



Extracorporeal Pheresis of Ticagrelor

ICD-10 Coordination & Maintenance Committee
Update
Spring 2025

CytoSorbents Corporation
Princeton, NJ

Patient Population – Unmet Medical Need

- Blood thinners are among the most commonly prescribed drugs for patients with cardiovascular disease
- They work by preventing blood clots, but can also cause bleeding
- Patients on blood thinners who require an urgent operation are at a very high risk of serious, life-threatening bleeding complications
- This scenario is most common among patients suffering a heart attack and treated with blood thinners who need urgent open-heart surgery
- DrugSorb-ATR™ is connected to the heart lung machine and can reduce the bleeding complications by removing these drugs during surgery

Brilinta - Unmet Medical Need

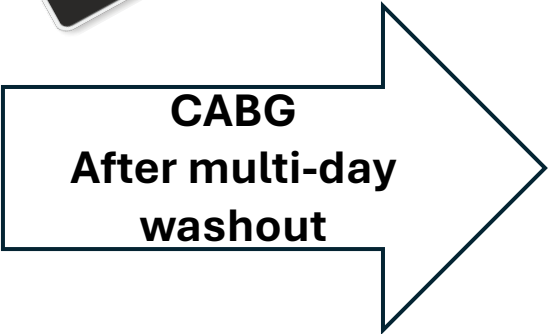
Most ACS patients receive a stent



5 - 10% need CABG surgery



weekly plan						
monday	tuesday	wednesday	thursday	friday	saturday	sunday
X	X	X	X	X		



Use Case for DrugSorb-ATR™

**Most ACS
patients
receive a
stent**



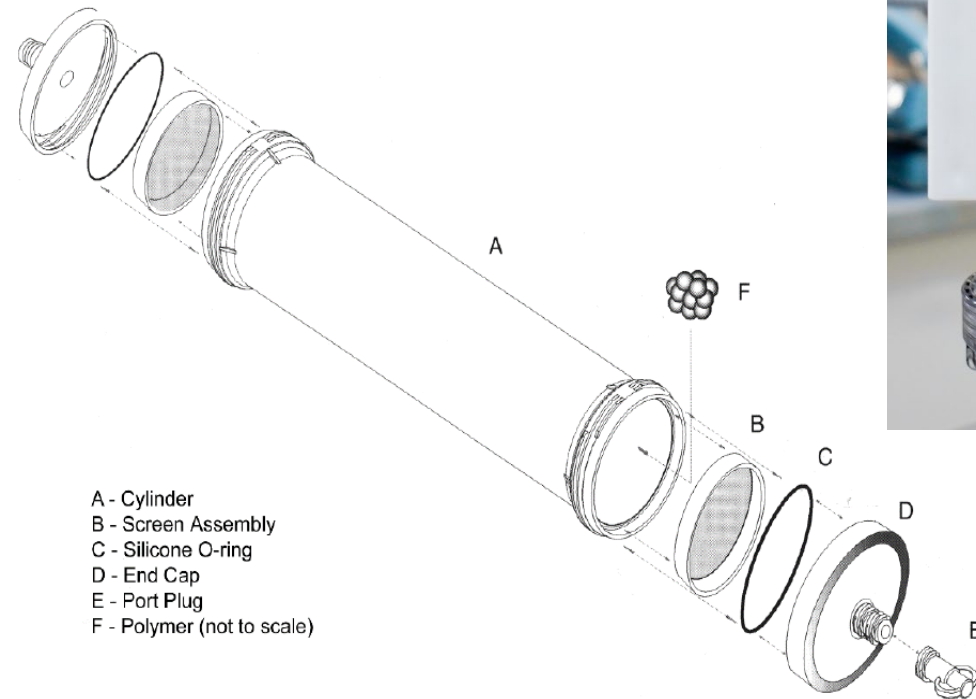
**5 - 10% need
CABG surgery**

The goal of DrugSorb-ATR™ is to allow patients to get the critical surgery they need without delay, while reducing or preventing bleeding complications

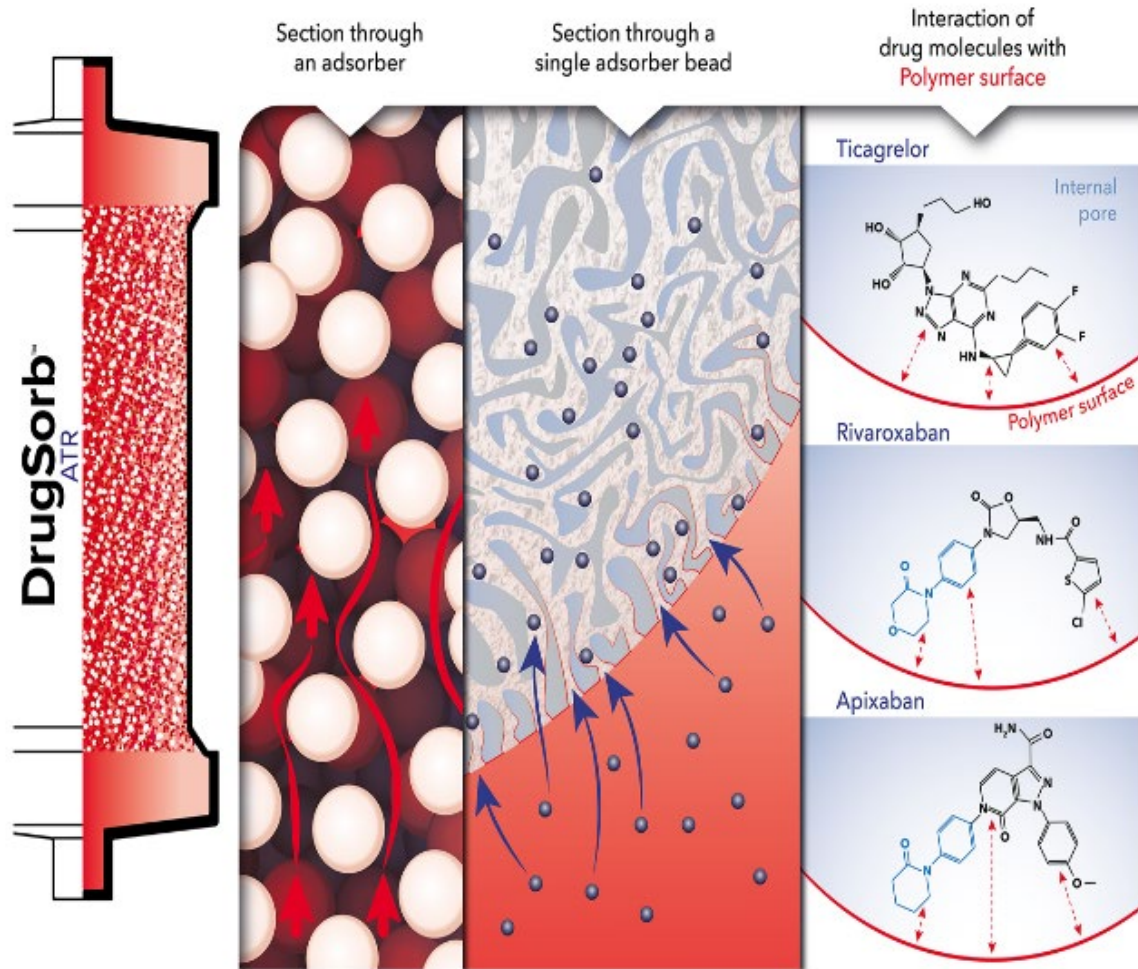


DrugSorb-ATR™ is a sorbent filled hemoperfusion cartridge

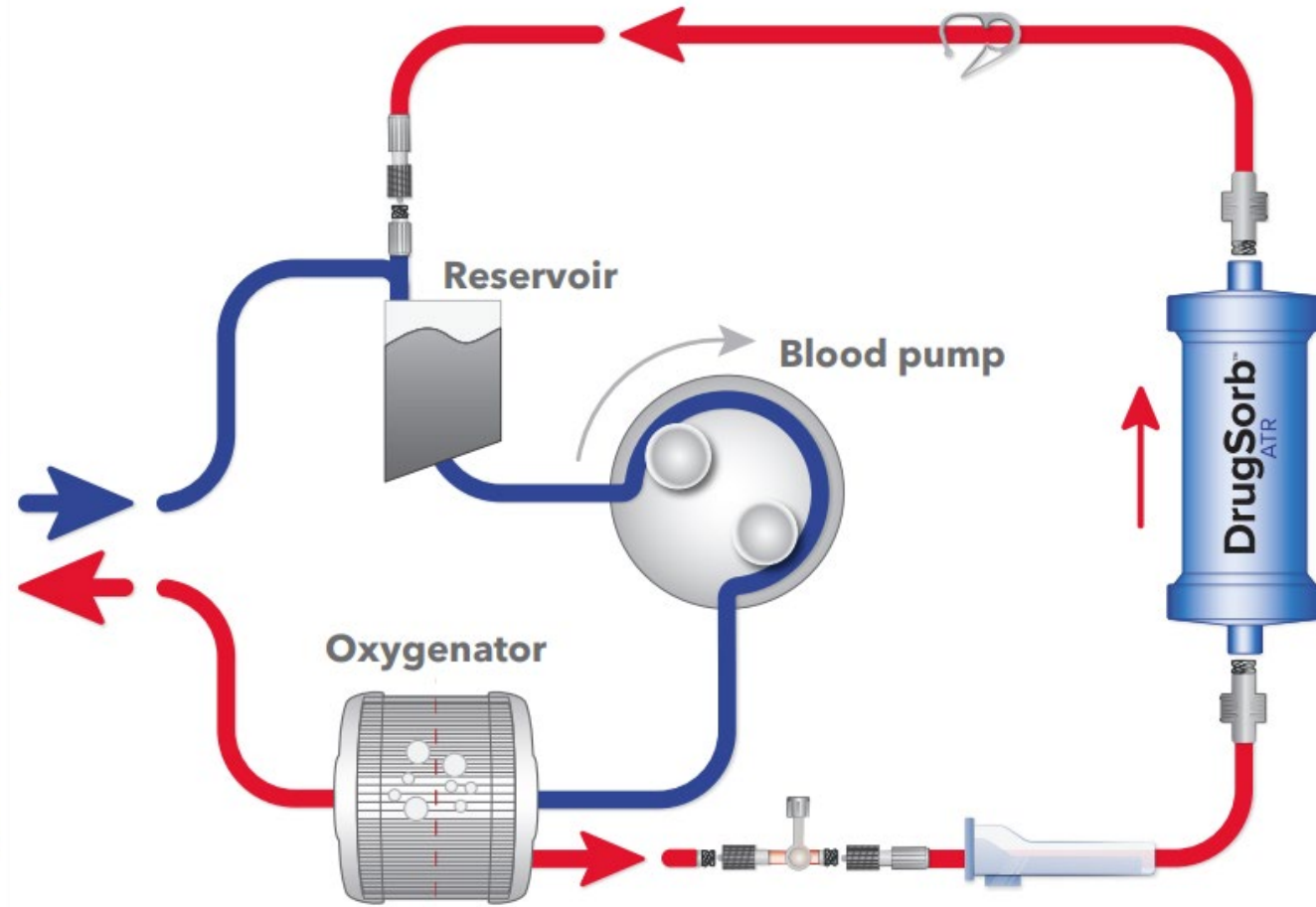
- Single use, non-pyrogenic device
- Millions of biocompatible porous polymer beads
- Each bead has hundreds of thousands of tightly controlled pores & channels
- Easy integration into extracorporeal circuits, including cardiopulmonary bypass (CPB)



Antithrombotic (“Blood Thinner”) Removal



Blood thinner capture by the polymer beads



Simple integration in the heart-lung machine

Three Step Setup

1. Prime DrugSorb-ATR Device:

- Connect inlet line to bag spike line
- Spike saline bag
- Prime line and connect to inlet side of device
- Connect outlet line to bag spike line
- Spike waste bag and connect to outlet side of device
- Prime 2x w/1L saline bags

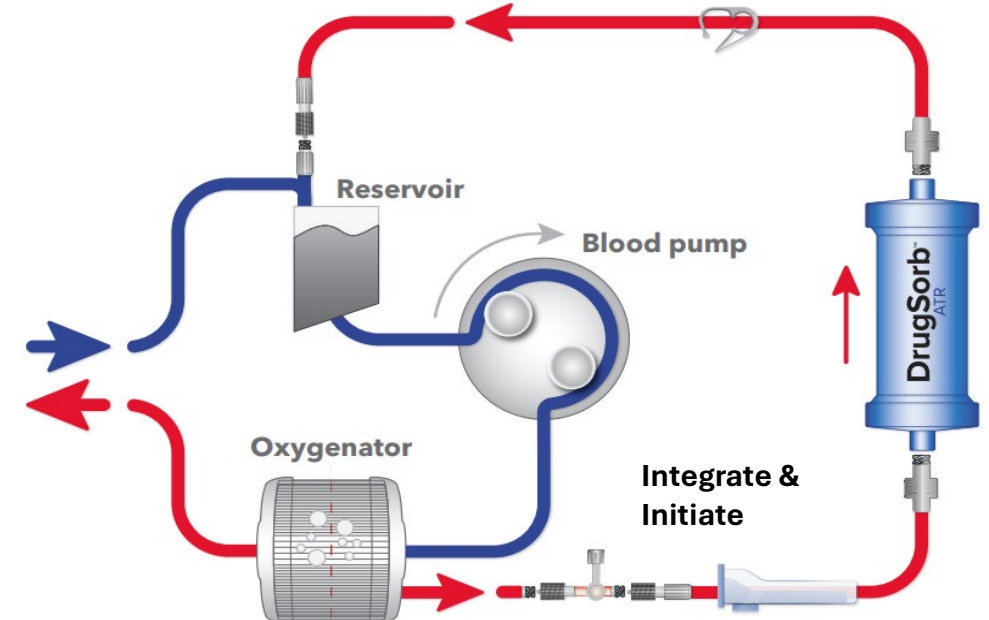
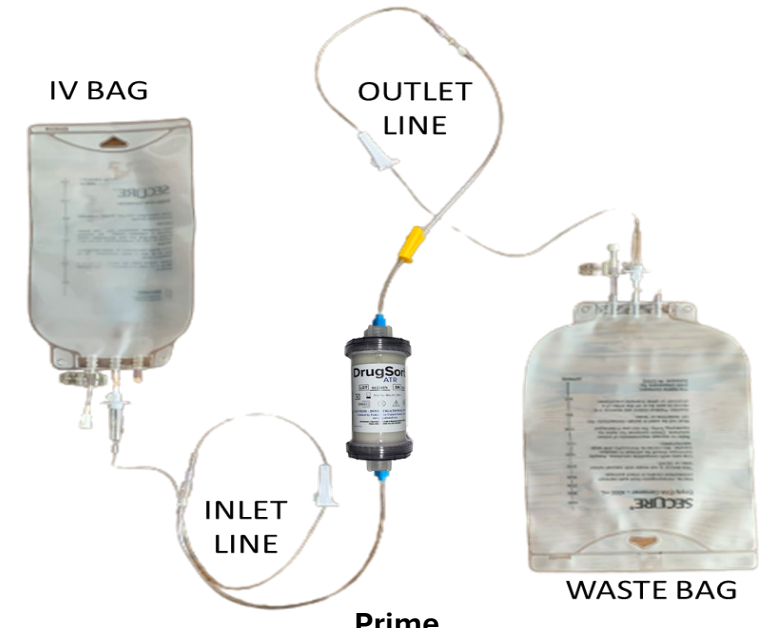
2. Integrate Device into CPB Circuit

- Connect inlet line to oxygenator
- Connect outlet line to reservoir

3. Initiate Flow at CPB Start

4. End Treatment

- Stop blood through device using stop cock at integration point and connect new bag spike line connected to saline bag
- Flush patient blood back to reservoir with 1 bag saline
- Close stop cock
- Disconnect tubing and device and dispose as biohazard material



FDA Submission and Medical Record Documentation

- DrugSorb-ATR™ received Breakthrough Device Designation on April 20, 2020
- FDA submission is currently pending approval
- Technology documentation that can be found in the progress notes of the medical record may include:
 - Antithrombotic removal
 - Antithrombotic filtration
 - DrugSorb hemoperfusion
 - DrugSorb extracorporeal filtration
 - Ticagrelor filtration
 - Ticagrelor extracorporeal filtration