Eganelisib
Addressing Significant Patient Need With Next-Generation Immunotherapies

H.C. Wainwright Global Investment Conference
May 23-25, 2022

Infinity™ PHARMACEUTICALS

Cautionary Note Regarding Forward-Looking Statements

This presentation contains forward-looking statements and information of Infinity Pharmaceuticals, Inc. ("we," "us," "our," "Infinity" or the "Company") within the meaning of The Private Securities Litigation Reform Act of 1995. All statements other than statements of historical facts contained in this presentation, are forward-looking statements. We often use words such as "anticipate," "believe," "estimate," "expect," "intend," "may," "plan," "predict," "project," "target," "milestone," "goal," "potential," "will," "would," "could," "should," "continue," and other words and terms of similar meaning to help identify forward-looking statements, although not all forward-looking statements contain these identifying words. You also can identify these forward-looking statements by the fact that they do not relate strictly to historical or current facts. Such forward-looking statements include those regarding the therapeutic potential of eganelisib; plans to initiate the MARIO-4 registration study and the MARIO-P platform study; design plans for MARIO-4; plans to release clinical data; the Company's estimated year end 2021 cash balance; financial guidance; plans to release 2021 financial results; and the Company's ability to execute on its strategic plans. Such statements are subject to numerous important factors, risks and uncertainties that may cause actual events or results to differ materially from the company's current expectations. For example, there can be no guarantee that eganelisib will successfully complete necessary preclinical and clinical development phases or that any positive developments with eganelisib will result in stock price appreciation. Management's expectations and, therefore, any forward-looking statements in this presentation, could also be affected by risks and uncertainties relating to a number of other factors, including the following: Infinity's results of clinical trials and preclinical studies, including subsequent analysis of existing data and new data received from ongoing and future studies; Infinity's ability to obtain, maintain and enforce patent and other intellectual property protection for eganelisib; the content and timing of decisions made by the U.S. FDA and other regulatory authorities; Infinity's ability to obtain and maintain requisite regulatory approvals and to enroll patients in its clinical trials; unplanned cash requirements and expenditures; and development of agents by Infinity's competitors for diseases in which Infinity is currently developing or intends to develop eganelisib. These and other risks which may impact management's expectations are described in greater detail under the caption "Risk Factors" included in Infinity's annual report and quarterly reports filed with the Securities and Exchange Commission (SEC), and other filings filed by Infinity with the SEC, available on the SEC's website at www.sec.gov. Any forward-looking statements contained in this presentation speak only as of the date hereof, and Infinity expressly disclaims any obligation to update any forward-looking statements, whether as a result of new information, future events or otherwise. Infinity regularly uses its website to post information regarding its business, product development programs and governance.

Infinity Pharmaceuticals

Headquarters: 1100 Massachusetts Avenue, Harvard Square, Cambridge, Massachusetts

Nasdaq: INFI

Focus: First-in-class/best-in-class oncology therapeutics

Adelene Perkins
Chair & CEO
TransForm, Genetics Institute, Bain

Larry Bloch, MD, JD
President
NeurAxon, NitroMed, Applied Molecular Evolution

Robert Ilaria, Jr., MD
Chief Medical Officer
BMS, Celgene, Eli Lilly

Seth Tasker, JD
Chief Business Officer
Surface Logix

Stéphane Peluso, PhD
Chief Scientific Officer
Ipsen, Millennium

Eganelisib: Potential Best-In-Class Next-Generation Immunotherapy

First-in-class, oral, potent and selective macrophage reprogramming therapeutic

- Strong preclinical/translational medicine data demonstrating reprogramming of tumor associated macrophages
- Uniquely differentiated, next-generation immunotherapy

Clinical activity, safety & translational data in P2 settings where CPIs have shown little or no patient benefit

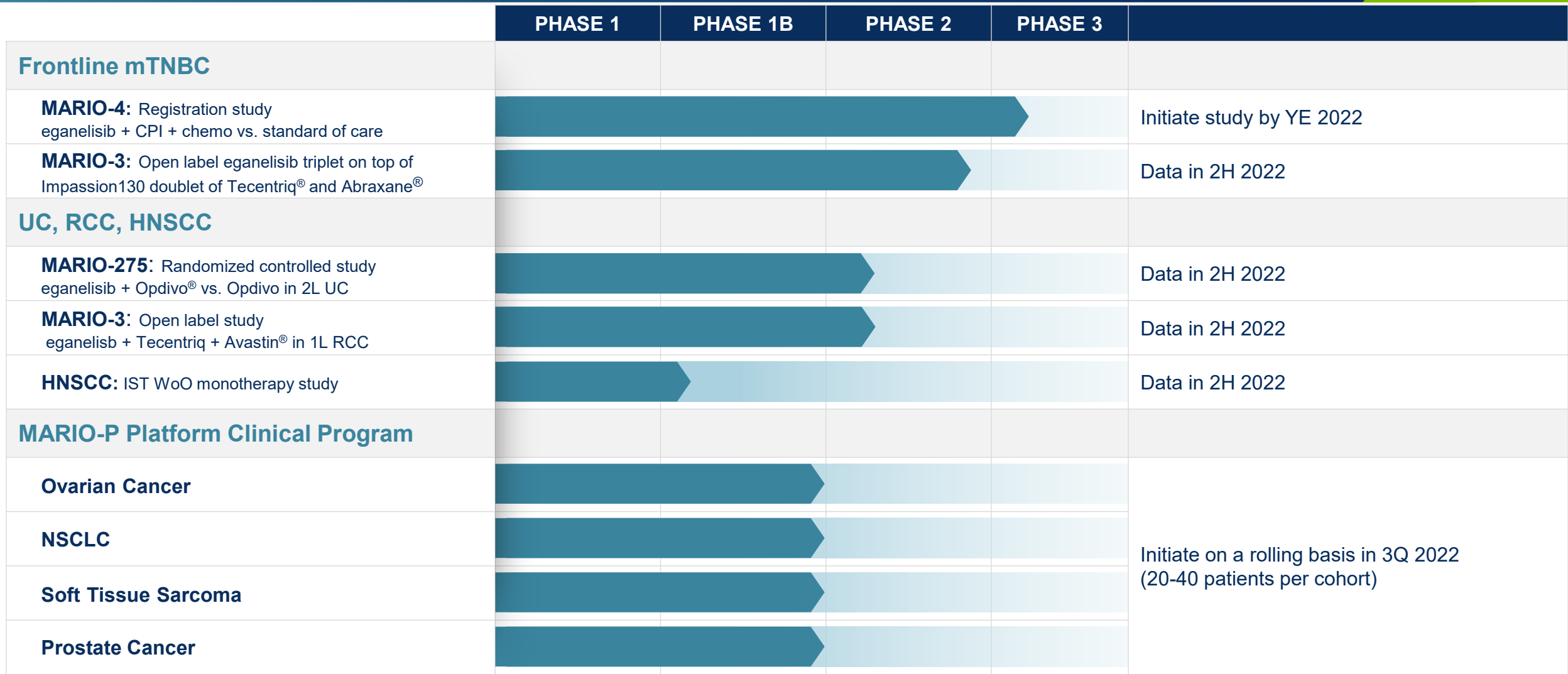
- 1L advanced/metastatic Triple Negative Breast Cancer (TNBC) in combination with CPI + chemo
- 2L metastatic Urothelial Cancer in combination with CPI
- Clinical/Translational Data releases in 4 tumor types in 2022

Registration enabling study in frontline advanced/metastatic TNBC - to be initiated by end of 2022

Platform clinical program to rapidly and efficiently evaluate eganelisib in indications where tumor associated macrophages limit effectiveness of current therapies - to be initiated in 3Q2022

Advancing and Expanding MARIO Clinical Development Program
MAcrophage Reprogramming in Immuno-Oncology

MARIO
MACROPHAGE REPROGRAMMING IN IMMUNO-ONCOLOGY

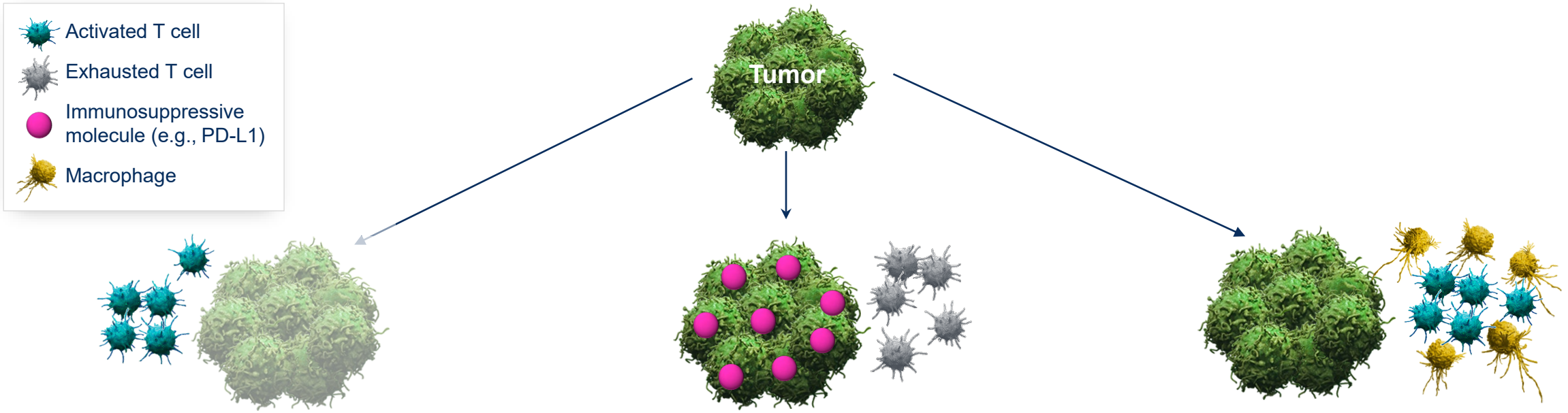


Triple Negative Breast Cancer (TNBC)
Urothelial Cancer (UC)
Renal Cell Carcinoma (RCC)
Head and Neck Squamous Cell Cancer (HNSCC)
Non Small Cell Lung Cancer (NSCLC)

Tecentriq® is a registered trademark of Genentech, Inc.
Abraxane® is a registered trademark of Abraxis BioScience, LLC.
Opdivo® is a registered trademark of Bristol Myers Squibb.
Avastin® is a registered trademark of Genentech, Inc.

Infinity PHARMACEUTICALS

How Tumors Evade the Immune System

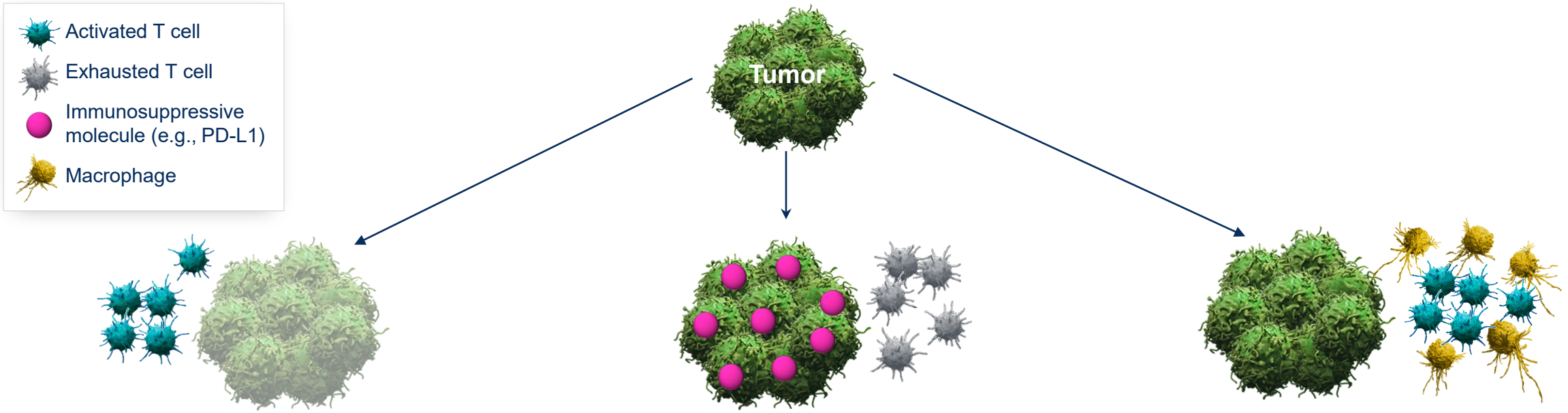


Tumor Invisible to Immune Attack

Tumor Visible but T cells Exhausted

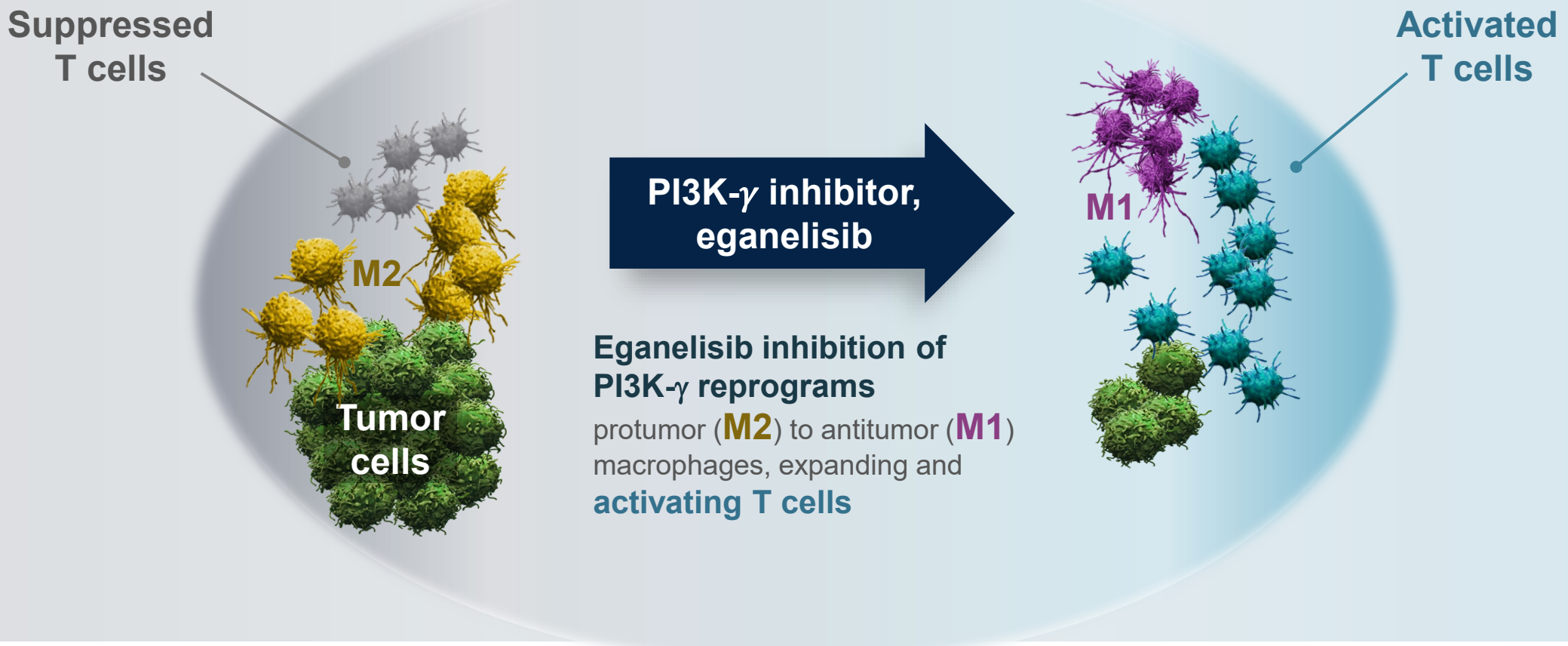
Tumor Visible but Microenvironment (TME) Suppresses T cell Response

Eganelisib: Next-Generation Immunotherapy Targeting Tumor Associated Macrophages to Overcome Cancer Immune Evasion



Tumor Invisible to Immune Attack	Tumor Visible but T cells Exhausted	Tumor Visible but Microenvironment (TME) Suppresses T cell Response
Treatment Approaches • Radiotherapy • Chemotherapy	**Treatment Approaches (CPIs)** • PD-1/PD-L1 • CTLA-4 • LAG-3 • TIGIT	**Treatment Approaches** • **Reprogram Tumor Associated Macrophages (TAMs) with PI3Kγ (Eganelisib)** • Target tumor vasculature • Target regulatory T cells (Tregs)

Eganelisib Reprograms Macrophages to Turn Tumor Microenvironment from Immune Suppressed to Immune Activated



Eganelisib inhibition of PI3K-γ reprograms protumor (**M2**) to antitumor (**M1**) macrophages, expanding and **activating T cells**

MARIO Clinical Program Demonstrates Eganelisib Clinical Activity and Safety Across Multiple Combinations and Tumor Types

MARIO
MACROPHAGE REPROGRAMMING IN IMMUNO-ONCOLOGY

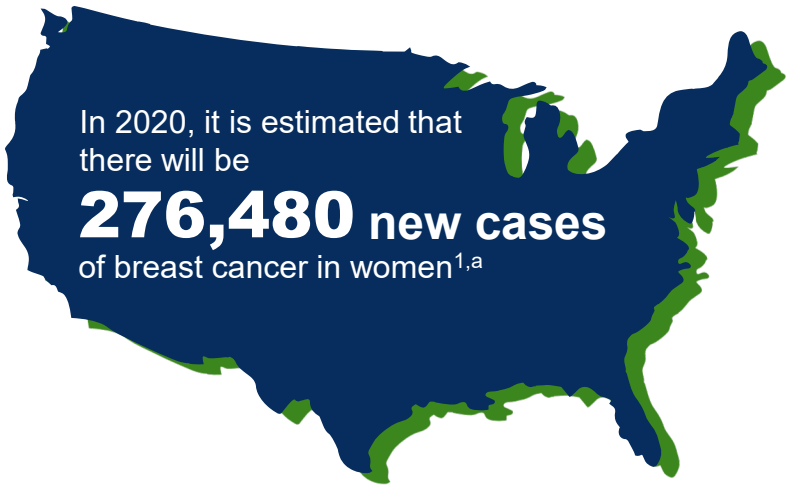
	PHASE 1	PHASE 1B	PHASE 2	KEY STUDY DATA
MARIO-275	Bristol Myers Squibb™			
2nd Line Urothelial Cancer in combination with Opdivo				ITT mOS of 15.4 mos vs 7.9 mos on Control Arm with HR of 0.62[1]
MARIO-3	Roche Genentech, A Member of the Roche Group			
Frontline Metastatic TNBC in combination with Tecentriq and Abraxane				PD-L1(+) Pts 47% Extension of mPFS[2] PD-L1(–) Pts 30% Extension of mPFS[2]
ARC-2	ARCUS BIOSCIENCES			
TNBC and Ovarian Cancer in combination with etrumadenant and Doxil®				TNBC ORR: 25% vs. 9%[3] Ovarian ORR: 75% vs. 14%[3]
MARIO-1	Bristol Myers Squibb™			
Checkpoint inhibitor refractory HNSCC and Melanoma in combination with Opdivo				SCCHN ORR (≤ 2 lines): 20%[4] Melanoma ORR (≤ 2 lines): 21%[5]

1. Tomczak et al. ASCO GU 2021; 2. Soliman et all, SABCS 2021 Compared to IMpassion 130 data presented by Emens, LA, 2018 SABCS, abstract GS1-04; 3. Gardner O et al. SABCS 2020 Triplet Arm (Eganelisib + Etrumadenant + Doxil) versus Doublet Arm (Etrumadenant + Doxil); Doxil® is a registered trademark of Baxter Healthcare Corporation.
4. Cohen et al. SITC 2020; 5. Postow et al. SITC 2020

Infinity™ PHARMACEUTICALS

Metastatic TNBC is Associated with Poor Prognosis

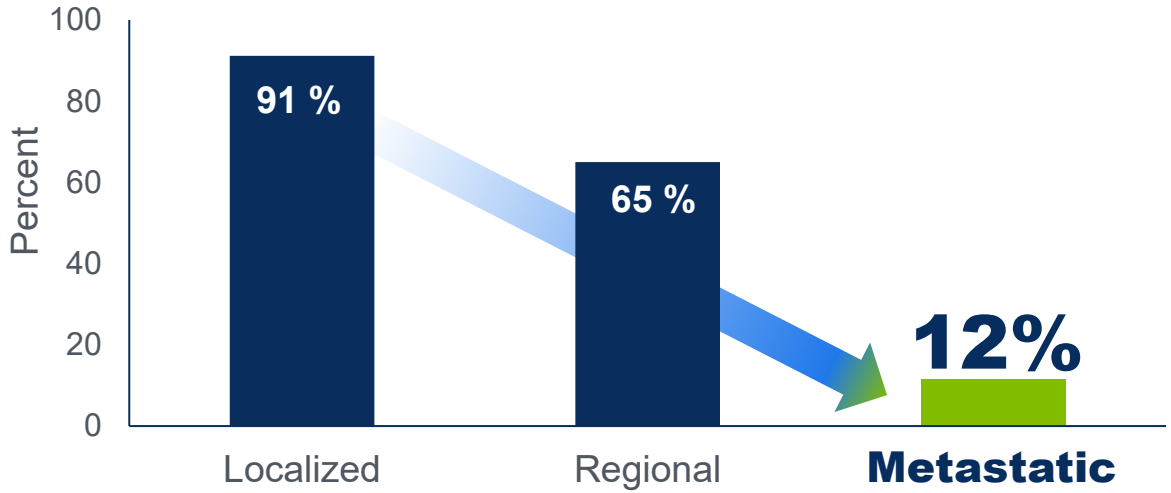
Advanced TNBC and PD-L1(-) TNBC Are Both Associated With Poor Prognosis



15% of breast cancer is **triple negative[2]**

(ie, negative for ER, PR, and HER2)

5-year survival rate by stage at diagnosis of TNBC[3,†]



PD-L1(-) cancers are associated with poor prognosis[4]
≈ 60% of TNBCs are PD-L1(-)[5,‡]

Forecast of 16K addressable 1L mTNBC patients globally in 2034 suggests market potential of over $2B[6]

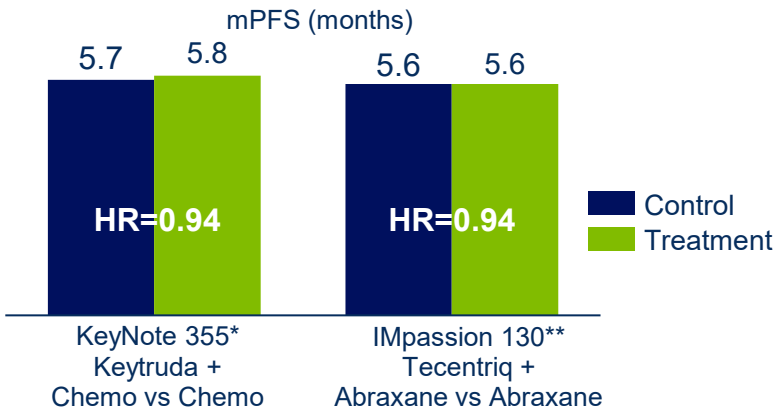
[a]Estimated cases based on 2013-2017 cases.
[†]5-Year relative survival percent, TNBC by SEER Summary Stage 2000.
[‡]PD-L1–stained tumor-infiltrating immune cells; positive PD-L1 threshold of 0.01 (≥1% of tumor area).

1. National Cancer Institute. Accessed November 24, 2020. https://seer.cancer.gov/statfacts/html/breast-subtypes.html 2. American Cancer Society. Accessed November 24, 2020. https://www.cancer.org/cancer/breast-cancer/understanding-a-breast-cancer-diagnosis/types-of-breast-cancer/triple-negative.html 3. National Cancer Institute. Accessed November 23, 2020. https://seer.cancer.gov/statfacts/html/breast-subtypes.html 4. Davis AA, Patel VG. *J Immunother Cancer.* 2019;7(1):278. 5. Matikas A et al. *Clin Cancer Res.* 2019;25(18):5717-5726, 6. LEK forecast based on LEK interviews, research and analysis, Decision Research Group data Dec 2020

PD-L1(-) Patients: No CPI Has Demonstrated Benefit Over SOC Chemo

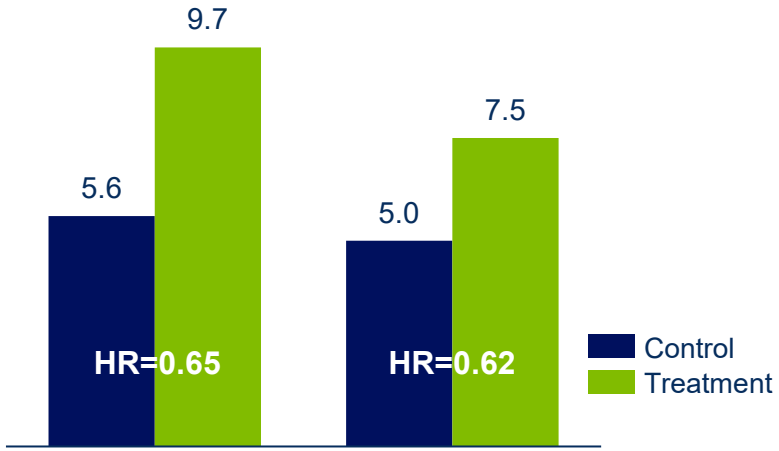
PD-L1(-)#
~60% of 1L TNBC patients

NO CPIs Approved



PD-L1(+)#
~40% of 1L TNBC patients

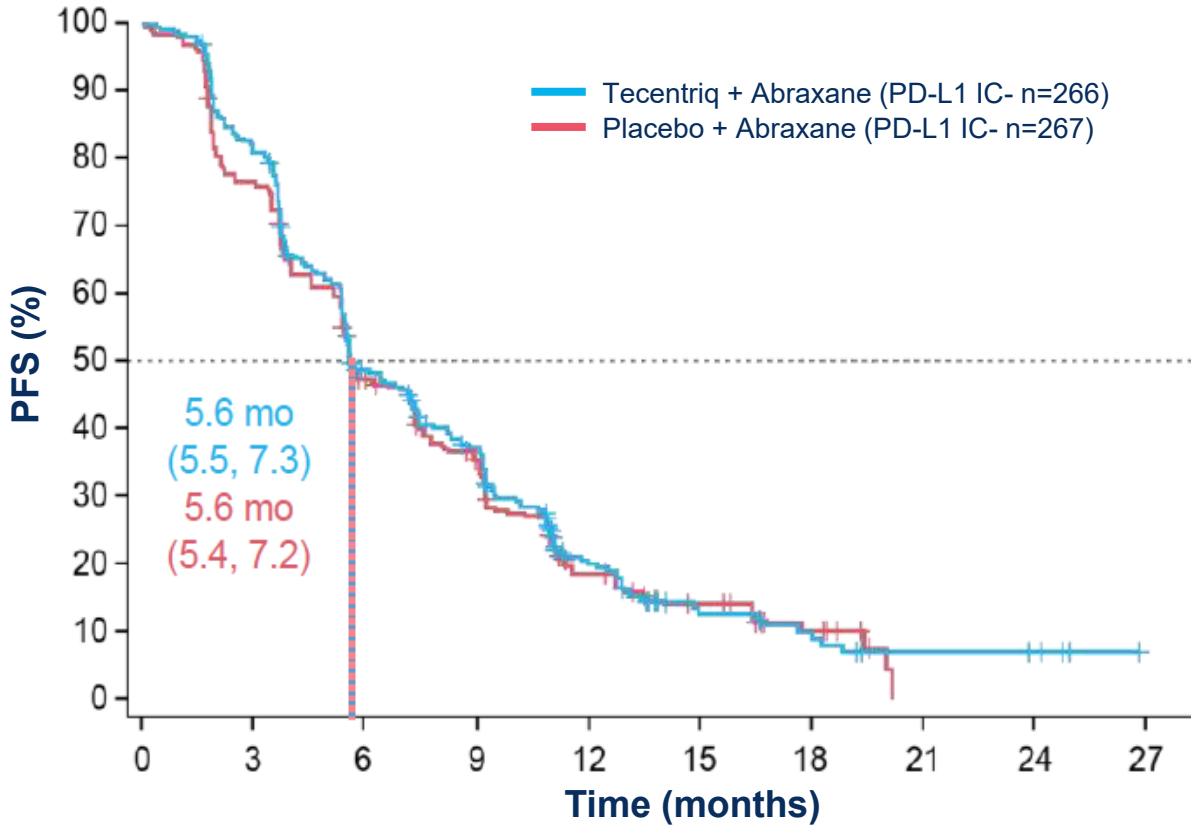
ONLY 1 CPI Approved in US



2 yr OS 48.2 %^

3 yr OS 36.0%^^

IMpassion130 PD-L1(-)**



*Cortes, Lancet December 5, 2020; 396:1817-28, **Emens, LA, IMpassion130, 2018 SABCS Abstract GS1-04, ^Rugo, ESMO 2021, Abstract LBA16, ^^ Emens, LA July 1,2021, Annals of Oncology., # Keynote 355 PD-L1 expression assessed by The 22C3 Dako PharmDx IHC assay, which factors in expression in both tumor cells and tumor-infiltrating immune cells. A CPS score is calculated and a score of ≥10% is positive and CPS <10% is negative. IMpassion130 PD-L1 expression assessed by IC ≥1% of tumor area is positive and IC <1% is negative as determined by the VENTANA PD-L1 (SP142) Assay.

Infinity™ PHARMACEUTICALS

MARIO-4: First Registration Study of Eganelisib

MARIO 4
MACROPHAGE REPROGRAMMING IN IMMUNO-ONCOLOGY

- Based on strength of efficacy, safety and translational medicine data from MARIO-3
- Randomized, double-blind, placebo-controlled study with PFS and OS endpoints
- PD-L1(-) patients: eganelisib + chemotherapy + checkpoint inhibitor vs chemotherapy
- PD-L1(+) patients: eganelisib + chemotherapy + checkpoint inhibitor vs chemotherapy + checkpoint inhibitor
- Study design to be finalized pending feedback from global regulatory authorities
- MARIO-4 Study to be initiated by end of 2022

Designed to Demonstrate Eganelisib's Ability to Improve and Extend the Clinical Benefit of Tecentriq + Abraxane in 1L mTNBC

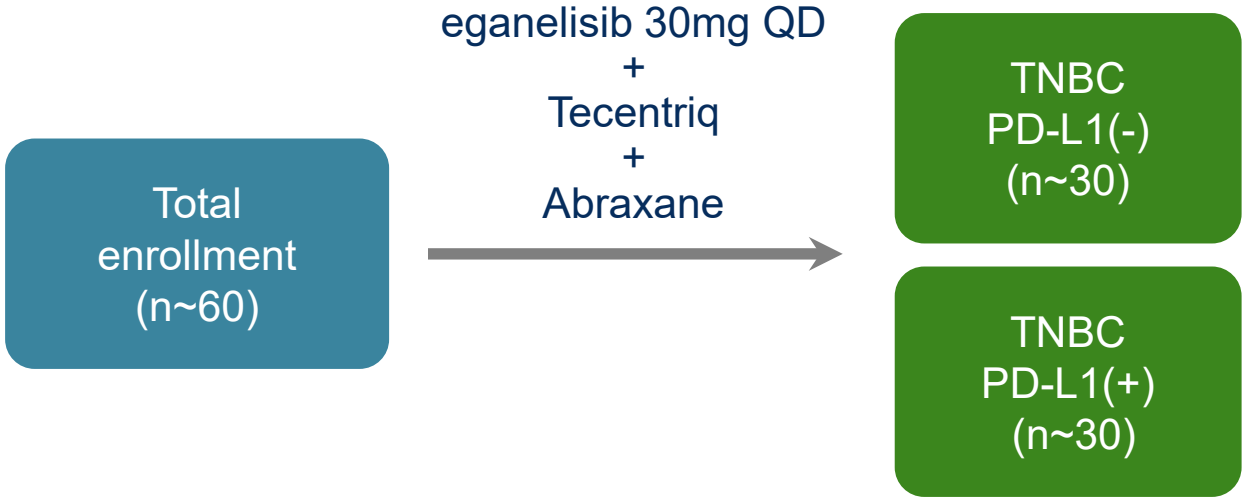
MARIO 3
MACROPHAGE REPROGRAMMING IN IMMUNO-ONCOLOGY

Eganelisib FDA Fast Track Designation for TNBC

MARIO-3 TNBC evaluating the potential of eganelisib to improve on IMpassion130 results*

Addition of eganelisib to Tecentriq and Abraxane in front-line TNBC

- Inclusion/exclusion criteria per IMpassion130 study
- Two prespecified cohorts: PD-L1(-) and PD-L1(+)
- Primary objective: CR rate
  CR benchmark ~7% ITT; 10% PD-L1(+)
- Secondary objectives: PK, PD, ORR, DCR, and PFS; ORR for PD-L1(-) cohort
- PD-L1 status determined via central lab (histogeneX) with Ventana SP142 antibody to align with IMpassion130



CR, complete response; DCR, disease control rate; ITT, intent-to-treat; ORR, overall response rate; PD, pharmacodynamics; PD-L1, programmed death-ligand 1; PFS, progression-free survival; PK, pharmacokinetics; QD, once daily; SOC, standard of care; mTNBC, metastatic triple-negative breast cancer; TNBC, triple-negative breast cancer.

Immune Cell Score ≥ 1% cutoff for PD-L1(+)

*Schmid P et al, N Engl J Med. 2018;379(22):2108-2121.

Infinity PHARMACEUTICALS

No New Safety Signals: Profile Consistent with Expectations for the 3 Component Drugs

MARIO 3 MACROPHAGE REPROGRAMMING IN IMMUNO-ONCOLOGY

Most Common Treatment-Related TEAEs in ≥ 10% of All Treated Patients** (N=50)

Preferred or Grouped Term#	Treatment-related TEAE (All)		Treatment-related TEAE (≥ Gr. 3)	
Nausea	25	(50.0)	0	(0.0)
Fatigue	24	(48.0)	3	(6.0)
Skin AEs	18	(36.0)	6	(12.0)
Diarrhea	15	(30.0)	3	(6.0)
Hepatic AEs*	14	(28.0)	9	(18.0)
Alopecia	13	(26.0)	0	(0.0)
Vomiting	11	(22.0)	1	(2.0)
Neutropenia AEs	11	(22.0)	8	(16.0)
Pyrexia	9	(18.0)	0	(0.0)

Preferred or Grouped Term	Treatment-related TEAE (All)		Treatment-related TEAE (≥ Gr. 3)	
Peripheral sensory neuropathy	9	(18.0)	3	(6.0)
Decreased appetite	8	(16.0)	0	(0.0)
Headache	8	(16.0)	0	(0.0)
Stomatitis	7	(14.0)	0	(0.0)
Dysgeusia	7	(14.0)	0	(0.0)
Constipation	6	(12.0)	0	(0.0)
Weight decreased	5	(10.0)	1	(2.0)
Hypokalaemia	5	(10.0)	0	(0.0)

Presented in descending order of All Treatment-Related TEAE
*One Grade 4 event and No Hy's Law
**No treatment-related Grade 5 AEs
Grouped terms:
Skin AEs: rash maculo-papular, rash, pruritus, dermatitis, dry skin, photosensitivity reaction, rash erythematous
Hepatic AEs: ALT increased, AST increased, ALP increased, blood bilirubin increased, autoimmune hepatitis
Neutropenia AEs: neutropenia and neutrophil count decreased

Soliman H, et al. SABCS 2021

Infinity PHARMACEUTICALS

Triplet Manageability Compares Favorably to Historical Doublet

MARIO 3
MACROPHAGE REPROGRAMMING IN IMMUNO-ONCOLOGY

	MARIO-3* Eganelisib+Tecentriq+Abraxane (N=50) n (%)		IMpassion130** Tecentriq+Abraxane (N=460) n (%)	
All-causality AEs				
Any grade	47	(94.0)	457	(99.3)
Grade 3 or 4	32	(64.0)	233	(50.7)
Grade 5	2	(4.0)	6	(1.3)
Serious AEs	15	(30.0)	110	(23.9)
AE leading to any treatment withdrawal	9	(18.0)	88	(19.1)
AE leading to Atezo withdrawal	8	(16.0)	37	(8.0)
AE leading to Nab-Pac withdrawal	8	(16.0)	85	(18.5)
Treatment-related AEs* **				
Any grade	47	(94.0)	444	(96.5)
Grade 3 or 4	30	(60.0)	191	(41.5)
Grade 5	0	(0.0)	2	(0.4)
Serious AEs	9	(18.0)	58	(12.6)

* MARIO-3: Data listed are treatment emergent adverse event (TEAE).
** Emens et al., Annal of Oncology 2021
*** In MARIO-3, the data listed are for TEAEs that were related to any study drug
Soliman H, et al. SABCS 2021

Infinity PHARMACEUTICALS

Immune Activation Shrinks Tumors Regardless of PD-L1 Status

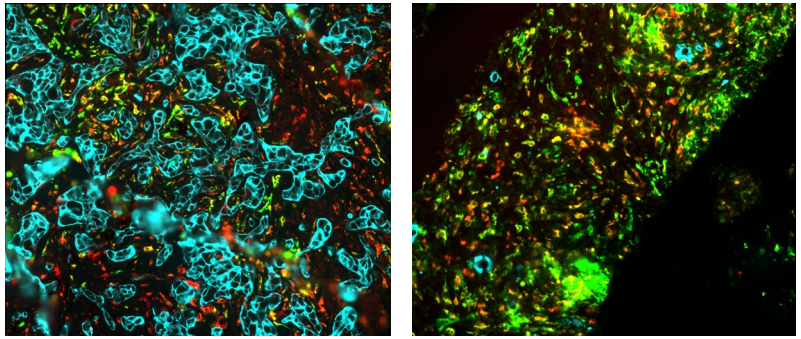
MARIO 3
MACROPHAGE REPROGRAMMING IN IMMUNO-ONCOLOGY

Paired Tumor Biopsies

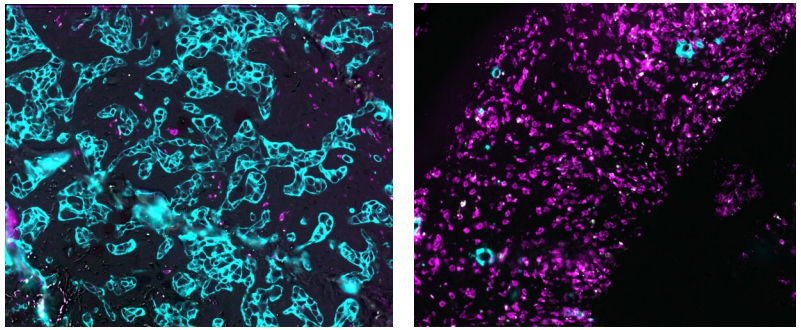
PD-L1(-) Patient with PR

Day 0 | 2 mo

Tumor M2 HLADR+ M1



Tumor CD8 T Cells Activated T Cell

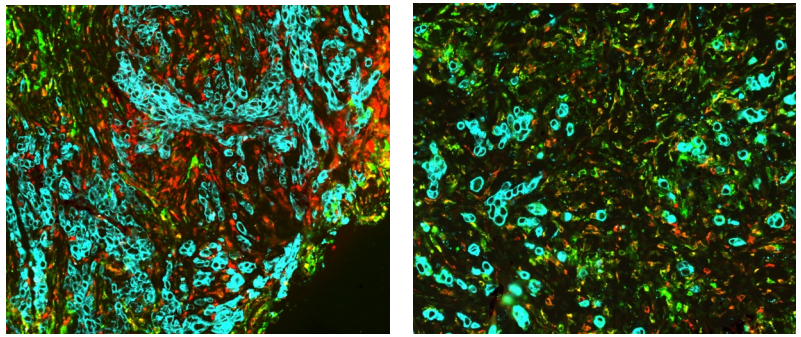


Patient Ongoing Over 13 Months

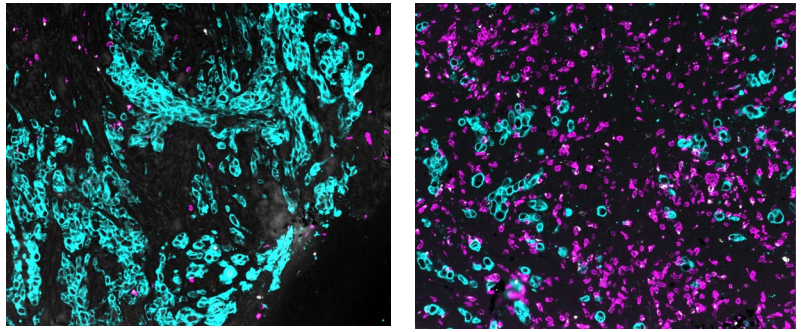
PD-L1(+) Patient with PR

Day 0 | 2 mo

Tumor M2 HLADR+ M1



Tumor CD8 T Cells Activated T Cell



Patient Ongoing Over 13 Months

Immune Cell Score ≥ 1% cutoff for PD-L1(+)

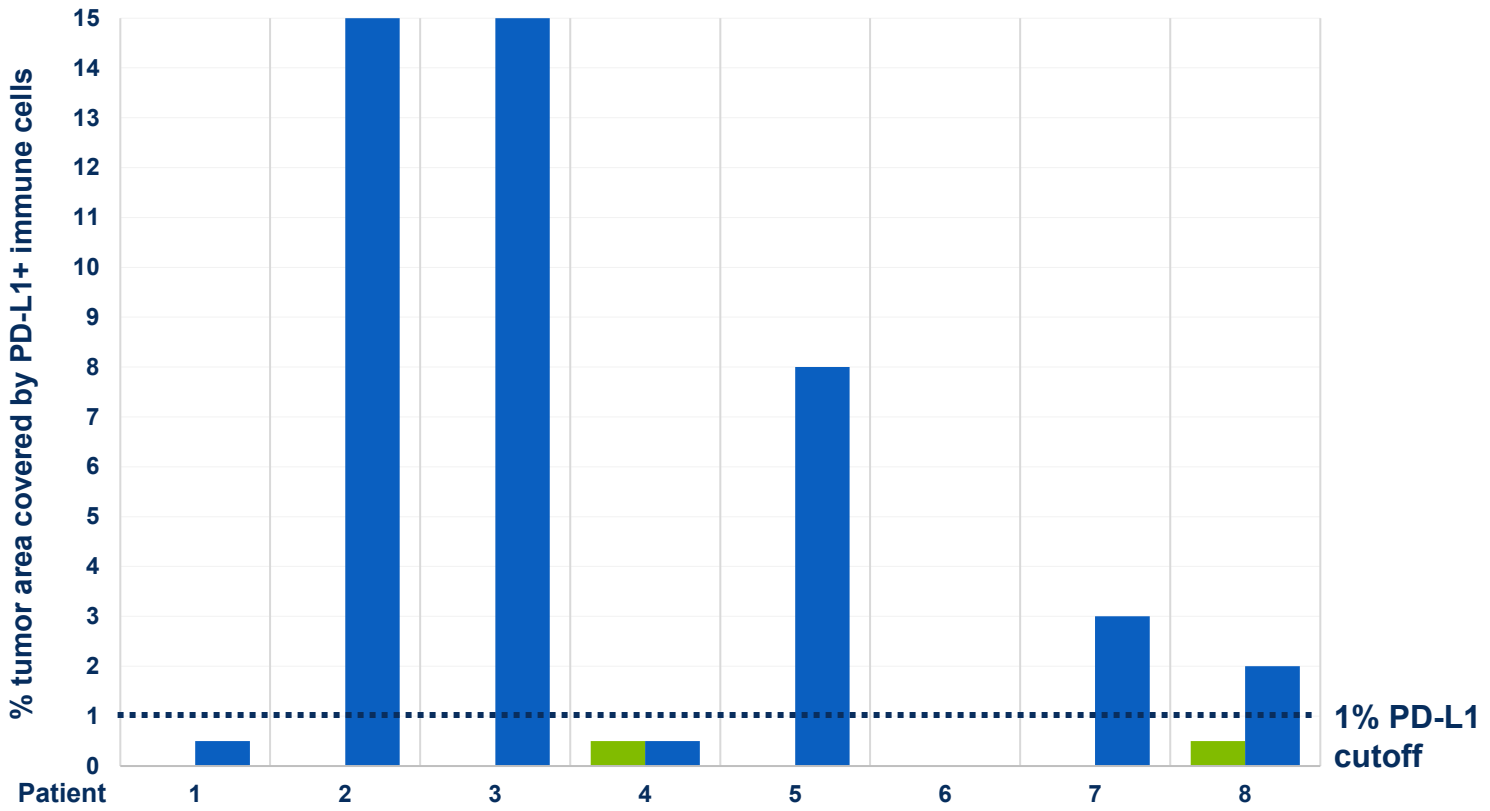
Soliman H, et al. SABCS 2021

Infinity PHARMACEUTICALS

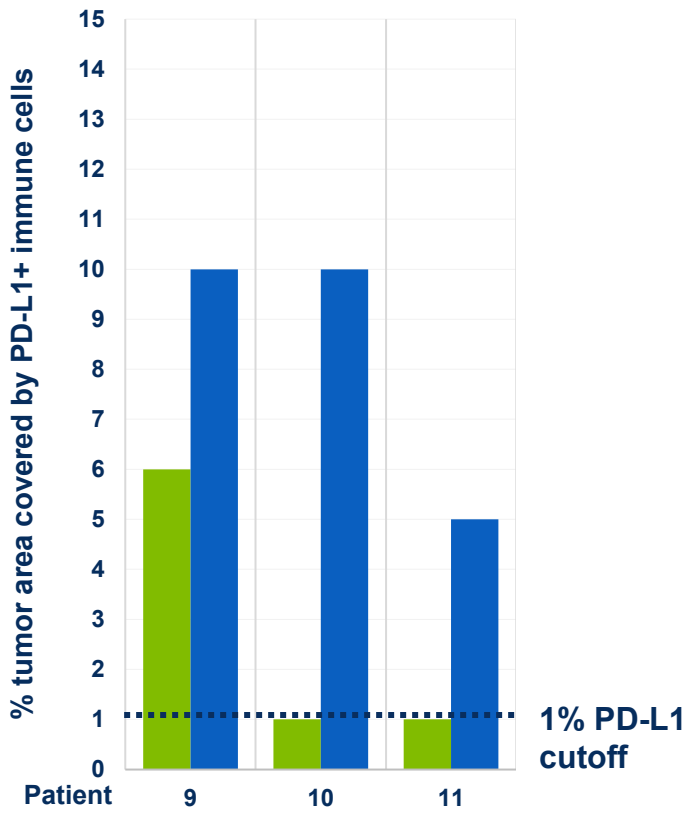
PD-L1 Expression Increased Following Eganelisib Treatment

MARIO 3
MACROPHAGE REPROGRAMMING IN IMMUNO-ONCOLOGY

PD-L1(-) at Baseline



PD-L1(+) at Baseline



11 Paired Tumor Biopsies

Baseline

2 months

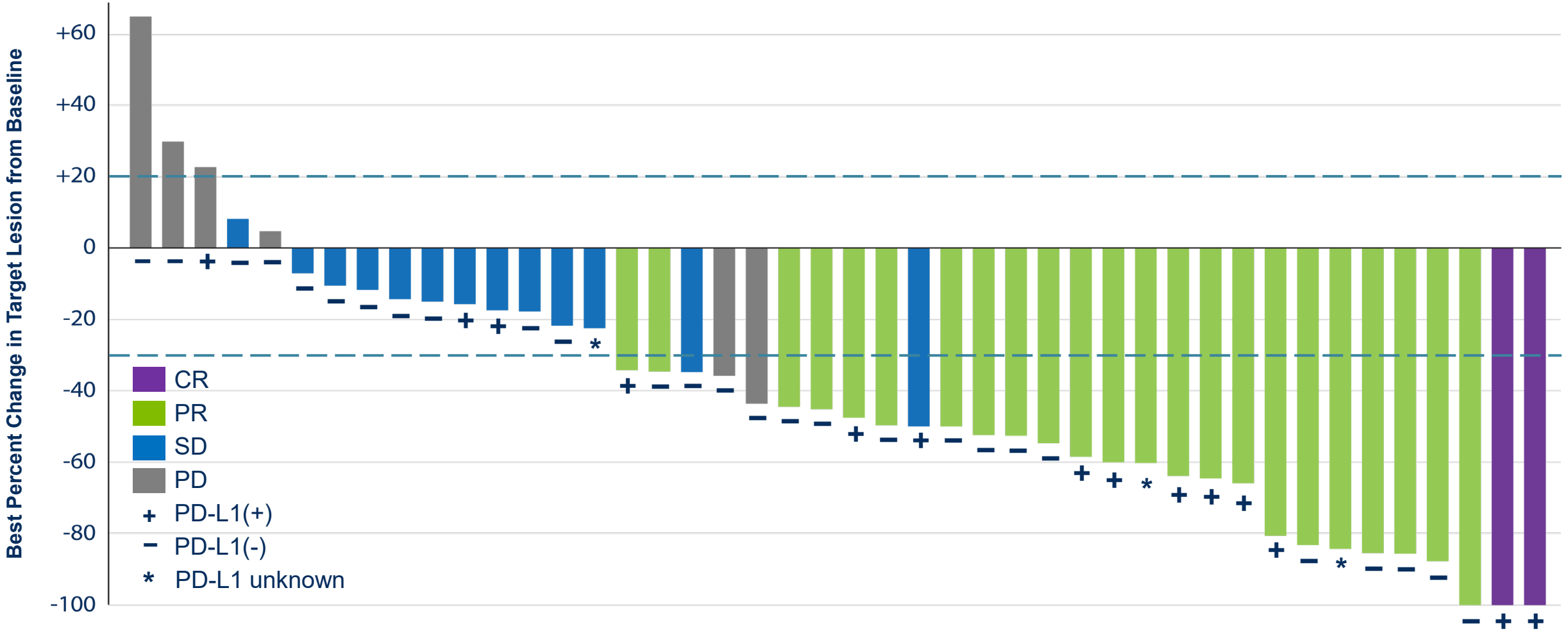
Soliman H, et al. SABCS 2021

Infinity PHARMACEUTICALS

88.6% of Evaluable Patients Achieved Tumor Reduction

MARIO 3
MACROPHAGE REPROGRAMMING IN IMMUNO-ONCOLOGY

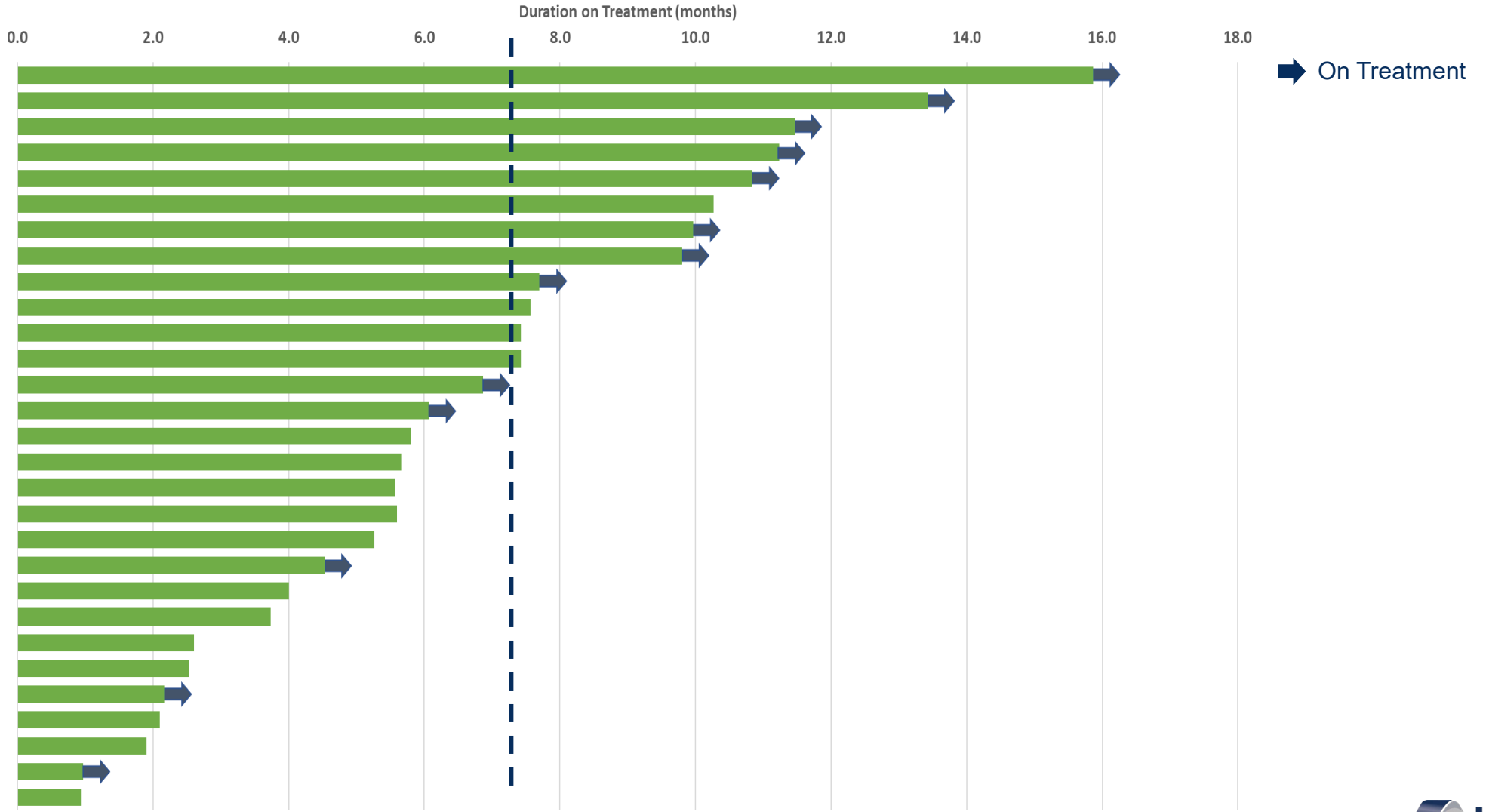
Tumor Reduction in 92.8% of PD-L1(+) and 85.2% of PD-L1(-) Patients



Immune Cell Score ≥ 1% cutoff for PD-L1(+)
Soliman H, et al. SABCS 2021

Infinity PHARMACEUTICALS

Durable, Ongoing Benefit in PD-L1(-) Patients



Soliman H, et al. SABCS 2021

mPFS Longer than IMpassion130 PD-L1(-) and PD-L1(+) Benchmarks

MARIO-3 MACROPHAGE REPROGRAMMING IN IMMUNO-ONCOLOGY

Median Duration of Follow Up of 9.9 Months

Median PFS in Patients With Both PD-L1(-) and PD-L1(+) Tumors		
	PD-L1(-)	PD-L1(+)
MARIO-3 (eganelisib + Tecentriq + Abraxane)	7.3 months (N=27)	11.0 months (N=14)
Benchmark IMpassion130[1] (Tecentriq + Abraxane)	5.6 months (N=266)	7.5 months (N=185)

1. Schmid P et al. *Lancet*. 2020; Soliman H, et al. SABCS 2021

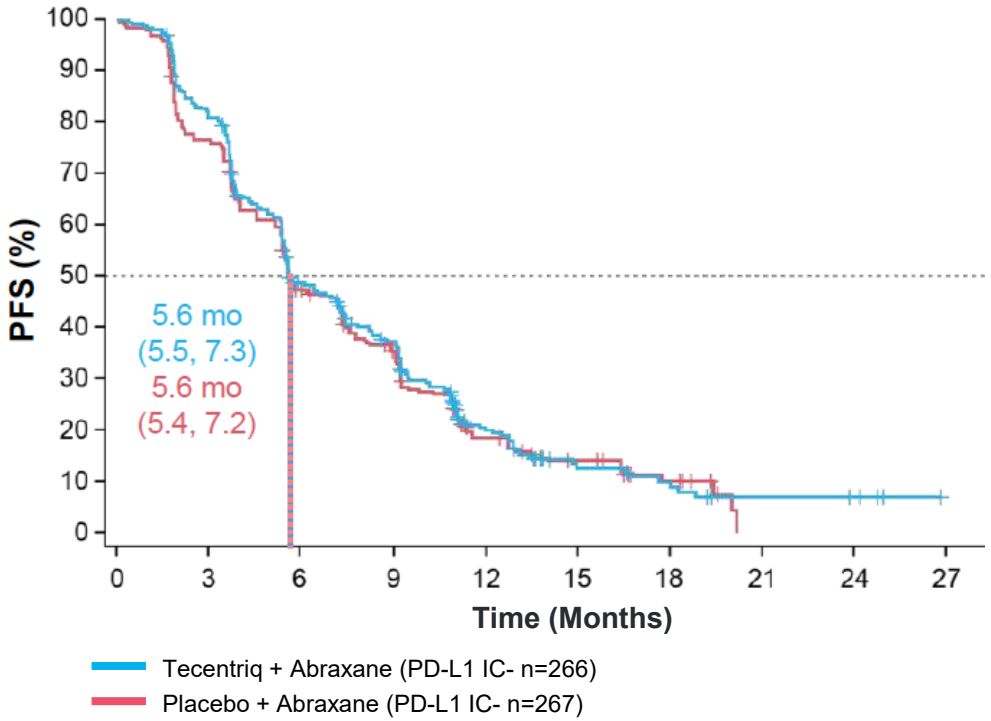
Infinity PHARMACEUTICALS

Positive Signal of PFS Durability in PD-L1(-) Patients vs SOC Chemo

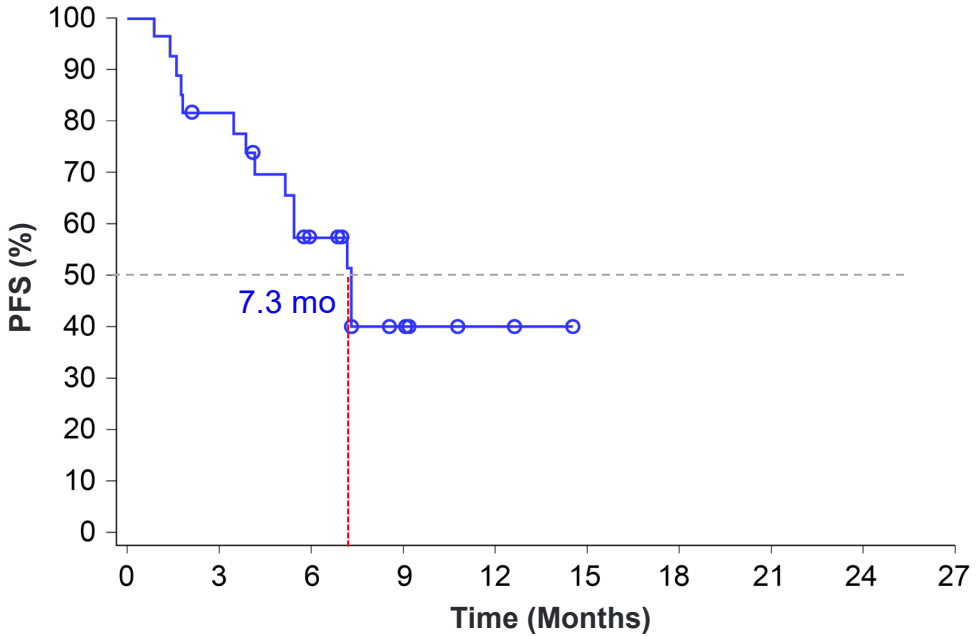
MARIO 3
MACROPHAGE REPROGRAMMING IN IMMUNO-ONCOLOGY

Potential to Address Need for Improvement Over SOC Chemo

Historical IMpassion130 PD-L1(-)*



MARIO-3 PD-L1(-)

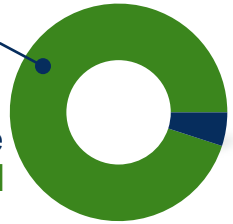


*Emens LA, et al. IMpassion130. SABCS 2018 (program #GS1-04)

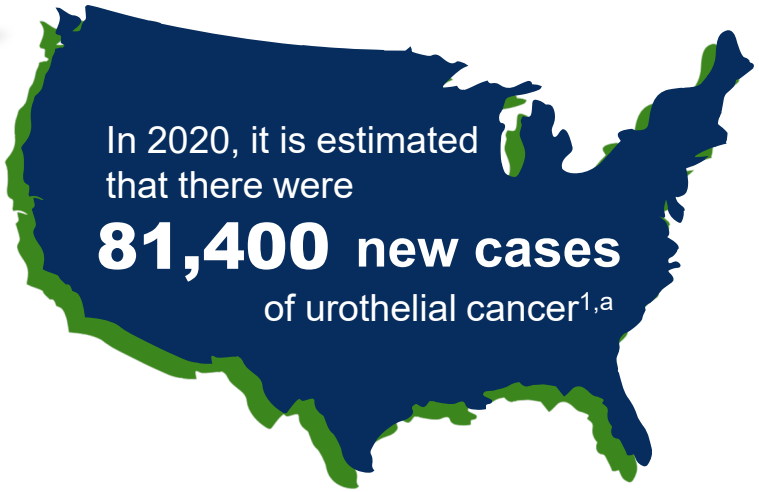
Infinity PHARMACEUTICALS

Significant Unmet Need in Metastatic Urothelial Cancer

UC Is the Most Common Type of Bladder Cancer[1]

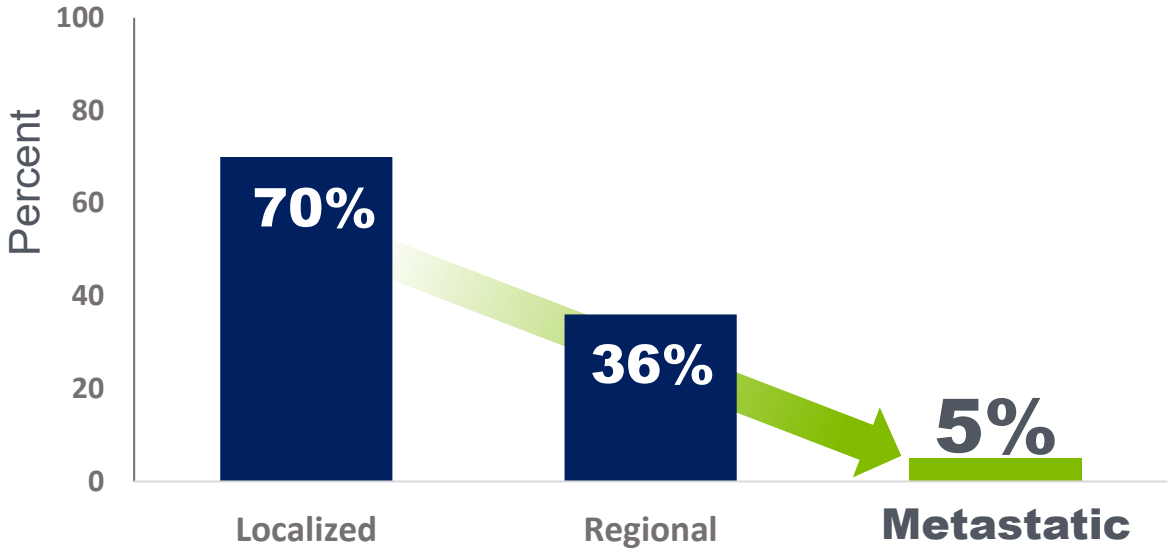


95% of bladder cancers are **urothelial cancer**



Majority of mUCs are PD-L1 negative[3]

5-Year Survival Rate by Stage at Diagnosis of UC[2,*]



Median Overall Survival for 2L mUC Patients with SOC Opdivo		
	PD-L1(-)	ITT
Checkmate 275	6.0 months (n=146, 54%)	8.6 months (n=270)

[a]Estimated cases based on 2013-2017 cases. *5-Year relative survival percent, UC by SEER Summary Stage 2000.
mUC, metastatic urothelial cancer; PD-L1, programmed death-ligand 1; SEER, Surveillance, Epidemiology, and End Results; UC, urothelial cancer.

1. National Cancer Institute. Accessed December 16, 2020. https://seer.cancer.gov/statfacts/html/urinb.html 2. National Cancer Institute. Accessed December 16, 2020. https://www.cancer.gov/types/bladder/patient/bladder-treatment-pdq#Keypoint2 3. Bellmunt J et al. *Ann Oncol.* 2015;26(4):812-817. 4. National Cancer Institute. Accessed July 20, 2021. https://seer.cancer.gov/statfacts/html/urinb.html

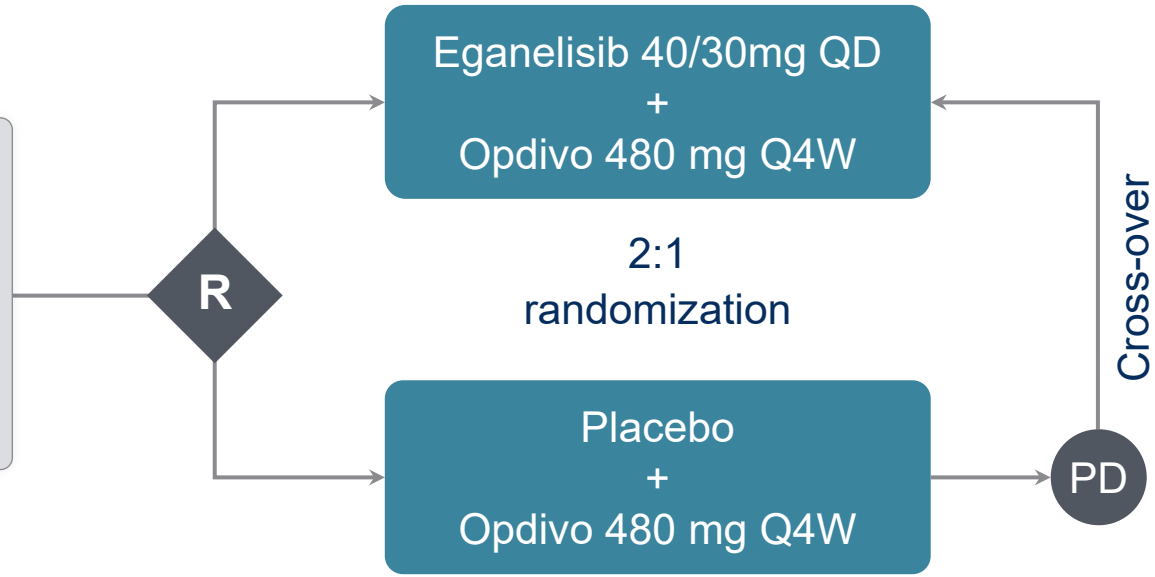
MARIO-275: Addition of Eganelisib to Standard of Care Opdivo in I/O Naïve Urothelial Cancer Patients, Including PD-L1(-) Patients

MARIO 275
MACROPHAGE REPROGRAMMING IN IMMUNO-ONCOLOGY

FDA Fast-Track Designation

Advanced Platinum Refractory 2nd Line Urothelial Cancer Patients

- Inclusion/exclusion criteria per BMS Checkmate 275 study

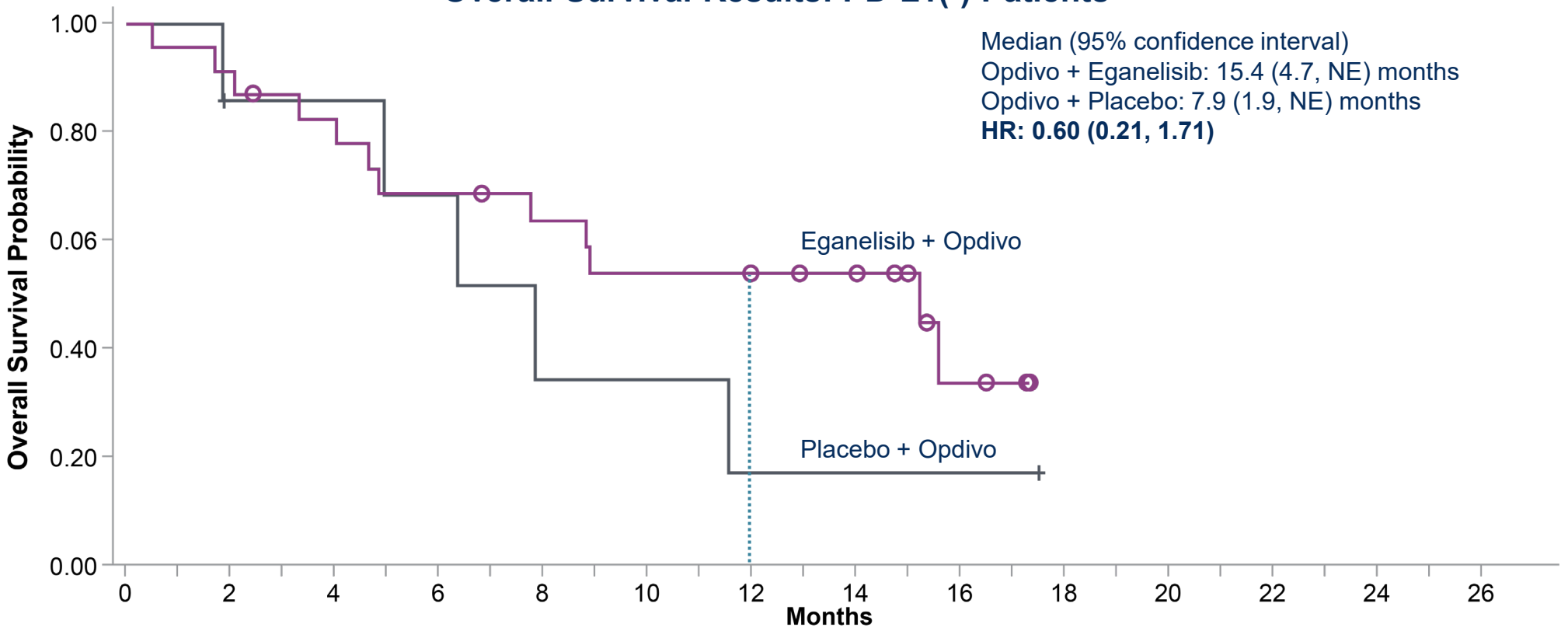


DOR, duration of response; MDSC, myeloid-derived suppressor cells; ORR, overall response rate; OS, overall survival; PD-L1, programmed death-ligand 1; PFS, progression-free survival; Q4W, once every four weeks; QD, once a day.
* PD-L1 expression measured in baseline/archival tumor biopsies with Dako PD-L1 immunohistochemical 28-8 pharmDx kit approved for nivolumab in UC, except 2 biopsies tested with 22C3 PD-L1 antibody prior to study (Tumor Proportion Score < 1% cutoff for PD-L1 (-)); Findings presented include data up to June 26, 2021

mOS of PD-L1(-) Pts on Combo Arm: 15.4 mos vs 7.9 mos on Control HR of 0.60 Indicating 40% Reduction of Risk of Death

MARIO 275
MACROPHAGE REPROGRAMMING IN IMMUNO-ONCOLOGY

Overall Survival Results: PD-L1(-) Patients



Eganelisib+Opdivo (N=23)	23	21	18	15	13	11	10	9	3	0		
Placebo+Opdivo (N=7)	7	5	5	4	2	2	1	1	1	0		

One Year OS Landmark:
54% on Combo versus
17% on Opdivo

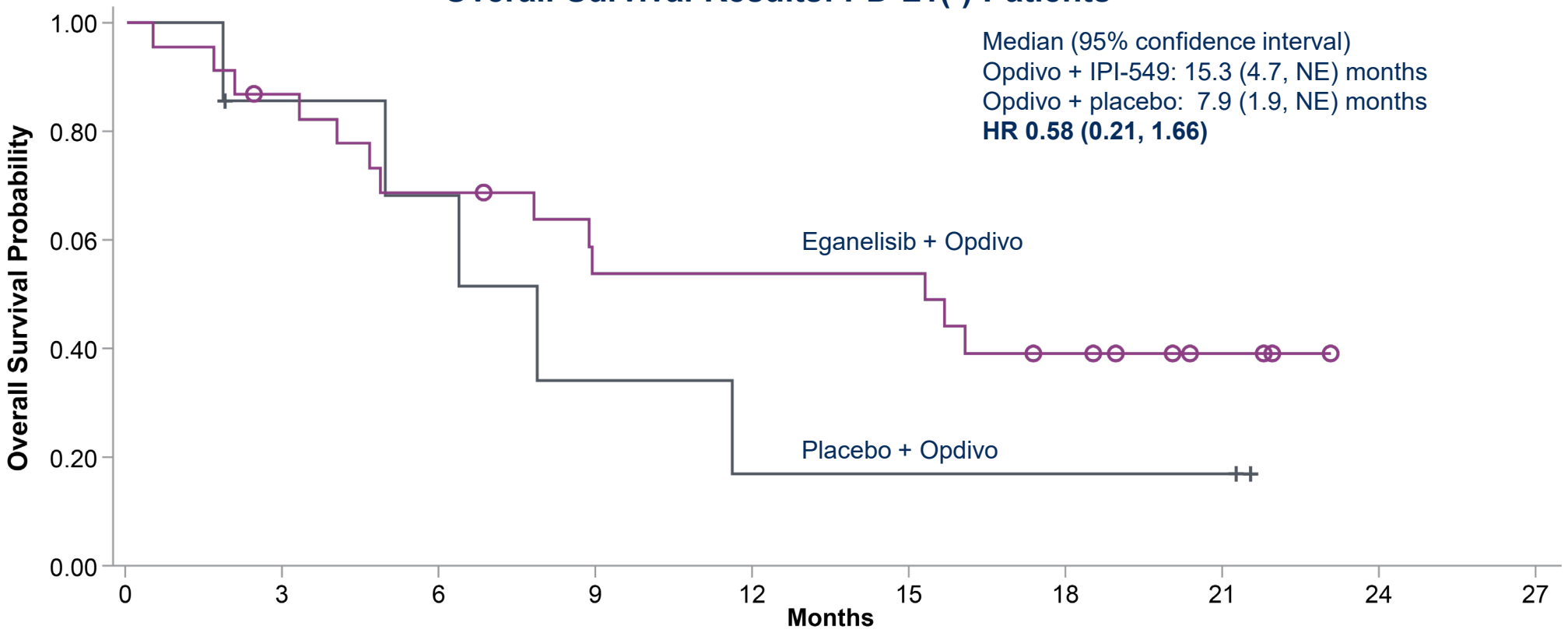
Censoring based on last available clinical visit; Tumor Proportion Score < 1% cutoff for PD-L1 (-)
Data Snapshot: 26 June 2021

Infinity PHARMACEUTICALS

mOS of PD-L1(-) Pts on Combo Arm: 15.3 mos vs 7.9 mos on Control HR of 0.58 Indicating 42% Reduction of Risk of Death

MARIO 275
MACROPHAGE REPROGRAMMING IN IMMUNO-ONCOLOGY

Overall Survival Results: PD-L1(-) Patients



Eganelisib+Opdivo (N=23)	23	19	15	11	11	11	7	3	0	0
Placebo + Opdivo (N=7)	7	5	4	2	1	1	1	1	0	0

OS (mITT): censoring based on last available clinical visit (Figures 14.1.1.3.5, Table 14.2.5.4)

Data Snapshot 30 November 2021

Infinity PHARMACEUTICALS

2022 Milestones: Two Study Starts and Four Data Readouts

Initiation of New Studies

1. MARIO-4 registration enabling study in frontline mTNBC by end of 2022
2. MARIO-P Platform Clinical Program in 3Q 2022

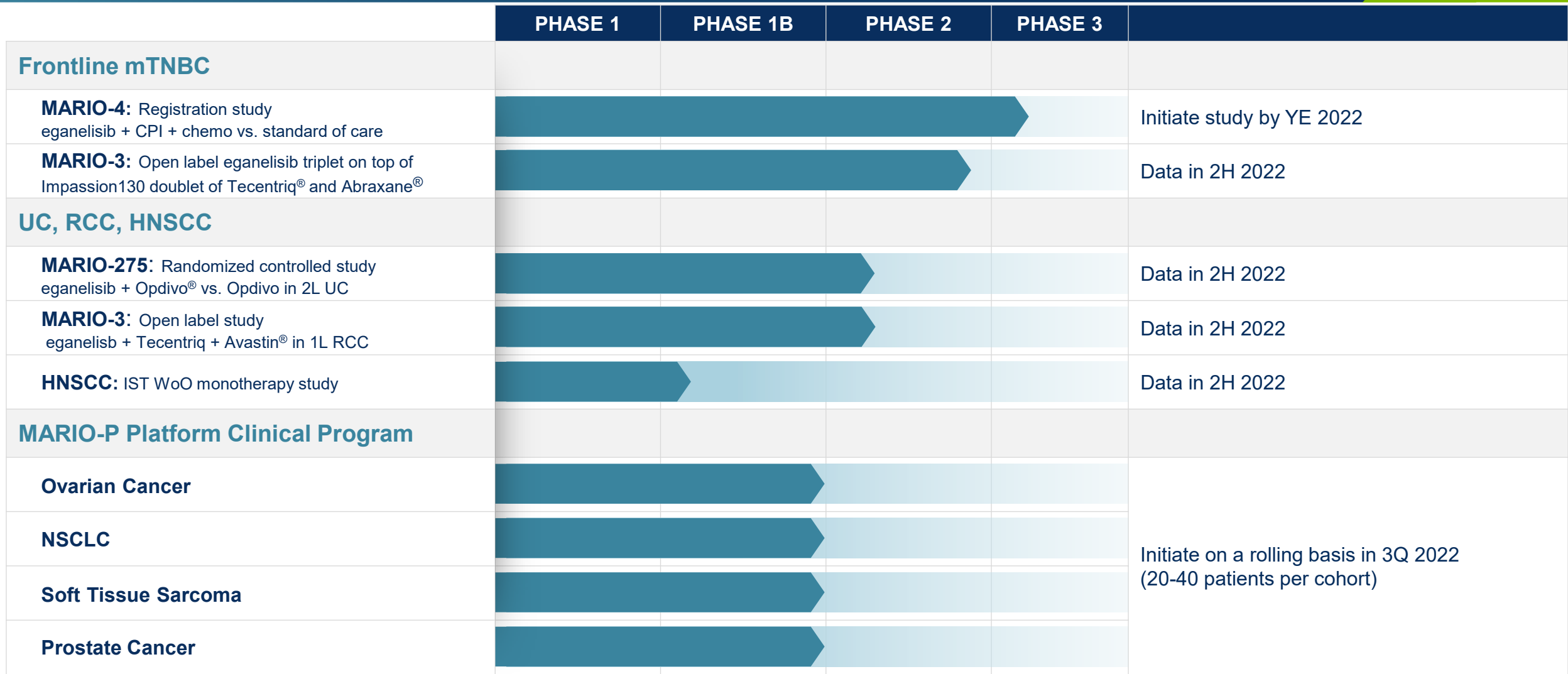
2022 new study starts and data to inform additional registration studies in 2023 and beyond

Data in 2H 2022

- MARIO-3 TNBC
- MARIO-275 UC
- MARIO-3 RCC
- HNSCC Window of Opportunity IST

Advancing and Expanding MARIO Clinical Development Program
MAcrophage Reprogramming in Immuno-Oncology

MARIO
MACROPHAGE REPROGRAMMING IN IMMUNO-ONCOLOGY



Triple Negative Breast Cancer (TNBC)
Urothelial Cancer (UC)
Renal Cell Carcinoma (RCC)
Head and Neck Squamous Cell Cancer (HNSCC)
Non Small Cell Lung Cancer (NSCLC)

Infinity™ PHARMACEUTICALS

2022 Financial Guidance

- **Cash at March 31, 2022 (unaudited): $67.1 million**
- **2022 Net Loss: $45 million to $55 million**
- **2022 Year-End Cash: $25 million to $35 million**

Infinity's financial guidance does not include potential additional funding or business development activities.

Eganelisib
Addressing Significant Patient Need With Next-Generation Immunotherapies

H.C. Wainwright Global Investment Conference
May 23-25, 2022

Infinity™ PHARMACEUTICALS