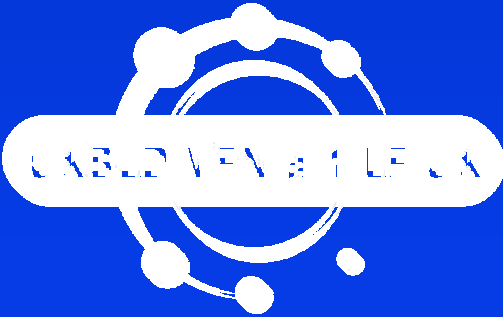


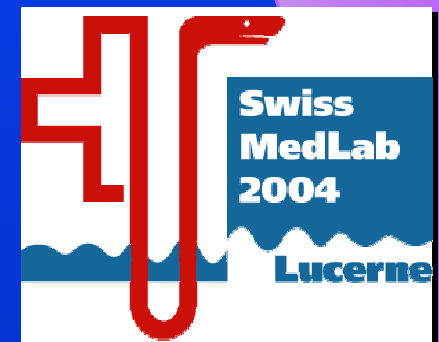
**Institute of Clinical Biochemistry and Laboratory Diagnostics
1st Faculty of Medicine, Charles University
General Faculty Hospital, Prague
Czech Republic**



Petr Kocna M.D., Ph.D.
<http://www.lf1.cuni.cz/~kocna/pkweb1.htm>

SEROLOGY MARKERS IN THE SCREENING AND DIAGNOSTICS OF COELIAC DISEASE

Swiss MedLab - Lucerne, October 9, 2004





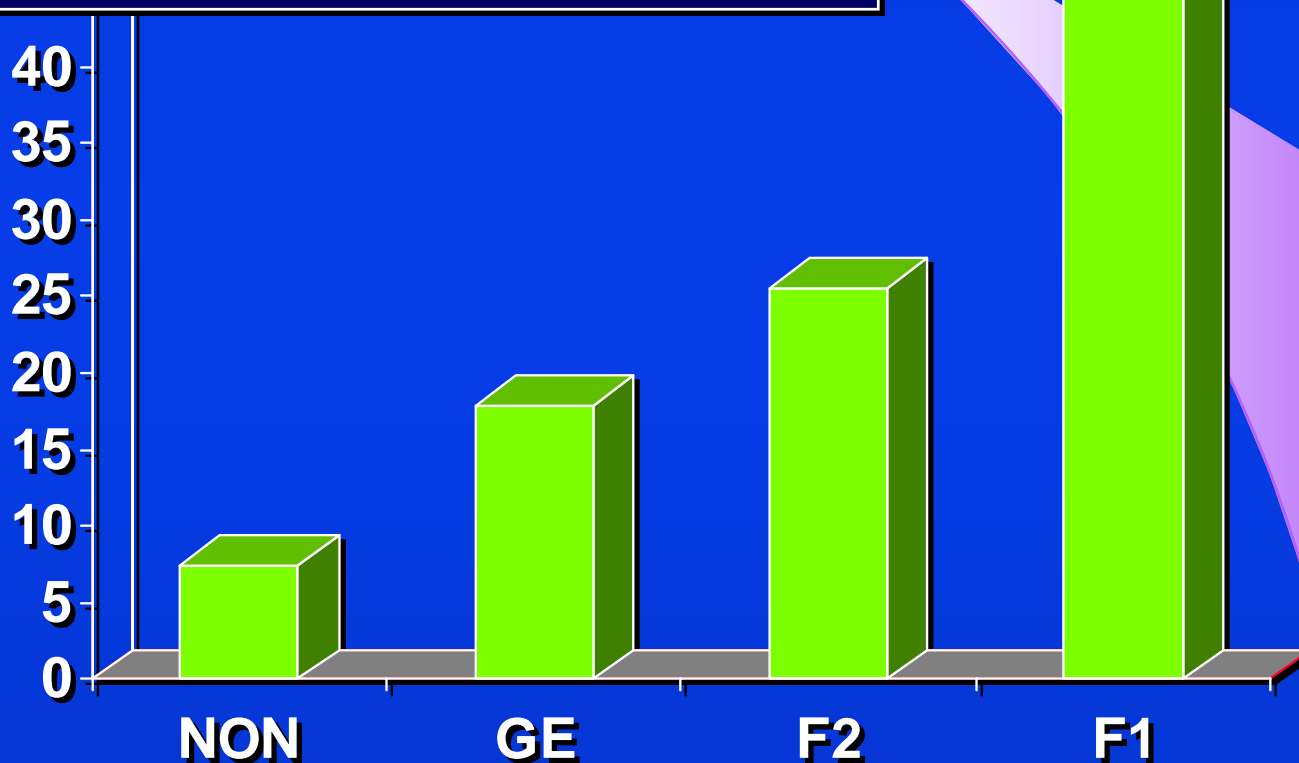
WHAT IS COELIAC DISEASE

- **LIFELONG** DISEASE, PERMANENT INTESTINAL INTOLERANCE OF GLUTEN, PROLAMIN PROTEINS
- **GENETIC FACTORS** - HLA-B8, HLA-DR3, HLADQ2
- INITIALISING FACTORS - **GLIADIN OR SIMILAR PEPTIDES**
- IMMUNOLOGY RESPONSE, **AUTOIMMUNE** TYPE OF DISEASE
- DAMAGE OF SMALL INTESTINAL MUCOSA
- MALABSORPTION SYNDROME
- RESPONSE TO **GLUTEN-FREE DIET**

HIGH RISK OF COELIAC DISEASE



1 : 22 RELATIVES 1. DEGREE
 1 : 39 RELATIVES 2. DEGREE
 1 : 56 GE SYMPTOMATOLOGY PATIENTS
 1 : 133 GENERAL POPULATION

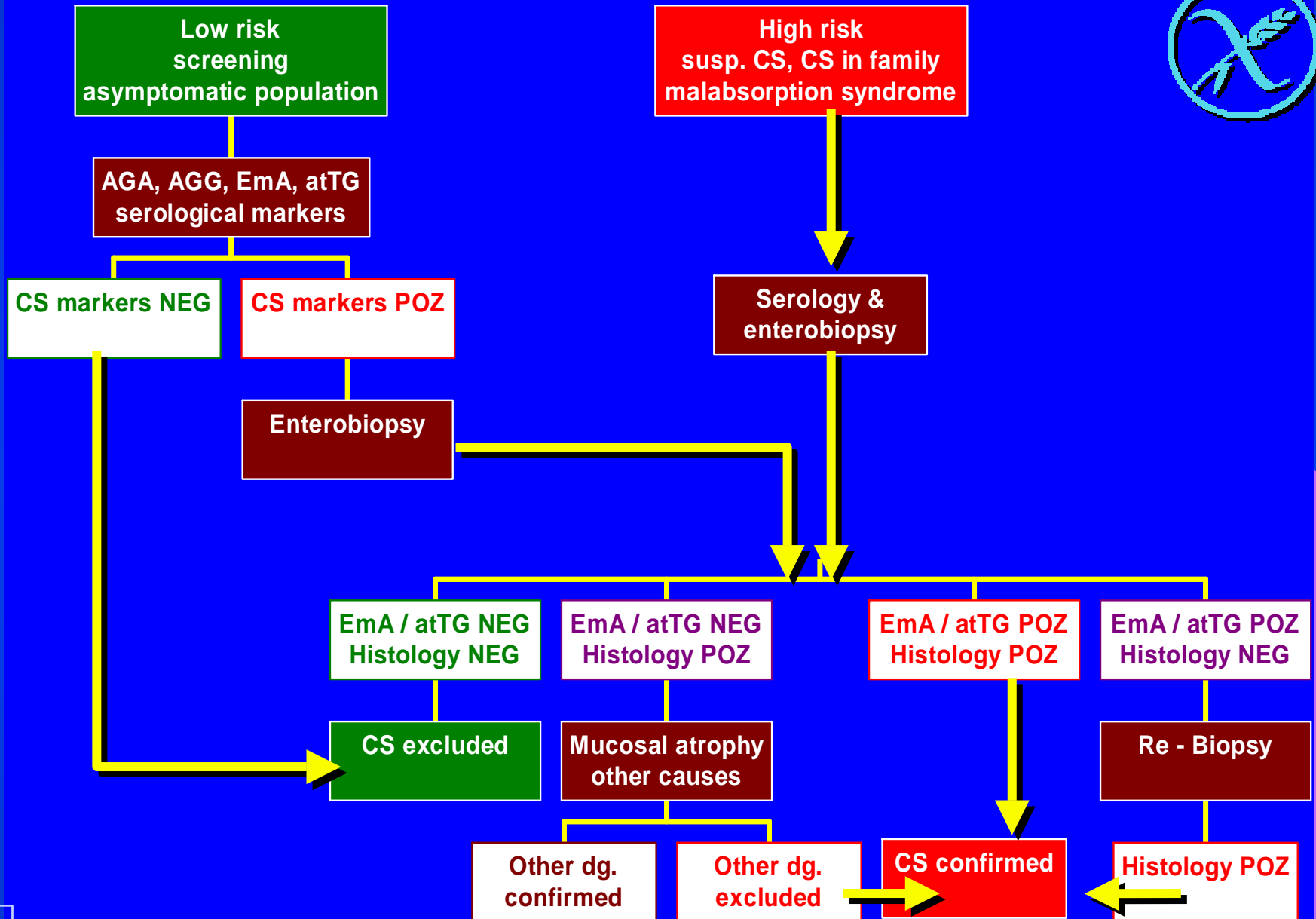


CONSULTATIVE ROLE OF LABORATORY

SCREENING
SELECTION

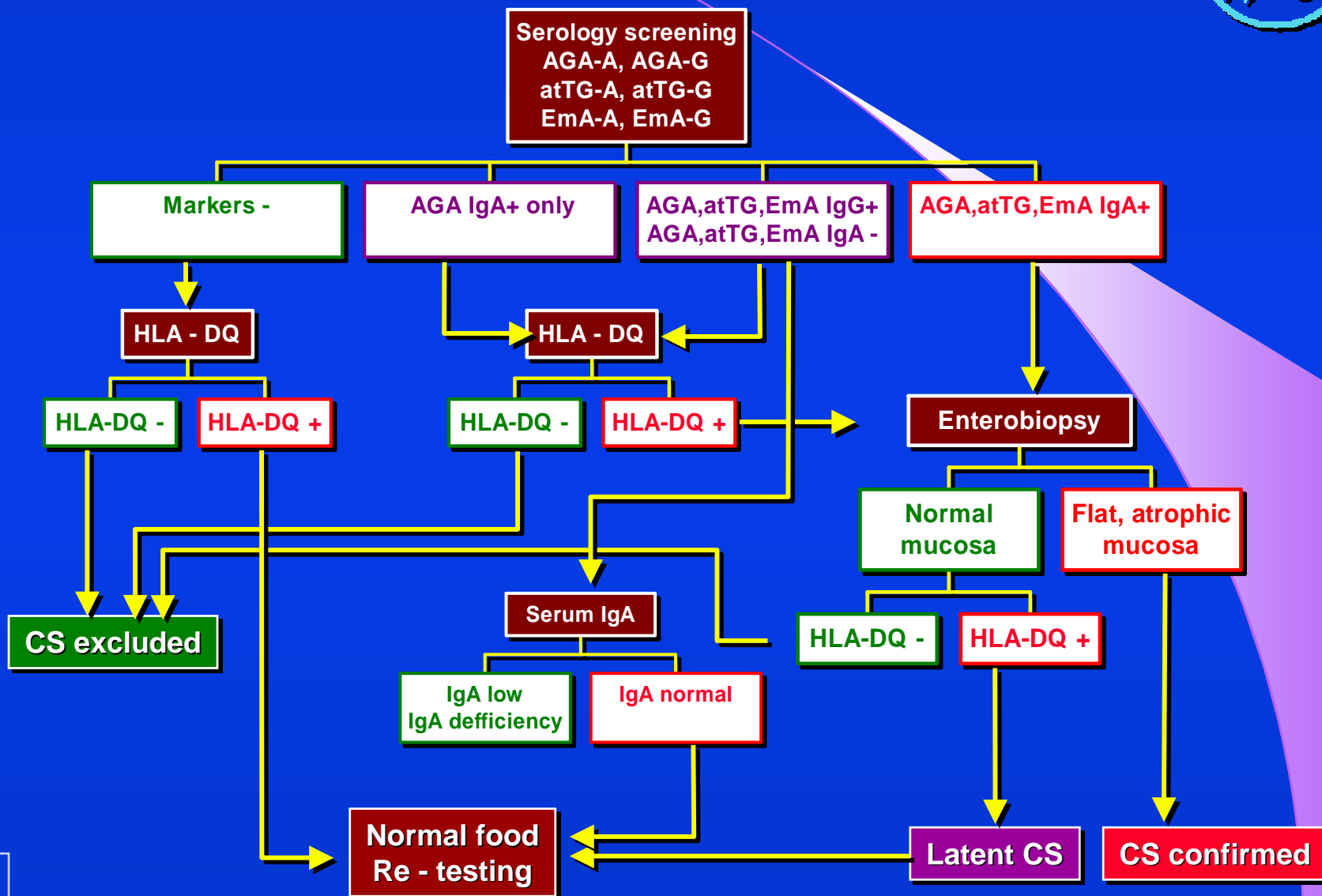
TEST
INTERPRETATION

PROFESIONAL
EDUCATION





DIAGNOSTIC ALGORITHM FOR COELIAC DISEASE



LABORATORY ACCURACY OF CS MARKERS

	SN	SP	PPV	NPV	ACC
AGA-A/AGA-G	0.970	0.462	0.604	0.949	0.695
EmA	0.813	0.950	0.925	0.871	0.891
gp-atTG	0.877	0.687	0.682	0.880	0.769
hr-atTG	0.930	0.904	0.888	0.940	0.916

sensitivity (SN), specificity (SP)
pos.predictive value (PPV), neg.predictive value (NPV)
accuracy (ACC)

CONSULTATIVE ROLE OF LABORATORY

**SCREENING
SELECTION**

**RISK PATIENTS
TEST PROCEDURE**

TEST
INTERPRETATION

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EDUCATION

CONSULTATIVE ROLE OF LABORATORY

SCREENING
SELECTION

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INTERPRETATION**

PROFESIONAL
EDUCATION



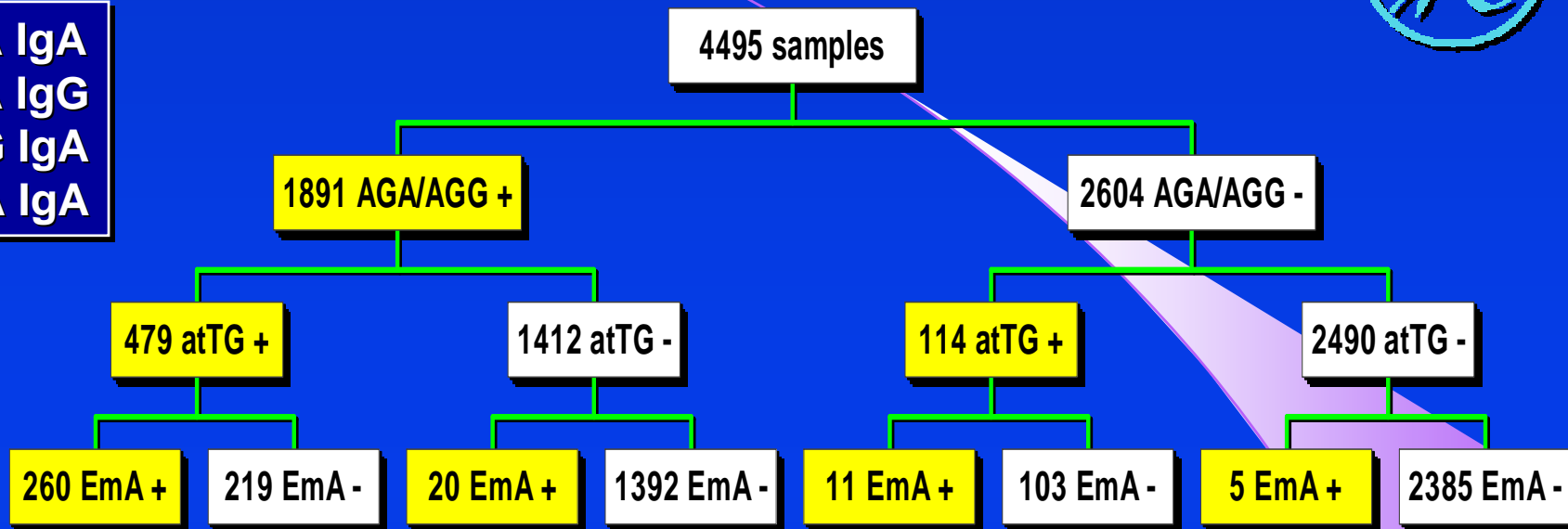
COELIAC SCREENING STUDY DESIGN

- 10 YEAR STUDY WITH SEROLOGICAL MARKERS OF CS
- 6023 SAMPLES ANALYSED BY ELISA AND IF
- 483 PATIENTS ANALYSED BY BIOPSY AND HISTOLOGY
- 208 PATIENTS WITH CS CONFIRMED BY HISTOLOGY
- **EmA** NEGATIVITY - 25.7% (SENSITIVITY **74.3% ONLY**), 1:20
- **anti-tTG** NEGATIVITY - 16.6% (SENSITIVITY IS 83.4%)
- **AGA-A or AGA-G** POSITIVITY - **92.3%**, WITH **a-GLIADIN**



SCREENING STRATEGY WITH atTG

AGA IgA
AGA IgG
atTG IgA
EmA IgA

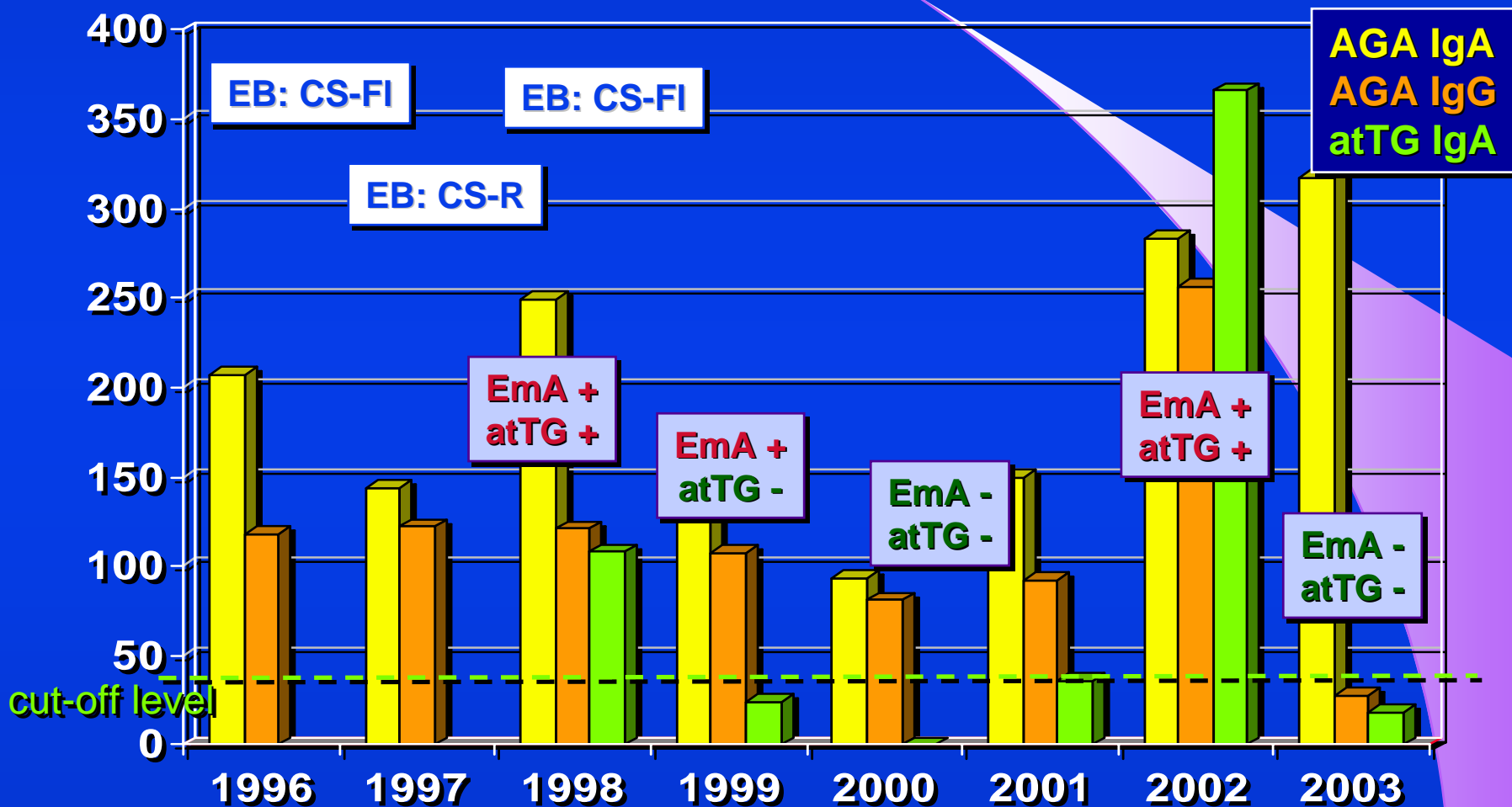


Biopsy

CSF	97/125	13/125	5	5	1	2	2
CSR	4/19	3		6			6/19
HL	2/53	5		27/53			19
N	6/127	15/127		45/127	1	6	54/127

LONG-TIME PATIENT'S FOLLOW-UP

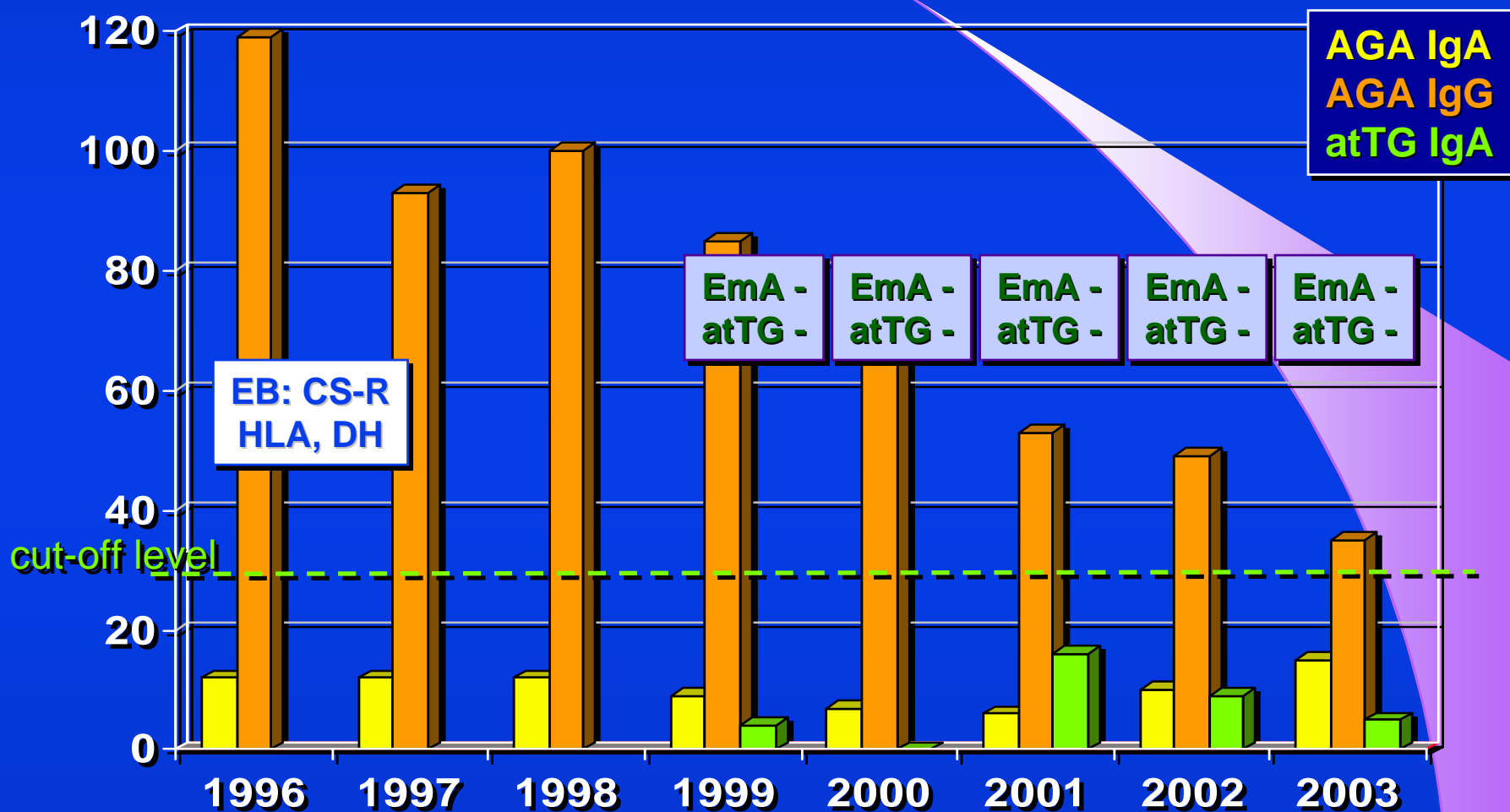
Case: J.H. *1947, long life GFD, CS refractory, not-responding type



Biopsies: 1989 CS-active, florid, 1990 collagen sprue, 1991 CS-R

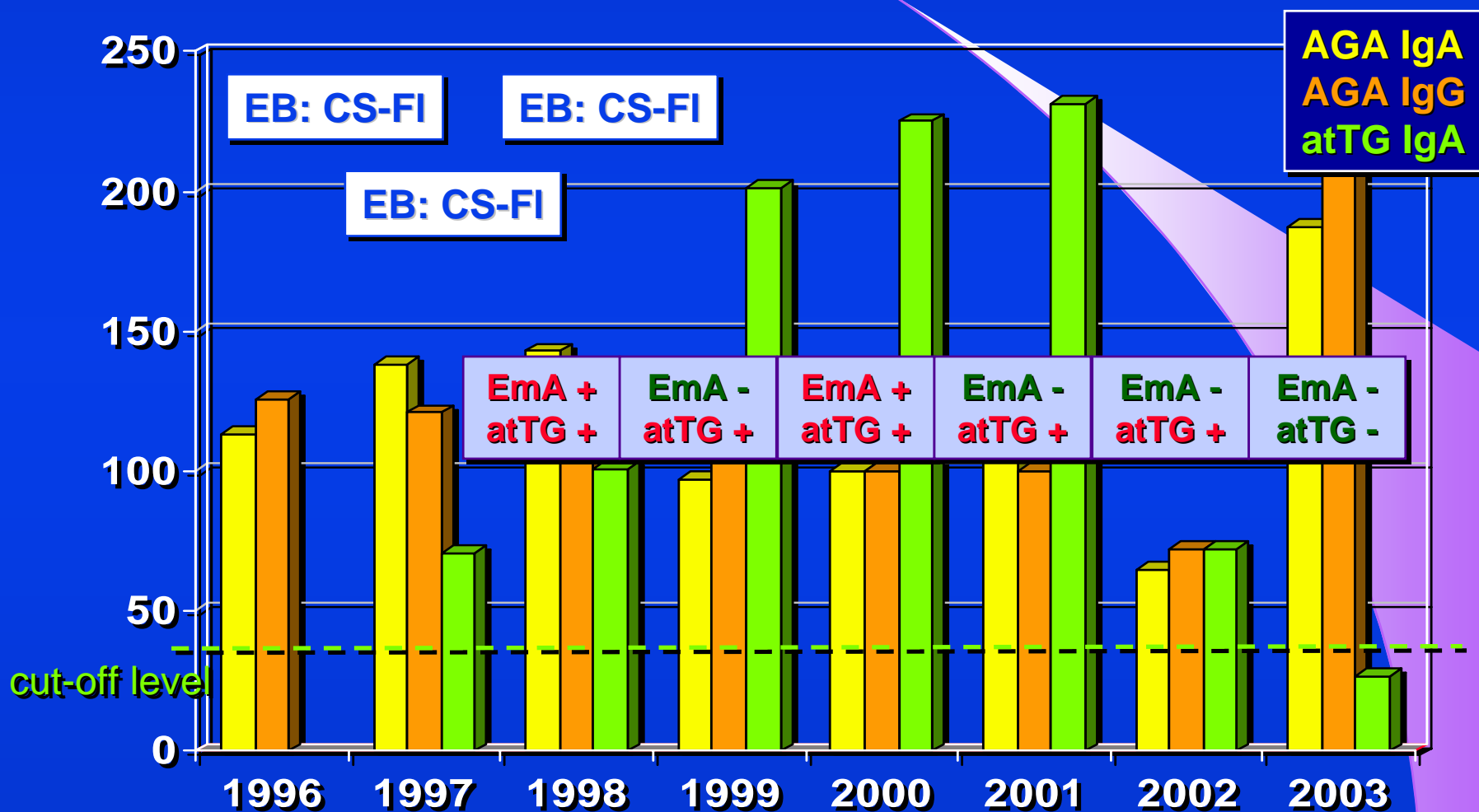
LONG-TIME PATIENT'S FOLLOW-UP

Case: M.R. *1974, CS in remision, Duhring dermatitis 9 years, non-diet



LONG-TIME PATIENT'S FOLLOW-UP

Case: J.V. *1946, active sprue confirmed in every biopsy, on GFD



CONSULTATIVE ROLE OF LABORATORY

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**LABORATORY
DATA ANALYSIS**

PROFESIONAL
EDUCATION

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INTERPRETATION

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EDUCATION**

WWW INTERNET - GE ENCYCLOPEDIA

- Anti-endomysium IgA
- Anti-gliadin IgA, IgG
- Anti-tTG IgA, IgG
- Anti-gliadin, tTG ve stolici
- A-vitamin zátěžový test
- B-karoten
- B-karoten zátěžový test
- Calprotectin ve stolici
- Célie, serologické markery
- Dechové testy H2
- Dechové testy 13C
- Dechový test MTG
- Dechový test OABT
- Dechový test UBT
- Dechový test s laktózou
- Dechový test s xylózou
- Elastáza 1 v séru
- Elastáza 1 ve stolici
- Funkční testy
- Gastrin
- Haemocult, screeningový test



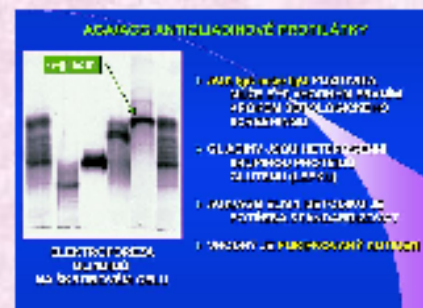
MiniEncyklopedie laboratorních metod v gastroenterologii

GastroLab



Protilátky ke gliadinu (AGA) - IgA a IgG

Peptidové fragmenty gliadinu, proteinů pšeničného glutenu (lepku) patří k základním etiopatogenetickým faktorům célie. Detekce protilátek třídy IgA a IgG proti gliadinu jsou proto nejčastěji a nejdéle používanými serologickými markery. ELISA metody detekce AGA jsou běžně dostupné a z uvedených markerů CS jsou AGA nejprvní test, který je ovlivněn AGA tříd



Medline on-line
Last references

Labor.method
national registry

Reference

Baudon JJ. - Arch Pediatr Adolesc Med. 2004, [Medline - link](#)



Ferre-Lopez S. - Clin Gastroenterol Hepatol. 2004, [Medline - link](#)



Kocna P. - Clin Chem Lab Med 2002, [Medline - link](#)



Grodzinsky E. - Clin Diagn Lab Immunol 2001, [Medline - link](#)



WWW link - <http://gelab.zde.cz>

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**EDUCATIONAL AND TEACHING ACTIVITIES
IN 2004 WERE AWARDED BY
CZECH SOCIETY OF CLINICAL BIOCHEMISTRY**

EXPERT GROUP FOR COELIAC DISEASE

MINISTRY OF HEALTH OF THE CZECH REPUBLIC
ASSIGNATED IN MAY 2004

EXPERT GROUP FOR COELIAC DISEASE

CO-OPERATING PROFESSIONALS:

CZECH SOCIETY OF GASTROENTEROLOGY
CZECH PEDIATRIC SOCIETY
CZECH SOCIETY OF CLINICAL BIOCHEMISTRY
CZECH SOCIETY OF ALERGOLOGY AND IMMUNOLOGY
CZECH COELIAC PATIENTS GROUP

CONSULTATIVE ROLE OF LABORATORY

**SCREENING
SELECTION**

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**PROFESIONAL
EDUCATION**

**WWW, CDROM,
MINISTRY OF HEALTH**



THANK YOU