



Cystic Fibrosis Research News

Citation:

Quon BS, Sykes J, Stanojevic S, Marshall BC, Petren K, Ostrenga J, Fink AK, Elbert A, Faro A, Goss CH, Stephenson AL. Clinical Characteristics of Cystic Fibrosis Patients Prior to Lung Transplantation: An International Comparison Between Canada and the United States. *Clinical Transplantation*. 2018 Mar;32(3):e13188. PMID: 29292522.

What was your research question? (50 words maximum)

Using population level data from national cystic fibrosis (CF) registries, we compared pre-transplant clinical features of lung transplant recipients in Canada and the United States. We did this to to compare and understand the differences between survival rates in the two countries.

Why is this important? (100 words maximum)

CF is the third most common reason for lung transplant in adults and the most common reason in children. Survival rates following a lung transplant have reportedly been different across different countries. Based on Canadian CF Registry (CCFR) data from 1998 to 2012, the median survival rate following transplant was an estimated 10 years. Using similar data from the U.S. from 2000 to 2011, median survival rates with private and public insurance were 7.9 and 4.7 years , respectively. It is important to learn more about why these rates may differ.

What did you do? (100 words maximum)

We looked at data from the CCFR and the U.S. CF Foundation Patient Registry (CFFPR) for the years 1986 through 2013. There were data from 42 Canadian care centers and over 110 U.S. care centers. We analyzed general characteristics and clinical variables prior to lung transplant for these years. We excluded patients that had prior non-lung transplants.

Cystic Fibrosis Research News

What did you find? (100 words maximum)

607 CF patients had lung transplants in Canada and 3,428 CF patients had lung transplants in the U.S. between 1986 and 2013. Lung function was similar between the two countries. A significantly greater portion of patients were classified as underweight in the U.S. when compared to Canada, despite the U.S. having higher rates of feeding tube use. A smaller portion of patients had *Burkholderia cepacia* complex growth prior to transplant in the U.S. than in Canada.

What does this mean and reasons for caution? (100 words maximum)

CF lung transplant recipients from the U.S. have similar lung function to their counterparts in Canada. However, they have lower rates of *Burkholderia cepacia* complex, and worse nutritional markers prior to transplant when compared to those in Canada. The exact date of transplant was missing for 54 percent of recipients in the CFFPR, even though the year was known. The lack of the exact date is a reason for caution when analyzing this information.

What's next? (50 words maximum)

Future studies are needed to examine how the impact of these differences in lung transplant recipients pre-transplant may affect survival rates following transplant.