



Snapshot of Ethnicity in Auckland Medical Oncology Clinical Trials

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INTRODUCTION

There is a lack of published data on Maori and other ethnic groups participating in clinical trials. Disparities in the healthcare interventions received by ethnic groups are often of interest, particularly in the case of the Maori population in New Zealand. The aim of this study was to provide a snapshot of the ethnicity of patients participating in medical oncology clinical trials in the Auckland (and Northland) regions of New Zealand. Comparisons of interest were with the ethnicity percentages obtained from the 2006 New Zealand Census and the incidence of breast cancer by ethnicity in New Zealand.

METHODS

Ethnicity has been routinely collected for all patients participating in medical and radiation oncology trials conducted by the Auckland Regional Cancer and Blood Service since 2004. The Auckland Regional Cancer and Blood Service, based at Auckland City Hospital, provides services to 4 district health boards including Auckland DHB, Counties Manukau DHB, Waitemata DHB & Northland DHB (Image 1). The Adult Oncology Research Centre (AORC) provides trial coordinating expertise for all studies for the Auckland Regional Cancer and Blood Service. Ethnicity data for oncology patients is held by AORC on their clinical trials database. All Cancer Trial New Zealand (CTNZ) trials have collected detailed patient ethnicity since its inception in 2003. CTNZ studies are conducted across all cancer centres in New Zealand: Auckland, Waikato, Tauranga, Palmerston North, Wellington, Christchurch and Dunedin.

For this study, data from AORC and CTNZ was used to determine the percentage of ethnic groups participating in medical oncology trials in the Auckland region. All patients registered/randomised in AORC and CTNZ medical oncology trials from the 01/01/2004 until 12/07/2010 were included in this analysis. To our knowledge, this includes most (if not all) the medical oncology trials in the Auckland region.

Ethnicity data from the 2006 Census was sourced from the Statistics New Zealand web site for the Auckland and Northland regions. Statistics New Zealand defines ethnicity as "the ethnic group or groups that people identify with or feel they belong to. Ethnicity is a measure of cultural affiliation, as opposed to race, ancestry, nationality or citizenship. Ethnicity is self-perceived and people can belong to more than one ethnic group".¹ In 2005, New Zealand Statistics introduced changes to the way "New Zealander" was classified. New Zealander responses were moved from the New Zealand European category in the 'European' grouping to a new level 1 grouping 'Other Ethnicity'. These responses are classified as a distinct category at level 4 of the standard ethnicity classification. Statistics New Zealand recommends that the European and Other Ethnicity groupings from Level 1 of the 2006 Census output should be combined to form a 'European or Other Ethnicity (including New Zealander)' group.² This method was also used to define the ethnicity of the patients in this study. Breast Cancer incidence rates were sourced from the Ministry of Health.³

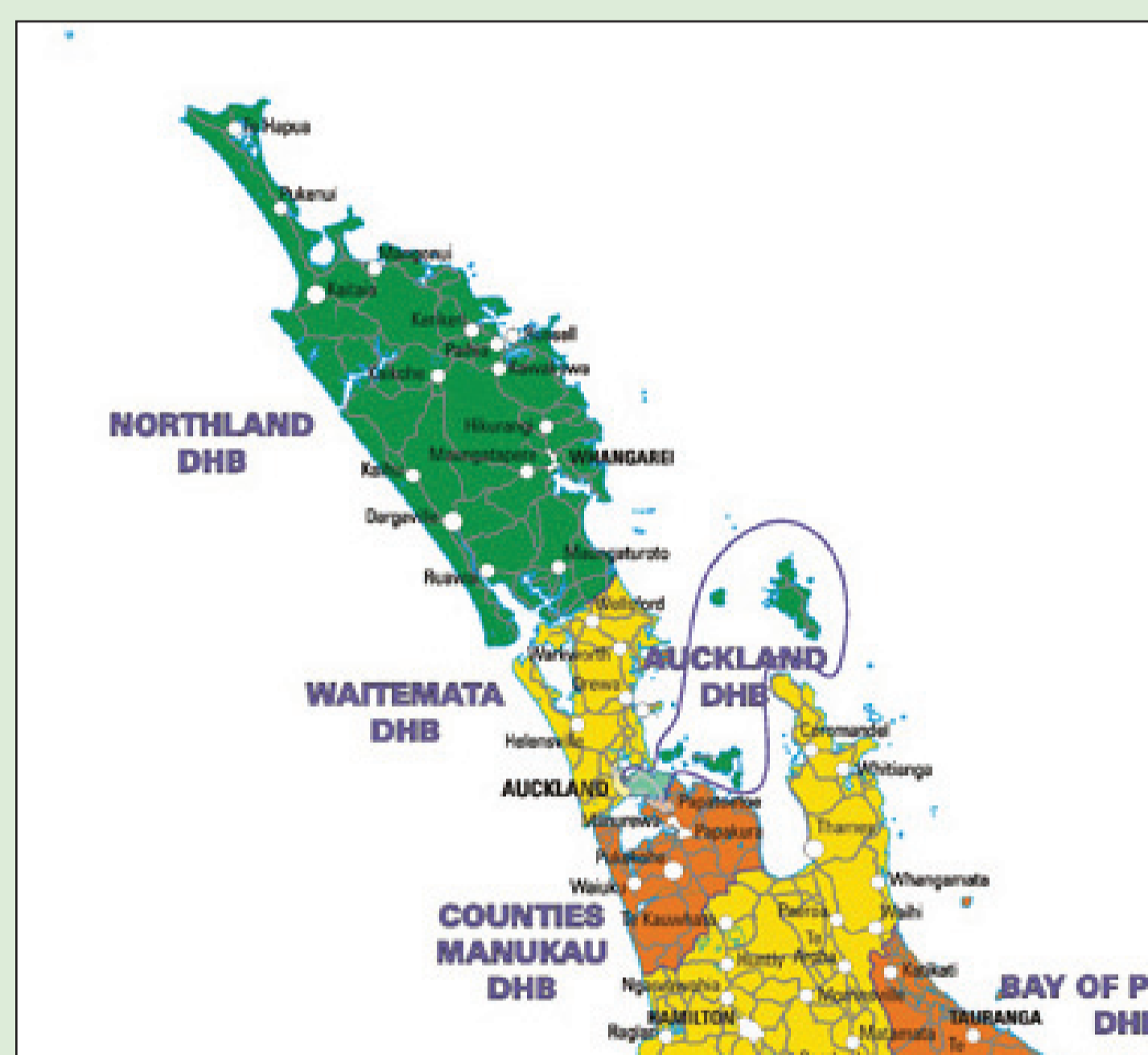


Image 1. The Auckland Regional Cancer and Blood Service Region (Ministry of Health)

RESULTS

Ethnicity data was collected on a total of 733 patients who participated in AORC trials and CTNZ trials. Five hundred and ninety seven of these patients were from the Auckland region (Table 1). Table 2 shows the ethnicity of these 597 patients participating in clinical trials. Table 3 shows Auckland region 2006 Census data and the combined Auckland & Northland region Census 2006 data. The Auckland Regional Cancer and Blood Service provides services to the 3 Auckland DHBs and Northland DHB. It is known that a small number of Northland DHB patients do participate in clinical trials. However accurate numbers were not available for this analysis and all clinical trial participants whether from Auckland or Northland are designated as Auckland.

Centre	No. of Patients	No. of Auckland Patients
AORC & CTNZ clinical trial participants	733	597

Table 1. Total number of patients randomised/registered for the period 01/01/2004 - 12/07/2010

Ethnicity	% [#]
Asian	7.5%
European or Other Ethnicity (including New Zealander)	77.6%
Maori	8.4%
Middle Eastern/Latin American/African	0.5%
Pacific Peoples	4.5%
Residual Categories [§]	3.2%

Table 2. Ethnicity of Patients Participating in medical oncology clinical trials from Auckland

[#]Patients are able to identify with more than one ethnic group, therefore percentages do not add up to 100

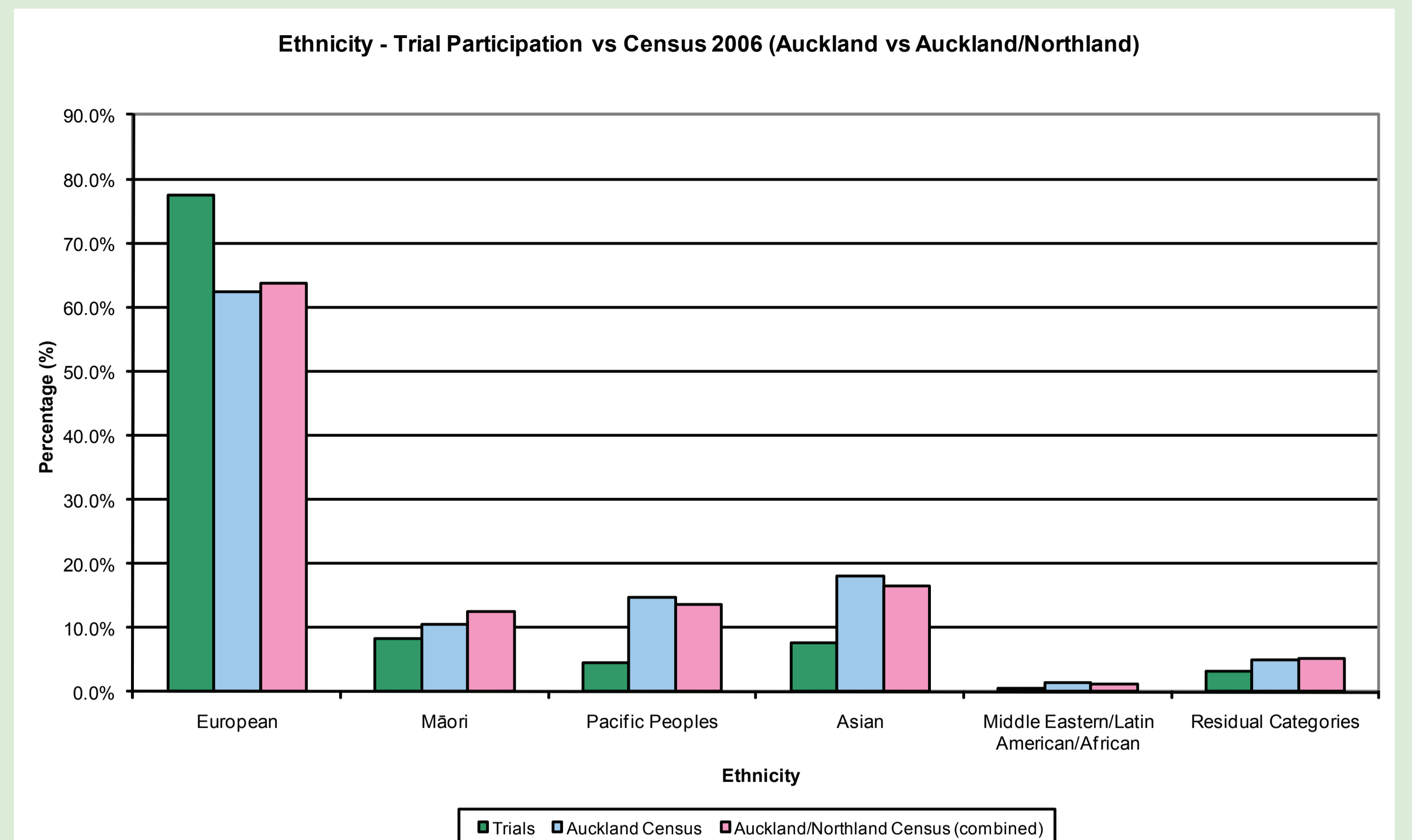
[§]Residual categories = don't know, refused to answer, repeated value, response unidentifiable, response outside scope, not stated

Ethnicity	Auckland [#]	Auckland/Northland [#]
Asian	18.2%	16.5%
European or Other Ethnicity (including New Zealander)	62.5%	63.7%
Maori	10.5%	12.4%
Middle Eastern/Latin American/African	1.4%	1.3%
Pacific Peoples	14.8%	13.6%
Residual Categories [§]	5.1%	5.3%

Table 3. Ethnicity of general population Census 2006

[#]Patients are able to identify with more than one ethnic group, therefore percentages do not add up to 100

[§]Residual categories = don't know, refused to answer, repeated value, response unidentifiable, response outside scope, not stated



Graph 1. Percentage of Ethnicity Group - Participation in clinical trials versus Auckland population versus Auckland & Northland combined population (2006 Census)

It should be noted that Maori incidence rates for all cancer sites appear to be higher in all age groups over 30 years compared to non-Maori⁴. The majority of cancer patients in clinical trials were diagnosed with breast cancer. Therefore we have compared the incidence rate of breast cancer in Maori and non-Maori³ (Table 4) to the ethnicity of patients participating in breast cancer trials from Auckland (Table 5).

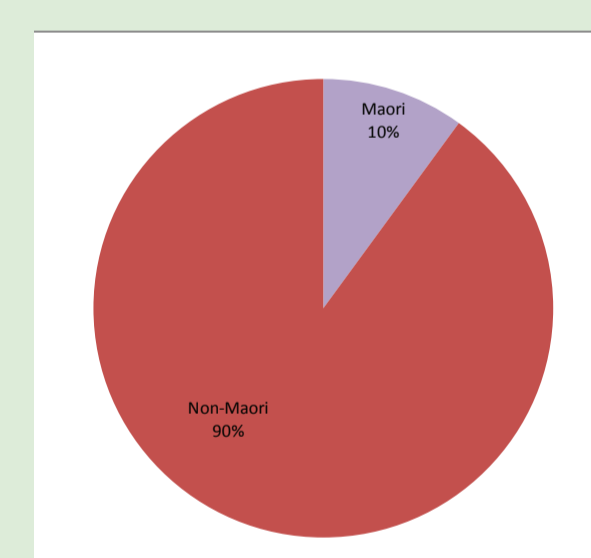
Graph 2 shows the percentage of Maori participating in trials with breast cancer. Graphs 3 and 4 show the expected percentage of Maori participation in trials for Auckland and Auckland/Northland region respectively based on 2006 Census data and the 2007 age-standardised breast cancer rate.

	Maori		Non-Maori	
	No.	Rate	No.	Rate
Breast (C50) male and female	305	65.1	2270	45.4

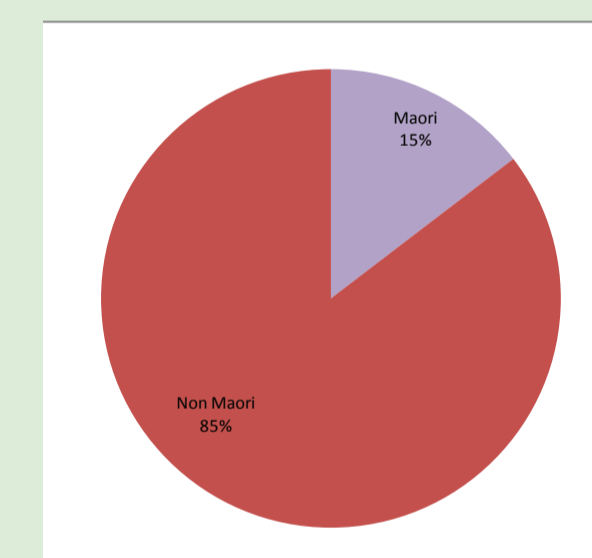
Table 4. Age-standardised rate per 100,000 population, 2007³

Ethnicity	No. of Patients
Maori Total	34
Non-Maori Total	311
Asian	31
European or Other Ethnicity (including New Zealander)	252
Middle Eastern/Latin American/African	2
Pacific Peoples	17
Residual Categories [§]	7

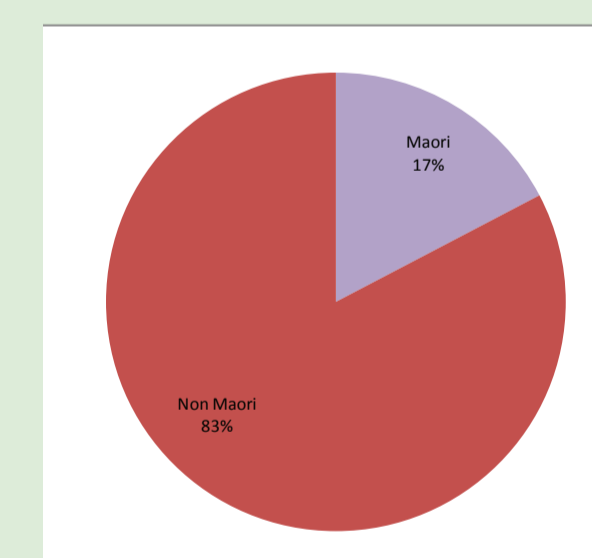
Table 5. Ethnicity of Patients Participating in breast cancer medical oncology clinical trials from Auckland



Graph 2. Actual percentage of breast cancer in trials



Graph 3: Expected percentage of breast cancer in Auckland Region based on 2006 census and the 2007 age-standardised breast cancer rate



Graph 4: Expected percentage of breast cancer in Auckland/Northland Region based on 2006 Census and the 2007 age-standardised breast cancer rate.

DISCUSSION

This study compares ethnicity groups taking part in cancer trials with the population ethnicity percentages and breast cancer rates by ethnicity. Census 2006 data shows that Maoris represent 10.5% of the Auckland region population and 12.4% of the combined Auckland/Northland region population. Eight point four percent of patients participating in clinical trials identified themselves as Maori. Whilst Maori participation in clinical trials was slightly lower than expected, Asian and Pacific Peoples had less than half the expected participation in clinical trials. When the participation of Maori with breast cancers was considered, it was seen that considerably fewer Maori than expected were participating in trials.

The reasons for poor participation in medical oncology clinical trials in New Zealand are currently unknown but some factors that have been reported in other research include age, language, social class, feeling of not belonging/mistrust, perceived racism, culture and religion^{5, 6}.

CONCLUSIONS

This study showed that there are some barriers to clinical trial participation for Maori, Asian and Pacific Peoples ethnic groups in Auckland. Funding for further research is being sought for a more inclusive study for the whole of New Zealand to further ascertain ethnic disparities with regard to participating in oncology trials and clinical trials in general.

REFERENCES

1. Statistical standard for ethnicity. Statistics New Zealand
2. Guidelines for Using Ethnicity Data: 2006 Census. Statistics New Zealand
3. Cancer: New Registrations and Deaths 2007.
4. Ministry of Health Unequal Impact: Maori and Non-Maori Cancer Statistics 1996-2001
5. Inclusion of indigenous and ethnic minority populations in intervention trials: challenges and strategies in a New Zealand supermarket study C Ni Mhurchu et al. J Epidemiol Community Health 2009;63:850-855
6. Involving South Asian patients in clinical trials. M Hussain-Gambles et al. Executive summary. Health Technology Assessment 2004; Vol . 8: No 42