t(2;17)(p23;q23)

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**Clinics and pathology**

**Disease**

Anaplastic large cell lymphoma: translocations involving 2p23 are found in more than half cases of anaplastic large cell lymphoma (ALCL), a high grade non Hodgkin lymphoma (NHL). They involve ALK, and are therefore called ALK+ ALCL.

The most frequent ALK+ ALCL being the the t(2;5)(p23;q35) with NPM1 -ALK fusion protein, which localises both in the cytoplasm and in the nucleus.

The t(2;17)(p23;q23) has so far been described in only 1 case, and, like other t(2;Var) involving various partners and ALK, the fusion protein has a cytoplasmic localization; they are therefore called "cytoplasm only" ALK+ ALCL.

**Clinics**

ALK+ ALCL without the t(2;5) (so called cytoplasmic only ALK cases) show clinical features similar to those of classical ALK+ ALCL: young age, male predominance, presentation with advanced disease, systemic symptoms, frequent involvement of extranodal sites, and a good prognosis. The t(2;17) case was that of a 14 yrs old girl.

**Genes involved and proteins**

**ALK**

Location 2p23

Protein 1620 amino acids; 177 kDa; glycoprotein (200 kDa mature protein); membrane associated tyrosine kinase receptor.

**CLTC**

Location 17q23

Protein 1675 amino acids, 191 kDa; component of the vesicles matrix originated from the plasma membrane or the Golgi.

**Result of the chromosomal anomaly**

**Hybrid gene**

Description 5’ CLTC - 3’ ALK

**Fusion protein**

Description The 1634 N term amino acids from CLTC fused to the 562 C-term amino acids from ALK (i.e. the entire cytoplasmic portion of ALK with the tyrosine kinase domain).

**Expression / Localisation**

Cytoplasmic localisation (in contrast with the t(2;5)(p23;q35) with NPM1-ALK, which localizes both in the cytoplasm and in the nucleus).

**References**


This article should be referenced as such: