ONLINE SUPPLEMENTARY MATERIAL

Consensus recommendations for procalcitonin-guided therapy of acute respiratory infections by treatment setting

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| **Primary Care** |
| **PCT cut-off** | **<0.1 µg/L** | **<0.25 µg/L** | **≥0.25 µg/L** | **>0.5 µg/L** |
| **Recommendation regarding use of antibiotics** | Strongly discouraged | Discouraged | Encouraged | Strongly encouraged |
| **Overruling the algorithm** | Consider use of antibiotics if patients are clinically unstable, have strong evidence of pneumonia, are at risk (i.e., COPD GOLD III-IV categories), or need hospitalization |
| **Follow-up/other comments** | Follow-up only needed if no symptom resolution after 1–2 days; if clinical situation is not improving; consider antibiotics if PCT level increases to ≥0.25 µg/L | Clinical re-evaluation as appropriate |
| **Emergency department** |
| **PCT cut-off** | **<0.1 µg/L** | **≤0.25 µg/L** | **>0.25 µg/L** | **≥0.5 µg/L** |
| **Recommendation regarding use of antibiotics** | Strongly discouraged | Discouraged | Encouraged | Strongly encouraged |
| **Overruling the algorithm** | Overruling of PCT algorithm permitted if patients are unstable, are at risk for adverse events (i.e., haemodynamic or respiratory instability, infiltrate in chest X-ray, or fever ≥38°C) |
| **Follow-up/other comments** | Re-evaluation after 6–24h if antibiotics were initially withheld | Re-evaluation if patient is clinically worsening and consider stopping antibiotics according to regularly measured PCT levels |
| **Intensive care unit** |
| **PCT cut-off** | **<0.25 µg/L** | **<0.5 µg/L** | **≥0.5 µg/L** | **≥1 µg/L** |
| **Recommendation regarding use of antibiotics** | Low PCT levels make a bacterial unlikely. Initiation of antibiotics is still advised in all patients that have strong suspicion of sepsis (see below) | Encouraged | Strongly encouraged |
| **Overruling the algorithm** | Empirical antibiotic therapy for all patients with clinical suspicion of infection; overruling based on clinical judgement |
| **Follow-up/ other comments** | Final decision according to treating physician, PCT should be measured on regular base | Discontinue antibiotics if PCT dropped by 80%-90% of peak levels |

Abbreviations: COPD, chronic obstructive pulmonary disease; GOLD, Global Initiative for Obstructive Lung Disease; PCT, procalcitonin

Quality of included trials according to GRADE classification

