

OSE IMMUNO
THERAPEUTICS



Breaking Through the
Therapeutic Ceiling with
First-In-Class Immunotherapies

November 2024

Forward Looking Statement

This presentation contains express or implied information and statements that might be deemed forward-looking information and statements in respect of OSE Immunotherapeutics. They do not constitute historical facts. These information and statements include financial projections that are based upon certain assumptions and assessments made by OSE Immunotherapeutics' management in light of its experience and its perception of historical trends, current economic and industry conditions, expected future developments and other factors they believe to be appropriate.

These forward-looking statements include statements typically using conditional and containing verbs such as "expect", "anticipate", "believe", "target", "plan", or "estimate", their declensions and conjugations and words of similar import.

Although the OSE Immunotherapeutics' management believes that the forward-looking statements and information are reasonable, the OSE Immunotherapeutics' shareholders and other investors are cautioned that the completion of such expectations is by nature subject to various risks, known or not, and uncertainties which are difficult to predict and generally beyond the control of OSE Immunotherapeutics. These risks could cause actual results and developments to differ materially from those expressed in or implied or projected by the forward-looking statements. These risks include those discussed or identified in the public filings made by OSE Immunotherapeutics with the AMF. Such forward-looking statements are not guarantees of future performance.

This presentation includes only summary information and should be read with the OSE Immunotherapeutics Universal Registration Document filed with the AMF on April 30, 2024, including the 2023 financial results, all available on the OSE Immunotherapeutics' website. Other than as required by applicable law, OSE Immunotherapeutics issues this presentation at the date hereof and does not undertake any obligation to update or revise the forward-looking information or statements.

This presentation does not constitute an offer to sell the shares or soliciting an offer to purchase any of the Shares to any person in any jurisdiction where such an offer or solicitation is not permitted. The Shares may not be offered or sold, directly or indirectly, may be distributed or sent to any person or into any jurisdiction, except in circumstances that will result in the compliance with all applicable laws and regulations. Persons into whose possession this presentation may come are required to inform themselves about, and to observe all, such restrictions. The Company accept no responsibility for any violation by any person, whether or not it is a prospective purchaser of Shares, of any such restriction.

The information contained in this presentation has not been independently verified and no commitment, representation or warranty, express or implied, is given by the Company or anyone of its directors, officers or respective affiliates or any other person and may not serve as the basis for the veracity, completeness, accuracy or completeness of the information contained in this document (or for any omission of any information in this presentation) or any other information relating to the Company or its affiliates. The information contained in this document is provided only as of the date of this document and may be subject to update, supplement, revision, verification and modification.

They can be modified significantly. The Company is not subject to an obligation to update the information contained in this document and any opinion expressed in this document is subject to change without notice. The Company, its advisers, its representatives cannot be held responsible in any manner whatsoever for any loss of any nature whatsoever resulting from the use of this document or its contents or otherwise related in any way to this document.

This document contains information relating to the Company's markets and the positioning of the Company in these markets. This information is derived from various sources and estimates of the Company. Investors cannot rely on this information to make their investment decision.

Delivering first-in-class immunotherapies from Target to Clinic

Key strategic pharma partnerships driving long-term value

- Founded in **2012**
- IPO/Euronext in **2015**
- **60+ FTEs**
- **500+ granted patents**

- **52 M€** : Equity
- **€219 M** : Partnerships*
+80% non-dilutive funding



Phase 3 asset in **Oncology**

Tedopi® most advanced cancer vaccine
NSCLC 2L post-CPI market: **+\$5b/year**



Phase 2 asset in **Inflammation**

Lusvertikimab anti-IL-7R mAb
Ulcerative colitis market: **+\$10b/year**

3 Strategic Pharma Partners

+€2.1b potential milestones

abbvie



5 Clinical stage assets

- 3 **Fully** owned (Phase 1, 2, 3)
- 2 **Partnered** (Phase 1, 2)

3 **Pre-clinical** platforms
Assets approaching development

- **Innovative MoA & Targets** to address critical unmet need
- International Research Collaboration



Memorial Sloan Kettering
Cancer Center



Strong foundation & recurrent track record of success

10 years of validated innovation in immunology thanks to an Extra[not]Ordinary R&D engine



Validated science
in high-impact publications



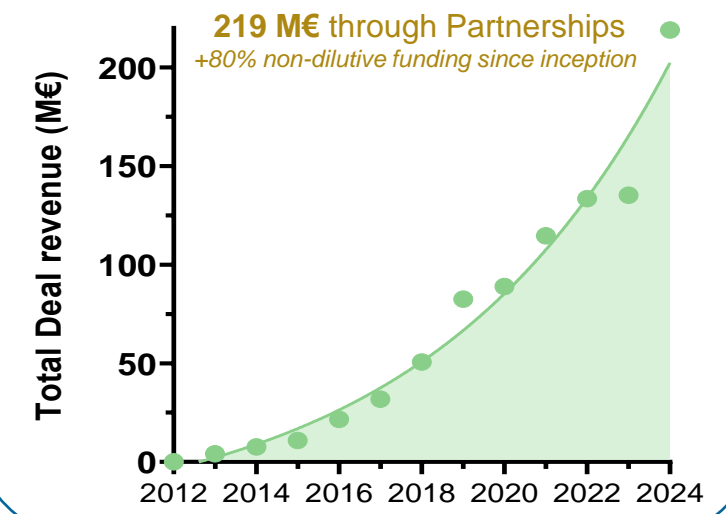
500+ granted patents



Strong track record
of Pharma partnerships











Recurrent revenues
Robust first-in-class business model



Clinical pipeline

Combining a clinical portfolio of first-in-class immunotherapies and diversified assets in IO and I&I

	Product candidate	Target	Indication	Research	IND-enabling	Phase Ia/Ib	Phase II	Phase III	
Proprietary	Tedopi® 	Neopeptide Vaccine	NSCLC Mono post-ICI 3L	█					Pivotal Phase 3
			NSCLC Mono post-ICI 2L	█					
			PDAC Combo (<i>exploratory eIS</i>)	█					
			NSCLC Combo 2L post-ICI (<i>eIS</i>)	█					
			OC Mono or Combo (<i>eIS</i>)	█					
	OSE-127 Lusvertikimab 	Anti-IL-7R	Ulcerative Colitis	█					Positive Results
		ALL	█						
	OSE-279 	Anti-PD1	Solid tumors	█					
Partnered	FR104/VEL-101	Anti-CD28	 Kidney Transplantation	█					
	BI 770371	Anti-SIRPα	 Solid tumors	█					
				Cardiovasc-Renal-Metabolic	█				
	ABBV-230	Anti-ChemR23	 Chronic Inflammation	█					
	Anti-PD1/cytokine	Anti-PD1/undisclosed	 Solid tumors	█					
IL-7R CAR-T	Anti-IL-7R CAR-T	 IL-7R+ tumors	█						


█ Immuno-Oncology
█ Immuno-Inflammation

Research platforms

Extra(not) Ordinary Research PowerHouse




Myeloid Checkpoint

- ▶ Anti-SIRPα 
- ▶ Anti-CLEC-1 mAbs




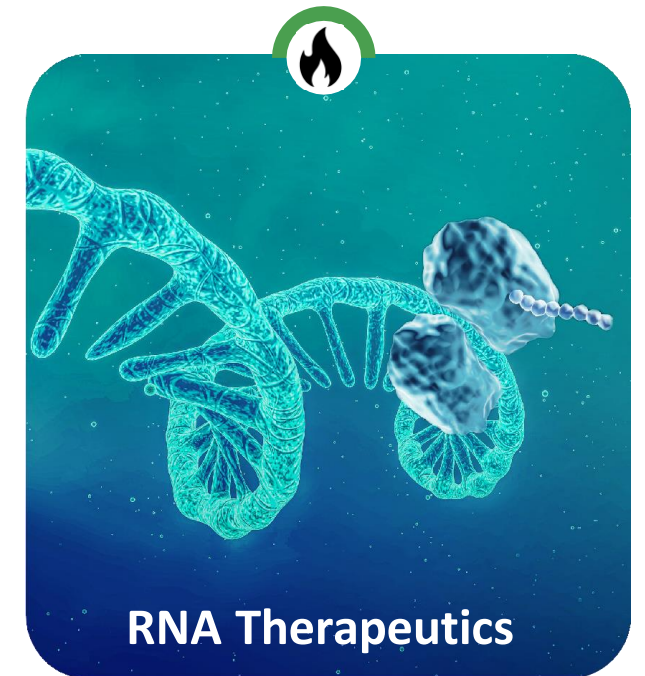
Cis-targeted Cytokine

- ▶ Anti-PD1/cytokine 
- ▶ Cis-Demasking technology



Pro-Resolutive mAb

- ▶ Anti-ChemR23 
- ▶ Undisclosed new pro-resolutive GPCRs



RNA Therapeutics

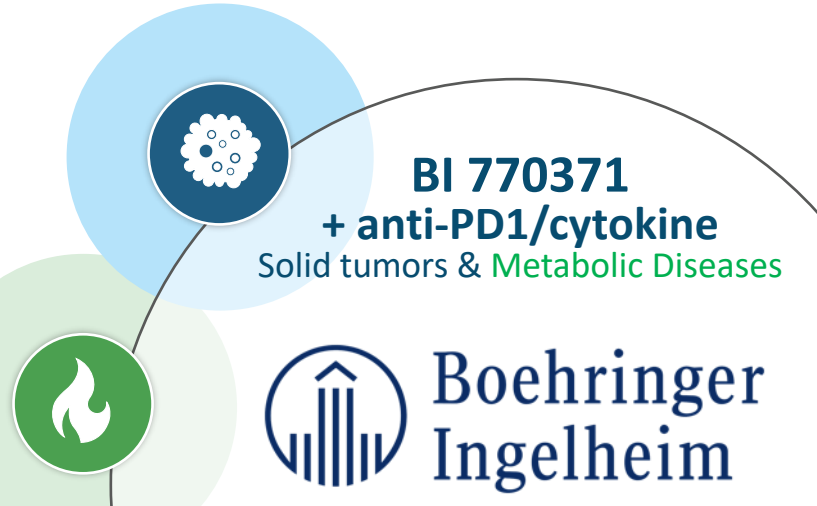
- ▶ IL-35 mRNA
- ▶ Undisclosed programs

 Partnered Asset

Strategic partners provide industry-leading clinical support & strong financial foundations

Over €2.1bn in potential milestones; €219m* already received

■ Immuno-Oncology
 ■ Immuno-Inflammation
 ■ Potential
 ■ Received




BI 770371
+ anti-PD1/cytokine
Solid tumors & Metabolic Diseases

Boehringer Ingelheim

Up to **€1.1bn**

€104m received

+ Tiered royalties on Global Sales



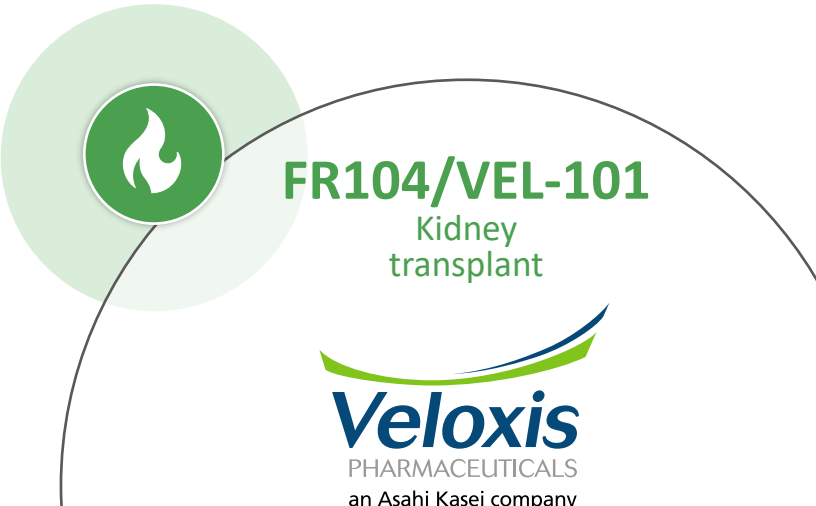
ABBV-230
Chronic Inflammation

abbvie

Up to **\$713m**

\$48m upfront

+ Tiered royalties on Global net Sales



FR104/VEL-101
Kidney transplant

Veloxis
PHARMACEUTICALS
an Asahi Kasei company

Up to **€315m**

€13.9m received

+ Tiered royalties on Global Sales

Key potential catalysts



Readouts

- **Lusvertikimab**
✓ Positive topline Phase 2 results in UC
- **OSE-279**
✓ Positive Phase 1 results in solid tumors
- **BI 770371 (partnered)***
Phase 1b results in solid tumors
- **FR104/VEL-101 (partnered)***
✓ Positive Phase 1/2 results in Kidney Tx



Progress

- **Tedopi®**
✓ Phase 3 start in NSCLC 2L
- **FR104/VEL-101 (partnered)***
Phase 2 start in Kidney Tx
- **BI 770371 (partnered)***
Phase 2 start in CRM
- **ABBV-230 (partnered)***
IND/Phase 1
- **R&D programs & Lusvertikimab**
✓ **New partnering opportunities**



Readouts

- **Tedopi®**
Phase 3 results in NSCLC 2L
- **BI 770371 (partnered)**
Phase 1b + Phase 2 results
- **FR104/VEL-101 (partnered)**
Phase 2 results in Kidney Transplantation
- **ABBV-230 (partnered)**
Phase 1 results + Phase 2 results



Progress

- **Lusvertikimab (to partner)**
Phase 2b/3 start
- **CLEC-1**
IND/Phase 1
- **Undisclosed Program I&I**
IND/Phase 1
- **New R&D programs/platforms**
- **New partnering opportunities**

2024

2025-2027

* Best estimate from the Management - not binding

Investment highlights

Late-stage compelling products

Promising clinical data from the Phase 3 oncology asset Tedopi®
Positive Phase 2 IBD asset Lusvertikimab

Large market opportunities

Focus on multi-billion \$ markets

- **I/O:** NSCLC (2L, 3L), HCC (1L, 2L), HNSCC (2L), Leukemia
- **I&I:** IBD (Ulcerative Colitis), Kidney Transplantation, Cardiovascular-Renal-Metabolic diseases

Strong pharma partnerships

Sustainable business through multi-partnership strategy
> €2.1bn milestones: AbbVie, Boehringer Ingelheim, Veloxis

Long duration IP portfolio

IP extends to 2040's

I/O: Tedopi® (>2038), BI770371 (>2037), OSE-279 (>2039), CLEC-1 (>2040) **I&I:** OSE-127 (>2037), FR104 (>2035), ABBV-230 (>2040)

Multiple upcoming catalysts

Multiple key clinical and regulatory milestones expected in next 12 months

- **Tedopi®:** Confirmatory pivotal phase 3 NSCLC 2L start
- **Lusvertikimab (OSE-127):** Complete Top-Line efficacy results Ulcerative Colitis Phase 2
- **BI 770371:** Phase 1b results in solid tumors/Phase 2 start in Cardiovascular-Renal-Metabolic diseases
- **FR104/VEL-101:** Phase 2 start in Kidney Transplantation
- **ABBV-230:** IND/Phase 1

Financial position

Cash visibility until 2027

€80.7 million level of cash as of June 30, 2024, providing solid financial position and visibility until 2027

Our plan to build a leading immunotherapy company

Position Tedopi® as the best treatment option after ICI-failure in cancer patients



Leverage the clinical advantage of anti-SIRPα in Solid Tumors & CRM



Position Lusvertikimab (OSE-127) as novel First-in-Class in IBD

Confirm FR104/VEL-101 benefit as maintenance therapy in kidney transplantation



Explore the pro-resolutive mAb potential in chronic & severe inflammation



Advanced proprietary early-stage assets from OSE's research platforms
+ *New Partnering Opportunities*



OSE IMMUNO
THERAPEUTICS 
**First-in-class
strategy**

A petri dish with a petri dish lid, a petri dish, and a petri dish lid, with a petri dish lid in the background.

Proprietary clinical programs

An anatomical illustration of human lungs, rendered in a blue-tinted style. The left lung (viewer's right) is shown with a glowing, multi-colored tumor (yellow, orange, and red) in its upper lobe. The right lung (viewer's left) is shown with a network of bronchi and smaller nodules. The background is a dark blue gradient.

TEDOPI®

Most Advanced Therapeutic Cancer Vaccine

Bringing new hope to patients in the fight against ICI resistant NSCLC

Tedopi® (OSE-2101): Product description

Tedopi® is a therapeutic cancer vaccine composed of modified epitopes restricted to HLA-A2+ targeting 5 Tumor-Associated Antigens frequently expressed in lung cancer^{1,2}

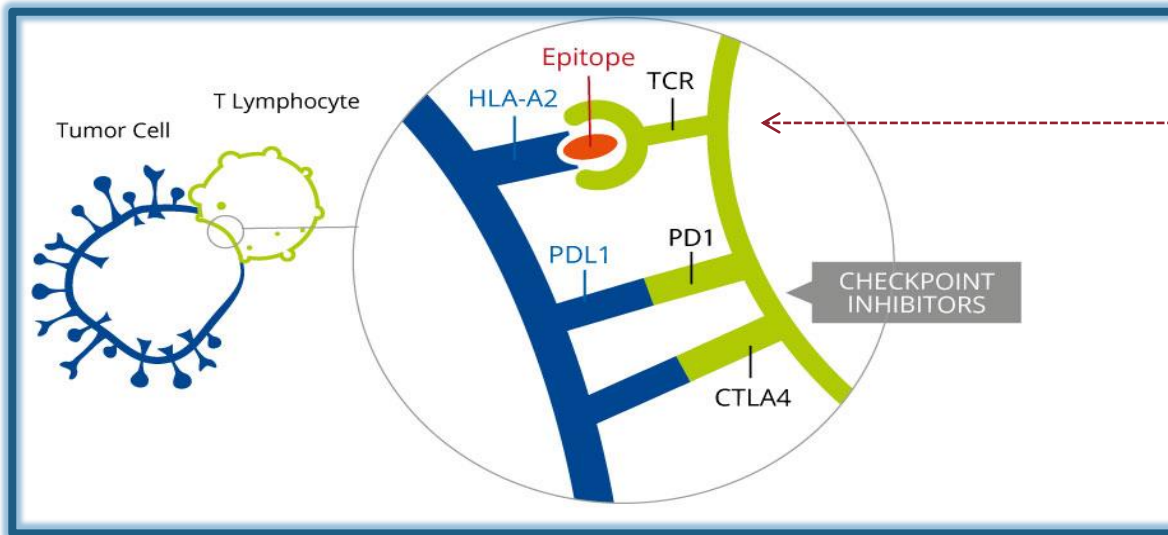
9 EPITOPES (TAA PEPTIDES) TARGETING 5 TAAs FREQUENTLY OVEREXPRESSED IN MANY CANCERS:

TAAs	Wild-type and neo-epitopes
CEA	1 heteroclitic* 1 heteroclitic
p53	1 fixed-anchor** 1 fixed-anchor
HER-2	1 fixed-anchor 1 fixed-anchor
MAGE-2	1 wild-type*** 1 wild-type
MAGE-3	1 heteroclitic

+ 1 Pan DR T Helper cell epitope (PADRE)

Emulsified in mineral oil adjuvant.

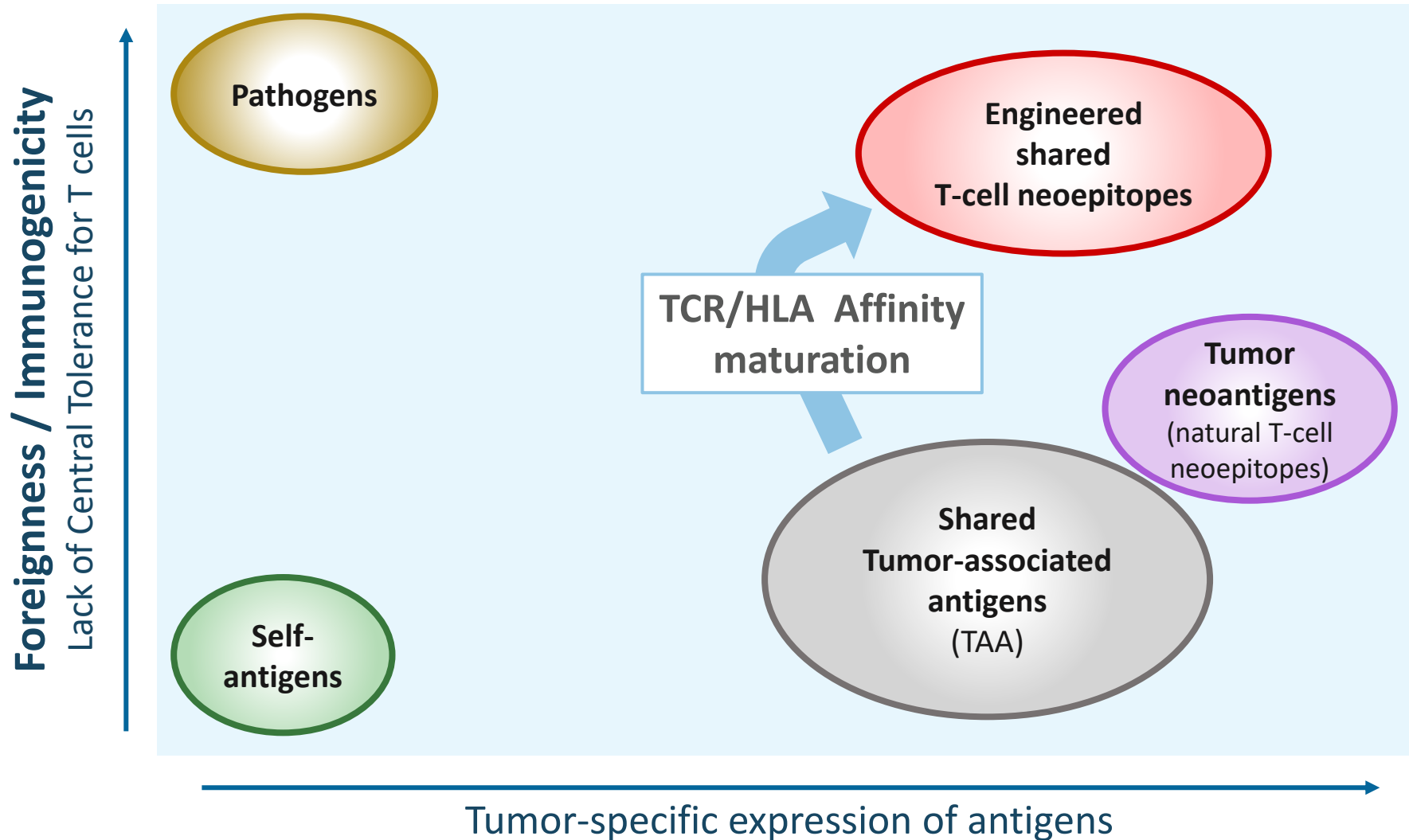
* Heteroclitic analogs have an increased TCR affinity[¶].
** Anchor analogs have an increased affinity to HLA binding[¶].
*** Wild-type epitopes with a high HLA-A2 binding.



The complex binding of MODIFIED EPITOPES / HLA-A2 / TCR is MANDATORY to activate Cytotoxic T-cell response:

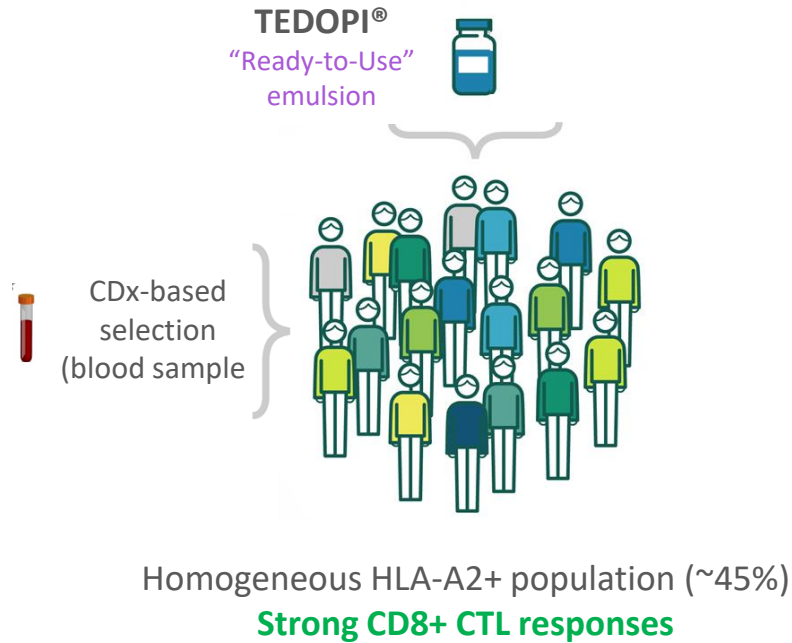
1st SIGNAL for T-Lymphocyte activation

Cancer antigens immunogenicity



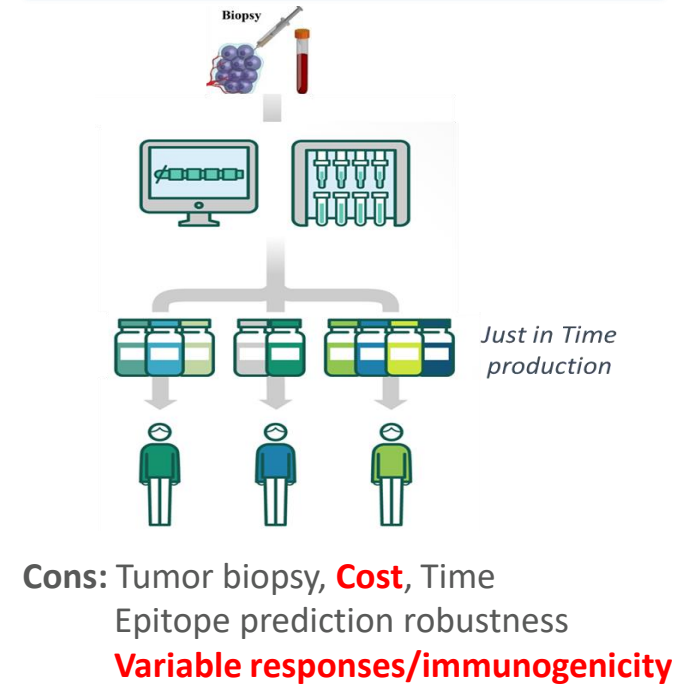
Personalized vs *Off-the-Shelf* cancer vaccines

Neoepitope cancer vaccine
= **Precision Medicine**
-> *Off-the-Shelf*



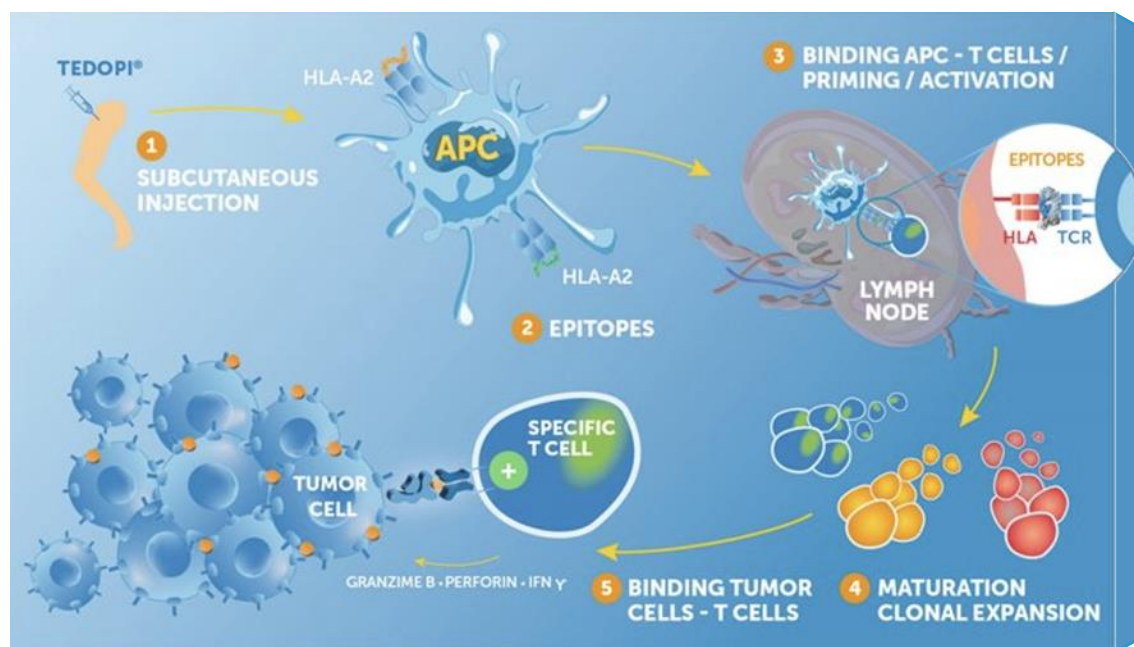
Positive data to extend survival in metastatic disease
(randomized Phase III NSCLC)

Neoantigen cancer vaccine
= **Personalized Medicine**
-> *Custom*



Adjuvant treatment at early stage to prevent tumor relapse
(non-randomized phases I/II to date)

An immunotherapy activating specific T-cells to revive anti-tumor response



Most advanced Cancer Vaccine in clinical development

- **Unique** combination of **neopeptides**: small peptides deriving from **tumor specific** antigens* expressed in various cancers
- Strong **binding to HLA-A2** receptor (45% population)
- **Direct activation of tumor specific T-cells differs from checkpoint inhibitors** releasing the break of immune response

Proprietary combination
(9 **optimized neopeptides**
+ 1 epitope giving universal
T helper response)

Induces early T cell
memory responses
+
Migration in tissues

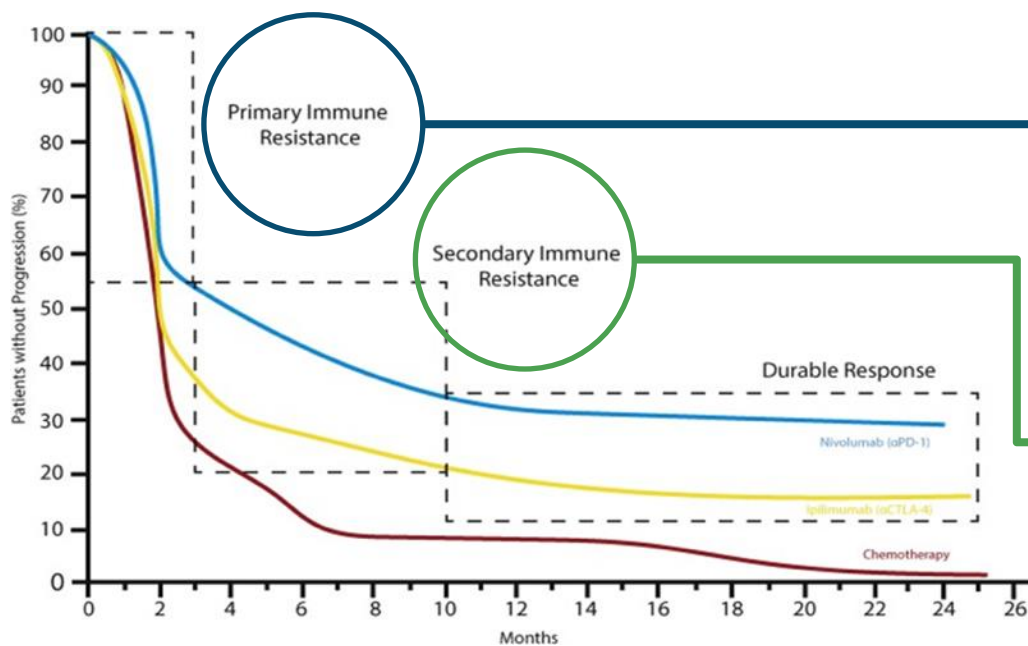
Ready to Use
subcutaneous formulation
with Q3W injection

Orphan Drug
Designation (FDA)
>1,000 injection
in clinical trials

Strong IP position
until **2038**¹
(US / EU / Asia)

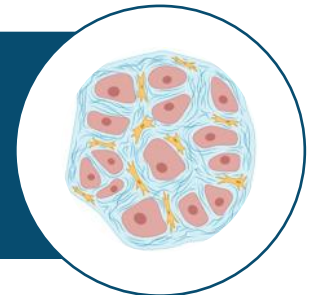
Tedopi® is a novel cancer vaccine with a strong biological rationale in post-ICI secondary resistance

Shifting paradigms with cancer vaccine immunotherapy



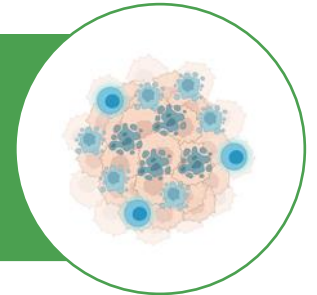
Primary (intrinsic) resistance
 Patients who do not respond to ICIs with a rapid disease progression
 → **Immune refractory tumors**

No T-cell refractory tumors



Secondary (acquired) resistance¹
 Patients who have a period of initial ICI therapy benefit followed by disease progression
 → **Immuno-sensitive tumors**

T-cell exhausted & dying



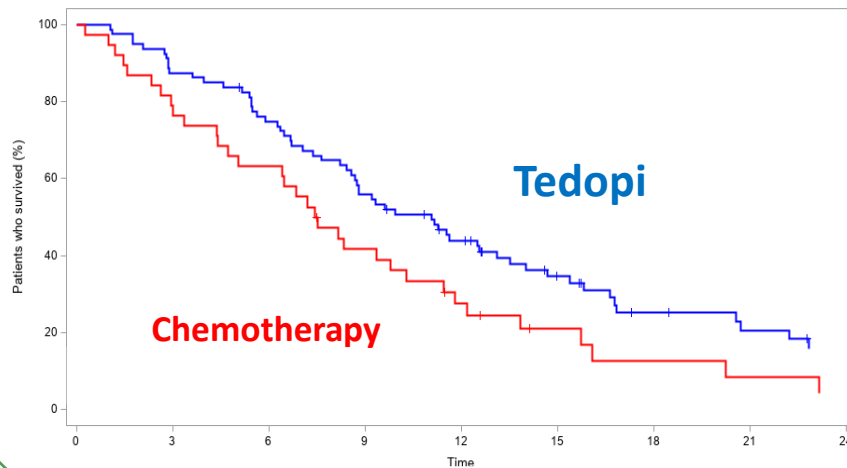
Tedopi® has the **potential to rejuvenate & refresh specific TILs** in immuno-sensitive tumors. Neopeptide-specific T cells have tumor killing potential and limited side effects.

Clinically meaningful benefit of Tedopi® in 3rd line NSCLC

Randomized Phase 3 with positive results vs. standard of care (SOC)

Overall Survival

secondary resistance post anti-PD(L)1



OS rate at 12 months
44%
 in Tedopi® vs.
27.5%
 in SoC

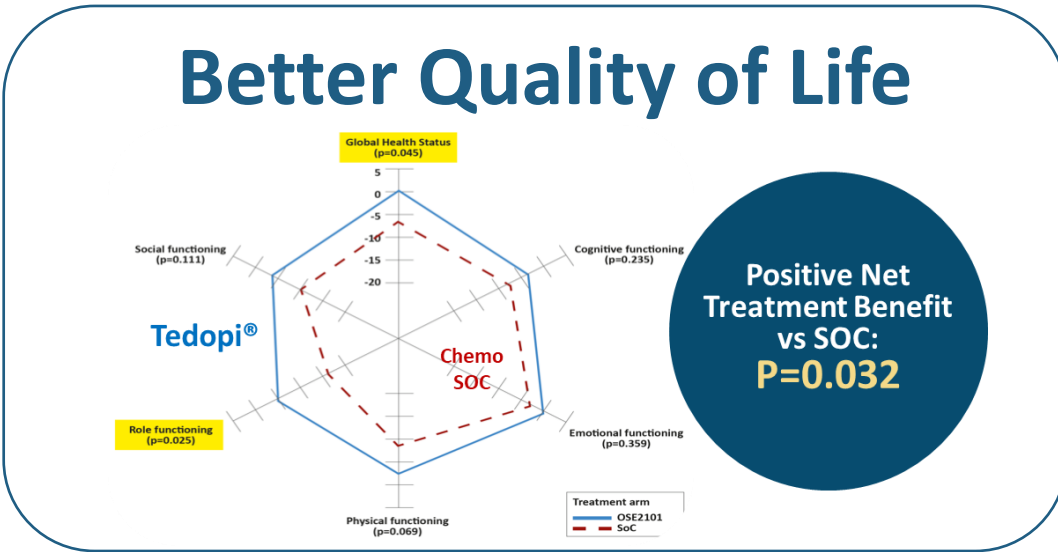
Delta OS: **3.6** months

Tedopi® 11.1 months
 VS
SoC 7.5 months

HR 0.59 /
 p-value=0.017
















Risk of Death reduced by 41% versus chemo.

Significantly safer than Chemo.
11% vs **35%** grade 3-5 AEs

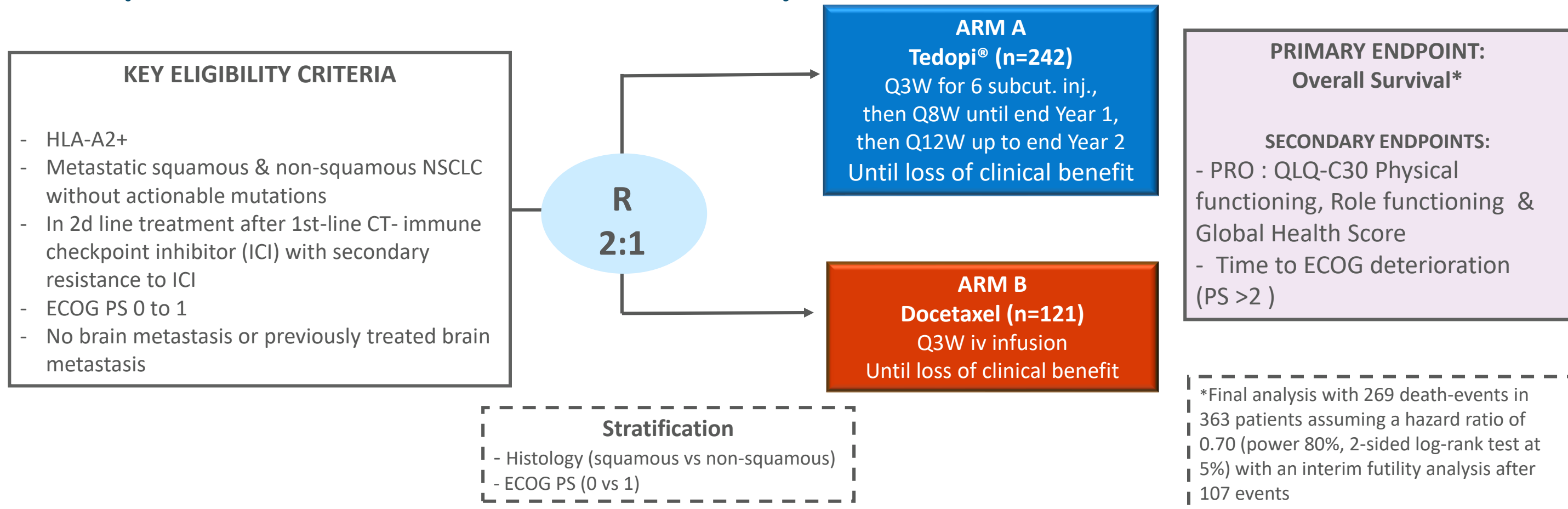


Tedopi® delivers important clinical benefits vs competition

Better Safety profile and QoL in current landscape of late-stage drug development post CT-IO

Company			  	 		 	 			
Target	Multi-epitopes vaccine	TKIs (anti-angiogenic)			Checkpoint Inhibitors		ADCs			
Current Study	ATALANTE-1	SAPPHIRE	CONTACT-01	LEAP-008	COSTAR Lung	PRESERVE-003	Tropion-LUNG1	EVOKE-01	CARMEN-LC03	NCT04928846
n	219 118 (secondary resistant)	500	350	405	750	600	604	580	554	698
Therapy	Tedopi® vs docetaxel	Sitra + Opdivo vs. docetaxel	Cabo+Tecentriq vs. docetaxel	Lenva + Keytruda vs. docetaxel	Cobolimab + Jemperli vs. docetaxel	Gostistobart vs. docetaxel	datopotamab deruxtecan vs docetaxel	Sacituzumab Govitecan-hziy vs docetaxel	SAR408701 vs. docetaxel	Telisotuzumab Vedotin vs. Docetaxel
Primary endpoints	OS	OS	OS	PFS and OS	OS	OS	PFS and OS	OS	PFS and OS	PFS and OS
Initiation	2017	Q3 2019	Q3 2020	Q2 2019	Dec 2020	Q2 2023	Q4 2020	Q4 2021	Q1 2020	Q1 2022
Read-out	2022	Failed	Failed	Failed	2024+	2027+	Failed OS (interim analysis)	Failed	Failed	2025+
Safety data from early-stage trials in NSCLC post-ICI										
- TEAEs G3/4	11%	53%	39%	78%	n.a.	43%	25-30%	> 50%	36%	36%
Source	Besse et al. 2023	Borghaei et al, Annals Oncol 2023	Neal et al, ASCO 2022	Taylor et al, J. Clin. Oncol. 38, 1154–1163.	Davar et al, SITC 2018	He et al, ASCO 2023	ESMO 2023 ASCO 2024	ASCO 2024	Gazzah et al, ASCO 2020	Camidge DR, et al. WCLC 2021

Tedopi® in NSCLC : ARTEMIA study



HLA: Human leukocyte antigen; NSCLC: Non-small cell lung cancer; SoC: Standard of care; CT: chemotherapy; ICI=Immune checkpoint inhibitors; ECOG PS: Eastern Cooperative Oncology Group Performance Status; PD: Progressive disease; subcut: subcutaneous; inj: injection; iv: intravenous, QLQ-C30: Quality of life questionnaire-core30

Protocol V2.0 on 14-MAR-24 (US, Canada) , 2.1 on 11-JUN-24 (UK), 2.3 on 23-AUG-24 (EU)

Tedopi® answers to real medical need in NSCLC

Tedopi® has the potential to become the new standard for recurrent patients in 2L NSCLC presenting HLA-A2 phenotype

LUNG CANCER :

High prevalence, mortality and unmet need - worldwide

- Highest mortality among 36 cancer types and 2nd most frequently diagnosed cancer type (based on data collected from 185 countries)*
- About 2,206,771 new cases of lung cancer diagnosed (11,4% of all cancers) and 1,796,144 deaths from lung cancer (18%)*
- The mortality is associated with a high degree of malignancy and late diagnosis. More than 65.33% of men diagnosed with lung cancer are in stage III-IV
- Majority of NSCLC patients without actionable mutation are treated with immune checkpoint inhibitors (ICI) as 1st line of treatment.

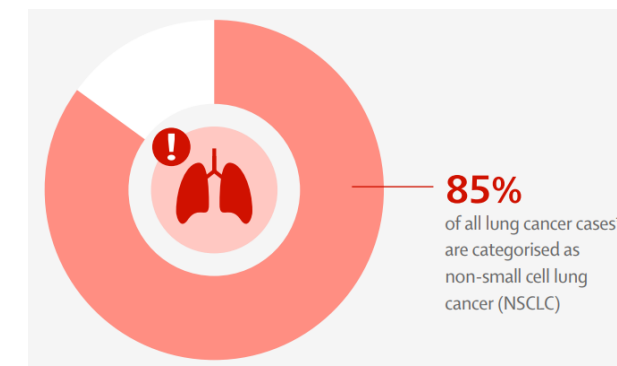
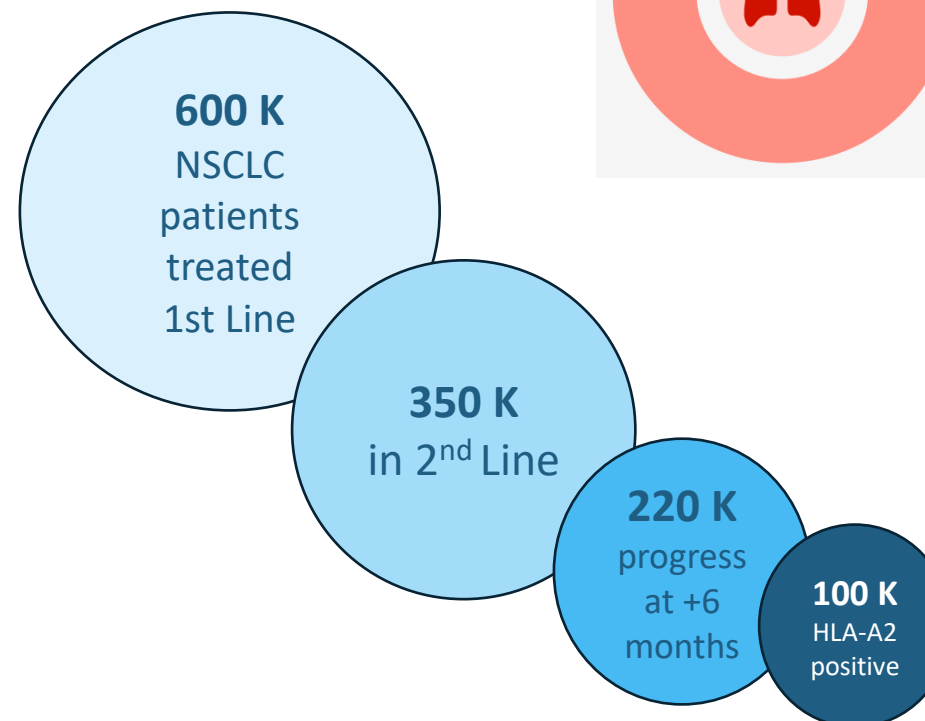
Treatment paradigm in NSCLC with no driver mutation

- L1 : treatment anti-PD(L)1 based with/w/out chemotherapy
- L2 : docetaxel remains standard with its limited efficacy and toxicity

Opportunity for Tedopi®

- Great opportunity for new standard without chemotherapy in a remaining high medical need after 1st line of treatment
- HLA-A2 patients represent about 45% of the patients

Incidence of advanced NSCLC in the US/EU5/Japan** + China



Further additional potential clinical value in combination NSCLC, PDAC and OC

Phase 2 ISS trials in combination with immunotherapy or chemotherapy treatments

2nd line post 1st line chemo IO

CombiTED - NSCLC
In combination with nivolumab



Tedopi® Plus Docetaxel or Tedopi Plus Nivolumab as 2nd line Therapy in Metastatic NSCLC failing standard 1st line Chemo-immunotherapy¹

Sponsored by FoRT
PI: Federico CAPPUZZO
(Roma Cancer Institute)
Italy /Spain/ France



Readout expected 2025

Maintenance setting post standard of care

TEDOVA - Ovarian Cancer
In combination with pembrolizumab



Tedopi® Alone or in Combination With Pembrolizumab vs Best Supportive Care as Maintenance in Patients with Platinum-Sensitive Recurrent Ovarian Cancer²

Sponsored by ARCAGY-GINECO
PI: Alexandra LEARY
(Gustave Roussy Institute)
France/ Germany/ Belgium



Readout expected in 2025

TEDOPaM - Pancreatic Cancer
In combination with FOLFIRI



Tedopi® plus FOLFIRI vs FOLFIRI as Maintenance Treatment in Controlled Advanced or Metastatic Pancreatic Ductal Adenocarcinoma after 8 Cycles of Folfirinox³

Sponsored by GERCOR PRODIGE
PI: Cindy NEUZILLET
(Curie Institute)
France



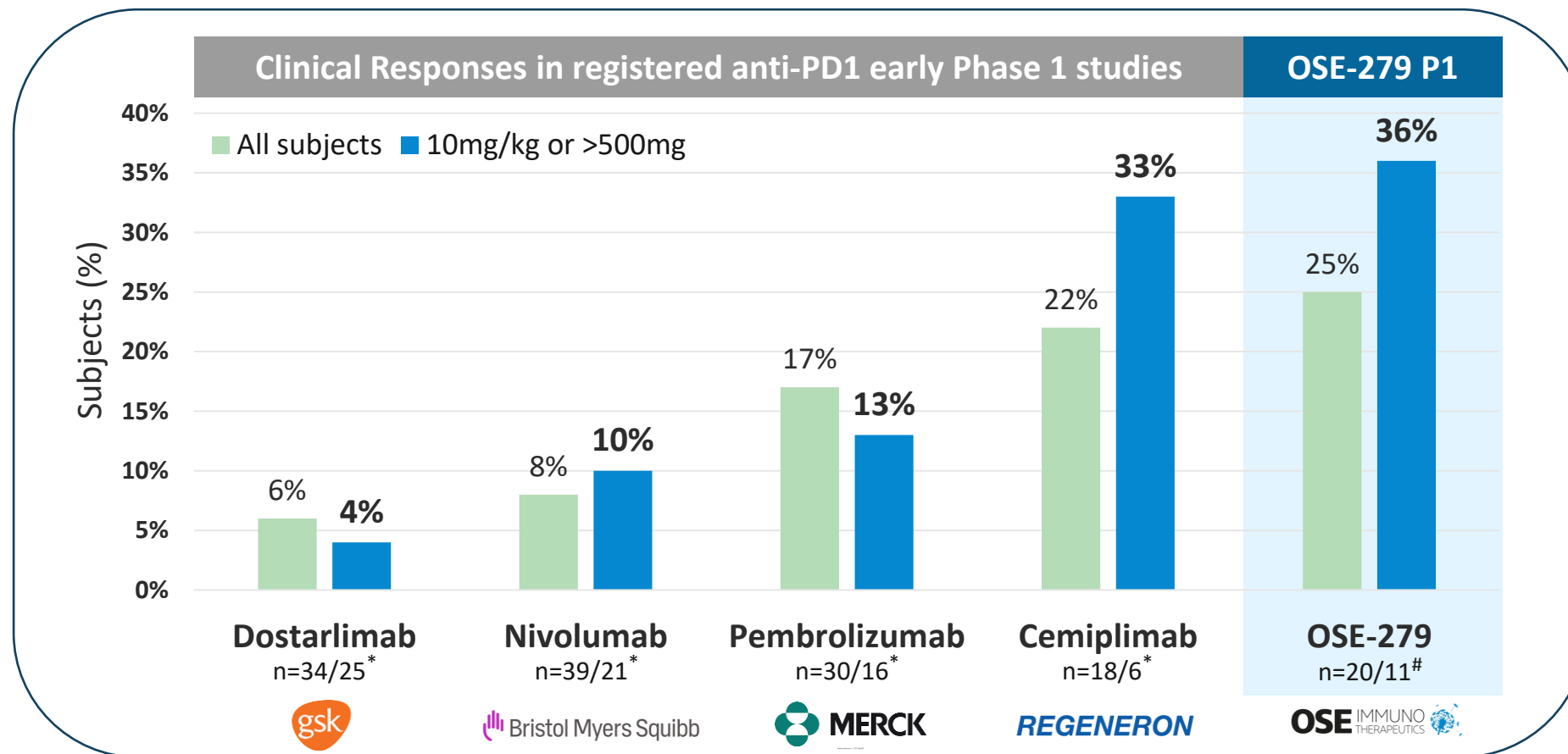
Recruitment completed Q2 2023

Readout expected in 2024

OSE-279: Proprietary anti-PD1 mAb

High affinity PD-1 antibody, recent patent granted in US, Europe, China, Japan

- ❖ Potential of combo with internal asset
- ❖ Potential for partnership with biotech/biopharma in combo with external assets
- ❖ Potential future marketing approvals in orphan indications with strong unmet medical needs



Not a head-to-head comparison. Differences exist between trial designs and subject characteristics, and caution should be exercised when comparing data across trials. For illustrative purposes only.

A silhouette of a diverse group of people of various ages and ethnicities holding hands in a line, set against a sunset background. The silhouettes are dark against the lighter, warm-toned sky. The group includes men, women, and children of different heights and builds, representing a multicultural community.

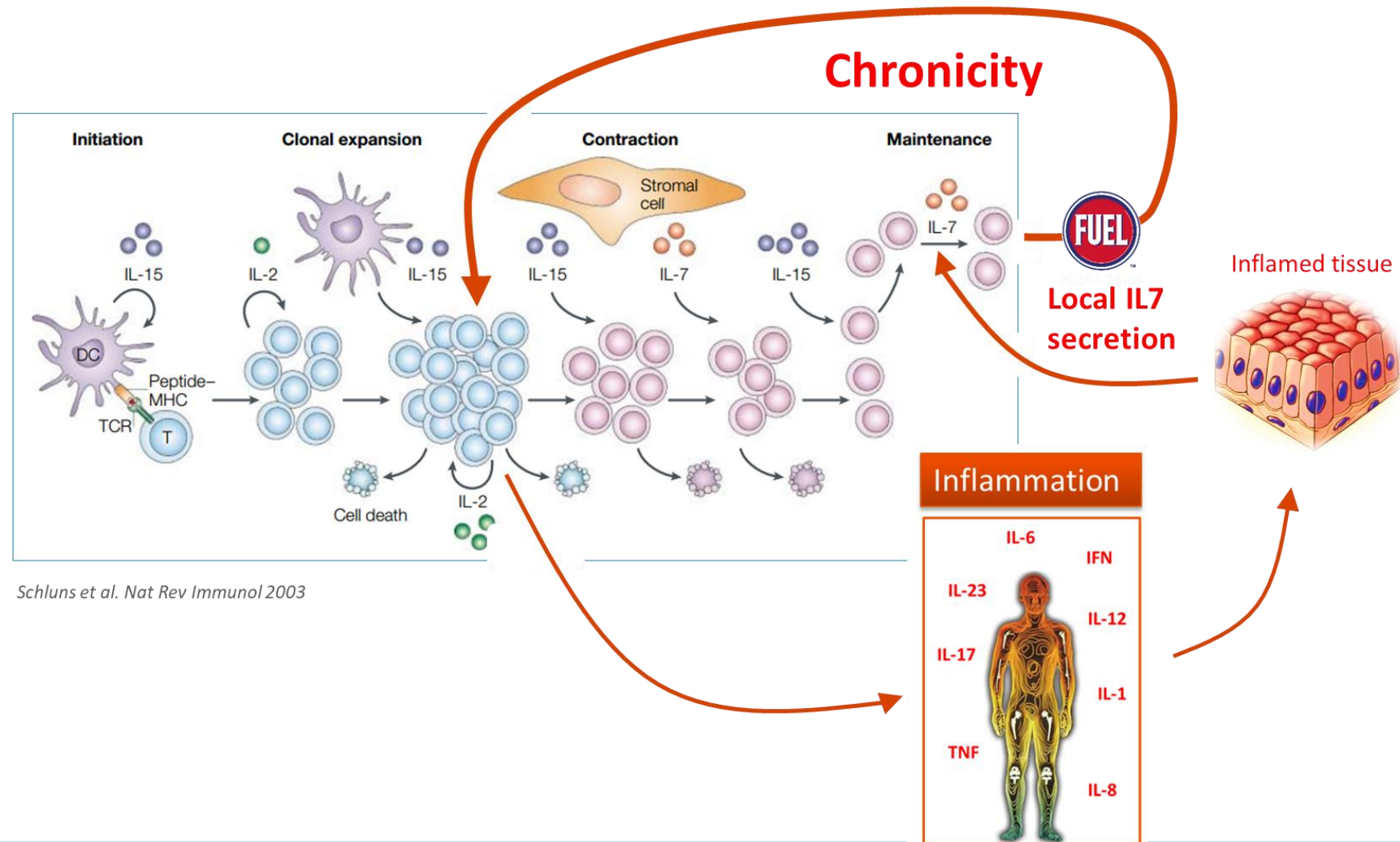
Lusvertikimab

Most advanced anti-IL-7R mAb

Strong biological rationale in refractory IBD patients

IL-7 fuels chronic inflammation in tissues

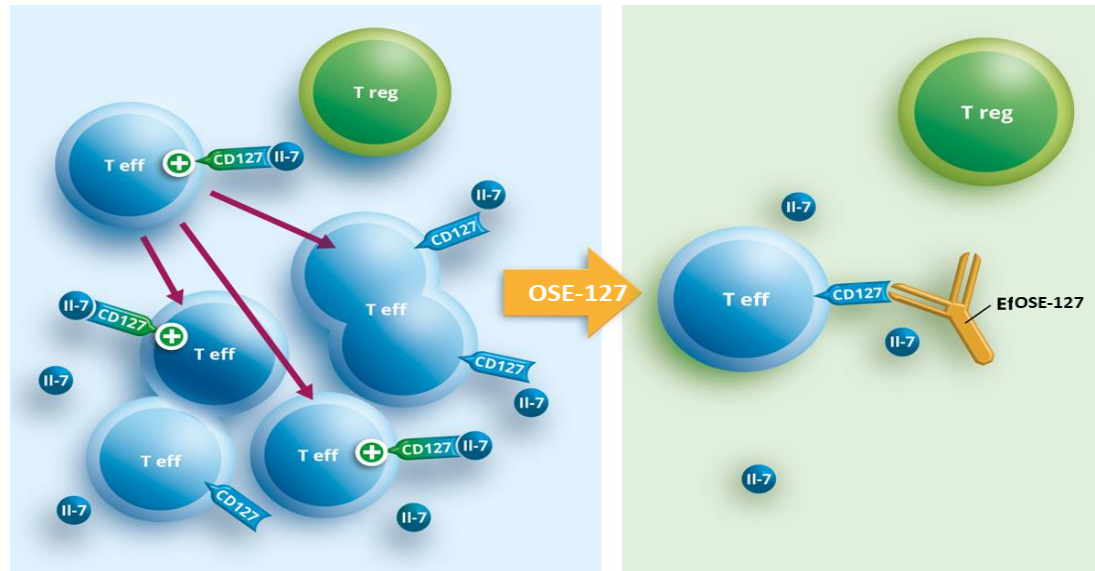
Lusvertikimab controls pathogenic memory T-cell persistence



Lusvertikimab/OSE-127

Pure IL-7 receptor antagonist mAb

Tackling the fuel of memory T-lymphocytes while sparing Tregs







A differentiated and highly qualified candidate

- IL-7 produced by inflamed tissues sustain T-cell survival and chronicity, drives Th1 and Th17 T cell differentiation
- IL-7R pathway overexpression in anti-TNF IBD non-responders¹
- Lusvertikimab, first non-internalizing (fully antagonist) acting as pure antagonist anti-IL-7R mAb²
- **Good safety, PK/PD profile in Phase 1³, no cytokine release, confirmed target-engagement**
- **Positive Phase-2 study in UC Top-line Results Q3 2024**
- High preclinical activity in acute leukemia (T and B-ALL)⁴
ASH Merit Award- ALL

Lusvertikimab most advanced First-in-Class anti-IL-7R mAb

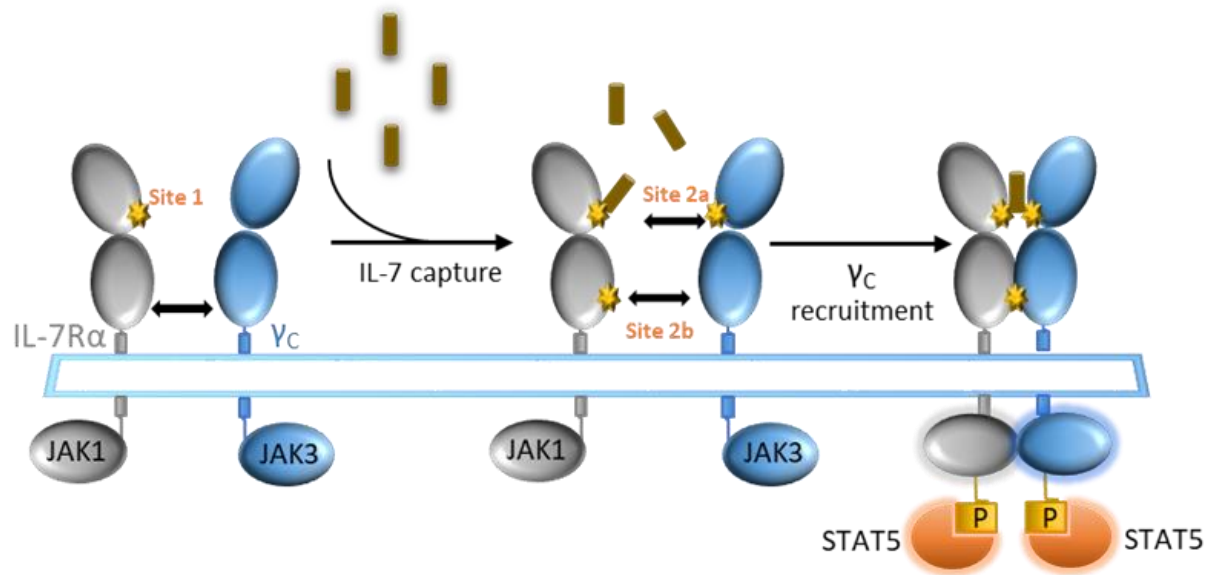
Differentiated by its Mechanism of Action

				
Isotype	IgG4	IgG1	IgG1	IgG1
MoA	<ul style="list-style-type: none"> - Non-Internalizing¹ - Full Antagonist IL7R - No Depletion 	<ul style="list-style-type: none"> - TSLP Antago - T-cell Decrease 	<ul style="list-style-type: none"> - Internalizing - Antago + Partial Agonist IL7R - TSLP Antago - T-cell Decrease² 	<ul style="list-style-type: none"> - Internalizing - Antago + Partial Agonist IL7R
Phase	2	2a	1b	Discontinued
Indication	Ulcerative Colitis (IBD) <i>(Completion Enrollment Q1 2024)</i>	Atopic Dermatitis <i>(Initiated Q4 2022)</i> Alopecia Areata <i>(Initiated Q3 2023)</i>	Alopecia Areata <i>(not initiated)</i>	Multiple Sclerosis <i>(discontinued after Phase 1 High Immunogenicity^{3,4})</i>

Lusvertikimab - Targets a specific “site 1/2b” epitope

Full antagonist, preventing receptor internalization & signaling

Cytokine-induced receptor heterodimerization signaling mechanism

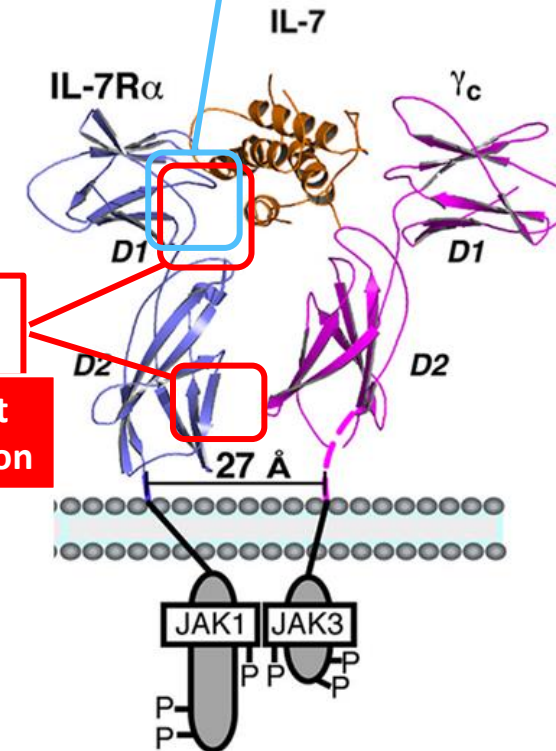


Walsh ST et al Immunol. Rev. 2012

Pfizer mAbs
GSK mAbs

Dual Agonist/Antagonist
mAb-induced
receptor internalization

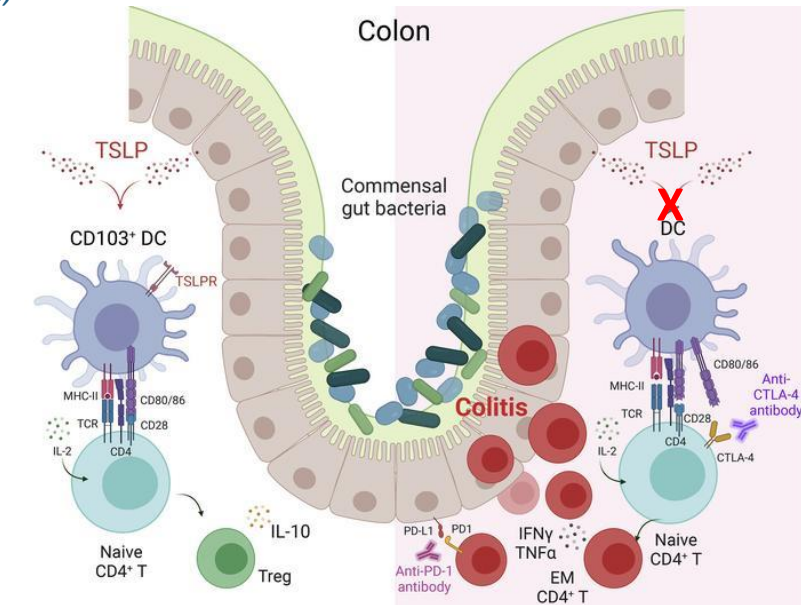
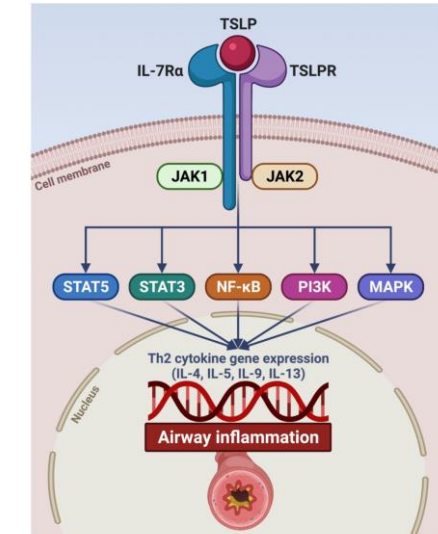
OSE-127
Full Antagonist
No internalization



Protective role of TSLP in intestinal immunity

Lusvertikimab selectively blocks IL7 but not TSLP axis

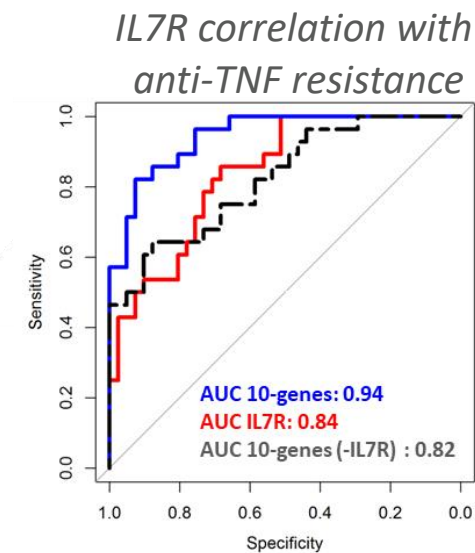
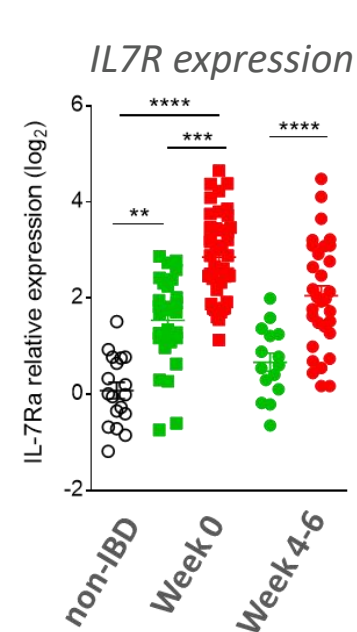
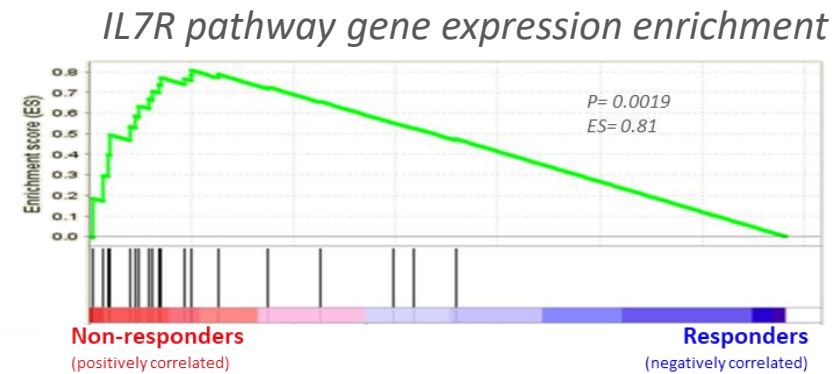
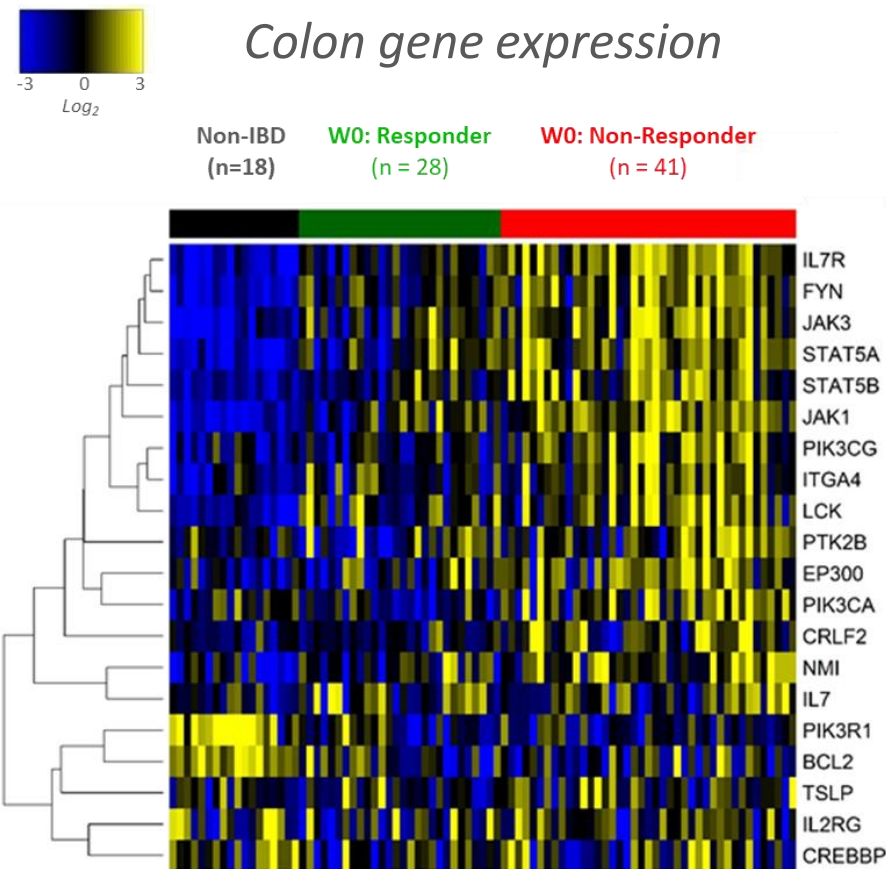
- TSLP drives Th2 responses → Pathogenic role in allergic diseases & atopic responses
- TSLP drives Foxp3+ Treg induction by DCs against commensal bacteria
(Spadoni et al. *Mucosal Immunology* 2012; Jiang et al. *Bio Med Central Immunology* 2006)
- TSLP protects against colitis & intestinal disorders (∇ intestinal cytokine)
(Aubry et al. *Microbial Cell Factories* 2015; Ziegler et al., *Adv Pharmacol* 2013; Spadoni et al. *Mucosal Immunology* 2012; Ordonez et al. *Inflamm Bowel Dis* 2012; Abraham et al. *Gastroenterology* 2011)
- TSLP blockades or TSLP deficient mice exacerbates severe colon inflammation & gut inflammatory cytokines (IFN γ , IL23, IL12p40...)
(Messerschmidt et al. *JCI Insight* 2023; Reardon et al. *Immunity* 2011; Taylor et al. *J Exp Med* 2009)
- Decreased TSLP gene expression in IBD associated with severity
(Messerschmidt et al. *JCI Insight* 2023; Tahaghoghi-Hajghorbani et al. *Auto Immu Highlights* 2019; Noble et al. *Infl Bow Dis* 2010; Middel et al. *Gastroenterology* 2006; Rimoldi et al. *Nature Immunol* 2005)



Messerschmidt et al. *JCI Insight* 2023

Mucosal IL-7R pathway over-expression in IBD tissues

High IL-7R expression in anti-TNF refractory patients



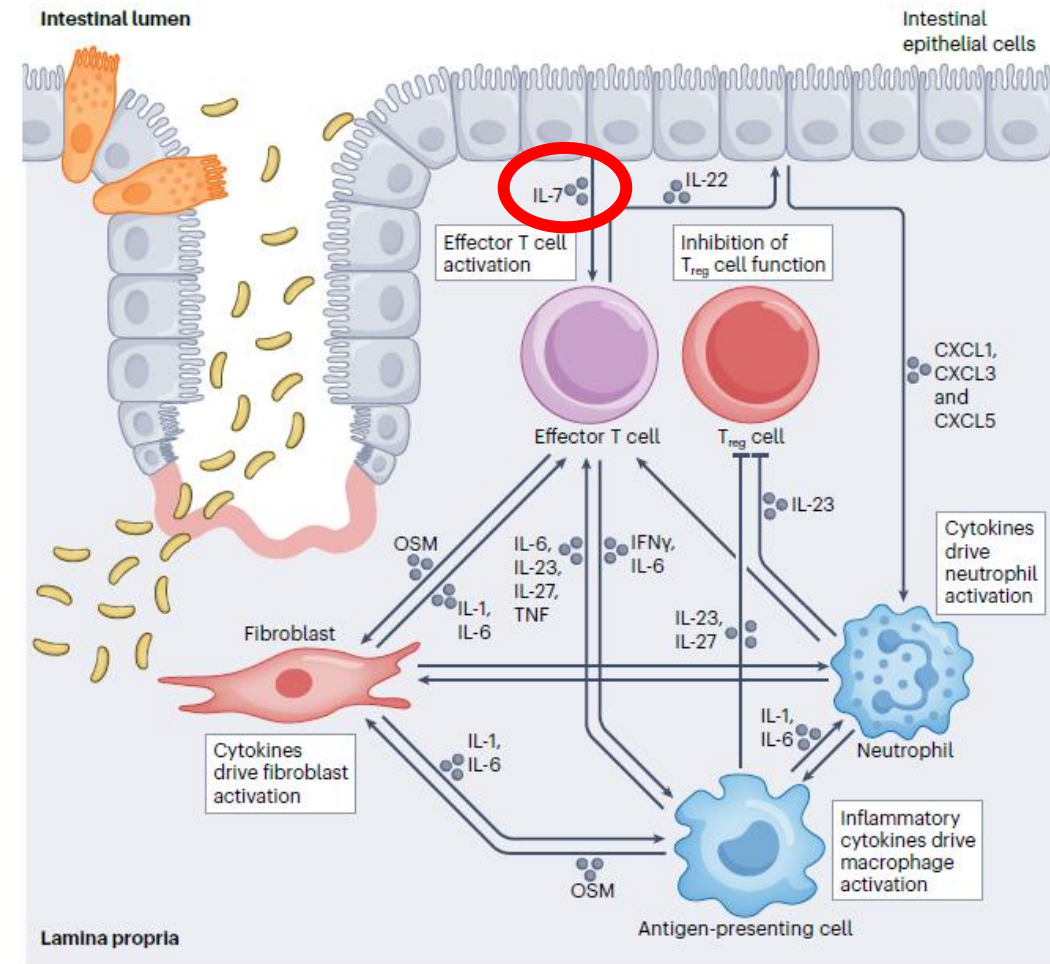
Anti-TNF Responder patients
Anti-TNF Refractory patients

IL-7 downstreams mechanism of resistance in hyper-inflammatory IBD

The ‘angry’ cell concept and resistance to anti-cytokine therapies.

“Recent evidence suggests the presence of highly pro-inflammatory — or ‘angry’ — cells in the intestinal mucosa in inflammatory bowel disease (IBD) that drive molecular resistance to anti-cytokine therapy (such as anti-tumour necrosis factor (anti-TNF) and anti-IL-12/IL-23 therapies). »

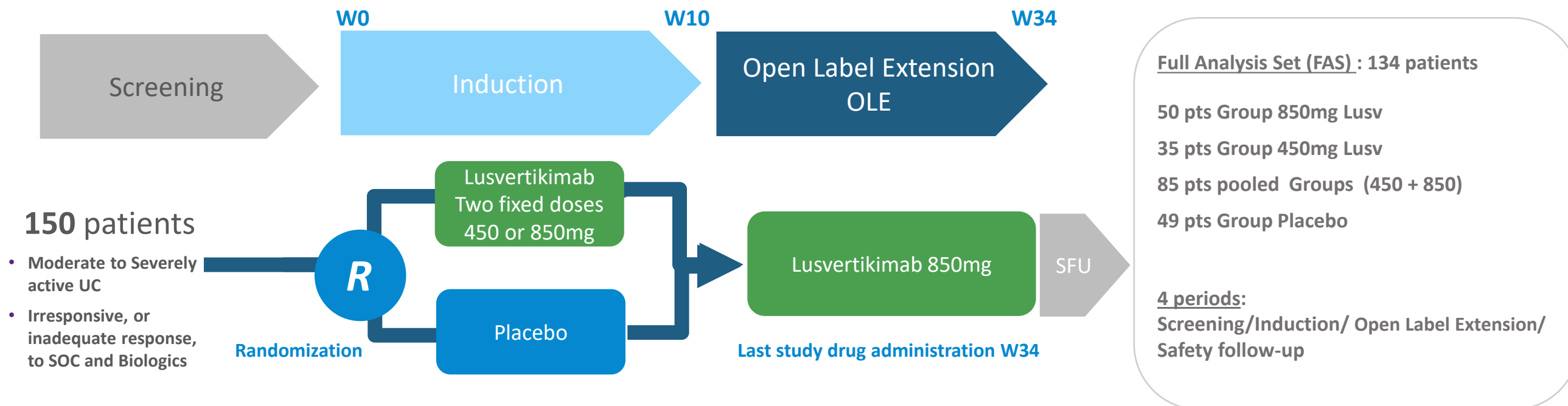
« Intestinal epithelial cells (IECs) produce cytokines such as **IL-7** to activate effector T cells and can produce chemokines such as CXCL1, CXCL3 and CXCL5 to induce neutrophil recruitment and activation.”



Neurath M. Nature Review Immunology 2024

CoTikiS Phase 2 randomized study of Lusvertikimab

Moderate-to-severe Ulcerative Colitis



Multicenter, randomized, double-blind, placebo-controlled, parallel-group Phase 2 study in patients with moderate to severe active UC

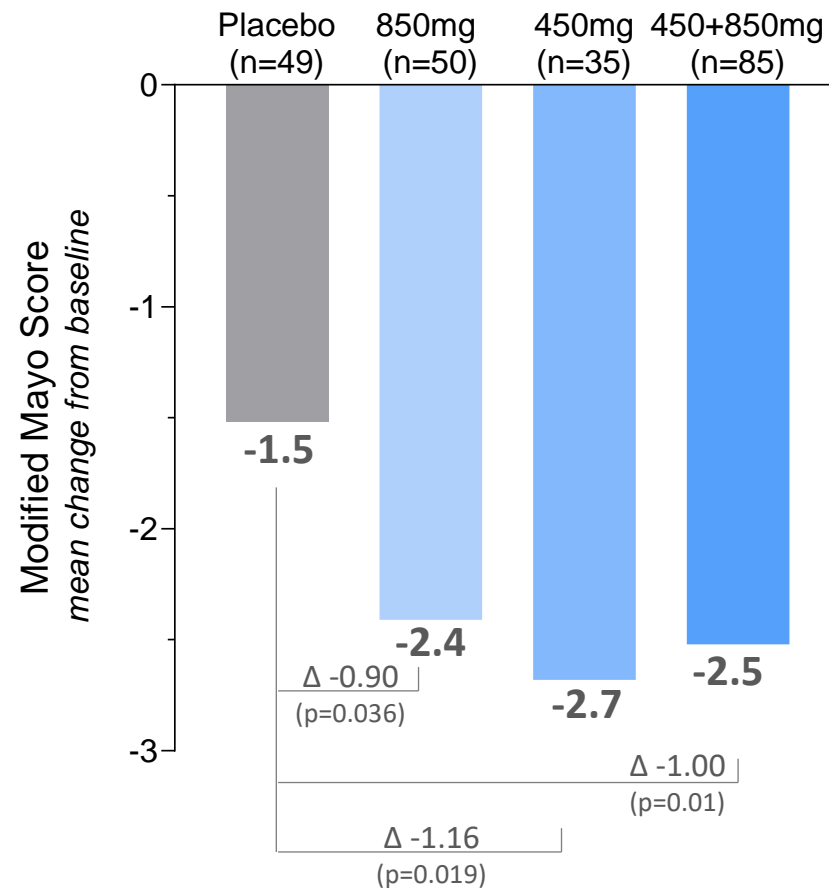
Induction: Lusv group 450mg/ Lusv group 850mg/ Placebo: IV infusions at Week 0, Week 2, Week 6. **Analysis at W10**

Open Label Extension OLE: At Week 10, additional infusions proposed for all patients at 850mg every 4 weeks for 6 months (W10, 14, 18, 22, 26, 30, 34)

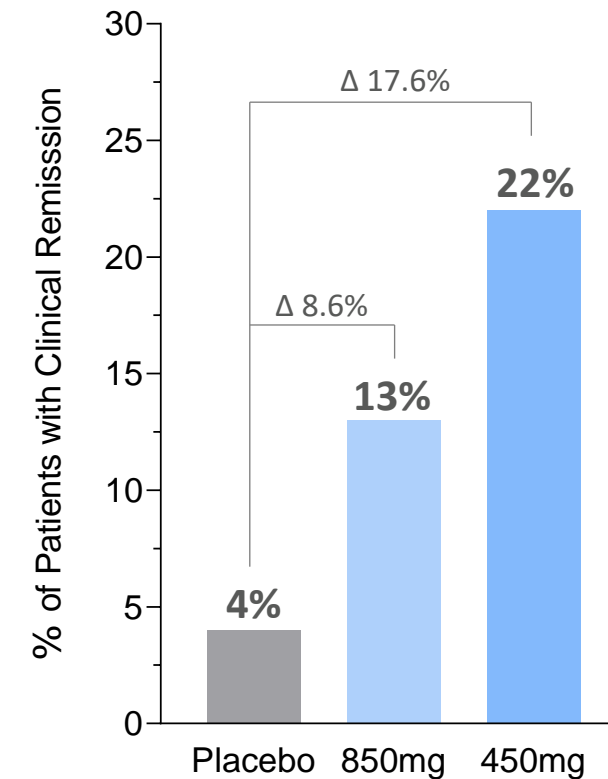
Clinical induction results at week-10

Clinically and statistically relevant clinical improvement in the Lusvertikimab groups

Primary Endpoint: Modified Mayo Score Improvement (MMS)*[‡]



Clinical Remission**

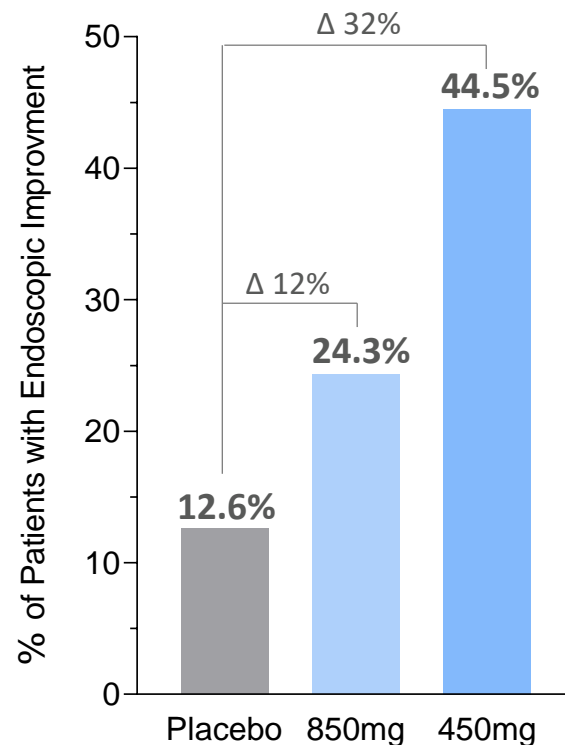


[‡] Least Square Mean Difference between Lusvertikimab and placebo= difference between groups of the Mean change in MMS between baseline and W10

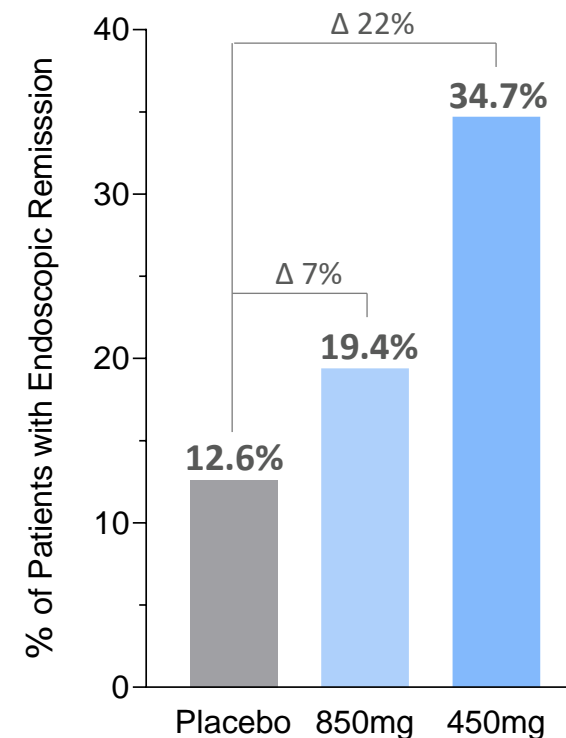
Clinical induction results at week-10

Clinically meaningful and significant endoscopic improvement and remission

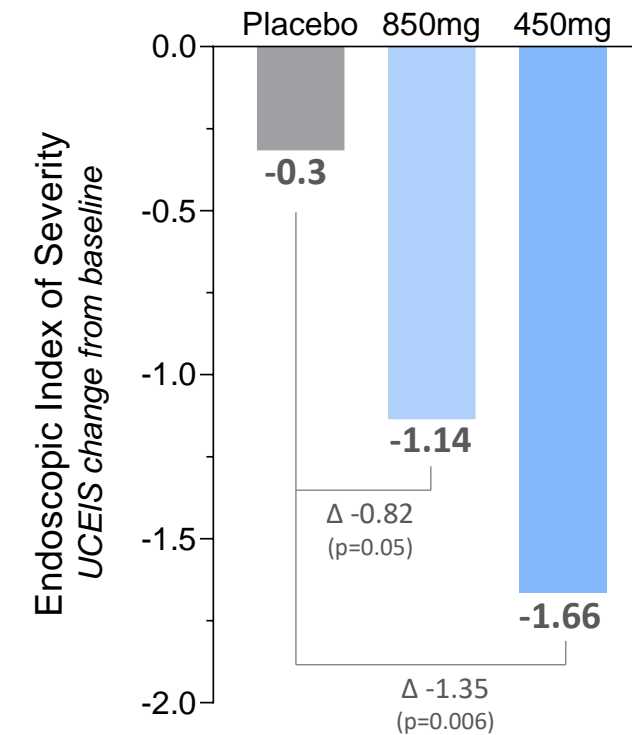
Endoscopic Improvement*



Endoscopic Remission**



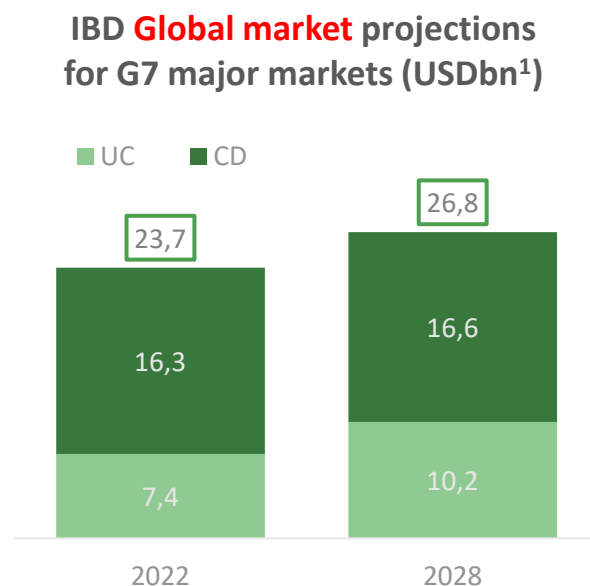
UC Endoscopic Index of Severity UCEIS***



Significant opportunity in Ulcerative Colitis & Acute Lymphoblastic Leukemia targeted markets

Ulcerative Colitis (UC)

- UC affects **3.3 million patients** in US, Europe and Japan
- ~50% UC patients “moderate to severe”, requiring methotrexate, corticosteroids, anti-TNFa, JAK etc.
- Despite broad options, remission rates are of only 25-30% leaving most patients without satisfactory treatment



Acute Lymphoblastic Leukemia (ALL)

- ALL is a rare disease with a diagnosed incident cases in EU, US, China, Japan estimated to achieve 26,482 in 2029².
- 40% cases of ALL diagnosed are in adults and among them about 50% present refractory disease or undergo relapse under current conventional therapies³.
- IL-7R expression in >84% of B-ALL and T-ALL samples⁴

ALL Global market projections for G7 major markets (USDbn⁵)



A petri dish with a petri dish lid, a gloved hand, and a petri dish lid, overlaid with a blue and green gradient.

Partnered clinical programs

Resolution of inflammation

Pr. C. Serhan, Harvard
seminal works
(OSE SAB member)



NEWS | FEATURES



Inflammation's **STOP SIGNALS**

Inflammation doesn't just peter out. The body actively shuts it down, using signals that researchers hope to transform into therapies *By Mitch Leslie*

Players in the endgame

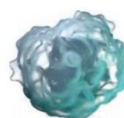
An assortment of molecules shut down inflammation and promote tissue healing by targeting different cells.



Lipoxins
Lipids whose jobs include stimulating macrophages and preventing neutrophils from slipping between endothelial cells to enter damaged tissue.



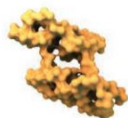
Protectins
Lipids that curtail release of inflammation-promoting molecules and are protective in the nervous system.



Macrophages
After clearing an infection, these immune cells consume proinflammatory cellular remains.



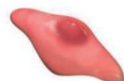
Resolvins
Family of lipids that block neutrophils' exit from the bloodstream and prod macrophages to eat cellular debris.



Annexin A1
A protein released by dying neutrophils, its functions include preventing other neutrophils from entering the injured site.



Neutrophils
First responders to wounds and infections, they release inflammatory cytokines.



Endothelial cells
These cells form the walls of blood vessels and make H₂S.



Maresins
Made by macrophages, lipids that spur tissue repair and act on nerves to ease pain.



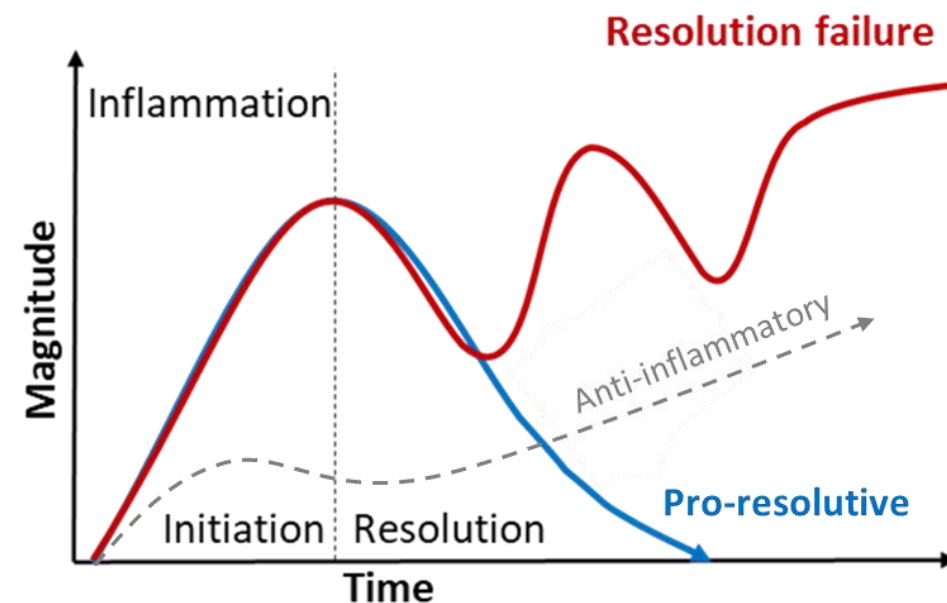
Hydrogen sulfide
Message-carrying gas that reduces pain and stimulates neutrophils to commit suicide.



Nerves
Inflammatory molecules trigger nerve cells, creating pain and itchiness.

SCIENCE sciencemag.org

2 JANUARY 2015 • VOL 347 ISSUE 6217 19

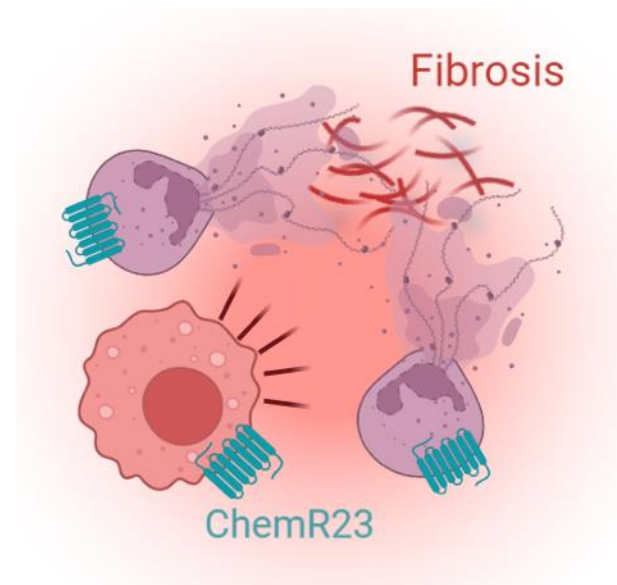


ABBV-230 - Resolving inflammation is an active immune process



During chronic inflammation

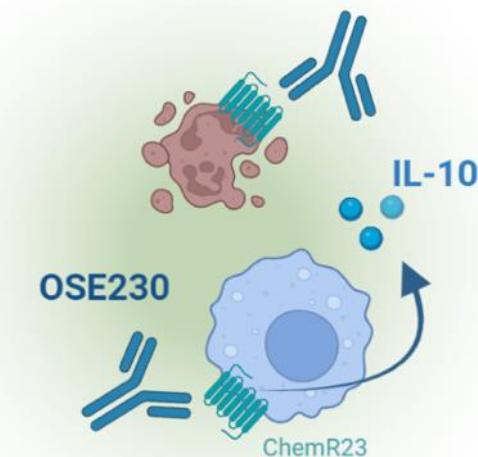
Dying neutrophils **send out inflammatory signals (e.g. NETosis)** that are important in maintaining chronic inflammation & fibrosis



With ChemR23 agonistic mAbs

ABBV-230 limits recruitment, survival & NETosis of inflammatory neutrophils & reprograms macrophages, **removing further chronic inflammatory signals**

Restoration of homeostasis



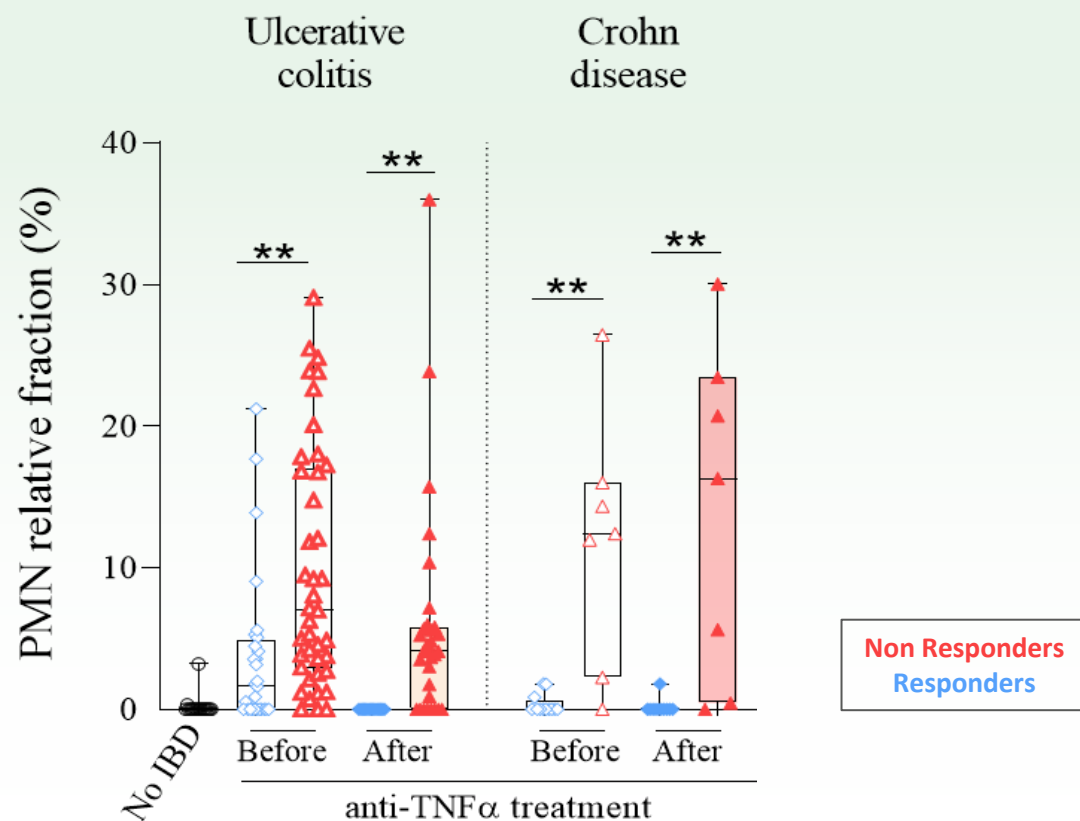
Potential First-in-class pre-IND candidate

Published in **ScienceAdvances**
MAAS

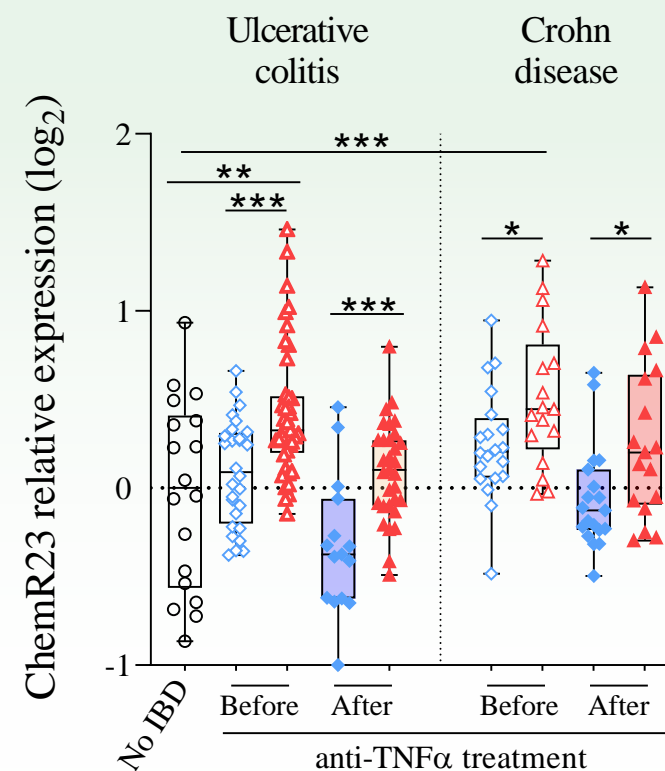
ABBV-230 - Strong rationale in IBD



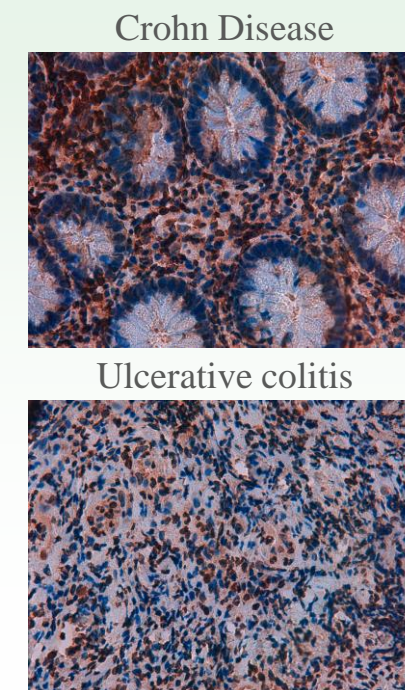
High Neutrophil infiltrates in anti-TNF α refractory patients



High ChemR23 expression in anti-TNF α refractory patients



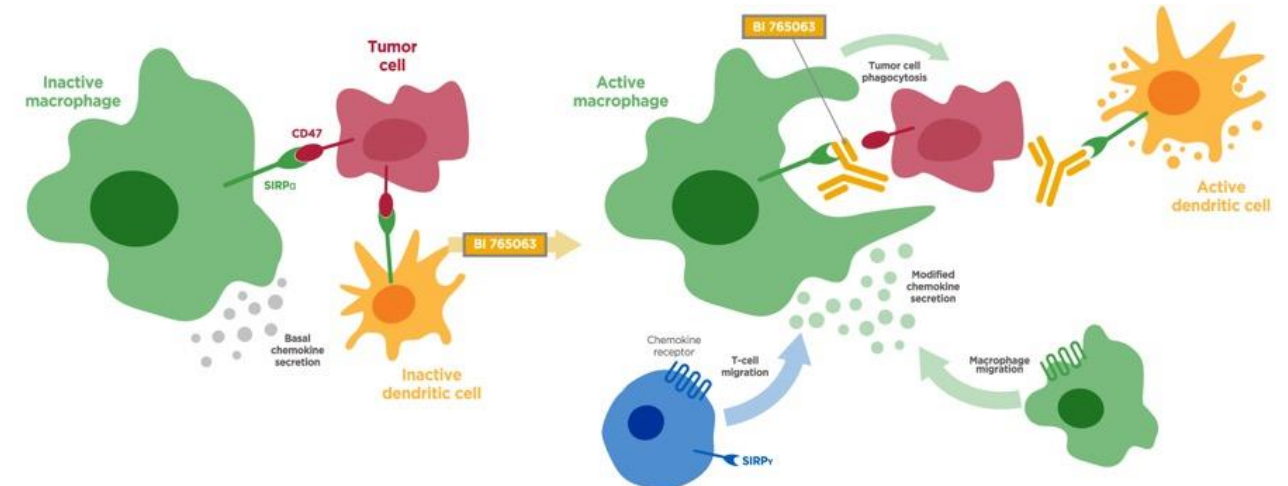
ChemR23 staining



SIRP α inhibition may have a synergistic antitumour effect when combined with ICIs

- Infiltrating **myeloid cells promotes immune evasion**, and this has generated interest in **myeloid-immune targets**^{1,2}
 - The CD47–SIRP α interaction transduces inhibitory signals on macrophages and other myeloid cells²
- Preclinical studies have indicated that **CD47 or SIRP α blockade in combination with ICIs** may have a synergistic antitumour effect³

The use of SIRP α antagonists to enhance antitumour immunity is currently being explored⁴



	Anti-CD47	Anti-SIRP α
Broad/restricted expression	Broad	Restricted to cells of the myeloid lineage
Safety signals	Acute anemia, Thrombocytopenia	No hematotoxicity
Interaction CD47/SIRP γ	Inhibit human T cells	OSE-172 is SIRP α specific

Limited **side effects** expected and less frequent dosing

Higher therapeutic window expected

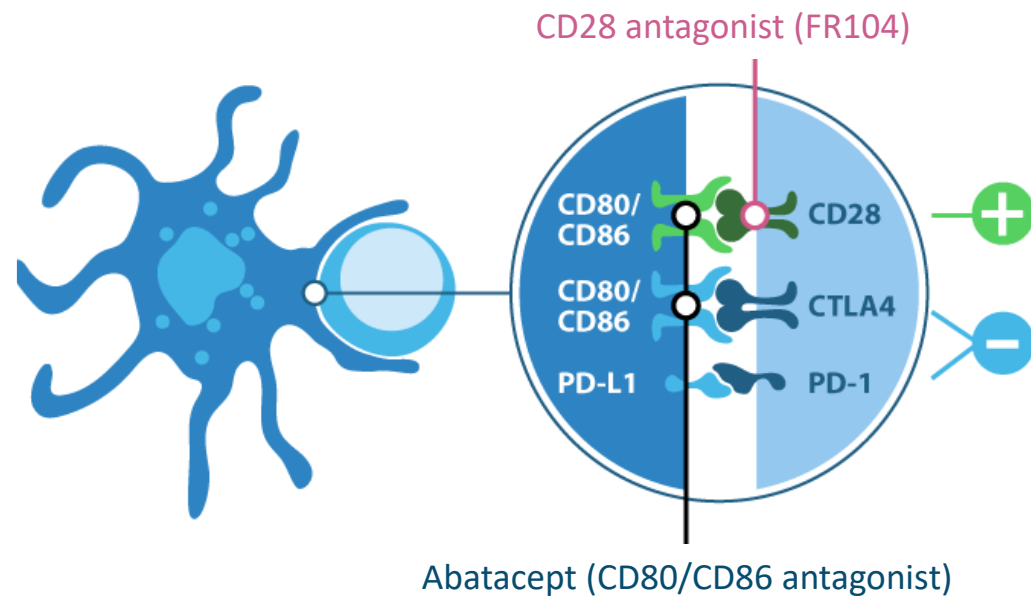
Favors T cell responses in solid tumors

CD: cluster of differentiation; ICI: immune checkpoint inhibitor; SIRP α : signal regulatory protein- α .

FR104/VEL-101

CD28 antagonist in organ Transplantation

Selective CD28 antagonist mAb in Kidney Transplantation



Ambitious Partnership & Development Plan with Veloxis

- **Veloxis** is a global leader in transplantation with leading product Envarsus XR (tacrolimus) realizing c. **USD 140m¹** turnover; Joined **Asahi Kasei** in FY2019², a **USD 17bn** annual turnover conglomerate with healthcare representing 17% of sales
- **Strong Preclinical data in Kidney & Cardiac transplantation + GVHD^{3,4,5}**
- **Positive Phase 1/2 in kidney transplantation (intravenous)⁶**
- **Positive Phase 1 subcutaneous⁷**

Phase 2 in kidney transplantation (subcutaneous) under preparation by Veloxis

FR104/VEL-101 - Transforming kidney transplant management



Positive results of the FIRsT phase I/II clinical evaluation in kidney transplantation³

Good Safety profile and early sign of efficacy:

- *Drug exposure allow high receptor occupancy maintenance during the one-year follow-up.*
- *No acute rejection under FR104/VEL-101 treatment, including after calcineurin-inhibitor (CNI) discontinuation.*
- *No biopsy-proven acute rejection (BPAR) observed at 1-year*
- *No donor-specific antibodies (DSA) detected at 1-year*

Kidney Transplant Market: A multi-billion dollar commercial opportunity

- **45k+** new kidney transplant annually for an estimated **500k+** people living with a functioning kidney graft in G7 countries
- 90k+ Americans in transplant waiting list, many transplanted patients require repeat transplants
- Chronic exposure to **CNIs** is associated with **renal toxicity**, cardio-metabolic complications, **insufficient** graft protection as well as **cancer** and **infections**
- FR104/VEL-101 seeks to address challenges associated with current immunosuppressive transplantation regimens using CNI-based therapies

The OSE team



A Board of Directors combining international expertise in drug development, industry & finance & experience in listed biotech companies



Didier Hoch, MD
Chairman

- 25+ years in pharma and vaccine industry (Sanofi-Pasteur MSD, Rhone-Poulenc)
- Several functions incl. commercial, marketing, general management



Maryvonne Hiance
Vice Chairwoman

- Founder and CEO of Effimune
- General Manager SangStat Atlantic, DrugAbuse Sc.
- Former President & Vice President of France Biotech



Nicolas Poirier, PhD
Director, Chief Executive Officer & Chief Scientific Officer

- 20 years experience in biotech/immunotherapy
- Advanced 6 novel therapies to clinic
- Leading to 6 pharma deals
- Global Management (INSEAD,HEC)



Anne-Laure Autret-Cornet
Director representing the employee shareholders, Chief Financial Officer

- 15+ years in Finance & Biotech
- ESSCA Management School
- Finance Corporate, HEC



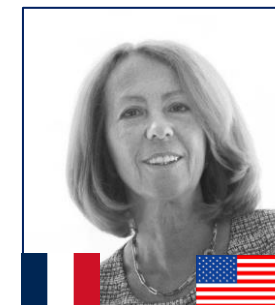
Marc Dechamps
Independent Director

- 35+ years in pharma industry (GSK, ViiV Healthcare)
- Expertise in market development for new products, I&I, I/O, vaccines
- CEO of Bioxodes



Markus Goebel, MD, PhD, MBA
Independent Director

- 30+ year experience in the Life Science industry (Novartis, Roche)
- Positions in BD&L, Corporate M&A, Corporate Venture Funds
- Founder & CEO of M&G Advisor
- Certified MD in oncology/hematology, MBA



Martine George, MD
Independent Director

- 30+ year experience in pharma & academic in the US (Pfizer, J&J, Sanofi, Sandoz-Novartis)
- Service Chief Gustave Roussy, Cancer center
- Expertise in clinical research, drug development, medical and regulatory affairs specializing in oncology



Eric Leire, MD
Independent Director

- Genflow Bioscience CEO
- Previously chairman & CEO of several biotech listed in US
- Previous Marketing Director position in Pharma US & EU



Cécile Nuyen-Cluzel
Independent Director

- Extensive experience in financial engineering & healthcare private equity
- Senior advisor in healthcare for France & Europe at Apposite Capital
- Master 2 « Ingénierie financière & « Leading the digital transformation in healthcare » certification from Harvard Medical School



Brigitte Dréno, MD
Independent Director

- Head Depart of Dermatology, Nantes university hospital
- Director of Biotherapy Clinical Investigation Centre
- Operational functions and research responsibilities

An experienced Executive leadership team



Nicolas Poirier, PhD
CEO, CSO

- 20 years experience in biotech/immunotherapy
- Advanced 6 novel immunotherapies to clinic
- Leading to 6 pharma deals
- Global Management & Finance (INSEAD, HEC)



Anne-Laure Autret-Cornet
Chief Financial Officer

- 15+ year experience in Finance / Biotech
- Graduated from ESSCA Management school
- Corporate Finance, HEC



Dominique Costantini, MD
Chief Development & Strategy

- 30+ years in product development/marketing
- Chairwoman, Co-founder
- IPO completion in 2015



Jean-Jacques Mention, PhD
Chief Business Officer

- 15+ years of Research in Immunology at King's College London, Institut Pasteur
- 10 years experience in Business Development



Aurore Morello, PhD
Head of Research

- 13+ year experience in Immunotherapy
- International Post-doctoral Fellowship (MSKCC, NYC)



Silvia Comis, MD
Head of Clinical

- 30+ year experience in Pharma
- Previously Senior Medical Director IQVIA, and European Head of Early Products Medical Affairs in oncology at Novartis



Valérie Gabarre, PharmD
Medico-Marketing Director

- 25+ years of experience in Pharma/Biotech, in Medico-Marketing & Sales - EU & Global, Immunotherapy & Oncology
- Global Network of Leaders & Corporative Groups in Oncology
- PharmD

International SAB - Renowned experts in IO and I&I



Wolf-Hervé Fridman, MD
Chairman of the SAB, Professor Emeritus of Immunology at the Université de Paris, France



Myriam Merad, MD, PhD
Director of the Precision Immunology Institute at Mount Sinai School of Medicine in New York and the Director of the Mount Sinai Human Immune Monitoring Center (HIMC)



Charles N. Serhan, PhD, DSc
Professor of Anaesthesia (Biochemistry and Molecular Pharmacology) at Harvard Medical School, Professor of Oral medicine, Infection and Immunity at Harvard School of Dental Medicine



Jennifer Wargo, MD, M.M.Sc
Professor of Genomic Medicine & Surgical Oncology, UT MD Anderson Cancer Center



Bernard Malissen, PhD
Group Leader at Centre d'Immunologie de Marseille-Luminy and Founding-Director of Center for Immunophenomics, Marseille, France



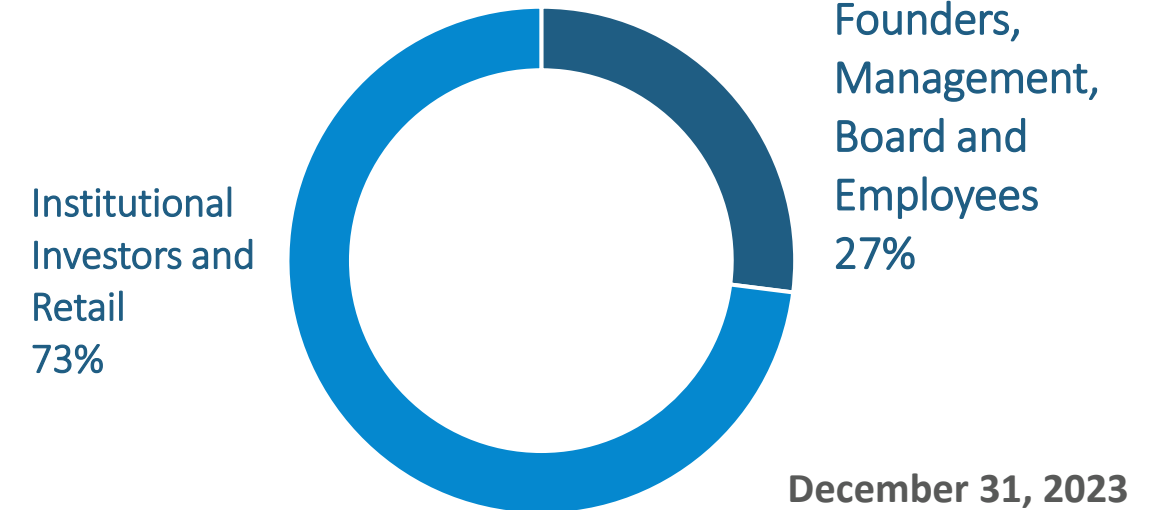
Sophie Brouard, PhD
Immunologist and Director in Veterinary Sciences, Director of Research at the Institut National de la Santé et Recherche Médicale (Inserm, National Institute for Health and Medical Research) in Nantes

Key financial and Shareholding structure

Key financials

ISIN code	FR0012127173
Market	Euronext Paris
Shares outstanding	21 817 777
Market cap <i>(Sept 5, 2024)</i>	€193 m
Level of Cash <i>(June 30, 2024)</i>	€80.7 m (of which €75.7 m classified in financial assets)
Financial visibility	2027

Shareholding structure



Analyst coverage



OSE IMMUNO
THERAPEUTICS



Breaking through the
therapeutic ceiling with
first-in-class immunotherapies

Immuno-Oncology & Immuno-Inflammation

Head Office
22, boulevard Bénoni Goullin
44200 Nantes, France

Paris Office
10, Place de Catalogne
75014 Paris, France

Company Information: <http://ose-immuno.com/en/>