



For Immediate Release

Hong Kong Sanatorium & Hospital Introduces First-in-Asia TomoHD System

(8 March 2011, Hong Kong) – **Hong Kong Sanatorium & Hospital (HKSH)** announces today the introduction of the first-in-Asia TomoHD (Helical Direct) system. With a plan to install another TomoHD system in May this year, HKSH is becoming the first and only treatment centre in the world equipped with two TomoHD systems, with the mission to provide quality treatment for more cancer patients.

In 2005, HKSH pioneered to introduce the first-in-Asia TomoTherapy treatment system, which combines image-guided radiation therapy and intensity-modulated radiation therapy. In 2009, HKSH embraced the second-generation TomoTherapy Hi·Art system, which provides more precise 3D image guidance and ensures a greater precision and accuracy, thereby substantially reducing the risk of adverse effects. After six years of clinical application and research studies, HKSH decided to install the state-of-the-art first-in-Asia TomoHD treatment system, as a continuous effort to raise and maintain the high standard of quality cancer care in Hong Kong.

In view of the ever-increasing demand to cancer treatment, Dr. Walton Li, Medical Superintendent of HKSH said, “HKSH is always committed to putting patients first, endeavouring to introduce the latest medical technology to the city with the aim to improve the survival rate and the quality of living (QOL) of our patients.” Following the adoption of this technology as the clinical treatment by HKSH, several Asian countries have followed suit to install the TomoTherapy system. Nowadays, a total of 58 treatment centres possess the TomoTherapy technology, spreading over Japan, South Korea and Taiwan, etc.

“Hong Kong Sanatorium & Hospital is a longstanding partner of TomoTherapy, with a number of research collaborations. The fact that HKSH is installing the most advanced TomoHD treatment system before its commercial launch in April this year signifies a key milestone in our partnership in developing the radiotherapy technology,” remarked Mr. Harry Tschopik, International Sales and Marketing Development Director of TomoTherapy.

1/3 Faster Treatment Time Patient Throughput Doubled

Mr. Wyman Li, Manager (Administration) of HKSH, highlights, “After continuous clinical applications and comprehensive clinical studies in the past six years, HKSH has accumulated wide-ranging experience in the operation of the TomoTherapy technology. Stringent standards have been formulated for all treatment procedures, in order to provide the most individualized therapy to the patients. The system has so far treated more than 1,800 people. Following the installation of the TomoHD system by HKSH, Hong Kong is the third place after Germany and Belgium embracing this cutting-edge system, which further strengthens Hong Kong’s position as a leading medical hub.”



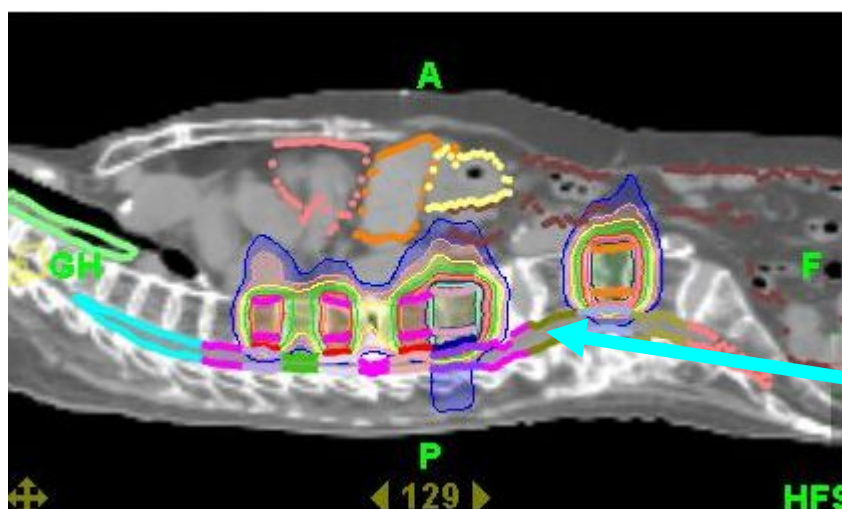
With two state-of-the-art TomoHD systems, HKSH is well-equipped to achieve the goal of providing top-notch treatment of high precision, high dose, high performance and low risk of damage while the treatment time can be greatly reduced by one-third. Not only can the systems benefit more people, but also increase the comfort of the patients and the precision of the therapy. According to the preliminary estimation, after the two TomoHD systems are fully put into practice, the daily number of patients to be treated by the Hospital will increase from 20-30 to 50-70 patients. The waiting time will be reduced from around 5 weeks to around 1 week.

Three Advantages of TomoHD System

TomoTherapy is a proven technology that demonstrates better clinical outcomes with over 1,000 clinical research papers published in a decade of development since 2001. HKSH has accumulated extensive clinical experience, and evidence shows that as compared to the conventional linear accelerator (Linac), TomoTherapy offers a wider range of advantages. TomoHD system, which combines the functions of treatment programme, tumour-locating and intensity-modulated radiation therapy (IMRT), is an image-guided radiation treatment (IGRT) system. The system can accurately locate the areas needed to be treated. It is able to measure the optimal distribution of the radiation beam and the best dose, keep track of the tumour shape and the change of its location, in order to concentrate the radiation on the tumour area, thereby minimizing the damage and side effects made to the surrounding tissues.

(1) Large metastasis area of the tumour

The efficacy of the TomoTherapy technology is most obvious in advanced and complicated cancer cases. When the cancer enters the advanced stage (such as stage three or four), which indicates the tumour has already metastasized, it becomes more difficult to have the case under effective control. As shown in Figure 1, metastasis of a colon cancer patient's tumour occurs and involves several spinal areas. Generally, if the spreading area of the tumour is large and scattering, radiotherapy is not recommended as the side effects may be so severe that the movement ability and the quality of living of the patient would be adversely affected.



(Figure 1) Patient with bone metastasis of colon cancer

With the TomoTherapy technology, the radiation distribution is precise so that those healthy tissues such as the nerves can remain unaffected.

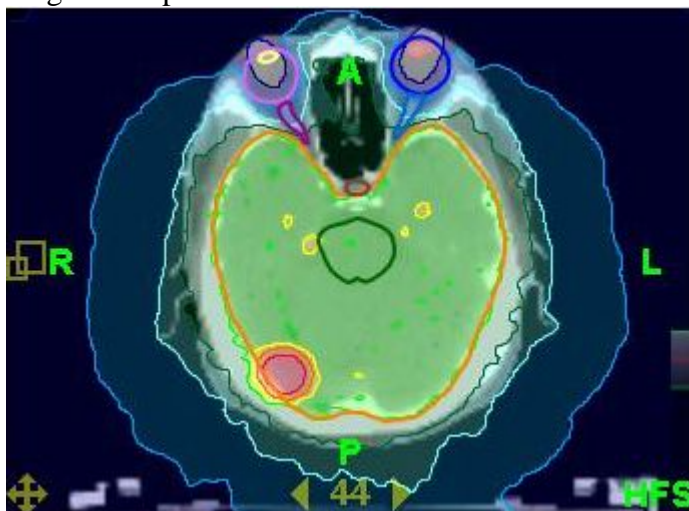
Due to the high precision of its radiation distribution delivered by the TomoTherapy technology, the cases which were not suggested to receive radiotherapy can also be benefited. The coverage of the conventional Linac is 40cm while the extent of the



TomoTherapy system reaches 160cm. For patients who have multiple metastases or a large area required to be irradiated, they may have to undergo separate treatments if the traditional Linac therapy is adopted. However, the TomoTherapy enables simultaneous treatment of multiple lesions. The TomoTherapy system releases radiation from all 360° angles around the patient and is capable to design a 51-angle Helical Intensity Modulated Radiation Therapy (IMRT). With the powerful computer program identifying the relevant areas, most radiation dose is directed to the tumour while minimizing exposure to healthy tissue. The TomoTherapy system offers fast and safe treatment choice to the patients.

(2) Tumour approximate to critical organs

The TomoTherapy system is advantageous over the conventional linear accelerator when used as the treatment of the tumours locating close to the important organs, such as brain tumour and nasopharyngeal carcinoma. As shown in Figure 2, the tumour of a lung cancer patient has been metastasized into some areas in the brain.



(Figure 2) Patient with brain tumour

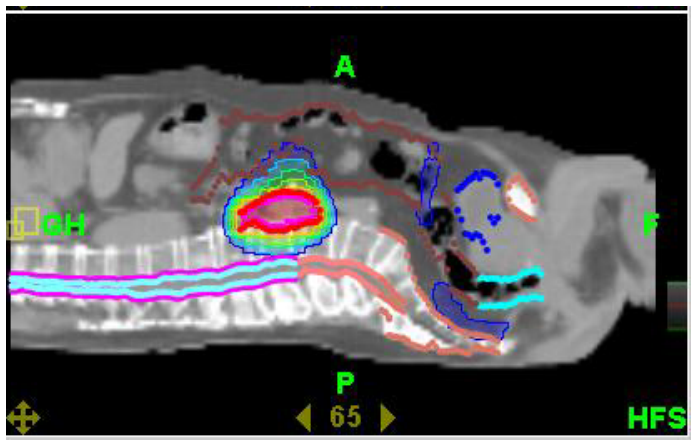
If the linear accelerator treatment is used in treating the brain tumour, a stereotatic supporting structure which is invasive in nature has to be placed on the patient's skull to ensure an exactly right location. TomoTherapy is the only system in possession of both the CT image-guided technology with the delicate radiotherapy technology, through which the brain cancer patient is merely required to fit out a non-invasive stereotatic supporting structure during treatment. This system also allows the taking of a CT scan just prior to each treatment in order to obtain a three-dimensional view of the patient's tissue location. By integrating these images with the planning CT images taken previously, the inaccuracy is corrected accordingly to make sure radiation is directed right where it should be.

(3) Tumour Recurrence

The TomoTherapy technology enables a greater opportunity of re-irradiation on recurrent tumour. As shown in Figure 3, the tumour of a para-aortic lymph node patient who received TomoTherapy before, relapses at the same location after a few years. If a conventional linear accelerator treatment was taken in the first time, the surrounding tissues would have absorbed a certain amount of radiation. When the cancer reappears, other kinds of treatment have to be used instead of the radiotherapy. Nevertheless, the TomoTherapy system produces meticulous beam modulation with



relatively low radiation dose to the surrounding healthy tissues, so that re-irradiation can be conducted at the same area if necessary.



(Figure 3) Patient with para-aortic lymph node

Meanwhile, the outstanding image quality is sufficient for verification of daily treatment delivery, allowing for plan adaptation according to tumour response. It can be used to quantitatively measure tumour response during radiotherapy in pursuit of a highly precise treatment result with limited damage caused.

TomoTherapy is today the most advanced and sophisticated choice among all radiotherapy methods. “HKSH will strive to introduce the latest and cutting-edged technology to Hong Kong, in order to provide excellent diagnosis and treatment for the benefit of the patients,” Mr. Wyman Li concludes.

Photos

1. Group Photo of the Management of HKSH with Mr. Harry Tschopik (Sixth from the right), International Sales and Marketing Development Director of TomoTherapy





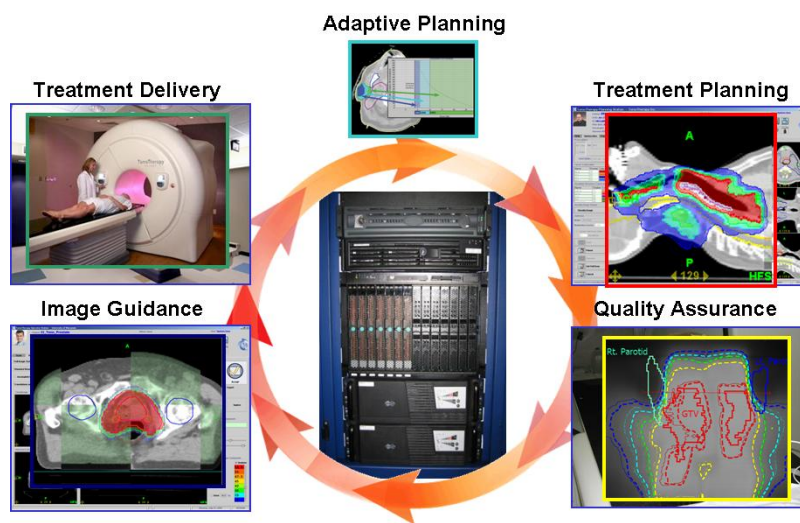
2. With a plan to install another TomoHD system in May this year, HKSH is becoming the first treatment centre in the world equipped with two TomoHD systems.



3. With the cutting-edge TomoHD system, HKSH provides precise and accurate radiotherapy to the cancer patients.



4. Treatment procedure of TomoHD (Helical Direct) system





5. (From left) Dr. Daniel Chua, Associate Director of the Department of Radiotherapy, Dr. Kwan Wing Hong, Director of the Department of Radiotherapy, and Dr. Ben Yu, Head of Medical Physics & Research Department, showcase TomoHD system.



6. Dr. Walton Li, Medical Superintendent of HKSH, delivers the welcome address to the media.



7. Mr. Wyman Li, Manager (Administration) of HKSH, claims that HKSH will strive to provide excellent diagnosis and treatment for the benefit of the patients, through the introduction of the latest and cutting-edged technology to Hong Kong.





8. Mr. Harry Tschopik, International Sales and Marketing Development Director of TomoTherapy



9. Dr. Kwan Wing Hong, Director of the Department of Radiotherapy of HKSH, expounds the clinical advantages of the TomoTherapy technology.



10. Dr. Daniel Chua, Associate Director of the Department of Radiotherapy of HKSH, compares the TomoHD System with the conventional linear accelerator.





11. Dr. Ben Yu, Head of Medical Physics & Research Department of HKSH, explains the scientific advantages of TomoHD System in cancer treatment.



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