

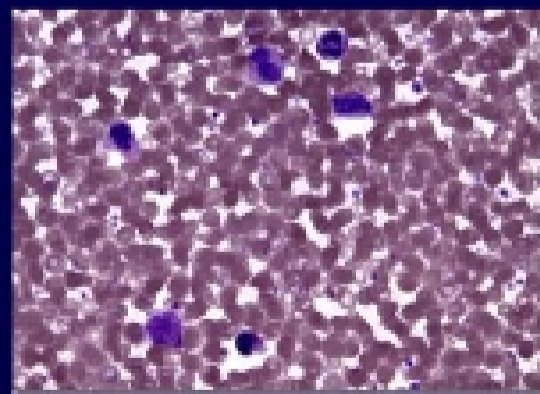
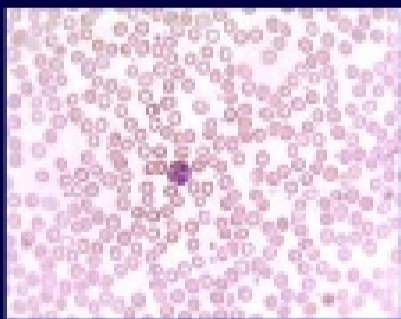
Erythrocytosis in a 57 year-old Man

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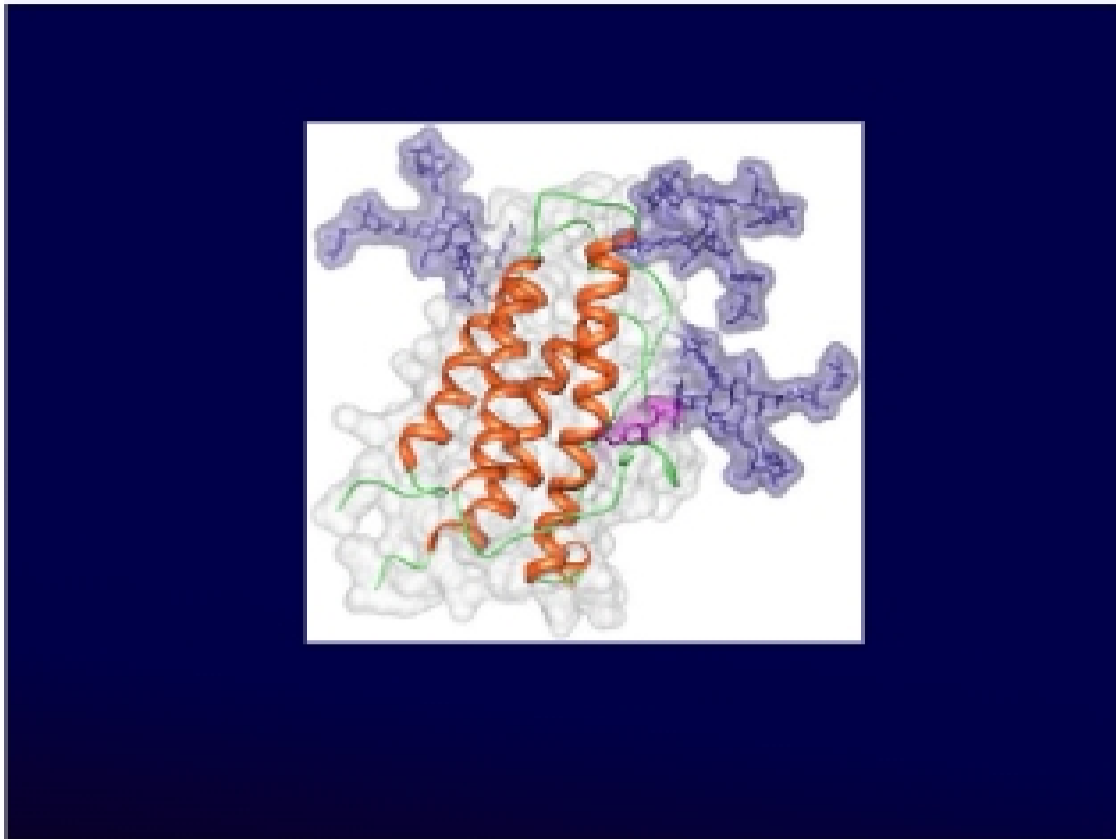
Case

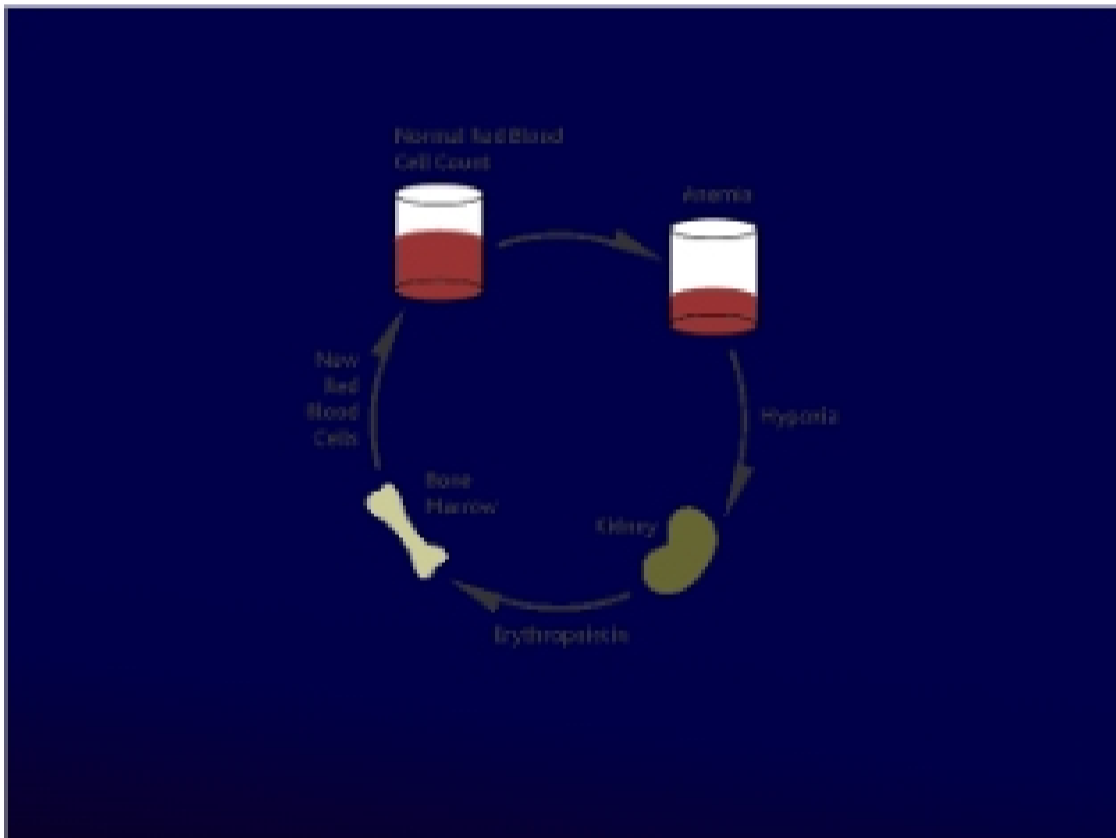
A 57 year old man had been followed by his primary care provider for 24 months with a rising hemoglobin. His hemoglobin had risen from 15.5 g/dl to 18.2 g/dl over this time period. The patient had a history of hypertension that was well controlled and did not smoke. His physical exam was unremarkable.

Blood Smear

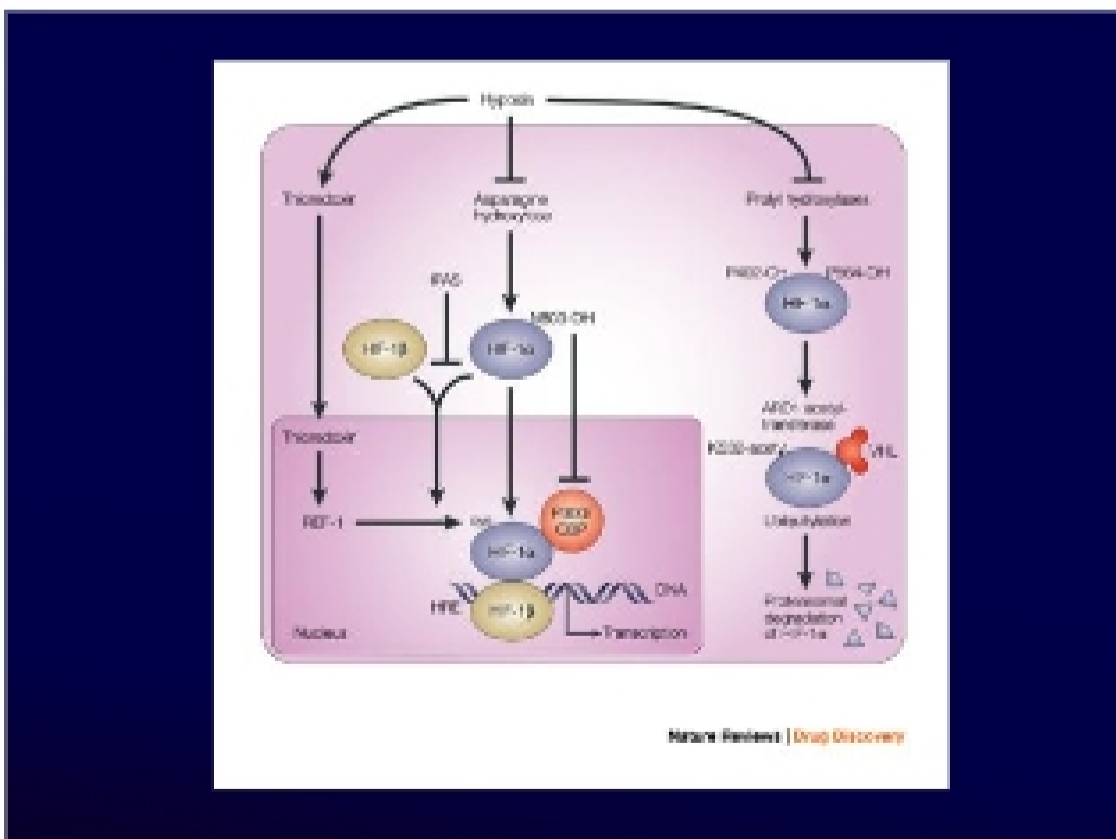


More red cells in smear on the right





hypoxic --> kidney senses hypoxia --> produces erythropoietin --> more RBCs produced



- HIF-hypoxic induction factor
- when there is hypoxia HIF 1alpha and HIF 1beta dimerize and act as transcription factors (bind to DNA) to produce epo and vegF
- if NO hypoxia, HIF 1alpha is hydrolyzed --> binds VHL --> and is degraded in proteosomexx
