REVIEWER'S REPORT

Manuscript No.: IJAR-51767   Date: 23 -05-2025

Title: Prognostic utility of GATA-3 and CK-14 Immunohistochemical expression in Urothelial Carcinoma of Urinary Bladder and its clinicopathological correlation

Recommendation:
Accept as it is..................YES.............
Accept after minor revision..................
Accept after major revision ....
Do not accept (*Reasons below*) ....

Rating	Excel.	Good	Fair	Poor
Originality			√	
Techn. Quality			√	
Clarity			√	
Significance			√	

Reviewer's Name: Dr Aamina

Reviewer's Decision about Paper: Recommended for Publication.

Comments (*Use additional pages, if required*)
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Reviewer's Comment / Report

Review Summary:

The manuscript presents a prospective observational study that investigates the prognostic significance of GATA3 and CK14 immunohistochemical (IHC) markers in urothelial carcinoma of the urinary bladder. The study correlates the expression profiles of these markers with a range of clinicopathological parameters, offering insights into tumor grading, muscle invasiveness, and morphological characteristics. The research contributes to the growing interest in molecular markers for guiding diagnosis, prognosis, and potential therapeutic interventions.

Content Evaluation:

The **Abstract** provides a succinct and informative summary of the study. It clearly states the background, aims, methods, key findings, and conclusion. The significance of GATA3 and CK14 as biomarkers is emphasized, with detailed expression patterns and their statistical relevance in the studied cohort. The conclusion logically follows from the presented data, indicating the practical applicability of the findings in clinical settings.

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The **Introduction** effectively sets the context by describing the global and national burden of bladder cancer, its gender disparity, and major risk factors like tobacco use. The epidemiological statistics, particularly those from GLOBOCAN and Indian cancer registries, establish the relevance and timeliness of the research. The text highlights the heterogeneity of the disease and the need for effective biomarkers, thereby justifying the study.

Methodological Merit:

The study's prospective nature and the inclusion of 80 histologically confirmed urothelial carcinoma cases over a defined timeframe lend robustness to the research design. The use of well-established IHC techniques for evaluating GATA3 and CK14 expression is appropriate for the stated objectives. The methodology is concise and aligns with standard histopathological evaluation practices.

Data Presentation and Analysis:

The results are clearly presented, with quantitative expression levels of GATA3 and CK14 effectively categorized and linked to clinical and pathological features. Statistical significance ($P < 0.001$) is reported where relevant, indicating a sound analytical approach. The association of marker expression with tumor grade, muscle invasion, nuclear pleomorphism, and mitotic activity supports the conclusion that these markers may have diagnostic and prognostic utility.

Scientific Contribution:

This study adds valuable knowledge to the field of uro-oncology by underscoring the potential role of GATA3 and CK14 in predicting tumor behavior. It contributes to the development of more refined prognostic models and supports the integration of IHC markers in routine diagnostic workflows.

Conclusion:

The manuscript is coherent, scientifically grounded, and contributes meaningfully to the understanding of urothelial carcinoma's biological and clinical spectrum. It supports the integration of GATA3 and CK14 as adjunct markers for prognostic evaluation and individualized patient management strategies.

Keywords: Urothelial carcinoma, Histopathological examination, Immunohistochemistry, GATA3, CK-14

Overall, the study is well-executed and provides clinically relevant data that could inform both diagnostic and therapeutic decisions in bladder cancer management.