

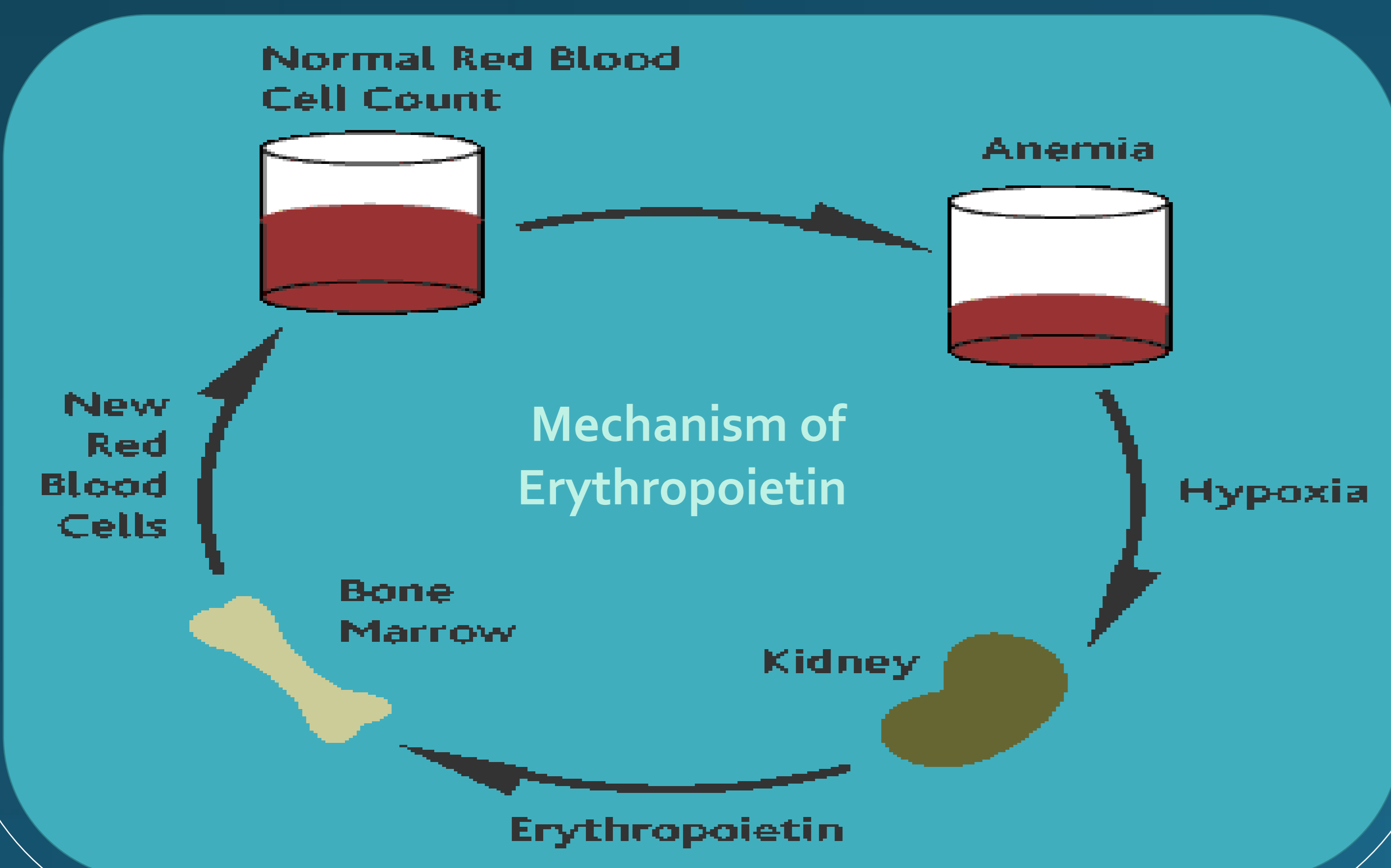
❖ INTRODUCTION

The kidneys are two bean-shaped organs. They are located just below the rib cage, one on each side of the spine. Every day, the kidneys filter about 120 to 150 quarts of blood to produce about 1 to 2 quarts of urine.

❖ ERYTHROPOIETIN

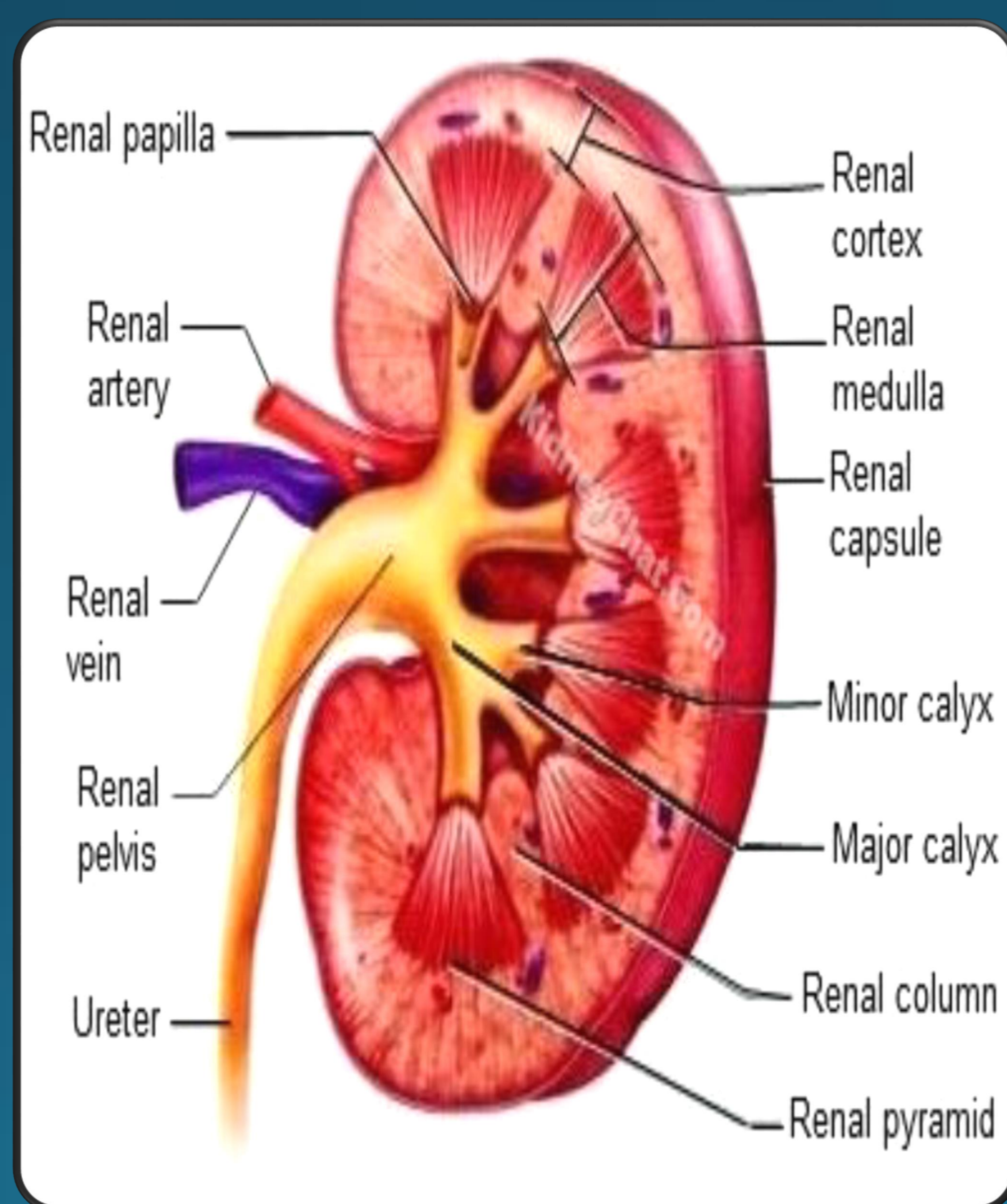
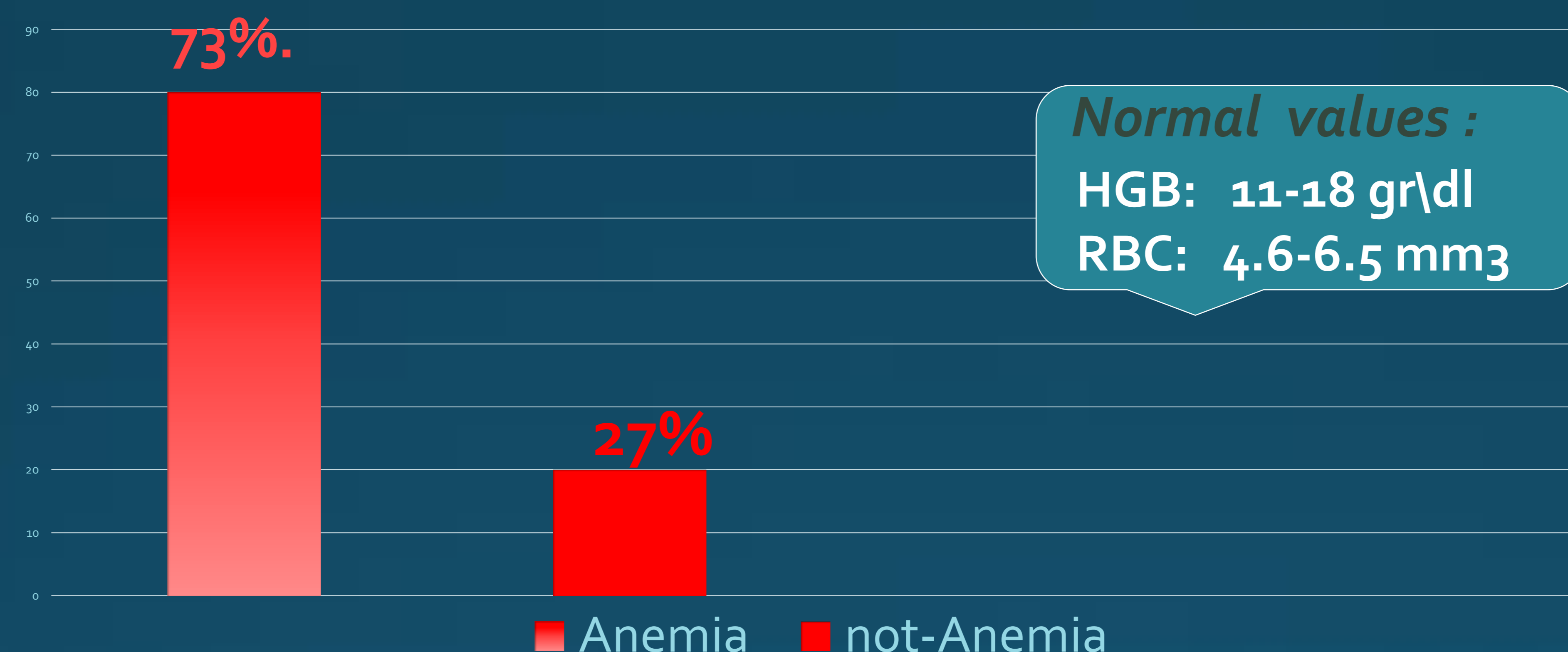
Erythropoietin (EPO) is a naturally occurring glycoprotein hormone produced by specialized cells in the kidneys. These cells are sensitive to the oxygen concentration in the blood, release of EPO is increased when the oxygen concentration is low (hypoxia).

EPO is a cytokine for stem cells in the bone marrow causing them to increase the production of erythrocytes (red blood cells).



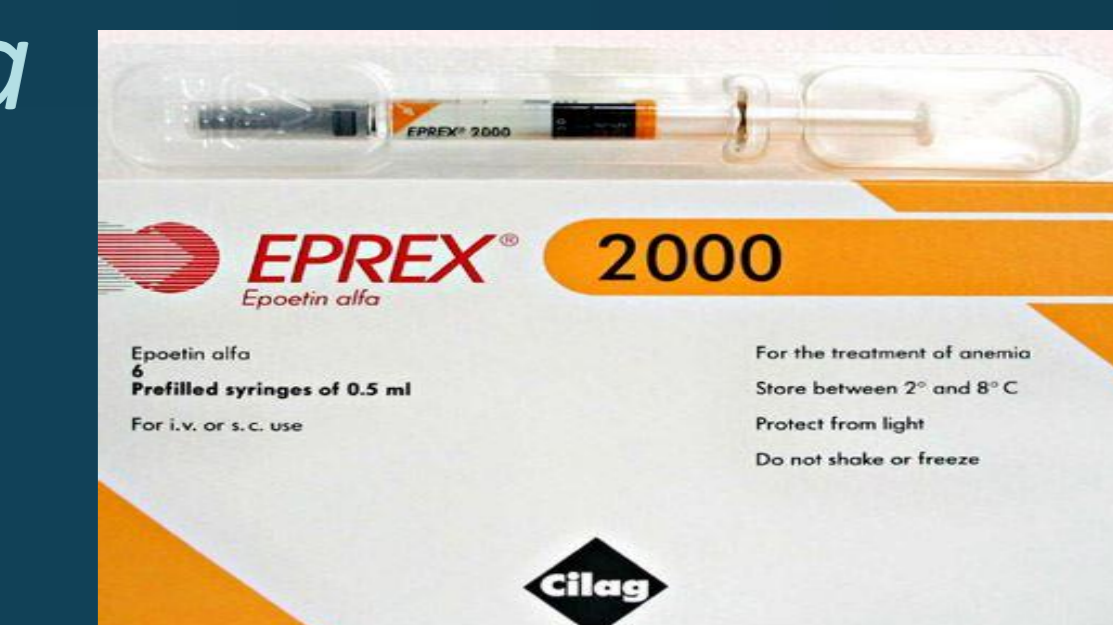
❖ METHODOLOGY AND RESULTS

Files of six cases of renal failure in Nephrology and Dialysis division in the BMC were evaluated specially for hemoglobin (HGB) & RBCs taking in consideration the normal values of HGB is : 11 - 18 g\dl and for RBC is 4.6 - 6.5 mm³. The following figure describes the results obtained.



❖ DOSE OF ERYTHROPOIETIN

Generic name: *epoetin alfa*
Brand name: *Eporex*[®]



Antianemic drugs could be a potential alternative to blood transfusion.

Patient not on dialysis need: 50-100 units/kg IV/SC three times weekly initially.

❖ CONCLUSION

EPO is an essential hormone for red blood cell production. Without EPO, no erythropoiesis.

Under hypoxic conditions, the kidney will produce and secrete EPO to increase the production of red blood cells.

❖ REFERENCE

- <https://www.niddk.nih.gov/health-information/kidney-disease/chronic-kidney-disease-ckd/anemia>
- http://noblood.org/forum/content/179-erythropoietin_-28epo-29
- <http://vikaspedia.in/health/diseaseskidney-related/basic-information-about-kidney/kidney-and-its-function>
- <https://www.healthline.com/health/acute-kidney-failure#diagnosis>