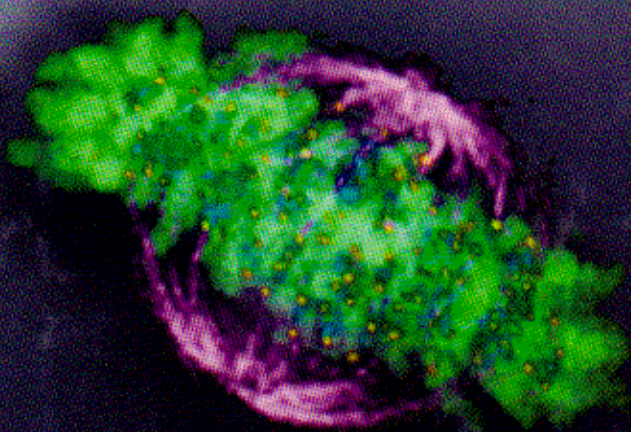




About the Cover

During cell division in animals, plants, and other eukaryotic species, the chromosomes in the cell nucleus of a mother cell must be properly sorted so that each daughter cell will receive the correct number. The micrograph shown on the cover depicts a human cancer cell in the act of mitosis—a process that achieves the proper sorting of chromosomes. This cell is in a stage of mitosis called metaphase. Different structures in the cell are labeled with colored fluorescent molecules. At metaphase, the chromosomes (green) line up along the center of the cell, and the spindle fibers (purple) grow from their poles and attach to kinetochore proteins bound to centromeres (yellow). At this stage, the chromosomes are composed of two identical sister chromatids. Later in mitosis, these sister chromatids separate from each other so that each daughter cell receives the same amount of genetic information as the original mother cell.



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