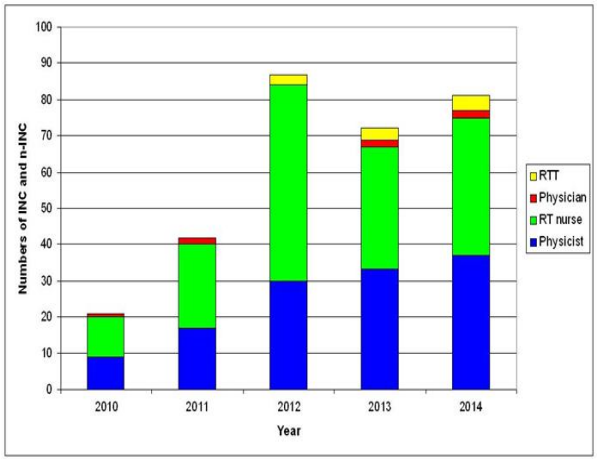
gives an easy overview and makes it possible to spot trends and risk factors. Staff is actively encouraged to report INCs and n-INCs. A monthly multidisciplinary staff meeting is used to disseminate lessons learned and resulting amendments to internal guidelines and work flows. Here, we attempt to show the effect of such a system by examining INC reporting rates over a 5 year time period, from the initiation of the setup to today. The distribution of reported INC between staff groups will be examined. Besides that we places a question in a general anonymously questionnaire where we ask concerning the culture of learning regarding INC.

Results: In the results we see a clear trend. Numbers of INC and n-INC reported are increasing through the years from 2010 to 2014. It seemed that the number shows stagnating for now. All staff groups have been participating through the years.



Staffs answer on our question regarding INC showed that the RT nurses agreed or totally agreed on 'The culture in our department makes it easy to learn from others INCs' in 91% of the cases and physicists agreed or totally agreed on that in 66% of the cases.

Conclusions: We experienced, that to use information gained in a learning matter, two things are needed: the INC reporting must be as complete as possible, i.e. all staff groups must be participating, and lessons learned should be disseminated through the organisation in an optimal way to assure and improve future workflow. We have shown, that a culture where we can discuss INCs and n-INCs in an open way, without involved parties feeling quilt; results in participation among staff groups in reporting INC.The multidisciplinary participation gives a differentiated picture of risk facts in the department and the systematic handling of the reported INC allows the RT department to track trends and helps to improve patient safety. Improvement of daily practice encouraged staff to report INCs.

EP-1687

Improving safety culture through incident reporting

K. Betcher[1], S. Lowitz[1]
[1]*Hospital of the University of Pennsylvania, Radiation Oncology, Philadelphia, USA*

Purpose/Objective: An organization's 'safety culture' and approach to errors and events are recognized across industries as key factors influencing safety and quality. This presentation summarizes experiences, insights, and lessons learned three years after developing and implementing a comprehensive incident learning program in a large, multi-site (academic and community) Radiation Oncology department.

Materials and Methods: A 'Condition Reporting' program was developed with key attributes: 1) full staff participation, 2) four carefully defined incident severity levels covering a broad range from significant harm to minor process delays, 3) specific requirements for analysis and response for each severity level, 4) formal processes for review and oversight, and 5) web-based information system for reporting and tracking.

Results: Results show an increasingly healthy culture, a low threshold for reporting, and a decrease in higher-severity events. Between March 2011 and February 2014 a total of 6,260 conditions were reported. AHRQ-based Safety Culture surveys show continual improvement with 8 categories above national average. Response to conditions includes improved treatment techniques, safety checks, workflow, policies, procedures, and education.

Conclusions: An interdisciplinary incident reporting system is an effective tool for fostering a safety culture. By investigating lower level events in a non-punitive yet just manner, proactive actions can be taken contributing to a reduction in higher-severity events and increased employee engagement and ownership.

EP-1688

Development and evaluation of the educational process of radiation therapy in Slovenia

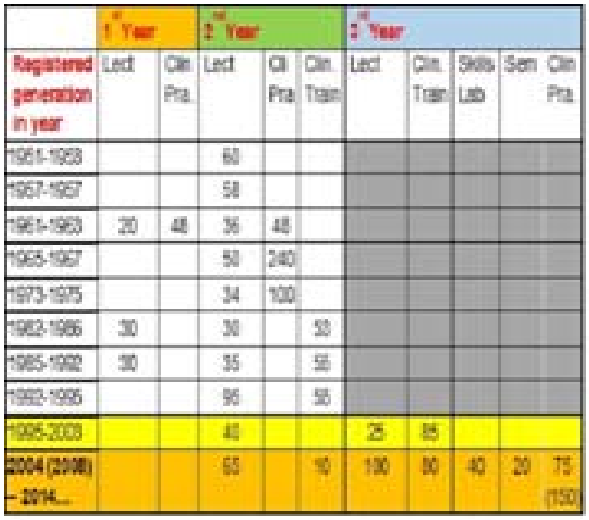
V. Zager[1], A. Okljesa Lukic[1], N. Bizjak Matosec[1]
[1]*Instute of Oncology Ljubljana, Radiotherapy, Ljubljana, Slovenia*

Purpose/Objective: The aim of this research is to present the development of education through history in the field of radiation therapy and to evaluate the number of lectures and hours of clinical training in the past and today.

Materials and Methods: Education of students of radiological technology has always been of utmost importance. The first data on the beginnings of schooling for a profession that is today indicated in the nomenclature of professions as 'engineer or graduated engineers of radiologic technology' are in Slovenia available in 'Kronika Vi?je ?ole za rentgenske pomocnike' (*Chronicles of the College for Radiology Assistants*). The study programme was later changed in 1954, 1962, 1975, 1982, and 1992. On the basis of the Higher Education Act from 2004, the first generation of students enrolled in the Bologna study programme – the first-cycle degree programme of Radiologic Technology – in 2008. In 2009, the first generation of students was enrolled in the Bologna study programme of Radiologic Technology, the second-cycle (master's) degree programme. To complete the undergraduate programme, the students must fulfil all their study obligations. They have to write a research project and make a presentation of their work. They finish their studies with a first-cycle degree final exam. Project theses are minor research works conducted by mentored students at the Department of Radiation Therapy and the Faculty of Health

Sciences. In their research, they must use different research tools, in various fields of interest.

Results: In the results, we present the analysis and evaluation of the development of education in the field of radiation therapy, as well as a few examples of project theses. The number of lectures increased by 105 hours from 1951 to 2014 and now includes lectures in radiotherapeutic technology delivered by suitably qualified engineers of radiology. The number of hours of clinical training and practice has increased by 59 hours during this time. A total of 23 project theses were written in the field of radiotherapeutic technology in the period from 2011 to 2014. From 1951 to November 2014, a total of **1574** students graduated with a first-cycle degree.



	1 Year		2 Year			3 Year				
Registered generation in year	Lect	Clin Pra	Lect	Cli Pra	Clin Train	Lect	Clin Train	Skills Lab	Sem	Clin Pra
1951-1953			60							
1957-1957			58							
1961-1963	20	48	36	48						
1965-1967			50	240						
1973-1975			34	100						
1982-1986	30		30		50					
1985-1992	30		35		55					
1992-1995			95		55					
1995-2003			40			25	85			
2004 (2008) – 2014...			65		10	100	80	40	20	75 (150)

Conclusions: Study programmes have always been designed so as to provide enough theoretical and practical knowledge to students in line with the currently valid ESTRO Core Curriculum for RTTs (3rd edition). It is important that radiology engineers become more actively involved in the process of educating students. Knowledge of students in the field of radiotherapeutic technology has improved significantly. In the future, we would like to see the existing main three branches of the current study of radiologic technology divided into three separate and independent study programmes, so that radiotherapeutic technology would become and independent programme and study. For the future, we are also considering a third level of studies – doctoral studies.

EP-1689

Establishing postgraduate study program in radiation oncology in a war-torn country ñ The Iraqi experience

L. Mula-Hussain[1], A. Shamsaldin[2], Z. Ramzi[3], L. Alrudainy[3], A. Ahmed[4], N. Noori[5], K. Faraj[6], Z. Ahmed[7], M. Mohammed[8], M.D. Hughson[9]

[1]*Zhianawa Cancer Center, Radiation Oncology, Sulaymaniyah, Iraq*

[2]*Zhianawa Cancer Center, Medical Physics, Sulaymaniyah, Iraq*

[3]*University of Sulaimani, Family and Community Medicine, Sulaymaniyah, Iraq*

[4]*University of Sulaimani, Diagnostic Radiology, Sulaymaniyah, Iraq*

[5]*University of Sulaimani, Medical Physics, Sulaymaniyah, Iraq*

[6]*University of Sulaimani, Radiation Biology, Sulaymaniyah, Iraq*

[7]*University of Sulaimani, Pharmacology, Sulaymaniyah, Iraq*

[8]*University of Sulaimani, Internal Medicine, Sulaymaniyah, Iraq*

[9]*Shorish General Hospital, Tumor Pathology, Sulaymaniyah, Iraq*

Purpose/Objective: Post-Graduate Study Program (PGSP) in Radiation Oncology (RO) is a vital step to provide qualified radiation oncologists. It is important that residents learn RO with high level of competence. In Iraq, there was a gap in this field for many years due to brain-drain, embargo and war. This work outlines an attempt to bridge this gap that might be of interest to some colleagues in the global radiotherapy community.

Materials and Methods: Descriptive report of the preparatory steps, challenges, processes and primary outcomes that accompanied the initiation of a PGSP in RO in Iraq in October 2013. One sample t-test is used to analyze the data.

Results: An invitation sent to an external board-certified radiation oncologist to visit a modest tertiary public cancer center in Iraq in order to evaluate its suitability to establish the PGSP in RO locally. After the visit, a report sent to the local decision makers who followed the recommendations. After 18 months of preparation, the training center completed its practical and logistical requirements to initiate a four-year PGSP in RO under the umbrella of the academic authorities. Eleven local members and three external faculty members were invited to cover the required syllabus that was assembled from five well-structured international curricula with a total of hundred credits (1 Credit equal 15 theoretical hours or 45 practical hours). Four residents were accepted (based on competition and entry examination) and all of them successfully completed their first year of training in October 2014 (Mean of successful average was 77.3% +/- 3.7 SD 'range was 74% – 81%', P value 0.028, which is significant as the minimum passing average is 70%). The evaluation included practical assessments, six in-term quizzes (in cancer staging, radiological anatomy and tumor pathology) and seven papers for annual assessment at the training center (covering medical statistics, cancer epidemiology, tumor pathology, radiological anatomy, pharmacology, radiobiology and medical physics) in addition to a comprehensive board examination (in tow papers) at the end of the 1st year-training at the academic board for medical specialties.

Conclusions: It is a real challenge facing Iraq to rebuild its human resources. In spite of this, PGSP in RO is successfully started in Iraq and it promises to help address a shortage of qualified radiation oncologists in this country. This experience can be accomplished in other demanding communities in case that strong will, team work, basic requirements and well cooperation were in place.

EP-1690

Analysis of logbook in an educational institution and comparison with ASTRO, ESTRO and CNRM requirements

L.G. Sapienza[1], M.L. Sucharski Figueiredo[1], M.J. Chen[1], A.C.A. Pellizzon[1]

[1]*AC Camargo Cancer Center, Radiotherapy, Sao Paulo, Brazil*