

Can magnetic resonance image-guided focused ultrasound surgery replace local oncology treatments? A review

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ABSTRACT

Magnetic resonance image-guided focused ultrasound surgery (MRgFUS) is an innovative technology in the new panorama of treatment using ultrasound. It combines two well-known and distinct methodologies: high-intensity focused ultrasound (HIFU) and a magnetic resonance imaging system (MRI). This review on MRgFUS is focused on the technical aspects and the current clinical applications in oncology. More precisely, the advantages/disadvantages of MRgFUS compared to other local approaches such as surgery and radiotherapy are discussed in detail.

Key words: magnetic resonance imaging, oncology, therapy, ultrasound focused.

Authors conflict of interest: none.

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Received July 26, 2010;
accepted February 16, 2011.