This document provides a short summary of this study for a general audience. You can find more information in the scientific summaries of the study. Links to those summaries are provided at the end of this document.

Study names

Short Title: A study to compare long-term mepolizumab treatment with stopping mepolizumab treatment in patients with severe eosinophilic asthma.

Full Scientific Title: A multi-centre, randomised, double-blind, placebo controlled, parallel group study to compare cessation versus continuation of long-term mepolizumab treatment in patients with severe eosinophilic asthma.

Study Number: 201810

Who sponsored this study?

GlaxoSmithKline (GSK)
GSK Clinical Support Help Desk
Website: clinicalsupporthd.gsk.com/contact.html
Email: GSKClinicalSupportHD@gsk.com

General information about the clinical study

When was this study done?

The study started in January 2016 and ended in July 2019.

What was the main objective of this study?

Asthma is a long-term condition of the airways. When the airways are inflamed, they become narrow. This narrowing can cause coughing, wheezing, chest tightness, and shortness of breath.

Patients with eosinophilic asthma have increased numbers of a type of white blood cells, called eosinophils. Eosinophils help the body fight infections and control some diseases. Too many eosinophils may worsen asthma symptoms, causing inflammation

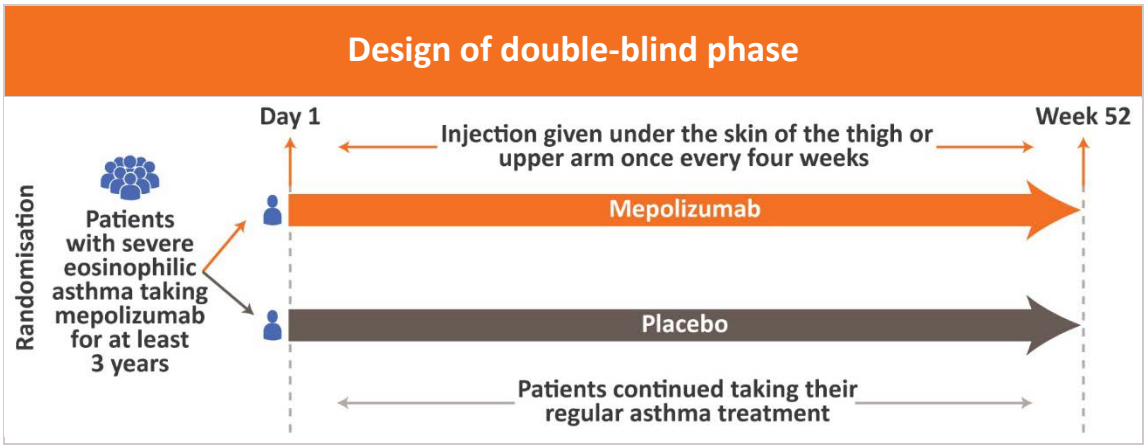
in the lungs. Eosinophilic asthma is considered severe when symptoms are hard to control, even when patients are taking asthma treatment.

Mepolizumab lowers the number of eosinophils in the blood to normal levels. It is used together with regular asthma treatment to help control severe eosinophilic asthma.

Patients who were included in previous mepolizumab studies and received mepolizumab in addition to regular asthma treatment for at least three years (long-term) took part in this study. The purpose of this study was to see if patients who continued to receive long-term treatment with mepolizumab were more or less likely to have a severe asthma attack compared with patients who stopped taking mepolizumab.

Which medicines were studied?

In this study, patients were placed in one of the two treatment groups by chance (randomisation). As shown in the figure below, patients either continued receiving mepolizumab or stopped receiving mepolizumab and were given placebo (no active medicine) instead. Neither patients nor study doctors knew who was receiving which treatment. This is called a double-blind phase.



If a patient had a severe asthma attack, the study doctor decided if the patient should stop receiving study treatment. These patients could then choose to enter the open-label phase of the study and receive mepolizumab until Week 52.

Which patients were included in this study?

Studies have a list of requirements for patients who can enrol (inclusion criteria) and those who can't (exclusion criteria). For this study, the main inclusion and exclusion criteria are listed below.

Men and women were included in the study if they had taken part in previous mepolizumab studies for severe eosinophilic asthma and were:

- Receiving continuous mepolizumab treatment for at least three years (with no gap more than 12 weeks) before randomisation.
- Taking regular asthma treatment for at least 12 weeks before starting the study and planned to continue taking it during the study.

Men and women were excluded from the study if they:

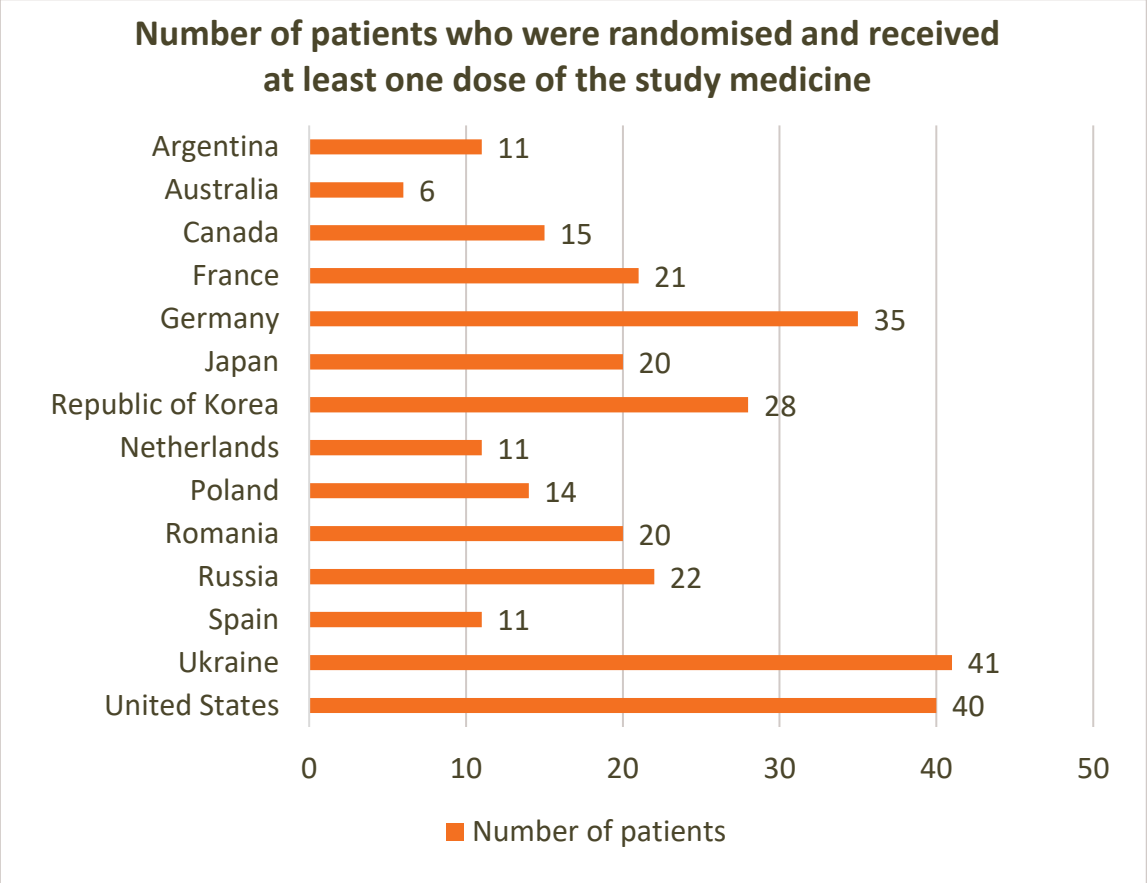
- Were withdrawn from any of the previous mepolizumab studies for safety reasons.
- Had poor health at the end of previous studies.
- Had any heart-related problem.
- Had cancer, including those who had been cancer free for less than one year before starting the study.
- Received any other medicine(s) that the study doctor thought would affect the results of the study.

Overall, 295 patients were randomised and received at least one dose of the study medicine. The study included 122 (41%) men and 173 (59%) women. The average age was 56 years. The youngest patient was 17 years old and the oldest patient was 80 years old.

For more detailed information about the patients included in this study, see the scientific results summaries (links to those summaries are provided at the end of this document).

Where was this study done?

Study sites were in 14 countries.



What were the overall results of the study?

The main comparison between treatment groups was to see if patients who continued to receive long-term treatment with mepolizumab had a higher or lower risk of having a severe asthma attack compared with patients who stopped taking mepolizumab and received placebo instead. For this study, a severe asthma attack was defined as an attack for which the patient needed additional treatment from the study doctor.

A calculation was used to estimate the risk (called relative risk) of having a severe asthma attack during the double-blind phase. This risk value shows whether continuous treatment with mepolizumab increases (risk value greater than one) or decreases (risk value less than one) the risk of having a severe asthma attack compared with placebo. The risk value was then converted to a percentage to show the degree to which continued mepolizumab treatment lowered the risk of having a severe asthma attack (relative risk reduction) compared with placebo.

Results are shown in the table below.

Number and percentage of patients with a severe asthma attack during the double-blind phase		
	Placebo 151 patients	**Mepolizumab 144 patients**
Number of patients (percent) who had a severe asthma attack	89 (59%)	66 (46%)
Relative risk	0.62	
Relative risk reduction	38%	

When added to regular asthma treatment, results show that continuous long-term treatment with mepolizumab reduced the risk of having a severe asthma attack in patients with severe eosinophilic asthma compared with placebo during the double-blind phase.

More information about the study results is available in the scientific results summaries (links to those summaries are provided at the end of this document).

What were the side effects?

Unwanted medical events (adverse events) can happen to people when they receive a medicine. Study doctors record these events. A summary of these events can be found in the scientific results summaries (links to those summaries are provided at the end of this document).

If the study doctor thinks that the event was caused by the study medicine, they record this as a possible side effect (adverse reaction).

In this summary, “side effects” refer to those events that the study doctor thinks may have been caused by the study medicine. The side effects in this summary may be different to those in the Informed Consent or other documents related to the study medicine.

In blinded studies, the doctor does not know which study medicine the patient is taking. In some cases, side effects will be assigned to placebo.

No serious side effects were reported during the double-blind phase of the study.

The table below shows the number of patients (percent) with non-serious side effects reported during the double-blind phase.

Number of patients (percent) with non-serious side effects reported during the double-blind phase		
	Placebo 151 patients	**Mepolizumab 144 patients**
Injection site reaction	1 (less than 1%)	4 (3%)
Allergic reaction	0	1 (less than 1%)

Of the 295 patients included in the double-blind phase, 84 patients from the placebo group and 45 patients from the mepolizumab group entered the open-label phase. No serious side effects were reported during the open-label phase of the study.

The table below shows the number of patients (percent) with non-serious side effects reported during the open-label phase.

Number of patients (percent) with non-serious side effects reported during the open-label phase	
	Mepolizumab 129 patients
Feeling tired	1 (less than 1%)
Injection site reaction	1 (less than 1%)
Worsening symptoms of asthma	1 (less than 1%)
Rash	1 (less than 1%)

How has this study helped patients and researchers?

Patients with severe eosinophilic asthma who received long-term mepolizumab, in addition to regular asthma treatment, took part in this study. This study showed that in patients who continued to receive long-term treatment with mepolizumab, the risk of having a severe asthma attack decreased by 38% compared with patients who stopped taking mepolizumab. The side effects reported in this study were limited in number and non-serious.

Are there plans for further studies?

Other studies on mepolizumab in patients with severe eosinophilic asthma have been conducted and more are underway.

Where can I find more information about this study?

Clinical studies have unique study numbers that are included in publications and other information about the study. The unique study numbers associated with this study are shown below with internet links to scientific summaries and other information.

The scientific summaries include more details about the requirements for study enrolment, the study visit schedule, results from other endpoints, and more detailed information about adverse events.

Organisation	Website	Study Number
European Medicines Agency	www.clinicaltrialsregister.eu	2015-002361-32[1]
United States National Institutes of Health (NIH)	www.clinicaltrials.gov	NCT02555371[2]

Your doctor can help you understand more about this study and the results. Speak to your doctor about the treatment options available in your country. You should not make changes to your care based on the results of this or any single study. Keep taking your current treatment unless instructed by your doctor.

[1] https://www.clinicaltrialsregister.eu/ctr-search/search?query=201810
[2] https://clinicaltrials.gov/ct2/show/study/NCT02555371

We would like to thank the patients who contributed to this study. The results of this study will help answer scientific questions about treating patients with severe eosinophilic asthma.

The content for this document was finalised by GSK on 13th of May 2020. The information in this summary does not include additional information available after this date.