

# Cystic Fibrosis Research News

**Title:**

Sex differences in outcomes of people with cystic fibrosis treated with elexacaftor/tezacaftor/ivacaftor

**Lay Title:**

Male female differences after elexacaftor/tezacaftor/ivacaftor

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**What was your research question?**

Is there a difference between male and female outcomes after treatment with elexacaftor/tezacaftor/ivacaftor?

**Why is this important?**

Outcome differences between males and females with CF are well established where females tend to die earlier and have worse responses to infections such as *Pseudomonas aeruginosa*. In the era of highly effective modulator therapies, whether this will persist and whether males and females will respond to elexacaftor/tezacaftor/ivacaftor similarly is unknown.

**What did you do?**

We used data from our own large adult CF center to compare outcomes such as lung function, pulmonary exacerbations, prevalence of *Pseudomonas aeruginosa* and body mass index between males and females before and after initiation of elexacaftor/tezacaftor/ivacaftor.

**What did you find?**

We found no significant adjusted mean difference pre- versus post-ETI in females compared to males for ppFEV1, presence of *Pseudomonas aeruginosa* or BMI, but we did find a greater



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decline in PEx in males relative to females. In those people who were modulator naïve prior to starting ETI, we also found a near significant increase in ppFEV1 pre- to post-ETI in males relative to females.

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

These data suggest that ETI will not narrow the sex disparity in CF and potentially amplify it in some populations. However, this study was done at a single site and sweat chloride levels and pharmacokinetics of elexacaftor/tezacaftor/ivacaftor were not measured and compared between males and females.

## **What's next?**

We plan to evaluate male versus female outcomes after initiation of ivacaftor using CF Foundation patient registry data now that nearly 10 year follow up is available on that group of people with CF.

## **Original manuscript citation in PubMed**

<https://pubmed.ncbi.nlm.nih.gov/37244841/>