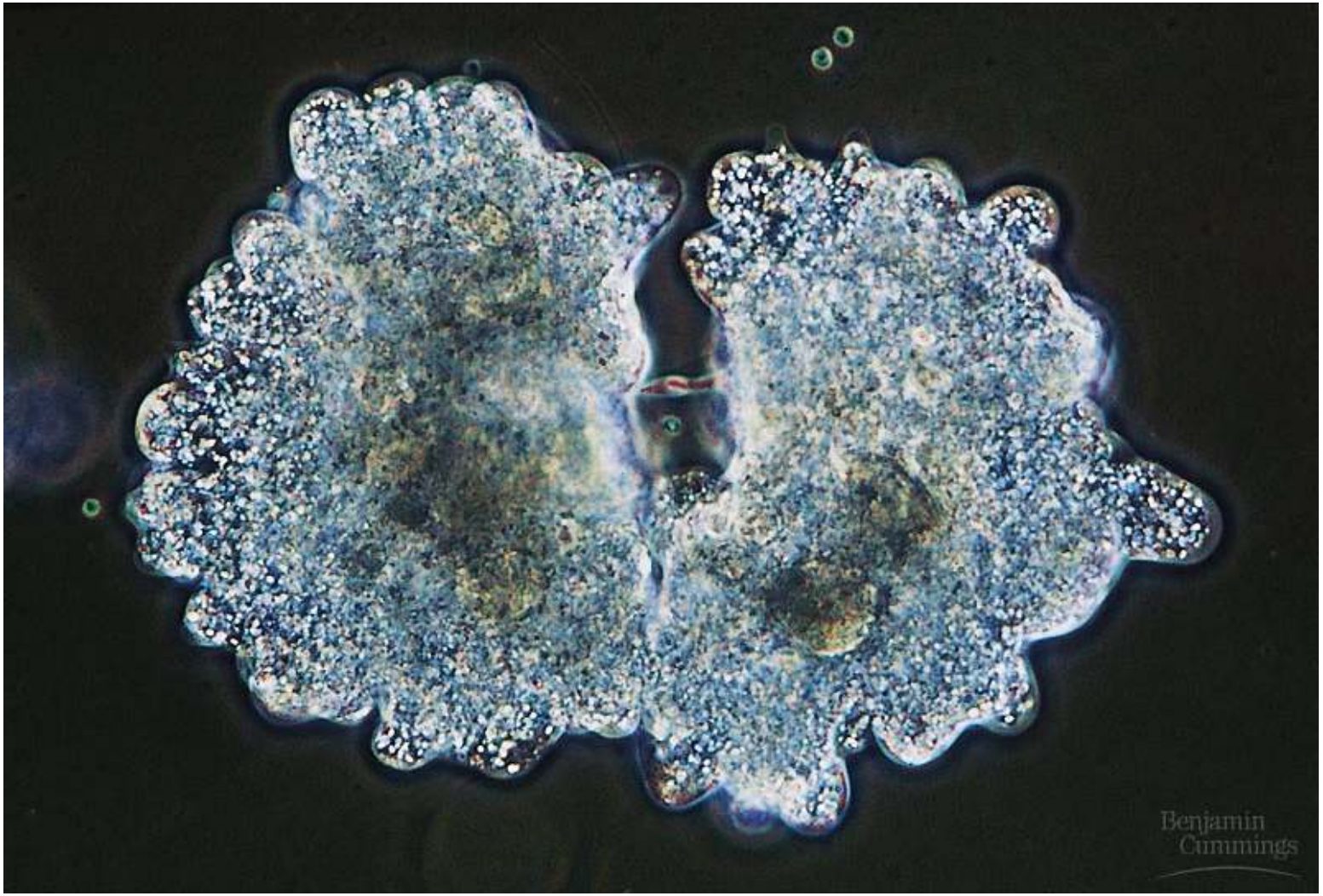
# Pre – AP Biology

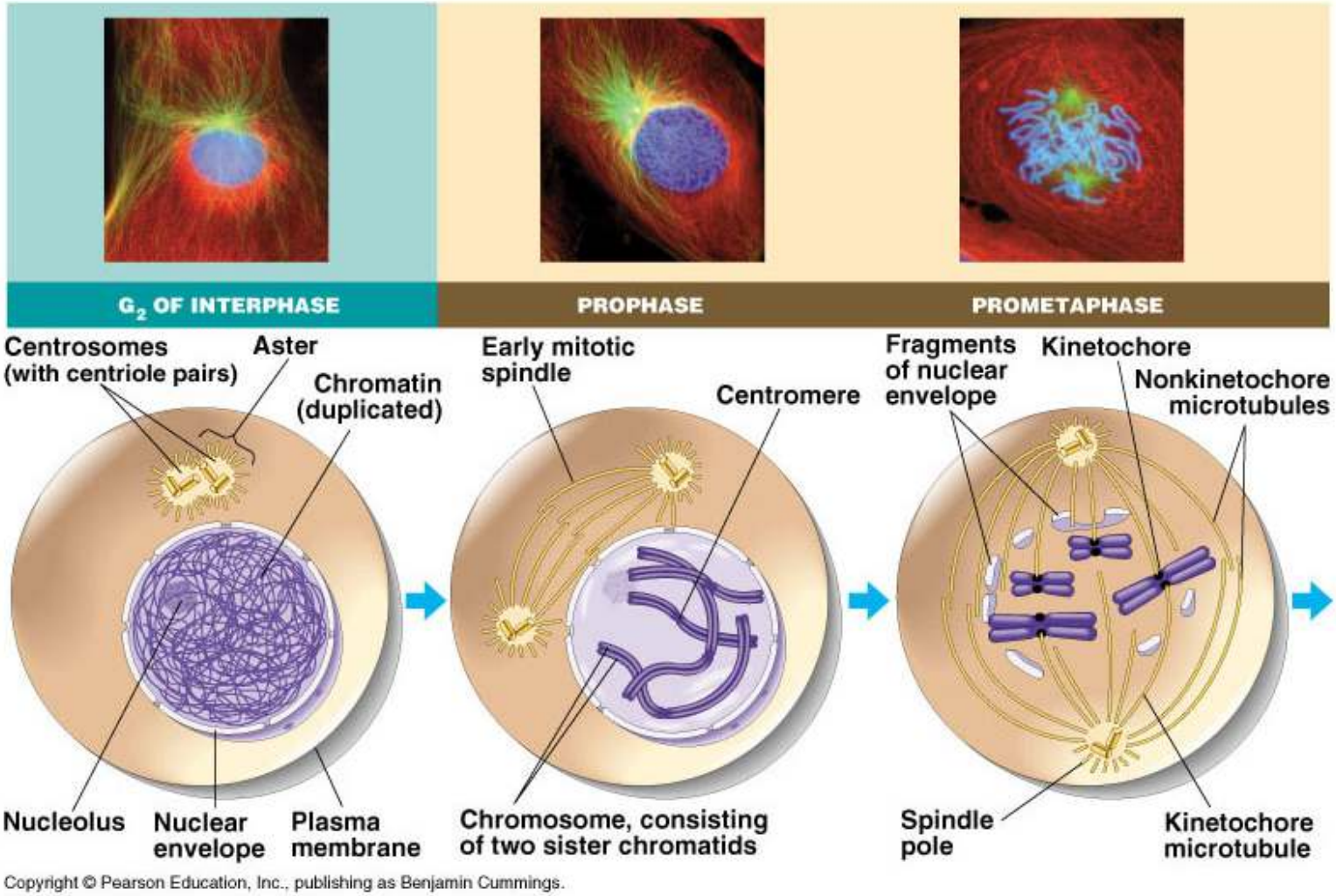
## The Cell Cycle (1.5)

## Part 1

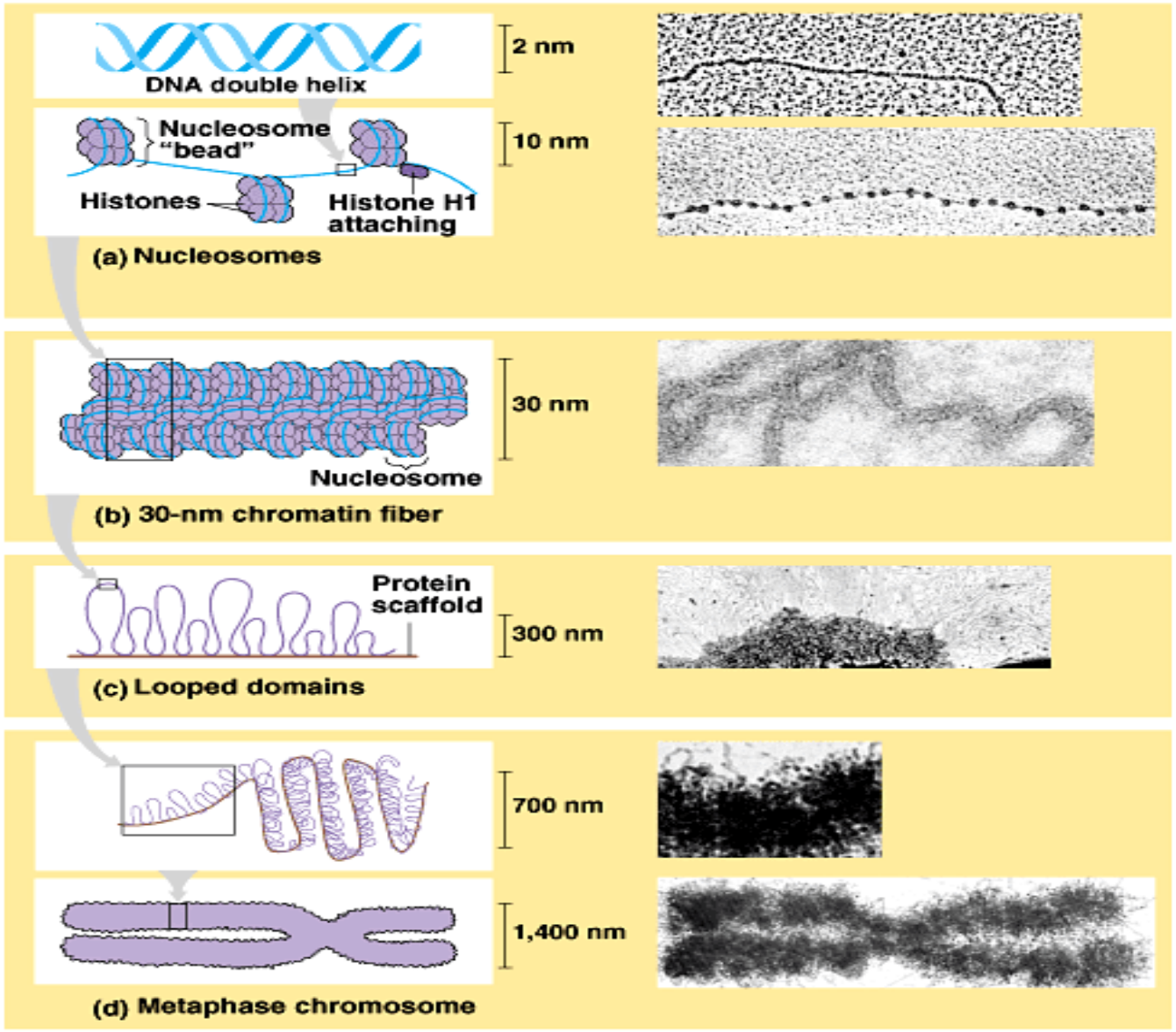
# One cell becoming two



# Chromatin vs. Chromosomes appearance within the cell.

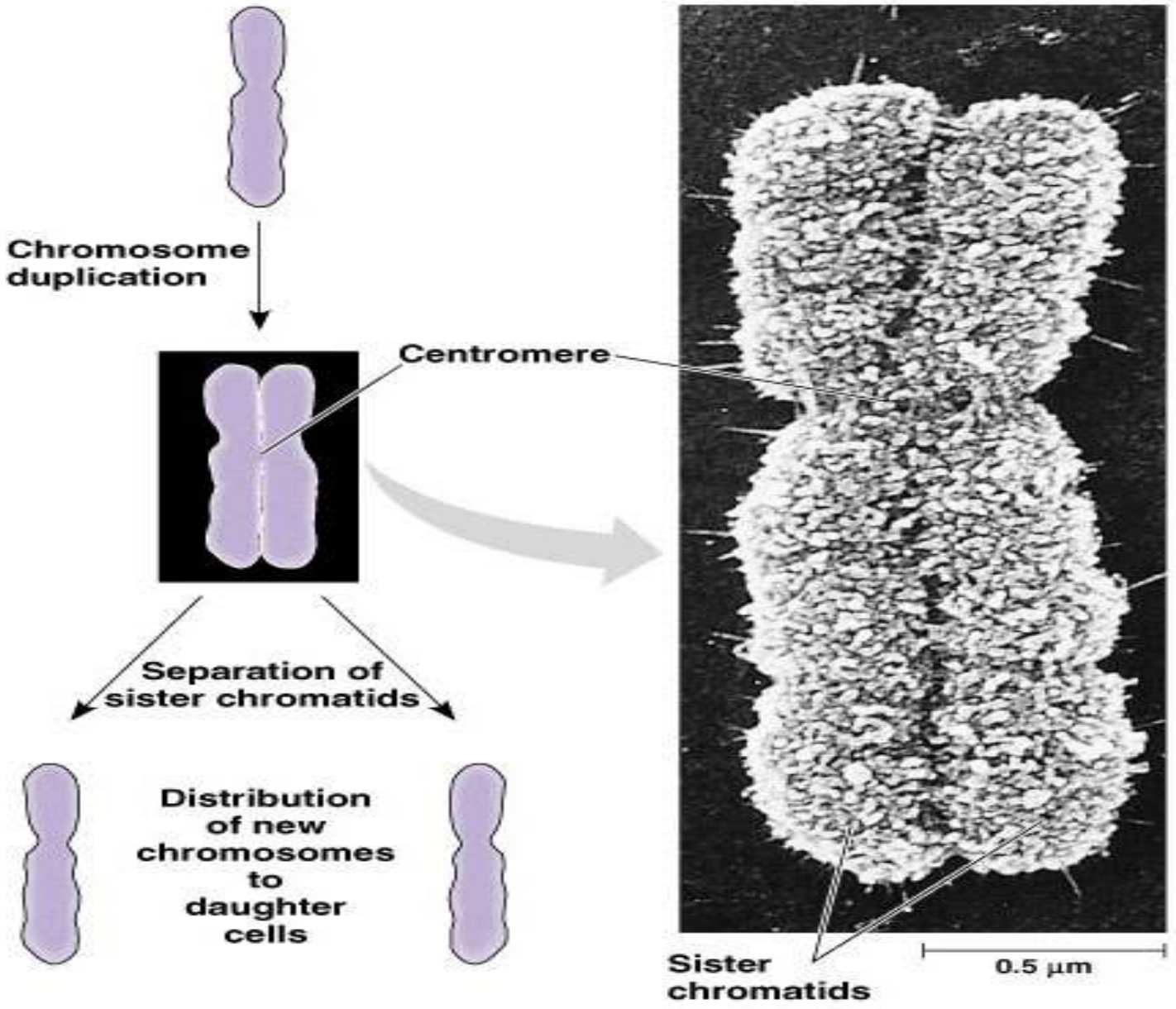


# DNA coiling up using histones



# Chromosome Duplication

## The DNA is replicated during the S phase



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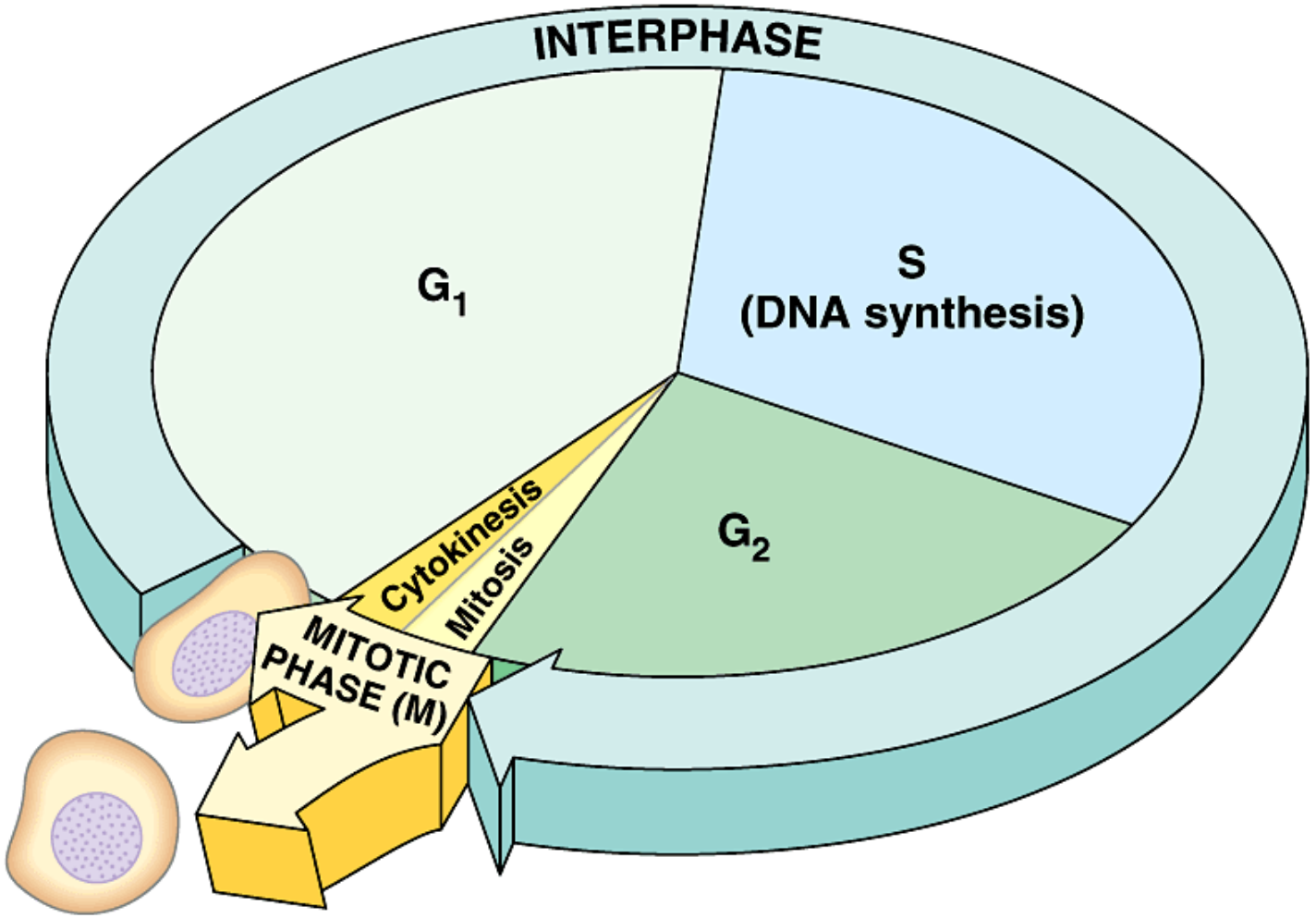
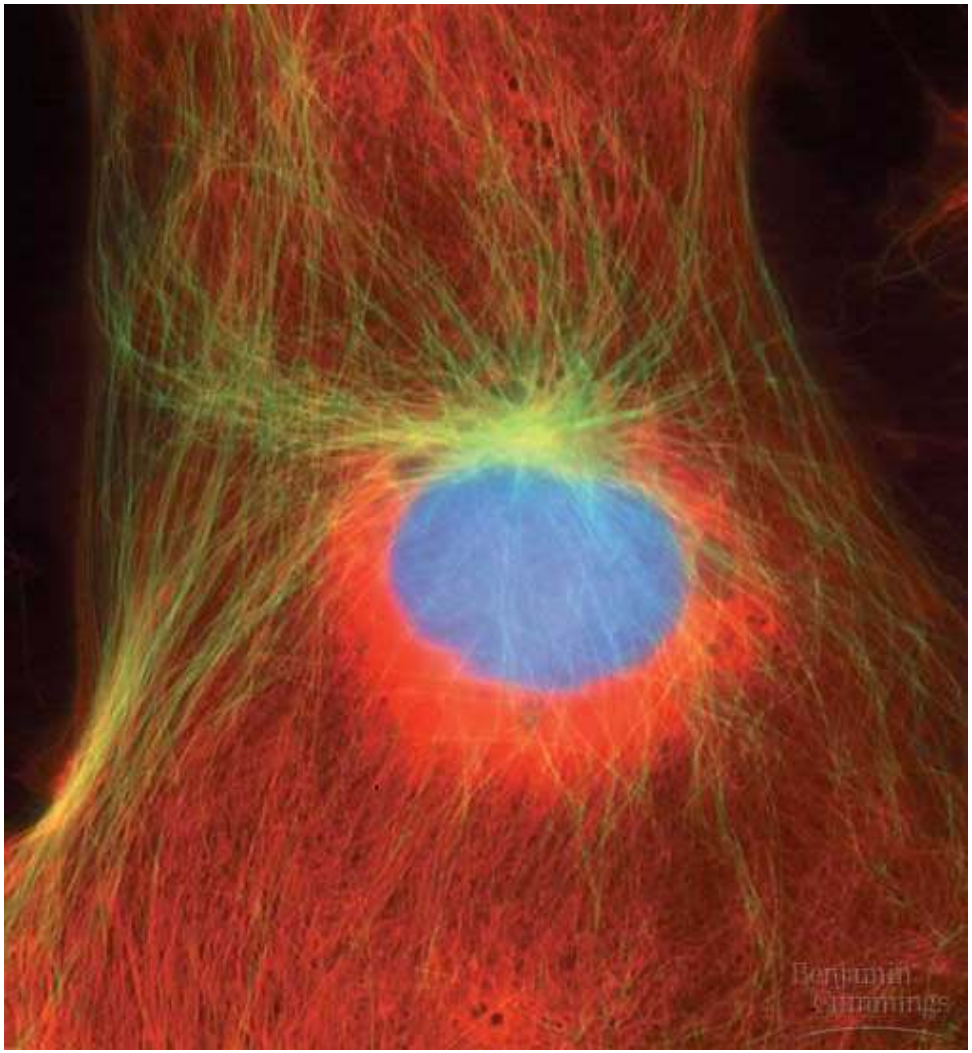
## The Cell Cycle (1.5)

## Part 2

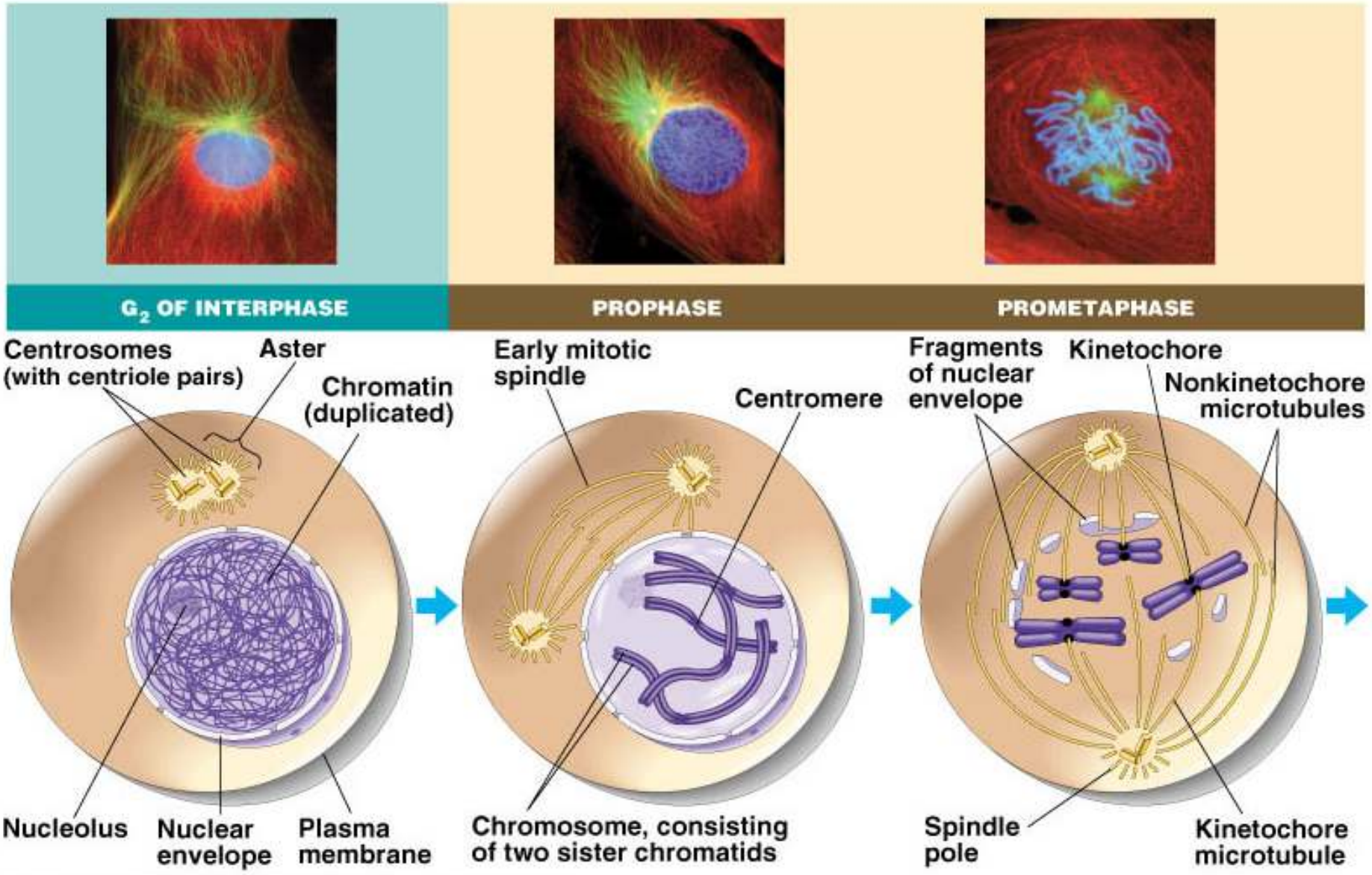
# Interphase



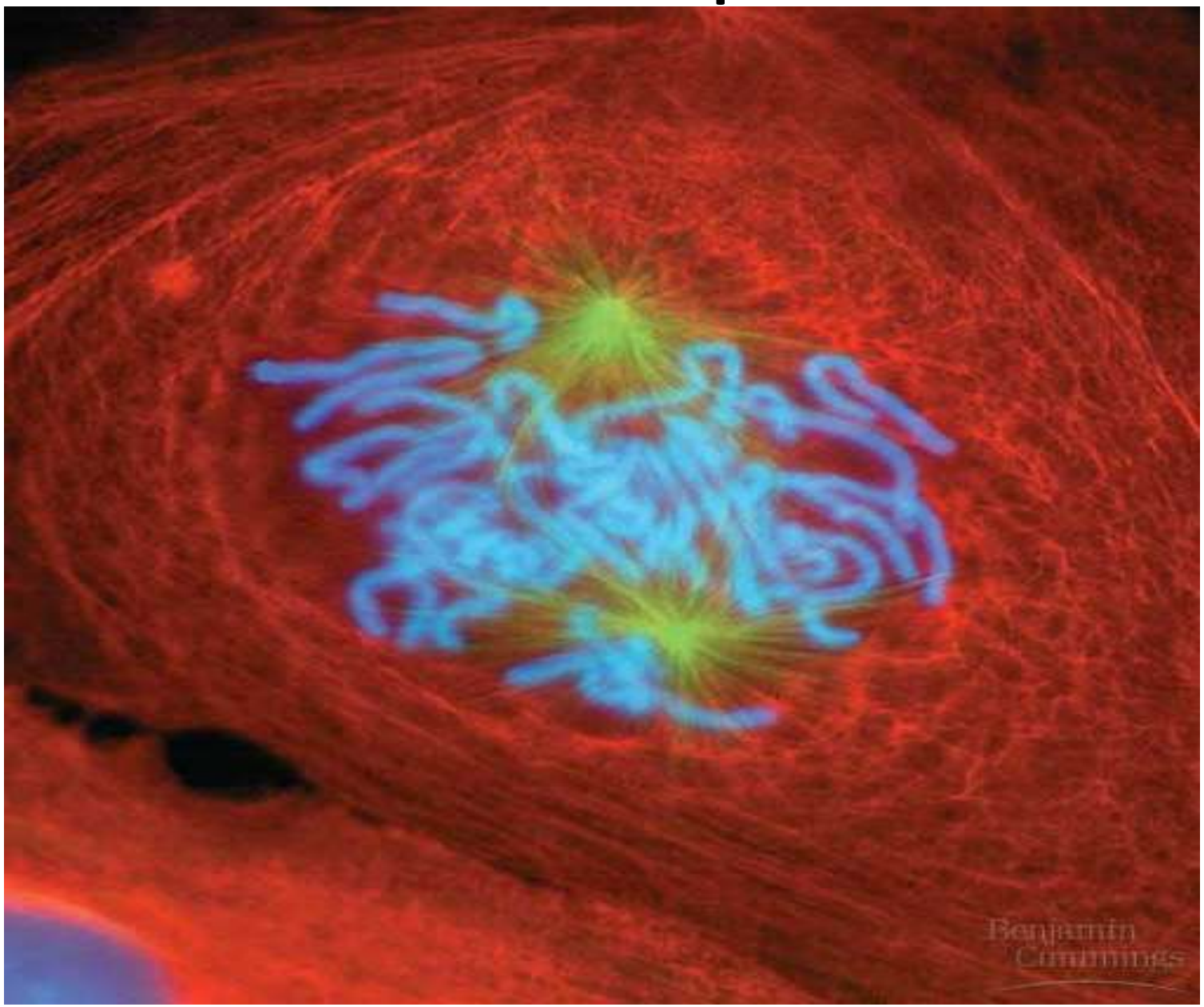
# Interphase cell
# (Look at the chromatin in the nucleus.)



# Starting Mitosis

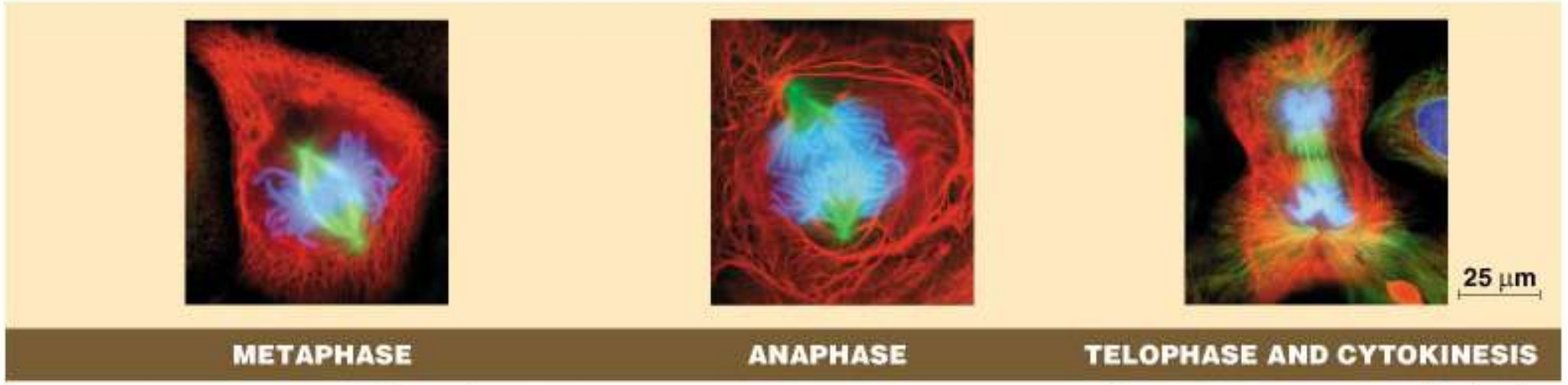


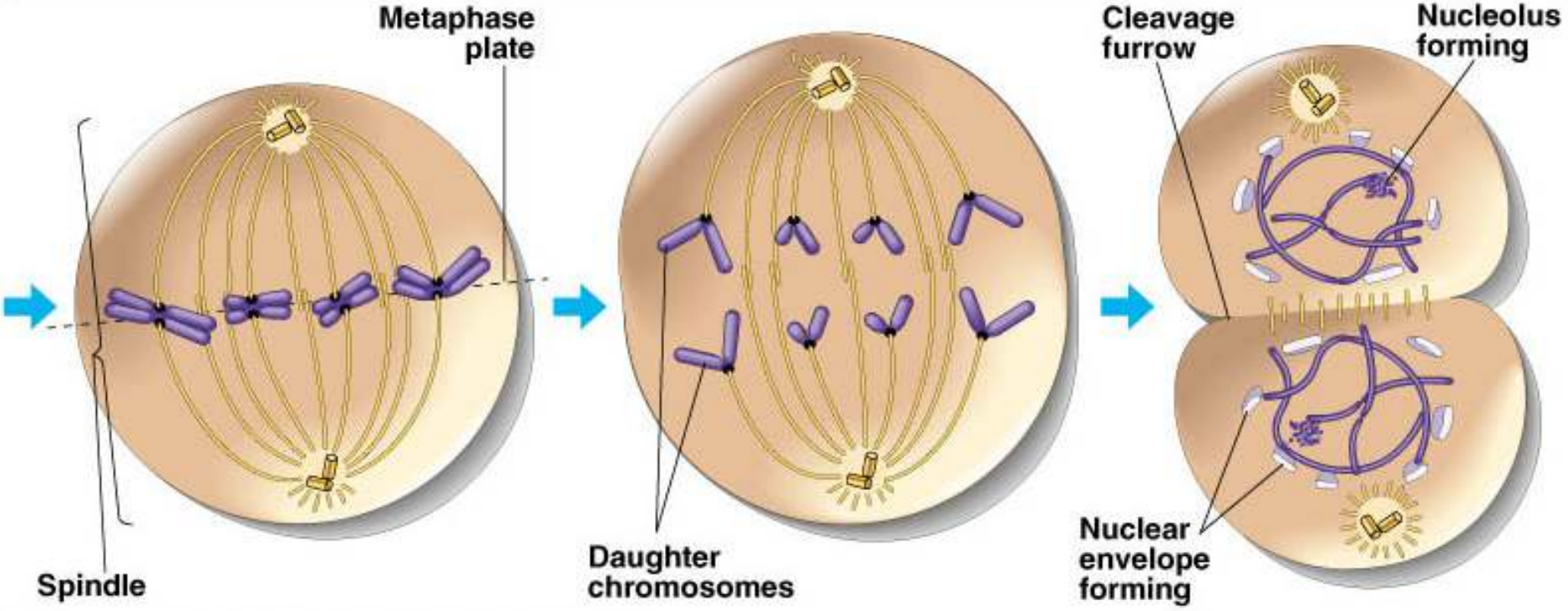
# Cell in Prophase



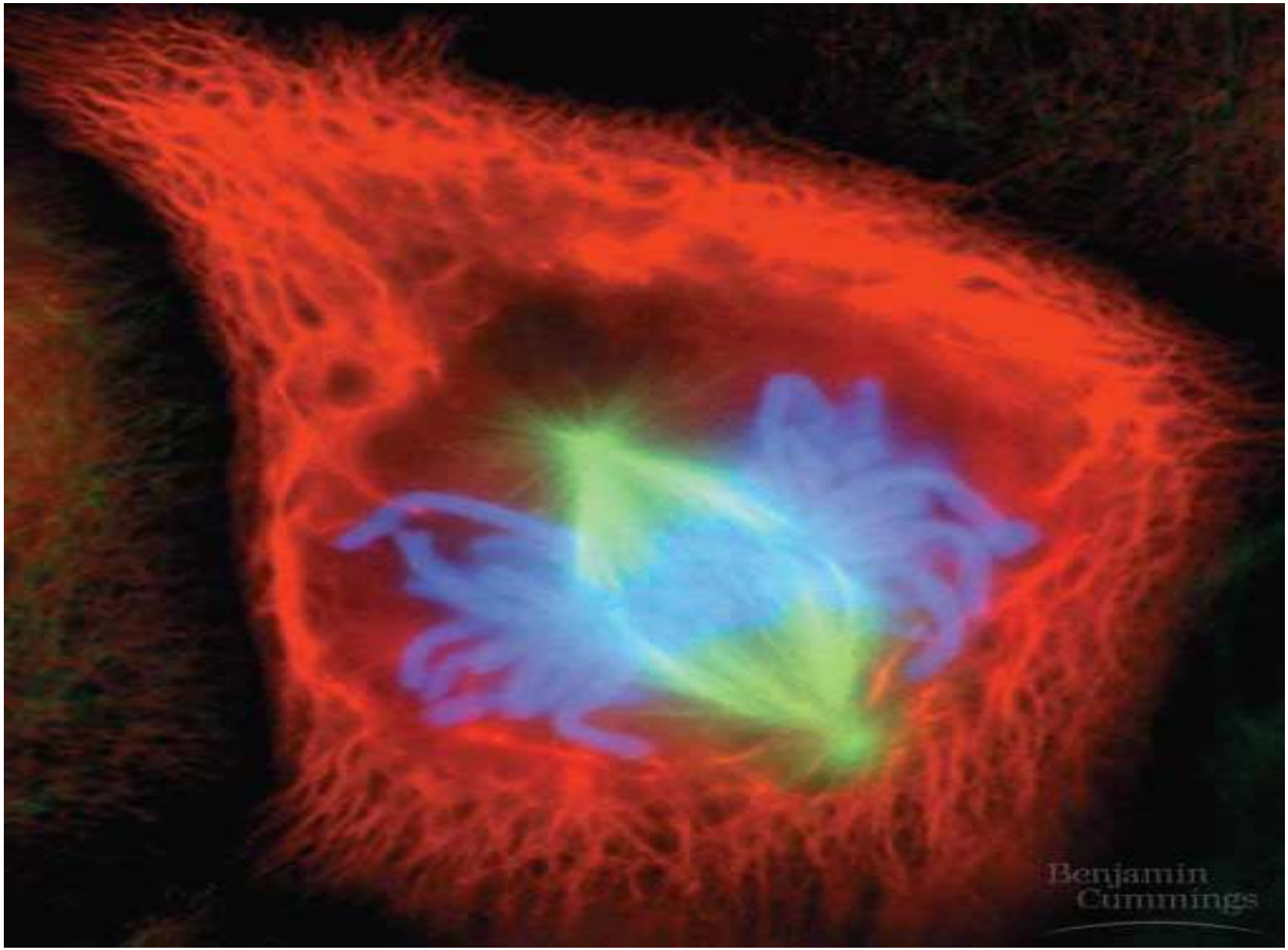
# Second half of Mitosis

## Can you “see” the phases in the name?

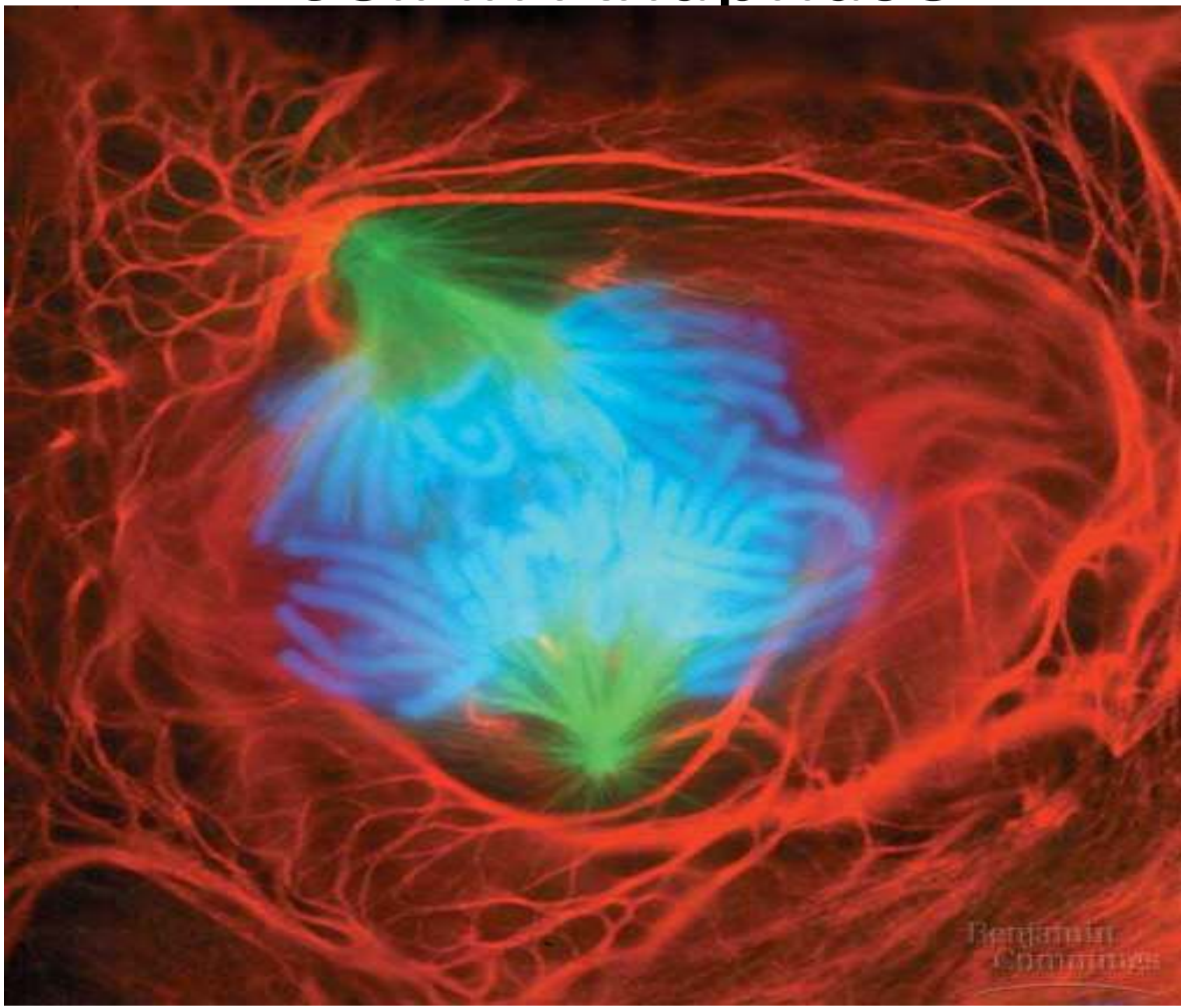


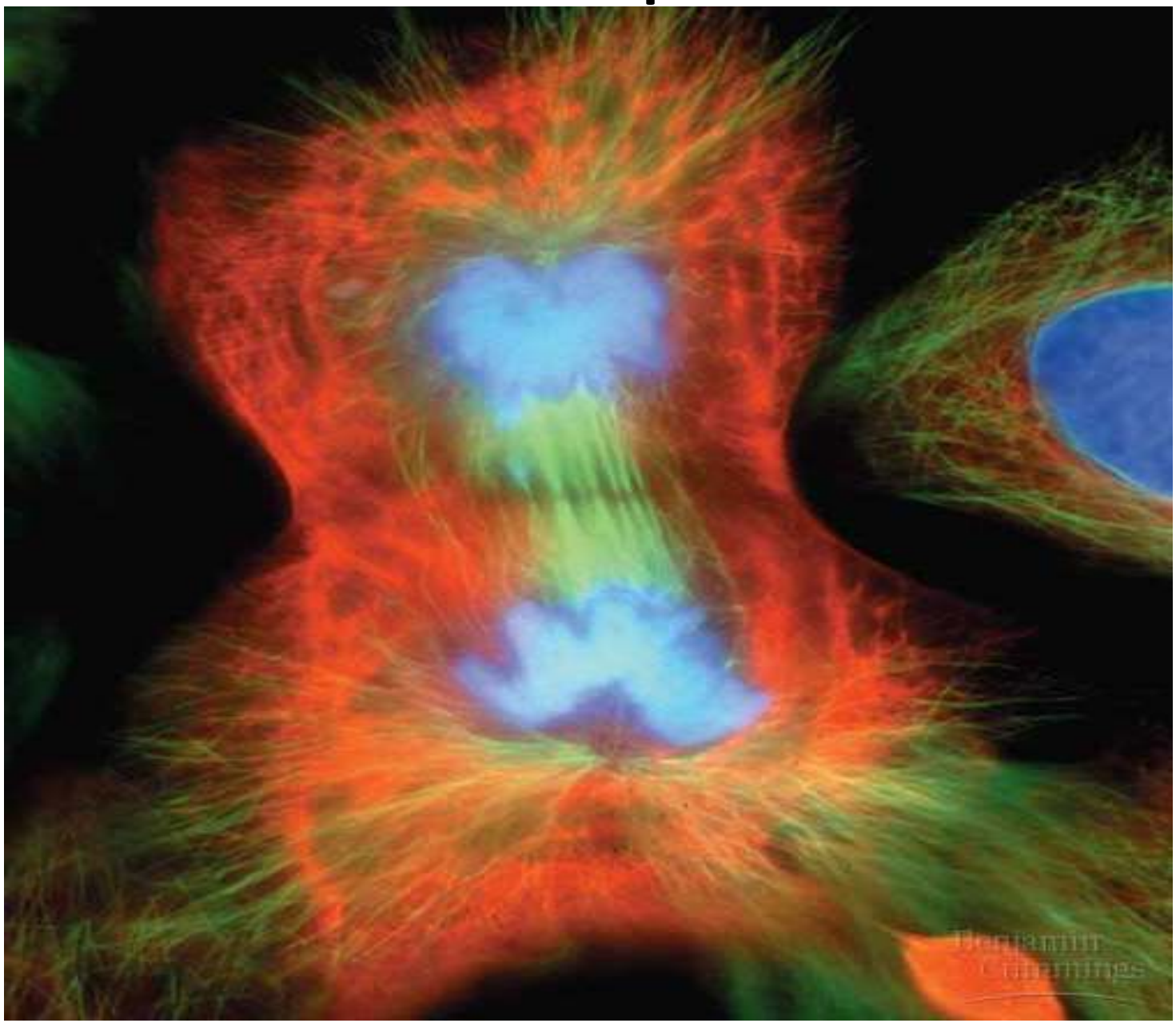
# Cell in Metaphase



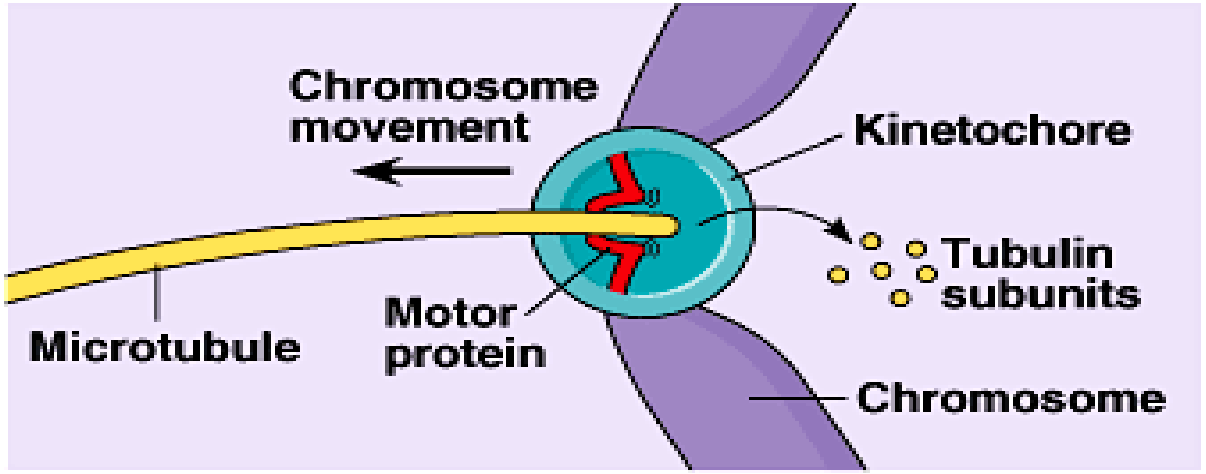
# Cell in Anaphase



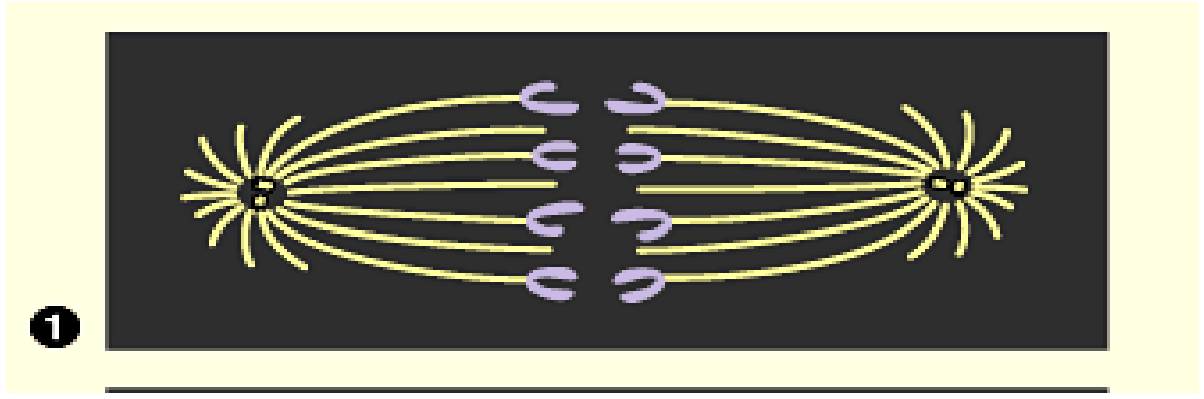
# Cell in Telophase



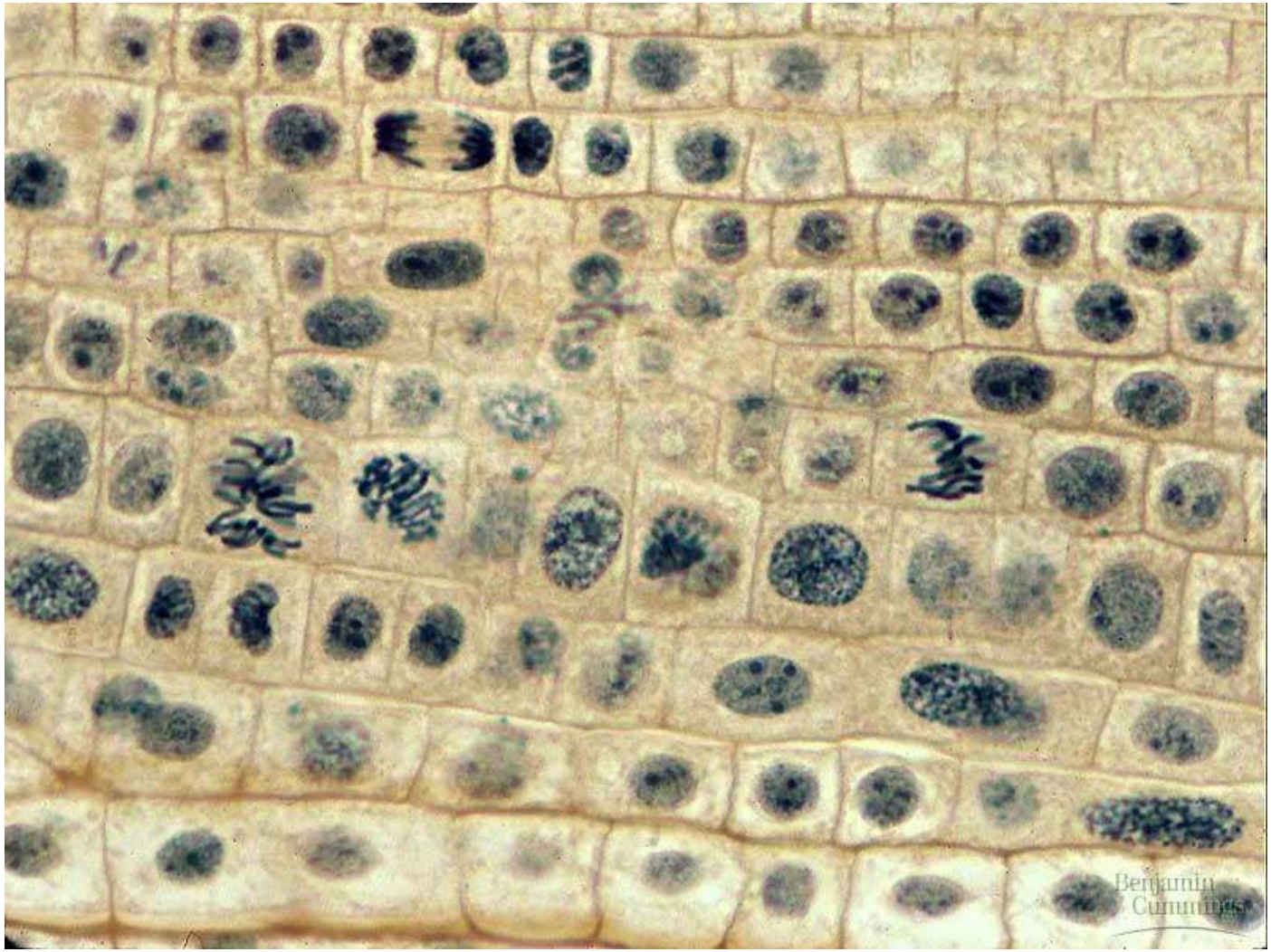
# Spindle Apparatus and Motor protein "walking" the chromosomes



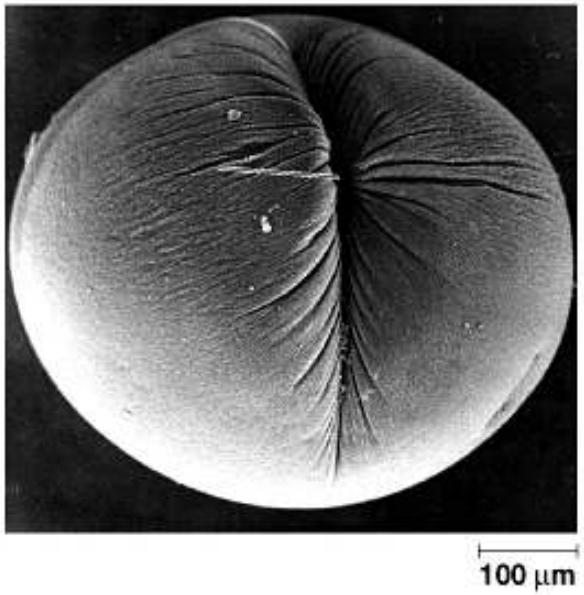

(a) Hypothesis



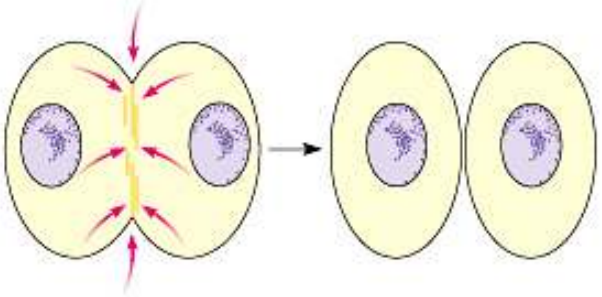
# Can you find the different phases in this onion root tip?

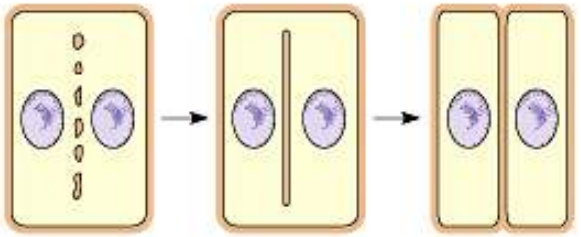


# Animal vs. Plant cytokinesis

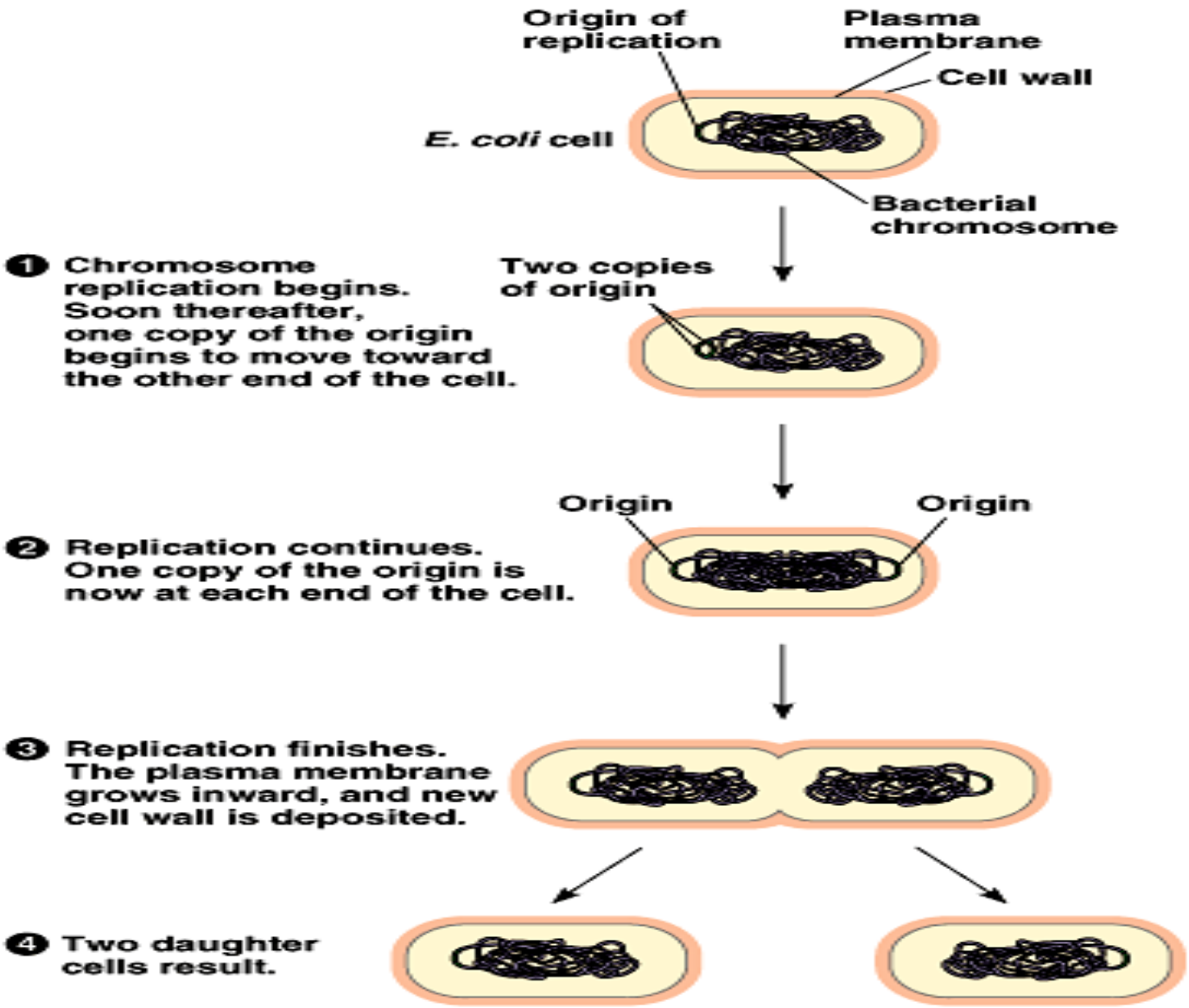








# Binary Fission in Bacteria

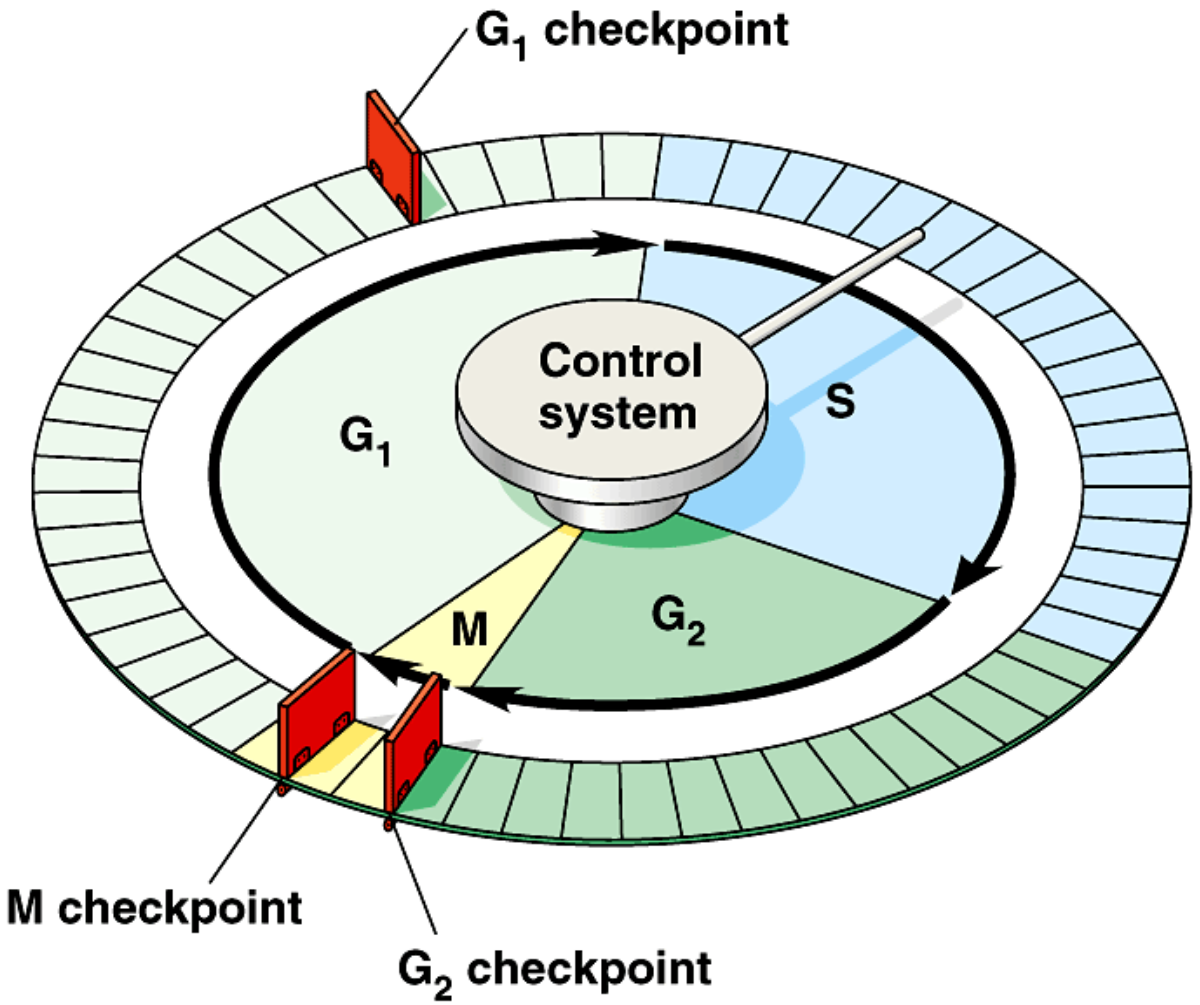


# Pre – AP Biology

## The Cell Cycle (1.5)

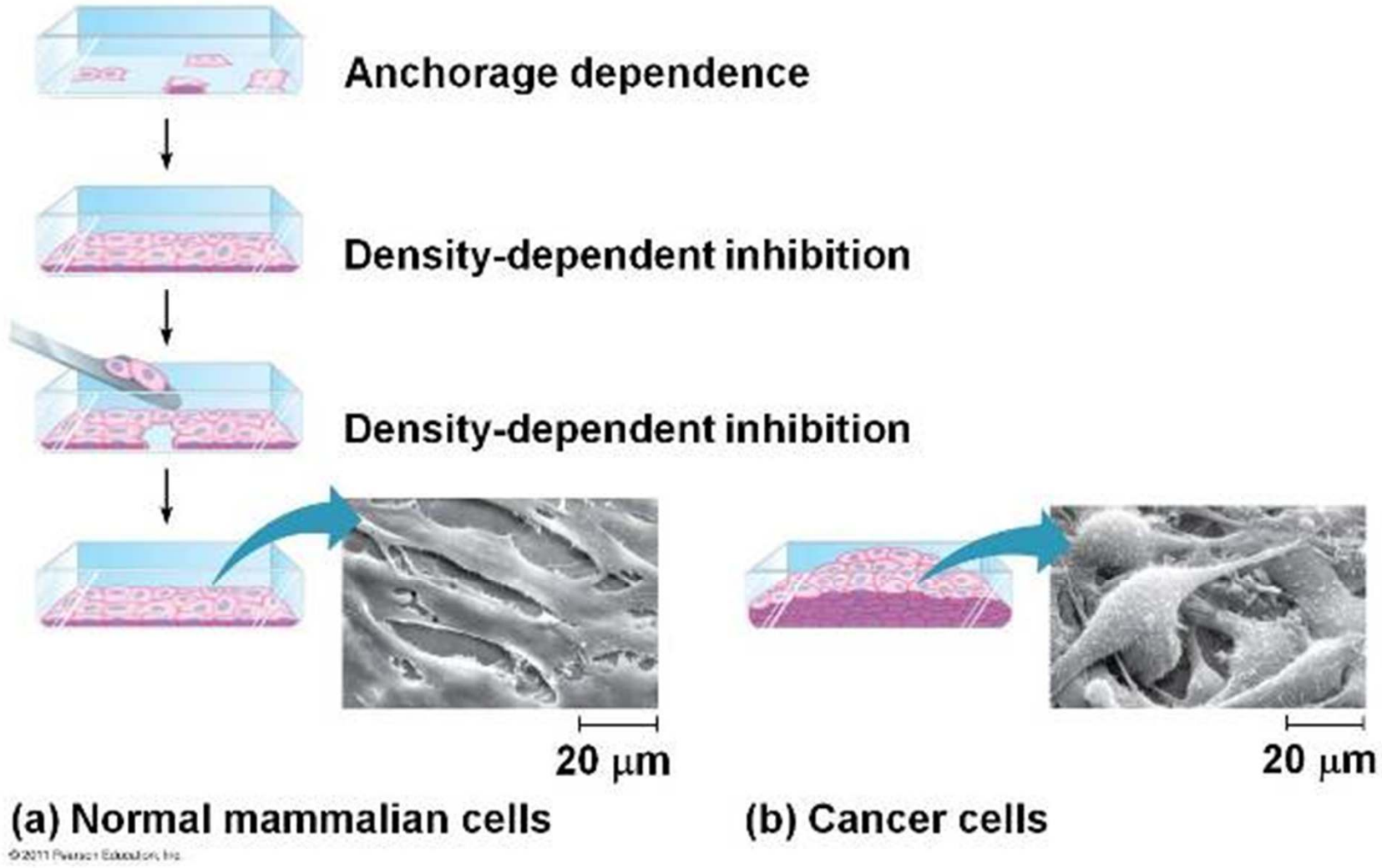
## Part 3

# Checkpoints
# (Is all going according to plan?)

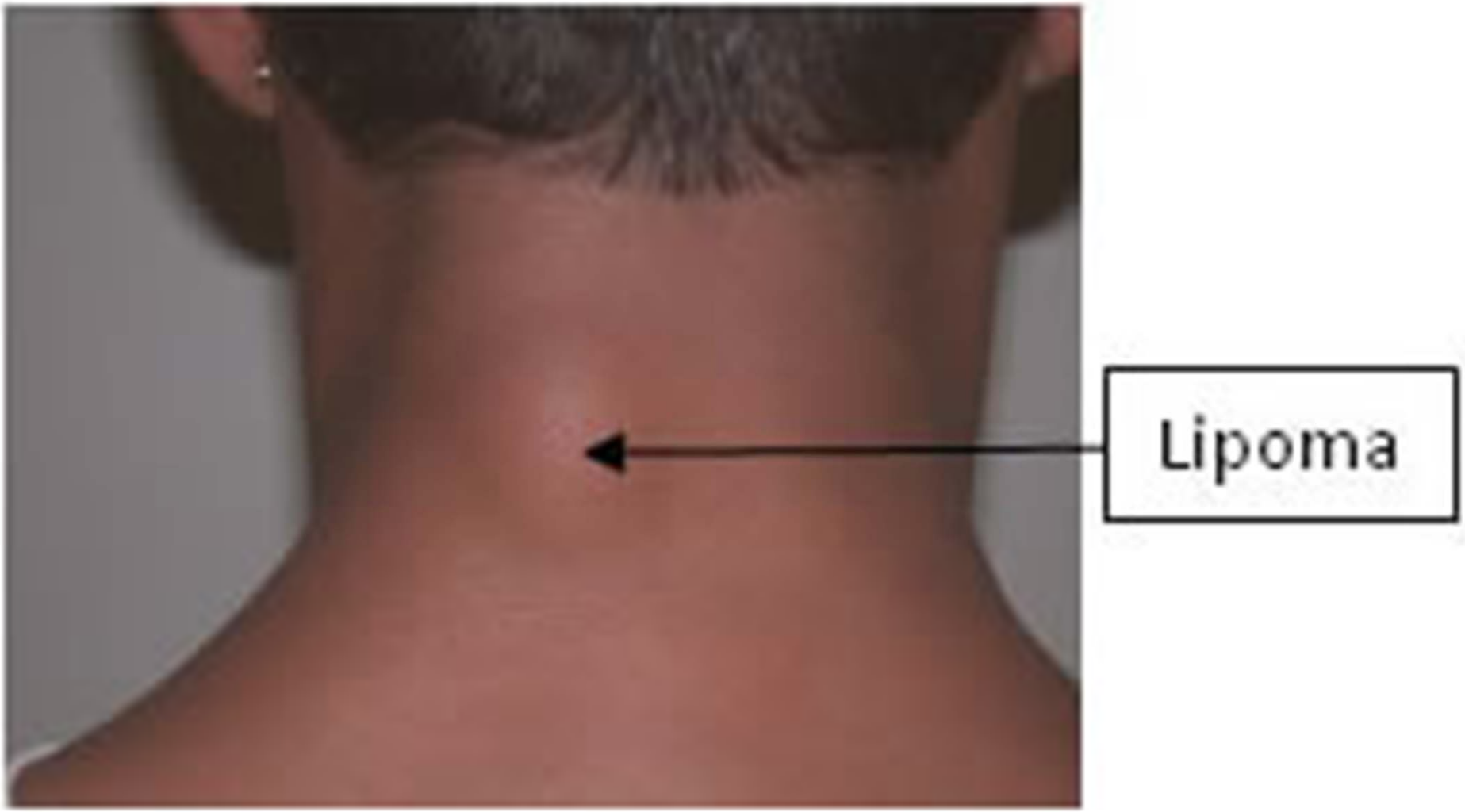


# Density-dependent inhibition

Notice how the mass begins to grow because cancerous cells ignore density



# Benign Tumor



Malignant cancer cells from the breast
(See the ABNORMAL "crab" shape of the cells.)