

NATIONAL INSTITUTE FOR HEALTH AND CLINICAL EXCELLENCE

Single Technology Appraisal

Bendamustine in combination with rituximab for the first-line treatment of mantle cell lymphoma

Final scope

Remit/appraisal objective

To appraise the clinical and cost effectiveness of bendamustine in combination with rituximab within its licensed indication for the first-line treatment of mantle cell lymphoma.

Background

Lymphomas are cancers of the lymphatic system, which is a part of the body's immune system. Traditionally, lymphomas are divided into Hodgkin's disease (now known as Hodgkin's lymphoma) and non-Hodgkin's lymphoma. Non-Hodgkin's lymphomas are a diverse group of conditions which are categorised according to the cell type affected (B-cell or T-cell), as well as the clinical features and rate of progression of the disease. Mantle cell lymphoma is a rare type of non-Hodgkin's lymphoma affecting the B-cells.

Lymphomas are graded according to the rate at which the abnormal lymphocyte cells divide. They are termed 'high-grade' (or aggressive) when they divide quickly and 'indolent' (or low-grade) when they divide slowly. Mantle cell lymphoma exhibits a moderately aggressive course, it is rarely curable with currently available standard treatment. The registered annual incidence of non-Hodgkin's lymphoma in England and Wales is around 10,400. Of these, mantle cell lymphoma accounts for around 5 to 8%, equivalent to around 670 new diagnoses per year. Mantle cell lymphoma usually occurs in older adults (the median age of presentation is 60 years) and has a male predominance. Despite response rates of 50-70% with many regimens, mantle cell lymphoma typically progresses after chemotherapy. The median survival time is approximately 3 years; the 10-year survival rate is 5 to 10%.

The most widely used treatment options for the first-line treatment of mantle cell lymphoma are cyclophosphamide, doxorubicin, vincristine and prednisolone in combination with rituximab (R-CHOP) and fludarabine and cyclophosphamide in combination with rituximab (R-FC). Other treatment options may include; cyclophosphamide, vincristine and prednisolone in combination with rituximab (R-CVP) and rituximab with chlorambucil. Stem cell transplantation may be an option for some patients.

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The technology

Bendamustine (Levact, Napp Pharmaceuticals) is an alkylating antitumour agent. The antineoplastic and cytotoxic effect of bendamustine hydrochloride is based on a cross-linking of DNA single and double strands by alkylation. As a result, DNA matrix functions and DNA synthesis and repair are impaired. It is administered by intravenous infusion.

Bendamustine in combination with rituximab does not currently have a UK marketing authorisation for the first-line treatment of mantle cell lymphoma. It has been studied in a clinical trial in comparison with R-CHOP for the first-line treatment of mantle cell lymphoma.

Intervention(s)	Bendamustine in combination with rituximab
Population(s)	People with previously untreated mantle cell lymphoma for whom stem cell transplantation is unsuitable
Standard comparators	<ul style="list-style-type: none">• cyclophosphamide, doxorubicin, vincristine and prednisolone plus rituximab (R-CHOP)• fludarabine and cyclophosphamide plus rituximab (R-FC) For people in whom the above regimens are unsuitable: <ul style="list-style-type: none">• cyclophosphamide, vincristine and prednisolone plus rituximab (R-CVP)• chlorambucil plus rituximab
Outcomes	The outcome measures to be considered include: <ul style="list-style-type: none">• response rates• duration of response/remission• time to new anti-lymphoma treatment/time to progression• overall survival• progression free survival• adverse effects of treatment• health related quality of life

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Economic analysis	<p>The reference case stipulates that the cost effectiveness of treatments should be expressed in terms of incremental cost per quality-adjusted life year.</p> <p>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.</p> <p>Costs will be considered from an NHS and Personal Social Services perspective.</p>
Other considerations	<p>Guidance will only be issued in accordance with the marketing authorisation.</p>
Related NICE recommendations	<p>Related Technology Appraisals: Terminated Technology Appraisal No. 207, Oct 2010, 'Temsirrolimus for the treatment of relapsed or refractory mantle cell lymphoma'.</p> <p>Related Cancer Service Guidelines: Cancer Service Guidelines, October 2003, 'Improving outcomes in haemato-oncology cancer'.</p>