

CORTICOSTEROIDS

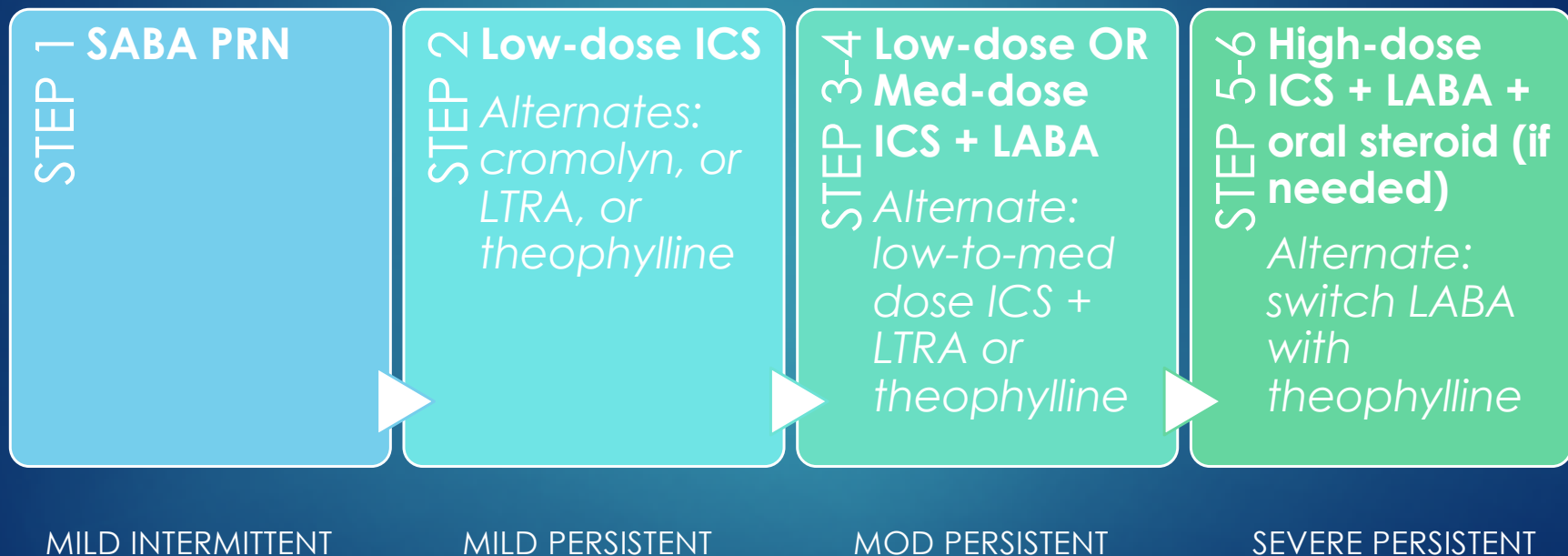
FLAME LECTURE: 29

MARSHBURN 8.17.19

LEARNING OBJECTIVES

- ▶ To describe the use of inhaled corticosteroids in the treatment of asthma
- ▶ To describe the use of systemic corticosteroids in the treatment of asthma
- ▶ Prerequisites:
 - ▶ NONE
- ▶ See also – for closely related topics
 - ▶ FLAMEs on ASTHMA

REVIEW OF MAINTENANCE MGMT



OVERVIEW

- ▶ Low dose inhaled corticosteroids (ICS) are the preferred first line treatment for step-wise control in asthma and are featured starting in Step 2
 - ▶ They assist in preventing bronchospasm
- ▶ ICS treatments have been shown to reduce symptom severity, systemic steroid use, ED visits, hospitalizations, and deaths caused by asthma, and improve asthma control, quality of life, and objective measures of lung function
- ▶ Adverse effects of inhaled corticosteroids are limited
 - ▶ Decreased growth of ~0.5 cm per year noted in children
 - ▶ Increased risk for thrush, but this does decrease when patients rinse their mouths following the use of ICS

SYSTEMIC CORTICOSTEROIDS

- ▶ When patients with asthma have advanced beyond their asthma action plans, they need prompt medical attention
- ▶ In the ambulatory and emergency department settings, we aim to improve oxygenation and rapidly reverse airflow obstruction
- ▶ In children 5 to 12 years of age with frequent acute exacerbations, a short course of oral prednisolone at the onset of worsening symptoms demonstrated decreased symptoms, health resource use, and absence from school
- ▶ The administration of systemic corticosteroids within one hour of emergency department presentation decreases the need for hospitalization
- ▶ Patients can be discharged with a 5-day course of systemic corticosteroids to decrease relapse of asthma symptoms and future hospitalizations
- ▶ Of note, systemic steroid courses of 5 days have been shown to be as effective as steroid course of 7-10 days

REFERENCES

1. National Heart, Lung, and Blood Institute, National Asthma Education and Prevention Program. Expert panel report 3: guidelines for the diagnosis and management of asthma. Bethesda, Md.: National Heart, Lung, and Blood Institute; Revised August 2007. NIH publication no. 07-4051.
<http://www.nhlbi.nih.gov/guidelines/asthma/asthgdln.htm>. Accessed March 11, 2016
- ▶ Chauhan BF, Ducharme FM. Anti-leukotriene agents compared to inhaled corticosteroids in the management of recurrent and/or chronic asthma in adults and children. *Cochrane Database Syst Rev*. 2012;(5):CD002314.
 - ▶ Guevara JP, Ducharme FM, Keren R, Nihtianova S, Zorc J. Inhaled corticosteroids versus sodium cromoglycate in children and adults with asthma. *Cochrane Database Syst Rev*. 2006;(2):CD003558.
 - ▶ Rowe BH, Spooner CH, Ducharme FM, Bretzlaff JA, Bota GW. Corticosteroids for preventing relapse following acute exacerbations of asthma. *Cochrane Database Syst Rev*. 2007;(3):CD000195.
 - ▶ Krishnan JA, Davis SQ, Naureckas ET, Gibson P, Rowe BH. An umbrella review: corticosteroid therapy for adults with acute asthma. *Am J Med*. 2009;122(11):977–991.