Materials/Methods: Eight patients were treated at our institution during January and February 2011 with this technique. Median age was 73.5 years (range: 44 to 96), 7 male and 1 female. Average Karnofsky Performance Score Index was 75% (range:60 to 90%). Histological diagnosis - basal cell carcinoma: 6 patients, squamous cell carcinoma: 1 patient; basal cell without exclusion of squamous cell carcinoma: 1 patient. Staging was T1a in 6 patients, T1b in one and T2 in the remaining one. 3 patients underwent pre-BT surgery (one with positive surgical margins, 2 with un evaluable margin status), however 6 patients had undergone at least one prior surgery. 3 patients were referred to our department after excisional or incisional biopsies. Treatment doses were extrapolated from low dose rate tables and ranged between 32.5 Gy/10 fractions to 50 Gy/10 fractions. In one patient we performed in vivo dosimetry. We provide a report on the application of interstitial catheters, dose prescription, treatment delivery and preventive management of local complications.

Results: All treatments were uneventful. 6 lower eyelid hematomas resolved within weeks; 7 patients - grade 1 radiodermitis; 1 patient - mild conjunctivitis. Treatment was very well tolerated by all patients without any treatment-related infection, severe hemorrhage or visual loss during treatment. There was no conspicuous tumor at treatment completion in any case. One patient had an ulcer at the tumor location, attributed to tumor lysis.

Conclusions: HDR BT is a feasible and safe technique for both basal and squamous cell carcinoma of the lower eyelid.

Author Disclosure: B. Chang: None. J. Beitler: None.
Purpose/Objective(s): To present software for a Radiation therapy facility that will simplify and automate the process of dosimetric planning system (Varian Eclipse v 8.6) and computes the DVH. There is also a facility to define disease site, technique and plan and DVH data and gives you the desired results. This software accepts DICOM RT data from an IHE-RO compliant Treatment planning system and gives you the freedom to use a/b ratios to modify the tolerance values in accordance with dose-fractionation schemes (other than 2Gy/fraction). Based on treatment intent and treatment site templates can be designed and submitted in the software. These templates are then used to evaluate the dosimetric characteristics of a plan. Optimal plan selection is then performed by the computer to find the best plan for the patient.

Materials/Methods: The prototype system has been used to design various templates for different treatment sites such as breast and prostate. The templates have been used to evaluate plan on the basis of various dosimetric parameters for several patients. The templates have been used to evaluate plan on the basis of various dosimetric parameters for several patients. The templates have been used to evaluate plan on the basis of various dosimetric parameters for several patients. The templates have been used to evaluate plan on the basis of various dosimetric parameters for several patients. The templates have been used to evaluate plan on the basis of various dosimetric parameters for several patients.

Conclusions: Conclusions: Conclusions: Conclusions: Conclusions: Conclusions: This study represents a comprehensive assessment of the epidemiological features of breast and gynecological cancers in Jordan basing a framework for enhancing strategic health plans regarding cancer surveillance and control in Jordan and the Middle East.

Author Disclosure: A. A. Salem: None. D. El Tannir: None. A. Salem: None.

3008 Radiation Oncology in the Core Clinical Medical School Curriculum: An Update on the Oncology Education Initiative

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Purpose/Objective(s): The Oncology Education Initiative (OEI) was established in 2007 to advance oncology and radiation oncology education in the undergraduate medical curriculum. The OEI integrates structured radiation oncology didactics into the existing core radiology clerkship, offered to both third- and fourth-year medical students. Here we set out to determine whether these structured didactics would continue to increase overall medical student knowledge about radiation oncology.

Materials/Methods: We administered a pre- and post-clerkship test examining oncologic concepts. This multiple-choice exam was administered at the beginning and end of the radiology clerkship during which a 1.5-hour didactic session was given by a radiation oncology attending. Changes in individual question responses and overall categorical responses were analyzed. All hypothesis tests were two-tailed with a significance level of 0.05.

Results: During the 2010 academic year, 155/208 (75%) students were present for the pretest, posttest and lecture, and therefore met the requirements for evaluation. 77 (49%) students were third-years and 78 (51%) students were fourth-years. The average exam score improved from 62% to 70% (p<0.001). All topics (100%) showed improvement in scores with the largest absolute improvement seen in the radiation oncology category, which increased from 57% to 72% (p<0.001). Fourth-year students performed significantly better than their third-year counterparts on the overall average pretest exam scores (64% vs. 60%, p = 0.04), however, there was no significant difference in posttest scores overall. (71% vs. 68%, p = 0.11). Interestingly, as the year proceeded, average exam scores increased among third-year students and decreased among fourth-year students. Reviewing previous classes, in the 2008 academic year, 137 students had exam score improvements from 59% to 70% (p = 0.011). In the 2009 academic year, 145 students had exam score improvements from 60% to 71% (p<0.001). With over 400 students since the pre and post test were initiated, we continue to show significant improvements in the scores every year.

Conclusions: Conclusions: Conclusions: Conclusions: Conclusions: Conclusions: In the successive years since the inception of the OEI, the addition of radiation oncology didactics continues to show a significant improvement in medical students’ knowledge of the field. Interestingly, it may be more beneficial to complete the radiology clerkship during the third-year, as students seemingly benefit more from the course at that point in their medical career. Radiation oncology didactics should be incorporated into the undergraduate medical curriculum to provide students with exposure to the field and a better understanding of multidisciplinary oncology management.


3009 Automated Plan Evaluation Tool

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Purpose/Objective(s): To present software for a Radiation therapy facility that will simplify and automate the process of dosimetric planning system evaluation and will help clinicians and physicists to review and analyze the plan.

Materials/Methods: Every treatment plan requires certain dosimetric characteristics or parameters to be evaluated, which are essential for the assessment of a treatment plan. One can automate this process with software that can understand the treatment plan and DVH data and gives you the desired results. This software accepts DICOM RT data from an IHE-RO compliant Treatment planning system (Varian Eclipse v 8.6) and computes the DVH. There is also a facility to define disease site, technique and fractionation specific templates for dose volume constraints. This software helps you to analyze normal tissue tolerance doses against data in the literature and gives you the freedom to use a/b ratios to modify the tolerance values in accordance with dose-fractionation schemes (other than 2Gy/fraction). Based on treatment intent and treatment site templates can be designed and submitted in the software. These templates are then used to evaluate the dosimetric characteristics of a plan. Optimal plan selection is then performed by the computer to find the best plan for the patient.

Results: The prototype system has been used to design various templates for different treatment sites such as breast and prostate. The templates have been used to evaluate plan on the basis of various dosimetric parameters for several patients. The templates have been used to evaluate plan on the basis of various dosimetric parameters for several patients. The templates have been used to evaluate plan on the basis of various dosimetric parameters for several patients. The templates have been used to evaluate plan on the basis of various dosimetric parameters for several patients. The templates have been used to evaluate plan on the basis of various dosimetric parameters for several patients.

Conclusions: This prototype software provides a simplified solution for an automated dosimetric plan evaluation. These evaluated dosimetric parameters are stored in a database for all patients in the clinic. Clinician reports and patient follow-up information (quality of life information) could be linked with this database. This would help understand why certain radiation treatment techniques are better than others in certain cases of treatment.

Sample template showing Plan evaluation report for Prostate case

Name of Patient: XX Patient Id: XX
Date of Birth: Sex:
Case: Ca Prostate Fractionation scheme: X Gy/# in XX fractions
Refer table for tissue tolerance (Tissue Tolerance Comparison Result)