First Steps in a Rheumatologic Workup- Tips for Referring Providers

Victoria Lear, FNP-C

Tina Valentine, AGPCNP-C

Objectives

1. Understand the Role of Rheumatology in Patient Care

- Define rheumatology and explain its significance in managing autoimmune diseases.
- Recognize when to consider a referral to a rheumatologist.

2. Identify Appropriate Referral Criteria for Rheumatology

3. Explain the ANA (Antinuclear Antibody) Test and Its Indications

- Define ANA and its relevance in autoimmune disease diagnosis.

4. Recognize Common Rheumatologic Diseases and Lab Tests

- Identify the most common rheumatologic diseases (e.g., rheumatoid arthritis, lupus, etc.) and key laboratory tests.

5. Diagnose Early Rheumatoid Arthritis (RA)

- Identify the early signs and symptoms of rheumatoid arthritis.

6. Understand Gout Treatment, Management, and When to Refer

- Discuss the pathophysiology of gout, and how to manage acute flares, and long-term treatment.

What is Rheumatology?

- A specialized field focusing on diseases that cause inflammation to the joint, muscle, bone, and immune system.

What Diagnoses Does Rheumatology Treat?

- Ankylosing Spondylitis
- Churg-Strauss Syndrome
- EGPA
- Lupus
- Microscopic Polyangiitis
- Myositis/Dermatomyositis/Polymyositis
- Polymyalgia Rheumatica
- Pseudogout (CPPD)
- Mixed Connective Tissue Disease
- Digital Ulcers
- Rheumatoid Arthritis
- Psoriatic Arthritis
- Sarcoidosis
- Scleroderma
- Sjogren's
- Temporal Arteritis/ Giant Cell Arteritis
- Uveitis
- Vasculitis
- Wegner's Granulomatosis
- Gout- Uncontrolled

Diagnoses NOT Treated by Rheumatology

- Osteoarthritis
- Chronic Pain
- Degenerative Back Pain
- Disability Evaluations
- Ehlers Danlos, hypermobility
- Fibromyalgia
- Narcotic Management
- Trauma or accident-related injuries/pain

What is An Autoimmune Disease?

- Autoimmune disease happens when the body’s natural defense system can’t tell the difference between your own cells and foreign cells, causing the body to mistakenly attack normal cells. There are more than 80 types of autoimmune diseases that affect a wide range of body parts.
- Sometimes these can be hard to diagnose and the most important thing you can do is listen to the patient and document your findings.

What is an ANA?

- Anti-nuclear antibodies (ANA) are possible signs of autoimmune diseases, such as lupus, scleroderma, Sjögren's syndrome, juvenile arthritis, or polymyositis and dermatomyositis. White blood cells in the body's immune system make antibodies to spot and attack foreign agents that cause infections or disease. Sometimes, antibodies target normal proteins in our body by mistake. This can trigger inflammation that leads to joint or tissue damage. These antibodies are called autoantibodies. Everyone has small amounts of autoantibodies. ANAs are one type of autoantibody. A positive ANA blood test means autoantibodies are present, but it's not a sure sign of an autoimmune disease.

What is Sedimentation Rate and C-Reactive Protein?

- Sedimentation rate (ESR) and C-reactive protein (CRP) are lab tests to measure inflammation. ESR and CRP are nonspecific and can be elevated for several reasons. Some of these reasons are obesity, pregnancy, bacterial infection, viral infection, surgery, wounds, injury, cancer, and age.

When to order an ANA by IFA?

- An ANA should be ordered if you have a high suspicion for an autoimmune disease such as Sjogren's, Lupus, or Scleroderma.
- Ordering ANA is NOT recommended in patients with fatigue, back pain, headaches, musculoskeletal pain, paresthesia, abdominal pain, or vague symptoms such as diffuse pain.

What to Order when Suspecting Autoimmune Disease?

- Suspect myositis? Recommend ordering ANA by IFA, myositis panel, CK, sedimentation rate, and CRP
- Suspecting pulmonary sarcoidosis? Order Chest x-ray and referral to pulmonology.
- Suspecting cutaneous sarcoidosis, psoriasis, or lupus? Referral to Dermatology.
- Suspecting vasculitis? ANCA panel, MPO, PR3, ESR, CRP
- Suspecting lupus? ANA with IFA, dsDNA, C3, C4, immunoglobulins (IgA, IgM, IgG), U/A, protein/creatinine ratio urine, ESR, and CRP

Autoimmune Condition	Common Signs/ Symptoms	Abnormal Test Results
Systemic Lupus Erythematosus (lupus)	• Inflammatory arthritis • Malar rash • Discoid rash • Oral ulcers • Nasal ulcers • Alopecia • Serositis	• Cytopenias • Proteinuria • Hematuria • Low C3 and C4
Sjogren's Syndrome	• Dry eyes • Dry mouth • Parotid swelling	• Elevated ESR
Systemic Sclerosis (scleroderma)	• Raynaud's • Sclerodactyly • Digital ulcers • Telangiectasias • Calcinosis	• Pulmonary artery hypertension • Interstitial lung • disease
Mixed Connective Tissue Disease	• Raynaud's • Puffy Hands • Rashes • Proximal weakness • Serositis	• Elevated CK and aldolase • Pulmonary artery hypertension • Interstitial lung disease

UNC School of Medicine. (n.d.). *Decoding the ANA: A guide to ANA testing.* UNC Medicine. Retrieved January 18, 2025, from https://www.med.unc.edu/medicine/rheumatology-allergy-immunology/patient-care/rheumatology-clinical-care/decoding-the-ana-a-guide-to-ana-testing/#:~:text=An%20ANA%20should%20be%20ordered,Sjogren's%2C%20Lupus%2C%20or%20Scleroderma.

My Patient Has Positive Antibodies, Now What?

- Please make sure to document a detailed assessment such as which joints are involved, locations of rashes, skin changes, etc. that led you to draw labs.
- Pictures are always helpful
- Include your clinical question in your referral
- Be cautious of labeling a patient with a firm diagnosis
- If you are unsure if your patient has a rheumatologic condition and warrants a referral, please feel free to place a e-consult.

What is Rheumatoid Arthritis?

- Rheumatoid arthritis (RA) is a chronic inflammatory autoimmune disease that can cause erosions to cartilage and bones leading to joint destruction. RA can also affect multiple organs such as lungs, skin, eyes, mouth, and heart. This is why early detection for this rheumatic disease is important. At Rheumatology, our goal is to help prevent joint destruction and multi organ involvement. There is no cure for rheumatoid arthritis but there is treatment.

Patient History is KEY!

- Obtaining a thorough history of a patient’s complaints is one of the most important aspects in diagnosing rheumatic disease. This can guide us in determining if the patient's symptoms are related to rheumatic disease or mechanical condition such as osteoarthritis or fibromyalgia.
- Identifying joint pain patterns such as onset, duration, location.
- What are the aggravating or relieving factors of joint pain?
- Is there systemic involvement such as weight loss, fevers, recent illnesses, changes in labs?
- Does the patient have a family history of autoimmune disease?
- ***Critical determination: is it joint pain or soft tissue pain???***

Early Rheumatoid Arthritis

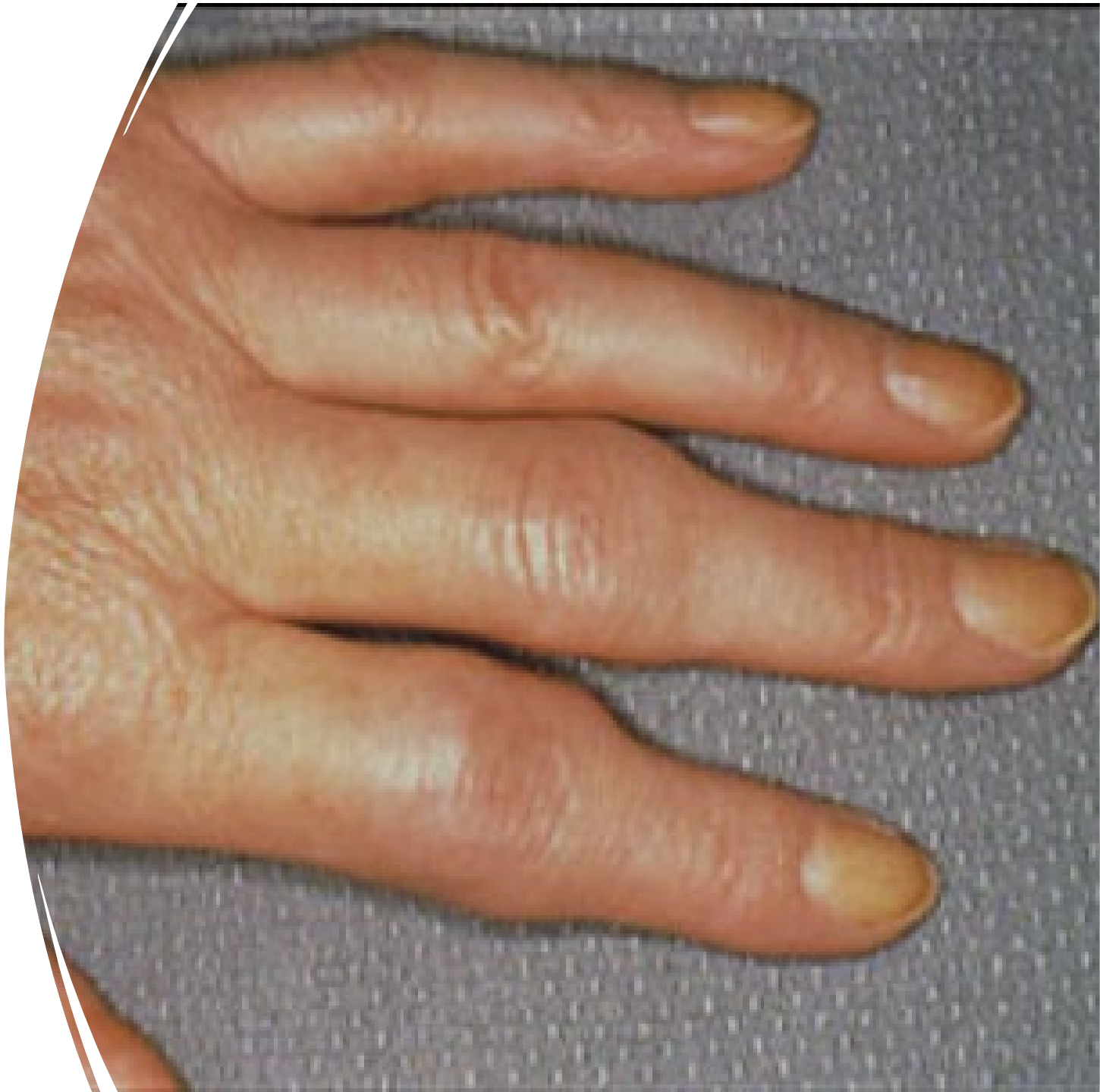
- The goal is early detection of RA to help prevent joint disease. Early diagnosing can lead to prompt treatment, resulting in clinical benefits for most patients. Remember, once there is joint destruction, there is no reversing the damaged joints.
- In Rheumatology, just because the patient has positive serologies, RF, CCP, or elevated inflammatory markers, it does not mean that they have rheumatic disease. Patients can have positive antibodies, but this does not mean they have active disease. Inflammatory markers are nonspecific and can be elevated for several reasons.
- ***Take caution in officially labeling a patient with a firm diagnosis.***

Clinical Presentation

- Usually, symptoms of RA are insidious. Patients can recall joint pain, stiffness, and joint swelling. Typically, joint symptoms are symmetrical and most commonly first affecting MCP and PIP in hands, wrist, and MTP in toes.
- Morning stiffness lasting >60 minutes
- Symmetrical joint pain and swelling lasting >6 weeks
- Inflammation symptoms are worse after rest.
- Mechanical symptoms are worse after use.

What is Synovitis?

- Synovitis is inflammation of the synovial lining that surrounds joints.



Ruffing, V., & Bingham, C. O. III. (n.d.). Rheumatoid arthritis: Signs and symptoms. *Johns Hopkins Arthritis Center*. https://www.hopkinsarthritis.org/arthritis-info/rheumatoid-arthritis/ra-symptoms/

Criterion Criteria 1-4 must have been present for ≥ 6 weeks.	**Definition**
1. Morning stiffness	Morning stiffness in and around the joints, lasting at least an hour before maximal improvement
2. Arthritis of ≥ 3 joint areas	≥ 3 joints areas simultaneously have had synovitis observed by a physician
3. Arthritis of hand joints	At least 1 area swollen in a wrist, MCP, or PIP joint
4. Symmetric arthritis	Simultaneous involvement of the same joint areas on both sides of the body
5. Rheumatoid nodules	Subcutaneous nodules, over bony prominences, extensor surfaces or juxta-articular regions
6. Serum RF	Positive RF
7. Radiographic changes	Radiographic changes typical of RA in posteroanterior hand and wrist radiographs
≥ 4/7 Criteria satisfied = RA	

Humphreys, J. H., Verstappen, S. M., Scire, C. A., Uhlig, T., Fautrel, B., Sokka, T., & Symmons, D. P. (2014). How Do We Classify Rheumatoid Arthritis in Established Disease—Can We Apply the 2010 American College of Rheumatology/European League Against Rheumatism Classification Criteria?. *The Journal of Rheumatology*, *41*(12), 2347-2351. DOI: https://doi.org/10.3899/jrheum.131443

Diagnosing Rheumatoid Arthritis

- The goal is early detection of RA to help prevent joint disease. Early diagnosing can lead to prompt treatment, resulting in clinical benefits for most patients. Remember, once there is joint destruction, there is no reversing the damaged joints.
- In Rheumatology, just because the patient has positive serologies (RF, CCP, or elevated inflammatory markers), it does not mean that they have active rheumatic disease. Patients can have positive antibodies, but this does not mean they have active disease. Inflammatory markers are nonspecific and can be elevated for several reasons. RF can be elevated in older population.
- ***Take caution in officially labeling a patient with a firm diagnosis.***

Appropriate Referrals for Joint Pain

- When referring a patient, a detailed medical history, current symptoms, treatment and its benefits, provider assessment, and rheumatology labs, x-rays of painful joints, and indication why the provider believes rheumatology evaluation is necessary should be available for review.
- Does the patient have persistent multiple joint pain and swelling greater than 4 weeks?
- Does morning stiffness lasts more than 1 hour
- Has a patient seen Dermatology for skin issues? Rheumatologists are amateur dermatologists and recommend input from dermatology.
- Does the patient have unexplained fatigue, unexpected weight loss, or worsening muscle weakness? Systemic symptoms are always present.

Labs We Like to See:

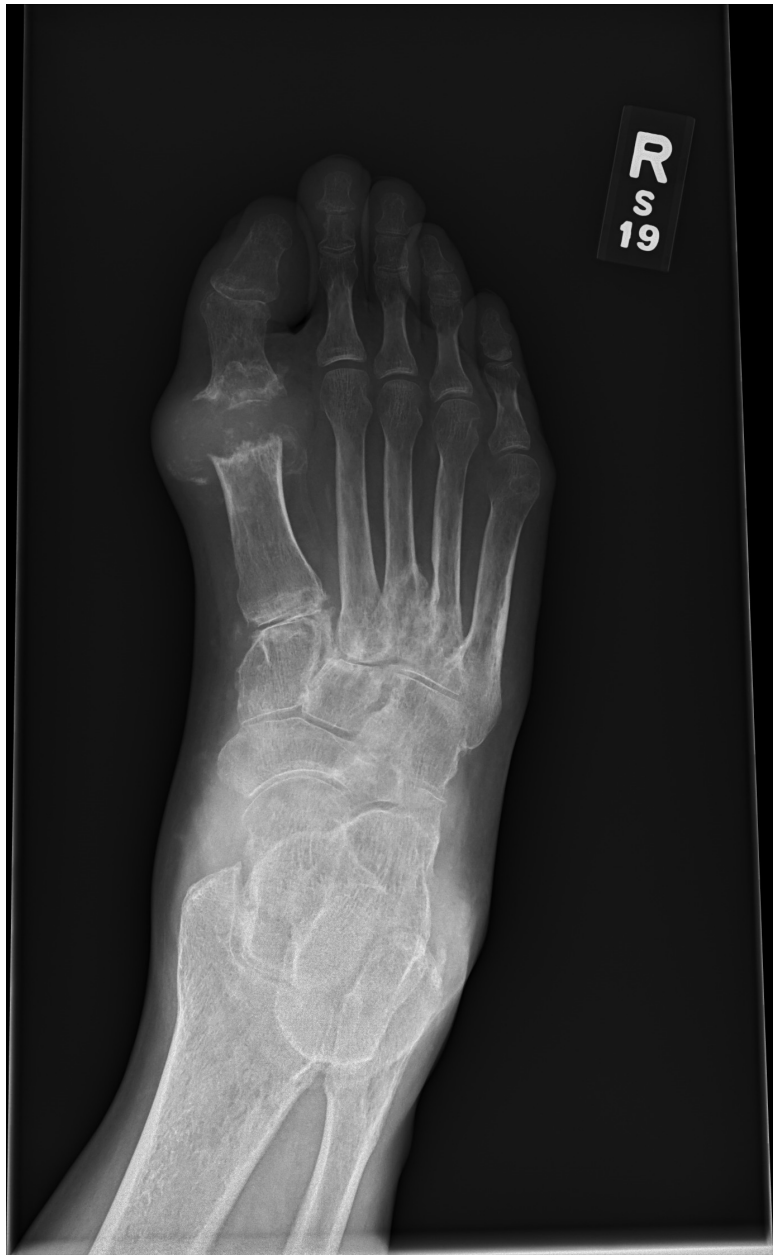
- CCP, RF, ANA by IFA, sedimentation rate, and CRP

Gout

- Gout is an inflammatory arthritis characterized by a sudden onset of joint pain, redness and swelling usually caused by the accumulation of uric acids in the joints.
- It usually affects the 1st MTP joints but, can affect other joints including feet, knees, hands, and elbows.
- Diet high in purines, alcohol intake, and drugs including diuretics can cause increased uric acid.

Gout

Urate crystals can accumulate into Tophi which settle into joints causing destruction of the underlying joint.



34-year-old male with uncontrolled Gout- multiple tophi with deformities.

Uric Acid

- Diagnosis is based on history, exam findings, and laboratory tests. Blood tests can measure uric acid, although elevated uric acid levels doesn't always mean you have gout. Some people with gout may have low uric acid levels at times, even during flares. Diagnosing may require a sample of joint fluid using a needle to withdraw fluid from the swollen joint to look for urate crystals under a microscope.
- Goal Uric acid is <6 in patients with Gout.

Gout Treatment

- Allopurinol (Zyloprim) - start at 100 mg and titrate up to 300 mg based on tolerance . This blocks uric acid production.
- Colchicine(Colcrys)- reduces flares while lowering uric acid with allopurinol.
- Prednisone- Reduces pain and swelling during actual flare.
- NSAID’s can also be helpful for pain and swelling.

- Other options- Febuxostat (Uloric), Probenecid (Benemid) and Lesinurad (Zurampic) help the kidneys remove uric acid, and pegloticase (Krystexxa) infusions

When To Refer A Gout Patient?

- Frequent or severe flare ups
- Persistent Pain or swelling- there may be other underlying causes
- Difficulty managing uric acid levels even with lifestyle changes such as diet modifications and compliant with medications.
- Complications with treatment such as joint damage, kidney stones, or kidney disease

E-Consults

- Always available, Dr. Maxwell reviews the e-consults
- If you are worried you can always message us for guidance or advice

Clinical Pearls

- Documentation is key
- Assessment- Describe what you see- the more detailed the better
- Caution with officially labeling a patient with a rheumatic disease
- Earlier detection the better for early treatment to prevent joint destruction and complications
- E-consults are available
- Positive antibodies does not mean active disease- systemic symptoms are always present

Resources

- American College of Rheumatology. (n.d.). Antinuclear antibodies (ANA). *American College of Rheumatology*. Retrieved January 18, 2025, from https://rheumatology.org/patients/antinuclear-antibodies-ana
- American College of Rheumatology. (n.d.). Gout. *American College of Rheumatology*. Retrieved January 18, 2025, from https://rheumatology.org/patients/gout
- American College of Rheumatology. (n.d.). What is a rheumatologist? *American College of Rheumatology*. Retrieved January 18, 2025, from https://rheumatology.org/rheumatologist
- Baker, J. (2024). Diagnosis and differential diagnosis of rheumatoid arthritis. *UpToDate*. Retrieved January 12, 2025, from https://www.uptodate.com
- Humphreys, J. H., Verstappen, S. M., Scire, C. A., Uhlig, T., Fautrel, B., Sokka, T., & Symmons, D. P. (2014). How do we classify rheumatoid arthritis in established disease—can we apply the 2010 American College of Rheumatology/European League Against Rheumatism classification criteria? *The Journal of Rheumatology, 41*(12), 2347-2351. https://doi.org/10.3899/jrheum.131443
- Johns Hopkins Medicine. (n.d.). What are common symptoms of autoimmune disease? *Johns Hopkins Medicine*. Retrieved January 18, 2025, from https://www.hopkinsmedicine.org/health/wellness-and-prevention/what-are-common-symptoms-of-autoimmune-disease
- Overlake Arthritis. (n.d.). Gout: When is it time to see the rheumatologist? *Overlake Arthritis*. Retrieved January 18, 2025, from https://www.overlakearthritis.com/gout-when-is-it-time-to-see-the-rheumatologist/#:~:text=Frequent%20or%20Severe%20Flare%2DUps,management%20plan%20isn't%20effective
- Ruffing, V., & Bingham, C. O. III. (n.d.). Rheumatoid arthritis: Signs and symptoms. *Johns Hopkins Arthritis Center*. Retrieved from https://www.hopkinsarthritis.org/arthritis-info/rheumatoid-arthritis/ra-symptoms/
- Smith, A. B. (2024). Rheumatoid factor: Biology and utility of measurement. *UpToDate*. Retrieved January 19, 2025, from https://www.uptodate.com
- UNC School of Medicine. (n.d.). Decoding the ANA: A guide to ANA testing. *UNC Medicine*. Retrieved January 18, 2025, from https://www.med.unc.edu/medicine/rheumatology-allergy-immunology/patient-care/rheumatology-clinical-care/decoding-the-ana-a-guide-to-ana-testing