

# Cystic Fibrosis Research News

**Title:**

Long-term tezacaftor/ivacaftor safety and efficacy in people with cystic fibrosis and an *F508del-CFTR* mutation: 96-week, open-label extension of the EXTEND trial

**Lay Title:**

Safety and efficacy of extended treatment with tezacaftor/ivacaftor

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**What was your research question?**

We sought to understand the safety and health benefits of long-term tezacaftor/ivacaftor treatment in people with CF.

**Why is this important?**

Previous clinical trials have shown that tezacaftor/ivacaftor is generally safe and effective in treating the underlying cause of CF in patients with certain genetic mutations. However, CFTR modulator medications like tezacaftor/ivacaftor must be taken consistently to treat the disease. Therefore, it is important to collect and assess information on the long-term safety and efficacy of tezacaftor/ivacaftor from people with CF.

**What did you do?**

Our study, which has now completed two parts (Part A and Part B), is assessing the safety and efficacy of tezacaftor/ivacaftor in a group of people with CF over multiple 96-week treatment periods. The first treatment period (Part A) was previously reported. Here we described the results from the next 96-week treatment period (Part B), after which some patients had taken tezacaftor/ivacaftor for up to 216 weeks. During this treatment period, we collected



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information on adverse events as well as changes in each patients' lung function, weight, and how often they were sick with pulmonary exacerbations.

## **What did you find?**

Overall, there was a low number of patients who left the study due to adverse events, with most adverse events being generally consistent with what is commonly seen with CF disease. The improvements lung function and weight, as well as the decrease in how often patients were sick with pulmonary exacerbations, that were previously reported during the first treatment period with tezacaftor/ivacaftor (Part A, up to 120 weeks) were maintained over the additional 96-week treatment period (Part B) reported here.

## **What does this mean and reasons for caution?**

These findings suggest that tezacaftor/ivacaftor is generally safe and well tolerated and provides clinical benefits that persist over time in people with CF and specific mutations. It should be noted that there was a high discontinuation rate due to commercial drug availability. In addition, because this study had only one group of patients who were all taking tezacaftor/ivacaftor, we could not compare our findings to a similar group of patients not taking tezacaftor/ivacaftor, hindering the ability to make definitive conclusions about changes in patient outcomes over time.

## **What's next?**

Future observational studies of patients taking tezacaftor/ivacaftor in real-world settings will allow for more information to be collected on the long-term impact of tezacaftor/ivacaftor use on health outcomes in people with CF.

## **Original manuscript citation in PubMed**

<https://pubmed.ncbi.nlm.nih.gov/36581484/>