



## INVASIVE BLADDER CANCER

Bladder cancer either affects just the superficial lining of the bladder or affects the bladder muscle wall. A third of new patients have cancer invading the muscle wall, and a third of patients with superficial tumours will develop muscle-invading cancer over time. Whilst *superficial* bladder cancers are more common, *muscle-invasive* cancers are not rare. Superficial tumours tend to remain superficial within the bladder and are a nuisance but generally not life-threatening. Invasive cancers however extend through the bladder wall and may invade into neighbouring organs within the pelvis, or metastasise to elsewhere in the body causing death if untreated. Whilst most superficial cancer can be treated telescopically, invasive cancers require more aggressive management.

Radical therapy aims to cure cancer and the most proven and accepted radical treatment is systemic chemotherapy followed by surgical removal of the bladder. Some form of reconstruction is then required to collect and store the urine from the kidneys. Options for this are ileal conduit and neobladder. One may be more appropriate to an individual patient.

**Ileal conduit:** This is the simplest form of diversion, via a stoma into a bag on the skin surface. This works well long-term, most patients get used to it and most are happy with it. In general, older patients prefer ileal conduit over neo-bladder.

**Neo-bladder:** The continence structures and urethra are preserved and a new bladder is created out of a bowel segment. Whilst more complicated to perform, this avoids a bag and is preferred by younger patients as it preserves body image. It may only be considered where the bladder base and prostate are free of tumour. The bowel-bladder does not function quite as normally as the natural bladder, most patients needing to wake at night to void, many having to self-catheterise.

**Cystectomy** is the name given to bladder removal. It is a major operation with a number of associated potential problems and in general can only be performed in relatively fit patients. Hospital stay is typically 10 days and some complications are almost inevitable. However, patients get through these and the complications resolve. The likelihood of cure with cystectomy depends on the extent of the cancer, smaller cancers having a better prognosis than more extensive lesions. Thus, 80% of patients with tumour confined to the bladder wall can be cured and 40% of patients with cancer extending outside the bladder can be cured.

The reconstruction is performed simultaneously. Given the complexity of the surgery, to achieve optimal results, cystectomy is performed by specific surgeons in a centre. This means fewer surgeons doing cystectomy, each doing this regularly. Rather than many surgeons each do cystectomy occasionally. As such, we have a referral practice for cystectomy.

**Bladder preserving treatment (chemoradiotherapy)** for invasive cancer involves a combination of aggressive telescopic tumour resection surgery, followed by chemotherapy followed by radiotherapy. This is an alternative to radical surgery and may be similarly effective for achieving cancer cure, but may be limited by pre-existing and post-treatment bladder dysfunction and poor capacity and quality of life. It may still be possible to have cystectomy after chemoradiotherapy, reserved for patients in whom the cancer does not respond to chemotherapy, continues to grow or their bladder function and quality of life are poor.



Staging imaging is performed prior to radical treatment, chemotherapy with either surgery or radiotherapy, to identify if the cancer has spread to the lymphatics or to other organs. **Cancer that has metastasised** cannot be cured, although some patients will have good responses to and remissions from chemotherapy alone. CT scan, PET CT scan and examination under anaesthetic are the best guides to curability, and help to direct treatment.