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The WCC Note™

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A Weekly Guide To Harmonizing Clinical Trial Imaging

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MR-GUIDED FOCUSED ULTRASOUND SURGERY

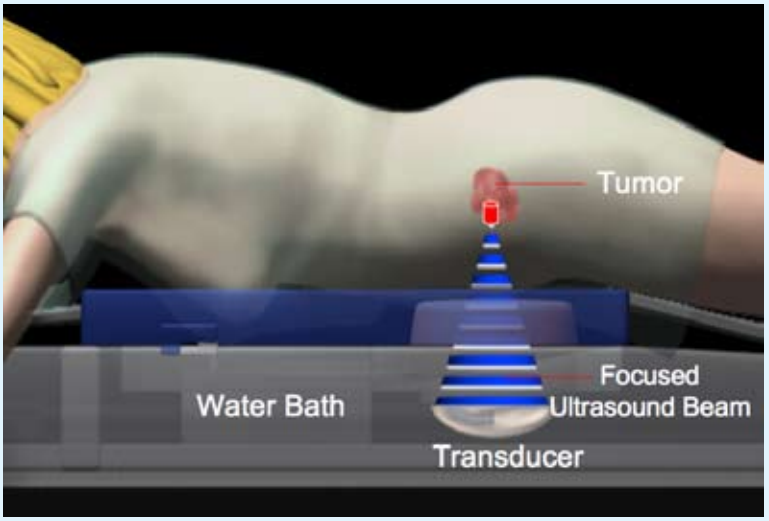
Non-Invasive Technique Effective for Treating Uterine Fibroids

In a study from the United Kingdom, researchers evaluated the cost-effectiveness of a new treatment for symptomatic uterine fibroids, **MR-guided focused ultrasound surgery (MRgFUS)**, as compared to current treatments including hysterectomy, myomectomy, and uterine artery embolization. The study found that, taking into account the cost, symptomatic relief, and outcomes after follow-up for several years, MRgFUS was more cost-effective than the other techniques. Another study led, by researchers from Harvard Medical School, found that in approximately 80% of patients, MRgFUS results in symptomatic improvement sustained for 12 months after treatment.[1,2]

Conclusion: MRgFUS is a cost-effective, non-invasive way to provide symptomatic relief to women with fibroids.

WHAT IS MR-GUIDED FOCUSED ULTRASOUND?

MR-guided focused ultrasound (MRgFUS) is a relatively new method of thermal ablation for tumors. The ultrasound machine creates high-energy sound waves focused at the area of interest, which heats the tissues and kills them. The ultrasound unit is integrated with the MR imaging system, allowing the MR images to guide the ultrasound beam to the correct location while avoiding vital structures such as the bowel. In addition, the MR images give real-time temperature measurements of the issues to confirm the effect of the ultrasound beam.



The FDA approved MRgFUS for the treatment of uterine fibroids in 2004. Uterine fibroids are extremely common, benign tumors that cause symptoms in women of reproductive age. They are commonly treated with invasive procedures such as myomectomy, hysterectomy, and uterine artery embolization. Because MRgFUS is completely non-invasive, it provides the advantage of fewer post-procedural complications.

PET COLON CANCER

PET Can Detect Early Recurrence of Colorectal Cancer

French researchers evaluated the possible role of FDG-PET in detecting colorectal cancer recurrences. Their study group consisted of 130 patients who had undergone both curative surgery and chemotherapy for treatment of colorectal cancer. These patients were randomly assigned to either receive traditional follow-up or follow-up with PET. Starting at nine months

assigned to either receive traditional follow-up or follow-up with PET. Starting at nine months post-surgery, all patients had follow-up every three months until 24 months had passed. Follow-up consisted of physical examination, ultrasound, CT, and chest x-rays at fixed intervals. The PET group had the same tests, in addition to F18-FDG PET after nine and 15 months. Recurrences were detected in a total of 46 patients – 25 in the PET group and 21 in the other group. The recurrences in the PET group were detected earlier (12.1 months) than the conventional follow-up group (15.4 months). The recurrences in the PET group were also more likely to be cured by surgery. In addition, PET detected three unexpected non-colorectal cancers.[3] **Conclusion: Regular follow-up with PET may allow earlier detection of colorectal cancer recurrence.**

SOURCES

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2. Zowall H, Cairns JA, Brewer C, *et al.* "Cost-Effectiveness of Magnetic Resonance-Guided Focused Ultrasound Surgery for Treatment of Uterine Fibroids." *BJOG: An International Journal of Obstetrics and Gynaecology* 2008; 115:653–662.
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NEXT ISSUE: MORE NEWS AND TRENDS IN CLINICAL TRIAL IMAGING

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