NATIONAL INSTITUTE FOR HEALTH AND CARE EXCELLENCE

Health Technology Evaluation

Durvalumab with gemcitabine and cisplatin before surgery (neoadjuvant) then alone after surgery (adjuvant) for treating muscle-invasive bladder cancer [ID6168]

Final scope

Remit/evaluation objective

To appraise the clinical and cost effectiveness of durvalumab with gemcitabine and cisplatin before surgery (neoadjuvant) then alone after surgery (adjuvant) for treating muscle-invasive bladder cancer.

Background

Bladder cancer is where a growth of abnormal tissue, known as a tumour, develops in the bladder lining. Muscle-invasive bladder cancer is when cancerous cells spread beyond the lining into the surrounding bladder muscle. Common symptoms of bladder cancer include blood in the urine, passing urine often, pain or burning sensation when passing urine, fatigue, pain in lower back or abdomen and unexplained weight loss.

In 2022, 18,060 new bladder cancer cases were diagnosed in England.[1] At diagnosis, 30% of bladder cancers are muscle-invasive bladder cancer.[2] The majority of cases are in those aged over 75 but bladder cancer can affect young people too.[3] Bladder cancer is more common among men than women (3 males for every 1 female),[3] but women are more likely to be diagnosed at a later stage. Smoking is the biggest cause of preventable bladder cancer.

NICE guideline NG2 recommends people with muscle-invasive bladder cancer may have surgery or radiotherapy. Cisplatin combination chemotherapy is recommended before surgery (neoadjuvant). Surgery consists of radical cystectomy (removal of the bladder) with urinary stoma or a continent urinary diversion. After surgery, some people with high risk of recurrence (for example positive lymph-node involvement) or for whom neoadjuvant chemotherapy was not suitable may receive cisplatin-based adjuvant therapy to improve survival. Where adjuvant platinum-based chemotherapy is not suitable, NICE technology appraisal 817 recommends nivolumab as an option for the adjuvant treatment of muscle-invasive urothelial cancer that is at high risk of recurrence after radical resection in adults whose tumours express PD-L1 at a level of 1% or more.

The technology

Durvalumab (Imfinzi, AstraZeneca) does not currently have a marketing authorisation in the UK for treating muscle-invasive bladder cancer. Durvalumab with gemcitabine and cisplatin before surgery (neoadjuvant) then alone after surgery (adjuvant) is being studied in a randomised controlled trial in adults with muscle-invasive bladder cancer.

Intervention(s)	Durvalumab with gemcitabine and cisplatin before surgery (neoadjuvant) then alone after surgery (adjuvant)

Population(s)	Adults with resectable muscle-invasive bladder cancer who are eligible to receive gemcitabine and cisplatin
Subgroups	If evidence allows, results by level of PD-L1 expression will be considered

Comparators	Established clinical management without durvalumab, including but not limited to:
	• As neoadjuvant (before surgery) treatment:
	  ○ cisplatin-based chemotherapy
	• As adjuvant (after surgery) treatment:
	  ○ nivolumab (for people whose tumours express PD-L1 at a level of 1% or more)
	  ○ best supportive care

Outcomes	The outcome measures to be considered include: • overall survival • event-free survival • progression-free survival • disease-free survival • response rates • adverse effects of treatment • health-related quality of life.
Economic analysis	The reference case stipulates that the cost effectiveness of treatments should be expressed in terms of incremental cost per quality-adjusted life year. The reference case stipulates that the time horizon for estimating clinical and cost effectiveness should be sufficiently long to reflect any differences in costs or outcomes between the technologies being compared. Costs will be considered from an NHS and Personal Social Services perspective. The availability of any commercial arrangements for the intervention, comparator and subsequent treatment technologies will be taken into account. The availability and cost of biosimilar and generic products should be taken into account.
Other considerations	Guidance will only be issued in accordance with the marketing authorisation. Where the wording of the therapeutic indication does not include specific treatment combinations, guidance will be issued only in the context of the evidence that has underpinned the marketing authorisation granted by the regulator.

Related NICE recommendations	**Related technology appraisals:** Nivolumab for adjuvant treatment of invasive urothelial cancer at high risk of recurrence. (2022) NICE technology appraisal guidance 817. Nivolumab for treating locally advanced unresectable or metastatic urothelial cancer after platinum-containing chemotherapy. (2018) NICE technology appraisal guidance 530 Avelumab for maintenance treatment of locally advanced or metastatic urothelial cancer after platinum-based chemotherapy. (2022) NICE technology appraisal guidance 788 **Related technology appraisals in development:** Nivolumab with BMS-986205 and chemotherapy for neoadjuvant treatment of muscle-invasive bladder cancer. NICE technology appraisal guidance [ID6321] Publication date to be confirmed Pembrolizumab with chemoradiation for neoadjuvant and adjuvant treatment of cisplatin eligible muscle-invasive bladder cancer. NICE technology appraisal guidance [ID6219] Publication date to be confirmed Enfortumab vedotin with pembrolizumab for neoadjuvant and adjuvant treatment of cisplatin-eligible muscle-invasive bladder cancer. NICE technology appraisal guidance [ID6301] Publication date to be confirmed Durvalumab with enfortumab vedotin for neoadjuvant and adjuvant treatment of muscle-invasive bladder cancer when cisplatin is unsuitable. NICE technology appraisal guidance [ID6445] Publication date to be confirmed Atezolizumab for adjuvant treatment of circulating tumour DNA-positive high-risk muscle-invasive bladder cancer after cystectomy. NICE technology appraisal guidance [ID6515] Publication date to be confirmed **Related NICE guidelines:** Bladder cancer: diagnosis and management (2015) NICE guideline NG2. Suspected cancer: recognition and referral (2023) NICE guideline NG12 **Related quality standards:** Bladder cancer (2015) NICE quality standard 106.
Related National Policy	The NHS Long Term Plan (2019) NHS Long Term Plan NHS England (2023) Manual for prescribed specialist services (2023/2024)

References

1. Cancer registration statistics (2022). Cancer registration statistics in England (Accessed December 2024)

2. Saginala, K,. et al (2020) Epidemiology of bladder cancer, Med. Sci 8(1): 15

3. Cancer Research UK (2023). Bladder cancer incidence statistics. (Accessed November 2024)

