



ACTIVATING THE PATIENT'S IMMUNE SYSTEM TO FIGHT CANCER

3Q 2019

7 November 2019



targovax

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Financials & Highlights

2. Melanoma
3. Next generation ONCOS
4. Mesothelioma
5. Newsflow

TARGOVAX AT A GLANCE



Immune activation by oncolytic viruses

- Addressing the growing need for **immune activators** to enhance efficacy in combination with other treatments, such as checkpoint inhibitors
- ONCOS clinical stage **adenovirus platform** targeting hard-to-treat solid tumors



ONCOS-102 lead clinical asset

- One of the **furthest developed** OV's with >180 patients treated to date
- Four ongoing combination trials with **rich news flow** the next 3-12 months



Encouraging clinical efficacy demonstrated

- Strong **single agent** immune activation and clinical data
- **33% ORR** in anti PD-1 refractory melanoma in combination with Keytruda
- Promising interim data in mesothelioma in combination with chemotherapy

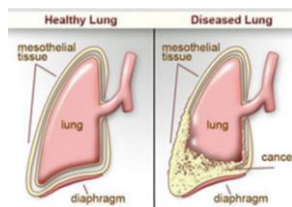


Corporate highlights

- **All assets unencumbered**
- Listed on Oslo Stock Exchange: **TRVX**
- Market cap **USD 35m***

ONCOS DEVELOPMENT STRATEGY

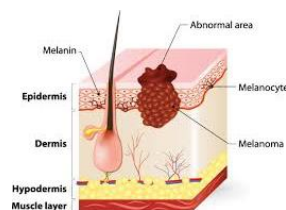
1 Path-to-market as orphan drug



Mesothelioma

- ~15.000 patients¹
- Potential as frontline therapy, limited competition
- Strong immune activation in monotherapy

2 Activating CPI refractory tumors



Anti-PD1 refractory melanoma

- No/few alternatives for ~50.000 patients¹
- Benchmarking for immune activators, 33% ORR in 9 pts
- May release a large potential in more indications

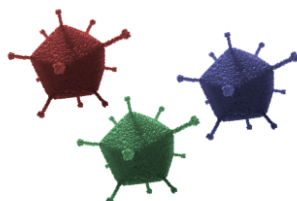
3 Expanding CPI indications



Peritoneal malignancies, from ovarian and colorectal cancers

- >100.000 patients¹ with tumors not responding to CPIs
- Strong immune activation in monotherapy
- Intraperitoneal administration may open new indications

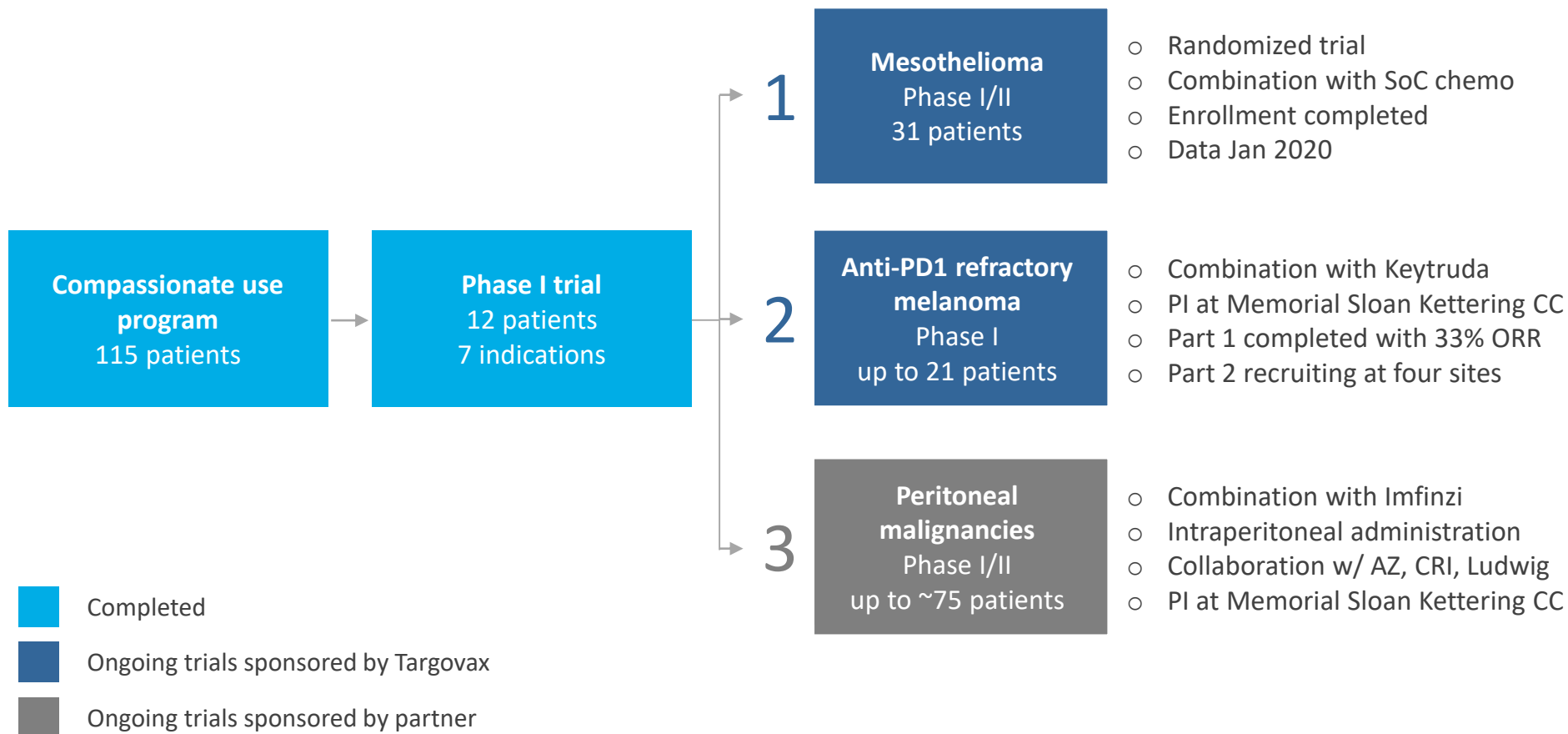
4 Next generation



Platform expansion in solid tumors

- Double transgenes
- Novel targets and modes of action
- Ongoing pre-clinical testing

ONCOS-102 CLINICAL DEVELOPMENT PROGRAM



3Q 2019 HIGHLIGHTS

R&D

- Released data from part 1 in **melanoma**, with clinical responses in three out of nine patients (**33% ORR**) and immune activation in all nine patients
- Completed dose escalation in **peritoneal malignancies** trial in combo with Imfinzi. The expansion part opened for patient enrollment
- Opened Oslo University Hospital as a site in ONCOS-102 trial in melanoma

Post-period

- Targovax was selected for oral presentation at Society for Immunotherapy of Cancer (SITC)

PROFIT AND LOSS

NOK m	3Q18	4Q18	1Q19	2Q19	3Q19
Total revenue	0	0	0	0	0
External R&D expenses	-17	-21	-19	-22	-14
Payroll and related expenses	-12	-14	-14	-18	-8
Other operating expenses	-5	-7	-7	-5	-5
Total operating expenses	-34	-42	-40	-45	-27
Operating loss	-34	-42	-40	-45	-27
Net financial items	-1	1	-1	-1	0
Loss before income tax	-35	-41	-41	-46	-26
Net change in cash	-27	-22	-46	30	-31
Net cash EOP	173	151	105	135	104

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TARGOVAX FINANCIAL POSITION

Operations

Cash end of 3Q

104 / 11

NOK million

USD million

Net cash flow - total 3Q

31 / 3

NOK million

USD million

Annual run rate - last four quarters

136 / 15

NOK million

USD million

The share

Market Cap - at share price NOK ~5

320 / 35

NOK million

USD million

Daily turnover - 6 month avg.

1.1 / 0.1 / 0.4%

NOK million

USD million

Analyst coverage

DNB, H.C. Wainwright, Arctic, ABG Sundal Collier,
Redeye, Edison

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Melanoma

- 3. Next generation ONCOS
- 4. Mesothelioma
- 5. Newsflow

ONCOS-102 ANTI-PD1 REFRACTORY MELANOMA PART 1

33% ORR AND ROBUST IMMUNE ACTIVATION

Patient population

- Advanced, unresectable **melanoma** with **disease progression following prior treatment with anti-PD1**
- Typically treated with **2-3 immunotherapies prior to inclusion**
- **Median age 73 years (40-87)**
- Poor prognosis, with **few treatment alternatives**

Treatment regime

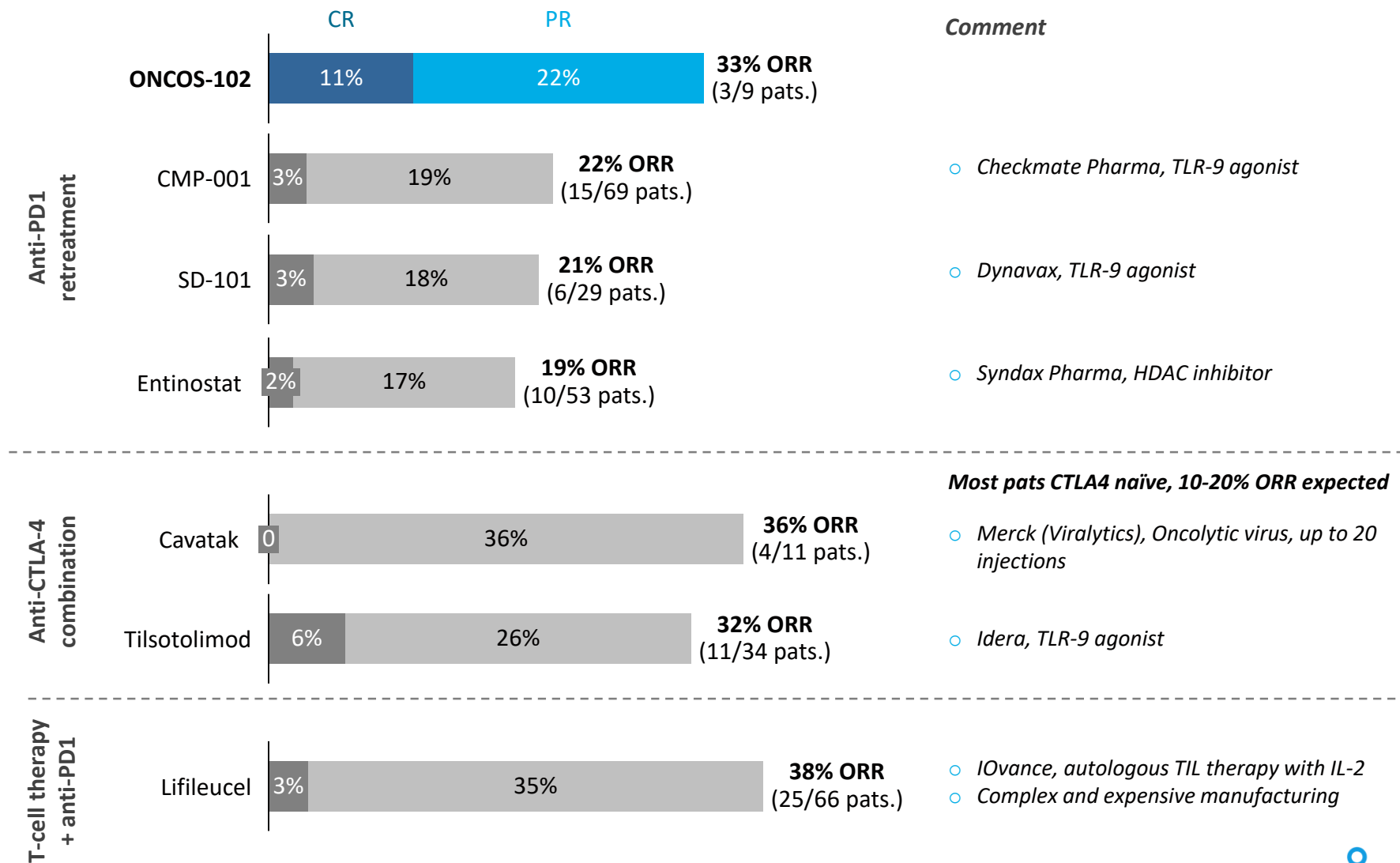
- **3 ONCOS-102 injections** followed by 5 months of Keytruda

Clinical data

- Safety: **Well tolerated**, no major concerns
- **33% Overall response rate (ORR) after 6 months** by RECIST 1.1 and irRECIST
 - 1 Complete Response (CR)
 - 2 Partial Responses (PR)
- **Robust systemic and local immune activation**

ONCOS-102 + KEYTRUDA DATA IN CONTEXT

ANTI-PD1 REFRACTORY MELANOMA BENCHMARK DATA

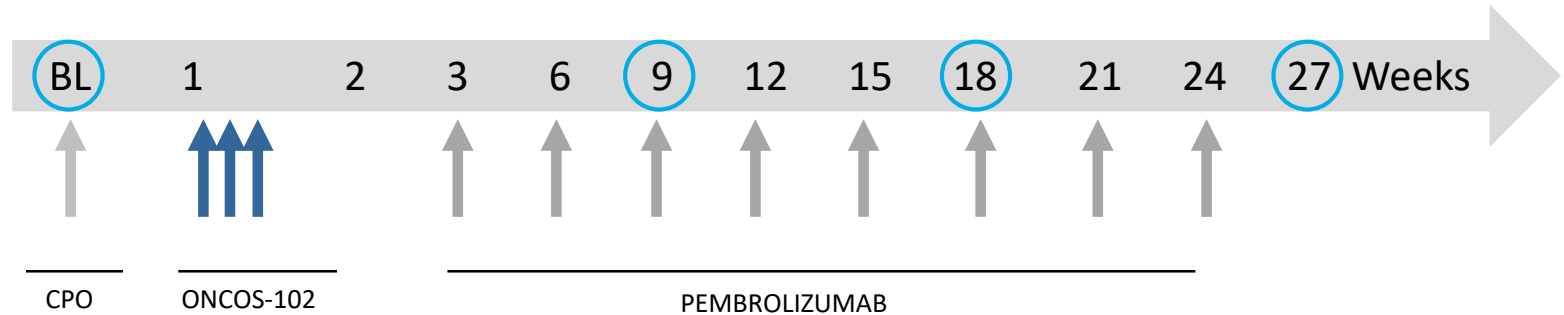


MELANOMA PART 2 IS RECRUITING

UP TO 12 PATIENTS: 12 ONCOS-102 INJECTIONS COMBINED WITH 5 MONTHS KEYTRUDA

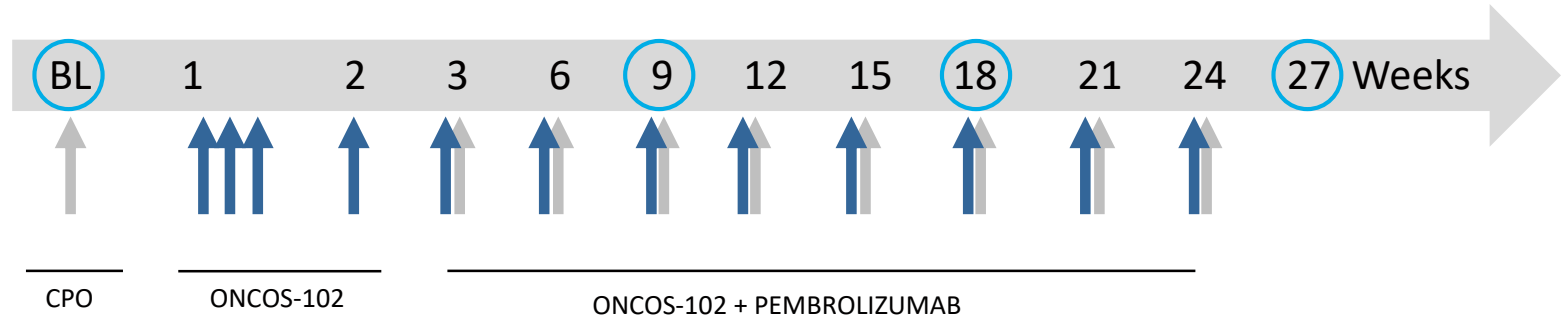
Part 1:

3 ONCOS-102
injections



Part 2:

12 ONCOS-102
injections



○ Imaging

CPO: Cyclophosphamide

ORAL PRESENTATION AT SITC BY DR. SHOUSHTARI



- SITC (Society for Immunotherapy of Cancer) 2019 Annual Meeting
- Dr. Alexander Shoushtari, MSKCC, NYC
- 9 November, 17:30 EST, National Harbor, MD, US



- Key Opinion Leader event hosted by White & Case and Solebury Trout
- Dr. Alexander Shoushtari, MSKCC, NYC
- 15 November, 14:00 EST, NYC, US

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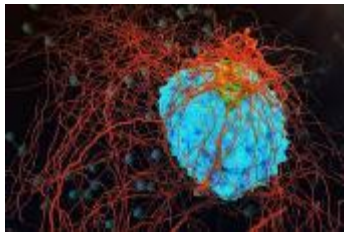
Next generation ONCOS

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NEXT GENERATION ONCOS VIRUSES HAVE DOUBLE TRANSGENES AND DISTINCT MODES OF ACTION

Mode of action

Target tumors

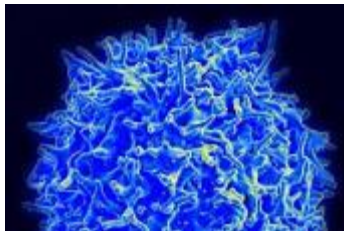


ONCOS-210 & -212

Inhibition of tumor growth and vascularization

- Interfere with tumor's ability to break down surrounding tissue
- Induce cell cycle arrest
- Inhibit angiogenesis

- Highly invasive or metabolic tumors

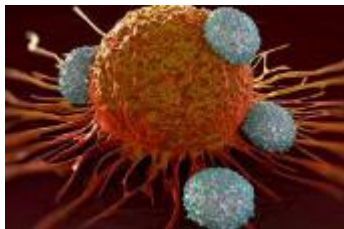


ONCOS-211

Counteract immune-suppressive tumor microenvironment

- Decrease inhibitory factors from tumor microenvironment
- Activate T-cells

- "Cold" uninflamed tumors



ONCOS-214

Enhanced cell killing properties

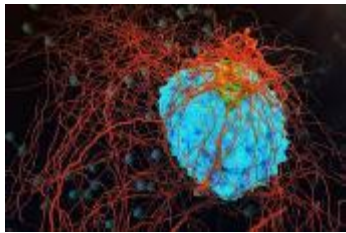
- Induce immunogenic cell death
- Extend cell killing ability to neighboring non-infected cells

- High-stroma tumors

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Mode of action

Target tumors

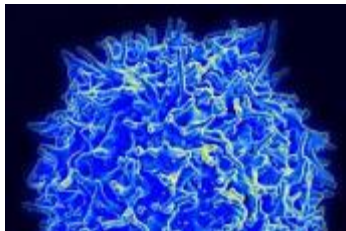


ONCOS-210 & -212

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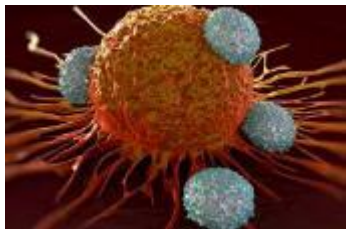


ONCOS-211

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ONCOS-214

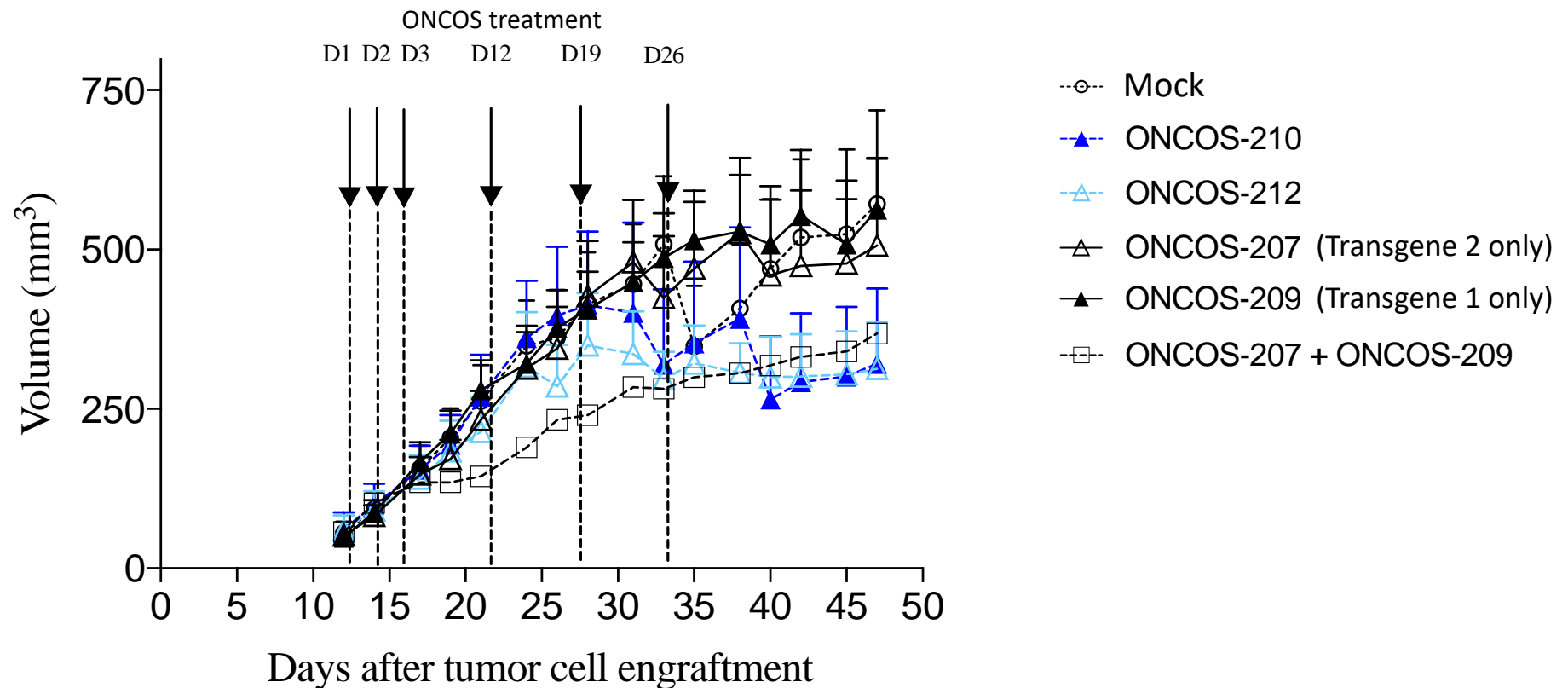
Enhanced cell killing properties

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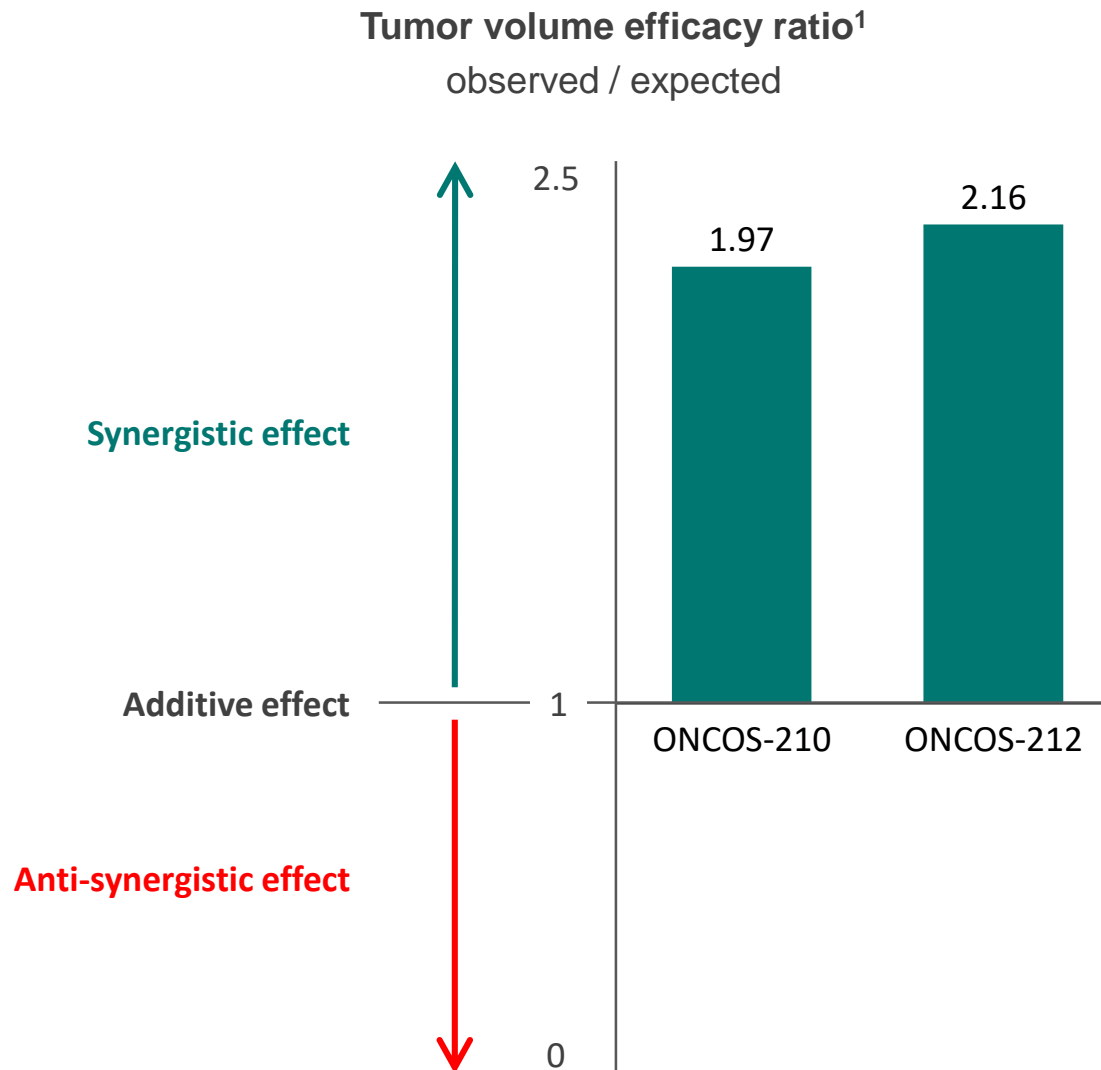
- High-stroma tumors

TUMOR GROWTH INHIBITION CONFIRMED IN IMMUNO-DEFICIENT MICE, SHOWING SUPERIORITY OF DOUBLE-TRANSGENE VIRUSES

Effect on tumor volume, melanoma model

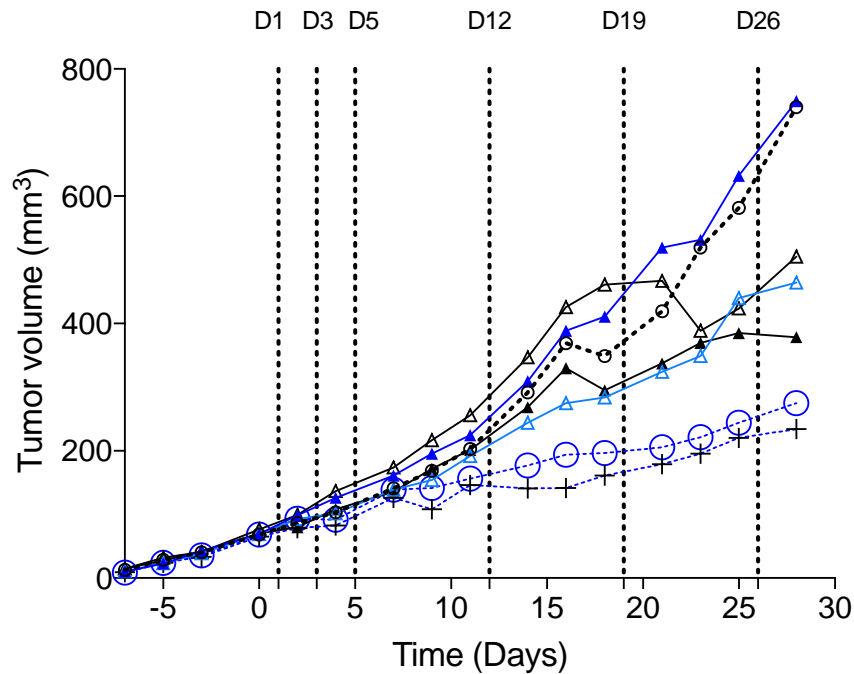


ONCOS-210 AND -212 TRANSGENES ACT SYNERGISTICALLY

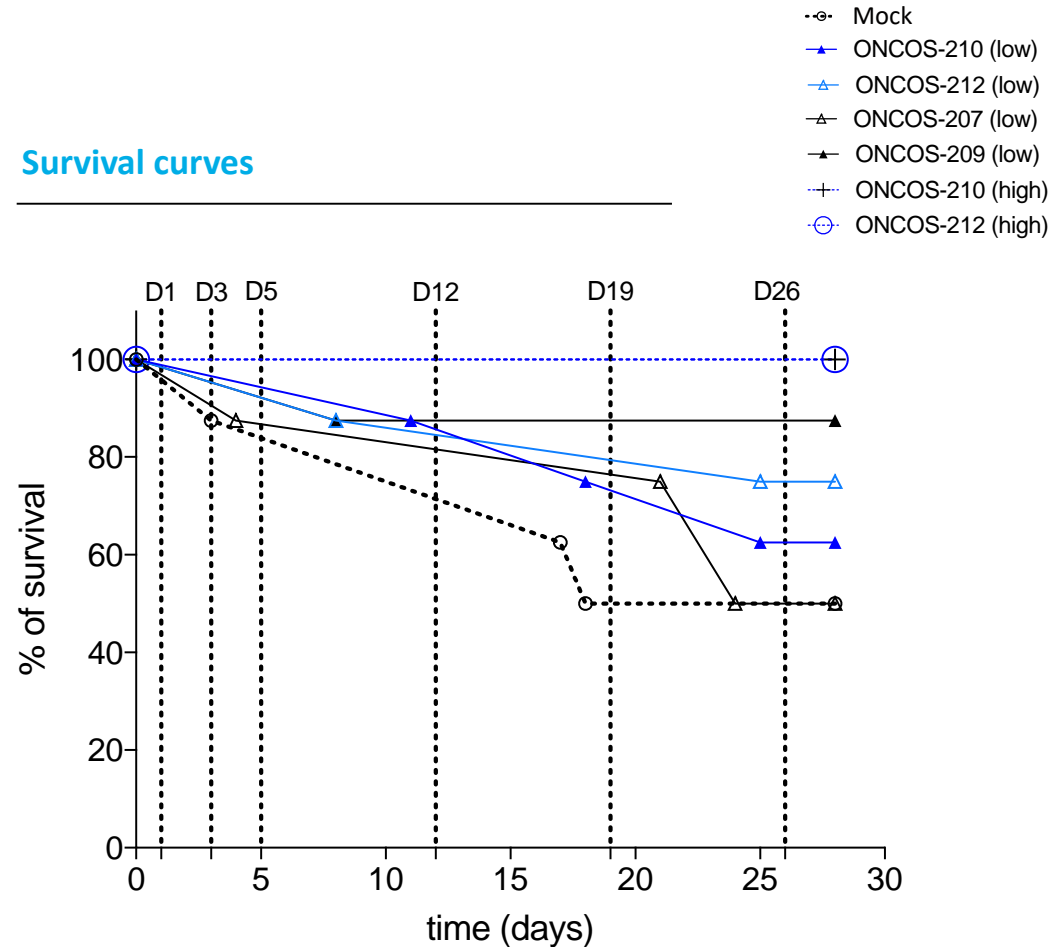


DOSE DEPENDENT TUMOR RESPONSES AND IMPROVED SURVIVAL OBSERVED IN IMMUNE-COMPETENT MICE

Effect on tumor volume



Survival curves



NEXT GENERATION ONCOS PROGRAM STATUS AND PLANS

Status and conclusions so far:

In vivo anti-tumor potency of ONCOS-210 and -212 has been demonstrated in immuno-deficient and immuno-competent mouse models

- The ONCOS backbone can effectively carry double transgenes
- Two transgenes seem more potent than one
- Double transgenes show synergistic activity

Next Steps:

- Further experiments to validate mode of action are currently ongoing
- Data to be presented at suitable scientific conferences in 2020
- Selection of a clinical candidate

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Mesothelioma

5. Newsflow

RATIONALE FOR ONCOS-102 GO-TO-MARKET STRATEGY IN MESOTHELIOMA

Become frontline therapy

- **Preclinical data and phase I results** indicate activity in mesothelioma
- **Ongoing randomized trial** combining with chemo
- **Good safety profile**

Orphan Drug Designation

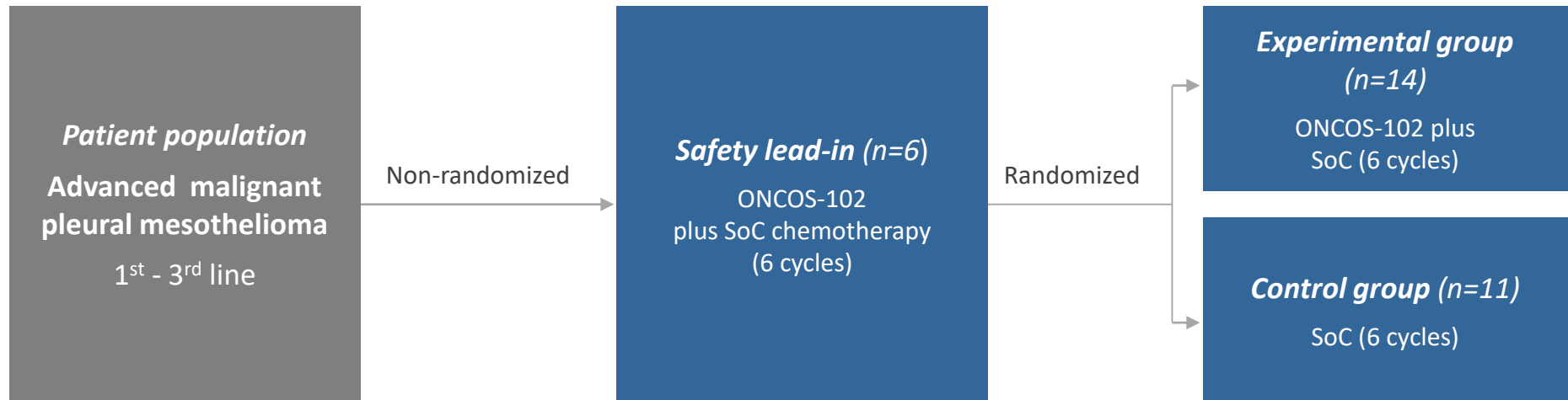
- High unmet medical need; **orphan drug designation**
- 7-10 year **market exclusivity**
- Opportunity for accelerated regulatory routes to market

Limited competition

- **Few other viruses in development**
- **ONCOS-102 most advanced**
- CPIs are **potential combinations**

ONCOS-102 IN MALIGNANT PLEURAL MESOTHELIOMA

PHASE I/II STUDY DESIGN IN COMBINATION WITH SOC



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Newsflow

RICH NEAR-TERM NEWS FLOW

ONCOS program pipeline overview

Product candidate	Preclinical	Phase I	Phase II	Phase III	Next expected event
ONCOS-102	Mesothelioma Combination w/ pemetrexed/cisplatin				January 2020 Randomized data
	Melanoma Combination w/Keytruda				1H 2020 Part 2 data
	Peritoneal metastasis Collaborators: Ludwig, CRI & AZ Combination w/Imfinzi				<i>Update by collaborator</i>
	Prostate Collaborator: Sotio Combination w/DCvac				<i>Update by collaborator</i>
Next-gen ONCOS	3 new viruses Double transgene				1H 2020 Pre-clinical data

Upcoming events

- 9 Nov** Society for Immunotherapy of Cancer (SITC), National Harbor, MD, US
- 11-13 Nov** BIO-Europe, Hamburg, Germany
- 15 Nov** KOL event, NYC, US
- 20-21 Nov** Jefferies Healthcare conference, London, UK
- 3-5 Dec** Oncolytic Virotherapy Summit, Boston, US
- 11-14 Dec** ESMO-IO, Geneva, CH
- 11 Dec** DNB Healthcare seminar, Oslo, NO
- 13-16 Jan** Trout Management Access, San Francisco, US

Upcoming milestones

- Jan 2020:** ONCOS-102 phase I/II trial in unresectable malignant pleural mesothelioma
 - *Six month ORR and immune data*
- 1H 2020:** ONCOS-102 phase I trial in checkpoint inhibitor refractory advanced melanoma
 - *Part 2 data*

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