# INTRODUCTION

Urinary bladder neoplasms are among the mostfrequently encountered tumors of the urinary tract.Appropriate useof the different imaging techniques is crucialfor accurate assessment of prognosis and for thedevelopment of appropriate treatment planning.Determination of local tumor extension and detection ofnodal or bone metastases in the cases of malignancy is especially important **(Barentsz et al., 1999).**

Carcinoma of the urinary bladder is one of the more common malignant tumors of the urinary tract in both male and female patients **(Barentsz et al., 1996b)**. Bladder cancer is the fourth most common tumor in men accounting for 6% of all cancers in men. Epithelial tumors account for more than 90% of all bladder tumors **(Husband, 1995).**

In Egypt, the condition is worse as a result of Bilharisiasis**.**Bilharisiasis is not only endemic in our country but also considered to be historical disease as it is discovered in the urinary bladder of pharaoh ancestors mummies. The uncommon aggressive squamous cell carcinoma is frequently associated with bilharasial bladder **(El-Bolkainy et al., 2007).**

In bladder cancer, tumor stage is a more reliable prognosticator than is grade and any evidence of muscle invasion markedly lowers survival Itis therefore essential to establish the stage of bladder tumors, not only to select the appropriate treatment but also to predict prognosis **(El-Bolkainy et al., 2007).**

Variousdiagnostic methods, including bimanual examination with

the patient anesthetized, cystoscopy, cystoscopic biopsy, intraluminal or transabdominal ultrasonography, computed tomography (CT), and magnetic resonance (MR) imaging,are being used for preoperative staging of bladder cancer. Clinical staging is often inaccurate, and understaging is common **(Richie et al., 1992)**.

Although a histologic diagnosis is usually established with cystoscopic biopsy, imaging modalities such as CT and MR imaging are commonly used for the staging of bladder cancer (**Kim et al., 1994**). A wide range of accuracy in staging has been reported for CT (40%-92%) and for conventional and contrast material-enhanced MR imaging (50%-96%) **(Nanumi et al., 1993a)**.

The value of magnetic resonance (MR) imaging in analyzing the male and female pelvis, specifically in demonstrating normal and benign pathologic conditions of the urinary bladder, has been reported **(Fisher et al., 1985b)**.MRI offers several advantages over other imaging modalities including CT such as multi-planar imaging with better detection of tumors, better tissue characterization , superiority in evaluation of prostatic or seminal vescicles invasion in addition to better differentiation between post biopsy effect and the tumor itself. MRI protocols were applied in this field **(Tanimoto et al., 1992)**.

MR imaging is the most accurate technique fordifferentiating the various stages of deep tumor infiltrationand detection of metastases, Thus, themajor indication for imaging is the local staging of cancer,and MR is currently the best maging modality *(Barentsz et al., 1997).*