Corporate Presentation

Bloom Burton & Co Healthcare Investor Conference

April 20, 2021

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Developing a New Class of Immunotherapies in Oncology and Infectious Disease

We are dedicated to making immunotherapy more effective, more broadly applicable, and more widely available to people facing cancer and other serious diseases.

TICKER

IMV (Nasdaq & TSX)

MARKET CAP (Apr. 16)

~ $US 188 M / ~ $CAD 235 M

CASH AND CASH EQUIV. (Dec.31)

~ 36.4 M US $ / $CAD 46.4 M

OUTSTANDING SHARES (Mar. 16)

Basic: 67.7M
Fully diluted: 71.6M

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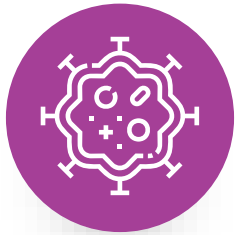
IMV Opportunity

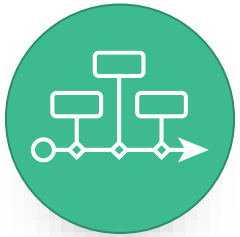
DPX™ delivery platform to create a novel class of immunotherapies

- Unique mechanism of action that generates targeted and sustained stimulation of immune system
- Immune cell activation that can be maintained over an extended period with limited side effects
- Clinically-demonstrated activity in solid / hematologic cancers as well as infectious diseases



DPX-Survivac, lead oncology program focused on unmet medical needs

- Demonstrated prolonged clinical benefit and tumor regression in solid and hematologic* cancers
- Excellent safety profile across all clinical Phase 1 and 2 studies (N=350)
- Potential to become a backbone of immunotherapy for cancer as single treatment, in different lines of settings and with a broad range of possibilities for combinations



Next Milestones

- Q2 2021: Initiation of DLBCL trial
- Q2 2021: Translational and biomarker **clinical update** for ovarian cancer DeCidE trial
- H2 2021: Meeting with the FDA and final design for next clinical study in ovarian cancer
- H2 2021: **Clinical update /** basket trial
- H2 2021: Initiation of a Phase 1 clinical study in bladder cancer with DPX-SurMAGE
- H1 2022: Initiation of phase 2B in ovarian cancer
- H1 2022: **Clinical update /** DLBCL trial

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* Clinical benefit in Heme malignancies demonstrated in combination with pembrolizumab

Leadership Team with a Strong Track Record in Drug Development

Frederic Ors, MSc, MBA
Chief Executive Officer

medicago

université PARIS DIDEROT PARIS 7

Pierre Labbé, CPA
Chief Financial Officer

medicago

LeddarTech

Andrew Hall, MSc
Chief Business Officer

Celgene

MERCK

Joanne Schindler, DVM, MD
Chief Medical Officer

H3 BIOMEDICINE

NOVARTIS

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DPX™ Has Important Commercial Advantages

Lipid nanoparticle technology

- Fully synthetic and easy to manufacture
- Can accommodate hydrophilic and hydrophobic compounds
- Lyophilized and reconstituted in lipids in convenient low mL doses
- Subcutaneous injection for simple in office administration
- Long term stability (3 years)
- Low cost of goods scalable manufacturing

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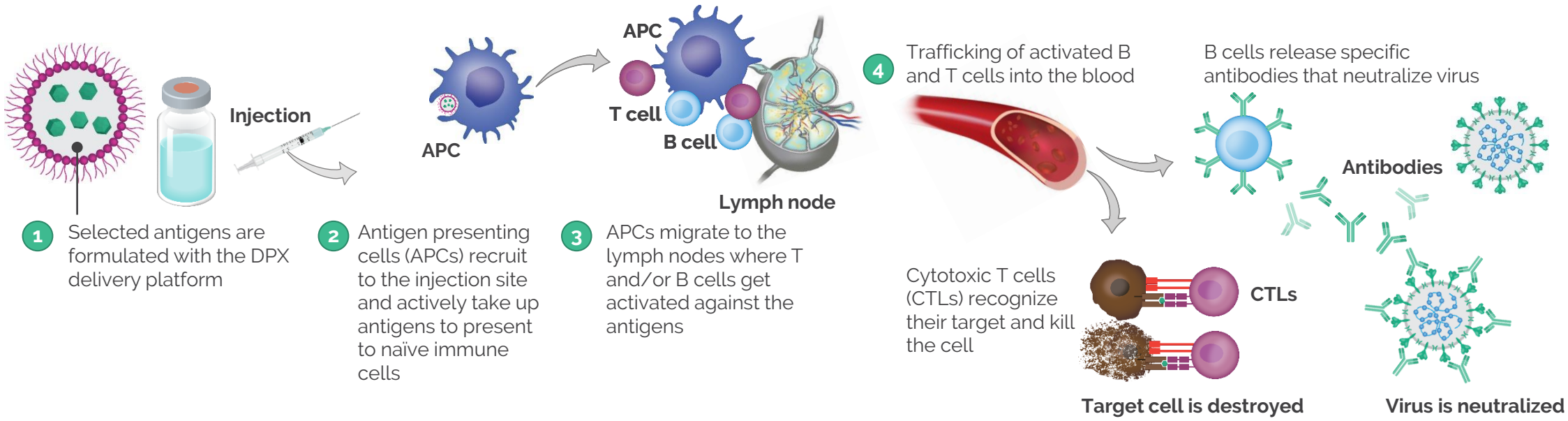
DPX™ Technology Induces Targeted and Sustained Immune Response

DPX™ delivery platform has a unique "no release" mechanism of action

- Unique lipid-based delivery platform
- The formulation does not release components at the injection site, allowing antigens to continuously interact with and stimulate the immune system over an extended period of time.
- Prolonged exposure by safely increasing the immune system's exposure to practically any antigen
- Versatility: can incorporate broad set of antigens, using peptides to activate T cells



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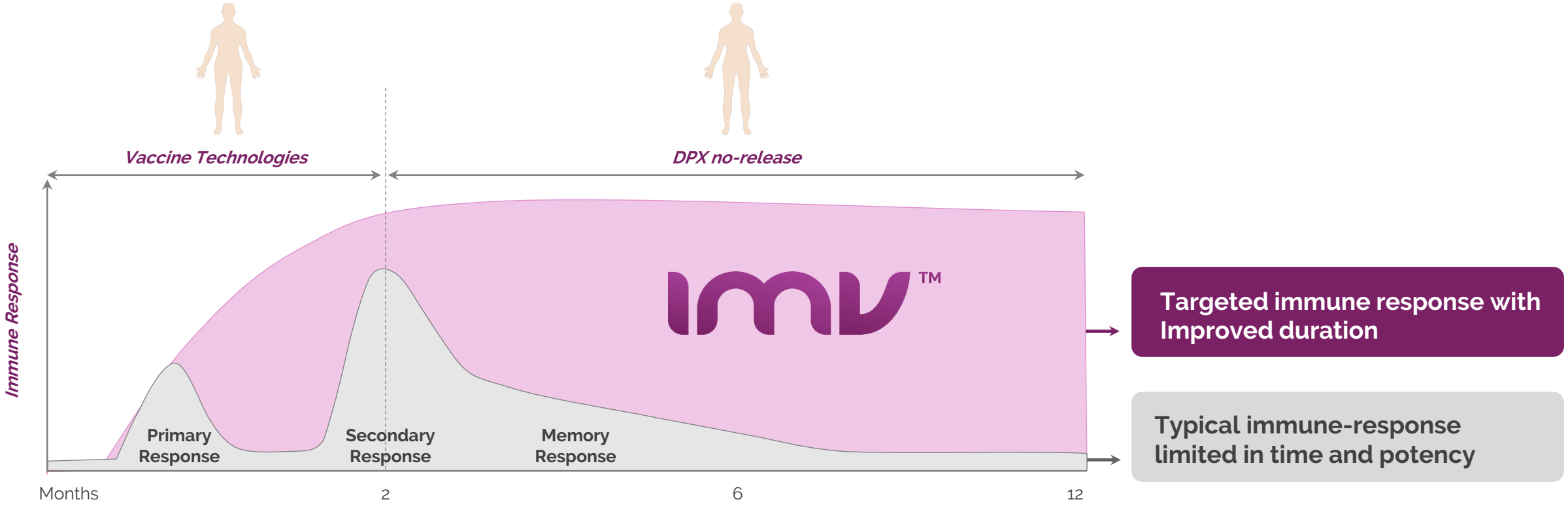
Continuous Stimulation of Immune System Over Extended Period

- DPX™ extended delivery into immune cells enables highly targeted T and B cell therapies against cancer cells or pathogens
- Gradual immune system stimulation that can be maintained over an extended period, with limited side effects
- Opens way to a next generation of precision immunotherapy with potential for increased safety, efficacy and ease of care



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Immunotherapy Challenges are Overcome by DPX Technology

Tolerability

Therapeutic exposure is limited to the injection site. Selective uptake by Antigen Presenting Cells (APCs) eliminates off target toxicity resulting in improved tolerability

Durability

Prolonged and protected peptide exposure results in sustained T-cell activation and proven durable clinical response

Patient Access

Infrequent subcutaneous injections.

Off-the-shelf technology permits immediate treatment post-diagnosis

Manufacturing Costs

Fully synthetic and optimized low-cost manufacturing results in a stable (up to three years) and scalable manufacturing process

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Late Stage Clinical Pipeline with Multiple Pending Catalysts

	Product (target)	Indication	Preclinical	Phase 1	Phase 2	Phase 3	Sponsor	Collaborators
Oncology	Maveropepimut-S (Survivin)	Ovarian					IMV	
		DLBCL			Combination with Keytruda®		IMV	MERCK
		Basket Trial: (Bladder, Liver, MSI-H)			Combination with Keytruda®		IMV	MERCK
	DPX-SurMAGE (Survivin + MAGE A9)	Bladder					IMV	CHU de Québec Université Laval
	DPX-BRAF/DPX-KRAS	Multiple indications					IMV	THE WISTAR INSTITUTE
Infectious Disease	DPX-RSV (SheA)	Respiratory Syncytial Virus (RSV)					IMV	CIRN, Canadian Center for Vaccinology
	DPX-COVID-19 (Spike)	COVID-19					IMV	CIRN, Canadian Center for Vaccinology

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Maveropepimut-S

Maveropepimut-S is the first of our T cell activating immunotherapies. It combines the power of our proprietary DPX Platform with the cancer antigen survivin. By activating survivin-specific killer T cells, Maveropepimut-S promotes the destruction of cancer cells and disrupts the fundamental processes of cancer cell reproduction and survival.

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Survivin is Essential for the Biology of Cancer

- Survivin is expressed in all 60 human tumor lines (NCI)
- Confers resistance to chemotherapy and radiation
- Biomarker of poor patient prognosis

- Promotes cell proliferation
- Inhibits cell death
- Alters cancer metabolism
- Promotes angiogenesis and adhesion
- Correlates with aggressive disease
- Total protein upregulated under hypoxia
- Depressed when p53 defective

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Relapsed Refractory DLBCL

Diffuse Large B Cell Lymphoma (DLBCL) is the most common and aggressive form of lymphoma

- Most common type of Non-Hodgkin lymphomas (NHL). Accounts for 30%-35% of all cases of adult NHL.
- 27,000 new cases/year in the US
- 35–40% of patients will exhibit primary refractory disease or relapse following an initial response to therapy and will have a very poor outcome
- Median overall survival is 4.4 months for patients who fail salvage regimens

High unmet medical need for non-eligible ASCT or non-eligible/CAR-T failure population

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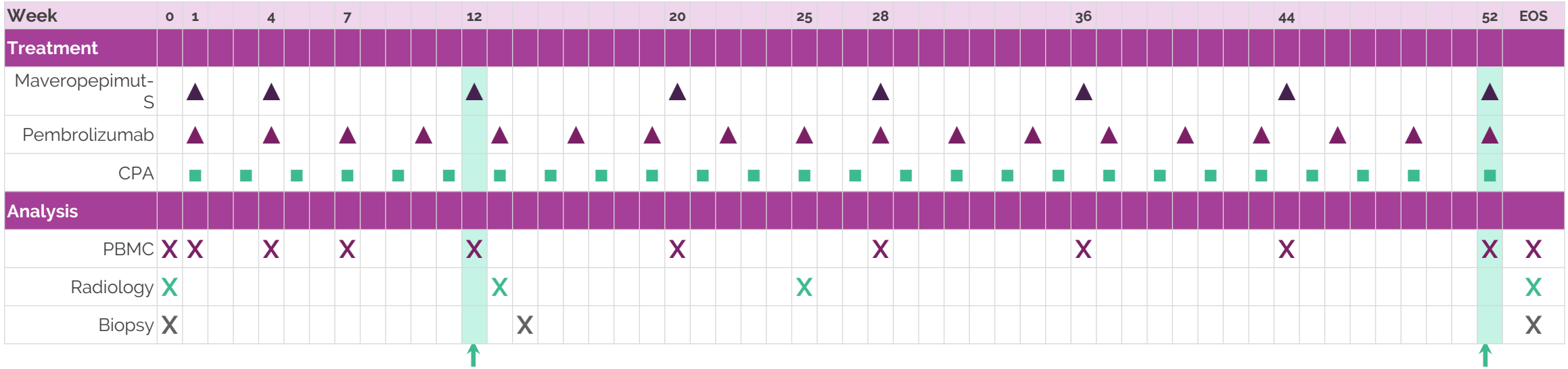
SPiReL Trial in Relapsed/Refractory DLBCL

Enrolled subjects are treated for 1 year or until confirmed PD

- Maveropepimut-S 0.5 mL on study day 7 and 28; then 0.1 mL every 8 weeks
- Pembrolizumab 200 mg every 3 weeks
- Intermittent, low dose cyclophosphamide (CPA: 50 mg BID, 1 wk on, 1 wk off)

Current Status: accrual ongoing; 24 enrolled; 3 ongoing



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Maveropepimut-S/Pembrolizumab Treatment Success in DLBCL

90.9% Clinical Benefit Observed in Biomarker Positive Population

Patient selection biomarker identified

Program Death Ligand 1 (PD-L1) positive

18 patients with pre-treatment samples

86% (6/7) of subjects with Objective Response Rate (ORR) (3 CR, and 3 PR) in PD-L1 positive

0% (0/11) ORR in PD-L1 negative

90.9% of evaluable subjects showed clinical benefit with minimal toxicity (most grade 1 and 2 were injection-site related adverse events)

Based on these results, IMV recently engaged with the FDA which provided productive feedback. The Company has finalized the protocol with its partner and a Phase 2b clinical study is expected to begin in Q2 2021,

Clinical outcomes for the SPiReL trial were presented at the American Society of Hematology (ASH) annual meeting on December 3, 2020

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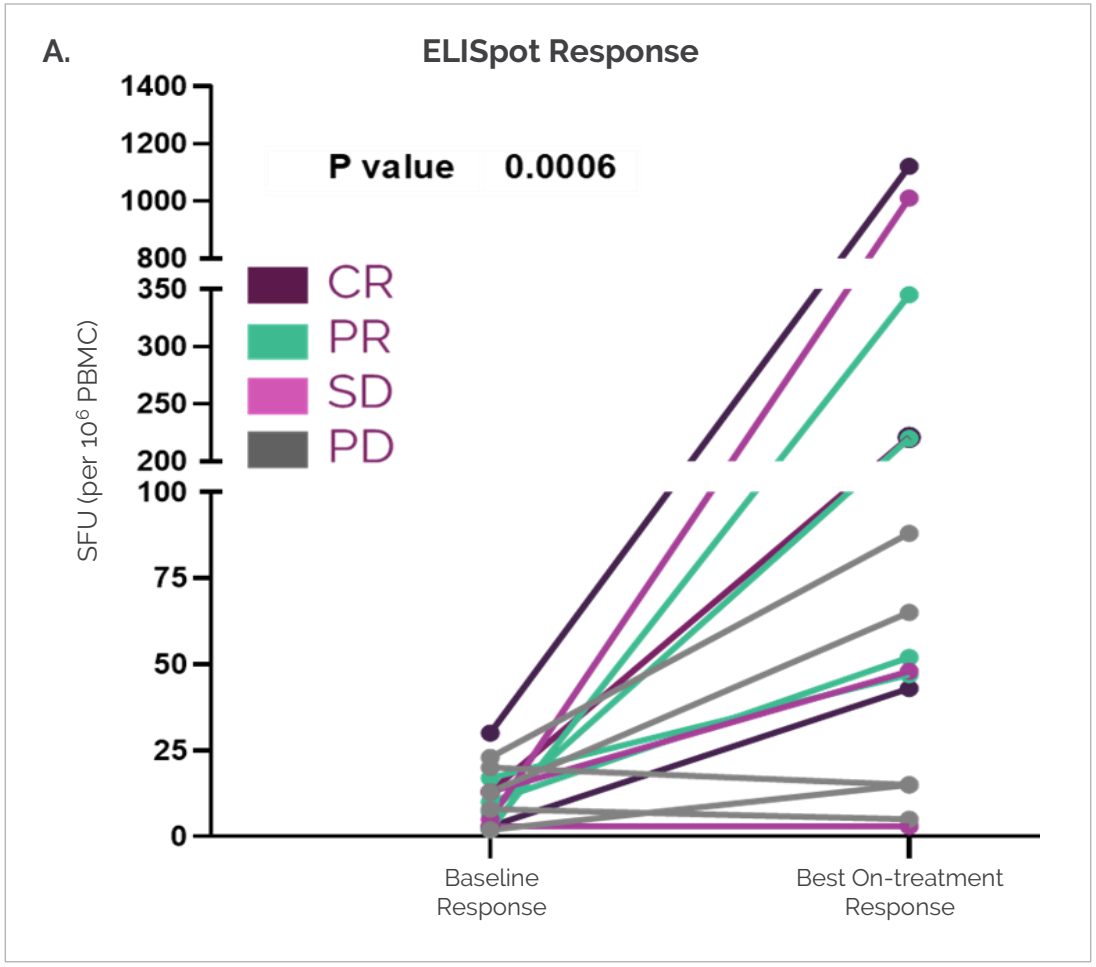
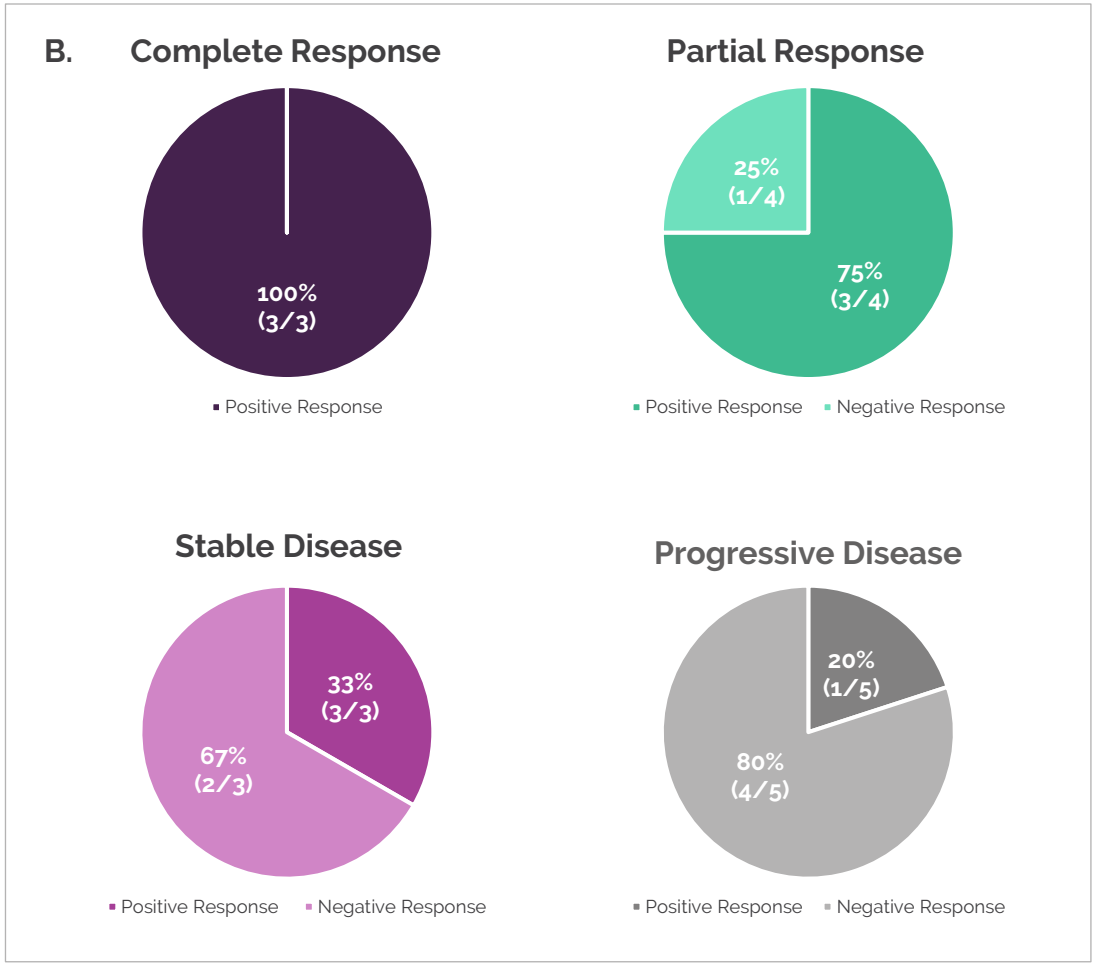
Survivin-specific T cell Responses Confirm Maveropepimut-S MOA

Maveropepimut-S Induced Survivin-specific T cell Responses by ELISpot





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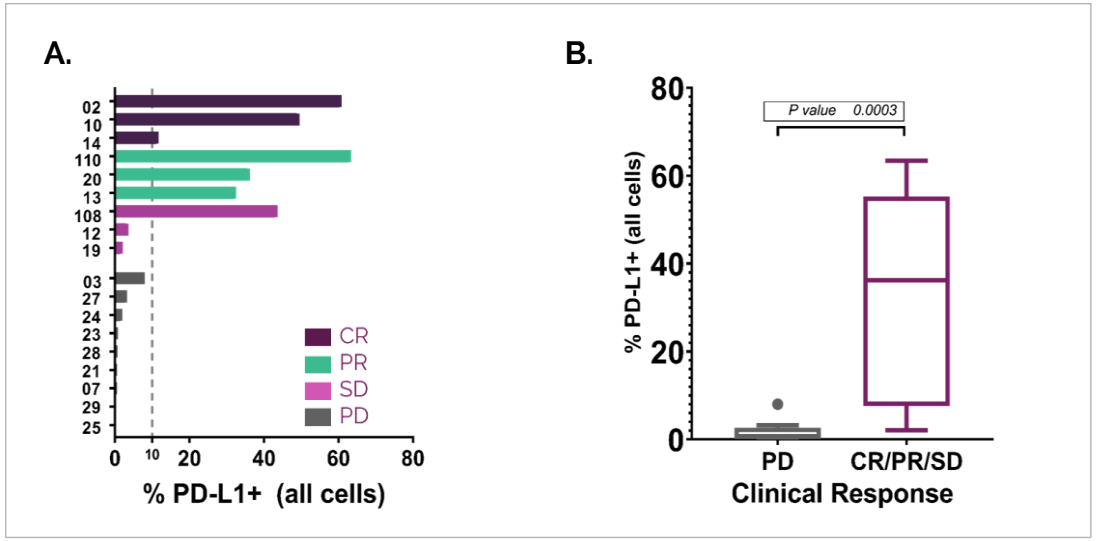
Clinical Effect in PD-L1 Positive Patients was Profound

Analyses of Baseline PD-L1 Expression and Clinical Response



Baseline tumor available and PD-L1 analysis completed for 18 subjects:

PD-L1 positive (N=7)
ORR = 86%

PD-L1 negative (N=11)
ORR=0%

PD-L1 expression with observed clinical responses. (A and B) represents percentage of PD-L1+ CD20+ cells scored in the tumor region and categorized by observed clinical responses. (C and D) represents percentage of total PD-L1+ cells scored in the tumor region and categorized by observed clinical responses. PD-L1 expression was assessed using mIHC analyses (Akoya Biosciences, Opal Panel) using CST #E1L3N antibody. PD-L1 expression across different clinical response groups were compared using two-tailed Mann-Whitney test

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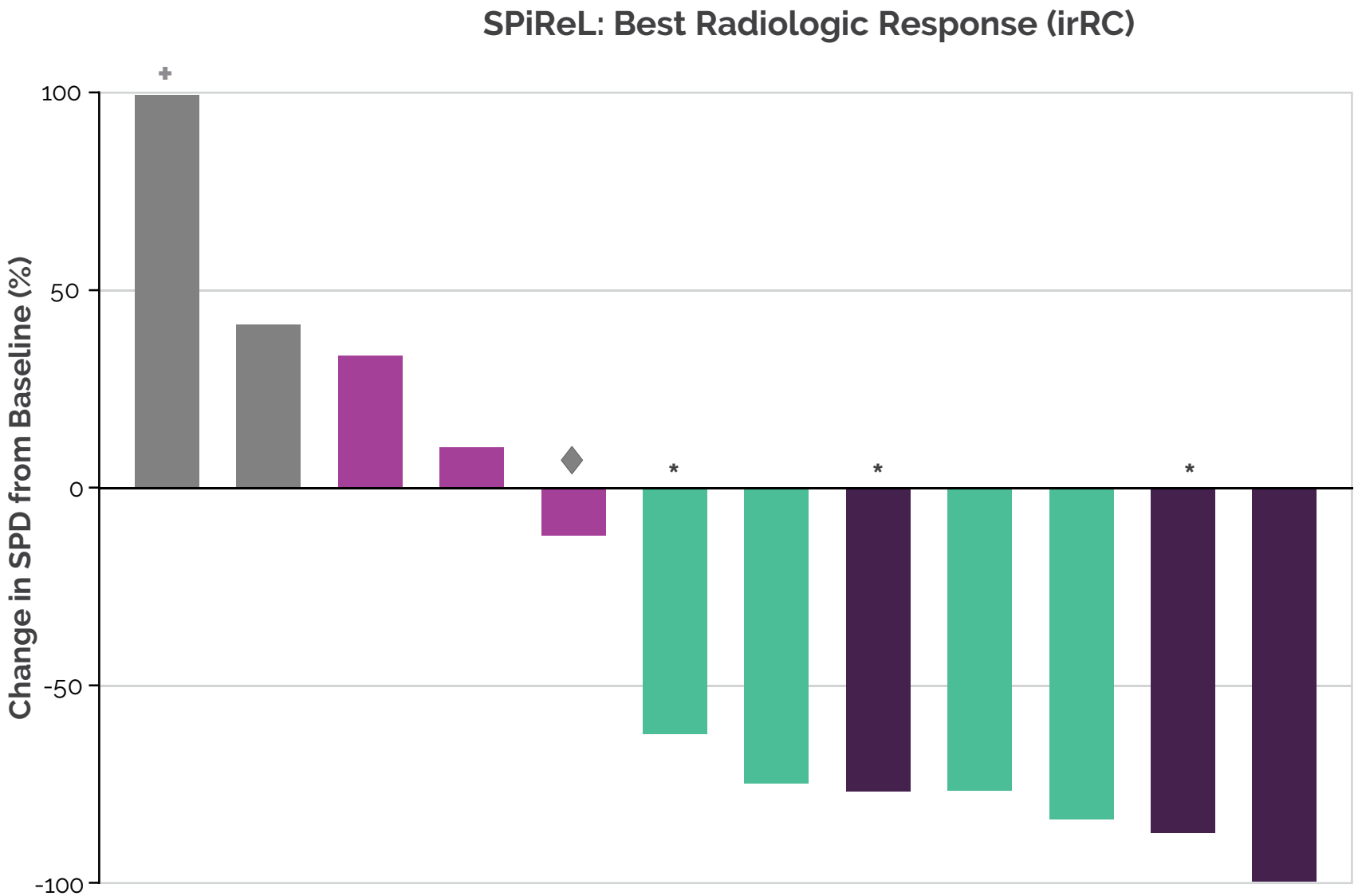
Significant Activity Observed Beyond that Expected from I/O Single Agents



Promising activity observed in an older population after multiple lines of therapy

Av. patient age - 75 years

Av no. prev. Lines of therapy - 5

Response observed in non-GCB

- Complete response
- Partial response
- Stable disease
- Progressive disease
- Subject ongoing
- * Subject completed study (1 year on study)
- + Change > 100%

† To be declared "evaluable", subjects must have received 4 doses of pembro and 3 doses of Maveropepimut-S (D84)

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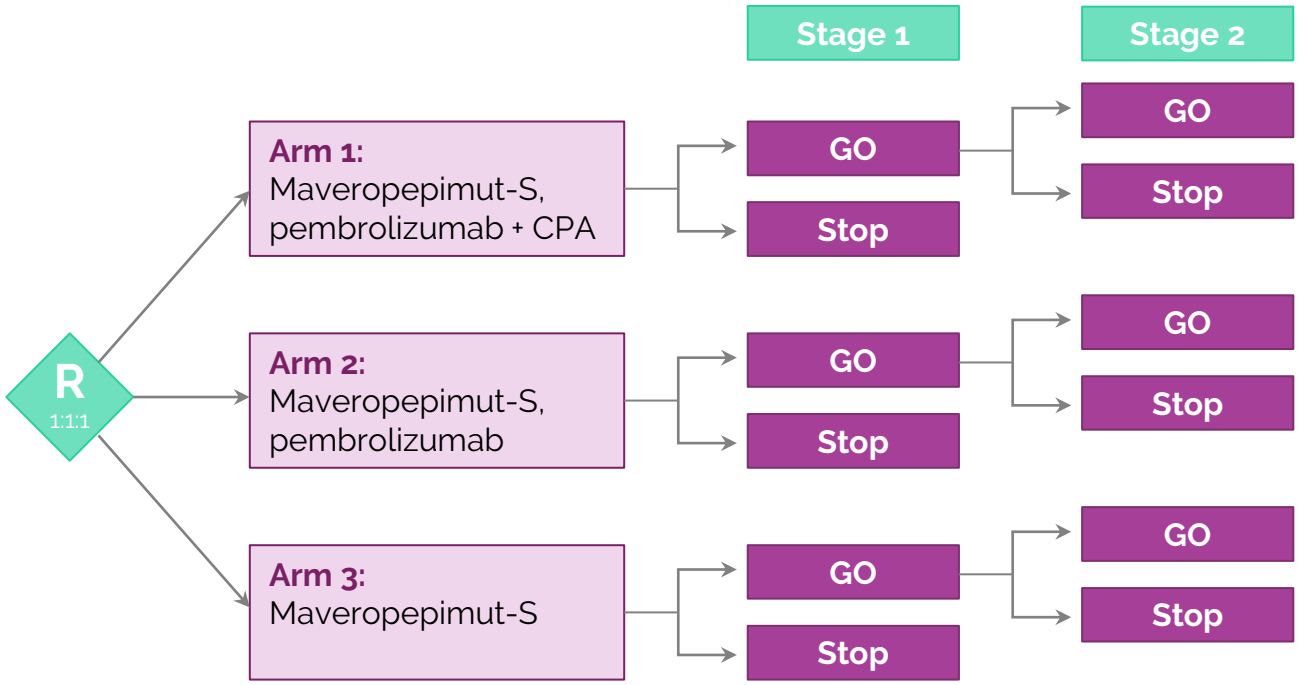
DLBCL Trial Design (Q2 Initiation)

N= up to ~150
- Relapsed/refractory DLBCL
- > 2 prior lines of therapy



Primary Objectives
- ORR

Secondary Objectives
- Safety
- DoR
- PFS
- DCR
- CR
- PRO

Early stopping rules will enable focus on optimal therapy
- Arm may be stopped early if emerging safety and/or efficacy data supports one arm over another

PD-L1 expression will be assessed at baseline

Patient population and clinical endpoints aligned with FDA guidance, to optimize potential for accelerated approval

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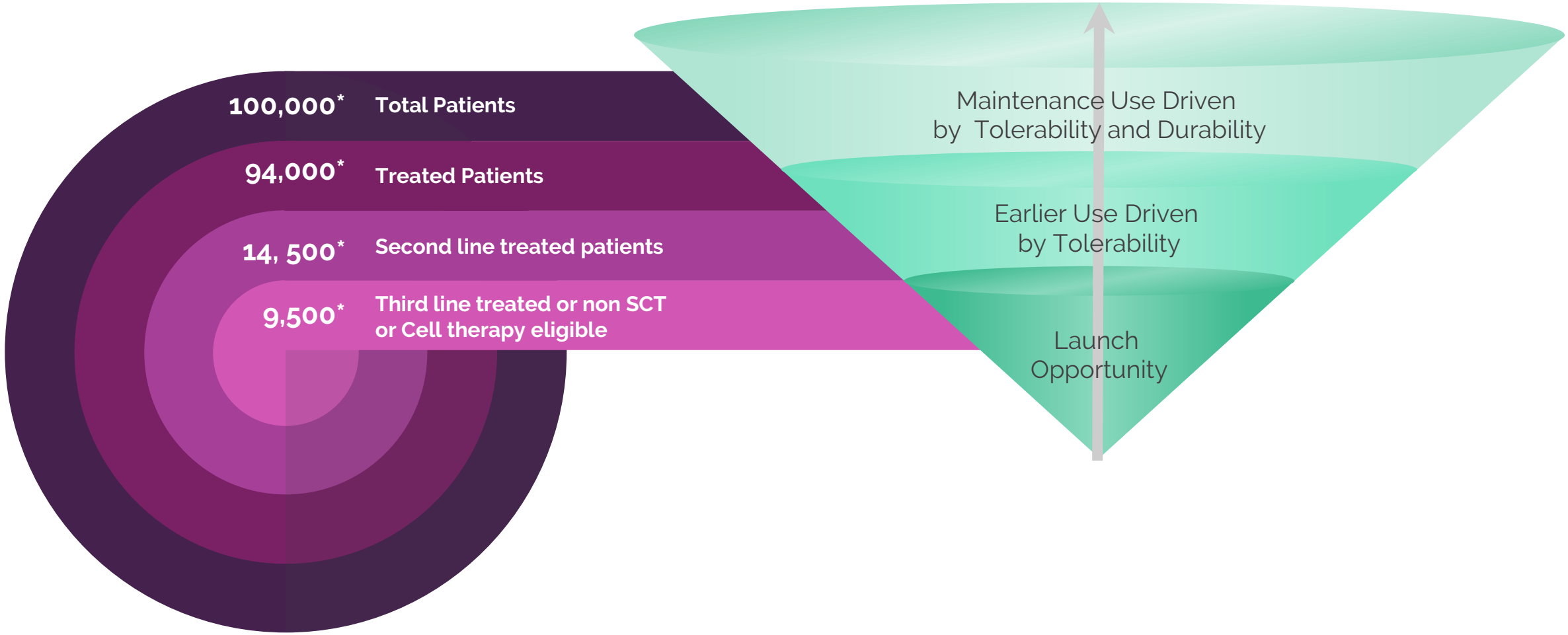
Maveropepimut-S – DLBCL 2024 US Commercial Opportunity



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* Data Monitor, 2019 syndicated report

Recurrent Ovarian Cancer

Fifth most common cause of cancer mortality in women 239,000 cases and 152,000 deaths worldwide each year. Median age at diagnosis is 63.

Almost all patients relapse and eventually become resistant to platinum-based therapy
(70% of patients relapse within 3 years)

Standard of care for recurrent platinum resistant ovarian cancer Single-agent chemotherapy (doxorubicin, paclitaxel, or topotecan)

- 12% objective response rate (ORR)
- 3 to 4.4 months Progression Free Survival (PFS)

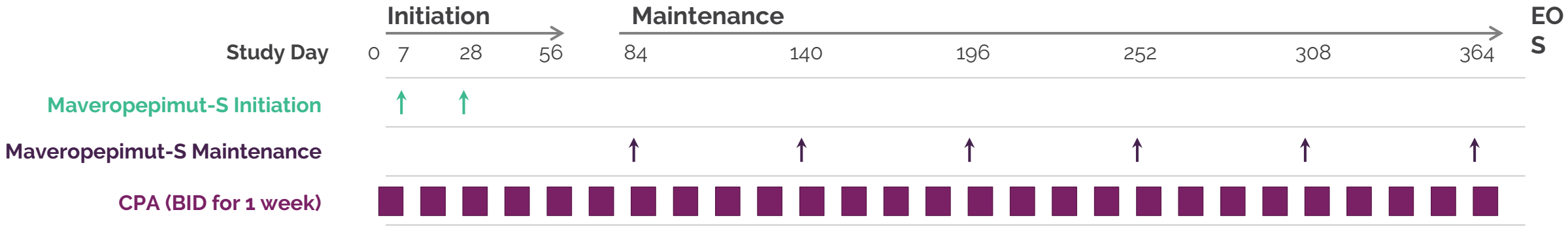
High unmet medical need

- Platinum resistant and non eligible to chemo, elderly population
- **No immunotherapy approved**

K Moore et al., ESMO 2019; Pujade-Lauraine et al., SGO 2019; Gaillard et al., ESMO 2018; SmartAnalyst report 2019. Garon et al., Lancet 2014; Rittmeyer A, et al. Lancet. 2017; Borghaei H, et al. N Engl J Med. 2015; SmartAnalyst report 2019

DeCidE[1] – Maveropepimut-S/CPA - Study Design

Maveropepimut-S Monotherapy



- Platinum sensitive and resistant
- Largest lesion no more than 4 cm
- No limit to # prior lines of therapy
- No prior exposure to anti-PD1/PD-L1
- ECOG 0-1

Current Status: accrual complete; 22 enrolled; 1 ongoing

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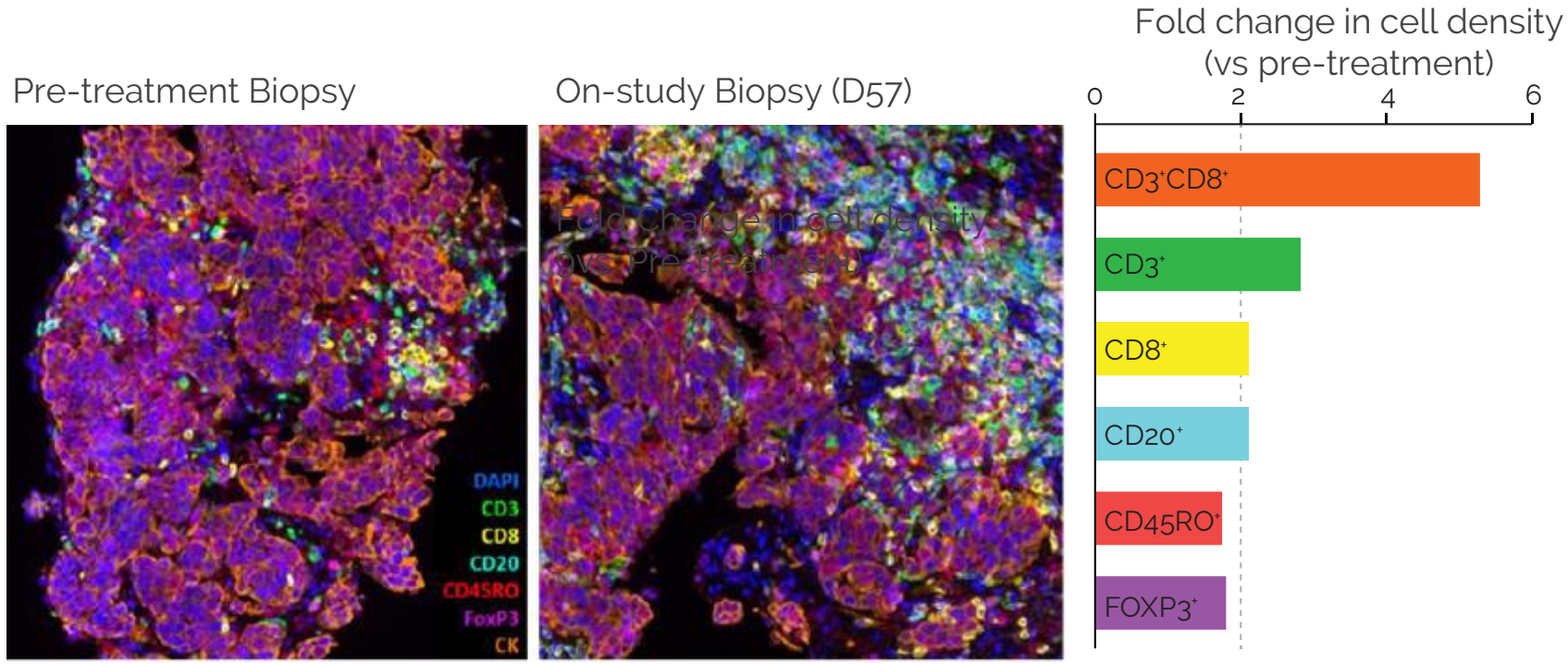
Maveropepimut-S Alters the Tumor Immune Environment

Proof-of-Principle for Immune Activation



Significant increase of CD8+ T cell infiltration at the tumor site on treatment with Maveropepimut-S

These data confirm the ability of Maveropepimut-S to induce robust survivin-specific effector T cell response in ovarian cancer patients despite multiple lines of prior myelosuppressive therapies

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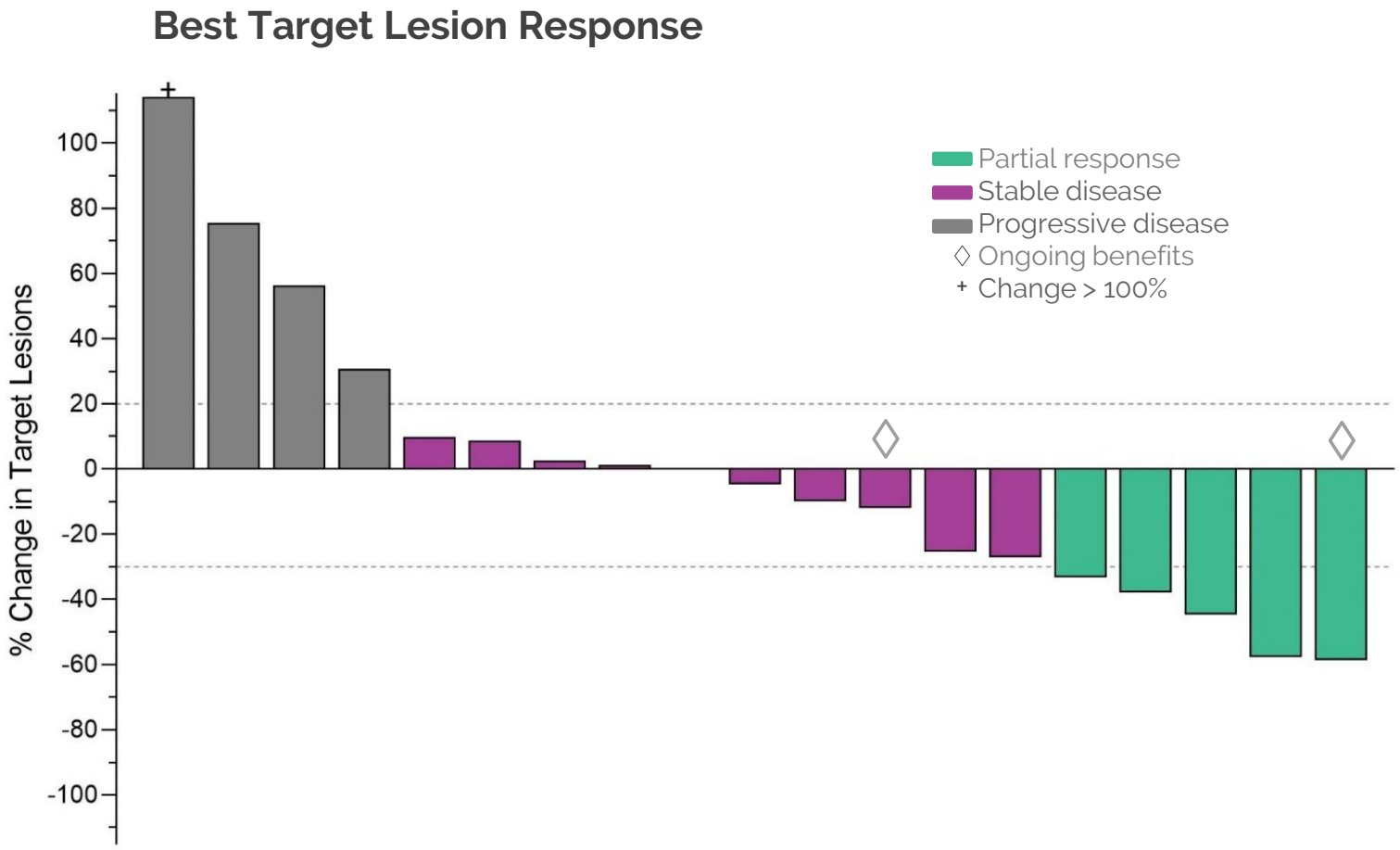
Dorigo et al, ASCO 2020

~80% Patients Showed Clinical Benefits

Recurrent ovarian cancer, Maveropepimut-S/CPA (N=19)



Tumor reduction and disease control were observed in the majority of the 19 evaluable subjects.

PR = 26.3%
SD = 52.6%

Clinical Benefit Rate 78.9%

PD = 21.1%

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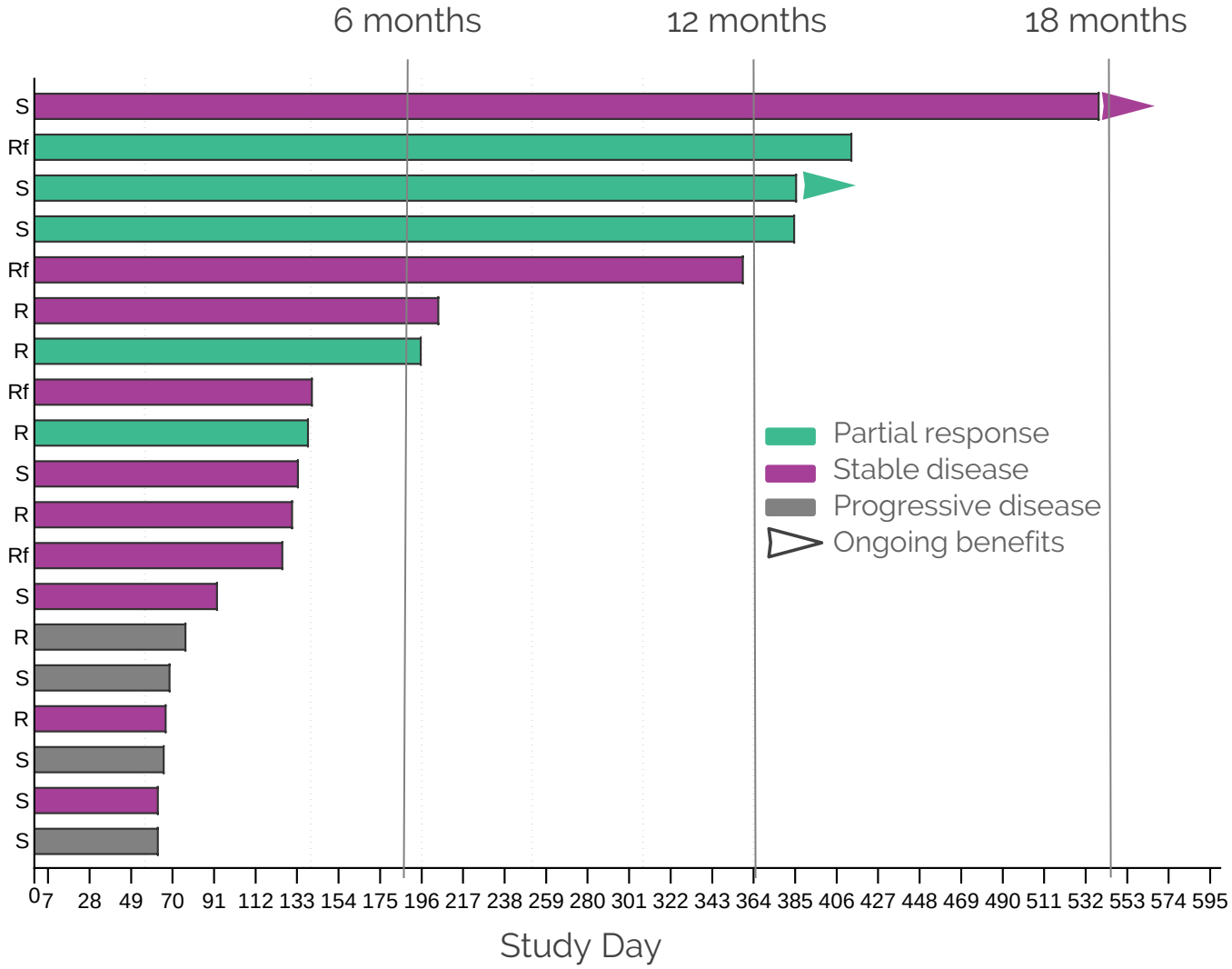
December KOLs meeting, study ongoing. Preliminary data, subject to change.

Responding Patients Show Durable Clinical Benefits



Platinum sensitive, resistant and refractory derived sustained benefits from Maveropepimut-S

- **Median duration of response greater than 12 months**
- 7/19 (37%) subjects with clinical benefits ≥ 6 months
- 5/19 (26.3%) subjects with clinical benefits up to or > 12 months

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Phase 2 Basket Trial in Multiple Advanced Metastatic Solid Tumors

Primary objectives:

objective response rate (ORR) using RECIST v1.1; Safety

Secondary objectives:

ORR, DoR, DCR, and PFS using iRECIST; overall survival

Exploratory objectives:

changes in immune cell infiltration; assessment of potential biomarkers; peripheral levels of cell mediated immunity; patient reported outcomes

Treatment: Maveropepimut-S 2 x 0.25 mL SC q3w followed by up to 11 x 0.1 mL q9w; oral CPA 50 mg BID on alternating weeks; pembrolizumab 200 mg IV every three weeks

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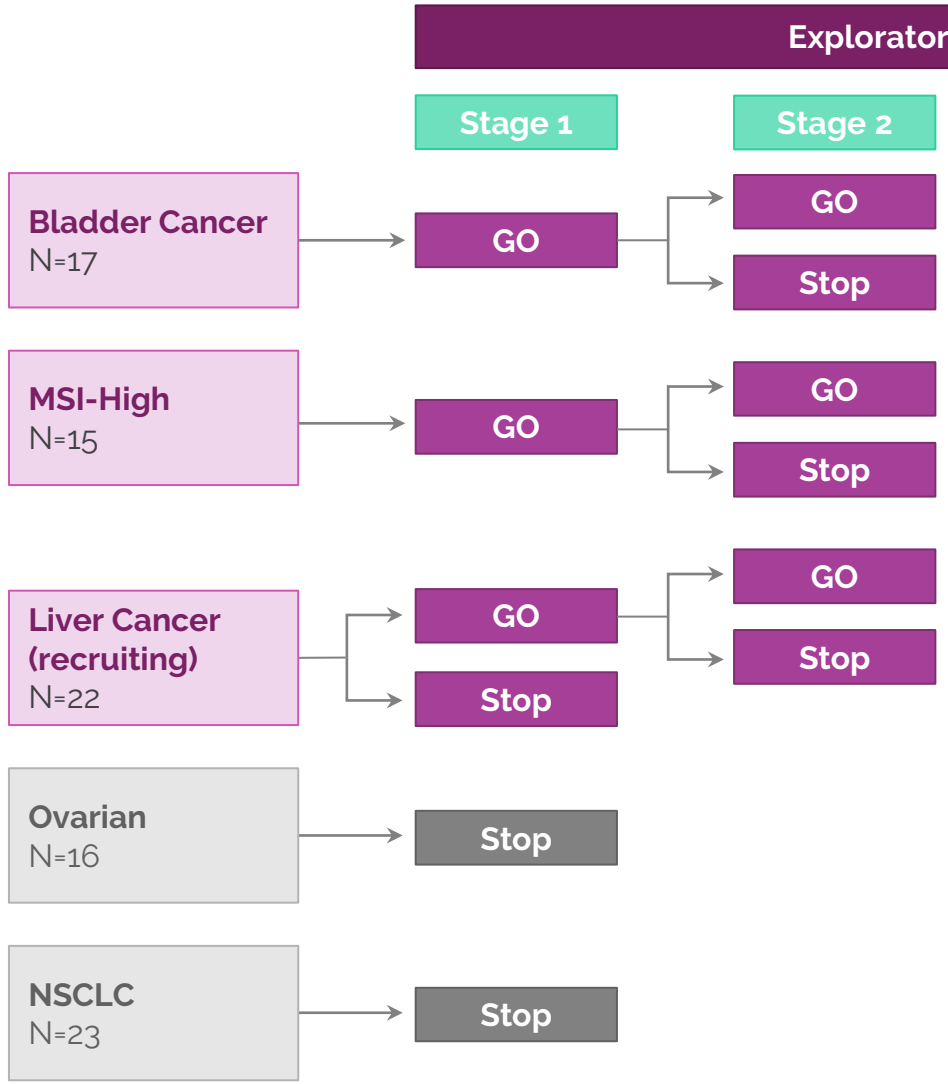
Phase 2 Basket Trial in Multiple Advanced Metastatic Solid Tumors

Promising Preliminary Results

Trial Details

- All patients receive Maveropepimut-S, pembrolizumab + CPA
- Go/Stop criteria are based on pre-specified hurdle rates vs. pembrolizumab monotherapy and commercial attractiveness



Promising preliminary results in two solid cancer indications in the basket trial: ***metastatic bladder and MSI-H tumor cancers***

Protocol amended to accelerate enrollment in hepatocellular carcinoma (liver cancer)

Best opportunity to be selected for further development based on safety/efficacy and commercial attractiveness

Interim Data Expected Q4 2021

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Other Clinical Programs

DPX-SurMAGE

- Dual-targeted immunotherapy
- Formulation of the DPX delivery platform with Immunogenic peptides from survivin and MAGE protein family
- H2 2021: First-in-human study in patients with non-muscle invasive bladder cancer
- Collaboration with the Research Centre of Québec – Laval University

DPX-COVID-19

- Due to the evolution of the regulatory landscape, the emergence of new variants and the approval of vaccines in different areas of the world, the Company is conducting complementary preclinical studies including evaluating the impact of new variants.
- Complementary preclinical studies are ongoing

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Summary

- Advancing novel immunotherapies for difficult-to-treat cancers and infectious diseases
- Proof of Concept from first Phase 2 studies in solid and hematologic cancers demonstrating efficacy, safety and duration
- De-risked clinical program in DLBCL on strength of positive data and establishment of biomarker
- Profile in ovarian cancer suggests multiple potential paths to market including monotherapy, combination and even maintenance therapy
- DPX-COVID-19 with potential ability to serve an older / immunocompromised population
- Fully synthetic formulation that allows rapid, cost-efficient scale-up manufacturing

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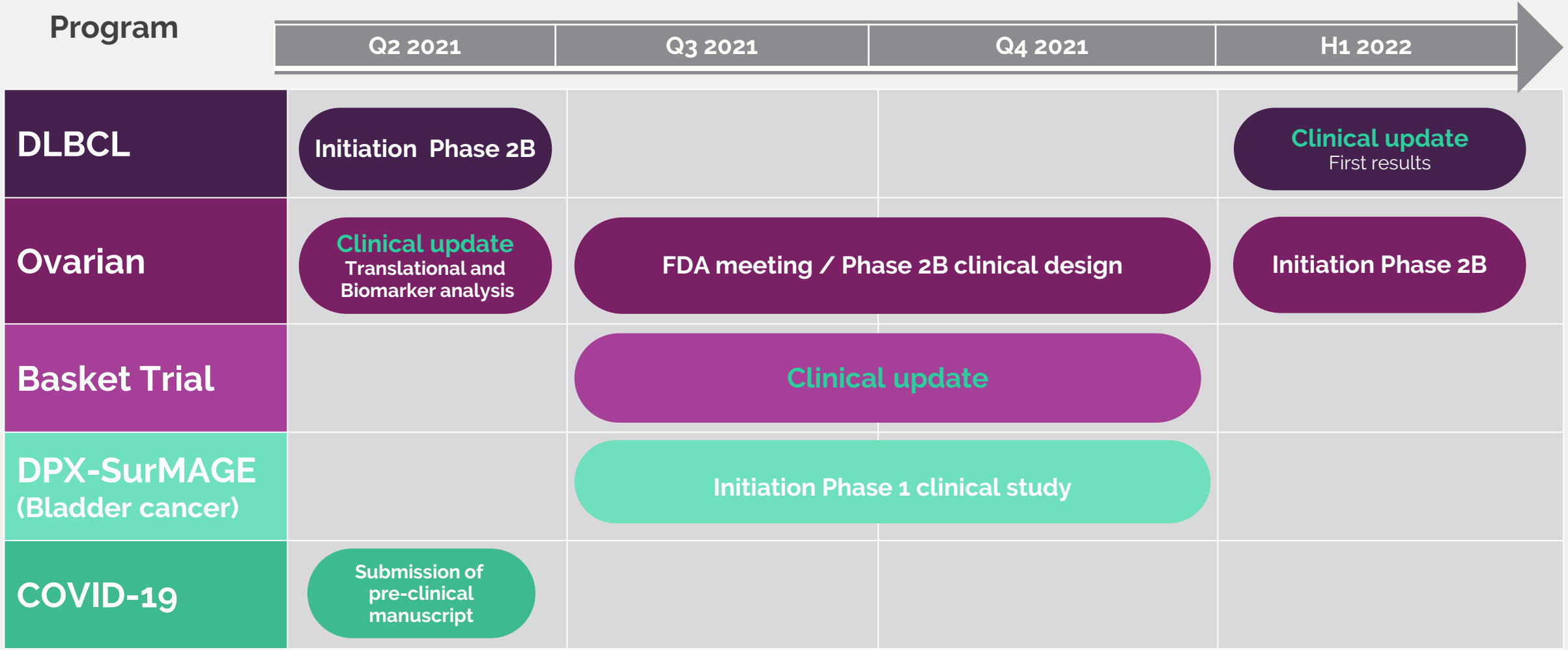
IMV's Upcoming Milestones



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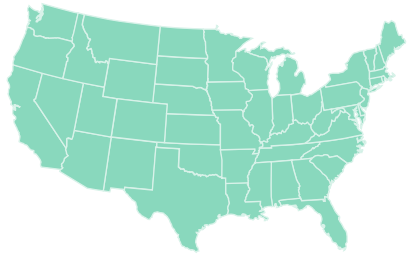
Financial Information (April 16, 2021)

Market cap	188 M $US / 235 M $CAD
Cash and cash equivalents (Dec. 31, 2020)	~ 36.4 M US $ / 46.4 M $CAD
Outstanding shares (March 16, 2021)	Basic: 67.7 M Fully diluted: 71.6 M
52 Week Trading Range - Nasdaq	$US 1.66 - $US 6.82
52 Week Trading Range - TSX:	$CAD 2.33 - $CAD 9.25
Average daily volume (US & Canada) (as at 04/16/2021, last 30 trading days, includes alternative exchanges in Canada)	477 K shares

Analyst Coverage (7)

USA



BTIG
HC Wainwright
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Canada

Industrial Alliance Securities
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