NATIONAL INSTITUTE FOR HEALTH AND CARE EXCELLENCE

Single Technology Appraisal

Brentuximab vedotin for treating relapsed or refractory systemic anaplastic large cell lymphoma

Final scope

Final remit/appraisal objective

To appraise the clinical and cost effectiveness of brentuximab vedotin within its marketing authorisation for treating relapsed or refractory systemic anaplastic large cell lymphoma.

Background

Anaplastic large cell lymphoma is a peripheral T-cell non-Hodgkin's lymphoma. It belongs to the group of CD30-positive lymphoproliferative disorders, which affect lymph nodes and extranodal sites. Anaplastic large cell lymphoma can appear in the skin, in lymph nodes, or in organs throughout the body. Symptoms may include a painless swelling in the neck, armpit or groin; loss of appetite; tiredness; night sweats; high temperatures; weight loss; and cough. There are 2 forms of anaplastic large cell lymphoma, systemic and cutaneous, with different outcomes and treatment options. There are 2 subtypes of systemic anaplastic large cell lymphoma: anaplastic lymphoma kinase (ALK)-positive, and ALK-negative. The latter subtype is generally associated with a less favourable prognosis.

In 2013, 11,392 people were diagnosed with non-Hodgkin's lymphoma in England.[1] It is reported that 3% of people with non-Hodgkin's lymphoma have systemic anaplastic large cell lymphoma.[2] The cancer occurs most commonly in children and young people. It is more common in males than females. Approximately 40–65% of people with anaplastic large cell lymphoma develop recurrent disease after initial therapy.[3]

CHOP chemotherapy (cyclophosphamide, doxorubicin, vincristine and prednisolone), with or without etoposide, is a commonly used first-line regimen for people with systemic anaplastic large cell lymphoma. If the cancer relapses, people who are eligible for transplant can be treated with second-line chemotherapy before transplant. Consolidation therapy with high-dose therapy followed by autologous stem cell transplantation can then be given to people who have a complete or partial response. People who are not eligible for transplant may be treated with second-line chemotherapy regimens or palliative radiotherapy, although there is no standard of care in this clinical setting.

The technology

Brentuximab vedotin (Adcetris, Takeda UK) is an antibody–drug conjugate comprising an anti-CD30 monoclonal antibody attached by an enzyme-

cleavable linker to a potent chemotherapeutic agent, monomethyl auristatin E (MMAE). The antibody–drug conjugate allows for the selective targeting of CD30-expressing cancer cells. It is administered by intravenous infusion.

Brentuximab vedotin has a marketing authorisation in the UK for treating adults with relapsed or refractory systemic anaplastic large cell lymphoma. Brentuximab vedotin is funded by the Cancer Drugs Fund for the treatment of relapsed or refractory systemic anaplastic large cell lymphoma.

Intervention(s)	Brentuximab vedotin
Population(s)	People with relapsed or refractory systemic anaplastic large cell lymphoma.
Comparators	Established clinical management without brentuximab vedotin.
Outcomes	The outcome measures to be considered include: • overall survival • progression-free survival • objective response rate • complete response rate • rate of stem cell transplantation (autologous and allogeneic) • 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	If the evidence allows, the economic analysis should model stem cell transplantation further down the treatment pathway. 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	Appraisals in development (including suspended appraisals) 'Brentuximab vedotin for treating CD30-positive Hodgkin's lymphoma' NICE technology appraisals guidance [ID722]. Publication expected January 2017.
Related National Policy	NHS England, National Cancer Drugs Fund List, November 2016. NHS England, Clinical Commissioning Policy: Haematopoietic Stem Cell Transplantation (HSCT) (all ages): Revised, Jan 2015. Department of Health, NHS Outcomes Framework 2015-2016, Dec 2014. https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/385749/NHS_Outcomes_Framework.pdf

References

[1] Cancer Research UK (2013) Non-Hodgkin lymphoma incidence statistics. Accessed July 2016.

[2]Skarbnik APZ and Smith MR (2012) Brentuximab vedotin in anaplastic large cell lymphoma. Expert opinion in biological therapy 12(5): 633–639.

[3]Pro B et al. (2012) Brentuximab vedotin (SGN-35) in patients with relapsed or refractory systemic anaplastic large-cell lymphoma: results of a phase II study. Journal of Clinical Oncology 30: 2190–2196.