



# Survival estimates in European cystic fibrosis patients and the impact of socioeconomic factors: a retrospective registry cohort study

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Median survival for patients with CF in Europe is similar to that reported in other jurisdictions and differs depending on socioeconomic status, with measures of higher healthcare spending associated with improved survival. <https://bit.ly/3jYF37q>

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## Abstract

**Background** Median survival for cystic fibrosis (CF) patients in Europe is unknown and is likely to be influenced by socioeconomic factors. Using the European CF Society Patient Registry (ECFSPR), median survival estimates were obtained for CF patients across Europe and the impact of socioeconomic status on survival was examined.

**Methods** CF subjects known to be alive and in the ECFSPR between 2010 and 2014 were included. Survival curves were estimated using the Kaplan–Meier method. Differences in the survival curves were assessed using the log-rank test. Cox regression was used to estimate the association between socioeconomic factors and the age-specific hazard of death, with adjustment for sex, age at diagnosis, CF transmembrane conductance regulator (*CFTR*) genotype and transplant status.

**Results** The final analysis included 13 countries with 31 987 subjects (135 833 person-years of follow-up) and 1435 deaths. Median survival age for these patients in the ECFSPR was 51.7 (95% CI 50.0–53.4) years. After adjusting for potential confounders age at diagnosis, sex, *CFTR* genotype and transplant status, there remained strong evidence of an association between socioeconomic factors and mortality ( $p < 0.001$ ). Countries in the highest third of healthcare spending had a 46% lower hazard of mortality (HR 0.54, 95% CI 0.45–0.64) than countries in the lowest third of healthcare spending.

**Conclusions** Median survival for patients with CF in Europe is comparable to that reported in other jurisdictions and differs by socioeconomic factors.