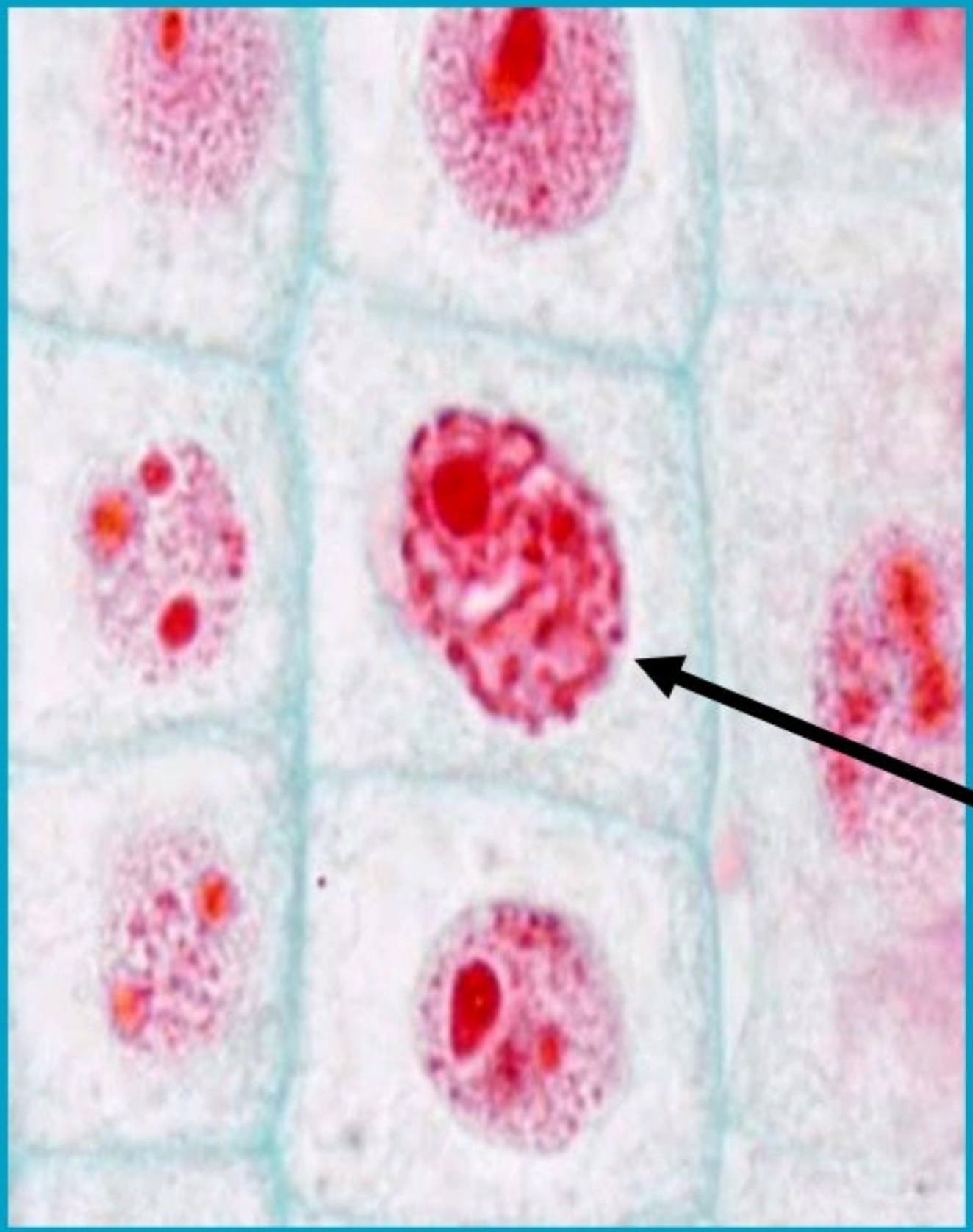
Cell Division

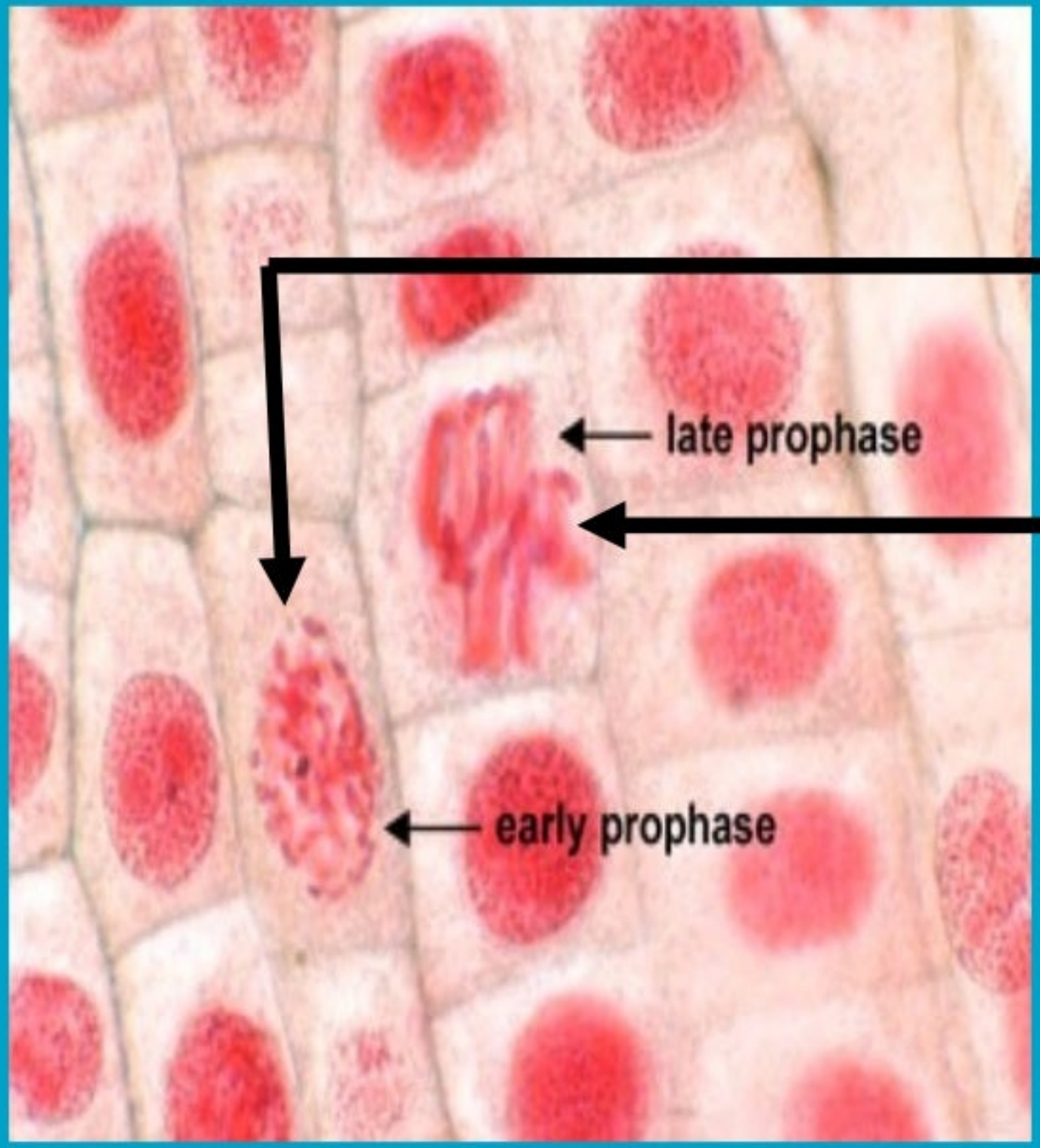
Mitosis & Meiosis



Prophase

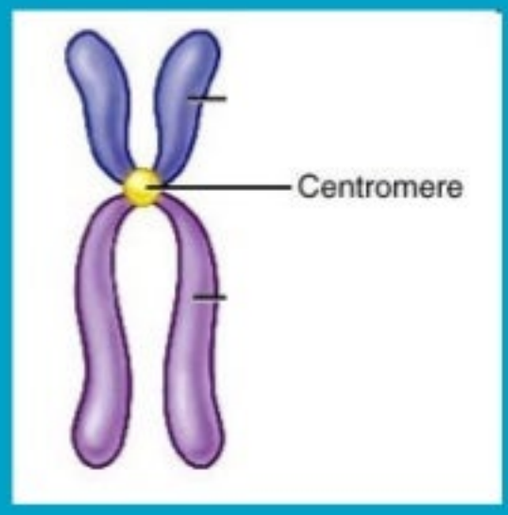
The Cell begins the division process

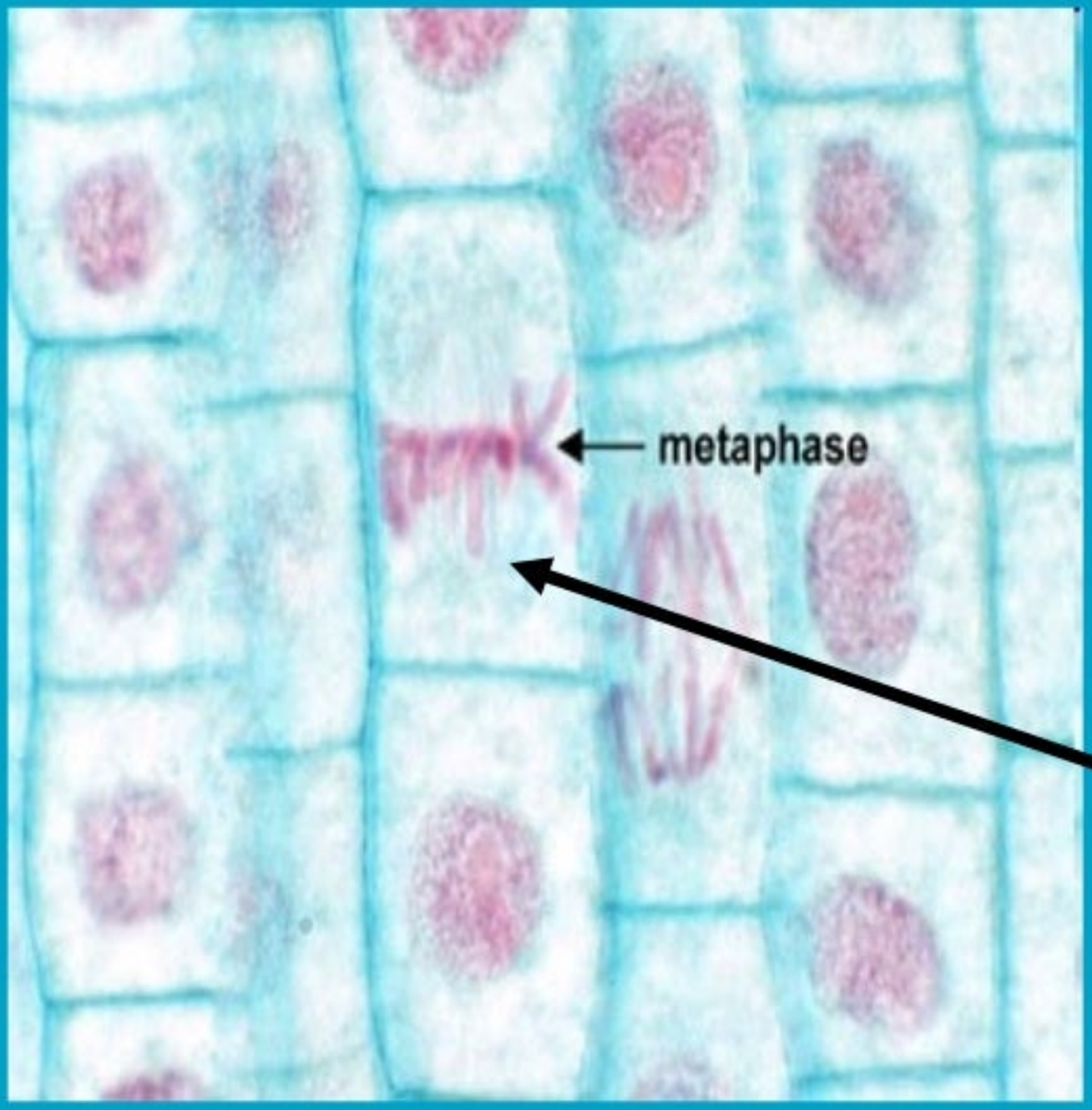
4. The nucleolus disappears,
5. The nuclear membrane breaks apart



3. The chromosomes become visible

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

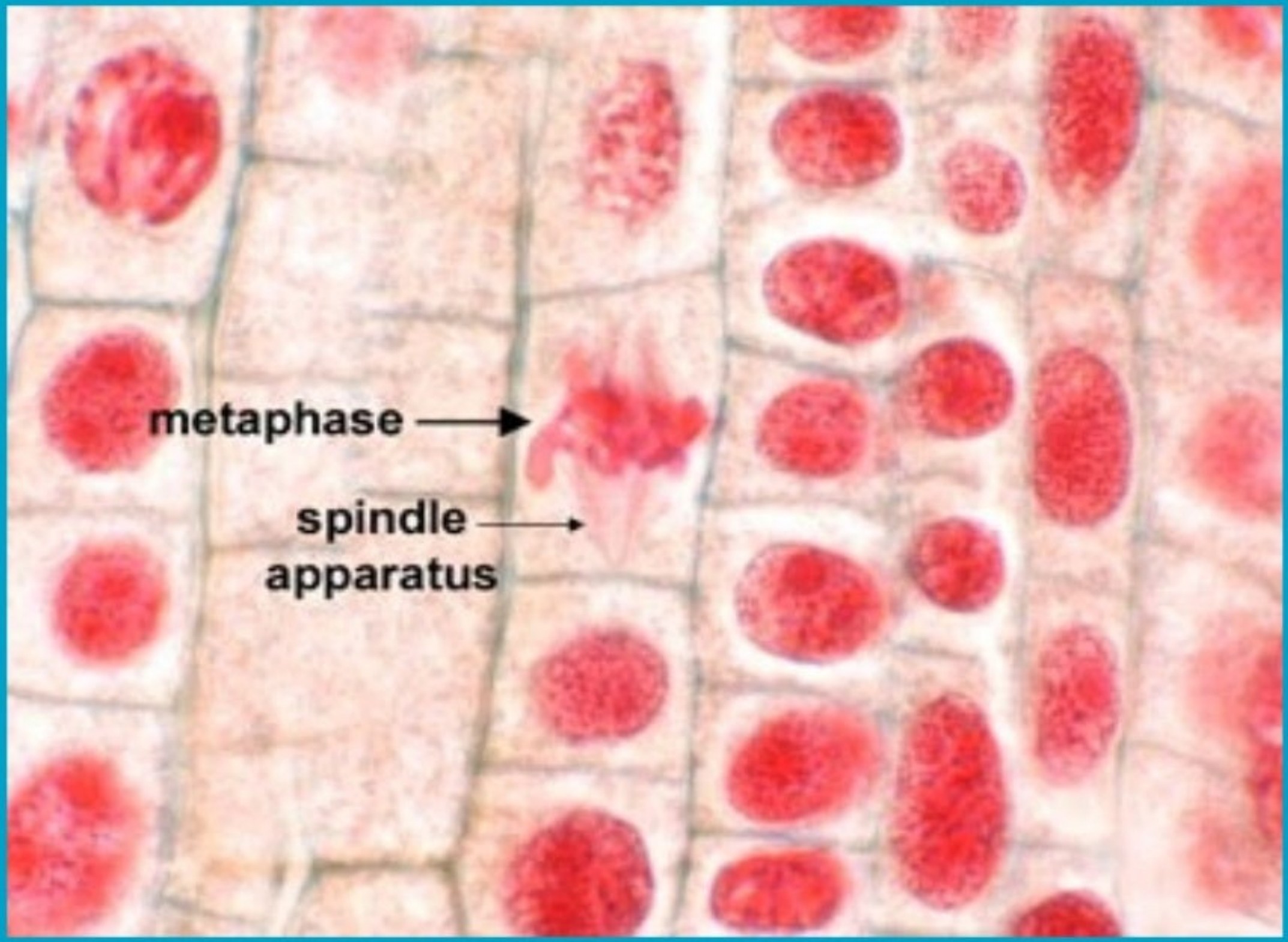


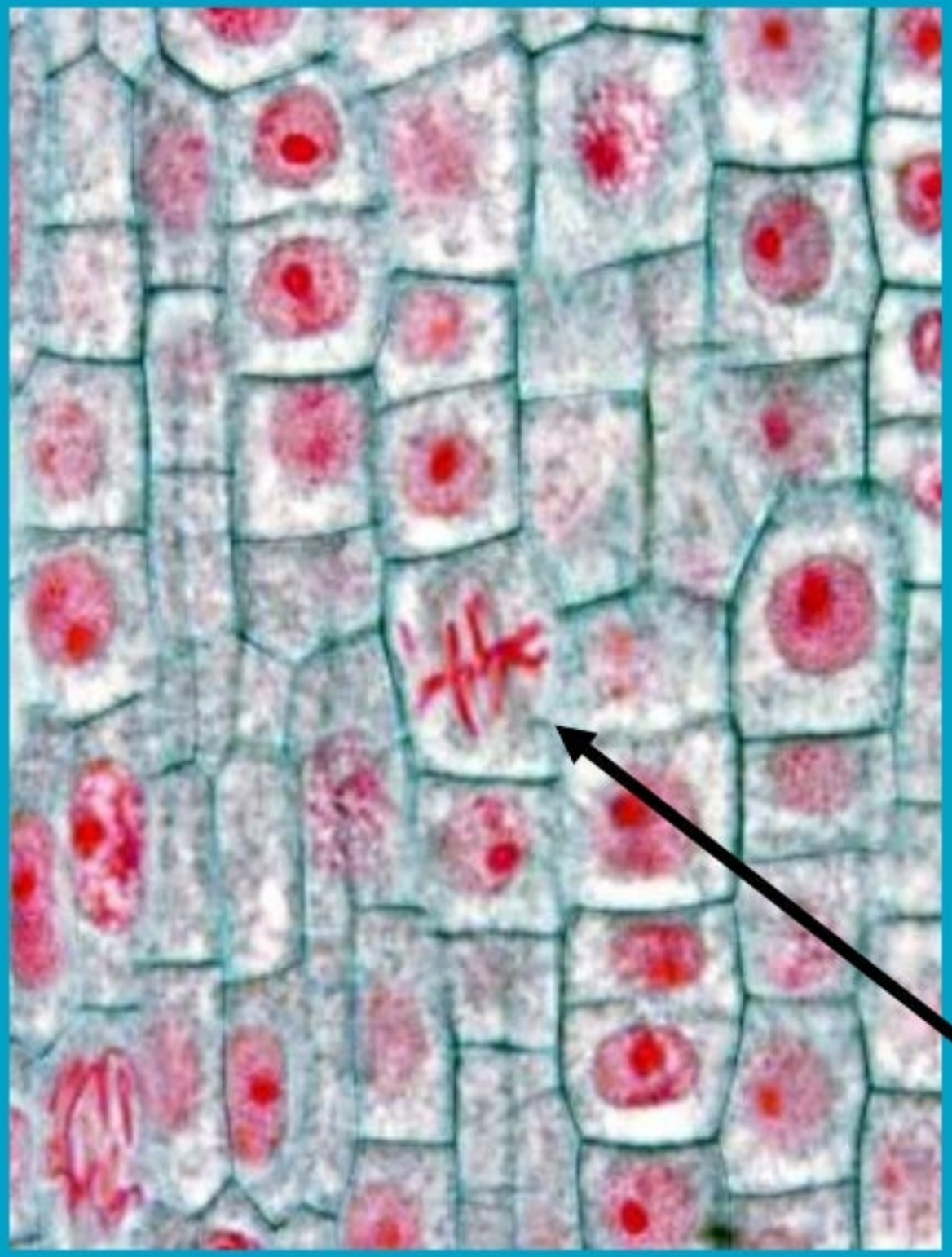


Metaphase

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

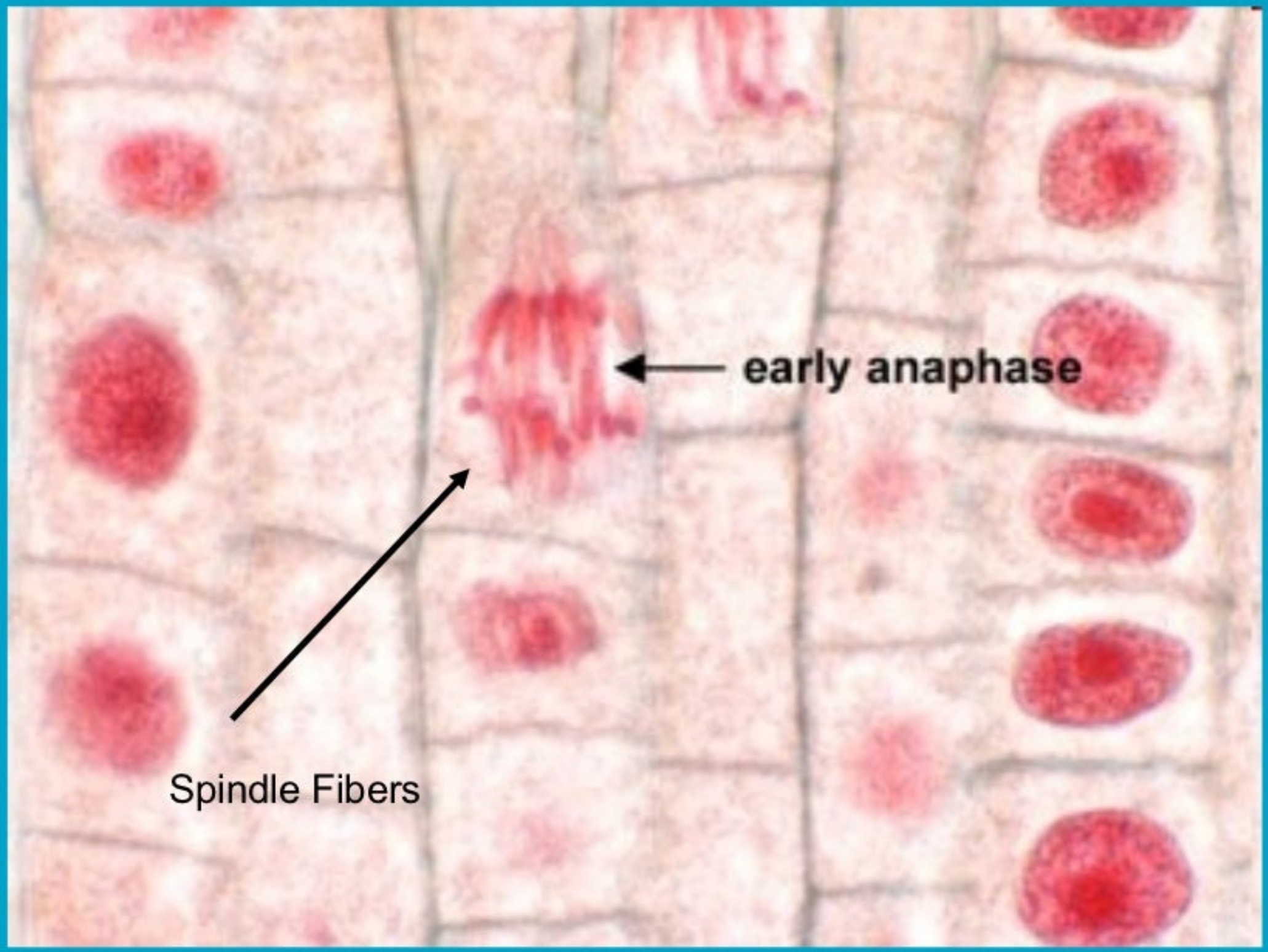


Anaphase

The third phase of Mitosis

Diploid sets of daughter chromosomes separate

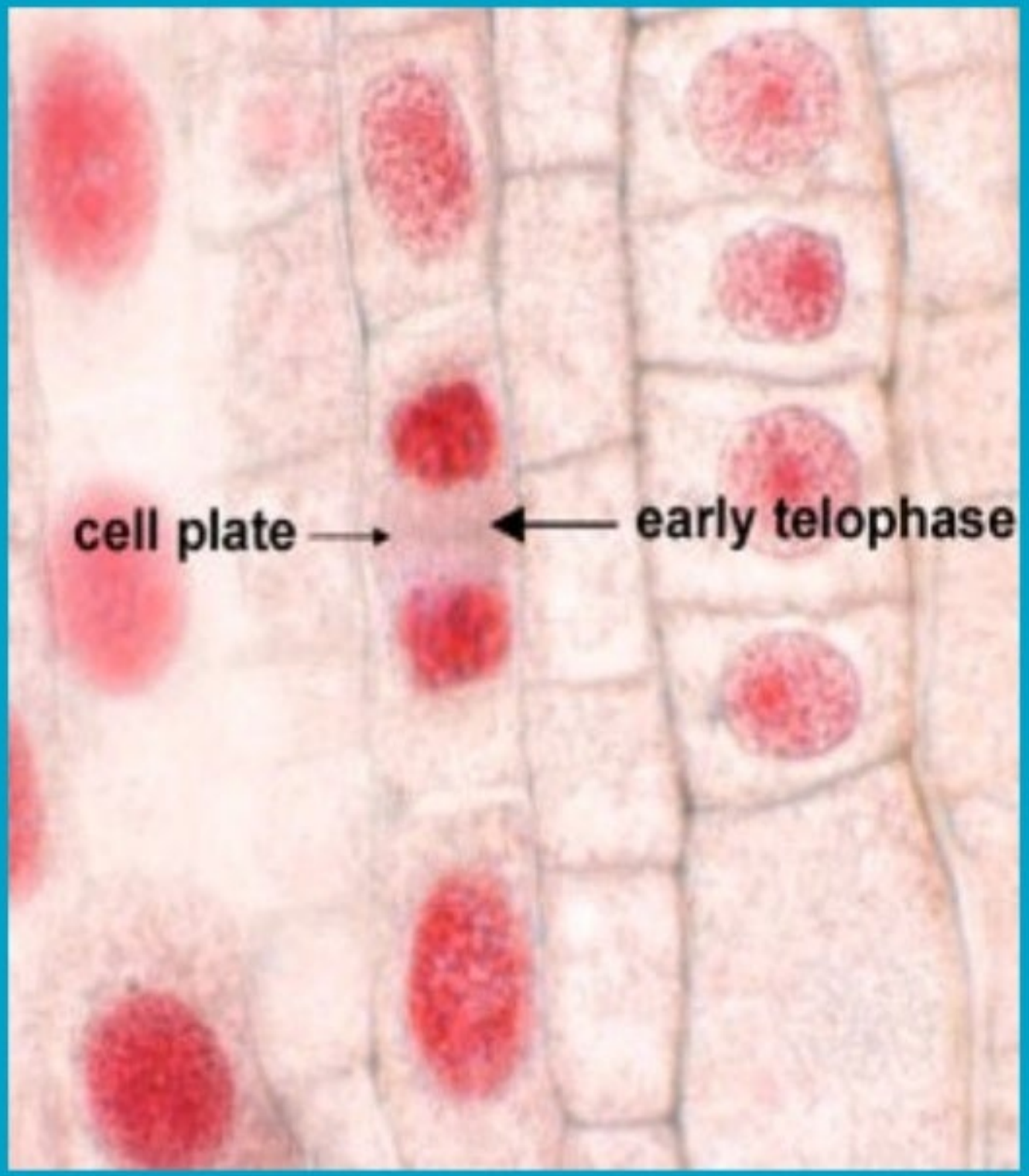
They are pushed and pulled toward opposite poles of the cell by the spindle fibers


early anaphase
Spindle Fibers

Telophase

The nuclear membrane and nucleoli (nucleus) reform.

Cytokinesis is nearly complete,

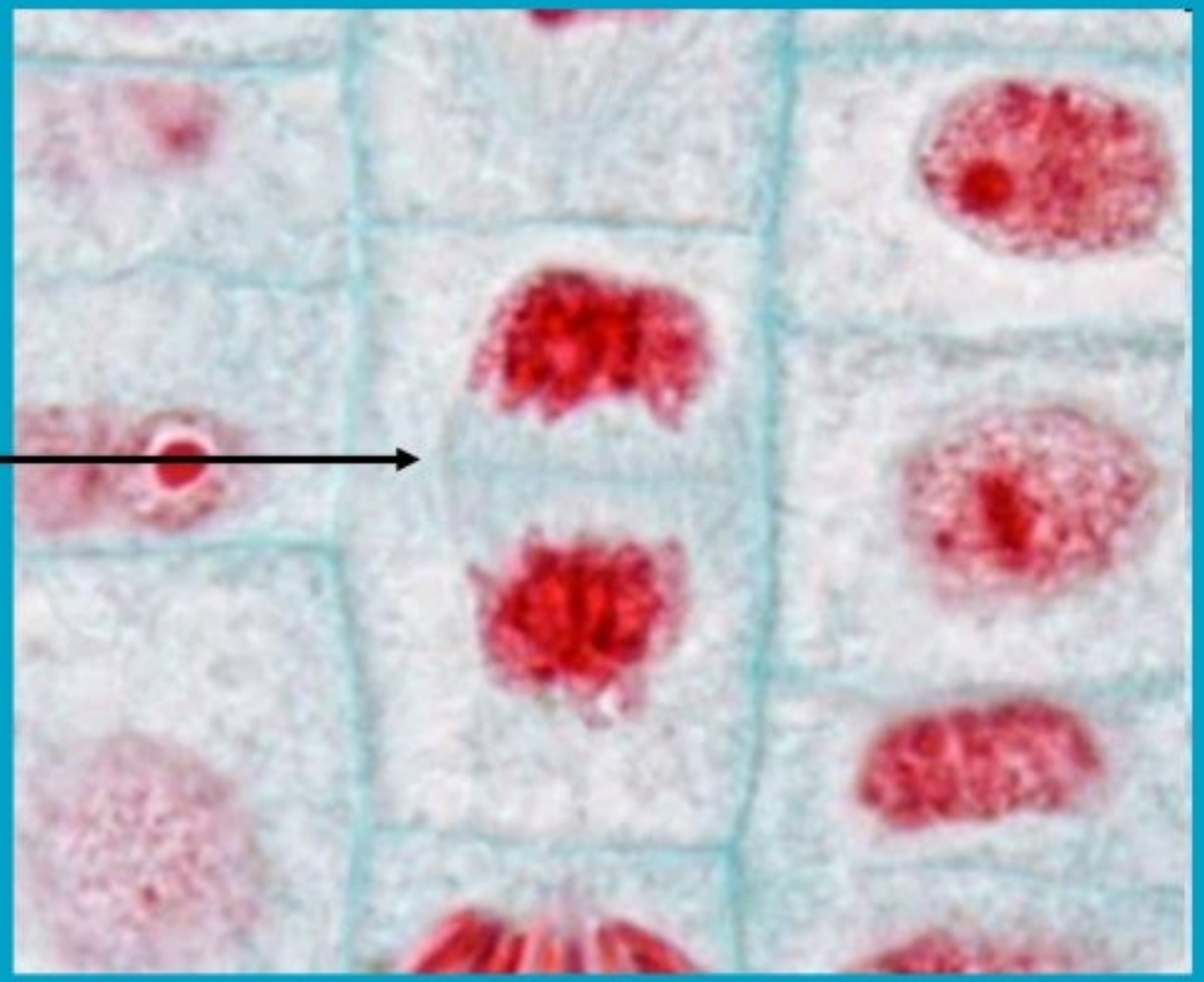


The Cell Plate begins to form

The Cell prepares for finial division

Cytokinesis – The final stage of Mitosis

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



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