**Eosinophilia in Asthma Patients Is Protective Against Severe COVID-19 Illness**
Ferastraaru et al 1152

**What is already known about this topic?** Risk factors for COVID-19 severe outcomes in asthmatics are not known. Although asthma appears to be under-represented in the COVID-19 comorbidities, diabetes (DM), hypertension (HTN), congestive heart failure (CHF), and chronic kidney disease (CKD) have been associated with severe disease.

**What does this article add to our knowledge?** Eosinophilia was protective from admission and mortality in COVID-19 asthma patients. Overall, having an asthma diagnosis without associated CHF, CKD, DM, HTN, and chronic obstructive pulmonary disease did not increase the mortality risk from COVID-19.

**How does this study impact current management guidelines?** Having a Th2-asthma phenotype may be an important predictive factor for reduced COVID-19 morbidity and mortality, emphasizing the need of prospective and mechanistic studies to explore the exact role of eosinophils in COVID-19 mortality.

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**Improved FcεRI-Mediated CD203c Basophil Responsiveness Reflects Rapid Responses to Omalizumab in Chronic Spontaneous Urticaria**
Oda et al 1166

**What is already known about this topic?** Basophil functional abnormalities such as the low-responsiveness of basophils via high-affinity IgE receptor (FcεRI) were reported in chronic spontaneous urticaria. Moreover, several studies reported increased FcεRI-mediated histamine release after omalizumab treatment.

**What does this article add to our knowledge?** Improvement of attenuated basophil responsiveness via FcεRI stimulation in chronic spontaneous urticaria is associated with rapid clinical effectiveness, and the mechanism of action of omalizumab might be due to improved responsiveness of newly circulating basophils.

**How does this study impact current management guidelines?** Changes in basophil responsiveness via FcεRI stimulation in some patients with chronic spontaneous urticaria before and after omalizumab treatment suggest the importance of basophil status as an action point of omalizumab treatment.

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**Dupilumab Improves Asthma Control and Lung Function in Patients with Insufficient Outcome During Previous Antibody Therapy**
Mümmler et al 1177

**What is already known about this topic?** Therapy with anti–IL-5/IL-5 receptor α or anti-IgE antibodies is highly effective in most patients with severe eosinophilic or IgE-dependent asthma. However, in some patients, outcome under these therapies is insufficient.

**What does this article add to our knowledge?** This is the first study assessing the response to the anti–IL-4 receptor α antibody dupilumab in patients with insufficient outcome during anti–IL-5/IL-5 receptor α or anti-IgE therapy.

**How does this study impact current management guidelines?** Switching to dupilumab appears to be a promising therapeutic option, leading to improvement in lung function and asthma control and decrease in oral corticosteroid use.
Benralizumab as a Steroid-Sparing Treatment Option in Eosinophilic Granulomatosis with Polyangiitis
Guntur et al

What is already known about this topic? Oral corticosteroids have been the mainstay of therapy for eosinophilic granulomatosis with polyangiitis (EGPA) for years. More recently, mepolizumab, an anti-IL-5 monoclonal antibody, was approved for use in EGPA.

What does this article add to our knowledge? In this phase II study, benralizumab, a monoclonal antibody that targets the IL-5 receptor α subunit, shows safety and efficacy in the treatment of EGPA.

How does this study impact current management guidelines? Benralizumab may represent a new treatment option for EGPA.

Long-Term Therapy Response to Anti–IL-5 Biologics in Severe Asthma—A Real-Life Evaluation
Eger et al

What is already known about this topic? Real-life data about long-term effects of anti–IL-5 treatment in patients with severe asthma are limited. Many questions about super responders and nonresponders, predictors of response, and residual disease manifestations are still unanswered.

What does this article add to our knowledge? In real-life, a small proportion of patients with specific characteristics show super response to long-term anti–IL-5 treatment. Most partial responders show impaired lung function or uncontrolled sinonasal disease, causing physicians to switch between biologics.

How does this study impact current management guidelines? Although anti–IL-5 biologics effectively reduce asthma exacerbations and oral glucocorticoid use in patients with eosinophilic asthma, in real-life many patients continue to suffer from bothersome disease manifestations despite anti–IL-5 treatment and these may require additional therapies.

Possible Protective Effect of Omalizumab on Lung Function Decline in Patients Experiencing Asthma Exacerbations
Busse et al

What is already known about this topic? Loss of lung function with aging can be accelerated in patients with asthma and is greater in patients who experience exacerbations.

What does this article add to our knowledge? In treatment-refractory asthma, omalizumab may prevent the loss of lung function due to exacerbations in patients with allergic asthma.

How does this study impact current management guidelines? Omalizumab is recommended for severe uncontrolled allergic asthma despite inhaled corticosteroids, with efficacy reflected in fewer exacerbations. But, even in those with asthma exacerbations on therapy, omalizumab may have benefits protecting against lung function decline.

Dupilumab Improves Asthma and Sinonasal Outcomes in Adults with Moderate to Severe Atopic Dermatitis
Boguniewicz et al

What is already known about this topic? Atopic dermatitis (AD) is a chronic inflammatory skin disease often associated with other type 2 inflammatory diseases such as asthma, allergic rhinitis, and other chronic inflammatory conditions of the sinonasal mucosa.

What does this article add to our knowledge? Dupilumab treatment in adult patients with moderate to severe AD and comorbid asthma and/or chronic sinonasal conditions significantly improved AD signs and symptoms as well as asthma and sinonasal disease.

How does this study impact current management guidelines? By inhibiting type 2 inflammation, dupilumab may optimize management of AD, asthma, and chronic sinonasal conditions simultaneously, addressing the systemic immune dysregulation underlying these and other type 2 inflammatory diseases.
Variability in Blood Eosinophil Counts in Patients with Eosinophilic Asthma
Corren et al

What is already known about this topic? Blood eosinophil (EOS) counts are key to diagnosis and monitoring of eosinophilic asthma.

What does this article add to our knowledge? Patients’ blood EOS counts vary substantially over time, and rapid shifts from low to high EOS counts are not uncommon.

How does this study impact current management guidelines? Repeated blood EOS count measurements may benefit the evaluation and management of patients with symptomatic asthma.

Beta-2 Agonists May be Superior to Epinephrine to Relieve Severe Anaphylactic Uterine Contractions
D’Astous-Gauthier et al

What is already known about this topic? Uterine contractions are recognized as a potential manifestation of anaphylaxis, but literature on their proper management is limited.

What does this article add to our knowledge? Reports indicate inconsistent response to epinephrine, possibly due to its alpha-adrenergic action on uterus. Pretreatment with antihistamine is generally ineffective. A few cases were successfully treated with beta-2 agonists. Pretreatment with nonsteroidal anti-inflammatory drug was also reported as effective.

How does this study impact current management guidelines? Use of beta-2 agonists and nonsteroidal anti-inflammatory drugs for the treatment of uterine contractions during anaphylactic reaction warrant further investigation. Use of epinephrine could be ineffective to relieve severe pain caused by uterus contraction.

Factors Associated with Nonadherence to Inhaled Corticosteroids for Asthma During Pregnancy
Robijn et al

What is already known about this topic? Nonadherence to inhaled corticosteroids during pregnancy is a clinical problem.

What does this article add to our knowledge? Smoking, higher parity, lower maternal age, adult diagnosis of asthma, and (re-)initiating inhaled corticosteroids during pregnancy are associated with nonadherence to inhaled corticosteroids during pregnancy.

How does this study impact current management guidelines? This study helps identify women who are at increased risk of being nonadherent to inhaled corticosteroids during pregnancy, which may assist health care professionals initiate a more targeted conversation with pregnant women about their asthma medication.

Treatable Traits That Predict Health Status and Treatment Response in Airway Disease
Hiles et al

What is already known about this topic? “Treatable traits” is a new proposed paradigm for airway disease management, whereby characteristics known as treatable traits are systematically assessed within the pulmonary, extrapulmonary, and behavioral/risk-factor domains and treatment is targeted to these characteristics.

What does this article add to our knowledge? Pulmonary, extrapulmonary, and behavioral treatable traits are associated with impairment in health-related quality of life and response to trait-targeted treatment in patients with chronic obstructive pulmonary disease and severe asthma.

How does this study impact current management guidelines? This study is a starting place for a broader conversation regarding identifying treatable traits that have impact, to derive a model of care that is feasible and cost-effective and has the largest impact on patient outcomes.
The Prevalence of Subtypes of Type 2 Inflammation in an Unselected Population of Patients with Severe Asthma
Frøssing et al

What is already known about this topic? Severe type 2 (T2)-high asthma is recognized as a heterogeneous entity and is considered to include several different clinical phenotypes of asthma; however, the prevalence of isolated and concomitant biomarker elevation is unknown.

What does this article add to our knowledge? We found 70% of patients with severe asthma to have at least 1 T2 biomarker elevated: 31% with a single biomarker elevated and 39% with 2 or more elevated.

How does this study impact current management guidelines? Our findings illustrate the heterogeneity of T2 inflammation in severe asthma, supports the existence of distinct subtypes of T2-high asthma, and points to a large discrepancy between airway and systemic eosinophilia.

“Can Do” Versus “Do Do” in Patients with Asthma at First Referral to a Pulmonologist
Janssen et al

What is already known about this topic? An impaired physical functioning may significantly add to poor asthma control and deteriorated quality of life in patients with asthma.

What does this article add to our knowledge? This study provides details on how the physical functioning of patients with asthma at referral to a pulmonologist is affected, applying a “can do, do do” concept that was recently developed for patients with chronic obstructive pulmonary disease. Results show that physical functioning is hampered in the vast majority of patients. In addition, patients with asthma with the most affected physical functioning turned out to have the worst asthma control and poorest quality of life.

How does this study impact current management guidelines? Outcomes of this study justify further studies on safety and efficacy of nonpharmacological interventions, such as physiotherapy.

Longitudinal Outcomes of Severe Asthma: Real-World Evidence of Multidimensional Analyses
Lee et al

What is already known about this topic? Severe asthmatics are suffering from frequent respiratory symptoms and acute asthma exacerbations and are at risk of rapid lung function decline, which is attributed to a higher level of eosinophilic airway inflammation.

What does this article add to our knowledge? This study presents real-world longitudinal data from severe asthmatics concerning eosinophilic inflammation, asthma exacerbation, and lung function, which have hardly been addressed. Based on the observation, a novel prediction model for severe asthma using a machine learning technique was established.

How does this study impact current management guidelines? The study results emphasized that earlier and more active treatment strategies are needed for severe asthmatics. The prediction model of severe asthma in our study may help identify and better manage severe asthmatics.

The Clinical Course of Asthma After Withdrawal of Inhaled Corticosteroids
Han et al

What is already known about this topic? Maintenance of inhaled corticosteroids (ICSs) is recommended in most adults with asthma and the Global Initiative for Asthma revised its recommendation to avoid complete withdrawal of ICSs in adults.

What does this article add to our knowledge? In a group of older patients with asthma with a high prevalence of smoking, most patients did not experience exacerbation events leading to hospitalization even after ICS withdrawal in real-life practice.

How does this study impact current management guidelines? ICS cessation could be considered cautiously in patients who are well controlled.
A Randomized, Noninferiority Trial Comparing ICS + LABA with ICS + LABA + LAMA in Asthma-COPD Overlap (ACO) Treatment: The ACO Treatment with Optimal Medications (ATOMIC) Study
Park et al

What is already known about this topic? The inhaled corticosteroid (ICS) + long-acting β2 agonist (LABA) treatment is essential for the initial treatment of asthma and chronic obstructive pulmonary disease (COPD) overlap (ACO) patients with asthma and COPD coexistence, and treatment efficacy with addition of long-acting muscarinic antagonist (LAMA) is unclear.

What does this article add to our knowledge? This trial validated the current approach to ACO treatment. It is unclear whether ICS + LABA + LAMA treatment reduces the time to first exacerbation; however, it is obvious that the LAMA add-on treatment improved lung function in ACO.

How does this study impact current management guidelines? Similar to current guidelines for treatment with ICS + LABA + LAMA in patients with severe uncontrolled asthma or eosinophilic COPD, ICS + LABA + LAMA treatment may be helpful in patients with ACO.

Asthma Prevalence and Mold Levels in US Northeastern Schools
Howard et al

What is already known about this topic? Mold exposures have been linked to asthma development and exacerbation.

What does this article add to our knowledge? The Environmental Relative Moldiness Index metric can be used to objectively quantify mold exposures in schools as well as in homes.

How does this study impact current management guidelines? Mold should be reduced in schools; air-conditioning may help.

Maternal Depressive Symptoms, Lung Function, and Severe Asthma Exacerbations in Puerto Rican Children
Stevens et al

What is already known about this topic? Little is known about the relationship between persistent or increasing maternal depressive symptoms over several years and lung function measures or severe asthma exacerbations in children and adolescents.

What does this article add to our knowledge? In this prospective study, increasing or persistent maternal depressive symptoms were associated with worse lung function measures (forced expiratory volume in 1 second [FEV1] and FEV1/forced vital capacity) and severe asthma exacerbations in Puerto Rican youth, a high-risk population.

How does this study impact current management guidelines? Physicians caring for children with asthma should be aware of potential maternal depression, which, if suspected, should be appropriately addressed.

Detecting Lesional Granulysin Levels for Rapid Diagnosis of Cytotoxic T lymphocyte–Mediated Bullous Skin Disorders
Chen et al

What is already known about this topic? Granulysin, primarily expressed by cytotoxic T lymphocytes (CTLs), is a specific cytotoxic protein responsible for Stevens-Johnson syndrome/toxic epidermal necrolysis.

What does this article add to our knowledge? The level of blister granulysin is can be useful for rapid differential diagnosing of Stevens-Johnson syndrome/toxic epidermal necrolysis and other CTL-mediated bullous skin disorders from other non–CTL-mediated bullous skin disorders, including pemphigus, bullous pemphigoid, and bullous lupus erythematosus.

How does the current study impact management guidelines? Early diagnosis of CTL-mediated bullous skin disorders is important for urgent management, as well as for the prevention of disease progression. In addition, monitoring of granulysin levels can be used as clinical guidance for evaluating disease activity and determining the appropriate timing for potential immunosuppressant therapy.
Penicillin Allergy Assessment in Pregnancy: Safety and Impact on Antibiotic Use
Wolfson et al

What is already known about this topic? First-line treatments for many infections in pregnancy are beta-lactam antibiotics, particularly penicillin. Although 10% of patients have a reported penicillin allergy, more than 90% of them are not allergic.

What does this article add to our knowledge? Following 389 electronic-consults, 222 (57%) pregnant patients with a penicillin allergy history had an in-person Allergy/Immunology evaluation and 209 (95%) had their penicillin allergy label removed. Compared with patients who did not receive an in-person Allergy/Immunology evaluation despite it being recommended by electronic-consult, fully evaluated patients had reduced broad-spectrum antibiotic use and a 27-fold increased odds of first-line penicillin prophylaxis for group B Streptococcus.

How does this study impact current management guidelines? Penicillin allergy evaluation was safe in the third trimester of pregnancy and was associated with an increased use of recommended first-line antibiotics.

First Real-World Effectiveness Analysis of Preschool Peanut Oral Immunotherapy
Soller et al

What is already known about this topic? Preschool peanut oral immunotherapy in a real-world setting has been shown to be safe; 0.4% of patients experienced a severe reaction, and 4.1% received epinephrine, during build-up.

What does this article add to our current knowledge? About 78.6% of preschoolers on peanut oral immunotherapy maintenance for 1 year had a negative cumulative 4000-mg oral food challenge without symptoms, and 98.3% could tolerate greater than or equal to 1000 mg, sufficient to protect against accidental exposures.

How does this study impact current management guidelines? Real-world peanut oral immunotherapy is effective in preschoolers who received the follow-up oral food challenge and should be considered as an alternative to current recommendations to avoid peanut.

Olfactory Function Is Impaired in Patients with Mastocytosis
Masala et al

What is already known about this topic? No data are currently available regarding the correlation between olfactory function and mastocytosis’ symptoms.

What does this article add to our knowledge? Patients with mastocytosis show an impairment of olfactory function.

How does this study impact current management guidelines? Olfactory dysfunction in mastocytosis may be considered among the clinical manifestations contributing to the burden of this disease.

As-Needed Versus Regular Use of Fluticasone Furoate Nasal Spray in Patients with Moderate to Severe, Persistent, Perennial Allergic Rhinitis: A Randomized Controlled Trial
Thongngarm et al

What is already known about this topic? Regular use of intranasal corticosteroids (INCSs) is recommended for the treatment of perennial allergic rhinitis. However, patients adjust their treatment according to the severity of their symptoms.

What does this article add to our knowledge? Both “as-needed” and “regular” use of INCSs had similar improvement in nasal symptoms and quality of life in patients with moderate to severe perennial allergic rhinitis. The treatment effect was less sustained with as-needed use. The cumulative dose of fluticasone furoate in the as-needed group was half that of the regular group.

How does this study impact current management guidelines? Although regular use of INCSs is recommended for the treatment of patients with perennial allergic rhinitis, as-needed use, at half of INCS exposure, was similar to regular use with regard to the improvement of nasal symptoms and quality of life. However, the treatment effect was less sustained with the as-needed use.