TESARO®

Wells Fargo Healthcare Conference
September 6, 2018

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To the extent that statements contained in this presentation are not descriptions of historical facts regarding TESARO, they are forward-looking statements reflecting the current beliefs and expectations of management made pursuant to the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. Words such as "may," "will," "expect," "anticipate," "estimate," "intend," and similar expressions (as well as other words or expressions referencing future events, conditions, or circumstances) are intended to identify forward-looking statements. Examples of forward-looking statements contained in this presentation include, among others, statements regarding our financial guidance (including projected full year and Q3 2018 revenues, interest expense and cash levels) and ZEJULA's profitability outlook, statements regarding the potential size of the current and future market opportunities for our various products and product candidates and our various assumptions related thereto, our lung cancer strategy, the design and expected timing of initiation, completion, and data readouts from our various ongoing and planned niraparib, TSR-042, TSR-033, TSR-022, and combination studies, the expected timing of various regulatory filings, and potential indications for our products and product candidates. Forward-looking statements in this presentation involve substantial risks and uncertainties that could cause our future results, performance, or achievements to differ significantly from those expressed or implied by the forward-looking statements. Such risks and uncertainties include, among others, risks related to competition, the uncertainties inherent in the execution and completion of clinical trials, uncertainties surrounding the timing of availability of data from clinical trials, uncertainties surrounding our ongoing discussions with and potential actions by regulatory authorities, risks related to manufacturing and supply, risks related to intellectual property, uncertainties related to our projected expenses, and other matters that could affect the availability or commercial potential of our products and product candidates. TESARO undertakes no obligation to update or revise any forward-looking statements. For a further description of the risks and uncertainties that could cause actual results to differ from those expressed in these forward-looking statements, as well as risks relating to the business of the Company in general, see TESARO's Annual Report on Form 10-K for the year ended December 31, 2017 and Quarterly Report on Form 10-Q for the quarter ended June 30, 2018.

Building a Leading Oncology Company

Robust Oncology Portfolio Led by ZEJULA

ZEJULA®
PARP Inhibitor

Approved in U.S. and Europe

Development programs ongoing with monotherapy and combinations in **gynecologic** and **lung** cancers

TSR-042
anti-PD-1

Registration trial ongoing; BLA on track for 2H 2019

Enables strategic development and commercial flexibility in **combination** with **ZEJULA**, **TSR-022**, **TSR-033**

TSR-022
anti-TIM-3

TSR-042 combination trial ongoing

Anti-PD-1 experienced NSCLC patients

TSR-033
anti-LAG-3

TSR-042 combination trial ongoing

Multiple tumor types

TSR-075
anti-PD-1/LAG-3 bispecific

IND-enabling studies

Multiple tumor types

NSCLC: Non-small Cell Lung Cancer

Development Strategy Focused on Gynecologic and Lung Cancers

Gynecologic Cancers: Ovarian, Endometrial

Ovarian

- Expand current ZEJULA label to treatment setting
- Move into front line

Endometrial

- No approved drug in 2L endometrial
- Current agents provide 10-14% ORR

Lung Cancer

Lung cancer

- Despite the availability of anti-PD-1 therapy, a large number of patients do not respond in the front-line setting
- anti-PD-1 monotherapy is now standard of care in patients with TPS >50%
- 2nd/3rd line PD-1 experienced market opportunity is growing rapidly

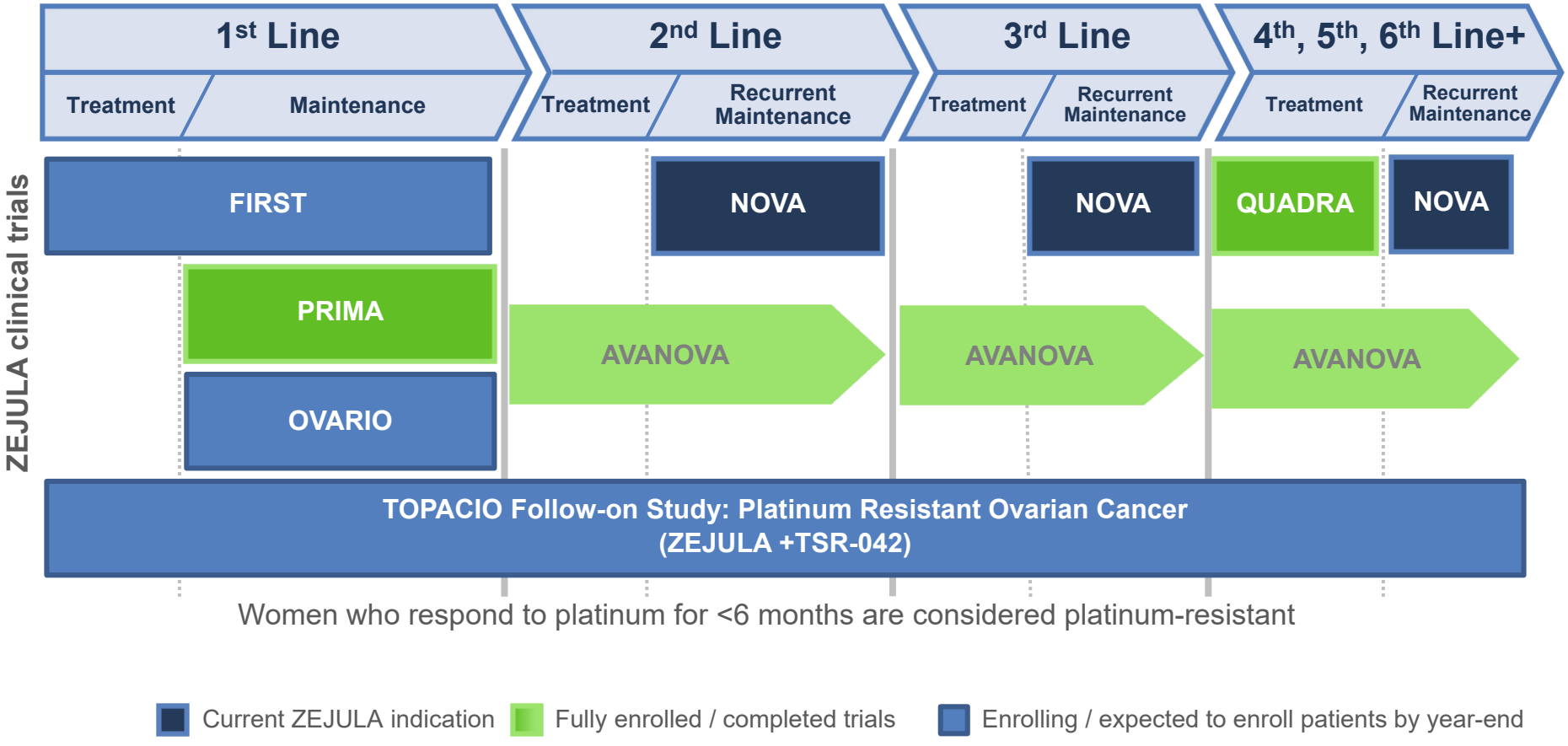
ZEJULA (PARP)

TSR-042 (PD-1)

ZEJULA and TSR-042 Partnerships & Collaborations (Prostate, Bladder, Breast, Pancreatic)

New Indications Would Address Every Stage of a Women's Journey with Ovarian Cancer

OVARIAN CANCER PATIENT JOURNEY



TSR-042: anti-PD-1 antibody; AVANOVA trial in collaboration with ENGOT

TSR-042 Registration Strategies Focuses on Endometrial Cancers

	Endometrial Cancer	MSI-H Cancers
Accelerated Approval (U.S.) Population	**2L/3L Endometrial Cancer** *(GARNET)*	**MSI-H Endometrial, MSI-H Colorectal and other MSI-H Tumors** *(GARNET)*
	• Includes MSS (70 - 75%) and MSI-H (25 - 30%) endometrial cancer • ~7,600 patients treated in U.S • ~7,600 patients treated in EU	• 2L/3L MSI-H Endometrial[2] • 3L/4L MSI-H Colorectal & Other MSI-H Tumors
Full Approval Populations	**Phase 3 Randomized 1L Endometrial Cancer**	**MSI-H Endometrial, MSI-H Colorectal and other MSI-H Tumors**
	• Includes MSS and MSI-H patients • ~11,000 patients treated in U.S. • ~11,000 patients treated in EU	• 2L/3L MSI-H Endometrial[2] • 3L/4L MSI-H Colorectal & Other MSI-H Tumors

U.S. Market Opportunity:[1] $500M (2L/3L) to $1.5B (1L)

Endometrial Cancer is an Area of High Unmet Need with No FDA Approved Therapies in 2L Endometrial

[1] Based on market pricing of FDA approved anti-PD-1 therapies; [2] MSI-H Endometrial accounts for ~50% of MSI-H tumors
Kantar Health estimated 2018 epidemiology numbers MSI-H: microsatellite instability-high

TSR-042 is the Foundation of our Lung Strategy

PARP	PD-1	TIM-3
Niraparib	**TSR-042**	**TSR-022**
ZEJULA+ TSR-042 in 1L (JASPER) Data 1H 19		
	GARNET: 2L NSCLC n=65 Data Q4 18	
	P2 TSR-042 vs. SOC in 1L NSCLC FPI Q1 19	
	2/3L TSR-042 + TSR-022 in PD-1 experienced (AMBER) Data Q4 18 & 1H 19	

Data to Guide Potential Registration Opportunities

>450 patients, including >120 lung cancer patients have been treated with TSR-042

NSCLC Treatment Landscape

Patients Treated Annually[1]	TPS <49% 2/3 of 1L patients	TPS ≥50% ~1/3 of 1L patients
First Line 110,000 (US) 135,000 (EU5)	Platinum Containing Chemo Regimen	PD-1 + Platinum Containing Chemo Regimen PD-1 Monotherapy
2nd / 3rd Line 115,000 (US) 110,000 (EU5)	PD-1 Monotherapy	Platinum Containing Chemo Regimen
	Single-agent Chemo (e.g. docetaxel)	

PD-1 Experienced Efficacy Benchmarks	ORR
Single-agent Chemo (docetaxel)[3]	~10%
Entinostat (HDACi) + pembrolizumab[4]	11% (6/57)
Durvalumab + tremelimumab[5]	5% (4/78)
Sitravatinib (TKI) + nivolumab[6]	26% (6/23)

	PD-1 Monotherapy		PD-1 + Chemo
First-line TPS ≥50%	KEYNOTE 024 (n=305)	KEYNOTE 042 (n=1,274)	KEYNOTE 189 (n=616)
ORR	45%	39.5%	61.4%
mPFS	10.3 months	7.1 months	9.4 months

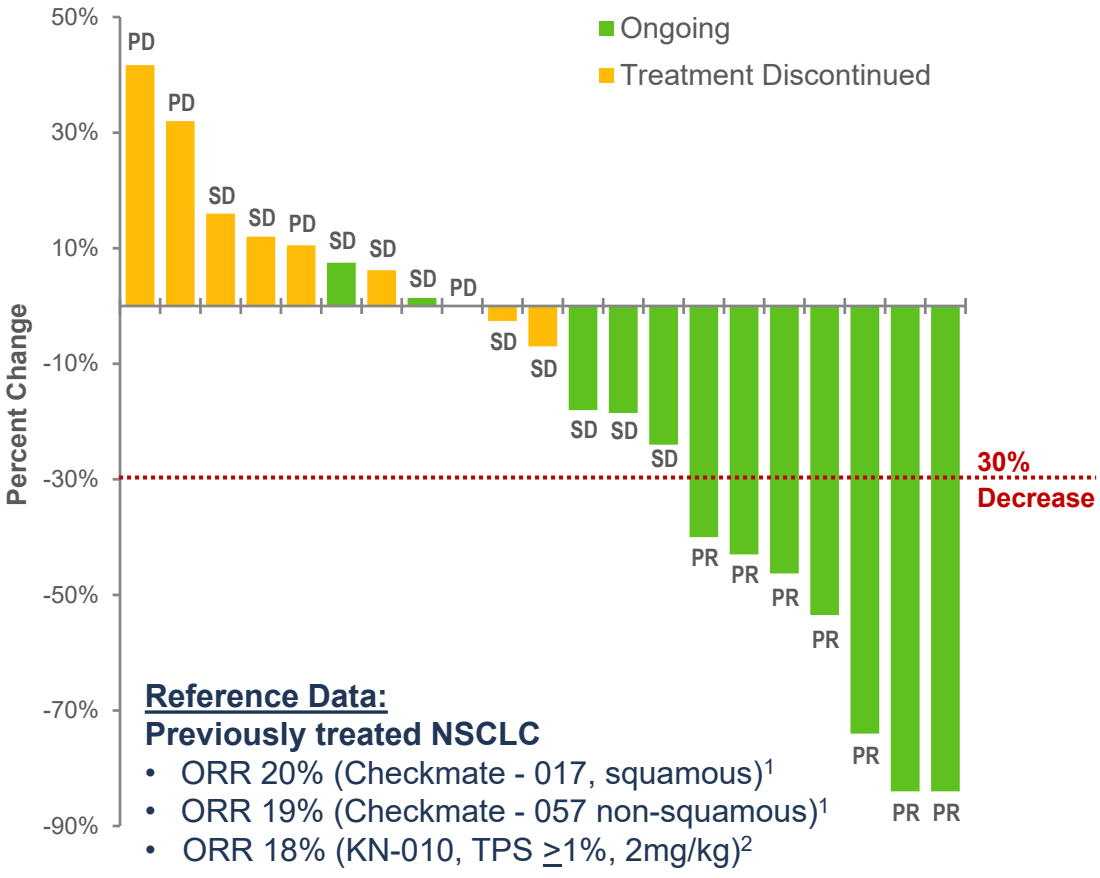
- Market research with KOLs and community oncologists support physician preference for PD-1 monotherapy in majority of first-line TPS ≥50% patients[2]

mPFS: median PFS; NSCLC: Non-small cell lung cancer

[1] Stage IIIb and IV NSCLC excluding ALK/EGFRm patients, Kantar Health estimated 2018 epidemiology numbers; [2] IPSOS Oncology Monitor NSCLC, primary market research studies, external market research; [3] docetaxel PI studies TA317 and TAX320; [4] Gadhi et al., ASCO 2018; [5] Garon et al., ASCO 2018; [6] Mirati corp. presentation, includes unconfirmed responses; KEYNOTE 024, 042: squamous + non-squamous; KEYNOTE 189: non-squamous only

GARNET Data: 2/3L Lung Results by TPS Status

Best Percent Change in Sum of Target Lesion Dimensions from Baseline (AACR 2018)



Reference Data:

Previously treated NSCLC

- ORR 20% (Checkmate - 017, squamous)[1]
- ORR 19% (Checkmate - 057 non-squamous)[1]
- ORR 18% (KN-010, TPS ≥1%, 2mg/kg)[2]

2L+ NSCLC GARNET TSR-042	TPS 0	TPS 1–49%	TPS ≥50% and NA
N	2/7	2/8	3/6
ORR[1,2] (%)	29%	25%	50%

2L+ NSCLC Keynote -010 Pembrolizumab	TPS 0	TPS 1–49%	TPS ≥50%
ORR[3] (%)	NA	~9–16%	~23–34%

NSCLC irORR of ~29%[2,3] is similar ORR of approved anti-PD-1s; but is largely from a PD-L1 TPS < 50% population, demonstrating response rate not driven by PD-L1 status

Data as of February 22, 2018

[1] Excludes patients that were not evaluable for tumor response

[2] Includes both confirmed and unconfirmed responses

[3] Patients who had at least 1 tumor assessment or did not have any tumor assessment but discontinued treatment

NA = TPS status not available

[1]Opdivo USPI [2]Keytruda USPI [3]ASCO 2016; Abs # 9015

PD = progressive disease; **PR** = partial response; **SD** = stable disease; **MSI-H EC** = microsatellite instability-high endometrial cancer; **R2PD** = recommended phase 2 dose.

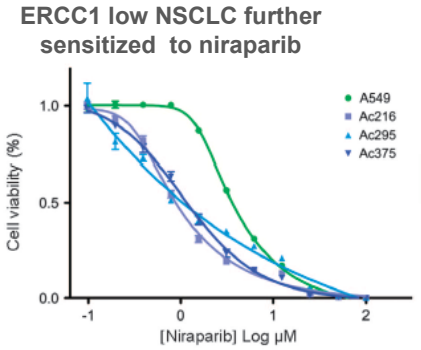
ZEJULA Rationale in Lung Cancer

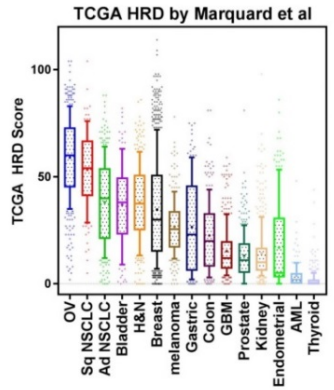
- Effective in platinum responsive ovarian cancer (OC); lung cancer is a platinum responsive disease
- Both ovarian and lung cancers have high rates of HRD that infer platinum and PARPi sensitivity[1]
- Demonstrated activity in preclinical lung cancer models and 2 of 2 NSCLC patients in Phase 1 had tumor regression, even at low dose of niraparib (40mg, 316d; 110mg 175d)[2]
- Demonstrated positive effect on immune system and combination activity with anti-PD-1 in non-clinical models shows activity
- TOPACIO data indicative of potential positive clinical benefit from PARP + anti-PD-1 combination

Phase 2 JASPER Trial 1L NSCLC
Goal: Evaluate Safety and Efficacy of Niraparib + PD-1

PD-L1 TPS ≥50%
Niraparib + anti-PD-1 mAb

Expression	Frequency
Low BRCA1/2[a]	69%
Low ERCC1[b]	50%
ATM loss[c]	40%
PTEN loss[d]	20-30%
Low MSH2[b]	18-38%
FA methylation[e]	14%





1. Marquard et al , Postel-Vinay Nature Rev Clin Onc 9:144 2012; Postel-Vinay Oncogene 2013 1-11, Lee et al Clin Can Res 13:832; 2. Sandhu et al Lancet Onc 2013; a. Clin Cancer Res 2007 13.832; b. Nat Rev Clin Onc 9:144 2012, c, oncotarget 2016 Villaruz et al, d, Rehman et al Nat Rev Clin Onc 7:718 2010, e , Oncogene 23:1000 2004

Mechanisms by Which ZEJULA Could Potentiate an Immune Response

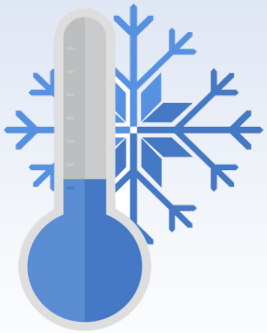
DNA Repair

PARP Inhibition
Niraparib

Immune System Evasion

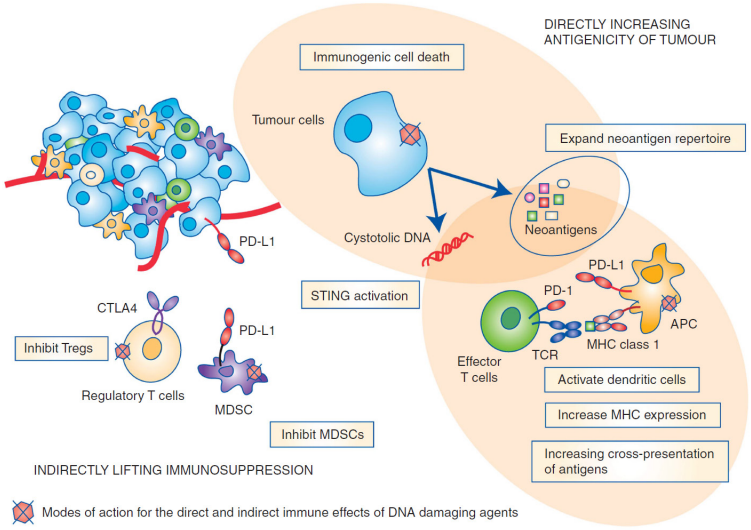
PD-1 Blockade
TSR-042

Immunologically ‘COLD’ Tumor

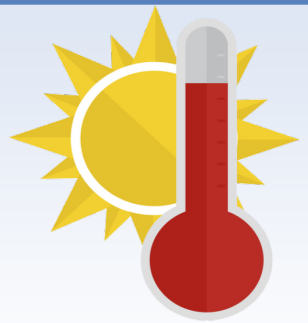


Limited or no presence of activated anti-tumor immune cells in the tumor and a suppressive TME

PARP Inhibition



Immunologically ‘HOT’ Tumor

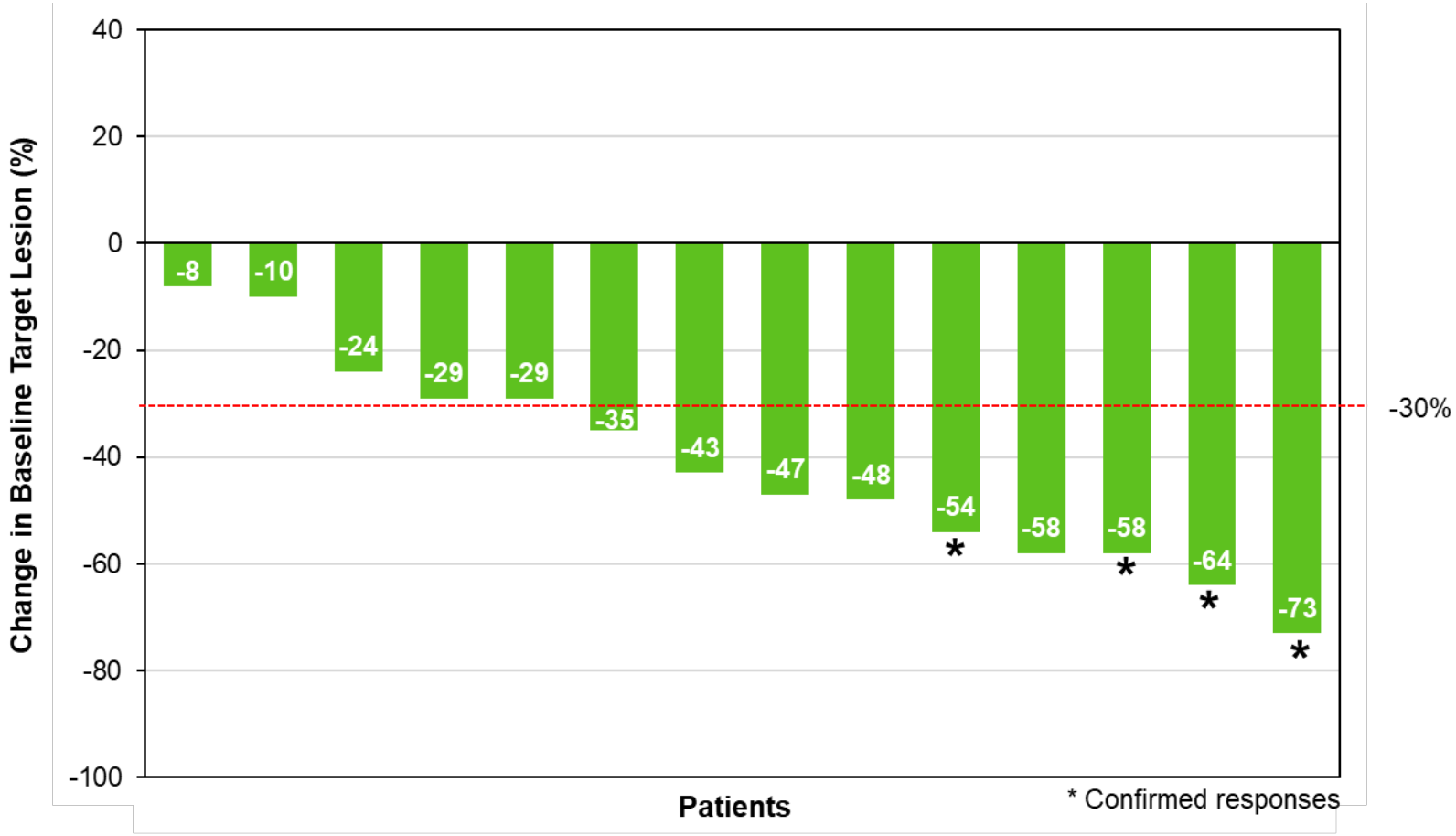


Presence of activated anti-tumor lymphocytes in the tumor and a supportive TME

TME: tumor microenvironment
*Brown, BJC 2018

JASPER Study: Preliminary Stage 1 Data for Niraparib in Combination with Anti-PD-1 in 1L NSCLC in Patients with TPS ≥ 50%

Best Percent Change in Sum of Target Lesion from Baseline

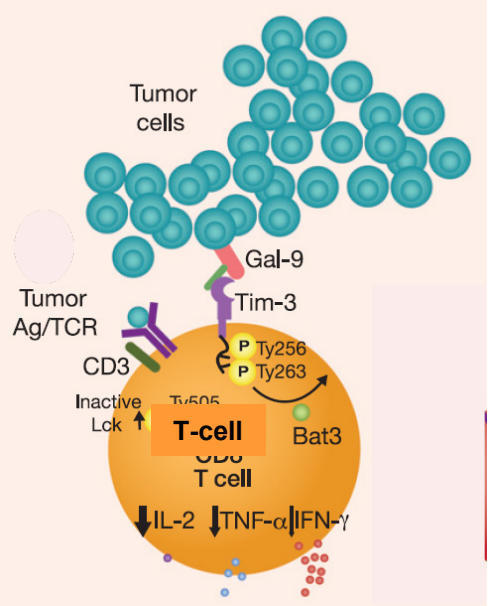


Objective responses by RECIST criteria following treatment with niraparib + pembrolizumab

TIM-3 is a Key Immune Checkpoint and a Next Generation Cancer Immunotherapy Target

TIM-3 biology has been Implicated in T Cell Exhaustion AND Immune Suppression Mediated by Regulatory T Cells and Myeloid Cells

CD4/8+ T Cell Exhaustion

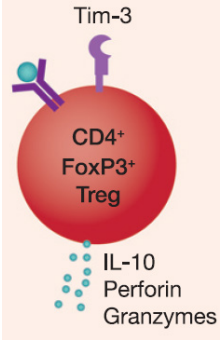


TIM-3 negatively regulates T cell activation and is a marker of exhausted T cells

Myeloid Cells

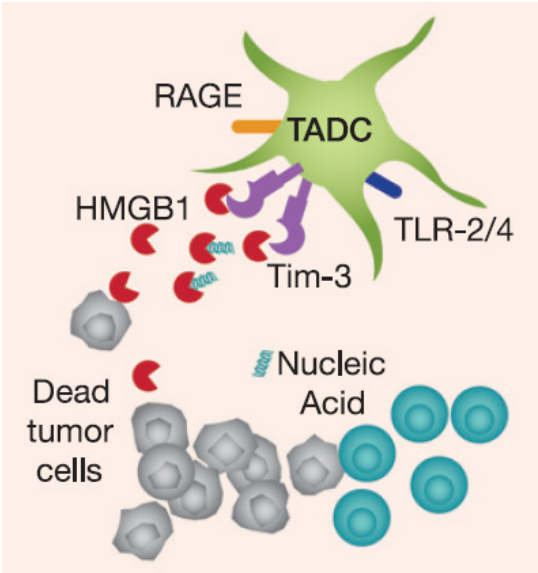
TIM-3 is expressed on macrophages and can also influence MDSC activity in TME*

Regulatory T Cells



TIM-3 is expressed on regulatory T cells and promotes survival and suppressive activity

Dendritic Cells



TIM-3 is expressed on tumor associated dendritic cells and may negatively regulate DC activation

*TME = tumor microenvironment.
Adapted from Anderson, A. Cancer Immunology Research. 2014.

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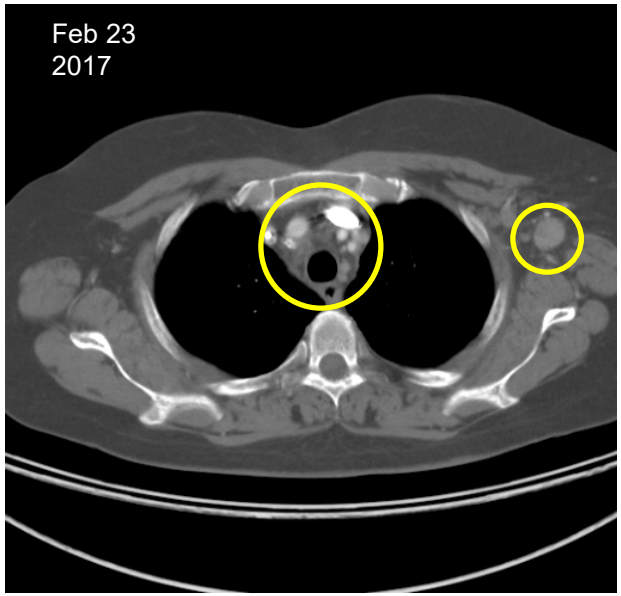
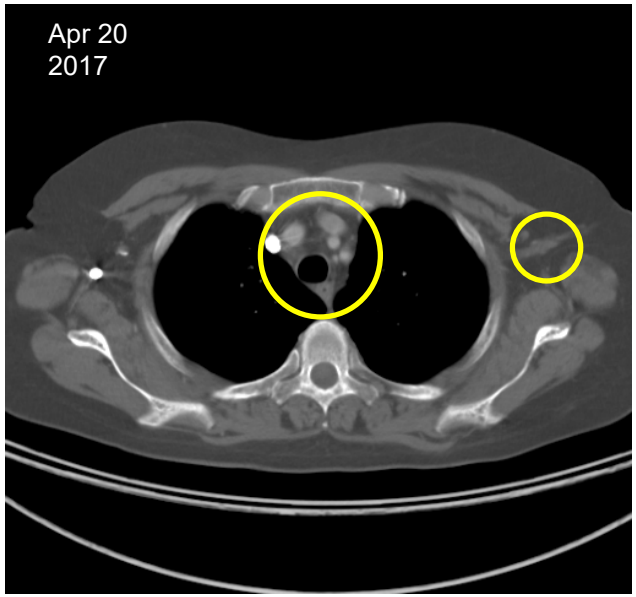
NSCLC Post-PD-1 Patient Case

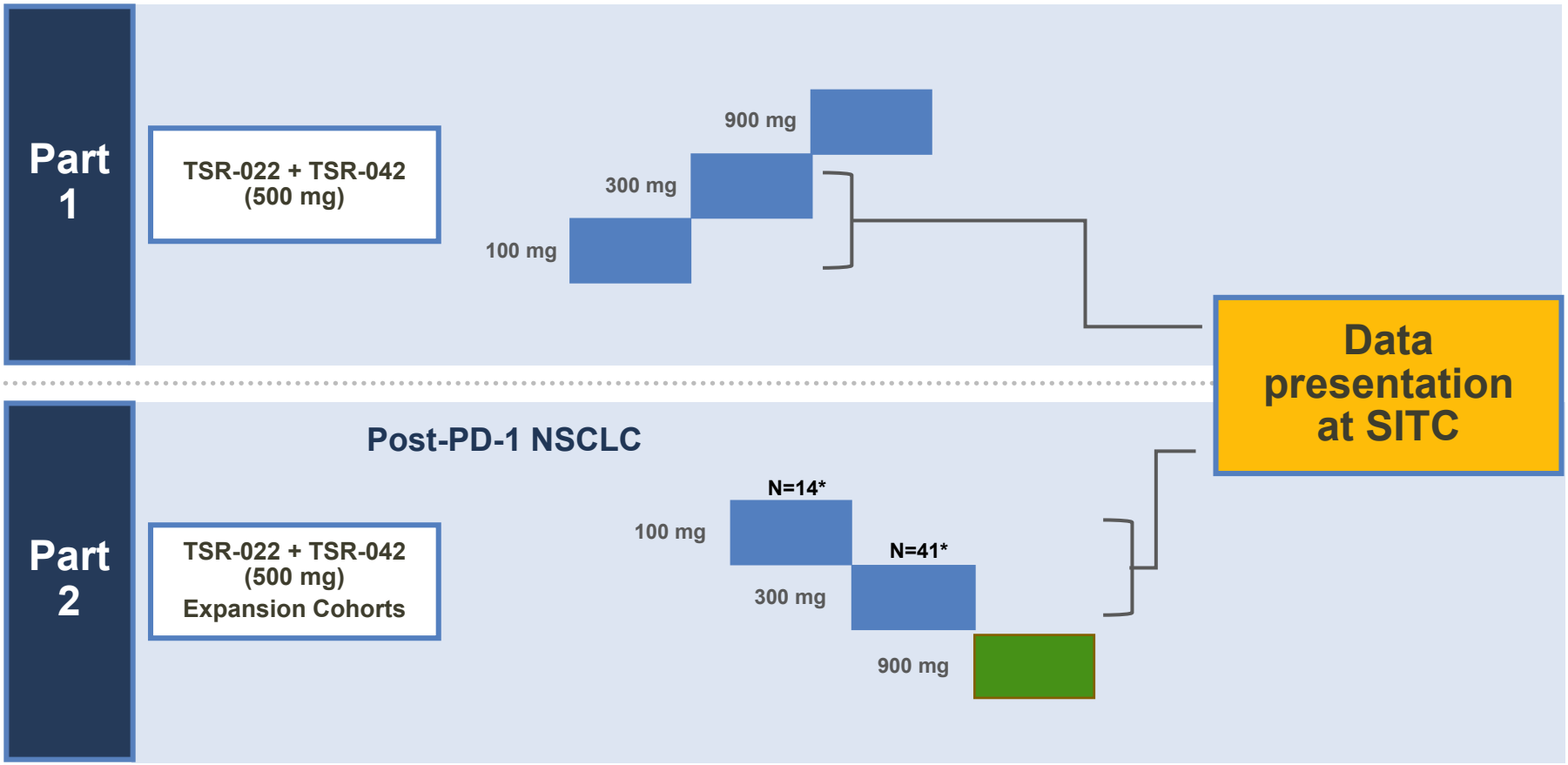
TSR-022 + anti-PD-1 combination dose escalation

- 63 year-old female diagnosed with Stage IV NSCLC
- Prior treatment included 1L chemotherapy, 2L anti-PD-1, 3L Tarceva
- TSR-022 (1 mg/kg) + anti-PD-1 >>> 72% shrinkage





AMBER Study: TSR-022 (anti-TIM-3) + TSR-042 (anti-PD-1) in Post-PD-1 NSCLC Patients



= complete

= enrolling

*enrolled patients

- Patients must have progressed following treatment with an anti-PD(L)-1 antibody as assessed by the investigator
- Patients had median of 5 prior lines of therapy
- Biomarker Analysis: PD-L1, TIM-3, TMB

Lung Cancer Development Programs Rapidly Advancing

Data at SITC Annual Meeting (November)

- NSCLC data from GARNET trial of TSR-042
- TSR-022 plus TSR-042 combination (AMBER) initial data in post-PD-1 NSCLC
- TSR-033 monotherapy (CITRINO)

2019 Key Data Readouts & Milestones

- Initial Phase 2 JASPER lung data with ZEJULA + TSR-042 in 1H 2019
- Initiate Phase 2 registration enabling trial of TSR-042 versus standard of care in first-line NSCLC in early 2019
- GARNET: final data for TSR-042 MSI-H and 2L Endometrial and NSCLC
- AMBER data for TSR-022 + TSR-042
- CITRINO data TSR-033 + TSR-042

TSR-042: anti-PD-1; TSR-022: anti-TIM-3; TSR-033: anti-LAG-3
SITC: Society for the Immunotherapy of Cancers NSCLC: Non-small cell lung cancer

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