

European Cystic Fibrosis Exacerbation Working Group

Introduction

The CF exacerbation working group was established in June 2018 following an application to the ECFS announced at the close of the 2018 meeting. The objective of this group is to improve the diagnosis, monitoring and treatment of Pulmonary Exacerbation (PEX). The group had the first official meeting as a funded working group in June of 2019 at the ECFS annual conference followed by a satellite meeting at the North American CF meeting in Nashville in October of 2019. Plans for 2020 have been impacted significantly by COVID19 both in terms of our inability to meet in person, and clinical staff being redeployed to local respiratory services during the initial peak of the pandemic, as well as the secondary effects of this on local services following lockdown.

Group Members

Robert Gray (lead-coordinator), Damian Downey, Cliff Taggart, Don Urquhart, Michal Shteinberg, Isabelle Durieu, Quitterie Reynaud, Silke van Koningsbruggen-Rietschel, Tania Pressler, Malcolm Brodlie, Barry Plant, Stuart Elborn, Ed McKone, Carlo Castellani.

Group Aims

- Identify the fundamental knowledge gaps in the diagnosis, monitoring and pathophysiology of exacerbation
- Perform a wide-ranging systematic review of PEX literature and formulate research proposals to the EU and similar funding bodies to investigate PEX
- Establish the basis for a precision medicine approach to PEX management by creating a platform for the collection and integration of individual patient data (IPD) and patient self-assessment with ECFS registry data
- Establish a programme of work to investigate the utility of biomarkers in the prediction and assessment of treatment response exacerbation, and translate these findings to clinically useful tests
- Utilise our links with the ECFS CTN to develop projects in the areas of biomarker assessment and pulmonary imaging in relation to PEX
- Interact with members of the North American STOP programme to facilitate further exacerbation research and aim to establish a firm basis for a future international collaborative network

Action Points from Annual Meeting June 2019

- Explore potential data available from CF Matters team to investigate exacerbation
- Systematic review of PEX in adults and kids – with a pitch to major journal covering:
 - a. Definition of PEX that is age specific
 - b. Inflammation in adults and paed
 - c. Biomarkers
 - d. Pathogens
 - e. Microbiome data
 - f. Define what is important and support with data or lack of data
- PIs to investigate their own individual biobanks and assess what samples are available (possibly form exacerbation biobank with extra funding)
- Evaluate access to usage of placebo data from clinical trials

- Future meetings: NACF and plan for early 2020 meeting to drive forward work packages

Meeting NACF October 2019

A 2hr meeting was held at the NACF where PIs were able to discuss the further plans going forward although it was felt that a meeting where all PIs could attend in early 2020 would be the most productive course of activity as the work streams above were pursued.

Plan for 2020/21

2020 has been a challenging for the group due to COVID and the knock on effects of lockdowns in a number of countries across Europe. Clearly this situation is fluid but unlikely to improve to the extent that we are able to hold in person meetings to facilitate progress for the foreseeable future. In view of this we will move all activities online, but may also have to re-address the core aims of the group due to other recent developments such as the approval of triple modulator therapy in Europe. This may prove to be a real opportunity for a positive change in direction where we will have to redefine our understanding of exacerbation (at least for the 90% of people with CF that are eligible for highly effective CFTR modulator therapies). We will hold an annual meeting online in October 2020 to discuss these challenges (and opportunities) and report back to the ECFS Board following that with our renewed aims and work plan.

Robert Gray, Edinburgh, September 2020