

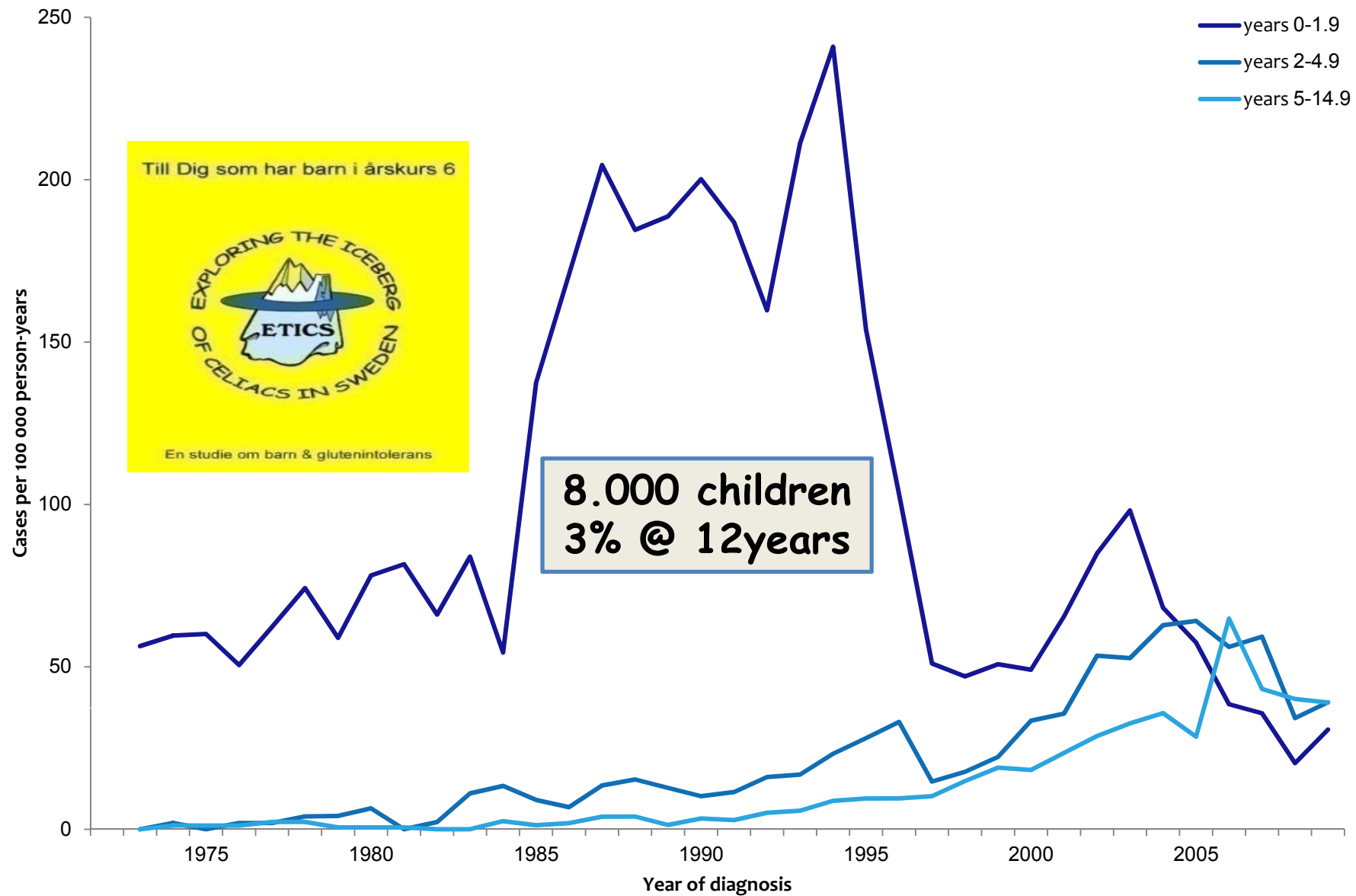


PREVENTCD: A PROSPECTIVE COHORT AT HIGH-RISK FOR CELIAC DISEASE. AN INTERIM REPORT

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Schneider Children's Medical Center, Tel-Aviv University, Israel, Leiden University, Medical Center, The Netherlands, European Laboratory for the Investigation of Food-Induced Diseases, University Federico II, Naples, Italy, University of Debrecen, and Heim Pál Children's Hospital, Budapest, Hungary.

כנס משותף לגסטרואנטרולוגיה, אילת, 7 לפברואר 2013



PreventCD Project

Hypothesis:
Childhood celiac disease may be prevented

By introduction of gluten

- in small amounts
- 4-6 months of age
- preferably while breastfeeding

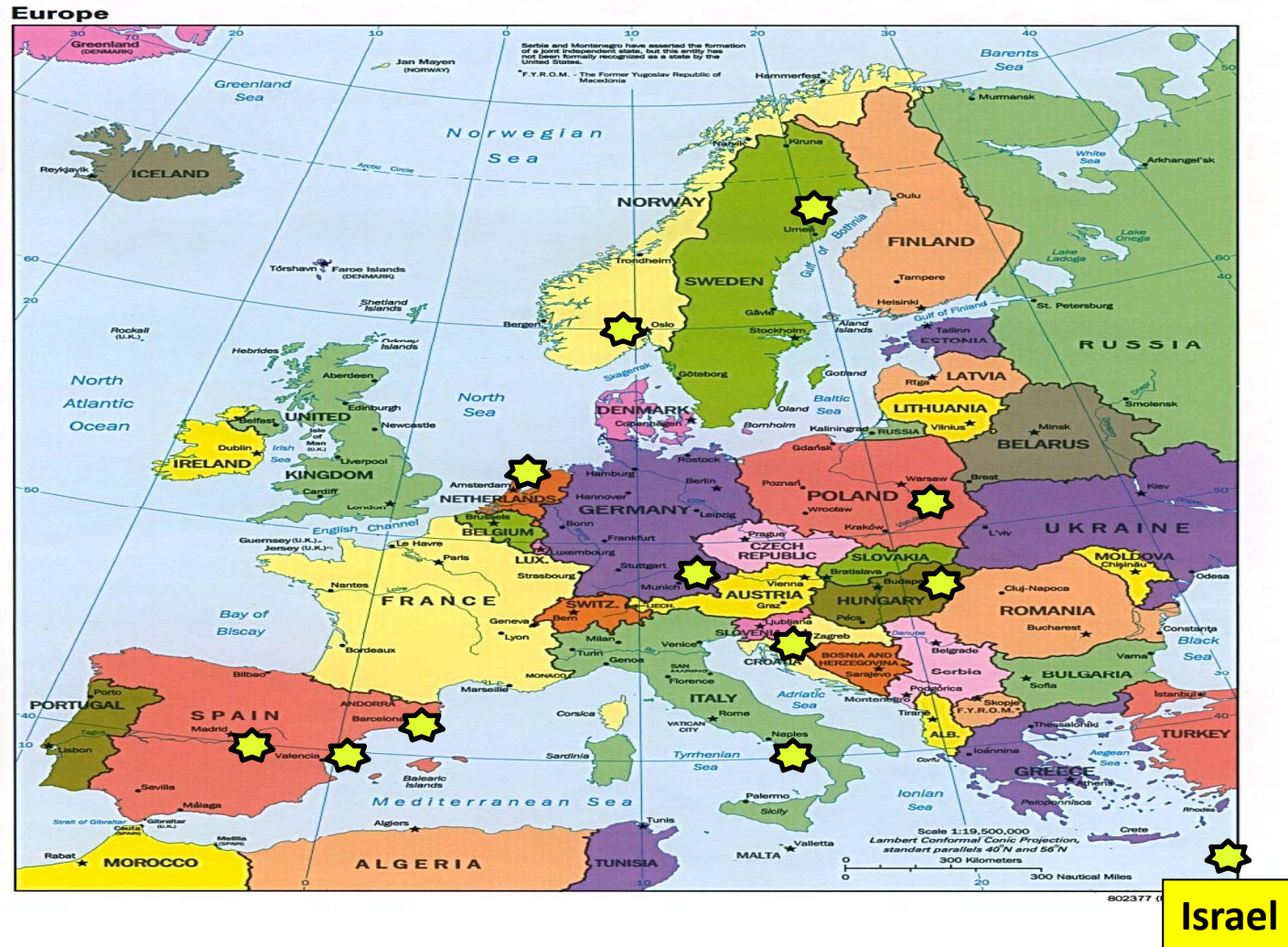




מרכז שניידר לרפואת ילדים בישראל
مركز شتاينر لطب الأطفال في إسرائيل
Schneider Children's Medical Center of Israel

PreventCD

www.preventcd.com




preventceliacdisease.com - Home - Microsoft Internet Explorer provided by UMG

http://www.preventceliacdisease.com/index.php?option=com_frontpage&Itemid=1

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PREVENTCD
prevent coeliac disease

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'Prevention is better than cure'

PREVENTCD: An European scientific research project to prevent coeliac disease. The project studies the influence of the dietary history in the prevention of coeliac disease; possibilities of induction of tolerance for gluten in genetic predisposed children for coeliac disease.



Photograph taken during the 4th pro...

...ion is funding this research proje...
...be performed by 10 European cou...
...rael, Hungary, Croatia, Germany, ...
...AOECS (Association of European

Population-based cohort
16000 children

Family-based cohort
1000 high risk children

S	M	T	W	T	F	S
27	28	29	30	1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17

start presentation Microsoft Office P... preventceliacdisease....

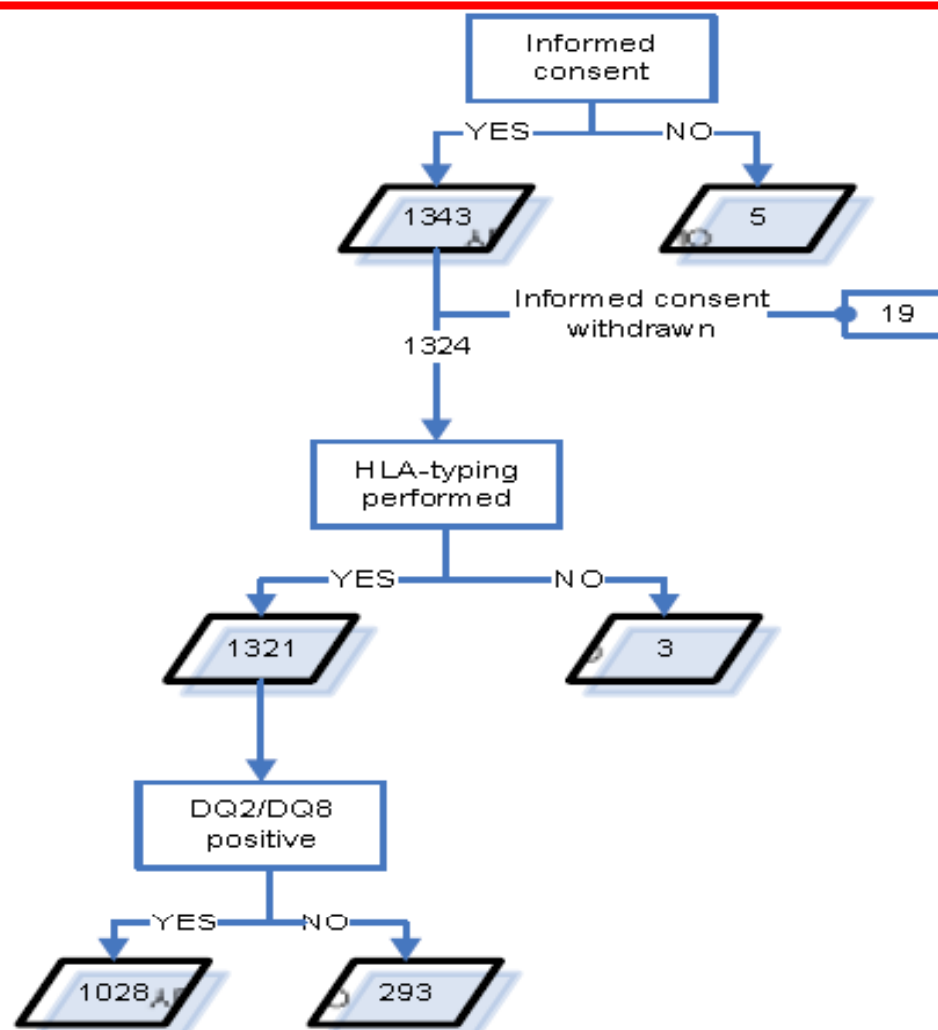
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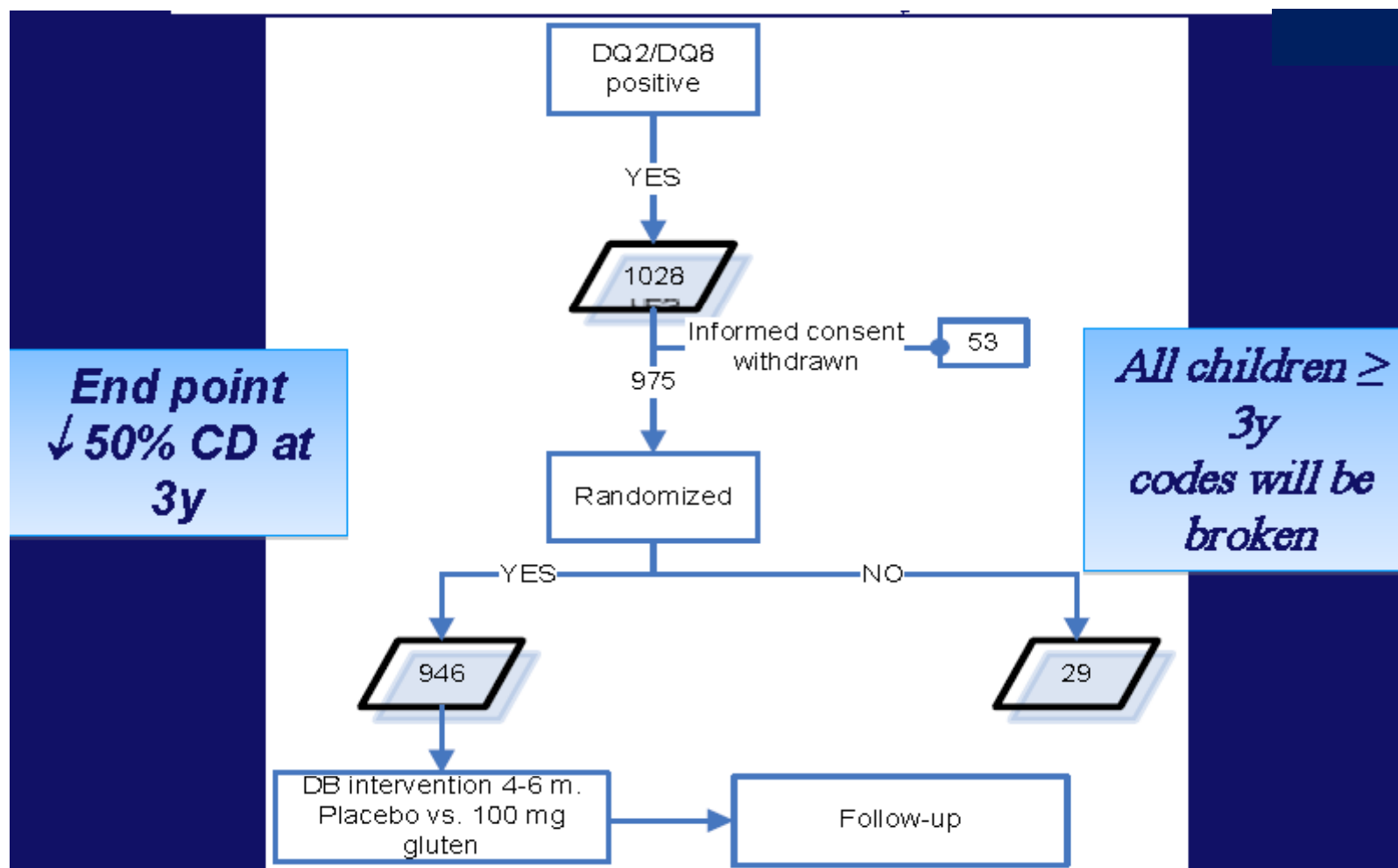
PreventCD intervention study





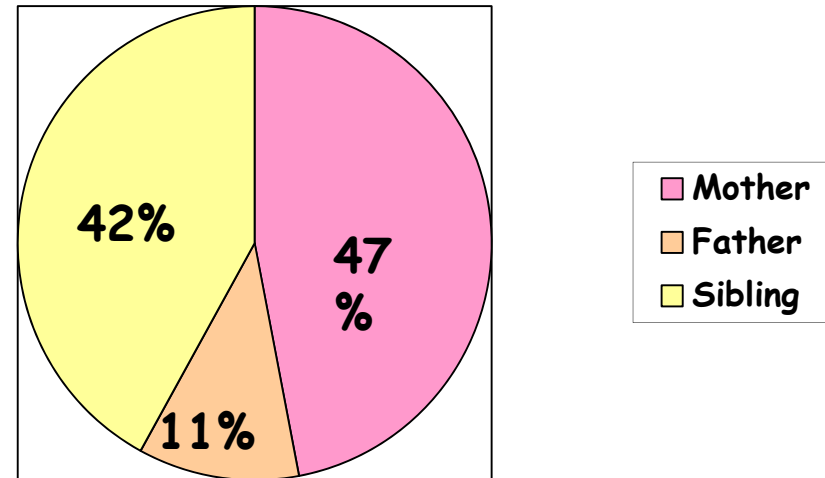
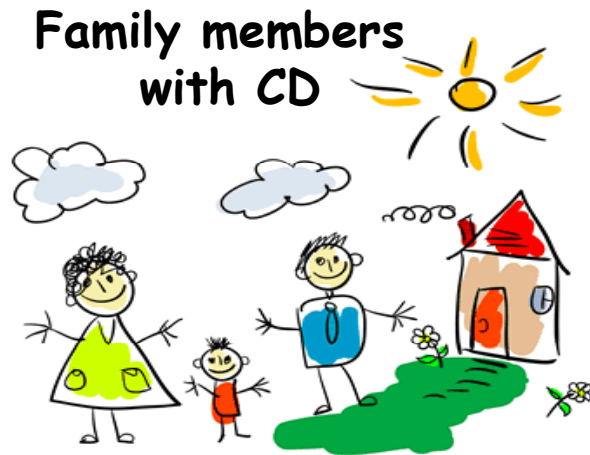
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PreventCD intervention study



PreventCD cohort (n=946)

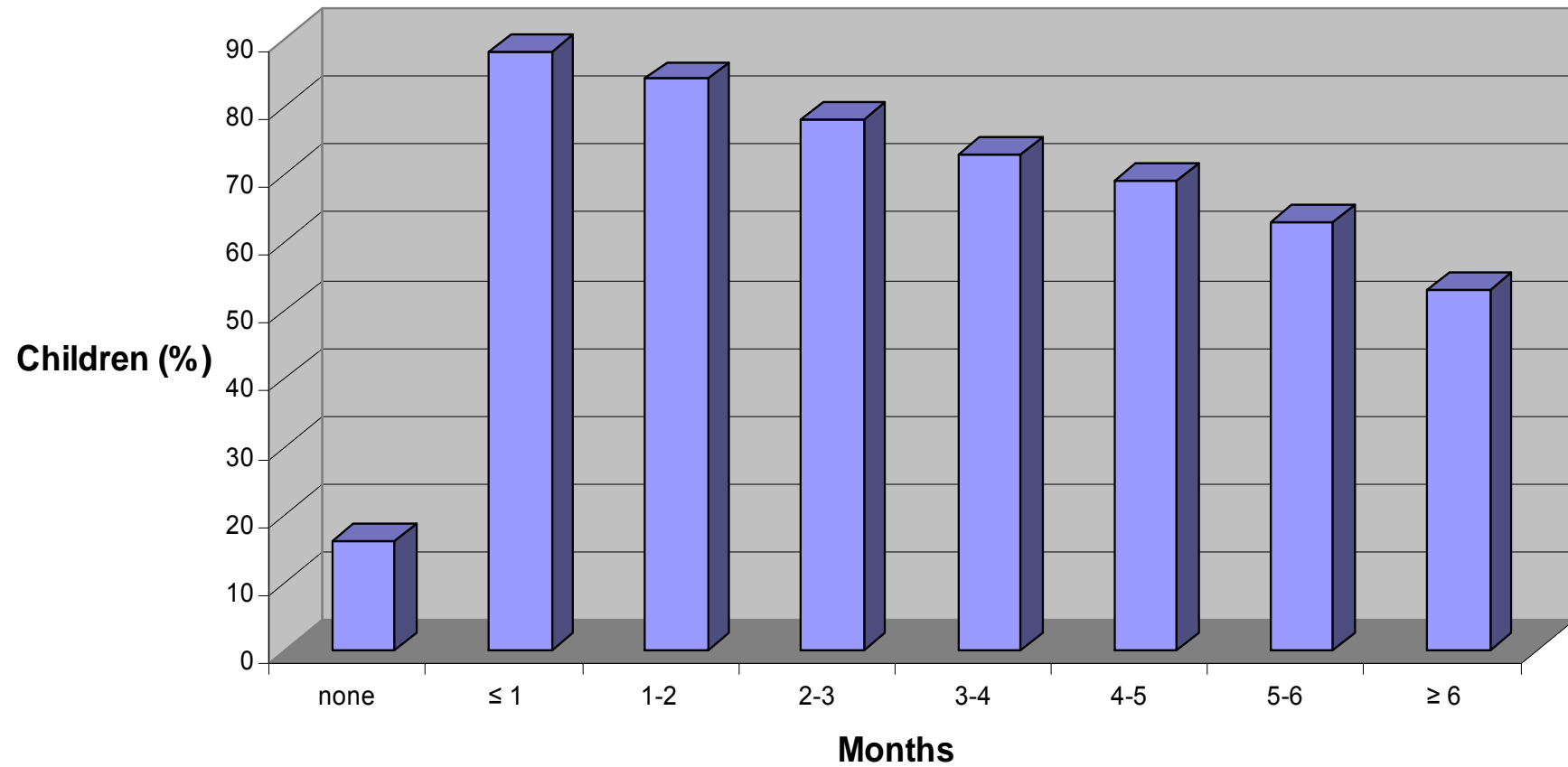
Current mean age of the cohort is 4.3y



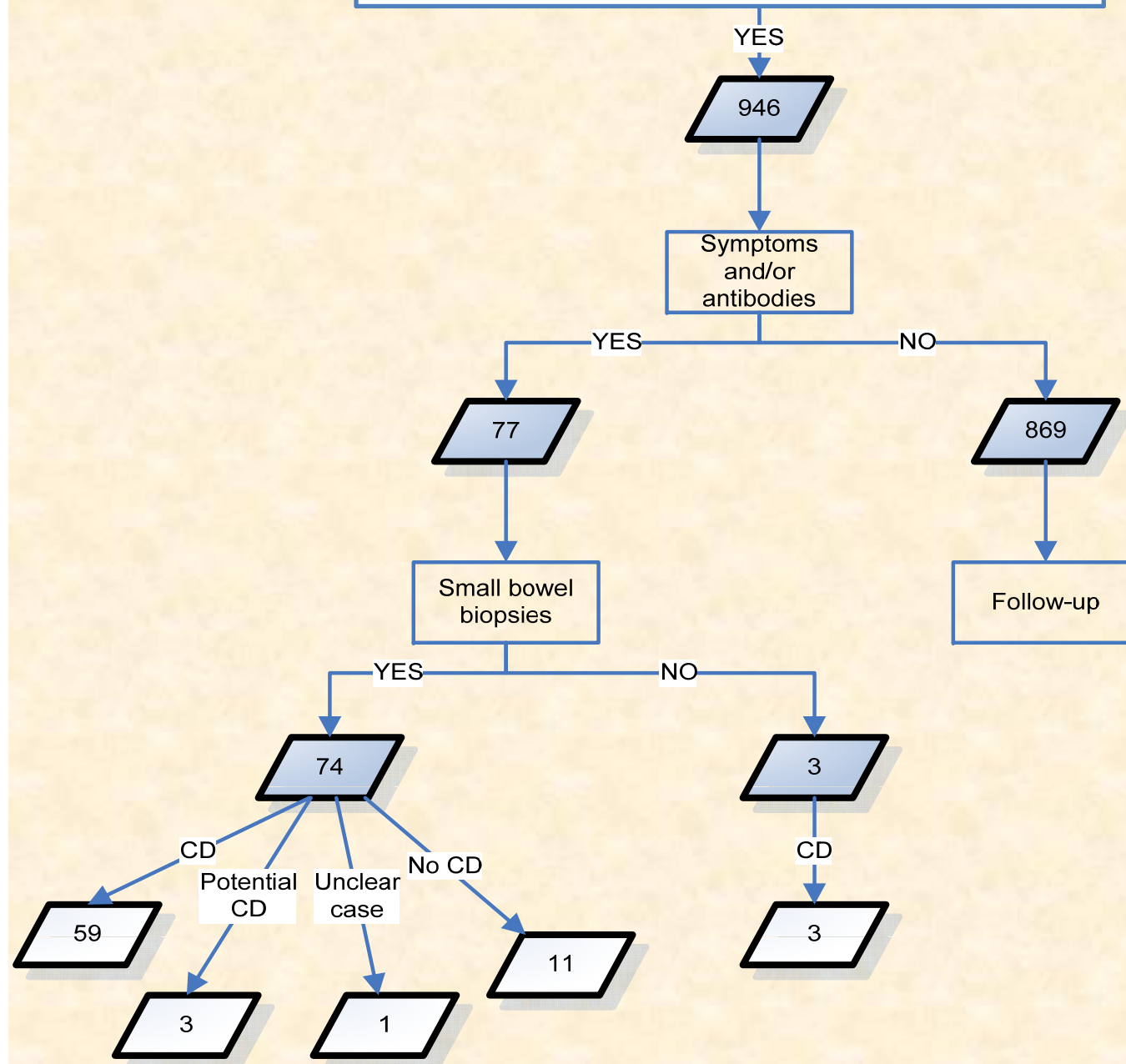
Gender	%
Male	52
Female	48

HLA-type	%
DQ2	80
DQ8	10
DQ2 & DQ8	10

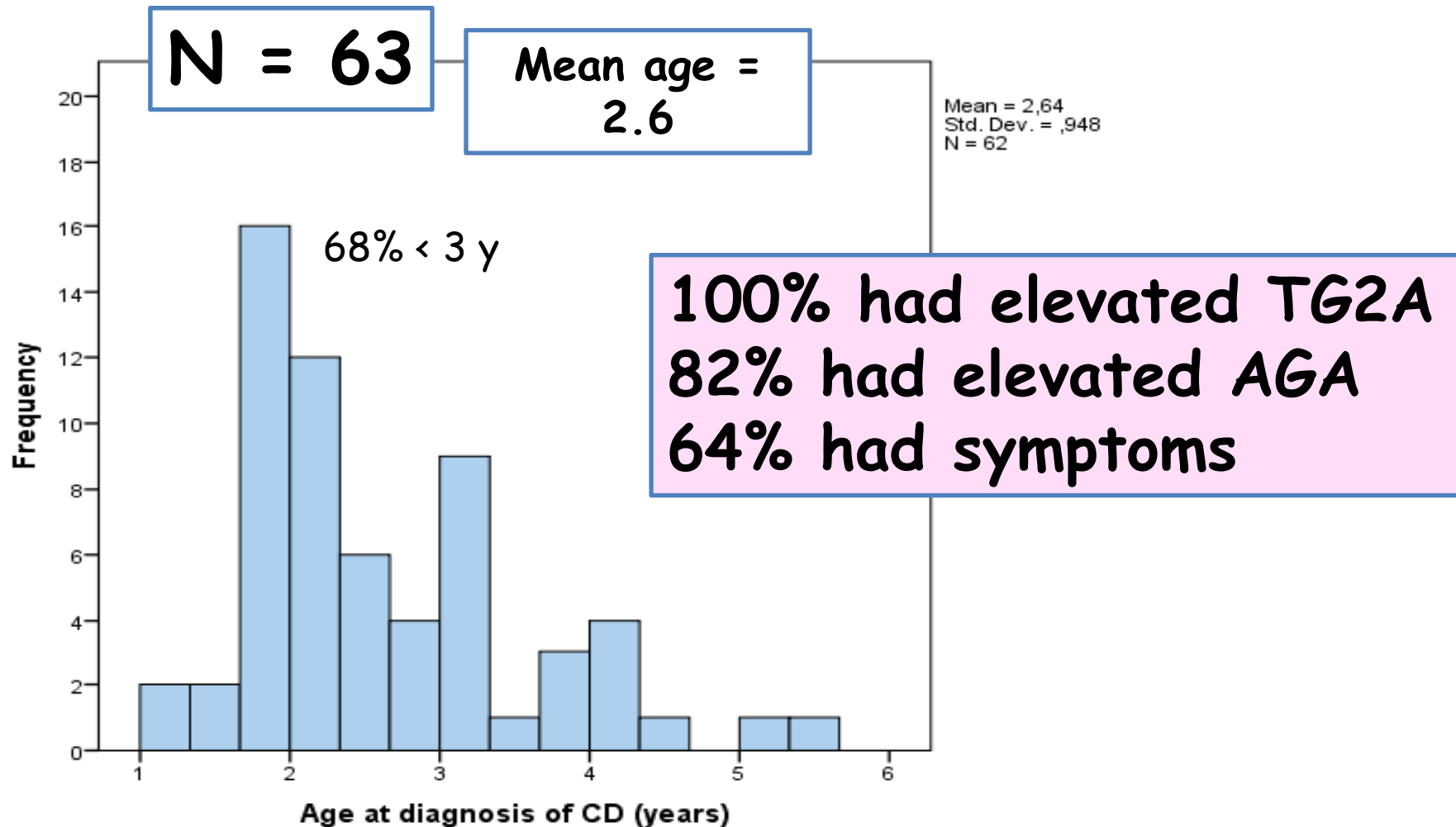
Duration of breastfeeding



RDBPC intervention study

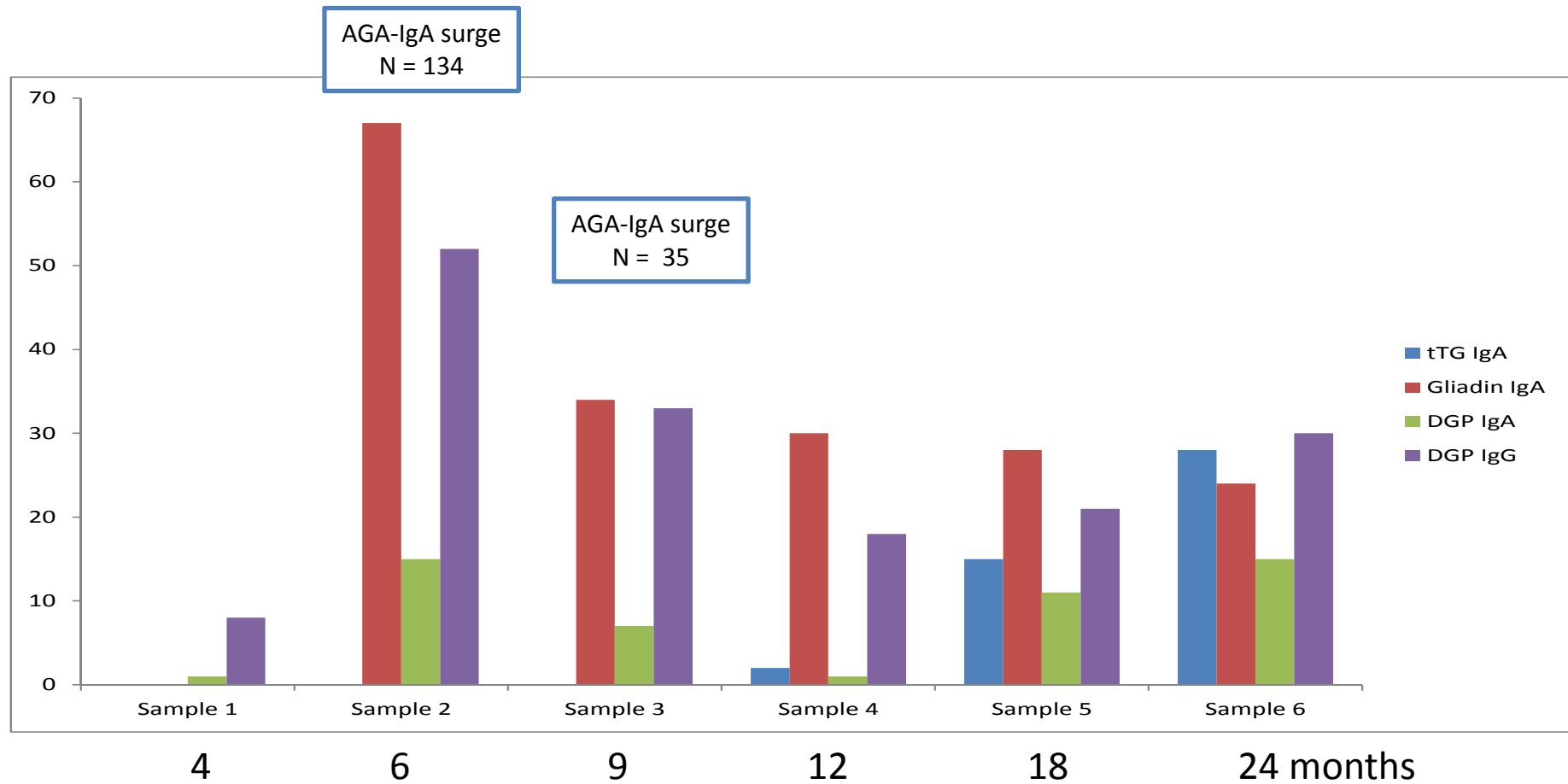


PreventCD cohort Children with CD



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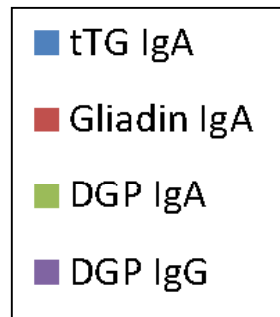
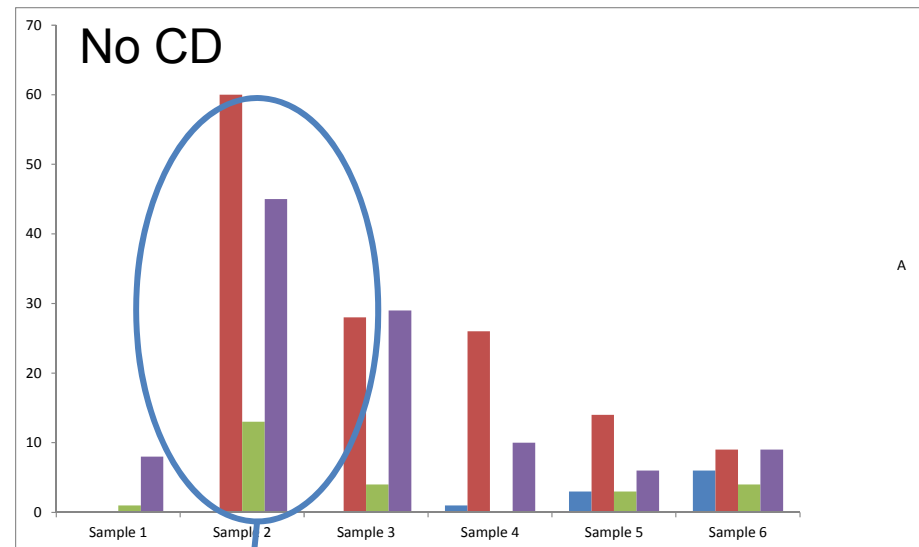
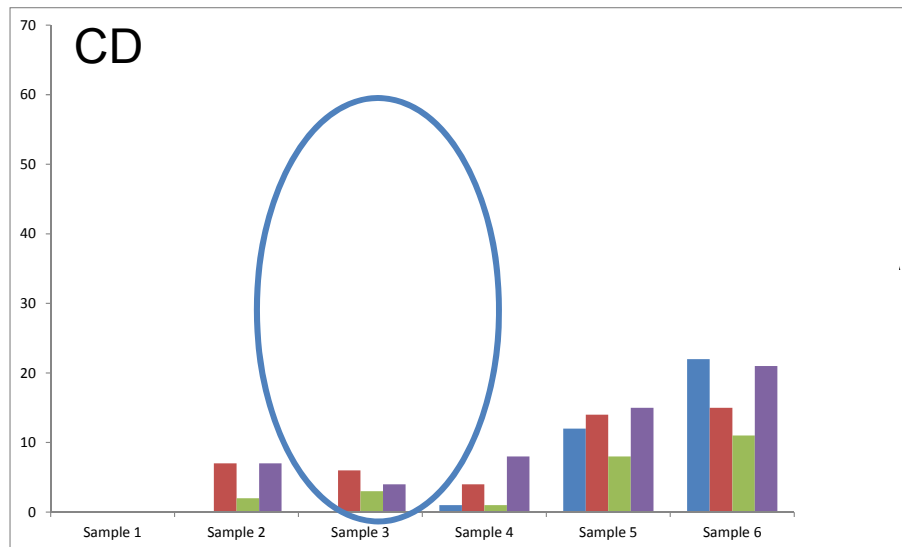
PreventCD cohort, celiac antibodies



www.preventcd.com

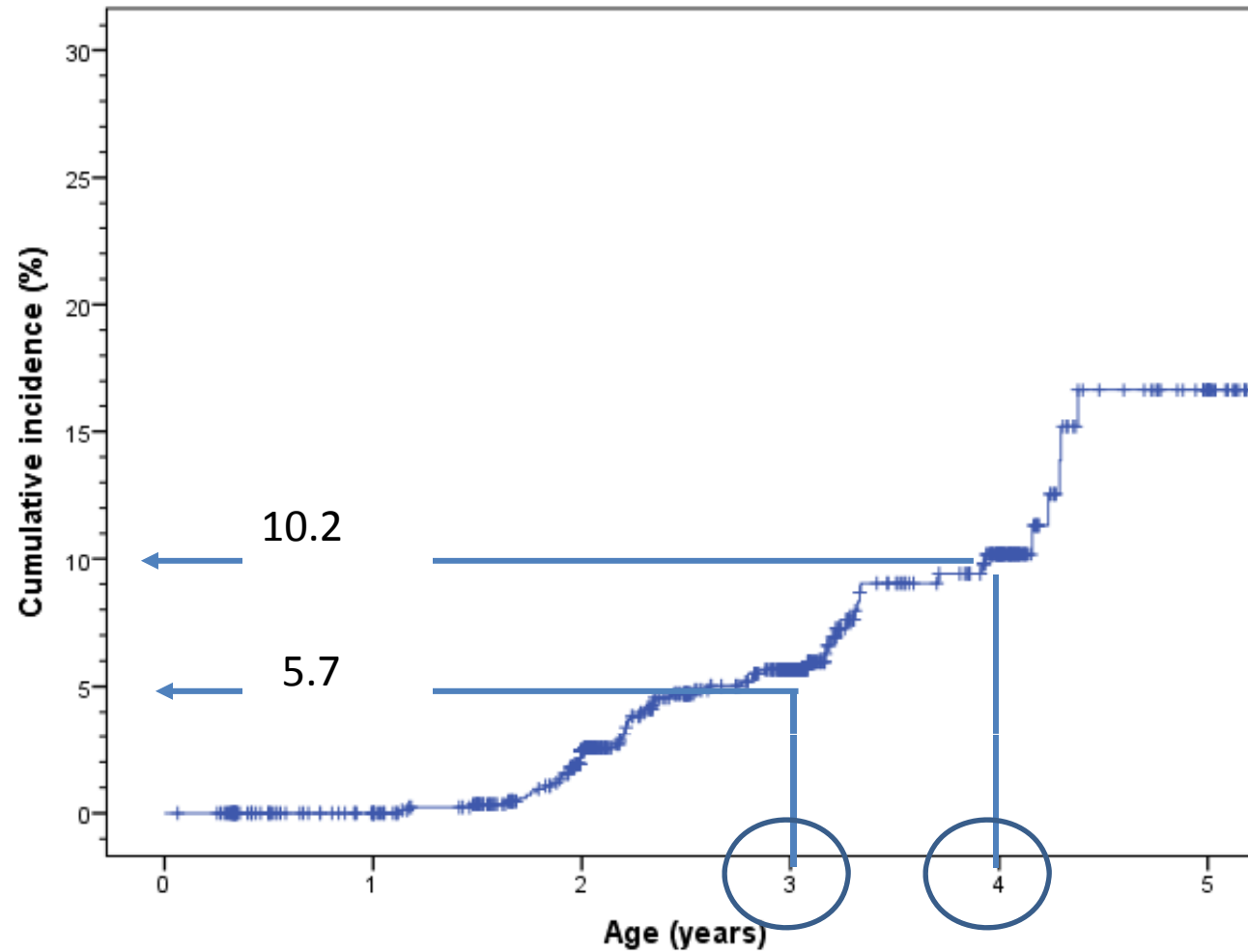
Antibody development

Celiacs vs. non-celiacs



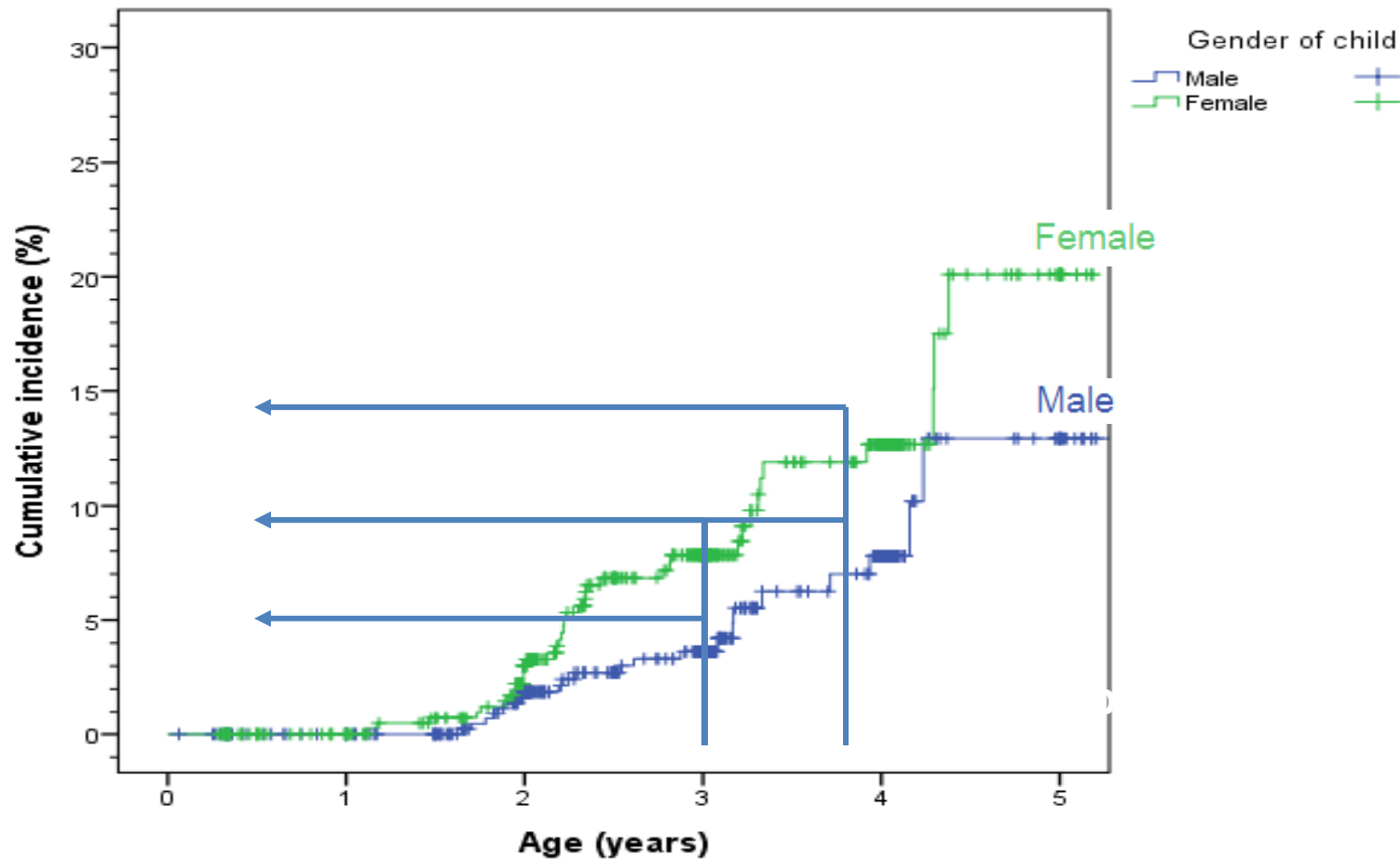
Early IgA antigliadin
response X5 above
baseline

Cummulative incidence of CD



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Cumulative incidence of CD by gender

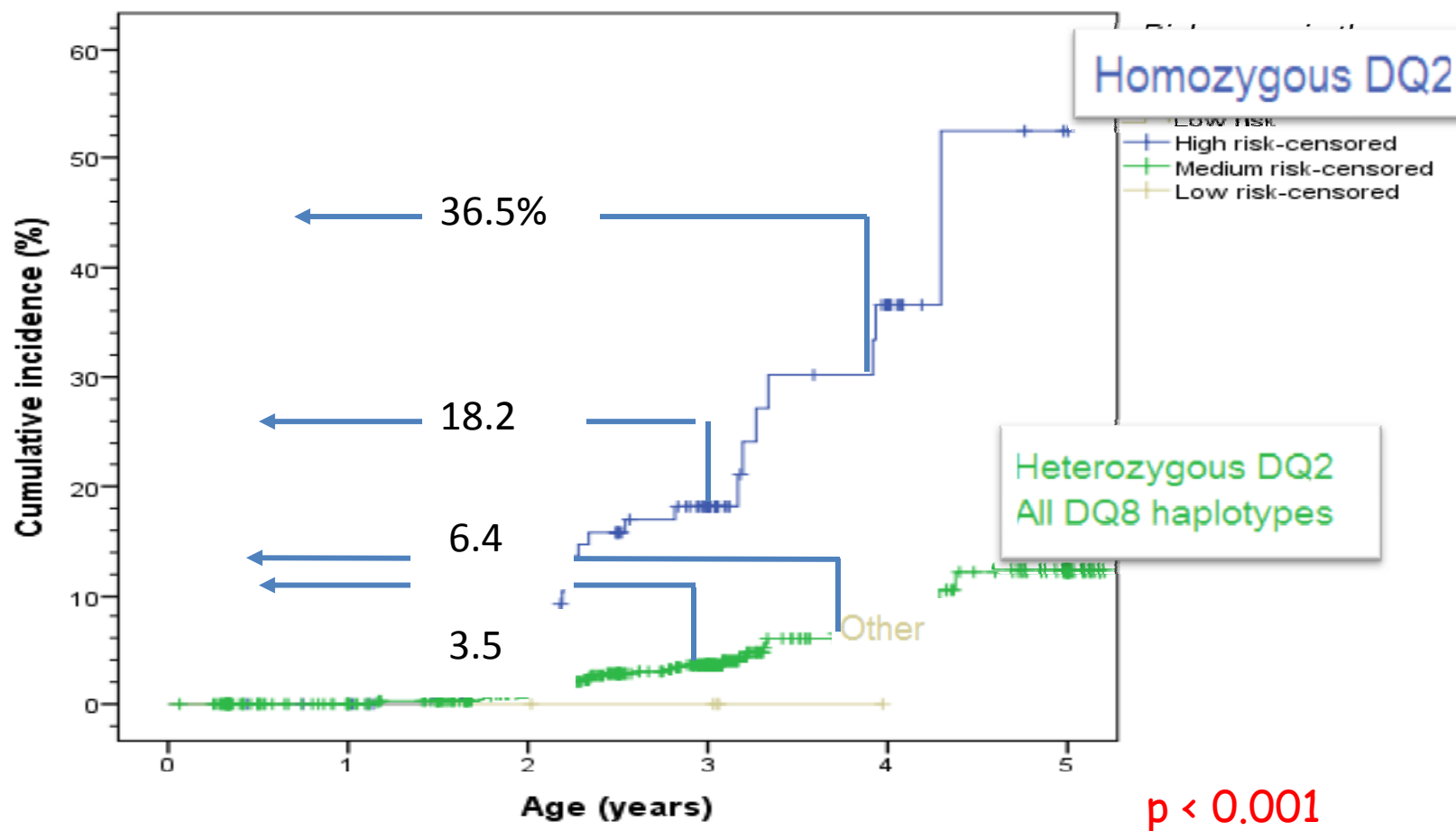


www.preventcd.com

Cummulative incidence of CD by HLA genotype

HLA genotypes	Frequency (%)	CI at 3y (%)
DR3-DQ2/DR3-DQ2	4.9	25.3
DR3-DQ2/DR7-DQ2	7.9	14.3
DR3-DQ2/DR5-DQ7	11.2	6.9
DR7-DQ2/DR7-DQ2	3.2	4.5
DR3-DQ2/DQX	31.6	3.5
DR7-DQ2/DR5-DQ7	8.6	3.5
DR7-DQ2/DQX	12.3	2.4
DR3-DQ2/DR4-DQ8	6.0	2.4
Other	14.4	0

Cumulative incidence of CD by HLA genotype



Conclusions (1)

- ❖ These preliminary results show that:
 - Genetically susceptible children from high-risk families develop CD at a very young age and that this is significantly associated with homozygosity for DQ2

Conclusions

- Both AGA and DGP had low predictive value for CD in these children. An early IgA AGA response at 6 mo. or earlier seems to be beneficial while at 9 mo. or later is associated with higher CD risk
- In contrast to the old paradigm, even in very young children, presence of TTG2Ab is a powerful predictor of CD

Thanking All participating children and parents and all partners:

	CE Hogen Esch		T Koltai
	B Funke Kupper		C Scerri
	S Vrienzinga		E Mummert
	Y Wijkhuisen		E Bravi
	F Koning		R Shamir
	ProMise		C Hartman
	R Brand		L Sollid
	H Putter		M Raki
	Y Kooy		S Kolacek
	R Troncone		S Abdovic
	R Auricchio		Z Misak
	A Ivarsson		I Korponay
	A Rosen		J Gyimesi
	A Myleus		G Castillejo
	H Szajewska		S Koletzko
	A Chmielewska		K Werkstetter
	G Piescik		G Osiander
	C Wijmenga		V Villanacci
	J Romanos		M Berant
	I Polanco		Etc,etc...
	E Martinez		
	C Ribes		
	A Lopez		
	J Bindels		

Supported by a grant from the Azrieli Foundation



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Save the Date

21-22 November 2013



Embassy of Italy
Tel Aviv



בתאריכים 21-22 לנובמבר 2013 יתקיים הכנס
האיטלקי ישראלי הראשון בנושא:

מחלת הצליאק-
תפיסות ואסטרטגיות חדשות

הכנס מתקיים בחסות שגרירות איטליה בישראל

פרטים בהמשך

נשמח לראותכם

HLA-DQ molecule	Encoded by		Risk for celiac disease	Expression in <i>cis</i> or <i>trans</i> position	Part of common <i>cis</i> haplotype
	DQA1*	DQB1*			
HLA-DQ2.5	05	02	High	<i>cis, trans</i>	DR3DQ2
HLA-DQ2.2	02	02	Low	<i>cis, (trans)</i>	DR7DQ2
HLA-DQ2.3	03	02	Likely low ^a	<i>trans, (cis)</i> ^b	
HLA-DQ7.5	05	03:01	Very low	<i>cis, (trans)</i>	DR5DQ7
HLA-DQ8	03	03:02	Low	<i>cis</i>	DR4DQ8
HLA-DQ8.5	05	03:02	Likely low ^a	<i>trans, (cis)</i> ^b	

This is the study demonstrating better to expose at 1 year



Proof of Concept of Microbiome-Metabolome Analysis and Delayed Gluten Exposure on Celiac Disease Autoimmunity in Genetically At-Risk Infants

Selitto et al. PLoS 2012

