



CytoSorb[®]
Therapy

10
YEARS



CytoSorbents Corporation
First Quarter 2022 Earnings Conference Call
May 3, 2022

Conference Call Participants

Moderator: Terri Anne Powers
CytoSorbents Corporation



Phillip Chan, MD, PhD – Chief Executive Officer



Vincent Capponi, MS – President and Chief Operating Officer



Kathleen Bloch, MBA, CPA – Chief Financial Officer



Efthymios "Makis" Deliargyris, MD, FACC, FESC, FSCAI – Chief Medical Officer



Christian Steiner, MD – Executive Vice President of Sales and Marketing and
Managing Director – CytoSorbents Europe GmbH



Christopher Cramer, MS, MBA – Vice President of Business Development

Safe Harbor Statement

Statements in this presentation regarding CytoSorbents Corporation and its operating subsidiaries CytoSorbents Medical, Inc and CytoSorbents Europe GmbH that are not historical facts are forward-looking statements and are subject to risks and uncertainties that could cause actual future events or results to differ materially from such statements. Any such forward-looking statements are made pursuant to the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. It is routine for our internal projections and expectations to change. 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 projections or 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. Readers are referred to a discussion of important risk factors detailed in the Company's 2021 Form 10-K filed with the Securities and Exchange Commission on March 10, 2022, and other reports and documents filed from time to time by us, which are available online at www.sec.gov.

Operational Update

Phillip Chan, MD, PhD
Chief Executive Officer

Q1 2022 Operational Highlights

- >170,000 cumulative CytoSorb devices utilized as of 3/31/22, up 30% year over year
- U.S. clinical trials in antithrombotic removal continue to progress, with first patient enrolled in STAR-D in April 2022 and STAR-T progressing towards 1st DSMB meeting, anticipated this summer
- New U.S. CTC Registry data from 56 patients, presented at ISICEM 2022 and to be presented this week at EuroELSO 2022, reiterated high survival (>70%) and greater improvement in lung function with early initiation of CytoSorb in critically ill COVID-19 patients on ECMO under U.S. FDA Emergency Use Authorization
- Appointed Ms. Jiny Kim, MBA to the Board of Directors
- Established U.K. operating subsidiary and hiring of U.K. country manager, Shaun Whittemore, with intent to sell CytoSorb direct in the UK and Ireland, part of a strategy to increase direct sales territories over time
- Successfully completed E.U. Notified Body audit of new Princeton, NJ manufacturing facility in April with no major findings. The facility is 95% complete. Full certification expected in coming months, allowing manufacturing and shipment of product to customers



Stable Core Product Sales in Q1 2022

- Total revenue (product sales and grant income) for Q1 2022 was \$8.7M vs \$10.6M in Q1 2021
- Product sales were: \$7.9M (\$7.6M core, \$0.3M COVID-19 sales) vs \$10.1M (\$8.3M core + \$1.8M COVID-19 sales) in Q1 2021. Product gross margins of 80%
- Q1 2022 core sales were stable: on par with Q3 and Q4 2021 core sales, and on a constant currency basis, reflecting a 7.4% reduction in the Euro to Dollar exchange rate, core sales would have been \$8.2M, comparable to Q1 2021



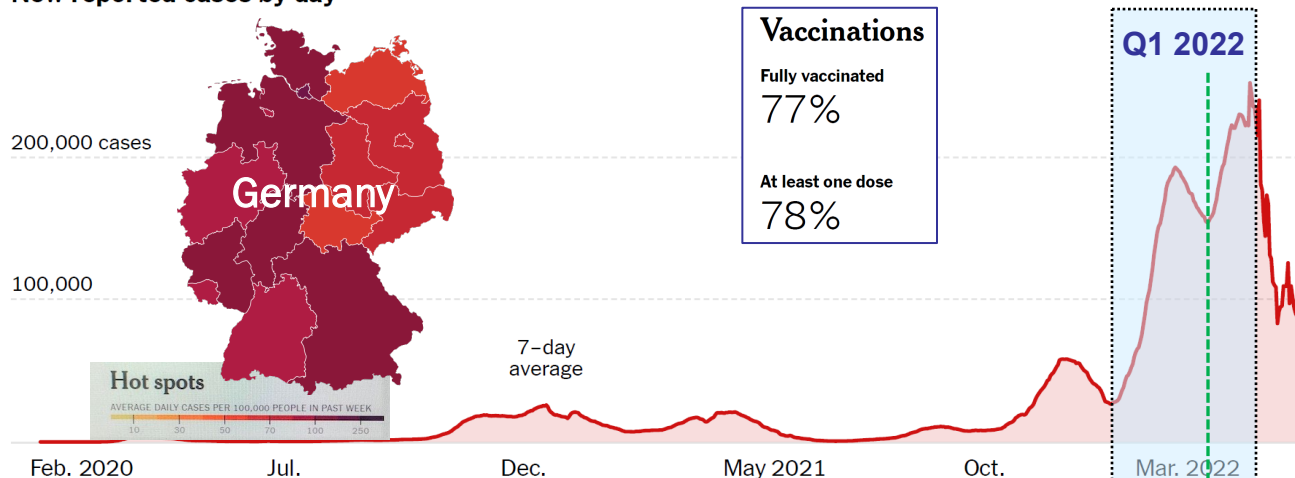
Constant Currency Adjustment of Core Sales Based on Q1 2021

	Q1 2021	Q3 2021	Q4 2021	Q1 2022
Actual Core	\$8.3M	\$7.8M	\$8.0M	\$7.6M
€ to \$ rate	1.21			1.12
Adjusted Core	\$8.3M			\$8.2M

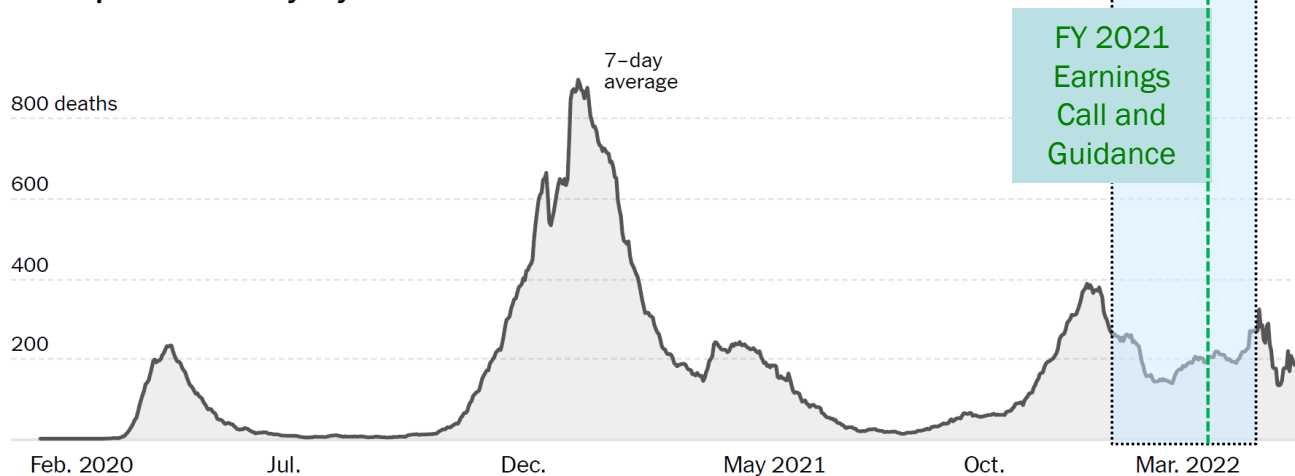
- Lower COVID-19 related revenue of only \$0.3M in Q1 2022 compared to \$1.8M a year ago, mainly accounted for the difference in product sales, reflecting the decreased need for CytoSorb due to the lower severity of COVID-19 illness related to high rates of vaccination and natural immunity

Germany COVID-19 Status (5/3/22)

New reported cases by day



New reported deaths by day



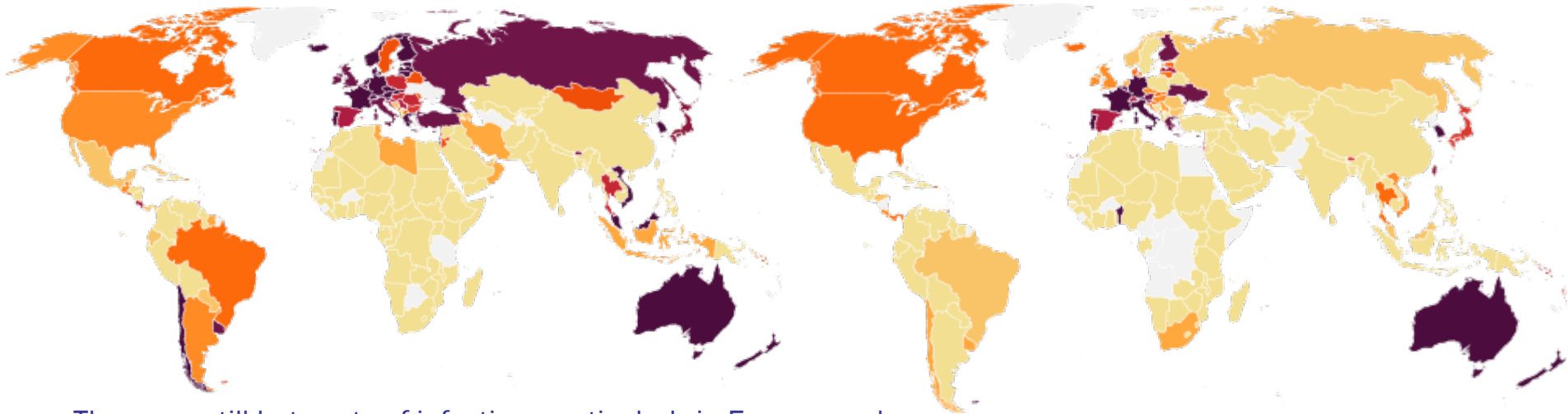
- Germany experienced the highest COVID rates since the pandemic began in Q1 2022, worsened by a new BA.2 variant surge following our last earnings call, that has delayed the recovery in Germany, and our sales
- Q1 2022 Germany sales were \$3.8M vs \$5.9M a year ago, primarily affected by COVID-related issues at hospitals. Seeing similar trends in early Q2 2022
- Fortunately, cases are rapidly declining (though still high), vaccination rates and natural immunity are high, and mortality remains low, portending an end to the pandemic this year

Source: <https://www.nytimes.com/interactive/2021/world/germany-covid-cases.html>

Worldwide COVID-19 and Vaccination Status

Early March 2022

Early May 2022



- There are still hot spots of infection, particularly in Europe, and increasing infections in certain parts of the U.S.
- 67% of the world population has now had at least 1 vaccine dose and 61% fully vaccinated
- Major European countries have high rates of vaccination (>70%) and natural immunity from infection
- Mortality rates have dropped significantly in modern countries approximating that seen with seasonal influenza
- Treatment of COVID-19 illness is better understood with new drugs/vaccines

Country	Fully Vaccinated	Partially Vaccinated	COVID Infected
U.S.	66%	78%	1 in 4
Germany	77%	78%	1 in 3
Italy	79%	84%	1 in 4
France	78%	81%	1 in 2
Spain	86%	88%	1 in 4
U.K.	74%	80%	1 in 3
Worldwide	61%	67%	1 in 15

CytoSorbentsTM

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Source: <https://www.nytimes.com/interactive/2021/world/covid-cases.html>

Revision of Prior 2022 Outlook

- The macro environment in which we operate is complex, difficult to predict, and not in our direct control with COVID having the most direct impact on our business
 - COVID, Russia-Ukraine War, inflation, currency exchange volatility and other factors
- We believe a surge of COVID-19 cases in Q1 2022 in Germany has delayed the recovery of German hospitals, and with it, our German business. Given the importance of Germany to our financial results, and given that we see some Q1 sales trends carrying over to Q2 2022 (although this may change), we are revising our guidance as follows:
- We expect COVID-19 cases and hospitalizations worldwide to continue to decline and expect to reach a more normalized operating environment as the year progresses. Because of this, we expect continued and progressive improvement in our underlying core non-COVID-19 business and expect growth in 2022 of core product sales on a constant currency basis. However, due to our limited visibility, we are removing specific growth targets with plans to revisit this later in the year. This expectation assumes:
 - A gradual recovery of normalized hospital activity and sales access in Germany and other key countries
 - No major economic slowdowns or major surges in COVID-19 infections caused by new COVID-19 variants
 - Little to no contribution to sales from Russia and neighboring countries that might be impacted by the war. In 2021, sales from these geographies represented less than 4% of total product sales
 - No escalation of the Russia-Ukraine war to other countries
 - Limited COVID-19 related product sales in 2022 due to low severity of COVID-19 illness and need for hospitalization and ICU care, and with it the use of CytoSorb in these patients.

Laser-Focused on 2022 Strategic Objectives



We are well-capitalized with \$44.7M in cash to weather this turbulence and uncertainty, and will continue investing selectively on priority programs, while taking proactive measures to significantly reduce our cash burn to end 2022 with more than \$30M in cash with the flexibility to add debt if needed.

Meanwhile, we are laser-focused on the following key objectives:

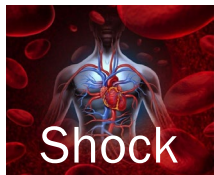
- Open the U.S. market by obtaining FDA Marketing approval for DrugSorb™-ATR to remove blood thinning drugs during cardiothoracic surgery through the STAR-T and STAR-D trials
- Restore growth of core CytoSorb sales
- Transition CytoSorb production to our new manufacturing facility and headquarters in Princeton, New Jersey this year
- Forge and expand new and existing strategic partnerships to maximize the synergy between our technology and those of our partners, while creating new global opportunities for growth.

Examples of Near-Term Growth Initiatives

- Resume in-person sales from a strong customer base:
- New therapeutic area divisions:

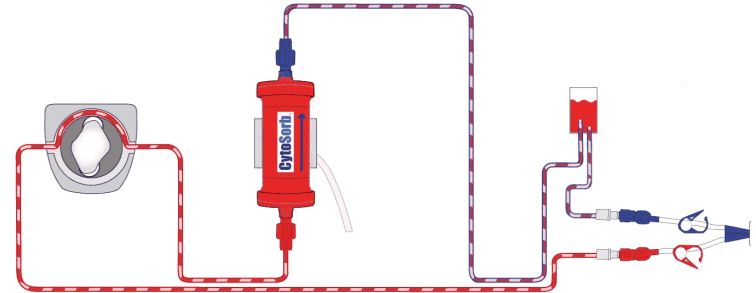
 <p>United States DrugSorb™ - ATR (development)</p>	 <p>International CytoSorb® (already commercialized)</p>		
<p>Cardiac Surgery</p> <ul style="list-style-type: none">• Antithrombotic removal	<p>Critical Care</p> <ul style="list-style-type: none">• Sepsis• Trauma• ARDS	<p>Cardiac Surgery</p> <ul style="list-style-type: none">• Endocarditis• Antithrombotic removal	<p>Liver/Kidney</p> <ul style="list-style-type: none">• Acute• Chronic

- Exclusive hospital chain partnerships
- Rise of existing and new applications



Examples of Longer-Term Growth Initiatives

- Stand-alone blood pump business model



- Expansion of direct sales territories



- Investment in important clinical studies in multiple clinical areas

Facility Update

Vincent Capponi, MS

President and Chief Operating Officer

Facility Expansion on Track

- Outgrown existing Monmouth Junction facility- new facility brings several advantages:
 - Optimized process flow
 - Additional space for growth in personnel or new product/production lines
 - Larger site supports existing business scale and future growth
 - Old facility lease term expiring- duplicative rent and facility expenses will go away
- Status of facility expansion
 - Construction completed
 - All equipment placed and qualified
 - Favorable audit from our Notified body
 - Expect to begin CytoSorb production Q2 2022
- Operational and Financial Goals
 - All personnel at a single site
 - Increased production capacity
 - Preserve and improve product gross margins
 - Provide space for future infrastructure build to support U.S. commercialization
 - Improve operational site efficiencies through site expansion

Exterior View of New Princeton HQ



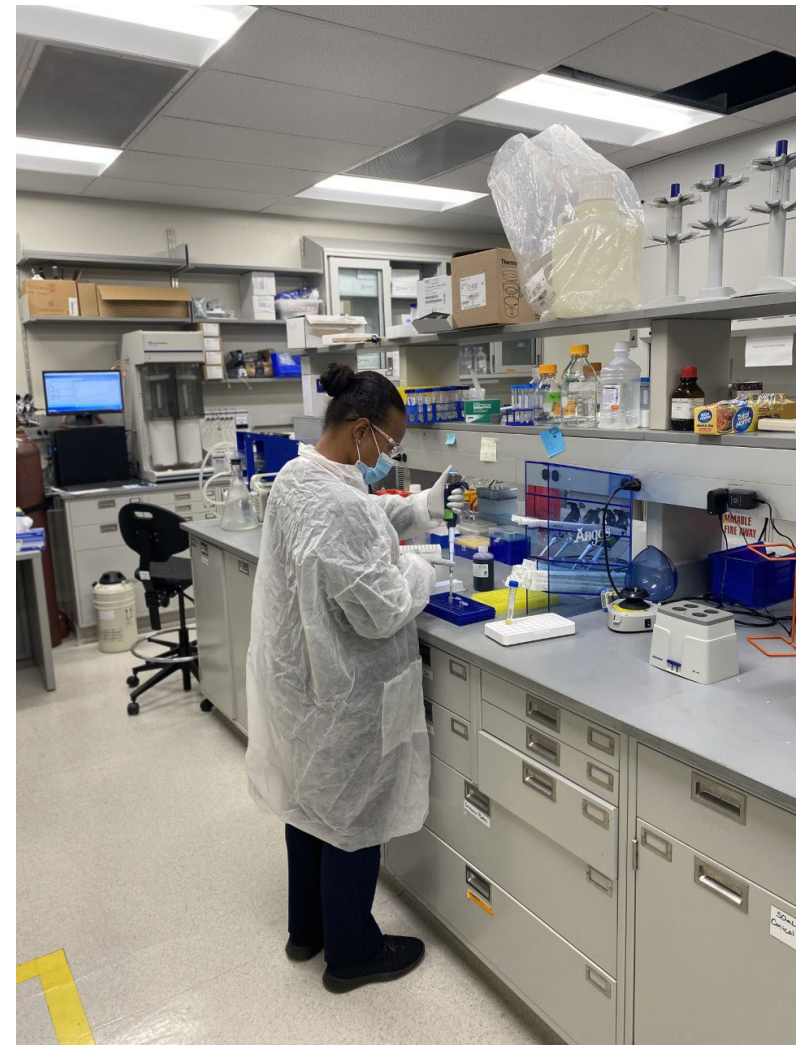
New Facility – First Look



New Facility – First Look



New Facility – First Look



Financial Highlights

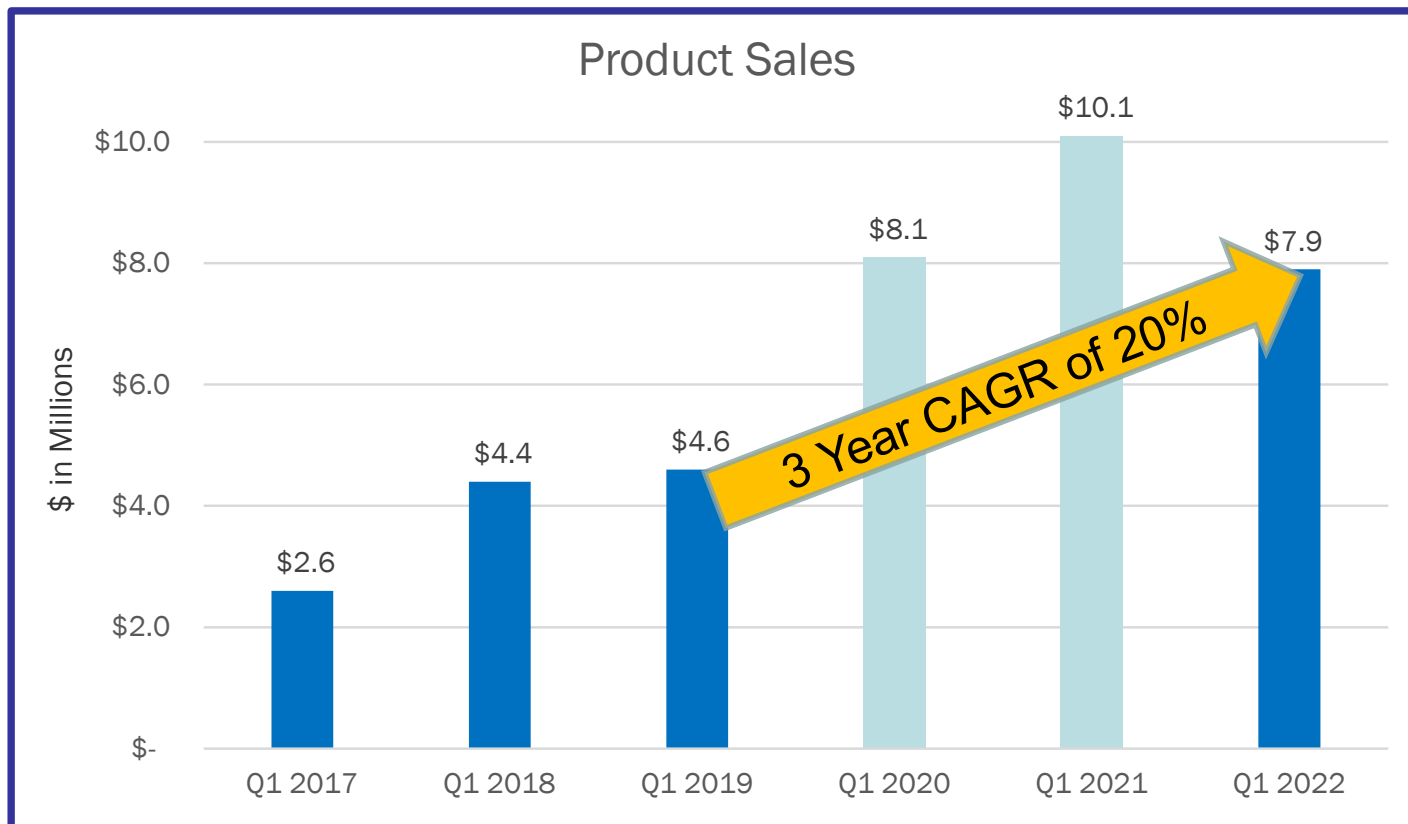
Kathleen Bloch, MBA, CPA
Chief Financial Officer

Comparative Quarterly Revenue Results

	Quarter Ended Mar 31, 2022	Quarter Ended Mar 31, 2021	% Incr.
Product revenue	\$7,924,457	\$10,143,356	(21.9)%
Grant and other income	766,967	455,491	68.4%
Total revenue	\$8,691,424	\$10,598,847	(18.0%)

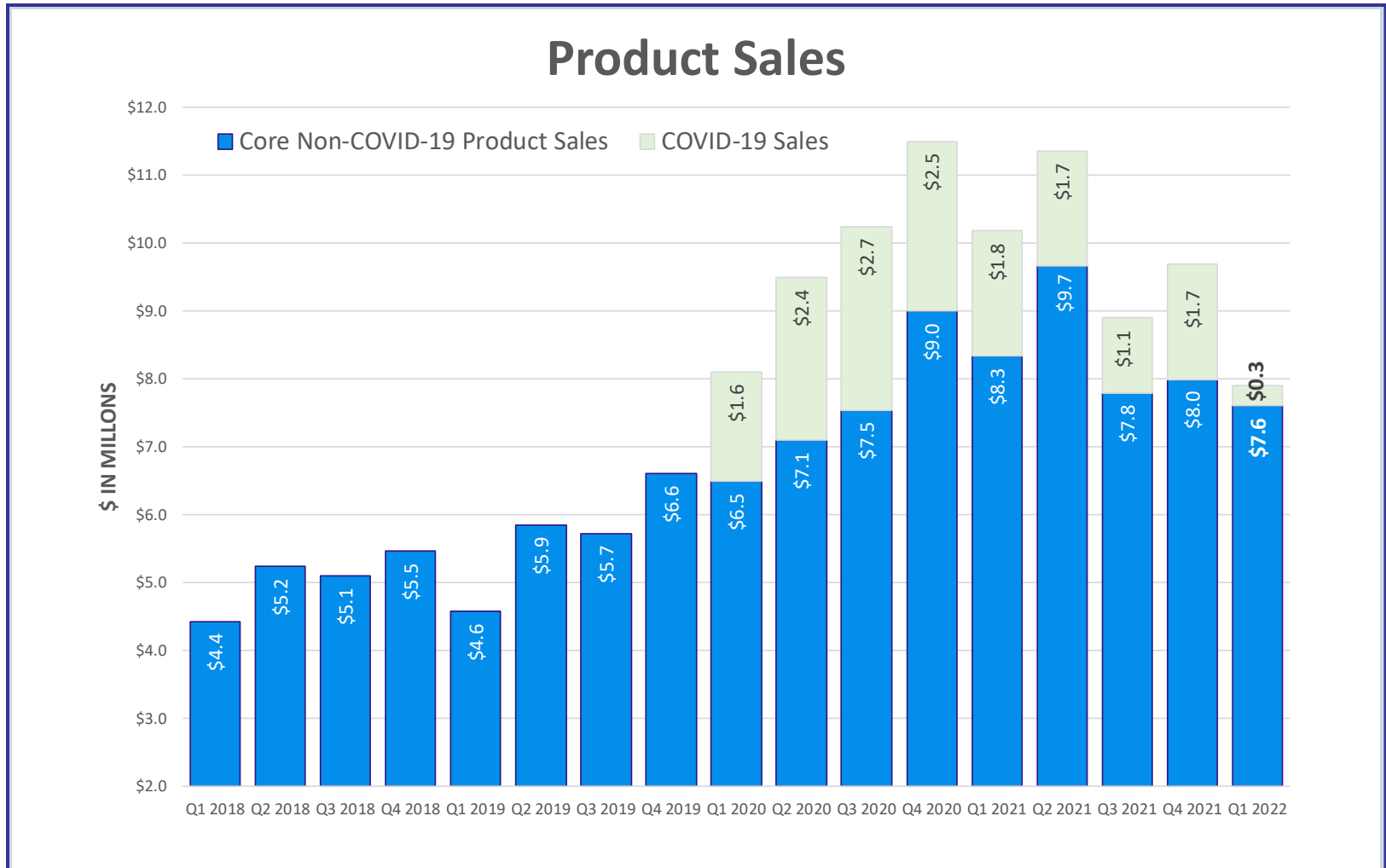
- Total revenue, including product sales and grant income was \$8.7M in Q1 2022 compared to \$10.6M for Q1 2021. FX negatively impacted sales by \$552K
- Product sales for Q1 2022 were \$7.9M compared to \$10.1M in sales in Q1 2021, down 22%. FX negatively impacted sales by \$552K. At constant currency product sales were down 16% Y-Y
- Grant revenue was \$767K in Q1 2022 compared to \$455K in Q1 2021
- Q1 2022 product gross margins were 80% compared to 77% for Q1 2021

First Quarter Product Sales Over Time



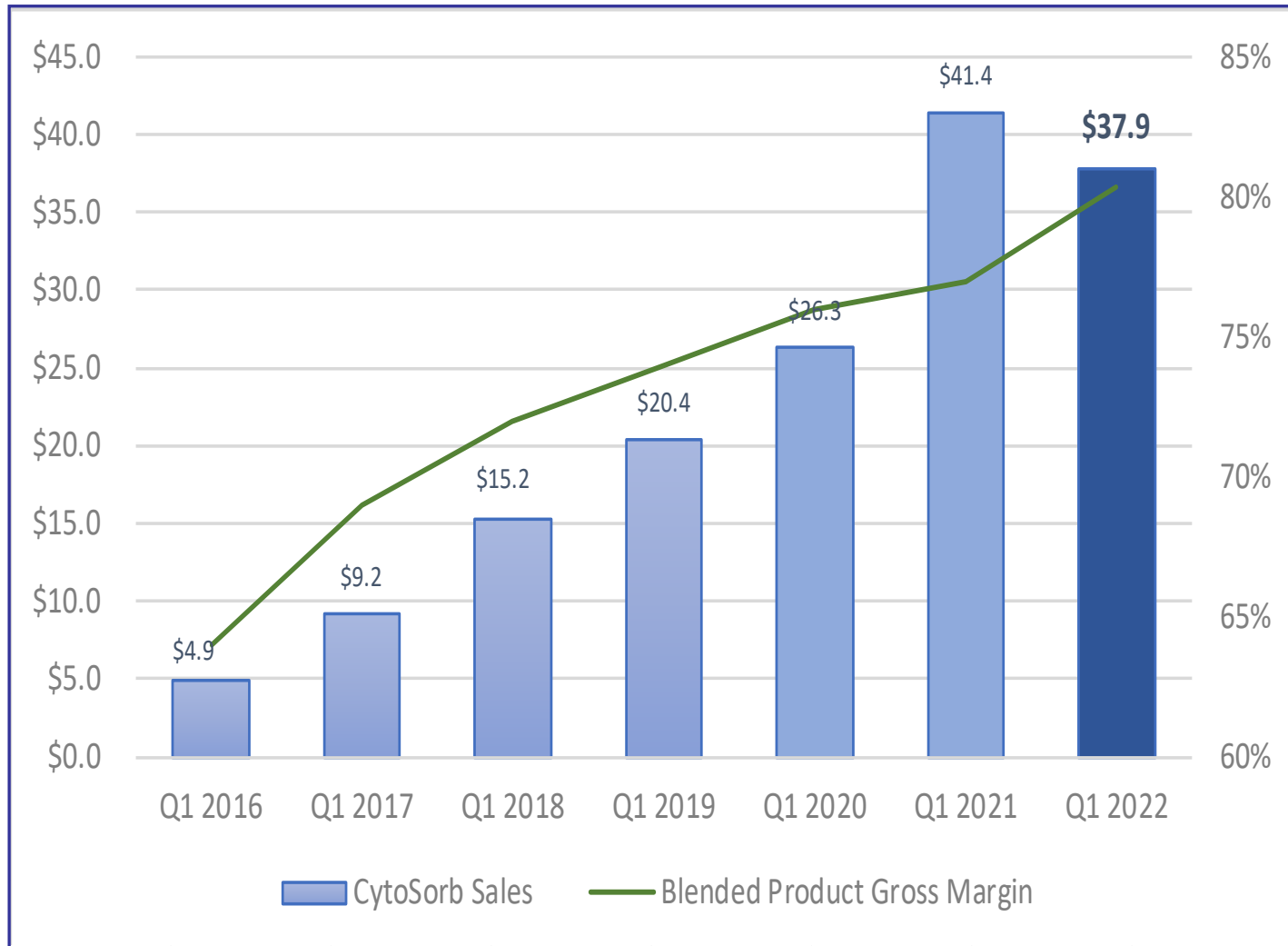
- COVID-19 accelerated sales growth in 2020 and 2021.
- Lower sales in Q1 2022 due to a decline in severely ill COVID-19 patients and COVID-19 related hospital restrictions.
- Q1 2022 sales levels are 73% higher than pre-COVID-19 sales levels.

Total Quarterly Product Sales



Q1 2022 COVID-19 sales are estimated to be \$300K.

TTM Product Sales & Blended Gross Margin



Working Capital and Cap Table

Working Capital as of					
	3/31/2022	12/31/2021	9/30/2021	6/30/2021	3/31/2021
Current Assets:					
Cash and short-term investments	\$43,023	\$52,138	\$61,043	\$65,609	\$68,468
Grants and accounts receivable, net	4,577	4,523	5,241	5,755	5,019
Inventories	5,445	4,766	4,528	3,689	3,108
Prepaid expenses and other current assets	2,809	2,872	1,940	2,032	3,040
Total current assets	55,854	64,299	72,752	77,085	79,635
Current Liabilities:					
Accounts payable	4,826	2,805	3,358	2,166	1,678
Accrued expenses and other current liabilities	9,359	10,314	7,447	8,378	7,619
Current maturities of long-term debt	-	-	-	-	-
Lease liability - current portion	487	571	266	252	463
Total current liabilities	14,672	13,690	11,070	10,796	9,759
Net Working Capital	\$ 41,182	\$ 50,609	\$ 61,681	\$ 66,289	\$ 69,876

Cap Table 3/31/2022

Fully Diluted Common Shares	
Common Stock	43,505,948
Options	5,802,229
Restricted Stock Unit Awards	248,928
	49,557,105

Focus on Financial Discipline and Flexibility

- We have taken actions to reduce planned quarterly cash spend by approximately \$2 million per quarter for the remainder of 2022, including:
 - Company-wide hiring freeze, excluding essential hires
 - Postponement of office space buildout
 - Reductions in non-grant R&D spend
- Our spend is focused on and fully aligned with our strategic priorities
 - Key Clinical trials
 - Sales & Marketing
 - Manufacturing facility
- We expect to fund our operating needs and capex with cash on hand and expect to end the year with ~\$30M in cash
- We have financial flexibility if needed with a \$15M Loan commitment from Bridge Bank

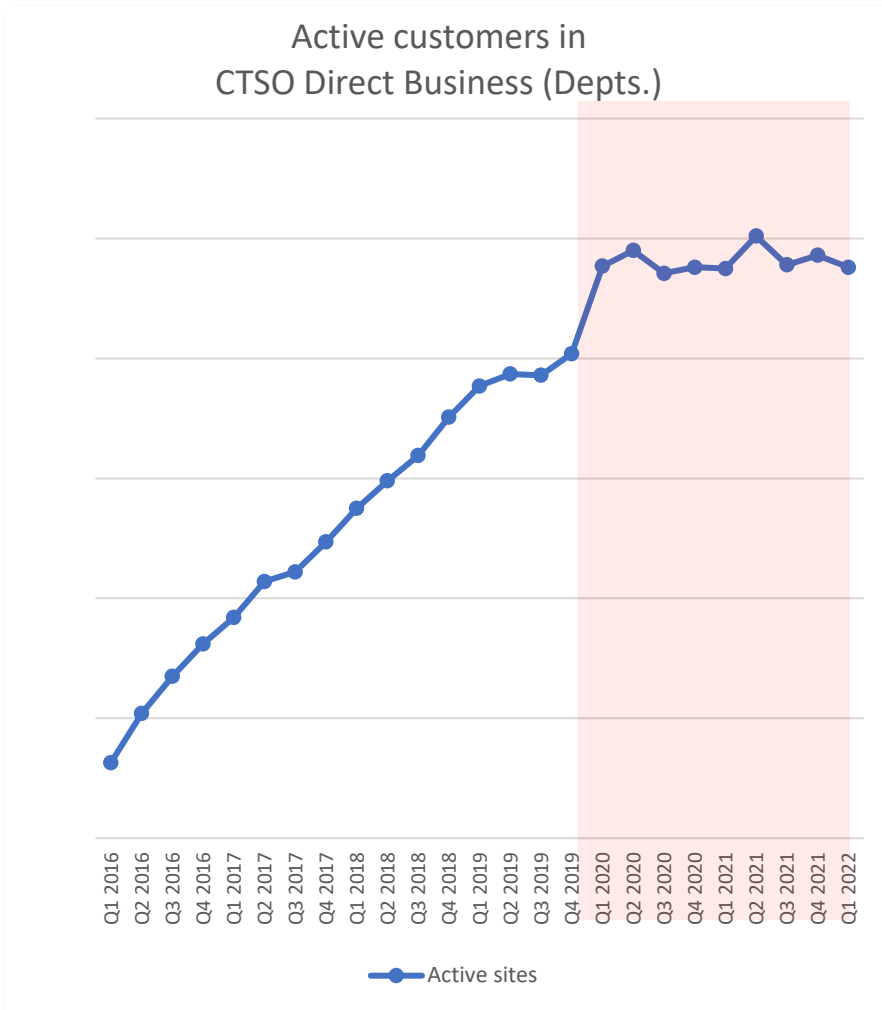
Commercialization Update

Christian Steiner, MD

Executive Vice President of Sales and Marketing

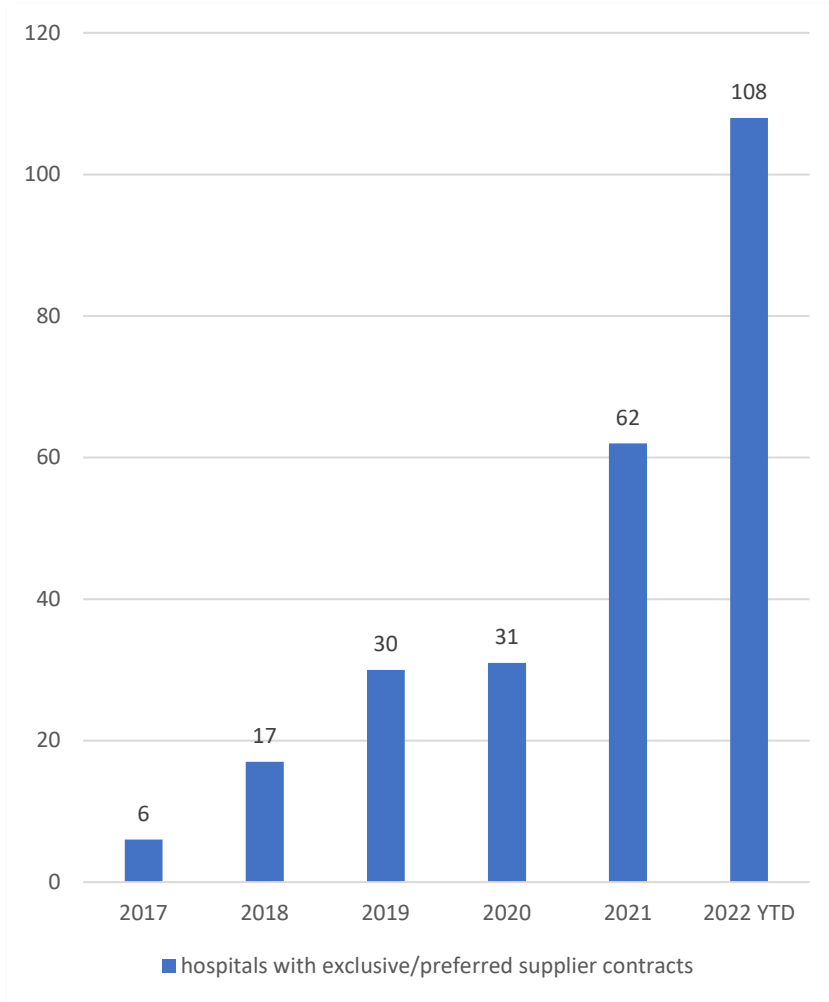
Managing Director – CytoSorbents Europe GmbH

Customer Base Stable in current environment



- Number of active customers/users has grown by 20-25% compared to pre-pandemic times and stabilized
- Customer loyalty has increased
- Amount of purchased adsorbents per department has fluctuated more than usual during pandemic
- Re-start of core business from higher base line while pandemic phases out

Exclusive /Preferred Supplier Contracts in Germany



- Customer loyalty and satisfaction has led to a significant increase of exclusive or preferred supplier contracts of CytoSorbents
- The 20% biggest customers are contributing 80% of the revenues in Germany
- Contracts with hospital chains or networks or with purchasing organizations enable easier access to hospitals

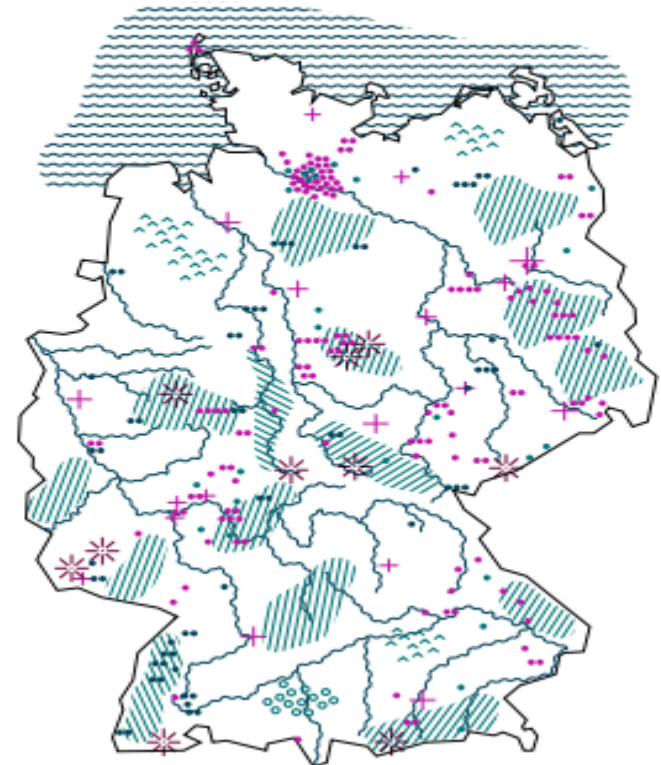
New Preferred Supplier Agreement with Asklepios

- New 3-year preferred supplier agreement signed in 1Q22
- Asklepios is among the leading private hospitals operators in Germany (facilities across 14 states, including 70 acute care clinics)
- CytoSorbents now has preferred supplier agreements with the three largest hospital chains in Germany
- Potentially 298 hospitals in those three groups alone



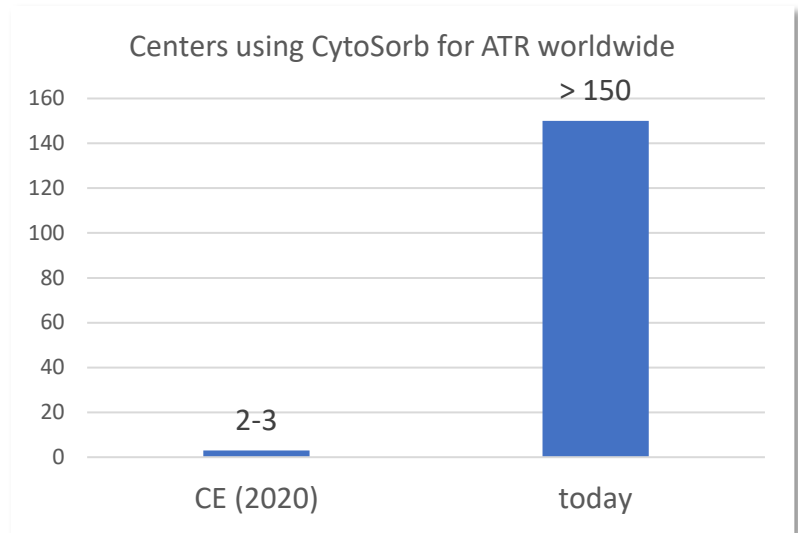
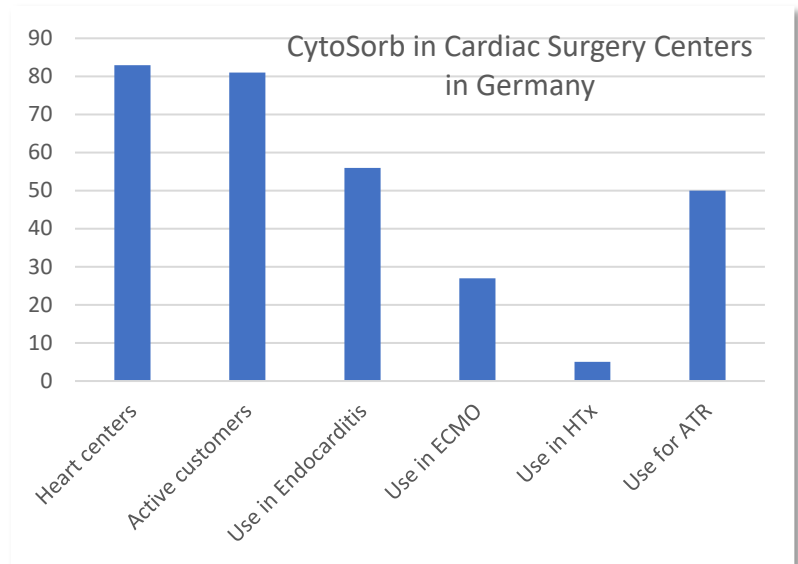
Healthcare facilities

- Asklepios Kliniken
- Schön-Klinikum AG
- MediClin AG



Therapeutic area – Cardiovascular

- TA team led by a experienced marketing executive and a cardiac surgeon
- Establishing and extending robust KOL network
- German Heart Center roadshow started; International planned
- A number of relevant peer-reviewed publications expected within the next months
- Increasing adoption of CytoSorb in several cardiovascular application fields



Near term growth drivers after pandemic

Focus on key initiatives

- Resume growth from **high active customer base**
- New exclusive/preferred **supplier partnerships**
- Focus on **major applications in key therapeutic areas** (critical care, cardiac surgery, and liver/kidney)
- Expansion of **direct sales footprint**
- Enhanced **sales partnerships**
- Stand alone **platform strategy** – Creating market

New Growth Opportunity


Chris Cramer, MBA

Vice President, Business Development

New Growth Opportunity to Drive CytoSorb Adoption

We believe there is a global opportunity to drive further adoption of CytoSorb by improving machine access for customers

- Physicians want the ability to start CytoSorb treatment prior to initiation of CRRT
- Access to CytoSorb therapy can be challenging in geographic regions where CRRT is limited due to cost of treatment, lack of skilled nursing, or in cases where market clearance for CRRT devices have not yet been obtained
- In the future, CTSO could benefit from a low cost, easy to use extracorporeal platform to accelerate its hospital wide strategy outside of the ICU



Providing customers with access to a low cost, easy to use extracorporeal platform has the potential to accelerate the adoption of CytoSorb in our current indications and serves as the foundation for future growth areas

Pilot Hemoperfusion Program Launched

- CTSO has executed an agreement with a large, multi-national extracorporeal machine provider to supply CTSO with hemoperfusion machines and accessories
 - Multi-country reseller agreement in place
 - CTSO has the ability to provide HP machines, tubing sets and field support to customers
 - Various business models possible, can be tailored to market situation (buy, lease, etc.)
- While still in early stages, initial results from the HP pilot have been promising
- Next steps are to continue to evaluate / refine the program and to scale the business model more broadly beyond the pilot with the goal of accelerating adoption of CytoSorb



COVID-19 patient with multi-organ failure treated with CytoSorb via hemoperfusion

Clinical Update

Efthymios N. Deliargyris, MD, FACC, FESC, FSCAI
Chief Medical Officer

Execution and Focus

- Global clinical plan on track with all studies now active
- **7 Programs (3 RCT, 3 Registries, 1 Pilot study)**
 - US (3): 2 FDA RCT: STAR-T; STAR-D + CTC Registry (EUA)
 - EU (4): RCT (PROCYSS); Pilot (HepOnFire); Registries (STAR + COSMOS)
- STAR FDA programs remain top priority and we are allocating maximal resources to drive execution
- Institutions still dealing with staff shortages and fatigue post-pandemic, but we still see very high levels of interest for participation in our trials
- **Data readouts** and international conference presentations in 2022:
 - ECMO/CTC Registry: Accepted abstracts: ISICEM (presented 3/22) and EuroELSO (5/22); final CTC results (n=100) submitted to ESICM + to be submitted for publication
 - Cardiac Surgery/Antithrombotic Removal – First ever *in vivo* antithrombotic drug removal data in cardiac surgery patients (submitted ESC 2022)

FDA Programs (**STAR-T** & **STAR-D**)

- Both studies have now left the station and are actively enrolling
- Very high levels of enthusiasm from U.S. centers - Expanding studies to 30 sites
- Majority of **STAR-T** sites active and recruiting - >3/4 of them also in **STAR-D**
- Dedicating maximum resources to ensure momentum and timely execution
- STAR site road show ongoing; STAR Investigator Event at AATS (Boston, May)
- **STAR-T**: Projected to hit milestone #1 this summer
- **STAR-D**: Too early to tell, but about 6 months behind **STAR-T**
- Both studies have identical paths highlighted by 3 major milestones (Table)

Milestone	Enrollment target	Triggered Action
1 st	33% (n=40)	1 st DSMB Safety review
2 nd	67% (n=80)	2 nd DSMB + Interim analysis (IA)
3 rd	100% (n=120)	Study completion (unless stopped at IA)

Antithrombotic Removal – Validation of a Large Opportunity

- Very high level of interest in this application across the board
 - Increased demand from US sites to participate in STAR trials
 - Increasing adoption as standard of care in heart centers around the world
- Growing body of evidence demonstrating strong efficacy and safety
 - New publication from Germany expanding benefits to Aortic Dissection surgery
 - Review article from Canada highlighting antithrombotic removal as a solution for a very large unmet need
- Robust value proposition of DrugSorb-ATR supporting premium pricing
 - **Stanford Byers Center for Biodesign** publication: “*The Need for Accelerated Medicare Coverage of Innovative Technologies: Impact on Patient Access and the Innovation Ecosystem*”. Health Management, Policy and Innovation (www.HMPI.org)
 - We are working with recognized Health Economists to model the economic impact of reducing costly perioperative bleeding complications and complement the clinical evidence from the STAR trials (DrugSorb-ATR value proposition)
- Hospital wide strategy to expand application beyond cardiac surgery

Non-FDA Clinical Programs

PROGRAM		Status	Next Steps	Target
CTC Registry (n=100) COVID-19 + ECMO	US	<u>Completed - Data Readouts</u> ISICEM, EuroELSO, ESICM	Presentations Publications	2022
PROCYSS RCT (n=160) Septic Shock	GER	<u>Enrolling at >50% of sites</u>	Interim Analysis (50% Enrollment)	2023
Hep-On-Fire (n=30) Acute Liver Failure	GER	<u>Recruiting</u>	Study Completion	2023
STAR Registry Cardiac Surgery	EU	<u>Enrolling in UK, GER, AUT</u>	Ongoing Enrollment Data Readouts	2023
COSMOS Registry Critical Care	EU	<u>Approvals received</u> Site activations begin	Ongoing Enrollment Data Readouts	2023

Clinical Summary

- Institutions are gradually recovering from COVID and are very enthusiastic about participating in our studies
- Our expert clinical team is laser focused on STAR-T/STAR-D execution
- Momentum is building and we reiterate our target of hitting the 1st milestone for STAR-T this summer. STAR-D trailing by about 6 months
- PROCYSS, our top priority and eagerly awaited RCT in refractory septic shock is now actively enrolling at multiple sites in Germany
- Multiple data readouts in 2022 from the U.S. multicenter CTC Registry (n=100)
- The international STAR and COSMOS Registries are on track and expected to begin reporting high fidelity data in cardiac surgery and critical care in early 2023

Concluding Remarks

Phillip Chan, MD, PhD
Chief Executive Officer

Summary

- As shareholders ourselves, we understand that the macro environment and stock price has created great uncertainty amongst investors
- However, we firmly believe we are an innovative and solidly financed company that can weather the current turbulence, with a robust strategic and tactical plan that positions us well for both near-term and long-term success once the pandemic abates
- We believe the world has never needed our technology more and that we are on the cusp of significant value creation with a planned return to sales growth of CytoSorb and the goal of opening the U.S. market with DrugSorb-ATR
- Although it has been challenging, we thank you for your support

Q&A Session

CytoSorbents Corporation

NASDAQ: CTSO

Investor Relations Contact

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