

Targeted radiofrequency ablation (t-RFA) of metastatic spinal tumors

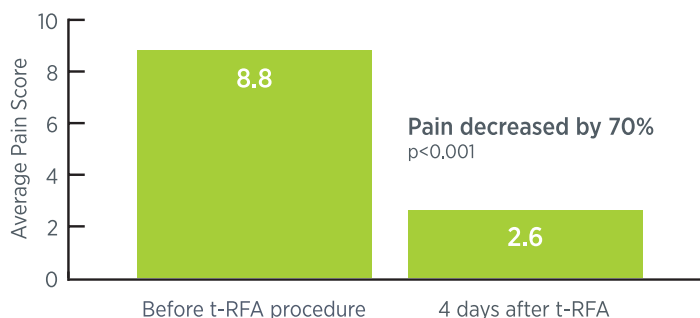
Bryn Mawr Hospital, Main Line Health® offers a new option for patients with painful, metastatic spinal tumors. Targeted radiofrequency ablation (t-RFA) is a minimally invasive procedure that delivers fast and durable pain relief and localized tumor destruction in a single, outpatient treatment.

How is t-RFA performed?

While the patient is under local anesthesia, a small, steerable device is inserted through a tiny incision into the vertebra to target the spinal tumor. The device uses radiofrequency energy to heat and destroy metastatic tumor cells, while real-time sensors within the device continuously monitor and display temperature for added safety. Once the tumor is ablated, the device is removed. In most cases, the entire procedure takes less than 60 minutes.

How does t-RFA benefit patients?

- **Rapid, lasting pain relief**—by providing fast, meaningful pain relief from metastatic spinal tumors, patients experience a return to their quality of life.
- **Complementary to chemotherapy and radiation**—t-RFA involves no drugs or radiation and will not interfere with systemic treatments, allowing patients to continue treatment of their primary cancer without interruption. In some cases, the patient may find it easier to lie still for other treatments when pain levels are reduced by t-RFA. In addition, t-RFA expands the range of treatment options for patients who have reached their maximum radiation dosage or have radiation-resistant tumors.



Meaningful Clinical Outcomes—This prospective study included 12 treated lesions in 10 patients who had failed conventional chemotherapy and radiation therapy. All patients reported “a significant decrease in pain shortly after treatment.”¹

Which patients are the best candidates for t-RFA?

While any patient with focalized pain from a metastatic spinal tumor may be a candidate for t-RFA, several specific patient groups will likely benefit most from the procedure. These include patients

- with radio-resistant tumors
- with recurrent pain after radiation therapy
- with posterior vertebral body metastatic tumors
- who have reached their radiation dose limit
- with focalized pain and symptoms that are preventing palliative radiation
- who cannot undergo other palliative treatments due to current systemic treatments

Are there risks with t-RFA?

As with any surgical procedure, patients undergoing t-RFA are subject to risks that may include problems from sedation, bleeding, bruising, pain, infection and other complications. Additional complications could include: blood clots, collapsed lungs, and damage to normal tissue, nerves, the spinal cord or other structures resulting in injuries including paralysis. The procedure is contraindicated for patients with pacemakers or other electronic implants or those with lesions in the cervical levels of the spine.

The importance of pain management

The National Comprehensive Cancer Network (NCCN), which provides guidelines for evidence-based care, maintains that in order to maximize patient outcomes, pain management is an essential part of oncologic management. Radiofrequency ablation is one of the interventions suggested for bone pain without oncologic emergency.²



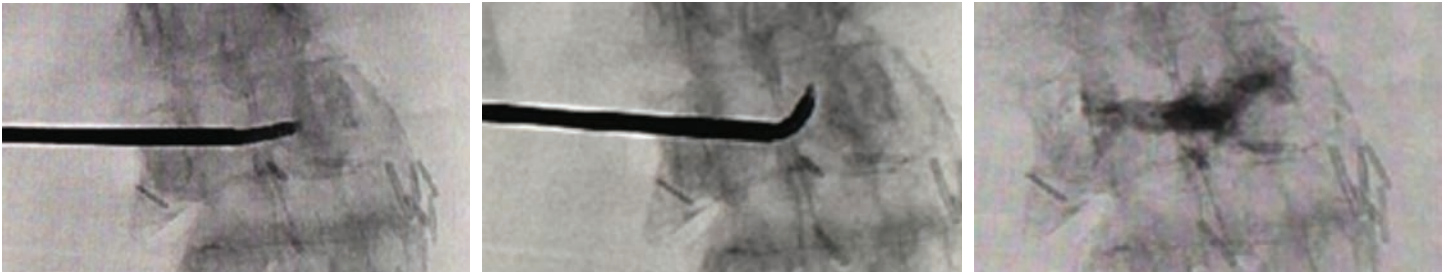
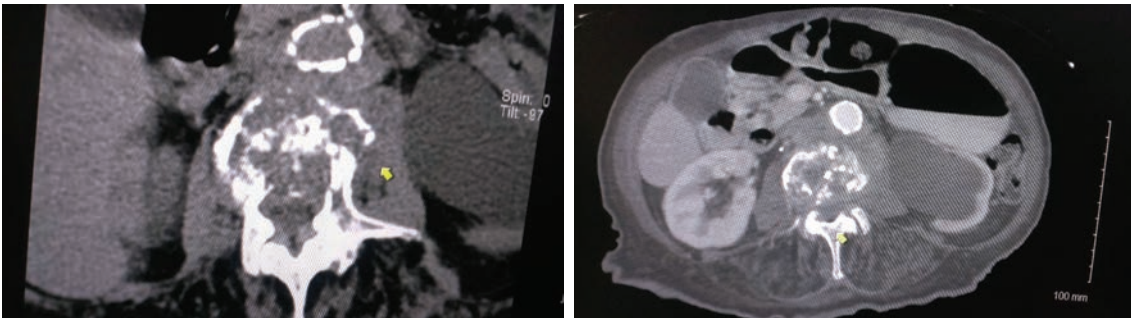
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To learn more, call **Vikram S. Dravid, MD** at **484.337.3453**.

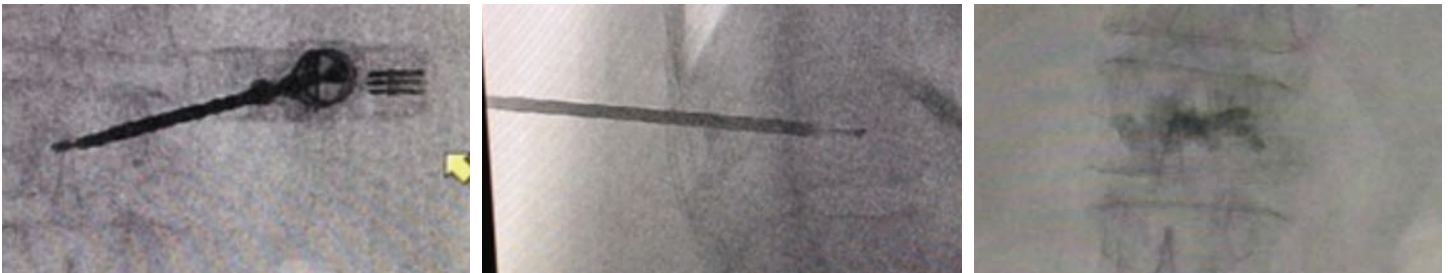
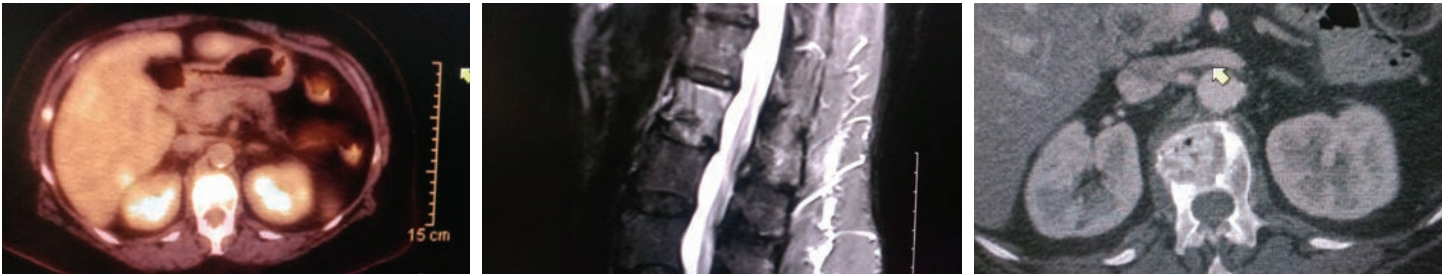
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¹Source: Dhand, et al., JVIR 2013.24(7): p.1077-78 www.jvir.org/article/S1051-0443(13)00968-8/abstract. ²NCCN Guidelines Version 2.2014 Adult Cancer Pain.

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93 y/o, L3 metastatic lesion, uterine carcinoma. Immediate, significant reduction in pain post-procedure.



70 y/o, L1 metastatic lesion, small cell carcinoma of lung. Some reduction in pain post-procedure.



65 y/o, L3 & L4 metastatic lesions, non-small cell lung cancer. Immediate reduction in pain post-procedure.