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Editorial: *Helicobacter pylori* and gastric cancer in Alaskan Natives: Time to stop studying *H. pylori* and to eradicate it

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Investigators at the Centers for Disease Control and Prevention present an analysis of data collected more than 20 years ago among Alaskan Natives regarding *Helicobacter pylori* infection and gastric cancer.¹ This is the newest of a series of investigations regarding *H. pylori* and its consequences in the Native Alaskan population. This study compares older and more recent studies. They show that *H. pylori* and its consequences appear stable in this generally low socioeconomic group of individuals who often live in remote and isolated settlements. Their final recommendation is to suggest an updated prevalence study in a similar cohort to investigate whether the prevalence of *H. pylori* continues to be stable.

Stable conditions in this population appear to differ markedly from the progress being made in other high-risk populations. For example, during the same 20-year period, Japanese investigators were able to convince their government that population-wide *H. pylori* eradication was indicated to begin population-wide *H. pylori* eradication.² Results in terms of reduction in gastric cancer incidence are already becoming apparent.³ China has also started pilot projects to test the feasibility of *H. pylori* eradication in China, and Taiwan has largely finished their preliminary project in Matsu Islands and has started pilot studies on the main island.^{4–6} Worldwide governments and medical societies are considering studies and projects to eradicate *H. pylori* and eliminate the diseases it causes.⁷ The Alaskan Native population and other American Native populations would seem to be ideal for targeted *H. pylori* eradication as they are relatively small and, in Alaska, are remote and self-contained such that news source of infection seems unlikely to be introduced. This recommendation is especially true when we look at the data from Surveillance, Epidemiology, and End Results

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DISCLOSURE OF INTERESTS

Dr. Lee and Dr. Asaka have nothing to declare. Dr. Graham is a consultant for RedHill Biopharma regarding novel *Helicobacter pylori* therapies. He has also received research support for culture of *H. pylori* and is the PI of an international study of the use of antimycobacterial therapy for Crohn's disease. He is also a consultant for BioGaia in relation to probiotic therapy for *H. pylori* infection and for Takeda in relation to *H. pylori* therapies.

Program, showing that the incidence rate of gastric cancer of American Indian/Alaska Native was relatively stable as compared with the rapidly declining trends of the White, Black, and Asian/Pacific Islanders (Figure 1).⁸

Perusing the reference list in their manuscript in this issue of *Helicobacter* illustrates the magnitude of the problem. Titles include “Cancer in Alaska Native People,” “High prevalence of *Helicobacter pylori* in the Alaska Native population and association with low serum ferritin levels in young adults,” “Reinfection after successful eradication of *H. pylori* in three different populations in Alaska,” “The diagnosis and treatment of *H. pylori* infection in Arctic regions with a high prevalence of infection,” and “Endemic iron deficiency associated with *Helicobacter pylori* infection among school-aged children in Alaska.” The fact that the populations are isolated suggests that that eradication of the infection in all infected individuals in each separated population should rapidly eliminate the problem. No rocket science is likely required as infection and reinfection require exposure, and exposure is limited. For more than 20 years, the CDC group has published a variety of descriptive studies when what appears to be needed is a systematic approach to producing an *H. pylori* eradication program, which also includes an efficient delivery system of screening service, a timely referral for a positive test, and a standardized treatment regimen based on clinical effectiveness and the cost.⁹ There is little doubt regarding what should be done, and what is lacking is the needed series of well-thought-out pilot projects. We suggest that the “observe, document and publish approach” be replaced with planning and executing a program that would actually benefit this repeatedly studied population.

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REFERENCES

1. Miernyk KM, Bulkow LR, Gold BD, Bruce MG, Hurlburt DH, Griffin PM, et al. Prevalence of *Helicobacter pylori* among Alaskans: factors associated with infection and comparison of urea breath test and anti-*Helicobacter pylori* IgG antibodies. *Helicobacter*. 2018; in press.
2. Asaka M, Graham DY. Strategy for eliminating gastric cancer in Japan. *Helicobacter*. 2010;15:486–490. [PubMed: 21073603]
3. Tsuda M, Asaka M, Kato M, et al. Effect on *Helicobacter pylori* eradication therapy against gastric cancer in Japan. *Helicobacter*. 2017;22:e12415.
4. Pan KF, Zhang L, Gerhard M, Ma JL, Liu WD, Ulm K, et al. A large randomised controlled intervention trial to prevent gastric cancer by eradication of *Helicobacter pylori* in Linqu County, China: baseline results and factors affecting the eradication. *Gut*. 2016;65:9–18. [PubMed: 25986943]
5. Lee YC, Chen TH, Chiu HM, Shun CT, Chiang H, Liu TY, et al. The benefit of mass eradication of *Helicobacter pylori* infection: a community-based study of gastric cancer prevention. *Gut*. 2013;62:676–682. [PubMed: 22698649]
6. Lee YC, Lin JT. Screening and treating *Helicobacter pylori* infection for gastric cancer prevention on the population level. *J Gastroenterol Hepatol*. 2017;32:1160–1169. [PubMed: 28087975]
7. Herrero R, Parsonnet J, Greenberg ER. Prevention of gastric cancer. *JAMA*. 2014;312:1197–1198. [PubMed: 25247512]

8. Surveillance, Epidemiology, and End Results (SEER) Program: Cancer Statistics Review 1975–2014, National Cancer Institute, USA Available at: https://seer.cancer.gov/csr/1975_2014/browse_csr.php?sectionSEL=24&pageSEL=sect_24_zfig.02.html). Accessed February 1, 2018.
9. Lee YC, Chiang TH, Liou JM, Chen HH, Wu MS, Graham DY. Mass eradication of *Helicobacter pylori* to prevent gastric cancer: theoretical and practical considerations. Gut Liv. 2016;10:12–26.

FIGURE 1. SEER incidence of gastric cancer stratified by the race/ethnicity in USA (1975– 2014). The incidence rates are age-adjusted to the 2000 US standard population