Melanoma and other skin cancers: a guide for medical practitioners

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

Diagnosed and treated early, 95% of melanoma and 99% of NMSC can be cured

Skin cancer is divided into 2 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.

- Is the most dangerous form of skin cancer and the most likely to cause death.
- The lifetime risk of developing melanoma is 1 in 25 for men and 1 in 34 for women.
- Over 8800 people are diagnosed and more than 1000 people die in Australia every year.
- Around 2% of the total number of skin cancers diagnosed are melanoma.
- Over 70% of melanoma related deaths in WA occur in people aged over 55 years.
- Over 50% of deaths from melanoma in WA occur in men aged over 50 years.

Non-melanocytic skin cancer (NMSC)

- **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.
- Over 370 000 new cases of BCC and SCC are diagnosed in Australia every year resulting in 400 deaths.

References

Australian Institute of Health and Welfare (AIHW) and Australian Association of Cancer Registries (AACR) (2004) Cancer in Australia 2001. AIHW Cat. no. CAN 23, Canberra.

Threlfall, T.J. and Thompson, J.R. (2005) Cancer in Western Australia: Incidence and mortality 2003 and Mesothelioma 1960-2003. Department of Health, Western Australia, Perth.

Causes of melanoma and other skin cancers

- Unprotected exposure to ultraviolet radiation (UVR) remains the single most important risk factor for melanoma and other skin cancers.
- Both UVB and UVA contribute to skin damage, premature aging and skin cancer.
- Melanoma and BCC are associated with intermittent, high intensity exposure to UVR, especially exposure resulting in sunburn.
- SCC is associated with cumulative or large amounts of exposure to UVR over long periods of time.
- Other risk factors for NMSC are rarer but can include exposure to some chemicals (arsenic), arc welding, radiation therapy, some psoriasis treatment, reduced immunity and some genetic conditions predisposing to skin cancer.

Risk factors for melanoma and other skin cancers

- Age.
- Experience of sunburn in the past, especially in childhood.
- Sporadic, intense exposure to UVR.
- Fair skin that burns easily, freckles and does not tan.
- Presence of dysplastic naevi.
- Presence of a large number of dysplastic naevi (>200).
- Having fair or red hair and blue or green eyes.
- Having a family history of melanoma.
- Personal history of NMSC.

Screening

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

Screening **is** recommended:

- For patients identified with risk factors for melanoma and NMSC, including patients with a previous diagnosis of melanoma.
- On an opportunistic or case finding basis, offered as part of a routine medical check-up of patients presenting with risk factors.

Skin self-examination (SSE)

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

- The Australasian College of Dermatologists recommends that people examine their skin four times a year or as often as recommended by their medical practitioner.
- Patients with risk factors should be encouraged to undergo a total body skin examination with a medical practitioner at least once a year.

Melanoma diagnosis

Superficial Spreading Melanoma (SSM)

Melanoma can develop in pre-existing moles in the skin, or in the melanocytic cells found in the epidermis.

- 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 heavily exposed to UVR. SSM is commonly found on the head, neck and trunk on men and lower extremities on women.
- A patient diagnosed with melanoma is twice as likely as the average person of the same age to develop another.
- Survival from melanoma is largely dependent on tumour thickness at the time of diagnosis. Tumours less than 1mm thick have a cure rate of over 90%, tumours thicker than 4mm, less than 55%.

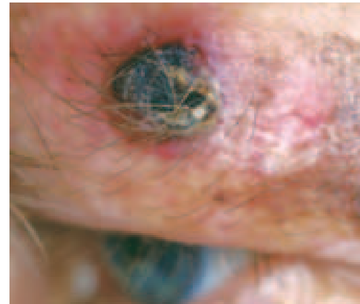
The ABCD can help distinguish a superficial spreading melanoma from a normal mole:

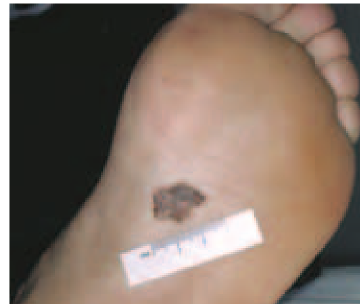
A **Asymmetry:** a lesion that is irregular in shape.

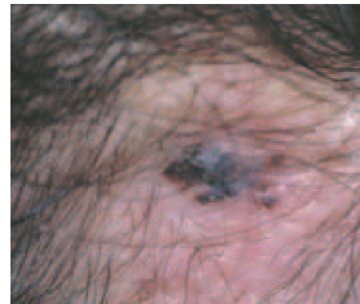
B **Border:** the border or outline of a melanoma is usually irregular.

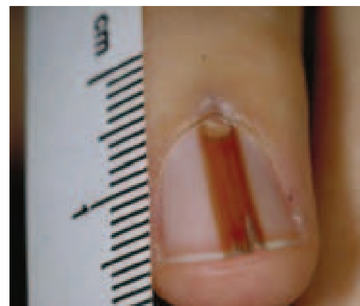
C **Colour:** there is variation in colour within the lesion.

D **Diameter:** the lesion is usually greater than 6mm across. However smaller suspicious lesions should also be investigated.









Nodular Melanoma (NM)

A highly dangerous form of melanoma that penetrates vertically into the epidermis and grows quickly.

NM differs from SSM in appearance. NM is more likely to be symmetrical and uniform in colour (red, pink, brown or black) and feels firm to the touch. Over time it develops a crusty surface that bleeds easily.

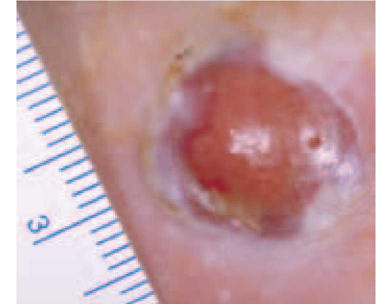
- NM can become life threatening in 6 - 8 weeks.
- Less than 15% of total melanomas diagnosed are NM but 70% of these lesions are thicker than 3mm.
- NM does not necessarily arise from a pre-existing mole, it can develop on any surface of the body. NM is often found on the back and the scalp.

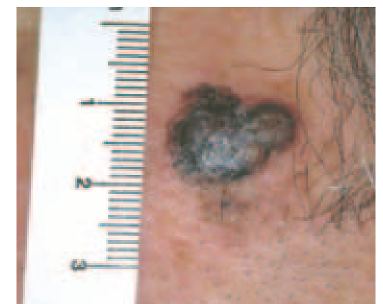
The ABCD cannot be used to aid diagnosis of nodular melanoma however the following can be of help:

E **Elevated –** can appear as a small, round and raised lump on the skin. Colour is uniform throughout the lesion.

F **Feels** firm to the touch.

G **Grows** quickly, the lesion being deeper than appears on the surface.





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

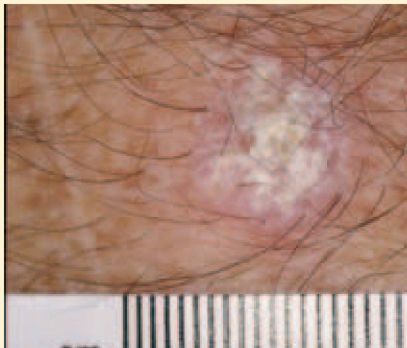
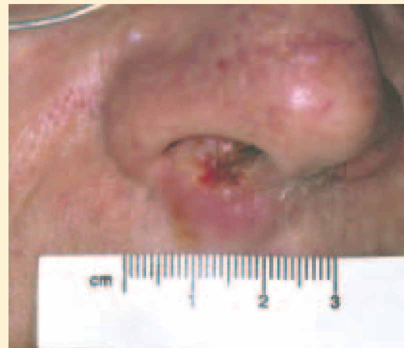
Biopsy and Excision for melanoma

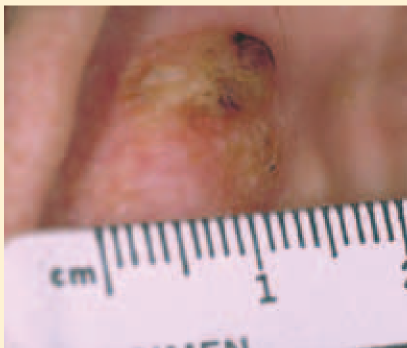
- Complete excision biopsy with a 2mm margin is recommended.
- Punch biopsies and shave excisions are not recommended as they can interfere with pathology analysis.
- If a thick melanoma or NM is suspected, refer patient to a dermatologist.

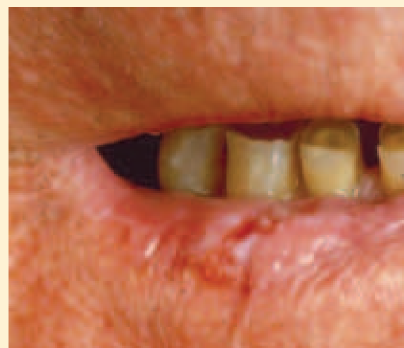
NMSC diagnosis

Squamous Cell Carcinoma (SCC)

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

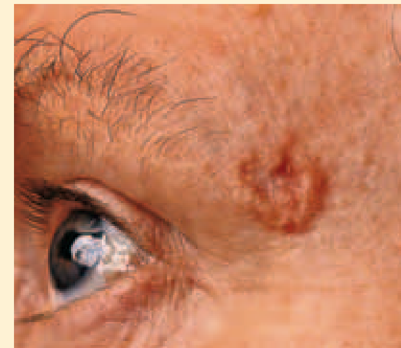
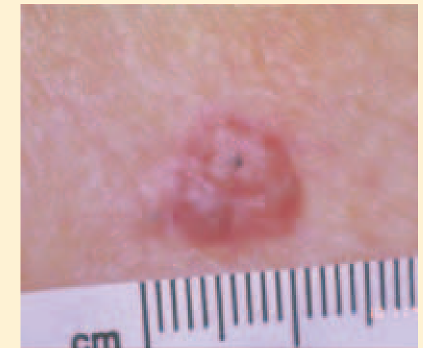


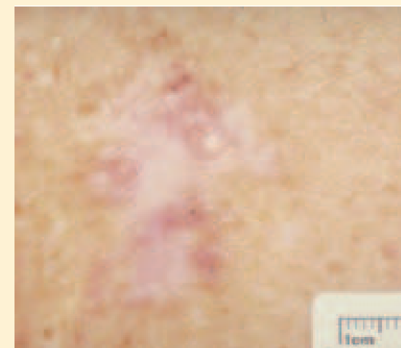
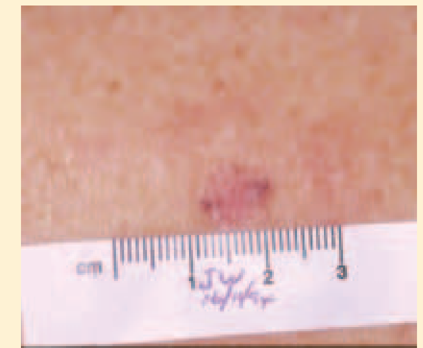


All images are supplied courtesy of the Sydney Melanoma Diagnostic Centre

Basal Cell Carcinoma (BCC)

- BCC is the most common and least dangerous form of skin cancer.
- Appears as a lump or scaly area that is red, pale or pearly in colour.
- Grows slowly.
- Over time may bleed or become ulcerated, 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 measured using the following system:

Tumour – in-situ (pTis)	the abnormal cells are found only in the uppermost layer of the skin and have not penetrated into deeper tissue.
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 1mm to 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)	minimum margin 1cm, maximum margin 2cm
(pT4)	minimum margin 2cm, maximum margin 3cm

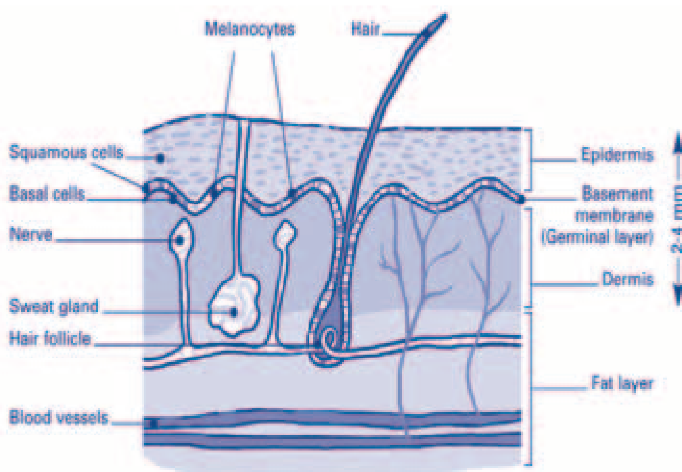
Other treatment options:

- Radiotherapy: used if the melanoma has spread to an internal organ or as follow up prevention treatment after the tumour has been removed.
- Chemotherapy: used to treat cancer that has spread to internal organs. If a cure is not possible chemotherapy can help relieve symptoms caused by the growth of the cancer.

Follow-up

All patients diagnosed with melanoma require follow-up. The frequency will depend on the stage of the primary tumour at time of diagnosis.

The reoccurrence of melanoma may be high. Patients should be encouraged to remain vigilant about any changes in their skin, have a professional full skin examination as deemed appropriate and further testing as required.



WA Melanoma Advisory Service

The Western Australian Melanoma Advisory Service (WAMAS) provides advice on diagnosis, management and treatment of melanoma through a multidisciplinary panel including specialists in anatomical pathology, dermatology, plastic surgery, medical and radiation oncology and psychological counselling. Information on clinical trials is also available.

The Service is FREE for all West Australians with melanoma. Patients may be referred to WAMAS by their general practitioner or specialist. Following consultation, WAMAS will provide the referring doctor with a suggested plan of management.

The nurse coordinator for the Service can be contacted on (08) 9382 9445, or fax (08) 9382 9446
email: wamas@sjog.org.au

Advice you can give your patients

Ask your patient to check their skin regularly and to see you straight away if they notice:

- A skin spot that is different from other spots around it.
- A mole or freckle that has changed in size, shape or colour.
- A suspicious spot that is new or has changed over weeks or months in size, shape or colour.
- An inflamed sore that has not healed within 3 weeks.

Skin cancers need not be painful and are much more frequently seen than felt. Suggest to them that a friend or partner check areas of the body that are hard to see.

A range of affordable sun protection merchandise is available from the Cancer Council Shop at 334 Rokeby Rd, Subiaco WA 6008. You can contact the shop on (08) 9381 5810 or shop online at www.cancerwa.asn.au/shop.

FOR MORE INFORMATION FOR YOUR PATIENTS

The Cancer Council Helpline 13 11 20 statewide, for the cost of a local call. Weekdays 8 am – 8 pm, Saturdays 9 am – 3 pm. TTY (08) 9381 6562
www.cancerwa.asn.au

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