

Cholangiocarcinoma (Bile Duct Cancer)

Bile duct cancer is rare. Bile duct cancers can start in the liver or they can start in the bile ducts outside of the liver.

- Clay-colored stools
- Dark urine

The Bile Duct System

A network of bile ducts (tubes) connects the liver and the gallbladder to the small intestine. This network begins in the liver where many small ducts collect bile. Bile is a fluid made by the liver to break down fats. Bile is released from the gallbladder through the common bile duct into the small intestine when you digest food.



Risk Factors

- Primary sclerosing cholangitis
- Chronic ulcerative colitis
- Choledochal (common bile duct) cysts
- Infection with a Chinese liver fluke parasite

Symptoms

- Yellow skin or whites of the eyes (jaundice)
- Itching
- Pain, often in the right upper abdomen
- Fever

Recovery

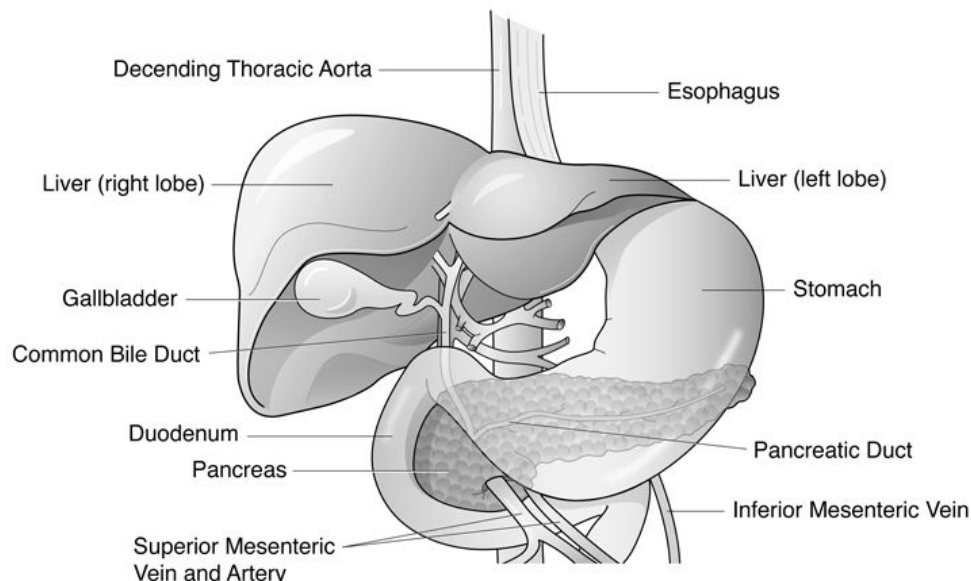
The chance of recovery and treatment options depend on:

- The stage of the cancer (whether it affects only the bile duct or has spread to other places in the body).
- Whether all the cancer can be removed by surgery.
- If the cancer is in the upper or lower part of the duct.
- Whether the cancer is newly diagnosed or has come back.

Treatment options may also depend on the symptoms caused by the cancer. We may not be able to remove all the cancer if we find it has spread. If the cancer has spread, we may only be able to offer palliative treatment options to improve your quality of life and/or give you more time.

Diagnosis and Staging

There are many tests that we may use to diagnose and stage bile duct cancers. The stage of the disease helps us decide on a treatment plan.



Physical exam will go over your health history and habits, past illnesses, and treatments.

Ultrasound bounces high-energy sound waves off tissues or organs to form a picture.

CT scan (CAT scan) uses x-ray to take a detailed picture of the inside of the body.

MRI uses a magnet, radio waves and a computer to make detailed pictures of the inside of the body.

ERCP uses a small lighted tube that we pass through the mouth, down into first part of the small intestine. We then pass a smaller tube into the ducts. We will inject a dye and take x-rays. If the ducts are blocked, we may insert a small stent into the duct to unblock it. We may also take tissue samples.

PTC uses a thin needle through the skin below the ribs to inject dye into the liver or bile ducts to take x-rays. If we find a blockage, we sometimes leave a stent in the liver to drain bile. The bile will drain into the small intestine or to a bag outside the body. We may also take tissue samples.

Biopsy removes cells or tissues to be viewed under the microscope to check for cancer. We can remove tissue during an ERCP, a PTC, or surgery.

Liver function tests use blood tests to 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 bile duct cancer.

Laparoscopy looks at the organs inside the abdomen to check for signs of disease. We insert a small lighted scope through a small

incision in the abdomen. We take tissue samples through the scope. This test helps us decide if the cancer can be removed or if it has spread to other organs.

Stages of Bile Duct Cancer

Stage 0 – cancer is found only in the innermost layer of cells lining the bile duct.

Stage I – includes stage IA and stage IB:

- **Stage IA** – cancer is found in the bile duct only.
- **Stage IB** – cancer has spread through the wall of the bile duct.

Stage II – includes stage IIA and stage IIB:

- **Stage IIA** – cancer has spread to the liver, gallbladder, pancreas, and/or to either the right or left branches of the hepatic artery or to the right or left branches of the portal vein.
- **Stage IIB** – cancer has spread to nearby lymph nodes and:
 - is found in the bile duct, or
 - has spread to the liver, gallbladder, pancreas, and/or the right or left branches of the hepatic artery or portal vein.

Stage III – cancer has spread:

- to the portal vein or to both right and left branches of the portal vein, or
- to the hepatic artery, or
- to other nearby organs or tissues. These may include the colon, stomach, small intestine, abdominal wall, or nearby lymph nodes.

Stage IV – cancer has spread to lymph nodes and/or organs far away from the bile duct.

Treatment Groups

Localized – the cancer is in a small area and can be removed.

Unresectable – the cancer has spread to nearby lymph nodes, blood vessels or other organs and cannot be removed.

Methods of Treatment

Treatment options include surgery, radiation therapy, chemotherapy (chemo), immunotherapy and clinical trials.

Surgery

These types of surgery are used to treat bile duct cancer.

- **Bile duct is removed** if the tumor is small and only in the bile duct. We will make a new duct by connecting the duct openings in the liver to the intestine. We remove the lymph nodes and view them under the microscope to see if they contain cancer.
- **Partial hepatectomy** removes part of the liver where cancer is found. The part removed may be a wedge of tissue, an entire lobe, or a larger part of the liver, along with some normal tissue around it.
- **Whipple surgery** removes the head of the pancreas, the gallbladder, part of the stomach, part of the small intestine, and the bile duct. We will leave enough of the pancreas to produce digestive juices and insulin.
- **Surgical biliary bypass** may be done if the tumor cannot be removed but is blocking the small intestine and causing bile to build up in the gallbladder. We will cut and sew the gallbladder or bile duct to the small intestine to create a new pathway around the blocked area. This helps

to relieve jaundice caused by the build-up of bile.

- **Stent placement** in the duct to drain bile that has built up in the area if the tumor is blocking the bile duct. The stent may drain to the outside of the body or it may drain the bile into the small intestine. We may place a stent during an ERCP, a PTC, or surgery.

Radiation Therapy

This cancer treatment uses radiation to kill cancer cells. There are two types of therapy:

- **External beam** radiation uses a machine outside the body to send radiation toward the cancer.
- **Internal beam** radiation uses a radioactive substance sealed in needles, seeds, wires, or catheters. We place these directly into or near the cancer.

The way the treatment is given depends on the type and stage of the cancer being treated.

Chemotherapy

Chemo uses drugs to stop the growth of cancer cells, either by killing the cells or by stopping the cells from dividing. Chemo is a treatment that can reach cancer cells throughout the body. We sometimes use chemo along with radiation therapy.

Immunotherapy

Immunotherapy is a type of treatment that helps your body recognize and fight cancer cells. This may be used in combination with chemo or on its own.

Clinical Trials

You may have the chance to take part in a clinical trial. Clinical trials are controlled research studies done to find out if new cancer treatments work and are safe or are better than the standard treatments.

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