Hematologics, Inc.

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Ph-like (BCR-ABL1-like) B-ALL Case Study

Clinical History: Anemia, thrombocytopenia, and leukocytosis with circulating blasts.

Specimen Type: Bone Marrow Aspirate

ΔN:™ Flowcytometry assay: Revealed immunophenotype consistent with a precursor B-cell acute lymphoblastic leukemia.

FISH assay: A deletion of the 9p21 (TP16), monosomy 4, and a gain of IGH (14q), suggestive of an alternate IGH rearrangement. **Reflex FISH findings were positive for CRLF2 (Xp22.3) gene rearrangements**

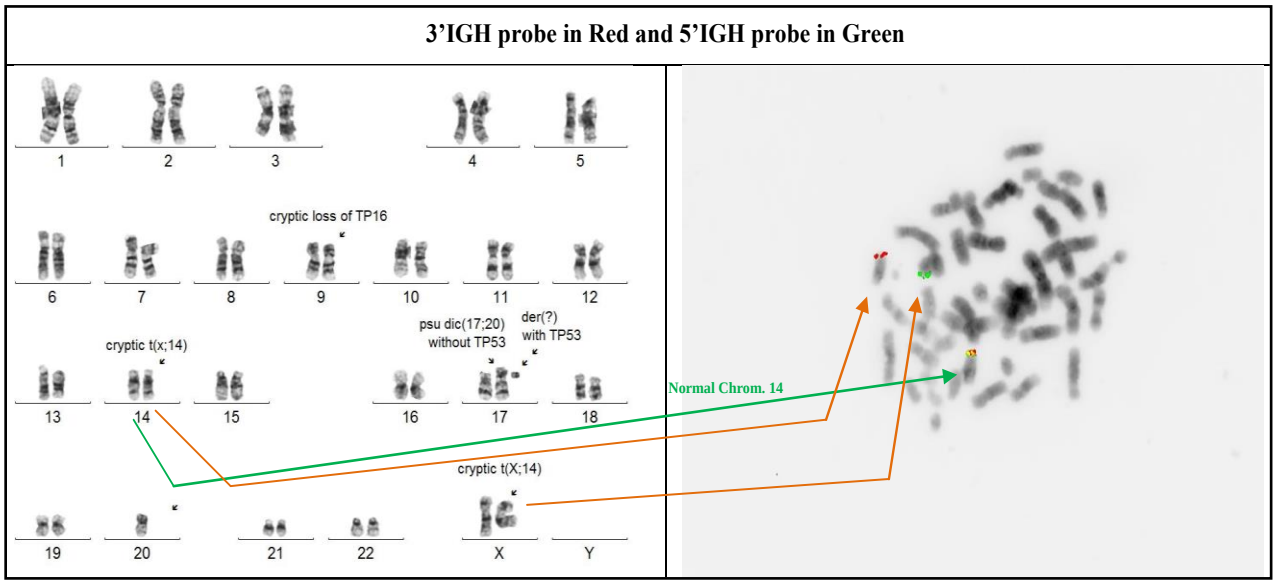
Cytogenetic karyotyping: Revealed complex abnormal female karyotype:

45~46,X,t(X;14)(p22.3;q32),del(9)(p21p21),
psu dic(17;20)(p11.2;q13.1),der(?)t(17;?)(p13;?)[cp18]/46,XX[2]
.ish t(X;14)(3'IGH-,5'IGH+;3'IGH+,5'IGH-),del(9)(TP16-,D9Z3+),
psu dic(17;20)(TP53-,D17Z1+),der(?)(TP53+,D17Z1-)

The combined results from chromosomal analysis and interphase and metaphase FISH assays revealed the following:

- **A cryptic translocation t(X;14), leading to a CRLF2/IGH gene rearrangement;**
- **A cryptic deletion in 9p, leading to loss of TP16;**
- **Rearrangements involving chromosome 17 and 20 with retainment of two copies of TP53 genes.**

These findings can be consistent with a BCR-ABL1-like B-cell ALL



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