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The Role of Genetic Markers in Prostate Cancer Diagnosis and Treatment

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Abstract : The utilization of genetic markers in prostate cancer management represents a significant advance in personalized medicine, offering the potential for more precise diagnosis and tailored treatment strategies. This paper explores the pivotal role of genetic markers in the diagnosis and treatment of prostate cancer, emphasizing their contribution to the identification of individual risk profiles, tumor aggressiveness, and response to therapy. By integrating current research findings, we discuss the application of genetic markers in developing targeted therapies and the implications for patient outcomes. Despite the promising advancements, challenges such as accessibility, cost, and the need for further validation in diverse populations remain. The paper concludes with an outlook on future directions, underscoring the importance of genetic markers in revolutionizing prostate cancer care.

Keywords: prostate cancer, genetic markers, personalized medicine, BRCA1 and BRCA2

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