

**BJMHR**British Journal of Medical and Health Research
Journal home page: www.bjmhr.com

Oncology Practice Structure and Management of Castrate-Resistant Prostate Cancer in the Czech Republic

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ABSTRACT

Prostate cancer is a significant health concern in the Czech Republic, with a high incidence rate among men. This study assesses the current practices and management strategies of Czech oncologists in treating metastatic prostate cancer. A survey of 27 oncologists revealed that 42.2% of patients were currently with metastatic castration-resistant prostate cancer (mCRPC), followed by 27.6% with non-metastatic hormone-sensitive prostate cancer (nmHSPC), 22.7% with metastatic hormone-sensitive prostate cancer (mHSPC), and 7.4% with non-metastatic castration-resistant prostate cancer (nmCRPC). The majority of referrals (74.1%) came from urologists. Specific treatment choices for mCRPC patients included abiraterone (40.7%) and enzalutamide (29.6%). The findings highlight the need for early detection and intervention strategies to improve patient outcomes and support the design of future clinical trials.

Keywords: Prostate Cancer; Castration-Resistant; Czech Republic; Oncology Practice

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Received 02 June 2025, Accepted 26 August 2025

Please cite this article as: Mendoza *et al.*, Oncology Practice Structure and Management of Castrate-Resistant Prostate Cancer in the Czech Republic. British Journal of Medical and Health Research 2025.

INTRODUCTION

Prostate cancer is a significant health concern in the Czech Republic, with a high incidence rate among the male population. Each year, over 92,000 people are diagnosed with cancer in the Czech Republic, and prostate cancer is one of the most common types, particularly affecting men¹. The incidence of prostate cancer increases with age, and it is most frequently diagnosed in men over the age of 50. The Czech National Cancer Registry, which has been in place since 1977, provides comprehensive data on cancer incidence and mortality, making it a valuable resource for understanding the epidemiology of prostate cancer in the country (1,2). In comparison to other frequent types of tumors, prostate cancer is the most frequently diagnosed cancer in Czech men, followed closely by colorectal and lung cancer. This highlights the significant burden of prostate cancer on the male population in the Czech Republic (3)

The standard of care for prostate cancer in the Czech Republic includes advanced treatment methods such as robotic surgery, high-intensity focused ultrasound (HIFU) therapy, radiotherapy, and cryoablation. These treatments are in line with European guidelines and aim to improve overall survival and delay disease progression (4). Additionally, a national prostate cancer screening program was launched in 2024, following the EU Council's recommendation for early detection. This program targets men aged 50-59 and involves PSA-based screening through General Practitioners, with follow-up tests and referrals as necessary (3).

Despite these efforts, there remains a critical need for early detection and intervention strategies to manage prostate cancer effectively. The high prevalence of metastatic castration-resistant prostate cancer (mCRPC) in the Czech Republic underscores the importance of ongoing research and clinical trials to develop new treatment options and improve patient outcomes.

The purpose of this research is to assess the current practices and management strategies of Czech oncologists in treating metastatic prostate cancer. By understanding the distribution of prostate cancer stages, referral sources, and treatment choices, this study aims to identify gaps in care and areas for improvement. The findings will support the design and implementation of future clinical trials, ultimately contributing to the advancement of prostate cancer treatment in the Czech Republic.

METHOD

This study was conducted using a syndicated survey to assess the current practices and management strategies of Czech oncologists in treating metastatic prostate cancer. A structured questionnaire was employed during approximately 40-minute interviews with

Czech oncologists. The questionnaire, meticulously crafted by experts at IQVIA, was supported by the IQVIA OneKey™ database, which provides a comprehensive and continuously updated resource of healthcare professionals (HCPs) and healthcare organizations (HCOs).

The IQVIA OneKey™ database is the world's largest and most comprehensive network of real-time HCP data, offering a multidimensional view of healthcare professionals to inform compelling and adaptive engagement strategies. It integrates data from various sources, including claims, and electronic health records. The database is continuously enriched with over 1.5 million updates globally each month, ensuring the highest standards of data accuracy and reliability. This robust data foundation supports the identification of industry trends, informed decision-making, and effective communication with key stakeholders (5).

The survey was conducted in April 2024 and involved contacting 27 Czech oncologists. The questionnaire addressed key aspects such as the number of metastatic prostate cancer patients treated, newly diagnosed cases, individual treatment regimens, and the market shares of competing therapies. The data collection process was rigorous, with the information provided by the oncologists undergoing quality control and re-query as needed to ensure accuracy and reliability.

The analysis of the data collected from the survey was performed using SPSS version 17.0. This robust statistical software allowed for detailed examination and interpretation of the survey results, providing valuable insights into the current state of metastatic prostate cancer treatment in the Czech Republic. The use of a structured questionnaire and the involvement of a significant number of oncologists lend credibility and validity to the findings of this study. The survey was conducted by IQVIA's dedicated professional experts in marketing research, and the oncologists were reached after obtaining the information from the IQVIA database site management.

RESULTS AND DISCUSSION

Pathway and Percentage of Attended Czech Prostate Cancer Patients by Stages

A comprehensive survey involving 27 experts in prostate cancer treatment provided insights into the distribution of prostate cancer patients across various stages in the Czech Republic. The findings indicated that a significant proportion of patients, 42.2%, were with metastatic castration-resistant prostate cancer (mCRPC). This stage was the most prevalent among the patients surveyed. Following this, 27.6% of the patients were in the non-metastatic hormone-sensitive prostate cancer (nmHSPC) stage, highlighting a substantial number of patients who had not yet developed metastases but were still hormone-sensitive. Additionally, 22.7% of the patients were identified as having metastatic hormone-sensitive prostate cancer (mHSPC),

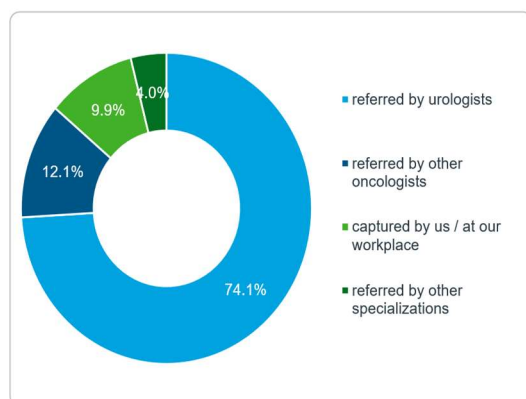
indicating that these patients had metastases but were still responsive to hormone therapy. The least common stage among the patients was non-metastatic castration-resistant prostate cancer (nmCRPC), which accounted for 7.4% of the cases. This stage represents patients who have not developed metastases but are no longer responsive to hormone therapy. See graph 1A.

Referral Sources for Prostate Cancer Patients

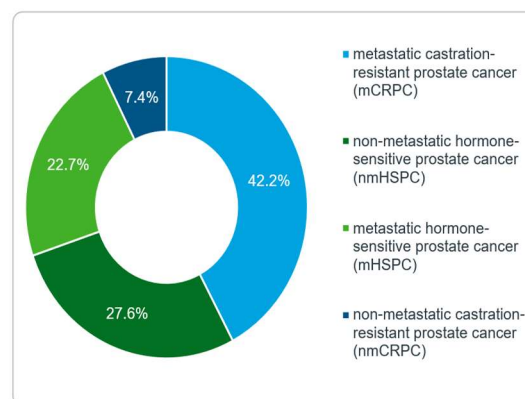
The survey also examined the sources from which prostate cancer patients were referred for treatment. The majority of referrals, 74.1%, came from urologists, underscoring the pivotal role that urologists play in the initial diagnosis and referral of prostate cancer patients. Other oncologists were responsible for referring 12.1% of the patients, indicating a collaborative approach in the management of prostate cancer. Self-referred patients constituted 9.9% of the total, reflecting a segment of patients who sought specialist care independently. Lastly, referrals from other specializations accounted for 4.0%, demonstrating the involvement of various medical disciplines in the referral process. See graph 1B.

Graph 1: Pathway and Percentage of Attended Czech Prostate Cancer Patients by Stages: Survey of 27 Experts in Prostate Cancer Treatment

A: Pathway of Czech prostate cancer patients



B: Percentage of attended Czech Prostate Cancer Patients by stages

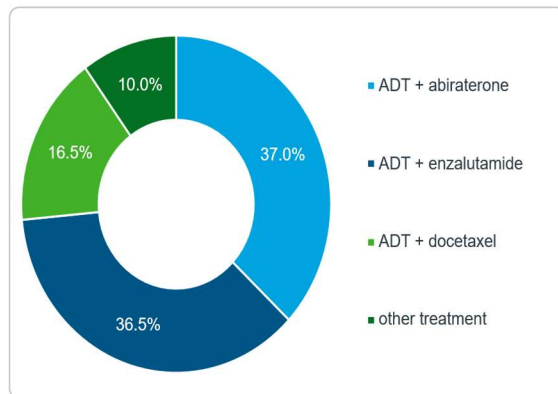


Specific Treatment Choices for mCRPC Patients After Failure of LHRH

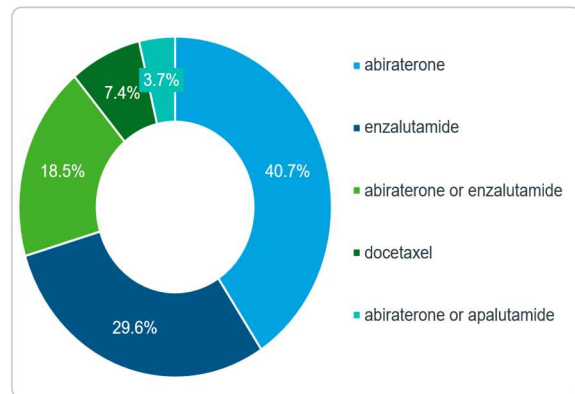
When examining the specific treatment choices for patients with metastatic castration-resistant prostate cancer (mCRPC) After failure of LHRH, the survey revealed that abiraterone was the most frequently used treatment, administered to 40.7% of the patients. Enzalutamide was the second most common treatment, used in 29.6% of the cases. A combination of either abiraterone or enzalutamide was chosen for 18.5% of the patients, highlighting the flexibility in treatment options. Docetaxel was used in 7.4% of the cases, and a combination of either abiraterone or apalutamide was selected for 3.7% of the patients, indicating the range of therapeutic strategies employed in the management of mCRPC. See graph 2A.

Graph 2: First-Line Treatment of Asymptomatic/Mildly Symptomatic Castrate Resistant Prostate Cancer Patients: Survey of 27 Experts in Cancer Patient Management

A: Patients with asymptomatic / moderated symptomatic patients with mCRPC



B: Patients with asymptomatic/mildly symptomatic patients after failure of LHRH treatment



ADT: Androgen deprivation therapy; mCRPC: metastatic castrate prostate cancer; LHRH: Luteinizing Hormone-Releasing Hormone

First-Line Treatment of Asymptomatic/Mildly Symptomatic Castrate-Resistant Prostate Cancer Patients

The treatment strategies for patients with asymptomatic or mildly symptomatic metastatic castration-resistant prostate cancer (mCRPC) were diverse. The most commonly employed first-line treatment was androgen deprivation therapy (ADT) combined with abiraterone, used in 37.0% of the cases. This combination therapy was closely followed by ADT combined with enzalutamide, which was utilized in 36.5% of the cases. ADT combined with docetaxel was chosen for 16.5% of the patients, indicating its role as a significant treatment option. - 27.6%, metastatic hormone-sensitive prostate cancer (mHSPC) at 22.7%, and non-metastatic castration-resistant prostate cancer (nmCRPC) at 7.4%. These findings highlight the critical need for early detection and intervention strategies to manage prostate cancer effectively. Comparatively, in other countries, the distribution of prostate cancer stages varies. For instance, in the United States, non-metastatic disease is often diagnosed via routine screening in 77% of cases, while metastatic disease is diagnosed via routine screening in 63% of cases. In Germany, approximately 40% of prostate cancer cases are diagnosed at an early, non-metastatic stage through routine screening, while around 18% are diagnosed at a metastatic stage. Routine screening plays a crucial role in detecting prostate cancer early, improving treatment outcomes and survival rates. (6). These differences underscore the importance of robust screening programs and early detection efforts.

The majority of prostate cancer referrals in the Czech Republic come from urologists (74.1%), followed by other oncologists (12.1%), self-referrals (9.9%), and other specializations (4.0%). This highlights the pivotal role of urologists in the initial diagnosis and referral process. A multidisciplinary approach involving urologists, oncologists,

surgeons, and radiation oncologists is crucial for optimal patient outcomes. This collaborative approach ensures that patients receive well-rounded care and access to the latest treatment options (7).

Clinical trials play a vital role in advancing prostate cancer treatment. Referred patients are crucial for the success of these trials, as they provide the necessary data to evaluate new therapies. Participation in clinical trials offers patients access to cutting-edge treatments and contributes to the development of new standards of care. Engaging patients in clinical trials also helps improve the overall understanding of prostate cancer and its management (8).

The approval of new anticancer drugs in the Czech Republic is overseen by the State Institute for Drug Control (SÚKL). The introduction of new drugs in the country is relatively swift, ensuring that patients have access to the latest therapies. For example, the European Commission recently approved a new prostate cancer drug, Pluvicto, co-developed by a Czech scientist (9). This drug is now being administered in clinical trials at the Olomouc University Hospital, demonstrating the country's commitment to providing advanced treatment options.

The Czech healthcare system is based on a universal insurance model, with nearly 100% of the population covered by public health insurance (10). This system ensures that all citizens and permanent residents have access to necessary medical care, including anticancer drugs. The public insurance system covers the cost of most medications, making advanced cancer treatments accessible to a broad patient population (11).

The standard of care for asymptomatic or mildly symptomatic mCRPC after failure of LHRH therapy in the Czech Republic aligns with European guidelines. The most commonly employed first-line treatments include androgen deprivation therapy (ADT) combined with abiraterone or enzalutamide (12). These treatments have been shown to improve overall survival and delay disease progression. The PEACE-3 trial demonstrated that the combination of enzalutamide and radium-223 significantly improves radiographic progression-free survival in patients with mCRPC (13).

The findings of this study are crucial for facilitating the enrollment of prostate cancer patients in clinical trials. By providing detailed insights into the current management practices and patient distribution across different stages, this study helps identify gaps in care and areas for improvement. Clinical trials offer the best approach to providing advanced treatment options for metastatic prostate cancer patients, and the data from this study can support the design and implementation of future trials.

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