

skin cancer briefsheet

Every week in the UK, more than 220 people find out they have malignant melanoma, the most serious form of skin cancer.* And every year melanoma claims over 2,000 lives. Cancer Research UK is the largest funder of skin cancer research in the UK. Through our SunSmart campaign, we also raise awareness of how people can protect themselves from skin cancer by avoiding sunburn, and highlight the early signs of the disease.

Facts and figures

- Most cases of skin cancer are caused by ultraviolet (UV) rays from the sun or sunbeds.
- There are two main types of skin cancer: melanoma is less common but generally more serious, and causes 4 in every 5 deaths from skin cancer; non-melanoma skin cancer is the most common type.
- Melanoma incidence rates in Britain have more than quadrupled since the mid-1970s, but survival rates have also improved, and are now among the highest for any cancer.
- Melanoma is one of the most frequently diagnosed cancers in young adults aged 15-34.

Types of skin cancer

Melanoma skin cancer develops in cells in the outer layers of the skin, but can spread to other parts of the body. The earlier the disease is detected, the greater the chances of successful treatment.

Non-melanoma skin cancer is the form of the disease that is easiest to treat. There are two main types: basal cell carcinoma, which is the most common, and squamous cell carcinoma, which is more serious as it can spread to other parts of the body if left untreated.

Vitamin D

Sunlight is the main source of vitamin D, which is required to build and maintain strong bones. But enjoying the sun safely, while taking care not to burn, can help to provide the benefits of vitamin D without unduly raising the risk of skin cancer. The length of time in the sun needed to make enough vitamin D varies from person to person. It is typically short and less than the time it takes for skin to redden or burn. When it comes to sun exposure, little and often is best.

Our impact

- We issued our first warning on the link between sun exposure and skin cancer back in 1935, and we have continued to promote awareness ever since.
- We successfully lobbied MPs to pass a new law to restrict the use of sunbeds to over 18s in England and Wales - this came into force in April 2011.
- Our scientists helped discover that people who inherit a rare fault in the CDKN2A gene are at greater risk of melanoma. This means that those who carry the fault can be offered tailored advice and monitoring for early changes that could lead to cancer.
- Our researchers revealed that the BRAF gene is faulty in more than half of all melanomas. Thanks to this work, several drugs that target BRAF are now showing promise in clinical trials.

Justine's story

'These days I leave nothing to chance. If a mole, blemish or sore doesn't seem quite right I'll go to my GP. I wish I'd done that when I was younger.'



Justine from Liverpool was diagnosed with a melanoma in 2006. She regularly used sunbeds from the age of 15 and admits she rarely used sunscreen on beach holidays. In 2004 she noticed a mole on her chest but didn't get it checked for a further 18 months. When she did her GP immediately referred her to a specialist and the mole was diagnosed as a melanoma. Justine had surgery to remove the mole and is now back to full health. She is a passionate supporter of Cancer Research UK's Sunsmart campaign.

What could affect your risk?

Age

Like most cancers, skin cancer risk increases with age. But the number of melanoma cases diagnosed in young people is disproportionately high.

The sun

Excessive exposure to the sun is the main cause of skin cancer. The UV rays that come from the sun penetrate skin cells, causing sunburn, skin ageing and DNA damage. It is this damage that can cause skin cancer to develop.

Sunburn

A history of sunburn doubles the risk of melanoma. Sunburn is a sign of DNA damage and the skin's reaction to being over-exposed to UV rays. While the colour fades, the damage can remain and, over time, can lead to skin cancer.

Sunbeds

Like the sun, sunbeds give out harmful UV rays that damage DNA and cause skin cancer. In some cases, the UV rays from sunbeds can be 10-15 times higher than those of the midday sun.

Skin type

People who are fair-skinned, especially with fair or red hair and lots of moles or freckles, are at greater risk of developing skin cancer.

Family history

A person's risk is higher if a close relative has been diagnosed with skin cancer. People who've had skin cancer before are also more likely to develop it in the future.

Together we will beat cancer

April 2011

*latest available figures

Our research into skin cancer

We spent over £13 million on skin cancer research last year – here are just a few examples of our life-saving work:

Understanding skin cancer

Learning more about how skin cancer develops helps researchers design new ways to prevent, detect and treat the disease.

Professor Richard Marais in London researches how cells communicate with one another and how faults in these messages cause melanoma. His team's work on the BRAF gene led to new experimental treatments. He's now building on this work by looking at genes that work in tandem with BRAF to find new ways to treat melanoma.

Prevention and detection

Up to half of all cancers could be prevented by changes to lifestyle. We're carrying out crucial studies looking at the specific links between lifestyle and health. **Professor Tim Bishop** in Leeds is unravelling how particular combinations of genes and lifestyle influence a person's risk of developing skin cancer. His team have already identified people who are at increased risk of melanoma – such knowledge helps doctors to give personalised advice about skin cancer prevention.

Improving treatment

Better treatments for cancer with fewer side effects are vital for us to beat cancer. Our scientists are among the best in the world at developing new ways to treat the disease. One emerging approach is to kill tumours by restricting their blood supply. **Dr Pippa Corrie** in Cambridge is leading a national clinical trial to see whether these so-called 'anti-angiogenesis' drugs can help to prevent melanoma coming back after surgery.

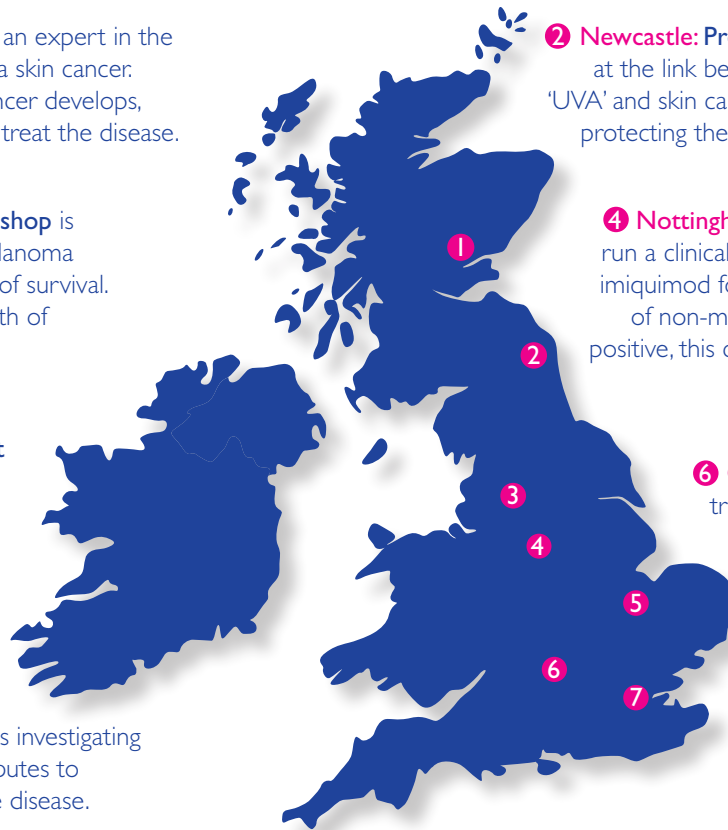
Other research highlights from across the UK

1 Dundee: **Professor Irene Leigh** is an expert in the biology and causes of non-melanoma skin cancer. Her work is uncovering how this cancer develops, leading to new ways to prevent and treat the disease.

3 Leeds: **Professor Julia Newton-Bishop** is running a large study to look for melanoma genes that affect a patient's chances of survival. Hundreds of people across the North of England are involved in her study.

5 Cambridge: **Professor Fiona Watt** is world-renowned for her research into skin stem cells, which are thought to fuel many skin cancers.

7 London: **Professor Fran Balkwill** is investigating how inflammation of the skin contributes to cancer to find new ways to treat the disease.



2 Newcastle: **Professor Mark Birch-Machin** is looking at the link between a type of ultraviolet light called 'UVA' and skin cancer. This could lead to better ways of protecting the skin such as by improving sunscreens.

4 Nottingham: **Dr Fiona Bath-Hextall** helped to run a clinical trial to test the use of a cream called imiquimod for treating basal cell carcinoma, a type of non-melanoma skin cancer. If the results are positive, this cream could avoid the scarring caused by surgery in some patients.

6 Oxford: **Professor Mark Middleton** is trying to identify 'molecular fingerprints' to predict if a patient's melanoma is likely to recur, and whether or not they will benefit from a drug called bevacizumab.

SunSmart

Since 2003, we've run SunSmart, the national skin cancer awareness campaign, funded by the Department of Health. Our messages are simple, but essential if we are to beat skin cancer:

- Don't burn – sunburn fades but damage can remain.
- Protect yourself from sunburn – cover up, relax in the shade and don't forget sunscreen, even in the UK.
- Sunbeds increase skin cancer risk.
- Keep an eye on your skin and report any changes in size, shape or colour of a mole or other patch of skin to your doctor without delay.
- Protect children in the sun – young skin is delicate and easily damaged.
- Be SunSmart – enjoy the sun safely.

www.sunsmart.org.uk

CancerHelp UK

CancerHelp UK is our award-winning patient information website. The site includes a unique searchable database of UK cancer clinical trials, written specifically for patients and relatives in plain English. If you're interested in a particular skin cancer trial, you can print off the details and take them to your doctor.

www.cancerhelp.org.uk