

Melanoma and other skin cancers: a guide for medical practitioners



Australia has the highest rate of skin cancer in the world. About one in two people who spend their life in Australia will develop some form of skin cancer.

Skin cancer is divided into two main types:

Melanoma

Develops in the melanocytic cells located in the epidermis. The melanocytes produce melanin, the pigment that provides the skin with its colour.

- The most dangerous form of skin cancer and the most likely to cause death.
- The lifetime risk of developing a melanoma in Victoria is 1 in 31 men and 1 in 39 women.
- Over 8800 Australians are diagnosed with a melanoma and more than 1000 die every year.
- 2% of the total number of skin cancers diagnosed are melanoma.
- In Victoria in 2004 there were almost 2000 new diagnoses and 261 deaths from melanoma.
- 81% of melanoma related deaths in Victoria occur in people aged over 50 years.

Non-Melanocytic Skin Cancer (NMSC)

374 000 new cases of BCC and SCC are diagnosed in Australia every year, resulting in 400 deaths.

Squamous cell carcinoma (SCC)

- Develops from the squamous cells in the epidermis. SCC accounts for approximately 30% of NMSC diagnosed.

Basal cell carcinoma (BCC)

- Develops from the basal cells in the epidermis. BCC accounts for approximately 70% of NMSC diagnosed.

The overall five-year survival rates for melanoma are 90% for men and 95% for women.

Causes of melanoma and other skin cancers

- Unprotected exposure to ultraviolet (UV) radiation remains the single most important lifestyle risk factor for melanoma and other skin cancers. Fair-skinned individuals are at increased risk of developing all types of skin cancer.
- Both UVA and UVB radiation contribute to skin damage, premature ageing and skin cancer.
- Melanoma and BCC are associated with both amount and pattern of sun exposure, with an intermittent pattern carrying the highest risk.
- SCC is associated with the total amount of sun exposure accumulated over life.
- Other risk factors for NMSC are rarer but can include exposure to some chemicals (arsenic), radiation therapy, UVA and psoralen (PUVA) treatment for psoriasis, immunosuppressive therapy and some rare genetic conditions predisposing to skin cancer.

Risk factors for melanoma

- Multiple naevi
- Multiple dysplastic naevi
- Personal or family history of melanoma
- Increasing age
- High levels of intermittent sun exposure (e.g. during outdoor recreation or sunny vacation)
- Personal history of NMSC

- Fair skin that burns easily, freckles and does not tan
- Having fair or red hair and blue or green eyes
- Immune suppression and/or transplant recipients

Screening

Population based or mass screening for melanoma and other skin cancers is **not** recommended.

Screening **is** recommended for patients identified to be at high risk of melanoma and NMSC, including patients with a previous diagnosis of melanoma.

Skin Self-Examination (SSE)

There is no specific SSE technique or recommended frequency of self-examination that has been shown to reduce morbidity. Up to 70% of melanomas are initially detected by people themselves or a family member. Regular skin examination may increase the probability of detecting melanoma at an early and treatable stage.

- The Australasian College of Dermatologists suggests that people examine their skin four times a year or as often as recommended by their medical practitioner.
- People at high risk for melanoma should be encouraged to have a total body skin examination with a medical professional at least once a year.

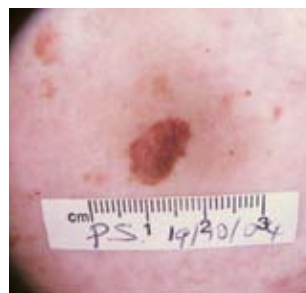
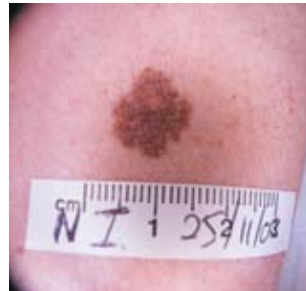
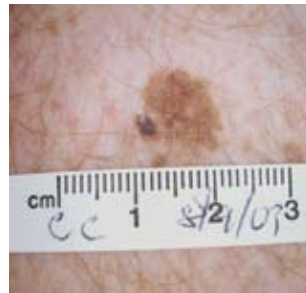


Melanoma diagnosis

Superficial Spreading Melanoma (SSM)

Melanoma can develop in pre-existing moles in the skin, or in the melanocytes found in the epidermis (i.e. de novo).

- SSM is the most common form of melanoma.
- SSM can appear as a new spot, or an existing spot, freckle or mole that changes size, colour or shape.
- SSM can develop on any part of the body including parts not exposed to UV radiation. SSM is most commonly found on the trunk and limbs, sites that are intermittently exposed to the sun.
- A patient diagnosed with melanoma is more than twice as likely as the average person of the same age to develop another. In Australia, the estimated 10-year risk of developing a second primary melanoma is 13%.
- Survival from melanoma is largely dependant on tumour thickness at the time of diagnosis. Tumours less than 1mm thick have a cure rate of well over 90%, tumours thicker than 4mm, approximately 50%.



The ABCDE acronym can help distinguish a superficial spreading melanoma from a normal mole:

- A** **Asymmetry:** a lesion that is irregular in shape
- B** **Border:** the border or outline of a melanoma is usually irregular
- C** **Colour:** there is variation in colour within the lesion
- D** **Diameter:** the lesion is usually greater than 6mm across. However, suspect lesions of smaller diameter should also be investigated
- E** **Evolving:** a lesion that changes over time (size, shape, symptoms, surface, colour).

Nodular Melanoma (NM)

An aggressive form of melanoma that often grows quickly. Nodular melanoma differs from SSM in appearance. NM does not grow much within the epidermis but penetrates vertically into the dermis early. It is more likely to be symmetrical and uniform in colour (red, pink, brown or black) and feels firm to the touch. Over time it may develop a crusty surface that bleeds easily.

- NM can become life threatening in 6–8 weeks.
- 15% of total melanomas diagnosed are NM but 70% of these lesions are thicker than 3mm.
- NM does not necessarily arise from a pre-existing mole; it can develop on any surface of the body. In Australia NM is often found on the lower limbs and head and neck.



The ABCD acronym cannot be used to aid diagnosis of nodular melanoma, however the following can be of help:

- E** **Elevated:** 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
- F** **Firm:** firm to the touch
- G** **Grows quickly:** a nodule that has been growing progressively for more than a month deserves urgent clinical assessment

If nodular melanoma is suspected, diagnosis **should not be delayed** and urgent referral to a dermatologist is recommended.

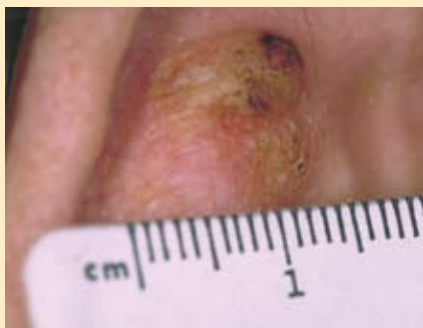
Biopsy and excision of melanoma or suspicious naevi

- Complete excision biopsy with a 2mm margin is recommended.
- Punch biopsies and shave excisions should be avoided if possible.
- If a thick melanoma or nodular melanoma is suspected, refer patient to a dermatologist or a surgeon with an interest in melanoma as a matter of urgency.

NMSC diagnosis

Squamous Cell Carcinoma (SCC)

- Is not as dangerous as melanoma but can spread to other parts of the body if not treated. Lesions on the ears and lips may have an increased risk of metastasis.
- Appears as a thickened, red, scaly spot that may bleed and ulcerate over time.
- Develops on sites most often exposed to the sun such as face, hands and forearms.
- Grows over a period of weeks to months.



Basal Cell Carcinoma (BCC)

- BCC is the most common and least dangerous form of skin cancer.
- Appears as a pearly lump or scaly or dry area that is red or pale in colour. Less than 10% have some pigment.
- May bleed or become ulcerated early on, then heal and break down again.



Treatment for melanoma

Selecting appropriate primary treatment will depend on the Breslow thickness (vertical depth) of the tumour. Breslow thickness is categorised using the following system:

Tumour in-situ (pTis) – the abnormal cells are found only in the non-vascular epidermis and have not penetrated into deeper tissue that contains blood vessels.

pT1 – the melanoma cells reach the upper part of the dermis. The melanoma is less than 1mm thick.

pT2 – the melanoma cells reach the upper part of the dermis. The melanoma is between 1mm and 2mm thick.

pT3 – the melanoma cells reach deeper into the dermis. The melanoma is between 2mm and 4mm thick.

pT4 – the melanoma is more than 4mm thick or it has invaded through the dermis and into the underlying fat.

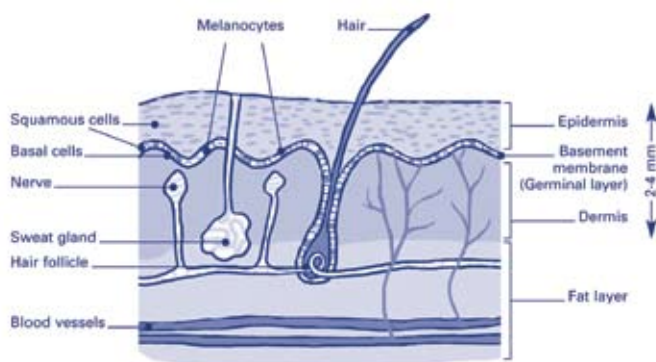
Treatment is based on the T1–T4 classification. The surgical removal of the tumour with recommended margins of excision for each of the T classification groups are:

(pTis) 5mm clearance

(pT1, pT2) 1cm clearance

(pT3, pT4) minimum margin 2cm, maximum margin 3 cm

Note: If significant morbidity would occur to obtain these maximum margins less surgical clearance may be utilised.



Other treatment options include:

- Surgery: Sentinel lymph node biopsy can be performed for pT2 (and on higher risk pT1 i.e. pT1b) or thicker lesions. Surgical resection of isolated metastases can be performed in both definitive and palliative treatment settings.
- Radiation treatment can be used to treat lentigo maligna definitively when surgical approaches are considered less suitable. Post-operative radiotherapy can be performed for melanomas likely to recur locally or regionally. Radiotherapy can be used for palliative management of cerebral and bone metastases and for other metastases where temporary local control is needed.

Chemotherapy

- Chemotherapy may be offered for treatment of metastatic disease. Commonly used agents include Dacarbazine (DTIC), Fotemustine and Carboplatin. Temozolamide is also occasionally used.
- Experimental agents, either alone or in combination with standard chemotherapeutic agents, may be

offered as treatment of metastatic disease, within the context of clinical trials.

Immunological therapies

- Interferon may be offered following surgical removal of melanoma that has not progressed past lymph nodes.
- Vaccines remain experimental, but may be offered within the context of clinical trials either after surgical removal of early stage melanoma, or for low volume metastatic disease.

Follow-up

Because of the risk of tumour recurrence, all patients diagnosed with melanoma require follow-up, the frequency of which will depend on the stage of the primary tumour at time of diagnosis.

Even with a thin tumour there is about a 1% annual risk of a second primary occurring. Patients should be encouraged to remain vigilant about any changes in their skin, have a professional full skin examination as deemed appropriate and have further testing as required.

Melanoma Units

Melanoma Units provide specialised diagnostic services and treatment services. Melanoma management and treatment is advised through a multidisciplinary panel including pathology services, medical specialists, treatment options and clinical trials. Patients may be referred to these units by their GP or specialist.

Victorian Melanoma Service	Alfred Hospital, Commercial Road Melbourne Vic 3004	9530 5940
Peter Mac Melanoma and Skin Oncology Service	Peter MacCallum Cancer Institute St Andrews Place East Melbourne Vic 3002	9656 1111
Melanoma Service	The Royal Melbourne Hospital Grattan Street, Parkville Vic 3050	9342 7410
Austin Hospital Melanoma Clinic	Medical Oncology Unit, Level 6 Harold Stokes Building, 145–163 Studley Road, Heidelberg Vic 3084	9496 5763

Skin cancer prevention

The Cancer Council Victoria recommends five steps to protect against sun damage:

1. Slip on some sun-protective clothing – that covers as much skin as possible
2. Slop on SPF30+ sunscreen – make sure it is broad spectrum and water resistant. Put it on 20 minutes before going outdoors and every two hours afterwards
3. Slap on a hat – that protects the face, head, neck and ears
4. Seek shade
5. Slide on some sunglasses – that meet Australian Standards.

For more information go to www.sunsmart.com.au

Cancer Council Helpline: 13 11 20

Acknowledgements:

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