

## Activity 3: Types of skin cancer

### Aim

- To increase student awareness and knowledge of skin cancer.

**Assessment outcomes** H&PE 4.6, 4.7

**Reference fact sheets** Fact sheet 1: Skin cancer  
Fact sheet 2: How to check for skin cancer

### Teacher guidelines

- 1 Ask students about their knowledge of skin cancer. Can they name any of the types of skin cancer? What causes skin cancer? How common is skin cancer in Australia?
- 2 Distribute and read through Fact sheet 1: Skin cancer.
- 3 While referring to Fact sheet 1 discuss with students:
  - Who can get skin cancer?
  - What causes skin cancer?
  - What can be done to prevent skin cancer?
  - Whose responsibility is it to prevent the incidence of skin cancer?
  - Who has helped you in understanding the importance of protecting yourself from the sun? (Hint: government, local council, school, coaches, parents...etc.)
  - What ways can governments i.e. local, state and federal assist in helping individuals understand the importance of sun protection?
- 4 Refer to the diagrams in Fact sheet 2: How to check for skin cancer. Allow students to familiarise themselves with the three kinds of skin cancers shown in the illustrations.  
Give students the opportunity to quiz each other about recognising the three different cancers.
- 5 Reinforce the message that skin cancer is rare in young people, but that sun damage is cumulative and SunSmart behaviour will reduce the chance of skin cancer later in life. Also remind students that early detection is very important in successful treatment of skin cancer. Emphasise the importance of checking their skin, knowing their skin and looking for changes.
- 6 Discuss with students the importance of role models, and how important it is for them to role model correct behaviour to younger children.
- 7 Students could develop an advertisement with a clear message i.e. poster, bus shelter or magazine advertisement or a single page information sheet on skin cancer. Focus on the ways to prevent skin cancer through SunSmart behaviour. These posters or pamphlets could be displayed in the school or possibly in the local community health centre.  
Evaluation of this promotion could be performed by conducting a mini survey as to the likely effectiveness of their poster or pamphlet on influencing others to take precautions before going out into the sun.



## Activity 3: Types of skin cancer (cont.)

### Extension activity

Students to work in groups of three to conduct a survey of ten people of different age groups about their knowledge of skin cancer. Students will need to

- create the questionnaire based on information in Fact sheets 1 and 2
- conduct survey
- collate results
- write up a conclusion.

Results from the whole class could be tabulated and conclusions from results could be prepared in the form of a short school newsletter article.

### Please note

- It is essential that students are guided through appropriate interview techniques and are well prepared before proceeding with this activity.
- It is important that groups negotiate who they will interview so the same person is not interviewed by several students.



# Fact sheet 1: Skin cancer

## Structure and function of the skin

The skin is the largest organ of the body. It has several important functions. It acts as a protective layer against injury and disease and also regulates our body temperature and maintains its hydration.

The skin consists of three layers:

- the epidermis, or the outer layer
- the dermis, or the inner layer
- the subcutaneous fat layer.

The epidermis is made up of cells that produce keratin, a substance that covers the outside of the skin and resists heat, cold and the effects of many chemicals. The cells in the epidermis also produce melanin, the substance that gives our skin its colour. Melanin is able to absorb ultraviolet light and provide some protection from its damaging effects.

## What is cancer?

Cancer is a disease of the body's cells. Normally the body's cells grow and divide in an orderly manner so that growth and healing of injured tissue occurs.

Occasionally some cells behave in an abnormal way and may grow into a lump which is called a tumour.

Tumours can be non-cancerous [benign] or cancerous [malignant]. Benign tumours do not spread to other parts of the body.

A malignant tumour is made up of cancer cells. These cells have the ability to spread beyond the original site and if left untreated may invade and destroy surrounding tissues. Sometimes cells break away from the original [primary] cancer and spread to other organs. When these cells reach a new site they may form another tumour often referred to as a secondary cancer or metastasis.

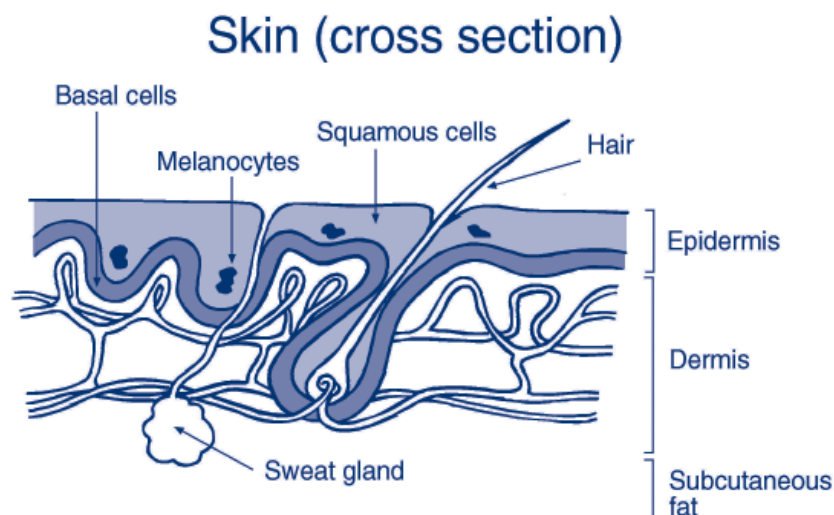
## What is skin cancer?

Skin cancer is a type of cancer that begins in the basal layer of the epidermis. There are three main types of skin cancer: basal cell carcinoma, squamous cell carcinoma and melanoma. Melanomas start in the pigment cells [melanocytes] while basal and squamous cell carcinomas develop from the epidermal cells. [Carcinoma is a term used for some types of cancer].

### Basal cell carcinoma [BCC]

Basal cell carcinomas are the most common but least dangerous type of skin cancer. They grow slowly over months to years but if left untreated a deep [rodent] ulcer may form. Fortunately they very rarely spread to other parts of the body. If you have one basal cell carcinoma you may have others, either at the same time or in later years.

Basal cell carcinomas are most commonly found on the face, neck and upper trunk. They appear as a lump or scaly area and are pale, pearly or red in colour. They may have blood vessels on the surface.



# Fact sheet 1: Skin cancer (cont.)

## Squamous cell carcinoma [SCC]

Squamous cell carcinomas are less common but more dangerous than basal cell carcinomas. They usually grow over a period of weeks to months. These cancers may spread to other parts of the body [metastasise] if not treated promptly.

Squamous cell carcinomas appear on areas of the skin most often exposed to the sun. They have scaling, red areas which may bleed easily and ulcerate, looking like an unhealed sore.

These common skin cancers generally occur in people over the age of 40. However basal cell carcinoma can occur in younger adults. The major cause of these skin cancers is sun exposure over many years.

## Melanoma

Melanoma is the rarest but most dangerous skin cancer. If left untreated melanoma can spread to distant parts of the body to form secondary cancers or metastases.

Melanomas can appear anywhere on the body not only in areas that get a lot of sun. The first sign of a melanoma is usually a change in a freckle or mole, or the appearance of a new spot on normal skin. Changes are normally seen over a period of several weeks to months, not over several days. The changes are in size, shape or colour.

Melanoma can occur from adolescence onwards and is the most common cancer in the 15–44 year age group. In rare instances it may develop in children.

## How common is skin cancer?

Skin cancer rates are higher in Australia than anywhere else in the world. It is the most common form of cancer in Australia affecting all age groups from adolescents upwards. Most common is basal cell carcinoma which accounts for about 75% of all skin cancers. Squamous cell carcinoma accounts for 20% and melanoma less than 5%.

One out of two Australians will develop a skin cancer in their lifetime – usually a basal cell carcinoma. In South Australia in 2003 the lifetime risk for developing melanoma was 1 in 31 for men and 1 in 39 for women.

## Signs and symptoms

As skin cancers are visible, they can be seen and checked as soon as they develop. Early symptoms of skin cancer may seem quite minor but any suspicious spot should be seen by a doctor immediately.

The signs to look for are:

- A crusty, non-healing sore.
- A small lump which is red, pale or pearly in colour.
- A new spot, freckle or mole changing in colour, thickness or shape over a period of several weeks to months. Particular attention should be paid to spots that are dark brown to black, red or blue-black.

## Diagnosis

If a doctor suspects a skin cancer, a biopsy may be performed. A biopsy is the removal of all or part of the affected skin, generally under local anaesthetic. It is a simple procedure that can be done by your family doctor or you can be referred to a specialist. The piece of skin that has been removed is then examined under a microscope. However in many cases the whole tumour is removed and a specimen is then sent to the laboratory for diagnosis.

## Treatment

### Common skin cancers



A variety of methods are available to treat the common skin cancers. Your doctor will choose your treatment by taking into consideration a number of factors. These will include the type of skin cancer, its size and position on your body and your personal preference.

Surgery can be used to remove the skin cancer and a small area of normal skin. This is quite simple and can usually be done under local anaesthetic.

Sunspots or pre-cancers can be briefly frozen with liquid nitrogen. This is called cryotherapy. Following cryotherapy the skin can become intensely red and peel away. Healing will begin in about a week.

Another technique is simply scraping off small common cancers [curettage] and burning the spot [cautery or diathermy].

# Fact sheet 1: Skin cancer (cont.)

Radiation therapy is another option although less commonly used now. It causes a crusting sore which takes some weeks to heal and then leaves a scar.

## Melanoma

Surgery is the preferred method of treatment for melanoma. Very thin melanomas are usually removed along with a small area of normal skin, under local anaesthetic.

For deeper melanomas a wide area of skin may need to be removed to make sure that all the cancer cells have been taken out. The local lymph glands may also be removed at this time.

## Outlook

Virtually all basal and squamous cell carcinomas that are found and treated early are cured.

The majority of people with early melanoma which is appropriately treated do not have any further trouble with their disease. However because there is a chance that the melanoma will reappear, your doctor will examine you at regular intervals.

For further details on outlook you should speak to your own doctor who is familiar with your full medical history.

## Causes of skin cancer

The major cause of skin cancer is exposure to the ultraviolet rays of the sun over many years.

### Sunlight exposure

Childhood exposure to the sun is an important factor in the development of skin cancer later in life. Research also suggests there may be a link between sunburn during childhood and melanoma in adulthood.

### Occupation

People who work outdoors have a greater risk of developing the common skin cancers than indoor workers. This is because of their greater exposure to sunlight. Workers in some industries have to take precautions against other known causes of common skin cancers, such as arsenic, polycyclic hydrocarbons and a number of other chemical compounds.

## Who is at risk?

Everyone is at risk of skin cancer, although people with skin that burns easily and rarely tans are at the greatest risk. Those who burn in early summer and then tan are also at high risk if they do not protect their skin. Unprotected skin, whether tanned or not, is likely to be damaged by the sun and may develop skin cancer later in life.

### Skin type

Skin cancer is seen most often in fair skinned people who have lived in Australia all their lives. It is most common in people of Celtic [Scottish, Irish and Welsh] background. However it also occurs in people whose parents migrated from Southern Europe e.g. Greece or Italy and who have themselves spent all or most of their lives in Australia. This is because the Australian sunlight is very harsh.

### Existing skin damage

Solar keratoses [sunspots] are dry, rough spots on the skin that are common in people over 40. They are not skin cancers but an indication that the skin has had enough sun exposure to develop skin cancer. People with keratoses should take particular care to protect their skin from the sun. Keratoses may progress and develop into SCCs.

They should also be examined to make sure a skin cancer is not present.

## How can you reduce your risk?

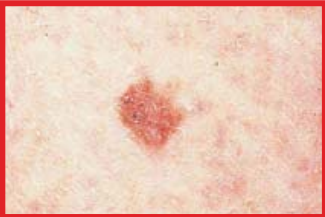











- Minimise your time in the sun between 10.00 am – 3.00 pm.
- Use shade as much as possible when outdoors.
- Wear protective clothing - a wide brimmed hat and cover-up clothing.
- Apply SPF 30+ broad spectrum sunscreen to skin which isn't covered by clothing.



# How to check for skin cancers

**Do you check for skin cancers? It could save your life.**

Carefully inspect all of your skin, looking for spots that are new or have changed colour, size or shape. See your doctor if you notice anything unusual as skin cancer can be cured if treated early.

<b>Skin cancers - see your doctor</b>			<b>Warning signs</b>	
	Melanoma	Melanoma		Solar keratoses
			<b>Warning signs</b>	
	Nodular melanoma	Nodular melanoma		Solar keratoses
			<b>Harmless spots</b>	
	Basal cell carcinoma	Basal cell carcinoma		Moles
				
	Squamous cell carcinoma	Squamous cell carcinoma	Seborrhoeic keratoses	

Call **The Cancer Council Helpline 13 11 20** for more information or visit [www.cancersa.org.au](http://www.cancersa.org.au)

## Skin spots to watch



### Melanoma

- The most deadly form of skin cancer. If untreated can spread to other parts of the body.
- Appears as a new spot or an existing spot that changes colour, size or shape.
- Has an uneven, smudgy outline and will be an irregular mix of colours.
- Can appear on skin not normally exposed to the sun.



### Nodular melanoma

- Develop quickly - early treatment is important to prevent spread to other parts of the body.
- Look different from common melanomas - they are raised from the start and even in colour.
- Many are red or pink and some are brown or black.
- They are firm to touch and dome-shaped.
- After a while they begin to bleed and crust.



### Squamous cell carcinoma

- Not as dangerous. A thickened, red scaly spot that may bleed easily, crust or ulcerate.
- Appears on skin most often exposed to the sun.
- Grows over some months.
- More likely to occur in people over 50.



### Basal cell carcinoma

- Most common and least dangerous form of skin cancer.
- Red, pale or pearly in colour, appears as a lump or dry, scaly area.
- May ulcerate or fail to completely heal.
- Grows slowly, usually on the head, neck and upper torso.



### Solar keratoses or sunspots

- A warning sign you are prone to sun damage and skin cancer.
- Red, flattish scaly dry skin that may sting if scratched.
- Appear on areas of skin most often exposed to the sun, like hands and face.
- Most common in people over 40.



### Moles

- Harmless coloured spots that range from 1 mm to 10 mm.
- Uniform in shape and even coloured. They may be raised.
- The more moles or freckles you have the higher your risk of sun damage.
- Have uneven borders and multiple colours like brown and black.
- Observe these moles carefully for any sign of change.



### Seborrhoeic keratoses

- A spot with a very discrete edge that looks like it sits on top of the skin.
- Most people have at least one or two of these spots by the age of 60.
- Colour varies from pale brown to orange or black.
- Size varies from a few millimetres to two centimetres.

## Most skin cancer can be prevented by combining the following sun protection measures

- Protect your skin when the UV radiation level is 3 and above. Find some shade.
- Slip on clothes that cover your arms and legs.
- Slap on a broad brimmed hat or one that covers your face, neck and ears.
- Slop on broad spectrum SPF 30+ sunscreen. Remember to reapply every 2 hours.
- Protect your eyes with close fitting sunglasses.
- Avoid getting a suntan, using a solarium or getting sunburnt.

And remember to check your skin regularly. If you do notice any new or unusual spots or discover a spot that changes shape, colour or size, see your doctor immediately.