

New surgical technique for removing inoperable tumors of the abdomen

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Abdominal tumors involving both roots of the celiac and superior mesenteric artery (SMA) are deemed unresectable by conventional surgical methods, as removal would cause necrosis of the organs that are supplied by those blood vessels.

A case report published in the journal *American Journal of Transplantation* presents a novel surgical technique that enables surgeons to remove tumors that are unresectable by the usual surgical techniques.

Led by Tomoaki Kato, MD, FACS, of Columbia University, surgeons removed tumors in 3 patients involving both the celiac artery and SMA using new surgical techniques never performed before, known as "ex vivo" surgery where the organs are removed to do surgery.

First, surgeons removed entire abdominal organs together with the tumor. The patient is "organless" during this period. The tumor was cut and [blood vessels](#) were reconstructed using synthetic vascular grafts. Surgeons then re-implanted the organs back into the patient's abdomen, connecting blood vessels and gastrointestinal tracts.

Surgery was successful, and all 3 patients are alive with no [tumor recurrence](#) to date after 2 to 4 years from the surgery.

"Our technique appears both feasible and effective in the proper clinical situation when performed by a multidisciplinary team experienced in multivisceral transplantation," Kato notes. "This technique can expand

the role of [transplant surgery](#) in specific oncological problem, and more patients with 'inoperable' tumors can be operated."

More information: *American Journal of Transplantation* 2012; [DOI: 10.1111/j.1600-6143.2011.03945.x](#)

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