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reported home internet access (PRE=87.5%; POST=91.4%;  $p$  0.259), 86% used a computer (PRE=79.2%; POST=90.8%;  $p$  0.004), and 26% used a wearable health tracker (PRE 25.7%; POST 26.4%;  $p$  0.881). On MVA, age>65 (OR 0.32;  $p$  0.001), annual income>50K (OR 2.16;  $p$  0.032), smart phone ownership (OR 4.07;  $p$  0.000), and new/current patient status (OR 2.15;  $p$  0.020) were all significant factors impacting willingness to e-report. Limited tech literacy ( $p$  0.024) and time commitment ( $p$  0.048) were the only significant barriers. Privacy as a barrier was greater in PRE vs POST cohort (OR 2.3 vs OR 1.1) trending toward significance. Nearly all modes of tech usage were greater in POST vs PRE cohort. POST cohort was significantly more willing to e-report (81.1% vs 69.1%; OR 1.91;  $p$  0.016). This remained significant on MVA after adjusting for age, concern for privacy, tech literacy, and patient status (OR 1.88;  $p$  0.026). Furthermore, 51% of POST cohort reported the pandemic directly influenced their willingness to e-report (40% more, 11% less).

**Conclusion:** Radiation oncology patients are willing to use mobile technology to report symptoms. Willingness increases with decreasing age, increasing annual income, smartphone ownership, and new/current patient status. Significant barriers include tech literacy and time commitment. Post-pandemic patients are more willing to e-report and list fewer barriers. The COVID-19 pandemic appears to have had a positive impact on technology usage by patients. Efforts to develop and test mobile applications for this population are justified.

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## 2246

### Electronic Health Record Patient Portal Use in Radiotherapy Treated Patients in the Era of COVID-19; Who's Getting Left Behind?

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**Purpose/Objective(s):** COVID-19 has accelerated the utility of electronic health record (EHR) patient portal (PP) as a method for patients to communicate with oncology teams and improve the quality of care. This study examines the relationship between several sociodemographic characteristics with activation and use of PP system at an academic center by patients who underwent radiotherapy (RT). Use of PP among patients for up-to-date information on their care and to enhance their ability to manage their healthcare are linked with more favorable outcomes and quality of life. With the rapid integration of PP in oncologic management, differences in sociodemographic could account for disparities seen in PP use highlighting patients that should be receiving targeted efforts.

**Materials/Methods:** EHR data were retrospectively analyzed regarding PP activation and use in all patients who underwent RT between the start of COVID-19 (March 2020) until February 2022 at an academic center. Summary statistics and odds ratios were used to examine the study cohort demographic characteristics regarding the outcome of PP activation.

**Results:** There was a 10.4% increase in RT treated patients' activation of PP from 69.8% before the COVID-19 pandemic (November 2017-March 2020) to 80.2% after the start of the pandemic. Concurrently, telemedicine use (requiring PP activation) among patients increased from 0.8% pre-pandemic to 40.2%. During the study period of interest, PP activation rate was 84.3% among White patients, 67.8% in Black/African American, 76.5% in Asians; 82.9% activation rate in Hispanics compared to 76.2% in non-Hispanics. Non-Hispanic White female was the group most likely to activate PP (OR 2.2; 95% CI 1.7-2.8), whereas non-Hispanic Black male was the least likely (OR 0.5; 95% CI 0.3-0.7). English speakers were significantly more likely to activate their PP (OR 3.7; 95% CI 2.1-6.5) compared to non-English speakers (OR 0.3; 95% CI 0.1-0.5). The highest activated PP by age

range was amongst 20-30 years old (89.6%). PP activation was slightly lower in ages 30-40 (80.7%), and then recovered to 85.9% in 40-50 years old, after which there was a gradual decrease each subsequent decade reaching a low of 75.8% in  $\geq$  80 years. Breast cancer had the highest activation rate (92.7%) followed by head and neck (84%), prostate (81.3%), and lung cancer (66.5%). Married or divorced patients in comparison to single or widowed were more likely to activate PP. There was no correlation with having activated PP with a "no show" status for RT treatment.

**Conclusion:** Overall, activation of PP has increased in RT treated patients since the start of the pandemic. There are disparities in respect to race, speaking English, sex, and age. At the time of this study, the PP system was only available in English. The lower rate of activation identified in specific sex, race and age should prompt exploration of creative opportunities to increase patient activation and engagement in populations facing health disparities.

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## 2247

### Prospective Evaluation of Automated Contouring for CT-Based Brachytherapy Treatment Planning of Gynecologic Malignancies

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**Purpose/Objective(s):** The use of artificial intelligence to automatically-contour OARs in gynecologic radiation treatment has been well-established in the literature. Yet, there is limited data on the prospective use of AC in clinical practice. The objective of this study was to assess the accuracy and efficiency of AC for CT-based brachytherapy treatment planning of gynecologic malignancies.

**Materials/Methods:** An in-house AC tool was used to automatically-delineate five organs-at-risk (OARs) used for gynecologic radiation treatment planning: the bladder, small bowel, sigmoid, rectum and urethra. The accuracy of each auto-contour was evaluated by the treating physician using a 5-point Likert scale: a score of five indicated the contour could be used without edits, while a score of one indicated the contour was unusable (Table 1). To assess the efficiency of AC in clinical practice, the planning time of a prospective AC cohort was compared to the planning time of a retrospective MC cohort. Planning time of each case was quantified as the time between import of CT image to TPS and final plan approval. Mean, standard deviation and standard error of each cohort's time to approval was analyzed via unpaired t-test with Welch's correction.

**Results:** Eight prospective AC cases from January 2022 to February 2022 and thirty retrospective MC cases from July 2021 to January 2022 were included in the study. The average time to plan approval in the AC cohort was 30% less than MC cohort (AC vs MC, 109.0  $\pm$  6.4 minutes vs. 155.1  $\pm$  15.4 minutes,  $p=0.0092$ ). The AC group had less time variance between cases with a standard deviation of 17.0 minutes, compared to a 31.5-minute variance of the MC cohort. The mean accuracy score in the AC cohort was 4.8 (SD=0.7) for the bladder, 4.0 (SD=0.9) for the small bowel, 4.2 (SD=0.7) for the sigmoid, 4.6 (SD=0.7) for the rectum, and 4.8 (SD=0.4) for the urethra. No auto-contoured OARs required major edits from the attending physician. Physician slice-by-slice review of the AC contours took on average 3.6 minutes (SD=1.6) revising OARs (including edits if needed) and overall contouring time (included adding targets) took an average of 14.1 minutes (SD=6.0).

**Conclusion:** Automated contouring appears to be safe and accurate for use in clinical practice. Clinical implementation of AC shows promise to streamline radiation treatment workflows and decrease time required to design and approve gynecologic brachytherapy plans.