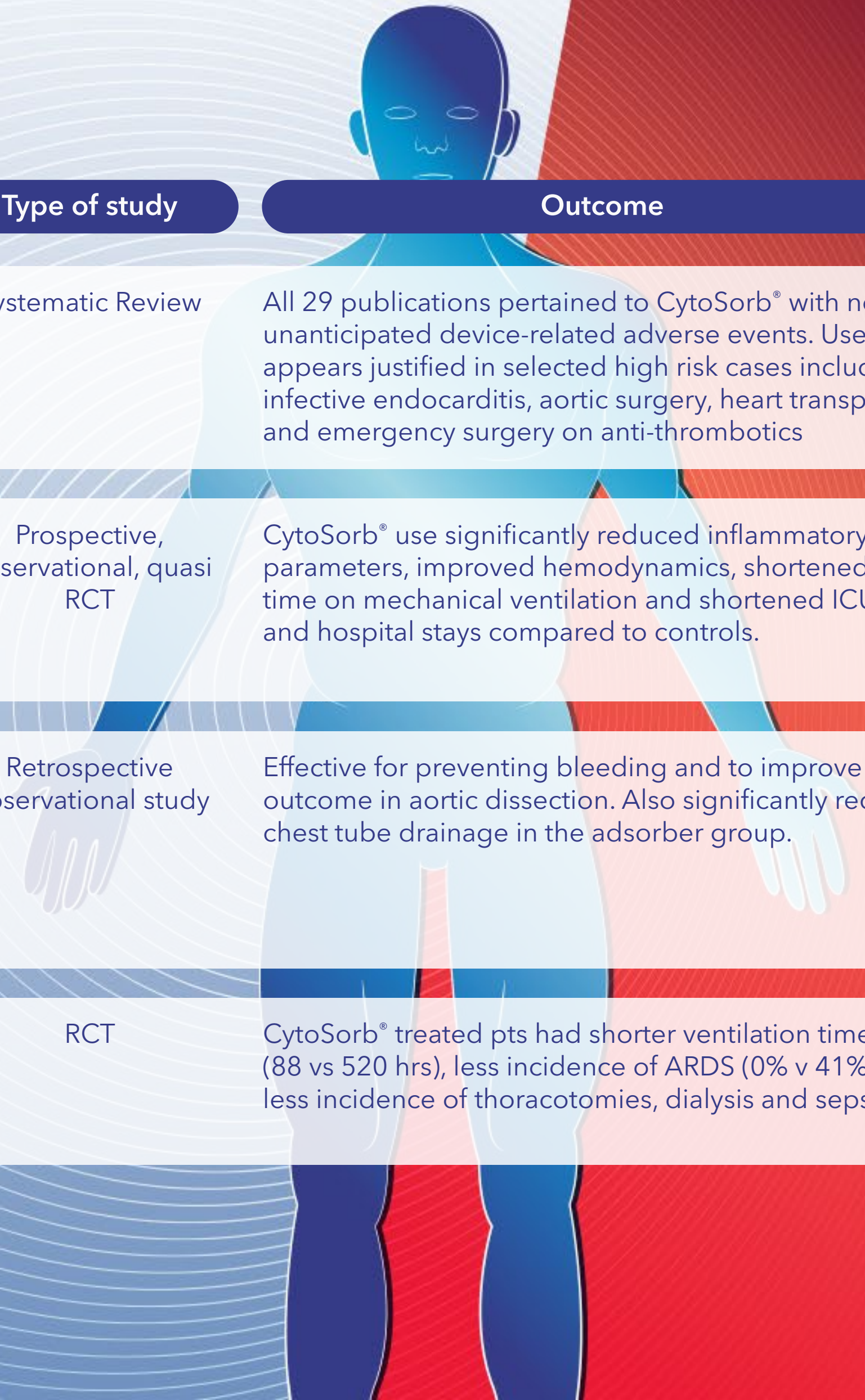






Clinical Evidence for CytoSorb® Therapy in Aortic Surgery

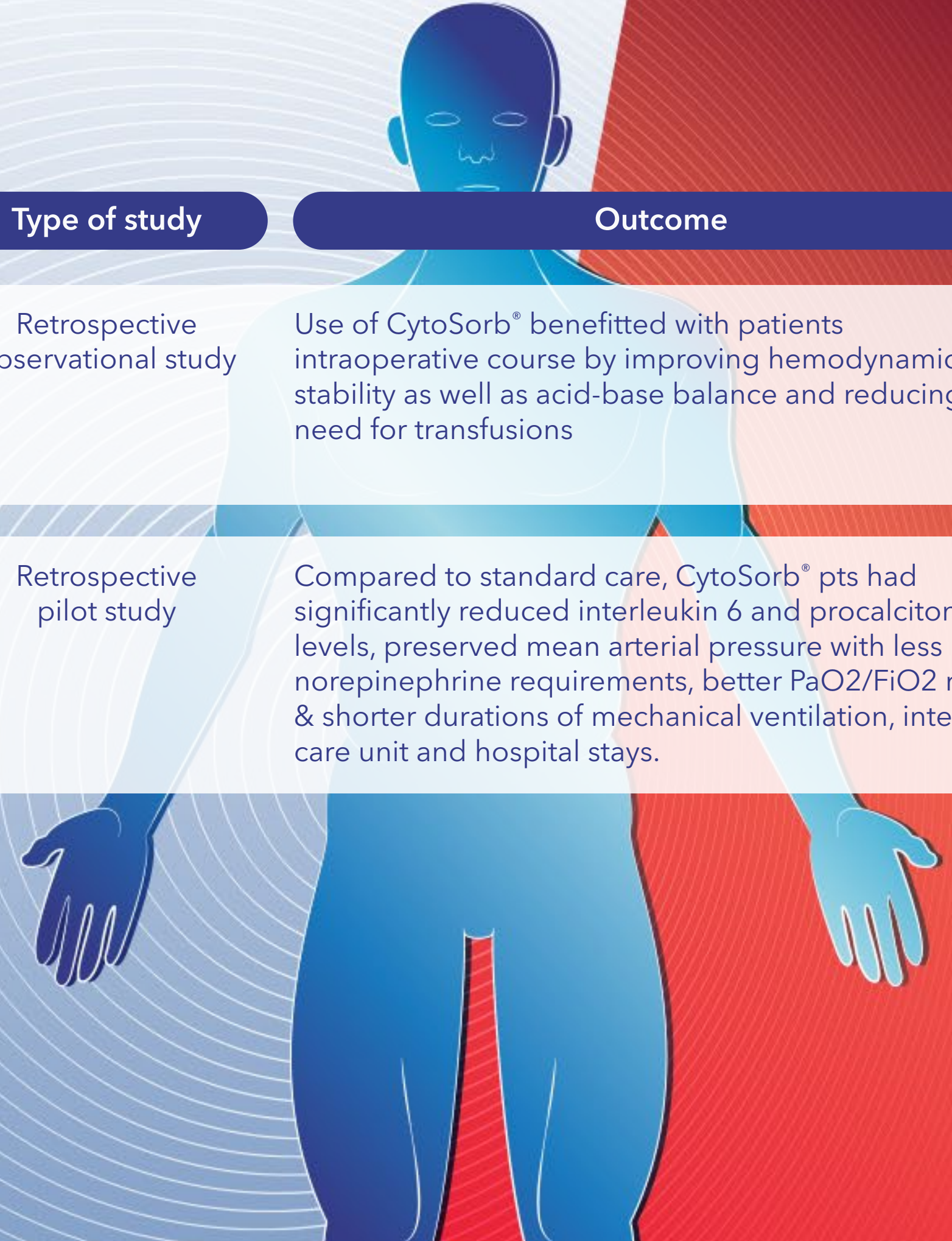
Name	Title	Aim	Number of patients	Type of study	Outcome
Matejic-Spasic et al., BMC Cardiovasc Dis 2024; 2481):258	The role of hemoadsorption in cardiac surgery – a systematic review	Assess all published literature on role of perioperative hemoadsorption in cardiac surgery	N/A	Systematic Review	All 29 publications pertained to CytoSorb® with no unanticipated device-related adverse events. Use appears justified in selected high risk cases including infective endocarditis, aortic surgery, heart transplant and emergency surgery on anti-thrombotics
Mehta et al., Interdiscip Cardiovasc Thorac Surg 2024; 38(4):ivae050	Impact of intraoperative haemoadsorption on outcomes of patients undergoing aortic surgery: a Single-Centre, prospective, observational study	Investigate the impact of CytoSorb® on inflammatory markers and patient outcome during aortic root surgery	60 (30 v 30)	Prospective, observational, quasi RCT	CytoSorb® use significantly reduced inflammatory parameters, improved hemodynamics, shortened time on mechanical ventilation and shortened ICU and hospital stays compared to controls.
Hassan et al., Annals of Thoracic and Cardiovascular Surgery 2022; 28(3):186-192	Hemoadsorption of Rivaroxaban and Ticagrelor during Acute Type A Aortic Dissection Operations	To analyze the results of hemoadsorption in patients requiring thoracic aortic surgery who had been loaded beforehand with either Factor Xa inhibitor rivaroxaban or P2Y12 receptor antagonist ticagrelor	21 (11 v 10)	Retrospective observational study	Effective for preventing bleeding and to improve the outcome in aortic dissection. Also significantly reduced chest tube drainage in the adsorber group.
Doukas et al., J Clin Med 2023; 12:546	Intraoperative Hemoadsorption (Cytosorb®) during open thoracoabdominal aortic repair: A pilot randomized controlled trial	Compare pts treated with intraop CytoSorb® with controls	27 (10 v 17)	RCT	CytoSorb® treated pts had shorter ventilation time (88 vs 520 hrs), less incidence of ARDS (0% v 41%), less incidence of thoracotomies, dialysis and sepsis.





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 Saller et al., Eur J Cardiothorac Surg 2019; 56(4):731-737	Haemadsorption improves intraoperative haemodynamics and metabolic changes during aortic surgery with hypothermic circulatory arrest	Compare pts having aortic surgery & hypothermic circulatory arrest plus CytoSorb® to those receiving the same operation but without CytoSorb®	168 matched pairs	Retrospective observational study	Use of CytoSorb® benefitted with patients intraoperative course by improving hemodynamic stability as well as acid-base balance and reducing need for transfusions
 Mehta et al., Journal Cardiothor & Vasc Anesth 2021; 35(2): 673 - 675	Modulating the Inflammatory Response With Hemadsorption (CytoSorb®) in Patients Undergoing Major Aortic Surgery	To evaluate the effect of CytoSorb® used intra-operatively in patients ungoing elective major aortic surgery	16 (8 v 8)	Retrospective pilot study	Compared to standard care, CytoSorb® pts had significantly reduced interleukin 6 and procalcitonin levels, preserved mean arterial pressure with less norepinephrine requirements, better PaO2/FiO2 ratio & shorter durations of mechanical ventilation, intensive care unit and hospital stays.







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

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www.cytosorbents.com

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