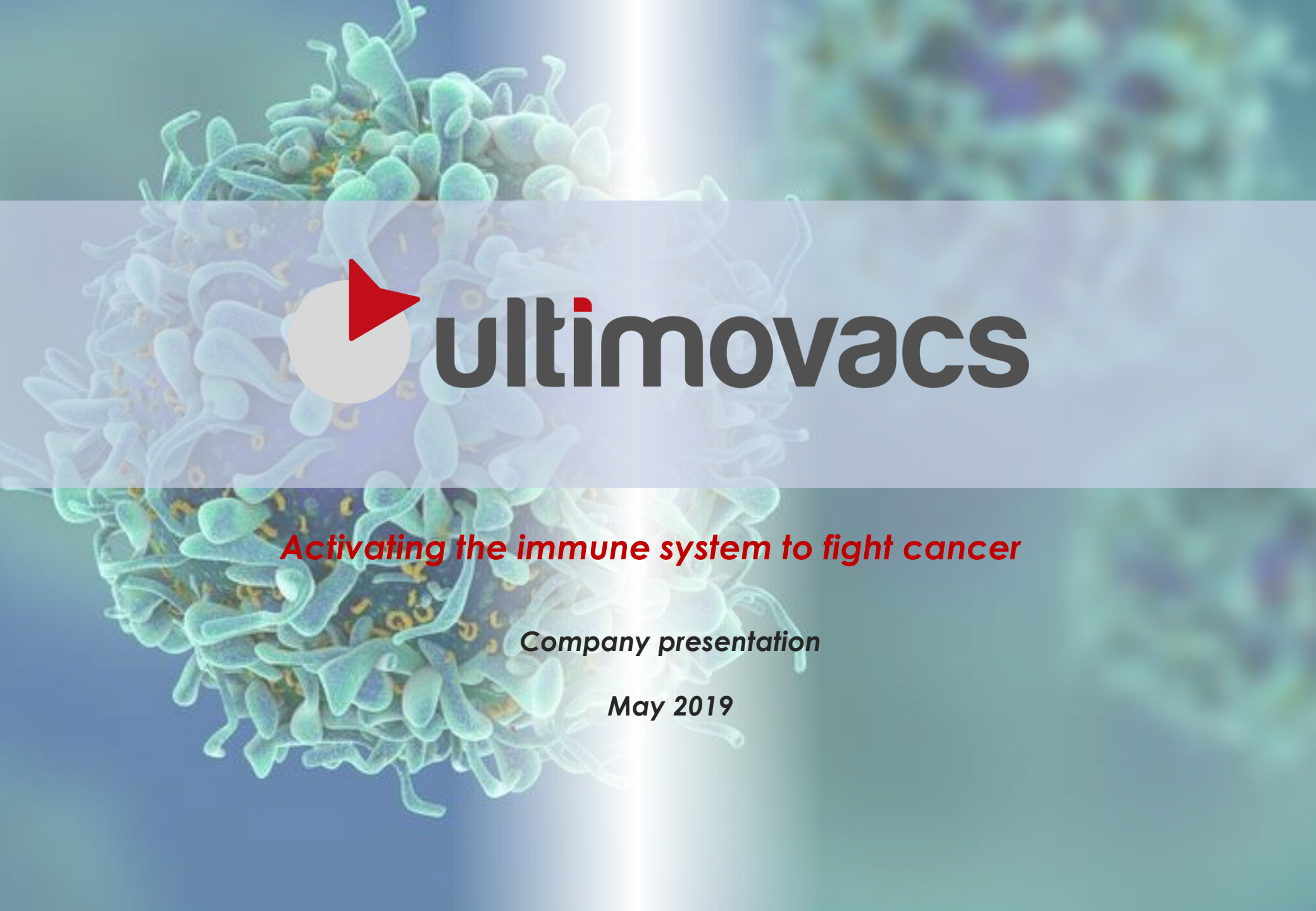

ultimovacs

Activating the immune system to fight cancer

Company presentation

May 2019

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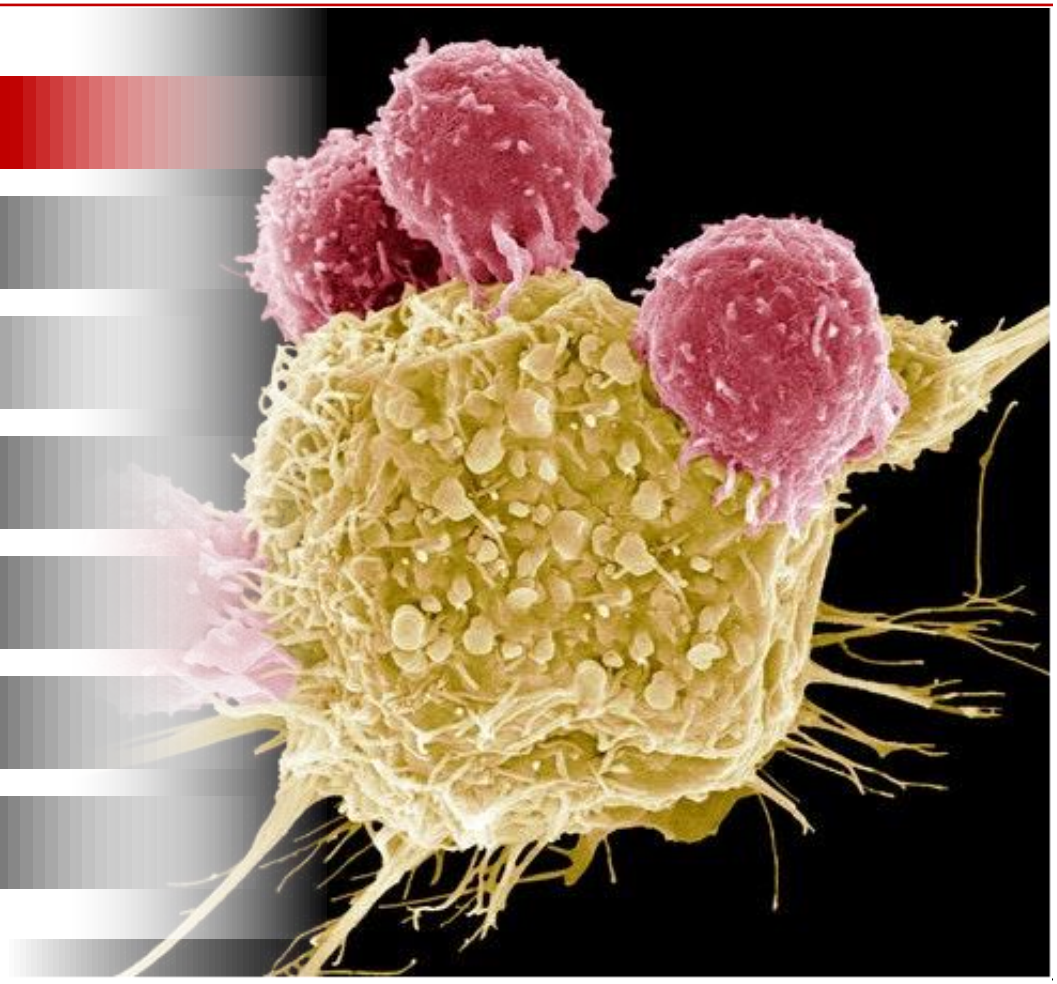
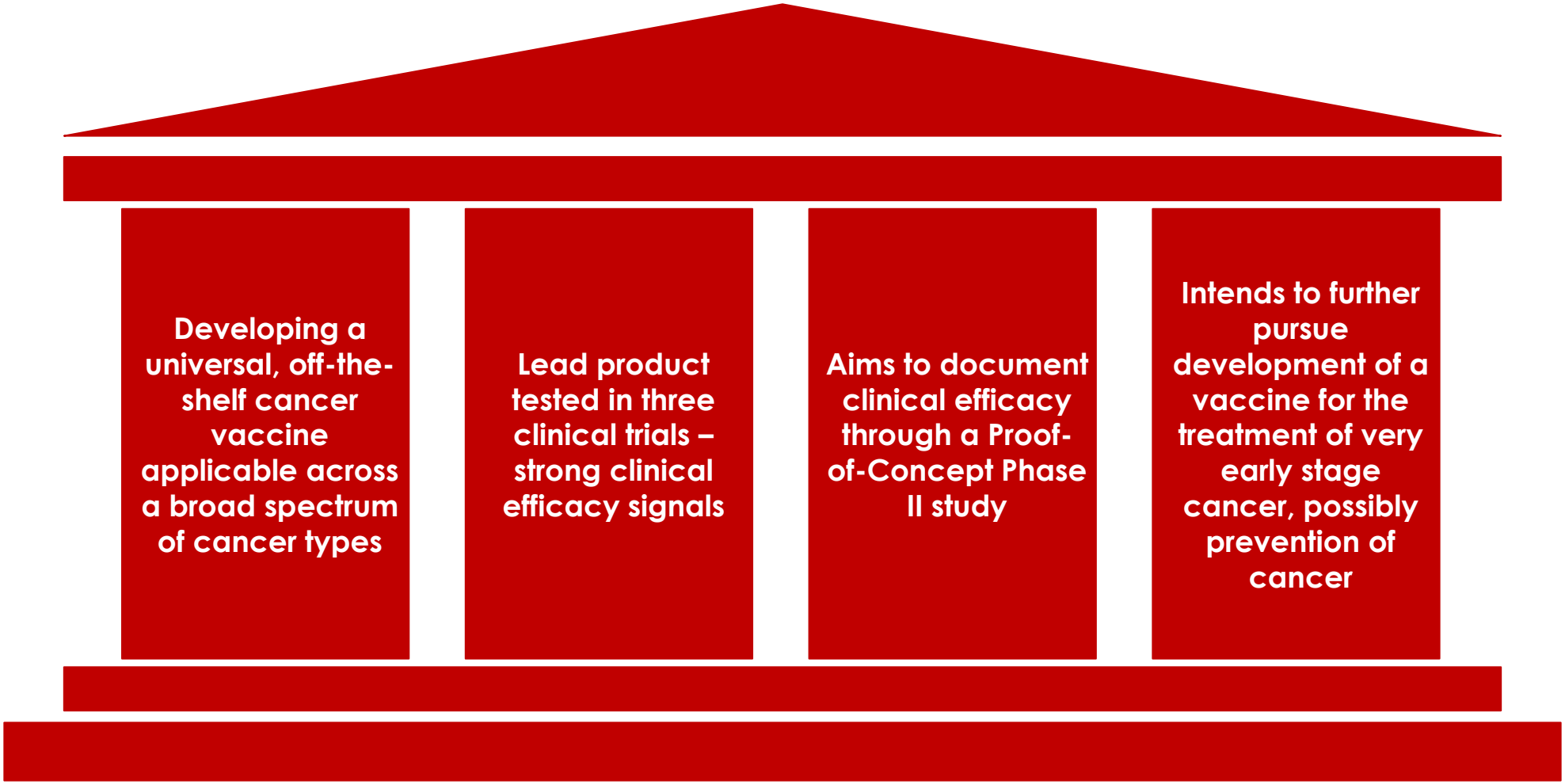
Agenda

1. Introduction to Ultimovacs
2. Immunotherapy and telomerase (target antigen)
3. The UV1 vaccine
4. Clinical development program
5. Newsflow and shareholder base
6. UV2 preclinical / first-in-man clinical trial
7. Supporting information



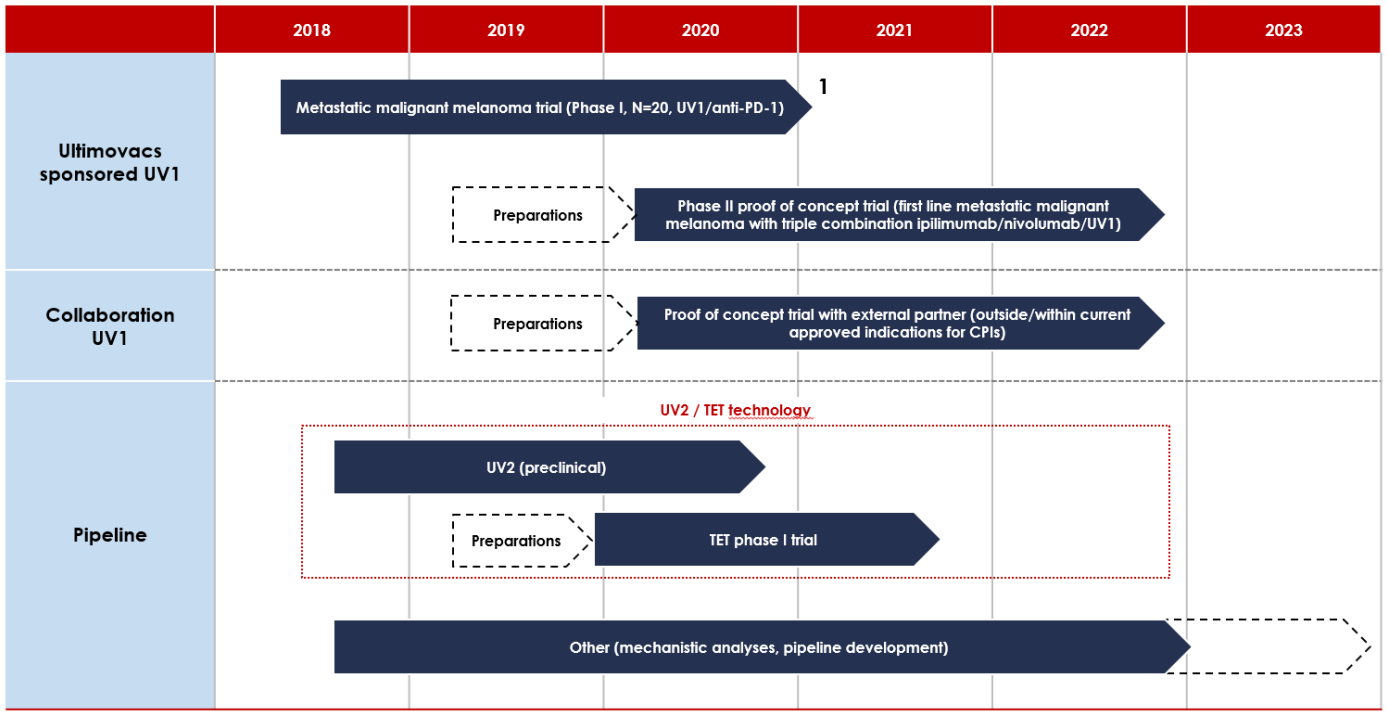


Company Snapshot

Brief overview

- Ultimovacs is a research based pharmaceutical company focused on developing universal cancer vaccines applicable at all stages of cancer, including possibly prevention of cancer
- Ultimovacs' lead product UV1 is a universal cancer vaccine developed to enable the immune system to identify and kill cancer cells
- UV1 activates the immune system against telomerase antigens (hTERT) essential to cancer cells' unlimited proliferation ability
- These antigens are present in 85 – 90% of all cancers
- UV1 is developed in combination with checkpoint inhibitors
- UV1 is easy to produce and requires no sophisticated infrastructure

Development plan



1: Strong momentum in recruitment, as of 14 May 2019, 11 patients are recruited to the study

Ultimovacs – Investment Highlights

Proven, highly experienced management team

- Seasoned management team with a track record of success
- Industrial experience from research through commercialization

UV1 - Unique and universally applicable cancer vaccine

- Universally applicable across cancer indications, stages and populations
  - T-helper cell (CD4) activating vaccine
  - Synergistic effects with checkpoint inhibitors (CPIs)
    - HLA type independent, no screening necessary

Multiple sources of value

- Strong commercial potential as combination treatment with CPIs
  - Potential to expand therapeutic area to include indications approved for CPIs
  - CPI sales expected to exceed USD 34bn by 2024
- Significant upside opportunity to move use of UV1 to adjuvant setting and possibly prevention of cancer

Promising clinical data

- hTERT is a universal self antigen, identification of tumor or patient specific antigens not necessary
- Three Phase I/IIa clinical trials completed and in follow-up with promising data
  - Melanoma: 75% 2Y survival (UV1 + ipilimumab) vs. 42% (ipilimumab only)
  - Stage 3B/4 NSCLC: 50% 2Y survival and 28 months median overall survival (UV1 mono)
  - Prostate: 8 of 22 patients with normal PSA levels and no clinical signs of cancer after 4.5 years

Pioneers in a new area of biology

- Pioneered and identified the concept of using telomerase (hTERT) as an immune therapy target
- hTERT expression is the mechanism enabling the cancer cell to divide an endless number of times

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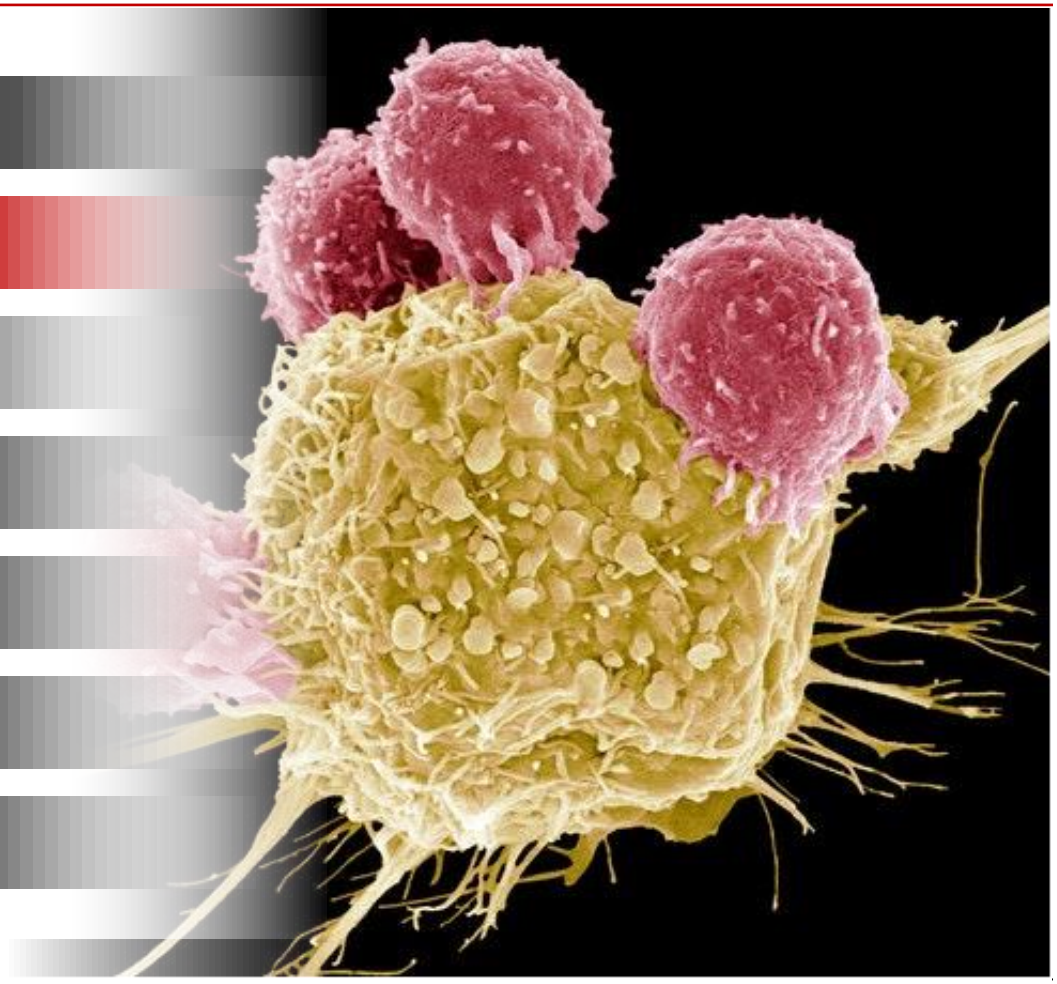


UV1 is a CD4 Activating, Universal Cancer Vaccine

UV1 is directed towards hTERT, which is expressed in 85-90% of all cancer indications

UV1 can be used in the general population without pre-screening of HLA

The UV1 vaccine consists of long peptides activating CD4 helper T lymphocytes

UV1 is easily manufactured, has a long shelf life and a low unit cost

Ease of clinical use, no complex hospital infrastructure required

Ultimovacs is in the forefront of Cancer Vaccine Development

Key enablers for Ultimovacs

- Checkpoint inhibitors
- Combination treatments
- Understanding of telomerase as antigen

Ultimovacs differentiation

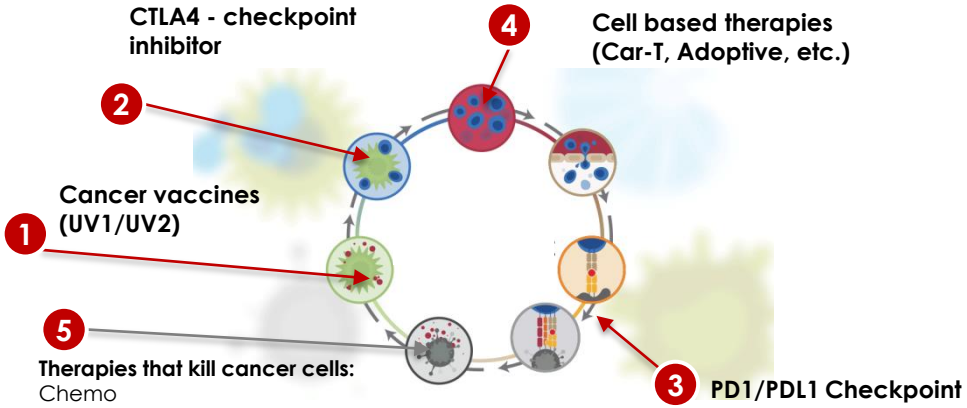
- Long peptide = T-helper cell activation approach
- Universal target
- Essential target
- Off-the-shelf solution

Immunotherapy Clears Cancer

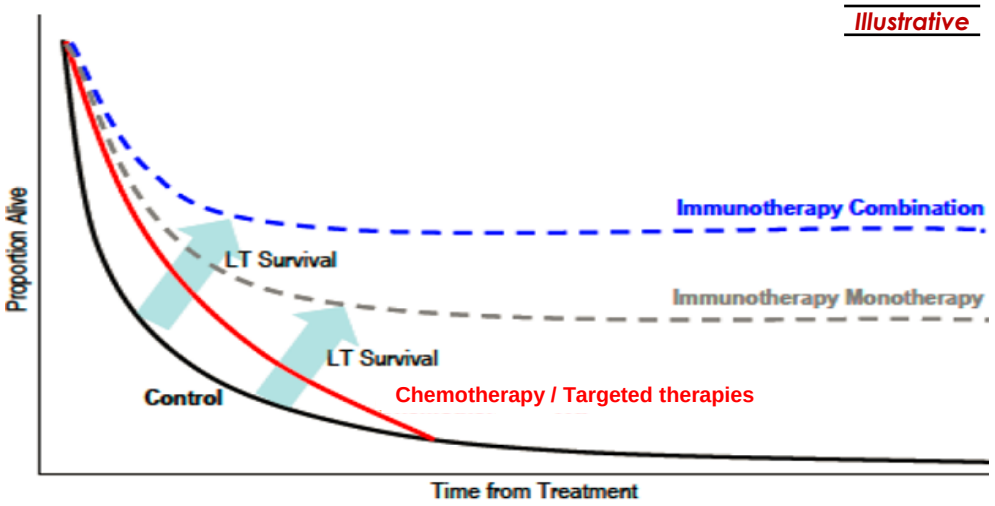
Immunotherapy is a unique approach using the body's natural defences (the immune system) to fight cancer

- The premier feature of the immune system is the ability to differentiate and recognize foreign bodies or abnormal cells such as tumor cells from normal cells
- Cancerous cells deploy different approaches to avoid recognition and elimination by the immune system through;
  - Disruption of the antigen presenting mechanisms (downregulating HLA or disabling antigen processing); or
  - Disrupting the pathways involved in controlling T cell inhibition and activation to avoid being attacked by the immune system
- The immunotherapy approach enables the immune system to target cancer cells directly, is less invasive, has fewer limitations and is applicable to tumors at a broader spectrum of stages compared to standard of care (chemo, radiation, surgery)
- Since the first immunotherapy treatment was approved in 2010, it has proven effective in treating a wide array of oncology indications

The cancer immunity cycle



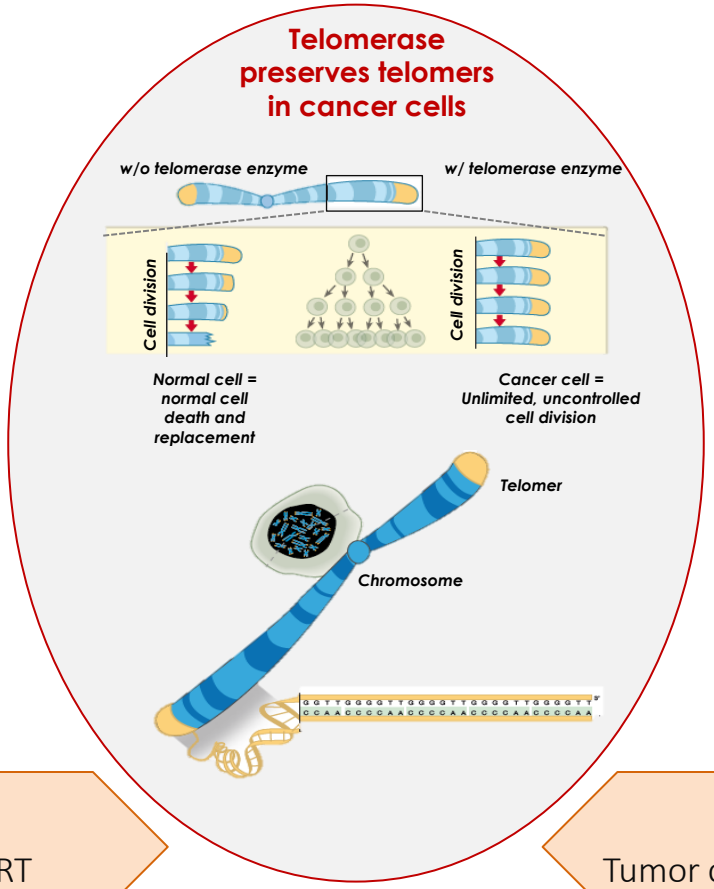
Improving long-term survival



Source: Citi – opinion article November 19th 2013, Dagens Medisin

Telomerase (hTERT) is an Ideal Target Antigen in Cancer Immunotherapy

- Telomerase's function and relevance for tumor is well known and documented
- Most normal cells are telomerase negative
- Telomerase is present in cancer stem cells



- Telomerase is essential for unlimited growth and immortality
- Telomerase is also essential for tumor spread

Telomerase is a **universal target**:
85-90% of cancer cells express hTERT

Telomerase is an **essential target**:
Tumor cells are dependent on expressing hTERT

Source: Role of Telomeres and Telomerase in Aging and Cancer (2016) , Jerry W. Shay

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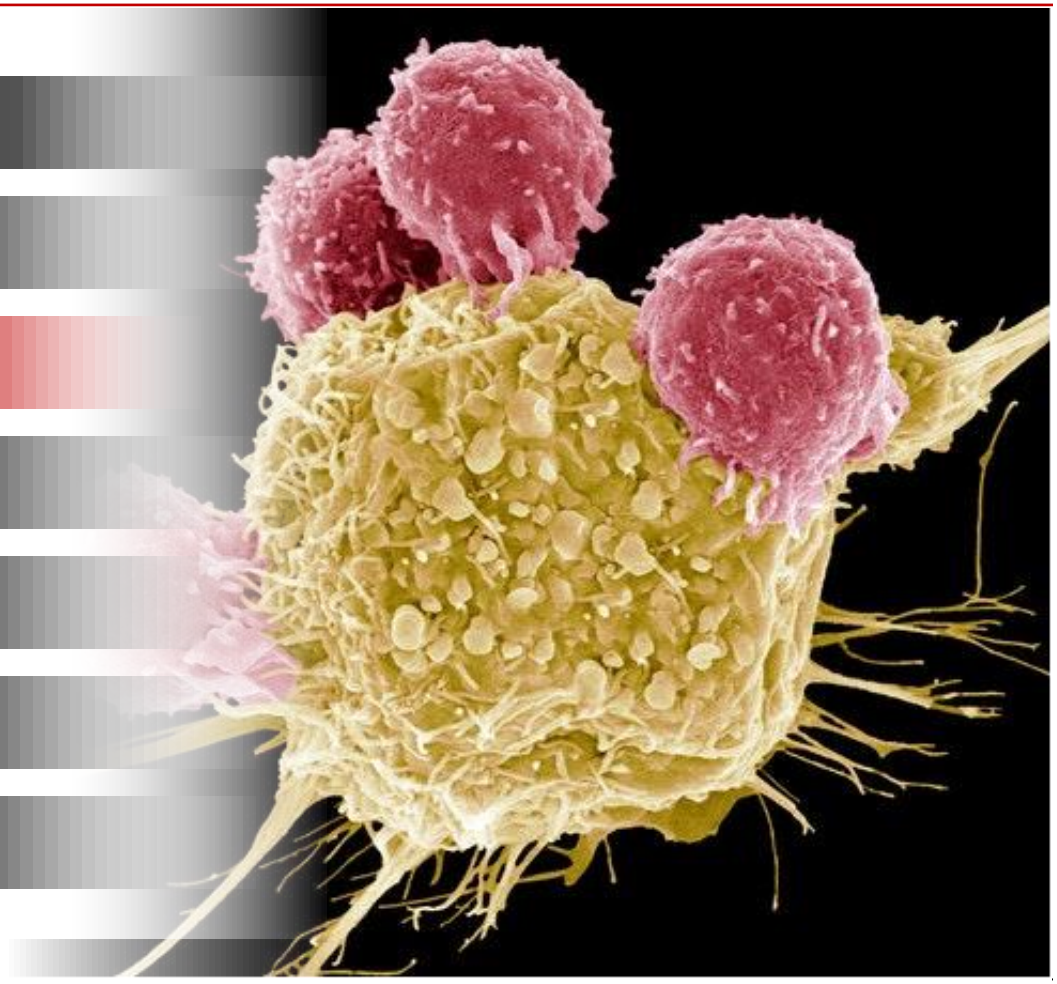
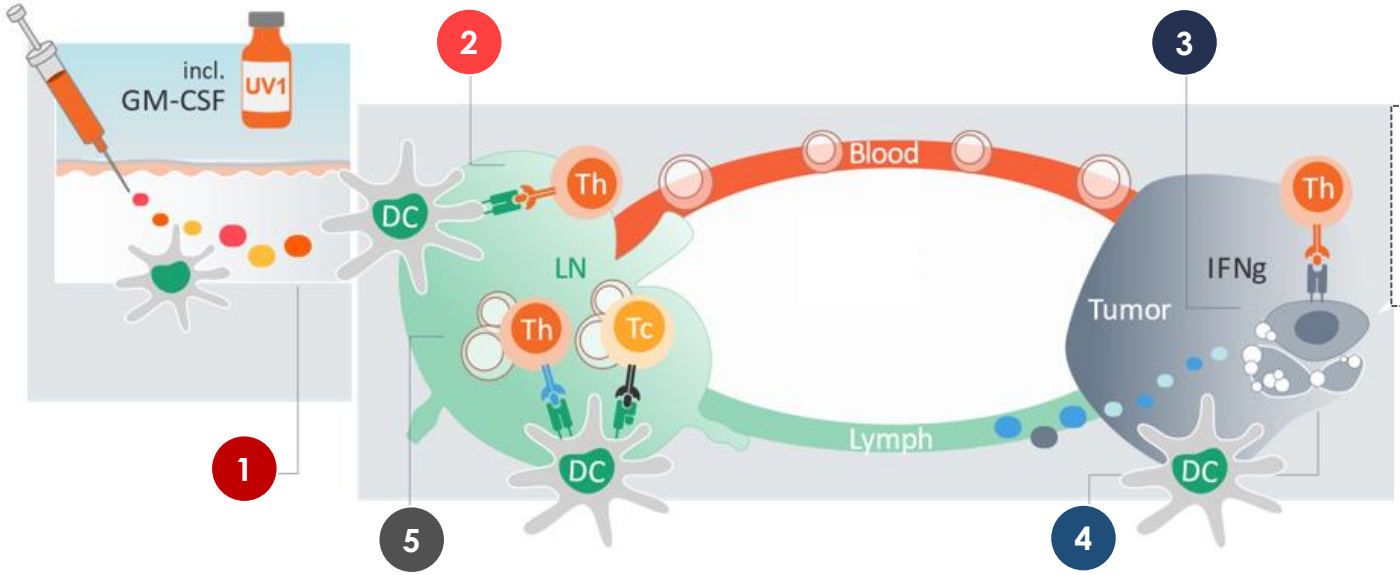


UV1 – Mechanism of Action

The UV1 mechanism of action is fundamentally to activate CD4 helper T lymphocytes



DC = Dendritic cell (antigen presenting cell)
Th = T helper cell
Tc = T killer cell
IFNg = Interferon gamma
LN = Lymph node

1. **UV1 is administered as an intradermal injection, taken up by antigen presenting cells and transported to lymph node**
2. **In the lymph node UV1 epitopes are presented to T-cells and T-cells are clonally expanded**
3. **T-cells migrate in blood to tumor and enter the tumor if microenvironment is acceptable. T-cells will kill cancer cells presenting UV1 epitopes. The UV1 T-cells produce several molecules (IFNg, IL-2 and TNF-alfa) generating an optimal environment for immune-mediated killing of cancer cells and formation of memory T-cells**
4. **New epitopes (neoantigens) from dead tumor cells are taken up by antigen presenting cells and transported to lymph node**
5. **T-cells recognizing new epitopes are clonally expanded and migrate to tumor**

CD4 T Cells Orchestrate Effective and Durable Antitumor Immune Responses (1 of 2)

Key roles of CD4 Th1 cells in the cancer immunity cycle

A **Induction of effective antigen presentation**[1]

- *Through cytokine production, CD4 T cells mediate induction of class I and II HLA molecules on tumor cells and upregulation of antigen processing machinery in antigen presenting cells (APCs)*

B **Augmentation of CD8 T cell responses**[1,2]

- *CD4 T cells activate APCs, leading to cross-priming of CD8 T cells and antigen spreading*

C **T cell homing**[1,3,6]

- *CD4 T cells produce IFN-g which by several mechanisms support T cell infiltration to the tumor*

D **Tumor cell killing**[1,4,5]

- *Induction of cytotoxic T cell responses, and direct and indirect killing of HLA-class II pos or neg tumors, respectively*

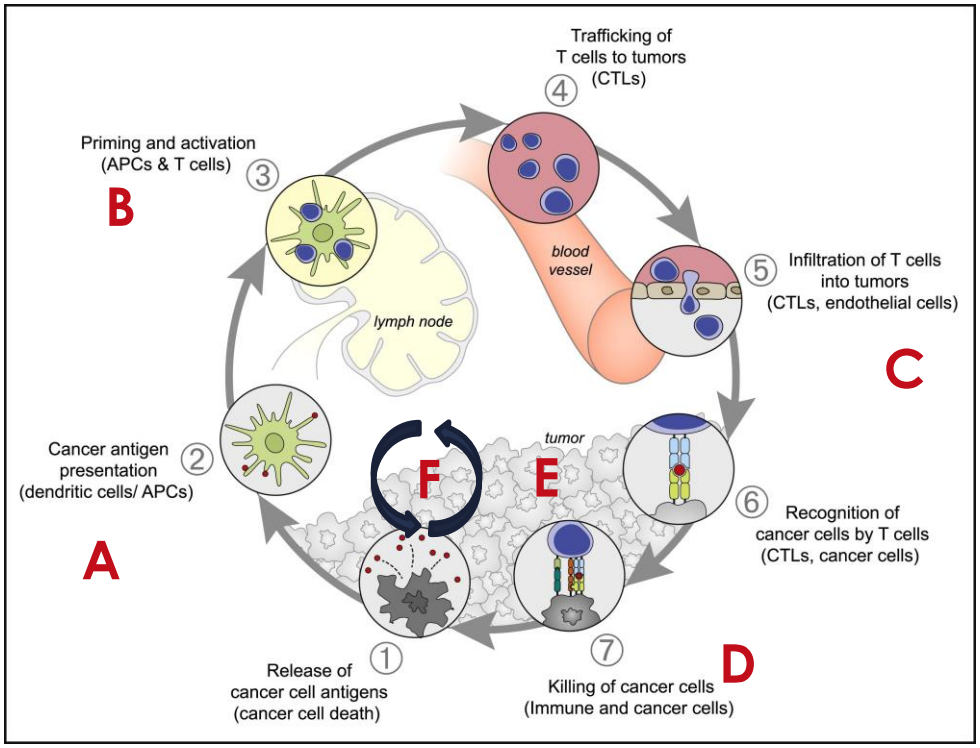
E **Activation of other immune cells**[9]

- *CD4 T cells activate NK cells, macrophages and B cells, potentially leading to a favorable modulation of the tumor microenvironment*

F **Memory formation**[1,7]

- *CD4 help is required for optimal CD8 memory formation and secondary recall response*

The cancer immunity cycle[8]

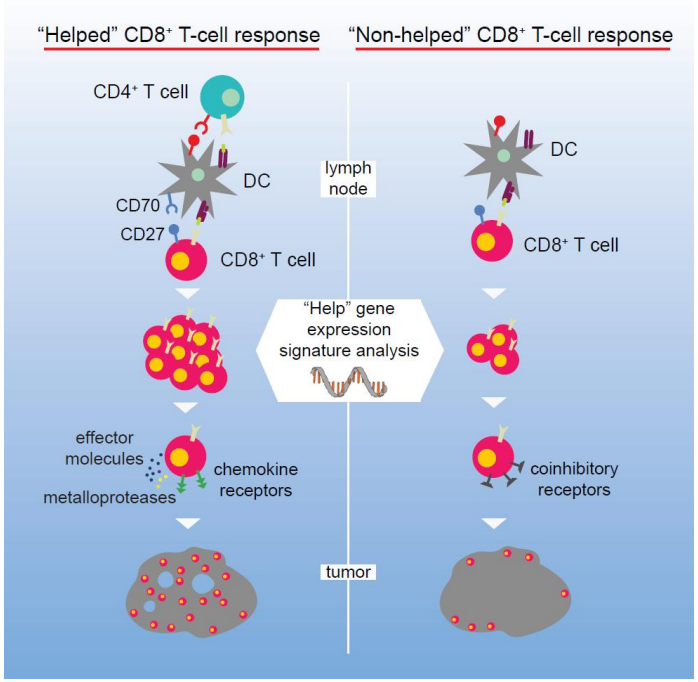


1: Mellsen & Slingluff, Curr. Op. Immunol., 2017; 2: Kreiter S et al., Nature, 2015; 3: Keskin et al, Nature, 2019; 4: Tran E, et al., Science, 2014; 5: Haabeth et al, Front. In Immunol. 2014; 6: Justin Wong et al, J Immunol., 2008; 7: Janssen et al, Nature, 2004; 8: D.S. Chen & I. Mellman, Immunity, 2013; 9: Murphy K & Weaver C Janeway`s Immunobiology 9th edition, 2017

CD4 T Cells Orchestrate Effective and Durable Antitumor Immune Responses (2 of 2)

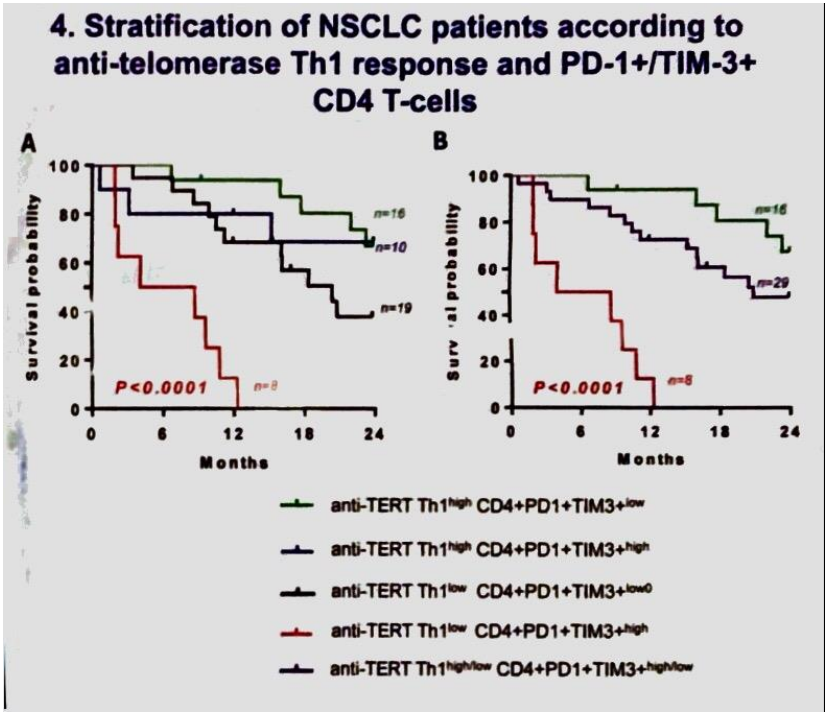
CD4 "help" potentiates CD8 effector function[1-2]

- Priming of CD8 T cells in absence of CD4 "help" is ineffective, due to lack of CD27 co-stimulation, leading to a 10-fold reduction in cell frequency
- Effector differentiation, migration and extravasation of the CD8 T cells are reliant on CD4 stimulation
- Therefore, lack of CD4 stimuli during priming ultimately results in impaired anti-tumor activity



Clinical validation of the relevance of hTERT-specific CD4 T cells[3]

- Spontaneous hTERT-specific immune responses of the CD4+ Th1 phenotype are proven to correlate with favorable outcome
- hTERT-specific Th1 cells counteracts hyper exhausted CD4+ cells leading to improved survival, regardless of disease stage
- hTERT-specific CD4+ Th1 cells suggested as a potential biomarker for immunotherapy



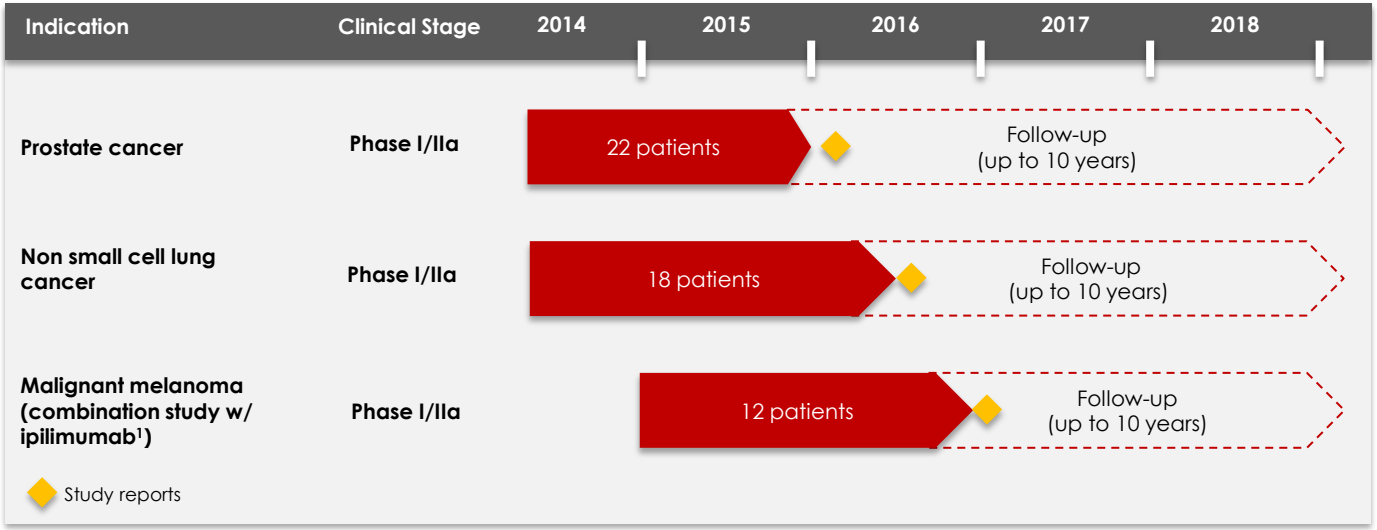
1: Ahrends et al, Immunity, 2017

2: Provine et al, J Immunol, 2016

3: Laheurte et al, abstract 575/10 presented at AACR 2019, An immunomonitoring study in NSCLC (N=59) showed that levels of hTERT-specific CD4 Th1 cells correlated with positive survival (p=0.009)

UV1 Clinical Trials Completed to Date

Clinical trial overview



Description

- 3 Phase I/IIa trials are completed and now in follow-up
- Safety profile as expected for therapeutic cancer vaccine
  - Generally well tolerated with mild side effects reported as injection site related
- All trials were performed as single site trials at The Norwegian Radium Hospital

Key conclusions from completed studies

Melanoma trial	Lung cancer trial	Prostate cancer trial
2-year survival of 75% (UV1 + ipilimumab) vs. 42% (ipilimumab only)	2-year survival of 50% and 28 months median overall survival (UV1 mono)	8 of 22 patients with normal PSA levels and no clinical signs of cancer after 4.5 years
▸ The study treatment is safe and well tolerated ▸ Median progression-free survival was 6.5 months	▸ The study treatment is safe and well tolerated ▸ Median progression-free survival was 12.3 months	▸ The study treatment is safe and well tolerated ▸ 8 of 22 patients with normal PSA levels and no clinical signs of cancer after 4.5 years

1: Ipilimumab Yervoy (Bristol-Myers Squibb) was the first checkpoint inhibitor approved for cancer treatment. It works by helping to stimulate t-cell activation and proliferation

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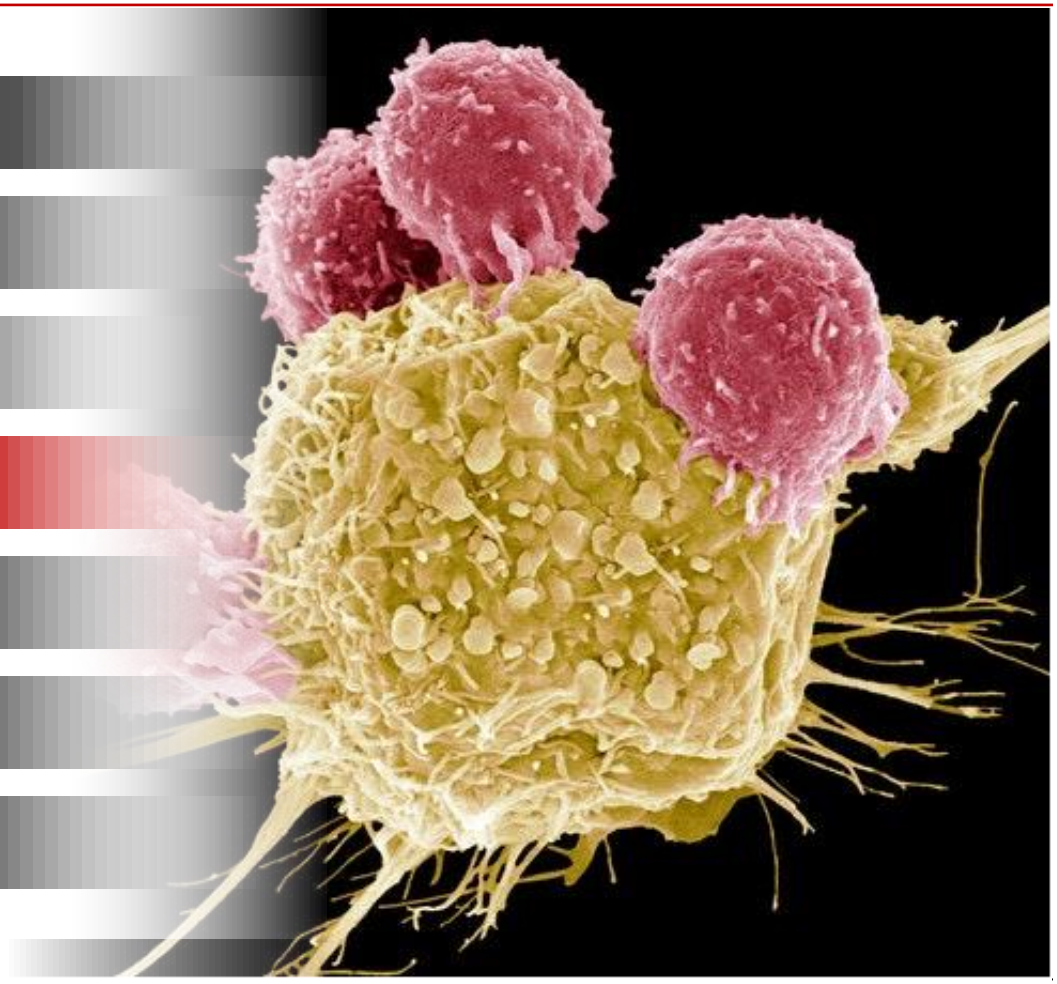


Process for Selection of Indications for Proof of Concept Trial

Workflow for identification of proof of concept trial

Scientific, medical, regulatory and commercial selection criteria

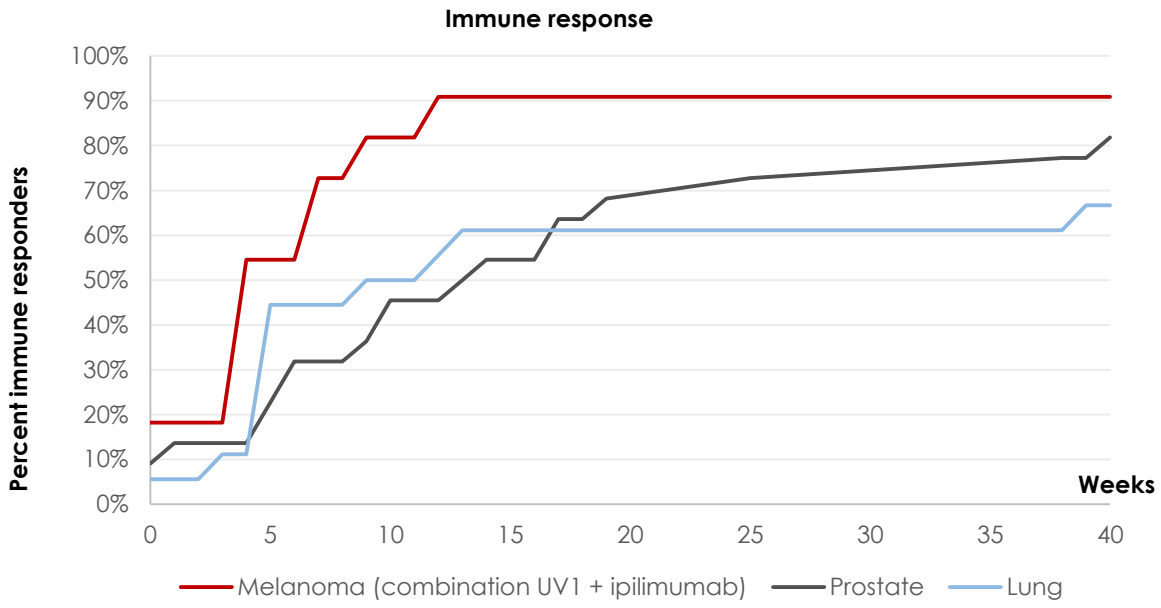
- Unmet medical need
- Clinical efficacy signals from completed Ultimovacs trials
- Combination checkpoint inhibitors (CPIs) approved in major markets
- Current CPI Standard of Care expected to be stable for next 3 years
- Acceptance by international Key Opinion Leaders
- Positive trial outcome relevant for future development

Proposed Proof of Concept trial

First line metastatic malignant melanoma with triple combination ipilimumab/nivolumab/UV1

Rationale for selection of Malignant Melanoma (1 of 2)

Immune response and response rate



Best overall response[1]

Ipilimumab (N=315) CheckMate-067	Ipilimumab/UV1 (N=9)
19%	44%

Key takeaways

- Excellent UV1 immune responses, in particular in malignant melanoma in combination with ipilimumab
- Strong clinical efficacy signal

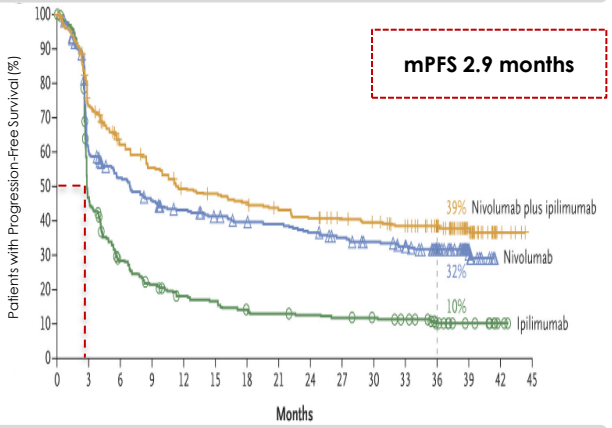
1: Rate (%) of patients with complete or partial response according to RECIST 1.1

Rationale for selection of Malignant Melanoma (2 of 2)

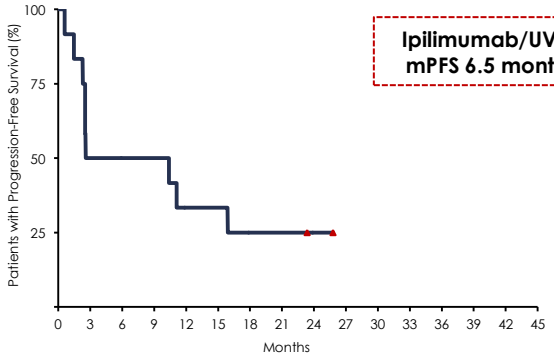
Immune response and response rate

Progression free survival

Checkmate-067 study, ipilimumab arm

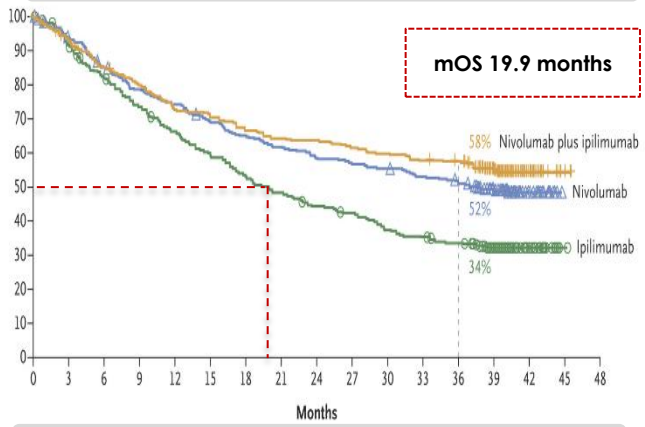


Ipilimumab + UV1 in Melanoma

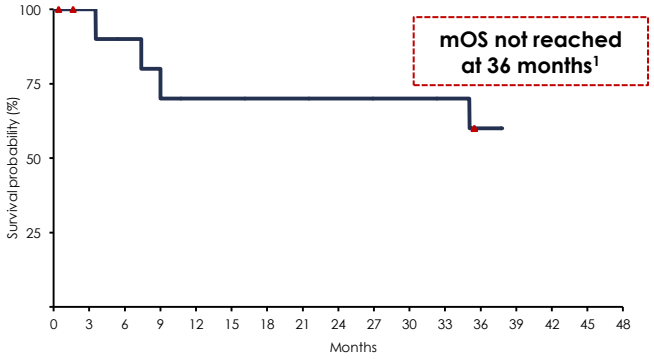


Overall survival

Checkmate-067 study, ipilimumab arm



Ipilimumab + UV1 in Melanoma

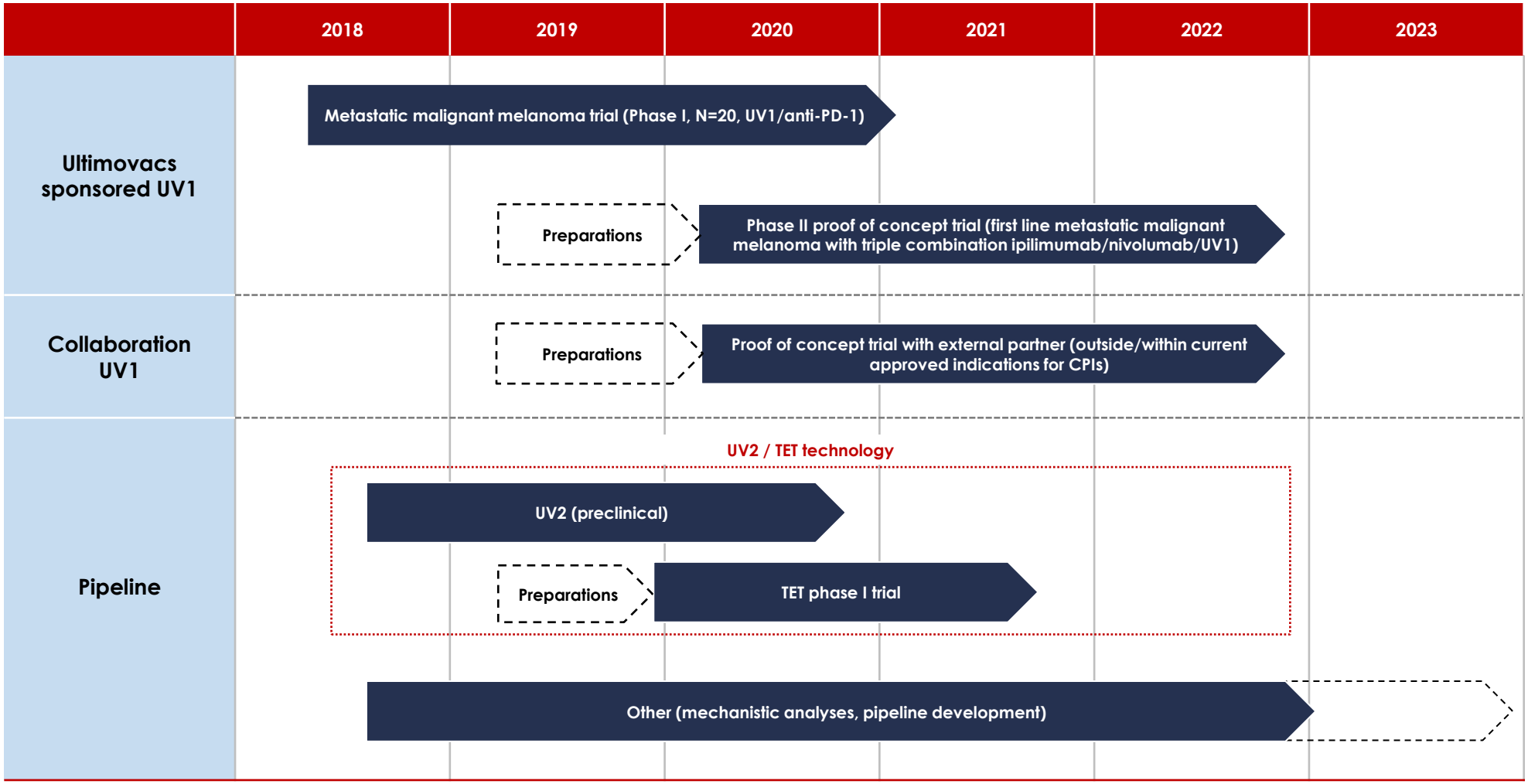


Key takeaways

- Combination treatment with ipilimumab and UV1 enhances immune response in melanoma patients as compared to monotherapy with UV1
- Combination treatment with ipilimumab/UV1 increases PFS and OS as compared to historical controls
- UV1 is expected to be synergistic to both anti-PD1 and anti-CTLA-4
- UV1's Mode of Action is complementary to checkpoint inhibitors (CPIs) and could add incremental effect to CPI combinations (nivolumab + ipilimumab)

1: Cut-off Nov 2018

Ultimovacs – Development Plan



Phase II trial in First Line Malignant Melanoma Patients Indicated for Combination Treatment with Nivolumab/Ipilimumab

Proof of concept trial to compare treatment with UV1/anti-PD1/anti-CTLA-4 versus anti-PD1/anti-CTLA-4 in patients that are indicated for anti-PD1/anti-CTLA-4 treatment

Background and rationale

Purpose

- To show signal of superiority of UV1/anti-PD1/CTLA-4 over anti-PD1/CTLA-4 in 1st line metastatic malignant melanoma

Goal and timing of primary endpoints

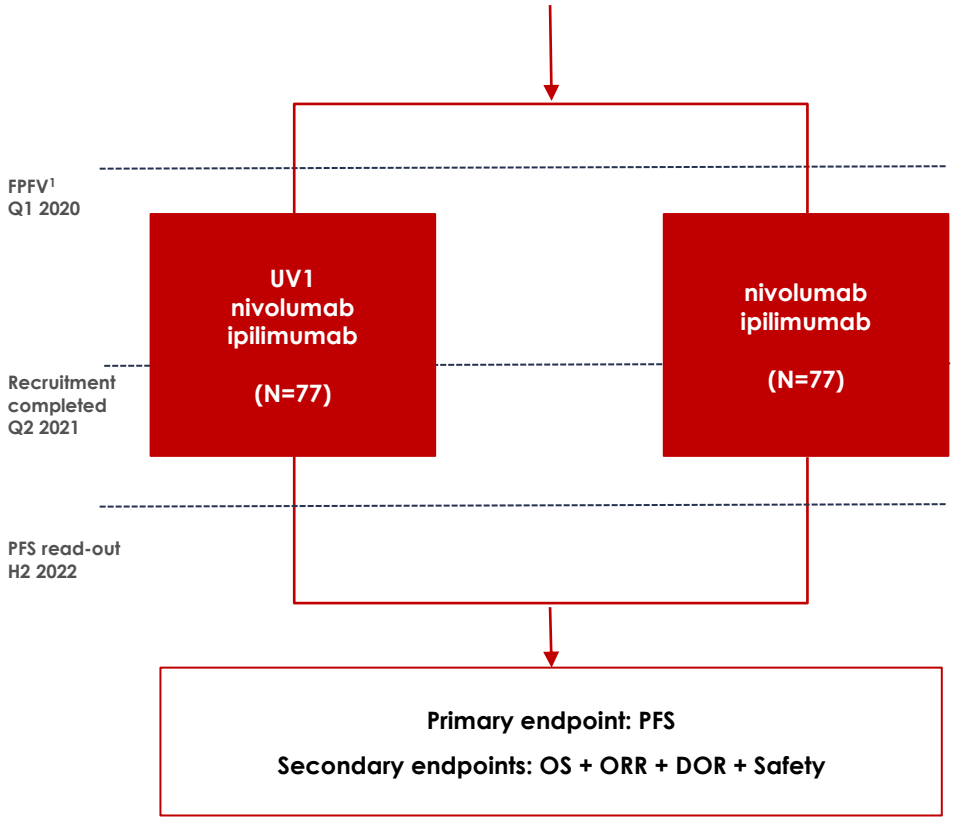
- Evidence of signal that UV1/anti-PD1/anti-CTLA-4 is clinically superior to anti-PD1/anti-CTLA-4
- PFS read-out when 70 endpoints have been reached (expected to be appr. 30 months after study start)
- Interim immune response data in H1 2021from randomized patients

Patient population and endpoints

- Target is a hazard ratio of 0.6, expected mPFS in control arm 11.5 months (CheckMate 067)

Potential outcome:
Efficacy data in target population relevant for future development

Study design



: First patient first visit

Research activities related to Proof of Concept study

Background and hypothesis

Background

- Analyses of blood and tumor biopsies collected from patients participating in Proof of Concept study

Hypothesis

- Vaccination with UV1 is expected to drive;
  - Amplification and diversification of immune response against tumor-specific antigens (epitope spread) and;
  - Increased infiltration of T cells into tumor

Research collaborations

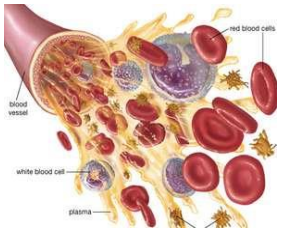
- Collaborations with leading European expertise on T Cell Receptor repertoire sequencing and analysis of immunorepertoire data funded by Eurostars
- Other collaborations include OncoImmunity, offering innovative solutions for neoantigen prediction

OncoImmunity, eurostars, ENPICOM, OSE IMMUNOTHERAPEUTICS, Biomax INFORMATICS, ultimovacs, Universitätsklinikum Hamburg-Eppendorf

Key objectives

Correlate immune responses in blood with intra-tumoral changes, elucidating the mechanisms underlying clinical benefit of UV1 therapy

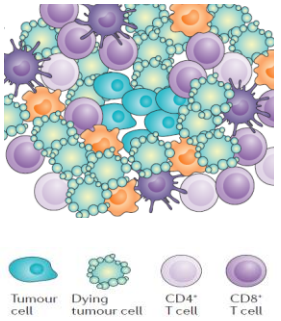
Blood



Key output

- *UV1-specific immune response*
- *Neoantigen-specific immune response*
- *T cell receptor repertoire*

Tumor



Key output

- *Immune cell composition*
- *T cell receptor repertoire*
- *Tumor mutational burden*
- *Neoantigen prediction*

Significance of findings

Understanding mechanisms underlying signal of clinical efficacy

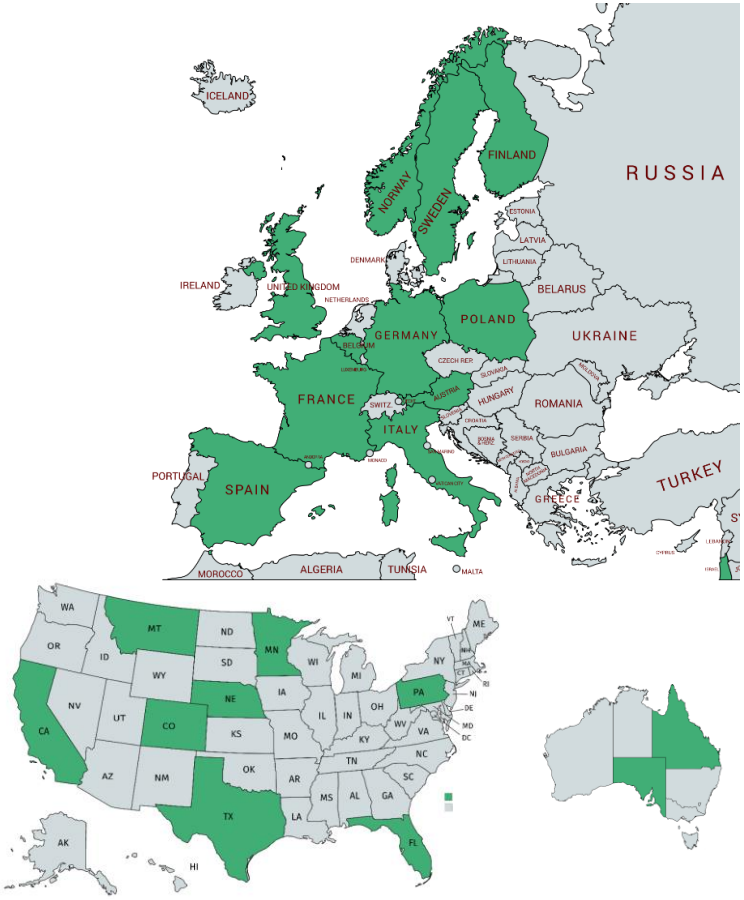
Strengthening of clinical signals on efficacy

Guidance for future studies with regards to novel therapeutic combinations and indications

Biomarkers for response to treatment

Pre-Feasibility Showing High Interest

Geographical overview



High interest from KOLs to participate

Country	Individual	Institute
	Dirk Schadendorf	University Hospital Essen
	Ulrich Keilholz	Charité Universitätsmedizin Berlin
	Peter Mohr	Elbe Klinikum Buxtehude
	James Larkin	The Royal Marsden Hospital
	Jean-Jacques Grob	APHM Hospital Timone Aix Marseille University
	Paolo Ascierto	National Tumour Institute "Fondazione G. Pascale"
	Michele Maio	Azienda Ospedaliero Universitaria Senese
	Eva Muñoz-Couselo	Hospital Vall D'Hebron
	Michal Lotem	Hadassah Hebrew University Medical Center
	Steven O'Day	John Wayne Cancer Institute
	Omid Hamid	The Angeles Clinic and Research Institute
	Sanjiv Agarwala	St Luke's Cancer Center & Temple University
	Rene Gonzales	University of Colorado Cancer Center

Immediate responses:

"Happy to contribute in this very interesting approach"

- Jean Jacques Grob

"Of course we are interested in this trial, as discussed at ESMO"

- Ulrich Keilholz

"We are certainly interested in this study"

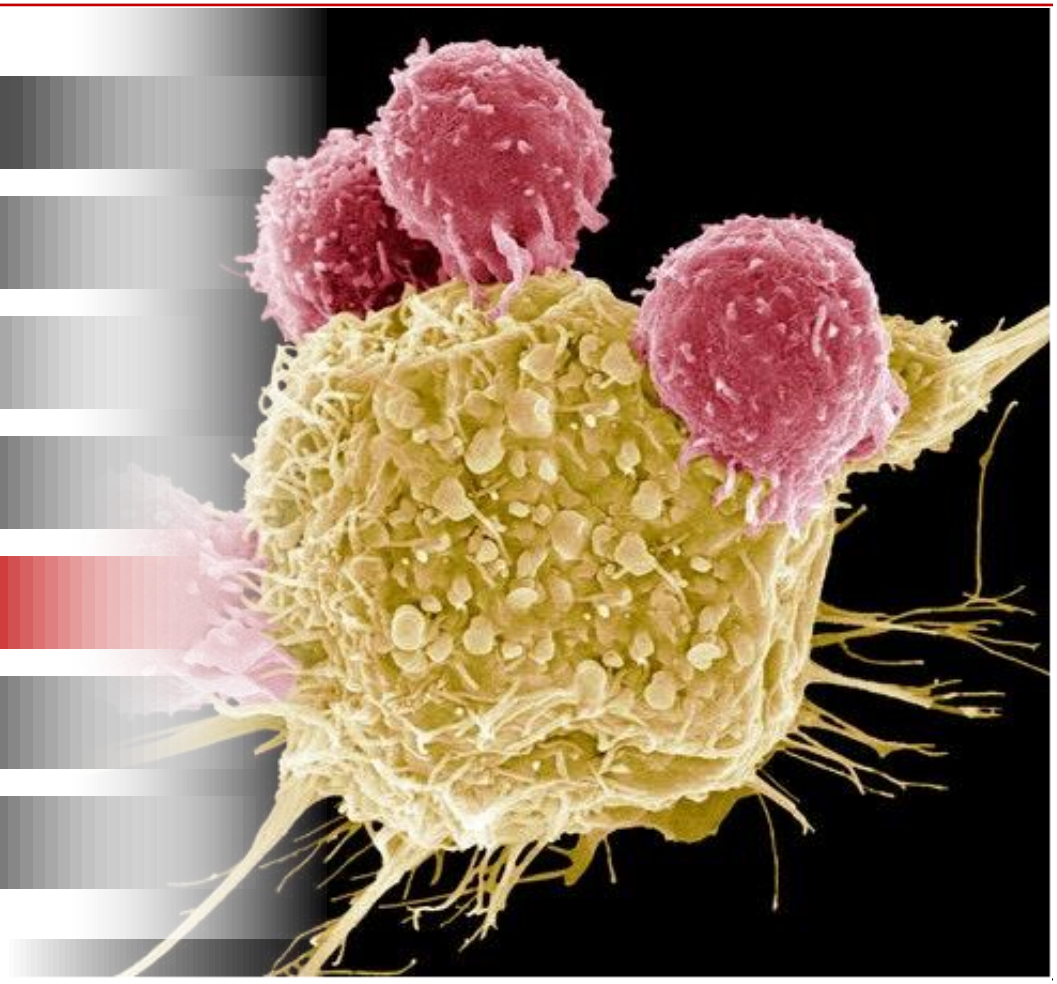
- Michele Maio

"Yes this study would definitely be of potential interest"

- James Larkin

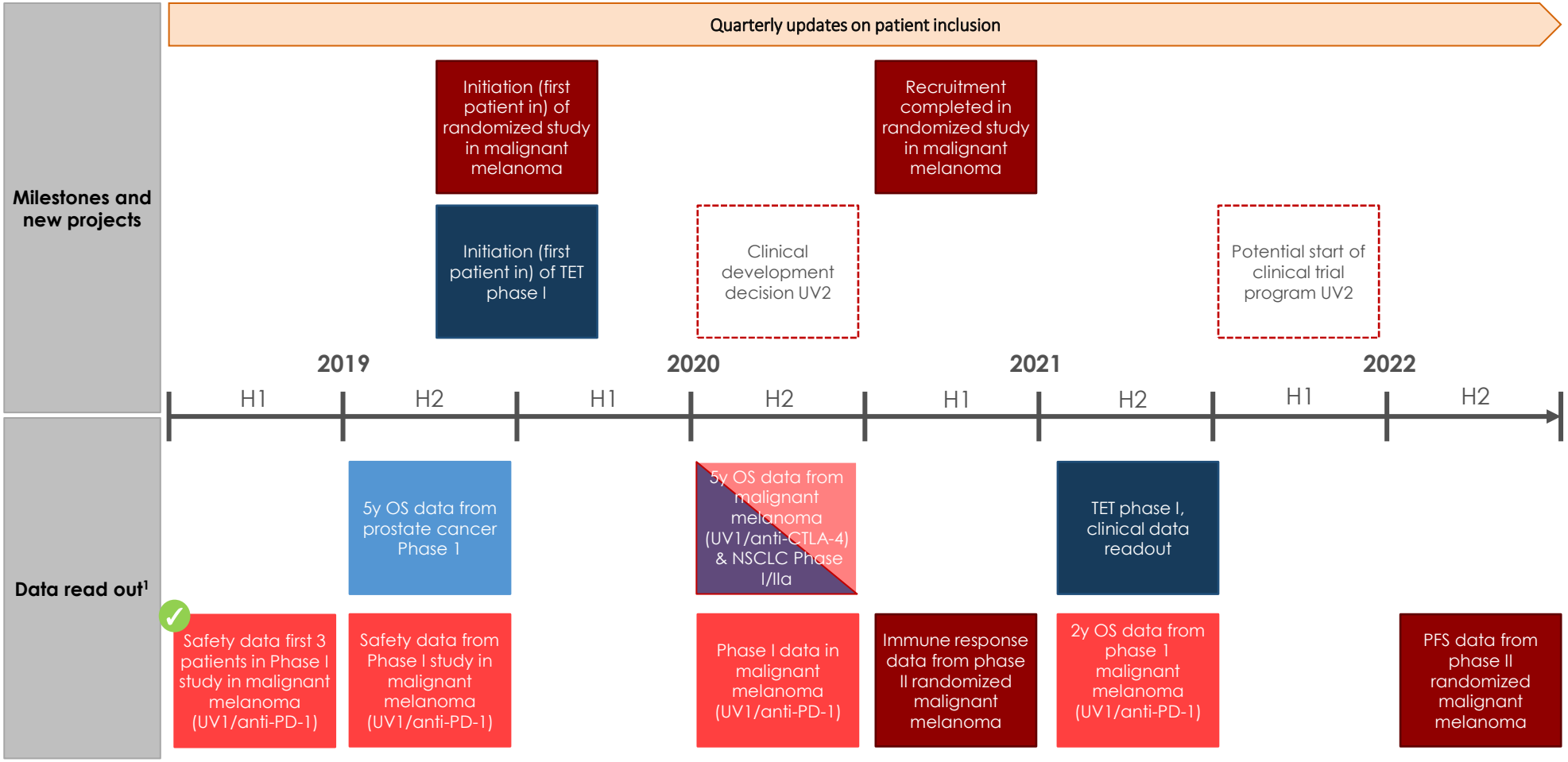
Agenda

1. Introduction to Ultimovacs
2. Immunotherapy and telomerase (target antigen)
3. The UV1 vaccine
4. Clinical development program
5. Newsflow and shareholder base
6. UV2 preclinical / first-in-man clinical trial
7. Supporting information



Anticipated News Flow Up to 2022 (I/II)

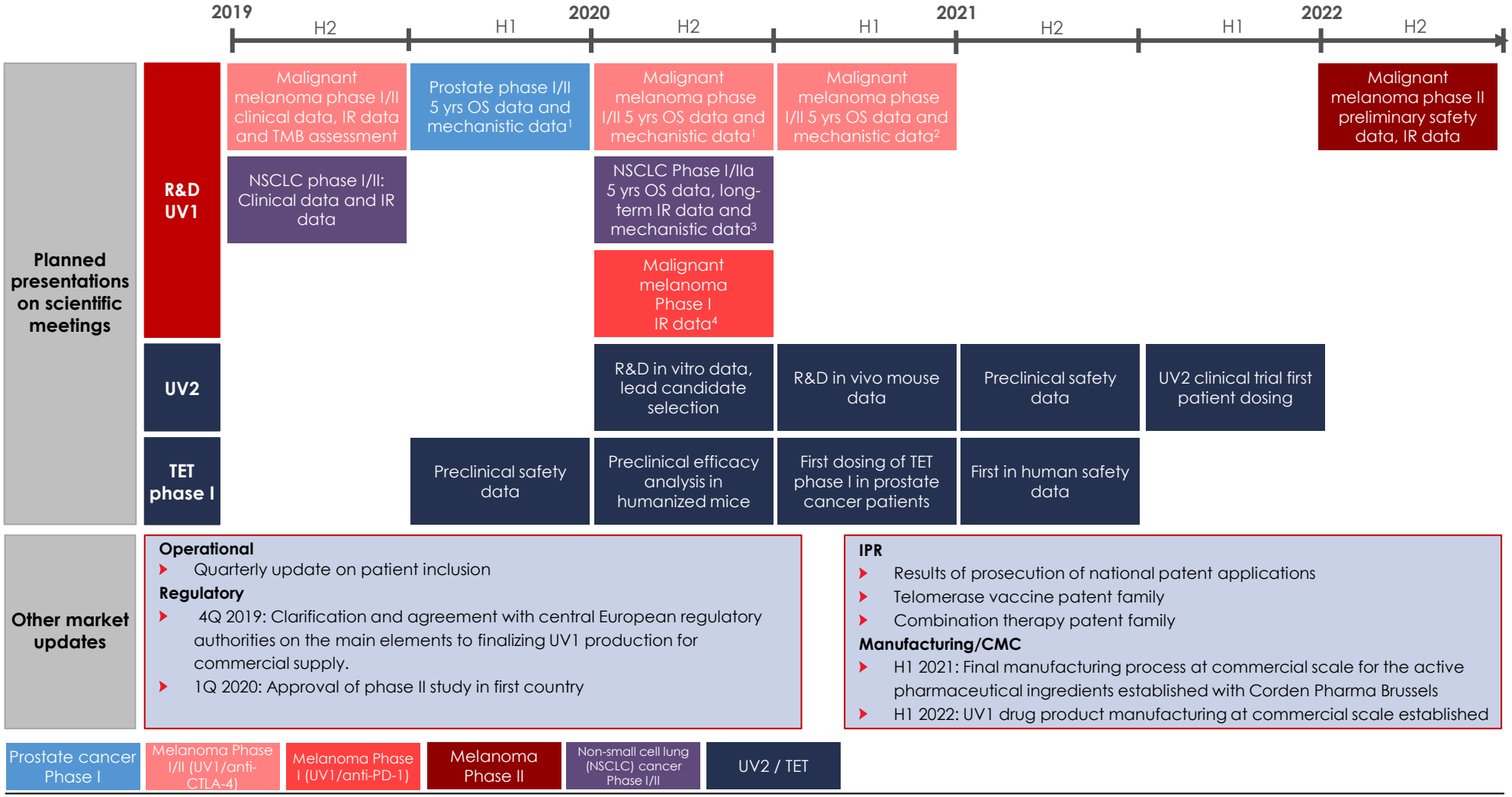
Multiple near-term value creating milestones, leading up to efficacy signals in 2022



1: Data will be presented in peer reviewed journals and at scientific conferences as appropriate

Prostate cancer Phase I | Melanoma Phase I/II (UV1/anti-CTLA-4) | Melanoma Phase I (UV1/anti-PD-1) | Non-small cell lung (NSCLC) cancer Phase I/II | Melanoma Phase II | UV2 / TET

Anticipated News Flow Up to 2022 (II/II)



1: On UV1 Mode of Action based on genetic profiling of tumor and immune repertoire profiling of blood.
2: Based on immunogenicity testing of predicted neoantigens
3: On UV1 Mode of Action based on immune repertoire profiling of blood
4: Based on T cell proliferation, immune repertoire profiling of blood and DTH
Note: IR = Vaccine specific immune response, MoA = Mode of Action

Strong Shareholder Base and Ownership Structure

Description

- Ultimovacs is backed by a strong shareholder base with a combination of industry- and financial competence
  - Top 10 shareholders currently holds 85.9% of the total shares outstanding
  - Largest owner is institutional investor Gjelsten Holding
- Ultimovacs has successfully completed three financing rounds since early 2015, raising a total of NOK 246m
  - Proceeds mainly used to finance ongoing and completed clinical trials

	Number of shares ('000)			Equity value (NOKm)			
Date	**Pre issue**	**Issue**	**Post issue**	**Pre money**	**Capital raised**	**Post money**	**Dilution (%)**
Jan-15	9,675	1,350	11,025	320	45	365	12.3%
Aug-16	11,025	1,750	12,775	475	75	550	13.7%
Oct-17	12,775	2,375	15,150	675	126	801	15.7%

- In July 2018 Ultimovacs completed the acquisition of TET Pharma AB (now Ultimovacs AB) from the Swedish company Immuneed AB for NOK 50.4m[2]
  - The purchase price was paid through a combination of cash and shares

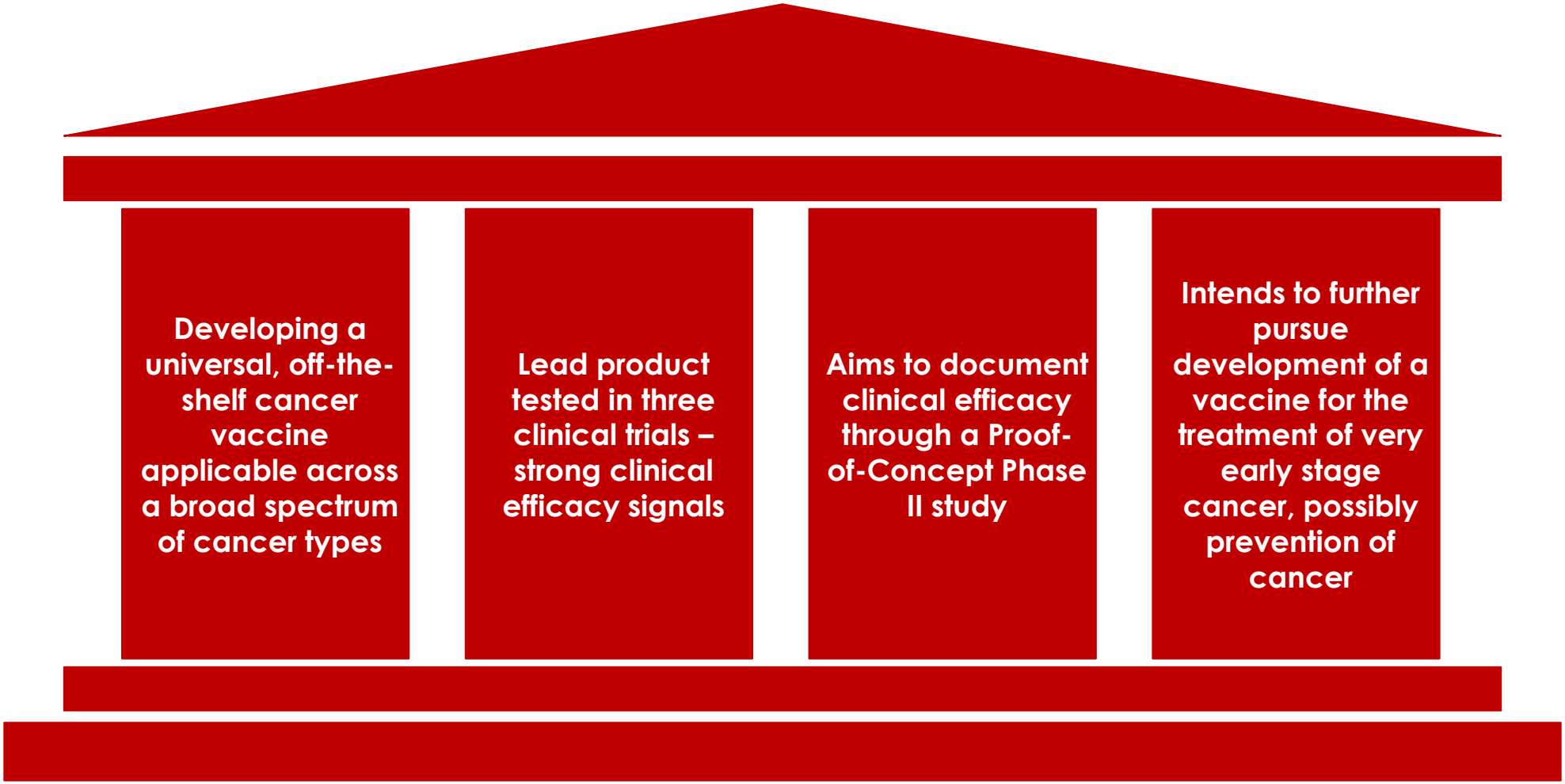
Key transaction details	
Cash consideration	NOK 4.5m
Share consideration	NOK 45.9m[2]
Total purchase price	**NOK 50.4m**
Total shares in Ultimovacs pre transaction	15,154,000
Total shares issued	866,400
Total shares post transaction	**16,020,400**
Implied equity value post transaction[2]	**NOK 847m**

Overview of top 20 shareholders

#	Shareholder	Number of shares	% ownership	
1	Gjelsten Holding AS	4,885,450	30.5%	*Top 5 Shareholders 66.2%*
2	Inven2 AS	2,021,775	12.6%	
3	Canica AS	1,397,150	8.7%	
4	Radiumhospitalets Forskningsstiftelse	1,395,875	8.7%	
5	Langøya Invest AS	906,325	5.7%	
6	Immuneed AB	866,400	5.4%	*Top 10 Shareholders 85.9%*
7	Watrium AS	820,925	5.1%	
8	Sundt AS	617,150	3.9%	
9	Prieta AS	485,175	3.0%	
10	CGS Holding AS	364,375	2.3%	
11	Helene Sundt AS	364,375	2.3%	
12	Wiarom AS	250,000	1.6%	
13	Annemvax AS	246,900	1.5%	
14	Holmetjern Invest AS	228,550	1.4%	
15	Månebakken AS	189,000	1.2%	
16	Vitmed AS	160,000	1.0%	
17	K-TO AS	119,175	0.7%	
18	Asteroidebakken AS	94,500	0.6%	
19	Aeolus AS	87,500	0.5%	
20	Jakob Hatteland Holding AS	62,500	0.4%	
	Sum top 20 shareholders	**15,563,100**	**97.1%**	
	Other shareholders	457,300	2.9%	
	Sum	**16,020,400**	**100.0%**	

Executive management

1: Prieta AS = Gustav Gaudernack (CSO), Vitmed AS = Øyvind Kongstun Arnesen (CEO), Aeolus AS = Audun Tornes (COO)
2: Value based on subscription price of latest completed equity issue at NOK 52.9 per share (Oct-17)
Note: Figures adjusted for 1:25 share split completed in May 2019



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6. **UV2 preclinical / first-in-man clinical trial**
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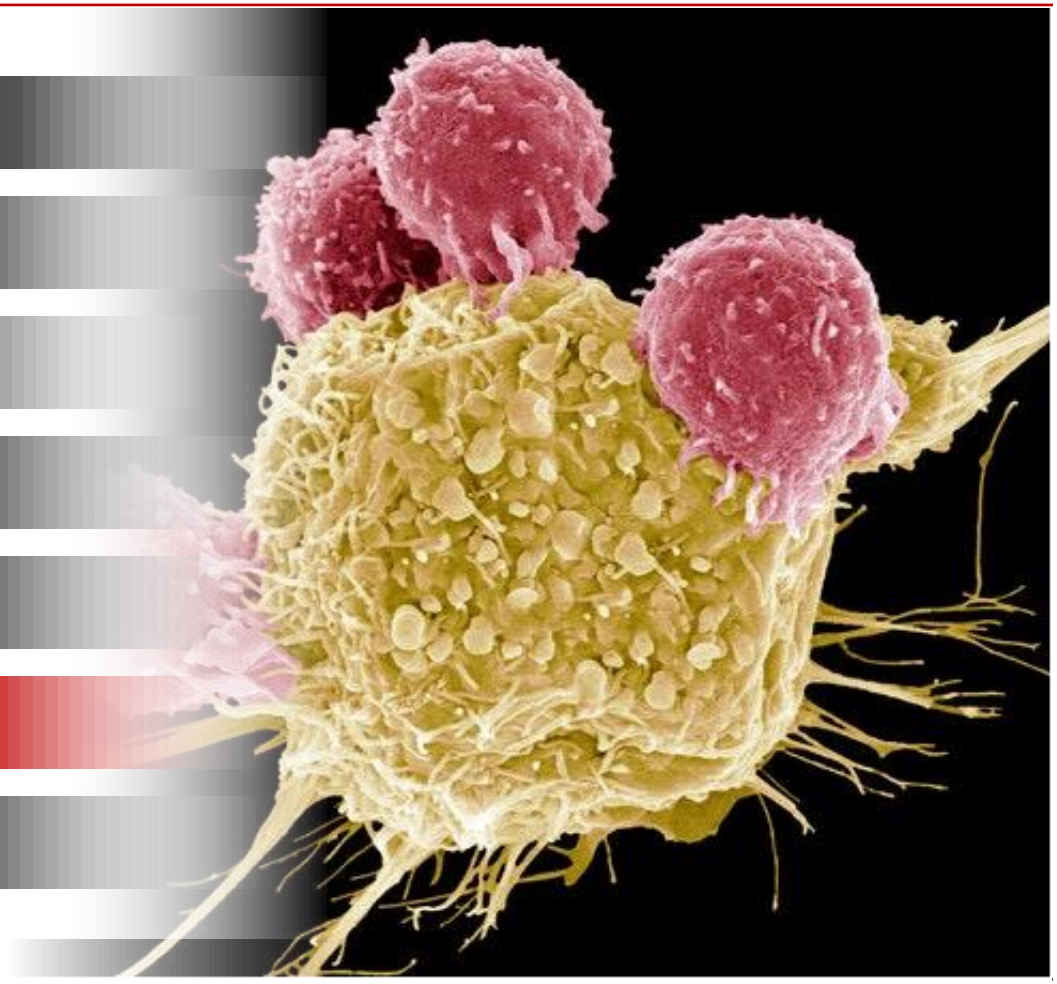
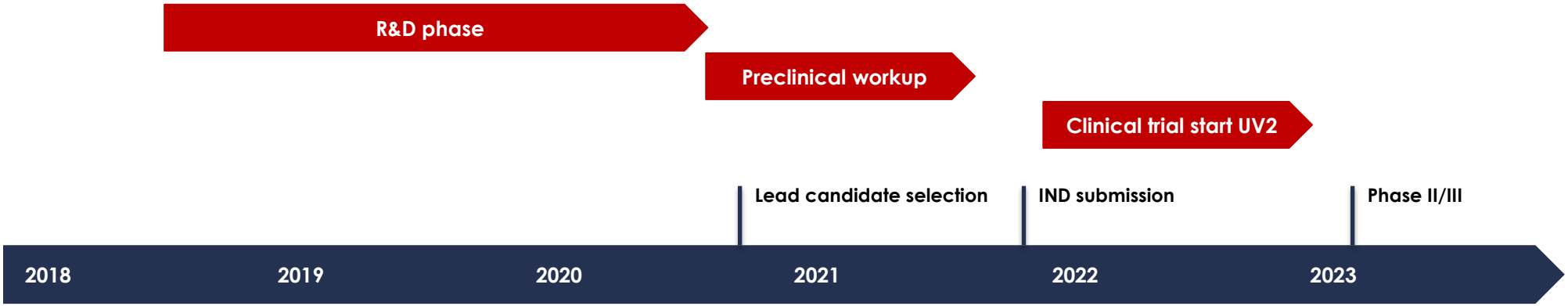


UV2 Preclinical Development Plan and Future Milestones

Successful pre-clinical development of UV2 will establish a platform technology tentatively applicable in general cancer treatment from early stages to advanced disease



- UV2 combines the TET technology based adjuvant and Ultimovacs' peptide based vaccine platform for active uptake in antigen presenting cells
- Conjugates adjuvant and peptides into one molecule
- Applicable for peptide vaccines in general
- Ultimovacs acknowledges the possibility for using this principle for very early stage and possibly preventive vaccine for high risk populations

Phase I/IIa Trial With TET Test Molecules in Advanced Prostate Cancer

First-in-man dose finding study evaluating safety and tolerability of TET conjugate vaccine in patients with advanced or metastatic prostate cancer

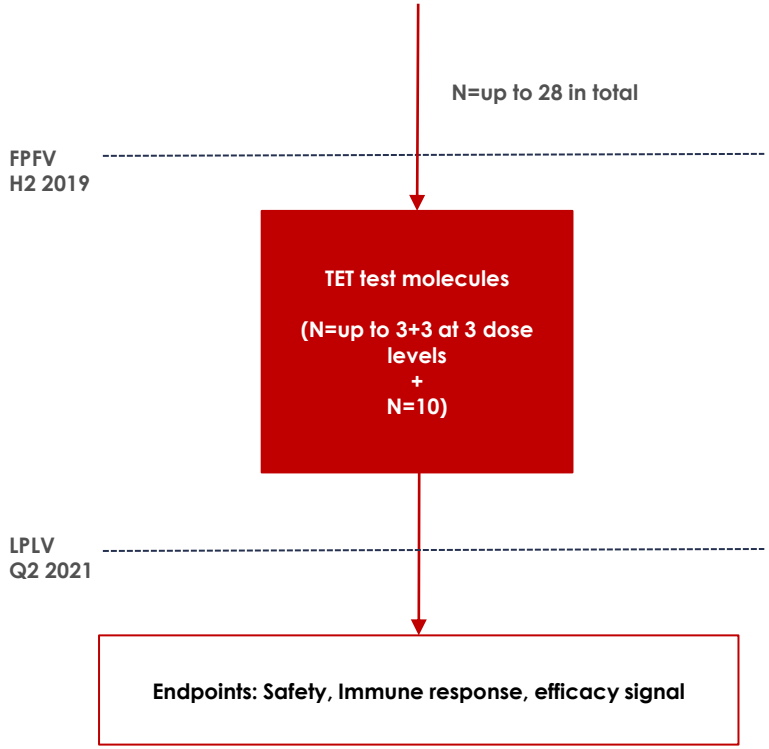
Background and rationale

Background

- Ultimovacs aims to document the safety and tolerability of TET conjugate vaccine

Description	▸ Patients (N): A 3 + 3 dose escalation with 3 dose levels will be used ▸ The study will expand at the selected Phase II dose level with additional 10 patients with advanced or metastatic prostate cancer
Purpose	▸ Primary objectives: To determine safety and tolerability of TET conjugate. To define a Recommended Phase II dose ▸ Secondary objectives: To show a clear immune response to TET conjugate ▸ Exploratory objectives: Systemic cytokine response profiling
Goal	▸ Favorable safety profile and number of immune responses
Timetable	▸ First patient in: H2 2019 ▸ Last patient out: Q2 2021 (+ follow-up)

Study design



Reasons for TET phase I Clinical Trial in Prostate Cancer Patients

The TET conjugate trial will likely address relevant questions regarding future clinical development of the UV2 program

SUPPORT TO UV2

- **Proof of Concept** for TET technology, bridging to UV1 prostate cancer
- **Reduced risk** since UV1 and new core are not exposed
- **Generate information** on UV2 on safety, possible biomarkers and doses to optimize design of UV2 study program
- **Effects** on CD4 and CD8 responses will provide support to future novel UV2 constructs

- **Fastest way to safety signal on TET technology, early risk mitigation strategy to avoid costly clinical program for UV2**

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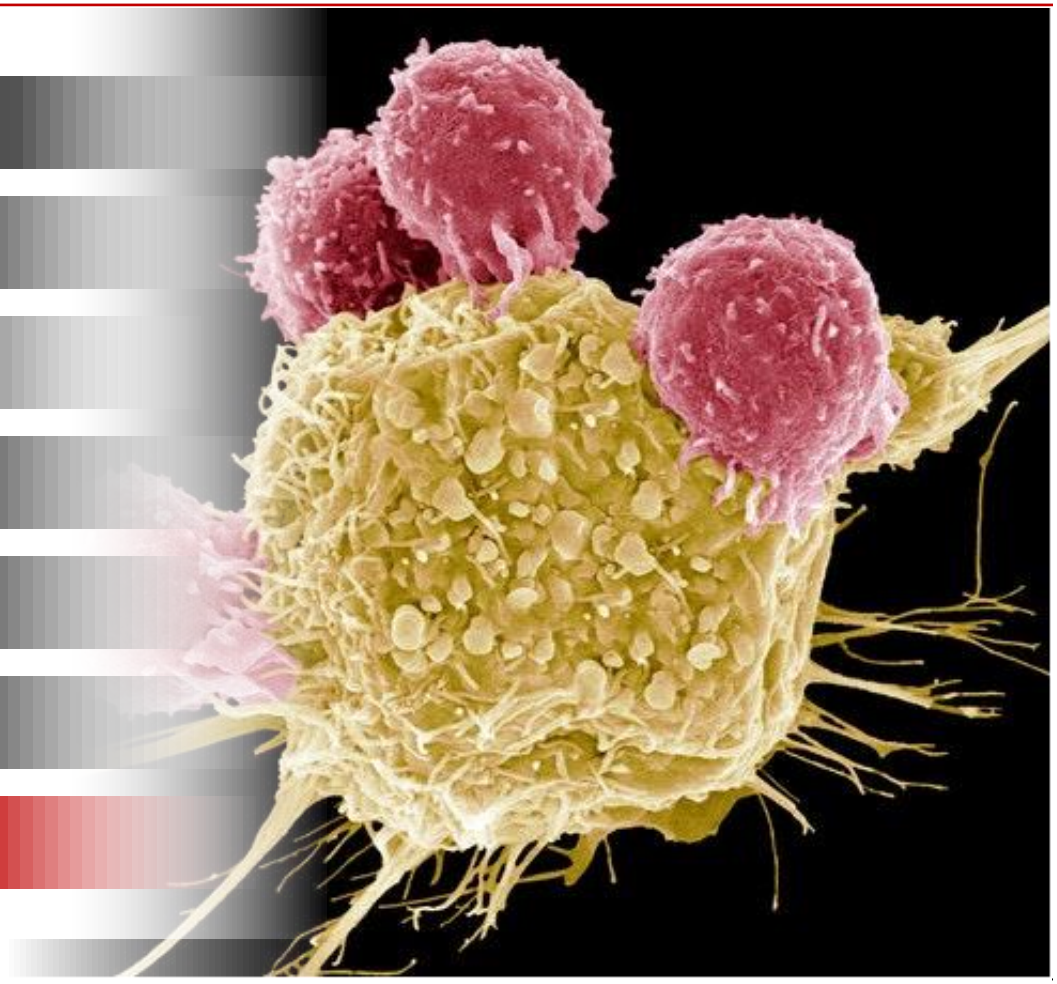


Documentation of Efficacy in First Line Malignant Melanoma with the Triple Combination Ipilimumab, Nivolumab and UV1

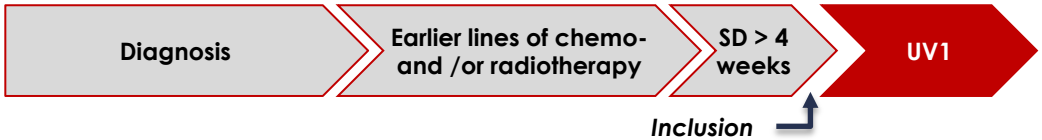
Considerations

- **Unmet medical need**
  - Nivolumab/ipilimumab is currently indicated as combination therapy in patients with metastatic malignant melanoma
  - Even if the effect of the combination therapy has dramatically improved clinical outcome for patients with this indication, more than 50% of patients have progressed on treatment within 12 months and around 60% will not survive
- **CPI indication approved in major markets**
  - The combination is approved as first line treatment of patients with metastatic malignant melanoma in all major markets
  - Based on external competitive intelligence data, scientific meetings and 1:1 discussion with Key Opinion Leaders, Ultimovacs has identified that change of Standard of Care during the expected inclusion period in the registration study is less likely
  - Key Opinion Leaders state that the study is attractive, feasible and clinically relevant
- **Outcome data relevant for further development/market authorisation**
  - Ultimovacs' view is that the planned Proof of Concept trial has a relevant clinical and regulatory design for further late phase development of the triplet combination

Phase I/IIa Study in Non Small Cell Lung Cancer

Study design overview

Study design	Single arm / Single center (The Norwegian Radium Hospital)
Inclusion	18 Patients
Treatment	UV1 + GM-CSF, dose escalating: 100 / 300 / 700 µg
Treatment period	Max 18 doses / 1 year and 9 months
Endpoints	Safety, immune response, PFS, OS



Endpoint readout

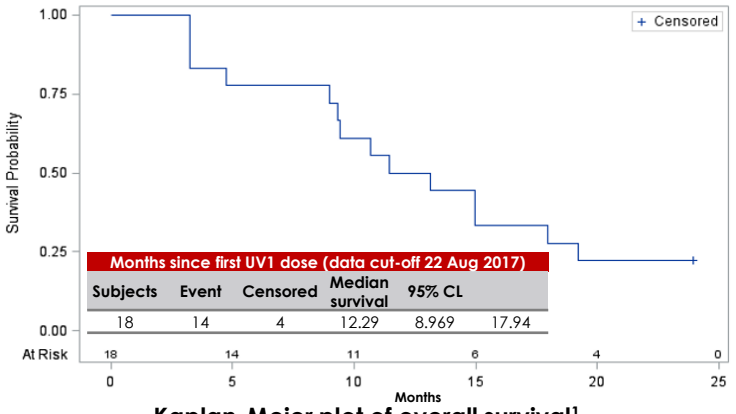
Immune response	67% of patients
Safety	The study treatment is safe and well tolerated
mPFS	12.3 months (Docetaxel chemo therapy mPFS 3-4 months[2])
mOS	28.2 months (Docetaxel chemo therapy mOS 12 months[2])

Conclusion

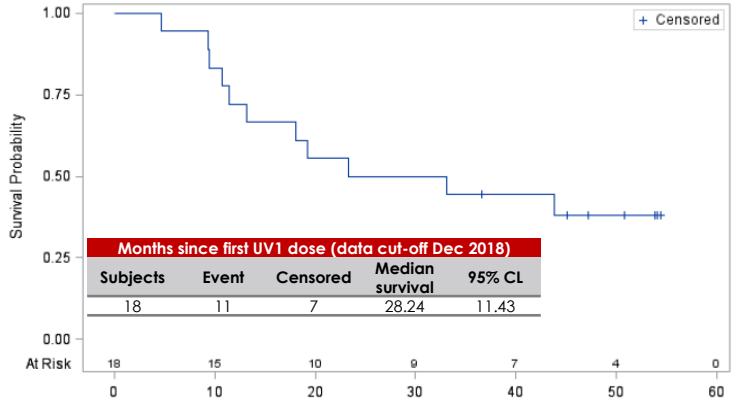
- The study treatment is safe and well tolerated in patients with NSCLC
- The immune response and survival results indicate that there may be a dose relationship of UV1 with 700 µg being the best dose

Data readout plots

Kaplan-Meier plot of progression-free survival[1]



Kaplan-Meier plot of overall survival[1]



1: With number of subjects at risk
2: As second line therapy

Phase I/IIa Study in Hormone-Sensitive Metastatic Prostate Cancer

Study design overview

Study design	Single arm / Single center (The Norwegian Radium Hospital)
Inclusion	22 Patients
Treatment	UV1 + GM-CSF, dose escalating: 100 / 300 / 700 µg
Treatment period	Max 18 doses / 2 years
Endpoints	Safety, immune response, OS

Endpoint readout

Immune response	82% of patients
Safety	Four SAEs, allergic reactions
mOS	Estimated 51.8 months

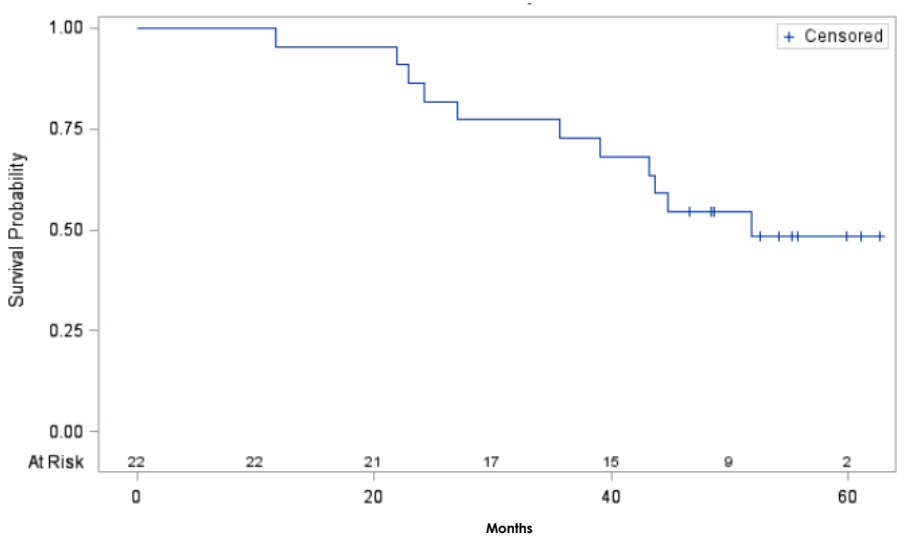
Conclusion

- The study treatment is safe and well tolerated
- 8 of 22 patients with normal PSA levels and no clinical signs of cancer after 5 years

Data readout plots

Kaplan-Meier plot of overall survival[1]

Months since first UV1 dose (data cut-off May 2018)				
Subjects	**Event**	**Censored**	**Median survival**	**95% CL**
22	11	11	51.84	36.65



1: With number of subjects at risk

Deep Bench of Experienced Talent

Management team

	Individual	Years of experience	Select experience	Background
	**Øyvind Kongstun Arnesen, MD** *Chief Executive Officer*	20+	Bristol-Myers Squibb, Boehringer Ingelheim	▪ Extensive industrial and clinical experience as MD and from leading positions in big pharma
	**Hans Vassgård Eid** *Chief Financial Officer*	20+	Foinco, McKinsey & Company, Orkla, storebrand	▪ Experience include senior management positions ▪ Previously with Orkla, Storebrand, Foinco and McKinsey & Company
	**Audun Tornes** *Chief Operating Officer*	20+	GE Healthcare	▪ R&D management experience from pharma industry ▪ Inventor of 10+ patents in diagnostics and cancer therapy
	**Jens Bjørheim, MD and PhD** *Chief Medical Officer*	20+	AstraZeneca, BASF, Novartis, Clavis Pharma	▪ Experience from BASF, Novartis, Clavis Pharma and AstraZeneca ▪ MD PhD with clinical oncology experience and scientific merits within immunology and cancer genetics
	**Ingunn Hagen Westgaard, PhD** *Head of Research*	10+	CHMP	▪ Consulting, R&D and regulatory experience from biotech industry within oncology and regulatory authorities, including membership in CHMP
	**Gudrun Trøite, PhD** *Director of Regulatory Affairs & QA*	11	PHOTOCURE	▪ 11 years' experience in Biotech industry ▪ Previously with Photocure as Clinical Operations Director
	**Øivind Foss** *Head of Clinical Operations*	13	AstraZeneca, Pharmalink	▪ 13 years' experience from clinical development in the Biotech industry ▪ Previously with Pharmalink Oncology as Clinical Operations Director
	**Gunilla Ekström, MD and PhD** *Managing Director (Ultimovacs AB)*	25+	Karolinska Institutet, orexo, AstraZeneca	▪ Extensive experience of managing advanced pre-clinical and clinical pharmaceutical development projects and organizations

Key scientific resources

	Individual	Years of experience	Select experience	Background
	**Gustav Gaudernack, PhD** *Chief Scientific Officer*	40+	EORTC, Oslo universitetssykehus, MERCK	▪ Holds 50+ patents in cancer vaccines and diagnostics ▪ Head of Immunotherapy at Oslo University Hospital 1995-2011
	**Steinar Aamdal, MD and PhD** *Senior Medical Advisor*	40+	ESMO, AACR, Oslo universitetssykehus	▪ Professor in Oncology at Oslo University Hospital ▪ Active member of ESMO, AACR and ASCO ▪ Member of EMA Scientific Advisory Group for Oncology
	**Sara Mangsbo, PhD** *Chief Development Officer*	10+	Karolinska Institutet, AstraZeneca, Uppsala Universitet	▪ Founder of and previous CSO of Immuneed AB and have 10+ years in the R&D field of immuno-oncology with experience in antibody and peptide-based drugs along with advanced ex vivo and in vivo modeling

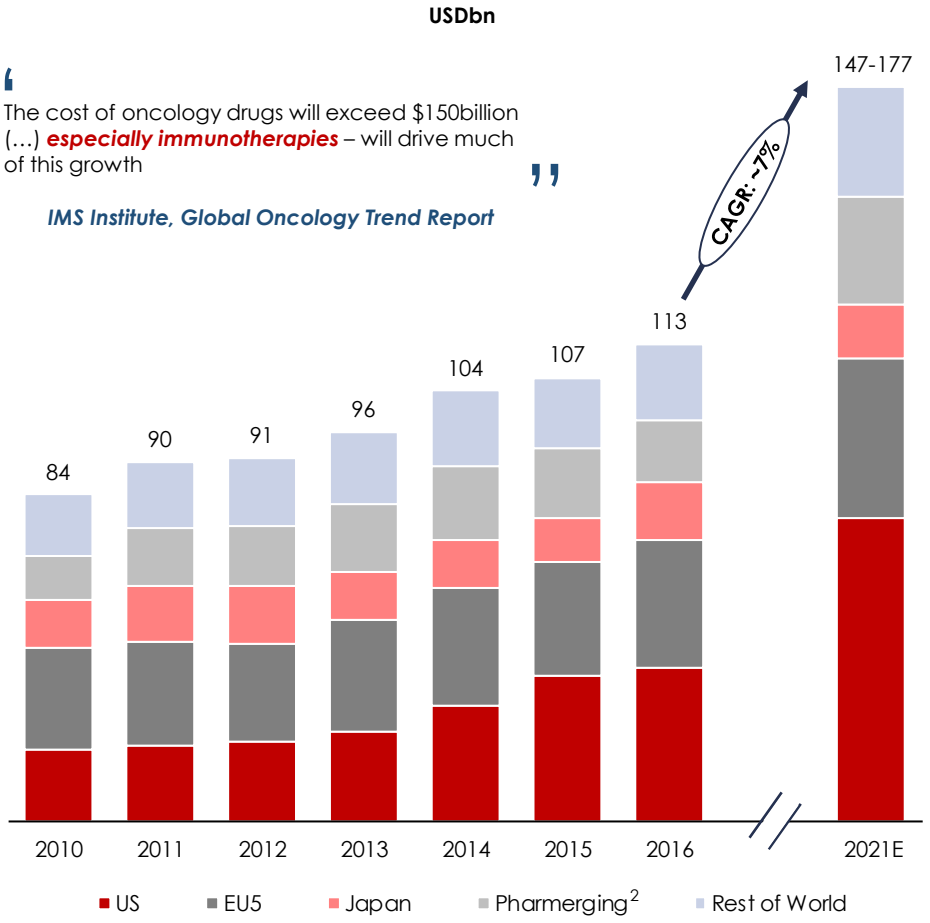
Strong Board of Directors

	Individual	Background
	**Jonas Einarsson** *Chairman of the board*	▪ CEO of the Norwegian Radium Hospital Research Foundation ▪ Board member of several biotech companies ▪ One of the initiators behind the Norwegian Center of Expertise, Oslo Cancer Cluster
	**Leiv Askvig** *Board member*	▪ CEO of Sundt AS, a Norwegian family owned investment company ▪ Board member of Pandox AB, Eiendomsspar, Oncoinvent AS and Civita ▪ Previously Chairman of the Board of Oslo Stock Exchange and CEO of Sundal Collier & Co
	**Ketil Fjerdingen** *Board member*	▪ 25+ years experience from board and management positions in different companies and industries ▪ Ultimovacs' Chairman of the board from '11-'17
	**Henrik Schüssler** *Board member*	▪ CEO and board member of Gjelsten Holding AS ▪ Previously CFO and CEO of Norway Seafood ▪ Accounting/consulting experience from Ernst & Young
	**Kristin L. A. Wilhelmsen** *Board member*	▪ Co-owner and CFO of WAK Family Office - Watrium ▪ Board member of Nordic and Europe Health Invest AS and a number of Wilhelmsen family's investment companies
	**Kari Grønås** *Board member*	▪ Extensive experience in drug development and commercialization within the pharmaceutical industry of new breakthrough products securing regulatory approvals, i.e. Xofigo, Hexvix ▪ Board positions in Spago Nanomedical AB, SoftOx AS and The Norwegian Lung Cancer Society
	**Eva S. Dugstad** *Board member*	▪ Director for Business Development of the Norwegian Radium Hospital Research Foundation ▪ Previously President and the EVP at the Institute for Energy Technology (IFE) and chair of the board for IFE Venture ▪ Has been involved in various boards in both public and private sector and in several public expert panels

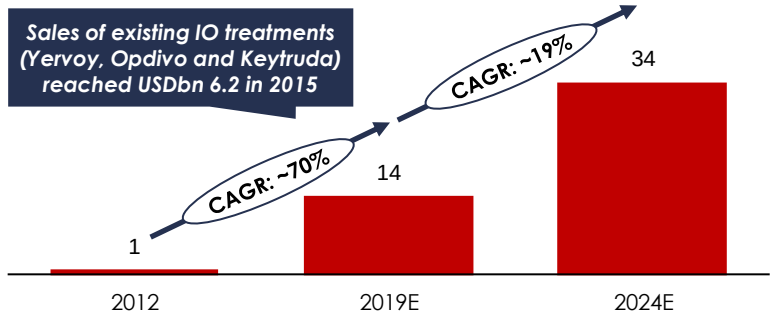
Immunotherapy Rapidly Became an Enormous Market…

Overall oncology market expected to grow – driven by…

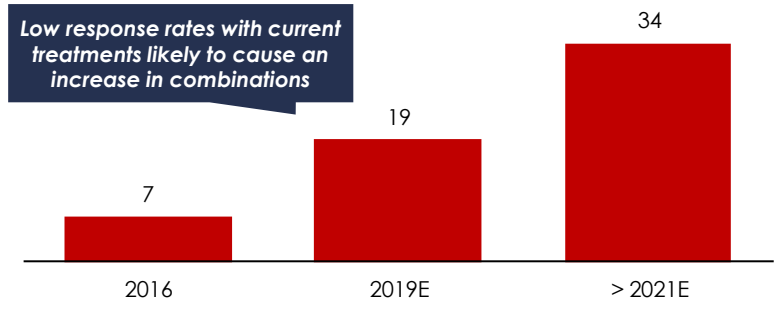
> "The cost of oncology drugs will exceed $150billion (…) ***especially immunotherapies*** – will drive much of this growth"
>
> ***IMS Institute, Global Oncology Trend Report***



1 … high growth in the immunotherapy market (USDbn)[1], and…



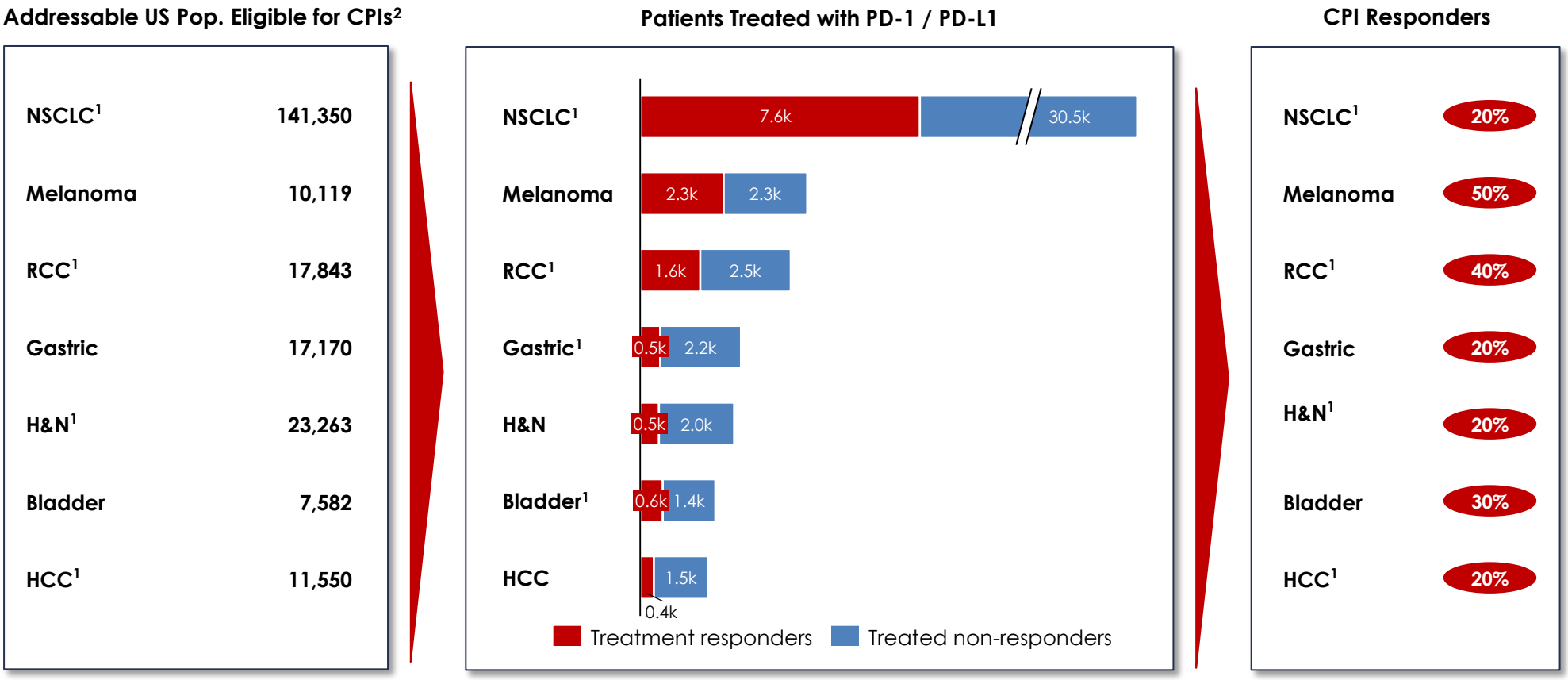
2 … expected increase in launched combination therapies (number)



Source: IMS Institute, Global Oncology Trend Report: A Review of 2015 and Outlook to 2020, DCAT, GlobalData, QuintilesIMS, Gjendrum (2010), BMS
1: 7 main markets = US, France, Germany, Italy, Spain, UK and Japan
2: Includes China, India, Brazil, Russia, South Africa, Argentina, Mexico, Poland, Ukraine, Turkey, Egypt, Algeria, Nigeria, Thailand, Indonesia, Pakistan and Saudi Arabia

…But Response is Still Lackluster

Checkpoint inhibitors still only work in a fraction of the total addressable population



Of the top 7 indications where CPIs are approved only 24% of the aggregate treated patients respond to treatment

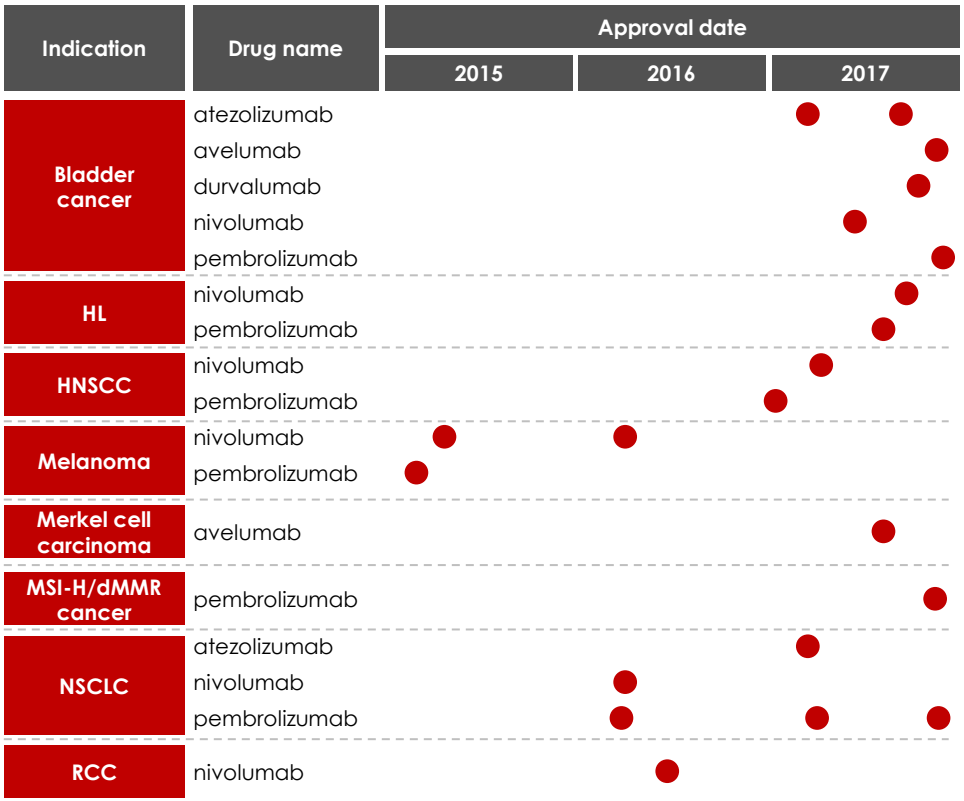
Source: Cowen and Company
1: NSCLC = Non small cell lung cancer; RCC = Renal cell carcinoma; H&N = Head and neck cancer; HCC = Hepatocellular carcinoma
2: Defined as metastatic patients within indication, per 2017
3: Total patients treated with PD-1 / PD-L1 therapy

Significant Tailwinds From Approvals of Checkpoint Inhibitors

The potential target market for UV1 is rapidly expanding, as checkpoint inhibitors (CPIs) become approved in new indications

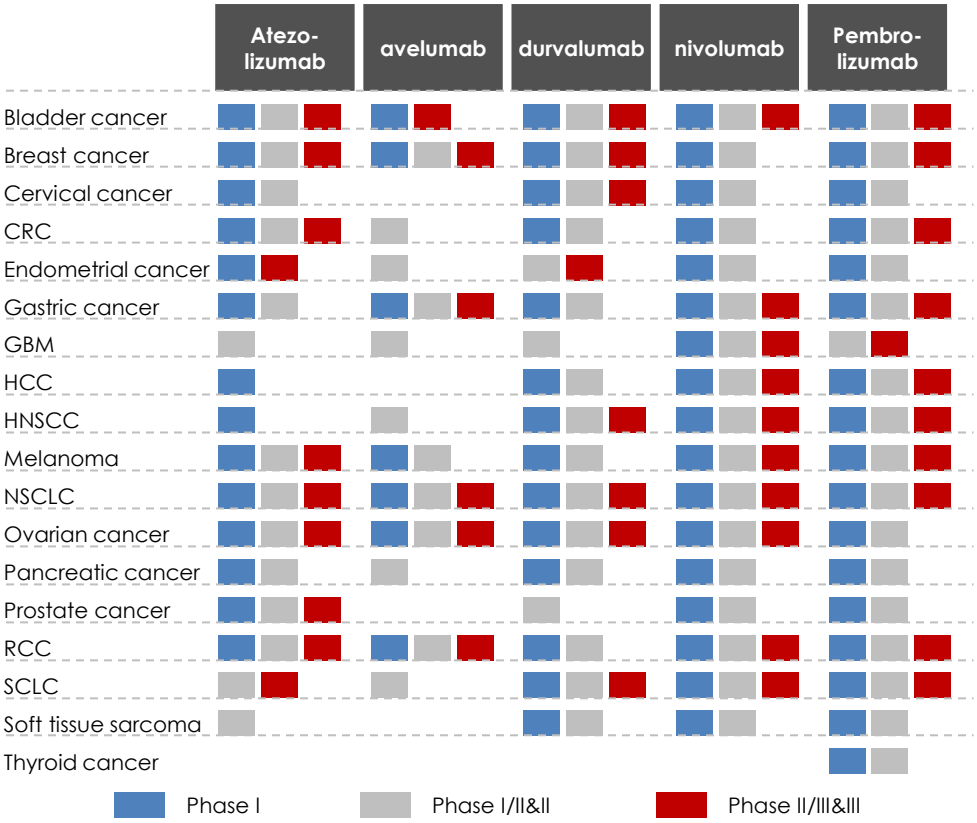
Rapidly increasing approval rates for CPIs…

US Approval Timeline of PD-(L)1 Checkpoint Modulators



…with extensive development pipeline in new indications

Clinical Trials with PD-(L)1 modulators in Solid Tumours



Source: GlobalData, Pharma Intelligence Center

Telomerase Broader Landscape

Select telomerase based vaccines in development

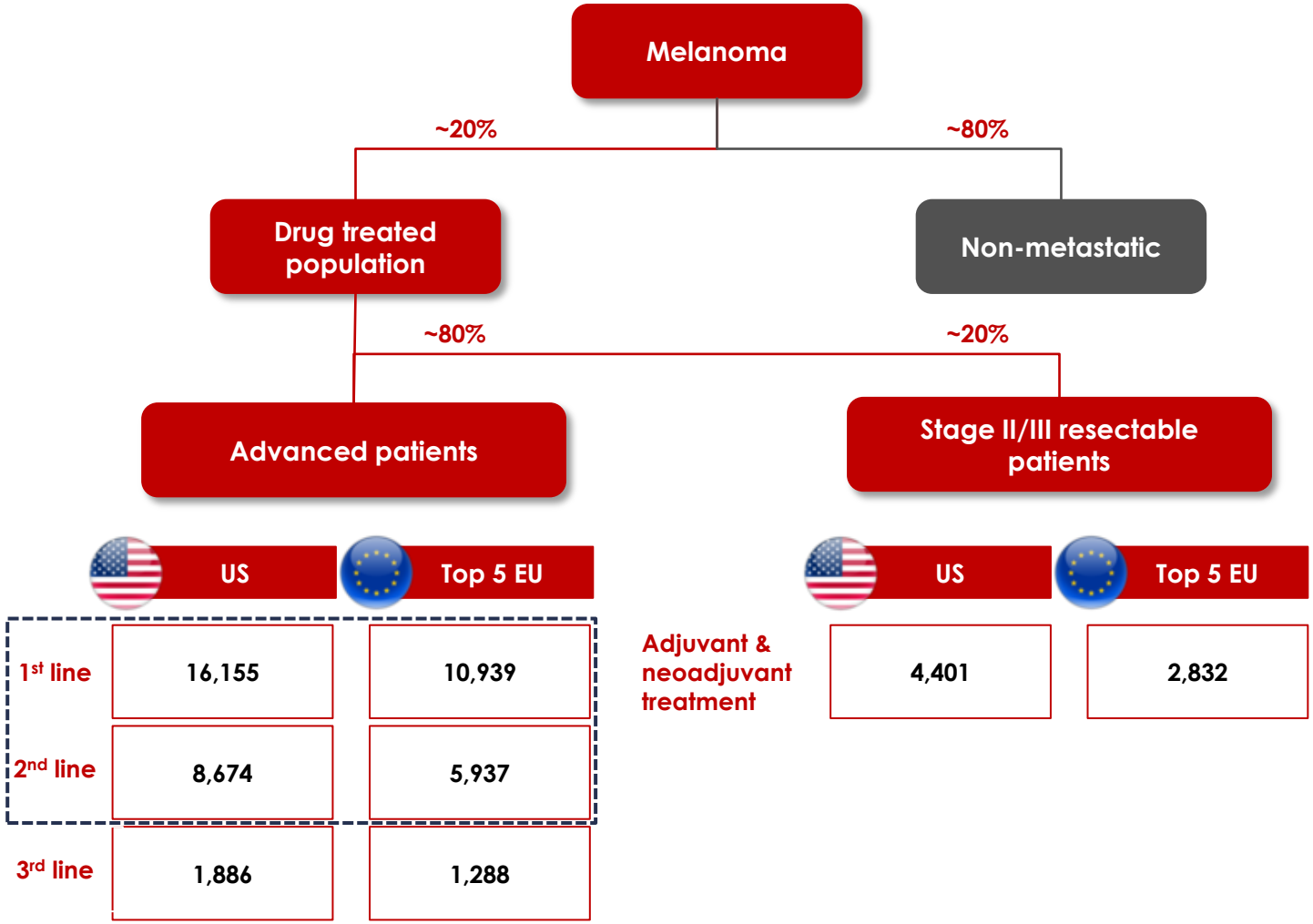
Therapeutic vaccines targeting hTERT currently in development				Competitive positioning vs. UV1		
Drug Name	**Company Name**	**Indication**	**Development Stage**	**HLA screening not needed**	**Long peptides**	**Adjuvant**
UV1	ultimovacs	Melanoma	Phase II	✓	✓	*GM-CSF*
ASTVAC-1	ASTERIAS BIOTHERAPEUTICS	AML	Phase II	✓	✗ *(DC vaccine)*	*Not required*
ASTVAC-2	ASTERIAS BIOTHERAPEUTICS	NSCLC	Phase I	✓	✗ *(DC vaccine)*	*Not required*
GX-301	genovax	Prostate Cancer	Phase II	✗	✓	*Montanide ISA-51 & Imiquimod*
INO-1400	inovio PHARMACEUTICALS	Multiple Solid Tumors	Phase I	✓	✗ *(DNA vaccine)*	*n.a.*
INVAC-1	invectys THERAPEUTIC CANCER VACCINE	CLL	Phase I	*n.a.*	✗ *(DNA vaccine)*	*n.a.*
UCPVax	invectys THERAPEUTIC CANCER VACCINE	Lung Cancer	Phase II	✓	✓	*Montanide*
Vx-001	VAXON Biotech	Lung Cancer	Phase II	✗	✗	*n.a.*
Vx-006	VAXON Biotech	Breast Cancer; Gastric Cancer; Prostate Cancer	Phase II	✗	✗	*Montanide*

Source: Globaldata

Background and UV1 rationale

- Several companies develop vaccines based on telomerase
  - Established consensus on telomerase/hTERT as a key target for immuno-oncology therapies
- UV1 can be used in non HLA-screened population
  - Most other candidates need HLA-screening, narrowing the target population
- UV1 is a synthetic product with general application that does not need complex infrastructure (as compared to drugs that need individual adjustments)

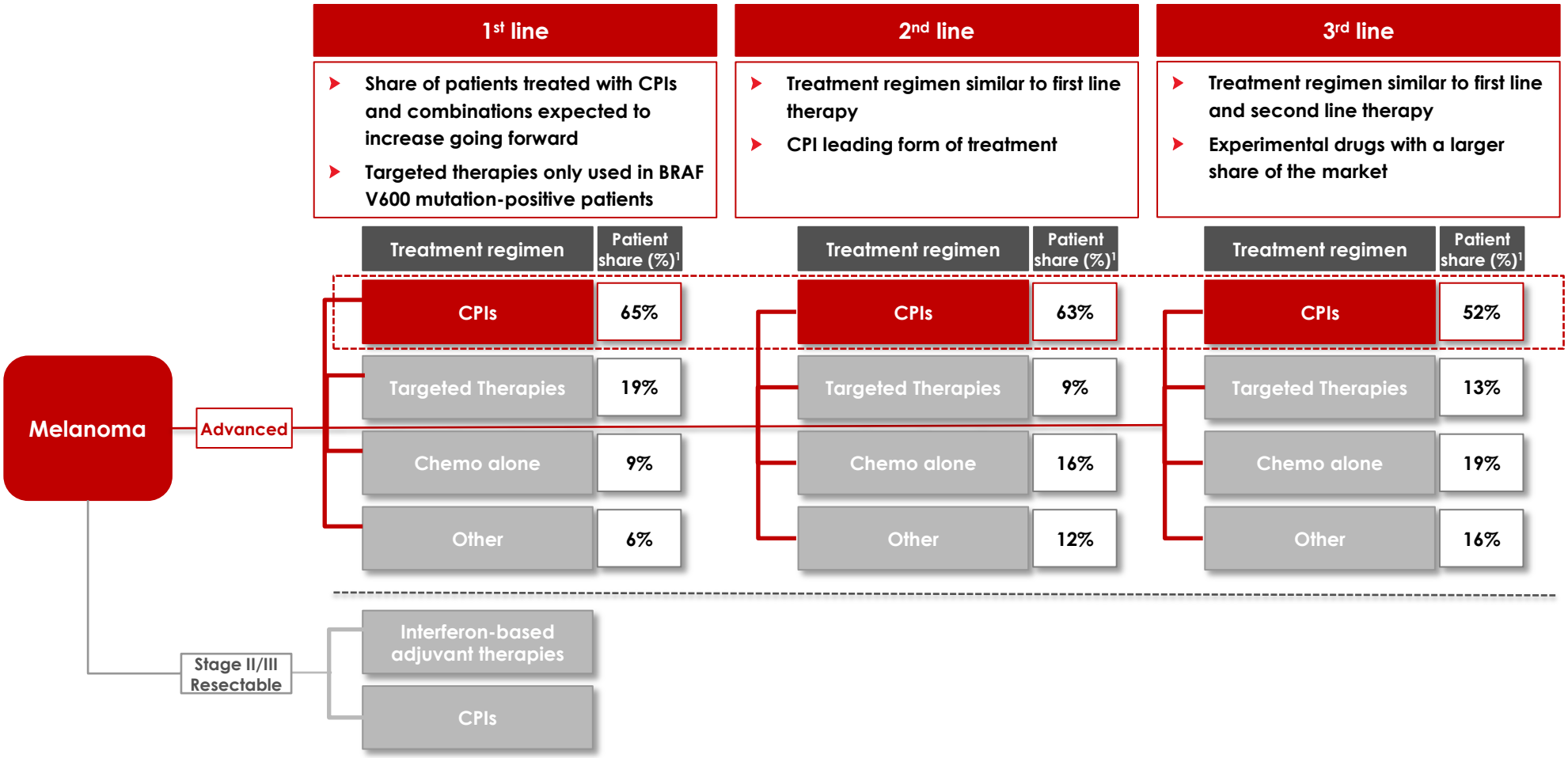
Large Target Population in Melanoma



- ✓ Immunotherapy has been established as standard of care in several patient groups with malignant melanoma
- ✓ Further expansion of the use of immunotherapy in malignant melanoma is likely over the next few years.
- ✓ Ipilimumab and nivolumab is the first immunotherapy combination approved in malignant melanoma. The combination is expected to be in wider use over the next years due to superior clinical efficacy as compared to monotherapy and better safety control
- ✓ In 2018, more than 40k patients will be treated for metastatic melanoma in the US and EU5
- ✓ UV1 currently being evaluated as 1st line therapy, with more than 25k patients treated in US and EU5 (2018)
- ✓ 2nd line treatment for relapsed patients treated with BRAF/MEK inhibitor as 1st line therapy
- ✓ Potential upside in other markets

Note: 2018E figures
Source: Globaldata

Standard of Care – Metastatic Malignant Melanoma



CPIs are established as the standard of care across the metastatic malignant melanoma treatment spectrum

1: Based on 2018 US figures
Source: Globaldata

UV1 product development and manufacturing (CMC)

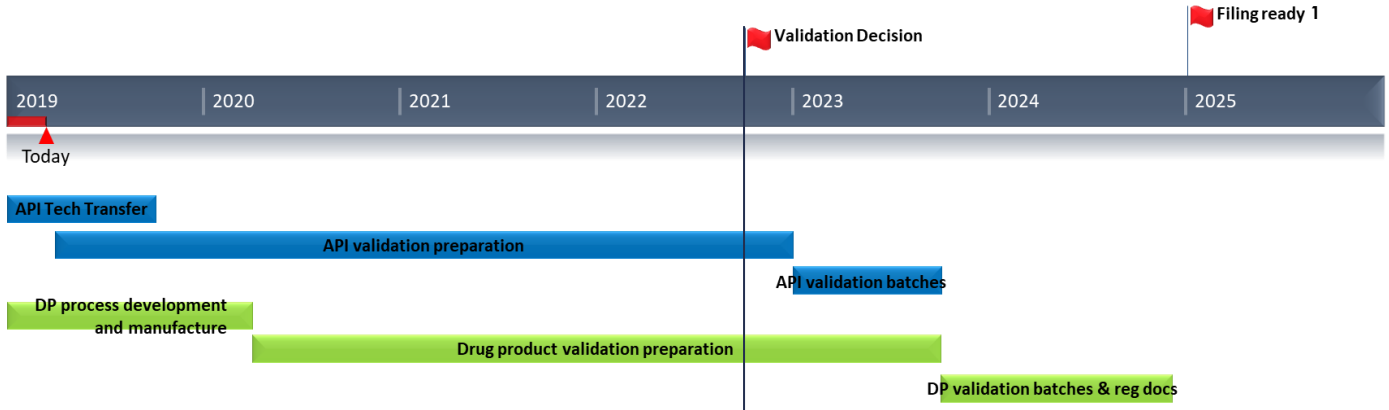
The development and manufacture of the 3 Active Pharmaceutical Ingredients (APIs) will be performed at Corden Pharma Brussels. Development, up-scaling and manufacture of UV1 Drug Product (DP) continue at Corden Pharma Caponago

Manufacturing of UV1 for clinical trials

- Manufacturing and supply of UV1 meeting regulatory requirements for all clinical trials. Multiple batches needed.
- The regulatory requirements differs in Europe and US and are stricter for late stage clinical trials (UV1 classed as a "biologic" by FDA)
- Generation of clinical data on diffent batches of UV1

Process development and validation

- Complete transfer of API manufacturing process to Brussels and demonstrate equivalence (paid by Corden)
- Development of commercial scale process for DP and document formulation
- Development of Potency Assay required by FDA
- Identify and fill gaps in process, analytical methods and documentation
- Regulatory scientific advice on requirements for marketing application in Europe and US (implement later except where immediate action needed)



- Process validation decision to be made at start of pivotal clinical trial
- Validation batches are 3 consecutive batces of each API and DP with fixed commercial process. UV1 from these may potentially be sold.

1: Timelines assume filing in 2025. This is flexible. However, the decision to start validation must be made 2.5 years prior to planned filing.