CONDITION

Metastatic melanoma

Metastatic melanoma is melanoma that has spread from its original site to distant parts of the body.

WHAT IT IS
Melanoma that has spread to distant body areas

BODY SYSTEM
Skin, lymph nodes, and affected internal organs

MAIN SYMPTOMS
Fatigue, unexplained weight loss, pain, neurological changes

WHAT CAUSES IT
DNA changes, often linked to ultraviolet exposure

HOW IT IS DIAGNOSED
Biopsy, body scans, and tumour genetic testing

MAIN TREATMENT
Immunotherapy, targeted therapy, surgery, or radiation

CAN IT BE CURED?
Sometimes - selected people achieve lasting complete remission

IS IT AN EMERGENCY?
Sometimes - seizures, severe breathlessness, or sudden weakness

LONG-TERM OUTLOOK
Serious, but treatment may control it for years

Overview

Melanoma is a cancer that begins in melanocytes, the cells that make skin pigment. Most melanomas start in the skin, although they can also begin in the eye or in moist internal surfaces such as the mouth.

Metastatic melanoma means melanoma cells have travelled from the original tumour to a distant part of the body. This usually happens through the blood or lymphatic system. The lymphatic system is a network of vessels and glands that helps manage fluid and immune cells.

Metastatic melanoma is generally classed as stage 4 melanoma. Common places of spread include distant lymph nodes, the lungs, liver, bones, brain, and areas beneath the skin. A melanoma that has only reached nearby lymph nodes is usually stage 3 rather than metastatic melanoma.

This is a serious condition, but its treatment has changed greatly. Immunotherapy and medicines aimed at specific genetic changes can control melanoma for some people. A smaller group have a complete response that lasts for years. Results cannot be predicted with certainty for one person.

This article mainly describes melanoma that began in the skin. Melanoma of the eye, called uveal melanoma, can behave differently and may require different treatment.

Symptoms

Symptoms depend on where the melanoma has spread. Some people feel well when metastases are first found during a routine scan.

General symptoms can include ongoing tiredness, reduced appetite, unexplained weight loss, or a persistent sense of being unwell. These symptoms have many possible causes and do not, by themselves, mean that melanoma has spread.

Melanoma in or beneath the skin may cause new firm lumps, changes near the original scar, or swollen lymph nodes. Lymph nodes may feel like firm lumps in the neck, armpit, or groin.

Possible symptoms in other organs include:

A new symptom is not always caused by melanoma. However, persistent or worsening changes should be reported to your cancer team.

- Lungs: ongoing cough, breathlessness, or chest discomfort
- Liver or abdomen: abdominal pain, swelling, nausea, or yellow skin and eyes
- Bones: persistent, localised pain or a bone that breaks more easily
- Brain: new headaches, seizures, weakness, speech changes, confusion, or vision problems
- Digestive tract: abdominal pain, dark stools, bleeding, or changes in bowel habits

Causes and risk factors

Metastatic melanoma develops when melanoma cells gain changes that allow them to invade tissue, survive in the circulation, and grow elsewhere. These changes usually build up during a person's lifetime.

Ultraviolet radiation from sunlight and tanning devices is an important cause of many skin melanomas. It damages DNA inside skin cells. However, not every melanoma is related to obvious sun exposure, and melanoma can occur on areas that rarely see the sun.

Factors associated with a higher risk of skin melanoma include fair skin that burns easily, a history of severe sunburn, many or unusual moles, use of tanning devices, a weakened immune system, and a personal or family history of melanoma. People of every skin tone can develop it.

Features of the original melanoma help estimate its chance of spreading. These include how deeply it grew, whether its surface was broken or ulcerated, and whether nearby lymph nodes contained melanoma cells.

Some melanomas contain a change in a gene called BRAF . This is usually a change found only in the cancer cells, not an inherited change passed through a family. It matters because it may make targeted treatment possible.

Having metastatic melanoma is not evidence that you failed to protect your skin or notice the original cancer soon enough. Some melanomas spread despite appropriate care.

Diagnosis

A biopsy is needed to confirm melanoma. During a biopsy, a clinician removes all or part of a suspicious lump or lesion so that a pathologist can examine it under a microscope. If you have had melanoma before, comparing the new tissue with the original tumour can help show whether it is a metastasis.

Scans identify where the melanoma is and help determine its stage. These may include CT, PET-CT, or MRI scans. An MRI of the brain is often used because melanoma can spread there even before it causes symptoms.

Blood tests cannot confirm metastatic melanoma. They can show how your liver, kidneys, bone marrow, and other organs are working. A blood marker called lactate dehydrogenase, or LDH, may provide information about outlook, but many conditions can affect it.

Tumour tissue is usually tested for genetic changes that may guide treatment. Testing for a BRAF mutation is particularly important. Other tests may be considered based on where the melanoma began and which treatments are being considered.

Your team may describe the number, size, and location of metastases. They will also consider your symptoms, general health, previous treatment, and whether all visible disease could be treated locally.

Treatment and management

Treatment aims to shrink or control the melanoma, relieve symptoms, protect organ function,

and help you live as well as possible. In selected circumstances, treatment may remove or destroy all visible disease.

A multidisciplinary team usually plans care. This may include specialists in medical oncology, surgery, radiation treatment, radiology, pathology, nursing, and supportive care.

Immunotherapy helps the immune system recognise and attack melanoma cells. Checkpoint inhibitors are the main type. Treatment may use a medicine that blocks PD-1 alone or a combination that blocks more than one immune checkpoint.

Immunotherapy can produce long-lasting control, including after treatment has stopped, but it does not work for everyone. Because it activates the immune system, it can cause inflammation in healthy organs. This may affect the bowel, lungs, liver, skin, hormone glands, kidneys, heart, nerves, or other tissues. Side effects can begin during treatment or after it has ended, so new symptoms should be reported promptly.

Targeted therapy may be used when the melanoma has a suitable BRAF mutation. These medicines usually combine a BRAF inhibitor with a MEK inhibitor, blocking linked signals that cancer cells use to grow. They can sometimes shrink melanoma quickly. Side effects and the length of benefit differ between people, and the melanoma can become resistant.

Surgery may be considered if there are only one or a few metastases that can be completely removed. It may also relieve symptoms such as pressure, bleeding, or blockage.

Radiation therapy uses focused energy to damage cancer cells. It can treat selected brain metastases, painful bone disease, or other specific areas. Stereotactic radiation delivers a highly focused dose and is often considered for a limited number of brain metastases.

Chemotherapy is used less often because immunotherapy and targeted therapy are generally more effective for many people. Clinical trials may provide access to new treatments or new combinations.

Supportive and palliative care can be provided alongside cancer treatment. It helps manage pain, nausea, fatigue, sleep problems, appetite changes, emotional distress, and practical concerns. Receiving palliative care does not mean that active melanoma treatment has stopped.

Scans, examinations, and blood tests are repeated during treatment. These show whether the melanoma is shrinking, stable, or growing and help check for side effects.

Complications

Metastatic melanoma can interfere with the function of affected organs. Brain metastases

may cause swelling, seizures, weakness, or problems with speech and thinking. Bone metastases can cause pain, fractures, or pressure on the spinal cord. Disease in the lungs or around them may make breathing difficult.

Liver involvement can affect liver function and cause fluid to collect in the abdomen. Melanoma in the digestive tract may bleed or cause blockage. Cancer-related fatigue, poor appetite, weight loss, and pain can also affect independence and quality of life.

Treatment has possible complications too. Immunotherapy can cause immune-related inflammation, which may become serious if not recognised. Targeted therapy can cause fever, skin problems, tiredness, joint symptoms, and changes involving the heart, liver, or eyes. Surgery and radiation have risks related to the area treated.

Your team should explain which side effects are most relevant to your treatment and how to contact them if these occur.

Prevention

Metastatic melanoma cannot always be prevented. A melanoma may spread even when it was found and treated appropriately.

Reducing ultraviolet exposure lowers the risk of developing some skin melanomas. Helpful measures include avoiding tanning devices, seeking shade when sunlight is strong, wearing protective clothing, and using broad-spectrum sunscreen as part of sun protection. These steps cannot remove all risk.

If you have been treated for melanoma, attend the follow-up and scan appointments recommended for you. Check your skin and nearby lymph-node areas as instructed, and report new or changing lumps or lesions. Follow-up may detect a recurrence before symptoms become obvious, but it cannot guarantee that spread will be prevented.

No diet, supplement, or complementary therapy has been shown to prevent melanoma from spreading. Tell your cancer team about supplements because some can affect medicines or test results.

Living with it and what to expect

The course of metastatic melanoma is different for each person. Some melanomas respond quickly to treatment, while others shrink slowly, remain stable, or continue to grow. A treatment that initially works may become less effective later.

People who have a strong response to immunotherapy can sometimes remain well for years. Others need ongoing or repeated treatment. If one treatment stops working or causes unacceptable side effects, another medicine, local treatment, or clinical trial may be considered.

Regular scans are a long-term part of care. The timing is based on your treatment, previous results, symptoms, and the sites involved. Scan appointments can cause anxiety. Asking when and how results will be shared may make the waiting period more manageable.

Fatigue can continue even when scans are stable. Gentle activity, planned rest, nutrition support, symptom treatment, and rehabilitation may help. Work, travel, sexual health, driving, and family responsibilities may also be affected, particularly during active treatment.

Emotional responses can change over time. Fear, anger, sadness, and uncertainty are common. Cancer nurses, counsellors, social workers, support groups, and palliative care teams can help with both emotional and practical needs.

When to get medical help

Contact your cancer team promptly about any new, persistent, or worsening symptom. This is especially important during immunotherapy because early treatment of immune-related side effects may prevent them from becoming more severe.

Seek urgent same-day advice for symptoms such as:

Call emergency services for a seizure, sudden weakness on one side, new difficulty speaking, severe breathing difficulty, loss of consciousness, coughing or vomiting blood, or symptoms of spinal cord pressure such as new leg weakness with loss of bladder or bowel control.

For routine concerns, contact your usual team about manageable side effects, new skin changes, sleep or appetite problems, emotional distress, or questions about medicines and supplements. Do not wait for the next scan if a symptom is getting worse.

- New or worsening diarrhoea, especially with blood or abdominal pain
- Yellow skin or eyes, very dark urine, or severe nausea
- A spreading rash, blistering, or painful skin changes
- New breathlessness, persistent cough, or fever
- Marked weakness, dizziness, confusion, or reduced urine output
- A severe or steadily worsening headache

Common questions

Is stage 4 melanoma curable?

Sometimes. Surgery or focused treatment may remove limited metastatic disease, and some people have a lasting complete response to systemic treatment. For many others, treatment is intended to control the melanoma rather than cure it.

How fast does metastatic melanoma spread?

There is no single speed. Some melanomas change over weeks or months, while others remain stable for much longer. Scans over time provide more useful information than the original tumour alone.

Where does melanoma usually spread first?

It often reaches nearby skin or lymph nodes before distant organs, but this is not always recognised. Distant sites commonly include the lungs, liver, brain, bones, and tissue beneath the skin.

What does BRAF-positive melanoma mean?

It means the melanoma cells contain a particular change in the BRAF gene. This does not usually mean you inherited the change. It may allow treatment with medicines that block BRAF and MEK signals.

Can metastatic melanoma come back after disappearing on scans?

Yes. A complete response means no cancer can be seen on current tests, but tiny groups of cells may remain. Some complete responses last for many years, while others are followed by recurrence, so follow-up remains important.

Can I live for years with metastatic melanoma?

Some people do, especially when treatment produces lasting control. Others have melanoma that progresses despite treatment. Your response to therapy, disease sites, general health, and tumour features all help shape the outlook.

Sources

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