

## Journal Watch-Palliative Care

### MR-guided focused ultrasound surgery (MRgFUS) for the palliation of pain in patients with bone metastases-preliminary clinical experience

**By:** Alireza Sameny (FMR2), August 14, 2008 during morning rounds at Grey Nuns Tertiary Palliative Care Unit.

**Reference:** Annals of Oncology 18: 163–167, 2007

R. Catane, A. Beck, Y. Inbar, T. Rabin, N. Shabshin, S. Hengst, R. M. Pfeffer, A. Hanannel, O. Dogadkin, B. Liberman, & D. Kopelman

#### Abstract

**Background:** Magnetic resonance-guided focused ultrasound surgery (MRgFUS) is a noninvasive thermal ablation technique, shown to be clinically effective in the treatment of uterine fibroids and is being evaluated as a method of thermal ablation of benign and malignant breast tumors. To evaluate the safety and initial efficacy of MRgFUS for the palliation of pain caused by bone metastases, in patients for whom other treatments are either not effective or not feasible.

**Materials and methods:** Thirteen patients suffering from symptomatic bone metastases underwent MRgFUS procedure. Treatment safety was evaluated by assessing the incidence and severity of device-related complications up to 6 months after treatment. Effectiveness of pain palliation was evaluated by visual analog scale, pain questionnaires and changes in the patients' medication.

**Results:** Fifteen procedures were carried out. Mean follow-up was 59 days. Twelve patients received adequate treatment and were available for follow-up. Two patients died due to disease progression during the first month after treatment. No severe adverse events were recorded. The remaining 10 patients reported prolonged improvement in pain score and/or reduced analgesic dosage.

**Conclusion:** MRgFUS may provide a safe and effective noninvasive alternative for the palliation of pain, caused by bone metastases.

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#### Strength:

As a pilot study, it introduced a new method for pain management in bone metastasis.

Enough follow up considering the life expectancy of the patient population.

#### Weakness:

Small group of patients.

Lack of control group.

**Relevance to Palliative Medicine:** Bone metastasis is one of the common side effects of cancers. Although it is not lethal, usually it causes lots of pain. The current study investigates a new method to relieve this pain in cases that have not responded to conventional therapies. Safety and outcomes of this new method needs to be studied in more detail. Moreover, there are issues regarding expenses and resource allocation that should be addressed in future.