

towards higher specificity than the other assays studied. This should be confirmed with a higher sample size. Although the new serological assay prototype did not achieve sufficient accuracy for routine clinical practice it is acceptable for screening.

### P01.10 | Non invasive diagnosis of upper GI disease in a primary care setting: A study on 1900 patients

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Gastropanel<sup>®</sup> is a non invasive test able to perform a “serological biopsy” of gastric mucosa. To diagnose different upper gastrointestinal diseases in a population suffering from upper GI disturbances by means of serology. 1900 consecutive patients showing upper GI troubles underwent Gastropanel<sup>®</sup>. Normal values: PGI: 30-120 µg/L, PGII: 2-15 µg/L, G-17: 1-9 pmol/L, Hp-IgG: <30 U/L. The diagnosis of Hp related non atrophic gastritis was made with PGII>10 µg/L and Hp-IgG >30 U/L; the diagnosis of GERD by G-17 <2 pmol/L; the diagnosis of chronic atrophic gastritis (CAG) if PGI <30 µg/L and G-17 >14 pmol/L. If every parameter was normal, the subjects were classified as normal. All patients underwent gastroscopy to support the serological diagnosis, with appropriate gastric biopsy according with OLGA classification. 488 patients were classified as affected by Hp related non atrophic gastritis (26%); 782 as GERD patients (41%); 547 as normal (29%); 83 as CAG (4%). In 96% out of the 488 patients with Hp related non atrophic gastritis the features was confirmed by histology (OLGA 0, 1, 2); in 91% out of the 782 patients diagnosed as GERD subjects, the diagnosis was confirmed by oesophagitis at endoscopy or by positive Demeester score 24 hours pH-metry or by presence of typical GERD symptoms. Most of 83 patients diagnosed as CAG showed a picture of OLGA 3 (56.6%) or OLGA 4 (24.2%). Gastropanel<sup>®</sup> improves the appropriateness of endoscopy and better addresses to treat Hp infection and GERD.

### P01.11 | Characteristics of cultured non-*Helicobacter pylori* Helicobacter and its relation to human gastric diseases

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Gastric non-*Helicobacter pylori* Helicobacters, including *Helicobacter suis* and *Helicobacter heilmannii*, has become one of the emerging bacteria in the post-*Helicobacter pylori* eradication era. We have recently observed these bacteria using the biphasic culture method (Liang, J. et al, *Helicobacter* 2015; 20, 2006) by vital, confocal and electron microscopy and found several characteristics of these bacteria. The bacterial movement was clearly visualized and two kinds of bacteria, rod and spherical, were observed. By the immunohistochemical observation, not only rod-shaped bacteria but also the spherical bacteria were immunoreactive to *Helicobacter* antibody and the round bacteria were found to have a thick plasma membrane, characteristic to coccoid form. The movement of the rod-shaped bacteria was found to be pH dependent, and pH4 was the most suitable condition for the rapid movement. We performed PCR analysis on 184 *H. pylori*-negative human patients with gastroduodenal diseases from all over Japan. In nodular gastritis patients, 6 out of 11 cases (54%) were found to be positive to NHPH. Twenty out of 90 cases (22%) in other gastritis cases, 12 out of 62 cases (19%) in gastric MALT lymphoma were positive, while all cases were negative in gastric cancer and duodenal follicular lymphoma. The positive rate in eastern Japan was higher than western Japan, which coincided with the tendency of pork consumption. In conclusion, the characteristics and infection pattern of NHPH were shown in the present study, suggesting new strategy must be made by precise understanding and control of this bacterial infection.

### P01.12 | Comparative estimation of results of non-invasive ammonium test and histological method in diagnostic of *Helicobacter pylori* infection

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**Background:** C13 urease breath test is one of the main methods for diagnosis of *Helicobacter pylori* (Hp) infection. However, this method is not widely available. Therefore, elaboration of alternative cost-effective non-invasive methods for diagnosis of Hp infection is actual. **Aim:** To estimate results of non-invasive breath ammonium test “HELIC-test” (“Association of medicine and analytics, Saint-Petersburg, Russia) and histological method in diagnostic of Hp.

**Materials and Methods:** Three independent studies in Belarus, Russia and Azerbaijan were performed. In Russia 171 patients with dyspepsia, in Belarus 187 patients with chronic gastritis and 44 patients dyspepsia in Azerbaijan were surveyed. Hp infection was confirmed by a histological examination of samples obtained from the antrum and corpus of stomach during endoscopy. For all patients non-invasive breath ammonium HELIC-test also was performed. Patients during at least four weeks before diagnostics did not take any medications