Courses and Workshops (Pre conference) April 16-17, 2011		
C1 - Modern Radiotherapy: Risks and Benefits	Yakov Pipman - Chair (USA) Helvécio Mota (USA)	Risk of advanced technologies; quality assurance for radiotherapy units; treatment planning using different imaging techniques; patient safety

The goal of this course is to review the experience and lessons learned from past events where harm has resulted in the course of applying radiation to patients.
The introduction and adoption of new technologies and radiotherapy techniques keeps accelerating and expanding. This is a good development in general since it implies that more patients have access to more effective treatment and a better chance at controlling their disease with fewer side effects.
When patients enter into the radiotherapy environment they expect a significant health benefit in the treatment of a very serious disease. This environment is probably among the most complex that a patient may encounter. The complexity arises from the mixture of professionals that take part in the patient's treatment, from the complexity of the equipment and the multiple types of equipment needed in the process, and from the crucial part played by software, hardware and communications, both electronic and human.
In the last several years, with the increase in complexity of the equipment, and of the techniques that it allows, there have been many more documented cases of errors and accidents. In the most publicized cases, unintended but severe harm has occurred. Analysis of these events showed repeatedly that various factors were involved and compounded.
While these cases represent a very small fraction of the total number of patients that routinely benefit from radiotherapy, the high visibility of recent cases, the severity of the outcomes, and the fact that radiation is involved, has shined an intense light into our field of work. It is imperative that as a profession we use this opportunity and put into practice tools to reduce the risks much more than they currently are.
We anticipate that participants will learn about the lessons from recent events and about some of the methods and tools that are being explored to reduce risk in the radiation therapy process. We expect that some of these will be adopted and put into practice.