

strated that *MUC1* gene expression was detected in four of eight negative control lymph nodes. The discrepancy between Hoon et al.'s and our results in the detection of *MUC1* mRNA in control lymph nodes seems to be explained by the difference in assay sensitivity. Because Hoon et al. employed Southern blot analysis of RT-PCR products, their assay sensitivity should have been superior to that of our method (i.e., ethidium bromide staining). Although we did not mention it in our paper, we tried to incorporate a nested RT-PCR method to increase detection sensitivity. However, this nested RT-PCR method detected *MUC1* mRNA in every control lymph node; thus, we abandoned this method. Therefore, we agree with Hoon et al. that a low amount of *MUC1* mRNA is expressed in control lymph nodes (probably plasma cells are responsible for *MUC1* mRNA expression). It is speculated that this low amount of *MUC1* mRNA can be detected by a highly sensitive Southern blot analysis but not by a less sensitive ethidium bromide staining method.

We believe, however, that *MUC1* mRNA RT-PCR method for the detection of micrometastases is unlikely to be flawed by the false-positive problem if one uses ethidium bromide staining but not Southern blot analysis at the cost of detection sensitivity. Our method has been shown to be so sensitive as to detect 6 micrometastases out of the 41 histologically negative lymph nodes. A final goal of the study on detection of micrometastases is to select patients at high risk for relapse. The value of our *MUC1* mRNA RT-PCR method should be assessed not by its sensitivity but by its clinical utility, which only can be determined after a long term follow-up of many patients.

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Ondansetron versus Granisetron in the Prevention of Chemotherapy-Induced Nausea and Vomiting

Gebbia et al.¹ recently reported the results of a randomized trial showing that granisetron and ondansetron are equally effective for the prevention of chemotherapy-induced nausea and vomiting. We have performed a similar comparison in patients with HIV-related non-Hodgkin's lymphoma (HIV-NHL) receiving chemotherapy. Although in patients with HIV infection malignant tumors that may require intensive chemotherapy regimens frequently develop during the course of the disease, there are no published data regarding the use of both granisetron and ondansetron in an HIV setting.

From June, 1993, to August, 1994, we enrolled 25 consecutive patients with HIV-NHL seen at the Division of Medical Oncology and AIDS of the Centro di Riferimento Oncologico of Aviano, Italy, in a prospective randomized study comparing granisetron versus ondansetron with the aim to evaluate the antiemetic and antinausea efficacy of both drugs. Granisetron was administered at a dose of 3 mg intravenously before chemotherapy and ondansetron at an intravenous dose of 8 mg before and 4 hours and 8 hours after chemotherapy as follows: patients received one of the antiemetic drugs at the odd cycles and the alternative drug at even cycles. The evaluation of the efficacy of the antiemetic drugs was performed through a strict cooperation between nurses and physicians, with a questionnaire given to the patients every 6 hours for 2 days after the chemotherapy administration. The efficacy of the antiemetic treatments was determined according to the World Health Organization criteria: grade 0, no nausea and vomiting; grade 1, nausea only; grade II, nausea and vomiting; grade III, vomiting requiring therapy; and grade IV, intractable vomiting. All patients were in the ward during this study.

All patients received moderately emetogenic chemotherapy regimens including cyclophosphamide, doxorubicin, vincristine, bleomycin, etoposide, mitoxantrone, and prednimustine at the standard dosage for the treatment of NHL, in particular LNH84, cyclophosphamide, doxorubicin, vincristine, and prednisone (CHOP) and etoposide, mitoxantrone, and prednimustine (VMP). The majority of our patients was intravenous drug users (12 of 25) in accordance to the overall epidemiology of HIV infection in Italy, but at the time of chemotherapy they were not reporting the use of any illicit drugs. The median age was 35 years (range, 25-79 years) and total number of the administered cycles was 70 (36 with ondansetron and 34 with granisetron). Twenty-one patients of 25 enrolled patients, who received at least two cycles of chemotherapy, were considered evaluable for this study. The four patients not evaluable for this study had HIV-NHL that progressed before the completion of two cycles of chemotherapy. No significant difference between the two groups of patients were observed. In particular, we observed four episodes of nausea with ondansetron and five episodes with granisetron; four episodes of vomiting (three G2 and one G3) with ondansetron and two (both G2) with granisetron. Both antiemetic drugs were well tolerated with no severe side effects observed in either treatment arm. However, the percentage of episodes of headache was higher in the granisetron arm than in the ondansetron arm (8% vs. 4%); constipation also occurred more frequently in the granisetron arm than in the ondansetron arm (2% vs. 1%). These differences did not reach statistical significance. Our data are summarized in Table 1.

In conclusion, our data confirm that ondansetron and granisetron are both effective agents against nausea and vomiting in patients with HIV infection receiving moderately emetogenic antineoplastic chemotherapy. Granisetron may be preferred because it is administered in a single dose and it is less expensive. These aspects are very important in a population of patients such as ours, mainly intravenous drug users, with many economic and social problems.

Table 1. Effect of Granisetron and Ondansetron on the Incidence of Nausea and Vomiting

Grade	Ondansetron* (%)	Granisetron† (%)	P
G0	28 (78)	27 (79)	NS
G1	4 (11)	5 (15)	NS
G2	3 (8)	(2 (6)	NS
G3	1 (3)	—	NS
G4	—	—	—

NS: not significant.

* 36 cycles total.

† 34 cycles total.

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Fedele et al., from the Division of Medical Oncology of Aviano performed a comparative study that prospectively evaluated the antiemetic efficacy and clinical toxicity of ondansetron (8 mg intravenously three times a day) versus granisetron (3 mg intravenously daily) in a series of 25 patients affected by HIV-related non-Hodgkin's lymphomas treated with moderately emetogenic polychemotherapy, including bleomycin, cyclophosphamide, vincristine, etoposide, mitoxantrone, and prednimustine. The authors concluded that ondansetron and granisetron are equiactive (no nausea/vomiting or only nausea in 89% vs. 84% of patients, respectively), although headache was more frequently recorded in the granisetron group than in the ondansetron group (8% vs. 4%).

These results confirm our recently published data,¹ at least in terms of equiactivity, although in our study headache incidence was higher in the ondansetron rather than the granisetron group. In our study, we observed a somewhat lower antiemetic activity of both anti-HT-3 drugs (69% vs. 67% complete response rate, respectively, for ondansetron and granisetron). This difference in complete response rate may be due to differences in patient population sampling, and differences in chemotherapeutic treatments. In fact, patients treated

by Fedele et al. received polychemotherapeutic regimens that also contained corticosteroids, which are known to influence positively the therapeutic effects of most antiemetic drugs. Moreover, 12 of 25 patients with HIV-related non-Hodgkin's lymphoma were illicit intravenous drug users. We were not able to ascertain whether these patients used other drugs that could, potentially, interfere with the emetic response, such as psychotropic drugs. It should be stressed, however, that the authors employed the World Health Organization criteria for definition of toxicity as response criteria instead of the more widely accepted criteria for antiemetic response which rely on the number of emetic episodes rather than on the generic severity of vomiting and on the need of antiemetic and supportive therapy.^{2,3} For this reason, data reported by Fedele et al.¹ and by our group are not entirely comparable.

The authors conclude that "granisetron may be preferred because it is administered as a single dose and it is less expensive". We do not agree completely with this statement, because ondansetron may be administered as a single dose of 24 mg instead of three refracted doses as performed by other workers in Aviano with similar results.^{4,5} Furthermore, we cannot make any realistic and definitive comments on the budgetary impact of the two antiemetic drugs because employing modalities (combination with other drugs) and the prices are still changing, at least in our country.

In conclusion, we agree with Fedele et al. on the antiemetic equiactivity and safety of the two anti-HT-3 drugs and we thank the authors for their letter, which allowed us to make some further comments on this topic. Knowledge that new anti-HT-3 drugs are highly active in the management of acute emesis induced by polychemotherapeutic treatment in patients with HIV-related neoplasms is of great utility for all oncologists.

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