

Improved Survival After Repeat Lung Transplantation at Cystic Fibrosis Care Centers

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Background

Introduction

- Improved outcomes after repeat lung transplant in patients with cystic fibrosis & allograft dysfunction
- Repeat transplantation is technically challenging & requires highly specialized perioperative care
- Cystic Fibrosis Care Centers (CFCC) are accredited to provide specialized multidisciplinary care for patients with cystic fibrosis

Research Question

- In adult patients with cystic fibrosis, is treatment at a Cystic Fibrosis Care Center associated with improved postoperative outcomes after repeat lung transplantation?

Methods

Study Design

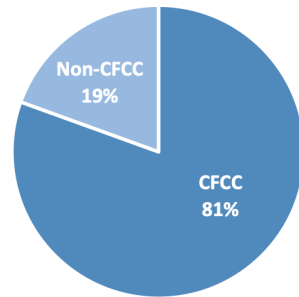
- Retrospective cohort study** of data from the Scientific Registry of Transplant Recipients & CF data registry
- Population:** Adult patients with cystic fibrosis who underwent repeat lung transplantation from 2005-2018
- Intervention:** Care at CFCC vs. non-CFCC facility
- Outcome measures:** Graft survival (freedom from death, graft failure, and re-transplantation), overall survival
- Analysis:** Multivariable Cox proportional hazards model

Results

Characteristics of Patients Treated at CFCC vs. Non-CFCC Facilities (2005-2018)

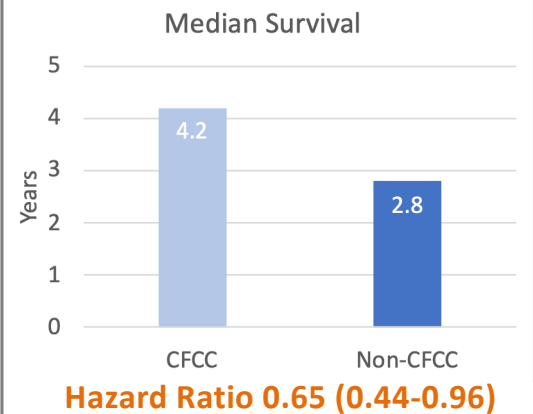
Characteristic, N (%)	Non-CFCC N=59	CFCC N=244
Age, m (sd)	31 (10)	31 (8)
Male Gender	35 (59)	116 (48)
BMI, m (sd)	18 (3)	18 (3)
Preop Life Support	10 (17)	75 (31)
Preop Ventilator Support	9 (15)	60 (25)
Preop Status		
ICU	10 (17)	74 (30)
Hospital (Non-ICU)	14 (24)	44 (18)
Not Hospitalized	35 (59)	125 (51)
FEV1 (% predicted), m (sd)	23 (13)	23 (14)
FVC (% predicted), m (sd)	41 (14)	40 (14)
Transplant Type		
Single	5 (8)	15 (6)
Double	54 (92)	229 (94)

Note: CFCC - Cystic Fibrosis Care Center, FEV1 - forced expiratory volume in 1 second, FVC - forced vital capacity, ICU - intensive care unit, m - mean, sd - standard deviation



Results (Cont.)

Overall Survival



Summary of Key Findings

- Patients undergoing repeat lung transplantation at **CFCCs had longer graft and overall survival** compared to those treated at non-CFCCs
- Patients treated at CFCCs lived on average 1.5 years longer than those at non-CFCCs
- Limitation:** Unmeasured variables may impact choice of treatment center as well as survival outcomes

Conclusion

Specialized care at Cystic Fibrosis Care Centers may confer a survival advantage after lung transplantation, even among high acuity patient subgroups

Graft Survival Among Patients with CF Undergoing Repeat Lung Transplantation

