

ECFS Exercise Working Group

Annual Report

Activities of the Exercise Working Group and achieved milestones 5/2019 - 04/2020:

Meetings of the Exercise Working Group

- 1) A meeting of the group took place at the ECFS conference in Liverpool on 05 June 2019 with 19 attendees from around the world. During that meeting, the group discussed 1) first results of the ACTIVATE-CF study, 2) a new study idea addressing the role of cardiopulmonary exercise testing in advanced CF lung disease and 3) ideas for educational activities.

Activities of the Exercise Working Group prior to and at the ECFS conference 2019 in Liverpool

- 2) Short course "*Exercise Testing in Cystic Fibrosis – Who, when and why?*". The exercise working group, in conjunction with the physiotherapy special interest group, ran a short course for 1.5 days prior to the 2019 ECFS in Liverpool. The course was fully subscribed with 60 attendees from various disciplines - physiotherapists, exercise trainers, and physiologists as well as medical staff caring for individuals with CF. The course included both theory and practical exercise testing sessions, whilst small group sessions allowed lots of opportunity for discussion between participants and course tutors. The feedback for the course was very positive.
- 3) The Exercise Working Group was involved in planning and conducting a symposium "Exercise and activity for young people with cystic fibrosis: it's not just football" and a workshop entitled "Measuring the impact of physiotherapy and exercise" on 06 June 2019.

ACTIVATE-CF

- 4) ACTIVATE-CF has been completed and the data are currently being analyzed and interpreted.

International, multi-center retrospective study on the additional prognostic value of cardiopulmonary exercise testing in cystic fibrosis lung disease

- 5) This study has been published in the American Journal of Respiratory and Critical Medicine in April 2019.

Citation: Hebestreit et al. Cardiopulmonary Exercise Testing Provides Additional Prognostic Information in Cystic Fibrosis. Am J Respir Crit Care Med 2019; 199(8):987-995

International, multi-center retrospective study on the additional prognostic value of cardiopulmonary exercise testing in advanced cystic fibrosis lung disease

- 6) Based on the success of the previous project (see point 5), we decided to start a new project investigating the short-term prognostic value of cardiopulmonary exercise testing in people with advanced CF lung disease. This project focuses on 2-year survival in people with an $FEV_1 \leq 40\%$ predicted. Between 14th July and 19th August 2019, we conducted a survey among ECFS Exercise Working Group members and people publishing on exercise testing in CF to assess the feasibility of the study with respect to the estimated number of available patients and cases (death/LTx) fulfilling the study-specific inclusion criteria. Based on the survey results we decided to conduct the project and received funding from LUNGE ZÜRICH. The project is led by Dr. Thomas Radtke and Prof. Helge Hebestreit.

ERS Statement on Cardiopulmonary Exercise Testing in Chronic Lung Diseases

- 7) Several members of the ECFS Exercise Working Group were actively involved in an ERS Task Force on Standardisation of Cardiopulmonary Exercise Testing in Chronic Lung Disease led by Prof. Helge Hebestreit & Prof. Ioannis Vogiatzis. This ERS Task Force continued and extended the work of the ECFS Exercise Working Group on exercise testing in cystic fibrosis. The Task Force resulted in two publications:

Citation: Radtke T, Vogiatzis I, Urquhart DS, Laveneziana P, Casaburi R, Hebestreit H. Standardisation of cardiopulmonary exercise testing in chronic lung diseases: summary of key findings from the ERS task force. Eur Respir J 2019; 54(6). pii:1901241

Citation: Radtke T, Crook S, Kaltsakas G, Louvaris Z, Berton D, Urquhart DS, Kampouras A, Rabinovich RA, Verges S, Kontopidis D, Boyd J, Tonia T, Langer D, De Brandt J, Goertz YMJ, Burtin C, Spruit MA, Braeken DCW, Dacha S, Franssen FME, Laveneziana P, Eber E, Troosters T, Neder JA, Puhan MA, Casaburi R, Vogiatzis I, Hebestreit H. ERS Statement on standardisation of cardiopulmonary exercise testing in chronic lung diseases: Eur Respir Rev 2019; 28(54).pii:180101

Proposed work for 2020/2021:

- a) Virtual meeting of the ECFS Exercise Working Group on 03 June 2020, 12.00-15.00 CEST
- b) Revision of the ECFS Exercise Working Group Statement on Exercise Testing in CF (published in Respiration 2015)

This statement requires a review after 5 years. The Exercise Working Group will discuss options (complete review vs. short update paper) and start working on the manuscript.

- c) Continue the collaborative study on the additional prognostic value of cardiopulmonary exercise testing in advanced cystic fibrosis lung disease.
- d) Education package

Developing workstream and delivery timelines to achieve an online education package on exercise in CF that would exist within ECFS website for working group and ECFS members

The work would include:

- Basics of exercise physiology
- Theory and practice of exercise testing
- Running an exercise test from start to finish
- Exercise test interpretation
- Exercise counselling/exercise training/exercise prescription
- CF exercise testing and counselling cases

Budget plan for 2020

The budget plan for 2020 would include the following:

1. Support for librarian to conduct a systematic literature review on exercise testing and cystic fibrosis (years 2014-2020) € 500
Additional funds will be required for the open access fees for the publication which we expect only in 2021.
2. Financial support for 10 members of the ECFS Exercise Group to attend a 2-day face-to face meeting to work on delivery of educational package (€ 600 per person) € 6,000
The meeting location (and timing) will need to be determined depending on COVID-19 situation (for example near Frankfurt/Heathrow/Schiphol airport or similar and have a 3-session meeting with Day 1 evening and Day 2 morning/afternoon meeting sessions to nail down a plan.

Würzburg, 14 May 2020



Prof. Dr. Helge Hebestreit for the ECFS Exercise Working Group