**NATIONAL INSTITUTE FOR HEALTH AND CARE EXCELLENCE**

**Proposed Health Technology Appraisal**

# Fostemsavir in combination with other antiretroviral treatment for multidrug-resistant HIV-1

**Draft scope (pre-referral)**

## Draft remit/appraisal objective

To appraise the clinical and cost effectiveness of fostemsavir within its proposed marketing authorisation for treating adults with multidrug resistant HIV-1 for whom it is not possible to construct a suppressive anti-viral regimen.

## Background

HIV is a virus that causes HIV attacks the immune system destroying CD4 positive (CD4+) T cells, a type of white blood cell that is vital for fighting infections. The destruction of these cells leaves people living with HIV unable to fight off infections and some other diseases.

There are two main types of HIV. Most cases within the UK are from the HIV-1 type and it is considered more transmissible than HIV-2. An estimated 103,800 people live with HIV in the UK in 2018, of which 93% were diagnosed (95,500 diagnosed cases). Of these patients, 97% were receiving treatment (estimated 92,500) and 97% of these patients were virally suppressed (estimated 90,000)[1]. Therefore, approximately 2500 diagnosed patients did not have a suppressive anti-viral regimen.

Current clinical management involves life-long antiretroviral treatment (ART), which stop the virus replicating in the body and destroying CD4+ T cells. There is no cure for HIV, but ART enables most people to live a long and healthy life with an undetectable viral load, which eliminates the risk of passing on the infection. ARTs are often used in combination to avoid the disease adapting and becoming resistant. Choice of ART combinations is complex and inividualised, often including consideration of contraindication, drug-drug interactions, tolerability, treatment history, drug resistance profile, adherence and future salvage regimens[2]. ART requires a very high level of adherence (taking the required dose at the right time, ideally greater than 95%) to avoid drug resistance and increased viral load.

Etravirine in combination with other antiretroviral drugs is licensed for treating HIV-1 in antiretroviral treatment-experienced patients and enfuvirtide is licensed for people whose treatment is resistant to other standard ART regimens.

## The technology

Fostemsavir (brand name unknown, ViiV Healthcare) belongs to a group of HIV drugs called GP10 attaching inhibitors. Fostemsavir converts in the body to temsavir which inhibits the binding of the HIV-1 virus to white blood cells through blocking the GP120 receptor which means the virus cannot attach to CD4+ receptor. It is administered orally.

Fostemsavir does not have a marketing authorisation, it has been studied in clinical trials compared with placebo in heavily treatment experienced subjects with multi-drug resistant HIV-1.

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| **Intervention** | Fostemsavir with optimised background regimen of other ART |
| **Population** | People with multidrug-resistant HIV-1 for whom it is not possible to construct a suppressive anti-viral regimen |
| **Comparators** | • Optimised background regimen (established clinical management without fostemsavir)<br>• Enfuvirtide with optimised background regimen<br>• Etravirine with optimised background regimen |
| **Outcomes** | The outcome measures to be considered include:<br>• change in viral load<br>• CD4+ T-cell levels<br>• patients with viral suppression (undetectable viral load)<br>• adherence to treatment regimen<br>• mortality<br>• adverse effects of treatment<br>• 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.<br>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.<br>Costs will be considered from an NHS and Personal Social Services perspective. |
| **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. |

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| **Related NICE recommendations and NICE Pathways** | 'Ibalizumab for multidrug-resistant HIV-1' Proposed NICE technology appraisal [ID 2720]. Publication date to be confirmed.<br>'Cabotegravir with rilpivirine for HIV-1' Proposed NICE technology appraisal [ID2719]. Publication date to be confirmed.<br>Related Guidelines:<br>'HIV testing: increasing uptake among people who may have undiagnosed HIV' (2016). NICE guideline 60<br>Related Quality Standards:<br>'HIV testing: encouraging uptake' (2017). NICE quality standard 157.<br>Related NICE Pathways:<br>'HIV testing and prevention' (2019) NICE pathway |
| **Related National Policy** | The NHS Long Term Plan, 2019. NHS Long Term Plan<br>NHS England (2018/2019) NHS manual for prescribed specialist services (2018/2019), Chapter 16: adult specialist services for patients infected with HIV<br>Department of Health and Social Care, NHS Outcomes Framework 2016-2017: Domains 1-5.<br>NHS England (2019) Best Practice in HIV Prescribing and Multidisciplinary Teams |

**Questions for consultation**

Have all relevant comparators for fostemsavir been included in the scope?

What number of patients would be eligible for treatment with fostemsavir?

How should established clinical management without fostemsavir be defined?

Are the outcomes listed appropriate?

Are there any subgroups of people in whom fostemsavir is expected to be more clinically effective and cost effective or other groups that should be examined separately?

In what situations is fostemsavir expected to be used in clinical practice?

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 fostemsavir is 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.

Do you consider fostemsavir to be innovative in its potential to make a significant and substantial impact on health-related benefits and how it might improve the way that current need is met (is this a 'step-change' in the management of the condition)?

Do you consider that the use of fostemsavir can result in any potential significant and 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 Appraisal Committee to take account of these benefits.

To help NICE prioritise topics for additional adoption support, do you consider that there will be any barriers to adoption of this technology into practice? If yes, please describe briefly.

NICE intends to appraise this technology through its Single Technology Appraisal (STA) Process. We welcome comments on the appropriateness of appraising this topic through this process. (Information on the Institute's Technology Appraisal processes is available at http://www.nice.org.uk/article/pmg19/chapter/1-Introduction).

**References**

1. Public Health England (2019) HIV in the United Kingdom: Towards Zero HIV transmissions by 2030. Accessed January 2020

2. British HIV Association (BHIVA) (2016) British HIV Association guidelines for the treatment of HIV-1-positive adults with antiretroviral therapy. Accessed January 2020