

Abstract 8111

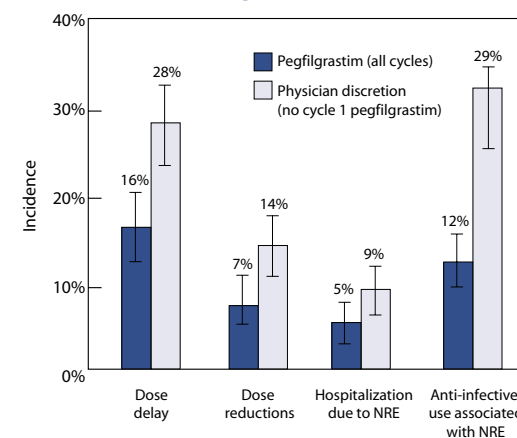
A Large Study of the Older Cancer Patient in the Community Setting: Initial Report of a Randomized Controlled Trial Using Pegfilgrastim to Reduce Neutropenic Complications

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BACKGROUND: Most new cancer diagnoses occur in people ≥ 65 years old, but comparatively few randomized controlled studies have been done in older patients. One reason for this paucity is the need for individualized treatment for older patients, which hinders study accrual of this population. In the interest of facilitating the study of older cancer patients, the Geriatric Oncology Consortium (GOC), which includes a cooperative group of community practices, was established. This study followed the efforts to conduct community clinical trials in older cancer patients and reported on the age-related increased risk of neutropenia and complications that may prevent optimal treatment of the elderly. **METHODS:** This large, prospective, open-label trial included patients ≥ 65 years old who were scheduled to receive chemotherapy every 21 days for cancers of the lungs, breasts, or ovaries (solid tumor stratum) or non-Hodgkin's lymphoma. Patients were randomized to receive either pegfilgrastim during the first and subsequent cycles or no pegfilgrastim in cycle 1 (these patients may have used the drug during subsequent cycles according to doctor discretion). The primary endpoint included the incidence of febrile neutropenia (absolute neutrophil count [ANC] $< 1,000/\mu\text{L}$ and temperature $\geq 38^\circ\text{C}$); other endpoints included neutropenia with or without fever, delays and reductions in chemotherapy dose, hospitalizations, and use of antibiotics. **RESULTS:** In all, 852 patients were enrolled from June 2002 to July 2004; treatment ended for the last subject November 2004. Mean age was approximately 72 years (range, 65–88 years); 32% of the subjects were at least 75 years of age. The proportion of patients having febrile neutropenia was significantly lower in the arm using pegfilgrastim all cycles than in the physician discretion ($P = 0.0014$). Further, those using pegfilgrastim starting in the first chemotherapy cycle had a reduced incidence of febrile neutropenia, hospitalization, intravenous anti-infective use, and reductions and delays in chemotherapy dose than did patients in the current community

Incidence of Neutropenic Events



NRE = neutropenia-related events; error bars represent 95% confidence intervals

practice, who may have been given pegfilgrastim in later cycles. **CONCLUSION:** This research represented the largest prospective trial accomplished thus far to focus on chemotherapy side effects in patients ≥ 65 years old. The GOC provided an effective platform for the study of elderly cancer patients, established the possibility of accomplishing community-based trials in this population, and demonstrated that myelosuppressive chemotherapy may be used in older cancer patients.

Q&A

How do the complications of neutropenia affect older patients in particular?

Obviously, when you are using a form of treatment that is fairly toxic, such as the treatment for lymphoma, the complications are going to be more severe. I can think of two recent studies that demonstrate that in patients with lymphoma, the rate of neutropenic fever was about 50% in people older than 65 years of age. Also, the duration of hospitalization was much longer in this patient population.

How did this study address the need for individualized treatment approaches for older patients?

That was not part of the study. When you do a study like this, you need to have as much uniformity as possible with regard to treatment. Our study randomized patients into groups that would or would not use pegfilgrastim in the first cycle. After that, it was up to the investigator whether to use the drug or not. So, to some extent, we left room for the investigator's judgment.

— Lodovico Balducci, MD

PEER VIEWPOINT

A large trial with older patients was reported by Balducci et al, who treated 852 older (age > 65) patients with chemotherapy. In this randomized trial, patients were assigned chemotherapy with pegfilgrastim or chemotherapy supported by growth factors initiated at the discretion of the treating physician. Patients were receiving chemotherapy treatment for a variety of tumors, including lymphoma, lung, breast, and ovarian cancers. The rate of febrile neutropenia in the first chemotherapy cycle was 3% for patients assigned to pegfilgrastim treatment versus 7% for patients not treated. The overall rate of febrile neutropenia was reduced from 10% to 4%. These results were achieved despite the fact that 42% of all patients assigned to the physician discretion arm received granulocyte colony-stimulating factor (G-CSF) at some point, including 13% of patients who received G-CSF across all treatment cycles.

— Harold J. Burstein, MD, PhD