



## Innovators in the treatment of diuretic-resistant fluid overload

liver disease  malignant ascites  heart failure

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- The **alfapump**® system has not yet received regulatory approval in the United States and Canada. Any statement in this presentation about safety and efficacy of the **alfapump**® system does not apply to the United States and Canada. In the United States and Canada, the **alfapump**® system is currently under clinical investigation (POSEIDON Study) and is being studied in adult patients with refractory or recurrent ascites due to cirrhosis. For more information regarding the POSEIDON clinical study visit [www.poseidonstudy.com](http://www.poseidonstudy.com).
- DSR® therapy is still under development and it should be noted that any statements regarding safety and efficacy arise from ongoing pre-clinical and clinical investigations which have yet to be completed. DSR® therapy is currently not approved for clinical research in the United States or Canada. There is no link between DSR® therapy and ongoing investigations with the **alfapump**® system in Europe, the United States or Canada.

## COVID-19 disclaimer:

- Sequana Medical is closely following the evolution of the COVID-19 global health crisis and is in constant dialogue with its partners to assess the impact and adapt operations accordingly.
- Sequana Medical has put in place mitigation plans to minimise delays. The impact of increased demands on the healthcare systems, limitations on non-essential hospital visits and procedures, social-distancing and travel restrictions may result in further delays to execution of clinical studies and impact sales.
- Sequana Medical will continue to update the market as needed and whenever possible.

## Note:

- alfapump**® is a registered trademark. DSR® and **alfapump** DSR® are registered trademarks in the Benelux, China, the EU, United Kingdom, and Hong Kong.

# Treating diuretic-resistant fluid overload

Multi billion € markets with clear unmet clinical needs

- Fluid overload is a key clinical problem in liver failure, heart failure, renal failure and cancer
- Diuretics are standard of care – we are NOT replacing these
- Diuretic-resistance is common – and alternatives have significant disadvantages
- We use our **alfapump**® and DSR® technologies to develop therapies to deliver:
  - improved clinical outcomes
  - better quality of life for patients
  - cost savings to healthcare systems



# alfapump<sup>®</sup> platform

Eliminating fluid from the peritoneal cavity – working in partnership with the bladder



Fully implanted



Automatic operation



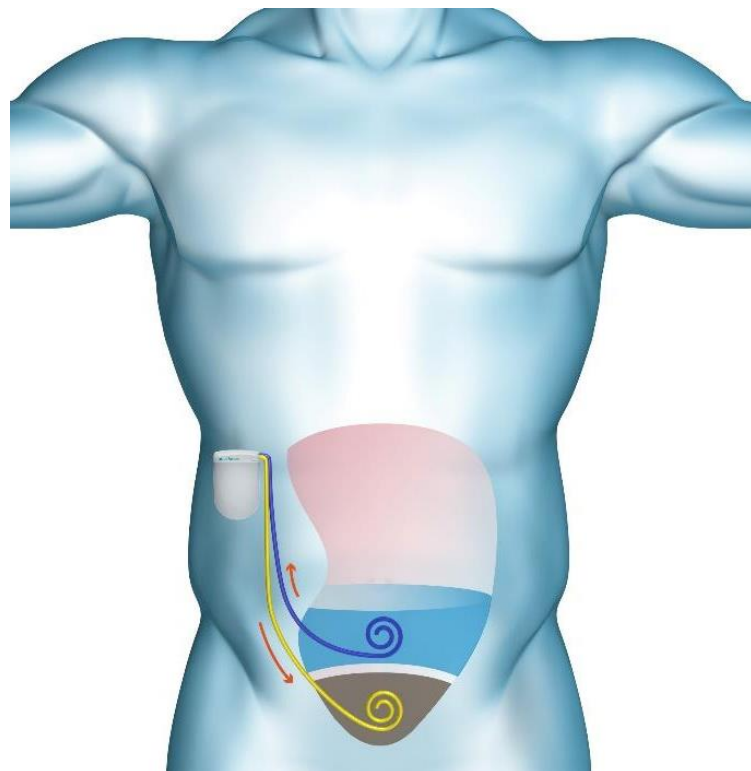
Wireless battery charging



Settings wirelessly adjusted



Remote data monitoring



Easy implantation



Long-term implantation & catheter patency



Moves up to 4 litres / day



Virtually non-clogging



No significant heating during charging and operation

***Proven capabilities – over 900 systems implanted***  
***Strong IP barriers through extensive patent portfolio & know-how***

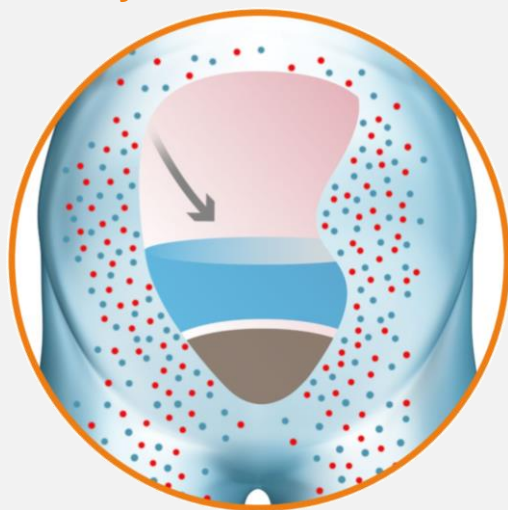


# Direct Sodium Removal (DSR®) platform

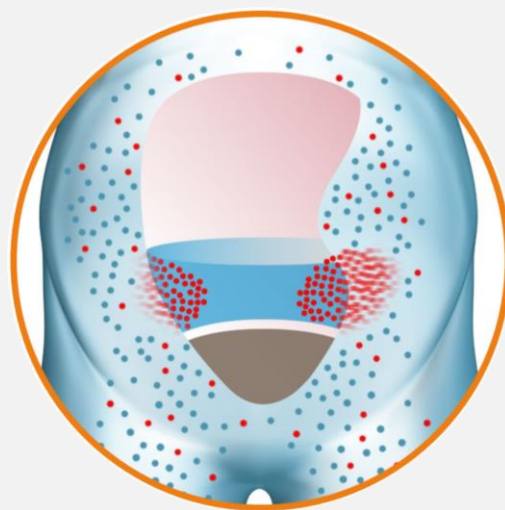
Eliminating fluid spread across the body – working in partnership with the kidneys



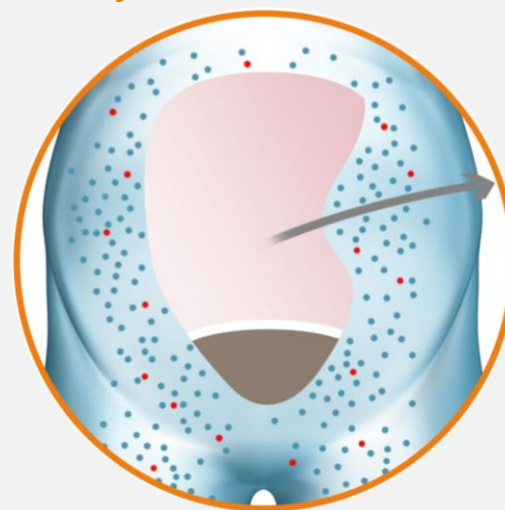
- 1 Sodium-free DSR infusate administered to peritoneal cavity



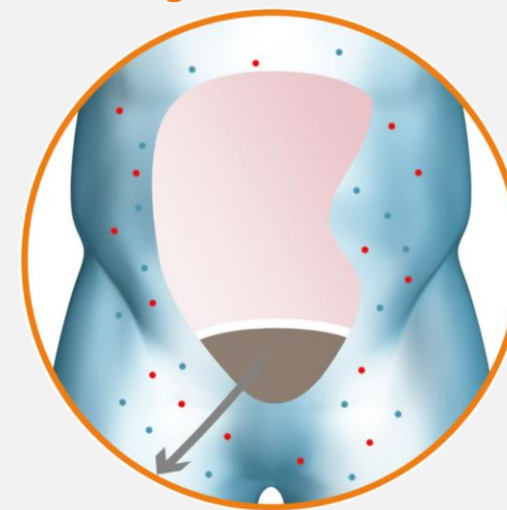
- 2 Sodium diffuses from body into DSR infusate



- 3 DSR infusate + extracted sodium removed from the body



- 4 Body eliminates free water to restore sodium balance, reducing the fluid overload



● water  
● sodium

*Fundamental patents to reduce fluid overload in heart failure patients  
granted in the US and Europe*

# Focus on two products – € billion opportunities



**alfapump®**

**Liver Disease (NASH) in N. America**

> €3 Bn / year market opportunity in US<sup>(1)</sup>



**FDA** Breakthrough Device  
Designation

**POSEIDON pivotal study enrolment complete**

**Sequana Medical salesforce**



**alfapump DSR®**

**Congestion due to Heart Failure**

> €5 Bn / year market opportunity in EU & US<sup>(2)</sup>



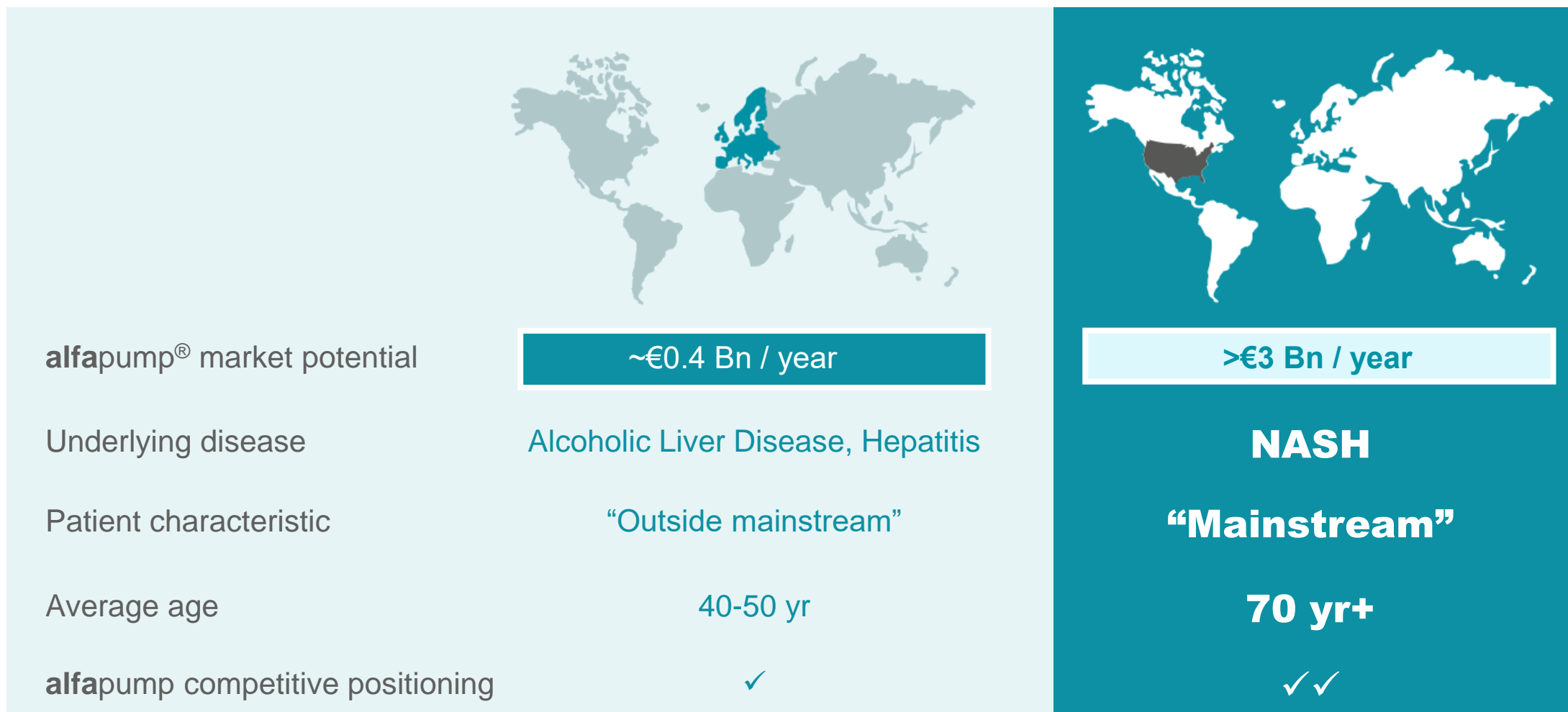
**SAHARA DESERT study ongoing**

**Partnering after US efficacy study**

**Built upon proven European clinical & commercial experience**

# NASH drives US market attractiveness

Liver cirrhosis is transitioning to a mainstream disease requiring modern treatment options







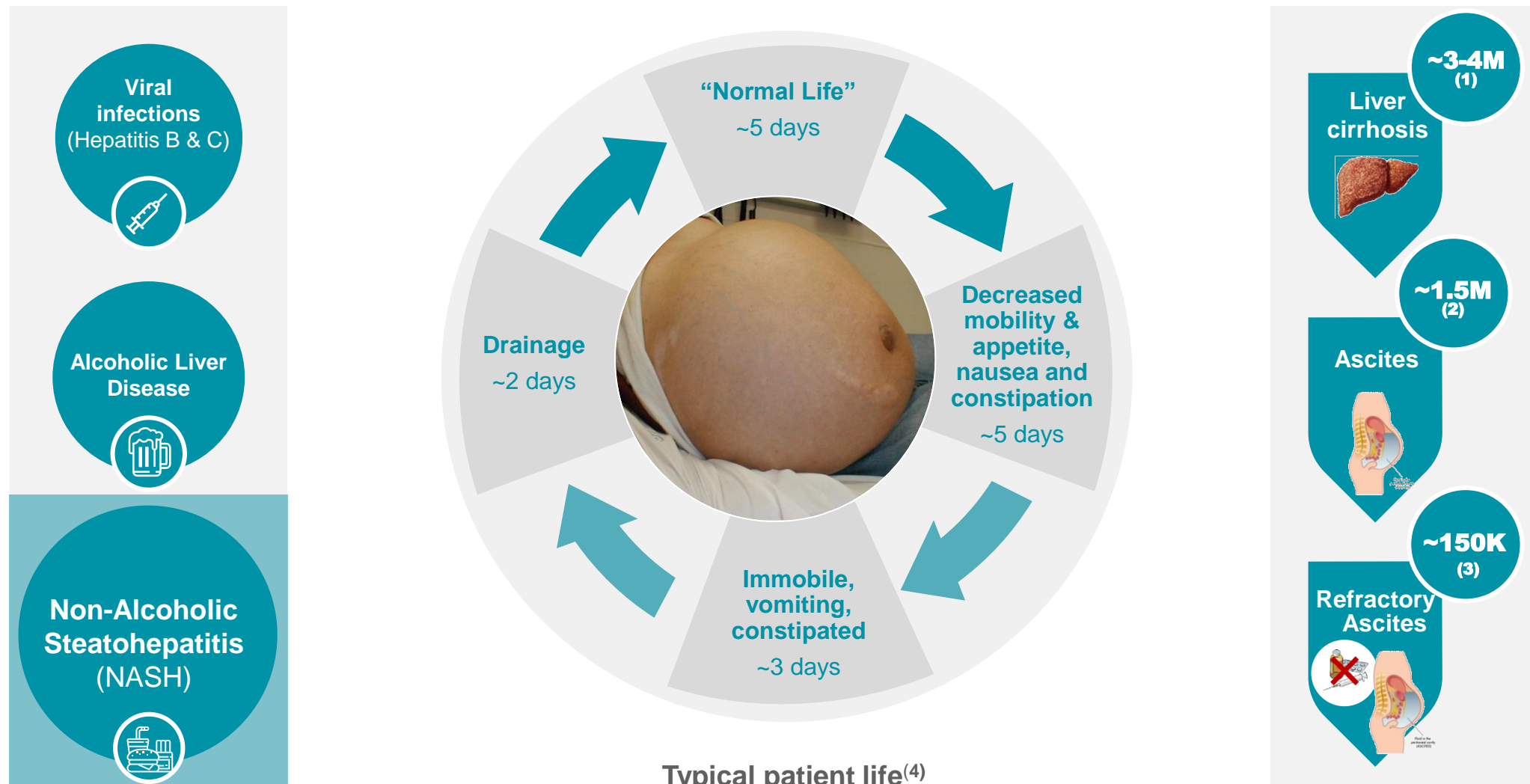
**alfapump®**

Proven step change in the  
treatment of liver refractory  
ascites and malignant ascites



# Refractory ascites – key complication of liver cirrhosis

Fatty liver disease / NASH is driving dramatic growth and change in attitudes to liver cirrhosis patients



Note : Prevalence of NASH in US is expected to increase by 63% between 2015-2030; Estes et al., 2018

Source 1 Management estimate in US based on Estes et al; GlobalData Nash Epidemiology Forecast to 2026; Nouredin et al., 2013

Source 2: Runyon 2009: approximately 50% of cirrhotic patients develop ascites within 10 years of diagnosis of cirrhosis

Source 3: Ginès et al., NEJM 2004: refractory ascites occurs in 5-10% patients with ascites

Source 4: Presentation of Dr. Rajiv Jalan at EASL in 2018, Large Volume Paracentesis (LVP) treatment cycle for refractory ascites

# Malignant ascites

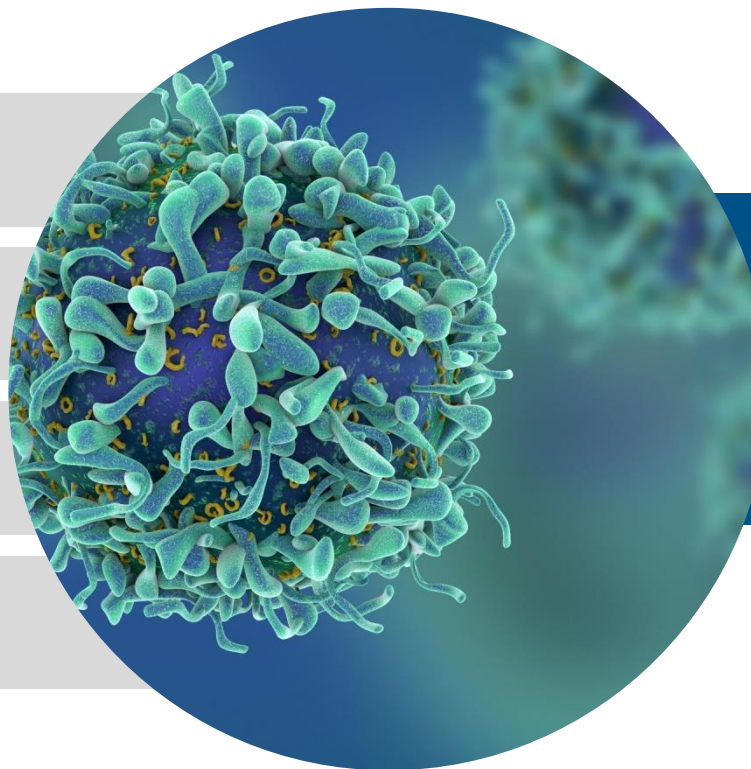
Severe complication of late-stage cancers

Fluid accumulation in the abdomen due to **drainage of lymph system**

**Breast and ovarian cancer** have longest survival with ascites<sup>(1)</sup>

Severe impact on **quality of life**

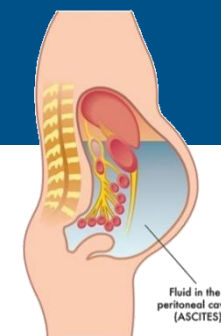
Reduces ability to undergo **anti-cancer treatment**



Malignant ascites due to breast and ovarian cancer<sup>(2)</sup>:

EU5: ~18K

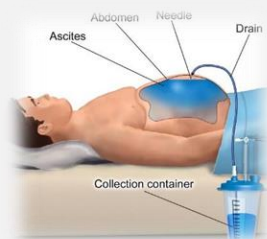
US: ~16K



*Clear unmet need for improving Quality of Life and the ability to increase cancer treatment intensity*

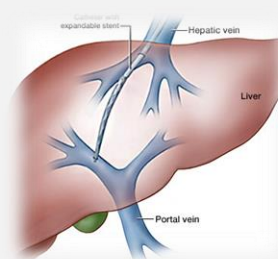
# Limitations of existing therapies

## Drainage (“Large Volume Paracentesis / LVP”)



Painful, Poor Quality of Life, Short Term Benefit

## Transjugular Intrahepatic Portosystemic Shunt (TIPS)



Complications, Contraindications

## Permanent Catheter System



External Catheter, Risk for Infections / Blockage

## Liver transplantation



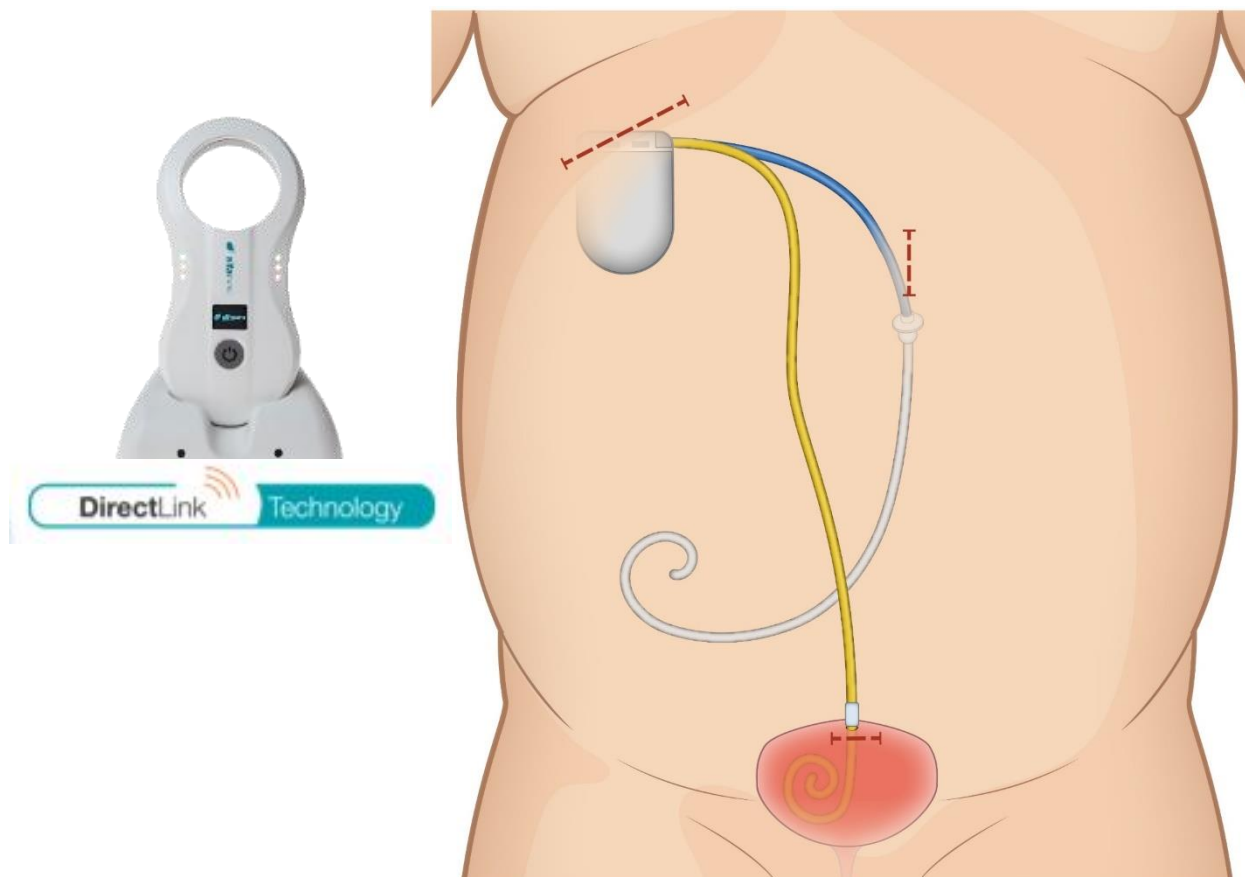
High Cost, Limited Availability

**alfapump®**



# alfapump® for long-term treatment

Over 900 implants and hundreds of years of patient experience



# Strong clinical and economic rationale

- ✓ Reduced burden of disease
- ✓ Improved patient QoL
- ✓ Cost savings for hospitals and payers

Estimated treatment cost / patient\*:

**LVP: ~\$54K** ↔ **alfapump®: ~\$35K**

~\$1.8K / LVP<sup>(1)</sup>  
2 LVP / month  
15 months

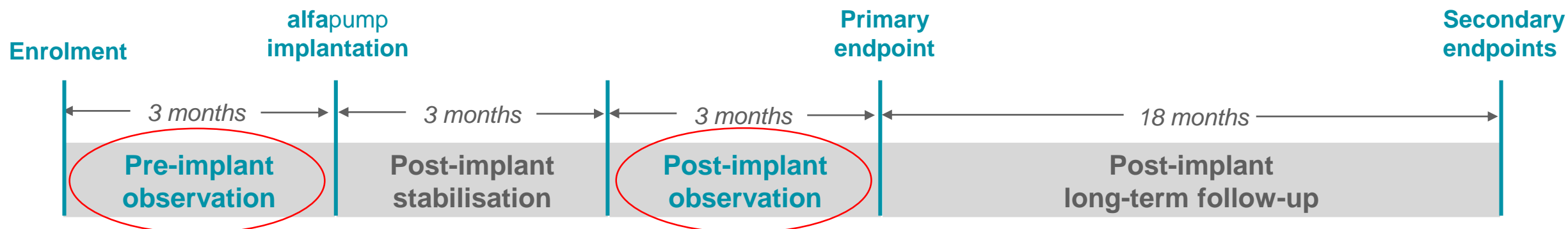
~\$25K / alfapump  
~\$10K / implantation

\* Management estimate of US treatment costs, assuming no complications



# North American Pivotal Study (POSEIDON) underway

Pivotal Cohort of up to 50 implanted patients; Roll-In (“training”) cohort of up to 40 patients



## POSEIDON Study Endpoints

**Primary efficacy:** 1) 50% reduction in average monthly frequency of Therapeutic Paracentesis (“TP”) post-implant vs. pre-implant  
2) 50% of patients achieve a 50% reduction in the requirement for TP post-implant vs. pre-implant

**Primary safety:** Rate of **alfapump** related re-interventions adjudicated by the Clinical Events Committee (CEC)

**Secondary:** QoL (SF36, Ascites-Q), nutritional status, health economics, safety (device and/or procedure-related AEs), survival

# Interim POSEIDON: Positive for primary endpoints

Data from 26 Roll-In patients

## EFFICACY

- ✓ Over 90% reduction in mean Therapeutic Paracentesis (TP) frequency (primary endpoint >50% reduction)
- ✓ 100% patients with > 50% reduction in mean TP frequency per month (primary endpoint >50% of patients)

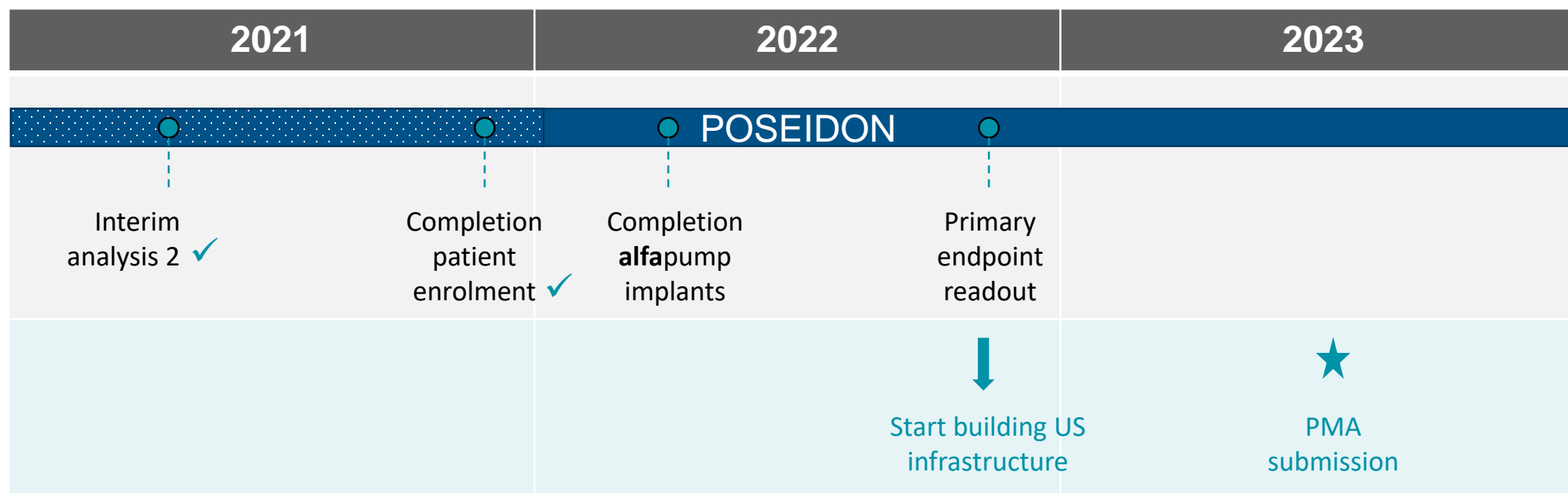
## SAFETY

- ✓ In line with expectations – 3 composite primary safety events

## QUALITY OF LIFE

- ✓ Clinically important improvement maintained for up to 12 months post-implantation

# Pursuing North American alfapump® approval



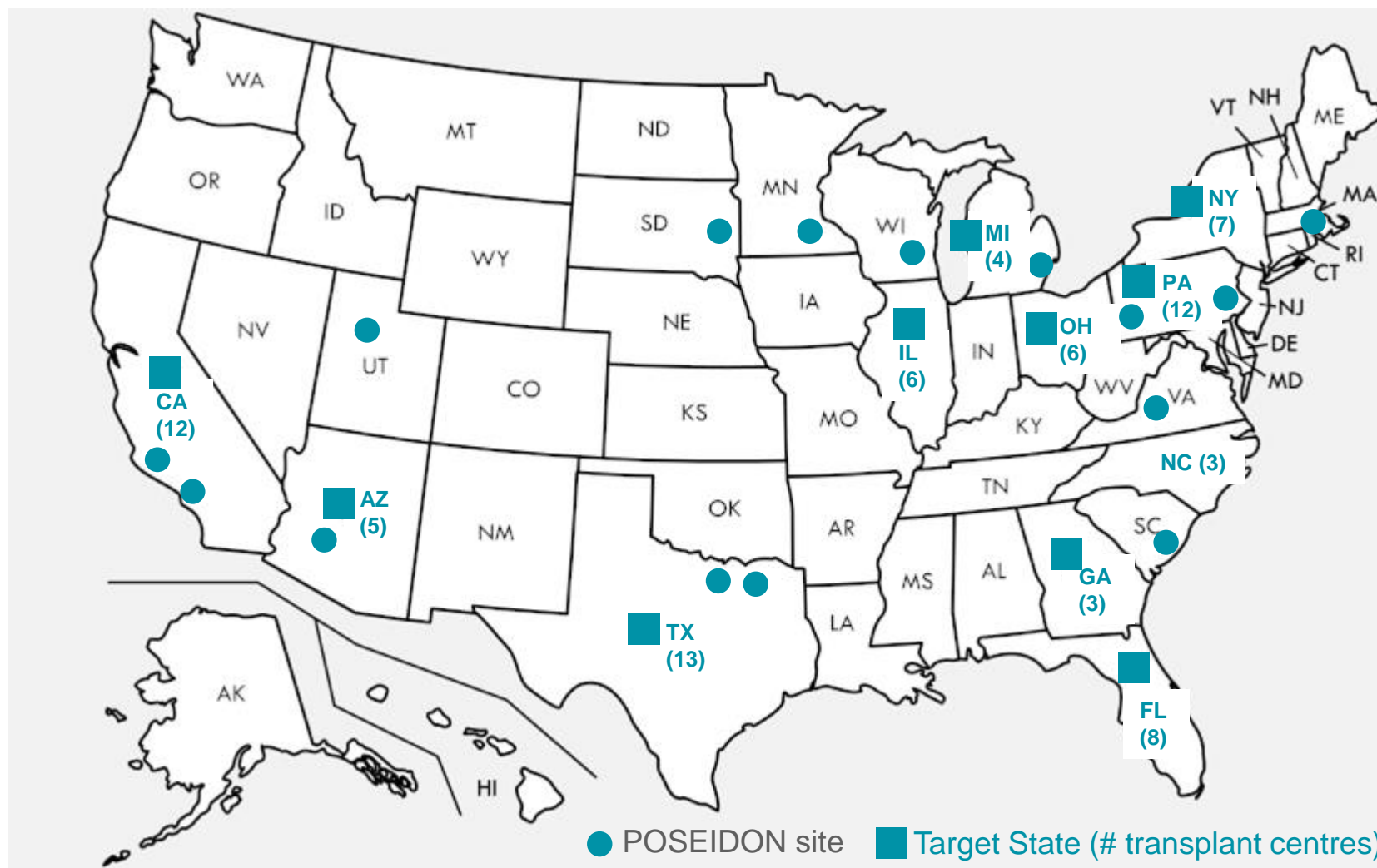
*NTAP for breakthrough devices de-risks reimbursement in key Medicare population*



**PMA:** Pre-Market Approval; **NTAP:** New Technology Add-On Payment

Note: Presented timelines are subject to further developments related to the COVID-19 pandemic

# US commercialisation through our specialty salesforce



Initial focus on key  
transplant centres

~50-person team:  
35 sales reps, 10 clinical,  
5 corporate

A photograph of an elderly couple walking in a park. The man on the left is wearing a maroon sweater over a blue collared shirt and light-colored trousers. The woman on the right is wearing a blue cardigan over a black and white polka-dot top and jeans. They are both smiling and holding hands. The background is a bright, sunny outdoor setting with green trees and a clear sky.

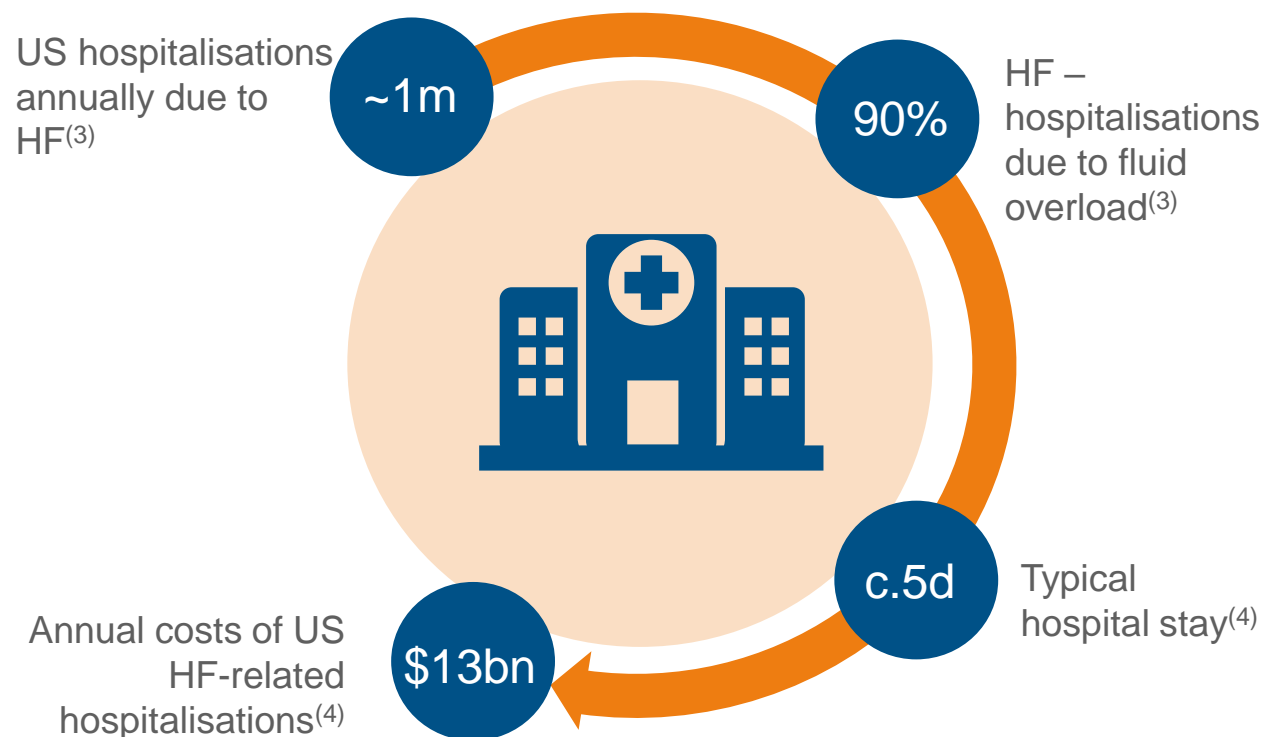
# alfapump DSR<sup>®</sup>

Breakthrough approach to  
**persistent congestion in heart failure** built on proven  
alfapump<sup>®</sup> platform



# Diuretic-resistant congestion in heart failure

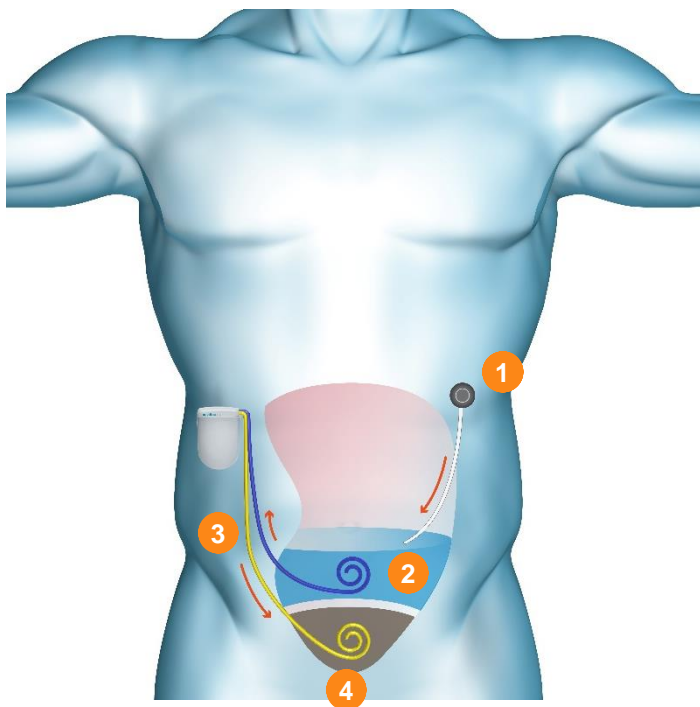
Clear unmet clinical need and driver of costs for heart failure patients



- 40% of heart failure patients on IV loop diuretics have a poor response<sup>(1)</sup>
- 24% re-admission rate at 30 days<sup>(2)</sup>

# alfapump DSR<sup>®</sup> leveraging proven alfapump<sup>®</sup> platform

Fully implanted system for long-term DSR<sup>®</sup> therapy



- 1 Sodium-free DSR infusate administered to peritoneal cavity via implanted subcutaneous port
- 2 Sodium diffuses into DSR infusate
- 3 **alfapump** pumps sodium-rich DSR infusate into the bladder
- 4 Body eliminates excess fluid through osmotic ultrafiltration and urination

# RED DESERT: repeated dose alfapump DSR<sup>®</sup> study

8 euvoletic heart failure patients on high dose diuretics treated with DSR 3x per week up to 6 weeks

## Highly effective management of fluid and sodium balance

- Generally safe and well tolerated; no clinically relevant hyponatremia

## Significant improvement in cardio-renal function

- 30% decrease\* in NT-proBNP\*\* ( $p < 0.001$ )
- 22% increase\* in eGFR\*\* ( $p < 0.001$ ) / 22% decrease\* in creatinine\*\* ( $p < 0.001$ )

Presented as  
Late-Breaker and  
Highlight at  
Heart Failure 2021

## Dramatic and sustained improvement in diuretic response

- End of 6-week study: over 150% increase\*\* in diuretic response\*\*\*
- Long-term follow-up (9-19 months after study completion): 40-96% reduction in diuretic dose at last visit during follow-up

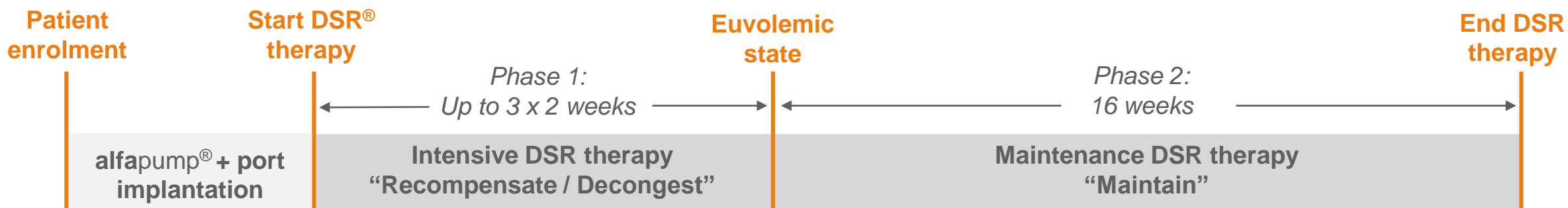
***“Simultaneous normalisation of diuretic response and improvement in cardio-renal status is a never before seen treatment effect” – Dr. Testani, Yale***

\* Paired statistical analysis of patients with baseline and D42 value (N=7); \*\* mean value; \*\*\*assessed by 6-hour excretion of sodium after IV administration of 40mg furosemide

NT-proBNP: N-terminal-pro hormone B-type Natriuretic Peptide (analysed in local lab); eGFR: estimated glomerular filtration rate

# SAHARA DESERT: Targeting persistent congestion

20 decompensated heart failure patients with persistent congestion on high dose diuretics – ongoing



## Study Endpoints

- **Primary:** safety and tolerability of **alfapump** DSR® therapy
- **Secondary:** feasibility of DSR therapy to restore and maintain euvoolemia without additional loop diuretics
- **Exploratory:** evaluate potential impact of SGLT-2 inhibitors on DSR therapy\*

\* patients will be randomised 1:1 to DSR therapy +/- SGLT-2 inhibitor therapy

# Interim<sup>1</sup> SAHARA DESERT: Indication of strong safety & efficacy results

**Safe, effective and rapid elimination of persistent congestion and restoration of euvoemia without any loop diuretics**

- Mean weight loss of ~6kg (=7% of body weight) vs. baseline

**Considerable benefit in cardio-renal status**

- Reduction\* in NT-proBNP >30% vs. baseline
- eGFR\* and creatinine\* similar to baseline
  - Worsening in kidney function is normally expected during significant volume removal

**Dramatic improvement in diuretic responsiveness for months post-treatment**

- End of phase 1 (n=6\*\*\*): more than doubling\* of sodium excretion\*\* (near normal levels)
- 3 months\* after end of Phase 1 (n=4): less than 10% of their baseline loop diuretic dose

***“These interim results are highly encouraging and could potentially provide a course of therapy for severely ill diuretic-resistant heart failure patients with persistent congestion where alternative treatment options are currently exceedingly limited” – Dr. Testani***

<sup>1</sup>: n=6

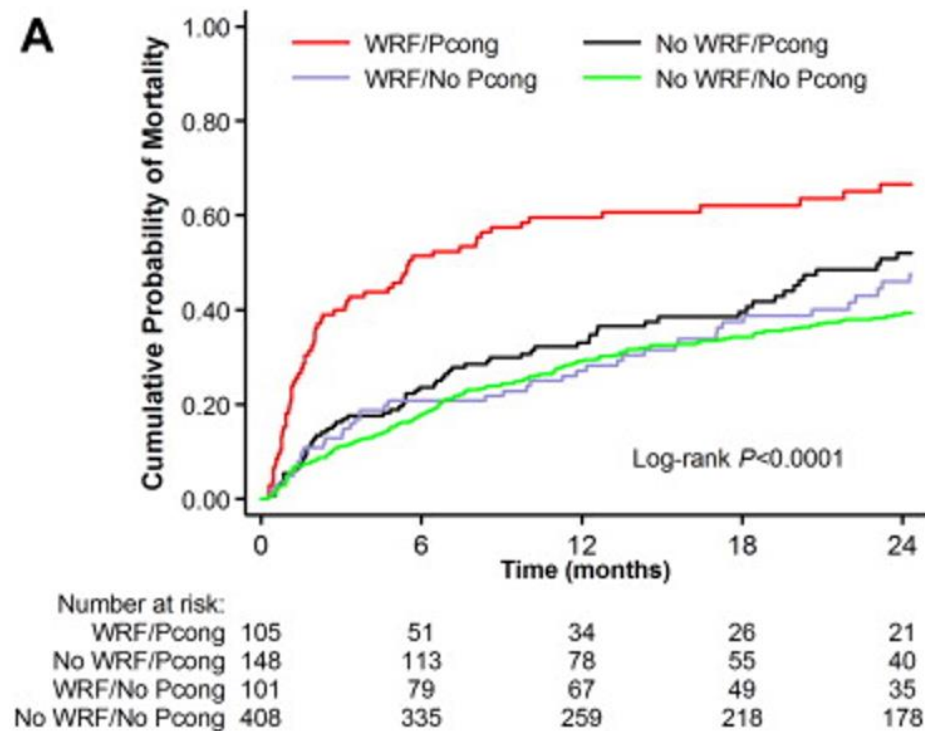
\*mean value; \*\* assessed by 6-hour excretion of sodium after IV administration of 40mg furosemide \*\*\* one patient has completed first 2-week dosing in phase 1 and is about to enter second 2-week dosing in phase 1

NT-proBNP: N-terminal-pro hormone B-type Natriuretic Peptide (analysed in local lab); eGFR: estimated glomerular filtration rate



# Persistent congestion and Worsening renal function

Key drivers of mortality in decompensated heart failure



Wattad et al, American Journal of Cardiology, 2015: interaction between worsening renal function and persistent congestion in acute decompensated heart failure (study of 762 patients)

# Proprietary DSR® Infusate 2.0 drives value model

- D10% used as initial DSR infusate for fastest proof-of-concept
- We are developing our **proprietary next-generation DSR infusate**



- ✓ Improved therapeutic profile
- ✓ IP protection
- ✓ Recurring revenue from high gross margin consumable

# Short-term DSR® – Derisking & extending franchise

Simplifying regulatory path and preparing market for alfapump DSR® market entry

## Short-term DSR – “drug only”

- “one off” ~2 weeks intensive DSR treatment
- With peritoneal catheter (no **alfapump**)

## Long-term alfapump DSR – “drug / device”

- Intermittent, recurring, intensive DSR treatment
- With **alfapump**



Simpler regulatory path  
/ earlier market entry



Faster adoption by  
clinical community



Support **alfapump** DSR  
market entry

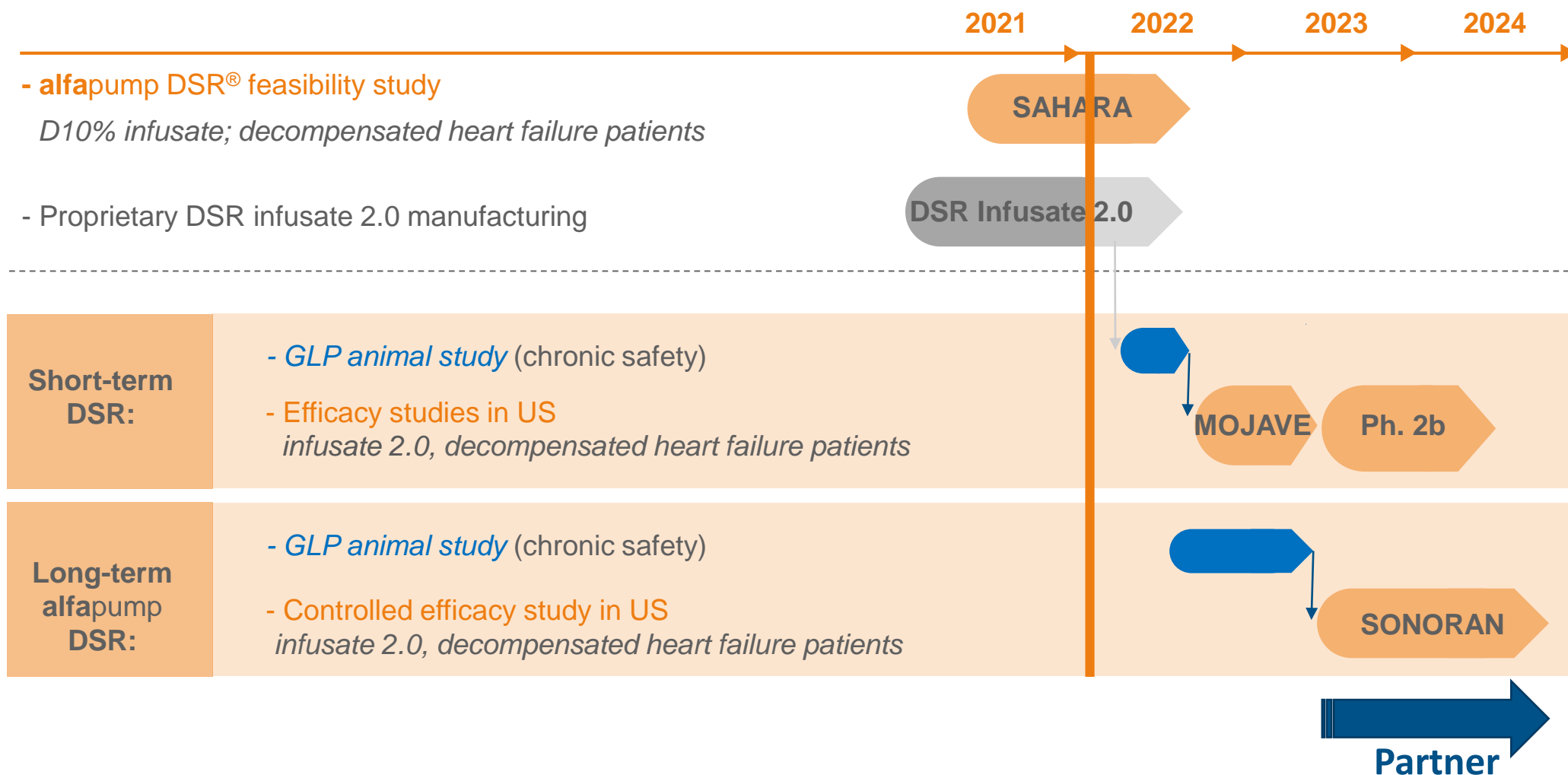


Expand potential market  
opportunity

***Tackling residual congestion and restoring diuretic response and cardio-renal status in diuretic-resistant heart failure patients***

# DSR® – Robust development program\*

Step-by-step approach to introduction of breakthrough therapy



\* Timelines subject to further developments related to the ongoing COVID-19 pandemic  
Description and timing of these studies are subject to change and/or feedback from applicable regulatory authorities



# Outlook

Strong **near term value drivers**  
**with** clear **long term potential**



# Building on our two proprietary platforms

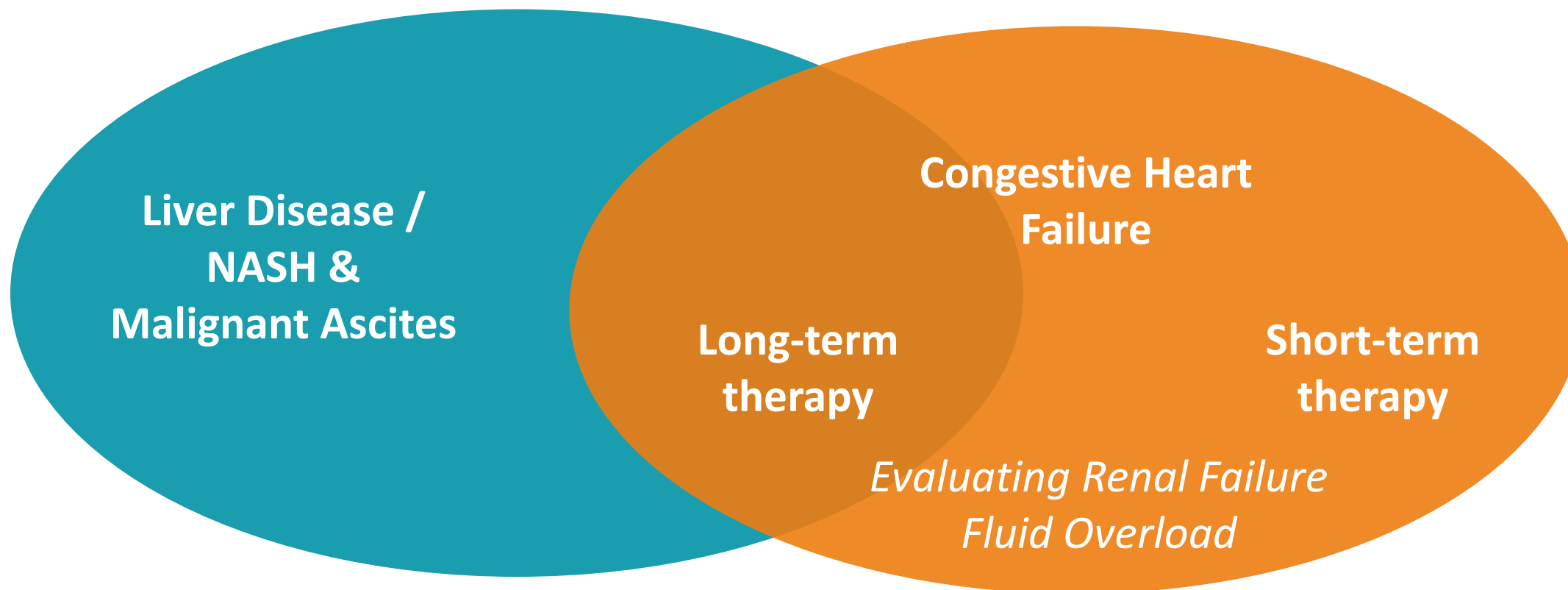
Complementary approaches to diuretic-resistant fluid overload

alfapump®

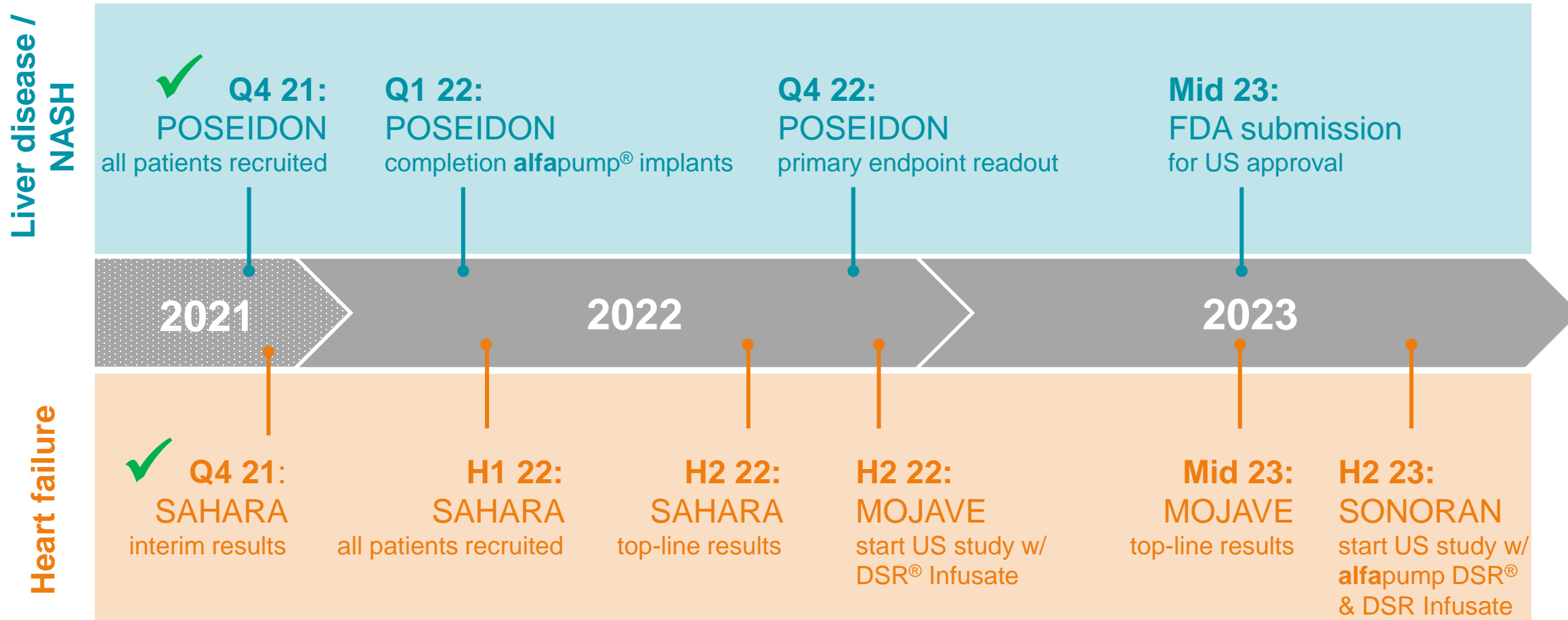


alfapump DSR®

DSR®



# Strong outlook for value drivers



Note: Presented timelines are subject to further developments related to the COVID-19 pandemic

# Back-up



# Sequana Medical NV

- Founded in 2006
- Gent, Belgium (HQ): corporate, clinical, commercial
- Zurich, Switzerland: manufacturing, engineering, QA/RA
- ~60 employees
- Euronext Brussels: SEQUA



# Strong organisation

Highly experienced leadership team supported by committed and well-reputed shareholders

## Executive team:



**Ian Crosbie**  
Chief Executive Officer



**Kirsten Van Bockstaele**  
Chief Financial Officer



**Oliver Gödje**  
Chief Medical Officer



**Dragomir Lakic**  
VP Manufacturing



**Gijs Klarenbeek**  
Senior Medical Advisor



**Martijn Blom**  
Chief Commercial Officer



**Timur Resch**  
Global VP QM/QA/RA



**Andreas Wirth**  
VP Engineering

## Board of Directors:



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Board Chairman



**Ian Crosbie**  
Chief Executive Officer



**Wim Ottevaere**  
Director



**Jackie Fielding**  
Director



**Rudy Dekeyser**  
Director

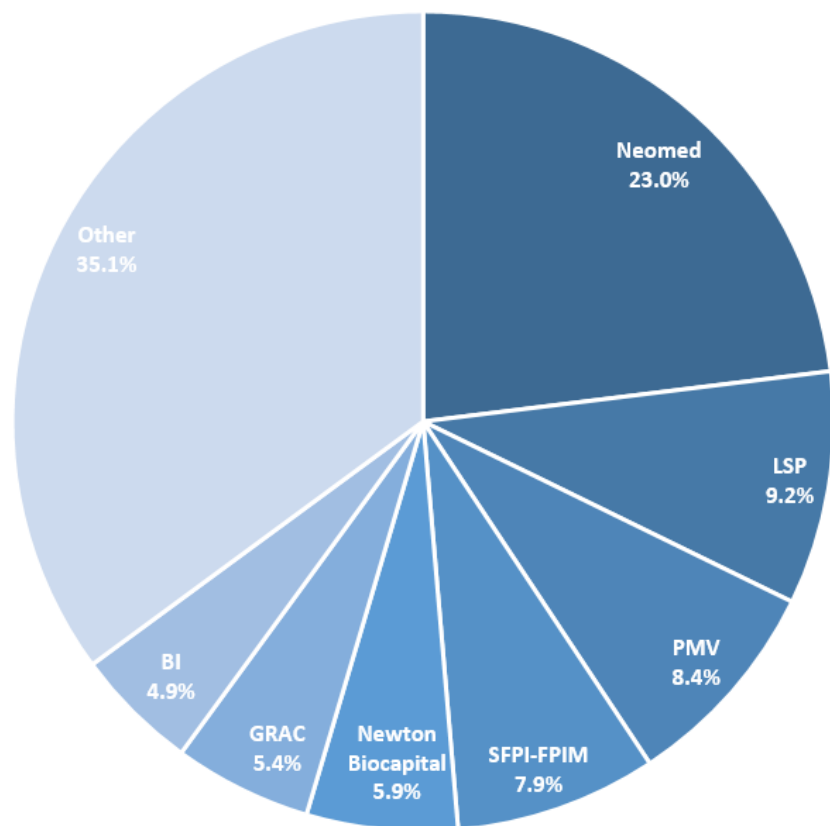


**Erik Amble**  
Director

# Shareholders base and financial overview

Ticker: SEQUA – Euronext Brussels

- Outstanding shares: 18.5M
- Outstanding share options & warrants: 1.8M



- Analysts:
  - KBC Securities – Jeroen Van den Bossche
  - Kempen – Ingrid Gafanhão
  - Kepler Cheuvreux – Matthias Maenhaut
  - Mirabaud – Daniel Jelovcan
  - H.C. Wainwright – Yi Chen, Raghuram Selvaraju
  - Degroof Petercam – Laura Roba, Kris Kippers
- Cash (30 June 2021): €21.8M
- Cash runway into Q2 2022



# POSEIDON – study cohorts

Patients with recurrent or refractory ascites due to liver cirrhosis in up to 20 centres across US and Canada

## Two study cohorts with the same inclusion / exclusion criteria

### 1 Pivotal Cohort

- Up to 50 patients implanted with the **alfapump**®
- For primary and secondary endpoint analysis

### 2 Roll-In Cohort ➡ enables us to report interim data

- Up to 30 patients implanted with the **alfapump**
- To teach clinicians and medical teams at new centres how to use the **alfapump**





# Recurrent or refractory ascites – patient profile

26 patients from the Roll-In Cohort in the POSEIDON study

|   |                |
|---|----------------|
| Age (mean)                                  | 63 y           |
| MELD score (mean $\pm$ SD)                  | 10.3 $\pm$ 3.9 |
| Cirrhosis etiology                          |                |
| - Alcohol                                   | - 50.0%        |
| - NASH                                      | - 23.1%        |
| - NASH / Alcohol                            | - 3.8%         |
| - Alcohol / Hepatitis                       | - 11.5%        |
| - Alcohol / Primary Sclerosing Cholangitis  | - 3.8%         |
| - Hepatitis C                               | - 3.8%         |
| - Budd Chiari Syndrome                      | - 3.8%         |
| TP per month prior to study (mean $\pm$ SD) | 3.8 $\pm$ 1.4  |

N. American patients are treated early in their disease

NASH is becoming a major driver of ascites market

Higher number of TP compared to Europe



# Roll-In Cohort: Substantial and durable reduction in Therapeutic Paracentesis (TP)

| Mean values                            | Primary efficacy endpoint<br>Pivotal Cohort | Interim data<br>Roll-In Cohort (N = 26) |
|--|---|---|
| % reduction in monthly frequency of TP | > 50% <sup>(1)</sup>                        | > 90% <sup>(2)</sup>                    |
| % patients with >50% reduction in TP   | > 50% <sup>(1)</sup>                        | 100% <sup>(2)</sup>                     |

(1) Monthly frequency of TP during 3-month post-implant observation period (month 4 to 6) vs 3-month pre-implant observation period

(2) Monthly frequency of TP during period up to 12 months post-implant vs one month prior to implant (medical history)

***Substantial reduction in TP well beyond 6 months post-implantation with alfapump<sup>®</sup>***

\* Note: Pre- and post-implant periods for this analysis of the Roll-In Cohort differ from those that will be used for the Pivotal Cohort analysis

TP: Therapeutic Paracentesis



# Roll-In Cohort: Safety in line with expectations

## Primary safety endpoint:

- Rate of **alfapump** related re-interventions adjudicated by Clinical Events Committee (CEC)

## Interim data Roll-In Cohort (N=26):

- No unanticipated adverse device effects
- Three patients experienced a **composite primary safety event** as adjudicated by CEC:
  - Hematuria after car accident – **alfapump** explant 1 in 1 patient
  - Wound dehiscence – **alfapump** explant 1 in 1 patient
  - Arterial injury during implantation – patient died 1 in 1 patient

*“Safety data reassuring for the potential of the alfapump as a long-term treatment in this fragile patient population” – Prof. Wong, Principal Investigator POSEIDON*

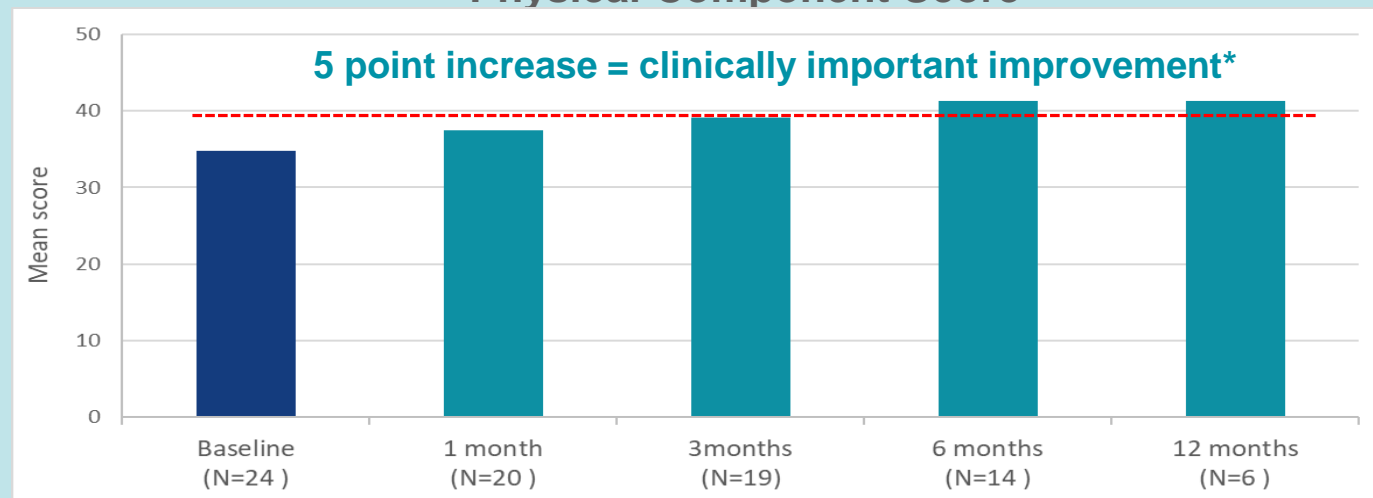


# Roll-In Cohort: Clinically important improvement in quality of life maintained up to 12 months

*SF-36*

*General health-survey questionnaire*

Physical Component Score



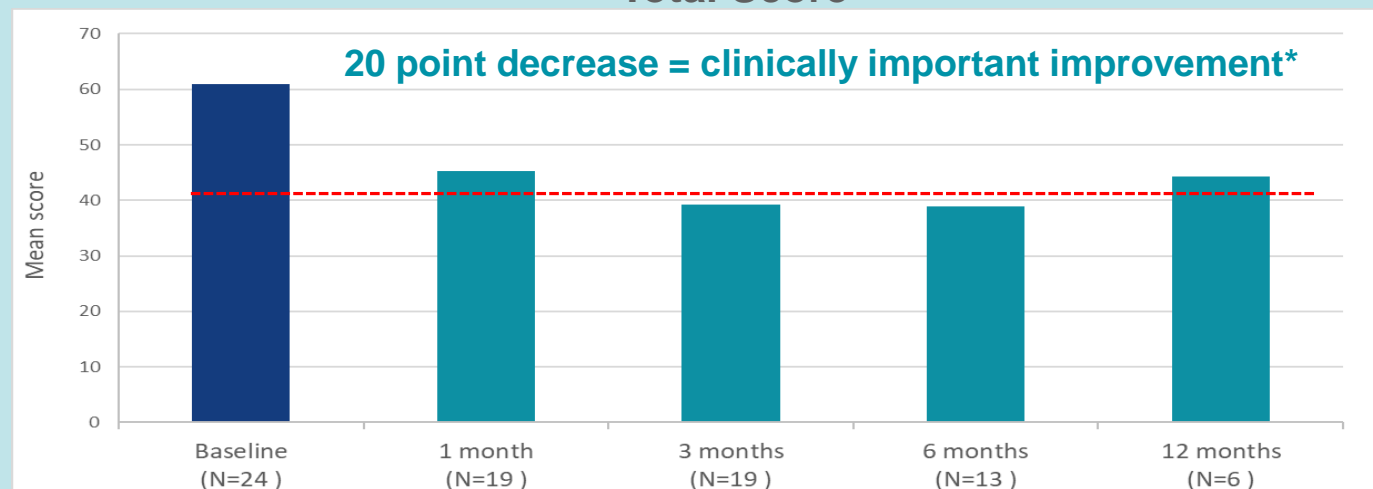
Higher is better



*Ascites Q*

*Specific health-survey questionnaire for ascites*

Total Score



Lower is better



\* Clinically important improvement: exceeding the threshold for Minimal Clinically Important Difference



# Leading experts as Heart Failure Scientific Advisors



**Dr. Maria Rosa Costanzo**

Medical Director of the Edward Center for Advanced Heart Failure  
Medical Director Heart Failure Research for the Advocate Heart Institute



**Dr. Wilson Tang**

Professor of Medicine at Cleveland Clinic Lerner College of Medicine at Case Western Reserve University



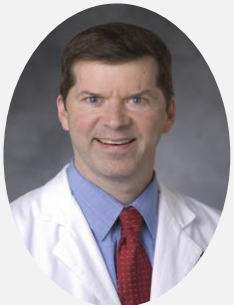
**Dr. Javed Butler**

Professor and Chairman of the Department of Medicine at the University of Mississippi Medical Center



**Dr. Jeffrey Testani**

Associate Professor of Medicine and Director of Heart Failure Research at Yale University School of Medicine



**Dr. Michael Felker**

Professor of Medicine in the Division of Cardiology at Duke University School of Medicine  
Director of Cardiovascular Research at the Duke Clinical Research Institute and Vice-Chief for Clinical Research in the Division of Cardiology



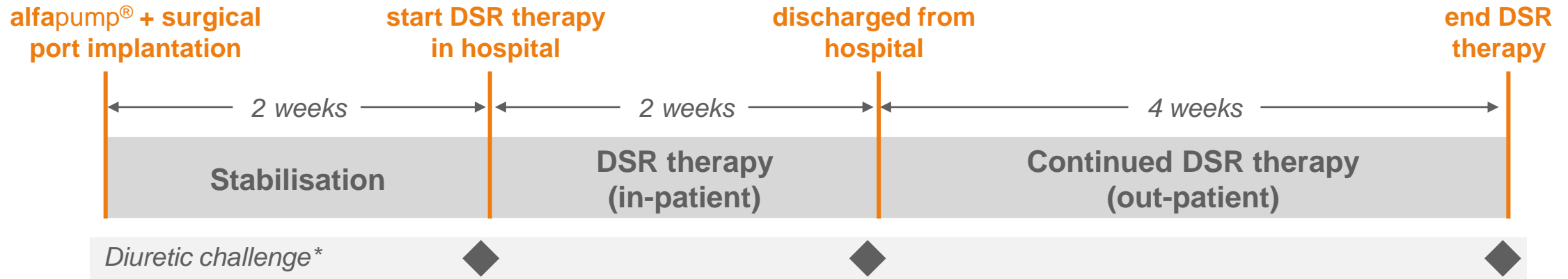
**Dr. Udelson**

Chief of the Division of Cardiology at Tufts Medical Center  
Professor of Medicine and Radiology at Tufts University School of Medicine



# RED DESERT – The first repeated DSR<sup>®</sup> therapy study

Repeated dose proof-of-concept study of alfapump DSR<sup>®</sup> in stable heart failure patients on high dose diuretics



## Study Endpoints

- **Primary:** absence/rate of device, procedure and/or therapy related serious adverse events
- **Secondary:** ability of the alfapump DSR to maintain a neutral sodium balance in the absence of diuretic therapy and the sustained effect of DSR to maintain euvolemia
- **Exploratory:** impact of DSR to restore response to diuretics following DSR treatment

\* 40mg intravenous furosemide to evaluate diuretic response (6 hour sodium and fluid excretion)



# RED DESERT: Highly effective management of fluid & sodium

No loop diuretics required during study despite mean baseline dose of >300 mg/day furosemide equivalents

| Subject     | Ejection Fraction (%) | NT-proBNP (pg/mL) | Daily Dose of loop diuretics (mg)** |                                |
|-------------|-----------------------|-------------------|-------------------------------------|--------------------------------|
|             | At baseline           | At baseline       | At baseline                         | During DSR Treatment (D0 - 42) |
| 101-001     | 26                    | 6,110             | 80                                  | 0                              |
| 101-002     | 27                    | 2,863             | 200                                 | 0                              |
| 101-003     | 28                    | 1,536             | 400                                 | 0                              |
| 101-005     | 25                    | 1,628             | 120                                 | 0                              |
| 101-006*    | 23                    | 1,963             | 80                                  | 0                              |
| 101-007*    | 26                    | 5,927             | 300                                 | 0                              |
| 101-008*    | 20                    | 7,853             | 600                                 | 0                              |
| 101-009†    | 20                    | 8,831             | 800                                 | 0                              |
| Mean (± SD) | 24 ± 3                | 4,589 ± 2,945     | 323 ± 263                           |                                |

**Study recruited severely ill heart failure patients on very high doses of oral loop diuretics**

\* in follow-up extension with DSR; † subject 101-009 died at D3

\*\* loop diuretics in furosemide equivalents (mg)

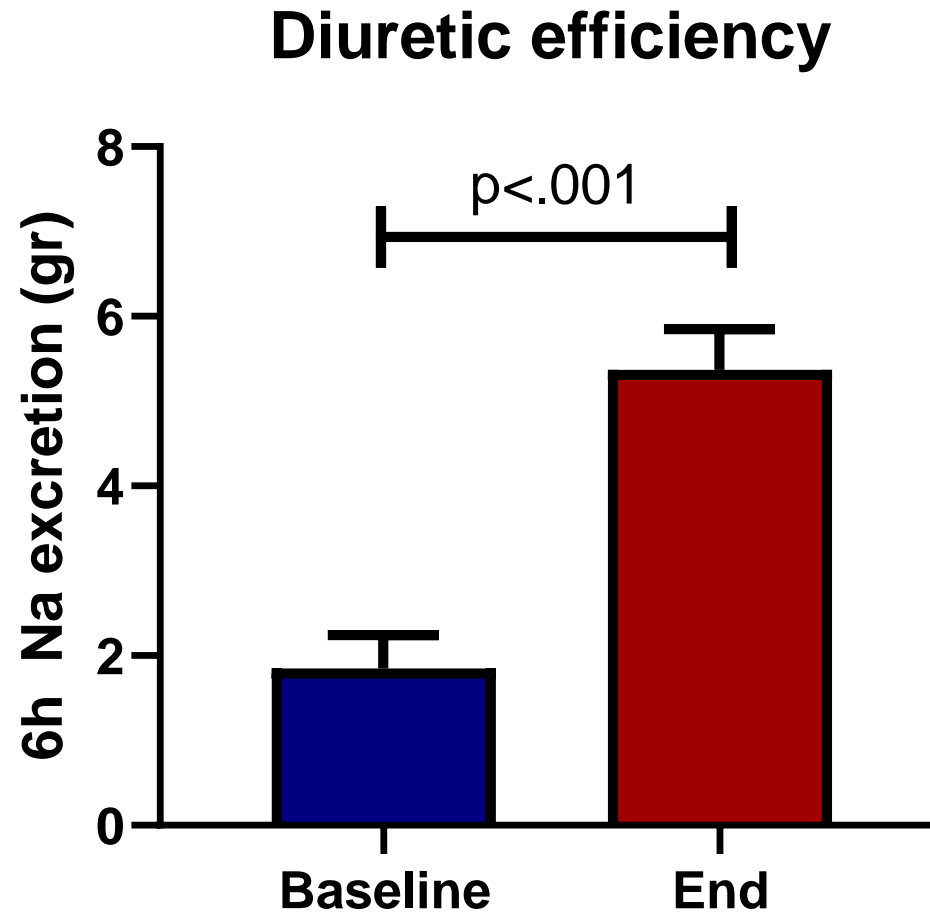
NT-proBNP: N-terminal-pro hormone B-type Natriuretic Peptide – analysed in local lab





# RED DESERT: Dramatic improvement in diuretic efficiency

Over 150% increase in mean diuretic response\*



\* 6 hour Na excretion following administration of 40mg intravenous furosemide; paired statistical analysis of patients with baseline and D42 value (N=7)



# RED DESERT: Long-term follow-up of patients

Durable improvement in diuretic response following alfapump DSR<sup>®</sup> therapy

| Subject   | Daily dose of loop diuretics** |                                 | Time since last DSR treatment in the study | Current known daily dose*** | Current known reduction in diuretic dose |
|-----------|--------------------------------|---------------------------------|--|-----------------------------|--|
|           | At screening                   | During DSR treatment (D0 – D42) |  |                             |  |
| 101-001   | 80                             | 0                               | 19 months                                  | 40                          | <b>-50%</b>                              |
| 101-002   | 200                            | 0                               | 19 months                                  | 120                         | <b>-40%</b>                              |
| 101-003   | 400                            | 0                               | 16 months                                  | 160                         | <b>-60%</b>                              |
| 101-005   | 120                            | 0                               | 16 months                                  | 40                          | <b>-67%</b>                              |
| *101-006  | 80                             | 0                               | 14 month                                   | 20 EOD                      | <b>-88%</b>                              |
| *101-007  | 300<br>(400 EOD +<br>200 EOD)  | 0                               | 9 month                                    | 40 BIW                      | <b>-96%</b>                              |
| *101-008† | 600                            | 0                               | 9 month                                    | 80                          | <b>-87%</b>                              |
| 101-009†  | 800                            | 0                               | NA   | NA                          | <b>NA</b>                                |

\* in follow-up extension with DSR; † subject 101-008 died in follow-up extension (9 months after end of study), subject 101-009 died at D3

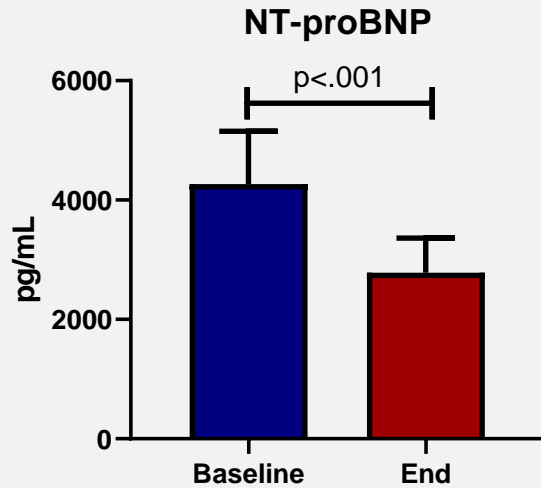
\*\* loop diuretics in furosemide equivalents (mg)

\*\*\* loop diuretics in furosemide equivalents (mg) – status 5 Nov 2021

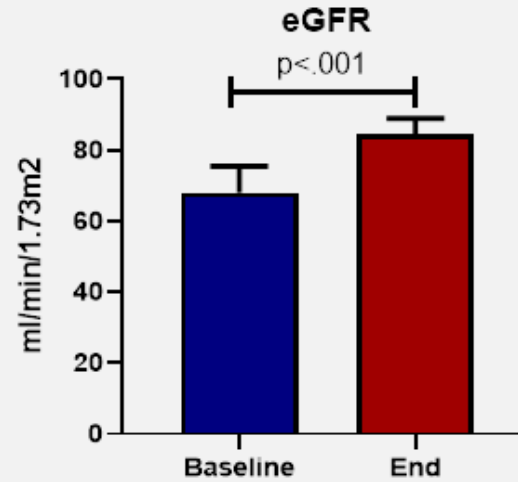
**EOD:** every other day; **BIW:** two times per week



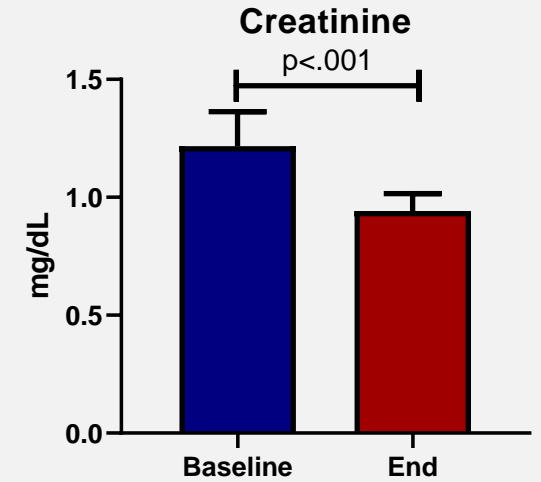
# RED DESERT: Significant improvement in cardio-renal function\*



**30% decrease  
in mean natriuretic peptides**



**22% increase  
in mean eGFR**



**22% decrease  
in mean creatinine**

*“The simultaneous normalisation of diuretic response and improvement in cardio-renal status of the RED DESERT patients is a never before seen treatment effect and could translate into important long-term clinical benefits in heart failure patients” – Dr. Testani*

\* Paired statistical analysis of patients with baseline and D42 value (N=7)

**NT-proBNP:** N-terminal-pro hormone B-type Natriuretic Peptide (analysed in local lab); **eGFR:** estimated glomerular filtration rate



# SAHARA DESERT interim analysis

6 severe heart failure patients with persistent congestion on high dose diuretics

## Mean values at baseline of 6 patients in interim analysis

|   |              |
|---|--------------|
| Left ventricular ejection fraction:               | low 20%      |
| NT-proBNP:  | >6,000 pg/mL |
| Furosemide equivalent dose:<br>(standard of care) | ~250 mg/day  |

*NT-proBNP: N-terminal-pro hormone B-type Natriuretic Peptide; analysed in local lab*

## Study status of 6 patients in interim analysis

|          |                               |
|----------|-------------------------------|
| Phase 1: | n = 2 (1 complete, 1 ongoing) |
| Phase 2: | n = 4 (1 complete, 3 ongoing) |



# SAHARA DESERT interim analysis

Repeated alfapump® DSR therapy was safe and well-tolerated

- No clinically significant changes in serum sodium levels or other electrolytes after intensive DSR therapy
- Reported adverse events were manageable:
  - ⇒ Diarrhea (1 patient)
  - ⇒ Catheter blockage (1 patient)
  - ⇒ Smart charger communication error (2 patients)



# SAHARA DESERT interim analysis

Enrolment status – 7 December 2021

- Overall, 9 patients have been enrolled and implanted with **alfapump DSR®** across 2 sites
  - 6 patients were evaluated for interim analysis
  - 2 further patients just started study treatment\*
  - 1 further patient was enrolled but died due to a cardiac arrest three days after study initiation\*
    - ⇒ Study site: not related to study therapy, procedure or device
    - ⇒ Data Monitoring Committee: possibly related to study therapy; not related to procedure or device
- Completion of patient enrolment expected in H1 2022
- Reporting of top-line data expected in H2 2022

\* excluded from interim analysis

# Evaluating potential for DSR® in renal failure

Complementary opportunity leveraging heart failure programme capabilities

- Like heart failure, kidney failure / dialysis is one of the leading burdens for healthcare systems and carries a high mortality / morbidity burden
- Hemodialysis seeks to tackle two different challenges – removal of uremic toxins as well as managing the sodium and fluid balance – creating clinical and economic challenges
- DSR therapy has the potential to more effectively manage the fluid and sodium balance of this large patient group
  - ⇒ Leveraging all of our experience from congestion / fluid overload in heart failure
- We are exploring the potential of DSR in this large and important patient group, potentially reducing hospitalisations, the cost and burden of hemodialysis therapy as well as mortality
  - ⇒ Supporting work of Dr McIntyre (Lawson Health Research Institute, Ontario, Canada): evaluating the use of DSR therapy in effective volume management and sodium removal in prevalent hemodialysis patients (NCT04603014)





# Contact info



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