

Leukaemia Section

Short Communication

i(8)(q10) in acute myeloid leukaemia

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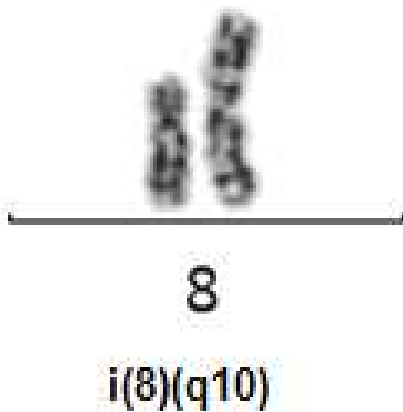
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Identity



i(8)(q10) G- banding - Courtesy Melanie Zenger and Claudia Haferlach.

Clinics and pathology

Disease

Acute myeloid leukaemia (AML)

Note: The aberration has also been reported in many other neoplastic disorders, most notably T-prolymphocytic leukaemia (PLL) and acute lymphoblastic leukaemia (ALL). In the latter, it often occurs as a secondary event to the t(9;22).

Phenotype / cell stem origin

Has been reported to occur in all AML FAB types, with FAB M2 representing the most common morphology.

Epidemiology

A rare non-random event reported in over 50 cases of AML (below 0.5% of all cases) and occurs in both children and adults.

Prognosis

As the aberration is rare and will frequently occur in complex karyotypes, whether an independent prognosis association can be determined is uncertain.

Cytogenetics

Cytogenetics morphological

In approximately 40% of cases the aberration is reported as a chromosome gain.

Probes

Use of a centromere 8 probe combined with a C-MYC probe will help distinguish between gain of i(8)(q10) and simple chromosome 8 gain.

Additional anomalies

Seldom occurs as a primary karyotype event. Most often found in complex karyotypes and/or arises in a sub-clone. The complex karyotypes will frequently contain loss of chromosome 5(q) and/or loss of chromosome 7(q).

References

Rodrigues Pereira Velloso E, Michaux L, Ferrant A, Hernandez JM, Meeus P, Dierlamm J, Criel A, Louwagie A, Verhoef G, Boogaerts M, Michaux J-L, Bosly A, Mecucci C, Van den Berghe H. Deletions of the long arm of chromosome 7 in myeloid disorders: loss of band 7q32 implies worst prognosis. *Br J Haematol* 1996;92:574-581.

Huhta T, Vettenranta K, Heinonen K, Kanerva J, Larramendy ML, Mahlamaki E, Saarinen-Pihkala UM, Knuutila S. Comparative genomic hybridization and conventional cytogenetic analyses in childhood acute myeloid leukemia. *Leuk Lymphoma* 1999;35:311-315.

Wong KF, Kwong YL. Isochromosome 8q is a Marker of Secondary Acute Myeloid Leukemia. *Cancer Genet Cytogenet* 2000;120:171-173.

Harrison CJ, Yang F, Butler T, Cheung K-L, O'Brien PC, Hennessy BJ, Prentice HG, Ferguson-Smith M. Cross-species color banding in ten cases of myeloid malignancies with complex karyotypes. *Genes Chromosomes Cancer* 2001;30:15-24.

Seppa L, Hengartner H, Leibundgut K, Kuhne T, Niggli FK, Betts DR. Loss of *i(8)(q10)* at relapse in two cases of childhood acute myeloid leukaemia. *Leuk Lymphoma* 2007 (in press).

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