Haifu

Treatment—Minimize harm to patients

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Model JC200D

Focused Ultrasound Tumor Therapeutic System (for Gynaecology)

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Focused Ultrasound Tumor Therapeutic System (for Gynaecology)

Product Structures

Treatment Table

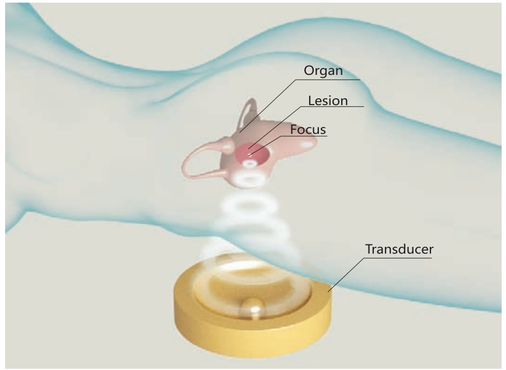
- High-Frequency Generator
- Integrated Transducer
- 6-Dimension Motion Devices

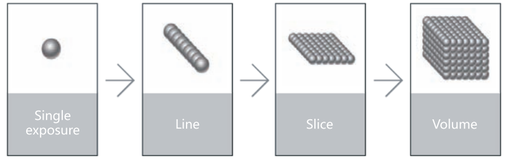
Central Console

- Ultrasound Monitoring Device
- Therapeutic Control Part

Auxiliary Systems

- Water Treatment System
- Safety Protecting Device





Technology

- An ultrasound beam can propagate through living tissue harmlessly and be focused at a tiny focal region. The energy in the focal region is high enough to induce an immediate thermal toxicity (temperature above 56 °C) which will cause irreversible coagulative necrosis (a "lesion").

3D Conformal Treatment

- From a point (single exposure) to a line, then a slice, then a volume that covers the entire tumor at any shape.
- Large-volume ablation in a single treatment
- Safe ablation of malignant tumors adjacent to major blood vessels

Powerful TPS Software

- 3D targeting module defines the boundary of tumor
- 3D planning module divides tumors into appropriate slices, records and analyzes coordinate information, forms a 3D therapeutic plan.
- Therapeutic module manages the treatment in conformity with treatment planning, monitors the tissue response and the safety of acoustic pathway, adjusts therapeutic parameters.

Precise Ablation Technology

Precise Boundary

- The treatment planning software enables conformal ablation of the whole tumor with no upper limit on the volume nor tumor shape
- The margin between treated and untreated tissue can be as narrow as 6 to 10 cells wide

Precise Dosage

- Real-time imaging allows visual feedback during treatment process
- Immediate image after each exposure can be compared with the previous
- An operator can adjust the dose anytime to suit the individual needs
- Integrated dose data will be recorded for future analysis and effect evaluation

Precise Control

- With ±1 mm accumulative error, the accurate movement of 6-dimensional motion system can ablate tumors adjacent to major vessels and nerves safely
- Color Doppler Ultrasound provides clear real-time monitoring during the whole treatment procedure

Indications

Uterine fibroids

Clinical Advantages

- Non-invasive treatment , with no blood transfusion and no radiation
- Preserve of uterus and sexual function, no damage to the structure of pelvic floor
- Day treatment under conscious sedation, with no anaesthesia
- Real-time ultrasound guided therapy with digital quantitative analysis

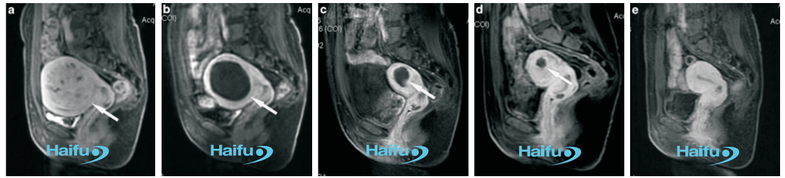
End-users

- Incheon Christian Hospital, Incheon, Korea
- European Institute of Oncology, Milan, Italy
- The John Radcliffe Hospital, Oxford, UK
- University Clinics of Bonn, Bonn, Germany
- Hospital Mutua de Terrassa, Barcelona, Spain
- Saint Marina Hospital, Pleven, Bulgaria
- Medical Center of Central Bank of Russian Federation, Moscow, Russia
- Queen Mary Hospital of the University of Hong Kong, China
- King Fahad Medical City, Riyadh, Saudi Arabia
- 301 PLA General Hospital, Beijing, China

Over 100 centers and 60,000 cases worldwide (Nov, 2014)

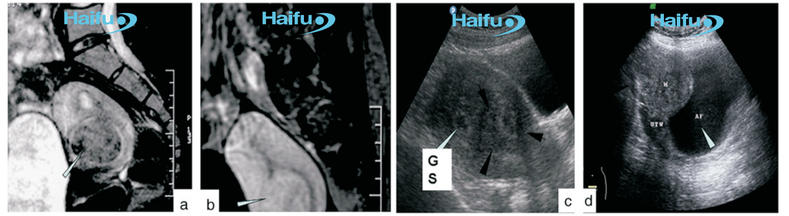
Incheon Christian Hospital, Incheon, Korea

Clinical Cases



Wei Wang&Yang Wang&Ting Wang&Junyan Wang& Longxia Wang&Jie Tan. Safety and efficacy of US-guided high-intensity focused ultrasound for treatment of submucosal fibroids. Eur Radiol, 2012.

MRI images of a 50-year-old woman received US-guided HIFU ablation of submucosal uterine fibroid. The ablated fibroid was completely absorbed 2 years later. a: before treatment, b: 1week, c: 6 week, d:1 year, e: 2 years after HIFU treatment.



Juan Qin, Jin-Yun Chen, Wen-Peng Zhao, Liang Hu, Wen-Zhi Chen, Zhi-Biao Wang. Outcome of unintended pregnancy after ultrasound-guided high-intensity focused ultrasound ablation of uterine fibroids.2012 International Federation of Gynecology and Obstetrics

Image for a 28-year-old woman (gravida 1, para 0) with uterine fibroids characterized by dysmenorrhea and secondary infertility for a period of 2 years. T2-weighted (A) and T1-weighted (B) MRI images of uterine fibroids (gray arrowhead) before HIFU ablation. (C) and (D) show the uterine fibroid gestational sac (GS, gray arrowhead; myoma, black arrowhead) at 8 months after HIFU and the gestational amniotic fluid (AF, gray arrowhead) after 26 weeks of gestation, respectively.

Total Solution

Professional Equipment

With complete intellectual rights, it is the world first equipment clinically applied in tumor treatment, a result of over 20 years experience and optimization.

Experienced Specialists

A team of experienced medical and engineering specialists will provide integrated training and service to enable the end-users independent operation of the equipment.

Customized Solution

Suitable clinical protocols, operation & management advices and research cooperation proposal will be tailored for each end-user.

Qualification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① Certification of National SFDA (China)
② National Prize of Technological Invention (China)
③ Certification of KFDA (Korea)
④ National Prize of scientific and technological advance (China)
⑤ Market Licence of Russia
⑥ Patent (Singapore)
⑦ Patent (USA)
⑧ Patent (Japan)
⑨ Patent (Canada)
⑩ Patent (Russia)
⑪ Patent (Korea)
⑫ Patent (Australia)
⑬ etc.

Main Parameters	Acoustic focusing efficiency	28000
	Focal region	1.1mm×1.1mm×3.3mm
	Max acoustic intensity	≥10000W/cm^2
	Max output acoustic power	400W
	Side lobe	<-10dB
	Maximum range of transducer movement	X=120mm,Y=120mm,Z=180mm
	Movement control accuracy	±0.1mm
	Accumulated tolerance in linear movement	±1mm
	Therapeutic frequency	0.5-2MHz
	Probe vertical movement range	0-100mm
	Probe rotating angle range	0°-180°
	Dissolved oxygen	≤4ppm
	Electrical Power	8.5KVA
Installation Environment	Room requirement	Area：≥25m^2, Width：≥4m
	Power requirement	Three-phase five-wire power cable with ground wire which in conformity with local laws
	Water requirement	Flow: 1~2m^3/h, Pressure: 0.2-0.5MPa