Leukaemia Section
Short Communication

**t(13;19)(q14;p13)**

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### Clinics and pathology

#### Disease

B cell acute lymphoblastic leukemia (B-ALL)

**Note**

An apparently identical t(13;19)(q14;p13) has been described in 3 cases of chronic lymphocytic leukemia (CLL) (Finn et al., 1998; Merup et al., 1998; Brown et al., 1993).

#### Epidemiology

Only one case to date of ALL with this translocation, a 19-year-old female patient with pre-B-ALL; she achieved complete remission and (CR) was in continuing CR 10 months later, at last follow up (Barber et al., 2007).

### Genes involved and proteins

**Note**

The translocation involves TCF3 and an unknown partner.

**TCF3**

#### Location

19p13.3

#### Protein

The E2A gene encodes two distinct basic helix-loop-helix transcription factors, E12 (ITF1) and E47 (TCF3) through alternative splicing. It forms homodimers and heterodimers with other basic helix-loop-helix transcription factors. Ubiquitously expressed during development. Role in cell growth, cell commitment, and differentiation. Role in epithelial mesenchymal transition (review in Slattery et al., 2008).

### References


Barber KE, Harrison CJ, Broadfield ZJ, Stewart AR, Wright SL, Martineau M, Strefford JC, Moorman AV. Molecular cytogenetic characterization of TCF3 (E2A)/19p13.3 rearrangements in B-cell precursor acute lymphoblastic leukaemia. Genes Chromosomes Cancer. 2007 May;46(5):478-86


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