



Peter Mac
Peter MacCallum Cancer Centre
Victoria Australia

Development of a nutrition care pathway for haematology cancer patients undergoing chimeric-antigen receptor (CAR-T cell) therapy.

Kate Graham & Jenelle Loeliger

Nutrition & Speech Pathology Department, Peter MacCallum Cancer Centre



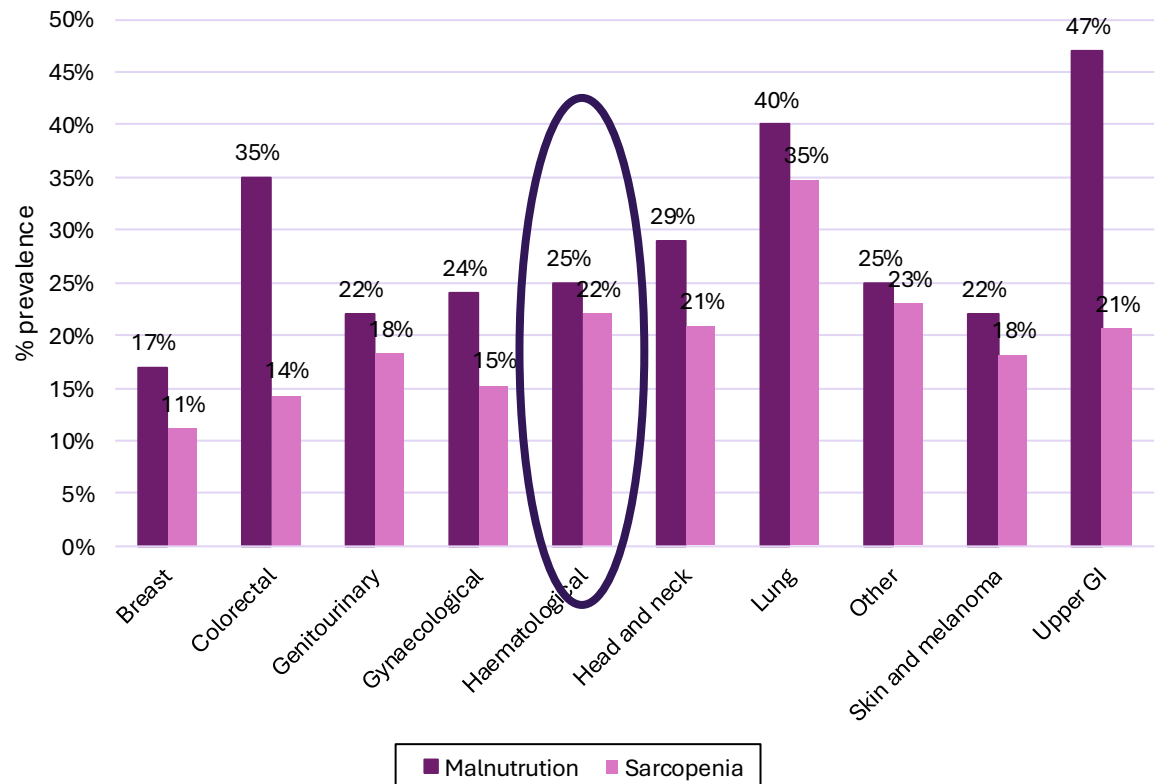
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- Christie NHS Foundation Trust
 - Nutrition Department
 - CAR-T MDT
- Australian CAR-T cell treatment site dietitians



Background

- Chimeric Antigen Receptor T-Cell (CAR-T cell) treatment is a new & emerging therapy
- Currently used in B-ALL, DLBCL, Myeloma
- CAR-T cell treatment has a unique toxicity profile
- Malnutrition and sarcopenia are common
- Limited understanding of nutrition impacts of CAR-T cell treatment



Aims & Objectives

- To conduct an environmental scan to inform a nutrition model of care for patients being treated with CAR-T cell treatment.
- To collate information to develop a nutrition model of care for patients treated with CAR-T cell treatment.



Practice Guideline > Clin Nutr. 2017 Feb;36(1):11-48. doi: 10.1016/j.clnu.2016.07.015.

Epub 2016 Aug 6.

ESPEN guidelines on nutrition in cancer patients

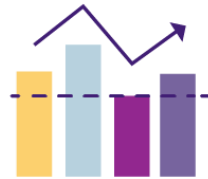


**A.S.P.E.N. Clinical Guidelines:
Nutrition Support Therapy During
Adult Anticancer Treatment and in
Hematopoietic Cell Transplantation**

Methodology



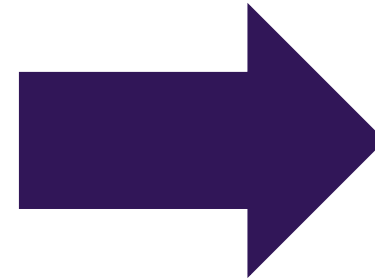
Comprehensive literature review of nutrition and CAR-T cell treatment (inception-March 2026)



National benchmarking survey of nutrition care across all sites providing CAR-T cell treatment in Australia



Observational visit of CAR-T service at The Christie NHS Foundation Trust (Manchester, UK)



Collate all finding and resources to formulate a proposed nutrition care pathway

2021

Meta-analysis

Systematic review of nutrition support interventions in adult haematology and oncology patients receiving CAR T cell therapy

B. Cucchiaro ^{a,*}, C.E. Weekes ^b

^a Nutrition and Dietetics Department, University College London Hospitals NHS Foundation Trust, 3rd Floor East, 250 Euston Road, London NW1 2PG United Kingdom

^b Nutrition and Dietetics Department, Guy's and St Thomas' NHS Foundation Trust, Westminster Bridge Road, London SE1 7EH United Kingdom

Original article

Malnutrition and cachexia are associated with poor CAR T-cell therapy outcomes including survival

B. Cucchiaro ^{a,b}, N.A. Davies ^a, C.E. Weekes ^a, M. O'Reilly ^c, C. Roddie ^d, A. Slee ^{a,*}

^a University College London, Division of Medicine, Rayne Institute, 5 University Street, London, WC1E 6BT, UK

^b University College London Hospital, Nutrition and Dietetics Department, 250 Euston Road, NW1 2PG, UK

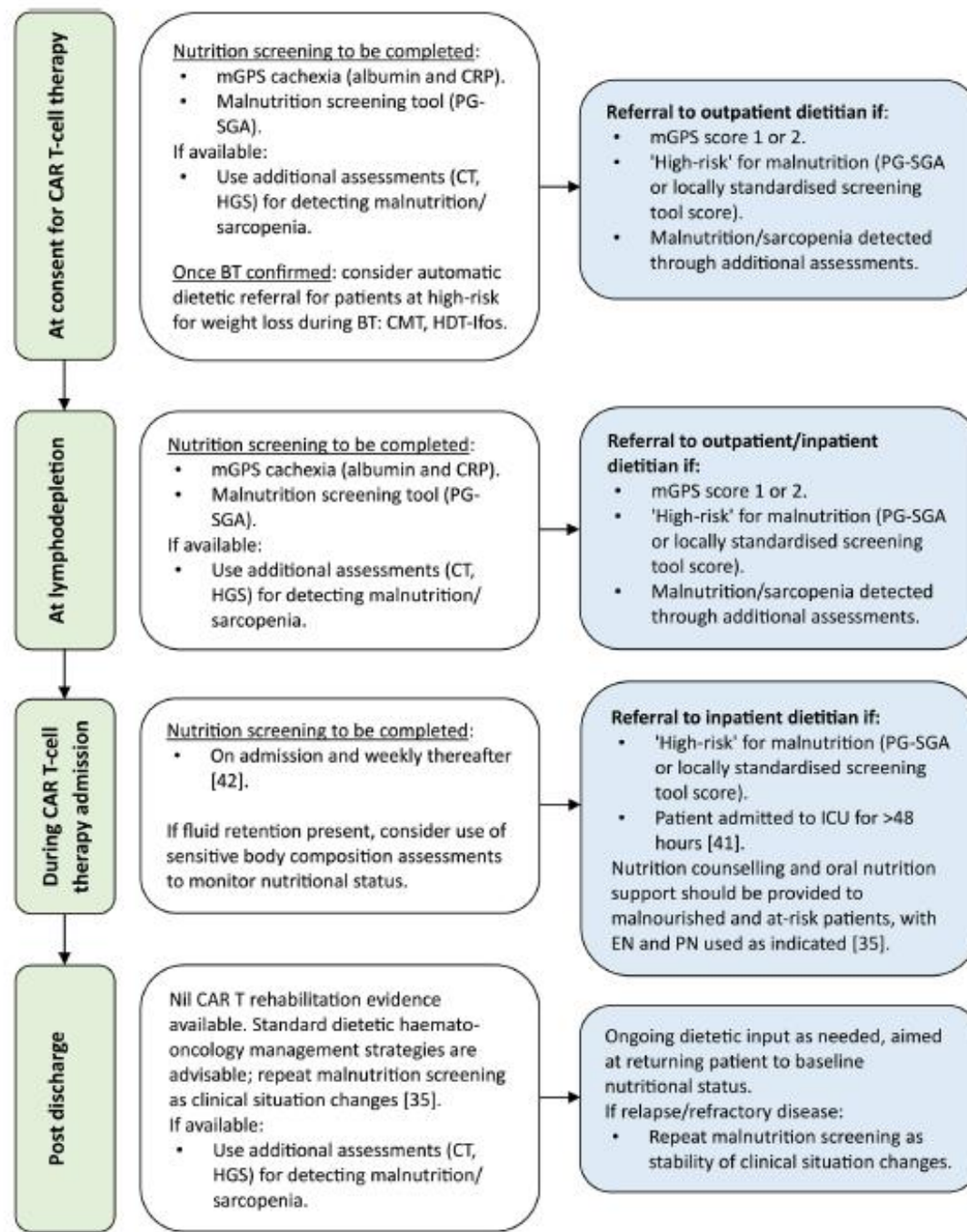
^c University College London Hospital, 250 Euston Road, NW1 2PG, UK

^d University College London, Cancer Institute, 72 Huntley Street, WC1E 6DD, UK

2025

- 12 publications*
- Malnutrition & sarcopenia associated with poorer outcomes & progression free survival
- Impact of prior treatments
- Higher prevalence malnutrition & sarcopenia with neurotoxicity

Literature



Benchmarking*

Site	Screening	Nutrition care pathway	Automatic referral	Prehabilitation	Outpatient follow up
Westmead Hospital, NSW 2018→	✗	✗	✓ on admission	✗	Ad Hoc
RCH, Vic 2019→	✗	✗	✓ on admission	✗	✗
Fiona Stanley Hospital, WA 2020→	✓ on admission	✗	✗	✗	✗
Alfred Health, Vic 2020→	✓ on admission	✗	✗	✗	Ad Hoc
Royal Brisbane & Women's, QLD 2022→	✓ on admission	✗	✓ on admission	✗	Ad Hoc
RPA, NSW 2023→	✓ on admission	✗	✗	✗	Ad Hoc
Townsville Hospital, QLD 2024→	✓ MST & SARC-F in workup	✗	✓ on admission	✗	Ad Hoc
Peter Mac, VIC 2019→	✓ on admission	✗	✗	✗	Ad Hoc

Observation



The Christie
NHS FOUNDATION TRUST



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- Nutrition embedded in CAR-T MDM
- High volume service
- Treating DLBCL, B-ALL, Myeloma(starting)



Final consent

Outpatient
assessment:

- Nutrition: PG-SGA
- Sarcopenia: HGS, CC

Inpatient
admission

Repeat measures

- ONS, EN, PN

D/C

Repeat measures

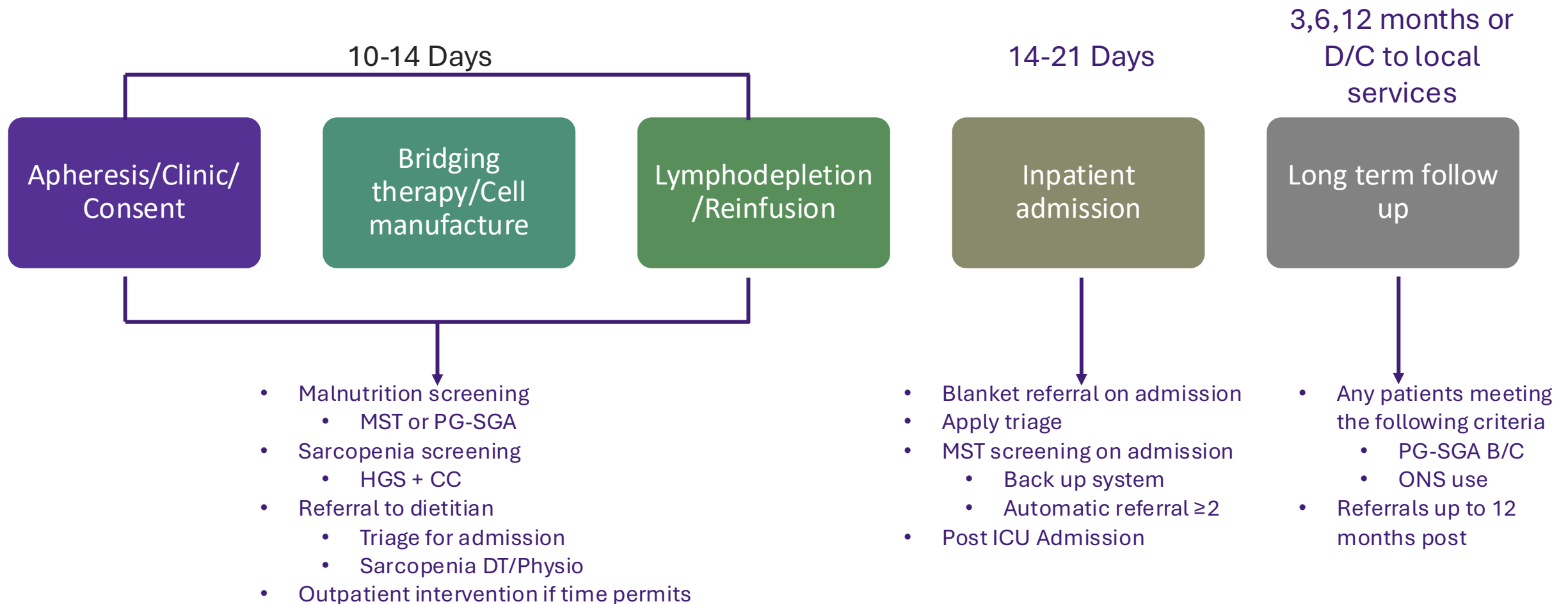
- Referral to community services

Follow up 3,6,12
months

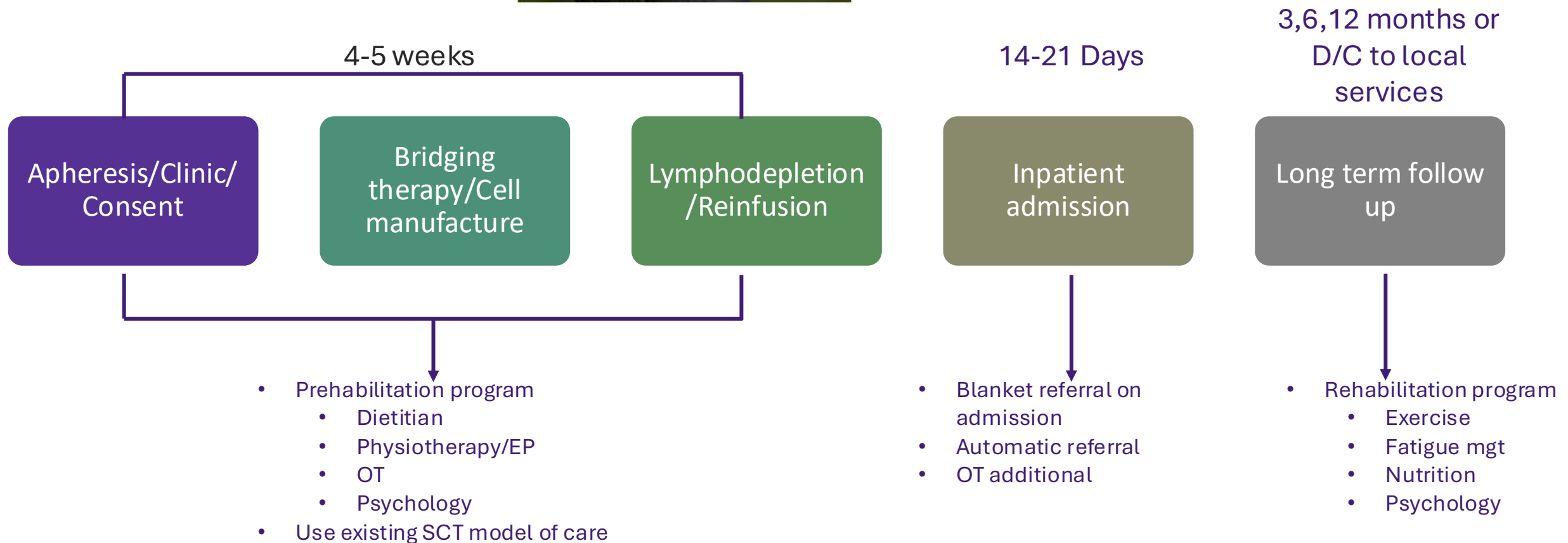
Repeat measures

- Information gathering

Proposed Nutrition Care Pathway



Opportunity



Next Steps



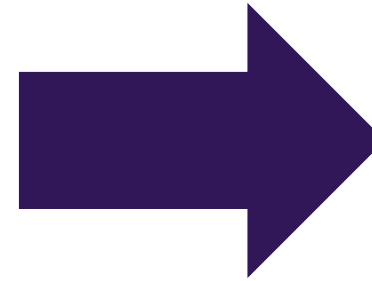
Establish
baseline data
pre-
implementation



Implement
proposed
pathway



Evaluate
success of
proposed
pathway



Expand pathways
across Allied
Health including
prehabilitation

References

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Cucchiaro, B., & Weekes, C. E. (2021). Systematic review of nutrition support interventions in adult haematology and oncology patients receiving CAR T cell therapy. *Clinical nutrition ESPEN*, 46, 60–65. <https://doi.org/10.1016/j.clnesp.2021.10.015>

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Rejeski K, Cordas Dos Santos DM, Parker NH, Bücklein VL, Winkelmann M, Jhaveri KS, Liu L, Trinkner P, Günther S, Karschnia P, Blumenberg V, Schmidt C, Kunz WG, von Bergwelt-Baildon M, Jain MD, Theurich S, Subklewe M. Influence of Adipose Tissue Distribution, Sarcopenia, and Nutritional Status on Clinical Outcomes After CD19 CAR T-cell Therapy. *Cancer Immunol Res*. 2023 Jun 2;11(6):707-719. doi: 10.1158/2326-6066.CIR-22-0487. PMID: 37040425; PMCID: PMC10236147.

Thank you

kate.graham@petermac.org



Peter Mac
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