

Skin cancer (melanoma)

Information for the public

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About this information

NICE guidelines provide advice on the care and support that should be offered to people who use health and care services.

This information explains the advice about skin cancer (melanoma) that is set out in NICE guideline NG14.

Does this information apply to me?

Yes, if you or someone you care for has, or may have, a type of skin cancer called melanoma.

Skin cancer (melanoma)

Skin cancer is divided into 2 main types, called melanoma and non-melanoma. Melanoma is the more serious type. Although melanoma is less common than the non-melanoma skin cancers, the number of people who develop it is rising every year.

Melanoma develops when cells in the skin are damaged, often by exposure to the sun. This damage can cause the skin cells to multiply very quickly and form tumours, which appear as lesions on the skin. These lesions often look like moles, or develop from existing moles. Sometimes they look like patches or lumps on the skin. They are usually black or brown although they can be other colours as well, such as red, grey or white. The first sign of melanoma is usually a new mole or changes in the appearance of an existing mole.

People with pale skin are the most likely to develop melanoma, especially if they have skin that already has many moles or that burns easily in the sun.

Melanoma can develop anywhere on the body, although the most common places are the back, legs, arms and face. It can spread from the skin to other parts of the body. However, if it's found early enough, it can be cured before it spreads.

Your care team

A range of professionals who specialise in different areas of treatment or support may be involved in your care. These could include GPs, dermatologists (doctors who specialise in skin problems), clinical nurse specialists, oncologists (doctors who treat cancer with drugs or radiotherapy), pathologists (doctors who examine tissue samples), radiologists (doctors who carry out and examine scans of the body), plastic surgeons (doctors who repair or rebuild missing or damaged areas of tissue or skin) and maxillofacial surgeons (plastic surgeons who specialise in the jaws and face). These professionals often work together in a team called a specialist skin cancer multidisciplinary team (or MDT for short).

Working with you

Your care team should talk with you about melanoma. They should explain any tests, treatments or support you should be offered so that you can decide together what is best for you. Your family or carer can be involved in helping to make decisions, but only if you agree. If you are a child or young person, your parent or carer may be involved in helping to make decisions, depending on your age. There are questions throughout this information that you can use to help you talk with your care team.

You may also like to read NICE's information for the public on [patient experience in adult NHS services](#). This sets out what adults should be able to expect when they use the NHS. We also have more information on the NICE website about [using health and social care services](#).

Information and support

Your care team should explain to you what melanoma is, how it's diagnosed, what the different stages of melanoma are, and the treatments that are available (see [other NICE guidance](#) for details of our guidance on improving outcomes for people with skin tumours including melanoma). They should also:

- Give you information that is tailored to your own needs.
- Ask you what other types of information and support would be helpful to you, for example if you want to know whether your relatives could develop melanoma and how they might reduce their risk.
- Tell you about the support that's available to help with any problems you might have because of your melanoma, such as physical side effects from treatment, anxiety and worry about the melanoma, or practical problems with work, school or finances. They should also give you this information in written form, such as a leaflet, that you can keep.
- Provide a nurse called a skin cancer clinical nurse specialist to help with any questions or concerns you have.
- Tell you how you can contact a member of your care team quickly and easily, and give you this information in a written form that you can keep.
- Invite you to bring a companion to your appointments if you wish.
- Explain how you can protect your skin from sun damage while making sure you get enough vitamin D.

Questions you might like to ask your care team

About melanoma

- Can you recommend any websites or reading materials about melanoma?
- Are there any cancer support organisations in my local area?
- Can you provide information for my family or carers?

About tests and treatment

- How will I be involved in making decisions about my tests and treatment?
- Who will I be able to talk to about my tests and treatment?
- Is there someone in my care team who can help me to make decisions and choices?

- Can I have support with decision-making from my family, carer or a close friend?
- Will my GP be involved? If so, what will they do?

For family members or carers

- What can I/we do to help and support the person with melanoma?

Some treatments or care described here may not be suitable for you. If you think that your treatment does not match this advice, talk to your care team.

Stages of melanoma

Melanoma is divided into 5 main stages, which are numbered 0, 1, 2, 3 and 4. Doctors often write the stage number in Roman numerals – 0, I, II, III and IV.

Stages 1, 2 and 3 are then divided into smaller stages that are described using letters of the alphabet, for example stage 2A (or stage IIA). The stages are based on a number of factors including how big the melanoma is and whether or not it has spread.

The treatment you should be offered depends on the stage of melanoma you have.

Diagnosis

If you're referred to a specialist to have a lesion (a mole, patch or lump) on your skin checked, they should examine it using a magnifying tool called a dermoscope. If they don't think the lesion needs treatment straight away, but they are not entirely sure that it is harmless, they should offer to photograph it. They should keep the photograph and ask you to come back again in 3 months to check whether the lesion has changed since the photograph was taken.

If it's thought that the lesion might be melanoma, it can be removed and sent to a laboratory to be tested and measured. The results of the tests will show whether it is melanoma and will give information about what stage it is. You should be told what stage of melanoma you have.

Unusual lesions (spitzoid lesions)

If you have a lesion that is unusual (called a spitzoid lesion) and it is not certain whether it is melanoma, it should be discussed by the specialist skin cancer multidisciplinary team. If there is any doubt, the lesion should be treated as if it were melanoma.

Questions you might like to ask your care team

- If the specialist doesn't think my lesion is melanoma, will I be referred back to my GP?
- Will it help if I take pictures of the lesion too, so that I can check whether it's changing?
- When can I have the lesion removed?
- When will I find out whether it's melanoma?
- If it is melanoma will I need to have any more surgery?
- What stage of melanoma do I have? What does this mean for me?
- Will I need more tests?
- How likely is it that my melanoma has spread?
- Are my relatives likely to develop melanoma?

Tests after diagnosis

Tests for everyone with melanoma

Your vitamin D level should be measured. If it's thought that the level is low, you should be given information and advice about taking vitamin D supplements. See [other NICE guidance](#) for details of our guidance on vitamin D.

Questions you might like to ask your care team

- Should I take vitamin D supplements and why?

- Could taking vitamin D supplements do me any harm?

Tests for stage 1B or stage 2 melanoma

If your melanoma is stage 1B or stage 2, you may be offered an operation called a sentinel lymph node biopsy. In this procedure 1 or 2 of your lymph nodes are removed (see the box below for more information about lymph nodes). The lymph nodes that have been removed are sent to the laboratory to check whether there is melanoma in them.

Lymph nodes

Lymph nodes are small, bean-shaped structures that are part of the body's immune system. They are found in many parts of the body, including the armpits, neck and groin. If a melanoma has started to travel or spread through the body's immune system, it may have reached the nearby lymph nodes. For this reason doctors sometimes check these lymph nodes to work out whether the melanoma has spread.

Your care team should explain sentinel lymph node biopsy and discuss it with you. There are both possible advantages and possible disadvantages to having this operation. These are shown in the table below.

Possible advantages of having sentinel lymph node biopsy	Possible disadvantages of having sentinel lymph node biopsy
It can help to find out whether the melanoma has spread to any nearby lymph nodes, so that those lymph nodes can be removed. Sentinel lymph node biopsy is better than ultrasound scans at finding very small cancers.	It doesn't cure your melanoma, and there is no good evidence that people who have the operation live longer than those who don't.

<p>It can help to predict what might happen in the future, based on what has happened to other people. For example, in people with melanoma who've had a sentinel lymph node biopsy:</p> <ul style="list-style-type: none"> • about 7 out of 10 live for at least another 10 years if melanoma is found in their lymph nodes • about 9 out of 10 live for at least another 10 years if melanoma isn't found in their lymph nodes. 	<p>It doesn't always predict what might happen in the future. For example, about 3 out of 100 people who have no melanoma in their lymph nodes at the time of their sentinel lymph node biopsy develop cancer in their lymph nodes later on.</p>
<p>It can allow you to take part in clinical trials of new treatments for melanoma. These trials often can't accept people who haven't had a sentinel lymph node biopsy.</p>	<p>You would need to have a general anaesthetic for this operation.</p>
	<p>The operation has caused other health problems, such as swelling under the incision (the cut made to perform the operation), for between 4 and 10 out of every 100 people who have had it.</p>

NICE has also produced a [decision aid](#) (called an 'option grid') to help you discuss with your healthcare professional whether to have sentinel lymph node biopsy.

If melanoma is found in the lymph nodes, your melanoma stage will be changed to stage 3. You should be told if your melanoma stage is changed and offered scans to check whether the melanoma has spread to other parts of your body (see [tests for stage 3 melanoma](#) below). You should also be offered treatment, which is explained in [treatment for stage 3 melanoma](#).

Tests for stage 3 melanoma

CT or whole-body MRI scan

If your melanoma is stage 3, you should be offered a CT scan to check other areas of your body. A CT (short for computed tomography) scan makes a picture of part of the body using a series of

X-rays. If the cancer might have spread beyond the lymph nodes, you should also have a CT scan of your brain.

If you're aged 24 or under, you may be offered a whole-body MRI scan instead of a CT scan. A whole-body MRI (short for magnetic resonance imaging) scan makes a picture of the whole body using magnetic fields and radio waves. There is less radiation from an MRI scan than from a CT scan.

Genetic testing for stage 2C or stage 3 melanoma

If your melanoma is stage 2C or stage 3, you may be offered genetic testing of the melanoma. This is to find out whether a type of drug treatment called targeted systemic therapy might be suitable for you later on if the melanoma spreads further. For more information see [genetic testing and targeted systemic therapy](#).

Questions you might like to ask your care team

Tests for stage 0 or stage 1A melanoma

- Do I need any more tests if my melanoma is stage 0 or stage 1A?

Sentinel lymph node biopsy

- Why have you decided to offer me a sentinel lymph node biopsy?
- What does this operation involve? Where can I have it done?
- Can you give me more detailed information about sentinel lymph node biopsy? Is there any written information, like a leaflet, that I could have?
- What's likely to happen if I have the sentinel lymph node biopsy? What's likely to happen if I don't have it?
- If I decide not to have it now, can I change my mind later?
- What are the side effects? Are they permanent?

- How long will I have to wait to have a sentinel lymph node biopsy? Will I have any treatment for my melanoma while I'm waiting?
- How long does it take to get the results? What will they tell you?

Scans

- Why are you offering me a CT scan if there is less radiation from an MRI scan?
- How long will I have to wait to have a scan?
- How long does it take to get the results of a scan? What will they tell you?

Genetic testing for stage 2C or stage 3 melanoma

- Will I be able to have genetic testing of my melanoma?
- How is the genetic testing done? When will you know the result?

Treatment

If you're taking medicine for another condition when you start treatment for melanoma

You should be able to keep taking any medicines you take for other conditions, unless they're a type of medicine called an immunosuppressant (for example, a corticosteroid or methotrexate). If you're taking an immunosuppressant your doctor may suggest that you reduce the dose or stop the immunosuppressant altogether. Your doctor should discuss with you the possible advantages and disadvantages of reducing or stopping your immunosuppressant treatment.

Treatment for stage 0, stage 1 or stage 2 melanoma

Removal of tissue around the melanoma

You may be offered a second procedure to remove some of the healthy tissue around the area of the melanoma. This is to make sure that all of the cancerous cells have been removed. The amount of healthy tissue that should be removed may be at least half a centimetre if your melanoma was stage 0. If your melanoma was stage 1, this should be increased to at least 1 centimetre, and if your melanoma was stage 2, at least 2 centimetres of surrounding tissue should be removed.

Cream to treat stage 0 melanoma if the tissue can't be removed

Sometimes removal of the tissue around the melanoma would have cosmetic effects that would be unacceptable, or be potentially harmful. You may instead be offered treatment with a cream called imiquimod that you put on the skin. Imiquimod should only be offered to treat stage 0 melanoma in adults. When you finish your imiquimod treatment, you may be offered a skin biopsy (removal of some tissue for testing) to check how well the imiquimod has worked.

Imiquimod to treat melanoma

At the time of publication (July 2015), imiquimod was not licensed specifically to treat stage 0 melanoma or secondary melanomas, or to treat children and young people. Your care team should tell you this and explain what it means for you. For more information about licensing and 'off label' use of medicines visit [NHS Choices](#).

Treatment for stage 3 melanoma

Surgery for stage 3A melanoma

If your melanoma is stage 3, this means it has spread to at least 1 of the nearby lymph nodes.

If you have stage 3A melanoma, you may be offered an operation to remove the rest of the lymph nodes in that part of your body, even if these lymph nodes might not have developed melanoma. This operation is called a completion lymphadenectomy. Your doctor should explain the operation and discuss it with you. They should tell you that there are both possible advantages and possible disadvantages to having the rest of the lymph nodes removed. These are shown in the table below.

Possible advantages of having the rest of your lymph nodes removed (completion lymphadenectomy)	Possible disadvantages of having the rest of your lymph nodes removed (completion lymphadenectomy)
It's less likely that melanoma will come back in that part of your body in the future.	You might develop long-term swelling (called lymphoedema), which is more likely if the lymph nodes are in your groin than in other parts of your body.
It's safer and less complicated than waiting until melanoma develops in the rest of the lymph nodes before removing them.	Melanoma may not develop in the remaining lymph nodes, so there's a chance that you'll have had them removed unnecessarily. It's been shown that melanoma develops in the remaining lymph nodes in 1 out of every 5 people who don't have them removed.
You may be able to take part in clinical trials of new treatments after having this operation. These trials often can't accept people who haven't had these lymph nodes removed.	Any operation can cause complications.

NICE has also produced a [decision aid](#) (called an 'option grid') to help you discuss with your healthcare professional whether to have completion lymphadenectomy.

Surgery for stage 3B or 3C melanoma

If your melanoma is stage 3B or stage 3C, you should be offered an operation to remove the lymph nodes that have developed melanoma together with all the other lymph nodes in that area, in case there are small amounts of melanoma in the other lymph nodes.

Radiotherapy

Radiotherapy (a treatment that uses high-energy rays to destroy cancer cells) is sometimes used to reduce the risk of the cancer coming back after lymph nodes have been removed. You should not be offered radiotherapy if you have stage 3A melanoma because the disadvantages are likely to outweigh the advantages.

If you have stage 3B or stage 3C melanoma you should only be offered radiotherapy if it's thought that the advantages of radiotherapy for you will outweigh its disadvantages. Your care team should discuss the possible benefits and risks with you.

Treating symptoms of stage 3 melanoma

You may develop small melanomas, called secondary melanomas, on the skin or just under the skin in the same part of the body as your original melanoma. For example, if your original melanoma was in your ankle, you may develop secondary melanomas in your leg. You may be offered surgery to remove these small secondary melanomas. If surgery isn't suitable for you, you may be offered another type of treatment, which might be:

- Chemotherapy (drugs to destroy the melanoma cells) given directly into the leg or arm (a treatment known as isolated limb infusion or isolated limb perfusion).
- Radiotherapy.
- Electrochemotherapy (chemotherapy that uses electrical energy to help the chemotherapy drugs work better). See [other NICE guidance](#) for details of our guidance on electrochemotherapy.
- Laser treatment.
- Treatments that you apply to your skin, such as imiquimod. For more information see [imiquimod to treat melanoma](#).

Treatment for stage 4 melanoma

Genetic testing and targeted systemic therapy

You might have had a test to examine a sample of tissue from your melanoma to find out whether a type of treatment called targeted systemic therapy would be suitable for you (see [genetic testing for stage 2C or stage 3 melanoma](#)). The test can show whether there is a change called a mutation in the cells of your melanoma. The mutation produces a protein that causes melanoma cells to grow more quickly. Targeted systemic therapy uses drugs that can slow the growth of the melanoma by reducing production of this protein. Examples of targeted systemic therapy drugs are dabrafenib and vemurafenib. See [other NICE guidance](#) for details of our guidance on dabrafenib and vemurafenib.

Immunotherapy

Immunotherapy is a type of drug treatment that helps the body's immune system to find and destroy melanoma cells. Ipilimumab is an example of an immunotherapy that can be used to treat melanoma. For details of our guidance on ipilimumab see [other NICE guidance](#).

Chemotherapy

If targeted systemic therapy and immunotherapy are not suitable for you, you may be offered chemotherapy with a drug called dacarbazine.

Symptom relief

To relieve symptoms caused by stage 4 melanoma, such as pain or bleeding, you may be offered surgery, radiotherapy, or a treatment called radioembolisation (radiotherapy together with a treatment that blocks the blood vessels to prevent blood flow).

Questions you might like to ask your care team

About surgery to have the melanoma removed (stage 0, stage 1 or stage 2 melanoma)

- Will there be a scar where the melanoma is removed? How big will it be? Will it fade?
- Are there any options to having the melanoma removed, for example can it be treated with a cream instead?
- Will the melanoma come back again?

About surgery to have lymph nodes removed (stage 3 melanoma)

- Why have you offered me an operation to remove my lymph nodes?
- What does the operation involve?
- Can you give me more detailed information about having my lymph nodes removed? Is there any written information, like a leaflet, that I could have?
- What's likely to happen if I have the lymph nodes removed? What's likely to happen if I don't have them removed?
- If I decide not to have them removed now, can I change my mind later?

- What are the side effects of the operation? Are they permanent?
- How long will I have to wait to have the operation? Will I have any other treatment for my melanoma while I'm waiting?

About drug treatments (stage 4 melanoma)

- Will I be able to have targeted systemic therapy?
- What other drug treatments are available for my melanoma?
- How well are they likely to work? Will they stop the melanoma from spreading further?

Follow-up care after treatment

Follow-up care for everyone

After your treatment for melanoma you should be offered the follow-up care described below, as a minimum. If you have a higher than average risk of developing another melanoma (for example because there is a history of melanoma in your family or because you have many moles), you may be offered extra check-ups.

If you've had stage 0 melanoma you should be discharged after your treatment is finished.

If you've had stage 1A melanoma you may be offered between 2 and 4 check-ups during the first year after you finish treatment. You may be discharged at the end of that year.

If you've had stage 1B, stage 2 or stage 3 melanoma you may be offered follow-up care for 5 years after you finish treatment. You would have check-ups every 3 months for the first 3 years, then every 6 months for the next 2 years.

If you've had stage 2C or stage 3 melanoma you may also be offered CT or MRI scans at regular intervals for a set period of time (known as surveillance imaging). See [regular follow-up scans after stage 2C or stage 3 melanoma](#) for more information.

If you've had stage 4 melanoma you should be offered a personalised plan for your follow-up care.

At every check-up

You should have a full examination of your skin and the lymph nodes nearest to the melanoma. You and your family or carers should also be offered support with problems related to your melanoma, such as physical side effects from treatment, anxiety and worry about the melanoma or practical problems with work, school or finances.

You should be reminded about:

- how to check your skin for melanoma
- how to avoid risk factors for poor health, such as skin damage from the sun and smoking (see [other NICE guidance](#) for details of our guidance on smoking cessation)
- how to make sure you get enough vitamin D.

Regular follow-up scans after stage 2C or stage 3 melanoma

If you've had stage 2C or stage 3 melanoma you may be offered CT or MRI scans at regular intervals for a period of time. This is called surveillance imaging. You may be offered this as part of a clinical trial. Your care team should discuss the possible advantages and disadvantages of regular follow-up scans with you. These are shown in the table below.

Possible advantages of having regular follow-up scans (surveillance imaging)	Possible disadvantages of having regular follow-up scans
If the melanoma comes back (known as recurrent melanoma), it's more likely to be detected sooner. It is possible that this could lead to a better outcome by allowing treatment with drugs (such as immunotherapy drugs) to start earlier.	Although early drug treatment of recurrent melanoma might improve the outcome, there is currently no evidence to show this.
You might find it reassuring to have regular scans.	You might find that having regular scans makes you anxious.

	<p>Sometimes a scan will show an abnormality that turns out to be harmless. This can mean that you will have unnecessary tests, and will become more anxious.</p>
	<p>Regular scans can put you at risk of other problems, for example:</p> <ul style="list-style-type: none"> • They expose the body to radiation, which can increase the risk of cancer in the future. • Scans of the brain and neck increase the risk of developing cataracts. • Scans of the chest cause a very small increase in the risk of thyroid cancer.

NICE has also produced a [decision aid](#) (called an 'option grid') to help you discuss with your healthcare professional whether to have follow-up with regular CT scans.

Questions you might like to ask your care team

- Where will I have my check-ups?
- Will my GP be involved?
- How long will I have check-ups for?
- How often should I check my skin for melanoma? What signs should I look for?
- What should I do if I get signs of melanoma between check-ups?
- How likely is it that I'll get melanoma again?
- What can I do to avoid getting melanoma again?

- Do I need to keep taking vitamin D supplements?
- Do I need to avoid the sun completely from now on?
- If I decide to stop smoking, is there any support I can have?
- My melanoma was stage 2C/stage 3. Will I be offered regular follow-up scans?

Sources of advice and support

- Cancer Research UK, 0808 800 4040
www.cancerresearchuk.org/about-cancer
- Lymphoedema Support Network, 0207 351 4480
www.lymphoedema.org
- Macmillan Cancer Support, 0808 808 0000
www.macmillan.org.uk
- Melanoma Focus, 01223 324 359
www.melanomafocus.com
- Melanoma UK, 0808 171 2455
www.melanomauk.org.uk
- Skcin, 0115 981 9116
www.skcin.org

You can also go to [NHS Choices](#) for more information.

NICE is not responsible for the quality or accuracy of any information or advice provided by these organisations.

Other NICE guidance

[Vitamin D \(2014\) NICE guideline PH56](#)

[Dabrafenib for treating unresectable or metastatic BRAF V600 mutation-positive melanoma \(2014\) NICE technology appraisal guidance 321](#)

[Ipilimumab for previously untreated advanced \(unresectable or metastatic\) melanoma \(2014\) NICE technology appraisal guidance 319](#)

[Electrochemotherapy for metastases in the skin from tumours of non-skin origin and melanoma \(2013\) NICE interventional procedure guidance 446](#)

[Vemurafenib for treating locally advanced or metastatic BRAF V600 mutation-positive malignant melanoma \(2012\) NICE technology appraisal guidance 269](#)

[Ipilimumab for previously treated advanced \(unresectable or metastatic\) melanoma \(2012\) NICE technology appraisal guidance 268](#)

[Improving outcomes for people with skin tumours including melanoma \(2010\) NICE cancer service guidance CSGSTIM](#)

[Smoking cessation \(2008\) NICE guideline PH10](#)

Changes after publication

November 2015: Corrected information on other health problems in the section on possible disadvantages of sentinel lymph node biopsy.

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Accreditation

