

CPFA

Coupled Plasma Filtration Adsorption

A targeted response in your hands



Critically ill patients are progressively increasing in complexity

Critically ill patients could develop severe forms of multi-organ dysfunction syndrome (MODS), sepsis or liver disease.¹ Sepsis is a life-threatening medical emergency; without treatment, can rapidly lead to death.

Organ dysfunction or overt failure is a commonplace event in the critically ill, affecting up to

70%

of patients during their stay in the intensive care units (ICUs).²

Every year:

11M

people worldwide die from sepsis and about **half of survivors** suffer long term consequences.^{3,4}

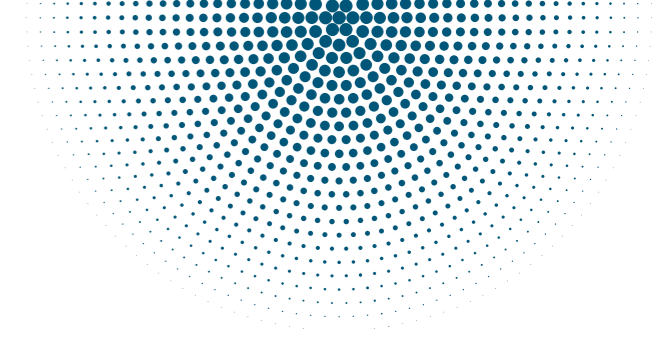
2M+

Liver disease accounts for over **2M** deaths annually and is responsible for **4%** of all deaths.⁵

Liver diseases include, among other diseases, Acute Liver Failure (ALF) which is associated with high mortality, morbidity and resource use.⁵

! Challenge

The management of these critically ill patients in ICU is becoming progressively more complex because the increase in simultaneous organ dysfunction often results in a vicious cycle that progressively worsens the syndrome.¹



How to overcome

Toxins clearance plays a critical role for the treatment of these patients⁶ and **plasma-perfusion** with adsorptive resins selectively removes either specific mediators, toxins, or classes of mediators based on particular properties.⁷

SOLUTION

Toxins Clearance



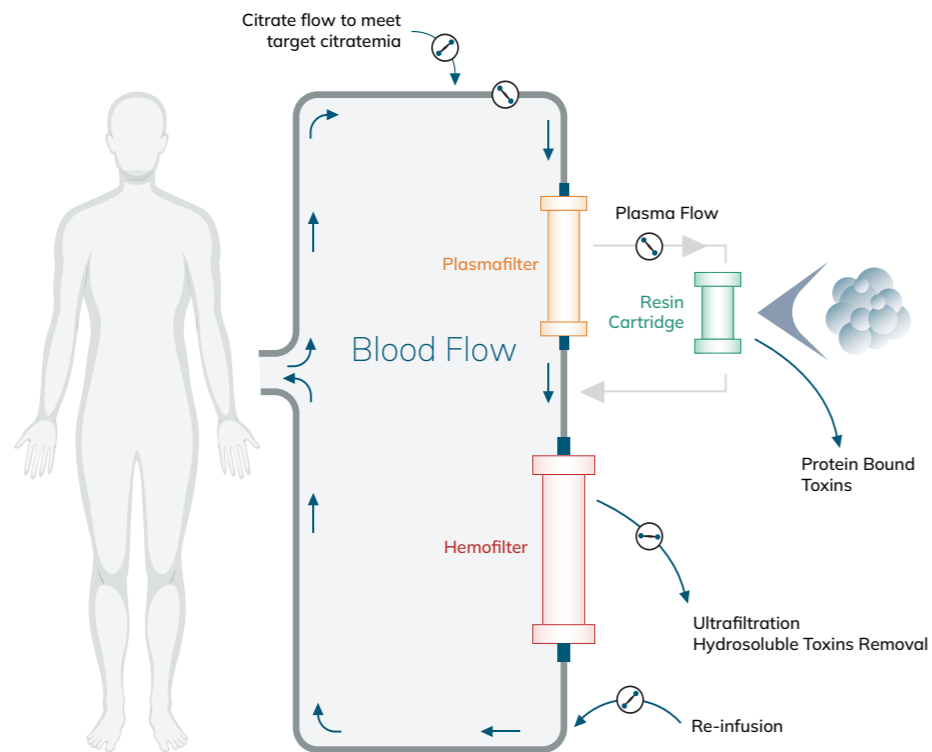
Plasma-perfusion

HOW

Our Solution



CPFA: An adsorption therapy with a targeted response to sepsis and Multiple Organ Dysfunction (MOD)



Plasmafilter

Plasma is separated with a plasmafilter which allows a greater removal of higher molecular weight mediators than traditional hemofilters.

Compared to hemoperfusion, working with plasma improves adsorption capacity, due to the slower plasma flow. This allows a longer contact time with resin and is associated with less fouling.⁷

Resin Cartridge

The plasma passes through a resin cartridge. After passage through the resin, the purified plasma is returned to the patient.

Hydrophobic adsorbent resin permits fast and extensive adsorption of mediators⁷ and a biocompatibility profile (no extractable toxins/metals).¹

Hemofilter

Associated with adsorption, a second clearance process uses hemofiltration.

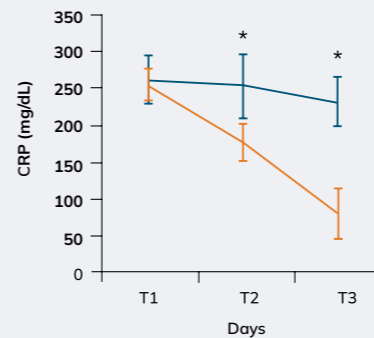
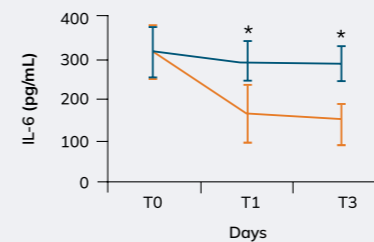
The second filter is used to remove smaller toxins and control fluid balance.⁷

CPFA Clinical Results

With the aim of reversing the downward spiral of the critically ill patient, CPFA is able to:

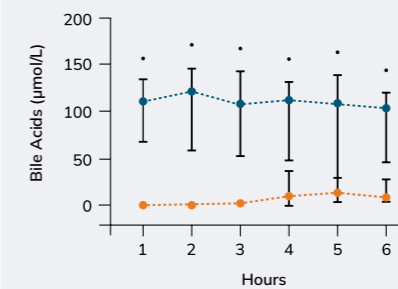
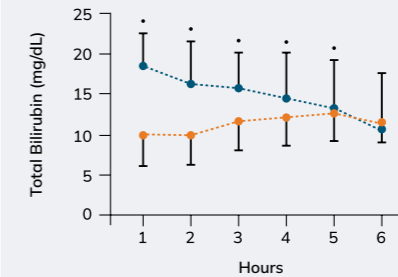
- remove myoglobin, bilirubin, bile acids and mediators involved in the inflammatory cascade^{7,8}
- restore immune function⁹
- improve kidney function^{10,11}
- allow reinfusion of albumin and amino acids⁷

Sepsis



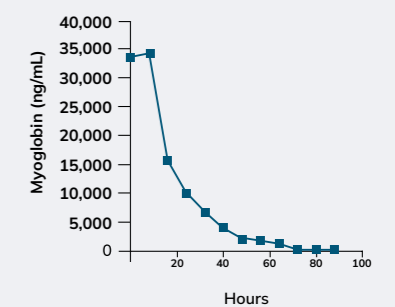
Effects of CPFA on markers of inflammation and sepsis on Gram-negative septic patients.⁸

Liver Failure

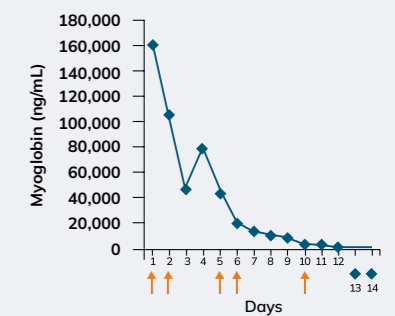


Pre and post-cartridge bilirubin values during 18 CPFA sessions and bile acids during 4 CPFA sessions on ALF or Acute on Chronic Liver Failure (AoCLF) patients.¹¹

Rhabdomyolysis



Trend of myoglobin values after CPFA in a patient with a post-traumatic rhabdomyolysis with renal damage.¹²



CPFA effect on serum myoglobin levels in patient with acute kidney failure and severe rhabdomyolysis.¹⁰

AMPLYA Acute Multitherapeutic system™

CPFA is performed by **AMPLYA system™**, which supports specific patients' needs.¹³

1. Offers parameter values guidance during treatments and guides the operator to achieve the minimum plasma dose.
2. Provides a dedicated TMP control for plasma flow during CPFA treatment.



3. Allows locoregional anticoagulation with Citrate 20/4.
4. Owns a dedicated ECMO connection modality program for enabling CPFA while simultaneously performing ECMO (ExtraCorporeal Membrane Oxygenation).

CPFA

A targeted response in your hands



Use CPFA for your critically ill patients with the following conditions:

- Sepsis
- MOD
 - liver failure
 - rhabdomyolysis
 - pulmonary failure
 - cerebral failure
 - renal failure
 - cardiac dysfunction





References

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5. Devarbhavi H, Asrani SK, Arab JP, Nartey YA, Pose E, Kamath PS. Global burden of liver disease: 2023 update. *J Hepatol.* 2023;79(2):516-537.
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13. Amplya user manual rev SW 5.7, Ed. 2022-06

Disclaimer

Amplya is an active, non-invasive, class IIb medical device CE0123 manufactured by Bellco S.r.l.

Pre-assembled device for CPFA for Amplya is a non-active, non-invasive, class IIb medical device CE0123 manufactured by Bellco S.r.l.

Mediasorb Cartridge is a non-active, non-invasive class IIb medical device CE0123 manufactured by Bellco S.r.l.

The Pre-assembled device for CPFA for Amplya and the Mediasorb Cartridge are included in KABL14P05 – KIT CPFA X AMPLYA procedure pack.

Please refer to the devices and procedure pack Instructions for Use for complete instructions, contraindications, warnings and precautions.

Citrachoice 24, also referred to as Citrate 20/4 throughout this document, is a medical device manufactured by Paolo Gobbi Frattini S.r.l.

Mozarc Medical
EMEA Regional Headquarters
Via Varesina, 162
20156 Milano MI, Italy



emeacontactus@mozarcmedical.com



[mozarcmedical.com](https://www.mozarcmedical.com)



[LinkedIn](#)

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