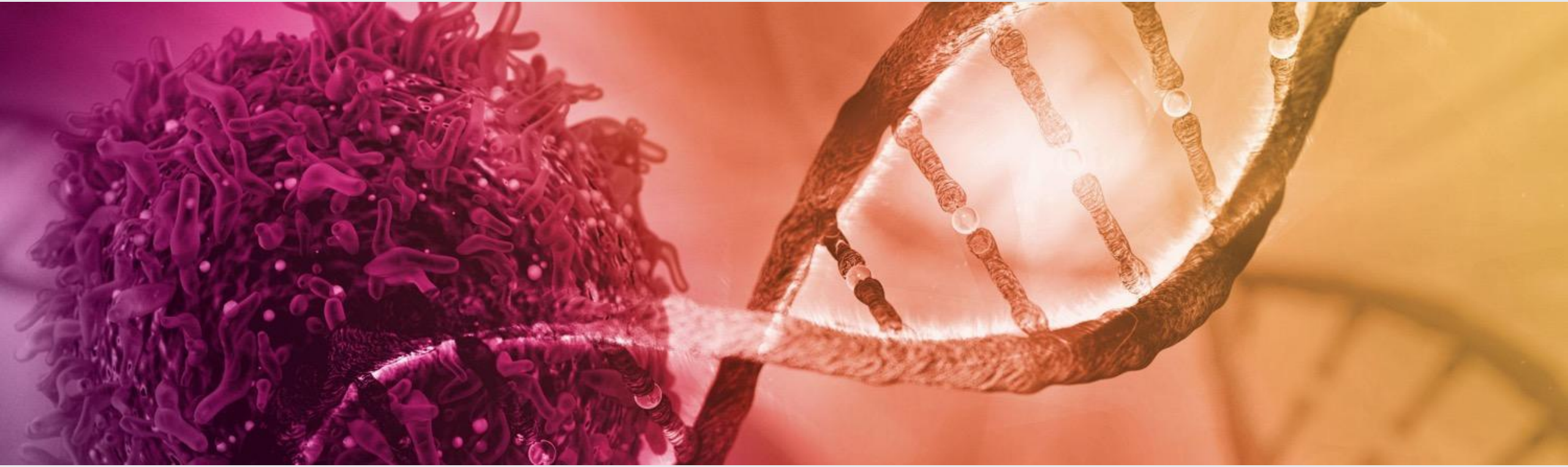

Achilles Therapeutics

Jefferies Healthcare Conference
June 2nd, 2020

Important Notice

This presentation may contain forward-looking statements. By their nature, forward-looking statements involve risks and uncertainties as they relate to events or circumstances that may or may not occur in the future. Actual results may differ materially from those expressed or implied in such statements because they relate to future events. These statements may be identified by words such as "may," "will," "should," "could," "expect," "intend," "plan," "anticipate," "believe," "estimate," "predict," "potential," "forecast," "continue," and variations of these words or similar expressions that are intended to identify forward-looking statements. All statements other than statements of historical facts contained in this presentation are forward-looking statements, including statements regarding plans or strategies, our current and prospective product candidates and planned clinical trials and preclinical activities.

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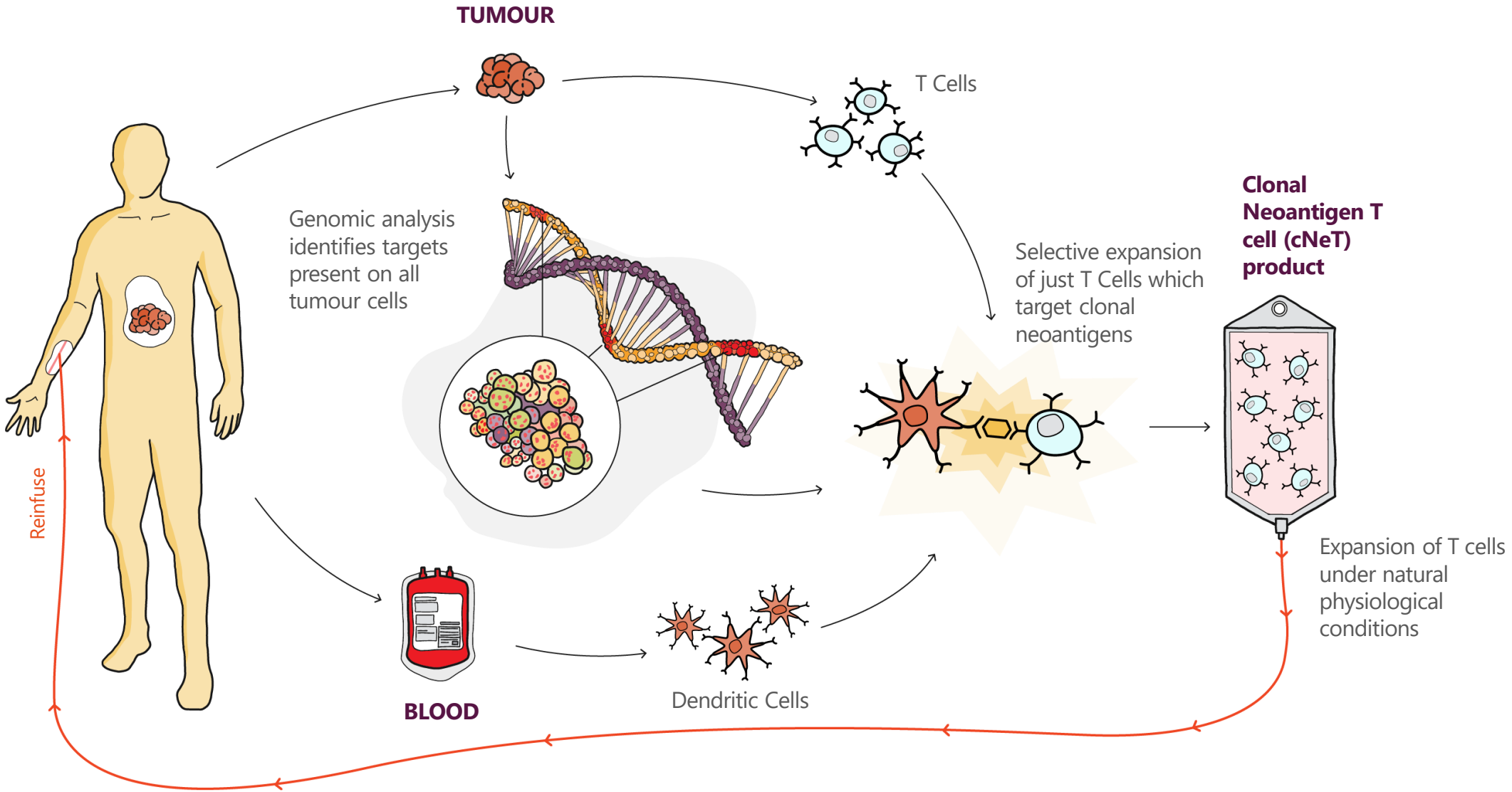
A clinical stage company developing potentially transformative T cell therapies targeting clonal neoantigens (cNeT) across multiple solid tumours

- Achilles was founded in 2016 by Syncona (£28.25 M Series A) and completed a £100 M Series B round in September 2019, led by RA Capital and joined by: Forbion, INVUS, Perceptive Advisors and Redmile Group, amongst others
- CTA and IND approved for NSCLC and melanoma clinical studies with first patient dosed in May 2020 and interim data expected in Q1 2021
- Evaluating a pipeline of pre-clinical targets, anticipating an additional 2-4 programs to enter the clinic by 2022
- Science based on pioneering research led by Profs. Charlie Swanton, Karl Peggs, Mark Lowdell and Sergio Quezada into tumour evolution, immune-regulation and the translation of personalised T cell therapies
- >100 staff based in Greater London with access to GMP licensed manufacturing facilities

Using cutting edge personalised genomics to target all tumour cells in the body

The first precision TIL therapy



Management team

Iraj Ali
CEO

- Over 13 years of commercial experience in speciality and advanced therapeutics
- Investment director in Nightstar Tx, Blue Earth Dx and Achilles
- Involved in six worldwide pharmaceutical product launches

Syncona

McKinsey&Company

Prof Sergio Quezada
CSO & Founder

- 15 years of academic experience in cancer immunology & immunotherapy
- Recognised leader in the field of immune-regulation and cancer
- Co-lead development of first-in-class anti-CD25 Treg depleter with TUSK Therapeutics (acquired by Roche)

UCL CANCER INSTITUTE UCL

CANCER RESEARCH UK

Jane Robertson
CMO

- Certified haematologist with over 17 years drug development experience
- Global clinical development leader of multiple studies
- Led Phase III development, registration of AZ's PARP inhibitor Lynparza®

AstraZeneca

KEYOS

Ed Samuel
SVP Manufacturing

- Over 18 years experience in the fields of cell and gene therapy
- Expertise in process development technology transfer and GMP manufacturing
- Led European operations at Orchard Therapeutics and Cognate BioServices

Orchard therapeutics

Cognate BioServices, Inc.

Beverley Carr
CBO

- 20 years of business development experience in global pharma and biotech
- Led multiple transactions including co-founding of Sitryx Therapeutics and out-licensing of ofatumumab to Novartis

cat Cambridge Antibody Technology

gsk

Robert Coutts
Finance Director

- Qualified accountant with over 13 years finance experience across practice and industry
- Expertise in set-up and operationalisation of the finance functions of multiple biotech companies

KPMG

Syncona

Shree Patel
SVP Global Clinical

- 10 years experience in cell therapy supply chain and operations
- Led global supply for autologous and allogeneic products
- Led European operations for adult and paediatric cell therapy trial

Cell Medica

Board of Directors

Edwin Moses
Independent Chairman

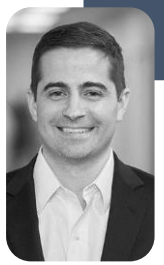
- 25 years of business building and Board level experience in over 15 companies
- Previously CEO of Ablynx, led the landmark $4.8Bn sale to Sanofi (2018)

Michael Giordano
Independent NED

- Previously SVP Development for Immuno-Oncology at BMS
- At BMS led 12 product approvals including Opdivo®, Yervoy®, Empliciti® and Sprycel®

Carsten Boess
Independent NED

- Previously CFO of Synageva through its $8Bn sale to Alexion
- Multiple finance leadership roles including Alexion, Insulet, Serono and Novo Nordisk
- Key role in multiple IPOs



Derek DiRocco
Investor Director

- Principal on the Investment Team at RA Capital Management
- Experienced public and private market investor with in depth knowledge of the solid tumour oncology landscape

Rogier Rooswinkel
Investor Director

- Partner at Forbion
- Specialist in evaluation and structuring of new investment opportunities with a strong focus on oncology

Karl Peggs
Founder Director

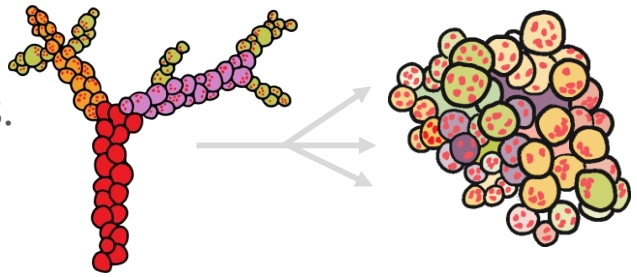
- Director of the Sir Naim Dangoor Centre for Cellular Immunotherapy
- Pioneered the development of anti-viral T cell therapies
- Led over 20 clinical trials in the T cell therapy field

Martin Murphy
Investor Director

- Founder and CEO of Syncona (Achilles founding investor)
- Previously a Partner at MVM leading their European operations and led a number of successful investments

Clonal neoantigens: A new class of solid tumour targets

Sub-clonal neoantigens (the branches) are present on only some cancer cells. Clonal neoantigens (the trunk) are formed early in evolution and are present on all cancer cells



We are able to specifically identify clonal neoantigens in tumours using our proprietary bioinformatics tool (PELEUS™) which has been developed based on our exclusive access to the world's most comprehensive solid tumour data base, the TRACERx study

PELEUS

A unique and proprietary tool to identify clonal neoantigens

The TRACERx study comprises extensive data from over 600 NSCLC patients collected over a period of 5 years[1,2,3,4]. The learnings from the identification of clonal antigens in this study can be broadly applied to other solid tumours

1. Jamal-Hanjani et al., Plos Biol, 2014
2. Jamal-Hanjani et al. NEJM, 2017
3. Abbosh et al., Nature, 2017
4. Rosenthal et al., Nature, 2019

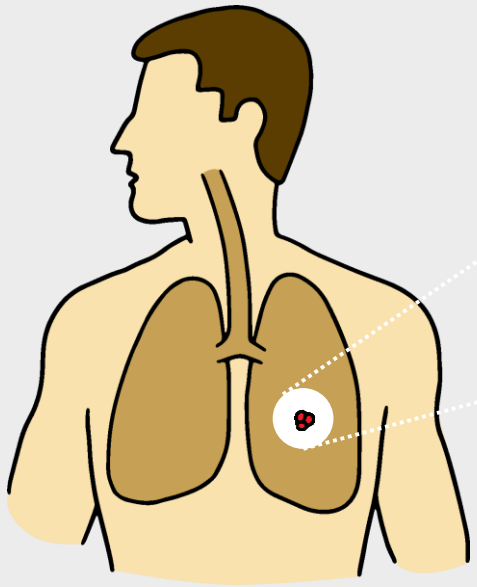
A clinical stage company combining cutting-edge genomics with a clinically validated cell therapy approach – Precision TIL

- Achilles has developed proprietary technology to identify a new class of neoantigens present on **all cancer cells** and absent from healthy tissue: **clonal neoantigens**
- We are able to target **multiple clonal neoantigens** which helps minimise the possibility **of evolved resistance** and **disease relapse**
- Achilles uses a **clinically validated** approach based on **tumour infiltrating lymphocytes (TILs)** to address some of the hardest to treat cancers
- T cells targeting clonal neoantigens (**cNeT**), **precision TIL therapy** with potentially transformative outcomes

IP and know-how

Core use patent applications	Designed to protect the use of T cells that specifically target clonal neoantigens to treat cancer
Target selection	Proprietary PELEUS™ bioinformatics platform used to identify clonal neoantigens from patient samples
Cell manufacturing	Proprietary VELOS™ advanced manufacturing process suitable for commercial supply of personalised T cell therapeutics

Achilles has developed proprietary technology to target all tumour cells



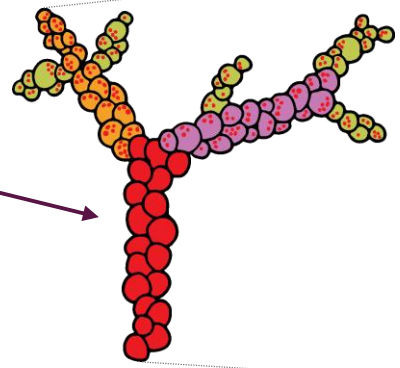
Tumours are **clonal in origin** and originate from a group of cells that are exactly the same

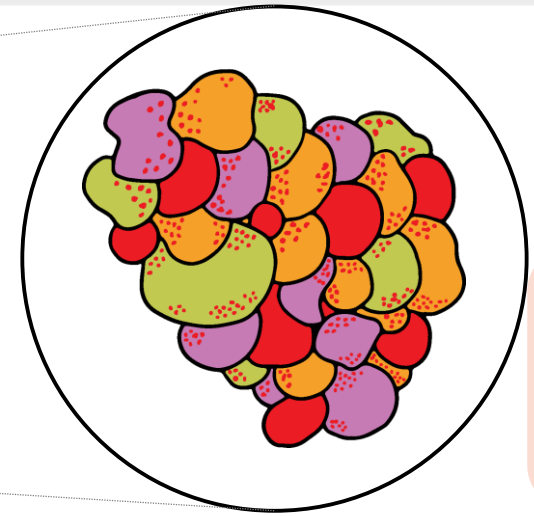
Tumours evolve, developing many new mutations resulting in **heterogeneity** that enables them to evade targeting

Targeting the new mutations, only allows you to kill only **some cancer cells**

Achilles has developed proprietary technology (using TRACERx) to identity the original tumour mutations **present on all cancer cells**, **clonal neoantigens**

We are able to identify and **target multiple clonal neoantigens** with our cNeT therapy



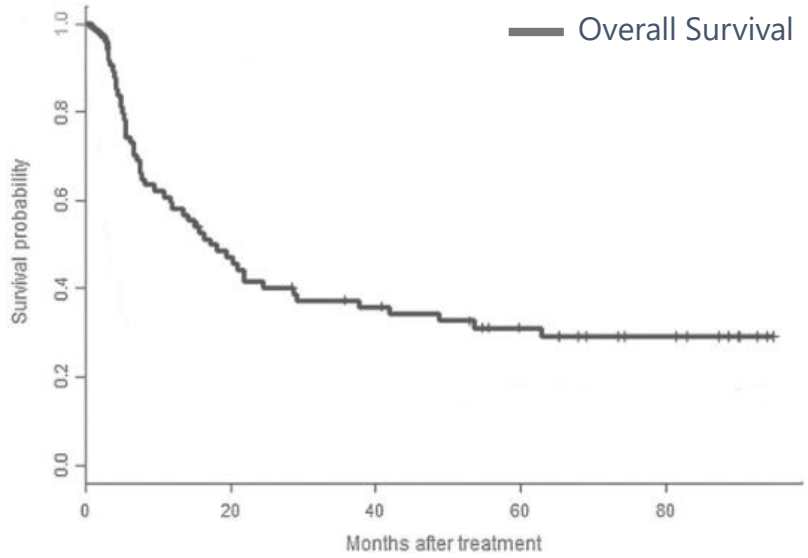


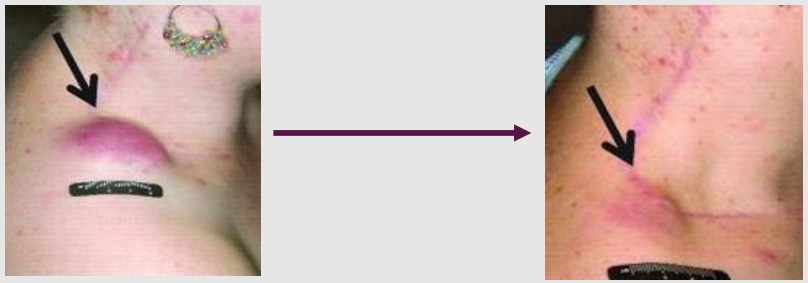
Clonal neoantigens are present on **primary tumours and all metastases**

The basic principle of TIL therapy has delivered impressive clinical responses in multiple late stage settings

Survival in response to TIL therapy

Prospective study in Metastatic Melanoma
74 patients, MD Anderson (2018)[1]





TIL has demonstrated profound efficacy in multiple solid tumour settings

36% ORR in melanoma (with 2 CRs) and durable responses (median DoR not reached after 17 months follow up). 66 patients, 3.3 lines of prior therapy and all PD-1 refractory.
– *IOVANCE ASCO abstract May 2020*

44% ORR in cervical cancer (3 times better than Keytruda), in 27 patients with 2.6 prior lines of therapy
– *IOVANCE ASCO abstract May 2019*

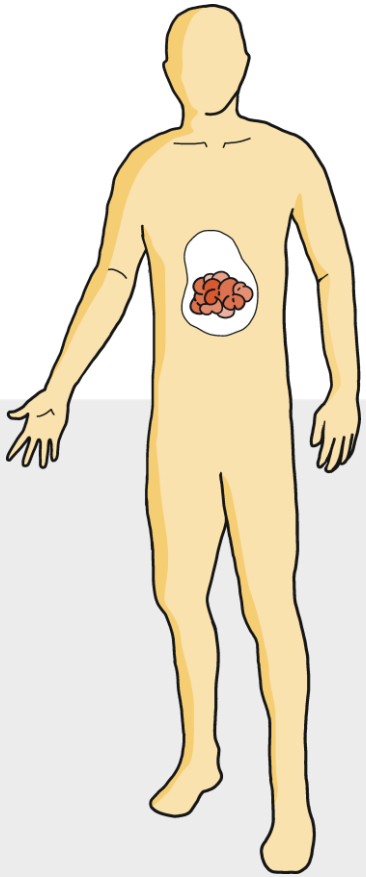
25% ORR in NSCLC in 12 patients (2 CRs and 1 PR) responses ongoing for 2 years
– *Moffitt Investigator Sponsored Study update at AACR April 2020*

Total mutational load and predicted neoantigen load correlate with clinical benefit in TIL
- Lauss et al., Nature Comm, 2017

1 Forget et al., Clin. Can. Res,. 2018

Despite impressive results, opportunities exist for improvement of standard TIL therapies

Standard TIL



cNeT

Clonal neoantigen T cells

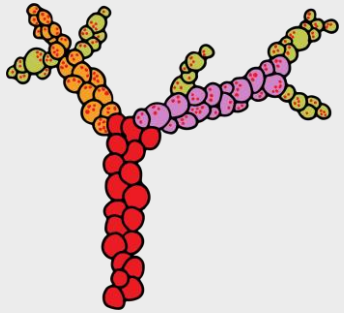
Non-specific expansion of all T cells

No control over which antigens are targeted

Very high levels of IL-2

Result in more differentiated (or exhausted) T cells with reduced anti-tumour activity[1]

Manufacturing process developed in the 1980s

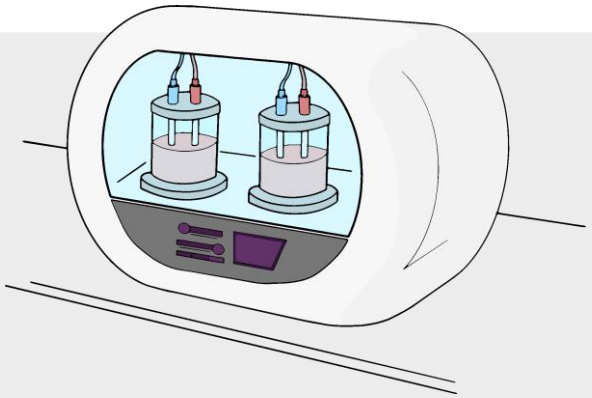


cNeT process selectively targets clonal neoantigens

Shown to correlate with the efficacy of TIL[2] and checkpoint inhibitors[3]

Natural dendritic cell driven T Cell expansion

Using low levels of IL-2



Modern proprietary process

Designed with scale-up and competitive COGS in mind

1 Gattinoni et al. J Clin Invest, 2005
2 Lauss et al., Nature Comm, 2017
3 Snyder et al., NEJM, 2014

Our technology leads the next wave of immuno-oncology approaches and is uniquely positioned to target clonal neoantigens – Precision TIL therapy

Cell therapies

Checkpoint Inhibition

OPDIVO

YERVOY

KEYTRUDA

Tumour associated antigens

TCR² THERAPEUTICS

TMUNITY

Adaptimmune TRANSFORMING T CELL THERAPY

Fate THERAPEUTICS

MARKER THERAPEUTICS

Neoantigens

IOVANCE BIOTHERAPEUTICS

BIONTECH United States

TAILORED THERAPEUTICS

PACT pharma

Precision TIL therapy

ACHILLES THERAPEUTICS transformative T cell therapy

Achilles has a unique capability to target clonal neoantigens (cNeT)

Achilles approach

- *Clinically validated with TIL*
- *Multiple targets (prevents tumour escape)*
- *Natural TCR and T cell expansion delivering potent (CD4+ and CD8+) T cells*

cNeT characteristics and advantages

Manufacturing being reduced to practice

- Produced clinical doses of >100 million cNeT cells
- Product contains both cytotoxic (CD8+) and helper T cells (CD4+) which can directly target tumour cells[1-3] and are critical for durable responses[4-5]

Superior Potency

- In response to clonal neoantigens, cNeT cells secrete significantly higher amounts (>5X) of effector cytokines compared to TILs[6]
- Compared to TILs, cNeT have a less exhausted phenotype which should enable greater in vivo proliferation and improved anti-tumour activity[7-8]

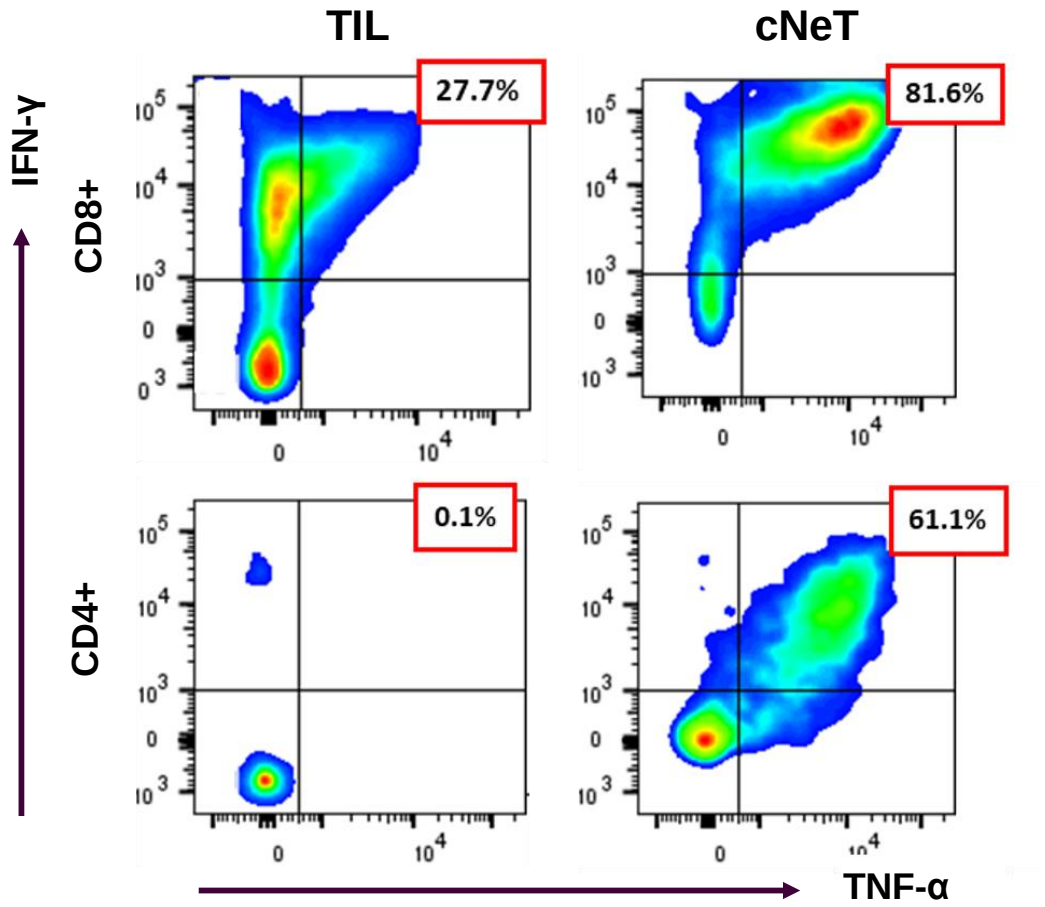
A patient specific product

- The cNeT product contains multiple clonally reactive T cell populations that are unique to each patient and reduce the risk of relapse through tumour escape

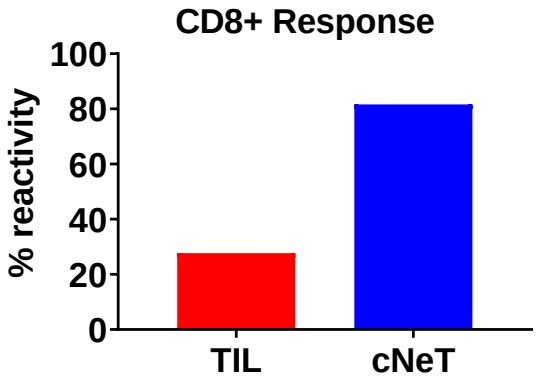
1. Quezda et al., J Exp Med 2009; 2. Tran et al., Science, 2014; 3. Hunder et al., N Engl J Med, 2008; 4. Church et. al., Eur J Immunol, 2014; 5. Antony et al., J Immunol, 2005; 6. Achilles unbuplished data 7. Peggs et al., 2008; 8. Gattinoni et al., J Clin Invest, 2005

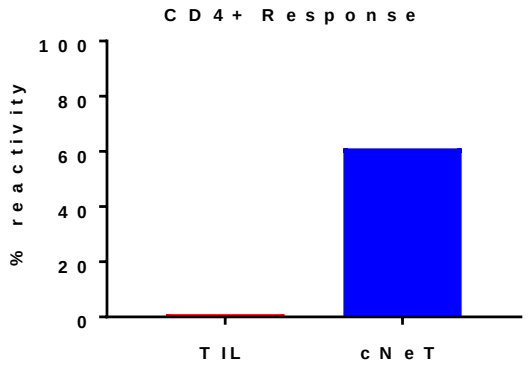
cNeT demonstrate improved activity compared to standard TIL

cNeT process has been shown to produce both CD4+ and CD8+ T cell populations. There is a strong body of pre-clinical data which shows CD4+ and CD8+ T cells work in concert to deliver potent and durable responses[1-3]



T cell function measured by cytokine secretion using flow cytometric analysis

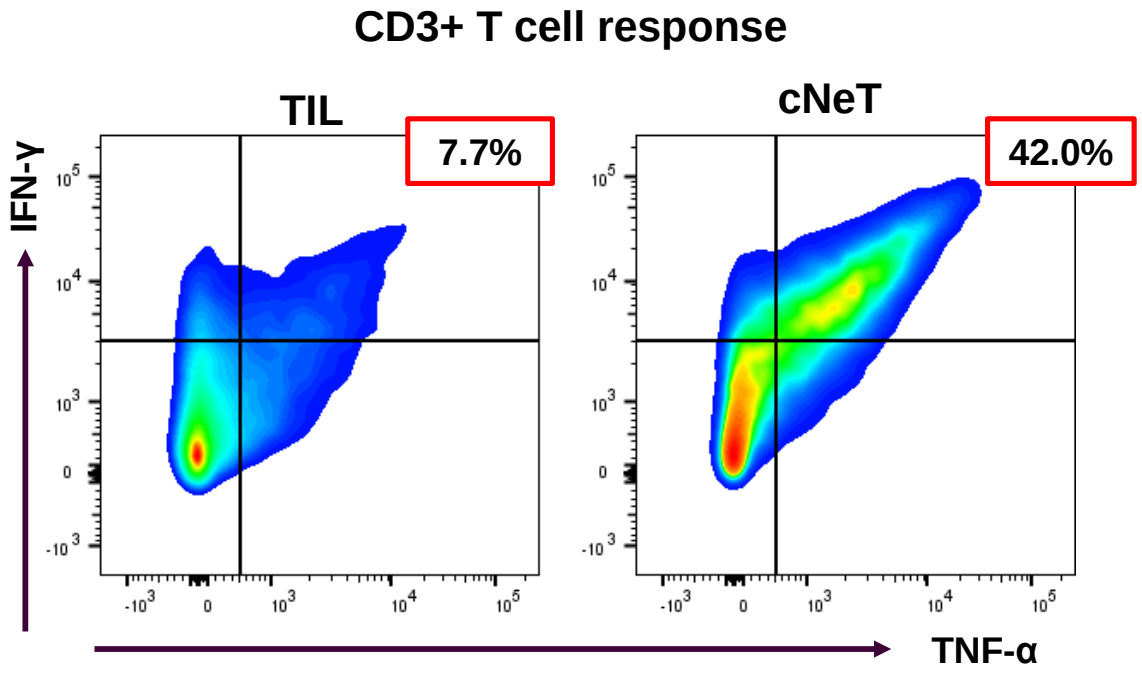


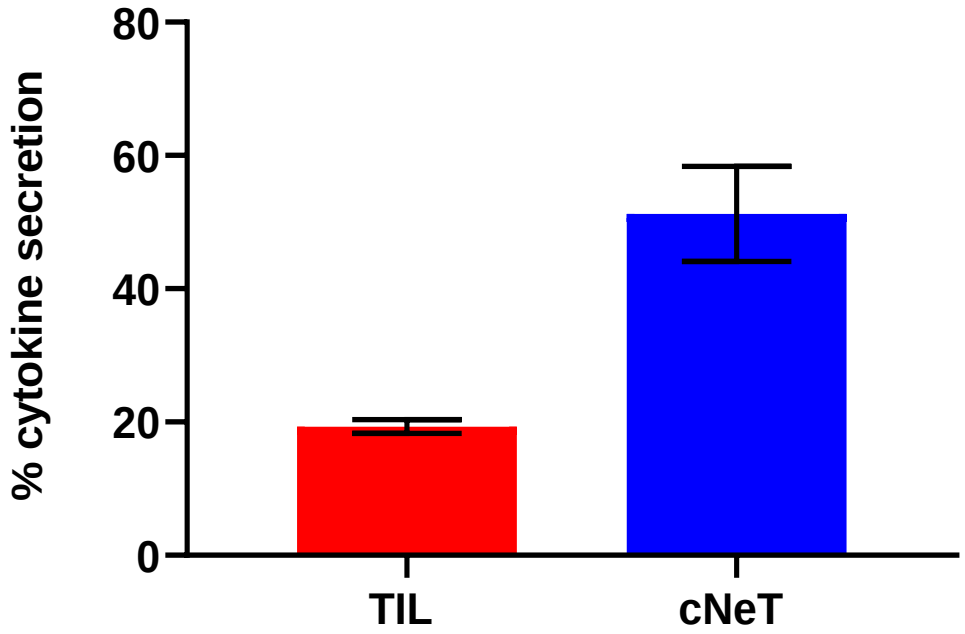


1. Hunder et al., NEJM, 2008;
2. Church et. al., Eur J Immunol, 2014;
3. Antony et al. J Immunol, 2005;

Natural dendritic cell driven expansion delivers significant improvement in T cell fitness for cNeT compared to standard TIL

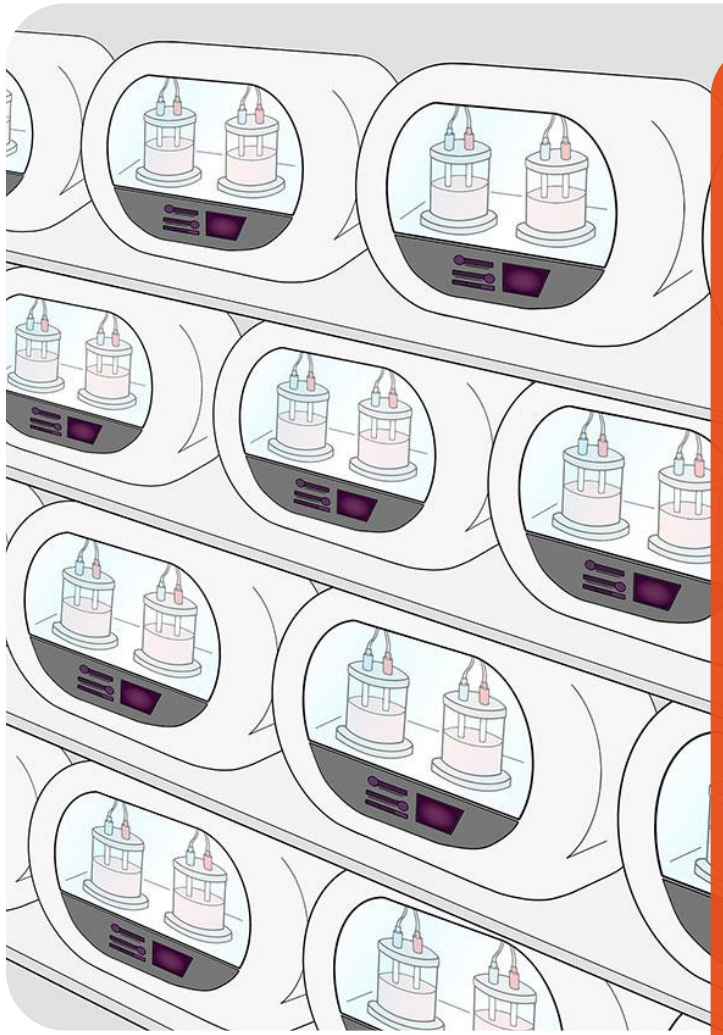
The fitness of all T cells can be assessed through the non-specific activation of the CD3 T cell co-receptor. Comparison of matched patient samples reveals a significant improvement in T cell function for cNeT compared to standard TIL





T cell function measured by cytokine secretion using flow cytometric analysis

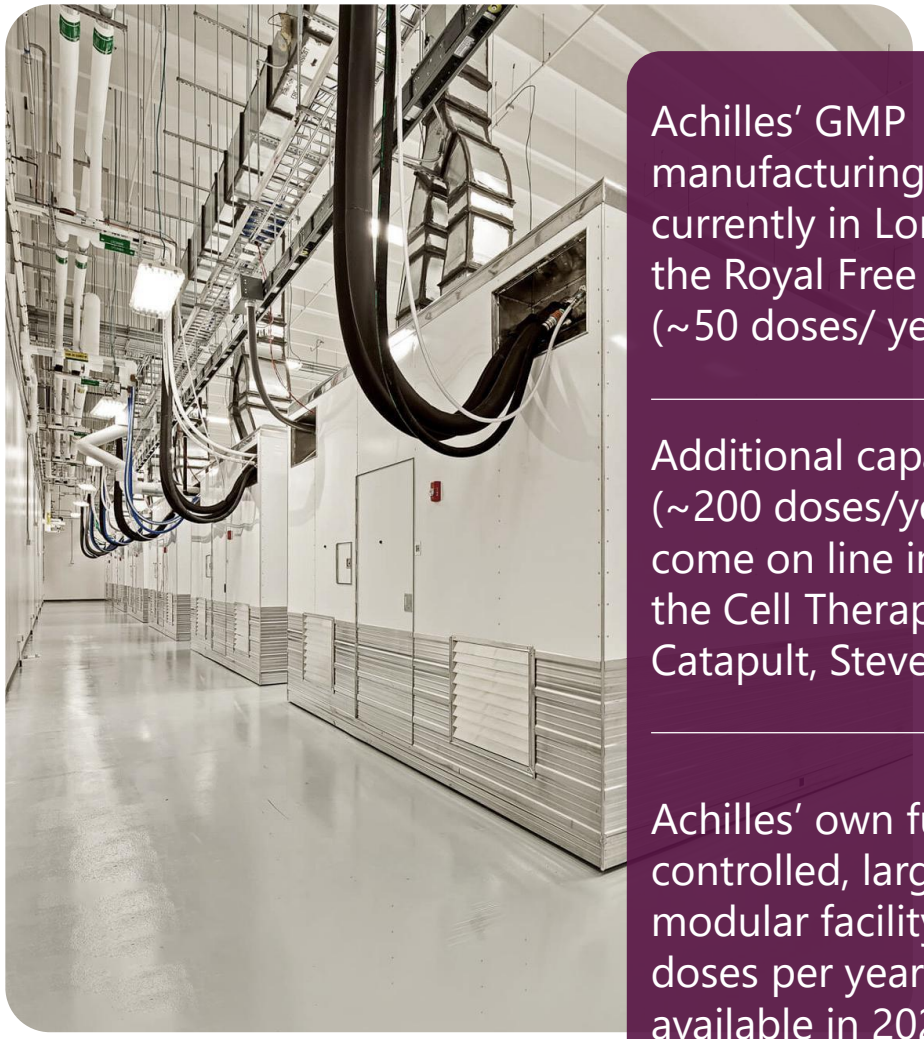
Achilles' increasing manufacturing capability



Development of an automated and fully closed end-to-end process

Individual products will be manufactured in closed automated bio-processors that can be readily scaled

Closed automated manufacturing will be performed in licensed manufacturing pods (right) that can be rapidly scaled



Achilles' GMP manufacturing is currently in London at the Royal Free Hospital (~50 doses/ year)

Additional capacity (~200 doses/year) will come on line in 2021 at the Cell Therapy Catapult, Stevenage (UK)

Achilles' own fully controlled, large scale modular facility (~1,000 doses per year) becomes available in 2022

Achilles has opened two clinical trials in 2020

CHIRON

Advanced Non-Small Cell Lung Cancer (Stage III-Stage IV)
Open label
Q2 2020 – Q2 2022

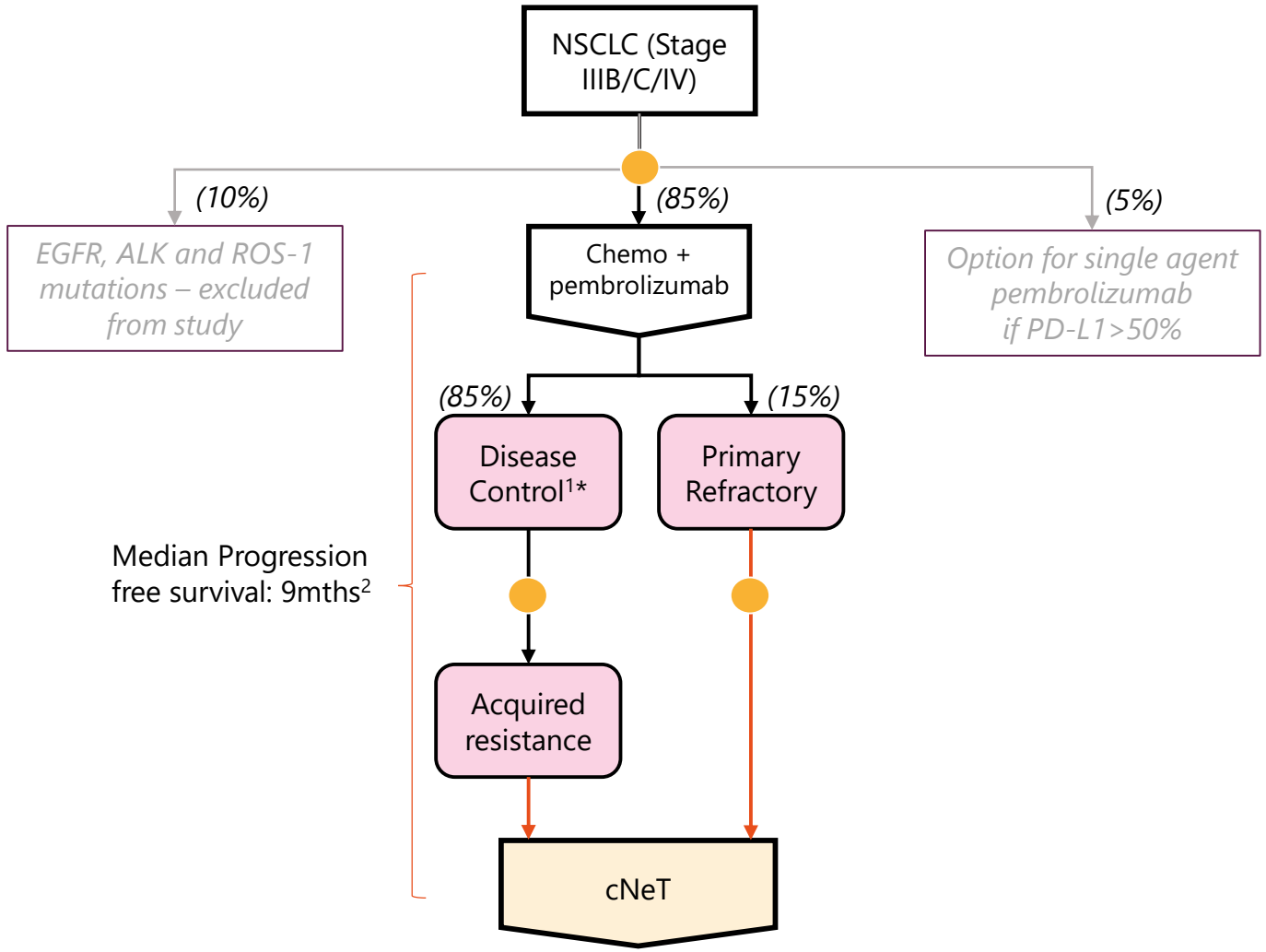
- 40 patients with advanced unresectable or metastatic NSCLC
- Never-smokers and EGFR/ALK/Ros-1 mutations excluded
- cNeT monotherapy (and option for combination with PD-1/PD-L1 inhibitor)
- 8 UK sites initially, expanding to EU and US

THETIS

Recurrent or metastatic malignant melanoma
Open label
Q2 2020 – Q2 2022

- 20 patients with metastatic or recurrent melanoma
- Acral, uveal and mucosal melanoma excluded
- cNeT monotherapy
- 4 UK sites initially, expanding to EU and US

cNeT therapies can be readily delivered within standard treatment pathways



- Significant unmet in NSCLC following first line therapy:
  - 61% patients experience disease progression or die within 12 months[2]
  - Half of responders have disease progression within 12 months[2]

1 KEYNOTE 189, Gandhi et al., NEJM 2018; 2. Gadgeel et al., J Clin Onc 2020
* Disease control rate = responders (48%) plus stable disease (37%)

Clinical objectives of the CHIRON and THETIS studies

PRIMARY

To assess the safety and tolerability of cNeT therapy

SECONDARY

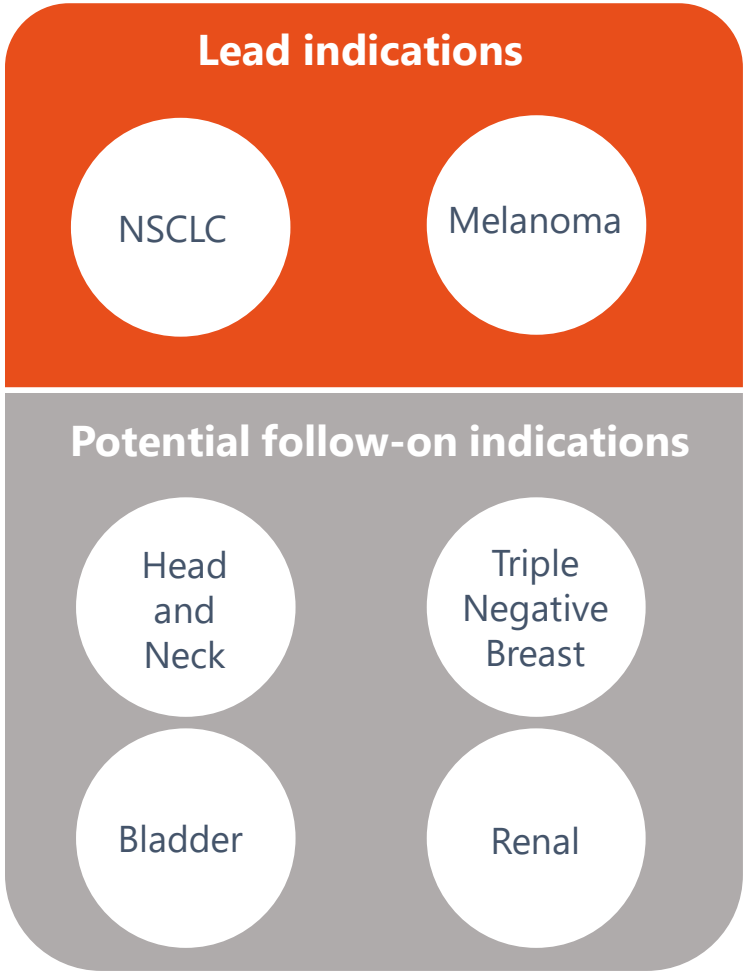
To evaluate the clinical efficacy of cNeT using RECIST 1.1[1] and imRECIST[2]

EXPLORATORY

- To evaluate the manufacturing success rate and factors affecting product quality
- To evaluate the phenotype, expansion, persistence, and functionality of cNeT cells in patients
- To evaluate potential biomarkers of clinical activity
- To evaluate the utility of a bespoke plasma circulating tumour (ctDNA) assay

1. Eisenhauer et al., Eur J Cancer, 2009
2. Hodi et al., JCO, 2018

Significant opportunity for cNeT beyond lead indications



- Indication selection driven by medical unmet need, commercial opportunity and suitability of cNeT approach
- Pipeline of 2-4 follow-on indications to potentially enter the clinic by 2022
- Highly engaged clinical partners facilitate access to a wide range of patient material through our Tissue Collection Protocol (TBL)

Corporate strategy

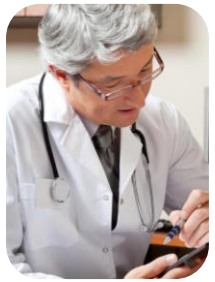
- To develop the first precision TIL therapy, delivering a personalised, T cell based therapeutic targeting clonal neoantigens (cNeT), against a range of commercially attractive solid tumour targets beginning with NSCLC and melanoma
- To rapidly generate clinical PoC data in the two lead indications and quickly develop a pipeline targeting up to four additional indications
- To continuously invest in our proprietary technology platforms (PELEUS and VELOS)
- To partner with pharma companies where they can bring additional resources and specific indication expertise to fully exploit the cNeT platform
- To commercialise some cNeT indications ourselves in certain geographies

2020-2022 potential key milestones

H1 2020
First patient dosed

Q1 2021
Interim efficacy read-out
in NSCLC and melanoma

H2 2021
INDs filed for follow-on indications



Q2 2022
Full clinical read-out
NSCLC and melanoma (60 patients)

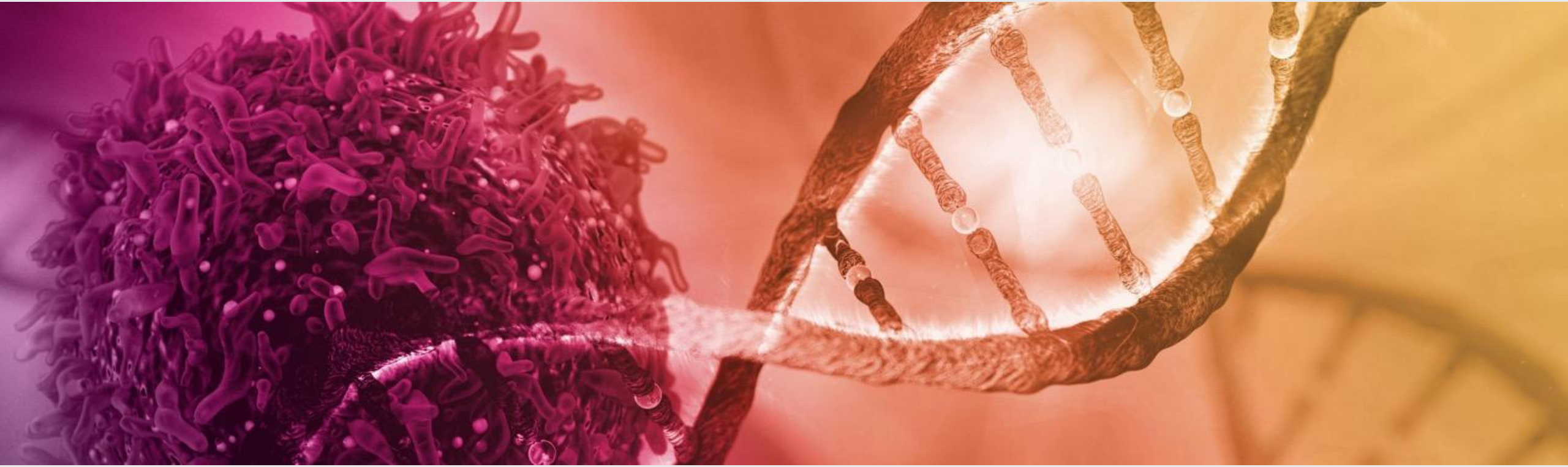
2020 | 2021 | 2022

Q3 2020
Occupy new R&D facility
(London)

H2 2021
Manufacturing facility on-line
(200 doses/ year)
(Cell Therapy Catapult)

H1 2022
Open Ph I/II
for follow-on indications

H2 2022
Manufacturing facility on-line
(1000 doses/ year)
(large scale modular facility)



Thank you