Prevalence and overlap of malnutrition, sarcopenia, and cachexia in hospitalised older adults with cancer: a cross-sectional study

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Background:
Malnutrition, sarcopenia, and cachexia are three under-recognised and under-treated conditions.

Aim:
We aimed to investigate the prevalence and overlap of these conditions in a cohort of older adults with cancer.

Methods:
A prospective, cross-sectional, exploratory study. Eligible patients were consenting adults with cancer, aged ≥70 in a tertiary centre, recruited January to March 2020.

Participants were screened for malnutrition, sarcopenia, and cachexia using the 3-Minute Nutrition Screening tool (3-MinNS), revised European working group on sarcopenia in older people (EWGSOP2) algorithm and Mini cachexia score (MCASCO).

Descriptive analysis and associations between the conditions and key clinical outcomes were performed, including logistic regression.

Results:
Of the 30 participants (70% male, mean age 75.7yrs, range 70–83)

In univariate analysis
- Rockwood clinical frailty score was associated with sarcopenia
(OR 2.94 [CI:1.26–6.89, p=0.013])
- Reported percentage meal consumption, and visible wasting were associated with malnutrition
(OR 2.28 [CI:1.24–4.19, p=0.008])
(OR 8.43 [CI:1.9–37.3])
- Percentage overall weight loss was associated with cachexia
(OR 8.44 [CI:1.91–37.31])

Low to moderate correlations were seen between different malnutrition screening tools:
- MUST and 3-MinNS (correlation coefficient 0.49)
- PG-SGA and 3-MinNS (correlation coefficient 0.60)

Venn diagram of overlap of conditions
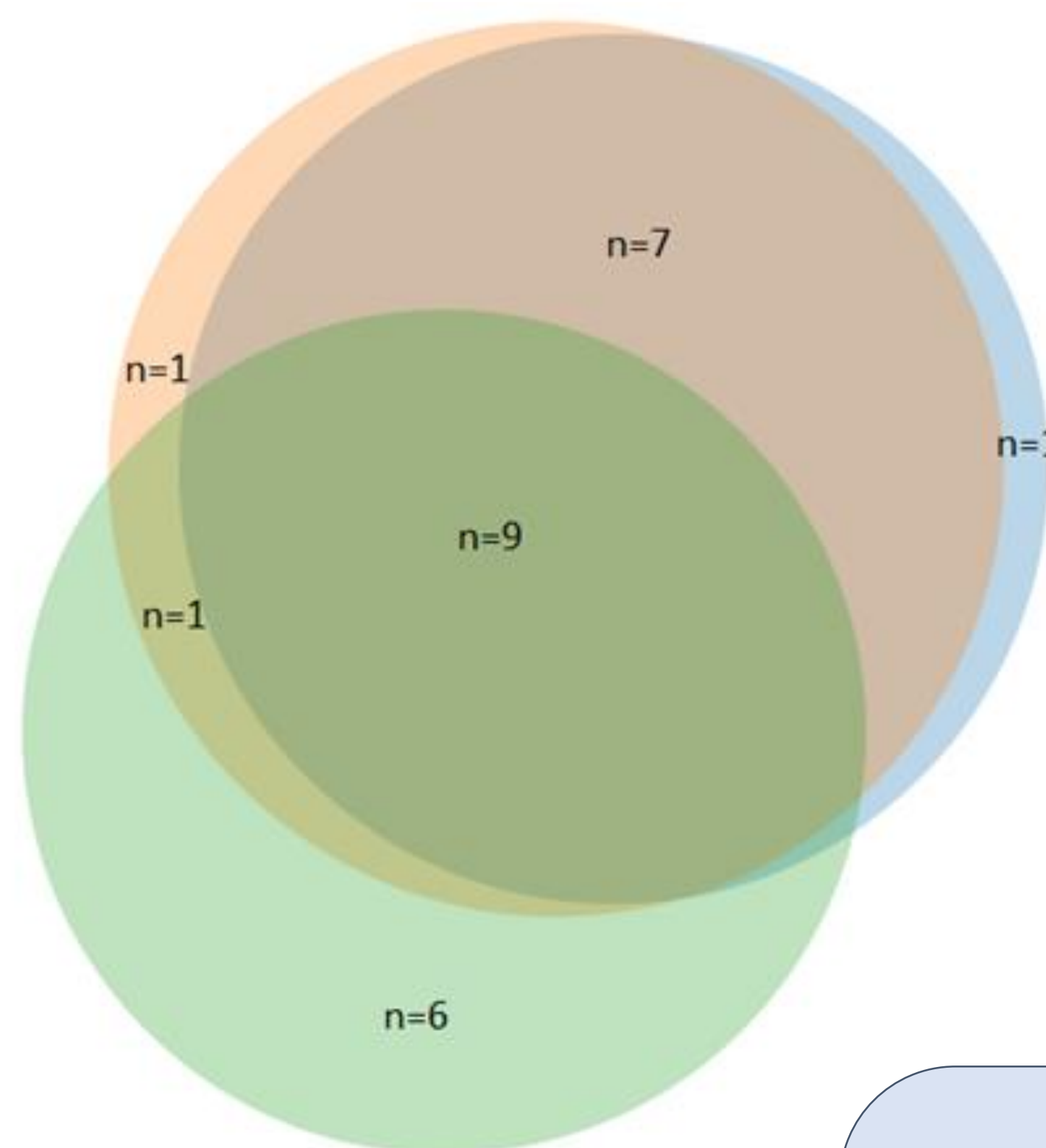
Severely **malnourished**: n=13 (43.3%) (n=18 moderate or severe)
Sarcopenic: n=16 (53.3%)
Cachexic: n=17 (56.7%)

80% were diagnosed with at least one condition

23.3% were diagnosed with all three conditions

Conclusion:
Malnutrition, sarcopenia, and cachexia are highly prevalent conditions in hospitalised older adults with cancer, with one or more condition affecting the majority of patients. Screening for these conditions is feasible in a hospital setting, and may be simplified using key markers of the conditions. Further investigations into the clinical utility of simplified screening tools, able to distinguish between the three conditions, are needed.

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