

# Leukaemia Section

## Short Communication

### idic(7)(q11.2)

Paul Persad, Cyrus Manavi, Michael Beaty, Wei Wang, Mark J Pettenati

Department of Pathology, Wake Forest Baptist Health, Medical Center Blvd, Winston-Salem, NC, 27157, USA (PP, CM, MB, WW, MJP)

Published in Atlas Database: March 2012

Online updated version : <http://AtlasGeneticsOncology.org/Anomalies/idic7q11ID1582.html>  
DOI: 10.4267/2042/47541

This work is licensed under a Creative Commons Attribution-Noncommercial-No Derivative Works 2.0 France Licence.  
© 2012 Atlas of Genetics and Cytogenetics in Oncology and Haematology

#### Identity

##### Other names

Isodicentric 7p

##### Note

Isodicentric chromosome 7p is a rare chromosomal abnormality characterized by the loss of the majority of chromosome 7q genetic material during recombination and centromeric duplication. In one study, less than 1% of 500 reviewed AML cases with abnormal cytogenetics contained this anomaly.



#### Clinics and pathology

##### Disease

Acute myeloid leukemia (AML)

##### Note

Isodicentric 7p, idic(7)(q11.2) has been reported in elderly patients with AML often as a sole abnormality. In the 4 previously documented cases presence of

idic(7)(q11.2) is associated with a favorable response to induction chemotherapy.

##### Epidemiology

Isodicentric 7p, idic(7)(q11.2) is an extremely rare entity with only 4 cases reported in the literature.

##### Clinics

The case of AML with idic(7)(q11.2) was a 66 year-old female with pancytopenia and 82% blasts.

##### Prognosis

The 5 cases of AML with idic(7)(q11.2) have responded favorably to induction chemotherapy. Genes mapped to the short arm of chromosome 7 and known to have oncogenic potential include EGFR, PDGFA, MDR1, T-cell invasion and metastasis inducing locus and aryl hydrocarbon receptor (AHR). The role of these genes in the favorable chemotherapy response is yet to be determined.

#### References

Beverstock GC, de Meijer PH, ten Bokkel Huinink D, Pruijt JF, den Ottolander GJ, Wessels HW, Mollevanger P. A case of isodicentric 7p as sole abnormality in a patient with acute myeloid leukemia. *Cancer Genet Cytogenet.* 1996 Jul 15;89(2):132-5

Johansson B, Axelsson P, Billström R, Strömbeck B, Arheden K, Olofsson T, Cervin A, Adriansson M, Tanke HJ, Mitelman F, Fioretos T. Isodicentric 7p, idic(7)(q11.2), in acute myeloid leukemia associated with older age and favorable response to induction chemotherapy: a new clinical entity? *Genes Chromosomes Cancer.* 2001 Mar;30(3):261-6

*This article should be referenced as such:*

Persad P, Manavi C, Beaty M, Wang W, Pettenati MJ. idic(7)(q11.2). *Atlas Genet Cytogenet Oncol Haematol.* 2012; 16(9): 676.