Age Differences in Patient-reported Psychological and Physical Distress Symptoms in Bladder Cancer Patients — A Cross Sectional Study

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OBJECTIVE To assess age-based differences in psychological and physical symptoms of bladder cancer (BC) patients at different disease stages.

METHODS This was a cross-sectional single-center retrospective study between 2014 and 2017, assessing BC patients at different time points of their disease trajectory, after completing the Edmonton Symptom Assessment System-revised questionnaire. The questionnaire was filled at 3 predefined time points: (a) following diagnosis, (b) after radical cystectomy (RC), and (c) at last follow-up. The Edmonton Symptom Assessment System-revised consists of the physical distress sub-score (PHSDSS), entailing scores of 6 physical symptoms, and the psychological distress sub-score (PDSS), entailing scores of 3 psychological symptoms. Patients were stratified to those younger and older than 65 years. Multivariable linear regression models assessed predictors of increased PDSS and PHSDSS.

RESULTS A total of 232 patients were analyzed. No significant baseline clinical differences were demonstrated between both groups, excepting a higher Charlson comorbidity score (4.85 vs 3.87, $P = .004$), and a higher rate of muscle-invasive disease (71.7% vs 52.1%, $P = .008$) in older patients. PHSDSS scores remained similar throughout all time points in both groups. In contrast, younger patients had a significantly higher PDSS score at diagnosis, and after RC. Multivariable models demonstrated that an increased PDSS score (B = 2.372, 95% CI 0.36-4.385) was more likely in younger patients at diagnosis and after RC. An increased PHSDSS (B = 5.118, 95% CI 0.462-9.774) was more likely in younger patients only after RC.

CONCLUSION Younger BC patients may benefit from access to psychological support services as part of a comprehensive treatment regimen, especially after diagnosis and RC. UROLOGY 134: 154−162, 2019.

Bladder cancer (BC) is the sixth most common cancer in the US and fifth most common cancer in Canada with 8900 new cases diagnosed in 2017 in Canada.[1] Men are 4 times more likely to develop BC than women.[2] It is usually more prevalent among older people, with 90% of patients being older than 55 years, while the median age of diagnosis is 73 years.[2] Diagnosis and treatment of BC are associated with reduced physical, and social functioning, negatively impacting patients' quality of life, regardless of cancer stage.[3] The psychological health of cancer patients was found to be an essential predictor of quality of life.[4] However, 45%-95% of the psychological symptoms manifested by cancer patients are usually not managed as part of their care.[4] This has

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resulted, among other things, in increased suicide risk in cancer patients,[5] including urological cancer patients,[6] with the highest risk being in the first 5 years following diagnosis.[7] This is especially true for BC patients, with almost 30% of patients exhibiting a need for psychosocial support,[8] and harboring a suicide risk nearly 3 times higher than in the general population, and more than 6 times higher specifically in male patients.[7]

BC patients experience anxiety starting early in their disease course, beginning with cystoscopy performed for surveillance in patients with nonmuscle invasive BC.[9] Cystoscopy, often perceived to be "benign," is associated with discomfort, pain, and physical symptoms, with younger patients exhibiting lower tolerance.[10] Transurethral resection of a bladder tumor (TURBT) was also associated with higher levels of erectile dysfunction, anxiety, and depression, especially in younger patients.[11] In more advanced disease (muscle-invasive BC [MIBC]), more than half of the patients who were older than 66 years have been shown to have psychological problems, whether treated with radical cystectomy (RC) or a combination of chemotherapy and radiotherapy.[12]

A recent review of the role of psychological symptoms in BC patients concluded that poor mental health, similar to the burden of physical symptoms, is associated with poor prognosis.[13] Furthermore, BC patients utilizing psychiatric resources prior to diagnosis have an increased risk of cancer-specific mortality.[14] Therefore, to explicate factors that predict psychological distress in BC patients, to identify vulnerable populations for timely psychological intervention, and to improve the quality of care, we attempted to quantify these BC-associated psychological symptoms at different disease time-points. Our goal was to assess whether psychological and physical symptoms vary with age and change throughout the disease trajectory, using a well-known validated questionnaire. We hypothesized that younger patients would exhibit greater psychological and physical symptoms than their older counterparts, as seen in other malignancies.[15,16]

METHODS

This was a cross sectional single center retrospective study assessing BC patients at different time points in their disease trajectory, after completing a validated questionnaire assessing their psychological and physical symptoms. The study received approval by our institution's research ethics board and was reported according to the Strengthening the Reporting of Observational Studies in Epidemiology statement,[17] and the Survey Reporting Guideline.[18] To ascertain age differences, based on the median age at diagnosis, BC patients were divided to a younger and an older group.

Patient Cohort

We retrospectively queried our institution's prospectively maintained electronic database for all consecutive nonmetastatic urothelial BC patients diagnosed between 2010 and 2017. We specifically searched for all patients who completed the Edmonton Symptom Assessment System revised (ESAS-r) questionnaire, since its electronic implementation (using a designated iPAD) in our clinics in 2014. The questionnaire was given to patients in the clinic to complete on a voluntary basis.

Almost all patients were seen by 1 out of only 2 staff urologists, who saw BC patients in our institution, and also performed all surgeries using the same operative technique. The patients were seen in the same BC clinic, consisting of the same staff (administrative assistants, registered nurses, physician-assistants, residents, and fellows). The follow-up protocol for all patients was similar for both urologists. The urologist's note dictated at each clinic visit of every patient was faxed to the corresponding primary care physician. Preoperatively, all patients were seen by the urologist and signed a consent form. Patients were also seen by a registered nurse working in the clinic and had a separate presurgical visit with an anesthesiologist. No routine preoperative psychological consultation or any other similar consultation was performed, unless the patient had requested this, which was a rare case.

Data Collection and Outcomes of Interest

Relevant demographic and clinical parameters were collected and analyzed, including patient age, gender, Charlson comorbidity score, marital status, body mass index, smoking status, and the number of pack-years smoked (for smokers), and history of previous cancer. Disease parameters were also collected including stage, grade, presence of carcinoma in situ, and management details, including the number of previous TURBTs, intravesical Bacillus Calmette-Guerin treatment, recurrence rates, RC rates, and administration of neoadjuvant, and adjuvant chemotherapy. To compare older and younger patients, we stratified patients into 2 groups (younger and older), based on our median cohort age of 65. Our outcomes of interest included the physical distress sub-score, and psychological distress sub-score (PDSS), which are parts of the ESAS-r questionnaire, at 3 distinct predefined time points: (a) following diagnosis, (b) after RC, and (c) at last clinic follow-up. Importantly, patients who completed at least 1 questionnaire were included, and thus most patients did not complete all questionnaires at all 3 time points.

The Edmonton Symptom Assessment System Questionnaire

The ESAS is a tool developed to screen for commonly reported symptoms in cancer patients.[19] It was introduced in 1991[20] and has been adopted in many palliative care programs and countries. It is used as a clinical, research, and administrative tool.

For simplification purposes, a revised version of the ESAS, the ESAS-r, was created, which retains the core elements of the ESAS, with key revisions focusing on symptom assessment time frame, terminology, item order, and format[21] (Appendix 1).

Since 2006, the ESAS-r has been adopted by Cancer Care Ontario in Canada to screen cancer patients.[22] The ESAS-r questionnaire consists of nine 11-point single Likert scale items with 0 = no symptom and 10 = the worst symptom.[20] The patient can add an optional 10th symptom. ESAS-r assesses the average intensity of each of the 9 symptoms (pain, fatigue, nausea, depression, anxiety, drowsiness, shortness of breath, appetite, and feelings of well-being) over the past 24 hours. The sum of patient responses to these 9 symptoms is the ESAS-r distress score (ranges from 0 to 90, with a higher score representing higher distress). The ESAS-r can be divided to the PHSDSS, consisting of the sum of scores (0-60) for 6 symptoms (pain, nausea, tiredness, drowsiness, lack of appetite, and shortness of breath), and the PDSS, which is the sum of the scores (0-30) of depression, anxiety, and feeling of not well-being.[20] This questionnaire has exhibited high validity and reliability for measuring multi-dimensional symptoms in patients with cancer.[23]

Statistical Analysis

Descriptive analyses (mean with standard deviation and medians with interquartile range) were used for continuous variables, proportions for discrete variables, and comparative tests included chi-square for discrete variables and Kruskal–Wallis for continuous variables. Multivariable linear regression analyses were performed to identify covariates predicting PDSS and PHSDSS scores at 3 distinct time points: following diagnosis, after RC, and at last follow-up. A priori covariates in the models that were hypothesized to influence the results of the PDSS and PHSDSS were incorporated in the model. These covariates included age below or equal or above 65, time from 1 of the 3 points of interest to when the relevant survey was filled out, gender, Charlson comorbidity score, marital status, presence of MIBC, number of previous TURBTs, whether the patient underwent RC, type of urinary diversion, and receipt of neoadjuvant and/or adjuvant chemotherapy. Statistical tests were 2-tailed and a *P* value <.05 was considered statistically significant. All analyses were conducted using SPSS software version 23.0 (SPSS Inc., Chicago, IL).

RESULTS

Overall, 232 out of 775 (29.9%) patients with BC were analyzed after fully completing the questionnaire in at least 1 clinic visit. The median age of the study cohort was 65, and thus patients were divided to 2 groups, those younger than 65 years and those 65 years or older. The clinical characteristics of the study population are summarized in Table 1. No significant difference between the groups were noted in gender, body mass index, smoking status, rate of patients living with a spouse, disease features (including presence of carcinoma in situ), and management parameters including number of TURBTs, Bacillus Calmette-Guerin and RC rates. However, the Charlson comorbidity score was significantly higher among older patients (4.85 vs 3.87, *P* = .004). Moreover, the rate of MIBC was higher in the older group (71.7% vs 52.1%, *P* = .008). Out of the 232 patients 145 (62.5%) underwent RC.

Overall, 150 out of 232 (64.7%), 75 out of 145 (51.7%), and 94 ut of 232 (40.5%) completed the questionnaire after diagnosis, following RC, and at last follow-up, respectively. Figure 1 compares the mean PDSS and PHSDSS scores for the 2 age groups, at the predefined 3 distinct time points. Figure 1 demonstrates that the older group had a significantly lower PDSS scores at diagnosis, and after RC compared to the younger group. However, at last follow-up, the mean PDSS scores were similar between the groups with no statistically significant difference. In

Table 1. Patient demographic and clinical characteristics

Characteristic	Age Below 65	Age Above 65	*P*
Number of patients, *n* (%)	113 (48.7%)	119 (51.3%)	-
Mean age at diagnosis (SD)	54.0 (8.1)	74.14 (7.0)	<.0001
Median age at diagnosis (IQR)	56 (51, 60)	73 (68, 80)	<.0001
Males, *n* (%)	87 (73.1%)	84 (74.3%)	.832
Mean Charlson comorbidity score (SD)	3.87 (2.3)	4.85 (2.8)	.004
Mean BMI (SD)	27.1 (5.3)	26.1 (4.5)	.131
History of smoking, *n* (%)	56 (65.9%)	52 (58.4%)	.404
Mean pack years of smoking (SD)	16.8 (20.6)	16.7 (22.0)	.958
History of other cancer, *n* (%)	26 (21.8%)	25 (22.1%)	.960
Living with spouse, *n* (%)	92 (78.0%)	93 (82.3%)	.699
High grade disease at diagnosis, *n* (%)	87 (73.7%)	82 (72.6%)	.239
CIS present at diagnosis, *n* (%)	39 (33.1%)	39 (34.5%)	.972
Muscle invasive disease at diagnosis, *n* (%)	62 (52.1%)	81 (71.7%)	.008
Mean number of TURBTS until last follow-up (SD)	1.7 (1.7)	1.45 (1.1)	.161
Received BCG, *n* (%)	44 (37.0%)	32 (28.3%)	.125
Recurrence, *n* (%)	26 (34.7%)	25 (33.3%)	.985
Patients who underwent Radical Cystectomy, *n* (%)	75 (63.6%)	70 (61.9%)	.573
Last status at follow-up, *n* (%)			.089
Alive without disease	57 (47.9%)	41 (36.3%)	-
Alive with disease	22 (18.5%)	22 (19.5%)	
Dead of disease	14 (11.8%)	29 (25.7%)	
Dead of other causes	1 (0.8%)	2 (1.8%)	
Unavailable	25 (21%)	19 (16.8%)	
Number of patients who answered questionnaire following diagnosis, *n* (%)	75 (66.4%)	75 (63%)	
Median time from Diagnosis to 1st survey date in mo (IQR)	51.5 (15.2, 254.2)	35.6 (10.0, 127.1)	.431
Number of patients who answered questionnaire following Radical cystectomy, *n* (%)	38 (33.6%)	37 (31%)	-
Median time from Radical Cystectomy to first postoperative survey in mo (IQR)	111.3 (8.4, 121.7)	64.0 (29.8, 119.4)	.238
Number of patients who answered questionnaire at last follow-up, *n* (%)	55 (48.7%)	39 (32.8%)	-
Median time from Diagnosis to last survey date in mo (IQR)	152.7 (62.7, 269.2)	147.1 (88.1, 247.8)	.877

BCG, Bacillus Calmette–Guerin; BMI, Body mass index; CIS, Carcinoma in situ; IQR, Interquartile range; SD, Standard deviation; TURBT, Transurethral resection of bladder tumor.

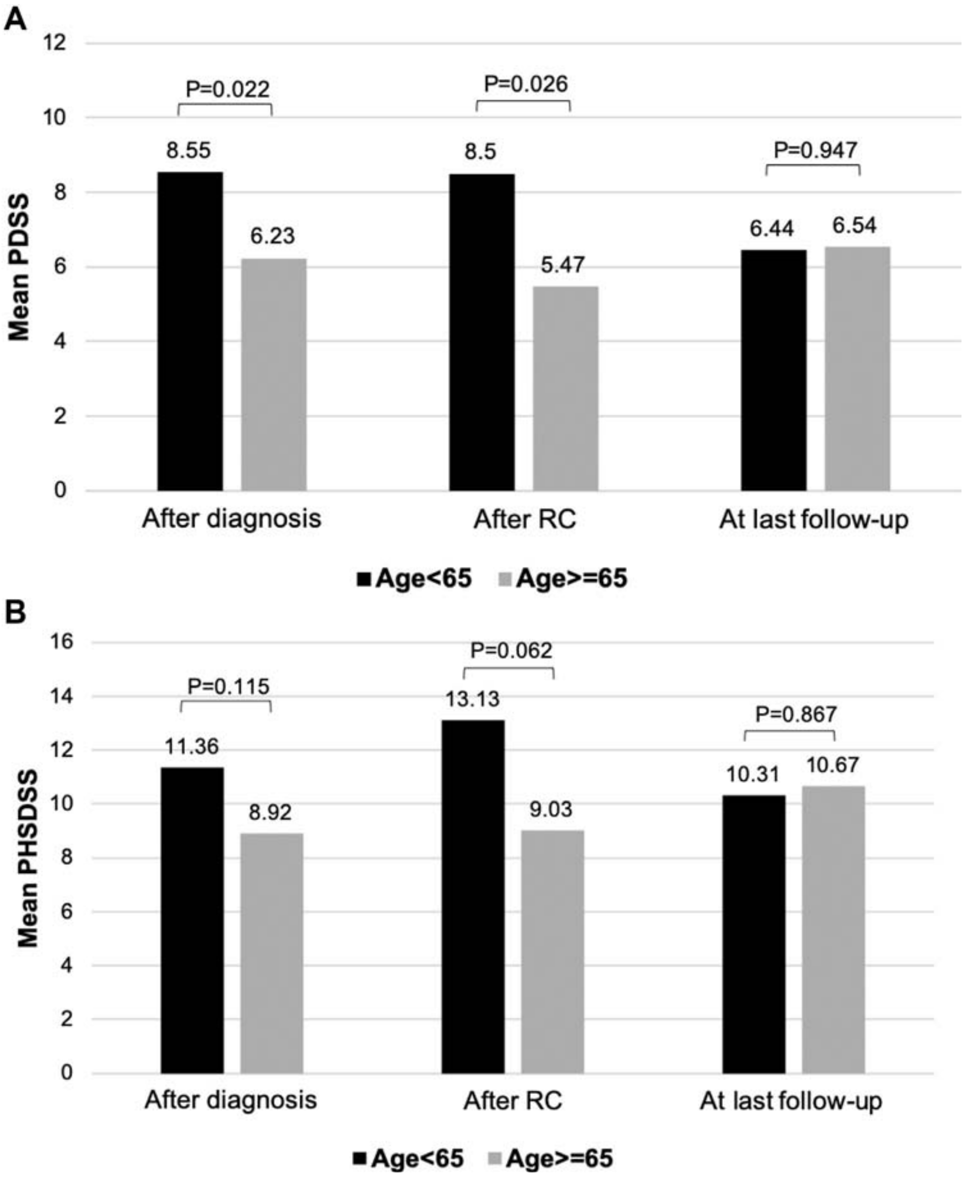

Figure 1. Mean scores of the (**A**) Psychological distress sub-score, and (**B**) Physical distress sub-score after diagnosis, after radical cystectomy and at last follow-up for the 2 age groups.

contrast, PHSDSS scores remained similar throughout all 3 analyzed time points. Supplemental Figure 1 demonstrates the total ESAS-r scores in both age groups.

Multivariable linear regression models demonstrated that a PDSS score increase by 1 point was 2.372 (95% CI 0.36-4.385) and 3.354 (95% CI 0.480-6.228) times more likely in patients younger than 65, compared to their older counterparts, at diagnosis and following RC, respectively (Table 2). However, at last follow-up, age was no longer shown to be associated with the PDSS score. The time from diagnosis to the first survey and time from the last follow-up to the last survey were both associated in a statistically significant manner to the PDSS sub-score (B = 0.005, 95% CI 0.001-0.009, *P* = .019) at diagnosis and (B = −0.002, 95% CI −0.003-0, *P* = .011) at last follow-up.

PHSDSS score increase by 1 point was 5.118 (95% CI 0.462-9.774) times more likely in patients younger than 65, compared to older patients, following RC (Table 3). However, after diagnosis and at last follow-up, age was not shown to be associated with PHSDSS score. The time from diagnosis to the first survey was associated in a statistically significant manner with the PHSDSS sub-score (B = 0.006, 95% CI 0.000-0.012, *P* = .039) after diagnosis. However, it was not shown to be associated with PHSDSS score after RC or at last follow-up.

Pertinent demographic baseline covariates such as gender, marital status, and Charlson comorbidity score were not shown to affect PDSS and PHSDSS scores. Lastly, the number of previous TURBTs was associated in a statistically significant manner to PHSDSS (B = 1.602, 95% CI 0.296-2.909, *P* = .017) at last follow-up. All other disease parameters, including stage and grade, did not have a statistically significant association with PDSS and PHSDSS scores at any time point.

DISCUSSION

Elderly BC patients with good functional status and limited comorbidities, who receive standard therapy, for both

Table 2. Multivariable linear regression analysis predicting the psychological distress sub-score after diagnosis, after radical cystectomy, and at last follow-up

	After Diagnosis		After Radical Cystectomy		At Last Follow-up	
Variable	B (95% CI)	*P* Value	B (95% CI)	*P* Value	B (95% CI)	*P* Value
Mean time from Diagnosis to 1st survey date (d)	**0.005 (0.001, 0.009)**	**.019**				
Mean time from radical cystectomy to survey (d)			4.476 (−0.566, 9.518)	.081		
Mean time from last surgery to last survey date (d)					**−0.002 (−0.003, 0)**	**.011**
Age <65 (vs age≥65)	**2.372 (0.36, 4.385)**	**.021**	**3.354 (0.480, 6.228)**	**.023**	−0.330 (−3.261, 2.601)	.823
Gender (Male vs female)	−1.142 (−3.276, 0.992)	.292	2.172 (−2.405, 5.990)	.241	−1.735 (−5.230, 1.760)	.326
Charlson score	0.231 (−0.145, 0.608)	.226	−0.009 (−0.583, 0.564)	.974	0.406 (−0.277, 1.089)	.240
Living with spouse (vs living without a spouse)	0.35 (−0.051, 0.12)	.425	0.067 (−0.057, 0.191)	.286	−2.492 (−5.874, 0.891)	.147
Muscle invasive disease (vs nonmuscle invasive disease)	−0.06 (−0.146, 0.026)	.170	−0.013 (−0.087, 0.061)	.722	1.172 (−1.637, 3.981)	.409
Number of TURBTs in the past	−0.798 (−1.736, 0.141)	.095			0.560 (−0.318, 1.438)	.208
Patient undergo radical cystectomy (vs patients that did not undergo radical cystectomy)					2.471 (−1.421, 6.363)	.210
Type of diversion (Neobladder vs Ileal conduit)			0.008 (−0.041, 0.057)	.741		
Neoadjuvant chemotherapy (vs no neoadjuvant chemotherapy)			−0.319 (−3.730, 3.092)	.852		
Adjuvant chemotherapy (vs no adjuvant chemotherapy)			−0.833 (−4.433, 2.768)	.646		

Bold values denotes statistical significance.
CI, Confidence interval; TURBT, Transurethral resection of bladder tumor.

Table 3. Multivariable linear regression analysis predicting the physical distress sub-score after diagnosis, after radical cystectomy, and at last follow-up

	After Diagnosis		After Radical Cystectomy		At Last Follow-up	
Variable	B (95% CI)	*P* Value	B (95% CI)	*P* Value	B (95% CI)	*P* Value
Mean time from Diagnosis to 1st survey date (d)	**0.006 (0.000, 0.012)**	**0.039**				
Mean time from radical cystectomy to survey (d)			−0.001 (−0.004, 0.002)	0.388		
Mean time from last surgery to last survey date (d)					−0.002 (−0.004, 0.000)	.054
Age <65 (vs age≥65)	2.496 (−0.667, 5.659)	0.121	**5.118 (0.462, 9.774)**	**0.032**	−1.549 (−5.934, 2.837)	.484
Gender (Male vs female)	1.104 (−2.234, 4.442)	0.514	4.110 (−1.825, 10.045)	0.171	−4.157 (−9.476, 1.162)	.124
Charlson score	0.349 (−0.239, 0.937)	0.242	0.457 (−0.472, 1.386)	0.330	0.593 (−0.437, 1.624)	.255
Living with spouse (vs living without a spouse)	−0.042 (−0.176, 0.092)	0.534	−0.126 (−0.327, 0.075)	0.215	−0.755 (−5.834, 4.323)	.768
Muscle invasive disease (vs non-muscle invasive disease)	0.018 (−0.117, 0.152)	0.794	0.054 (−0.066, 0.174)	0.369	−0.589 (−4.789, 3.612)	.781
Number of TURBTs in the past	−1.439 (−2.909, 0.031)	0.055			**1.602 (0.296, 2.909)**	**.017**
Patient undergo Radical Cystectomy (vs patients that didn't undergo radical cystectomy)					4.718 (−1.274, 10.709)	.121
Type of diversion (Neobladder vs Ileal conduit)			−0.028 (−0.107, 0.051)	0.479		
Neoadjuvant chemotherapy (vs no neoadjuvant chemotherapy)			0.264 (−5.261, 5.790)	0.924		
Adjuvant chemotherapy (vs no adjuvant chemotherapy)			−1.013 (−6.845, 4.820)	0.730		

Bold values denotes statistical significance.
CI, Confidence interval; TURBT, Transurethral resection of bladder tumor.

nonmuscle invasive BC and MIBC, (including neoadjuvant chemotherapy followed by RC), have been shown to harbor similar clinical outcomes as their younger counterparts.[24] However, our study suggests that younger patients (<65 years) experience higher psychological distress manifested with higher PDSS scores at diagnosis, and after RC, when compared to older patients (≥65 years). A higher PDSS score at diagnosis was associated for a longer time from diagnosis to survey date; and patients younger than 65 were more likely to have a higher PDSS after diagnosis and RC. Lastly, for the PHSDSS score, younger patients were more likely to have a higher score after RC; and an increased number of previous TURBTs were associated with a higher score at last follow-up.

In other cancers such as breast and endometrial cancer, younger patients were shown to harbor worse physical and psychosocial functions compared to older patients.[16] Moreover, older patients were capable of psychologically adapting better to their medical condition, and had lower psychosocial distress.[15] Similar data have also been shown in BC patients, with anxiety and depression being more common in younger patients undergoing TURBTs.[25] Additionally, comparable results have also been demonstrated in younger patients undergoing RC, exhibiting worse psychological symptoms following surgery,[26] reaching up to a third of patients,[27] with higher rates of depression, an increased reporting of seeking for professional help, and significant concerns involving social activity and relationships.[26] This is consistent with our regression models results, showing that younger age (<65) independently predicted higher PDSS, following diagnosis and RC.

There was no difference in the total PDSS scores between the 2 age groups at the last follow-up. Our multivariable regression analysis also confirmed that PDSS would decrease (psychological symptom improvement) as time passes from diagnosis to the last follow-up date. This is in accordance with data showing that psychological symptoms regress with time, as patients develop new values and internal standards, and learn to cope with their cancer and chronic symptoms.[28]

Our analyses also revealed that no discernible difference was seen in the physical symptoms of patients in all disease stages between the 2 age groups. As both age groups received similar optimal treatments for their BC, this most probably had resulted in a similar rate of physical symptoms arising from the disease itself and due to treatment-related side-effects. However, the multivariable linear regression model showed that younger age was associated with higher PHSDSS score after RC. In other words, younger patients subjectively endured more physical symptoms following an extensive surgical procedure (RC). This has been corroborated in an interview-based study demonstrating that younger patients (<60 years) are more likely to report adverse effects following RC, including urinary incontinence, sexual dysfunction, and difficulties with self-care, when compared to their older counterparts.[26] Lastly, implementation of minimally invasive RC surgical modality in an attempt to lower surgical morbidity and adverse effects has been demonstrated to benefit older people more than younger people.[29]

Interestingly, in our models, PHSDSS score at last follow-up was significantly associated with an increased mean number of previous TURBTs. This has been shown previously by Yoshimura et al reporting that physical, social, and emotional functioning were reduced in correlation to an increased number of the previous TURBTs.[30] Recent published data have shown that depression rates were higher among cancer patients undergoing TURBTs, compared to the general population, further worsening after tumor resection.[11] Interestingly, the highest risk of depression was manifested in younger patients.[11]

In summary, our results are consistent with previous studies, both in BC and other malignancies as well, showing that older patients manifest less psychological distress, at most time-point of the disease trajectory, when compared to their younger counterparts. We can surmise that this might stem from their different life stage, increased life experience, and better coping mechanisms, more stable relationships and less of an impact by the associated BC treatment-specific adverse effects, such as sexual dysfunction and altered body image.

Our study has some limitations. These included its single-center retrospective design, with a relatively low response rate, resulting in an inherent selection bias. The low response rate could be explained by the nonstandardized method of requesting patients to fill out the questionnaire. There are designated personnel in the clinic to support and assist patients in filling these questionnaires, but their presence and number in all relevant clinics has not been standardized until recently. The resulting selection bias resulted in a higher than expected percentage of patients with MIBC in both groups. However, even though the rate of MIBC was significantly higher in the older group, younger patients were still shown to have a higher psychological distress score, at all-time points, making our results more clinically significant. The patients completing the questionnaire at all 3 time points were not the same patients, precluding a true comparison of the same patients at 3 distinct time-points of the disease trajectory. We also lacked prediagnosis questionnaire-based data for comparison. High prediagnosis PDSS or PHSDSS scores in 1 group compared to the other, could have potentially affected our conclusions. Although we chose 3 predefined disease time points for questionnaire-based data collection, the exact timing of when the questionnaires were completed, was not standardized, potentially affecting the comparison between both groups. The mean Charlson comorbidity score and the proportion of patients with MIBC were not similar among the groups, being significantly higher in the older group. However, despite these baseline clinical differences, our results still showed that younger patients were in more considerable psychosocial distress than their older counterparts at all time-points of their disease trajectory, except at last follow-up. Lastly, almost a fifth of our patients were lost to follow-up, making it difficult to correlate their final disease status to the results of the questionnaires.

To our knowledge, we are the first to investigate and compare mean PDSS and PHSDSS scores between younger and older BC patients. Our results have important clinical implications. Even though the young group in our study had a significantly lower rate of advanced disease compared to the older patients, younger patients were shown to require additional supportive psychological services, as part of their treatment, especially after diagnosis, and following RC.

SUPPLEMENTARY MATERIALS

Supplementary material associated with this article can be found in the online version at https://doi.org/10.1016/j.urology.2019.08.032.

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EDITORIAL COMMENT

A cancer diagnosis comes with profound effects on the patient's mental psyche. However, bladder cancer carries additional ramifications like potential of living with an ostomy bag, loss of sexual function, and repeat operations throughout a lifetime. Previous studies have created health related quality of life questionnaires like the Bladder Utility Symptom Scaled,[1] and Bladder Cancer Index[2] aimed at better understanding the disease burden on various facets of function. This study used the

Edmonton Symptom Assessment System-revised[3] to evaluate patients over 65 and under 65 at different time points in treatment of bladder cancer. It fills an important gap in the literature by suggesting that age plays a vital role in the needs of the patient. It brings to light the concerns with bladder cancer in that younger patients might suffer more psychologically from the diagnosis and treatment of bladder cancer. This information can better guide urologists in managing expectations with this population of patients.

This study employed the Edmonton Symptom Assessment System-revised to assess bladder cancer patients at diagnosis, after radical cystectomy and at last clinic follow-up. Completion of the survey was on a voluntary basis. At each time point, the percentage of patients who qualified for and completed the survey varied.

Despite the inability to compare the 3 groups, this study does recognizes the psychological impact the diagnosis and treatment of bladder cancer has on a patient. This type of study needs to continue longitudinally in the future so we may increase our understanding of the psychological burden of this cancer diagnosis on both the patient and caregivers/family members.

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AUTHOR REPLY

We thank the authors of this editorial for their important and accurate comments. There is data from almost 25 years ago that older individuals with cancer, whether newly diagnosed or with more advanced disease, experience fewer negative psychosocial consequences than their younger counterparts.[1] Older cancer patients are at times more physically compromised than younger patients. One would intuitively expect that the older "frailer" cancer patients would experience more psychosocial problems and have a harder time coping emotionally and socially with their disease and its treatment. However, the exact opposite has been reported, with younger patients showing greater psychosocial distress.[1]

These findings have been specifically reported in breast, endometrial, and bladder cancer patients with younger patients shown to harbor worse physical and psychological functions compared to their older counterparts.[2-4]

There could be several potential reasons for this finding. Younger cancer patients have different demands of social roles than older patients, with their expectations about their respective future-shaping how they cope with this major stressor.[5] Aside from increased life experience, older patients may have fewer demands in life, and their partners may be more able to support them as they are usually not engaged in full-time employment or in raising children. Additionally, the financial situation may be completely different among young and old patients. Older patients have usually reached their economic goals and have had time to accumulate more funds over the years. At the time of diagnosis, they are not engaged in large financial expenditures such as buying a house, raising children, or sending them to higher-education facilities. In contrast, younger patients, in their midlife, may be forced to lose their income due to their disease, resulting in devastating financial and social consequences to the entire family. The increasing expenses resulting from their newly diagnosed cancer makes matters worse and creates greater distress.

As the authors of the editorial state, in bladder cancer, there are additional ramifications which may potentially increase psychological distress. These include the fact that this is a chronic cancer, conferring numerous surgeries throughout a lifetime, the possibility of loss of sexual function, altered body image, and living with an ostomy bag. Although all bladder cancer patients may have these significant adverse effects, younger patients may be more psychologically affected by them. One example is the worsening of sexual function that has been shown to bother older bladder cancer patients much less than their younger counterparts.[6]

Cancer and its treatment have a tremendous psychological and psychosocial impact on both patients and their families.[7] Acknowledging this significant and unique aspect is extremely important for cancer care professionals in order to provide integrated and comprehensive care in oncology. There is documented scientific evidence regarding the benefits of providing psychosocial cancer care as part of the standard care to patients and families. This has been shown to eventually lead to improved survival.[8] Younger bladder cancer patients should probably be offered routine psychological support, due to their significantly higher levels of psychological distress.

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