

# Cystic Fibrosis Research News

**Title:**

**Worsening anxiety and depression after initiation of lumacaftor/ivacaftor combination therapy in adolescent females with cystic fibrosis**

**Authors:**

Cameron J. McKinzie<sup>1</sup>, Jennifer L. Goralski<sup>2,3</sup>, Terry L. Noah<sup>2</sup>, George Z. Retsch-Bogart<sup>2</sup>, Mary Beth Prieur<sup>4</sup>

**Affiliations:**

1. Department of Pharmacy, University of North Carolina Medical Center, Chapel Hill, NC
2. Division of Pediatric Pulmonology, Department of Pediatrics, University of North Carolina School of Medicine, Chapel Hill, NC
3. Division of Pulmonary and Critical Care Medicine, Department of Medicine, University of North Carolina School of Medicine, Chapel Hill, NC
4. Department of Psychiatry and Pediatrics, University of North Carolina School of Medicine, Chapel Hill, NC

**What was your research question?**

This study was focused on the question regarding what expression of anxiety and depression occurs in lumacaftor/ivacaftor patients. The study is a descriptive report of adolescent female patients who experienced worsening mental health (depression and/or anxiety) after starting lumacaftor/ivacaftor.

**Why is this important?**

Lumacaftor/ivacaftor is a new combination CFTR modulator therapy that was first approved in 2015. As with any new medication, it is important to document possible side effects associated with the medication. This will allow health care providers to appropriately counsel patients on the risks and benefits of this medication.

**What did you do?**

Review and summarise the cases of five adolescent female patients, who started taking lumacaftor/ivacaftor therapy at the appropriate dose based on their age and later exhibited changes in mental health.



# Cystic Fibrosis Research News

## **What did you find?**

These five patients each experienced worsening depression and/or anxiety, leading to discontinuation of the medication, and three of the five patients attempted suicide. One of these patients' worsening symptoms may have been related to a drug interaction between their existing psychiatric medication and lumacaftor/ivacaftor.

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

Providers should be aware of the potential for previously unreported adverse effects from lumacaftor/ivacaftor, including worsening mental health conditions. Patients should be appropriately screened for depression and anxiety at their CF center according to the guideline recommendations, and consideration for drug-drug interactions should be taken when starting lumacaftor/ivacaftor therapy.

## **What's next?**

This is an anecdotal report from our center; however, if other centers have patients experiencing similar effects, these should be reported to the FDA MedWatch program.

## **Original manuscript citation in PubMed**

<https://www.ncbi.nlm.nih.gov/pubmed/?term=Worsening+anxiety+and+depression+after+initiation+of+lumacaftor%2Fivacaftor+combination+therapy+in+adolescent+females+with+cystic+fibrosis>