

Overview of Virginia's Vectorborne Disease Activity in 2025

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What does the health department do?



Receives select data for **reportable conditions**.



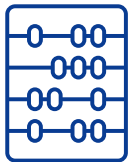
Information is **analyzed, shared**.



Cases are **investigated**.



Interventions may be **enacted**.

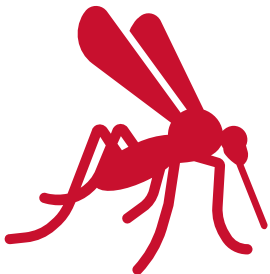


Cases are **classified and counted**.

Mosquitoborne Diseases

Reported Human Cases in Virginia, 2025

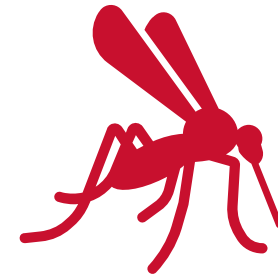
Disease Name		Confirmed + Probable (n)
West Nile		31
La Crosse Encephalitis		1
Imported {	Malaria	94
	Dengue	22
	Chikungunya	3



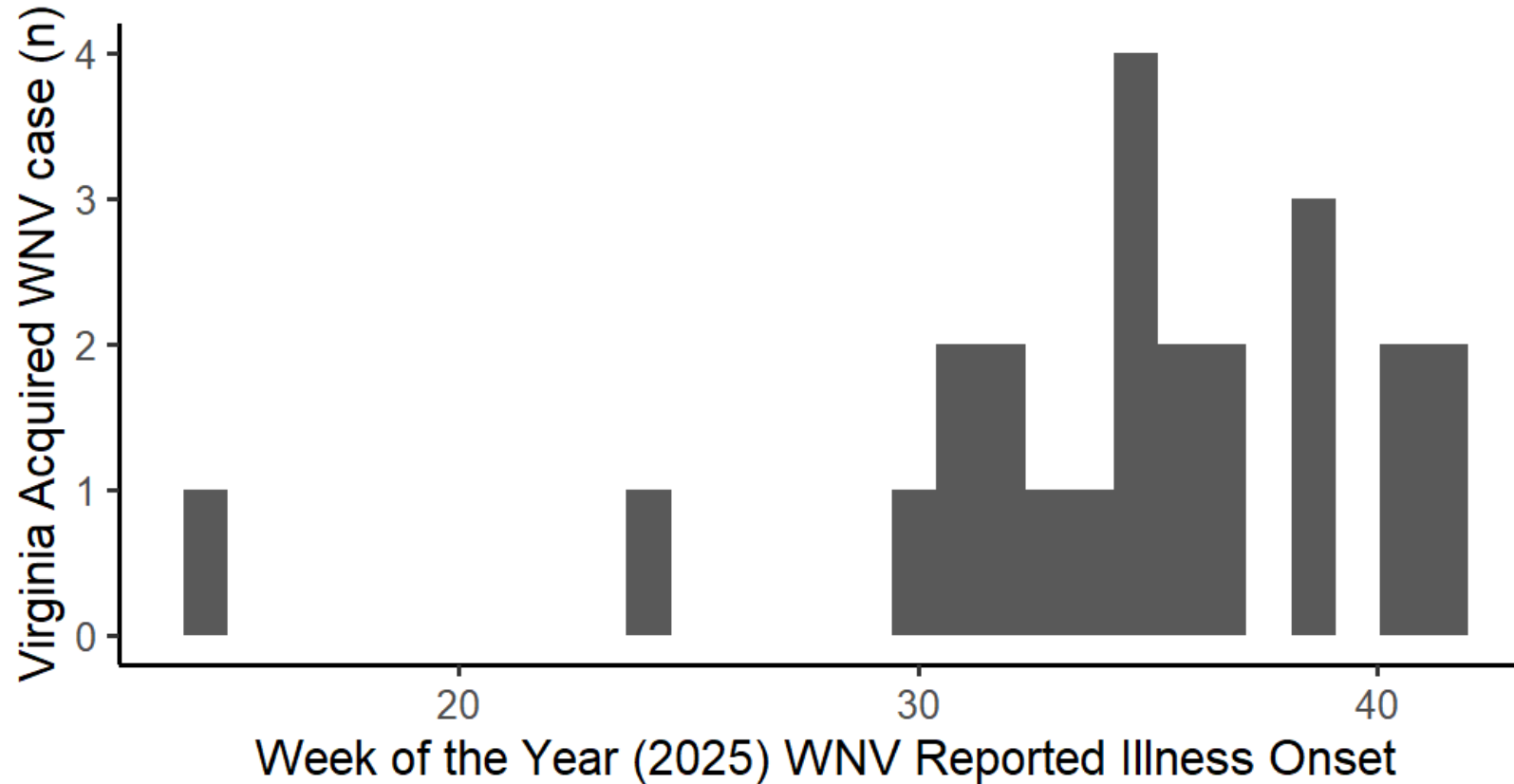
West Nile Virus in People, 2025

Confirmed and probable n = 31

- 20 neuroinvasive cases, 11 non-neuroinvasive
- Age range 22–86 (median 63)
- 24 cases determined to be acquired in Virginia
 - Unknown/Unlisted = 5
 - Out of State = 2

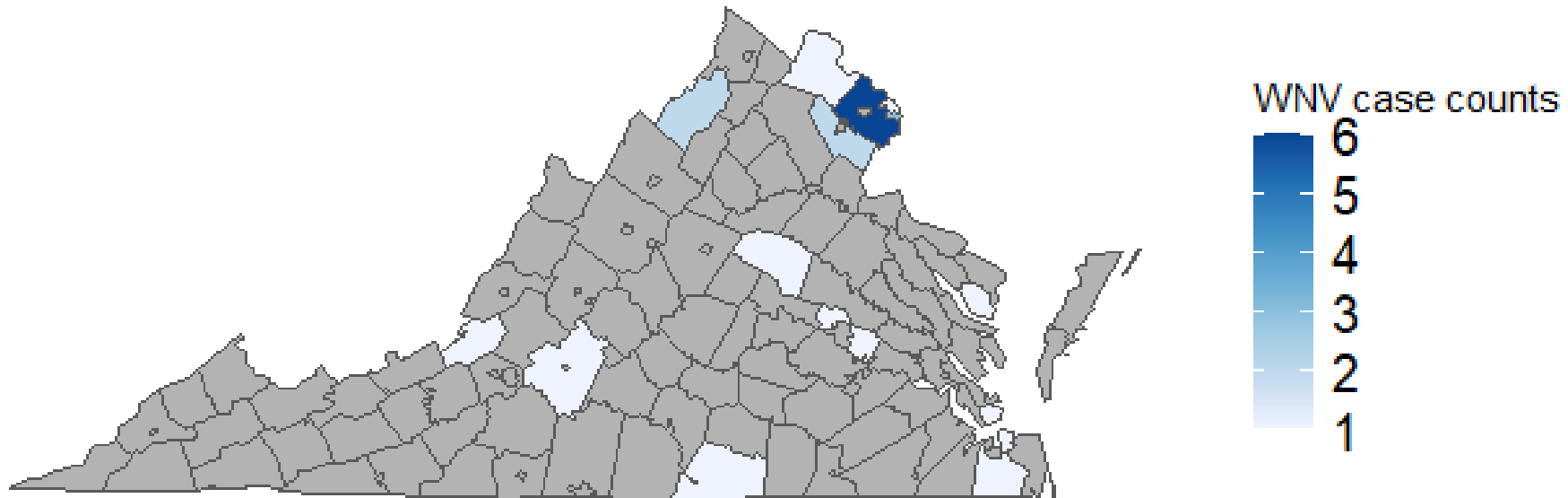


VA-acquired WNV cases' illness-onset week, 2025



75% of Virginia-acquired cases occurred during WOTY 30–40

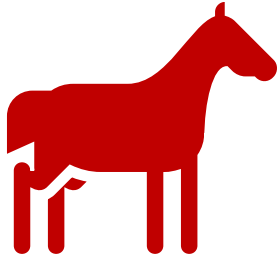
WNV Indigenous Case Counts by Counties, 2025



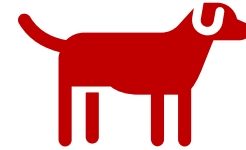
Virginia Department of Health 2025

Confirmed and probable cases displayed by disease acquired location determined to be in-state (n = 24).

Animal Vector-borne Cases in 2025



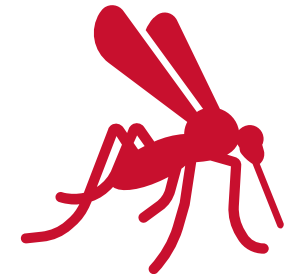
4 equine WNV cases
1 equine EEE case (fatal)



1 canine RMSF case (fatal)
under investigation

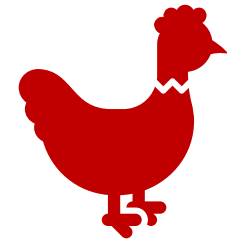
Mosquito Infection Data for 2025:

Jurisdiction	WNV Pos Pools	EEE Pos Pools
Chesapeake	23	1
Fairfax	58	
Fairfax Co.	514	
Falls Church	31	
Henrico Co.	72	
Norfolk	45	
Prince William County	229	
Suffolk	10	1
York Co.	18	



Sentinel Chicken Data, 2025

- 2 WNV positive chickens:
 - 1 reported in week 33 and 1 reported in week 37.
- 1 EEE positive chicken reported from week 38.



Tickborne Diseases

Reported Human Cases in Virginia, 2025

Disease Name	Confirmed + Probable (n)
Lyme disease	1634
Ehrlichiosis	170
Spotted Fever Rickettsiosis	87
Anaplasmosis	83
Babesiosis	23



MMWR Year 2025 data from NBS is preliminary

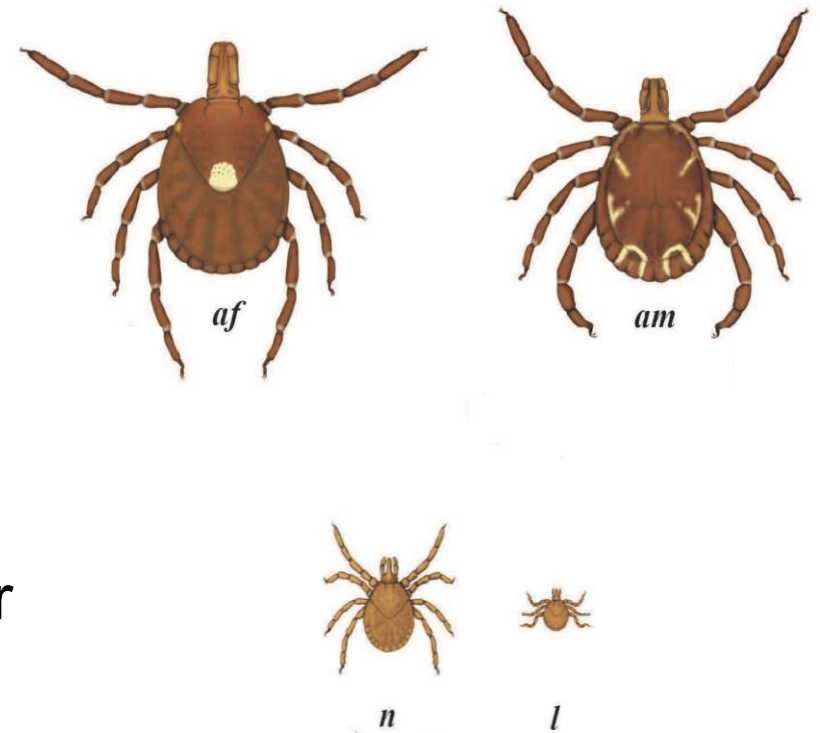
Alpha-gal Syndrome (AGS)

An acquired allergy to the galactose- α -1,3-galactose sugar molecule.

- Found in cattle, pigs, sheep, deer, and other mammals
- Mammal-derived products (gelatin, dairy)

AGS is primarily associated with the bite of a lone star tick (*Amblyomma americanum*).

- It is unclear why some people develop AGS and others do not
- One bite may be sufficient to induce AGS; multiple bites increase risk



AGS Illness Presentation

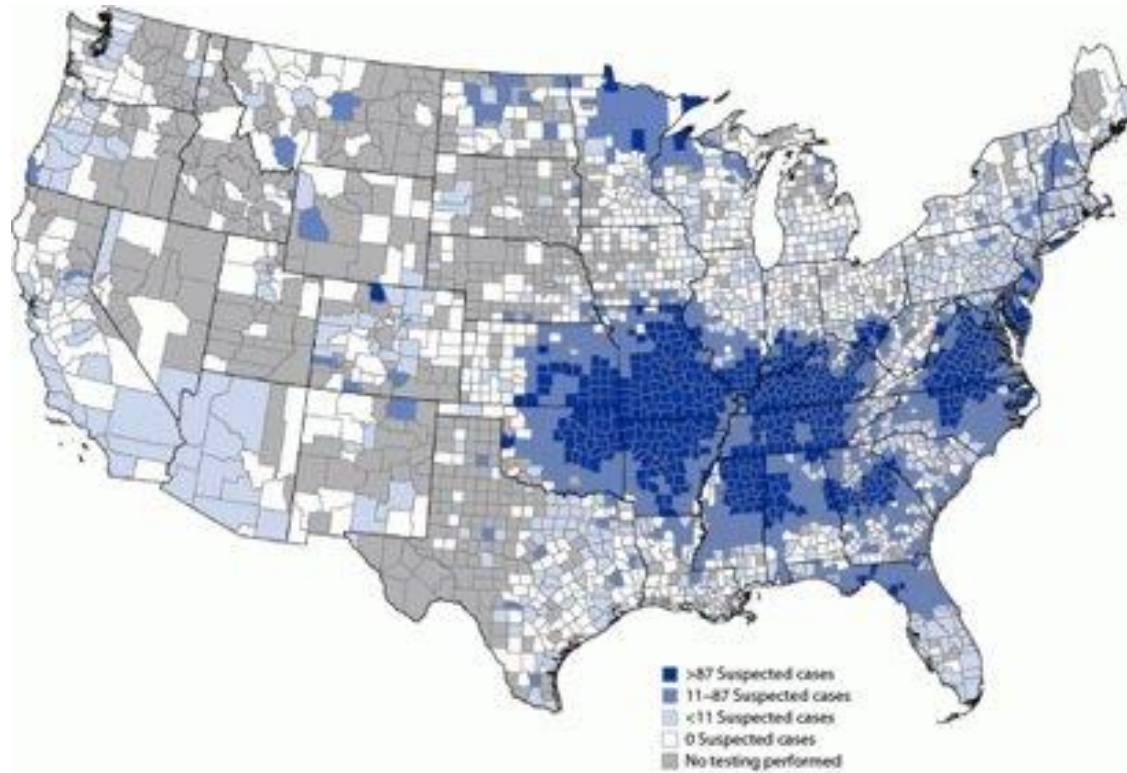
- Adult onset with broad clinical presentation
- Skin reactions such as hives and itching as well as anaphylaxis are common features; some patients may have gastrointestinal or respiratory symptoms
 - Typically, 3-6 hours after alpha-gal consumption
 - OR
 - Immediately after IM, IV, or SQ administration of alpha gal-containing medication/vaccination



Commins SP. Diagnosis & management of alpha-gal syndrome: lessons from 2,500 patients. *Expert Rev Clin Immunol*. 2020 July; 16(7): 667–677.

Tripathi A, et al. Delayed Anaphylaxis to Red Meat Masquerading as Idiopathic Anaphylaxis. *Allergy Clin Immunol Pract*; May/June 2014.

Geographic Distribution of Suspected Alpha-gal Syndrome Cases United States, January 2017–December 2022

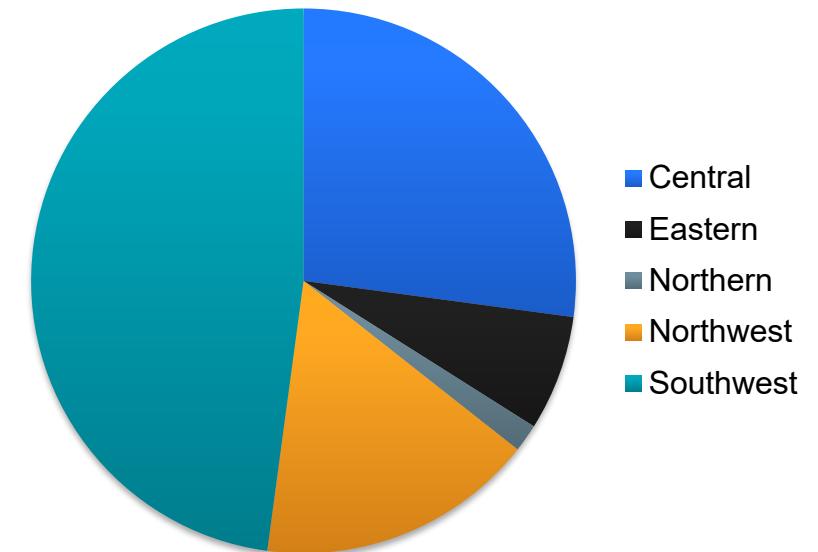


Thompson, et al. Geographic Distribution of Suspected Alpha-gal Syndrome Cases — United States, January 2017–December 2022. <https://www.cdc.gov/mmwr/volumes/72/wr/mm7230a2.htm>

Alpha-gal Syndrome is Now Reportable to VDH

- Voluntary lab reporting began in 2024
 - Able to assess anticipated volume
 - Identify regions for potential interventions
- Mandatory reporting began in September 2025
 - Sampling strategy for case investigations
- Data analysis and surveillance evaluation in progress

Positive Alpha-gal Laboratory Reports by VDH Region

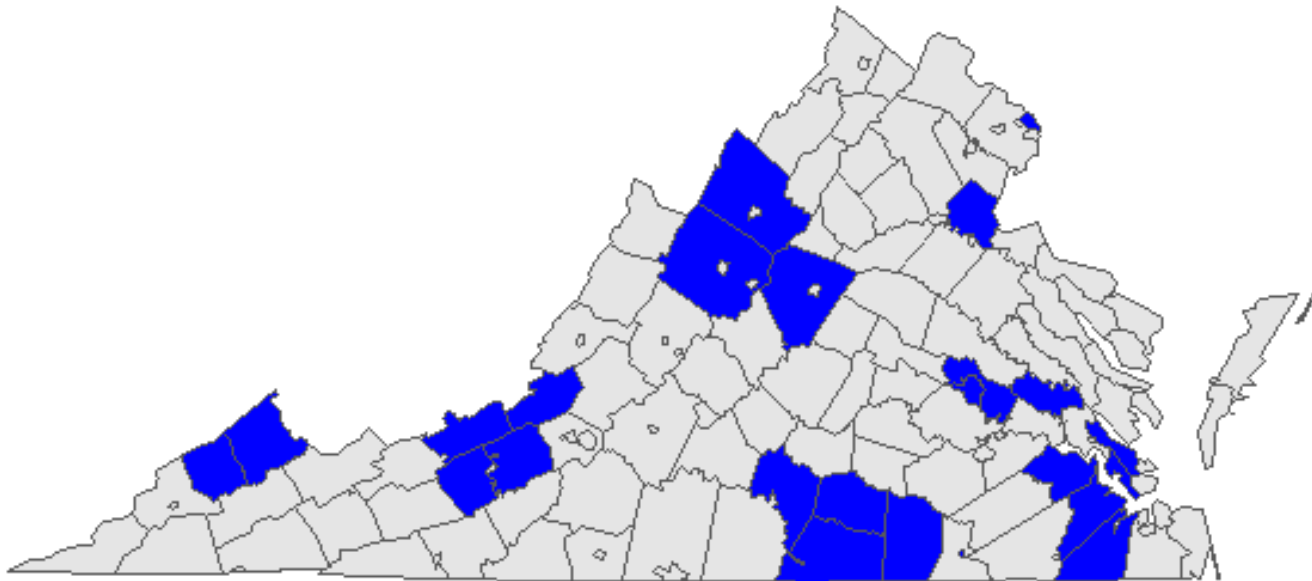


What AGS Might Mean for Vector Control:

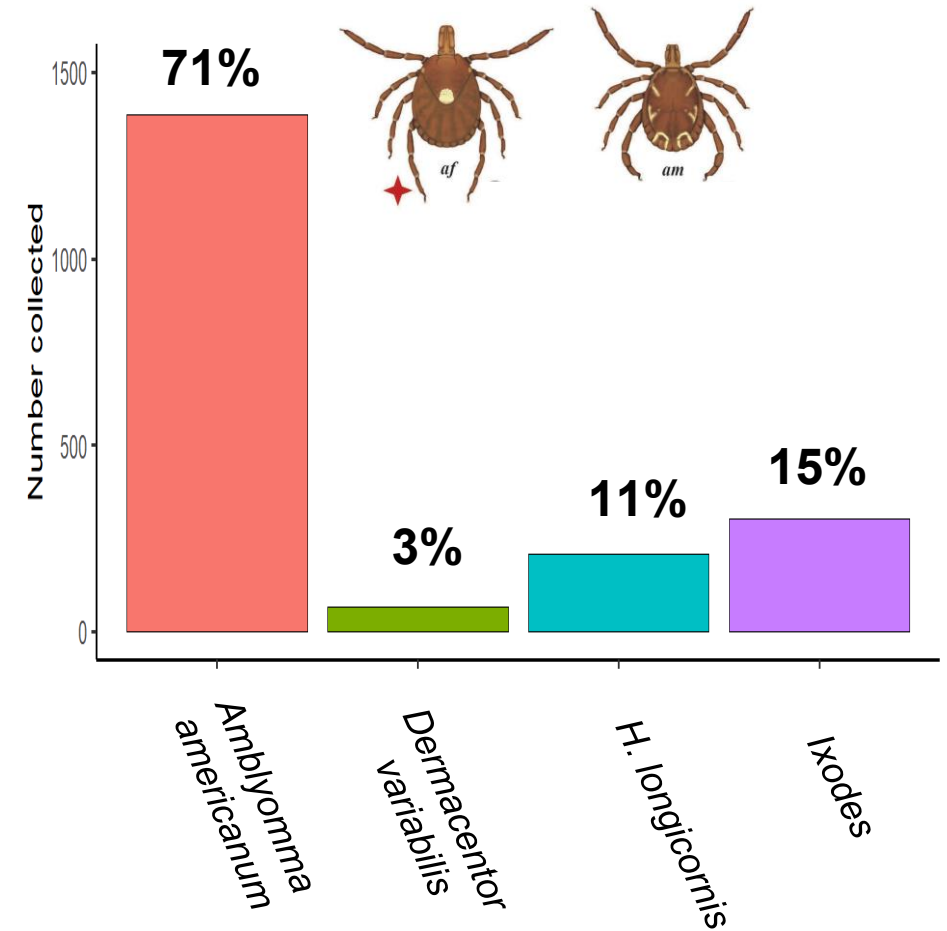
- There is no cure for AGS, preventing tick bites is the main strategy for AGS intervention.
- Increased attention on the range, density of *Amblyomma americanum* (lone star) tick to assess risk.
 - Tick testing not recommended/available for alpha-gal sugar molecule in ticks.
- Increased attention on developing/strengthening tick control measures and surveillance.



Tick Surveillance in 2025



Virginia Department of Health Tick Drags, April 2025-July 2025



41 sites across 26 counties or independent cities

Tick Infection Data in 2025

300 *Ixodes* ticks were sent to CDC for pathogen testing from VDH active surveillance dragging efforts:

Ixodes scapularis (n = 253)

- *Borrelia burgdorferi*: 13% positive
- *A. phagocytophilum* (human strain): 1% positive
- *Babesia microti*: 0%
- *Ehrlichia muris euchlarensis*: 0%

Ixodes affinis (n = 31)

- *Borrelia burgdorferi*: 55% positive



Plans for 2026

- Revisit printed materials
- Tick surveillance maps on VDH website
- Revive the internal mosquito activity report
- Draft emergency response & preparedness plans
- Conduct tick surveillance in under-surveyed counties
 - Provide support to counties beginning/engaging in surveillance
- Open citizen tick submissions to companion animals
- Outreach to counties without mosquito control districts



Questions?