

del(13q) in ALL

Identity

Note Deletions of chromosome 13q are a non-random finding in a broad spectrum of haematological neoplasms, including [B-cell chronic lymphocytic leukemia](#) (CLL), non-Hodgkin's lymphoma (NHL) and [multiple myeloma](#) (MM) and (AML) IMAGE

Clinics and Pathology

Disease Acute lymphoblastic leukaemia (ALL)

Phenotype / cell stem origin No specific immunophenotype observed

Epidemiology A del(13q) chromosome is found in approximately 2% of cases in both adult and childhood disease at presentation. Up to 4% of cases may have some loss of 13q material, either through full monosomy or unbalanced rearrangements. Incidence of chromosome 13 deletions is higher at relapse.

Prognosis May confer an increased risk of treatment failure but to date has not been shown to be an independent prognostic indicator.

Cytogenetics

Cytogenetics Various breakpoints reported. The centromeric breakpoint is typically Morphological in the 13q12-14 region and telomeric between 13q21 and 13qter. Loss of all or part of 13q14 is common to almost all cases. Occurs as a sole event in approximately 10% of cases. There are also rare reports of translocations also leading to a partial 13q deletion. Monosomy 13 is also reported but occurs very rarely as a sole aberration. Under representation of chromosome 13 is often found in hypotriploid cases.

Additional anomalies Most cases with del(13q) will have additional aberrations, but there is no consistent picture and the events can include the typical non-random events in ALL.

Genes involved and Proteins

Note Critical region in 13q14 appears to lie telomeric to [RB1](#).

External links

Other database [del\(13q\) in ALL](#) [Mitelman database \(CGAP - NCBI\)](#)

Bibliography

Deletions in the 13q14 locus in adult lymphoblastic leukemia: Rate of incidence

and relevance.

Chung CY, Kantarjian H, Haidar M, Starostik P, Manshoury T, Gidel C, Freireich E, Keating M, Albitar M.

Cancer 2000; 88: 1359-1364.

Medline [10717617](#)

Abnormalities of chromosome bands 13q12 to 13q14 in childhood acute lymphoblastic leukemia.

Heerema NA, Sather HN, Sensel MG, Lee MK, Hutchinson RJ, Nachman JB, Reaman GH, Lange BJ, Steinherz PG, Bostrom BC, Gaynon PS, Uckun FM.

J Clin Oncol 2000; 18: 3837-3844.

Medline [11078497](#)

New recurring cytogenetic abnormalities and association of blast cell karyotypes with prognosis in childhood T-cell acute lymphoblastic leukemia: a Pediatric Oncology Group report of 343 cases.

Schneider NR, Carroll AJ, Shuster JJ, Pullen DJ, Link MP, Borowitz MJ, Camitta BM, Katz JA, Amylon MD.

Blood 2000; 96: 2543-2549

Medline [11001909](#)

Deletion of chromosomal region 13q14.3 in childhood acute lymphoblastic leukaemia.

Cave H, Avet Loiseau H, Devaux I, Rondeau G, Boutard P, Lebrun E, Mechinaud F, Vilmer E, Grandchamp B.

Leukemia 2001; 15: 371-376.

Medline [11237059](#)

Aberrations involving chromosome 13q12-14 are frequently secondary events in childhood acute lymphoblastic leukaemia.

Kovacs BZ, Niggli FK, Betts DR.

Cancer Genet Cytogenet 2004; 151: 157-161.

Medline [15172754](#)

Contributor(s)

Written 11- David Betts
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<http://www.infobiogen.fr/services/chromcancer/Anomalies/del13qALLID1188.html>

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