NATIONAL INSTITUTE FOR HEALTH AND CLINICAL EXCELLENCE

Health Technology Appraisal

Lenalidomide for multiple myeloma in people who have received at least one prior therapy.

Final scope

Remit/appraisal objective

To appraise the clinical and cost effectiveness of lenalidomide in combination with dexamethasone for the treatment of multiple myeloma in people who have received at least one prior therapy.

Background

Multiple myeloma (MM), is a cancer of the plasma cells (a form of white blood cell), where a clone of abnormal plasma cell multiplies, forms tumours in the bone marrow and produces a large quantity of abnormal antibodies that accumulate in the blood or urine. Patients with MM can experience bone pain, bone fractures, fatigue, anaemia, infections, hypercalcaemia and kidney problems. Following initial treatment, patients usually experience a period of remission, but almost all patients eventually relapse, and others have disease which has been refractory (not responded) to treatment.

In 2001 there were 3145 new cases of multiple myeloma diagnosed in England and Wales and 2317 deaths in 2002. There has been an increase in incidence of MM over the past 30 years but this may reflect improvements in diagnosis. Prevalence of MM over a period of five years for the UK has been estimated at 7893 (2002 as reference year). The likelihood of developing MM increases with age, and the median age at diagnosis is 60-65 years. It is more common in men than women and associated with poor disease prognosis and high mortality.

MM is currently an incurable illness. The natural history of myeloma is heterogeneous with survival times ranging from a few weeks to over 20 years. The prognosis is usually poor. The one-year survival rate is approximately 60% and the five-year survival rate is approximately 20%, and rates for patients with relapsed and/or refractory disease are somewhat lower. Prognostic factors include age, stage of disease, serum levels of ß2-microglobulin, C-reactive protein, and albumin, atypical plasma cell morphology and abnormal cytogenetic features.

The aim of therapy is to control disease as effectively as possible, maximise quality of life and to prolong survival. Current treatments for relapsed and/or refractory disease include chemotherapy with alkylating agents and anthracyclines, bortezomib, thalidomide and corticosteroids, alone or in combination use. Repeat high-dose chemotherapy with stem-cell rescue may be considered for certain patients. Choice of therapy for an individual patient

is influenced by the previous treatment and response to it, the duration of remission, comorbidities, patient preference and cytogenetic features of disease.

The technology

Lenalidomide (Revlimid, Celgene) is an oral immuno-modulatory thalidomide analogue. Lenalidomide in combination with dexamethasone is licensed for the treatment of multiple myeloma in patients who have received at least one prior therapy.

Intervention	Lenalidomide in combination with high dose dexamethasone
Population	People with multiple myeloma who have received at least one prior therapy
Standard comparators	• High dose dexamethasone • Bortezomib monotherapy and bortezomib in combination with high dose dexamethasone • Thalidomide-containing regimens • Repeat initial chemotherapy including regimens based on mephalan, vincristine, cyclophosphamide and doxorubicin
Outcomes	The outcome measures to be considered include: • time to disease progression • overall survival • response rates • health-related quality of life • adverse effects of treatment
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	If evidence allows subgroups of patient populations in whom the technology is clinically effective and cost effective should be considered. These may include subgroups by the type and number of prior therapies (for example whether or not thalidomide has been used at first line), treatment response and duration of remission, severity of disease and cytogenetic features. Consideration should be given to number of treatment cycles and continuation and stopping rules for treatment. Consideration should be given to measurement scales for assessing treatment response including the use of serum-M protein, urinary free light chain levels and EBMT criteria. Guidance will only be issued in accordance with the marketing authorisation.
Related NICE recommendations	Related Technology Appraisals: Technology Appraisal No. TA 129, October 2007, Bortezomib monotherapy for relapsed multiple myeloma Related Guidelines: Cancer Service Guidance: Improving Outcomes in Haematological Cancer, October 2003