HIFU THERAPY:

CURRENT CLINICAL PRACTICE AND FUTURE AVENUES

INTERNATIONAL CONFERENCE

22 April 2016, Pleven, Bulgaria

Information

Home:	1. Medical University-Pleven, Bulgaria
Co-organisators:	1. St. Marina Hospital-Pleven, Bulgaria 2. Second Affiliated Hospital of Chongqing Medical University, China
Venue:	Ambroise Pare Hall
Date:	22 April, 2016
Time:	09:00 a.m.- 16:00 p.m.

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Dear Colleagues and guests,

For the last 15 years the High Intensity Focused Ultrasound (HIFU) therapy has been introduced and developed as an innovative non-invasive method for thermal ablation of some benign and malignant solid tumors. For its 3-year experience, the HIFU Center at Saint Marina Hospital-Pleven, Bulgaria, which is a training base for medical students of Medical University-Pleven, has become one of the "Centers of Excellence" in Europe with more than 350 non-invasive ultrasound ablations.

The first HIFU scientific conference will give a summarized report on the results of the bilateral scientific project titled "Research on the Potential of HIFU (high intensity focused ultrasound) Technology to treat Uterine Fibroids in Bulgarian and Chinese Patients as a Non-invasive Alternative Method to Conventional Surgery". The project is a part of the agreement between the governments of the People's Republic of China and the Republic of Bulgaria for scientific research and development in which the Medical University - Pleven, HIFU Center at Saint Marina Hospital-Pleven and the 2nd Affiliated Hospital to the Medical University of Chongqing have participated.

The other purpose of the Conference is to enable colleagues, experienced with different clinical applications of HIFU therapy to share their knowledge, ideas and expertise with broader circles of medical society - both from Bulgaria and abroad, as well as with undergraduate and postgraduate medical students. We hope that this scientific forum will enlighten and provide answers to some questions about the principles of this innovative treatment.

We believe that organizing the First HIFU Conference at Medical University – Pleven, Bulgaria is the best way to share and improve our knowledge and to create "Future Avenues" of this therapy.

Sincerely yours,

Prof. Slavcho Tomov, MD, PhD, DSc
Rector of Medical University - Pleven
President of the Organizing Committee

Assoc. prof. Dobromir Dimitrov, MD, PhD
Secretary of the Organizing Committee

Organizing committee:

Prof. Slavcho Tomov, Chairmen and
Prof. Zhechuan MEI, Co-Chairmen, Scientific

Committee members

Assoc. prof. Dobromir Dimitrov – *Secretary*

Dr. Zhou Kun – *Scientific Committee member*

Prof. Grigor Gortchev – *Scientific Committee member*

Dr. Ventsislav Georgiev – *member*

Prof. Tashko Deliyski – *member*

Dr. Hyulia Feradova – *member*

Dr. Nadya Stanislavova – *member*

Medical University - Pleven (MU-Pleven) stands out with its modern appearance of leading educational and research center with a priority in the development of telemedicine and robotic surgery, attracting growing numbers of Bulgarian and international students.

MU-Pleven is known as the first higher medical school in the country that in 1997 introduced the whole training course in Medicine in English language as the medium of instruction. At present 13 alumni of international medical doctors have already graduated and achieved successful medical career around the world - USA, Europe, India and Australia.

For its more than 40-year history MU-Pleven has been developing and growing very fast. Founded in 1974 as Medical Faculty, nowadays it is a university comprising three faculties – Faculty of Medicine, Faculty of Public Health and Faculty of Health Care. The Medical College and the Department of Language and Specialized Training are also included in the higher school structure. Training is carried out in 11 specialties in 4 professional fields - Medicine, Health Care, Public Health and Social Activities. In the academic 2015/2016 year a new basic unit within the structure of the university will be established - Faculty of Pharmacy offering training of Masters in Pharmacy.

With its highly qualified academic staff, with its impressive facilities, sports complex, two student dormitories, modern university library, its own publishing center, the University meets all the requirements for independent higher medical school.

Today Medical University – Pleven incorporates a large complex of educational facilities, contemporary pre-clinical base and a university hospital with over 1100 beds having a large number of specialized clinics and research units with modern equipment. The clinical base for training of students, postgraduates and trainee doctors is the University Hospital - University Multi-Profile Hospital for Active Treatment Dr. Georgi

Stranski - Pleven. Two robotic systems da Vinci S and da Vinci Si with a training simulator have been installed at the Oncology Center for performing robotic surgery and surgery from a distance in the fields of gynecology, general surgery and urology.

The only one in Eastern Europe and on the Balkans Telecommunication Endoscopic Center with an experimental operating room and two training simulators was launched in 2007 at MU-Pleven. The center is provided with high-tech equipment, which is the most advanced in the field of the Endoscopic Surgery. Two training amphitheatrically designed halls are equipped with a built-in audiovisual conference network for establishing connection within and outside the borders of the country. Live Surgery Sessions in 3D format are broadcasted there for training of students, postgraduates and trainee doctors with cutting-edge equipment. Since the year 2012 at MU-Pleven the non-invasive method of treatment of solid tumors was introduced for the first time in Bulgaria – the application of HIFU technologies (High Intensity Focused Ultrasound).

Saint Marina Hospital – Pleven is recognised for its focus on cutting-edge and innovative on the world stage treatment methods, its state-of-the-art medical equipment and its world class level of medical expertise. The mission that the founders have set for the hospital and its staff is simple – make available the achievements and advances of the leading medical minds in the world to its patients.

One such medical breakthrough is the ability to treat benign and malignant tumours of parenchymal organs non-invasively with the use of high-intensity focused ultrasound – HIFU. The technology was introduced by Saint Marina Hospital to Bulgaria in 2012, when it purchased its HIFU Model JC therapeutic system, the only system in the world approved for CE Mark that can treat malignant tumours through the use of HIFU, and CZF- Seepostar HIFU device from the global leader in HIFU research and development - Chongqing Haifu Technologies Ltd. The first patient to be treated with the innovative technology in Bulgaria was in 2012, in Pleven, at the newly launched Saint Marina Specialized Clinical HIFU Centre. In 2016, the Centre remains the only one of its type in Central and Eastern Europe and over 400 patients have benefited from the treatment, in some lucky patients even resulting in an otherwise impossible, pregnancy.

RESEARCH ON THE POTENTIAL OF HIFU (HIGH-INTENSITY FOCUSED ULTRASOUND) TECHNOLOGY TO TREAT UTERINE FIBROIDS IN BULGARIAN AND CHINESE PATIENTS AS A NON-INVASIVE ALTERNATIVE METHOD TO CONVENTIONAL SURGERY

Uterine fibroids (uterine fibrosis) are the most common solid tumors in the female pelvis and are a leading cause for hysterectomy - surgical removal of the uterus. Overall, 20-50% of women are affected according to the World Health Organization (WHO) worldwide.
The standard treatment modalities for fibroid-related problems include hysterectomy (abdominal, laparoscopic, or robot-assisted), myomectomy (abdominal, laparoscopic, or hysteroscopic) and the relative newcomer - uterine artery embolization (UAE).
HIFU is a completely non-invasive innovative technology for extracorporeal thermoablation of benign and malignant tumors. The essence of this unique technology is the generation of high energy focused ultrasonic beam, which is delivered into a certain focus of the tissue at a distance from the source. The absorption of this energy results in heating of the tissue, causing local temperature rise in the point of focus, and as a final result - coagulation necrosis is obtained, without the surrounding healthy tissues being damaged.

Purpose of the project:

1. The objective of this research is the creating of a working group of members of HIFU Center "St. Marina" Pleven, Bulgaria – a training base for students of the Medical University of Pleven, and colleagues from China. The group will develop a clinical protocol for the selection and monitoring of the Bulgarian and Chinese patients with myoma, treated with HIFU.
2. For the purpose of the study database (DB) software will be created. It will allow storage of patient data as well as fast, easy and convenient sorting, searching, making reports, filtering according to specific criteria for the needs of the project and the bilateral cooperation.

Scientific tasks:

Introduction of the HIFU technology to the patients, the medical and scientific community together with the advantages and benefits from this therapy of myoma compared to conventional surgery, uterine artery embolization and other popular invasive and minimally-invasive methods.

Creation of a unified Database (DB) as a software product which makes the great Chinese experience available to Bulgarian doctors and patients. This will unify the database processing in all HIFU centers and will facilitate the research and scientific activities.

Precise identification of the indications for HIFU treatment of uterine fibroids, the influence of several parameters such as vascularization of the myoma, body mass index /BMI/ of patients, etc on the performance of HIFU ablation as well as monitoring the effects of the treatment.

HIFU: Current Clinical Practice and Future Avenues

22 APRIL, 2016

Official programme

09:00 – 09:30	**Opening ceremony** *Chairman:* **Prof. Slavcho Tomov, MD, PhD, DSc** – *Rector of Medical University - Pleven* *Co-Chairman:* **Prof. Hui Zhu, MD, PhD, DSc** – *The chief of Clinical Center for Tumor therapy, Second Affiliated Hospital of Chongqing Medical University, China*
09:30 – 10:30	Final report on the results and findings from "Research on the Potential of HIFU (high intensity focused ultrasound) Technology to treat Uterine Fibroids in Bulgarian and Chinese Patients as a Non-invasive Alternative Method to Conventional Surgery" Chinese-Bulgarian project supported by the Governments of PR of China and Republic of Bulgaria
10:30 – 11:00	**Coffee break**
11:00 – 12:30	**HIFU treatment of patients with advanced pancreatic cancer** *Panel chairs:* **Prof. Grigor Gortchev-MD, PhD, DSc,** *Assoc. prof. Kun Zhou-MD, PhD*
11:00 – 11:15	"HIFU applications in malignancies" *Speaker:* **Hui Zhu** - *Chief of Clinical Center for Tumor Therapy-Chongqing, China*
11:15 – 11:30	"High-intensity focused ultrasound (HIFU) in advanced pancreatic cancer patients" *Speaker:* **Joan Vidal-Jove** – *Director HIFU - Focused Ultrasound Oncology Hospital, University Mutua Terrassa – Barcelona, Spain*

11:30 – 11:45	"High-intensity focused ultrasound (HIFU) for pancreatic carcinoma" *Speaker:* **Holger Strunk** - *Department of Radiology, University of Bonn, Germany*
11:45 – 12:00	"The comparisons of un-operative pancreatic cancer treated by HIFU between Bulgaria and China" *Speaker:* **Kun Zhou** - Second Affiliated Hospital of Chongqing Medical University, China
12:00 – 12:15	„Does HIFU treatment improve the quality of life of advanced pancreatic cancer patients?" *Speaker:* **Hyuliya Feradova** – *"St. Marina" Hospital, Medical University - Pleven, Bulgaria*
12:15 – 12:30	**Discussion**
12:30 – 14:00	**Lunch at the lobby**
14:00 – 15:30	**HIFU – a new medical frontier for malignant and benign indications across the human body.** *Panel Chairs:* **Prof. Holger Strunk** – *MD, PhD,* **Prof. Hui Zhu** – *MD, PhD*
14:00 – 14:10	"Imaging after HIFU of solid tumors" *Speaker:* **Milka Marinova** – *Department of Radiology, University of Bonn, Germany*
14:10 – 14:20	"HIFU and Immunology" *Speaker:* **Svetla Blazeva** – *Department of Immunology, MU – Pleven, Bulgaria*
14:20 – 14:30	"US-guided HIFU treatment of benign solid thyroid nodules in euthyroid patients" *Speaker:* **Roussanka Kovatcheva** – *Clinical Center of Endocrinology, MU – Sofia, Bulgaria*

14:30 – 14:40	"HIFU treatment in breast disease – single institution experience" *Speaker:* **Dobromir Dimitrov** – *Head of HIFU department, "St. Marina" Hospital, MU-Pleven, Bulgaria*
14:40 – 14:50	"Efficacy of US- Guided focused ultrasound (HIFU) Treatment of breast fibroadenoma - 12 months of follow up" *Speaker:* **Roussanka Kovatcheva** – *Clinical Center of Endocrinology, MU – Sofia, Bulgaria*
14:50 – 15:00	"Our experience with HIFU in the treatment of localized prostate cancer" *Speaker:* **Nita Gheorghe** – *HIFU Terramed Conformal, Bucharest, Romania*
15:00 – 15:10	"Complication rate after HIFU treatment – single institution experience" *Speaker:* **Dobromir Dimitrov** – *Head of HIFU department, "St. Marina" Hospital, MU-Pleven, Bulgaria*
15:10 – 15:20	"Focused US therapy for nonneoplastic intraepithelial disorders of vulva" *Speaker:* **Ventsislav Georgiev** – *HIFU Department, "St. Marina" Hospital, MU-Pleven, Bulgaria*
15:20 – 15:30	"HIFU in Otorhinolaryngology" *Speaker:* **Boris Duhlenski** – Department of Otorhinolaryngology, MU – Pleven, Bulgaria
15:30 – 15:50	**Discussion**
15:50 – 16:00	**Closing Ceremony**

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