Highly Specialised Technologies (HST) criteria checklist

Belumosudil for treating chronic graft versus host disease after 2 or more lines of systemic therapy ID4021

### Introduction

The NICE HST criteria checklist is to highlight where a technology meets/partially meets or does not meet the criteria for routing to the HST programme. Its purpose is to show the details of why a technology may not be appropriate for HST evaluation, but also where it has been identified as suitable. For more information, please see [section 7 of NICE health technology evaluation topic selection: the manual](https://www.nice.org.uk/process/pmg37/chapter/highly-specialised-technologies)

### Key – Please use the colour key to advise if the technology meets the criteria

|  |  |
| --- | --- |
| Met  | There is clear and strong evidence that the criterion is met |
| Not met | There is some, but not enough clear evidence that the criterion is met or There is no evidence or limited evidence that the criterion is met.  |

### MA wording: Belumosudil is indicated in the UK for treatment of people aged 12 years and older with chronic graft-versus-host disease who have received at least two prior lines of systemic therapy.

| **Number** | **Criterion** | **Description of how the technology meets the criteria**  | **Does the technology meet the criteria?** |
| --- | --- | --- | --- |
|  | The disease is very rare defined by 1:50,000 in England  | * Clinical experts at the scoping workshop estimated the prevalence of cGVHD in England was in excess of 1,100 patients (1:50,000). This was because chronic graft vs host disease (cGVHD) is relatively common following a transplant and more and more transplants are being done in clinical practice.
* There were 1,506 allografts in England in 2019.1 We used the 2019 figures because during 2020 there were less transplants performed due to the COVID pandemic. This figure includes adult and paediatric figures.
* Chronic GVHD is reported more commonly following adult allograft procedures. For malignant indications, it occurs at 33% in adults compared to 16% in the paediatric; for non-malignant indications, it occurs at 23% in adults and 12% in paediatrics1.
* This equates to 436 incident cases of cGVHD that year.
* Following the scoping workshop clinical experts were contacted and asked if the incidence could be used to estimate prevalence. They suggested this was inappropriate.
* In the absence of another source of evidence, to estimate prevalence the technical team assumed it was equal to incidence multiplied by disease duration (For this criterion we are looking at the condition as a whole. This includes those with mild, moderate or severe cGVHD). We heard at the workshop that a good proportion of cases are mild and do not result in a reduction in overall survival.
* A literature estimate for disease duration was 2 to 3.5 years2 . This estimate of treatment duration was confirmed by a clinical expert after the meeting to be an appropriate assumption.

**Number of people estimated to have cGVHD in England varied by duration of disease and % risk of developing disease**.

|  |  |  |
| --- | --- | --- |
| Disease duration | 2 Years | 3.5 Years |
| Prevalent cases | 871 | 1525 |

* The range of prevalent cases is approximately 871 to 1525. However, this estimate is highly uncertain, and includes people under 12 years old (not included in the marketing authorisation).
* On balance, given the clear clinical expert opinion, and estimates available this criteria is not clearly met.
 | Not met |
|  | Normally no more than 300 people in England are eligible for the technology in its licensed indication and no more than 500 across all its indications  | * Belumosudil is indicated for the treatment of patients 12 years and older with chronic graft-versus-host disease (chronic GVHD) after failure of at least two prior lines of systemic therapy.
* Belumosudil only has a licence for cGVHD
* Clinical experts at the scoping workshop stated that those with extensive or moderate to severe cGVHD are those likely to require second and subsequent lines of systemic treatment.
* A clinician at the scoping workshop advised that obtaining the number of patients who had ruxolitinib during the Covid-19 pandemic (when it was permitted as an interim treatment) could give an estimation of how many would be eligible for belumosudil. NHSE confirmed that xxx people received ruxolitinib in 2021 although as noted in criteria 1 it could be considered an underestimate because there were fewer transplants taking place due to the COVID pandemic.
* A clinical expert was consulted following the workshop who confirmed the number of patients eligible in England for treatment with belumosudil is likely to be below 300. This is consistent with the figures obtained by NHSE. This criterion is met.
 | Met |
|  | The very rare disease for which the technology is indicated significantly shortens life or severely impairs quality of life  | * Overall survival at 1 year for the condition is approximately 66-94% and survival at 4 years is 53-71%.4
* We heard at the scoping workshop that many cases present with mild disease which may resolve with topical or limited systemic treatment.5,6
* Whilst the disease can impair quality of life, in the majority of cases it does not lead to a significant shortening of life. This criterion is not met.
 | Not met |
|  | There are no other satisfactory treatment options, or the technology is likely to offer significant additional benefit over existing treatment options. | * There are no licensed or NICE approved therapies routinely used for third line treatment of cGVHD
* Ruxolitinib does have a marketing authorisation and was available to patients during the COVID pandemic however NHSE have confirmed that their interim policy for ruxolitinib in chronic GVHD (and for acute GVHD) was withdrawn earlier this year.
* In addition, at the workshop we heard that because subsequent lines of treatment are most clearly defined by the introduction of any systemic agent not previously used in the regimen for first-line treatment; patients can have treatments such as rituximab, imatinib and ECP. Therefore, there are other satisfactory treatment options in the third line setting.
* We also received clinical advice after the workshop that other treatments such as ibrutinib are used in clinical practice even though they are not reimbursed.
* We received clinical advice after the workshop which stated that there is not enough long-term data yet to determine if belumosudil offers a significant additional benefit over existing treatment options. The clinical advice suggested that in order to improve survival over existing treatments belumosudil would need to demonstrate a significant reduction in the use of corticosteroids and/or other immunosuppressants and not significantly increase the risk of infective complications long term.
* As there are multiple treatment options available in the third line setting and clinical advice suggests not enough long-term data to demonstrate a significant benefit over existing treatment options this criterion is not met.
 | Not Met |

**References**

1. British Society of Blood and Marrow Transplantation and Cellular Therapies (BSBMTCT) (2022). 13th Report to Specialist Commissioners Report 2020.
2. Mary E. D. Flowers, Paul J. Martin; How we treat chronic graft-versus-host disease. *Blood* 2015; 125 (4): 606–615. doi: [https://doi.org/10.1182/blood-2014-08-551994 Accessed 11/2022](https://doi.org/10.1182/blood-2014-08-551994%20Accessed%2011/2022)
3. ONS Population estimates (2021) Available [https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates Accessed 11/2022](https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates%20Accessed%2011/2022)
4. Csanadi M, Agh T, Tordai A, et al. A systematic literature review of incidence, mortality, and relapse of patients diagnosed with chronic graft versus host disease. Expert review of hematology. 2019. 12(5): 311-323.
5. Filipovich A, Weisdorf D, Pavletic S, et al. National Institutes of Health consensus development project on criteria for clinical trials in chronic graft-versus-host disease: I. Diagnosis and staging working group report. *Biol Blood & Marrow Transpl*. 2005. 11(12): 945-956.
6. Wolff D, Gerbitz A, Ayuk F, et al. Consensus Conference on Clinical Practice in Chronic Graft-versus-Host Disease (GVHD): First-Line and Topical Treatment of Chronic GVHD. *Biol Blood & Marrow Transpl*. 2010. 16(12): 1611-1628