

# What I tell my transplant patients about skin cancer and sun protection

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Skin cancer is the most common cancer in the UK, and its incidence has risen rapidly over the last 20 years.<sup>1</sup> Everyone needs to be aware of the dangers of sun exposure and the need to practice 'sun-safe' behaviour. Skin cancer, particularly malignant melanoma, is not just limited to the UK; it is a recognised health problem worldwide. However, there are more skin cancer deaths in the UK than in Australia, even though Australia has more cases of the disease. Around 2,560 people died from skin cancer in 2008 in the UK, and sun exposure is the main cause of the disease.<sup>2</sup>

Everyone is at risk of developing a skin cancer but, unfortunately, all transplant patients have an even greater risk, due to the immunosuppressive drugs that they are given to prevent the rejection of the transplanted organ. These drugs work by dampening down the immune system, but they can also increase the risk of developing a skin cancer and other, benign, tumours. In transplant patients, the risk of skin cancer increases with time, and 20 years after a transplant, more than half of all patients will have had a skin cancer.<sup>3</sup>

There are two main types of skin cancer. These are known as malignant melanoma, which is usually more serious, and non-melanoma skin cancer. Non-melanoma skin cancers are divided into two types, called basal cell carcinomas and squamous cell carcinomas; these are more common and usually easier to treat. In 2008, there were 98,800 new cases of non-melanoma skin cancer reported, but the real figure is thought to be higher, as not all cases were registered. In the same year, 11,767 cases of malignant melanoma were diagnosed in the UK, and the incidence of melanoma has gone up by more than four times since 1970. The rates of melanoma have risen faster than for any other cancer in the UK.<sup>4</sup>

There are several factors that can indicate if patients are at a higher risk of developing a skin cancer (see Box 1).<sup>3</sup> If you are a transplant patient, you need to be aware of any changes in your skin



## Box 1. Indicating factors for higher risk of skin cancer<sup>3</sup>

Patients with any of the following are at a higher risk of developing a skin cancer than others:

- Fair skin that burns easily in strong sun
- Red or fair hair
- Lots of moles or freckles
- A personal or family history of skin cancer
- Outdoor work or heavy sun exposure in the past
- Those who are immune-suppressed
- Experience of episodes of sunburn, especially as a child

and should carry out a thorough check on your skin once a month. The signs you need to look out for are any new lesions that have appeared or any lesions that have changed. These changes include any marks or lesions on your skin that are growing, bleeding or changing in appearance, or ones that never heal completely. If you have any moles, it is a good idea to take a close-up digital photograph of them, so that you can monitor the moles for change by comparing them with the photograph. If you do note any changes to your moles, the digital image will provide evidence that you can take to your nurse or doctor.

## Precancerous lesions

Frequently, people develop lesions called actinic keratoses (AKs) (also known as solar keratoses),



which can develop into skin cancer. AKs are usually pink or red spots with a rough surface; they generally appear on sun-exposed sites, with the head, backs of hands and forearms being the areas most often affected. AKs are easy to feel due to their roughness, and they can be very extensive. They generally do not become cancerous, but treatment is advisable to minimise the possibility of cancerous lesions developing. AKs can be treated with topical creams (for example, Solaraze® [diclofenac sodium; Almirall], Aldara® [imiquimod; Meda] and Actikerall® [fluorouracil and salicylic acid; Almirall]), or they can be frozen (cryotherapy). AKs often become very hard and scaly; you should apply moisturisers (emollients) to affected areas to keep the skin soft and supple.

Another skin condition that people can develop is Bowen's disease. This can occur on any sun-exposed site, but characteristically occurs on the lower legs. Bowen's disease presents as a fixed, red, scaly, raised area of skin (called a plaque), which looks like eczema or psoriasis. Unlike these conditions, however, it does not respond to treatment with topical steroids and gradually expands in size over several months. Bowen's disease rarely changes to an invasive squamous cell carcinoma, but if it is left untreated over many years it has the potential to do so. The treatment options for Bowen's disease are surgery, curettage and cautery (the skin is scraped with a tool called a curette and then bleeding is prevented by applying very high heat to the area), photodynamic therapy (treatment with intense light), and topical agents such as Efudix® [fluorouracil; Meda] and Aldara.

### Non-melanoma skin cancers

Basal cell carcinomas are the most common non-melanoma skin cancer and generally arise in sun-damaged skin, but can occur in burn scars and skin damaged by radiation. They are usually painless and grow slowly, and rarely spread to other parts of the body (metastasis). They usually start as a small round or flattened lump. The lump may be red, pale or pearly in colour. It sometimes appears as a scaly eczema-like patch on the skin, or as a sore that may bleed and crust but will not heal. Basal cell carcinomas are most frequently seen on the face and scalp – particularly on the eyelid, behind the ear and on the inner corner of the eye, near the nose – but can develop anywhere on the body.

Squamous cell carcinoma is more serious than basal cell carcinoma, as it has the potential to

spread to the lymph nodes if it is left untreated. Squamous cell carcinomas frequently appear on sun-exposed areas of the body, such as the face, neck, lips and ears, and on the hands, shoulders and limbs. They can, however, occur in non-exposed sites, such as the perineum or vulva. Squamous cell carcinomas appear as persistent red, scaly spots, lumps, sores or ulcers, which may bleed easily and can be painful. The lesion might be crusty, scaly, plaque-like or nodule-like. Lesions can also have a hard, horny cap and generally have a history of appearing within a couple of months. The signs to watch out for with non-melanoma skin cancers are:

- A small lump that may be smooth or waxy
- A new growth or sore that will not heal
- A spot, or a mole that itches or hurts
- A mole that bleeds, crusts or scabs
- A lump with a scaly or horny top.

There are topical treatments available to treat superficial basal cell carcinoma; for example, Efudix and Aldara. The topical treatments are easy to apply and work very effectively, but can make the areas being treated very red and sore. These symptoms will subside once treatment is completed. Treatments for more extensive carcinomas include photodynamic therapy, radiotherapy and surgery – which may be in the form of excision (cutting out), Moh's surgery (a microsurgery technique that allows complete removal), curette or cautery. The treatment choice depends upon the size, site and number of lesions. Long-term follow-up and self-examination, to look for any recurrence or the development of new lesions, are important.

### Malignant melanoma

Malignant melanoma is the most serious type of skin cancer. It is a cancer that usually starts in normal-looking skin or where a mole has developed. Melanoma affects adults of all ages and is one of few cancers to affect young adults. It is the third most common cancer among 15–39-year-olds, with more women than men developing melanoma. It is far better to prevent melanoma than to treat it once it has occurred. If melanoma is caught early it can be treated successfully. Early detection is extremely important as the earlier the diagnosis, the better the prognosis and the less likely it is that the cancer will have spread elsewhere in the body.<sup>5</sup> Patients should check their moles every month, watching to see if they grow or change. They should use the ABCDE checklist (see Box 2) to note any changes in their moles.<sup>6</sup>



### Box 2. Changes in moles to look out for

Changes in moles to look out for are known by the ABCDE rule. If any of the following changes are noticed the advice of a doctor should be sought immediately:

- Asymmetry – the two halves of the mole do not look the same
- Border – the edges of the mole are irregular, blurred or jagged
- Colour – the colour of the mole is uneven, with different shades of black, brown and pink
- Diameter – the mole is more than 6 mm in diameter (the size of a pencil eraser)
- Expert – if in doubt, check it out! See a GP or doctor who will refer you to see a dermatologist if there are any concerns about your mole

Generally, everyone's moles look very similar; they are even in size, shape and colour. It is the mole that is different from the others, or a new mole that grows, that it is important to keep a regular check on. If a mole has changed, go to your GP immediately – if in doubt, get it checked out! It is never a waste of the GP's time, as if they think your mole is fine they will have a record of what it looked like at that time (size and shape) and perhaps a photograph for your records in case there are any problems in the future. If, however, there is any reason for concern, a direct referral to the local dermatology department can be arranged under the two-week urgent referral system, to get a definitive diagnosis.

At the dermatology department, your mole will be examined with a special magnifying instrument called a dermatoscope. If there are any suspicions about the mole being malignant it will be excised under local anaesthetic with a small margin of skin, following which the mole will be sent off to the pathology laboratory to gain a diagnosis. Complete surgical excision of the primary cutaneous lesion (that is, the mole) is always first-line management.

It generally takes two to three weeks for histological examination (study of small sections of the mole using a microscope) and staging (determining its progression). The staging is determined by the thickness of the melanoma (using what is called the Breslow thickness scale), and this can be measured using a microscope. The Breslow thickness scale is used to decide upon the most appropriate treatment and can give an idea of whether the melanoma may spread or recur in the future. If your mole is found to be a malignant

melanoma, your treatment will be further surgery (a wide local excision) to ensure that adequate margins for the melanoma are achieved. You will then be followed up in the dermatology department according to the guidelines for the treatment of melanoma.

### Sun protection

Skin cancer is linked to episodes of sunburn, and the best prevention is simply to avoid too much sun exposure. Many people think that 'sun exposure' is just when they go out to the beach sunbathing, but this term is applied to all activities that take place outdoors; for example, sport (golf, cricket, bowls), walking, shopping and gardening. It is important to remember that the winter sun (skiing holidays and so forth) can also cause sunburn and be just as damaging as the summer sun. Everyone is at risk when they are outdoors without adequate sun protection.

Everyone should know what their skin 'type' is as it can give an idea of how they need to protect themselves in the sun. Your skin type does not change; it is determined by your genes. Your skin type affects how your skin will react in the sun and how likely you are to develop skin cancer. It is categorised as Type I to Type VI. Types I and II (pale skin that rarely tans and burns easily) are at particular risk of burning rapidly and need to protect themselves with both sunscreen and clothing. Types III and IV ('Mediterranean'-type skin that burns with long exposure to the sun, but generally tans quite easily) should protect themselves in strong sunlight. Types V and VI (naturally brown/black/Asian skin that only burns with extreme exposure) generally only need to protect themselves when outdoors in the sun for a long time.<sup>7</sup>

It is important that sunscreen is applied half an hour before going out in the sun to ensure that the sunscreen is absorbed into the skin and to prevent you from burning. The best form of sun protection is covering up with clothing (long sleeves and trousers), hats and sunglasses. The more skin that is covered up by clothing, the better the protection.<sup>8</sup> There are several tips for being sun-safe.

- Protect the skin with clothing, including a hat, T-shirt and UV protective sunglasses. The clothes need to be made of material with a close weave; if you can see daylight through it then you can get burnt. Sunglasses should have the 'CE' mark (which proves they

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conform to the European Community Standard), and also satisfy British Standard BSEN1836, as well as have a UV 400 label and a statement that they offer 100% UV protection.

- Avoid walking out between 11 am and 3 pm, when the sun is at its highest, but seek shade.
- Use a high broad-spectrum sunscreen; this will protect you against the ultraviolet radiation from the sun (UVA and UVB). The sun protection factor (SPF) should be at least 30+ and it should have a 3–5 star rating. The SPF protects you against the UVB rays (burning rays) of the sun. By law in the UK, all sunscreens have to display a 'star' rating on their packaging. The star rating indicates the level of protection from the UVA rays (aging rays, causing wrinkles and sun damage); a star rating of 3–5 will give good protection. Apply the sunscreen, even on a cloudy day, to all exposed areas before going outside, as UVA and UVB rays can penetrate through the clouds and cause sunburn. Remember that no sunscreen gives 100% protection.
- Apply the sunscreen generously and reapply every two hours and after swimming.
- There is no such thing as a 'safe tan' – tanned skin is damaged skin. Babies and young children should be kept out of direct sunlight. There is a strong link between episodes of blistering or severe sunburn as a child and developing a skin cancer in later life.
- When sitting outside, seek the shade of trees, gazebos or umbrellas, and use sunscreen, too.
- We all need a certain amount of sunshine to help our bodies create vitamin D. Vitamin D is

essential for good bone health, and low levels have been linked to rickets in children. While 15 minutes a day outdoors in the sun is sufficient for the body to generate enough vitamin D, this should not be between 11 am and 3 pm, when the sun is at its strongest.

- Never use sunlamps or sunbeds.

There are several websites from which you can download or order information leaflets about skin cancer and sun awareness for free. With the number of skin cancer cases increasing every year, it is important that we educate and provide patients with the information that they require to spot any potential skin problems. The Save Our Skin campaign has an easy slogan to remember:

- Slip on a shirt – protect your skin with clothing, and don't forget to wear a hat that protects your face, neck and ears, and a pair of UV-protective sunglasses
- Seek out shade – spend time in the shade between 11 am and 3 pm. Step out of the sun before your skin has the chance to redden or burn. Keep babies and very young children out of direct sunlight
- Slap on the sunscreen – when choosing a sunscreen look for:
  - High protection factor (SPF 30 or more), to protect against UVB
  - 4–5 stars and the UVA circle logo, to protect against UVA. Apply 15–30 minutes before going out in the sun, and reapply sunscreen every two hours and straight after swimming and towel-drying ■

#### Declaration of interest

None declared.

#### References

1. [www.sunsmart.org.uk/skin-cancer-facts/about-skin-cancer/](http://www.sunsmart.org.uk/skin-cancer-facts/about-skin-cancer/) (last accessed 06/12/11)
2. <http://cancerhelp.cancerresearchuk.org/type/skin-cancer/> (last accessed 06/12/11)
3. [www.bad.org.uk/site/879/default.aspx](http://www.bad.org.uk/site/879/default.aspx) (last accessed 06/12/11)
4. [www.nice.org.uk/newsroom/pressreleases/NewGuidanceOnPreventingSkinCancer.jsp](http://www.nice.org.uk/newsroom/pressreleases/NewGuidanceOnPreventingSkinCancer.jsp) (last accessed 06/12/11)
5. British Association of Dermatologists. *Melanoma: Prevention and Risk Factors* (leaflet 1 of 7). London: BAD, 2009.
6. British Association of Dermatologists. *Melanoma: Symptom awareness and early detection* (leaflet 2 of 7). London: BAD, 2009.
7. [www.bad.org.uk/site/718/default.aspx](http://www.bad.org.uk/site/718/default.aspx) (last accessed 06/12/11)
8. [www.sunsmart.org.uk/advice-and-prevention/covering-up](http://www.sunsmart.org.uk/advice-and-prevention/covering-up) (last accessed 06/12/11)

#### Useful websites

1. [www.bad.org.uk](http://www.bad.org.uk)
2. [www.cancerhelp.org.uk](http://www.cancerhelp.org.uk)
3. [www.macmillian.org.uk](http://www.macmillian.org.uk)
4. [www.skcin.org](http://www.skcin.org)
5. [www.sunsmart.org.uk](http://www.sunsmart.org.uk)
6. [www.wessexcancer.org](http://www.wessexcancer.org)

### Key points

- **Skin cancer is the most common cancer in the UK. Transplant patients are at increased risk of skin cancer due to the immunosuppressive drugs they take.**
- **Transplant patients should carry out a thorough check of their skin once a month, and be aware of any changes.**
- **If a mole has changed, patients should visit their GP. If there is any cause for concern, a referral to the local dermatology department can be arranged.**
- **Skin cancer is linked to sunburn, and so the best prevention is simply to avoid sun exposure.**



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