

Exploring Apolipoprotein A1 As A Liquid Biopsy Biomarker For Diagnosis Of Low-Grade Bladder Cancer

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ABSTRACT

Bladder cancer is known for its high recurrence rate, necessitating frequent invasive and costly re-examinations. The development of a non-invasive diagnostic method utilizing urinary biomarkers could greatly enhance early detection and monitoring. This study investigates apoA1 as a potential non-invasive marker for diagnosing low-grade bladder cancer. A total of 60 participants were enrolled, including 50 males and 10 females, with a median age of 63. Using fully automated ELISA, urinary ApoA1 levels were assessed, and a cutoff value of 190 ng/ml was determined. ApoA1 exhibited a sensitivity of 89.4% and a specificity of 85% for distinguishing low-grade bladder cancer from high-grade cases. The study concludes that urinary ApoA1 demonstrates high diagnostic accuracy and is a promising liquid biopsy biomarker for early detection of low-grade bladder cancer, offering an alternative to invasive diagnostic methods.

Keywords: Bladder cancer, Urinary biomarker, Apolipoprotein A1, liquid biopsy, Early diagnosis.

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