CONDITION

Liver metastases

Liver metastases are cancer deposits in the liver that have spread from cancer elsewhere in the body.

WHAT IT IS
Cancer deposits spread to the liver from another site

BODY SYSTEM
Digestive system

MAIN SYMPTOMS
Upper abdominal pain, appetite loss, fatigue, jaundice

WHAT CAUSES IT
Cancer cells spreading through blood or lymph

HOW IT IS DIAGNOSED
Contrast CT or MRI, sometimes biopsy

MAIN TREATMENT
Cancer medicines, surgery, or liver-directed treatment

CAN IT BE CURED?
Sometimes - when all visible cancer can be treated

IS IT AN EMERGENCY?
Sometimes - confusion, bleeding, or fever during treatment

LONG-TERM OUTLOOK
Often treatable, shaped by cancer type and extent

Overview

Liver metastases are areas of cancer that have spread to the liver from another part of the body. A single area is called a liver metastasis. They are also known as secondary liver cancer.

Liver metastases are not the same as primary liver cancer, which begins in liver cells. For example, bowel cancer that spreads to the liver is still bowel cancer. The cancer cells in the liver usually behave like the original cancer and are treated according to where they began.

The liver is a common place for cancer to spread because it receives a large blood supply. Blood coming from the bowel and several other abdominal organs passes through it.

Liver metastases matter because they can grow, affect liver function, or show that cancer has spread beyond its original site. However, their effect and treatment options differ greatly.

Some people have one or a few deposits that can be removed or destroyed. Others have more widespread cancer that is managed with medicines and symptom support.

Symptoms

Liver metastases may cause no symptoms, especially when they are small. They are often found during tests used to stage a newly diagnosed cancer or during follow-up after cancer treatment.

Possible symptoms include:

These symptoms are not specific to liver metastases. They can have many other causes. Blood tests may also show liver changes before symptoms appear.

The liver has considerable reserve, so it can continue working even when part of it is affected. Symptoms related to reduced liver function are more likely when there is extensive liver involvement, blockage of bile drainage, or another liver condition.

- Discomfort or pain in the upper right side of the abdomen
- Loss of appetite, nausea, or feeling full after a small meal
- Unplanned weight loss, tiredness, or weakness
- A swollen abdomen caused by fluid, called ascites
- Yellow skin or eyes, called jaundice
- Dark urine, pale stools, or itchy skin

Causes and risk factors

Liver metastases develop when cells break away from a cancer elsewhere in the body. The cells travel through the bloodstream or lymphatic system, settle in the liver, and begin to grow.

Cancers that commonly spread to the liver include cancers of the bowel, pancreas, stomach, breast, and lung. Melanoma and neuroendocrine tumours can also spread there. Almost any invasive cancer can potentially do so.

The main risk factor is having a cancer capable of spreading. Risk is influenced by the original cancer's type, stage, growth pattern, and response to treatment. It is not possible to predict spread from symptoms alone.

Alcohol use, fatty liver disease, and viral hepatitis can increase the risk of some primary liver cancers. They do not directly cause liver metastases. Existing liver disease may, however,

affect which cancer treatments are suitable.

Liver metastases are not contagious and cannot be passed to another person.

Diagnosis

Liver metastases may be found while investigating symptoms, staging a known cancer, or checking for recurrence after treatment.

Diagnosis usually begins with imaging. An ultrasound may identify an abnormal area, but contrast-enhanced CT or MRI provides more detail. Contrast is a substance given by mouth or injection that helps structures show more clearly on a scan.

MRI can be particularly useful for examining the number, size, and position of liver deposits. CT also checks other parts of the chest, abdomen, and pelvis. A PET-CT may be used in selected situations to look for active cancer elsewhere, but it is not needed for everyone.

Blood tests can assess liver function and general health. They may measure bilirubin, liver enzymes, blood counts, and kidney function. Tumour markers-substances linked with certain cancers-may help monitor some people, but they cannot confirm or exclude liver metastases on their own.

A biopsy may be needed when the scan findings are uncertain, the original cancer is unknown, or more information would change treatment. During a biopsy, a needle removes a small tissue sample for examination under a microscope. Imaging is usually used to guide the needle.

Sometimes a biopsy is unnecessary because the scans and history provide enough information. The decision also considers bleeding risk and whether tissue is needed for molecular testing. Molecular testing looks for changes in cancer cells that may help guide targeted treatment.

The care team also establishes whether cancer is present outside the liver. This process is called staging. Treatment planning considers the original cancer, the number and location of liver deposits, nearby blood vessels, liver health, previous treatment, and general fitness.

Treatment and management

Treatment is tailored to the cancer where it began, not simply to its location in the liver. The aim may be to remove all detectable cancer, control it for as long as possible, relieve symptoms, or combine these goals.

A multidisciplinary team usually reviews the options. This may include cancer specialists, liver

surgeons, radiologists, pathologists, and specialist nurses.

Main treatment approaches include:

More than one approach may be used. For example, cancer medicines may shrink deposits before surgery or lower the risk of recurrence afterward. A deposit that cannot initially be removed may sometimes become treatable after a good response, although this is not always possible.

Supportive care can be provided at every stage. It includes treatment for pain, nausea, poor appetite, itching, fatigue, anxiety, and abdominal fluid. Palliative care is specialist support for symptoms and quality of life; it can be given alongside cancer treatment and does not mean that treatment has stopped.

- Systemic treatment: Medicines that travel throughout the body, such as chemotherapy, targeted therapy, immunotherapy, or hormone therapy. The choice is based on the original cancer and features of its cells.
- Surgery: Removal of the affected part of the liver may be possible when all known deposits can be removed while leaving enough healthy liver. This is most established for selected people with bowel cancer, although it may be considered for some other cancers.
- Ablation: Heat, cold, or another form of energy destroys individual deposits. It is generally considered for a limited number of smaller areas.
- Radiotherapy: Highly focused radiation, including stereotactic body radiotherapy, may treat selected deposits without an operation.
- Artery-directed treatment: Tiny particles, radiation-containing beads, or chemotherapy may be delivered through the artery supplying liver tumours. These approaches are suitable only in particular circumstances.

Complications

Liver metastases can interfere with bile drainage or reduce liver function when much of the liver is affected. Possible complications include jaundice, itching, fluid in the abdomen, problems with blood clotting, and increasing tiredness or confusion.

A deposit may press on nearby structures or cause pain by stretching the outer covering of the liver. Liver surgery and local procedures also carry risks such as bleeding, infection, bile leakage, or temporary changes in liver function.

Cancer medicines can cause their own side effects. These differ by treatment and may include infection risk, bowel changes, skin problems, nerve symptoms, or tiredness. The treatment

team usually monitors blood counts, liver tests, and symptoms so that problems can be managed promptly.

Prevention

There is no reliable way to prevent liver metastases after cancer cells have acquired the ability to spread. Their development is not a personal failure and is not usually caused by something a person did after their cancer diagnosis.

Reducing the risk of some original cancers may reduce the chance of later metastases. This can include not smoking, limiting alcohol, maintaining a healthy weight, and taking part in recommended cancer screening. These steps cannot prevent every cancer or guarantee that a diagnosed cancer will not spread.

Follow-up scans and blood tests do not prevent metastases. Their purpose is to detect changes at a stage when treatment may be more useful.

Living with it and what to expect

The course of liver metastases can differ over months and years. It is shaped mainly by the original cancer, whether cancer is present elsewhere, how much of the liver is involved, and how well treatment works.

Scans are often repeated during treatment. Results may show that deposits have shrunk, remained stable, or grown. A scan showing stable disease can be a useful treatment result because it means the cancer has not progressed during that period.

Some people have limited liver disease that can be removed or destroyed. The remaining liver can grow after part of it is removed, but this does not prevent cancer from returning. Follow-up remains important because new deposits can appear in the liver or elsewhere.

For many people, liver metastases are treated as a long-term cancer condition. Treatment may continue, pause, or change over time. Periods with few symptoms can alternate with periods requiring more treatment or support.

It is not possible to give one meaningful life-expectancy figure for everyone with liver metastases. Statistics based on large groups cannot predict an individual's outcome. Day-to-day life may include appointments and scan-related uncertainty, but many people continue work, family activities, travel, or exercise with adjustments around treatment and energy levels.

When to get medical help

Contact your cancer team or usual clinician for routine advice if you develop a persistent change such as increasing abdominal discomfort, reduced appetite, unplanned weight loss, new swelling, or worsening tiredness. New symptoms do not automatically mean that the cancer has grown, but they should be assessed.

Seek urgent same-day advice for:

Follow any treatment-specific fever instructions you have been given. Some cancer medicines lower infection-fighting white blood cells, so fever may need rapid assessment.

Call emergency services for severe difficulty breathing, vomiting blood, black bowel movements, uncontrolled bleeding, collapse, or new marked confusion or unusual drowsiness.

- New yellowing of the skin or eyes
- Rapidly increasing abdominal swelling
- Repeated vomiting or inability to keep fluids down
- Fever or chills during cancer treatment
- Severe or worsening pain after a biopsy, operation, or liver procedure

Common questions

Are liver metastases the same as liver cancer?

They are a form of secondary liver cancer, but they did not begin in the liver. They keep the name and cell type of the original cancer. Bowel cancer in the liver, for example, is treated as metastatic bowel cancer rather than primary liver cancer.

Can liver metastases be cured?

Sometimes. Cure may be possible when all known cancer can be removed or destroyed, particularly in selected people with limited spread. Cancer can still return afterward. When cure is not realistic, treatment may shrink the deposits, slow their growth, reduce symptoms, and extend life.

Can you live without part of your liver?

Yes. The liver has an unusual ability to grow after part is removed. Surgery is planned carefully to leave enough healthy, well-supplied liver to function. Not everyone is suitable for an operation, especially if the remaining liver would be too small or cancer is widespread.

How fast do liver metastases grow?

There is no single growth rate. Some cancers progress quickly, while others change slowly or remain stable during treatment. Comparing scans taken at different times gives more useful information than symptoms or one scan alone.

What happens if liver metastases cannot be removed?

Surgery is only one option. Cancer medicines may treat deposits throughout the body. Ablation, focused radiotherapy, or artery-directed treatments may be considered in selected cases. Supportive and palliative care can also control symptoms alongside cancer treatment.

Do liver metastases always cause abnormal liver blood tests?

No. Blood tests can remain normal when deposits are small or liver function is well preserved. Abnormal results can also come from medicines, bile blockage, infection, or other liver conditions. Imaging is needed to assess suspected metastases.

Sources

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