

Gallbladder Cancer

Gallbladder cancer is a cancer, which arises in the gallbladder. Surgery to remove the cancer and in most cases followed by chemotherapy and radiation therapy offers the best chance of a cure.

What is the gallbladder ?

The gallbladder is a small pouch on the undersurface of the liver. It stores the bile produced by the liver and ejects it when the body requires bile. Bile is a digestive fluid that helps break down fatty food and is carried from the gallbladder to the bowel through a tube called the bile duct. Bile is yellow-green in color because it contains a substance called bilirubin. If bile isn't removed from the blood, it builds up and causes jaundice (the skin turns a yellow color).

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 cells in the body, and there are many different types of cancer which arise from different types of cells. What all types of cancer have in common is that the cancer cells are abnormal.

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 gallbladder cancer?

Gallbladder cancer usually affects people over 65, particularly between the ages of 70 and 75. Most people diagnosed with gallbladder cancer are women. Gallbladder cancer can grow in the

gallbladder and extend into the liver or other nearby organs. It can spread to other parts of the body through the bloodstream or lymph system.

The most common type of gallbladder cancer is adenocarcinoma, which starts in the gland cells of the gallbladder lining. Other types of gallbladder cancer include squamous cell cancer, adenosquamous cancer, small cell cancer, and sarcoma. Rarer types of gallbladder cancer include neuroendocrine tumors, lymphomas, and melanomas of the gallbladder.

What are the symptoms of gallbladder cancer?

There may not be any symptoms during the early stages of gallbladder cancer. Many early stage gallbladder cancers are found incidentally (or by chance) during routine gallbladder removal. For example, one in five people are diagnosed after gallbladder surgery to remove a gallbladder complicated by gallstones.

Symptoms of gallbladder cancer may include :

- Pain in the upper right side of the abdomen
- Nausea and vomiting
- Jaundice : the skin and the whites of the eyes may turn yellow, urine may darken, stool may become pale, and the skin may become itchy.

Although not necessarily a sign of gallbladder cancer, if you have any of these symptoms you should see your doctor.

What are the causes of gallbladder cancer?

Most cases of gallbladder cancer are sporadic. However, there may be an increased risk of developing gallbladder cancer in the following :

- Large gallstones
- Family history gallbladder cancer
- Gallbladder polyps
- Calcified (porcelain) gallbladder
- Tobacco (smoking)
- Exposure to chemicals that contain nitrosamines, which are used in the metal or rubber industry

How is gallbladder cancer diagnosed ?

Some gallbladder cancers are diagnosed incidentally during or after surgery for gallstones.

When gallbladder cancer is suspected or confirmed, other tests may be required :

- Blood tests

- Imaging such as ultrasound, computerized tomography (CT) or magnetic resonance imaging (MRI). These can help to show the location and extent of the cancer.
- An endoscopic retrograde cholangio-pancreatography (ERCP) to check whether there is a narrowing or blockage in the bile duct. This procedure involves insertion of a narrow, flexible, tube-like telescopic camera called an endoscope through the mouth. Further evaluation of a blockage can be performed and a shent placed if indicated (see below).
- Alternatively to an ERCP, a percutaneous transhepatic cholangiography (PTC) can be performed to evaluate a blockage. During this procedure, a needle is passed through the skin to the liver and a dye is injected into the bile duct and X-ray image is taken. Like during an ERCP, evaluation of a blockage can be performed and a shent placed if indicated. This is not a common procedure needed.
- A biopsy, which involves taking a small sample of tissue from the gallbladder and sending it to a laboratory for testing. An ultrasound or CT scan may be used to guide a needle to the gallbladder to take the biopsy. Alternatively, a biopsy may be taken by laparoscopy, which is an operation using small incisions to look inside the abdomen. During laparoscopy, the extent of the cancer can be potentially seen and biopsies taken.

What are the treatment options ?

Surgical resection is the main type of treatment for gallbladder cancer. If the tumor is resectable, surgery is the best treatment, as it offers the only reasonable chance of cure. If the cancer hasn't spread beyond the gallbladder and adjacent liver (such as spread to the peritoneum or distant liver), the gallbladder should be removed (cholecystectomy). In addition to removal of the gallbladder and the cancer, a portion of the liver is typically removed "en bloc" (ie., the gallbladder and portion of liver are removed together. This is called "extended cholecystectomy"). A number of lymph nodes are also removed (lymphadenectomy) at the time of surgical resection.

Radiation therapy and/or chemotherapy may be added after surgery in many cases, or they may be used instead of surgery if the cancer cannot be completely removed by surgery (ie., unresectable). Radiation and chemotherapy is not generally used for early stage gallbladder cancer.

Palliation : If the cancer is unresectable, or has spread to another part of your body, chemotherapy with or without radiation treatment may be given. Radiation may be used to relieve symptoms if there is advanced disease causing pain. These treatments may also be offered as part of a clinical trial.

If the cancer has spread or cannot be removed, another procedure may be done if the bile passage is blocked. For example, a stent (a small hollow tube) may be inserted to help bile drain properly into your digestive system. The aim is to relieve symptoms and jaundice. This can be carried out during an ERCP. Alternatively, the stent may also be put in through a catheter (a longer tube which drains to the outside of your body), which is called a transhepatic drainage (THC). The approach is decided by the location of the blockage.

What is the prognosis (outlook)?

The best chance of a cure is with surgery when the cancer is completely removed and has not spread from the primary site of the gallbladder. However, if this is not possible, treatment with chemotherapy with or without radiation therapy is the next option.

Sources : www.ncbi.nlm.nih.gov/pubmedhealth
 www.bupa.co.uk/individuals/health-information
 www.cancer.org

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