

Leukaemia Section

Short Communication

t(5;10)(q33;q21)

Cristina Mecucci

Hematology, Policlinico Monteluca, Via Brunamonti, 06123 Perugia, Italy (CM)

Published in Atlas Database: January 2001

Online updated version : <http://AtlasGeneticsOncology.org/Anomalies/t510ID1166.html>

DOI: 10.4267/2042/37710

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Clinics and pathology

Disease

Myeloid lineage.

Phenotype/cell stem origin

Atypical chronic myeloid leukemia (CML), Philadelphia negative, bcr-abl negative with eosinophilia.

Epidemiology

Only two cases available.

Clinics

Massive splenomegaly in one case; some clinical features of accelerated CML.

Cytology

Peripheral blood leukoerythroblastosis; bone marrow granulocytic hyperplasia, bone marrow fibrosis (grade III-IV reticulin), dry tap

Pathology

Extramedullary hemopoiesis in the spleen.

Treatment

Control of disease by hydroxyurea in both cases.

Cytogenetics

Cytogenetics morphological

Cytogenetic result: add(5q), del(10q).

Probes

cosB for PDGFRB (5q33); PAC29F6 for H4/D10S170 (10q21)

Genes involved and proteins

PDGFRB (Platelet Derived Growth Factor Receptor Beta)

Location: 5q33

Protein

Transmembrane and tyrosine kinase domains.

H4(D10S170)

Location: 10q21

Protein

Carboxyterminal putative SH3 binding site; cytoskeletal protein?

Result of the chromosomal anomaly

Hybrid gene

Transcript

H4-PDGFRB chimeric RNA constantly present.

References

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This article should be referenced as such:

Mecucci C. t(5;10)(q33;q21). *Atlas Genet Cytogenet Oncol Haematol*. 2001; 5(1):55.