

Recommendations for screening and surveillance for specific cancers: Guidelines for general practitioners.



Breast cancer

Recommendation: Good evidence for population based screening.

Method and frequency of screening

Mammography every two years is recommended for average risk women aged 50-69.

Who should be screened?

For women of average risk (95% of the population) two-yearly screening should occur from the age of 50 to the age of 69. Women 40 – 49 and above the age of 69 may be screened if they attend.

Women of moderately increased risk (<4% of the population) may need screening with mammography beginning at a younger age or more often, however the evidence is not clear. These women have:

- one first-degree relative diagnosed with breast cancer before the age of 50

OR

- two first-degree relatives on the same side of the family, diagnosed with breast cancer

OR

- two second-degree relatives on the same side of the family, diagnosed with breast cancer, at least one before the age of 50

Women of high risk, (<1% of the population) should be offered appropriate clinical surveillance at a specialist cancer or genetic clinic. They may need more frequent screening, different modalities (including possibly MRI), and earlier commencement of screening or genetic counselling. These women have;

- potentially high risk of ovarian cancer

BreastScreen Australia has recently conducted a review of their screening program. At time of printing, the outcomes of this review were not available. For the latest information on breast screening, please visit www.cancerscreening.gov.au

OR

- two first or second-degree relatives on the same side of the family diagnosed with breast or ovarian cancer *plus* one or more of the following features on the same side of the family:

- additional relatives with breast or ovarian cancer
- breast cancer diagnosed before the age of 40
- bilateral breast cancer
- breast *and* ovarian cancer in the same woman
- Ashkenazi Jewish ancestry
- breast cancer in a male relative

- one first or second-degree relative diagnosed with breast cancer at age 45 or younger plus another first or second-degree relative on the same side of the family with sarcoma at age 45 or younger

OR

- Member of a family in which the presence of a high risk breast cancer gene mutation has been established.

Government programs

BreastScreen Australia aims to reduce mortality and morbidity from breast cancer by actively recruiting and screening women aged 50-69 years for a free mammogram.

References

National Breast and Ovarian Cancer Centre
www.nbocc.org.au

Department of Health and Ageing – National screening programs
<http://www.cancerscreening.gov.au/>

Cervical cancer

Recommendation: Good evidence for population based screening.

Method and frequency of screening

Cervical smear (Pap test) every two years

Who should be screened?

All women who have ever been sexually active should commence having Pap tests between the ages of 18 to 20 years, or one to two years after commencing sexual activity, *whichever is later*. In some cases, it may be appropriate to start screening before 18 years of age

For women who have had a hysterectomy, Pap tests are needed if the cervix was not completely removed; if the woman, prior to the hysterectomy, had a history of high grade abnormalities or if the hysterectomy was performed as part of treatment for a gynaecological cancer; or if the woman has never had a Pap test.

Women over 70 years of age who have had two normal Pap tests in the last five years, do not require further Pap tests. If a woman over 70 years has never had a Pap test, or requests a Pap test, they should be screened.

The cervical cancer vaccine does not protect against all strains of HPV that cause cervical cancer so it is still important for women who have had the vaccine to continue regular Pap tests.

Government programs

The National Cervical Screening Program aims to reduce incidence and death from cervical cancer, in a cost-effective manner, through an organised approach to cervical screening. The Program encourages women in the target population to have regular Pap tests.

References

Department of Health and Ageing – National screening programs
<http://www.cancerscreening.gov.au/>

Bowel (colorectal) cancer

Recommendation: Good evidence for population based screening.

Method and frequency of screening

Faecal Occult Blood Screening (FOBT) at least every two years for average risk people aged over 50.

Who should be screened?

For people of average risk (98% of the population), two-yearly screening should occur from the age of 50. In addition, it is acceptable to offer flexible sigmoidoscopy every five years.

People of moderately increased risk (<2% of the population) may need screening with colonoscopy every five years starting at age 50, or at an age 10 years younger than the age of first diagnosis of bowel cancer in the family (whichever comes first). FOBT may be offered in the intervening years. These people are those who have:

- One first-degree with bowel cancer diagnosed before the age of 55 years (without potentially high risk features described below).

OR

- Two first-degree or one first-degree and one second-degree relative/s on the same side of the family with bowel cancer diagnosed at any age (without potentially high risk features described below).

People at potentially high risk (<1% of the population) require close surveillance. These people have;

- Three or more first-degree relatives or a combination of first-degree and second-degree relatives on the same side of the family diagnosed with bowel cancer.
- Two or more first-degree or second-degree relatives on the same side of the family diagnosed with bowel cancer, plus any of the following high risk features:
 - Multiple bowel cancers in a family member
 - Bowel cancer before the age of 50

- A family member who has/had a cancer related to the syndrome of hereditary non-polyposis colorectal cancer (HNPCC, also known as Lynch syndrome) including endometrial, ovarian, stomach, small bowel, renal pelvis or ureter, biliary tract, or brain cancer.

- At least one first-degree or second-degree relative with a large number of adenomas throughout the large bowel (suspected familial adenomatous polyposis - FAP).

- Member of a family in which a gene mutation that confers a high risk of bowel cancer has been identified.

Consider referring those at potential high risk to a familial cancer service for further risk assessment and possible genetic testing. They should be referred to a bowel cancer specialist to plan appropriate surveillance and management. This may include:

- FAP: Flexible sigmoidoscopy yearly or second yearly starting from age 12-15 years until polyposis develops, then prophylactic surgery. If family genetic testing is inconclusive and no polyposis develops, sigmoidoscopy reduced to every 3 years after the age of 35, then change to population screening if examinations normal to age 55. Prophylactic surgery eg restorative proctocolectomy is appropriate for those with proven FAP.

- HNPCC, also known as Lynch syndrome: Colonoscopy every one to two years from age 25, or five years earlier than the youngest diagnosis in the family (whichever comes first). FOBT may be offered in alternate years or to subjects unwilling to accept frequent colonoscopy. There are options for surveillance at other sites, usually starting from age 25-35. Prophylactic surgery may be appropriate for some.

Government programs

The National Bowel Cancer Screening Program aims to reduce the incidence and death from bowel cancer. It is currently offering screening to people turning 50, 55 or 65 years of age between January 2008 and December 2010. They will receive a faecal occult blood test in the post. Those testing positive (i.e blood found) are encouraged to visit their doctor for follow up testing. The age groups will be expanded in future policy announcements

References

Familial aspects of bowel cancer: A guide for health professionals (Cancer Council Australia)
www.cancer.org.au/clinicalguidelines

Department of Health and Ageing – National screening programs
www.cancerscreening.gov.au

Melanoma

Recommendation: Insufficient evidence for population based screening.

Method and frequency of screening

Regular whole body visual examination of the skin by a medical practitioner, or by self has been suggested but there is no conclusive evidence that such examinations are effective in reducing mortality.

Who should be screened?

There is no conclusive evidence that screening of average risk people decreases mortality from melanoma.

There is low grade evidence that individuals at high risk of melanoma could benefit from education to recognise and document lesions suspicious of melanoma, and to be regularly checked by a clinician with six-monthly full body examination supported by total body photography and dermoscopy as required. High risk individuals are not well defined but may include combinations of the following factors: age and sex; history of previous melanoma or non-melanoma skin cancer; family history of melanoma, including age of onset and multiplicity of any melanoma cases; the number of common melanocytic naevi; number of clinically atypical naevi; skin and hair pigmentation type and response to sun exposure; and evidence of actinic skin damage.

Individuals with known inherited mutations in the genes encoded by the CDKN2A locus, p16INK4A and p14ARF have an increased melanoma risk, especially in the context of a family history of melanoma. Screening for a mutation in the CDKN2A gene be contemplated only after a thorough clinical risk assessment by a familial cancer or melanoma clinic.

References

Clinical practice guidelines for the management of melanoma in Australia and New Zealand
www.cancer.org.au/clinicalguidelines

Melanoma: An aide memoire to assist diagnosis
www.cancer.org.au/clinicalguidelines

Ovarian cancer

Recommendation: Insufficient evidence for population based screening.

Method of screening

Ultrasound (abdominal, transvaginal, Doppler) and serum CA125 have been suggested, however none of these have the sensitivity or specificity to be recommended as a screening test.

Who should be screened?

Screening is not recommended for women at average risk (99% of the population).

Women at potentially high risk of ovarian cancer and perhaps other cancers comprise 1% of the population and should be referred to a familial cancer clinic for assessment and management. This group comprises women with the following:

- One first-degree relative diagnosed with epithelial ovarian cancer in a family of Ashkenazi Jewish ancestry;

OR

- Two first or second-degree relatives on the same side of the family diagnosed with breast or ovarian cancer, especially if one or more of the following features occurs on the same side of the family:

- breast cancer diagnosed before the age of 40;
- bilateral breast cancer;
- breast and ovarian cancer in the same woman;
- breast cancer in a male relative;

OR

- Three or more first or second-degree relatives on the same side of the family diagnosed with any of the cancers associated with hereditary non-polyposis colorectal cancer (HNPCC): colorectal cancer (particularly if diagnosed before the age of 50), endometrial cancer, ovarian cancer, gastric cancer, and cancers involving the renal tract;

OR

- A member of a family in which the presence of a high risk ovarian cancer mutation in a gene such as BRCA1, BRCA2 or one of the DNA mismatch repair genes, has been demonstrated.

References

Clinical practice guidelines for the management of women with epithelial ovarian cancer
www.cancer.org.au/clinicalguidelines

Assessment of symptoms that may be ovarian cancer: A guide for GPs
www.cancer.org.au/clinicalguidelines

Prostate cancer

Recommendation: Insufficient evidence for population based screening.

Men should be informed about prostate cancer and the pros and cons of testing and from this make an individual decision based on their personal preferences and individual risk factors.

Method and frequency of screening

Digital Rectal Examination (DRE) and Serum Prostate Specific Antigen (PSA) are used as screening tests, although the accuracy of these tests is not high. The likelihood that a man has prostate cancer if his PSA is above 4ng/ml is about 30% (positive predictive value). For every 100 men who actually have prostate cancer, between 10 and 30 will have a PSA below 4ng/ml.

Who should be screened?

The issue of population screening for prostate cancer remains controversial, as current evidence suggests the harms associated with screening outweigh the benefits. Cancer Council Australia's position is that in the absence of direct evidence showing a clear benefit of population based screening for prostate cancer, a patient centred approach for individual decisions about testing is recommended. Ideally this takes the form of an informed, shared, decision-making process between the doctor and man, discussing the benefits, risks and uncertainties of testing, and discussion about treatment options and side effects. Screening discussions and decisions should always include and take into account, age and other individual risk factors such as a family history of the disease.

References:

Cancer Council Australia position statement on prostate screening
www.cancer.org.au/positionstatements

Andrology Australia position statement on prostate screening
http://www.andrologyaustralia.org/docs/AndrologyAustralia_PSAposition_webversion_140509.pdf

Early detection of prostate cancer in general practice: supporting patient choice - GP/Patient showcard
www.cancer.org.au/HealthProfessionals/PrimaryCareResources.htm

Lung Cancer

Recommendation: Insufficient evidence for population based screening.

Method and frequency of screening

Chest X-ray, sputum cytology, spiral CT scanning have been proposed but there is no evidence that any of these are effective in reducing mortality.

Who should be screened?

There is no evidence that any groups benefit from screening for lung cancer.

References

Clinical Practice Guidelines for the Prevention, Diagnosis and Management of Lung Cancer
www.cancer.org.au/clinicalguidelines

Testicular cancer

Recommendation: Insufficient evidence for population based screening.

Method and frequency of screening

Regular palpation of the testes by self or physician is suggested but there is no evidence that this will decrease mortality.

Who should be screened?

No evidence exists on which to base a recommendation for or against screening for testicular cancer.

Males with undescended testes, gonadal dysgenesis, Klinefelter's syndrome, father or identical twin with testicular cancer, or a history of testicular cancer in the contralateral testis are at increased risk.

References:

Cancer Council Australia position statement on testicular cancer
www.cancer.org.au/positionstatements

