  | |  |
| PPV | 0.77 |  | |  |
| NPV | 0.81 |  | |  |
| **Bacteria Count/hpf\***  **N=112,982** | **5-50** | **>50** | |  |
| Sensitivity | 0.92 | 0.77 | |  |
| Specificity | 0.39 | 0.76 | |  |
| PPV | 0.38 | 0.56 | |  |
| NPV | 0.93 | 0.89 | |  |

\*Note that n may vary by parameter as different UA panels may or may not include all

**Table S4: Single Parameter Estimates based on presence of catheter – Catheterized Samples**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Leukocyte Esterase\***  **N=22,584** | ≥**Trace** | | ≥**1+** | ≥**2+** |
| Sensitivity | 0.92 | | 0.87 | 0.73 |
| Specificity | 0.45 | | 0.57 | 0.75 |
| PPV | 0.50 | | 0.55 | 0.63 |
| NPV | 0.91 | | 0.88 | 0.82 |
| **WBC Count/hpf\***  **N=** | **≥5** | **≥10** | | **≥20** |
| Sensitivity | 0.88 | 0.77 | | 0.62 |
| Specificity | 0.43 | 0.61 | | 0.75 |
| PPV | 0.43 | 0.49 | | 0.55 |
| NPV | 0.87 | 0.84 | | 0.80 |
| **Nitrite\***  **N=22,544** | **Positive** |  | |  |
| Sensitivity | 0.37 |  | |  |
| Specificity | 0.88 |  | |  |
| PPV | 0.64 |  | |  |
| NPV | 0.70 |  | |  |
| **Bacteria Count/hpf\***  **N=20,904** | **5-50** | **>50** | |  |
| Sensitivity | 0.92 | 0.70 | |  |
| Specificity | 0.39 | 0.77 | |  |
| PPV | 0.48 | 0.66 | |  |
| NPV | 0.88 | 0.80 | |  |

\*Note that n may vary by parameter as different UA panels may or may not include all

**Table S5: Single Parameter Estimates stratified by Age and Sex**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Female, <65 years of age** | | | | |
| **Leukocyte Esterase\***  **N=85,567** | ≥**Trace** | | ≥**1+** | ≥**2+** |
| Sensitivity | 0.84 | | 0.73 | 0.51 |
| Specificity | 0.48 | | 0.62 | 0.81 |
| PPV | 0.35 | | 0.39 | 0.46 |
| NPV | 0.90 | | 0.88 | 0.83 |
| **WBC Count/hpf\***  **N=52,994** | **≥5** | **≥10** | | **≥20** |
| Sensitivity | 0.85 | 0.71 | | 0.54 |
| Specificity | 0.44 | 0.64 | | 0.79 |
| PPV | 0.32 | 0.38 | | 0.45 |
| NPV | 0.90 | 0.87 | | 0.85 |
| **Nitrite\***  **N=85,506** | **Positive** |  | |  |
| Sensitivity | 0.41 |  | |  |
| Specificity | 0.95 |  | |  |
| PPV | 0.74 |  | |  |
| NPV | 0.83 |  | |  |
| **Bacteria Count/hpf\***  **N=58,252** | **5-50** | **>50** | |  |
| Sensitivity | 0.94 | 0.78 | |  |
| Specificity | 0.21 | 0.61 | |  |
| PPV | 0.31 | 0.43 | |  |
| NPV | 0.91 | 0.88 | |  |
| **Female, ≥65 years of age** | | | | |
| **Leukocyte Esterase\***  **N=66,027** | ≥**Trace** | ≥**1+** | | ≥**2+** |
| Sensitivity | 0.90 | 0.82 | | 0.61 |
| Specificity | 0.45 | 0.60 | | 0.78 |
| PPV | 0.50 | 0.56 | | 0.64 |
| NPV | 0.88 | 0.84 | | 0.76 |
| **WBC Count/hpf\***  **N=35,003** | ≥**5** | ≥**10** | | ≥**20** |
| Sensitivity | 0.85 | 0.71 | | 0.55 |
| Specificity | 0.49 | 0.67 | | 0.80 |
| PPV | 0.47 | 0.53 | | 0.59 |
| NPV | 0.86 | 0.81 | | 0.77 |
| **Nitrite\***  **N=65,989** | **Positive** |  | |  |
| Sensitivity | 0.43 |  | |  |
| Specificity | 0.95 |  | |  |
| PPV | 0.83 |  | |  |
| NPV | 0.73 |  | |  |
| **Bacteria Count/hpf\***  **N=40,241** | **5-50** | **>50** | |  |
| Sensitivity | 0.94 | 0.81 | |  |
| Specificity | 0.35 | 0.75 | |  |
| PPV | 0.49 | 0.68 | |  |
| NPV | 0.90 | 0.86 | |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Male, <65 years of age** | | | | |
| **Leukocyte Esterase\***  **N=33,450** | ≥**Trace** | | ≥**1+** | ≥**2+** |
| Sensitivity | 0.84 | | 0.78 | 0.62 |
| Specificity | 0.70 | | 0.79 | 0.90 |
| PPV | 0.39 | | 0.46 | 0.60 |
| NPV | 0.95 | | 0.94 | 0.91 |
| **WBC Count/hpf\***  **N=22,589** | ≥**5** | ≥**10** | | ≥**20** |
| Sensitivity | 0.84 | 0.72 | | 0.59 |
| Specificity | 0.61 | 0.76 | | 0.86 |
| PPV | 0.33 | 0.41 | | 0.49 |
| NPV | 0.94 | 0.92 | | 0.90 |
| **Nitrite\***  **N=33,405** | **Positive** |  | |  |
| Sensitivity | 0.36 |  | |  |
| Specificity | 0.95 |  | |  |
| PPV | 0.61 |  | |  |
| NPV | 0.87 |  | |  |
| **Bacteria Count/hpf\***  **N=24,734** | **5-50** | **>50** | |  |
| Sensitivity | 0.88 | 0.68 | |  |
| Specificity | 0.58 | 0.90 | |  |
| PPV | 0.38 | 0.66 | |  |
| NPV | 0.94 | 0.91 | |  |
| **Male, ≥65 years of age** | | | | |
| **Leukocyte Esterase\***  **N=36,887** | ≥**Trace** | ≥**1+** | | ≥**2+** |
| Sensitivity | 0.90 | 0.84 | | 0.69 |
| Specificity | 0.63 | 0.73 | | 0.84 |
| PPV | 0.50 | 0.56 | | 0.65 |
| NPV | 0.94 | 0.92 | | 0.87 |
| **WBC Count/hpf\***  **N=24,115** | ≥**5** | **≥10** | | **≥20** |
| Sensitivity | 0.87 | 0.78 | | 0.65 |
| Specificity | 0.59 | 0.73 | | 0.83 |
| PPV | 0.44 | 0.52 | | 0.58 |
| NPV | 0.92 | 0.90 | | 0.86 |
| **Nitrite\***  **N=36,836** | **Positive** |  | |  |
| Sensitivity | 0.38 |  | |  |
| Specificity | 0.93 |  | |  |
| PPV | 0.69 |  | |  |
| NPV | 0.78 |  | |  |
| **Bacteria Count/hpf\***  **N=28,102** | **5-50** | **>50** | |  |
| Sensitivity | 0.91 | 0.71 | |  |
| Specificity | 0.55 | 0.87 | |  |
| PPV | 0.50 | 0.73 | |  |
| NPV | 0.92 | 0.86 | |  |