

EX-99.1 2 lmao-ex991_117.htm EX-99.1 INVESTOR PRESENTATION 2022-05-03



Investor Presentation
SeaStar Medical, Inc.
LMF Acquisition Opportunities, Inc.



May 3, 2022



Important Disclosures

This investor presentation (the "presentation") is for information purposes only to assist interested parties in making their own evaluation with respect to the business combination (the "Transaction") between LMF Acquisition Opportunities, Inc. ("LMAO") and SeaStar Medical, Inc. ("SeaStar"). The information contained herein does not purport to be all-inclusive and none of LMAO, SeaStar or their respective directors, officers, stockholders, affiliates or advisers or any other person makes any representation or warranty, express or implied, as to the accuracy, completeness or reliability of the information contained in this presentation or any other written or oral communication to the recipient in the course of the recipient's evaluation of LMAO or SeaStar. The information contained herein is preliminary and is subject to change and such changes may be material. The information in this presentation assumes that the Transaction is consummated on the terms contemplated by the Agreement and Plan of Merger ("Merger Agreement") entered into by LMAO and SeaStar.

You should not construe the contents of this presentation as legal, tax, accounting or investment advice or a recommendation. You should consult your own counsel and tax and financial advisors as to legal and related matters concerning the matters described, and by accepting this presentation, you confirm that you are not relying upon the information contained herein to make any decision.

No securities commission or securities regulatory authority in the United States or any other jurisdiction has in any way passed upon the merits of the Transaction or the accuracy or adequacy of this presentation.



Important Disclosures (cont.)

Forward Looking Statements

This presentation contains certain forward-looking statements within the meaning of the “safe harbor” provisions of the Private Securities Litigation Reform Act of 1995. These forward-looking statements include, without limitation, LMAO’s and SeaStar’s expectations with respect to the Transaction, including statements regarding the benefits of the Transaction, the anticipated timing of the Transaction, the implied valuation of SeaStar, the products offered by SeaStar and the markets in which it operates, and SeaStar’s projected future results. Words such as “believe,” “project,” “expect,” “anticipate,” “estimate,” “intend,” “strategy,” “future,” “opportunity,” “plan,” “may,” “should,” “will,” “would,” “will be,” “will continue,” “will likely result,” and similar expressions are intended to identify such forward-looking statements. Forward-looking statements are predictions, projections and other statements about future events that are based on current expectations and assumptions and, as a result, are subject to significant risks and uncertainties that could cause the actual results to differ materially from the expected results. Most of these factors are outside LMAO’s and SeaStar’s control and are difficult to predict. Factors that may cause actual future events to differ materially from the expected results, include, but are not limited to: (i) the risk that the Transaction may not be completed in a timely manner or at all, which may adversely affect the price of LMAO’s securities, (ii) the risk that the Transaction may not be completed by LMAO’s business combination deadline, even if extended by its sponsor, (iii) the failure to satisfy the conditions to the consummation of the Transaction, including the adoption of the Merger Agreement by the stockholders of LMAO and the satisfaction of the minimum trust account amount following redemptions by LMAO’s public stockholders, (iv) the occurrence of any event, change or other circumstance that could give rise to the termination of the Merger Agreement, (v) the receipt of an unsolicited offer from another party for an alternative transaction that could interfere with the Transaction, (vi) the effect of the announcement or pendency of the Transaction on SeaStar’s business relationships, performance, and business generally, (vii) the inability to recognize the anticipated benefits of the Transaction, which may be affected by, among other things, competition and the ability of the post-combination company to grow and manage growth profitability and retain its key employees, (viii) costs related to the Transaction, (ix) the outcome of any legal proceedings that may be instituted against SeaStar or LMAO following the announcement of the Transaction, (x) the ability to maintain the listing of LMAO’s securities on Nasdaq, (xi) the ability to implement business plans, forecasts, and other expectations after the completion of the Transaction, and identify and realize additional opportunities, (xii) the risk of downturns and the possibility of rapid change in the highly competitive industry in which SeaStar operates, (xiii) the risk that SeaStar and its current and future collaborators are unable to successfully develop and commercialize SeaStar’s products or services, or experience significant delays in doing so, including failure to achieve approval of its products by applicable federal and state regulators, (xiv) the risk that SeaStar may never achieve or sustain profitability; (xv) the risk that SeaStar may need to raise additional capital to execute its business plan, which many not be available on acceptable terms or at all; (xvi) the risk that third-parties suppliers and manufacturers are not able to fully and timely meet their obligations, (xvii) the risk of product liability or regulatory lawsuits or proceedings relating to SeaStar’s products and services, (xviii) the risk that SeaStar is unable to secure or protect its intellectual property, (xix) the risk that the post-combination company’s securities will not be approved for listing on Nasdaq or if approved, maintain the listing and (xx) other risks and uncertainties indicated from time to time in the proxy statement / prospectus to be filed relating to the Transaction, including those under the “Risk Factors” section therein and in LMAO’s other filings with the SEC. The foregoing list of factors is not exhaustive. Forward-looking statements speak only as of the date they are made. Readers are cautioned not to put undue reliance on forward-looking statements, and SeaStar and LMAO assume no obligation and do not intend to update or revise these forward-looking statements, whether as a result of new information, future events, or otherwise.



Important Disclosures (cont.)

Industry and Market Data

In this presentation, we rely on and refer to information and statistics regarding market participants in the sectors in which SeaStar expects to compete and other industry data. We obtained this information and these statistics from a variety of publicly available sources, including reports by market research firms and other public company filings. No representation is made as to the reasonableness of the assumptions made within or the accuracy or completeness of any projections or modeling or any other information contained herein. Any data on past performance or modeling contained herein is not an indication as to future performance.

Trademarks

This presentation may contain trademarks, service marks, trade names and copyrights of other companies, which are the property of their respective owners. Solely for convenience, some of the trademarks, service marks, tradenames and copyrights referred to in this presentation may be listed without the TM, SM, © or ® symbols, but LMAO and SeaStar will assert, to the fullest extent under applicable law, the rights of the applicable owners, if any, to these trademarks, service marks, trade names and copyrights.

Important Information and Where to Find It

In connection with the Transaction, LMAO intends to file a registration statement on Form S-4 (the "Registration Statement") with the SEC, which will include a preliminary proxy statement to be distributed to holders of LMAO's common stock in connection with LMAO's solicitation of proxies for the vote by LMAO's stockholders with respect to the Transaction and other matters as described in the Registration Statement, as well as the prospectus relating to the offer of the securities to be issued to SeaStar's stockholders in connection with the Transaction. After the Registration Statement has been filed and declared effective, LMAO will mail a definitive proxy statement, when available, to its stockholders. Investors and security holders and other interested parties are urged to read the proxy statement/prospectus, any amendments thereto and any other documents filed with the SEC carefully and in their entirety when they become available because they will contain important information about LMAO, SeaStar and the Transaction. Investors and security holders may obtain free copies of the preliminary proxy statement/prospectus and definitive proxy statement/prospectus (when available) and other documents filed with the U.S. Securities and Exchange Commission (the "SEC") by LMAO through the website maintained by the SEC at <http://www.sec.gov>, or by directing a request to: LMF Acquisition Opportunities, Inc., 1200 Platt Street, Suite 1000 Tampa, FL 33602.

Participants in Solicitation

LMAO and SeaStar and their respective directors and certain of their respective executive officers and other members of management and employees may be considered participants in the solicitation of proxies with respect to the Transaction. Information about the directors and executive officers of LMAO is set forth in its Annual Report on Form 10-K for the fiscal year ended December 31, 2021. Additional information regarding the participants in the proxy solicitation and a description of their direct and indirect interests, by security holdings or otherwise, will be included in the proxy statement/prospectus and other relevant materials to be filed with the SEC regarding the transaction when they become available. Stockholders, potential investors and other interested persons should read the proxy statement/prospectus carefully when it becomes available before making any voting or investment decisions. When available, these documents can be obtained free of charge from the sources indicated above.

No Offer or Solicitation

This presentation shall not constitute a solicitation of a proxy, consent or authorization with respect to any securities or in respect of the Transaction. This presentation shall also not constitute an offer to sell or the solicitation of an offer to buy any securities, nor shall there be any sale of securities in any states or jurisdictions in which such offer, solicitation or sale would be unlawful prior to registration or qualification under the securities laws of any such state or jurisdiction.



Overview of LMF Acquisition Opportunities



LMF's team has significant public company experience to support SeaStar Medical's growth plans

100+ years combined investing & operating experience

Growth oriented investors & operators

Robust M&A and capital markets experience

Long-term track record of value creation across sectors



Bruce M. Rodgers, Esq.
Chairman & CEO, President



- 7+ years of public company experience plus over 20 years serving as outside counsel to public companies
- 2015 – Present: Chairman, CEO & President of LM Funding America, Inc. (Nasdaq:LMFA)
- Mr. Rodgers was instrumental in developing LMFA's business model prior to its inception and in pivoting the business to Bitcoin mining
- As LMFA's Chief Executive Officer, Mr. Rodgers has guided LMFA through its initial public offering and subsequent public offerings
- 1998 – 2003: Equity Partner at Foley & Lardner LLP



Richard Russell
Chief Financial Officer



Craig Burson
Director





Overview of SeaStar Medical

SeaStar Medical is a medical technology company developing a platform therapy to address hyperinflammation, with lead programs in Acute Kidney Injury (“AKI”)

Innovative Acute
Kidney Injury
 (“AKI”)
Treatment

Granted
Breakthrough
Device
Designation for
AKI in Adults on
Apr. 29th

Near-Term
Commercial
Opportunity in
Pediatric AKI
upon Approval
under HDE*

Adult AKI Pivotal
Interim Results
Expected in Q4
2023

In United States, AKI is associated with an increase in hospitalization costs that are estimated between \$5.4 and \$24.0 billion, annually**

*HDE: Humanitarian Device Exemption

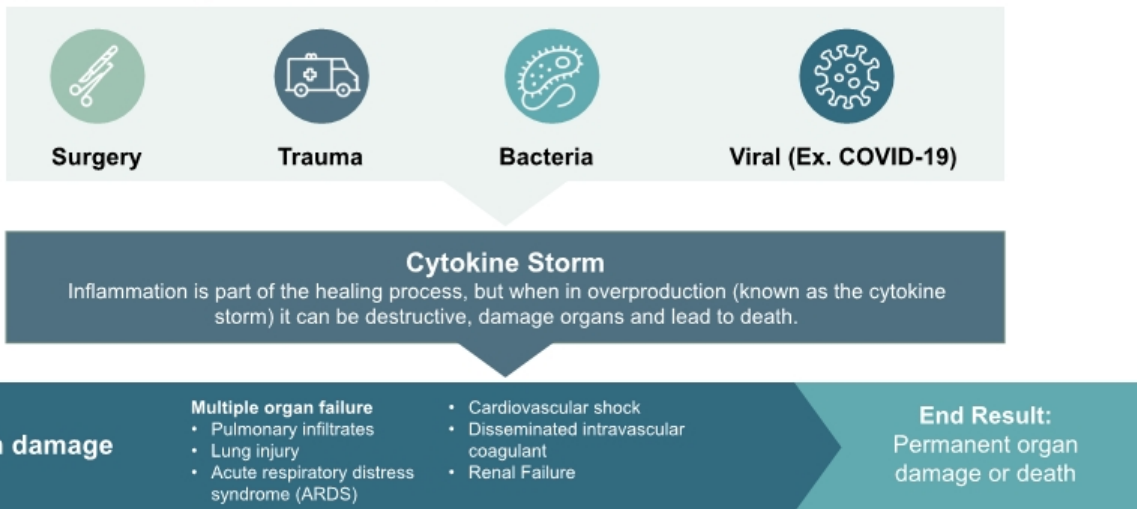
**Source: The Economic Consequences of Acute Kidney Injury, Nephron 2017



Clinical Focus: Hyperinflammation as a Disease State

Various diseases and health issues can trigger hyperinflammation through the release of cytokines (Cytokine Storm) from immunological effector cells.

The COVID-19 pandemic has highlighted the devastating significance of this disease state and the inter-relationship between organs such as kidney and lung, as an example





The Disease State Provides a Logical Expansion into Acute and Eventually Chronic Diseases Beyond Our Initial Focus – Acute Kidney Injury (AKI)



Acute Kidney Injury

Control fluid and electrolyte balance



Acute Resp. Distress
Synd.

Ventilator, proning, oxygen, and fluids

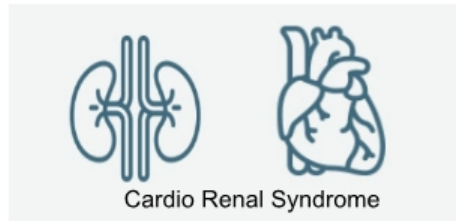
Today, removing cytokines is the predominant clinical course of action

A major Cytokine Storm can lead to long term-term morbidity, severe organ damage and or death



Chronic Dialysis

Frequent dialysis treatment per week



Cardio Renal Syndrome

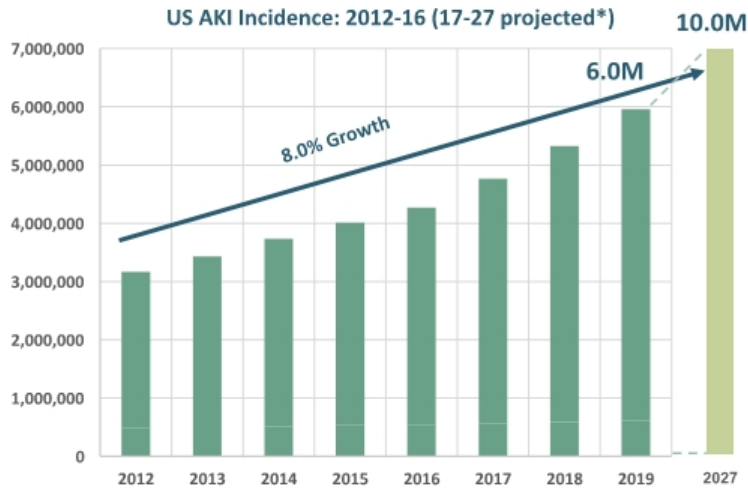
Diuretics, ultrafiltration

A simplified clinical approach to the down regulation of cytokine production at the effector cell level may be the new clinical focus moving forward

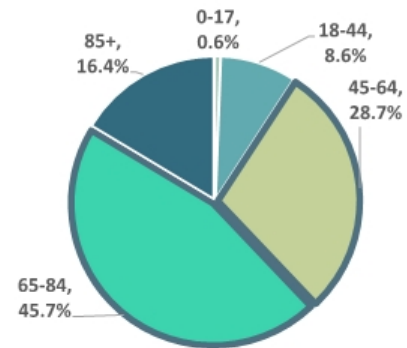


Market Opportunity: AKI in the Acute US Hospital Setting

AKI incidence in the US is projected to grow to 10 MM patients by 2027 as patients over 45 have higher comorbidities (correlated w/ AKI)



2019 Projected US AKI Incidence Distribution (Age)^{1,2}

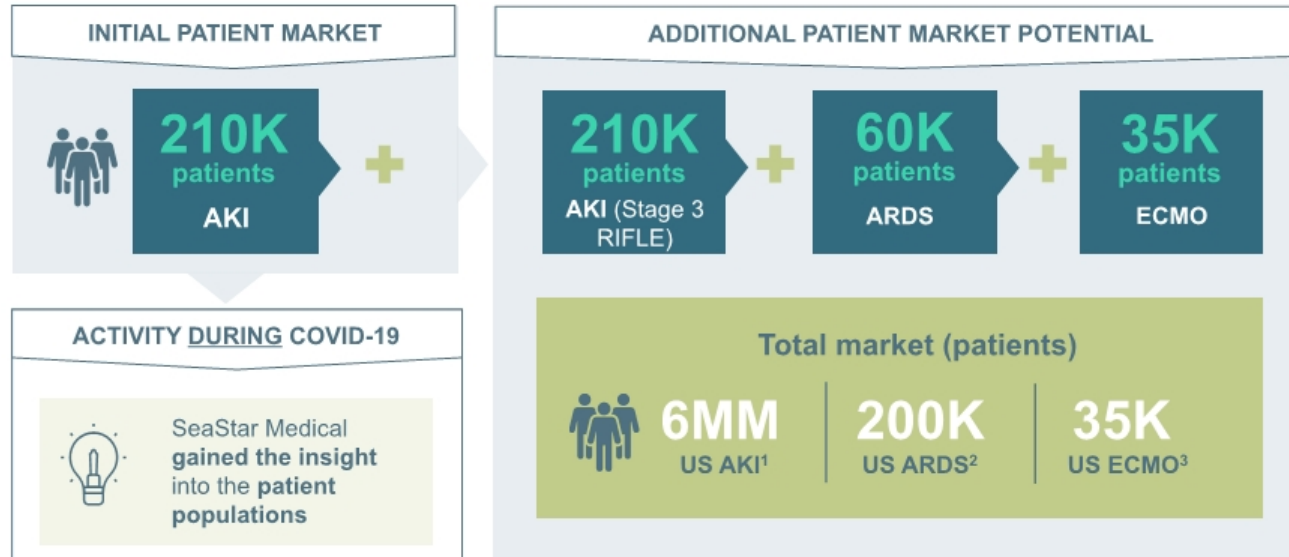


Aging demographics will contribute to growth

1. US Gov't: Agency for Healthcare Research - HCUPnet, 2012-2016 data extrapolation (CAGR 7.8%): <https://hcupnet.ahrq.gov/#setup>
 2. Extrapolated with annual patient growth of 8%
 *Based on historical growth rate



SeaStar Medical Gained Critical Insights and Developed Valuable Predictions About these Patient Populations and How Each are Treated

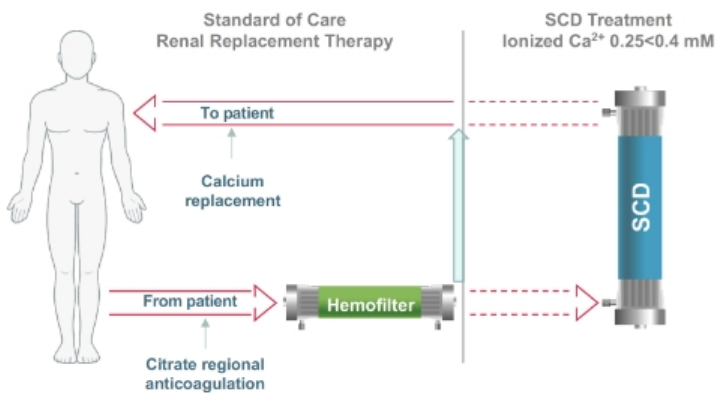


1. Medpar.
2. <https://acphospitalist.org/archives/2019/07/coding-corner-ards.htm>.
3. Source: www.elseo.org
AKI=Acute Kidney Injury, RIFLE=Risk, Injury, Failure, Loss of kidney function, and End-stage kidney disease; ARDS=Acute Respiratory Distress Syndrome; ECMO=Extracorporeal Membrane Oxygenation

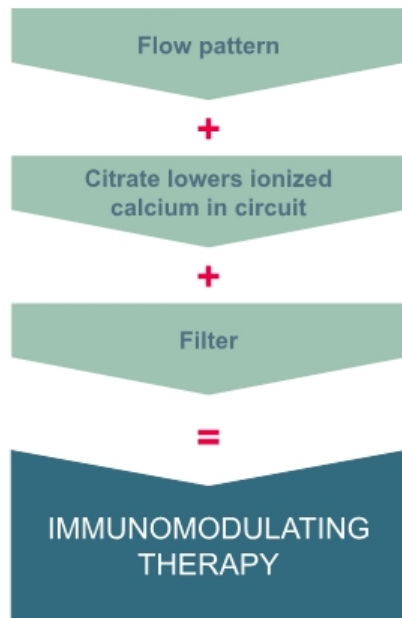


SeaStar Medical's Selective Cypheretic Device (SCD) Consists of Three Key Components and Leverages Current Installed Base of CRRT Systems

Easy for ICU staff to add the SCD



Pathway for normal hemofilter



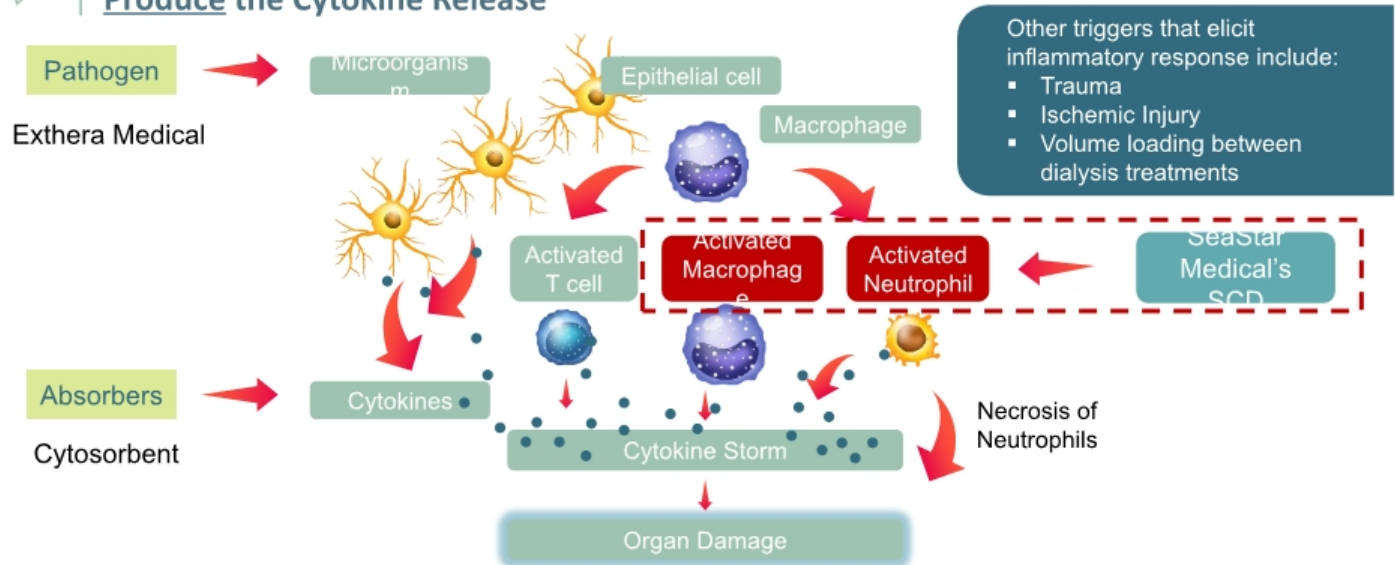
CRRT = Continuous Renal Replacement Therapy

SeaStar Medical

11



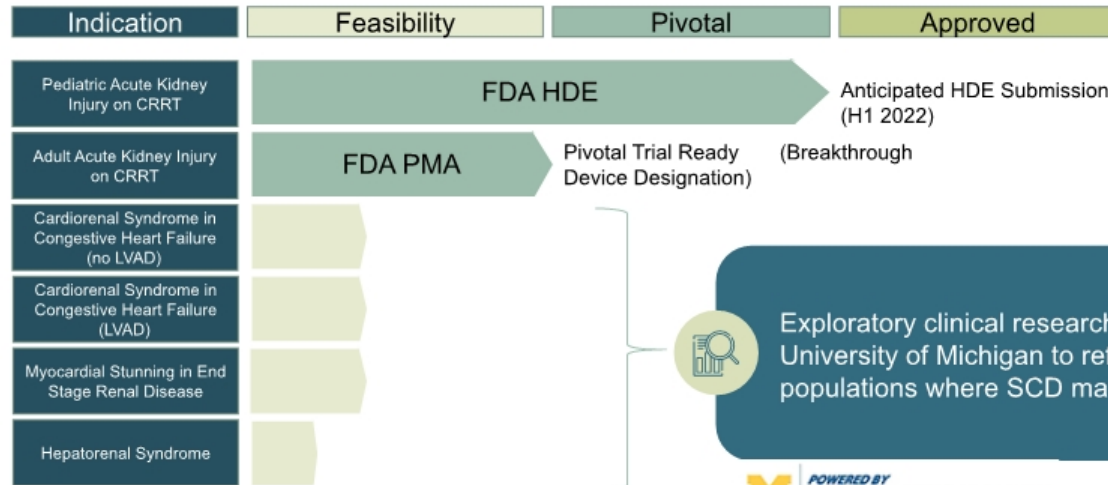
SeaStar Medical's SCD is Designed to Modulate the Immunological Effector Cells that Produce the Cytokine Release



Pathogen removal has promise if used early in disease progression to remove pathogen load. In contrast, the SCD's immunomodulatory MOA can address a broad spectrum of acute critical diseases common in the ICU which present at an earlier or later stage and potentially in chronic diseases



Robust Clinical Development Pipeline in Multiple Organs



Exclusive, worldwide, low royalty bearing license to commercialize in human therapeutics

AKI: Acute Kidney Injury
 HDE: Humanitarian Device Exemption
 PMA: Premarket Approval
 LVAD: Left Ventricular Assist Device

SeaStar Medical

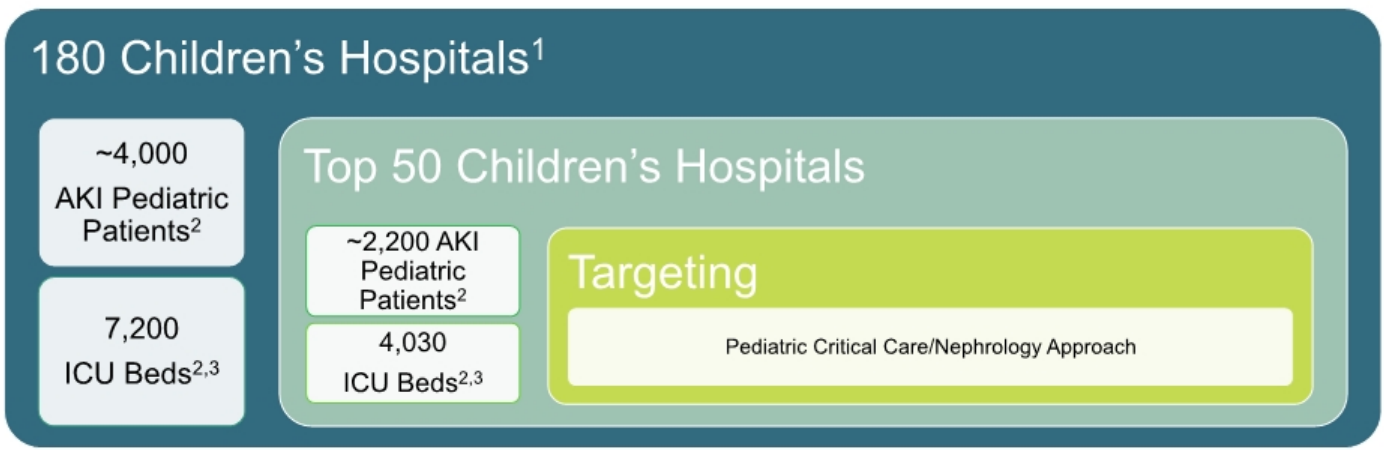
13



Pediatric Acute Kidney Injury is Accessed through Fewer Hospitals

Ability to penetrate pediatric AKI market with small/niche sales force

~20% of Top 50 children's hospitals (by number of beds) have personnel with direct experience with SeaStar Medical's Pediatric SCD



1. <https://www.childrenshospitals.org>
2. America Hospital Directory Database Export January 2020
3. <https://www.beckershospitalreview.com/lists-and-statistics/30-largest-childrens-hospitals-in-the-united-states.html>



Pediatric Acute Kidney Injury (AKI) Remains an Unmet Need

27%
ICU

The overall incidence of AKI is 27% in the pediatric ICU setting¹

2X
Longer

Pts with AKI stay in the ICU twice as long 8 days vs 4 days.²

50%
Mortality

For children with Acute Kidney Injury and Multi Organ Dysfunction requiring continuous KRT (CKRT)³⁻⁵

10 - 60%
Chronic Disease

Incidence of Chronic Kidney Disease for pediatric patients with Acute Kidney Injury⁶⁻⁸

\$1.6M grant received from FDA's Orphan Products to fund the Pediatric SCD clinical study

1. Kaddourah A, et al. *N Engl J Med*. 2017;376:11-20.
2. De Zan F, Amigoni A, Pozzato R, Pettegnazzo A, Murer L, Vidal E: Acute Kidney Injury in Critically Ill Children: A Retrospective Analysis of Risk Factors. *Blood Purif* 2020; **49**:1-7 s
3. Symons JM, Chua AN, Somers MJ, et al. Demographic characteristics of pediatric continuous renal replacement therapy: a report of the prospective pediatric continuous renal replacement therapy registry. *Clin J Am Soc Nephrol* 2007; **2**: 732-738.
4. Modem V, Thompson M, Golhofer D, et al. Timing of Continuous Renal Replacement Therapy and Mortality in Critically Ill Children. *Crit Care Med* 2013.
5. Goldstein SL, Somers MJ, Baum MA, et al. Pediatric patients with multi-organ dysfunction syndrome receiving continuous renal replacement therapy. *Kidney Int* 2005; **67**: 653-658.
6. Menon S, Kirkendall ES, Nguyen H, et al. Acute kidney injury associated with high nephrotoxic medication exposure leads to chronic kidney disease after 6 months. *J Pediatr* 2014; **165**: 522-527 e522.
7. Mammen C, Al Abbas A, Skippen P, et al. Long-term Risk of CKD in Children Surviving Episodes of Acute Kidney Injury in the Intensive Care Unit: A Prospective Cohort Study. *Am J Kidney Dis* 2012; **59**: 523-530.
8. Madsen NL, Goldstein SL, Froslev T, et al. Cardiac surgery in patients with congenital heart disease is associated with acute kidney injury and the risk of chronic kidney disease. *Kidney Int* 2017; **92**: 751-756.



The Consistency of the SCD's Clinical Results is a Vital Value Proposition

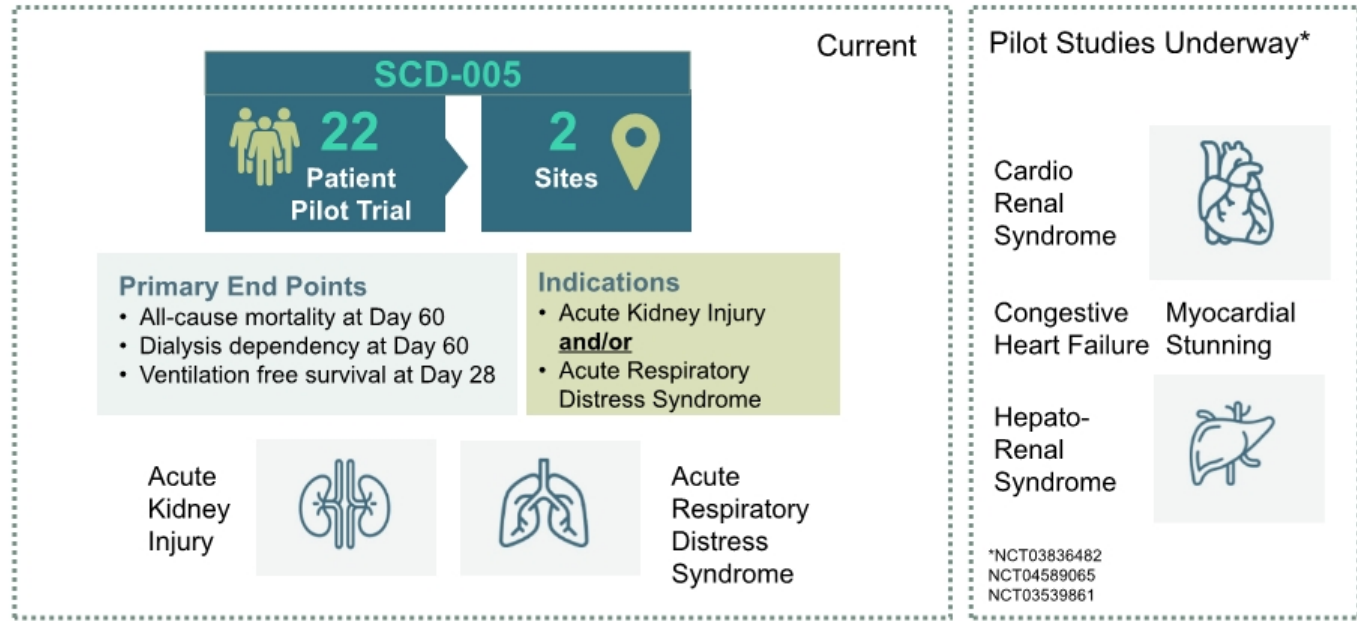
	Treated	Mortality Rate			Dialysis Dependency	
		SCD	Control		SCD	Control
China	9	22%	78%*	56%	0%	25%
Adult Pilot 002	35	31%	50%***	19%	0%	25%
Adult ARF 003	19/27**	16%	41%	25%	0%	25%
Ped SCD 001	16	25%	50%***	25%	0%	15 to 20%
Total	79					

Consistent Clinical Outcomes

Note: All subjects in these studies were patients with Acute Kidney Injury (AKI)
 *Case matched controls based on SOFA Scores and age
 **Treated per protocol (iCa in therapeutic range using citrate)
 ***Historical control based on published studies
 ARF: Acute Renal Failure

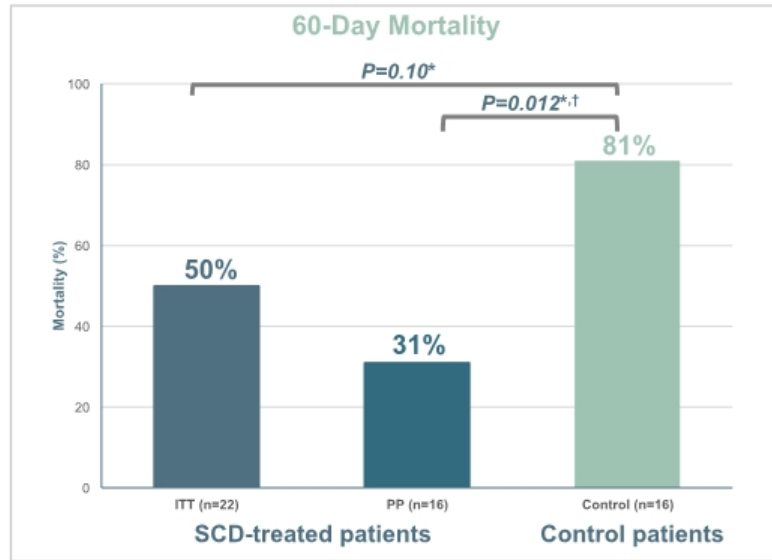


Expansion Strategy Validation: SCD-005 COVID-19 Pilot Study Confirmed the Multi-organ Expansion Strategy





Mortality of SCD-005 Treated Patients was Significantly Lower Than Contemporaneous Control Population Standard of Care



- 60-day mortality of SCD-treated patients (ITT population and PP population) was lower than in the contemporaneous control group
- Continues to build upon immunomodulation that is insult* agnostic

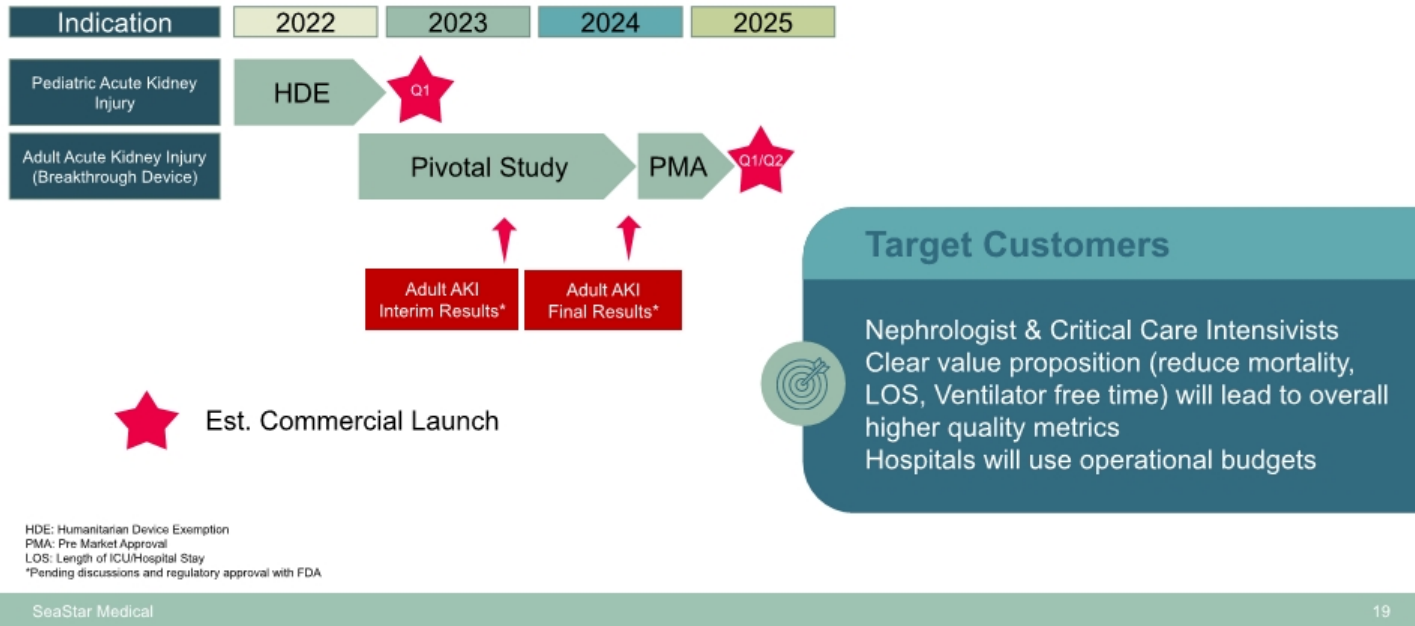
*Examples of "insults" include: bacterial, viral, surgical, trauma, etc.

ITT=intent to treat; PP=per protocol; SOC=standard of care.
 ITT population are all patients on SCD treatment enrolled in study, regardless of withdrawal; PP population are the patients on SCD treatment for ≥96 hours.
 *P values calculated using χ^2 with Yates's correction. †Indicates significance.



Clear Clinical Development Path Offers Multiple Catalysts Over Next 24 Months

Launch Pediatric AKI SCD in Q1 2023* and complete Adult AKI SCD Pivotal Clinical Trial





Key Relationships in Place to Execute on Business Strategy

Supply Agreement

US supply for pediatric and adult indications



Contract Research Organization in Place for SCD 006



Distribution Agreement

Right of first refusal to distribute both pediatric and adult AKI products in United States





Comprehensive Patent Estate for Modulating Inflammation, Including Composition of Matter and Methods of Use

U.S. Patent Portfolio

- 17 granted; 4 pending
- Of the granted patents, the last will expire in 2032*

Ex-U.S. Patent Portfolio

- 20 granted; 16 pending
- Of the granted patents, the last will expire in 2032

*Once US Regulatory Approval is granted, company will apply to extend patent life by up to 5 year via Hatch Waxman Act
Included in the above are patents co-owned by University of Michigan



SeaStar Medical Management Team



Eric Schlorff
CEO & Chairman

- Over 20 years of business leadership at both large and growing companies
- Dow Chemical, Dow AgroSciences
- University of Illinois



Caryl Baron
Controller

- Over 30 years of accounting and finance experience in private and public companies
- WPP, Tiffany & Co, CDM Group
- University of Maryland



Matt Jacques
Director of Clinical Nursing

- Over 10 years ICU nursing
- AdventHealth Hospital, Diabetes Institute
- University of Florida





Board of Directors – SeaStar Medical Holding Corporation



Eric Schlorff - Chairman

- CEO – SeaStar Medical
- Dow Chemical Company
- MS Pharmacology



Kenneth Van Heel

- Dow Chemical Company
- Former Board Member of Pfenex, Inc (NASDAQ: PFNX)



Rick Barnett

- Past President & CEO of Satellite Healthcare
- Board Chair National Kidney Foundation, Northern California



Andres Lobo

- Dow Chemical Company
- Manages ~\$16 Billion NAV



Allan Collins, MD

- Fmr. Chief Medical Officer of NxStage, Fresenius Medical Care
- Past President of National Kidney Foundation



Bruce Rodgers

- CEO – LM Funding America, Inc. and LMF Acquisition Opportunities
- Experienced M&A Lawyer



Richard Russell

- CFO – LMF Acquisition Opportunities
- Experienced public CFO





SeaStar Medical Corporate Highlights

- ✓ Proprietary platform therapy with differentiated immunomodulatory mechanism of action to address hyperinflammation
- ✓ Late-stage lead programs that have demonstrated consistent clinical and preclinical outcomes
- ✓ Large and growing US market opportunities in both acute and chronic settings¹ that includes the impact of Covid-19
- ✓ Therapeutic impact with “device” regulatory pathway leads to smaller clinical studies required for approval and clear value proposition for hospitals
- ✓ Robust platform leverages hyperinflammation in multiple organ indications
- ✓ Strong international intellectual property portfolio covering composition and methods of use
- ✓ Multiple catalysts over next 24 months post-funding/transaction²
- ✓ Experienced management team and board

1. See slides 9-10 for market data

2. Pediatric Acute Kidney Injury product expected to launch in early 2023 under HDE; Pivotal trial ready program in Adult Acute Kidney Injury, with projected interim and final data readouts in 2023/2024 (PMA)

HDE: Humanitarian Device Exemption
PMA: Premarket Approval

SeaStar Medical

24



Summary Transaction Overview

Overview	<ul style="list-style-type: none"> The combined company will be known as SeaStar Medical Holding Corporation Will operate under the same management team as SeaStar Medical Anticipated closing in Q3 2022
Ownership	<ul style="list-style-type: none"> The transaction contemplates an enterprise value of approximately \$85 million for SeaStar Medical As part of the transaction, all SeaStar Medical shares owned by SeaStar Medical's existing equity holders will be converted into Class A Common Stock of SeaStar Medical Holding Corporation
Financing	<ul style="list-style-type: none"> Dow Pension Plans, as existing investors of SeaStar Medical, has committed to further participate in the transaction through a PIPE investment concurrent with the business combination
Transaction Rationale	<ul style="list-style-type: none"> Provides SeaStar Medical with access to the capital markets, allowing it to accelerate the development and advancement of its proprietary and innovative immunomodulatory platform for pediatric and adult AKI Multiple near-term value inflection points
Use of Proceeds	<ul style="list-style-type: none"> To submit SCD for FDA approval under HDE for pediatric AKI and initiate a pivotal trial of SCD in Adult AKI To launch commercialization of SCD in pediatric AKI upon HDE approval Working capital and general corporate purposes



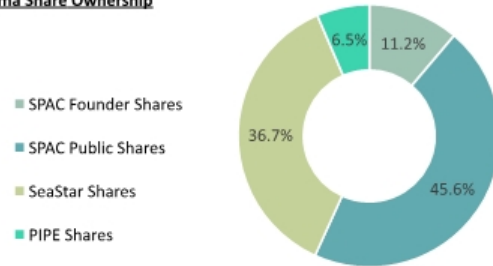
Detailed Transaction Overview

Pro Forma Valuation^{1,3}

(In millions, except per share data)

Pro-forma Shares Outstanding ³	23,144,500
(x) Illustrative Share Price	\$ 10.00
Pro Forma Equity Value ³	\$ 231.4
(-) Pro Forma Net Cash	\$ 109.2
Total Enterprise Value ³	\$ 122.2

Pro Forma Share Ownership



Illustrative Sources & Uses

Sources	
LMAO Cash in Trust ¹	\$ 105.6
Stock Issuance to SeaStar ⁴	\$ 85.0
Cash from PIPE ²	\$ 15.0
Total Sources	\$ 205.6

Uses	
SeaStar Equity Rollover	\$ 85.0
Cash to balance sheet ¹	\$ 109.2
Estimated Transaction Fees & Expenses	\$ 11.4
Total Uses	\$ 205.6

1. Assumes no redemptions by LMAO public shareholders and no cash from SeaStar's balance sheet
 2. Estimated \$15 million in gross proceeds, with \$5 million from DOW Pension Plans, to close concurrently with the business combination
 3. Pro forma diluted basis at \$10.00 per share, assumes no redemptions and excludes the to-be-established post-business combination company equity incentive plan and the current LMAO warrants
 4. Includes LMAO assumption of current SeaStar warrants, options and restricted stock units



Thank You

May 2022

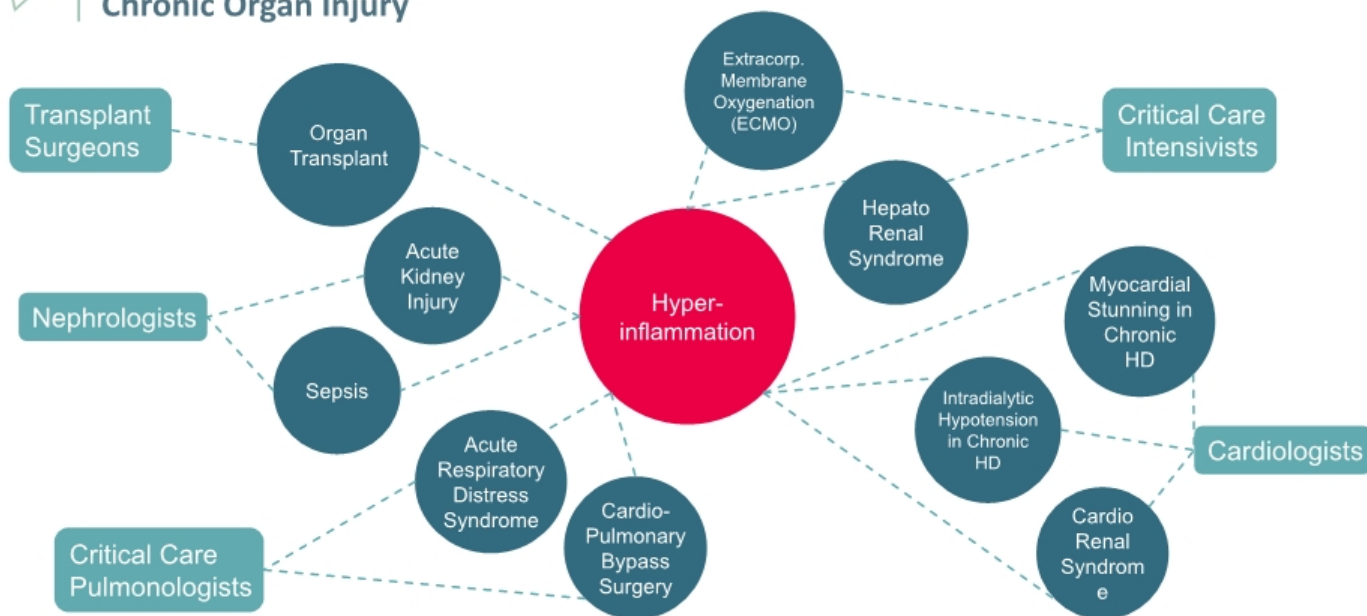




Supplemental Medical Information



Uncontrolled Hyperinflammation (Disease State) is at the Center of Acute and Chronic Organ Injury



Same hyperinflammation is occurring in the same places (ICU and Dialysis Centers)



The High Hospitalization & Mortality Rate Indicates an Underserved Market and Significant Opportunity, Aligned to Hospital Quality Measures

	2018 Data based on National Averages ¹				
	LOS Days	Average Cost/Patient	Average Cost/Day	Average Reimbursement/Patient	Net Loss/Patient
AKI+RRT+Multi Organ Failure	17.9	\$107,948	\$6,031	\$78,576	-\$29,372

Mortality Rate % with Multi Organ Failure (MOF)				
	1 organ	2 organs	3 organs	4 organs
Fry et al ²	30%	60%	85%	100%
Moore et al ³	11%	24%	60%	62%

	No AKI	Stage 1 (Mild)	Stage 2 (Mod)	Stage 3 (Sev)	Patients (n)
Readmission Rate ⁴	9%	16%	22%	29%	2,209



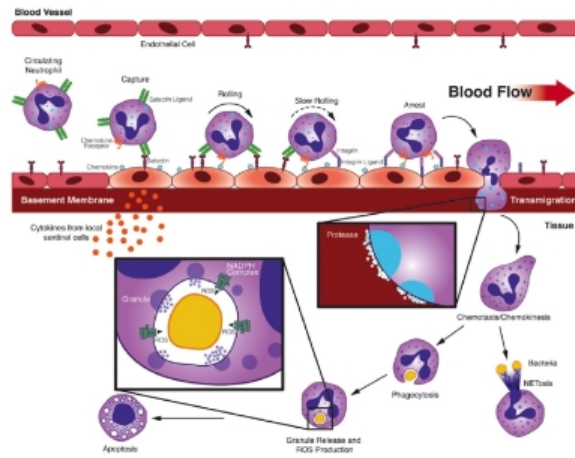
Examples of relevant Quality Measures tracked by Mayo

1. Mortality Ratio
2. Patient Safety Indicators
3. Readmission Rates
4. Transplant Quality Indicators

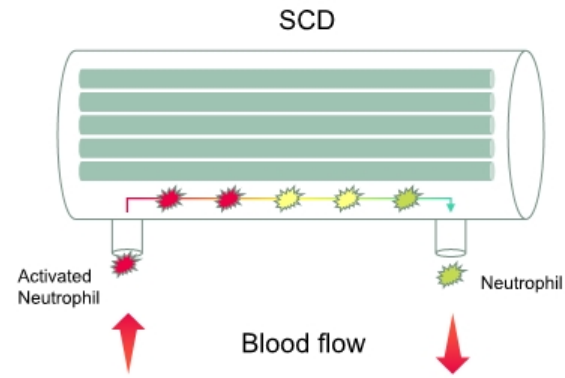
1. American Hospital Directory Database, accessed Jan 2020 on 7,018 hospitals, data on file for 2018
 2. D. E. Fry, L. Pearlstein, R. L. Fulton and H. C. Polk, "Multi-ple System Organ Failure: The Role of Uncontrolled In- fection," Archives of Surgery, Vol. 115, No. 2, 1980, pp. 136-140.
 3. F. A. Moore, A. Sausala, E. E. Moore, et al., "Postinjury Multiple Organ Failure: A Bimodal Phenomenon," Jour- nal of Trauma, Vol. 40, No. 4, 1996, pp. 501-502.
 4. Brown et al. Impact of perioperative acute kidney injury as a severity index for thirty-day readmission after cardiac surgery. Ann Thorac Surg. 2014;97(1):111-117.



How SeaStar Medical's SCD Mimics Nature



Neutrophils are captured, roll, stop and enter endothelial cells



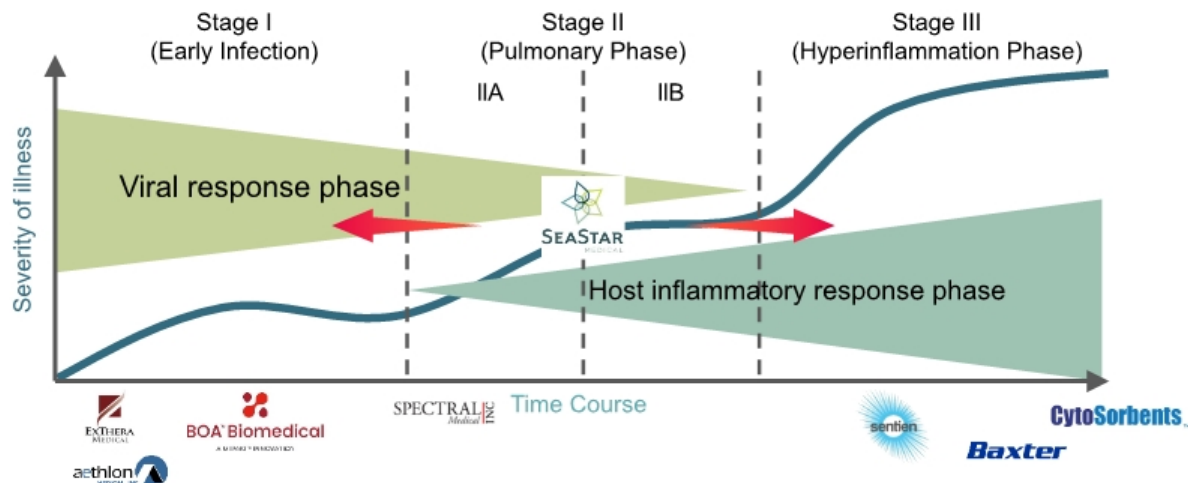
- Activated Neutrophils release cytokines
- SCD deactivates neutrophils (apoptosis)
- Deactivated neutrophils signal immune system back into homeostasis

Source: Caster et al Re-Examining Neutrophil Participation in GN JASN August 2017 Vol 28 (8): 2275 - 2289



SeaStar Medical's SCD is Designed to Address the Host Inflammatory Response, Head On, and is Agnostic as to what Initiates the Injury

An example of when each technology would be used^{1,2}

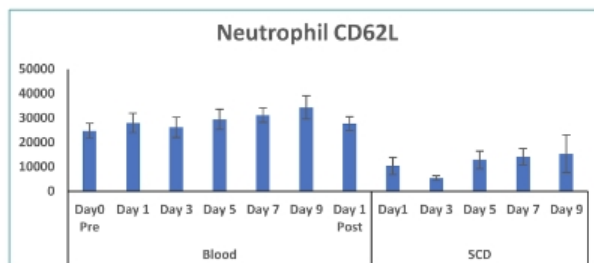
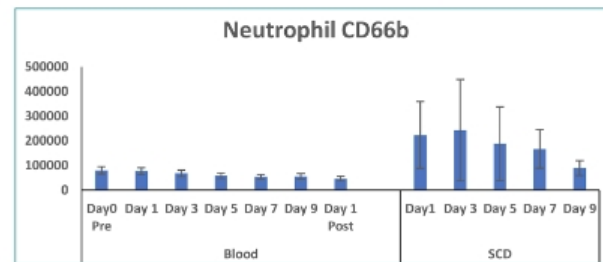
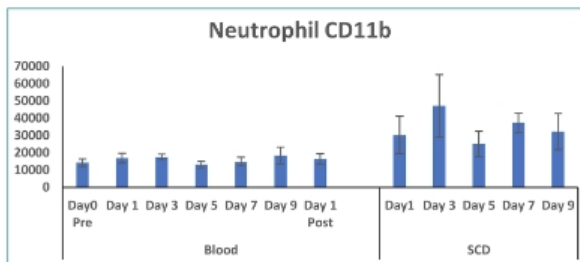


1. Placement of our competitors based on stage in time course where their products are currently used or on management's assessment of where they would be used
 2. Some of the competitors are clinical stage while others are approved/commercial.
 Source: J Heart Lung Transplant. 2020 May; 39(5): 405-407. Copyright © Published by Elsevier Inc. on behalf of International Society for Heart and Lung Transplantation.



Neutrophil Biomarkers Strongly Suggest that the SCD is Capturing the Most Highly Activated Neutrophils

Reducing hyperinflammation propagates a reparative immune system response



- High CD11b expressed in hyperinflammation
- High CD62L signals reparative
- High CD66b associated with severity of sepsis and COVID 19

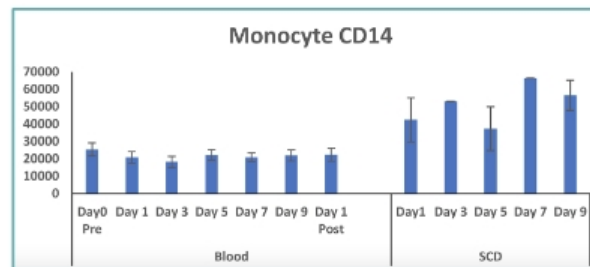
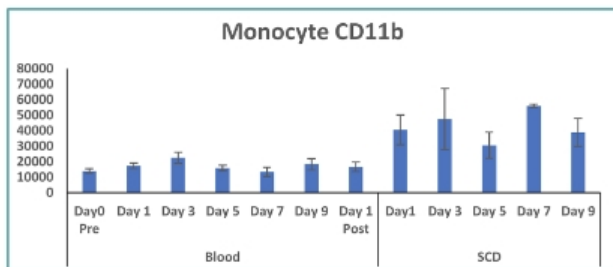
Data from SeaStar Medical - SCD 005
NCT04395911

SeaStar Medical

33



Monocyte Biomarkers Strongly Suggest that the SCD is Capturing the Most Highly Activated Monocytes

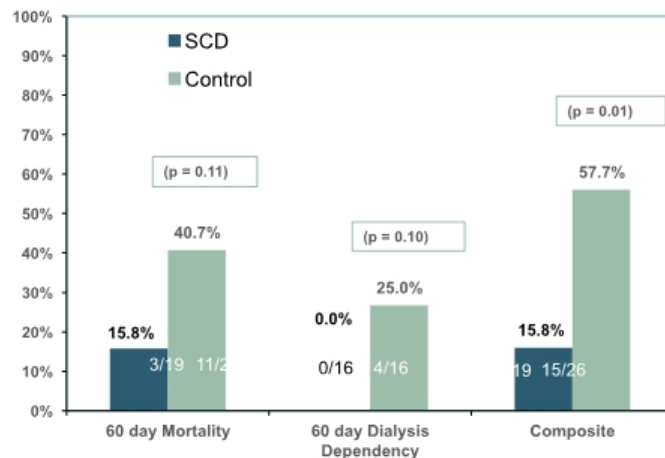


High CD11b expressed in hyperinflammation
High CD14 expressed in hyperinflammation

Data from SeaStar Medical - SCD 005
NCT04395911



Adult ARF-003 Ad-hoc Trial Results



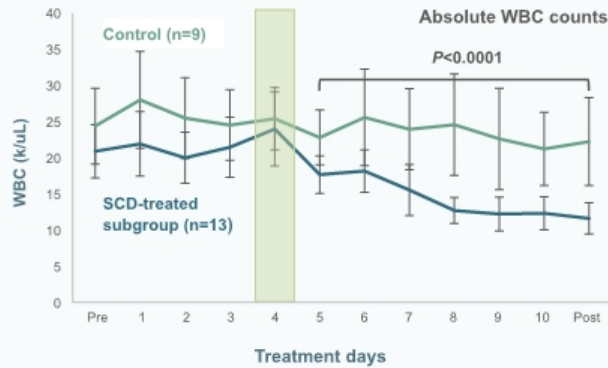
Adult Pivotal trial will have ~4x more patients

*Tumlin et al. A Multi-Center, Randomized, Controlled, Pivotal Study to Assess the Safety and Efficacy of a Selective Cytopheretic Device in Patients with Acute Kidney Injury. PLOS One. 2015;10(8)



Significant Reductions of Activated Neutrophils and Monocytes and Pro-inflammatory Cytokines Were Seen in SCD-005 Treated Patients

SCD treatment reduced mean absolute neutrophil and WBC counts after 4 days



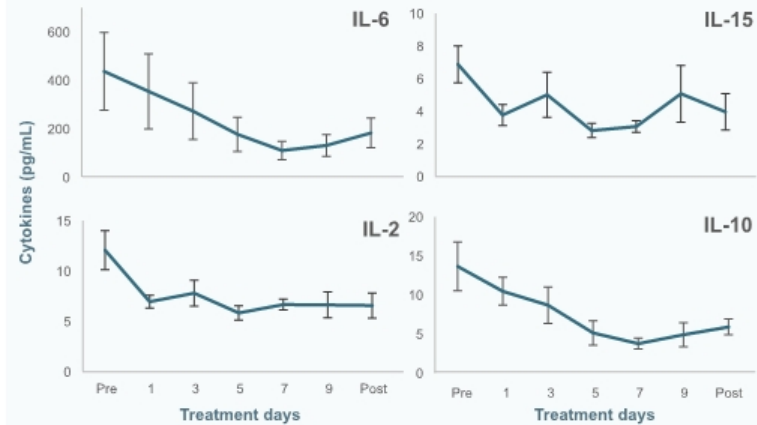
Cytometric analysis of cell surface markers reflective of neutrophil activation (CD11b,CD10) and monocyte activation (CD11b,CD14) demonstrated that SCD sequestered the more activated neutrophils and monocytes from circulation.

WBC=white blood cell.

Presented at the American Society of Nephrology Kidney Week 2021, November 4-7, 2021 (virtual) ePoster #PO2523

SeaStar Medical

SCD treatment significantly* reduced the elevated levels of multiple key predictive biomarkers of mortality in patients with COVID-19, including IL-6, IL-2, IL-15, and IL-10



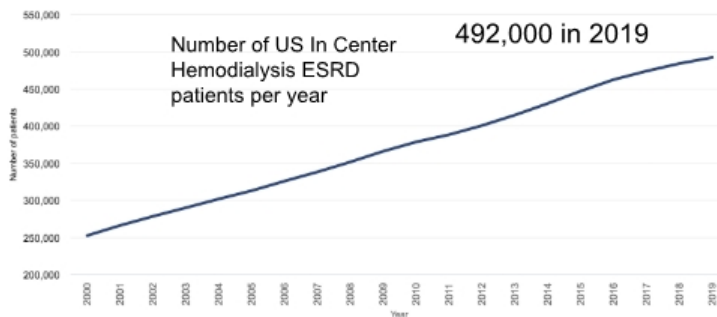
*Paired t tests were significant for all presented cytokines, calculated by comparing baseline level to lowest level during treatment.

36



Market Opportunity: Chronic Non-Hospital Setting

End Stage Renal Disease (ESRD) is a costly chronic disease burden that reduces life span. A proven innovation would address the unmet need and allow access to a large market



Source: usrds.org

In US, dialysis patients are treated three times a week

Source: National Kidney Foundation

Expected remaining lifetime in years

Age	Dialysis		General U.S. population, 2017	
	Male	Female	Male	Female
40-44	10.9	10.2	36.5	40.3
45-49	9.4	8.9	32.0	35.7
50-54	8.0	7.7	27.7	31.2
55-59	6.8	6.7	23.7	26.8
60-64	5.7	5.8	19.9	22.7
65-69	4.8	4.9	16.3	18.7
70-74	4.0	4.1	12.9	14.9
75-79	3.4	3.6	9.9	11.4
80-84	2.9	3.1	7.2	8.4
85+	2.3	2.6	3.7	4.3

Source: USRDS

Between 30 and 50 % of hemodialysis patients have elevated cytokine

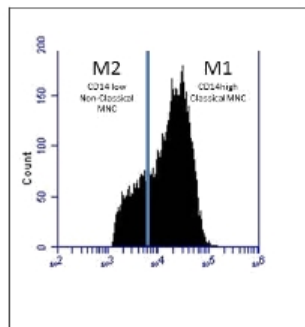
Source: DOI: <https://doi.org/10.1681/ASN.2006080926>



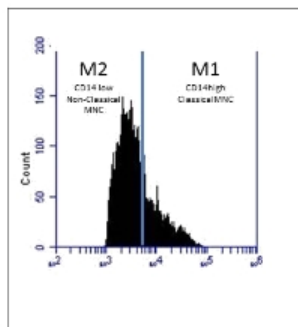
SCD May Also Have Impact in the Chronic Setting with End Stage Kidney Disease (ESRD)

15 African American ESRD patients (8 males/7 females) with high CRP

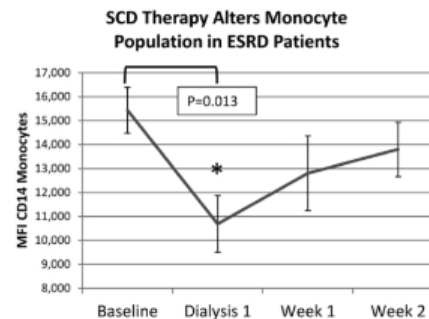
Protocol was standard 4-hour hemodialysis session with heparin followed by Single 4-hour HD Session with citrate + SCD



Baseline Phenotype



Post SCD Therapy



...And durable response

Shift in immune system from pro-inflammatory to reparative

