participation. Having introduced the concept of emotional intelligence students analyze the scenarios and, through discussion, try to separate effective strategies from ineffective ones in these different situations. In addition to these core components, the program uses commercial instruments for students to evaluate their personal values and styles and hence to better understand and manage themselves. Approximately one hour each is devoted to a discussion of career planning and work/life balance as topics required for the young professional to lead a fulfilling professional and private life.

Results: The first cohort of students comprised one RO fellow, two early career physicists, two physics residents and 3 graduate students. Evaluation immediately after the program was very positive in spite of the unfamiliar delivery model and content of the program. More importantly many of the skills discussed during the program were being further developed and utilized when the students were surveyed five months later.

Conclusions: A time efficient program for the development of soft skills in radiation medicine professionals has been developed and run. Participant reviews immediately afterwards and five months later were both very positive.

EP-1323
Building capacity for medical physics at the International training centre for the CIS region
V. Kostylev1, M.V. Ktsiakov1
1Ass. of Med. Physicists in Russia, Institute of Medical Physics and Engineering, Moscow, Russian Federation

Purpose/Objective: Radiation oncology in Russia and the CIS countries are 30 years behind the developed countries. To liquefied this gap urgent measures are taken on procurement of expensive cutting-edge equipment for radiation therapy. However, the most serious problem is the acute shortage of qualified medical physicists which hinders the radiation oncology modernization in this CIS region.

Materials and Methods: The IAEA Technical Cooperation project Building Capacity for Medical Physics in Radiation Oncology at the International Training Centre for the Commonwealth of Independent States’ is being realized under the support of the IAEA, Russian Government, Rosatom. The education of medical physicists is provided by the International center on medical physics, radiation oncology and nuclear medicine organized by the Association of medical physicists in Russia in Moscow on the clinical base of N.N.Blokhin Russian Cancer Research Center.

Results: The Continuous Professional Development for medical physicists includes the following courses on Dosimetry and Quality Assurance of External Beam Radiotherapy, Commissioning and Quality Assurance for Radiotherapy Treatment Planning Systems, Basic course for Medical Physicists and Medical physics for the university teachers and medical managers. The teaching is done in the Russian language by qualified and highly skilled specialists in Russia. The course consists of lectures and hands-on laboratory sessions. The group is composed of 20 trainees from the CIS countries.

Conclusions: The repositioning accuracy of patients who underwent SBRT for tumours of the upper lobe was evaluated. Of these patients, half were immobilised using a Bodyfix and the remaining half using a thermoplastic head and neck mask. Pre-treatment Cone Beam CT (CBCT) data for each patient was gathered to calculate the mean displacement in target position from that of the original CTSim data in the X, Y, Z direction and the degree of rotation. The mean shifts from planned to treated coordinates were analysed. Average set up and treatment delivery times of both immobilization systems were recorded compared to assess the impact of each on the departmental resources (e.g. scheduling and equipment).

Results:
- Mean displacement: The results show a greater degree of rotation with the Bodyfix in comparison to that of the S-Frame. There was a difference noted in the displacement between both set ups in the Ant/Post direction, with a larger displacement Ant/Post when using the Bodyfix.
- Comfort: Mild chest wall discomfort, shoulder and upper back pain were reported by three of those immobilized using the Bodyfix system. Analgesia was recommended to these prior to treatment. The majority of patients immobilised with the head and neck masks reported no problems. Two patients reported feeling distressed and claustrophobic. In both cases the mask was cut out around the eyes to ease some pressure and relieve stress.

Time: Results to date point towards a quicker treatment time using the S-Frame.

Conclusions: It was found that the S-Frame was a suitable alternative to the Bodyfix immobilisation system for upper lobe tumours in SBRT.

EP-1326
Our initially experience in prone setup for breast radiation therapy
F. Mazzi1, E. La Salvia1, L. Starace1, U. Bordino1, A. Argenone1, V. Borzillo1, S. Falivene1, P. Muto1
1Istituto Nazionale Tumori Fondazione Pascale, Radioterapia, Napoli, Italy

Purpose/Objective: Patients undergoing breast conserving surgery usually receive radiotherapy in the supine position. The prone setup is commonly used in position for both MRI and stereotactic biopsy, but it is not usually adopted in radiotherapy. Our aim was to value the feasibility of prone position vs. international-standard supine position in women undergoing whole breast radiotherapy (WBRT).

Materials and Methods: On October and November 2012, we enrolled 7 patients (pts), mean age 68 (range 58-73), underwent to breast positions and external irradiation plans with two tangential opposite fields were performed. The dose volume histograms (DVH) for each patient were evaluated in the two positions and the integral dose and volume was calculated. The target volume enclosed by 95, 80, 50 and 20% of prescribed dose was also analyzed. Furthermore, V20 and V50 were evaluated for heart and V20 for ipsilateral and contralateral lung in all cases.

Results: Analyzed data showed: i) dose in target was greater in supine position, ii) the healthy irradiated volume was lower in ventral set up in 87.5% of patients, iii) the sparing effect was more significant in the tissue included into higher isodoses and iv) this difference was directly proportional to breast size and dose level.

Conclusions: From these observations and taking into account the radiation protection principles, the group of patients who would benefit from the prone position was determined.

EP-1325
A comparative look at two immobilization techniques used for SBRT of the lung, specifically the upper lobe.
E. Kennedy1, G. Fagan1, S. Barrett1
1The Beacon Hospital, Radiotherapy, Sandyford Dublin 18, Ireland

Purpose/Objective: Stereotactic body radiation therapy (SBRT) is a technique commonly used for early stage, lung cancer. SBRT differs from conventional radiotherapy in that a higher, more conformal dose is delivered over fewer fractions. Consequently, accurate patient positioning, immobilisation and image guidance are key for target localization. A mode of immobilization must be chosen which ensures maximum stability and reproducibility. The purpose of this study was to compare the reproducibility of two immobilisation mechanisms (Bodyfix system and thermoplastic S Frame) used for the treatment of upper lobe tumours of the lung using SBRT. Reported patient comfort and set up time was also evaluated.

Materials and Methods: The repositioning accuracy of patients who underwent SBRT for tumours of the upper lobe was evaluated. Of these patients, half were immobilised using a Bodyfix and the remaining half using a thermoplastic head and neck mask. Pre-treatment Cone Beam CT (CBCT) data for each patient was gathered to calculate the mean displacement in target position from that of the original CTSim data in the X, Y, Z direction and the degree of rotation. The mean shifts from planned to treated coordinates were analysed. Average set up and treatment delivery times of both immobilization systems were recorded compared to assess the impact of each on the departmental resources (e.g. scheduling and equipment).

Results:
- Mean displacement: The results show a greater degree of rotation with the Bodyfix in comparison to that of the S-Frame. There was a difference noted in the displacement between both set ups in the Ant/Post direction, with a larger displacement Ant/Post when using the Bodyfix.
- Comfort: Mild chest wall discomfort, shoulder and upper back pain were reported by three of those immobilized using the Bodyfix system. Analgesia was recommended to these prior to treatment. The majority of patients immobilised with the head and neck masks reported no problems. Two patients reported feeling distressed and claustrophobic. In both cases the mask was cut out around the eyes to ease some pressure and relieve stress.

Time: Results to date point towards a quicker treatment time using the S-Frame.

Conclusions: It was found that the S-Frame was a suitable alternative to the Bodyfix immobilisation system for upper lobe tumours in SBRT.

EP-1324
Prone position as optimization of breast cancer external conformal radiotherapy
L. Maira1, E. Parera1, M.S. Colombo2, E.M. Cebile2, F.J. Diaz2, M.E. Sardi2
1Medaterapia, Physics on Radiation Oncology, Buenos Aires, Argentina
2Medaterapia, Medical Radiation Oncology, Buenos Aires, Argentina

Purpose/Objective: To show the analyse of dose distribution in the target volume and the sparing effect on the organs at risk in supine vs prone position in cases of cancer in large breast with pendular geometry.

Materials and Methods: CT scans were performed on eight patients with large and pendular breast, in supine and prone position. To achieve the prone position a specific immobilizer with a hole (where the breast can be treated) was used. In this way, the contralateral breast can be away from the radiation beam. On each patient, the target, heart and both lungs were outlined in both
Results: All pts referred more comfort in standard supine position. The elderly pts and the obese pts had difficulty in climbing onto the platform and achieving a reproducible immobilization without experiencing chest pain or arm pain. So prone position appears less reproducible in this category of patients. In advantage breast tends to be dislocated away from the chest wall by gravity, increasing the separation of the target and critical organs and minimizes target motion caused by breathing and cardiac systole, limiting the excursion of the chest wall to less than 5 mm.

Conclusions: The prone position is a valid alternative for irradiation of the mammary gland especially in patients with large pendulous breasts but further experience is required to optimize the feasibility and reproducibility of the prone treatment-platform before it can become a standard treatment option at our Institution.

EP-1327 Positioning and interfraction movement in stereotactic body radiation for lung cancer: J. Frangis1, G. Lee1, M. Barada1, D. Bidaud1, P. Nouet1, H. Vees1 1HUG, Radiation Oncology, Geneva, Switzerland

Purpose/Objective: To evaluate the positioning and interfraction patient movement of our stereotactic hypofractionated radiotherapy protocol used for the treatment of lung tumors.

Materials and Methods: Since May 2012, 9 patients with a non-operable non-small cells lung cancer stage I and size ≤ 3 cm and having no indication for conventional radiation therapy have undergone a hypofractionated treatment in our centre. The ITV was defined through imaging within 4DCT or a PET-CT in the patient’s treatment position. A personalized vacuum fixed device was made for each patient. PTV margins were chosen as small as possible with a maximum of 5 mm from the ITV. VMAT was used to treat the patient with a dose of 60 Gy in 8 fractions or 5 fractions or 3 fractions, depending on the tumor location. Positioning of the patient pre-treatment and patient movement during the treatment is verified by imaging guided radiotherapy (IGRT). Exactrac, CBCT and KV were performed before, during and after treatment.

Results: Comparison between pre- and post-treatment CBCTs showed an average movement of 0.13 cm in the anterior-posterior direction and no movement in the left-right and superior-inferior directions. The standard deviation in the ant-post direction was 0.3 cm and 0.2 cm in the other directions.

Conclusions: There is no statistically significant difference in the measurements in the pre- and post-CBCT images. Due to a stable immobilization system, the speed of delivering with VMAT, and the use of IGRT, our method of positioning is relatively precise and effective.