

SNS COLLEGE OF PHARMACY AND HEALTH SCIENCES



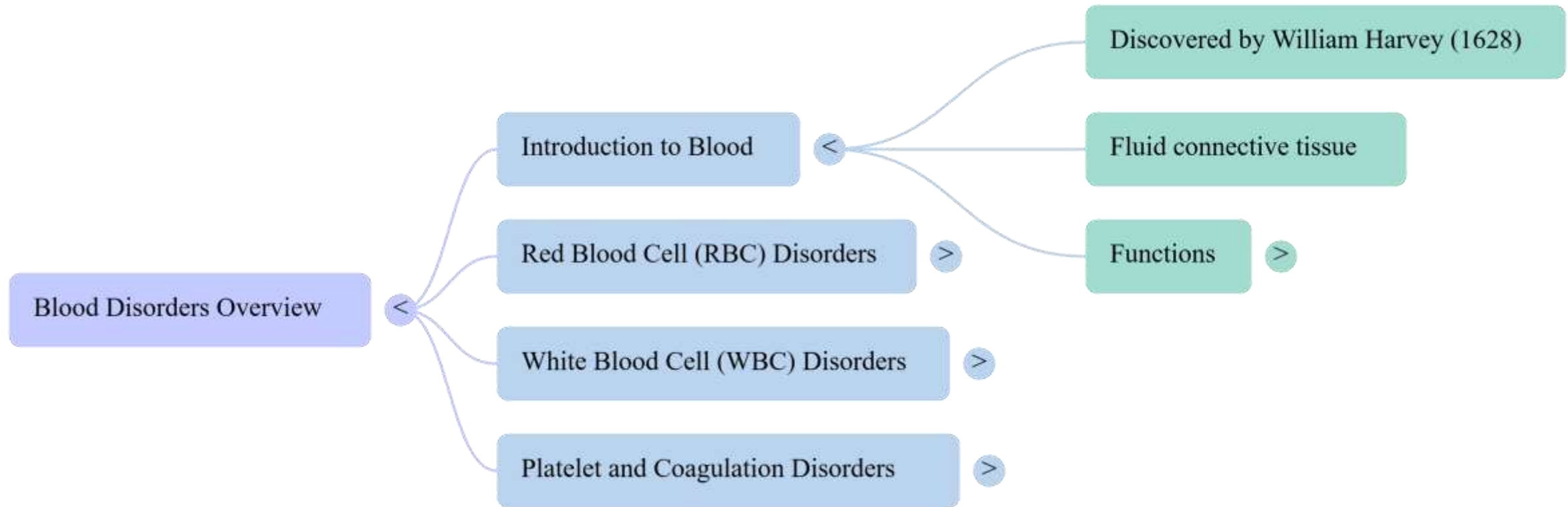
Affiliated To The Tamil Nadu Dr. MGR Medical University, Chennai
Approved by Pharmacy Council of India, New Delhi. Coimbatore -641035

COURSE NAME : HUMAN ANATOMY & PHYSIOLOGY (BP301 T)

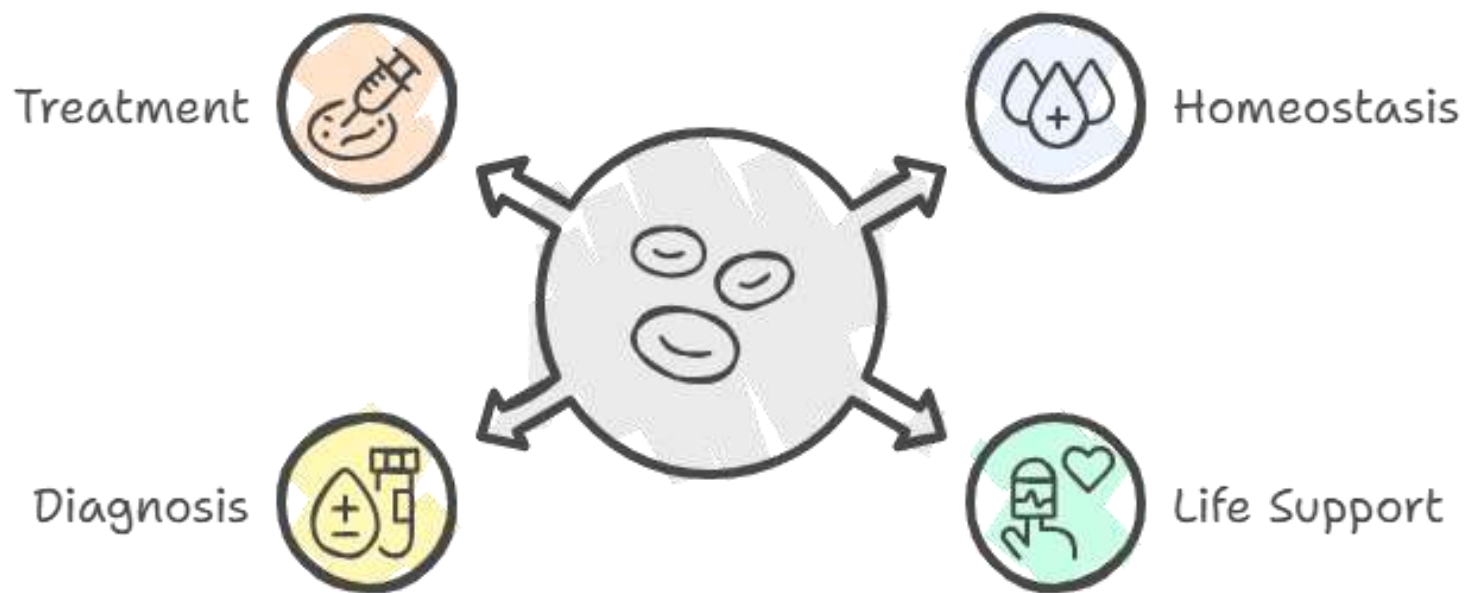
YEAR : I SEM/I YEAR

TOPIC : SIGNIFICANCE & DISORDER OF BLOOD

MIND MAP

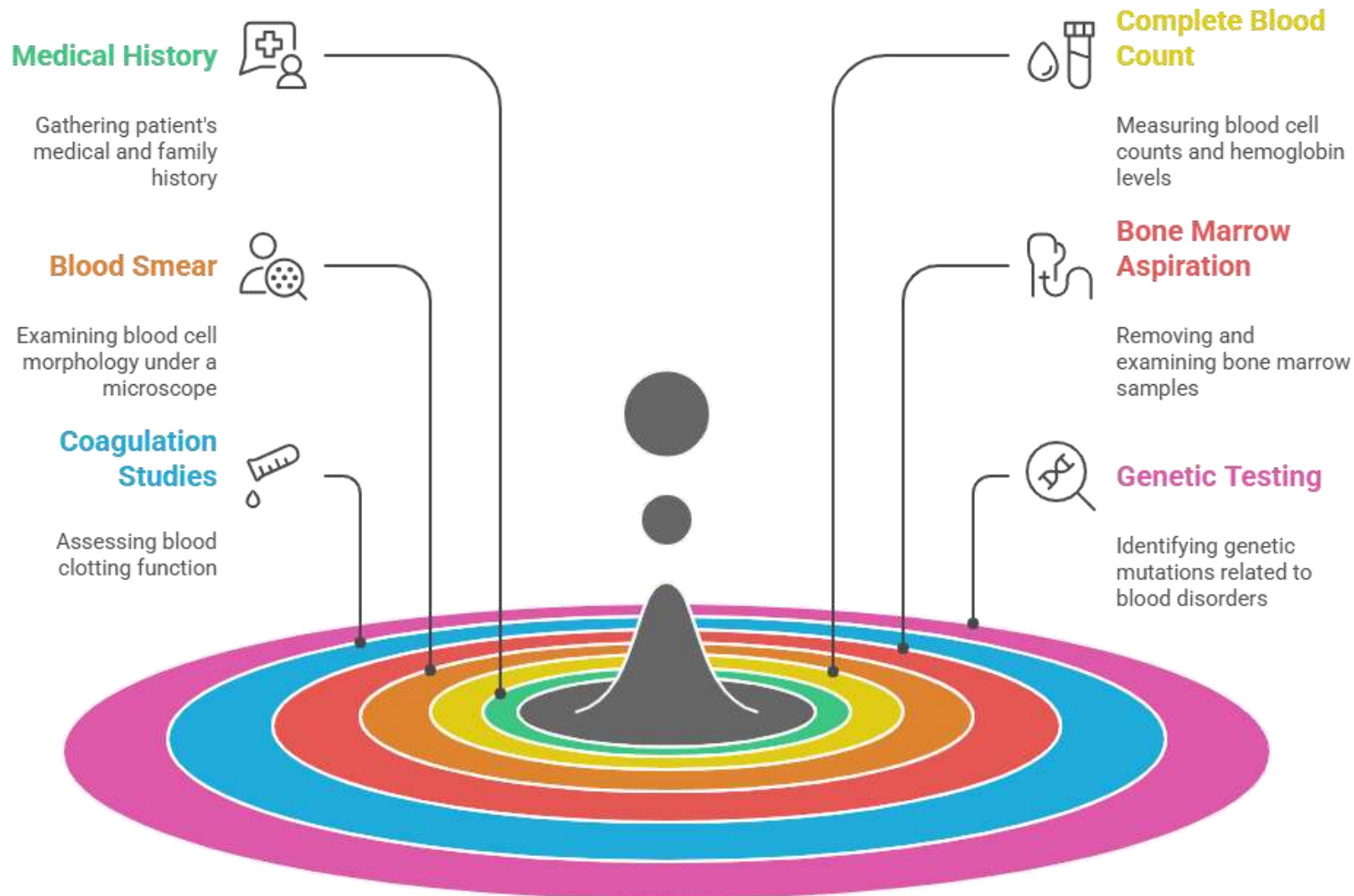


Blood Significance and Disorders



Made with  Napkin

Diagnostic Approaches for Blood Disorders



Polycythemia Vera Explained



What is polycythemia vera?

It's a disorder where the bone marrow produces too many red blood cells.

What are the consequences?

Increased blood viscosity and a higher risk of blood clots.



Made with  Napkin

Myelodysplastic Syndromes Outcomes



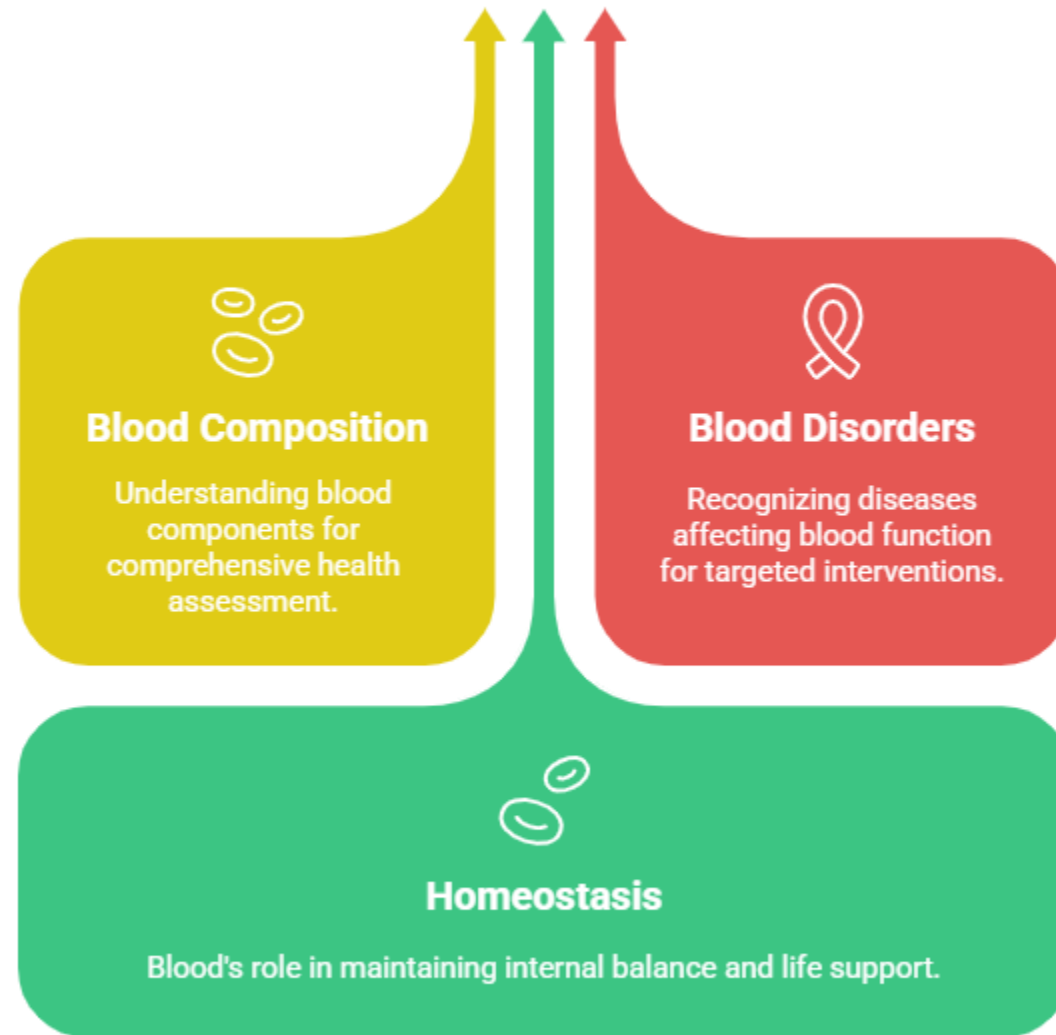
Causes of Anemia



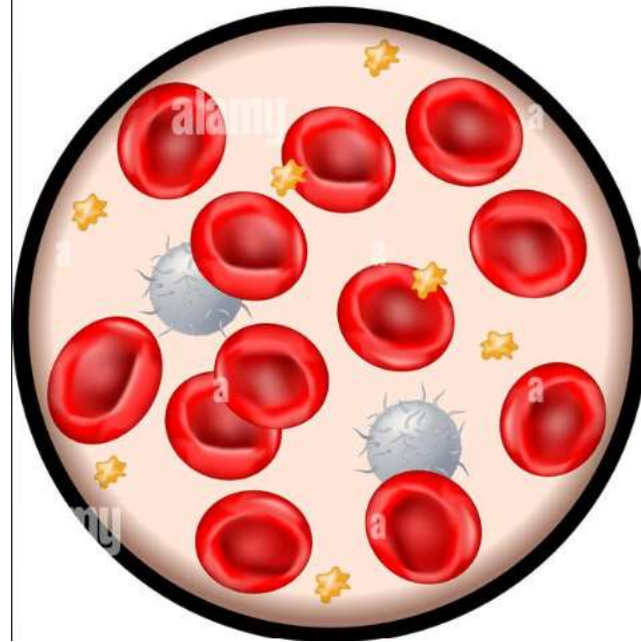
Blood Cell Comparison

	Red Blood Cells	White Blood Cells	Platelets
Primary Function	Oxygen Transport	Immune Defense	Blood Clotting
Abundance	Most Abundant	Less Abundant	Small Fragments
Key Features	Biconcave, No Nucleus	Five Main Types	Cell Fragments

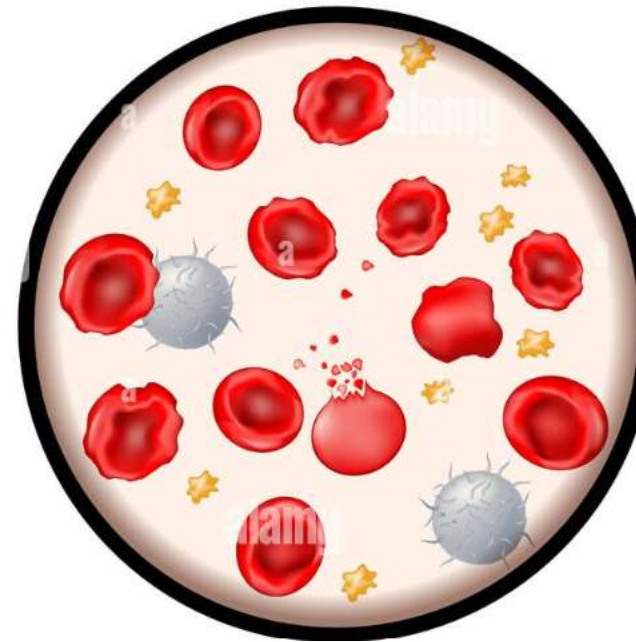
Blood's Role in Health



Normal



Thalassemia



HEMOPHILIA



Normal
Blood Vessel



Bleeding starts

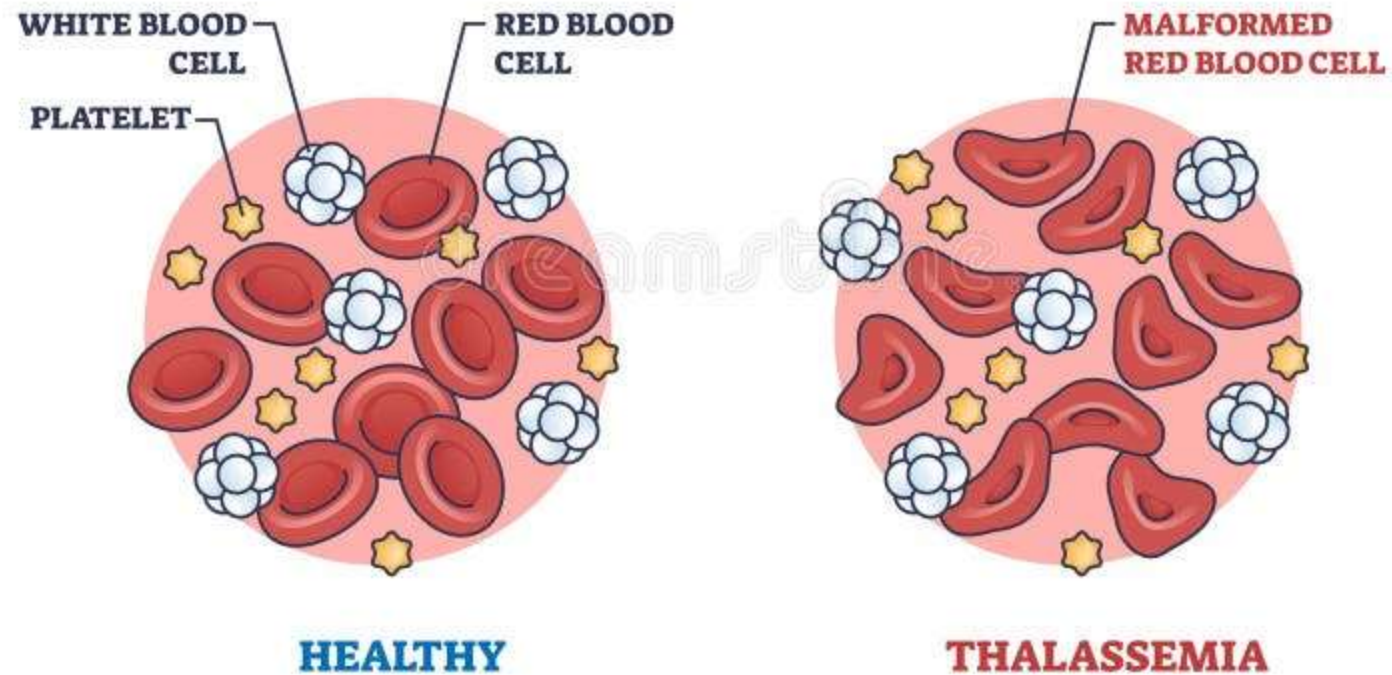


HEMOPHILIA
Incomplete Fibrin clot
Continued bleeding



Completed
Fibrin clot

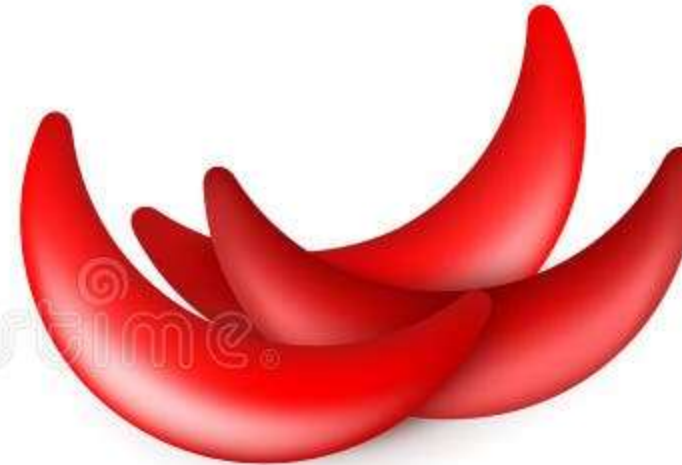
THALASSEMIA



SICKLE CELL ANAEMIA

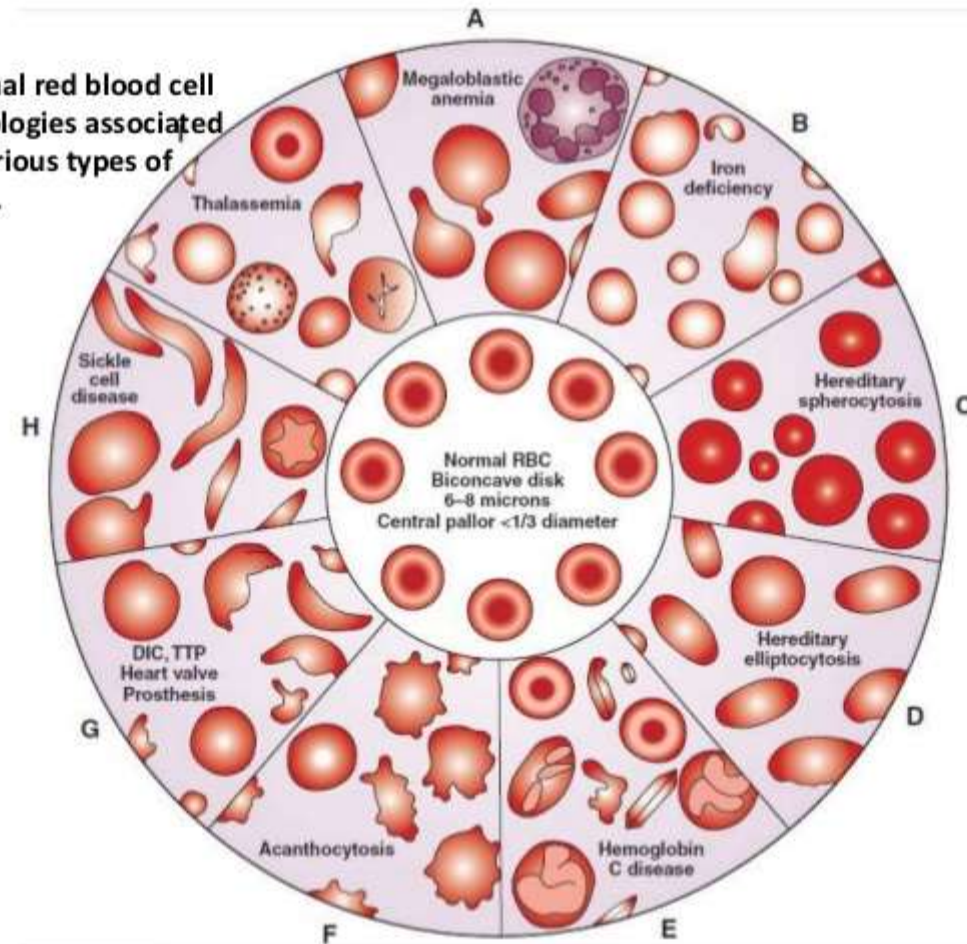


Normal
red blood cells

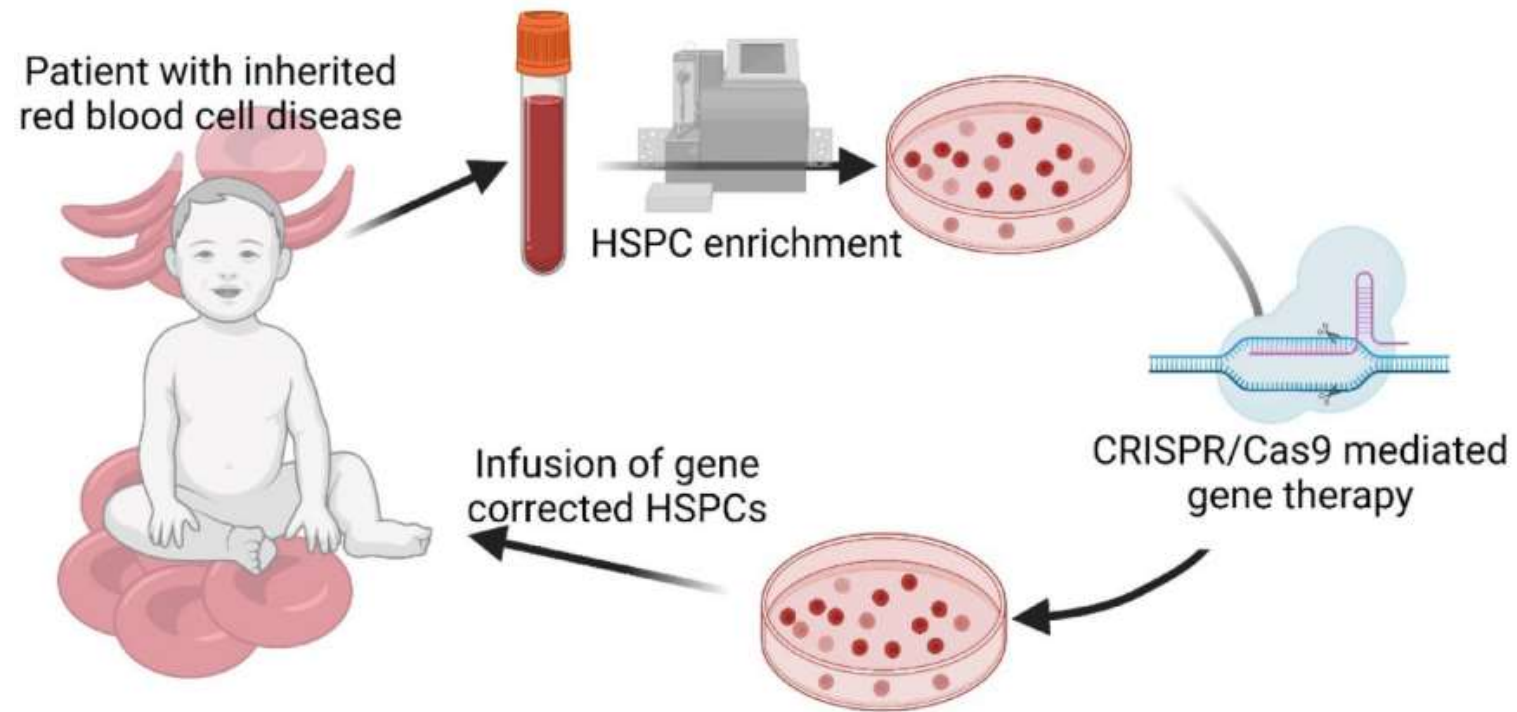


Sickle-shaped
red blood cells

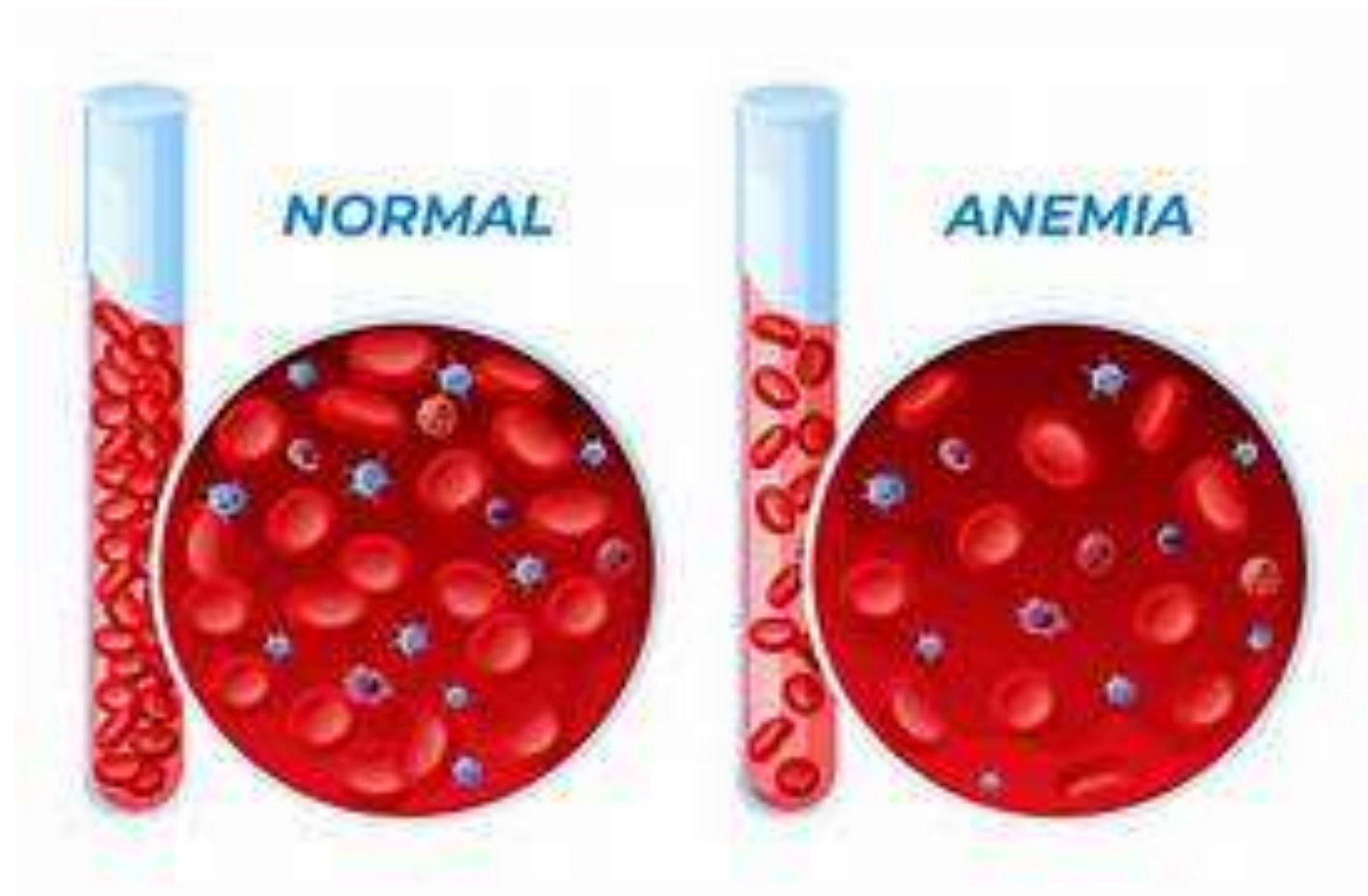
Abnormal red blood cell morphologies associated with various types of anemia.



GENE EDITING



Gene Editing for Red Blood Cell Diseases



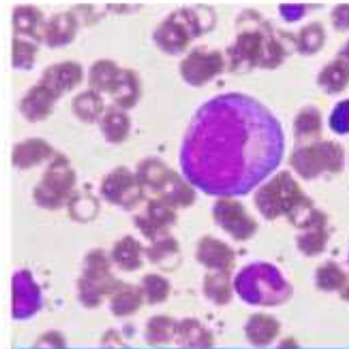
BLOOD DISORDERS

MOST COMMON BLOOD DISEASES



ANEMIA

Lack or low level of healthy blood cells or hemoglobin



LEUKEMIA

A type of blood cancer marked by abnormal production of white blood cells.



HEMOPHILIA

Rare disorder marked by unabated bleeding

INQ
DATA FROM DOST

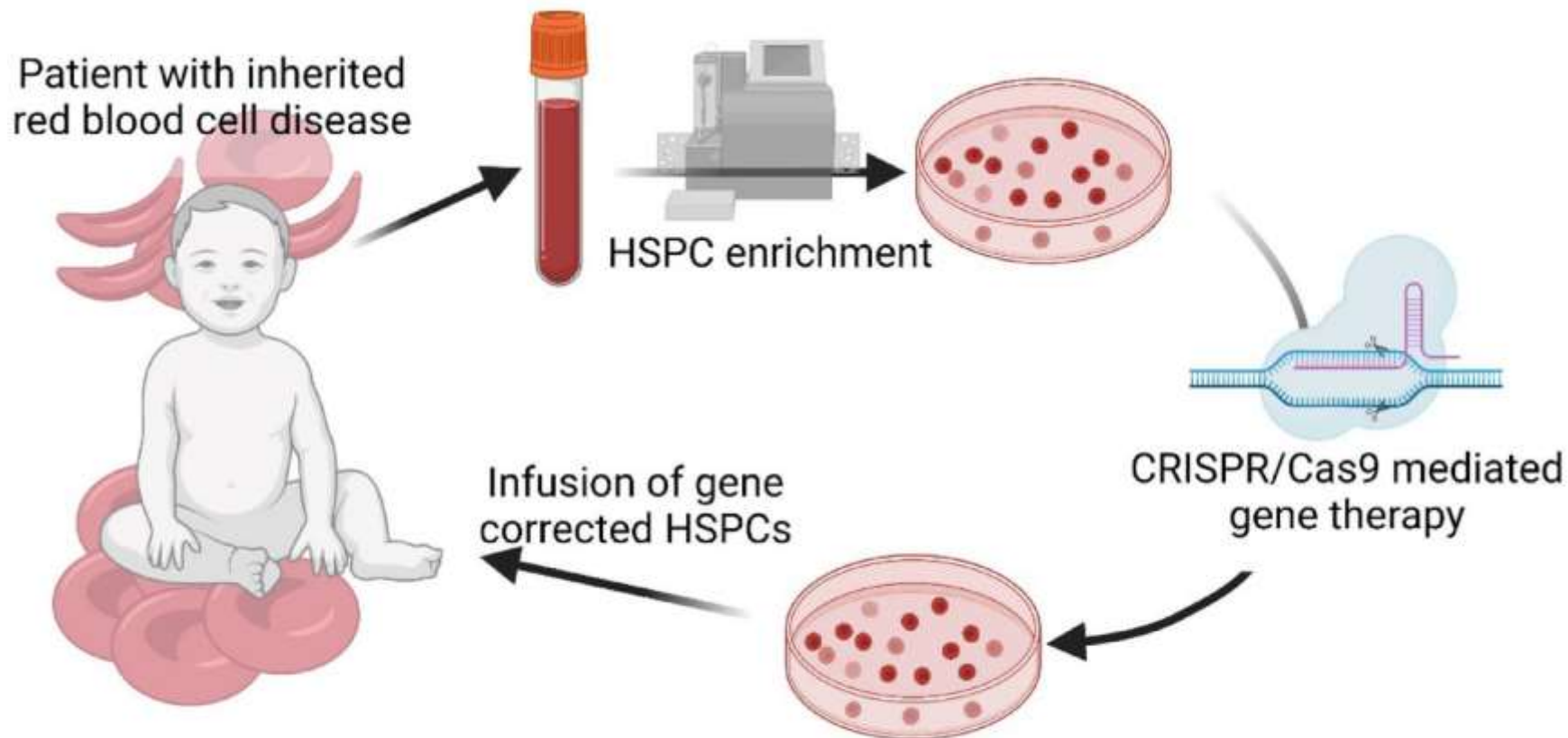
CLASS ASSESSMENTS



Identify the type of disorder?



SUMMARY



Gene Editing for Red Blood Cell Diseases

REFERENCE

- ✓ Essentials of Medical Physiology, K. Sembulingam & P. Sembulingam (Jaypee Brothers Medical Publishers)
- ✓ A Textbook of Human Anatomy and Physiology-I, SIA Publishers
- ✓ Human Anatomy & Physiology Gerard J. Tortora & Bryan H. Derrickson (Wiley)
- ✓ Ross and Wilson anatomy and physiology in health and illness, Anne Waugh & Allison Grant.

