INTRODUCTION
Leptospirosis is an infectious disease caused by a free living spirochete. There are only 100-150 cases reported annually in the United States. Distribution is sporadic, however, Hawaii is most frequently associated with leptospirosis cases. Infections can occur as a result of contact with contaminated water via skin or mucosa. Symptoms begin 5-28 days after exposure.

BACKGROUND
Patients presenting with fever, chills, myalgia, nausea, vomiting, diarrhea, headache, conjunctival suffusion, and jaundice should be suspected to have leptospirosis.

CASE PRESENTATION
35M with PMH of angioedema presented with high fevers of 104 F, chills, generalized aches, nausea, vomiting, and severe headaches for 3 days. He reported travel to Costa Rica 1 month prior as well as work in subway maintenance.

Physical Exam:
Patient was tachycardic to 110’s, BP 128/83, RR tachycardic for 3 days.

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DISCUSSION
Our patient presented with a classic features of leptospirosis given his transaminis, acute kidney injury, severe headache and persistent fevers in the setting of recent travel to an endemic area. Despite history and physical exam findings, empiric treatment for leptospirosis was not initiated as serologic tests returned negative for leptospirosis antibody.

A covering physician later started treatment for leptospirosis (IV doxycycline/ceftriaxone) based on high clinical suspicion and performed repeat testing. Following the patient’s rapid improvement, the repeat serologic tests returned positive for leptospirosis antibody.

This case along with typhoid, Rocky Mountain spotted fever and similar rare infectious diseases may routinely be missed due to reliance on laboratory testing instead of clinical diagnosis. The importance of utilizing clinical reasoning in the era of patient serology

CONCLUSION
Leptospirosis IgM ELISA testing has a reported sensitivity ranging from 47% to 87% in studies completed in Sri Lanka and Thailand where there are high endemic rates of the disease. Despite relatively good sensitivity (~87%) in the high end of the spread, the variability in results is likely due to the delay in development of the antibodies against leptospirosis that are measured by the assays. Due to this large variability in serologic sensitivity, particularly early in disease, clinical diagnosis based on patient risk factors and symptomology should be paramount in identifying and promptly treating patients.

REFERENCES

About Northwell Health
Northwell Health is the largest health care provider and private employer in New York State, serving the health needs of over 22 million people across the five boroughs of New York City, Long Island, and Western Suffolk County. It is the state’s third largest employer and performs more than 10.6 million laboratory tests annually. Northwell Health is also one of the nation’s most advanced academic medical centers, searching for new solutions and breakthroughs through the combined talents of南瓜研究科学家, 医学博士和科研人员. It has 7 hospitals and 20 inpatient facilities in New York City, Long Island, and Western Suffolk County. Northwell Health is an independent academic medical center affiliated with the Icahn School of Medicine at Mount Sinai and the State University of New York Downstate Medical Center. Northwell Health is also home to New York’s most advanced ambulatory care delivery system. Northwell Health has about 30,000 organized physicians and employees, 4 million annual patient encounters and 5,700 members of Northwell Health Physicians Partners. For more information, go to northwell.edu.