Cancer-Specific Geriatric Assessment (C-SGA): The relative importance of deficits in individual assessment domains on cancer outcomes

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Objective

To evaluate the relative importance of individual Geriatric Assessment domain deficits on cancer outcomes in older breast cancer survivors.
Study Population
N=660

- Women age ≥65 years at diagnosis
- Primary stage I-IIIA breast cancer
- Living in four geographic regions in the USA: Los Angeles, California; Minnesota; North Carolina; Rhode Island
- Permission from the attending physician to contact
Cancer Outcomes

• **Poor treatment tolerance:** Self-reported 4-level scale “not too well at all, not too well, fairly well, very well”

• **All-cause mortality:** National Death Index and Social Security Death Index
C-SGA

Included four domains described by six individual measures:

- **Socio-demographic**: Adequate finances
- **Clinical**: Comorbidity, BMI
- **Functional**: Number of physical function impairments
- **Psychosocial**: Mental health, social support
Analytic Methods

• Using multiple-component modelling, we evaluated the relative importance of incremental deficits in each Geriatric Assessment domain in relation to cancer outcomes.

• All models were adjusted for age and stage.

• Relative models used the clinical domain as the reference.
Population Characteristics

N=660

Demographic
- Median age 73 ±6.0 years
- Education ≥12 years: 544 (82%)
- White: 620 (94%)
- Married: 304 (46%)

C-SGA deficits by domain
- Socio-demographic: 65 (10%)
- Clinical: 349 (53%)
- Functional: 247 (37%)
- Psychosocial: 398 (60%)

Cancer outcomes
- Poor treatment tolerance: 38 (6%)
- All-cause mortality: 218 (33%)
Results

Estimated overall effect of a C-SGA domain deficit:

- Poor Treatment Tolerance
  \[ OR = 2.36 \ (95\% CI \ 1.50-3.72) \]

- All-Cause Mortality
  \[ OR = 1.91 \ (95\% CI \ 1.54-2.38) \]
Results

Relative order of importance of individual domain deficits for *poor treatment tolerance*:

- **Socio-demographic**: OR=1.51 (95%CI 1.19-1.91)
- **Functional**: OR=1.15 (95%CI 1.06-1.24)
- **Psychosocial**: OR=0.94 (95%CI 0.90-0.99)
Results

Relative order of importance of individual domain deficits for *all-cause mortality*:

- **Socio-demographic**: OR=1.34 (95%CI 1.20-1.49)
- **Functional**: OR=1.10 (95%CI 1.05-1.15)
- **Psychosocial**: OR=0.95 (95%CI 0.92-0.99)
Conclusion

• The relative order of importance of individual domain deficits for both outcomes was similar.

• A socio-demographic domain deficit had the greatest effect on outcomes and a psychosocial domain deficit the least; relative to a clinical domain deficit.

• If replicated, the relative importance of individual domains on cancer outcomes could inform the development of clinical interventions.
Thanks!! to my colleagues...

Drs Soe Soe Thwin & Rebecca A. Silliman

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