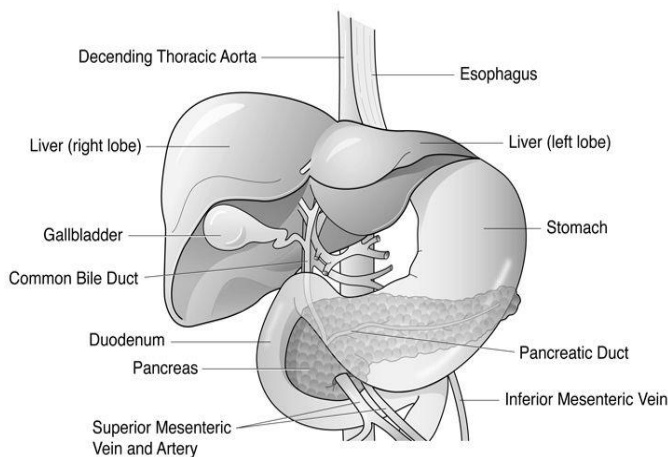


## Gall Bladder Cancer

### The Gallbladder

The gallbladder is a pear-shaped organ under the liver in the right upper abdomen. The gallbladder stores bile. Bile is a yellow, brown or greenish liquid made by the liver to digest fat. When food is being broken down in the stomach and intestines, bile is released from the gallbladder through a tube called the common bile duct. This tube connects the gallbladder and liver to the first part of the small intestine (the Duodenum).



### Gall Bladder Cancer

Gallbladder cancer is rare. Most of the cases are found when a patient has surgery to remove gall stones. The wall of the gallbladder has 3 main layers of tissue.

- Mucosal (innermost) layer.
- Muscularis (middle, muscle) layer.
- Serosal (outer) layer.

Cancer starts in the innermost layer and spreads through the outer layers as it grows. Gallbladder cancer is hard to find and diagnose because there are no early symptoms.

### Risk Factors to Develop Cancer

- Gall stone disease
- Chronic inflamed gallbladder
- Gallbladder polyps
- Congenital biliary cysts
- Increase with age
- Female
- Caucasian, Southwestern Native American, or Mexican American
- Smoking

### Symptoms

The most common symptoms caused by gallbladder cancer are right upper abdominal pain followed by loss of appetite, nausea or vomiting. Fever and bloating may occur.

### Jaundice

Yellow skin or eyes may happen if the bile ducts are blocked.

### Recovery

Recovery and treatment options depend on:

- The stage of the cancer (whether the cancer has spread from the gallbladder to other places in the body).
- Whether the cancer can be removed by surgery.
- The type of gallbladder cancer.
- The cancer has just been diagnosed or has recurred (come back).

Treatment options may also depend on your age, general health, and symptoms.

Gallbladder cancer can be cured only if it is found before it has spread or when it can be removed by surgery. If the cancer has spread, a treatment plan may improve quality of life.

## Diagnosis and Staging

These tests and procedures may be used to diagnose gallbladder cancer and the extent of the cancer. We need to know the stage of the disease to make a treatment plan.

- **Physical exam** and complete history of health habits, past illness and treatments.
- **Ultrasound** is a test that bounces high-energy sound waves off tissues or organs to form a picture called a sonogram.
- **Endoscopic ultrasound** is a small lighted tube (scope) passed through the mouth, esophagus, stomach and first part of the intestine.
- **CT scan (CAT scan)** is a detailed picture of the inside of the body taken by a special x-ray machine.
- **MRI** (magnetic resonance imaging) uses a magnet and radio waves to make detailed pictures of the inside of the body.
- **ERCP** (endoscopic retrograde cholangiopancreatography) is a small lighted tube (scope) passed through the mouth, esophagus, stomach, and first part of the intestine. A smaller tube or catheter is passed into the ducts. A dye is injected, and x-rays are taken. If a duct is blocked, a small flexible tube (stent) may be placed into the duct to unblock it. Tissue samples may be taken.
- **PTC** (percutaneous transhepatic cholangiography) is used to x-ray the liver and bile ducts. A thin needle is placed in the skin below the ribs and into the liver. Dye is injected into the liver or bile ducts and x-rays are taken. If a blockage is found, a flexible tube or stent may be left in the liver to drain bile into the small intestine or into a bag outside the body. Tissue samples may be taken.

- **Biopsy** is the removal of cells or tissues to check for cancer.
- **Liver function tests** are blood tests that measure the amounts of certain substances released into the blood by the liver. Higher than normal amounts can be a sign of liver disease that may be caused by the gallbladder cancer.
- **Laparoscopy** is surgery to look at the organs inside the abdomen to check for signs of disease. A thin, lighted tube (laparoscope) is placed into a small incision in the abdomen. Tissue samples may be taken. This helps to see if the cancer can be removed with surgery or if it has spread to other areas in the stomach.
- **PET** (positron emissions tomography) is a scan to make a picture of the organs and tissue inside the body. A small amount of radioactive sugar is placed into a vein. This sugar is taken up by cells that use the most energy like cancer cells. A scanner then detects this substance and shows images of the inside of the body.

## Stages of Gallbladder Cancer

**Stage 0:** Cancer is found in the innermost (mucosal) layer of the gallbladder only.

**Stage I** is divided into stage IA and stage IB.

- **Stage IA:** Cancer has spread beyond the innermost layer to the first and second layers or to the muscle layer.
- **Stage IB:** A tumor is only in the gallbladder and has not spread.

**Stage II** is divided into stage IIA and stage IIB.

- **Stage IIA:** Cancer has spread beyond the tissue that covers the gallbladder and other organs in the abdomen and/or to the liver and/or one nearby organ (such as the

stomach, small intestine, colon, pancreas, or bile ducts outside the liver).

- **Stage IIB:** A tumor has reached the peri muscular connective tissue (the layer between the muscle layer and the outer later) but has not spread elsewhere.

**Stage III A:** A tumor has spread beyond the gallbladder but not to nearby arteries or veins. It has not spread to any lymph nodes or other parts of the body.

**Stage III B:** A tumor of any size has spread to nearby lymph nodes but not to nearby arteries and/or veins or to other parts of the body.

**Stage IV:** Cancer has spread to nearby lymph nodes and/or to organs far away from the gallbladder.

**Recurrent:** Gallbladder cancer that comes back after treatment.

### Treatment Groups

- **Localized (Stage I) and resectable** – the cancer is found in the wall of the gallbladder and can be removed by surgery.
- **Unresectable (Stage II, Stage III, and Stage IV)** – cancer has spread through the wall of the gallbladder to tissues or organs or throughout the abdominal cavity. Except in patients whose cancer has spread only to lymph nodes, the cancer is unresectable (cannot be completely removed by surgery).

### Surgery

Surgery for gallbladder cancer is to remove the gallbladder, a wedge resection of the liver, resection of the extra hepatic (outside of the liver) bile duct, and resection of the regional lymph nodes. If gallbladder cancer is found after a laparoscopic cholecystectomy, more surgery may be needed to remove any cancer that remains.

### Radiation Therapy

Radiation therapy uses high-energy x-rays to kill cancer cells. There are two types:

- **External beam** radiation uses a machine outside the body to send radiation to the cancer.
- **Internal beam** radiation uses a radioactive substance sealed in needles, seeds, wires, or catheters that are placed into or near the cancer. Radiation may be given along with chemo but depends on the type and stage of the cancer being treated.

### Chemotherapy (Chemo)

Chemo uses drugs to stop the growth of cancer cells, either by killing the cells or by stopping the cells from dividing. This treatment can reach cancer cells throughout the body. Chemo may be used along with radiation therapy.

### Clinical Trials

Clinical trials may be available using chemo with or without radiation

Your health care team may have given you this information as part of your care. If so, please use it and call if you have any questions. If this information was not given to you as part of your care, please check with your doctor. This is not medical advice. This is not to be used for diagnosis or treatment of any medical condition. Because each person's health needs are different, you should talk with your doctor or others on your health care team when using this information. If you have an emergency, please call 911. Copyright © 7/2020. University of Wisconsin Hospitals and Clinics Authority. All rights reserved. Produced by the Department of Nursing. HF#6701