Prevention of chemotherapy- and radiotherapy-induced nausea and vomiting: Guideline update and results of the Perugia consensus conference

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Received: 22 October 2010 / Accepted: 10 November 2010 / Published online: 28 December 2010
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Keywords MASCC antiemetic guidelines ·
ESMO antiemetic guidelines

Despite the relevant progress achieved in the last 20 years, vomiting and, especially, nausea continue to be two of the most distressing side effects of cancer chemotherapy. In the late 1990s, several professional organizations published recommendations on the optimal antiemetic prophylaxis in patients submitted to chemotherapy and radiotherapy.

Subsequently, due to the emergence of new findings and new antiemetic agents after the first recommenda-

tions from 1997, representatives from several oncology societies met in Perugia, Italy in 2004 for a conference organized by the Multinational Association of Supportive Care in Cancer (MASCC) and updated the antiemetic guidelines [1]. Due to the publication of several new studies evaluating the role of the most recently developed antiemetic drugs, experts from the European Society of Medical Oncology (ESMO) and from MASCC thought it necessary to update the recommendations. To achieve this aim, the two societies organized on June 20–21, 2009 the third Consensus Conference on antiemetics in Perugia, Italy.

The methodology for the guideline process was based on a literature review through June 1, 2009 using MEDLINE (National Library of Medicine, Bethesda, MD, USA) and other databases, with evaluation of the evidence by an expert panel composed of 23 oncology professionals in clinical medicine, medical oncology, radiation oncology, surgical oncology, oncology nursing, statistics, pharmacy, pharmacology, medical policy, and decision making (Table 1). With the participating experts coming from ten different countries, on five continents, we believe that this is the most representative and evidence-based guideline process that has yet been performed.

The panel was comprised of ten committees dealing with major topics in this field (Table 2). Each committee was composed of five to seven members and each committee had one chair and co-chair. Each expert could be part of three or four committees but could only be a chair or co-chair of one committee. During the consensus conference,

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Table 1 Participants in the antiemetic guideline process

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the findings of each committee were presented by the chair to the entire expert panel. Although prevention of acute and delayed nausea and vomiting induced by highly- and moderately emetogenic chemotherapy had specific committees; at the end, these worked together as some of the issues are inseparable. Finally, the panel discussed the results and determined the level of evidence and the level of confidence for the recommendations according to ESMO and MASCC criteria [1, 2].

To change the 2004 recommendations or for a new guideline recommendation to be accepted, a consensus of at least 66% of the expert panelists was needed. As a general rule, the panel considered changes of 10% or greater to be sufficient to warrant changing a guideline, given that the evidence supported this magnitude of benefit.

The results of the Perugia Conference are reported in this supplement of the Journal of Supportive Care in Cancer. Each article deals with one of the specific topics

Table 2 Antiemetic guidelines committees

I	Emetogenic classification of antineoplastic agents
II	Acute emesis: highly emetogenic chemotherapy
III	Delayed emesis: highly emetogenic chemotherapy
IV	Acute emesis: moderately emetogenic chemotherapy
V	Delayed emesis: moderately emetogenic chemotherapy
VI	Emesis induced by minimal or low emetogenic chemotherapy
VII	Additional issues: refractory emesis, rescue antiemetic therapy, multiple-day chemotherapy, high dose chemotherapy
VIII	Anticipatory emesis
IXa	Radiotherapy induced emesis
IXb	Antiemetics in children receiving chemotherapy
X	Future considerations: research directions, study design, economic considerations

reported in Table 2 and it has been written by the relative committee members who were actually participating in the Conference.

Acknowledgment To help organize the Consensus Conference, we received unrestricted grants from Eisai, Helsinn, GSK, Merck and Prostrakan. Additional funds were also committed by ESMO and MASCC.

References

1. Roila F, Hesketh PJ, Herrstedt J et al (2006) Prevention of chemotherapy- and radiotherapy-induced emesis: results of the 2004 Perugia International Antiemetic Consensus Conference. *Ann Oncol* 17:20–28
2. Herrstedt J, Roila F (2009) Chemotherapy-induced nausea and vomiting: ESMO clinical recommendations for prophylaxis. *Ann Oncol* 20(Suppl 4):156–158