## Severe Asthma Livestream #1 Posttest Rationale

- 9. Difficult-to-treat asthma is defined by GINA as uncontrolled asthma despite treatment with medium or high dose ICS with a second controller or maintenance OCS or asthma that requires such treatment to maintain control and reduce risk for exacerbations while severe asthma is defined as asthma that is uncontrolled despite adherence to maximal optimized therapy and treatment of contributory factors, or asthma that worsens when high dose treatment is decreased. To confirm a diagnosis of severe asthma, GINA recommends confirming the diagnosis of asthma and presence of airflow obstruction with reversibility, adherence and correct inhaler technique, and identifying potential risk factors and comorbidities. This includes checking for risk factors such as smoking, allergen exposure, or medication use and identifying and treating comorbidities.
- 10. Nick's correct phenotype is eosinophilic. GINA defines that eosinophilic phenotype as patients with severe asthma with blood eosinophils ≥150 cells/µL, FENO ≥20 ppb, or sputum eosinophils ≥2%. Jane's correct phenotype is allergen-driven, which GINA defines as a clinical history of allergies, positive skin prick test, or confirmation of serum IgE (sslgE>0.65kUA/L; total>100 kUA/L). A third phenotype identified by GINA is OCS-dependent asthma which is confirmed via review of medication history.
- 11. Hypereosinophilic syndrome is a rare blood disorder that is chronic and progressive in nature. It is associated with inflammation and organ dysfunction and persistent eosinophilia at >1500 cells/μL for >6 months.
- 12. A 2019 retrospective chart review of patients with chronic rhinosinusitis in North America found that approximately 82% of patients had CRSsNP and 18% has CRSwNP.
- 13. The AAAAI states that in general, asthma should be well-controlled if possible and controller medications should be continued and the usual treatment measures for patients at risk of exacerbation should be employed.
- 14. According to GINA, eligibility for anti-IgE therapy is determined via sensitization on skin prick testing or specific IgE, total serum IgE and weight within the dosage range, and exacerbations in the past year. Eligibility for anti-IL5/IL5r is determined by exacerbations in the past year and blood eosinophils ≥300 cells/µL. Anti-IL-4R eligibility is determined by exacerbations in the last year, blood eosinophils ≥300 cells/µ or FeNO ≥25 ppb, or because of the need for maintenance OCS.