in the specialty. The themes identified by this analysis fit well with an apprenticeship model of education. Medical educators and radiation oncologists can apply these findings to create purposeful formal curricula, mentorships, observances, and informal opportunities that better highlight RO. This would have a meaningful effect in engaging medical students and promoting RO as a career choice.

155 ATTITUDES OF CANCER PATIENTS ON USE OF CANNABIS BEFORE AND AFTER LEGALIZATION OF RECREATIONAL MARIJUANA IN CANADA
Murali Rajaraman1, Shawn Wrigley1, Marc Leblanc1, Kye Rajaraman1, Neyousha Shahisavandi1
1Dalhousie University, Halifax, NS
2Saint Mary’s University, Halifax, NS
3University of Southern California, CA

Purpose: Published literature suggests that cannabis may be beneficial in the alleviation of symptoms related to cancer and its treatment. This study was conducted to determine the attitudes and patterns of cannabis use amongst cancer patients undergoing radiation therapy and whether they were altered by the legalization of recreational marijuana (LRM) in Canada on October 17, 2018.

Materials and Methods: In early 2018, prior to the LRM, an anonymous paper survey on attitudes and patterns of use of cannabis was offered to consecutive adult cancer patients about to undergo radiation therapy. Two hundred-thirteen anonymous responses were received and analyzed. In early 2020, 16 months after the LRM, a similar survey was conducted using a digital questionnaire and compared with the previous results.

Results: Seven months before the LRM, the response rate was 88% (n=213). The average age was 62 years and 59% were females. Seventy-two percent of respondents were interested in learning about medical marijuana (MM) and 68% wanted this information from cancer care providers. Of the 30% who were active users, the most common reasons were for pain, poor sleep, stress, poor appetite. Forty-six percent of on non-users reported that they would change their mind after LRM. The full results of the survey conducted 16 months after the LRM and its comparison to the previous survey results will be reported.

Conclusions: The high response rate indicates that cancer patients are interested in discussing cannabis use. The majority of patients wanted to learn about MM and most would like their cancer care providers to offer this information. Although 46% of cannabis non-users stated they would change their mind after the legalization of RM, the final survey results will show the real change also inform healthcare providers about actual changes, if any, in cancer patients’ attitudes regarding the use of cannabis.

156 CONTINUING MEDICAL EDUCATION IN RADIATION MEDICINE: INTERNATIONAL PERCEPTIONS OF LEARNER EXPERIENCES, OUTCOMES, AND PROGRAM IMPACT
Nicole Harnett1, Sarah Tosoni1, Rebecca Wong1
1University of Toronto, Toronto, ON
2Princess Margaret Cancer Centre, Toronto, ON

Purpose: The Accelerated Education Program (AEP) at the Princess Margaret (PM) Cancer Centre has been offering continuing medical education (CME) courses since 2006. The purpose of this study was to qualitatively assess learner experiences, perspectives, and outcomes using Kirkpatrick’s Four Level Training Evaluation Model (i.e., Reaction, Learning, Behavior, Results) to ascertain if it was meeting stated goals.

Materials and Methods: In-depth semi-structured interviews were conducted with 17 volunteers from five countries recruited from a pool of practicing professionals who attended at least one AEP course between 2010 and 2018 and were not staff or trainees at PM. Participants included medical physicists (MP; n=2), radiation oncologists (RO; n=6), and radiation therapists (RT; n=9). Interviews lasted 25 minutes on average (range: 12-45 minutes) and were transcribed verbatim. Qualitative thematic analysis of transcripts was conducted by a four-person research team leading to the identification of prominent categories, themes, and sub-themes.

Results: Consistently positive learner outcomes were reported at each level of Kirkpatrick’s Model. At the Reaction level, participants articulated satisfaction with the level of interactivity, learning from and with an interprofessional group, and learning from the experiences of renowned experts from PM and external guest faculty. Suggestions for improvements were also provided related primarily to making the content even more practical. At the Learning level, participants reported obtaining knowledge/skills, increased awareness/change in attitude, and confirmation of practice. Behaviour changes noted included shared learnings with colleagues, clinical practice/technique, departmental/organizational change, inter-professional practice. Perceived Results/Outcomes included improved quality/effectiveness, increased efficiency/capacity/referrals, and increased research/academic activity. Findings were consistent across disciplines except for confirmation of practice, behavior changes related to interprofessional practice, and the increase in research/academic output. Participants described challenges/barriers encountered while trying to affect change after the course focusing primarily on capacity and specialty training issues.

Conclusions: AEP courses were seen to have a positive overall impact on local practices ranging from confirmation of current practice through to increasing patient capacity via increased efficiency in workflow. Overall, the dynamic educational needs of front-line radiation medicine professionals have been brought to light; while these findings confirm that AEP is achieving its stated goals, they can also be instrumental in guiding the optimal development of similar future programming.
cognitive pretesting and was iteratively revised. The survey was distributed to the Presidents of the National Societies who have endorsed the ESTROCore Curriculum (n=29). The data was summarized using descriptive statistics.

**Results:** Twenty-six (90%) National Societies completed the survey. One respondent perceived that the values of the training system of their country would be incompatible with the proposed ESTROCore Curriculum. The most common contextual barriers to implementation was a lack of support from the government (57%), a lack of internal organizational support (35%) and a ‘poor fit’ between the ESTROCore Curriculum and the broader political & economic context (35%). Perceived implementation process barriers included insufficient numbers of faculty (44%), poor coordination between the government and training institutions (48%), and a lack of an influential person leading the implementation (44%). Two barriers related to curriculum change were a lack of funding and lack of assessment tools.

**Conclusions:** The content and values espoused in the ESTRO Core Curriculum are endorsed across diverse geopolitical and sociocultural regions. Barriers to curricular implementation are identified at the organizational and systems level and include insufficient teaching faculty, lack of coordination and the need for influential leadership.

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**158 PATIENT-REPORTED EXPERIENCES WITH SERIAL MAGNETIC RESONANCE IMAGING AND IMPLICATIONS FOR ADAPTIVE RADIOTHERAPY**

Michael Velec, Pablo Munoz-Schuffenegger, Anna Simeonov, Andrea Shessel, Teo Stanescu, Patricia Lindsay, Ali Hosni, Rebecca Wong, Laura Dawson

**University of Toronto, Toronto, ON**

**Purpose:** MR is increasingly used in radiation therapy (RT) for its superior anatomic visualization and functional evaluation. Negative patient experiences with MR imaging, however, can impact their compliance with imaging and technical parameters such as image quality and breathing motion. The aim was to evaluate patient-reported outcomes and experience measures during a serial imaging study for the development of MR-guided, adaptive RT.

**Materials and Methods:** Patients with upper gastrointestinal cancers were consented to this research ethics board-approved study to receive up to five MR imaging sessions before or after cone beam CT-guided RT. In each 30 minute session, non-contrast 3D axial T1/T2-weighted exhale breath-hold and free-breathing 2D cine-MR was acquired. A 15-item validated MR-related anxiety questionnaire (MRAQ) was completed by patients following each MR session. The MRAQ is based on a two-dimension model (anxiety, relaxation) with statements rated being “not at all”, “somewhat”, “moderately” or “very much so” related to higher anxiety. Time trends were evaluated using Wilcoxon signed-rank tests. Mean overall cohort scores were compared to published literature using Student's t-tests. After the final MR session, a 17-item validated questionnaire on their experience with RT and MR imaging procedures was also completed.

**Results:** Twenty-seven patients consented to the study, with six unavailable for analysis (patient withdrawal n=3, logistical issues n=3). Median age was 65 (range 43-84), treatment was for the pancreas (n=6) or liver (n=12 primary disease, n=3 metastases), and 76% received 5-fraction stereotactic-body RT. MR imaging was acquired using a 3T MR-simulator (n=17) or 1.5T MR-linac (n=4). The mean overall MRAQ score was 17.8±4.3 (range 15.0-32.4) corresponding to being “not at all” anxious on average, and is lower than published data from diagnostic MR studies of non-cancer patients (p=0.0001). Nine patients (43%) reported maximum overall MRAQ as being “somewhat” anxious for at least one session. On the anxiety-subscale, three patients (14%) reported feeling “somewhat” anxious on average, with maximum reported values in any session being “somewhat” (n=3) or “moderately” (n=1) anxious. On the relaxation-subscale, six (29%) reported feeling “somewhat” and one (5%) “moderately” non-relaxed on average, with maximum reported values in any session being “somewhat” (n=3), “moderately” (n=2) or “very much so” (n=4) non-relaxed. Overall MRAQ scores improved over time between the initial and last MR sessions (mean 18.6 versus 16.9, p=0.042), particularly for patients with higher initial scores. Patients reported excellent experiences overall with 89-100% “agreeing” they were satisfied with items describing accessibility and convenience, physical environment and comfort, relationships with staff and patient education.

**Conclusions:** RT patients reported low MR-related anxiety compared to diagnostic MR patients. Although anxiety reduces over time, relaxation strategies may further improve patient experiences especially for those anxious during initial imaging sessions. Efforts are underway to relate patient-reported anxiety to motion characteristics during MR. This research suggests that MR-guided, adaptive RT will be well tolerated by patients.

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**159 USING A SIMULATION MODEL FOR TRAINING RESIDENTS IN HIGH-DOSE INTERSTITIAL BREAST BRACHYTHERAPY: A PILOT STUDY**

Harry Brastianos, Evan Lusty, Aquila Akingbade, Natasa Janssen, Tamas Ungi, Martin Korzeniowski, Catherine de Metz, Gabor Fichtinger, Conrad Falkson

Queen's University, Kingston, ON

**Purpose:** Accelerated partial breast irradiation (APBI) using multi-catheter interstitial brachytherapy can be used as adjuvant local therapy post-lumpectomy in early stage breast cancer. In a recent survey, over 50% of residents reported being dissatisfied with the training they received in high-dose rate (HDR) breast brachytherapy. Furthermore, only 15% of residents felt they were competent to perform the procedure. The purpose of this study is to demonstrate that participation in a simulation program for HDR breast brachytherapy will improve resident confidence, competence and efficiency.

**Materials and Methods:** From July 2019-August 2019, 10 radiation oncology residents from first year to fourth year were recruited. They all attended a didactic lecture in HDR breast brachytherapy, followed by a demonstration on an anthropomorphic phantom performed by a radiation oncologist experienced in breast brachytherapy. Participants then completed a pre-simulation survey prior to starting the simulation procedure. Using an opaque anthropomorphic plastic breast phantom with an internal target, each resident placed a total of five needles, in two parallel planes, 1 cm apart in a diamond pattern. The first row consisted of three needles and the second row was made up of two needles. Each resident repeated this procedure three times over a period of one month and there was no time limit to complete the implantation. A CT scan of the phantom was acquired after the first and the last session. A researcher assessed participant performance by evaluating the number of needles within the target and the correct geometry. A further survey was then done evaluating participant satisfaction.

**Results:** Of the 10 participants in this study, only one had resident had implanted a needle under direct supervision. The number of catheters placed within the target ranged from 2-5 needles in their first attempt. In the final attempt, all participants were able to place the needles within the target. The mean deviation of the needles from the ideal distance of 1cm in their first attempt...