



Effect of interleukin-6 receptor antagonists in critically ill adult patients with COVID-19 pneumonia: two randomised controlled trials of the CORIMUNO-19 Collaborative Group

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In two prospective randomised studies of COVID-19 patients in the ICU, anti-IL-6 receptor did not significantly increase early survival without mechanical ventilation. However, due to the small number of patients, no definitive conclusion could be drawn. <https://bit.ly/3GoFAJV>

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Abstract

Background Our objective was to determine whether anti-interleukin (IL)-6 receptors improve outcomes of critically ill patients with coronavirus disease 2019 (COVID-19) pneumonia. We report on two cohort-embedded, investigator-initiated, multicentre, open-label, Bayesian randomised controlled clinical trials.

Methods Patients were randomly assigned to receive either usual care (UC) or UC+tocilizumab (TCZ) 8 mg·kg⁻¹ (TOCI-2 trial) or UC or UC+sarilumab (SARI) 200 mg (SARI-2 trial), both intravenously on day 1 and, if clinically indicated, on day 3.

Results Between 31 March and 20 April 2020, 97 patients were randomised in the TOCI-2 trial, to receive UC (n=46) or UC+TCZ (n=51). At day 14, numbers of patients who did not need noninvasive ventilation (NIV) or mechanical ventilation (MV) and were alive with TCZ or UC were similar (47% *versus* 42%; median posterior hazard ratio (HR) 1.19, 90% credible interval (CrI) 0.71–2.04), with a posterior probability of HR >1 of 71.4%. Between 27 March and 4 April 2020, 91 patients were randomised in the SARI-2 trial, to receive UC (n=41) or UC+SARI (n=50). At day 14, numbers of patients who did not need NIV or MV and were alive with SARI or UC were similar (38% *versus* 33%; median posterior HR 1.05, 90% CrI 0.55–2.07), with a posterior probability of HR >1 of 54.9%. Overall, the risk of death up to day 90 was: UC+TCZ 24% *versus* UC 30% (HR 0.67, 95% CI 0.30–1.49) and UC+SARI 29% *versus* UC 39% (HR 0.74, 95% CI 0.35–1.58). Both TCZ and SARI increased serious infectious events.

Conclusion In critically ill patients with COVID-19, anti-IL-6 receptors did not significantly increase the number of patients alive without any NIV or MV by day 14.

