AbstractID: 7957 Title: Errors – Why They Occur, How to Minimize Them (Part II)

Errors – Why They Occur, How to Minimize Them is a 2-day symposia focused on quality of treatment in medical physics and the challenges associated with actual clinical operations. Three presentations will be given on each day of the symposia. This abstract describes the Day 2 presentations.

The first presentation in this session presents a framework to accrue and analyze and report on radiation therapy errors and near-miss events, from decision to treat to final treatment. All reported radiation therapy incidents and near-miss events from 2001 to 2006 were analyzed. Each report was staged according to the type, cause, and clinical impact of the incident. Each report identified what stage of a generalized external beam radiation therapy process the incident or near-miss event occurred. The framework has allowed the assessment of trends in radiation therapy treatment incidents which will be presented. The second and third presentations in this session will discuss quality assurance and error pathways for radiotherapy technologies of Tomotherapy and CyberKnife. Each of these presentations will be from users will extensive academic and clinical experience. Part of these presentations will focus on these technologies' relation to image guided treatments and issues of implementation that may be prone to errors (or poor quality assurance) if not understood by the Medical Physicist. Future needs in the use of these equipments for optimal quality assurance and safe operation will be discussed.

Presentation 1 *Incidents in external beam radiation therapy: a new taxonomy based on a five year review*

Presentation 2 *Tomotherapy: error pathways and quality assurance*

Presentation 3 *Cyberknife QA: current landscape, and a map for the exploring the future*