

EXPLORING CHEMOTHERAPY TOXICITY PROFILE IN THE ELDERLY POPULATION AT A PORTUGUESE ONCOLOGY CENTER

M.Lagarto¹, T.Pina Cabral¹, V.Duarte Branco¹, M.Nunes Abreu¹, M.D’Orey¹, P.Frazão¹, F.Ferreira¹, P.Cavaco¹, A.Martins¹

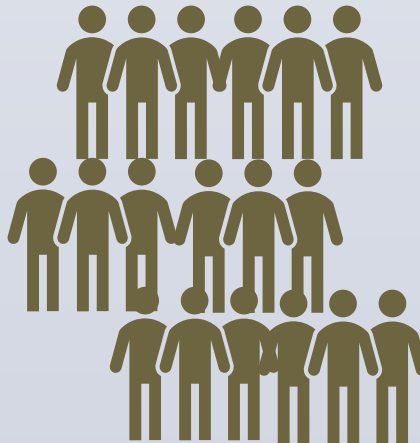
¹ Oncology Department, Hospital São Francisco Xavier, Lisboa, Portugal

INTRODUCTION

Cancer is becoming increasingly prevalent in the elderly population. However, the complex interplay between aging, frailty, and chemotherapy-related toxicity poses a significant challenge.

METHODS

We enrolled all patients aged 65 or older who underwent chemotherapy at a Portuguese Oncology center in 2023.



- ✓ Gender;
- ✓ Age;
- ✓ ECOG PS;
- ✓ BMI;
- ✓ Creatinine clearance (CrCl);
- ✓ Tumor type;
- ✓ Treatment dosage (standard vs. reduced);
- ✓ Chemotherapy regimen (mono vs. polychemotherapy)
- ✓ Toxicity profile (CTCAE v5.0)

* Descriptive analysis *

Table 1. CLINICAL CHARACTERISTICS OF THE OVERALL POPULATION

The median age was 73 years (range: 65–93), with the majority being male (n = 159, 56.2%) and having an ECOG PS of 0 (n = 185, 65.5%). Most patients had a gastrointestinal tumor (n = 164, 58%), received a standard dose of chemotherapy (n = 216, 76%), were treated with a polychemotherapy regimen (n = 156, 55%), and experienced a chemotherapy-related toxicity event (n = 238, 84.1%). PS: performance status
GI: gastrointestinal; GU: genitourinary.

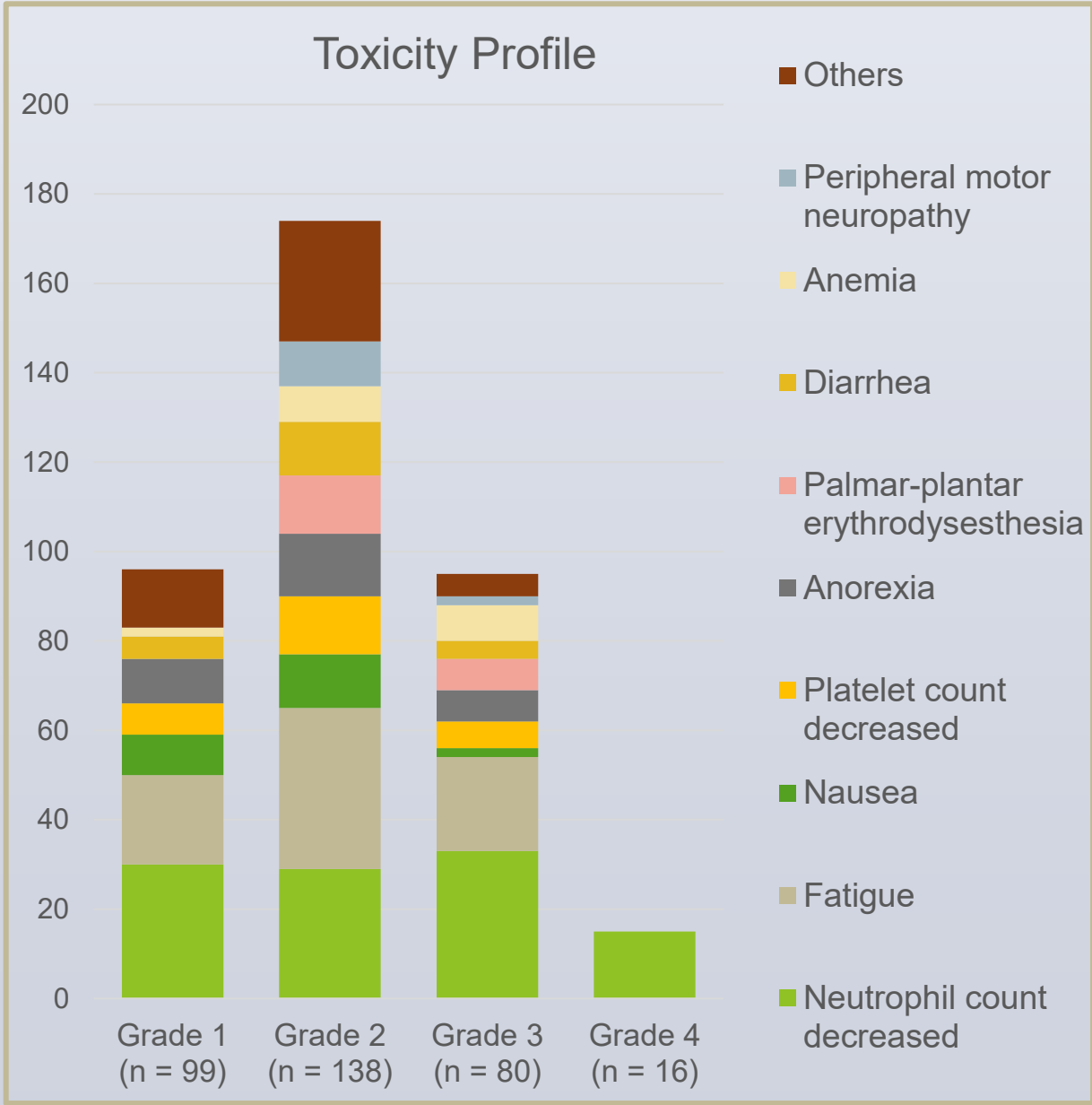
Characteristic		
Gender – no. (%)		
Male		159 (56)
Female		124 (44)
Median age (range) -yr		73 (65-93)
ECOG PS – no. (%)		
0		185 (66)
1		77 (27)
2		21 (7)
Tumor type – no. (%)		
GI cancer		164 (58)
GU cancer		45 (16)
Breast cancer		34 (12)
Gynecological cancer		24 (9)
Head and neck cancer		16 (6)
Chemotherapy regimen – no. (%)		
Monochemotherapy		127 (45)
Polychemotherapy		156 (55)
Treatment dosage – no. (%)		
Standard dose		216 (76)
Reduced dose		67 (24)
Chemotherapy-related toxicity event – no. (%)		238 (84)

Characteristic	65 - 75 yo (n = 179)	76 - 85 yo (n = 91)	86 - 95 yo (n = 13)
ECOG PS – no. (%)			
0	130 (76)	49 (54)	6 (46)
1	41 (23)	31 (34)	5 (38)
2	8 (5)	11 (12)	2 (15)
Median CrCl - mL/min	64	63	62
Median BMI – Kg/m²	25	21	27
GI cancer – no. (%)	92 (51)	55 (60)	7 (54)
Chemotherapy regimen – no. (%)			
Monochemotherapy	70 (39)	45 (49)	12 (92)
Polychemotherapy	109 (61)	46 (51)	1 (8)
Standard treatment dose – no. (%)	135 (75)	71 (78)	10 (77)
Grade 3 and 4 toxicity – no. (%)	25 (14)	33 (36)	5 (39)

Table 2. CLINICAL CHARACTERISTICS BY AGE GROUP
Among patients aged 65–75 years, 14% (n = 25) experienced grade 3/4 toxicity, compared to 36% (n = 33) in the 76–85 age group and 39% (n = 5) in the 86–95 age group.

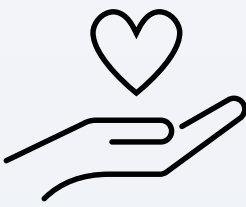
Among the subset of patients who experienced toxicity:

- ✓ Male (n = 128, 53%);
- ✓ Aged 65-75 years (n = 148, 62%);
- ✓ ECOG PS 0 (n = 153, 64%);
- ✓ Mean BMI 20.73 Kg/m² and mean CrCl 63.3mL/min;
- ✓ GI cancer (n = 148, 62%);
- ✓ Standard dose (n = 179, 75%) polychemotherapy regimen (n = 139, 58%);
- ✓ Grade 2 toxicity (n = 138, 49%);
- ✓ Fatigue (n = 36, 26%) and neutropenia (n= 29, 21%) were the most common side effects.
- ✓ Grade 3 / 4 toxicity (n = 96, 34%).



Graphic 1. TOXICITY PROFILE
Grade 2 toxicity was observed in 49% of patients (n = 138) and grade 3/4 toxicity occurred in 34% (n = 96). The most reported toxicities were fatigue and neutropenia (neutrophil count decrease).

RESULTS



Discussion

Chemotherapy related toxicity is highly common in the elderly population and has significant impact. Clinics should incorporate geriatric assessment tools to individualize treatment strategies, minimize toxicity and preserve quality of life.

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