

## Initiative of the New Two Cancer Screening for Men

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### Editorial

Substantial amount of large population-based social surveys and medical statistics show that an increasing number of diseases are seriously threatening the physical and mental health of men [1-3]. In China, the estimated number of new cases of malignant tumors is 3.929 million, with approximately 2.151 million cases in males and 1.778 million cases in females [4]. Among them, the incidence of bladder cancer is about 80,500, with approximately 32,900 deaths, ranking first among malignant tumors of the urinary system [5]. The incidence of prostate cancer is about 60,300, with approximately 26,600 deaths, ranking second among malignant tumors of the urinary system [6]. Bladder cancer and prostate cancer have become the "two major killers" of the urinary system. We refer to bladder cancer

and prostate cancer as the "new two cancers" for males, distinguishing them from breast cancer and cervical cancer in females.

As society continues to progress and the pace of human life continues to accelerate, the physical and mental health of people is facing significant challenges. In China, deeply influenced by traditional beliefs, adult males are generally regarded as the backbone of a family and the primary source of both material and spiritual wealth. Therefore, the vast majority of adult males, as the ultimate representatives of competitiveness and development potential in each family, constantly bear immense dual pressures of work and mental stress [7]. Even in the early stages of various diseases, many still disregard health risks and insist on struggling in the workplace. They often seek medical assistance only when their bodies have already shown serious symptoms. At this point, the best time for treatment is often missed, leading to increased challenges in treatment [8,9]. In response to the above challenges, considering the increasing trend in the incidence of the new two cancers and their clinical characteristics of easy recurrence, metastasis, and the need for long-term monitoring, more and more urologists have called on male individuals to actively participate in early screening for the new two cancers [10-14].

Looking back over the past few decades, the development of clinical diagnostic for the new two cancers has been slow [14,15]. Cystoscopy is the gold standard for detecting bladder cancers [15]. It is a minorly invasive diagnostic that can be painful and psychologically stressful for patients. Moreover, it is expensive and not easily accessible to the general population [15]. In the case of prostate cancer, Prostate-Specific Antigen (PSA) testing is widely used for early screening and monitoring, but a definitive diagnosis requires a biopsy for abnormal cases [14]. Additionally, PSA is specific to prostate tissue but not specific to prostate cancer. This means that there is still a significant need for innovation in the diagnostic methods for the new two cancers.

In order to further improve the diagnostic methods of the two new cancers, improving patient experience and benefiting more people, after 15 years of research, a team of scientists from the Institute of Biophysics, Chinese Academy of Sciences has discovered several novel therapeutic targets for bladder and prostate cancers, established an in vitro diagnostic system based on the newfound targets, developed targeted therapeutic drugs centered on the two new cancer targets, and published multiple research papers in internationally renowned journals such as the *European Journal of Urology* and *Clinical Cancer Research* [16-22]. The scientists developed a series of bladder cancer and prostate

cancer detection kits, which provide simple, efficient, and accurate non-invasive tests for early screening and postoperative monitoring of the two new cancers. Additionally, they have organized front-line urologists in clinical settings, serving as a bridge between basic research and clinical studies in the field of urology. They are dedicated to providing more extensive, high-quality, economical, and convenient medical services, benefiting a broader spectrum of patients with the new two cancers.

Epidemiologic transition describes the changes in mortality/morbidity patterns and the disease burden of populations as societies improve demographically, economically, and socially [23]. This transition involves a shift from predominantly communicable diseases to predominantly non-communicable diseases. In contemporary times, people's life expectancy is increased and the factors that have the greatest adverse impact on their health are chronic diseases such as cancer [23]. With millions of families suffering from cancer all around the world, it is necessary to implement cancer prevention and treatment actions, promote preventive screening, early diagnosis and treatment, and scientific research, and strive to alleviate the pain points of people's livelihood [24]. Early screening, early diagnosis and treatment have become essential steps in cancer prevention and treatment actions, highlighting the significant importance of promoting screening for the new two cancers [25-29]. For the sake of your own health and the happiness of your family, we hereby call on all men to join the new two cancers screening, establish a healthy concept of life, advocate a healthy lifestyle, and build a healthy and happy family. For the sake of your own health and the happiness of your family, a sincere appeal is made to all men to participate in screening for the new two cancers. It is essential to foster a healthy outlook on life, advocate for a healthful lifestyle, and build a foundation for a healthy and happy family.

At the same time, scientists extend an appeal to the entire society: please support and encourage every man around you to participate in screening activities for the new two cancers. Let us join hands and work together to promote screening for the new two cancers, actively responding to the national health strategy. By prioritizing early screening, prevention, and treatment of cancer, we contribute our efforts to realizing the goals of shaping a better future.

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