

AbstractID: 4444 Title: Physics Aspects of Clinical Trials: From the Basics to IMRT and IGRT

Medical physicists play an important role in the success of clinical trials involving radiation therapy. An understanding of how these clinical trials work is necessary and expected of the physicist involved with these treatments. AAPM Report #86, Quality Assurance for Clinical Trials: A Primer for Physicists, provides background information to physicists participating in clinical trials and will be reviewed.

The second part of the presentation introduces a new initiative within the AAPM that will affect how clinical trials are conducted. The goal of AAPM Task Group 113 is to provide guidance to physicists and others involved in clinical trials on methods to improve the consistency and quality of data generated for trials involving external beam radiotherapy. This presentation will discuss factors that impact data quality for the entire treatment planning and delivery process with an emphasis on advanced technologies such as IMRT and IGRT. The scope of Task Group 113 includes image acquisition for volume definition, treatment planning systems, patient localization, treatment guidance and delivery, and credentialing for clinical trials.

Educational Objectives:

1. To review the primer on QA for Clinical Trials
2. To describe the goals of TG#113 Physics Practice Standards for Clinical Trials
3. To highlight factors that directly impact clinical trials that involve IMRT and IGRT