

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 triple therapy (fluticasone furoate/umeclidinium/vilanterol) with tiotropium alone in patients with chronic obstructive pulmonary disease.

Full Scientific Title: A Phase IV, 12 week, randomised, double-blind, double-dummy study to compare single inhaler triple therapy, fluticasone furoate/umeclidinium/vilanterol, with tiotropium monotherapy based on lung function and symptoms in participants with chronic obstructive pulmonary disease.

Study Number: 207626

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 March 2018 and ended in July 2019.

What was the main objective of this study?

Chronic obstructive pulmonary disease (COPD) is a long-term disease of the lungs that makes it hard to breathe and gets worse over time. For patients with COPD, inhaled medicines are an important part of treatment. An inhaler is a handheld device that delivers medicine(s) to the lungs.



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Patients with COPD who need to take three inhaled medicines (triple therapy) may use two or three inhalers. GSK has developed the Ellipta inhaler that can deliver three medicines in one inhaler.

The main objective of this study was to compare lung function in patients with COPD taking triple therapy (fluticasone furoate/umeclidinium/vilanterol) using the Ellipta inhaler with those taking tiotropium alone using the HandiHaler. The researchers also assessed the safety of these medicines.

Which medicines were studied?

Patients were put into one of the two treatment groups by chance (randomisation), as shown in figure below.

Medicines and inhalers used in the study	
Triple therapy group	Ellipta inhaler (once daily) containing a combination of three medicines: <ul style="list-style-type: none">• Fluticasone furoate 100 micrograms (mcg)• Umeclidinium 62.5 mcg• Vilanterol 25 mcg 
Tiotropium group	HandiHaler (once daily) containing tiotropium 18 mcg 

Fluticasone furoate is an inhaled corticosteroid (inhaled medicine that reduces inflammation in the lungs).

Umeclidinium, vilanterol, and tiotropium are long-acting bronchodilators (inhaled medicines that relax and open the airways in the lungs).

Each patient received two inhalers, one contained study medicine(s) and the other contained placebo (no active medicine). Neither patients nor study doctors knew who was receiving which treatment. This is called a double-blind study.

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 with COPD were included in the study if they:

- Were at least 40 years old.
- Were current or former smokers.
- Had impaired lung function.
- Were taking tiotropium (via inhaler) daily for their COPD for at least three months before starting the study.
- Had a history of at least two moderate episodes or one severe episode of sudden worsening of COPD symptoms (exacerbation), which required treatment and/or hospitalisation in the year before starting the study.



Men and women were excluded from the study if they had:

- Asthma.
- Respiratory tract infection or any other respiratory problem, such as tuberculosis.
- Removal of part of the lung in the year before starting the study.
- A specific genetic condition that led to COPD.
- Pneumonia and/or COPD exacerbation that had not improved in at least 14 days before starting the study.
- A risk of developing pneumonia during the study.

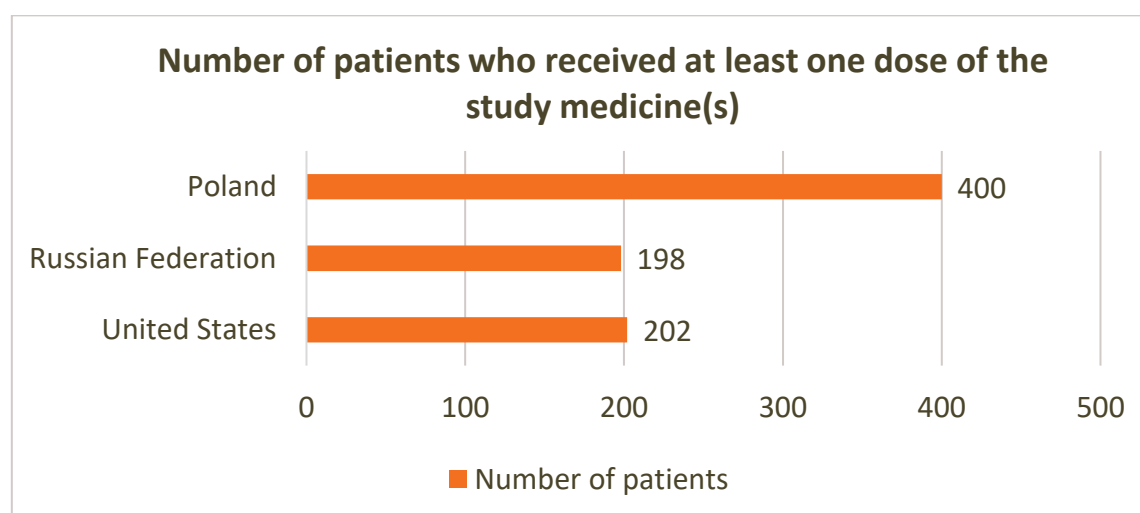
A total of 800 patients received at least one dose of study medicine. The table below shows the gender and age of these patients.

Patients who received at least one dose of the study medicine(s)		
	Triple therapy group 400 patients	Tiotropium group 400 patients
Female	126 (32%)	131 (33%)
Male	274 (69%)	269 (67%)
Age range (years)	42 to 87	40 to 87
Average age (years)	66	66

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 three countries.



What were the overall results of the study?

Lung function tests measure how well a patient's lungs move air in and out of the body. Doctors can use the results of these tests to see if lung function is stable, getting better, or getting worse.

One measure of lung function is Forced Expiratory Volume in one second (FEV₁). FEV₁ measures the amount of air that a patient can breathe out in the first second when asked to blow as hard as possible into a tube connected to a machine (spirometer). Higher values of FEV₁ mean more air is flowing out of the lungs and that lung function is better.

Study doctors measured the FEV₁ values on Day 1 (baseline) and at Week 12. The difference between the FEV₁ values at baseline and after 12 weeks of treatment is called the Week 12 change from baseline in FEV₁.

The Week 12 change from baseline in FEV₁ values from individual patients in each treatment group were combined and averaged. These averaged values were compared between the two treatment groups. The Week 12 change from baseline in FEV₁ could be calculated for 737 patients who had both baseline and Week 12 values. The results are shown in the table below.

Week 12 change from baseline in average FEV ₁		
	Triple therapy group	Tiotropium group
Number of patients with FEV ₁ values at baseline and at Week 12	362	375
Week 12 change from baseline in average FEV ₁ (in millilitres [mL])	115 mL	20 mL

After 12 weeks of treatment, the improvement in the average FEV₁ (lung function) of patients in the triple therapy group was greater compared with the tiotropium group.

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(s). The side effects in this summary may be different to those in the Informed Consent or other documents related to the study medicine.

No serious side effects were reported in the study up to Week 12.

No non-serious side effects were reported by one percent or more of patients in either treatment group up to Week 12.

How has this study helped patients and researchers?

Researchers concluded that patients with COPD, when treated with triple therapy using the Ellipta inhaler, showed a greater improvement in lung function compared with tiotropium alone using HandiHaler. The side effects reported in this study were limited in number and non-serious.

Are there plans for further studies?

Other studies of fluticasone furoate, umeclidinium, and vilanterol in patients with COPD 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	2017-001190-16 ¹
United States National Institutes of Health (NIH)	www.clinicaltrials.gov	NCT03474081 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.

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 COPD.

The content for this document was finalised by GSK on the 31st of January 2020. The information in this summary does not include additional information available after this date.

¹<https://www.clinicaltrialsregister.eu/ctr-search/search?query=2017-001190-16>

²<https://clinicaltrials.gov/ct2/show/study/NCT03474081>