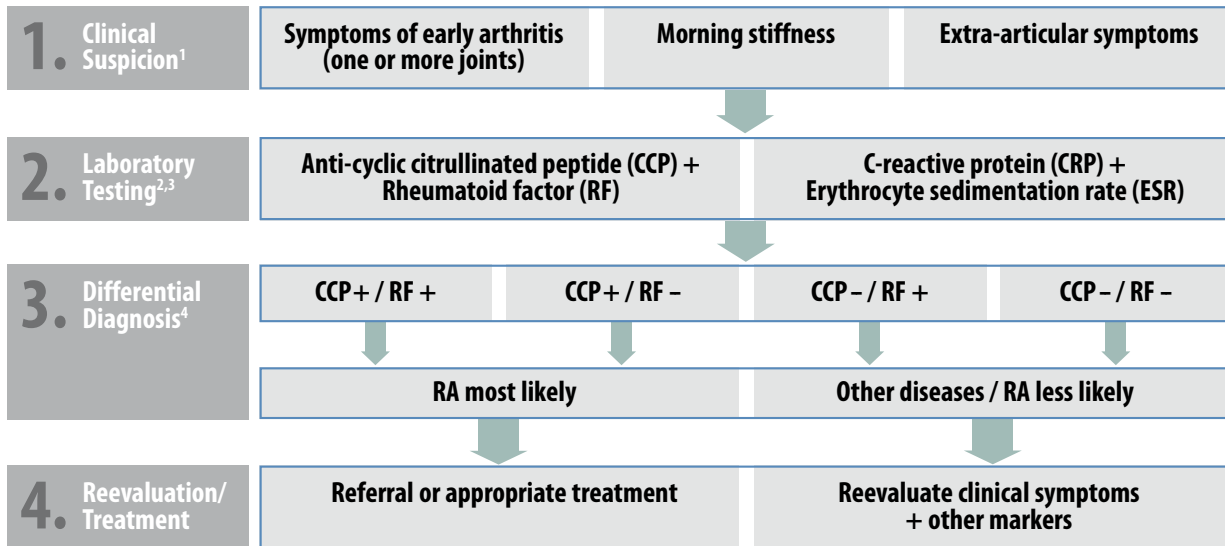




Diagnosis of Rheumatoid Arthritis (RA)



CCP is more sensitive and more specific than RF

Initial symptoms of RA^{1,2}

- Systemic or articular
- Flu-like symptoms
- Fatigue
- Malaise
- Weight loss
- Anemia
- Thrombocytosis
- Diffuse musculo-skeletal pain
- Symmetric poly-arthritis with morning stiffness in one or more joints
- Swelling of joints
- Pain on movement
- Tenderness in joints
- Sensation of heat in joints (without erythema)

Laboratory investigations that may help differentiate rheumatic disorders¹⁻³

- Anti-CCP antibodies
- RF
- Erythrocyte sedimentation rate (ESR)
- C-reactive protein (CRP)
- Complete blood count (CBC)
- Urea and electrolytes
- Liver function tests
- Uric acid
- Synovial fluid analysis
- Urinalysis
- Anti-nuclear antibodies
- Viral titers

American College of Rheumatology (ACR) criteria^{2,4}

- Morning stiffness lasting for at least 1 hour
- Arthritis in three or more joint areas
- Arthritis of hand joints
- Symmetric arthritis
- Rheumatic nodules
- Serum RF
- Radiographic changes

References:

1. Rindfleisch JA, Muller D. *Am Fam Physician*. 2005;72(6):1037-1047. 2. American College of Rheumatology. *Arthritis Rheum*. 2002;46(2):328-346. 3. Bombardieri M, Alessandri C, Labbadia G, et al. *Arthritis Res Ther*. 2004;6(2):R137-R141. 4. Marcelletti JF, Nakamura RM. *Clin Appl Immunol Rev*. 2003;4:109-123. 5. Vossenaar ER, van Venrooij WJ. *Clin Appl Immunol Rev*. 2004;4:239-262.

Table: Frequency of anti-CCP and RF antibodies in some similarly presenting disorders.^{3,5}

Diseases that may have a similar presentation	Frequency of anti-CCP (%)	Frequency of RF (%)
Rheumatoid arthritis⁵	77	74
Other etiologies		
Osteoarthritis⁵	9	18
Arthropathies⁵ (including reactive arthritis, gout, psoriatic arthritis, fibromyalgia, inflammatory polyarthritis, ankylosing spondylitis)	4	7
Connective tissue diseases⁵ (including SLE, MCTD, scleroderma, Sjögren's syndrome, CREST syndrome, polymyositis/dermatomyositis)	5	38
Inflammatory diseases⁵ (including Crohn's disease, ulcerative colitis, polymyalgia rheumatica, vasculitis, Wegener's granulomatosis, sarcoidosis, AI thyroiditis)	1	9
Viral infections⁵ (including Epstein-Barr, HCV, parvovirus B19, rubella, viremia)	1	25
Bacterial infections⁵ (including inflammatory endocarditis, legionellosis, Lyme disease, yersiniosis, salmonellosis, tuberculosis, streptococcosis)	1	12
HCV infection³	0	15
Parasitic infections⁵ (including malaria, mycoplasmosis, toxoplasmosis, Chagas' disease, schistosomiasis, leishmaniasis)	2	22
Healthy individuals⁵	0	11
Total non-RA⁵	3	22

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