NewYork-Presbyterian Provides Multifaceted Care for Primary and Metastatic Liver Tumors

A unique feature of the liver is its capacity to regenerate after a portion of it is removed. In patients with a normal liver, up to 75 percent of liver tissue can be removed, while in patients with injured livers, only a smaller portion can be resected. Removal of part of the liver (hepatectomy or liver resection) can be used in the treatment of primary and secondary liver cancers.

Hepatocellular carcinoma (primary liver cancer) is a complication of chronic hepatitis and cirrhosis. The liver is also a frequent site of metastases (secondary liver cancers), particularly those from progressive colorectal cancer. At NewYork-Presbyterian Hospital, both types of tumors are managed effectively, using the latest techniques delivered by a multidisciplinary team of highly skilled and experienced professionals.

This exceptional level of care is available at both NewYork-Presbyterian/Columbia University Medical Center and NewYork-Presbyterian/Weill Cornell Medical Center. Each institution boasts a renowned roster of liver tumor specialists, including hepatologists, gastroenterologists, surgeons, medical and radiation oncologists, interventional endoscopists and radiologists, pathologists, nurses, social workers, and others involved in the comprehensive care of patients.

Liver Tumor Diagnosis
Patients have access to a number of imaging procedures to diagnose liver tumors, including ultrasound, CT, MRI, and PET scanning. Interventional radiology is useful for biopsying liver tumors and for accessing areas of the body that are difficult to get to using conventional surgery.

Management of Liver Metastases
Liver metastases from colorectal cancer may be diagnosed at the same time as the primary colorectal tumor (synchronous metastases) or may develop later, as the disease progresses following tumor resection (metachronous metastases). Our team assesses each patient’s case individually to tailor a personalized plan of care.

For patient with synchronous metastases, we may offer neoadjuvant chemotherapy followed by simultaneous or sequential surgeries to remove the primary tumor and the liver metastases. Patients with metachronous metastases may be offered systemic chemotherapy, followed by surgery in operable cases. A number of anticancer agents have been developed over the last decade to extend the lives of patients with advanced colorectal cancer. Treatment with these and other agents, as well as surgery, is available at both NewYork-Presbyterian Hospital campuses, as along with clinical trials evaluating novel drugs and drug combinations.

The liver is also a site for the metastasis of cancers originating in other organs, such as the ovaries and breast, and neuroendocrine tumors arising in the pancreas and bowel. Our multidisciplinary team meets to optimize the care of these patients as well.

Treatment of Primary Liver Cancer
Select patients with chronic hepatitis B, hepatitis C, and/or cirrhosis may be screened with ultrasound or MRI as frequently as every six months to detect hepatocellular carcinoma early, should it develop. Some patients with early tumors may be candidates for liver transplantation, a procedure that is performed at both the NewYork-Presbyterian/Columbia and NewYork-Presbyterian/Weill Cornell campuses.

NewYork-Presbyterian Hospital boasts one of the largest and most experienced liver transplantation programs in the nation, offering living donor liver transplantation and employing minimally invasive surgical approaches whenever possible.

Other patients with liver cancer may be offered surgery, locoregional therapy, or systemic therapy. Surgery may be used in the management of localized tumors in patients with compensated liver disease. Patients with small tumors (less than 4 cm in diameter) may also be candidates for localized therapy, such as:

- radiofrequency or microwave embolization, in which the tumor is destroyed with highly targeted radiofrequency or microwave energy
- radio arterial embolization, in which tiny spheres radiolabeled with yttrium-90 are delivered to the tumor site via the hepatic arterial system; the radioactive yttrium kills cancer cells at the tumor site

Chemoembolization (chemotherapy injected into the hepatic artery via a continued on back
Liver Cancer

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catheter) may be used to target larger tumors. The chemotherapy is combined with a substance that temporarily blocks off the hepatic artery, trapping much of the chemotherapy near the tumor. This approach spares nearby healthy tissue from the toxic effects of chemotherapy.

Systemic therapy, such as the drug sorafenib, is offered to patients who are not candidates for surgery or locoregional therapy. NewYork-Presbyterian/Columbia is conducting several clinical trials assessing sorafenib in combination with other agents for patients with hepatocellular carcinoma.

Management of Bile Duct Obstruction

Blockage of the bile duct is a potential complication of liver tumors, liver surgery, and bile duct cancer. Our interventional endoscopists utilize endoscopic retrograde cholangiopancreatography (ERCP) to relieve bile duct obstructions. They may insert a stent into the duct to relieve the obstruction and allow drainage to proceed into the intestine, sparing the patient from having to wear an external bag on the abdomen to drain fluids and improving quality of life. This approach may relieve the patient of associated jaundice as well. Both campuses offer endoscopic ultrasound to biopsy bile duct or pancreatic tissue.

Patients with bile duct cancer who are candidates for surgery are offered a procedure tailored to the location of the tumor in the biliary tree. Lesions located high in the biliary tree may require liver resection, while patients with distal bile duct tumors may have the Whipple procedure. Our surgeons are highly experienced in performing this procedure and have achieved good outcomes.

Coordination of Care

We understand that the management of hepatobiliary tumors can be a complex and lengthy process. Patients’ healthcare teams therefore include patient care coordinators to facilitate appointments with various specialists, and support services (including psychosocial support and financial guidance) to ease the journey for patients and their families.

Personalized, comprehensive care for patients with primary and secondary liver tumors

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