PROTON THERAPY CONGRESS

20-21 September 2016
Kensington Close Hotel, London, UK

Hear from the Proton Therapy Industry’s Most Prestigious Speakers:

Professor Tony Lomax
Chief Medical Physicist
PSI

Professor Nancy Mendenhall
Medical Director
University of Florida
Proton Therapy Institute

Dr Steve Myers
Executive Chairman
ADAM SA a subsidiary of AVO plc

Professor Nigel Allinson
Project Director and Principal Investigator,
PRaVADA
University of Lincoln

Professor Karol Sikora
Chief Medical Officer
Proton Partners International

Professor Johannes Langendijk
Chair of Department of Radiation Oncology
University of Groningen

Professor James Metz
Chair of Radiation Oncology
Perelman School of Medicine, University of Pennsylvania

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14 CPD Credits from the Royal College of Radiologists

“For the first time, the proton therapy world market is anticipated to reach US$ 1 billion in 2019, with almost 330 proton therapy treatment rooms that will be available to patients.”
Proton Therapy World Market Report – 2015, MEDraysintell

Hear from the Proton Therapy Industry’s Most Prestigious Speakers:

1. The proton therapy industry is growing rapidly. The first UK centres are currently under construction and many more are planned globally.
2. This conference will provide an impartial platform for education and discussion.
3. This is a unique opportunity to discuss ideas and identify strategies for development.
4. Network with top academics and clinicians, private enterprises, government bodies, ground breaking solution providers and industry leaders.
5. There will be a focus on unpublished data, new technological advances and translational case studies to highlight not only the strengths of proton therapy, but also the challenges surrounding its optimisation, and practical implementation.

Register online at www.protontherapycongress.com or call us at +44 (0)203 696 2920
Dear Colleague,

We all know that protons are theoretically better than photons, thanks to a trait of physics, the Bragg Peak. **What remains unclear is how we can best translate this academic research into optimal clinical practice and commercially viable solutions.** The Proton Therapy Congress will bring together leaders from a multitude of disciplines to showcase unpublished data, new technological advances and translational case studies to highlight not only the strengths of proton therapy, but also the challenges surrounding its optimisation, and practical implementation.

With the UK’s first centres currently under construction, and many more being planned globally, determining suitable indications for treatment is becoming increasingly important. Representatives from highly respected American centres, such as Massachusetts General Hospital and Florida Proton Therapy Institute, share findings from their current clinical trials, whilst Johannes Jangendijk presents the model-based patient selection approach, currently accepted by Dutch health authorities. Top medical physicists such as Tony Lomax, will focus on technical aspects surrounding the optimisation of proton therapy, whilst Steve Myers discusses Proton Accelerators for Cancer Therapy.

**The conference will not only combine content from academics carrying out research and clinicians delivering the treatment, but also consider the practical aspects of proton therapy,** from the health economics of high cost cancer treatments, to the importance of IT networks. For proton therapy to be fully utilised, it relies on high-quality data showing clinical outcomes, and Jem Rashbass discusses the practical aspects of collecting and analysing this data.

The wider context of proton therapy will be discussed in a panel led by Karol Sikora, which will include discussions around the place of proton therapy in future radiotherapy practice. Tadashi Kamada ends the conference with what he feels is a commercially viable alternative to protons, carbon-ion therapy.

Whether you are a practicing clinician, an academic in the field, a ground-breaking solution provider, an industry leader or just want to find out how proton therapy is relevant to your work, this meeting will be beneficial to you. The Proton Therapy Congress will bring together leaders in the field to provide a platform for education, collaboration and discussion of a strategy for future development.

I look forward to meeting you all in London.

Stephanie Jaczniakowska-McGirr  
Conference Director  
Kisaco Research

*P.S.: This exciting networking conference is also approved for 14 CPD Credits by the Royal College of Radiologists! Book today online at www.protontherapycongress.com.*

**ABOUT KISACO RESEARCH**

Kisaco Research works with the early adopters and leaders of growth markets in driving their respective industries forward and in providing the right knowledge, learning and social opportunities to stimulate business growth quickly and effectively.

Kisaco Research produces, designs and hosts B2B industry conferences and exhibitions. Our platforms are neutral, so that our attendees get the right information from the most relevant people.

Our level of research ensures the topics and products we offer are of utmost relevance and timeliness; our 30+ years of combined experience in the event industry means we have an unmatched level of strategic social engineering onsite.

Join our conferences to ensure you benefit from the high-quality knowledge, learning and networking opportunities. Find out more about our upcoming events by emailing events@kisacoresearch.com.

Thank You to Our Steering Committee

**Chairman**

Professor Nancy Mendenhall  
Medical Director  
University of Florida Proton Therapy Institute

**Professor Karol Sikora**  
Chief Medical Officer  
Proton Partners International

**Professor Tony Lomax**  
Chief Medical Physicist  
PSI

Who Will You Meet?

- Academics
- Clinicians
- Investors & Venture Capital
- Established proton therapy centres
- Private Insurers
- Proton beam machine manufacturers
- Diagnostics machine manufacturers
- Consulting Companies
- Stockbrokers Firms
- Construction and design solution providers
SPEAKING FACULTY

Professor Michael Brada
Professor of Radiation Oncology
University of Liverpool

Professor Marco Borghesi
Professor of Mathematics and Physics
Queens University Belfast

Professor James Metz
Chair of Radiation Oncology
Perelman School of Medicine, University of Pennsylvania

Dr Hugo Palmans
Dosimetry Group Leader at MedAustron and Principal Research Scientist at the National Physical Laboratory

Julia Ross
Head of Cardiac, Cancer & Radiology Healthcare Management BUPA

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The last decade, many new radiation delivery techniques have been clinically introduced without being subjected to randomized controlled trials. Many of these new techniques have been introduced in order to reduce the dose to the healthy tissues and subsequently to prevent radiation-induced side effects. Due to its superior beam properties, radiotherapy with protons compared to photons enables similar dose administration to the target volume with substantially lower dose to the normal tissue. In the Netherlands, we applied a 4-step model-based approach to select patients for proton therapy and to validate the benefit of protons compared to photons with regard to reducing the risk on radiation-induced side effects. The model-based approach is an evidence-based method for selection and validation of new radiation technologies.

The ENLIGHT network has been instrumental in bringing together different European centers to promote hadron therapy and to help establish international discussions comparing the respective advantages of intensity modulated radiation proton and carbon therapies. A major success of ENLIGHT has been the creation of a multidisciplinary platform bringing together communities that were traditionally separated, so that clinicians, physicists, biologists, and engineers work side-by-side.

The world-wide interest in proton therapy is mainly due to one simple fact: protons stop. This allows for therapeutically effective doses to be delivered to tumours, whilst significantly reducing the doses to surrounding normal tissues in comparison to conventional radiotherapy techniques using photons. However, although the advantage of protons is that they stop, the disadvantage is that, in the complex system that is a patient, we don’t always know exactly where. As such, there is an uncertainty in the exact range of protons in all forms of proton therapy, sources of which range from variations in beam energy (very small) through to day-to-day anatomical variations of the patient (potentially very large). Indeed, range uncertainty is probably the largest cause for concern in clinical proton therapy today, and has been the subject of much discussion in the literature, as well as being the driving force for the development of many interesting techniques aimed at measuring proton range in-vivo. In this presentation, the sources and consequences of range uncertainties will be discussed and an attempt made to assess the effects of range uncertainty in the context of current clinical reality.

Often referred to as the Holy Grail of proton beam therapy, proton CT, with its capability to drastically reduce range errors both during planning and during treatment, has been a long time coming. Now, we are being presented with not just one approach but different forms of CT – each with its own characteristics. We are witnessing the birth of a new medical imaging modalities. This presentation will describe the progress made by the PRAvDA Consortium in developing a fully solid-state instrument capable of quality assurance tasks, real-time treatment monitoring and enhanced proton radiography. In addition, it will outline new forms of proton CT, their differing uses and how they could be fused with other diagnostic imagery.

Compared with traditional photon radiotherapy, proton radiotherapy irradiates less normal tissue and could improve health outcomes associated with photon radiotherapy by reducing toxic effects to normal tissue. A trial to assess late complications, acute side-effects, and survival associated with proton radiotherapy in children with medulloblastoma, showed acceptable toxicity and similar survival outcomes to those noted with conventional radiotherapy, suggesting that the use of the treatment may be an alternative to photon-based treatments. This presentation will review on-going research into the use of proton radiotherapy, intensity modulation, and image guidance to treat cancer and to spare side effects of therapy including second malignancies in the paediatric population.

**CONFERENCE DAY ONE**

**Tuesday, September 20th 2016**

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<tr>
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<tr>
<td>8:00</td>
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<td>8:50</td>
<td>Chairman’s Opening Remarks</td>
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<tr>
<td>9:00</td>
<td>The Role of Multidisciplinary Collaborations in Proton Therapy&lt;br&gt;Manjit Dosanjh, Medical Applications Advisor, CERN&lt;br&gt;Harnessing the full potential of particle therapy requires the expertise and ability of physicists, physicians, radiobiologists, engineers, and information technology experts, as well as collaboration between academic, research, and industrial partners. The European Network for Light Ion Hadron Therapy (ENLIGHT 2002), which had its inaugural meeting at the European Organization for Nuclear Research (CERN) in February 2002, was established to coordinate European efforts in using light-ion beams for radiation therapy. The ENLIGHT network has been instrumental in bringing together different European centers to promote hadron therapy and to help establish international discussions comparing the respective advantages of intensity modulated radiation proton and carbon therapies. A major success of ENLIGHT has been the creation of a multidisciplinary platform bringing together communities that were traditionally separated, so that clinicians, physicists, biologists, and engineers work side-by-side.</td>
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<tr>
<td>9:35</td>
<td>The Role of a Model-Based Selection Approach to Identify Suitable Indications for Proton Therapy&lt;br&gt;Professor Johannes Langendijk, Chair of Department of Radiation Oncology, University of Groningen&lt;br&gt;The last decade, many new radiation delivery techniques have been clinically introduced without being subjected to randomized controlled trials. Many of these new techniques have been introduced in order to reduce the dose to the healthy tissues and subsequently to prevent radiation-induced side effects. Due to its superior beam properties, radiotherapy with protons compared to photons enables similar dose administration to the target volume with substantially lower dose to the normal tissue. In the Netherlands, we applied a 4-step model-based approach to select patients for proton therapy and to validate the benefit of protons compared to photons with regard to reducing the risk on radiation-induced side effects. The model-based approach is an evidence-based method for selection and validation of new radiation technologies.</td>
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<tr>
<td>10:10</td>
<td>Morning Networking Break&lt;br&gt;Technical Insight Session on Eclipse™ Proton Treatment Planning for Adaptive Therapy to be delivered by Varian. This will take place at the Varian exhibition stand in the exhibition room.</td>
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<td>10:40</td>
<td>Myths and Reality in Range Uncertainty in Proton Therapy&lt;br&gt;Professor Tony Lomax, Chief Medical Physicist, PSI&lt;br&gt;The world-wide interest in proton therapy is mainly due to one simple fact: protons stop. This allows for therapeutically effective doses to be delivered to tumours, whilst significantly reducing the doses to surrounding normal tissues in comparison to conventional radiotherapy techniques using photons. However, although the advantage of protons is that they stop, the disadvantage is that, in the complex system that is a patient, we don’t always know exactly where. As such, there is an uncertainty in the exact range of protons in all forms of proton therapy, sources of which range from variations in beam energy (very small) through to day-to-day anatomical variations of the patient (potentially very large). Indeed, range uncertainty is probably the largest cause for concern in clinical proton therapy today, and has been the subject of much discussion in the literature, as well as being the driving force for the development of many interesting techniques aimed at measuring proton range in-vivo. In this presentation, the sources and consequences of range uncertainties will be discussed and an attempt made to assess the effects of range uncertainty in the context of current clinical reality.</td>
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<tr>
<td>11:15</td>
<td>Pursuing the Elusive Proton CT&lt;br&gt;Professor Nigel Allinson, Project Director and Principal Investigator, PRAvDA Consortium, University of Lincoln&lt;br&gt;Often referred to as the Holy Grail of proton beam therapy, proton CT, with its capability to drastically reduce range errors both during planning and during treatment, has been a long time coming. Now, we are being presented with not just one approach but different forms of CT – each with its own characteristics. We are witnessing the birth of a new medical imaging modalities. This presentation will describe the progress made by the PRAvDA Consortium in developing a fully solid-state instrument capable of quality assurance tasks, real-time treatment monitoring and enhanced proton radiography. In addition, it will outline new forms of proton CT, their differing uses and how they could be fused with other diagnostic imagery.</td>
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<td>11:50</td>
<td>Realizing the Promise of Proton Radiotherapy: Health Outcomes and Quality of Life in Pediatrics&lt;br&gt;Dr Torunn Yock, Director, Pediatric Radiation Oncology, Massachusetts General Hospital&lt;br&gt;Compared with traditional photon radiotherapy, proton radiotherapy irradiates less normal tissue and could improve health outcomes associated with photon radiotherapy by reducing toxic effects to normal tissue. A trial to assess late complications, acute side-effects, and survival associated with proton radiotherapy in children with medulloblastoma, showed acceptable toxicity and similar survival outcomes to those noted with conventional radiotherapy, suggesting that the use of the treatment may be an alternative to photon-based treatments. This presentation will review on-going research into the use of proton radiotherapy, intensity modulation, and image guidance to treat cancer and to spare side effects of therapy including second malignancies in the paediatric population.</td>
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CONFERENCE DAY ONE

12:25  Afternoon Networking Lunch

13:40  The Use of Proton Therapy in Relatively New Indications
       Dr Jiří Kubeš, Medical Director, Proton Therapy Centre Czech
       This presentation will focus on the use of pencil beam scanning for relatively new indications, such as Hodgkin disease and nasopharyngeal cancer, where extensive radiotherapy is necessary and where the theoretical advantages of protons are clear, but randomized studies are not feasible in reasonable time. It will also touch on the use of proton beam for lymphomas and head and neck cancer, discussing which technology and evidence is necessary using case studies from the Proton Therapy Centre Czech in Prague.

14:15  PANEL DISCUSSION: Practical Implementation of Proton Therapy in the UK
       Karol Sikora, Chief Medical Officer, Proton Partners International
       Professor James Metz, Chair of Radiation Oncology, Perelman School of Medicine, University of Pennsylvania
       Julia Ross, Head of Cardiac, Cancer & Radiology, Healthcare Management BUPA
       With the first UK centres currently under construction and many more planned globally, it is more important than ever to understand how to practically implement these centres successfully. This panel will discuss both the NHS and Private approaches to the practical implementation of proton therapy centres, touching on not only the physics and clinical aspects but also optimising the environment for proton therapy and integrating it with other treatment options.

15:00  Afternoon Networking Break
       Technical insight Session to be delivered by IBA. This will take place at the IBA exhibition stand in the exhibition room.

15:30  Proton Accelerators for Cancer Therapy
       Dr Steve Myers, Executive Chairman, ADAM SA, a subsidiary of AVO plc
       Many types of proton accelerators exist in the world today. These were originally designed and built for particle physics research. The most famous and highest energy machine to be built is the CERN Large Hadron Collider which is a synchrotron.
       Several types of accelerators have been designed and built for cancer therapy. Initially the accelerator of choice for particle therapy was the cyclotron (due to its simplicity) and many of these types of accelerators have been brought into service for successful treatment of patients.
       In this talk I will point out the inherent properties of the different types of accelerators which are currently being or planned to be used in proton therapy. I will then investigate the properties relevant to performing particle therapy and point out the advantages and disadvantages of each type of accelerator. Then I will describe how the inherent properties of the different types of accelerators impact on other important treatment parameters such as clinical efficiency and financial considerations, including total cost (cradle to grave) and patient throughput.

16:05  Building a Successful Center: Lessons Learned from the Roberts Proton Therapy Center
       Professor James Metz, Chair of Radiation Oncology, Perelman School of Medicine, University of Pennsylvania
       The Roberts Proton Therapy Center is the largest and most advanced facility in the world for proton therapy. This presentation will provide case studies and lessons to be learnt from the experiences and challenges faced by Dr Metz, as he led the development of the Roberts Proton Therapy Center.

16:40  Dosimetry Support for Proton Therapy by the National Physical Laboratory
       Dr Hugo Palmans, Dosimetry Group Leader at MedAustron and Principal Research Scientist at the National Physical Laboratory
       This presentation reviews the dosimetric challenges for novel modalities and the status of research efforts by the National Physical Laboratory and MedAustron addressing these for the application of primary standard calorimeters and ionisation chambers for reference dosimetry, gas-, liquid- or solid-state-based dosimeters for relative dosimetry and detectors for micro- and nanodosimetry.

17:15  Chairman’s Closing Remarks and End of Conference Day One
ASSOCIATE PARTNERS:

Advanced Oncotherapy plc
Website: avoplc.com
Advanced Oncotherapy plc is a UK-based company focused on delivering a cost-effective proton-based radiotherapy solution called LIGHT. Based on ground-breaking technology developed and tested at world-renowned CERN in Switzerland, the LIGHT system delivers an integrated proton radiotherapy system to treat cancer. The uniqueness of LIGHT means that it is possible to treat patients in the centre of any major city in the world at an affordable price.

Proton Partners International
Website: www.proton-int.com
Proton Partners International’s establishment of specialist centres marks a significant breakthrough in the provision of cancer treatments within the UK.

The organisation will deliver a suite of cancer services including: diagnostic, chemotherapy, radiotherapy and proton beam therapy. The Newport (Wales) centre will be the first PBT centre in the UK and will provide radiotherapy and proton beam therapy later this year, and proton beam therapy in 2017.

RaySearch
Website: www.raysearchlabs.com
RaySearch is a medical technology company that develops software for radiation therapy of cancer. RaySearch’s vision is to improve chances of survival and quality of life for cancer patients by providing innovative software to clinics for more effective radiation therapy of cancer.

Varian Medical Systems
Website: www.varian.com
Varian Medical Systems is the world’s leading manufacturer of medical devices and software for treating cancer and other medical conditions with radiotherapy, radiosurgery, proton therapy, and brachytherapy. Our products include linear accelerators, simulators, afterloaders, and a broad range of accessories and interconnected software tools for planning, verifying, and delivering leading edge treatments in the fight against cancer and other diseases. We partner with physicians, scientists, researchers, and others around the world to offer the most advanced and cost-effective treatment technologies available.

Hitachi
Website: www.hitachi.co.uk
Hitachi Ltd., a multinational corporation with an annual turnover of over €90 billion, has successfully delivered and installed state of the art proton therapy systems in Asia and in the US in recent years. In the UK and Europe, Hitachi is expanding its healthcare division to focus on particle beam therapy systems available as a one room or a multi-room system.

IBA
Website: www.iba-worldwide.com/
IBA is the worldwide technology leader in advanced cancer radiation therapy technologies. The company’s special expertise lies in the development of innovative proton therapy technologies, supplying the oncological world with equipment of unequalled precision. IBA’s proton therapy solutions are flexible and adaptable, allowing customers to choose from full scale proton therapy centers as well as compact, single room systems. Today 65% of the patients treated in Proton Therapy are on IBA systems.

Mevion
Website: www.mevion.com/
Mevion Medical Systems is a leading global provider of proton therapy systems for use in radiation treatment of cancer patients. Mevion Medical Systems delivers high-quality, cost-effective solutions — making proton therapy accessible to patients worldwide. As a result, Mevion has more systems sold, installed and treating than any other compact proton therapy system manufacturer.

Vision RT
Website: www.visionrt.com/
Vision RT is setting a new standard of care in motion management. We provide superior solutions for the radiotherapy market, with products installed in some of the leading treatment centers in the world. AlignRT® provides real time feedback on a patient’s alignment before treatment and motion throughout. This is vital for ensuring that the patient is in the correct position and radiation is being delivered according to plan. GateCT® and GateRT® allow for 4D CT imaging and respiratory gating on areas that might be affected by breathing motion.

PHILIPS
Website: www.philips.co.uk/healthcare
At Philips, we look beyond technology to the experiences of patients, providers and caregivers across the health continuum from healthy living to prevention, diagnosis, treatment, recovery and home care. We unlock insights leading to meaningful innovations from hospital to home. Our solutions combine clinical breadth and depth of expertise, technology and services, actionable data, consultative new business models and partnerships.

C-RAD
Website: www.c-rad.se/
C-RAD’s cutting-edge solutions ensure exceptionally high precision, safety and efficiency in advanced radiation therapy, helping to cure more cancer patients and improve their quality of life. In new advanced radiation therapy techniques, the radiation dose must be delivered to the tumor with extremely high precision and microsecond timing. Our positioning and scanning systems assure just that.

SIEMENS Healthineers
Website: www.healthcare.siemens.co.uk/radiation-oncology
Siemens Healthineers is one of the world’s largest suppliers of technology to the healthcare industry and a leader in medical imaging, laboratory diagnostics and healthcare IT. By enabling Radiation Therapy specialists to look closer at the facts, Siemens’ tailor-made imaging solutions help achieve prime outcomes for every single patient, and let experts see further than ever before into the future of individualised therapies.

Icotec AG
Website: www.icotec.ch/en/home/
icotec AG is a Swiss medical device company focusing on the development, manufacturing and distribution of solutions for the treatment of musculoskeletal diseases using innovative Carbon/PEEK implants.

Imaging Equipment Limited
Website: www.imagingequipment.co.uk/
Imaging Equipment Limited (IEL) are proud to be a distributor of international medical equipment for medical physics environments, including radiotherapy physics, diagnostic radiology, nuclear medicine, radiopharmaceuticals, radiation safety and radiation protection products. IEL represents over thirty-five manufacturers and specialises in the effective use of radiation in medicine for both diagnostic and therapeutic purposes.

Stantec
Website: www.stantec.com/
Stantec is the world’s leading expert in the design of particle therapy centers. The Stantec community unites 22,000 employees working in over 400 locations across six continents to bring buildings, energy and resource, environmental, and infrastructure projects to life.

QLRAD
Website: www.qlrad.com
QLRAD’s mission is to develop, design and supply Medical products that contribute to patients Health and Quality of Life during and/or after medical treatment. Our services and solutions are innovative and cost effective.

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Laser-driven approaches to ion acceleration, which have emerged during the last 10-15 years, represent a radically different route to the production and delivery of high-energy particle beams. The potential use of these beams as an alternative driver for hadron therapy was proposed at an early stage of their development, and has acted as a strong motivation for research in this field, with several projects worldwide currently assessing the prospects for all-optical drivers for proton therapy. After reviewing the rationale behind a laser-driven approach and its potential advantages, the talk will report on the state of the art in laser acceleration and the challenges that need to be faced in order to turn it into a viable healthcare technology. Initial activities devoted to the biological validation of laser-driven beams (operating at dose rates many order of magnitude higher than in conventional therapy) and to scoping out laser-based hardware will also be discussed.

**9:35 Health Economics of High Cost Cancer Treatments**

Professor Nick Bosanquet, Emeritus Professor of Health Policy, Imperial College London

The presentation will review changes in the costs of cancer treatment covering surgery, radiotherapy and chemotherapy, including episodes of care and longer term care programmes. It will also cover changes in funder policies with increased use of patient access schemes. In the past proton beam therapy might have stood out as a high cost treatment but there have been major increases in the costs of chemotherapy. For chemotherapy there is a deficit in outcome measures and for proton therapy there can be partnership with clinical teams to develop reliable and locally available outcome measures. Proton beam therapy can set an example of linking payment to guaranteed information on outcomes which the recent NAO report on the CDF has shown is missing from most chemotherapy with only 7% of SACT respondents reporting outcome measures.

**11:15 The Importance of IT Networks in Proton Therapy**

Mark Crocker, CEO, Statumen Ltd.

Whilst IT has had a supporting role in clinical developments and in this instance, oncology, it also serves as a front seat in developing new, economic options and improved work practices.

With the explosion of computing power and high speed networks, we can move to a new paradigm. The network allows IT to build single multi-site solutions that give huge flexibility providing options for new work practices for clinical staff. With the single solution, comes options such as remote planning, shared work-flow and the ability to free-flow patients and patient data. As systems become more powerful this continues to allow faster planning, more complex plans and to some extent IT driven plans with clinical staff only needing to approve and check.

**11:50 Proton Therapy; Hope, Hype, Misinformation and Clinical Evidence**

Professor Michael Brada, Professor of Radiation Oncology, University of Liverpool

Despite the absence of high level evidence of the benefits of proton therapy, showing improved efficacy, reduced toxicity, or both, compared to best photon radiotherapy, the number of proton facilities continues to increase at an exponential rate. This growth is based on the belief in the clinical benefits, which must surely follow the more localised deposition of energy of charged particles compared to photons. While such belief and enthusiasm is necessary for bringing new technically challenging technology into clinical practice, it needs to be tempered by realism which takes into account not only the potential advantages but also the potential uncertainties and risks inherent in such complex technology.

As with the introduction of new drugs, the potential value should be tested in well-designed prospective trials; this is particularly true in a situation where even the prediction of clinically relevant benefits based on technical advantages are likely to be marginal. The academic clinical community, together with healthcare providers and funders, should ensure that proton therapy is appropriately tested and subsequently only used in indications with evidence of true clinical benefit.
13:40 Practical Implications of Patient Data Collection and Analysis
Dr Jem Rashbass, Director for National Disease Registration, Public Health England
The introduction of Proton Beam Therapy into routine NHS practice has considerable potential to revolutionise the treatment of patients. However, we will need access to high-quality patient-level data if we are to ensure that the treatments are given to the right patients and rich and detailed follow-up data to evaluate the success of this intervention on those who are treated.
This presentation will cover the practical aspects of cancer data collection by the National Cancer Registration and Analysis Service in Public Health England. It will explain how data is collected, linked and analysed and the how this resource can be used to assess the benefits of Proton Beam Therapy.

14:15 PANEL DISCUSSION: The Place of Proton Therapy in Future Radiotherapy Practice
Professor Karol Sikora, Chief Medical Officer, Proton Partners International
Professor Michael Brada, Professor of Radiation Oncology, University of Liverpool
Dr Jiří Kubeš, Medical Director, Proton Therapy Centre Czech
John Jessen, Senior Principal, Stantec Architecture
Meaningful large scale randomised trials with protons versus photons are unlikely. Instead the pre-treatment comparison of PBT versus IMRT in individual patients using pre-set metrics of plan quality will be necessary for funding. This assessment would be made objectively by treatment planning software systems. Payers, both government and insurers, will use these criteria to assess the value of PBT in an individual using a comparative equation incorporating tumour control, late toxicity and overall lifetime costs of care. Such analyses will determine the level of the therapeutic plateau in the relationship of cost to clinical outcome gain. The range of published estimates varies enormously from 1.5% (UK, NHS) to 20% in the US. The majority of European strategic plans are assuming a 10-15% utilisation of protons in patients treated with radical radiotherapy within the next 5 years.

15:00 Afternoon Networking Break

15:30 Introducing Motion with Pencil Beam Scanning
Professor Damien Weber, Head and Chairman, PSI
Pencil Beam scanned (PBS) proton therapy is one of the most advanced forms of radiotherapy technique and will soon become one of the most frequent delivery paradigm used worldwide for protons. PSI has treated over 1,100 patients for various ‘static’ cancer indications with PBS with good clinical outcomes and exceptional patient’s reported outcome. Its efficacy for the treatment of moving tumors (e.g. lung, liver and other tumors in the upper abdomen or pelvic region) is however still a matter of concern, mainly due to the ‘interplay effect’. In addition to the dose blurring resulting from tumor motion, which can be efficiently addressed using an adequate margin, additional dose corruption within the target volume is observed due to the interplay of the treatment dynamics and the anatomical tumor motion which cannot be compensated by an ITV paradigm. This talk will resume the various strategies foreseen to mitigate motion effects for PBS, not limited but including, breath-hold techniques, re-scanning with- or without gating and tumor tracking. Finally, the project work-packages at PSI for achieving motion mitigation for the delivery of PBS protons for patients with lung cancer will be detailed and may be useful for PT centers coming online in the not too distant future.

16:05 Sustainable Carbon-Ion Radiotherapy Facilities Using Next-Generation Technology: A Viable Alternative to Proton Therapy
Professor Tadashi Kamada, Director, NIRS Research Center for Charged Particle Therapy
Despite the enormous initial investment required, five carbon-ion radiotherapy centers are in operation and another two are under construction in Japan. After twenty years of experience with carbon-ion radiotherapy, and following substantial technological progress, improved profitability with better clinical outcomes has been seen at carbon-ion radiotherapy facilities, constituting a viable alternative to proton therapy.

16:40 Close of Conference
**REGISTRATION INFORMATION**

**VENUE & ACCOMMODATION**

Kensington Close Hotel
Wrights Lane
London W8 5SP

Kisaco Research is pleased to offer attendees of the Proton Therapy Congress a discounted rate at the Kensington Close Hotel during the duration of the event.

Rate: £160.00 includes VAT and breakfast – double for single occupancy, available until 18 August 2016 or until the block runs out.

**To book a room, you can:**

Telephone hotel reservations on +44 (0)207 368 4023 or 4041
Email: groups@kensingtonclosehotel.com

Always quote KISACO RESEARCH when booking. Cancellation policy is 28 days prior to arrival date.

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- All Prices are in GBP
- All Early Bird discount prices, including Group Discounts, must be paid in full by deadlines provided above.
- All discount offers cannot be combined with any other offer, except for the Group Discount, which you can apply to any Early Bird Discount.
- Please view our Cancellation Policy.
- All Price exclude GB VAT of 20%

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**YES, PLEASE REGISTER ME:**

**Attendee Information:**  
academic  industry

Name: _________________________________________________________________________________________________________________________________________________________

Company: ______________________________________________________________________________________________________________________________________________________

Phone: ___________________________________________________________________  Email: _______________________________________________________________________________

**Payment Information:**  

- Visa  MasterCard  American Express  Discover

Credit Card Number: _________________________________________________________________________  Expiration Date: _____/_____/_______  Security Code: _________

Card Holder’s Name: _____________________________________________________________________________________________________________________________________________

Signature: ______________________________________________________________________________________________________________________________________________________

Billing Address on Card: __________________________________________________________________________________________________________________________________________