Section 1

Introduction and methods

Section 1 Introduction and methodology

Patient Experience, Expectations and Knowledge (PEEK) is a research program developed by the Centre for Community-Driven Research (CCDR). The aim of PEEK is to conduct patient experience studies across several disease areas using a protocol that will allow for comparisons over time (both quantitative and qualitative components). PEEK studies give us a clear picture and historical record of what it is like to be a patient at a given point in time, and by asking patients about their expectations, PEEK studies give us a way forward to support patients and their families with treatments, information and care.

This PEEK study in bladder cancer includes 44 people diagnosed with bladder cancer throughout Australia. In addition, 5 carers or family members to people with bladder cancer took part.

Bladder cancer occurs more frequently in men and those over 60 years of age. In 2021 there were and estimated 3,066 new cases of bladder cancer in Australia, approximately 2,400 of these were men; the median age was 76.3 years. There were an estimated 653 deaths from bladder cancer in Australia in 2021, it is the 9th most common cause of death from cancer². The five year survival during the period 2031 to 2017 was 55%. In Australia, at the end of 2016, there were 8165 people living with bladder cancer.

There was a decrease in 5 year survival from 68% in 1982 - 1987, to 53% in 2009-2013, the reasons for this are not clear and cannot be explained by an increase in age at diagnosis which has only modestly increased in this time period^{1,4}. However, there was a decrease in age-standardised mortality rate from 5.4 per 100,000 in 1982 to 3.8 per 100,000 in 2017, this is due to a reduction of overall incidence.

Introduction

Bladder cancer occurs more frequently in men and those over 60 years of age¹. In 2021 there were and estimated 3,066 new cases of bladder cancer in Australia, approximately 2,400 of these were men; the median age was 76.3 years^{2,3}. There were an estimated 653 deaths from bladder cancer in Australia in 2021, it is the 9th most common cause of death from cancer². The five year survival during the period 2031 to 2017 was 55% ³. In Australia, at the end of 2016, there were 8165 people living with bladder cancer³.

There was a decrease in 5 year survival from 68% in 1982-1987, to 53% in 2009-2013, the reasons for this are not clear and cannot be explained by an increase in age at diagnosis which has only modestly increased in this time period^{1,4}. However, there was a decrease in age-standardised mortality rate from 5.4 per 100,000 in 1982 to 3.8 per 100,000 in 2017¹, this is due to a reduction of overall incidence.

Personal Experience, Expectations and Knowledge (PEEK)

Patient Experience, Expectations and Knowledge (PEEK) is a research program developed by the Centre for Community-Driven Research (CCDR). The aim of PEEK is to conduct patient experience studies across several disease areas using a protocol that will allow for comparisons over time (both quantitative and qualitative components). PEEK studies give us a clear picture and historical record of what it is like to be a patient at a given point in time, and by asking patients about their expectations, PEEK studies give us a way forward to support patients and their families with treatments, information and care.

The research protocol used in PEEK studies is independently driven by CCDR. PEEK studies include a quantitative and qualitative component. The quantitative component is based on a series of validated tools. The qualitative component is the result of two years of protocol testing by CCDR to develop a structured interview that solicits patient experience data and provides patients with the opportunity to provide advice on what they would like to see in relation to future treatment, information and care. The structured interview has also been designed so that the outcomes of PEEK studies can inform policy, research, care, information, supportive care services and advocacy efforts.

Participants

To be eligible for the study, participants needed to have been diagnosed with bladder cancer, have experienced the healthcare system in Australia, be 18 years of age or older, be able to speak English, and be able to give consent to participate in the study. Recruitment commenced 1 April 2022 and was completed by 30 July 2022.

Ethics

Ethics approval for this study was granted (as a low or negligible risk research study) by the Centre for Community-Driven Research Ethics Committee (Reference CS_Q4_03).

Data collection

Data for the online questionnaire was collected using Zoho Survey (Zoho Corporation Pvt. Ltd. Pleasanton, California, USA, www.zoho.com/survey). Participants completed the survey from 1 April 2022 to 30 July 2022.

There were five researchers who conducted telephone interviews and used standardised prompts throughout the interview. The interviews were recorded and transcribed verbatim. Identifying names and locations were not included in the transcript. All transcripts were checked against the original recording for quality assurance.

Interview data was collected from 1 April 2022 to 30 July 2022.

Online questionnaire (quantitative)

The online questionnaire consisted of the 36-Item Short Form Health Survey (SF36) (RAND Health)⁵, a modified Cancer Care Coordination Questionnaire for Patients (CCCQ)⁶, the Short Fear of Progression Questionnaire (FOP12)⁷, and the Partners in Health version 2 (PIH)⁸. In addition, investigator derived questions about demographics, diagnosis, treatment received and future treatment decisions making were included.

Structured Interview (qualitative)

Interviews were conducted via telephone by registered nurses who were trained in qualitative research. The first set of interview questions guided the patient through their whole experience from when symptoms were noticed up to the present day.

Questionnaire analysis

Statistical analysis was conducted using R included in the packages "car", "dplyr" and "ggplot2" (R 3.3.3 GUI 1.69 Mavericks build (7328). The aim of the statistical analysis of the SF36, CCCQ, FOP12, and PIH responses was to identify variations by disease stage, gender, location of residence, education status and socioeconomic status. Scales and subscales were calculated according to reported instructions⁵⁻⁸.

The Location of participants was evaluated by postcode using the Australian Statistical Geography Maps (ASGS) Remoteness areas accessed from the Australian Bureau of Statistics⁹.

The level of socio-economic status of participants was evaluated by postcode using the Socio-economic Indexes for Areas (SEIFA) accessed from the Australian Bureau of Statistics¹⁰.

For comparisons by disease stage, a one-way analysis of variance (ANOVA) analysis was conducted. A Tukey HSD test was used post-hoc to identify the source of any differences identified in the one-way ANOVA test. Where the assumptions for the one-way ANOVA were not met, a Kruskal-Wallis rank sum test on care was conducted with post-hoc pairwise comparisons using Wilcoxon rank sum test. When the assumption of equal variances were not met, a Welch one-way test was used with post-hoc pairwise t-tests with no assumption of equal variances.

For all other comparisons between groups, a two-sample t-test was used when assumptions for normality and variance were met, or when assumptions were not met, a Wilcoxon rank sum test with continuity correction was used. Questions where participants were asked to rank preferences were analysed using weighted averages. Weights were applied in reverse, the most preferred option was given the largest weight equal to the number of options, the least preferred option was given the lowest weight of 1.

Structured interviews analysis

A content analysis was conducted using conventional analysis to identify major themes from structured interviews. Text from the interviews were read line-by-line by the lead researcher and then imported into NVivo 8 (QSR International)/MaxQDA. Each question within the interview was individually analysed. Initial categories and definitions were identified and registered in NVivo 8 (QSR International)/MaxQDA. The minimum coded unit was a sentence with paragraphs and phrases coded as a unit.

A second researcher verified the codes and definitions, and the text was coded until full agreement was reached using the process of consensual validation. Where a theme occurred less than 5 times it was not included in the study results, unless this result demonstrated a significant gap or unexpected result.

Data analysis and final reporting was completed in June 2021.

Position of this study

A search was conducted in Pubmed (April 7, 2022) to identify studies of bladder cancer with patient reported outcomes, or patient experience conducted in the past five years in worldwide (Table 1.1). Meta-analysis studies, studies with children, studies conducted in developing countries, population studies, and studies of less than five participants were excluded. There were 99 studies identified of between 8 and 1796 liver cancer participants.

There were 10 studies that interviewed between 10 and 30 people with bladder cancer. There were 3 studies that were focused on treatment¹¹⁻¹³, 2 studies that were focused on health related quality of life^{14,15}, and a single study each focused on diagnosis¹⁶, education¹⁷, decision making¹⁸, healthcare services¹⁹

There were 7 studies where 10 to 57 people with bladder cancer took part in focus groups, two of these studies included interviews and are described above. There were 3 studies that were focused on healthcare service²⁰⁻²², and a single study each focused on treatment²³, and lifestyle²⁴

There were 65 studies that were focused on treatment^{5,9,10,25-86}, 6 studies that were focused on Health related quality of life⁸⁷⁻⁸⁹, 3 studies that were focused on Lifestyle⁹⁰⁻⁹², 2 studies that were focused on diagnosis^{93,94}, 2 studies that were focused on costs to patients^{95,96}, 2 studies that were focused on complementary therapy^{97,98}, and a single study each focused on healthcare services⁹⁹, decision making¹⁰⁰, and education¹⁰¹

In this PEEK study, 44 people with bladder cancer were interviewed and completed questionnaires, in addition to 5 carers of people with bladder cancer. PEEK is a comprehensive study covering all aspects of disease experience from symptoms, diagnosis, treatment, healthcare communication, information provision, care and support, quality of life, and future treatment and care expectations.

Table 1.1: PEEK position

First Author, Year	Location	Number of participants	Data collection	Focus	PEEK SECTION									
					2: Health status, co- morbidities	3: Diagnosis experience	4: Decision making	5: Treatment, healthcare system use	6: Information, communicati on and self- management	7: Care, support and navigating healthcare system	8: Quality of life, mental health, relationships	9 Expectations, preferences and messages		
McMullen (2019) ²³	USA	57 (5 carers)	Focus group	Treatment			X	Х	X					
Gupta (2021) ¹³	USA	22 (3 partners)	Interviews/ focus groups	Treatment							X			
Rammant (2019) ¹¹	Belgium	30	Interview	Treatment	X	X		Х			X			
Yi (2022) ¹²	Korea	9	Interview	Treatment							X			
Garg (2018) ²⁰	USA	20	Focus group	Healthcare service			Х	Х		X	Х			
Lee (2020) ²¹	USA	19	Focus group	Healthcare service					Х					
Koo (2017) ²²	USA	12	Focus group	Healthcare service			Х	Х			Х			
Jordan (2022) ¹⁹	USA	10	Interview/ focus group	Healthcare service			Х		X	Х				
Rutherford (2017) ¹⁴	Australia	26	Interview	Health related quality of life	X	X								
Heyes (2020) ¹⁵	Australia	8	Interview	Health related quality of life						Х	X			
Tan (2020) ¹⁰²	UK	20 interview, 213 quest.	Interviews/ questionnaire	Diagnosis	X	X					Х			
Schroeck (2020) ¹⁶	USA	22	Interview	Diagnosis					Х					
Wulff- Burchfield (2021) ¹⁷	USA	16	Interview	Education					X					
Banerjee (2021) ²⁴	UK	14	Focus group	Lifestyle				Χ			Х			
Klein (2021) ¹⁸	USA	13	Interview	Decision making			X					X		
Witjes (2022) ²⁵	Multi-national	709	Questionnaire	Treatment	Х	Х								
Bajorin (2021) ²⁶	Multi-national	709	Questionnaire	Treatment	Х	Х								

First Author, Year	Location	Number of participants	Data collection	Focus	PEEK SECTION								
					2: Health status, co- morbidities	3: Diagnosis experience	4: Decision making	5: Treatment, healthcare system use	6: Information, communicati on and self- management	7: Care, support and navigating healthcare system	8: Quality of life, mental health, relationships	9 Expectations, preferences and messages	
Kelly (2019) ²⁷	UK	709	Questionnaire	Treatment	Х	Х							
Mason (2018) ²⁸	England	673	Questionnaire	Treatment	Χ	X							
Necchi (2020) ²⁹	Multi-national	530	Questionnaire	Treatment	X	Χ							
Vaughn (2018) ³⁰	Multi-national	519	Questionnaire	Treatment	Х	Х							
Huddart (2020) ³¹	UK	485	Questionnaire	Treatment	Х	X							
Cox (2020) ³²	UK	472	Questionnaire	Treatment	X								
Clements (2022) ³³	USA	411	Questionnaire	Treatment	X	X							
Westhofen (2022) ³⁴	Germany	407	Questionnaire	Treatment	X	X							
Kukreja (2018) ³⁵	USA	383	Questionnaire	Treatment		Χ							
Masiero (2021) ⁹	Italy	382	Questionnaire	Treatment	X	X							
Wijburg (2021) ¹⁰	Netherlands	348	Questionnaire	Treatment	X								
Hupe (2018) ³⁶	Germany	324	Questionnaire	Treatment	х	х							
Cerruto (2017) ³⁷	Italy	319	Questionnaire	Treatment	X	Χ							
Becerra (2020) ³⁸	USA	302	Questionnaire	Treatment	X	X							
Frees (2017) ³⁹	Germany	250	Questionnaire	Treatment	X	Х							
Volz (2022) ⁴⁰	Germany	246	Questionnaire	Treatment	Х	Χ							
Asanad (2021) ⁴¹	USA	198	Questionnaire	Treatment	Х	Х							
Check (2020) ⁴²	USA	192	Questionnaire	Treatment	Х	Х	Х	Х					
Grimm (2019) ⁴³	Germany	178	Questionnaire	Treatment	Х	Х							
Normann (2020) ⁴⁴	Norway	173	Questionnaire	Treatment	Х	Х							

First Author, Year	Location	Number of participants	Data collection	Focus	PEEK SECTION								
					2: Health status, co- morbidities	3: Diagnosis experience	4: Decision making	5: Treatment, healthcare system use	6: Information, communicati on and self- management	7: Care, support and navigating healthcare system	8: Quality of life, mental health, relationships	9 Expectations, preferences and messages	
Kijima (2019) ⁴⁵	Japan	154	Questionnaire	Treatment	Х	Х							
Loh-Doyle (2020) ⁴⁶	USA	151	Questionnaire	Treatment		Х							
Kern (2021) ⁴⁷	USA	146	Questionnaire	Treatment	X	X							
Siracusano (2018) ⁴⁸	Italy	145	Questionnaire	Treatment	Х	Х							
Rehme (2022) ⁴⁹	Germany	143	Questionnaire	Treatment	Х								
Kretschmer (2020) ⁵⁰	Germany	134	Questionnaire	Treatment	Х	Х							
Westerman (2020) ⁵¹	USA	132	Questionnaire	Treatment	Х	Х							
Gellhaus (2017) ⁵²	USA	128	Questionnaire	Treatment	Х	Х							
Mastroianni (2022) ⁵³	Italy	116	Questionnaire	Treatment	Х								
Danielsson (2018) ⁵⁴	Sweden	113	Questionnaire	Treatment	Х	Х							
Tan (2019) ⁵⁵	UK	104	Questionnaire	Treatment	X	X							
Schulz (2019) ⁵⁶	Germany	103	Questionnaire	Treatment	С	Х							
Siracusano (2018) ⁵⁷	Italy	103	Questionnaire	Treatment	Х	Х							
Kretschmer (2017) ⁵⁸	Germany	100	Questionnaire	Treatment	Х	X							
Kitamura (2020) ⁵⁹	Japan	99	Questionnaire	Treatment	Х	Х							
Rammant (2022) ⁶⁰	USA	99	Questionnaire	Treatment	X				Х	Х	Х		
Dellabella (2018) ⁶¹	Italy	95	Questionnaire	Treatment	Х								
Mostafid (2020) ⁶²	UK	82	Questionnaire	Treatment	Х	Х							
Taarnhøj (2021) ⁶³	Denmark	79	Questionnaire	Treatment	Х	Х					Х		

First Author, Year	Location	Number of participants	Data collection	Focus	PEEK SECTION									
					2: Health status, co- morbidities	3: Diagnosis experience	4: Decision making	5: Treatment, healthcare system use	6: Information, communicati on and self- management	7: Care, support and navigating healthcare system	8: Quality of life, mental health, relationships	9 Expectations, preferences and messages		
Fuschi (2021) ⁶⁴	Italy	78	Questionnaire	Treatment	Х	Х								
Cerruto (2018) ⁶⁵	Italy	77	Questionnaire	Treatment	Х	X								
Abozaid (2022) ⁶⁶	UK	76	Questionnaire	Treatment	Х	X								
Tostivint (2021) ⁶⁷	France	73	Questionnaire	Treatment	Х	Х								
Siracusano (2019) ⁶⁸	Italy	73	Questionnaire	Treatment	Х	Х								
Volz (2021) ⁵	Germany	72	Questionnaire	Treatment	Х	Х								
Cheng (2021) ⁶⁹	USA	58	Questionnaire	Treatment	X	X								
González- Padilla (2021) ⁷⁰	Spain	56	Questionnaire	Treatment	Х	Х								
Kaye (2020) ⁷¹	USA	54	Questionnaire	Treatment	Х	X								
Mastroianni (2021) ⁷²	Italy	51	Questionnaire	Treatment	Х	Х								
Catto (2021) ⁷³	UK	50	Questionnaire	Treatment	Х									
Huddart (2017) ⁷⁴	UK	45	Questionnaire	Treatment	Х	X								
Liedberg (2022) ⁷⁵	Sweden	44	Questionnaire	Treatment		X								
Biardeau (2020) ⁷⁶	France	40	Questionnaire	Treatment	Х	Х								
Rose (2021) ⁷⁷	USA	39	Questionnaire	Treatment	Χ	Χ								
Ziegelmueller (2020) ⁷⁸	Germany	35	Questionnaire	Treatment	Х	Х								
Bosschieter (2019) ⁷⁹	Netherlands	28	Questionnaire	Treatment	Х	Х								
Frees (2018) ⁸⁰	Canada	27	Questionnaire	Treatment	X			X						
Ebbing (2018) ⁸¹	Germany	27	Questionnaire	Treatment	Х	Х								

First Author, Year	Location	Number of participants	Data collection	Focus	PEEK SECTION									
					2: Health status, co- morbidities	3: Diagnosis experience	4: Decision making	5: Treatment, healthcare system use	6: Information, communicati on and self- management	7: Care, support and navigating healthcare system	8: Quality of life, mental health, relationships	9 Expectations, preferences and messages		
Pattou (2022) ⁸²	France	23	Questionnaire	Treatment	Х	Х								
Feuerstein (2019) ⁸³	USA	16	Questionnaire	Treatment	Х	Х					Х			
Hockman (2020) ⁸⁴	USA	13	Questionnaire	Treatment				Х	X	X				
Tuderti (2020) ⁸⁵	Italy	11	Questionnaire	Treatment	X	X								
Miyake (2022) ⁸⁶	Japan	10	Questionnaire	Treatment	Х	Х								
Catto (2021) ⁸⁷	UK	1796	Questionnaire	Health related quality of life	Х	Х								
Yu (2019) ⁸⁸	UK	1160	Questionnaire	Health related quality of life	Х	Х		Х		Х				
Tsai (2021) ⁸⁹	Taiwan	343	Questionnaire	Health related quality of life	Х									
Draeger (2018) ¹⁰³	Germany	301	Questionnaire	Health related quality of life						Х	Х			
Suppanuntar oek (2020) ¹⁰⁴	Japan	205	Questionnaire	Health related quality of life	Х	Х								
Taarnhøj (2020) ¹⁰⁵	Denmark	78	Questionnaire	Health related quality of life	Х	Х								
Chung (2019) ⁹⁹	Canada	586	Questionnaire	Healthcare service	Х	Х			Х	Х	Х			
Gopalakrishn a (2017) ⁹⁰	USA	472	Questionnaire	Lifestyle	Х	Х		Χ						
Gopalakrishn a (2018) ⁹¹	USA	459	Questionnaire	Lifestyle	Х	Х		Х						
Chung (2020) ⁹²	Canada	235	Questionnaire	Lifestyle	Х	Х		Х						
Lauridsen (2022) ¹⁰⁶	Denmark	104	Questionnaire	Lifestyle	Х									
Kukreja (2022) ⁹³	USA	488	Questionnaire	Diagnosis		Х								
Smith (2019) ⁹⁴	USA	304	Questionnaire	Diagnosis		Х					Х			

First Author, Year	Location	Number of participants	Data collection	Focus	PEEK SECTION							
					2: Health status, co- morbidities	3: Diagnosis experience	4: Decision making	5: Treatment, healthcare system use	6: Information, communicati on and self- management	7: Care, support and navigating healthcare system	8: Quality of life, mental health, relationships	9 Expectations, preferences and messages
Ehlers (2021) ⁹⁵	USA	226	Questionnaire	Costs to patients				Х	_			
Casilla- Lennon (2018) ⁹⁶	USA	138	Questionnaire	Costs to patients	X	X		X				
Hussain (2021) ⁹⁷	UK	117	Questionnaire	Complementary therapy	Х	X						
Silverdale (2019) ⁹⁸	UK	38	Questionnaire	Complementary therapy	Х	Х						
Li (2019) ¹⁰⁰	USA	211	Questionnaire	Decision making			X					
Mohamed (2020) ¹⁰¹	USA	25	Questionnaire	Education				Х	Х			

Abbreviations and terminology

ASGS The Australian Statistical Geography Standard from the Australian Bureau of

Statistics, defines remoteness and urban/rural definitions in Australia

CCDR Centre for Community-Driven Research

dF Degrees of Freedom. The number of values in the final calculation of

a statistic that are free to vary.

f The F ratio is the ratio of two mean square values, used in an ANOVA

comparison. A large F ratio means that the variation among group means is

more than you'd expect to see by chance.

HER2 Human epidermal growth factor receptor 2

FOP Fear of Progression. Tool to measure anxiety related to progression

IQR Interquartile range. A measure of statistical dispersion, being equal to the

difference between 75th and 25th percentiles, or between upper and

lower quartiles.

p Probability value. A small p-value (typically ≤ 0.05) indicates strong. A large p-

value (> 0.05) indicates weak evidence.

PEEK Patient Experience, Expectations and Knowledge

PIH Partners in Health

SD Standard deviation. A quantity expressing by how much the members of a

group digger from the mean value for the group/

SEIFA Socio-Economic Indexes for Areas (SEIFA) ranks areas in Australia according to

relative socio-economic advantage and disadvantage. This is developed by the

Australian Bureau of Statistics.

SF36 Short Form Health Survey 36

t t-Statistic. Size of the difference relative to the variation in your sample data.

Tukey HSD Tukey's honestly significant difference test. It is used in this study to find

10significantly different means following an ANOVA test.

W The W statistic is the test value from the Wilcoxon Rank sum test. The

theoretical range of W is between 0 and (number in group one) x (number in

group 2). When W=0, the two groups are exactly the same.

 X^2 Chi-squared. Kruskal-Wallis test statistic approximates a chi-square

distribution. The Chi-square test is intended to test how likely it is that an

observed distribution is due to chance.

References

- 1. Australian Institute of Health and Welfare 2017. Cancer in Australia 2017. Cancer series no.101. Cat. no. CAN 100. Canberra: AIHW.
- 2. Australian Institute of Health and Welfare (AIHW) 2021 Cancer Data in Australia; Canberra: AIHW. https://www.aihw.gov.au/reports/cancer/cancer-data-in-australia/.
- 3. Australian Institute of Health and Welfare 2021. Cancer in Australia 2021. Cancer series no. 133. Cat. no. CAN 144. Canberra: AIHW. .
- 4. Cheluvappa R, Smith DP, Cerimagic S, Patel MI. A comprehensive evaluation of bladder cancer epidemiology and outcomes in Australia. *Int Urol Nephrol* 2014; **46**(7): 1351-60.
- 5. Volz Y, Grimm T, Ormanns S, et al. Radical cystectomy for locally advanced urothelial carcinoma of the urinary bladder: Health-related quality of life, oncological outcomes and predictors for survival. *Urol Oncol* 2021; **39**(5): 299 e15- e21.
- 6. Young JM, Walsh J, Butow PN, Solomon MJ, Shaw J. Measuring cancer care coordination: development and validation of a questionnaire for patients. *BMC Cancer* 2011; **11**: 298.
- 7. Hinz A, Mehnert A, Ernst J, Herschbach P, Schulte T. Fear of progression in patients 6 months after cancer rehabilitation-a- validation study of the fear of progression questionnaire FoP-Q-12. *Support Care Cancer* 2015; **23**(6): 1579-87.
- 8. Petkov J, Harvey P, Battersby M. The internal consistency and construct validity of the partners in health scale: validation of a patient rated chronic condition self-management measure. *Qual Life Res* 2010; **19**(7): 1079-85.
- 9. Masiero M, Busacchio D, Guiddi P, et al. Quality of life and psycho-emotional wellbeing in bladder cancer patients and their caregivers: a comparative analysis between urostomy versus ileal orthotopic neobladder. *Ecancermedicalscience* 2021; **15**: 1163.
- 10. Wijburg CJ, Michels CTJ, Hannink G, et al. Robotassisted Radical Cystectomy Versus Open Radical Cystectomy in Bladder Cancer Patients: A Multicentre Comparative Effectiveness Study. *Eur Urol* 2021; **79**(5): 609-18.
- 11. Rammant E, Fonteyne V, Decaestecker K, et al. Understanding physical activity behavior in patients with bladder cancer before and after radical cystectomy: a qualitative interview study. *Clin Rehabil* 2019; **33**(4): 750-61.
- 12. Yi E, Yoo YS, Lee S, Park H. The Experiences of Illness in Korean Bladder Cancer Patients With Radical Cystectomy. *Cancer Nurs* 2022; **45**(2): 132-40.
- 13. Gupta N, Rasmussen S, Haney N, et al. Understanding Psychosocial and Sexual Health Concerns Among Women With Bladder Cancer Undergoing Radical Cystectomy. *Urology* 2021; **151**: 145-53.
- 14. Rutherford C, Costa DSJ, King MT, Smith DP, Patel MI. A conceptual framework for patient-reported outcomes in non-muscle invasive bladder cancer. *Support Care Cancer* 2017; **25**(10): 3095-102.

- 15. Heyes SM, Prior KN, Whitehead D, Bond MJ. Toward an Understanding of Patients' and Their Partners' Experiences of Bladder Cancer. *Cancer Nurs* 2020; **43**(5): E254-E63.
- 16. Schroeck FR, St Ivany A, Lowrance W, Makarov DV, Goodney PP, Zubkoff L. Patient Perspectives on the Implementation of Risk-Aligned Bladder Cancer Surveillance: Systematic Evaluation Using the Tailored Implementation for Chronic Diseases Framework. *JCO Oncol Pract* 2020; **16**(8): e668-e77.
- 17. Wulff-Burchfield EM, Potts M, Glavin K, Mirza M. A qualitative evaluation of a nurse-led pre-operative stoma education program for bladder cancer patients. *Support Care Cancer* 2021; **29**(10): 5711-9.
- 18. Klein GT, Ajay D, Volk RJ, Leal V, Westney OL. Living With Urinary Diversions: Patient Insights to Improve the Perioperative Experience. *Urology* 2021; **152**: 190-4.
- 19. Jordan SR, Geiger CL, Fischer SM, Kessler ER. Care planning priorities of older patients with advanced bladder cancer. *J Geriatr Oncol* 2022; **13**(4): 432-9.
- 20. Garg T, Connors JN, Ladd IG, Bogaczyk TL, Larson SL. Defining Priorities to Improve Patient Experience in Non-Muscle Invasive Bladder Cancer. *Bladder Cancer* 2018; **4**(1): 121-8.
- 21. Lee CT, Mohamed NE, Pisipati S, et al. Development and evaluation of a bladder Cancer specific survivorship care plan by patients and clinical care providers: a multi-methods approach. *BMC Health Serv Res* 2020; **20**(1): 686.
- 22. Koo K, Zubkoff L, Sirovich BE, et al. The Burden of Cystoscopic Bladder Cancer Surveillance: Anxiety, Discomfort, and Patient Preferences for Decision Making. *Urology* 2017; **108**: 122-8.
- 23. McMullen CK, Kwan ML, Colwell JC, et al. Recovering from Cystectomy: Patient Perspectives. *Bladder Cancer* 2019; **5**(1): 51-61.
- 24. Banerjee S, Semper K, Skarparis K, et al. Patient perspectives of vigorous intensity aerobic interval exercise prehabilitation prior to radical cystectomy: a qualitative focus group study. *Disabil Rehabil* 2021; **43**(8): 1084-91.
- 25. Witjes JA, Galsky MD, Gschwend JE, et al. Health-related Quality of Life with Adjuvant Nivolumab After Radical Resection for High-risk Muscle-invasive Urothelial Carcinoma: Results from the Phase 3 CheckMate 274 Trial. *Eur Urol Oncol* 2022.
- 26. Bajorin DF, Witjes JA, Gschwend JE, et al. Adjuvant Nivolumab versus Placebo in Muscle-Invasive Urothelial Carcinoma. *N Engl J Med* 2021; **384**(22): 2102-14.
- 27. Kelly JD, Tan WS, Porta N, et al. BOXIT-A Randomised Phase III Placebo-controlled Trial Evaluating the Addition of Celecoxib to Standard Treatment of Transitional Cell Carcinoma of the Bladder (CRUK/07/004). *Eur Urol* 2019; **75**(4): 593-601.
- 28. Mason SJ, Downing A, Wright P, et al. Health-related quality of life after treatment for bladder cancer in England. *Br J Cancer* 2018; **118**(11): 1518-28.
- 29. Necchi A, Nishiyama H, Matsubara N, et al. Health-related quality of life in the randomized phase 3 study of ramucirumab plus docetaxel versus placebo plus docetaxel in platinum-refractory advanced urothelial carcinoma (RANGE). *BMC Urol* 2020; **20**(1): 181.

- 30. Vaughn DJ, Bellmunt J, Fradet Y, et al. Health-Related Quality-of-Life Analysis From KEYNOTE-045: A Phase III Study of Pembrolizumab Versus Chemotherapy for Previously Treated Advanced Urothelial Cancer. *J Clin Oncol* 2018; **36**(16): 1579-87.
- 31. Huddart RA, Hall E, Lewis R, et al. Patient-reported Quality of Life Outcomes in Patients Treated for Muscleinvasive Bladder Cancer with Radiotherapy +/-Chemotherapy in the BC2001 Phase III Randomised Controlled Trial. *Eur Urol* 2020; **77**(2): 260-8.
- 32. Cox E, Saramago P, Kelly J, et al. Effects of Bladder Cancer on UK Healthcare Costs and Patient Health-Related Quality of Life: Evidence From the BOXIT Trial. *Clin Genitourin Cancer* 2020; **18**(4): e418-e42.
- 33. Clements MB, Atkinson TM, Dalbagni GM, et al. Health-related Quality of Life for Patients Undergoing Radical Cystectomy: Results of a Large Prospective Cohort. *Eur Urol* 2022; **81**(3): 294-304.
- 34. Westhofen T, Eismann L, Buchner A, et al. Baseline Health-related Quality of Life Predicts Bladder Cancerspecific Survival Following Radical Cystectomy. *Eur Urol Focus* 2022.
- 35. Kukreja JB, Shi Q, Chang CM, et al. Patient-Reported Outcomes Are Associated With Enhanced Recovery Status in Patients With Bladder Cancer Undergoing Radical Cystectomy. *Surg Innov* 2018; **25**(3): 242-50.
- 36. Hupe MC, Vahlensieck W, Ozimek T, et al. Diarrhea and flatulence are major bowel disorders after radical cystectomy: Results from a cross-sectional study in bladder cancer patients. *Urol Oncol* 2018; **36**(5): 237 e1- e8.
- 37. Cerruto MA, D'Elia C, Siracusano S, et al. Health-related Quality of Life After Radical Cystectomy: A Cross-sectional Study With Matched-pair Analysis on Ileal Conduit vs Ileal Orthotopic Neobladder Diversion. *Urology* 2017; **108**: 82-9.
- 38. Becerra MF, Venkatramani V, Reis IM, et al. Health Related Quality of Life of Patients with Bladder Cancer in the RAZOR Trial: A Multi-Institutional Randomized Trial Comparing Robot versus Open Radical Cystectomy. *J Urol* 2020; **204**(3): 450-9.
- 39. Frees S, Schenk AC, Rubenwolf P, et al. Bowel function in patients with urinary diversion: a gendermatched comparison of continent urinary diversion with the ileocecal pouch and ileal conduit. *World J Urol* 2017; **35**(6): 913-9.
- 40. Volz Y, Eismann L, Pfitzinger P, et al. Long-term Health-related Quality of Life (HRQOL) After Radical Cystectomy and Urinary Diversion A Propensity Scorematched Analysis. *Clin Genitourin Cancer* 2022.
- 41. Asanad K, Nazemi A, Ghodoussipour S, et al. Evaluation of Bowel Function Following Radical Cystectomy and Urinary Diversion Using Two Validated Questionnaires: What Are the Effects on Quality of Life? *Urology* 2021; **156**: 279-84.
- 42. Check DK, Leo MC, Banegas MP, et al. Decision Regret Related to Urinary Diversion Choice among Patients Treated with Cystectomy. *J Urol* 2020; **203**(1): 159-63.
- 43. Grimm T, Grimm J, Buchner A, et al. Health-related quality of life after radical cystectomy and ileal orthotopic

- neobladder: effect of detailed continence outcomes. *World J Urol* 2019; **37**(11): 2385-92.
- 44. Normann CO, Opheim R, Andreassen BK, Bernklev T, Haug ES. Health-related quality-of-life after radical cystectomy among Norwegian men and women compared to the general population. *Scand J Urol* 2020; **54**(3): 181-7.
- 45. Kijima T, Tanaka H, Koga F, et al. Selective tetramodal bladder-preservation therapy, incorporating induction chemoradiotherapy and consolidative partial cystectomy with pelvic lymph node dissection for muscle-invasive bladder cancer: oncological and functional outcomes of 107 patients. *BJU Int* 2019; **124**(2): 242-50.
- 46. Loh-Doyle JC, Han J, Ghodoussipour S. Factors Associated With Patient-Reported Penile Length Loss After Radical Cystoprostatectomy in Male Patients With Bladder Cancer. *J Sex Med* 2020; **17**(5): 957-63.
- 47. Kern SQ, Speir RW, Tong Y, et al. Longitudinal Health Related Quality of Life After Open Radical Cystectomy: Comparison of Ileal Conduit, Indiana Pouch, and Orthotopic Neobladder. *Urology* 2021; **152**: 184-9.
- 48. Siracusano S, D'Elia C, Cerruto MA, et al. Quality of Life in Patients with Bladder Cancer Undergoing Ileal Conduit: A Comparison of Women Versus Men. *In Vivo* 2018; **32**(1): 139-43.
- 49. Rehme C, Fritsch B, Thomas L, et al. Clinical outcome and quality of life in octogenarian patients with muscle-invasive urothelial carcinoma of the bladder treated with radical cystectomy or transurethral resection of the bladder tumor: a retrospective analysis of 143 patients. *Int Urol Nephrol* 2022; **54**(1): 71-9.
- 50. Kretschmer A, Grimm T, Buchner A, et al. Midterm Health-related Quality of Life After Radical Cystectomy: A Propensity Score-matched Analysis. *Eur Urol Focus* 2020; **6**(4): 704-10.
- 51. Westerman ME, Kokorovic A, Wang XS, et al. Radical Cystectomy and Perioperative Sexual Function: A Cross-Sectional Analysis. *J Sex Med* 2020; **17**(10): 1995-2004.
- 52. Gellhaus PT, Cary C, Kaimakliotis HZ, et al. Long-term Health-related Quality of Life Outcomes Following Radical Cystectomy. *Urology* 2017; **106**: 82-6.
- 53. Mastroianni R, Ferriero M, Tuderti G, et al. Open Radical Cystectomy versus Robot-Assisted Radical Cystectomy with Intracorporeal Urinary Diversion: Early Outcomes of a Single-Center Randomized Controlled Trial. *J Urol* 2022; **207**(5): 982-92.
- 54. Danielsson G, Malmstrom PU, Jahnson S, Wijkstrom H, Nyberg T, Thulin H. Bladder health in patients treated with BCG instillations for T1G2-G3 bladder cancer a follow-up five years after the start of treatment. *Scand J Urol* 2018; **52**(5-6): 377-84.
- 55. Tan WS, Panchal A, Buckley L, et al. Radiofrequency-induced Thermo-chemotherapy Effect Versus a Second Course of Bacillus Calmette-Guerin or Institutional Standard in Patients with Recurrence of Non-muscle-invasive Bladder Cancer Following Induction or Maintenance Bacillus Calmette-Guerin Therapy (HYMN): A Phase III, Open-label, Randomised Controlled Trial. *Eur Urol* 2019; **75**(1): 63-71.
- 56. Schulz GB, Grimm T, Buchner A, et al. Benefits and Complications during the Stay at an Early Rehabilitation

- Facility after Radical Cystectomy and Orthotopic Ileum Neobladder Reconstruction. *Urol Int* 2019; **103**(3): 350-6.
- 57. Siracusano S, Silvestri T, Bassi S, et al. Health-related quality of life after BCG or MMC induction for non-muscle invasive bladder cancer. *Can J Urol* 2018; **25**(5): 9480-5.
- 58. Kretschmer A, Grimm T, Buchner A, et al. Prospective evaluation of health-related quality of life after radical cystectomy: focus on peri- and postoperative complications. *World J Urol* 2017; **35**(8): 1223-31.
- 59. Kitamura H, Hinotsu S, Tsukamoto T, et al. Effect of neoadjuvant chemotherapy on health-related quality of life in patients with muscle-invasive bladder cancer: results from JCOG0209, a randomized phase III study. *Jpn J Clin Oncol* 2020; **50**(12): 1464-9.
- 60. Rammant E, Leung TM, Gore JL, et al. Associations of self-efficacy, social support and coping strategies with health-related quality of life after radical cystectomy for bladder cancer: A cross-sectional study. *Eur J Cancer Care (Engl)* 2022; **31**(3): e13571.
- 61. Dellabella M, Branchi A, Gasparri L, Claudini R, Castellani D. Oncological safety and quality of life in men undergoing simultaneous transurethral resection of bladder tumor and prostate: results from a randomized controlled trial. *World J Urol* 2018; **36**(10): 1629-34.
- 62. Mostafid AH, Porta N, Cresswell J, et al. CALIBER: a phase II randomized feasibility trial of chemoablation with mitomycin-C vs surgical management in low-risk non-muscle-invasive bladder cancer. *BJU Int* 2020; **125**(6): 817-26.
- 63. Taarnhoj GA, Lindberg H, Johansen C, Pappot H. Patient-Reported Outcomes, Health-Related Quality of Life, and Clinical Outcomes for Urothelial Cancer Patients Receiving Chemo- or Immunotherapy: A Real-Life Experience. *J Clin Med* 2021; **10**(9).
- 64. Fuschi A, Al Salhi Y, Sequi MB, et al. Evaluation of Functional Outcomes and Quality of Life in Elderly Patients (>75 y.o.) Undergoing Minimally Invasive Radical Cystectomy with Single Stoma Ureterocutaneostomy vs. Bricker Intracorporeal Ileal Conduit Urinary Diversion. *J Clin Med* 2021: **11**(1).
- 65. Cerruto MA, D'Elia C, Siracusano S, et al. Health-Related Quality of Life after Radical Cystectomy for Bladder Cancer in Elderly Patients with Ileal Orthotopic Neobladder or Ileal Conduit: Results from a Multicentre Cross-Sectional Study Using Validated Questionnaires. *Urol Int* 2018; **100**(3): 346-52.
- 66. Abozaid M, Tan WS, Khetrapal P, et al. Recovery of health-related quality of life in patients undergoing robot-assisted radical cystectomy with intracorporeal diversion. *BJU Int* 2022; **129**(1): 72-9.
- 67. Tostivint V, Verhoest G, Cabarrou B, et al. Quality of life and functional outcomes after radical cystectomy with ileal orthotopic neobladder replacement for bladder cancer: a multicentre observational study. *World J Urol* 2021; **39**(7): 2525-30.
- 68. Siracusano S, D'Elia C, Cerruto MA, et al. Quality of life following urinary diversion: Orthotopic ileal neobladder versus ileal conduit. A multicentre study among long-term,

- female bladder cancer survivors. *Eur J Surg Oncol* 2019; **45**(3): 477-81.
- 69. Cheng KW, Yip W, Shah A, et al. Stoma complications and quality of life in patients with Indiana pouch versus appendico/neo-appendico-umbilicostomy urinary diversions. *World J Urol* 2021; **39**(5): 1521-9.
- 70. Gonzalez-Padilla DA, Gonzalez-Diaz A, Guerrero-Ramos F, et al. Quality of life and adverse events in patients with nonmuscle invasive bladder cancer receiving adjuvant treatment with BCG, MMC, or chemohyperthermia. *Urol Oncol* 2021; **39**(1): 76 e9- e14.
- 71. Kaye DR, Schafer C, Thelen-Perry S, et al. The Feasibility and Impact of a Presurgical Exercise Intervention Program (Prehabilitation) for Patients Undergoing Cystectomy for Bladder Cancer. *Urology* 2020; **145**: 106-12.
- 72. Mastroianni R, Tuderti G, Anceschi U, et al. Comparison of Patient-reported Health-related Quality of Life Between Open Radical Cystectomy and Robot-assisted Radical Cystectomy with Intracorporeal Urinary Diversion: Interim Analysis of a Randomised Controlled Trial. *Eur Urol Focus* 2022; **8**(2): 465-71.
- 73. Catto JWF, Gordon K, Collinson M, et al. Radical Cystectomy Against Intravesical BCG for High-Risk High-Grade Nonmuscle Invasive Bladder Cancer: Results From the Randomized Controlled BRAVO-Feasibility Study. *J Clin Oncol* 2021; **39**(3): 202-14.
- 74. Huddart RA, Birtle A, Maynard L, et al. Clinical and patient-reported outcomes of SPARE a randomised feasibility study of selective bladder preservation versus radical cystectomy. *BJU Int* 2017; **120**(5): 639-50.
- 75. Liedberg F, Hagberg O, Baseckas G, et al. Anorectal dysfunction after radical cystectomy for bladder cancer. *Scand J Urol* 2022; **56**(2): 155-61.
- 76. Biardeau X, Lamande N, Tondut L, et al. Quality of life associated with orthotopic neobladder and ileal conduit in women: A multicentric cross-sectional study. *Prog Urol* 2020; **30**(2): 80-8.
- 77. Rose TL, Harrison MR, Deal AM, et al. Phase II Study of Gemcitabine and Split-Dose Cisplatin Plus Pembrolizumab as Neoadjuvant Therapy Before Radical Cystectomy in Patients With Muscle-Invasive Bladder Cancer. *J Clin Oncol* 2021; **39**(28): 3140-8.
- 78. Ziegelmueller BK, Jokisch JF, Buchner A, et al. Long-Term Follow-Up and Oncological Outcome of Patients Undergoing Radical Cystectomy for Bladder Cancer following an Enhanced Recovery after Surgery (ERAS) Protocol: Results of a Large Randomized, Prospective, Single-Center Study. *Urol Int* 2020; **104**(1-2): 55-61.
- 79. Bosschieter J, Nieuwenhuijzen JA, Hentschel A, et al. Value of a Marker Lesion in Non-Muscle-Invasive Bladder Cancer Patients Treated with Interleukin-2 Instillations: A Randomized Controlled Multicentre Trial. *Urol Int* 2019; **102**(1): 69-76.
- 80. Frees SK, Aning J, Black P, et al. A prospective randomized pilot study evaluating an ERAS protocol versus a standard protocol for patients treated with radical cystectomy and urinary diversion for bladder cancer. *World J Urol* 2018; **36**(2): 215-20.
- 81. Ebbing J, Heckmann RC, Collins JW, et al. Oncological outcomes, quality of life outcomes and

- complications of partial cystectomy for selected cases of muscle-invasive bladder cancer. *Sci Rep* 2018; **8**(1): 8360.
- 82. Pattou M, Baboudjian M, Pinar U, et al. Continent cutaneous urinary diversion with an ileal pouch with the Mitrofanoff principle versus a Miami pouch in patients undergoing cystectomy for bladder cancer: results of a comparative study. *World J Urol* 2022; **40**(5): 1159-65.
- 83. Feuerstein MA, Goldstein L, Reaves B, et al. Propensity-matched analysis of patient-reported outcomes for neoadjuvant chemotherapy prior to radical cystectomy. *World J Urol* 2019; **37**(11): 2401-7.
- 84. Hockman L, Bailey J, Sanders J, et al. A Qualitative Assessment of Patient Satisfaction with Radical Cystectomy for Bladder Cancer at a Single Institution: How Can We Improve? *Res Rep Urol* 2020; **12**: 447-53.
- 85. Tuderti G, Mastroianni R, Flammia S, et al. Sex-Sparing Robot-Assisted Radical Cystectomy with Intracorporeal Padua Ileal Neobladder in Female: Surgical Technique, Perioperative, Oncologic and Functional Outcomes. *J Clin Med* 2020; **9**(2).
- 86. Miyake M, Nishimura N, Oda Y, et al. Intravesical Bacillus Calmette-Guerin treatment-induced sleep quality deterioration in patients with non-muscle invasive bladder cancer: functional outcome assessment based on a questionnaire survey and actigraphy. *Support Care Cancer* 2022; **30**(1): 887-95.
- 87. Catto JWF, Downing A, Mason S, et al. Quality of Life After Bladder Cancer: A Cross-sectional Survey of Patient-reported Outcomes. *Eur Urol* 2021; **79**(5): 621-32.
- 88. Yu EY, Nekeman D, Billingham LJ, et al. Health-related quality of life around the time of diagnosis in patients with bladder cancer. *BJU Int* 2019; **124**(6): 984-91.
- 89. Tsai YS, Wu TY, Jou YC, Tzai TS, Wang JD. Determinants and Dynamic Changes of Generic Quality of Life in Human Bladder Cancer Patients. *J Clin Med* 2021; **10**(23).
- 90. Gopalakrishna A, Longo TA, Fantony JJ, Harrison MR, Inman BA. Physical activity patterns and associations with health-related quality of life in bladder cancer survivors. *Urol Oncol* 2017; **35**(9): 540 e1- e6.
- 91. Gopalakrishna A, Chang A, Longo TA, et al. Dietary patterns and health-related quality of life in bladder cancer survivors. *Urol Oncol* 2018; **36**(10): 469 e21- e29.
- 92. Chung J, Kulkarni GS, Bender J, et al. Modifiable lifestyle behaviours impact the health-related quality of life of bladder cancer survivors. *BJU Int* 2020; **125**(6): 836-42.
- 93. Kukreja JB, Schroeck FR, Lotan Y, et al. Discomfort and relieving factors among patients with bladder cancer undergoing office-based cystoscopy. *Urol Oncol* 2022; **40**(1): 9 e19-9 e27.
- 94. Smith AB, Daneshmand S, Patel S, et al. Patient-reported outcomes of blue-light flexible cystoscopy with hexaminolevulinate in the surveillance of bladder cancer: results from a prospective multicentre study. *BJU Int* 2019; **123**(1): 35-41.
- 95. Ehlers M, Bjurlin M, Gore J, et al. A national cross-sectional survey of financial toxicity among bladder cancer patients. *Urol Oncol* 2021; **39**(1): 76 e1- e7.
- 96. Casilla-Lennon MM, Choi SK, Deal AM, et al. Financial Toxicity among Patients with Bladder Cancer:

- Reasons for Delay in Care and Effect on Quality of Life. *J Urol* 2018; **199**(5): 1166-73.
- 97. Hussain SA, Porta N, Hall E, et al. Outcomes in Patients with Muscle-invasive Bladder Cancer Treated with Neoadjuvant Chemotherapy Followed by (Chemo)radiotherapy in the BC2001 Trial. *Eur Urol* 2021; **79**(2): 307-15.
- 98. Silverdale N, Wherry M, Roodhouse A. Massage and reflexology for post-operative cancer cystectomy patients: Evaluation of a pilot service. *Complement Ther Clin Pract* 2019; **34**: 109-12.
- 99. Chung J, Kulkarni GS, Morash R, et al. Assessment of quality of life, information, and supportive care needs in patients with muscle and non-muscle invasive bladder cancer across the illness trajectory. *Support Care Cancer* 2019; **27**(10): 3877-85.
- 100. Li Y, Rapkin B, Atkinson TM, Schofield E, Bochner BH. Leveraging Latent Dirichlet Allocation in processing freetext personal goals among patients undergoing bladder cancer surgery. *Qual Life Res* 2019; **28**(6): 1441-55.
- 101. Mohamed N, Leung TM, Shah QN, et al. Involving Patients in the Development and Evaluation of an Educational and Training Experiential Intervention (ETEI) to Improve Muscle Invasive Bladder Cancer Treatment Decision-making and Post-operative Self-care: a Mixed Methods Approach. *J Cancer Educ* 2020; **35**(4): 808-18.
- 102. Tan WS, Teo CH, Chan D, et al. Exploring patients' experience and perception of being diagnosed with bladder cancer: a mixed-methods approach. *BJU Int* 2020; **125**(5): 669-78.
- 103. Draeger DL, Sievert KD, Hakenberg OW. Psychosocial Distress in Bladder Cancer Stratified by Gender, Age, Treatment, and Tumour Stage. *Urol Int* 2018; **101**(1): 31-7.
- 104. Suppanuntaroek S, Hatakeyama S, Fujita N, et al. Influence of pretreatment quality of life on prognosis in patients with urothelial carcinoma. *Int J Clin Oncol* 2020; **25**(2): 362-9.
- 105. Taarnhoj GA, Johansen C, Lindberg H, Basch E, Dueck A, Pappot H. Patient reported symptoms associated with quality of life during chemo- or immunotherapy for bladder cancer patients with advanced disease. *Cancer Med* 2020; **9**(9): 3078-87.
- 106. Lauridsen SV, Thomsen T, Jensen JB, et al. Effect of a Smoking and Alcohol Cessation Intervention Initiated Shortly Before Radical Cystectomy-the STOP-OP Study: A Randomised Clinical Trial. *Eur Urol Focus* 2022.