The beneficial effects of combining hyperthermia, artificial raising of temperature to 40 - 45°C, and radiotherapy are well known in cancer treatment. Recent laboratory studies have demonstrated the radiation dose can be more than halved if combined with hyperthermia thus maintain the same survival rate. This free workshop, which will be also streamed online, will see the participation of world leading researchers in the field of radiotherapy and hyperthermia, and the most important metrology institutes in Europe to discuss the latest developments and the measurement challenges involved in the treatment. They will be joined by a selected committee of stakeholders representing clinics, pre-clinics and Oncology Institutes.
PRESENTATION FROM THE RaCHy CONSORTIUM

09:00 | WELCOME AND OPENING OF THE WORKSHOP  
Giovanni Durando - INRIM Istituto di Ricerca Metrologica - Italy

09:05 | EURAMET EMPIR 18HLT06 RaChy PROJECT OVERVIEW  
Giovanni Durando - INRIM Istituto di Ricerca Metrologica - Italy

09:15 | DESIGN AND IN SILICO MODELLING OF MAGNETIC NANO- 
PARTICLES FOR HYPER-THERMIA APPLICATIONS  
Alessandra Manzin - INRIM Istituto di Ricerca Metrologica - Italy

09:35 | DESIGN AND CHARACTERISATION OF A SYSTEM FOR ULTRASOUND HY 
PER-THERMIA IN SMALL ANIMALS  
Raphaela Baesso - NPL National Physical Laboratory - UK

09:55 | COMBINATION OF US HYPER-THERMIA AND RADIO- 
THERAPY: IN VIVO PRELIMINARY RESULTS AND FUTURE PLANS  
Antonello Spinelli - OSR Ospedale San Raffaele - Italy

10:15 | INNOVATIVE ANALYTICAL TOOLS FOR BIOLOGICAL ASSESSMENT  
Andrea Hornemann - PTB Physikalisch-Technische Bundesanstalt - Germany

10:35 | EVALUATION OF THE SYNERGISTIC BIOLOGICAL EFFECTS FROM COMBINED RADIOTHERAPY HYPER- 
THERMIA EXPERIMENTS  
Jacco de Pooter - VSL Dutch Metrology Institute - Netherlands

10:55 | COFFEE BREAK

PRESENTATION FROM STAKEHOLDERS

11:20 | US AND RADIOTHERAPY - PRECLINICAL STUDIES  
Gail ter Haar - ICR The Institute for Cancer Research - UK

11:40 | THERMAL DOSE CONCEPTS AND THEIR IMPACT FOR CLINICAL THERMAL THERAPY  
Gerard van Rhoon - ESHO European Society of Hyperthermic Oncology - Netherlands

12:00 | WHAT DO WE NEED FOR TO ACHIEVE THE MAXIMUM SYNERGETIC EFFECT OF HYPER-THERMIA COMBINED WITH RADIOTHERAPY?  
Cristina Garibaldi - IEO Istituto Europeo di Oncologia - Italy

12:20 | PROSPECTIVE THERMAL DOSE EVALUATION IN REFRACTORY AND RECURRENCE CHILDHOOD LIVER TUMORS  
Ruediger Wessalowski - Heinrich-Heine-University - Germany

12:40 | TEST OBJECTS FOR HIFU THERMAL THERAPY  
Simone Ambrogio - GSST Guy's and St Thomas' NHS Foundation Trust - UK

13:00 | TOWARDS AN EUROPEAN METROLOGY NETWORK IN THE FIELD OF THE MEDICAL APPLICATIONS USING IONIZING RADIATIONS: THE MIRA PROJECT  
Valentin Blideanu - EMPIR 19NET04 MIRA - France

13:20 | FINAL REMARKS AND CLOSING OF THE WORKSHOP  
Giovanni Durando - INRIM Istituto di Ricerca Metrologica - Italy