Choosing Wisely®

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American College of Rheumatology – **Pediatric Rheumatology**

American College of Rheumatology
Education • Treatment • Research

Five Things Physicians and Patients Should Question

1 Don't order autoantibody panels unless positive antinuclear antibodies (ANA) and evidence of rheumatic disease.

Up to 50% of children develop musculoskeletal pain. There is no evidence that autoantibody panel testing in the absence of history or physical exam evidence of a rheumatologic disease enhances the diagnosis of children with isolated musculoskeletal pain. Autoantibody panels are expensive; evidence has demonstrated cost reduction by limiting autoantibody panel testing. Thus, autoantibody panels should be ordered following confirmed ANA positivity or clinical suspicion that a rheumatologic disease is present in the child.

2 Don't test for Lyme disease as a cause of musculoskeletal symptoms without an exposure history and appropriate exam findings.

The musculoskeletal manifestations of Lyme disease include brief attacks of arthralgia or intermittent or persistent episodes of arthritis in one or a few large joints at a time, especially the knee. Lyme testing in the absence of these features increases the likelihood of false positive results and may lead to unnecessary follow-up and therapy. Diffuse arthralgias, myalgias or fibromyalgia alone are not criteria for musculoskeletal Lyme disease.

3 Don't routinely perform surveillance joint radiographs to monitor juvenile idiopathic arthritis (JIA) disease activity.

There are no available data to suggest that routinely obtaining surveillance joint radiographs to monitor for the development or progression of erosive changes in children with juvenile idiopathic arthritis (JIA) improves outcomes. Radiation exposure and cost are potential risks. In the absence of data to support clear benefit, radiographs should be obtained by the pediatric rheumatologist only when history and physical exam raise clinical concern about joint damage or decline in function.

4 Don't perform methotrexate toxicity labs more often than every 12 weeks on stable doses.

Laboratory abnormalities in JIA patients taking methotrexate are usually mild and rarely prompt significant changes in management. Screening low-risk children every 1–2 months may lead to unnecessary interruptions in treatment. More frequent monitoring may be required in the first six months after methotrexate initiation or dose escalation and in patients with risk factors for toxicity including obesity, diabetes, renal disease, psoriasis, systemic JIA, Down syndrome and use of alcohol or other hepatotoxic or myelosuppressive medications.

5 Don't repeat a confirmed positive ANA in patients with established JIA or systemic lupus erythematosus (SLE).

ANA is important in the diagnosis of SLE and positivity guides more frequent slit lamp examination for detection of uveitis in children with JIA. Beyond this, there is no evidence that ANA is valuable in the ongoing management of SLE or JIA. It is recommended that following diagnosis of SLE or JIA, ANA should not be repeated unless a child with JIA has evolution of symptoms suggestive of an autoimmune connective tissue disease.

How This List Was Created

The American College of Rheumatology (ACR) used a multi-stage process combining consensus methodology and literature reviews to arrive at its Pediatric Rheumatology Top 5 list. Items were generated by a group of practicing pediatric rheumatologists using the Delphi method. Items with high content agreement and perceived prevalence advanced to a survey of ACR members who listed pediatric rheumatology as their specialty. Based on member input related to content agreement, impact and item ranking, candidate items advanced to literature review. The ACR Special Committee on Pediatric Rheumatology discussed the items in light of their relevance to rheumatology, level of evidence to support their inclusion in the final list and the member survey results, and drafted the final pediatric rheumatology Top 5 list. The list was reviewed and approved by the ACR Board of Directors.

ACR's disclosure and conflict of interest policy can be found at www.rheumatology.org.

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Sources

1

Wong KO, Bond K, Homik J, Ellsworth JE, Karkhaneh M, Ha C, Dryden DM. Antinuclear antibody, rheumatoid factor, and cyclic-citrullinated peptide tests for evaluating musculoskeletal complaints in children. Comparative Effectiveness Review No. 50. AHRZ Publication No. 12-EHC015-EF. Rockville, MD: Agency for Healthcare Research and Quality. March 2012.

Cabral DA, Petty RE, Fung M, Malleson PN. Persistent antinuclear antibodies in children without identifiable inflammatory rheumatic or autoimmune disease. Pediatrics. 1992;89:441–4.

Deane PM, Liard G, Siegel DM, Baum J. The outcome of children referred to a pediatric rheumatology clinic with a positive antinuclear antibody test but without an autoimmune disease. Pediatrics. 1995;95:892–5.

McGhee JL, Burks FN, Sheckels JL, Jarvis JN. Identifying children with chronic arthritis based on chief complaints: absence of predictive value for musculoskeletal pain as an indicator of rheumatic disease in children. Pediatrics. 2002;110:354–9.

Man A, Shojania K, Phoon C, Pal J, Hudoba de Badyn M, Pi D, Lacaille D. An evaluation of autoimmune antibody testing patterns in a Canadian health region and an evaluation of a laboratory algorithm aimed at reducing unnecessary testing. Clin Rheumatol. 2012; doi:10.1007/s10067-012-2141-y.

2

Lyme Disease Diagnosis and Treatment. [Internet]. Atlanta (GA). Centers for Disease Control and Prevention. [Updated 2011 Nov 15; cited 2012 Sep 6]. Available from: www.cdc.gov/lyme/diagnosistreatment/index.html.

American College of Physicians. Guidelines for laboratory evaluation in the diagnosis of Lyme disease. Ann Intern Med. 1997;127(12):1106–8.

Hu LT. Lyme disease. Ann Intern Med. 2012;157(3):ITC2-1.

Wormser GP, Dattwyler RJ, Shapiro ED, Halperin JJ, Steere AC, Klempner MS, Krause PJ, Bakken JS, Strle F, Stanek G, Bockenstedt L, Fish D, Dumler JS, Nadelman RB. The clinical assessment, treatment, and prevention of Lyme disease, human granulocytic anaplasmosis, and babesiosis: clinical practice guidelines by the Infectious Diseases Society of America. Clin Infect Dis. 2006;43(9):1089–134.

3

Beukelman T, Patkar NM, Saag KG, et al. 2011 American College of Rheumatology recommendations for the treatment of juvenile idiopathic arthritis: initiation and safety monitoring of therapeutic agents for the treatment of arthritis and systemic features. Arthritis Care Res. 2011;63:465–82.

Magni-Manzoni S, Rossi F, Pistorio A, Temporini F, Viola S, Beluffi G, Martini A, Ravelli A. Prognostic factors for radiographic progression, radiographic damage, and disability in juvenile idiopathic arthritis. Arthritis Rheum. 2003;48:3509–17.

Magni-Manzoni S, Malattia C, Lanni S, Ravelli A. Advances and challenges in imaging in juvenile idiopathic arthritis. Nat Rev Rheumatol. 2012;8:329–36.

Yazici Y, Sokka T, Pincus T. Radiographic measures to assess patients with rheumatoid arthritis advantages and limitations. Rheum Dis Clin North Am. 2009;35:723.

Okkalides D, Fotakis M. Patient effective dose resulting from radiographic examinations. Br J Radiol 1994;67:564–72.

4

Beukelman T, Patkar NM, Saag KG, Tolleson-Rinehart S, Cron RQ, DeWitt EM, Ilowite NT, Kimura Y, Laxer RM, Lovell DJ, Martini A, Rabinovich CE, Ruperto N. 2011 American College of Rheumatology recommendations for the treatment of juvenile idiopathic arthritis: initiation and safety monitoring of therapeutic agents for the treatment of arthritis and systemic features. Arthritis Care Res. 2011;63(4):465–82.

Saag K, Teng G, Patkar N, Anuntiyo J, Finney C, Curtis JR, Paulus HE, Mudano A, Pisu M, Elkins-Melton M, Outman R, Allison JJ, Suarez Almazor M, Bridges SL Jr, Chatham WW, Hochberg M, MacLean C, Mikuls T, Moreland LW, O'Dell J, Turkiewicz AM, Furst DE; American College of Rheumatology. American College of Rheumatology 2008 recommendations for the use of nonbiologic and biologic disease-modifying antirheumatic drugs in rheumatoid arthritis. Arthritis Care Res. 2008;59(6):762–84.

Lahdenne P, Rapola J, Ylijoki H, Haapasaari J. Hepatotoxicity in patients with juvenile idiopathic arthritis receiving longterm methotrexate therapy. J Rheumatol. 2002;29:2242–5.

Kocharla L, Taylor J, Weiler T, Ting TV, Luggen M, Brunner HI. Monitoring methotrexate toxicity in juvenile idiopathic arthritis. J Rheumatol. 2009;36:2813–8.

Ortiz-Alvarez O, Morishita K, Avery G, Green J, Petty RE, Tucker LB, Malleson PN, Cabral DA. Guidelines for blood test monitoring of methotrexate toxicity in juvenile idiopathic arthritis. J Rheumatol. 2004;31:2501–6.

5

Petty RE, Cassidy JT, Sullivan DB. Clinical correlates of antinuclear antibodies in juvenile rheumatoid arthritis. J Pediatr 1973;83:386–9.

Cassidy J, Kilvin J, Lindsley C, Nocton J. Ophthalmologic examinations in children with juvenile rheumatoid arthritis. Pediatrics. 2006;117:1843–5.

Ravelli A, Varnier GC, Oliveira S, Castell E, Arguedas O, Magnani A, Pistorio A, Ruperto N, Magni-Manzoni S, Galasso R, Lattanzi B, Dalprà S, Battagliese A, Verazza S, Allegra M, Martini A. Antinuclear antibody-positive patients should be grouped as a separate category in the classification of juvenile idiopathic arthritis. Arthritis Rheum. 2011;63:267–75.

Ferraz MB, Goldenberg J, Hilario M, Bastos WA, Oliveira SK, Azevedo EC, di Napoli D. Evaluation of the 1982 ARA lupus criteria data set in pediatric patients. Committees of Pediatric Rheumatology of the Brazilian Society of Pediatrics and the Brazilian Society of Rheumatology. Clin Exp Rheumatol. 1994;12:83–7.

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About the American College of Rheumatology

Over 50 million Americans, including 300,000 children, suffer from arthritis and rheumatic diseases, and rheumatologists are the specialists in the treatment of those diseases. The American College of Rheumatology (ACR) represents over 8,500 rheumatologists and rheumatology health professionals around the world. The ACR offers its members the support needed to ensure they are able to continue their innovative research and quality patient care.

To find a rheumatologist in your area, or to learn about the ACR, visit www.rheumatology.org.

For more information or to see other lists of Five Things Physicians and Patients Should Question, visit www.choosingwisely.org.