

**Epidemiyolojik Arařtırma Tipleri:**  
*örneklerle inceleyelim*

***Prof. Dr. Nerin Bahçeciler Önder***

***YDÜ Tıp Fakltesi***  
***Pediatric Anabilim Dalı***

# EPİDEMİYOLOJİK ARAŞTIRMA TİPLERİ

**GÖZLEME DAYALI**

**TANIMLAYICI**

1. OLGU SUNUMU
2. OLGU SERİSİ
3. KORELASYON AR.  
-ZAMAN SERİSİ  
-EKOLOJİK

**ANALİTİK**

1. KESİTSEL
2. OLGU KONTROL
3. KOHORT

**DENEYSEL**

**RANDOMİZE  
KONTROLLU**

1. İNSAN
2. HAYVAN

**SAHA**

**TOPLUM**

## **A randomized, double-blind, placebo-controlled study of milk oral immunotherapy for cow's milk allergy**

Justin M. Skripak, MD,<sup>a</sup> Scott D. Nash, MD,<sup>b</sup> Hannah Rowley, RD,<sup>a</sup> Nga H. Brereton, RD,<sup>a</sup> Susan Oh, RD,<sup>a</sup> Robert G. Hamilton, PhD,<sup>a</sup> Elizabeth C. Matsui, MD,<sup>a</sup> A. Wesley Burks, MD,<sup>b</sup> and Robert A. Wood, MD<sup>a</sup> *Baltimore, Md, and Durham, NC*

**Objective:** We sought to determine whether milk oral immunotherapy (OIT) is safe and efficacious in desensitizing children with cow's milk allergy.

**Methods:** Twenty children were randomized to milk or placebo OIT (2:1 ratio). Dosing included 3 phases: the build-up day (initial dose, 0.4 mg of milk protein; final dose, 50 mg), daily doses with 8 weekly in-office dose increases to a maximum of 500 mg, and continued daily maintenance doses for 3 to 4 months. Double-blind, placebo-controlled food challenges; end-point titration skin prick tests; and milk protein serologic studies were performed before and after OIT.

## METHODS

### Study design

Children between the ages of 6 and 21 years with a known history of IgE-mediated milk allergy were recruited from the pediatric allergy clinics at the Johns Hopkins University Hospital, Baltimore, Maryland, and Duke University Medical Center, Durham, NC. Eligibility criteria were a positive skin

prick test (SPT) response to milk extract (wheal  $\geq$  histamine control) or milk IgE level of greater than 0.35 kU/L and a positive milk challenge result at baseline defined as reacting with clear signs, symptoms, or both to a cumulative dose of 2.5 g or less of milk protein. Patients were excluded if they had a history of anaphylaxis requiring hospitalization, history of intubation related to asthma, or a current diagnosis of severe persistent asthma.

- **Deneklerin tanımı**
- **Dahil etme kriterleri**
- **Hariç tutma kriterleri**

# Ne tür çalışma?

- Gözlemsel

- Deneysel

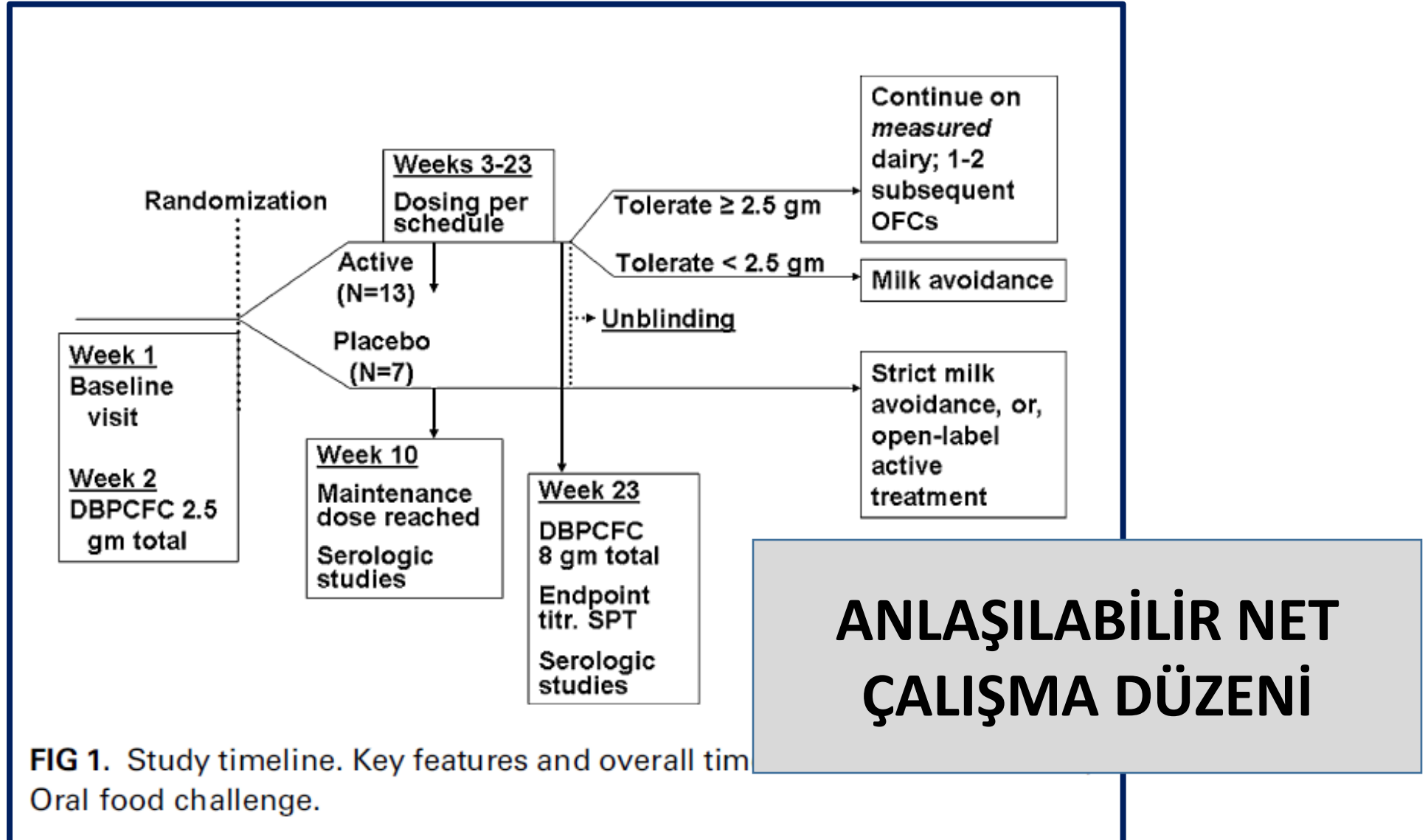
- Ne tür «DENEYSEL» çalışma

- a. Randomize Kontrollü Deneyler

- b. Saha Deneyleri

- c. Toplum Deneyleri

# Çalışma düzeni (study design)



# Çalışmaya alınan hastaların özellikleri

**TABLE II.** Demographics of study participants randomized to active or placebo treatment

Characteristics	Active-treated group (n = 13)	Placebo-treated group (n = 7)	P value
Male sex, no. (%)	8 (62)	4 (57)	1.0
Age (y), mean (SD)	9.3 (3.3)	10.2 (3.3)	.5
Hx/o eczema, no. (%)	7 (54)	4 (57)	1.0
Current eczema, no. (%)	4 (31)	2 (29)	1.0
Hx/o asthma, no. (%)	12 (92)	5 (71)	.27
Current asthma, no. (%)	9 (69)	3 (43)	.36
Hx/o other FA, no. (%)	10 (77)	5 (71)	1.0
No. of other current FA, median (range)	2 (0-8)	2 (0-5)	
Baseline CM IgE (kUA/L), median (range)	34.8 (4.86-314)	14.6 (0.9)	

*Hx/o*, History of; *FA*, food allergy.

**GRUPLARININ  
KARŞILAŞTIRILABİLİR  
OLMASI**

## Altered early infant gut microbiota in children developing allergy up to 5 years of age

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**Objective** To relate gut microbiota in early infancy, notably bifidobacteria and lactobacilli at species level, to allergy development during the first 5 years of life and study if environmental factors influence the early infant gut microbiota.

**Methods** Fecal samples were collected at 1 week, 1 month and 2 months after birth from 47 Swedish infants, followed prospectively to 5 years of age. Bacterial DNA was analysed with real-time PCR and related to allergy development, family size as well as endotoxin and *Fel d 1* levels in house dust samples. Primers binding to *C. difficile*, four species of bifidobacteria, two lactobacilli groups and *Bacteroides fragilis* were used. Children regarded as allergic manifested allergic symptoms and were skin prick test positive during their first 5 years while non-allergic children were neither

**Results** Children who developed allergy were significantly less often colonized with lactobacilli group I (*Lactobacillus (L.) rhamnosus*, *L. casei*, *L. paracasei*), *Bifidobacterium adolescentis* and *C. difficile* during their first 2 months. Infants colonized with several *Bifidobacterium* species had been exposed to higher amounts of endotoxin and grew up in larger families than infants harbouring few species.



## Material and methods

### *Study population*

The study population, including 123 Swedish children, has been described in detail by Voor et al. [22]. The children were born between March 1996 and October 1999 in Linköping, Sweden. All were born at term and they had an uncomplicated perinatal period. Inclusion in this study was based on the availability of fecal samples at 1 week, 1 month and/or at 2 months of age and known allergy status up to the age of 5. In all, 47 infants were included. Sixteen infants developed allergy during their first 5 years of life, while 31 remained non-allergic throughout the study period (Table 1). The allergic chil-

- **KOHORT**
- **RETROSPEKTIF**

Table 1. Demographic data of the subjects

	Subjects ( <i>n</i> = 47)	Non-allergic ( <i>n</i> = 31)	Allergic ( <i>n</i> = 16)
Female subjects	23 (49%)	14 (45%)	9 (56%)
Born with caesarean section	3 (6%)	3 (10%)	0 (0%)
Any atopic heredity	37 (79%)	22 (71%)	15 (94%)
Allergic mother	13 (28%)	8 (26%)	5 (31%)
Exclusively breastfed $\geq$ 2 months	45 (96%)	31 (100%)	14 (88%)
Oral antibiotics $\leq$ 2 months	2 (4%)	2 (6%)	0 (0%)
Pets	7 (15%)	6 (19%)	1 (6%)
Number of family members	3 (3–8)*	3 (3–8)	3 (3–5)*
Household area/individual (m <sup>2</sup> )	28 (18–47)*	28 (18–47)	27 (20–38)*

**OLGU-KOHORT**

# Ne tür bir araştırma

- Gözleme Dayalı
- Deneysel
- Ne tür gözleme dayalı araştırma?
  - . Kesitsel
  - . Olgu-kontrol (Yuvalandırılmış,..)

Kohort

Ne tür kohort?

prospektif

Retrospektif

olgu kohort

# Kohort

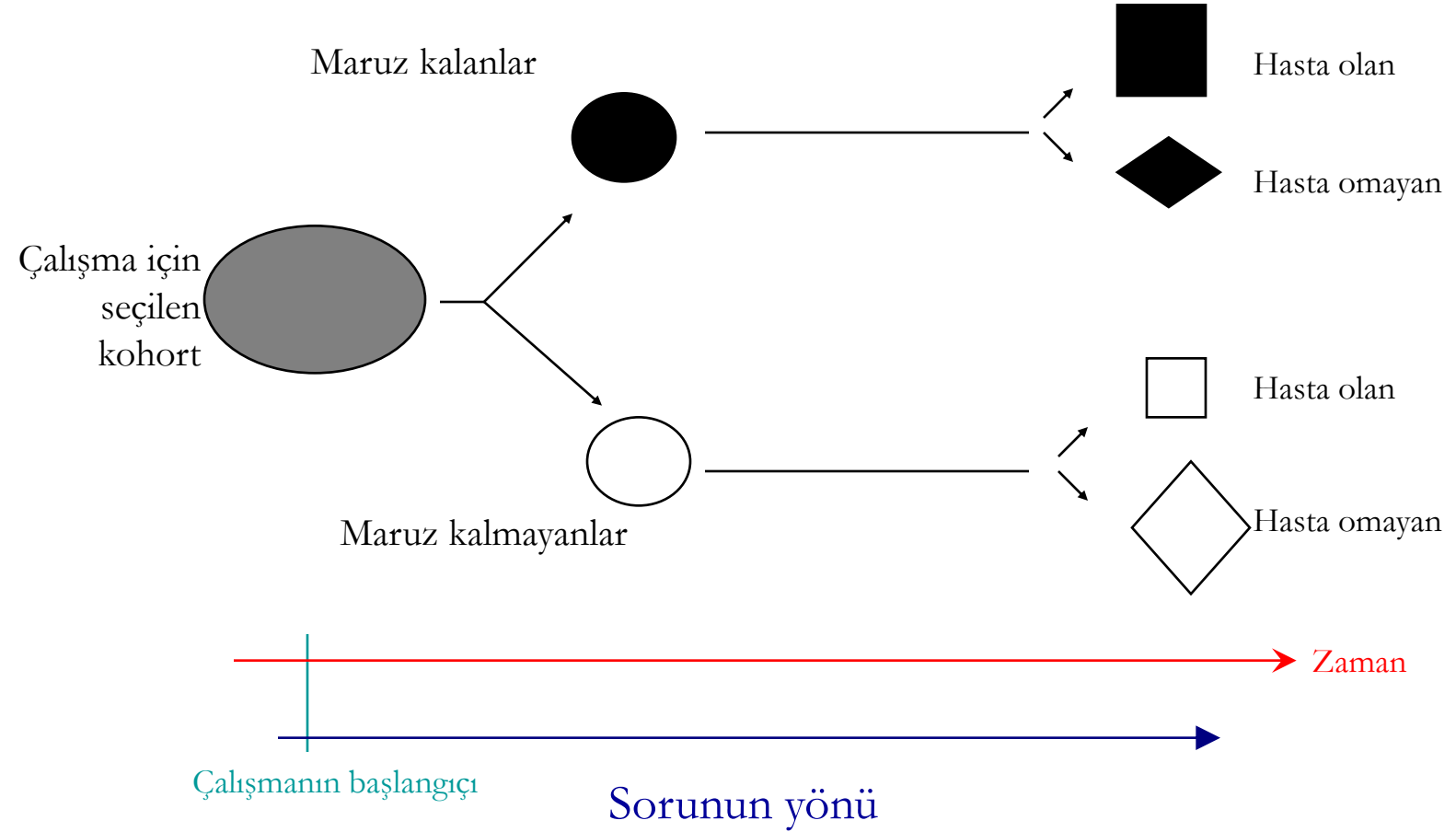
Soru:

Ne olacak?



# Kohort

## *İnsidans hızı ve rölatif risk*



# Kohort

Kohort arařtırmaları, yeni olgu bulurlar; yani **insidans** üzerinde alıřırlar.

	Hastalık Var	Hastalık Yok	Toplam
Etken Var	a	b	a+b
Etken Yok	c	d	c+d
Toplam	a+c	b+d	a+b+c+d

Etken (+) olanlarda insidans hızı =  $a / a+b$

Etken (-) olanlarda insidans hızı =  $c / c+d$

Rölatif Risk (RR) =  $(a / a+b) / (c / c+d)$

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# Cross sectional retrospective study of prevalence of atopy among Italian military students with antibodies against hepatitis A virus

Paolo M Matricardi, Francesco Rosmini, Luigina Ferrigno, Roberto Nisini,  
Maria Rapicetta, Paola Chionne, Tommaso Stroffolini, Paolo Pasquini, Raffaele D'Amelio

## Abstract

**Objective:** To investigate the working hypothesis that common infections occurring early in life prevent atopy.

**Design:** Cross sectional, retrospective study of young Italian men with results for hepatitis A serology and atopy.

**Setting:** Air force school for military students in Caserta, Italy.

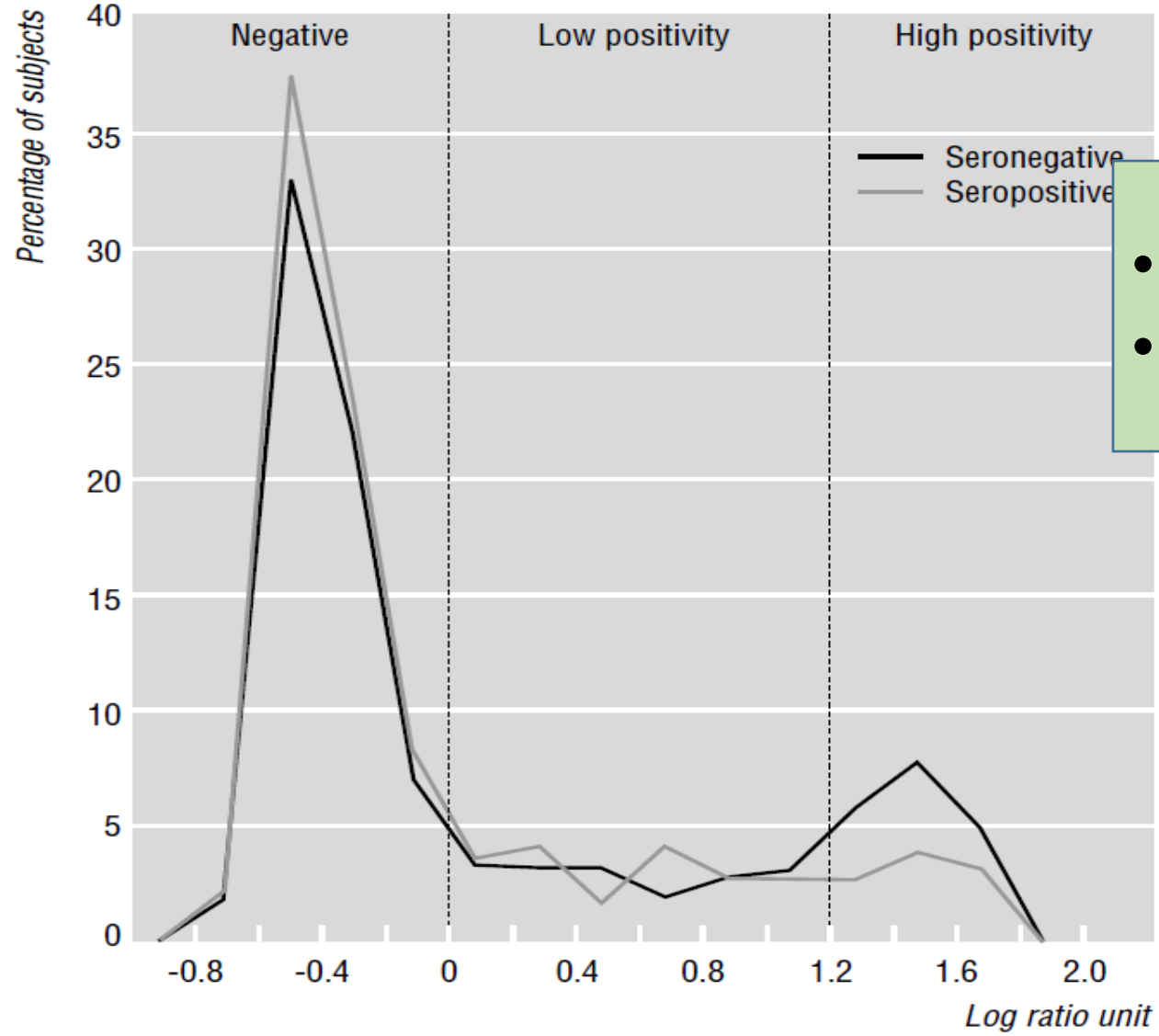
**Subjects:** 1659 male students aged 17-24, most of whom (90%) were from central and southern Italy.

**Main outcome measures:** Skin sensitisation and specific IgE antibodies to locally relevant airborne allergens; diagnosis of respiratory allergy (asthma or rhinitis, or both); hepatitis A seropositivity.

**Table 1** Skin sensitisation to common airborne allergens, specific IgE concentrations, and respiratory allergy in 1659 Italian military students according to presence of antibodies to hepatitis A virus. Values are numbers (percentages) of subjects

	Seronegative (n=1216)	Seropositive (n=443)	Odds ratio (95% CI)
<b>Skin sensitisation</b>			
No of sensitisations:			
1	172 (14.1)	59 (13.3)	1.07 (0.77 to 1.49)
2	117 (9.6)	26 (5.9)	1.71 (1.08 to 2.72)*
≥3	78 (6.4)	12 (2.7)	2.46 (1.29 to 4.81)**
At least 1	367 (30.2)	97 (21.9)	1.54 (1.18 to 2.01)**
Cumulative weal diameter (mm):			
≥5	308 (25.3)	76 (17.2)	1.64 (1.23 to 2.19)***
≥10	169 (13.9)	33 (7.5)	2.01 (1.34 to 3.02)***
≥15	75 (6.2)	10 (2.3)	2.85 (1.41 to 5.91)**
Prevalence of sensitisation to allergens:			
<i>Dermatophagoides pteronyssinus</i>	229 (18.8)	57 (12.9)	1.57 (1.14 to 2.18)**
Cat epithelium	94 (7.7)	18 (4.1)	1.98 (1.15 to 3.43)**
Mixed grass pollens	174 (14.3)	40 (9.0)	1.68 (1.15 to 2.46)**
<i>Parietaria judaica</i>	103 (8.5)	27 (6.1)	1.43 (0.90 to 2.27)
<i>Olea europaea</i>	32 (2.6)	7 (1.6)	1.68 (0.70 to 4.21)
<i>Artemisia vulgaris</i>	21 (1.7)	3 (0.7)	2.58 (0.73 to 10.90)
<i>Alternaria alternata</i>	22 (1.8)	4 (0.9)	2.02 (0.66 to 6.96)
<b>Specific serum IgE to common inhalants</b>			
Low positivity (log ratio unit >0<1.2)	213 (17.5)	83 (18.7)	0.92 (0.69 to 1.23)
High positivity (log ratio unit >1.2)	224 (18.4)	43 (9.7)	2.10 (1.47 to 3.02)***
<b>Respiratory allergic disease</b>			
Allergic rhinitis (with or without asthma)	187 (15.4)	34 (7.7)	2.19 (1.47 to 3.27)***
Allergic asthma (with or without rhinitis)	51 (4.2)	9 (2.0)	2.11 (0.99 to 4.64)
Total (allergic rhinitis and/or asthma)	203 (16.7)	37 (8.4)	2.20 (1.50 to 3.24)***





**Fig 1** Frequency distribution of overall degree of serum IgE sensitisation to common airborne allergens in young Italian men according to seropositivity for hepatitis A virus

- **GÖRSELLİK**
- **ANLAŞILABİLİRLİK**

# Ne tür bir araştırma

- Gözleme Dayalı

- Deneysel

- Ne tür gözleme dayalı araştırma?

  - Kesitsel

  - Olgu-kontrol (Yuvalandırılmış,..)

  - Kohort (Prospektif, retrospektif, olgu-kohort,..)

# Kesitsel

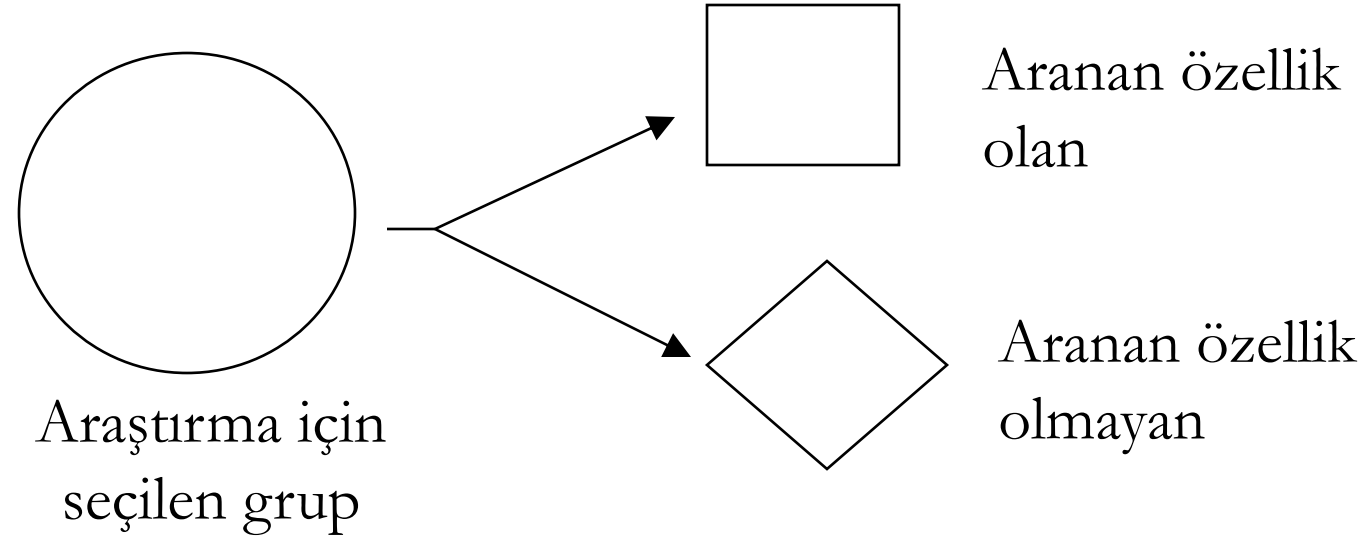
Soru:

Ne oluyor?



# Kesitsel

*Prevelans elde edilir*



Çalışmanın başlangıcı  $\rightarrow$  Zaman

Sorunun yönü yok.

# Olgu-kontrol

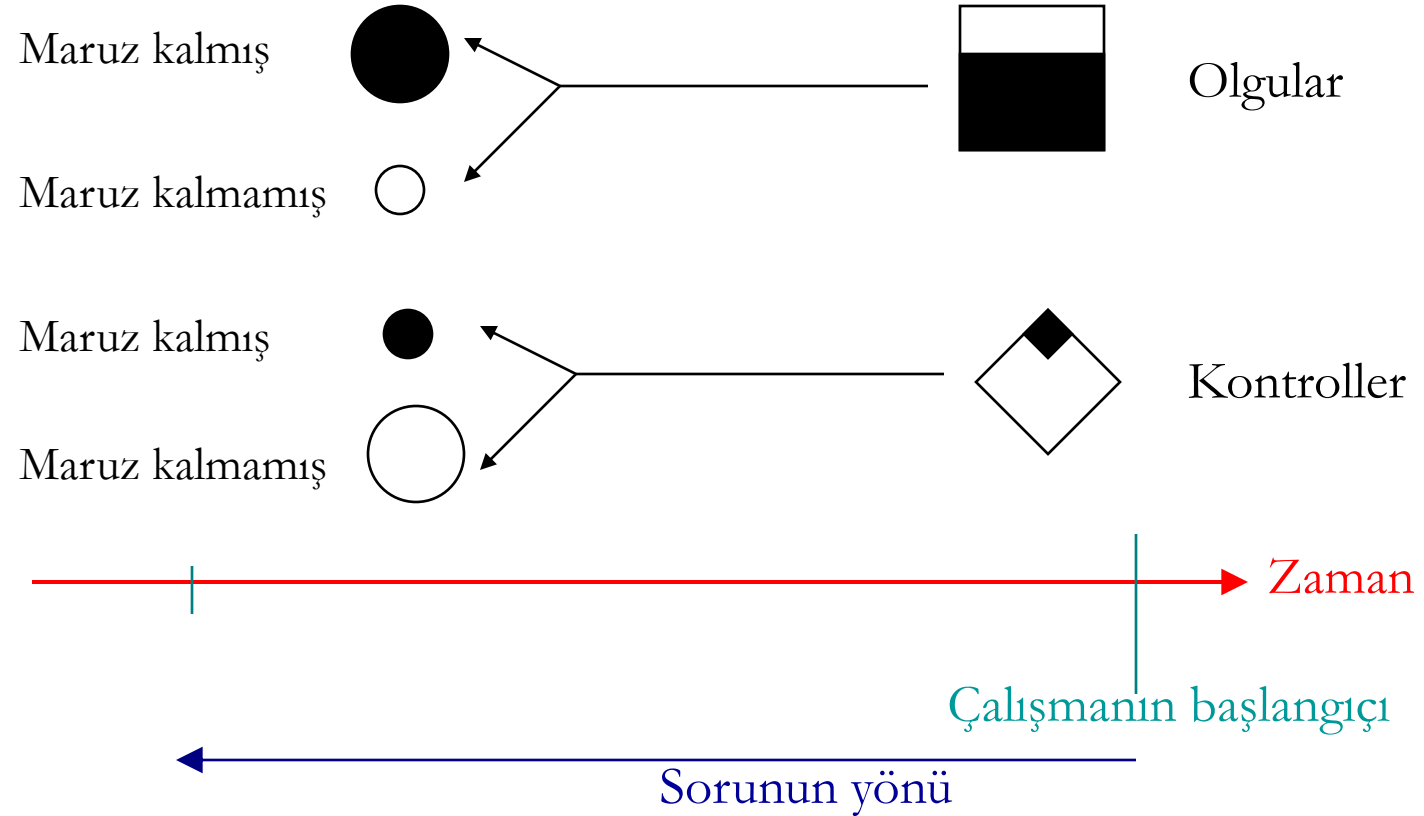
Soru:

Ne oldu?



# Olgu-kontrol

*Olasılıklar oranı (Tabmini rölatif risk/ Odds ratio)*



# Olgu-kontrol

	Olgu	Kontrol	Toplam
Etken			
Karşılaşmış	a	b	a+b
Karşılaşmamış	c	d	c+d
Toplam	a+c	b+d	a+b+c+d

Olgu grubunda etkenle karşılaşma oranı:  $a/a+c$

Kontrol grubunda etkenle karşılaşma oranı:  $b/b+d$

Odds Ratio (Tahmini Rölatif Risk) =  $(a/a+c) / (b/b+d)$

Odds Ratio (Tahmini Rölatif Risk) =  $(a/c) / (b/d)$

**Odds Ratio =  $ad / bc$**

# Worldwide trends in the prevalence of asthma symptoms: phase III of the International Study of Asthma and Allergies in Childhood (ISAAC)

**Background:** Phase I of the International Study of Asthma and Allergies in Childhood (ISAAC) was designed to allow worldwide comparisons of the prevalence of asthma symptoms. In phase III the phase I survey was repeated in order to assess changes over time.

**Methods:** The phase I survey was repeated after an interval of 5–10 years in 106 centres in 56 countries in children aged 13–14 years (n=304 679) and in 66 centres in 37 countries in children aged 6–7 years (n=193 404).

**Results:** The mean symptom prevalence of current wheeze in the last 12 months changed slightly from 13.2% to 13.7% in the 13–14 year age group (mean increase of 0.06% per year) and from 11.1% to 11.6% in the 6–7 year age group (mean increase of 0.13% per year). There was also little change in the mean symptom prevalence of severe asthma or the symptom prevalence measured with the asthma video questionnaire.



**Table 1** Summary regional and global estimates for changes in the prevalence of self-reported asthma symptoms (written questionnaire) between phase I and phase III: percentage change in symptom prevalence per year (and phase III symptom prevalence percentage)

Centre	Phase I (n)	Phase III (n)	12 month prevalence						Ever had asthma	Ever had asthma and current wheeze
			Wheeze	≥4 Attacks	Wheeze disturbs sleep	Severe wheeze limiting speech	Exercise wheeze	Night cough		
<i>13–14-year-old children</i>										
Africa	28554	28397	0.16 (13.4)	0.06 (4.0)	0.05 (3.5)	0.02 (5.9)	0.44 (24.7)	0.91 (30.5)	0.07 (11.9)	−0.01 (5.2)
Asia-Pacific	66222	57389	0.07 (8.8)	0.00 (2.3)	0.01 (0.7)	−0.02 (2.1)	0.42 (17.0)	0.49 (20.6)	0.39 (12.6)	0.04 (4.0)
Eastern Mediterranean	16109	19887	−0.10 (11.6)	−0.04 (2.7)	−0.04 (2.2)	−0.05 (3.9)	−0.11 (15.0)	0.22 (23.4)	0.11 (10.9)	0.00 (3.7)
Indian subcontinent	22120	20767	0.02 (6.4)	−0.09 (2.1)	−0.04 (1.1)	−0.15 (2.6)	−0.05 (6.9)	−0.38 (20.0)	−0.01 (6.1)	0.01 (3.1)
Latin America	46209	44550	0.32 (18.8)	0.02 (3.6)	−0.01 (2.7)	−0.02 (4.6)	0.13 (21.3)	0.83 (35.1)	0.25 (16.1)	0.12 (8.2)
North America	5863	4920	0.12 (21.5)	−0.02 (4.9)	0.04 (3.1)	0.11 (7.0)	0.20 (24.9)	0.00 (21.1)	0.71 (22.5)	0.10 (13.2)
Northern and Eastern Europe	36508	32608	0.26 (11.6)	0.08 (2.3)	0.01 (0.8)	0.08 (2.2)	0.30 (14.3)	0.41 (14.0)	0.29 (5.9)	0.10 (2.5)
Oceania	15460	13317	−0.39 (26.7)	−0.38 (6.2)	−0.05 (2.6)	−0.21 (6.2)	−0.29 (37.5)	−0.01 (28.9)	0.93 (32.4)	0.16 (17.0)
Western Europe	85969	82844	−0.07 (15.2)	−0.05 (3.7)	−0.02 (1.6)	−0.02 (3.8)	0.03 (20.3)	0.64 (29.3)	0.33 (16.3)	0.07 (7.7)
Global total	323014	304679	0.06 (13.7)	−0.02 (3.3)	−0.01 (1.8)	−0.01 (3.7)	0.15 (19.2)	0.51 (25.8)	0.28 (13.8)	0.06 (6.2)
<i>6–7-year-old children</i>										
Africa	1696	2396	0.10 (15.0)	0.00 (0.0)	0.00 (0.0)	0.00 (0.0)	0.00 (0.0)	0.00 (0.0)	−0.01 (3.3)	−0.10 (1.1)
Asia-Pacific	40516	43403	0.07 (11.4)	0.00 (2.3)	0.01 (0.7)	−0.02 (2.1)	0.42 (17.0)	0.49 (20.6)	0.12 (11.4)	−0.04 (4.9)
Eastern Mediterranean	12853	13990	−0.10 (11.6)	−0.04 (2.7)	−0.04 (2.2)	−0.05 (3.9)	−0.11 (15.0)	0.22 (23.4)	0.11 (10.9)	0.00 (3.7)
Indian subcontinent	16981	18877	0.02 (6.4)	−0.09 (2.1)	−0.04 (1.1)	−0.15 (2.6)	−0.05 (6.9)	−0.38 (20.0)	−0.01 (6.1)	0.01 (3.1)
Latin America	21467	21112	0.32 (18.8)	0.02 (3.6)	−0.01 (2.7)	−0.02 (4.6)	0.13 (21.3)	0.83 (35.1)	0.25 (16.1)	0.12 (8.2)
North America	5707	4014	0.12 (21.5)	−0.02 (4.9)	0.04 (3.1)	0.11 (7.0)	0.20 (24.9)	0.00 (21.1)	0.71 (22.5)	0.10 (13.2)
Northern and Eastern Europe	24196	21984	0.26 (11.6)	0.08 (2.3)	0.01 (0.8)	0.08 (2.2)	0.30 (14.3)	0.41 (14.0)	0.29 (5.9)	0.10 (2.5)
Oceania	14233	13841	−0.39 (26.7)	−0.38 (6.2)	−0.05 (2.6)	−0.21 (6.2)	−0.29 (37.5)	−0.01 (28.9)	0.93 (32.4)	0.16 (17.0)
Western Europe	60100	53787	−0.07 (15.2)	−0.05 (3.7)	−0.02 (1.6)	−0.02 (3.8)	0.03 (20.3)	0.64 (29.3)	0.33 (16.3)	0.07 (7.7)
Global total	197749	193404	0.13 (11.6)	−0.01 (2.0)	−0.01 (1.8)	−0.01 (3.7)	0.15 (19.2)	0.51 (25.8)	0.28 (13.8)	0.07 (5.7)

**Yıllık prevelans artışı**

# Ne tür bir araştırma

- Gözleme Dayalı
- Deneysel

## Ne tür gözleme dayalı araştırma?

- Tanımlayıcı
- Analitik

## Ne tür tanımlayıcı araştırma?

Olgu

Vaka serisi

Korelasyonel

## A3.Korelasyon alıřmaları

- alıřma birimini “gruplar” oluřturur.
- Ekolojik korelasyon

*Et tüketime ile kolon kanseri korelasyonu*

- Zaman serileri

*Boğmaca insidansının yıllar içinde deęiřimi*

# Prevalence of childhood asthma in Istanbul, Turkey

## Material and methods

In order to determine asthma prevalence in 6–12-year-old schoolchildren, we distributed 2350

questionnaires to the children to be completed by their parents at home, in six schools randomly chosen from different regions of the metropolitan municipality of Istanbul between March and May 1995 (Fig. 1).

For the epidemiologic definition of asthma, self-reporting of diagnosed asthma with a physician's confirmation was used (5). In general, physicians used the terms “allergic bronchitis” or “spastic bronchitis” instead of “asthma”. For this reason, both of these terms were accepted as asthma in evaluation.

**6-12 yaş arası okul  
çocuklarında ASTİM  
prevelansı**

## Results

In total, 2232 of the questionnaires were completed with an overall response rate of 94.9%, and 2216 questionnaires were taken into consideration. Because of illiteracy, 16 questionnaires were excluded. Of the 2216 children who participated in the study, 1115 (50.3%) were girls and 1101 (49.7%) were boys. There was no statistical difference between these two groups according to age (Table 1).

The self-reported prevalence of asthma is summarized in Table 2. A total of 334 (15.1%) children had a history of wheezing at any time, and 181 (8.2%) had had the same symptoms in the last 12 months. The total number of children diagnosed by a physician as having asthma was 218 (9.8%).

- Yanıt hızı
- Yanıt veren VS vermeyen karşılaştırılabilir
- Kız/Erkek karşılaştırılabilir
- Astım, wheezing prevalans

Table 2. Prevalence of wheezing, asthma, and other symptoms

	<i>n</i>	%	95% CI
Wheeze ever	334	15.1	13.6–16.6
Wheezing in last year	181	8.2	7.1–9.3
Attacks of wheezing in last year			
1–3	117	5.2	4.2–6.0
4–12	49	2.2	1.6–2.8
> 12	15	0.7	0.4–1.0
Sleep disturbed by wheezing in last year	103	4.6	3.8–5.4
Severe attacks of wheezing limiting activity in last year	89	4.0	3.2–4.8
Doctor-diagnosed asthma		9.8	8.6–11.0
Wheezing after exercise		12.5	11.2–13.8
Waking with cough in last year	322	14.5	13.1–15.9

95% CI: 95% confidence interval.

**prevelans**

Table 4. Risk factors affecting prevalence of asthma

Factors	Asthmatics (n=218) %	Nonasthmatics (n=1998) %	OR*	95% CI	Significance level <i>P</i>
Sex					
M	50.4	49.5	1.034	0.782–1.368	NS
F	49.6	50.5			
Smoking at home	63.2	69.1	0.763	0.570–1.022	NS
Domestic animals at home	21.7	26.4	0.772	0.550–1.082	NS
Stuffed toys	22.3	25.9	0.820	0.585–1.148	NS
Home dampness	20.6	18.1	1.176	0.827–1.670	NS
Breast-feeding	90.7	91.6	0.891	0.548–1.451	NS
Asthma in first-degree relatives	15.6	6.9	2.490	1.661–3.732	<0.001
Eczema diagnosed by physician	5.9			0.82–3.864	0.01729
Food allergy diagnosed by physician	12.8				<0.001
Frequent otitis history	13.3				0.0354
Frequent sinusitis history	22.9				<0.001

\* OR: odds ratio.

**RISK FAKTÖRLERİ  
ODD ORANI**

# Ne tür bir araştırma

- Gözleme Dayalı

- Deneysel

- Ne tür gözleme dayalı araştırma?

  - Kesitsel

    - Olgu-kontrol (Yuvalandırılmış,..)

    - Kohort (Prospektif, retrospektif, olgu-kohort,..)



# Kesitsel

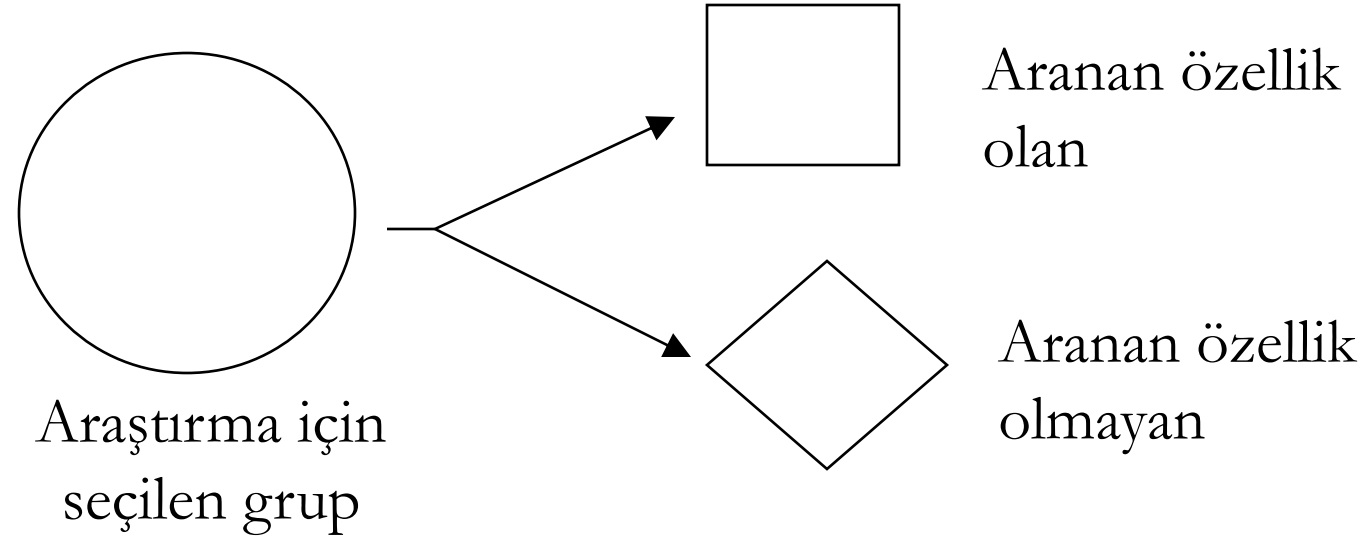
Soru:

Ne oluyor?



# Kesitsel

*Prevelans elde edilir*



Çalışmanın başlangıcı  $\rightarrow$  Zaman

Sorunun yönü yok.

# Sublingual grass pollen immunotherapy is associated with increases in sublingual Foxp3-expressing cells and elevated allergen-specific immunoglobulin G4, immunoglobulin A and serum inhibitory activity for immunoglobulin E-facilitated allergen binding to B cells

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## Summary

*Background* The mechanisms of sublingual immunotherapy (SLIT) are less well understood than those of subcutaneous immunotherapy (SCIT).

*Objectives* To determine the effects of grass-pollen SLIT on oral mucosal immune cells, local regulatory cytokines, serum allergen-specific antibody subclasses and B cell IgE-facilitated allergen binding (IgE-FAB).

*Methods* Biopsies from the sublingual mucosa of up to 14 SLIT-treated atopics, nine placebo-treated atopics and eight normal controls were examined for myeloid dendritic cells (mDCs) (CD1c), plasmacytoid dendritic cells (CD303), mast cells (AA1), T cells (CD3) and Foxp3 using immunofluorescence microscopy. IL-10 and TGF- $\beta$  mRNA expression were identified by *in situ* hybridization. Allergen-specific IgG and IgA subclasses and serum inhibitory activity for binding of allergen-IgE complexes to B cells (IgE-FAB) were measured before, during and on the completion of SLIT.

## Methods

### Patients

Fifty-six patients were recruited to participate in a double-blind placebo-controlled parallel group study of sublingual grass pollen immunotherapy, as described previously [24]. Treatment involved a 6-week up-dosing

units) was performed in all subjects. A subgroup of 23 patients (14 on active treatment, nine on placebo) consented to undergo a sublingual biopsy. Eight non-atopic volunteers (no history of respiratory allergies, negative skin prick testing to a panel of common aeroallergens) also consented to undergo a sublingual biopsy. Biopsies

# Ne tür araştırma?

- Gözlemsel

- Deneysel

- Ne tür «DENEYSEL» çalışma

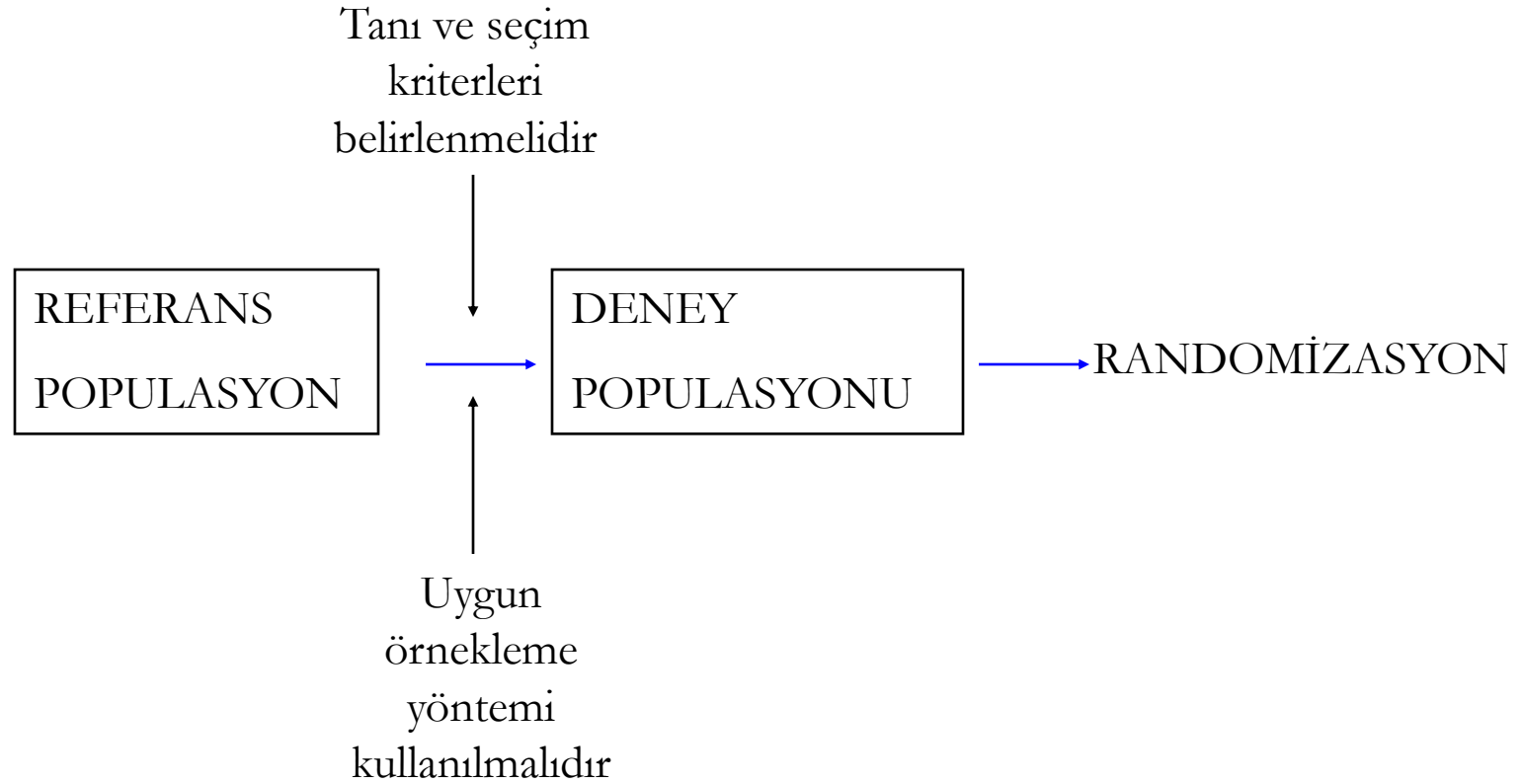
- a. Randomize Kontrollü Deneyler

- b. Saha Deneyleri

- c. Toplum Deneyleri

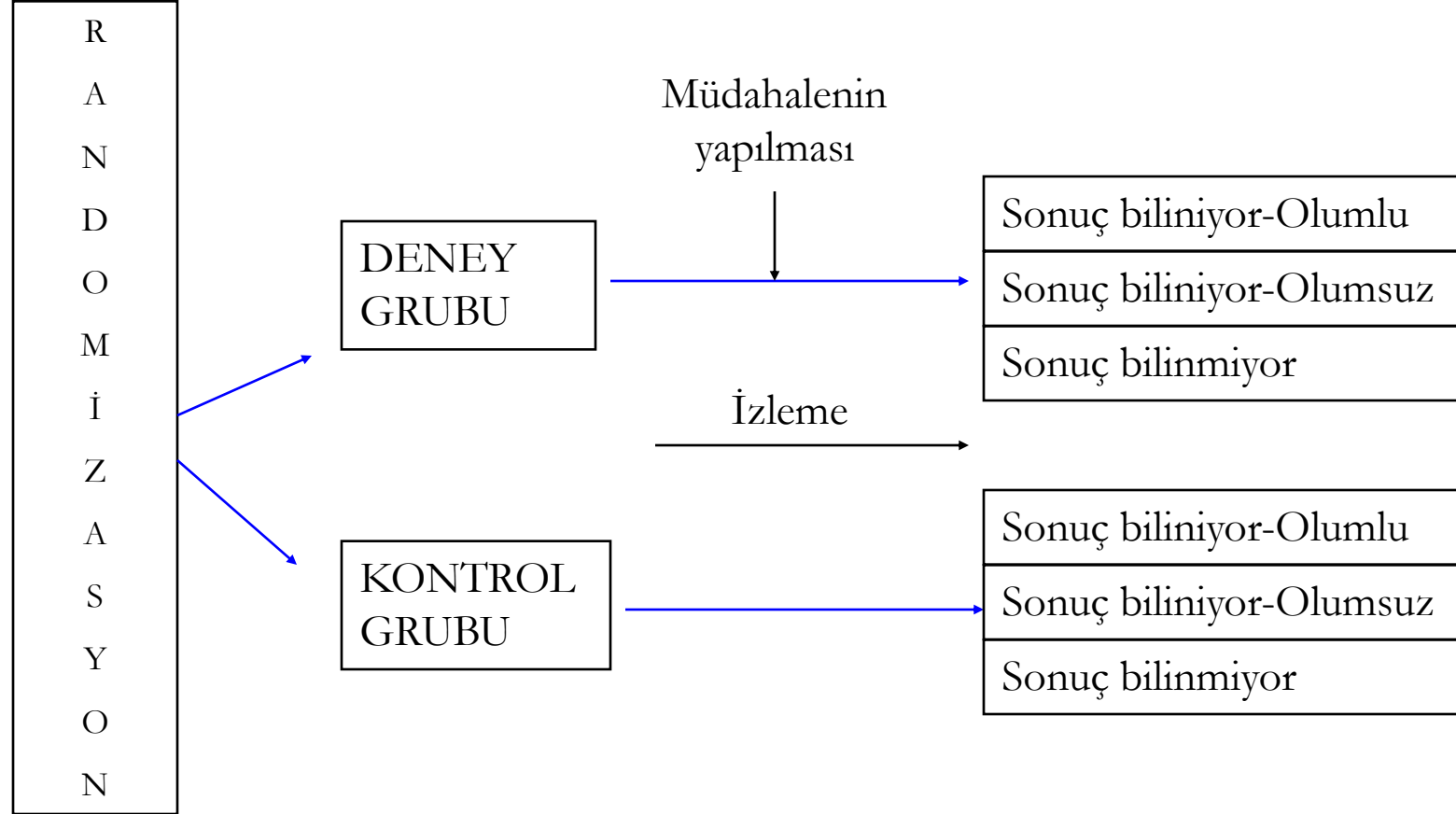
# ***DENEYSEL ARAŐTIRMALAR***

## ***A. Randomize kontrollü deneyler***



# DENEYSEL ARAŞTIRMALAR

## A. Randomize kontrollü deneyler



# Preoperative prostate biopsy and multiparametric magnetic resonance imaging: reliability in detecting prostate cancer

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## ABSTRACT

*Purpose:* The aim of the study was to analyse and compare the ability of multiparametric magnetic resonance imaging (mp-MRI) and prostate biopsy (PB) to correctly identify tumor foci in patients undergoing radical prostatectomy (RP) for prostate cancer (PCa).

*Materials and Methods:* 157 patients with clinically localised PCa with a PSA <10 ng/mL and a negative DRE diagnosed on the first (12 samples, Group A) or second (18 samples, Group B) PB were enrolled at our institution. All patients underwent mp-MRI with T2-weighted images, diffusion-weighted imaging, dynamic contrast-enhanced mp-MRI prior to RP. A map of comparison describing each position was created for each patient, with each tumor focus shown on the map as it presented on the definitive histological examination in order to compare the position and location. The sensitivity of mp-MRI and PB for diagnosis was compared using Student's t-test. The ability of the two exams to detect the prevalence of Gleason pattern 4 in the identified lesions was compared using a chi-square test.

*Results:* Overall sensitivity of PB and mp-MRI to identify tumor lesion was 59.4% and 78.9%, respectively ( $p < 0.0001$ ). PB missed 144/355 lesions, 59 of which (16.6%) were significant. mp-MRI missed 75/355 lesions, 12 of which (3.4%) were significant. No lesions with a GS  $\geq 8$  were missed. Sensitivity of PB and mp-MRI to detect the prevalence of Gleason pattern 4 was 88.2% and 97.4%, respectively.

**ALTIN STANDART YÖNTEM  
VS  
YENİ YÖNTEM**

# Ne tür araştırma?

- Gözlemsel

- Deneysel

- Metodolojik



**Table 4 - Comparison between sensitivity of prostate biopsy and mp-MRI in identifying tumor lesions. Results are reported by studied variables in the overall population and in Group A (first prostate biopsy) and B (second prostate biopsy).**

		Sensitivity	PB	mp-MRI	p-value
Total	Overall		59.4%	78.9%	<0.0001
	Group A		57.1%	77.8%	<0.0001
	Group B		65.0%	81.6%	0.0112
Pathologic Tumor Volume	<0.5 mL	Overall	21.4%	50.7%	<0.0001
		Group A	20.8%	49.5%	<0.0001
		Group B	23.1%	53.9%	<0.0001
	>0.5 mL	Overall	84.2%	97.2%	<0.0001
		Group A	81.5%	96.7%	<0.0001
		Group B	90.6%	98.4%	0.0316

**PROSTAT BX VS MRI  
SENSITIVITE**

*Teşekkürler.....*