



**BLADDER CARCINOMA IN YOUNG PATIENTS: A COMPREHENSIVE ANALYSIS OF RISK FACTORS AND DISEASE BEHAVIOR**

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**ABSTRACT**

Bladder carcinoma in young adults is rare and exhibits distinct clinical and pathological features compared to older populations. This prospective observational study includes 20 patients under the age of 40 diagnosed with bladder carcinoma. We analyzed demographic data, risk factors, clinical presentations, histological grade, tumor stage, and recurrence rates. The findings suggest a relatively higher proportion of low-grade and non-muscle-invasive tumors, although recurrence rates remain notable. Further large-scale studies are needed to define management strategies for this unique group.

**KEYWORDS**

**INTRODUCTION**

Bladder cancer typically affects the elderly, but a small proportion of cases occur in younger individuals. The disease behavior, risk profile, and outcomes in young patients remain underexplored.

This study aims to assess the clinical characteristics, risk factors, and outcomes of bladder cancer in patients under 40.

**METHODS**

This is a prospective observational study conducted over a defined period, including 20 patients aged below 40 years diagnosed with bladder carcinoma. Detailed histories were obtained including smoking habits, occupational exposure, and presenting symptoms.

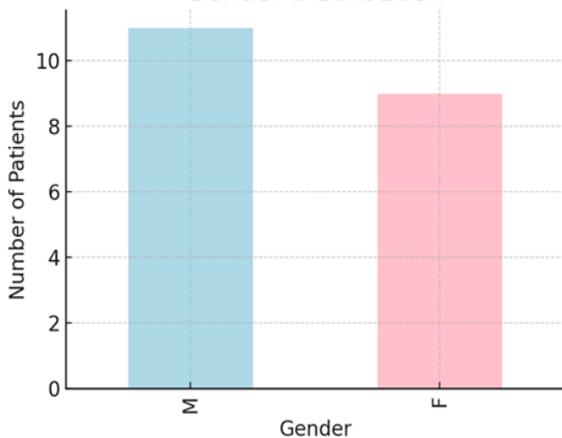
Urine cytology, imaging, cystoscopy, and histopathological examinations were used for diagnosis. Follow-up was done to monitor recurrence.

**RESULTS**

**Key Findings From The Study Are Summarized Below:**

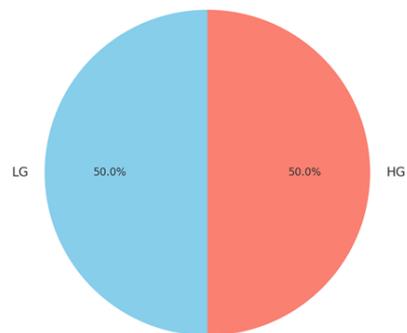
- Mean age: 29.8 years
- Gender: 11 males (55%), 9 females (45%)
- Smoking history present in 11 patients (55%)
- Occupational exposure in 9 patients (45%)
- Hematuria was the most common presenting symptom
- 55% had high-grade tumors, 45% low-grade
- Tumor staging: Ta (45%), T1 (30%), T2 (25%)
- Recurrence observed in 50% of high-grade cases

**Gender Distribution**



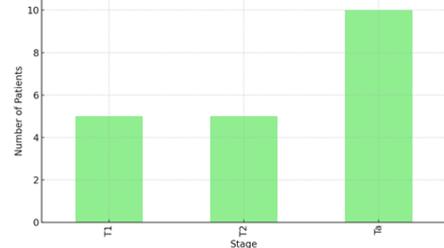
**Figure 1: Gender Distribution**

**Histological Grade Distribution**



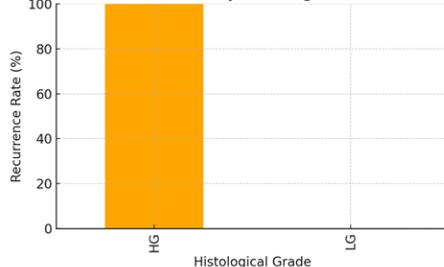
**Figure 2: Histological Grade Distribution**

**Tumor Stage Distribution**



**Figure 3: Tumor Stage Distribution**

**Recurrence Rate by Histological Grade (%)**



**Figure 4: Recurrence Rate by Histological Grade**

**DISCUSSION**

This study shows that bladder carcinoma in young patients tends to present with non-muscle-invasive and low-grade tumors. However,

the recurrence rate in high-grade cases remains a concern, indicating the need for close surveillance. The findings are consistent with global literature suggesting better prognosis but persistent risk of recurrence in this age group. Smoking and occupational exposure remain significant modifiable risk factors.

### CONCLUSION

Bladder carcinoma in young adults demonstrates a unique biological behavior with a predominance of low-stage tumors. Despite a favorable initial prognosis, vigilant follow-up is essential due to significant recurrence in high-grade disease.

### REFERENCES

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2. Jones DJ, et al. Bladder cancer in the young: a review. *Urology*. 2015.
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