**Polychromatophilic Red Cell:**

**Appearance:** Nonnucleated, round, or ovoid red cell staining homogeneously pink-gray or pale purple. Larger than a mature RBC and lacks central pallor.

**Special features:** Final stage of red cell maturation after exiting the bone marrow; contains mostly hemoglobin with a small amount of RNA. Can be stained as reticulocyte and enumerated using supravital stains or by automated instrument analysis.
Sickle Cell (Drepanocyte):

**Appearance:** Thin crescent with 2 pointed ends; other forms seen in sickle cell anemia include boat-shaped, filament-shaped, holly-leaf form, or envelope cells. Usually lacks central pallor.

**Cause:** Polymerization/gelation of deoxygenated hemoglobin S.

**Special features:** May be seen particularly in the absence of splenic function or after splenectomy in patients with sickle cell anemia, hemoglobin SC disease, SD disease, and S-beta-thalassemia.
Platelet Satellitism:

Appearance: Adherence of 4 or more platelets to a segmented neutrophil, band, or (rarely) monocyte. The morphology of the involved platelets and leukocyte is normal.

Special features: Also known as “platelet rosettes”; an in-vitro phenomenon due to the interaction of EDTA and immunoglobulin, which nonspecifically binds to platelets. Antibody-coated platelets then bind to the leukocyte surface. Platelets are not counted.
Megakaryocyte Nucleus:

**Appearance:** Most have a very high N:C ratio with a single or occasionally bilobed nucleus with characteristic smudged or “puddled” chromatin that has been likened to a “turtle’s back.” Most have a thin rim of cytoplasm with or without surface projections. When the cytoplasm is completely absent the cell can be recognized as a megakaryocyte by the chromatin pattern.

**Size:** Highly variable; generally 15–30 µm in diameter.