

# Survival and treatment of cervical cancer among Māori and non-Māori women in New Zealand

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# Overview

- Part of wider Unequal Treatment project
  - IHD, maternity and cervical cancer
- Stages of project
  - Quantitative aspect (complete)
  - Qualitative aspect
    - Focus groups with health providers (complete)
    - Analysis ongoing

# Cervical Cancer Background

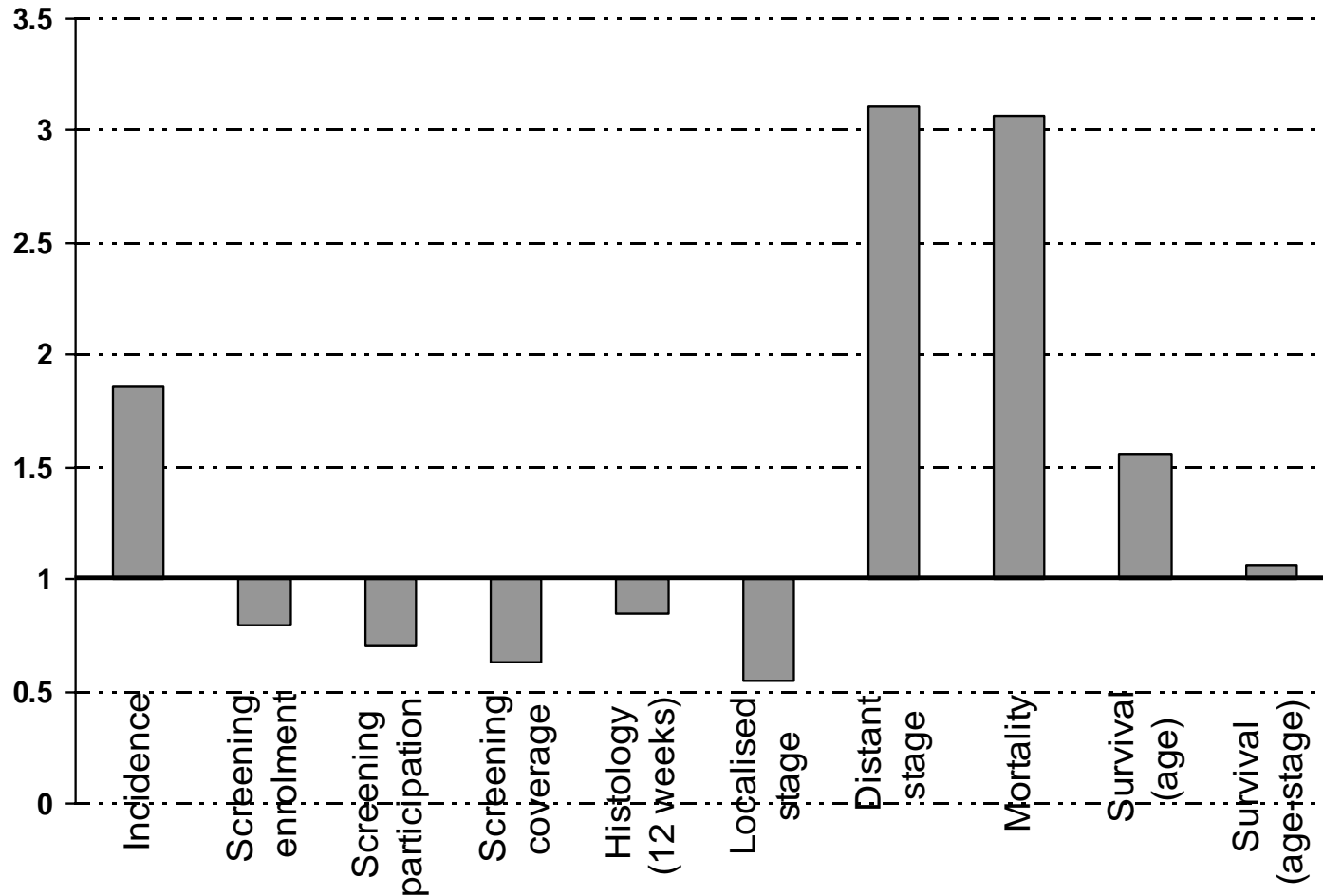
- Cervical cancer incidence has been declining in NZ since the early 1990s
- 152 new registrations and 54 deaths in 2005
- 4<sup>th</sup> most commonly occurring cancer for Māori women (4.8% of new registrations 2000-2004)
- Evidence of disparities in cervical cancer incidence and outcomes by ethnicity
- 2000-2005, age standardised\* incidence and mortality rates

	Māori	non-Māori	Ratio	(95%CI)
Incidence	10.1	5.6	1.81	(1.53 - 2.15)
Mortality	3.9	1.2	3.15	(2.43 - 4.09)

\*standardised to 2001 Māori population

- Screening pathway disparities
- Survival disparities ?stage ?treatment

# Summary – NZ literature

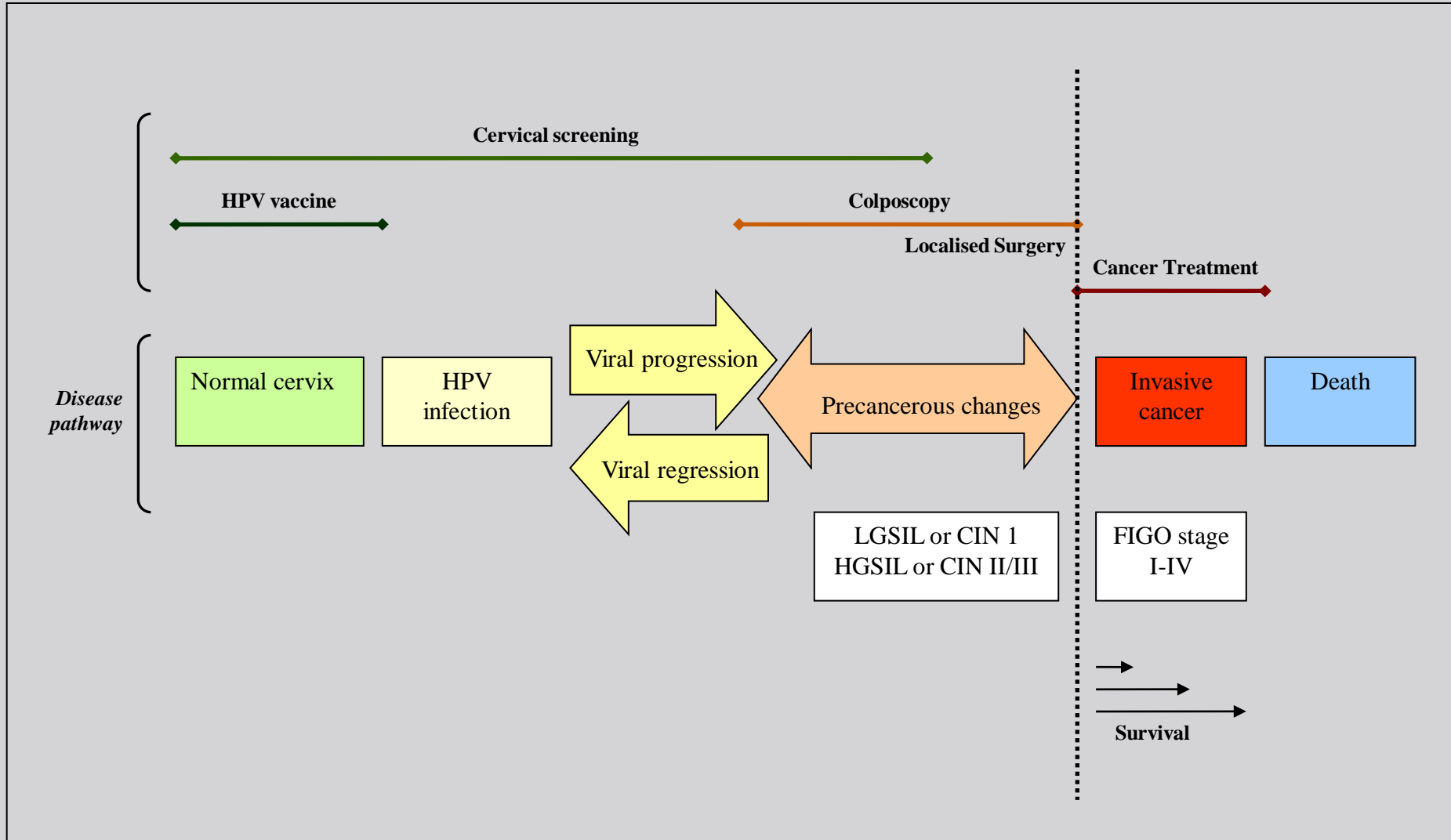


\* Participation and coverage are hysterectomy adjusted rates

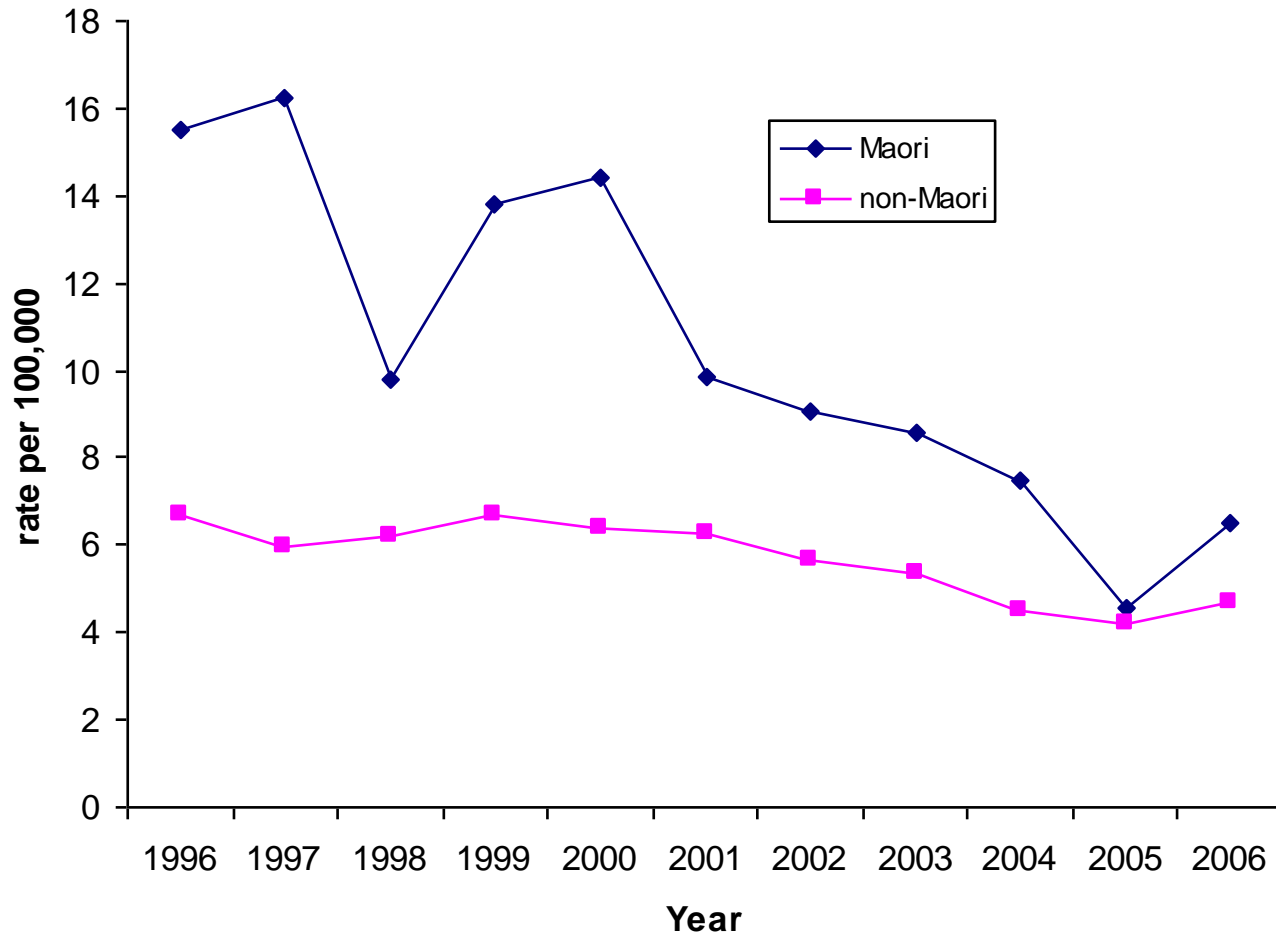
# Cervical cancer study

- Aim
  - To determine if there are ethnic disparities in treatment and survival in a cohort of Māori and non-Māori women registered with cervical cancer between 1996 and 2006
- Methods (Quantitative)
  - Retrospective cohort study of women registered with cervical cancer between 1996 and 2006
  - Data sources: NZ Cancer Register, public hospital discharges, mortality data
  - Study informed by clinical reference group
- Methods (Qualitative)
  - 3 provider focus groups
  - Māori, secondary, tertiary

# CxCa Disease Pathway and Management Outline

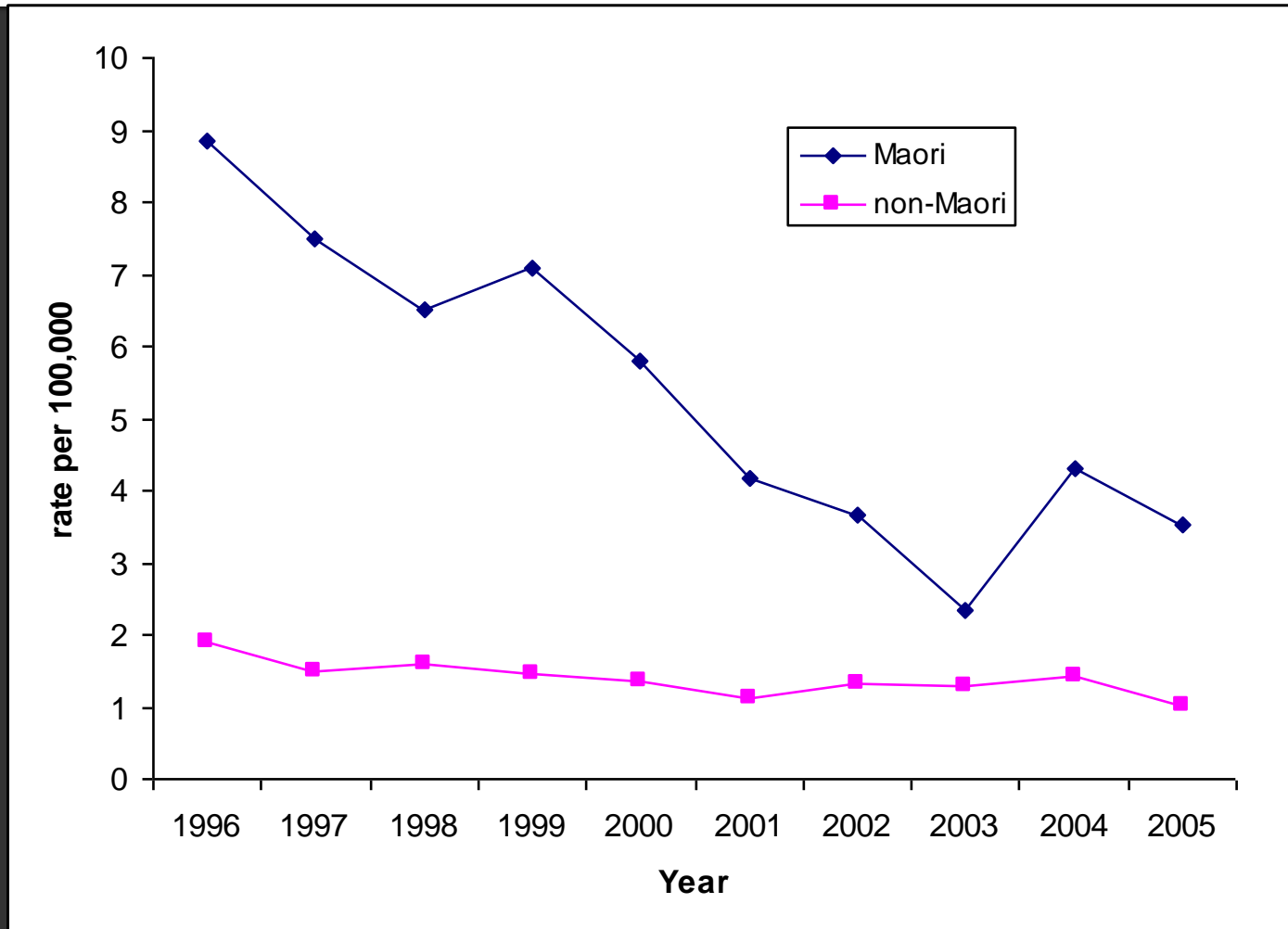


# Cervical cancer registrations



Age standardised rates to 2001 Māori population

# Cervical cancer deaths



Age standardised rates to 2001 Māori population

# Cohort 1996-2006

- Cervical cancer registrations by morphology

Morphology				
	Maori		Non Maori	
	N= 344		N= 1,567	
Morphology	N	%	N	%
Adenocarcinomas 8140-8384	35	10.2	281	17.9
Adenosquamous carcinoma 8560	21	6.1	81	5.2
Squamous cell carcinomas 8050-8084	288	83.7	1205	76.9

Differences highlighted above statistically significant ( $p < 0.05$ )

# Stage by ethnicity

FIGO	Māori N= 344		Non Māori N= 1,567	
	N	%	N	%
Unknown	83	24.1	388	24.8
I	2	0.6	16	1.0
IA	90	26.2	357	22.8
IB	72	20.9	468	29.9
II & III	85	24.7	312	19.9
IV	12	3.5	26	1.7

Extent of disease	Māori N= 344		Non Māori N= 1,567	
	N	%	N	%
Localised	144	41.9	792	50.5
Regional	36	10.5	179	11.4
Distant	37	10.8	76	4.9
Not known	127	36.9	520	33.2

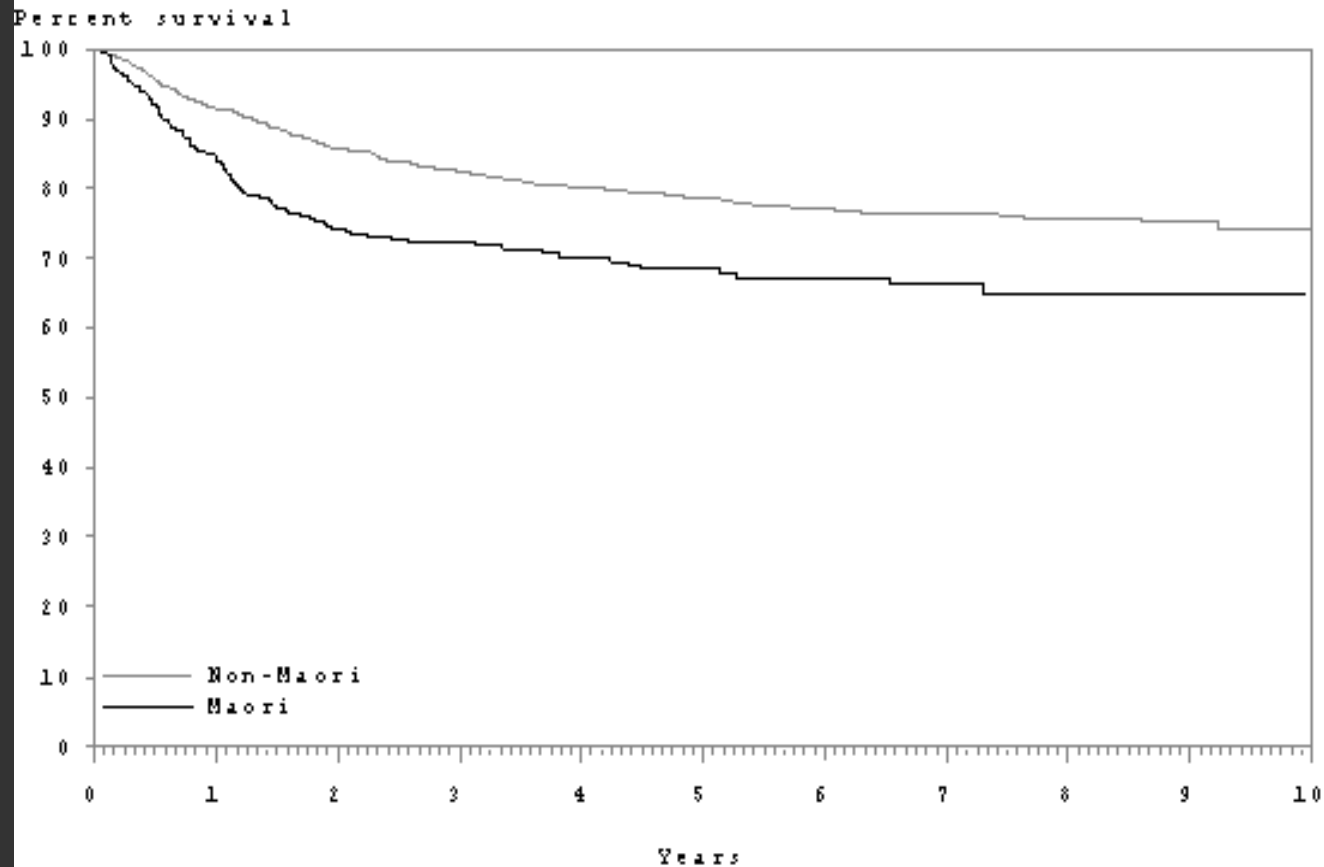
Differences highlighted above statistically significant ( $p < 0.05$ )

Draft results – not for quotation

# Outcomes

- Possible outcome variables
  - Survival ✓
  - Treatment
    - Localised treatment/cervical excision
    - Hysterectomy ✓
    - Brachytherapy ✓
    - EB Radiotherapy
    - Chemotherapy
  - Formal staging – e.g EUA
  - Admission to a cancer centre ✓

# Survival curve



# Survival disparities

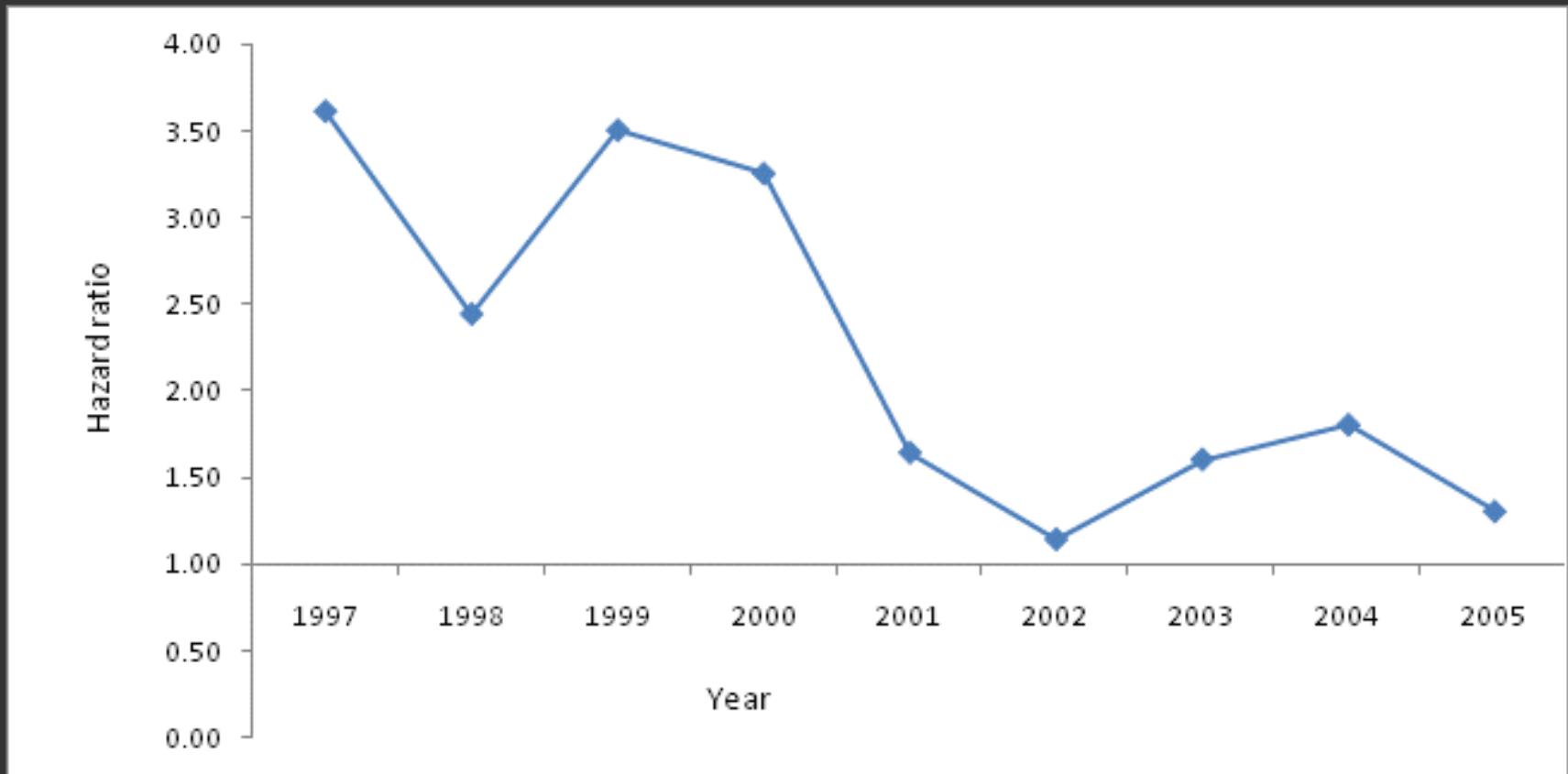
- HR Māori vs non-Māori

Adjusted for	HR	95% CI
age	2.07	1.63 - 2.62
age, FIGO, EOD	1.64	1.03 - 2.62

Excludes unknown stage

# Survival disparities over time

- Māori vs non-Māori 2-year mortality HRs



Age-adjusted

# Treatment differences

- HR Māori vs non-Māori

<b>Treatment within one year of diagnosis</b>	<b>HR age adjusted</b>		<b>HR age and FIGO adjusted</b>	
	HR	95% CI	HR	95% CI
<b>Total Hysterectomy</b>	1.20	0.90-1.61	1.32	0.99-1.77
<b>Radical Hysterectomy</b>	0.60	0.45-0.81	0.81	0.61-1.09
<b>Brachtherapy</b>	1.29	1.00-1.65	1.17	0.90-1.50
<b>Cancer Centre admission</b>	1.03	0.87-1.23	0.96	0.79-1.17

# Summary of results

In summary, Māori women have

- Higher incidence and mortality
- Are diagnosed with more advanced disease than non-Māori women
- No differences in the treatment variables that we looked at
- Over time, improving survival for Māori with decreasing disparities – not due to stage or treatment.

# Possible explanations for reducing survival disparities

- Not stage or treatment (as measured)
- Service provision and quality
- Within stage changes
- Improvements in other factors related to survival e.g co-morbidities, SES

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- Melissa McLeod
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## Clinical Reference Group

- Peter Sykes
- Douglas Iupati
- Beverley Lawton
- Hilary Adams
- Nick Walker
- Joanne Doherty
- Anne O'Donnell
- Surya Harijatna

## Study Participants

# References

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