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NATIONAL INSTITUTE FOR HEALTH AND CARE EXCELLENCE

Health Technology Evaluation

Lisocabtagene maraleucel for treating relapsed or refractory large B-cell lymphoma after 2 or more systemic treatments (review of TA987) [ID6619]

Final scope

Final remit/evaluation objective

To appraise the clinical and cost effectiveness of lisocabtagene maraleucel within its marketing authorisation for treating relapsed or refractory diffuse large B-cell lymphoma (DLBCL), primary mediastinal large B-cell lymphoma (PMBCL) after 2 or more systemic treatments.

Background

Lymphomas are cancers of the lymphatic system, which is a part of the immune system. Lymphomas are divided into Hodgkin lymphoma and non-Hodgkin lymphoma. Non-Hodgkin lymphomas (NHL) 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. High-grade NHL is an aggressive, fast-growing form of the disease.

The most common high-grade NHL is diffuse large B-cell lymphoma (DLBCL). DLBCL is a subtype of large B-cell lymphoma (LBCL). There are other forms of LBCL. These include primary mediastinal large B-cell lymphoma (PMBCL) and FL grade 3B (FL3B). PMBCL and FL3B are subtypes of LBCL that are clinically and biologically distinct from DLBCL.[1] The symptoms of NHL depend on what organ or tissue the lymphoma is affecting. LBCL often presents 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.

In England in 2022 there were 4,385 diagnoses of DLBCL and other high grade mature B-cell neoplasms.[2] DLBCL is slightly more common in men than women and most people diagnosed are aged 65 years or over.[3] The 5-year survival rate for people with DLBCL is around 60%.[4]

The most widely used first-line treatment for DLBCL is R-CHOP (rituximab, cyclophosphamide, doxorubicin, vincristine and prednisolone). Sometimes etoposide is added to this regimen. NICE technology appraisal 874 recommends polatuzumab vedotin in combination with rituximab, cyclophosphamide, doxorubicin and prednisolone (Pola + R-CHP). For relapsed or refractory disease after 1 systemic therapy, NICE guideline NG52 recommends a multi-agent chemotherapy, potentially in combination with rituximab, followed by stem cell transplantation for people who are fit enough to have it. Chemotherapy regimens commonly used in clinical practice include DHAP (dexamethasone, cytarabine, cisplatin), GDP (gemcitabine, dexamethasone, cisplatin), ICE (ifosfamide, carboplatin, etoposide) and IVE (ifosfamide, etoposide, epirubicin). NICE technology appraisal 1048 recommends lisocabtagene maraleucel for treating relapsed or refractory large B-cell lymphoma after first-line chemoimmunotherapy when a stem cell transplant is suitable. Currently, axicabtagene ciloleucel is available within the Cancer Drugs Fund for

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treating relapsed or refractory diffuse large b-cell lymphoma after first-line chemoimmunotherapy, recommended through NICE technology appraisal 895.

If stem cell transplantation is not suitable, further chemotherapy, with or without immunotherapy, may be used. NICE technology appraisal 649 recommends polatuzumab vedotin with rituximab and bendamustine for relapsed or refractory DLBCL in adults who cannot have stem cell transplantation.

Options for relapsed and refractory DLBCL after 2 therapies include:

- NICE technology appraisal 872 axicabtagene ciloleucel as an option for treating relapsed or refractory DLBCL and PMBCL in adults after 2 or more systemic therapies.
- NICE technology appraisal 927 glofitamab for treating relapsed or refractory diffuse large B-cell lymphoma after 2 or more systemic treatments
- NICE technology appraisal 947 loncastuximab tesirine for relapsed or refractory DLBCL and high-grade B-cell lymphoma in adults after 2 or more systemic therapies if they have previously had polatuzumab vedotin, or if polatuzumab vedotin is contraindicated or not tolerated
- NICE technology appraisal 954 epcoritamab for treating relapsed or refractory diffuse large B-cell lymphoma after 2 or more systemic treatments

The technology

Lisocabtagene maraleucel (Breyanzi, Bristol Myers Squibb) has a marketing authorisation in the UK for treating relapsed or refractory DLBCL, PMBCL and FL3B, after 2 or more systemic treatments.

Intervention(s)	Lisocabtagene maraleucel
Population(s)	Adults with relapsed or refractory DLBCL or PMBCL, after two or more lines of systemic therapy
Subgroups	If evidence allows, the following subgroups will be considered: • type of lymphoma (DLBCL, PMBCL) • grade of lymphoma • number of previous treatments • previous stem cell transplant

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Comparators	Established clinical management without lisocabtagene maraleucel
	The main relevant comparator is:
	• Axicabtagene ciloleucel
	Other comparators are:
	• Salvage chemotherapy combination regimens with or without rituximab, including:
	  • DHAP (dexamethasone, cytarabine, cisplatin)
	  • ESHAP (etoposide, methylprednisolone, cytarabine, cisplatin)
	  • GDP (gemcitabine, dexamethasone, cisplatin)
	  • GEMOX (gemcitabine and oxaliplatin)
	  • ICE (ifosfamide, carboplatin, etoposide)
	  • IVE (ifosfamide, epirubicin and etoposide)
	• Polatuzumab vedotin with rituximab and bendamustine (only when stem cell transplantation is not suitable)
	• Loncastuximab tesirine (if previously had polatuzumab vedotin or if polatuzumab vedotin is contraindicated or not tolerated)
	• Glofitamab
	• Epcoritamab (if previously had polatuzumab vedotin or if polatuzumab vedotin is contraindicated or not tolerated)
	• Glofitamab with gemcitabine and oxaliplatin for treating relapsed or refractory DBCL

Outcomes	The outcome measures to be considered include: • progression free survival • overall survival • response rates, including time to next treatment and duration of response • adverse effects of treatment • health-related quality of life.

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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. If the technology is likely to provide similar or greater health benefits at similar or lower cost than technologies recommended in published NICE technology appraisal guidance for the same indication, a cost comparison may be carried out. 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, comparator and subsequent treatment technologies will be taken into account.
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 only in the context of the evidence that has underpinned the marketing authorisation granted by the regulator.
Related NICE recommendations	**Related technology appraisals:** Lisocabtagene maraleucel for treating relapsed or refractory large B-cell lymphoma after first-line chemoimmunotherapy when a stem cell transplant is suitable (2025). NICE technology appraisal guidance 1048. Epcoritamab for treating relapsed or refractory diffuse large B-cell lymphoma after 2 or more systemic treatments (2024). NICE technology appraisal guidance 954. Loncastuximab tesirine for treating relapsed or refractory diffuse large B-cell lymphoma and high-grade B-cell lymphoma after 2 or more systemic treatments (2024). NICE technology appraisal guidance 947. Glofitamab for treating relapsed or refractory diffuse large B-cell lymphoma after 2 or more systemic treatments (2023). NICE technology appraisal guidance 927. Axicabtagene ciloleucel for treating diffuse large B-cell lymphoma and primary mediastinal large B-cell lymphoma after 2 or more systemic therapies (2023). NICE technology appraisal guidance 872. Axicabtagene ciloleucel for use within the Cancer Drugs Fund as an option for DLBCL when an autologous stem cell is suitable if it has relapsed within 12 months after, or is

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	refractory to, first-line chemoimmunotherapy (2023). NICE technology appraisal guidance 895. Polatuzumab vedotin with rituximab and bendamustine for relapsed or refractory DLBCL in adults who cannot have a haematopoietic stem cell transplant (2020). NICE technology appraisal guidance 649. Pixantrone monotherapy for adults who have multiply relapsed or refractory aggressive non-Hodgkin B-cell lymphoma, when they have been treated previously with rituximab and are receiving third- or fourth-line treatment (2014). NICE technology appraisal guidance 306. **Related technology appraisals in development:** Glofitamab with gemcitabine and oxaliplatin for treating relapsed or refractory DLBCL. NICE technology appraisal guidance in development ID6202. Publication expected TBC. **Related NICE guidelines:** Non-Hodgkin's lymphoma: diagnosis and management (2016). NICE guideline NG52 **Related NICE guidelines in development:** Suspected Cancer: recognition and referral. NICE guideline. Publication expected March 2026. **Related quality standards:** Haematological cancers (2017) NICE quality standard 150

References

1. Alaggio R, Amador C, Anagnostopoulos I et al. (2022) The 5th edition of the World Health Organization Classification of Haematolymphoid Tumours: Lymphoid Neoplasms. Leukemia 36: 1720-1748. Accessed September 2025.

2. NHS Digital. Cancer Registrations Statistics, England 2022- First release, counts only. Accessed September 2025.

3. Diffuse large B-cell lymphoma. Lymphoma action. Accessed September 2025

4. Cancer Research UK. Survival for non-Hodgkin lymphoma. Accessed September 2025.