

# Optimizing Patient Outcomes in Gout

## Overview

The incidence and prevalence of gout in the United States have increased in the last 20 years, partly due to the rise in obesity and the aging population.<sup>1-4</sup> Gout now affects 8.3 million (4%) adults,<sup>1,3,4</sup> and is the most common form of inflammatory joint disease in men<sup>5-8</sup> and post-menopausal women.<sup>9</sup> It is more commonly seen in men, however, due to their higher baseline levels of blood uric acid.<sup>10</sup>

Treatment of acute gout aims to relieve pain and restore normal function to the affected joint,<sup>11</sup> and first-line therapy comprises colchicine and non-steroidal anti-inflammatory drugs (NSAID).<sup>12</sup> In previous decades, research interest in gout has been minimal.<sup>13-18</sup> Over the past 20 years, however, the increased prevalence of the disease has led to a rise in interest by researchers and physicians.<sup>19</sup> New advances in the field of gout have enhanced understanding of the processes of inflammation and innate immunity that contribute to the disease, and new therapies are now either available or in development.<sup>19</sup> Some therapies aim to reduce urate levels, while others are anti-inflammatory.<sup>19</sup>

The importance of interleukin-1 $\beta$  (IL-1 $\beta$ ) in the pathogenesis of gout is also evolving. Accumulation of the metabolic substrate monosodium urate in this condition is now known to stimulate release of IL-1 $\beta$  from the NLRP3 inflammasome, and this has led to evaluation of IL-1 blocking agents as an alternative to current anti-inflammatory therapeutic agents.<sup>20</sup>

Due to the increased pace of advances in understanding the disease, it is important that physicians are knowledgeable about the pathophysiology, symptoms, diagnosis, and current advances for the management of gout. We recommend the creation of a CME-accredited program addressing the appropriate management of gout to optimize long-term patient outcomes.

The proposed educational activity will provide an overview of the key clinical aspects, diagnosis, treatment, and management of patients with gout. An interactive Audience Response System (ARS) will be used to facilitate audience participation in the clinical consultation led by the faculty during each topic presentation. Specialists in rheumatology will discuss therapeutic

advances and their impact on patient outcomes. Speakers will also discuss the practical aspects of disease management using a case-based format, encouraging learners to utilize analytical skills and foster collaboration with peers. Each topic area will be designed to offer a strong instructional foundation designed to meet the learning objectives of acquiring knowledge and skills, and influencing attitudes and behaviors.

The goal of the activity will be to enable learners to develop strategies for treatment and management of patients with gout. Baseline measurements of key educational messages (based on the needs assessment), and current practices regarding the appropriate treatment and management of gout will be assessed. Its practical approach and case-based format make this course extremely relevant for internal medicine and primary care physicians.

### **Learning Objectives**

After participating in this educational activity, practitioners will be able to:

- Recognize the risk factors for development of gout
- Identify optimal therapeutic options for treating acute and chronic gout and hyperuricemia
- Define the dosing guidelines for colchicine, its side effects, and interactions with other drugs
- Create patient education strategies to maintain treatment adherence and optimize long-term outcomes

## **Suggested Faculty**

### **Michael A. Becker, MD**

Professor Emeritus of Medicine  
Department of Medicine  
Rheumatology Section  
The University of Chicago Medical Center  
Chicago, IL

### **N. Lawrence Edwards, MD**

Professor of Medicine  
Division of Rheumatology and Clinical Immunology  
University of Florida  
Gainesville, FL

### **Michael Guma DO, FACP, FACR**

Director of Rheumatology  
Saint Michael's Medical Center  
Newark, NJ

### **Brian F. Mandell, MD PhD**

Professor and Chairman of Medicine, Education Institute  
and Department of Rheumatic and Immunologic Disease  
Center for Vasculitis Care and Research  
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Cleveland, OH

### **James C. Pile, MD**

Assistant Professor of Medicine  
Divisions of Hospital Medicine and Infectious Diseases  
Case Western Reserve University/MetroHealth Medical Center  
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### **Gary E. Rudoff, MD**

Clinical Professor of Family Practice  
Michigan State University College of Medicine  
East Lansing, MI

Director of Clinical Research  
Westside Family Medical Center  
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**Peter A. Simkin, MD**

Emeritus Professor of Medicine  
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**John S. Sundy, MD PhD**

Associate Professor of Medicine  
Division of Rheumatology and Immunology  
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**Robert A. Terkeltaub, MD**

VA Rheumatology Section Chief  
Professor of Medicine  
University of California, San Diego  
San Diego, CA

**Arthur L. Weaver, MD, MS, FACP, MACR**

Clinical Professor of Medicine  
Rheumatology  
University of Nebraska Medical Center  
Omaha, NE

**Proposed Program Agenda**

1. Live meeting (75 minutes with pre-test, audience response system, faculty Q&A, post-test and evaluation).
2. Two faculty per session
3. Speaker one: A Rheumatologist
  - Epidemiology and pathophysiology of gout
  - Review of high-risk populations (patient registries, studies)
  - Revised 2011 recommendations to the 2006 EULAR evidence-based gout guidelines
  - Diagnostic and functional assessment
  - Overview of advances of gout: including therapeutic lifestyle and pharmacologic treatments

#### 4. Speaker two: Primary Care Clinician

- Introduction to cases
- Review of current guidelines for managing gout
- Functional assessment of patients with gout
- Overview of treatment options
- Role of Primary Care Physician
- Patient Simulation- Detail of treatment options and use of guidelines to get patient to goal: use of ARS

#### 5. Questions and answers

### **Needs Assessment**

This needs assessment of the educational gaps facing primary care physicians who manage gout is supported by: 1) a comprehensive literature review; 2) revised 2011 recommendations to the 2006 EULAR evidence-based gout guidelines;<sup>21</sup> 3) data from patient registries that identify patients at risk; and 4) feedback from rheumatology specialists. These data identify the following educational needs of primary care physicians:

- Understanding the etiology and pathophysiology of hyperuricemia and gout in order to identify patients at risk
- Making an early diagnosis of gout in order to initiate treatment as soon as possible and reduce morbidity in this group.
- Selecting appropriate therapeutic agents for patients with gout, and awareness of their side effects and drug-drug interactions.
- Knowledge of recently approved drugs for treatment of gout

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