ChinaBio Conference

Suzhou – April 25 2018

Immunotherapy has the potential to cure cancer

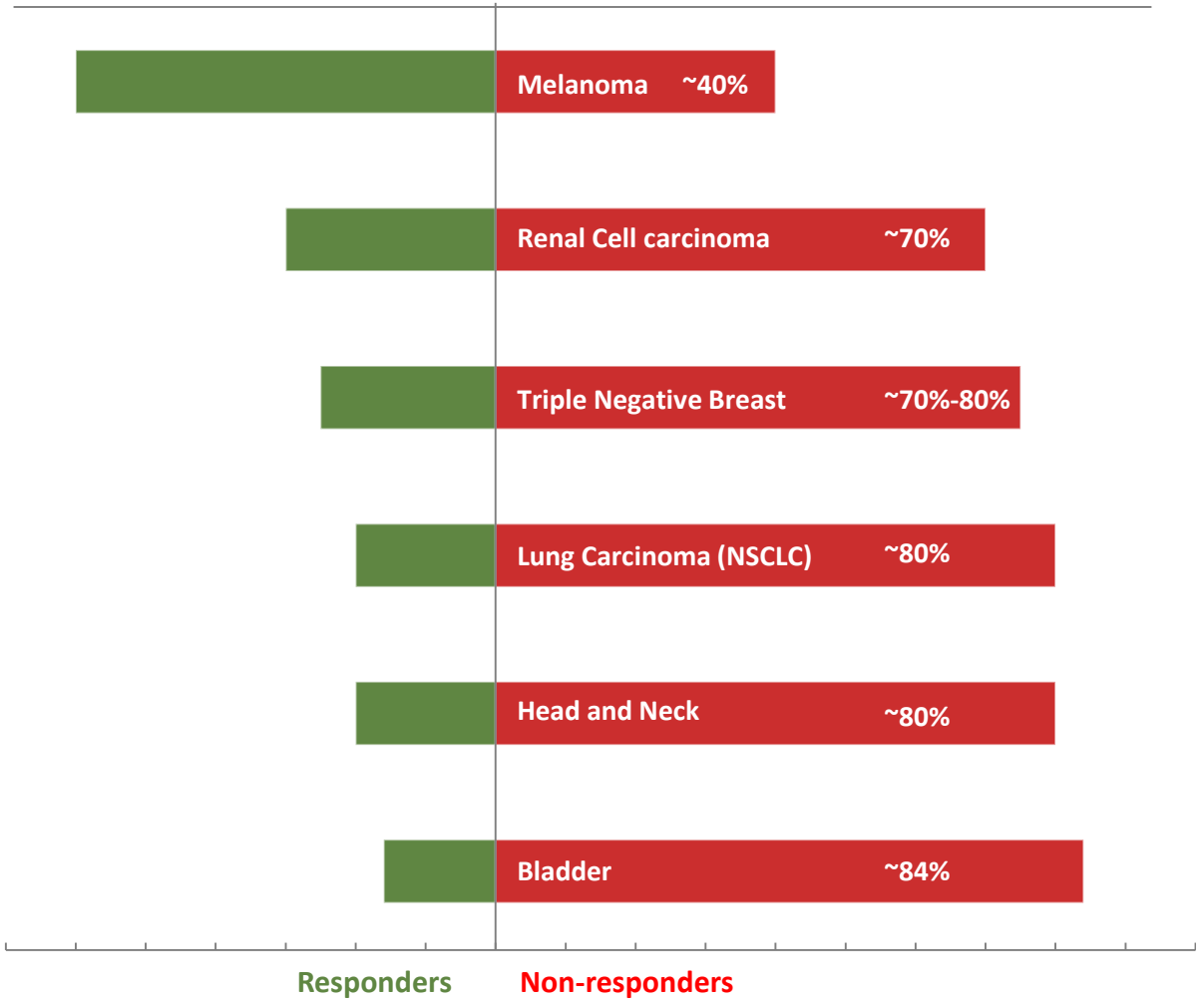
Patient example – Yervoy® checkpoint inhibitor trial

Prior to Yervoy®

1 year after

Most patients do not respond to currently available immunotherapies

Response rate to checkpoint inhibitors (CPIs)

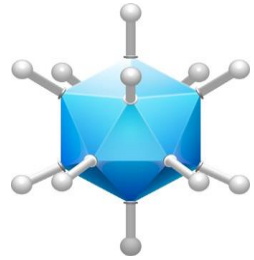


Boosting T-cells in tumors *may make checkpoint inhibitors* ***effective in more patients***

Targovax has two immuno-oncology programs in clinical development

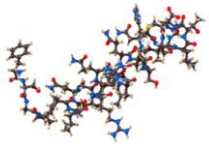
ONCOS
Oncolytic virus

- Genetically **armed adenovirus**
- Makes **cancer antigens** visible to immune system
- **Induces T-cells** specific to patients' tumor



TG
RAS neoantigen vaccine

- Shared neoantigen, **off-the-shelf peptide vaccine**
- Targets oncogenic, mutated **RAS neoepitopes**
- **Induces T-cells** specific to **RAS mutations**

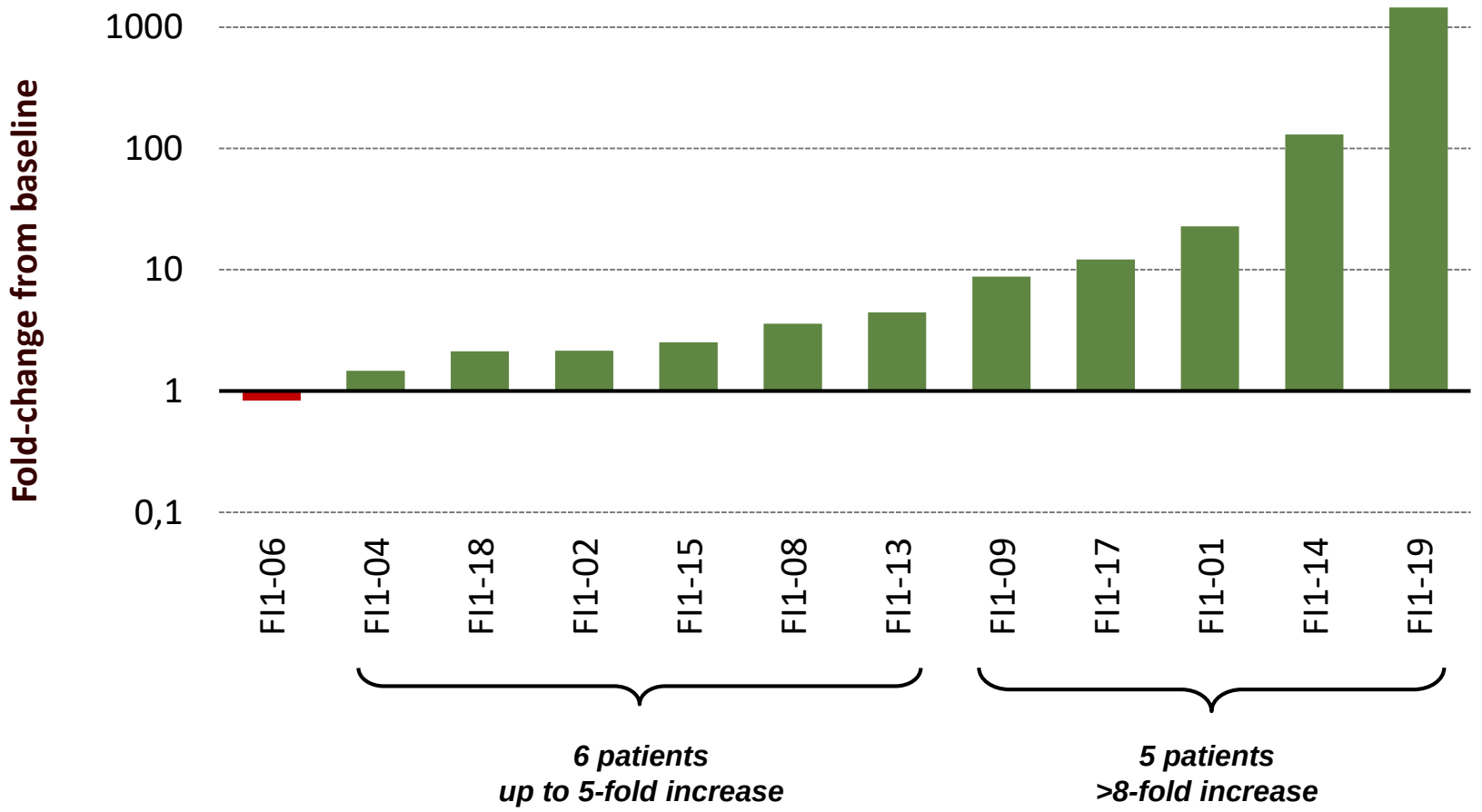


Agenda

- **ONCOS oncolytic virus platform**
- TG mutRAS neoantigen vaccine platform
- Targovax clinical program overview

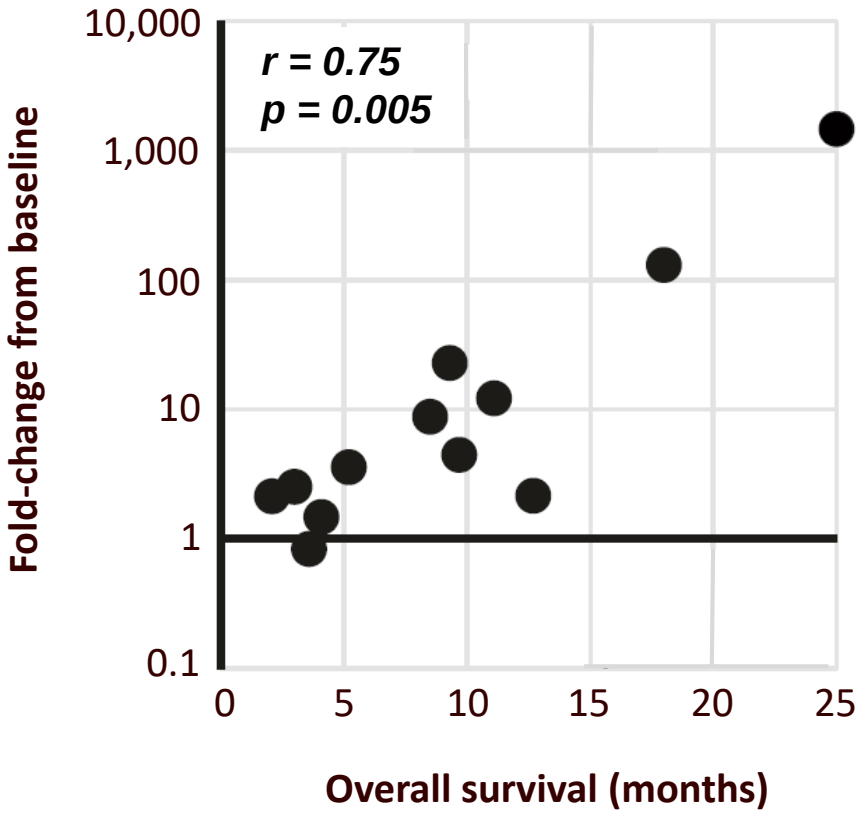
ONCOS-102 can increase T-cell count in tumors

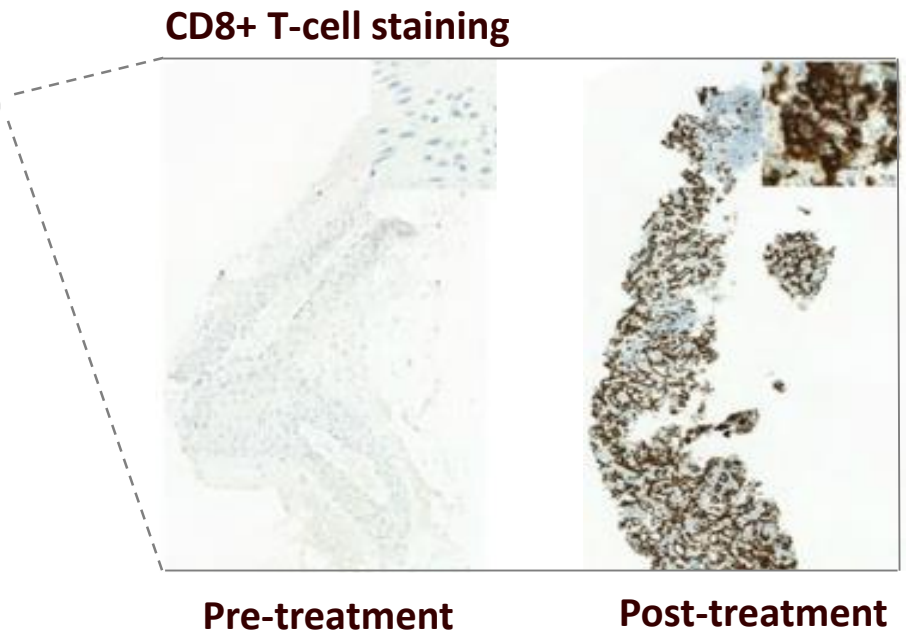
Phase I trial data: change in CD8+ T-cell count after treatment with ONCOS-102



This T-cell increase correlates with survival

Phase I trial data: Fold-change CD8+ T-cell count vs. survival





Ranki et al., Journal for Immunotherapy of Cancer 2016, 4(17)

ONCOS clinical program overview

Completed trials
Ongoing trials
Starting trials

Compassionate use program
Finland
115 patients

- *Individual clinical responses*
- *Reassuring safety data*

Phase I trial
7 Solid tumors
12 patients

- *Correlation between immune activation and survival*

Ovarian / colorectal
Phase I/II
up to 78 patients

- *Collaboration with Ludwig, CRI and MedImmune (AstraZeneca)*
- *Intraperitoneal administration*

Mesothelioma
Phase Ib/II
30 patients

- *1st line combination with chemo*
- *Randomized controlled trial*

Prostate
Phase I
10 patients

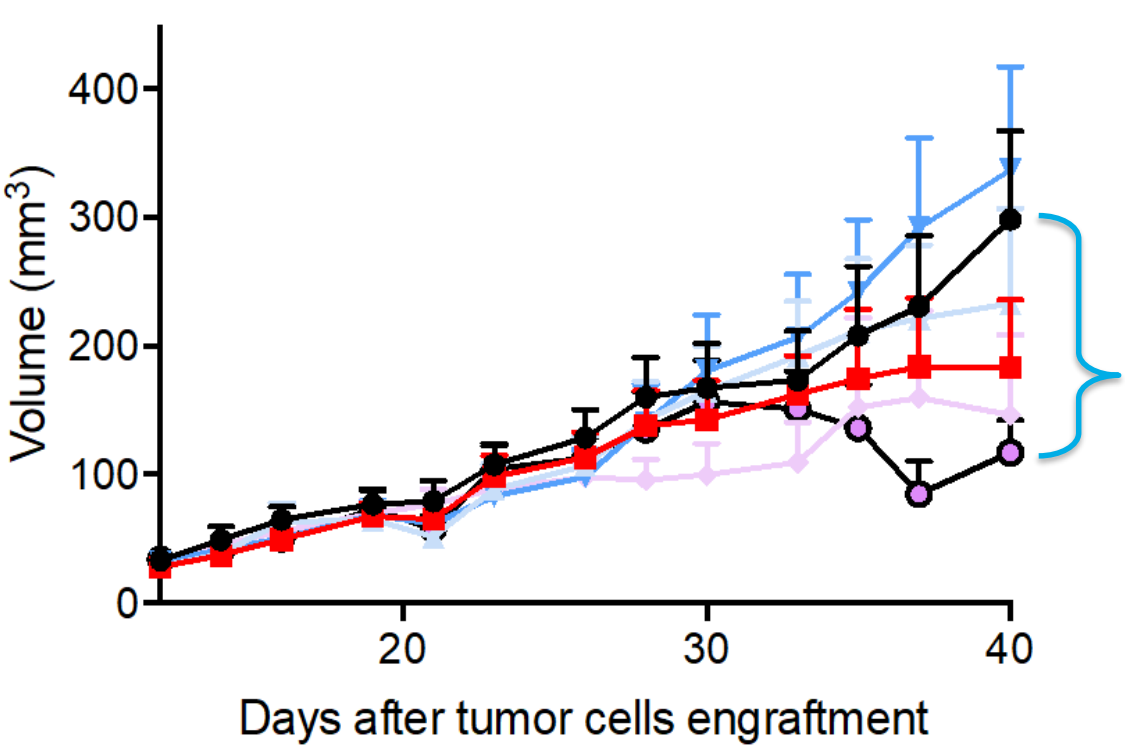
- *Partnered with Sotio*
- *Combination with DC therapy*

Melanoma
Phase I
12 patients

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

Melanoma: ONCOS triggers 70% reduction in tumor volume with CPI 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:

Keytruda only	**No change**
ONCOS-102 only	**52%** reduction p<0.05
ONCOS-102 + Keytruda (200)	**61%** reduction p<0.05
ONCOS-102+ Keytruda (400)	**69%** reduction p<0.05

Melanoma: ONCOS-102 induces early immune activation

Safety

- ✓ **First safety review completed with no safety concerns**
- ✓ ONCOS-102 first time in melanoma treatment

Innate immune activation

- ✓ **Systemic increase of several pro-inflammatory cytokines** (4/4 patients)

Adaptive immune activation

- ✓ **Increase** in the relative level of **cytotoxic CD8+ T cells** (4/4 patients)
- ✓ **Increase in PD-1 expression** on CD8+ T cells (4/4 patients)

Clinical efficacy

- ○ *First ORR data expected in 2H 2018*

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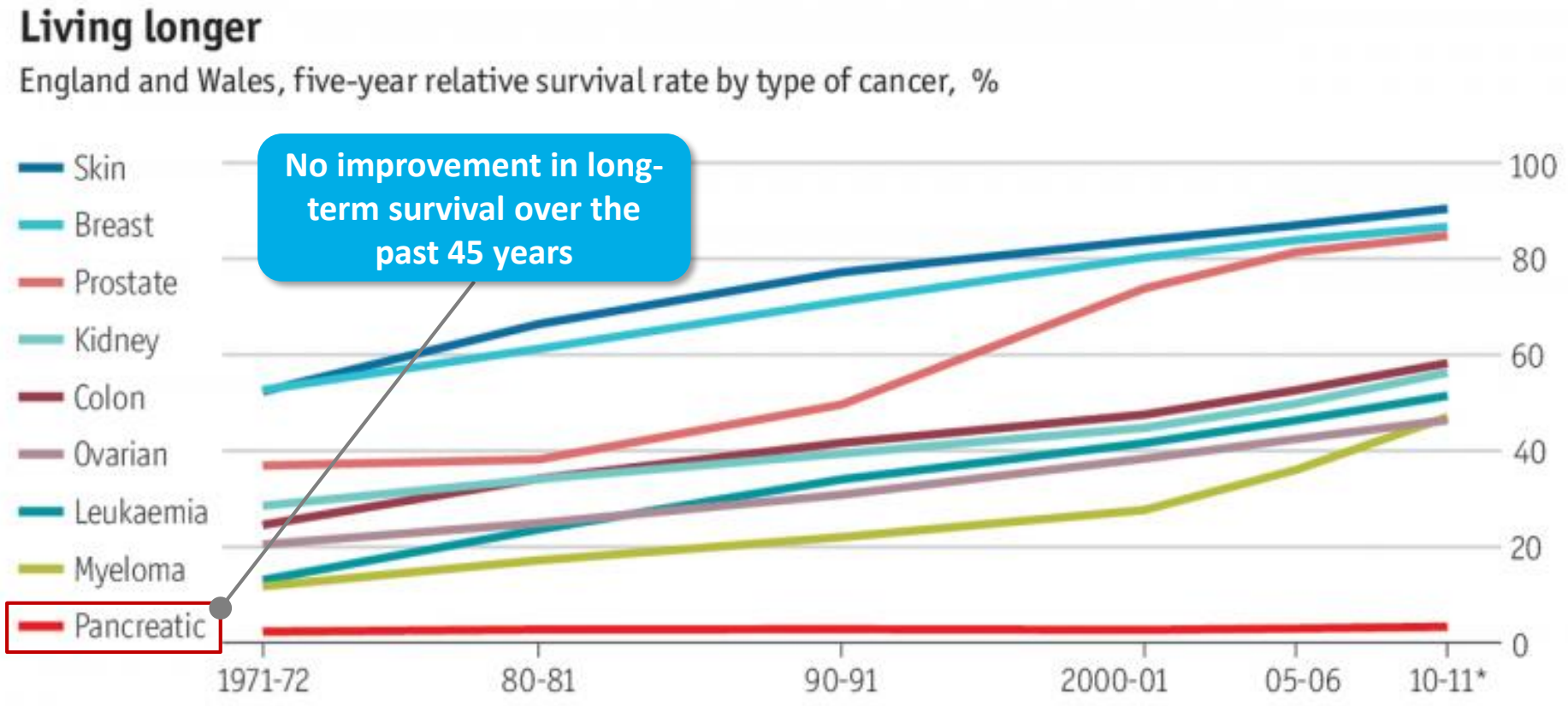
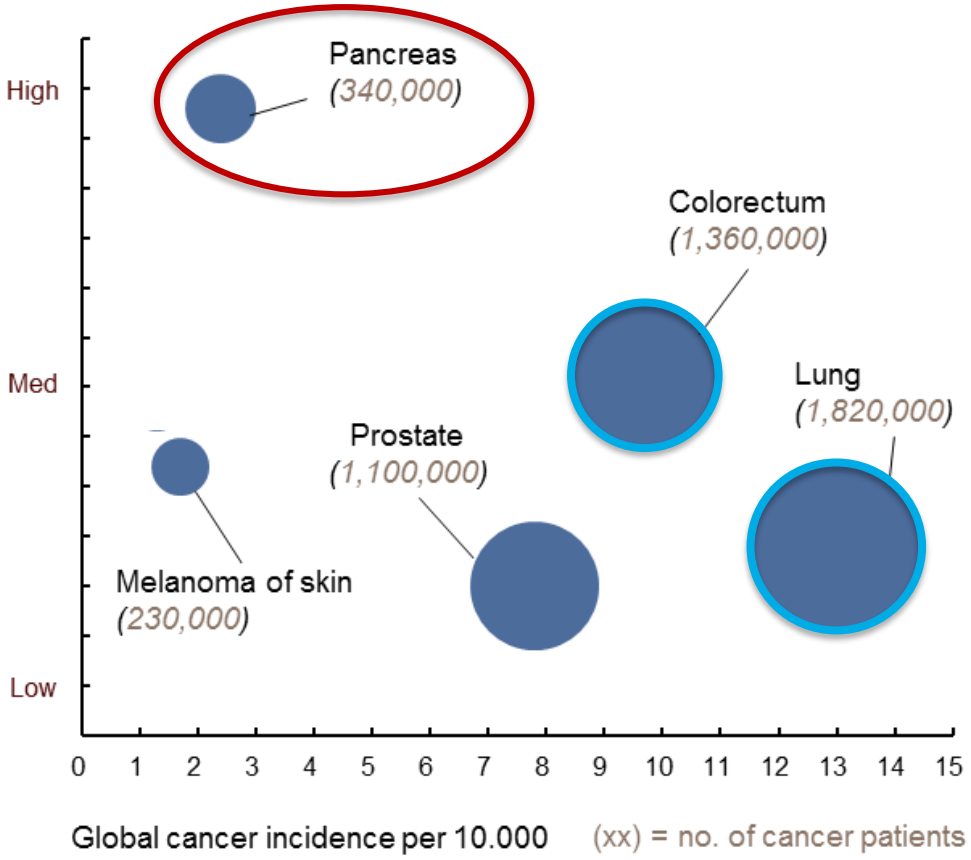
The five year survival rate for pancreatic cancer patients has not improved since the 1970s



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

RAS is mutated in >90% of pancreatic cancer patients, making it an ideal target in this disease

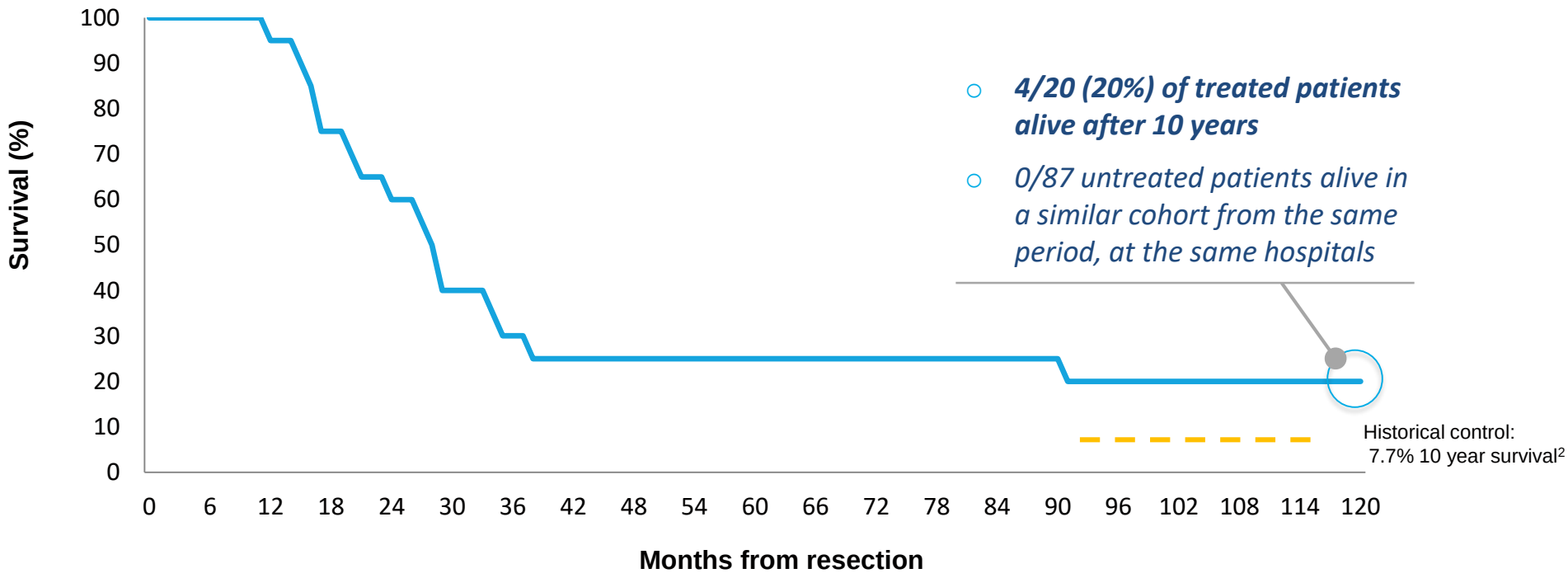
Frequency of RAS mutations



- RAS mutations result in **uncontrolled cell division**
- **There are no existing therapies** targeting RAS
- Targovax has developed a unique **vaccine against mutant RAS**

In previous trials in resected pancreatic cancer, TG vaccination has shown 20% 10 year survival

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



[1] Wedén et al., 2011

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

These promising results are now being validated in a phase I/II trial finalizing in 1H 2018

1st cohort (19 patients)

- **Median survival 33.1 months vs. 27.6 for historical control**
- **13 of 19 patients (68%) alive 2 years after surgery**, vs. 30-53% in historical controls

2nd cohort (13 patients)

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

mutRAS immune response (1 yr)

- **90% of patients** (29/32) had **RAS-specific 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)

Completed trials
Ongoing trials
Planned trials

TG clinical program overview

Pancreas, resected & non-resected
Phase I
>200 patients

- *10 year survival data*
- *Correlation between immune response and survival*

Resected pancreas
Phase I/II
32 patients

- *Encouraging median survival*
- *90% immune response*

Resected pancreas
TG01 - Randomized
Phase II

- *Ph IIb-III adaptive design*
- *Aimed to reach registration*
- *Possible CPI combination arm*

Colorectal - TG02
Phase I - single arm

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

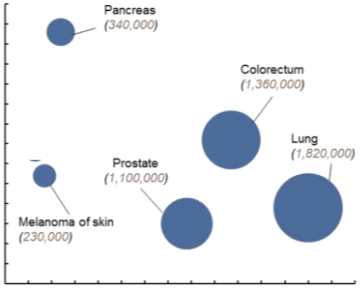
Resected pancreatic cancer is the lead indication, but all RAS mutated cancers are potential TG targets

1. **Pancreatic cancer** (resected)
2. **Colorectal cancer**
3. **Lung cancer** (NSCLC)
4. **All mutRAS cancers**

- **TG01 lead indication**
- Completing phase I/II
- Planning phase IIb/III
- **40.000 patients**

- **TG02 lead indication**
- Phase I trial recruiting
- 50% RAS mutated
- **Up to 500.000 patients**

- **TG02 potential future indication**
- 30% RAS mutated
- **Up to 500.000 patients**



- **TG02 + TG03 ultimate long-term potential**
- 30% of all cancers
- **Up to 30% of all cancer patients**

Source: Global data, Riva et al. Plos One 2017 Estimated total addressable patient number with RAS mutations in US, EU and China

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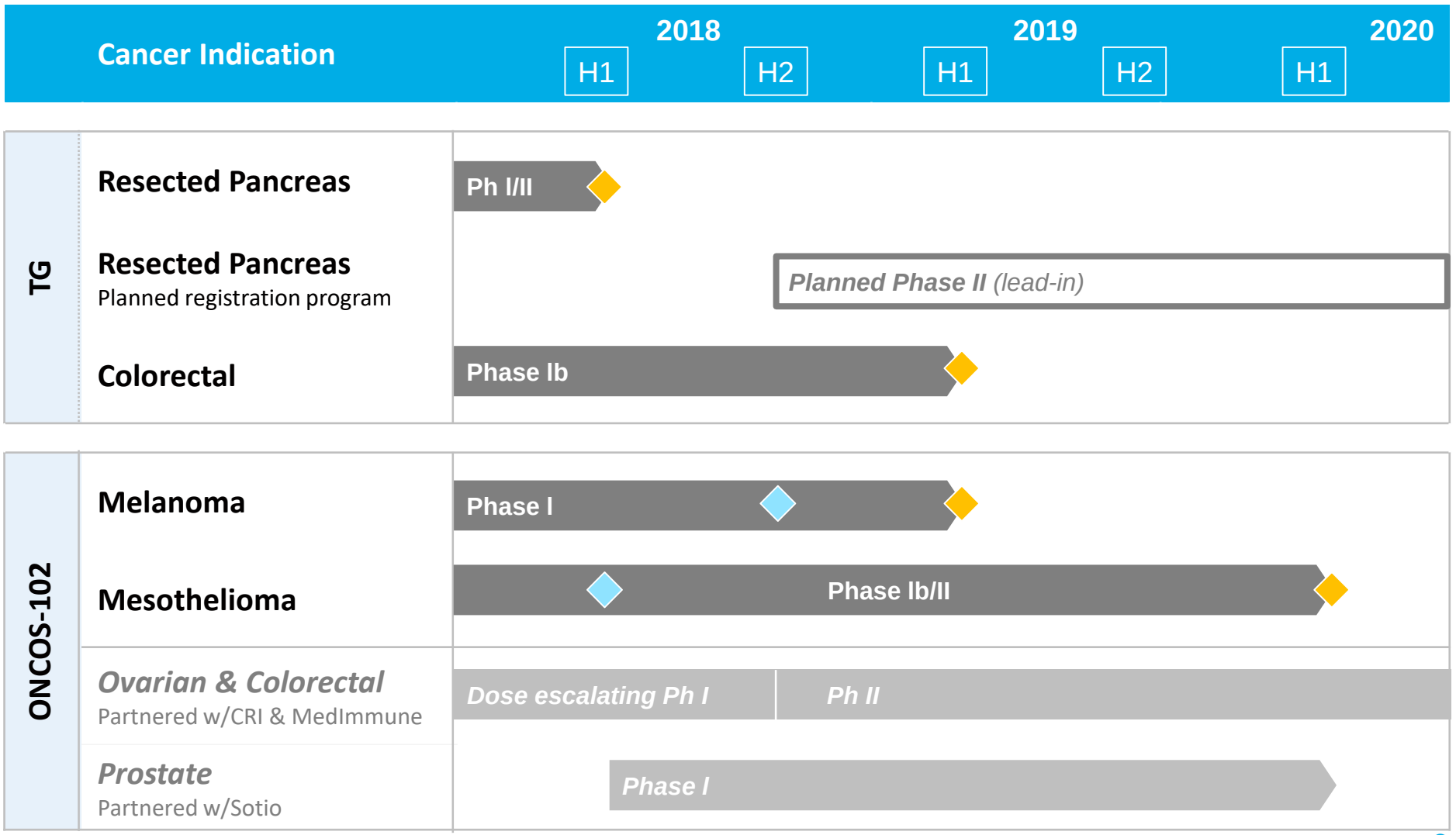
- **Targovax clinical program overview**

Overview of Targovax' full clinical program

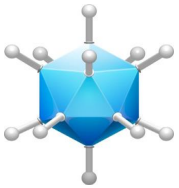


Arming the patient's immune system to fight cancer

Broad clinical program

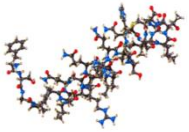
- ✓ Six shots on goal
- ✓ Several upcoming data points

ONCOS



- ✓ Demonstrated ability to increase T-cell count
- ✓ Potential to make CPIs effective in more indications

TG



- ✓ Unique approach for targeting RAS mutations
- ✓ Potential to benefit up to 1/3 of all cancer patients

BACKUP

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

Operations			
Cash end of Q4	**NOK 262m**	USD 32m	*Des 31st 2017*
Net cash flow	**NOK -24m**	USD -3m	*Total Q4*
Annual run rate	**NOK 110m**	USD 14m	*Last four quarters*

The share	OSE: TRVX		
Market Cap	**NOK 900m**	USD ~110m	*At share price NOK ~17*
Daily turnover	**NOK 4m**	USD 0.5m	*Rolling 6 month avg.*
Analyst coverage	DNB, ABG Sundal Collier, Arctic, Redeye, Norske Aksjeanalyser, Edison		

News flow – Multiple near-term value inflection points