Clinical Use of Expanded Prostate Cancer Index Composite for Clinical Practice to Assess Patient Reported Prostate Cancer Quality of Life Following Robot-Assisted Radical Prostatectomy

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Purpose: EPIC-CP (Expanded Prostate Cancer Index Composite for Clinical Practice) is a short questionnaire that comprehensively measures patient reported health related quality of life at the point of care. We evaluated the feasibility of using EPIC-CP in the routine clinical care of patients with prostate cancer without research infrastructure. We compared longitudinal patient and practitioner reported prostate cancer outcomes.

Materials and Methods: We reviewed health related quality of life outcomes in 482 patients who underwent radical prostatectomy at our institution from 2010 to 2014. EPIC-CP was administered and interpreted in routine clinical practice without research personnel. We compared practitioner documented rates of incontinence pad use and functional erections to patient reported rates using EPIC-CP.

Results: A total of 708 EPIC-CP questionnaires were completed. Mean urinary incontinence domain scores were significantly higher (worse) than baseline (mean $\pm$ SD 0.6 $\pm$ 0.2) 3 and 6 months after treatment (mean 3.1 $\pm$ 2.3 and 2.2 $\pm$ 2.1, respectively, each $p < 0.05$) but they returned to baseline at 12 months (mean 1.6 $\pm$ 1.7, $p > 0.05$). Mean sexual domain scores were significantly worse than baseline (mean 2.4 $\pm$ 2.8) at all posttreatment time points (each $p < 0.05$). Practitioners significantly overestimated incontinence pad-free rates at 3 months (48% vs 39%) and functional erection rates at 3 months (18% vs 12%), 6 months (38% vs 23%) and 12 months (45% vs 23%, each $p < 0.05$).

Conclusions: EPIC-CP is feasible to use in the routine clinical care of patients with prostate cancer without requiring a research infrastructure. Using

Abbreviations and Acronyms

ACS = American Cancer Society®

AUA = American Urological Association

EPIC = Expanded Prostate Cancer Index Composite

HRQOL = health related quality of life

PRO = patient reported outcome

UCLA-PCI = UCLA-Prostate Cancer Index

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EPIC-CP in clinical practice may help practitioners objectively assess and appropriately manage posttreatment side effects in patients with prostate cancer.

Key Words: prostatic neoplasms/therapy, quality of life, outcome assessment (health care), questionnaires, patient-centered care

PROSTATE cancer treatment can lead to long-lasting impairments in HRQOL. The overall lengthy survival after prostate cancer treatment makes it critical for practitioners to counsel patients about side effects before treatment and treat them appropriately after therapy.[1] While practitioners recognize the characteristic side effects of treatment, they tend to underestimate the severity of patient treatment related side effects compared to when patients report HRQOL using validated PRO questionnaires.[2]

To accurately assess prostate cancer specific HRQOL several PRO instruments have been developed, such as UCLA-PCI,[3] EPIC[4] and EPIC-26.[5] However, these instruments were designed for use in research and can be difficult to practically administer and score in a busy clinical practice without research personnel or infrastructure.

EPIC-CP was developed in 2011 specifically to enable the use of a point of care PRO instrument in the routine clinical care of patients with prostate cancer.[1] EPIC-CP is a 16-item questionnaire evaluating the 5 HRQOL domains of urinary incontinence, urinary irritation/obstruction, bowel related symptoms, sexual dysfunction and hormonal symptoms.[1] EPIC-CP was derived from EPIC-26[5] but it is shorter, requires less time to administer and is scorable at the point of care in a manner similar to the AUA symptom score.[6] Its routine use has been recommended by ACS.[7] However, to our knowledge there has not been an evaluation of EPIC-CP use in the clinical setting to date outside a research study.

The 3 main objectives of this study were to 1) evaluate the feasibility of using EPIC-CP to measure HRQOL in patients before and after radical prostatectomy in the clinical setting outside a research or validation study, 2) assess whether EPIC-CP captures the expected HRQOL deficits and recovery after surgery, and 3) evaluate for discrepancies between patient reported outcomes using EPIC-CP and practitioner reported outcomes in the medical record.

MATERIALS AND METHODS

Expanded Prostate Cancer Index Composite for Clinical Practice

EPIC-CP is a validated, 1-page, 16-item, patient reported outcome questionnaire designed to measure comprehensive HRQOL in men with prostate cancer (supplementary figure, http://jurology.com/). EPIC-CP, which was derived from EPIC-26,[5] was designed to be shorter and more convenient, and used at the point of care in clinical practice. A detailed juxtaposition of EPIC-CP and EPIC-26 has been previously described.[1,8]

Beyond having fewer questions (16 vs 26) and taking less time to complete (5 vs 10 to 15 minutes), the suitability of EPIC-CP in clinical practice is facilitated by its redesigned scoring system. It is analogous to the AUA symptom index,[6] in which item answers are summed to calculate domain scores, allowing EPIC-CP to be completed and scored at the point of care. This is in contrast to the scoring systems in UCLA-PCI and the longer forms of EPIC, in which item answers must be computationally transformed to a 0 to 100 scale and then averaged in each domain, rendering point of care administration unfeasible without a database or electronic administration. EPIC-CP is scored from 0 to 12 with a higher score indicating worse HRQOL. EPIC-CP contains 5 prostate cancer specific health domains (urinary incontinence, urinary irritation/obstruction, bowel, sexual, vitality/hormonal). It has been psychometrically validated[1] and was shown to be responsive to quality of life changes with time after prostate cancer treatment.[8]

Cohort and Health Related Quality of Life Assessment

Between 2010 and 2014, 482 men with nonmetastatic prostate cancer who underwent robot-assisted laparoscopic radical prostatectomy completed the EPIC-CP questionnaire as part of routine clinical practice at our institution. Patients were asked to complete EPIC-CP on paper in the waiting room before the clinic visit. The completed EPIC-CP paper forms were then placed in the patient chart outside the examination room. Clinic visits were performed according to surgeon discretion with most patients following 3, 6 and 12 months after surgery.

EPIC-CP was administered, scored and interpreted in the routine flow of clinical practice without the assistance of research personnel. Participating practitioners completed an average of 29 patient visits per clinic day, of which the majority were oncology related, including treatment counseling and procedural visits.

Study Design

In this institutional review board approved study we retrospectively reviewed patient EPIC-CP questionnaire answers and domain scores, and electronically abstracted all completed EPIC-CP paper forms into our research database. To compare patient vs practitioner reported outcomes we assessed for differences in the degree of symptom severity reported by patients using EPIC-CP compared to those reported by practitioners in the medical record. We focused on 2 clinically relevant functional