

NATIONAL INSTITUTE FOR HEALTH AND CARE EXCELLENCE

Health Technology Evaluation

**Brentuximab vedotin with doxorubicin, dacarbazine and vinblastine for previously untreated late-stage classical Hodgkin lymphoma (including Review of TA594)**

**Final scope**

**Remit/evaluation objective**

To appraise the clinical and cost effectiveness of brentuximab vedotin with doxorubicin, dacarbazine and vinblastine within its marketing authorisation for treating previously untreated late-stage classical Hodgkin lymphoma.

**Background**

Hodgkin lymphoma is a cancer of the lymphatic system. It can be classified into 2 main groups; the classical types, and the nodular lymphocyte-predominant type<sup>1</sup>. Classical Hodgkin lymphomas contain the Reed–Sternberg cells (which are cancerous B lymphocyte cells). Nodular lymphocyte-predominant lymphoma contains lymphocyte-predominant cells, a variant of Reed–Sternberg cells<sup>1</sup>. Reed–Sternberg cells typically express integral membrane antigen CD30<sup>2</sup>. The most common symptom of Hodgkin lymphoma is often swelling of the lymph nodes in the neck, armpit or groin<sup>3</sup>. Other symptoms include recurring fever, night sweats, weight loss, cough, breathlessness, abdominal pain, and itching.

Around 2,100 people are diagnosed with Hodgkin lymphoma each year in the UK, and over 300 people die from Hodgkin lymphoma each year<sup>1,4</sup>. In England, there were 1,802 people diagnosed with Hodgkin lymphoma and 275 registered deaths from Hodgkin lymphoma in 2017<sup>5</sup>. The age-specific incidence of Hodgkin lymphoma shows two peaks, one in people aged 20 to 24 years and the second in people aged over 75 years<sup>4</sup>. Classical Hodgkin lymphoma accounts for approximately 95% of cases of Hodgkin lymphoma.

The goal of treatment for previously untreated Hodgkin lymphoma is to cure the disease while managing short- and long-term complications. Current first-line treatment for Hodgkin lymphoma is chemotherapy. Up to 5-10% of the disease is refractory to these therapies and 10-30% will relapse after initial remission<sup>6</sup>. For people whose disease is relapsed or refractory, high-dose chemotherapy followed by autologous stem cell transplant is a potentially curative treatment that is effective in about 50% of people. However, autologous stem cell transplant may not be an option in some circumstances; for example, when the disease is refractory to high dose chemotherapy, or when the person's age or comorbidities prohibit this intervention.

There is currently no NICE recommended guidance for previously untreated Hodgkin lymphoma. [NICE technology appraisal guidance 594](#) of brentuximab vedotin for untreated advanced Hodgkin lymphoma was terminated without recommendation and will be covered in this technology appraisals guidance.

**The technology**

Brentuximab vedotin (Takeda) in combination with doxorubicin, dacarbazine and vinblastine does not currently have a marketing authorisation in the UK for adult patients with previously untreated late-stage classical Hodgkin lymphoma. It has been studied in clinical trials in combination with doxorubicin, dacarbazine and vinblastine, compared with doxorubicin, bleomycin, vinblastine and dacarbazine, in adults with previously untreated advanced (stage 3 or 4) classical Hodgkin lymphoma.

It does have marketing authorisation in combination with doxorubicin, dacarbazine and vinblastine for adult patients with previously untreated CD30+ stage 4 Hodgkin lymphoma. It also has marketing authorisation as a monotherapy for adults with CD30+ Hodgkin lymphoma at increased risk of relapse or progression following autologous stem cell transplant, and adults with relapsed or refractory CD30+ Hodgkin lymphoma following autologous stem cell transplant or following at least two prior therapies when autologous stem cell transplant or multi-agent chemotherapy is not a treatment option.

<b>Intervention(s)</b>	Brentuximab vedotin with doxorubicin, dacarbazine and vinblastine
<b>Population(s)</b>	People with previously untreated late-stage classical Hodgkin lymphoma
<b>Comparators</b>	Single or combination chemotherapy including but not limited to drugs such as doxorubicin, bleomycin, dacarbazine and vinblastine
<b>Outcomes</b>	The outcome measures to be considered include: <ul style="list-style-type: none"> <li>• overall survival</li> <li>• progression-free survival</li> <li>• response rates</li> <li>• adverse effects of treatment</li> <li>• health-related quality of life.</li> </ul>
<b>Economic analysis</b>	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, comparator and subsequent treatment technologies will be taken into account.

<p><b>Other considerations</b></p>	<p>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.</p>
<p><b>Related NICE recommendations</b></p>	<p><b>Related technology appraisals:</b></p> <p><a href="#">Pembrolizumab for treating relapsed or refractory classical Hodgkin lymphoma after stem cell transplant or at least 2 previous therapies</a> (2022) NICE technology appraisal guidance 772</p> <p><a href="#">Pembrolizumab for treating relapsed or refractory classical Hodgkin lymphoma</a> (2018) NICE technology appraisal guidance 540.</p> <p><a href="#">Brentuximab vedotin for treating CD30-positive Hodgkin lymphoma</a> (2018) NICE technology appraisal 524.</p> <p><a href="#">Nivolumab for treating relapsed or refractory classical Hodgkin lymphoma</a> (2017) NICE technology appraisal 462.</p> <p><a href="#">Brentuximab vedotin for untreated advanced Hodgkin lymphoma</a> [terminated appraisal] (2019) NICE technology appraisal guidance 594</p> <p><a href="#">Nivolumab for treating relapsed or refractory classical Hodgkin lymphoma after autologous stem cell transplant</a> [ID1103] NICE technology appraisal guidance suspended.</p> <p><b>Related appraisals in development:</b></p> <p><a href="#">Pembrolizumab for treating relapsed or refractory classical Hodgkin lymphoma after brentuximab vedotin (review of TA540)</a> NICE technology appraisal guidance [ID5084]. Guidance under development.</p> <p><b>Related NICE guidelines:</b></p> <p><a href="#">Haematological cancers: improving outcomes</a> (2016) NICE guideline NG47.</p>
<p><b>Related National Policy</b></p>	<p>The NHS Long Term Plan (2019) <a href="#">NHS Long Term Plan</a></p> <p>NHS England (2018) <a href="#">NHS manual for prescribed specialist services (2018/2019)</a> Chapter 105. Specialist cancer services (adults)</p> <p>NHS England (2020) <a href="#">Clinical Commissioning Policy Statement: Bendamustine for relapsed/refractory classical Hodgkin lymphoma (all ages)</a> [1828] [Publication reference: 200701P]</p> <p>NHS England (2018) B15/S/a 2013/14 <a href="#">NHS standard contract for cancer: chemotherapy (adult)</a>. Section B Part 1 - Service specifications</p>

### References

1. Lymphoma Action (2022). Hodgkin lymphoma. Accessed 28 November 2023.
2. Haluska, F, Brufsky, A and Canellos, G (1994). The Cellular Biology of the Reed–Sternberg Cell. *Blood* Vol 84 (4): 1,005-1,019. 3. Cancer Research UK (2020).
3. Hodgkin lymphoma: Symptoms. Accessed 28 November 2023.
4. Cancer Research UK. Hodgkin lymphoma statistics. Accessed 28 November 2023.
5. Office for national statistics (2019). Cancer registration statistics, England: 2017.
6. Quddus, F and Armitage, J O (2009). Salvage Therapy for Hodgkin's Lymphoma. *Cancer Journal* Vol 15 (2): 161-3.