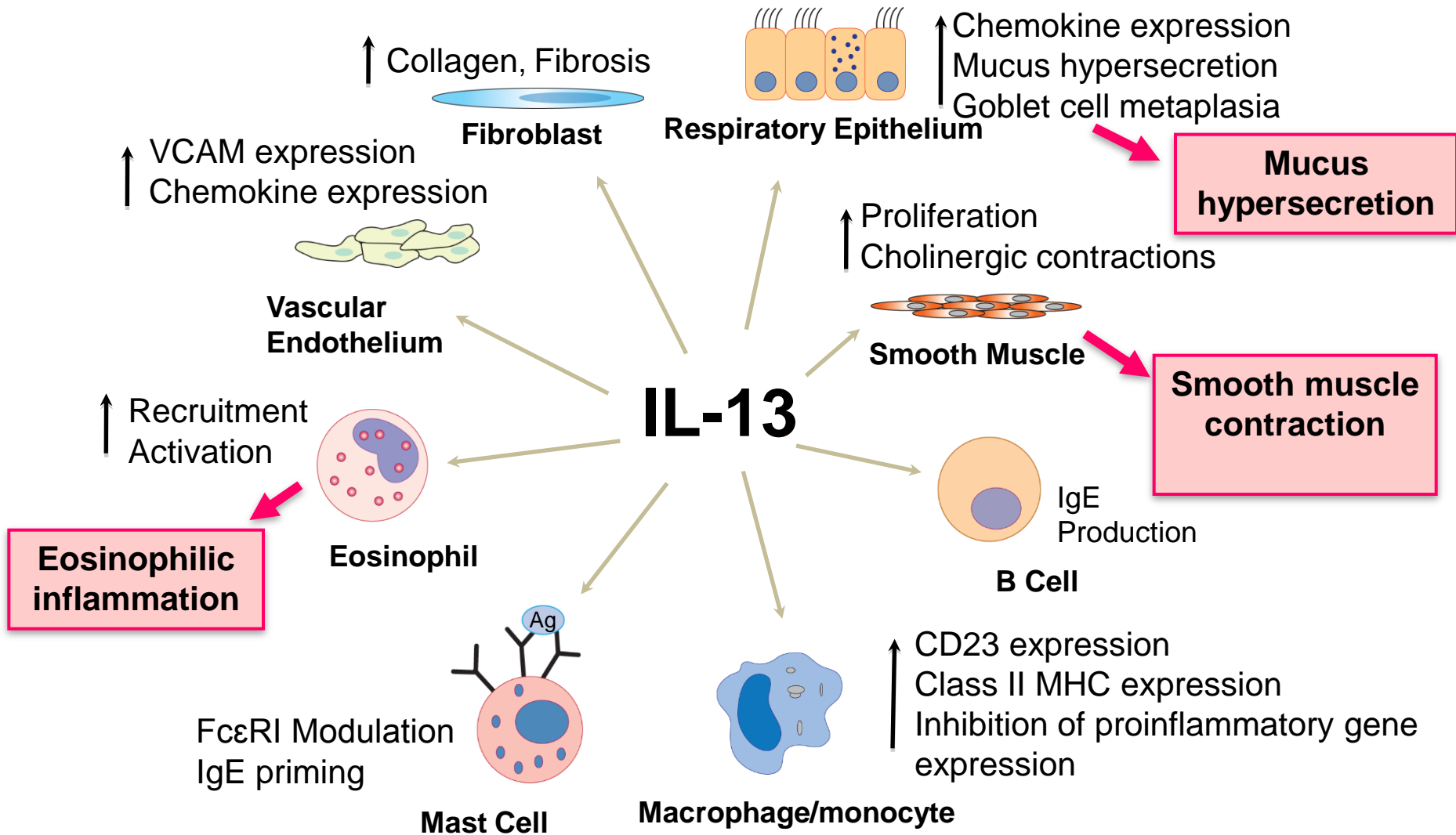


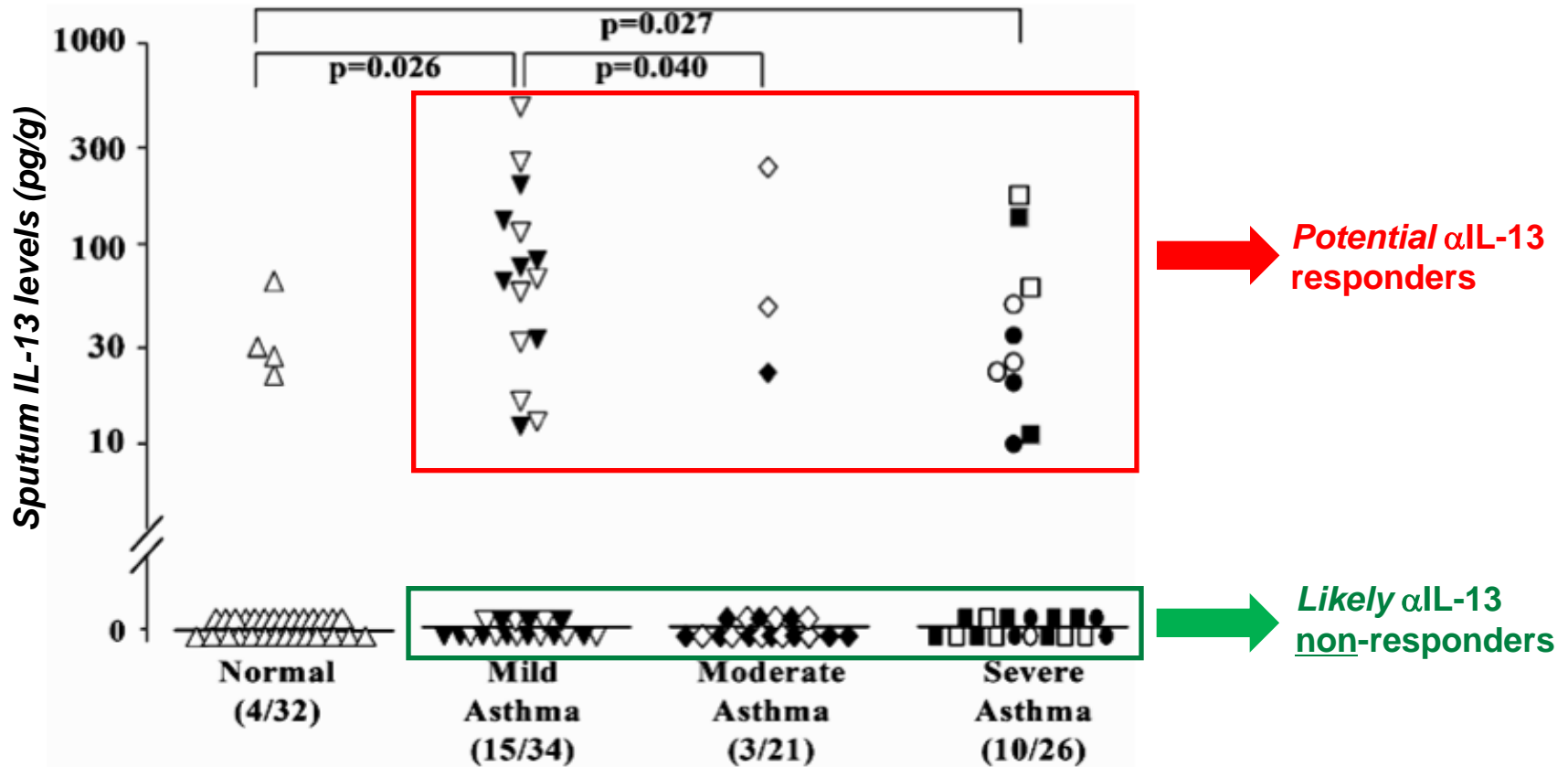
MILLY Study Podcast

Supporting Slides

IL-13 is a Pleiotropic Cytokine

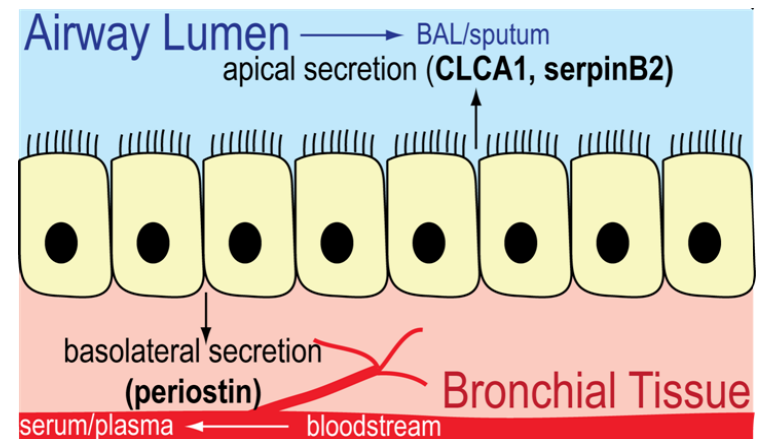
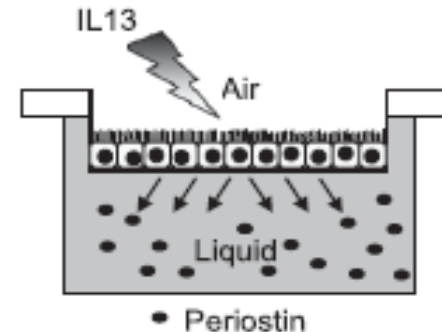


IL-13 Expression is Variable in Mild, Moderate and Severe Asthma



Periostin: A Potential Response Biomarker

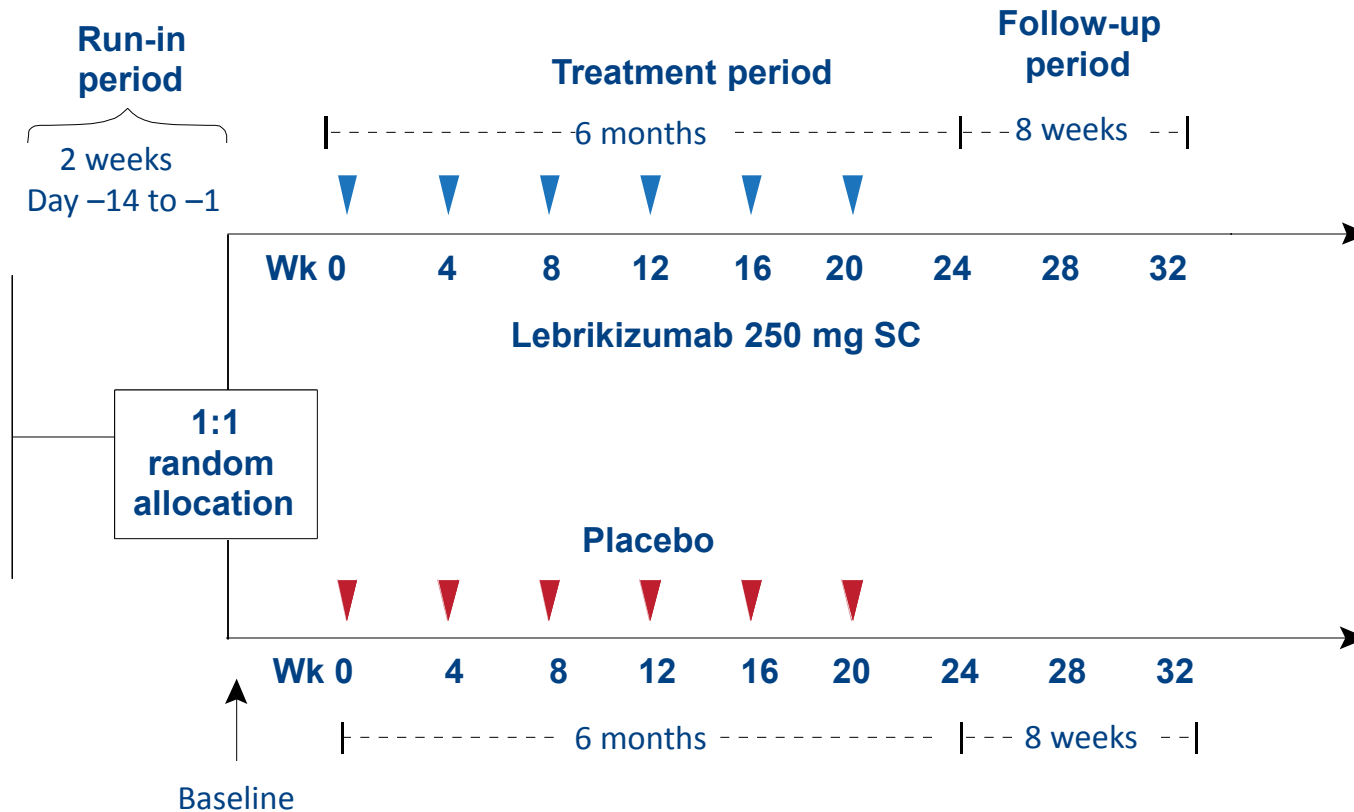
- Periostin
 - An IL-13-inducible matricellular protein secreted by bronchial epithelial cells
 - Effects on fibroblasts and epithelial cells may contribute to airway remodeling in asthma
 - Levels in serum may be a surrogate measure of IL-13 activity



Lebrikizumab (Anti-IL-13)

- A humanized monoclonal IgG4 antibody with high specificity and affinity for soluble IL-13
- Inhibits IL-13 function with high potency
 - Blocks IL-13 induced STAT-6 signaling with high potency
 - Blocks IL-13 induced TF-1 cell proliferation

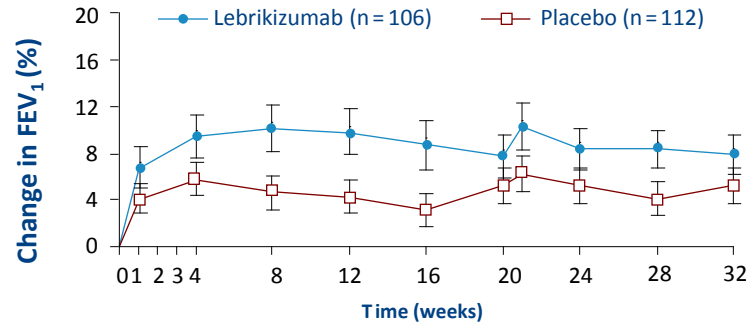
Study Design



- Randomized, double-blind, placebo-controlled, multicenter study (N = 219)
- Patients characterized by IL-13/Th2 surrogate markers (IgE level and peripheral blood eosinophil count) as high-Th2 or low-Th2 subgroups

Effect of Lebrikizumab on FEV1

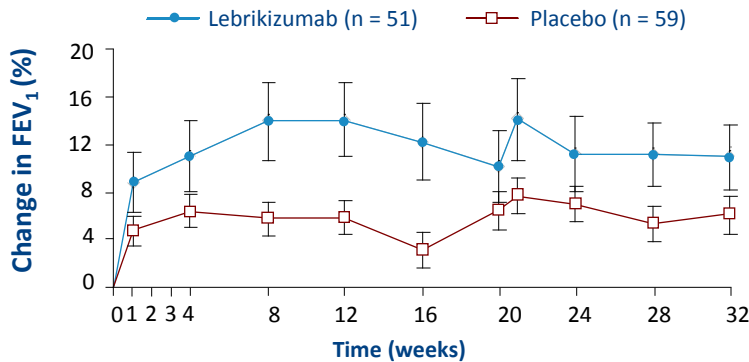
Total cohort (ITT population)



Mean change at Week 12:

Lebrikizumab: 9.8%; placebo: 4.3%
($P = .02$)

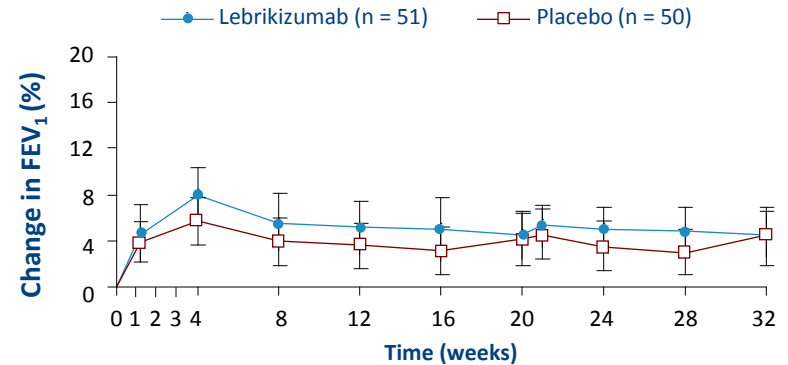
High-periostin subgroup



Mean change at Week 12 :

Lebrikizumab: 14.0%; placebo: 5.8%
($P = .03$)

Low-periostin subgroup



Mean change at Week 12:

Lebrikizumab: 5.1%; placebo: 3.5%
($P = .61$)

Lebrikizumab Effect on Severe Exacerbations

Treatment group	Severe exacerbation rate			
	Lebrikizumab	Placebo	% reduction	P value
All ITT patients	0.15	0.27	43 (-10 to 71)	0.10
High-Periostin Subgroup n=110	0.08	0.25	67 (-15 to 90)	0.08
Low-Periostin Subgroup n=101	0.24	0.33	29 (-69 to 70)	0.44

Incidence of Adverse Events - 1

Adverse events, n (%)	Placebo (n=112)	Lebrikizumab (n=106)	All ITT (N=218)
Any adverse event	88 (76)	79 (74.5)	167 (76.6)
Any serious adverse event	6 (5.4)	4 (3.8)	10 (4.6)
Study discontinuation due to adverse event	3 (2.7)	3 (2.8)	6 (2.8)
Treatment discontinuation due to adverse event	3 (2.7)	4 (3.8)	7 (3.2)
Severity of adverse event:			
Mild	67 (59.8)	59 (55.7)	126 (57.8)
Moderate	58 (51.8)	51 (48.1)	109 (50.0)
Severe	20 (17.9)	15 (14.2)	35 (16.1)

Incidence of Adverse Events - 2

Adverse event*, n (%)	Placebo (n=112)	Lebrikizumab (n=106)	All ITT (N=218)
Infection or infestation	55 (49.1)	51 (48.1)	106 (48.6)
Respiratory, thoracic, or mediastinal disorder	52 (46.6)	38 (35.8)	90 (41.3)
General disorder or event due to administration-site conditions	15 (13.4)	16 (15.1)	31 (14.2)
Musculoskeletal or connective tissue disorders	6 (5.4)	14 (13.2)	20 (9.2)
Gastrointestinal disorder	14 (12.5)	5 (4.7)	19 (8.7)
Skin or subcutaneous tissue disorder	11 (9.8)	7 (6.6)	18 (8.3)
Nervous system disorder	8 (7.1)	6 (5.7)	14 (6.4)
Abnormal laboratory test result	6 (5.4)	8 (7.5)	14 (6.4)

*Adverse events with incidence rates $\geq 5\%$