Omalizumab Treatment Patterns Among Patients with Asthma in the US Medicare Population  
Li et al  507
What is already known about this topic? Older patients and patients with disabilities have unique problems (eg, comorbidities, polypharmacy, poorer cognition, and lower incomes) that make management of their asthma more challenging versus younger patients; older age and increased disease severity are associated with worse asthma outcomes.
What does this article add to our knowledge? In US Medicare patients with asthma initiating omalizumab, patient age, low-income subsidy status, and the number of physician visits for evaluation and management were factors associated with discontinuation and adherence to omalizumab.
How does this study impact current management guidelines? Understanding the reasons for omalizumab treatment discontinuation and adherence in the Medicare population may provide insights that may guide the management of omalizumab in patients with asthma treated with this biologic.

Dupilumab Efficacy in Patients with Uncontrolled, Moderate-to-Severe Allergic Asthma  
Corren et al  516
What is already known about this topic? Type 2-high asthma includes the overlapping phenotypes, allergic asthma (characterized by increased expression of specific IgE to aeroallergens), and eosinophilic asthma (characterized by blood and/or airway/tissue eosinophilia).
What does this article add to our knowledge? Dupilumab is effective in patients with and without allergic asthma and suppresses type 2 inflammatory biomarkers, highlighting the key role of IL-4 and IL-13 in airway inflammation.
How does this study impact current management guidelines? Results support the roles of IL-4 and IL-13 in IgE- and non–IgE-mediated inflammatory pathways in asthma and IL-4/IL-13 inhibition by dupilumab therapy as beneficial for both the allergic and nonallergic asthma phenotypes.

Dupilumab Efficacy in Uncontrolled, Moderate-to-Severe Asthma with Self-Reported Chronic Rhinosinusitis  
Maspero et al  527
What is already known about this topic? Patients with asthma frequently have chronic rhinosinusitis (CRS) comorbidity, and these patients are often difficult to treat, with poor quality of life and few treatment options.
What does this article add to our knowledge? Dupilumab provides efficacy and quality-of-life benefits to patients with asthma and comorbid CRS.
How does this study impact current management guidelines? Patients with asthma and comorbid CRS may gain additional benefits from dupilumab treatment as it targets type 2 inflammation associated with these comorbid conditions.
Safety of Reslizumab in Uncontrolled Asthma with Eosinophilia: A Pooled Analysis from 6 Trials
Virchow et al

What is already known about this topic? The monoclonal IL-5 antibody reslizumab has shown good efficacy and tolerability in patients with severe asthma with eosinophilia in individual placebo-controlled trials lasting up to 52 weeks and in a 2-year open-label study.

What does this article add to our knowledge? This analysis of pooled data in more than 1000 reslizumab-treated patients from placebo-controlled trials and an open-label extension includes data over a longer total duration than previously available. This allows assessment of rare events and demonstrates the good tolerability of reslizumab treatment for a duration of more than 12 months with no evidence of safety issues.

How does this study impact current management guidelines? These data strengthen the evidence base for the good safety and tolerability profile of long-term treatment with intravenous reslizumab 3.0 mg/kg by characterizing rare safety events as well as available long-term data.

Trends and Disparities in Asthma Biologic Use in the United States
Inselman et al

What is already known about this topic? Asthma biologics are used infrequently in the US population.

What does this article add to our knowledge? There are barriers to accessing asthma biologics that need to be recognized.

How does this study impact current management guidelines? Clinicians may need additional logistical support to deliver asthma biologics to patients as recommended by guidelines.

Efficacy of Intravenous Reslizumab in Oral Corticosteroid–Dependent Asthma
Nair et al

What is already known about this topic? Reslizumab efficacy has been demonstrated in phase 3 asthma clinical trials, but only limited data have been published for oral corticosteroid–dependent patients.

What does this article add to our knowledge? Reslizumab is efficacious in the oral corticosteroid–dependent population, and was associated with reductions in systemic corticosteroid burden in the overall population.

How does this study impact current management guidelines? These data support the benefit of biologic add-on therapy to improve asthma outcomes in patients with severe oral corticosteroid–dependent asthma.

Estimation of Health and Economic Beneﬁts of Clinic Versus Home Administration of Omalizumab and Mepolizumab
Shaker et al

What is already known about this topic? Biologic therapy for asthma and urticaria is safe and effective for most patients, but anaphylaxis risk has historically limited access to at-home administration.

What does this article add to our knowledge? For most patients, at-home administration of omalizumab and mepolizumab is a cost-effective option. The in-clinic mitigation of therapy-related anaphylaxis risk is offset by increased risk of automobile-related fatality.

How does this study impact current guidelines? Home administration may be an appropriate consideration for many patients receiving omalizumab or mepolizumab. This is associated with lower overall risk to the patient, lower costs, and increased access to these therapies.

Perimenstrual Asthma in Aspirin-Exacerbated Respiratory Disease
Eid et al

What is already known about this topic? Aspirin sensitivity is associated with perimenstrual asthma.

What does this article add to our knowledge? Twenty-four percent of females with aspirin-exacerbated respiratory disease report perimenstrual asthma, which is associated with younger age at aspirin-exacerbated respiratory disease onset, menstruation-related worsening of sinus symptoms, increased asthma-related health care utilization, and a change in respiratory symptom severity at menopause.

How does this study impact current management guidelines? Females with aspirin-exacerbated respiratory disease should be counseled about both upper and lower respiratory tract symptom deterioration with menstruation.
Diagnostic Cutoffs and Clinical Utility of Recombinant *Aspergillus fumigatus* Antigens in the Diagnosis of Allergic Bronchopulmonary Aspergillosis

Muthu et al 579

**What is already known about this topic?** Although recombinant *Aspergillus fumigatus* (rAsp)-specific antigens are used in diagnosing allergic bronchopulmonary aspergillosis (ABPA), the optimal diagnostic cutoff and clinical utility of rAsp-specific IgE are not known.

**What does this article add to our knowledge?** The cutoffs derived from receiver-operating characteristic analysis fared better than fixed cutoffs. IgE against rAsp f1 (sensitivity, 89%; specificity, 100%) and the combination of either rAsp f1 or f2 (sensitivity, 100%; specificity, 81%) were most useful in differentiating ABPA from Aspergillus-sensitized asthma.

**How does this study impact current management guidelines?** Our study provides optimal and usable cutoffs to diagnose ABPA using rAsp antigens. The existing guidelines do not incorporate rAsp-specific IgE. We provide evidence to integrate IgE against rAsp f1 and f2 in the diagnosis of ABPA.

Rhinovirus Type in Severe Bronchiolitis and the Development of Asthma

Bergroth et al 588

**What is already known about this topic?** Respiratory syncytial virus (RSV)- and rhinovirus (RV)-induced bronchiolitis are associated with an increased risk of asthma.

**What does this article add to our knowledge?** Compared with children with RSV-induced bronchiolitis, children with RV-A or RV-C–induced bronchiolitis start asthma control medication earlier and are more likely to use it 4 years later. The risk is especially high among patients with RV-C, atopic dermatitis, and fever.

**How does this study impact current management guidelines?** Secondary prevention strategies targeting rhinoviruses, especially RV-C, might help to prevent childhood asthma.

Do Baseline Asthma and Allergic Sensitization Characteristics Predict Responsiveness to Mouse Allergen Reduction?

Ahmed et al 596

**What is already known about this topic?** Mouse allergen reduction is associated with improvements in asthma among sensitized and exposed children with asthma.

**What does this article add to our knowledge?** The effect of mouse allergen reduction among mouse-sensitized and exposed children on asthma outcomes may be modified by baseline clinical characteristics.

**How does this study impact current management guidelines?** Findings suggest that interventions aimed at reducing mouse allergen exposure should not be restricted to populations with certain clinical characteristics, especially given that mouse allergen reduction is a low-risk and modest cost intervention.

Inhaled Corticosteroids in Acute Asthma: A Systemic Review and Meta-Analysis

Kearns et al 605

**What is already known about this topic?** High doses of inhaled corticosteroids (ICS) reduce the risk of hospital admission in patients with acute asthma presenting to emergency department (ED). However, the evidence so far has been insufficient to change clinical practice.

**What does this article add to our knowledge?** By focusing on the efficacy of ICS as an add-on therapy to systemic corticosteroids (SCS), these contemporary findings establish whether the use of ICS achieves additional efficacy to the established practice of administering SCS in acute asthma.

**How does this study impact current management guidelines?** The findings provide the evidence base on which the use of high-dose ICS in addition to SCS can be recommended in the treatment of acute asthma presenting to ED.
**Bronchodilation Test with Inhaled Salbutamol Versus Bronchial Methacholine Challenge to Make an Asthma Diagnosis: Do They Provide the Same Information?**

Louis et al

*What is already known about this topic?* Surveys show that misdiagnosis of asthma is frequent in clinical practice. Bronchial methacholine challenge and reversibility to salbutamol are key tests in supporting an asthma diagnosis in patients with recurrent or chronic respiratory symptoms, even if positive response to these may also be present in chronic obstructive pulmonary disease.

*What does this article add to our knowledge?* It directly compares the 2 tests on the same population of patients. Being much less influenced by baseline airway caliber, positive methacholine challenge has a much greater occurrence than positive bronchodilation, though not selecting patients with different demographics or immune-inflammatory features.

*How does this study impact current management guidelines?* It reemphasizes that a lack of significant reversibility to salbutamol is common in patients with symptoms suspected to be due to asthma and should prompt the performance of a methacholine challenge to confirm the diagnosis. Our data also cast doubt on the utility of inflammatory biomarkers to make an asthma diagnosis.

**The Relationship Between Real-World Inhaled Corticosteroid Adherence and Asthma Outcomes: A Multilevel Approach**

Vervloet et al

*What is already known about this topic?* Adherence to inhaled corticosteroids (ICSs) is suboptimal. The relationship between ICS adherence and asthma outcomes is complex, because it may vary between adherence stages and is likely bidirectional. This bidirectionality is rarely investigated.

*What does this article add to our knowledge?* Better ICS use (implementation) was weakly associated with risk domain asthma control within the prescription interval. Risk domain asthma control was associated with higher ICS implementation within the same interval. Overuse of short-acting β-agonists strongly predicted lower ICS implementation.

*How does this study impact current management guidelines?* Clinicians should be aware that patients may adapt ICS use without this having a major impact on risk domain asthma control and that some patients may use short-acting β-agonists to manage symptoms as alternative for regular ICS use.

**Personalized Biofeedback on Inhaler Adherence and Technique by Community Pharmacists: A Cluster Randomized Clinical Trial**

O’Dwyer et al

*What is already known about this topic?* Adherence to inhaled therapy is poor, but interventions to address inhaler adherence and technique are difficult to implement in primary care as educators lack tools to provide objective feedback to patients.

*What does this article add to our knowledge?* In a community pharmacy setting, adherence was significantly improved when pharmacists gave each patient personalized biofeedback relating to their timing and technique of inhaler use.

*How does this study impact current management guidelines?* The development of digital-enabled inhalers will empower community pharmacists to address inhaler adherence.

**Determinants and Differences in Satisfaction with the Inhaler Among Patients with Asthma or COPD**

Plaza et al

*What is already known about this topic?* Satisfaction with the inhaler is an important determinant of treatment adherence in patients with asthma and chronic obstructive pulmonary disease. Few studies have compared these groups to identify differences in satisfaction and to determine the factors associated with high inhaler satisfaction in both diseases.

*What does this article add to our knowledge?* This study identifies clinically relevant differences between these 2 patient populations in satisfaction with the inhaler, indicating that the specific diagnosis is less relevant to inhaler satisfaction than other variables (age, disease control, and training in inhalation technique).

*How does this study impact current management guidelines?* These findings—particularly the role of training on satisfaction with the inhaler—provide a clear target to improve satisfaction and thereby clinical outcomes.
Clinical Characteristics of Cough Frequency Patterns in Patients with and without Asthma
Fukuhara et al 654

What is already known about this topic? Cough is a frequent symptom of asthma. Cough frequency monitoring devices are now available to objectively measure cough counts. However, little is known about differences in cough frequency between patients with and without asthma.

What does this article add to our knowledge? Nocturnal cough in asthmatic patients was more frequent and improved greater after appropriate treatment than that in nonasthmatic patients. In addition, nocturnal cough in asthma can be associated with bronchial hyperresponsiveness.

How does this study impact current management guidelines? Nocturnal cough frequency in asthmatic patients is different from that in nonasthmatic patients and may provide unique and valuable information on making an early prediction of therapeutic effects in asthma.

Predicting Skin Barrier Dysfunction and Atopic Dermatitis in Early Infancy
Rehbinder et al 664

What is already known about this topic? Skin barrier dysfunction, measured by increased transepidermal water loss (TEWL), has been found to precede atopic dermatitis (AD). Dry skin, a cardinal sign of AD, is associated with higher TEWL.

What does this article add to our knowledge? The article reveals distinctive factors predictive for dry skin, high TEWL, and AD at 3 months of age. Dry skin at 3 months was predictive for AD 3 months later.

How does this study impact current management guidelines? Recognizing predictive factors for AD early in life, including the presence of dry skin, may help targeting infants for primary prevention of AD.

The Association Between Season of Birth and Atopic Dermatitis in the Northern Hemisphere: A Systematic Review and Meta-Analysis
Calov et al 674

What is already known about this topic? Atopic dermatitis (AD) is a prevalent chronic skin condition. Although several risk factors for AD have been proposed over the years, it is unknown whether season of birth can affect the risk of developing AD.

What does this article add to our knowledge? This meta-analysis shows that fall and winter birth in the Northern hemisphere was associated with a slightly increased risk of AD, but also indicate that more research is needed to support a cause-effect relationship.

How does this study impact current management guidelines? If prophylactic treatment aiming at improving the skin barrier can reduce the risk of AD, this could be of particular value in children born during the fall and winter on the Northern hemisphere.

Multicenter Australian Study to Determine Criteria for Low- and High-Risk Penicillin Testing in Outpatients
Stevenson et al 681

What is already known about this topic? Recent single-center studies report that oral penicillin challenges, without skin testing, in adults deemed “low-risk” are safe. However, what constitutes a “low-risk” penicillin allergy history has been variably and arbitrarily defined.

What does this article add to our knowledge? We statistically determined that the optimal “low-risk” penicillin allergy history definition is a benign rash occurring more than 1 year before review. Adults meeting these criteria safely underwent oral penicillin challenge, without skin testing, in our study cohort.

How does this study impact current management guidelines? This simple evidence-based penicillin allergy delabeling strategy will potentially enable nonspecialist primary care doctors to (1) safely perform outpatient low-risk penicillin challenges in the future and (2) determine who should be referred for penicillin allergy skin testing.
Searching for the Culprit Drugs for Stevens-Johnson Syndrome and Toxic Epidermal Necrolysis from a Nationwide Claim Database in Korea

Yang et al

What is already known about this topic? Some drugs cause Stevens-Johnson syndrome (SJS) and toxic epidermal necrolysis (TEN) more common than other drugs. However, common causative drugs of these diseases can be different depending on ethnicity.

What does this article add to our knowledge? The common causes of SJS and TEN were different depending on ethnicity, and the method used in this study could be helpful in estimating the common cause of SJS and TEN in a specific population.

How does this study impact current management guidelines? To identify the cause of SJS and TEN, it seems necessary to consider the common causative drugs of these diseases in a specific population, which can be estimated by analyzing a large database.

A One-Bag Rapid Desensitization Protocol for Paclitaxel Hypersensitivity: A Noninferior Alternative to a Multi-Bag Rapid Desensitization Protocol

Lee et al

What is already known about this topic? Rapid desensitization based on a multi-bag protocol with serial dilutions is widely used in patients with immediate hypersensitivity reactions to chemotherapeutic agents, but it is time consuming and labor intensive.

What does this article add to our knowledge? This article shows that the 1-bag paclitaxel desensitization protocol is noninferior to the conventional multi-bag desensitization protocol in efficacy and safety.

How does this study impact current management guidelines? The 1-bag desensitization protocol may be a more practical alternative to the multi-bag desensitization protocol and it can be easily implemented in real practice.

Oral Immunotherapy for Hazelnut Allergy: A Single-Center Retrospective Study on 100 Patients

Moraly et al

What is already known about this topic? Oral immunotherapy raises the allergen threshold in children with IgE-mediated allergy to peanut, cow’s milk, and eggs. However, this approach has never been evaluated for hazelnut, a major cause of food allergy in Europe.

What does this article add to our knowledge? This is the first study to show that hazelnut oral immunotherapy may lead to desensitization and increase the allergen threshold safely in IgE-mediated allergic children.

How does this study impact current management guidelines? This study provides initial evidence for the use of hazelnut immunotherapy in IgE-mediated allergic children. These findings may be applied to the design of a randomized controlled clinical trial.

Efficacy and Safety of HDM SLIT Tablet in Japanese Adults with Allergic Asthma

Tanaka et al

What is already known about this topic? According to the Global Initiative for Asthma global strategy for asthma management and prevention, sublingual immunotherapy is a treatment option for adults with house dust mite allergic asthma.

What does this article add to our knowledge? This trial did not meet the primary efficacy end point. However, post hoc analysis shows that the treatment was potentially efficacious in those who required short-acting β2-agonists to control their symptoms.

How does this study impact current management guidelines? The post hoc analysis of the Japanese patients who required short-acting β2-agonists during the baseline period supports European data on the efficacy of the standardized quality house dust mite sublingual immunotherapy tablet in patients suffering from house dust mite allergic asthma.
Relationship of Chronic Rhinosinusitis with Asthma, Myocardial Infarction, Stroke, Anxiety, and Depression
Kim et al 721

What is already known about this topic? It is known that chronic rhinosinusitis (CRS) is associated with various comorbidities. However, population-based, long-term cohort studies investigating the relationship between CRS and its comorbidities are lacking.

What does this article add to our knowledge? Using a Korean nationwide representative sample, we showed that CRS is associated with an increased incidence of asthma, acute myocardial infarction, stroke, anxiety disorder, and depression.

How does this study impact current management guidelines? Clinicians may consider the risk of developing asthma, acute myocardial infarction, stroke, anxiety disorder, and depression in patients newly diagnosed with CRS.