AbstractID: 9854 Title: Patient Dosimetry

For decades, physicists have been making measurements on patients during treatment in order to confirm the overall accuracy of the dose planning and delivery system. Such patient dosimetry (often referred to as "in vivo dosimetry" or IVD) is an essential component of a comprehensive quality assurance program. Recently, new technologies and refinements to older technologies have improved the accuracy and efficiency of IVD. Specific advances in diodes, FETs, and EPID-based dosimetry will be discussed, along with advantages and disadvantages of each approach. Implementation strategies for an IVD program will be presented. Measurements involved in acceptance testing, commissioning, and routine quality assureance of the variety of patient dosimetry systems will also be discussed.

Educational Objectives:

1. To develop a basic understanding of the technologies presently available for patient dosimetry
2. To become familiar with the advantages and limitations of the available technologies
3. To develop an understanding of the practical issues involved in implementing an IVD program, along with realistically achievable tolerance limits
4. To develop an understanding of the measurements required to perform acceptance testing, commissioning, and routine quality assurance on patient dosimetry systems.