

High-Intensity Ultrasound Improves Scar Ablation

Competitive Advantages

- ☑ Scar removal therapy based on recent HIFU technology.
- ☑ Applies precisely targeted, intense ultrasound that ablates scar while leaving surrounding tissues undamaged.
- ☑ Low recurrence and minimal side effects anticipated.
- ☑ Cylindrical transducer focuses energy in a line to match scar shape.

The scarring that follows skin and musculoskeletal injuries causes pain, loss of range of motion, and impaired function. Current treatments are unsatisfactory, producing high recurrence rates and side effects. In many attempts at surgical repair, worse scarring results from the patient's inflammatory response to the wound.

Precisely Targeted Therapy

High-intensity focused ultrasound (HIFU), a noninvasive, nonionic technology that produces highly localized acoustic energy, offers a promising new procedure for scar ablation. Currently in investigative use for tumor ablation, it heats and kills cancer cells while leaving surrounding tissue intact. HIFU is free of the side effects associated with chemotherapy and radiation, and it generates a thermal lesion the size of a grain of rice within seconds. Larger tumors can be treated with multiple exposures.

Low-intensity ultrasound is used by physical therapists to treat scars, but it heats tissue much less rapidly and to much lower temperatures than HIFU. This type of ultrasound may soften a scar but does not remove it, and the treatment is ineffective for severe scars.

Minimal Side Effects Anticipated

A new application of HIFU is its use in the treatment of scarring and ad-

hesions that impair function. The ultrasound energy level would be lower than that in cancer treatment but higher than that in physical therapy.

Scar treatment with HIFU is expected to achieve rapid ablation while producing only mild inflammation on the periphery of the targeted region. In addition, the ultrasound can be applied with a cylindrical transducer that focuses the energy on a line rather than a point, better matching the shape of many scars.

Next Steps

Systematic testing of the safety and efficacy of the procedure will be conducted.

Patent / Licensing Status

Patent pending. Exclusive rights available.

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Full description with illustrations (PDF)
www.uvminnovations.com/graphics/HiFU.pdf

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