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Immutep AIPAC Phase IIb Clinical Results & Update Global Webcast Slides

Date & Time: Thursday, March 26th, 8am Australian Eastern Daylight Time / Wednesday, March 25th, 5pm US Eastern Daylight Time

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A replay of the webcast will also be made available at www.immutep.com from the day after the event.

(ASX: IMM, NASDAQ: IMMP)

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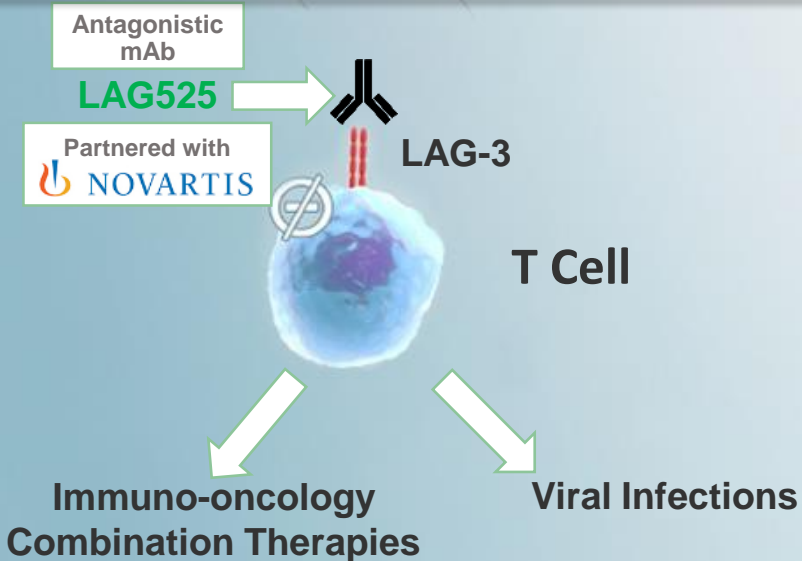
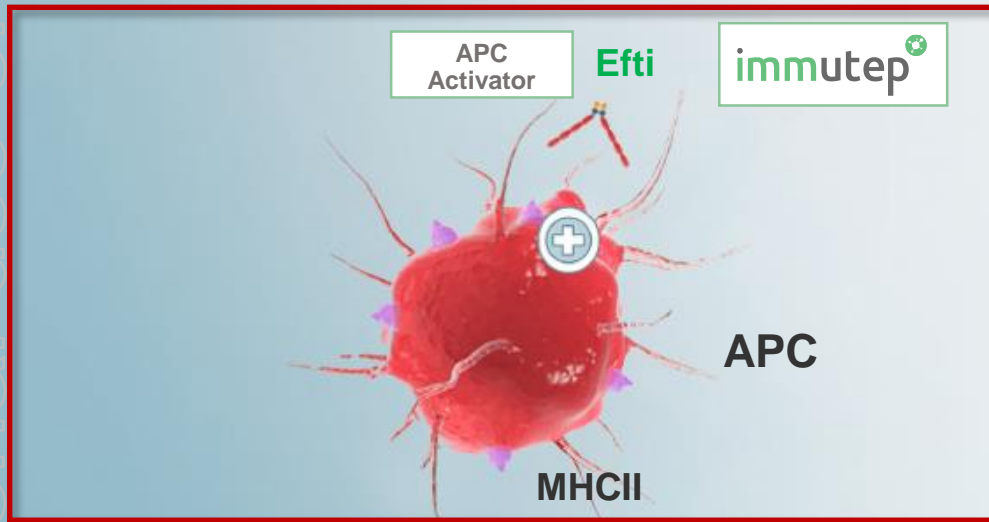
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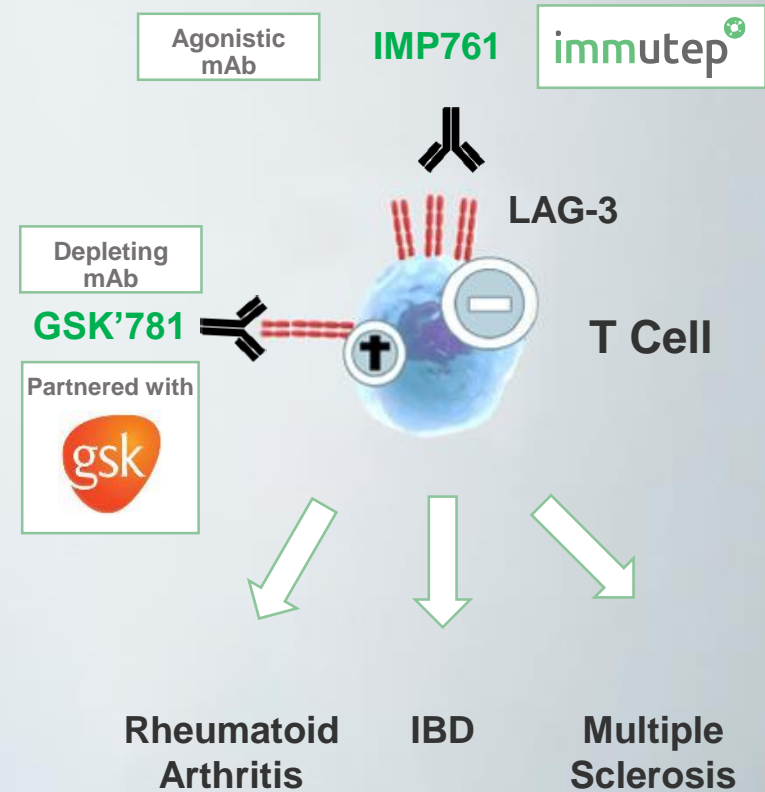
Eftilagimod Alpha (efti or IMP321)

Targeting LAG-3 / MHC II may lead to multiple therapeutics in numerous indications

IMMUNOSTIMULATION

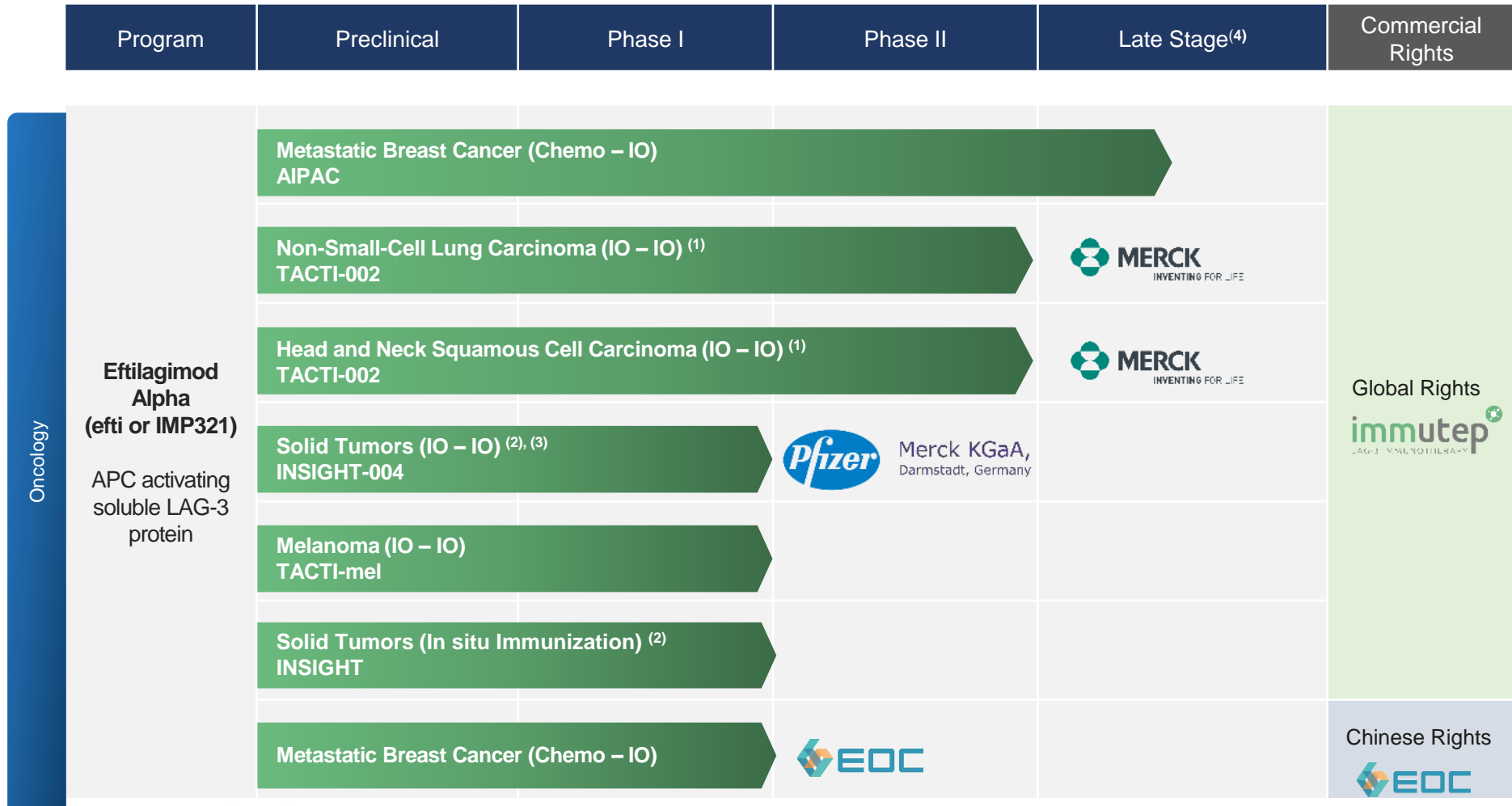


IMMUNOSUPPRESSION



Immutep Controlled Immunotherapy Pipeline (Oncology)*

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Notes

* Information in pipeline chart current as at 19 March 2020

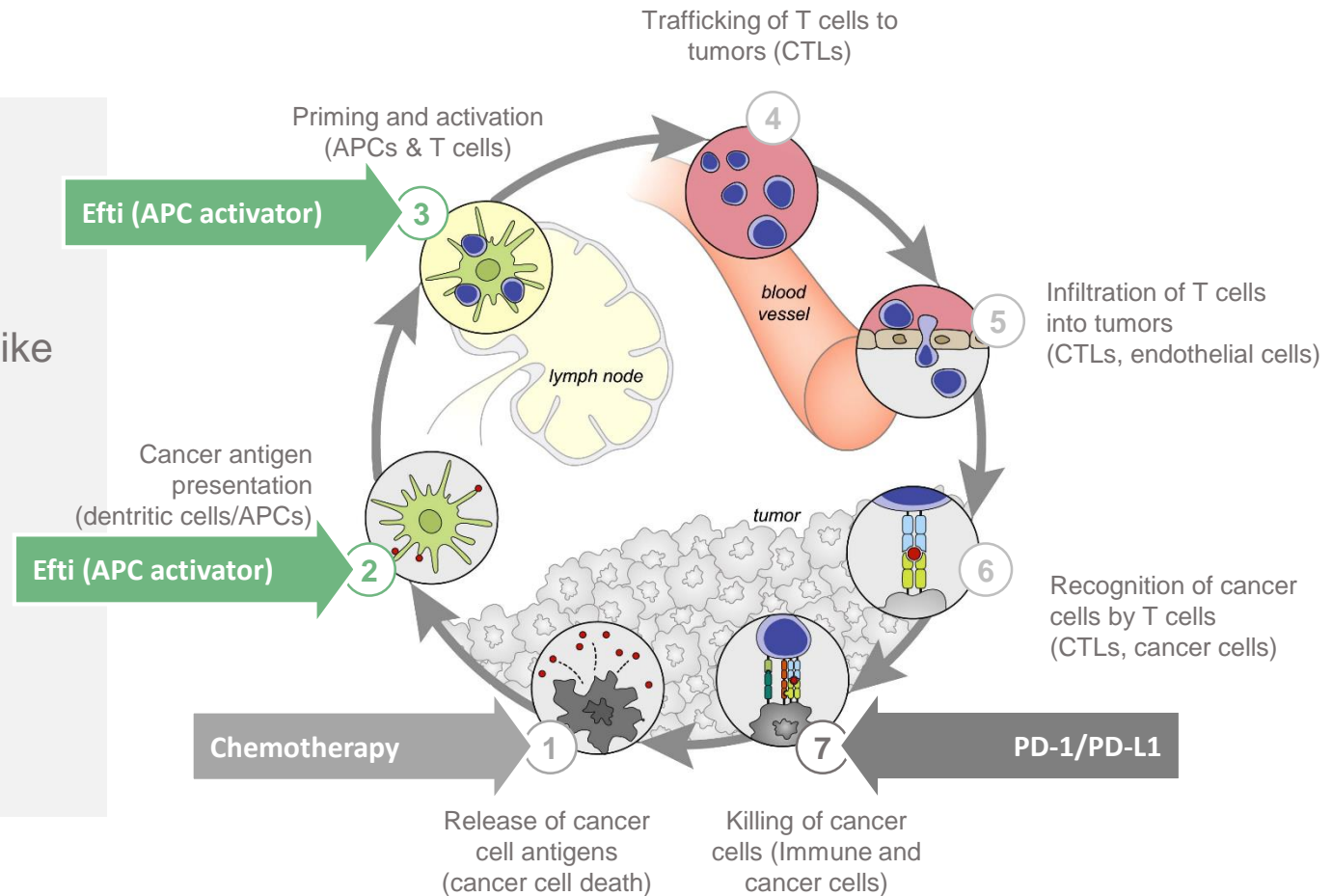
- 5 (1) In combination with KEYTRUDA® (pembrolizumab) in non-small cell lung carcinoma (“NSCLC”) or head and neck carcinoma (“HNSCC”)
- (2) INSIGHT Investigator Initiated Trial (“IIT”) is controlled by lead investigator and therefore Immutep has no control over this clinical trial

- (3) In combination with BAVENCIO® (avelumab)
- (4) Late stage refers to Phase IIb clinical trials or more clinically advanced clinical trials

Efti: a Pipeline in a Product

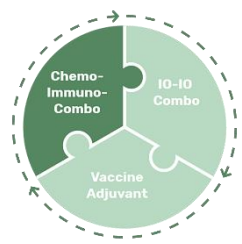
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Efti has disruptive potential for oncology

- ✓ **First-in-Class** MHCII agonist
- ✓ good safety profile
- ✓ unique protective IP positioning (unlike ICI mAbs)
- ✓ encouraging efficacy data
- ✓ low cost of goods
- ✓ potential for use in various combination settings -> **efti is a “pipeline in a product”**



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AIPAC Update



Efti positioning in HR⁺/HER2⁻ MBC

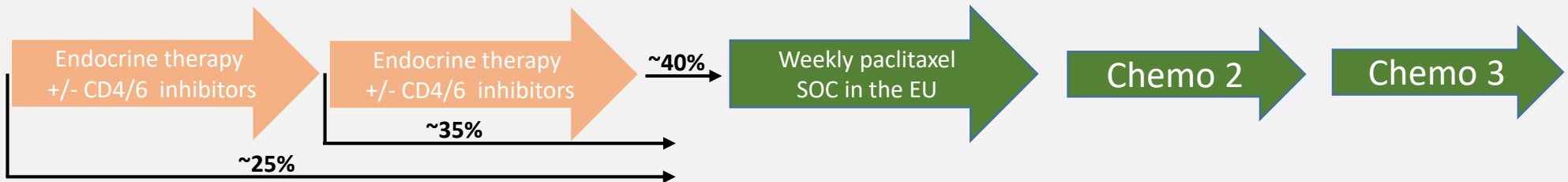
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Epidemiology:

- 812,500 HR⁺/HER2⁻ diagnoses per annum worldwide⁽¹⁾
- approximately 250,000 develop metastatic disease and are eligible to receive chemotherapy

Diagnosis of metastatic disease

Start of chemotherapy



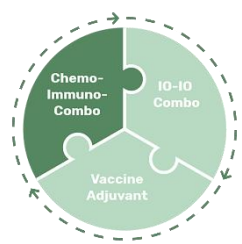
Current Status:

- despite all changes for early treatment lines → no improvement for patients receiving first-line chemotherapy
- taxane monotherapy widely used in first-line chemotherapy setting
- no active IO approved / or in late-stage trials

Typical Patient Population in MBC:

- number of pre-treatments have increased over recent years → patients receive chemo at a later stage → shortened expected benefit
- expected that most patients starting with chemotherapy have:
 - visceral disease
 - usually 1 or 2 previous anti-cancer therapies

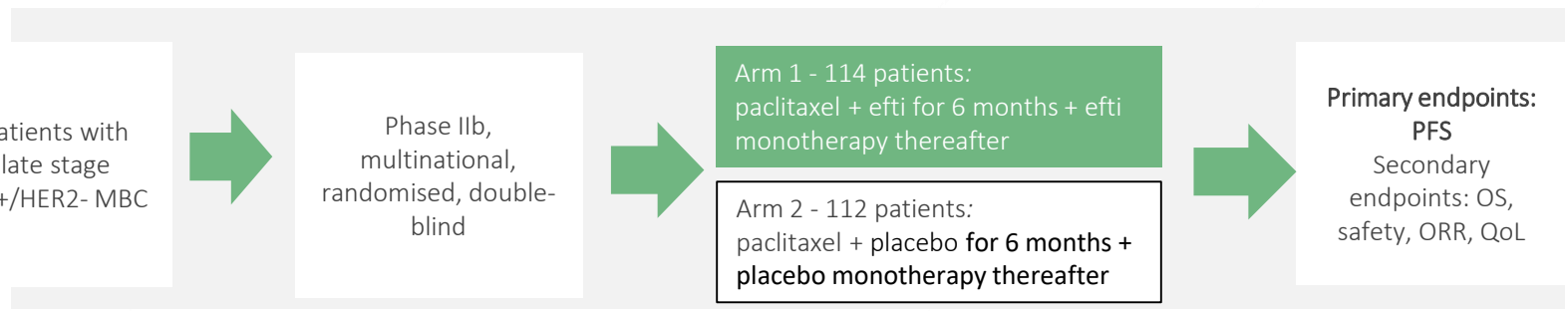
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(1) Source: GlobalData 2019



Efti: Clinical Development AIPAC (Phase IIb)

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

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Primary endpoint includes:

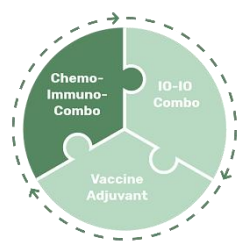
- Assessment of Progression-Free Survival (PFS) including confidence intervals (note: no hypothesis testing), and,
- Hazard Ratio: relative risk of progression compared to placebo;

Secondary endpoints include:

- Overall Response rate (ORR) and Overall Survival (OS)
- Biomarker and Immune Monitoring
- Safety and tolerability

Fact sheet

- ✓ Conducted in 7 EU countries
- ✓ Local and blinded independent central read
- ✓ LPI enrolled Jun 2019
- ✓ Cut-off for primary analysis 10th Jan 2020 (Data received 24th Mar 2020)
- OS data expected by end of 2020



AIPAC Phase IIb Clinical Results



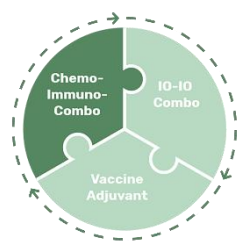
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Baseline Characteristics

	Paclitaxel + Efti N=114	Paclitaxel + Placebo N=112
Median age (range)	58 yrs (24-87)	61 yrs (35-79)
ECOG 0	60.5 %	62.5 %
% visceral disease	90.4 %	92.9 %
% pre-treated with CDK4/6 for met disease	43.9 %	42.9 %
One or more systemic therapies for metastatic disease	68.4 %	71.4 %
Tumor type (central pathology)		
Luminal A	34.1 %*	36.7%*
Luminal B	48.8 %*	49.4%*
Monocytes at baseline < 0.25 x 10 ⁹ /L	21.9 %	19.8 %

- **Well balanced treatment groups**
- **Very late stage disease and large proportion pre-treated with CDK4/6**

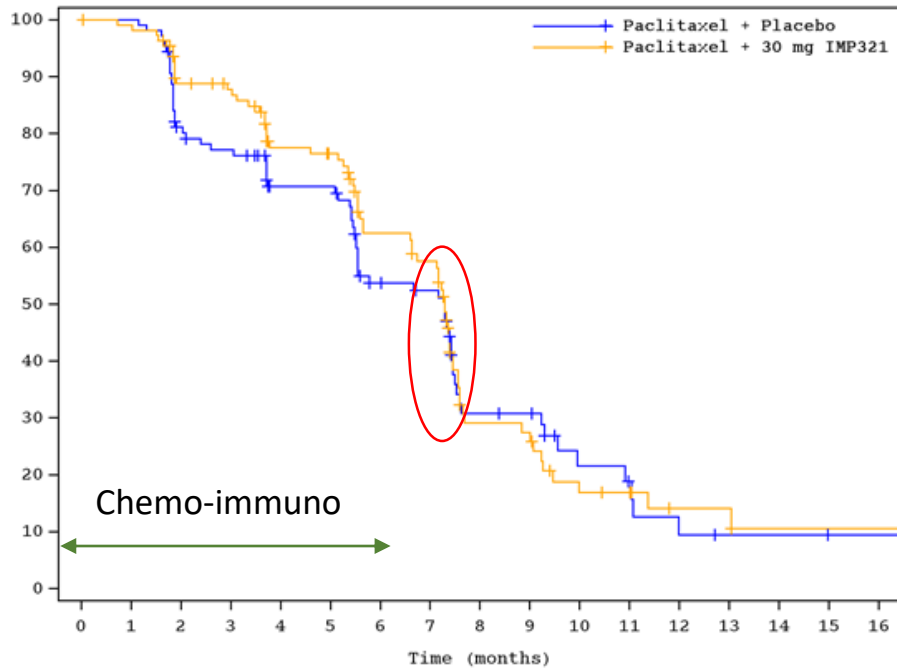
* Reference number of patients different as not all patients were assessed centrally



AIPAC Phase IIb Clinical Results

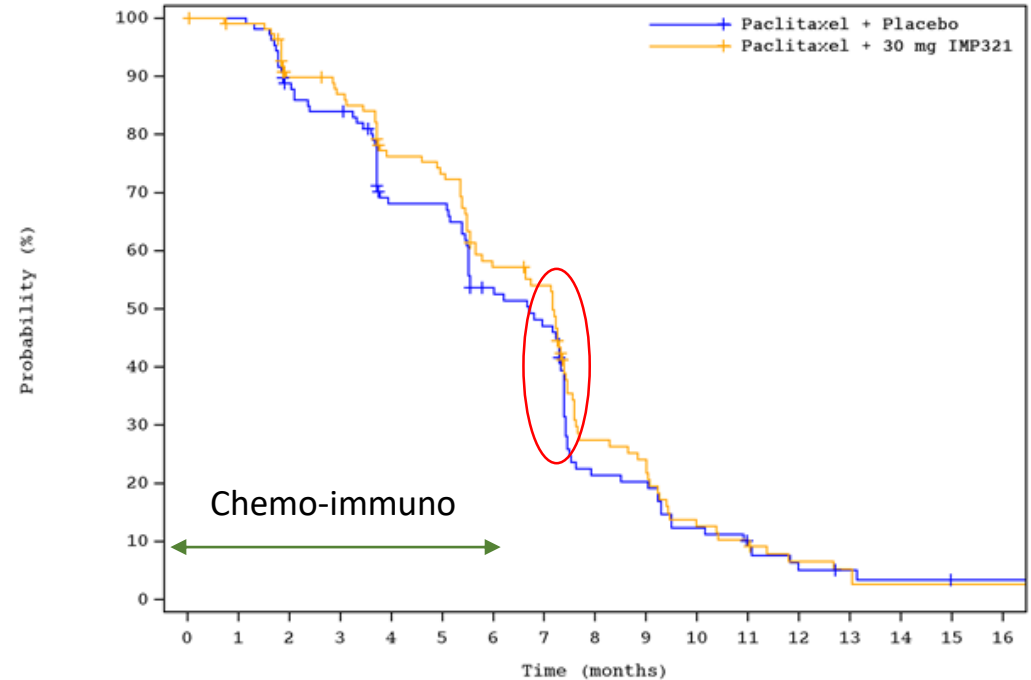


Blinded independent investigator read (BICR)



	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Placebo	112	107	81	76	60	60	42	39	18	17	8	6	3	2	2	1	1
IMP321 30mg	114	108	92	88	72	69	51	46	18	17	9	8	4	4	2	2	2

Investigator Read



	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Placebo	112	107	92	87	66	66	49	43	19	18	11	8	4	3	2	1	1
IMP321 30mg	114	108	94	90	77	74	55	51	24	21	11	9	5	4	2	2	2

PFS estimates – primary analysis* BICR

Paclitaxel + Efti N=114	Paclitaxel + Placebo N=112
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HR [95 % CI]

0.93 [0.67-1.30], p=0.341

Median in months [95 % CI]

7.29 [6.64-7.46]

7.29 [5.52-7.46]

Mean in months [SE]

7.12 [0.37]

6.64 [0.38]

% progression free at 6 months

63 % [52%-71%]

54 % [43%-63%]

PFS estimates – primary analysis* Investigator Read

Paclitaxel + Efti N=114	Paclitaxel + Placebo N=112
----------------------------	-------------------------------

HR [95 % CI]

0.92 [0.69-1.23], p=0.305

Median in months [95 % CI]

7.16 [5.65-7.39]

6.70 [5.52-7.33]

Mean in months [SE]

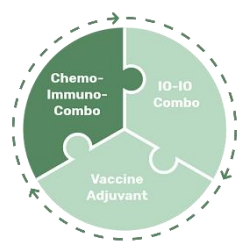
6.81 [0.33]

6.30 [0.31]

% progression free at 6 months

57 % [47%-66%]

54 % [43%-63%]

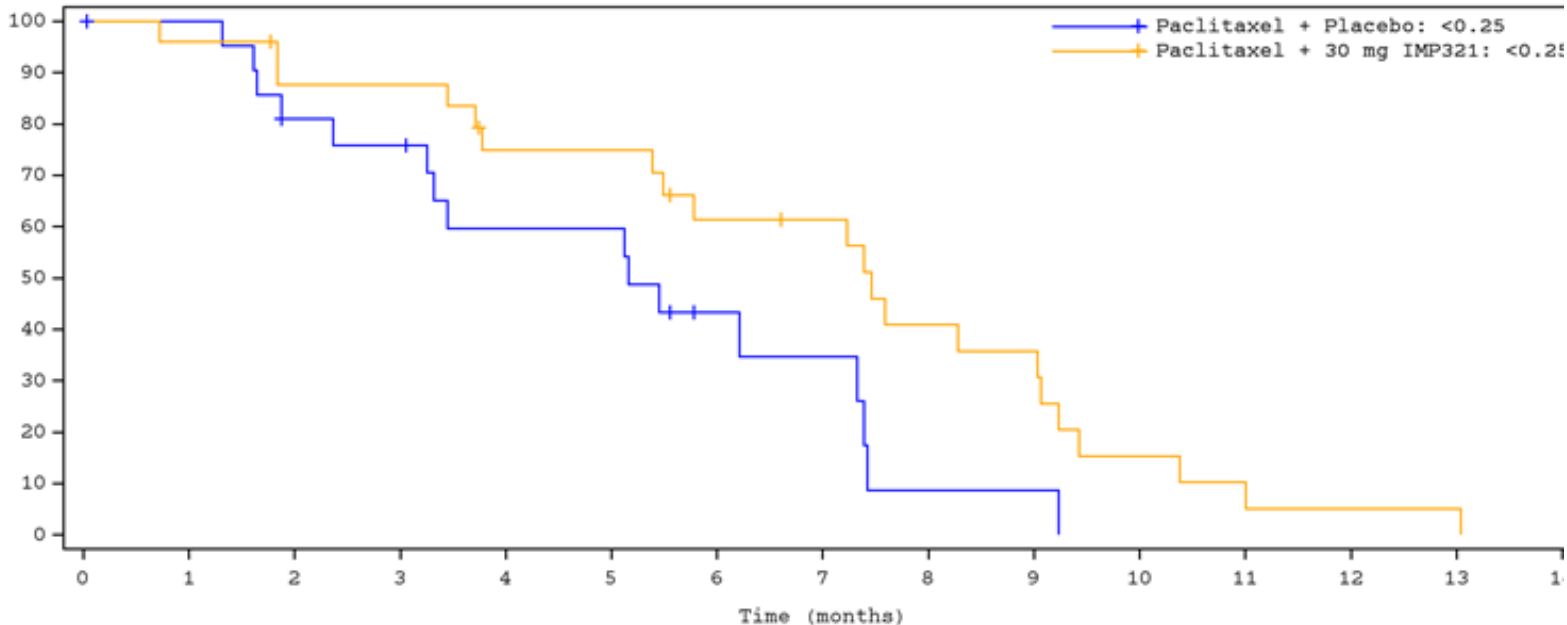


AIPAC Phase IIb Clinical Results

Subgroup 1 – low monocytes - PFS

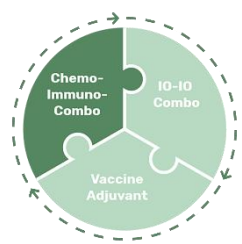


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Progression free survival estimates per subgroup	Paclitaxel + Efti Median, months	Paclitaxel + Placebo Median in months	Hazard Ratio [95 CI]; p-value
low (<0.25 x 10 ⁹ /L) monocytes at baseline			
BICR	7.29	5.45	0.61 [0.29-1.15]; p=0.084
Investigator Read	7.46	5.16	0.44 [0.21-0.90]; p=0.012

- Low monocyte counts (i.e. compromised innate immunity) fit with mechanism of action of efti and are very interesting for other studies e.g. TACTI-002
- Differences in subgroups confirmed both by BICR and investigator read

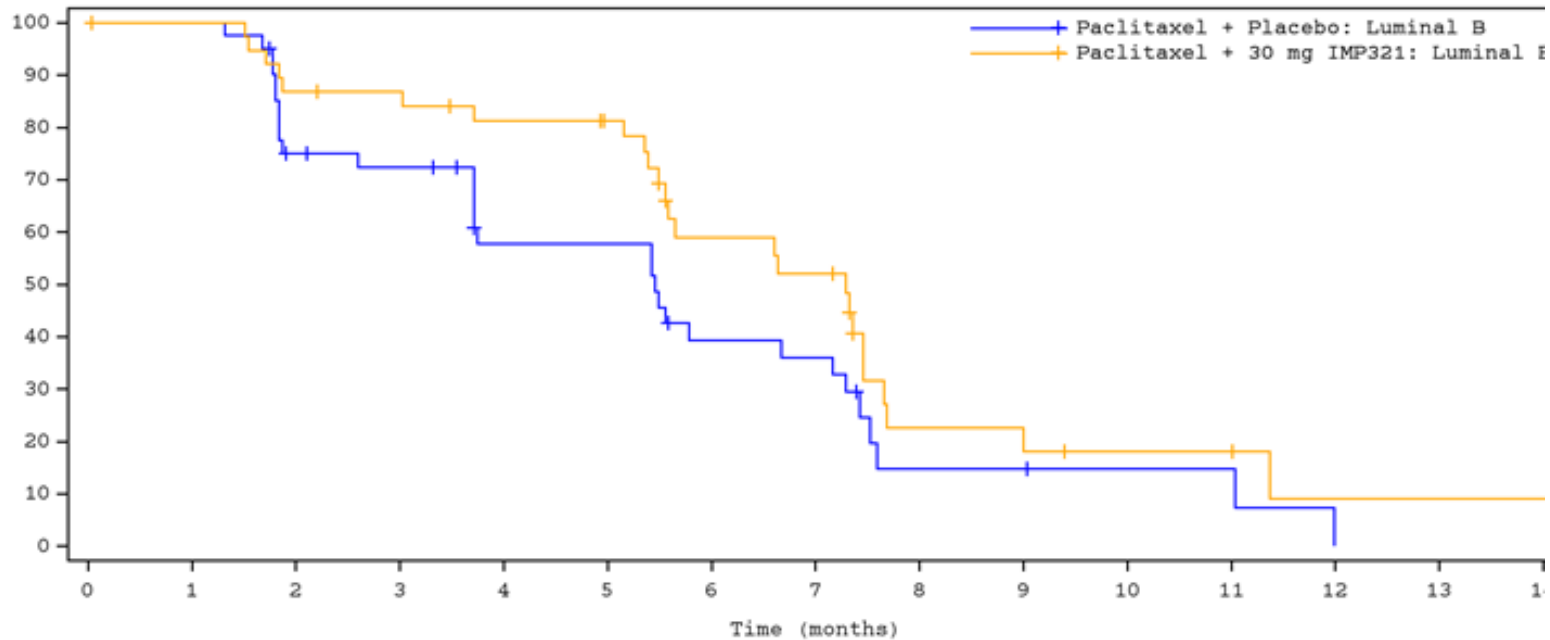


AIPAC Phase IIb Clinical Results

Subgroup 2 – luminal B - PFS



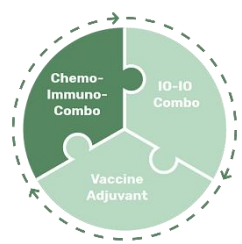
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	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Placebo: Luminal B	43	41	29	27	19	19	12	11	3	3	2	2	0		
MP321 30mg: Luminal B	40	38	33	32	29	27	17	15	5	5	3	3	1	1	1

Progression free survival estimates per subgroup	Paclitaxel + Efti Median, months	Paclitaxel + Placebo Median in months	Hazard Ratio [95 CI]; p-value
luminal B type			
BICR	7.29	5.45	0.65 [0.38-1.11]; p=0.058
Investigator Read	7.20	5.55	0.72 [0.45-1.15]; p=0.081

- Luminal B (more aggressive tumor growth subtype): an interesting observation indicating that fast growing tumors (e.g. NSCLC in TACTI-002) are better targets for APC activators like efti
- Differences in subgroups confirmed both by BICR and investigator read



AIPAC Phase IIb Clinical Results Subgroups – summary - PFS

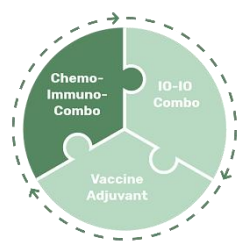
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Compelling results observed in multiple patient subgroup populations

- Meaningful differences in different subgroups (**Note: phase II studies are not powered to show statistical significance for subgroups!**)
- Besides the two subgroups and the low ECOG performance status (see details below) there are more interesting subgroups like age, BMI etc.

Progression free survival estimates per subgroup	Paclitaxel + Efti Median, months	Paclitaxel + Placebo Median in months	Hazard Ratio [95 CI]; p-value
lower performance status at baseline			
BICR	7.13	6.67	0.76 [0.43-1.35]; p=0.178
Investigator Read	6.64	5.52	0.67 [0.42-1.09]; p=0.057

- Luminal B and low monocyte count sub-groups fit well with mechanism of action of efti and are very interesting for other studies e.g. TACTI-002
- Differences in subgroups confirmed by BICR and investigator read
- Further analysis (Cox model) will be carried out

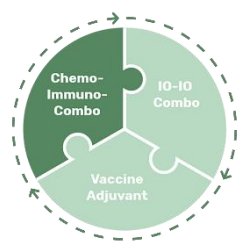


AIPAC Phase IIb Clinical Results

Efficacy improvement observed from efti compared to placebo in terms of ORR

BOR acc. to RECIST 1.1 by BICR	Paclitaxel + Efti N=114	Paclitaxel + Placebo N=112
Complete Response	0.9 %	1.8 %
Partial response	47.4 %	36.6 %
Stable disease	36.8 %	37.5 %
Progressive Disease	8.8 %	18.8 %
Non-evaluable	6.1 %	5.4%
Overall Response Rate	48.3%	38.4%
Disease Control Rate	85.1 %	75.9%

- In efti group higher response rate and fewer pts with immediate progression
- **Response rate (38.4 %) of placebo group is** relatively high compared to historical data
- **Disease Control Rate (85.1 %) and Response rate (48.3 %)** in efti group is consistent with previously reported data
- **Combination therapy was safe & well tolerated**



AIPAC Phase IIb Clinical Results

Conclusions

- Combination therapy was safe and well tolerated
- In efti group higher response rate and fewer patients with immediate progression
- In the first months together with paclitaxel, improvement of delay in progression
- Interesting subgroups (low monocyte count, luminal B, etc.) to be investigated further
- Immunetep will pursue regulatory interaction to outline next steps in MBC

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Outlook

Update on Other Ongoing Efti Studies

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TACTI-002 Phase II Study

- 74 patients enrolled at 12 sites in AU, ES, UK and US
- ORR in HNSCC and 1st line NSCLC highly encouraging compared to pembrolizumab monotherapy
- Further data expected in the course of 2020
- Recruitment progressing well

Study – Part*	Stage 1 (N) Actual/target	Stage 2 (N) target
Part A - 1st line NSCLC	17/17	16/19
Part B - 2nd line NSCLC	17/23	-/13
Part C - 2nd line met. HNSCC	18/18	6/19

INSIGHT-004

- Cohort 1 - fully recruited
- Cohort 2 - 2/6 pts recruited

AIPAC-002

- IND approved & open for FDA interaction in MBC
- Planning continuing pending further analysis of AIPAC

TACTI-mel

- CSR in preparation

COVID update: TACTI-mel & AIPAC not affected as data already monitored, recruitment for TACTI-002 continues → monitoring strategy is under discussion with CRO → limited impact on ImmuteP's clinical activities

Upcoming news 2020 (est):

- Further AIPAC data e.g. OS
- NSCLC 1st line - more data from Stages 1 and 2 from TACTI-002 throughout 2020
- HNSCC 2nd line - initial data from Stages 1 and 2 from TACTI-002 throughout 2020
- NSCLC 2nd line - initial data from Stage 1 from TACTI-002 throughout 2020
- Combination with avelumab - initial data from Phase I trial throughout 2020
- Regulatory progress
- Update from partnered programs with GSK and Novartis
- Updates from efti partnerships
- IMP761 updates

*The actual timing of future data readouts may differ from expected timing shown above. These dates are provided on a calendar year basis.

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Thank you!