MANATŪ HAUORA
MINISTRY OF HEALTH

Health New Zealand
Te Whatu Ora

Aide-Mémoire

Early detection programmes for prostate and ovarian cancer

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To:	Hon Dr Shane Reti, Minister of Health		
Consulted:	Te Aho o Te Kahu – Cancer Control Agency ☒		

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Purpose: This aide-mémoire responds to your request for advice on next steps for early detection programmes for prostate and ovarian cancer following the cancer deep dive.

Summary:

- Prostate and ovarian cancer are among the most diagnosed cancers in New Zealand.
- Screening has the potential to prevent the development of disease, prevent premature death and disability, and improve quality of life. However, it is also costly and has the potential to do harm.
- Population-based screening programmes should be based on good quality evidence which indicates that they do more good than harm, at reasonable cost, and they can be delivered within the context of an effective quality assurance programme.
- There is currently not enough evidence to support the introduction of population-based prostate or ovarian cancer screening programmes, including a lack of evidence that either programme would reduce mortality or morbidity.
- No other countries comparable to New Zealand have population-level screening programmes for prostate or ovarian cancer.
- Te Aho o Te Kahu – Cancer Control Agency is exploring a quality improvement project to standardise and improve the quality of opportunistic Prostate Specific Antigen (PSA) testing across the country.
- There are opportunities to improve outcomes in ovarian cancer. For example, through genetic testing for those at higher risk, establishing a registry within the CanShare environment, and improving the health pathway for ovarian cancer.
- Lung cancer, a leading cause of cancer death and cancer outcome inequities in New Zealand, may be a better candidate for a population-based screening programme. Investigation into the

potential for lung cancer screening in New Zealand is currently underway. Health New Zealand – Te Whatu Ora (Health NZ) has provided you with separate advice on the Māori Health pipeline, includes lung cancer screening (refer HNZ00040256).

- Officials are available to discuss any matters raised in this aide-mémoire at your request. This aide-mémoire discloses all relevant information.

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Early detection programmes for prostate and ovarian cancer

Population-level screening for cancer

1. Early detection of cancers or pre-cancers through population-level screening can be beneficial for certain cancer types, by enabling early detection and treatment of disease. There are existing national population-based screening programmes for breast, bowel, and cervical cancers; all of which have gone through robust assessment processes.

2. However, there are also potential economic, clinical, and social costs and harms associated with population-based screening, such as increasing pressure on health services and staff, and the potential to increase inequities between groups. Screening programmes should be based on good quality evidence that they do more good than harm, at reasonable cost, and they should be delivered within the context of an effective quality assurance programme.

3. Population-based screening programmes can cause harm to individuals – through the psychological stress of receiving a false positive result, and physical harms through side effects from diagnostic tests or treatments, which may result in overdiagnosis[1] or overtreatment[2]. Receiving false negative results through screening is also harmful if it causes people to then ignore symptoms.

4. There is therefore a high threshold to consider a condition appropriate for population-based screening.

5. The National Screening Advisory Committee (NSAC) provides high level strategic governance and leadership related to national population-based screening programmes. The NSAC follow the National Health Committee's criteria for assessing potential new screening programmes (shown in Appendix 1), and provide evidence-based multidisciplinary expert advice on screening.

Prostate cancer

Background

6. Prostate cancer is the second most common cancer diagnosed in men in New Zealand, with around 4,000 people diagnosed and 700 deaths from prostate cancer each year.

7. Whilst registrations for prostate cancer are similar for Māori, Pacific, and European/other men, the mortality rate is higher for Māori and Pacific peoples (refer table 1 below).

Table 1: Age-standardised rate per 100,000, 2021

[1] Overdiagnosis is when a cancer is diagnosed that would never have caused an impact on someone's life.
[2] Overtreatment is when cancers that would not have caused major issues for patients are detected by screening programmes and provided with unnecessary treatment.

	Asian	European/Other	Māori	Pacific
Registration rate	42.9	113.6	104.0	97.6
Mortality rate	6.0	15.6	23.2	20.6

8. Prostate cancer is often slow growing, and as a result, many people may have prostate cancer and never develop symptoms. Autopsy studies of people who died from other causes have found that over 40% of males in their 70s also had prostate cancer when they died.

9. Although stage at diagnosis may contribute to poor survival, it does not fully account for the survival disparity between Māori and non-Māori. Māori have poorer survival than non-Māori even when diagnosed with the same stage disease.

Screening for prostate cancer using Prostate-Specific Antigen testing

10. There is currently no population-based screening for prostate cancer in New Zealand. Instead screening for prostate cancer is done opportunistically through a blood test for Prostate-Specific Antigen (PSA), often in conjunction with a digital rectal examination (DRE). Opportunistic screening for prostate cancer is not organised at a national level, it happens either when someone asks their doctor for a test, or a test/check is offered by a clinician.

11. Neither PSA blood testing nor DRE are recommended as a screening test, either alone or in combination.

12. The PSA test is considered a poor test as it is not sensitive or specific enough. Many people with a raised PSA result will not have prostate cancer, and PSA levels may be raised for other reasons such as prostatitis or a urinary tract infection. PSA levels also increase with age.

13. Randomised controlled trials (RCTs) looking at the impact of PSA screening on mortality have produced variable and conflicting results. Current available evidence suggests that, at best, PSA screening may lead to a small reduction in prostate cancer mortality. However, only one major RCT had statistically significant results, with the remainder showing statistically insignificant results. Further detail on available evidence is provided in Appendix 2.

14. It is also unclear if quality of life is improved overall by prostate cancer screening. One study found screening resulted in a gain of only 56 quality-adjusted life-years (QALYs) per 1,000 men receiving annual screening. However, the 95% confidence interval ranged from a loss of 21 QALYs to a gain of 97 QALYs, meaning that there is no evidence of a true difference in QALYs between those receiving annual screening and those who do not.

15. Due to the lack of sensitivity and specificity of PSA testing, using this test for prostate cancer screening can lead to overdiagnosis and overtreatment. Whilst overdiagnosis is difficult to quantify, it is estimated that it could occur in 21% to 50% of screen-detected prostate cancers.

16. A diagnosis of prostate cancer following a screening test ultimately involves a prostate biopsy. It is estimated that for every prostate cancer death saved by screening 1000 men over 10 years, the following harms occur:

a. biopsy- and treatment-related sepsis (~1 man)

b. urinary incontinence (~3 men)

c. erectile dysfunction (~25 men)

d. for men undergoing radiation therapy, up to 1 in 6 will experience bowel symptoms such as bowel urgency and faecal incontinence.

Health system implications

17. A population-based prostate screening programme using PSA testing as the only screening tool may overwhelm the healthcare system. Many people would receive unnecessary follow-up assessments, and the key follow-up diagnostic test; prostate biopsy, is only offered by specialist urology services.

18. An MRI may be used to improve the accuracy in diagnosis of prostate cancer after an abnormal PSA result, as it has a slightly higher sensitivity and specificity than PSA testing alone. A combined screening programme that uses PSA testing and MRI/ultrasound scanning may reduce the number of unnecessary prostate biopsies and may be more cost-effective than PSA testing alone[3]. However, this strategy would require a well-resourced radiology workforce and infrastructure.

19. Given that New Zealand already has a critical shortage of trained workforce and long wait-times in radiology services, introducing national MRI-based screening for prostate cancer would increase pressure on the workforce. Expanding the radiology infrastructure necessary would also require significant financial investment.

Comparison to other countries

20. No other similar countries to New Zealand (including Australia, the United Kingdom, Canada, or the United States of America) currently support generalised population-based screening for prostate cancer.

21. Lithuania and Kazakhstan are the only countries in the world currently offering population-based screening for prostate cancer.

Population level screening for prostate cancer is not currently recommended

22. There is not enough evidence to support the introduction of a population-level prostate screening programme in New Zealand. Prostate cancer screening is not proven to reduce mortality of prostate cancer, and it is not clear whether it improves quality of life for people involved in screening.

23. The NSAC most recently reviewed the evidence on prostate screening in November 2023, and concluded there is currently not enough evidence to support a population-level prostate screening programme given that the benefits do not outweigh the harms.

[3] There is no New Zealand specific research on the cost-effectiveness of combined PSA testing and MRI, so estimates on the cost-effectiveness of this screening method are based on international evidence.

There are other opportunities to improve prostate cancer outcomes

24. There are high levels of unorganised opportunistic PSA screening in New Zealand[4], but with variable rates across the country and with Māori significantly less likely to receive PSA testing than non-Māori.

25. Te Aho o Te Kahu - Cancer Control Agency is currently exploring a project that will standardise and improve the quality of PSA testing across the country. This work will investigate how PSA testing is being utilised, reported, and monitored to improve the early detection of prostate cancer. This will also include the way in which laboratory tests are reviewed and reported.

26. NSAC has identified the need for a Quality Improvement Programme and/or monitoring of equity in terms of prostate cancer treatment and survival, including regional monitoring.

27. A national prostate cancer quality improvement programme could establish the groundwork required for the prostate cancer pathway and focus on improving outcomes for people with prostate cancer. This includes improving the cultural safety and competency of services for Māori and Pacific peoples.

Ovarian cancer

Background

28. In New Zealand, ovarian cancer is the fifth most common type of cancer for women, and has a 36% five-year survival rate.

29. New Zealand has the worst emergency ovarian cancer diagnosis rates of comparable health systems. Of the 1,531 people diagnosed with ovarian cancer between 2017 and 2021, 46.9% were diagnosed in the 30 days following an emergency admission. 42% of women diagnosed via the emergency department will die within a year compared to 17% diagnosed via primary care.

30. Māori and Pacific peoples have an increased incidence of ovarian cancer and are more likely to be diagnosed at a younger age, and with rarer ovarian cancers. Māori are also 62% more likely to die of ovarian cancer than other ethnicities.

31. In New Zealand, one in eight people diagnosed with ovarian cancer are younger than 45 years. This increases to one in three for Māori and Pacific peoples.

Analysis of ovarian cancer screening methods

Cancer Antigen-125 (CA-125)

32. One method to identify ovarian cancer is through a blood test assessing levels of Cancer Antigen-125 (CA-125). However, as CA-125 is not a tumour specific biomarker, the presence of elevated CA-125 levels alone is not specific enough for identification or confirmation of potential ovarian cancer in a screening or diagnostic setting. Individuals may have elevated CA-125 levels due to other health outcomes or individuals who have ovarian cancer may not be expressing the biomarker.

[4] In 2020/21 476,078 PSA tests were undertaken in New Zealand.

33. The sensitivity and specificity of CA-125 for the detection of ovarian cancer is known to be poor, with approximately only 50% of stage one ovarian cancer patients expressing high levels of the protein.

Transvaginal ultrasound

34. This method uses an ultrasound wand to internally scan the uterus, ovaries, and fallopian tubes through the vaginal walls.

35. Transvaginal ultrasound screening has a high rate of false positives due to incorrect interpretation of images. An ultrasound is also unable to determine whether a mass is malignant or benign, and the reported specificity ranges from 70-85%.

Combined CA-125 and transvaginal ultrasound

36. A third option is for both CA-125 testing and transvaginal ultrasound to be used in a combined approach.

37. Studies have shown that a two-stage strategy, where a marked increase in CA-125 prompts a transvaginal ultrasound, is able to improve specificity (to >99.6%).

38. This method has been found to detect a higher fraction of early-stage disease than either method alone. However, even using this combined approach, diagnosis requires further repeated scans and biopsy for confirmation.

There is currently no appropriate screening test for ovarian cancer

39. There are currently no established ovarian cancer population screening programmes either nationally or internationally beyond study trials.

40. The primary limitation with using the methods above is that the reported sensitivity and specificity of each test does not meet accepted thresholds for use as a population-based screening programme in asymptomatic women. All methods therefore require further scans and a biopsy to determine a cancer diagnosis.

41. There is currently no evidence of significant improvement in either ovarian cancer detection or mortality rates compared to no screening using CA-125 testing, transvaginal ultrasound, and multimodal screening combining CA-125 testing and transvaginal ultrasound, usually with risk stratification. Further information on available studies can be found in Appendix 3. Note also that there is a lack of recent evidence regarding ovarian cancer screening with most of the studies identified in Appendix 3 occurring prior to 2015.

42. In addition, there is a lack of evidence on screening efficacy in younger age groups. However, it is unlikely that screening in younger women would have a significant benefit and the invasive nature of the exam and high risk of false positives may cause undue harm.

There are alternative options for improving ovarian cancer outcomes

Genetic testing, particularly for those with hereditary cancers

43. In 2022, national guidelines for genetic testing for hereditary cancer were introduced, as there are increased risks of ovarian cancer in those with BRC1 and BRCA2 mutations, and Hereditary Nonpolyposis Colorectal Cancer (HNPCC or Lynch Syndrome). Ongoing monitoring of the implementation of these guidelines, including the potential for

registries of hereditary cancers to track those at increased risk to ensure they receive appropriate management and timely intervention, may improve ovarian cancer outcomes in these genetically pre-disposed populations.

44. The Ministry of Health has recently published its long-term insights briefing on precision health, which covers both genomics and artificial intelligence. Genomics may have future implications for ovarian cancer but there are no immediate opportunities in this space. We can provide you with further advice on genomics at your request.

Registry within CanShare

45. Te Aho o Te Kahu are looking at the feasibility of a registry for ovarian cancer that could sit within the CanShare cancer informatics environment, rather than a standalone registry.

46. This registry may improve the ability to measure effectiveness across key metrics, particularly those measures that are important given existing delays in diagnosis that may not be currently captured by existing monitoring. For example, time from when symptoms were first noticed to presenting to a doctor and number of doctor visits before being offered testing.

47. Establishment of an ovarian cancer registry to be developed within the CanShare cancer informatics environment would deliver accessible real time standards-based cancer data providing a comprehensive and accurate picture of patient outcomes and treatment patterns.

48. Enabling real time cancer data has multiple benefits for clinicians, service planners and researchers. The New Zealand Genetic Health Service is currently working with Te Aho o Te Kahu to ensure their data system is upgraded to CanShare standards creating further benefit to those individuals who have an inherited genetic mutation.

Education programmes for public and the sector

49. The sector has advised there may be benefit in a targeted education campaign for patients and healthcare providers to increase awareness of ovarian cancer symptoms.

50. In July 2023, the Ovarian Cancer Foundation New Zealand met with the Health Select Committee to call for urgent improvements to the diagnosis, treatment, and research of ovarian cancer. The Health Select Committee endorsed the Foundation's recommendations for ovarian cancer and uterine cancer symptoms education to be included in the cervical screening programme.

51. Shifting to human papillomavirus (HPV) as the primary test for cervical screening has meant a significant change and education programme for the sector and the eligible screening population. There are significant differences between cervical cancer, and uterine and ovarian cancer with almost all cervical cancer cases (99%) linked to infection with high-risk HPV, an extremely common virus transmitted through sexual contact.

52. In contrast, ovarian and uterine cancers are not caused by HPV and currently there is no viable screening test available for these cancers. Therefore, education about uterine and ovarian cancer whilst a participant is being tested for HPV may be confusing at this early stage of the implementation of the HPV programme.

53. In 2023, Te Aho o Te Kahu commissioned the Best Practice Advocacy Centre New Zealand (BPAC) to publish education on all 5 gynaecological cancers, including ovarian cancer.

There have been 35,540 total views on all the resources for the 5 cancers. The most viewed individual resources are for ovarian cancer, with 8,394 views.

Improving the health pathway for ovarian cancer

54. Across the health pathway, improvements can be made in terms of how we diagnose, treat, and care for patients with ovarian cancer. There is work nationally to look at gynaecological oncology service delivery due to significant capacity constraints within the service. This work is being led by Health NZ with input from Te Aho o Te Kahu.

55. Equitable access to ultrasound may be a significant barrier to ensuring people with ovarian cancer symptoms can be tested promptly. This may be due to the residual costs of publicly funded ultrasounds for individuals and whānau and existing pressures on the availability and capacity of radiology services, specifically ultra-sonographers.

Research and access to clinical trials

56. Despite ovarian cancer being the fifth most common cancer, globally there has been underinvestment in ovarian cancer research. In the United States ovarian cancer research is funded at a rate 18 times less of that in prostate and breast cancer relative to mortality, and the National Cancer Research Institute in the UK spent the lowest amount on ovarian cancer out of all cancers. New Zealand already has dedicated labs working on ovarian cancer research, and investment in this area could support New Zealand becoming world-leading in this area.

57. There could also be investigation into increased access to clinical trials, given that there is reduced access to clinical trials for ovarian cancer in New Zealand in comparison with Australia. Clinical trial participation could be offered as part of ovarian cancer patient's care in New Zealand. There is a need to improve the variety of clinical trials available for people with ovarian cancer, reduce geographic inequities, and cater to a greater diversity of ovarian cancers.

The next best opportunity for population-based screening to improve cancer outcomes is lung cancer screening

58. More recently, interest and activity on a potential new cancer screening programme has focussed on lung cancer. There is currently no lung cancer screening programme in Aotearoa New Zealand. However, Te Oranga Pūkahukahu (Lung Heath Check study) research group is undertaking multiple research studies to inform a potential national lung cancer screening programme.

59. International evidence from lung cancer screening trials have demonstrated a 20–26% reduction in lung cancer mortality, with higher reductions seen for women. Screening for lung cancer offers the potential for early detection of disease, where treatment options would offer a better chance of survival.

60. Lung cancer is a leading cause of cancer death in New Zealand and is the single biggest contributor to the difference in life expectancy between Māori and non-Māori. Māori women's rates are more than 4 times higher and Māori men's rates nearly 3 times higher than those of non-Māori. Pacific peoples also have a high burden of lung cancer.

61. Coordinated by Health NZ, the research team, cancer and respiratory clinical leaders, screening experts, and other key stakeholders are working on accelerating planning for a national programme. Implementation of lung screening as the next cancer screening

programme would result in significant health outcome improvements, although such a programme would be a substantial undertaking for the health system. The importance of national planning is outlined in Te Pae Tata and has previously been signalled in the Cancer Action Plan and by the National Screening Advisory Committee (NSAC). Hei Āhuru Mowai (Māori Cancer Leadership Group) have also indicated their support for prioritisation of lung cancer screening.

62. Given the disparities in lung cancer rates in New Zealand, it is important to design a screening programme that is accessible and addresses Māori needs. Health NZ has provided you with separate advice on the Māori Health Pipeline which includes detail on the lung cancer screening research and national planning (refer HNZ00040256).

Equity

63. Cancer does not impact all groups within our population evenly. There are inequities at every step along the cancer continuum – from an individual's exposure to risk factors and their likelihood of developing cancer in the first place, to the speed with which they are diagnosed, their ability to access appropriate cancer treatment, their timely referral to specialist palliative care, and bereavement support for whānau after death.

64. Population-based cancer screening programmes can play an important role in improving cancer outcomes and equity. For instance, variations in survival for Māori and Pacific women are largely eliminated in women with breast cancer detected through screening.

65. However, there are currently no recommended population-based screening programmes for either prostate or ovarian cancer, or evidence that such programmes would reduce mortality or morbidity for Māori or Pacific peoples. In the case of PSA-based screening, there is a risk that this would expose Māori and Pacific peoples to increased risk of harms associated with overtreatment and overdiagnosis.

66. Improving the cultural safety and competency of primary care and the cancer pathway in general is critical in enabling people to access the necessary secondary specialist and radiology care for those with prostate and ovarian cancer. This can be done through improving the cancer pathway for both ovarian and prostate cancer, and the quality improvement programme for opportunistic PSA testing.

67. Te Aka Whai Ora – the Māori Health Authority has also provided you separate advice on Hauora Māori commissioning initiatives for prostate and ovarian cancer (ref MHA41967).

68. Addressing lung cancer mortality and improving access to breast and bowel screening provide the greatest opportunities to improve cancer outcomes for Māori and Pacific peoples through population-based screening programmes. The capability of Hauora Māori and Pacific providers in delivering screening and health promotion is critical in engaging people in screening programmes and cancer care.

69. Te Aho o Te Kahu has also recently released a 'Route to Diagnosis' report which shows that, compared to other countries, people in New Zealand experience a high rate of being first diagnosed with cancer after an emergency or acute (unplanned) hospital admission. This is likely to be after the cancer has been progressing for some time. Te Aho o Te Kahu are currently scoping a project which aims to explore options to improve access to early diagnosis for people with cancer.

Next steps

70. Agencies will continue to work collaboratively on activities to improve cancer outcomes, including for prostate and ovarian cancers.

71. Te Aho o Te Kahu will discuss the proposed work on improving the quality of PSA testing, and establishing an ovarian cancer registry within CanShare at your next meeting with them in May 2024.

72. Officials are available to discuss any of the matters raised in this aide-mémoire at your request.

Appendix 1: National Health Committee Criteria to assess screening programmes

1 The following National Health Committee criteria are used by the National Screening Advisory Committee when assessing new screening programmes:

a. the condition is suitable for screening; it is an important health problem and the epidemiology and natural history is understood and there should be a detectable risk. This includes specific consideration around the burden for Māori

b. there is a suitable test: Safe, simple, reliable, accurate/valid, and highly sensitive[5] and specific[6]

c. there is an effective and accessible treatment or intervention for the condition

d. there is high-quality evidence that a screening programme is effective in reducing death and illness

e. the potential benefit of the test should outweigh potential harm; which may be physical and/or psychological, caused by the test, diagnostic procedures and treatment

f. the health care system will be capable of supporting all necessary elements of the screening pathway, including diagnosis, follow-up and programme evaluation

g. there is consideration of social and ethical issues

h. there is consideration of cost-benefit issues.

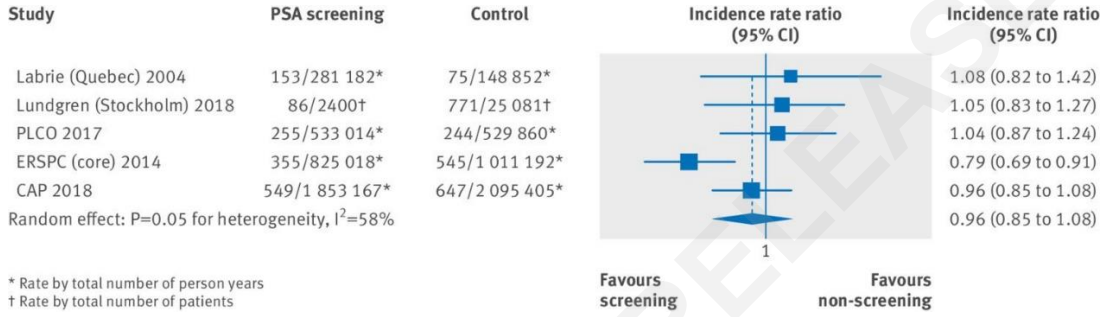
[5] Specificity is the probability of giving a negative finding when the person being screened does not have the condition.
[6] Sensitivity is the probability of giving a positive finding when the person being screened has the condition.

Appendix 2: Evidence on Prostate screening

1 This appendix provides an overview of the best available evidence on prostate cancer screening.

2 A meta-analysis of 5 RCTs found no reduction in prostate cancer mortality from prostate screening (0.96, 95% CI 0.85-1.08) (9). The studies included varied in the eligibility criteria for screening, frequency of screening, and PSA threshold for further investigation. The overall study designs were also different, with variable levels of bias. Of the studies included in the meta-analysis, the European Randomized Study of Screening for Prostate Cancer (ERSPC) was assessed to have the lowest risk of bias.

Figure 1: Forest plot from Ilic et al, showing the incidence rate ratio for prostate-specific mortality for PSA screening v control groups. Horizontal bars denote 95% confidence intervals. Studies are represented as squares centred on the point estimate of the result of each study. The area of the square represents the weight given to the study in the meta-analysis. The diamond represents the overall estimated effect and its 95% confidence interval.



3 The ERSPC is the only major RCT to show a statistically significant reduction in prostate cancer mortality from screening. The ERSPC study commenced in the early 1990s and is a multi-centre randomised control trial of 182,000 men from eight European countries aged 55-69 with 2–4 yearly PSA testing +/- DRE.

4 After 16 years of follow-up, the prostate cancer mortality rate in the screening group was 0.53 per 1000 person-years compared with 0.66 per 1000 person-years in the control group. The absolute risk reduction of prostate cancer death was 1.76 per 1000 males (95% CI 0.88-2.63), meaning that to avert one prostate cancer death, 570 males needed to be invited to screening. The magnitude of benefit from screening increases as follow up time increases (1.3 deaths per 1,000 at 13 years).

5 To put the potential mortality reduction of prostate cancer screening in context, **Error! R eference source not found.** shows the estimated deaths averted per 1,000 people for bowel, breast and prostate cancer screening based on international research.

Table 2: comparison of estimated death averted per 1,000 people. Note: these are estimates, and exact numbers will depend on screening threshold and interval.

	Estimated deaths averted by 1,000
Bowel cancer screening (11)	20-23 (for annual FIT test, noting that NZ screening programme is every 2 years)
Breast cancer screening (age 50-69) (12)	12.5
Prostate cancer screening (ERSPC, 4 yearly screening of men aged 55-69)	1.76

6 It is unclear whether prostate cancer screening improves quality of life. Simulation modelling using 11 year follow up data from ERSPC data found an overall gain of only 56 quality-adjusted life-years (QALYs) per 1,000 men receiving annual screening, with a 95% confidence

interval that ranged from a loss of 21 QALYs to a gain of 97 QALYs. This analysis hasn't been repeated with the latest ERSPC data, and benefit may increase with longer term follow-up data.

7 There is limited evidence looking at unorganised opportunistic screening which is what is happening in New Zealand. One study found that opportunistic PSA testing had little effect on mortality and was associated with increased overdiagnosis compared to organised screening. The potential reduction in mortality seen in good quality trials of population-based, organised prostate cancer screening programmes like ERSPC, do not translate to the same level of benefit from opportunistic screening. It is also likely that harms from screening are greater for unorganised opportunistic screening.

Appendix 3: Evidence on ovarian cancer screening

1 This appendix provides an overview of the best available evidence on ovarian cancer screening.

CA-125 testing

2 The United Kingdom Collaborative Trial of Ovarian Cancer Screening (UKCTOCS) found no significant reduction in mortality due to ovarian or tubal cancer using annual testing of any change in CA-125 levels with subsequent triage, compared to no screening in 202,638 postmenopausal women aged 50–74 years.

Transvaginal ultrasound

3 United Kingdom Collaborative Trial of Ovarian Cancer Screening (UKCTOCS) found no significant reduction in mortality due to ovarian or tubal cancer using annual transvaginal ultrasound compared to no screening in postmenopausal women aged 50–74 years.

4 A prospective cohort study from the University of Kentucky reported improved survival using annual transvaginal ultrasound in 25,327 women compared to an historic unscreened group of 380 women from the same institution; however, this finding should be interpreted cautiously due to the lack of randomisation to screening or no screening.

Combined CA-125 testing and transvaginal ultrasound

5 The US Prostate, Lung, Colorectal, and Ovarian (PLCO) Cancer Screening Trial found no significant improvement in mortality due to ovarian or tubal cancer using annual combined CA-125 testing and transvaginal ultrasound examination, compared to no screening in 78,216 women aged 50–74 years.

6 The Shizuoka Cohort Study of Ovarian Cancer Screening found that more stage one cancers were detected using combined annual CA-125 and transvaginal ultrasound, compared to no screening but the difference was not statistically significant. No mortality results were reported.

ENDS.

Minister's Notes