International trends in pancreatic cancer incidence and mortality rates

Wilfredo E. DeJesus-Monge
University of Massachusetts Medical School, Wilfredo.DeJesus-Monge@umassmed.edu

Bruce A. Barton
University of Massachusetts Medical School, Bruce.Barton@umassmed.edu

Follow this and additional works at: http://escholarship.umassmed.edu/cts_retreat
Part of the Neoplasms Commons, and the Public Health Commons

This work is licensed under a Creative Commons Attribution-Noncommercial-Share Alike 3.0 License.
INTERNATIONAL TRENDS IN PANCREATIC CANCER INCIDENCE AND MORTALITY RATES

Wilfredo E. De Jesus-Monge, MD, MSc¹, Bruce A. Barton, PhD²

¹Program in Gene Function and Expression, ¹,²Memorial Cancer Center of Excellence, ¹,²Center for Clinical and Translational Science, ²Department of Quantitative Health Sciences, University of Massachusetts Medical School, Worcester, MA

Contact:
Wilfredo E. De Jesus-Monge, MD, MSc:
Postdoctoral research fellow
E-mail: Wilfredo.DeJesus-Monge@umassmed.edu

Background: Pancreatic cancer is a rare disease, with a lifetime risk of 1.45%. However, it is deadly, with a 1-year relative survival rate of 20% and a 5-year rate of 4% in the US. Risk factors for pancreatic cancer are cigarette smoking, obesity, physical inactivity, among others. Associated with developed countries, these risk factors are increasing in less developed and economically transitioning countries. Therefore, the objective of this presentation is to show international trends in pancreatic cancer incidence and mortality rates.

Method: The pancreatic cancer incidence rates were collected from the Cancer Incidence in Five Continents (CI5) report and the mortality rates were collected from the World Health Organization cancer mortality database, both by the International Agency for Research on Cancer, for the periods 1988-1992 to 1998-2002 (10-year) and 1978-1982 to 1998-2002 (20-year). The statistics are provided countrywide or for specific regions within a country.

Results: In America, 50% of evaluated countries/regions showed decreased pancreatic cancer incidence rates in any or both sexes during the 10-year period. In Northern Europe, one-third of the evaluated countries/regions showed decreased pancreatic cancer incidence rates in any or both sexes during the 10-year period. In Southern Europe, 44% of the evaluated countries/regions showed increased pancreatic cancer incidence rates in any or both sexes during the 10-year period. Both Chinese regions show increased pancreatic cancer incidence rates in both sexes during the 20-year period. Twenty-seven percent of the evaluated world countries/regions show decreased pancreatic cancer mortality rates in both sexes during the 20-year period.
**Discussion:** There is international/regional variation in pancreatic cancer incidence and mortality rates. Specific protective or risk (like acquiring developed-country lifestyles or high life expectancy) factors could explain these differences.

**Conclusion:** The findings of this study provide preliminary evidence to reassess pancreatic cancer prevention strategies worldwide.