

# UPSTATE

## UNIVERSITY HOSPITAL

Department of Pathology

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To: Medical Staff  
Subject: Changes to the Iron Panel testing

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- ❖ Quantitation of **Total iron-binding capacity (TIBC), serum iron, and the percent iron saturation** are useful for the clinical diagnosis of iron-deficiency anemia and chronic inflammatory disorders and as screening tests for other clinical conditions.
- ❖ The TIBC measures the amount of iron that would appear in blood if all the transferrin were saturated with iron.
- ❖ The TIBC is currently calculated using measurement of the Unsaturated Fe Binding Capacity (UIBC). However, this calculation is not as accurate as calculation of TIBC using the measurement of transferrin.
- ❖ Effective on October 8<sup>th</sup>, 2019, the TIBC will be calculated using the measurement of transferrin rather than UIBC. The UIBC test currently offered at the Upstate Pathology Laboratory will no longer be available. The order for TIBC remains the same (**Epic Code: LAB829**).
- ❖ The updated calculation for TIBC and percent iron saturation (performed by the laboratory information system automatically and reported in Epic):
  1. TIBC may be calculated from the indirect measurement of serum transferrin by the following formula:  
$$\color{blue}{\oplus} \text{ TIBC } \mu\text{g/dL} = \text{serum transferrin mg/dL} \times 1.389$$
  2. To obtain the percent iron saturation, the serum iron is divided by the TIBC which gives the actual amount of saturated transferrin:  
$$\color{blue}{\oplus} \text{ Percent Iron saturation or Transferrin saturation (\%)} = \text{serum iron level } (\mu\text{g/dL}) / \text{TIBC } (\mu\text{g/dL}) \times 100$$

For questions, please feel free to reach us out at [alima@upstate.edu](mailto:alima@upstate.edu) or call # 315-464-9175.