

## **Prognostic factors for hematotoxicity of chemotherapy in aggressive non-Hodgkin's lymphoma.**

Ziepert M, Schmits R, Trümper L, et al. *Ann Oncol.* 2008; **19(4)**: 752-62.

Study overview: Chemotherapy doses are often reduced to prevent haematotoxicity, however this can impact negatively on treatment outcome. Ziepert et al. developed and validated models that help assess the risk of haematotoxicity in patients with aggressive non-Hodgkin lymphoma (NHL) receiving CHOP-like regimens.

Data from 1,399 NHL patients were used in two multivariate models of haematotoxicity; one based on patient-, disease-, and treatment-related risk factors, and a second combining pre-treatment factors with information on haematotoxicity during the first chemotherapy cycle. The models were validated on two independent data sets.

Key findings: Risk of haematotoxicity was associated with etoposide treatment, low pre-treatment haematological cell counts, female gender, low weight, poor performance status and high lactate dehydrogenase. Haematotoxicity in the first cycle strongly predicted toxicity in subsequent cycles.

Conclusions: A higher risk for leukocytopenia was associated with more infections, more antibiotic use, longer hospitalisation and higher treatment-related mortality; suggesting that prognostic risk groups are clinically relevant and that these models could be used in clinical decision making. Factors identified in these models have been incorporated into a web-based risk assessment tool, available at [www.toxcalculator.com](http://www.toxcalculator.com).

<http://www.ncbi.nlm.nih.gov/pubmed/18048382?dopt=Citation>