HELPING REDUCE DEADLY UNCONTROLLED INFLAMMATION IN HOSPITALIZED PATIENTS WORLDWIDE

NASDAQ: CTSO
Investor Presentation
May 2020
Safe Harbor Statement

This presentation contains “forward-looking statements” pursuant to the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. Forward-looking statements include, without limitation, any statement that may predict, forecast, indicate, or imply future results, performance or achievements, and may contain the words “estimate,” “intend,” “target,” “will,” “is likely,” ”would,” ”may,” or, in each case, their negative, or words or expressions of similar meaning. These forward-looking statements are found at various places throughout this presentation and include information concerning possible or assumed future results of our operations; business strategies; future cash flows; financing plans; plans and objectives of management; any other statements regarding future operations, future cash needs, business plans and future financial results, and any other statements that are not historical facts. Unless otherwise indicated, the terms “CytoSorbents,” “Company,” “we,” “us” and “our” refer to CytoSorbents Corporation. Any or all of the forward-looking statements included in this presentation are not guarantees of future performance and may turn out to be inaccurate. These forward-looking statements represent our intentions, plans, expectations, assumptions and beliefs about future events and are subject to risks, uncertainties and other factors. Many of those factors are outside of our control and could cause actual results to differ materially from the results expressed or implied by those forward-looking statements. Although these expectations may change, we are under no obligation to inform you if they do. Actual events or results may differ materially from those contained in the forward-looking statements. The following factors, among others, could cause our actual results to differ materially from those described in a forward-looking statement: our history of losses; potential fluctuations in our quarterly and annual results; competition, inability to achieve regulatory approval for our device, technology systems beyond our control and technology-related defects that could affect the companies' products or reputation; risks related to adverse business conditions; our dependence on key employees; competition for qualified personnel; the possible unavailability of financing as and if needed; and risks related to protecting our intellectual property rights or potential infringement of the intellectual property rights of third parties. This list is intended to identify only certain of the principal factors that could cause actual results to differ from those discussed in the forward-looking statements. In light of these risks, uncertainties and assumptions, the events described in the forward-looking statements might not occur or might occur to a different extent or at a different time than we have described. You are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the date of the applicable presentation. You are referred to a discussion of important risk factors detailed in the Company’s Form 10-K filed with the Securities and Exchange Commission on March 5, 2020 and other reports and documents filed from time to time by us, which are available online at www.sec.gov.
CytoSorbents is a Leader in Critical Care Immunotherapy

Leading the Prevention or Treatment of Life-Threatening Inflammation in the ICU and Cardiac Surgery using CytoSorb® Blood Purification
CytoSorbents At a Glance (NASDAQ: CTSO)

• CytoSorbents (NASDAQ: CTSO) is a New Jersey-based, vertically-integrated medical device company that specializes in blood purification to treat life-threatening conditions

• CytoSorb® is E.U. approved as an extracorporeal cytokine adsorber to help treat hyperinflammatory conditions where cytokines are elevated (e.g. “cytokine storm”)
  • Cytokine storm plays a key role in some of the worst epidemics in recent history including COVID-19, Ebola, Swine flu, seasonal flu, MERS, SARS, and many others
  • CytoSorb has also received FDA Emergency Use Authorization for use in critically COVID-19+ patients

• Granted FDA Breakthrough Designation for removal of ticagrelor in cardiothoracic surgery. Approved in E.U. to remove ticagrelor and rivaroxaban in cardiothoracic surgery as well

• CytoSorb is sold in 58 countries worldwide: 10 direct, 48 through distributors/partners

• TTM Product Sales (3/31/20) were $26.3M, 76% blended gross margins in Q1 2020

• 156 employees with international footprint across two wholly-owned subsidiaries
  • CytoSorbents Medical, Inc: Headquarters - New Jersey, USA
  • CytoSorbents Europe GmbH: International sales office - Berlin, Germany

• Strategic Partnerships with major players including Fresenius Medical Care, Terumo, & Biocon

• Strong government support with ~$30M in grants, contracts, other non-dilutive funds

• Russell 2000 & 3000 listed. Coverage by Cowen, B Riley, HCW, Maxim, Dawson James, Zacks
Leadership Background

Phillip Chan, MD, PhD – Chief Executive Officer
Former Partner at the $80M NJTC Venture Fund, leading life science investments for 5 years. Co-founder and Vice-Chair of Medality Medical, evaluating its US FDA 510(k) cleared HydraSolve™ device to treat Type 2 Diabetes. MD/PhD - Yale School of Medicine, internal medical residency - Beth Israel Deaconess Medical Center at Harvard

Vincent Capponi, MS – Chief Operating Officer and President
30+ years experience in the medical device, pharmaceutical and imaging fields. Led the first regulatory approval for the heparin flush syringe, used worldwide in hospitals, and managed manufacturing of > 1 million units/week

Kathleen Bloch, MBA, CPA – Chief Financial Officer
25+ years as CFO of private and public companies. Former Laureate Biopharma CFO, a contract biopharmaceutical manufacturer, and CFO of Silverline Windows, a $750M revenue window manufacturing company with 9 manufacturing plants nationally

Efthymios “Makis” Deliargyris, MD – Chief Medical Officer
19+ years of experience in academic medicine as a cardiologist and accomplished interventional cardiologist, and industry, most recently as CMO of PLx Pharma, and as Vice President, European Medical Director and Global Medical Lead – Acute Cardiovascular Care at The Medicines Company

Christian Steiner, MD – Senior Vice President of Sales and Marketing
20+ years experience in sales and marketing of extracorporeal therapy and critical care sales at Teraklin for MARS, the first liver failure dialysis technology, and at Pulsion Medical (hemodynamic monitoring)

Christopher Cramer, MS, MBA – Vice President of Business Development
20+ years experience in business development and commercial experience. Former Senior Director of New Venture Development at Johnson & Johnson, and previously at PwC Consulting
Uncontrolled Inflammation is Deadly

- Influenza
- Sepsis
- Trauma
- Burn Injury
- Lung Injury
- Pancreatitis
- Surgical Complications
- Cytokine Release Syndrome
- Liver Failure

Millions Die Of Uncontrolled Deadly Inflammation Each Year
Massive Inflammation Causes Organ Failure

Organ failure occurs when vital organs stop working, causing nearly half of all deaths in the ICU.

Little can be done to prevent or treat organ failure today.
No Ideal Options to Treat Severe Inflammation

**Anti-Inflammatory (too weak)**
- NSAIDs
- Aspirin
- Anti-cytokine antibodies
- Anti-integrin antibodies
- Anti-oxidants

**Immunosuppressive (too strong)**
- Corticosteroids
- Chemotherapy
- Organ transplant
- Anti-rejection drugs
- Radiation
- Immune system ablation
- Anti-leukocyte Abs
CytoSorb Bridges the Gap

**Anti-Inflammatory (too weak)**
- NSAIDs
- Aspirin
- Anti-cytokine antibodies
- Anti-integrin antibodies
- Anti-oxidants

**Immunosuppressive (too strong)**
- Corticosteroids
- Chemotherapy
- Organ transplant
- Anti-rejection drugs
- Radiation
- Immune system ablation
- Anti-leukocyte Abs
CytoSorb® Reduces the Fuel to the Fire

• CytoSorb® targets the $20+ billion opportunity in critical care and cardiac surgery

• Approved in the European Union as the first specifically approved extracorporeal cytokine adsorber. CytoSorb has received FDA Emergency Use Authorization for use in COVID-19+ critically-ill patients.*

• Broad indication for use where cytokines are elevated

• Removes cytokines and many other inflammatory mediators such as free hemoglobin, bacterial toxins, myoglobin, and activated complement

• Safe and well-tolerated: 88,000+ cumulative treatments delivered, up from 61,000 a year ago

*CytoSorb has received Emergency Use Authorization for use in COVID-19 patients, however, it has not received formal approval or clearance for COVID-19
Patented Blood Purification Technology

The underlying blood purification technology is based on biocompatible, highly porous polymer beads that act like tiny sponges to remove harmful substances from blood.

- Proprietary patented technology with multiple patents pending worldwide
- Manufactured at our ISO 13485 certified facility in New Jersey
- One of the highest grade medical sorbents on medical market today
CytoSorb is “Plug and Play”

Compatible with Existing Dialysis, CRRT, ECMO, and Heart-Lung Machines

- Place a temporary dialysis catheter in a major vein
- Connect the device to a standard dialysis, ECMO, or heart-lung machine found in hospitals worldwide
- Pump blood out of the body and through the cartridge
- The polymer beads directly contact blood and remove unwanted or toxic substances
- “Purified” blood is pumped back into the patient
- Can treat 70+ total blood volumes per 24 hour treatment
- Each treatment uses a new cartridge
Goal: To Prevent or Treat Organ Failure

Improve Patient Outcome and Survival

Decrease Costs Of ICU and Patient Care

The Potential to Revolutionize Critical Care Medicine
The World Needs **CytoSorb®**

Of All Deaths, Sepsis Kills 1 in 5

America Has a $27 Billion Sepsis Crisis
Rationale for **CytoSorb** Use in COVID-19

- COVID-19 infection causes a very severe viral pneumonia and pneumonitis, that can rapidly progress to severe respiratory failure and ARDS that requires mechanical ventilation.

- Cytokine storm and hyperinflammation (as evidenced high cytokines such as IL-6, ferritin, CRP, D-dimers, etc) appears to play an important role in determining the severity of complications, due to capillary leak syndrome, direct tissue injury, cell-mediated injury, hypercoagulability and thrombotic microangiopathy, and other problems.

- The critical problem today is the disease is so severe, that patients take 2-4 weeks to wean from mechanical ventilation, if at all, while requiring scarce ICU beds, ventilators, and personnel. These resource intensive patients have crippled ICUs and hospital systems in hard-hit areas.

- Therapies that can reduce cytokine storm may reduce the severity or duration of lung injury, promote healing of the lung and facilitate weaning off of mechanical ventilation or ECMO, or reverse other organ injury/failure would help alleviate the current crisis. Anecdotal data support the use of specific anti-cytokine therapies (e.g. IL-6 blockers), validating this approach.

- CytoSorb is more powerful than specific anti-cytokine therapies because it is a broad spectrum treatment of cytokine storm with the ability to adsorb a wide range of cytokines and inflammatory mediators. The most pronounced effect is a reversal of shock but also improved lung function.
CytoSorb and COVID-19

- CytoSorb has now been used to treat 800+ critically-ill COVID-19 patients in Italy, China, Germany, U.S. and other countries U.S., resulting in preliminary positive reports of:
  - Reduction of cytokine storm and inflammatory mediators such as IL-6, ferritin, CRP, and others
  - Improved respiratory function in ARDS (↑ oxygenation, P/F ratio, improved lung compliance) and weaning from ECMO and mechanical ventilation
  - Improved hemodynamic stability and reversal of shock

- CytoSorb is now specifically recommended in the Italy and Panama COVID-19 treatment guidelines, with blood purification to treat cytokine storm in the China COVID-19 guidelines

- CytoSorb has now received FDA Emergency Use Authorization, enabling CytoSorb to be commercially sold to all hospitals in the U.S. for use in critically-ill, COVID-19+ patients, 18 years of age or older with imminent or confirmed respiratory failure.*

- We are currently fulfilling orders and shipping CytoSorb to many hospitals throughout the U.S. with the intent of collecting data under a COVID-19 treatment registry

- Our goal is to help save lives, while demonstrating the value of CytoSorb as one of the broadest treatments for cytokine storm

* Although CytoSorb has received FDA EUA, CytoSorb is not cleared or approved for the treatment of COVID-19
Forecast CytoSorbents 2020: Faster Growth Ahead
CytoSorbents Has a Strong Hybrid Sales Model

58 Countries Worldwide and 88,000+ treatments

Critical Care and Cardiac Surgery

Direct Sales

Distributor and Partner Sales

Direct sales in 10 countries:
Germany, Austria, Switzerland, Belgium, Poland, Netherlands, Denmark, Norway, Sweden, Luxembourg

Distributor and Partner sales in 48 countries
Recently added Mexico and South Korea with partner, Fresenius Medical Care
Also added Brazil, Colombia, and Costa Rica
CytoSorb Initial Commercialization Focus

By Market
- Critical Care 67%
- Cardiac Surgery 33%
- Other Critical Care 17%
- Sepsis 50%

- Acute Respiratory Distress
- Reversal of Shock
- Trauma
- Acute Liver / Pancreatic

By Geography
- 20 – 30% Distributor / Partner
- 10 – 15% Other Direct
- 60 – 65% Germany – Direct

- Austria
- Switzerland
- 7 other countries

Cytokine Storm Plays Role in Recent Epidemics

Validating Partners

TERUMO
(Cardinal Surgery)

FRESNENIUS MEDICAL CARE
(Critical Care)

Biocon
(India – Cardiac / Critical Care)
CytoSorb® Is a High Margin “Razorblade”

- High margin “razorblade” fully compatible with existing installed base of “razor” blood pumps: Dialysis/CRRT, ECMO machines (ICU), heart-lung machines (OR)

- Blended gross margins are at or near 80% in Q4 2019, driven by volume production from our new manufacturing facility and manufacturing efficiencies

- Average Direct Selling Price is approximately $1,000 per cartridge

- Approximately 1 - 10 cartridges are typically used per patient
  - Open heart surgery: 1-2 cartridges
  - Sepsis: 3-5 cartridges or roughly 1 day in the ICU
  - Severe acute pancreatitis: 5-10 cartridges

- In Germany, 400 hospitals have >400 beds. Each hospital typically sees 300-600 sepsis patients per year. At 3-5 cartridges per patient:
  - Revenue per patient = ~$3,000-5,000
  - Potential revenue per hospital = $1-3M for sepsis alone

- Previously disclosed one German hospital has already achieved sales >$1M, validating revenue model
Quarterly Product Sales

Q1 2020 product sales were a record high of $8.2M.
### TTM Product Sales & Blended Gross Margin

Product sales and gross margin continues to grow over the years.

<table>
<thead>
<tr>
<th></th>
<th>Q1 2015</th>
<th>Q1 2016</th>
<th>Q1 2017</th>
<th>Q1 2018</th>
<th>Q1 2019</th>
<th>Q1 2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales</td>
<td>$3,269,802</td>
<td>$4,937,610</td>
<td>$9,204,720</td>
<td>$15,219,016</td>
<td>$20,395,666</td>
<td>$26,345,244</td>
</tr>
<tr>
<td>Gross Margin</td>
<td>60%</td>
<td>62%</td>
<td>64%</td>
<td>66%</td>
<td>68%</td>
<td>70%</td>
</tr>
</tbody>
</table>

- **CytoSorb Sales**
- **Blended Product Gross Margin**
Targeting High Margin Growth

• The COVID-19 pandemic has put cytokine storm and CytoSorb into the spotlight and is expected to increase demand for CytoSorb in critically-ill patients globally

• We believe the underlying, non-COVID 19 business has the ability to achieve sustained growth in product sales, with blended product gross margins >80%

• GAAP profitability is anticipated at product sales of ~$50M

• Growth is expected to come from numerous places
  • As the COVID-19 pandemic resolves, it is expected to be a long-term catalyst for sales
  • Infrastructure investments in 2019 (50% expansion in headcount) weighted heavily on commercialization and direct sales countries like Germany and others
  • Growth in existing markets: sepsis, shock, cardiac surgery, liver failure, trauma, etc
  • New markets: EU label expansion for removal of ticagrelor and rivaroxaban during emergency cardiac surgery
  • Geographic expansion and increased direct sales countries
  • New clinical data: Germany REMOVE endocarditis trial expected to read out mid-2020
  • Heavy marketing push on messaging, conferences, etc
  • Reimbursement in select countries
Strong Focus on Germany

- Germany is the largest medical device market in the E.U. and the third largest in the world. The German market alone represents a $1.0-1.5 billion total addressable market for CytoSorb

- CytoSorb has a strong foundation for growth in Germany
  - Outstanding sales team, including sales reps, product, technical, and clinical support
  - Strong key opinion leader and healthcare community support
  - Dedicated reimbursement supported by major medical societies
  - Penetration into hundreds of hospitals throughout the country
  - Multiple promising therapeutic applications

2013

2018
Sales of CytoSorb in Germany

- Subdivided Germany to shrink territories to allow maximization of revenue opportunity: Enables focus and growth of key accounts, increased efficiency due to shorter travel, and ability to detail small and mid-sized hospitals better

- For 2020, we have more than doubled Germany sales reps/specialists from 8 to 18. We expect productivity to increase from existing sales reps by focusing and growing key accounts, and rapid productivity for new reps, as they will start in active territories with sales

* Preliminary, unaudited financials
Near Term Clinical Data May Catalyze Sales Also

**CytoSorb®**

<table>
<thead>
<tr>
<th>Indication</th>
<th>Pre-Clinical</th>
<th>Safety Feasibility</th>
<th>Pivotal</th>
<th>APPROVED</th>
<th>Post-market</th>
</tr>
</thead>
<tbody>
<tr>
<td>EU</td>
<td>Cytokine Storm, Liver Disease</td>
<td></td>
<td>Extracorporeal Cytokine, Bilirubin, Myoglobin &amp; Adsorber</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EU</td>
<td>Endocarditis</td>
<td></td>
<td>REMOVE Endocarditis Trial – Germany (complete/over-enrolling)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EU</td>
<td>Endocarditis</td>
<td></td>
<td>TISORB Ticagrelor Removal – United Kingdom</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EU</td>
<td>CAR T-cell</td>
<td></td>
<td>CAR T-cell Immunotherapy CRS/CRES trial</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EU</td>
<td>Cytokine Storm, Liver Disease</td>
<td></td>
<td>50+ Investigator initiated studies</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EU</td>
<td>Post-cardiac surgery AKI</td>
<td></td>
<td>REFRESH 2-AKI Pivotal Trial</td>
<td>Enrollment temporarily suspended</td>
<td></td>
</tr>
<tr>
<td>US</td>
<td>Emergency Cardiac Surgery</td>
<td></td>
<td>Anti-thrombotic removal</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**HemoDefend-RBC™**

| US                              | Purification pRBC                                                           |                    | HemoDefend-RBC                                                        |                                                                          |             |
Infective endocarditis (heart valve infection) occurs when bacteria seeds a heart valve from IV drug abuse and dirty needles, or from dental procedures.

The incidence of endocarditis is rising due to the opiate crisis and use of dirty needles. ~950K cases in the US.

Patients often require open heart surgery valve replacement but are very hemodynamically unstable before, during, and after surgery due to a combination of sepsis and heart valve destruction.

Outcomes are generally poor with hemodynamic instability, high mortality (~15%), many adverse events, and high cost ($150-250,000 per case). Intraoperative CytoSorb has been used to help stabilize such patients peri-operatively with good success.

The German Federal Ministry of Education and Research is funding a 250 patient, multi-center, randomized, controlled study (REMOVE) using CytoSorb during valve replacement open heart surgery in patients with infective endocarditis.

Primary endpoint is improvement of SOFA score.

Trial completed in Jan 2020 with 288 patients enrolled. Data analysis is expected in 1H 2020, with data release in mid-2020.
Expanded CE Mark Approval for Ticagrelor Removal During Cardiothoracic Surgery

- Ticagrelor (Astra-Zeneca – Brilinta, Brilique) is a blockbuster anti-platelet agent (“blood thinner”) with more than $1.6 billion in worldwide sales
  - Indicated to reduce the thromboembolic risk of cardiac death, heart attack, stroke, and in-stent thrombosis
  - Widely used as part of dual-antiplatelet therapy with aspirin for patients undergoing percutaneous coronary intervention (PCI) and stent placement for acute coronary syndrome (i.e. sudden decrease in blood flow to heart)
  - Approximately 5-10% of ACS patients are not amenable to PCI and must go for urgent or emergent cardiac surgery. However, if emergent surgery, up to 65% will have “major fatal/life-threatening bleeding”, and if urgent surgery after 2-4 days, more than 40% will have such bleeding due to the inability to clot normally

- CytoSorb received CE Mark label expansion for removal of ticagrelor during cardiac surgery in January 2020, allowing on-label use. Potential to rapidly become standard of care and could double existing product sales. Supported by UK TISORB Study

A recent study from St. Georg Hospital in Hamburg, Germany, evaluated 55 patients on either ticagrelor (Brilinta®) and rivaroxaban (Xarelto®) that underwent emergency cardiac surgery. Of these, 39 were treated with CytoSorb intraoperatively in an investigational application.

- Patients not using CytoSorb had significant bleeding complications
- CytoSorb significantly:
  - Reduced need for red blood cell (p=0.01) and platelet (p=0.05) transfusions
  - Reduced surgical drainage (p=0.004)
  - Reduced the need for rethoracotomy (0% vs 37.5% control, p<0.001)
  - Reduced length of operation (p=0.004)
  - Reduced time in ICU (p=0.01) and hospital stay (p=0.02)

A separate cost-effectiveness analysis concluded a projected savings of approximately $5,000 per case due to these clinical benefits with the UK TISORB trial underway to confirm this

FDA Grants Breakthrough Designation For Removal of Ticagrelor Removal During Cardiothoracic Surgery

- FDA granted Breakthrough Designation to CytoSorb for the removal of ticagrelor during cardiopulmonary bypass in emergent and urgent cardiothoracic surgery

- Identifies the significant unmet medical need of the inability to reverse the anti-coagulant effects of ticagrelor and the lack of approved therapies to treat it

- FDA will work with CytoSorbents to expedite the development, assessment, and regulatory review of CytoSorb for the removal of ticagrelor

- Will work with FDA to further define steps needed for U.S. regulatory approval

- This is a very important step, creating much more visibility in the U.S. about a parallel path forward, as an alternate route to the REFRESH 2-AKI Trial

Specifically the FDA may:
1) Prioritize review of regulatory submissions for devices designated as breakthrough (including pre-submissions, investigational device exemption (IDE) applications, and marketing submissions);
2) Provide for interactive and timely communication on regulatory submissions (including pre-submissions, IDE applications, and marketing submissions) through review team support and senior management engagement;
3) Use timely post-market data collection when scientifically appropriate for devices that require premarket approval;
4) Take steps to ensure that the design of clinical trials is as efficient and flexible as practicable, when scientifically appropriate;
5) Expedite the review of manufacturing and quality systems compliance, as applicable.
Rivaroxaban Removal During Cardiothoracic Surgery Added to CytoSorb Label in E.U.

- Rivaroxaban (Xarelto® – Bayer, Jansenn/J&J) is a blockbuster Factor Xa inhibitor and novel oral anti-coagulant (NOAC) agent (“blood thinner”) with more than nearly $7 billion in 2019 global sales
  - Indicated to reduce the risk of blood clots in common conditions such as atrial fibrillation, deep vein thrombosis, and pulmonary embolism
  - Also indicated to reduce the risk of major cardiovascular events in conditions such as coronary artery disease and peripheral artery disease
  - Rivaroxaban was the 10th top selling prescription drug by global revenue in 2018 and cumulatively, more than 40 million people worldwide have been prescribed the drug
  - An estimated 6 million people are currently on the Factor Xa inhibitors an/or low molecular weight heparin with more than 2 million patients on rivaroxaban
  - Approximately 8-10% of patients on anti-coagulant therapy, in general, will require emergent surgery as some point in their lifetime

- CytoSorb received CE Mark label expansion for removal of rivaroxaban (Xarelto®) during cardiac surgery in Q2 2020, allowing on-label use.
First CRS Trial Initiated in CAR-T Cell Immunotherapy

• CAR-T cell cancer immunotherapy is a blood cancer treatment breakthrough.

• However, ~40-50% of patients can develop severe, high grade cytokine release syndrome (CRS), a cytokine storm that can lead to rapid organ failure and death.

• CytoSorb® was specifically designed to control cytokine storm and CRS and has already successfully treated a dozen cases of the closely related disease hemophagocytic lymphohistiocytosis (HLH).

• With FDA and E.U. approvals of Kymriah (Novartis) and Yescarta (Gilead), we are positioning CytoSorb® to be used as an alternative to, or in conjunction with, tocilizumab and steroids.

• In 2017, the pioneer of CAR T-cell immunotherapy, Dr. Carl June at University of Pennsylvania, joined our Scientific Advisory Board.

• In September 2019, University of Hannover, Germany announced the launch of the first trial to evaluate CytoSorb for CRS and CRES.

• First two successful treatments of CRS have now been published.
Expanded Label Targets Liver Failure and Trauma

Recently received European approval to expand the use of CytoSorb in liver disease to reduce bilirubin, and in trauma to reduce myoglobin – both very large markets

• Liver disease
  • 850 million people suffer from chronic liver disease due to viral hepatitis, alcoholism, and non-alcoholic fatty liver (NASH), and other causes leading to 1 million deaths from chronic liver disease, and another 1 million from hepatic cancer
  • CytoSorb has been used as a liver dialysis therapy in numerous acute exacerbations of liver disease including acute-on-chronic liver failure, alcoholic hepatitis and others showing both bilirubin and bile acid reduction, and important clinical benefits such as hepatic coma reversal

• Trauma
  • 56 million hospitalizations in trauma worldwide each year with approximately 5 million deaths. Severe crush injury of muscle releases myoglobin, called rhabdomyolysis, which can precipitate kidney failure, and increase the risk of death
## Dual Path to U.S. Regulatory Approval

### Prevention of AKI Following Cardiac Surgery

**REFRESH 2 – AKI Pivotal Trial**

- 400 patient RCT in 25 US centers in valve replacement or aortic surgery with hypothermic cardiac arrest
- Primary endpoint: Reduction in the severity or incidence of AKI 48 hours after surgery
- MOA: Intraoperative reduction of free hemoglobin, complement and cytokines by dual CytoSorb cartridges
- 153 patients enrolled
- Have temporarily paused enrollment to improve data collection and quality at the request of the DMSB
- Expect to resume enrollment in mid-2020 and get to the interim analysis at 200 patients by Q4 2020-Q1 2021

### Removal of Anti-Thrombotics During Cardiac Surgery

**Ticagrelor Removal in Emergent/Urgent Cardiac Surgery**

- Acute coronary syndrome patients, dissecting aortic aneurysm, infective endocarditis, etc that requires emergent or urgent cardiothoracic surgery
- Granted Breakthrough Designation for removal of ticagrelor during cardiopulmonary bypass during emergent or urgent cardiothoracic surgery
- We expect to have more clarity on the path forward soon

“Emergency Use Authorization” in the U.S. for COVID-19 Critically-III patients in place
## Recent Milestones and Near-Term News Flow

### Recent Accomplishments
- CE Mark label expansion – Ticagrelor and Rivaroxaban (anti-thrombotic removal)
- Enrollment complete – REMOVE Trial (German, endocarditis, n=288).
- New CRO for U.S. pivotal REFRESH 2-AKI (400 patient RCT, 25 U.S. centers)
- CE Mark renewal through May 2024 (defers risk of new NDA)
- First CAR-T cell immunotherapy trial initiated
- FDA Emergency Use Authorization in U.S. for COVID-19 patients
- FDA Breakthrough Designation: ticagrelor removal

### 2020 News Flow
- U.S. regulatory visibility on anti-thrombotic removal
- Enrollment of UK TISORB (Ticagrelor removal)
- REMOVE results (mid-2020)
- Resume REFRESH 2-AKI enrollment (mid-2020)
- Q2 2020 Financial Results
Investment Summary

- We believe we are a unique company in the medical device space with a high margin razorblade in another’s razor business model

- We are helping to treat some of the largest unmet medical needs in modern medicine and are riding the wave of multiple macro trends
  - Aging baby boomer generation and risk of sepsis, structural heart disease, and trauma
  - The liver disease pandemic
  - Cancer and cancer immunotherapy (CART-cell)
  - The opiate crisis
  - Influenza, COVID-19, other epidemics
  - Widespread use of blood thinners, and many others

- We have extensive validation from physicians around the world, leading strategic partners, U.S. government agencies, and the media

- We are confident in the future, with management purchasing 120,000+ shares in the recent past
Providing Hope in a helpless situation

HELPING PATIENTS SURVIVE CRITICAL ILLNESSES WORLDWIDE

CytoSorbents™
Working to Save Lives Through Blood Purification

NASDAQ: CTSO
Dr. Phillip Chan, MD, PhD – CEO
pchan@cytosorbents.com