

FACT SHEET FOR HEALTHCARE PROVIDERS

Emergency Use of Seraph 100 Microbind Affinity Blood Filter for COVID-19

April 17, 2020

Coronavirus Disease 2019 (COVID-19)

This Fact Sheet informs you of the significant known and potential risks and benefits of the emergency use of the Seraph 100 Microbind Affinity Blood Filter device for the reduction of pathogens and inflammatory mediators.

The Seraph 100 Microbind Affinity Blood Filter device is authorized for emergency use to treat patients 18 years of age or older with confirmed COVID-19 admitted to the intensive care unit (ICU) with confirmed or imminent respiratory failure.

All patients who are treated with the Seraph 100 Microbind Affinity Blood Filter device during the COVID-19 pandemic will receive the Fact Sheet for Patients: Emergency Use of Seraph 100 Microbind Affinity Blood Filter for COVID-19.

What are the symptoms of COVID-19?

Many patients with confirmed COVID-19 have developed fever and/or symptoms of acute respiratory illness (e.g., cough, difficulty breathing). However, limited information is currently available to characterize the full spectrum of clinical illness associated with COVID-19. Based on what is known about the virus that causes COVID-19, signs and symptoms may appear any time from 2 to 14 days after exposure to the virus. Based on preliminary data, the median incubation period is approximately 5 days, but may range 2-14 days.

Public health officials have identified cases of COVID-19 infection throughout the world, including the United States, which may pose risks for public health. Please check the CDC webpage for the most up to date information.

What do I need to know about the emergency use of the Seraph 100 Microbind Affinity Blood Filter device?

The Seraph 100 Microbind Affinity Blood Filter device has been authorized to treat patients 18 years of age or older with confirmed COVID-19 admitted to the ICU with any one of the following conditions:

- a) Early acute lung injury (ALI)/early acute respiratory distress syndrome (ARDS); or
- b) Severe disease, defined as:
 - 1) dyspnea,
 - 2) respiratory frequency $\geq 30/\text{min}$,
 - 3) blood oxygen saturation $\leq 93\%$,
 - 4) partial pressure of arterial oxygen to fraction of inspired oxygen ratio < 300 , and/or
 - 5) lung infiltrates $> 50\%$ within 24 to 48 hours; or
- c) Life-threatening disease, defined as:
 - 1) respiratory failure,
 - 2) septic shock, and/or
 - 3) multiple organ dysfunction or failure.

Healthcare providers should review the instructions accompanying the Seraph 100 Microbind Affinity Blood Filter device, entitled "Seraph 100 Microbind Affinity Blood Filter Instructions for Use" (available at <https://www.fda.gov/medical-devices/emergency-situations-medical-devices/emergency-use-authorizations>).

Use appropriate personal protective equipment when caring for individuals suspected of having COVID-19 as outlined in the CDC *Interim Infection Prevention and Control Recommendations for Patients with Confirmed Coronavirus Disease 2019 (COVID-19) or Persons Under Investigation for COVID-19 in Healthcare Settings* or on the CDC webpage on *Infection Control*.

Current information on COVID-19 for healthcare providers is available at CDC's webpage, *Information for Healthcare Professionals* (see links provided in "Where can I go for updates and more information" section).

Report Adverse events, including problems with test performance or results, to MedWatch by submitting the online FDA Form 3500 (<https://www.accessdata.fda.gov/scripts/medwatch/index.cfm?action=reporting.home>) or by calling **1-800-FDA-1088**

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What are the known and potential benefits and risks of the Seraph 100 Microbind Affinity Blood Filter device?

Potential benefits of the Seraph 100 Microbind Affinity Blood Filter device include:

- Removal of pathogens from the bloodstream
- Removal of inflammatory mediators from the bloodstream

Potential risks of the Seraph 100 Microbind Affinity Blood Filter device include:

- Hemodynamic compromise (e.g., hypotension, increased vasopressor requirement, reduced cardiac perfusion)
- Arrhythmia
- Blood loss
- Headache
- Nausea
- Cramping
- Hypertension
- Thrombosis
- Air embolism
- Infection
- Temperature dysregulation
- Allergic reaction
- Hemolysis
- Imbalance of certain chemicals (e.g., potassium, calcium, phosphate) in the blood
- Acid-base abnormalities
- Thrombocytopenia / leukopenia
- Removal of other substances from the blood (e.g., vitamins, proteins, medications)
- Risks related to vascular access placement (e.g., infection, blood loss, thrombosis, tissue/organ injury)
- Risks related to anticoagulation (e.g., blood loss, allergic reaction)
- Itching
- Anxiety
- Convulsions/seizure
- Altered mental status
- Hemorrhage
- Clotting
- Pyrogenic reactions

- Cardiac dysrhythmia
- Chest pain
- Dyspnea

What is an EUA?

The United States FDA has made available the Seraph 100 Microbind Affinity Blood Filter device for the removal of pathogens and inflammatory mediators in patients 18 years of age or older with COVID-19 with confirmed or imminent respiratory failure available under an emergency access mechanism called an Emergency Use Authorization (EUA). The EUA is supported by the Secretary of Health and Human Service's (HHS's) declaration that circumstances exist to justify the emergency use of medical devices, including alternative devices used as medical devices, due to shortages during the COVID-19 pandemic.

The Seraph 100 Microbind Affinity Blood Filter device made available under an EUA has not undergone the same type of review as an FDA-approved or cleared device. FDA may issue an EUA when certain criteria are met, which includes that there are no adequate, approved, available alternatives, and based on the totality of scientific evidence available, it is reasonable to believe that the Seraph 100 Microbind Affinity Blood Filter device meets certain criteria for safety, performance, and labeling, and that the Seraph 100 Microbind Affinity Blood Filter device may be effective in treatment of patients 18 years of age or older during the COVID-19 pandemic.

The EUA for the Seraph 100 Microbind Affinity Blood Filter device for removal of pathogens and inflammatory mediators to treat patients 18 years of age or older with COVID-19 with confirmed or imminent respiratory failure is in effect for the duration of the COVID-19 emergency declaration justifying emergency use of these devices, unless terminated or revoked (after which the products may no longer be used).

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Where can I go for updates and more information?

CDC webpages:

General: <https://www.cdc.gov/COVID19>

Healthcare Professionals:

<https://www.cdc.gov/coronavirus/2019-nCoV/guidance-hcp.html>

Infection Prevention and Control Recommendations in Healthcare Settings:

<https://www.cdc.gov/coronavirus/2019-ncov/infection-control/control-recommendations.html>

Infection Control: <https://www.cdc.gov/coronavirus/2019-ncov/infection-control/index.html>

FDA webpages:

General: www.fda.gov/novelcoronavirus

EUAs: (includes links to patient fact sheet and manufacturer's instructions) <https://www.fda.gov/medical-devices/emergency-situations-medical-devices/emergency-use-authorizations>

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