Eastern Pathology Alliance NHS

Guide to using Antibodies to diagnose Rheumatoid Arthritis.

RA = Rheumatoid Arthritis, RF = Rheumatoid Factor, AA = Acute Arthritis panel, CCP = cyclic citrullinated peptide

RA is rare, approximate incidence of 79/100,000/year (1). In East Anglia (population 1, 021,250) we should expect to see 790 new diagnoses / year.

Your immunology laboratory at NNUH processed 13554 RF tests in 2014-15.

741 (5.5%) were positive. **12, 813 were negative.**

The issues:

- RF doesn't distinguish people with RA from those without RA very well
- there is now a better test – CCP.
- CCP and RF have a similar sensitivity (approximately 65% of patients with RA will be positive for both RF and CCP) but
- CCP has much higher specificity – only **5%** of patients who do not have RA will have a positive CCP, for RF the figure is **20%**
- The poor specificity of RF leads to unnecessary anxiety and referrals
- So….we should all use CCP!

However CCP is ***more expensive*** so its use must be restricted to ONLY those patients in whom RA is clinically likely:

Joint Findings	Duration	
	< 6 weeks	> 6 weeks
1 large joint	NOT RA – no CCP test required.	NOT RA – no CCP test required.
2-10 large joints	NOT RA – no CCP test required.	Request CCP and CRP – If high titre CCP AND raised CRP – refer.
1-3 small joints	Request CCP and CRP – If high titre CCP AND raised CRP - Refer	Request CCP and CRP – If high titre CCP OR raised CRP – refer.
4-10 small joints	Request CCP and CRP – If high titre CCP OR raised CRP - refer	Request CCP and CRP - Any titre CCP OR raised CRP – refer.
>10 small joints	Request CCP and CRP - Any titre CCP OR raised CRP –refer.	RA – select Acute Arthritis bloods and refer.

Table Adapted from ACR/EULAR Diagnostic criteria 2010

To summarise,

- No longer request RF for the diagnosis of RA
- Only request CCP when your patient has clinical features consistent with RA
- Don't request CCP where there is a low chance of RA (green shaded boxes in the table) because a false positive result could delay the alternative underlying diagnosis.
- Don't forget the alternative diagnoses that may need referral without waiting for bloods. This link outlines the differential diagnoses: http://www.arthritisresearchuk.org/~/media/Images/CPD/Widespread%20msk%20pain/Diagnostic%20tips.ashx?la=en

Ref 1: The incidence of rheumatoid arthritis in the UK: comparisons using the 2010 ACR/EULAR classification criteria and the 1987 ACR classification criteria. Results from the Norfolk Arthritis Register.