

Supplemental Materials

Table S1. Admitting or present on admission diagnoses from ICD-10 Codes

Variable	Codes
Pneumonia	481, 481, 482.2, 482.30, 482.31, 482.32, 482.39, 482.84, 482.9, 483.0, 483.1, 483.8, 485, 486, J13, J18.0, J18.1, J18.8, J18.9, J15.0, J15.3, J15.4, J15.5, J15.6, J15.7, J15.8, J15.9, J16.0, J16.8, J14, 480, 480.1, 480.2, 480.3, 480.8, 480.9, 482.4, 482.41, 482.42, 482.49, 482.81, 482.82, 482.83, 482.89, 483, 484.3, 484.5, 484.6, 484.7, 484.8, 487, 488.01, 488.11, 488.81, J10.00, J10.01, J10.08, J11.0, J11.00, J11.08, J12.0, J12.1, J12.2, J12.3, J12.8, J12.81, J12.89, J15.1, J15.20, J15.21, J15.211, J15.212, J15.29, J69.0
Fever	R50, R50.2, R50.8, R50.81, R50.82, R50.83, R50.9
Neutropenia	D70, D70.0-4, D70.8-9
Sepsis	R65.20, R65.21, 670.20, 670.22, 670.24, 995.91, 995.92, A02.1, A22.7, A26.7, A32.7, A40, A40.0, A40.1, A40.3, A40.8, A40.9, A41-2, A54.86, B37.7, O03.37, O85, O86.04, P36
Pyelonephritis	590.0, 590.1, 590.10, 590.8, 590.80, 590.81, A02.25, D86.84, N10, N11.1

Table S2. Logical Observation Identifiers, Names and Codes (LOINC) Laboratory Codes

Platelets	26515-7, 777-3, 778-1, 5907-1, 74464-9, 79427-1, 97995-5
Procalcitonin	75241-0, 33959-8, LG15749-1
WBC	58410-2, 26464-8, 6690-2, 804-551383-8, 12227-5, 33256-9, 26464-8, 30406-3, 57021-8, 57022-6, 57782-5,

Creatinine	2160-0, 44784-7, 35203-9, 14682-9, 21232-4, 38483-4, 59826-8, 77140-2, 24362-6, 50261-7, 24320-4, 24321-2, 24322-0, 24323-8, 45064-3, 45065-0, 51990-0, 70219-1, 88843-8, 89044-2
Albumin	1751-7, 61151-7, 61152-5, 54347-0, 62235-7, 62234-0, 76631-1, 77148-5, 24322-0, 24323-8, 45065-0, 89044-2
Lactate	2524-7, 32693-4, 51829-0, 30242-2, 2519-7, 30241-4, 14118-4, 19239-3, 19240-1, 2518-9, 2519-7, 32132-3, 32133-1, 35245-0, 59032-3,

Table S3. Prediction Models

PCT+predictors model	-2.693935592 (Intercept) + 0.001342232*AGE + 0.016094408*PCT + 0.083899681*diabetes + 0.230911834*liver_disease - 0.088039088*malignancy -0.265200533* COPD + 0.03776216*renal_disease + 0.082137661*CHF + 1.003462724*Admit_pyelo + 0.154997402*Admit_FN + 1.954755840*Admit_sepsis + 0.054753876*Abnormal_scr + 0.260894165*Abnormal_alb + 0.520389720*Abnormal_plt + 0.108123071*Abnormal_WBC
Predictors only model	-2.6465545788 (Intercept) + 0.0005363365*AGE + 0.0615012849*diabetes + 0.1856434769*liver_disease - 0.0929392763*malignancy - 0.2810399153*COPD + 0.0123805899*renal_disease + 0.0708894530*CHF + 1.0333367679*Admit_pyelo + 0.1375249469*Admit_FN + 2.0675191862*Admit_sepsis + 0.2489875526*Abnormal_scr + 0.3187883713*Abnormal_alb + 0.5844923683*Abnormal_plt + 0.1158177503*Abnormal_WBC

Figure S1. Calibration of bacteremia model with clinical characteristics and lab results excluding PCT

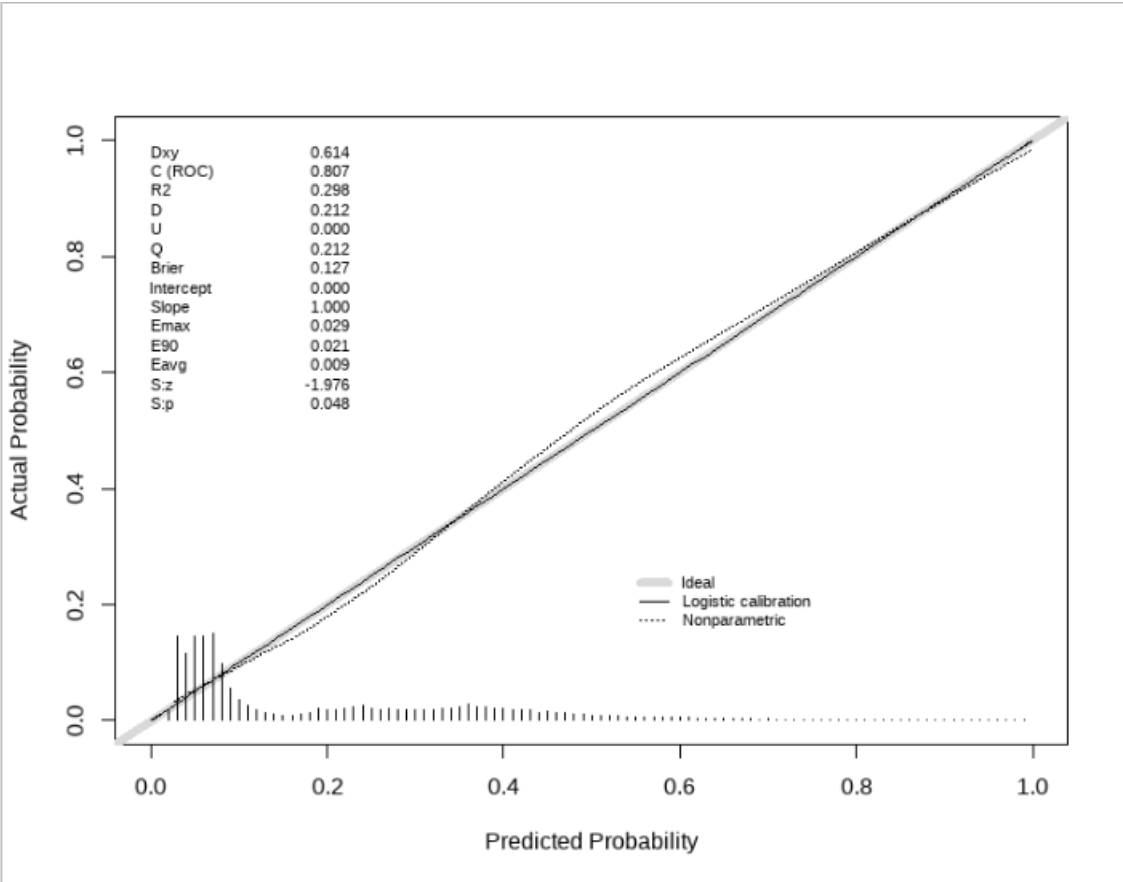


Figure S2. Calibration of bacteremia model with clinical characteristics and lab results including PCT

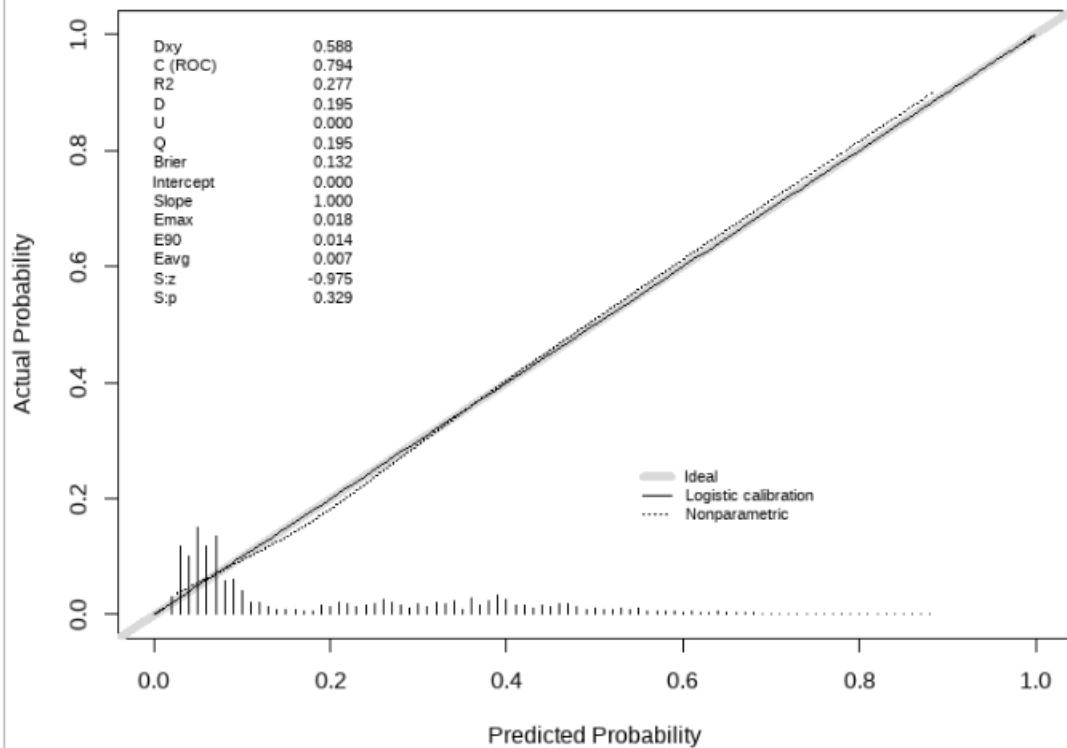


Table S4. Decision making on advanced diagnostic testing using direct specimens

PCT Level (ng/dL)	PCT only	Predicted Risk without PCT			Predicted Risk with PCT		
		Low (<25%)	Med (25-75%)	High (>75%)	Low (<25%)	Med (25-75%)	High (>75%)
<0.5	No	-	-	-	No	No	Yes
0.5< to <2	No	-	-	-	No	No	Yes
>2 to <10	No	-	-	-	No	Yes	Yes
>10	Yes	-	-	-	No	Yes	Yes
Overall	-	No	No	Yes	-	-	-