



Utilization of CFTR modulators in cystic fibrosis in Norway

CFTR modulators provide targeted treatment of the underlying protein defect in patients with cystic fibrosis (CF). Continued evaluation is needed due to emerging safety concerns, including psychiatric adverse effects. This DARWIN EU® cohort study describes real-world use, supportive therapy patterns, and selected safety outcomes. Here, we highlight results for Norway.

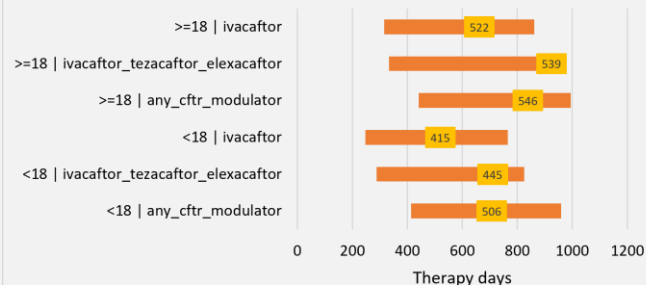
Study overview

- Design: Population-level drug utilization study in databases across France, Germany, Italy, Norway, Spain, and UK.
- Population: Individuals with CF in Norway (2018–2023) with ≥1 year of prior observable data and 180 days follow-up (N = 273).
- Exposure: Initiation of CFTR modulator therapy (ivacaftor, combinations).
- Outcomes: CFTR modulator treatment patterns, patient demographics, use of supportive CF therapies, pulmonary exacerbation and adverse events of special interest (AESIs) incidence.

CFTR modulator utilization in Norway

- In Norway, first-line CFTR modulator therapy was predominantly ivacaftor/tezacaftor/elixacaftor (triple therapy) accounting for 77.9% of initiators, the highest observed across databases.

IQR (Q25–Q75) of days exposed to any CFTR modulator in Norway, by age group and ingredient (median shown)

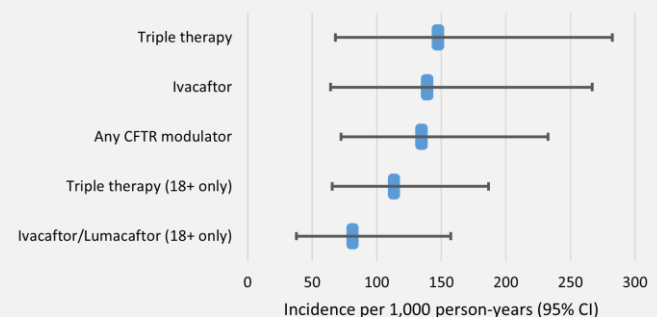


- In pediatrics, triple-therapy initiation was dominant (81.7%), followed by ivacaftor/lumacaftor (18.2%). Pediatric patients represent 53.2% of all Norwegian patients initiating ivacaftor/lumacaftor.

CFTR modulator-treated patient characteristics in Norway

- The median age at CFTR modulator initiation was 25 years (IQR 14–39), 35.5% were <18 years.
- Main supportive therapies used after CFTR initiation were multienzymes (70.0%), mucolytics (63.0%), salbutamol (53.8%), proton pump inhibitors (28.2%), and tobramycin (15.0%).

Pulmonary exacerbation incidence in Norway during the first year after CFTR modulator initiation



- Anxiety was the only of four AESI with sufficient events for stable estimation (33.4 per 1,000 PY).

Data & Methods notes

- Pulmonary exacerbations may be under-recorded or misclassified because they are identified using diagnostic codes, which may miss subclinical events and lack detail on severity.
- Most AESIs were rare (<5), limiting their assessment.
- The first recorded CFTR modulator treatment after CF diagnosis marks cohort entry and may not reflect the true treatment start or clinical decision date.

How was this useful?

This study provides real-world evidence on CFTR modulator use, treatment patterns, and associated outcomes among people with CF in Norway. It adds details on first-line regimen choice and post-initiation care, including supportive therapies recorded around treatment initiation. Compared with other countries, Norway showed the highest observed first-line uptake of triple therapy (77.9%). These findings help contextualize national treatment practice. They also highlight that many AESIs were rare and therefore difficult to quantify precisely in Norway.

Access to the full report

[DARWIN EU® - Drug utilisation study in individuals with cystic fibrosis in Europe](#)

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