Arming the patient's immune system to fight cancer

3Q 2016 presentation

17 November 2016

Important notice and disclaimer

This report contains certain forward-looking statements based on uncertainty, since they relate to events and depend on circumstances that will occur in future and which, by their nature, will have an impact on the results of operations and the financial condition of Targovax. Such forward-looking statements reflect the current views of Targovax and are based on the information currently available to the company. Targovax cannot give any assurance as to the correctness of such statements.

There are a number of factors that could cause actual results and developments to differ materially from those expressed or implied in these forward-looking statements. These factors include, among other things, risks or uncertainties associated with the success of future clinical trials; risks relating to personal injury or death in connection with clinical trials or following commercialization of the company's products, and liability in connection therewith; risks relating to the company's freedom to operate (competitors patents) in respect of the products it develops; risks of non-approval of patents not yet granted and the company's ability to adequately protect its intellectual property and know-how; risks relating to obtaining regulatory approval and other regulatory risks relating to the development and future commercialization of the company's products; risks that research and development will not yield new products that achieve commercial success; risks relating to the company's ability to successfully commercialize and gain market acceptance for Targovax's products; risks relating to the future development of the pricing environment and/or regulations for pharmaceutical products; risks relating to the company's ability to secure additional financing in the future, which may not be available on favorable terms or at all; risks relating to currency fluctuations; risks associated with technological development, growth management, general economic and business conditions; risks relating to the company's ability to retain key personnel; and risks relating to the impact of competition.

Third quarter highlights

IPO

- Listed on Oslo Axess in July
- Raised NOK 114m

Data

- The international Journal of Cancer published preclinical data demonstrating synergy of ONCOS-102 with pemetrexed and cisplatin (combo of chemo)

Finances

- Cash NOK 193m
- Operating expenses NOK 25m
- Operating cash flow NOK -20m

Post-period

- A temporary supply interruption of ONCOS-102 will delay administration of drug to 1H17. Key PoC* data in melanoma in 2H17 will not be affected
- Øystein Soug succeeded Gunnar Gårdemyr as CEO

* PoC = Proof of Concept

Financial Snapshot

NOK m

	3Q15	4Q15	1Q16	2Q16	3Q16
Total revenue	**0**	**0**	**-**	**-**	**0**
External R&D expenses	-5	-15	-11	-12	-11
Payroll and related expenses	-13	-15	-13	-12	-10
Other operating expenses	-11	-11	-7	-8	-4
Total operating expenses	**-29**	**-41**	**-31**	**-32**	**-25**
Operating loss	-29	-41	-31	-32	-25
Net financial items	1	-1	-1	-1	-1
Loss before income tax	-29	-42	-32	-33	-26
Net change in cash	162	-33	-33	-34	85
Net cash EOP	**207**	**174**	**141**	**107**	**193**

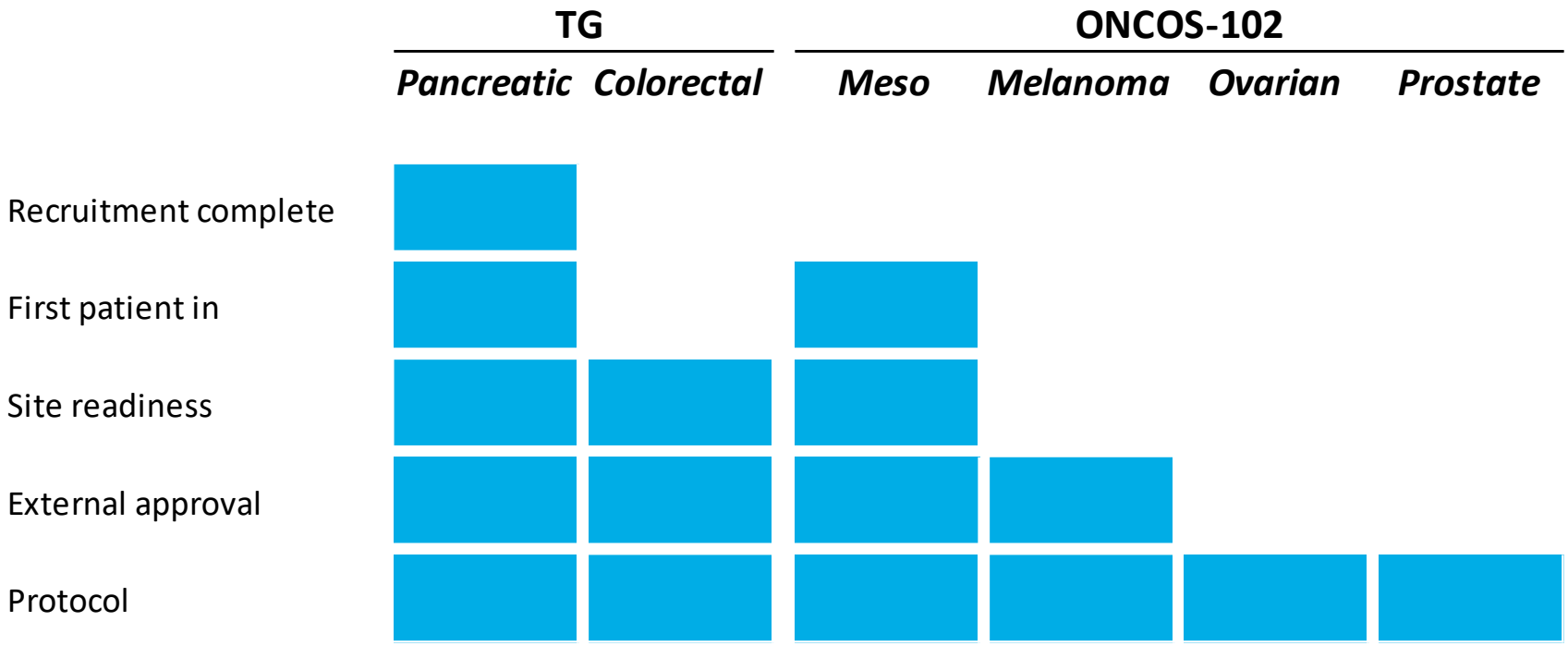
Strong shareholder base as per 1 November 2016

	Shareholder		Estimated ownership	
			Shares m	*Relative*
1	HealthCap	Sweden	11,2	26,5 %
2	RadForsk	Norway	4,1	9,7 %
3	Nordea	Norway	2,7	6,5 %
4	Datum Invest AS	Norway	2,4	5,7 %
5	Rasmussengruppen	Norway	2,1	5,0 %
6	KLP	Norway	2,1	4,9 %
7	Statoil	Norway	0,8	2,0 %
8	Danske Bank (nom.)	Denmark	0,8	1,8 %
9	Swedbank	Norway	0,7	1,7 %
10	Timmuno AS	Norway	0,7	1,7 %
11	Prieta AS	Norway	0,7	1,7 %
12	Nordnet Bank AB (nom.)	Sweden	0,7	1,7 %
13	Pohjola	Finland	0,6	1,4 %
14	Sundt AS	Norway	0,6	1,3 %
15	Birk Venture AS	Norway	0,5	1,2 %
16	Eltek Holding AS	Norway	0,4	1,0 %
17	Pactum AS	Norway	0,4	0,9 %
18	Artic Funds	Norway	0,4	0,9 %
19	DNB	Norway	0,4	0,9 %
20	Spar Kapital Investor AS	Norway	0,3	0,8 %
	Top 20		32,6	77,5 %
	Total		**42,1**	

- 42.1m ordinary shares
- Fully diluted number of shares is 44.6m[1,2]
- Approx. ~760 shareholders
- Average strike price on options NOK 23.2[1]
- Total dilutive effect of options is <6.0%[1]

[1] As per 30 September 2016
[2] Includes outstanding options (2,360,123) and Restricted Stock Units (129,991) to Board members

Where are we with the clinical trials?



Clinical development program

	Cancer indication	Combo with		2016 H2	2017 H1	2017 H2	2018 H1	2018 H2	2019 H1
ONCOS-102	Melanoma	CPI			Phase I				
	Mesothelioma	Chemo*	Orphan ind.	Phase Ib/II					
	Ovarian	CPI	Orphan ind. Sponsor: Ludwig			Phase I/II			
	Prostate	DC therapy	Sponsor: Sotio					Phase I	
TG	Resected Pancreatic	Chemo*	Orphan ind.	Phase I/II					
	Colorectal	CPI			Phase Ib				

◆ Interim data

◆ Clinical, immune and safety data

4 readouts 2017

5 readouts 2018

* In combination with Standard of Care Chemoterapy. Pemetrexed/cisplatin for Mesothelioma and Gemcitabine for Resected Pancreatic

Upcoming data: TG01 in resected pancreatic cancer

Earlier platform data demonstrated

- *20% OS after 10-years*
- *Induction of RAS mutation specific CD4+ and CD8+ T cells in patients*
- *Killing of cancer cells from vaccinated patient by both RAS mutation specific CD4+ and CD8+ cells from the same patient (in vitro)*
- *Tumor specific T cell infiltration in biopsy from vaccinated patient*

2015-16 data demonstrated

14 of 15 patients alive after 1 year
(19 ITT, 15 eligible patients)

DTH* response 15 of 18 patients

RAS specific T-cell response:
6 of first 8 patients

First half 2017

Two-year survival

First cohort: 19 patients

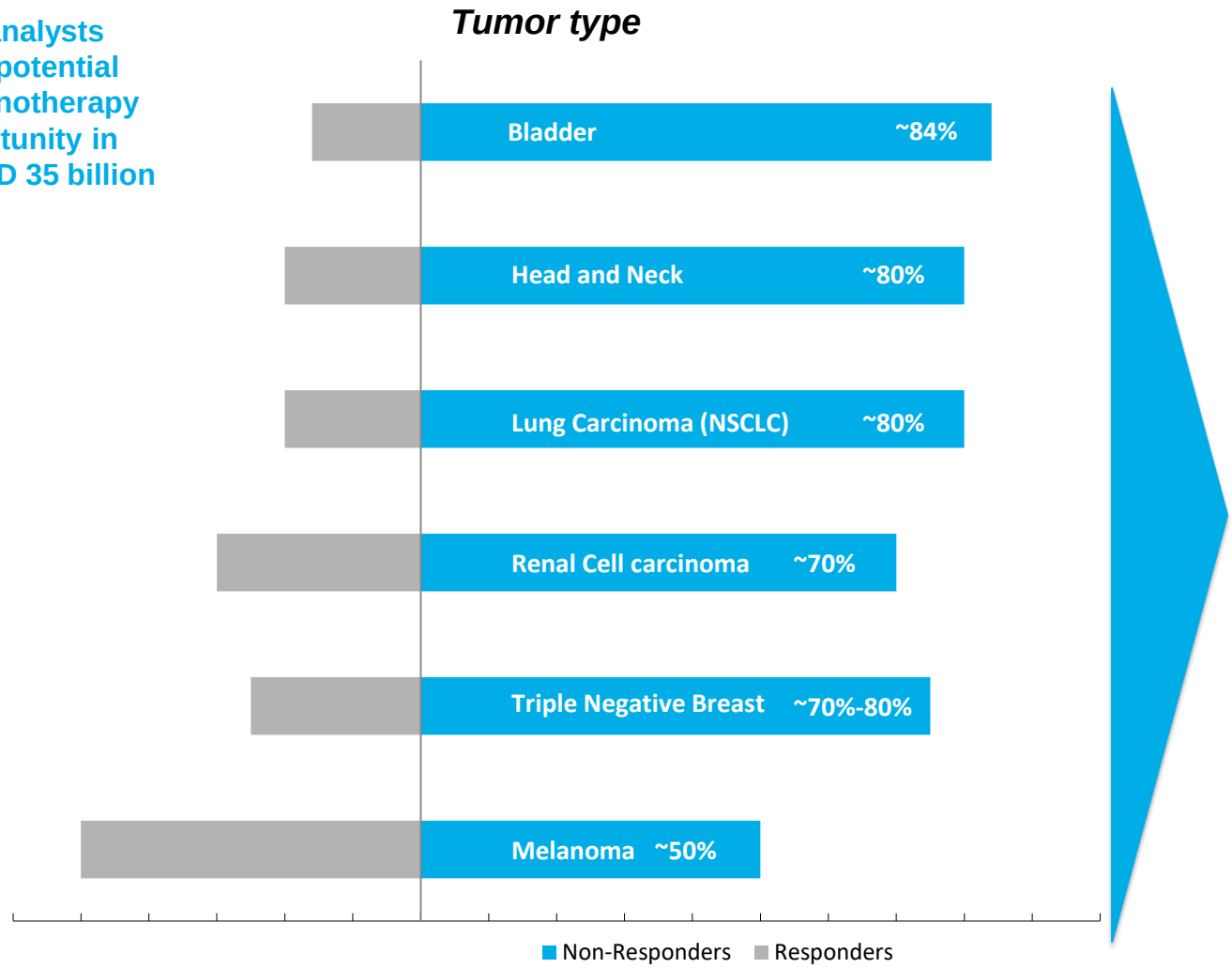
* DTH = blood test

ONCOS-102 Phase I Melanoma trial

- Clinical proof of platform -

Check point inhibitors (CPI) have had a significant clinical impact - but most patients do not respond

In 2013, Citi analysts forecasted a potential cancer immunotherapy market opportunity in excess of USD 35 billion by 2023



ONCOS-102 can potentially activate non responders to become susceptible to CPI's

ONCOS-102: In treatment refractory melanoma

Background

- There is no standard of care for patients not responding to CPI

Objective

- Explore the safety and immune activation of sequential treatment with ONCOS-102 followed by Keytruda

Setting

- Advanced malignant melanoma patients not responsing to CPIs
- Immune activate with ONCOS-102, then re-challenge with Keytruda

Cohorts

- Six patients with prior PD1 monotherapy
- Six patients with prior PD1 plus Yervoy combination therapy

Key endpoints

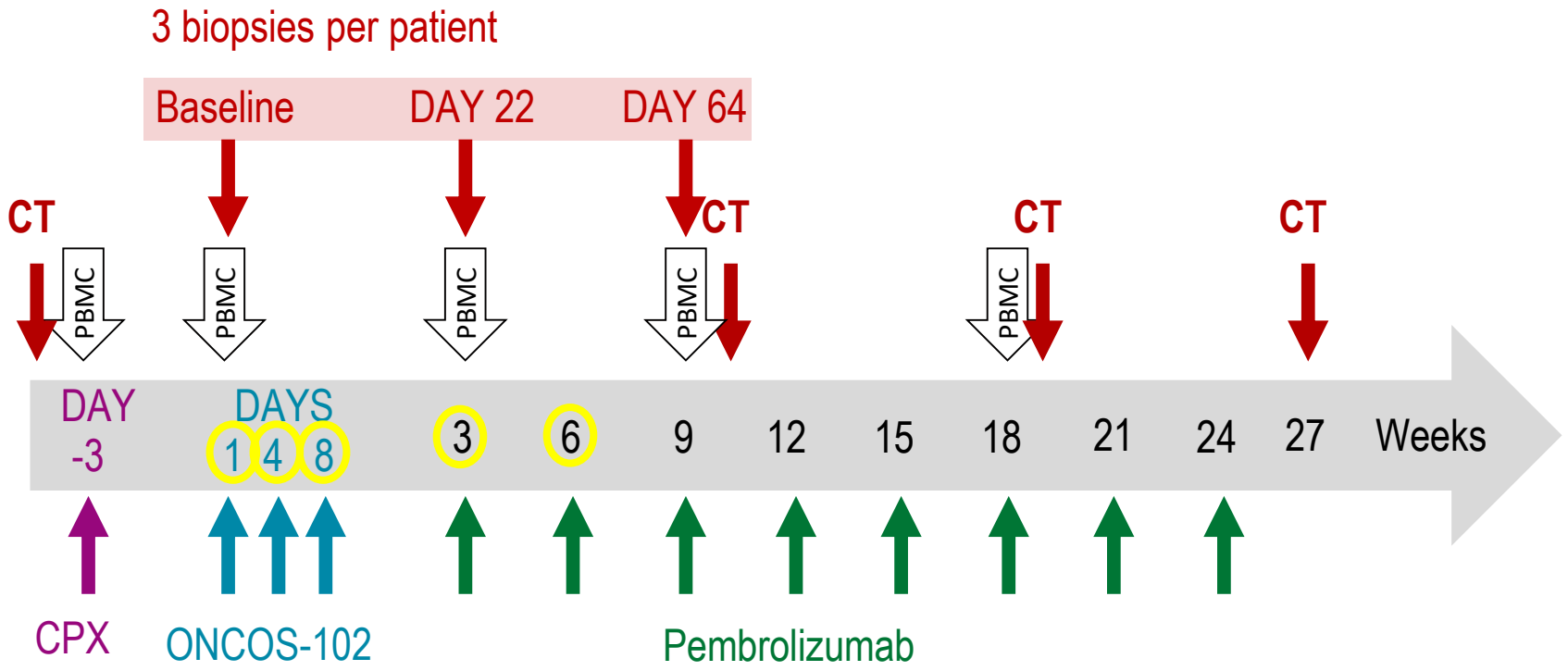
- Safety
- Immune activation and clinical response data
- Correlation of immune activation and clinical response data

Yervoy – generic name: ipilimumab
Keytruda – generic name: pembrolizumab

ONCOS-102: Melanoma study details

Open-label Phase I trial

- ONCOS-102: 3 injections at day 1, 4 & 8
- Keytruda (CPI) at day 22, then every 3 weeks for 5 months



The ONCOS Platform: Mechanism of immune activation

At the tumor:

The virus is injected, starts to replicate and lyse the tumour cells

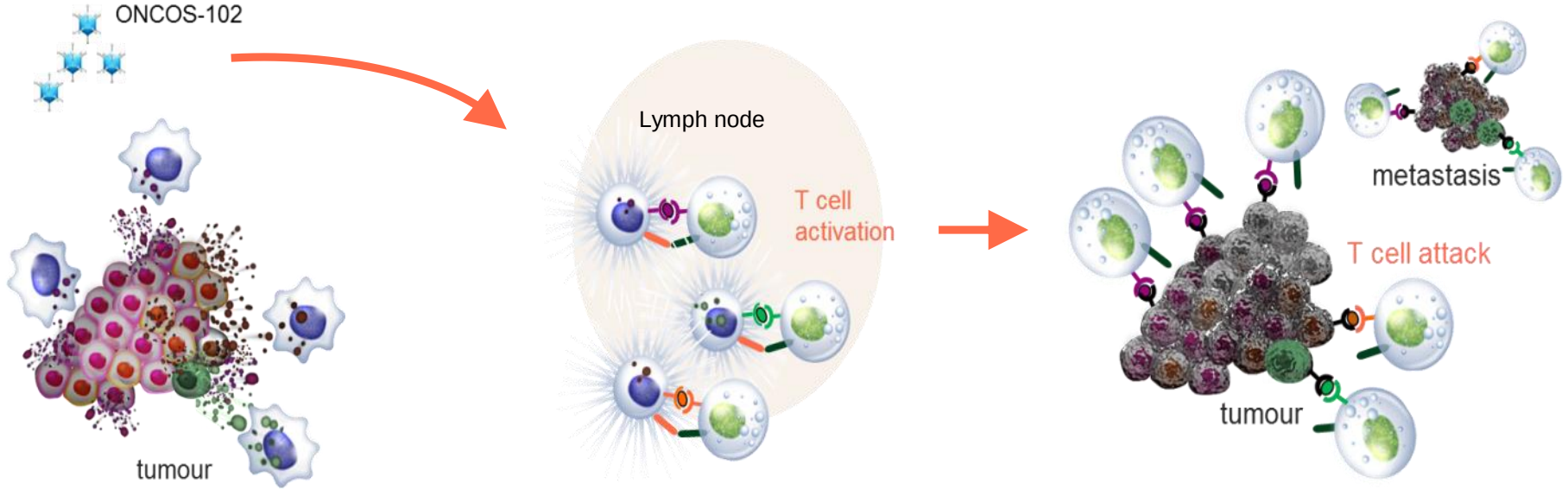
Unique tumor antigens are released

At the lymph node:

Presentation of antigens and production of tumor specific T-cells later released systemically

At the tumor lesions:

T-cells find tumor lesions with corresponding tumor antigens and kill the cancer cells



Significant immunological marker activation (C1 trial data)

Evidence that immune system recognizes tumor threat

Innate Immune System (biopsy)

- Induction of proinflammatory cytokines + fever (all patients)
- Infiltration of innate immune cells into tumors in 11 out of 12 patients

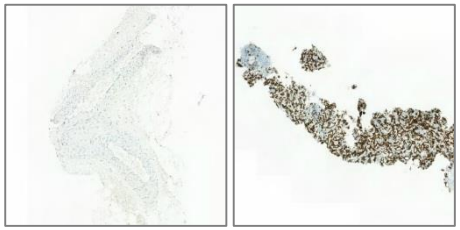
Correlation between post-treatment increase in innate immune cells and OS

Evidence that T-cells find the tumor and are cell killing

Adaptive immune system (biopsy)

- Increase in T-cell infiltration into tumors (including CD8+ killer T-cells) in 11 out of 12 patients
- Observation in one non-injected distant metastasis

OvCa. patient (FI1-19)



Correlation between post-treatment increase in CD8+ T-cells and OS (p=0.008, R=0.74)

Evidence that newly produced T-cells are tumor specific

Anti-tumor immune response (blood)

- Systemic induction of tumor-specific CD8+ T-cells

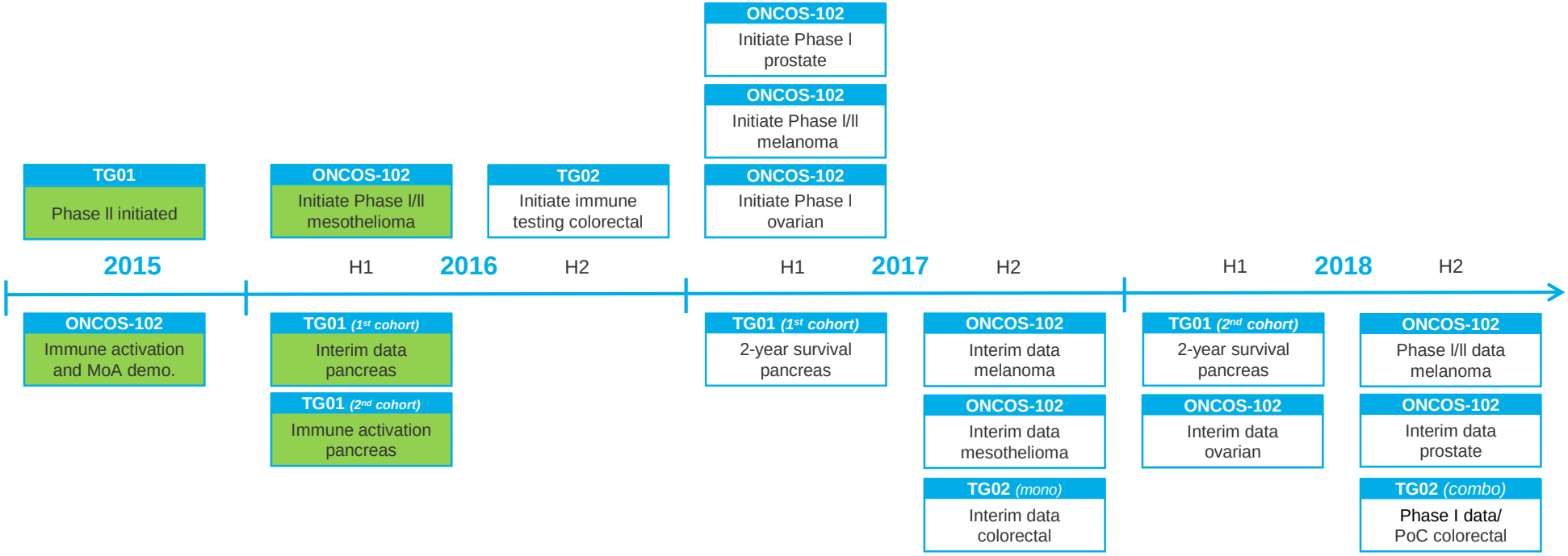
Ovarian patient:
NY-ESO-1, MAGE-A1, MAGE-A3, and Mesothelin specific CD8+ cells

Mesothelioma patient:
MAGE-A3 specific CD8+ cells

Associated with clinical benefit

targovax

Strong newsflow over coming 18 months



Arming the patient's immune system to fight cancer

1 **Core focus on immuno-oncology**	✓ Lead product is an differentiated oncolytic adenovirus ✓ Targeting refractory solid, injectable tumors
2 **Proprietary platforms and pipeline**	✓ Promising Phase I data from two platform technologies ✓ Immunological findings linked to clinical benefit
3 **Multiple near term value inflection points**	✓ Six combination trials (Phase I and II) ✓ All six trials read out in 2017-2018
4 **Corporate**	✓ Oslo IPO in July 2016 (OSE:TRVX) ✓ Cash at approx. USD 24m

targovax