

How many lines is too many? Real world patterns of number of lines of chemotherapy in platinum resistant ovarian cancer

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Topic: Ovarian

Objectives

The utility of more than two lines of systemic therapy after development of platinum resistance in ovarian cancer has been questioned. Literature quotes one-year survival at initiation of a sixth line of systemic therapy at 7%. This study evaluated whether features present at the time of development of platinum resistance could predict which patients were likely to receive >5 lines of total or >2 lines of platinum resistant therapy.

Methods

Retrospective review of platinum resistant ovarian cancer patients at a single institution from 2011-2020. Data were abstracted from medical records. Student's T or medians tests were used to compare continuous variables, and chi-squared or Fisher's exact tests for categorical variables.

Results

258 patients were included, and received a median of 4.5 total lines (range 1-15) and two lines (range 1-14) of platinum resistant chemotherapy. Ninety-four (36.4%) received >5 total and 119 patients (46.1%) received >2 lines of platinum resistant therapy. When comparing patients receiving ≤ 5 to >5 lines of total therapy and ≤ 2 to >2 lines of platinum resistant therapy, groups differed by age (54 vs. 63, $p < 0.001$; 58 vs 63, $p < 0.001$). Race, ethnicity, stage, and number of lines of chemotherapy prior to development of platinum resistance were similar between groups in both analyses.

Conclusions

Over a third of the patients continued to receive new lines of chemotherapy after a point where one-year survival is less than 10%. Almost half of the patients received >2 lines of systemic therapy for platinum resistant ovarian cancer, despite data suggesting lack of benefit. Only younger age was associated with more lines of therapy in both analyses. Our findings reiterate the importance of individualizing treatment in the platinum resistant setting. Points of progression represent opportunities for shared decision making, incorporating prognostic information and considering whether pursuing additional lines of treatment is congruent with the patient's values and goals.

Abstract Table or Graph



	Total Lines		p-value	Platinum Resistant Lines		p-value
	≤ 5 n=164 (63.6)	> 5 n=94 (36.4)		≤ 2 n=139 (53.9)	> 2 n=119 (46.1)	
Age at diagnosis (years)	63 (23-87)	54 (16-84)	<0.001	63 (39-87)	57 (16-84)	<0.001
Race/Ethnicity: Non-Hispanic Caucasian	86.6%	91.5%	0.24	84.9%	92.4%	0.06
Stage			0.38			0.46
I	1.2%	2.1%		0.7%	2.5%	
II	1.8%	3.2%		1.4%	3.4%	
IIIA	1.8%	4.3%		3.6%	1.7%	
IIIB	3.7%	6.4%		5.8%	3.4%	
IIIC	59.8%	50.0%		56.1%	56.3%	
IVA	14.0%	9.6%		14.4%	10.1%	
IVB	17.7%	24.5%		18.0%	22.7%	
Total lines platinum sensitive chemotherapy	-	-	-	2 (1-8)	2 (1-5)	0.60

Values reported in median (range) or %