

# A Rare Encounter: 22-year-old Pennsylvanian with Babesia Duncanii

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## Introduction

- Babesia Microti is the most common causative organism for Babesiosis.
- Some cases of Babesia Duncanii have been reported in West coast, but none have been reported in the Midwest or Northeast

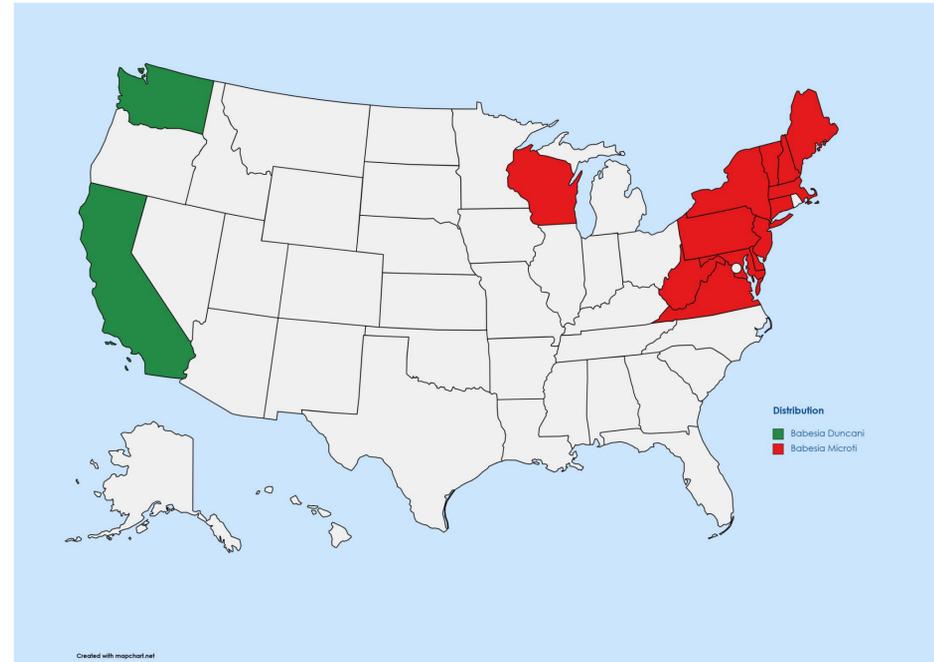
## Discussion

- Babesiosis Duncanii is primarily found in the western United States. Its presence in Pennsylvania raises questions about the evolving distribution of tick-borne diseases.
- Preferred tools for diagnosis of babesiosis include blood smear for identification of Babesia organisms and polymerase chain reaction (PCR) for detection of Babesia DNA. Positive serology may provide retrospective confirmation and should be confirmed with PCR and/or blood smear.
- Treatment differs from other Tick-borne illnesses in the fact that Babesiosis is treated with Azithromycin plus Atovaquone or Clindamycin plus Quinine.
- Prevention consists of personal protective measures that minimize exposure to ticks.

## Conclusion

- Changing ecology has contributed to the increase and expansion of human babesiosis in the USA; this case signifies the importance of testing for the several species of Babesia even in regions not originally considered endemic.

## Distribution of Babesia Duncanii vs Babesia Microti



## Case Report

22-year-old male with no significant past medical history presented with persistent fever, malaise, weight loss and fatigue since the past 2 weeks.

Travel history: Israel 2 months ago and recent travel to rural Pennsylvania 2 weeks prior to onset of symptoms where he mostly stayed indoors. He denied any recollection of tick bites or mosquito bites.

Initial labs : WBC 3.1, ANC 1.5, hemoglobin 13.6, hematocrit 39.0, MCV 81.5 and LDH 393  
All other labs were unremarkable

On initial evaluation ID recommended starting doxycycline due to concerns for tickborne illness. Doxycycline was substituted with amoxicillin and rifampin to cover for tickborne diseases and anaplasmosis.

Extensive infectious and rheumatological work-up was negative.

The patient continued to have low-grade fevers ranging between 38.2 to 39.0

MRI raised concerns for subarachnoid processes such as infection.

Diagnostic lumbar puncture revealed WBC 44, glucose 56, protein 51 concerning for viral meningitis.

CSF herpes/VZV PCRs were negative

On day 8 of hospitalization : WA1 IgG antibody FTA came back positive.

After 8 days of hospitalization, he was discharged on azithromycin and atovaquone.

## Life Cycle of Babesia

