

The association between
serum interleukin 6 levels
and *Helicobacter pylori*
antibody levels among
Japanese outpatients

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Objective

- *Helicobacter pylori* (*H. pylori*) infection causes chronic inflammation resulting in the development of chronic gastritis, gastric ulcer and gastric cancer.



“*Helicobacter pylori* “ EBM willbun

- Interleukin6 (IL-6) is an inflammatory cytokine and could be associated with immune reaction of *H. pylori* infection. The association between serum IL-6 levels and *H. pylori* antibody levels was examined.

MATERIALS and METHODS

- Subjects are 265 Japanese people who visited a clinic in Nagoya, Japan, for *H. pylori* infection test and subsequent eradication treatment without gastric cancer, ITP (Idiopathic Thrombocytopenic Purpura) or IL-6 > 7 pg/ml.
- Aged 23 to 78 years (mean age = 53.0, SD ± 12.8)
- Study period : Dec. 2005 ~ Oct. 2010.
- Assessment of *H. pylori* infection: urea breath test and serum levels of immunoglobulin G antibodies

MATERIALS and METHODS

- Definition of *H.pylori* infection: urea breath test ($\geq 2.5\text{‰}$)
- Measurement of IL-6:CLEIA (chemiluminescent enzyme immunoassay)

Characteristics of Subjects

	Male	Female	Total
Uninfected	39	52	91
Infected	55	107	162
Total	94	159	253

12 people were unknown to be infected or not.

Infection rate = 64.0%



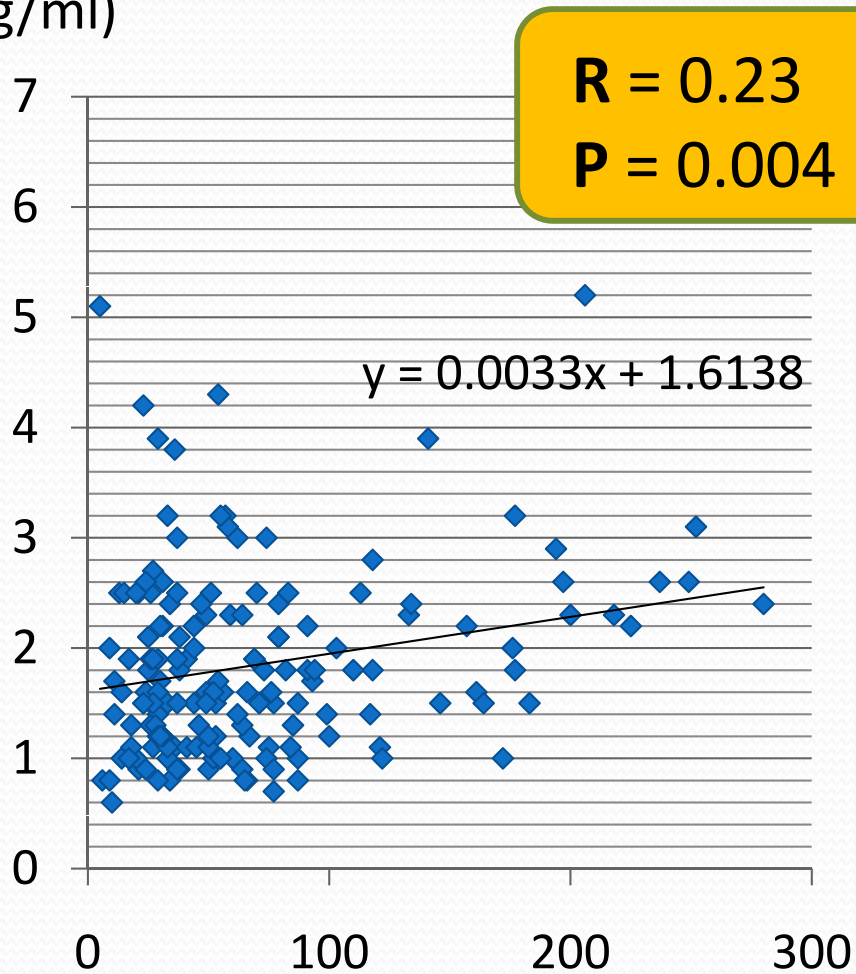
The infected 162 people aged 23 to 78 years (mean age= 57.0) were analyzed.

Statistical analysis

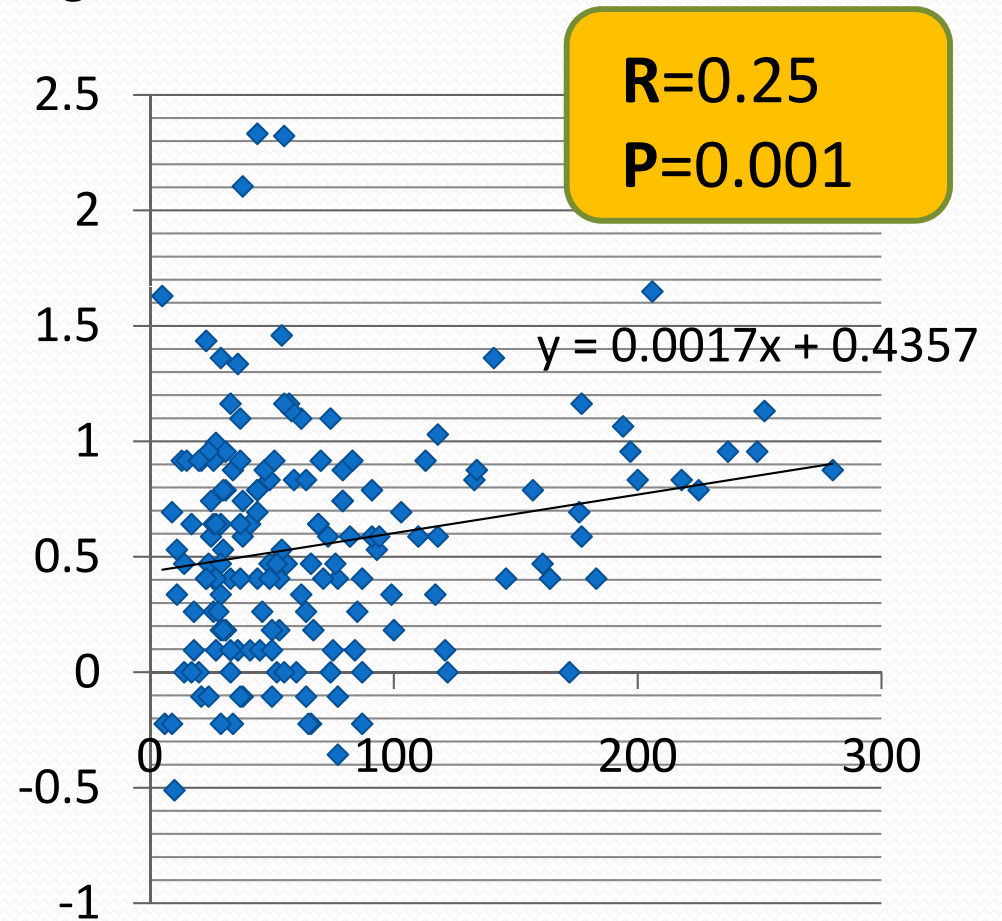
- All statistical analysis was preformed with Stata version 11.1
- The correlation coefficient between IL-6 levels and *H.pylori* antibody levels was calculated.
- The log IL-6 levels was regressed on *H.pylori* antibody with adjustment of sex and age.

Result

Serum IL-6
(pg/ml)



Log serumIL-6



H.pylori antibody (IgG)

Multivariate regression analysis for log IL-6 adjusted for sex and age

	Coef.	95% Conf. Interval	P value
Sex (woman vs man)	- 0.091	- 0.223 ~ 0.040	0.172
Age (per 1 year)	0.012	0.006 ~ 0.019	<0.001
<i>H.Pylori</i> antibody (per 1 unit)	0.0014	0.0003 ~ 0.0025	0.014

Dependent variant = Log IL-6

Conclusions

- This study suggested that serum IL-6 levels were significantly associated with *H.pylori* antibody levels among *H.pylori* infected people.
- It indicates that the antibody level may reflect the level of chronic inflammation.