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**Effective Date: 10/03/2024**

**Nucala® (mepolizumab)**

**HCPCS: J2182**

**Policy:**

*Requests must be supported by submission of chart notes and patient specific documentation.*

- A. Coverage of the requested drug is provided when all the following are met:
    - a. FDA approved age
    - b. For the diagnosis of severe uncontrolled eosinophilic asthma
      - i. Patient is currently receiving, and will continue to receive standard of care regimen
      - ii. Must be used as add on maintenance treatment with severe uncontrolled eosinophilic asthma
      - iii. Severe eosinophilic asthma identified by:
        - 1. Blood eosinophils greater than or equal to 150 cells/microliter at initiation of treatment
      - iv. Chronic administration of systemic corticosteroids or high dose inhaled corticosteroids (listed in table 1) in combination with
        - 1. Long acting inhaled  $\beta$ 2 agonist for at least 3 months fails to maintain adequate control  
OR
        - 2. Leukotriene modifier for at least 3 months fails to maintain adequate control  
OR
        - 3. LAMA (long acting muscarinic antagonists) in adults and children  $\geq$  12 years old for at least 3 months fails to maintain adequate control
- OR
- c. A diagnosis of eosinophilic granulomatosis with polyangiitis (EGPA), and
    - i. Documentation of a consult with an allergist/immunologist or pulmonologist prior to initiation of Nucala therapy
    - ii. History or presence of asthma
    - iii. At least 2 of the following criteria that are typical of EGPA
      - 1. Histopathological evidence of eosinophilic vasculitis, perivascular eosinophilic infiltration, or eosinophil-rich granulomatous inflammation
      - 2. Neuropathy
      - 3. Pulmonary infiltrates
      - 4. Allergic rhinitis and nasal polyps
      - 5. Cardiomyopathy
      - 6. Glomerulonephritis

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7. Alveolar hemorrhage
8. Palpable purpura
9. Antineutrophil cytoplasmic antibody (ANCA) positivity

OR

- d. A diagnosis of hypereosinophilic syndrome (HES), and
  - i. At least 2 HES flares within the past 12 months
    1. Defined as documented HES-related worsening of clinical symptoms or blood eosinophil counts requiring an escalation in therapy
  - ii. Stable on HES therapy for at least 4 weeks
    1. Examples include oral corticosteroids, immunosuppressive or cytotoxic therapy
  - iii. Eosinophil counts of 1,000 cells/microL or higher at initiation of therapy
  - iv. Member does not have eosinophilia of unknown clinical significance, non-hematologic secondary HES (drug hypersensitivity, parasitic helminth infection, HIV infection, non-hematologic malignancy), or FIP1L1-PDGFR $\alpha$  kinase-positive HES

OR

- e. A diagnosis of chronic rhinosinusitis with nasal polyps (CRSwNP)
  - i. Patient is currently receiving, and will continue to receive standard of care regimen
  - ii. Recurring severe CRSwNP despite previous treatment with intranasal corticosteroids
- f. Not to be used in combination with other biologics or targeted disease-modifying antirheumatic drugs (DMARDs) for the same indication.
- g. The member will self-administer Nucala unless clinically unable to do so
- h. Trial and failure, contraindication, OR intolerance to the preferred drugs as listed in BCBSM/BCN's utilization management medical drug list and/or the BCBSM/BCN prior authorization and step therapy documents

**B. Quantity Limitations, Authorization Period and Renewal Criteria**

- a. Quantity Limits: Align with FDA recommended dosing
- b. Authorization Period: One year at a time
- c. Renewal Criteria: Clinical documentation must be provided to confirm that current criteria are met and that the medication is providing clinical benefit

\*\*\*Note: Coverage and approval duration may differ for Medicare Part B members based on any applicable criteria outlined in Local Coverage Determinations (LCD) or National Coverage Determinations (NCD) as determined by Center for Medicare and Medicaid Services (CMS). See the CMS website at <http://www.cms.hhs.gov/>. Determination of coverage of Part B drugs is based on medically accepted indications which have supported citations included or approved for inclusion determined by CMS approved compendia.

**Background Information:**

- Nucala is an interleukin-5 (IL-5) antagonist monoclonal antibody (IgG1 kappa) indicated for:
  - Add-on maintenance treatment of patients with severe asthma aged 6 years and older, and with an eosinophilic phenotype.
  - The treatment of adult patients with eosinophilic granulomatosis with polyangiitis (EGPA).
  - The treatment of adult and pediatric patients aged 12 years and older with hypereosinophilic syndrome (HES) for  $\geq 6$  months without an identifiable non-hematologic secondary cause.
  - Limitations of use: Not for relief of acute bronchospasm or status asthmaticus.

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- Eosinophilic Granulomatosis with Polyangiitis (EGPA, formerly Churg-Strauss Syndrome)
  - Rare condition affecting 10-15 people per million
  - Mean age of diagnosis is 40 years old, and is rare in children, adolescents, and patients over 65
  - Antineutrophil cytoplasmic antibodies (ANCA) are found in 40%-60% of patients, but it is unknown whether ANCA have a pathogenic role or if this is simply a manifestation of EGPA
  - Multisystem disorder characterized by allergic rhinitis, asthma, and prominent peripheral blood eosinophilia
  - Primarily affects the lungs, followed by the skin, but also involves the cardiovascular, gastrointestinal, renal, and central nervous systems
  - Asthma is the cardinal feature of EGPA, which presents, along with allergic rhinitis and nasal polyps, long before vasculitis and the initial EGPA diagnosis
  - The next phase of the disease is typically eosinophilia, high levels of eosinophils in the blood, which are 5% or less in healthy patients and at least 10% up to as high as 60% in EGPA patients
  - Vasculitis is the third and final phase of symptoms and includes several organs: fever, fatigue, sudden weight loss, muscle and joint pain, rash, numbness/tingling/loss of strength of hands or feet, chest pain or palpitations, shortness of breath, chronic cough, venous thrombotic events, abdominal pain, blood in stool
  - Nucala is the first and only treatment available for adults with EGPA
- Hypereosinophilic syndrome (HES)
  - HES are a group of rare disorders marked by the sustained overproduction of eosinophils with an estimated prevalence between 0.36 to 6.3 per 100,000.
  - In HES, eosinophils damage the tissues that they infiltrate, with common targets that include skin, lung, and GI tract.
  - The goal of therapy is a reduction of the absolute eosinophil count, reduction of signs and symptoms, and prevention of disease progression.
  - Choice of therapy depends on clinical features, specifically whether the patient has clinical features consistent with a myeloid disorder with or without a FIP1L1-PDGFR $\alpha$  positive mutation. Those with myeloid variants are treated initially with imatinib mesylate, while other types of HES are treated with an initial trial of glucocorticoids.
  - Per the guideline for the investigation and management of eosinophilia in the British Journal of Haematology from January 2017, patients with idiopathic HES who do not respond adequately to corticosteroids, or who require prolonged corticosteroid therapy, or who are intolerant of corticosteroids, should be considered for a short trial (4 – 6 weeks) of imatinib, immunomodulatory agents (interferon alpha, ciclosporin or azathioprine), myelosuppressive therapy (hydroxycarbamide) or monoclonal antibody therapy with mepolizumab (anti-interleukin 5), the latter preferably as part of a clinical trial (Grade 2B).

- Prednisone is the primary initial therapy for symptomatic FIP1L1-PDGFR $\alpha$ -negative HES without indications for emergency treatment. Appropriate starting doses range from 20 mg to 60 mg daily, depending on the severity of the disease manifestations and the degree of eosinophilia at presentation. The dose should be adjusted once the patient responds. Once blood eosinophilia is suppressed and symptoms are controlled, daily glucocorticoid doses are gradually reduced to the lowest dose that maintains control of the eosinophil count and clinical manifestations. Alternate-day dosing should be the ultimate goal if tolerated.
  - Hypereosinophilia of unknown significance (HEus) patients are asymptomatic but have marked eosinophilia (>1,500 cells/microL) and no evidence of clinical manifestations or organ involvement. HEus is not considered a form of HES as eosinophil-mediated complications are absent.
  - Those individuals included in Nucala's pivotal trial for HES had eosinophil counts greater than 1,000 cells/microL during screening, a history of 2 or more flares within the past 12 months and had been stable on HES therapy for at least 4 weeks prior to randomization.
- Severe asthma with an eosinophilic phenotype
    - Severe asthma requires treatment with high dose inhaled corticosteroids (ICS) plus a second controller (and/or systemic corticosteroids) to prevent it from becoming uncontrolled or which remains uncontrolled despite therapy. Add-on treatment for severe asthma include LAMA, leukotriene receptor antagonist (LTRA), low dose azithromycin (adults) and biologic agents for severe allergic or severe type 2 asthma. Type 2 inflammation is found in a majority of people with severe asthma and characterized by production of cytokines such as interleukin (IL). Anti-IL5 monoclonal antibodies (Cinqair<sup>®</sup>, Nucala, and Fasentra<sup>™</sup>) specifically target the formation of eosinophils and deplete blood eosinophil levels.
    - The Global Initiative for Asthma (GINA) 2023 Difficult-to-Treat & Severe Asthma Diagnosis and Management guidelines recommend those with severe asthma and Type 2 airway inflammation (blood eosinophils  $\geq$  150/ $\mu$ L and/or fractional exhaled nitric oxide (FeNO)  $\geq$ 20 ppb and/or sputum eosinophils  $\geq$ 2%, and/or asthma is clinically allergen driven) first should consider adherence tests and consider increasing the ICS dose for 3-6 months. Add-on Type 2-targeted biologic therapy should be considered for patients with exacerbations or poor symptom control on high dose ICS-LABA. Local payer eligibility criteria, comorbidities should also be considered. Anti-IL5/anti-IL5R, including Nucala is appropriate in patients with exacerbations in the last year and blood eosinophils  $\geq$  150/ $\mu$ L.
    - A peripheral blood eosinophil count is an indirect way to estimate airway inflammation. A blood eosinophil count  $\geq$  300 cells/microL may help predict asthmatics who are at increased risk for exacerbations in the next year. Furthermore, a count-response relation exists between blood eosinophil counts and asthma-related outcomes. The European Respiratory Society/American Thoracic Society guidelines from 2020 suggest that treatment of severe asthma be guided by clinical criteria and biomarkers such as blood eosinophil levels or fractional exhaled nitric oxide (FeNO), rather than by clinical criteria alone. In addition, it also suggests that a blood eosinophil count cut-off point of  $\geq$  150 cells/microliter can be used to guide anti-IL5 initiation in adult patients with severe asthma and a history of prior asthma exacerbations.
    - Response to biologic therapy is reviewed after 3-4 months of treatment. If the patient had a good response, the need for each medication should re-evaluated, but do not completely stop inhaled therapy. Consider gradually decreasing or stopping oral steroids first.

- Chronic rhinosinusitis with nasal polyps
  - Chronic rhinosinusitis with nasal polyps (CRSwNP, also referred to as nasal polyposis or nasal polyps) is a chronic inflammatory disease of the nasal passage lining or sinuses that leads to bilateral, benign soft tissue growth referred to as nasal polyps. It affects 5% - 12% of the general population worldwide, often occurring with other immunologic conditions such as allergies and/or asthma. The polyps are characterized by elevated eosinophil levels and are most commonly seen in the third and fourth decade of life.
  - The cornerstone of treatment for nasal polyps is intranasal corticosteroids as well as nasal saline sprays or irrigation. Systemic corticosteroids may also be used short term (10-15 days) to reduce severe polyp inflammation and symptoms like impaired sense of smell or severe nasal blockage.
  - For patients with refractory disease that has not responded to intranasal and oral corticosteroids, biologic therapy and/or functional endoscopic sinus surgery (FESS) may be considered. Surgery must be followed with maintenance therapy with intranasal corticosteroids and other appropriate therapies to prevent recurrence of polyps. No comparative studies or guidelines are available that recommend one treatment option over another for refractory cases.
  - Maintenance therapies are initiated once symptoms have been controlled to minimize inflammation and prevent the regrowth of nasal polyps after surgery. The mainstay of maintenance treatment is intranasal glucocorticoids. Leukotriene inhibitors may also be of benefit as adjunctive therapy, particularly if allergic rhinitis or aspirin-exacerbated respiratory disease are suspected contributing factors.
- There have been no studies supporting co-administration of Nucala with other biologics for approved indications, therefore the safety and efficacy of Nucala is unknown when used in combination with other biologics.
- Clinical reasons a patient may be unable to self-administer Nucala include:
  - Patient or caregivers are unable to perform subcutaneous injections with proper technique
  - Member requires monthly medical support from the physician

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**Table 1: Comparative cumulative daily dosing of inhaled corticosteroids (mcg/day)**

Inhaled Corticosteroid	Ages 12 and up			Ages 6-11		
	Low Dose	Medium Dose	High Dose	Low Dose	Medium Dose	High Dose
Beclomethasone dipropionate HFA	100 – 200	>200 – 400	>400	50 – 100	>100 – 200	>200
Budesonide DPI	200 – 400	>400 – 800	>800	100 – 200	>200 – 400	>400
Budesonide nebulers	NA	NA	NA	250 – 500	>500 – 1,000	>1,000
Ciclesonide HFA	80 – 160	>160 – 320	>320	80	>80 – 160	>160
Fluticasone furoate DPI	100	NA	200	NA	NA	NA
Fluticasone propionate DPI	100 – 250	>250 – 500	>500	100 – 200	>200 – 400	>400
Fluticasone propionate HFA	100 – 250	>250 – 500	>500	100 – 200	>200 – 500	>500
Mometasone furoate	110 – 220	>220 – 440	>440	110	≥220 - <440	≥440
Triamcinolone acetonide	400 – 1,000	>1,000 – 2,000	>2,000	400 – 800	>800 – 1,200	>1,200

Policy History		
#	Date	Change Description
2.8	Effective Date: 10/03/2024	Changed the verbiage of “cannot be used in combination with other biologic agents indicated for any of the conditions listed in the policy and other targeted DMARDs” to “Not to be used in combination with other biologics or targeted DMARDs for the same indication” to align with other biologic policies
2.7	Effective Date: 10/12/2023	Annual review of policy; no changes were made to the criteria.
2.6	Effective Date: 10/06/2022	Criteria updated to require self-administration unless clinically unable to do so
2.5	Effective Date: 10/07/2021	Updated to include criteria for new indication: chronic rhinosinusitis with nasal polyps.  For asthma indication: Updated LABA and LAMA requirement to LABA or LAMA
2.4	Effective Date: 06/10/2021	Criteria aligned between all biologic asthma agents. Supporting information updated for eosinophilic asthma. The criteria for asthma was previously part of the Biologics for Asthma Policy which will be retired
2.3	Effective Date: 12/03/2020	Updated to include new indication for Hypereosinophilic Syndrome.
2.2	Effective Date: 10/08/2020	Annual Review
2.1	Effective Date: 08/13/2020	Criteria updated for Fasentra
2.0	Effective Date: 4/16/2020	Criteria update for step therapy to reference dosing chart for inhaled corticosteroids.
1.9	Effective Date: 2/06/2020	Criteria updated to include eosinophil level for the diagnosis of EGPA per clinical trial

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1.8	Effective Date: 12/05/2019	Updated policy criteria to include Fasentra self-administered product										
1.7	Effective Date: 11/7/2019	Criteria update to authorization period and FDA approved age										
1.6	Effective Date: 08/15/2019	Updated criteria to account for new self-injectable Nucala formulation										
1.5	Effective Date: 02/14/2019	Criteria update										
1.4	Effective Date: 11/01/2018	Criteria update										
1.3	Effective Date: 08/09/2018	Updated document for new indication of EGPA										
1.2	Effective Date: 02/12/2018	UM medical management system update for MAPPO and BCNA <table border="1" data-bbox="483 619 1365 829"> <thead> <tr> <th>Line of Business</th> <th>PA Required in Medical Management System (Yes/No)</th> </tr> </thead> <tbody> <tr> <td>BCBS</td> <td>Yes</td> </tr> <tr> <td>BCN</td> <td>Yes</td> </tr> <tr> <td>MAPPO</td> <td>Yes</td> </tr> <tr> <td>BCNA</td> <td>Yes</td> </tr> </tbody> </table>	Line of Business	PA Required in Medical Management System (Yes/No)	BCBS	Yes	BCN	Yes	MAPPO	Yes	BCNA	Yes
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1.0	Effective Date: 11/05/2015	Preliminary Criteria <table border="1" data-bbox="483 982 1365 1192"> <thead> <tr> <th>Line of Business</th> <th>PA Required in Medical Management System (Yes/No)</th> </tr> </thead> <tbody> <tr> <td>BCBS</td> <td>Yes</td> </tr> <tr> <td>BCN</td> <td>Yes</td> </tr> <tr> <td>MAPPO</td> <td>No</td> </tr> <tr> <td>BCNA</td> <td>No</td> </tr> </tbody> </table>	Line of Business	PA Required in Medical Management System (Yes/No)	BCBS	Yes	BCN	Yes	MAPPO	No	BCNA	No
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\* The prescribing information for a drug is subject to change. To ensure you are reading the most current information it is advised that you reference the most updated prescribing information by visiting the drug or manufacturer website or <http://dailymed.nlm.nih.gov/dailymed/index.cfm>.