WHAT IS THE LIVER?
The liver is the largest organ in the human body, after the skin. It is football-sized and sits in the upper right part of the abdomen, beneath the diaphragm and above the stomach. The liver has more than 500 jobs such as:

- Processing and storing nutrients
- Removing waste from blood
- Filtering and detoxifying chemicals

WHAT IS INTERMEDIATE HEPATOCELLULAR CARCINOMA?
Hepatocellular carcinoma (HCC) is cancer that develops in the hepatocytes of the liver. Hepatocytes are the main liver cells and do most of the work for the liver to keep the body healthy.

HCC is a complex disease and frequently occurs in the context of another liver disease. Once HCC has been diagnosed, the healthcare team determines the location of the cancer in the liver and to what extent, if any, the disease has spread, using a process called staging. Treatment is recommended based on the location of the cancer in the liver. Each liver cancer is different, and it is important to work with a multidisciplinary team to create a treatment plan that is unique to each individual’s needs.

Intermediate HCC generally refers to primary liver cancers that have not spread to the lymph nodes or distant organs but cannot be completely removed by surgery. Frequently these tumors can be treated and managed with ablation, embolization and radiation therapy.

If you or a loved one has been diagnosed with HCC, this can be an overwhelming and difficult time. Remember you are not alone. GLI is here and available to provide you with resources, information, and support.

There are many different staging systems. Two commonly used systems in the U.S. include Tumor Node Metastasis (TNM) and Barcelona Clinic Liver Cancer (BCLC).
TREATMENT FOR INTERMEDIATE HCC

ABLATION
Ablation is a localized treatment that destroys liver tumors without removing them and is ideal for people with small tumors and when surgery is not a good option. Types of ablation:

- Radiofrequency ablation (RFA) - done with high energy radio waves
- Microwave ablation (MWA) - done with electromagnetic waves
- Cryoablation - done with extreme cold
- Ethanol ablation or percutaneous ethanol injection (PEI) - done with concentrated alcohol

Potential ablation side effects include abdominal pain, nausea and vomiting, diarrhea, and loss of appetite.

EMBOLIZATION
Embolization is a procedure where substances are injected directly into an artery leading to a tumor in the liver to kill the cancer cells. Embolization is most frequently used in people with tumors too large to be treated with ablation who have adequate liver function. Types of embolization:

- Trans-arterial embolization (TAE) - done with particles
- Trans-arterial chemoembolization (TACE) - done with chemotherapy
- Drug-eluting bead chemoembolization (DEB-TACE) - done with tiny beads filled with chemotherapy
- Radioembolization - done with radioactive beads (microspheres) that give off radiation

Potential embolization side effects include abdominal pain, nausea and vomiting, low grade fever, lethargy, fatigue, and ulcers.

RADIATION THERAPY
Radiation therapy uses high energy rays or particles to kill cancer cells. Types of radiation:

- External beam radiation therapy (EBRT) - done with x-ray photons and delivered from outside the body
- Stereotactic body radiation therapy (SBRT) - done with x-ray photons but at much higher doses over a shorter period of time
- Radioembolization - done with radioactive beads (microspheres) that give off radiation
- Proton beam therapy - done with protons rather than photons from outside the body

Potential radiation therapy side effects include skin changes in radiated areas, ranging from redness to blistering and peeling, nausea and vomiting, fatigue, diarrhea, and loss of appetite.
QUESTIONS TO ASK

THE DOCTOR
• What is your experience treating liver cancer?
• How many patients like me (of the same age, gender, race) have you treated?
• Will you be consulting with experts to discuss my care? Whom will you consult?

GENERAL
• What is my diagnosis?
• Where is the cancer in my liver? Is it anywhere else in my body?
• How healthy is my liver?
• Who can help me gather my records for a second opinion?

ABOUT TREATMENT
• What are all of my treatment options?
• Am I eligible for a clinical trial?
• What treatment do you recommend and why?
• If I am not able to have the recommended treatment, what happens? What does that mean for me and my future health?
• What will followup from treatment look like?

ABOUT SUPPORT
• Are there support groups for me and my family?
• How can your hospital/office help me manage the costs of cancer care?
• What groups can I connect with for more resources?

© 2021 GLOBAL LIVER INSTITUTE
Global Liver Institute provides this information as a service. It is not intended to take the place of medical professionals or the recommendations of your healthcare team. We strongly suggest consulting your healthcare team if you have questions about your specific care.

SUPPORT FOR THIS PROGRAM IS PROVIDED BY