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hypopharynx, larynx, nasal cavity, and oropharynx (all log-rank  $p < 0.0001$ ). Even among favorable HPV positive oropharynx cancer patients, Black patients had a significantly inferior OS compared to White patients (log-rank,  $p < 0.0001$ ). On multivariable analysis, Black patients had a higher mortality (HR:1.09, 95% CI, 1.02-1.155,  $P = 0.003$ ) after adjusting for income, insurance type, co-morbidity status, treatment modality, clinical stage, and HPV status.

**Conclusion:** This large cohort of HNSCC patients demonstrates that Black race is independently associated with worse OS. Efforts should be made to reduce clinical and non-clinical factors in racial minorities to further narrow the survival gaps in HNSCC. Further work is needed to better understand the biological basis for the worse outcomes seen after accounting for social determinants of health.

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## 2288

### Perceptions of Radiation Therapy amongst Black Female Breast Cancer Survivors in Urban Communities

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**Purpose/Objective(s):** Perceptions of cancer care are impacted by many factors and differ among individuals. Patients generally want consistent support, effective communication, accessible treatments, and information to manage physical, emotional, and psychosocial needs. Black/African American cancer survivors have expressed concerns about providers ignoring the social and financial implications of cancer care and neglecting to address the generations of mistrust between minority communities and the healthcare system. There is limited information about these perceptions as they relate specifically to radiation therapy which we aim to address with this study.

**Materials/Methods:** Female breast cancer survivors identifying as Black/African American within the metropolitan Milwaukee area were eligible to participate in a semi-structured interview guided by a demographic questionnaire, a life narrative account, and a residential history. Participants were purposively sampled by neighborhood racial and ethnic composition (majority Black, minority Black, and racially diverse communities) to ensure a diversity of experiences. Interviews were transcribed and analyzed using a codebook developed and refined based on a conceptual model. Individuals worked in assigned pairs to open code each transcript. Data coded as "clinical presentation" or "treatment/healthcare" were pulled and reviewed for discussion of radiation therapy. Within these codes, further thematic analysis was performed to breakdown perceptions of this treatment modality.

**Results:** Fifty Black women were interviewed, 25 from majority, 7 from diverse, and 18 from minority communities. In discussing radiation therapy, six key themes emerged: emotional reactions, logistics of daily treatment, social barriers, side effects, general positive experiences, and general negative experiences. Emotional reactions included feelings of fear, anger, and being overwhelmed. Social barriers related to family obligations, transportation, distance from a treatment center, and racism. Commonly

discussed side effects included fatigue, dermatitis, impacts on reconstruction, and long-term cardiotoxicity. Women living in majority Black communities were more likely to discuss side effects and general positive experiences while other themes were more equally explored by majority, minority, and diverse community members alike.

**Conclusion:** Black women have diverse and varied perspectives of radiation therapy during breast cancer treatment. Anticipated themes surrounding logistics, side effects, and overall emotions of treatment were observed. Unique to their experiences, Black women have faced racism and an increased burden of social barriers during their treatment. Further studies exploring the perspectives of Black female cancer survivors are needed to optimize quality of care and outcomes.

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## 2289

### Trends and Disparities in Telehealth Utilization for Cancer Care during COVID-19

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**Purpose/Objective(s):** COVID-19 has dramatically increased telehealth utilization for cancer care delivery. However, telehealth access and utilization may differ amongst minority populations. We evaluated differences in telehealth utilization and patient satisfaction based on patient demographics.

**Materials/Methods:** Anonymized patient surveys from all virtual visit (VV) and in-person visits (IP) collected between April 2020 - January 2022 at a single comprehensive cancer center were included. Available patient demographic data included age, gender, race/ethnicity, language, and marital status. Patient demographics for virtual visits were compared to in-person visits using Wilcoxon rank-sum, chi-square, or Fisher's exact test as appropriate. Patient satisfaction surveys consisted of 10 closed-end questions assessing the following aspects of the patient experience: connection quality (2/12), patient-physician communication (6/12), and overall provider quality (2/12). Qualitative responses were given on a 1-3 Likert-type scale ranging from no, yes (somewhat), and yes (definitely). Responses were binned into satisfied (yes, [definitely] responses) and not satisfied (no and yes [somewhat] responses). Univariate and multivariate analyses of patient satisfaction questions were carried out with a logic regression model with a significance level of 0.05.

**Results:** In total, 3424 VV and 17303 IP surveys were assessed. Compared to IP, VV had significantly less utilization amongst Asian (6% vs. 9%,  $p < 0.01$ ) and Hispanic patients (6% vs. 9%,  $p < 0.01$ ), but similar utilization for White (71% vs. 66%, NS), Black (10% vs 9%, NS), and other (5% vs 5%, NS) patients. VV had significantly fewer non-English speaking patients compared to IP (3% vs. 6%,  $p < 0.01$ ). There were no significant differences in patient satisfaction scores based on race/ethnicity for White, Asian, or Black patients. Hispanics were more likely to be satisfied compared to White, Black, and Asian patients regarding connection ease (OR 3.4,  $p < 0.01$ ), connection quality (OR 2.18,  $p < 0.01$ ), quality of explanation (OR 2.85,  $p < 0.01$ ), appointment timing (OR 2.63,  $p < 0.01$ ), and follow-up instructions (OR 1.75,  $p = 0.03$ ). English-speaking patients were significantly more than non-English speaking patients regarding connection quality (OR 1.68,  $p = 0.03$ ), patient-provider trust (OR 1.87,  $p = 0.04$ ), and overall rating (OR 1.77,  $p = 0.05$ ). There was a significant decrease in VV utilization compared to IP over time as the pandemic progressed ( $p < 0.01$ ). Compared to White patients, Asian ( $p < 0.01$ ) and Black ( $p = 0.04$ ) patients saw a larger decrease in VV utilization over time.

**Conclusion:** Virtual compared to in-person visits were less likely to be utilized by Asian, Hispanic, and non-English speaking patients. Hispanic patients were more likely to be satisfied with their virtual visit, while non-

English speaking patients were less likely to be satisfied. Further research is needed to understand the reason for disparities in telehealth utilization.

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## 2290

### A Systematic Review Evaluating Racial and Ethnic Demographic Reporting for Patients Enrolled on Prospective Phase II Clinical Trials of Proton Therapy

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**Purpose/Objective(s):** Equitable inclusion of racial and ethnic participation in clinical trials is crucial to improving disparities in healthcare, especially for historically marginalized populations. However, a recent review noted a prevalence in underreporting of racial and ethnic demographics in published studies, with Hispanic and Black representation recorded in 10% and 38.2% of cancer drug clinical trials and representing 3.1% and 6.1% of trial participants. Proton therapy relies on clinical investigations to guide treatment protocols; yet, few publications have investigated their demographic composition. We aimed to describe the racial and ethnic demographics of patients enrolled on published phase II U.S. clinical trials involving proton therapy.

**Materials/Methods:** Published manuscripts were identified in PubMed, Embase, World of Science, and Cochrane. Phase II trials evaluating proton therapy for patients in the United States were included. For each article included, data were collected on authors, title, and publication year; clinical trial numbers were verified. Additional data included tumor site, primary institution, sample size, reported race/ethnicity data, and raw number/percentile of race/ethnicity. Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) guidelines were used for reporting.

**Results:** Overall, 970 titles were identified; 636 remained after duplicate screening; and 75 full-text articles were assessed. Ultimately, we identified 38 eligible manuscripts for inclusion with a total 2,648 patients. Only 15 (39%) of the publications reported race/ethnicity. Of these 38, 8 (21%) and 10 (26%) documented Hispanic or Black representation of trial participants, respectively. Moreover, 6 (16%) documented both Hispanic and Black representation in trial participants. Of 1,409 patients with documented race/ethnicity, 89.0% (n=1,254) were non-Hispanic white, 5.3% (n=75) were Black, and 2.2% (n=31) were Hispanic. Other and unknown race/ethnicity comprised the remaining patients (3.5%; n=49).

**Conclusion:** In this analysis, we identified underreporting of demographic data in published phase II proton therapy trials, unfortunately mirroring underreporting for cancer drug clinical trials. We also note dramatic Black and Hispanic underrepresentation across the trials in which race and ethnicity are reported. Findings highlight the urgent need to identify and address barriers to proton therapy trials for Black and Hispanic patients so that clinical trials in radiation oncology are representative of patients seen in clinical practice.

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## 2291

### Disparities in Specialized Radiation Treatment Modalities for Grade Group 2, Intermediate-Risk Prostate Cancer

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**Purpose/Objective(s):** Men with Grade Group 2 (GG2) intermediate risk (IR) prostate cancer (PCa) have multiple curative radiation (RT) options. Compared to conventional external beam photon RT (XRT), including 3D-conformal RT (3DCRT) and IMRT, highly conformal RT techniques may provide less integral RT dose to normal tissue, including brachytherapy (BT), SBRT, and proton beam radiation therapy (PBT). These treatments require either advanced equipment and/or specialized training. Here we analyzed national trends in utilization of XRT, BT monotherapy, SBRT, and PBT, and assessed potential factors associated with receiving each technique. We hypothesize that socioeconomic and/or racial disparities are associated with differences in utilization of these specialized techniques.

**Materials/Methods:** Men diagnosed with favorable IR PCA cancer, defined as Gleason 3+4 disease, PSA < 20 and clinical stage T1-T2 N0 M0, between 2004-2017 were identified in the National Cancer Database. Cohorts were defined as: XRT (3DCRT+IMRT, hypofractionated (HF) or standard fractionation (SF)), BT monotherapy (HDR, LDR), SBRT (5 fx) and PBT (HF or SF). Trends in utilization were examined. Associations between technique and patient, clinical disease, and sociodemographic characteristics were assessed by multivariable logistic regression, with  $P < 0.05$  considered significant.

**Results:** 71,140 patients met inclusion criteria of which 72.4% received standard XRT and 27.6 % received specialized radiation modalities (18.5% brachytherapy, 6.0% SBRT, & 3.1% PBT). Utilization of XRT and BT declined from 71.0% (XRT) and 27.5% (BT) in 2004 to 69.7% (XRT) and 17.2% (BT) in 2017. Receipt of SBRT and PBT increased from 0% (SBRT) and 1.45% (PBT) in 2004 to 9.9% (SBRT) and 3.3% (PBT) in 2017, respectively. On multivariable logistic regression, Black patients were less likely to receive BT (adjusted OR 0.79; 95%CI 0.74-0.83), SBRT (adjusted OR 0.77; 95%CI 0.70-0.85), or PBT (adjusted OR 0.39; 95%CI 0.33-0.47) compared to XRT (all  $P < 0.0001$ ). Socially disadvantaged seniors (SDS; age > 65 years with Medicaid insurance) were less likely to receive specialized RT (adjusted OR 0.45; 95%CI 0.31-0.60;  $P < 0.0001$ ). Factors associated with increased likelihood of receiving BT, SBRT, or PBT included: treatment at Academic/Research center, treatment at a metropolitan facility, younger age, lower Charlson-Deyo Comorbidity Score, and lower PSA at presentation (all  $P < 0.01$ ).

**Conclusion:** Trends in utilization of RT modalities have dramatically changed in recent years with a sharp decline in BT, a doubling of PBT, and rapid adoption of SBRT, as coded in the NCDB. Compared to White patients with GG2 IR PCA, there are disparities in utilization of BT, SBRT, and PBT for Black patients and for SDS. It is unclear whether similar disparities exist for other prostate cancer grade groups for which BT and SBRT are being utilized. Future efforts should address access-to-care challenges for the use of these specialized techniques as they are expanded into higher GG.

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