

بِسْمِ اللّٰهِ الرَّحْمٰنِ الرَّحِيْمِ
الْحٰمِدُ لِوَالْحَمْدُ لِلّٰهِ
الْحَمْدُ لِلّٰهِ الْعَلِيِّ الْكَبِيرِ

A photograph showing a person's hands wearing blue nitrile gloves. They are holding a clear glass pipette with a white bulb at the top, which is being used to transfer a bright red liquid into a clear glass Erlenmeyer flask. The flask has markings for 100, 150, and 200 milliliters. The background is a plain, light-colored wall.

تشخیص بیوشیمیایی آنمی ها



Dr. Zahra Hesari

Assistant professor of
Clinical Biochemistry

Golestan University of
Medical Sciences

Iron Deficiency Anemia (IDA)

A large, abstract graphic at the bottom of the slide features two overlapping, flowing curves in a light teal color. The curves start from the left side, curve upwards and to the right, then downwards and to the right again, creating a sense of motion and depth. They are set against a white background.

دلایل مختلف بروز IDA

- ۶ تا ۲۴ ماهگی بعد از تولد
- Milk Anemia
- Eventual IDA
- مسمومیت با سرب
- اتلاف خون

ترتیب رویدادها در توسعه IDA

تهی شد از آهن

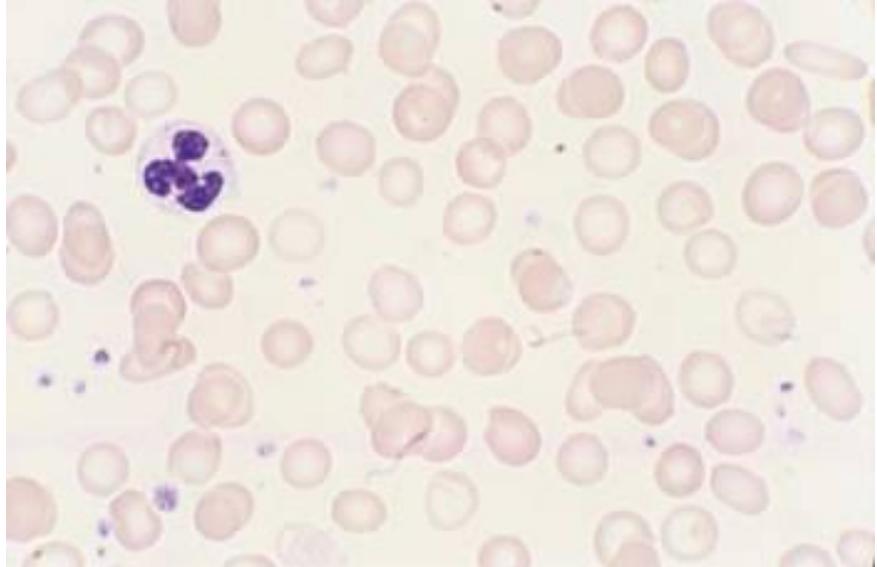
نرم‌وسیتیک- نرم‌وکروم

اریتروپوئز همراه با کمبود آهن

میکروسیتیک- نرم‌وکروم

آنمی فقر آهن

میکروسیتیک- هایپوکروم



- ✓ RBC; Ret-He
- ✓ WBC
- ✓ Serum Iron
- ✓ Tf; TIBC
- ✓ % TIBC Saturation: (SI/TIBC)
- ✓ Ferritin
- ✓ Erythrocyte protoporphyrin (EPP);
Zinc protoporphyrin (ZPP)

تشخيص افتراقی IDA با سایر علل میکروسیتوز

sideroblastic anemia

- Serum Iron
- % STIBC
- Ring sideroblasts

Anemia of Chronic Disease

- Ferritin
- TIBC

Thalassemia

- ZPP
- Ferritin
- Serum Iron
- HbA2

Anemia of Chronic Disease (ACD)



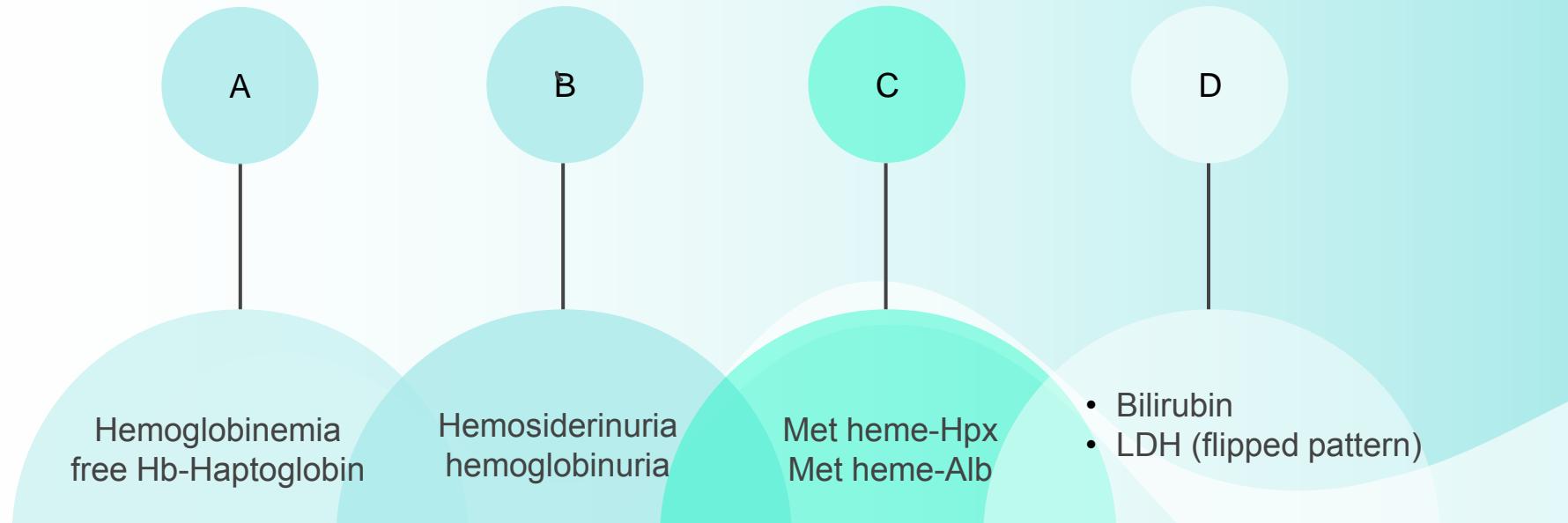
ACD

- مهمترین مکانیسم بیماریزا: سطح بالای سایتوکاین ها ($TNF\alpha$) و فعال شدن ماکروفاژها
- در ۵۰ درصد از بیماران بستری در بیمارستان
- SI; TIBC; %STIBC; sideroblasts
- Ferritin; EPP
- اریتروپئتین (EPO)



Hemolytic Anemia

Intravascular Hemolysis

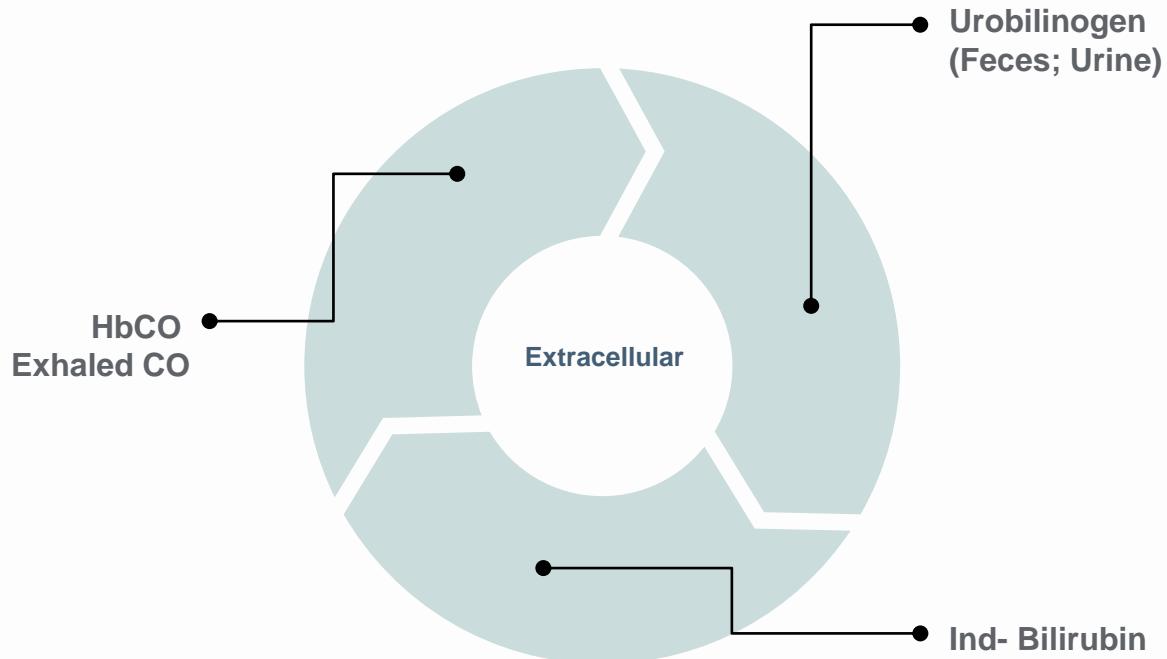




Hemolytic Anemia

Extravascular Hemolysis

Extravascular Hemolysis



A white stethoscope is positioned on the left side of the image, coiled against a light blue background. The stethoscope has a silver diaphragm at the bottom left and a white earpiece at the top left.

Thank you