

Abstract

Beyond the guidelines: A critical appraisal of the 2022 ELSO ECMO Circuit Guidelines

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25 September 2026

Background

The 2022 ELSO Guidelines for Adult and Pediatric Extracorporeal Membrane Oxygenation Circuits were developed to provide practical recommendations for the design, monitoring and safe management of ECMO circuits across all patient populations. As a consensus document, the guideline reflects expert opinion supported by the best available evidence at the time of publication and was never intended to represent an immutable standard of care.

Purpose

This lecture aims to critically appraise the 2022 ELSO circuit guidelines from the perspective of current clinical practice, technological innovation and future developments in extracorporeal support.

Content

The presentation will highlight the strengths of the guideline in promoting safety, standardization and education while discussing areas where recommendations rely predominantly on expert consensus rather than robust clinical evidence. Emerging technologies will be examined in relation to the original recommendations. Finally, the lecture will identify knowledge gaps and propose priorities for future revisions of the ELSO circuit guidelines.

Conclusions

Four years after publication, the 2022 ELSO circuit guideline remains an essential reference for ECMO practice. However, rapid technological evolution and expanding clinical experience highlight the need for continuous reassessment. Rather than reviewing the guideline itself, this lecture will explore how its recommendations can be interpreted, challenged and refined to support the next generation of ECMO circuit management