Professor Ross Lawrenson

Professor of Population Health

The University of Waikato

Friday, August 09, 2019

(Plenary)

14:20 - 14:40 Opportunities for Primary Care

Cancer and General Practice

Ross Lawrenson MD, FRCGP, FFPH, FAFPHM

THE UNIVERSITY OF WAIKATO
Te Whare Wānanga o Waikato

THE UNIVERSITY OF WAIKATO
Medical Research Centre

Background

- New Zealand has high rates of cancer
- It has poorer outcomes from cancer than many comparable countries
- Late cancer diagnosis is a major contributor to our poor outcomes
- What can we do to achieve earlier diagnosis for cancer?

Global cancer rates

THE UNIVERSITY OF WAIKATO
Te Whare Wānanga o Waikato

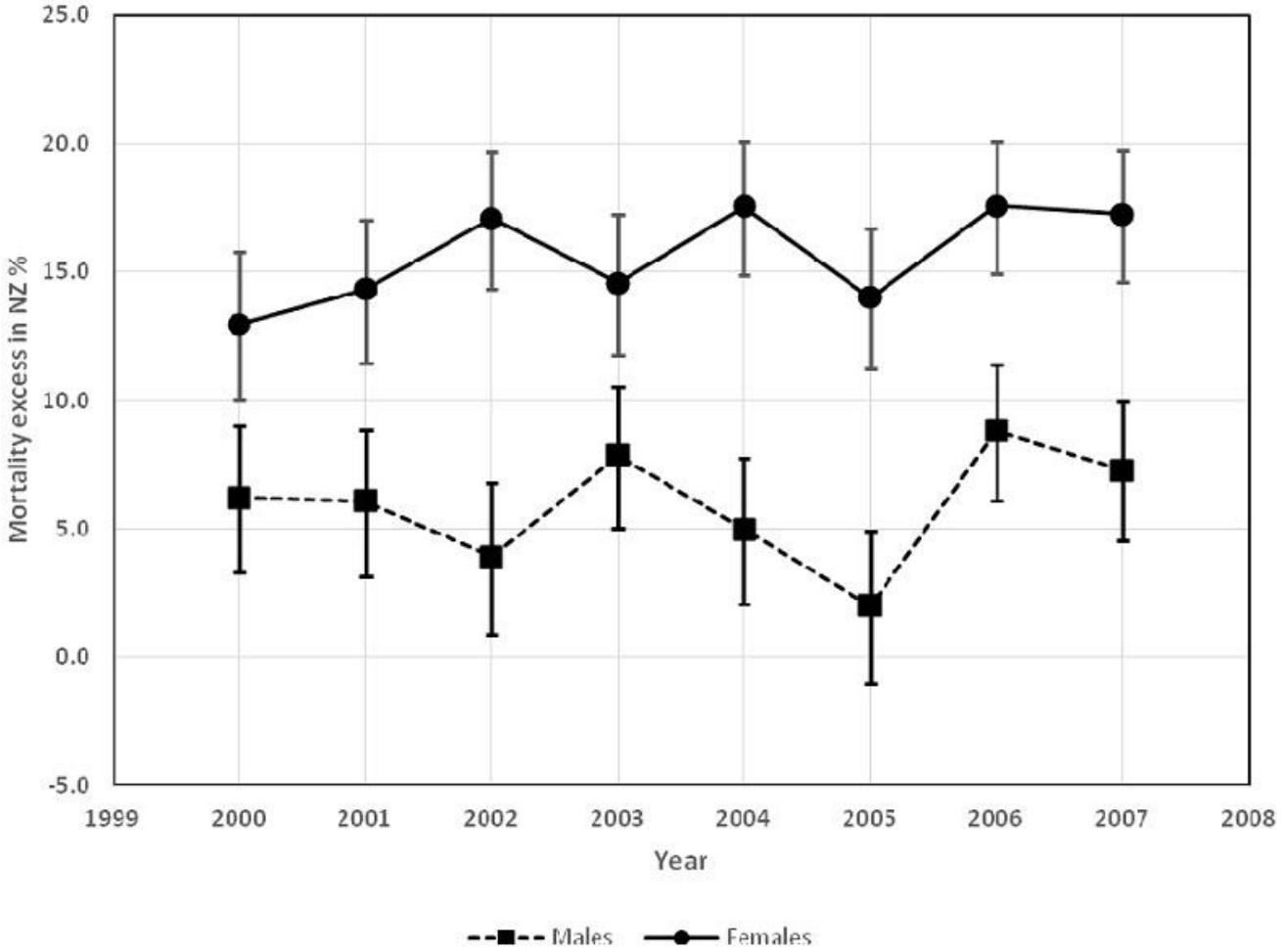
Rank	Country	Age-standardised rate per 100,000
1	Australia	468.0
2	**New Zealand**	**438.1**
3	Ireland	373.7
4	Hungary	368.1
5	US	352.2
6	Belgium	345.8
7	France	344.1
8	Denmark	340.4
9	Norway	337.8
10	Netherlands	334.1

THE UNIVERSITY OF WAIKATO
Medical Research Centre

High rates of cancer

• Breast cancer	Maori women have highest incidence in the world
• Leukaemia	NZ is number one
• Prostate cancer	12th in the world
• Lung cancer	Maori rates higher than No1 country Hungary
• Colorectal cancer	14th in the world
• Melanoma	second only to Australia

Excess proportion of cancer deaths in New Zealand, compared to Australian rates, by year, 2000 to 2007.



Alafeishat L; Elwood M; Ioannides S. N Z Med J: 1175-8716, 2014 Aug 15; Vol. 127 (1400), pp. 9-19

Poor outcomes compared to Australia

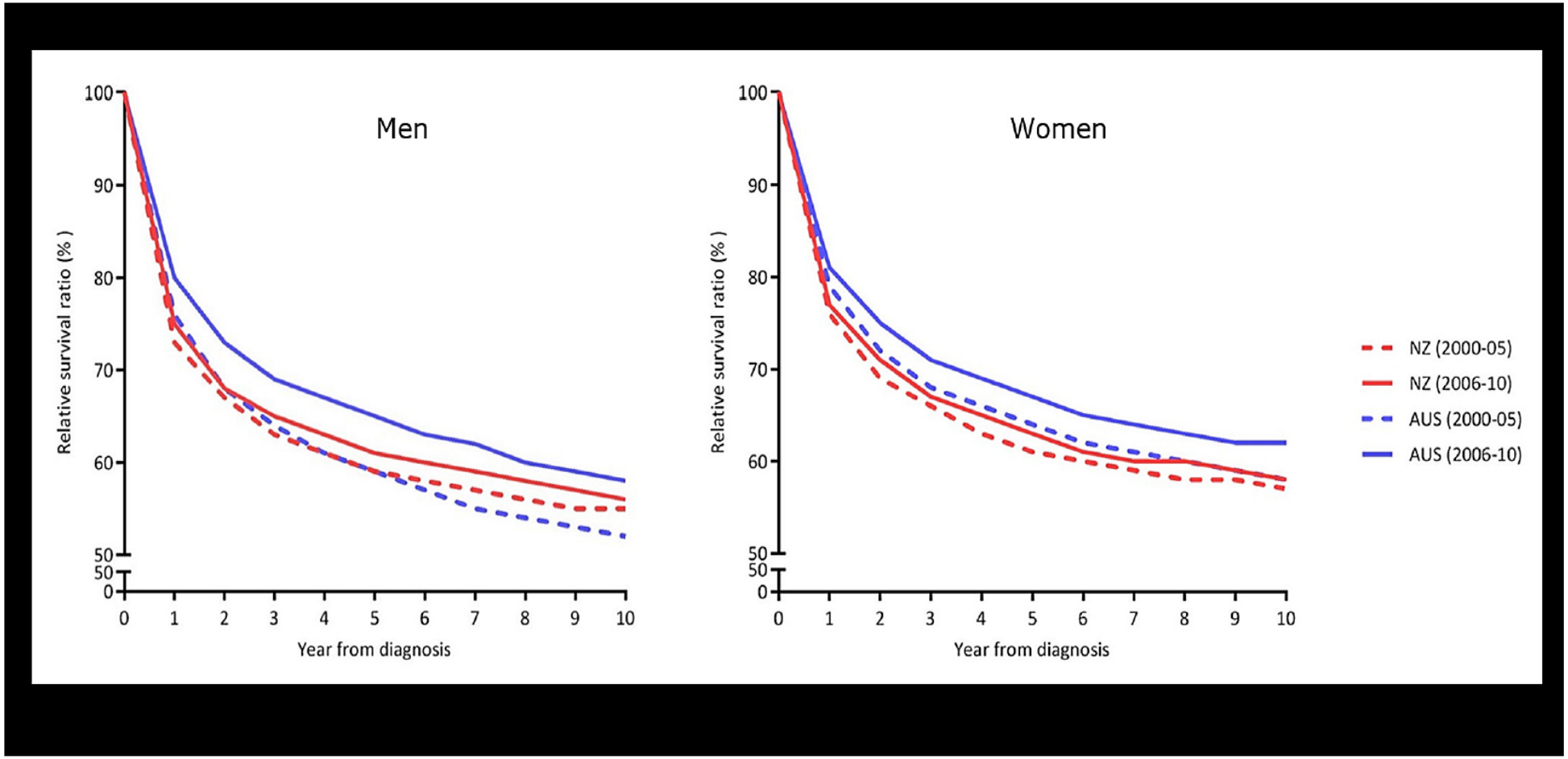


Fig 1. Relative survival ratios for all cancers combined comparing New Zealand and Australia, 2000–2005 and 2006–2010 (men and women).

Elwood JM, Aye PS, Tin Tin S **PLoS** ONE,2016, Vol. 11 Issue 3, p1-14, 14p

Cancer and Primary Care

- 1030 General practices (average 5000 patients)
- 23 new cancer cases each year per practice
- 125 “cancer survivors”
- 10 cancer deaths per year

THE UNIVERSITY OF WAIKATO
Te Whare Wānanga o Waikato

THE UNIVERSITY OF WAIKATO
Medical Research Centre

Role of general practice in cancer care

- Keep people well
- Gatekeeper role of GP
- Risk sink for the health sector
- Patient advocate

Actually who is the gatekeeper?

Waikato Hospital?

Poorer access to diagnostics

THE UNIVERSITY OF WAIKATO
Te Whare Wānanga o Waikato

TABLE 1 Proportion of GPs with direct access to tests

	New Zealand (192 respondents)		11 other ICBP areas, %			
	%	95% CI	Average	Min	Max	NZ rank (of 12)
Blood tests						
Blood tests	88.5	83.9–93.0	84.0	69.3	99.5	6
Imaging (non-specific)						
X-ray	89.1	84.7–93.5	90.8	74.3	100.0	8
Ultrasound scan	60.9	54.0–67.8	84.6	60.9	98.9	11
CT scan	14.1	9.2–19.0	66.2	14.1	100.0	11
MRI scan	3.6	1.0–6.2	47.0	3.6	91.6	11
Endoscopy						
Upper GI endoscopy	20.8	15.1–26.5	41.5	7.4	68.5	8
Colonoscopy	20.8	15.1–26.5	29.2	7.9	61.9	8
Flexible sigmoidoscopy	9.9	5.7–14.1	26.3	9.9	54.9	12

Data for other ICBP areas from Rose et al. (2015).

Htun HW, Elwood JM, Ioannides SJ, Fishman T, Lawrenson R
Eur J Cancer Care. 2017 May;26(3).

THE UNIVERSITY OF WAIKATO
Medical Research Centre

HDC Report

- The Health & Disability Commissioner (HDC) noted in their report on Delayed Diagnosis of Cancer in Primary Care that lung and colorectal cancer were the commonest causes of complaint.
- Reasons for delay by GPs included:
  - the presence of comorbidities drawing focus away from the cancer diagnosis,
  - inappropriate reliance on a test. E.g. a negative chest X-ray is likely to reassure that lung cancer is not present whereas it is not uncommon on CT to discover cancer that was not apparent on X-ray.

Colon Cancer

- 39% of PIPER patients were stage 1 or 2 compared to 46% in Australia and UK

- The mode of first presentation was to the emergency department (ED) for 34% - in the UK the figure is 26.5% (RCGP Audit)

- 44% of Maori and 51% of Pacific patients first present to ED

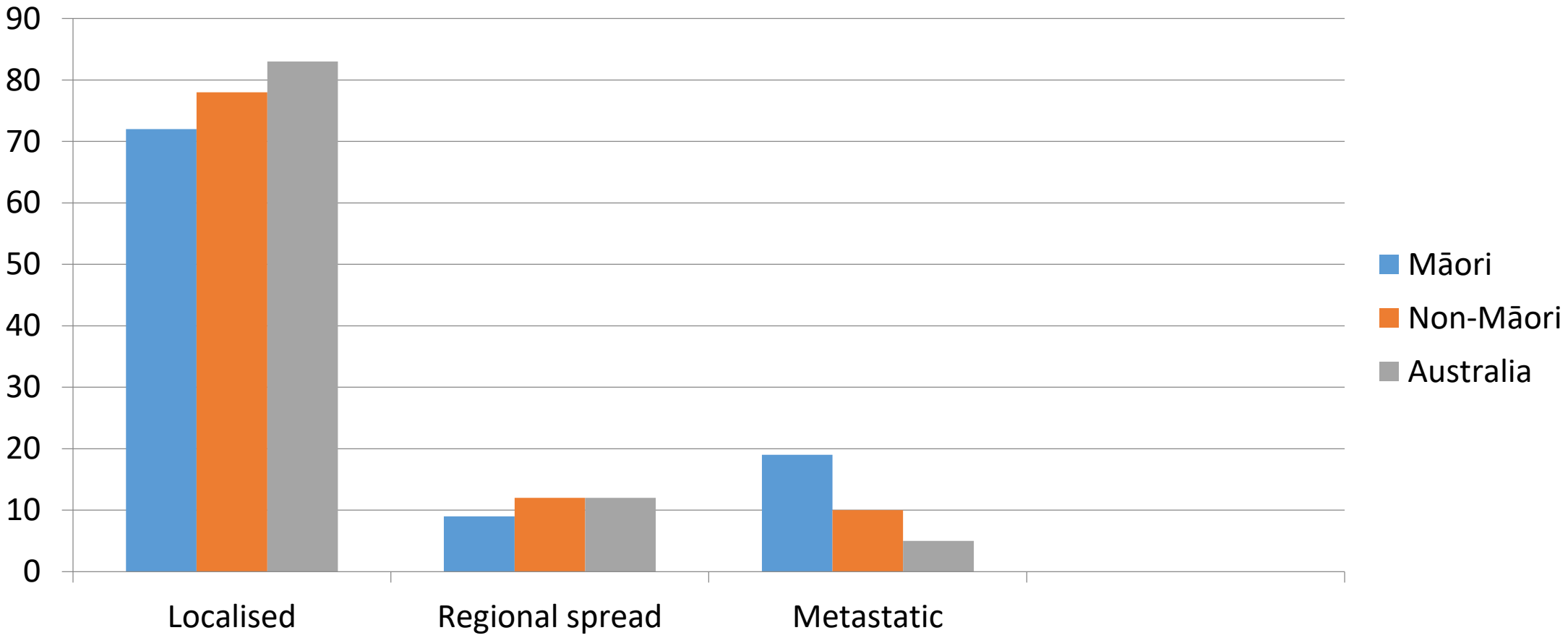
Lung cancer stage in Midland Region (2057 cases, 31.9% Maori)

Leeds UK 26.5% were Stage 1 or 2 and improved to 35% after a social media campaign
Australia 19%

Stage	Maori	Non-Maori	Total
1	10.0%	11.5%	11.0%
2	5.4%	5.6%	5.5%
3	25.4%	20.8%	22.3%
4	59.2%	62.1%	61.2%

Lawrenson R, Lao C, Brown L, Wong J, Middleton K, Firth M, Aitken D.
N Z Med J. 2018 Jul 27;131(1479):13-23.

Prostate cancer stage at diagnosis (Waikato data 2010)



Breast cancer

- Overall about 5% of women with breast cancer have metastatic disease at diagnosis – similar to the UK and Australia

- But 17.6% European women are diagnosed with Stage 3 or 4 disease, compared to 26.2% of Māori women and 33.8% Pacific women

- Māori women have twice the mortality rate of NZ European women with breast cancer

Key factors leading to disparity for Māori – primary care contributes most

- Cancer stage at diagnosis accounted for approximately a third of the survival disparity between Māori and NZ European women
- Differences in mode of diagnosis (screen vs. non-screen) contributed 15%
- The contribution from cancer biological characteristics was 7%
- Differences in treatment including use of definitive local therapy, systemic therapy, and delays in treatment contributed approximately 15%
- Patient characteristics including medical comorbidities, smoking and BMI contributed a further 15% to the survival disparity

Seneviratne S, Lawrenson R, Scott N, Kim B, Shirley R, Campbell I.
PLoS One. 2015 Apr 7;10(4):e0123523

Midland lung cancer co-design project

- Aimed at encouraging early diagnosis of symptomatic lung cancer cases in Maori
- Take a kaupapa Maori approach
- Maori led research
- Community engagement with key stakeholders

Health Research Council of New Zealand

THE UNIVERSITY OF WAIKATO Medical Research Centre

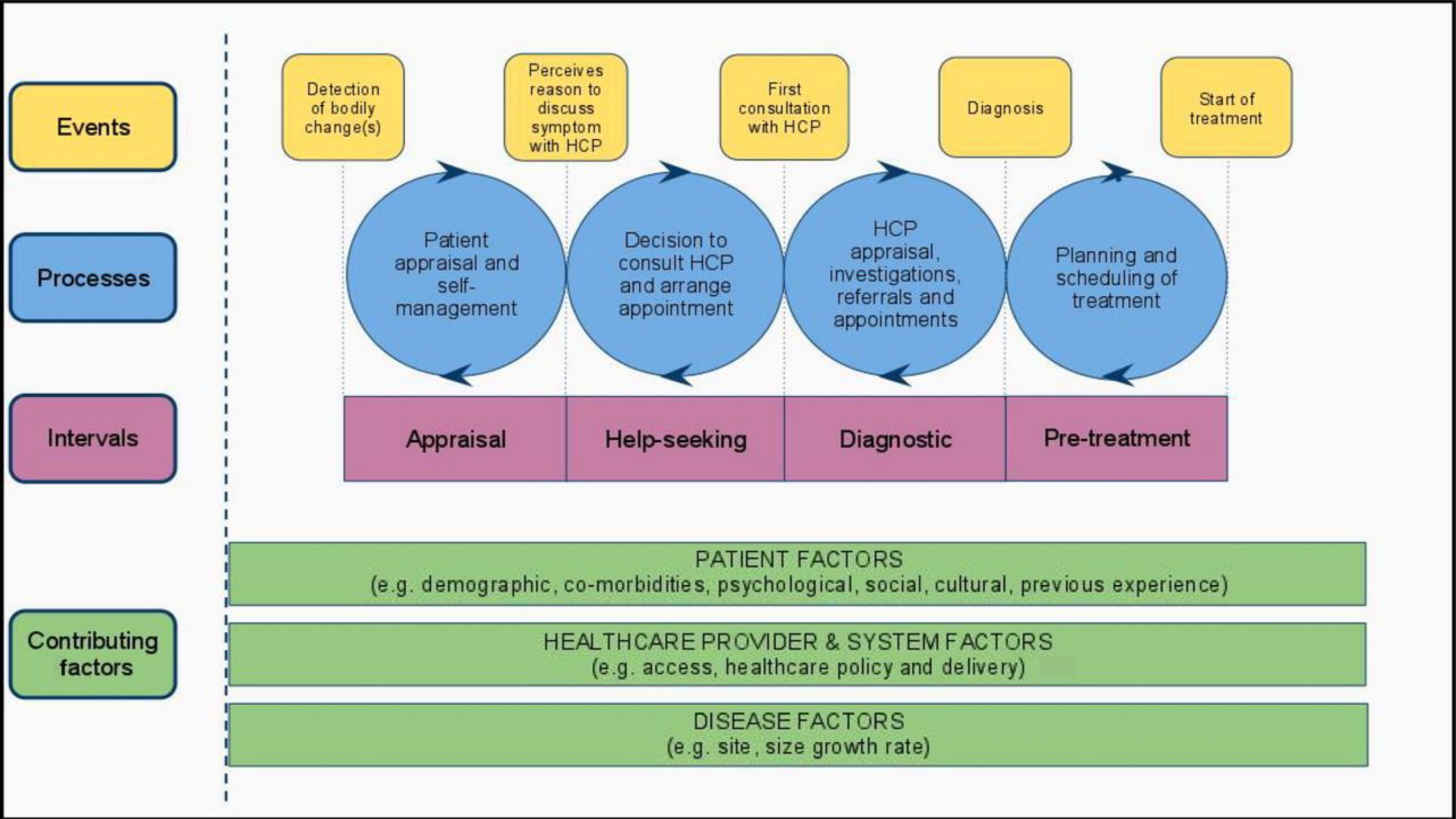
Systematic review

- **Healthcare provider and system factors barriers**:
- difficulty making or accessing appointments; discontinuity of care; quality of communication between the patient and GP; lack of established trust between patient and GP; long waiting times; patients getting delayed in the system; difficulty faced by GP to get referrals for specialists; lung cancer as being smoking related and being the 'fault of the individual', increased stigma
- **Patient factors:**
- normalisation, misattribution, misinterpretation, minimization or low risk perception of symptoms relating to lung cancer; fatalistic beliefs and fear of death and/or cancer diagnosis; patients put off visiting healthcare professionals by perceptions that they would be lectured or reprimanded to cease smoking
- **Disease factors:** included site, size and tumour growth rate as well as symptom presentation; wide variation in lung cancer symptoms; lack of a clear symptom profile or a lack of symptom presentation overall made both GP diagnosis and patient awareness difficult; existence of co-morbidities masked many of the respiratory changes indicative of lung cancer.

Cassim S, Chepulis L, Keenan R, Kidd J, Firth M, Lawrenson R.
BMC Cancer. 2019 Jan 8;19(1):25. doi: 10.1186/s12885-018-5169-9

Community involvement

- 4 high needs Maori communities in MCN (Opotiki, Gisborne, Te Kuiti and Rotorua)
- Community hui in each region X3
- Follow up with co-design process with key community contacts
- Meet with local GP practices


Events
Processes
Intervals
Contributing factors
Detection of bodily change(s)
Perceives reason to discuss symptom with HCP
First consultation with HCP
Diagnosis
Start of treatment
Patient appraisal and self-management
Decision to consult HCP and arrange appointment
HCP appraisal, investigations, referrals and appointments
Planning and scheduling of treatment
Appraisal
Help-seeking
Diagnostic
Pre-treatment
PATIENT FACTORS
(e.g. demographic, co-morbidities, psychological, social, cultural, previous experience)
HEALTHCARE PROVIDER & SYSTEM FACTORS
(e.g. access, healthcare policy and delivery)
DISEASE FACTORS
(e.g. site, size growth rate)

Key themes

- Appraisal
  - Health literacy/knowledge about cancer/lung cancer
- Health seeking
  - GP relationship and position in the community
  - Key barriers (cost, access, travel)
- Diagnostic
  - System issues
- Tangata whaiora and whanau journey

Ongoing study

- Have a co-design process in the four communities
- Information app, media campaign, kaiawhina training and health navigator)
- Look to see acceptance/uptake with GPs
- Increase in use of X-rays

Suggested intervention

- Information we need to give to whanau about lung cancer
- Need a resource pack for patient and whanau
- Resource needs to be culturally responsive
- A resource to help the doctor better meet patient needs
- A resource that can be accessed on a phone e.g. an App

What Māori patients say they want from their GP

- Communication - avoid overly complicated language and terminology when delivering information/diagnoses.
- a relationship/familiarity with their GPs *(as opposed to the high GP turnaround),* or at least have the GP take some time to get to know the patient (whakawhanaungatanga) and read their file during or prior to the appointment.
- have the GPs trust that the patient knows their body and when something is not right.
- avoid negative, stereotypical assumptions about their (Māori) patients

What do we need to do to achieve earlier diagnosis for cancer?

- being aware of limitations of diagnostic testing (e.g. false negative rates)
- hold a suspicion for cancer despite co-morbidities
- providing safety-netting advice to patients
- Improved access to diagnostics/specialist advice
- ?significant event reviews

Equity focus

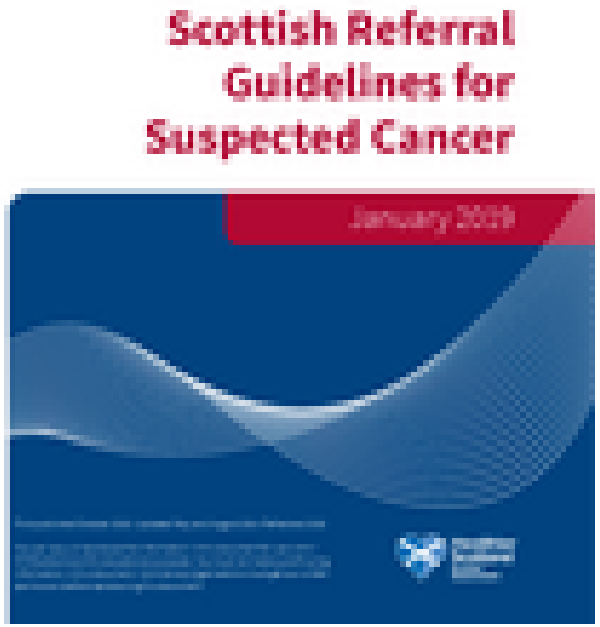
- Greatest contribution to reducing Maori inequity in outcomes will be to address disparity in stage at diagnosis
- Improved information for patients that is culturally appropriate
- Engage with local Maori community on ways to better tailor services to Maori
- Continuity of care with trusted GPs/staff
- Offer to engage with whanau over health care journey

Suspected Cancer in Primary Care

Guidelines for investigation, referral and reducing ethnic disparities

THE UNIVERSITY OF WAIKATO
Te Whare Wānanga o Waikato

- NZGG guidelines need updating



THE UNIVERSITY OF WAIKATO
Medical Research Centre

Summary

- 10 out of 25 deaths each year in a practice are due to cancer

- Late diagnosis
  1) contributes to NZ poor outcomes
  2) major cause of Māori inequity

- Patient factors – health literacy

- System factors – access to diagnostics

- Disease factors – need update guidelines