

Incidence and predictors of low chemotherapy dose-intensity in aggressive non-Hodgkin's lymphoma: a nationwide study.

Lyman GH *et al.* *J Clin Oncol* 2004;**22**:4302-4311

It has been shown that the reduction of relative dose-intensity (RDI) below 85% of planned dose compromises the survival of cancer patients. This study assessed the incidence and risk factors for reduced RDI in patients with aggressive non-Hodgkin's lymphoma (NHL) using the data collected from 4,522 patients in 567 US practices.

The received dose intensity was compared with two separate standards; a minimum of 6 cycles and the National Comprehensive Cancer Network Guidelines. RDI \leq 85% occurred in 53% and 48% of patients respectively. Between 1999 and 2001 an increase in the planned reduction of RDI was observed. Older patients not treated with (colony stimulating factor) CSF were significantly more at risk of reduced RDI and FN. The independent factors linked to reduced RDI were: age (\geq 60 years), advance disease stage, poor performance status and no CSF use. In a previous study in patients with ESBC, Lyman *et al.* found similar predictive factors of reduced RDI, in particular, age (\geq 65 years) and no use of CSF in the first cycle (Lyman *et al.* 2003).

In conclusion, this study confirms that the prophylactic use of CSF in patients with aggressive NHL as soon as during the first cycle of treatment can significantly reduce the risk of neutropenic complications and decrease the risk of reduced RDI.

Lyman *et al.* propose that a risk model that identified the patients at high risk of FN would allow the use of prophylactic CSF to be targeted and for the full dose of chemotherapy to be given.

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