

Improving the Clinical Utility of Antinuclear Antibody Consults at the University of Chicago

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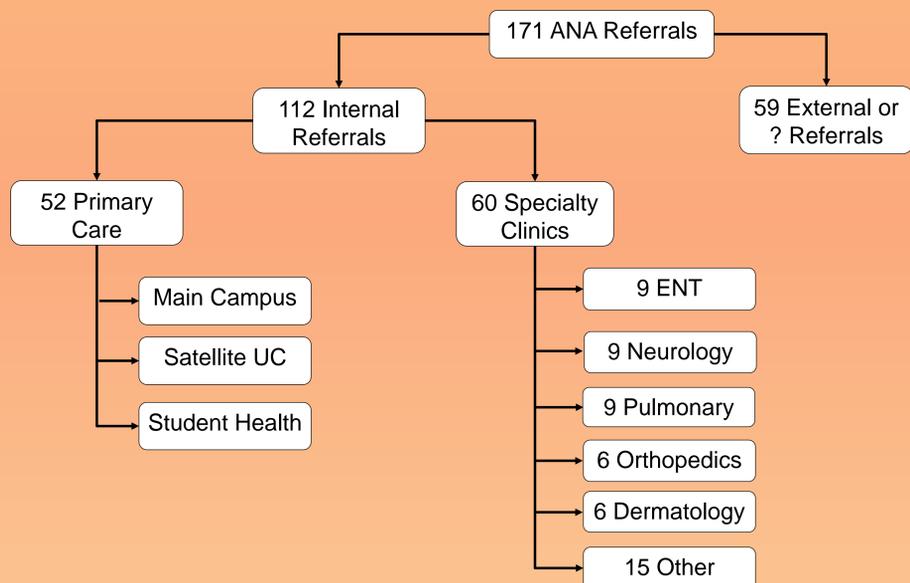
Background

- The Antinuclear antibody (ANA) test is nonspecific and can be difficult to interpret without understanding the limitations of the test.
- Prior studies have reported that the positive predictive value of positive ANAs actually resulting in a diagnosis of an ANA-associated rheumatic disease (AARD) to be 11% or less.
- Referrals to Rheumatology for positive ANA is a common practice that may lead to unnecessary resource utilization and contribute to delays in patients seeing a rheumatologist.
- In 1 year, U of C Rheumatology received 171 referrals for positive ANA and only 8 were diagnosed with an AARD, equaling a positive predictive value for AARD to be 4.7%. Over \$50,000 was spent on subsequent labs and imaging ordered due to these referrals, and the majority of these tests were normal.
- The current wait time for a new patient visit at U of C rheumatology is over 90 days.

Project Aims

- To evaluate the quality and associated healthcare expenditures of our ANA referrals
- To perform an intervention to improve the quality of ANA referral and decrease unnecessary costs and wait times

Project Design and Strategy



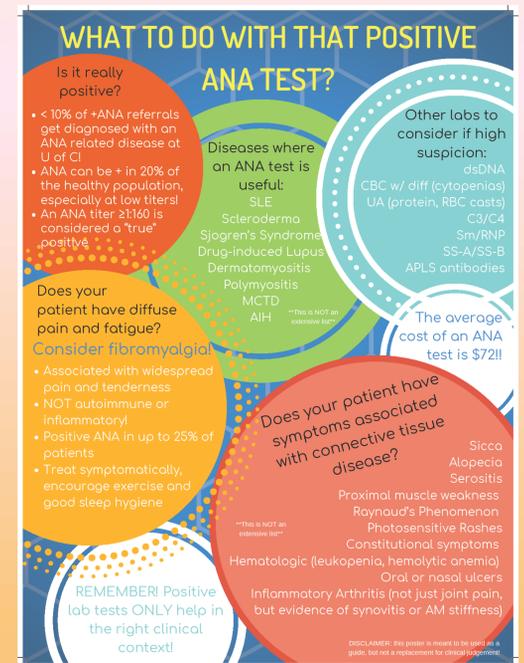
Intervention Rationale:

- Majority of consults from internal primary care clinics
 - Most of main campus clinics, which have U of C medicine residents
 - >150 PCPs in U of C network
- Intervention should include educational component because test is overall ordered infrequently by providers
- Would be helpful to have an EMR clinical decision support in order to reach providers that practice off-site
- Will start with PCP clinics, then move to specialty clinics
- Team Members:** Primary care faculty, chief medical resident, medical informatics faculty, rheumatology faculty and fellow
- Proposed Measures:** positive predictive value to ANA consults after interventions, wait times, referring provider satisfaction and rheumatologist satisfaction

Interventions

Intervention #1: Educational poster

- Education poster was made using ACR lab testing guidelines and consensus among U of C rheumatologists
- Content focused towards common consults from primary care
- Posters were hung in all main campus PCP workrooms
- Announcements during medicine residents noon conferences made by chief medical resident to bring awareness to posters in clinic

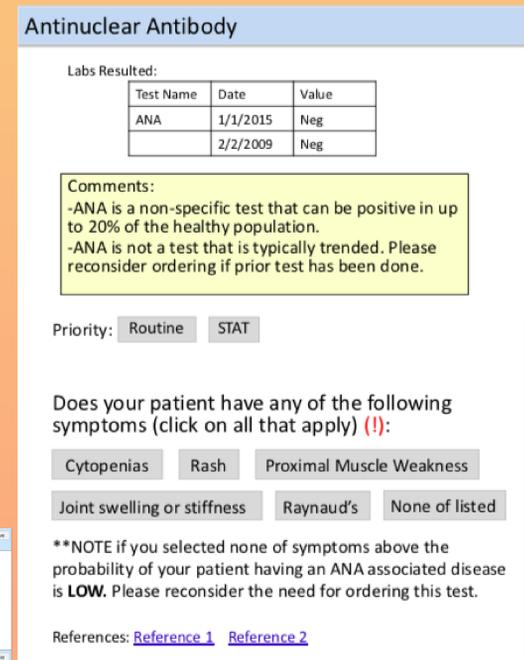


Intervention #2: Clinical Decision Support

- Will add prompts, references and information to actual ANA order that provider must answer before order can be signed
- The goal of this intervention is to provide real-time information to assist provider in the necessity of ordering an ANA test



Current ANA order



Proposed ANA order

Progress so far

- Educational posters have been placed in all main campus PCP clinics
- Ongoing meetings to develop ANA order support
- Project announcement to residents in noon conference

Next Steps

- Finalize ANA order clinical decision support
- Modify posters for subspecialty clinics and hang them up
- Announce project at primary care monthly meeting
- Find a way to track ANA referrals more seamlessly without continuous chart review

References

- Solomon, D H, et al. "Evidence-Based Guidelines for the Use of Immunologic Tests: Antinuclear Antibody Testing." *Arthritis and Rheumatism*, U.S. National Library of Medicine, Aug. 2002, www.ncbi.nlm.nih.gov/pubmed/12209492.
- Abeles, A, et al. "The Clinical Utility of a Positive Antinuclear Antibody Test Result." *The American Journal of Medicine*, Elsevier, 8 Feb. 2013, www.sciencedirect.com/science/article/pii/S0002934312009084.
- Slater, Davis, Shmerling. Antinuclear antibody testing. A study of clinical utility. *Arch. Intern. Med.* 1996;156(13):1421-5.