



FOCUSED ULTRASOUND

A NOVEL APPROACH TO TREATING CANCER

OVERVIEW

Focused Ultrasound (FUS) is an early-stage, non-invasive therapeutic technology with the potential to improve quality and longevity of life and decrease the cost of care for patients with cancer. FUS could serve as an alternative or complement to each of the four pillars of traditional cancer treatment: surgery, radiation therapy, chemotherapy and immunotherapy.

This novel technology delivers concentrated beams of ultrasonic energy to precise targets deep in the body, which stimulates a variety of therapeutic effects at the targeted area without damaging surrounding healthy tissue. The diversity of therapeutic effects, which can be achieved without incisions or the use of ionizing radiation, may enable the treatment of more than 60 medical conditions with focused ultrasound, including 16 different cancers.

Promising pre-clinical and clinical studies have demonstrated focused ultrasound's potential to optimize the arsenal of traditional cancer therapy by providing an alternative to invasive surgery, replacing or augmenting ionizing radiation, and enhancing drug delivery and anti-tumor immune responses.

STATE OF THE TECHNOLOGY

Although research, development, and commercialization is increasing, most potential applications of focused ultrasound are in the early stages of development. Currently, the technology is approved in the US for treating painful bone metastases, prostate tissue, uterine fibroids, and essential tremor; and outside of the US, it is approved for many cancers and neurological disorders.

State of Research & Regulatory Approval by Clinical Application



*The FDA approved two focused ultrasound systems in 2015 that could be used to treat these prostate diseases



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BENEFITS

Current cancer therapy is not effective for all patients, and can also cause side effects that compromise quality of life and limit treatment. Focused ultrasound has the potential to enhance current therapies as well as provide new therapies for many patients, reducing pain, complications and cost while improving outcomes.

Focused ultrasound has the potential to enhance the effectiveness of, or provide an alternative to, the four pillars of traditional cancer treatment: surgery, radiation therapy, chemotherapy, and immunotherapy



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