

12-13-2022

The Association of the G8 Questionnaire with Treatment Side Effects and Unscheduled Care Among Older Breast Cancer Patients: A Retrospective Cohort Study

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Recommended Citation

Gomaa, Sameh; Cappelli, Louis; Swartz, Kristine; Zhan, Tingting; Chapman, Andrew; Lopez, Ana Maria; Lombardo, Joseph; and Wen, Kuang-Yi, "The Association of the G8 Questionnaire with Treatment Side Effects and Unscheduled Care Among Older Breast Cancer Patients: A Retrospective Cohort Study" (2022). *Department of Medical Oncology Posters*. 17.

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Introduction

- Nearly half of the patients diagnosed with breast cancer are ≥ 65 years.
- Older patients with breast cancer are at higher risk for experiencing treatment side effects and unplanned health care.
- This can compromise treatment outcomes and increase the cost of care.
- The G8 is among the most sensitive screening tools for frailty and mortality.
- The aim of this study is to evaluate the association of the G8 questionnaire with treatment side effects and unscheduled care in older breast cancer women.

Methods

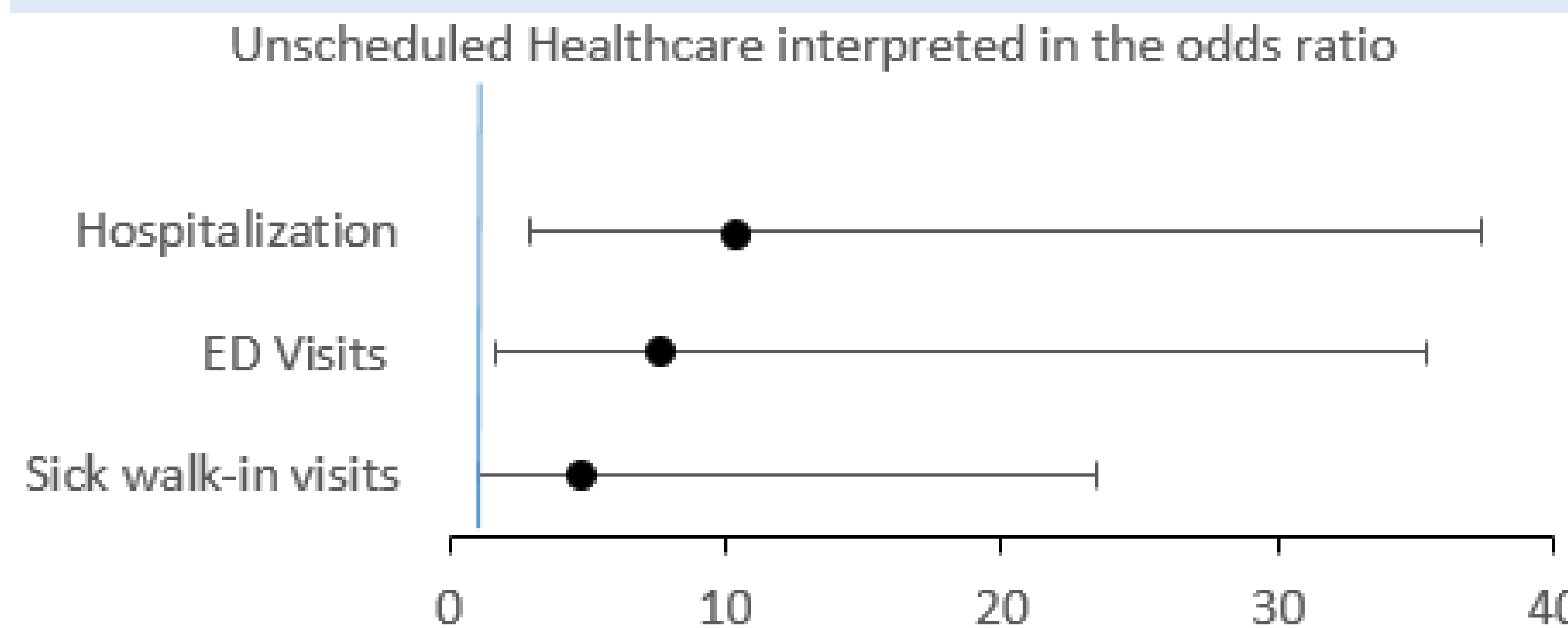
- This is retrospective cohort study of breast cancer patients 65 and older with G8 screening completed before their treatment initiation.
- The patients were identified by an EPIC data query, and completed by manual chart review.
- Patients were classified as “fit” with G8 score > 14 or “frail” with G8 score ≤ 14 .
- Treatment-specific side effects and unscheduled care (defined by sick walk-in visits, emergency department visits, and hospitalization compared between the fit and frail patients.
- Analysis was calculated using ANOVA or 2 sample t-test
- Unscheduled healthcare chart results are interpreted in the odds ratio

Acknowledgments

This project was supported by the Cancer Center Cessation Initiative (C3i) launched by the National Cancer Institute (NCI)

The G8 Questionnaire is an useful tool that is highly utilizable to predict unscheduled care among elderly breast cancer patients and can have great potential for cancer patients treatment planning

Measure		G8 scores ≤ 14	G8 scores > 14	P-value
ED visits during treatments	Total (N=15)	13 (21.67%)	2 (3.51%)	p= 0.002
Sick walk-in visits	Total (N=11)	9 (15%)	2/57 (3.51%)	p= 0.000
Hospitalization	Total (N=25)	22 (44.9%)	3 (5.8%)	p= 0.008



Unscheduled health care	Sensitivity (95% CI)	Specificity (95% CI)	PPV (95% CI)	NPV (95% CI)	OR	p
Sick walk in	81.8 % (48.2 - 97.7 %)	51.8% (41.9 % - 61.7%)	15% (11.1% - 19.8%)	96.4% (88.5% - 98.9%)	4.8 (1.0 to 23.5)	0.040
ED visits	86.6% (59.5% - 98.3%)	53.9% (43.7%- 63.8%)	21.6% (17.1%- 26.9%)	96.4% (88.2%- 99.0%)	7.60(1.636 to 35.43)	0.001
Hospitalization	88.0% (68.7%- 97.4%)	58.7% (47.9%- 68.8%)	36.6% (30.3%- 43.4%)	94.7% (86.0%- 98.1%)	10.42 (2.91- 37.31)	0.000

Results

- 117 patients were included in this study with a mean age of 74, 82.9% White, and all females.
- Sixty patients (51.3%) screened with the G8 questionnaire were deemed frail.
- Frail patients showed association with a lower mean performance status measured by KPS and ECOG and greater number of comorbidities and polypharmacy compared with G8 fit patients.
- Further, in the patients with a frail G8 score had a greater frequency of chemotherapy-induced side effects, sick walk-in visits, emergency department visits and hospitalization.
- The G8 questionnaire have proven sensitive in identifying patients prone for unscheduled care.
- The test also showed high negative predictive value for Sick walk-in visits, ED visits and hospitalization.
- According to the G8 questionnaire frail patients are more likely to have sick walk-in visits by a factor of 4.85 (1.0 to 23.5) and ED visits 7.6 (1.6 to 35.4) and 10.4 (2.9-37.3) for hospitalizations.

Conclusion

- Our findings suggest that the G8 screening tool has great potential in predicting unscheduled health care.
- Future studies need to consider integrating the G8 screening for informed treatment planning and targeted interventions.
- The ultimate aim to minimize treatment side effects and mitigate unscheduled care, which will optimize outcomes of cancer treatments among older cancer patients.