Find Cancer Early: A Guide for General Practitioners

Find Cancer Early: A Guide for General Practitioners is a tool designed to assist Western Australian General Practitioners (GPs) in the early diagnosis of patients with **colorectal**, **lung**, **prostate**, **breast** and **skin** cancers. This resource uses evidence-based positive predictive value (PPV) tables that highlight the clinical features that best predict cancer [1,4,9]. This guide is not intended to replace clinical judgment, the need for a thorough patient and family history, or the importance of assessing an individual's risk factors.

PROSTATE CANCER

Symptoms that best predict prostate cancer[1]

- hesitancy
- nocturia
- frequency/urgency
- haematuria
- weight loss

Figure 1: Probability of cancer if clinical features present[1]

Haematuria	Loss of weight	Nocturia	Hesitancy	Rectal exam - benign	Rectal exam - malignant	Frequency/ urgency	PPV= Positive predictive value (%) or probability of cancer
1.0	0.75	2.2	3.0	2.8	12	2.2	PPV as a single clinical feature
1.6*	☐	1.9	☐	3.3	3.9	1.8	Haematuria
	2.1*	12	☐	9.4	☐	1.8	Loss of weight
		3.3*	2.8	3.9	15	3.2	Nocturia
			2.0*	3.3	10	4.7	Hesitancy
						3.1*	Frequency/ urgency
						4.0	Rectal exam - benign
						13	Rectal exam - malignant

Figure 1 shows the probability of prostate cancer for individual and pairs of clinical features, including second* presentation.

For example, the probability of prostate cancer for nocturia alone is 2.2%, but nocturia combined with weight loss increases the probability to 12%. Two separate presentations of nocturia have a probability of 3.3%.

Probabilities highlighted in red are >5%, and urgent referral should be considered.

- >5% probability of cancer
- 2-5% probability of cancer
- 1-2% probability of cancer
- <1% probability of cancer
- ✲ Second presentation
- ☐ denotes data unknown

Risk factors

- increasing age[8]
- family history of prostate, breast or ovarian cancer (see **RACGP Red Book**[2] for risk criteria).

Implications for practice

- Severity of symptoms does not predict prostate cancer.
- Men age >40 years with lower urinary tract symptoms should have a Digital Rectal Exam (DRE) and PSA blood test.

Send referral to the Central Referral Service (CRS) or phone: 1300 551 142

For more information, access the Cancer Council Australia **Optimal Care Pathway (OCP)[16]** for men with prostate cancer

Refer all patients exhibiting symptoms suggestive of advanced prostate cancer urgently to a Urologist affiliated with a multidisciplinary team (MDT).

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LUNG CANCER

Symptoms that best predict lung cancer [4, 7, 15]

- haemoptysis
- weight loss or fatigue, particularly in smoker or ex-smoker
- loss of appetite
- unexplained bone or chest pain/shoulder pain
- new and progressive dyspnoea
- new and persistent cough/change in cough
- new and persistent hoarseness
- persistent pneumonia.

Figure 2: Probability of cancer in NON-smokers if clinical features present[4]

Lung cancer clinical features NON-smokers (including ex-smokers)

Cough	Fatigue	Dyspnoea	Chest pain	Loss of weight	Loss of appetite	Thrombocytosis	Abnormal spirometry	Haemoptysis	PPV= Positive predictive value (%) or probability of cancer
0.40	0.43	0.66	0.82	1.1	0.87	1.6	1.6	2.4	PPV as a single clinical feature
0.58*	0.63	0.79	0.76	1.8	1.6	2.0	1.2	2.0	Cough
	0.57*	0.89	0.84	1.0	1.2	1.8	4.0	3.3	Fatigue
		0.88*	1.2	2.0	2.0	2.0	2.3	4.9	Dyspnoea
			0.95*	1.8	1.8	2.0	1.4	5.0	Chest pain
				1.2*	2.3	6.1	1.5	9.2	Loss of weight
					1.7*	0.9	2.7	>10	Loss of appetite
							3.6	>10	Thrombocytosis
								>10	Abnormal spirometry
								17*	Haemoptysis

- >5% probability of cancer
- 2-5% probability of cancer
- 1-2% probability of cancer
- <1% probability of cancer
- * Second presentation
- □ denotes data unknown

Figure 3: Probability of cancer in smokers if clinical features present[4]

Lung cancer clinical features for smokers

Cough	Fatigue	Dyspnoea	Chest pain	Loss of weight	Loss of appetite	Thrombo-cytosis	Abnormal spirometry	Haemoptysis	PPV= Positive predictive value (%) or probability of cancer
0.9	0.8	1.2	1.3	2.1	1.8	4.2	4.0	4.5	PPV as a single clinical feature
1.3*	1.0	1.4	0.9	2.3	2.8	6.5	3.6	3.9	Cough
	1.2*	1.4	1.3	2.0	2.3	2.4	>10	6.1	Fatigue
		1.5*	2.2	3.1	5.5	2.4	>10	6.9	Dyspnoea
			1.4*	4.4	7.6	>10	>10	4.1	Chest pain
				1.7*	5.0	>10	>10	□	Loss of weight
					2.7*	□	□	□	Loss of appetite
							□	12*	Haemoptysis

Figures 2 and 3 show the probability of lung cancer for individual and pairs of clinical features, including second* presentation in non-smokers (including ex-smokers) and smokers respectively.

For example, the probability of lung cancer for haemoptysis alone in non-smokers is 2.4%, but haemoptysis combined with weight loss increases the probability to 9.2%.

The probability of lung cancer for haemoptysis alone in smokers is 4.5%, but haemoptysis combined with dyspnoea increases the probability to 6.9%.
Two separate episodes of haemoptysis in non-smokers and smokers have a probability of 17% and 12% respectively.

Probabilities highlighted in red are >5%, and urgent referral should be considered.

Risk factors[5]

- current smoker or ex-smoker
- increasing age
- exposure to secondhand smoke
- occupational exposures e.g. asbestos, diesel engine exhaust[6]
- previous lung diseases including COPD or ILD
- family history of lung cancer.

Implications for practice

- Perform early chest X-ray in those with relevant symptoms.
- Conduct a full blood count in people with possible symptoms of lung cancer.

Diagnostic pathways

Refer to Cancer Australia's **'Investigating symptoms of lung cancer: a guide for GPs'**[7] for investigation pathways.

Refer all suspected lung cancer within two weeks to a respiratory physician affiliated with a lung cancer multidisciplinary team (MDT).

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COLORECTAL CANCER

Symptoms that best predict colorectal cancer[1]

- rectal bleeding
- symptoms of anaemia, e.g. tiredness, fatigue
- weight loss
- abdominal pain or tenderness
- change in bowel habit, e.g. diarrhoea, constipation.

Figure 4: Probability of cancer if clinical features present[1]

Constipation	Diarrhoea	Rectal bleeding	Loss of weight	Abdominal pain	Abdominal tenderness	Abnormal rectal exam	Haemoglobin 10–13 g/dL	Haemoglobin <10 g/dL	PPV= Positive predictive value (%) or probability of cancer
0.42	0.94	2.4	1.2	1.1	1.1	1.5	0.97	2.3	PPV as a single clinical feature
0.81*	1.1	2.4	3.0	1.5	1.7	2.6	1.2	2.6	Constipation
	1.5*	3.4	3.1	1.9	2.4	11	2.2	2.9	Diarrhoea
		6.8*	4.7	3.1	4.5	8.5	3.6	3.2	Rectal bleeding
			1.4*	3.4	6.4	7.4	1.3	4.7	Loss of weight
				3.0*	1.4	3.3	2.2	6.9	Abdominal pain
					1.7*	5.8	2.7	>10	Abdominal tenderness

Figure 4 shows the probability of colorectal cancer for individual and pairs of clinical features, including second presentation.

For example, the probability of colorectal cancer for rectal bleeding alone is 2.4%, but rectal bleeding combined with an abnormal rectal exam increases the probability to 8.5%. Two separate episodes of rectal bleeding have a probability of 6.8%.

Probabilities highlighted in red are >5%, and urgent referral should be considered.

- >5% probability of cancer
- 2-5% probability of cancer
- 1-2% probability of cancer
- <1% probability of cancer
- ✻ Second presentation

Risk factors[2]

- increasing age
- personal history of:
  - colorectal cancer
  - adenomas
  - inflammatory bowel disease
  - Lynch syndrome-related cancers*
- family history of:
  - colorectal cancer
  - suspected familial adenomatous polyposis (FAP)
  - suspected Lynch syndrome
  - Lynch syndrome-related cancers*
- alcohol use, overweight and obesity, physical inactivity, smoking and diet e.g. red/processed meat consumption, insufficient fibre.[3]

**Lynch syndrome-related cancers include but are not limited to: bowel, endometrial, ovarian, stomach, hepatobiliary, urinary tract, kidney, pancreatic, brain, skin (sebaceous adenoma, sebaceous epithelioma, or sebaceous carcinoma and keratoacanthoma) and small bowel cancers.[17]*

Implications for practice[2]

- Findings of a physical examination including rectal examination can significantly alter the probability of colorectal cancer.
- Conduct a full blood count in people with possible symptoms of colorectal cancer.
- Low haemoglobin in the presence of symptoms significantly raises the probability of colorectal cancer.
- Positive FOBT can provide justification for an urgent referral for colonoscopy.
- Negative FOBT does not exclude cancer in people with symptoms.
- Recent onset of symptoms in patients >40 years should be viewed with an even higher degree of suspicion.

Refer all suspected colorectal cancer within four weeks for colonoscopy or appropriate specialist review within four weeks.

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BREAST CANCER

Symptoms that best predict breast cancer[9, 18]

- lump or lumpiness in breast or axilla, especially if it's only in one breast or on one side
- breast lump and pain
- changes in nipple appearance, e.g. retraction, scaliness, inversion, redness
- discharge from the nipple
- breast pain, particularly localised with or without cyclic variation
- change in shape or appearance of breast, e.g. dimpling, redness.

Figure 5: Probability of cancer if clinical features present[9]

Age (years)	PPV= Positive predictive value (%) or probability of cancer				
	Breast pain	Nipple discharge	Nipple retraction	Breast lump	Breast lump/ pain
40-49	0.17	1.2	□	4.8	4.9
50-59	0.80	2.1	2.6	8.5	5.7
60-69	1.2	2.3	3.4	25	6.5
>70	2.8	23	12	48	>5

Figure 5 shows the probability of breast cancer for clinical features paired with age groups.

For example, the probability of breast cancer for a breast lump at age 40-49 years is 4.8%. This increases to 48% for a woman aged 70 years or over.

Probabilities highlighted in red are >5%, and urgent referral should be considered.

- >5% probability of cancer
- 2-5% probability of cancer
- 1-2% probability of cancer
- <1% probability of cancer
- □ denotes data unknown

Risk factors[10]

- family history of breast or ovarian cancer (see **iPrevent**[14] for risk criteria)
- increasing age (uncommon <40 years)
- previous diagnosis of breast cancer or high risk benign lesion such as LCIS
- breast density
- hormonal factors:
  - longer menstrual history (age at menarche <12 years, age at menopause >55 years)
  - use of hormonal treatments (combined hormone replacement therapy, oral contraceptive pill)
  - conception history (age at first birth >29 years, nulliparity)
- alcohol use, smoking, overweight and obesity (particularly in postmenopausal women), physical inactivity.

Implications for practice

- Any new breast symptom or sign should be investigated as clinically indicated.
- The triple-test is the recommended approach in the investigation of breast changes. The triple-test includes:
  1. Clinical examination and family history.
  2. Imaging (mammography and/or ultrasound).
  3. Non-excision biopsy (FNA and/or core biopsy).
- If any of the triple test results are abnormal or if even one of the results do not fit with a benign diagnosis, refer urgently to a Breast Assessment Clinic.
- Nipple retraction in women over 50 years should be investigated.

Diagnostic pathways

Refer to Cancer Australia's **'The investigation of a new breast symptom: a guide for GPs'**[11] for investigation pathways.

Refer all suspected breast cancer within two weeks to a Breast Assessment Clinic affiliated with a multidisciplinary team (MDT).

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SKIN CANCER

Skin self-examination (SSE)

Patients at high risk for melanoma or treated for non-melanoma skin cancer (NMSC) should be taught to self-screen and have a full body examination with a clinician every 6 to 12 months (or more frequently for NMSC patients at higher risk).

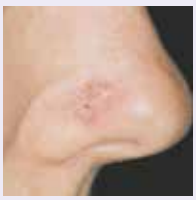
For the general population, the Australasian College of Dermatologists recommends SSE four times a year or as often as recommended by their medical practitioner.[12]

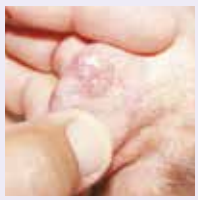
Signs of skin cancer

Basal Cell Carcinoma (BCC)

- Is the most common and least dangerous form of skin cancer.
- Appears as a well-defined lump or scaly area that is red or pearly in appearance.
- May bleed or become ulcerated early on, then heal and break down again.
- Usually grows relatively slowly.

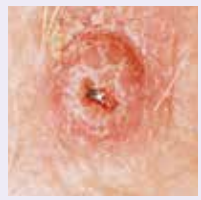
High-risk BCC subtypes (e.g. micronodular, infiltrating or morphoeic) and BCCs in immune-suppressed individuals tend to have higher rates of recurrence after treatment.





Squamous Cell Carcinoma (SCC)

- Appears as a lump or scaly area that is either red, pale or pearly in colour.
- May bleed or form an ulcer or non-healing sore.
- Grows slowly and is usually found on the head, neck or upper torso.



Melanoma

Melanoma develops in the melanocyte (pigment-producing) cells located in the epidermis. Untreated, melanoma has a high risk for metastasis.

The most common clinical subtype is superficial spreading melanoma (SSM), making up 55% – 60% of all melanoma. SSM is most commonly found on the head and neck (per unit area). Other common sites are the trunk in males and lower extremities in females.

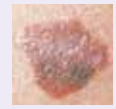
However, SSM can develop on any part of the body, including parts not heavily exposed to ultraviolet (UV) radiation.

The ABCD(E) acronym can help distinguish an SSM from a normal mole:

Asymmetry: the lesion is irregular in shape or pattern.

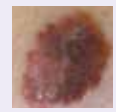
Border: the border or outline of a melanoma is usually irregular.

Colour: there is variation in colour within the lesion.



Diameter: the lesion is usually greater than 6mm across. However, suspect lesions of smaller diameter should also be investigated.

Evolving: the lesion changes over time (size, shape, surface, colour, symptoms e.g. itch).



The ABCDE acronym cannot be used to aid diagnosis of nodular melanoma but the following EFG features can assist with diagnosis.

Elevated: the lesion can appear as a small, round and raised lump on the skin. Colour may be uniform throughout the lesion and may be black, brown, pink or red.

Firm: the lesion feels firm to the touch.

Grows: a nodule that has been growing progressively for more than a month should be assessed as a matter of urgency.

7-POINT CHECKLIST SUMMARY [2]

A score of >3 is associated with an increased risk of melanoma

Major features of the lesions (2 points each):

- change in size
- irregular shape
- irregular colour.

Minor features of the lesions (1 point each):

- largest diameter 7mm or more
- inflammation
- oozing
- change in sensation.

Risk factors[13]

- UV exposure
- family history
- skin type – fair skin more susceptible
- greater presence of benign nevi.

Diagnostic pathways

Refer to Cancer Australia's **'Clinical Practice Guidelines'**[19] for guidance on diagnostic aids for melanoma and biopsy requirements.

View more FCE resources at **findcancerearly.com.au/gp/**

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Cancer Council WA

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This resource was initially developed as part of the Improving Rural Cancer Outcomes project by The University of Western Australia, Cancer Council WA and Department of Health WA's Rural Cancer Initiative project team, which investigated ways to improve cancer outcomes for people in rural WA. The resource was last updated by Cancer Council WA in March 2021. Evidence based clinical guidelines for the prevention, diagnosis and management of cancer to inform clinical practice in the Australian context are available online at ***wiki.cancer.org.au/australia/Guidelines***

For support and information on cancer and cancer-related issues, call our Cancer Council nurses on **13 11 20**
or visit **cancerwa.asn.au**
Calls are confidential and available statewide
Monday to Friday during business hours.

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