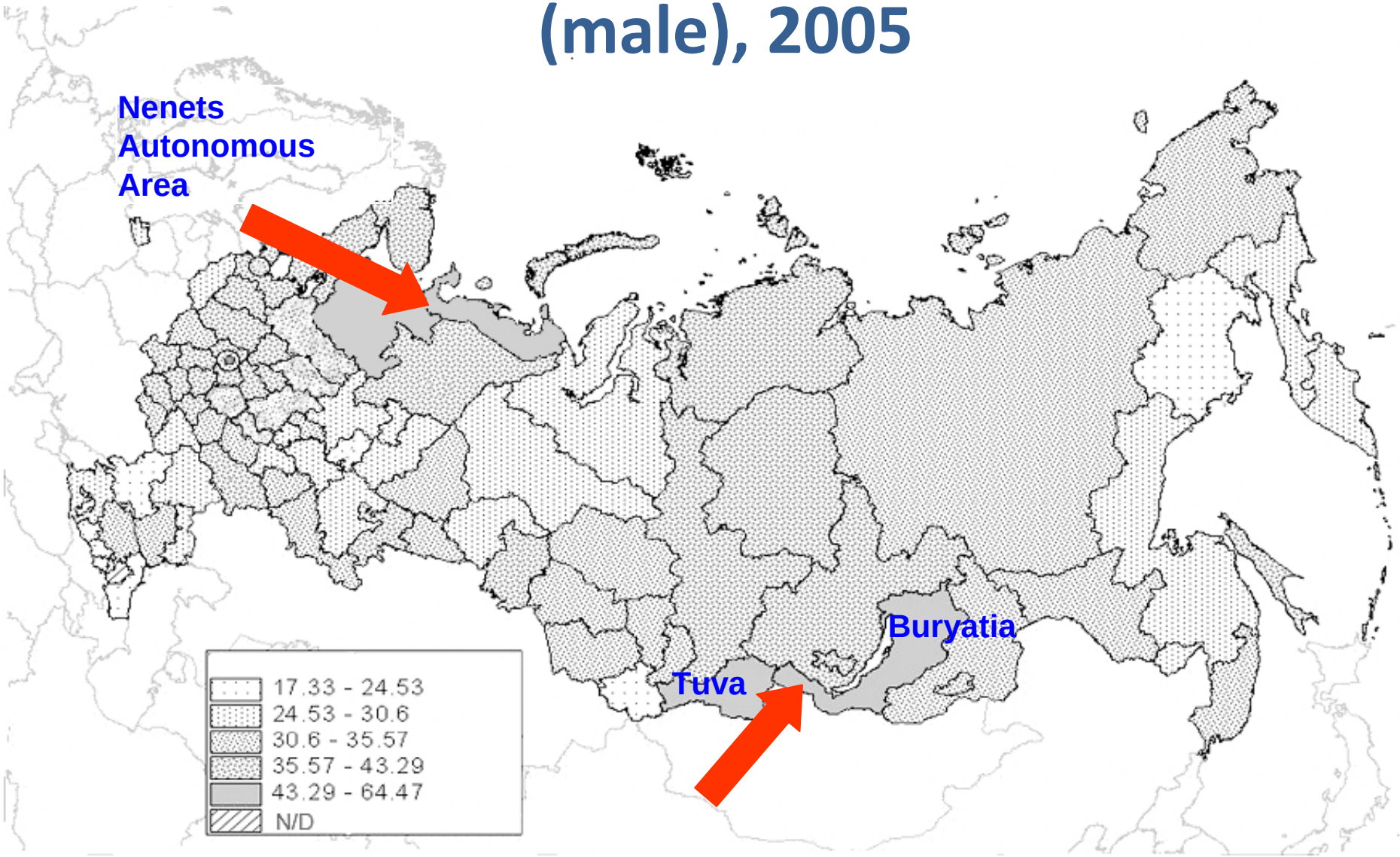
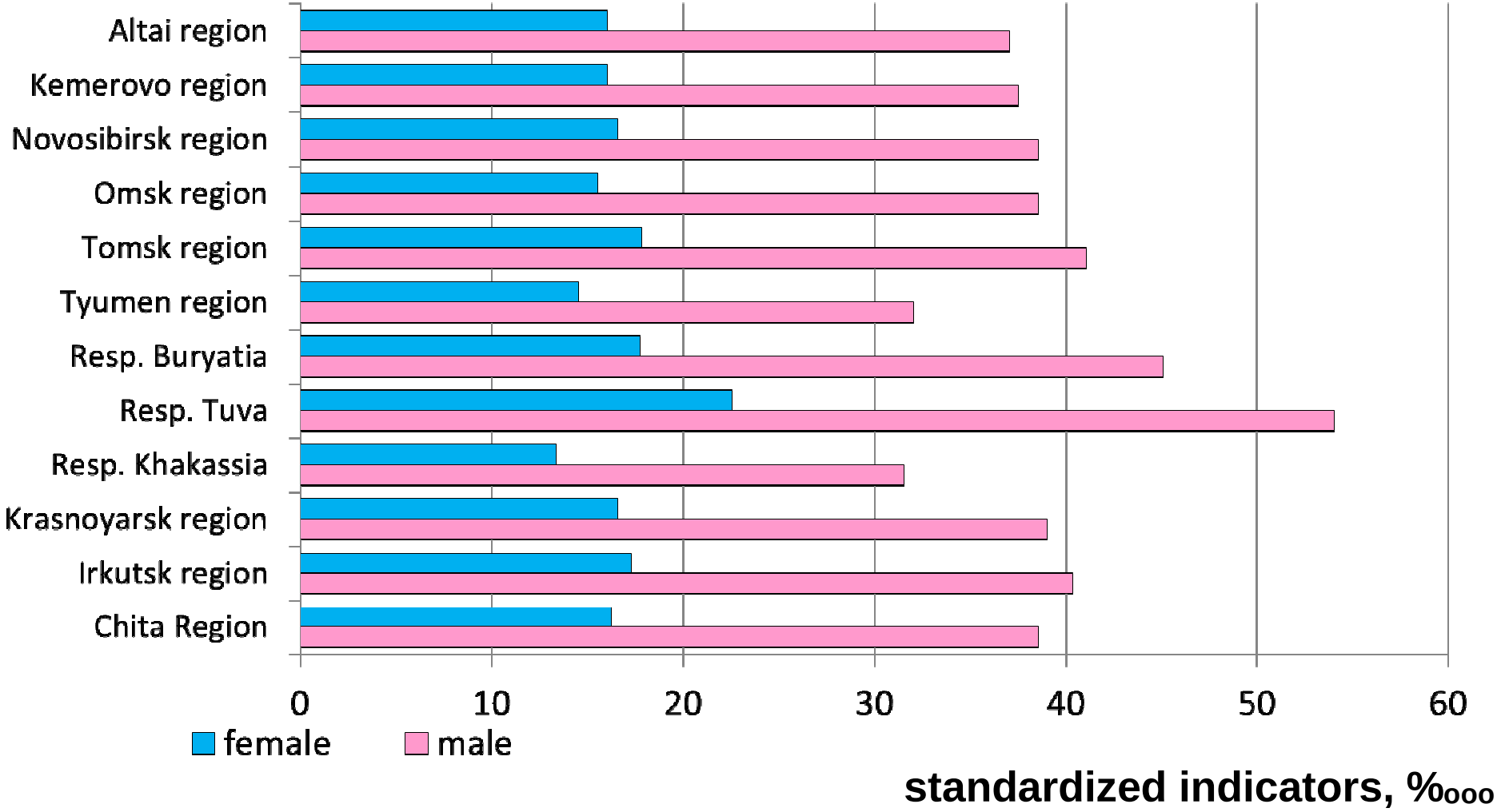

Updates on H. pylori
in Russia
Vladislav Tsukanov

Incidence of gastric cancer in Russia (male), 2005



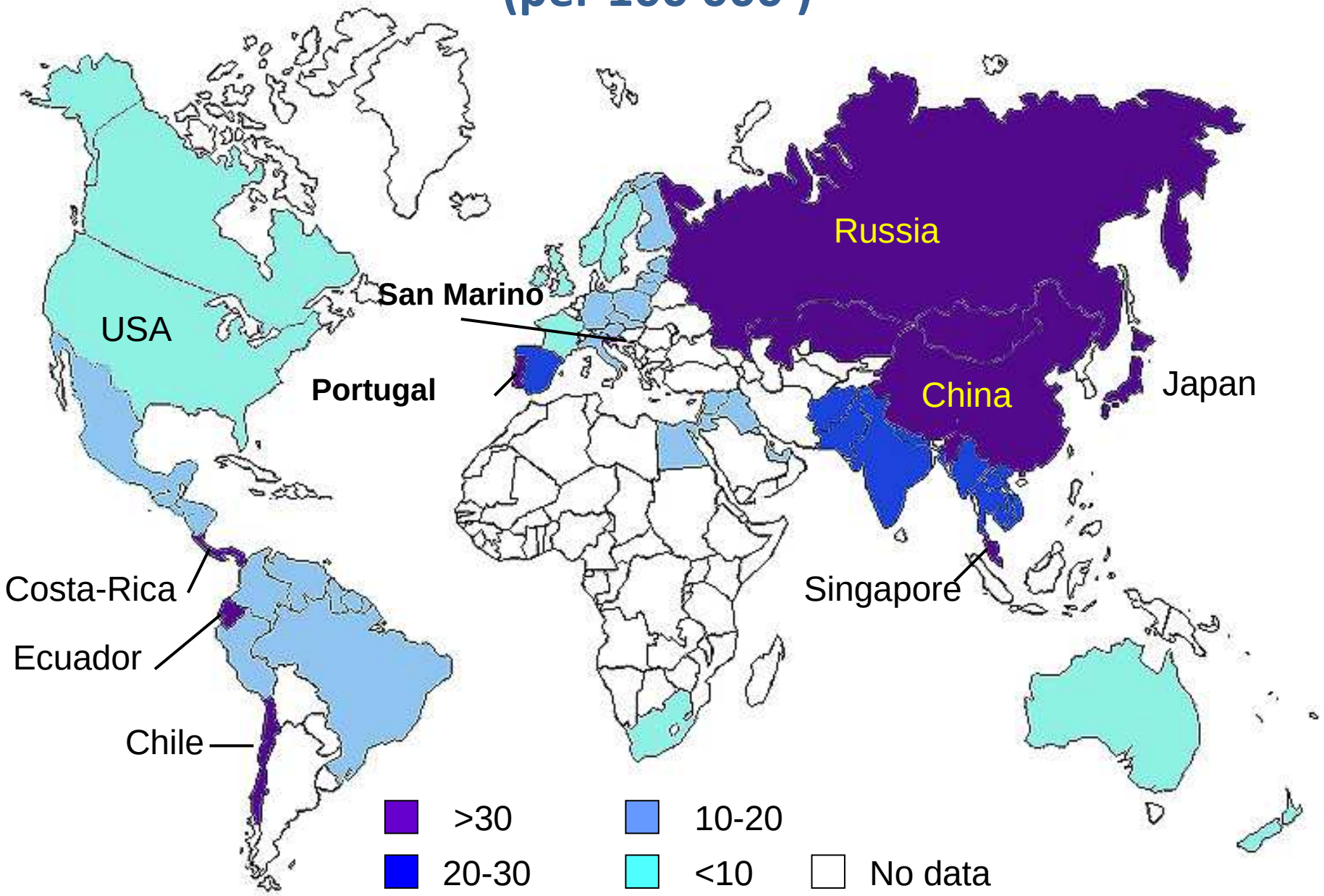
Incidence of gastric cancer in population of Siberia 1991-2005

Pisareva LF et al., Sib. Oncol. J., 2009, №3, c.36-43



Gastric cancer mortality

(per 100 000)



Recommendations for the screening of gastric cancer in Japan

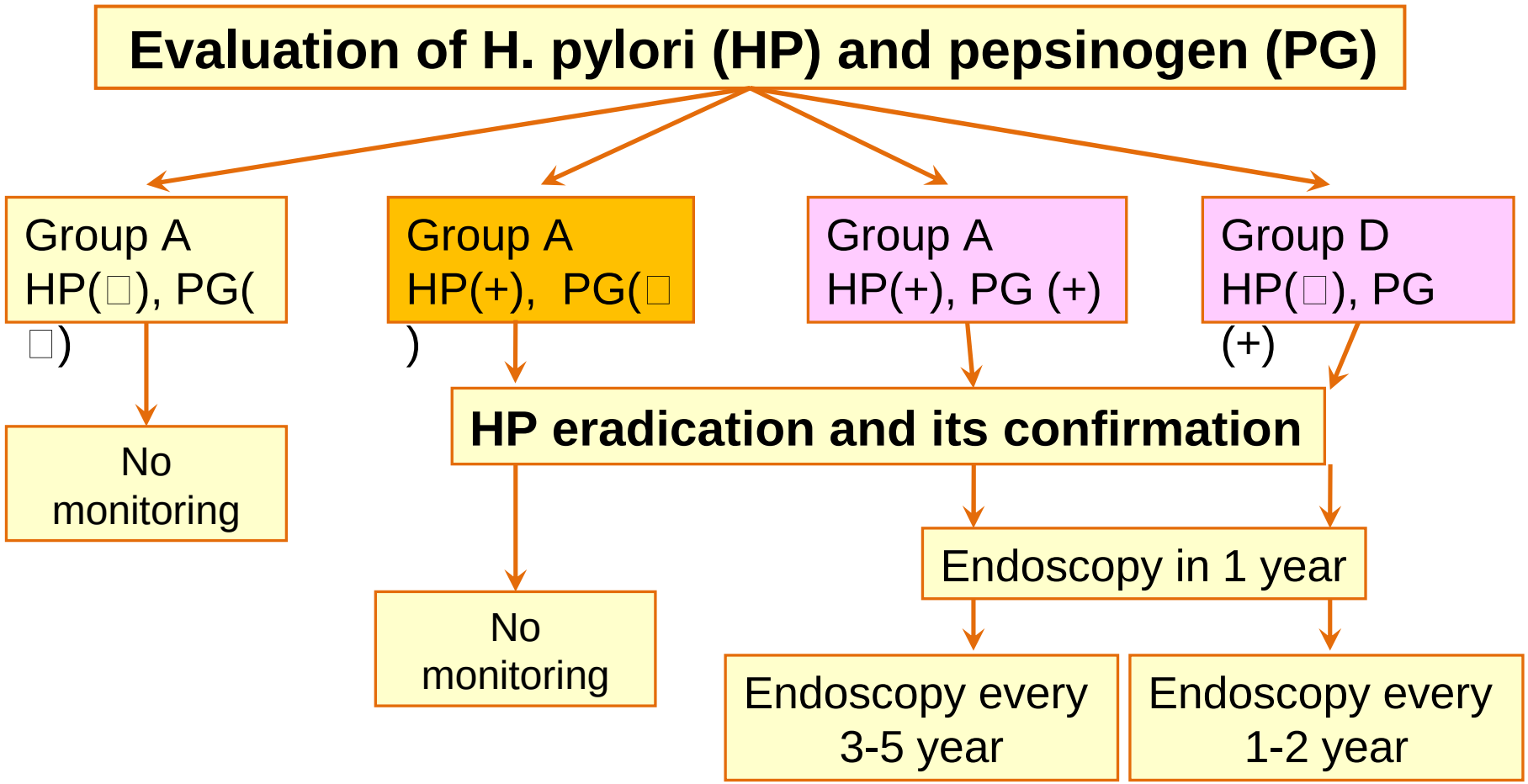
H. Suzuki, Tokyo, Japan

- Gastrofluorography
- Gastrofibroscopy
- Serum pepsinogen
- Antibodies to Helicobacter pylori

Hamashima et al., 2008, *Jpn. J. Clin. Oncol.*, Vol.38, P.259-267.

Screening for gastric cancer, based on new approaches

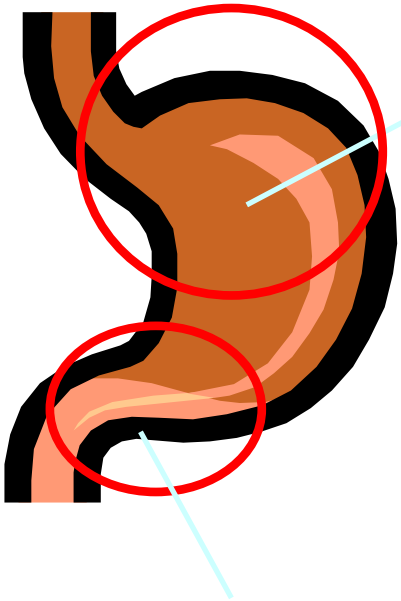
H. Suzuki, Tokyo, Japan



Asaka, *J. Jpn. Soc. Gastroenterol.*, 2010, Vol.107, P.359□364.

Maastricht – 4, 2010

Noninvasive methods of screening for gastric cancer



Pepsinogen I (PG) ⇩
PG I / PG II ⇩

Gastrin (G-17) ⇩

After stimulation G-17 ⇩

Serological methods for the determination of *H.pylori* and atrophy (pepsinogen) <u>are the best approach to identify persons with increased risk of gastric cancer.</u>

Evidence level 1a

Grant

We perform the study «Early detection of gastric mucosa precancerous changes in the population over 45 years of Krasnoyarsk» on the grant of Krasnoyarsk Regional Fund of scientific and technological activities support.

Methods

The list of persons for the study was determined using random numbers table on the basis of lists of adult population of Krasnoyarsk city.

Sample size was 800 people.

Methods

At current stage of study clinical examination with filling questionnaires, collection and preservation of blood serum were performed in 483 persons (224 male, 259 female).

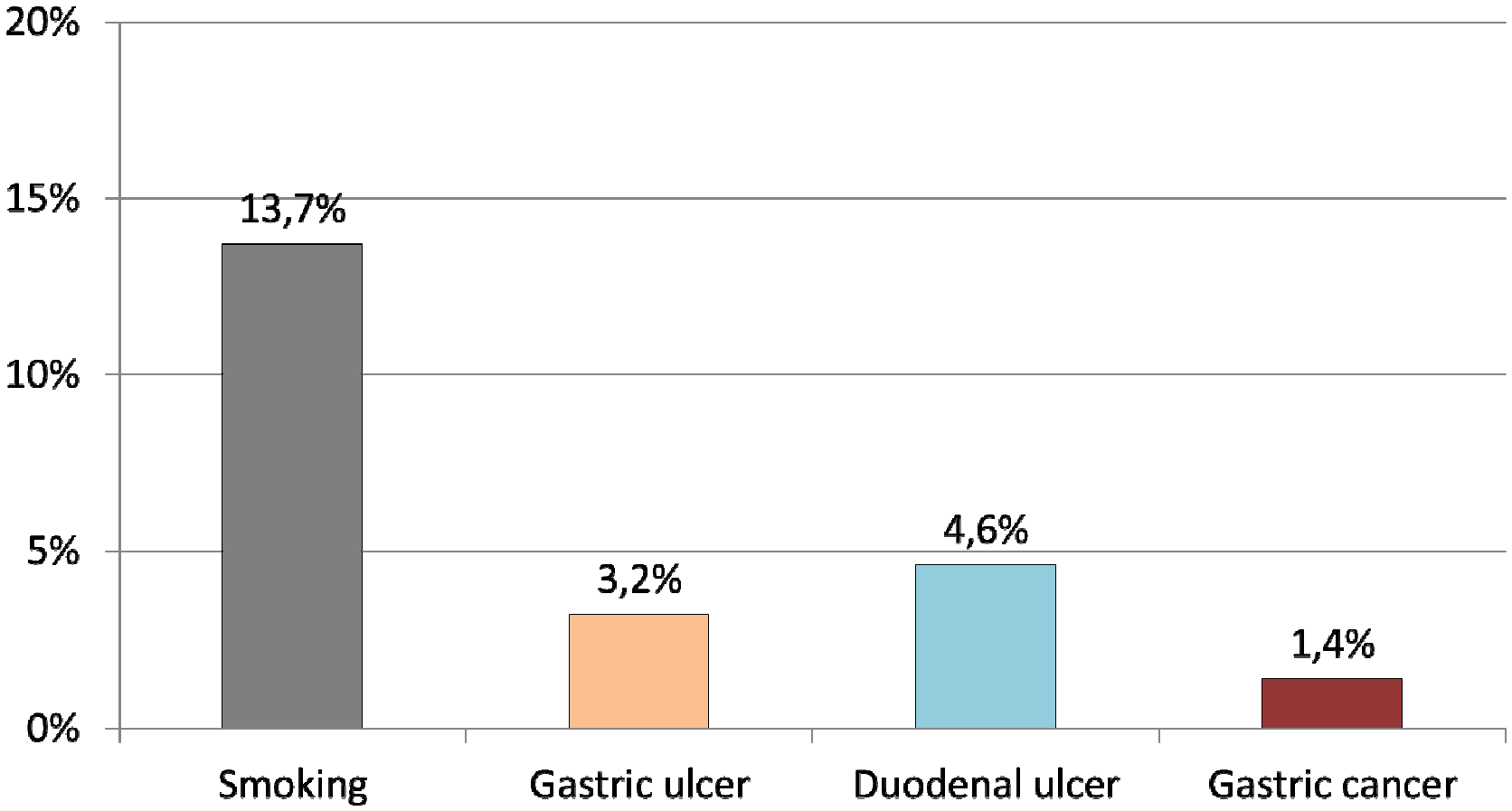
Methods

Pepsinogen-1, pepsinogen-2 and antibodies to Helicobacter pylori were determined in blood serum by ELISA analyzer "StatFaks-3000" using the test system "Gastropanel" ("Biohit", Finland).

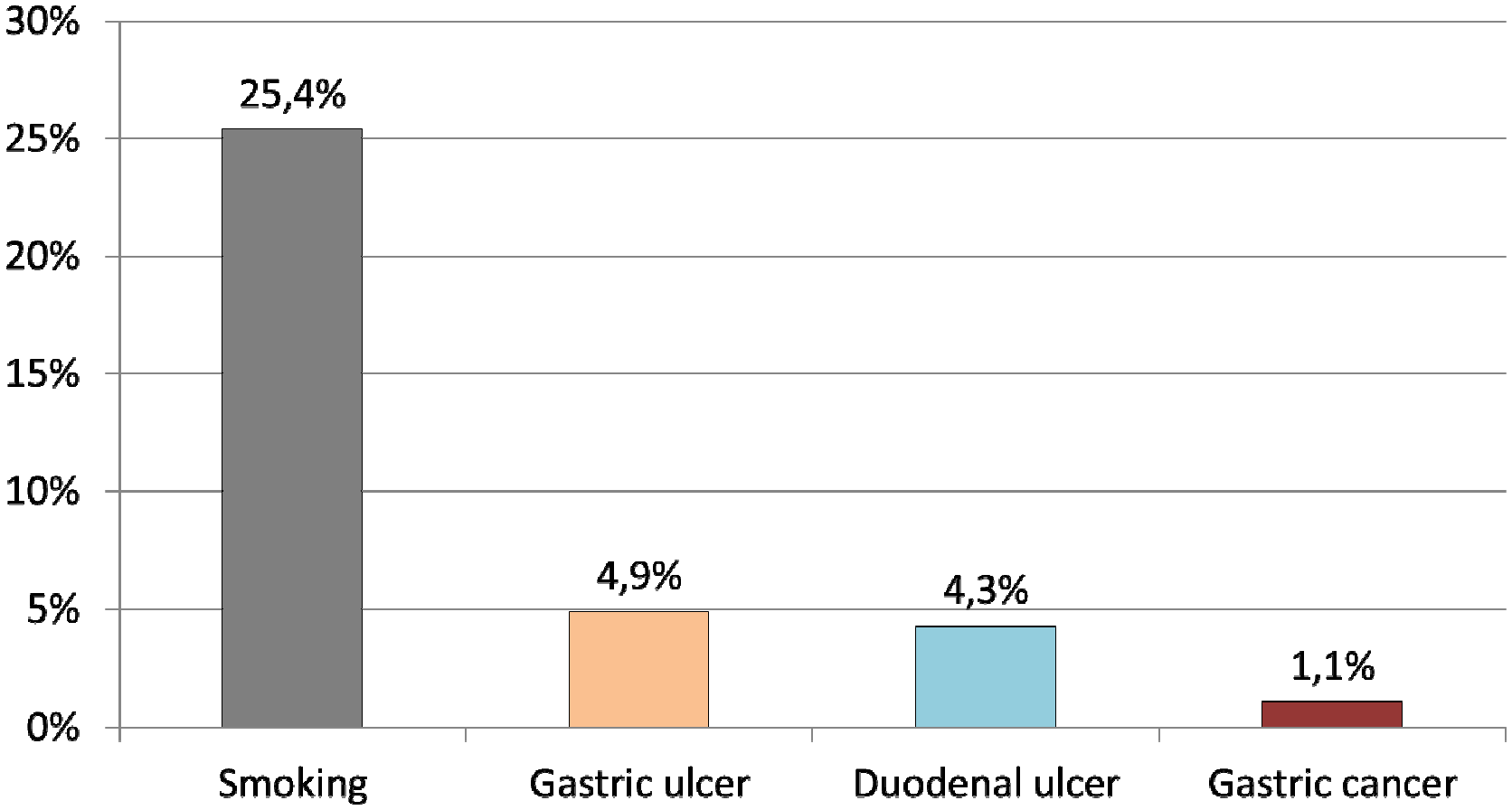
Methods

In accordance to the manufacturer's instructions as a marker of atrophy of gastric body mucosa were pepsinogen-1 level less than 25 mg / L and pepsinogen-1/pepsinogen-2 ratio less than 3.

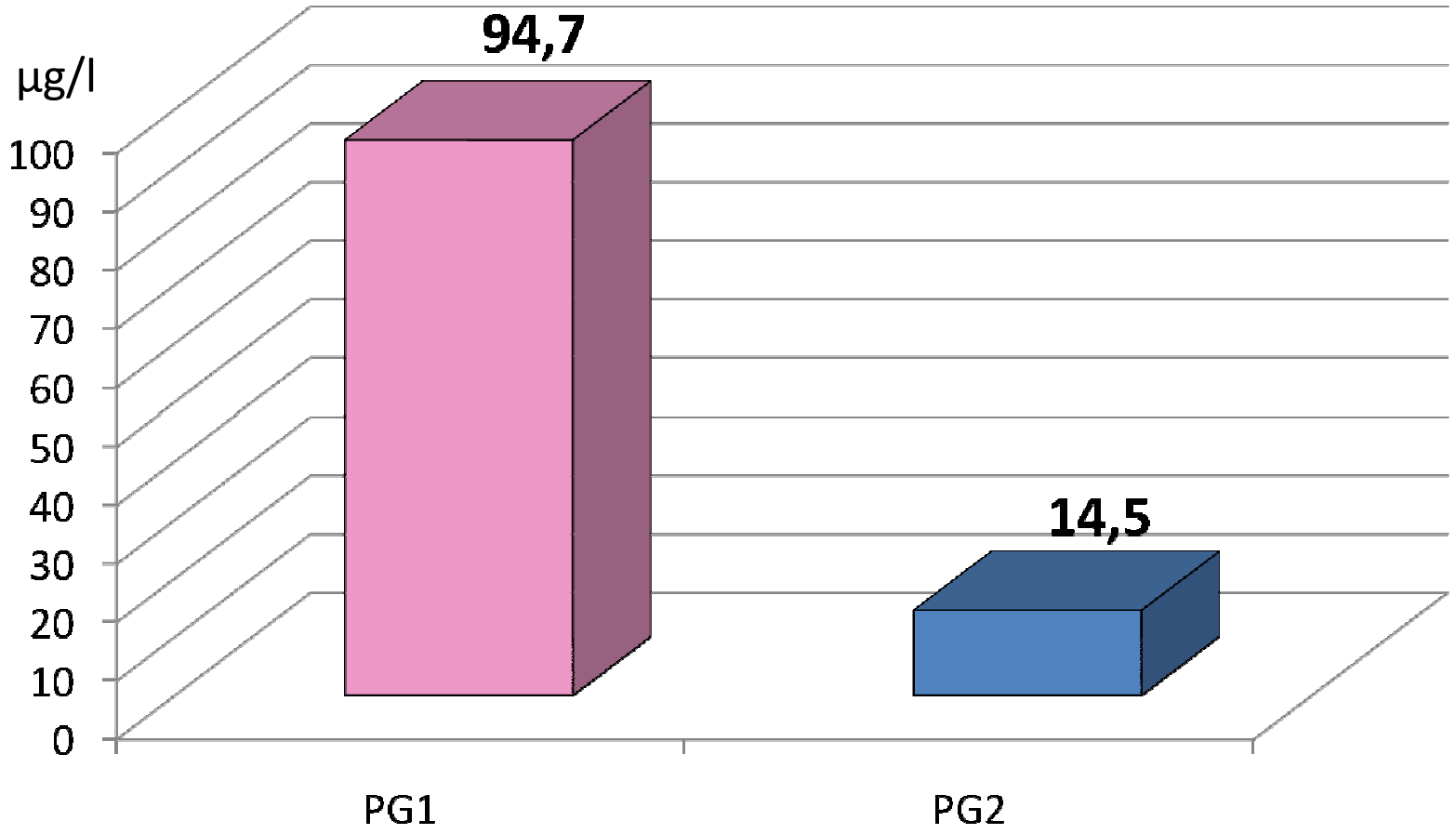
The prevalence of anamnestic data in female older 45 years



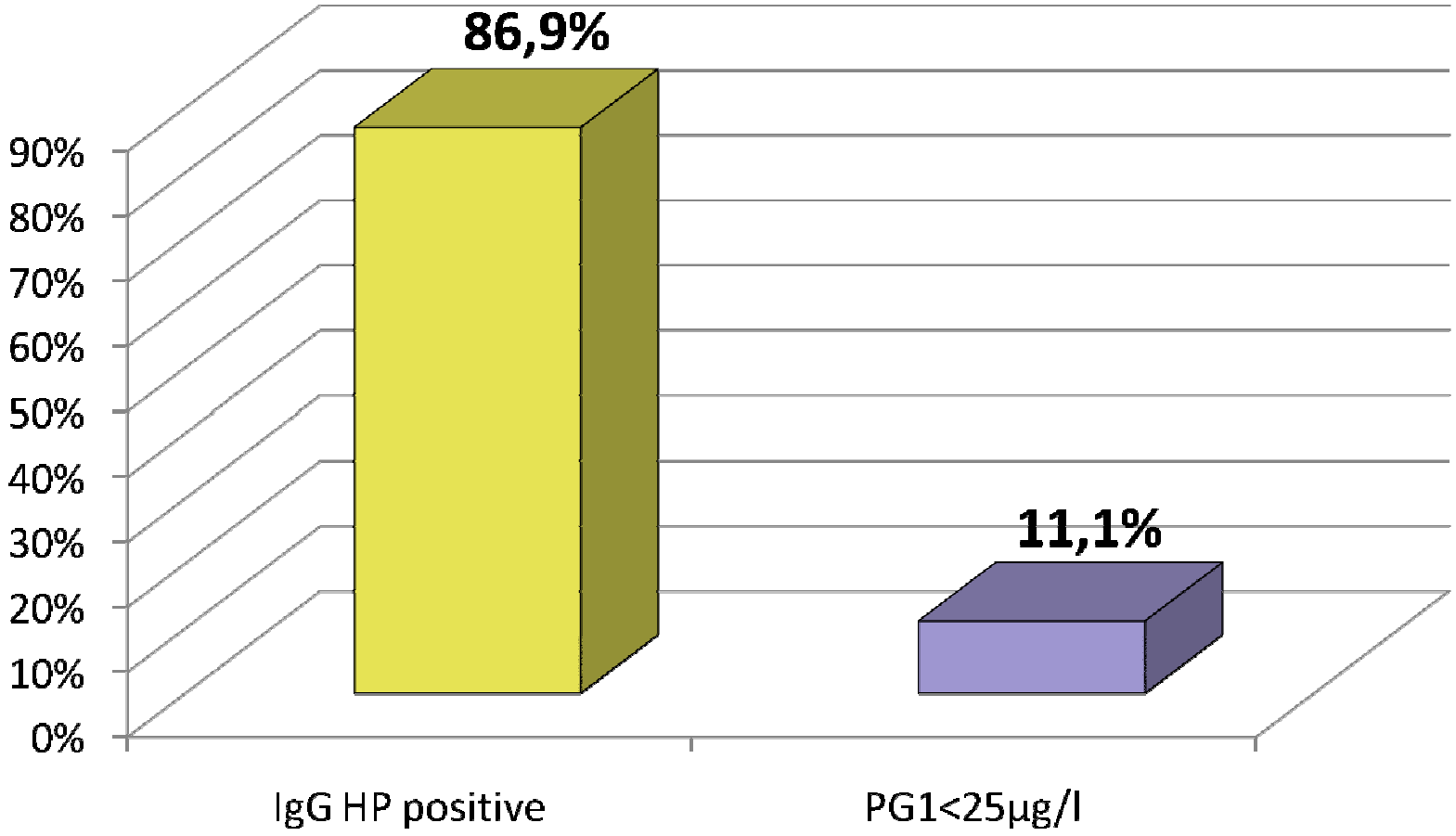
Prevalence of anamnestic data in male older 45 years



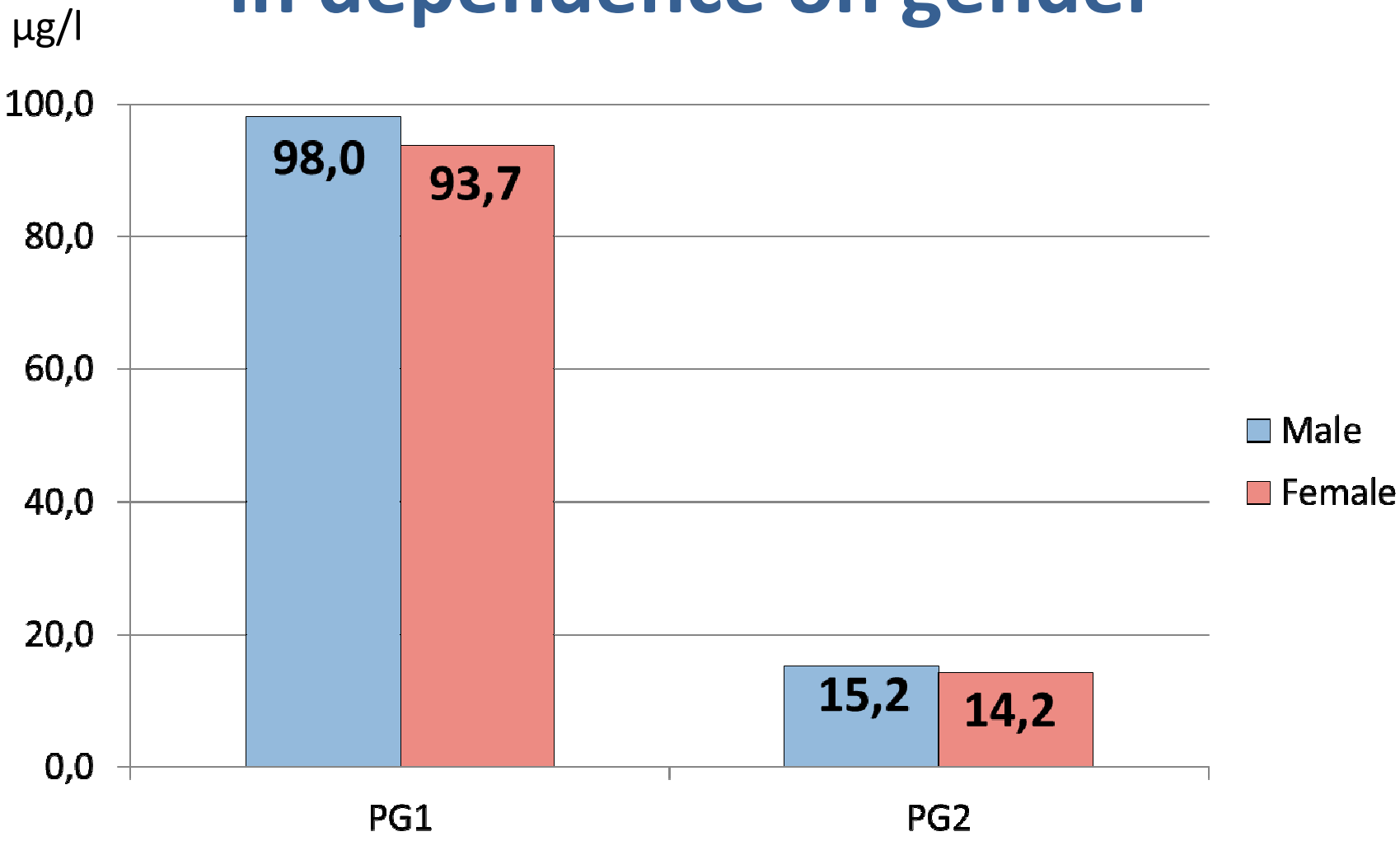
Average PG1 и PG2 (µg/ l)



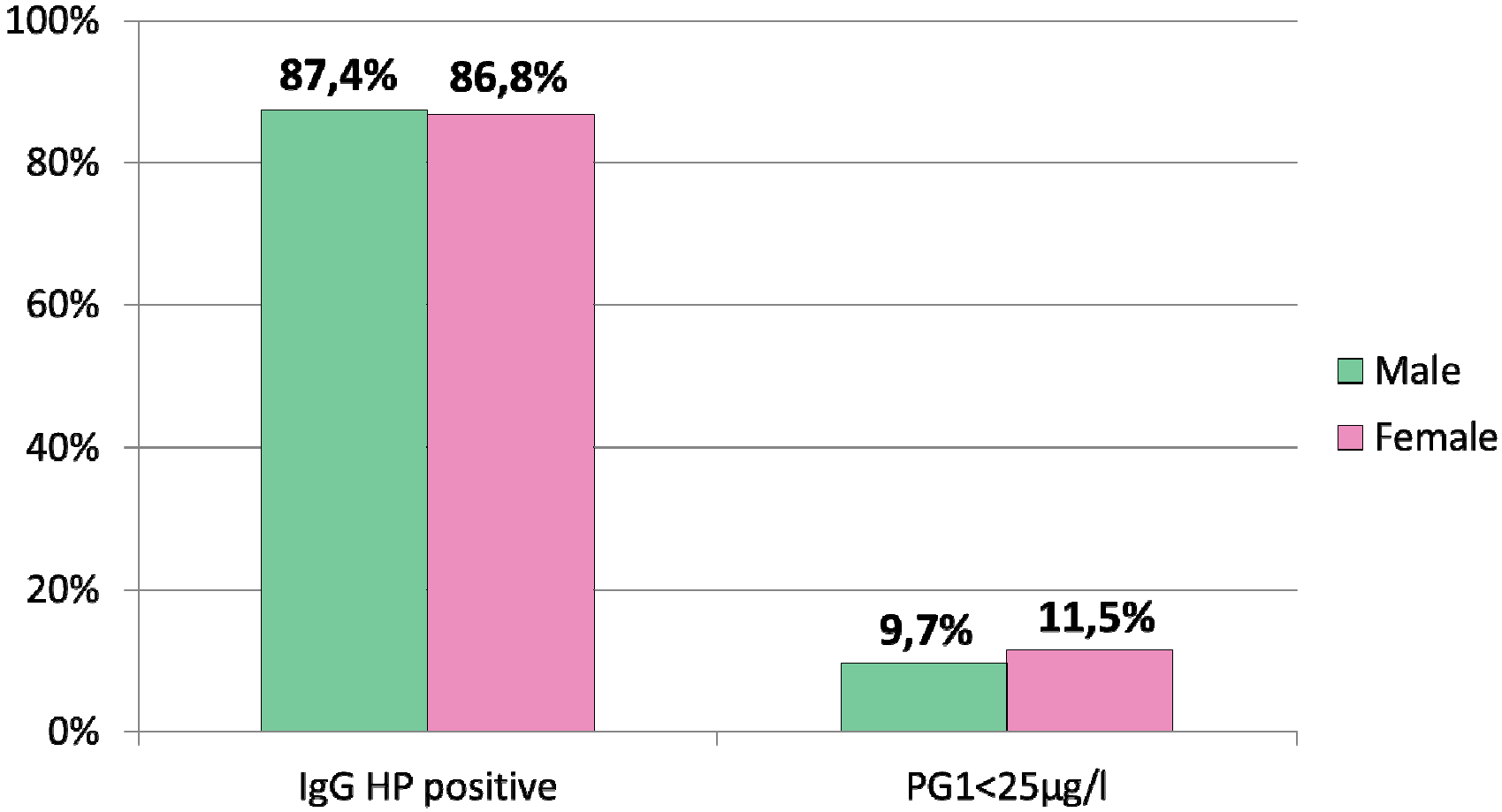
Prevalence of H. pylori and corpus atrophic gastritis (PG1<25 µg/ l)



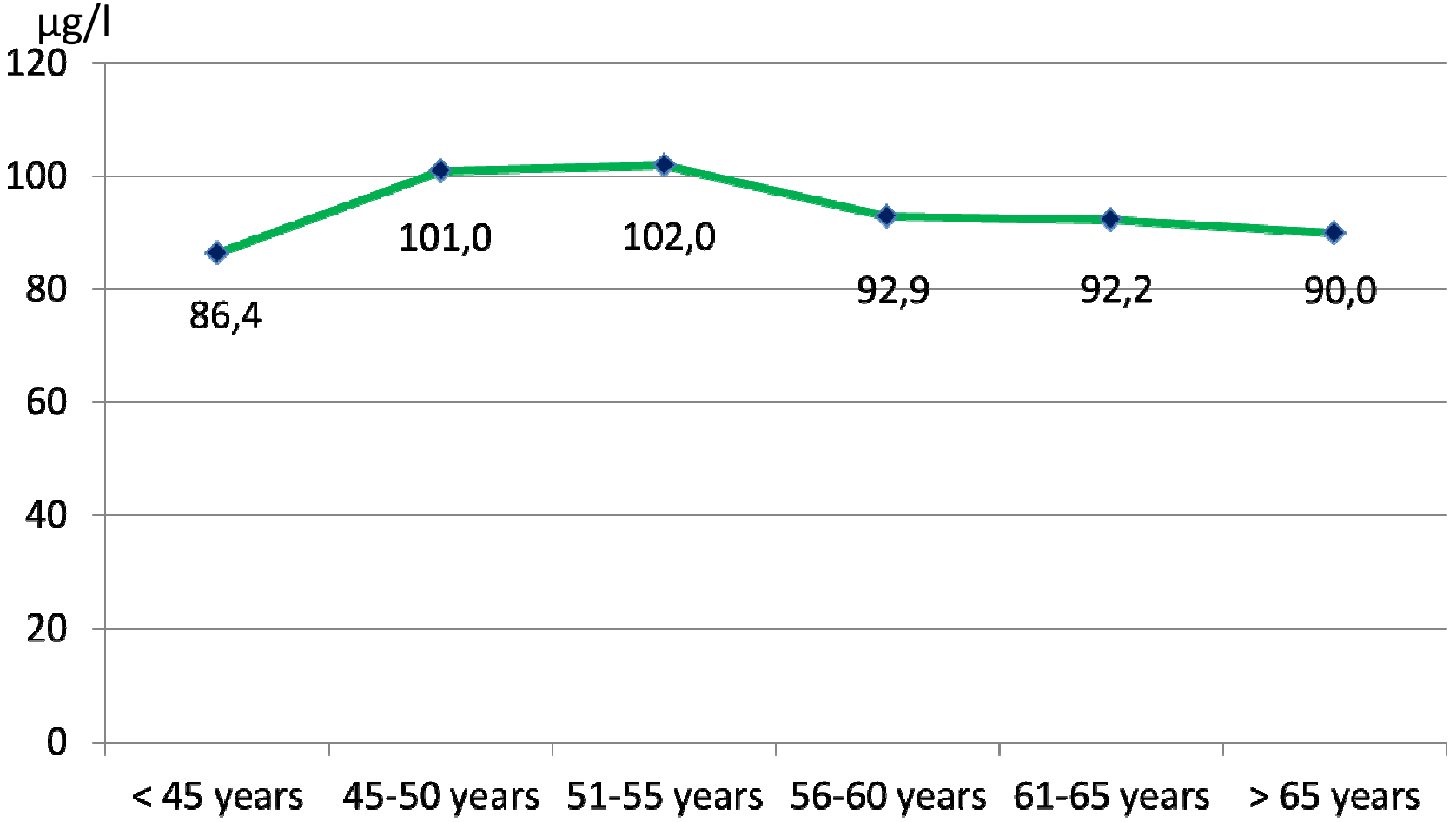
Average PG1 и PG2 (µg/ l) in dependence on gender



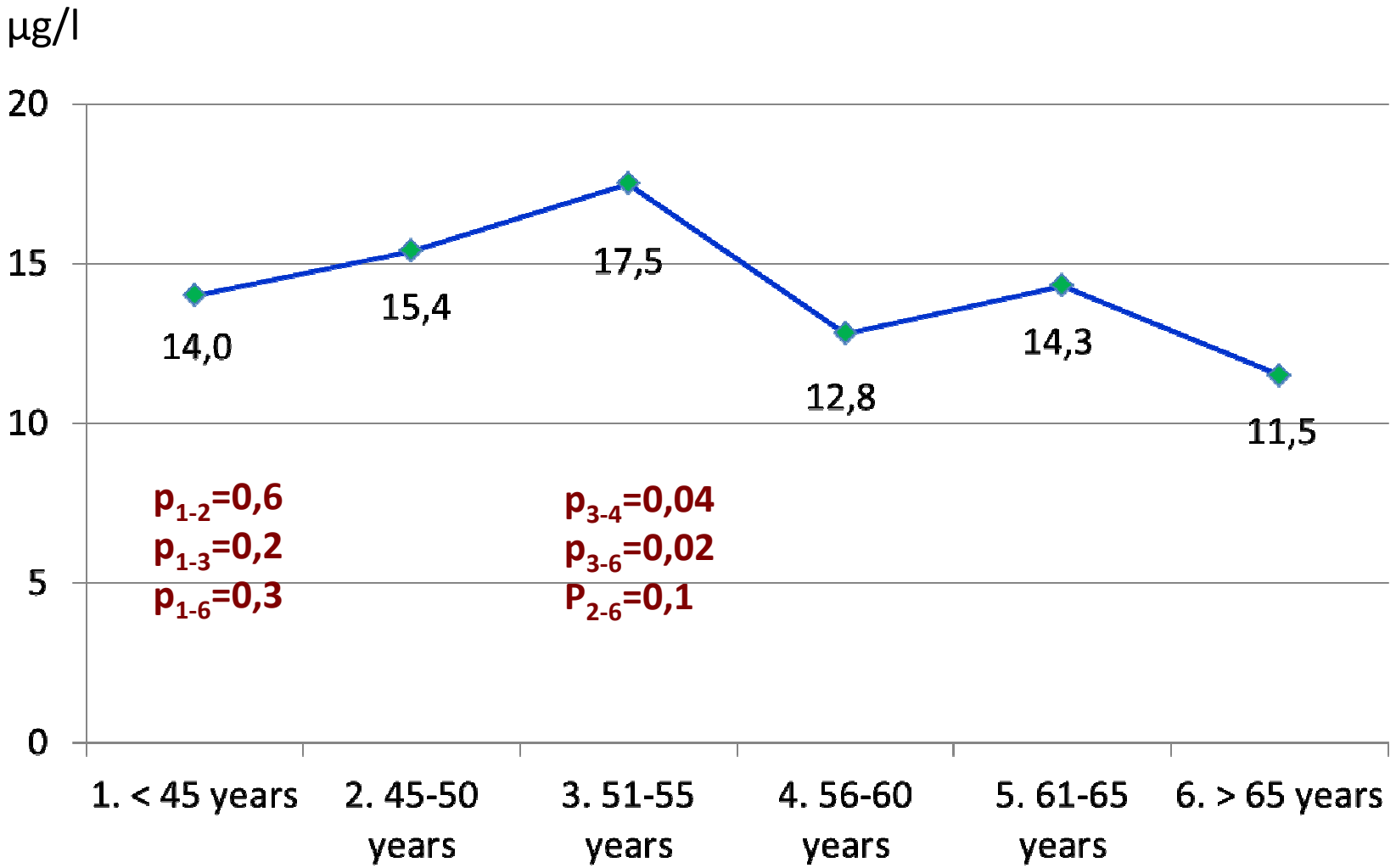
Prevalence of H. pylori and corpus atrophic gastritis (PG1<25 µg/ l) in dependence on gender



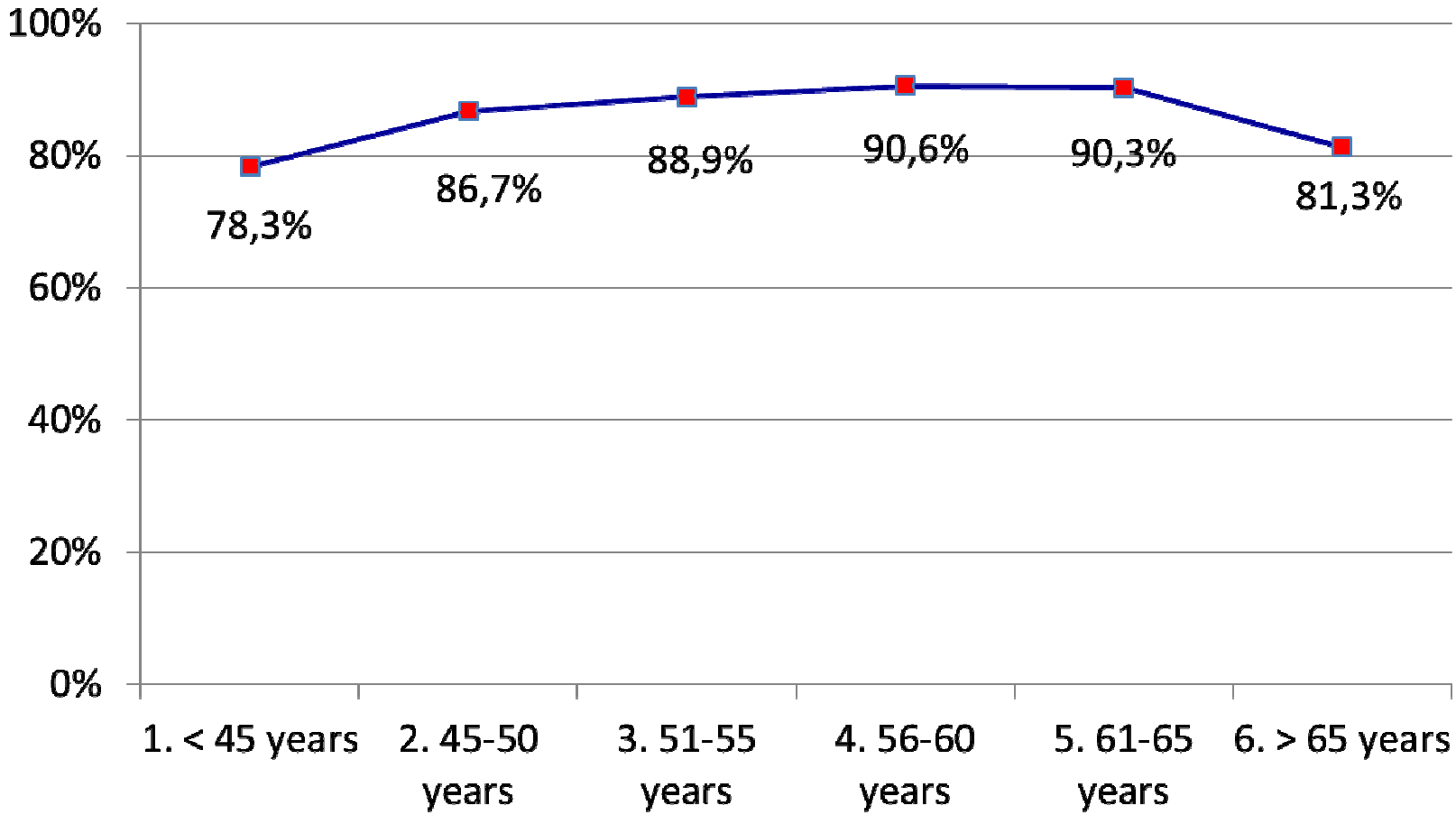
Average PG1 (µg/ l) in dependence on age



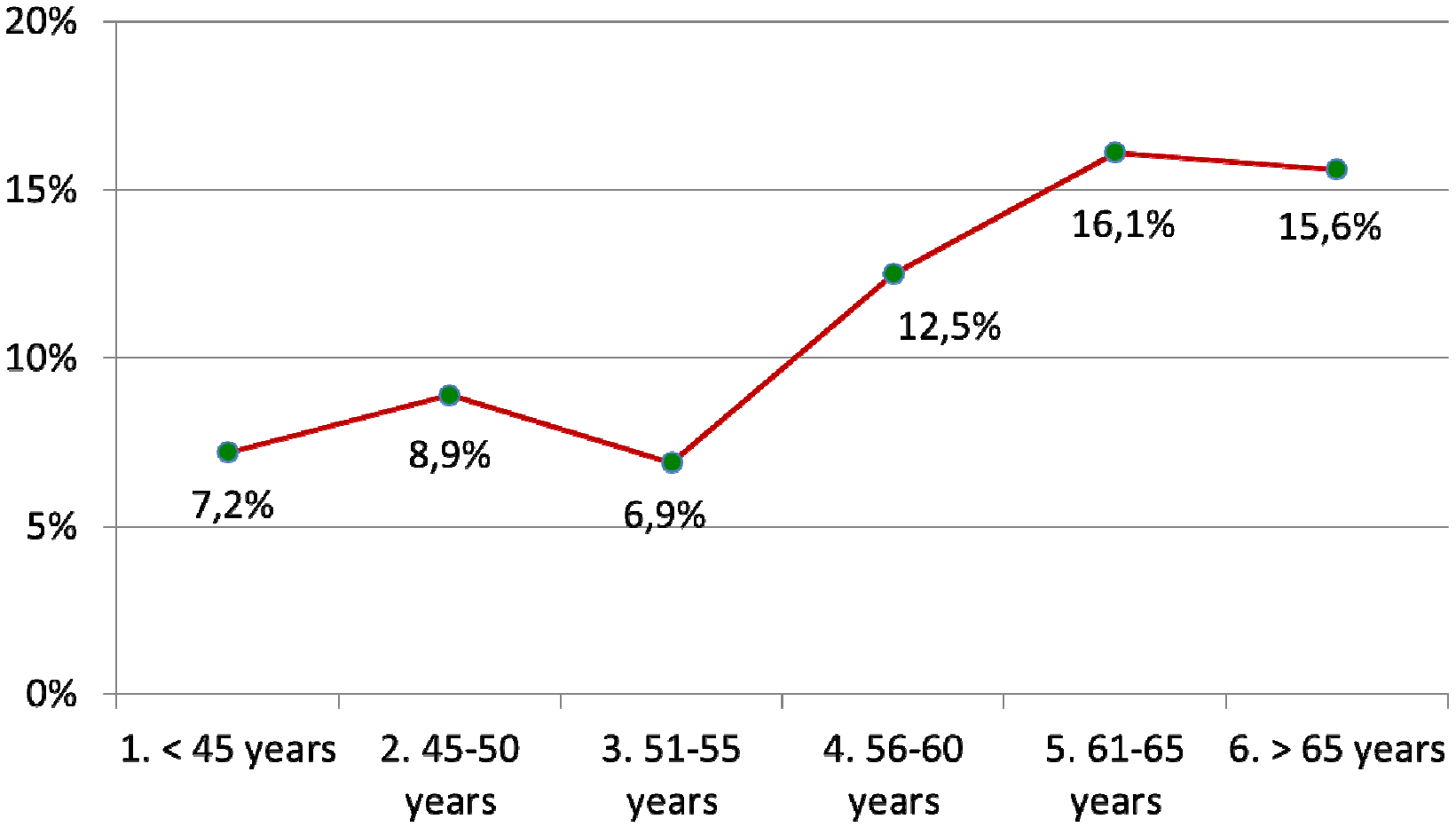
Average PG2 (µg/ l) in dependence on age



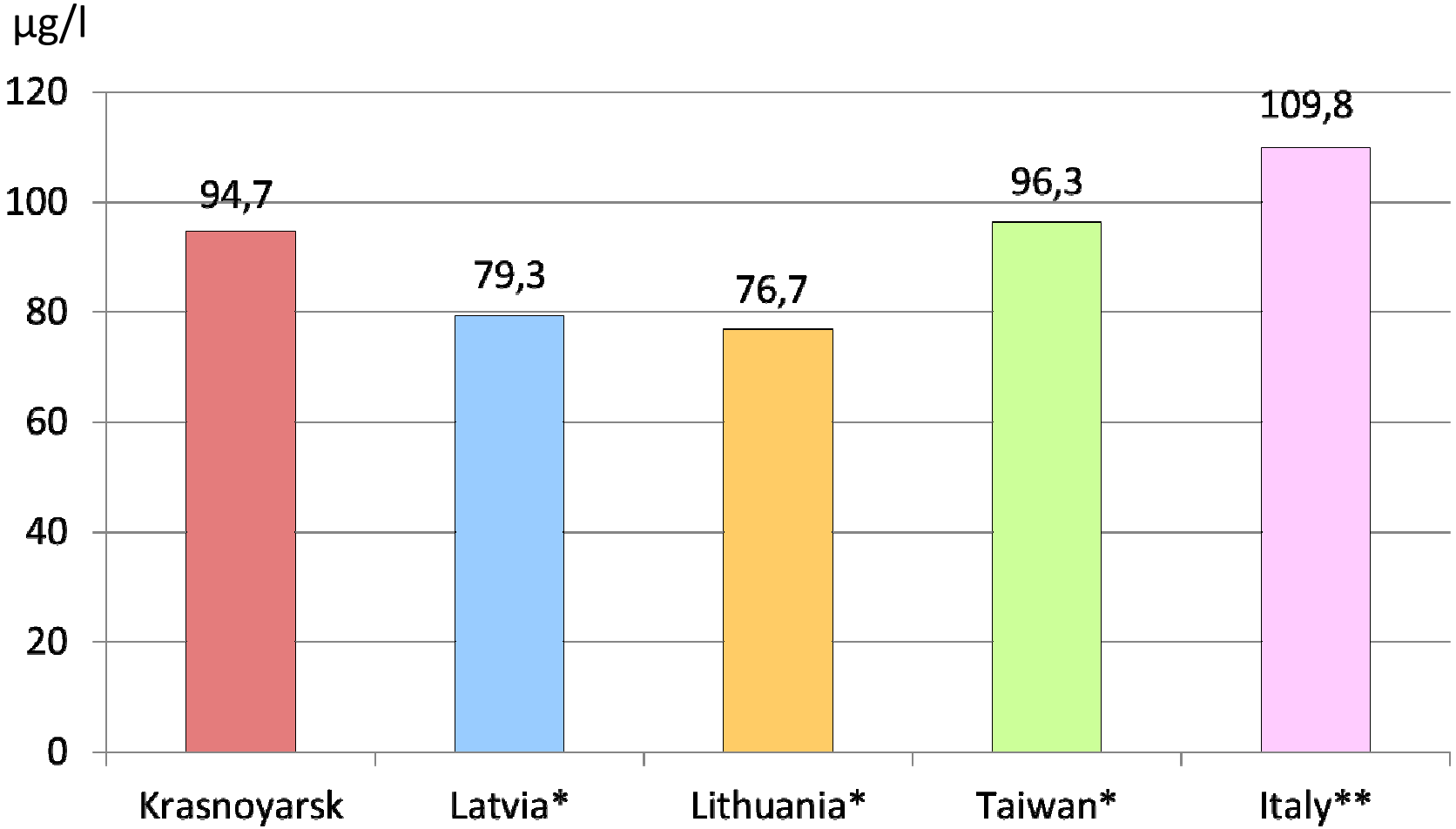
Prevalence of H. pylori in dependence on age



Prevalence of corpus atrophic gastritis (PG1<25 µg/ l) in dependence on age



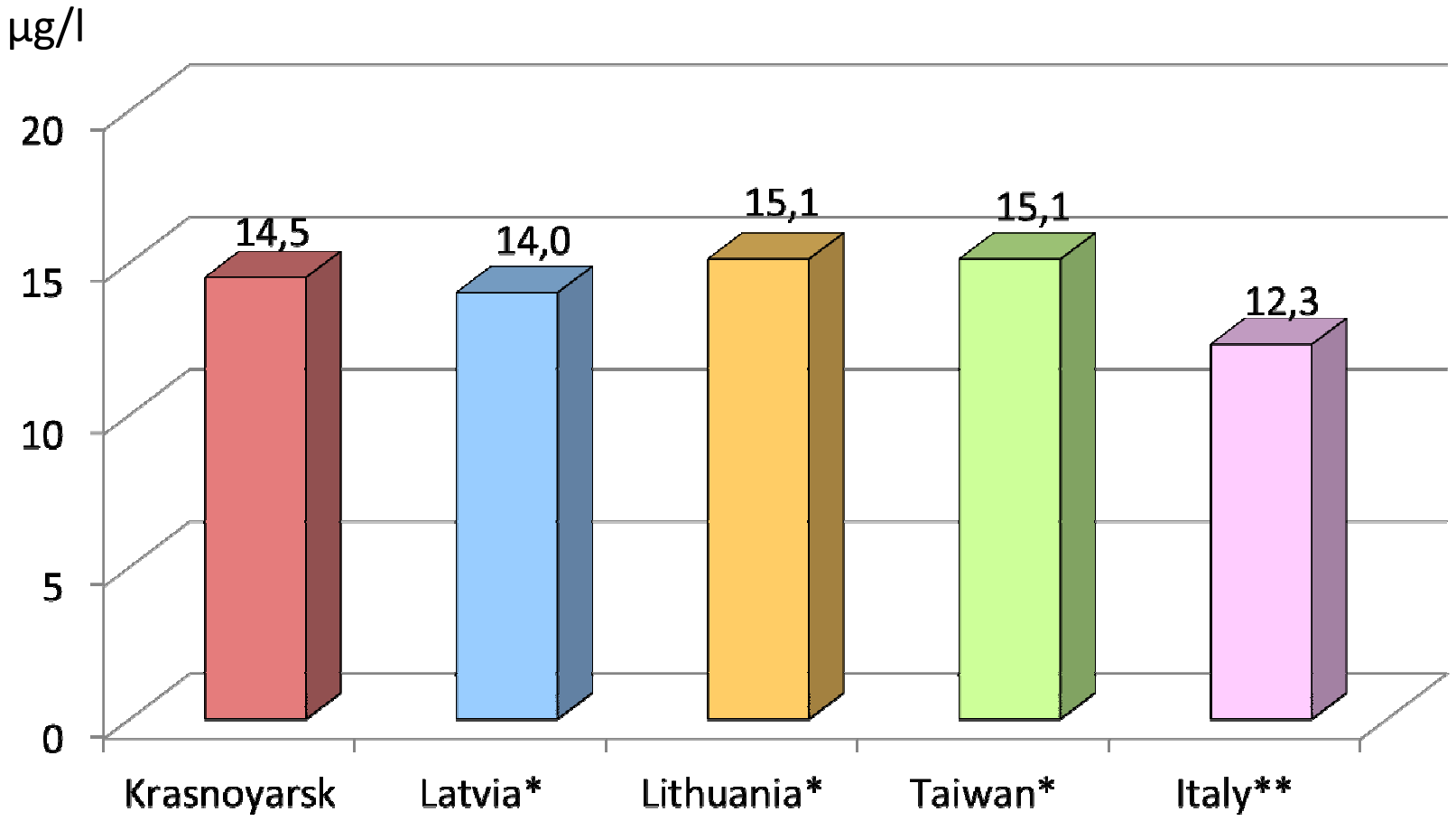
Comparison of content PG1 (µg/ l) in different countries



* M. Leja et al. Dig. Dis. Sci., 2009, 54:2377-2384.

**F. Di Mario et al. Dig. Dis. Sci., 2006, 51:1791-1795

Comparison of content PG2 (µg/ l) in different countries



* M. Leja et al. Dig. Dis. Sci., 2009, 54:2377-2384.

**F. Di Mario et al. Dig. Dis. Sci., 2006, 51:1791-1795

Prevalence of corpus atrophic gastritis (PG1<25 μg/ l) in Moscow

Leontjeva NI et al., 2009.

391 patients (273 female and 112 male) aged 15-84 years with chronic diseases of the gastrointestinal tract were examined. Pepsinogen-1, pepsinogen-2 and antibodies to H. pylori in blood serum were determined in all patients by Gastropanel (Biohit, Finland).

Prevalence of corpus atrophic gastritis (PG1<25 μg/ l) in Moscow

Leontjeva NI et al., 2009.

The prevalence of corpus atrophic gastritis (PG1<25 μg/ l) was 14%. 89% persons were positive to H. pylori.

Prevalence of corpus atrophic gastritis (PG1<25 μg/ l) in Novosibirsk and Yakutsk

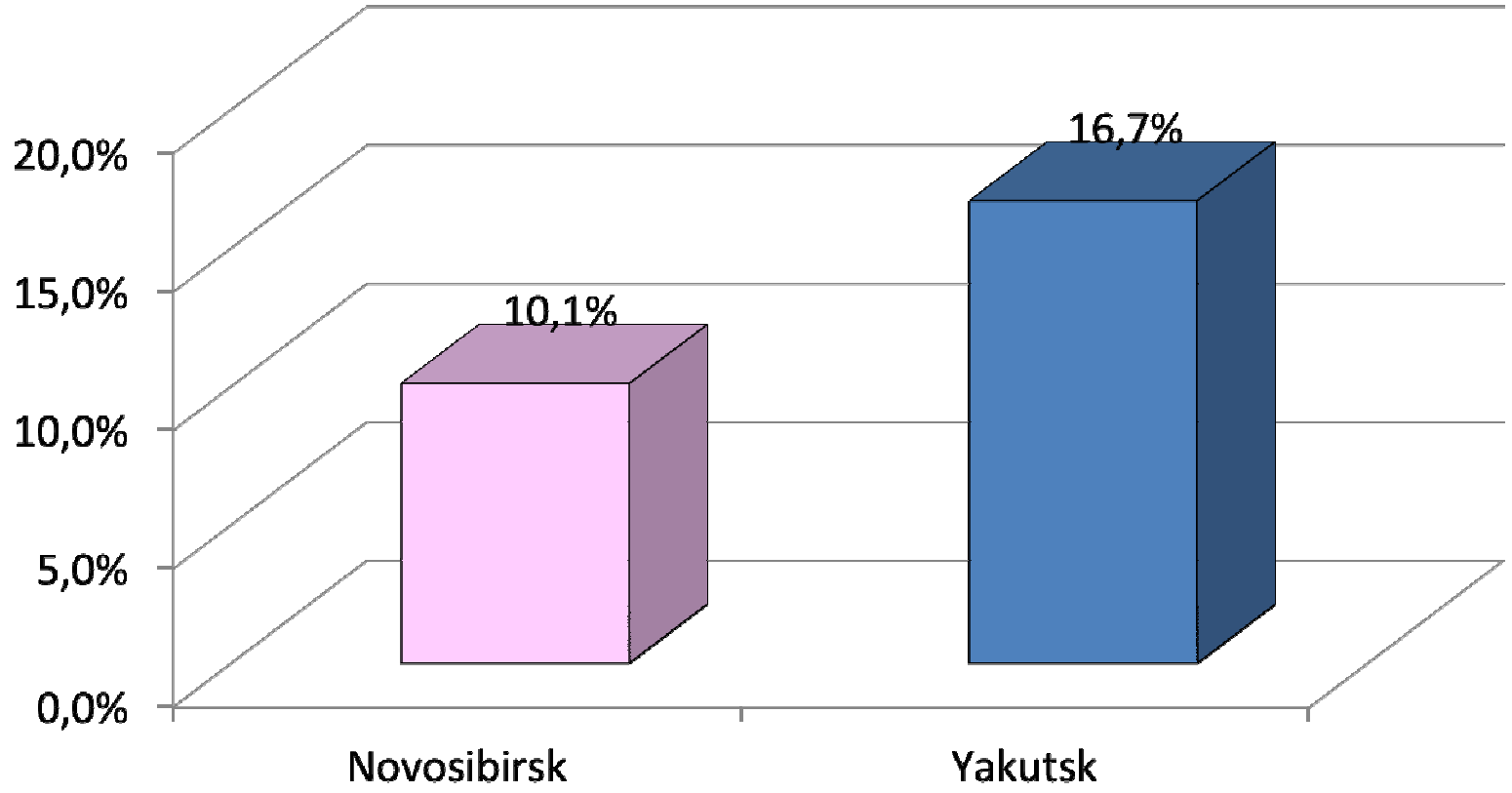
Reshetnikov OV et al., Clin Medicine, 2008, №7, P.35-38.

Diagnostics of atrophic gastritis with Gastropanel (Biohit, Finland).

- **168 people aged 45-70 years (84 men and 84 women) were examined in Novosibirsk.**
- **90 native people at the age over 45 years (50 men and 40 women) were examined in Yakutsk.**

Prevalence of corpus atrophic gastritis (PG1<25 μg/ l) in Novosibirsk and Yakutsk

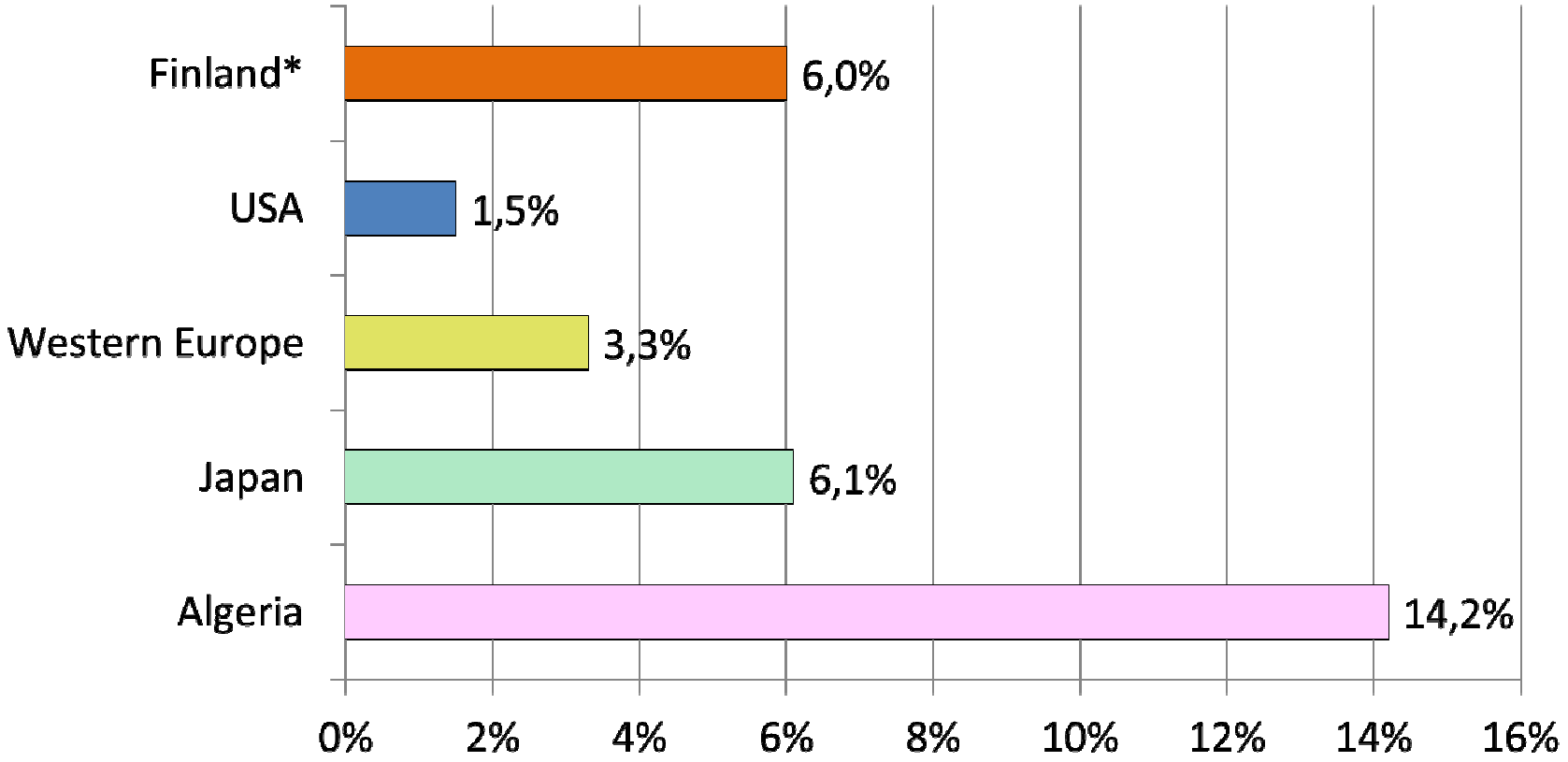
Reshetnikov OV et al., Clin Medicine, 2008, №7, P.35-38



Prevalence of corpus atrophic gastritis (PG1<25 µg/ l) in different countries

Webb P.M. et al., Gastroenterology, 1994, Vol.107, P.1335-1344.

*Week M.N. Cancer. Epidemol. Biomarkers Prev., 2006, Vol.15, P.1083-1094.



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H. pylori resistance to antibiotics in Europe (2008-2009) (total: 2204) H. pylori

ATB	N	%
clarithromycin	421	19,1
amoxicillin	23	1,04
levofloxacin	273	12,38
tetracycline	14	0,63
rifabutin	26	1,18
metronidazole	729	33,07

Resistance of H. pylori to clarithromycin in Russia

№	City	%	Author	Год
1.	Moscow	13,8	Kudryavtseva L.V.	2003
2.	St. Petersburg	13,3	Kudryavtseva L.V.	2003
3.	Krasnoyarsk	0	Tsukanov V.V.	2003
4.	Novosibirsk	6,0	Kurilovich S.V.	2011
5.	Abakan	0	Tsukanov V.V.	2003
6.	St. Petersburg	32,6	Uspensky U.P.	2010

Resistance of H. pylori to metronidazole in Russia

№	Город	%	Автор	Год
1.	Moscow	55,5	Kudryavtseva L.V.	2003
2.	St. Petersburg	40	Kudryavtseva L.V.	2003
3.	Krasnoyarsk	78	Tsukanov V.V.	2003
4.	Abakhan	81	Tsukanov V.V.	2003

European consensus on eradication of H. pylori Maasticht-4

(Florence, November 12-13 ноября)

The effectiveness of H. pylori eradication in Russia

№	Author	City	Year	N	Scheme	%
1.	Pasechnikov V.D.	Stavropol	2010	111	Om+ Clar+ Amo 7 days	76,7%
2.	Maev I.V.	Moscow	2008	31	Rab+Clar+Amo 14 days	93,5%
3.	Starostin B.D.	St. Petersburg	2008	359	Rab+Amo – 5 days Rab+Clar+Tin – 5 days	94%
4.	Tsukanov V.V.	Krasnoyarsk	2011	54	Om+ Clar+ Levo	85,2%

Conclusion

1. Currently the optimal scheme of gastric cancer screening is the serologic definition of pepsinogens and H. pylori.
2. Until now there is no effective system for screening of gastric cancer in Russia. Solitary studies of atrophic gastritis prevalence by serologic diagnosis and evaluation of pepsinogens show relatively high level of pathology prevalence, and corresponds to high incidence of gastric cancer.

Conclusion

3. There are features of H. pylori resistance to antibiotics in Russia. Relatively low resistance to clarithromycin and very high resistance to metronidazole were determined.

4. The standard schemes of H. pylori eradication recommended by European consensus demonstrate sufficient efficiency in Russia.