

United States Senate

WASHINGTON, DC 20510

November 26, 2013

Harold Varmus, M.D.
Director
National Cancer Institute
National Institutes of Health
BG 9609 MSC 9760
9609 Medical Center Drive
Bethesda, MD 20892-9760

Dear Dr. Varmus:

We are concerned about the state of gastric cancer research in the United States and respectfully request your commitment to improve gastric cancer's profile at the National Cancer Institute (NCI).

Deadly gastric cancer is on the rise in young people. In May of 2010, the NCI reported that the likelihood of being diagnosed with gastric cancer at age 25-39 years has increased by almost 70 percent since 1977. The consequences of such a diagnosis are catastrophic for a young person. Because there are minimal symptoms of gastric cancer, it is most often diagnosed at late stage when curative treatment is impossible.

Also on the rise, is cardia gastric cancer, cancer that arises in the top part of the stomach. While the overall incidence of gastric cancer is decreasing in the US, this reduction in gastric cancer cases applies primarily to non-cardia gastric cancer, which is associated with h-pylori infection.¹ Cardia gastric cancer, not associated with h-pylori infection, is increasing in Western nations. In the United States, based on data from the Surveillance, Epidemiology, and End Results (SEER)1 program, incidence rates for gastric cardia have increased 4%-10% per year among men since 1976, more rapidly than for any other type of cancer.² Rates for cardia gastric cancer, while once far surpassed by non-cardia cancer, now are nearly equal.³

Likewise, while gastric adenocarcinomas of the intestinal subtype are on the decline, the diffuse subtype is rising exponentially. Using the Surveillance, Epidemiology, and End Results (SEER) data from 1973 to 2000, significant variances of cancer incidence in the cancer subtypes have been reported. While rates for the intestinal type have decreased by about 50%, rates for the diffuse or signet type have risen more than 400% .⁴

These factors taken together send an alarming message. We urge NCI to stem these concerning trends by dedicating more research resources to understanding this deadly cancer – particularly devoting resources to the cancer subtypes that are on the rise due to factors not yet understood.

¹ New York Presbyterian Hospital, "Digestive Diseases, About Stomach (Gastric) Cancer"

² Blot WJ, Devesa SS, Kneller RW, Fraumeni JF Jr. Rising incidence of adenocarcinoma of the esophagus and gastric cardia. JAMA 1991;265:1287-9.

³ Changing patterns in the incidence of esophageal and gastric carcinoma in the United States.

Devesa SS, Blot WJ, Fraumeni JF Jr. Division of Cancer Epidemiology and Genetics, National Cancer Institute, Bethesda, Maryland 20892-7368, USA.

⁴ Henson DE, Dittus C, Younes M, Nguyen H, Albores-Saavedra J. Differential trends in the intestinal and diffuse types of gastric carcinoma in the United States, 1973–2000: increase in the signet ring cell type. Arch Pathol Lab Med. 2004;128:765–70. [PubMed]

Gastric cancer receives *by far the lowest amount of research funding* for the common cancers at NCI, at only \$12 million in 2012. That amounts to only 0.4 percent of the entire NCI FY 2012 budget for common cancer research.

The American Cancer Society (ACS) estimates 21,600 new cases of gastric cancer will be diagnosed in 2013, and 10,990 men and women will die from the disease within the year. According to the NCI, about 80 percent of people with stomach cancer are diagnosed with advanced metastatic cancer. At stage IV, the 5-year survival rate for gastric cancer is four percent. Even those few who beat the odds face a lifetime of cancer treatments to prevent the return of cancer.

We are pleased that gastric cancer has been selected for study under The Cancer Genome Atlas (TCGA). However, without efforts by the NCI to assist researchers in utilizing the genomic data from TCGA, the impact of TCGA on gastric cancer will be minimal. Very little foundational research data exists for gastric cancer; thus, gastric cancer researchers are greatly in need of federal assistance to ensure that promising gene candidates identified in TCGA research are able to be investigated to make progress in this field. Though the TCGA information will be available on the cancer genomics portal, researchers need funding in order to develop the research data necessary to apply and receive NCI research grants.

We ask you to increase the federal research for stomach cancer in order to stem these dangerous trends.

We appreciate your consideration of our request and look forward to hearing about the NCI's plans for furthering gastric cancer research. Please direct questions and correspondence to Cade Clurman or Leigh Owano in the office of Senator Kirk at 202-224-2854.

Sincerely,



Senator Mark Kirk



Senator Brian Schatz



Senator Marco Rubio



Senator Sherrod Brown



Senator Robert Menendez