News update

Latest developments on products and services from the industry. To have your news included contact Patricia McDonnell on patricia@oncologynews.biz or T/F: +44 (0)288 289 7023.

UK innovation lends patients with cancer a helping hand

Innovation in the UK encompasses advances in virtually every area in science, industry and medicine. The country is especially prolific in its production of medical technology, specifically the radiation treatment system known as the linear accelerator or linac. Two-thirds of all cancer patients worldwide receive radiation therapy during their illness, and for the vast majority of these patients, a linac will deliver their therapy.

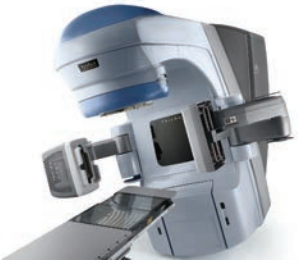
The 3,000th digital linac produced by Elekta since 1985 recently rolled off the Crawley production line, and is scheduled for installation at The Christie NHS Foundation Trust (Withington, Manchester). Coincidentally, the 3,000th digital linac was Elekta's Versa HD™ system, the world's most advanced digital linac. Versa HD (www.versahd.com) combines state-of-the-art beam shaping and high dose rate delivery technologies, giving clinicians the flexibility to treat the wide variety of common cases and the sophistication to apply the most advanced radiotherapy techniques available.

Versa HD™ is the sixth generation of digital linear accelerators from Elekta. *Versa HD is not available for sale or distribution in all markets.*

For more information on UK innovation, visit: www.fco.gov.uk/en/about-us/what-we-do/public-diplomacy/great-campaign/innovation/ and www.elekta.com

Inaugural French-language clinical training program

Varian Medical Systems, the world leader in radiotherapy equipment and software, has collaborated with one of France's leading cancer hospitals to provide a clinical training program on advanced image-guided radiotherapy and gating techniques for French-speaking customers. The Varian Advanced Imaging Clinical School has conducted its first class at the Institute Sainte Catherine in Avignon, attracting delegates from across France and Morocco.



Institute Sainte Catherine, which treats 2,500 new cancer patients each year on five Varian treatment machines, began using respiratory gating in 2000 and image-guidance in 2004 to account for breathing motion and target tumours more precisely. Today, more than 700 patients per year are being helped using these techniques, which enable clinicians to detect small changes in tumour position during and between treatments, and compensate for them to enhance precision.

The center also uses Varian's gating technologies for targeting moving tumours, such as in the lung and liver, and for left-sided breast cancer in order to better protect the heart, lung and coronary arteries during treatment. They achieve this using respiration control techniques such as deep inspiration breath-hold with a Varian automatic gating module and are implementing free breathing respiratory synchronisation, where the beam is automatically switched on and off as the targeted area moves in and out of position.

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PV-10 data presented examines induction of systemic immune response in multiple tumour types

Provectus Pharmaceuticals, Inc. announced details of a poster presentation on the induction of a systemic immune response with intralesional (IL) PV-10 by researchers from the Moffitt Cancer Center at the American Association for Cancer Research Annual Meeting in Washington, DC.

The poster entitled, 'Intralesional Injection with PV-10 Induces a Systemic Anti-tumour Immune Response in Murine Models of Breast Cancer and Melanoma,' was presented by Shari Pilon-Thomas, PhD, Immunology Program, Moffitt Cancer Center.

Provectus's PV-10, a 10% solution of Rose Bengal, is currently being examined as a novel cancer therapeutic. It is designed to selectively target and destroy cancer cells without harming surrounding healthy tissue, significantly reducing potential for systemic side effects. In melanoma patients, intralesional (IL) injection of PV-10 has led to regression of injected lesions as well as distant metastases (i.e., bystander lesions).

The Moffitt study examined the immunologic mechanism of PV-10 treatment in murine models of breast cancer and melanoma to determine how IL PV-10 therapy induces the systemic anti-tumour immune response apparent in bystander responses in clinical trial participants. In the current work, IL injection of PV-10 led to regression of injected and untreated contralateral subcutaneous lesions in the MT-901 breast cancer model, with a significant increase in survival in mice treated with IL PV-10 versus those treated with IL saline. A copy of the poster is available at the following link: www.pvct.com/publications/SPTAACR2013-Final.pdf

For further information visit: www.pvct.com

Celebrities Wear a Hat Day

On Thursday March 28th, Brain Tumour Research, along with supporters and member charities held its annual national Wear a Hat Day event. Actors, actresses, TV presenters, sports stars and comedians have backed the campaign by being photographed in their hats to highlight the need for more funding. Gillian Anderson, Sheila Hancock, Vic Reeves, Nigel Havers, Sarah Beeny, Kevin McCloud, Tom Chambers, Brigitte Neilsen and Ian Reddington have pledged support, with many having personal connections to family or friends affected by a brain tumour. Gillian Anderson, actor, lost her brother to a brain tumour in 2011. "Brain Tumours kill more children and adults under 40 than any other form of cancer and yet research into this devastating disease is seriously underfunded. At best, research equals a cure. At worst, we still have improved outcomes for patients. We need to put much much more money into research, and that is why I supported Brain Tumour Research and their excellent Wear A Hat Day campaign."

In addition, Rachel Trevor-Morgan, Milliner to Her Majesty The Queen, has designed a unique limited edition hat brooch for the charity. The pink and black vintage-inspired brooch is available for a suggested donation of £10 from the Brain Tumour Research charity.

For further information visit: www.braintumourresearch.org

Double success for Elekta at Gatwick Business Diamond Awards

Crawley-based Elekta has won two awards at the prestigious annual Gatwick Diamond Business Awards 2013. The global medical technology company won awards in the categories of Developing People for Business Success and Innovation and Technology at the Copthorne Effingham Park Hotel. The ceremony celebrated businesses or people who have shown innovation and inspiration in their work, and have demonstrated a real commitment to the regional economy.

"This is great recognition of all our efforts here in Crawley and shows what Elekta can achieve with the support of our global colleagues," says Bill Yaeger, Executive Vice President Elekta Oncology. "I found it a particularly proud moment as Elekta was the only business to win two awards, in an evening that saw many internationally-recognised companies and well known local businesses compete for a broad range of awards."

Referring to the Developing People for Business Success Award, Sarah Wright, principal of Central Sussex College adds: "Elekta is the world's fastest growing oncology company with its ethos firmly rooted in valuing and developing its staff for business growth and success."

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Varian achieves full accreditation for MTAA's Code of Practice

Varian Medical Systems has become the first oncology systems company to become a licensee of the Medical Technology Industry's Code of Practice, as administered by the Medical Technology Association of Australia (MTAA). In addition, all Varian Medical Systems employees in Australia have successfully undertaken the MTAA Code of Conduct training.

"We are honoured to become a code licensee for an organisation which is committed to enhancing treatments and outcomes for patients in Australia," says Chris Cowley, managing director of Varian Medical Systems Australasia. "As a code licensee, Varian makes a commitment to adhere to the principles and requirements of the Code and support ethical business practice in radiation oncology."

The MTAA is the national association representing companies in the medical technology industry. MTAA aims to ensure the benefits of modern, innovative and reliable medical technology are delivered effectively to provide better health outcomes to the Australian community.

"I congratulate Varian on obtaining the code license and so publically reaffirming their support of ethical business practices when working with healthcare professionals and consumers," said MTAA Chief Executive Officer Anne Trimmer.

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UK hospitals order all Varian TrueBeam Radiotherapy Systems offered under Government Stimulus Program

Hospitals in London and Dorset have acquired the final two of ten advanced Varian Medical Systems radiotherapy treatment machines offered as part of an innovative government program to roll out the most modern cancer treatments for patients in the UK's public hospitals. North Middlesex University Hospital and Poole Hospital NHS Foundation Trust have ordered TrueBeam™ medical linear accelerators via an NHS Supply Chain initiative aimed at stimulating replacements of older treatment machines with state-of-the-art systems.

For North Middlesex University Hospital, the TrueBeam ordered earlier this year replaces an older radiotherapy machine and will enable the hospital to introduce advanced radiotherapy techniques such as image-guided radiotherapy, stereotactic body radiotherapy and stereotactic radiosurgery for the first time, along with fast and precise RapidArc® technology.

"We see a lot of lung cancer and prostate cancer patients at this hospital and these patients will benefit greatly from these more advanced and precise technologies," says Sian Davies, consultant clinical oncologist. "We have a large workload here and RapidArc on TrueBeam will be particularly helpful in enabling us to achieve a greater throughput."

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Denmark's Odense University Hospital orders Elekta's new Versa HD linear accelerator

Odense University Hospital (OUH, Odense) recently signed an order to acquire two Versa HD™ radiation therapy treatment systems from Elekta. Versa HD promises the versatility to enable clinicians to deliver conventional therapies to a wide range of tumours throughout the body, while also permitting treatment of very complex cancers that require extreme targeting accuracy. Versa HD also unveils new capabilities designed to maximise health care system resources and deliver highly sophisticated therapies without compromising treatment times.

"In the process of replacing two existing linear accelerators, we began evaluating the systems of different vendors. Our focus was to acquire high-end linear accelerators with fast and efficient dose delivery mainly for stereotactic treatments, but also for head-and-neck and lung cases," says Knud Aage Werenberg, head physicist at OUH. "We found that Elekta's Versa HD – with its highly conformal beam shaping technology and High Dose Rate mode – would fulfill these requirements."

The high doses employed in the treatment of typically very small targets in stereotactic radiation therapy demand a system that combines high precision with rapid beam delivery, he adds.

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Versa HD is not available for sale or distribution in all markets.

The Christie NHS Foundation Trust anticipating new era of radiotherapy speed and precision with Elekta's new Versa HD System

Elekta's new Versa HD™ system will help clinicians at The Christie NHS Foundation Trust (Withington, Manchester) maximise the precision of therapeutic beams on the tumour target, while also accelerating radiation delivery to new levels.

Versa HD is designed to be the most sophisticated, high-versatility treatment system. The system offers clinicians the flexibility to deliver conventional therapies to treat a wide range of small and large tumours throughout the body, while also enabling treatment of highly complex cancers that require extreme targeting precision. Treatment of the most challenging cases is addressed by ultra-conformal beam shaping, working in concert with an innovative High Dose Rate mode – a potent combination that delivers both high precision and high treatment speeds.

"Other linear accelerators have high dose rates, but only Versa HD combines High Dose Rate mode with a multileaf collimator [Agility™] that offers the industry's highest leaf speeds," says Carl Rowbottom, Ph.D., head of radiotherapy physics at The Christie. "With high leaf speeds we will be able to modulate the field shape fast enough to achieve the required dose distribution, while also treating at the fastest delivery speed."

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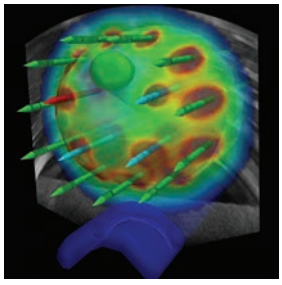
Prostate cancer patient receives first treatment using Vitesse from Varian



A prostate cancer patient has become the first person in the world to be treated using the latest version of Varian's Vitesse™ real time planning solution for planning and performing advanced high-dose-rate, ultrasound-guided brachytherapy treatments. The treatment took place at the Levine Cancer Institute in Charlotte, North Carolina.

"Our team was very impressed overall with this treatment planning system," says Dr. Michael Haake, chief, division of Radiation Oncology at Carolinas Medical Center, Levine Cancer Institute. "The total anesthesia time for the patient was just three hours, which is short for this type of treatment. He was discharged about two and half hours after he woke up."

HDR brachytherapy involves delivering radiotherapy from inside the body by temporarily placing a tiny radioactive source directly into the tumour or other targeted area. Using a robotic device called an afterloader, clinicians place the radioactive source into positions through needles that have been inserted into the area being treated. The source is then moved within the needles under computer control to create the specified dose distribution within the patient's anatomy.

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Elekta's advanced Versa HD system to begin treating cancer patients at new Swiss radiotherapy clinic

Cancer patients referred to Hôpital Riviera's (Vevey, Switzerland) new radiotherapy clinic will soon benefit from the center's acquisition of Elekta's advanced new linear accelerator, Versa HD™.

Versa HD is designed to be the most sophisticated, high-versatility treatment system, giving clinicians the flexibility to deliver conventional therapies to treat a wide range of small and large tumours throughout the body, while also enabling treatment of highly complex cancers that require extreme targeting precision. Treatment of the most challenging cases is facilitated by high-definition beam shaping, in addition to a groundbreaking high dose rate delivery mode.

"High-definition, high-speed beam shaping combined with high dose rate delivery makes Versa HD the ideal SBRT machine," says Oscar Matzinger, MD, radiation oncologist at Hôpital Riviera and Centre Hospitalier Universitaire Vaudois. "Still, Versa HD will be our mainstay for basic and palliative treatments and support our future expansion of radiotherapy capabilities."

The first-ever combination of high-precision beam shaping plus high dose rate delivery in Versa HD will significantly improve the execution of SBRT, Dr Matzinger adds.

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Varian spotlights Technology at ESTRO 2013

Varian Medical Systems, the world leader in radiotherapy equipment and software, demonstrated its full range of radiotherapy delivery systems and software at the 2nd ESTRO Forum in April 2013. The Varian booth featured the company's technology and products for radiotherapy, radiosurgery, brachytherapy, and proton therapy. Varian's TrueBeam™ platform for fast and precise radiotherapy and radiosurgery was on display along with the RapidArc® image-guided intensity-modulated radiotherapy system, the PerfectPitch™ six-degrees-of-freedom couch, and the Calypso® 'GPS for the Body' system, all of which are aimed at helping clinicians to deliver treatments faster and more precisely.

Visitors to the Varian booth also learned more about the company's new EDGE* Radiosurgery™ treatment system, Varian's first dedicated, fully integrated end-to-end solution for planning and delivering advanced radiosurgery treatments using new real-time tumour tracking technology and motion management capabilities.

"The next big advances in radiotherapy and radiosurgery involve continuing improvements in how motion is monitored and tumours are tracked during treatments and Varian continues to offer our most advanced clinical capabilities," said Rolf Staehelin, head of international marketing for Varian's Oncology Systems business.

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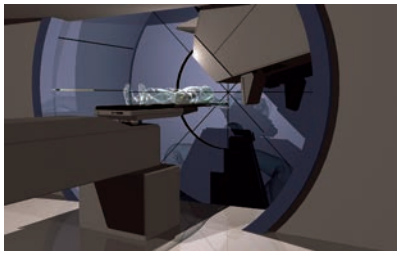
Varian Medical Systems and Paul Scherrer Institute (PSI) announce collaboration on motion management for IMPT



Varian Medical Systems and Paul Scherrer Institute (PSI) are announcing a collaboration to further advance motion management techniques for proton therapy. The multi-year agreement, aimed at optimising treatment strategies for indications such as cancer in the lung, liver, pancreas and breast, will evaluate strategies using a 4-D treatment planning simulator developed by PSI.

Proton therapy involves the use of a controlled beam of protons to target tumours with higher levels of precision than is possible with other forms of radiation therapy, potentially limiting damage to healthy surrounding tissue.

The Paul Scherrer Institute in Switzerland is a pioneer in the development of Intensity Modulated Proton Therapy techniques, and specialises in the treatment of pediatric patients. "We hope to exploit our unique methods for simulating clinically realistic organ motions for the study of motion mitigation techniques for spot scanned proton therapy," says Professor Tony Lomax from PSI. "This project will utilise 4-D motion data sets and dose calculations that can uniquely model patient motion variations that are difficult to capture with conventional data sets."

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Study finds brachytherapy for treating prostate cancer achieves better outcomes

Better outcomes can be achieved for prostate cancer patients using brachytherapy, a highly targeted form of radiotherapy, compared to surgery, according to a new study conducted by PANAXEA, The University of Twente, Netherlands.[1]

The study, which was presented during the 2nd ESTRO Forum in Geneva, examined research findings from six recent overview studies involving 55,000 prostate cancer patients and assessed disease progression, associated costs and outcomes extrapolated over a 10-year period from a UK NHS cost perspective.

The investigators found that for patients whose prostate cancer remained localised, brachytherapy was more cost effective and offered better quality of life outcomes – used either alone in low risk patients, in which 'active surveillance' is not favoured, or in combination with external beam radiation therapy (EBRT) for higher risk patients.[1]

"Prostate cancer is the most common cancer in men[2] and UK survival rates are lower than in comparable countries such as Norway and Sweden," said Lotte Steuten, Associate Professor at Health Technology Assessment at University of Twente and the study's principal investigator.[3]

"Brachytherapy offers a shorter recovery time than surgery and we found it is more cost effective.[1] Physicians caring for patients with prostate cancer should consider these results and how they can achieve the best outcomes for their patients and optimal cost effectiveness."

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References

1. Steuten LMG. Comparative cost / QALY of guideline-recommended prostate cancer treatments: a UK cost perspective. PD 0371; 2nd ESTRO Forum, Geneva, Switzerland 2013.
2. Prostate Cancer UK Available at: http://prostatecanceruk.org/information/prostate-cancer-facts-and-figures [last accessed March 2013]
3. A comparison of prostate cancer survival in England, Norway, Sweden www.ncin.org.uk/view.aspx?rid=284 [last accessed March 2013]

Cancer experts detail advanced radiosurgery treatments for lung cancer using Varian Technologies

Cancer experts have reported future trends and progress in radiotherapy treatments for lung cancer using motion management and tumour-tracking technologies from Varian Medical Systems. Speakers at Varian's Emerging Technologies Symposium at the annual ESTRO conference detailed experiences of stereotactic ablative body radiotherapy (SABR) treatments using Varian's TrueBeam™ medical linear accelerator and Calypso® 'GPS for the Body' tumour-tracking technology.

Professor Suresh Senan, radiation oncologist at VU University Medical Center (VUMC) in Amsterdam, the Netherlands, presented a systematic review[1] into published outcomes of lung SABR treatments for central lung tumours at multiple cancer centers globally. "This systematic review shows that SABR achieves high local control with limited side effects, even for central lung tumours," he said.

Prof Senan also provided details of treatments at VUMC, where more than 1200 stage 1 lung tumour patients have been treated in the last ten years using SABR. The clinic, which receives referrals from more than 70 Dutch hospitals, treats patients on eight Varian linear accelerators, including four TrueBeam devices. Since 2008, all lung SABR treatments at VUMC have been delivered using Varian's RapidArc® technology, many on the TrueBeam system. According to Professor Senan, the main benefit of RapidArc for lung patients is the shorter treatment time with less risk of motion.

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1. Senthi S et al. Outcomes of stereotactic ablative radiotherapy for central lung tumours: A systematic review. Radiother Oncol (2013), http://dx.doi.org/10.1016/j.radonc.2013.01.004

Milestone 3,000th radiation treatment system rolls off Elekta's UK production line

Two-thirds of all cancer patients worldwide receive radiation therapy during their illness, and for the vast majority of these patients, a linac will deliver their therapy. The 3,000th digital linear accelerator produced by Elekta since 1985 recently rolled off the Crawley production line, and is scheduled for installation at The Christie NHS Foundation Trust in Withingon, Manchester, UK.

"The Christie is delighted to be able to continue to offer the latest radiotherapy technology to our patients and to work with Elekta to develop treatments for the future," says Head Physicist at The Christie, Dr Carl Rowbottom.

"The 3,000th digital linac is a tremendous milestone for Elekta," says Bill Yaeger, Executive Vice President Elekta Oncology. "Crawley is renowned worldwide as the 'Home of the Digital Linear Accelerator,' and we are immensely proud of our history in radiation oncology. We are grateful for the dedication of our staff and particularly for our customers in clinics and medical centres around the world, including our thriving partnerships with NHS Trusts here in the United Kingdom. Elekta digital linear accelerators annually treat more than one million patients with cancer worldwide."

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New research reveals brain tumours have one of the lowest survival rates of all cancers – yet one of the lowest levels of funding

Credit: NPC and Brain Tumour Research

Brain Tumour Research (BTR) is calling for increased funding for research into brain tumours following the publication of a new report that shows brain tumours to have one of the lowest survival rates across all cancers - and one of the lowest levels of funding.

The report by New Philanthropy Capital (NPC), commissioned by BTR, found that brain tumours, have one of the lowest survival rates amongst all cancers, with just 18.8% of individuals surviving for more than five years. The research highlights that mortality rates are increasing, with 16% more deaths recorded in 2011 than in 2001. Earlier research by Neil Burnet et al showed the average years of life lost for brain tumours stands at 20.1 years compared to the average across all cancers of 12.5 years. When NPC compared this to the funding, it showed that brain tumours remain in a very poor position relative to other cancers.

The report further shows that cancer research funding is significantly skewed, with 43 of the top 48 cancer sites, including brain cancer, receiving just 40% of funding for site specific cancers. The rest goes to just 5 cancer sites. Unlike most other cancers, brain tumour research benefits little from general cancer research, which makes up 60% of the total research spend in the UK, because of the complexities of the brain. So overall brain tumours current share of the total research spend is only 1.4%. And spending has increased only very recently—since 2002 brain tumour's have received less than 1% of the cumulative spend.

The NPC research focuses only on primary tumours - if secondary tumours are taken into account, this further increases the proportion of all cancers that are brain tumours.

For more information about Brain Tumour Research, visit www.braintumourresearch.org

Gamma Knife Centre Official Opening

Notable UK government and healthcare leaders, Gamma Knife® radiosurgery experts and representatives of the National Hospital for Neurology and Neurosurgery (NHNN) gathered on April 23 to observe the official opening of The Gamma Knife Centre at Queen Square Radiosurgery Centre by the Rt Hon John Bercow, Speaker of the House of Commons. The new centre – which treated its first patients last fall using its Leksell Gamma Knife® Perfexion™ system from Elekta – is the United Kingdom's sixth operational Gamma Knife centre.

Gamma Knife radiosurgery is a gentler alternative to traditional brain surgery for illnesses such as metastatic disease, which is cancer that has travelled to the brain from elsewhere in the body. With pinpoint accuracy, the system delivers up to thousands of low-intensity radiation beams to one or more targets in a single session.

NHNN's acquisition of Gamma Knife supports the government's efforts to improve access to advanced clinical techniques and will boost research and clinical efforts on neurological disorders.

"In terms of research, the addition of Gamma Knife will enable assessment and evaluation of a range of treatment modalities for brain disorders, particularly for brain metastases," Mr. Kitchen says. "Clinically, Gamma Knife is a well accepted and proven technology that is a gentle and effective option to standard treatments for brain metastases and other brain disorders that can prolong and improve patients' quality of life."

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New endurance rider plans epic fundraiser – from the Bay to Hay

Vika Engel and her pony Sparkle have joined Endurance GB in preparation for their epic ride to raise funds for the cancer unit at Birmingham Children's Hospital. Starting On May 26th they aim to travel 100 miles over six days, from the sandy beach at Borth on the Welsh coast, to Hay-on-Wye on the English border. On her arrival during the Hay Festival, Vika will be met by film producer, Revel Guest.

Vika will be raising funds in memory of her brother, Laurie, whose 21st birthday should have been May 28. Laurie died of cancer, aged 13, and the fund set up by his family after Laurie's death, has already raised over £1 million to build a new teenage cancer unit at Birmingham Children's Hospital, where he was treated. Now the hospital is appealing for £4 million to refurbish the rest of the cancer department, this is Vika's inspiration.

A new Justgiving page tells the whole story: http://www.justgiving.com/bchlaurieengelfund. To read Laurie's full story, visit www.laurieengelfund.org.

For more information on how to take up endurance riding in the UK, visit www.endurancegb.co.uk