



Procalcitonin in Adults with Lower Respiratory Tract Infections

Initial Value (Baseline)

Procalcitonin Value	<0.1 ng/mL	0.1-0.24 ng/mL	0.25-0.5 ng/mL	>0.5 ng/mL
Antibiotic START recommendation	Initiation strongly discouraged	Initiation discouraged	Initiation encouraged	Initiation strongly encouraged
Comments	<ul style="list-style-type: none"> Hold on giving antibiotics. Consider alternate diagnosis. Repeat procalcitonin in 6-12 hours if antibiotics not initiated and no clinical improvement. If clinically unstable, immunosuppressed, or high-risk, consider overruling. (PSI Class IV-V, CURB-65 >3). 		<ul style="list-style-type: none"> Start antibiotics. Repeat every 2-3 days to consider early antibiotic cessation. See follow-up table below. If initial value is >5-10 ng/mL, assess for reduction of 90% from peak values. 	
Follow-Up (Repeat procalcitonin level Q48-72 hours)				
Procalcitonin Value	<0.1 ng/mL or ↓ by >90%	0.1-0.24 ng/mL or ↓ by >80%	0.25-0.5 ng/mL	>0.5 ng/mL
Antibiotic STOP recommendation	Cessation strongly encouraged	Cessation encouraged	Cessation discouraged	Cessation strongly discouraged
Comments	<ul style="list-style-type: none"> Stop antibiotics. Consider continuing if clinically unstable. 		<ul style="list-style-type: none"> Continue antibiotics. If procalcitonin is rising or not adequately decreasing, consider possible treatment failure and evaluate for need for expanding antibiotic coverage or further diagnostic evaluation. 	

Procalcitonin in Adults with Sepsis without a Source

Follow-Up (Repeat procalcitonin level Q24h or with morning labs daily x3 days)

Procalcitonin Value	<0.25 ng/mL	0.25-0.49 ng/mL or ↓ by >80%	≥ 0.5 ng/mL AND ↓ by >80%	≥ 0.5 ng/mL AND rising or stable
Antibiotic STOP recommendation	Cessation strongly encouraged	Cessation encouraged	Cessation discouraged	Cessation strongly discouraged
Comments	<ul style="list-style-type: none"> Stop antibiotics. Consider continuing if clinically unstable. 		<ul style="list-style-type: none"> Continue antibiotics. A procalcitonin value which is rising or not declining at least 10% per day is a poor prognostic indicator and suggests infection is not controlled. Consider expanding antibiotic coverage or further diagnostic evaluation. 	

Exclusion Criteria: <18 years old; pregnant/breastfeeding; CrCl <30 mL/min or hemodialysis (renally excreted biomarker); severe immunosuppression (eg ANC <500, HIV with CD4 <200, transplant patients, or on immune modulators); severe trauma, burn, or major surgery within 24 hours (particularly abdominal surgery); chronic infections necessitating antibiotics (eg endocarditis, osteomyelitis, tuberculosis); cystic fibrosis; small cell lung cancer or medullary thyroid cancer; receipt of OKT-3 and/or anti-thymocyte globulin; end-stage cancer; concurrent infections.

Source: ANMC Clinical Guidelines.
Click for hyperlink to full guideline,
including accompanying resources.

This guideline is designed for the general use of most patients but may need to be adapted to meet the special needs of a specific patient as determined by the medical practitioner.

Approved by MSEC unknown date.

If comments about this guideline, please contact Ellen_Hodges@ykhc.org.