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Psychometric validation of the EORTC QLQ-PR25 and clinical correlates of quality of life among Albanian men with prostate cancer

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Abstract

Our aim was to assess the psychometric properties of the "EORTC QLQ-PR25" in Albania and to determine the links between disease characteristics and treatment in men with prostate cancer. A study conducted in Tirana during April 2024–December 2025 included 74 consecutive men diagnosed with prostate cancer who completed the EORTC QLQ-PR25 questionnaire (response: ≈94%). The EORTC QLQ-PR25 demonstrated excellent internal consistency across all subscales (Cronbach's alpha range: 0.85-0.91), with very high reliability for the overall scale (α=0.94). Higher symptom burden and poorer overall quality-of-life were significantly associated with radical prostatectomy, metastatic disease, high Gleason score (9-10), and extracapsular tumour spread (all P<0.05). Patients undergoing radical prostatectomy reported the worst outcomes across all symptom domains, as well as the lowest general quality-of-life and health status scores. Seemingly, the EORTC QLQ-PR25 is a reliable and clinically valid instrument for assessing prostate cancer-specific quality-of-life among Albanian men. Also, symptom burden and quality-of-life impairment were strongly associated with disease severity and invasive treatment. Our findings support the integration of patient-reported outcomes into routine prostate cancer care in Albanian-speaking countries.

Key words: Albania, EORTC QLQ-PR25, prostate cancer, quality-of-life, reliability, validation.

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Introduction

Prostate cancer is one of the most diagnosed malignancies among men worldwide and a leading cause of cancer-related morbidity in aging populations.[1,2] More specifically, prostate cancer is the second most commonly diagnosed cancer and the fifth leading cause of cancer death among men worldwide.[3,4] Advances in early detection and treatment have improved survival in many settings;[3,4] however, these gains have been accompanied by a growing recognition of the long-term impact of prostate cancer and its treatment on patients' quality of life.[5,6] As a matter of fact, urinary, bowel, sexual, and hormonal symptoms are common across the disease trajectory and may persist for many years following diagnosis and treatment, affecting considerably physical functioning, psychological well-being, social relationships, and overall health perception of prostate cancer patients.[5,7] Consequently, quality of life has become a central outcome in prostate cancer research and clinical decision-making, complementing traditional endpoints such as survival and disease progression.[7-9]

Evidence from observational studies and clinical trials consistently demonstrates that disease stage, treatment modality, and tumour characteristics are key determinants of quality-of-life outcomes among men with prostate cancer.[5,7,10] Radical treatments, including prostatectomy and radiotherapy, are frequently associated with higher symptom burden, particularly urinary incontinence, erectile dysfunction, and bowel disturbances,[5,7,11,12] whereas advanced disease and metastasis are linked to poorer overall health status and reduced quality of life.[13,14] Importantly, these impacts vary across populations and healthcare settings, influenced by access to care, treatment pathways, and sociocultural factors.[15-17] Furthermore, in countries with limited cancer surveillance and resource constraints including Albania, patient-reported outcomes remain underexplored,[18] despite their importance for guiding patient-centred care and health policy.[18] To accurately capture prostate cancer-specific quality-of-life outcomes, validated, disease-specific patient-reported outcome measures have long been considered essential.[19,20] In this framework, the "European Organisation for Research and Treatment of Cancer Quality of Life Questionnaire" (EORTC QLQ-C30) has been developed as a core cancer-specific quality-of-life instrument.[21] This tool was designed to examine the quality of life of cancer patients in general regardless of the type, stage, or location of the neoplasm.[21,22] Next, based on this generic instrument, the EORTC QLQ-PR25 tool was developed by adding a prostate cancer module addressing symptoms and concerns particularly relevant to men with prostate cancer.[19,22] The PR25 assesses urinary and bowel symptoms, treatment-related

hormonal effects, and sexual activity and functioning, offering a comprehensive profile of symptom burden and functional impairment.[19,22] Since its development, the EORTC QLQ-PR25 has been widely used in clinical trials, observational studies, and cross-cultural research across diverse clinical contexts.[19,23,24] These multiple validation studies conducted in Europe, Asia, and other regions have demonstrated that the EORTC QLQ-PR25 possesses good to excellent internal consistency, construct validity, and clinical sensitivity, supporting its use in both research and routine clinical practice.[19,23,24] The instrument has shown the ability to discriminate between patient groups defined by disease stage, treatment type, and clinical severity, as well as to detect differences in symptom burden over time.[19,23,25] Nonetheless, psychometric performance may vary by population, language, and healthcare context,[26] underscoring the importance of local validation studies.

In Albania, evidence on quality of life among men with prostate cancer is scarce, and no previous studies have formally evaluated the psychometric properties of the EORTC QLQ-PR25 in this population. Given the likely under-reporting of prostate cancer cases in Albania[27] and the evolving cancer care landscape,[28] assessing patient-reported outcomes is particularly important for this post-communist country characterized by a particularly rapid aging and its related epidemiological transition.[29]

In this context, this study aimed to assess the reliability and clinical validity of the EORTC QLQ-PR25 instrument in a sample of Albanian men with prostate cancer and to examine the associations between symptom burden, disease characteristics, and treatment modalities. Our study seeks to contribute to improved assessment of patient-centred outcomes by providing locally relevant evidence and thereby supporting more informed clinical and public health strategies in prostate cancer care in Albania.

Materials and Methods

This was a case-series study conducted in Albania during the period April 2024 – December 2025.

Study population

This study included all patients diagnosed with prostate cancer during the study period at the Oncology Service of the University Hospital Centre "Mother Teresa" in Tirana, the capital of Albania.

The diagnosis of prostate cancer was based on the following diagnostic criteria and (chronological) procedures: i) biochemical tests: Prostate-Specific Antigen (PSA) values exceeding 4 ng/mL in repeated tests; ii) imaging techniques: including ultrasound examination, computed tomography, prostate magnetic resonance imaging, and bone scintigraphy; iii) biopsy: which served as the definitive histopathological method for confirming prostate cancer in all patients. Between April 2024 and December 2025, overall, 79 cases of prostate cancer were diagnosed and registered at the Oncology Service of the University Hospital Centre "Mother Teresa" in Tirana. Of these, five patients either refused participation (n=2) or were too sick to participate (n=3). Hence, our study included 74 Albanian men diagnosed with prostate cancer who agreed to participate (response rate: 74/79≈94%).

Data collection

All prostate cancer patients were administered the EORTC QLQ-PR25 instrument,[19,22] consisting of the following quality-of-life dimensions (subscales).

Urinary symptoms

Eight items inquiring about urinary problems during the past week preceding the interview, each ranging from 1 (not at all) to 4 (very much).[19,22] A summary subscale score was calculated for each participant ranging from 8 (highest quality of life for this dimension) to 32 (lowest quality of life for the "urinary symptoms" dimension). Of note, the original EORTC QLQ-PR25 tool includes in the urinary symptoms dimension an additional question for prostate cancer patients who wear an incontinence aid.[19,22] In our sample, there were only three patients who reported wearing an incontinence aid and, therefore, this item was excluded from the analysis.

Bowel symptoms

Four items asking about bowel problems during the past week before the interview, each ranging from 1 (not at all) to 4 (very much).[19,22] A summary subscale score was calculated for each participant ranging from 4 (highest quality of life for this dimension) to 16 (lowest quality of life for the "bowel symptoms" dimension).

Hormonal treatment-related symptoms

Six items inquiring about symptoms during the past week (three items) or during the last four weeks (the other three items of this subscale).[19,22] A summary subscale score was calculated for each participant ranging from 6 (highest quality of life for this dimension) to 24 (lowest quality of life for the dimension of "hormonal treatment-related symptoms").

Sexual activity symptoms

Two items asking about symptoms related to sexual activity during the last four weeks.[19,22] A summary subscale score was calculated for each participant ranging from 2 (highest quality of life for this dimension) to 8 (lowest quality of life for the dimension of "sexual activity symptoms").

Overall scale (all symptoms)

Twenty items including all the symptom subscales (urinary, bowel, hormonal treatment-related, and sexual activity). An overall summary score was calculated for each participant ranging from 20 (highest quality of life for the overall scale) to 80 (lowest quality of life for the overall quality of life scale as measured by the EORTC QLQ-PR25 instrument). Notably, the original EORTC QLQ-PR25 tool includes an additional dimension on sexual functioning symptoms which is conditional on the sexual activity of prostate cancer patients over the last four weeks preceding the interview.[19,22] In our sample, there were only two patients who reported sexual activity in the past four weeks and, thus, this symptoms dimension was excluded from the analysis.

Hence, in our analysis, the summary score of the whole scale of the EORTC QLQ-PR25 instrument was calculated based on 20 items instead of 25 items described in the original version of the EORTC QLQ-PR25 tool.[19,22]

In addition, the questionnaire included the following two general outcome measures:[21,22] i) general quality of life – based on the following question: "How would you rate your overall quality of life?". Potential answers ranged from 1 (very poor) to 7 (excellent);[21,22] ii) general health status – based on the following question: "How would you rate your overall health?". Potential answers ranged from 1 (very poor) to 7 (excellent).[21,22]

Furthermore, information on a range of clinical characteristics and sociodemographic factors of the patients was collected.

Clinical characteristics included Gleason score (ranging from

6 to 10, which in the analysis was dichotomized into: 6-8 *vs*. 9-10), type of intervention (no intervention, transurethral resection, and radical prostatectomy), as well as presence of extracapsular tumour spread, metastasis, chronic kidney disease, and diabetes (all four dichotomized into: "yes" *vs*. "no").

Sociodemographic factors included age of the patients (which was dichotomized in the analysis into: ≤69 *vs*. ≥70 years), marital status (also, dichotomized in the analysis into: married *vs*. not married), educational level (trichotomized into: low, middle, and high), and current employment status (employed, unemployed, and retired) (Table 1).

Ethical aspects

The study was approved by the Ethical Council of the University of Medicine, Tirana (no. 742/1, date: 18/03/2024). All patients provided their written consent for participation after being informed about the aim and procedures of the study and after being ensured about the anonymousness and confidentiality.

Statistical analysis

Cronbach's alpha was used to assess the internal consistency of the subscales (specific symptoms) and the overall scale (all symptoms) of the EORTC QLQ-PR25 instrument (Table 2 – upper panel). Additionally, item-own scale and item-other scale correlational coefficients were calculated for each subscale and the overall scale of the instrument.

Mean values and their respective standard deviations along with median values and their respective interquartile ranges were calculated for each subscale and the overall scale of the EORTC QLQ-PR25 tool (lower panel).

The independent samples Kruskal-Wallis test was used to compare the distribution of the scores of quality-of-life dimensions (specific symptoms, alias subscales of EORTC QLQ-PR25), the overall scale (alias all symptoms measured by the EORTC QLQ-PR25 tool), the general quality of life (measured on a 7-point scale) and the general health status (also, measured on a 7-point scale) among different patients' groups distinguished by the type of intervention (no intervention, transurethral resection, and radical prostatectomy; Table 3). Conversely, the independent samples Mann-Whitney U test was employed to compare differences in quality-of-life scores across clinical subgroups defined by the presence of metastasis (no *vs*. yes), Gleason score (6-8 *vs*. 9-10), or the presence of extra-capsular tumour spread (no *vs*. yes; Table 3). P≤0.05 was considered statistically significant for all statistical tests. Statistical Package for the Social Sciences (SPSS, version 19.0) was used for all the statistical analyses.

Results

Table 1 presents the distribution of baseline characteristics in the sample of prostate cancer patients (N=74) included in this study. Overall, most participants were aged 70 years or older (≈55.4%), whereas the remaining ≈45% were aged 69 years or younger (upper panel). Also, most participants were married (≈88%). Educational attainment was predominantly low-to-middle, with only a quarter (≈26%) having a higher education. Reflecting the older age distribution, three-quarters of patients (≈76%) were retired, whereas only ≈12% were employed (upper panel).

Clinically (lower panel), most patients had Gleason scores of 6-8 (≈74%), whereas the remaining ≈26% presented with high-grade disease (Gleason 9-10). Extra-capsular tumour spread was present in ≈35% of patients, and ≈14% had metastatic disease at the time of assessment. Regarding treatment, nearly half of the patients (≈49%) had undergone transurethral resection, ≈20% had received radical prostatectomy, and ≈31% had not undergone surgical intervention. The prevalence of major comorbidities was relatively low considering the risk profile of the patients, with diabetes reported in ≈8% and chronic kidney disease in ≈4% of patients (lower panel).

The EORTC QLQ-PR25 instrument demonstrated excellent internal consistency across all subscales (Table 2 – upper panel). Cronbach's alpha coefficients ranged from 0.85 to 0.91 for individual symptom domains, whereas the overall scale showed very high reliability (α=0.94). Item-own scale correlations were consistently higher than item-other scale correlations, supporting good item discrimination and scale coherence.

Descriptive analyses (lower panel) indicated a moderate overall symptom burden, with a mean overall PR25 score of about 49.4±13.4 (in a scale from 20 [lowest] to 80 [highest]). Among

Table 1. Distribution of baseline characteristics among study participants (N=74).

Upper panel: sociodemographic factors Variable	Number	Percentage
Age-group		
≤69 years	33	44.6
≥70 years	41	55.4
Marital status		
Married	65	87.8
Not married	9	12.2
Educational level		
Low	31	41.9
Middle	24	32.4
High	19	25.7
Employment status		
Employed	9	12.2
Unemployed	9	12.2
Retired	56	75.7

Variable	Number	Percentage
Gleason score:		
6-8	55	74.3
9-10	19	25.7
Extra-capsular tumour spread		
No	48	64.9
Yes	26	35.1
Metastasis		
No	64	86.5
Yes	10	13.5
Intervention		
No intervention	23	31.1
Transurethral Resection	36	48.6
Radical prostatectomy	15	20.3
Chronic kidney disease		
No	71	95.9
Yes	3	4.1
Diabetes		
No	68	91.9
Yes	6	8.1

symptom domains, urinary symptoms showed a mean (SD) score of 22.0±5.8 (scale: from 8 [lowest] to 32 [highest]), whereas the hormonal treatment-related symptoms exhibited a mean (SD) score of 14.2±4.6 (from 6 [lowest] to 24 [highest]). Bowel symptoms and sexual activity symptoms had mean scores of around 8.4±3.3 (from 4 [lowest] to 16 [highest]) and 4.8±1.8 (from 2 [lowest] to 8 [highest]), respectively (lower panel). Quality-of-life outcomes varied significantly according to treatment modality, disease progression, and tumour characteristics (Table 3). Patients who had undergone radical prostatectomy reported the highest levels of symptom burden across all PR25 domains, including urinary, bowel, hormonal, and sexual activity symptoms, compared with those receiving transurethral resection and especially patients with no intervention (all P<0.001). Correspondingly, patients with radical prostatectomy reported the lowest general quality of life and health status scores (both P<0.001). Patients with metastatic disease experienced significantly worse urinary symptoms (P<0.01) and overall symptom burden (P=0.03), as well as markedly poorer general quality of life and health status (both P<0.01), compared with non-metastatic patients. Similar patterns were observed among patients with high Gleason scores (9-10) and those with extra-capsular tumour spread, who consistently reported higher symptom scores and significantly lower perceived quality of life and poorer health (Table 3).

Discussion

Our study provides evidence on the first psychometric evaluation of the EORTC QLQ-PR25 instrument among men with prostate cancer in Albania and offers novel insights into the relationship between disease characteristics, treatment modalities, and patient-reported quality-of-life outcomes in this transitional setting.

Overall, our findings demonstrate that the QLQ-PR25 exhibits excellent internal consistency and strong clinical validity in Albanian men with prostate cancer. Also, our findings confirm that increasing disease severity and more invasive treatment approaches (such as radical prostatectomy) are associated with substantially greater symptom burden and poorer perceived quality of life.[5,7-9,11-14]

The internal consistency estimates observed in our study were high across all symptom domains, with Cronbach's alpha coefficients comparable to or exceeding those reported in previous validation studies conducted in other countries.[19,23-26] As a primary benchmark for comparisons, the original international field study of the EORTC QLQ-PR25 has reported good-to-excellent internal consistency (Cronbach's alpha generally ≥0.70) across symptom domains in multiple countries.[19] Additionally, validation of the Korean version of the QLQ-PR25 has reported Cronbach's alpha values comparable to those found in Western populations.[24] Also, psychometric evaluation of the Taiwan Chinese version of the QLQ-PR25 has demonstrated satisfactory-to-high internal consistency across subscales, supporting cross-national comparability.[25] Moreover, evaluation of the QLQ-PR25 in prostate cancer survivors has confirmed acceptable-to-strong internal consistency.[23] Based on the findings of our psychometric analysis, the Albanian version of the QLQ-PR25 seems to reliably capture prostate cancer-specific symptoms in a coherent and internally consistent manner, which is in line with many previous studies conducted internationally.[19,23-26] Also, the strong item-own scale correlations relative to item-other scale correlations in our study further support the construct validity of the Albanian-adapted instrument and confirm that individual items appropriately measure their intended domains. These findings are consistent with international evidence demonstrating the robustness of the QLQ-PR25 across diverse cultural and healthcare contexts.[19,23-26]

Beyond psychometric performance, the clinical validity of the instrument was clearly demonstrated through its ability to discriminate between patient groups defined by treatment type, tumour characteristics, and disease progression. Hence, in our study, patients who had undergone radical prostatectomy consistently

Table 2. Internal consistency and descriptive statistics of the subscales' scores of the EORTC QLQ-PR25 instrument administered in a sample of cancer patients in Albania (N=74).

Upper panel: internal consistency of the EORTC QLQ-PR25 subscales				
EORTC QLQ-PR25 subscales	**No. items**	**Item – own scale Correlation**	**Item – other scale correlation**	**Cronbach's alpha**
Urinary symptoms	8	0.57 (0.38-0.93)	0.54-0.91	0.911
Bowel symptoms	4	0.60 (0.42-0.75)	0.52-0.84	0.856
Hormonal treatment-related symptoms	6	0.52 (0.31-0.77)	0.62-0.88	0.864
Sexual activity symptoms	2	0.75 (0.75-0.75)	0.52-0.71	0.854
Overall scale (*all symptoms*)	20	0.45 (0.18-0.93)	0.71-0.91	0.943
Lower panel: descriptive statistics of the scores of EORTC QLQ-PR25 subscales				
EORTC QLQ-PR25 subscales	**Mean**	**Standard deviation**	**Median**	**Interquartile range**
Urinary symptoms	21.97	5.79	21.0	18.0-25.0
Bowel symptoms	8.38	3.29	7.0	6.0-10.0
Hormonal treatment-related symptoms	14.24	4.63	13.0	10.0-19.0
Sexual activity symptoms	4.77	1.80	4.5	3.0-6.0
Overall scale (*all symptoms*)	49.36 *	13.35	46.0	39.0-62.0

* In our study, the summary score of the overall scale of the EORTC QLQ-PR25 instrument was calculated based on 20 items instead of 25 items described in the original version of the EORTC QLQ-PR25 tool.19,22 The following five items were excluded from the calculations: one item related to urinary symptoms dimension [consisting of a question administered only to patients who wear an incontinence aid;19,22 in our study, there were only three such patients], and four items related to sexual functioning symptoms which is conditional on the sexual activity of prostate cancer patients19,22 [in our study, only two participants reported sexual activity in the past four weeks preceding the interview].

reported the highest levels of urinary, bowel, hormonal, and sexual activity symptoms, as well as the poorest general quality of life and health status. This pattern is compatible with extensive literature documenting the long-term functional and quality-of-life consequences of radical surgical treatment, particularly with respect to urinary incontinence, bowel dysfunction, and sexual impairment.[5,7,8,11,12] In contrast, Albanian prostate cancer patients who had not undergone surgical intervention reported the lowest symptom burden and more favourable quality-of-life outcomes.

Similarly, metastatic disease, high Gleason score, and extracapsular tumour spread were all associated with significantly worse symptom scores and poorer global assessments of quality of life and health. Disease severity and/or its advanced stage have been convincingly linked to poorer quality of life among prostate cancer patients.[9,13,14] Furthermore, tumour aggressiveness (including high Gleason score, or extracapsular spread) has been linked to worse long-term functional and quality-of-life outcomes, independent of treatment effects.[5,7] Thus, our findings reinforce the notion that severity of prostate cancer plays a critical role in shaping patients' lived experiences and perceived well-being.[14]

Importantly, while hormonal treatment-related symptoms and sexual activity symptoms showed less consistent associations with some clinical variables, the overall scale of the QLQ-PR25 remained sensitive to differences in disease progression, underscoring the value of a composite symptom burden measure.[19,23-25] Hence, the original international field study has demonstrated that while individual subscales may vary in their associations with clinical variables, the overall PR25 scale reliably discriminates

Table 3. Association of the scores of quality-of-life dimensions with disease progression (N=74).

Quality of life scale	No intervention (N=23)	Transurethral resection (N=36)	Radical prostatectomy (N=15)	p†
Urinary symptoms	16.8±3.7 *	22.3±4.0	29.1±3.8	<0.001
Bowel symptoms	6.1±1.2	7.7±2.4	13.5±1.6	<0.001
Hormonal treatment-related symptoms	10.1±1.9	14.9±4.5	19.1±0.9	<0.001
Sexual activity symptoms	3.5±1.2	4.8±1.5	6.5±1.7	<0.001
Overall scale (all symptoms)	36.6±5.2	49.7±9.4	68.3±3.4	<0.001
General quality of life‡	4.3±1.1	3.1±0.8	2.0±0.8	<0.001
General health status§	4.8±1.0	2.9±0.9	2.1±0.8	<0.001
Quality of life scale		**No metastasis (N=64)**	**Metastasis (N=10)**	**P ¶**
Urinary symptoms		21.2±5.5 *	27.2±5.1	0.004
Bowel symptoms		8.1±3.2	9.9±3.3	0.064
Hormonal treatment-related symptoms		14.1±4.7	15.5±3.8	0.426
Sexual activity symptoms		4.7±1.7	5.2±2.4	0.511
Overall scale (all symptoms)		48.1±13.0	57.8±12.8	0.030
General quality of life‡		3.4±1.2	2.2±0.9	0.004
General health status§		3.5±1.4	2.1±0.6	0.001
Quality of life scale		**Gleason score: 6-8 (N=55)**	**Gleason score: 9-10 (N=19)**	**P ¶**
Urinary symptoms		21.0±5.7 *	24.9±5.2	0.012
Bowel symptoms		8.0±3.3	9.4±3.1	0.045
Hormonal treatment-related symptoms		13.9±4.8	15.2±4.2	0.316
Sexual activity symptoms		4.7±1.8	4.8±1.9	0.797
Overall scale (all symptoms)		47.7±13.5	54.3±12.0	0.043
General quality of life‡		3.4±1.2	2.6±1.1	0.013
General health status§		3.6±1.4	2.5±1.0	0.003
Quality of life scale		**No extra-capsular tumour spread (N=48)**	**Extra-capsular tumour spread (N=26)**	**P ¶**
Urinary symptoms		20.6±5.0 *	24.5±6.3	0.013
Bowel symptoms		7.6±2.8	9.9±3.6	0.007
Hormonal treatment-related symptoms		13.5±4.5	15.5±4.7	0.169
Sexual activity symptoms		4.5±1.6	5.2±2.1	0.129
Overall scale (all symptoms)		46.2±11.5	55.2±14.7	0.011
General quality of life‡		3.6±1.2	2.5±0.9	<0.001
General health status§		3.7±1.4	2.5±0.9	<0.001

*Mean values ± standard deviations. For symptoms (urinary, bowel, hormonal treatment-related, sexual activity, and the overall scale), higher values denote a higher degree of dysfunction (*i.e.*, a lower quality of life). Conversely, for the general quality of life and/or health, higher values denote a higher quality of life and/or better health. †P-values from independent samples Kruskal-Wallis test. ‡Measured on a 7-point scale based on the following question: "*How would you rate your overall quality of life?*". Potential answers ranged from 1 (very poor) to 7 (excellent). §Measured on a 7-point scale based on the following question: "*How would you rate your overall health?*". Potential answers ranged from 1 (very poor) to 7 (excellent). ¶P-values from independent samples Mann-Whitney U test.

between disease stages and clinical severity, supporting the usefulness of a composite symptom burden score.[19] Also, a previous study has confirmed that the overall PR25 score remains clinically informative and sensitive in prostate cancer survivors.[23] Additionally, among Taiwanese patients, less consistent associations have been reported for sexual- and hormonal-related domains in relation to some clinical characteristics, yet acceptable performance of the overall scale in detecting differences across patient groups was confirmed.[25] Furthermore, among Korean patients, certain symptom domains (especially sexual activity/functioning) have been influenced by cultural and clinical factors, whereas the composite scale has been shown to maintain stability and discriminative ability.[24]

Our study has several implications for clinical practice and health policy in Albania. Given the scarcity of patient-reported outcome data in prostate cancer care,[27,28] the availability of a validated, disease-specific quality-of-life instrument represents an important step toward more patient-centred oncology services. Thus, routine use of the QLQ-PR25 could facilitate better symptom monitoring, inform shared decision-making, and help Albanian clinicians anticipate and manage treatment-related side effects.[19] Additionally, a recent systematic review found that integrating patient-reported outcome measures into cancer care improves health-related quality of life and patient outcomes, supporting the value of routine symptom monitoring and clinical use of patient-reported outcome measures.[30] At a population level, such data could also support health system planning and resource allocation in Albania, a country undergoing rapid aging and its related epidemiological transition.[29]

Nonetheless, several limitations should be acknowledged. The relatively small sample size and single-centre design may limit generalisability, and the exclusion of certain conditional items from the original QLQ-PR25 (due to the very low prevalence of incontinence aid use and recent sexual activity) may affect comparability with studies using the full 25-item scale. Yet, we consider that these adaptations reflect real-world clinical circumstances and do not detract from the overall reliability or validity of the instrument in the Albanian context.

Conclusions

On the face of it, our study indicates that the EORTC QLQ-PR25 is a reliable and clinically valid instrument for assessing prostate cancer-specific quality of life among Albanian men.

Also, symptom burden and quality-of-life impairment were strongly associated with disease severity and invasive treatment among Albanian patients with prostate cancer, highlighting the substantial impact of prostate cancer progression on patients' daily functioning and well-being.

In conclusion, our study provides evidence on the first psychometric validation of the EORTC QLQ-PR25 instrument among men with prostate cancer in Albania and offers novel insights into the relationship between disease characteristics, treatment modalities, and patient-reported quality-of-life outcomes in this transitional setting. Our findings support the integration of patient-reported outcomes into routine prostate cancer care in Albanian-speaking countries.

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Ethical approval: the study was approved by the Ethical Council of the University of Medicine, Tirana (no. 742/1, date: 18/03/2024). All patients provided their written consent for participation after being informed about the aim and procedures of the study and after being ensured about the anonymousness and confidentiality.

Data availability statement: the data presented in this study is available upon reasonable request from the corresponding author.

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