

Biostock Life Science Summit, Lund  
November 21, 2024

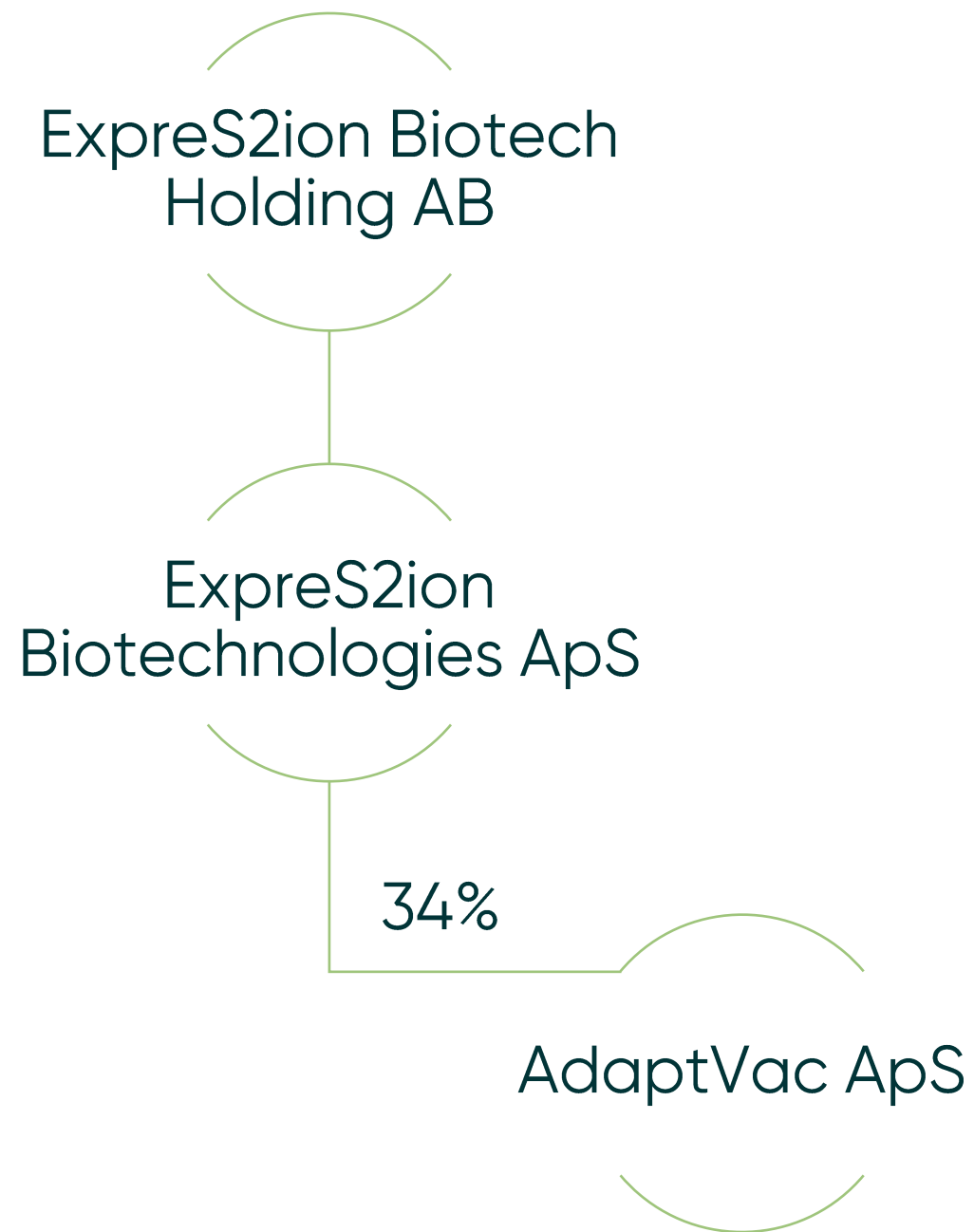
# Revolutionizing breast cancer treatment: **ES2B-C001**

STO: EXPRS2

ExpreS2ion Biotech Holding AB  
Org. Nr. 559033-3729



# About ExpreS2ion



## ExpreS2ion Biotech Holding AB

- Listed on the Nasdaq First North Growth Market since 2016
- Holding company for ExpreS2ion Biotechnologies ApS, which it owns 100%












## ExpreS2ion Biotechnologies ApS

- Established in 2010
- **ExpreS2™ protein production platform, vaccine pipeline and CRO business**
- Owns 34% of AdaptVac ApS

## AdaptVac ApS

- Co-founded in 2017 by ExpreS2ion and researchers from Copenhagen University
- **Virus-like particle (VLP) platform** – AdaptVac's VLP is a delivery vehicle in ExpreS2ion's breast cancer vaccine candidate, ES2B-C001 (HER2-VLP)

# Deep experience in breast cancer, vaccines and clinical development

Leadership Team				
	<b>Bent Frandsen</b> CEO	MSc, Copenhagen Business School	<ul style="list-style-type: none"><li>&gt;27 years life science management, business development and finance experience</li><li>Successfully participated in development of &gt;10 clinical-stage assets, closed over 25 license and partner deals worth &gt;€1B, and raised in public markets &gt;€40M</li></ul>	
	<b>Dr. Farshad Guirakhoo</b> CSO	PhD, Medical University of Vienna	<ul style="list-style-type: none"><li>&gt;35 years broad translational research experience in vaccine development</li><li>Successfully developed vaccines for Dengue Fever, Japanese Encephalitis, and West Nile Disease (horse and human), from inception to commercial stages</li></ul>	
	<b>Dr. Lars Damstrup</b> Director of Clinical Development	MD, PhD, University of Copenhagen	<ul style="list-style-type: none"><li>40 years in oncology within academia (15 years), preclinical research (6 years) and industry (19 years)</li><li>Led &gt;15 phase I/II trials, with several continuing to phase II &amp; one oncology drug granted FDA conditional approval</li></ul>	
	<b>Dr. Max Søgaard</b> SVP of R&D and Technology	PhD, University College London	<ul style="list-style-type: none"><li>&gt;24 years research experience, including leading R&amp;D for cell line development, pipeline and client projects</li><li>Led candidate selection and/or manufacturing process of &gt;20 oncology &amp; infectious disease vaccine candidates</li></ul>	
	<b>Thomas Jørgensen</b> Program & CMC Project Lead	MSc, University of Southern Denmark	<ul style="list-style-type: none"><li>&gt;30 years CMC and program management experience with leading biotech and pharmaceutical companies</li><li>Led CTA/BLA enabling activities for seven companies in the oncology, inflammation and infectious disease fields</li></ul>	
	<b>Keith Alexander</b> CFO	MBA, The Wharton School	<ul style="list-style-type: none"><li>&gt;20 years in financial markets, primarily advising institutional investors, raising &gt;€30 million &amp; advising &gt;€1T</li><li>Advised executive management on M&amp;A, JVs, growth strategies and competitive intelligence</li></ul>	

## Board of Directors



**Dr. Martin Roland Jensen, PhD, Co-Founder and Chairman**

- Co-Founder of ExpreS2ion Biotechnologies
- Co-founder, Chairman and CBO of Cell2Cure ApS
- Co-founder of Unikum Therapeutics



**Dr. Karin Garre, MD, Board Member**

- Chair of Bioneer and Board Member of Cervello
- Leadership and drug development experience with Novo Nordisk, Genmab, Symphogen and Astra



**Sara Sande, MSc, Board Member**

- Investment Partner at EIFO
- Board Member of Agreena, Monta and Biosyntia; Board Observer of Cellugy and Chromologics



**Jakob Knudsen, LL.M., MBA, Board Member**

- CEO of Virogates, Board Member of Ingeniørsystem and PV Fonden
- Commercial operations, business development, marketing and finance experience with ALK and Egalet

## Oncology Scientific Advisory Board

**Dr. Javier Cortes, MD, PhD**  
Doctor of Medical Oncology and Head of the International Breast Cancer Center, Barcelona

**Dr. Michael Andersson, MD, DMSci**  
Clinical Oncologist, Specialist in HER2-positive breast cancer

**Dr. Ulrik Lassen, MD, PhD**  
Professor of Clinical Oncology & Personal Medicine at the University of Copenhagen, Head of Oncology Department at the National Hospital (Rigshospitalet)

**Dr. Giuseppe Curigliano, MD, PhD**  
Associate Professor of Medical Oncology at the University of Milan, Head of Early Drug Development Division at the European Institute of Oncology

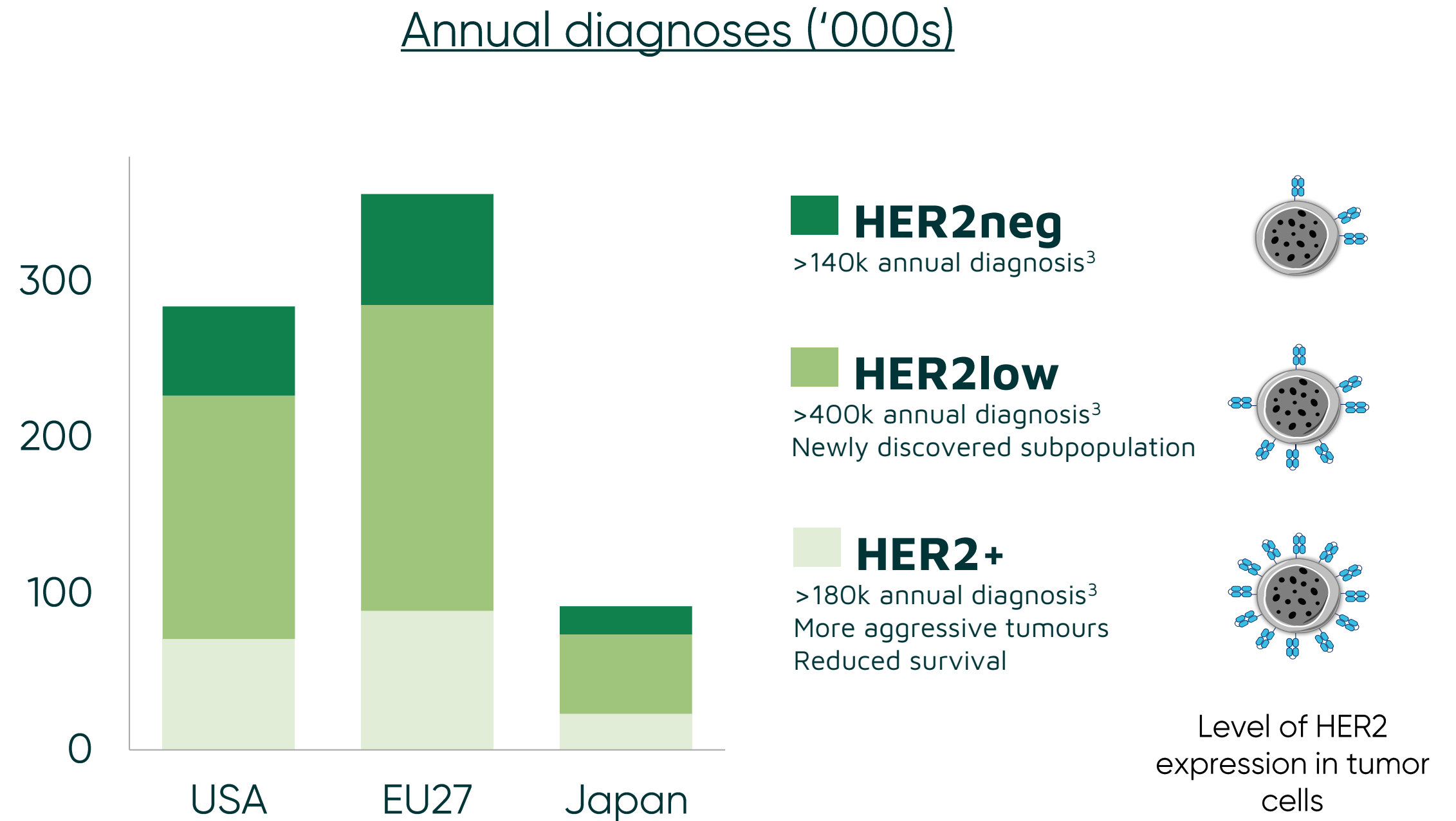
**Dr. Rupert Bartsch, MD**  
Associate Professor of Medicine at the Medical University of Vienna, Director of Breast Cancer Programme in the Department of Oncology

**Dr. Daniel Lenihan, MD, FACC, FESC, FIC-OS**  
Cardiologist at the St. Francis Healthcare System-Cape Girardeau in Missouri

\*Not all icons for company experience shown on this slide.

# The persistent challenge of HER2+ breast cancer

- 1 in 8 women are diagnosed with invasive breast cancer during a lifetime<sup>1</sup>
- In 2022, about 2.3 million women were diagnosed with breast cancer worldwide and 670,000 died<sup>1</sup>
- HER2 is overexpressed in up to 30% of breast cancer tumours<sup>2</sup>
- Overexpression of HER2 is associated with
  - More aggressive disease
  - Higher recurrence rate
  - Increased mortality<sup>2</sup>



<sup>1</sup> Breast Cancer Research Foundation (<https://www.bcrf.org/breast-cancer-statistics-and-resources>)

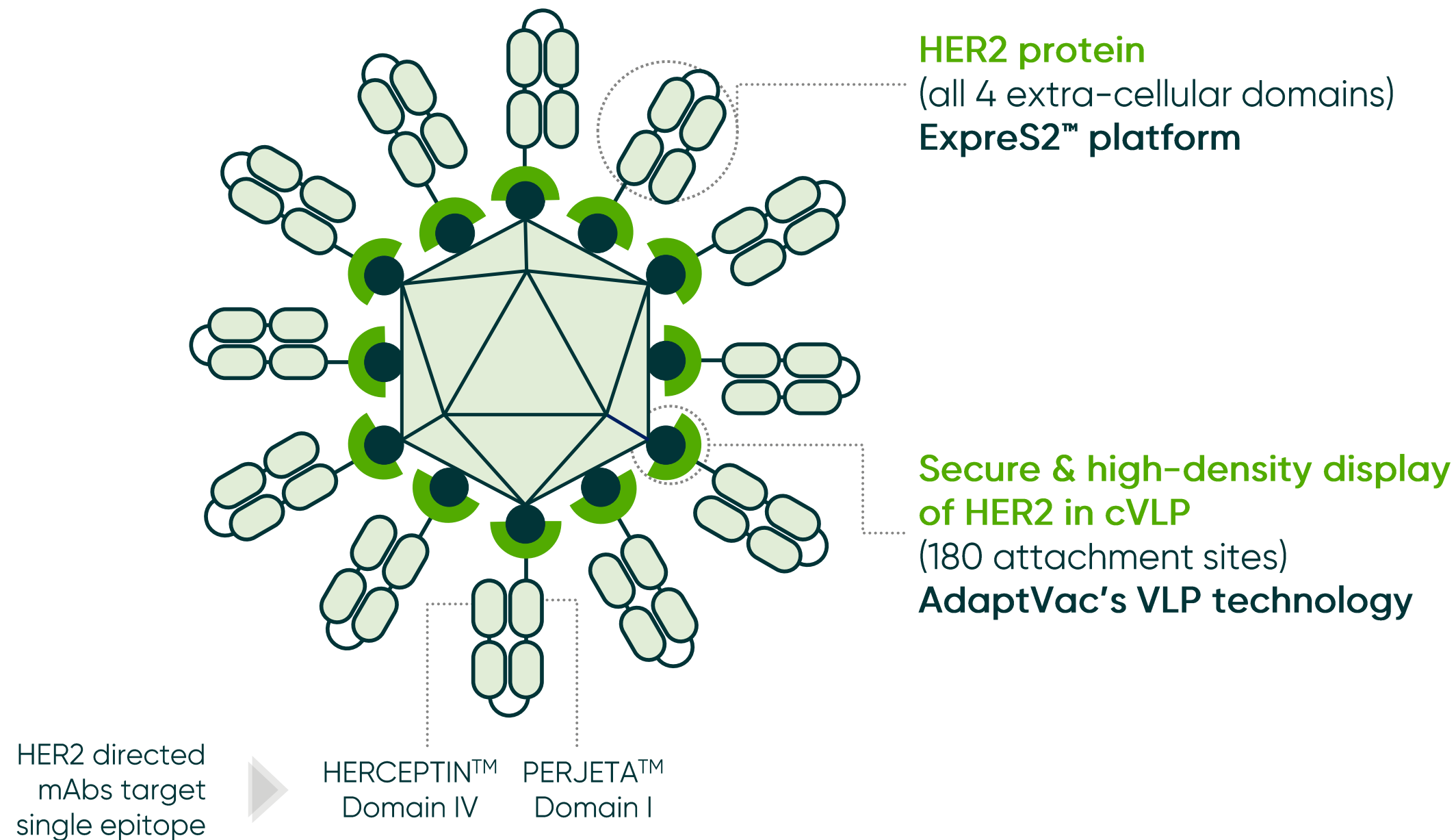
<sup>2</sup> Mitri Z et al. The HER2 Receptor in Breast Cancer: Pathophysiology, Clinical Use, and New Advances in Therapy (Chemother Res Pract. 2012; 2012: 743193)

<sup>3</sup> EU, US, Japan



# ES2B-C001 vaccine design

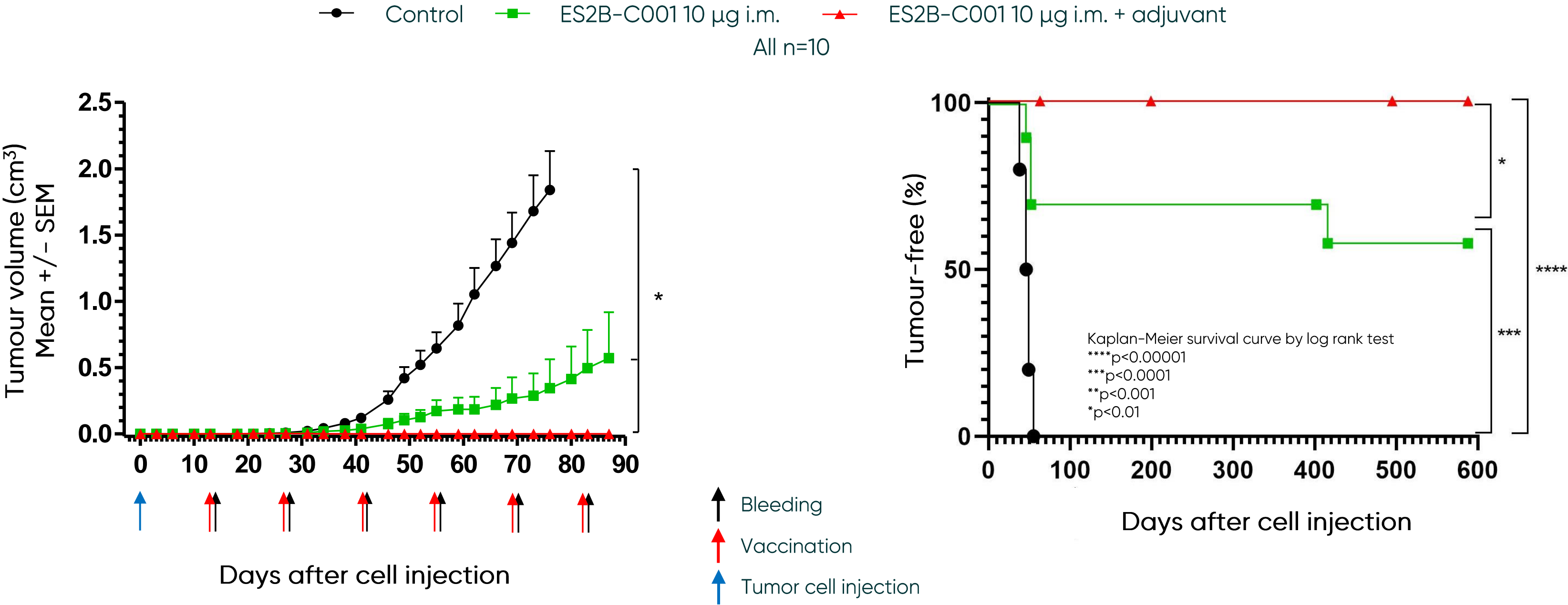
Proprietary platform is Phase III-validated: Combines unique full-length antigen with highly immunogenic VLP technology, leading to durable polyclonal antibody response



- **VLP concept in approved cancer vaccines**  
HPV vaccine against cervical cancer and HBV vaccine against liver cancer
- **Highly immunogenic**  
A wide range of epitopes presented to B-cells. Generates a strong polyclonal Ab response -> effective in tumour cells resistant to mAbs.
- **Safety profile**  
Technology validated in phase III testing of another indication & ES2B-C001 long-term GLP NHP studies
- **Longevity of immune response**  
Potent B-cell activation via VLP presentation. Break 'self-tolerance' for HER2+.
- **Combination with SoC**  
Applied on top of different LOTs.
- **Off-the-shelf, scalable, cost-effective**

# Promising non-clinical results

Significant *in vivo* tumour growth inhibition resulting in 100% survival of treated animals  
(used as a prophylactic and therapeutic vaccine)



Studies conducted by Alma Mater Institute on Healthy Planet & DIMES, University of Bologna  
Note: FVB mice are mice being challenged with tumours, while Delta16 mice spontaneously develop tumours and have been inoculated with tumour cells to accelerate tumour development  
Ref. Ruzzi, et al., Biomedicines 2022, 10, 2654

# Significant improvement on competing HER2-expressing breast cancer therapies

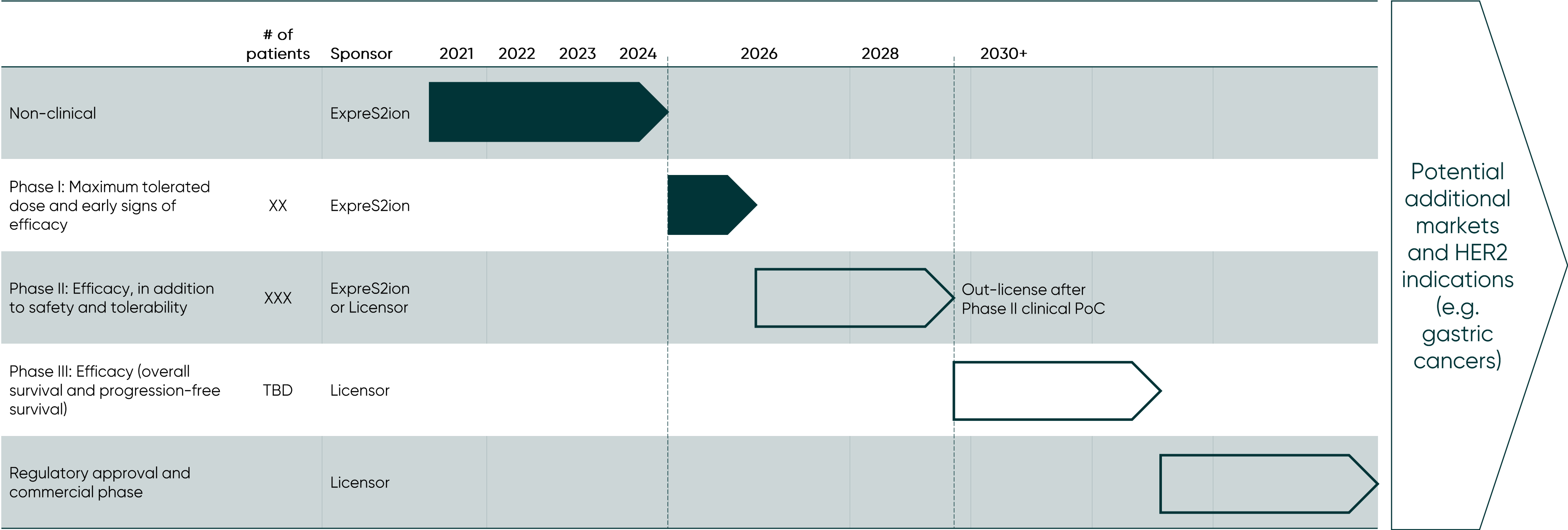
	mAbs	ADCs	TKIs	Other vaccines	ES2B-C001
Cardiac toxicity	Yes	Yes	Yes	TBD	Not observed
Gastrointestinal toxicity	N/A	N/A	Yes	TBD	Not observed
Liver toxicity	N/A	Yes	Yes	TBD	Not observed
Thrombocytopenia	N/A	Yes	N/A	TBD	Not observed
Interstitial lung disease	N/A	Yes	N/A	TBD	Not observed
SoC resistance	Nearly one-third of HER2+ breast cancer patients develop resistance <sup>2</sup>			TBD	Demonstrated breaking tolerance <i>in vitro</i>
Long-term effect (PFS in months)	<19	<10	<8	TBD	FVB mice tumour-free >19 months
Easy to administer/ receive	No	No	Yes	Yes	Yes
VLP-based <sup>1</sup>	N/A	N/A	N/A	No	Yes
Cost effective	No	No	No	Varies	Yes

<sup>1</sup> All approved cancer vaccines are VLP-based, including those for HPV (Gardasil™, Cervarix™) and HBV (Engerix-B™)

<sup>2</sup> Pallerla, S., Abdul, A. ur R.M., Comeau, J. and Jois, S. (2021). Cancer Vaccines, Treatment of the Future: With Emphasis on HER2-Positive Breast Cancer. International Journal of Molecular Sciences, [online] 22(2). doi:https://doi.org/10.3390/ijms22020779.

# Path to clinical proof-of-concept and commercialisation

High-level summary of integrated development plan (iDP)



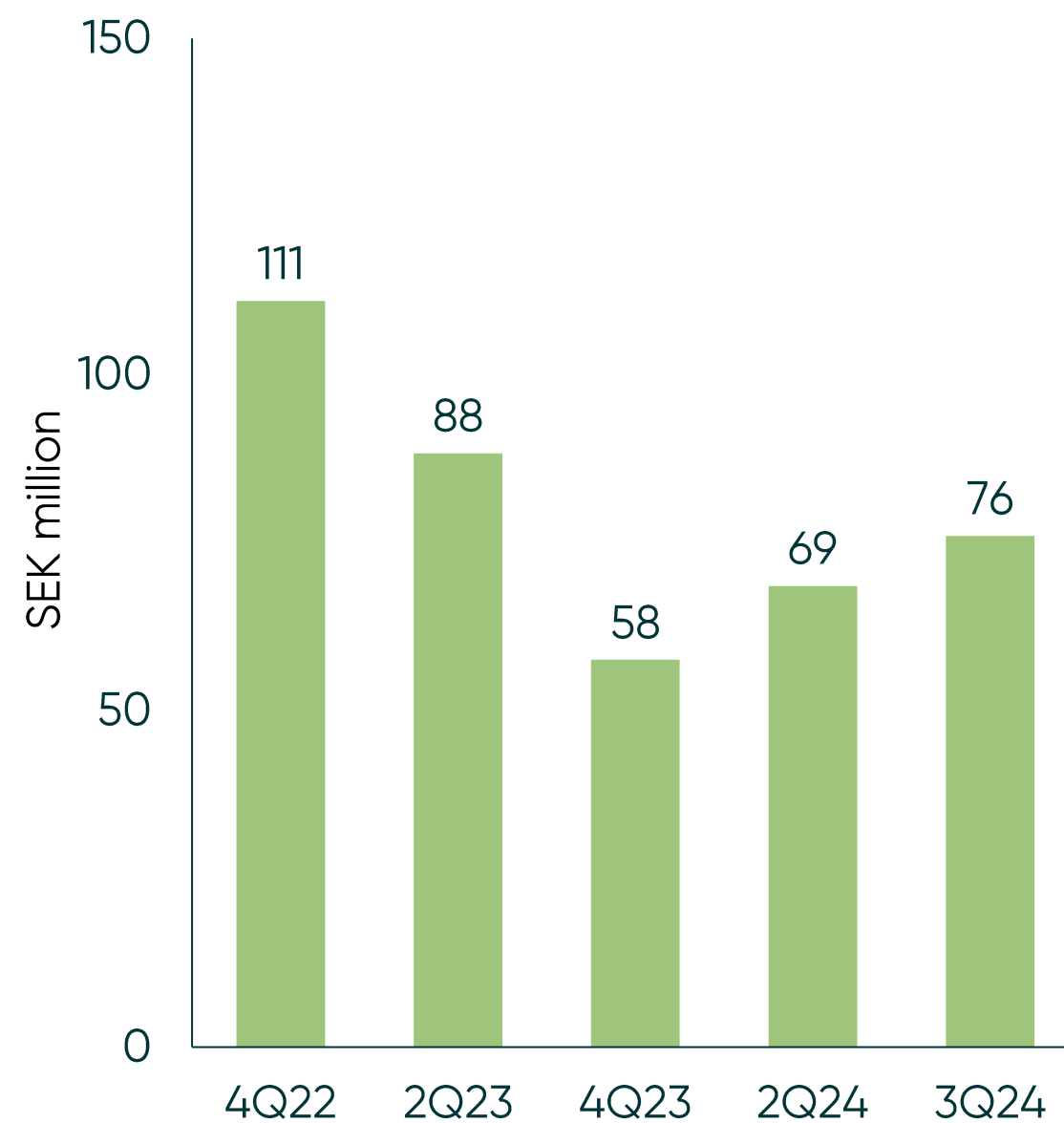


# Positioned for growth: Cash reserves and future funding

## Cash

## Milestones

## Important cash in-flow in the near-term



- CTA approval
- First-in-human
- Interim results

### TO 10 warrant subscription

- Subscription: Nov. 20 – Dec. 4, '24
- Terms: 40 warrants = 1 new share
- Price: 17.91 SEK (30% discount to 2-week VWAP)

Window open now

### TO 11 warrant subscription

- Subscription: Sep. 18 – Oct. 2, '25
- Terms: 40 warrants = 1 new share
- Price: 70% of the VWAP during Sep. 1-12 '24

# Groundbreaking novel cancer therapy

ES2B-C001 summary: A therapeutic vaccine to treat HER2-positive breast cancer awaiting CTA approval



- A HER2-cVLP vaccine targeting HER2-expressing breast cancer, addressing a €27B global market with 7.2% CAGR next 5 years<sup>1</sup>
- ES2B-C001 demonstrated significant tumour growth inhibition, resulting in 100% survival of treated animals
- Effectively breaking tolerance, and overcoming monoclonal antibody resistance
- CTA submitted in Q3 '24 and aim to complete first-in-human Phase I clinical trial by Q1 '26
- ExpreS2ion committed to ensure completion of Phase II clinical proof-of-concept studies during 2026-2029

<sup>1</sup> Mordor Intelligence, breast cancer therapeutics market, 2024-2029 estimates

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