Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

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Effectiveness of a Digital Inhaler System for Patients With Asthma: A 12-Week, Open-Label, Randomized Study (CONNECT1)
Hoyte et al 2579

What is already known about this topic? Frequent use of short-acting beta-2 agonist and incorrect inhaler technique may indicate poor asthma control. Use of an electronic inhaler monitoring device has demonstrated reductions in short-acting beta-2 agonist use and may potentially improve asthma control.

What does this article add to our knowledge? In this 12-week study, participants with uncontrolled asthma using the Reliever Digihaler System had an 85.3% probability of achieving greater odds of improvement in asthma control than those using standard of care albuterol inhalers.

How does this study impact current management guidelines? Its findings suggest that the Reliever Digihaler System provides important information for the management of patients with asthma, including insight on inhaler technique.

SARS-Cov-2 Infection in Severe Asthma Patients Treated With Biologics
Papaioannou et al 2588

What is already known about this topic? The coronavirus disease 2019 (COVID-19), caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), continues to cause significant morbidity and mortality all over the world. Previous studies have provided evidence that COVID-19 in severe asthmatics receiving different types of biological treatments is not associated with greater risk of hospitalization, intensive care unit admission, or death.

What does this article add to our knowledge? Our study confirms that the use of biologics for the treatment of severe asthma is safe during the pandemic, and despite the initial concerns, COVID-19 is not more common in asthmatics treated with biologics compared with general population.

How does this study impact current management guidelines? Administration of biologics is not necessary to be postponed due to SARS-CoV-2 infection.

Constant-Load Exercise Versus High-Intensity Interval Training on Aerobic Fitness in Moderate-to-Severe Asthma: A Randomized Controlled Trial
Aparecido da Silva et al 2596

What is already known about this topic? High-intensity interval training (HIIT) and constant-load exercise (CLE) improve aerobic fitness.

What does this article add to our knowledge? HIIT induced a greater reduction in fatigue and dyspnea symptoms, and a similar improvement in physical fitness compared with CLE.

How does this study impact current management guidelines? This study shows the potential to include new models of physical training, such as HIIT, to the clinical treatment of asthma.
Clinical Deterioration and Lung Function Change in Patients With Concomitant Asthma and Bronchiectasis
Kim et al

What is already known about this topic? Bronchiectasis is expected to worsen the clinical and functional outcomes in patients with asthma, but limited data are available regarding the long-term effects of bronchiectasis on the clinical course of asthma.

What does this article add to our knowledge? This study found that the presence and progression of bronchiectasis are associated with increased risk of moderate-to-severe acute clinical deterioration in patients with asthma.

How does this study impact current management guideline? This study suggests that it is necessary to evaluate the presence and severity of bronchiectasis in asthma patients with frequent clinical deteriorations.

The Contribution of Oral and Inhaled Glucocorticoids to Adrenal Insufficiency in Asthma
Brennan et al

What is already known about this topic? Adrenal insufficiency (AI) is a well-known consequence of long-term oral glucocorticoid exposure. This is well studied in patients with asthma on maintenance oral corticosteroid. AI due to inhaled corticosteroid or intermittent oral corticosteroid is not often considered.

What does this article add to our knowledge? This article highlights the prevalence of AI in patients with asthma who are not taking regular maintenance oral corticosteroid, a population of patients in whom AI may not be routinely considered.

How does this study impact current management guidelines? This study should prompt additional consideration before prescribing glucocorticoids and increase awareness of potential AI in patients with asthma in all clinical settings, especially those in which corticosteroid treatment is not standard.

Real-World Impact of Nonclinical Inhaler Regimen Switches on Asthma or COPD: A Systematic Review
Usmani et al

What is already known about this topic? Switching inhaler regimens can be driven by poor disease control but also by nonclinical factors, such as cost and environmental impact. The consequences of switching for nonclinical reasons are largely unclear.

What does this article add to our knowledge? The key findings of our study suggest that switching inhaler regimens for nonclinical reasons is a complex issue that can have highly variable clinical consequences; and that inhaler regimen switches can be detrimental to the patient—healthcare professional relationship, especially when the switches are non-consented.

How does this study impact current management guidelines? Our systematic review addresses a key knowledge gap by providing a comprehensive overview of the clinical, humanistic, and economic consequences of real-world inhaler switches for nonclinical reasons in asthma or chronic obstructive pulmonary disease patients, and identifies an urgent need to develop a robust framework for the personalized switching of inhaler regimens in management guidelines.

Effectiveness of Maintenance and Reliever Therapy Using Inhaled Corticosteroid–Formoterol in Asthmatics
Kim et al

What is already known about this topic? The clinical efficacy of single maintenance and reliever therapy (MART) strategy of inhaled corticosteroids (ICS)—formoterol in reducing asthma exacerbation has been reported in previous clinical trials.

What does this article add to our knowledge? This article presents real-world evidence on the clinical effectiveness of MART of ICS-formoterol. This strategy can reduce the risks of asthma exacerbation and systemic corticosteroid requirement in real-world practice.

How does this study impact current management guidelines? The results of this study support current Global Initiative for Asthma guidelines that recommend MART of ICS-formoterol for the management of adult asthma.
REALITI-A Study: Real-World Oral Corticosteroid-Sparing Effect of Mepolizumab in Severe Asthma
Pilette et al 2646

What is already known about this topic? Risks associated with the use of maintenance oral corticosteroids (OCS) and systemic corticosteroid bursts are well-known. Several randomized, placebo-controlled trials involving patients with severe asthma have demonstrated the OCS-sparing effect of mepolizumab.

What does this article add to our knowledge? Data from this large, prospective study translate the OCS-sparing effect of mepolizumab in patients with severe asthma reported across randomized, placebo-controlled trials into real-world clinical effectiveness when used alongside standard of care.

How does this study impact current management guidelines? An OCS-sparing treatment approach for severe asthma is recommended in current guidelines. Our data highlight the clinical effectiveness of mepolizumab as an add-on treatment to reduce maintenance OCS and systemic corticosteroid bursts in corticosteroid-dependent patients.

Dietary Elimination for the Treatment of Atopic Dermatitis: A Systematic Review and Meta-Analysis
Oykhman et al 2657

What is already known about this topic? The influence of diet on atopic dermatitis is unclear, and the use of dietary elimination to treat eczema has conflicting views. The clinical evidence, last reviewed over 13 years ago, was inconclusive.

What does this article add to our knowledge? The systematic review and meta-analysis reconciles the disparate viewpoints of many patients struggling with eczema and the views of many of their care providers, showing that dietary elimination may lead to a slight improvement in eczema severity in some patients with atopic dermatitis. However, the degree of benefit is potentially unimportant compared with the risk for harm, including developing IgE-mediated allergy.

How does this study impact current management guidelines? These findings provide key evidence-based estimates to inform shared decision-making and will inform the upcoming American Academy of Allergy, Asthma & Immunology/American College of Allergy, Asthma & Immunology Joint Task Force on Practice Parameters guidelines on atopic dermatitis.

Incidence and Risk Factors of Immediate Hypersensitivity Reactions and Immunization Stress-Related Responses With COVID-19 mRNA Vaccine
Imai et al 2667

What is already known about this topic? Although studies have estimated a low incidence rate of anaphylaxis to mRNA vaccines and identified several potential risk factors, there exists a knowledge gap regarding the incidence and risk factors for nonserious immediate hypersensitivity reactions (IHSR) and immunization stress-related responses (ISRR).

What does this article add to our knowledge? Adverse events were more commonly classified as ISRR, instead of IHSR, and the incidence rates of IHSR were very low. We found that the several risk factors were associated with the increased risk of IHSR and ISRR.

How does this study impact current management guidelines? Although recipients with risk factors are associated with increased risks of IHSR and ISRR, their incidence rates were low. Hence, these risk factors are not of sufficient magnitude to warrant special measures regarding their vaccination.

Assessment of Immediate Allergic Reactions After Immunization With the Pfizer BNT162b2 Vaccine Using Intradermal Skin Testing With the COVID-19 Vaccines
Shavit et al 2677

What is already known about this topic? Allergic reactions to coronavirus disease 2019 vaccines are rare but warrant evaluation when they occur. Skin tests with coronavirus disease 2019 vaccines excipient for evaluation of allergy are of low value. The utility of skin tests with the whole vaccine is yet to be determined.

What does this article add to our knowledge? Intradermal testing with the whole vaccine may discriminate sensitized subjects, detect cross-sensitization between vaccines, and enable estimation of patients at high risk.

How does this study impact current management guidelines? We recommend assessment of allergy to coronavirus disease 2019 vaccines using intradermal testing with the whole vaccine and offer tailored immunization protocols (eg, alternative vaccine, premedication, and desensitization) for patients at high risk.
Validation of Practical Pathway in Patients With Anaphylaxis to Low Osmolar Contrast Media: A Retrospective Cohort Study
Ahn et al 2685

What is already known about this topic? Although skin tests with low osmolar contrast media (LOCM) can be used to guide the tolerability of alternative agents, breakthrough reactions can still occur with skin test-negative LOCM in patients with anaphylaxis.

What does this article add to our knowledge? Patients with a history of anaphylaxis to LOCM can receive enhanced computed tomography without severe breakthrough reactions if first screened by intravenous challenge with a maximal 30 mL of LOCM chosen by skin testing.

How does this study impact current management guidelines? An intravenous challenge with a maximum of 30 mL of LOCM before reuse might be a safe option for high-risk subjects with LOCM-induced anaphylaxis by further screening out systemically reactive LOCM, which was not ruled out by skin testing.

Effect of Dupilumab on Blood Eosinophil Counts in Patients With Asthma, Chronic Rhinosinusitis With Nasal Polyps, Atopic Dermatitis, or Eosinophilic Esophagitis
Wechsler et al 2695

What is already known about this topic? Transient increases in blood eosinophil counts were reported in clinical trials with dupilumab in patients with asthma, chronic rhinosinusitis with nasal polyps, or atopic dermatitis.

What does this article add to our knowledge? Transient increases in mean blood eosinophils in dupilumab-treated asthma, chronic rhinosinusitis with nasal polyps, or atopic dermatitis patients generally declined to below baseline and were not associated with a decline in efficacy or clinical symptoms.

How does this study impact current management guidelines? Although the eosinophilia observed in these studies was temporary and only rarely associated with clinical symptoms, it remains important for clinicians to base judgment on individual patient history and baseline eosinophil counts.

Timing of Cow’s Milk Protein Introduction and Childhood Adverse Reactions to Cow’s Milk
Switkowski et al 2713

What is already known about this topic? Cow’s milk allergy is among the most common childhood food allergies. Early introduction of cow’s milk protein may protect against allergy. Many infants receive cow’s milk formulas soon after birth, including those who are later breast-fed.

What does this article add to our knowledge? An early window for promoting tolerance of cow’s milk protein may exist immediately after birth if exposure is sustained. Another optimal exposure window at age 2 weeks to 6 months may exist for those not given formula immediately after birth.

How does this study impact current management guidelines? Mothers intending to exclusively breast-feed might avoid postbirth cow’s milk–based formula supplements. Parents might consider whether an infant was given supplemental formula after birth when deciding the timing of introducing cow’s milk protein to the diet.

Lessons Learned From Five Years of Newborn Screening for Severe Combined Immunodeficiency in Israel
Lev et al 2722

What is already known about this topic? Newborn screening (NBS) programs for severe combined immunodeficiency (SCID) have changed the outcome of affected infants, enabling early diagnosis followed by prompt and appropriate treatment. Reporting the long-term follow-up of such programs is of great importance.

What does this article add to our knowledge? We summarize a 5-year follow-up of NBS for SCID in Israel and present a 1-year follow-up for non-SCID patients and detailed clinical data and outcomes of SCID patients who received hematopoietic stem cell transplantation.

How does this study impact current management guidelines? Reports on long-term follow-up of NBS programs for SCID improve screening strategies and follow-up protocols, defining clinical targets and tailoring specific management plans to improve the outcomes and survival of affected newborns.
In Urticarial Vasculitis, Long Disease Duration, High Symptom Burden, and High Need for Therapy Are Linked to Low Patient-Reported Quality of Life
Bonnekoh et al

What is already known about this topic? Urticarial vasculitis is a rare and chronic skin disease. Management of patients with urticarial vasculitis is often challenging for treating physicians because current drugs have limited efficacy and no clinical guidelines are available.

What does this article add to our knowledge? Patients with urticarial vasculitis have a considerable impairment of quality of life associated with long disease duration, high symptom burden, and high need for therapy.

How does this study impact current management guidelines? Patients’ needs and quality-of-life impairment should be taken into account in the management plan of patients with urticarial vasculitis. Early symptom control may help to decrease disease burden and improve quality of life.