AWTTC
All Wales Therapeutics & Toxicology Centre
Canolfan Therapiwteg a Thocsicoleg Cymru Gyfan

# Mepolizumab (Nucala®▼) for the treatment of chronic eosinophilic pneumonia (OW15)

**May 2022**

## ONE WALES INTERIM DECISION

**Mepolizumab (Nucala®▼) for the treatment of chronic eosinophilic pneumonia**

**Date of original advice: November 2019**
**Date of review: May 2022**

**The following One Wales Medicines Assessment Group (OWMAG) recommendation has been endorsed by health board Chief Executives.**

It is the view of the One Wales Medicines Advisory Group (OWMAG) that mepolizumab (Nucala®) should continue to not be supported within NHS Wales for the treatment of chronic eosinophilic pneumonia.

Individual Patient Funding Request (IPFR) consideration remains appropriate for those patients who are likely to obtain significantly more clinical benefit from the intervention than would normally be expected at a reasonable value for money.

This advice will be reviewed after 12 months or earlier if new evidence becomes available.

**One Wales advice assists consistency of access across NHS Wales**

**This is a summary of new evidence available and patient outcome data collected, to inform the review.**

## Background

Chronic eosinophilic pneumonia (CEP) is a rare disease that is part of a larger group of lung diseases characterised by abnormal infiltrations of eosinophils in the lungs. It is characterised by the progressive onset of symptoms including cough, dyspnoea, malaise, chest pain, fever and weight loss, over a few weeks. It is usually successfully treated with corticosteroids but the disease can relapse on tapering or discontinuation of corticosteroids. Mepolizumab for the treatment of CEP in people who require chronic or repeat courses of corticosteroids is an off label (unlicensed) use. Clinicians in Wales consider there is an unmet need and have identified a cohort of patients who could benefit from this treatment.

**Current One Wales Decision:** Not supported

## Licence status

Mepolizumab (Nucala®) for chronic eosinophilic pneumonia remains an off-label indication.

## Guidelines

There are no published guidelines for the treatment of chronic eosinophilic pneumonia.

## Licensed alternative medicines/Health Technology Appraisal advice for alternative medicines

There are no new medicines or health technology appraisal advice.

## Efficacy/Effectiveness

Six case reports were identified from a repeat literature search and the company.

Tashiro et al (2022) reported a case series including two patients diagnosed with CEP. A 74-year-old male developed two recurrences of bilateral chest infiltrations and elevated blood eosinophil count despite treatment with prednisolone so mepolizumab was initiated. After four weeks his blood eosinophil count was reduced to 32.5/ microlitre and he had not experienced any recurrences without corticosteroid at 19 months follow up. The second patient was a 68-year-old male with ground-glass shadows and infiltrations in bilateral lower lung fields and elevated blood eosinophil count; he experienced three recurrences and was maintained with 5 mg of prednisolone which lead to worsening glucose tolerance induced by corticosteroid. He was then treated with mepolizumab, which reduced his blood eosinophil count and glucose tolerance also recovered at 17 months follow up.

Sato et al (2021) reported two patients with corticosteroid-refractory CEP. A 24-year-old male with a previous diagnosis of asthma and CEP was admitted with a two-week history of dyspnoea. He had peripherally predominant ground glass shadows in the left upper lobe, and a peripheral blood eosinophil count of 1,220/ microlitre. He was diagnosed with relapse of CEP and treated with prednisolone. Follow up peripheral blood eosinophil counts were still elevated so subcutaneous mepolizumab was started at 100 mg every four weeks. No asthma attacks or exacerbations of the shadow were observed and prednisolone was discontinued after ten months. After 14 months the mepolizumab was reduced to an eight-weekly regimen; no clear relapses of CEP were reported after three years follow up. The second patient was a 26-year-

old female with a previous diagnosis of asthma and CEP. She was diagnosed with relapsed CEP after an increase in eosinophil level to 1,130/ microlitre, increased eosinophils in bronchoalveolar lavage fluid (48.5%) and peripherally predominant infiltrative shadows in both lungs shown on a CT scan. After introduction of 100 mg subcutaneous mepolizumab every four weeks, no further asthma attacks or exacerbations of the CEP shadows were observed, and seven months later her prednisolone was discontinued. Dosing of mepolizumab was changed to once every eight weeks after 12 months and no clear relapse of CEP has been observed during the two-year follow up.

Eldaabossi et al (2021) reported a case series including two patients diagnosed with CEP. The first patient was a 56-year-old female and the second was a 48-year-old, both with type II diabetes mellitus and CEP diagnosis. After receiving oral corticosteroids, the patients experienced adverse effects such as weight gain, uncontrolled diabetes, depression and bone fractures, but had unsuccessful corticosteroid dose reduction. Subsequently, both patients were given 100 mg subcutaneous mepolizumab monthly, which enabled them to eventually discontinue oral corticosteroids. No relapse of CEP has been observed during follow up (15 and 6 months, respectively) for either patient at the time of publication.

**Safety**
No relevant safety analyses were identified in the repeat literature search.

**Cost effectiveness**
No relevant cost-effectiveness analyses were identified in the repeat literature search.

**Budget impact**
The estimated eligible population reported in the original evidence review published in 2019 was 35 patients per annum in Wales. Since the last review in January 2021, there have been no IPFR requests made for this medicine and indication across Wales.

**Impact on health and social care services**
No new impact data provided, though the impact of this medicine is considered to be minimal.

**Patient outcome data**
It would appear that no patients in Wales have received mepolizumab for CEP in the preceding 12 months.

**Next review date: May 2023**

**References**
Available upon request

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