

Clinical Pathway Guide

Integrated Vector-Borne Disease Evaluation and Testing

Purpose of This Guide

This clinical pathway guide is designed to support clinical thinking, not to mandate testing, diagnosis, or treatment.

It provides a structured, decision-support framework to help clinicians organize next steps when a patient's presentation feels complex, unresolved, or disproportionate to available findings, and when vector-borne disease (VBD) is part of a broader differential.

This guide does not require clinicians to pursue testing or intervention. Instead, it offers a measured, evidence-informed way to approach uncertainty once a case no longer fits expected patterns.

This guide is most useful when a clinician is already asking: **“This presentation doesn't fully add up — could an infectious or vector-borne process be contributing?”**

When This Guide Is Most Helpful

This guide is intended for use when:

- A patient's presentation does not align with expected disease trajectories
- Symptoms persist, evolve, or fragment despite appropriate evaluation
- Prior workups have been thorough but inconclusive
- Clinical patterns resemble those described in case-based or pattern recognition tools
- There is plausible exposure risk or epidemiologic context

It is not designed to introduce suspicion where none exists, but to support structured thinking once uncertainty is already present.



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Appropriate Use and Clinical Boundaries

Consider this guide when patients present with:

- ✓ Multisystem, relapsing, or unexplained symptoms
- ✓ Limited or incomplete response to standard therapies or protocols
- ✓ Exposure history or epidemiologic plausibility for vector-borne disease
 - Note: this could be exposure to ticks, household pets, and/or other "bugs" like sand flies, lice, etc.
- ✓ Clinical patterns that raise reasonable suspicion without diagnostic certainty

This guide is not intended for:

- ✗ Patients with alternative diagnoses that fully explain symptoms
- ✗ Routine screening in asymptomatic individuals
- ✗ Situations where additional evaluation would not meaningfully change management

These guardrails help prevent overtesting and reinforce thoughtful clinical judgment.

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Step 1: Establishing Clinical Suspicion

Begin by assessing whether the patient's presentation or exposure history raises reasonable suspicion for vector-borne disease.

- If suspicion is present, structured evaluation may be considered.
- If suspicion is low or absent, no further action within this pathway is required.

Choosing not to proceed is a supported clinical outcome, not a missed step.



Step 2: Clinical Stratification

When suspicion is established, stratify based on clinical context:

- Early or evolving presentations
→ Antibody-based testing may be limited by timing and delayed immune response.
- Chronic, relapsing, or multisystem presentations
→ Consider the possibility of low-abundance, intracellular, or intermittently detectable infection, as well as variability in individual immune response.

This stratification is intended to frame clinical thinking, not dictate decisions.

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Step 3: Diagnostic Modality Consideration

Diagnostic approaches should be considered in context, recognizing that:

- Some vector-borne pathogens may circulate at low levels
- Others preferentially reside in tissue or intracellular environments
- Immune response may be delayed, blunted, or variable

These factors can influence test sensitivity depending on method and timing.

Direct Detection (when appropriate)

May be considered when:

- Disease is early or evolving
- Immune suppression or immune variability is suspected
- Prior serologic testing has been inconclusive or negative despite ongoing suspicion

Indirect Detection (when appropriate)

May be considered when:

- Assessing exposure history
- Evaluating immune response as contextual information

Providers may choose **one, both, or neither**, based on clinical judgment and patient context.

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Step 4: Interpreting Results in Clinical Context

Diagnostic results should always be interpreted within the broader clinical picture.

- Positive results may support clinical suspicion but should not be viewed in isolation.
- Negative or inconclusive results are common and do not represent failure of evaluation or decision-making.

If suspicion remains high, repeat or complementary evaluation may be considered.

If suspicion decreases, discontinuing the pathway is appropriate.

Persistent symptoms or incomplete response to prior interventions may warrant reconsideration of co-infection, immune system dysregulation, or alternative contributors such as toxic burden, depending on context.



Step 5: Reassessment and Supported Stopping Points

Stopping is appropriate when:

- Findings reduce clinical suspicion
- Another diagnosis better explains the presentation
- Further evaluation would not alter management or outcomes

Stopping reflects responsible clinical reasoning, not abandonment of care.

Looking Ahead

This guide:

- Supports structured reasoning in complex cases
- Helps reduce diagnostic uncertainty without escalation pressure
- Reinforces cautious, stepwise decision-making
- Does not replace clinical judgment, guidelines, or standards of care

Begin with the Pattern Recognition Guide to determine whether deeper consideration is warranted, use the Clinical Pathway Guide for structured evaluation when appropriate.

Together, these tools support a deliberate transition from “This feels familiar” → “Here is how I think next.”