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# Macrolide combination therapy for hospitalised CAP patients? An individualised approach supported by machine learning

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The use of macrolides in combination with betalactams to improve outcomes in patients with community-acquired pneumonia (CAP) remains a topic of controversy, mainly because most of the evidence comes from observational studies rather than from randomised clinical trials (RCTs). Some recent studies have suggested that macrolides are effective in patients with *Streptococcus pneumoniae* infection plus a high systemic inflammatory response [1]. However, macrolides can be harmful [2] and there is a clear need to identify CAP phenotypes that would benefit from macrolides without suffering negative effects. We are unlikely to solve this question using conventional study designs; rather, we need to explore new technologies, among them the use of models obtained with machine learning methodology.