

Allergy: respiratory, skin, food, gastro-intestinal, occupational, anaphylaxis...

- Immunology
- Genes
- Environment
- Epi-genetics
- Pharmacogenetics
- Epidemiology of Allergy epidemic
- Risk factors for childhood asthma
- Allergen specific immunotherapy
- EuroPrevall – food allergy
- SOTI = specific oral tolerance induction

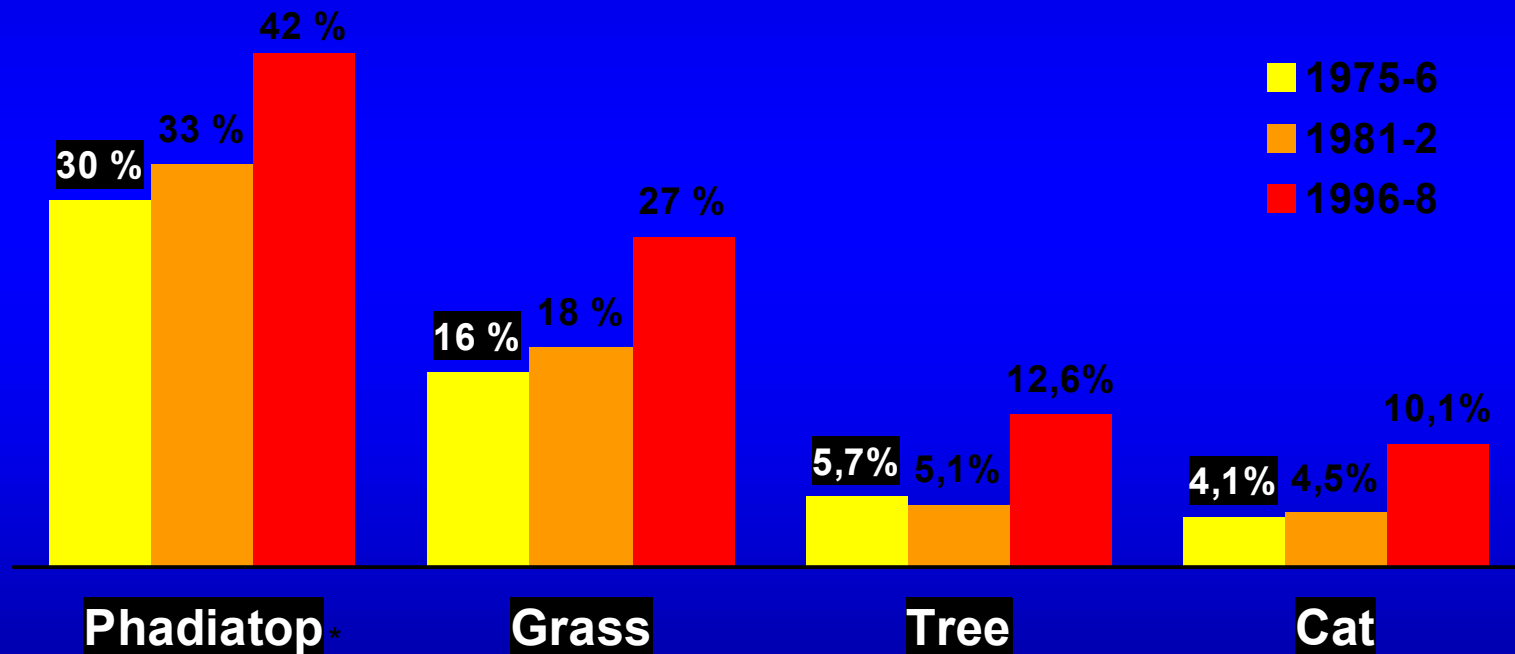
EU 7th Scientific Framework
Programme includes

**RESPIRATORY DISEASES
INCLUDING ALLERGIES
IN THE CATEGORY OF
MAJOR DISEASES**

The total budget being more than
€54 billion euros for the years
2007-2013

Allergy Epidemic Has Spread Beyond the Young

Proportion of men aged 40-64 with IgE reactivity to various antigens



*Phadiatop is a standard mixture of 11 indoor and outdoor antigens.

Law et al. *BMJ*. 2005;330:1187.

Linneberg. *BMJ*. 2005;331:352.

Air pollution

- In 1992 in China there were 600.000 cars.
- In the year 2000 there were about 3.000.000 cars.
- It is forecasted that in the year 2010 there will be more than 25.000.000 vehicles on the roads of China.

Wheezing phenotypes in children

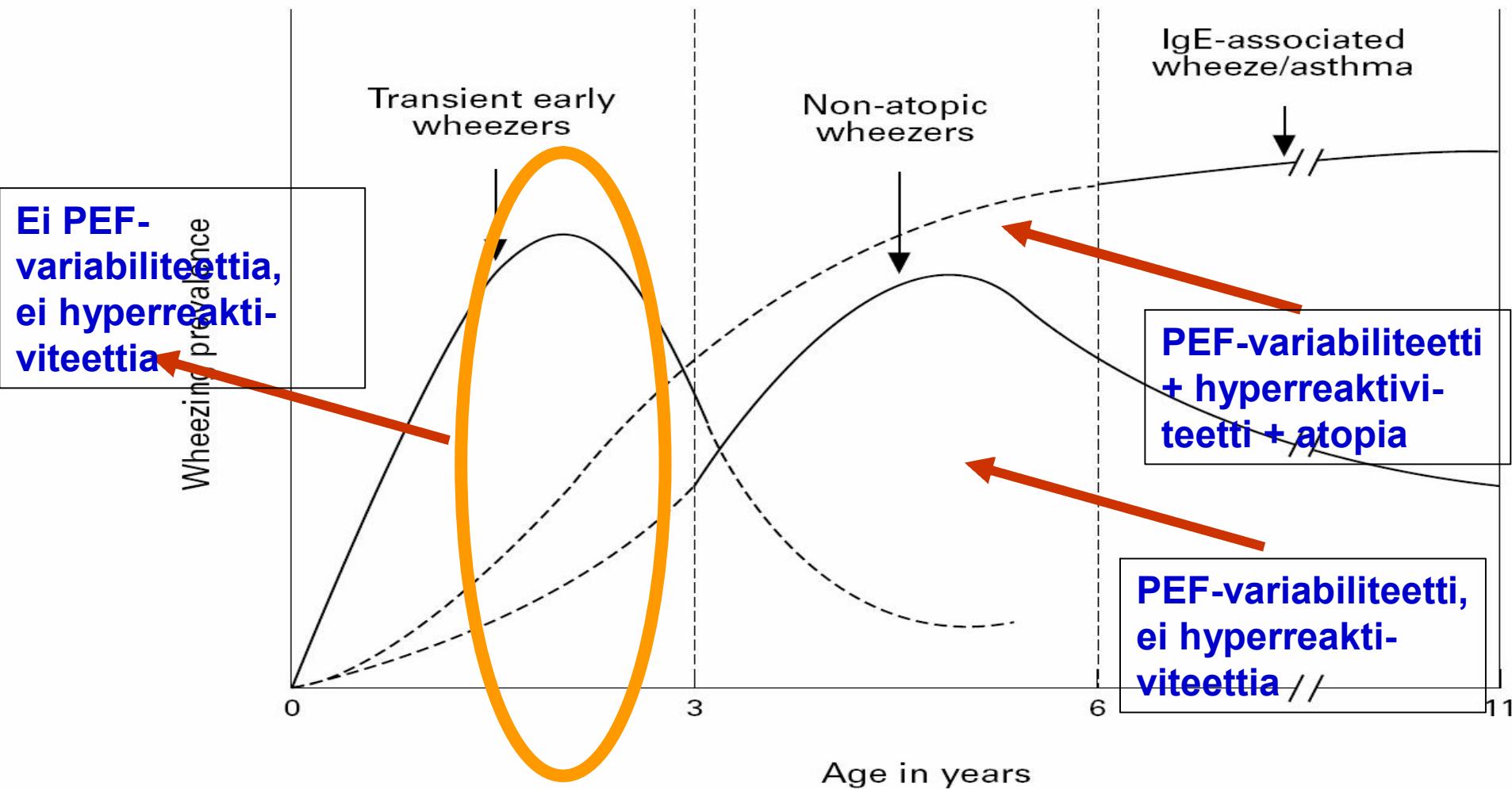


Figure 2 Hypothetical yearly peak prevalence of wheezing for the three different wheezing phenotypes in childhood. Prevalence for each age interval should be the sum of the areas under each curve. This classification of wheezing phenotypes should not imply groups are exclusive. Dashed lines suggest wheezing can present different curve shapes due to many different factors including overlap of groups. Modified from Wilson.³⁰

Miten arvioida toistuvasti vinkuvan pikkulapsen riskiä sairastua krooniseen astmaan?

Kliininen riski-indeksi astmariskin määrittämiseksi:

vähintään yksi pääkriteeri tai kaksi sivukriteeriä toistuvasti vinkuvalla lapsella

Pääkriteeri	Sivukriteeri
1.lääkärin toteama astma äidillä tai isällä	1.lääkärin toteama allerginen nuha lapsella
2.lääkärin toteama atooppinen ekseema / IgE-välitteinen ruokaallergia lapsella	2.lääkärin toteama hengityksen vinkuna myös silloin, kun lapsella ei ole flunssaa
	3.eosinofilia > 4%

Subcutaneous Immunotherapy (SCIT)



Oral Immunotherapy (OIT)



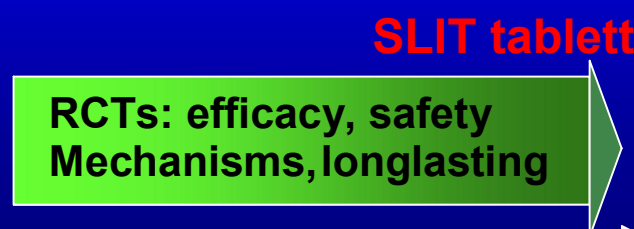
Local Bronchial Immunotherapy (LBIT)



Local Nasal Immunotherapy (LNIT)



SLIT-swallow immunotherapy



1910 1960 1980 1985 1990 2000 2006

Allergic Rhinitis and its Impact on Asthma update: Allergen immunotherapy

Passalacqua G and Durham S. JACI 2007;119:881-91

- ARIA published in 2001
- New Medline search 2000- June 2006
 - **SCIT studies:** DBPC trials on the efficacy, n=20, including 870 patients in the active treatment and 659 in the placebo
 - **SLIT studies:** DBPC trials on the efficacy, n=23, including 1428 patients in the active treatment and 1289 in the placebo

Allergic Rhinitis and its Impact on Asthma

update: Allergen immunotherapy

Passalacqua G and Durham S. JACI 2007;119:881-91

	<u>SCIT</u>	<u>SLIT</u>
Clinical efficacy: Rhinitis	Ib	Ia
Clinical efficacy: Asthma	Ia	Ia
Clinical efficacy: Children	Ib	Ia
Long-term effect	Ib	IIa
Prevention of new sensitizations	Ib	IIa
Prevention of asthma	Ib	Ib

Ia Evidence from meta analysis of RCT

Ib Evidence from at least one RCT

IIa Evidence from at least one controlled trial without randomization

IIb Evidence from at least one other type of quasi experimental trial

III Evidence from non experimental descriptive studies (comparative, case-control)



PAT

Preventive Allergy Treatment Study

Maintenance dose:

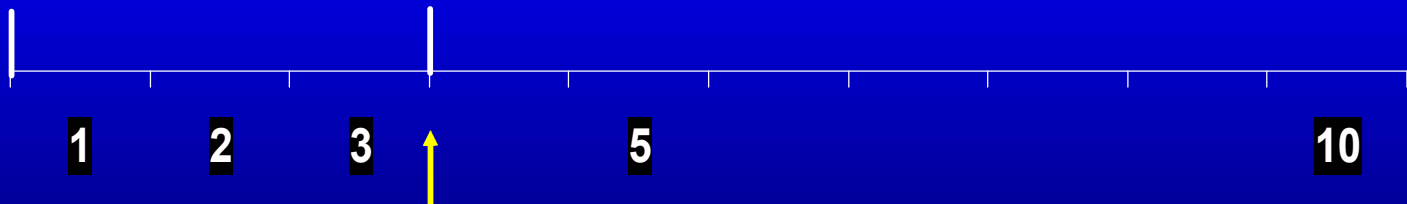
Grass: 20 μ g Phl p5

Birch: 13 μ g Bet v1

SIT

Follow up

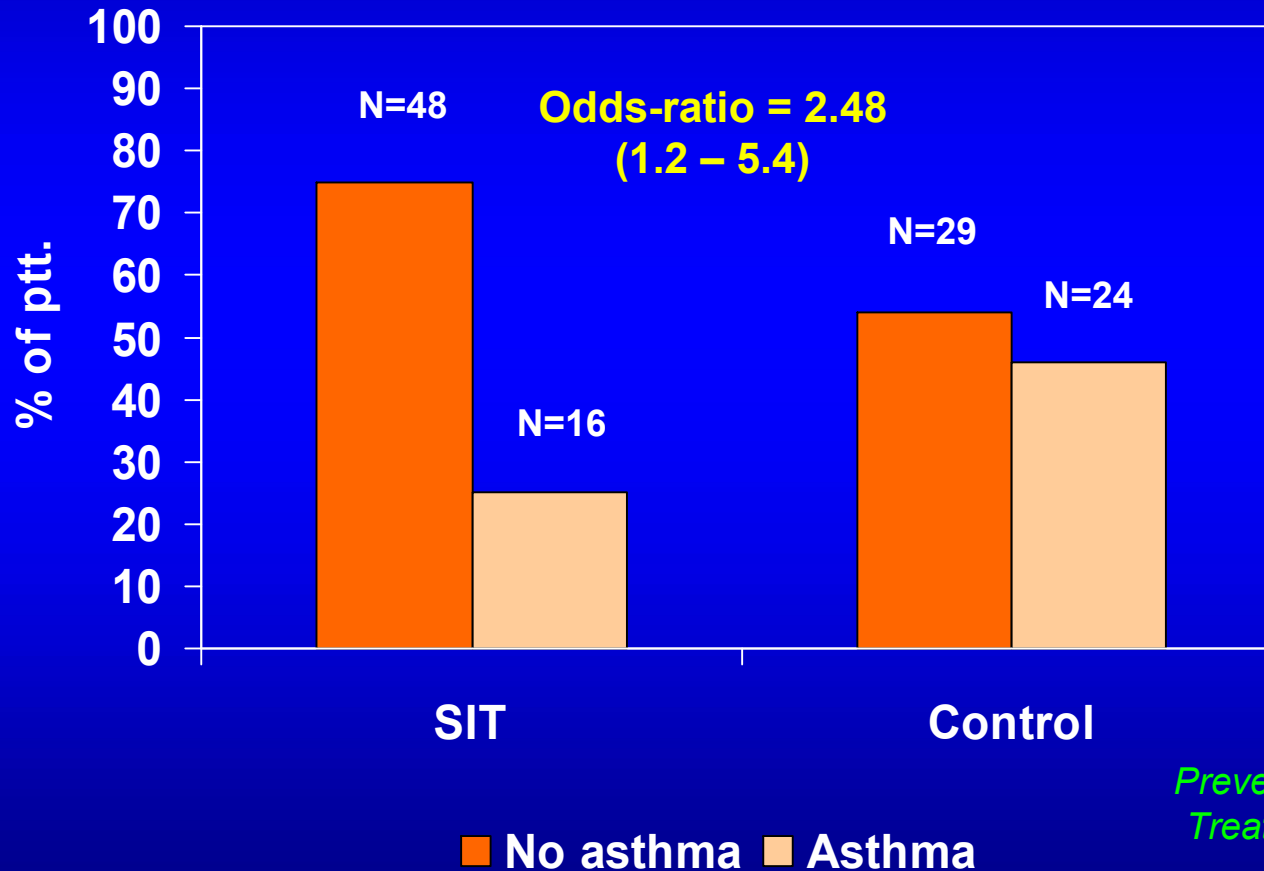
Follow up



Möller et al. J Allergy Clin.Immunol. 2002;109:251-6.

DEVELOPMENT OF ASTHMA AT 10 YEARS

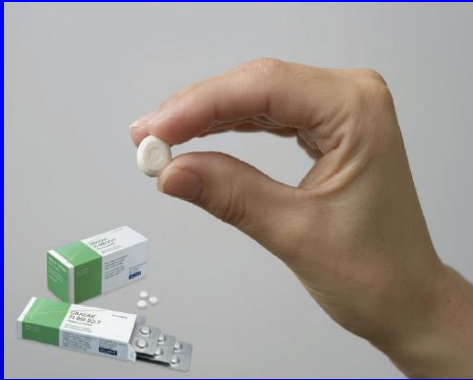
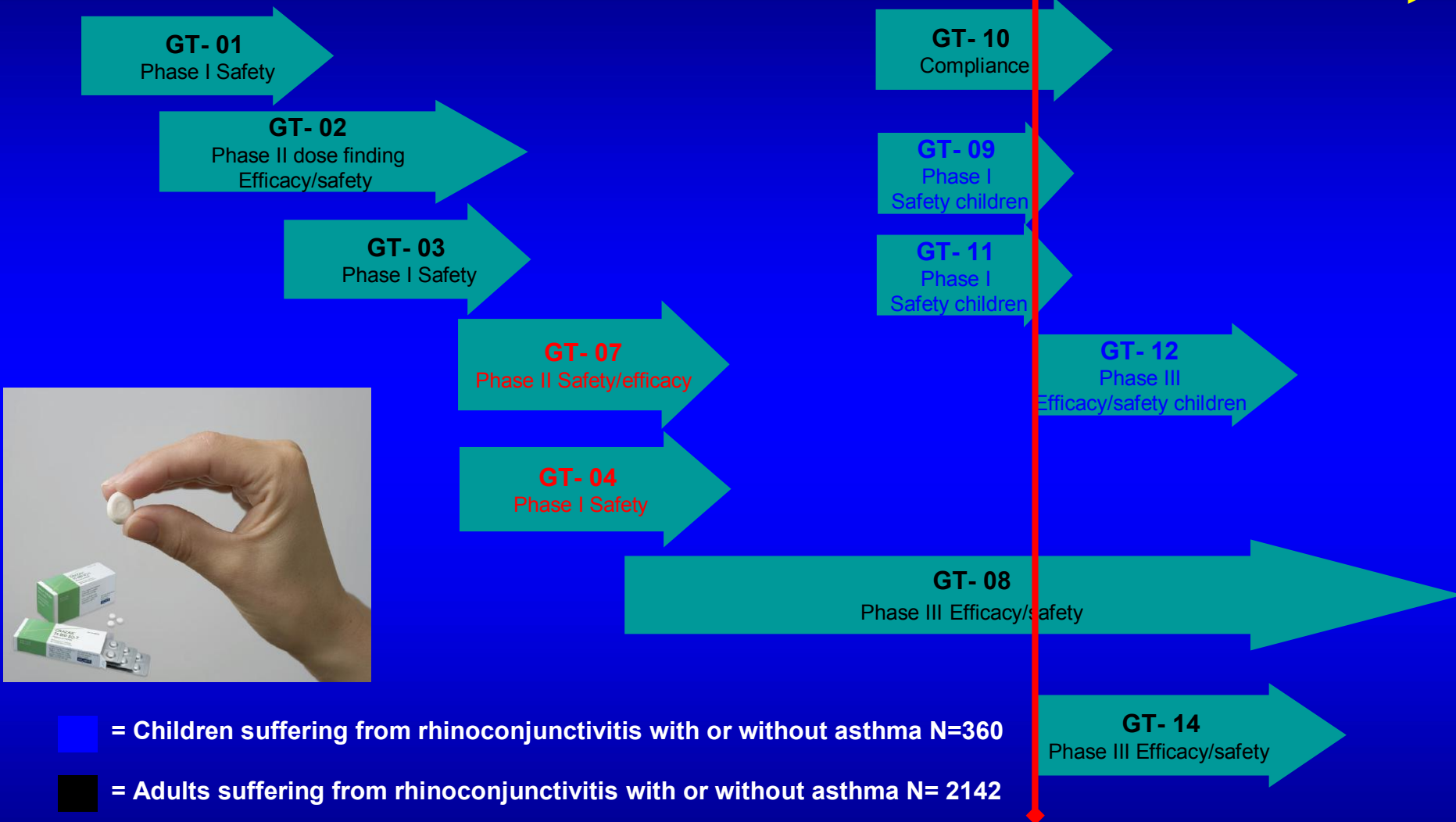
N=117 (patients without asthma in season one)






Jacobsen L, Valovirta E, Wahn U et al. Allergy, in press



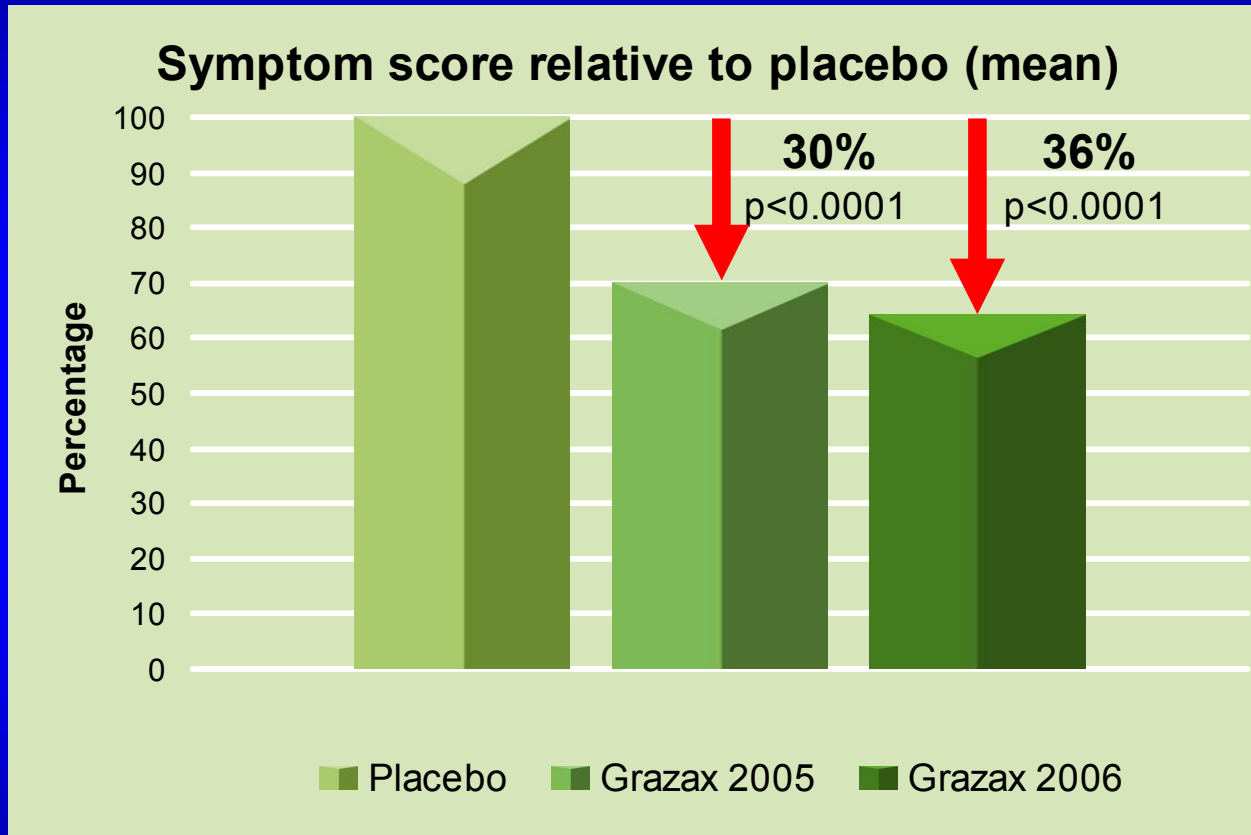
2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008



-  = Children suffering from rhinoconjunctivitis with or without asthma N=360
-  = Adults suffering from rhinoconjunctivitis with or without asthma N= 2142
-  = Adults suffering from rhinoconjunctivitis and asthma N=157

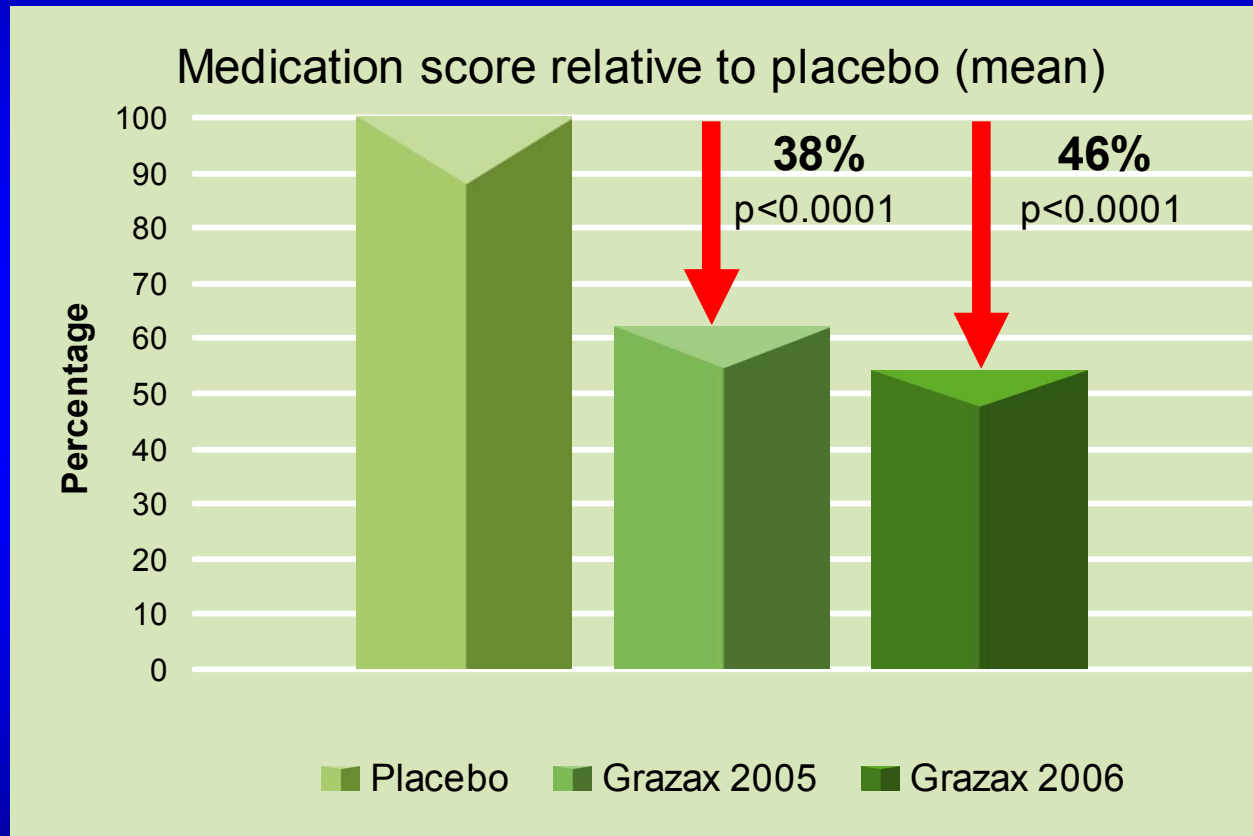
EMEA approval

Progressive effect of GRAZAX immunotherapy: Symptoms



Year 2005, n=634 and year 2006 n=351

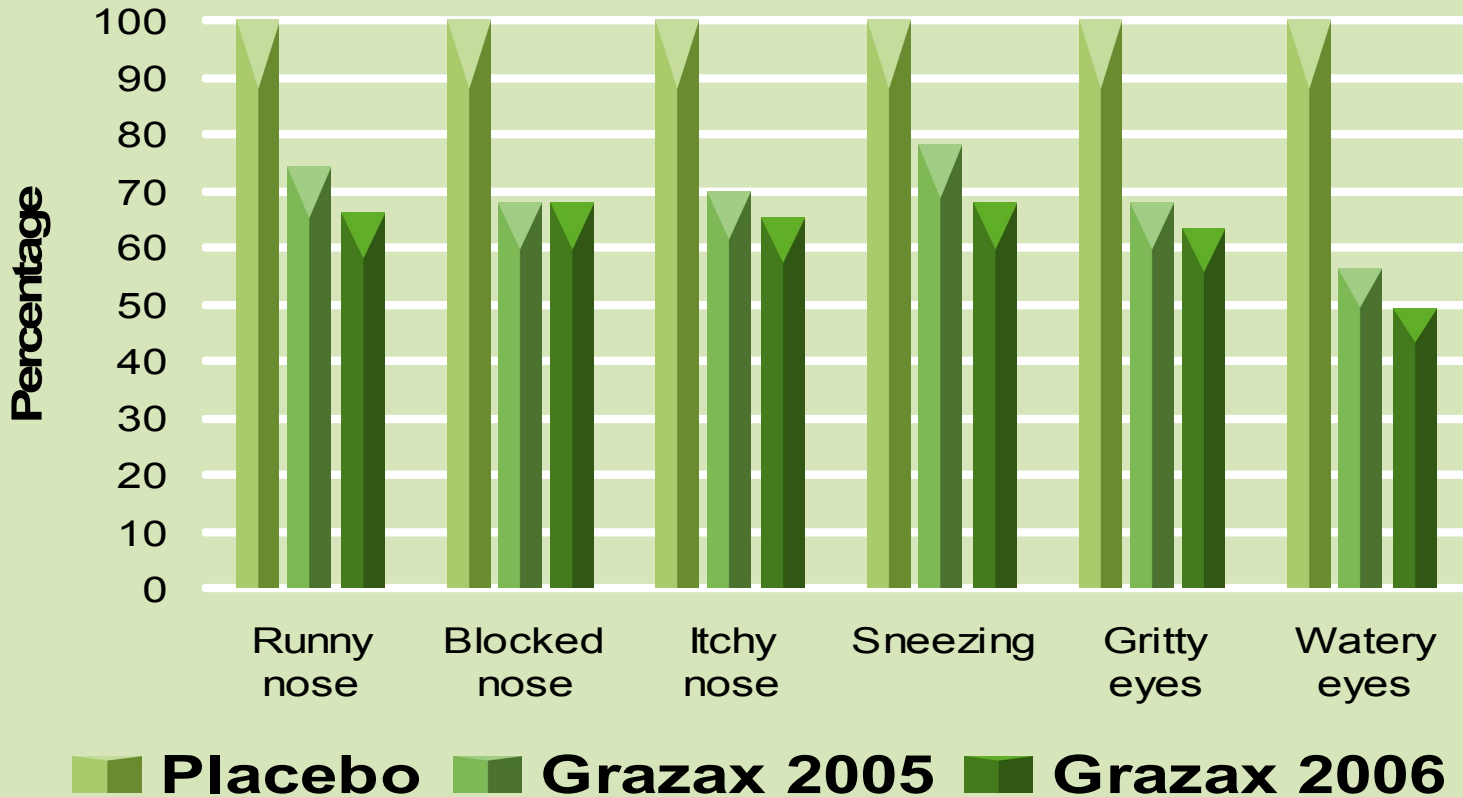
Progressive effect of GRAZAX immunotherapy: Medication



Year 2005, n=634 and year 2006 n=351

Consistent effect on all nose and eye symptoms

Nose and eye symptom score reduction relative to placebo



Year 2005, n=634 and year 2006 n=351

Today's allergies require new treatment strategies

