




Cancer Treatment

TRUEBEAM™ STx



TRUEBEAM™ STx TREATMENT

 **Sunway Medical Centre
is the first hospital in
Malaysia to install the
TrueBeam™ STx
system.**

Radiotherapy is one of the most effective methods in fighting cancer. It uses high-energy radiation to damage cancer cells by destroying the genetic material that controls how cells grow and divide.

It can be used alone or in combination with surgery and/or chemotherapy. It is a non-invasive outpatient procedure that requires no anaesthesia.







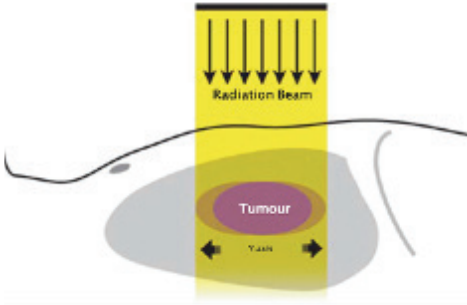
TrueBeam™ STx with 4D Imaging Technology.

The TrueBeam™ STx is an advanced linear accelerator and stereotactic body treatment system that allows doctors to treat challenging cancer cases in the lung, breast, abdomen and other regions.

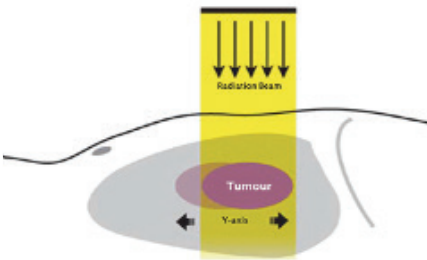
The system uses sophisticated 4D imaging technology to target and treat tumours, even when your tumour moves during your natural breathing patterns. Images can be generated using 25% less X-ray doses. These images are used to confirm a patient's tumour position prior to-and-during the treatment process.



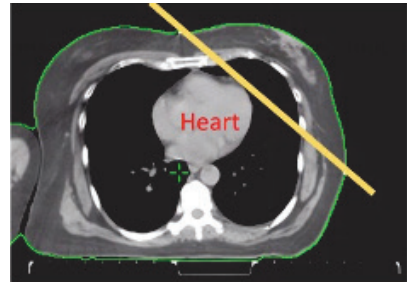
TrueBeam™ STx with DIBH Technique



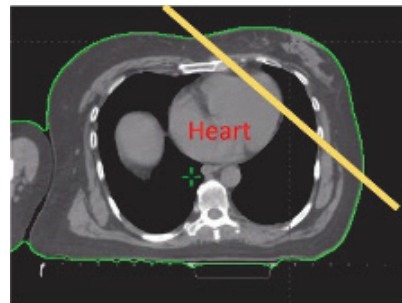
3D Radiotherapy : The normal lung tissues in the whole range of the moving Y-axis are irradiated.



4D Radiotherapy : Tumour-tracking system follows the patient's tumours movement so that relatively small volumes of normal lung tissues are irradiated.



DIBH



Free-Breathing

Deep Inspiration Breath Hold (DIBH) is a specific radiation therapy technique for Breast treatment to spare dose to the heart. During the DIBH technique, the patient is asked to take a deep breath in and hold their breath while the radiation is delivered. This, in turn, will limit the amount of the heart that is exposed to the radiation beam (See sample pictures above).

The Benefits of Treatment with TrueBeam™ STx

● Radiation is so precise that it gives medical professionals the tools to treat more complex cancer cases.

● Real time imaging allows for more accurate targeting and tracking of tumours to improve the effectiveness of treatment.

● TrueBeam™ STx offers more than double the radiation strength of the previous generation of technology, supplying a dose rate of up to 1400 monitor units per minute, allowing doctors to treat patients more quickly than before, for greater patient comfort during treatment.

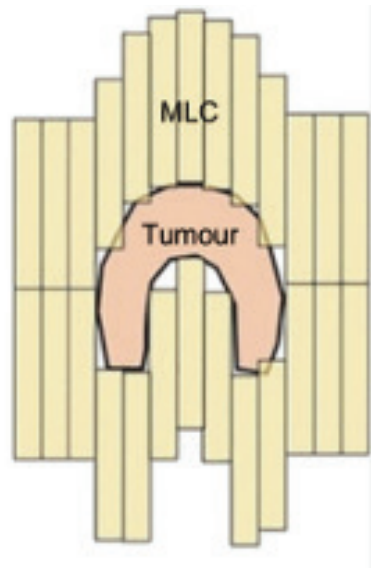
● Fewer rounds of treatment (5 rather than 35 times for early stage lung tumours), for greater patient convenience.

● More finely-shaped beams of radiation on a tumour to protect sensitive structures such as the spinal cord.

How does the TrueBeam™ STx work?

● Rotates around the patient to deliver a prescribed radiation dose from any angle.

● Because tumours aren't perfectly round, an accessory called a multileaf collimator (MLC) is what shapes the beam. It has 120 computer-controlled "leaves" or "fingers" that alter the shape of the radiation beam to match the 3-D shape of your tumour. These can move and change during treatment to target the tumour and minimise the dose to the surrounding healthy tissue.



Real-time surface tracking system is used to track the surface body contour of a patient and confirm they are properly positioned for safe radiation treatment, without extra dose from CT imaging during treatment.

Real-time imaging tools allow clinicians to “see” the tumour they are about to treat. This gives them confidence, and they can target tumours with accuracy measured in millimetres.

The system includes a “gated” option for synchronising beam delivery with respiration. This helps maintain accuracy as the system changes its targeting whenever tumour motion is an issue, for example during lung cancer treatments.



For more information, kindly contact us at:

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Operation Hours

Monday - Friday : 8.30am - 5.30pm
Saturday : 8.30am - 1pm
Public Holidays & Sundays: Closed

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