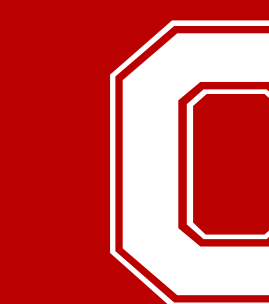


Gender Based Differences in Sarcopenia Screening with the SARC-F Questionnaire in Inflammatory Bowel Disease

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Background

- Sarcopenia is defined as the loss of skeletal muscle mass and a loss of function
- Sarcopenia is a modifiable condition that affects 27 to 61% of patients with inflammatory bowel disease (IBD)¹
- Traditional measurements of sarcopenia can be cumbersome and are not rapidly available
- The SARC-F Questionnaire is a five-item questionnaire that assesses the following: strength, need for assistance with walking, rising from a chair, climbing stairs, and the number of falls in the past year²
- SARC-F has not previously been studied in IBD patients

Aim

- To use a five-item SARC-F questionnaire to assess sarcopenia in patients with IBD

Study Design

- Patients (≥18 years) seen at the IBD Center with a confirmed diagnosis of IBD without short bowel syndrome were invited to complete the SARC-F questionnaire
- Retrospective chart review was performed for demographic and disease characteristics for all patients that completed the questionnaire
- For patients with available CT or MRI abdominal imaging within 3 months of completion of the questionnaire, the skeletal muscle index (SMI) was measured using a single slice through the third lumbar vertebra
- Sarcopenia on SARC-F was defined as a score ≥4 and on SMI as <55cm²/m² for males and <39cm²/m² for females³
- Statistical analysis was performed using univariate analysis

Results

Table 1: SARC-F Questionnaire

Component	Question	Scoring
Strength	How much difficulty do you have in lifting and carrying 10 pounds?	None = 0 Some = 1 A lot or unable = 2
Assistance in walking	How much difficulty do you have walking across a room?	None = 0 Some = 1 A lot, use aids, or unable = 2
Rise from a chair	How much difficulty do you have transferring from a chair or bed?	None = 0 Some = 1 A lot or unable without help = 2
Climb stairs	How much difficulty do you have climbing a flight of 10 stairs?	None = 0 Some = 1 A lot or unable = 2
Falls	How many times have you fallen in the past year?	None = 0 1 - 3 falls = 1 4 or more falls = 2

Table 2: Patient Characteristics by Presence of Sarcopenia on SARC-F

	No Sarcopenia n=189	Sarcopenia n=44	p - value
SARC-F Total Score [median (IQR)]	0 (0, 1)	5 (4, 6)	<0.001
Age [median (IQR)]	41 (31, 53)	48 (39, 56)	0.046
Gender (%)	Male	37	0.017
	Female	63	
Race (%)	African American	4.8	0.6
	Asian	2.6	
	Caucasian	90	
	Other	2.6	
BMI [median (IQR)]	26 (23, 31)	30 (27, 38)	<0.001
Tobacco use (%)	Never	72	<0.001
	Former	24	
	Current	3.7	
Disease type (%)	Crohn's	65	0.7
	Ulcerative Colitis	1.6	
	Indeterminate	34	
Duration [median (IQR)]	11 (5, 20)	13 (7, 23)	0.11
Active Disease (%)	51	55	0.7
History of bowel surgery (%)	33	59	0.001
Steroid use within 3 months (%)	16	25	0.2

Discussion

- 233 patients completed the SARC-F questionnaire and 44 patients met criteria for sarcopenia with a score ≥ 4 on SARC-F
- Of the 233 patients included, 58 had recent abdominal imaging available for measurement of SMI and 15 patients met imaging criteria for sarcopenia
- BMI, age, tobacco use, and history of bowel surgery were all associated with sarcopenia on SARC-F
- More females screened positive for sarcopenia on the SARC-F questionnaire than males (23.2% vs 10.3%, p=0.017) while more males screened positive for sarcopenia on SMI, the gold standard, than females (50% vs 11%, p=0.0017)
- There may be gender bias that could limit accuracy of patient-driven answers to questions regarding physical strength and function

Conclusions

- More females with IBD screened positive on a self-evaluation for sarcopenia despite a higher proportion of males with sarcopenia on the gold standard indicating a possible gender bias that limits the accuracy of patient-completed questionnaires

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