MEDICAL POLICY – 2.03.502
Monoclonal Antibodies for the Treatment of Lymphoma

BCBSA Ref. Policy: 2.03.05
Effective Date: April 3, 2020
Last Revised: July 1, 2020
Replaces: N/A

RELATED MEDICAL POLICIES:
5.01.549  Off-Label Use of Drugs and Biologic Agents
5.01.550  Pharmacotherapy of Arthropathies
5.01.556  Rituximab: Non-oncologic and Miscellaneous Uses
8.01.533  Radioimmunotherapy in the Treatment of Non-Hodgkin Lymphoma

Select a hyperlink below to be directed to that section.

POLICY CRITERIA  |  DOCUMENTATION REQUIREMENTS  |  CODING
RELATED INFORMATION  |  EVIDENCE REVIEW  |  REFERENCES  |  HISTORY

∞  Clicking this icon returns you to the hyperlinks menu above.

Introduction

An antibody is a blood protein. When the immune system detects an unhealthy cell, antibodies attach themselves to a molecule known as an antigen on that unhealthy cell. The antibody then acts as flag for other immune system cells, causing those other immune system cells to swarm to the area and fight the unhealthy cell. Cancer cells can evade the immune system by reproducing very quickly, avoiding detection, or completely blocking the immune system. Monoclonal antibodies are drugs that work with the body’s natural immune response. Monoclonal antibodies are produced in a laboratory and made to specifically attach to the antigens which are typically found in high numbers on cancer cells. This policy describes when treatment with monoclonal antibodies may be approved to treat lymphoma.

Note:  The Introduction section is for your general knowledge and is not to be taken as policy coverage criteria. The rest of the policy uses specific words and concepts familiar to medical professionals. It is intended for providers. A provider can be a person, such as a doctor, nurse, psychologist, or dentist. A provider also can be a place where medical care is given, like a hospital, clinic, or lab. This policy informs them about when a service may be covered.
<table>
<thead>
<tr>
<th>Drug</th>
<th>Medical Necessity</th>
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</table>
| Rituxan® (rituximab), Ruxience™ (rituximab-pvvr) | Rituxan® (rituximab), Ruxience™ (rituximab-pvvr), and Truxima® (rituximab-abbs) are a CD20-directed cytolytic antibody and may be considered medically necessary (for the following labeled indications) in the treatment of patients with:  
| • First-line                                     | • Non-Hodgkin’s Lymphoma (NHL)  
|                                                 | • Chronic Lymphocytic Leukemia (CLL)  
|                                                 | AND  
|                                                 | • For Truxima® (rituximab-abbs) the patient has had an inadequate response or intolerance to Rituxan® (rituximab) OR Ruxience™ (rituximab-pvvr)                                                                 |
| Truxima® (rituximab-abbs)                       | Rituxan® (rituximab), Ruxience™ (rituximab-pvvr), and Truxima® (rituximab-abbs) may be considered medically necessary for the following off-label indications:  
| • Second-line                                    | • Treatment of any B-cell or other Lymphoid malignancies with documented CD20 antigen expression  
|                                                 | o ALL, CLL/SLL  
|                                                 | o Primary CNS lymphomas  
|                                                 | o AIDS-related B-cell lymphoma  
|                                                 | o Follicular lymphoma  
|                                                 | o Hairy cell leukemia  
|                                                 | o Lymphoblastic lymphoma  
|                                                 | o MALT lymphoma  
|                                                 | o Hodgkin’s lymphoma  
|                                                 | o Burkitt’s lymphoma  
|                                                 | o Mantle cell lymphoma  
|                                                 | o Splenic marginal zone lymphoma  
|                                                 | o Multiple myeloma  
|                                                 | o Waldenstrom’s macroglobulinemia  
|                                                 | o CD-20 positive leptomeningeal metastases  
|                                                 | • Treatment of posttransplant lymphoproliferative disorder  
|                                                 | • First-line therapy of monomorphic or polymorphic post-transplant lymphoproliferative disorder (PTLD)  
|                                                 | • Second-line therapy for persistent or progressive PTLD  

<table>
<thead>
<tr>
<th>Drug</th>
<th>Medical Necessity</th>
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<tbody>
<tr>
<td></td>
<td>• Maintenance therapy for polymorphic PTLD AND&lt;br&gt;• For Truxima® (rituximab-abbs) the patient has had an inadequate response or intolerance to Rituxan® (rituximab) OR Ruxience™ (rituximab-pvvr)</td>
</tr>
<tr>
<td>Rituxan Hycela™ (rituximab and hyaluronidase human)</td>
<td>Rituxan Hycela™ (rituximab and hyaluronidase human) is a CD20-directed cytolytic antibody and hyaluronidase human, an endoglycoside, and may be considered medically necessary (for the following labeled indications) in the treatment of adult patients with:&lt;br&gt;• Follicular Lymphoma (FL)&lt;br&gt;  o Used as a single agent for relapsed or refractory FL&lt;br&gt;  o Used in combination with first-line chemotherapy for previously untreated FL&lt;br&gt;  o Used as single agent maintenance therapy in patients achieving a complete or partial response to rituximab in combination with chemotherapy&lt;br&gt;  o Used as a single agent after first-line cyclophosphamide, vincristine, and prednisone (CVP) chemotherapy for non-progressing (including stable disease)&lt;br&gt;• Diffuse Large B-cell Lymphoma (DLBCL)&lt;br&gt;  o In combination with cyclophosphamide, doxorubicin, vincristine, prednisone (CHOP) or other anthracycline-based chemotherapy regimens for previously untreated diffuse large B-cell lymphoma&lt;br&gt;• Chronic Lymphocytic Leukemia (CLL)&lt;br&gt;  o In combination with fludarabine and cyclophosphamide (FC) for previously untreated and previously treated CLL</td>
</tr>
</tbody>
</table>

Rituxan Hycela™ (rituximab and hyaluronidase human) may be considered medically necessary for any other labeled or off-label indications of Rituxan®.

Note: Initiate treatment with Rituxan Hycela only after patients have received at least ONE FULL DOSE of a rituximab product by intravenous infusion.
<table>
<thead>
<tr>
<th><strong>Drug</strong></th>
<th><strong>Medical Necessity</strong></th>
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</thead>
</table>
| **Arzerra® (ofatumumab)** | **Arzerra® (ofatumumab) may be considered medically necessary for the treatment of chronic lymphocytic leukemia (CLL):**  
  • In combination with chlorambucil, for the treatment of previously untreated patients with CLL for whom fludarabine-based therapy is considered inappropriate  
  • In combination with fludarabine and cyclophosphamide for the treatment of patients with relapsed CLL  
  • For extended treatment of patients who are in complete or partial response after at least two lines of therapy for recurrent or progressive CLL  
  • For the treatment of patients with CLL refractory to fludarabine and alemtuzumab |
| **Adcetris® (brentuximab vedotin)** | **Adcetris® (brentuximab vedotin) may be considered medically necessary for the following labeled indications:**  
  • Previously untreated Stage III or IV classical Hodgkin lymphoma (cHL), in combination with chemotherapy  
  • Classical Hodgkin lymphoma at high risk of relapse or progression as post-autologous hematopoietic stem cell transplantation (auto-HSCT) consolidation  
  • Classical Hodgkin lymphoma after failure of auto-HSCT or after failure of at least two prior multi-agent chemotherapy regimens in patients who are not auto-HSCT candidates  
  • Previously untreated systemic anaplastic large cell lymphoma (sALCL) or other CD30-expressing peripheral T-cell lymphomas (PTCL), including angioimmunoblastic T-cell lymphoma and PTCL not otherwise specified, in combination with chemotherapy  
  • Systemic anaplastic large cell lymphoma (sALCL) after failure of at least one prior multi-agent chemotherapy regimen  
  • Primary cutaneous anaplastic large cell lymphoma (pcALCL) or CD30-expressing mycosis fungoides (MF) who have received prior systemic therapy |
| **Lumoxiti™ (moxetumomab pasudotox)** | **Lumoxiti™ (moxetumomab pasudotox) may be considered medically necessary for the following labeled indication:**                                                                                                                                 |
### Drug

<table>
<thead>
<tr>
<th>Drug</th>
<th>Medical Necessity</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>• Treatment of adult patients with relapsed or refractory hairy cell leukemia (HCL) who received at least two prior systemic therapies, including treatment with a purine nucleoside analog</td>
</tr>
<tr>
<td></td>
<td><strong>Note:</strong> Lumoxiti™ is not recommended in patients with severe renal impairment (CrCl ≤ 29 mL/min).</td>
</tr>
<tr>
<td>Polivy™ (polatuzumab vedotin-piiq)</td>
<td>Polivy™ (polatuzumab vedotin-piiq) may be considered medically necessary for the following labeled indication:</td>
</tr>
<tr>
<td></td>
<td>• In combination with bendamustine and a rituximab product for the treatment of adult patients with relapsed or refractory diffuse large B-cell lymphoma (DLBCL), not otherwise specified, after at least two prior therapies</td>
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</table>

### Drug

<table>
<thead>
<tr>
<th>Drug</th>
<th>Investigational</th>
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<tbody>
<tr>
<td>Rituxan® (rituximab), Ruxience™ (rituximab-pvvr), Truxima® (rituximab-abbs)</td>
<td>Rituxan® (rituximab), Ruxience™ (rituximab-pvvr), and Truxima® (rituximab-abbs) are considered investigational for the following off-label indication:</td>
</tr>
<tr>
<td></td>
<td>• Treatment of lymphoid B-cell malignancies that do not express CD20 antigen</td>
</tr>
<tr>
<td></td>
<td><strong>All other uses of Rituxan® (rituximab), Ruxience™ (rituximab-pvvr), and Truxima® (rituximab-abbs) are considered investigational unless listed in a related medical policy.</strong></td>
</tr>
<tr>
<td>As listed</td>
<td>All other uses of the medications listed in this policy are considered investigational.</td>
</tr>
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</table>

### Length of Approval

<table>
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<tr>
<th>Approval</th>
<th>Criteria</th>
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<tbody>
<tr>
<td>Initial authorization</td>
<td>All drugs listed in policy may be approved up to 6 months.</td>
</tr>
<tr>
<td>Re-authorization criteria</td>
<td>Future re-authorization of all drugs listed in policy may be approved up to 12 months as long as the drug-specific coverage criteria are met and chart notes demonstrate that the patient continues to show a positive clinical response to therapy.</td>
</tr>
</tbody>
</table>
Documentation Requirements

The patient’s medical records submitted for review for all conditions should document that medical necessity criteria are met. The record should include the following:

- Office visit notes that contain the diagnosis, relevant history, physical evaluation and medication history

Coding

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
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<tbody>
<tr>
<td>J9042</td>
<td>Injection, brentuximab vedotin (Adcetris®), 1 mg</td>
</tr>
<tr>
<td>J9302</td>
<td>Injection, ofatumumab (Arzerra®), 10 mg</td>
</tr>
<tr>
<td>J9309</td>
<td>Injection, polatuzumab vedotin-piiq (Polivy™), 1 mg</td>
</tr>
<tr>
<td>J9311</td>
<td>Injection, rituximab 10 mg and hyaluronidase (Rituxan Hycela®)</td>
</tr>
<tr>
<td>J9312</td>
<td>Injection, rituximab, 10 mg (Rituxan®)</td>
</tr>
<tr>
<td>J9313</td>
<td>Injection, moxetumomab pasudotox-tdfk, (Lumoxiti™) 0.01 mg</td>
</tr>
<tr>
<td>Q5115</td>
<td>Injection, rituximab-abbs, biosimilar, (Truxima), 10 mg</td>
</tr>
<tr>
<td>Q5119</td>
<td>Injection, rituximab-pvvr, biosimilar, (Ruxience™), 10 mg</td>
</tr>
</tbody>
</table>

Note: CPT codes, descriptions and materials are copyrighted by the American Medical Association (AMA). HCPCS codes, descriptions and materials are copyrighted by Centers for Medicare Services (CMS).

Related Information

Chronic lymphocytic leukemia/small lymphocytic lymphoma (CLL/SLL)

Chronic lymphocytic leukemia/small lymphocytic lymphoma (CLL/SLL) is classified as an indolent non-Hodgkin’s lymphoma (NHL). When CLL/SLL is relapsed or refractory and CD20+ B-cells (not T-cells) are present, treatment is appropriate with Rituximab.

Rituxan® and Arzerra® are intended for IV infusion administration.
Benefit Application

State or federal mandates regarding off-label uses of drugs approved by the U.S. Food and Drug Administration (FDA) may supersede this policy.

Evidence Review

Description

Normal and malignant hematopoietic cells express various antigens on their surfaces, including: CD20 expressed by B-lymphocytes and B-cell malignancies; CD33, present on myeloid progenitors and acute myeloid leukemia (AML); and CD52, expressed by normal and malignant T- and B-lymphocytes. Monoclonal antibodies have been developed to each of the above antigens and have been investigated for the following labeled and off-label uses.

Rituxan® (rituximab) is a CD20-directed cytolytic antibody indicated for the treatment of patients with following labeled indications:

- Non-Hodgkin’s Lymphoma (NHL), and
- Chronic Lymphocytic Leukemia (CLL)

Rituximab and hyaluronidase human (Rituxan Hycela™) is a CD20-directed cytolytic antibody and hyaluronidase human, indicated for the treatment of adult patients with the following labeled indications:

- Follicular Lymphoma (FL)
- Diffuse Large B-cell Lymphoma (DLBCL)
- Chronic Lymphocytic Leukemia (CLL)

Arzerra® (ofatumumab): human monoclonal antibody to the CD20 antigen. Labeled indications:

- Treatment of patients with chronic lymphocytic leukemia (CLL) refractory to fludarabine and alemtuzumab.
Brentuximab vedotin is an antibody-drug conjugate (ADC). The antibody is a chimeric IgG1 directed against CD30. The small molecule, monomethyl auristatin E (MMAE), is a microtubule disrupting agent. MMAE is covalently attached to the antibody via a linker. Nonclinical data suggest that the anticancer activity of Adcetris is due to the binding of the ADC to CD30-expressing cells, followed by internalization of the ADC-CD30 complex, and the release of MMAE via proteolytic cleavage. Binding of MMAE to tubulin disrupts the microtubule network within the cell, subsequently inducing cell cycle arrest and apoptotic death of the cells. Additionally, in vitro data provide evidence for antibody-dependent cellular phagocytosis (ADCP).

CD30 is a member of the tumor necrosis factor receptor family. CD30 is expressed on the surface of systemic anaplastic large cell lymphoma (sALCL) cells and on Hodgkin Reed-Sternberg (HRS) cells in classical Hodgkin’s lymphoma (HL), and has limited expression on healthy tissue and cells. In vitro data suggest that signaling through CD30-CD30L binding may affect cell survival and proliferation.

Moxetumomab pasudotox-tdfk is a CD22-directed cytotoxin. Moxetumomab pasudotox-tdfk binds CD22 on the cell surface of B-cells and is internalized. Moxetumomab pasudotox-tdfk internalization results in ADP-ribosylation of elongation factor 2, inhibition of protein synthesis, and apoptotic cell death.

**NCCN Compendium**

The National Comprehensive Cancer Network (NCCN) Drugs and Biologics Compendium is based directly on the NCCN Clinical Practice Guidelines in Oncology. The compendium lists specific panel recommendations for off-label uses of drugs, and each recommendation is supported by a level of evidence category.

The NCCN Categories of Evidence and Consensus used in the recommendations are:

- **Category 1**: The recommendation is based on high level evidence (eg, randomized controlled trials) and there is uniform NCCN consensus.

- **Category 2A**: The recommendation is based on lower level evidence and there is uniform NCCN consensus.

- **Category 2B**: The recommendation is based on lower level evidence and there is nonuniform NCCN consensus (but no major disagreement).
• Category 3: The recommendation is based on any level of evidence but reflects major disagreement.

In June 2008, the NCCN Compendium became one of four references for the Centers for Medicare & Medicaid Services (CMS) for oncology coverage policy.

In its national coverage decision, CMS states that, in general, a use identified by the NCCN Compendium is medically accepted if the indication is a Category 1 or 2A as defined by NCCN. A use is not medically accepted if the indication is a category 3 in NCCN.

The local CMS contractor, Noridian Administrative Services (NAS), has issued an additional coverage statement regarding Category 2B:

NAS recognizes NCCN Categories of Evidence Levels Category 1 and Category 2A ONLY as medically accepted indications. If a provider chooses to use NCCN level 2B in support of a chemotherapeutic drug used off-label in an anti-cancer chemotherapeutic regimen, NAS expects that the provider will make available to NAS significant peer-reviewed Phase II or Phase III studies demonstrating such support. In the absence of such studies, level 2B evidence does not support such use.

The following policy considers only the off-label indications for rituximab and atumumab.

Background

*Rituxan® (rituximab)*

Regarding Rituxan® (rituximab) for patients with intermediate or aggressive non-Hodgkin’s lymphoma (NHL), an interim analysis of a randomized controlled trial is available in abstract form. The trial compared rituximab plus combination chemotherapy (cyclophosphamide, doxorubicin, vincristine and prednisone, aka CHOP) to CHOP therapy alone in 400 patients with previously treated diffuse large B-cell lymphoma. By intent-to-treat analysis, event-free and overall survival at 12 months was superior in the rituximab plus CHOP arm. In 2002, final results of this trial were published by Coiffier et al., confirming the superior outcomes in the combination arm. In the Coiffier study, event-free survival at 2 years (CI 95%) was 57% in the CHOP + Rituximab arm and 38% in the CHOP alone arm. A 2002 TEC Assessment also found Rituximab met criteria for treatment of patients with intermediate or aggressive B-cell non-Hodgkin’s lymphoma based on the Coiffier study.
In a randomized, Phase III trial of 122 patients with untreated advanced-stage mantle cell lymphoma, Lenz and colleagues reported patients receiving cyclophosphamide, doxorubicin, vincristine and prednisone (CHOP) plus rituximab (n=62) had significantly superior outcomes than patients receiving CHOP alone (n=60). Complete response rates and median time to treatment failure in the CHOP plus rituximab group vs the CHOP alone group were 34% vs. 7% (p=0.00024) and 21 months versus 14 months (p=0.0131), respectively. Toxicities were reported to be acceptable and similar in both treatment groups.

The indications for off-label use of rituximab were determined by:

- Considering the limited but evolving evidence in clinical trials indicating that CD20 expression enhanced susceptibility to this drug, and thus a response was more likely;
- Soliciting the expert opinion of physician specialists on its accepted use; and

*Rituxan Hycela™ (rituximab and hyaluronidase human)*

Evidence for efficacy and safety of Rituxan Hycela™ (rituximab and hyaluronidase human) was evaluated in three studies of each specified indication. All studies demonstrated comparability of the subcutaneous (SC) formulation to the intravenous (IV) formulation of rituximab.

**Follicular Lymphoma**

The SABRINA study was a randomized, controlled, open-label, multicenter Phase 3 trial that evaluated 410 patients with previously untreated CD20-positive FL of Grade 1, 2, or 3a who received either IV Rituxan® (rituximab) or one cycle of an IV rituximab product followed by SC Rituxan Hycela™ (rituximab), plus chemotherapy. The primary endpoint was overall response (complete response, unconfirmed complete response, and partial response) at the end of induction, which amounted to 84.9% (95% CI 79.2 – 89.5) in the IV group and 84.4% (95% CI 78.7 – 89.1) in the SC group, for a difference of -0.5% (95% CI -7.7 – 6.8). The frequency of adverse events was similar in both groups (95% in the IV group and 96% in the SC group).

**Diffuse Large B-Cell Lymphoma**
The MabEase study was a randomized, controlled, open-label, multicenter Phase 3b trial that evaluated 576 patients with previously untreated CD20-positive DLBCL who received either IV rituximab or one cycle of an IV rituximab product followed by SC rituximab, plus chemotherapy. The primary endpoint was complete response/unconfirmed complete response (CR/Cru) at the end of induction, which amounted to 50.6% (95% CI 45.3% - 55.9%) in the SC group and 42.4% (95% CI 35.1% - 49.7%) in the IV group (P=0.076). Safety profiles were similar between arms, with no unexpected safety signals.

**Chronic Lymphocytic Leukemia**

The SAWYER study was a randomized, controlled, open-label, multicenter, non-inferiority Phase 1b trial that evaluated 176 patients with previously untreated CD20-positive CLL who received either IV rituximab or one cycle of an IV rituximab product followed by SC rituximab, plus chemotherapy. Overall, the study demonstrated non-inferiority of SC rituximab to IV rituximab through the primary endpoint of pharmacokinetic profiles. The geometric mean trough serum concentration was 97.5 mcg/mL in the SC group and 61.5 mcg/mL in the IV group, with an adjusted geometric mean ratio of 1.53 (90% CI 1.27 – 1.85). The proportion of patients reporting adverse events was similar between treatment arms.

**Arzerra® (ofatumumab)**

The evidence for efficacy and safety of Arzerra® (ofatumumab) is currently limited to uncontrolled clinical studies. This evidence suggests ofatumumab is efficacious for achieving an objective response in approximately 50% patients with fludarabine- or alemtuzumab-refractory CLL. The drug also appears to have efficacy in some patients with rituximab-refractory disease. Controlled clinical trials are needed to establish the superiority of ofatumumab over other therapeutic alternative (eg, rituximab). In addition, improved survival remains to be established.

**Adcetris® (brentuximab vedotin)**

The efficacy of Adcetris® (brentuximab vedotin) in patients with classical HL who relapsed after autologous hematopoietic stem cell transplantation was evaluated in one open-label, single-arm, multicenter trial. One hundred two patients were treated with 1.8 mg/kg of ADCETRIS
intravenously over 30 minutes every 3 weeks. An independent review facility (IRF) performed efficacy evaluations which included overall response rate (ORR = complete remission [CR] + partial remission [PR]) and duration of response as defined by clinical and radiographic measures including computed tomography (CT) and positron-emission tomography (PET) as defined in the 2007 Revised Response Criteria for Malignant Lymphoma (modified). The 102 patients ranged in age from 15–77 years (median, 31 years) and most were female (53%) and white (87%). Patients had received a median of 5 prior therapies including autologous hematopoietic stem cell transplantation. Duration of response is calculated from date of first response to date of progression or data cutoff date.

**Lumoxiti™ (moxetumomab pasudotox)**

The efficacy of Lumoxiti™ (moxetumomab pasudotox) was based upon a pivotal multicenter trial of Moxetumomab Pasudotox in relapsed/refractory Hairy Cell Leukemia, conducted in patients with histologically confirmed HCL or HCL variant with a need for therapy based on presence of cytopenias or splenomegaly and who had received prior treatment with at least 2 systemic therapies, including 1 purine nucleoside analog (PNA). Eligible patients had serum creatinine ≤ 1.5 mg/dL or creatinine clearance ≥ 60 mL/min as estimated by the Cockcroft Gault equation.

A total of 80 patients were enrolled; 77 with classic HCL and 3 with HCL variant. The median age was 60 years (range: 34 to 84) years, 79% were male, and 94% were Caucasian. At baseline, 98% of patients had an ECOG performance status of 0 or 1. The median number of prior treatments was 3 (range: 2 to 11); all patients received prior PNA therapy, including 29% in combination with rituximab. The most common other prior treatment regimens were rituximab monotherapy (51%), interferon-alpha (25%), and a BRAF inhibitor (18%). At baseline, 33% (26/80) of patients had low hemoglobin (< 10 g/dL), 68% (54/80) of patients had neutropenia (< 1000/mm3), and 84% (67/80) patients had baseline platelet counts < 100,000/mm3. About 35% of patients had enlarged spleens (≥ 14 cm, assessed by BICR) at baseline.

Patients received moxetumomab pasudotox 0.04 mg/kg as an intravenous infusion over 30 minutes on Days 1, 3, and 5 of each 28-day cycle for a maximum of 6 cycles or until documentation of complete response (CR), disease progression, or unacceptable toxicity. The median duration of follow-up was 16.7 months (range: 2 to 49). An independent review committee (IRC) performed efficacy evaluations using blood, bone marrow, and imaging criteria adapted from previous HCL studies and consensus guidelines. Efficacy of moxetumomab pasudotox in HCL was evaluated by the IRC-assessed rate of durable CR, as confirmed by maintenance of hematologic remission (hemoglobin ≥ 11 g/dL, neutrophils ≥ 1500/mm3, and platelets ≥ 100,000/mm3 without transfusions or growth factor for at least 4 weeks) more than
180 days after IRC-assessed CR. The IRC-assessed durable CR rate was 30% (24/80 patients; 95% CI: 20, 41).

Polivy™ (polatuzumab vedotin-piiq)

Evidence from one ongoing, global, randomized, active-controlled Phase Ib/II trial currently supports the proposed indication of use in combination with bendamustine/rituximab (BR) for the treatment of adults with relapsed/refractory (R/R) diffuse large B-cell lymphoma (DLBCL). As of a data cutoff of April 30, 2018 and a median follow-up of 22.3 months, positron emission tomography complete response (PET-CR) by independent review committee (IRC) was 40% with polatuzumab + BR vs 18% with BR (NNT=4.5) and ORR was 45% vs 18% (NNT=3.7), respectively. While exploratory endpoints in the trial, progression-free survival (PFS) and overall survival (OS) also appeared longer with polatuzumab + BR compared to BR.

In an additional multicenter, randomized, open-label, active-controlled Phase II trial (ROMULUS), the antitumor activity and safety of polatuzumab + rituximab was compared with that of pinatuzumab + rituximab in patients with R/R DLBCL or R/R follicular lymphoma (FL). Both antibody drug conjugate (ADCs) were administered as 2.4 mg/kg IV every 21 days (each cycle) in combination with rituximab until PD, unacceptable toxicity, or up to one year. The primary study outcomes were anti-tumor response and safety. A total of 81 patients with DLBCL were randomized to polatuzumab + rituximab (n=39) or pinatuzumab (n=42) and a total of 41 patients with FL were randomized to polatuzumab + rituximab (n=20) or pinatuzumab + rituximab (n=21).

In an ongoing, multicenter, open-label, single arm, Phase Ib/II (dose escalation/expansion) trial, the preliminary antitumor activity and safety of polatuzumab (1.8 mg/kg) in combination with rituximab or obinutuzumab (G; 1.4 mg/kg) IV plus cyclophosphamide/doxorubicin/prednisone (CHP) every 21 days (each cycle) for 6-8 cycles was evaluated in treatment-naive patients with DLBCL. The primary study outcomes were safety and maximum tolerated dose. Preliminary antitumor activity (ORR, CR, PFS, and OS) was a secondary study outcome. A total of 82 patients were treated and evaluable, n=25 with any previously untreated B-cell NHL in the dose escalation phase and n=57 with previously untreated DLBCL and an International Prognostic Index (IPI) of 2-5 in the dose expansion cohort. The maximum tolerated dose of polatuzumab + R/G-CHP from Phase Ib was 1.8 mg/kg every 21 days; consequently, this was the dose employed in the Phase II dose expansion phase. At a December 29, 2017 data cutoff in the dose expansion phase, 75 (91%) patients had DLBCL and 66 (88%) of these 75 (n=45 R-CHP and n=21 G-CHP) were treated with the Phase Ib recommended polatuzumab dose of 1.8 mg/kg. Median follow-up was 21.5 months in this latter group. ORR was achieved by 59/66 (89%), with 51 (77%) having
CR and 8 (12%) with PR. Also, in this subpopulation 12-Month PFS was 91% (95% CI 84-98) and 24-month PFS was 83 (95% CI 73-93). Four patients with untreated DLBCL receiving the recommended dose of polatuzumab during the expansion phase died \( n=2 \) (3%) due to AEs (atrial fibrillation and septic shock) and \( n=2 \) (3%) due to disease progression.

**Ongoing and Unpublished Clinical Trials**

*Randomized Placebo-controlled Clinical Trial in Classical HL Post-auto-HSCT Consolidation (Study 3)*

The efficacy of Adcetris® (brentuximab vedotin) in patients with classical HL at high risk of relapse or disease progression post-auto-HSCT was studied in a randomized, double-blind, placebo-controlled clinical trial. Three hundred twenty-nine patients were randomized 1:1 to receive placebo or Adcetris® (brentuximab vedotin) 1.8 mg/kg intravenously over 30 minutes every 3 weeks for up to 16 cycles, beginning 30–45 days post-auto-HSCT. Patients in the placebo arm with progressive disease per investigator could receive Adcetris® (brentuximab vedotin) as part of a separate trial. The primary endpoint was progression-free survival (PFS) determined by IRF. Standard international guidelines were followed for infection prophylaxis for HSV, VZV, and PCP post-auto-HSCT [see Clinical Trial Experience (6.1)].

High risk of post-auto-HSCT relapse or progression was defined according to status following frontline therapy: refractory, relapse within 12 months, or relapse ≥12 months with extranodal disease. Patients were required to have obtained a CR, PR, or stable disease (SD) to most recent pre-auto-HSCT salvage therapy.

A total of 329 patients were enrolled and randomized (165 Adcetris® (brentuximab vedotin), 164 placebo); 327 patients received study treatment. Patient demographics and baseline characteristics were generally balanced between treatment arms. The 329 patients ranged in age from 18–76 years (median, 32 years) and most were male (53%) and white (94%). Patients had received a median of 2 prior systemic therapies (range, 2–8) excluding autologous hematopoietic stem cell transplantation. PFS is calculated from randomization to date of disease progression or death (due to any cause). The median PFS follow-up time from randomization was 22 months (range, 0–49). Study 3 demonstrated a statistically significant improvement in IRF-assessed PFS and increase in median PFS in the Adcetris® (brentuximab vedotin) arm compared with the placebo arm. At the time of the PFS analysis, an interim overall survival analysis demonstrated no difference.
Clinical Trial in Relapsed sALCL (Study 2)

The efficacy of Adcetris® (brentuximab vedotin) in patients with relapsed sALCL was evaluated in one open-label, single-arm, multicenter trial. This trial included patients who had sALCL that was relapsed after prior therapy. Fifty-eight patients were treated with 1.8 mg/kg of ADCETRIS administered intravenously over 30 minutes every 3 weeks. An IRF performed efficacy evaluations which included overall response rate (ORR = complete remission [CR] + partial remission [PR]) and duration of response as defined by clinical and radiographic measures including computed tomography (CT) and positron-emission tomography (PET) as defined in the 2007 Revised Response Criteria for Malignant Lymphoma (modified).

The 58 patients ranged in age from 14–76 years (median, 52 years) and most were male (57%) and white (83%). Patients had received a median of 2 prior therapies; 26% of patients had received prior autologous hematopoietic stem cell transplantation. Fifty percent (50%) of patients were relapsed and 50% of patients were refractory to their most recent prior therapy. Seventy-two percent (72%) were anaplastic lymphoma kinase (ALK)-negative.

Duration of response is calculated from date of first response to date of progression or data cutoff date.

Clinical Input Received from Physician Specialty Societies and Academic Medical Centers

2004 Update

The U.S. Pharmacopoeial Convention (2003) has concluded that Rituxan® (rituximab) is accepted for the following off-label indications: a) as first-line treatment of diffuse aggressive NHL; b) treatment of relapsed or refractory diffuse aggressive NHL; c) first-line treatment of intermediate to high-grade NHL; and d) first-line treatment of low-grade NHL.

2006 Update

Studies continue, but have not yet been published, which would indicate the safety and efficacy of Mylotarg® as a single-agent treatment for patients who are CD33-positive with AML in first relapse. Outcomes of these studies are awaited.
**2008 Update**

NCCN guidelines v.3.2008 recommends rituximab (preferred), or alkylating agents such as cyclophosphamide or chlorambucil as single agents for first-line therapy for follicular lymphoma in elderly or infirm patients.

**2009 Update**

Both R-CHOP (rituximab with cyclophosphamide, doxorubicin, vincristine and prednisone) and R-CVP (rituximab with cyclophosphamide, vincristine and prednisone) have been used successfully in the treatment of patients with symptomatic follicular lymphoma (FL). Ganguly and Patel (2009) conducted a meta-analysis of relevant literature comparing both treatment arms for FL with response being the final endpoint. Two analyses were conducted: The first analysis compared R-CHOP to R-CVP as frontline agents for the treatment of FL and the second analysis included both untreated and relapsed patients. The authors report that for both studies, R-CVP was superior to R-CHOP when evaluating for complete response (CR). However, for overall response (CR+PR), R-CHOP was superior. The authors concluded that both R-CHOP and R-CVP protocols achieve excellent overall response. In patients with known cardiac history, omission of anthracyclines is reasonable and R-CVP provides a competitive CR rate. In younger patients with FL where cumulative cardio-toxicity may be of importance in the long term and in whom future stem cell transplantation is an option, again R-CVP may be a more appealing option.

The Company recognizes uses of rituximab, ofatumumab, and alemtuzumab listed in the NCCN Drugs and Biologics Compendium with Categories of Evidence and Consensus of 1 and 2A as proven and Categories of Evidence and Consensus of 2B and 3 as unproven. However, Category 2B uses may be considered for coverage if they are substantiated by provider submission of significant peer-reviewed Phase II or Phase III studies demonstrating treatment effectiveness.

**2010 Update**

Updated to reflect current NCCN Compendium recommendations as of February 2010. Added newly marketed anti-CD20 monoclonal antibody, ofatumumab. Added information concerning the voluntary withdrawal of gemtuzumab from the market.
2011 Update

Policy updated with literature review. Policy statements for Mylotarg® and supporting data removed from policy statement and any reference throughout the policy subsequent to FDA withdrawal of approval for this drug.

2012 Update

Policy updated to include NCCN recommendation for treatment of leptomeningeal metastases. (Category 2A) These may occur with various solid tumors, breast and lung being the most common. Therapy is palliative and usually of limited duration, as the average life expectancy of these patients is only a few weeks.

2013 Update

Policy updated to include NCCN recommendation for addition of rituximab in induction/consolidation treatment of, ALL, CLL/SLL, primary CNS lymphomas, AIDS-related B-cell lymphoma, follicular lymphoma, hairy cell leukemia, and lymphoblastic lymphoma. (Category 2A and above) Also treatment of post-transplant lymphoproliferative disorder. (Category 2A)

Added Arzerra® (ofatumumab) NCCN recommended off-label use for Waldenstrom’s macroglobulinemia. (Category 2A)

Campath (alemtuzumab) removed from policy as it is no longer commercially available.

2014 Update

Policy updated to include new labeled indication in combination with chlorambucil for the treatment of previously untreated patients with chronic lymphocytic leukemia (CLL) for whom fludarabine-based therapy is considered inappropriate.

2015 Update

Policy updated with primary literature review and reference to NCCN guidelines. No new evidence was found that would require a change in this policy.
2016 Update

Policy updated with primary literature review and reference to NCCN guidelines. Adcetris criteria, description, and rationale were added to the policy.

2017 Update

Policy updated with primary literature review and reference to NCCN guidelines. Rituxan Hyclea™ criteria, description, and rationale were added to the policy.

2018 Update

Policy updated with literature review and reference to NCCN guidelines. Moxetumomab pasudotox criteria, description, and rationale were added to the policy.

2019 Update

Reviewed prescribing information for all drugs in policy. Added criteria for the biosimilar Ruxience™ (rituximab-pvvr). Added criteria for a new medication Polivy™ (polatuzumab vedotin-piiq) for the treatment of relapsed or refractory diffuse large B-cell lymphoma (DLBCL). No additional evidence was identified that would require changes to other drugs listed in this policy.

Medicare National Coverage

There is no national coverage determination.

References
1. Blue Cross and Blue Shield Association Technology Evaluation Center (TEC). Off-label uses of monoclonal antibodies for treatment of B-cell lymphoid or myeloid malignancies. TEC Assessments 2001; Tab 7.


3. 2002 TEC Assessment; Tab 3, Rituximab for treatment of intermediate or aggressive B-cell non-Hodgkin’s lymphoma.


26. Reviewed and recommended for adoption by the Pharmacy & Therapeutics Committee, September 26, 2006; May 27, 2008; and March 30, 2010.


29. Ghielmini M, Hsu, Schmitz SF, Cogliatti SB; et al. Prolonged treatment with rituximab in patients with follicular lymphoma significantly increases event-free survival and response duration compared with the standard weekly x 4 schedule. Blood 2004; 103:4416-23.


46. Sehn LH, Herrera AF, Matasar MJ, et al. Polatuzumab vedotin (Pola) plus bendamustine (B) with rituximab (R) or obinutuzumab (G) in patients with relapsed/refractory (R/R) diffuse large B-cell lymphoma (DLBCL): updated results of a Phase (Ph) Ib/II study [abstract]. Blood. 2018;132:1683.


**History**

<table>
<thead>
<tr>
<th>Date</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>08/15/01</td>
<td>Add to Medicine Section - New Policy</td>
</tr>
<tr>
<td>08/13/02</td>
<td>Replace Policy - Policy revised; policy statement changed regarding Rituximab for intermediate or aggressive NHL.</td>
</tr>
<tr>
<td>07/13/04</td>
<td>Replace Policy - Policy revised with literature updated; added the 2004 US Pharmacopeia and the American Hospital Formulary Service off-label indications to the Benefit Application section; clarification made: mantle cell was removed from investigational status; otherwise, policy statement unchanged.</td>
</tr>
<tr>
<td>12/14/04</td>
<td>Replace Policy / New Policy - Policy replaces BC.2.03.05 per direction from OAP 10/29/04 meeting. Indications changed from investigational to medically necessary.</td>
</tr>
<tr>
<td>10/11/05</td>
<td>Replace Policy - Scheduled reviewed. Added two off-label indications to Rituximab in policy statement.</td>
</tr>
<tr>
<td>02/06/06</td>
<td>Codes updated - No other changes.</td>
</tr>
<tr>
<td>Date</td>
<td>Comments</td>
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<tr>
<td>06/23/06</td>
<td>Update Scope and Disclaimer - No other changes.</td>
</tr>
<tr>
<td>12/12/06</td>
<td>Replace Policy - Policy reviewed by P&amp;T Committee on September 26, 2006; policy statement expanded to include the use of Alemtuzumab (CamPath) in the treatment of malignancies other than CLL that express CD-52 antigen as a medically necessary indication; and the use of Gemtuzumab ozogamicin (Mylotarg) in the treatment of malignancies other than CLL which express CD-33 antigen as a medically necessary indication; malignancies other than CD33-positive remain investigational, but the condition of AML has been removed from this particular statement indication.</td>
</tr>
<tr>
<td>02/22/07</td>
<td>Update References - Policy reviewed and recommended by OAP February 22, 2007. No change to policy statement.</td>
</tr>
<tr>
<td>04/10/07</td>
<td>Replace Policy - Policy Guidelines amended to indicate that Mylotarg is intended for IV administration.</td>
</tr>
<tr>
<td>06/10/08</td>
<td>Replace Policy - Policy updated with literature search. Policy statement under Rituxan updated to include: “Therapy of other B-cell malignancies that express CD-20 antigen including some cases of CD-20 positive Hodgkin’s Disease and Monotherapy as first-line follicular lymphoma treatment for elderly patients, or others who are not good candidates for cytotoxic chemotherapy” as a medically necessary indication. Policy reviewed and recommended by OAP May 22, 2008. P&amp;T reviewed and approved on May 27, 2008.</td>
</tr>
<tr>
<td>02/10/09</td>
<td>Code Update - Code 273.3 added; no other changes.</td>
</tr>
<tr>
<td>05/12/09</td>
<td>Replace Policy - Policy statements revised to clarify off-label uses. Intent of policy remains unchanged. NCCN categories of evidence added to Description and Rationale. References added.</td>
</tr>
<tr>
<td>10/13/09</td>
<td>Cross Reference Update - No other changes.</td>
</tr>
<tr>
<td>05/11/10</td>
<td>Cross Reference Update - No other changes.</td>
</tr>
<tr>
<td>08/10/10</td>
<td>Replace Policy - Policy updated the Rituximab labeled indications reflecting the latest revision (02/2010) by deleting all the references to the other chemotherapy agents.Reviewed and recommended by P&amp;T in March 2010; by OAP in May 2010. Mylotarg removed. Arzerra added.</td>
</tr>
<tr>
<td>10/19/11</td>
<td>Related Policy 5.01.01 added.</td>
</tr>
<tr>
<td>09/11/12</td>
<td>Replace policy. Policy updated with literature review. CD20 positive leptomeningeal metastases added to the list of approved off-label indications for rituximab.</td>
</tr>
<tr>
<td>11/26/12</td>
<td>Related Policies Update, add 5.01.526.</td>
</tr>
<tr>
<td>10/14/13</td>
<td>Replace policy. Within the Policy section, additional examples of off-label indications for Rituxan have been added to the list of those considered medically necessary; Azerra has an added medically necessary indication for salvage treatment of Waldenstrom’s Macroglobulinemia / Lymphoplasmacytic lymphoma in rituximab-intolerant patients; and Campath has been removed from the policy as it is no longer commercially available. Description, Policy Guidelines and Rationale sections updated</td>
</tr>
<tr>
<td>Date</td>
<td>Comments</td>
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<tr>
<td>11/20/13</td>
<td>Update Related Policies. 5.01.01 deleted and replaced with 5.01.549.</td>
</tr>
<tr>
<td>12/18/13</td>
<td>Update Related Policies. Change title to 5.01.526.</td>
</tr>
<tr>
<td>03/17/14</td>
<td>Update Related Policies. Add new policy 5.01.550 which replaces 5.01.526 and 5.01.601; they are now deleted.</td>
</tr>
<tr>
<td>08/11/14</td>
<td>Annual Review. Policy updated to include new labeled indication in combination with chlorambucil for the treatment of previously untreated patients with chronic lymphocytic leukemia (CLL) for whom fludarabine-based therapy is considered inappropriate. ICD-9 diagnosis codes removed.</td>
</tr>
<tr>
<td>11/05/14</td>
<td>Minor correction. Correct usage to “CD20” throughout the policy to be consistent. No other changes.</td>
</tr>
<tr>
<td>01/23/15</td>
<td>Update Related Policies. Add 5.01.556.</td>
</tr>
<tr>
<td>10/13/15</td>
<td>Annual Review. Policy updated with literature review; no change in policy statements. Remove CPT codes 96409-96417; these are not primarily utilized in adjudication.</td>
</tr>
<tr>
<td>01/01/17</td>
<td>Annual Review, approved December 13, 2016. Adcetris criteria, description, and rationale were added to the policy.</td>
</tr>
<tr>
<td>01/13/17</td>
<td>Coding update, added HCPCS code J9042.</td>
</tr>
<tr>
<td>12/01/17</td>
<td>Annual Review, approved November 14, 2017. Rituxan Hyclea criteria, description, and rationale were added to the policy.</td>
</tr>
<tr>
<td>08/01/18</td>
<td>Interim Review, approved July 10, 2018. Updated Adcetris indications.</td>
</tr>
<tr>
<td>01/01/19</td>
<td>Coding update, added new HCPCS codes J9311 and J9312 (new codes effective 1/1/19).</td>
</tr>
<tr>
<td>02/01/19</td>
<td>Interim Review, approved January 8, 2019. Updated Adcetris indications.</td>
</tr>
<tr>
<td>05/01/19</td>
<td>Interim Review, approved April 18, 2019. Added criteria for Truxima (rituximab-abbs) which is a biosimilar of Rituxan® (rituximab). Added description Rituxan Hycela to J9311 and Rituxan to J9312 in coding section. Added Truxima and Lumoxiti names in relationship to J9999. Added term date to J9310.</td>
</tr>
<tr>
<td>08/01/19</td>
<td>Coding update, added HCPCS code Q5115 (new code effective 7/1/19).</td>
</tr>
<tr>
<td>10/01/19</td>
<td>Coding update, added HCPCS code J9313 (new code effective 10/1/19). Removed HCPCS code J9999.</td>
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<tr>
<td>01/01/20</td>
<td>Annual Review, approved December 17, 2019, effective for dates of services on or after April 3, 2020, following provider notification. Added criteria for Polivy (polatuzumab vedotin-piiq). Added criteria for Ruxience (rituximab-pvvr) which is a biosimilar of Rituxan (rituximab). Updated criteria for Truxima (rituximab-abbs). Removed HCPCS code J9310 as it was terminated 1/1/19. Added HCPCS code J9309 (new code effective 1/1/20) and J3590 to report Ruxience. References were added.</td>
</tr>
<tr>
<td>07/01/20</td>
<td>Coding update. Added code Q5119. Removed code J3590.</td>
</tr>
</tbody>
</table>

**Disclaimer:** This medical policy is a guide in evaluating the medical necessity of a particular service or treatment. The Company adopts policies after careful review of published peer-reviewed scientific literature, national guidelines and local standards of practice. Since medical technology is constantly changing, the Company reserves the right to review and update policies as appropriate. Member contracts differ in their benefits. Always consult the member benefit booklet or contact a member service representative to determine coverage for a specific medical service or supply. CPT codes, descriptions and materials are copyrighted by the American Medical Association (AMA). ©2020 Premera All Rights Reserved.

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U.S. Department of Health and Human Services
200 Independence Avenue SW, Room S09F, HHH Building
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