

Māori-Responsive Translational Lung Cancer Research: Establishing a Tissue Cohort in Aotearoa New Zealand (NZ)

Cameron, Laird^{1,2} Fraser, Anne¹ Lalanne, Jess¹ Wilson, Mathew¹ Henare, Kimiora²
Correspondence: Laird.Cameron@TeWhatuOra.govt.nz. 1. Te Whatu Ora, Auckland City Hospital. 2. University of Auckland.



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INTRODUCTION

- In Aotearoa NZ, indigenous Māori suffer higher incidence and mortality from lung cancer than non-Māori (1).
- Immunotherapy is effective for Non Small Cell Lung Cancer with under-representation of indigenous peoples in clinical trials and biomarker discovery research.
- Our existing regional biobank contained no lung cancer samples.
- We designed a specific biobank “Thoracic Oncology Archival Tissue Study (TAONGA)” prioritising and supporting Māori patients with lung cancer to donate tissue.
- Donated tissue enabled spatial profiling with Multiplexed Immunofluorescence to examine the immune microenvironment to find improved biomarkers for immunotherapy response.

METHODS

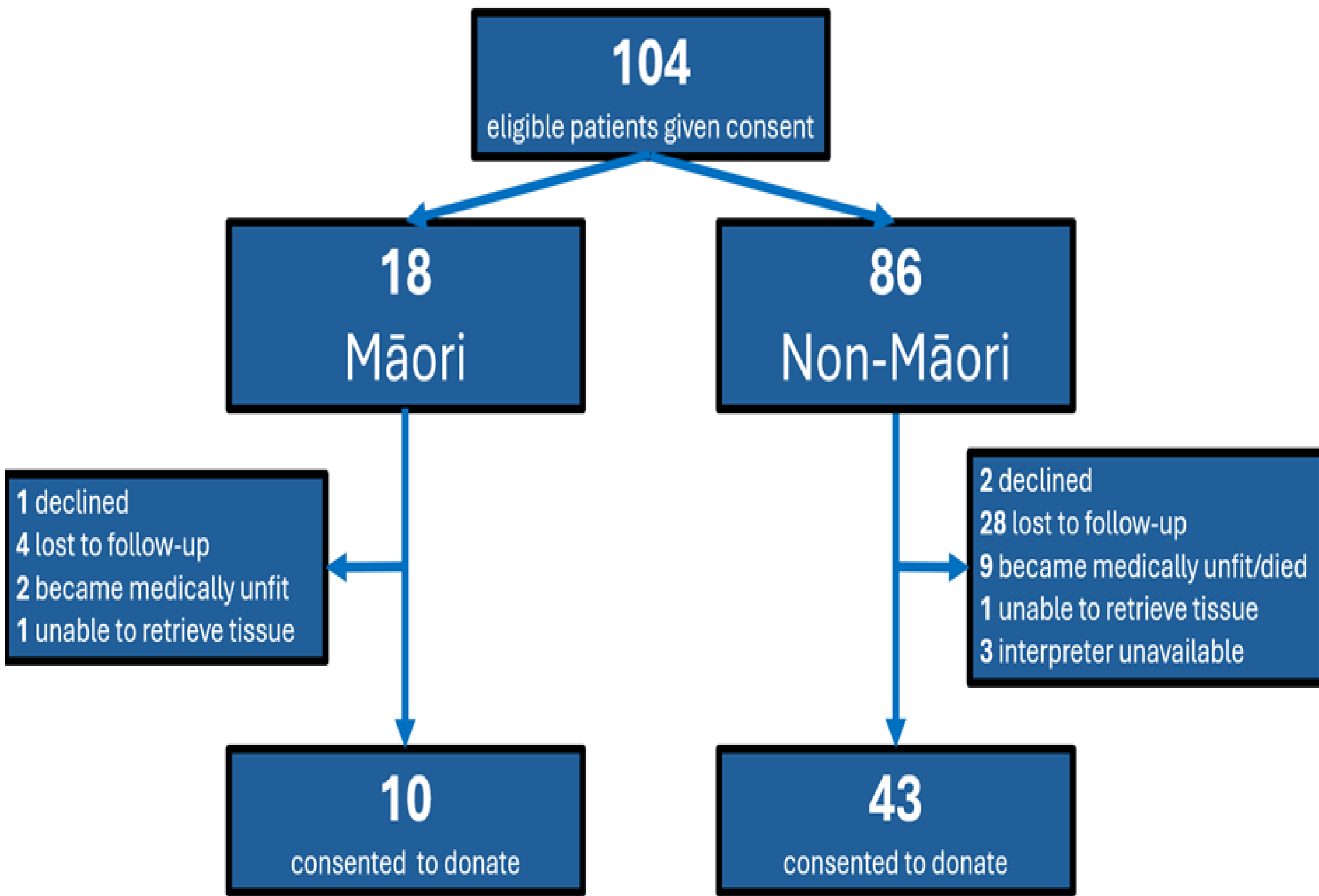
- Clinicians identified potential participants who were initially approached at a routine clinic appointment. A consent form was given then patients were later contacted by research staff and clinicians.
- Inclusion criteria.
 - Patient with a diagnosis of NSCLC attending medical or radiation oncology clinic at our regional service.
 - Archival surgical resection samples available and not needed to inform treatment or interventional trial options.
 - Able to provide informed consent.
- Archival tissue was examined by clinical pathologists, retrieved, de-identified and provided to the university research laboratory.

DISCUSSION AND CONCLUSION

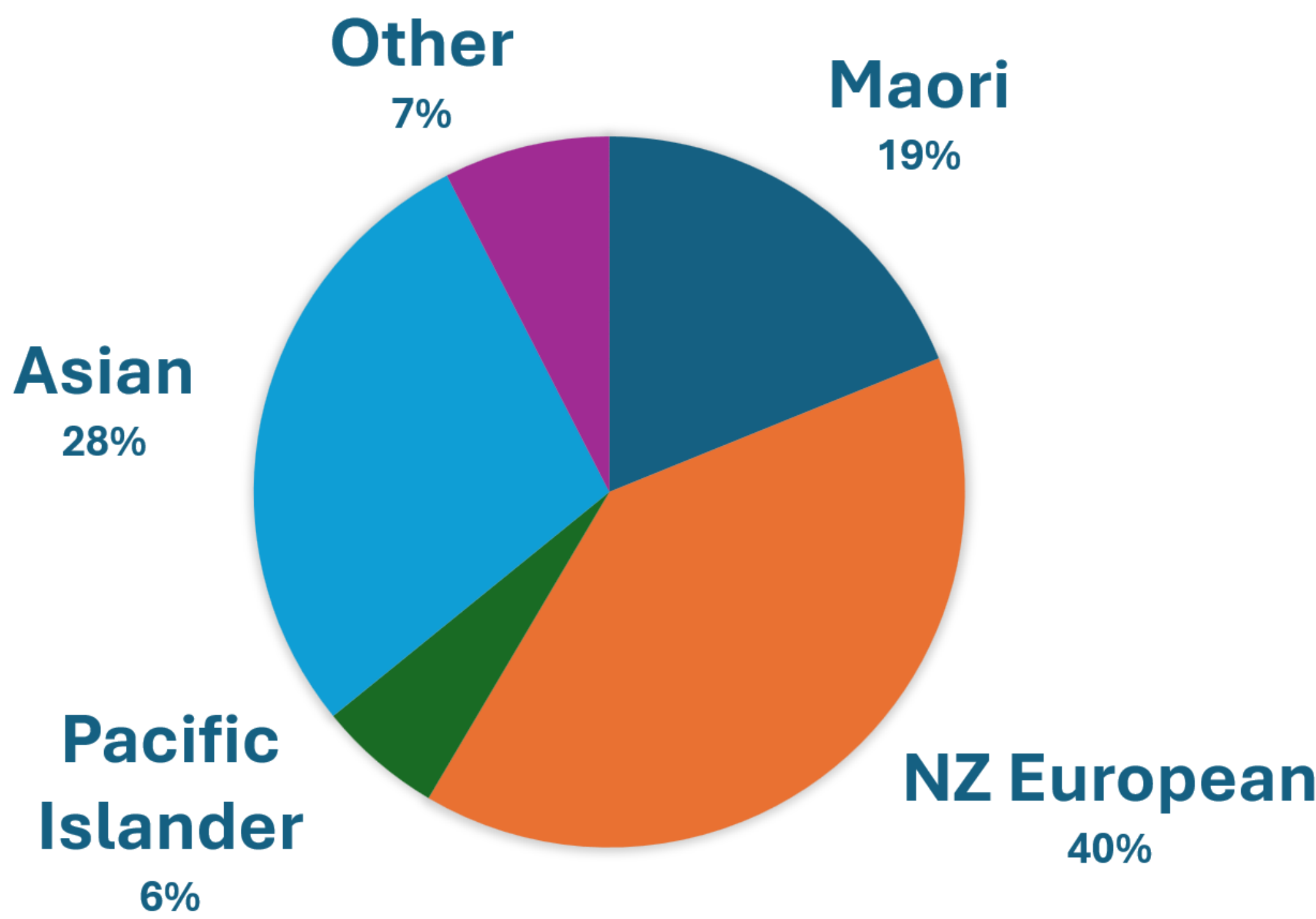
- Study design features that supported Māori participation include:
 - Māori leadership within the research team.
 - Culturally safe clinicians and support for participants from Māori support services.
 - Clear consent processes including flexibility of additional options allowing any future unspecified research or tissue sharing
 - Tikanga-informed processes such as an offer of karakia (prayer) at the time of tissue disposal.
 - Careful and consulted framing for dissemination of results.
- Half of eligible patients (Māori 55%, Non-Māori 50%) consented. Indicating willingness of indigenous Māori to donate archival tissue for research. Only one Māori patient declined to donate.
- 16 of 53 participants requested karakia and were of various ethnicities.
- The TAONGA project has successfully created the first biobank containing lung cancer specimens from indigenous Māori in our region.
- Subsequent spatial profiling of donated tissue has included specimens from indigenous patients to investigate improved biomarkers of immunotherapy response.

RESULTS

- Over 9 Months (April 2025 – Jan 2026) 104 patients were approached and 53 completed consent for tissue donation. 10 Māori patients with lung cancer donated archival tissue.



PARTICIPANT ETHNICITY



ETHNICITY	KARAKIA REQUESTED (total = 16)
Māori	5
Other	4
European	3
South East Asian	2
European	1
Samoan	1
African	1

1. Gurney, J., et al., Disparities in Cancer-Specific Survival Between Māori and Non-Māori New Zealanders, 2007-2016. JCO Glob Oncol, 2020. 6: p. 766-774.