Commissioning Guide

The purpose of this commissioning guide is to describe the process of configuring the eRT application for clinical use. This requires modeling the actual electron treatment machines in terms of physical geometry (e.g. SAD, rotation directions and limitations, applicator sizes/names), beam parameters (e.g. treatment energies, energy spectrum, beam flatness), and other facility information/preferences (e.g. CT Curves, location/shipping address, planning defaults). As the beam modeling/commissioning steps are critical to ensuring the safety and quality of patient treatments, it is also essential that the qualified medical physicist (QMP) responsible for the facility has a sufficient understanding of the dose calculation technique used by the eRT application. As such, this guide also serves to provide this information.

Organization / Facility Modeling

The first step in preparing eRT for clinical use will be to gather the data needed to create a model of the local treatment facility. This model will include the follow information:

List facility info here

Dose Calculation Engine

decimal eRT dose calculations follow the pencil beam redefinition algorithm as described in Pencil-beam redefinition algorithm for electron dose distributions that allows for electron dose calculations using beam limiting devices.

Commissioning Data

As a semi-analytical calculation model, the PBRA requires only simple measurement data results in order to fully commissioning the system. Th