

SURGERY

MRgFUS—non invasive treatment for patients with painful bone metastasis

Bone metastases are key contributors to cancer-related pain, often impairing quality of life. Radiotherapy and analgesics are the standard of care for localized metastatic pain; however, two thirds of patients still have residual pain after treatment. Hurwitz and colleagues have now demonstrated that magnetic resonance-guided focused ultrasound (MRgFUS), a non-invasive technique with surgical precision for thermal ablation, is a safe and effective palliative therapy for patients with persistent or recurrent pain after radiation.

The investigators enrolled 147 patients and randomly assigned them 3:1 to receive MRgFUS or placebo. “MRgFUS results in a rapid and durable response at a rate that compares well with other treatment options,” explains Hurwitz. Response rates at 3 months were 64.3% in the MRgFUS arm versus 20% in the

placebo arm. “These benefits were not just highly statistically significant, but also of meaningful clinical impact,” continues Hurwitz. Of note, many patients were able to reduce or discontinue use of narcotics. The researchers are exploring how refining this technique can improve response rates and extend applicability. As Hurwitz emphasizes, “the role of MRgFUS as part of primary treatment for bone metastasis, including enhanced effects when heat and radiation are combined, also needs to be further explored.” These are important efforts as pain is one of the major factors negatively impacting everyday life of patients with advanced cancer.

Alessia Errico

Original article Hurwitz, M. D. *et al.* Magnetic resonance-guided focused ultrasound for patients with painful bone metastases: phase III trial results. *J. Natl Cancer Inst.* doi:10.1093/jnci/dju082