

# Emerging Trends in Bladder Cancer Advancements: A Brief Overview

Satish Kumar Sahu\*

Department of Oncology, Cancer Hospital, Kolkata, India

## Commentary

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**\*For Correspondence:** Satish  
Kumar Sahu, Department of  
Oncology, Cancer Hospital,  
Kolkata, India

**Email:**satishsahu456@gmail.com

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## ABOUT THE STUDY

Bladder cancer, though not always in the spotlight, is a significant public health concern. It ranks among the most commonly diagnosed cancers globally, with a substantial impact on patients' lives and healthcare systems. In this short communication, we aim to shed light on the latest trends and advancements in the understanding, diagnosis, and treatment of bladder cancer, offering a concise overview of this critical field.

### Understanding the disease

Bladder cancer primarily originates in the bladder's inner lining, known as the urothelium. It can manifest as either Non-Muscle-Invasive Bladder Cancer (NMIBC) or Muscle-Invasive Bladder Cancer (MIBC), each having distinct characteristics and treatment approaches.

### Emerging trends in diagnosis

**Liquid biopsies:** Liquid biopsies are revolutionizing cancer diagnosis, including bladder cancer. These minimally invasive tests analyze blood or urine samples for the presence of tumor-specific genetic material, providing valuable insights into disease progression and potential treatment options.

**Advanced imaging:** Innovations in medical imaging, such as multiparametric Magnetic Resonance Imaging (mpMRI) and Positron Emission Tomography-Computed Tomography (PET-CT), offer more accurate and detailed information about tumor size, location, and staging, aiding in treatment planning and monitoring.

### Treatment paradigm shifts

**Immunotherapy:** Immune checkpoint inhibitors, such as pembrolizumab and atezolizumab, have shown promise in treating advanced bladder cancer. These therapies work by unleashing the body's immune system to attack cancer cells, leading to improved survival rates in some patients.

**Personalized medicine:** Molecular profiling of tumors helps identify specific genetic alterations that drive bladder cancer. This knowledge enables personalized treatment approaches, including targeted therapies that address the unique genetic makeup of each patient's cancer.

### Enhanced surgical techniques

**Minimally invasive surgery:** Techniques like robotic-assisted laparoscopic surgery have made bladder cancer surgeries less invasive, resulting in shorter hospital stays and faster recovery times for patients.

**Bladder-preserving strategies:** Trimodality therapy, combining transurethral resection, radiation therapy, and chemotherapy, allows some patients with MIBC to preserve their bladder function while effectively treating the cancer.

### The role of supportive care in bladder cancer

Bladder cancer, a significant public health concern, not only poses physical challenges but also takes a toll on a patient's overall well-being. Beyond the primary treatment modalities such as surgery, chemotherapy, and immunotherapy, the role of supportive care in bladder cancer management is increasingly recognized as essential. Supportive care aims to address the physical, emotional, and psychological aspects of the disease, ultimately enhancing a patient's quality of life.

**Pain management:** Pain is a common symptom in bladder cancer, especially in advanced stages or following certain treatments. Supportive care includes pain management strategies that help alleviate discomfort and improve the patient's daily life. This may involve the use of medications, physical therapy, or alternative therapies such as acupuncture to manage pain effectively.

**Emotional and psychological support:** A bladder cancer diagnosis can be emotionally overwhelming, leading to anxiety, depression, and a sense of uncertainty. Supportive care often involves counseling and psychological support to help patients and their families cope with the emotional challenges of the disease. Providing a safe space to express feelings and fears can significantly improve a patient's mental well-being. Bladder cancer and its treatments can impact a patient's appetite and ability to eat. Maintaining proper nutrition is crucial for overall health and recovery. Supportive care teams, which may include dietitians, can provide dietary guidance tailored to the patient's needs, ensuring they receive adequate nutrition during their journey.

### Rehabilitation and physical therapy

Bladder cancer and its treatments can result in physical challenges, such as urinary incontinence or limitations in mobility. Supportive care may involve physical therapy and rehabilitation programs to address these issues. Pelvic floor exercises, for example, can help improve urinary control and enhance a patient's quality of life.

**Palliative care:** For patients with advanced bladder cancer, palliative care becomes a crucial component of supportive care. Palliative care specialists work alongside the primary medical team to manage symptoms, improve

comfort, and enhance the patient's overall well-being. This specialized care focuses on maintaining the best possible quality of life throughout the course of the disease.

**Survivorship care:** Supportive care doesn't end with the completion of treatment. Survivorship care plans are designed to monitor and address the long-term effects of bladder cancer and its treatments. Regular follow-up visits and ongoing support ensure that patients receive the necessary care to maintain their health and well-being post-treatment.

The role of supportive care in bladder cancer management is integral to improving the overall experience and outcomes for patients. By addressing pain, emotional distress, nutrition, physical challenges, and more, supportive care complements traditional treatment approaches and helps patients navigate the complexities of their journey with bladder cancer. Recognizing the importance of supportive care and integrating it into the comprehensive care plan is essential in enhancing the quality of life for individuals affected by this disease.