Quality of Life After Prostate Cancer Diagnosis: Data from the Pros-IT CNR

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Prostate cancer (PCa) is the second most frequently diagnosed tumor and one of the leading causes of cancer death among men [1]. Currently, most of the prostate cancers are clinically localized at the time of diagnosis; therefore, the aim of any primary treatment of PCa is to maximize survival and preserve quality of life (QoL) [2].

Pros-IT CNR (www.prositcnr.it) was launched in September 2014. It is an ongoing national, multicenter, observational, prospective, no-profit study, promoted by the National Research Council (CNR), intended to monitor the QoL in an unselected sample of Italian male patients who were diagnosed with biopsy-verified PCa and were treatment naïve [3]. Ninety-seven centers, including urology, radiation oncology, and oncological units, located throughout Italy, were able to enroll 1705 consecutive patients, with a mean age at diagnosis of 69 ± 7 yr. Validated questionnaires were administered at the time PCa was diagnosed (baseline), and at 6, 12, 24, 36, 48, and 60 mo after the diagnosis. General QoL was measured by Italian version of the Short Form Health Survey (SF-12) [4], while PCa-specific QoL was measured by the Italian version of the University of California Los Angeles–Prostate Cancer Index (UCLA-PCI) [5].

Preliminary data from the Pros-IT CNR were presented during several international meetings [6–9]. Comprehensive baseline data of Pros-IT CNR survey has been described previously [3]. Ninety-seven centers, including urology, radiation oncology, and oncological units, located throughout Italy, were able to enroll 1705 consecutive patients, with a mean age at diagnosis of 69 ± 7 yr. Validated questionnaires were administered at the time PCa was diagnosed (baseline), and at 6, 12, 24, 36, 48, and 60 mo after the diagnosis. General QoL was measured by Italian version of the Short Form Health Survey (SF-12) [4], while PCa-specific QoL was measured by the Italian version of the University of California Los Angeles–Prostate Cancer Index (UCLA-PCI) [5].

Preliminary data from the Pros-IT CNR were presented during several international meetings [6–9]. Comprehensive baseline data of Pros-IT CNR survey has been described previously. Of the 1705 patients enrolled, 1549 participated in the first follow-up 6 mo after biopsy-verified PCa diagnosis. Four patients died; the causes of death included myocardial infarction, multiple myeloma, cardiac arrest, and cancer progression. A total of 152 patients were lost at the first follow-up: 12 for health reasons, 33 for not being available, and 107 for no longer being interested to participate in the study.
PCa treatments reported in the 6-mo follow-up included surgery as monotherapy (498 patients, 32.2% of study participants), surgery and radiotherapy (95, 6.1%), exclusive radiotherapy (337, 21.8%), radiotherapy and hormone therapy (242, 15.6%), and hormone therapy only (107, 6.9%). Of the study participants, 111 were on observational therapy: 95 in active surveillance and 16 in watchful waiting. The remaining treatments reported included brachytherapy (15 patients, 1%), focal therapy (6, 0.4%), and different combinations of surgery, radiotherapy, and hormone therapy. PCa treatment was not specified for 62 patients.

Data on QoL related to SF-12 were available at 6 mo from the diagnosis for 1445 study participants (missing data for 6.7% of the participants to the first follow-up). At diagnosis, the mean value for the physical component of the SF-12 (PCS) was 51.6 \( \pm \) 7.5 and that for the mental component (MCS) was 49.3 \( \pm \) 9.7. At 6 mo from the diagnosis, the mean value for PCS was 50.3 \( \pm \) 7.7, with a mean change from the baseline of \(-1.4\) (95% confidence interval [CI] \([-1.8, -1.0]\)). For MCS, the mean value measured at 6 mo follow-up was 50.6 \( \pm \) 8.6, with a mean change from the baseline of \(+1.5\) (95% CI \([0.9, 2.0]\)). As observed for the baseline of the study, also at 6 mo from the diagnosis, PCS scores tended to be lower in the oldest patients \(p < 0.0001\) Jonckheere–Terpstra test for trend), while for MCS scores the trend with age was not significant \((p = 0.8305)\).

Responses to the UCLA-PCI at 6 mo from the diagnosis were available for 1471 participants (5% missing data). A decrease in relation to urinary function (UF), urinary bother (UB), sexual function (SF), and sexual bother (SB) scores at the 6mo follow-up was observed. The mean change was \(-10.9\) (95% CI \([-12.2, -9.6]\)) for UF, \(-9.0\) (95% CI \([-10.7, -7.3]\)) for UB, \(-21.0\) (95% CI \([-22.6, -19.3]\)) for SF, and \(-11.5\) (95% CI \([-13.7, -9.4]\)) for SB. For bowel function (BF) and bother (BB) the change was small: for BF \(-0.8\) (95% CI \([-1.7, 0.1]\)), for BB \(-1.9\) (95% CI \([-3.2, -0.7]\)). The mean scores for the UCLA-PCI components, as well as for SF-12 components, by age classes at diagnosis and evaluation time, are presented in Figure 1. Table 1 reports the mean scores at baseline and at 6mo follow-up for the whole population.

As expected, a significant worsening of physical well-being (PCS) of SF-12 and both urinary and sexual activities (UCLA-PCI; UF-UB and SF-SB) has been reported for all patients regardless of age at the time of diagnosis (except for bother related to sex in patients aged \(\geq 75\) yr), probably due to the use of primary treatments after diagnosis. Conversely, the management of PCa in the first months after biopsy-verified PCa diagnosis allows one to achieve a significant improvement of emotional perception (MCS) in all men, in particular for the younger ones (below 70 yr).

In conclusion, the Pros-IT CNR study provides a real-life report on QoL change 6 mo after diagnosis of PCa. Further analyses are needed to evaluate the impact of all preclinical features (age, body mass index, smoke, comorbidities, and drug assumption), tumor characteristics (prostate-specific antigen; imaging, biopitical data), and treatment choice.
Table 1 – Mean values for SF-12 and UCLA-PCI components at baseline and at the 6-mo follow-up for the whole population.

<table>
<thead>
<tr>
<th>Component</th>
<th>Baseline (diagnosis)</th>
<th>6-mo follow-up</th>
<th>p-value (Wilcoxon signed rank test)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SF-12</td>
<td>Physical component</td>
<td>51.6 ± 7.5</td>
<td>50.3 ± 7.8</td>
</tr>
<tr>
<td></td>
<td>Mental component</td>
<td>49.3 ± 9.7</td>
<td>50.6 ± 8.6</td>
</tr>
<tr>
<td>UCLA-PCI</td>
<td>Urinary function</td>
<td>93.2 ± 15.7</td>
<td>82.3 ± 25.0</td>
</tr>
<tr>
<td></td>
<td>Urinary bother</td>
<td>88.5 ± 23.5</td>
<td>79.1 ± 29.2</td>
</tr>
<tr>
<td></td>
<td>Sexual function</td>
<td>48.6 ± 32.2</td>
<td>27.4 ± 28.7</td>
</tr>
<tr>
<td></td>
<td>Sexual bother</td>
<td>64.1 ± 35.0</td>
<td>53.1 ± 35.3</td>
</tr>
<tr>
<td></td>
<td>Bowel function</td>
<td>93.6 ± 13.2</td>
<td>92.9 ± 15.3</td>
</tr>
<tr>
<td></td>
<td>Bowel bother</td>
<td>93.3 ± 18.3</td>
<td>91.3 ± 20.6</td>
</tr>
</tbody>
</table>

SF-12 = Short Form Health Survey; UCLA-PCI = University of California Los Angeles-Prostate Cancer Index.

(observational surgery, or radiotherapy) on the QoL outcomes in the first months after PCA diagnosis. Research projects within the Pros-IT CNR can be proposed at https://www.prositcnr.it/contatti/.

Conflicts of interest: The authors have nothing to disclose.

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References


