relapse-free survival 79.6 % C195% [72.1-85.2] and colostomy-free survival 81.2% C195% [74.0-86.6].

Conclusion: IMRT is emerging as a standard therapy for anal cancer. A dosimetric analysis will be done to complete this study.

Poster: RTT track: Other topics for RTTs

PO-1015
Virtual training in patient information sessions prior to external beam radiotherapy
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Purpose or Objective: The aim of the study was to explore the prostate patients’ perceptions of Virtual Environment for Radiotherapy Training (VERT) as an information giving resource prior to radiotherapy delivery. The objectives were:

• To determine the level of knowledge of those patients who attended (VERT) for a pre-treatment talk
• To explore patients perceptions who utilised (VERT) as an information giving resource prior to radiotherapy treatment
• To identify the benefits and limitations of using VERT as pre-treatment information giving resource

Material and Methods: A survey design was utilised to address the aims and objective of the study. The study was conducted over 2 phases: Phase 1 - participants were invited to attend a (VERT)patient information session four weeks prior to their planning CT scan. Phase 2 - patients were asked to complete a questionnaire two weeks after start of radiotherapy treatment. The questionnaire was designed to collect data on the prostate cancer patient’s knowledge attitudes and beliefs regarding pre-treatment information provided prior to their radiotherapy treatment. A total population sample was used for this study. All patients being referred for radical radiotherapy to the prostate were invited to participate, over a five month data collection period (March - August 2015). A total of n=40 patients were included in the sample

Results: Statistical package SPSS (Version 21) was used for data analysis. Descriptive statistics and frequency tables were the first steps in the data analysis. Thereafter, Chi-squared tests were used to analyse the data further. Open ended questions were analysed thematically. Results are currently being analysed however preliminary results are very positive, a summary of the preliminary results are outlined below (the final presentation will include frequency tables):

• Most patients found the (VERT) session to be very helpful
• Most patients stated that the session helped them to understand the importance of following bowel and bladder instructions prior to treatment and enhanced their knowledge about radiotherapy side effects
• The sessions were highly recommended for other patients and future recommendations included family members and carers to be included.
• Most patients were comfortable being part of a group during the presentation.
• Patients believed the sessions reduced their anxiety and stress about their upcoming treatment.

Conclusion: Patient perceptions on the use of (VERT) as information giving tool prior to radiotherapy treatment were very positive. The sessions enable patients to understand the potential impact of treatment volumes if the internal organ shape and location differed from that originally planned, enabling them to comply with radiotherapy treatment instructions.

PO-1016
Radiotherapy students’ perceptions of skills training simulation using a bariatric suit
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Purpose or Objective: Aim: The question posed is “Can simulation training improve/enhance student knowledge and skills in dealing with bariatric patients?”

Context: Accurate patient positioning, immobilisation and the delivery of precisely targeted radiation treatment are key stages in the radiotherapy process and bariatric patients present a unique challenge in achieving these stages. Radiotherapy for obese patients is a major challenge, both for the patient and the radiographer. There are practical limitations of radiotherapy equipment such as treatment couch weight limits and computed tomography (CT) scan aperture limits. Daily setup potentially is difficult. In addition, it also impacts on the safe manual handling on both staff and this group of patients.

Material and Methods: As part of their professional practice clinical skills sessions, the Year one undergraduate radiotherapy students (n=32) took part in a simulation session involving a bariatric suit. During each session, the radiotherapy lecturer wore the bariatric suit whilst the students working in pairs were required to position the lecturer (acting as the patient) on the couch. After each simulation session, students were asked to complete a 10 point Likert scale questionnaire which permitted them to rate their experience of using the bariatric suit. A response rate of 100% was achieved. They were asked to consider the following 3 areas:
• Whether it aided their learning in positioning patients
• Whether it increased their awareness to deal with different patient groups
• Whether it increased their knowledge on the importance of accuracy and precision

In addition, they were asked to write a short reflection to identify what they learnt from the session.

Results: Students gave favourable feedback in all 3 areas investigated with a mean score above 4.5 (range -5 to +5) The written reflective feedback supported the above quantitative scores by acknowledging the benefits of simulated training.

Conclusion: The feedback from the students suggests that simulation training using a bariatric suit has had a positive impact on their learning. In addition, the sessions have assisted them in appreciating aspects as such as accuracy, precision, communication and manual handling issues. Most significantly students have acknowledged that the sessions have prepared them for their clinical placements.

PO-1017
Survey of image-guided radiation therapy use in Australia
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Purpose or Objective: Image-guided radiation therapy (IGRT) utilises various imaging modalities for target and organs at risk delineation, tumour localisation, and patient setup. Although there is considerable development in IGRT technologies in Australia, little is known about their current clinical applications. The aim of this survey was to evaluate imaging technologies currently in use for planning and delivery of radiotherapy (RT) in Australia.

Conclusion: Patient perceptions on the use of (VERT) as information giving tool prior to radiotherapy treatment were very positive. The sessions enable patients to understand the potential impact of treatment volumes if the internal organ shape and location differed from that originally planned, enabling them to comply with radiotherapy treatment instructions.
Material and Methods: An online survey was developed and sent to all 73 RT departments in Australia in August 2015. The survey inquired about imaging practices during both planning and treatment delivery processes. Respondents were asked about the types of IGRT technologies used, reasons for implementation, current utilisation rates, and future plans for IGRT use in their department.

Results: Responses were received from all states and territories, with a response rate of 71%. All respondents had access to CT simulators and regularly used image registration to fuse or co-register the following scans to the RT planning CT to aid tumour delineation; diagnostic CT (50%), diagnostic MRI (95%), planning MRI (34%), planning PET (26%) and diagnostic PET (97%). All respondents used some type of IGRT for in-room setup/tumour localization. The percentage of respondents using ultrasound, MV planar, kV planar, kV CBCT, and MVCT (Tomotherapy) were 9%, 77%, 89%, 97%, 6%, respectively. For other modalities, the percentage of respondents using spirometer, infrared, optical, and radio-frequency systems were 17%, 31%, 9% and 6%, respectively. Figure 1 displays the cumulative adoption of each IGRT modality based on reported years of adoption. Most centres used a combination of modalities for each tumour site depending on the treatment technique used. Table 1 shows rationale for in-room IGRT implementation. The main reasons or contributing factors for under-utilisation of in-room IGRT use were; lack of equipment capability (53%), insufficient funding (38%), concerns about imaging dose (34%), physicist availability for commissioning (28%), radiation oncologists availability to assess images (28%), and radiation technologists availability for image assessment (25%). The number of departments planning to increase use of IGRT for target delineation and in-room set-up/tumour localisation was 46% and 55%, respectively. No current users planned to decrease or cease use of IGRT.

Reasons for Implementation

<table>
<thead>
<tr>
<th>Reason for Implementation</th>
<th>Percentage of Respondents</th>
</tr>
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<tbody>
<tr>
<td>Use of highly conformal techniques</td>
<td>100</td>
</tr>
<tr>
<td>Workflow enhancement</td>
<td>77</td>
</tr>
<tr>
<td>Use of hypofractionated regimen</td>
<td>57</td>
</tr>
<tr>
<td>To minimize normal tissue toxicities</td>
<td>89</td>
</tr>
<tr>
<td>To decrease CTV to PTV margin</td>
<td>63</td>
</tr>
<tr>
<td>Use of adaptive radiotherapy</td>
<td>54</td>
</tr>
<tr>
<td>Clinical trial requirement</td>
<td>43</td>
</tr>
</tbody>
</table>

Conclusion: This survey provides an insight into the IGRT technologies currently in use in Australia. IGRT is widely used among radiotherapy centres in Australia for both planning and treatment delivery. To our knowledge, this is the first study to assess the overall use of IGRT in Australia.

PO-1018
Increase efficiency and quality? Yes please! Use project management, participation and ownership

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Purpose or Objective: In Norway about 30,000 Norwegians get cancer each year. Approximately 230,000 Norwegians are living with cancer. The numbers are increasing rapidly. With population growth, longer life expectancy and elderly wave, Norway will have a need to streamline their health care.

Material and Methods: In Norway it has been common that each treatment attendance is set to 15 minutes (one PVE - Patient Visits Equivalent) by default. Normal opening hours are from 08:00 a.m. to 3:30 p.m. In other words 30 PVE per machine per day. Norway has strong union movement and strong culture of cooperation and involvement of employee representatives and employees. From management theories we know that change processes are easier to achieve if the changes are requested by the employees, owned by the employees and that employee representatives are included in the process. Radiation therapists and physicists are concerned with quality. Streamlining should not come at the expense of quality. One must therefore find efficiency measures that both improve quality while offering a more efficient operation. In autumn 2014 began management of the department to look at measures to increase quality and improve operational efficiency. One had thought of several possible ways; extended opening hours, logistics efficiency, LEAN processes, dressing stalls, automaticantry and field execution, change PVE. We organized the work as a project where we included employee representatives and employees. The group consisted of a total of 4 people. They got a project that consisted of; background, mandate, goals, objectives, organization and budget. Important keywords were; Quality, time and cost. The order was that the group would come with concrete suggestions to increase the quality and efficiency. It was pointed out that efficiency should not compromise on quality. The order was both open and linked to direct questions. The group leaves after a few months forward its proposals. The proposals were discussed in a meeting between management and the group. The group then got feedback on what they could work on and discard. A new meeting was scheduled and we together agreeing on measures. The measures were then presented for all workers at the department. The project was then closed down and implements regular operation.

Results: We increased opening hours by 30 minutes without changing working hours or labor costs. Standard PVE was changed from 15 minutes to 10 minutes. One will thus be able to increase patient meetings with around 60% per treatment machines without increasing staffing levels of radiation therapists and physicists. The increase will be gradual and in close dialogue with employee representatives and employees.

Conclusion: Project management is a good work method to introduce changes. All employees now have ownership of the changes that the department must gradually take over the coming years.

PO-1019
Reflective practice: What is its impact on therapy radiographers practice?

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Purpose or Objective: Reflective practice is a well-established aspect of professional development within radiotherapy. It is believed to improve patient care by assisting in workplace learning and providing more competent radiotherapy practice. The aim of the study was to investigate how therapy radiographers perceive how engaging in reflective practice impacts upon their work practice.

Material and Methods: A closed question format Likert questionnaire formulated to investigate therapy radiographer’s opinions on how reflection impacts on their work practice was distributed to therapy radiographers in The Christie NHS Foundation Trust radiotherapy department and its satellites. Focus groups were employed to investigate