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EARLY DEATH IN ADVANCED OVARIAN CANCER IN OLDER ADULTS

To the Editor: The incidence of ovarian cancer increases with age, especially in the seventh and eighth decades of life.[1] Age is a risk factor for mortality in individuals with ovarian cancer.[1] Three main reasons may explain this. First, older adults have greater risk of being diagnosed at advanced stages.[1,2] Second, the optimal treatment is often administered in an incomplete manner in this population.[3] Third, older adults are vulnerable; comorbidities are often the explanation for undertreatment of cancer,[3] and malnutrition is associated with mortality in cancers.[4] The U.S. National Comprehensive Cancer Network (NCCN) and the International Society of Geriatric Oncology (SIOG) recommend that a comprehensive geriatric assessment (CGA) be used to determine the best management of older adults with cancer.[4] A CGA is a multidimensional, interdisciplinary diagnostic process to measure many major components, including comorbidities; nutritional status; physical performance; and psychological, cognitive, and social status.[4] Exploring the association between components of the CGA and early death in older adults with specific cancer as in advanced ovarian cancer may be helpful to improve knowledge of the effect of geriatric factors on short-term mortality. The aim of the current study was to examine the association between components of the CGA and early death in individuals with advanced ovarian cancer.

All women aged 70 and older diagnosed with Stage III or IV ovarian cancer between 2007 and 2012 and evaluated by the oncogeriatric team at the request of an oncologist were retrospectively included in this cross-sectional study. Data were recorded on age, comorbidities (Cumulative Illness Rating Scale (CIRS-G)),[5] nutritional status (Mini Nutritional Assessment (MNA) score),[4] functional limitation (instrumental activity of daily living (IADL) score),[4] cognitive impairment (Mini-Mental State Examination (MMSE) score),[4] depression (mini Geriatric Depression Scale (mini GDS)),[4] results of the CGA (fitness for optimal or adapted treatment vs palliative treatment), presence of ascites, and chemotherapy. Early death was defined as death in the 6 months after the first consultation with an oncologist. Participants were separated into two groups based on early death or not. Between-group comparisons were performed using independent-sample *t*-tests or chi-square tests, as appropriate. Univariate logistic regression models were used to examine the association between early death (dependant variable) and components of the CGA (independent variables). $P < .05$ was considered statistically significant. All analyses were performed using SPSS version 19.0 (SPSS, Inc., Chicago, IL).

Twenty-nine women were included (mean age 81.6 ± 4.5). Participants were polypathological, with a median CIRS of 9.7. Fifteen (58.6%) were malnourished, 12 (41.4%) had an ADL limitation, 20 (69%) had an IADL limitation, 13 (44.8%) had a MMSE score lower than 24, and nine (31%) had a positive mini-GDS. The oncogeriatric team gave a favorable opinion for optimal or adapted treatment to 65.5% of participants. Ten participants (34.5%) died in the 6 months after their first consultation with an

Table 1. Baseline Participant Characteristics According to Early Death or Not and Univariate Logistic Regression Showing Cross-Sectional Associations Between Early Death (Dependent Variable) and Clinical Characteristics (Independent Variables) (N = 29)

Characteristic	Early Death			Univariate Model Odds Ratio (95% Confidence Interval) *P* -Value
	Yes	No	*P*-Value[a]	
Age, mean ± SD	80.6 ± 5.2	83.5 ± 2.7	.13	0.16 (0.97–1.40) .12
Cumulative Illness Rating Scale for Geriatrics, mean ± SD	9.5 ± 3.3	9.9 ± 3.0	.48	1.04 (0.81–1.34) .76
Mini Nutritional Assessment score <17, n (%)	7 (36.8)	8 (80.0)	.03	6.86 (1.24–41.83) .04
Instrumental activity of daily living limitation, n (%)	14 (73.7)	6 (60.0)	.45	0.54 (0.11–2.72) .45
Mini-Mental State Examination score<24, n (%)	8 (42.1)	5 (50.0)	.71	1.38 (0.30–6.40) .68
Mini Geriatric Depression Scale score >0	7 (36.8)	2 (20.0)	.43	0.43 (0.07–2.61) .36
Comprehensive geriatric assessment: optimal or adapted treatment	4 (21.0)	6 (60.0)	.05	0.18 (0.03–0.95) .04
Ascites	16 (84.2)	9 (90.0)	>.99	1.69 (0.15–18.71) .67
Chemotherapy	19 (94.7)	7 (70.0)	.07	0.13 (0.11–2.10) .18

SD = standard deviation.

[a]Between-group comparison based on simple *t*-test or chi-square test, as appropriate.

oncologist. Median survival was 13.2 months (range 1–96 months). Participants who died in the 6 months after their first consultation were more malnourished ($P = .05$) than survivors. Univariate logistic regression showed that malnutrition (odds ratio (OR) = 6.86, $P = .04$) and recommendation of optimal or adapted treatment by the oncogeriatric team (OR = 0.18, $P = .04$) were significantly associated with early death (Table 1).

These findings showed that malnutrition, measured using the MNA, was associated with early death, consistent with previous studies that showed an association between malnutrition and death in individuals with cancer.[6,7] The current study found an association between optimal or adapted treatment given by the oncogeriatric team and absence of early death, which greater tolerability of treatment in older adults may explain. Various publications have shown that the CGA can identity prognostic factors of early death and severe treatment toxicity.[6,8,9] Recommendation of optimal or adapted treatment by the oncogeriatric team was associated with no high risk of early death.

The main limitation of the current study was the small number of participants, which limited statistical power. Further research is needed to corroborate this finding.

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VASCULAR RETINOPATHY IN RELATION TO COGNITIVE FUNCTIONING IN AN OLDER POPULATION—THE HOORN STUDY

To the Editor: Cognitive impairment and dementia are important health problems that may be caused by vascular damage in the brain.[1] The cerebral vasculature is anatomically, embryologically, and physiologically related to that of the retina, and both are sensitive to exposure to vascular risk factors.[2,3] Vascular damage to the retina is easy to measure noninvasively. Hence, visualization of retinal vessels may offer insight into the status of the vessels in the brain and thus provide insight into vascular causes of late-life cognitive impairment.

A recent systematic review found variable associations between retinal vascular changes and performance on various cognitive domains in persons without dementia.[4,5] The goal of the current study was to extend these findings by assessing these associations in a population-based cohort using a detailed neuropsychological examination.

METHODOLOGY

Participants (N = 313, mean age 72.9 ± 5.6, 52% male) from the population-based Hoorn cohort underwent fundus photography and neuropsychological examination. Details about the design of the study have been described previously.[6–8] None of the participants had cognitive dysfunction severe enough to disturb day-to-day functioning.

Any vascular retinopathy was defined as presence of hypertensive or sclerotic vessel changes; hemorrhages and microaneurysms; preretinal, vitreous, or flame-shaped hemorrhages; hard exudates; cotton wool spots; intraretinal microvascular abnormalities; venous beading; areas of neovascularization; fibrous proliferation; laser coagulation scars; focal arteriolar narrowing; arteriovenous nicking; venous or arteriolar occlusion; arterial narrowing; retinal