SEVERE ASTHMA

NUCALA 100MG SUBCUTANEOUS INJECTION

THE FIRST TARGETED ANTI IL-5 ADD-ON TREATMENT FOR ADULTS WITH SEVERE REFRACTORY EOSINOPHILIC ASTHMA

FIND OUT MORE VISIT - WWW.NUCALA.CO.UK

FOR HEALTHCARE PROFESSIONALS

This information has been produced and developed by GlaxoSmithKline.

UK/NLA/0012/15[1]a
Date of preparation: March 2016
Prescribing information can be found on the penultimate page of this document.
DISEASE OVERVIEW

ASTHMA

- Asthma is a chronic heterogeneous lung disease characterised by airway inflammation, bronchial hyperresponsiveness, and reversible airway obstruction that fluctuates over time.\(^1,2\)
- The majority of asthma patients are adequately controlled and treated in a stepwise approach as recommended by the British Thoracic Society/Scottish Intercollegiate Guideline Network (BTS/SIGN).\(^3\)

SEVERE ASTHMA

- The international European Respiratory Society (ERS) and American Thoracic Society (ATS) Task Force defined severe asthma as:

  "asthma which 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 this therapy”.\(^4\)

REFRACTORY ASTHMA

- A small proportion of patients with asthma have refractory disease, which either remains uncontrolled despite their treatment being optimised or requires high doses of controller and reliever medication to maintain symptom control.\(^5\)

PHENOTYPES

- Evidence shows that patients with severe asthma are comprised of different phenotypes; one example is an eosinophilic asthma phenotype which has been shown to be associated with asthma severity, late onset disease and steroid refractoriness.\(^2\)

TARGETED THERAPIES

- By characterising patients’ severe asthma phenotypes they can be differentially treated with personalised and targeted therapies, and outcomes could be improved.\(^6\)
Burdens

- It is estimated that 5–10% of the total asthma population have severe asthma.\(^4\)
- Severe asthma patients are at high risk of having a **severe exacerbation** and are often dependent on oral corticosteroids (OCS).\(^6\)
- These patients account for a significant percentage of healthcare resource utilisation\(^4\) and have **few therapeutic options** available.\(^5,6\)
- Severe asthma patients may face a number of additional costs including lost earnings due to impaired productivity and/or **reduced quality of life**.\(^7,8\)
- OCS can have significant **side-effects** and **co-morbidities** that result in a burden on patients’ lives and NHS services. These include osteoporosis (fracture risk), diabetes and cataracts.\(^9\)
- The adherence to daily OCS has been documented to be as low as 45%.\(^10,11\)

## Introducing Nucala 100mg SC

**A Targeted Add-on Therapy for Adult Patients with Severe Refractory Eosinophilic Asthma**

**Nucala 100mg SC Compared to Placebo, When Both Are Added to Standard of Care:**\(^+\)

- Significantly reduces frequency of exacerbations by 53%\(^12\)
- Significantly reduces patients’ dependency on OCS whilst maintaining asthma control\(^13\)
- Improves health-related quality of life\(^12\)

**Nucala is Generally Well Tolerated. The Most Commonly Reported Adverse Reactions Were Headache, Injection Site Reactions and Back Pain.**

\(^+\)Standard of care–High dose ICS and additional maintenance treatment(s), in line with BTS/SIGN Step 4 and above
INTERLEUKIN-5

- IL-5 is the major cytokine responsible for the growth, differentiation, recruitment, activation and survival of eosinophils.\textsuperscript{\textsuperscript{14}}
- Eosinophils play a role in maintaining long-term inflammation and exacerbation risk, under the control of IL-5.\textsuperscript{\textsuperscript{15}}

INFLAMMATORY PATHWAY FOCUSING ON IL-5 STEPS

\begin{itemize}
  \item ALLERGENS
  \item POLLUTANTS, PATHOGENS
  \item Th2
  \item B CELLS
  \item IgE
  \item MAST CELLS
  \item ILC2
  \item EOSINOPHILS
\end{itemize}

Recruitment, activation, survival of eosinophils by IL-5 pathways
NUCALA 100MG SUBCUTANEOUS INJECTION

- Nucala is the first humanised monoclonal antibody (IgG1 Kappa) that inhibits the bioactivity of IL-5 with high affinity and specificity.
- Nucala inhibits IL-5 signalling by blocking IL-5 binding to the alpha chain of the IL-5 receptor complex. This in turn inhibits IL-5 signalling and the production and survival of eosinophils, thereby reducing inflammation.
- Following a dose of Nucala 100mg SC every 4 weeks for 32 weeks, blood eosinophil levels were reduced by 84%* when compared with placebo when both were added to standard of care†. This reduction was observed within 4 weeks of treatment.16

*blood eosinophils were reduced from a geometric mean count at baseline of 290 to 40 cells/µL at week 32, n=182

HOW DOES NUCALA WORK?

† Standard of care - High dose ICS and additional maintenance treatment[s], in line with BTS/SIGN Step 4 and above
REFERENCES

Nucala® ▼ (mepolizumab) Prescribing information

Please consult the full Summary of Product Characteristics (SmPC) before prescribing.

Nucala® (mepolizumab) powder for solution for injection. Each vial contains 100 mg mepolizumab. After reconstitution, each ml of solution contains 100 mg mepolizumab.

Indications: Indicated as an add-on treatment for severe refractory eosinophilic asthma in adult patients.

Dosage and administration: Nucala should be prescribed by physicians experienced in the diagnosis and treatment of severe refractory eosinophilic asthma. Adults: Recommended dose of mepolizumab is 100 mg administered subcutaneously once every 4 weeks. Treatment is intended long-term and the need for continued therapy should be considered at least on an annual basis. Method of administration is subcutaneous only, administered by a healthcare professional. It may be injected into the upper arm, thigh, or abdomen. The powder should be reconstituted under aseptic conditions and administered within 8 hours, protected from sunlight, at <30 degrees Celsius.

Contraindications: Hypersensitivity to the active substances or to any of the excipients (sucrose, sodium phosphate dibasic heptahydrate and polysorbate 80).

Precautions: Not to be used to treat acute asthma exacerbations. Asthma related adverse events or exacerbations may occur during treatment. Abrupt discontinuation of corticosteroid after initiation of therapy is not recommended. Hypersensitivity and administration-related reactions may occur within hours of administration, but some instances may have a delayed onset. Pre-existing helminth infections should be treated before commencing Nucala.

Special populations: No dose adjustment is required for elderly, hepatic impaired and renal impaired patients with a CrCl 50-80ml/min (limited data for patients with CrCl <50ml/min).

Interactions with other medicinal products: No interaction studies have been performed. The potential for interactions is considered low.


Side effects: Very Common (≥1/10): Headache. Common (≥1/100 to <1/10): Lower respiratory tract infection, urinary tract infection, pharyngitis, hypersensitivity reactions, nasal congestion, abdominal pain upper, eczema, back pain, administration related reactions (rash, flushing, myalgia), local injection site reactions, pyrexia. Immunogenicity: In trials 15/260 patients (6%) developed anti-mepolizumab antibodies. Neutralising antibodies were detected in just 1 subject. See SmPC for other side effects.

Legal category: POM.

Presentation and Basic NHS cost: Nucala®. 1 vial - £840.00.

Marketing authorisation (MA) no. [EU/1/15/1043/001]; MA holder: GlaxoSmithKline Trading Services Limited, Currabinny, Carrigaline, County Cork, Ireland.

Last date of revision: November 2015. UK/NLA/0013/15.

Nucala® is a registered trademark of the GlaxoSmithKline group of companies. All rights reserved. group of companies. All rights reserved.
## INTRODUCING NUCALA 100MG SUBCUTANEOUS (SC)

NUCALA IS THE FIRST TARGETED ANTI IL-5 ADD-ON THERAPY FOR ADULT PATIENTS WITH SEVERE REFRACTORY EOSINOPHILIC ASTHMA

<table>
<thead>
<tr>
<th>BRAND NAME</th>
<th>Nucala®</th>
</tr>
</thead>
<tbody>
<tr>
<td>GENERIC NAME</td>
<td>Mepolizumab</td>
</tr>
<tr>
<td>LICENSED INDICATION</td>
<td>An add-on treatment for adult patients with severe refractory eosinophilic asthma</td>
</tr>
<tr>
<td>THERAPEUTIC CLASS</td>
<td>Humanised monoclonal antibody which inhibits the bioactivity of the cytokine interleukin-5 (IL-5)</td>
</tr>
<tr>
<td>ANTICIPATED PLACE IN THERAPY (BTS/SIGN GUIDELINES*)</td>
<td>Nucala-eligible patients are either at step 4 and remain uncontrolled despite being on high dose inhaled corticosteroid (ICS) plus additional maintenance treatment(s), or at step 5</td>
</tr>
<tr>
<td>DOSAGE</td>
<td>100mg for subcutaneous injection once every 4 weeks</td>
</tr>
<tr>
<td>ADMINISTRATION</td>
<td>To be reconstituted under aseptic conditions and administered subcutaneously by a healthcare professional</td>
</tr>
<tr>
<td>DURATION OF TREATMENT</td>
<td>Intended for long-term treatment. The need for continued therapy should be considered at least on an annual basis</td>
</tr>
<tr>
<td>KEY CLINICAL TRIALS</td>
<td>MENSA: Exacerbation reduction study. Mepolizumab as adjunctive therapy in patients with severe asthma SIRIUS: Steroid reduction with mepolizumab study DREAM Phase IIb/III dose ranging study that defined a responder population by blood eosinophil count that was studied in phase III</td>
</tr>
<tr>
<td>SAFETY</td>
<td>Nucala is generally well tolerated; the most commonly reported adverse reactions were headache, injection site reactions and back pain</td>
</tr>
</tbody>
</table>

*BTS - British Thoracic Society; SIGN - Scottish Intercollegiate Guideline Network*