

Bands

Interpretive Summary

Description: Bands are immature segmented neutrophils that are typically released early from the bone marrow in response to inflammation.

Decreased Bands

Common Causes

- Normal (reference interval includes zero)

Increased Bands

Common Causes

- Inflammatory response (local or systemic; acute or chronic)
 - Infections: bacterial
 - Immune-mediated disease
 - Tissue necrosis
 - Neoplasia

Uncommon Causes

- Inflammatory response (local or systemic; chronic or acute)
 - Infections: parasitic, rickettsial, viral, fungal, protozoal
- Corticosteroid-induced

Related Findings

- Inflammatory response
 - Infectious
 - Increased neutrophils, toxic neutrophils and/or band neutrophils
 - Positive culture of urine, CSF, joint fluid, blood, tissue, body cavity effusion, other
 - Evidence of infection on abdominal or thoracic imaging
 - Positive serology or PCR results
 - Septic effusion on fluid analysis and cytology
 - Suppurative inflammation +/- bacterial organisms on cytology or histopathology
 - Immune-mediated disease
 - Increased neutrophils and monocytes
 - Nonregenerative or regenerative anemia, thrombocytopenia
 - Inflammation found on fluid analysis and cytology of joint fluid, CSF, or body cavity effusion
 - Positive Coombs, ANA titer, or Rheumatoid Factor
 - Tissue necrosis
 - Increased neutrophils and monocytes, toxic neutrophils and/or band neutrophils
 - Necrotic mass on abdominal or thoracic radiographs, or abdominal ultrasound
 - Evidence of necrosis on cytology or histopathology of a mass or organ
 - Neoplasia
 - Enlarged lymph nodes or mass on abdominal radiographs, abdominal ultrasound, or thoracic radiographs
 - Neoplastic cells on cytology or histopathology

Additional Information

Physiology

- Bands are an immature stage of development of the neutrophil.
- Bands have a curved nucleus of uniform thickness in which the sides are approximately parallel to one another throughout the entire length of the nucleus
- The ability of neutrophils to respond to stimuli and migrate increases with maturation, thus bands may be slightly less responsive than segmented forms.

Diagnostic Methodology

- The absolute band count is calculated by multiplying the band percentage by the total white blood cell count.

References

- Latimer KS, Mahaffey EA, Prasse KW, eds. *Duncan and Prasse's Veterinary Laboratory Medicine: Clinical Pathology*, 4th ed. Ames, IA: Blackwell; 2003.
- Stockham SL, Scott MA. *Fundamentals of Veterinary Clinical Pathology*, 2nd ed. Ames, IA: Blackwell; 2008.

Last updated 11/1/2013