i(8)(q10) in acute myeloid leukaemia

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Published in Atlas Database: March 2007
Online updated version: http://AtlasGeneticsOncology.org/Anomalies/i8q10ID1334.html
DOI: 10.4267/2042/38453

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


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This article should be referenced as such: