

Granulocytes with Cytoplasmic Morulae

[Granny-granulocyte with More Cakes](#)

Peripheral smear of these patients reveals granulocytes with morulae in the cytoplasm.

Antibody Testing

[Ant-tie-body with Test-Tubes](#)

Indirect immunofluorescence antibody (IFA) assay for immunoglobulin G (IgG) directed against *A. phagocytophilum* antigen is the preferred diagnostic test for anaplasmosis.

Pancytopenia

[Pan-side-toe-peanut](#)

Pancytopenia (deficiency of all three cellular components of the blood) is a common manifestation of anaplasmosis. Leukopenia (deficiency of white blood cells) and thrombocytopenia (deficiency of platelets) are particularly common. The exact mechanism behind the pancytopenia is unknown, but immune reactions and direct cell invasion (e.g., erythrocytic invasion) are possible mechanisms.

Management

Doxycycline

[Dachshund-cycling](#)

Doxycycline inhibits bacterial protein synthesis by binding to the 30S ribosomal subunit. Doxycycline is the drug of choice for anaplasmosis.

Rifampin

[Ref amp](#)

Rifampin is a bactericidal antibiotic that works by inhibiting RNA polymerase. It is an alternative to doxycycline in patients with anaplasmosis, particularly in children under the age of 8 and in pregnant women. It is important to note that even in these subpopulations, doxycycline is still the preferred antibiotic due to the prevalence of data showing its efficacy and safety.