

History

Helical tomotherapy is a relatively new modality with integrated treatment planning and delivery hardware for radiation therapy treatments. In view of the uniqueness of the hardware design of the helical tomotherapy unit and its implications in routine quality assurance, the Therapy Physics Committee (TPC) of the American Association of Physicists in Medicine (AAPM) commissioned Task Group 148 (TG148) to review this modality and make recommendations for quality assurance related methodologies.

General Outline of Report

The report is divided into three main chapters that cover treatment imaging, treatment planning, and treatment delivery. Each chapter gives an overview of the unique aspects and proceeds to describe the recommended QA tests. A final chapter summarizes the QA recommendations and details daily, monthly, quarterly, and annual QA procedures.

Major Highlights

This report is designed with the intent to provide guidance to the physicist on the routine QA aspects of the tomotherapy unit. Since the imaging and treatment planning aspects are intimately connected with the physical machine hardware each aspect is covered in this review.

Implementation Plan

The summary chapter lists daily, monthly, quarterly, and annual tests. This chapter is designed to facilitate the implementation of recommended QA procedures.

Timeline for Report Release

This TG report is currently under review by the Therapy Physics Council.