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Treating Liver Cancer

team. These doctors may include:

- A **surgical oncologist**: a doctor who treats cancer with surgery.
- A **radiation oncologist**: a doctor who treats cancer with radiation therapy.

A

- [Seeking a Second Opinion](#)

Thinking about taking part in a clinical trial

Clinical trials are carefully controlled research studies that are done to get a closer look at promising new treatments or procedures. Clinical trials are one way to get state-of-the-art cancer treatment. In some cases they may be the only way to get access to newer treatments. They are also the best way for doctors to learn better methods to treat cancer.

If you would like to learn more about clinical trials that might be right for you, start by asking your doctor if your clinic or hospital conducts clinical trials.

- [Clinical Trials](#)

Considering complementary, integrative, and alternative methods

You may hear about alternative or complementary methods to relieve symptoms or treat your cancer that your doctors haven't mentioned. These methods can include vitamins, herbs, and special diets, or other methods such as acupuncture or massage, to name a few.

Complementary methods are treatments that are used **along with** your regular medical care. **Alternative** treatments are used **instead of** standard medical treatment. Although some of these methods might be helpful in relieving symptoms or helping you feel better, many have not been proven to work. Some might even be harmful.

Whether you are thinking about treatment, getting treatment, or not being treated at all, you can still get supportive care to help with pain or other symptoms. Communicating with your cancer care team is important so you understand your diagnosis, what treatment is recommended, and ways to maintain or improve your quality of life.

Different types of programs and support services may be helpful, and they can be an important part of your care. These might include nursing or social work services, financial aid, nutritional advice, rehab, or spiritual help.

The American Cancer Society also has programs and services - including rides to treatment, lodging, and more - to help you get through treatment. Call our Cancer Knowledge Hub at 1-800-227-2345 and speak with one of our caring, trained cancer helpline specialists. Or, if you prefer, you can use our chat feature on cancer.org to connect with one of our specialists.

- [Palliative Care](#)
- [Programs & Services](#)

Choosing to stop treatment or choosing no treatment at all

For some people, when treatments have been tried and are no longer controlling the cancer, it could be time to weigh the benefits and risks of continuing to try new treatments. Whether or not you continue treatment, there are still things you can do to help maintain or improve your quality of life.

Some people, especially if the cancer is advanced, might not want to be treated at all. There are many reasons you might decide not to get cancer treatment, but it's important to talk to your doctors as you make that decision. Remember that even if you choose not to treat the cancer, you can still get supportive care to help with pain or other symptoms.

People who have advanced cancer and who are expected to live less than 6 months may want to consider hospice care. Hospice care is designed to provide the best possible quality of life for people who are near the end of life. You and your family are encouraged to talk with your doctor or a member of your supportive care team about hospice care options, which include hospice care at home, a special hospice center, or

The treatment information given here is not official policy of the American Cancer Society and is not intended as medical advice to replace the expertise and judgment of your cancer care team. It is intended to help you and your family make informed decisions, together with your doctor. Your doctor may have reasons for suggesting a treatment plan different from these general treatment options. Don't hesitate to ask your cancer care team any questions you may have about your treatment options.

Surgery for Liver Cancer

- [Partial hepatectomy](#)
- [Liver transplant](#)
- [More information about surgery](#)

The best option to cure liver cancer is with either surgical resection (removal of the tumor with surgery) or a liver transplant. If all cancer in the liver is completely removed, you will have the best outlook. Small liver cancers may also be cured with other types of treatment such as ablation or radiation.

Partial hepatectomy

Partial hepatectomy is surgery to remove part of the liver. Only people with good liver function who are healthy enough for surgery and who have a single tumor that has not grown into blood vessels can have this operation.

[Imaging tests](#)¹, such as CT or MRI with angiography are done first to see if the cancer can be removed completely. Still, sometimes during surgery the cancer is found to be too large or has spread too far to be removed, and the surgery that has been planned cannot be done.

Most patients with liver cancer in the United States also have [cirrhosis](#)². In someone with severe cirrhosis, removing even a small amount of liver tissue at the edges of a cancer might not leave enough liver behind to perform important functions.

People with cirrhosis are typically eligible for surgery if there is only one tumor (that has not grown into blood vessels) and they will still have a reasonable amount (at least 30%) of liver function left once the tumor is removed. Doctors often assess this function by assigning a Child-Pugh score (see [Liver Cancer Stages](#)³), which is a measure of cirrhosis based on certain lab tests and symptoms.

Patients in Child-Pugh class A are most likely to have enough liver function to have surgery. Patients in class B are less likely to be able to have surgery. Surgery is not typically an option for patients in class C.

Possible risks and side effects

Liver resection is a major, serious operation that should only be done by skilled and experienced surgeons. Because people with liver cancer usually have other liver problems besides the cancer, surgeons have to remove enough of the liver to try to get all of the cancer, but also leave enough behind for the liver to function.

Bleeding: A lot of blood passes through the liver, and bleeding after surgery is a

awareness about the importance of organ donation is an essential public health goal that could make this treatment available to more patients with liver cancer and other serious liver diseases.

Most livers used for transplants come from people who have just died. But some patients receive part of a liver from a living donor (usually a close relative) for transplant. The liver can regenerate some of its lost function over time if part of it is removed. Still, the surgery does carry some risks for the donor. About 370 living donor liver transplants are done in the United States each year. Only a small number of them are for patients with liver cancer.

People needing a transplant must wait until a liver is available, which can take too long for some people with liver cancer. In many cases a person may get other treatments, such as [embolization](#) or [ablation](#), while waiting for a liver transplant. Or doctors may suggest surgery or other treatments first and then a transplant if the cancer comes back.

Possible risks and side effects

Like partial hepatectomy, a liver transplant is a major operation with serious risks and should only be done by skilled and experienced surgeons. Possible risks include:

- Bleeding
- Infection: People who get a liver transplant are given drugs to help suppress their immune systems to prevent their bodies from rejecting the new organ. These drugs have their own risks and side effects, especially the risk of getting serious [infections](#)⁴. By suppressing the immune system, these drugs might also allow any liver cancer that had spread outside of the liver to grow even faster than before. Some of the drugs used to prevent rejection can also cause high blood pressure, high cholesterol, and diabetes; can weaken the bones and kidneys; and can even lead to a [new cancer](#)⁵.
- Blood clots
- Complications from anesthesia
- Rejection of new liver: After a liver transplant, regular blood tests are done to check for signs of the body rejecting the new liver. Sometimes liver biopsies are also taken to see if rejection is happening and if changes are needed in the drugs that prevent rejection.

More information about surgery

For more general information about surgery as a treatment for cancer, see [Cancer Surgery](#)⁶.

To learn about some of the side effects listed here and how to manage them, see [Managing Cancer-related Side Effects](#)⁷.

Hyperlinks

1. www.cancer.org/cancer/diagnosis-staging/tests/imaging-tests/imaging-radiology-tests-for-cancer.html
 2. www.cancer.org/cancer/types/liver-cancer/causes-risks-prevention/risk-factors.html
 3. www.cancer.org/cancer/types/liver-cancer/detection-diagnosis-staging/staging.html
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Last Revised: April 1, 2019

Ablation for Liver Cancer

- [Radiofrequency ablation \(RFA\)](#)
- [Microwave ablation \(MWA\)](#)
- [Cryoablation \(cryotherapy\)](#)
- [Ethanol \(alcohol\) ablation](#)
- [Side effects of ablation therapy](#)

Ablation is treatment that destroys liver tumors without removing them. These techniques can be used in patients with a few small tumors and when surgery is not a good option (often because of poor health or reduced liver function). They are less likely to cure the cancer than surgery, but they can still be very helpful for some people. These treatments are also sometimes used in patients waiting for a liver transplant.

Ablation is best used for tumors no larger than 3 cm across (a little over an inch). For slightly larger tumors (1 to 2 inches, or 3 to 5 cm across), it may be used along with embolization. Because ablation often destroys some of the normal tissue around the tumor, it might not be a good choice for treating tumors near major blood vessels, the diaphragm, or major bile ducts.

People getting this type of treatment typically do not need to stay in a hospital. Often, ablation can be done without [surgery](#) by inserting a needle or probe into the tumor through the skin. The needle or probe is guided into place with ultrasound or CT scan. Sometimes, though, to be sure the treatment is aimed at the right place, the ablation may be done in the operating room under general anesthesia (you are asleep) and may need an incision (cut) like the one for a [partial hepatectomy](#).

Radiofrequency ablation (RFA)

Radiofrequency ablation is one of the most common ablation methods for small tumors. It uses high-energy radio waves. The doctor inserts a thin, needle-like probe into the tumor through the skin. A high-frequency current is then passed through the tip of the probe, which heats the tumor and destroys the cancer cells.

Microwave ablation (MWA)

Embolization Therapy for Liver Cancer

The liver is special in that it has 2 blood supplies. Most normal liver cells are fed by the **portal vein**, whereas a cancer in the liver is mainly fed by the **hepatic artery**. Blocking

been damaged by diseases such as hepatitis or cirrhosis. It isn't yet clear which type of embolization has a better long-term outcome.

People getting this type of treatment typically do not stay in the hospital overnight.

Trans-arterial embolization (TAE)

During trans-arterial embolization a catheter (a thin, flexible tube) is put into an artery in the inner thigh through a small cut and eased up into the hepatic artery in the liver. A dye is usually injected into the bloodstream to help the doctor watch the path of the catheter. Once the catheter is in place, small particles are injected into the artery to plug it up, blocking oxygen and key nutrients from the tumor.

Trans-arterial chemoembolization (TACE)

Trans-arterial chemoembolization is usually the first type of embolization used for large liver cancers that cannot be treated with surgery or ablation. It combines embolization with chemotherapy (chemo). Most often, this is done by giving chemotherapy through the catheter directly into the artery, then plugging up the artery, so the chemo can stay close to the tumor.

Drug-eluting bead chemoembolization (DEB-TACE)

Drug-eluting bead chemoembolization combines TACE embolization with drug-eluting beads (tiny beads that contain a chemotherapy drug). The procedure is essentially the same as TACE except that the artery is blocked after drug-eluting beads are injected. Because the chemo is physically close to the cancer and because the drug-eluting beads slowly release the chemo, the cancer cells are more likely to be damaged and die. The most common chemo drugs used for TACE or DEB-TACE are mitomycin C, cisplatin, and doxorubicin.

Radioembolization (RE)

Radioembolization combines embolization with radiation therapy. This is done by injecting small beads (called *microspheres*) that have a radioactive isotope (yttrium-90 or Y-90) attached to them into the hepatic artery. Once infused, the beads lodge in the blood vessels near the tumor, where they give off small amounts of radiation to the tumor site for several days. The radiation travels a very short distance, so its effects are limited mainly to the tumor.

Possible side effects of embolization

Possible complications after embolization include:

- Abdominal pain
- Fever
- Nausea
- Infection in the liver
- Blood clots in the main blood vessels of the liver

Sometimes, it can take 4-6 weeks to fully recover from the procedure. Because healthy liver tissue can be affected, there is a risk that liver function will get worse after embolization. This risk is higher if a large branch of the hepatic artery is embolized. Serious complications are not common, but they are possible.

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Last Revised: April 1, 2019

Radiation Therapy for Liver Cancer

- [How is radiation therapy given?](#)
- [Radioembolization](#)
- [Possible side effects of radiation therapy for liver cancer](#)
- [More information about radiation therapy](#)

Radiation therapy uses high-energy rays (or particles) to kill cancer cells. It may not be a good option for some patients whose liver has been greatly damaged by diseases such as hepatitis or cirrhosis.

Radiation can be helpful in treating:

- Liver cancer that cannot be removed by surgery
- Liver cancer that cannot be treated with ablation or embolization or did not respond well to those treatments
- Liver cancer that has spread to other areas such as the brain or bones
- People with pain because of large liver cancers
- People with a tumor thrombus (a collection of liver cancer cells) blocking the portal vein.

How is radiation therapy given?

[External beam radiation therapy](#)¹ (EBRT) focuses radiation from a source outside of the body on the cancer. Getting radiation therapy is much like getting an x-ray, but the radiation is stronger. The procedure itself is painless. Each treatment lasts only a few minutes, although the setup time – getting you into place for treatment – usually takes longer. Most often, EBRT treatments are small doses of radiation given 5 days a week for several weeks.

Although liver cancer cells are sensitive to radiation, much care is taken when planning the treatment to avoid damaging normal liver tissue as much as possible. Newer radiation techniques, such as **stereotactic body radiation therapy (SBRT)**, help doctors target liver tumors while reducing the radiation to nearby healthy tissues. This

lasts a set time, but can be fatal in some instances. Signs and symptoms seen with RILD can include abnormal blood liver tests, an enlarged liver and spleen, ascites (fluid build up in the abdomen), and jaundice. Ask your doctor what side effects to expect and how to prevent or relieve them.

More information about radiation therapy

To learn more about how radiation is used to treat cancer, see [Radiation Therapy²](#).

Targeted Drug Therapy for Liver Cancer

- [Kinase inhibitors](#)
- [Monoclonal antibodies](#)
- [More information about targeted therapy](#)

As researchers learn more about the changes in cells that cause cancer, they have been able to develop newer drugs that specifically target these changes. Targeted drugs work differently from standard chemotherapy drugs (which are described in [Chemotherapy for Liver Cancer](#)) and often have different side effects.

Like chemotherapy, these drugs enter the bloodstream and reach almost all areas of the body, which makes them potentially useful against cancers that have spread to distant parts of the body. Because standard chemo is not very effective in most patients with liver cancer, doctors are focusing more on using targeted therapies.

Kinase inhibitors

Kinases are proteins on or near the surface of a cell that carry important signals to the cell's control center. Many of the targeted drugs used to treat liver cancer are **kinase inhibitors**. These drugs block several kinase proteins, which normally help tumor cells grow in one of two ways:

- Some kinases help tumor cells grow directly.
- Some kinases help tumors form the new blood vessels they need in order to get bigger (a process called **angiogenesis**).

Blocking these proteins can often help stop the growth of the cancer.

Sorafenib (Nexavar) and lenvatinib (Lenvima)

One of these drugs can be used as the first treatment for liver cancer if it cannot be treated by surgery or if it has spread to other organs.

Sorafenib is a pill taken twice daily. Lenvatinib is a pill that is taken once a day.

Sorafenib may work better in people with liver cancer caused by hepatitis C.

Regorafenib (Stivarga) and cabozantinib (Cabometyx)

Side effects of angiogenesis inhibitors

Common side effects of these drugs can include:

- High blood pressure
- Tiredness (fatigue)
- Bleeding
- Low white blood cell counts (with increased risk of infections)
- Headaches
- Mouth sores
- Loss of appetite
- Diarrhea

Rare but possibly serious side effects can include blood clots, severe bleeding, holes (called perforations) in the stomach or intestines, heart problems, and slow wound healing.

More information about targeted therapy

To learn more about how targeted drugs are used to treat cancer, see [Targeted Cancer Therapy](#)¹.

To learn about some of the side effects listed here and how to manage them, see [Managing Cancer-related Side Effects](#)².

Hyperlinks

1. www.cancer.org/cancer/managing-cancer/treatment-types/targeted-therapy.html
2. www.cancer.org/cancer/managing-cancer/side-effects.html

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Last Revised: June 10, 2020

Immunotherapy for Liver Cancer

Immunotherapy is the use of medicines that help a person's own immune system find and destroy cancer cells. It can be used to treat some people with liver cancer.

- [Immune checkpoint inhibitors](#)
- [More information about immunotherapy](#)

Immune checkpoint inhibitors

An important part of the immune system is its ability to keep itself from attacking normal

cells in the body. To do this, it uses “checkpoints” – proteins on immune cells that need to be turned on (or off) to start an immune response. Cancer cells sometimes use these checkpoints to avoid being attacked by the immune system. Newer drugs that target these checkpoints hold a lot of promise as liver cancer treatments.

PD-1 and PD-L1 inhibitors

PD-1 is a checkpoint protein on immune cells called *T cells*. When PD-1 attaches to PD-L1, a protein on other cells in the body, it acts as a type of “off switch” that basically tells the T cell to leave the other cell alone. Some cancer cells have large amounts of PD-L1, which helps them hide from an immune attack. Drugs that target either PD-1 or PD-L1 can block this binding and boost the immune response against cancer cells.

Atezolizumab (Tecentriq) and **durvalumab (Imfinzi)** target the PD-L1 protein. Blocking this protein can help boost the immune response against cancer cells. This can shrink some tumors or slow their growth.

Ipilimumab (Yervoy) and **tremelimumab (Imjudo)** are other types of drugs that boost the immune response, but they have a different target. They block CTLA-4, another protein on T cells that normally helps keep them in check.

Tremelimumab (Imjudo) can be used with another immunotherapy drug durvalumab as the first treatment for liver cancer that cannot be removed with surgery. It is given as an intravenous (IV) infusion once every 4 weeks.

Ipilimumab can be used in combination with nivolumab to treat liver cancer that has previously been treated (such as with the targeted drug sorafenib). This drug is given as an intravenous (IV) infusion, usually once every 3 weeks for 4 treatments.

Possible side effects of checkpoint inhibitors

Side effects of these drugs can include:

- Feeling tired or weak
- Fever
- Cough
- Nausea
- Itching
- Skin rash
- Loss of appetite
- Muscle or joint pain
- Constipation or diarrhea

Other, more serious side effects occur less often:

Infusion reactions: Some people might have an infusion reaction while getting these drugs. This is like an allergic reaction, and can include fever, chills, flushing of the face, rash, itchy skin, feeling dizzy, wheezing, and trouble breathing. It's important to tell your doctor or nurse right away if you have any of these symptoms while getting these drugs.

Autoimmune reactions: These drugs work by basically removing one of the safeguards on the body's immune system. Sometimes the immune system starts attacking other parts of the body, which can cause serious or even life-threatening problems in the lungs, intestines, liver, hormone-making glands, kidneys, skin, or other organs.

Serious side effects seem to occur more often with ipilimumab than with the PD-1 and

PD-L1 inhibitors.

It's very important to report any new side effects to your health care team promptly. If serious side effects do occur, treatment may need to be stopped and you may get high doses of corticosteroids to suppress your immune system.

More information about immunotherapy

To learn more about how drugs that work on the immune system are used to treat cancer, see [Cancer Immunotherapy](#)¹.

To learn about some of the side effects listed here and how to manage them, see [Managing Cancer-related Side Effects](#)².

Hyperlinks

1. www.cancer.org/cancer/managing-cancer/treatment-types/immunotherapy.html
2. www.cancer.org/cancer/managing-cancer/side-effects.html

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Last Revised: September 19, 2024

Chemotherapy for Liver Cancer

- Which chemotherapy drugs are used for liver cancer?
How is chemotherapy given?

- Capecitabine (Xeloda)
- Mitoxantrone (Novantrone)

Sometimes, combinations of 2 or 3 of these drugs are used. GEMOX (gemcitabine plus oxaliplatin) is one option for people who are fairly healthy and may tolerate more than one drug. 5-FU based chemotherapy, for example with FOLFOX (5-FU, oxaliplatin and leucovorin), is another option for people with bad liver disease.

How is chemotherapy given?

You can get chemotherapy in different ways.

Systemic chemotherapy

Drugs are injected right into a vein (IV) or taken by mouth. These drugs enter the bloodstream and reach almost all areas of the body, possibly making this treatment useful for cancers that have spread to other parts of the body.

For IV chemo, a slightly larger and sturdier catheter is required in the vein system to administer chemo. They are known as [central venous catheters](#)¹ (CVCs), central venous access devices (CVADs), or central lines. They are used to put medicines, blood products, nutrients, or fluids right into your blood. They can also be used to take out blood for testing. Many different kinds of CVCs are available. The 2 most common types are the port and the PICC line.

Doctors give chemo in cycles, with each period of treatment followed by a rest period to give you time to recover from the effects of the drugs. Cycles are most often 2 or 3 weeks long. The schedule varies depending on the drugs used. For example, with some drugs, the chemo is given only on the first day of the cycle. With others, it is given for a few days in a row, or once a week. Then, at the end of the cycle, the chemo schedule repeats to start the next cycle.

Treatment for advanced liver cancer is based on how well it is working and what side effects you have.

Regional chemotherapy

Drugs are put right into an artery that leads to the part of the body with the tumor. This focuses the chemo on the cancer cells in that area. It reduces side effects by limiting the amount of drug reaching the rest of the body. Hepatic artery infusion, or chemo given

directly into the hepatic artery, is regional chemotherapy that can be used for liver cancer.



Hepatic artery infusion

Doctors have studied putting chemo drugs directly into the hepatic artery at a constant rate to see if it might be more effective than systemic chemo. This technique is known as hepatic artery infusion (HAI). It is slightly different from [chemoembolization](#) because surgery is needed to put an infusion pump under the skin of the abdomen (belly). The pump is attached to a catheter that connects to the hepatic artery. This is done while the patient is under general anesthesia. The chemo is injected with a needle through the

skin into the pump' reservoir and it is released slowly and steadily into the hepatic artery.

The healthy liver cells break down most of the drug before it can reach the rest of the body. This method gets a higher dose of chemo to the tumor than systemic chemo but doesn't increase side effects. The drugs most commonly used for HAI include floxuridine (FUDR), cisplatin, and oxaliplatin.

HAI may be used for people with very large liver cancers that cannot be removed with surgery or cannot be treated entirely with [TACE](#). This technique may not be useful in all patients because it requires surgery to insert the pump and catheter, an operation that many liver cancer patients may not be able to tolerate.

Early studies have found that HAI is often effective in shrinking tumors, but more research is still needed.

Possible side effects of chemotherapy for liver cancer

Chemo drugs attack cells that are dividing quickly, which is why they work against cancer cells. But other cells in the body, such as those in the bone marrow, the lining of the mouth and intestines, and the hair follicles, also divide quickly. These cells are also likely to be affected by chemo, which can lead to side effects.

The side effects of chemo depend on the type and dose of drugs given and the length of time they are taken. Common side effects include:

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Last Revised: April 1, 2019

Treatment of Liver Cancer, by Stage

- [Potentially resectable or transplantable liver cancer \(stage I and some stage II cancers\)](#)
- [Unresectable \(inoperable\) liver cancer that has not spread](#)
- [Advanced \(metastatic\) liver cancer \(includes all N1 or M1 tumors\)](#)
- [Recurrent liver cancer](#)

Although the AJCC (TNM) staging system (see [Liver Cancer Stages](#)¹) is often used to describe the spread of a liver cancer, doctors use a more practical system to determine treatment options. Liver cancers are often categorized as:

- Potentially resectable or transplantable cancer
- Unresectable (inoperable) cancer that has not spread
- Advanced cancer

Potentially resectable or transplantable liver cancer (stage I and some stage II cancers)

Potentially resectable

If your cancer is early stage and the rest of your liver is healthy, [surgery](#) (partial hepatectomy) may cure you. Only a small number of people with liver cancer are in this category. Important factors that may influence the outcome are the size of the tumor(s) and if nearby blood vessels are affected. Larger tumors or those that invade blood vessels are more likely to come back in the liver or spread elsewhere after surgery. How well your liver is working and your general health are also important. For some people with early-stage liver cancer, a liver transplant could be another option.

[Clinical trials](#)² are now looking at whether patients who have a partial hepatectomy will be helped by getting other treatments in addition to surgery. Some studies have found that using [chemoembolization](#) or other treatments along with surgery may help some patients live longer. More research is needed to know the value (if any) of adding other treatments to surgery.

Potentially transplantable

If your cancer is at an early stage, but the rest of your liver isn't healthy, you may be able to be treated with a liver transplant. A transplant may also be an option if the tumor is in a part of the liver that makes it hard to remove (such as very close to a large blood vessel). Candidates for liver transplant might have to wait a long time for a liver to become available. While they are waiting, they are often given other treatments, such as [ablation](#) or [embolization](#), to keep the cancer under control.

Unresectable (inoperable) liver cancer that has not spread

Unresectable cancers include cancers that haven't yet spread to lymph nodes or distant parts of the body, but that can't be removed safely by partial hepatectomy. This might be because:

- The tumor is too large to be removed safely.

- The tumor is in a part of the liver that makes it hard to remove (such as very close to a large blood vessel).
- There are several tumors or the cancer has spread throughout the liver.
- The person isn't healthy enough for liver surgery.

Treatment options might include [ablation](#), [embolization](#), or both for the liver tumor(s). Other options may include [targeted therapy](#), [immunotherapy](#), [chemotherapy](#) (either systemic or by hepatic artery infusion), and/or [radiation therapy](#). For some of these cancers, treatment may shrink the tumor(s) enough so that [surgery](#) (partial hepatectomy or transplant) may become possible.

These treatments are very unlikely to cure the cancer, but they can reduce symptoms and may even help a person live longer. Because these cancers can be hard to treat, [clinical trials](#)³ of newer treatments may offer a good option in many cases.

Advanced (metastatic) liver cancer (includes all N1 or M1 tumors)

Advanced liver cancer has spread either to the lymph nodes or to other organs. Because these cancers are widespread, they cannot be removed with surgery.

For people whose liver is functioning well enough (Child-Pugh class A or B), initial treatment options might include:

- The [immunotherapy](#) drug atezolizumab (Tecentriq) plus the [targeted drug](#) bevacizumab (Avastin)
- Either of the targeted drugs sorafenib (Nexavar) or lenvatinib (Lenvima)

If these drugs are no longer working, other targeted drugs, such as regorafenib (Stivarga), cabozantinib (Cabometyx), or ramucirumab (Cyramza) are possible options. Immunotherapy drugs such as pembrolizumab (Keytruda), or nivolumab (Opdivo) combined with ipilimumab (Yervoy), might also be helpful.

As with unresectable liver cancer that has not spread, [clinical trials](#)⁴ of newer targeted therapies, immunotherapy, new approaches to chemotherapy (new drugs and ways to deliver chemotherapy), new forms of radiation therapy, and other new treatments may be helpful. These clinical trials are also important for improving the outcome for future patients.

Treatments such as radiation might also be used to help relieve [pain](#)⁵ and other symptoms. Please be sure to discuss any symptoms you have with your cancer team,

so they can treat them effectively.

Recurrent liver cancer

Cancer that comes back after treatment is called **recurrent**. Recurrence can be local (in or near the same place it started) or distant (spread to organs such as the lungs or bone). Treatment of liver cancer that returns after initial therapy depends on many factors, including where it comes back, the type of initial treatment, and how well the liver is functioning.

People with resectable cancer that recurs in the liver might be eligible for further [surgery](#) or local treatments like [ablation](#) or [embolization](#).

If the cancer is widespread, [targeted therapy](#), [immunotherapy](#), or [chemotherapy](#) drugs may be options. Patients may also wish to ask their doctor whether a [clinical trial](#)⁶ may be right for them.

Treatment can also be given to [relieve pain and other side effects](#)⁷. Please be sure to discuss any symptoms you have with your cancer care team, so they may be treated effectively.

Hyperlinks

1. www.cancer.org/cancer/types/liver-cancer/detection-diagnosis-staging/staging.html
2. www.cancer.org/cancer/managing-cancer/making-treatment-decisions/clinical-trials.html
3. www.cancer.org/cancer/managing-cancer/making-treatment-decisions/clinical-trials.html
4. www.cancer.org/cancer/managing-cancer/making-treatment-decisions/clinical-trials.html
5. www.cancer.org/cancer/managing-cancer/side-effects/pain.html
6. www.cancer.org/cancer/managing-cancer/making-treatment-decisions/clinical-trials.html
7. www.cancer.org/cancer/managing-cancer/palliative-care.html

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Abou-Alfa GK, Jarnigan W, Dika IE, D'Angelica M, Lowery M, Brown K, et al. Ch. 77 - Liver and Bile Duct Cancer. In: Niederhuber JE, Armitage JO, Doroshow JH, Kastan MB, Tepper JE, eds. *Abeloff's Clinical Oncology*. 6th ed. Philadelphia, Pa: Elsevier; 2020:1314–1341.

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