

# About Dataset

## ➤ Researchers Information

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## ➤ Context

This is the first Dataset for various Hematology patients in Iraq. The Dataset provides the patients' Cell Blood Count test information that can be used to create a Hematology diagnosis/prediction system. Also, this Data was collected in 2022 from the Medial City / Hematology Center and can be cleaned & analyzed using any programming language because it is provided in an excel file that can be accessed and manipulated easily. The user just needs to understand how rows and columns are arranged because the data was collected as images(CBC images) from the laboratories and then stored the extracted data in an excel file.

## ➤ Content

This Dataset contains 300 rows. For each row (patient information), there are 28 columns containing CBC test features that can be described as follows:

1. **ID:** Patients Identifier
2. **Gender:** Patient sex (0 for Female and 1 for Male)
3. **DevTyp:** Device Type (1 or 2)
4. **WBC:** White Blood Cell  
Ranges for device 1: 4.00 to 10.00, Unit:  $10^9/L$   
Ranges for device 2: 4.00 to 9.00, Unit:  $10^3/\mu L$
5. **LYMp:** Lymphocytes percentage, which is a type of white blood cell  
Ranges for device 1: 20.000 to 40.000, Unit: %  
Ranges for device 2: 17.00 to 57.00, Unit: %
6. **MONp:** Monocytes percentage, which is a type of white blood cell  
Ranges for device 1: 2.00 to 10.00, Unit: %  
Ranges for device 2: 0 to 10.00, Unit: %
7. **NEUp:** Neutrophils percentage, which is a type of white blood cell  
Ranges for device 1: 40.00 to 80.00, Unit: %  
Ranges for device 2: 28.00 to 78.00, Unit: %
8. **EOSp:** Eosinophils percentage, which is a type of white blood cell  
Ranges for device 1: 1.00 to 6.00, Unit: %  
Ranges for device 2: 0 to 10.00, Unit: %
9. **BASOp:** Basophils percentage, which is a type of white blood cell  
Ranges for device 1: 1.00 to 2.00, Unit: %  
Ranges for device 2: 0 to 2.00, Unit: %
10. **LYMn:** Lymphocytes Number  
Ranges for device 1: 1.000 to 3.000, Unit:  $10^9/L$   
Ranges for device 2: 0.70 to 5.10, Unit:  $10^3/\mu L$
11. **MONn:** Monocytes Number  
Ranges for device 1: 0.200 to 1.000, Unit:  $10^9/L$   
Ranges for device 2: 0 to 0.90, Unit:  $10^3/\mu L$
12. **NEUn:** Neutrophils Number

- Ranges for device 1: 2.000 to 7.000, Unit:  $10^9/L$   
 Ranges for device 2: 1.10 to 7.00, Unit:  $10^3/\mu L$
- 13. EOSn:** Eosinophils Number  
 Ranges for device 1: 0.020 to 0.500, Unit:  $10^9/L$   
 Ranges for device 2: 0 to 0.90, Unit:  $10^3/\mu L$
- 14. BASOn:** Basophils Number  
 Ranges for device 1: 0.020 to 0.100, Unit:  $10^9/L$   
 Ranges for device 2: 0 to 0.20, Unit:  $10^3/\mu L$
- 15. RBC:** Red Blood Cell  
 Ranges for device 1: 3.50 to 5.50, Unit:  $10^{12}/L$   
 Ranges for device 2: 3.76 to 5.70, Unit:  $10^6/\mu L$
- 16. HGB:** Hemoglobin  
 Ranges for device 1: 12.0 to 16.5, Unit: g/dL  
 Ranges for device 2: 12.00 to 18.00, Unit: g/dL
- 17. HCT:** Hematocrit is the proportion, by volume, of the Blood that consists of red blood cells  
 Ranges for device 1: 37.0 to 54.0, Unit: %  
 Ranges for device 2: 33.5 to 52.0, Unit: %
- 18. MCV:** Mean Corpuscular Volume  
 Ranges for device 1: 80.0 to 100.0, Unit: fL  
 Ranges for device 2: 80.0 to 100.0, Unit: fL
- 19. MCH:** Mean Corpuscular Hemoglobin is the average amount of haemoglobin in the average red cell  
 Ranges for device 1: 27.0 to 34.0, Unit: pg  
 Ranges for device 2: 28.0 to 32.0, Unit: pg
- 20. MCHC:** Mean Corpuscular Hemoglobin Concentration.  
 Ranges for device 1: 32.0 to 36.0, Unit: g/dL  
 Ranges for device 2: 31.0 to 35.0, Unit: g/dL
- 21. RDWSD:** Red Blood Cell Distribution Width  
 Ranges for device 1: 35.0 to 56.0, Unit: fL  
 Ranges for device 2: 42.8 to 51.0, Unit: fL
- 22. RDWCV:** Red blood cell distribution width  
 Ranges for device 1: 11.0 to 16.0, Unit: %  
 Ranges for device 2: 11.6 to 14.0, Unit: %
- 23. PLT:** Platelet Count  
 Ranges for device 1: 150 to 410, Unit:  $10^9/L$   
 Ranges for device 2: 150.0 to 350.0, Unit:  $10^3/\mu L$
- 24. MPV:** Mean Platelet Volume  
 Ranges for device 1: 6.5 to 12.0, Unit: fL  
 Ranges for device 2: 7.0 to 11.0, Unit: fL
- 25. PDW:** Red Cell Distribution Width  
 Ranges for device 1: 9.0 to 17.0, Unit: fL  
 Ranges for device 2: 15.5 to 18.9, Unit: %
- 26. PCT:** The level of Procalcitonin in the Blood  
 Ranges for device 1: 0.11 to 0.28, Unit: %  
 Ranges for device 2: 0.16 to 0.33, Unit: %
- 27. PLCR:** Platelet Large Cell Ratio  
 Ranges for device 1: 9.00 to 45.00, Unit: %  
 Ranges for device 2: 20.0 to 58.0, Unit: %
- 28. PLCC:** Platelet Large Cell Count  
 Ranges for device 1: 13 to 129, Unit:  $10^9/L$

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