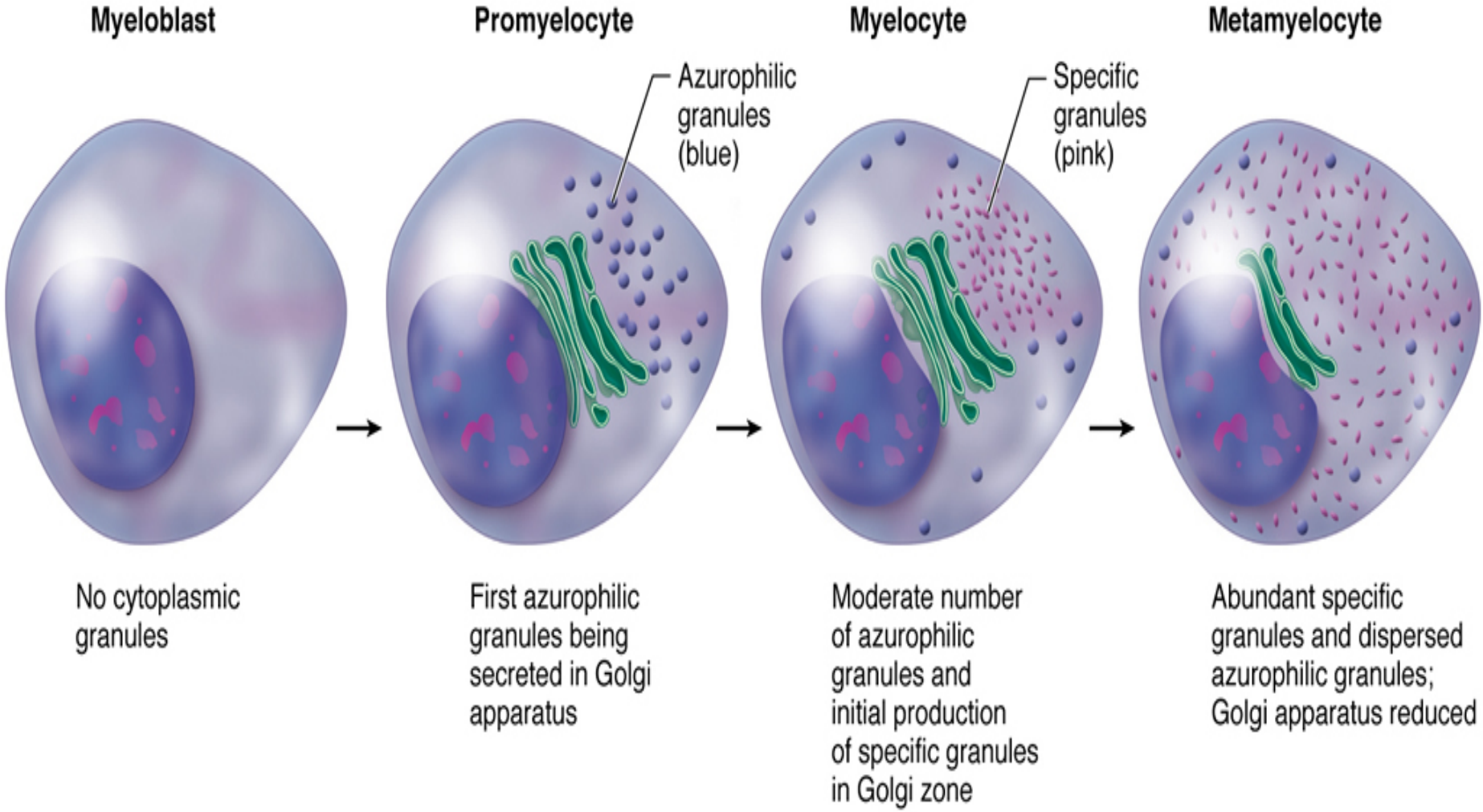
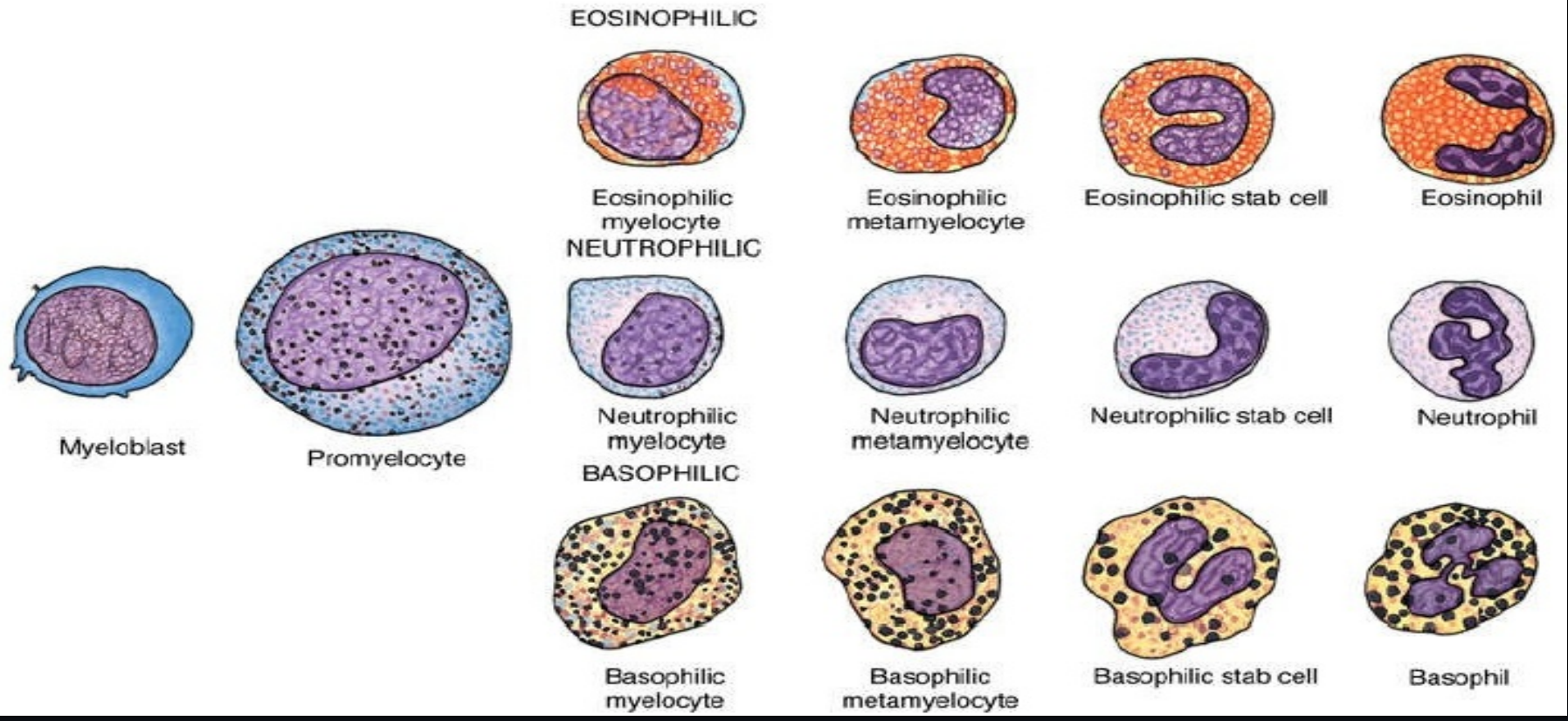
Biology

Bone marrow:

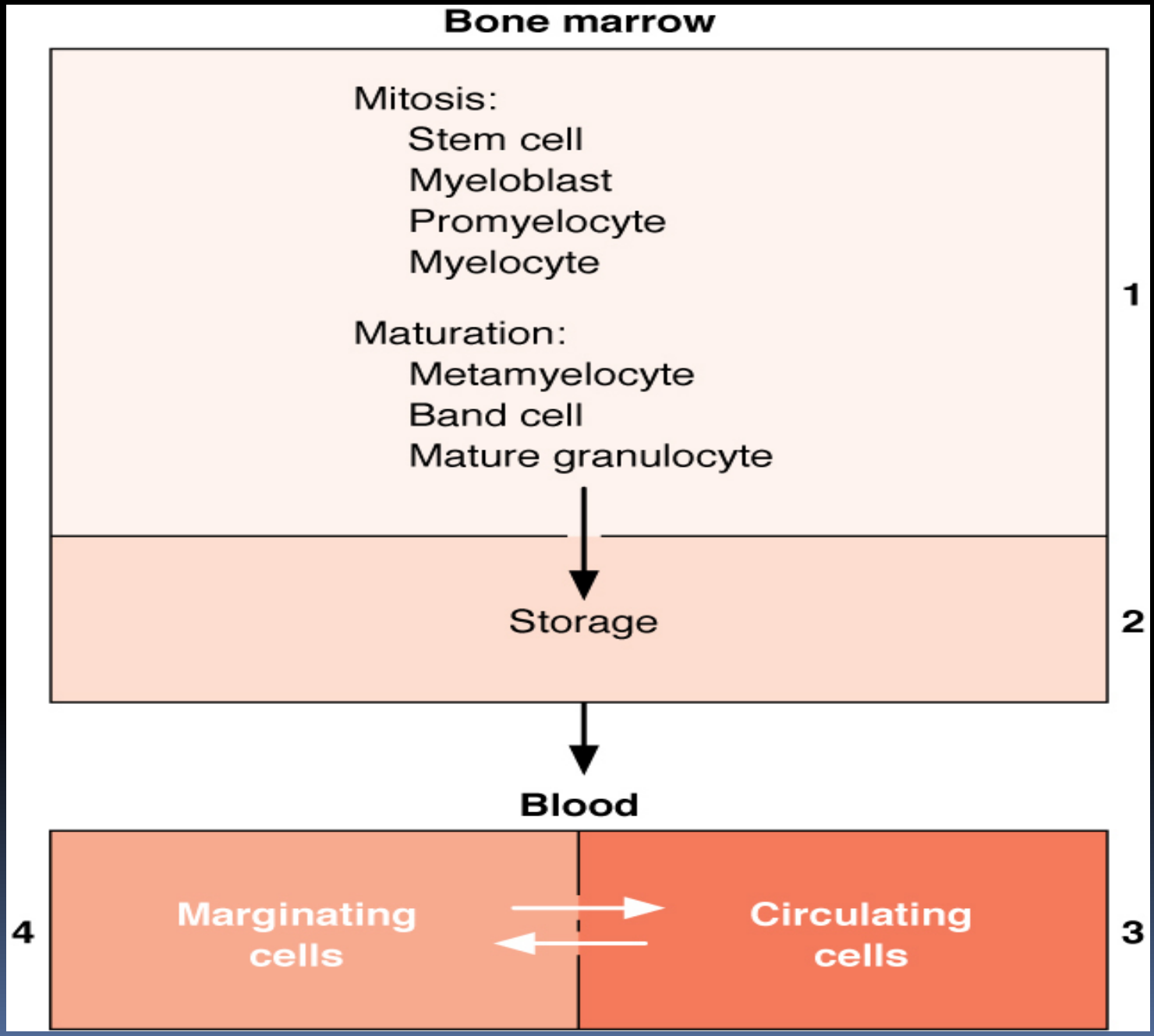
- **Granulopoiesis:**



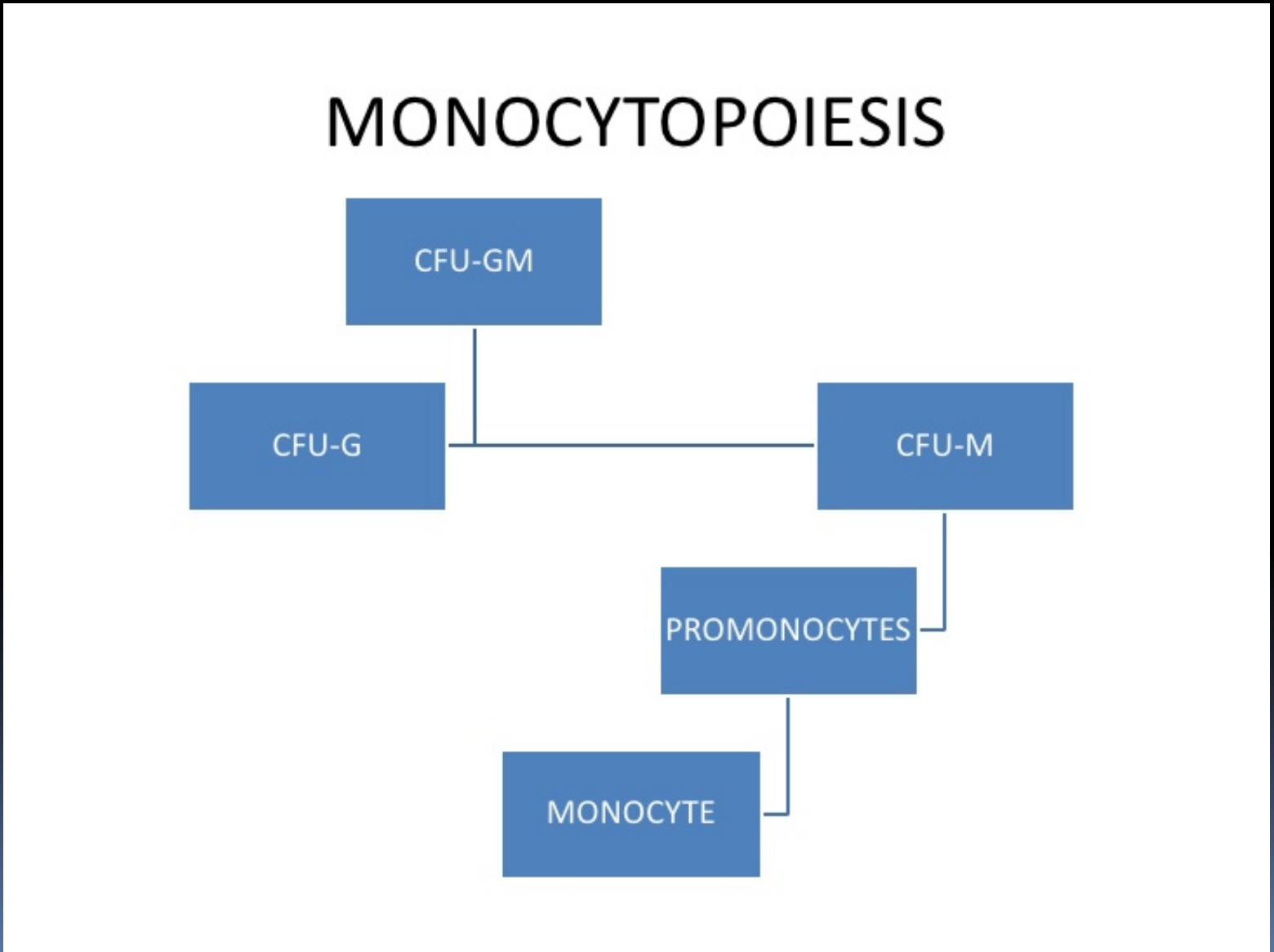
GRANULOCYTOPOIESIS



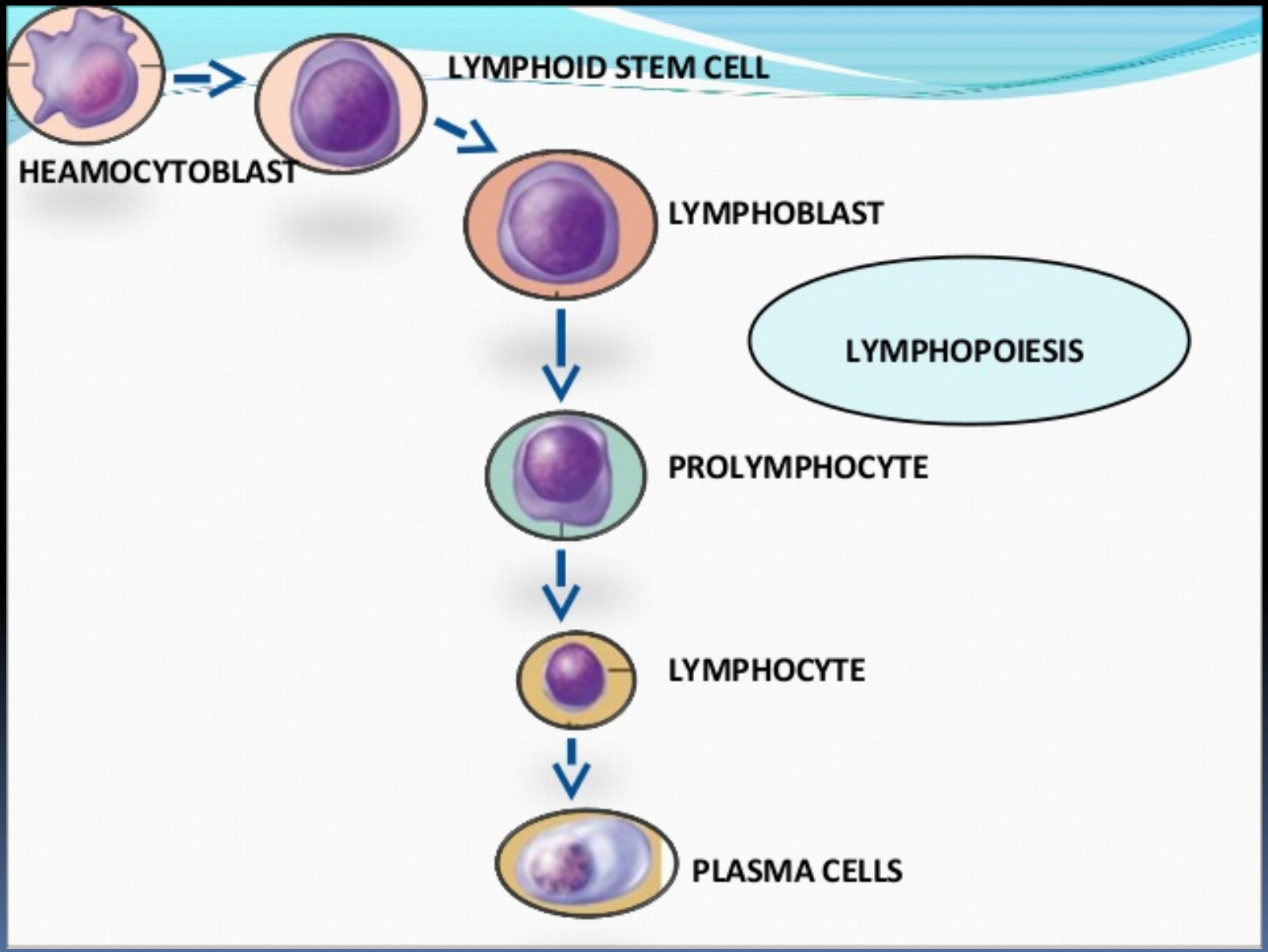
The top row represents the eosinophilic cell line, the middle row represents the neutrophilic line, and the bottom row represents the basophilic line. Note the decrease in cell size, the decrease in cytoplasmic basophilia (meaning decrease in polyribosomes), the increase in cytoplasmic granules (these first become specific and distinguishable as eosinophilic or basophilic at the myelocyte stage), and an increase in lobulation of the nucleus.


Bone marrow
Mitosis:
Stem cell
Myeloblast
Promyelocyte
Myelocyte
Maturation:
Metamyelocyte
Band cell
Mature granulocyte
1
Storage
2
Blood
4
Marginating cells
Circulating cells
3

- **Agranulopoiesis:**
- **Monocytes:**



- **Lymphocytes:**



Lymphopoiesis

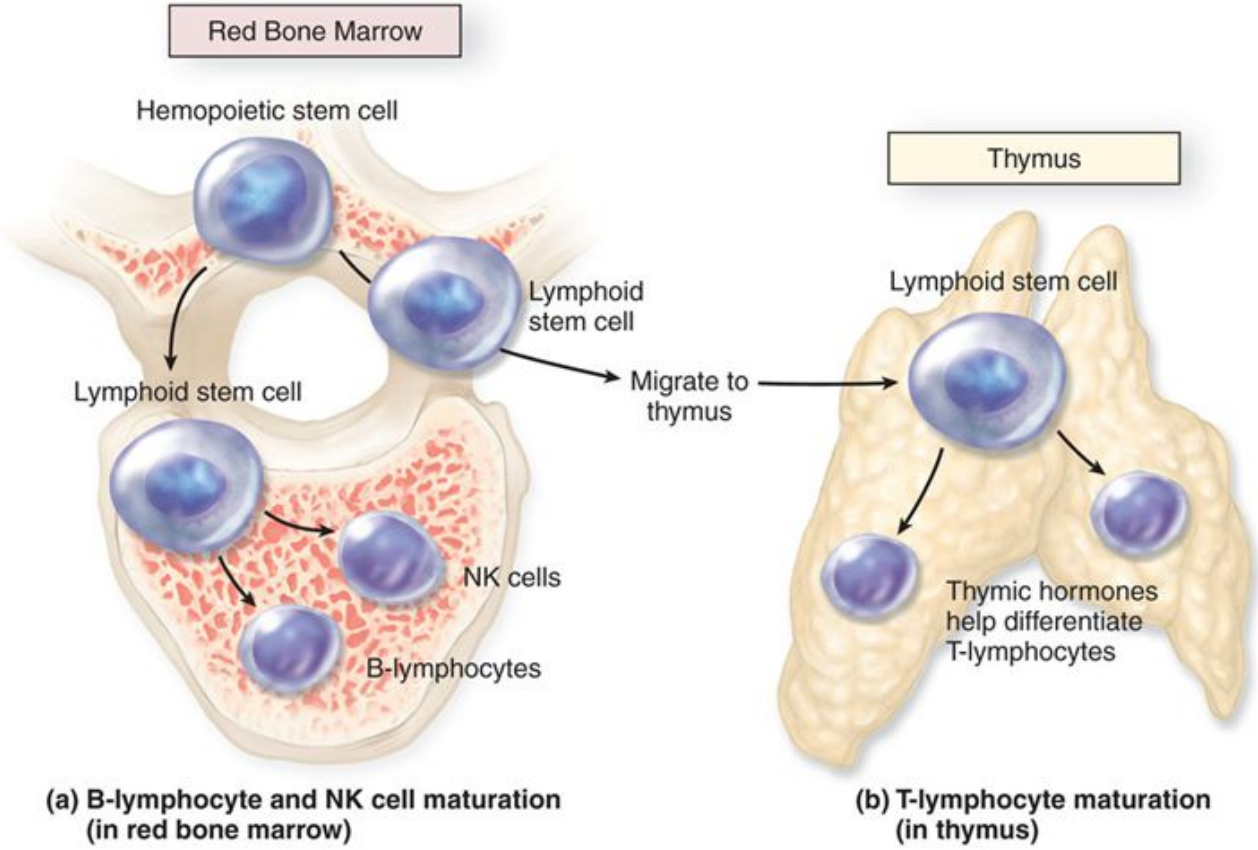
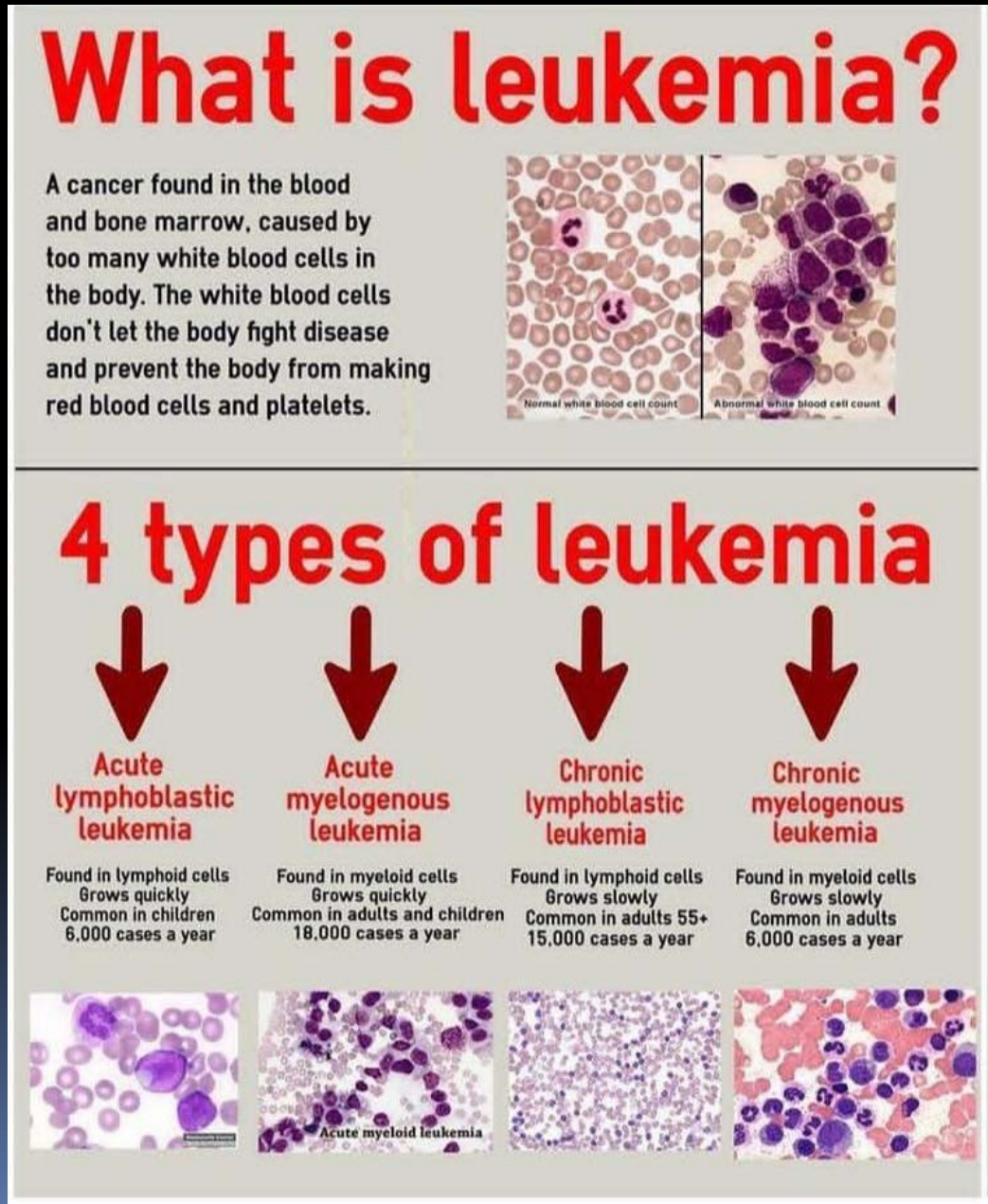
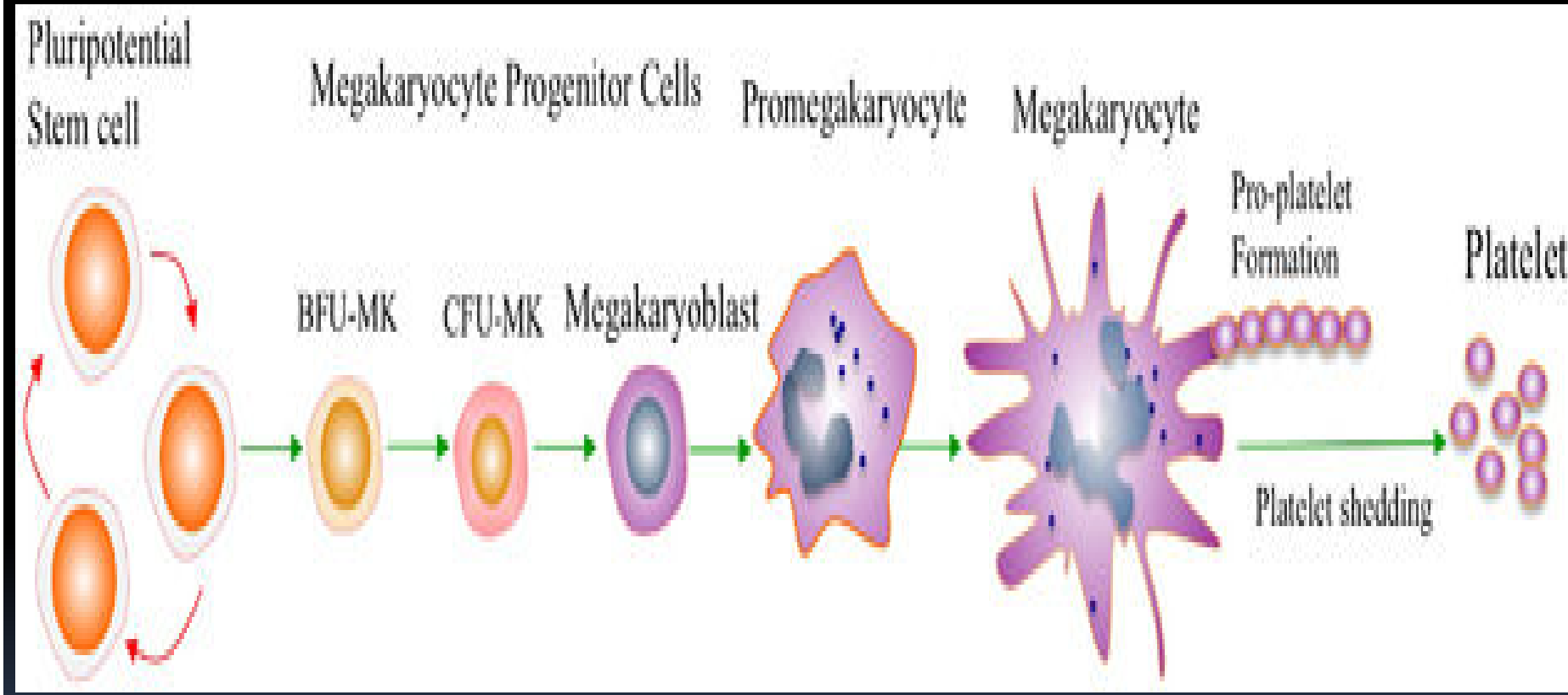


Figure 24.7

- Clinical correlation:
- Leakemia
- Bandemia

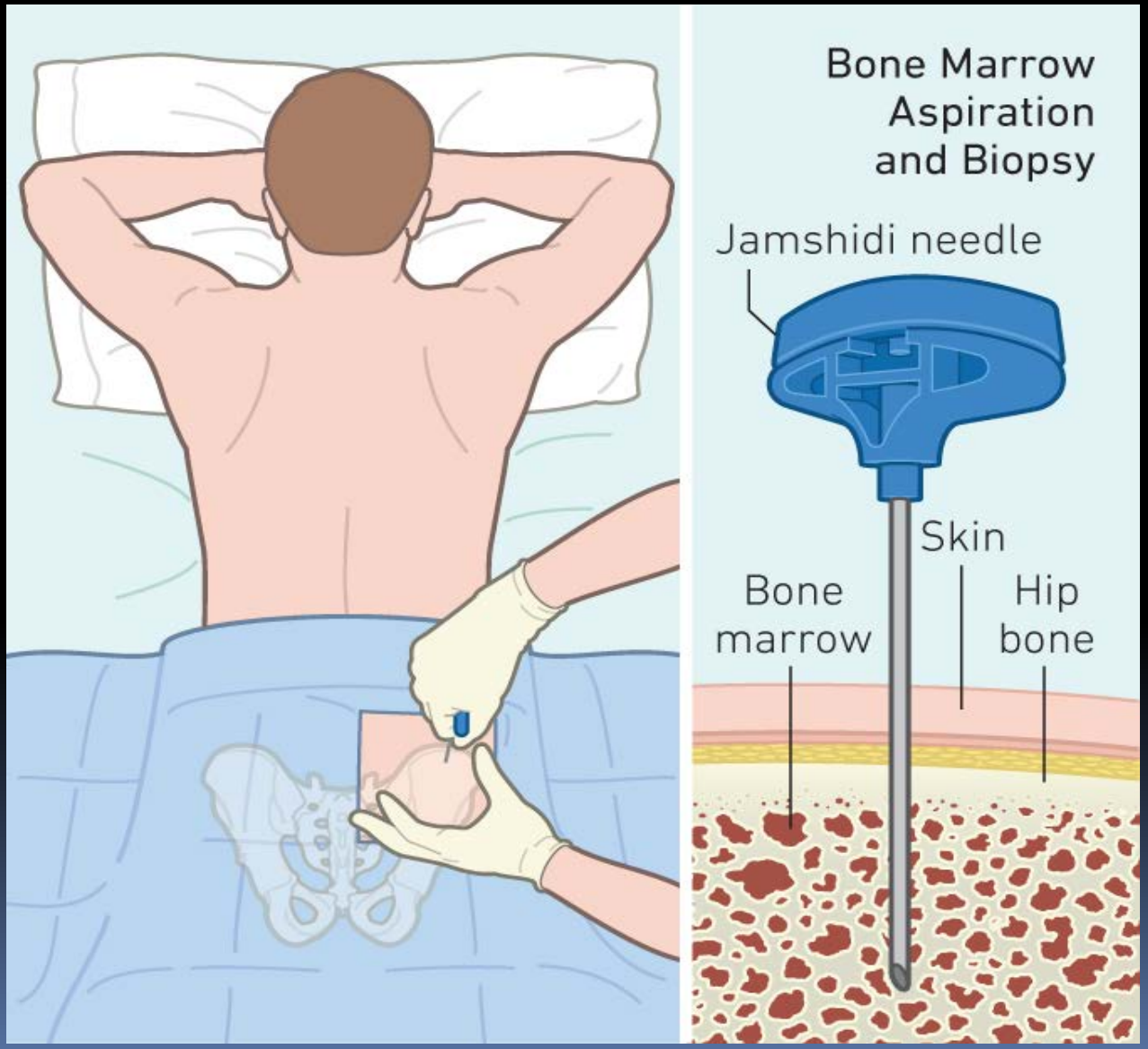


- **Megakariocytopoiesis:**



- **thrombocytopenic purpura**

Bone Marrow Aspiration and Biopsy



Bone Marrow Cellularity

- Bone marrow cellularity index (%)= 100 – age ± 10%

Thank You