NATIONAL INSTITUTE FOR HEALTH AND CARE EXCELLENCE

Single Technology Appraisal

Brentuximab vedotin for untreated CD30-positive peripheral T-cell lymphoma (ID1586)

Final scope

Remit/appraisal objective

To appraise the clinical and cost effectiveness of brentuximab vedotin with cyclophosphamide, doxorubicin, and prednisone within its marketing authorisation for untreated CD30-positive peripheral T-cell lymphoma.

Background

Non-Hodgkin's lymphomas (NHL) are malignant disorders of the lymphatic system, a part of the immune system. They 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. T-cell lymphomas are less common than B-cell lymphomas. T-cell lymphomas can develop from immature or mature T cells. Peripheral T-cell lymphoma (PTCL) is a heterogeneous group with over 20 distinct lymphomas that all develop in a similar way from mature T cells. The most common PTCLs are the nodal subtypes which include PTCL not otherwise specified, angioimmunoblastic T-cell lymphoma and systemic anaplastic large cell lymphoma (sALCL). The latter can further be subdivided depending on the expression of anaplastic lymphoma kinase (ALK) into ALK-positive and ALK-negative ALCL. PTCLs are fast growing lymphomas that often present as painless lumps (enlarged lymph nodes) in the neck, armpit or groin but sometimes may start in other parts of the body such as the stomach or bowel (extranodal disease). People may also have loss of appetite, tiredness or night sweats.

CD30 is a cell surface protein expressed on some cancer cells. These tumours are called CD30-positive. CD30 expression varies among PTCL subtypes but is uniformly expressed in sACLC subtypes.

There were around 12,065 new cases of NHL in England in 2017.[1] Of those, 796 people had a primary diagnosis of peripheral or cutaneous T-cell lymphoma.[1] Yearly there are about 170 people diagnosed with PTCL that is not otherwise specified, 100 with ALK-negative ALCL and 70 with ALK-positive ALCL.[2] Most people diagnosed with NHL are 65 or over.[3] Survival rates for NHL are around 68% at 5 years and 63% at 10 years.[3] The average survival rate for T-cell lymphoma is 50% at 5 years.[2] The 5-year survival rates for PTCL that is not otherwise specified, ALK-negative ALCL and ALK-positive sALCL are 25.4%, 44.7% and 80.2%, respectively.[2]

The standard of care for untreated PTCL in the UK is CHOP (cyclophosphamide, doxorubicin, vincristine and prednisone). Stem cell transplant may also be a treatment option for some people.

The technology

Brentuximab vedotin (Adcetris, Takeda) is an antibody-drug conjugate that selectively targets tumour cells expressing the CD30 protein. CD30 is expressed in all cases of sALCL and is sometimes expressed in other PTCL subtypes. Brentuximab vedotin is administered by intravenous infusion.

Brentuximab vedotin does not currently have a marketing authorisation in the UK for untreated CD-30 positive PTCL. It has been studied in trials in combination with cyclophosphamide, doxorubicin, and prednisone in adults with untreated CD30-positive PTCL.

Intervention(s)	Brentuximab vedotin with cyclophosphamide, doxorubicin, and prednisone
Population(s)	Adults with untreated CD30-positive peripheral T-cell lymphoma (PTCL)
Comparators	Established clinical management including: • cyclophosphamide, hydroxydaunorubicin, vincristine, and prednisone (CHOP) with or without stem cell transplant
Outcomes	The outcome measures to be considered include: • overall survival • progression free survival • response rate • 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 commercial arrangements for the intervention or comparator and subsequent technologies will be taken into account.

Other considerations	If the evidence allows the following subgroups will be considered. These include people with PTCL not otherwise specified, people with angioimmunoblastic T-cell lymphoma, people with sACLC, people with ALK-positive sACLC, and ALK-negative sACLC. 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 Guidelines:** Non-Hodgkin's lymphoma: diagnosis and management (2016) NICE guideline 52 Haematological cancers: improving outcomes (2016) NICE guideline 47 **Related Quality Standards:** Haematological cancers (2017) NICE quality standard 150 **Related NICE Pathways:** Blood and bone marrow cancers (2013, updated Feb 2019) NICE pathway Non-Hodgkin's lymphoma (2016, updated March 2019) NICE pathway
Related National Policy	The NHS Long Term Plan, 2019. NHS Long Term Plan NHS England (2018/2019) NHS manual for prescribed specialist services (2018/2019) Department of Health and Social Care, NHS Outcomes Framework : Domains 1, 3, 4 and 5. https://digital.nhs.uk/data-and-information/publications/ci-hub/nhs-outcomes-framework#framework-domains NHS England (2013/14) NHS Standard Contract for Cancer: Chemotherapy (Adult). B15/S/a.

References

1 Cancer registration statistics, England: 2017, accessed May 2019
2 Haematological Malignancy Research Network (HMRN), HMRN 2010-2016, accessed May 2019
3 Cancer research UK, accessed May 2019

