

Rheumatology Educational Goals & Objectives

Musculoskeletal complaints are very common in the practice of primary care. They may reflect overuse or trauma, or be a manifestation of a broad range of musculoskeletal disorders or other systemic diseases. The Rheumatology rotation will provide the resident with exposure to common conditions, such as osteoarthritis, osteoporosis, crystalline diseases, and rheumatoid disease as well as rare and diagnostically elusive conditions, such as vasculitis, spondyloarthropathies, and inflammatory muscle disease. As these conditions are not always encountered during training, the goal is to give the resident an understanding of the pathophysiology and resulting systemic manifestations of connective tissue disorders, with a focus on the following issues: clinical patterns of disease, cost-effective diagnostic evaluation, early identification and treatment of disease to prevent disability and improve quality of life, proficiency in the use of ant-inflammatory, immunosuppressive and cytotoxic drugs; and enhancement of procedural skills, such as arthrocentesis and injection.

Faculty will facilitate learning in the 6 core competencies as follows:

Patient Care and Procedural Skills

- I. All residents must be able to provide compassionate, culturally-sensitive, and appropriate care for patients with rheumatologic diseases.
 - PGY2s should seek directed and appropriate specialty or surgical consultation when necessary to further patient care.
 - PGY3s should facilitate seamless transitions of care between the patient's primary care physician and the consultant and when appropriate, between inpatient and outpatient care.
- II. Residents will demonstrate the ability to take a pertinent history and perform a complete physical exam, with emphasis on the musculoskeletal exam. PGY1s should be able to elicit the timing, intensity, and impact on functional status of a patient's symptoms. PGY1s should be able to obtain the following historical details:
 - Amiarosis fugax
 - Family or personal history of autoimmune disease
 - History of hypercoagulability
 - Jaw claudication
 - Joint, muscular, and neuropathic symptoms
 - Mucocutaneous abnormalities: hair loss, photosensitivity, rash, ulcers
 - Reynaud's phenomenon
 - Sicca complex
 - Systemic symptoms, such as fatigue, fever, poor sleep, sweats, or weight loss

PGY2s should be able to differentiate inflammatory from mechanical joint pain and recognize the contribution of comorbidities and medication compliance to a patient's symptoms.

PGY3s should be able to independently obtain the above details for patients with a complex history of rheumatologic disease.

- III. Residents should be able to characterize the following physical findings:
- PGY1s
 - Alopecia
 - Clubbing
 - Digital and mucocutaneous ulcers
 - Dupuytren's contracture
 - Foot drop
 - Joint abnormalities, including Bouchard and Heberden's nodes, crepitus, instability, effusion, range of motion, subluxation, and ulnar deviation
 - Kyphosis
 - Muscle atrophy
 - Nail pitting
 - Palpable purpura
 - Rashes: discoid, heliotrope, malar, psoriasis
 - Scleroderma skin changes
 - Splinter hemorrhages
 - Tophi
 - PGY2s/ PGY3s: periungual erythema/abnormal nailfold capillaries, Gottron's papules
- IV. Residents will understand the indications, contraindications, complications, limitations, and interpretation of following procedures, and become competent in the their safe and effective use:
- PGY1s: knee arthrocentesis and injection, nailfold capillary microscopy, bursal injection
 - PGY2s: other joint arthrocentesis and injection (optional), soft tissue injection

Medical Knowledge

- I. PGY1s will develop an approach to the evaluation and treatment of the following presenting conditions:
- Back or neck pain
 - Cold digits
 - Fever of unknown origin (FUO)
 - Joint pain/swelling/stiffness
 - Muscle weakness or myalgias
 - Numbness or tingling in digits
 - Positive ANA
 - Rash
 - Ulcers of digits, nose, mouth

PGY1s will explore the basic pathophysiology, clinical presentation, and treatment of more common conditions, such as Baker's cyst, bursitis, carpal tunnel syndrome,

fibromyalgia, gout, osteoarthritis, rheumatoid arthritis, rotator cuff tear, scoliosis, systemic lupus erythematosus, and tendonitis.

PGY2s will develop a more complete understanding of the pathophysiology, clinical presentation, and therapy for the following conditions:

- Adhesive capsulitis
- Antiphospholipid Antibody Syndrome
- Behcet's Disease
- Greater trochanteric pain syndrome
- Meralgia perasthetica
- Myofascial strain
- Paget's Disease
- Polymyalgia Rheumatica
- Pseudogout
- Radiculopathy
- Reflex Sympathetic Dystrophy
- Sacroiliac dysfunction
- Scleroderma
- Septic arthritis and bursitis
- Sjogren's Syndrome
- Spinal stenosis
- Spondyloarthropathies
- Sweet's Syndrome
- Vasculitis

PGY3s will also be able to recognize musculoskeletal manifestations of systemic diseases, such as diabetes, Hepatitis, HIV, malignancy, Parvovirus, reactive arthritis, and thyroid disease. PGY3s will recognize patterns of rheumatologic disease in patients presenting with undiagnosed symptom complexes.

II. All residents will become familiar the following issues related to therapy for connective tissue disease:

- Selection of initial therapy
- Risks and benefits of biologic therapy
- Clinical and laboratory monitoring of response to therapy
- Special considerations for patients on chronic steroid therapy
- Treatment related complications

III. All residents will be able to understand the indications for ordering and the interpretation of the following laboratory values and procedures:

- Analysis of synovial fluids
- Autoantibodies – ANA, ANCA, anti-cardiolipin, anti-CCP, anti-dsDNA, anti-ENA, anti-Jo-1, anti-MPO, anti-phospholipid, anti-PR3, anti-Scl-70, anti-Sm, rheumatoid factor
- CBC with peripheral smear
- Chemistries
- Complements

- Cryoglobulins
- Imaging with plain films and MRI
- Immunoglobulins
- Muscle enzymes
- Sedimentation rate and c-reactive protein
- Uric acid
- Urinalysis with microscopy

PGY2s will also demonstrate knowledge of the effect of inflammation on other laboratory values (acute phase response), the overlap of lab findings in synovial fluid inflammation and/or infection, and the indications for ordering and/or the interpretation of:

- Arthroscopy
- EMG/NCV
- Muscle, salivary gland, or sural nerve biopsy

PGY3s will independently, appropriately order studies and be able to interpret results within the context of patient comorbidities, pretest probability of disease, and patient values.

- IV. Residents should become fluent in the social issues relevant to patients with rheumatologic disease, such as the assessment of functional limitation at home and at work, and the need for support groups.

Practice-Based Learning and Improvement

- I. All residents should be able to access current national guidelines (e.g. http://www.rheumatology.org/Practice/Clinical/Guidelines/Clinical_Practice_Guidelines/) to apply evidence-based strategies to patient care.
- II. PGY2s should develop skills in evaluating new studies in published literature, through Journal Club and independent study.
- III. All residents should participate in case-based therapeutic decision-making, involving the primary care provider, rheumatologist and, where appropriate, orthopedic surgeon. Residents should learn to coordinate patient care as part of a larger team, including the nurse, pharmacist, physical therapist, and social worker to optimize patient care, with PGY3s taking a leadership role.
- IV. All residents should respond with positive changes to feedback from members of the health care team.

Interpersonal and Communication Skills

- I. PGY1s must demonstrate organized and articulate electronic and verbal communication skills that build rapport with patients and families, convey information to other health care professionals, and provide timely documentation in the chart.

- II. PGY2s must also develop interpersonal skills that facilitate collaboration with patients, their families, and other health professionals.
- III. PGY3s should demonstrate leadership skills to build consensus and coordinate a multidisciplinary approach to patient care.
- IV. PGY3s must be able to navigate complex discussions on sensitive topics with patients and their families.

Professionalism

- I. All residents must demonstrate strong commitment to carrying out professional responsibilities as reflected in their conduct, ethical behavior, attire, interactions with colleagues and community, and devotion to patient care.
- II. PGY1s should be able to educate patients and their families in a manner respectful of gender, age, culture, race, religion, disabilities, national origin, socioeconomic status, and sexual orientation on choices regarding their care.
- III. PGY2s should be able to counsel patients and families both on diagnostic and treatment decisions and on withdrawal of care.
- IV. PGY2s should be able to use time efficiently in the clinic to see patients and chart information.
- V. PGY3s should be able to provide constructive criticism and feedback to more junior members of the team.

Systems-Based Practice

- I. PGY1s must have a basic understanding that their diagnostic and treatment decisions involve cost and risk and affect quality of care.
- II. PGY2s must also demonstrate an awareness of alternative therapies and their costs, risks, and benefits.
- III. PGY3s must be able to identify current quality issues in rheumatology, such as recent recommendations regarding diagnostic testing within the context of providing high quality, high value care for patients with rheumatic disease.

Teaching Methods

- I. Supervised patient care, primarily in the outpatient setting with occasional inpatient consultation.
 - Residents will initially be directly observed with patients to facilitate the acquisition of excellent history taking and physical exam skills.
 - As residents become more proficient, they will interact independently with patients and present cases to faculty.
 - Initial emphasis will be on diagnosis and basic management.
 - When residents have mastered these skills, focus will be on medical decision-making, and residents will work with supervising physicians to finalize a care plan.
- II. Conferences
 - Specialty-specific didactics
- III. Independent study

- Journal and Textbook reading TBD by rheumatology attending
- Online educational resources
 - Practice guidelines
http://www.rheumatology.org/Practice/Clinical/Guidelines/Clinical_Practice_Guidelines/
 - American College of Rheumatology High Impact Rheumatology Curriculum
 - <https://www.rheumatology.org/Learning-Center/Educational-Activities/High-Impact-Rheumatology/High-Impact-Rheumatology-Curriculum>
 - Rheumatology Image Bank <http://images.rheumatology.org/>
 - Up to Date
 - Clinical Key

Evaluation

- I. Mini-CEX bedside evaluation tool
- II. Verbal mid-rotation individual feedback
- III. 360 Evaluation
- IV. Attending written evaluation of resident at the end of the month based on rotation observations and chart review.

Rotation Structure

- I. Residents should contact the rheumatology attending the day prior to determine start time and location.
- II. Residents should spend the majority of their time in Rheumatology clinic, with occasional visits to the hospital as appropriate to achieve the above educational goals.
 - Rotations are a “hands-on” learning experience. If you have a resident, send them in to see a patient.
 - If the same patient returns during the rotation, send the resident in to see the follow-up.
 - Case-based learning is very effective. Give your resident patient-based questions to research and report back to you.
 - Consider having your resident do a short presentation to the group on a pertinent topic.
 - When doing consults, ensure the resident understands the question asked and provides a concise answer.
- III. Call and weekend responsibilities TBD by the attending physician.
 - Hours worked must be consistent with ACGME requirements and are subject to approval by the Program Director.
- IV. Residents have specialty-specific didactics and should be excused in a timely fashion to attend.