



Clinical Implications of Urothelial Cancer

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81.1 Diagnosis Staging

For non-muscle-invasive bladder cancer (Ta, T1 and CIS), ultrasonography (US) is the first method used to investigate the anatomy of the bladder and the upper urinary tract. Intravenous urography has been used for decades, and today CT urography is being used with increased frequency. CT urography is the gold standard for exploration of the upper urinary tract with reported sensitivity and specificity of 93.5% and 94.8% for the detection of urothelial cancer. MRI is infrequently used in the primary investigation of the upper tract urothelial cancer. The detection rate of MRI urography is 75% for tumours <2 cm, and the method is indicated in patients who cannot be subjected to a CT urography. Muscle-invasive bladder cancer is first being evaluated with US and intravenous urography, but CT and MRI scans are used for TNM classification. PET/CT scans do not offer additional information and should not be used [1, 2].

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81.2 Follow-up Strategies

Imaging plays an important role in the follow-up of patients with urothelial cell cancers. The investigations used include chest X-ray, CT urography, and both CT and MRI are effective in detection of nodal (short-axis diameter larger than 1 cm) and hematogenous metastases of urothelial cancer. PET scans can be used for the evaluation of suspected nodal metastasis as well [1, 2].

References

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2. Swinnen G, Maes A, Pottel H et al (2010) FDG-PET/CT for the preoperative lymph node staging of invasive bladder cancer. *Eur Urol* 57(4):641–647