



# Enabling the immune system to fight cancer

Ultimovacs Company Presentation

14 December 2022

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# Ultimovacs develops next-generation universal cancer vaccines

Off-the-shelf and easy to use immunotherapy that can be broadly applied

## UV1: universal cancer vaccine

- Lead asset UV1 enhances the efficacy and durability of IO therapy
- Off-the-shelf applicability and easy to use

## Strong combination potential

- UV1 improves immune checkpoint inhibitor (CPIs) activity in combination base line therapy
- Broadly applicable as backbone therapy in different cancer types and in immune-therapy combinations

## Human Telomerase (hTERT): A Universal Cancer Cell Target

- hTERT is expressed in 85-90% of cancer types at all stages of disease
- UV1 does not interfere with telomerase, but triggers the immune response against telomerase to identify and kill cancer cells

## Good safety profile in Phase I

- Strong safety profile and efficacy signals
- Robust immune response induction (durability >7.5 years)
- FDA recognition: Fast Track and Orphan Drug Designation

## Broad Phase II program

- Five Phase II randomized clinical combination trials ongoing: enrolling >650 patients, 100 hospitals in 15 countries
- Expected readouts from H1 2023 onwards: key value inflection points

# Ultimovacs has a strong financial position, experienced management team, supported by long-term shareholders, with a cash runway into 2024

## Company profile

- **Founded in Oslo, Norway 2011**
- **Successful IPO 2019** on Euronext Oslo (ULTI.OL), raising NOK 370m (~\$38m), with follow-on offerings
  - Oversubscribed private placement of gross NOK 160m (~\$17m), May 2020
  - Oversubscribed private placement of gross NOK 270m (~\$28m), October 2021
- Total cash end of Q3 2022 amounted to NOK 469m (\$46m) providing an **estimated financial runway to the first part of 2024**
- Debt free
- **Market cap**<sup>1</sup>: NOK 4.4bn (~\$440m)
- **25 FTEs** in Norway and Sweden
- **Multiple key value inflection points** near term and over the next 24 months

## Management



**Carlos de Sousa**  
**MD, EMBA**  
Chief Executive Officer



**Hans Vassgård Eid**  
Chief Financial Officer



**Jens Bjørheim**  
**MD, PhD**  
Chief Medical Officer



**Ton Berkien**  
Chief Business Officer










**Gustav Gaudernack**  
**Inventor, Professor Emeritus**  
Chief Scientific Officer

## Shareholders

20 largest shareholders<sup>2</sup>: ~ 70%, whereof:

- Gjelsten Holding AS: 19%
- Canica AS: 7.9%
- Sundt Group: 7.7%
- Other Family Offices/HNWI: 13.1%
- Government Pension Fund Norway<sup>3</sup>: 4.5%
- University of Oslo TTO<sup>4</sup>: 4.5%
- Radforsk Oncology Fund: 4.4%
- Other Institutional/funds: 7.7%
- Founders: 2.3%

# Broad Phase II clinical program for UV1 with more than 650 Patients

	Indication	Clinical trial information	Expected topline readout	Phase I	Phase II	Phase III	Contributors
UV1	Malignant melanoma	With ipilimumab 12 patients (completed)	Completed	UV1-ipi ●			
	Malignant melanoma	With pembrolizumab 30 patients (completed)	Completed	UV1-103 ●			
	Malignant melanoma	With ipilimumab & nivolumab <b>100% recruited</b>	H1 2023		INITIUM ●		
	Pleural mesothelioma	With ipilimumab & nivolumab <b>&gt; 90% recruited<sup>1</sup></b>	H1 2023		NIPU ●		 <sup>3</sup> 
	Head and neck cancer	With pembrolizumab <b>&gt; 50% recruited<sup>1</sup></b>	End of 2023 <sup>2</sup>		FOCUS ●		 MARTIN-LUTHER-UNIVERSITÄT HALLE-WITTENBERG
	Ovarian cancer	With durvalumab & olaparib <b>&lt; 10% recruited<sup>1</sup></b>	End of 2023 <sup>2</sup>		DOVACC ●		 <small>Nordic Society of Gynaecological Oncology - Clinical Trial Unit</small>  <sup>3</sup>  <small>European Network of Gynaecological Oncological Trial groups</small>
	Non-small cell lung cancer (NSCLC)	With pembrolizumab <b>&lt; 10% recruited<sup>1</sup></b>	End of 2024 <sup>2</sup>		LUNGVAC ●		 DRAMMEN HOSPITAL
TET	Prostate cancer	Dose finding trial, monotherapy <b>100% recruited</b>	-	TENDU ●			



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- 1. UV1: a universal cancer vaccine**
2. Phase I trial results
3. Phase II pipeline & program design
4. TET platform
5. Market potential and competition

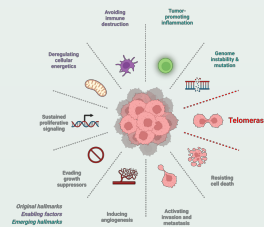
# UV1 enhances antitumor response by activating telomerase-specific T cells

## Current CPI challenges

- Checkpoint Inhibitors (CPI) have transformed cancer therapies, but rely on a pre-existing T cell response towards the tumor for efficacy
- Many patients have limited long term response to CPI treatment: 10 - 58% response rate depending on indication<sup>1</sup>
- Ultimovacs is developing a universal cancer vaccine (UV1) that can be combined with CPIs to improve the immune response towards cancer cells that express telomerase

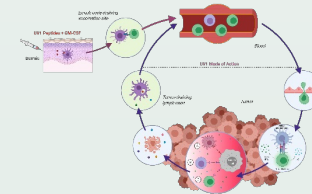
## 1 Telomerase

- Telomerase is universally expressed (85-90%) on cancer cells and present throughout all tumour stages
- It plays an essential role in tumour proliferation potential and cellular immortality



## 2 Mechanism of action

- Telomerase peptides are picked up by antigen-presenting cells and prime cells
- Telomerase-specific T cells migrate to the tumor site and initiate tumor killing
- Through cytokine secretion, the T cells activate other immune cells, enhancing the immune response against the tumor

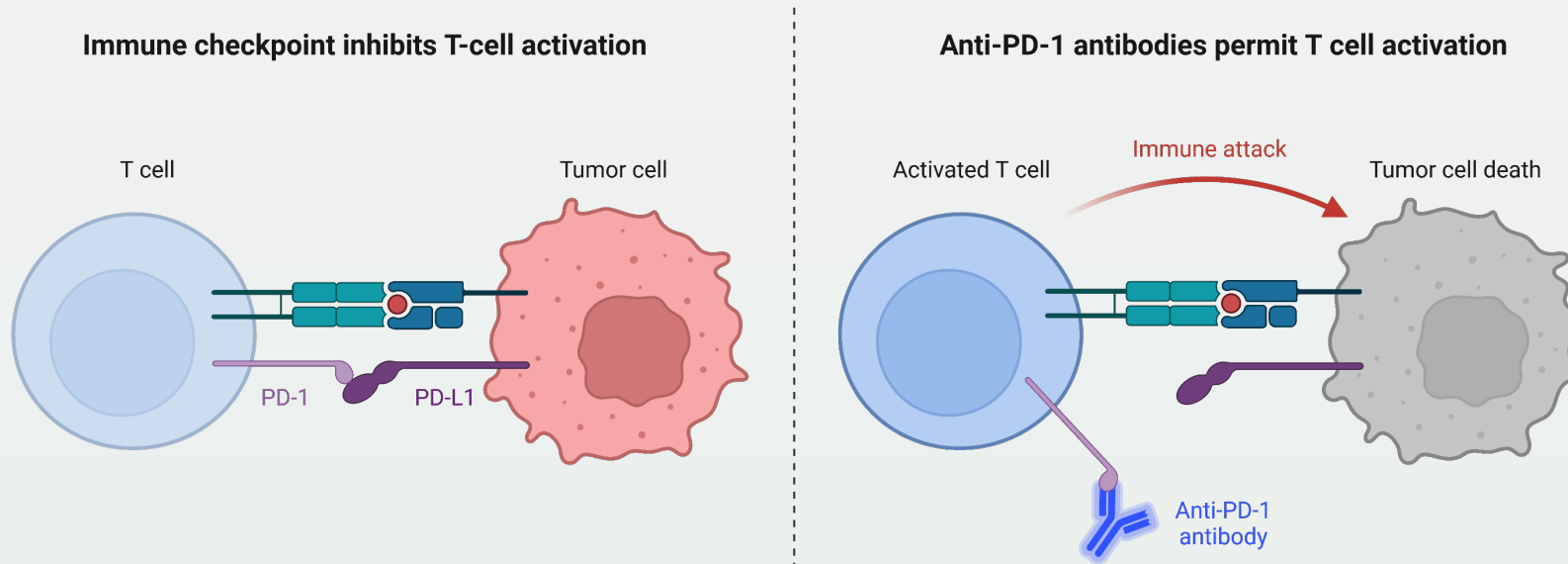


## 3 Easy production & use

- UV1 is ready to be administered when needed (off-the-shelf), and can be used in the general population without any pre-screening
- Manufacturing process is straight forward with low unit cost
- Long shelf life (>3 years)



# CPIs have transformed cancer therapy, but stronger immune responses are required to improve efficacy

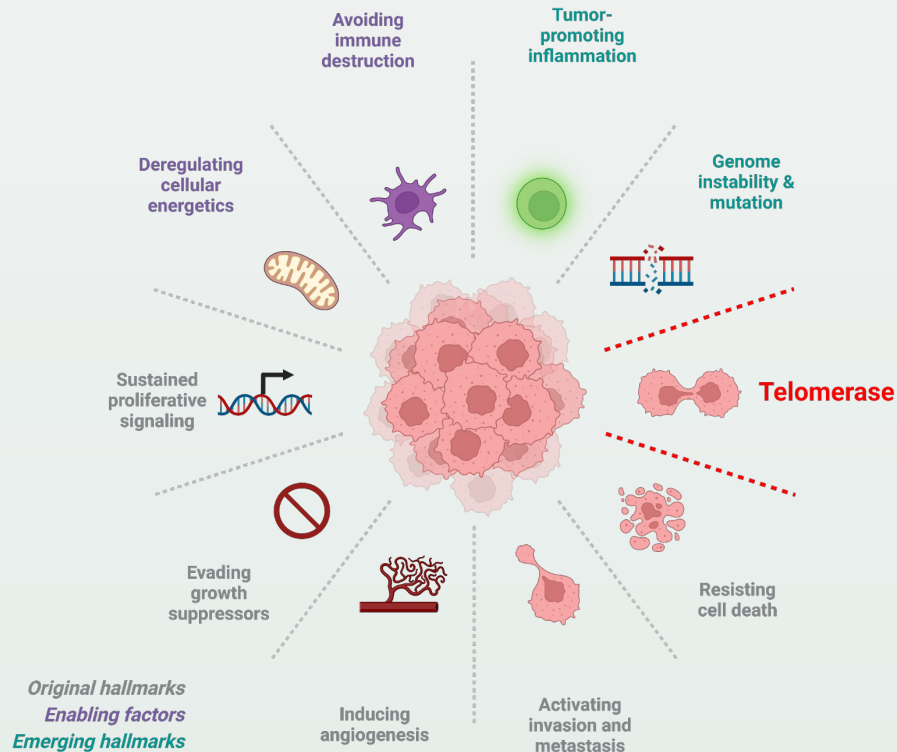


- CPIs rely on **spontaneous** T cell responses against tumors
- However, most patients do not experience clinical benefit from checkpoint inhibition, resulting in a major unmet medical need
- Clinical non-responders are characterized by an insufficient spontaneous anti-tumor immune response<sup>1</sup>
- To improve efficacy, **improve the T cell response**



# UV1 induces T cell responses against telomerase: a hallmark of cancer the tumor cells cannot mutate away from

## Hallmarks of Cancer<sup>1</sup>



## Telomerase Characteristics

## UV1 Vaccine Qualities

### Universal

85-90% of cancer cells express telomerase

Applicable to broad range of cancers

### Essential

Tumor cells depend on expressing telomerase

High relevance in heterogenous tumor environments

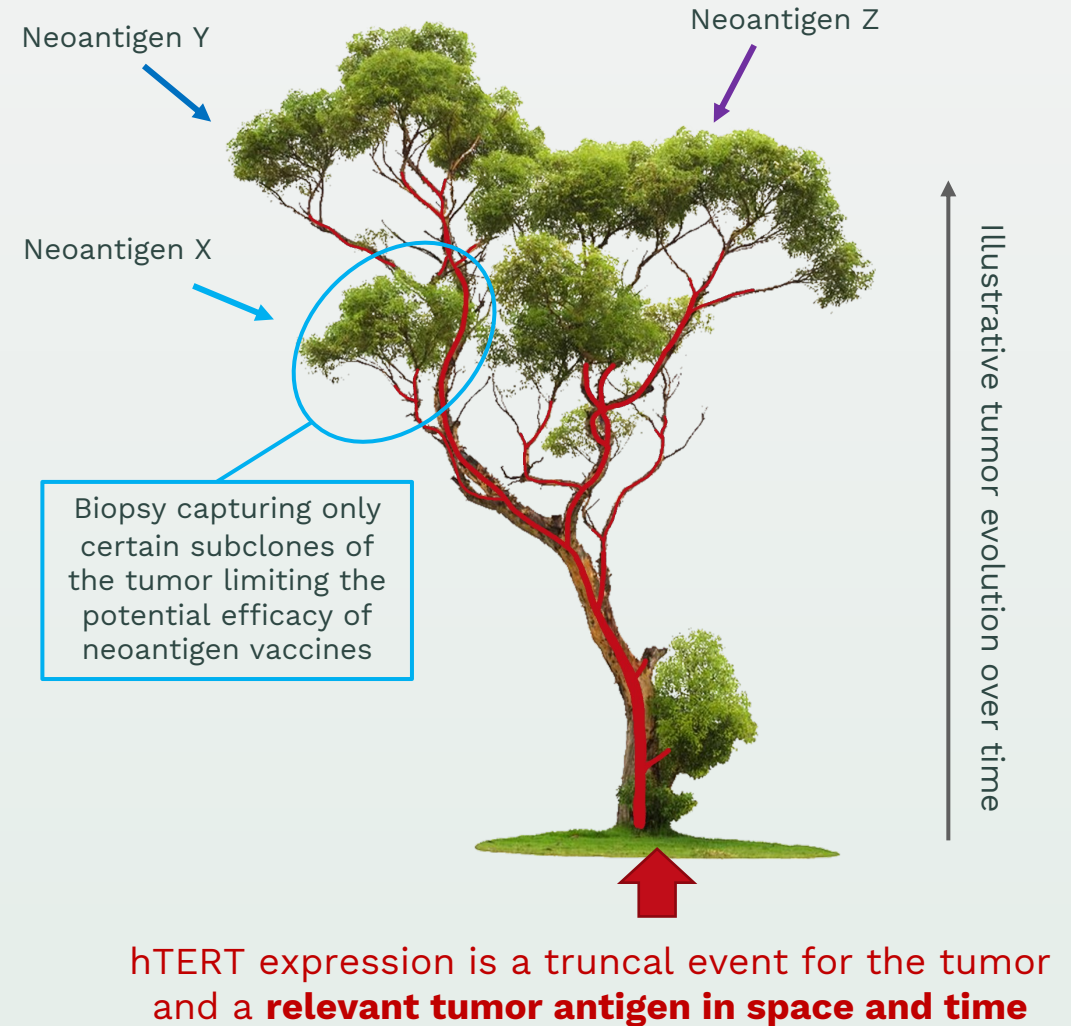
### Enduring

Present throughout tumor evolution: stem cells to tumor cells

Enduring immune response over time throughout the tumor

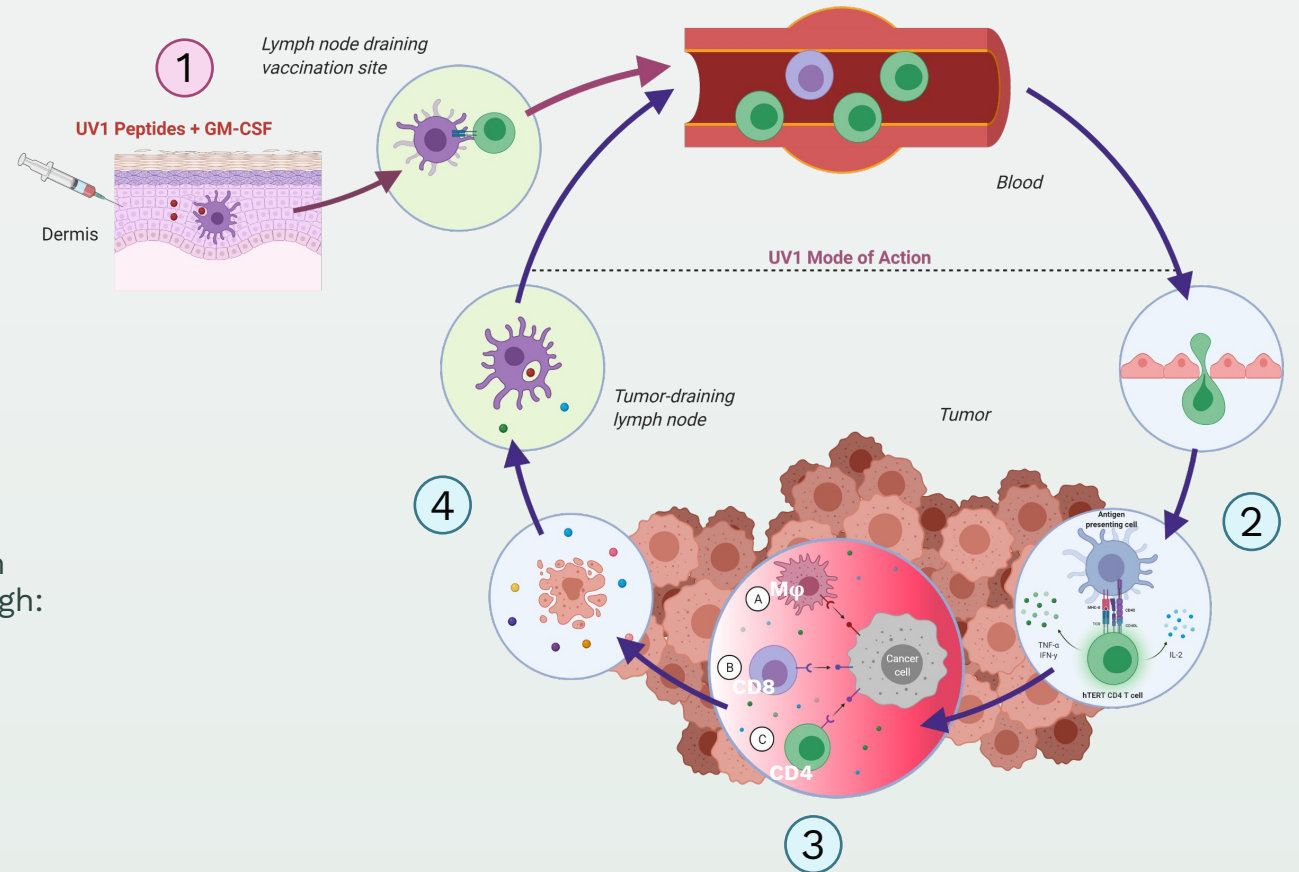
## UV1 activates hTERT specific CD4-helper T lymphocytes

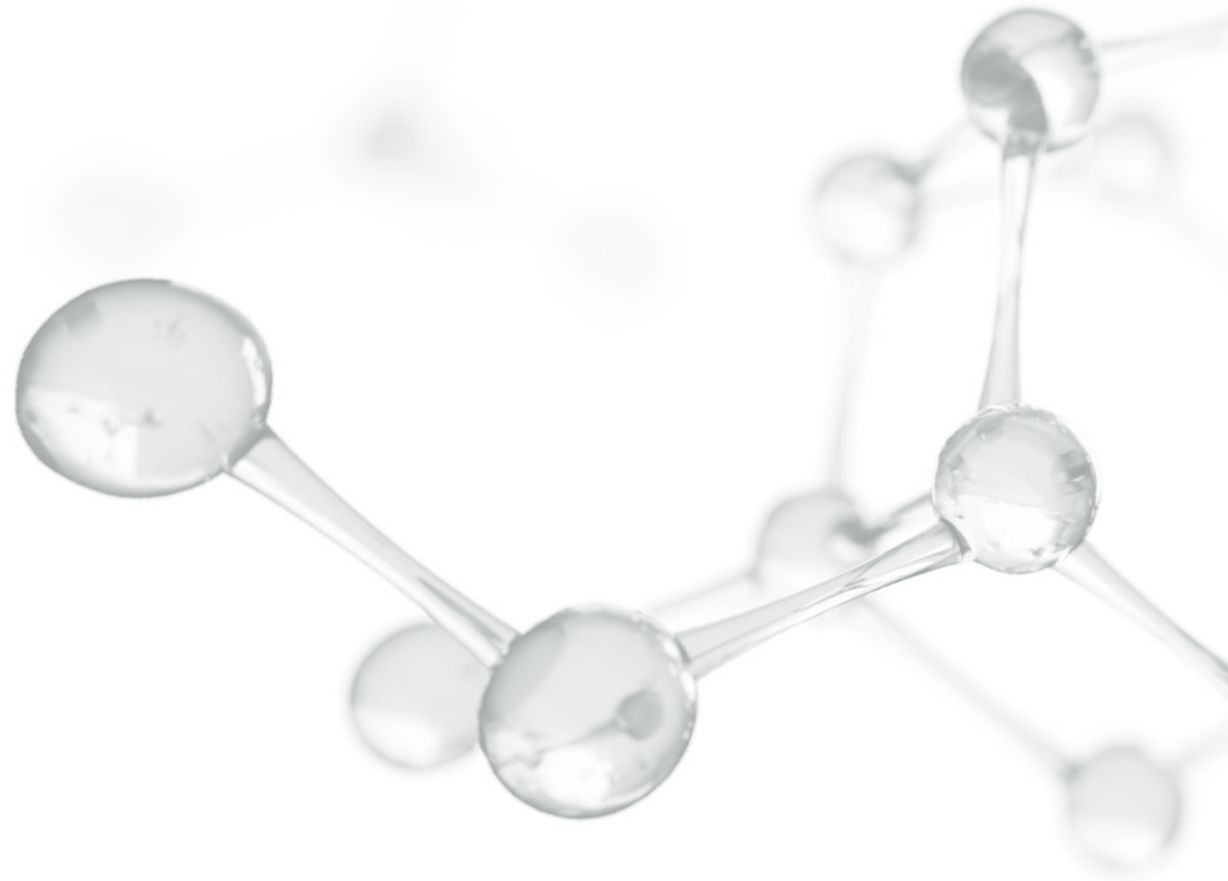
- **Mechanism of action:** Vaccination induces T cell responses, which have pro-inflammatory functions and roles in activation of CTLs and memory T cell formation
- **Vaccine design:** UV1 consists of three synthetic long peptides (one 30-mer, two 15-mers), covering the catalytic site of human telomerase reverse transcriptase – hTERT
- **Easy to use:** Peptides are promiscuous with respect to HLA class I and II alleles – No need for pre-screening of HLA type or other biomarkers
- **Administration:** 8 UV1 intradermal vaccinations over a 14-week period – off the shelf. Local administration of GM-CSF as vaccine adjuvant to attract DCs
- **Safe:** UV1 does not interfere with telomerase but recognizes fragments of telomerase presented in the context of HLA molecules on cells in the tumor. No safety signals seen from healthy tissues expressing telomerase (e.g. stem cells).



# UV1 mode of action and downstream mechanisms

- 1 **Intradermal injection of UV1 and activation of TERT-specific T cells**
- 2 **Improved priming of anti-tumor immune responses**
  - T cells bind their antigen (TERT) expressed on local APCs and the T cells release cytokines (TNF- $\alpha$ , IFN- $\gamma$  and IL-2) inducing a pro-inflammatory “hot” tumor microenvironment
- 3 **Enhanced intratumoral activation of T cells**
  - T cells activate other cells of the immune system through cytokine secretion, directing killing through:
    - i. Macrophages
    - ii. CD8 T cells
    - iii. CD4 T cells
- 4 **Increased tumor cell killing**
  - Dying tumor cells release antigens
  - These are taken up by APCs and presented to T cells, broadening the immune response against the tumor





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# Strong Phase I efficacy and safety data of UV1 in two combination trials

Trial design	① UV1 + ipilimumab	② UV1 + pembrolizumab
<b>Nr. of patients</b>	12	30 (cohort 1: 20, cohort 2: 10)
<b>UV1 dose</b>	300 µg	300 µg
<b>GM-CSF dose</b>	75 µg	Cohort 1: 37.5 µg, cohort 2: 75 µg
<b>Primary endpoint</b>	Safety (good)	Safety (good)
<b>Secondary endpoints</b>	PFS, OS, ORR, exploratory biomarkers	PFS, OS, ORR, exploratory biomarkers
<b>Clinical response</b>	Strong initial signals	Strong initial signals
<b>Publication</b>	Poster presentation at <a href="#">SITC Annual Meeting 2021</a> , publication in <a href="#">Frontiers in Immunology</a> (May 2021)	Data reported at ASCO 2021 and updates presented at the 19th International Conference of the Society for Melanoma Research, 17-20 October 2022 in Edinburgh

## FDA designations

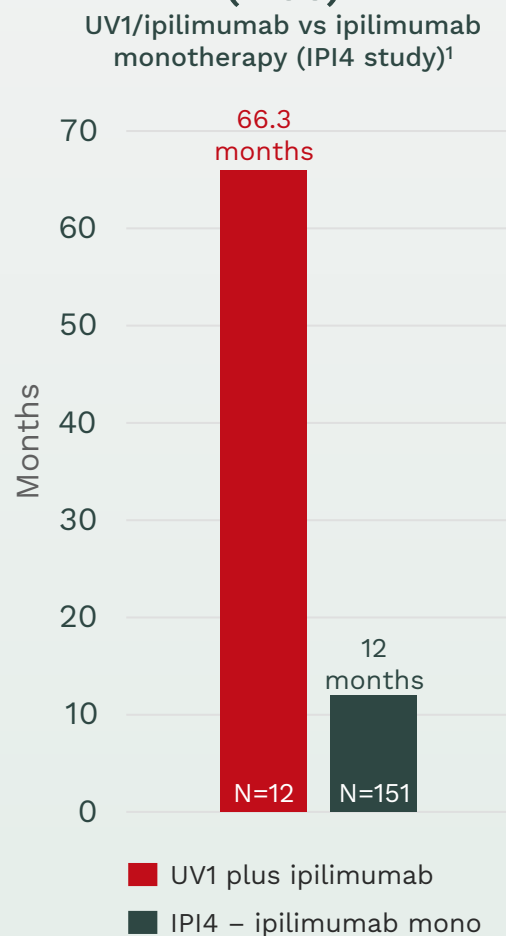
- In Oct 2021, granted **Fast Track designation** for UV1 as add-on therapy to ipilimumab or pembrolizumab in advanced non-resectable and metastatic melanoma
- In Dec 2021, granted **Orphan Drug designation** for UV1 as add-on therapy to ipilimumab and nivolumab in stage IIB-IV malignant melanoma

# Positive efficacy vs. historical control results of UV1 + ipilimumab

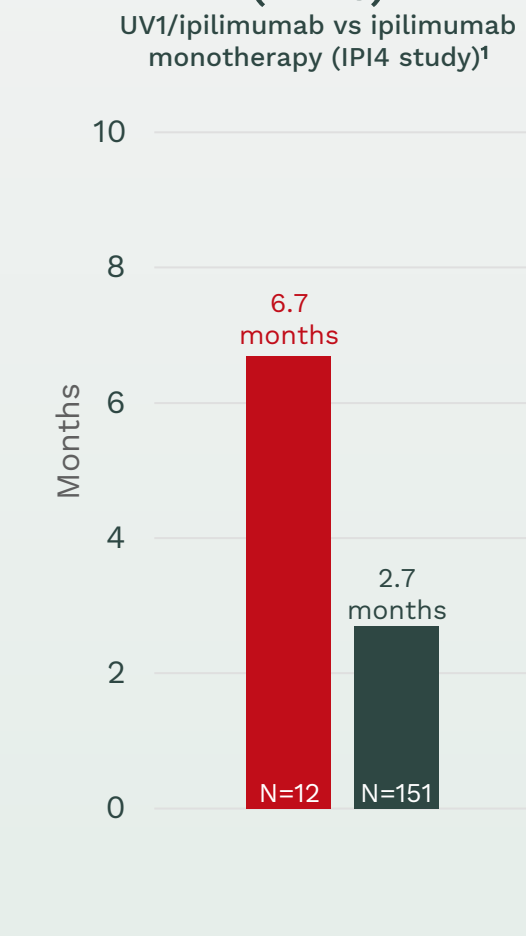
## Patient characteristics

- All patients had stage IV disease
  - M1c in 50% of patients
- Elevated LDH in 50% of patients
- 33.3% of patients had received prior therapy

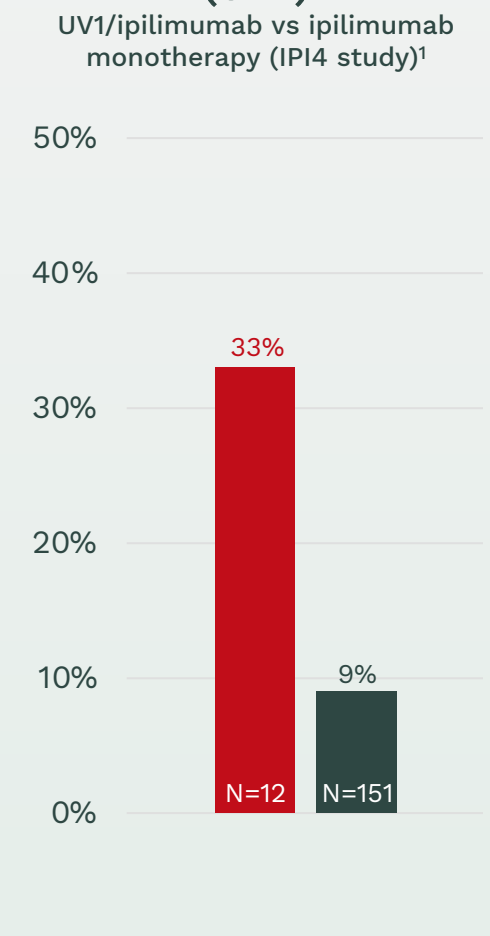
## Median Overall Survival (mOS)



## Median Progression Free Survival (mPFS)



## Objective Response Rate (ORR)



## Patient baseline demographics of Phase I UV1 + pembrolizumab

### **Key Eligibility Criteria**

- Advanced histologically confirmed malignant melanoma (stage IIIB-C, IV)
- Measurable and evaluable disease according to iRECIST
- Previously untreated and eligible for pembrolizumab (prior BRAF and MEK inhibitors permitted)
- ECOG 0-1
- Active brain metastases, and uveal or ocular melanoma not permitted

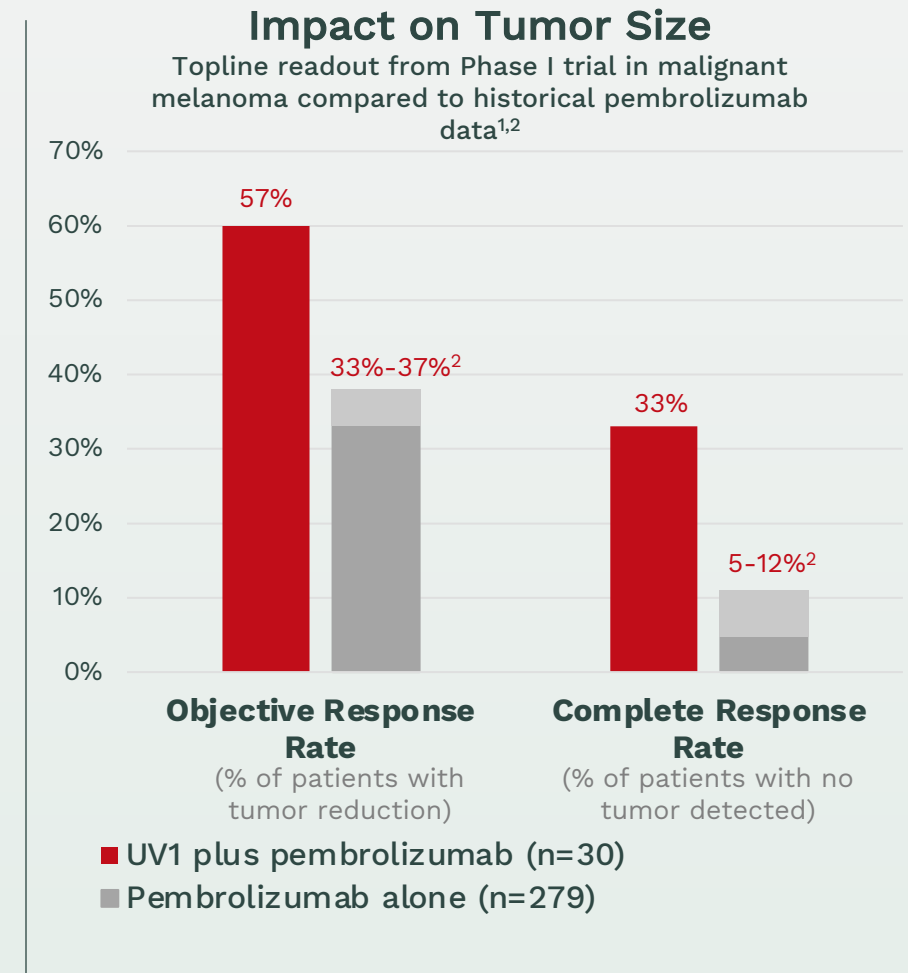
### **Patient characteristics**

- 63% ECOG status 1
- M1c in 27% of patients
- Elevated LDH in 31% of patients
- All patients treated as first-line
- PD-L1 negative tumour biopsies in 64% of evaluable patients
- TMB low in 47% of evaluable patients

# Positive response rate vs. historical control results: UV1 + pembrolizumab

- The **Response Rates** for the 30 patients in cohort 1 and cohort 2 combined, as measured by iRECIST:
  - Complete response (CR) 10/30
  - Partial response (PR) 7/30
  - Stable disease (SD) 2/30
  - Progressive disease (PD) 11/30
- Patients will continue to be followed for long-term survival
- UV1 has demonstrated a good safety profile; no unexpected safety issues have been observed in the trial

**Objective response rate (ORR) 57%**

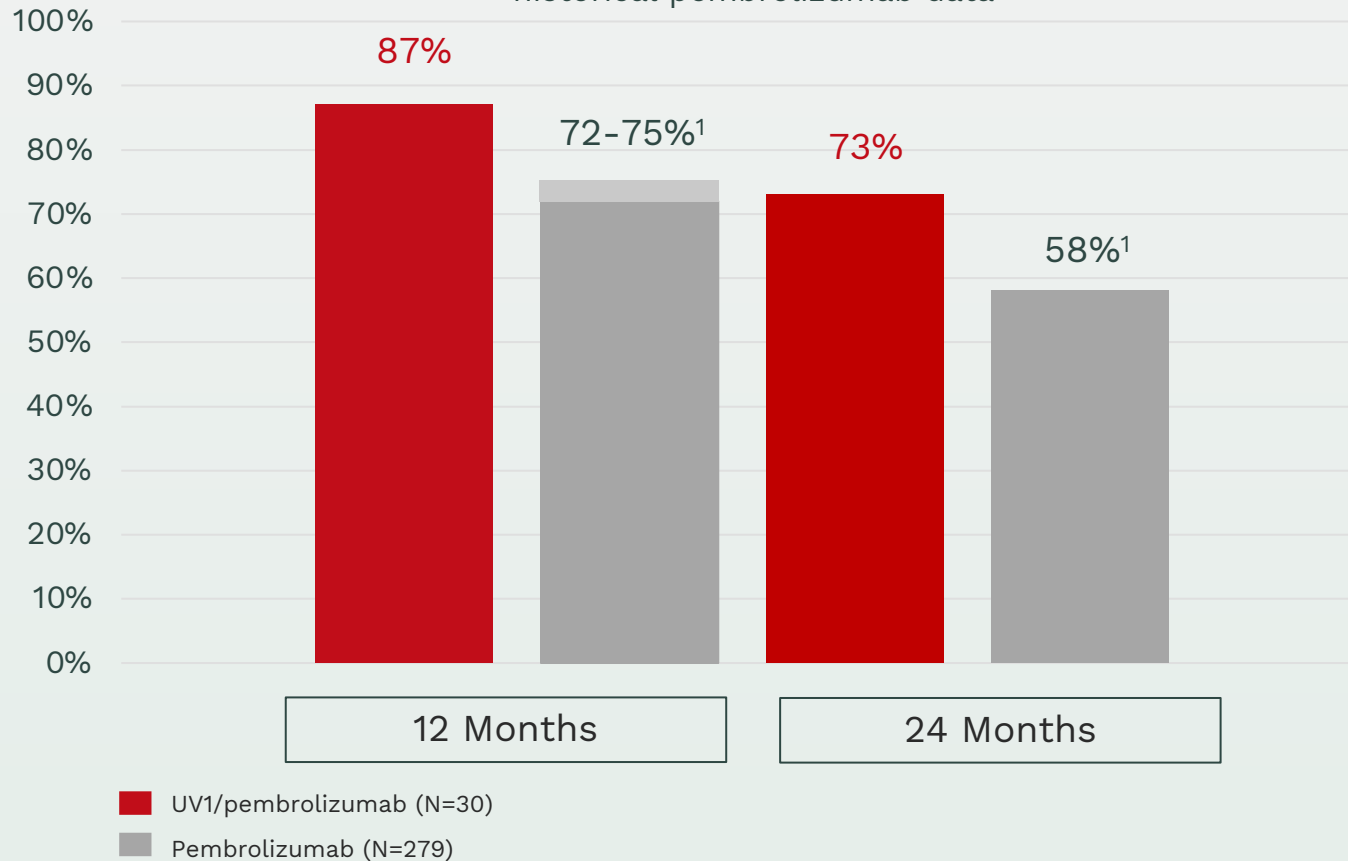




# Encouraging OS & mPFS vs. historical pembrolizumab data

## Overall Survival at 12 and 24 months – All 30 patients

Topline readout from Phase I trial in malignant melanoma compared to historical pembrolizumab data<sup>1</sup>



## Median Progression Free Survival

### UV1 + pembrolizumab:

- Cohort 1+2 combined: 18.9 months

### Pembrolizumab:

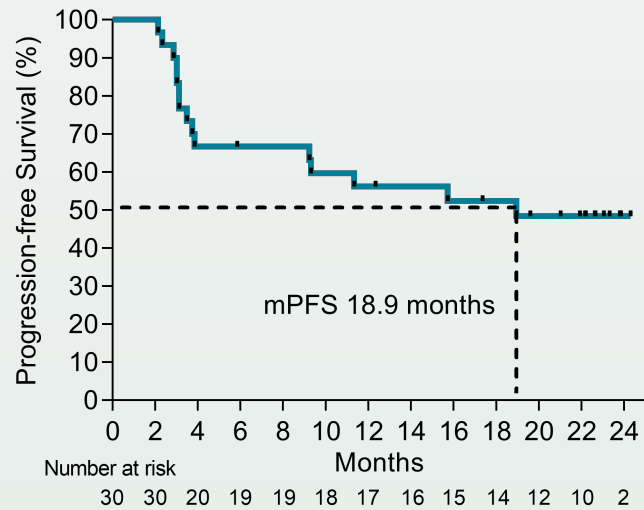
- 5.5-11.6 months<sup>1</sup>

### OS for Cohort 1 after 36 months<sup>1</sup>:

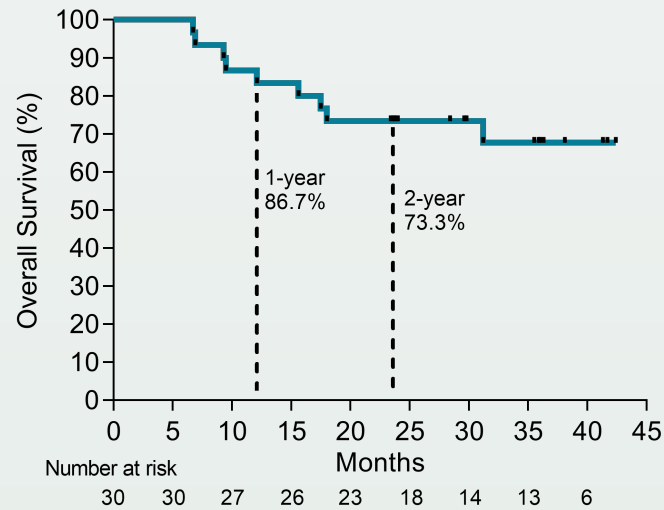
- UV1+pembrolizumab 71%
- Pembrolizumab 51%

# Progression-free and overall survival rates are promising

Progression-free Survival (n=30)



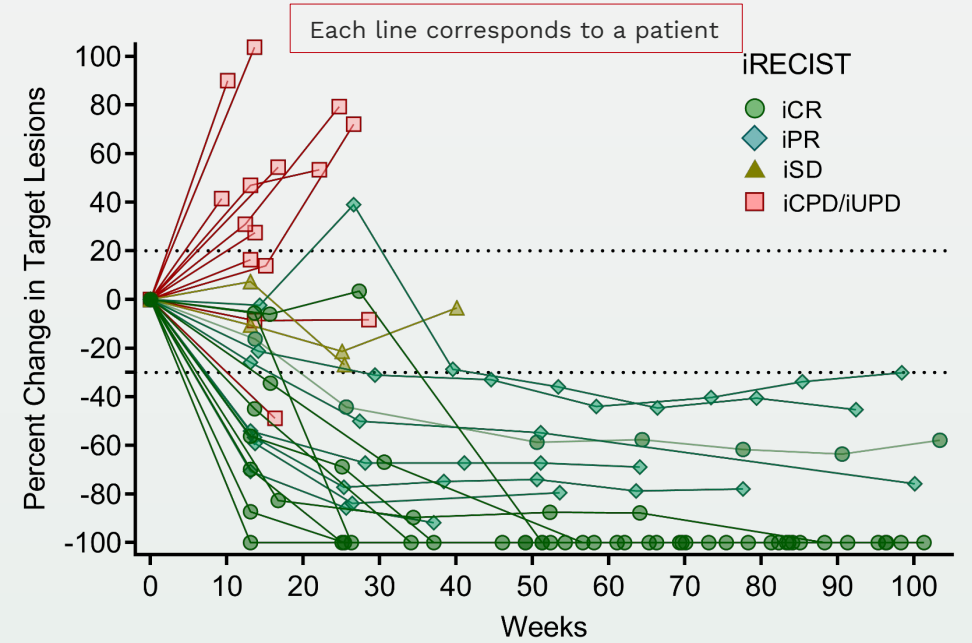
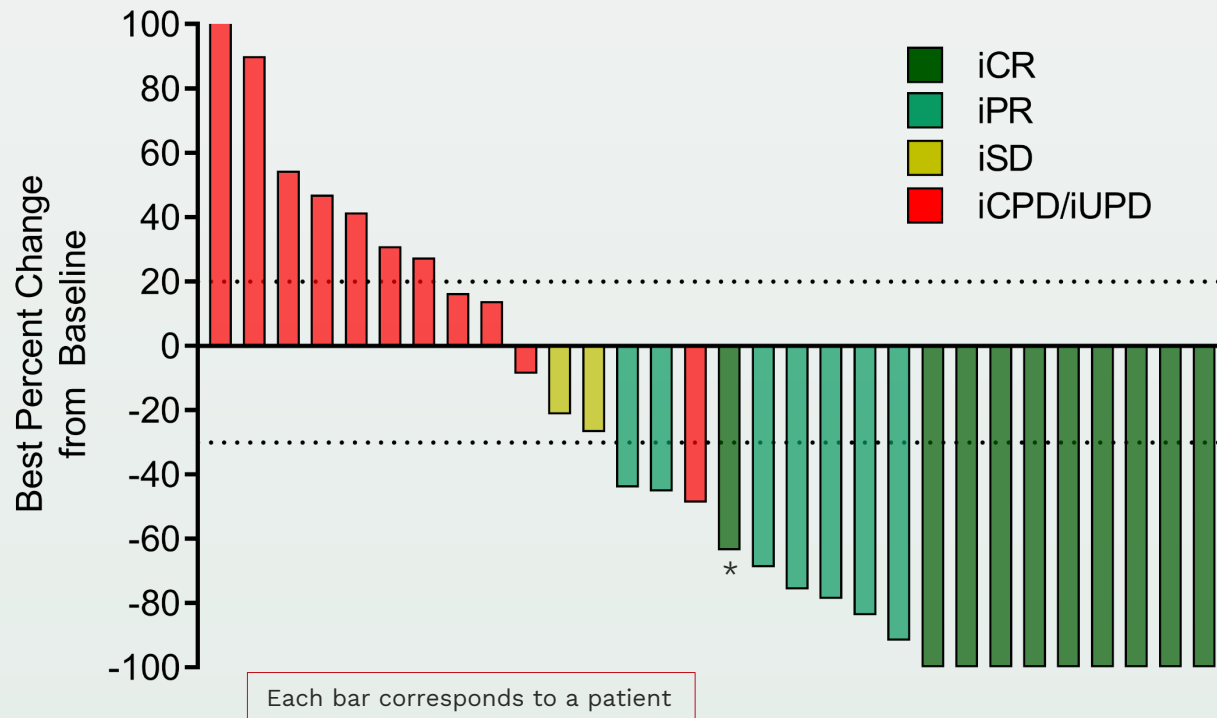
Overall Survival (n=30)



Best Overall Response (iRECIST)	n	%
Objective Response Rate	17	56.7
• Complete Response	10	33.3
• Partial Response	7	23.3
Stable Disease	2	6.7
Confirmed/Unconfirmed Progressive Disease	11	36.7

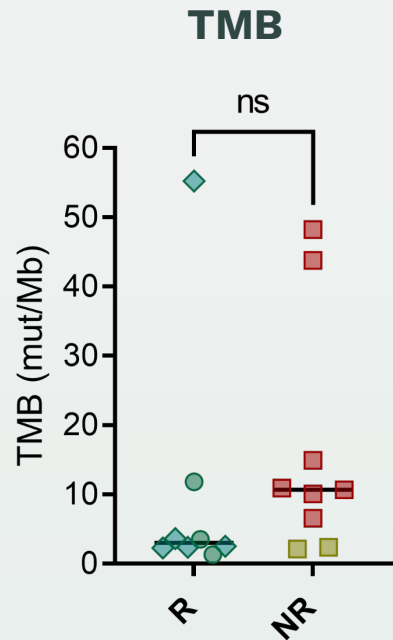
# Clinical responses are not impacted by PD-L1 level

Potential to expand target patient population



Population	ORR (%)	iCR (%)	iPR (%)
PD-L1 (≥1%) (n=8)	4 (50.0%)	3 (37.5%)	1 (12.5%)
PD-L1 (<1%) (n=14)	8 (57.1%)	5 (35.7%)	3 (21.4%)
Stage III B/C (n=11)	8 (72.7%)	5 (45.5%)	3 (27.3%)
Stage IV (n=19)	9 (47.4%)	5 (26.3%)	4 (21.1%)

# Clinical responses are not impacted by tumor mutational burden (TMB), neoantigens or IFN- $\gamma$ status – potential to expand target patient population

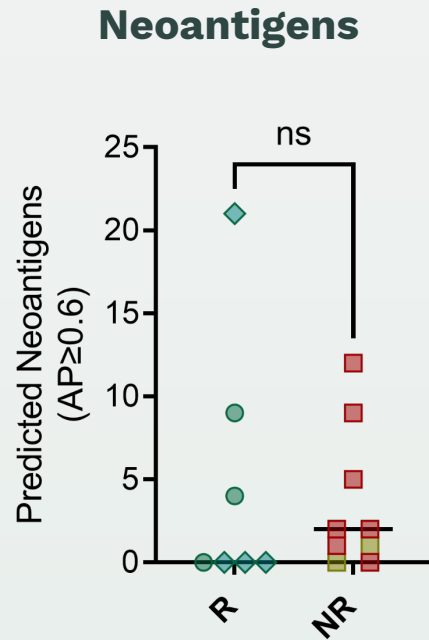


**Responders (R)**

- iCR (n=3)
- ◆ iPR (n=5)

**Non-Responders (NR)**

- iCPD/iUPD (n=9)
- iSD (n=2)

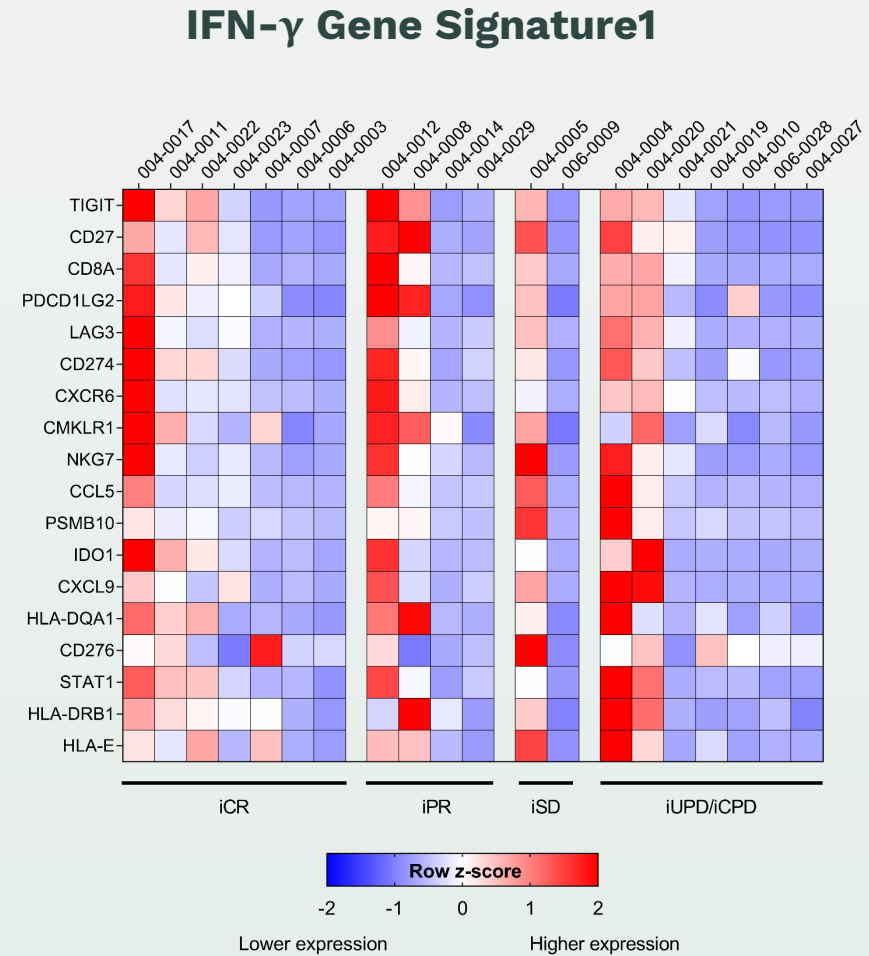


**Responders (R)**

- iCR (n=3)
- ◆ iPR (n=4)

**Non-Responders (NR)**

- iCPD/iUPD (n=7)
- iSD (n=2)










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# Ultimovacs' UV1 pipeline consists of five comparative, randomized Phase II trials in more than 650 patients

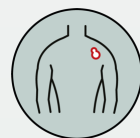
Trial design	 <b>1 INITIUM</b>	 <b>2 NIPU</b>	 <b>3 FOCUS</b>	 <b>4 DOVACC</b>	 <b>5 LUNGVAC</b>
<b>CPI combination</b>	Ipilimumab + nivolumab	Ipilimumab + nivolumab	Pembrolizumab	Durvalumab + olaparib	Pembrolizumab
<b>Indication</b>	First line malignant melanoma	Second line mesothelioma	First line head and neck cancer	Second line ovarian cancer	First line non-small cell lung cancer
<b>Timeline</b>	2020 – 2023	2020 – 2023	2021 – 2023	2021 – 2023	2022 – 2024
<b>No. of patients, countries, sites, etc.</b>	156 out of 156* <b>100% recruited</b> 40 sites in US, NO, BE, UK	108 out of 118* <b>&gt; 90% recruited</b> 6 sites in NO, SE, DK, ES, AU,	41 out of 75* <b>&gt; 50% recruited</b> 10 sites in DE	7 out of 184* <b>&lt; 10% recruited</b> >40 sites in NO, SE, DK, FI, BE, NL, DE, AT, LT, EE, GR	3 out of 138* <b>&lt; 10% recruited</b> 8-10 sites in NO
<b>Milestones</b>	<b>H1 2023</b>	<b>H1 2023</b>	2023**	2023**	H2 2024**

**Primary endpoint: Progression Free Survival (PFS)**  
**Secondary endpoints: Overall Survival (OS) + Objective Response Rate (ORR) + Duration of Response (DOR) + safety**

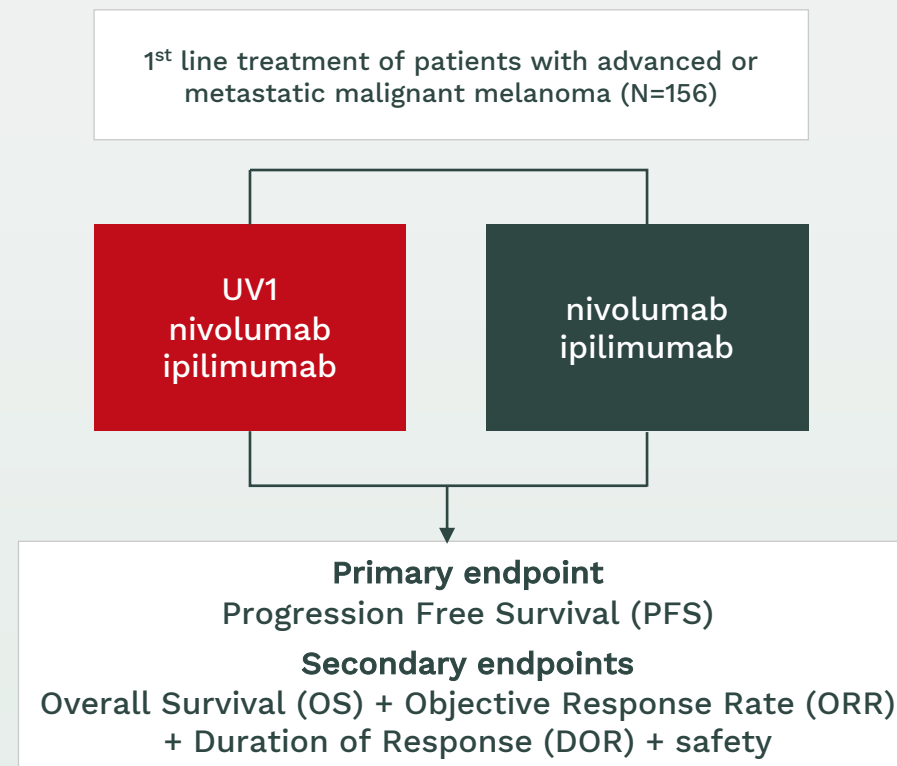
# INITIUM UV1 Phase II trial

## INITIUM: First line advanced or metastatic malignant melanoma

- **Combination:** nivolumab, ipilimumab
- **Patients:** 156 patients\* from 39 sites in 4 countries: US, UK, Belgium and Norway
- First patient enrolled June 2020
- Randomized and statistically powered trial
- Patient enrollment completed June 2022
- **Milestones:** Top line results expected H1 2023

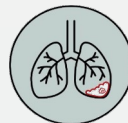


## INITIUM

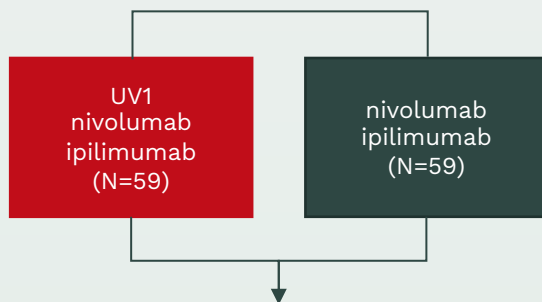


# NIPU & DOVACC UV1 Phase II Trials

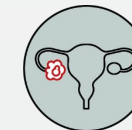
## NIPU: Second line malignant pleural mesothelioma



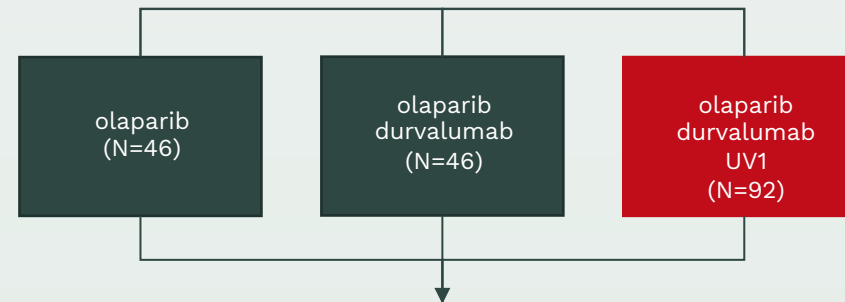
- **Combination:** nivolumab, ipilimumab
- **Contributors:** Oslo University Hospital (sponsor); BMS
- **Patients:** 118 from 6 sites in Norway, Sweden, Denmark, Spain and Australia
- First patient enrolled June 2020
- 108 patients enrolled as of 9 November 2022 (Q3 2022 reporting)
- **Milestones:** Top line results expected H1 2023



## DOVACC: High-grade BRCA negative ovarian cancer, second maintenance



- **Combination:** olaparib, durvalumab
- **Contributors :** NSGO/ENGOT (sponsor), Astra Zeneca
- **Patients:** 184 from more than 40 sites in more than 10 European countries
- First patient enrolled December 2021
- 7 patients enrolled as of 9 November 2022 (Q3 2022 reporting)
- **Milestones:** Top line results have been expected during 2023. This guidance will be updated with the Q4 2022 report



Primary endpoint: PFS

Secondary endpoints: OS + ORR + DOR + safety

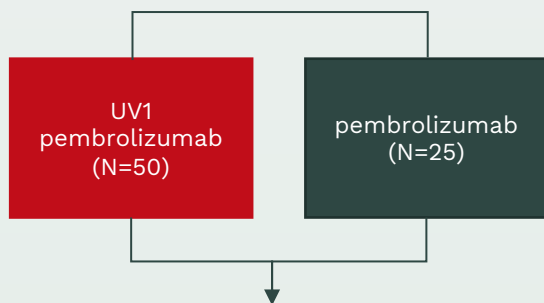


# FOCUS and LUNGVAC UV1 Phase II Trials

## FOCUS: Metastatic or recurrent head and neck squamous cell carcinoma



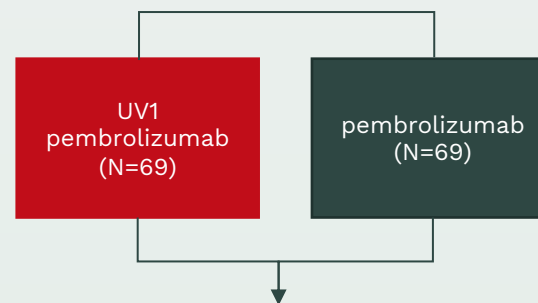
- **Combination:** pembrolizumab
- **Contributors** : Sponsored by Halle University Hospital network
- **Patients:** 75 from 10 sites in Germany
- First patient enrolled August 2021
- 41 patients enrolled as of 9 November 2022 (Q3 2022 reporting)
- **Milestones:** Topline results have been expected during 2023. This guidance will be updated with the Q4 2022 report



## LUNGVAC: Advanced or metastatic non-small cell lung cancer (NSCLC)



- **Combination:** pembrolizumab
- **Contributors:** Sponsored by Drammen Hospital
- **Patients:** 138 patients from 8-10 hospitals in Norway
- First patient enrolled October 2022
- 3 patients enrolled as of 9 November 2022 (Q3 reporting)
- **Milestones:** Topline results have been expected by the end of 2024. This guidance will be updated with the Q4 2022 report



Primary endpoint: PFS

Secondary endpoints: OS + ORR + DOR + safety



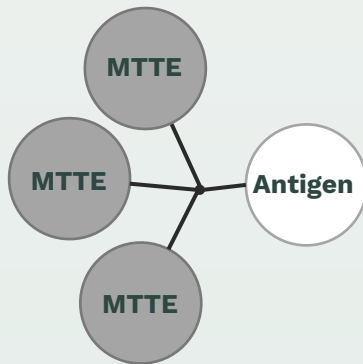
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# TET adjuvant technology platform takes advantage of a previous immune response to increase the immune response against peptides

## Platform technology

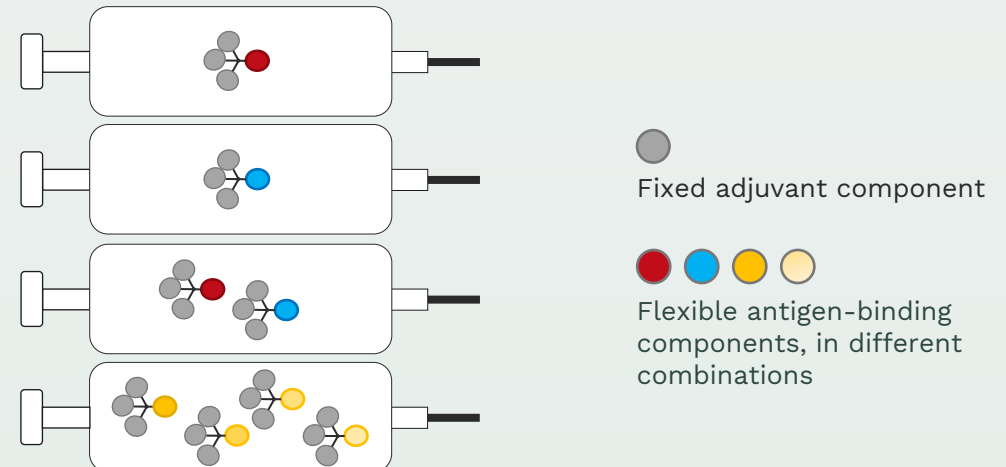
- **Expected benefits:** Improved safety profile, simplified administration, stronger immune response
- **Flexibility:** TET vaccines can be tailored to many types of cancer and infectious diseases, by coupling various antigens to the TET adjuvant



TET vaccine design (illustrative)

## Vaccine design

- **Core element** is the vaccine adjuvant, a tetanus toxin peptide sequence MTTE (Minimal Tetanus Toxin Epitope), a B cell epitope
- **Molecule design:** the adjuvant (three identical MTTEs) and the tumor antigen are coupled to a central core and combined in the same molecule



TET vaccine flexibility (illustrative)

## The TENDU Phase I trial

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- The **TENDU trial** investigates a prostate cancer specific vaccine based on the TET adjuvant platform technology
  - Conducted at Oslo University Hospital
  - Completed enrollment of twelve patients as of Dec 14<sup>th</sup>, 2022
  - Three patients were treated in each of the first two dosing cohorts, and six in the highest dosing cohort
  - **No safety concerns to date**
- This Phase I trial will provide valuable information on dose, safety and immune activation toward the further development of new vaccine solutions based on the TET technology



## Contents

1. UV1: a universal cancer vaccine
2. Phase I trial results
3. Phase II pipeline & program design
4. TET platform
- 5. Market potential and competition**

# UV1 is poised to tap into a large market due to its combination with CPIs

## 1 Combination with CPIs

- UV1 can be combined with the (standard-of-care) CPI in a broad range of cancer types
- Use of UV1 as an add-on therapy is currently evaluated in 5 different cancer indications
- Large opportunity to expand to other cancer types

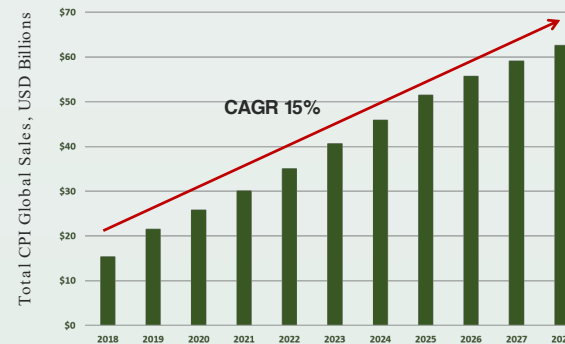
## 2 Substantial market potential

- UV1 is combined with 4 out of the top 5 CPIs currently on the market
- The target population and market potential is large and growing: the US CPI market is expected to grow by 15% p.a. until 2028

## 3 Competitive advantage

- UV1 is uniquely positioned on the market when compared to other cancer vaccine approaches
- Competitive advantage based on patient eligibility, production and administration









Malignant melanoma		CPIs									
UV1		Keytruda®	Opdivo®	Imbruvic®	Tecentriq®	Bosimma®	Nervo®	Likteq®	Yervoy®	Keytruda®	Opdivo®
NSCLC											
HRNC											
Melanoma											
Ovarian											
Prostate											
SCC											
Renal											
Uterine											
MSI-high											
Gastric											
Cervical											
Hepatocellular											
Metastatic											
Hodgkin											
Large B-cell											
Breast											
Pancreatic											
Esophageal											
Endometrial											
Cutaneous squamous cell											
Colon											



Vaccine	Eligible patients	Production	Administration
UV1	✔ No HLA screening or tumor type restriction	✔ Off-the-shelf / Low cost	✔ Intradermal
Neoantigen vaccines	Sequencing of biopsies for prediction of neoantigens	Long lead-time / High cost	Intradermal Sub-Cutaneous Intra-Muscular
Intratumoral vaccines	Patients with lesion available for intratumoral injection	Depending on platform	Intratumoral
Other tumor-associated antigen (TAA) vaccines	HLA and biomarker screening for selection of patients	Depending on platform	Intradermal Sub-Cutaneous Intra-Muscular

# Broad Combination Potential for UV1 in Multiple Cancer Types<sup>1</sup>

Clinical data opens the door to future collaborations in combination therapy

(As per September 2022)		Keytruda®  pembrolizumab	Opdivo®  nivolumab	Imfinzi®  durvalumab	Tecentriq®  atezolizumab	Bavencio®  avelumab	Yervoy®  ipilimumab	Libtayo®  cemiplimab <sup>2</sup>
Malignant melanoma	UV1 clinical trials	CPI approved indication	CPI approved indication				Nivo+Ipi	
NSCLC	UV1 clinical trials	CPI approved indication	CPI approved indication				Nivo+Ipi	
HNSCC	UV1 clinical trials	CPI approved indication	CPI approved indication					
Mesothelioma	UV1 clinical trials		CPI approved indication				Nivo+Ipi	
Ovarian	UV1 clinical trials							
Prostate	UV1 clinical trials							
SCLC	UV1 growth opportunity			CPI approved indication	CPI approved indication			
Renal	UV1 growth opportunity		CPI approved indication				Nivo+Ipi	
Urothelial	UV1 growth opportunity	CPI approved indication	CPI approved indication		CPI approved indication			
MSI-high	UV1 growth opportunity						Nivo+Ipi	
Gastric	UV1 growth opportunity	CPI approved indication	CPI approved indication					
Cervical	UV1 growth opportunity	CPI approved indication						
Hepatocellular	UV1 growth opportunity	CPI approved indication	CPI approved indication		CPI approved indication		Nivo+Ipi	
Merkel cell		CPI approved indication				CPI approved indication		
Hodgkins		CPI approved indication	CPI approved indication					
Large B-cell		CPI approved indication						
Breast	UV1 growth opportunity	CPI approved indication			CPI approved indication			
Pancreatic								
Esophageal	UV1 growth opportunity	CPI approved indication	CPI approved indication					
Endometrial	UV1 growth opportunity	CPI approved indication						
Cutaneous squamous cell		CPI approved indication						CPI approved indication
Colon	UV1 growth opportunity		CPI approved indication				Nivo+Ipi	

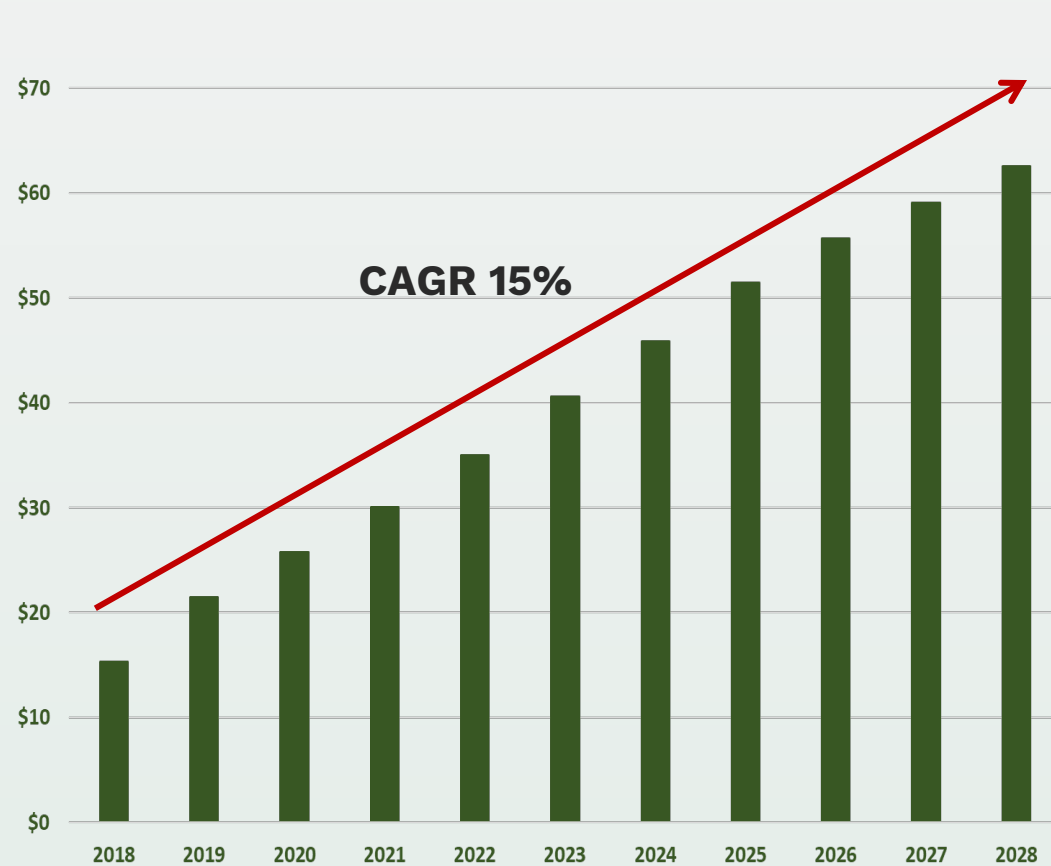


1. Global Data, 2022, Product package inserts Q2 2022  
 2. Also approved in Basal cell carcinoma  
**Note:** other approved PD1/PD-L1 program: Dostarlimab (Jemperli), various additional approvals in China

- UV1 clinical trials
- UV1 growth opportunity
- CPI approved indication

# UV1 is uniquely positioned in Phase II trials with 4 out of the top 5 CPIs

Total CPI Global Sales, \$ bn (2018-2028)



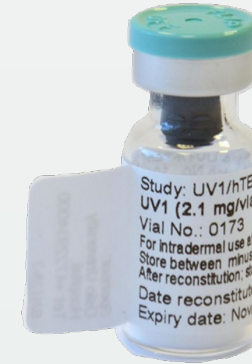
Marketed CPIs	UV1 trial	Indication
1. Pembrolizumab (Keytruda®)	FOCUS, LUNGVAC	Head & neck cancer, NSCLC <sup>2</sup>
2. Nivolumab (Opdivo®)	INITIUM, NIPU	Malignant melanoma, mesothelioma
3. Atezolizumab (Tecentriq®)		
4. Ipilimumab (Yervoy®)	INITIUM, NIPU	Malignant melanoma, mesothelioma
5. Durvalumab (Imfinzi®)	DOVACC	Ovarian cancer
6. Cemiplimab (Libtayo®)		
7. Sintilimab (Tyvyt®)		
8. Avelumab (Bavencio®)		



## UV1 is an 'off-the-shelf' product ready for combination use

### Simple production and logistics:

- Well established **proprietary technology**
- Production by **standard peptide synthesis**
- Stable product with **3 years shelf life** at 5°C
- Standard shipping and **simple on-site preparation**, i.e., reconstitution with water
- **Low manufacturing cost**



# UV1 Competitive Profile vs Other Cancer Vaccines approaches

Vaccine	Eligible patients	Production	Administration
UV1	✓ No HLA screening or tumor type restriction	✓ Off-the-shelf / Low cost	✓ Intradermal
Neoantigen vaccines	Sequencing of biopsies for prediction of neoantigens	Long lead-time / High cost	Intradermal Sub-Cutaneous Intra-Muscular
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Other tumor-associated antigen (TAA) vaccines	HLA and biomarker screening for selection of patients	Depending on platform	Intradermal Sub-Cutaneous Intra-Muscular

# Experienced Management Team with Proven Execution Capabilities



**Carlos de Sousa**

MD, EMBA  
CEO



**Jens Bjørheim**

MD, PhD  
CMO



**Ingunn H. Westgaard**

PhD  
Head of Research



**Hans Vassgård Eid**

MSc Business  
CFO



**Gudrun Trøite**

PhD  
Head of Project  
Coordination



**Audun Tornes**

MSc  
CTO



**Orla Mc Callion**

PhD  
Head of Regulatory &  
QA



**Øivind Foss**

Dr.Scient  
Head of Clinical  
Operations



**Ton Berkien**

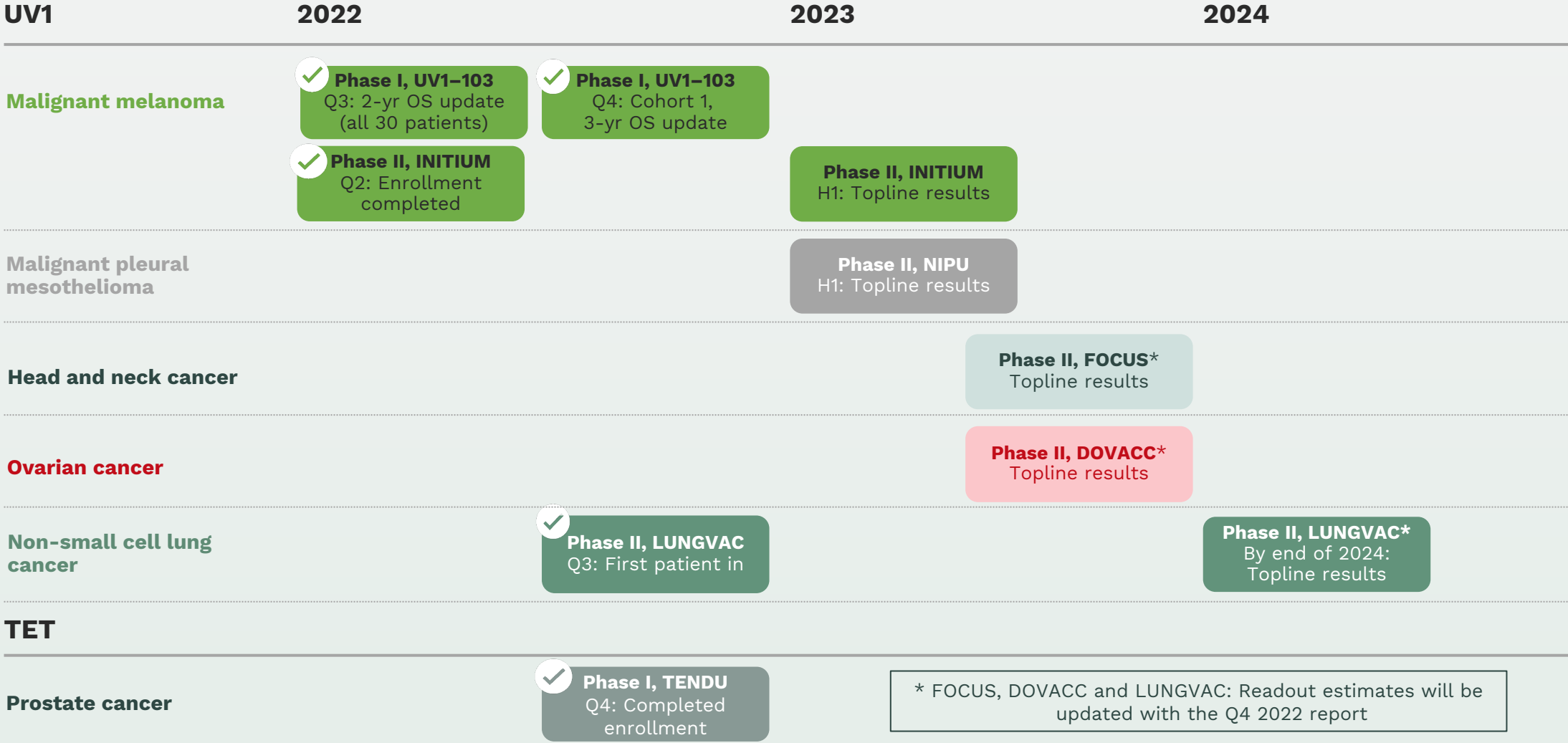
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**Anne Worsøe**

MSc Business  
Head of IR

# Expected news flow and milestones: key value inflection points during the next 9-24 months



# Key Takeaways

- **Cancer vaccine platform** (UV1 and TET) enhances the efficacy and durability of IO therapy
  - Broadly applicable as backbone therapy in different cancer types and in immune-therapy combinations
- UV1 improves CPIs activity in **combination base line therapy**: off-the-shelf applicability and easy to use
  - hTERT is expressed in 85-90% of cancers at all stages of disease
  - UV1 triggers the immune response against hTERT to identify and kill cancer cells
- **Good safety profile** and clear signals of clinical efficacy inducing robust immune response (durability >7.5 years)
- **Broad Phase II development program highlights the significant commercial potential**
  - Five Phase II randomized clinical combination trials ongoing
  - Enrolling >650 patients, 100 hospitals in 15 countries
- **Fast Track** designation and **Orphan Drug** designation in metastatic melanoma provides FDA validation
- Validation through **joint projects with large pharma companies and oncology specialist groups**
- Start of clinical evaluation of innovative novel TET-platform with Phase I TENDU Study
- **Experienced team**, strong shareholder base and good cash position
- **Multiple key value inflection points in the near term** and over the next 24 months



**Enabling the immune system  
to fight cancer**

[ir@ultimovacs.com](mailto:ir@ultimovacs.com)



# Appendix

# Patient baseline demographics of Phase I UV1 + ipilimumab in Malignant Melanoma

## Patient characteristics

- All patients had stage IV disease
  - M1c in 50% of patients
- Elevated LDH in 50% of patients
- 33.3% of patients had received prior therapy

Patient	N (%)
<b>Age (years)</b> median, range	57 (44-74)
<b>Sex</b>	
female	5 (42%)
male	7 (58%)
<b>ECOG</b>	
0	11 (91.7%)
1	1 (8.3%)
≥2	0 (0%)
<b>Stage</b>	
M1a	3 (25%)
M1b	2 (16.7%)
M1c	6 (50%)
M1d	1 (8.3%)
<b>BRAF status</b>	
Mut	3 (25%)
wt	9 (75%)

Patient	N (%)
<b>Liver metastases</b>	
Yes	3 (25%)
No	9 (75%)
<b>LDH</b>	
above ULN	6 (50%)
below ULN	6 (50%)
<b>Prior therapy</b>	
Chemotherapy	2 (16.7%)
BRAF/MEK inhibitor	2 (16.7%)
ipilimumab	0 (0%)
<b>Prior lines of therapy</b>	
0	8 (66.7%)
1	4 (33.3%)
≥2	0 (0%)



## Patient baseline demographics of Phase I UV1 + pembrolizumab

### Key Eligibility Criteria

- Advanced histologically confirmed malignant melanoma (stage IIIB-C, IV)
- Measurable and evaluable disease according to iRECIST
- Previously untreated and eligible for pembrolizumab (prior BRAF and MEK inhibitors permitted)
- ECOG 0-1
- Active brain metastases, and uveal or ocular melanoma not permitted

### Patient characteristics

- 63% ECOG status 1
- M1c in 27% of patients
- Elevated LDH in 31% of patients
- All patients treated as first-line
- PD-L1 negative tumour biopsies in 64% of evaluable patients
- TMB low in 47% of evaluable patients

Characteristic	N (%)
<b>Age (years)</b>	
Median, range	70,5 (30-87)
<b>Sex</b>	
female	9 (30%)
male	21 (70%)
<b>ECOG status</b>	
0	19 (63%)
1	11 (37%)
<b>Stage</b>	
IIIB	2 (7%)
IIIC	9 (30%)
IV M1a	5 (17%)
IV M1b	5 (17%)
IV M1c	8 (27%)
IV M1d	1 (3%)
<b>Liver metastases</b>	
Yes	4 (13%)
No	26 (87%)

Characteristic	N (%)
<b>BRAF V600E*</b>	
Mut	10 (33%)
Wild-type	17 (57%)
<b>LDH<sup>^</sup></b>	
above ULN	9 (31%)
below ULN	20 (69%)
<b>Prior lines of systemic therapy</b>	
0	30 (100%)
<b>PD-L1 status</b>	
Positive (≥1%)	8 (36%)
Negative	14 (64%)
Missing	8
<b>Tumor mutational burden</b>	
High (≥20 mut/Mb)	3 (18%)
Intermediate (6-19 mut/Mb)	6 (35%)
Low (0-5 mut/Mb)	8 (47%)
Missing	13

# Fast track and orphan drug designation confirms our confidence in the therapeutic potential of UV1











## **Ultimovacs is granted Fast Track designation from the FDA for**

- UV1 as add-on therapy to pembrolizumab for the treatment of malignant melanoma
- UV1 as add-on therapy to ipilimumab for the treatment of malignant melanoma
- Fast track is designed to facilitate the development and expedite the review of drugs to treat serious conditions and fill an unmet medical need  
The purpose is to get important new drugs to the patient earlier

## **Ultimovacs is granted Orphan Drug designation from the FDA, for**

- UV1 in patients with malignant melanoma
- A status given to certain drugs which show promise in the treatment, prevention, or diagnosis of orphan diseases; a rare disease or condition that affects fewer than 200,000 people with unmet medical needs in the US. The intention of the program is to support and advance the development and evaluation of new treatments.

# Experienced Board of Directors

 <p><b>Jonas Einarsson</b> Chairman of the board</p>	<ul style="list-style-type: none"> <li>CEO of the Norwegian Radium Hospital Research Foundation</li> <li>Board member of several biotech companies</li> <li>One of the initiators behind the Norwegian Center of Expertise, Oslo Cancer Cluster</li> </ul>	 <p><b>Henrik Schüssler</b> Board member</p>	<ul style="list-style-type: none"> <li>CEO and board member of Gjelsten Holding AS</li> <li>Previously CFO and CEO of Norway Seafood</li> <li>Accounting/consulting experience from Ernst &amp; Young</li> </ul>	 <p><b>Haakon Stenrød</b> Board member</p>	<ul style="list-style-type: none"> <li>Senior Investment Manager at Watrium</li> <li>Previously 12 years in the Investment Banking at ABG Sundal Collier, focusing on M&amp;A, restructurings and capital markets advisory</li> <li>Board member of DF Capital, a UK challenger bank listed on AIM London</li> </ul>
 <p><b>Leiv Askvig</b> Board member</p>	<ul style="list-style-type: none"> <li>Investment Advisor at Sundt AS, a Norwegian family owned investment company</li> <li>Board member of Padox AB, Eiendomsspar, Oncoinvent AS and Civita</li> <li>Previously Chairman of the Board of Oslo Stock Exchange and CEO of Sundal Collier &amp; Co</li> </ul>	 <p><b>Kari Grønås</b> Board member</p>	<ul style="list-style-type: none"> <li>Extensive experience in drug development and commercialization within the pharmaceutical industry of new breakthrough products securing regulatory approvals, i.e. Xofigo, Hexvix</li> <li>Board positions in Spago Nanomedical AB, SoftOx AS and The Norwegian Lung Cancer Society</li> </ul>	 <p><b>Aitana Peire</b> Board member</p>	<ul style="list-style-type: none"> <li>Investment Manager of Canica's Future of Health assets. Board member in EXACT-Tx AS</li> <li>Previously senior consultant in Venture Valuation, Pharma equity research analyst at Kepler Cheuvreux and PMA consultant for Stratas Partners in Basel and investment analyst for London-based hedge fund Carval Investors</li> </ul>
 <p><b>Ketil Fjerdings</b> Board member</p>	<ul style="list-style-type: none"> <li>25+ years experience from board and management positions in different companies and industries</li> <li>Ultimovacs' Chairman of the board from '11-'17</li> </ul>	 <p><b>Eva S. Dugstad</b> Board member</p>	<ul style="list-style-type: none"> <li>Manager for Business and Community Relations at Faculty of Mathematics and Natural Sciences, University of Oslo</li> <li>Previously Director for Business Development at Radforsk and President and EVP at the Institute for Energy Technology (IFE)</li> <li>Has been involved in various boards in both public and private sector and in several public expert panels</li> </ul>		