

## WHAT IS MELANOMA?

### What is melanoma?

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Melanoma is a form of cancer which develops from that part of the skin which produces its colour.

It grows from the cell which produces the brown pigment in our skin: the melanocyte. Often the melanoma has been a mole first, sometimes it grows from a single melanocyte, in what looks like normal skin.

## WHAT IS MELANOMA?

### Diagnosis

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The diagnosis of melanoma is made by a specialist (usually a dermatologist or plastic surgeon), by looking at the skin. The diagnosis is confirmed, after removal, by the pathologist. The melanoma is usually removed, using local anaesthetic, both to treat the problem and to obtain the tissue which can then be examined by the pathologist.

Usually this operation is a minor one, which removes the melanoma with a thin rim of normal skin.

The scar will vary in size with the melanoma but is usually an inch or so in length like the one seen in the photograph below.



## WHAT IS MELANOMA?

### What does the pathologist do?

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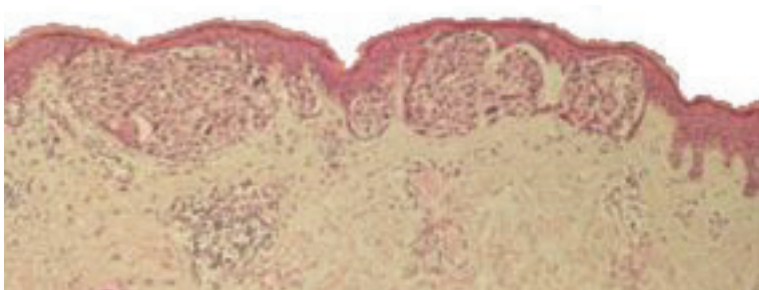
When the piece of skin is removed it is sent to a pathology lab where it is processed. This processing takes time.

It involves placing the skin in melted wax to form a so-called block. When the wax cools it hardens and the block is therefore firm enough to be handled. The block is placed in a machine, which allows a skilled technician to slice the tissue thinly and place the tissue (called a section) on glass slides. Stain is then added to the slides so that the nature (type) of the tissue becomes clear to the pathologist. The pathologist is a doctor who then looks at the slide, and interprets the pattern he or she sees and makes the diagnosis. All of this usually takes at least a week.

Sometimes the pathologist needs more information and may request more sections to be cut or new stains to be added. Sometimes he or she might send the slides to another pathologist to seek a second opinion when the process may even take several weeks. This can be frustrating for the patient, but it is always better to take time and get the answer right.

Sometimes, the pathologist, even after discussion with other pathologists, cannot make a definite (clear-cut) diagnosis.

In such cases doctors tend to treat cautiously: that is, to treat the patient as if they have a melanoma, while being optimistic about the future.



Histology photo (this is the appearance of the skin as seen by the pathologist when reporting a slide).



## WHAT IS MELANOMA?

### What happens when the diagnosis is made?

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Once your doctor has received the written report he or she will discuss the results with you.

The main issues are:

Is it a melanoma?

If it is a melanoma, what type is it?

There are three main types:

Melanoma In Situ

Radial Growth Phase Melanoma

Vertical Growth Phase Melanoma

## WHAT IS MELANOMA?

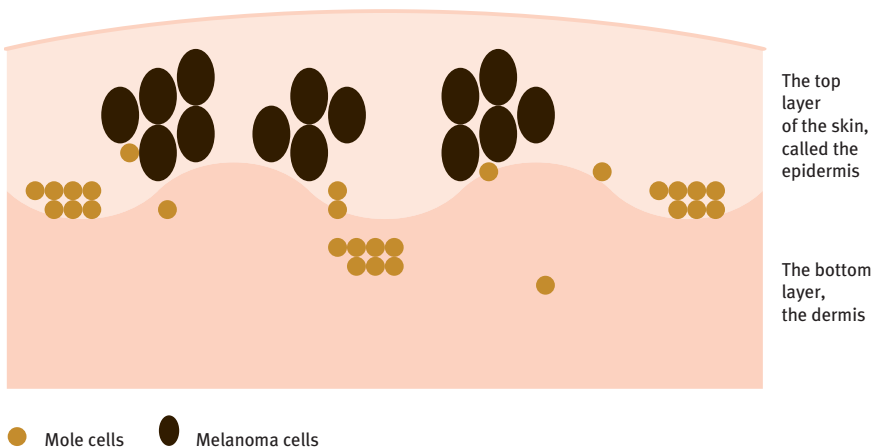
### Melanoma in situ

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This is a melanoma that is at a very early stage of development. The cancer cells are entirely in the top layer of the skin (the epidermis).

This type of melanoma is entirely curable and should never come back.

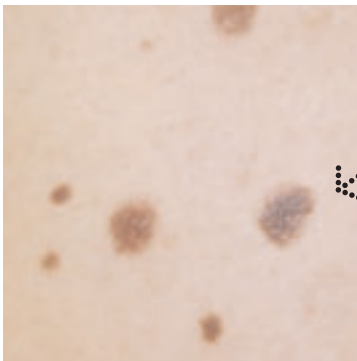
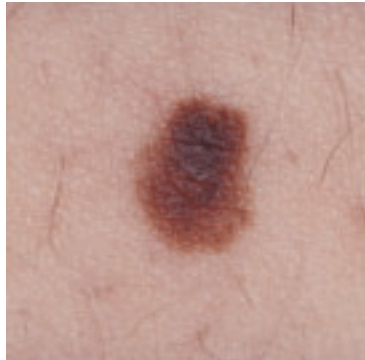
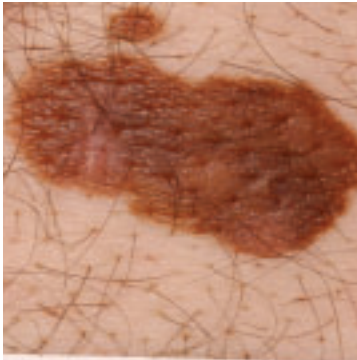
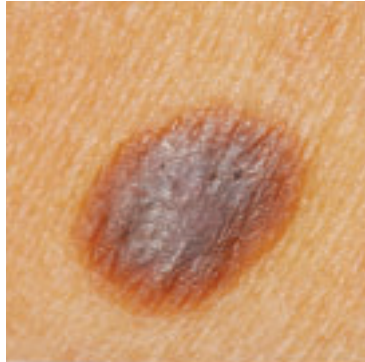
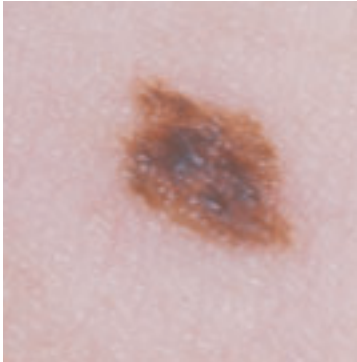
The diagram shows the appearance of an in situ melanoma: the cancer cells are shown in black.



## WHAT IS MELANOMA?

### Examples of melanoma in situ

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Early melanoma surrounded by moles of varying sizes.

## WHAT IS MELANOMA?

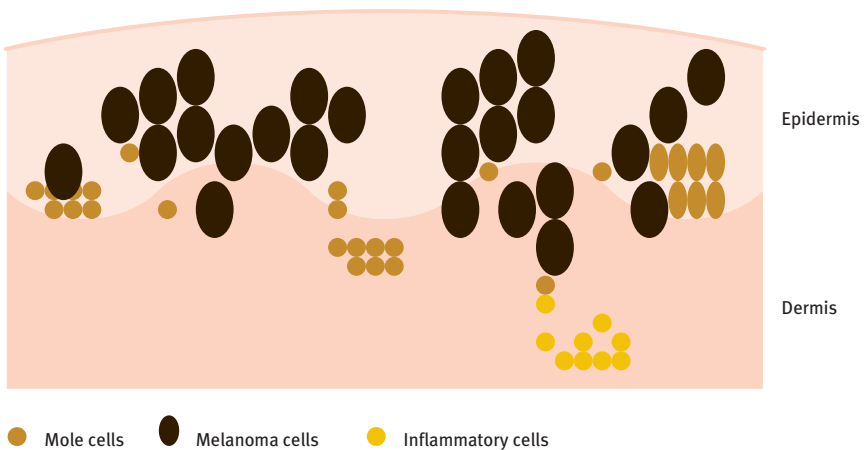
### Radial growth phase melanoma

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This is a melanoma that has started to grow but still mainly sideways in the skin rather than downwards into deeper layers. The most common type of melanoma is known as a superficial spreading melanoma, and early superficial spreading melanomas are in radial growth phase. These melanomas typically have an irregular shape and a variable or mixed colour.

The diagram below shows the appearance of a radial growth phase melanoma. The cancer cells are shown in black.

People with this type of melanoma should be cured by surgery. The melanoma is unlikely to come back after it has been removed.

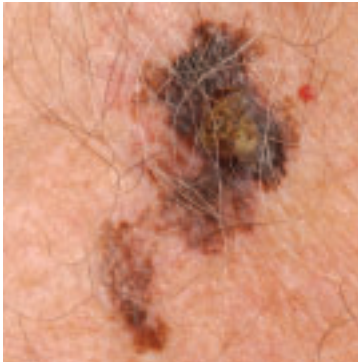
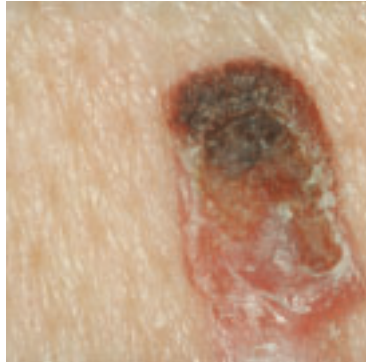
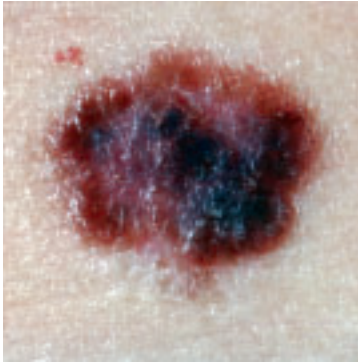




## WHAT IS MELANOMA?

### Examples of radial growth phase melanomas

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## WHAT IS MELANOMA?

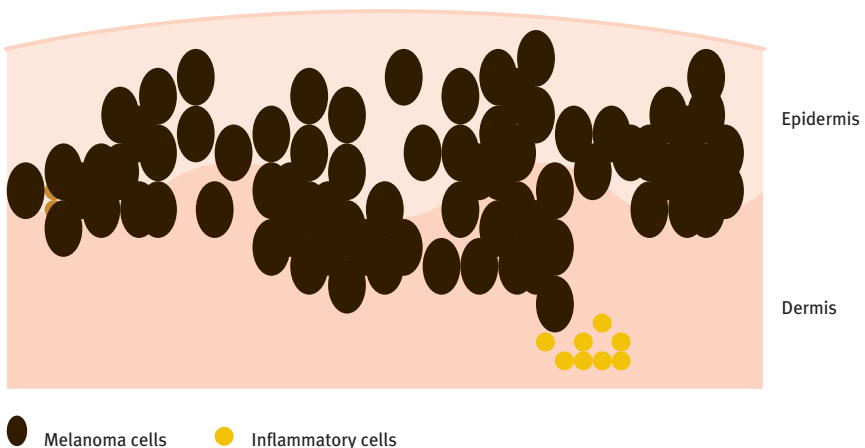
### Vertical growth phase melanoma

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This is a melanoma that has started to grow downwards into the skin. Again the diagram below shows the cancer cells in black. This is a potentially more serious type of melanoma.

The likelihood of it coming back or having spread to other parts of the body is variable and depends how deeply within the skin it has grown.

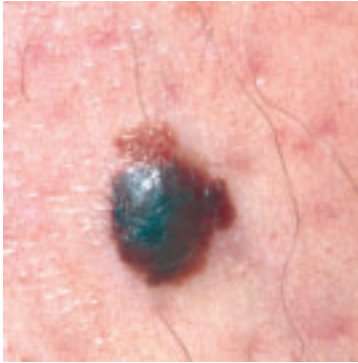
This depth is known as the Breslow thickness. Vertical growth phase melanomas may develop from superficial spreading melanomas. They may also grow vertically from the beginning when they are called nodular melanomas.



## WHAT IS MELANOMA?

### Examples of vertical growth phase melanomas

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## WHAT IS MELANOMA?

### Is melanoma serious?

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Melanoma can be serious if it spreads from the skin to other organs.

However, the majority of patients never have any further recurrence of their disease.

It is possible to estimate the risk of the melanoma coming back, although of course it is only ever an estimate.

It is a good idea to think about how much detail you want before you talk to your doctor about the risk of melanoma coming back.

### Dealing with the details

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Dealing with the details of treatment at diagnosis can be emotionally trying.

It may be difficult to take everything in that the doctor tells you during the consultation. This leaflet is designed to add to the information that the doctor gives you, but your own doctor and their team remain the best source of information for you.

If you are not clear about anything during your treatment, then ask.

You may want to write down a list of questions to take with you to your appointments.

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### Do I need further surgery?

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After removal of a melanoma the doctor will discuss with you how much skin needs to be removed.

It is true to say that this remains a controversial issue but there is some agreement or consensus around the world.

For melanoma in situ it is thought unnecessary to remove a lot of normal skin from around the melanoma. Normally a few millimetres is sufficient and usually no further surgery is needed.

For all other melanomas it is usual to take between 1 and 2 cm of normal skin from around the melanoma.

Occasionally 3 cm margins will be advised. The reason for this further surgery is to make sure that all the cancer cells have been removed. The doctor will discuss with you the pros and cons of this and the particular considerations of the site of your melanoma. For example it is easy to take an extra 2cm of “spare skin” from the tummy in most of us, but it would be impossible on the face.

The final decision about the extent of further surgery should therefore be made as a result of a discussion between you and your surgeon, considering safety and the cosmetic result.

If a small further operation is needed this is often performed by the dermatologist. If a larger operation is required, then a plastic surgeon is usually asked to do it.

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### What will my scar look like?

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This will depend upon several things:

- Where on the body the wound is. Lumpy scars called “keloids” may result from operations. They occur most commonly on the upper arms, the lower back and over the breast bone. The scar feels hard and itchy at first but these scars fade and soften with time.
- Amount of spare skin available to cover the wound and therefore whether a skin graft is needed.
- How much normal skin needs to be removed from around the melanoma.
- Individual healing, as some people heal better than others.
- Whether there are any complications such as infections.



## WHAT IS MELANOMA?

### What is a skin graft?

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When the removal of a melanoma leaves a gap too big to fill with existing skin, a skin graft will be needed. This operation is usually, but not always, carried out using a general anaesthetic (when you are asleep).

Most skin grafts are called split skin grafts. A special knife is used to take off the top layer of skin from another area of the body (often the thigh): this is known as the donor site.

This knife is a bit like a Dutch cheese knife, which slices off a thin sheet of skin, which is composed mainly of the epidermis (the top scaly layer of the skin). This is the graft, and it is placed carefully over the gap and is stitched to the edge.

The donor site and the grafted site will then both be firmly bandaged. The purpose of the bandage is to keep the grafted skin in position so that it will settle down and start to grow. Sometimes if the grafted site is near a joint then the surgeon may place the limb in plaster to prevent movement.

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### Possible complications of skin grafts

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Infection in the wound or breakdown of the graft may occur occasionally and when this happens then the surgical result may be poorer.

Wounds usually look worse soon after the surgery than they do later. Redness fades and in time the skin takes on a more normal appearance.

Don't panic if your wound looks awful to you when you first see it. It will get better.

The operation often leaves a depression or dint in the skin so that the shape of the body is changed and many patients find this difficult to cope with. However, this usually fills in a good deal with time, and most patients feel content after 6 months or so. Usually however the scar continues to get better for years.



A skin graft 1 week after surgery



A different graft 6 months after surgery



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### The donor site

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The bandages will be taken off after 7 days or so.

The donor site will look and heal up like a graze. It often feels more sore, and for longer, than the grafted site.

Both photographs below show healed donor sites.



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### Flaps

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Sometimes it is possible to fill the gap using something called a “flap”.

This means moving a piece of skin around on a “stalk” to fill the gap. This technique is very valuable because the normal body shape is often retained.

This photograph shows the scar resulting from a flap, six months after surgery. The scar will become less red with time. The scar is long but the shape of the back is normal.

