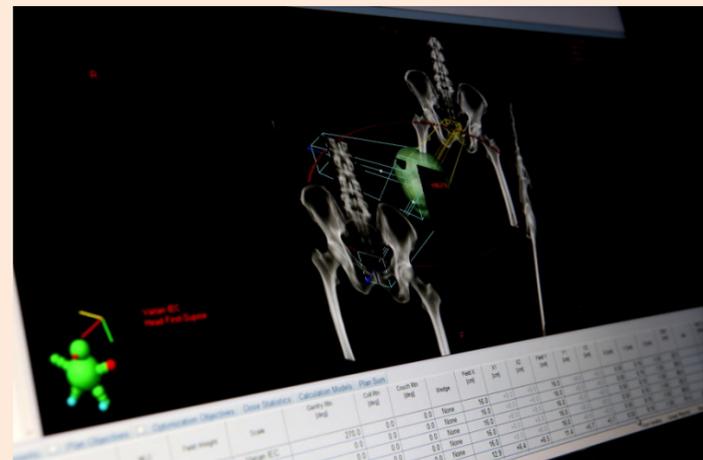


Stereotactic Body Radiation Therapy (SBRT)

Stereotactic body radiation therapy (SBRT) is used to treat extracranial tumors with high dose per fraction in a hypofractionated scheme. The stringent accuracy requirements of dose delivery and tumor localization can be achieved by 4DCT/ABC, advanced patient immobilization and the state-of-the-art image guidance techniques in our centre.



Adaptive Radiation Therapy (ART)

With the advance of deformable registration in the software Velocity, patient plans can be adapted to the changes in tumor sizes and positions.

Contact

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Office Hours:

Monday to Friday: 0900 – 1730

Saturday: 0900 – 1230

Sunday & Public Holiday: Closed

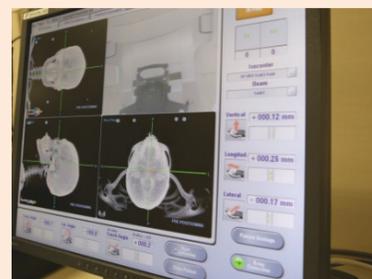
Image-Guided Radiation Therapy (IGRT)

Our centre makes use of different imaging techniques such as infrared and non-coplanar x-ray of Exactrac, cone beam computed tomography (CBCT), on-board kV imaging and MV portal imaging as well as the patient position correction device, PerfectPitch couch, to adjust the patient position accurately in six dimensions. Submillimeter treatment accuracy can be achieved.



Stereotactic Radiotherapy (SRT) and Stereotactic Surgery (SRS)

With the advance of image guidance techniques, patient fixation devices as well as collimation designs such as cones and fine MLC (M3), high dose can be delivered precisely with fast dose falloff. Both framed SRS/SRT and non-invasive frameless SRS/SRT are available in our centre.

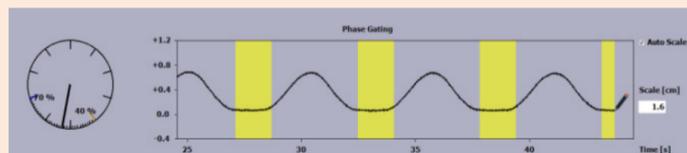


Volumetric Modulated Arc Therapy (VMAT)

VMAT is a radiotherapy technique that offers delivery of rotational beam with variable aperture shapes and intensity. During the treatment, the gantry moves continuously while the dose-rate and MLC leaves vary. The greatest advantage of VMAT is its capability to deliver conformal and modulated dose to the tumors while sparing the normal tissues. The treatment time is significantly reduced, which can reduce the amount of patient motion during the treatment.

Four Dimensional Computed Tomography (4DCT)

4DCT monitors the breathing cycles of patients during the CT scans. With this technique, the positions of the moving tumors at each phase of the breathing cycle can be closely monitored.



Active Breathing Coordinator (ABC)

Apart from 4DCT, our centre also provides ABC technique for regulating breath hold. It minimizes the motion of tumors due to breathing.

High Dose Rate (HDR) Brachytherapy

HDR brachytherapy allows treatments on an outpatient basis. It delivers very high dose to the tumors while it has a rapid dose falloff to spare the organs at risk. In our centre, afterloader with Iridium-192 is used to deliver high dose rate brachytherapy automatically.



2D and 3D Conformal Planning

Both techniques make use of the Multi-Leaf Collimators (MLC) to shape the x-ray apertures conformal to the tumor shapes sparing the normal tissues.



St. Teresa's Hospital Oncology Centre

Radiation Therapy Services in St. Teresa's Hospital Oncology Centre

Our centre offers different modalities of radiation therapy techniques that allow accurate delivery of radiation dose to the target tumours while minimising damage to the surrounding healthy tissues. Radiation therapy techniques and equipment available in our centre are described below.

