del(17p) in non-Hodgkin’s lymphoma (NHL)

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Identity

Note
the 17p- chromosome is a secondary change in most cases of NHL


Clinics and pathology

Disease
Virtually all histologic subsets of NHL may harbour a 17p- chromosome; there is variation in the reported incidence due to heterogeneity of histologic classification and to the different sensitivity of the detection methods.
10 to 15% of follicle centre cell lymphoma (FCCL) and mantle cell lymphomas (MCL) may carry a 17p- chromosome; minority of marginal zone B-cell lymphomas may be associated with 17p deletion. This anomaly is rarely found in T-cell NHL.

Prognosis
The 17p- chromosome was reported to predict for a poor prognosis in low grade lymphomas; any abnormality of chromosome 17 was also reported to negatively affect survival in lymphomas of all histologic grades

Cytogenetics

Cytogenetics morphological
The deleted segment may vary in size and many cases with sub-microscopic deletions involving the 17p13 band were reported by FISH; cases with unbalanced 17p translocations leading to 17p loss were also described; these cases may be associated with dicentric rearrangements.
The 17p- is usually associated with transformation of a low-grade FCCL with t(14;18) into a high grade lymphoma; likewise, there is a higher incidence of 17p- in the blastoid variant of MCL with t(11,14) than in the typical form.

Cytogenetics molecular
The deletion may be detected by G or R-banding; FISH using a 17p13/p53 probe is recommended, this technique being more sensitive than conventional cytogenetics.

Genes involved and proteins

Note
The majority of cases with 17p- carry a p53 gene deletion, associated with mutation of the remaining allele; there may be a small fraction of cases with a more distal deletion involving an as yet unidentified locus.
Reference


This article should be referenced as such: