SEXUAL MEDICINE

Racial and Ethnic Variation in Health-Related Quality of Life Scores Prior to Prostate Cancer Treatment

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ABSTRACT

Introduction: Many men diagnosed with prostate cancer are concerned with how the disease and its course of treatment could affect their health-related quality of life (HRQOL). To aid in the decision-making process on a course of treatment and to better understand how these treatments can affect HRQOL, knowledge of pre-treatment HRQOL is essential.

Aims: To assess the racial and ethnic variations in HRQOL scores in men newly diagnosed with prostate cancer before electing a course of treatment.

Methods: Male members of the Kaiser Permanente of Southern California health plan who were newly diagnosed with prostate cancer completed the five-domain specific Expanded Prostate Index Composite—26 (EPIC-26) HRQOL questionnaire from March 1, 2011 through August 31, 2013 (N = 2,579). Domain scores were compared across racial and ethnic subgroups and multiple logistic regression analyses were used to assess the association after adjusting for sociodemographic and clinical characteristics.

Main Outcome Measures: The five EPIC-26 domain scores (sexual, bowel, hormonal, urinary incontinence, and urinary irritation and obstruction).

Results: Results from the fully adjusted analyses indicated that non-Hispanic black men were more likely to be above the sample median on the sexual (odds ratio [OR] = 1.43, 95% CI = 1.09—1.88), hormonal (OR = 1.35, 95% CI = 1.03—1.77), and urinary irritation and obstruction (OR = 1.34, 95% CI = 1.03—1.74) domains compared with non-Hispanic white men. The Asian or Pacific Islander men were less likely to be above the sample median on the sexual domain (OR = 0.60, 95% CI = 0.44—0.83) compared with non-Hispanic white men. No additional statistically significant differences were identified.

Conclusions: Within an integrated health care organization, we found minimal racial and ethnic differences, aside from sexual function, in pretreatment HRQOL in men newly diagnosed with prostate cancer. These findings provide important insight with which to interpret HRQOL changes in men newly diagnosed with prostate cancer during and after prostate cancer treatment. **Reading SR, Porter KR, Slezak JM, et al. Racial and Ethnic Variation in Health-Related Quality of Life Scores Prior to Prostate Cancer Treatment. Sex Med 2017;X:XXX—XXX.**

Key Words: EPIC-26; Ethnicity; Prostate Cancer; Quality of Life; Questionnaire; Race

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INTRODUCTION

Prostate cancer is the most prevalent type of solid tumor malignancy and the most common type of cancer diagnosis in American men. Fortunately, the survival rate for men diagnosed with prostate cancer is relatively high. Nearly 100% of men are alive at 5 years, 99% are alive at 10 years, and 94% are alive at 15 years,[1] with prostate cancer survivors representing one in five of all living cancer survivors.[2] This high likelihood of prostate cancer survival has created a shift in focus from that of basic survival to improvement or sustainment of health-related quality of life (HRQOL), because many men diagnosed with prostate cancer have reported disease-specific functional deterioration (eg, decreased urinary, sexual and bowel function) and broader HRQOL concerns (eg, decreased overall energy and vitality and lower performance in physical and social roles) associated with undergoing prostate cancer treatment.[3] Thus, of primary concern for many men diagnosed with prostate cancer is how the disease and its course of treatment could affect their HRQOL.

Unfortunately, there is limited information regarding HRQOL differences in men diagnosed with prostate cancer before electing a course of prostate cancer treatment. Comparisons have been made between pre- and post-treatment HRQOL after specific prostate cancer treatments,[4–7] in the long-term changes in HRQOL during the post-treatment survivorship period,[8–11] and in the use of HRQOL as a prognostic tool for survival.[12] However, these comparisons have not been made within population subgroups. Broad descriptive pretreatment HRQOL information also has been reported,[13,14] but not within population subgroups. Specifically, sparse data are available on HRQOL for men who identify as Hispanic or Asian and Pacific Islander.[13,15,16] Given the growing number of racial and ethnic minorities contributing to the population of prostate cancer survivors,[17,18] identifying potential differences between these groups could aid the patient-provider decision-making process when electing a course of prostate cancer care. Accordingly, our aim in the present investigation was to assess the racial and ethnic variations in pretreatment HRQOL in men newly diagnosed with prostate cancer to help identify those men who might be more likely to have poor pretreatment HRQOL.

METHODS

Setting

The source population included male members of the Kaiser Permanente of Southern California (KPSC) health plan, a not-for-profit integrated health care delivery system that provides comprehensive care to more than 4 million individuals throughout the southern California region. Membership within the KPSC is socially and demographically diverse and highly representative of the underlying population.[19–21] Individuals are enrolled in the KPSC health plan through their employer, family member, individually, or a state or federally funded program. All individual-level data, including sociodemographic information and details of medical care obtained from outpatient, emergency department, and hospital encounters, are captured within a comprehensive electronic health record based on the EpicCare system (Epic Systems, Verona, WI, USA).

Study Population

The present investigation included male KPSC members who (i) received an incident positive prostate biopsy diagnosis from a KPSC medical center from March 1, 2011 through August 31, 2013 and (ii) were willing to participate in a study to evaluate prostate cancer treatment outcomes (n = 5,727; Figure 1). Participation was restricted to include only those men who completed a pretreatment HRQOL questionnaire within a 90-day window of their prostate biopsy diagnosis (60%; n = 3,422). This 90-day window started 30 days before and ended 60 days after prostate biopsy diagnosis to allow men to be included who (i) completed the questionnaire on the date of their prostate biopsy appointment but then had their prostate biopsy rescheduled and (ii) did not complete the questionnaire on the date of their prostate biopsy appointment so instead had the questionnaire mailed to their home. Most men completed the questionnaire in a KPSC clinic before undergoing their prostate biopsy examination (79%; n = 2,702), with the remainder completing the questionnaire by mail. If a completed pretreatment HRQOL questionnaire had not been returned by mail within 1 month of the man undergoing his prostate biopsy, he was mailed an additional questionnaire to complete and return by mail.

Men who were missing data to assess their sociodemographic (age, race and ethnicity, marital status, neighborhood education, neighborhood income, and primary language), health status (body mass index [BMI] and tobacco use), and medical history (Charlson Comorbidity Index [CCI] score, Gleason score, prostate cancer family history, serum prostate-specific antigen [PSA] level, and knowledge of prostate cancer status at time of questionnaire completion) information were excluded. The final analytic cohort included 2,579 men. This investigation was approved by the KPSC's institutional review board and the informed consent requirement was waived, citing that the pretreatment HRQOL questionnaire was considered part of standard urologic care. There was no remuneration for participation.

Health-Related Quality of Life

Pretreatment HRQOL was assessed with the Expanded Prostate Cancer Index Composite Short Form (EPIC-26) questionnaire, an abbreviated version of the full-length EPIC-50. This validated and self-administered 26-item questionnaire,[22] specifically designed for individuals diagnosed with prostate cancer, evaluated five prostate cancer-specific functional and bother domains: (i) sexual, (ii) bowel, (iii) hormonal, (iv) urinary incontinence, and (v) urinary irritation and obstruction. Response options for each item form a Likert scale and multiple-item scale scores are transformed linearly to a 0 to 100 domain scale, with higher scores indicating better HRQOL and a