

CORRESPONDENCE

Author's reply

M.M.G. Mulder¹, M.D. Lancé²

¹Department of Intensive Care, Maastricht University Medical Centre+, Maastricht, the Netherlands

²Department of Anaesthesiology, ICU & Perioperative Medicine, Hamad Medical Corporation, Doha, Qatar

Correspondence

M. Mulder - mmg.mulder@student.maastrichtuniversity.nl

Dear Dr. Goyal,

Thanks a lot for reading our review article and your critical note regarding the mortality rate in patients receiving ECMO therapy. We totally agree that knowledge of mortality rates on ECMO is very important in daily critical care decision-making.

In the correspondence, you describe our reported mortality of 57% on VV ECMO and 66% on VA ECMO (Karagiannidis et al.) as too high.^[1] In their international summary, the Extracorporeal Life Support Organisation published mortality rates of 39% for VV ECMO, 50% for VA ECMO^[2] and the Cesar trial had a mortality rate of 43% until six months after discharge.^[3]

Karagiannidis et al. published data from the Federal Statistical Office of Germany, which collected data from the whole country during a seven-year period. Besides the published ECMO

mortality rates, there are no data available for comorbidities and outcome of the patients. Furthermore, in contrast to the Cesar trial, there are no exclusion criteria, resulting in inclusion of all patients who are connected to ECMO in the study. Thereby, in our opinion, the data are not affected by inclusion criteria and hence representative for an average ECMO centre. On the other hand, data from the ELSO international summary give a more optimistic view about the ECMO mortality rates because of the strict ELSO data policy for participating centres. This does not reflect daily practice as participation is voluntarily. Finally, despite enrolling patients from the whole of the UK, in terms of treatment the Cesar trial is a single-centre study which mainly focused on respiratory failure.

Summing this up, the real mortality might be somewhere in between these ranges and some centres might have better while others have worse results.

References

1. Karagiannidis C, Brodie D, Strassmann S, et al. Extracorporeal membrane oxygenation: evolving epidemiology and mortality. *Intensive Care Med.* 2016;42:889-96.
2. International Summary of the ELSO database July 2017, <https://www.elseo.org/>.
3. Peek GJ, Mugford M, Tiruvoipati R, et al; CESAR Trial Collaboration. Efficacy and economic assessment of Conventional Ventilatory Support Versus Extracorporeal Membrane Oxygenation for Severe Adult Respiratory Failure (CESAR): a multicentre randomised controlled trial. *Lancet.* 2009; 374:1351-63.