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LAG-3 IMMUNOTHERAPY

Unlocking the power of the immune system to fight cancer and autoimmune disease

Annual General Meeting 2023
(ASX: IMM, NASDAQ: IMMP)

Forward-Looking Statements

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This presentation is authorised for release by the CEO of Immutep Limited.

Agenda

- Overview of Immutep
- Achievements in FY23
- Efti results: ESMO
- Pipeline update
- Outlook & milestones ahead

Overview of Immutep

Deep Pipeline

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	Program	Indication	Preclinical	Phase I	Phase II	Late Stage*	Collaborations	Commercial Rights
ONCOLOGY	**Eftilagimod Alpha** Soluble LAG-3 Protein	1L Head & Neck Squamous Cell Carcinoma (HNSCC)	TACTI-003 | Efti+Pembrolizumab [a]				MERCK	immutep Global Rights ex-China
		1L Non-Small Cell Lung Cancer (NSCLC), 2L HNSCC, PD-X Refractory 2L NSCLC	TACTI-002 | Efti+Pembrolizumab [a]				MERCK	
		Urothelial Cancer	INSIGHT-005 | Efti+Avelumab [§, b]				Merck KGaA Darmstadt, Germany	
		1L NSCLC	INSIGHT-003 | Efti+Pembro+Chemo [§]					
		Soft Tissue Sarcoma	EFTISARC-NEO | Efti+Pembro+Radiotherapy [§]				Narodowy Instytut Onkologii	
		HR+/HER2- Metastatic Breast Cancer & TNBC	AIPAC-003 | Efti+Paclitaxel					
		Metastatic Breast Cancer & Solid Tumors	Efti+Paclitaxel and Efti+Pembrolizumab [#]				EOC	EOC Efti China Rights
	Anti-LAG-3 Small Molecule	Undisclosed					CARDIFF UNIVERSITY	immutep Global Rights
	LAG525 Anti-LAG-3 Antibody	Solid Tumors & Blood Cancer					NOVARTIS	NOVARTIS Global Rights
		Triple Negative Breast Cancer						
		Melanoma						
		Solid Tumors						
		Triple Negative Breast Cancer						
AUTOIMMUNE DISEASE	**GSK'781** Depleting LAG-3 Antibody	Ulcerative Colitis					GSK	GSK Global Rights
		Psoriasis						
		Healthy Subjects						
	IMP761 Agonist LAG-3 Antibody	Undisclosed						immutep Global Rights

Information in pipeline chart current as of May 2023;AIPAC-003 Phase II/III trial expected to begin Q1'2023. For EOC's China rights, Immutep may receive undisclosed milestones plus royalties; LAG525 - ClinicalTrials.gov (for Novartis' global rights, Immutep may receive milestones plus royalties); GSK2831781 - ClinicalTrials.gov (for GSK's global rights, Immutep may receive milestones plus royalties), Phase II in Ulcerative Colitis discontinued. * Late stage refers to active Phase IIb clinical trials or more clinically advanced clinical trials; # Conducted by EOC in China. Immutep has no control over either the trials. § Investigator Initiated Trials controlled by lead investigator & therefore Immutep has no control over this clinical trial; [a] In combination with KEYTRUDA®; [b] In combination with BAVENCIO®.

Immutep's Pioneering Immunotherapies

Only company with multiple therapeutic approaches around LAG-3 / MHC Class II interaction

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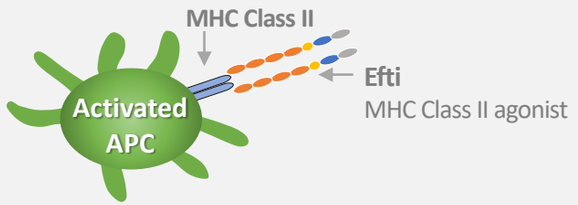
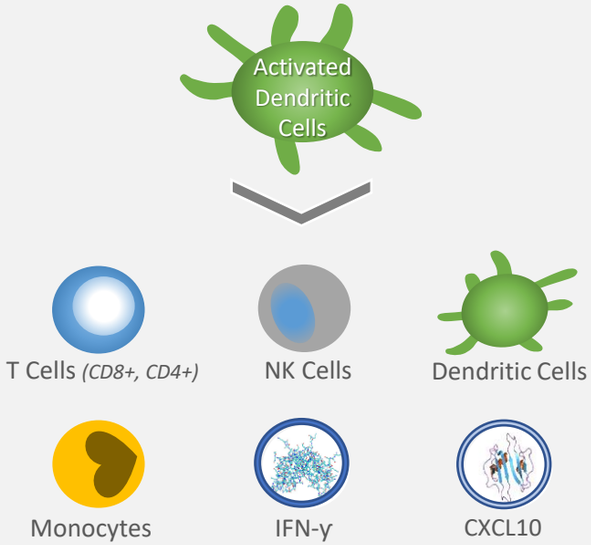
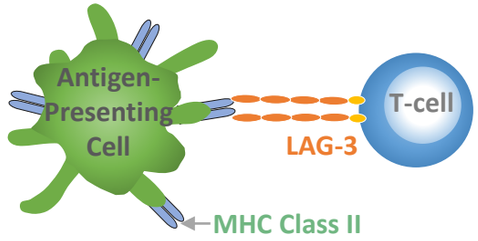
Targeting MHC Class II on APCs with Soluble LAG-3 Protein (Efti)



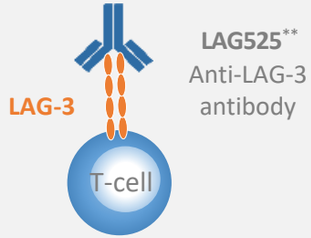
Activating APC (e.g., dendritic cells) with efti leads to a systemic anti-cancer immune response. Can work well in "hot", "tepid", and "cold" tumours.





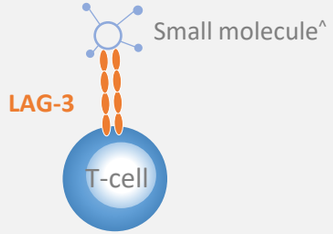
LAG-3 on T cells binds to MHC Class II molecules# on antigen-presenting cells (APC)

Targeting LAG-3 on T cells with an Antagonist Antibody



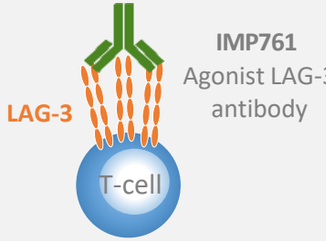
Blocking LAG-3 on T cells prevents LAG-3-mediated co-inhibitory signaling, allowing T cells to attack cancer

Targeting LAG-3 on T cells with Small Molecules



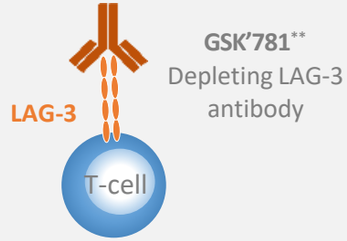
Small molecules blocking LAG-3 could offer convenience of an oral pill at a fraction of the cost of biologics

Targeting LAG-3 on T cells with an Agonist Antibody



Increasing LAG-3's natural down-regulation of auto-reactive memory T cells may address autoimmune diseases

Targeting LAG-3 on T cells with a Depleting Antibody



Depleting LAG-3 T cells can suppress immune system's response, enabling treatment of autoimmune diseases

* In multiple clinical trials, including monotherapy and in combination with chemotherapy & anti-PD-(L)1 therapy, efti has driven statistically-significant increases of various anti-tumor cells and serum biomarkers. # MHC Class II = Major Histocompatibility Complex Class II. ** LAG525 (leramilimab) is out-licensed to Novartis and GSK'781 is out-licensed to GSK. ^ The anti-LAG-3 small molecule is an early development-stage project at Immutep.

Substantial Commercial Opportunity

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Encouraging Clinical Data with Chemo-free Efti + Anti-PD-(L)1 Combinations and Efti + Chemo

- **Doubling of Overall Response Rate** of KEYTRUDA® (anti-PD-1) monotherapy in 1st line non-small cell lung cancer (NSCLC) and in 2nd line head & neck cancer in all-comer PD-L1 Phase II trial
- **Mature median Overall Survival of 35.5 months** in 1st line NSCLC patients with >1% PD-L1 expression, above reported rates of anti-PD-1 monotherapy, IO-IO, and IO-chemo combinations
- **Deep, durable responses in negative & low PD-L1 expressing patients** with both KEYTRUDA® (anti-PD-1) and with BAVENCIO® (anti-PD-L1) across multiple indications
- Subcutaneous delivery of efti leads to **systemic anti-tumor effect** and strong synergies with standard-of-care chemotherapy
- Efti has **favorable safety profile** and is well-tolerated

Anti-PD-1**

KEYTRUDA® (pembrolizumab) Injection 100 mg
~$20.9 billion

OPDIVO® (nivolumab)
~$8.2 billion

LIBTAYO® (cemiplimab-rwlc) Injection 350 mg
~$468.9 million

Jemperli (dostarlimab-gxly) Injection 500 mg
~$26 million

$29.6 Billion
in 2022 sales

Anti-PD-L1**

TECENTRIQ® atezolizumab
~$3.9 billion

IMFINZI® durvalumab
~$2.8 billion

BAVENCIO® avelumab Injection 20 mg/mL
~$914.6 million

$7.6 Billion
in 2022 sales

* Based upon clinical data from TACTI-002, INSIGHT-004, and TACTI-mel trials. Source of sales figures: 1. Bloomberg and company reports; Currency: USD. Approved anti-PD-1 therapies include pembrolizumab (KEYTRUDA®), nivolumab (OPDIVO®), cemiplimab (LIBTAYO®), dostarlimab (JEMPERLI®). Approved anti-PD-L1 therapies include atezolizumab (TECENTRIQ®), avelumab (BAVENCIO®), durvalumab (IMFINZI®).

Acheivements in FY23

Advancing Clinical Development Strategy for Efti

Immutep, or its partners, aim to obtain marketing authorisation in multiple indications to fully exploit the potential of efti

Non-Small Cell Lung Cancer
TACTI-004: Phase III

- Positive feedback from the FDA
- Ongoing preparation for Phase 3 clinical trial
- FDA Fast Track designation

Head & Neck Cancer
TACTI-003: Phase IIb

- Initial safety data reviewed by IDMC and recommended the trial continue with no modifications
- Trial in Progress poster at SITC 2022
- Recruitment nearing completion
- FDA Fast Track designation

Metastatic Breast Cancer
AIPAC-003: Phase II/III

- Design of Phase II/III AIPAC-003 trial agreed with FDA and EMA
- Preparations, initiation and first patient dosed
- 6 patients currently in open-label lead-in with 90mg

Expansion

- EFTISARC-NEO IIT trial in soft tissue sarcoma
- INSIGHT-005 Phase I trial in metastatic urothelial carcinoma in collaboration with Merck KGaA

Financial Summary

- Strong cash position of app. A$110.1 million as of 30 Sep 2023 post A$80 million capital raise
- Immutep will continue to manage its strong cash balance carefully as it pursues its overall development strategy for efti and IMP761
- Total revenue and other income were A$5.20 million in FY23 compared to A$6.76 million in FY22
- Research and development and intellectual property expenses increased to A$36.3 million in FY23
- Increases in clinical trial costs drove the increase in R&D expenses and the net loss
- As at 30 June 2023, the Company had 41 employees of which 68% were female compared to as at 30 June 2022, where 66% were female from a total of 35 employees. 50% of the Company's senior executives were female as at both dates.

	FY23	FY22
Revenue and other income	A$5.2M	A$6.8M
G&A Expenses	A$8.7M	A$7.2M
R&D and IP expenses	A$36.3M	A$31.3M
Net loss	A$39.9M	A$32.2M
Net operating cash outflow	A$35.4M	A$30.2M
Cash and cash equivalents at the end of the financial year	A$123.4M	A$80.0M
Cash and cash equivalents at 30 September	A$110.1M	A$73.9M

Strong cash runway to early CY2026*

* As reported in Immutep Quarterly Activities Report on 31 July 2023.

Commercial Scale Efti Manufacturing

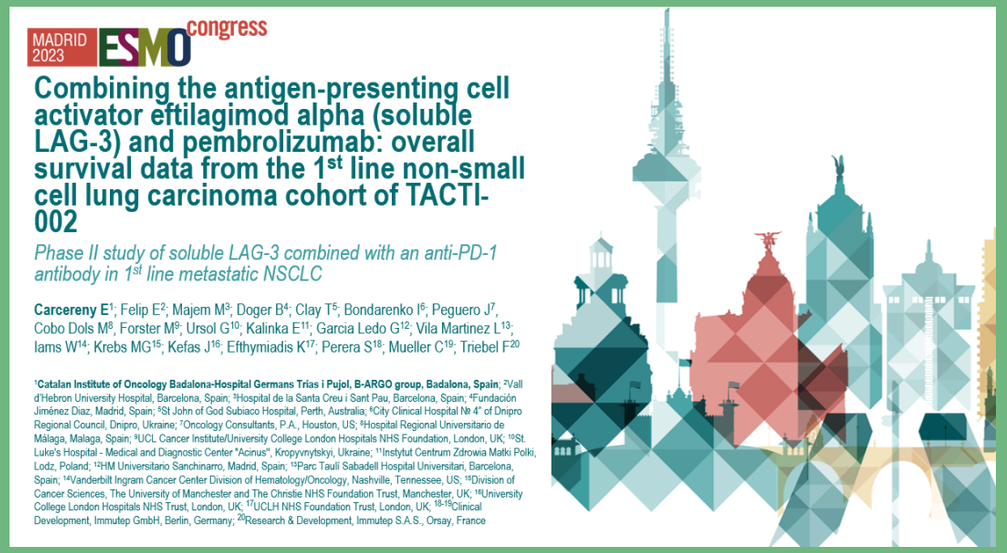
- Successful scale-up with first 2,000L manufacturing run completed at WuXi Biologics in December 2022
- Comparability of drug substance and drug product manufactured at 2,000L scale achieved in Sept 2023
- Regulatory authorisation granted for clinical trial use across multiple European countries including:
  - Germany
  - Belgium
  - Denmark
  - United Kingdom

Manufacturing scale-up is an important step towards potential commercial production of efti

TACTI-002 Phase II Trial – Part A

Efti + Pembrolizumab Combination in First Line Treatment of Metastatic Non-Small Cell Lung Cancer

Data Update from ESMO 2023 Mini Oral Presentation



1st line Non-Small Cell Lung Cancer

Epidemiology & Unmet Need

1L NSCLC Epidemiology[1,2]

- 1.87 million NSCLC diagnoses per annum worldwide
- NSCLC is the highest cause of death among all cancers
- Current total addressable market (TAM) of NSCLC drug market is ~$24 billion
- Approximately one million patients per annum that develop metastatic NSCLC disease & are eligible to receive anti-PD-(L)1 therapy
- Up to 80% patients do not respond to immune checkpoint inhibitor (ICI) monotherapy & median Overall Survival (OS) is still under 24 months for most patients
- ICI & chemo combinations have limited Duration of Response & high discontinuation rates due to toxicity

High unmet medical need for well tolerated, efficacious and durable treatment options, preferably chemo-free

- **NSCLC drug market is expected to nearly double to US$48 billion in 2031, and immune checkpoint inhibitors are expected to earn more than half of these sales (US$26 billion)[3]**
- **Efti could double the addressable NSCLC patient population with an effective, safe chemo-free IO regimen (i.e., patients with either 1-49% and/or ≥50% PD-L1 TPS)**

(1) Calculated from Global Cancer Observatory (WHO), 2020 data & American Cancer Society, About Lung Cancer
(2) Informa Pharma Intelligence Report 2018 for US, Japan and EU5
(3) Nature Reviews Drug Discovery 22, 264-265 (23 Jan 2023) doi: https://doi.org/10.1038/d41573-023-00017-9.
(4) Patient population estimates by PD-L1 expression: based on publications of registrational trials KN-189, KN-407, EMPOWER-Lung 3 and TACTI-002 all comer trial (Data cut-off July 1, 2022)

TACTI-002 / KN-798 Trial Overview and Baseline Characteristics

Part A: Large Phase II trial (N=114) in metastatic 1st Line non-small cell lung cancer (1L NSCLC)

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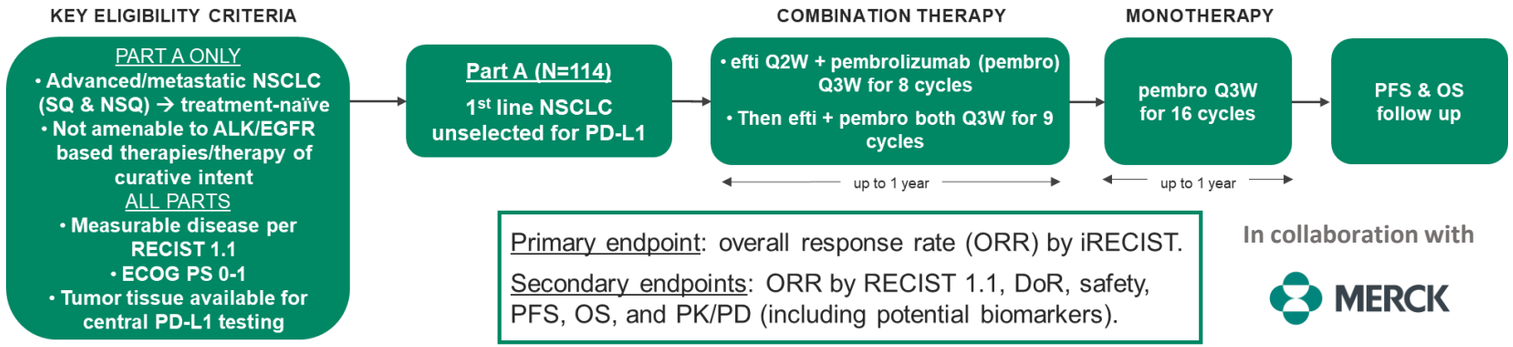
Trial Design (Part A)

- Phase II, open label, Simon's two stage
- Six countries (US, UK, ES, PL, UA, AU)
- 18 sites
- 114 patients enrolled



Primary endpoint: overall response rate (ORR) by iRECIST.
Secondary endpoints: ORR by RECIST 1.1, DoR, safety, PFS, OS, and PK/PD (including potential biomarkers).

In collaboration with MERCK

Baseline characteristics

- Trial enrolled 1L NSCLC patients regardless of PD-L1 Tumor Proportion Score (TPS) expression
- ~75% of patients have PD-L1 TPS of <50%
- Lower proportion of patients with PD-L1 TPS ≥50% than would be expected

Safety

- No new safety signals compared to pembrolizumab monotherapy

Baseline characteristics for TACTI-002 Part A		N=114	
Age, median (range), years		67 (44-85)	
Sex, n (%)	Female / Male	30 (26.3) / 84 (73.7)	
ECOG PS score, n (%)	0 / 1	43 (37.7) / 71 (62.3)	
Smoking status, n (%)	Current or Ex-smoker / Non-smoker	108 (94.7) / 6 (5.3)	
Histology, n (%)	Squamous / Non-squamous / Unknown	40 (35.1) / 72 (63.2) / 2 (1.8)	
Metastatic disease, n (%)	Yes / No	113 (99.1) / 1 (0.9)	
PD-L1 expression TPS, n[1] (%)	< 1% 1-49% ≥ 50%	*Central only* 32 (35.6) 38 (42.2) 20 (22.2)	*Central + local* 37 (34.3) 42 (38.9) 29 (26.9)
Previous therapy, n (%)	Radiotherapy Surgery Systemic therapy for non-metastatic disease	38 (33.3) 23 (20.2) 26 (22.8)	

Note: Patients were recruited according to Simon's optimal two-stage design: during the first stage, 17 pts were recruited; second stage recruitment (n=19) was opened only after the number of responses was above 4. An extension stage (n=78) could be added if there were above 12 responses. In total, 114 pts were enrolled.

Data cut-off August 15, 2023

[1] N=90; Central assessment of PD-L1 TPS using Dako IHC 22C3 pharmDx. [2] N=108; Central assessment as per footnote 1 for 90 pts. For 18 patients, local assessment used predominantly Dako IHC 22C3 pharmDx due to non-evaluable central assessment results.
True response rates sources/assumptions: KN-001 &-042 (KN-001: Lancet Respir Med, 2019; 7(4): 347-357; KN-042: Lancet 2019;393(10183:1819-1830), expecting that ~70% of patients had PD-L1 TPS <50%.

Excellent Survival Benefit across all PD-L1 Expression Levels

Strong efficacy with any PD-L1 (TPS≥1%) and PD-L1 negative (TPS <1%), low (TPS 1-49%), high (TPS ≥50%)

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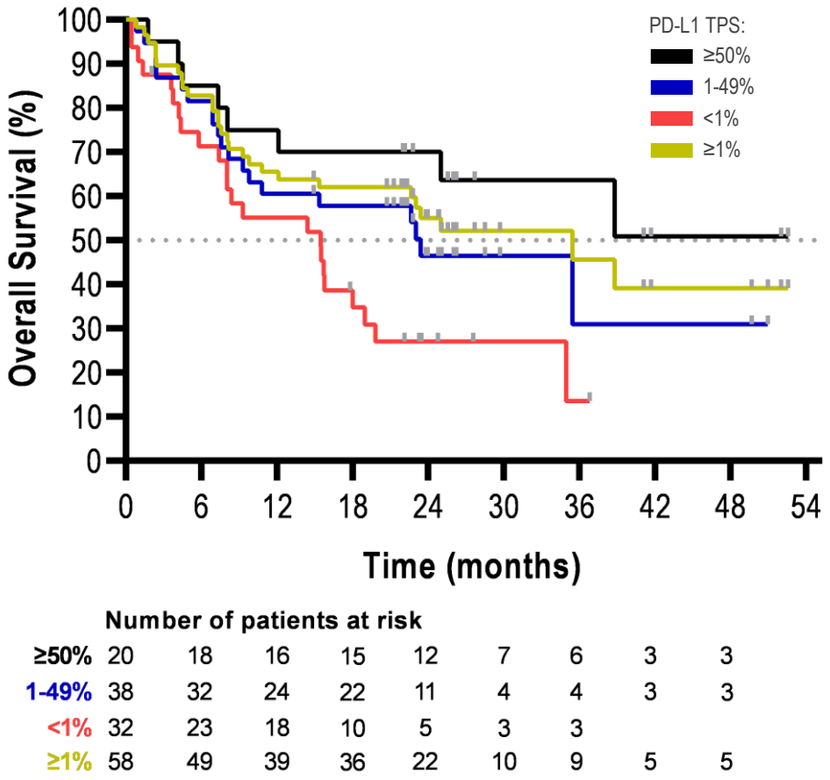
Promising efficacy with strong Overall Response Rate (ORR), Progression Free Survival (PFS), Duration of Response (DOR), and Overall Survival (OS) visible across all PD-L1 TPS subgroups including negative and low expressing patients[1,2]

Tumor Response by Central PD-L1[1], N=90

Efficacy parameter	TPS <1% n (%), N=32	TPS 1-49% n (%), N=38	TPS ≥50% n (%), N=20	TPS ≥1% n (%), N=58
ORR[2,3], % (95% CI)[4]	31.3 (16.1-50.0)	44.7 (28.6-61.7)	55.0 (31.5-76.9)	48.3 (35.0-61.8)
mPFS[2], months (% events)	4.2 (90.6)	9.3 (71.1)	16.5 (70.0)	11.2 (70.7)
mDoR[2], months (% events)	20.7 (57.1)	NR (35.7)	18.7 (63.6)	24.2 (48.0)
mOS, months (% events)	**15.5** (71.9)	**23.4** (52.6)	**NR** (40.0)	**35.5** (48.3)

Overall Survival by central PD-L1[1]



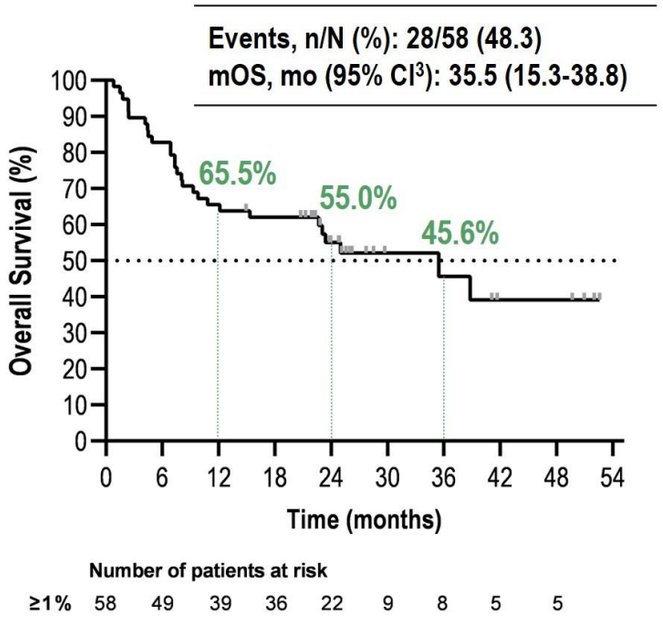
Data cut-off date: August 15, 2023. [1] N=90; Central assessment of PD-L1 TPS using Dako IHC 22C3 pharmDx; [2] iRECIST; [3] unconfirmed; [4] calculated using Clopper Pearson method; NR: not reached.
Note: results for PD-L1 central + local (N=108) were as follows (<1% / 1-49% / ≥50% / ≥1%): mOS, mo: 14.4 / 23.4 / 38.8 / 35.5; mPFS[2]: 4.2 / 8.3 / 16.3 / 9.8; mDoR[2]: 20.7 / 21.6 / 18.7 / 21.6.

Significant 35.5-Month Median OS Reached in TPS ≥1%

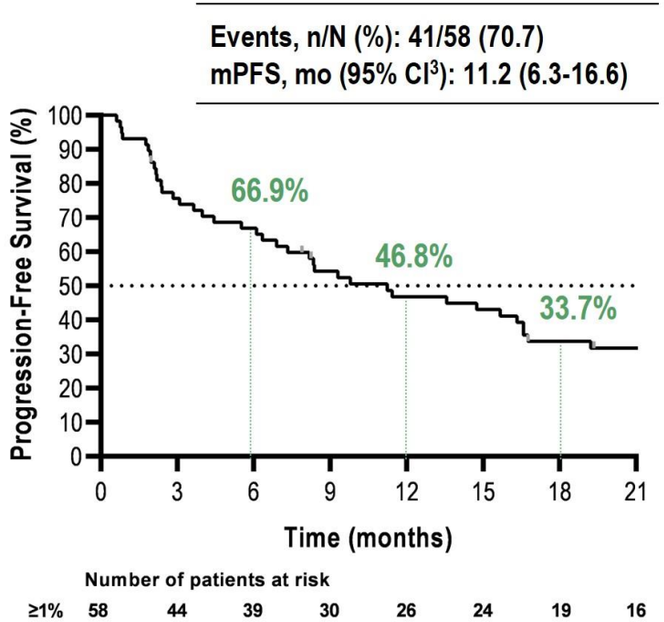
Patients with any PD-L1 expression or TPS ≥1% represent ~65% of the 1L NSCLC patient population

- Significant median OS of 35.5 months[1]
- 48.3% ORR, median PFS of 11.2 months, and median DoR of 24.2 months
- 12-month PFS- and 36-month OS-rate are very promising at 46.8% and 45.6%, respectively
- Strength of data in PD-L1 TPS 1-49% (N=38, 66% of TPS ≥1% group#), including 44.7% ORR, 9.3-month mPFS, mDOR not reached, and 23.4-month mOS, contributed significantly to overall results in TPS ≥1% unlike other IO-IO combinations

Overall Survival, TPS ≥1%



Progression Free Survival, TPS ≥1%[2]



[1] The mOS in TPS ≥1% was attained with both central assessment of PD-L1 (N=58) and in larger patient group with central + local assessment of PD-L1 (N=71). [2] iRECIST and RECIST 1.1 for PFS was comparable with 61.6%, 43.7% and 32.8% at 6, 12, and 18 months, respectively, as per RECIST1.1.
[3] 95% confidence intervals calculated using Clopper-Pearson method or using Kaplan-Meier survival analysis method.
For reference, in TPS ≥1%, TACTI-002 has 66% patients with TPS 1-49% and 34% with TPS ≥50%, which compares to KN-042 with ~53% patients with PD-L1 and ~47% patients with PD-L1 TPS ≥50%.

Benchmarking against Pembrolizumab Monotherapy

Robust Overall Survival, Overall Response Rates, and Progression-Free Survival across all PD-L1 levels

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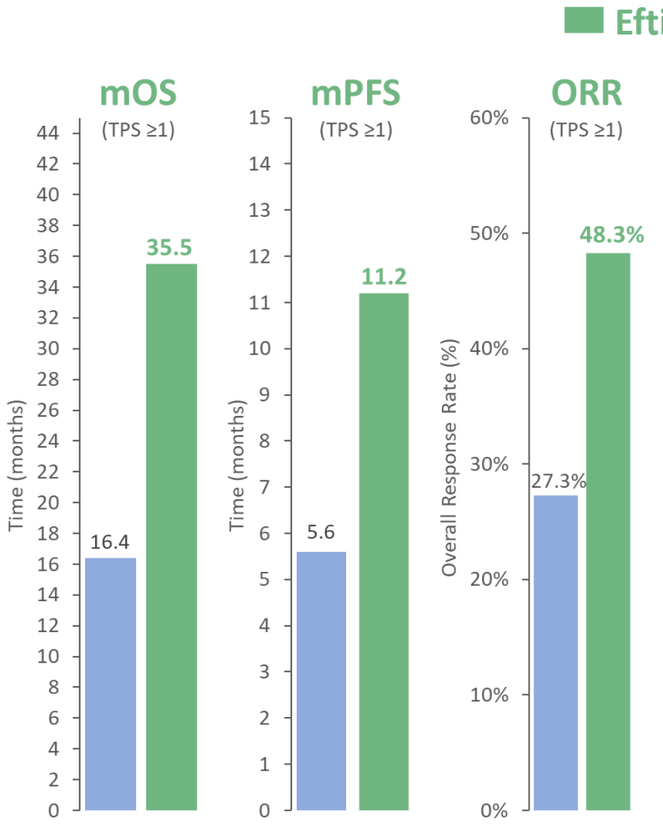

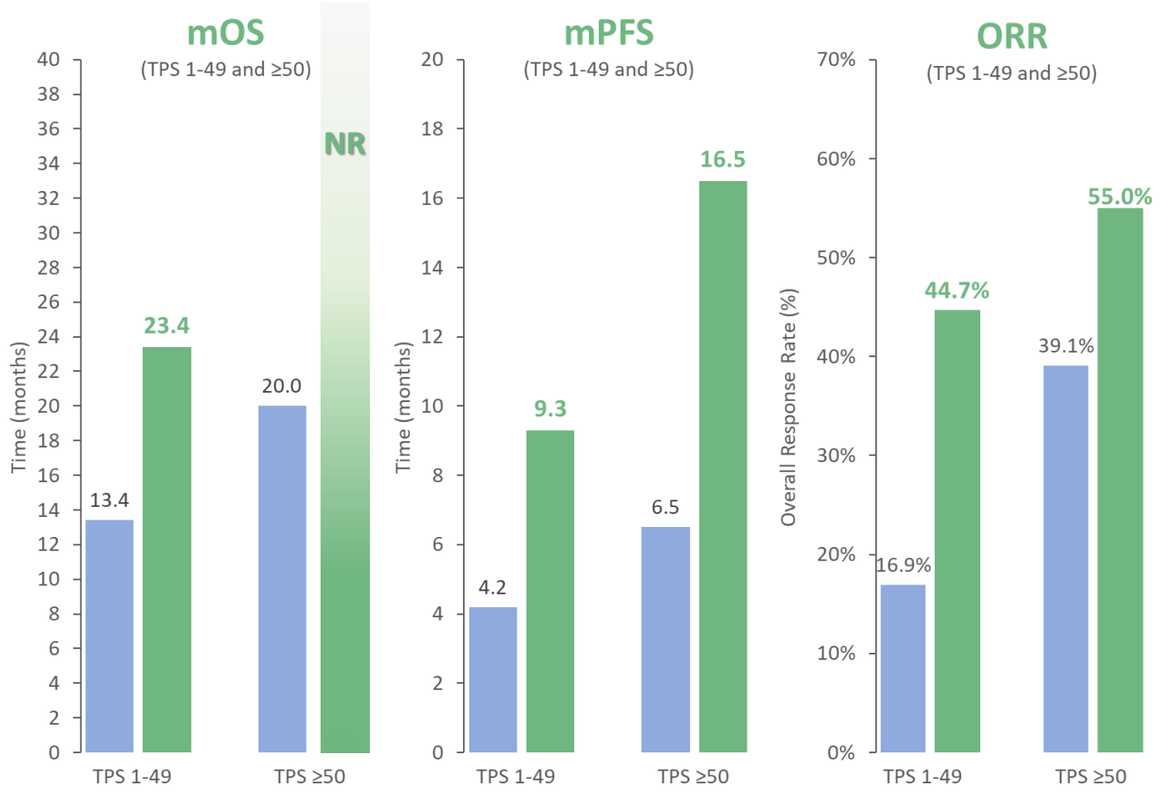

TPS ≥1%

- Efficacy increased by 1.5- to 2-fold for all important efficacy parameters while maintaining safety and durability
- For patients with SD, BOR translates to meaningful OS
- Confidence intervals do not overlap for ORR

TPS 1-49% and TPS ≥50%

- In TPS 1-49%, efficacy increased by 1.5- to over 2-fold for all important efficacy parameters while maintaining safety and durability
- In TPS ≥50%, strong ORR, PFS & mOS that strengthened as not reached with August 2023 cut-off, up from 38.8 months with March 2023 cut-off

Sources:
Pembrolizumab monotherapy data was taken from publications/EPAR asessment report of KN-042 registrational trial

Benchmarking against Standard-of-Care in 1L NSCLC

Overall survival & safety of efti + pembro vs. IO, IO-chemo, & IO-IO-chemo in patients with PD-L1 TPS ≥1%

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Differentiated OS from **Efti + Pembro** that extends well beyond all standard-of-care regimens achieved with a **favorable safety profile** that is comparable to pembrolizumab monotherapy

Therapy	TRAEs Leading to Discontinuation[2]	Median Overall Survival[4]
Efti + Pembrolizumab	**9.6%**	**35.5 months**
Pembro + Doublet Chemo (NSQ)	20.5%	23.3 months
Pembro + Doublet Chemo (SQ)	16.8%	18.9 months
Ipilimumab + Nivolumab[1]	18.1%	17.1 months
Pembrolizumab monotherapy[1]	**9.9%**	16.4 months
Ipi + Nivo + 2 cycles of Doublet Chemo	22.1%	15.8 months

NSQ = Non-squamous; SQ = Squamous

Efti + Pembro data: Data cut-off August 15, 2023, for Response Rate, Progression Free Survival, Duration of Response, and median OS. (1) Ipi + Nivo approved in US for 1L NSCLC PD-L1 TPS>1% but not in EU; Pembro mono not approved in Europe for TPS 1-49%. (2) TRAE = Treatment related adverse events leading to discontinuation taken from publications/EPAR assessments of respective trials (KN-042, KN-024, KN-189, KN-021, KN-407, CM-227, CM-9LA). (4) Arrow lengths are proportional representations of Overall Survival data. Data for standard-of-care therapies taken from publications of respective registrational trials (e.g., KN-042, KN-189, KN-407, CM-227, CM-9LA), and comparison of data is from different clinical trials.

INSIGHT-003 Phase I Trial:

Efti + Pembrolizumab + Chemotherapy Combination in Metastatic Non-Squamous First Line NSCLC

Data from ESMO poster

INSIGHT-003: IO + IO + Chemo Combination Trial

INSIGHT-003 - Investigator-initiated study focusing on front line non-squamous NSCLC adenocarcinomas

KRANKENHAUS NORDWEST

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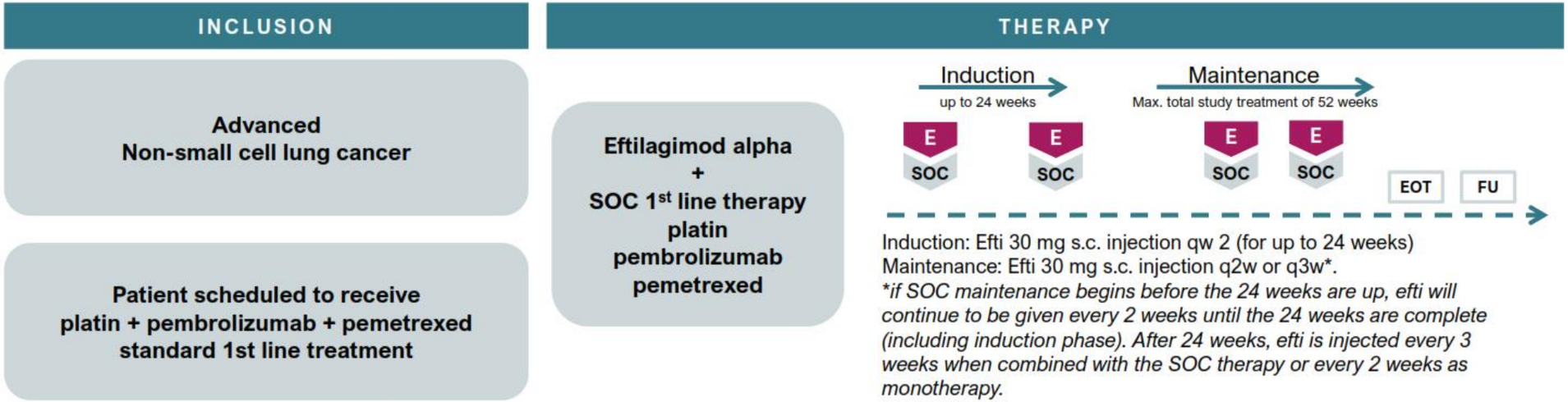


Design:

- Evaluating triple combination therapy consisting of efti in conjunction with carboplatin/pemetrexed & anti-PD-1 therapy
- Study focuses on pts with TPS <50%
- Trial assessing safety, tolerability and initial efficacy

Key aspects:

- 21 pts recruited as of Jan 2023 → extension opened in summer 2023 and trial has already recruited six additional patients
- Strong 67% ORR and 91% DCR detailed in ESMO abstract with older cutoff date (updated data to be presented at ESMO with later cutoff date and more mature data)
- Triple combination has been well tolerated & appears to be safe. No occurrence of unacceptable toxicities.

Outlook:

- Immutep is looking forward to have the additional patients recruited soon → expected by H1 2024
- Current IO-chemotherapy combinations generate ORR near 40% level for patients with TPS <50%. Goal is to generate a higher ORR as compared to any approved chemo + anti-PD-1 combination in this TPS <50% setting that would warrant further investigation.

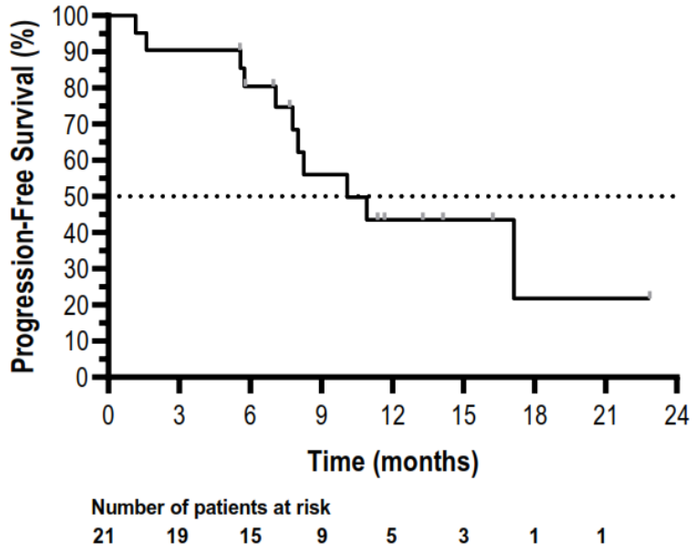
Source: ESMO 2023 Poster (#1042P) – A Atmaca et al., INSIGHT 003 evaluating feasibility of eftilagimod alpha (soluble LAG-3) combined with 1st line chemo-immunotherapy in metastatic non-small cell lung cancer (NSCLC) adenocarcinomas – a multicenter early phase trial –

Efti + anti-PD1 + Chemo in NSQ 1st line NSCLC

Efficacy - ITT Population

Baseline parameters		N=21
Age, median (range), years		65 (55-73)
Sex, n (%)	Female / Male	7 (33) / 14 (67)
ECOG PS score, n (%)	0 / 1	11 (52) / 10 (48)
Metastatic disease, n (%)	Yes / No	19 (91) / 2 (9)
PD-L1 expression TPS, n (%)	<1% 1-49% ≥50%	7 (33) 10 (48) 4 (19)

Best Overall Response (BOR) by RECIST 1.1	N=21 n (%)
Complete Response	0 (0.0)
Partial Response	15 (71.4)
Stable Disease	4 (19.0)
Progression	2 (9.5)
ORR confirmed, n (%)	**14 (66.7)**
ORR unconfirmed, n (%)	**15 (71.4)**
DCR, n (%)	19 (90.5)



- Triple combination has been well tolerated & appears to be safe. No occurrence of unacceptable toxicities.
- At data cut-off, ORR of 71.4%
- With a median follow up of 12.4 months, the ITT population had a mPFS of 10.1 months and mOS was not reached.

Source: ESMO 2023 Poster (#1042P) – A Atmaca et al., INSIGHT 003 evaluating feasibility of eftilagimod alpha (soluble LAG-3) combined with 1st line chemo-immunotherapy in metastatic non-small cell lung cancer (NSCLC) adenocarcinomas – a multicenter early phase trial –

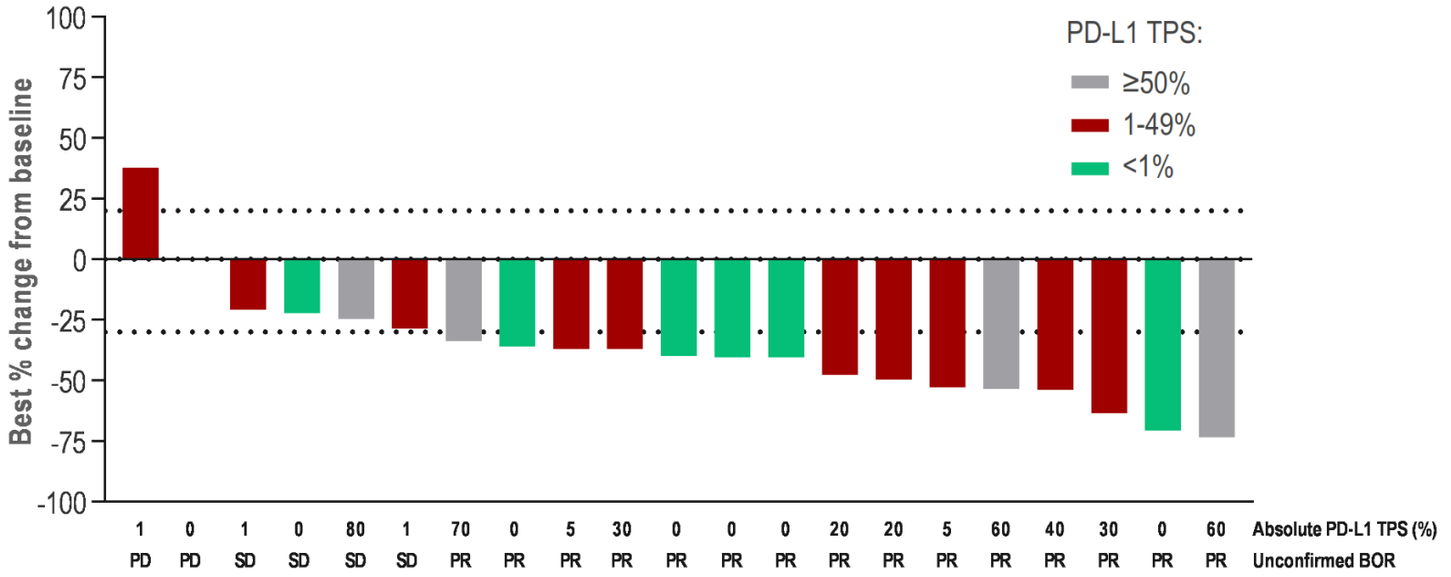
Efti + anti-PD1 + Chemo in NSQ 1st line NSCLC

Efficacy - by TPS level

Tumor Response	PD-L1 expression level (TPS)			
	<1%, N=7	1-49%, N=10	≥50%, N=4	<50%, N=17
ORR* unconfirmed, n (%)	5 (71.4)	7 (70.0)	3 (75.0)	12 (70.6)
ORR* confirmed, n (%)	5 (71.4)	6 (60.0)	3 (75.0)	11 (64.7)
mPFS*, months (% events)	10.1 (42.9)	10.9 (60.0)	7.1 (50.0)	10.9 (52.9)
mOS, months (% events)	17.4 (28.6)	NR (10)	NR (25)	NR (17.6)

* Per RECIST 1.1.

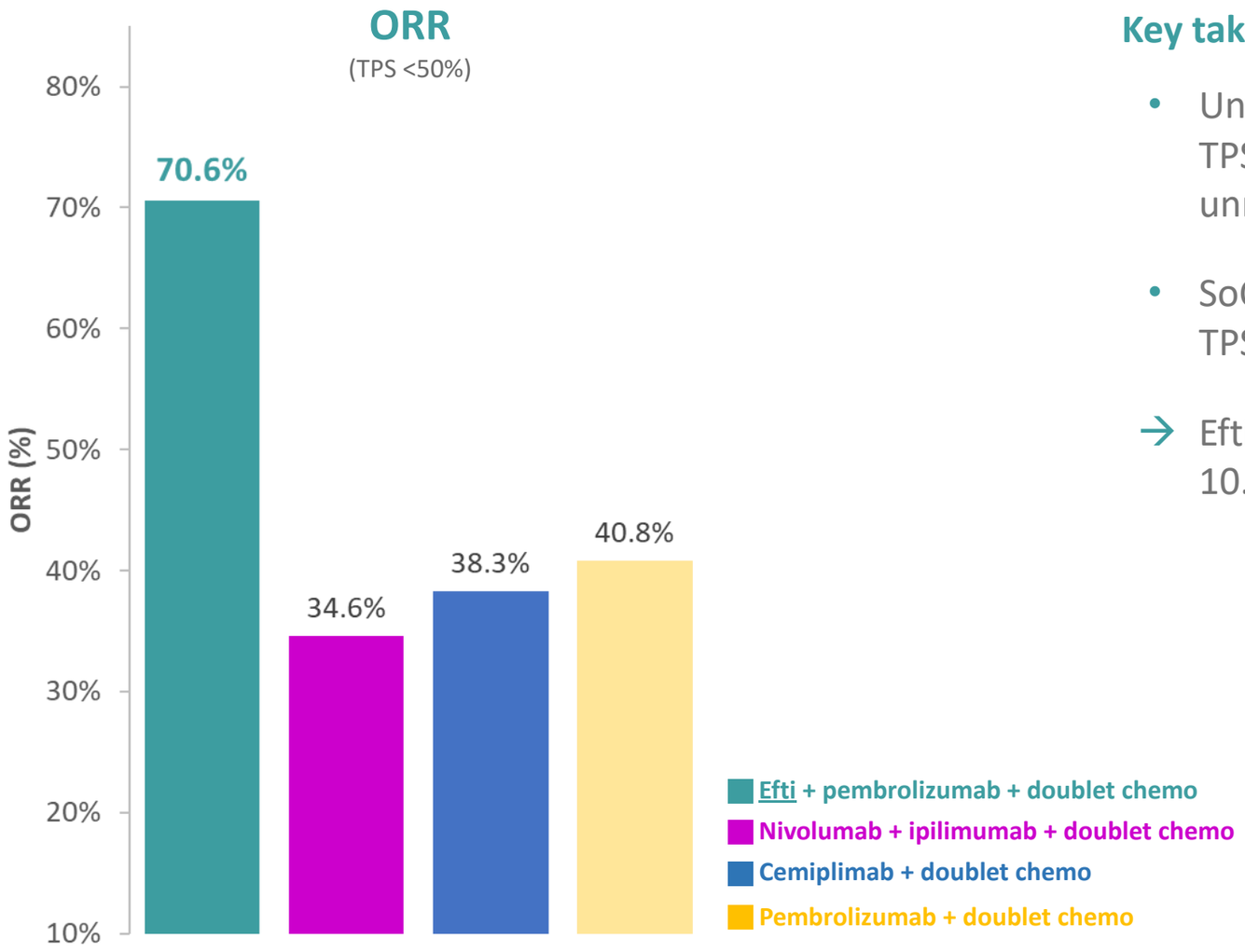
- Patients with negative or low PD-L1 status (TPS <50%) showed ORR of 70.6%
- Responses are deep



Source: ESMO 2023 Poster (#1042P) – A Atmaca et al., INSIGHT 003 evaluating feasibility of eftilagimod alpha (soluble LAG-3) combined with 1st line chemo-immunotherapy in metastatic non-small cell lung cancer (NSCLC) adenocarcinomas – a multicenter early phase trial –

Benchmarking

Efti + anti-PD1 + Chemo vs. SoCs in PD-L1 TPS <50%



Key takeaways:

- Until now chemo combination mostly used in pts with TPS <50% → ORR of SoC around ~40% foremost → high unmet medical need especially for long-term outcomes
- SoC historically achieved around ~7.5 months mPFS in TPS <50% population

→ Efti on top of chemo + PD-1 leads to ORR >> 60% and 10.9 months mPFS in INSIGHT-003

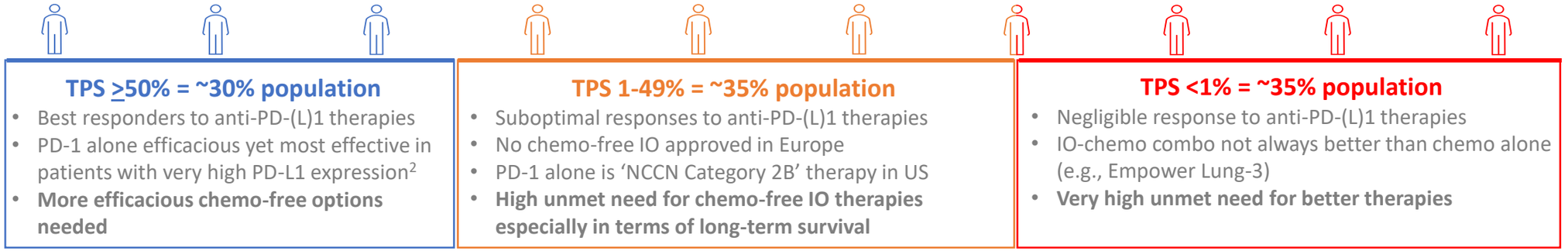
Sources:
KN-189: Gadgeel et al. 2020, DOI https://doi.org/10.1200/JCO.19.03136; **EMPOWER-Lung 3:** EPAR Assessment Report MA/CHMP/118736/2023 of 23 February 2023; **CheckMate 9LA:** M. Reck et al. *Lancet Oncol* 2021, https://doi.org/10.1016/j.esmoop.2021.100273; *EMPOWER-Lung 3 (Cemiplimab + doublet chemo) and CM-9LA data includes squamous patients as well

Efti Uniquely Positioned in 1st line Non-Small Cell Lung Cancer

Large potential opportunity for efti with both chemo-free IO-IO and IO-IO-chemo combinations

1L NSCLC Patient Population by PD-L1 Tumor Proportion Score (TPS)[1]

PD-1 expression levels have substantial impact on clinical outcomes for anti-PD-(L)1 therapies. The strength of the clinical data presented at ESMO 2023, SITC 2022, and ASCO 2022 shows *efti has significant potential to address all PD-L1 levels*.



TPS ≥50% = ~30% population

- Best responders to anti-PD-(L)1 therapies
- PD-1 alone efficacious yet most effective in patients with very high PD-L1 expression[2]
- **More efficacious chemo-free options needed**

TPS 1-49% = ~35% population

- Suboptimal responses to anti-PD-(L)1 therapies
- No chemo-free IO approved in Europe
- PD-1 alone is 'NCCN Category 2B' therapy in US
- **High unmet need for chemo-free IO therapies especially in terms of long-term survival**

TPS <1% = ~35% population

- Negligible response to anti-PD-(L)1 therapies
- IO-chemo combo not always better than chemo alone (e.g., Empower Lung-3)
- **Very high unmet need for better therapies**

65% patient population, >$10 billion TAM[3]

Strategy A: IO-IO

Goal: **Create an efficacious chemo-free regimen for 1L NSCLC patients** with TPS ≥1% without actionable mutations.

70% patient population, >$10 billion TAM[3]

Strategy B: Chemo-IO-IO

Goal: **Create a new standard** for 1st line NSCLC patients with TPS <50% without actionable mutations.

(1) Patient population estimates by PD-L1 expression: based on publications of registrational trials KN-001, KN-189, KN-407, EMPOWER-Lung 3 and TACTI-002 all comer Phase II trial. (2) Aguilar et al. Ann. Onc. 2019, 1;30(10):1653-1659. DOI: 10.1093/annonc/mdz288
(3) Market size estimates are based on intelligence data from GlobalData and Nature Reviews Drug Discovery 22, 264-265 (23 Jan 2023) doi: https://doi.org/10.1038/d41573-023-00017-9. Note Efti + pembrolizumab has Fast Track Designation in >1% TPS in 1L NSCLC.

Pipeline Update

Efti + Pembro in 2nd Line Head & Neck Squamous Cell Carcinoma

Strong, long-lasting efficacy and favourable safety; positive benchmarking to pembro monotherapy

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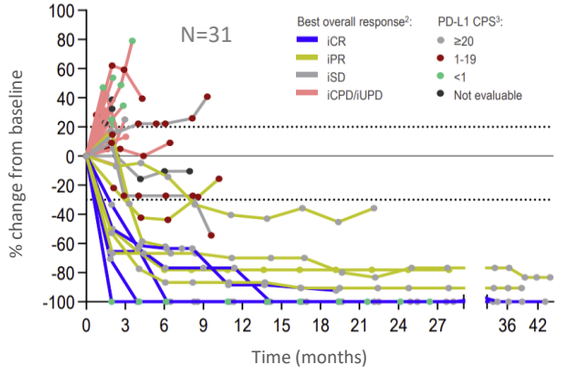
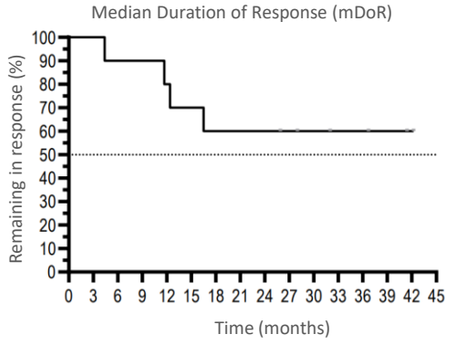
TACTI-002/KEYNOTE-798: 2nd Line Head & Neck Squamous Cell Carcinoma (Part C)

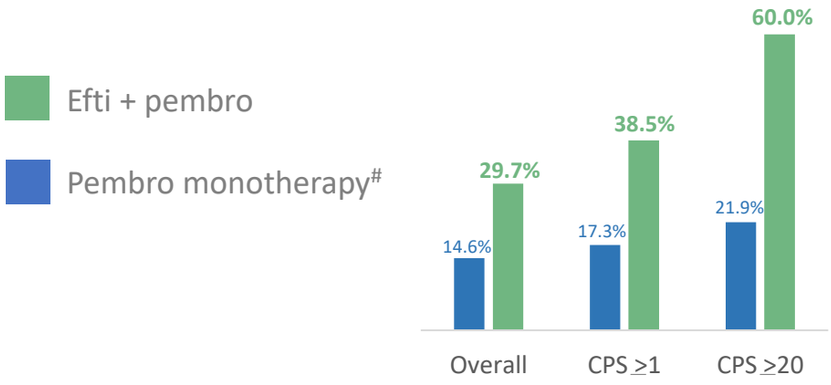
Deep, durable responses from efti + pembro across all PD-L1 levels including 5 Complete Responses[1]



Median DoR Not Reached* (efti driving durable responses)

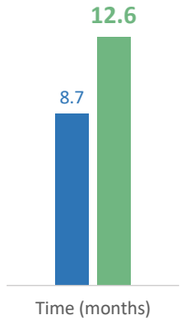


More than double Overall Response Rates

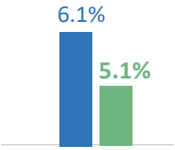


8X increase in Complete Response rate

~50% increase in Overall Survival in CPS ≥1*



Discontinuation due to treatment related AEs

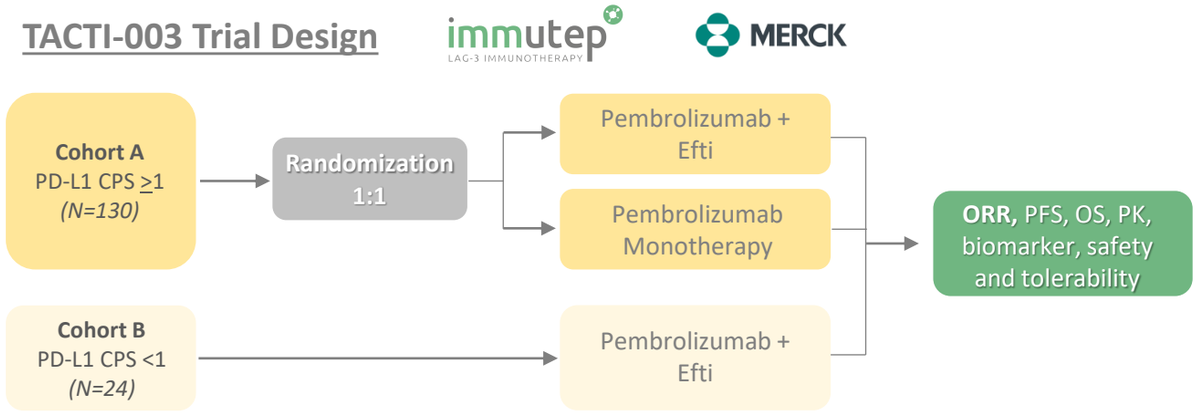


*ASCO 2023. Final results from TACTI-002 Part C: A Phase II study of eftilagimod alpha (soluble LAG-3 protein) and pembrolizumab in patients with metastatic 2nd line head and neck squamous cell carcinoma unselected for PD-L1 (Data cut-off March 31, 2023) #Data for Keytruda (pembrolizumab monotherapy or 'pembro mono') derived from KN-040 trial. [1] All pts with ≥1 post-baseline CT scan with evaluable response; n=31. Pts listed with iPR/iCR whether confirmed or unconfirmed. [2] Best overall response by iRECIST (local assessment). [3] Central PD-L1 assessment with Dako kit.

TACTI-003 Phase IIb in 1st Line Head & Neck Squamous Cell Carcinoma (Fast Track Designation)

TACTI-003 - Randomised Phase IIb Trial in 1L HNSCC patients utilizing efti + pembrolizumab versus pembrolizumab (KEYTRUDA®) monotherapy*

- Efti has FDA Fast Track designation in 1L HNSCC based on strength of data from TACTI-002 trial in 2L HNSCC
- TACTI-003 has multiple shots on goal: CPS ≥1, CPS 1-19, CPS ≥20, and CPS <1
  - In Cohort A (N=130), trial design includes 1L HNSCC patients whose tumours express PD-L1 (CPS ≥1) with CPS 1-19 and CPS ≥20 used as stratification factors
  - In Cohort B (N=24), patients with negative PD-L1 expression (CPS <1) only receive efti plus KEYTRUDA® because anti-PD-1 monotherapy is ineffective in this patient population
- Recruitment nearing completion



* Pembrolizumab monotherapy approved for 1st line HNSCC patients whose tumors express PD-L1 (CPS ≥1) and pembrolizumab with chemo approved for 1st line HNSCC in all-comer PD-L1 population. FDA approval based on KN-048.

Efti + Chemo in Randomized Phase IIb in Metastatic Breast Cancer

Efti drove broad anti-cancer immune response & synergies with chemo led to encouraging efficacy/safety

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AIPAC (Active Immunotherapy and PAClitaxel) Phase IIb in Metastatic Breast Cancer (MBC) – Strong results from double blind, 1:1 randomized Phase IIb study with 226 patients testing efti + paclitaxel (N=114) against paclitaxel + placebo (N=113)

Positive trends in ORR, DCR and OS

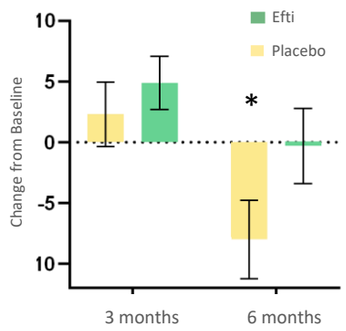
	Efti + paclitaxel	Paclitaxel	Differential
Overall Response Rate	48.3%	38.4%	+9.9%
Disease Control Rate	85.1%	75.9%	+9.2%
Overall Survival	20.4 months	17.5 months	+2.9 months

Significant OS improvement in 3 pre-specified subgroups

Pre-specified Subgroups	Median Overall Survival	Hazard Ratio	P-value
Low Monocytes	+19.6 months	HR 0.44	p=0.008
Under 65 Years	+7.5 months	HR 0.66	p=0.017
Luminal B	+4.2 months	HR 0.67	p=0.049

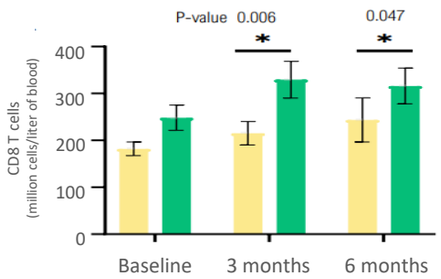
Sustained Quality of Life (QoL)

vs significant decline in placebo grp*

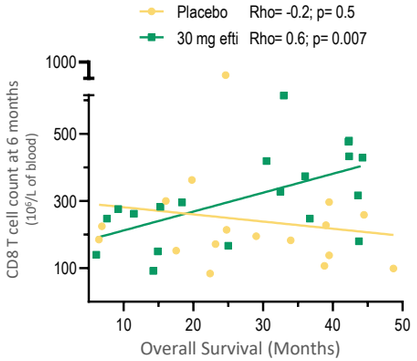


CD8⁺ T cell count increased significantly

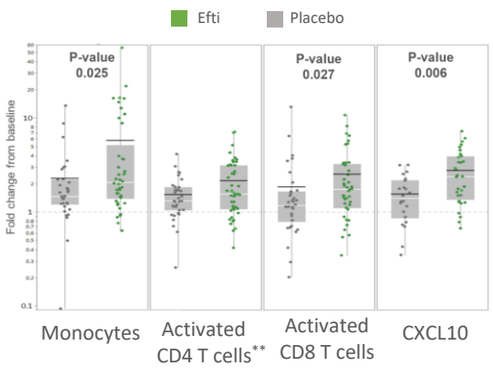
Blood samples taken before dosing ensuring only minimal residual effect was measured



Significant correlation between OS and Cytotoxic CD8⁺ T cell count



Significant increase in anti-tumor cells and biomarkers



Results published: Biomarker and multivariate analyses results from AIPAC: A phase IIb study comparing eftilagimod alpha (a soluble LAG-3 protein) to placebo in combination with weekly paclitaxel in HR + HER2 - metastatic breast carcinoma – ESMO Breast 2022, Database cut-off date was May 14, 2021; *Quality of Life (QoL) as measured by Global Health Status / QoL QLQC30-B23; ** Increase in activated CD4 T cells but not statistically significant. Further results derive from published poster at SITC 2021 in November 2021, Database cut-off date was May 14, 2021.

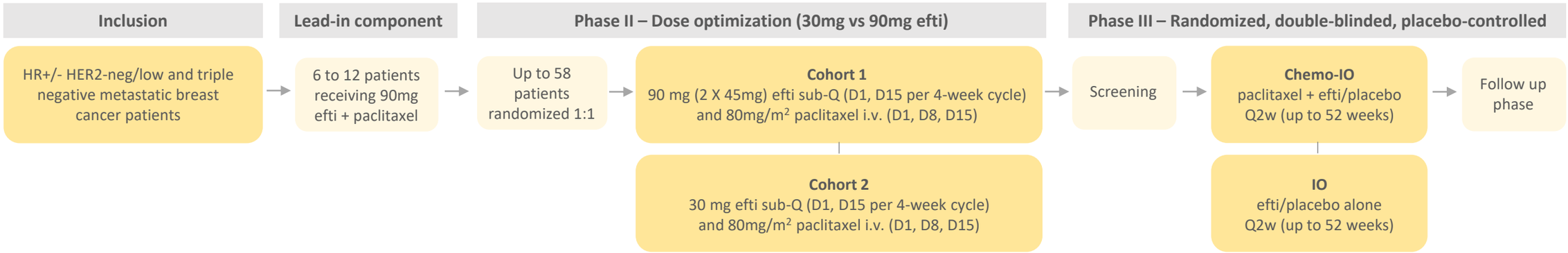
AIPAC-003 Phase II/III Trial Underway in Metastatic Breast Cancer

AIPAC-003: **A**ctive **I**mmunotherapy (Eftilagimod Alpha) and **PAC**litaxel

AIPAC-003: Integrated Phase II/III trial in Metastatic Breast Cancer (MBC)

- Trial design provides risk-balanced approach and incorporates feedback from FDA & EMA, including expansion of HR+/- HER2-neg/low and triple negative MBC patient population that together account for ~78% of breast cancer cases[1]
- Unlike previous trial that administered efti + paclitaxel on different days and ceased paclitaxel at six months, AIPAC-003 patients will receive both on same day and efti + paclitaxel treatment can continue until disease progression.
- First patient enrolled May 2023*; currently 6 patients on trial with 90 mg

AIPAC-003 Study Design



Biomarker and multivariate analyses results from AIPAC: A phase IIb study comparing eftilagimod alpha (a soluble LAG-3 protein) to placebo in combination with weekly paclitaxel in HR+ HER2- metastatic breast carcinoma – ESMO 2022; * As reported on 25 May 2023, Immutep Doses First Patient in AIPAC-003 Phase II/III Trial for Metastatic Breast Cancer. ** Subject to results and resources. [1] Cancer Stat Facts: Female Breast Cancer Subtypes - NCI SEER. [2] World Health Organization; Breast Cancer Fact Sheet. [3] Estimation of Datamonitor Healthcare, Informa Pharma Intelligence for US, Jap, EU

IMP761: First-in-Class LAG-3 Agonist is Potential Game-Changer

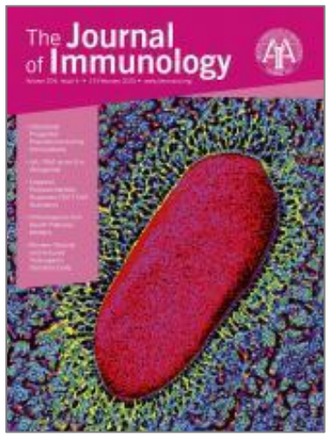
ELSEVIER

Current Opinion in Immunology
Volume 67, December 2020, Pages 1-9

Inhibitory receptor agonists: the future of autoimmune disease therapeutics?

Stephanie Grebinoski [1 2], Dario AA Vignali [1]

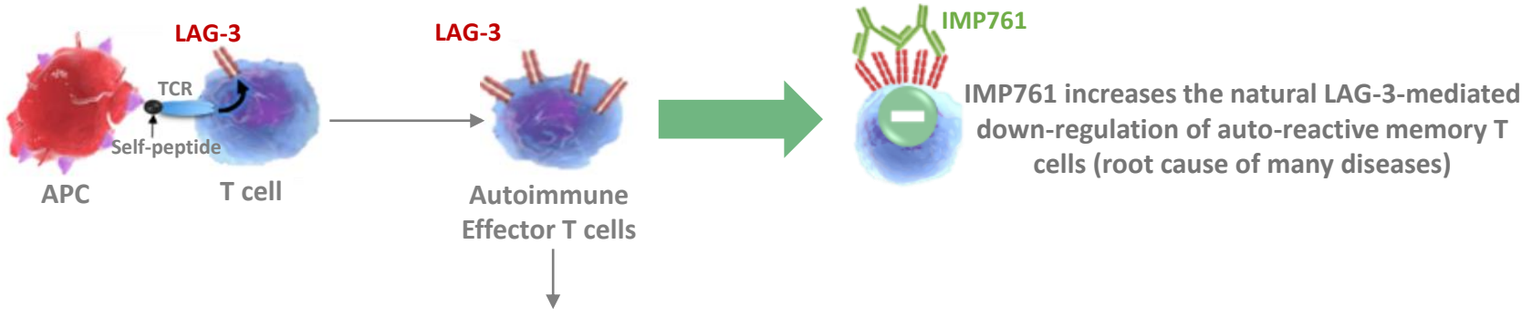
Central and peripheral tolerance both contribute to protection against autoimmunity. The pathogenesis of autoimmunity, however, can result from critical deficits or limitations in peripheral and/or central tolerance mechanisms, presenting an opportunity for therapeutic intervention. Recent advances highlight the substantial impact of inhibitory receptors (IRs), which mediate peripheral tolerance, in autoimmunity. Deletion and blockade studies in mice, IR disruption in humans, and correlation with positive disease outcomes all highlight potential clinical benefits of enhancing IR signaling (agonism)—specifically CTLA4, PD1, LAG3, TIM3 and TIGIT—to treat autoimmune disease. Although critical questions remain, IR agonists represent an unappreciated and untapped opportunity for the treatment of autoimmune and inflammatory diseases.



*A LAG-3-Specific Agonist Antibody for the Treatment of T Cell-Induced Autoimmune Diseases**

*Juvenile idiopathic arthritis: LAG-3 is a central immune receptor in children with oligoarticular subtypes***

As the world's first immunosuppressive agonist antibody to LAG-3 acting upstream on activated T cells, IMP761 targets the root cause of many autoimmune diseases and represents a potential game-changer in the treatment landscape. Expect to enter clinic by mid-2024.



Epigenetic reprogramming leads to T cell helper (Th) induced AI diseases: Th1 (e.g., Rheumatoid Arthritis), Th2 (e.g., Allergic Asthma), Th17 (e.g., IBS), etc.

Stephanie Grebinoski, Dario AA Vignali, Inhibitory receptor agonists: the future of autoimmune disease therapeutics?, Current Opinion in Immunology, Volume 67, 2020, Pages 1-9, ISSN 0952-7915, https://doi.org/10.1016/j.coi.2020.06.001.

Outlook & Milestones Ahead

Biotech Sector Year-to-Date

- NASDAQ Biotechnology Index is down 19% YTD as the market weighs the prospects of a “higher for longer” strategy by the US Federal Reserve

YTD comparison of IMMP (Immutep NASDAQ traded ADR and the Exchange Traded Fund XBI (S&P Biotech ETF representing the US listed biotech industry)*. IMMP YTD +16.57% / XBI YTD -19.17%.

On 17 May 2023 IMMP was one of the most highly traded stocks on NASDAQ (as shown below), following the release of the initial overall survival benefit data in 1st line NSCLC. To celebrate this achievement, NASDAQ's bell tower in Times Square lit up with a congratulatory message to Immutep!

- Sector continues to face reduced capital availability in a landscape of higher rates and tightening credit conditions with high geopolitical uncertainty
- Sector performance is expected to improve as the year progresses, with select high-quality, catalyst-driven smaller-cap biotechnology Companies.
- Sector’s capacity to innovate as a whole remains robust and there are signs big institutions are re-entering the sector.

Most Active Share Volume

Symbol	Name	Last	Change	Share Volume
TSLA	Tesla, Inc.	$173.86	+7.34	118,531,608
IMMP	Immutep Limited	$2.62	+1.03	74,683,916
AMD	Advanced Micro Devices, Inc.	$103.70	+2.22	67,685,443
AMZN	Amazon.com, Inc.	$115.56	+2.16	56,249,503
AAPL	Apple Inc.	$172.79	+0.72	44,265,221

*source: yahoo finance; 22nd Oct 2023

Recent Milestones & Looking Ahead

Metastatic Breast Cancer
Initiated AIPAC-003 PII/PIII trial of efti + chemo in MBC

Non-Small Cell Lung Cancer
Presented final data from TACTI-002 (Part B) in anti-PD-(L)1 refractory 2L NSCLC

Metastatic Urothelial Carcinoma
Received regulatory approval for initiation of jointly-funded INSIGHT-005 with Merck KGaA, Darmstadt, Germany

AIPAC-003 → EFTISARC-NEO → TACTI-002 → TACTI-002 → INSIGHT-005 → 2023 & 2024

Soft Tissue Sarcoma
Commenced cost-efficient investigator-initiated chemo-free EFTISARC-NEO PII study in soft tissue sarcoma

Head & Neck Squamous Cell Carcinoma
Presented final data from TACTI-002 (Part C) in 2L HNSCC

Non-Small Cell Lung Cancer
Data updates from TACTI-002 PII trial, including biomarker results from 1st line NSCLC at SITC in Nov 2023

Head and Neck Cancer
Complete enrolment and announce data from randomised TACTI-003 Phase IIb trial

Non-Small Cell Lung Cancer
Data updates from triple combination INSIGHT-003 PI trial with efti + anti-PD-1 + chemotherapy in 1st line NSCLC

Metastatic Urothelial Carcinoma
Update from investigator-initiated INSIGHT-005 study

Soft Tissue Sarcoma
Update from investigator-initiated EFTISARC-NEO study

Autoimmune Diseases
IND-enabling studies of IMP761

Updates from partnered programs

Updates regarding expansion of clinical trial pipeline

Cash position of ~A$110.1m as of 30 Sep 2023, post A$80m capital raise, providing cash runway to early CY2026

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LAG-3 IMMUNOTHERAPY

Thank You