Accidents and Audits in Radiotherapy with an emphasis on Peer Review (Internal Auditing) in Medical Physics

J. Francisco Aguirre
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Objective of the course

To provide participants with the necessary knowledge and skill in order to:

1. Identify and manage risk in radiotherapy medical physics
2. Handle the documentation, reporting and reviewing of accidents and near-incidents
3. Develop procedures based on lessons learned
4. Perform regular internal peer review and auditing of their own radiotherapy medical physics practices.
The Subjects to be Covered

- The radiotherapy process
- Accidents in radiotherapy
- The risks of high technology
- Clinical consequences of radiotherapy
- Quality and safety
- AAPM safety profile assessment
- Reporting of accidents and incidents
- Process maps
- Failure modes and effects analysis
- Incident learning
- Checklists
- Preventive measures
The Subjects to be Covered

- Root cause analysis
- Statistical process control
- Quality management
- Safety culture
- Improvements on safety, an IAEA perspective
- IAEA audits and accident prevention
- Improvement of quality and safety, the clinician perspective
- Staffing levels, training, communication
- A QA program that includes safety
- Quality audit programs in the USA and other countries
- What to do when an accident occurs
## Composition of the Group

- Engineer  
- MD  
- Rad. Oncologist  
- Hosp Admin/MBA  
- Medical Physicist  
- Maintenance  
- Administration  
- Clinical RT  
- Clinical Director  
- Medical Physics  
- National Program
The Lecturers in this Course

- J. Francisco Aguirre
  Senior Medical Physicist, retired from MDACC
  Consultant in medical physics for the Memorial North West Hospital, Houston, TX
  In charge of QA at the Accredited Calibration Dosimetry Laboratory at MDACC
  International consultant in medical physics
The Lecturers in this Course

- Yakov Pipman
  Emeritus Medical Physics Professor
  North Shore University Hospital

- Alfred Siochi
  Professor of Medical Physics
  West Virginia University
The Lecturers in this Course

- Suzanne Evans MD, MPH
  Assistant Professor of Therapeutic Radiology; Assistant Chief and Medical Director of Rad. Oncology, Lawrence Memorial Hospital

- Peter Dunscombe, Ph.D.
  Professor Emeritus, Calgary Canada
The Lecturers in this Course

- Derek Brown PhD
  Associate Clinical Professor, University of California at San Diego

- Sasa Mutic PhD
  Professor Washington University School of Medicine
The Lecturers in this Course

- Todd Pawlicky PhD
  Professor at University of California at San Diego, La Jolla CA

- Debbie Gilley MPA
  IAEA officer within the Radiation Protection Section
The Lecturers in this Course

- Beadle MD
  Professor Radiation Oncology UT MD
  Anderson Cancer Center

- Paul Jursinic PhD
  Director of Medical Physics West Michigan Cancer Center