NATIONAL INSTITUTE FOR HEALTH AND CARE EXCELLENCE

Proposed Health Technology Appraisal

Lusutrombopag for treating thrombocytopenia in people with chronic liver disease needing elective surgery

Draft scope (pre-referral)

Draft remit/appraisal objective

To appraise the clinical and cost effectiveness of lusutrombopag within its marketing authorisation for treating thrombocytopenia in people with chronic liver disease needing elective surgery.

Background

Thrombocytopenia is characterised as a reduction in the number of circulating platelets within the blood. Platelets come from megakaryocytes in the bone marrow. They play a critical role in haemostasis, a process which causes bleeding to stop. Thrombocytopenia can generally be classified on the basis of the platelet count in the blood. It is usually defined as a platelet count of less than 150 x 10^9 per litre of blood.

Thrombocytopenia is a common complication in people with chronic liver disease either as a direct result of the liver pathology or a consequence of interferon-based antiviral therapy. While mild to moderate thrombocytopenia rarely causes bleeding during procedures including liver biopsy or liver transplantation, severe thrombocytopenia increases the risk of excessive bleeding during and after surgery and can have a significant impact on the clinical management of chronic liver disease. It can delay or prevent the start of appropriate therapy leading to increased morbidity and mortality and a reduced quality of care.

The prevalence of thrombocytopenia in people with chronic liver disease varies from 15% to 70% depending on the stage of liver disease and differences in platelet count cut-off used to define thrombocytopenia. Between 2016 and 2017, Hospital Episode Statistics showed 27,927 admissions[1] with liver disease in England.

There are currently no licensed treatment options in the UK for treating thrombocytopenia in people with chronic liver disease requiring surgery. Therapies include stimulation of megakaryocyte maturation and platelet production. Treatment for severe thrombocytopenia can include platelet transfusion, splenic artery embolisation and surgical splenectomy.

The technology

Lusutrombopag (Mulpeta, Shionogi Inc) is a small molecule thrombopoietin receptor agonist which targets the c-Mpl thrombopoietin cell surface receptor

on megakaryocytes to stimulate platelet production. Lusutrombopag is administered orally.

Lusutrombopag does not currently have a marketing authorisation in the UK. It is currently being studied in clinical trials compared with placebo in adults with thrombocytopenia associated with chronic liver disease requiring surgery.

Intervention(s)	Lusutrombopag
Population(s)	People with severe thrombocytopenia associated with chronic liver disease requiring surgery
Comparators	Established clinical management without lusutrombopag (including, but not limited to platelet transfusion)
Outcomes	The outcome measures to be considered include: • platelet count • response rate • number of platelet transfusions • number of blood transfusions • return to operating theatre • need for rescue treatments • use of concurrent treatments • bleeding score • mortality • 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.

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 and NICE Pathways	**Related NICE Pathways:** Blood conditions (2017) NICE Pathway Liver conditions (2017) NICE Pathway
Related National Policy	NHS England (2016) Manual for prescribed specialised services 2016/17 Chapter 69 Liver transplant services (adults and children) 131 Specialist services for complex liver, biliary and pancreatic diseases in adults NHS England (June 2015) Treatment of chronic hepatitis C in patients with cirrhosis Interim Clinical Commissioning Policy Statement Ref: B07/P/a NHS England (2015) Operational delivery networks for Hepatitis C care in adults Service Specifications NHS England (2013) 2013/14 Standard Contract for Hepatobiliary and Pancreas (adult) Particulars, schedule 2 The Services, Service Specifications Ref: A02/S/a NHS England (2013) 2013/14 NHS Standard Contract for Live Liver Transplantation Service Particulars, Schedule 2 the services, A service specifications Ref: A02/S(HSS)/a **National Service Frameworks** Long Term Conditions (including neurological) – archived Department of Health (2016) NHS outcomes framework 2016 to 2017

Questions for consultation

Have all relevant comparators for lusutrombopag been included in the scope?
Which treatments are considered to be established clinical practice in the NHS for thrombocytopenia associated with chronic liver disease requiring surgery?
Are the outcomes listed appropriate?

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

Where do you consider lusutrombopag will fit into the existing Liver conditions or Blood conditions NICE pathway?

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 lusutrombopag 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.

Do you consider lusutrombopag 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 lusutrombopag 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. Hospital Episode Statistics Admitted Patient Care England 2016-17 (2017). Accessed 23/11/2017