

Patient safety has always been a critical concern to AAPM members, but has recently taken on a new public awareness. The AAPM will be hosting a special symposium to discuss issues related to patient safety. The goals of the symposium will be to present the background to the recent increase in awareness and what the AAPM and international organizations are doing to improve patient safety.

We will start with Walt Bogdanich, the author of the recent articles in the New York Times concerning patient safety and radiation accidents in radiation therapy and diagnostic imaging. Mr. Bogdanich joined the New York Times in 2001 after being an investigative producer for 60 minutes. He also worked as an investigative reporter for The Wall Street Journal and The Cleveland Press and The Plain Dealer. Mr. Bogdanich was awarded the Pulitzer Prize in 2005 for his series "Death on the Tracks" and the 1988 Pulitzer Prize for his articles in The Wall Street Journal on substandard medical laboratories. Mr. Bogdanich will present the history behind his series of articles on radiation accidents and on what he found.

The second speaker will be William Hendee. Dr. Hendee has been an AAPM member since 1965 and is the editor of the journal Medical Physics. Dr. Hendee has authored more than 370 scientific articles and 25 books. He has held many leadership positions and was a cofounder of the National Patient Safety Foundation, an organization dedicated to improving the safety of patients. Dr. Hendee will be discussing an example of the AAPM's latest effort to improve patient safety, a conference entitled "Safety in Radiation Therapy – A Call to Action", held June 24-25, 2010. Recent high-profile reports of technical failures and human errors causing severe injuries and deaths of patients accentuate the need for enhanced efforts to improve patient safety in radiation therapy. In response to this need, the American Association of Physicists in Medicine (AAPM) and the American Society of Radiation Oncology (ASTRO) convened a Call to Action summit that included medical physicists, radiation oncologists, medical dosimetrists, radiation therapists, hospital administrators, industry leaders, and governmental representatives. The summit yielded several objectives and strategies directed to improving the safety of patients undergoing radiation therapy. These recommendations should be communicated to vendors and to members of the radiation therapy team in every institution providing radiation therapy services to patients.

The third speaker will be Michael Herman. Dr. Herman is the current president of the AAPM and will describe AAPM efforts to improve patient safety in the medical use of radiation. These include two recent meetings; CT technique, calibration and monitoring and safety in radiation therapy. He will describe AAPM and cooperative multi-society and agency efforts under way that focus on 4 primary objectives: 1) national recognition of properly qualified individuals who participate in procedures in medical imaging and radiation therapy. This includes national recognition and enforcement of the AAPM definition of the qualified medical physicist. The Consistency, Accuracy, Responsibility and Excellence in Medical Imaging and Radiation Therapy ("CARE") Act represents an opportunity to achieve this goal; 2) establishing nationally consistent practice accreditation for all medical radiation uses, that recognize qualified individuals, in appropriate staffing levels, who follow approved community consensus standards and

practice guidelines. Dr. Herman will also describe independent auditing services that could be provided by centers for radiologic physics (CRPs), which existed in the 1970s and early 1980s to provide audit and quality review for radiation therapy practices. The CRP model could substantially enhance the accreditation process with objective assessment of practice technical competence. AAPM has formed a committee to investigate the reincarnation of the CRP model; 3) the development of a consistent mechanism for reporting potential and actual adverse events in the medical use of radiation. Such a system would provide essential data on medical errors to perform trend analysis, assessment, inform the community and to make improvements; 4) enhancement of the FDA pre market approval and post market monitoring systems. The current systems have substantial limitations in terms of effectively reviewing all safety and efficacy aspects of devices that use medical radiation. AAPM has continued to dialogue with FDA and others to provide assistance. It is possible that technical assessments performed by experts that are independent of manufacturer and regulatory agencies could provide objective, quantitative and relevant guidance to the clearance and monitoring processes. The AAPM technology assessment institute, possibly in cooperation with other similar organizations is preparing to provide such evaluations.

The last speaker will be Ola Holmberg. Dr. Holmberg is the head of the Radiation Protection of Patients (RPoP) Unit, Radiation Safety and Monitoring Section, NSRW-Division, at the International Atomic Energy Agency (IAEA), Vienna, Austria. He is a medical physicist with long radiotherapy experience from Malmö University Hospital, Sweden, St. Luke's Hospital, Dublin, Ireland, The Netherlands Cancer Institute, Amsterdam and Chief Physicist at Copenhagen University Hospital, Herlev, Denmark. He was a co-founder of the Radiation Oncology Safety Information System (ROSIS) in 2001, an international voluntary safety reporting system for radiotherapy with more than 100 participating departments globally and a database of over 1200 incident reports, and is also a Task Group member of the International Commission on Radiological Protection (ICRP) on prevention of accidental exposures from new external beam radiation therapy technologies. Dr. Holmberg will discuss efforts being undertaken by the IAEA for radiation accident prevention in medicine, including education, training, guidance, knowledge exchange and the implementation of safety reporting as a tool for preventing accidental exposures.

#### Learning Objectives:

- 1) Understand the background history of radiation accidents
- 2) Understand ways to improve patient safety
- 3) Understand the ways that the AAPM is supporting patient safety
- 4) Understand how international organizations, specifically the IAEA, is supporting patient safety