



ACTIVATING THE PATIENT'S IMMUNE SYSTEM TO FIGHT CANCER

Økonomisk Ugebrev

Life Science Seminar

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THE IMMUNO-ONCOLOGY REVOLUTION

- > **500,000** patients treated per year
- > **3,000** ongoing clinical trials
- > **40%** of US cancer patients eligible
- > **10** approved products



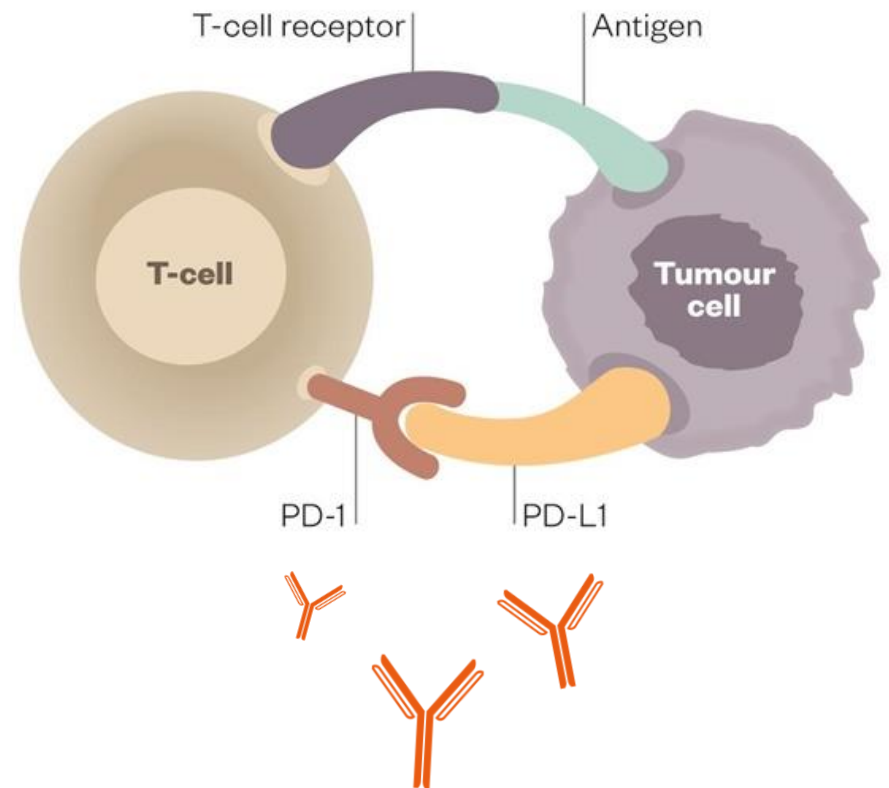
FIRST GENERATION IMMUNO-ONCOLOGY: CHECKPOINT INHIBITORS

Cornerstone of current
cancer treatment

Deep and durable responses

\$25b annual sales globally

7 products approved to date,
many more in development



THE CHALLENGE:

MAKE PD1 CHECKPOINT INHIBITORS WORK FOR MORE PATIENTS

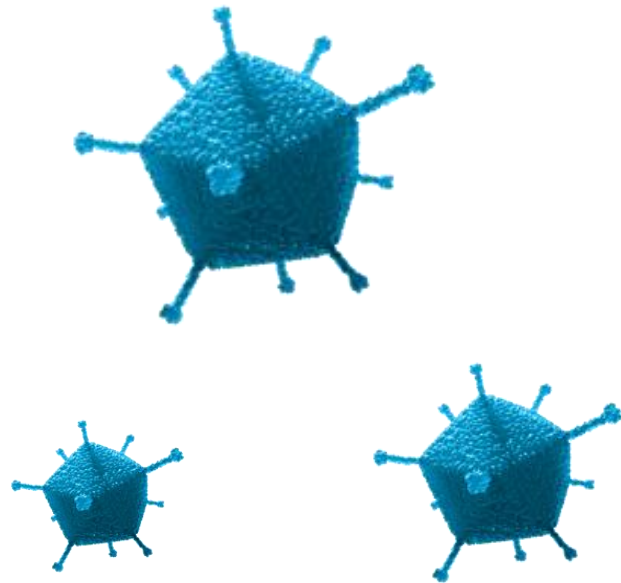


0-40% of treated patients respond

>50% of responding patients relapse

1+ PD1 checkpoint inhibitor monotherapy not sufficient

THE SOLUTION: ONCOS-102 IMMUNE ACTIVATION

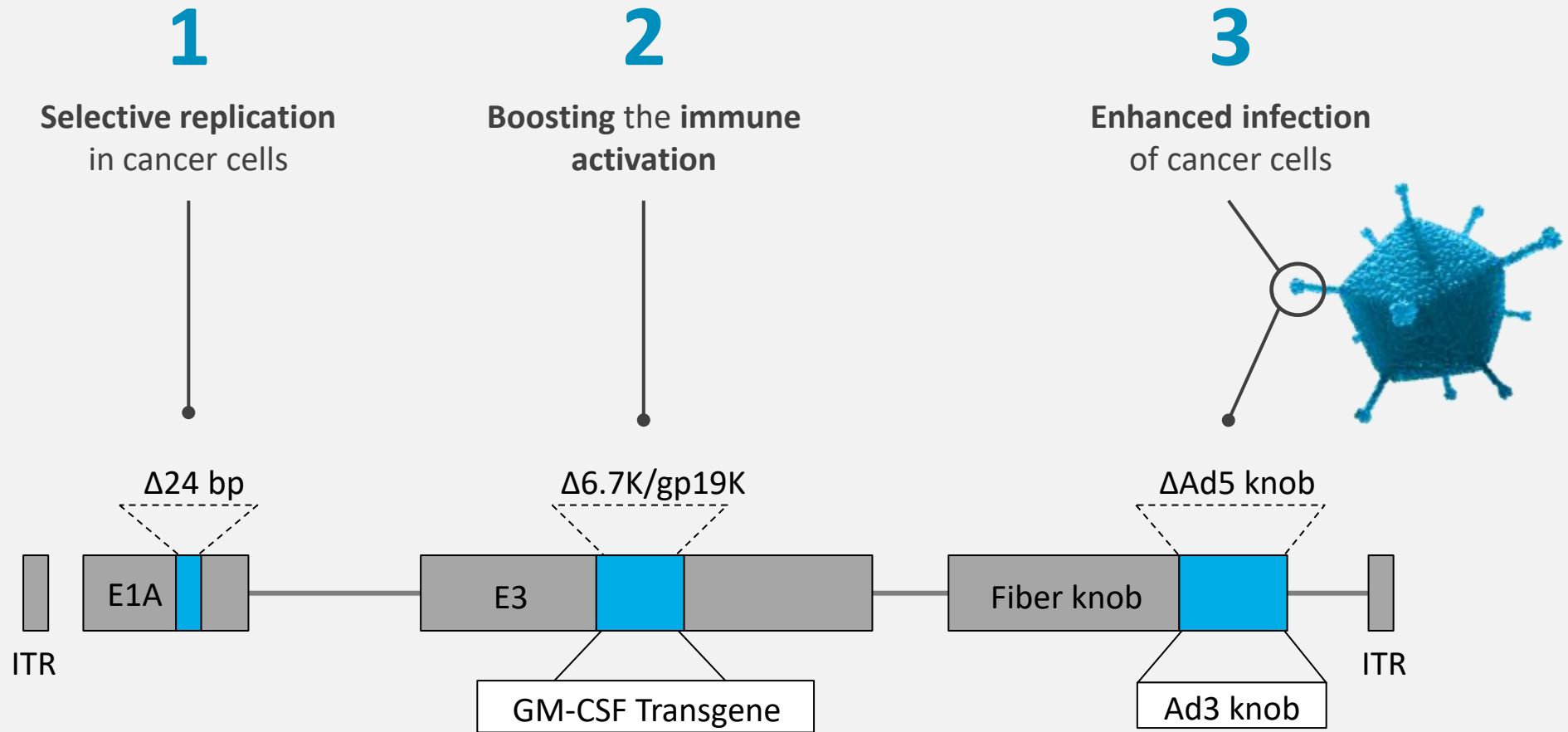


Unblinds the tumor to the immune system

Activates the body's own T-cells against the cancer

Reverses immunosuppressive defense mechanisms in the tumor

ONCOS-102 IS AN ONCOLYTIC ADENOVIRUS SEROTYPE 5 ARMED WITH AN IMMUNE ACTIVATING TRANSGENE



CLINICAL AND PRECLINICAL PIPELINE

Product candidate	Preclinical	Phase 1	Phase 2	Phase 3	Next expected event
ONCOS-102	Refractory Melanoma Platform trial				2022 First patient
	Mesothelioma Combination w/pemetrexed/cisplatin				2H 2021 Survival update
	Metastatic Colorectal cancer Combination w/anti PDL1				1H 2022 Clinical data
Next Gen viruses					<i>Preclinical data and selection of candidates</i>
Novel mutRAS concepts					<i>Preclinical data and selection of candidates</i>

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35% ORR AND SYSTEMIC EFFECT IN ANTI-PD1 REFRACTORY MELANOMA

Patient population

- Advanced, unresectable **melanoma**
- Disease **progression** despite prior treatment with anti-PD1
- 20 patients, 11 stage III and 9 stage IV

Treatment regime

- **Part 1: 3 ONCOS-102 injections** followed by 5 months of Keytruda
- **Part 2: 12 ONCOS-102 injections** - priming and concomitantly

Clinical data

- **35% ORR** by RECIST 1.1 and irRECIST
 - 1 Complete Response (CR) (Part 1)
 - 6 Partial Responses (PR) (2 in Part 1, 4 in Part 2)
- Multiple examples of **systemic effect**
- Robust systemic and local **immune activation**
- Well tolerated, **no safety concerns**

CASE EXAMPLE: PATIENT WITH COMPLETE RESPONSE

Tumor response, 1 of 1 injected lesion

Baseline

Week 3

Week 9

Week 18

Week 27 (EoS)



Progression on
pembrolizumab



3x ONCOS-102 only
(no pembrolizumab)



3x ONCOS-102 &
2x pembrolizumab



3x ONCOS-102 &
5x pembrolizumab



3x ONCOS-102 &
8x pembrolizumab

Patient characteristics

Tumor stage at enrolment:

IIIb
T4a, N2b, M0

Prior therapies:

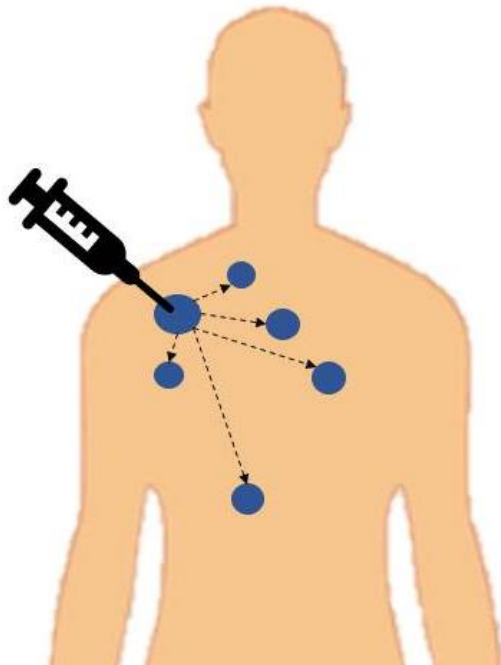
Surgery (x3)
Ipilimumab
Dabrafenib + Trametinib
Pembrolizumab

RECIST 1.1:

CR, week 9-27

MULTIPLE EXAMPLES OF SYSTEMIC (ABSCOPAL) EFFECT

TWO PATIENTS WHERE A NON-INJECTED LESION COMPLETELY DISAPPEARED



Conservative definition of abscopal effect per lesion:

- $\geq 30\%$ tumor reduction from baseline
- $\geq 5\text{mm}$ absolute reduction

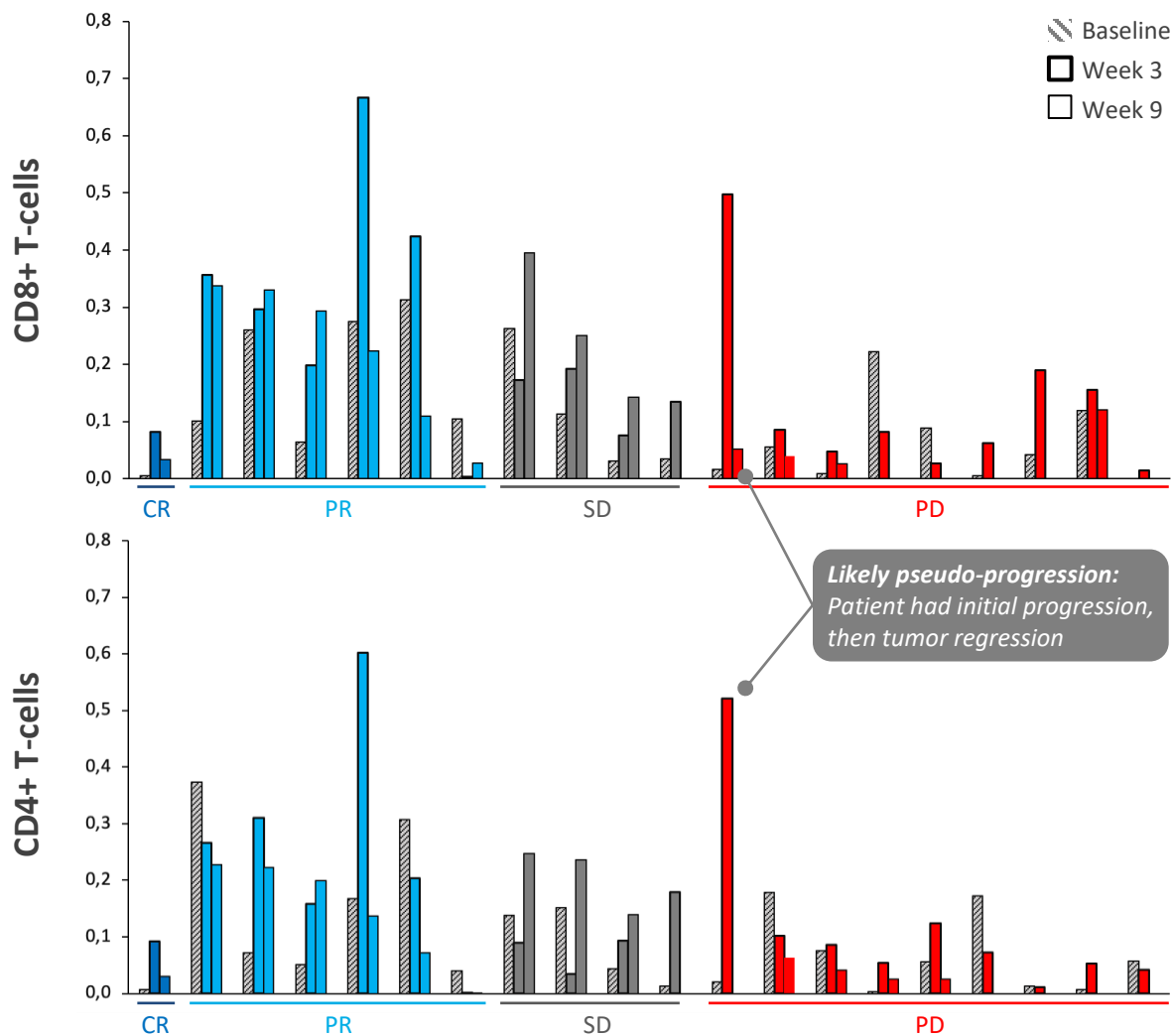
Abscopal effect observed in 4 / 20 patients (20%)

- 1 / 8 patients in Part 1 (12.5%)
- 3 / 12 patients in Part 2 (25%)

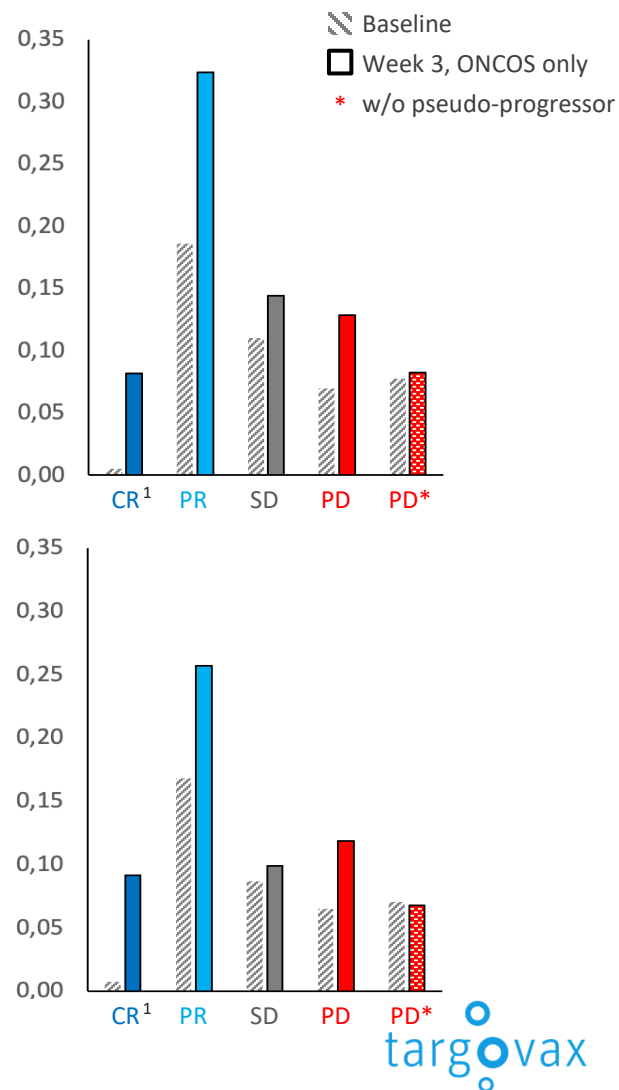
Complete regression (100%) of a non-injected lesion observed in two patients

CLINICAL EFFECT SUPPORTED BY IMMUNE DATA

T-cell infiltrate (TIL) for individual patients; tumor mIHC, relative level

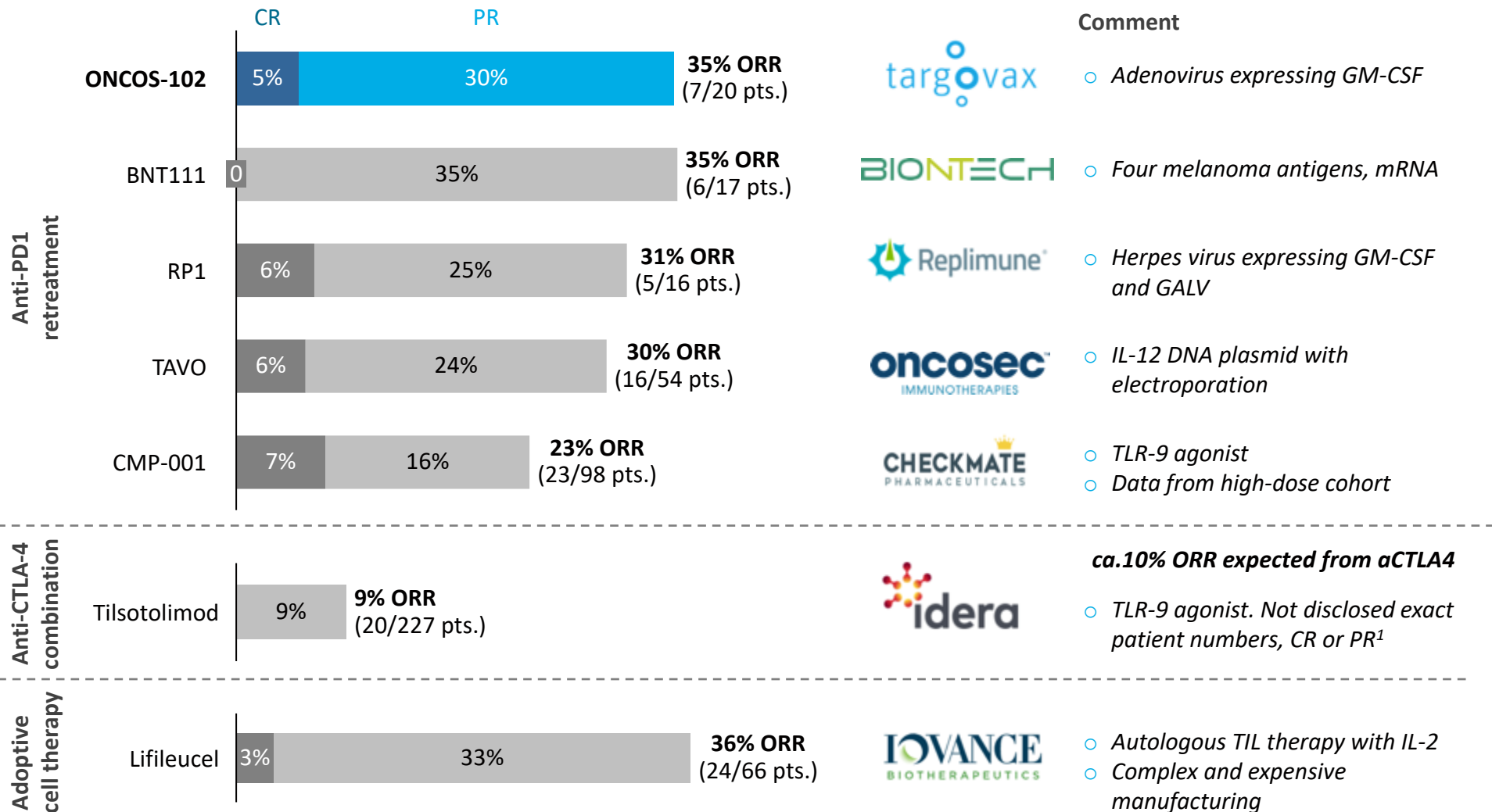


Average T-cell level per group



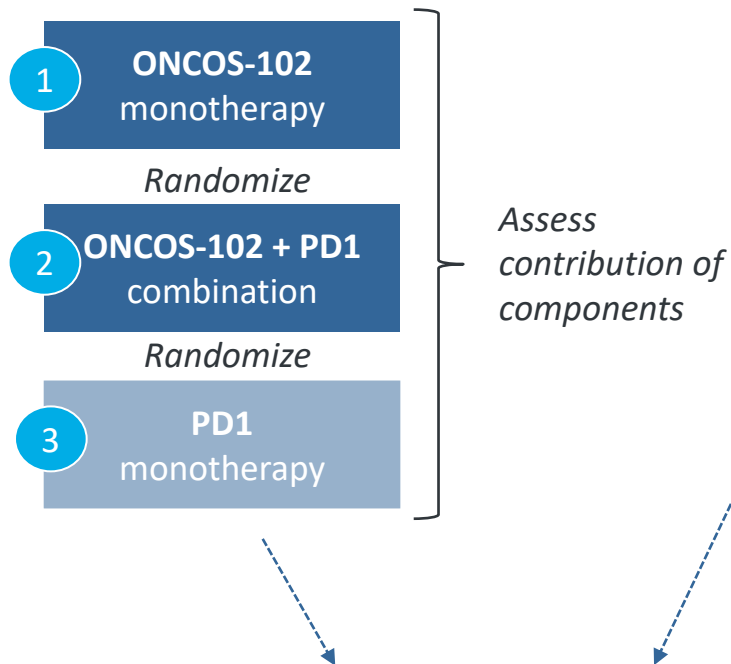
1: One CR patient only

ONCOS-102 HAS DEMONSTRATED CLASS-LEADING EFFICACY IN PD1-REFRACTORY MELANOMA

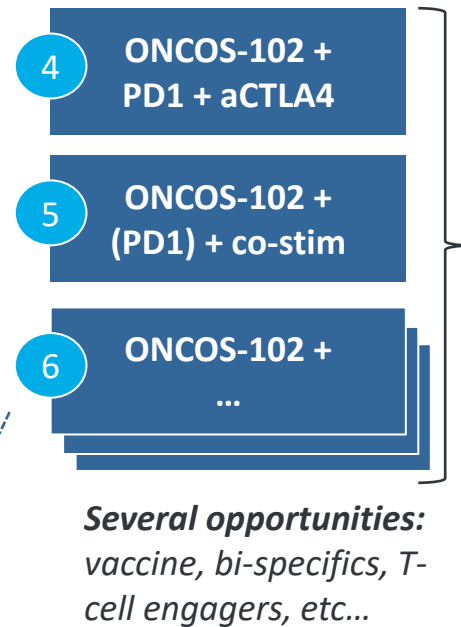


MELANOMA PHASE 2 PLATFORM TRIAL TO EXPLORE MULTIPLE ONCOS-102 COMBINATIONS

Part 1 – run-in



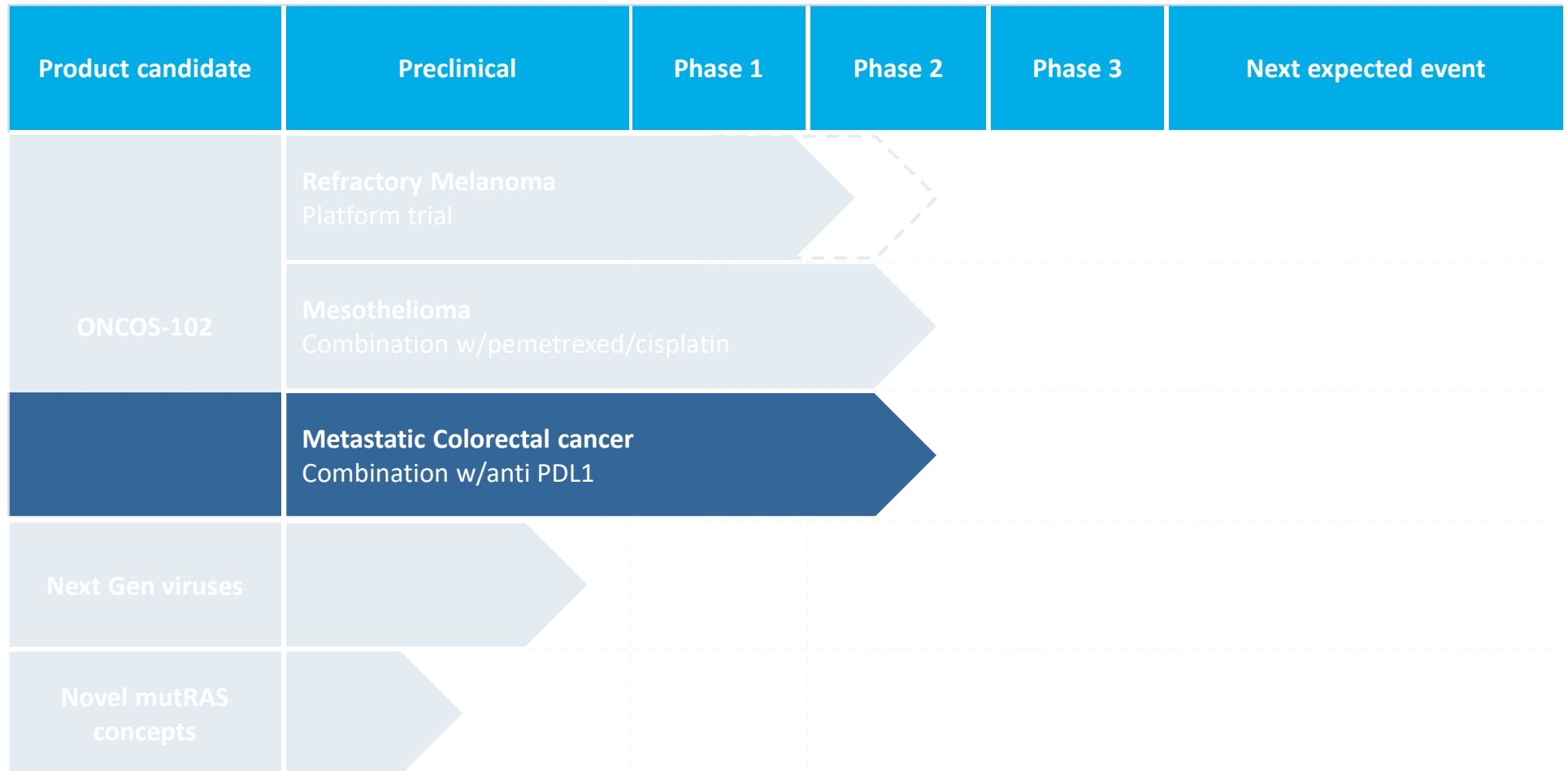
Part 2 – multi-cohort extension



- Additional cohorts to explore novel combinations
- Aim to further boost response rates beyond 35% ORR
- Collaboration with partners – dialogues ongoing

Several permutations of cohorts can form the basis for a subsequent registrational trial

CLINICAL AND PRECLINICAL PIPELINE



PHASE 1/2 COLLABORATION TRIAL COMBINING ONCOS-102 AND IMFINZI

Collaborators



CANCER
RESEARCH
INSTITUTE

LUDWIG
CANCER
RESEARCH

AstraZeneca 

Patient population

- Primary colorectal cancer with peritoneal metastases
- Failed prior standard-of-care 5-FU based chemotherapy

Treatment regime

- 6 ONCOS-102 intraperitoneal infusion (once per week)
- 12 cycles of Imfinzi (starting on day 15)

Status

- *Safety lead-in data presented at ASCO 2020*
- *Clinical data and immune data expected 1H22*

TARGOVAX AT A GLANCE

