

## AbstractID: 7716 Title: Five year-report on a web-based interactive dosimetry training tool

**Purpose:** To address the critical shortage of medical dosimetrists in radiation oncology, an NCI-funded web-based 'Dosimetry Training Tool' education program was developed. The aim of this work was to present the end of funding period findings.

**Method and Materials:** A dedicated group of volunteer medical physics and medical dosimetry experts developed high quality educational material enhanced by the interactive capabilities offered through web-based learning. Educational rigor was provided by frequent interaction between the developers and a psychometrician and internet education specialist. During the development of the program, tests were performed to evaluate and revise the program direction using selected sites. Pre- and post module quizzes are taken by the students to quantify the educational benefit of the learning tool. An online user feedback tool is available for content and/or quiz queries.

**Results:** Twenty-four modules were developed, from Fundamentals of the Medical Management of Cancer (module 1), external beam and brachytherapy treatment planning, to Basic Math Skills for Dosimetry (module 24). Each module contains between 3 and 26 sessions. Over 1100 users, including over 800 students have used the dosimetry training tool, with a steady increase in the number of users throughout the program development. Mentors and students are predominantly from the US, however, other countries with approved mentors and active students are Afghanistan, Australia, Canada, China, Greenland, Hong Kong, Ireland, Israel, Pakistan, Singapore, Taiwan, and Thailand. Increases in pre- and post-quiz scores range from 2 to 35% with a mean of 15% improvement.

**Conclusion:** A successful web-based dosimetry training tool has been developed and is in use by over 800 students. The use of the developed web-based interactive educational design approach could be extended to augment and facilitate the development of medical physics graduate programs, medical physics residencies and other allied health care professional education.