

Metastatic Liver Cancer

Metastatic liver cancer is where the cancer originates somewhere else in the body and spreads to the liver. Also called secondary liver cancer, the treatment depends on many factors, but in particular from where the cancer has spread. A common cancer to spread to the liver is from colon and rectal cancer, where surgery to remove the cancer combined with chemotherapy offers the best chance of a cure.

What is the liver?

The liver is the second most important organ in the body and is located under the rib cage on the right side. It weighs about three pounds and is shaped like a football that is flat on one side. The liver performs many jobs including :

- Storing glycogen (fuel for the body) which is made from sugars. When required, glycogen is broken down into glucose (sugar) which is released into the bloodstream.
- Helping to process fats and proteins from digested food.
- Making proteins that are essential for blood to clot (clotting factors).
- Helping to process and/or remove alcohol, many types of medicines, toxins and poisons from the body.
- Making bile which passes from the liver to the gut down the bile duct. Bile breaks down the fats in food so that they can be absorbed from the bowel.

What is cancer?

Cancer is a disease of the cells in the body. The body is made up of millions of tiny cells. There are many different types of cell in the body, and there are many different types of cancer which arise from different types of cell. What all types of cancer have in common is that the cancer cells are abnormal and multiply 'out of control'.

A cancerous or malignant tumor is a 'lump' or 'growth' of tissue made up of cancer cells which continue to multiply. As they grow, malignant tumors can invade into nearby tissues and organs.

Malignant tumors may also spread to other parts of the body. This happens if some cells break off from the first (primary) tumor and are carried in the bloodstream or lymph channels to other parts of the body. These small groups of cells may then multiply to form 'secondary' tumors (metastases) in one or more parts of the body. These secondary tumours may then grow and invade nearby tissues, and spread again.

Some cancers are more serious than others, some are more easily treated than others (particularly if diagnosed at an early stage), some have a better outlook (prognosis) than others.

In each case it is important to know what type of cancer has developed, where it has developed, how large it has become, and whether it has spread. This will enable you to get information on treatment options.

What is metastatic liver cancer?

Cancer of the liver can be divided into primary liver cancer and metastatic (secondary) liver cancer. Metastatic liver cancer is when a cancer which started in another part of the body has spread to the liver. Many types of cancer can spread to the liver. The behavior, treatment and outlook of metastatic liver cancer is dependant on many factors, but very importantly from where the cancer has spread.

What causes metastatic liver cancer?

The liver is the second most common site of metastasis (spread of cancer), after the lymph nodes. Because blood from all parts of the body must pass through the liver for filtration, cancer cells from other organs and tissues easily reach the liver, where they can lodge and grow into secondary tumors. Many cancers can metastasize to the liver. The most common cancers to spread include colon and rectum, stomach, pancreas, breast, neuroendocrine, and lung.

What are the symptoms of metastatic liver cancer?

Liver metastases are often difficult to detect. Symptoms of liver metastases are subtle at first but become increasing intense over time. With a history of previous cancer, loss of weight or appetite, fever, or gastrointestinal disorders may indicate liver metastases. Liver blood tests might first detect cancer in the liver. However, a liver biopsy might be necessary.

If there is a history of cancer, symptoms of metastatic liver cancer may include:

- Abdominal pain or bloating that continues an extended time without any obvious cause
- Ache on the right side below the rib cage
- Occasional sharp pain in the right side
- Yellowing of the skin or eyes (jaundice)
- Abnormal liver function blood tests

How is metastatic liver cancer diagnosed ?

Imaging studies are useful in locating areas of abnormal liver or elsewhere in the body. If there is a history of cancer, the doctor will likely do periodic imaging to look for spread of the cancer depending on the type of primary cancer. Imaging studies, however, cannot tell the difference between a non-cancerous and cancerous tumor in the liver, although the doctor can make a judgment as to the origin of an abnormal finding in the liver. A liver biopsy of the tumor may be needed to make the definitive diagnosis cancer. CT or ultrasound can be used to guide the doctor in selecting the best location for obtaining the biopsy. At times, a laparoscopy is recommended to look for spread of cancer to the liver. Through a small incision in the abdomen, a small, lighted tube called a laparoscope is inserted to view the area. In any approach to biopsy, a small piece of liver tissue is removed and examined under a microscope for the presence of cancer cells. Liver function tests are not generally useful in the diagnosis of

liver metastases, as changes do not appear until late in the course of the disease and even then may be non-specific.

What are the treatment options for metastatic liver cancer?

Treatment of metastatic liver cancer is based on several factors, including the original type of cancer (that is, from where the cancer has spread), the extent of tumor in the liver, the presence of other areas of spread (such as, to the lung), and other coexisting diseases. All of these factors are extremely important and are considered when treatment is recommended.

Surgery

Surgery which aims to cure the cancer is an option in some cases. If the cancer can technically be removed, has not spread outside the liver, and the rest of the liver is healthy, then it may be possible to remove a portion of the liver which contains the cancer. Only a surgeon can determine if a tumor can technically be removed. In general, those who can have the entire tumor removed have the best chance for survival. In most cases where surgery is recommended, it is combined with chemotherapy. Examples of cancers where surgery is considered include : colon and rectum, neuroendocrine, breast, lung, head and neck, and anus.

Surgery options include:

- Partial liver resection (a portion of the liver is removed) or hemi-hepatectomy (one-half of the liver is removed), where the affected part of the liver is removed.
- Microwave ablation, where a heat therapy is applied to kill off the tumor. Here, a special probe is inserted into the tumor under ultrasound guidance. The probe then “heats up” the tumor to destroy it. Not all tumors are amenable to this treatment. Sometimes, microwave might be used in combination with liver resection.
- Radiofrequency ablation is also a heat therapy, which is similar to microwave.

Chemotherapy

Some patients with metastatic cancer of the liver can have their lives prolonged by chemotherapy, although cure might not be possible. Chemotherapy is a treatment which uses anti-cancer drugs to kill cancer cells, or to stop them from multiplying. Although it is not likely to be curative, but may shrink the tumor down to slow the progression of the disease. Systemic chemotherapy is given through the vein of either the arm or, more commonly, through a specially-implanted port in the chest. Metastatic pancreas cancer to the liver is an example of cancer that would be typically treated with systemic chemotherapy.

Other treatments

- Chemoembolisation. For this treatment, drugs used for chemotherapy are injected into branches of the liver artery (hepatic artery) which are supplying the tumor with blood. This type of treatment might be used for some neuroendocrine or kidney cancers. Not all metastatic cancers are amenable to this treatment.

- Radioembolisation. This is a newer type of treatment where radiation is attached to small beads which are then injected into the blood vessels supplying the liver tumor.
- Radiation therapy. This is a treatment which uses high energy beams of radiation which are focused on cancerous tissue. This kills cancer cells, or stops cancer cells from multiplying. This is currently an uncommon treatment for metastatic liver cancer, and not all cancer types or tumors are amenable to this treatment.

Clinical trials

A clinical trial is an investigational research project with the purpose of studying a treatment. There are many clinical trials in place studying new types of chemotherapy, new drugs and drug combinations, biological therapies, radiation therapy, surgery, in addition to ways of combining various types of treatment for liver cancer, side effect reduction, and quality of life. Speak to your doctor about available clinical trials. Information on clinical trials can also be acquired from the National Cancer Institute at <http://www.nci.nih.gov> or (800) 4-CANCER.

Multidisciplinary Care

Multidisciplinary care is where doctors come together of different disciplines (for example, surgery, medical oncology, radiation oncology, pathology, and radiology) to discuss the care of cancer patients. This is important as most cancer patients are best cared for when different specialists together make a treatment recommendation (consensus treatment).

Most cancer patients will have a doctor who will coordinate cancer care, such as a Medical Oncologist. You should have a full discussion with a specialist who knows your case. He/she will be able to give you the pros and cons, likely success rate, the possible side-effects, and other details about the possible treatment options for your type of cancer.

What is the prognosis (outlook)?

Overall, the outlook depends on the original cancer site and the extent of disease. The best chance of a cure, in general, is with surgery if possible. However, this is not feasible in all cases. Other treatments may delay the progression of the disease, but are not often curative.

The treatment of cancer is a developing area of medicine. New treatments continue to be developed and the above information is very general. The specialist who knows your case can give more accurate information about your particular outlook, and how well your type and stage of cancer is likely to respond to treatment.

Sources : www.patient.co.uk
www.bupa.co.uk/individuals/health-information
<http://www.virtualmedicalcentre.com/diseases.asp?did=705&title=metastases-to-the-liver>

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