

FIGHTING AGAINST CANCER

July 2024

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INVESTMENT HIGHLIGHTS

Strong cash position

Expert leaders with 13 prior FDA approved cancer drugs



Numerous key catalysts expected in 2024



Long-life patent portfolio



4 cancer therapeutics in 4 clinical trials



MARKET CAPITALISATION AS OF
20 JUNE 2024

A\$432M



CASH AS OF
31 MARCH 2024

A\$114.1M



THREE NOVEL TECHNOLOGIES ADVANCING THROUGH THE CLINIC

 **Allo CAR T Cell Therapy**
IMUGENE



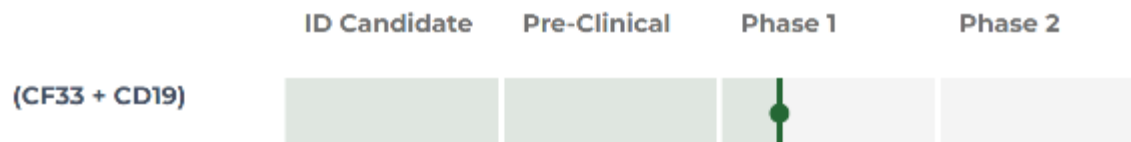
azer-cel trial: In patients with DLBCL blood cancer who failed autologous CAR T therapy

 **CF33 Oncolytic Virus**
IMUGENE



VAXINIA MAST trial: in patients with metastatic or advanced solid tumours with additional focus on cholangiocarcinoma, or bile tract cancer

 **onCARlytics**
IMUGENE



onCARlytics OASIS trial: in patients with advanced or metastatic solid tumours in combination with blinatumomab

Subject to patient enrolment, preliminary early data from all 3 programs expected in 2024

* DLBCL (diffuse large B cell lymphoma)

IMUGENE CLINICAL EXECUTIVE TEAM

Over 150 years of Cancer Drug Development Experience
13 FDA Approved Drugs to market



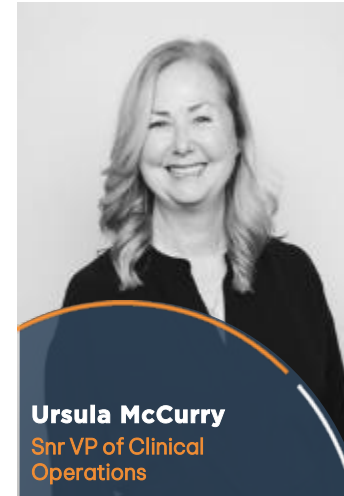
Leslie Chong
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Officer & Managing Director



Dr. Paul Woodard, MD
Chief Medical Officer



Dr Bradley Glover
Chief Operating
Officer



Ursula McCurry
Snr VP of Clinical
Operations



Dr. John Byon, MD, PhD
Snr VP of Clinical
Development



Dr Monil Shah
Chief Business Officer

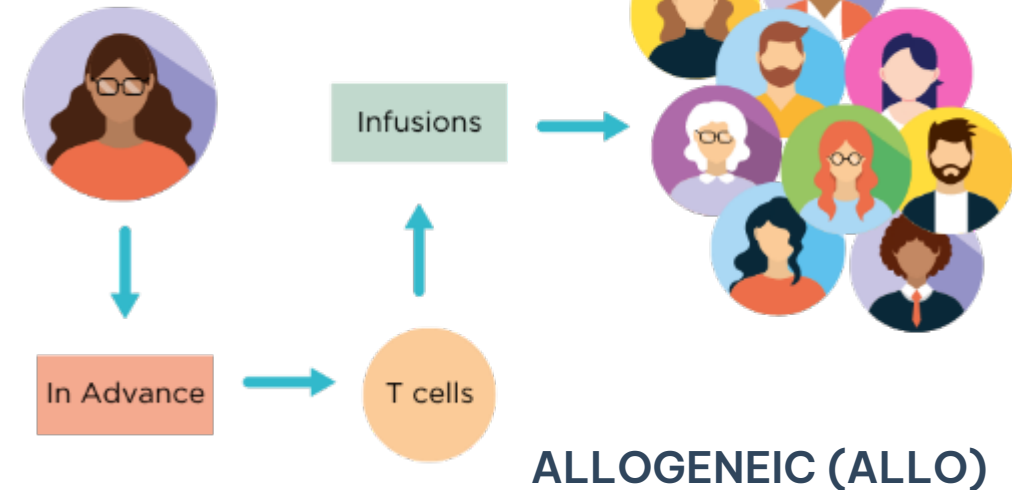
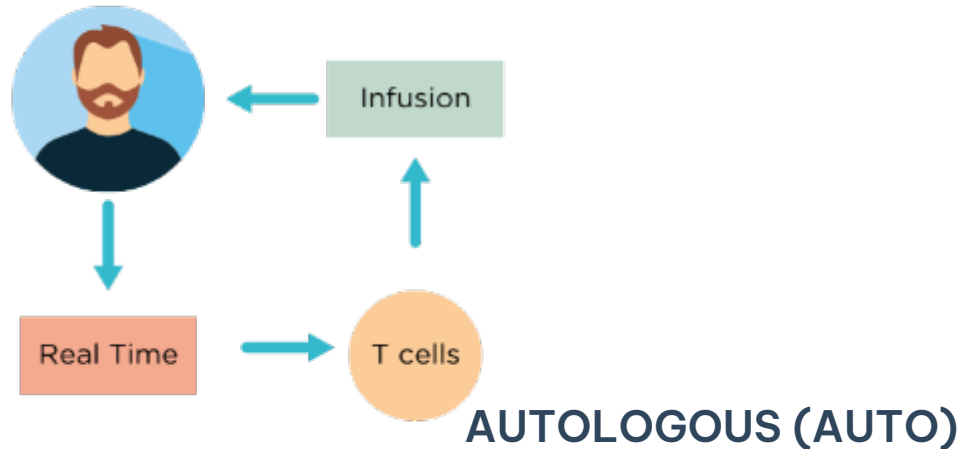


AZER-CEL CD19 ALLOGENEIC CAR T CELL THERAPY



THE FUTURE OF CELL THERAPY IS OFF THE SHELF (ALLOGENEIC) CAR T

Patients shouldn't have to wait for treatment



- Auto CAR Ts are made from the patient's own T-cells cells. Limited patient access (highly personalized)
- Long and complex manufacturing process and wait time (requires leukapheresis* and often extra chemotherapy treatment until cells are ready)
- High manufacturing costs
- Variable potency due to health of patients own T cells

- Allo CAR Ts are made from a universal donor. Broad patient access (multiple patients from a single batch)
- Can be mass produced, available on demand and off-the-shelf immediately (no leukapheresis* and no bridging treatment required). **Ready when you need them.**
- More efficient and cost-effective manufacturing
- Healthy donor cells engineered for potency and persistence

ALLOGENEIC (ALLO) CAR T THERAPY - A LIVING DRUG; OFF THE SHELF

Allo CAR T cell therapy is a type of immunotherapy that uses healthy donor T Cells that are genetically modified and engineered to be used "off the shelf" for multiple patients

1



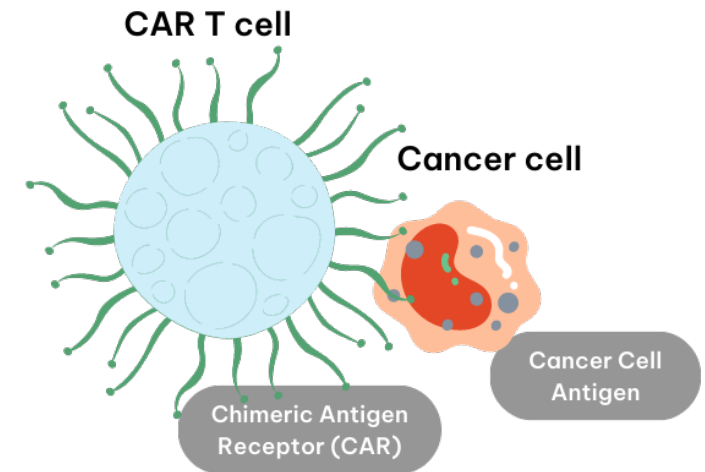
HEALTHY donors provide T Cells to make the CART product candidate. Donor T cells are processed for "**universal match**" and incorporated to chimeric antigen receptor designed to attack tumour cells.

2



As an "off the shelf" product, the processed batches can be frozen and shipped to multiple hospitals and clinics. **Each batch product can produce multiple doses.** The re-programmed CD 19 T Cells are then injected into the cancer patient

3



When the CD19 T Cells see the cancer cells with CD19 on them, the T Cells attack and kill them

AZER-CEL HAS MEANINGFUL CLINICAL ACTIVITY IN BLOOD CANCER

84 patients treated with azer-cel

61

Non-Hodgkin lymphoma (NHL)
Patients

58% ORR¹

41% CR²



23

B-Cell lymphoblastic
leukaemia (B-ALL) Patients

61% ORR

61% CR/CRi

All Doses / All LD* Regimens

1. ORR – Overall Response Rate

2. CR – Complete Response

*lymphodepletion

Note: Based on Patients Evaluable for Efficacy

AZER-CEL HAS THE POTENTIAL TO BE A NEW DRUG FOR BLOOD CANCER

High response rates and durability

84 blood cancer patients treated with azer-cel: 61 patients with Non-Hodgkin lymphoma (NHL); 23 patients with B-Cell acute lymphoblastic leukaemia (B-ALL)



Note: Based on Patients Evaluable for Efficacy

¹N=11 patients evaluable for > 6 months duration on response, 6 durable responders past 6 months or longer with 431 (> 1 year) median days on response; DoR measured from DO

*lymphodepletion

AZER-CEL OFF-THE-SHELF (ALLOGENEIC) CAR T

Safety and Efficacy in DLBCL¹(Type of Blood Cancer)

- Azer-cel showed no safety concerns
- 83% overall response rate (ORR) with durable responses of 6 months

High Unmet Need

- DLBCL is an aggressive and fast-growing type of non-Hodgkin's lymphoma (Blood Cancer)
- ~30,000 new cases per year in the U.S.²

First-to-Market Potential

- Currently in Phase 1b trial; potential for registrational Phase 2/3 trial for FDA approval
- Azer-cel could be the first approved allogeneic CAR T therapy for patients with DLBCL who failed autologous CAR T

Blockbuster³ Drug Potential

- Global CAR T market ~USD \$3B in 2023; projected to be ~USD \$23B by 2033, growing at a compound annual growth rate of 23.35%⁴
- 60-65% of patients treated with autologous CD19 CAR T have their cancer return; azer-cel could be a treatment

Azer-cel

- Allogeneic CAR T therapy
- Takes healthy donor immune cells & re-engineers them to fight cancer.

CD19 AUTOLOGOUS CAR T RELAPSE MARKET IS LARGE AND GROWING



60-65%

of patients currently treated with autologous CD19 CAR T will relapse¹



By 2025

Global CAR T relapse patient pool is expected to grow ~4x as autologous CAR T drugs become the Standard of Care

Estimate total Global G8 markets to be ~18k patients per year²

Azer-cel potential blockbuster sales of ~\$2.5B³ per annum in DLBCL (Blood cancer) CAR T relapsed patients

Note: Retrospective Literature states that 12-28% of patients have antigen negative relapse (CD19-)

1. Estimated from ZUMA 1 and ZUMA 7 EFS rates;
2. G8 includes US, Japan, Canada and EU5 assuming equal access to CAR T therapies; market research, CancerMPac
3. TAM: total addressable market is total number of treatable patients x price at 100% market share



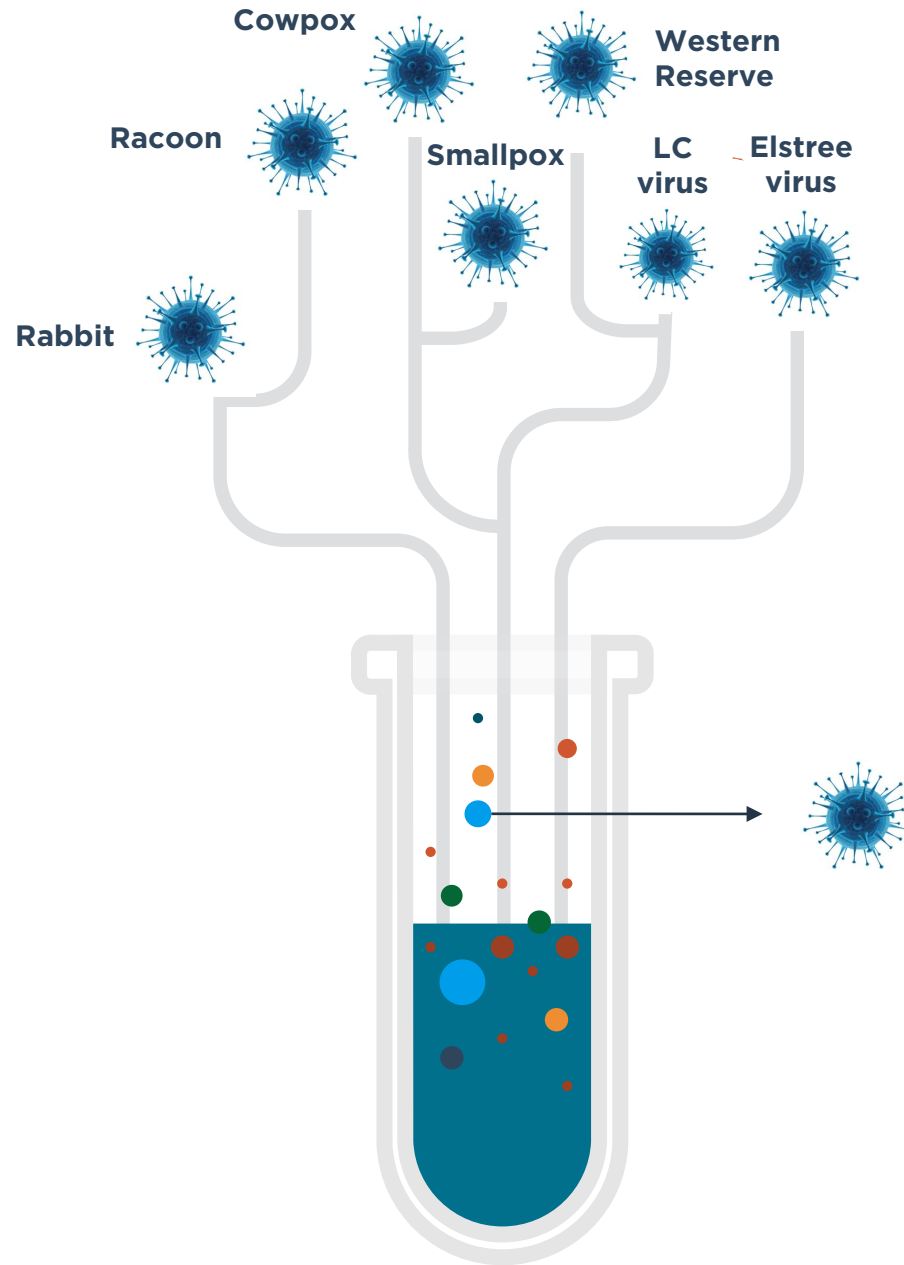
CF33 Oncolytic Virus
IMUGENE

CF33 ONCOLYTIC VIRUS



WHAT IS THE CF33 VIRUS & WHERE DID IT COME FROM?

Engineered next-generation virus

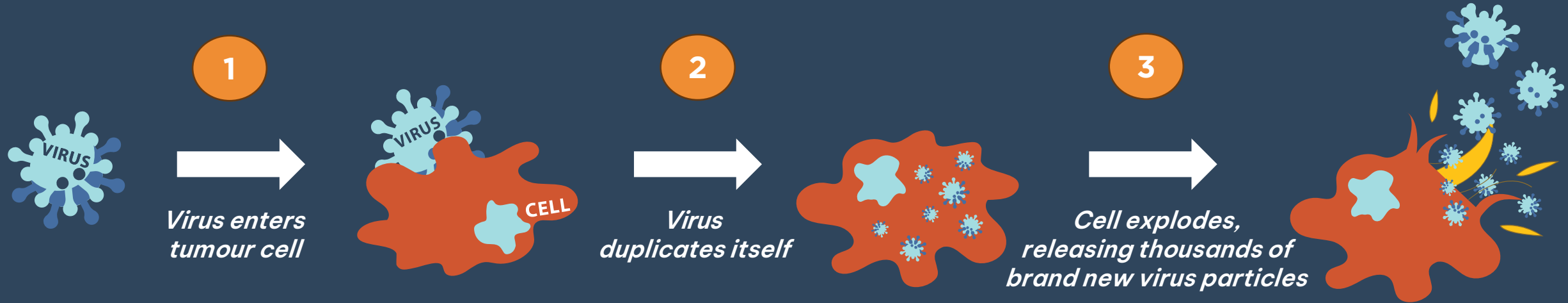


 **CF33 Oncolytic Virus**
IMUGENE

CF33
Invented by
Professor Yuman Fong

 City of
Hope™

CF33 CAN INFECT AND SELECTIVELY KILL TUMOR CELLS



Engineering enhancements

- Infect and kill only cancer cells
- Carry payloads to increase killing

Multiple ways to kill cancer cells

- Direct killing
- Activation of immune cells to kill cancer cells
- Priming the tumour environment to enhance immune response¹

Precedent for approval

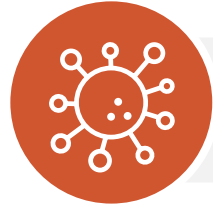
- Tvec approved in the United States for skin cancer (2015)
- Oncorine approved in China for head and neck cancer (2005)
- Delytact approved in Japan for brain cancer (2021)

PHASE 1 MAST TRIAL - ENCOURAGING EARLY SIGNALS



Patients

- 40 patients have been evaluated in the trial



Disease Control

- Nearly half of the patients (48%) have remained on treatment for >3 months
- 3 patients have remained on treatment for >200 days



Responses

- Patient with bile tract cancer had a complete response (CR) (no signs of cancer); ongoing remission for >1.6 years . 2 patients with melanoma had partial responses (PRs) (decrease in cancer) and 17 patients achieved stable disease (SD)



Bile Tract Trial

- Trial in bile tract cancer patients based on positive response
- Preliminary data are expected in late 2024/early 2025



Fast Track

- US FDA Fast Track Designation for bile tract cancer, which allows for faster review



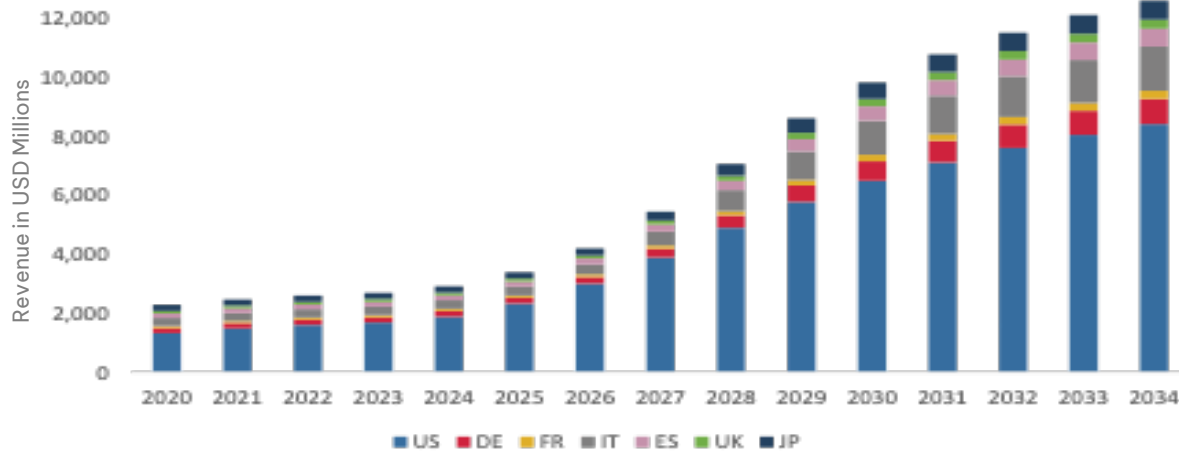
HIGHLANDS
ONCOLOGY



*Preliminary enrollment update; data and number of evaluable patients subject to change with full statistical analysis

IMUGENE IS PURSUING LARGE AND GROWING INDICATIONS

- The global solid tumor cancer treatment market size was estimated at USD 185.97 billion in 2022 and is projected to hit around USD 532.42 billion by 2032, growing at a compound annual growth rate (CAGR) of 11.09% during the forecast period 2023 to 2032.¹



- Bladder cancer is a highly recurrent disease
- Total (NMI)² bladder cancer market size was USD \$2.3 B in 2020
- Expected to grow to USD \$12.5B by 2034 at a compound annual growth rate (CAGR) of 12.3%





Delveinsight Non-muscle Invasive Bladder Cancer (NMIBC) Market Insight, Epidemiology, and Market Forecast – 2034 (January 2024)

- Bile tract cancer
- Total market size was USD \$613 million in 2020
- Expected to grow to USD \$2.2B million by the end of 2034, at a compound annual growth rate (CAGR) of 9.4%

Delveinsight Biliary Tract Cancer Market Insight, Epidemiology, and Market Forecast – 2034 (February 2024)

¹ <https://www.precedenceresearch.com/solid-tumor-cancer-treatment-market> ² Non muscle invasive (NMI)

OTHER ONCOLYTIC VIRUSES IN DEVELOPMENT

COMPANY	MARKET CAP (USD)	ASSET/TARGET CANCERS
 Replimune®	\$561.49 M	RP1, Various solid cancers
 GENELUX	\$81.414 M	Olvi-Vec, Ovarian cancer
 GCG ONCOLOGY™	\$2.09 B	cretostimogene grenadenorepvec, Bladder cancer
 CANDEL THERAPEUTICS	185.98 M	Lung, pancreatic, prostate, brain cancers

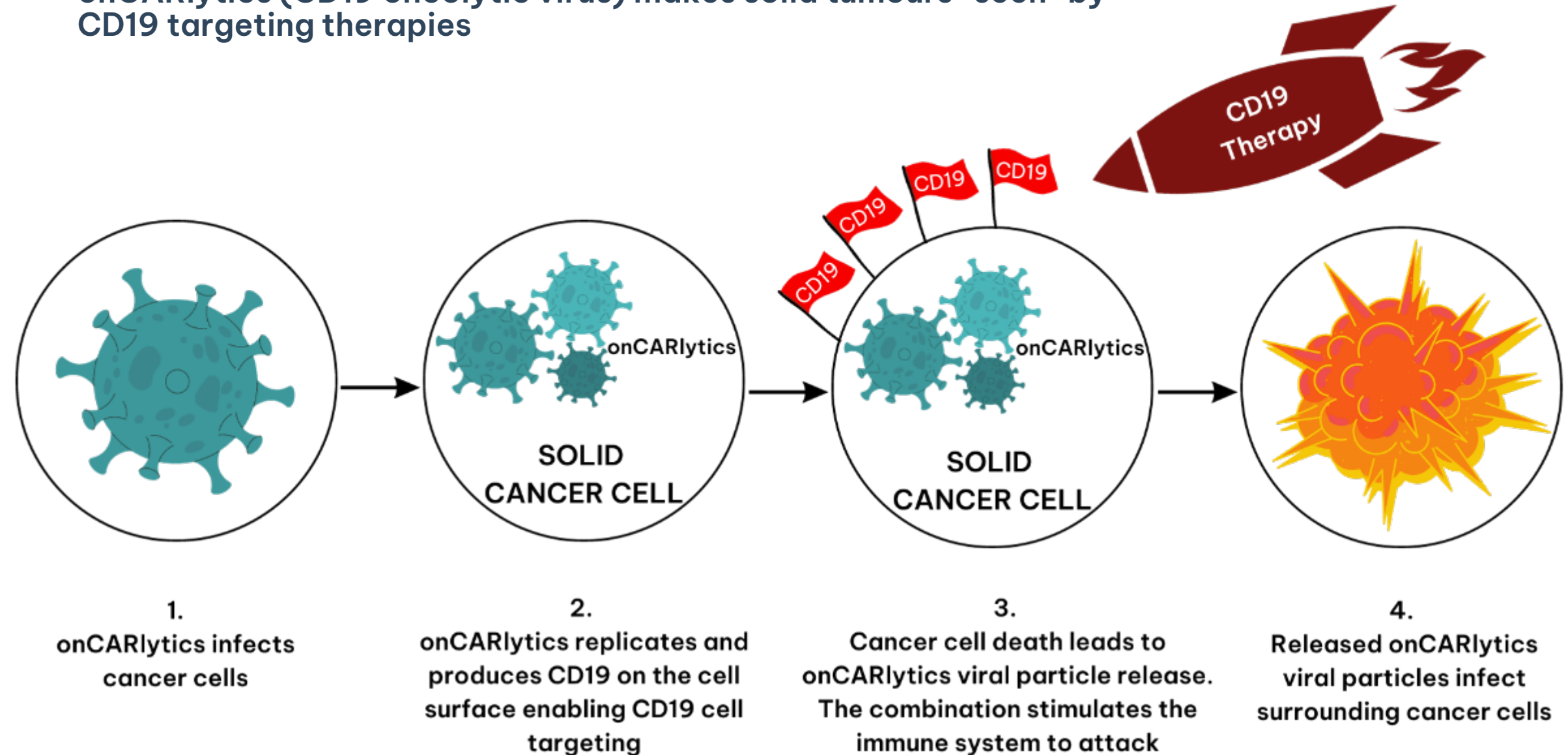
- Oncolytic viruses are validated, generating interest from other companies
- Imugene has differentiated oncolytic viruses and a unique opportunity

ONCARLYTICS FOR SOLID TUMORS



HOW DOES ONCARLYTICS WORK?

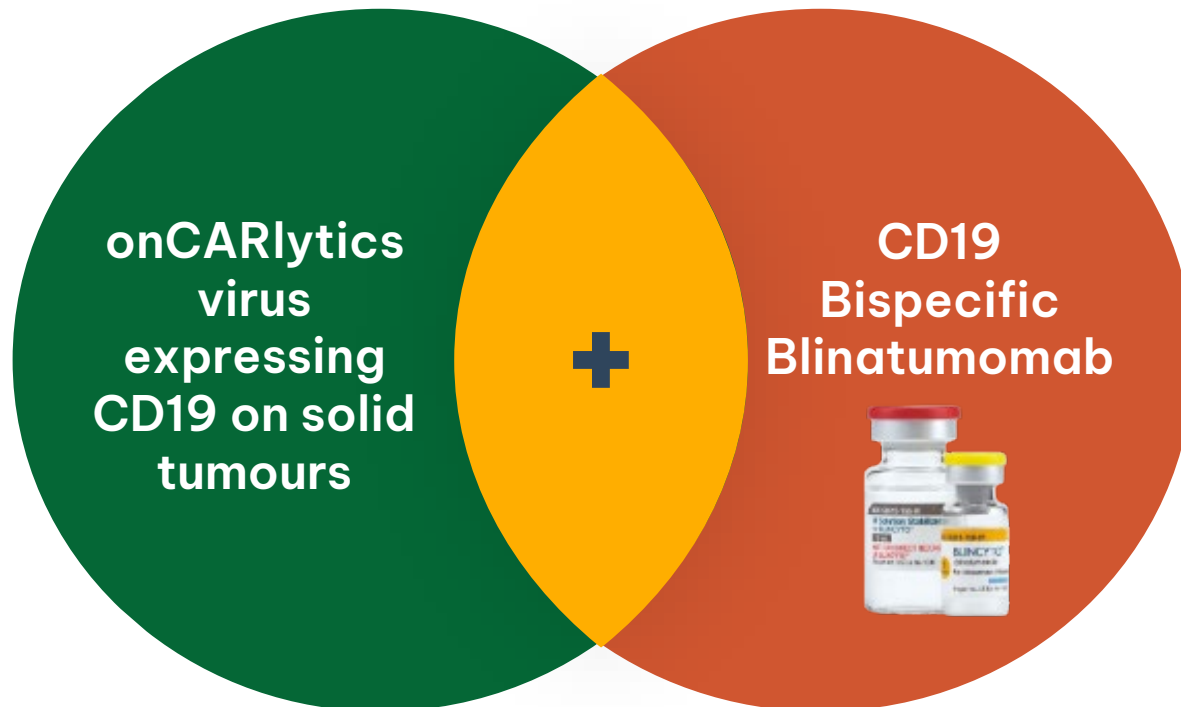
onCARlytics (CD19 oncolytic virus) makes solid tumours “seen” by CD19 targeting therapies



ONCARLYTICS (CF33-CD19)

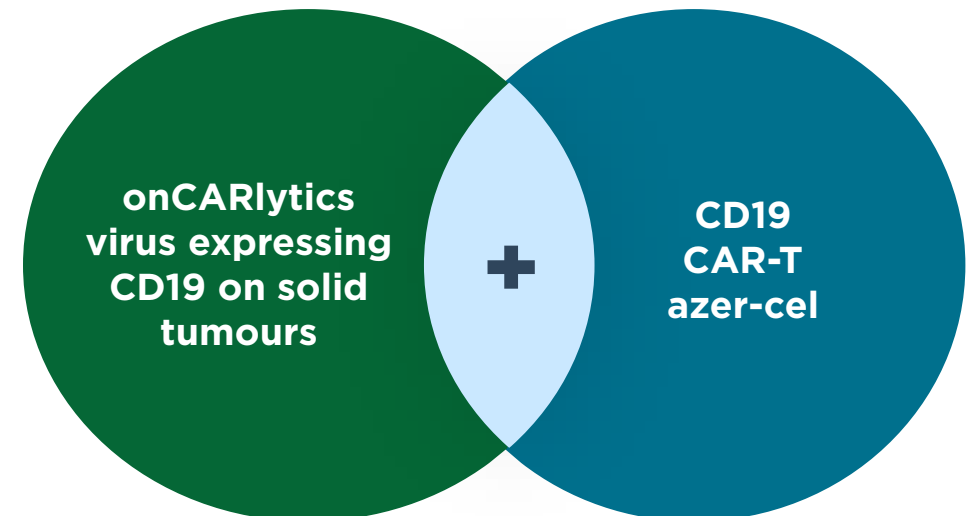
Combination treatment for solid tumours

Current Clinical Trial



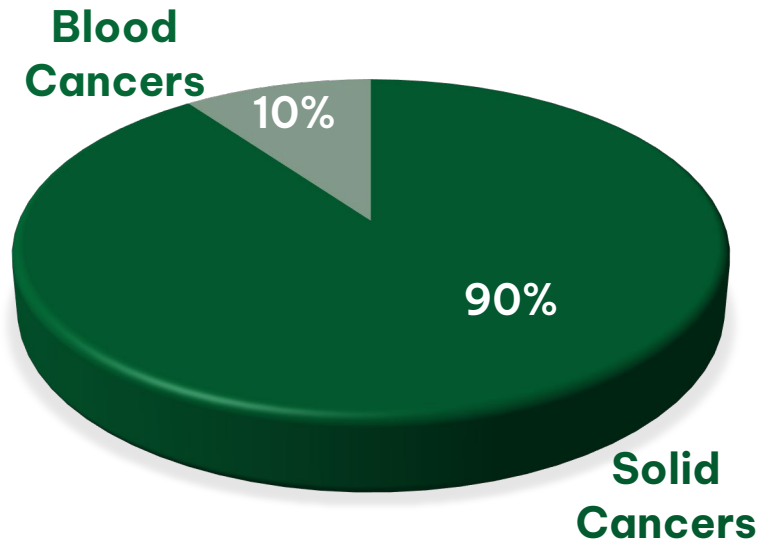
- Phase 1 trial in solid tumour patients
- Combination cohort open for enrolment
- FPI IV combination in June, 2024

- Preclinically, azer-cel in combination with onCARlytics demonstrated sustained, robust activity against multiple tumour types
- Showed 100% killing of Triple Negative Breast Cancer and Gastric Cancer at 72 hours



VARIETY OF APPROVED THERAPIES AVAILABLE FOR COMBINATION WITH ONCARLYTICS

onCARlytics can become the preferred partner for CD19 therapies in solid tumours (~90% of cancer market)











- Global blood cancer CAR T market ~USD \$3B in 2023; projected to be ~USD \$23B by 2033, growing at a compound annual growth rate of 23.35%¹
- The global solid tumor cancer treatment market size estimated at USD 185.97 billion in 2022 and is projected to grow around USD 532.42 billion by 2032

¹<https://www.precedenceresearch.com/solid-tumor-cancer-treatment-market>

Combination Opportunities

COMPANY	FIRST FDA APPROVAL	TARGET	APPROVED CANCERS
(tisagenlecleucel)	2017	CD19 Auto CAR T	B-ALL, DLBCL
(axicabtagene ciloleucel)	2017	CD19 Auto CAR T	DLBCL, R/R FL
(brexucabtagene autoleucel)	2020	CD19 Auto CAR T	R/R MCL
(lisocabtagene maraleucel)	2021	CD19 Auto CAR T	DLBCL
(tolastamab-cxix)	2020	CD19 Monoclonal Antibodies (MAbs)	DLBCL
(inebilizumab-cdon)	2020	CD19 MAbs	NMOSD
(binucumab)	2014	CD19-CD3 Bispecific MAbs	ALL
(loncastatamab)	2021	CD19 Antibody- drug conjugate (ADC)	B-Cell Lymphoma

COMPANIES DEVELOPING CAR T THERAPEUTICS

COMPANY	MARKET CAP (USD)	DRUGS/TARGETS
 NOVARTIS	\$234.50 B	Kymriah [®] , first CAR T-cell therapy
 Bristol Myers Squibb [®]	\$82.45 B	Breyanzi [®] , Abecma [®]
 GILEAD Creating Possible	\$84.88 B	Yescarta [®] and Tecartus [®] (acquired from Kite for \$11.9B)
 Autolus	\$900.53 M	AUTO 06NG in development
 LEGEND BIOTECH	\$8.24 B	LCAR-B38M in development
 BIONTECH	18.71 B	BNT211 in development
 Allogene THERAPEUTICS	\$460.53 M	Multiple therapies in development
 ImmunityBio	\$4.27 B	Bladder, ovarian, lung, HPV, lung, and other solid cancers

- CAR T therapies drive significant shareholder value
- CAR Ts are validated in blood cancers; a huge opportunity exists in solid tumors
- Imugene's azer-cel CAR T is a differentiated CAR T and represents a unique and large opportunity

RECENTLY ACHIEVED AND EXPECTED UPCOMING KEY CATALYSTS

RECENTLY ACHIEVED

- **AZER-CEL:**
 - ☑ Kinell Bio acquired manufacturing
- **VAXINIA:**
 - ☑ MAST trial positive early signals
 - ☑ MAST FPI in higher dose cohorts
 - ☑ Patent granted in China
 - ☑ IT Mono Bile Tract Expansion Open
- **ONCARLYTICS:**
 - ☑ FPI in Monotherapy IV arm
 - ☑ Combination arm opened
 - ☑ FPI in Combination IV arm Cohort 2

Key:

FPI, First Patient In, **Combo**: Combination Therapy

Mono: Monotherapy,

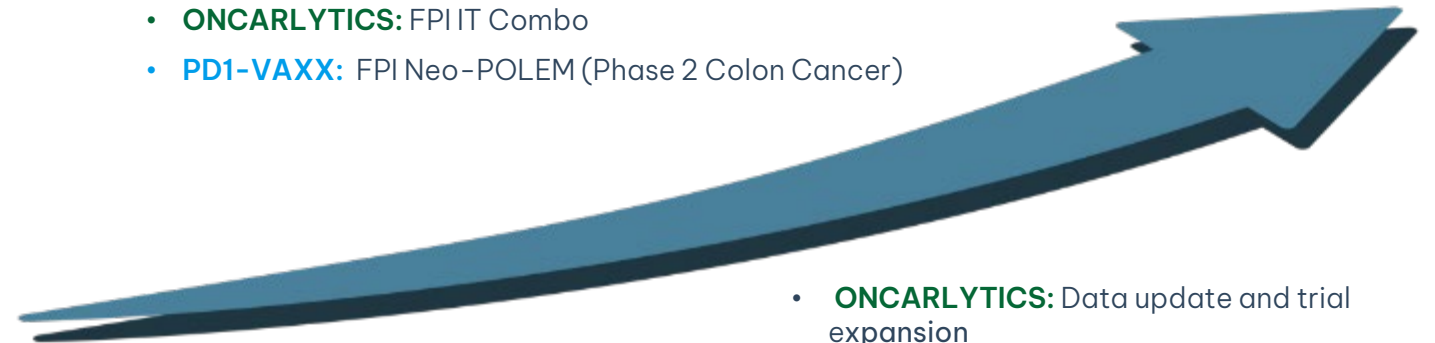
IA: Intra-arterial, **IP**: Intraperitoneal,

IT: Intratumoural, **IV**: Intravenous



H2 2024

- **VAXINIA**: IT Expansion Open other indication
- **AZER-CEL**: Prelim early Phase 1b data update
- **ONCARLYTICS**: FPI IT Combo
- **PD1-VAXX**: FPI Neo-POLEM (Phase 2 Colon Cancer)



2025

- **AZER-CEL**: Phase 1b data updates
- **AZER-CEL**: Target regulatory meeting with FDA
- **AZER-CEL**: Expansion into additional blood cancers (Phase 1 Expansion Cohort)
- **ONCARLYTICS**: Data update and trial expansion
- **ONCARLYTICS + AZER-CEL**: FDA IND and FPI in solid tumours
- **VAXINIA**: Phase 2 FPI
- **VAXINIA**: IP & IA Phase 1 FPIs
- **PD1-VAXX**: NeoPOLEM (Phase 2 Colon Cancer) update

IMUGENE COMMERCIALISATION STRATEGY

MULTIPLE VALUE REALISATION PATHWAYS



COMPANY ACQUISITION



PARTNER WITH BIG PHARMA



LICENSE TECHNOLOGIES SEPARATELY



DEVELOP / COMMERCIALISE INDEPENDENTLY

- The global model for biotech commercialisation is to out-license the technology to Big Pharma in Phase 1b/2 trials
- Conducting Phase 3 trials, obtaining FDA approval for the product not within the remit of biotech
- Out-licensing is highly dependent upon demonstrating safety in Phase 1 and convincing signals of efficacy in Phase 1b/2
- Licensing deals are generally structured with an up-front cash payment, payments upon reaching certain development milestones such as entering Phase 3 trials, payment on FDA approval of the drug, and royalties on net sales when the drug is on the market

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Expert leaders with 13 prior FDA approved cancer drugs



Numerous key catalysts expected in 2024



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4 cancer therapeutics in 4 clinical trials



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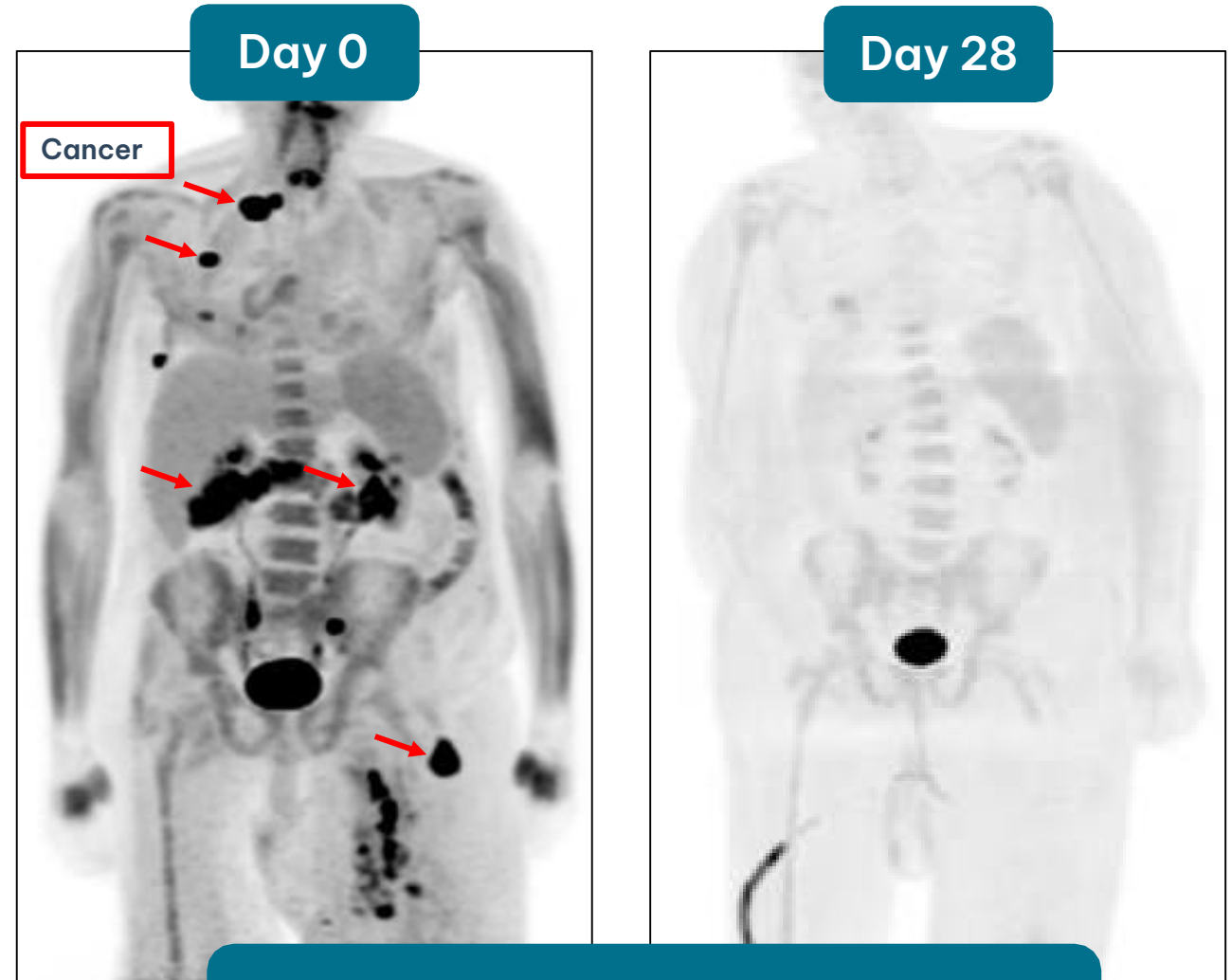


APPENDICIES

AZER-CEL PRIOR PHASE 1 CASE STUDY

Complete Response

- 63-year-old male with DLBCL (Blood Cancer)
- Complete response (CR), or the disappearance of all signs of cancer, with azer-cel treatment
- Response seen at day 28
- Prior to azer-cel, patient had failed 8 prior cancer treatments



Outcome: Day 28 Complete Response

PHASE 1 VAXINIA

Metastatic Advanced Solid Tumour (MAST) Trial



Dose Administration (Parallel Groups)

n=52-100 patients



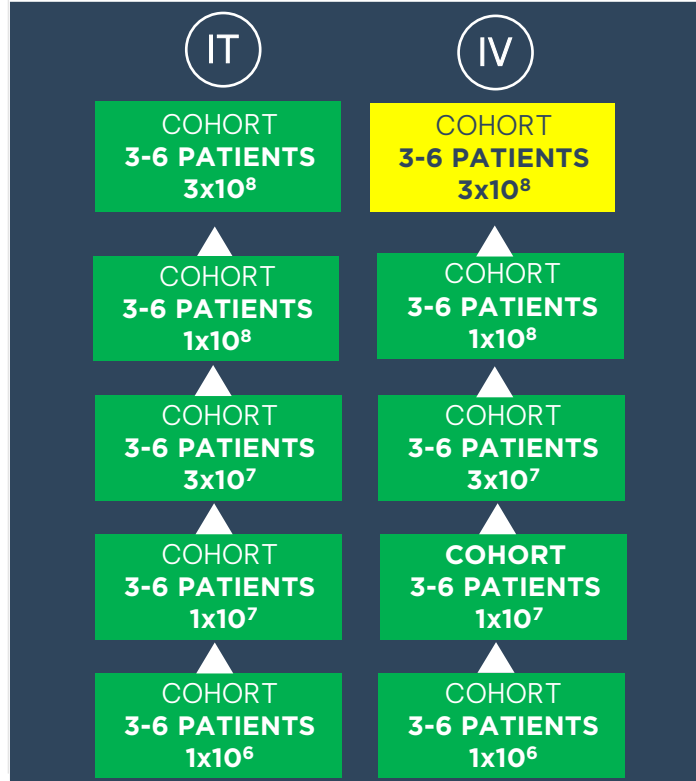
Intratumoural (IT) Administration
Metastatic and Advanced Solid Tumours



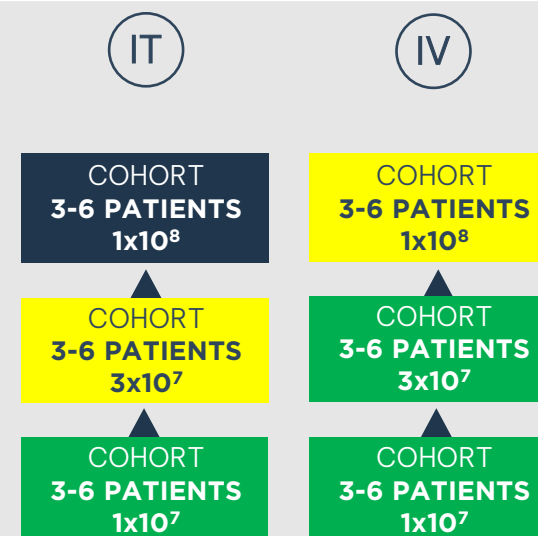
Intravenous (IV) Administration
Metastatic and Advanced Solid Tumours

Site Location: USA, AUS

VAXINIA Monotherapy Dose Escalation



VAXINIA + Pembrolizumab Combination Dose Escalation



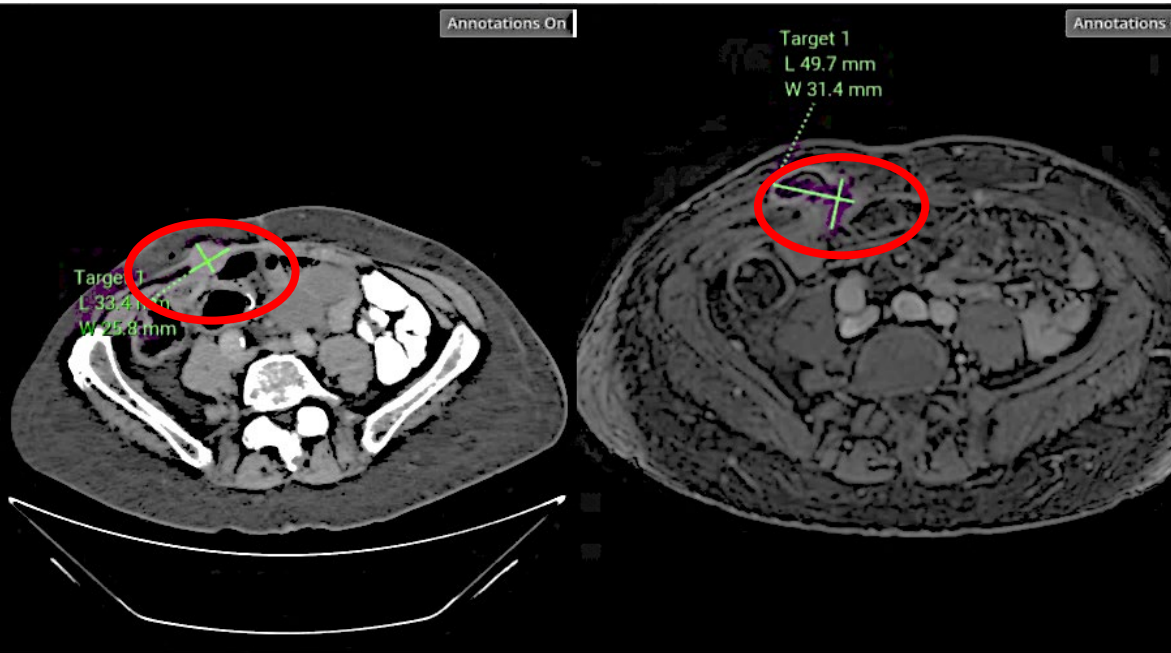
Cohort Expansion

Expansion Cohorts (N=10)

Tumour Types of Interest:
i.e. Cholangiocarcinoma (IT will occur first)

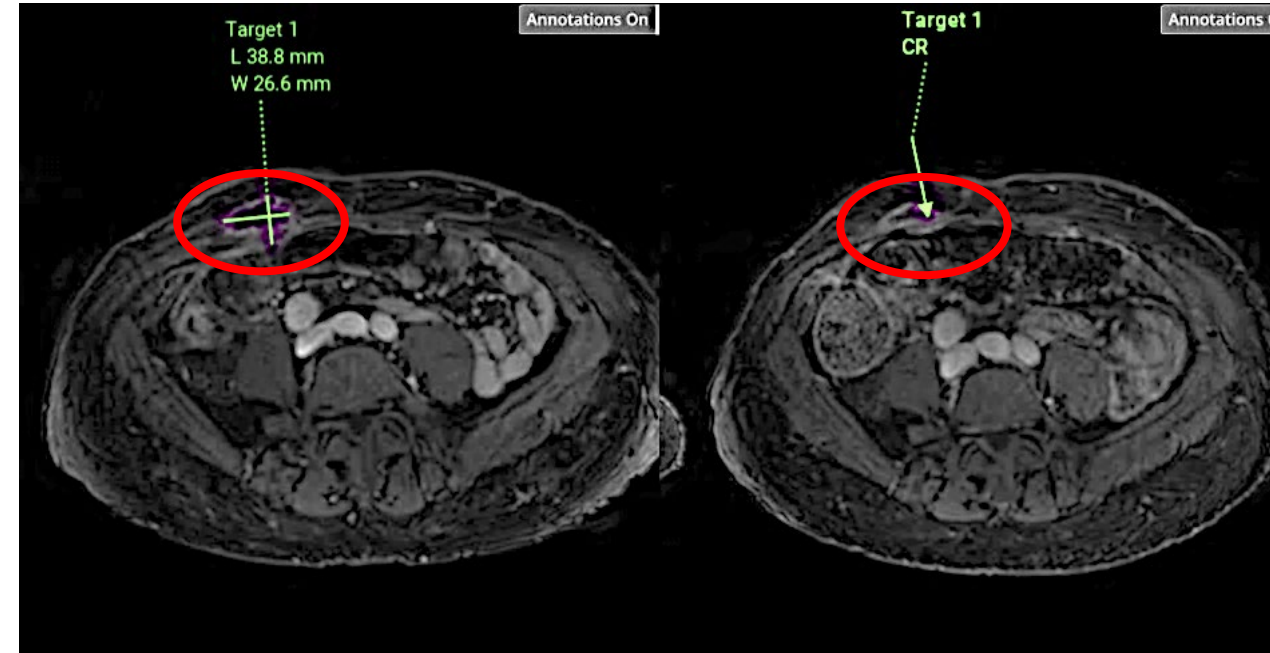
TURNING COLD TUMOURS HOT

Complete Remission after Pseudoprogression (immune activity) in a Monotherapy patient with a cold tumour (bile tract cancer)



Baseline scan
Start of the Trial

Second scan
Pseudoprogression
(Tumour looks to have grown due to immune activity)



Third scan
Decreased size

Fourth scan
Complete Remission

This patient had received 3 prior lines of chemotherapy and was PD-L1 negative with no response prior to CF33

PHASE 1 ONCARLYTICS (CF33 + CD19)

OASIS TRIAL

Dose Administration (Parallel Groups)

CF33+CD19 Monotherapy Safety Run In

CF33+CD19 + Blinatumomab Combination Dose Escalation

Cohort Expansion

IT

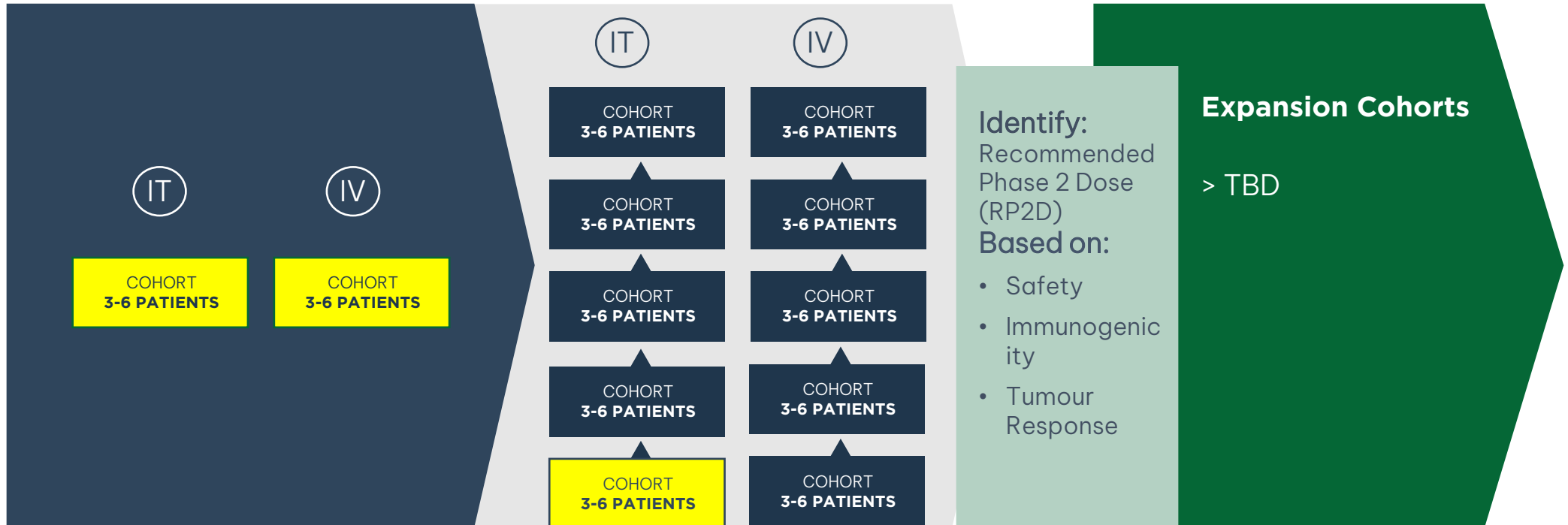
Intratumoural (IT) Administration

Metastatic and Advanced Solid Tumours

IV

Intravenous (IV) Administration

Metastatic and Advanced Solid Tumours



RECENT DEALS IN CELL THERAPY SUPPORT EXPANDING MARKET

Date	Deal Type	Deal Summary (Licensor, Licensee)	Technology	Indication	Stage	Financials
May 2022	Collaboration and license agreement	Cellular Biomedicine, Janssen	CAR T therapies (CD19/CD20 bispecific and CD20)	B cell malignancies	Phase I	\$245mm upfront cash payment + milestones and royalties
Nov 2022	Acquisition	AstraZeneca, Neogene Therapeutics	TCR T cell therapies	Solid tumors	Phase I	\$200mm upfront cash for equity + \$120mm milestones
Sep 2022	Collaboration and license agreement	Arsenal Bio, Genentech	Screening and T cell engineering tools	Solid Tumours	Preclinical	\$70mm upfront cash payment + milestones and royalties
Aug 2022	Strategic global collaboration	Poseida Therapeutics, Roche	Allogeneic CAR T cell therapies	B cell malignancies	Preclinical	\$110mm upfront cash payment + milestones and royalties <i>Potentially worth \$6B+</i>
Jan 2022	Strategic collaboration	Century Therapeutics, Bristol Myers Squibb	iPSC-derived allogeneic NK and T cell therapies	Hematologic malignancies and solid tumors	Preclinical	\$150mm upfront cash (\$50mm for equity) + milestones and royalties <i>Potentially worth \$3B+</i>
Sep 2021	Strategic collaboration	Adaptimmune, Genentech	iPSC-derived allogeneic T cell therapies	Oncology indications	Preclinical	\$150mm upfront cash payment + milestones and royalties <i>Potentially worth \$3B+</i>
Jan 2021	Discovery collaboration	Arsenal Bio, Bristol Myers Squibb	Anti-CA215 CAR-T cell therapy	Solid tumors	Preclinical	\$70mm upfront cash payment + milestones and royalties



IMUGENE

Developing Cancer Immunotherapies

ASX:IMU

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