



WHITE PAPER on Bladder Cancer

**Policy recommendations
to leverage legislative opportunities
for better support of patients and
carers affected by bladder cancer
in Europe**



Acknowledgements

We would like to thank many individuals and organisations for contributing to this work.

ABOUT WHITE PAPER ON BLADDER CANCER

The 2023 will be a landmark year for the EU Cancer Policy. With the ongoing implementation of Europe's Beating Cancer Plan, the white paper on bladder cancer aims to build momentum to raise awareness of the need to ensure an equitable policy approach to different types of cancers and provide concrete policy solutions to address the unmet needs of bladder cancer patients

FUNDING

WBCPC has received funding from Astellas Pharma Limited, Merck and Pfizer to produce this white paper. All outputs are non-promotional and not specific to any particular treatment or therapy. The content of this White Paper is the sole responsibility of the World Bladder Cancer Patient Coalition.

ABOUT WORLD BLADDER CANCER PATIENT COALITION (WBCPC)

The World Bladder Cancer Patient Coalition was established in January 2019 by a group of dedicated patient advocates from three national bladder cancer organisations that saw the need for a global bladder cancer coalition.

The coalition brings together patient organisations from around the world, uniting the vision and goals of bladder cancer patient organisations to ensure the best possible outcomes for bladder cancer patients worldwide. This coalition constitutes the first time that people affected by bladder cancer have a force connecting bladder cancer patients, groups and organisations worldwide.

ABOUT THE EUROPEAN ASSOCIATION OF UROLOGY (EAU)

The EAU represents the leading authority within Europe on urological practice, research, and education. The EAU has grown enormously in membership and scope in over forty years. The foundation of the EAU transcended the political climate that initially divided the continent, putting the improvement of patient care at the forefront of everything it does.

Nowadays, over 19,000 medical professionals have joined its ranks and contributed to our mission: To raise the level of urological care throughout Europe and beyond.

Printed in September 2023

Acknowledgements

- **Marek Babjuk Professor**, Doctor of Medical Sciences, Head of the Charles University Urological Clinic (Czechia)
- **Sara Bertucci**, Policy Officer for Cancer Prevention and Survivorship, Association of European Cancer Leagues (Belgium)
- **Liesbeth de Boer-Oosterhuis**, President, Leven met blaas- of nierkanker (Netherlands)
- **Antonella Cardone**, Chief Executive Officer, Cancer Patients Europe (Italy)
- **Claire Champeix**, Policy Officer, Eurocarers (Belgium)
- **Dr Jean Bernard Chazan**, Member of Cancer Vessie France (France)
- **Lori Cirefice**, Vice-President, World Bladder Cancer Patient Coalition, President, Cancer Vessie France (France)
- **Prof. Eva Comperat**, Head of the Pathology Department at Tenon Hospital, Sorbonne University, Paris (France)
- **Maria De Santis**, Associate Professor of Medicine, Paracelsus Medizinische Privatuniversität in Salzburg (Austria)
- **Alex Filicevas**, Executive Director, World Bladder Cancer Patient Coalition (Belgium)
- **Dr Neil Fleshner**, MD, MPH, FRCSC, Head of the Urology Division, University Health Network (Canada)
- **Valérie Fonteyne**, Ghent University Hospital, Ghent (Belgium)
- **Sana Gilfillan**, Policy and Communications Manager, Fight Bladder Cancer (UK)
- **Prof. Paolo Gontero**, Chairman of the Urology Division, San Giovanni Battista Hospital, University of Turin (Italy)
- **Peter Hoskin**, Mount Vernon Cancer Centre, London, Christie Hospital, Manchester and the University of Manchester (UK)
- **Piet Klein**, Board Member, Leven met blaas- of nierkanker (Netherlands)
- **Seth Paul Lerner**, M.D., FACS | BCM, Professor, Baylor College of Medicine (USA)
- **Laura Magenta**, Assistant to the President, Associazione PaLiNUro (Italy)
- **Marie Magenhann Cueto**, Communications and Community Engagement Assistant, World Bladder Cancer Patient Coalition (Belgium)
- **Dr Lydia Makaroff**, President, World Bladder Cancer Patient Coalition, Chief Executive, Fight Bladder Cancer (UK)
- **Luis Martínez-Piñeiro**, Chairman, Urology Department, La Paz University Hospital, Madrid (Spain)
- **Mihaela Militaru**, Senior Director, EU Patient Insights & Advocacy, Oncology, Healthcare Government & Public Affairs, Merck (Belgium)
- **Klark Mullen**, Associate Director, Therapeutic Area Government Affairs, Astellas (UK)
- **Andrea Necchi, MD**, Associate Professor, Vita-Salute San Raffaele University, Head of Genitourinary Medical Oncology, IRCCS San Raffaele Hospital, Milan (Italy)
- **Lilia Olefir**, Director, Smoke Free Partnership (Belgium)
- **Piet Ost**, Iridium Network, Antwerp (Belgium)
- **Juan Palou**, Department of Urology, Chairman of Urology Department. Fundació Puigvert, Professor, Universitat Autònoma de Barcelona (Spain)
- **Richard Price**, Head of Policy, European Cancer Organisation (Belgium)
- **Prof. Morgan Rouprêt**, Urology, Hospital Pitié-Salpêtrière, APHP Sorbonne Université (France)
- **Prof. Arnulf Stenzl**, MD, Professor and Chairman of Urology, University of Tübingen Medical Center (Germany)
- **Hein van Poppel**, Prof. Dr M.D, Ph.D, Chair, Policy Office, European Association of Urology (Belgium)
- **Dr Wendy Yared**, Director, Association of European Cancer Leagues (Belgium)
- **Prof. J.A. Witjes (Fred)**, Chair: Oncological urology, Professor - Faculty of Medical Sciences, Radboudumc (Netherlands)
- **Theodoros Yfantis**, Project Coordinator, World Bladder Cancer Patient Coalition (Belgium)

Table of Contents

Foreword	5
Executive Summary	6
Bladder Cancer State of Play in Europe	7
The Impact of Bladder Cancer	7
Symptoms and Risk Factors	8
Diagnosis and Treatments	9
Impact on Health Outcomes and Patient’s Lives	10
Bladder Cancer Survivorship: Carer Role	10
Policy Recommendations	11
Bladder Cancer Prevention	11
Bladder Cancer Diagnosis and Treatment	12
Living with Bladder Cancer	14
Improving Health Outcomes and Quality of Life	15
Survivorship and the role of Carers	16
Annex	19
The burden of bladder cancer	19
Risk factors	19
Symptoms	20
Types of bladder cancer	20
Awareness and diagnosis	21
Bladder cancer treatments	21
Bladder cancer impact on patient’s lives	22

Foreword

Cancer remains **the second leading cause of mortality in the EU**. However, not all cancers are treated equally, nor provided with the resources needed to reduce the pressure they place on health systems. Bladder cancer is one such type of cancer. It is **the fifth most common cancer in Europe**, and yet the level of attention paid to bladder cancer, and consequently to bladder cancer patients, is disproportionately small given the impact of the disease. At this critical time for European health policy, it is vital that there is a greater understanding of the **actions necessary to address this underserved and under-recognised cancer**.

The costs of bladder cancer are too high to ignore. Not only does the disease impact Europeans on a human level, but it also means that our health systems are being stretched further. Despite the high disease burden, awareness of the disease and its signs and symptoms remains low. With increased awareness, we can move forward with diagnosing the disease at an earlier stage, when patients will have the best chance of long-term survival and good quality of life. Bladder cancer also represents a growing challenge for European health systems. As our population continues to age, diseases with a higher prevalence in older people, such as bladder cancer, will become an increasing public policy challenge. It is, therefore, crucial that we make decisions right now to equip us for the future.

The future for bladder cancer can be positive, with new and innovative treatments offering hope for patients. It is crucial that this innovation reaches patients in Europe and that our R&D infrastructure and framework encourage this to take place within the EU. Europe needs to be the world leader in developing new treatments for cancer, including bladder cancer. Only by doing this will we be able to ensure access to clinical trials for more people affected by bladder cancer in Europe.

There is, therefore, an urgent need to address this situation and work towards meeting the needs of bladder cancer patients, carers and families. The policy recommendations set out in this white paper address the entire patient pathway and are made ahead of a crucial period for health policy in the EU. As we look ahead towards the 2024 European elections and the beginning of a new mandate, there is an opportunity to address this situation.

The European Union has made great strides in addressing cancer in recent years and is taking a more significant role in coordinating the work of Member States. I am proud of the work of the European Parliament on cancer, and my colleagues and I will continue to work together to further the topic at EU level. Europe's Beating Cancer Plan has been one of the stand-out achievements from the European Commission's work since 2019. With a mid-term review of the Plan due by the end of next year, now is the time to ensure that bladder cancer patients receive the support and resources they need to fight this disease.

The World Bladder Cancer Patient Coalition is vital in raising awareness of the needs of patients and their families across Europe and the world. Working together with the European Society of Urology, Members of the European Parliament and all stakeholders at the EU and Member State level can help us carve a way forward to improve the lives of all people affected by bladder cancer. Given the seriousness of the situation and the urgent need to take further action against bladder cancer, policymakers across Europe should read and act on the recommendations in this white paper on bladder cancer.

MEP István Ujhelyi,
S&D, Hungary

Lori Cirefice, Vice-
President, WBCPC &
President, Cancer Vessie
France

Executive Summary

Despite the challenges of the COVID-19 pandemic imposed on the resilience of the European health systems, cancer remains the key priority in health of the current European Commission and a key pillar of a strong European Health Union. However, policy measures targeting cancer in the EU do not approach all types of cancer equally.

Bladder cancer (BC) is the 5th most common cancer in Europe.¹ Despite having one of the highest lifetimes costs of any cancer, the research funding is among the lowest.² This has led to an alarming stagnation in availability of diagnostic tools that negatively impacts the prognosis and treatment options of bladder cancer, and complex pathways for patients to navigate their journey.

Furthermore, lack of bladder cancer awareness drastically hinders early detection, while insufficient understanding of the gender differences in bladder cancer symptoms further exacerbates the gender gap, leading to worse outcomes for women.

Considering the upcoming 2024 European Elections and the learnings from Europe's Beating Cancer Plan, this white paper aims to inform the policymakers in Brussels and the Member State capitals to consider an EU agenda with more ambitious policy actions targeting neglected cancers, such as bladder cancer, and close the cancer care gap by supporting awareness and education and ensuring access to high-quality diagnostic tools, care and treatment.

DISCLAIMER

The complex nature of EU policymaking requires significant coordination between Member States and the EU institutions. Such coordination is imperative to successfully implement the policy recommendations proposed in this white paper. We suggest to the reader the following presentation that will assist in understanding who do we target with the policy recommendations:



The policy recommendations with this icon indicate that significant commitment and coordination are required between the EU and Member States to initiate the policy change.



The policy recommendations with this icon encourage that particular commitment is needed at the Member State level to improve the state of play in bladder cancer.

THE TOP 10 POLICY RECOMMENDATIONS

- 1 Improve legislation** in the field of occupational cancer to recognise the link between certain chemicals and bladder cancer explicitly. Include bladder cancer in the list of occupational cancers in future revisions of the EU Carcinogens Directive.
- 2 Ensure the implementation of minimum standards on tobacco use.** The introduction of pictorial warnings on bladder cancer in the EU Tobacco Directive should complement these actions.
- 3 Guarantee** that the EU and Member States abide by the revised Council Recommendation on Cancer Screening to invest in developing effective early detection of bladder cancer for at-risk groups.
- 4 Facilitate funding** for research into unmet areas of bladder cancer therapies at European and national level.
- 5 Ensure access** to clinical trials should be an option to be discussed with the physician, with the therapeutic decision made depending on individual patients and disease characteristics.
- 6 Strengthen collaboration** between EU and Member States' health authorities to improve access to innovative treatments and recognise the value of incremental innovation.
- 7 Facilitate funding** from the EU and Member States for developing a reliable risk-based technology to screen bladder cancer at an early stage.
- 8 Support patient groups** at European and national level in advocating for greater bladder cancer disease awareness in primary care settings and among the general public regarding bladder cancer symptoms and risk factors.
- 9 Address the gender gap** in diagnosing and treatment for bladder cancer through better training of healthcare professionals (HPCs).
- 10 Unleash the potential** of the European Health Data Space (EHDS) to improve bladder cancer care by developing Electronic health records and a standardised registry of patient-centred outcomes for muscle-invasive and non-muscle-invasive bladder cancer.

Bladder Cancer State of Play in Europe

THE IMPACT OF BLADDER CANCER



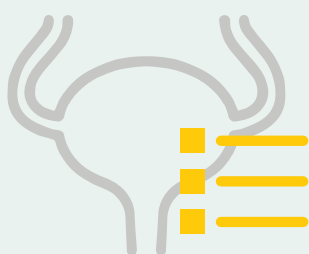
Bladder cancer is Europe's 5th most common cancer and the 10th most commonly diagnosed cancer in the world. More than 120,000 people are diagnosed annually with bladder cancer in the EU. Around 52,000 people die from bladder cancer every year. By 2030 the annual incidence is projected to increase to 219,000. Two-fifths of this is due to the ageing of the European population.³ Bladder cancer has one of the highest lifetime costs of any cancer and is responsible for consuming a large part of healthcare resources due to its high prevalence, cost of diagnostic tools and expense of medical and surgical treatments.⁴

The epidemiology of bladder cancer in Europe requires urgent policy actions and investments in prevention, diagnosis and treatment. Delay in diagnosis hinders patients' timely referral to treatment, thus having a negative impact on disease progression and patients' health outcomes. There are three primary stages of bladder cancer: Non-muscle invasive bladder cancer, which has not invaded the bladder muscle wall or NMIBC; Locally invasive bladder cancer, which has invaded the bladder muscle wall and/or spread to nearby organs or lymph nodes or MIBC; and Metastatic bladder cancer, that has spread to another part of the body. Around 51% -80% of bladder cancer cases are Non-Muscle Invasive Bladder Cancer (NMIBC) at the

time of initial diagnosis. Ten to fifteen percent of patients with muscle-invasive bladder cancer (MIBC) have metastasis at the time of diagnosis, and about half of MIBC patients treated with radical intent by cystectomy will relapse.⁵ About 25% of newly diagnosed patients with bladder cancer present with muscle-invasive bladder (MIBC) cancer or metastatic disease.⁶ Despite the currently available multimodality therapy, advanced and metastatic bladder cancer has a very low overall survival rate. For MIBC, the 5-year relative survival rate for patients is 70%. For patients with metastatic bladder cancer, the 5-year survival rate is significantly lower at about 8%.⁷

Studies on the economic cost of bladder cancer in the European Union found that this form of cancer absorbs EUR 4.9 billion, with healthcare spending accounting for EUR 2.9 billion (59%), representing 5% of the total healthcare costs in the EU.⁸ Productivity losses due to bladder cancer mortality and morbidity in the European Union amount to 23% and 18% of bladder cancer costs,⁹ adding a negative impact on social prosperity and economic growth. In such respect, investments in bladder cancer prevention, timely detection and screening of people at risk, diagnosis, treatment, aftercare and research provide the opportunity for significant return for patients, health system and society.

SYMPTOMS AND RISK FACTORS



smoking and other **tobacco** use



past **radiation** exposure



chronic bladder cancer **inflammation**



exposure to **chemicals**



parasitic **infections**

Bladder cancer is a disease of significant morbidity and mortality. Designing an effective policy response is instrumental in addressing the risk factors of this condition. Among the most prominent known bladder cancer risk factors are smoking and other tobacco use, past radiation exposure, chronic bladder cancer inflammation, exposure to chemicals, especially in work settings, and parasitic infections. However, it is not always clear what causes bladder cancer, and some people can be diagnosed without exposure to any of these listed causes.¹⁰

Bladder cancer tends to be more prevalent in the ageing population and more advanced in the elderly,¹¹ imposing an additional treatment burden.

Tobacco smoking has been recognised as the strongest risk factor for bladder cancer and other

types of cancers.¹² A growing body of evidence underlines that bladder cancer incidence is higher among tobacco smokers,¹³ which requires additional efforts in tobacco prevention policies. These should be complemented with increased awareness both at EU and national level of the impact of occupational and environmental exposure to carcinogenic substances and the contribution to bladder cancer incidence.¹⁴

As the main symptom of bladder cancer is macroscopic haematuria,¹⁵ it is of utmost importance to establish strategies to speed up the referral of these patients to a urologist.¹⁶ General public awareness regarding the importance of adequate and effective haematuria evaluation across age, gender categories and regardless of smoking status is a fundamental step in avoiding a missed cancer diagnosis.

DIAGNOSIS AND TREATMENTS



>80%
of people will survive
when diagnosed early

Bladder cancer is a disease area where patients, particularly those in the advanced setting, have high unmet medical needs. The World Bladder Cancer Patient Coalition, has recently published a report on Patient and Carer Experiences with Bladder Cancer, which features findings from a global survey. With almost 1,200 respondents from 45 countries, this multi-year, multi-national research project highlights the many unmet needs experienced by those affected by bladder cancer, and stresses the opportunities to improve care experiences for patients, as well as address the support and information needs of bladder cancer patients and carers. The survey showed that whilst most patients visited their doctor once (52%) or twice (23%), 1 in 10 patients visited a doctor 5 or more times before being referred to see a specialist about bladder cancer. It was most common for younger patients, women and metastatic/advanced bladder cancer patients to visit their doctor five or more times before being referred to a specialist. The survey also showed that only 8% of bladder cancer patients responding to the survey had taken part in a clinical trial,¹⁷ severely limiting access to potentially life-saving treatments.

In muscle-invasive bladder cancer (MIBC), systemic recurrence after radical treatment is a pressing problem, as the available therapies in this setting are of limited efficacy.¹⁸ The health outcomes of patients with muscle-invasive bladder cancer are also suboptimal due to undertreatment. Furthermore, the 5-year MIBC survival remains low due to limited access to

treatment for this advanced form. Considering disease heterogeneity, each patient must be matched with the most appropriate treatment. The European Association of Urology ([EAU](#)) and the European Society of Medical Oncology ([ESMO](#)) developed comprehensive guidelines which cover therapeutic options, but these are not systematically followed.¹⁹

The recent developments of innovative treatments for bladder cancer can help improve the standard of care, and national Health Technology Assessment (HTA) bodies should work together with all the stakeholders involved in the medicines evaluation process to enable swift and equitable access to new therapies, particularly those in immuno-oncology. In this regard, the [EU HTA regulation](#) could be a new frontier for access to innovative treatments, and meaningful and structured involvement of patient organisations in these processes will ensure an effective collection of data for patient-centred and informed decision-making. Innovative medicines provide direct health benefits to patients, such as reduced mortality and improved quality of life, but also drive productivity gains both in the economy and society.²⁰

The current gender gap at the diagnosis level has severe consequences on women's health outcomes, who are more likely to die from bladder cancer than men. Even though men are more often affected, women experience the worst outcomes, with a greater risk of recurrence and lower overall survival, as they are often diagnosed late or misdiagnosed.²¹ The WBCPC Survey showed that it was more common for women to be diagnosed with another condition first (69%) before a correct bladder cancer diagnosis. Women were twice as likely to be mis-diagnosed with a Urinary Tract Infection (UTI) at 39%, compared to only 21% of men.

Timely and accurate diagnosis is key in ensuring that patients can access the right pathway for their bladder cancer treatment. The cancer patient community highlights the lack of investment in bladder cancer, which resulted in limited treatment options being available, delayed diagnosis and lower survival rates.

More than 80% of bladder cancer patients will survive for five years or more when diagnosed early. If diagnosed late, this falls drastically to only around 10%. Despite research advances for other types of cancers, these figures have remained static for bladder cancer.²²

IMPACT ON HEALTH OUTCOMES AND PATIENT'S LIVES



The long-lasting challenges for cancer patients, such as timely diagnosis and access to treatments and care, have been exacerbated by the COVID-19 pandemic.

Overall, bladder cancer patients experience delays in treatment, which may have a negative impact on disease prognosis and cancer progression.²³ Indeed, in bladder cancer even short delays in diagnosis can lead to disease progression and to the development of a higher cancer stage. Patients living with bladder cancer experience a significant decline in functional status and overall health, including physical and mental well-being after diagnosis.²⁴

A patient survey conducted by the World Bladder Cancer Coalition (WBCPC) shows that the two critical

aspects that remain largely unaddressed in healthcare settings are the impact of bladder cancer treatment on patients' mental well-being and their sexual health.²⁵

"Although I knew that smoking is a risk factor for lung cancer, I was not aware that exposure to chemicals and tobacco smoking increase the risk of developing bladder cancer".

"The first time I had blood in urine I was shocked, but I did not take any actions. One week later, when it happened again, I got scared and went to my doctor. Only after the diagnosis did I know about the connection between the blood in urine and bladder cancer".

"My initial diagnosis dates back to 1999, and it is now chronic. The urologist informed that I had to undertake the cystoscopy and scheduled a TURBT (transurethral resection of bladder tumor). They didn't counsel me on how to navigate my disease and we didn't discuss treatment options. I he did what he though was best, and I accepted it".

Testimonial from a patient living and working with bladder cancer

BLADDER CANCER SURVIVORSHIP: CARER ROLE



Many researchers have underlined that significant unmet informational and supportive care needs, including survivorship, persist throughout the bladder cancer pathway.²⁶

Bladder cancer patients experience challenges ranging from lack of information, insufficient support in managing the long-term side effects of treatment, and barriers to performing certain tasks in the workplace, which often require changing employment. Furthermore, bladder cancer patients are exposed to psychological vulnerabilities regarding sexual dysfunction and altered-body image, particularly if they have had their bladder removed and are living with a urostomy.²⁷

Given the complexities of bladder cancer treatments, patients rely on their carers, many of whom are unpaid because their social and economic value is still not recognised in the majority of the EU Member States. Carers are often providing care and support to their spouse, partner or a parent, with a role often extending for more than a year.²⁸ Carers play a crucial role in finding information about bladder cancer, either together with

a patient or on their behalf. Although caring has positive and rewarding aspects, being an unpaid carer can be time-consuming and may have a negative impact on the carer's physical and mental health and well-being. In the recent WBCPC survey 91% of carers said they were impacted emotionally by caring for or supporting someone with bladder cancer.²⁹ This included feelings of fear that the person with bladder cancer will relapse, experiencing emotional distress, impact on wellbeing and feelings of guilt, among others.

"I was unaware that tobacco smoking and exposure to certain chemicals increases the risk of developing bladder cancer. I didn't know much about bladder cancer before I was diagnosed and was unaware of the symptoms, such as blood in urine, linked to this type of cancer. When I first had blood in my urine I was, of course, very scared and went to see my doctor immediately".

"When I discussed this with my doctor, I felt that I didn't receive sufficient information specifically related to bladder cancer. For example, the doctor did not discuss with me the available treatment options and what effects they can have on my day-to-day life and emotional wellbeing".

Testimonial from a patient living and working with bladder cancer

Policy Recommendations

BLADDER CANCER PREVENTION

Prevention programs are an instrumental part of the effort of cancer control, as they can reduce both the incidence of cancer and mortality rates. In the case of bladder cancer, incidence can be particularly impacted by tobacco smoking and exposure to carcinogens in the workplace, both requiring a strong and effective policy response.

P R E V E N T I O N

1



Improve legislation in the field of **occupational cancer**.³⁰ With the [EU Carcinogens and Mutagens Directive](#) having been revised in 2021, it is necessary to calibrate more focus in its transposition at national level on the links between certain chemicals³¹ and bladder cancer,³² as well as explicitly recognise in future revisions of the Directive the link between bladder cancer and certain chemicals and include it in the list as occupational cancer. As part of these efforts, the Commission should strengthen the mandate of the EU agency for occupational safety and health ([EU-OSHA](#)) in combatting occupational cancers. Furthermore, it is necessary for the Member States to focus on **health surveillance** for those at high-risk and encourage initiatives at national level to **monitor** the exposure to relevant chemicals and **improve & create databases of cancer-causing chemicals** to prevent bladder cancer.

2



Considering the EU's revision of its regulatory instruments on tobacco and the EU's Beating Cancer plan goal to create a tobacco-free generation by 2040, **the EU must ensure the implementation of the [Framework on Convention on Tobacco Control](#)**. This would also stand to address the **differential rates of smoking** between Member States, ranging from 28% in Bulgaria to 6% in Sweden. Such an objective will help countries with weaker tobacco legislation to take concrete actions towards addressing tobacco control. Taxation instruments play a pivotal role in reducing tobacco consumption. In this regard, the revision of the [EU Tobacco Tax Directive 2011/64/EU](#) will enable Member States to increase the minimum excise duty rate and harmonise the taxation of new products (e-cigarettes and heated tobacco products). The upcoming revision of the 2009 Council Recommendation on smoke-free environments to extend its coverage to new products and to additional outdoor spaces. The revision of the [Tobacco Products Directive 2014/40/EC](#) and the [Tobacco Advertising Directive 2003/33/EC](#) should encourage countries to implement mandatory plain standardised packaging with 80% front and back pictorial health warnings for all tobacco products, harmonise definitions of tobacco and related products across EU legislation, recommend banning cigarette filter, strengthening regulation on banning advertising, promotion, sponsorship of tobacco and novel products.

BLADDER CANCER DIAGNOSIS AND TREATMENT

Early diagnosis of bladder cancer is critical to improving survival rates.³³ When diagnosed at its earliest stage more than 8 in 10 people with the disease will survive for five or more years. The long-lasting challenges affecting cancer patients, including bladder cancer patients, such as timely diagnosis and access to treatment and care, have been further exacerbated by the COVID-19 pandemic.³⁴ The pandemic has profoundly impacted the continuity of care services, thus creating adverse outcomes for cancer patients.

ACCESS TO DIAGNOSIS & TREATMENT:

3



The European Commission, together with the Member States, should learn from [Europe's Beating Cancer plan](#) and its [Screening and Early Detection Recommendations](#) to invest in research and development of an effective bladder cancer early detection framework for at-risk populations. With future revisions of the Council Recommendations on Screening to be directed towards screening and early detection of bladder cancer. Furthermore, expanding the definition of essential quality standards, achieved in the [Commission Initiative on Breast Cancer](#), would be highly beneficial.³⁵

4



The Commission should encourage Member States to exchange best practices in establishing strategies for the early diagnosis of bladder cancer. **Research investments should be allocated at the EU and national levels to develop a reliable risk-based technology to screen for bladder cancer and better understand the current limitations and perspectives in clinical practice.** Currently, there is no screening test for bladder cancer in routine use anywhere in the world.³⁶ Around 25% of bladder cancers are diagnosed at later stages. For the most advanced stages, only 1 in 10 people survive for five years or more after the diagnosis. Timely and accurate diagnosis is critical in ensuring that patients are able to access the right pathway for their bladder cancer, whether it is non-muscle invasive, locally invasive, or metastatic.³⁷ Member states should therefore ensure that patients are aware of the potential risks of bladder cancer, and encouraged to take part in clinical tests for bladder cancer detection.

5



National HTA bodies should create a robust framework for patient advocacy groups' involvement in decision-making and facilitate their involvement in Health Technology Assessment (HTA), including the [EU HTA](#), as patients are the recipient of these technologies, and they have the lived experience of the condition and its treatment within a healthcare setting. Payers' consideration of patient-centric forms of data such as Real-World Evidence (RWE) in the HTA assessment will lead to more informed decision-making and reduce delays in patient access.

6



The EU and the Member States should facilitate funding for research into unmet need areas of bladder cancer. Bladder cancer is lagging behind other common cancers in terms of research funding. This gap in addressing unmet medical needs could potentially widen with the Pharmaceutical Legislation Revision by the European Commission. The proposed definition of unmet medical needs, which does not adequately include the patient voice, risks excluding crucial societal aspects around patients' needs that significantly impact their lives. To ensure accuracy, patients should be involved in drafting the definition, which must encompass both their medical and societal needs. Bladder cancer is a frequent malignancy and has a clinical need for new therapeutic approaches. [Horizon Europe, the EU4Health and national research](#) funds are instrumental in fostering investments in bladder cancer research to ensure that science is translated into highly innovative life-changing bladder cancer treatments and care solutions.

7



National HTA bodies should work with EU regulators to improve access to innovative treatments and recognise the value of incremental innovation and ensure that bladder cancer patients have equitable access to best possible and high-quality standard of care. The European Medicine Agency (EMA) PRIME scheme should consider allowing early access to novel bladder cancer therapies for patients without treatment options. Compared to other regions, in Europe most bladder cancer therapies are not approved or conditionally approved by EMA, thus exacerbating the unmet needs of patients. National HTA bodies should also invite input from bladder cancer patient groups during their assessment process.

8



An increasing number of studies are available in various settings for patients who have never had systemic therapy as well as pre-treated patients. **Access to clinical** trials could be an option to be discussed with the physician, and the therapeutic decision should be made depending on the individual patient and disease characteristics. The [ACT-EU clinical trials initiative](#) and its multi-stakeholder platform could be a promising opportunity for patients diagnosed with recurrent or metastatic bladder cancer, particularly those with unsuccessful prior chemotherapy.

LIVING WITH BLADDER CANCER

Patient surveys have shown that the experience of those with bladder cancer is one of the poorest compared to other cancers. This is driven by many factors including the absence of care planning, emotional support, and poor care discharge.³⁸ The clinical community needs to develop new measures to better identify patient needs across the care pathways, improve clinical practice, and assist patients in the early stage of diagnosis and treatment.

9



Establish centres of excellence with multidisciplinary teams in hospitals and for advanced disease outside hospitals to provide multidisciplinary, cutting-edge care to patients with all forms of bladder cancer. Encourage healthcare professionals (HCPs) participation in training, sharing best practices and scientific guidelines through the [European Inter-Specialty Cancer Training Programme](#); such an exchange of best practices at the European level would allow HCPs to better support patients in understanding different facets of diagnosis, as well as better prepare them to address the consequences of treatment on patient's sexual and social life, which is often not sufficiently taken into account. Encourage healthcare professionals to involve informal carers in the care team on an equal footing.

10



Member States together with the Commission should better collaborate to identify health disparities and inequalities associated with access to newer bladder cancer systemic therapies and propose solutions to the limited coverage of clinical trials availability.³⁹ The [European Inequalities Cancer Registry](#) could help identify disparities and inequalities associated with bladder cancer, especially in carcinogenic environmental exposure and advance the standardisation of care at the inter and intra-regional level. The inequalities cancer registry will play a critical role in informing Member States where to best direct investments. Member States should be responsible for providing appropriate tools to patients to access the right healthcare pathway for their bladder cancer and offer the best opportunity for high-quality care.

IMPROVING HEALTH OUTCOMES AND QUALITY OF LIFE (QOL)

Patient surveys highlight that bladder cancer patients experience reduced quality of life and suboptimal health outcomes after diagnosis.⁴⁰ Part of this state of play in bladder cancer is due to the lack of awareness around disease symptoms and risk factors, gender disparities and health inequity, and the recurrence rates of bladder cancer that frequently require prolonged care pathways, which are not well developed, and intensive surveillance over the lifetime of the patient.

AWARENESS

11



Empower patient groups to collaborate with national authorities and scientific societies to advocate for greater **bladder cancer disease awareness in primary care settings**. This will allow to ensure that patients can be referred and diagnosed more promptly, as well as for the establishment of bladder cancer patient networks within the healthcare setting to support the navigation through their disease. Member States⁴¹ should amplify the messages of Bladder Cancer Awareness month in May, led by the World Bladder Cancer Patient Coalition and its members.

12



Address gender gaps in diagnosing bladder cancer through better training of primary care healthcare professionals (HCPs) to enable them to make connections between exposure and disease, as well as **public awareness campaigns** to improve health literacy of bladder cancer risk factors and symptoms. For example, many general practitioners are unaware of bladder cancer's most frequent symptoms.⁴² Women are often diagnosed with bladder cancer at a later stage due to a gender difference in referral both at the patient and primary care levels. GPs, family doctors, and office-based urologists must pay particular attention to haematuria workup in women, as this matter is currently largely neglected. In this regard, increasing HCPs knowledge regarding haematuria and the implementation of haematuria workup guidelines for women is a fundamental step towards accurate diagnosis and timely referral to treatment.

13



Public awareness campaigns are instrumental in improving women's knowledge of bladder cancer symptoms and the necessity of an effective assessment of haematuria (i.e., distinguishing between haematuria and vaginal bleeding) to receive a timely diagnostic evaluation. Furthermore, awareness should be created for possible – and thus avoidable – hazards for bladder cancer, such as tobacco smoking or exposure, occupational chemicals, radiation exposure etc.

QOL AND HEALTH OUTCOMES IN BLADDER CANCER

14

Advocate for improving **health literacy** among the general public and risk groups regarding bladder cancer symptoms. Health literacy is pivotal in the context of reducing exposure to **bladder cancer risk factors**.⁴³

15



Allocate funding from the [National Recovery Resilience](#) plans and the EU structural and cohesion investment instruments to improve and modernise medical infrastructure at national level. Although cystoscopy is considered a key diagnostic tool for bladder cancer, there are other diagnostic tools that could be considered. For example, Computed Urography (CT scan)⁴⁴ is an accurate imaging technique for diagnosing cancer in the urinary tract. Studies highlight that CT can provide [97%](#) diagnosis accuracy. However, CT scan is not widely available in some countries.⁴⁵

SURVIVORSHIP AND THE ROLE OF CARERS

A holistic survivorship plan is instrumental for bladder cancer patients to secure their transition from treatment to well-being. The WBCPC survey respondents felt alone and lacked support to manage their health after treatment. More support was needed to help patient with recovery and adapting to the new normal. Cancer can affect patients' financial situation, employment, relationships, and social life. Bladder cancer treatment has the highest lifetime cost per patient of all cancers, and patients are not only exposed to high financial uncertainty, but they are also highly confronted by psychological and emotional burdens in their experience with treatment.

Furthermore, bladder cancer patients often rely on unpaid care from family and friends. Known as **informal carers**⁴⁸, their role ranges from helping with daily activities to more complex medical care. Cancer carers play a key role in supporting a relative affected through the cancer journey both physically and psychologically. Their involvement is essential for the treatment (i.e., coordinating with healthcare professionals, supporting adherence to treatment and delivering it in the case of treatment at home) as well as contributing to patients' well-being.⁴⁹ In Europe, 80% of long-term care (LTC) is provided by unpaid carers.⁵⁰ Carers are an indispensable part of the provision and sustainability of health and social systems. Providing care to a relative can be a personal source of satisfaction, but it also creates its own set of challenges. The informal carers will become even more important considering demographic ageing and the increasing prevalence of chronic conditions.

SURVIVORSHIP

16



Stakeholders and patient groups should advocate for the [EU Cancer Mission](#) and Europe's Beating Cancer Plan to provide a **holistic bladder cancer survivorship template** focused on physical and psychological health and social and economic challenges that affect cancer patients after the end of active cancer treatment. Patient groups and Member States should leverage the EU Cancer Survivor smart card to improve communication between patients with healthcare professionals, patient groups and social care providers to improve patients quality of life, support through rehabilitation and self-management, address long-term effect of treatment and psychological needs. Cancer survivors must also be supported with professional re-integration. The European Commission, under the EU4Health programme, recently ran a call for tenders to develop a [Code of Conduct of Fair Access of Cancer Survivors to Financial Services and a call to map EU/EEA/EFTA countries' job retention policies for cancer patients](#) and people with a history of cancer. It is of utmost importance for patient groups to mobilise and ensure that their needs are considered in these two important initiatives that will directly impact cancer patients' professional and financial status.

17



[European Health Data Space \(EHDS\)](#) is one of the central building blocks of the European Health Union, and it is of paramount importance in making a difference in the way care is delivered. **Electronic records play an instrumental role in improving the care experience for bladder cancer patients**, and the EHDS will be a foundational tool for implementing an effective framework for data harmonisation and enabling the use of electronic records for bladder cancer to learn from routinely collected clinical data for personalised treatment guidelines. Furthermore, the **establishment and application of a standardised registry of patient-centred outcomes for muscle-invasive and non-muscle-invasive bladder cancer** to help incorporate patient centrality and its experiences while undertaking a bladder cancer treatment.⁵¹ The Commission plays a critical role in encouraging Member States to exchange best practices for the efficient use of digital health data that can inform patient value-based care.

Bladder cancer presents a unique set of challenges, requiring further coordination at European and national level to better protect patients. On **early detection and screening**, a more detailed analysis of studies related to bladder cancer screening is needed to understand the current limitations as occupational screening remains widespread. Indeed, one of the main problems with bladder cancer is identifying a sufficiently high-risk population, given the almost ubiquitous nature of the main risk factors, such as smoking, pollution and occupational chemical exposure.

***Prof. Morgan Roupret**, Sorbonne University, AP-HP, Urology,
Pitié-Salpêtrière Hospital, F-75013 PARIS, France*

CARER ROLE

18



Recognise informal carers and the social and economic value of their contribution in national legislation and strengthen the collective voice and rights of unpaid carers at the community, regional and national levels through legal recognition, social protection and participation in policy initiatives as outlined in both the [European Care Strategy](#) to help address workforce challenges in the care sector and the [European Pillar of Social Rights](#).

19



Minimise the financial burden placed on unpaid carers and facilitate their employment and social inclusion through greater work-life balance. Beyond the minimal requirements stipulated in the [EU Directive on work-life balance](#), Member States should ensure informal carers can benefit from care leave which commensurate with their real needs and are financially compensated. Specific attention should be given across the EU to the effective implementation of carer's right to flexible working hours, supported by awareness raising activities. Member States should also ensure carers' access to pension right enshrined in [chapter 3](#), section 15 of the **European Pillars of Social Rights** and unemployment and accident insurance. In parallel, the out-of-pocket costs associated with cancer should be minimised to reduce the financial toxicity of the disease affecting the entire household.

20



Member States should build on the momentum created by the ambitious objectives and dedicated program by the [European Care Strategy](#), which calls specifically for informal carers to be better recognised and supported through information, training, respite care and access to formal services.

When it comes to **developing innovative bladder cancer therapies**, urologists need to be involved in clinical research and protocols to provide early access treatment options for their patients. It is vital that new molecules in the pipeline are available quickly to patients. Furthermore, when we look at **quality of life and health outcome** integrative medicine. Still, it must be admitted that today there are many differences in bladder cancer from one hospital to another. Solving this requires significant organisation, as well as human and financial resources. Finally, during **treatment** we must rely more on the doctor-patient dialogue and multidisciplinary listening approach. Empowering patients and encouraging their involvement in quality-of-life assessment process and patient-reported outcomes is also necessary.

Prof. Morgan Roupret, Sorbonne University, AP-HP, Urology,
Pitié-Salpêtrière Hospital, F-75013 PARIS, France

Annex

THE BURDEN OF BLADDER CANCER

- **The incidence of bladder cancer is nearly 4 times higher in men than in women.**⁵³ Worldwide, Greece has the highest incidence of bladder cancer among males, whereas Hungary has the highest number of incidence among females.⁵³
- **Southern Europe**, where approximately 26.6 per 100,000 males and 5.8 per 100,000 females are diagnosed with bladder cancer each year, **has the highest incidence of bladder cancer among the global population.**⁵⁴
- Histologically, more than **90% of bladder cancer cases** are transitional cell (urothelial) **carcinoma**, approximately 5% are squamous cell carcinoma, and less than 2% are adenocarcinoma.⁵⁵
- **In the European Union, bladder cancer is the ninth leading cause of death, accounting for 3% of all cancer deaths.**⁵⁶
- According to data from 2012, **bladder cancer cost the EU €4.9 billion.** Costs associated with **healthcare amount to €2.9 billion**, whilst the remaining **€3 billion** are caused by productivity **losses and informal care.**⁵⁷
- The **life expectancy** for bladder cancer patients is influenced by **co-morbidities, age, and gender.**⁵⁸
- The prognosis for bladder cancer also depends on whether the patient has:
 - ↳ **Non-muscle invasive bladder cancer:**⁵⁹ cancer is only in the lining or the connective tissue beneath the bladder lining.
 - ↳ **Muscle-invasive bladder cancer:** cancer has grown into a deeper muscle layer of the bladder or beyond.⁶⁰
 - ↳ **Metastatic bladder cancer:** The cancer that has spread to other parts of the body is called metastatic bladder cancer. Approximately 5% of patients are diagnosed at this stage.⁶¹
 - ↳ **Upper-tract urothelial carcinoma (UTUC):** cancer occurs in either the inner lining of the tube that connects the kidney to the bladder or within the inner lining of the kidney.⁶²

RISK FACTORS

- The risk of bladder cancer increases with age. About 9 out of 10 people with bladder cancer are older than 55.⁶³
- **Cigarette smoking** is generally recognised as the **leading cause of bladder cancer.** Smoking is accounted to cause about 50% of bladder cancer cases in developed countries.⁶⁴
- Occupational and environmental interaction with carcinogenic substances is the second-largest risk factor behind smoking.⁶⁵
- **Certain professions are therefore at greater risk of developing bladder cancer in working settings.** Industries carrying higher risks include makers of rubber, leather, textiles, paint products, and printing companies. Other workers with an increased risk of developing bladder cancer include painters, machinists, printers, hairdressers, and truck drivers.⁶⁶
- Urinary infections, kidney and bladder stones, bladder catheters left in place for a long time, and other causes of chronic (ongoing) bladder irritation have been linked to bladder cancer (especially squamous cell carcinoma of the bladder). But it's not clear if they intrinsically cause bladder cancer.⁶⁷
- Inherited genetic factors have been established as risk factors for bladder cancer, particularly for UTUC. Although certain genetic factors do not pose an intrinsic disposition for bladder cancer, they may confer additional risk.⁶⁸
- Other risk factors for bladder cancer include race, medical conditions, and dietary factors, although due to a lack of consensus, future research is required to identify causation.⁴⁹
- However, it is not always clear what causes bladder cancer, and some people can be diagnosed without having had exposure to any of the listed causes.

SYMPTOMS:

- Typically, bladder cancer is diagnosed after a person tells their doctor about blood in the urine, also called haematuria. "Gross haematuria" is a medical term defining that enough blood is present in the urine that the patient can see it. It is also possible that there are small amounts of blood in the urine that cannot be seen. This is called "microscopic haematuria," and it can only be found with the help of a microscope or with a urine test.⁶⁹
- General urine tests are not used to make a specific diagnosis of bladder cancer because haematuria can be a sign of several other conditions that are not cancer, such as an infection or kidney stones. One type of urine test that can determine whether there is cancer is cytology, a test in which the urine is studied under a microscope to look for cancer cells.⁷⁰
- Other bladder cancer symptoms and signs may include:
 - ↳ Frequent urination
 - ↳ Painful urination
 - ↳ Back pain
 - ↳ Incontinence
 - ↳ Weight loss
 - ↳ Fatigue
 - ↳ Repeated urinary tract infections.

TYPES OF BLADDER CANCER

- **Bladder cancer is classified based on the type of cells where it begins. The main types are:**
 - ↳ **Urothelial carcinoma** is the most common type of bladder cancer. It starts in the urothelial cells, which line the inside of the bladder.
 - ↳ **Squamous cell bladder cancer** begins in squamous cells, which are thin, flat cells that may form in the bladder after long-term infection or irritation. These cancers occur less often than urothelial cell cancers..
 - ↳ **Keratinising squamous cell metaplasia (KSCM)** refers to abnormal bladder wall tissue. This is a preneoplastic condition with strong associations with squamous cell carcinoma. There is limited guidance and follow-up for patients presenting with this condition.⁷¹
 - ↳ **Urothelial cell carcinoma of the upper tract**, which, technically is not a type of bladder cancer. Instead, it is a cancer of the inner lining of the kidneys or of a ureter, the tubes that carry urine from the kidneys to the bladder. Since it starts in the same type of cells as most bladder cancers, many treatments are the same, including chemotherapy, targeted therapy, and immunotherapy options.⁷²
- **Bladder cancer is also categorised based on whether and how it has spread within and outside the bladder. A patient's treatment options are often determined by this spread.**
 - ↳ **Non-muscle-invasive bladder cancer (NMIBC).** The cancer has not grown into the detrusor/muscle wall. Approximately, 50-80% of bladder cancer cases are NMIBC when diagnosed for the first time.
 - ↳ **Locally invasive bladder cancer.** The cancer has invaded the muscular wall of the bladder and/or spread to nearby organs and/or lymph nodes. Invasive bladder cancer is associated with a poor prognosis. Prompt removal of the bladder or a combination of chemoradiation can save the life of 1 out of 2 patients.
 - ↳ **Metastatic bladder cancer.** The cancer that has spread to other parts of the body is called metastatic bladder cancer. Approximately 5% of patients are diagnosed at this stage.⁷⁴
- Treatment for muscle-invasive bladder cancer has evolved from purely surgical to multimodal, as in the treatment of breast, prostate, or colon cancers. The biggest challenges today are to improve the ability to predict which patients will respond to which treatments, sparing patients from the unnecessary side effects of therapies that are unlikely to work for them.⁷⁴

AWARENESS AND DIAGNOSIS

- A [survey](#) developed by the World Bladder Cancer Patient Coalition (WBCPC) shows that 20% of patients felt that their symptoms are not seriously considered at the first visit to a doctor, 54% did not know the signs and symptoms of bladder cancer before diagnosis and 64% of the respondents did not know that visible blood in urine was a sign of bladder cancer.
- The same survey points out that 57% of respondents were diagnosed with another condition before bladder cancer, the most common being a urinary tract infection (28%).
- Most patients visited their doctor once (52%) or twice (23%) before being told they needed to see a specialist.
- The survey findings are consistent with literature showing that women have greater delays in diagnosis and lower referral to a specialist due to healthcare professionals' misconceptions regarding haematuria evaluation. The gender disparity is also partially explained by many women ignoring the most basic symptom of bladder cancer - blood in the urine.⁷⁵

BLADDER CANCER TREATMENTS

- **The most common types of bladder cancer treatments include:**⁷⁶
 - ↳ Surgery
 - ↳ Radiation therapy
 - ↳ Chemotherapy
 - ↳ Immunotherapy
 - ↳ Targeted therapy
- **Non-muscle-invasive bladder cancer treatment**
 - ↳ Non-muscle-invasive bladder cancer is treated by completely removing all visible tumours with Transurethral Resection of Bladder Tumor (TURBT), often followed by a washing of the bladder cancer with medicines to prevent the growth or spread of cancer cells (chemotherapy). Additional chemotherapy or immunotherapy may be used for patients with an increased risk of recurrence.⁷⁷
 - ↳ Bacille Calmette-Guerin (BCG) is recognised as a general type of treatment for bladder cancer, and it is a vaccine made from weakened Mycobacterium Bovis. BCG stimulates the immune system and leads to an increase in anti-cancer proteins. Instillation therapy with (BCG) subsequent to transurethral resection (TUR) is considered the most effective form of treatment in patients with non-muscle invasive carcinoma.⁷⁸
- **Muscle-Invasive bladder cancer treatment**⁷⁹
 - ↳ The primary treatment for muscle-invasive bladder cancer is the surgical removal of the bladder (cystectomy), followed by the construction of a new way to store and regulate the flow of urine.
 - ↳ Radiotherapy can be used:⁸⁰
 - As part of the treatment for some early-stage bladder cancer, after surgery that does not remove the whole bladder, such as TURBT.
 - As the main treatment for people with earlier-stage cancers who cannot have surgery or chemotherapy.
 - As part of treatment for advanced bladder cancer.
 - To help prevent or treat symptoms caused by advanced bladder cancer.
 - ↳ Radiation therapy is often included in the trimodal therapy (TMT), which is a combination of maximal transurethral resection of bladder tumour (TURBT), radiotherapy and chemotherapy. This treatment is available to all patients except where there are specific indications for surgery (widespread Carcinoma-in-situ (CIS), Squamous Cell Carcinoma (SCC), Adenocarcinoma etc.,). Considering that this treatment can incur side effects, high-level of patient compliance with the treatment and follow-up is required. About a third of patients undergo bladder removal after the failure of a bladder-sparing treatment.⁸²

- ↳ The World Bladder Cancer Patient Coalition (WBCPC) Survey findings show that only 16% of patients received information regarding clinical trials, and about half of them took part in one. This figure reflects the low level of research fundings in bladder cancer and the disproportionate few clinical trials conducted in Europe.
- ↳ Over a quarter of all survey respondents (27%) had a radical cystectomy, and nearly half of these patients reported not being counselled prior to their surgery on sexual side effects of the treatment.⁸³
- ↳ Radical cystectomy plays a central role in the treatment of muscle-invasive bladder cancer⁸⁴; it entails the removal of the bladder to prevent further cancer spread. It may also include the removal of some or all of the urethra. For men, the organs near the bladder may also be removed: prostate and seminal vesicles. In women, it may include the removal of the uterus, ovaries, fallopian tubes and, in some cases, parts of the vaginal wall.

- ↳ Nearly 74% of people who had a radical cystectomy said that no other treatment options were discussed with them to retain the bladder.⁸⁵ This figure reflects the low level of research funding in bladder cancer innovative treatments and the need to improve communication between patients and HCPs regarding the long-term effects of treatment options.

The type of urinary diversion after cystectomy for bladder cancer has an impact on the overall quality of life⁸⁶ such as urinary diversion via a urostomy, where urine is released into an external bag through an opening (stoma) through the skin, near the belly button.

BLADDER CANCER IMPACT ON PATIENT'S LIVES

- The survey conducted by the WBCPC shows that as a result of the therapeutic management of bladder cancer, patients reported a significant emotional impact, with the main impact being on sexual performance, anxiety and uncertainties regarding their professional and social status.⁸⁷
- According to patients' self-reported ability to perform activities of daily living (ADLs), bladder cancer has a significant impact on multiple domains. After a diagnosis of bladder cancer, patients reported difficulties in all ADLs, specifically for bathing, using the toilet and continence. Patients also reported a substantial decline in functional status and overall health, including both physical and mental well-being.⁸⁸ Additionally, some patients reported difficulties dressing, eating, walking, and sitting up and down.
- The physical impact of bladder cancer on patient-reported quality of life is dependent on the type of bladder cancer. Although patients with muscle-invasive and patients with non-muscle-invasive forms of bladder cancer both reported bodily pain; the reported impact on physical pain of muscle-invasive bladder cancer is significantly higher.⁸⁹
- Apart from adverse treatment outcomes on social, mental and physical life, bladder cancer patients are affected by the treatment financial burden. According to the WBCPC survey, half of the respondents said they were impacted financially. The degree of impact was higher for patients with metastatic bladder cancer, accounting for 57%.⁹⁰
- In order to mitigate the effects of the bladder on patients' lives, certified rehabilitation efforts need to be improved, in particular for females undertaking surgery but no adequate guidance and rehabilitation programs for their neobladder, as well as the training programs for patients after cystectomy.

References

- 1 Jemal A, Siegel R, Ward E, et al. (2007) Cancer Statistics. *CA Cancer J Clin.* 2007; vol 57, pp. 43-66.
- 2 Anke Richters et al. (2020) The Global Burden of Bladder Cancer: an update, in *World J Urol.* 2020 Aug;38(8):1895-1904.
- 3 Jose Leal et al., (2016) Economic Burden of Bladder Cancer Across the European Union. *European Urology.* Vol. 69, no 3, pp.438-447
- 4 Vladimir Bilim et al. (2020) Advanced Bladder Cancer: changing treatment landscape, *J Pers Med.* 2022 Oct 20;12(10):1745.
- 5 Jonathan Rosenberg et al., (2005) Update on chemotherapy for advanced bladder cancer. *Journal of Urology.* vol 174, pp.14-20.
- 6 Oner Sanli et al., (2017) Bladder Cancer. *Nature Reviews.* 2017;13:17022.
- 7 Cancer. Net Bladder Cancer: Statistics. Link [here](#) (Accessed 14/04/2023).
- 8 Jose Leal et al. (2016) Economic Burden of bladder cancer across the European Union, in *European Urology* Vol 69. No 3, pp. 438-447
- 9 Ibid.
- 10 Mayo Clinic (2022), Bladder Cancer, Available: <https://www.mayoclinic.org/diseases-conditions/bladder-cancer/symptoms-causes/syc-20356104> (Accessed 06/02/2023).
- 11 Gray Jordon et al., (2018) Treatment of urothelial cancer in elderly patients: focus on immune check inhibitors, *Drugs and Aging*, vol 35, pp. 409-421.
- 12 Cancer Council NWS [online] (2020). 16 types of cancers caused by smoking. Available at: <https://www.cancercouncil.com.au/news/there-are-16-cancers-that-can-be-caused-by-smoking/> (accessed 16/01/2023).
- 13 Neal Freedman et al. (2011) Association between smoking and risk of bladder cancer among men and women, *JAMA.* 306(7):737-745
- 14 Supra note.
- 15 Macroscopic haematuria is a condition characterised by the presence of blood in urine that is visible without a microscope.
- 16 Rashed Ghandour et al. (2019) Evaluation of Hematuria in a Large Public Health Care System, in *Bladder Cancer Journal*, vol 5, no 2, pp. 119-129
- 17 World Bladder Cancer Patient Coalition (2023). Patient and carer experiences with bladder cancer: findings from a global survey. Available online, worldbladdercancer.org/patient-survey-report.pdf
- 18 Martin Boegemann et al., (2020) [Prognostic Implications of Immunohistochemical Biomarkers in Non-muscle-invasive Bladder Cancer](#) and Muscle-Invasive Bladder Cancer. *Mini-Reviews in Medical Chemistry* vol. 20, no.12, pp.1133-1152
- 19 The [EAU guidelines](#) provide evidence to help urologists assess the evidence-based management of muscle-invasive-bladder cancer (MIBC) and to incorporate guideline recommendations into their clinical practice. The [ESMO clinical practice guidelines](#) provide key recommendations for diagnosis, staging and management of bladder cancer,
- 20 Claudio Schiener et al., (2021) Report: Social impact of innovative medicine - a systematic approach to capture the societal and macroeconomic dimension of medicines. *WiFOR Darmstadt.*
- 21 Joshua Cohn et al. (2014) Sex disparities in diagnosis of bladder cancer after initial presentation with hematuria: a nationwide claims-based investigation. *Cancer* vol.120, No 4, pp. 555-561.
- 22 Cancer Research UK. Survival for Bladder Cancer - <https://www.cancerresearchuk.org/about-cancer/bladder-cancer/survival> (Accessed 19/01/2023).
- 23 Julien Sarkis et al. (2020) "[Bladder cancer during the COVID-19 pandemic: the calm before the storm?](#)" *Future Science OA* 2020 (accessed 12/12/2022)
- 24 Garrett Ungerer et al. (2020), Living with bladder cancer: self-reported changes in patient's functional and overall health status following diagnosis, in *European Urology Open Science* vol. 20, pp. 14-19.
- 25 Fight bladder cancer: surviving bladder cancer. <https://fightbladdercancer.co.uk/get-help/living-cancer/surviving-bladder-cancer> (Accessed 04/11/2022).
- 26 Jili Chung et al. (2019) "Assessment of quality of life, information, supportive care needs in patients with muscle and non-muscle invasive bladder cancer across the illness trajectory" *Springer.* 27(10):3877-3885.
- 27 If cancer is in the bladder, part of the treatment may include the removal of all parts of the bladder and diverting or detouring the urine by doing a urostomy. More details on bladder cancer treatments in the ANNEX.
- 28 World Bladder Cancer Patient Coalition (2023). Patient and carer experiences with bladder cancer: findings from a global survey. Available online, worldbladdercancer.org/patient-survey-report.pdf
- 29 World Bladder Cancer Patient Coalition (2023). Patient and carer experiences with bladder cancer: findings from a global survey. Available online, worldbladdercancer.org/patient-survey-report.pdf
- 30 The European Directive 2004/37/EC on carcinogens, mutagens or reprotoxic substances at work was recently amended.
- 31 American Cancer Society, chemicals known to increase the risk of bladder cancer include aniline dyes, 2-Naphthylamine, 4-Aminobiphenyl, xenylamine, benzidine, o-toluidine. Occupations linked to an increased risk of bladder cancer are manufacturing jobs involving dyes, textiles, rubbers, paints, plastics and leather tanning. Link: [here](#) (Accessed 14/04/2023).
- 32 European Parliament (2020), Background note on environmental and occupational risk factors, and prevention strategies "According to the Roadmap on Carcinogens in 2016, about 120,000 work-related cancer cases occurred annually as a result of exposure to carcinogens at work in the EU, leading to approximately 80,000 fatalities each year. The IARC World Cancer Report 2020 noted that some of the most frequent occupational cancer types are lung cancer, bladder cancer, and skin cancer." Link [here](#). (Accessed 13/02/2023)
- 33 International Agency for Research in Cancer (2022) "[Improving early detection and clinical management of bladder cancer](#)" (Accessed 08.12.2022).
- 34 Abdul Rahman Jazieh et al., (2020) Impact of the COVID-19 pandemic on cancer care: a global collaborative study, in *JCO Global Oncology*, no 6, pp.1428-1438.
- 35 European Association of Urology "[The 'P' Word: the challenge of urinary problems in people living with prostate and bladder cancer](#)" (Accessed 12/12/2022)
- 36 National Health Institute, Bladder Cancer Screening. <https://www.cancer.gov/types/bladder/screening> (Accessed 27/02/2023)
- 37 European Cancer Coalition (2016), White Paper on Bladder Cancer.
- 38 World Bladder Cancer Patient Coalition (2023). Patient and carer experiences with bladder cancer: findings from a global survey. Available online, worldbladdercancer.org/patient-survey-report.pdf
- 39 Andrea Necchi et al., (2022) Disparities in access to novel systemic therapies in patients with urinary tract cancer: propagating access, policies and resources uniformly. *Clinical Genitourinary Cancer*, pp.? The article underlines that access to newer therapeutic options is susceptible to geographical health disparity due to the differences in healthcare systems and approval processes of the regulatory authorities. Furthermore, additional barriers to accessing innovative care are represented by limited coverage of clinical availability, which is consistent in focusing on selected geographical areas, across trials and clinical settings.
- 40 idem.
- 41 Another example of a successful awareness campaign is Movember and it could serve as an inspiration for a bladder cancer campaign. This impactful initiative originates from the United Kingdom, and it aims to make a difference in mental health and suicide prevention, as well as prostate and testicular cancer. Movember is an annual event in the UK involving the growing of moustaches during the month of November to raise awareness of men's health issues, such as prostate cancer, testicular cancer and men's suicide. Movember initiative also aims to increase cancer early detection, diagnosis and treatment in order to reduce the number of preventable deaths. Website: <https://uk.movember.com>
- 42 Yaxley Julian (2016) Urinary tract cancers: an overview of general practice, in *Journal of Family Medicine and Primary Care*, volume 5, no 3, pp. 533-538.
- 43 American Cancer Society "[Bladder Cancer Risk Factors](#)" (Accessed 14/12/2022).
- 44 Samuel Galgano et al., (2020) The role of imaging in bladder cancer diagnosis and staging, in *Diagnostics Review* vol.10, no 9.
- 45 Eurostat data on the use of the CT scanners in the Member States. <https://ec.europa.eu/eurostat/web/products-eurostat-news/-/ddn-20210702-2> (Accessed 15/10/2022)
- 46 World Bladder Cancer Patient Coalition (2023). Patient and carer experiences with bladder cancer: findings from a global survey. Available online, worldbladdercancer.org/patient-survey-report.pdf
- 47 Supra note.447.
- 48 The European Association Working for Carers (Eurocarers) defines an informal carer as "a person who usually provides unpaid care to someone with chronic illness, disability or other long-lasting care need, outside of a professional or formal framework".

- 49 [Cancer Carer Toolkit](#) (accessed 23/03/2023)
- 50 European Association Working for Carers, "[About carers](#)" (Accessed 12/12/2022)
- 51 Daan J. Reesink et al., (2021) Development of the first patient-centred set of outcomes for muscle-invasive and metastatic bladder cancer: a multicentre initiative, in *European Urology Open Science*, Vol 26, pp. 18-26.
- 52 Jemal A, Siegel R, Ward E. et al. (2007) *Cancer Statistics*, in *CA Cancer J Clin*. Vol. 57 pp. 43-66.
- 53 Sattam A Halaseh et al. (2022) A review of Etiology and Epidemiology of bladder cancer: all you need to know, *Cureus*. 2022 Jul 27;14(7):e27330.
- 54 Global Cancer Statistics 2020: GLOBOCAN estimates of incidence and mortality worldwide for 36 cancers in 185 countries. <https://acsjournals.onlinelibrary.wiley.com/doi/10.3322/caac.21660> (Accessed 07/11/2022)
- 55 Heney N.M. (1992) Natural history of superficial bladder cancer. Prognostic features and long-term disease course, in *Urologic Clinics of North America*. Vol 19, pp. 429-433.
- 56 Emanuele Crocetti (do you mean: Crocetti E, Pirastu R, Buzzoni C, Minelli G, Manno V, Bruno C, Fazzo L, Iavarone I, Pasetto R, Ricci P, Zona A, Conti S, Comba P. Risultati del Progetto SENTIERI [SENTIERI Project: results]. *Epidemiol Prev*. 2014 Mar-Apr;38(2 Suppl 1):29-124. Italian. PMID: 24986500.
- 57 Leal, J., Luengo-Fernandez, R., Sullivan, R. & Witjes, J. A. (2016) Economic Burden of Bladder Cancer Across the European Union, *European Urology*, Volume 69, Issue 3, 2016,
- 58 American Cancer Society (2022). *Cancer Facts & Figures 2022*.
- 59 A different classification of bladder cancer does not distinguish between NMB....
- 60 Shuo Chen et al. (2019) Identifying non-muscle-invasive and muscle-invasive bladder cancer based on blood serum surface-enhanced Raman spectroscopy, in *Biomedical Optic Express*. vol. 10. no.7 (3533-3544)
- 61 European Cancer Patient Coalition, *Bladder Cancer White Paper 2016*.
- 62 Wallis, J.D.C (2019). Upper Tract Urothelial Carcinoma. Urotoday.com (Accessed 18/01/2023)
- 63 American Cancer Society, <https://www.cancer.org/cancer/bladder-cancer/causes-risks-prevention/risk-factors.html> (Accessed 14/12/2022)
- 64 Janković S et al. (2007) Risk Factors for Bladder Cancer, in *Tumori*, Vol 93, No 1, pp. 4-12.
- 65 Supra note.
- 66 American Cancer Society "Bladder Cancer Risk Factors" available [here](#). (Accessed 04/11/2022)
- 67 American Cancer Society supra note
- 68 Burger, M. et al., (2013) Epidemiology and Risk Factors of Urothelial Bladder Cancer, in *European Urology*, Volume 63, Issue 2, pp. 234-241.
- 69 American Society of Clinical Oncology (ASCO) [Bladder Cancer Symptoms and Signs](#) (Accessed 14/12/2022)
- 70 idem.
- 71 Ali Moostapha Tasleem et al., (2018) Keratinising squamous cell metaplasia: when is it safe to stop looking? *BMJ Journals*, pp.223-227
- 72 The University of Texas, MD Anderson Cancer Center, <https://www.mdanderson.org/cancer-types/bladder-cancer.html> (Accessed 15/12/2022)
- 73 European Cancer Patient Coalition, *Bladder Cancer White Paper 2016*.
- 74 Ibidem.
- 75 Women and Bladder Cancer (2022). *Bladder Cancer Advocacy Network*. (Accessed 18/01/2023).
- 76 Cancer.Net "Bladder Cancer types of treatment" (Accessed 04/04/2023).
- 77 European Association of Urology guidelines on non-muscle-invasive bladder cancer. Link: <https://d56bochluxqz.cloudfront.net/documents/full-guideline/EAU-Guidelines-on-Non-Muscle-Invasive-Bladder-Cancer-2022.pdf> (Accessed 13/02/2023)
- 78 Grimm, M.-O. et al. (2020) Treatment of High-grade Non-muscle-invasive Bladder Carcinoma by Standard Number and Dose of BCG Instillations Versus Reduced Number and Standard Dose of BCG Instillations: Results of the European Association of Urology Research Foundation Randomised Phase III Clinical Trial "NIMBUS", *European Urology*, Volume 78, Issue 5, 2020, Pages 690-698,
- 79 Victoria Cancer Council. Treatment for Muscle-Invasive Bladder Cancer. Link: https://www.cancervic.org.au/cancer-information/types-of-cancer/bladder_cancer/treatment-invasive-bladder-cancer.html (Accessed 04/04/2023).
- 80 American Cancer Society. Radiation Therapy for Bladder Cancer. Link: <https://www.cancer.org/cancer/bladder-cancer/treating/radiation.html> (Accessed 04/04/2023).
- 81 Tholomier et al., (2020) Bladder-sparing protocols in the treatment of muscle-invasive bladder cancer. *Journal of Translational Andrology and Urology*. Vol 9, no 6 pp. 2920-2937.
- 82 Supranote.
- 83 World Bladder Cancer Patient Coalition (2023). Patient and carer experiences with bladder cancer: findings from a global survey. Available online, worldbladdercancer.org/patient-survey-report.pdf
- 84 Aminoltejari K & Black P.C. (2020) Radical cystectomy: a review of techniques, developments and controversies. *Transl Androl Urol*. 2020 Dec;9(6):3073-3081.
- 85 World Bladder Cancer Patient Coalition (2023). Patient and carer experiences with bladder cancer: findings from a global survey. Available online, worldbladdercancer.org/patient-survey-report.pdf
- 86 Hobisch A, Tosun K, Kinzl J, Kemmler G, Bartsch G, Höltl L, Stenzl A. (2001) Life after cystectomy and orthotopic neobladder versus ileal conduit urinary diversion. *Semin Urol Oncol* Feb;19(1):18-23. PMID: 11246729.
- 87 World Bladder Cancer Patient Coalition (2023). Patient and carer experiences with bladder cancer: findings from a global survey. Available online, worldbladdercancer.org/patient-survey-report.pdf
- 88 Ungerer, G. et al., (2020) Living with Bladder Cancer: Self-reported Changes in Patients' Functional and Overall Health Status Following Diagnosis, in *European Urology Open Science*, Vol. 20, pp. 14-19.
- 89 Smith, A.B. et al., (2018) Impact of bladder cancer on health-related quality of life, in *BJU International*, Vol. 121, pp. 549-557.
- 90 World Bladder Cancer Patient Coalition (2023). Patient and carer experiences with bladder cancer: findings from a global survey. Available online, worldbladdercancer.org/patient-survey-report.pdf



World Bladder
Cancer Patient
COALITION



European
Association
of Urology

CONTACTS:

WWW.WORLDBLADDERCANCER.ORG

WWW.UROWEB.ORG