

Cleveland Clinic first to use latest ablation technology to destroy large liver tumors

November 24 2020



The liver is examined with laparoscopic ultrasound and the tumor is exposed for microwave ablation. Credit: Cleveland Clinic

Cleveland Clinic is the first hospital in the world to use a recently FDA-approved ablation technology that can destroy large liver tumors. The

minimally invasive procedure uses a single needle connected to a powerful 150-watt microwave generator that can burn a malignant liver tumor as large as 2.4 inches, which is about the size of an egg.

Eren Berber, M.D., director of Cleveland Clinic's Surgical Liver Tumor Ablation Program, led a team that successfully used the technology in October to treat a patient who had a 2.4-inch liver tumor. Following the minimally [invasive procedure](#), the patient is doing well and the post-operative scan shows no trace of the tumor.

To perform the procedure, a laparoscopic camera and an ultrasound probe to locate the tumor are inserted in the abdomen through two small incisions. Under laparoscopic guidance, a microwave needle is inserted through the skin into the liver [tumor](#). When ready, the generator is powered on to deliver heat that burns and destroys the lesion.

Advances in minimally invasive liver surgery and [ablation](#) technologies continue to offer new treatment options for patients who have large malignant liver tumors and are not good candidates for open liver surgical procedures that are associated with longer operative times and hospital stays, as well as higher incidence of complications.

"The goal is to offer the best treatment option for patients depending on their unique health condition. In the hands of an experienced surgical team, the laparoscopic ablation technique benefits the patient, who experiences better postoperative recovery, less pain, a quicker return to normal life, and a lower risk of an incisional hernia compared with traditional open surgery," said Dr. Berber, with Cleveland Clinic's Endocrinology & Metabolism Institute and Digestive Disease & Surgery Institute.



Microwave ablation (burning of the tumor) is performed by using laparoscopic ultrasound guidance and monitoring. Ultrasound monitoring is key to the procedure by confirming that all of the tumor is covered with the burn created by microwave ablation. Credit: Cleveland Clinic

Cleveland Clinic has been using ablation technologies to treat smaller tumors that are about 1.5 inches in diameter and not amenable to liver resection. To date, Dr. Berber has performed one of the largest surgical laparoscopic series in the world using advanced ablation technologies to destroy liver tumors. Left untreated, malignant liver tumors can progress and lead to symptoms of liver disease, and even liver failure.

Since the first case in October at Cleveland Clinic, Dr. Berber and his team have successfully treated three more patients with large [liver](#)

tumors.

Dr. Berber has a consulting agreement with Medtronic and has received honoraria for consulting activities. His consulting agreements do not affect his choice of the best treatment option for his patients.

Provided by Cleveland Clinic

Citation: Cleveland Clinic first to use latest ablation technology to destroy large liver tumors (2020, November 24) retrieved 22 May 2024 from <https://medicalxpress.com/news/2020-11-cleveland-clinic-latest-ablation-technology.html>

<p>This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.</p>
--