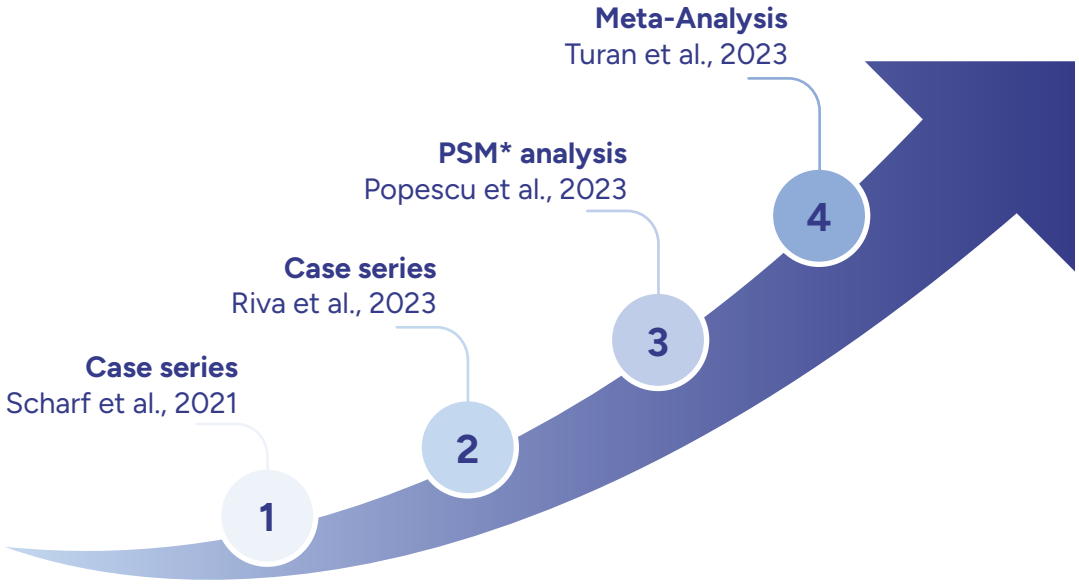
Support the liver with CytoSorb® hemoadsorption

The liver is considered the primary organ of detoxification. Major impairment in this function results in accumulation of various liver toxins, contributing to secondary organ dysfunction including the liver itself. A vicious cycle may occur, and support of excretory liver function might be required.

Vicious cycle of liver dysfunction

Evolution of evidence



* Propensity Score Matched

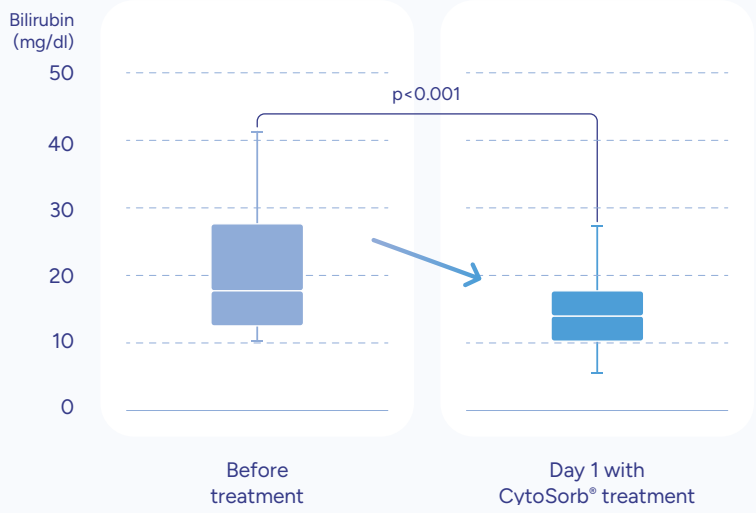
CytoSorbents™

Key study outcomes

1 **Scharf et al.,**
Sci Rep 2021; 11(1); 10190

Significant bilirubin reduction in patients with acute liver dysfunction.

Development of bilirubin levels with CytoSorb®

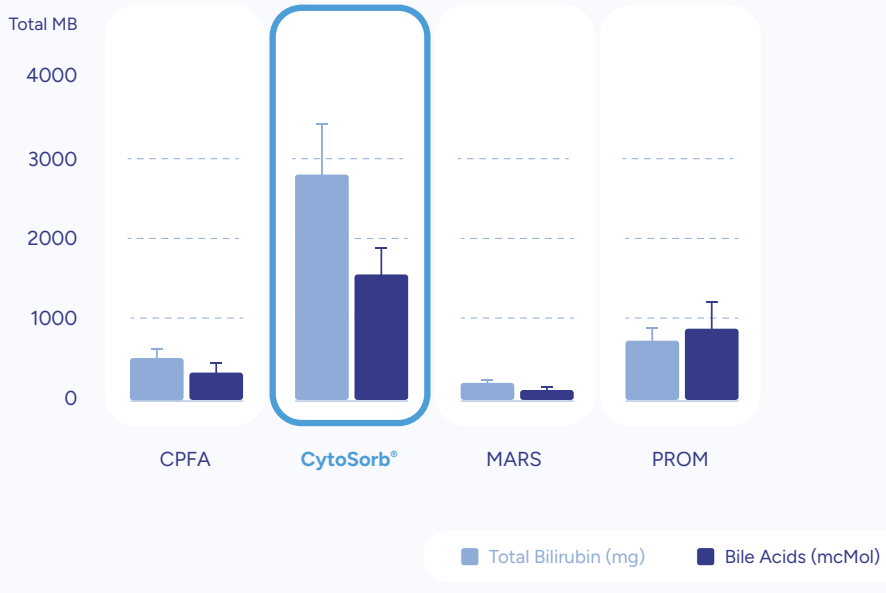


Successful elimination of bilirubin

2 **Riva et al.,**
J Art Orgs 2023; epub

Comparing all techniques, CytoSorb® was the most efficient system and might represent the most suitable option as a liver support technique

Removal of total substance amount (= Mass Balance)

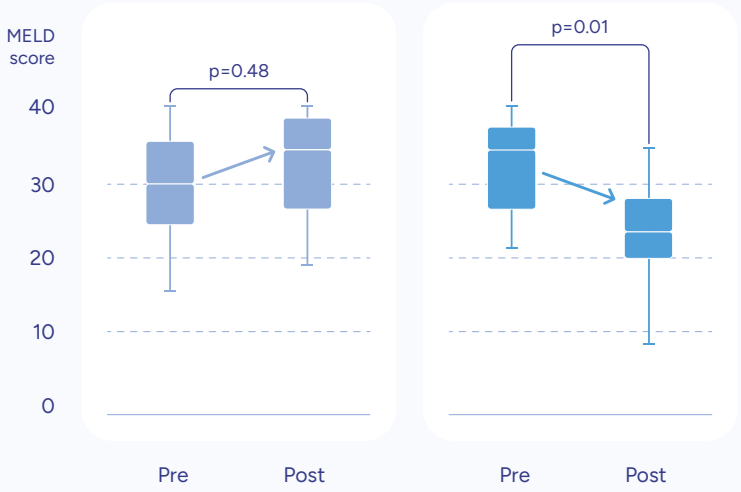


Superior performance compared to other liver support systems

3 Popescu et al.,
J Clin Med 2023; 12(6):2258

CytoSorb® may provide a more extensive biochemical control of liver failure compared to MARS.

Comparison of MELD score before and after treatment

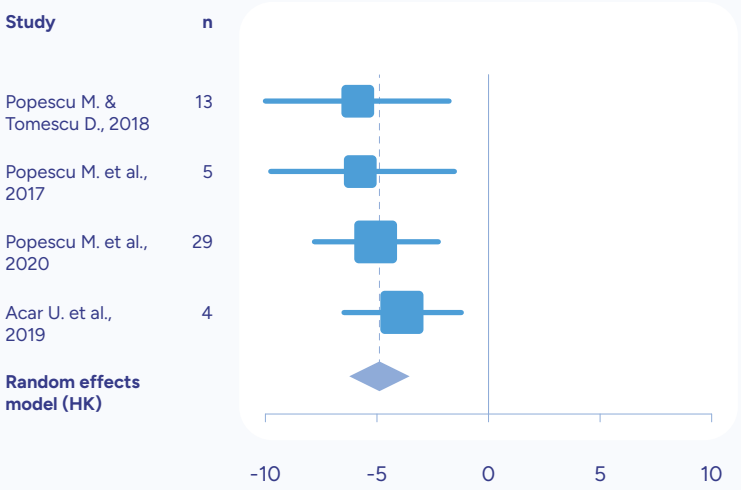


Superior detoxification & clinical performance compared to MARS

4 Turan et al.,
Biomedicines 2024, 12(1), 67

Results provide further support that adjuvant therapy with hemoadsorption is a feasible, safe, and effective method to reduce circulating bilirubin levels

Forest plot of total bilirubin levels pre- vs. post treatment



Meta analysis confirms effective bilirubin reduction

Conclusion

Increasing evidence for safe and effective usage of CytoSorb® for liver support

Key study facts

	1 Scharf et al., Sci Rep 2021; 11(1); 10190	2 Riva et al., J Art Orgs 2023; epub
Title	Successful elimination of bilirubin in critically ill patients with acute liver dysfunction using a cytokine adsorber and albumin dialysis: a pilot study	Extracorporeal Liver Support Techniques: a comparison
Aim	Compare bilirubin removal in patients with acute liver dysfunction; 33 patients treated with CytoSorb® versus 6 patients treated with ADVOS	Compared 17 pts who had 28 CytoSorb® treatments with 19 pts who had 37 coupled plasma filtration adsorption (CPFA) treatments, 1 pt who had 3 MARS treatments, 1 pt who had 5 prometheus treatments, and 1 pt who had 2 plasma adsorption perfusion treatments
Patients	39 (33/6) patients	39 (17/19/1/1/1) patients
Type of study	Case series	Case series

	3 Popescu et al., J Clin Med 2023; 12(6):2258	4 Turan et al., Biomedicines 2024, 12,67.
Title	Artificial Liver Support with CytoSorb® and MARS in Liver Failure: A Retrospective Propensity Matched Analysis	Hemoadsorption Therapy for Critically Ill Patients with Acute Liver Dysfunction: A Meta-Analysis and Systematic Review
Aim	Comparison of CytoSorb® & Molecular Adsorbent Recirculating System (MARS) in ALF and ACLF patients	To assess the effect of hemoadsorption in 335 (232 on CytoSorb) patients on clinical outcomes and the removal of total bilirubin, as well as the reduction in liver transaminases in critical illness-associated acute liver dysfunction.
Patients	15 vs 15 patients	335 (232) patients
Type of study	Propensity Score matched analysis	Meta-analysis

CytoSorbents™

CytoSorbents Europe GmbH
Müggelseedamm 131
12587 Berlin | Germany

T +49 30 65 49 91 45
F +49 30 65 49 91 46
support@cytosorbents.com