

# CHEMOTHERAPY-INDUCED NAUSEA AND VOMITING (CINV) IN A SAMPLE OF WOMEN WITH GYNECOLOGICAL CANCER: A LONGITUDINAL STUDY

Valentina E. Di Mattei, PhD<sup>1,2\*</sup>; Letizia Carnelli, PsyD<sup>2,3</sup>; Paola Taranto, PsyD<sup>2</sup>; Martina Mazzetti, PsyD<sup>2</sup>; Martina Bernardi, PsyD<sup>4</sup>; Silvia Piacenti, PsyD<sup>1</sup>; Paola M.V. Rancoita, PhD<sup>1</sup>; Federica Negrini, PsyD<sup>2</sup>; Francesca Carzaniga, PsyD<sup>2</sup>; Micaela Petrone, MD<sup>2</sup>; Emanuela Rabaiotti, MD<sup>2</sup>; Massimo Candiani, MD<sup>1,2</sup>.



<sup>1</sup>Vita-Salute San Raffaele University, Milan (Italy)

<sup>2</sup>San Raffaele Hospital, Milan (Italy)

<sup>3</sup>University of Milan-Bicocca, Milan (Italy)

<sup>4</sup>University of Parma, Parma (Italy)

\* Email: dimattei.valentina@hsr.it



## Introduction and aim

Gynecological cancer (specifically ovarian, endometrial and cervical cancer) is often subject to aggressive treatment regimens which can be associated with disabling side effects, such as nausea and vomiting, alopecia, fatigue and pain<sup>1,2</sup>.

Despite advancements in the control of emesis, chemotherapy-induced nausea and vomiting (CINV) still represents a major problem for these patients and can deeply affect their quality of life and everyday activities<sup>3,4</sup>. Moreover, evidence about CINV in gynecological cancer is still limited.

This study aimed to measure the frequency and intensity of CINV and its variation over time in a sample of women with gynecological cancer, in order to gain a better understanding of the extent to which patients experience it.

## Method

One hundred and twenty-one patients treated for gynecological cancer at the San Raffaele Hospital in Milan completed the MASCC Antiemesis Tool (MAT)<sup>5</sup> at 24 hours and 4 days after their first chemotherapy infusion; 85 of these patients completed the questionnaire also after the third infusion. The MAT is an easy-to-use and easy-to-evaluate tool used to assess the presence and intensity of acute and delayed nausea and vomiting during chemotherapy.

## Results

The age range of the sample was 32–85 years (mean=58.19; SD=13.82). Thirty-five percent of the patients experienced acute nausea after the first infusion and 44% after the third infusion; 48% reported delayed nausea after the first infusion and 58% after the third infusion. Only a small percentage of patients (5-18%) reported acute and delayed vomiting (Table 1). The intensity of nausea was significantly different from 0 in all four cases ( $p < .001$ ). A significant increase in the intensity of acute nausea ( $p = .017$ ) was found between the third infusion and the first (Table 2).

Variables	N	YES (%)
Acute nausea – first infusion	121	42 (34.7%)
Acute nausea – third infusion	85	37 (43.5%)
Delayed nausea – first infusion	120	58 (48.3%)
Delayed nausea – third infusion	85	49 (57.6%)
Acute vomiting – first infusion	121	6 (5%)
Acute vomiting – third infusion	83	12 (14.5%)
Delayed vomiting – first infusion	120	22 (18.3%)
Delayed vomiting – third infusion	85	14 (16.5%)

**Table 1.** Frequency of acute and delayed nausea and vomiting after the first and third chemotherapy infusion.

Variables	Mean	SD	p-value
Acute nausea intensity – first infusion	1.421	2.316	<0.001
Acute nausea intensity – third infusion	2.310	3.112	<0.001
Difference in acute nausea intensity	0.753	2.923	0.017
Delayed nausea intensity – first infusion	2.261	2.892	<0.001
Delayed nausea intensity – third infusion	2.871	2.999	<0.001
Difference in delayed nausea intensity	0.600	3.197	0.105

**Table 2.** Mean and standard deviation of the intensity of acute and delayed nausea after the first and third infusion and the difference between the third and first infusion. P-value refers to the comparison with 0, via the Wilcoxon test.

## Conclusions

The findings suggest that nausea represents an important problem that is still common among cancer patients undergoing chemotherapy; it is possible that an exhaustion of psychosocial resources and the accumulation of the effects of antineoplastic drugs contribute to the increased intensity of acute nausea over time. These should be further investigated in order to properly address these patient issues.

## References

1. Chase DM, Wenzel L (2011). Health-related quality of life in ovarian cancer patients and its impact on clinical management. *Expert Rev Pharmacoecon Outcomes Res*, 11(4): 421–431.
2. Casey C, Chen LM, Rabow MW (2011). Symptom management in gynecologic malignancies. *Expert Rev Anticancer Ther*, 11(7):1077-89.
3. Sommariva S, Pongiglione B, Tarricone R (2016). Impact of chemotherapy-induced nausea and vomiting on health-related quality of life and resource utilization: A systematic review. *Crit Rev Oncol Hematol*, 99:13-36.
4. Di Mattei VE, Carnelli L, Taranto P, et al. (2018). Quality of life and chemotherapy: predictive factors in a sample of gynaecological cancer patients. *Recenti Prog Med*, 109(3):193-196.
5. Molassiotis A, Coventry PA, Stricker CT, et al. (2007). Validation and psychometric assessment of a short clinical scale to measure chemotherapy-induced nausea and vomiting: the MASCC Antiemesis Tool. *J Pain Symptom Manage*, 34(2): 148-159.