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Jumping translocation: an unusual cytogenetic finding in myeloid neoplasm

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Bone marrow karyotype of 86-year-old woman with myelofibrosis evolution from essential thrombocythemia showed unbalanced translocation involving chromosome 1 and acrocentric chromosomes 14, 15 and 22 (Figure 1), configuring the phenomenon of Jumping translocation (JT). Twenty metaphases showed: 46,XX,der(14)t(1;14)(q12;p11.2)[11]/46,XX,der(22)t(1;22)(q12;p11.2)[3]/46,XX,der(15)t(1;15)(q12;p11.2)[2]/46,XX[4].

JT is a rare cytogenetic aberration that occurs when a donor segment chromosome breaks off and merges into two or more receptor chromosomes, resulting in an unbalanced translocation with gain of the donor chromosome

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This phenomenon shows genetic instability, despite not being associated with other chromosomal abnormalities and is associated with an unfavorable prognosis in myeloid neoplasms. Among the chromosomal gains, the most frequent is the partial trisomy 1q, as in the case described.

Conflicts of interest

The authors declare no conflicts of interest.

REFERENCES