AbstractID: 12637 Title: Pilot study of interactive physics course for radiation oncology residents

Purpose: Pilot a new approach to teaching physics to Radiation Oncology residents that seeks to maximize the learning experience under the constraint of limited class time provided for teaching. The pilot is limited to a few lectures during the year. **Method and Materials**: Class time is devoted to the interactive learning of the key concepts instead of reciting the text book by rote to the students by means of prepared in-class lectures. Two types of classes are given. The first class is spent asking the residents prepared questions on the key concepts of the subject material. These questions involve no calculations and are multiple-choice. The second class consists of reviewing problem set questions that were distributed beforehand. The residents are encouraged to teach each other to help the class understand the concepts and problem solving methods with the instructor acting as the guide in the process. In order to be prepared for class, the residents are required to review the material beforehand. To facilitate this, audio/visual (A/V) lectures are created in Adobe Captive for them to view. These lectures are kept short (~20 min) and are focused on the key concepts instead of the details. **Results:** The residents viewed the A/V lectures and came to class prepared for discussion. The in-class question sessions on concepts supported by a group learning approach enabled the residents to teach their peers and focus on the essential material. The problem sessions allowed them to apply their knowledge of the concepts to learn the details and calculation process. **Conclusions:** This pilot study has been successful as evidenced by the residents' increased exam scores and attendance to class. This program will be expanded to cover more lectures. In addition, the material (lectures, questions, problem sets and detailed answers) will be made available via the department website.