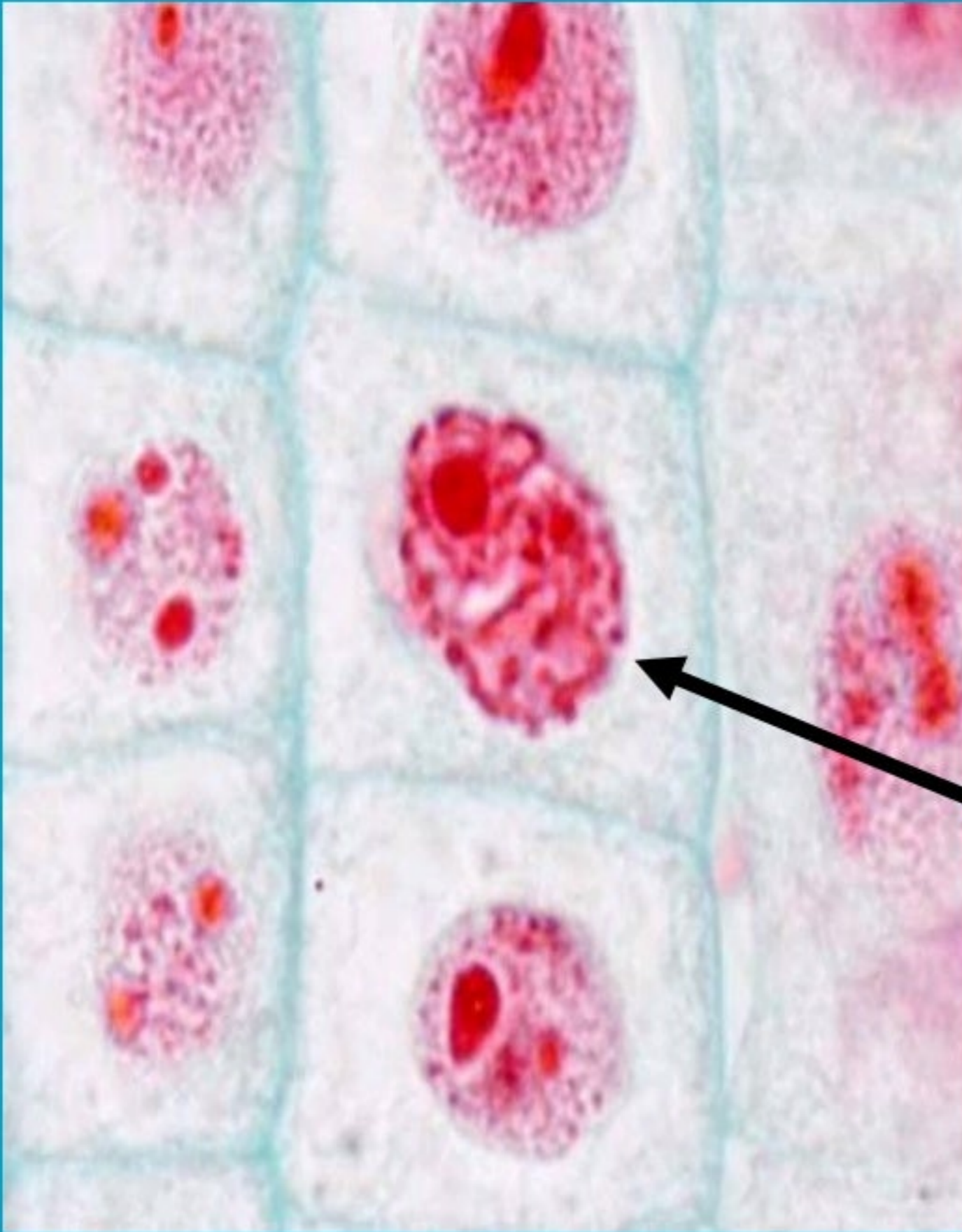


Cell Division

A fluorescence micrograph of a cell during division. The cell is roughly circular and contains a complex network of fibers. A central region is brightly colored in purple and blue, surrounded by a ring of red and orange. The outer periphery is primarily green and yellow. The background is dark, making the cell's internal structures stand out.

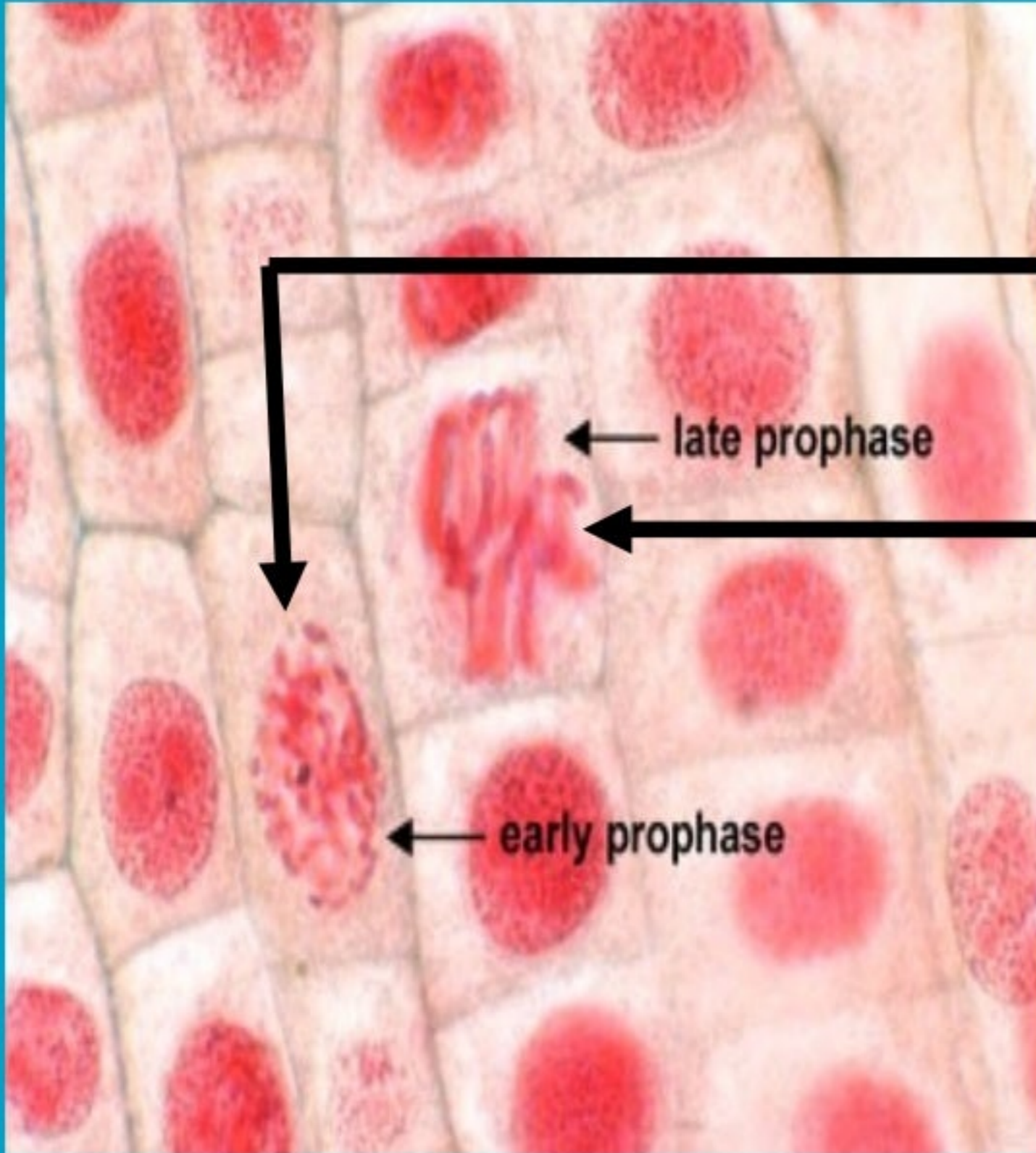
Mitosis & Meiosis



Prophase

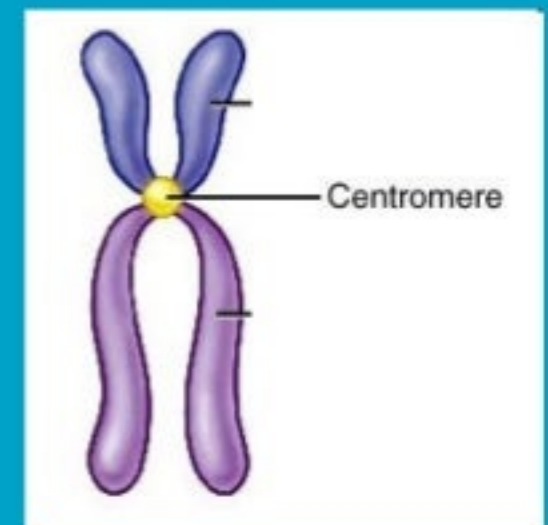
The Cell begins the division process

4. The nucleolus disappears,
5. The nuclear membrane breaks apart



3. The chromosomes become visible

4. The spindle apparatus forms and attaches to the centromeres of the chromosomes



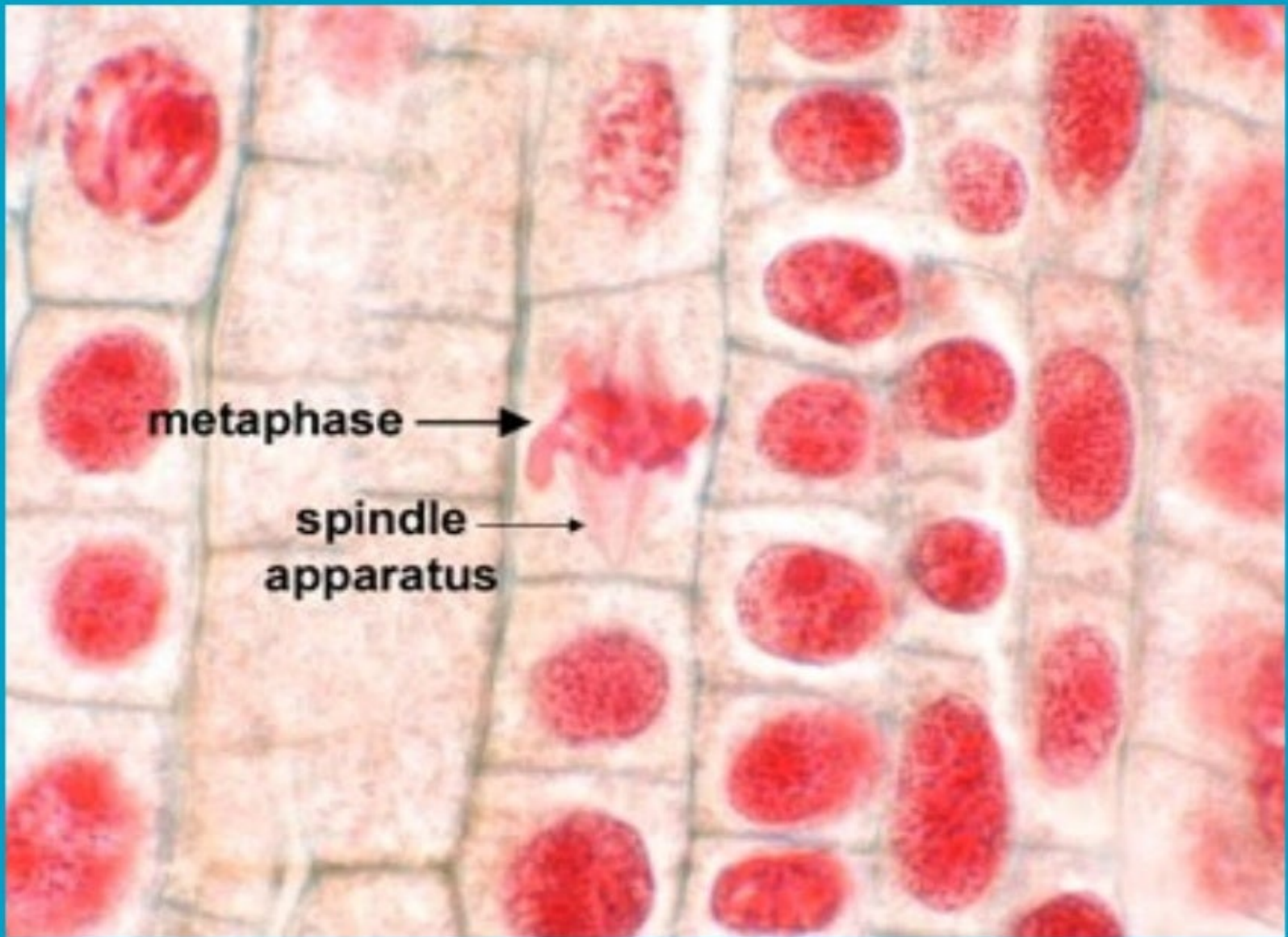
Metaphase

The Second Phase of Mitosis



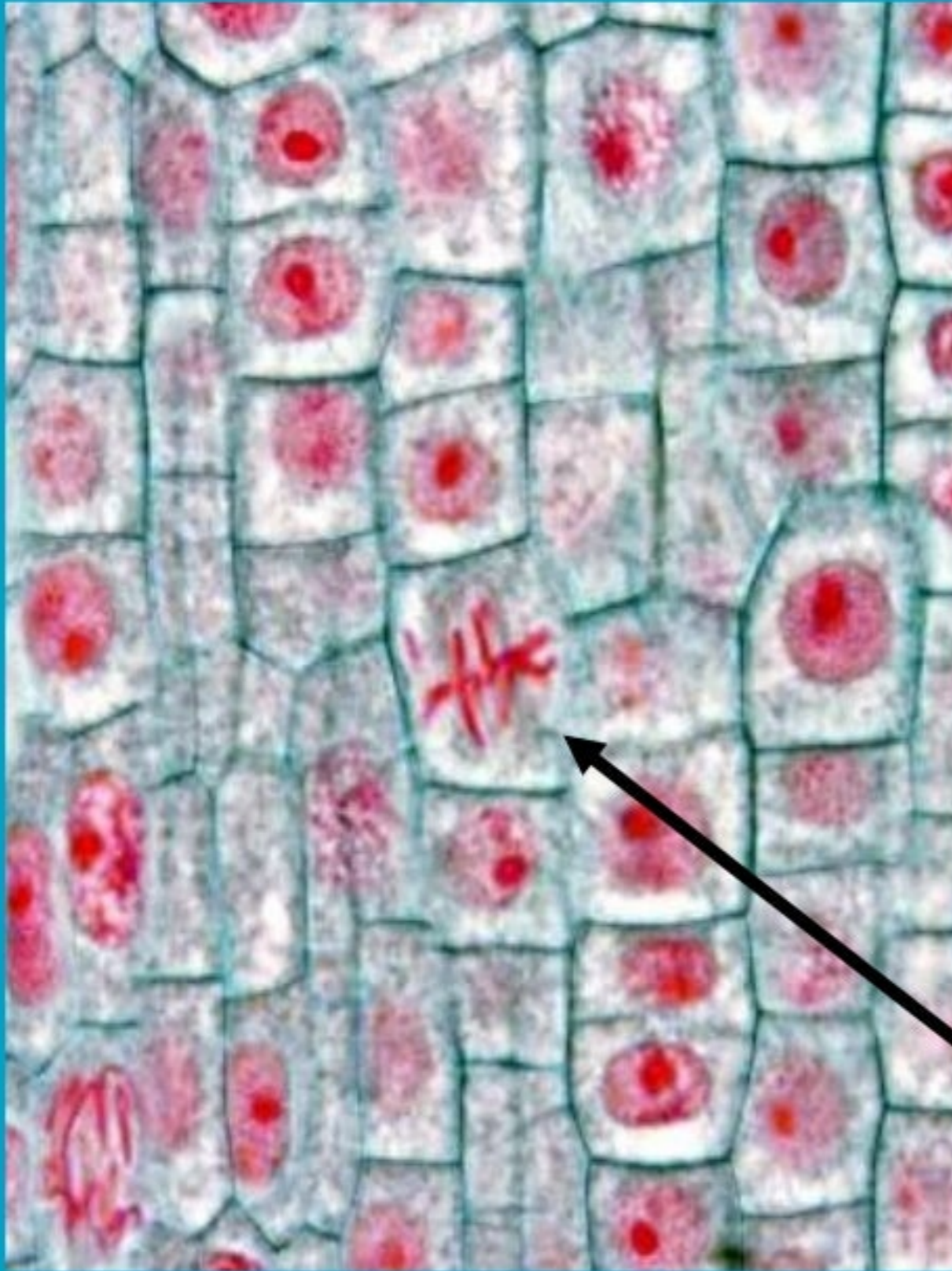
4. The Nuclear Membrane is completely gone

2. The duplicated chromosomes line up along the cell's equator.



metaphase →

spindle apparatus →

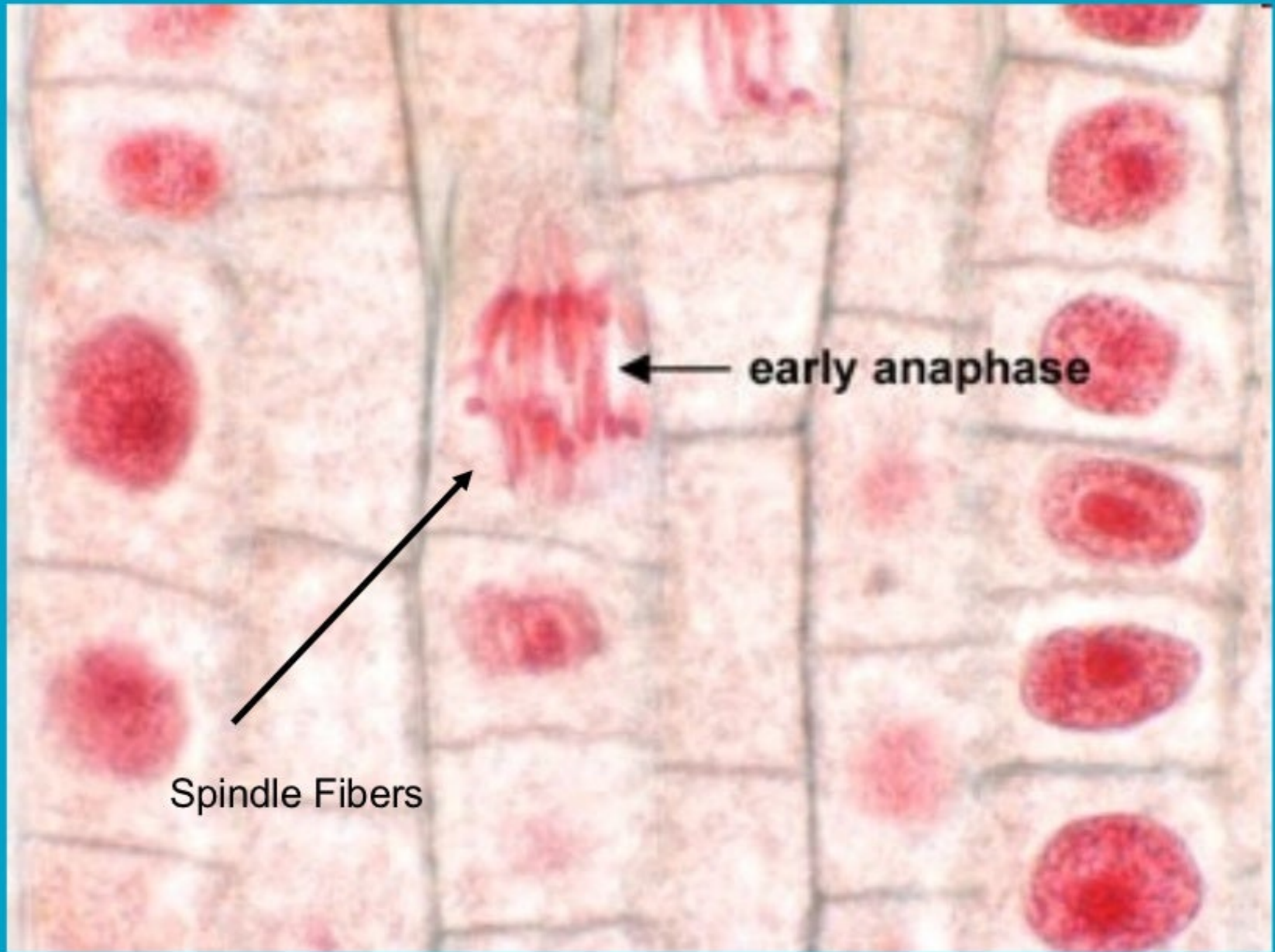


Anaphase

The third phase of Mitosis

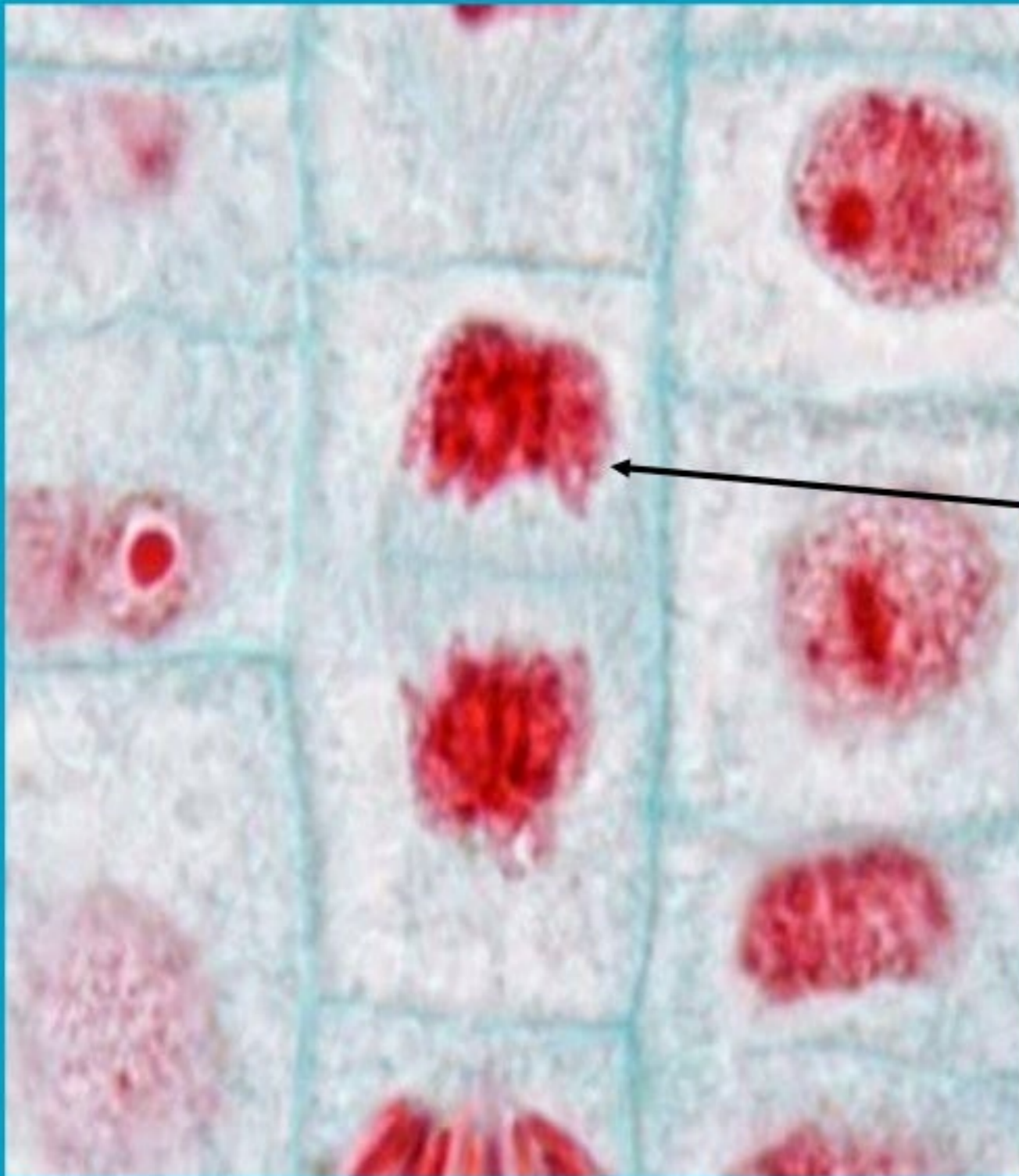
Diploid sets of daughter chromosomes separate

They are pushed and pulled toward opposite poles of the cell by the spindle fibers



← early anaphase

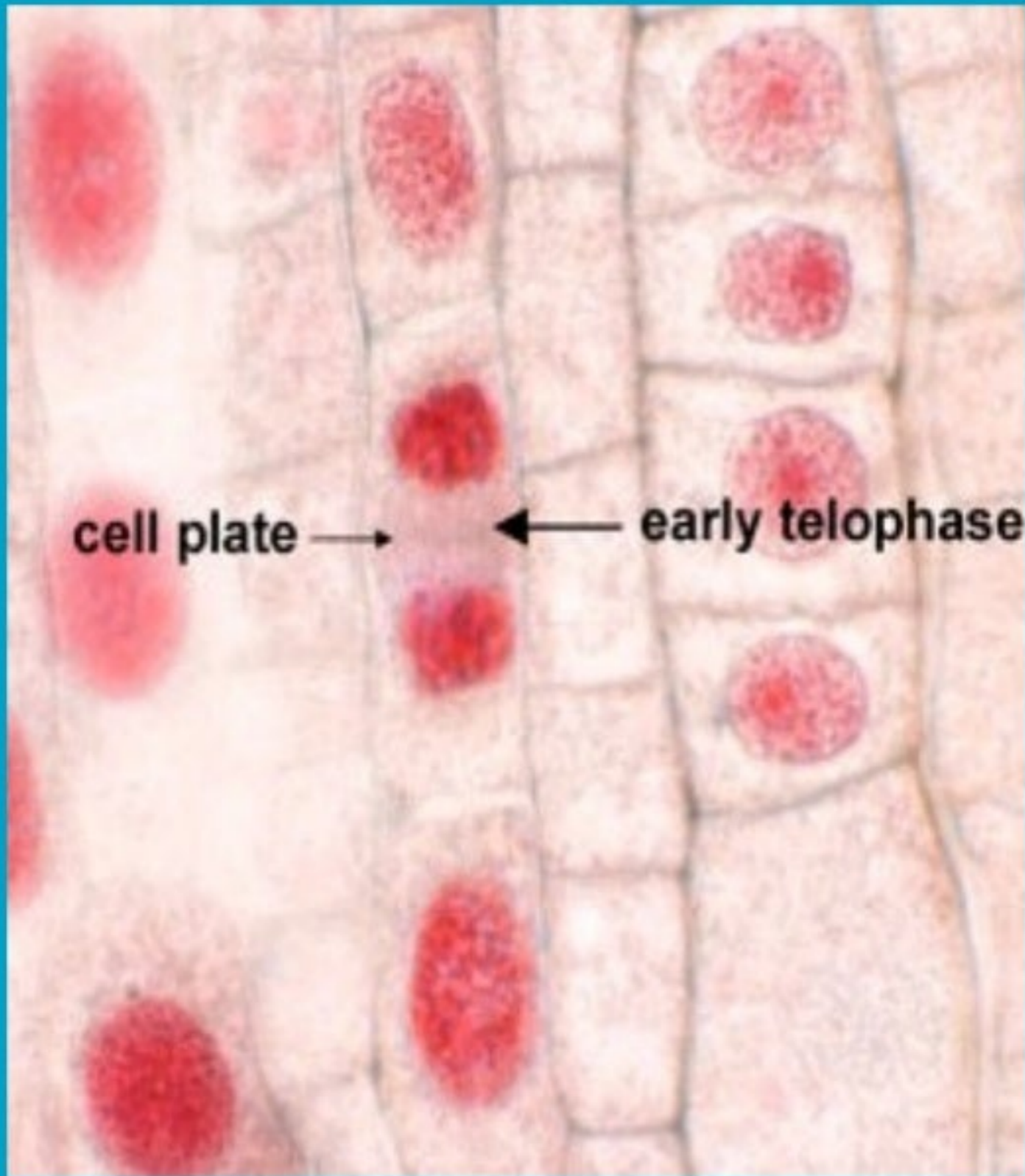
Spindle Fibers



Telophase

The nuclear membrane and nucleoli (nucleus) reform.

Cytokinesis is nearly complete,



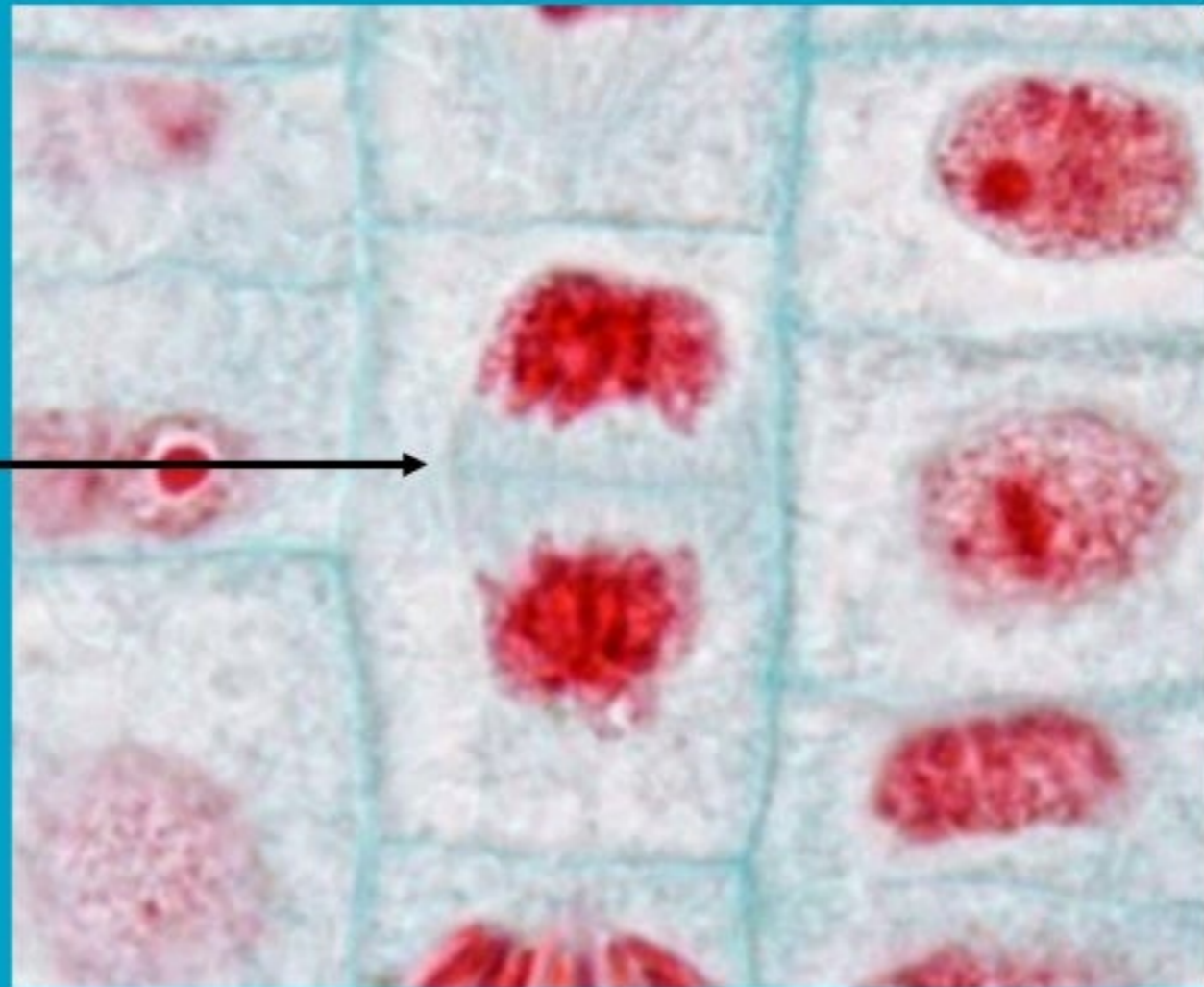
The Cell Plate
begins to form

The Cell
prepares for
final division

Cytokinesis – The final stage of Mitosis

The cytoplasm, organelles, and nuclear material are evenly split and two new cells are formed.

Cell Plate



The two new cells – each exactly like the other – are called Daughter Cells

