Introduction
This leaflet has been written to help you understand more about malignant melanoma. It tells you what they are, what causes them, what can be done about them and where you can find out more.

What is malignant melanoma?
It is a type of skin cancer that normally develops on an existing mole or appears as a new one.

It begins in a type of cell in the skin called a melanocyte. These cells are found in the lower part of the epidermis, which is the top layer of the skin. They produce melanin, the natural pigment that gives skin its colour. When skin is exposed to the sun, these melanocytes produce more pigmentation which causes the skin to tan.
What causes malignant melanoma (MM)?

Melanocytes are normal cells found in the skin and other parts of the body. MM occurs when melanocytes become malignant (malignant cells are those that can grow out of control and spread).

The cause for this is not fully known. However, there is strong evidence that ultraviolet rays from the sun and sunbeds damage the skin and can cause skin cancers including MM. Five episodes of sunburn will double the risk of MM. A family history of MM, having more than 150 moles and a history of changing moles also increases the risk of MM.

Where is MM most often found?

It can be found on any part of the skin surface but it is mostly found on:

- the legs in women
- the trunk, especially the back, in men

MM is rarely found in other parts of the body such as the eye, mouth, under nails or internally but it can occur.

What are the symptoms of MM?

A major sign of MM is a mole that changes in size, shape, colour or distribution of colour over a short period of time (four to six weeks). Other signs may include moles that are inflamed, red or bleed. Itching is usually not a sign of a skin cancer.

What happens if I need treatment?

All skin areas suspected to be MM are treated with surgery. This involves removing all of the suspicious mole together with an area of normal-looking skin around it. This is called an excision or biopsy. The tissue removed will be examined using a microscope to check if it is definitely an MM. Depending on the results of this, you may need to have more surgery.

What are the benefits of this treatment?

When the surgery is performed, it is hoped that the melanoma will be removed and there is a reduced risk of the melanoma spreading to other parts of the body.
What are the risks of the surgery?
As with any surgery, there are some risks. It is important that we tell you about these so that you can decide whether to have the surgery.

The risks are:

**General anaesthetic**
If you have a general anaesthetic, it can cause serious problems such as an allergic reaction but these are very rare. If you have any worries about this, you can discuss them at your meeting before your operation (health assessment) or with the anaesthetist before your operation.

**A scar**
You will have a scar that usually takes a few months to settle down. Even after this time it may remain thick and red. If you have surgery in certain areas such as your chest, shoulder or back, it is more likely that the scar will be thicker.

**Bleeding**
This can happen a few hours after surgery. Usually it is only slight and will stop if you press a clean dressing over it for a couple of minutes. If the bleeding does not stop or becomes heavy, please either contact us on 01384 456111 ext. 3088, visit your GP or in an emergency, go to your nearest Emergency Department (A&E).

**Infection**
This may happen a few days after surgery or after you have your stitches removed. If you experience a fever (high temperature), bad pain or a smell from your wound, contact your GP as you may need some antibiotics.

**Breakdown of the wound**
This is quite rare. It is when the wound may partly or completely split open at the time your stitches are removed, or soon after this.

Depending on the size of your wound, this may be left to heal on its own or it may need to be stitched back together.
Pain
You may experience some pain or soreness after your surgery. If this happens, please take painkillers such as paracetamol (always read the label; do not exceed the recommended dose). If you have very bad pain, please contact your GP.

What happens if MM is confirmed?
The excision or biopsy will confirm if you have an MM and how thick it is. Your consultant needs to know this in order to plan any further treatment. These plans are based on how deep and wide the MM has grown. The thinner the MM, the better the chance is of a complete cure.

For patients who have a thin MM, you will not need any more treatment or investigations. However, you will need to keep an eye on your body to check for any skin changes in both the treated area and other places where MM may develop.

Those who have a thicker MM will need to have more treatment.

If I need more treatment, what might this be?
You may need to have a wider excision. This means that your surgeon will need to remove more skin and tissue. This is to reduce the risk of the MM coming back on or under the skin where it first appeared. The amount of skin removed will depend on the thickness of the MM. You may need to have a skin graft or skin flap.

In some cases, the lymph nodes nearest to the MM may need to be taken out to test them. A small operation is used to do this.

Remember, your consultant will discuss the treatment plan with you. If you are unsure or have any questions, please ask the consultant or any member of the nursing team who will be pleased to help you. Do not feel that you have to fully understand everything at once. You can ask us at any time for more information and explanations of things that do not seem clear.
If I need more treatment, will I have to stay in hospital?
This will depend on the surgery. Some skin grafts can be carried out using a local anaesthetic while you are awake and you only need to be in hospital for the day. However, if you need more complicated surgery, you may need to stay in hospital for a few days afterwards.

Can MM spread?
Yes, especially if it is not treated.

Where can it spread to?
If it is not removed early, when it is still thin, the cancer cells may grow down from the skin into healthy tissue. If MM becomes thick and deep, the disease can spread to other parts of the body. Often the first place to find a spread is the lymph glands.

Where are the lymph glands?
They are:
- In front and behind the ears
- Under the angle of the jaw
- At the side and under the chin
- At the front, back and side of the neck
- In the armpits
- In front and the back of the elbow
- In the groin (inner thighs)
- At the back of the neck and the knees

Will I need any more tests after surgery?
If your consultant suspects that your MM has returned, or has spread to the lymph glands or other parts of your body, you will need to have more tests.

The tests are carried out to see if the MM has spread and if so, how and where it has spread. Sometimes tests may also be carried out to see how you are responding to treatment.
What tests may be used?
These may include:

- **Blood tests** to check your general health.

- **Fine needle aspiration (FNA)** – this is used to take a sample of cells from a suspicious lump. These will then be analysed using a microscope.

- **CT scan (sometimes called a CAT scan)** to build up a picture of the inside of your body. It can show the size and position of any spread of MM cells that may not be seen outside the body.

- **Positron emission tomography (PET) scan** to show how the body tissues are working, as well as what they look like. This scan shows whether the tissues affected still have active cancer or not.

- **Sentinal lymph node biopsy (SLNB)** is a small operation to remove the first lymph node that drains the melanoma site. This is usually carried out at the same time as a procedure called a wide local excision. This is where the consultant removes some skin and tissue around the site of the melanoma. Whether you need this will depend on the thickness of your melanoma.

When we have the results of these tests, you will need to come and see your consultant who will explain the results, check any wounds and discuss what happens next. You will also be given information on how to look after yourself and self-examination.

What will happen if my MM spreads?
If the MM spreads to other parts of the body and it can be removed by surgery, this will be suggested to you. If there is no suitable surgical treatment, you will be referred to an oncologist for either chemotherapy and or radiotherapy. An oncologist specialises in non-surgical cancer treatment. Modern chemotherapy is very much more effective for MM than it used to be.
What alternative treatments are there?
The alternative treatment is not to have surgery. However, in this case, it is very likely that the melanoma will continue to grow and may spread to other parts of the body. This may eventually be fatal.

What happens when my treatment is finished?
You will need to see your consultant for check-ups. How often you need to see your consultant will depend on your treatment and how thick the MM was. You will be given a plan of your follow-up visits.

Can I find out more?
You can find out more from the following organisations:

**Macmillan Cancer Support**
0808 808 00 00
Weblink: [http://www.macmillan.org.uk/Cancerinformation/Cancertypes/Melanoma/Melanoma.aspx](http://www.macmillan.org.uk/Cancerinformation/Cancertypes/Melanoma/Melanoma.aspx)

**Cancer Research UK**
0300 123 1022

**Lymphoedema Support Network**
0207 351 4480
If you have any questions, or if there is anything you do not understand about this leaflet, please contact:

Skin Oncology Team on 01384 456111 ext. 3088 (9am to 5pm, Monday to Friday)

Russells Hall Hospital switchboard number: 01384 456111

This leaflet can be downloaded or printed from:
http://dudleygroup.nhs.uk/services-and-wards/oncology/

If you have any feedback on this patient information leaflet, please email dgft.patient.information@nhs.net

This leaflet can be made available in large print, audio version and in other languages, please call 0800 073 0510.

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