Leukaemia Section
Mini Review

\textbf{t(10;11)(p13;q21)}

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\textbf{Identity}

\textbf{Note}: the description of this rare entity is arduous, since cases without molecular studies can be confused with cases of t(10;11)(p12;q23).

\textbf{Clinics and pathology}

\textbf{Disease}

A mainly T-cell ALL; at times ANLL and/or ANLL with T-cell markers, or B-cell ALL.

\textbf{Phenotype / cell stem origin}

A myelomonocytic/T-cell common progenitor may be involved; FAB: L1/L2.

\textbf{Epidemiology}

< 1% of ALL; about 5% of T-ALL; sex ratio: 9M/5F (from 14 cases herein reviewed).

\textbf{Clinics}

Organomegaly; no CNS involvement; blood data: high WBC (range 20-170 X 10^9/l).

\textbf{Prognosis}

Median survival: 22 mths in this review; range: 0-33+ mths, n=11 (but we are to be cautious: cases ascertained by molecular studies are needed before true prognostic ascertainment).

\textbf{Cytogenetics}

\textbf{Cytogenetics, molecular}

Investigations are required.

\textbf{Additional anomalies}

Most often (11/15 cases) present; del(5q), +8, and +19 already recurrent.

\textbf{Genes involved and Proteins}

\textbf{AF10}

\textbf{Location}: 10p12

\textbf{DNA / RNA}

5’ telomeric \rightarrow 3’ centromeric orientation.
Protein
Contains 3 Zn fingers and a leucine zipper; nuclear localisation; transcription factor.

**CALM**

**Location:** 11q14-21

**Protein**
Role in the integration of different signals.

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**Results of the chromosomal anomaly**

**Hybrid gene**

**Transcript**
Both 5' CALM - 3' AF10 and 5' AF10 - 3' CALM are expressed.

**Fusion protein**

**Description**
1- A 1595 amino acids protein with N-term and most of CALM (except the last 4 amino acids!) fused to most of AF10 from amino acid 81 (excluding the N-term zinc finger of AF10) C-term.

2- A small 84 amino acids protein with N-term zinc finger from AF10 fused to the very C-term end of CALM.

**Oncogenesis**
It is not known which of the 2 fusion proteins has the critical role.

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**References**


Kobayashi H, Hosoda F, Maseki N, Sakurai M, Imashuku S, Ohki M, Kaneko Y. Hematologic malignancies with the t(10;11)(p13;q21) have the same molecular event and a variety of morphologic or immunologic phenotypes. Genes Chromosomes Cancer 1997 Nov;20(3):253-9.

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