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Introduction

Sarcopenia is the age related loss of skeletal muscle mass and function.¹ Its presence in older adults is associated with increased risk of falls leading to debilitating injury, disability, hospitalization and death.²

The diagnosis of sarcopenia is defined as low muscle mass and low muscle strength and/or low muscle performance.³

The goal of this research is to determine the prevalence of sarcopenia in the hospitalized geriatric population.

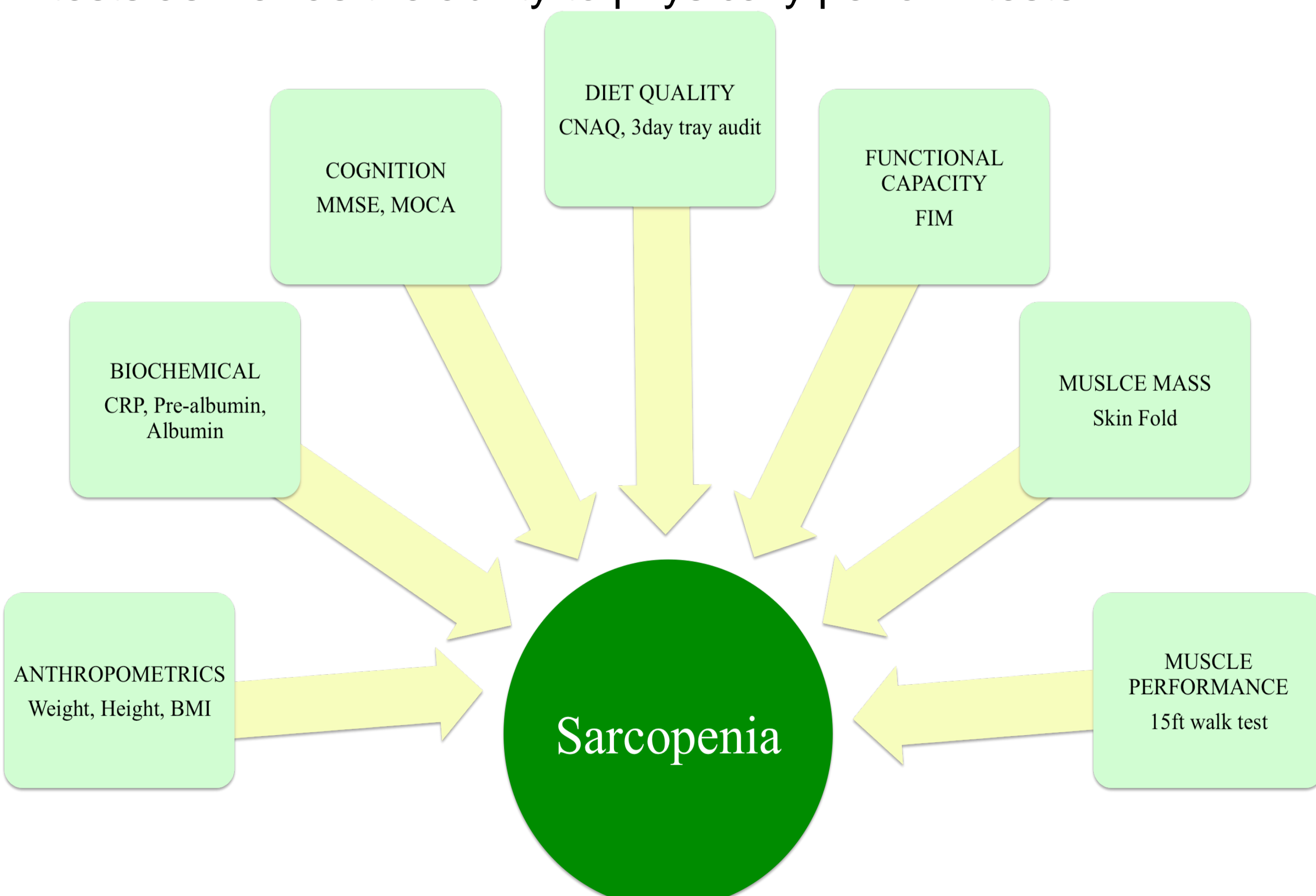
Understanding the prevalence in this population will help to develop clinical strategies to prevent the exacerbation of sarcopenia and its co-morbidities. We hypothesize that there will be a diagnosis prevalence of $\geq 5\%$ using the EWGSOP definition as evidenced by previous research on hospitalized adults 60-70yrs⁴.

Objectives

1. Assess muscle mass from skinfold measures on patient biceps, triceps and sub scapular using skinfold calipers.
2. Assess muscle performance using a 15 ft walk test.
3. Compare appetite and dietary quality to sarcopenia diagnosis using CNAQ and meal tray audits.
4. Determine general health status by collecting patient blood values and assessments of cognitive and functional capacity.

Methods

Patients (n=14) are recruited from the GAU by the unit RD with consultation of the unit Physiotherapist. Enrolment criteria is based on the patient's ability to understand and consent to tests as well as the ability to physically perform tests.



MMSE. Mini Mental State Exam. MOCA. Montreal Cognitive Assessment. CNAQ. Council of Nutrition Appetite Questionnaire. FIM. Functional Independence Measure. Skin Fold Measures: triceps, biceps, subscapular and mid arm circumference

Results

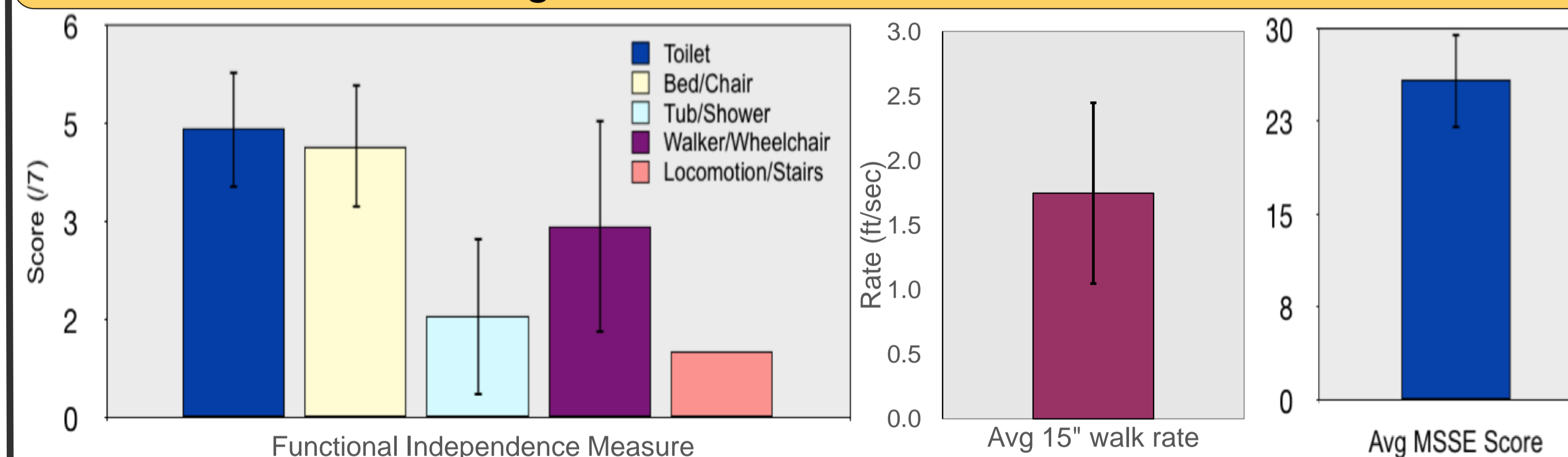
Demographics, Anthropometrics & Biochemical Values

Population: Caucasian, n=14, 3 males, 11 females		
Variable	Mean (\pm SD)	Range (min/max)
Age (yrs)	86.4 \pm 8.6	70-100
Height (cm)	161.3 \pm 10.19	148-185
Weight (Kg)	67.3 \pm 12.9	45.7-93
BMI (Kg/m ²)	25.9 \pm 4.4	18.3-35
Albumin (g/L)	35.8 \pm 5.4	27-48
Pre-Albumin (g/L)	0.22 \pm 0.05	0.15-0.31
CRP (mg/L)	19.6 \pm 18.1	0.30-52.8

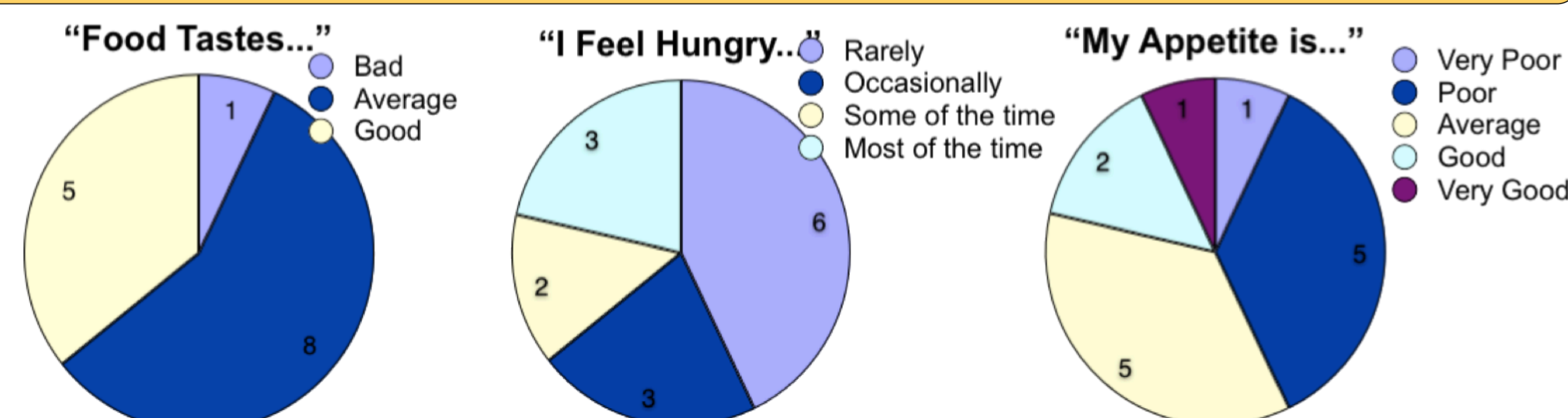
Skinfold Measures

Skinfold Measure	Mean (\pm SD)	Range (min/max)	Percentiles (# of participants)		
			<10	15-85	>90
Bicep (mm)	14.3 \pm 8.1	3.3-32.6			
Tricep (mm)	18.1 \pm 7.3	8.8-36.7	0	11	3
Subscapular (mm)	14.3 \pm 7.1	6-29.3	4	8	2
Mid arm Circumference (cm)	29.5 \pm 5.1	22.5-40.8	2	10	2
Mid arm Muscle Circumference (cm)	23.8 \pm 3	19.4-30.1	2	10	2

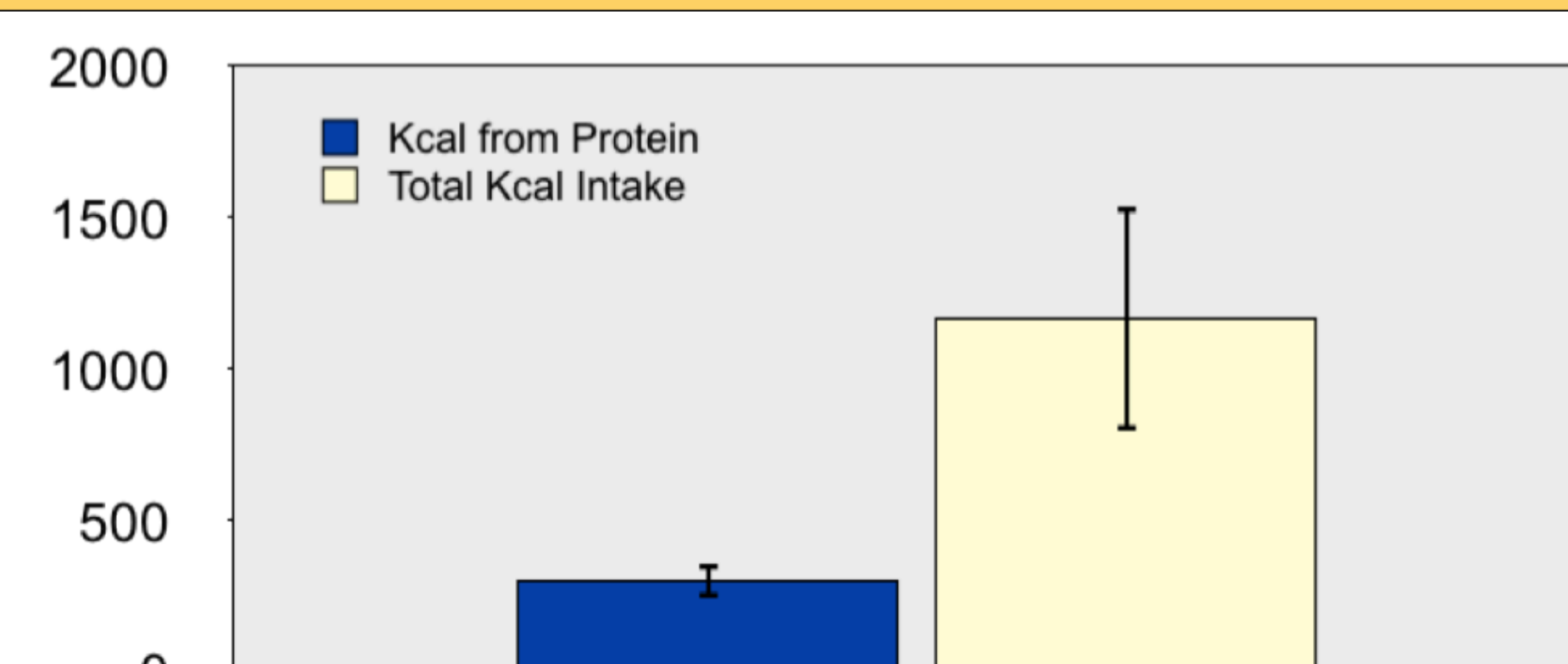
Cognitive & Functional Measures



Appetite & Diet Quality

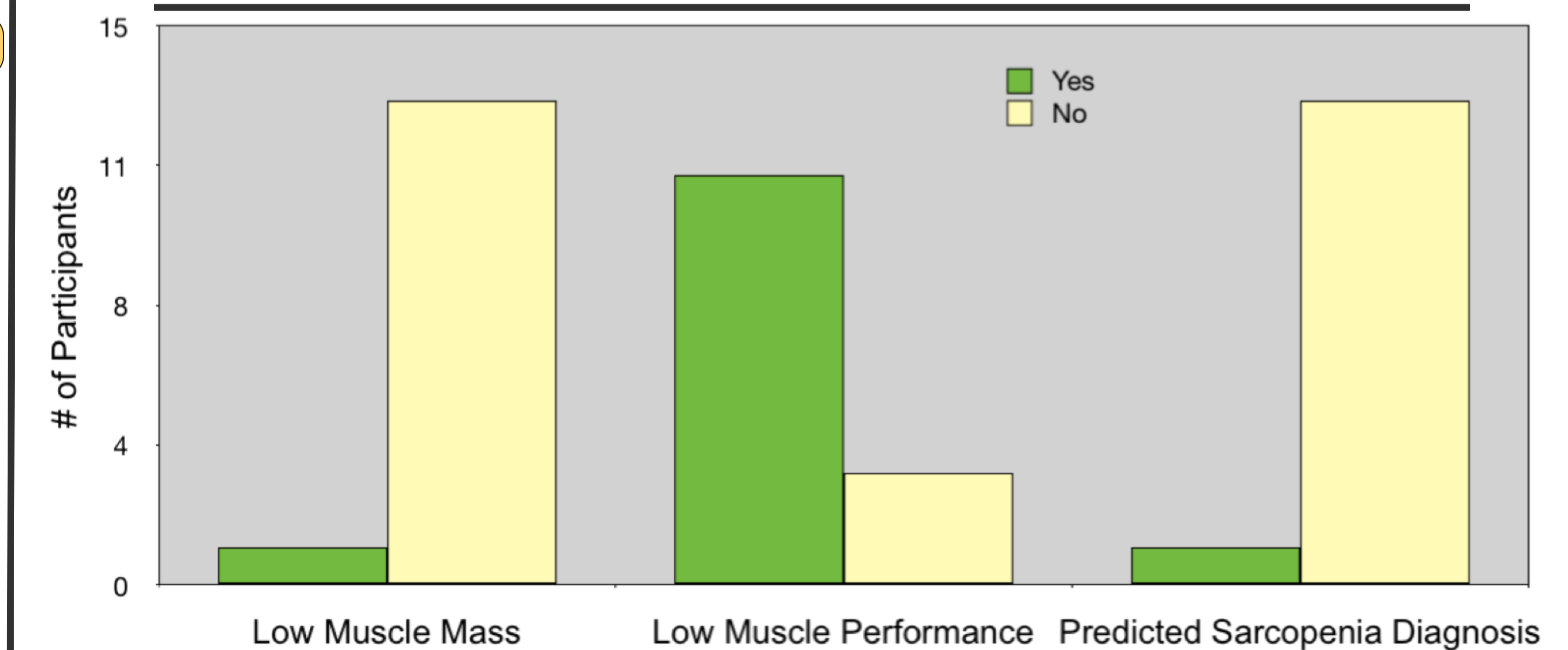


Energy and Protein Intake



Ethics Approval was obtained from the Human Research Ethics Board, University of Alberta/Capital Health/Caritas

Results



As defined by the EWGSOP the prevalence of sarcopenia in the sample (n=14) patient population was 7.14% (n=1).

Summary of Results

- No significant relationships between body composition (fat free mass, fat mass) and measures of appetite and dietary intake were observed ($P > 0.05$).
- While sarcopenia remains an issue of concern, the majority of patients in this cohort were characterized by muscle mass, functional (FIM, 15 foot walk test) and cognitive measures that were within normal ranges for age and gender.
- Potential factors influencing study outcomes: method of body composition (skin fold measures vs use of more sensitive measures such as DXA, CT), lack of muscle strength measures (hand grip strength) which may have resulted in underestimations in the prevalence of sarcopenia.

Conclusion

- Sarcopenia is a complex condition that requires precise and accurate measurements of body composition and functional outcomes.
- More research is needed to detect the prevalence of sarcopenia in this patient population.

Acknowledgements

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