

## What evaluation is best for an isolated, enlarged cervical lymph node?

### EVIDENCE-BASED ANSWER

The evaluation and follow-up of an isolated, enlarged cervical lymph node is determined by the presence of inflammation, duration, size, and associated symptoms. For patients with inflammatory symptoms (ie, fever, pain, erythema, and recent infection), a single course of broad-spectrum antibiotic and reassessment in 1 to 2 weeks is reasonable (strength of recommendation [SOR]: **C**, expert opinion). If lymph node enlargement persists despite antibiotics, yet an infectious or inflammatory cause is still suspected, further evaluation may include a PPD skin test and chest radiograph<sup>1</sup> (SOR: **C**, expert opinion).

For patients without initial inflammatory

symptoms, biopsy is recommended if the lymph node enlargement persists beyond 4 to 6 weeks, continues to enlarge, or is  $>3$  cm<sup>1</sup> (SOR: **C**, expert opinion). Biopsy is also indicated if there is a supraclavicular lymph node or concomitant constitutional symptoms (weight loss or night sweats)<sup>2</sup> (SOR: **B**, case series). Ultrasound or computerized tomography (CT) can also be helpful in determining which method of biopsy to choose<sup>3</sup> (SOR: **B**, case series). Fine-needle aspiration is a minimally invasive method for obtaining a tissue sample, but excisional biopsy can provide a definitive diagnosis<sup>2-6</sup> (SOR: **B**, case series).

### CLINICAL COMMENTARY

#### For those with no risk factors and an uncomplicated exam, counsel “tincture of time”

The foundation of managing solitary enlarged cervical nodes is a good history and physical. For patients with a benign story, no risk factors, and an uncomplicated exam, I always counsel “tincture of time” as the first-line diagnostic test.

However, this changes when patients present with risk factors for malignancy

(such as being older, male, white, or with a supraclavicular node) and a worrisome story or exam finding. In these cases, watchful waiting may delay diagnosis. Sometimes, in spite of my best efforts to reassure low-risk patients, their fear and anxiety derail my attempts to practice good medicine. For these patients, the only harm an ultrasound does is to the wallet.

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#### ■ Evidence summary

Limited research exists in this area. Practice today is guided by clinical judgment, anecdotal evidence, and historical teach-

ing. Assessment for inflammation and malignancy risk factors contributes to the diagnosis.

Lymph nodes with concomitant

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## FAST TRACK

**If enlargement persists after antibiotics, evaluate with a PPD and chest x-ray**

malignancy risk factors warrant immediate evaluation. For lymph nodes without signs or symptoms of inflammation or malignancy, observation for 4 to 6 weeks has been recommended. Further evaluation with imaging or biopsy is indicated if the node persists beyond 4 to 6 weeks, continues to enlarge, is located within the supraclavicular fossa, or is >3 cm.<sup>1</sup>

A study of 550 patients identified 5 significant predictors of malignancy: male gender (risk ratio [RR]=2.72; 95% confidence interval [CI], 1.63–4.56), increasing age (RR=1.05; 95% CI, 1.04–1.07), white ethnicity (RR=3.01; 95% CI, 1.19–7.6), supraclavicular lymph nodes (RR=3.72; 95% CI, 1.52–9.12), and 2 or more regions of lymph nodes (RR=6.41; 95% CI, 2.82–14.58).<sup>5</sup>

For lymph nodes with inflammatory symptoms, further evaluation (including imaging) is indicated if there is no response to antibiotics. CT with contrast is considered the gold standard. However, a study of 50 patients with lymphadenopathy on CT demonstrated the sensitivity of ultrasound was 92% in identifying the same nodes.<sup>3</sup> Another study demonstrated an ultrasound sensitivity of 100% and specificity of 97% for 154 patients with lymphadenopathy.<sup>5</sup>

Histologic evaluation after excisional biopsy is the gold standard for diagnosis. Fine-needle aspiration is an alternate, minimally invasive option for further work-up. Fine-needle aspiration had a sensitivity of 49% and specificity of 97% in a study of 550 patients.<sup>5</sup> In a study of 309 patients with supraclavicular lymphadenopathy, fine-needle aspiration had a sensitivity of 97%, a specificity of 98%, and a positive predictive value of 98%. A study of 94 patients found that clinical exam alone was 78% sensitive in diagnosing the cause of lymphadenopathy; this improved to 93% sensitivity with fine-needle aspiration.<sup>6</sup>

Fine-needle aspiration has a higher rate of false negatives. A study of 1103 patients found a 97% sensitivity (3.4% false-negative rate) and a 99% specificity (0.9% false-positive rate) for fine-needle

aspiration.<sup>4</sup> In cases where pathology is equivocal, or where concern for malignancy is exceptionally high, excisional biopsy provides a more definitive diagnosis.

### Recommendations from others

*Cecil's Textbook of Medicine* recommends observing the nodes when they are soft and smaller than 2 to 3 cm and the patient has no obvious systemic illness. They note that performing a complete blood count and peripheral smear exam can aid in diagnosing systemic illness and that antibiotics are often given. They suggest performing a biopsy if the lymph node does not regress within a few weeks or if it grows. They also say the art of medicine is at play here and that if patients are particularly anxious, biopsy may be done more quickly.<sup>7</sup>

*Harrison's Manual of Medicine* specifies that nodes >4 cm located in the supraclavicular or scalene area or hard nodes fixed to surrounding tissues should be biopsied immediately, and that tender nodes are most often benign.<sup>8</sup>

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