

综述

## 前列腺特异性抗原衍生体及前列腺癌高特异性生物标志研究现状

朱圣生<sup>1,2</sup>, 刘向云<sup>2</sup>, 孙祖越<sup>2</sup>

1. 复旦大学药学院, 上海 200032;
2. 上海市计划生育科学研究所药理毒理学研究室, 中国生育调节 药物毒理检测中心, 上海 200032

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**摘要** 前列腺癌是男性泌尿系统常见的恶性肿瘤之一, 严重威胁患者生命, 影响患者生活质量, 且近年来前列腺癌患病率在我国呈显著增高趋势。因此, 前列腺癌的早期诊断成为目前临床上关注的焦点。在临床上依赖传统肝门指诊和B型超声等检测手段难以在前列腺癌早期将其检出, 而前列腺癌早期(诊断)生物标志能够对早期前列腺癌做出诊断; 此外, 前列腺癌其他相关生物标志亦有助于临床治疗和预后监测, 所以前列腺癌生物标志引起广大学者的广泛关注和研究。近年来, 新的前列腺癌生物标志不断出现。本文对经典生物标志前列腺特异性抗原(PSA)及其衍生体如总PSA、PSA速率、PSA密度、移行区PSA密度、游离PSA百分比和年龄特异性PSA等进行了总结, 同时对敏感性较高和特异性较好的一些前列腺癌生物标志物PCA3基因、早期前列腺癌抗原(EPCA)、EPCA-2、 $\alpha$ -甲基酰基辅酶A消旋酶、肌氨酸、其他生物标志及多生物标记联合检测等进行了综述, 为前列腺癌的早期诊断和预后监测提供参考。

**关键词** [前列腺癌](#) [生物标志](#) [进展](#)

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## Progress in prostate specific antigen derivatives and biomarkers with high specificity for prostate cancer

ZHU Sheng-sheng<sup>1,2</sup>, LIU Xiang-yun<sup>2</sup>, SUN Zu-yue<sup>2</sup>

1. School of Pharmacy, Fudan University, Shanghai 200032, China;
2. Department of Pharmacology and Toxicology, Shanghai Institute of Planned Parenthood Research, National Evaluation Center for the Toxicology of Fertility Regulation Drugs, Shanghai 200032, China

### Abstract

Prostate cancer is the most common genitourinary malignancy in men. Prostate cancer can threaten a patient's life and seriously affect a patient's quality of life and the incidence of prostate cancer increased significantly in China through the last decade, so early diagnosis of prostate cancer has become the clinical focus. The early-stage prostate cancer, can not be detected by the traditional testing such as digital rectal examination, ultrasonic examination, which can be detected by biomarker of early detection of prostate cancer. Other biomarkers can also be helpful for the diagnosis and prognosis of prostate cancer. And then, many investigators focused on seeking biomarkers that have higher sensitivity and specificity, new biomarkers are increasing. In this paper, we review the progress of prostate specific antigen (PSA) and its derivatives (total PSA, PSA velocity, PSA density, PSA density in transition zone, free PSA, age specific PSA, etc), and summarize some promising biomarkers (PCA3, early prostate cancer antigen, early prostate cancer antigen-2,  $\alpha$ -methylacyl-CoA racemase, sarcosine, other biomarkers and detection of multiple biomarkers, etc), which have higher sensitivity and specificity for

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