

A Retrospective Observational Analysis of the effects of CFTR Triple Combination Modulator Therapy (Kaftrio®) on Body Composition Parameters in adults with Cystic Fibrosis attending Cork University Hospital (CUH)

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INTRODUCTION

The treatment for Cystic Fibrosis (CF) traditionally focused on addressing the characteristics/symptoms of the condition as opposed to the underlying genetic cause. New research has led to the development of CFTR modulator therapies which aim to correct the protein dysfunction at a cellular level (3).

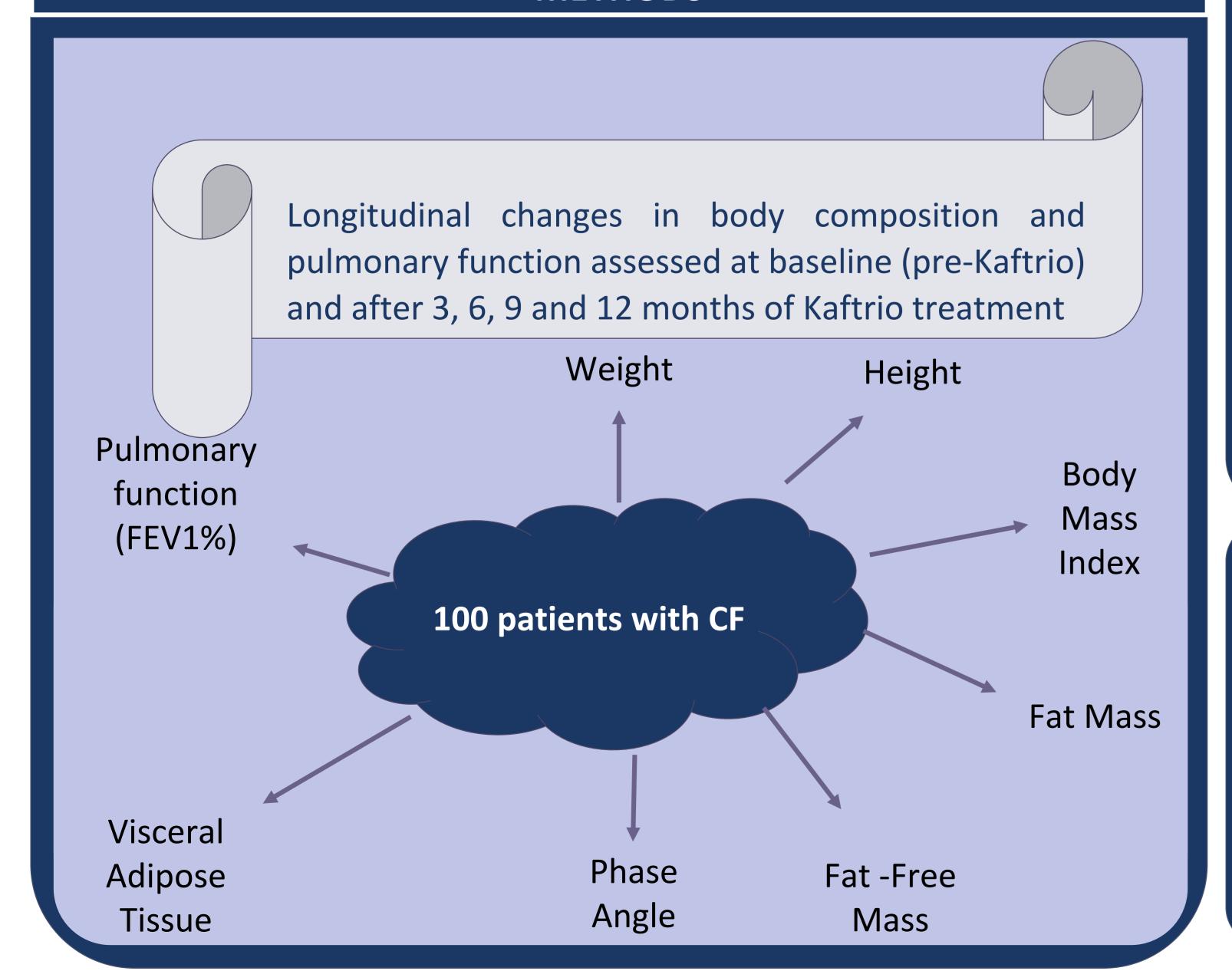
Kaftrio has shown significant clinical results for patients with the F508del mutation, even those with minimal function genotypes (gene changes that leave the protein minimally functioning or unable to function at all) (2). Previously, there were no modulator therapies to improve lung function or body mass index (BMI) in patients with minimal function genotypes (4).

Although the effects on body composition to date are only secondary outcomes of randomised control studies, the improvements in weight and BMI shown are much more significant in comparison to previous CFTR modulator therapies (1, 2)

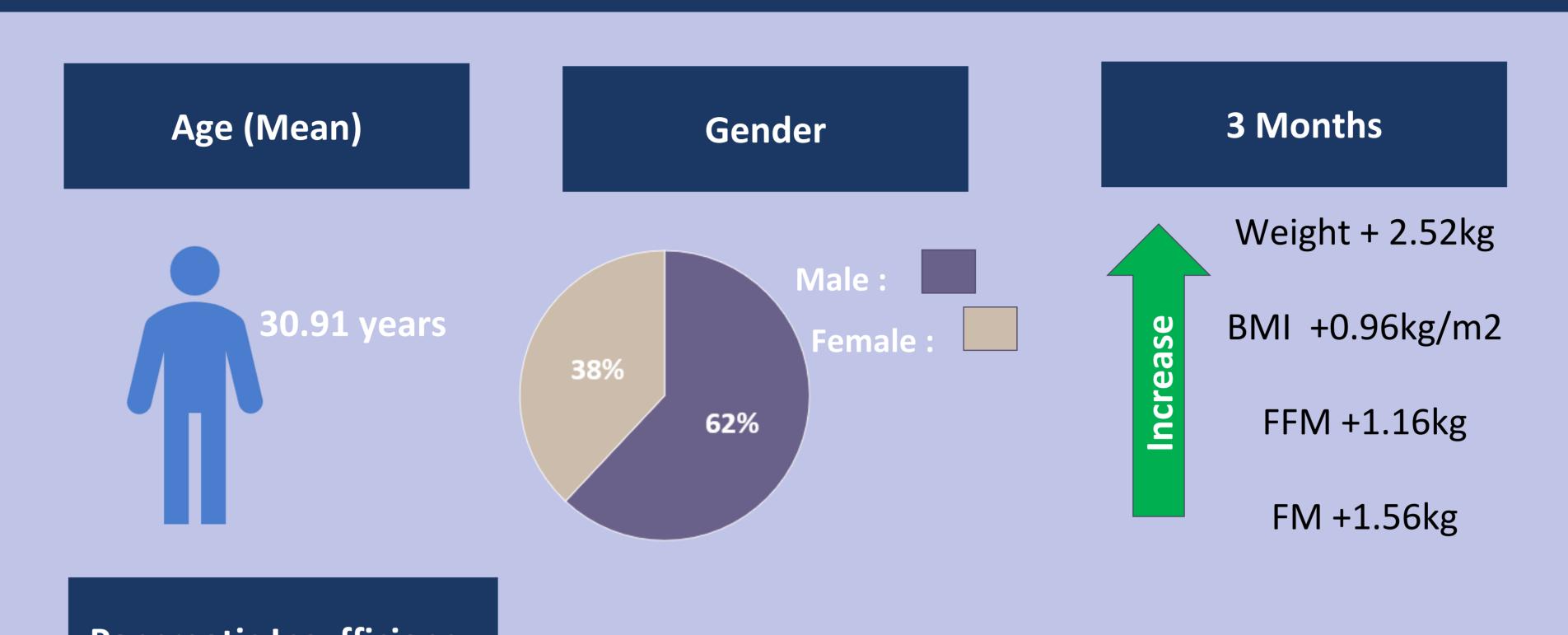
OBJECTIVES

- To study the effects of Kaftrio[®] on body composition variables and pulmonary function in CF over time
- ➤ To establish if any increase in weight is composed of fat mass (FM) or fat free mass (FFM)
- ➤ To establish if any improvement in pulmonary function (FEV1%) is associated with improvements in body mass index/fat mass/fat free mass or phase angle

METHODS











Pancreatic Insufficiency



Lung function (FEV1%) was positively correlated with BMI, fat free mass and phase angle, but not significantly (P>0.05) There was no correlation between FEV1% and fat mass (Rho= -0.04, P= 0.793)

CONCLUSION

- Changes in body composition are significantly associated with Kaftrio[®] in the first 3 months of treatment, with smaller gains observed between 3 and 6 months for weight and BMI. After 6 months of Kaftrio treatment, the results begin to plateau.
- The results of this study highlight the importance of incorporating body composition measurements into routine practice in order to provide specific, tailored, nutrition recommendations to patients.
- Only 20 patients have completed a full 12 months of Kaftrio treatment to date so further ongoing analysis is underway to assess these body composition changes.
- Further studies are needed to assess the long-term effects of Kaftrio treatment on body composition parameters as well as the mechanisms elucidating such changes.

References

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