

SITC 2021 Results: Management Update

GLOBAL WEBCAST

Date & Time: 8.00 am AEDT (Sydney) Wednesday 17 November 2021

4.00 pm EST (New York) Tuesday 16 November 2021 10.00 pm CET (Berlin) Tuesday 16 November 2021

Register: https://fnn.webex.com/fnn/onstage/g.php?MTID=ef12af93633b5d17a2e4e176fcac2f070

A replay of the webcast will also be available at www.immutep.com

(ASX: IMM, NASDAQ: IMMP)

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Overview



Immutep

is an innovative biotechnology company developing novel immunotherapies for cancer and autoimmune disease

Globally active



Leadership position in LAG-3



with 4 product candidates in immuno-oncology and autoimmune disease

Clinical Potential



Immutep's product candidates have demonstrated clinical potential in a range of indications with high unmet need

Collaborating with industry leaders





















LAG-3 Pioneer



French immunologist Prof. Frédéric Triebel, Immutep CMO & CSO



LAG-3 Overview & Product Candidates

LAG-3 Therapeutic Landscape Overview



		Company	Program	Preclinical	Phase I	Phase II	Phase III	Total Trials	Patients
	Agonist	immutep®	Eftilagimod Alpha ⁽⁵⁾		10	4		14	967
		BMS	Relatlimab ⁽⁶⁾		7	32	2	41	9,775
		Merck & Co. Inc.	Favezelimab		(1)	5	Ţ	6	1066
		U NOVARTIS	Ieramilimab		1	4	PDUFA goal date March 19, 2022	5	952
		Macrogenics	Tebotelimab		3	3		6	1422
<u> </u>		H-L Roche	RO7247669		1	2		3	538
Oncology	75	B.I.	BI754111		4	1		5	649
0	Antagonist	Regeneron ⁽¹⁾	Fianlimab		1	1		2	836
	Ant	Innovent	IBI110		1	1		2	328
		Tesaro ⁽³⁾	TSR-033		1	1		2	139
		Incyte	INCAGN02385		1	1		2	74
		Symphogen ⁽²⁾	SYM022		3			3	169
		F-star	FS-118		2			2	102
		Xencor	XmAb-22841		1			1	242
mune	Agonist	immutep [©]	IMP761						
Autoimmune	Depleting AB	gsk (4)	GSK2831781 (IMP731)		2	1		3	207

Sources: GlobalData, Company websites, clinicaltrials.gov, and sec.gov, as of 25th October 2021. The green bars above represent programs conducted by Immutep &/or its partners. Total trials includes all active, completed &/or inactive trials. Patient totals are based on estimated total enrolled &/or to be enrolled. Not a complete list of currently existing LAG-3 products.

⁽https://www.sec.gov/Archives/edgar/data/872589/000110465919000977/a19-1325_18k.htm)

²⁾ On 3 Apr. 2020 Les Laboratoires Servier acquired Symphogen
3) Tesaro was acquired by and is now part of GSK (www.gsk.com/en-gb/media/press-releases/gsk-completes-acquisition-of-tesaro-an-oncology-focused-biopharmaceutical-company/)

⁵⁾ Including IITs, one planned trials (MBC trial by EOC)

RELATIVITY-047 (https://investors.bms.com/iframes/press-releases/press-release-details/2021/Bristol-Myers-Squibb-Announces-RELATIVITY-047-a-Trial-Evaluating-Anti-LAG-3-Antibody-Relatlimab-and-Opdivo-nivolumab-in-Patients-with-Previously-Untreated-Metastatic-or-Unresectable-Melanoma-Meets-Primary-Endpoint-of-Progression-Free-Survival/default.aspx)

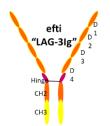


Eftilagimod Alpha Bringing APC Activation into Oncology

Eftilagimod alpha ~ Efti ~ IMP321

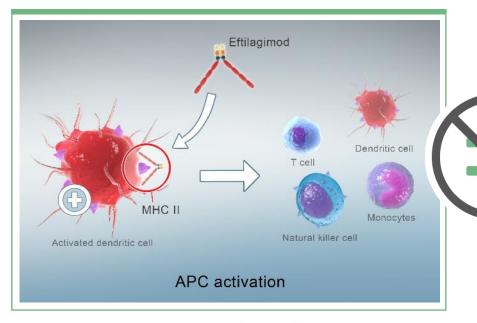
Efti: an Innovative LAG-3 I-O Product Candidate





- Efti is a soluble LAG-3 protein targeting a subset of MHC class II on APC
- Potentially synergistic with other therapeutic agents, e.g. Immuno-Oncology (I-O) agents or chemotherapies

"PUSHING THE ACCELERATOR ON IMMUNE RESPONSES"

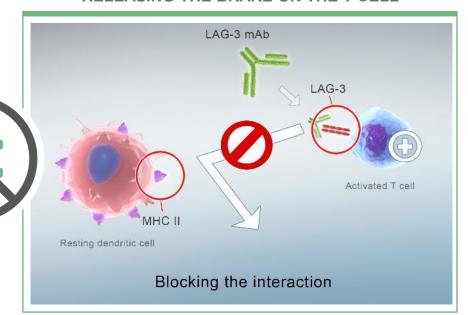


Efti is an MHC II agonist:

APC activator

- boost and sustain the CD8+ T cell responses
- activate multiple immune cell subsets

"RELEASING THE BRAKE ON THE T CELL"



LAG-3 antagonist, or blocking, antibodies: **Immune checkpoint inhibitor**

increase cytotoxicity of the pre-existing CD8
 T cell response

Clinical Development

Efti: Main Trials*



	Program	Preclinical	Phase I	Phase II	Late Stage ⁽⁵⁾	Commercial Rights
		Metastatic Breast Cancer (AIPAC-003	Chemo – IO) ⁽¹⁾			
		Metastatic Breast Cancer (AIPAC	Chemo – IO)			
		Head and Neck Squamous TACTI-003	Cell Carcinoma (IO – IO) ⁽²⁾		MERCK INVENTING FOR LIFF	
		Head and Neck Squamous TACTI-002	Cell Carcinoma (IO – IO) (2)		MERCK INVENTING FOR LIFF	
<u>×</u>	Eftilagimod Alpha (Efti or IMP321)	Non-Small-Cell Lung Carci TACTI-002	noma (IO – IO) ⁽²⁾		MERCK INVENTING FOR LIFE	
Oncology	APC activating soluble LAG-3	Solid Tumors (IO – IO – CI INSIGHT-003	nemo) ⁽³⁾		S	Global Rights immutep
0	Protein	Solid Tumors (IO – IO) ^{(3), (4} INSIGHT-004	a)	Merck KGaA, Darmstadt, Germany		
ı		Solid Tumors (IO – IO) (1), (3 INSIGHT-005), (4b)	Merck KGaA, Darmstadt, Germany		
ı		Melanoma (IO – IO) ⁽²⁾ TACTI-mel				
ı		Solid Tumors (Cancer Vacc YNP01 / YCP02 / CRESCE		CYTLIMIC Cytotoxic T Lymphocyte Immunotherapy in Cancer		
		Metastatic Breast Cancer (Chemo – IO) ^(5b)		♦ EOC	Chinese Rights

Notes:

Information in pipeline chart current as at November 2021. AIPAC-003 and INSIGHT-005 trial initiation are subject to further approvals.

⁾ Planned trial

⁽⁴⁾

⁽⁴⁾ a) In combination with BAVENCIO® (avelumab); b) in combination with intrafusp alfa

⁽⁵⁾ a) Conducted by CYTLIMIC in Japan; b) Conducted by EOC in China. Immutep has no control over either of these trials.

⁽⁶⁾ Late stage refers to Phase IIb clinical trials or more clinically advanced clinic

Clinical Development

Operational Update



TACTI-002

- ✓ Recruitment into Part A (1st line NSCLC) is expected to be completed ahead of time, due to great interest from sites.
- √ 70+ of 74 patients for part A extension already enrolled.

TACTI-003

- ✓ Full CTA approvals received in 5 of 8 countries → no roadblocks or any major comments received from authorities.
- ✓ Recruitment initiated, first patients randomized.

INSIGHT

- ✓ INSIGHT-003 (efti+SoC (e.g. doublet chemo + PD-1) in e.g. 1st line NSCLC) has enrolled already 5 patients.
- ✓ Preparation for **INSIGHT-005** collaboration with Merck KGaA are ongoing, but under review due to bintrafusp alfa performance.

AIPAC-003

- ✓ Positive feedback from EMA received.
- ✓ FDA discussion ongoing as planned.



Efti + Chemo Combination AIPAC trial

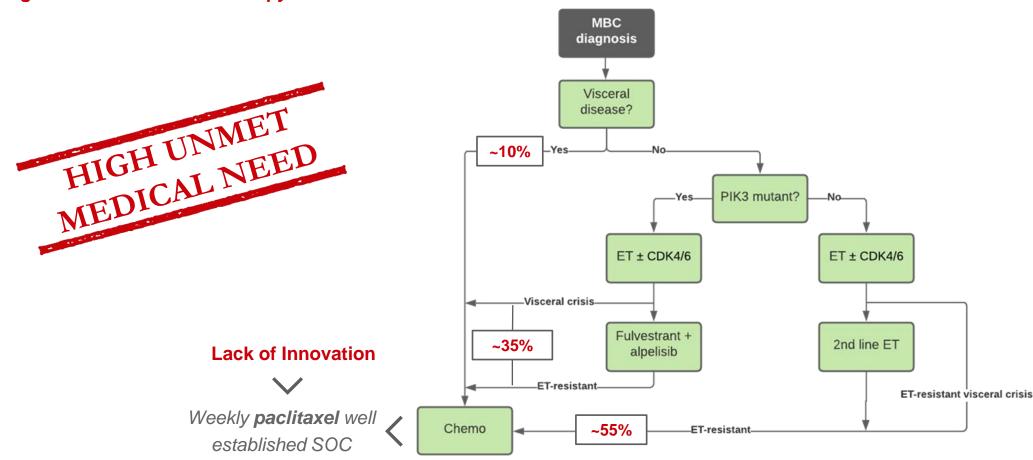
Final OS results presented at SITC, 10-14 November 2021

Goal: Improving OS while maintaining QoL in HR+/HER2- MBC patients



Epidemiology:

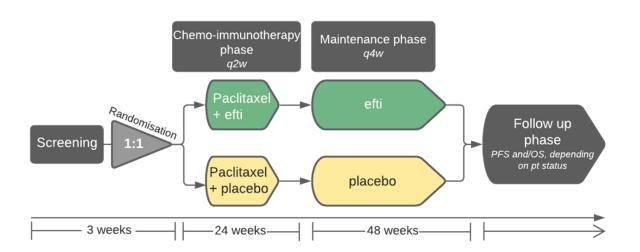
- Breast cancer (BC) is the **most frequently diagnosed cancer**. More than 2 million breast cancer (thereof ~70% HR+/HER2--) diagnoses per annum worldwide.
- Up to 550,000 patients in total and app. 350,000 patients younger than 65 develop metastatic disease and are eligible to receive chemotherapy⁽¹⁾ (2)



Efti: AIPAC (Phase IIb) design



AIPAC: Active Immunotherapy PAClitaxel in HER2-/ HR+ metastatic breast cancer (MBC)



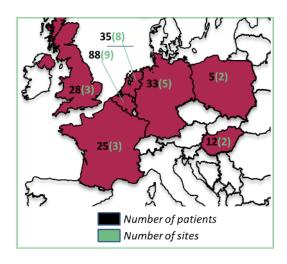
Hypothesis-Generating Study

Primary endpoint(*) (presented Mar. 2020) included:

Assessment of Progression-Free Survival (PFS)

Secondary endpoints(*) (presented Dec. 2020) included:

- Overall Survival (OS)
- Safety and tolerability
- Overall Response Rate (ORR) and other efficacy parameters
- Biomarker and Immune Monitoring



Fact sheet

- √ Conducted in 7 FU countries.
- √ Local and blinded independent central read
- √ Last Patient In enrolled Jun. 2019
- √ Primary analysis PFS (immature OS) Mar. 2020
- ✓ Follow-up 1 analysis OS Sep. 2020 (SABCS Dec. 2020) - ~60% OS events
- √ Final OS analysis at SITC 2021

AIPAC Phase IIb Clinical Results

Baseline Characteristics



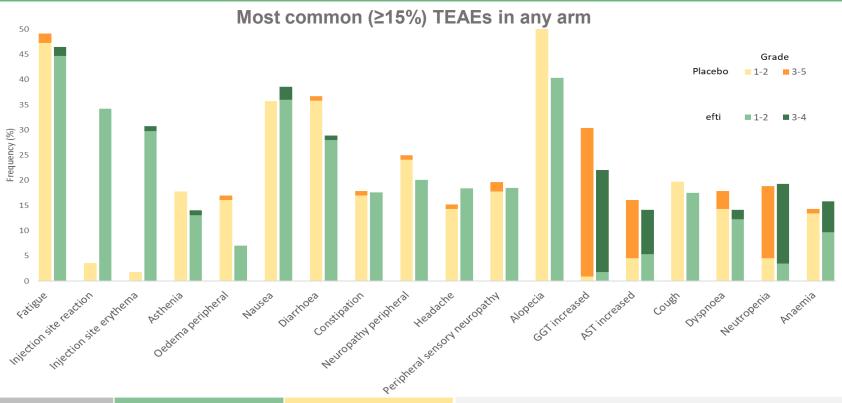
- Well balanced treatment groups.
- > Difficult to treat patient population:
 - Very late stage disease: 92% with visceral disease and 69% with elevated LDH
 - Heavily pre-treated subjects: 84% endocrine resistant; 44% received prior CDK 4/6; median of 2 prior systemic anticancer regimens.
 - HR+/HER2- tumor is traditionally <u>not</u> considered immunogenic.
- 227 patients were randomized to efti (N=114) or to placebo (N=113) between January 2017-July 2019. All except one patient received at least 1 dose of study medication and were included in the full analysis and safety populations.

	Efti + Paclitaxel N=114	Placebo + Paclitaxel N=112	Overall N=226
Baseline characteristics, n (%)			
Age, median (range), years <65 years	58 (24-87) 76 (66.7)	61 (35-79) 71 (63.4)	60 (24-87) 147 (65.1)
Body mass index, median (range)	24.7 (18.1-48.1)	24.9 (15.4-44.5)	24.7 (15.4-48.1)
ECOG 0	69 (60.5)	70 (62.5)	139 (61.5)
Visceral disease	103 (90.4)	104 (92.9)	207 (91.6)
Luminal A / B / Other¶, %	34.1 / 48.8 / 17.1	36.7 / 49.4 / 13.8	35.5 / 49.1 / 15.4
Monocytes < 0.25/nl	25 (21.9)	22 (19.8)	47 (20.9)
Elevated (>250 U/L) LDH	74 (65.5)	81 (73.0)	155 (69.2)
Prior therapy, n (%)			
Prior surgery Prior radiotherapy Prior systemic therapy Prior adjuvant therapy Prior therapy for metastatic disease	92 (80.7) 87 (76.3) 106 (93.0) 85 (74.6) 78 (68.4)	94 (83.9) 84 (77.7) 108 (96.4) 81 (72.3) 80 (71.4)	186 (82.3) 174 (77.0) 214 (94.7) 166 (73.5) 158 (69.9)
Prior taxanes (adjuvant) Prior CDK4/6 Prior endocrine therapy Endocrine resistant ^A	51 (44.7) 50 (44.6) 103 (90.4) <i>85 (82.5)</i>	43 (38.4) 50 (43.9) 104 (92.9) <i>89 (85.6)</i>	94 (41.6) 100 (44.2) 207 (91.6) 174 (84.1)

AIPAC Phase IIb Clinical Results

Outstanding Safety Profile





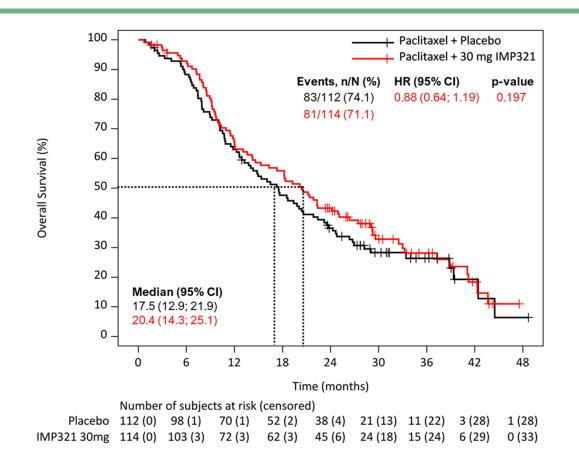
Summary of treatment-emergent adverse events (TEAEs) ¶	Efti + Paclitaxel N=114, n (%)	Placebo + Paclitaxel N=112, n (%)
≥1 TEAE	113 (99.1)	112 (100)
≥1 TEAE leading to death	2 (1.8)	3 (2.7)
≥1 TEAE leading to efti/placebo discontinuation	6 (5.3)	7 (6.3)
≥1 Grade ≥3 TEAE	78 (68.4)	73 (65.2)

- No fatal TEAE related to efti
- 3 pts discontinued due to hypersenstivity reactions developing after efti injections and 4 pts due to paclitaxel-induced hypersensitivity, respectively
- Most common efti related adverse event was any kind of local injection site reaction up to grade 3 reported in 75 (65.8%) pts in the efti arm

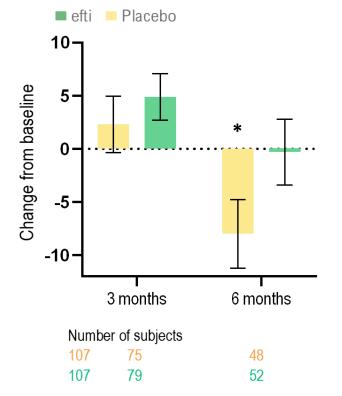
Overall Unselected Population*

Improving OS with better QoL









- Increase in OS: +2.9 months from median of 17.5 (95% CI: 12.9-21.9) in placebo to 20.4 (95% CI: 14.3 -25.1) in the efti group.
- Post-study treatment similar: 86 % (efti) vs. 90 %(placebo);
 majority received chemotherapy 70.2% (efti) vs. 76.8% (placebo)
- Preserving QoL in the efti arm, while significant deterioration of QoL (QLQ-C30-B23) observed in the placebo group at 6 months.
- Note: Paclitaxel treatment intensity was similar between groups

AIPAC Phase IIb Clinical Results

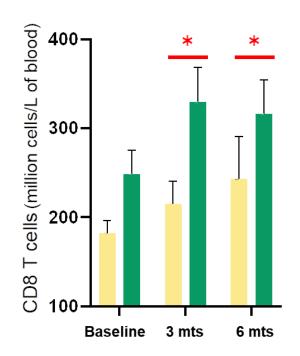
Immune Monitoring on Fresh Blood (up to 70 patients)



Significant Increase of CD8+ T Cell Count

Minimal Residual Effect: samples taken just before next treatment

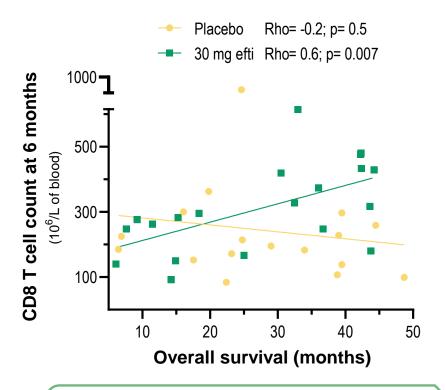




Proof of Principle
Number of T cells increased in efti group,
especially cytotoxic CD8+ T cells

Significant Correlation:

OS and cytotoxic CD8+ T cell count



Proof of Concept

Increased number of cytotoxic CD8+ T cells correlated with improved OS in the efti arm

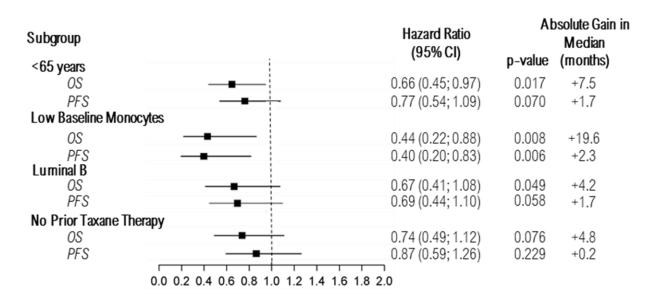
Prespecified Subgroups*

Exploratory Analysis



Exploratory multivariate analyses \rightarrow Prior CDK 4/6 treatment is an independent poor prognostic factor with a 37% increase in risk for death.

- Prior CDK 4/6 has a negative impact on OS in placebo group (median reduced from 20.4 to 14.9 months), but <u>not</u> in the efti group (median OS 21.9 vs. 20.2 months).
- CDK4/6 treatment are now standard, and most patients will have received it → favorable for efti.



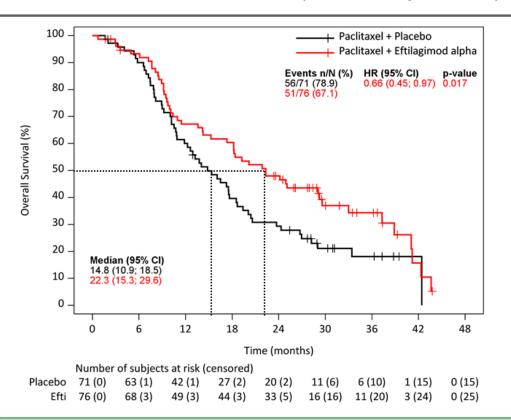
- Prespecified (prior to unblinding) exploratory univariate analysis showed that younger patients (<65 years), those with low baseline monocytes (<0.25/nL) or breast cancer subtype luminal B had significant and clinical meaningful improvement in median OS compared to placebo.
- In a post-hoc multivariate analysis "no prior taxanes" were found to be an additional predictive marker

Prespecified Subgroup <65 years*

Clinically meaningful improvement for OS, PFS and ORR

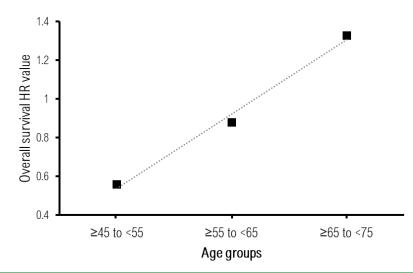


+7.5 months median OS (HR 0.66; p=0.017)



	mOS	mPFS	ORR
Benefit	+7.5 months	+2.0 months	+8%
	HR 0.66 (p=0.02)	HR 0.77 (p=0.07)	(46% vs. 38%)





- Prespecified subgroup showed significant (p=0.017, one-sided)
 improvement in OS with a HR of 0.66 (95% CI: 0.45-0.97).
- ESMO scale of magnitude** = level 4/5 (would be very supportive for reimbursement).

- HR point estimates for different age groups.
- Age had an almost linear effect on HR for OS.

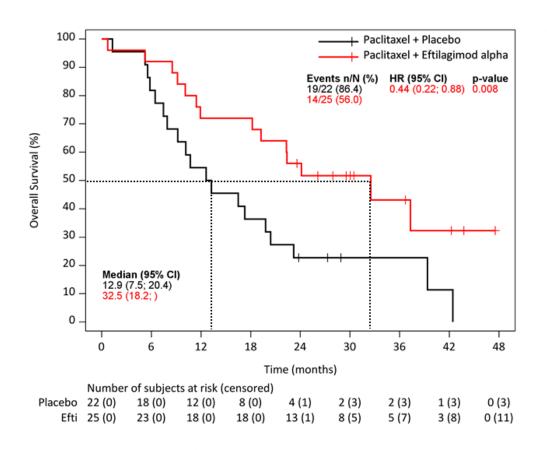
Notes

Prespecified Subgroup Low Monocytes*





+19.6 months median OS (HR 0.44; p=0.008)



	Efti + Paclitaxel	Placebo + Paclitaxel	Benefit
mOS	32.5 months	12.9 months	+19.6 months
	32.3 months	32.3 11011113	HR 0.44 (p=0.008)
mPFS	7.5 months	5.2 months	+2.3 months
IIIFFS	7.5 1110111115		HR 0.40 (p=0.006)
ORR	44%	32%	+12%

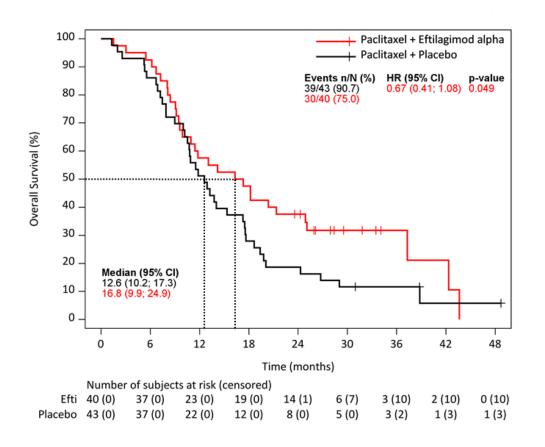
- Clinically meaningful, absolute and relative improvement for all efficacy parameters.
- Statistical significance for PFS and OS.
- ESMO scale of magnitude** = level 4/5 (would be very supportive for reimbursement).

Prespecified Subgroup Luminal B*

Overall Survival



+4.2 months median OS (HR 0.67, p=0.049)



	Efti + Paclitaxel	Placebo + Paclitaxel	Benefit
mOS	16.8 months	12.6 months	+4.2 months
11103	10.01110111115	12.0 1110111115	HR 0.67 (p=0.049)
mPFS	7.2 months	5.6 months	+1.6 months
IIIFF3	7.2 1110111115	5.6 1110111115	HR 0.69 (p=0.158)
ORR	43%	33%	+10%

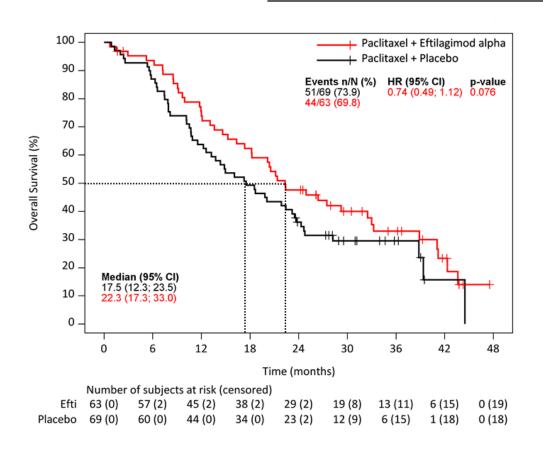
- Clinically meaningful improvement.
- Statistical significance for OS.
- ESMO scale of magnitude** = = level 3/5 (would be supportive for reimbursement).

Prespecified Subgroup No Prior Taxane*

Overall Survival



+4.8 months median OS (HR 0.74, p=0.076)



	Efti + Paclitaxel	Placebo + Paclitaxel	Benefit
mOS	22.3 months	17.5 months	+4.8 months HR 0.74 (p=0.08)
mPFS	7.4 months	7.2 months	+0.2 months HR 0.87 (p=0.229)

- Clinically meaningful improvement.
- Important in multivariate predictive model
- ESMO scale of magnitude** = = level 3/5 (would be supportive for reimbursement).

AIPAC-003: Phase III in MBC





1) Primary Endpoint: Overall Survival

- Preferred endpoint for Phase III and approval by regulatory agencies in such a patient population.
- Seems to be a better fit for active immunotherapies such as efti.

2) Treatment

 Paclitaxel will be allowed to be continued beyond 6 cycles to accommodate for EU & US standards and as a lesson from AIPAC.

3) Patient Population on Target

 Immutep will define the patient population and statistical read-out in a way to increase likelihood of success.

4) Statistical Design

• Will be robust and pre-agreed with regulatory agencies to ensure success later during MAA/BLA procedures.



Efti + anti-PD-1 Combination TACTI-002 trial

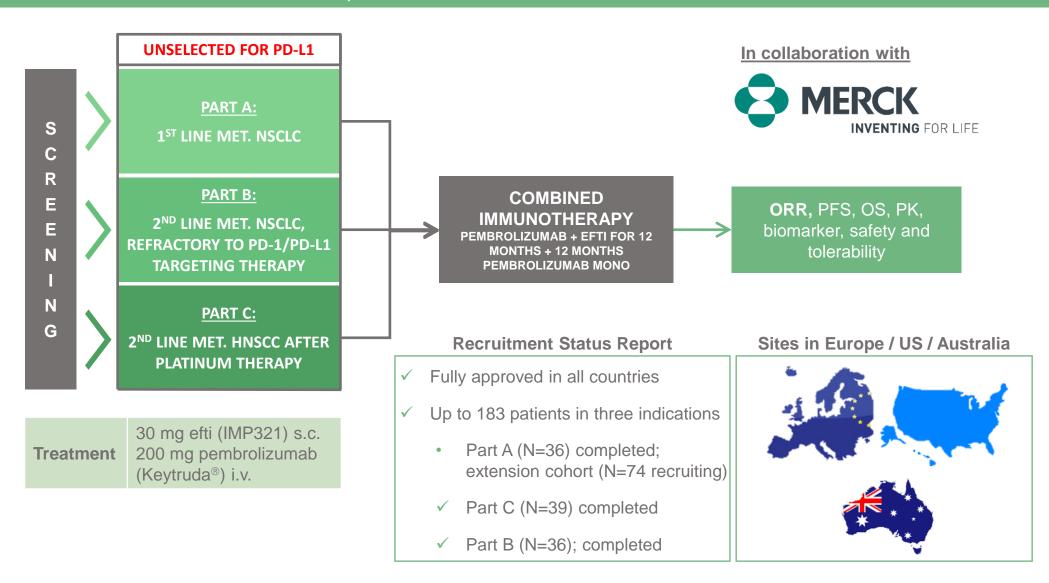
Update from SITC, 10-14 November 2021

TACTI-002 (Phase II)

Design & Status



TACTI-002: Two ACTive Immunotherapeutics in NSCLC and HNSCC

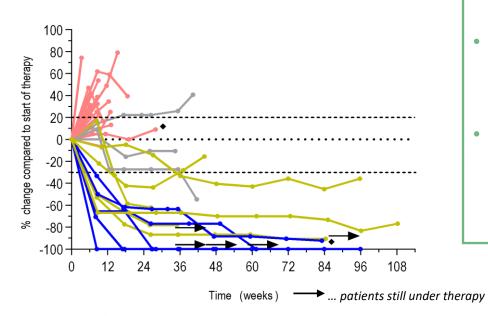


TACTI-002 Results(1)

2nd line HNSCC (Part C)

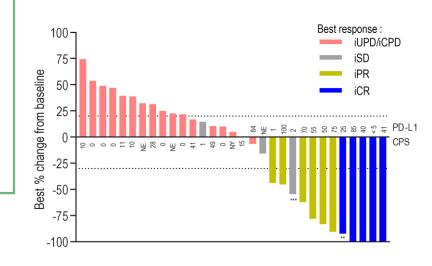


Best overall response, iRECIST	Investigator assessment N (%)
Complete Response	5 (13.5)
Partial Response	6 (16.2)
Stable Disease	3 (8.1)
Progression	17 (45.9)
Not evaluable¶	6 (16.2)
Disease Control Rate	14 (37.8)
Overall Response Rate [95% CI]	11 (29.7) [15.9 – 47.0]
Overall Response Rate – Evaluable pts* [95% CI]	11 (35.5) [19.2 – 54.6]



- ORR (iRECIST) in ITT of 29.7% and 35.5% evaluable pts
- Responses are deep with 5 (13.5%) CRs and long lasting
- ORR of 64.3% (40.7)
 in pts with CPS ≥ 20 (≥1)
- OS rates at 12 months for all PD-L1 groups in the range of 50% or above

All comer (N=37)	≥1 (N=27)	≥20 (n=14)
29.7	40.7	64.3
23	17	7
54.7	55.5	71.4
48.4	48.2	64.3
Progression-free survival		
30	17	8
37.8	48.2	64.3
32.4	40.7	57.1
	29.7 23 54.7 48.4 30 37.8	(N=37) (N=27) 29.7 40.7 23 17 54.7 55.5 48.4 48.2 30 17 37.8 48.2



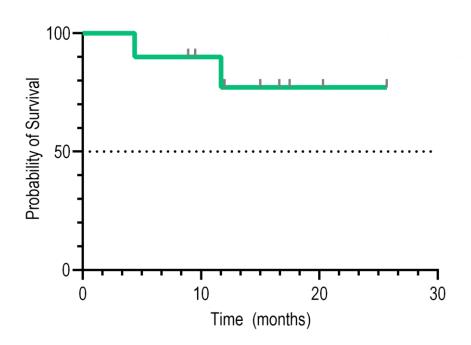
TACTI-002 Results(1)

2nd line HNSCC (Part C), DoR and Benchmarking



Duration of Response (DoR)

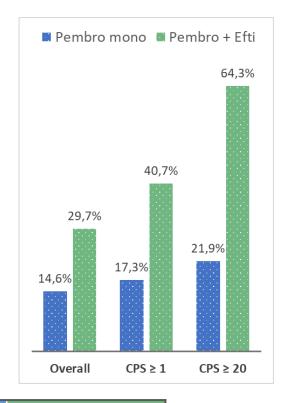
for confirmed responders (N=10)



- Median duration of response not yet reached
- all ongoing responses lasting9+ months

Benchmarking against Pembro

- ORR clearly higher (≥ factor 2) in all PD-L1 subgroups and overall
- PFS and OS rates at 6 and 12 months respectively are higher in all PD-L1 subgroups and overall with efti combination



	PD-L1 (CPS)	Pembro alone**	TACTI-002
	≥ 20	21.9%	64.3%*
ORR (%)	≥ 1	17.3% (2% CR)	40.7% * (20.8% CR*)
(70)	Overall pop.	14.6%	35.5%#
mDoR (mths)	Overall pop.	18.4	Not reached with min. 9+ months at cut-off

1st line HNSCC

Treatment options and positioning for efti + pembro



Median OS from KN-048 (1), unselected for PD-L1

10.7-11.0 months

11.6 months

↑ to 14.9 for CPS ≥ 20

13.0 months

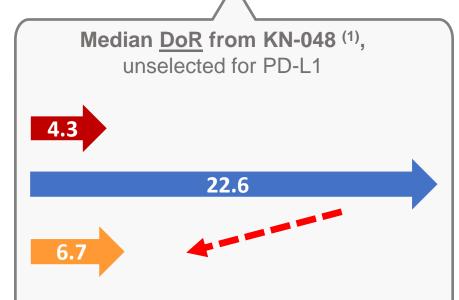
1 to 14.7 for CPS ≥ 20

- OS slightly improved by ~2 months with chemo + pembro, but pembro alone noninferior to chemo
- Substantially more toxicities in the chemo + pembro setting compared to pembro alone
- → Buy moderate OS benefit with a lot add. toxicity

Chemo + Cetuximab

Pembrolizumab

Chemo + Pembrolizumab



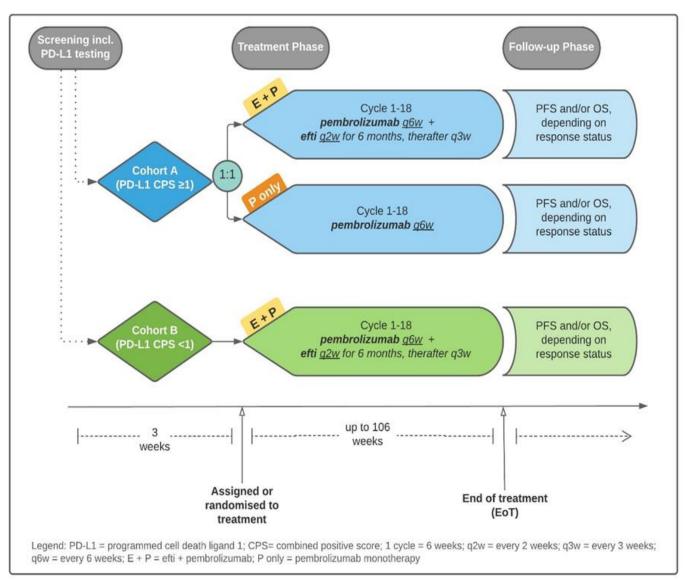
- ORR increased with chemo plus pembro (36% vs. 17% pembro alone)⁽¹⁾
- DoR drops dramatically if you add chemo
 → not the case with efti
- → Buy ORR by much shorter DoR → less benefit for pts on the long run and may explain moderate OS improvement

Combination of efti + pembro
May lead to higher ORR with same DoR
and excellent safety profile

TACTI-003 Trial in 1st line HNSCC

Current Design + Status





In collaboration with



Design:

- Randomised study with ORR as primary endpoint
- Sites worldwide (AU, US, Europe)
- Approx. 154 pts: either to be randomized to have sufficient pts in each group or in an experimental arm

Status:

- Ongoing, recruiting.
- Fast Track designation granted by FDA in April 2021



Summary and Outlook

Near-Term Milestones

Advancing Registration Relevant Trials



2021 till today

Remainder of 2021 and 2022

- ✓ Final Results from randomized, placebo controlled MBC trial (AIPAC)
- ▼ Fast Track designation in 1st line HNSCC from US FDA
- ✓ TACTI-002 recruitment & data delivered e.g. at ASCO & SITC for
 - √ 2nd line NSCLC
 - ✓ 2nd line HNSCC
- ✓ TACTI-003 Start randomized trial in 1st line HNSCC
- ✓ Final results of INSIGHT-004
- ✓ Progress from IMP761
- ✓ Expansion of IP portfolio
- ✓ Strong financial position

Registration relevant trials

Phase III preparations in MBC (AIPAC-003)

1st line HNSCC: Recruitment and updates from randomized trial (TACTI-003)

1st line NSCLC: Completion of recruitment & first data from the extension cohort (TACTI-002)

Ongoing regulatory (EMA/FDA) engagement

INSIGHT-003: Data from Efti + a-PD-1 + Chemo combination

Extension of IP portfolio

Potential new studies (financed)

Updates from IMP761

Updates from partnered programs (e.g. GSK, Novartis, CYTLIMIC and EOC Pharma)

[✓] Validation of LAG-3/MHC-II interaction by RELATIVITY-047 results

Summary



Global leadership position in LAG-3 with 4 LAG-3 related product candidates in immuno-oncology and autoimmune disease

Multiple active clinical trials (including partnered candidates), with further significant data read-outs in 2022

Compelling clinical data from efti & strong rationale to combine with multiple FDA approved treatments

Established collaborations with e.g. Merck (MSD), Pfizer, Merck KGaA, Novartis and GSK

Thank you!