

# NATIONAL INSTITUTE FOR HEALTH AND CLINICAL EXCELLENCE

## SCOPE

### 1 **Guideline title**

Bladder Cancer: The diagnosis and management of bladder cancer

#### 1.1 **Short title**

Bladder cancer

### 2 **The remit**

The Department of Health has asked NICE to develop a clinical guideline on the diagnosis and management of bladder cancer.

### 3 **Clinical need for the guideline**

#### 3.1 **Epidemiology**

- a) Bladder cancer is the 7th most common cancer in the UK. However, because it is more common in men than in women it is the 4th most common cancer in men and the 11th in women.
- b) In 2008, 9583 people were diagnosed with bladder cancer in England, Wales and Northern Ireland, and there were 2997 deaths from bladder cancer.
- c) About 80% of bladder cancers do not involve the muscle wall of the bladder (non-muscle invasive) at presentation and are confined to the urothelium and lamina propria of the bladder (stages pTa, pTis and pT1 respectively). Progression to more advanced disease from the pTa stage is uncommon and most pTa tumours are not life-threatening. However, recurrences are common and other areas of the urinary tract may be affected (renal pelvis, ureters and urethra).

Progression from pT1 disease is more common, and occurs in up to 50% of cases.

- d) When bladder cancer invades bladder muscle it can spread rapidly beyond the bladder and is life-threatening. Even with optimal treatment, 5-year survival is only 50%.

### **3.2 Current practice**

- a) Non-muscle invasive bladder cancers can recur and progress. Non-muscle invasive bladder cancer is divided into low-risk tumours (pTaG1 and most pTaG2) and high-risk tumours (some pTaG2, pTis, pTaG3 and pT1), based on the risk of progression. Recurrence is not life-threatening but progression is. Non-muscle invasive bladder cancer is usually treated with intravesical therapy after initial telescopic surgery. In low-risk tumours this is usually intravesical chemotherapy, and it reduces the risk of recurrence. In high-risk tumours this is usually intravesical immunotherapy (with Bacillus Calmette-Guérin, BCG), which reduces the risk of recurrence and may also reduce the risk of progression. Frequent hospital-based observation is also needed, often over many years.
- b) Muscle invasive bladder cancer needs intensive treatment that may include radical cystectomy, chemotherapy and radiotherapy. This can result in significant morbidity.
- c) The intensive treatment needed for muscle invasive bladder cancer and the prolonged hospital-based surveillance needed for non-muscle invasive bladder cancer mean that bladder cancer is one of the most expensive cancers to treat.
- d) The significant disease and treatment-related morbidity, the substantial use of NHS resources and the wide variation in practice make a guideline on the diagnosis and management of bladder cancer a high priority. There is likely to be variation in current practice at every stage and with every intervention.

## **4 The guideline**

The guideline development process is described in detail on the NICE website (see section 6, 'Further information').

This scope defines what the guideline will (and will not) examine, and what the guideline developers will consider. The scope is based on the referral from the Department of Health.

The areas that will be addressed by the guideline are described in the following sections.

### **4.1 Population**

#### **4.1.1 Groups that will be covered**

- a) Adults (18 years and older) referred from primary care with suspected bladder cancer.
- b) Adults (18 years and older) with newly diagnosed bladder cancer (urothelial carcinoma, squamous carcinoma, adenocarcinoma and small-cell carcinoma).
- c) Adults (18 years and older) with newly diagnosed cancer of the urethra.
- d) Adults (18 years and older) with recurrent bladder or urethral cancer.
- e) Subgroups identified as needing specific consideration will be considered during development of the guideline.

#### **4.1.2 Groups that will not be covered**

- a) Adults with bladder sarcoma.
- b) Children (younger than 18 years).
- c) Adults with urothelial carcinoma of the ureter and renal pelvis.

- d) Adults with secondary cancers of the bladder or urethra (for example, colorectal cancer or cervical cancer invading the bladder).

## **4.2 Healthcare setting**

- a) All settings in which NHS-funded care is provided.

## **4.3 Clinical management**

### **4.3.1 Key clinical issues that will be covered**

- a) What are the information and support needs of patients with bladder cancer, for instance for people at the point of diagnosis, those considering options for treatment, and those considering palliative care?
- b) What is the most effective technology involving a urine test for identifying new and recurrent bladder cancer?
- c) What are the optimal endoscopic techniques for diagnosing new and recurrent bladder cancer (for example, the extent, depth and location of biopsies; white light, blue light, narrow-band cystoscopy)?
- d) What is the most effective imaging for staging newly diagnosed and recurrent bladder cancer (for example, ultrasound, CT, MRI)?
- e) Which factors determine risk of relapse and progression in newly diagnosed non-muscle invasive bladder cancer (for example, histological grading of bladder cancer)?
- f) What are the comparative patient outcomes for treating low-risk non-muscle invasive bladder cancer with:
- transurethral resection
  - intravesical chemotherapy
  - intravesical BCG?

- g) What are the comparative patient outcomes for treating high-risk non-muscle invasive bladder cancer with:
- transurethral resection
  - intravesical chemotherapy
  - radiotherapy
  - intravesical BCG
  - radical cystectomy with urinary stoma or bladder reconstruction?
- h) What are the comparative patient outcomes for treating muscle invasive bladder cancer with:
- radical cystectomy with urinary stoma or bladder reconstruction
  - radical radiotherapy (including a comparison of different radiotherapy schedules and chemoradiotherapy)
  - neo-adjuvant and adjuvant chemotherapy?
- i) What is the effect of smoking cessation on bladder cancer recurrence?
- j) What are the comparative patient outcomes for treating metastatic bladder cancer with:
- first-line chemotherapy
  - second-line chemotherapy
  - radiotherapy
  - management of urinary tract obstruction?
- k) What is the optimum follow-up for patients with bladder cancer?
- l) What specific interventions are most effective for patients with intractable bleeding or bladder pain who are nearing the end of their lives (for example, nerve block, opioids, palliative radiotherapy, urinary diversion)?
- m) What specific interventions are most effective for patients with bladder toxicity following radiation or BCG therapy?

### **4.3.2 Clinical issues that will not be covered**

- a) Referral from primary care with suspected bladder cancer, including haematuria [this will be covered by 'Suspected cancer', the update of 'Referral guidelines for suspected cancer' (NICE clinical guideline 27)].
- b) Vinflunine for the treatment of advanced or metastatic transitional cell carcinoma of the urothelial tract (this is the subject of an ongoing NICE technology appraisal).

### **4.4 Main outcomes**

- a) Overall survival.
- b) Disease-free survival.
- c) Disease-related morbidity.
- d) Disease-related mortality.
- e) Treatment-related morbidity.
- f) Treatment-related mortality.
- g) Psychological wellbeing.
- h) Quality of life for those nearing the end of their life.
- i) Number and length of admissions to hospital after diagnosis.
- j) Number and severity of adverse events.
- k) Health-related quality of life.

### **4.5 Review questions**

- Review questions guide a systematic review of the literature. They address only the key clinical issues covered in the scope, and usually relate to interventions, diagnosis, prognosis, service delivery or patient experience.

Please note that these review questions are draft versions and will be finalised with the Guideline Development Group.

- What are the information and support needs of patients diagnosed with bladder cancer? (4.3.1a)
- What are the diagnostic accuracies of urine testing technologies for new and recurrent bladder cancer? (4.3.1b)
- What are the most effective endoscopic techniques for diagnosing bladder cancer (for example, the extent, depth and location of biopsies; white light, blue light, narrow band cystoscopy)? (4.3.1c)
- In the high- and low-risk subgroups of non-muscle invasive bladder cancer and in muscle invasive bladder cancer, what is the most appropriate method for staging newly diagnosed and recurrent disease? (4.3.1d)
- Which factors in newly diagnosed non-muscle invasive bladder cancer predict recurrence or progression after treatment? (4.3.1e)
- Does the extent of transurethral resection in non-muscle invasive bladder cancer reduce recurrence? (4.3.1f)
- What are the most effective adjuvant intravesical therapy (chemotherapy or immunotherapy) regimens for low-risk and for high-risk non-muscle invasive bladder cancer? (4.3.1f, 4.3.1g)
- For which patients with non-muscle invasive bladder cancer would cystectomy produce better outcomes than BCG? (4.3.1g)
- For which patients with high risk non-muscle invasive bladder cancer would radiotherapy produce better outcomes than cystectomy? (4.3.1g)
- What are the optimal follow-up protocols for low-risk and high-risk non-muscle invasive bladder cancer? (4.3.1k)
- What is the optimal follow-up protocol for muscle invasive bladder cancer? (4.3.1k)
- For which patient groups with muscle invasive bladder cancer would radical cystectomy produce better outcomes than radical radiotherapy and for which groups would radical radiotherapy produce better outcomes? (4.3.1h)

- Is bladder reconstruction or urinary stoma the more effective method for urinary diversion? (4.3.1g, 4.3.1h)
- What is the optimal radiotherapy regimen (including chemoradiotherapy) for patients offered radical radiotherapy for bladder cancer? (4.3.1h)
- Which patients with bladder cancer should be offered neoadjuvant chemotherapy? (4.3.1h)
- Which patients with bladder cancer should be offered adjuvant chemotherapy? (4.3.1h)
- What is the optimal first-line chemotherapy regimen for patients with metastatic bladder cancer? (4.3.1j)
- What is the optimal second-line chemotherapy regimen for patients with metastatic bladder cancer? (4.3.1j)
- What is the optimal radiotherapy regimen for patients with metastatic bladder cancer? (4.3.1j)
- What is the best way to manage urinary obstruction in patients with metastatic bladder cancer? (4.3.1j)
- Does smoking cessation affect outcomes for patients with bladder cancer? (4.3.1i)
- What specific interventions are most effective for patients with intractable bleeding or bladder pain who are nearing the end of their life (for example, nerve block, opioids, palliative radiotherapy, urinary diversion)? (4.3.1l)
- What specific interventions are most effective for patients with bladder toxicity following radiotherapy or BCG therapy for bladder cancer? (4.3.1m)

## **4.6 Economic aspects**

Developers will take into account both clinical and cost effectiveness when making recommendations involving a choice between alternative interventions. A review of the economic evidence will be conducted and analyses will be carried out as appropriate. The preferred unit of effectiveness is the quality-adjusted life year (QALY), and the costs considered will usually be only from an NHS and personal social services (PSS) perspective. Further detail on the methods can be found in 'The guidelines manual' (see 'Further information').

## **4.7 Status**

### **4.7.1 Scope**

This is the final scope.

### **4.7.2 Timing**

The development of the guideline recommendations will begin in October 2012.

## **5 Related NICE guidance**

### **5.1 Published guidance**

#### **5.1.1 NICE guidance to be updated**

This guideline will not update or replace any NICE guidance.

#### **5.1.2 NICE guidance to be incorporated**

This guideline will not incorporate any NICE guidance.

#### **5.1.3 Other related NICE guidance**

- [Opioids in palliative care](#). NICE clinical guideline 140 (2012).
- [Patient experience in adult NHS services](#). NICE clinical guidance 138 (2012).
- [Service user experience in adult mental health](#). NICE clinical guidance 136 (2011).
- [Lower urinary tract symptoms](#). NICE clinical guideline 97 (2009).
- [Medicines adherence](#). NICE clinical guideline 76 (2009).
- [Laparoscopic cystectomy](#). NICE interventional procedure guidance 287 (2009).
- [Metastatic spinal cord compression](#). NICE clinical guideline 75 (2008).
- [Electrically-stimulated intravesical chemotherapy for superficial bladder cancer](#). NICE interventional procedure guidance 277 (2008).
- [Intraoperative red blood cell salvage during radical prostatectomy or radical cystectomy](#). NICE interventional procedure guidance 258 (2008).

- [Intravesical microwave hyperthermia with intravesical chemotherapy for superficial bladder cancer](#). NICE interventional procedure guidance 235 (2007).
- [Urinary incontinence](#). NICE clinical guideline 40 (2006).
- [Improving supportive and palliative care for adults with cancer](#). NICE cancer service guidance (2004).
- [Improving outcomes in urological cancers](#). NICE cancer service guidance (2002).

## **5.2 Guidance under development**

NICE is currently developing the following related guidance (details available from the NICE website):

- Referral guidelines for suspected cancer (update). NICE clinical guideline. Publication date to be confirmed.
- Denosumab for the treatment of bone metastases from solid tumours and multiple myeloma. NICE technology appraisal guidance. Publication date to be confirmed.
- Vinflunine for the treatment of advanced or metastatic transitional cell carcinoma of the urothelial tract. NICE technology appraisal guidance. Publication date to be confirmed.

## **6 Further information**

Information on the guideline development process is provided in the following documents, available from the NICE website:

- [‘How NICE clinical guidelines are developed: an overview for stakeholders, the public and the NHS’](#)
- [‘The guidelines manual’](#).

Information on the progress of the guideline will also be available from the [NICE website](#).