

# Individual dietary intervention in adult patients with mitochondrial disease due to the m.3243A>G mutation: the DINAMITE study

Heidi Zweers, Debbie Smit, Susanne Leij, Geert Wanten, Mirian C.H. Janssen



Radboud Center for Mitochondrial Medicine

Radboudumc

Hogeschool van Arnhem en Nijmegen  
HAN University of Applied Sciences

## Objective

To evaluate the effect of an **individually tailored dietary intervention** on nutritional intake, body composition (BC), functioning, and quality of life (QoL) in adult patients with mitochondrial disease (MD) due to the m.3243A>G mutation.

## Methods

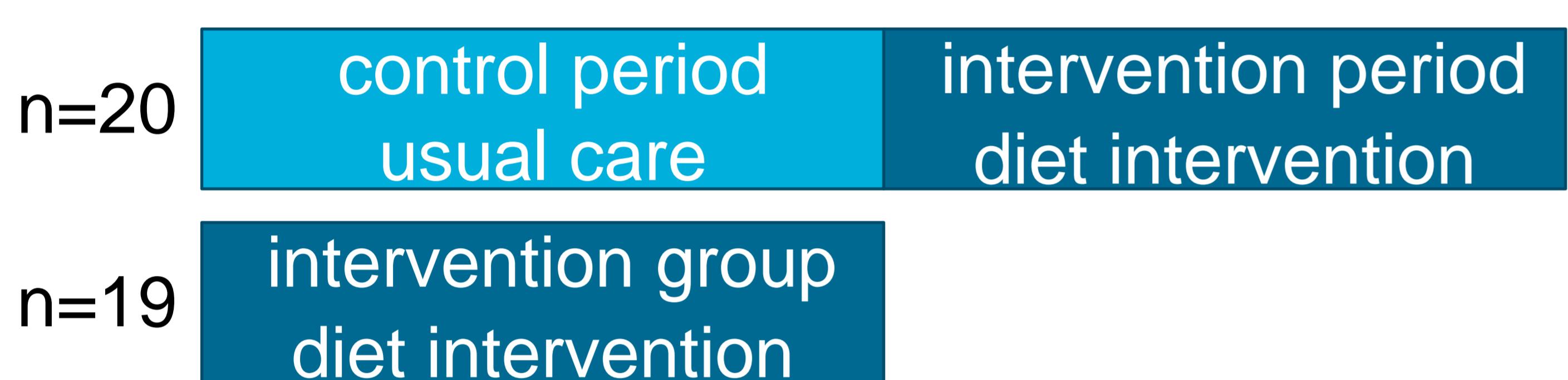
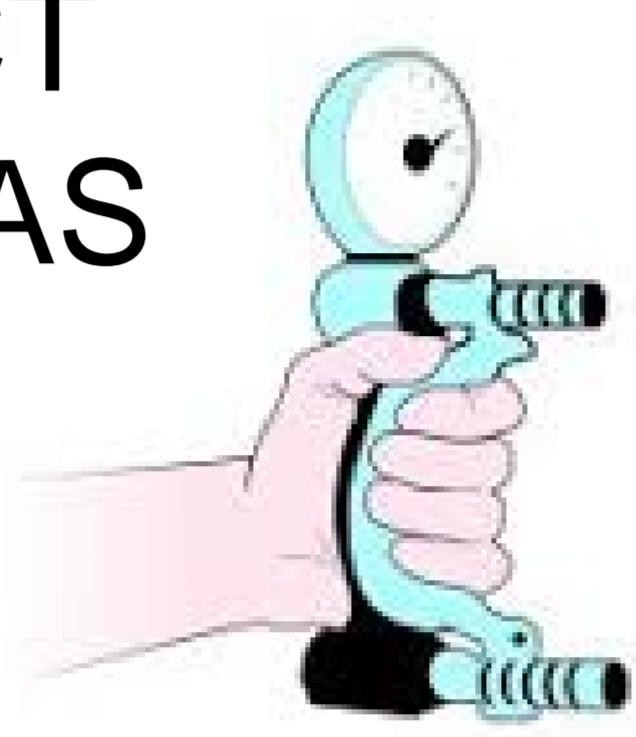
Explorative single centre RCT

Randomized based on NMDAS

Nutritional Assessment

Quality of life: SF 36

Linear mixed models



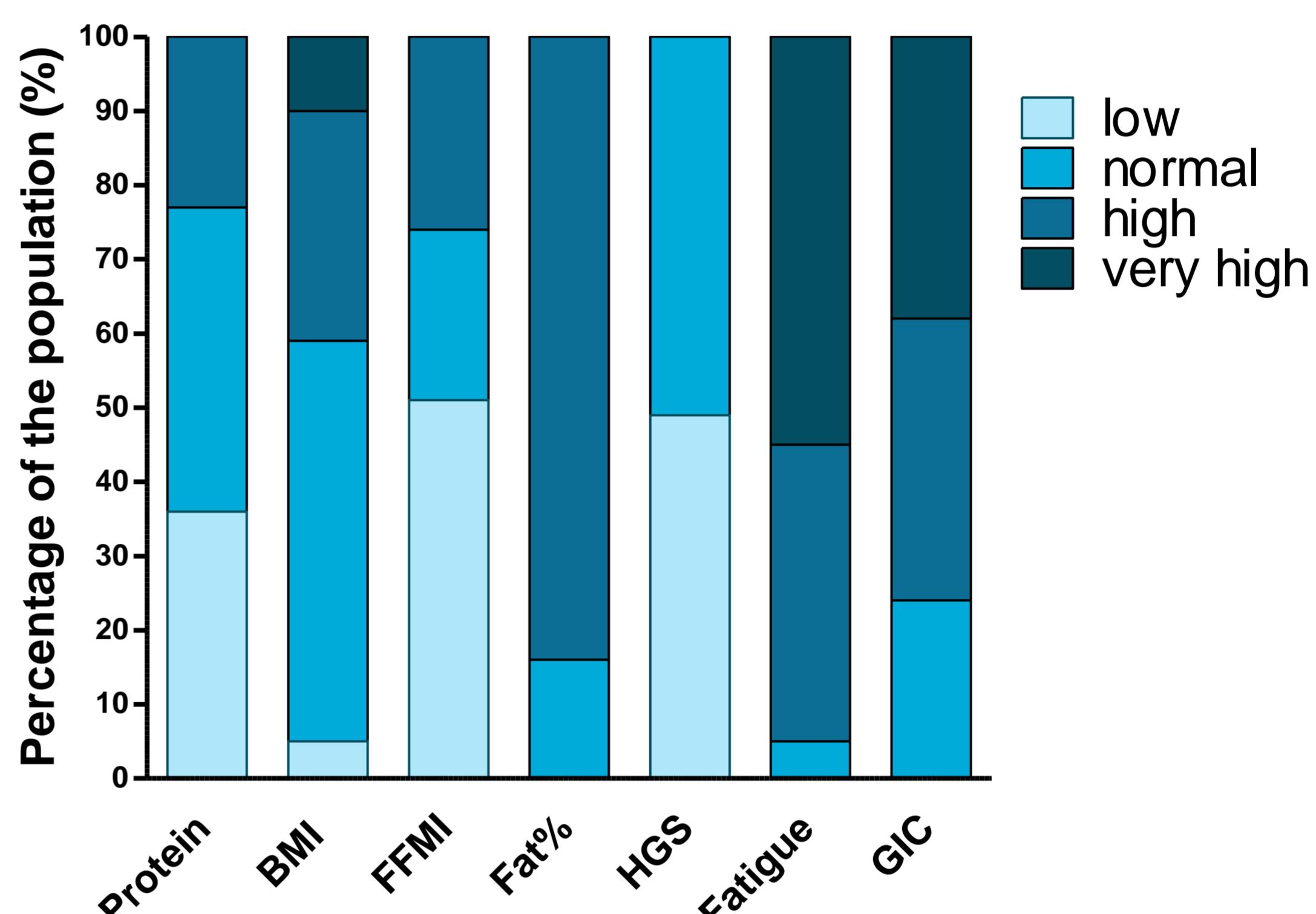
## Results

Patient characteristics n=39

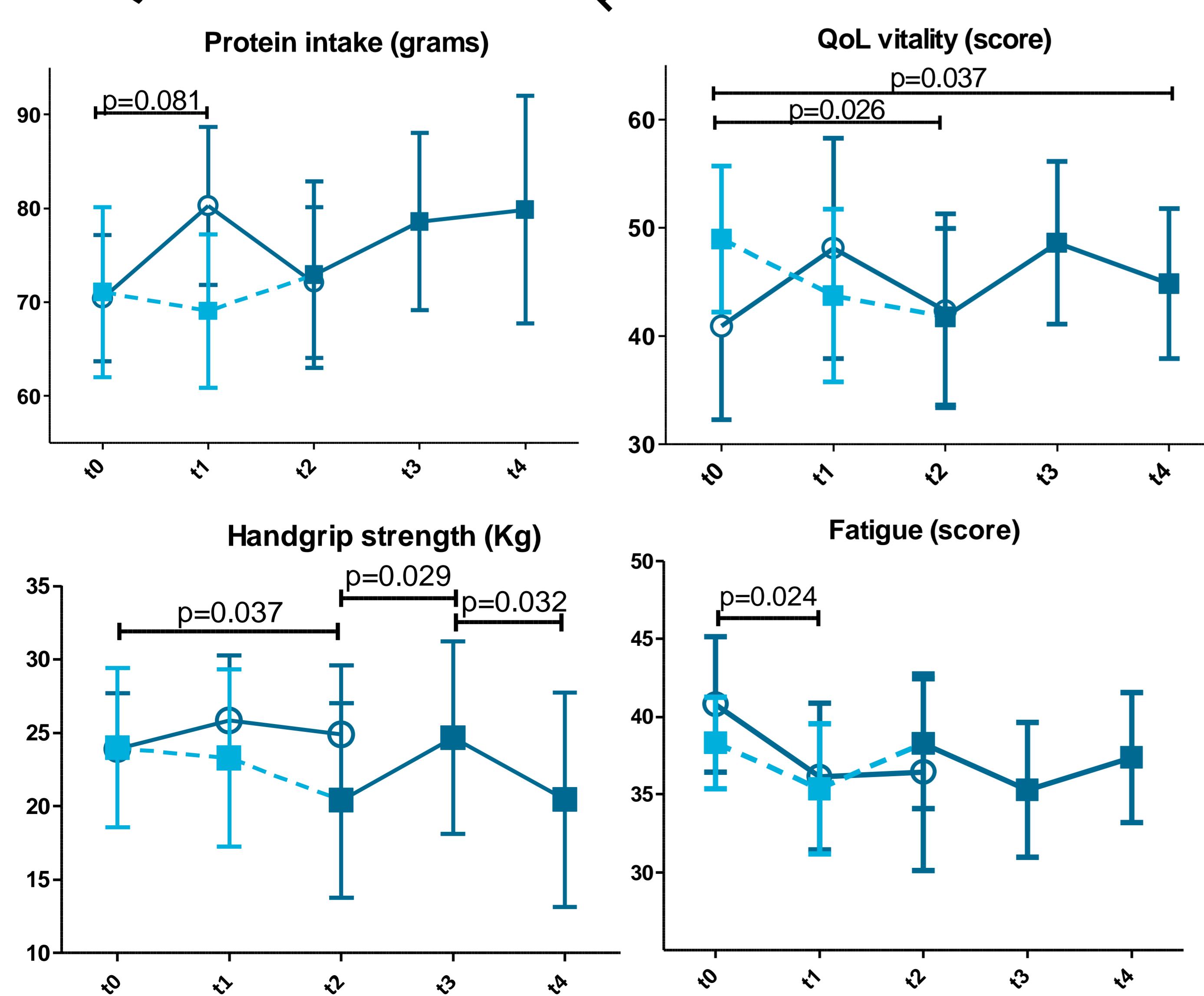
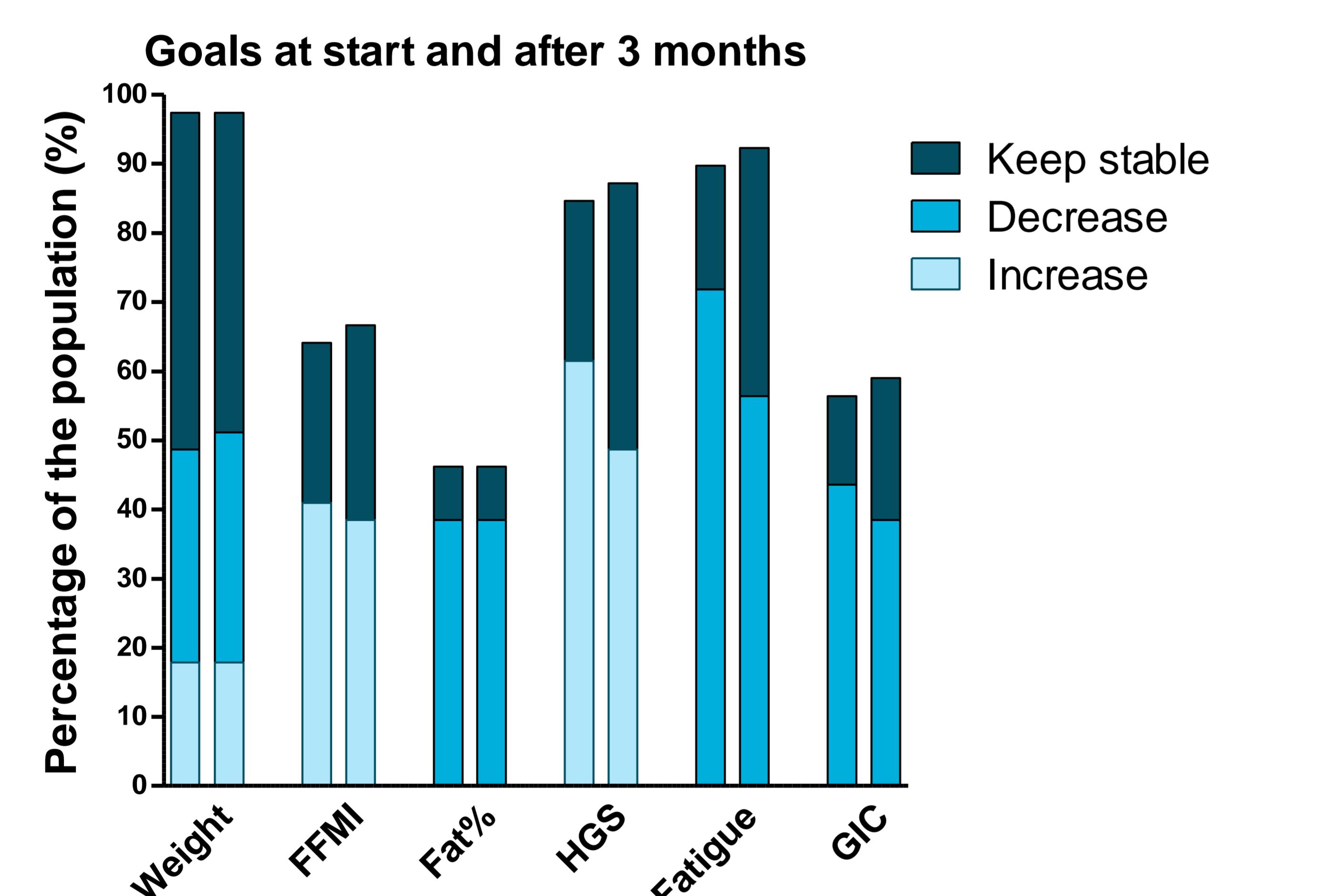
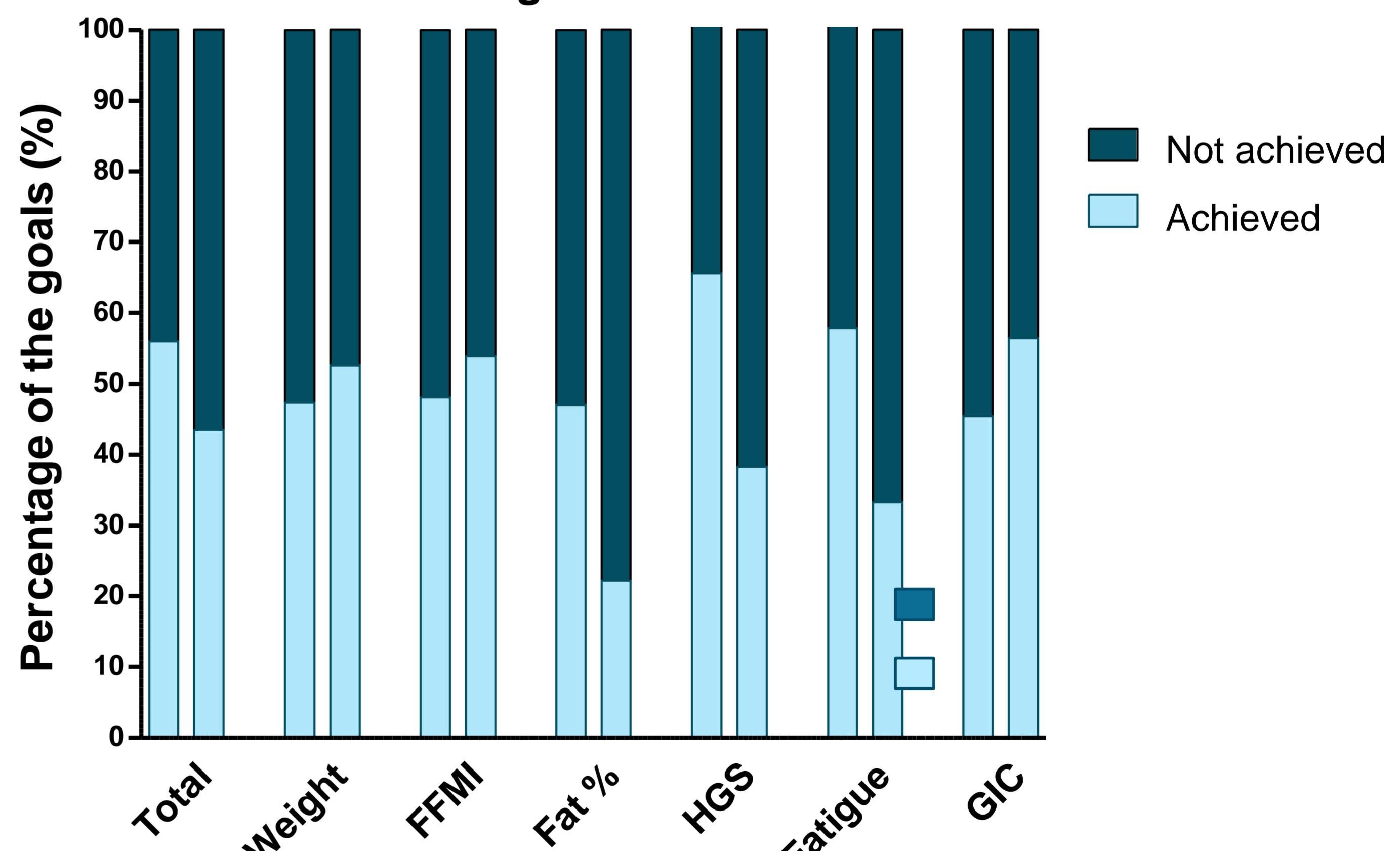
Age (years) (mean ±SD) 47 ±13

Female n(%) 32 (82)

Patients characteristics compared to references.



Achievement of the goals after 3 and 6 months



● Intervention group  
■ Control Iperiod control group  
▲ Intervention period control group

BMI: Body Mass index ( $\text{kg}/\text{m}^2$ )  
FFMI: Fat Free Mass index ( $\text{kg}/\text{m}^2$ )  
HGS: Hand grip Strength (kg)  
GIC: Gastro Intestinal Complaints

## Conclusion

An individually tailored dietary intervention seems to achieve personalized goals of patients with MD, especially with regard to BC, HGS, and gastro-intestinal complaints. After 3 months 56% of the individually set dietary goals were achieved and functioning improved (HGS, fatigue and QoL).