NATIONAL INSTITUTE FOR HEALTH AND CARE EXCELLENCE

Health Technology Evaluation

Erdafitinib for treating metastatic or unresectable FGFR-positive urothelial cancer ID1333

Draft scope

Draft remit/evaluation objective

To appraise the clinical and cost effectiveness of erdafitinib within its marketing authorisation for treating metastatic or unresectable fibroblast growth factor receptor (FGFR)-positive urothelial cancer.

Background

Urothelial carcinoma is cancer of the transitional cells which form the inner lining the bladder, urethra, ureter, or renal pelvis. It accounts for approximately 90% of bladder cancers.[1] Urothelial carcinomas can be described as non-invasive or invasive depending on how far the carcinomas invade the tissues. Non-invasive urothelial carcinomas can be further split into papillary carcinomas or flat carcinomas. Papillary carcinomas often grow towards the hollow part of the organ (for example bladder and ureter), without going into deeper layers. Flat carcinomas remain in the inner layers. Both papillary and flat carcinomas can become invasive.

Fibroblast growth factor receptors regulate cell growth. Genetic alterations in these receptors can promote uncontrolled growth of urothelial carcinoma tumours. Around 20% of patients with advanced urothelial carcinoma have alterations in the FGFR gene.[2]

In 2021, 9,401 new bladder cancers were diagnosed in England.[3] Bladder cancer is the 11th most common cancer in the UK.[4] The majority of cases are in those over the age of 60 and it is more common among men than women (3 males for every 1 female).[3,4] The most common symptom of bladder cancer is blood in urine, which is usually painless. Smoking is a major factor in the cause of bladder cancer. Urothelial carcinoma has a poor prognosis in the metastatic stage.

For locally advanced or metastatic cancer, NICE guideline NG2 recommends initial treatment is a cisplatin-containing chemotherapy. Where cisplatin is unsuitable, people may be offered carboplatin plus gemcitabine. Following treatment with platinum-containing chemotherapy (cisplatin or carboplatin), or where chemotherapy isn't suitable, people may be offered immunotherapy.

Currently, related NICE guidance includes:

- NICE technology appraisal 525, which recommends atezolizumab for treating locally advanced or metastatic urothelial carcinoma in adults who have had platinum-containing chemotherapy.

- NICE technology appraisal 530, which recommends nivolumab for treating locally advanced unresectable or metastatic urothelial cancer after platinum-containing chemotherapy

- NICE technology appraisal 692, which recommends pembrolizumab for treating locally advanced or metastatic urothelial carcinoma after platinum-containing chemotherapy

- NICE technology appraisal 739, which recommends atezolizumab as an option for untreated locally advanced or metastatic urothelial cancer in adults whose tumours express PD-L1 at a level of 5% or more and when cisplatin-containing chemotherapy is unsuitable.

- NICE technology appraisal 778, which recommends avelumab as an option for maintenance treatment of locally advanced or metastatic urothelial cancer that has not progressed after platinum-based chemotherapy in adults.

The technology

Erdafitinib (Balversa, Janssen) does not currently have a marketing authorisation in the UK for treating urothelial cancer. It is being studied in a phase 3 clinical trial in adults with advanced urothelial cancer that has progressed following 1-2 previous treatments (mostly chemotherapy and/or immunotherapy).

Intervention(s)	Erdafitinib
Population(s)	People with metastatic or unresectable fibroblast growth factor receptor (FGFR)-positive urothelial cancer
Subgroups	• FGFR alteration type • Previous anti-PD-(L) 1 treatment

Comparators	• Established clinical management without erdafitinib, including:
	  ○ Chemotherapy (including docetaxel, paclitaxel)
	  ○ Immunotherapy (atezolizumab, nivolumab, pembrolizumab)

Outcomes	The outcome measures to be considered include: • overall survival • progression-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. If the technology is likely to provide similar or greater health benefits at similar or lower cost than technologies recommended in published NICE technology appraisal guidance for the same indication, a cost comparison may be carried out. 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. The use of erdafitinib is conditional on the presence of FGFR alterations. The economic modelling should include the costs associated with diagnostic testing for FGFR alterations in people with urothelial cancer who would not otherwise have been tested. A sensitivity analysis should be provided without the cost of the diagnostic test. See section 4.8 of the guidance development manual (available here: https://www.nice.org.uk/process/pmg36/chapter/introduction-to-health-technology-evaluation).
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:** Atezolizumab for untreated PD-L1-positive advanced urothelial cancer when cisplatin is unsuitable. NICE technology appraisal guidance 739. Vinflunine for the treatment of advanced or metastatic transitional cell carcinoma of the urothelial tract. (2013) NICE technology appraisal guidance 272. Pembrolizumab for locally advanced or metastatic urothelial cancer where cisplatin is unsuitable. NICE technology appraisal guidance 674.

	Pembrolizumab for previously treated advanced or metastatic urothelial cancer NICE technology appraisal guidance 692. Nivolumab for treating metastatic or unresectable urothelial cancer after platinum-based chemotherapy. NICE technology appraisal guidance 530. Atezolizumab for treating metastatic urothelial cancer after platinum-based chemotherapy. NICE technology appraisal guidance 525. Avelumab for maintenance treatment of locally advanced or metastatic urothelial cancer after platinum-based chemotherapy NICE technology appraisal guidance TA788 **Related technology appraisals in development:** Durvalumab with tremelimumab and chemotherapy for treating unresectable or advanced urothelial cancer NICE technology appraisal guidance [ID3855]. Publication date tbc. Sacituzumab govitecan for treating unresectable metastatic urothelial cancer NICE technology appraisal guidance [ID6150]. Publication date tbc. **Related NICE guidelines:** Bladder cancer: diagnosis and management (2015) NICE guideline NG2. Improving outcomes in urological cancers (2002) NICE cancer service guidance. Published September 2002. **Related interventional procedures:** Transurethral laser ablation for recurrent non-muscle-invasive bladder cancer (2019) NICE interventional procedures guidance 656 Electrically stimulated intravesical chemotherapy for non-muscle-invasive bladder cancer (2019) NICE interventional procedures guidance 638 Intravesical microwave hyperthermia and chemotherapy for non-muscle-invasive bladder cancer (2018) NICE interventional procedures guidance 628 Laparoscopic cystectomy (2009) NICE interventional procedures guidance 287

	Related Quality Standards: Bladder cancer NICE quality standard. Published December 2015
Related National Policy	The NHS Long Term Plan (2019) NHS Long Term Plan NHS England (2018) NHS manual for prescribed specialist services (2018/2019) Chapter 105 NHS England (2019) Specialised kidney, bladder and prostate cancer services (adults): Service specification

Questions for consultation

Where do you consider erdafitinib will fit into the existing care pathway for metastatic or unresectable FGFR-positive urothelial cancer?

What is established clinical management for people with metastatic or unresectable FGFR-positive urothelial cancer following chemotherapy and/or immunotherapy?

Would erdafitinib be a candidate for managed access?

Do you consider that the use of erdafitinib can result in any potential substantial health-related benefits that are unlikely to be included in the QALY calculation?

Please identify the nature of the data which you understand to be available to enable the committee to take account of these benefits.

NICE is committed to promoting equality of opportunity, eliminating unlawful discrimination and fostering good relations between people with particular protected characteristics and others. Please let us know if you think that the proposed remit and scope may need changing in order to meet these aims. In particular, please tell us if the proposed remit and scope:

- could exclude from full consideration any people protected by the equality legislation who fall within the patient population for which erdafitinib will be licensed;
- could lead to recommendations that have a different impact on people protected by the equality legislation than on the wider population, e.g. by making it more difficult in practice for a specific group to access the technology;
- could have any adverse impact on people with a particular disability or disabilities.

Please tell us what evidence should be obtained to enable the committee to identify and consider such impacts.

NICE intends to evaluate this technology through its Single Technology Appraisal process. (Information on NICE's health technology evaluation processes is available at https://www.nice.org.uk/about/what-we-do/our-programmes/nice-guidance/nice-technology-appraisal-guidance/changes-to-health-technology-evaluation).

References

1 Cancer Research UK. Types of bladder cancer. https://www.cancerresearchuk.org/about-cancer/bladder-cancer/types-stages-grades/types Accessed November 2023

2 Xiao, J.F., et al., 2021. Targetable pathways in advanced bladder cancer: FGFR signaling. Cancers, 13(19), p.4891.

3 NHS Digital. Cancer Registrations Statistics, England 2021 https://digital.nhs.uk/data-and-information/publications/statistical/cancer-registration-statistics/england-2021---summary-counts-only Accessed November 2023.

4 Cancer Research UK (2023) Bladder cancer incidence statistics. https://www.cancerresearchuk.org/health-professional/cancer-statistics/statistics-by-cancer-type/bladder-cancer#heading-Zero Accessed March 2023.