An overview of Intensity Modulated Radiation Therapy (IMRT), a true revolution in the field of radiation oncology in that it provides the unprecedented means of conforming to the shape of the target tissues in 3-dimensions, reducing the risk of complications thereby improving the quality of life of irradiated patients. Moreover, IMRT provides the means to deliver higher than conventional doses thus improving the chance of cure in these patients. Despite its established benefits, several barriers exist to the widespread clinical implementation of IMRT.

In the past, great concerns existed regarding the large capital outlay needed for both software and hardware. This barrier is less relevant today given the increased reimbursements possible with IMRT. Today, the most significant barrier is education. IMRT is a fundamentally new approach to both treatment planning and delivery. Adoption of the IMRT approach entails new ways of thinking in regard to patient selection, treatment planning and quality assurance measures. Unfortunately, apart from a few University-based short courses, limited resources are available for the physician and physicist interested in learning IMRT. Moreover, the available courses primarily focus on the physics of IMRT, not on clinical aspects of IMRT planning and delivery.