What is HIFU?

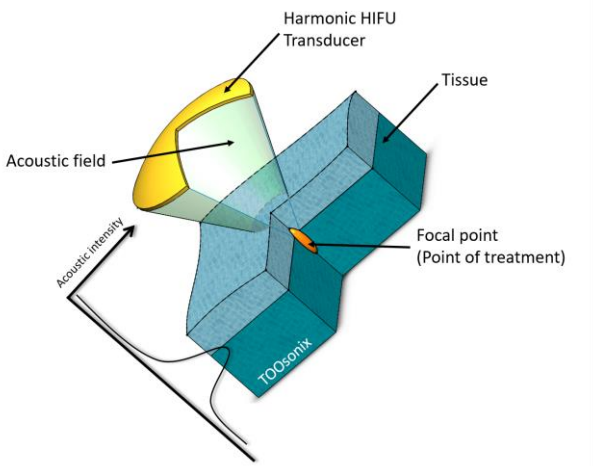
The mechanism used in HIFU is similar to using a magnifying glass to focus light. Instead of concentrating light, HIFU however uses a focused acoustic transducer to concentrate a beam of ultrasound waves onto a specific target.

In contrast to light-beams, the ultrasound can however pass through tissue with little effect. When the ultrasound reach the focal zone, where the beam converge, the energy is greatly intensified, and thereby induces thermal and mechanical effects. The method can therefore for example be used as a non-invasive way to treat features inside the human body without any form of surgical procedures or puncture of the skin surface.

The HIFU method is very well suited to make local thermal points and lesions of well-defined volumes inside the human body. The body's own immune system is then immediately activated and start a process of removal of dead and damaged cells via the lymphatic and vascular systems. Since the procedure does not involve any surgery or other open exposure of the body's internal structures, the risk of infections, scarring and other adverse effects typically seen in traditional surgery is significantly reduced.

The HIFU functionality can therefore be summarized as follows:

- Ultrasound is focused into a small focal point with very high acoustic energy density
- The focal point is created non-invasively inside the body without surgical procedures
- The very high power-density in the focal point creates a lesion and/or thermal effect
- There is no effect from the ultrasound in the adjacent tissue outside the focal point
- The local heating or cavitation in the focal point kills or activate cells
- The body's immune system is activated to repair and renew damaged cells



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