

Update on new TACTI-002 Phase II and initial INSIGHT-003 Phase 1 data presented at SITC 2022

Global Webcast Presentation
(ASX: IMM, NASDAQ: IMMP)

Date & Time Thursday, 10 November 2022, at 5 pm U.S. ET
Friday, November 11, at 9 am Australian Eastern Daylight Time (AEDT)

Registration [Webcast Link](#)

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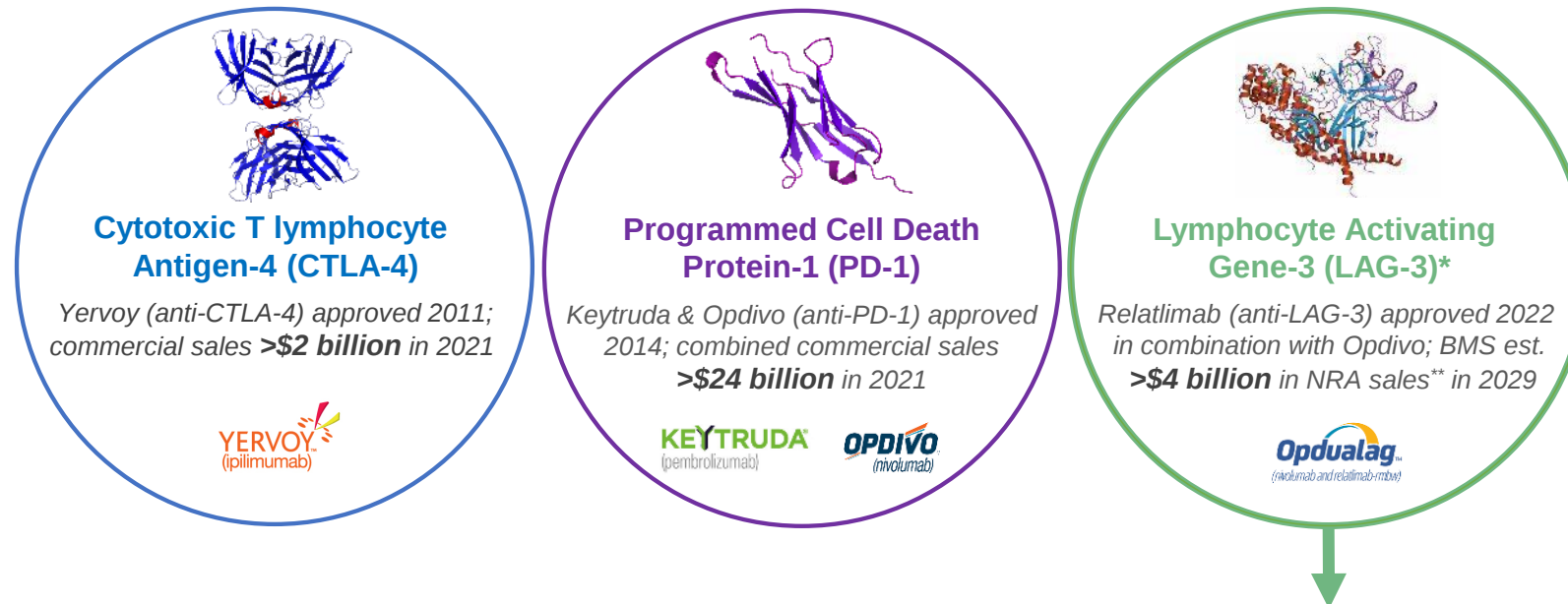
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Eftilagimod Alpha (efti): A First-in-Class Soluble LAG-3 Protein

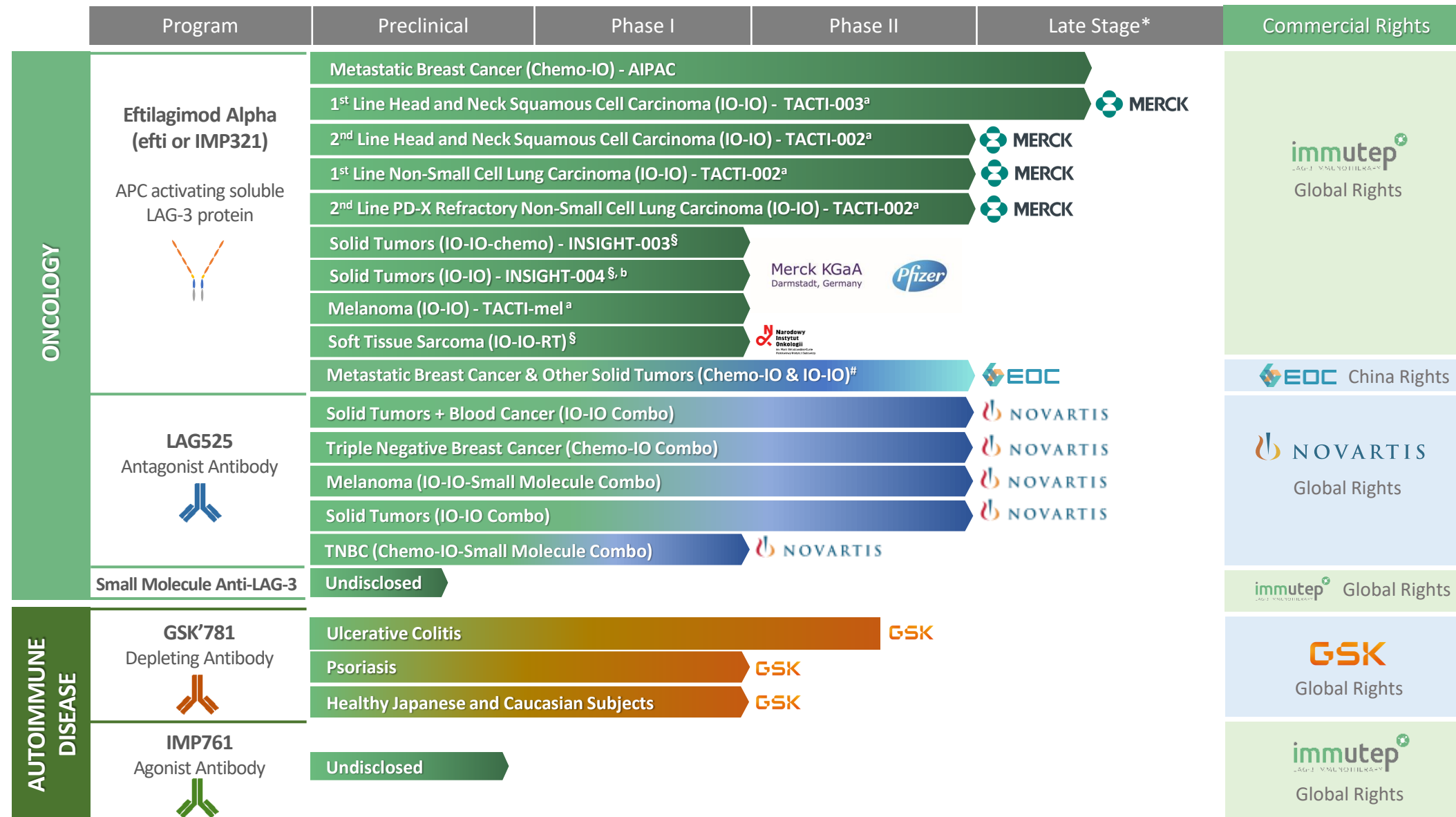
LAG-3: Approved Checkpoint with Unique Characteristics

Immune system's role in controlling cancer has led to regulatory approval of immunotherapies targeting CTLA-4, PD-1, and now LAG-3 checkpoints



LAG-3 is unique in that its inhibition on T cells & activation of dendritic cells engages the adaptive & innate immune systems against cancer offering significant potential to: (1) improve responses to standard-of-care immunotherapy & chemotherapy, (2) limit emergence of resistance, (3) offer chemotherapy-free options in select indications.

Immutep LAG-3 Pipeline

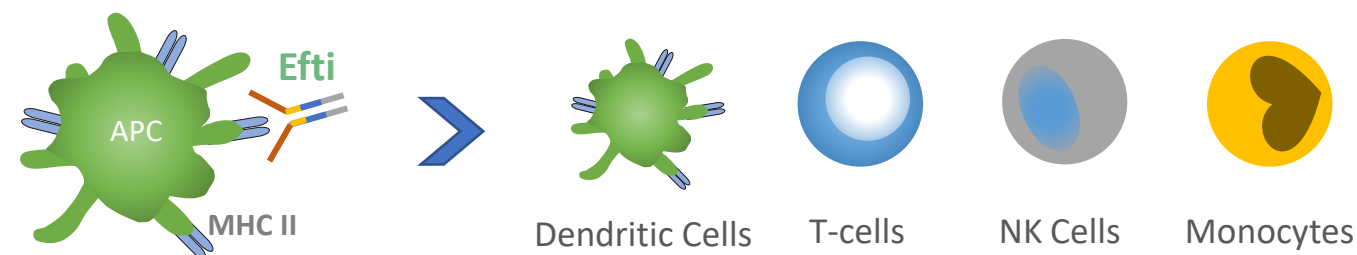
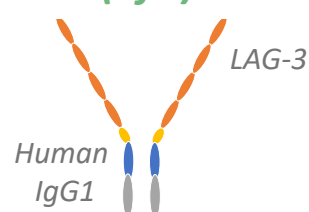


Pushing the Accelerator on the Immune System

APC activation with Efti

Anti-tumor immune cell activation

Eftilagimod alpha (Efti)



Immutep's proprietary soluble LAG-3Ig clinical candidate is a first-in-class antigen-presenting cell (APC) agonist via MHC II that capitalizes on LAG-3's unique characteristics

Efti, a soluble LAG-3 protein, acts as a key to unlock broad activation of the immune system

- Capitalizes on LAG-3's unique ability to drive adaptive & innate immune systems against cancer
- Has high affinity for a subset of MHC II ligand on APCs
- Its activation of APCs drives broad stimulation of multiple anti-tumor cells, as well as a significant increase in IFN- γ and CXCL10 serum biomarkers for systemic TH1 response

Compelling pairing capabilities

- Excellent safety profile drives high suitability for combination approaches
- Synergistic activity & encouraging clinical results with multiple agents including anti-PD-1, anti-PD-L1, and chemotherapy
- Enhances clinical activity of anti-PD-1 across PD-L1 status, including low & negative PD-L1 tumors

TACTI-002 Phase II Trial – Part A:

**Efti + Pembrolizumab Combination in
1st Line Non-Small Cell Lung Cancer (1L NSCLC)**

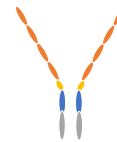
1L NSCLC Epidemiology^{1,2}

- 1.87 million NSCLC diagnoses per annum –
- Most frequent cause of cancer death (18%) –
- 1.3 million patients develop metastatic disease & are eligible to receive anti-PD-(L)1 –

Unmet need in 1L NSCLC as median Overall Survival still <24 months for most patients

Patients with **low PD-L1 status** have poorer responses to checkpoint therapy (TPS <50% = **~70% patient population**)

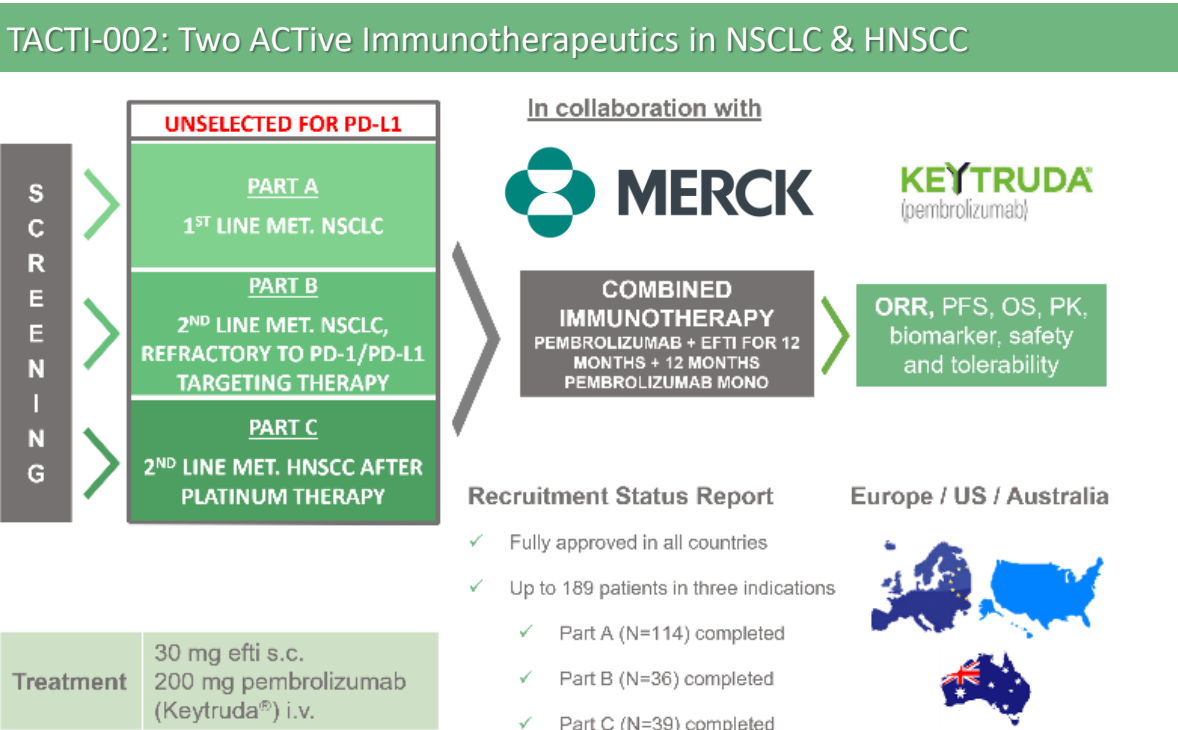
High discontinuation rates due to toxicity **limits Duration of Response** of checkpoint & chemo combinations



Well-tolerated treatment options that synergize with SOC and improve outcomes across PD-L1 status, including negative & low PD-L1 tumors, are necessary in frontline NSCLC. Efti in combination with anti-PD-1 immunotherapy has significant potential to fill this unmet need.

Phase II Trial Evaluating Efti + Pembro in 1L NSCLC

TACTI-002/KEYNOTE-798: 1st Line Non-Small Cell Lung Cancer (Part A)



Encouraging Clinical Results; Primary Objective Achieved

TACTI-002/KEYNOTE-798: 1L NSCLC (Part A)

ORR – PD-L1 all comer

Response	iRECIST ⁴ n (%)	RECIST 1.1 ⁴ n (%)
Complete Response	1 (0.9)	1 (0.9)
Partial Response	45 (39.5)	43 (37.8)
Stable Disease	37 (32.5)	37 (32.5)
Progression	18 (15.8)	20 (17.5)
Not Evaluable ¹	13 (11.4)	13 (11.4)
ORR, (ITT=114); [95% CI] ²	46 (40.4); [31.3-50.0]	44 (38.6); [29.6-48.2]
ORR (EVAL ³ =101); [95% CI] ²	46 (45.5); [35.6-55.8]	44 (43.6); [33.7-53.8]

- Primary Objective achieved (ORR > 35%)
- Responses confirmed in 87% of cases⁶
- Responses comparable between iRECIST and RECIST 1.1.
- Comparable ORR for squamous and non-squamous histologies
- 45% ORR for TPS of 1-49% and >30% & for PD-L1 negative patients

Tumor Response by PD-L1 status⁵

ORR & DCR by iRECIST, n (%)	<1%, N=32	1-49%, N=38	≥50%, N=20	≥1% N=58
ORR [95% CI] ²	10 (31.3) [16.1-50.0]	17 (44.7) [28.6-61.7]	11 (55.0) [31.5-76.9]	28 (48.3) [35.0-61.8]
DCR [95% CI] ²	21 (65.6) [46.8-81.4]	30 (78.9) [62.7-90.5]	16 (80.0) [56.3-94.3]	46 (79.3) [66.7-88.8]

Note: ORR for combined central + local PD-L1 (N=108); ORR for PD-L1 TPS <1% of 27%; ORR for 1-49% of 42.9%; ORR for ≥50% of 51.7%; ORR for ≥1% of 46.5%.

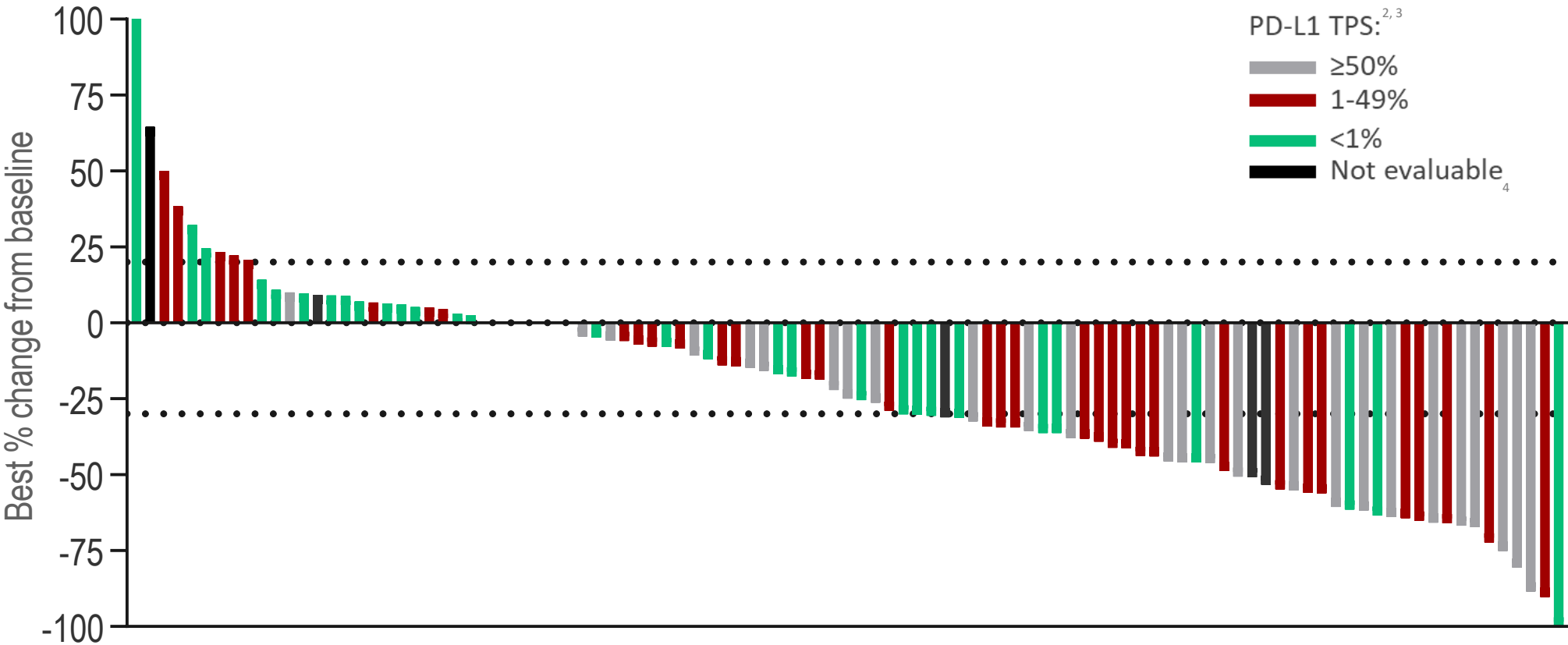
Tumor Response by tumor type

Tumor Response, n (%)	Squamous, N=40	Non-squamous, N=72
ORR [95% CI] ²	15 (37.5) [22.7-54.2]	29 (40.3) [28.9-52.5]
DCR [95% CI] ²	33 (82.5) [67.2-92.7]	48 (66.7) [54.6-77.3]

Note: 2 pts with tumor type not otherwise specified had a PR as BOR.

Responses Across Entire PD-L1 Spectrum

TACTI-002/KEYNOTE-798: 1L NSCLC (Part A)

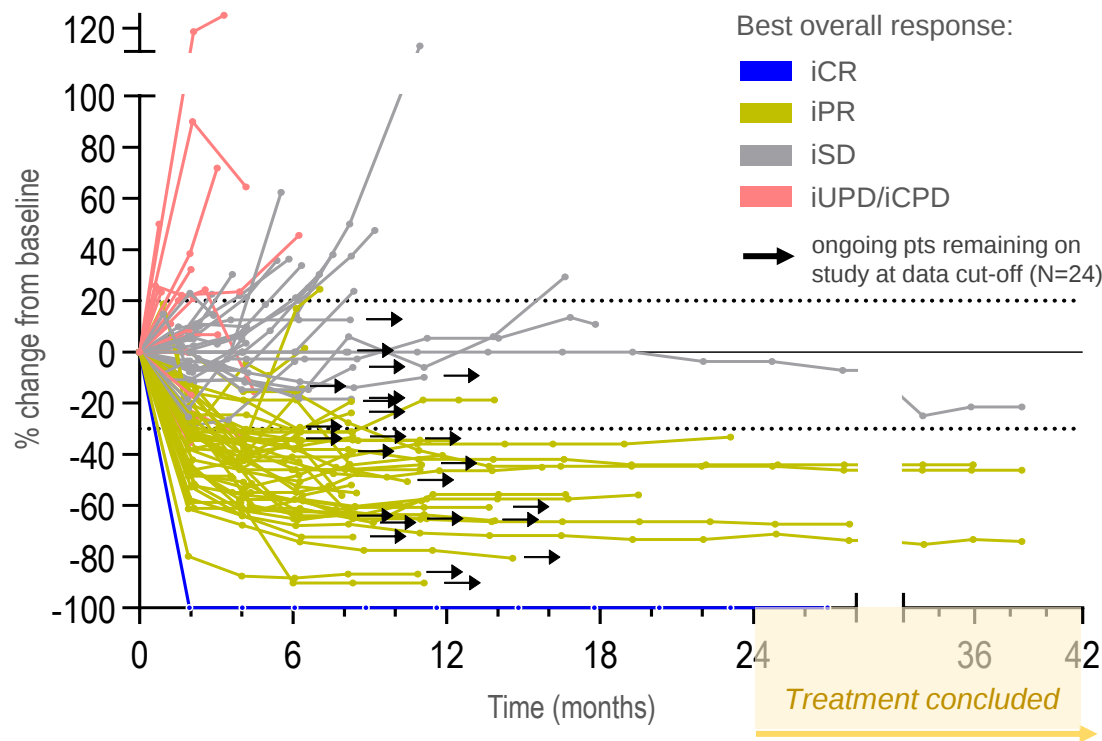


- Responses are deep and across all PD-L1 subgroups
- ~70 % of patients have a decrease of target lesions

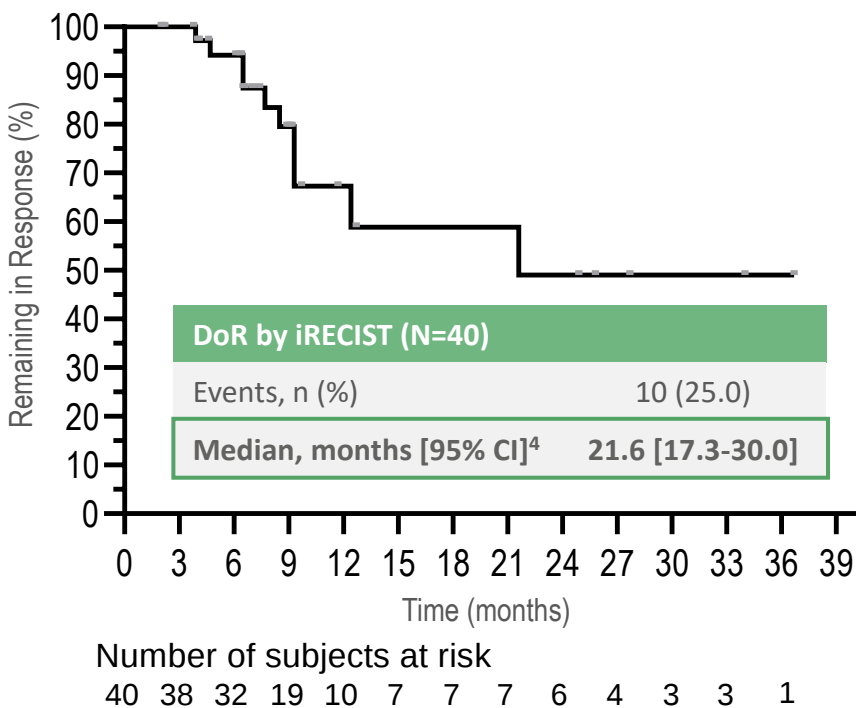
Deep & Durable Responses: Interim Median DoR 21.6 Months

TACTI-002/KEYNOTE-798: 1L NSCLC (Part A)

Efficacy: Change in Tumor Size Over Time¹



Interim Median Duration of Response (DoR)^{2,3}

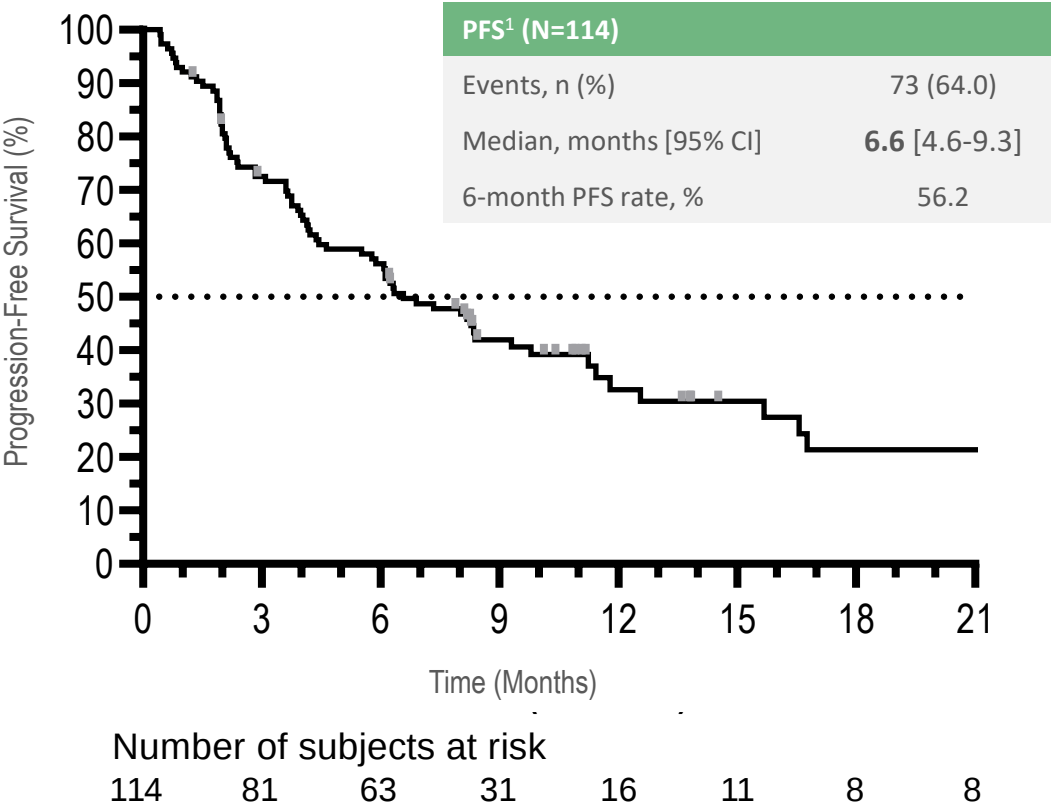


- Response onset is early & responses are long-lasting: interim mDoR 21.6 months
- Less than 10% of responding patients progress within 6 months

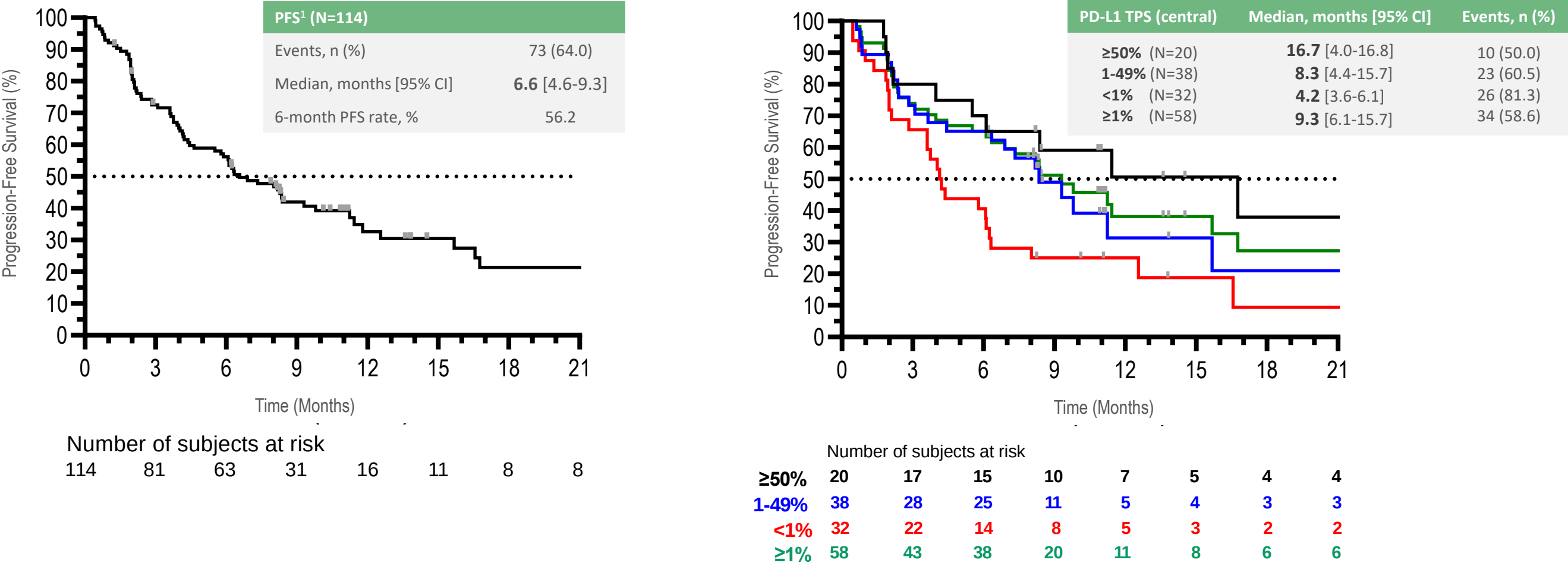
Promising Progression Free Survival (PFS)

TACTI-002/KEYNOTE-798: 1L NSCLC (Part A)

PFS¹ – PD-L1 all comer (ITT)



PFS¹ by PD-L1 status

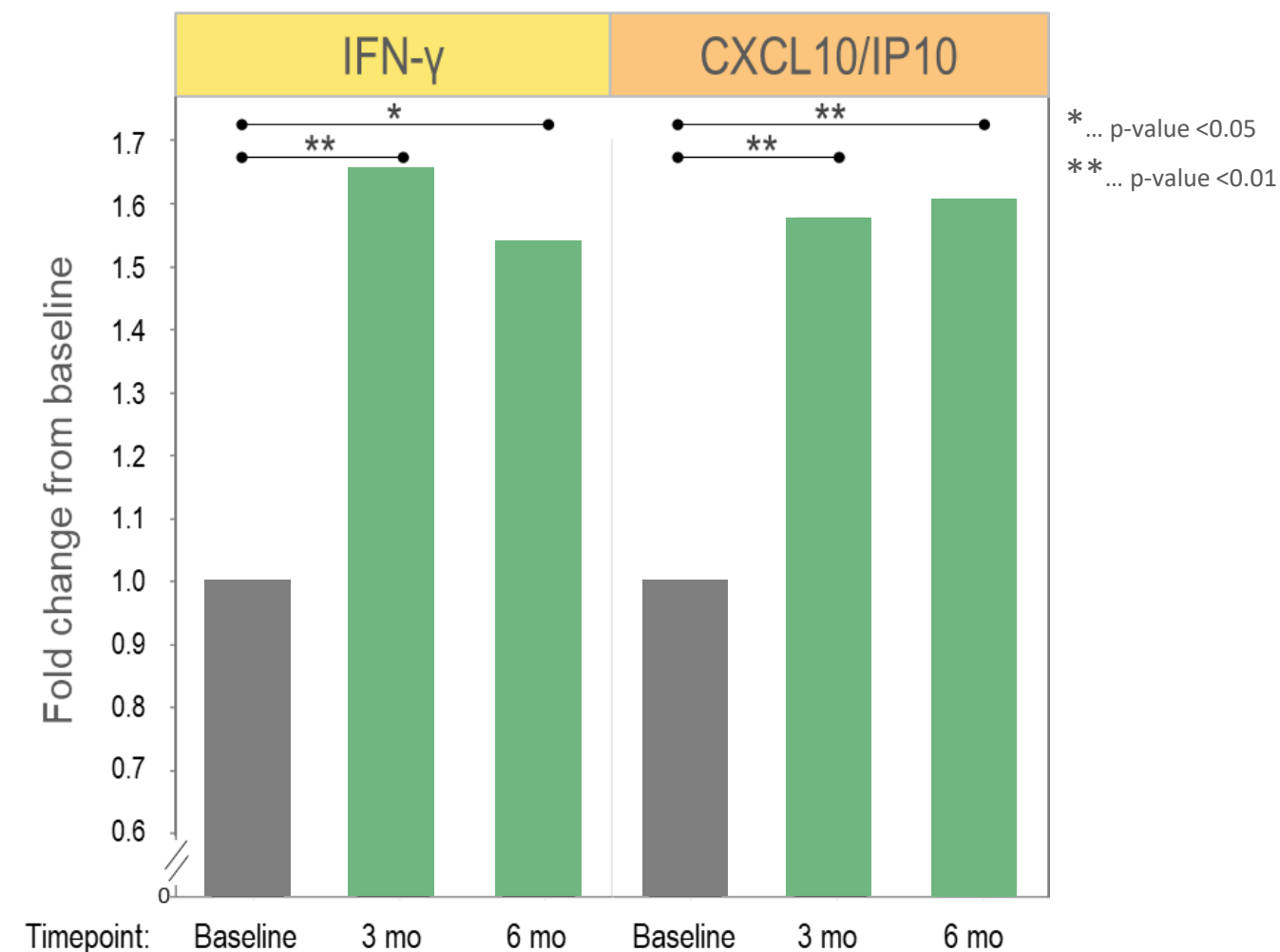
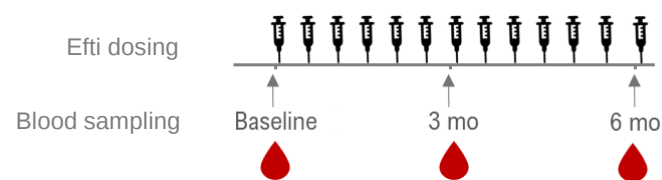


Initial Efti + Pembrolizumab Pharmacodynamic Data

TACTI-002/KEYNOTE-798: 1L NSCLC (Part A)

Key takeaways:

- Significant increase in IFN- γ and CXCL10 serum biomarkers for systemic TH1 response at 3 and 6 months compared to baseline. Substantiates efti's unique stimulation of the immune system, also seen in randomized AIPAC Phase IIb trial in Breast Cancer.
- Increased IFN- γ levels have been associated with objective tumor responses with anti-PD-1 therapy¹ & CXCL10 has been shown to contribute to "hot" tumor microenvironment²
- Increase is seen early (<24 hours) after first efti administration³
- Blood samples collected pre-efti dosing at baseline, after 3 months (n=68) and 6 months (n=36), 2 weeks after the previous efti dosing -> *minimal residual effect*



Overview of adverse reactions

Safety parameter ¹	n (%)
Adverse reactions with fatal outcome ²	3 (2.6)
Serious adverse reactions ²	12 (10.5)
Grade ≥3 adverse reactions ²	14 (12.3)
Adverse reactions leading to discontinuation of treatment ²	11 (9.6)

- Median efti exposure was 24.7 weeks (range 1- 58.0) and 24.2 weeks for pembro (range 0.1-103.3).
- 6 pts completed 2 years of treatment and 24 pts still on therapy at data cut-off.
- 26.3% of pts had any type of local injection site reactions³ G1+2. No reactions ≥ G3 were reported.
- irAEs² >2% were: hypothyroidism (6.1%), pneumonitis (4.4%), hyperthyroidism (3.5 %), and myositis (2.6%).

Frequent TEARs (incidence ≥10%) by PT related to treatment²

Adverse event by PT, n (%)	Any grade	G3	G4	G5
Pruritus	23 (20.2)	N/A	N/A	N/A
Asthenia	22 (19.3)	N/A	N/A	N/A
Rash	15 (13.2)	N/A	N/A	N/A
Diarrhoea	12 (10.5)	1 (0.9)	N/A	N/A
Fatigue	12 (10.5)	1 (0.9)	N/A	N/A

- Rate of discontinuation due to drug related adverse events comparable to pembrolizumab monotherapy**
- **Safety profile**, including immune mediated adverse events, **comparable to pembrolizumab monotherapy** except for the addition of any type of local injection site reactions**

Benchmarking against Pembrolizumab Monotherapy: Strong ORR & PFS Across PD-L1 Spectrum



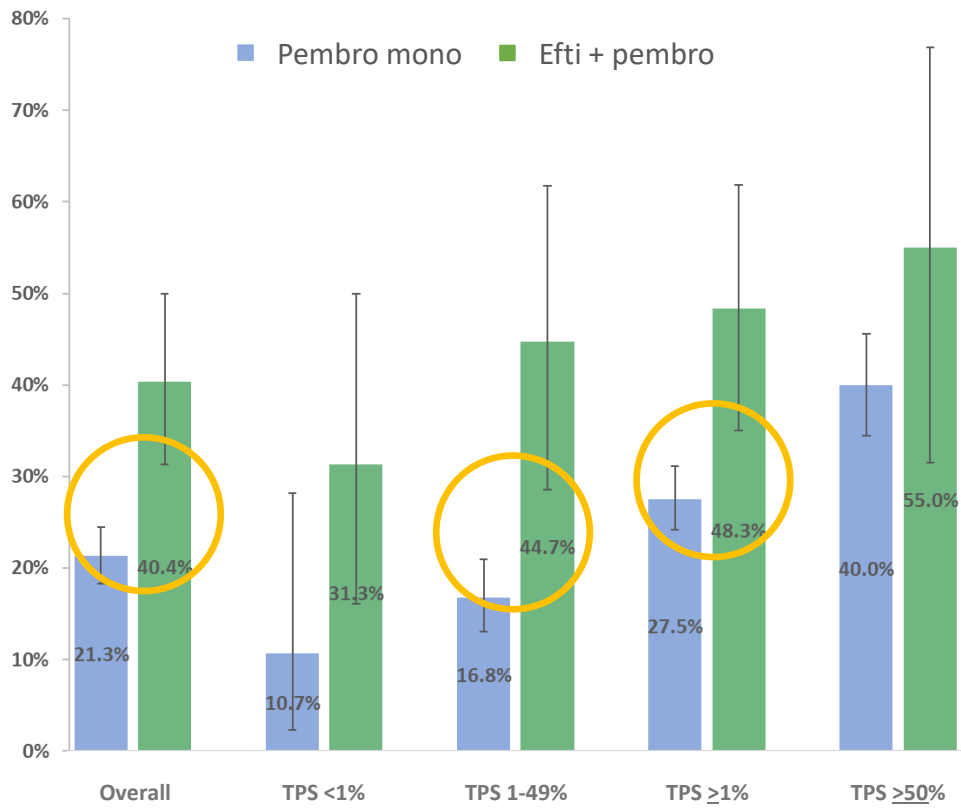
TACTI-002/KEYNOTE-798: 1L NSCLC (Part A)

Key Takeaways

- Superior ORR/PFS across all PD-L1 levels
- ORR at $\geq 1\%$ and 1-49% confidence intervals do not overlap with ORR reported for pembro monotherapy
- Sustained, durable responses similar to pembro monotherapy
- Well tolerated & safety profile remains similar to pembro alone
- Efti has potential to substantially increase # of patients that respond to anti-PD-1 therapy, due to its orthogonal mechanism of action
- Of note, efti + pembrolizumab has **Fast Track Designation in $\geq 1\%$ TPS** in 1st Line NSCLC

Overall Response Rate (ORR)

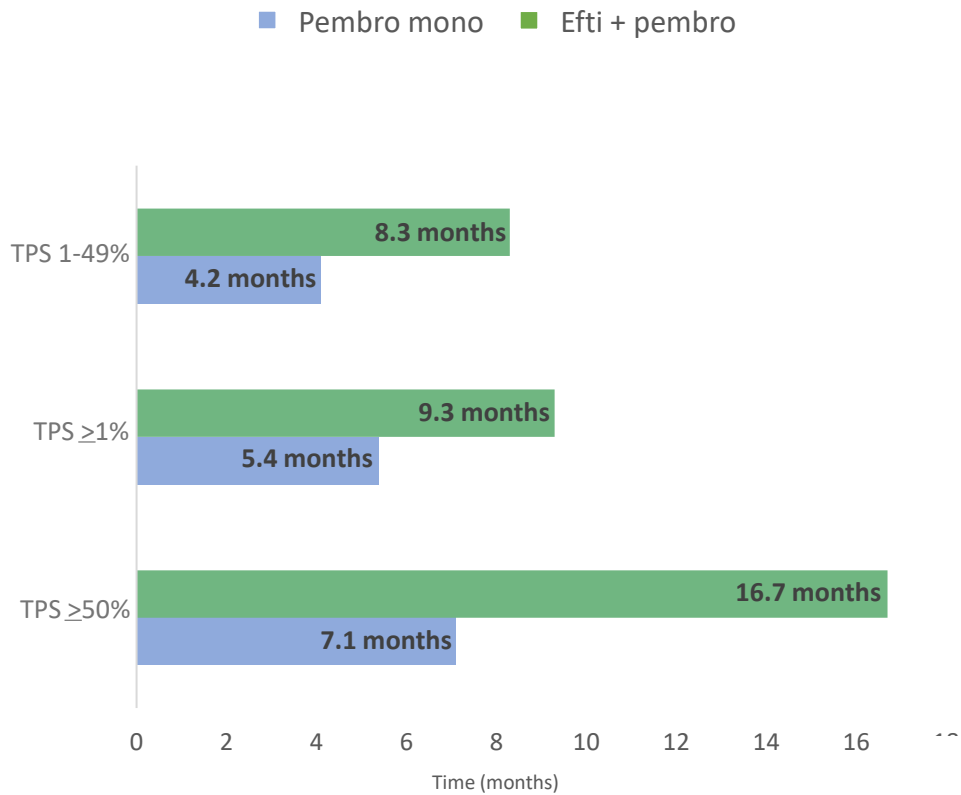
(with 95% confidence interval)



○ Confidence intervals do not overlap

Median Progression Free Survival# (PFS)

(by PD-L1 TPS Score)



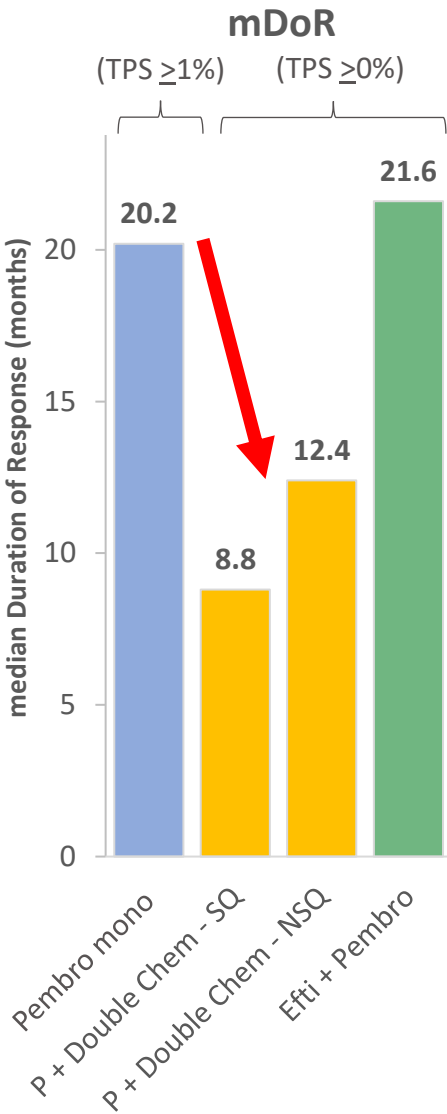
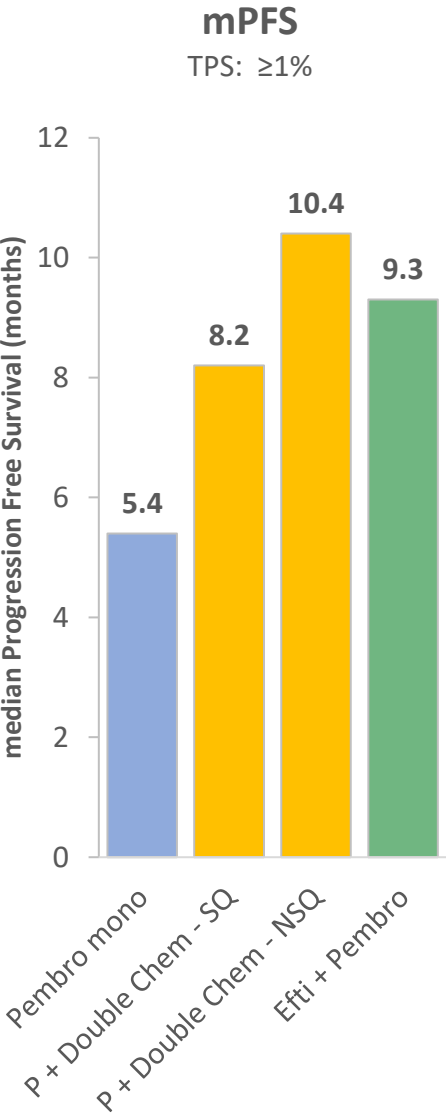
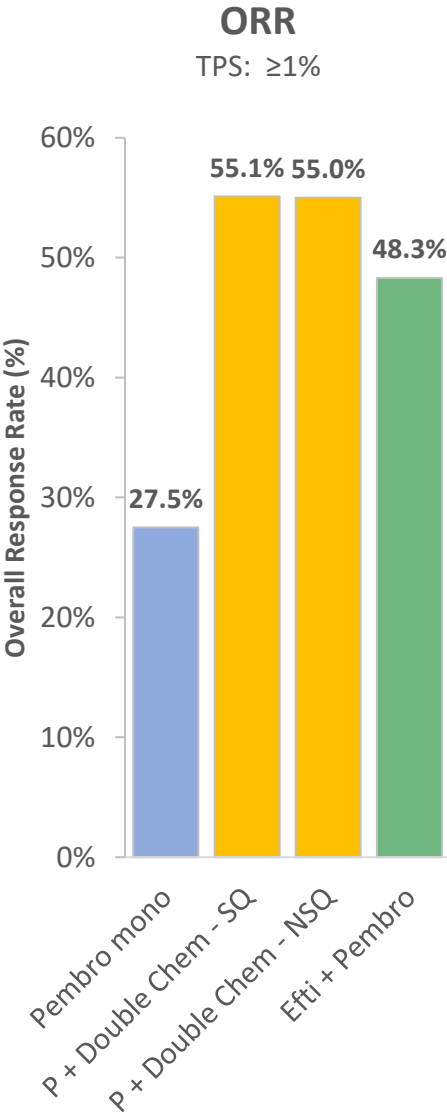
16 * Efti + Pembro ORR by iRECIST, unconfirmed, Total (N=114) and PD-L1 TPS subgroups (N=90). Data cut-off July 1, 2022. Pembrolizumab ('pembro') mono efficacy used for benchmarking for ORR: Total calculation based on KN-001; KN-042 and on adjustment for the same PD-L1 subgroup distribution as in TACTI-002. < 1 % TPS: calculation based on limited data set from KN-001 (1st & 2nd line altogether). 1-49%, $\geq 50\%$, and $\geq 1\%$ TPS based on KN-001, KN-042. # PFS by PD-L1 status (N=90) using central assessment for 90 patients. Pembro mono efficacy used for benchmarking: 1-49%, $\geq 50\%$, and $\geq 1\%$ TPS based on KN-001, KN-042. Lancet [https://doi.org/10.1016/S0140-6736\(18\)32409-7](https://doi.org/10.1016/S0140-6736(18)32409-7), Oral Presentation 2018 ASCO, EPAR assessment report, N Engl J Med 2016; 375:1823-33; KN-024 update J Clin Oncol 2019, KN-024 J Clin Oncol 2021

Benchmarking against Pembrolizumab Monotherapy and Pembrolizumab-Chemotherapy Combination

TACTI-002/KEYNOTE-798: 1L NSCLC (Part A)

Key Takeaways

- ORR & mPFS well ahead of pembro mono and similar range to chemo-IO
- DoR well ahead chemo-IO and ahead of pembro mono, despite TACTI-002 having 34.3% patients with TPS <1% vs pembro mono results from TPS ≥1% group
- On an individual basis, these key parameters for efti+pembro combination are impressive. Taken together, efti+pembro holds significant promise to positively impact patient outcomes.



INSIGHT-003 Phase 1 Trial:

**Efti + Pembrolizumab + Chemotherapy
Combination in 1L NSCLC**

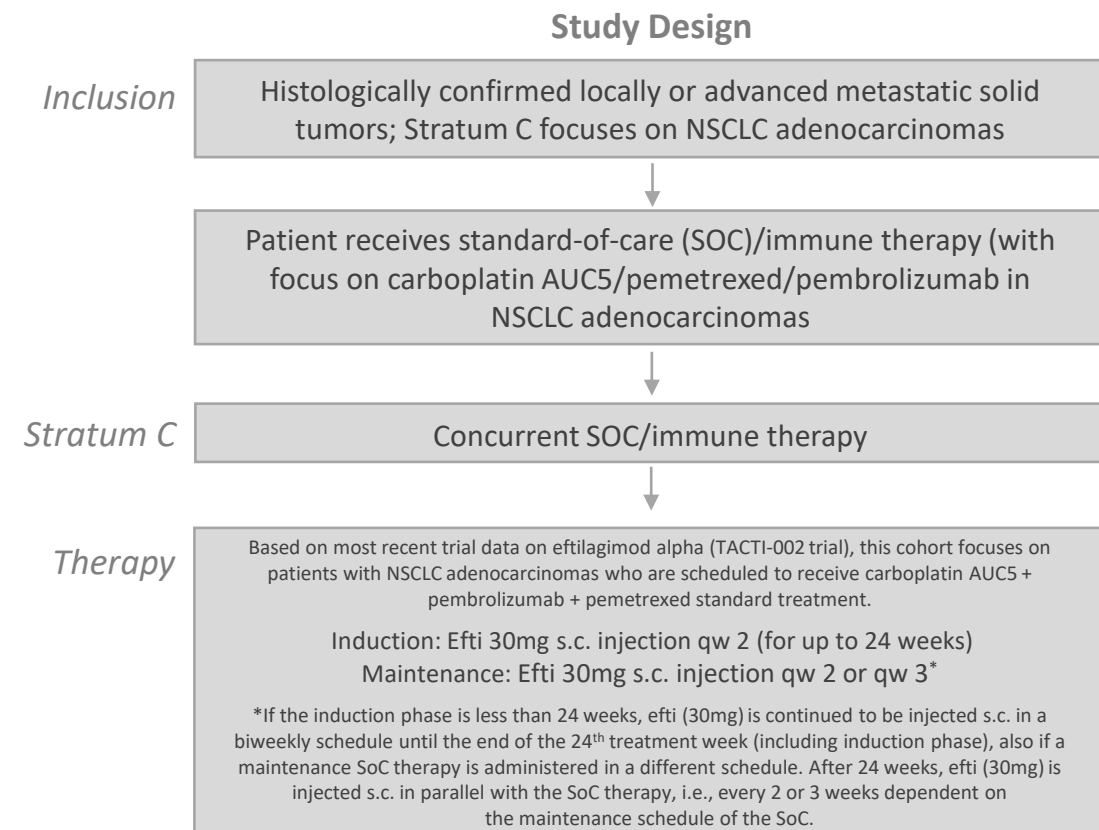
INSIGHT-003: IO + IO + Chemo Combination Trial

 INSIGHT-003: Phase I in Solid Tumors Focusing on NSCLC Adenocarcinomas

INSIGHT-003 - Third arm (Stratum C) of ongoing investigator-initiated study focusing on NSCLC adenocarcinomas



- Evaluating triple combination therapy consisting of efti in conjunction with carboplatin/pemetrexed & anti-PD-1 therapy
- Trial assessing safety, tolerability and initial efficacy
- 14 of 20 metastatic NSCLC patients have been enrolled between 2nd Aug 2021 until 14th Oct 2022 data cut off
- Median age 66 years; 71.4% male
- Majority of patients have PD-L1 TPS <50%
- Triple combination has been well tolerated & appears to be safe
- Promising early results with 72.7% response rate and 90.9% disease control rate in evaluable (N=11) 1st line NSCLC patients



Interim Safety and Initial Efficacy

INSIGHT-003: Phase I in Solid Tumors Focusing on NSCLC Adenocarcinomas

Initial Efficacy

Tumour Response according to RECIST 1.1 (N=11)	N, (%)
Complete Response (CR)	0 (0)
Partial Response (PR)	8 (72.7%)
Stable Disease (SD)	2 (18.2%)
Progressive Disease (PD)	1 (9.1%)
Objective Response Rate (ORR)	8 (72.7%)
Disease Control Rate (DCR)	10 (90.9%)

Nine (81.8 %) patients had PD-L1 TPS <50% with an ORR of 66.7 % in this subset

Interim Safety

Safety Parameter (N=14)	N, (%)
Most Frequent AEs	1 (9.1)
Neutrophil count decreased (grade 1-4)	11 (78.6)
White blood cell decreased (grade 1-4)	9 (64.3)
Platelet count decreased (grade 1-3)	8 (57.1)
Anemia (grade 1-3)	8 (57.1)
Patients with at least one SAE	4 (28.6)
Patients with at least one SAE related to study treatment	1 (7.1)

No new safety signals detected thus far

“Efti has accumulated an excellent safety profile to date, driving its high suitability for combination with standard of care therapies to address areas of unmet need for cancer patients. INSIGHT-003 represents the first triple combination therapy consisting of efti plus anti-PD-1 and chemo, and we are pleased with these promising, early results.” - **Prof. Dr. Salah-Eddin Al-Batran, Lead Investigator**

Conclusion:

- Large data set for efti+pembro (+chemo) combination with 120+ pts in 1st line NSCLC provides robust basis for phase III
 - ✓ Efti+pembro nearly doubles ORR of pembro mono (40.4% vs 21.3%), extends PFS, & maintains long DoR/safety profile of pembro mono
 - ✓ Due to orthogonal MoA, efti has potential to greatly increase # of patients who respond to anti-PD-1, including low/negative TPS
- Initial pharmacodynamic data of efti+pembro reveals significant increase in IFN- γ & CXCL10 (Th1 biomarker) → proof of principle
- Initial data shows efti + SoC doublet chemo + anti-PD-1 is feasible & safe with promising efficacy → increases flexibility for Phase 3 planning
- Strength of efti+pembro clinical data has led to Fast Track Designation in $\geq 1\%$ TPS in 1st Line NSCLC

Outlook:

- Planning around intelligent registrational relevant trials (e.g. adaptive Phase 2/3) is in progress and under discussion with regulators. Potential design options are proceeding and include:
 - ✓ Superiority in terms of OS against pembro monotherapy restricted to patients where this combination could potentially demonstrate superiority
 - ✓ Superiority in terms of OS vs. doublet chemo + anti-PD-1/PD-L1 in appropriate 1st line NSCLC patients
- Trials are being planned in most cost-effective and time-efficient manner
- Final trial design and patient population will depend on feedback from agencies
- Expected timelines are design feedback in H1 2023 concluded and trial start in H2 2023

Progress in HNSCC & MBC

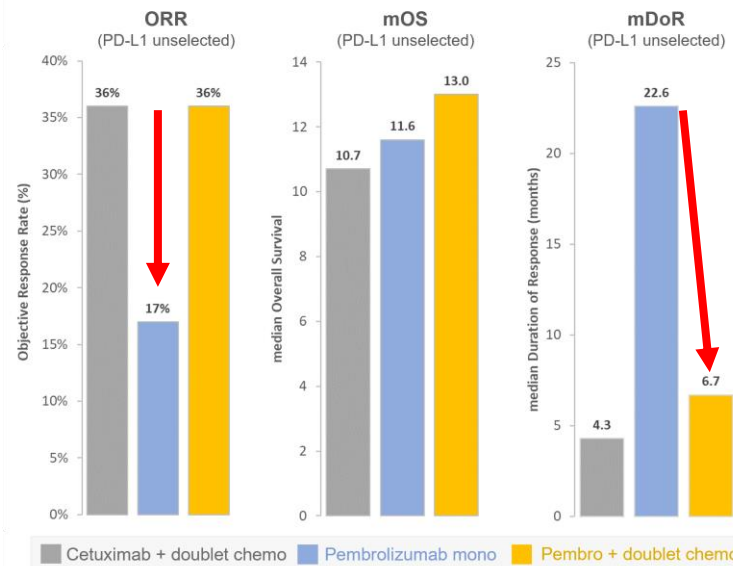
Targeting High Unmet Needs in 1st Line HNSCC & Metastatic Breast Cancer

HNSCC:

- Approx. 900,000 cases and over 400,000 deaths per annum worldwide¹.
- Pembrolizumab approved for 1st line HNSCC with chemo & also as monotherapy for patients whose tumors express PD-L1 (CPS ≥1)¹

Unmet Need in 1st Line HNSCC:

- Attain comparable DoR plus higher ORR & improved OS with similar safety to pembro mono utilizing ehti+pembro combination

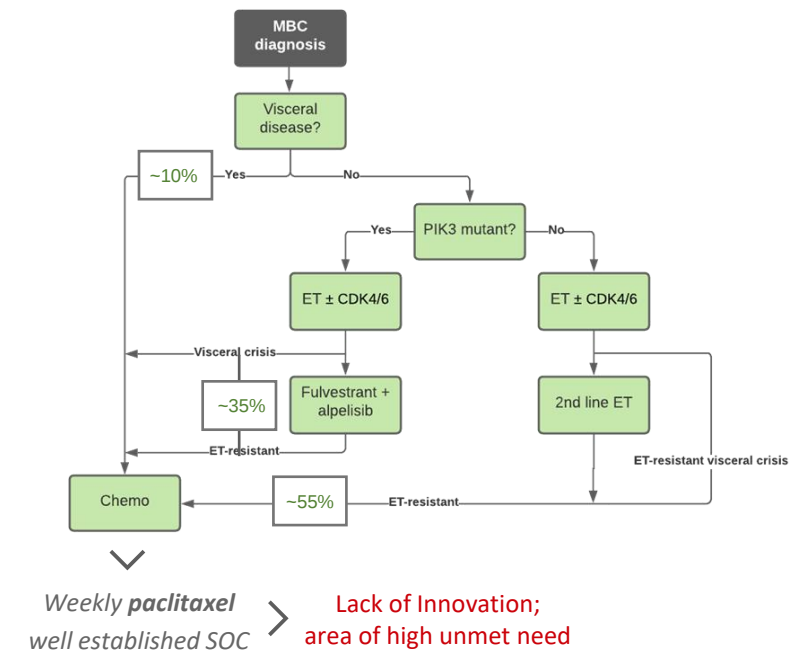


Breast Cancer:

- Over 2 million breast cancer diagnoses p.a. worldwide; ~70% are HR⁺/HER2^{neg}/low
- Up to 550,000 patients in total develop metastatic disease and are eligible to receive chemotherapy^{2,3}

Unmet Need in MBC:

- Improving OS while maintaining QoL in HER2– MBC patients utilizing ehti in combination with standard of care chemotherapy



Update on randomized Phase IIb TACTI-003 trial

- ✓ Ehti + pembro vs. pembro alone in CPS≥1; received FDA Fast Track designation on strength of TACTI-002 data in 2L HNSCC
- ✓ Recruiting (~38% enrolled; new sites activated & enrollment increasing*)
- ✓ Independent Data Monitoring Committee (IDMC) recommended continuing trial with no modifications after review of initial safety data; also reviewed initial efficacy data yet was not primary focus of the analysis
- ✓ *Trial in Progress* abstract presented at SITC 2022

Strategy in MBC

- ✓ Based on encouraging clinical data from the multicenter, placebo-controlled, double-blind, 1:1 randomized Phase IIb AIPAC trial and high unmet need, metastatic breast cancer (MBC) remains an attractive opportunity
- ✓ Immunetep's preparations for future clinical development in MBC, including engagement with regulators, CROs & other stakeholders, are progressing

2022 Milestones

- Year to date:
 - ✓ 1L NSCLC Oral Presentation at ASCO (TACTI-002; Part A)
 - ✓ 2L NSCLC PD-X refractory data at ELCC & WCLC 2022 (TACTI-002; Part B)
 - ✓ Fast Track Designation granted in 1L NSCLC
 - ✓ New, significant data from AIPAC study
 - ✓ IP expansion for eftilagimod alpha
 - ✓ New data from Phase II TACTI-002 in 1L NSCLC at SITC 2022
 - ✓ Initial results from INSIGHT-003 (triple-combo) at SITC 2022
 - ✓ Trial in progress poster on randomized trial in 1L HNSCC at SITC 2022
- Expansion of existing programs (i.e., new sarcoma trial)
- Regulatory updates
- Manufacturing scale up to 2,000L
- Updates on IMP761 & partnered programs

Corporate Snapshot

- Pioneering LAG-3 portfolio in oncology and autoimmune diseases with four product candidates in multiple clinical trials
- First-in-class positioning with eftilagimod alpha (efti)
- Multiple big pharma partnerships & collaborations, while retaining full control of efti (ex-China) & IMP761
- Well funded with ~A\$73.9 million* in cash
- Cash runway to early CY2024*
- Market cap ~A\$280M / \$185M US**
- Ticker symbols:
 - ✓ IMM (ASX) & IMMP (NASDAQ)
- Total institutional ownership of ~57% includes Fidelity (FIL Ltd.) ~7.41% and Australian Ethical ~4.98%***



Thank You