NATIONAL INSTITUTE FOR HEALTH AND CARE EXCELLENCE

Single Technology Appraisal

Panobinostat for treating multiple myeloma in people who have received at least 1 prior therapy

Final scope

Remit/appraisal objective

To appraise the clinical and cost effectiveness of panobinostat within its marketing authorisation for treating multiple myeloma in people who have received at least 1 prior therapy.

Background

Multiple myeloma is a form of cancer that arises from plasma cells (a type of white blood cell) in the bone marrow. Myeloma cells produce large quantities of an abnormal antibody, known as paraprotein. Unlike normal antibodies, paraprotein has no useful function and lacks the capacity to fight infection. Myeloma cells supress the development of normal blood cells that are responsible for fighting infection (white blood cells), carrying oxygen around the body (red blood cells) and blood clotting (platelets). The term multiple myeloma refers to the presence of more than one site of affected bone at the time of diagnosis. People with multiple myeloma can experience bone pain, bone fractures, tiredness (due to anaemia), infections, hypercalcaemia (too much calcium in the blood) and kidney problems.

In 2011, 4039 people were diagnosed with multiple myeloma in England. It is most frequently diagnosed in older people, with 43% of people diagnosed aged 75 years and over. Multiple myeloma is more common in men than in women and the incidence is also reported to be higher in people of African and Caribbean family origin. There were 2303 deaths in England in 2012. The 5-year survival rate for adults with multiple myeloma in England is estimated to be 37.1%.

Multiple myeloma is an incurable disease. The main aims of therapy are to prolong survival and maintain a good quality of life by controlling the disease and relieving symptoms. Following initial treatment, subsequent therapy is influenced by previous treatment and response to it, duration of remission, comorbidities and patient preference. NICE technology appraisal guidance 129 recommends bortezomib monotherapy as an option for treating progressive multiple myeloma in people who are at first relapse having received 1 prior therapy and who have undergone, or are unsuitable for bone marrow transplantation. NICE technology appraisal guidance 171 also recommends lenalidomide in combination with dexamethasone as a treatment option for people with multiple myeloma who have received at least 2 prior therapies. Other subsequent treatment options may include repeating high-

dose chemotherapy or chemotherapy with alkylating agents and anthracyclines, thalidomide and corticosteroids.

The technology

Panobinostat (Farydak, Novartis Pharmaceuticals UK) is an oral potent histone deacetylase inhibitor that disrupts a key mechanism in the transformation of normal cells to cancerous cells and selectively targets tumour cells for cell death.

Panobinostat does not currently have a marketing authorisation in the UK for multiple myeloma that has been previously treated with at least 1 prior therapy. Panobinostat has been studied in combination with bortezomib and dexamethasone compared with bortezomib and dexamethasone in adults with relapsed disease, and in adults with relapsed and refractory multiple myeloma who have received at least 1 prior therapy.

Intervention(s)	Panobinostat in combination with bortezomib and dexamethasone
Population(s)	People with multiple myeloma who have received at least 1 prior therapy
Comparators	After 1 prior therapy: • Bortezomib monotherapy • Bortezomib plus dexamethasone After 2 or more prior therapies: • Bortezomib plus dexamethasone • Lenalidomide plus dexamethasone • Combination chemotherapy regimens with, for example, mephalan and doxorubicin, thalidomide and corticosteroids
Outcomes	The outcome measures to be considered include: • progression-free survival • overall survival • response rates • time to next treatment • 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 patient access schemes for the intervention or comparator technologies should be taken into account. Where comparator technologies are available through the Cancer Drugs Fund, the cost incurred by the Cancer Drugs Fund should be used in any economic analyses, rather than the list price.
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 in the context of the evidence that has underpinned the marketing authorisation granted by the regulator. If the evidence allows, subgroup analyses based on number of lines of previous therapy will be considered.
Related NICE recommendations and NICE pathways	Related Technology Appraisals: Technology Appraisal No. 129, October 2007, 'Bortezomib monotherapy for relapsed multiple myeloma'. Guidance on Static list. Technology Appraisal No. 171, June 2009, 'Lenalidomide for the treatment of multiple myeloma in people who have received at least one prior therapy'. Guidance on Static list. Technology Appraisal No. 228, July 2011, 'Bortezomib and thalidomide for the first-line treatment of multiple myeloma'. Review proposal date July 2014. Technology Appraisal No. 311, April 2014, 'Bortezomib for induction therapy in multiple myeloma before high dose chemotherapy and autologous stem cell transplantation'. Review proposal date April 2017. Technology Appraisal in Preparation, 'Lenalidomide for the treatment of multiple myeloma following treatment with bortezomib' (part review of Technology Appraisal

	guidance 171). Earliest anticipated date of publication TBC. Technology Appraisal in Preparation, 'Pomalidomide for treating relapsed and refractory multiple myeloma previously treated with both lenalidomide and bortezomib'. Earliest anticipated date of publication TBC. Related Guidelines: Clinical Guideline in Preparation, 'Multiple myeloma: diagnosis and management of multiple myeloma'. Earliest anticipated date of publication January 2016. Cancer Service Guidance, October 2003, 'Improving Outcomes in Haematological Cancer'. NICE pathway: Multiple myeloma, Pathway created: December 2013 http://pathways.nice.org.uk/pathways/blood-and-bone-marrow-cancers#path=view%3A/pathways/blood-and-bone-marrow-cancers/multiple-myeloma.xml&content=close
Related National Policy	National service framework: 'Improving outcomes: a strategy for cancer', January 2011. https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/135516/dh_123394.pdf.pdf