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Topology of chromosomes 18 and X in human blastomeres from 3- to 4-day-old embryos.

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The positions of chromosomes 18 and X fluorescence in situ hybridization signals were analyzed in blastomeres generated from human in vitro fertilization 3- to 4-day-old embryos after preimplantation screening of aneuploidy of chromosomes 13, 16, 18, 21, 22, X, and Y. Fluorescent signal localization compared with a three-dimensional sphere model of random signal distribution revealed significant differences, providing evidence of peripheral localization of chromosome 18 in aneuploid (p=0.0013) and aneuploid/euploid blastomeres (p=0.0011). No differences were found in localization of chromosome 18 in euploid and in chromosome X in euploid and aneuploid blastomeres.

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