

# **“Superficial Bladder Cancer, Natural History and Surgical Implications”**

Thesis, submitted by

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# **Abstract**

In Egypt, according to the NCI Cancer Registry, Bladder Cancer is the second most common malignancy (a constant ranking since the 1924 registry), the most common one among male and the 5<sup>th</sup> most common among female patients. Of all the diagnosed cases, TCC represented 65%, of which 21.6% were of the papillary type. During the last ten years, the incidence of the previously predominant SCC has been declining whereas the TCC incidence has been increasing.

The work includes an updated review of the literature on superficial bladder cancer with particular interest in the most recent advances in the diagnosis and management.

The study includes a random sample of 100 patients diagnosed with superficial bladder cancer at NCI in the last 5 years. The study shows the frequency of recurrence, the frequency of progression to invasive type with evaluation of the results of the cases treated at NCI in comparison to the literature.

## **Key Words**

Superficial bladder cancer cystoscopy trans-urethral resection TUR  
BCG intravesical chemotherapy cytectomy surgery pathology stage  
grade recurrence progression invasion

# Introduction

Urinary Bladder Cancer is the 9<sup>th</sup> most common type of cancer in the world. In the West, it constitutes 4% of all cancers, with the Transitional Cell Carcinoma (TCC) type being more common than the Squamous Cell Carcinoma type (which is Schistosomiasis – related). 75% of the diagnosed TCC are superficial. Most of the patients are between the age of 50 and 70 years, with a male predominance.

In Egypt, according to the NCI Cancer Registry, Bladder Cancer is the second most common malignancy (a constant ranking since the 1924 registry), the most common one among male and the 5<sup>th</sup> most common among female patients. Of all the diagnosed cases, TCC represented 65%, of which 21.6% were of the papillary type. During the last ten years, the incidence of SCC is declining whereas the TCC incidence is increasing.

Currently, superficial bladder cancer (SBC) is a term that comprises three subtypes of TCC; Ta (papillary tumor confined to the mucosa), Tis (non-exophytic Carcinoma in situ confined to the urothelium) and T1 (papillary or nodular tumor invading the lamina propria). Further stage

subdivision has been proposed for T1 tumors according to the depth of lamina propria invasion. Accordingly, T1a designates those tumors not involving the muscularis mucosa, whereas T1b to T1c represents deeper invasion of the lamina propria to the level of the muscularis mucosa or beyond. Several recent reports have shown significant differences in outcome on the basis of the extent of lamina propria invasion.

Tumor grade is an important prognostic factor in bladder cancer. The World Health Organization grading system divides TCC into three grades (I, II and III) on the basis of the extent of cellular atypia.

The standard management of SBC is usually a multimodal treatment integrated by the surgeon. It initially consists of a Trans-Urethral Resection of the Tumor (TURBT) removing all visible bladder lesions; this establishes the diagnosis and allows pathologic analysis of the resected tumor specimen for tumor grade and depth of bladder invasion. Other recent modalities for ablation include LASER and Photodynamic therapy which relies on the photosensitization of cancerous cells with subsequent administration of light therapy.