

# Cystic Fibrosis Research News

**Title:**

HEALTH CARE RESOURCE UTILIZATION PRECEDING DEATH OR LUNG TRANSPLANTATION IN PEOPLE WITH CYSTIC FIBROSIS

**Lay Title:**

Use of health care before lung transplantation or death in people with cystic fibrosis

**Authors:**

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**What was your research question?**

The first aim was to measure health care resource utilization (the use of health care resources, HCRU) and associated costs in the year before death occurring in people with CF (pwCF) who had never received a lung transplant (LTx), or in the year before LTx. The second aim was to measure the associated costs the following two years after LTx.

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## Why is this important?

This study allowed analyzing if death without LTx could be associated with some subgroups of pwCF or with a lower level of care. These data could be of interest to improve the care of pwCF not eligible for elexacaftor/tezacaftor/ivacaftor (ETI). The access to ETI for pwCF with advanced lung disease has resulted in a significant decrease in the number of LTx. Therefore, it is important to take into account the avoided costs related to the decreased number of LTx in the cost effectiveness analysis of ETI.

## What did you do?

Using the database obtained by a linking 2006-2017 data from the French CF Registry (FCFR) with the French health claims database (Système National des Données de Santé; SNDS) including all reimbursed outpatient and inpatient medical resources used by 98.8% of the French population (Durieu I, Dalon F, Reynaud Q, et al. Temporal trends in healthcare resource use and associated costs of patients with cystic fibrosis. *J Cyst Fibros*. 2022;21(1):88-95). The HCRU and associated costs were taken from the year before LTx or before death without LTx, and two years after LTx.

## What did you find?

The study showed that the HCRU was lower in the year preceding death than LTx suggesting possible inappropriate care in some pwCF. Our data concerning costs of LTx indicated that the costs of avoided LTx may not completely compensate the costs of modulator therapies. Nevertheless, we suggest that the clinical benefit of modulator therapy observed for pwCF clearly outweighs the additional costs.

## What does this mean and reasons for caution?

Data linkages are increasingly performed in public health and epidemiology. It is a useful method to evaluate practice changes and induced costs following introduction of innovative therapies.

Limitations of our study: the data used in this study cover the period from 2006 to 2017, which is not the most recent period and does not include the use of ETI. However, they are still relevant, since LTx management remains unchanged. Despite decreased numbers of transplants observed since the availability of ETI, LTx will remain an important treatment performed on pwCF with advanced lung disease who have no access to ETI. Datasets used do not provide any direct information on causes of death, which is another limitation of this study.



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## What's next?

These data could be of interest to improve the care of pwCF not eligible for ETI, who will still progress to end-stage chronic respiratory insufficiency.

In the future, further linked dataset analyses will allow other studies evaluating the impact of ETI on the overall consumption of care, and the potential emerging comorbidities detected by the consumption of new cares.

## Original manuscript citation in PubMed

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