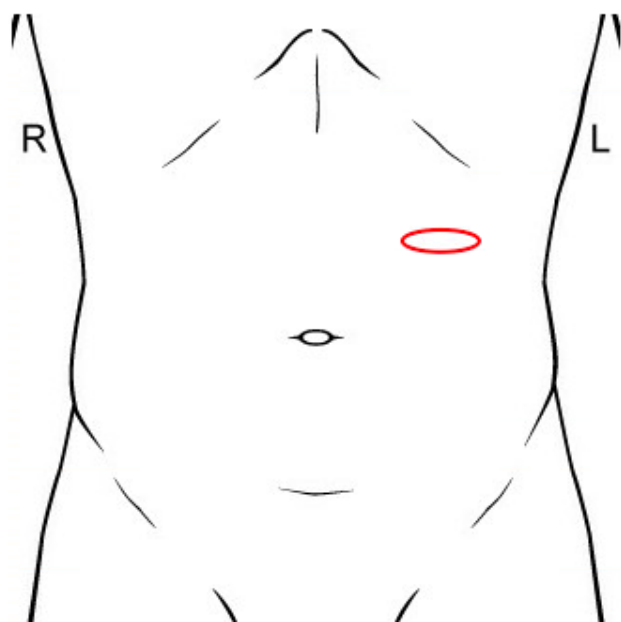






- A 43-year-old presents to the emergency department
- Chief complaint: painful skin lesion.
- He thinks he was bitten by a spider 4 days ago.
- Associated chills, myalgias, and headaches.
- T 100.4, HR 112

Necrotic brown recluse spider bite



Recluse spider bite with vesiculation



www.visualdx.com © 2014 Logical Images, Inc.

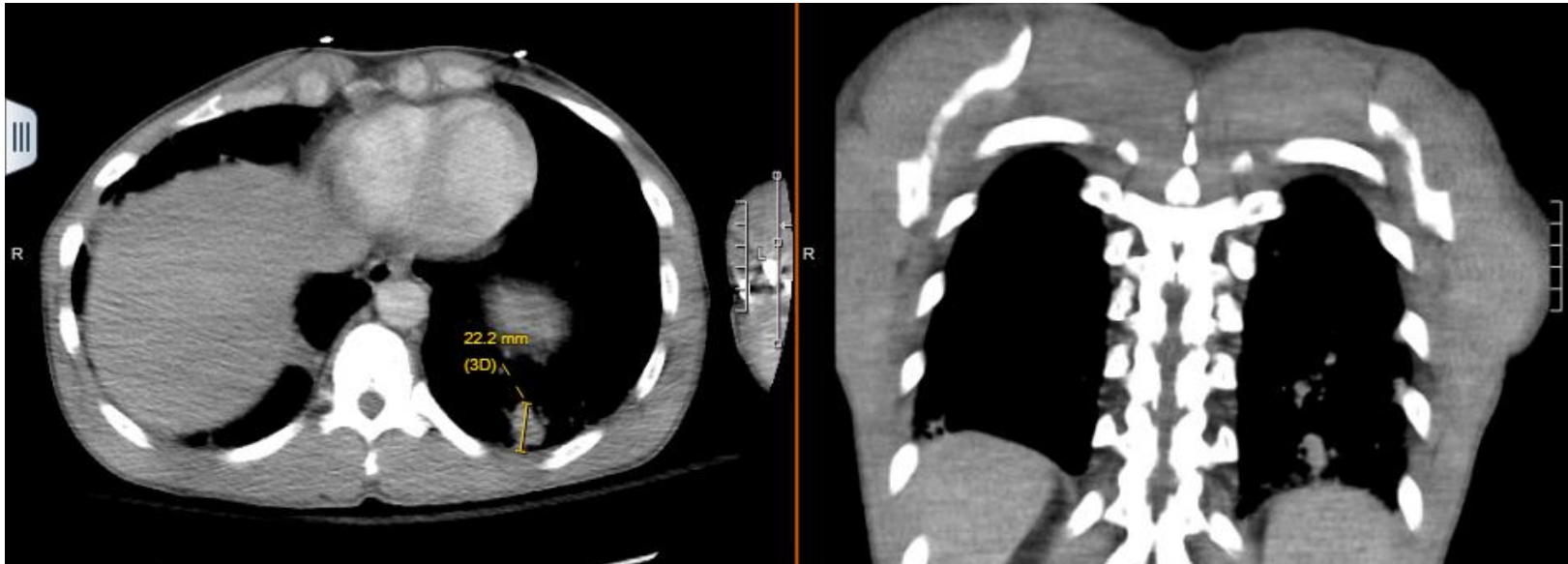
Care Timeline

- 1430 ○ Arrived
- 1555 ○ Wound Culture / Gram Stain
⚠
- 1615 ○ BASIC METABOLIC PANEL
○ CBC WITH DIFFERENTIAL ⚠
○ SARS-CoV-2 PCR (COVID-19)
- RAPID
- 1618 ○ hydrocodone/acetaminophen
1 Tab
- 1619 ○ 0.9 % sodium chloride
1000 mL
- 1756 ○ ED CT HEAD NO CONTRAST
- 2006 ○ ketorolac tromethamine
15 mg
- 2007 ○ metoclopramide HCl 10 mg
○ diphenhydramine HCl
12.5 mg
- 2018 ○ Discharged

Discharged on empiric cephalexin and trimethoprim-sulfamethoxazole

- Five days later, he returns to the emergency department with high fevers, shortness of breath, nausea with emesis, diarrhea, blurry vision, and visual hallucinations.
- T: 102.4 HR:112 RR:24 BP:121/61

- Past medical history: none
- Physical exam: eschar at the left lower chest with surrounding erythema and pustules
- Labs: neutrophilic leukocytosis, elevated lactic acid and procalcitonin, elevated transaminases, alk phos and direct bilirubin, and hyponatremia and has anion gap



1605 **CBC with Differential(!)**
Glucose cytosis to 18,000. [RM]
1605 **Lactic Acid With Reflex(!)**
Is a lactic acidosis 2.7. [RM]
1605 **HEPATIC FUNCTION PANEL(!)**
Hepatic function panel shows elevated liver enzymes, alk phos, direct bili. [RM]
1606 **PROCALCITONIN(!)**
Procalcitonin is elevated. [RM]
1606 **Basic Metabolic Panel(!)**
Patient is hyponatremic and has an anion gap likely secondary to lactic acidosis. [RM]

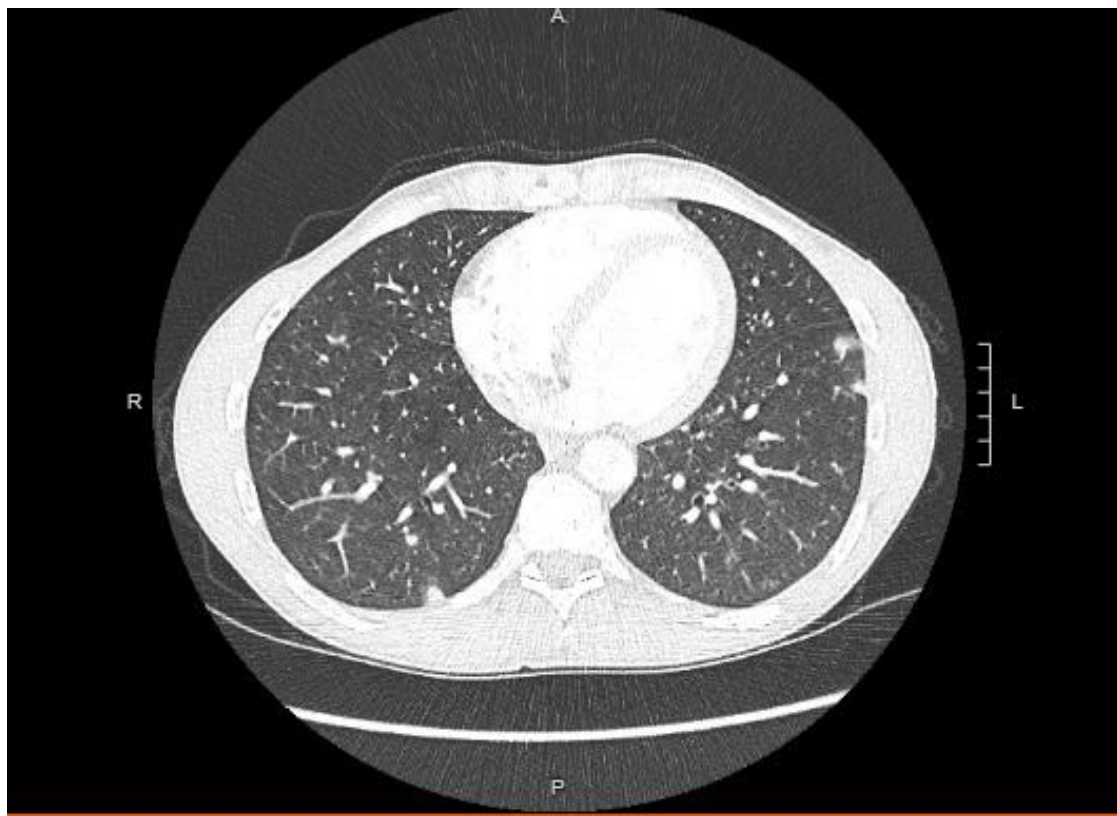
1738

IMPRESSION:

1. Innumerable bilateral solid pulmonary nodules concerning for multifocal infection or septic emboli. Metastatic disease possible though less likely in the absence of known primary malignancy.
2. Cholelithiasis without evidence of cholecystitis.

[RM]

Patient was COVID and flu negative.
Chest x-ray was unremarkable.



PACS Images

[Show images for CT CHEST/ABD/PELVIS W/ CONTRAST](#)

Impression

1. Numerous bilateral pulmonary nodules concerning for multifocal infection or septic emboli. Metastatic disease possible though less likely in the absence of known primary malignancy.
2. Cholelithiasis without evidence of cholecystitis.

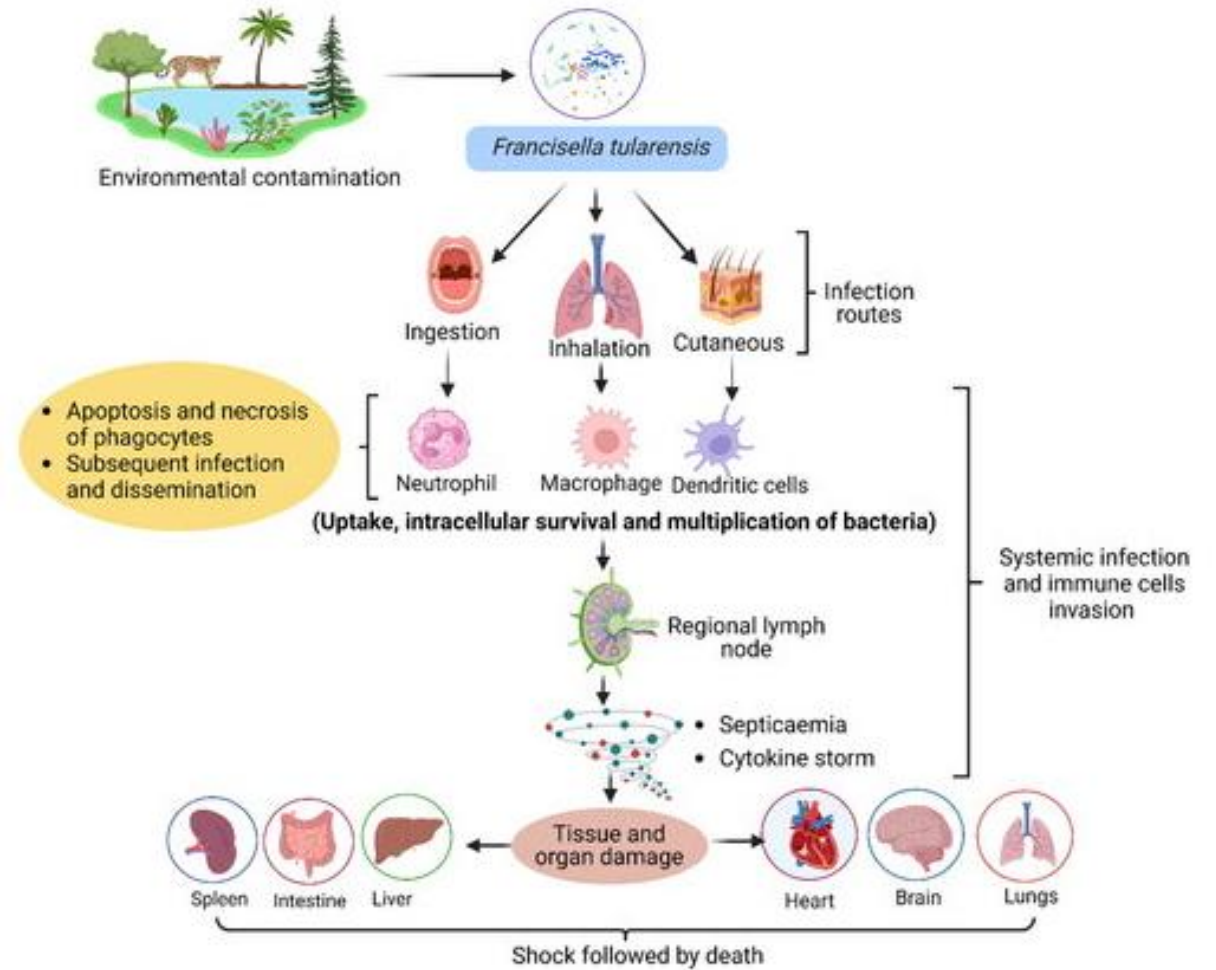
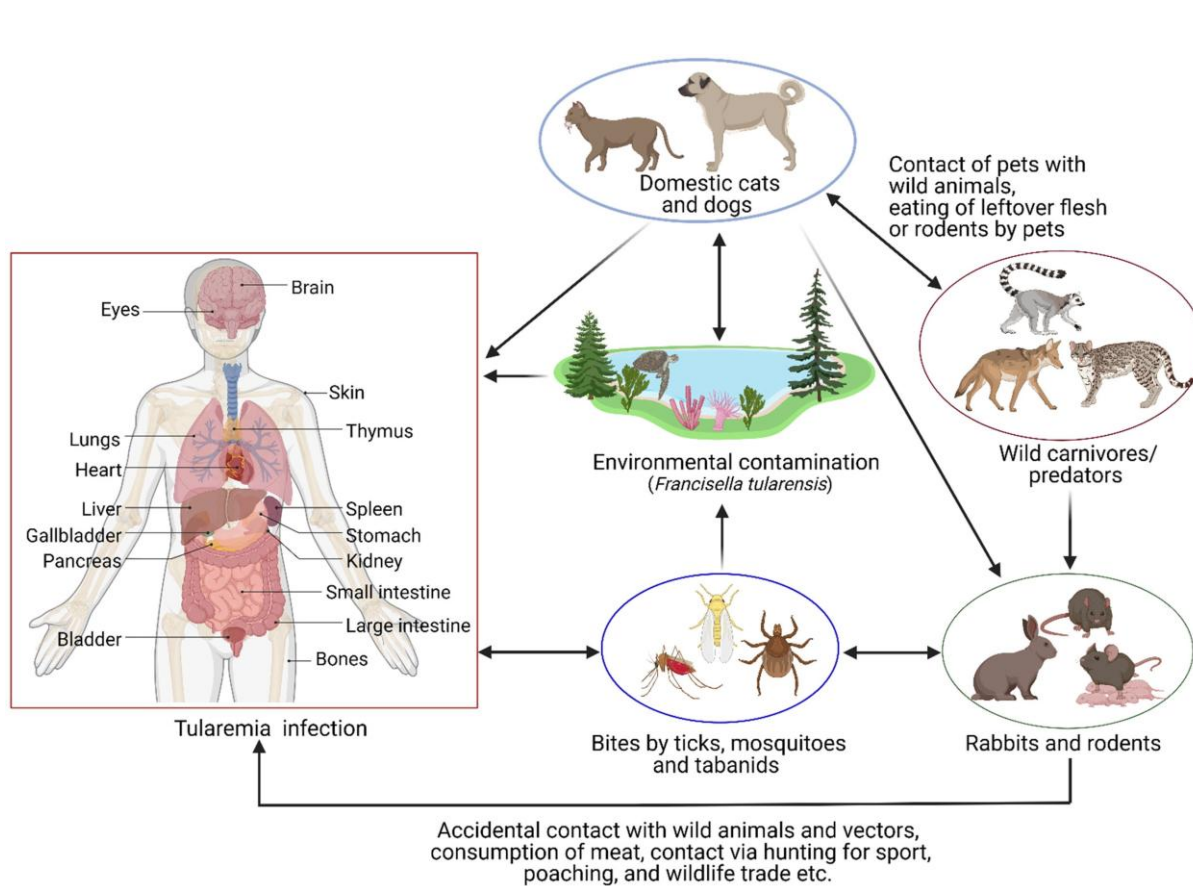
- CT head, lumbar puncture: unremarkable
- Blood cultures: negative.
- TTE: no valvular pathology or vegetations.
- Punch biopsy of the eschar: epidermal ulceration, a dense dermal inflammatory infiltrate, and peri-eccrine inflammation, suggestive a spider bite.
- He improved and was discharged home on a short course of amoxicillin/clavulanic acid and doxycycline.

- His initial wound culture was ultimately sent to the state health department for further identification, and *Francisella tularensis* was identified via PCR.
- The *F. tularensis* IgG drawn during his hospitalization also returned positive.
- Although he still had some residual symptoms, he declined re-admission for aminoglycoside therapy and was started on 10-day course of ciprofloxacin with near symptom resolution and interval reduction of pulmonary nodules on follow up CT chest.

A Wild Rabbit Chase: When Tularemia Hops into the Differential

Mackenzie Kelley¹, Anam Habib, MD², Tasniem Tasha, MD³, Cayleigh Blumrick, MD², Jennifer Wintringham, MD⁴, Catherine Derber, MD²

¹MD Program, ²Division of Infectious Disease, ³Department of Medicine, ⁴Department of Dermatology, Eastern Virginia Medical School, Norfolk, VA



Sharma R, Patil ,Rajendra Damu, Singh ,Birbal, et al. Tularemia – a re-emerging disease with growing concern. *Veterinary Quarterly*. 2023;43(1):1-16. doi:10.1080/01652176.2023.2277753

TULAREMIA

Francisella tularensis
Aerobic fastidious gram-negative
Coccobacillus (>100 species)



Zoonotic
infection

Vectors



"Rabbit Fever"
-Rabbits -Muskrats
-Rodents -Beavers



-Tick -Mosquitoes
-Horse flies - Fleas
-Lice



Used for
Bioterrorism

Ulceroglandular

Fever
+
Erythematous
papulo-ulcerative
lesion

Tender
lymphadenopathy

Suppuration+/-



Glandular

Regional
lymphadenopathy
single or multiple
nodes (Suppurative)

Most common
presentation among
children

NO evident lesion at
the site of inoculation



Oculoglandular

Splashing infected
material into the eye

Unilateral Symptoms

- o Pain
- o Photophobia
- o Increased tearing

**Parinaud's
Oculoglandular Sx.**
Conjunctivitis +lymph
nodes on the same side



Pharyngeal

Ingestion of
contaminated food
/water

Small percentage in the
United States

- o Exudative pharyngitis
- o Tonsillitis
- o cervical
lymphadenopathy



Pneumonic

Direct inhalation of
the organism into the
lungs.

More common in
adults. Farmers, sheep
shearers, landscapers

- o Fever
- o Myalgias
- o Nausea
- o Chest pain, and
cough



Typhoidal

Systemic febrile
illness without
prominent regional
adenopathy

Affected patients
often have chronic
underlying conditions

- o Fever
- o Nausea
- o Abdominal pain
- o Diarrhea
- o Sepsis/Shock



Treatment

Severe Disease

Gentamicin (IV,IM)
Streptomycin (IM)

Moderate Disease

1 Ciprofloxacin /Levofloxacin
2 Doxycycline

Diagnosis

Clinical syndrome + epidemiologic risk factors

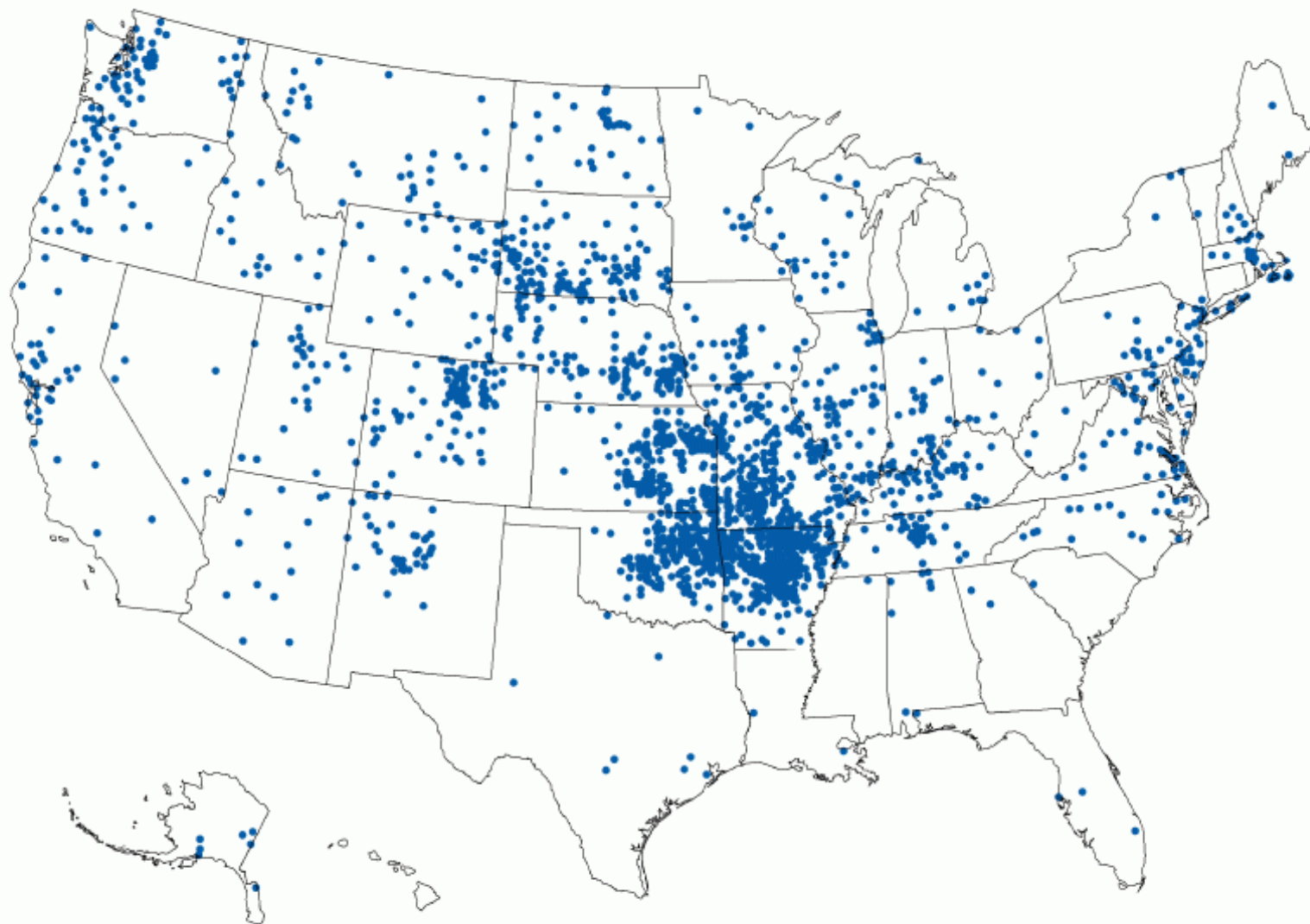
Serology (preferred)
Agglutination>1:116

Culture & GS
Rarely positive

PCR
Not widely available



@TheIDTrivia



Rich SN. Tularemia — United States, 2011–2022. *MMWR Morb Mortal Wkly Rep.* 2025;73.

doi:10.15585/mmwr.mm735152a1

- Microbiology lab members should be alerted immediately with any concerns for tularemia due to the need for special culture media and biosafety precautions.
- Aminoglycosides remain gold standard therapy, though doxycycline or a fluoroquinolone may be prescribed for mild-moderate infections. This patient's partial response to doxycycline may be attributed to the higher rates of treatment failure and relapse associated with doxycycline compared to fluoroquinolones in the treatment of tularemia.
- While tularemia is uncommon in the Southeast US, and disseminated tularemia with primary skin lesions are rare, a high index of suspicion and a careful review of exposure history are essential for more rapid diagnosis and appropriate treatment.