

Will 'fit' older cancer patients as assessed by frailty screening tools tolerate the first cycle of (radio)chemotherapy without serious adverse events?

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Introduction

- Older patients are more susceptible to chemotherapy-related toxicity due to age-related physiologic changes
- Older age does not necessarily lead to more severe toxic effects from chemotherapy compared with younger patients
- How to effectively select older patients for therapies with significant potential toxicity?
 - Chronological age versus biological age
 - The Comprehensive Geriatric Assessment (CGA) = recommended for guidance
 - Frailty screening tools quickly identify unfit patients who need CGA
- 'Fit' patients with a normal screening test:
 - No time-consuming CGA is needed
 - Tolerability of proposed chemotherapy?
- Aim of the study: predictive value of two frailty screening tools in relation to the tolerability of chemotherapy in 'fit' older patients.

Patients & Methods

- Prospective study
- Inclusion criteria: ≥ 65 years, various types and stages of cancer
- Frailty assessment prior to (radio)chemotherapy
- Patients were screened by Groningen Frailty Indicator (GFI)
 - 15 questions
 - Physical, cognitive, social and psychological items
 - Score range: 0-15
 - Abnormal screening test: GFI score ≥4

- Patients were screened with G8 screening tool
 - 8 questions
 - Based on the Mini Nutritional Assessment
 - Score range: 0-17
 - Abnormal screening test: G8 score ≤14
- Serious adverse events (SAE) were recorded during the first cycle of treatment.
- The negative predictive value (NPV) of the GFI and G8 for the occurrence of SAE were calculated

Results

Patient characteristics

N° patients	85	%
Gender		
male	41	48
female	44	52
Age (years)		
median	76	
range	66-88	

Type of cancer		(%)
urological	21	25
digestive system	19	22
breast	18	21
head and neck	11	13
lung	5	6
gynaecological	4	5
other	6	8

Treatment

- Chemotherapy: 76 patients; radiochemotherapy: 9 patients
- Treatment intent: 46% Curative; 54% Palliative

Serious Adverse Events

15 SAE in the first cycle (18%)

6 patients hospitalized due to hematological toxicity

9 patients hospitalized due to non-hematological toxicity

Three SAE resulted in death

Predictive value for SAE

GFI

- 60% with a normal screening test
- Group of patients with SAE: mean GFI score = 3,3 (SD 2,3)
- Group of patients without SAE: mean GFI score = 3,1 (SD 1,3)
- NPV for the occurrence of SAE: 78,4% (95% CI: 73,3-86,1%)

G8

- 31% with a normal screening test
- Group of patients with SAE: mean G8 score = 12,7 (SD 3,2)
- Group of patients without SAE: mean G8 score = 11,7 (SD 3,2)
- NPV for the occurrence of SAE: 76,9% (95% CI: 62,6-89,4%)

Discussion

- In oncology practice, classical performance status measures (e.g. Karnofsky Performance Status, ECOG) are regarded to be of limited value to estimate whether a patient is likely to tolerate a certain chemotherapy regimen.
- Frailty screening tools such as the G8 and GFI screening tool identify 'unfit' patients who require a full CGA
- It would be valuable for the clinician to know how likely it is for an older patient with a normal screening test to tolerate a proposed chemotherapeutic cancer treatment. However there are no data published in the relation to toxicity and results of frailty screening tools.
- There was a high probability (NPV) to complete the first cycle of (radio)chemotherapy without SAE in 'fit' older patients, as assessed by two frailty screening tools.
- More research is needed to improve the ability to predict treatment-related toxicity at the individual patient level.