Arming the patient's immune system to fight cancer

3Q 2017 presentation

2 November 2017

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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.

Agenda

- **3Q 2017 Highlights**
- Program overview
- TG mutRAS neo-antigen cancer vaccine platform
- ONCOS-102 oncolytic virus platform
- 3Q 2017 Financial highlights

Highlights from the third quarter 2017

Clinical trials	**Initiation of the phase I/II trial with ONCOS-102 in combination with durvalumab** for patients with ovarian and colorectal cancer
Patents	**Granted US patent for the therapeutic use of the TG products** in combination with anti-metabolite chemotherapy
Clinical data	**Three posters presented at the ESMO annual meeting in Madrid** - European Society of Molecular Oncology
Financing	**Raised NOK 6.4m** (USD 0.8m) in a subsequent offering in July, following the NOK 200m private placement in June
Post-period	***Reported one-year data for the 2nd cohort in the TG01 ph I/II trial*** *in resected pancreatic cancer – in line with the 1st cohort* ***Granted US patent for the 2nd generation product from the TG platform, TG02***

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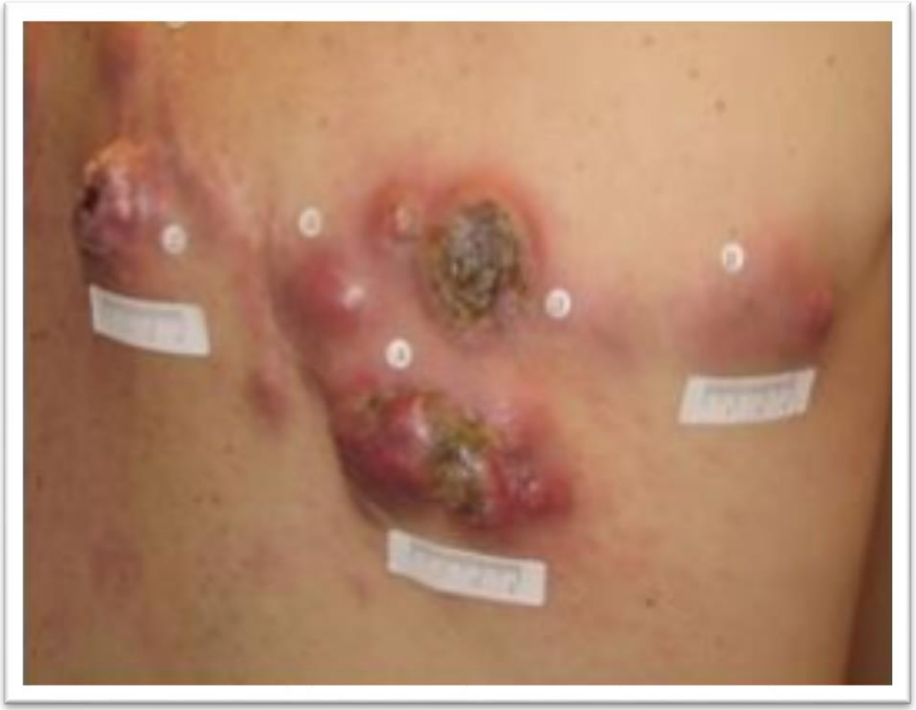
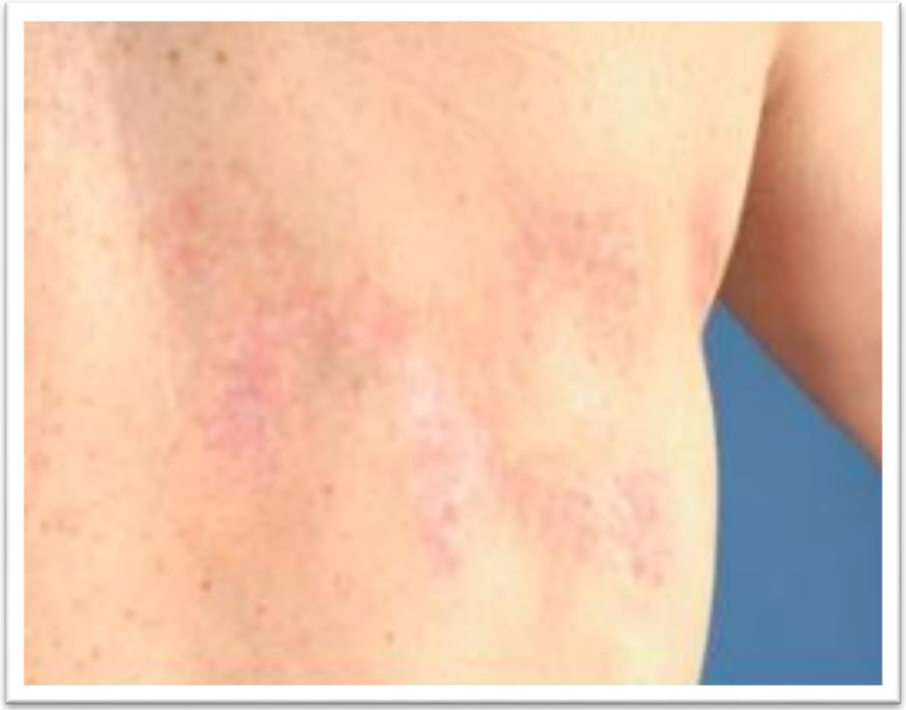
Immunotherapy has the potential to cure cancer

Patient example – Yervoy® checkpoint inhibitor trial



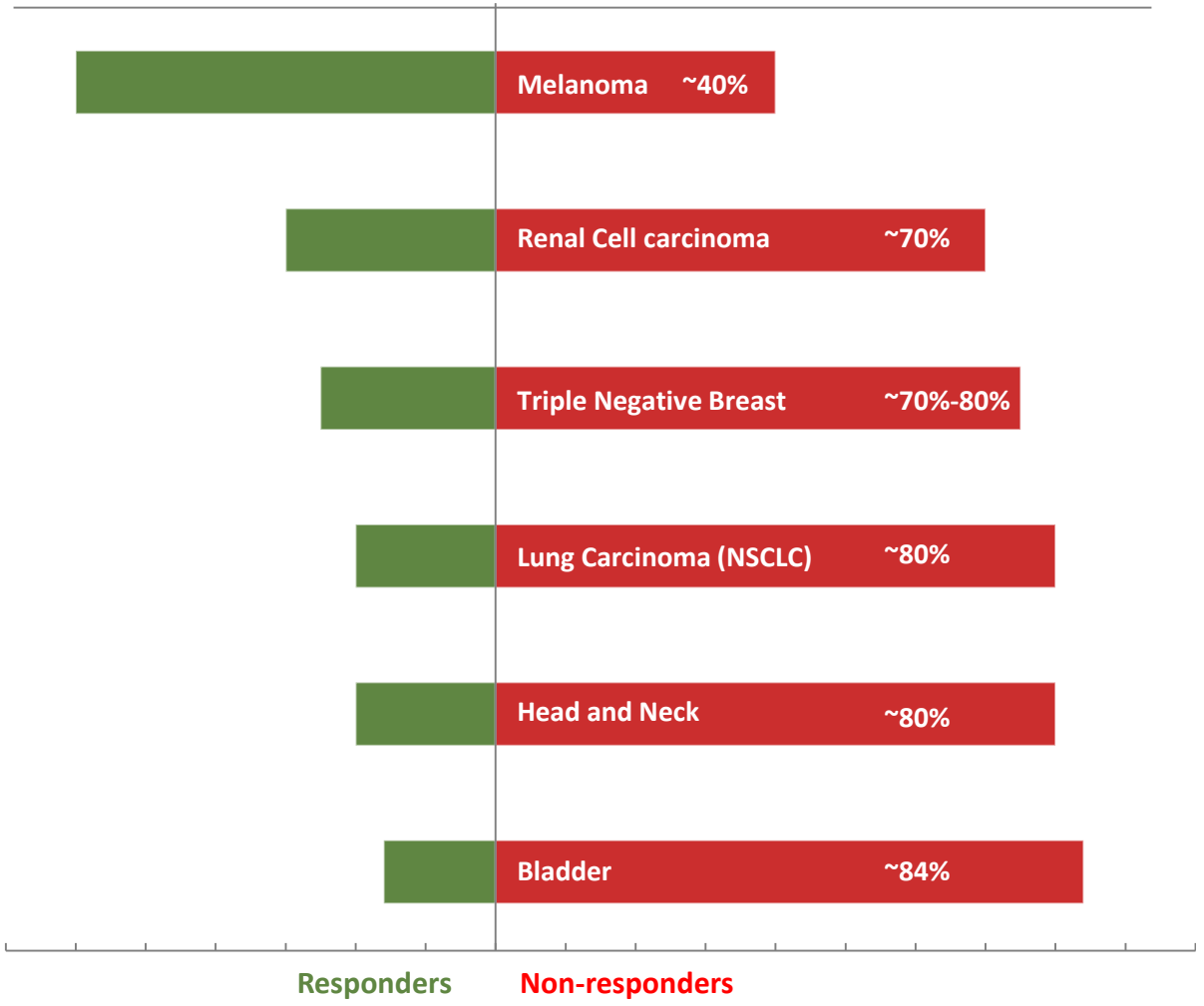
Prior to Yervoy®



1 year after

Most patients do not respond to currently available immunotherapies

Response rate to checkpoint inhibitors (CPIs)

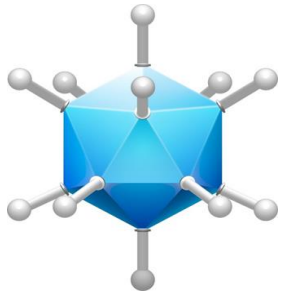


Complimentary ***immune priming medicines*** *may make tumors* ***respond better to checkpoint inhibitors***

Targovax is developing two drugs to boost the effect of immunotherapy

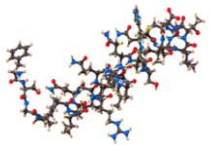
ONCOS-102
Oncolytic virus

- Genetically tailored **oncolytic adenovirus**
- **Selectively infects** and lyses cancer cells
- Triggers **tumor specific immune response**
- Phase I completed and **4 ongoing Phase I/II trials**



TG01
Neoantigen vaccine

- Cocktail of synthetic peptides **targeting oncogenic RAS mutations**
- Generates **RAS-specific CD4+ and CD8+ T-cells**
- T-cells circulate and **identify cancer cells displaying mutated RAS epitopes**
- **Encouraging survival data** from Phase I/II trials in pancreatic cancer



Clinical program and upcoming data read-outs

	Cancer indication	Combined with		2017 H1	2017 H2	2018 H1	2018 H2	2019 H1
ONCOS-102	Melanoma	CPI		Phase I				
	Mesothelioma	Chemo*	Orphan ind.	Phase Ib/II				
	Ovarian & Colorectal	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				

Indicative timing of:

- 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

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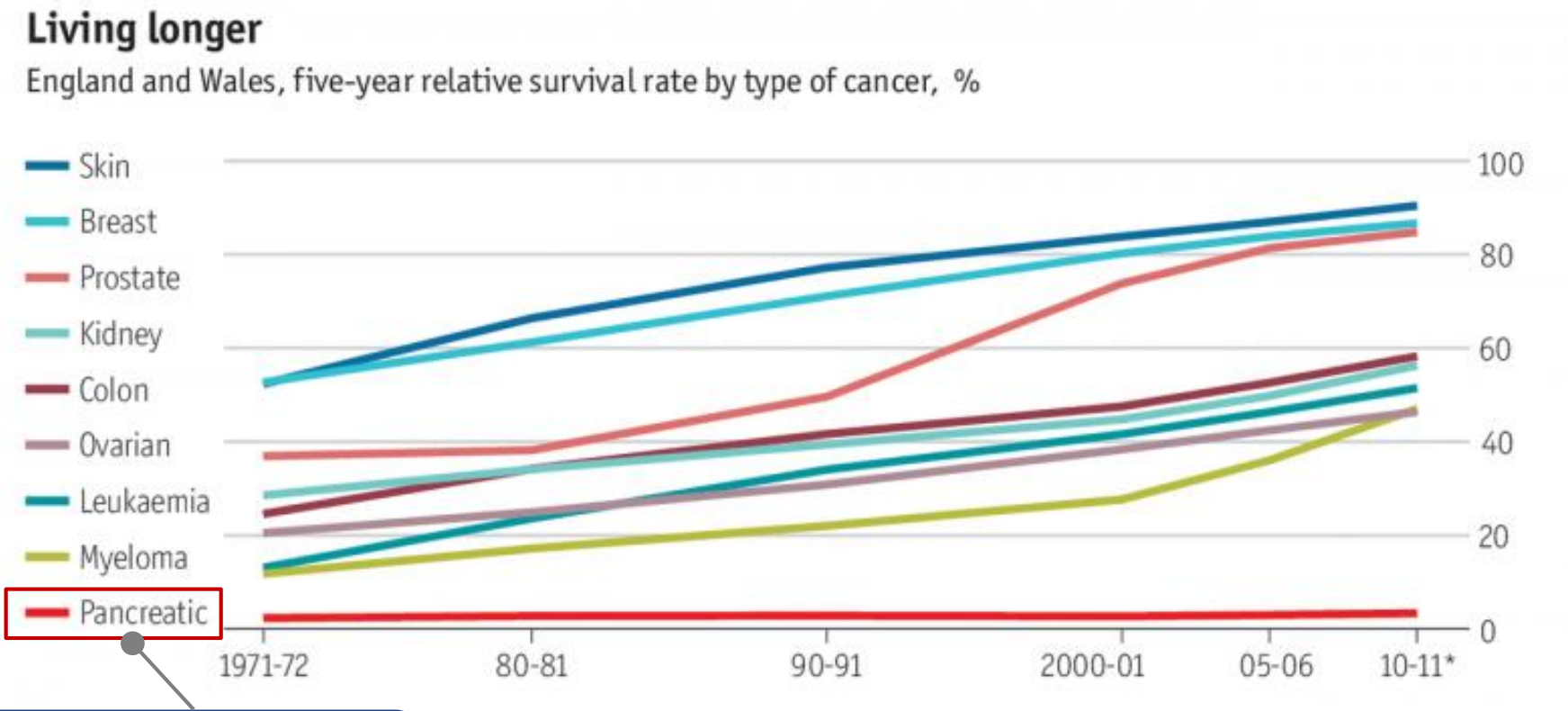
The five year survival rate for pancreatic cancer patients has not improved since the 1970s

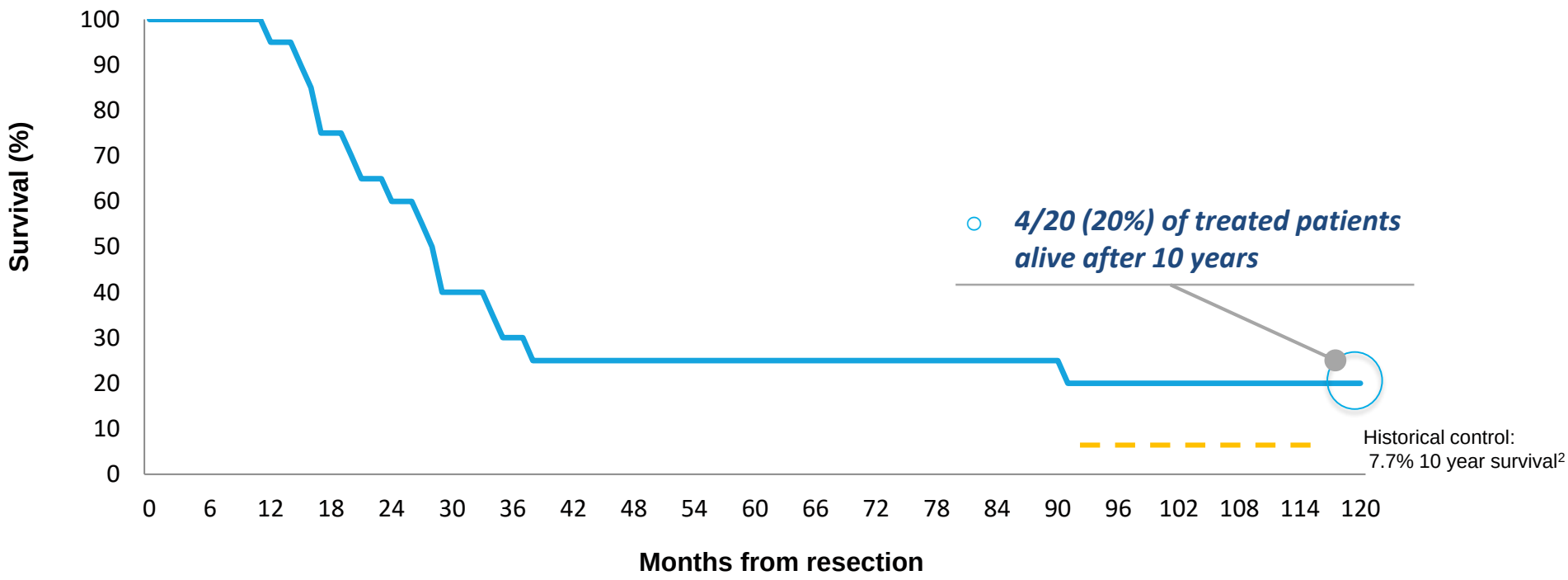


No improvement in long-term survival over the past 45 years

SOURCE: Cancer Research UK, graphic adapted from The Economist September 16 2017

In earlier trials, TG vaccination has shown 20% 10-year survival in retrospective analyses

10 year survival in historical TG trials in resected pancreatic cancer (n=20, TG monotherapy)[1]

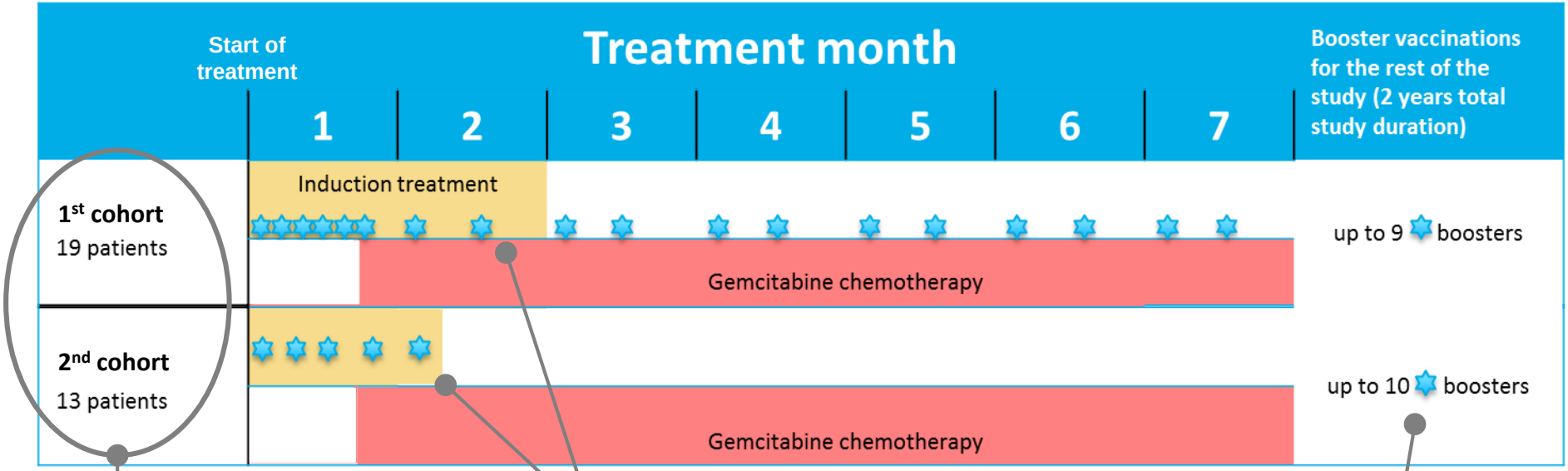


[1] Wedén et al., 2011

[2] Oettle H et al., JAMA 2013, vol 310, no 14

Targovax was set up to validate the TG concept in a modern setting with adjuvant chemotherapy

Ongoing Phase I/II trial in resected pancreatic cancer with adjuvant Gemcitabine (SoC)



- 32 patients in 2 cohorts
- Single arm design, no control group

- The cohorts have different dosing regimens
- Chemo given with/wo TG

- TG booster injections up to 2 years post surgery

Survival, immune activation and safety data from the ongoing TG trial is so far very encouraging

1st cohort (19 patients)

- **Median survival 33.1 months vs. 27.6 for historical control**[1]
- **13 of 19 patients (68%) alive 2 years after surgery,** historical control 2 year OS range from 30-53%[2]

2nd cohort (13 patients)

- **13 of 13 patients (100%) alive 1 year after surgery**

mutRAS immune response (1 yr)

- **1st cohort 18/19 patients** (95%) had immune activation
- **2nd cohort 11/13 patients** (85%) had immune activation

Safety

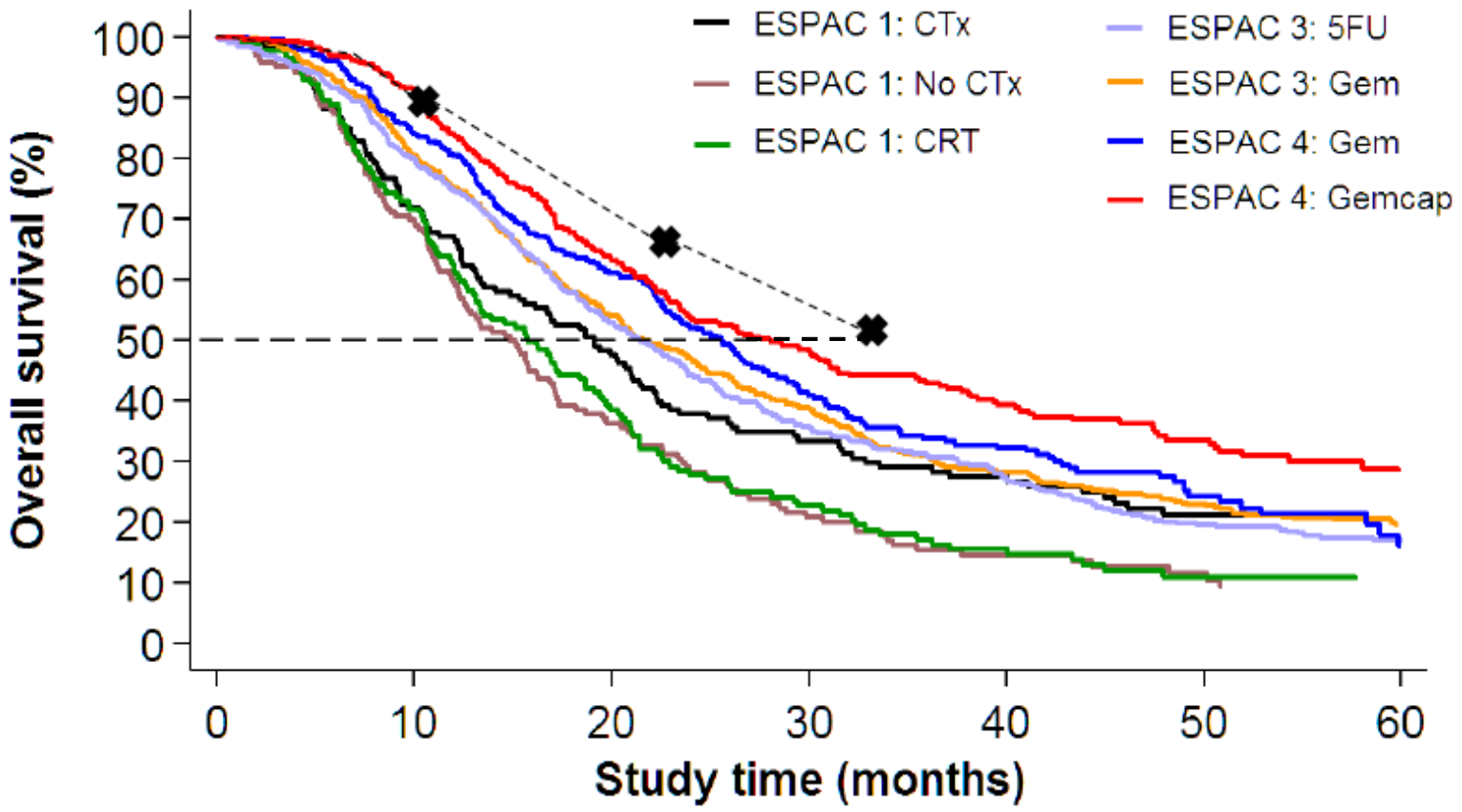
- TG01 and gemcitabine **combination treatment is well-tolerated**
- **Four allergic reactions reported in 1st cohort, none in 2nd cohort** (up to 1 year)

1: Based on ESPAC-4 reported 25.5 months median OS from randomisation, adding median time from surgery to randomization of 64 days (2.1 months)
2: Relevant historical control trials, not including ESPAC-4, which did not report 2 year OS

TG01 data in context

Ref. Prof. Daniel Palmer, London, June 2017

Comparative survival rates across trials in resected pancreatic cancer



NOTE: Relative survival curves across studies (ESPAC), meant for indicative comparisons only

Immunological response (DTH) to TG01 is associated with increased survival in non-resectable pancreatic cancer

Observational study of 25 patients receiving 12 vaccinations during 1 year

Advanced pancreatic cancer TG01/GM-CSF (mono-therapy)	**Evaluable patients**	**Median survival** (from 1st vaccination)	**1 year survival** (from 1st vaccination)
Detected immune response	**14 / 25 (56%)**	**5.2 months**	**3 (21%)**
Not detected Immune response	**11 / 25 (44%)**	**3.6 months**	**1 (9%)**

Ref. ESMO 2017

Clinical development overview for the TG program

Historical trials

Phase I
Resected & non-resected
>200 patients

- *10 year survival data*
- *Correlation between immune response and survival*
- *Large safety database*

Completing trial

Phase I/II
Resected pancreatic cancer
32 patients

- *Encouraging median survival*
- *3 year survival rate in 1H 2018*

Planned / recruiting trials

Resected pancreas
TG01 - Phase IIb/III
n = tbd

- *Ph IIb-III adaptive design*
- *Aimed to reach registration*
- *Currently seeking collaboration opportunities*

Colorectal - TG02
Phase I
20 patients

- *TG02, targets 8 mutations*
- *Combination w/KEYTRUDA®*
- *Currently recruiting patients*

How TG is different from other peptide vaccine approaches, and may succeed where others have failed

Lessons Learned	The TG approach
Target often poorly defined *and not cancer specific*	✓ Mutated **RAS is a well-defined neo-antigen**, and a driving cause of cancer
Insufficient immune activation *of CD4+ helper and CD8+ killer T-cells*	✓ TG peptides are designed and **proven to induce both CD4+ helper and CD8+ killer mutRAS-specific T-cells**
Depot-forming adjuvants not suitable*, as activated T-cells return to depot instead of tumor site*	✓ **Non depot-forming** immune modulator GM-CSF used as adjuvant to stimulate **strong, systemic T-cell response**

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Targovax has initiated a broad clinical program to test the clinical benefit of ONCOS-102

Compassionate use program
Finland
115 patients

- *Testing within ATAP EU program*
- *Individual clinical responses*
- *Reassuring safety data*

Initial Phase I trial
Solid tumors
7 indications

- *12 refractory patients*
- *Monotherapy*
- *Correlation between immune activation and survival*

Melanoma
Phase I
12 patients

- *Combination with PD-1 CPI in refractory patients*
- *Proof-of-concept*
- *Memorial Sloan Kettering*

Mesothelioma
Phase I/II - controlled
30 patients

- *Combination with chemo*
- *Randomized controlled trial*
- *Ultra-orphan indication*

Ovarian / colorectal
Phase I/II - controlled
78 patients

- *Collaboration with Ludwig & CRI*
- *Combination with Medimmune's durvalumab (Imfinzi™)*
- *Randomized controlled trial*

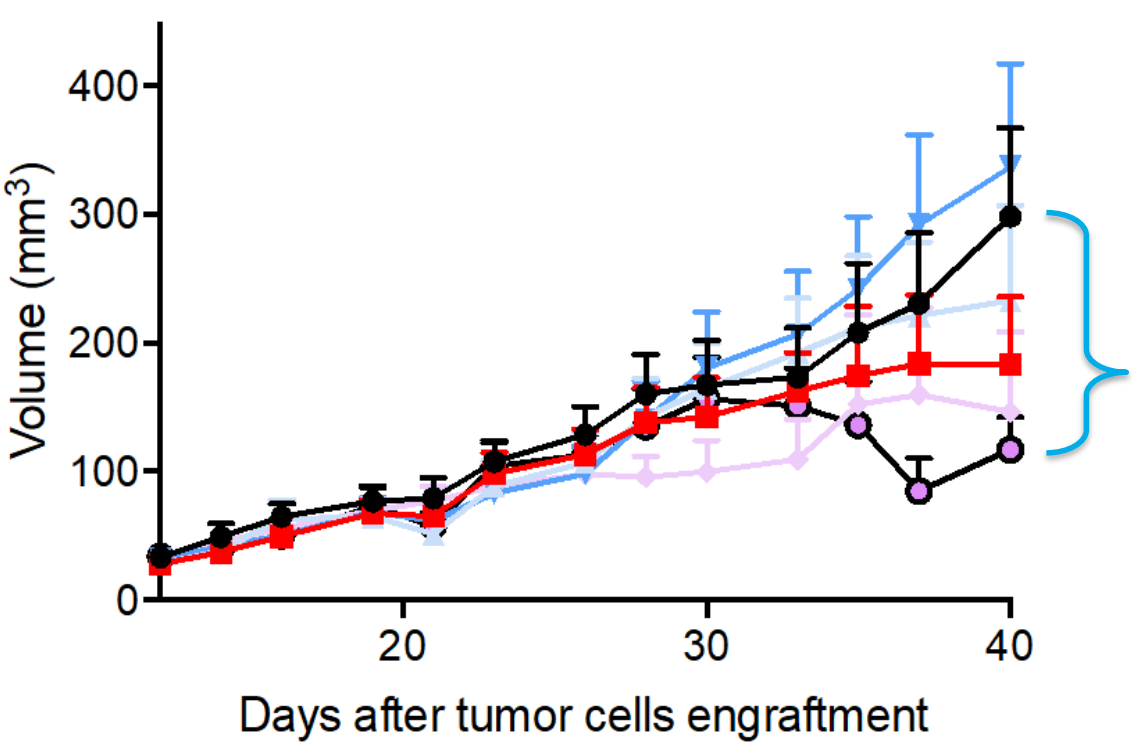
Prostate
Phase I
10 patients

- *Partnered with SOTIO*
- *Combination with DC therapy*

targovax

ONCOS-102 in melanoma – 70% reduction in tumor volume with KEYTRUDA® combination in mouse model

Effect of ONCOS-102 and KEYTRUDA® in humanized mouse melanoma model, change in tumor volume



Tumor volume reduction vs. vehicle control
% change by Day 40:

ONCOS-102 only	**52%** reduction
ONCOS-102 + Keytruda (200)	**61%** reduction
ONCOS-102 + Keytruda (400)	**69%** reduction

The mouse data support the scientific rationale of the ongoing clinical melanoma study with ONCOS-102 and KEYTRUDA®

Reduction in tumor volume

- **ONCOS-102 + KEYTRUDA®** (high) **reduced volume by 69%**
- ONCOS-102 alone reduced tumor volume by 51%
- KEYTRUDA® alone did not reduce tumor volume

CD8+ T-cell infiltration

- **ONCOS-102 + KEYTRUDA® >2-fold increase in CD8+ T-cell count in tumor** (vs. neg. control and vs. KEYTRUDA® alone)
- KEYTRUDA® alone – no change

Conclusions

- **Synergistic anti-tumor effect of ONCOS-102 + KEYTRUDA®**
- ONCOS-102 primes the immune system and enhances response to KEYTRUDA®

In Q3, a large trial combining ONCOS-102 and the PD-L1 CPI durvalumab in ovarian and colorectal cancer was initiated

Indication

- **Ovarian cancer – 42 patients**
- **Colorectal cancer – 36 patients**
- Safety lead-in – 6 patients

Route of administration

- **Intraperitoneal administration via catheter**

Combination

- **MedImmune's PD-L1 checkpoint inhibitor durvalumab** (Imfinzi™)

Partners and sponsor

- **Funded by Cancer Research Institute (CRI)**
- **Sponsored by Ludwig Cancer Research**

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Targovax has a sound financial position, with cash to complete the planned clinical program into 2019

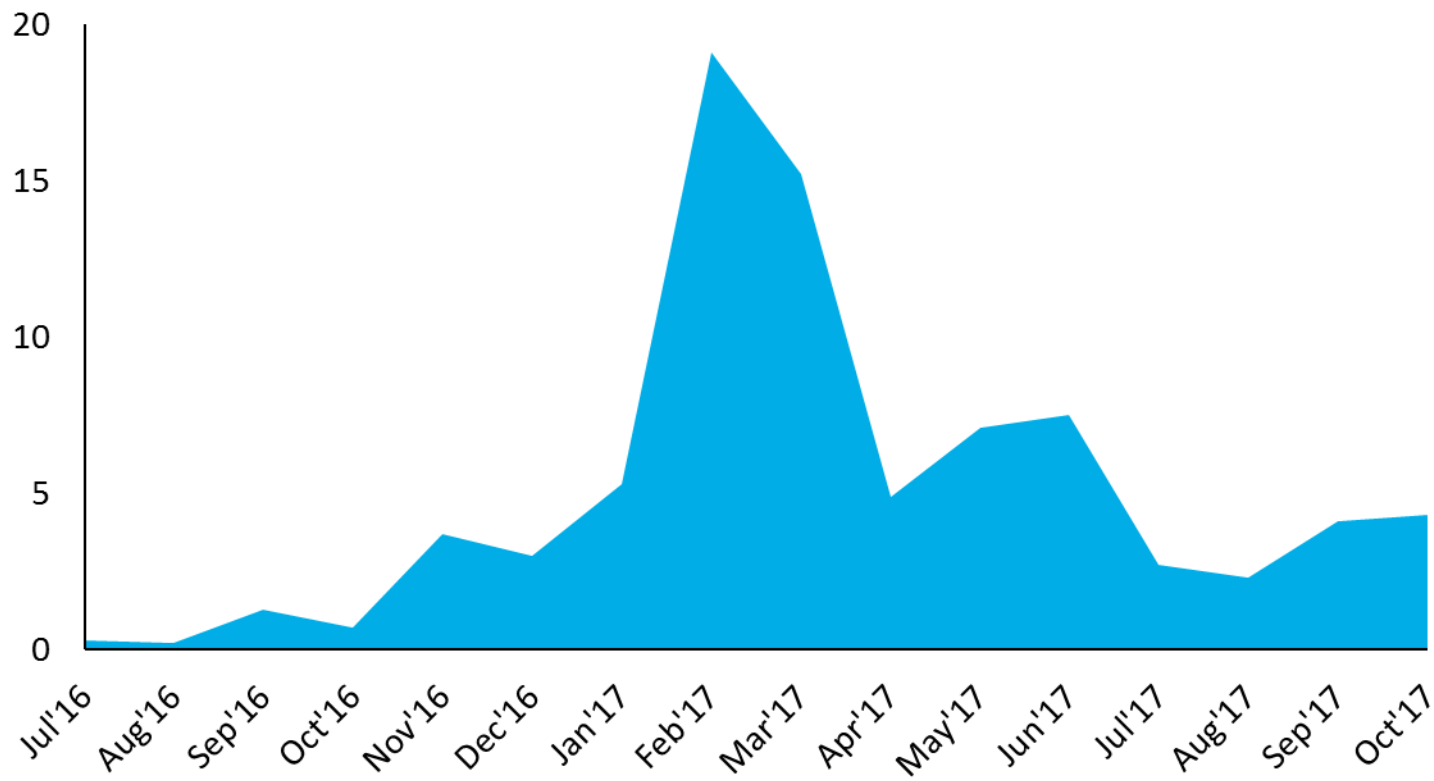
Raised NOK 206 million in private placement June/July 2017
10,000,000 new shares @ NOK 20 per share

Operations			
Cash end of Q3	**NOK 286m**	USD 36m	*Sep 30th 2017*
Net cash flow	**NOK -24m**	USD -3m	*Total Q3*
Annual run rate	**NOK 106m**	USD 13m	*Last four quarters*

The share	OSE: TRVX		
Market Cap	**NOK 950m**	USD ~120m	*At share price NOK ~18*
Daily turnover	**NOK 5m**	USD 0.6m	*Rolling 6 month avg.*
Analysts	DNB, ABG Sundal Collier, Arctic, Redeye, Norske Aksjeanalyser, Edison		

Targovax is listed on the main board on the Oslo Stock Exchange, with average daily liquidity of NOK 3.5m

Development in daily average share turnover *(NOK million / day)**



- ***NOK ~930 m market cap***
- ***NOK 3.5m NOK*** *avg. daily turnover in last 3 months*
- ***NOK 197m*** *total turnover in 3Q*
- ***160k shares*** *avg. daily volume in 3Q*
- ***>4,800 owners***
- ***52.6m shares**** *(56.2 fully diluted)*

* Up until 31th Oct

The shareholder base is strong, with a mix of specialist, generalist and retail investors

Shareholder		Estimated ownership	
		Shares m	*Relative*
HealthCap	Sweden	12,4	23,6 %
Nordea	Norway	4,7	8,9 %
RadForsk	Norway	4,4	8,4 %
KLP	Norway	1,9	3,7 %
Statoil	Norway	1,2	2,2 %
Thorendahl Invest AS	Norway	0,9	1,7 %
Danske Bank (nom.)	Denmark	0,8	1,5 %
Euroclear Bank (nom.)	Belgium	0,8	1,4 %
Timmuno	Norway	0,7	1,4 %
Prieta AS	Norway	0,7	1,4 %
Sundt AS	Norway	0,6	1,1 %
Yngve S. Lillesund	Norway	0,3	0,6 %
NHO - P665AK	Norway	0,3	0,5 %
The Bank of NY Mellon (nom.)	Belgium	0,2	0,5 %
The Bank of NY Mellon (nom.)	Belgium	0,2	0,4 %
Tobech Invest AS	Norway	0,2	0,4 %
Istvan Molnar	Norway	0,2	0,4 %
Danske Bank (nom.)	Denmark	0,2	0,3 %
Kristian Falnes AS	Norway	0,2	0,3 %
Spar Kapital Investor AS	Norway	0,2	0,3 %
Top 20		**31,0**	**59,0 %**
Other shareholders (4160)		*21,6*	*41,0 %*
Total		**52,6**	**100,0 %**

Key international investors participating in PP 2017

- Nyenburgh (NL)
- Trium (UK)
- Millenium Capital Partners (UK)
- Interogo (SWE)
- AP3 (SWE)
- Aramea AM (DE)

Shares and options

- **56.2m shares fully diluted**
  - Average strike price on options ~NOK 21
  - Total dilutive effect of options is 6.3%
- **52.6m ordinary shares**
  - Management ownership: 1.7%
  - 4,180 shareholders

Planned strong news flow with multiple near term value inflection points