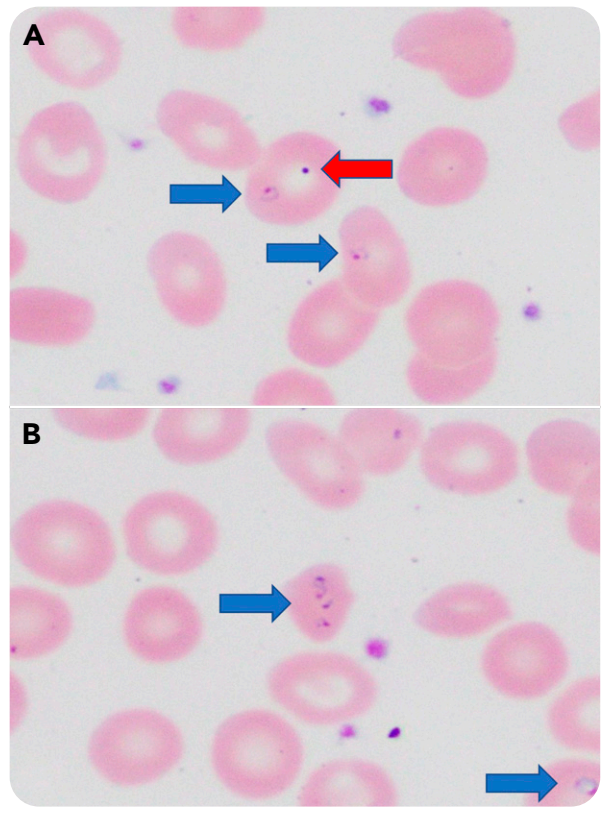


## Concurrent COVID-19 and babesiosis in an older, splenectomized patient

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An 83-year-old man with a history of splenectomy and acute myeloid leukemia (AML) in remission presented to the hospital with fever, fatigue, and upper respiratory symptoms. SARS-CoV-2 real-time reverse transcription-polymerase chain reaction was positive, despite the patient having received both doses of the BNT162b2 mRNA vaccine in February 2021. Monoclonal antibody therapy (casirivimab and imdevimab) was administered with improvement of symptoms for several days after infusion. He re-presented with recurrent fever, fatigue, and evidence of hemolysis (lactate dehydrogenase, 410 U/L; haptoglobin, <10 mg/dL [ $<100$  mg/L]). Clinical suspicion included worsening COVID-19 infection vs relapsed AML. A blood smear revealed numerous intraerythrocytic signet ring forms (panels A-B, blue arrows;  $\times 100$  objective, total magnification  $\times 1000$ ),

consistent with babesiosis, as well as many round, basophilic inclusions, compatible with Howell-Jolly bodies (panel A, red arrow). Parasitemia was estimated at 4.5%, and no blasts were identified. He denied recent tick exposure or blood transfusion. The BinaxNOW Malaria immunochromatographic assay was negative for *Plasmodium* antigens. Azithromycin and atovaquone were initiated, with a subsequent decrease in parasite load and improvement of symptoms.

This case highlights the importance of examining a peripheral blood smear, even when conditions other than babesiosis appear to be explanations for hemolytic anemia. Patients with asplenia and those with weakened immune systems are at increased risk for symptomatic babesiosis.



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