To the Editor

Several studies have attempted to determine the value of the Gram stain in the diagnosis and therapy in different populations of patients with Ventilator-associated Pneumonia (VAP), with conflicting results. In our hospital, aiming at restricting antibiotics overuse and prevent multidrug-resistant organisms induction and associated costs, a protocol created by the local Hospital Infection Control Committee precludes the use vancomycin for initial empiric treatment of VAP in the absence of gram-positive coci on gram stain of tracheal aspirate. To validate this protocol, we developed the present study to evaluate the accuracy of the Gram stain to predict the existence of Staphylococcus aureus in culture in patients suspected of VAP.

We found that Gram stain of tracheal aspirate could discard the presence of Staphylococcus aureus in patients with clinical diagnosis of VAP with a 92.8% Negative Predictive Value. Therefore, 7.2% of patients with S aureus would not be covered by an empiric treatment that precludes the use vancomycin when there is not identification of Gram-positive coci in clusters in tracheal aspirate.

It is unquestionable that antibiotic treatment must be started early and there is no clear advantage of late escalation. Our findings indicate that taking account of the microbial ecology of the ICU, S aureus coverage should be considered.