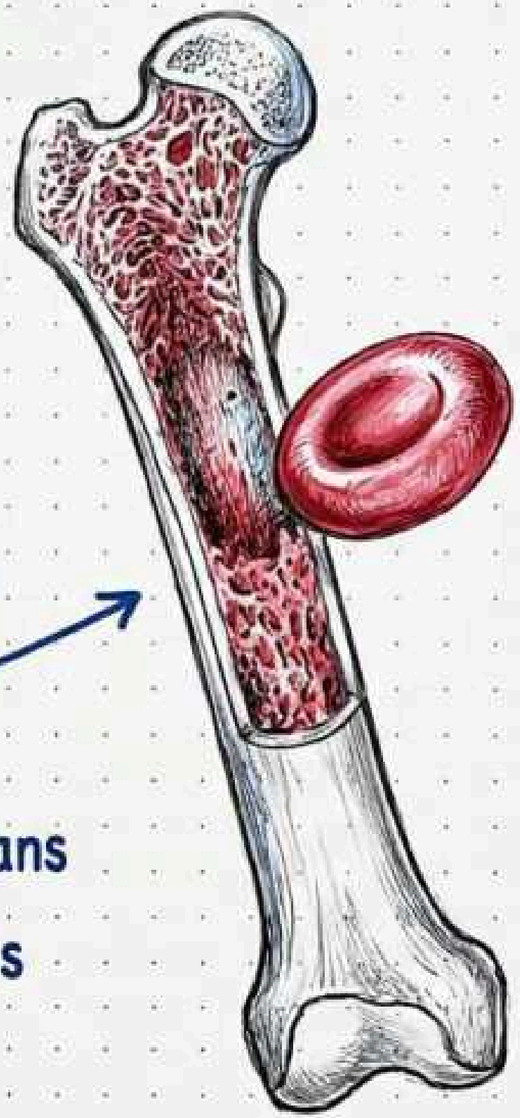
¶0.1

Welcome to Anderson Academy: Medicine 525 B, Hematology

5th Autumn Course | 2nd Year Medical School | Modeled on Harvard/MIT HST

Hematology

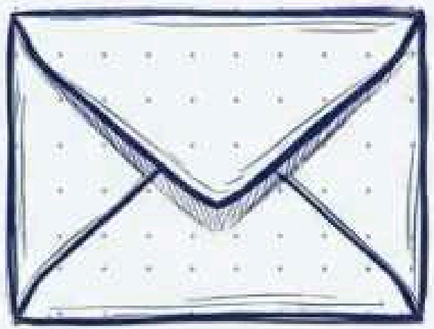
1. Blood
2. Blood-forming organs
3. Associated diseases



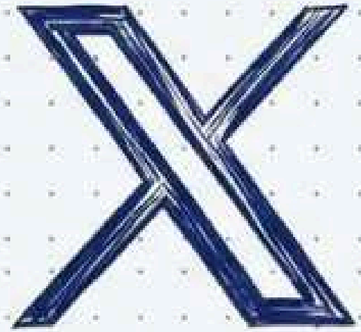
Gemini Notebook

Course Feedback & Questions

¶ 0.2



garyanderson@mail.grokbot.com



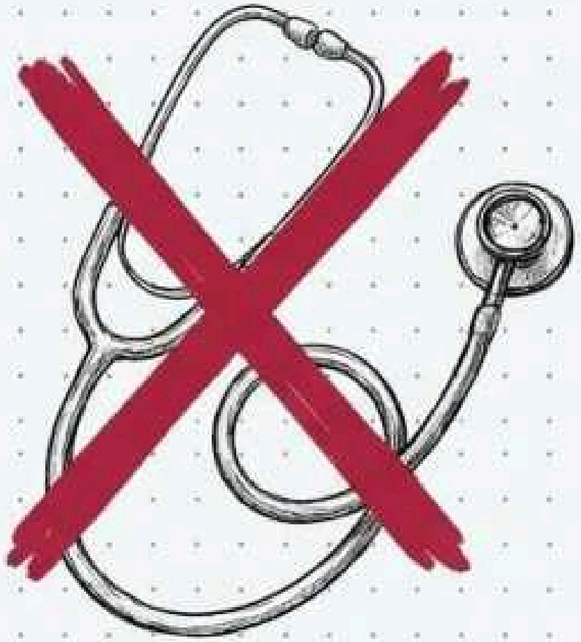
@garyanderson



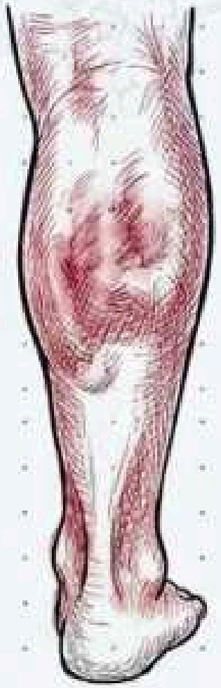
Gemini Notebook

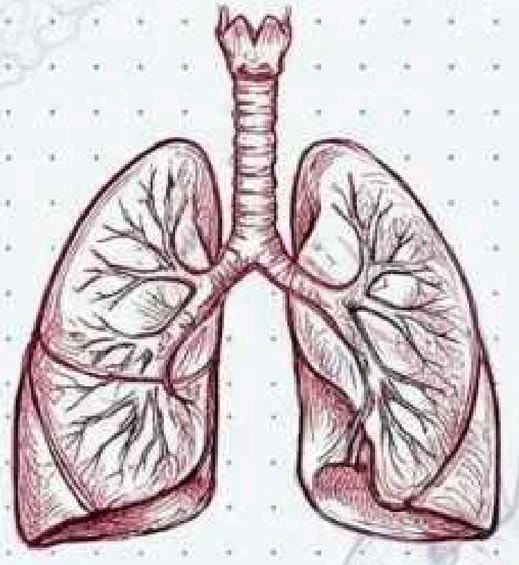
Scope of Practice & Warning Signs

¶ 0.3



- Medical Knowledge ONLY
- NOT Medical Training
- NO Clinical License
- NOT Medical Advice





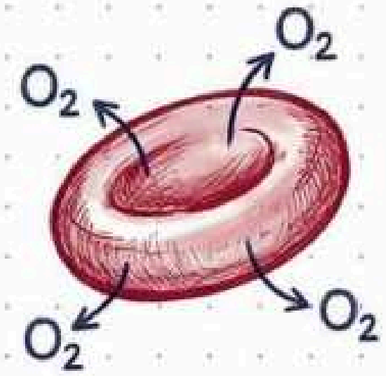
Requires PROMPT attention:
Unexplained bleeding/bruising OR
Painful swollen leg + sudden breathlessness.

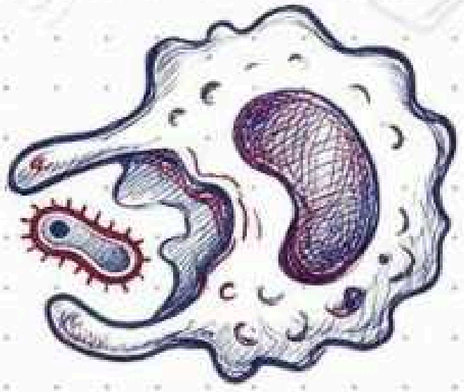
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Why Hematology Matters

¶ 0.4

Carries Oxygen

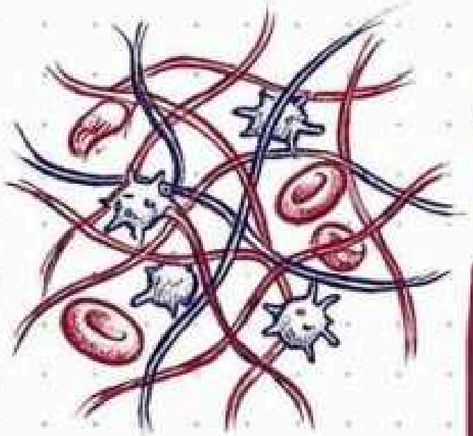




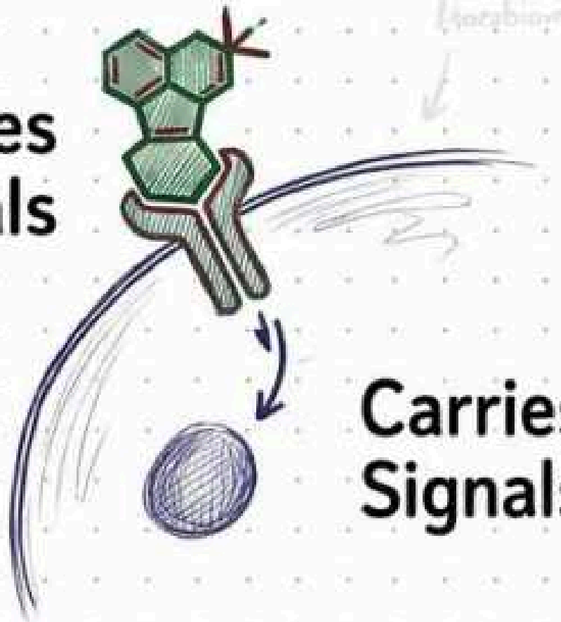
Fights Infection



Seals Wounds

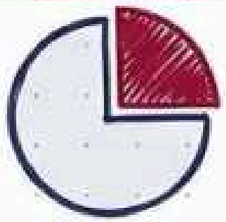


Carries Signals



Carries Signals

Blood tests are the commonest tests in medicine.

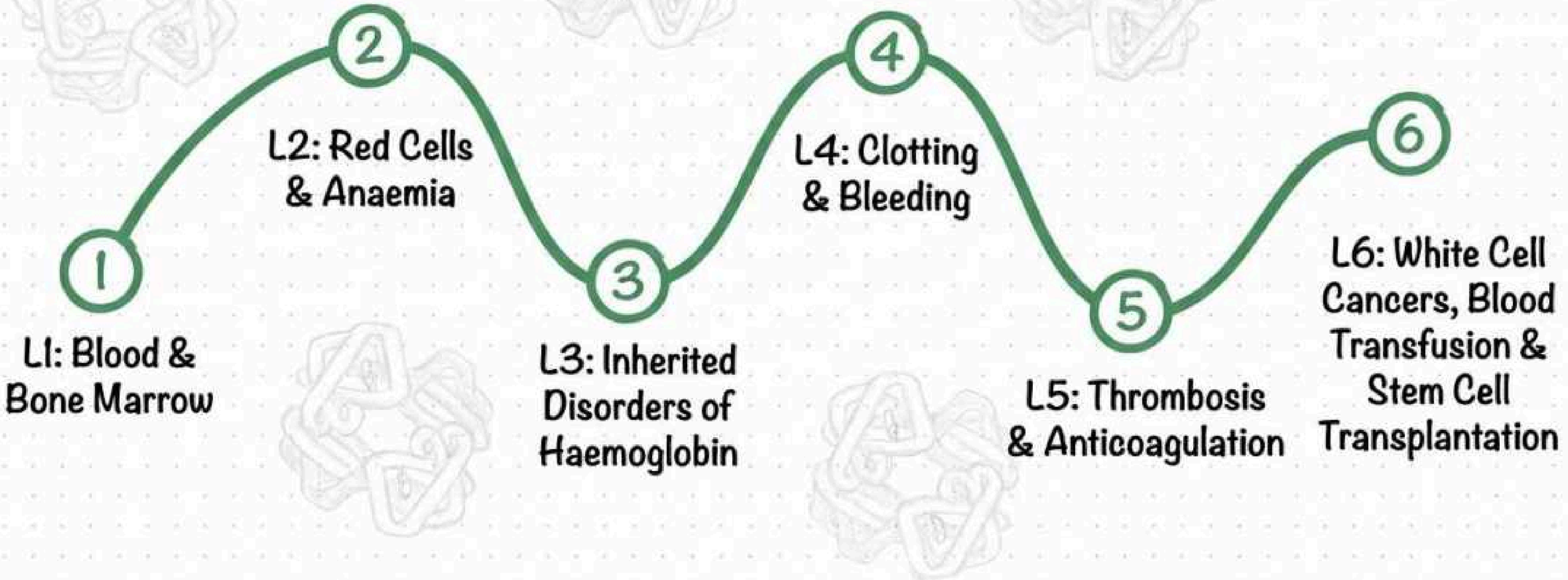


Anaemia alone affects ~25% of the global population.

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Course Map

¶0.5

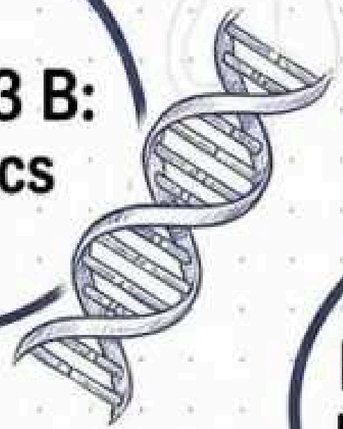


Gemini Notebook

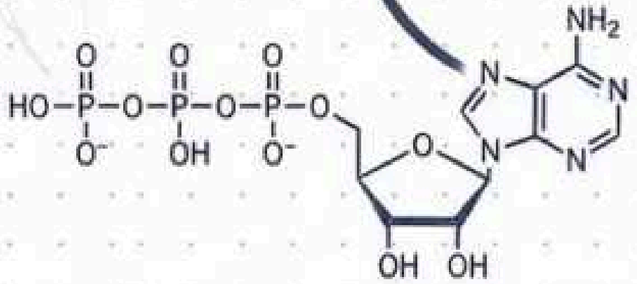
Foundational Knowledge

¶ 0.6

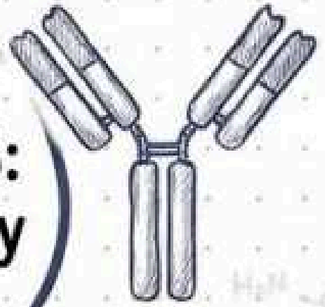
Med 503 B: Genetics



Med 502 B: Biochem & Metabolism



Med 504 B: Immunology



Med 525 B: Hematology

Med 521 B (Heart)

Med 522 B (Lungs)

Essential for understanding Clotting.

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Practical Tip: The Full Blood Count (FBC)

¶ 0.7

FULL BLOOD COUNT REPORT

Red Cells:	4.2 x 10^{12}/L	(3.8–5.8)
Hemoglobin:	120 g/L	(115–165)
Hematocrit:	0.36 L/L	(0.35–0.47)
MCV:	85 fL	(80–100)
White Cells:	3.1 x 10^{9}/L	(4.0–11.0)
Neutrophils:	1.5 x 10^{9}/L	(1.7–7.5)
Lymphocytes:	1.2 x 10^{9}/L	(1.0–4.5)
Platelets:	90 x 10^{9}/L	(150–450)

Reports numbers and sizes

1. Which cell line is abnormal?



RBC WBC PLT

2. In which direction?

Increased
(e.g., Polycythaemia, Leukaemia, Thrombocytosis)

Decreased
(e.g., Anaemia, Leucopenia, Thrombocytopenia)

3. Is >1 line affected?

Yes (Pancytopenia or Bicytopenia)
→ Consider Bone Marrow/Systemic

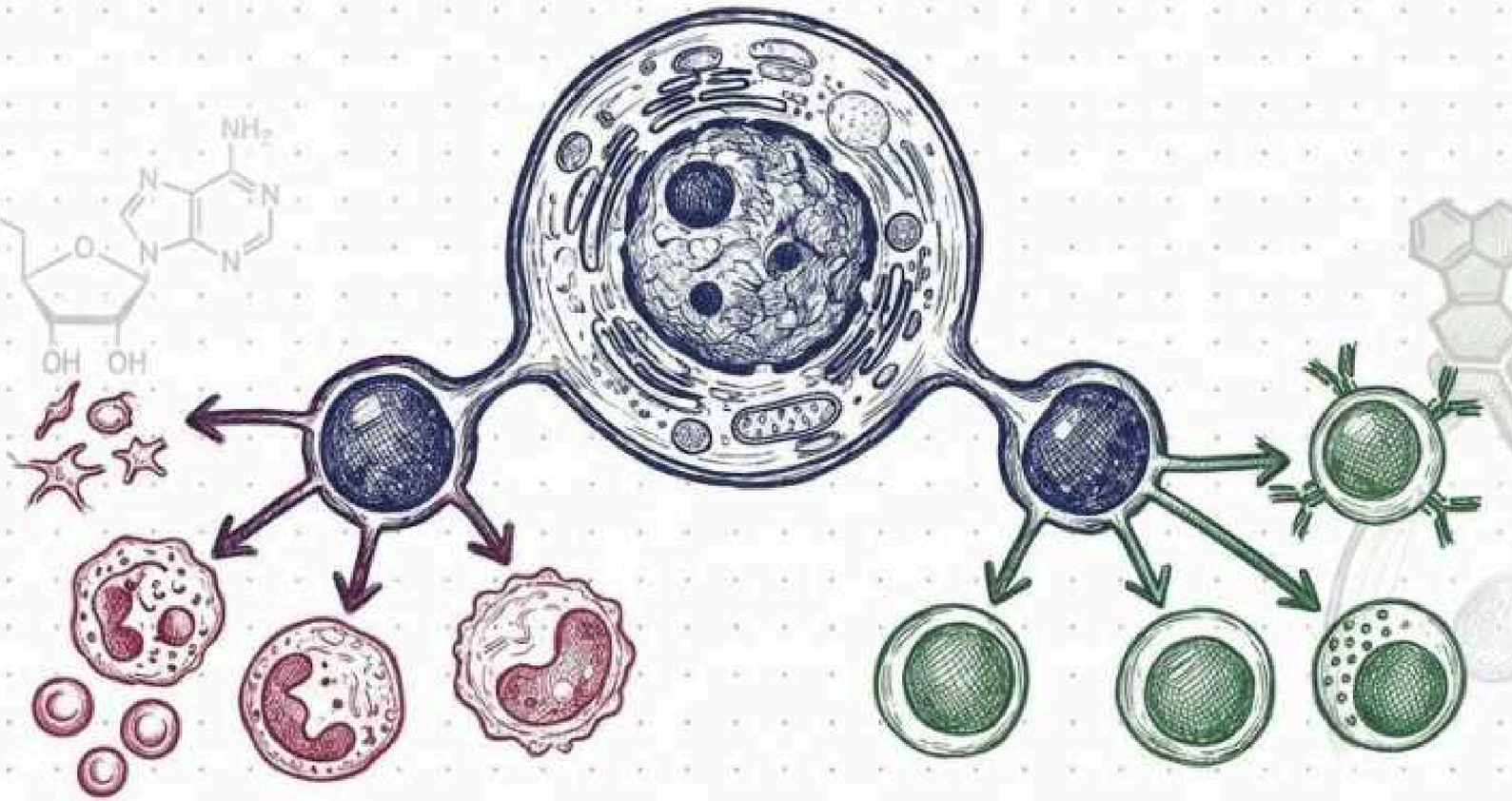
No (Isolated Cytopenia)
→ Consider Line-Specific Causes

This is the first skill of haematology.

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So let us begin with how blood is made.

¶ 0.8



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