

Ablation proved as effective as traditional surgery in treating kidney cancer

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A minimally invasive technique used to destroy kidney tumors with an electrically controlled heating probe showed similar effectiveness as surgical removal of tumors in curbing cancer recurrence rates for up to five years after treatment.

In an article available online in the journal *Cancer*, Dr. Jeffrey Cadeddu, professor of urology and radiology at UT Southwestern Medical Center, reported the outcomes of more than 200 patients who were treated with radiofrequency ablation (RFA).

Once the diagnosis of tumor is confirmed and the RFA technique is agreed upon, a needle-like probe is placed inside the tumor. The radiofrequency electricity waves passing through the probe heat up tumor tissue and destroy it. Surgeons view the RFA procedure with the aid of imaging devices such as computed tomography (CT scan).

Of the 208 patients who underwent the RFA procedure, 160 were diagnosed with [renal cell carcinoma](#), a type of [kidney cancer](#) that is slow-growing but malignant and able to spread easily to other organs. Those patients had three- and five-year survival rates of more than 95 percent.

"These types of cancers aren't typically fast-growing, but there are between 40,000 and 50,000 cases of kidney cancers diagnosed each year in the United States," Dr. Cadeddu said. "The fact that cancer survival rates were comparable to surgical interventions is very encouraging."

Currently, many patients who are diagnosed with primary tumors that originate inside the kidney are treated surgically.

"The standard treatment is usually a partial nephrectomy, where the surgeon removes the tumor and some surrounding tissue via open or laparoscopic surgery," said Dr. Cadeddu. "With surgery, there is a 5 percent to 10 percent risk of bleeding and an associated need for transfusion, as well as an increased chance of readmission for the patient. Of course, the recovery time is longer as well."

With open surgery, surgeons go in through a patient's abdomen or flank to remove the kidney tumor. A laparoscopic partial nephrectomy involves doctors accessing the organ through several small incisions in a patient's abdomen. The recovery time for open surgery is about six to eight weeks and three to four weeks for laparoscopic procedures.

With RFA, 90 percent of the patients are able to go home the same day, said Dr. Cadeddu, but the real advantage to RFA is its superior preservation of kidney tissue.

"Preserving kidney function has been clearly demonstrated to maximize quality of life and length of life for patients with kidney tumors," Dr. Cadeddu said. "Whenever possible, we try to save as much of the kidney as we can."

Provided by UT Southwestern Medical Center

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