Cancer Epidemiology in Panama: Morbidity and Mortality Trends 2002-2010

Arturo Rebollón¹, MD, MPH, CPH. Dawood H. Sultan², PhD.

1. Doctoral Student in Global Health. College of Public Health. USF Health.

2. Assistant Professor. Department of Health Policy and Management. College of Public Health. USF Health.

Objectives

To analyze the trend of the morbidity and mortality of all cancers in Panama between 2002 and 2010

Methods

Data collection

Public Records from the National Cancer Registry

Data Cleaning

Arrays, proc transpose and lag function in SAS

Population at Risk per years

Public records from the Panama Census/ Government accountability office

Gender-Standardized Rates Estimation

Mortality Morbidity

Trend Lines

Gplot and ODS html export in SAS

Estimation of the Annual Percent Change

Conclusions

The standardized incidence and mortality rates have increased in the majority of the cancers in Panama.

Further trend analysis using the SEER Joinpoint regression program will provide more information on slope and average annual percent change per cancer type, and will serve as a baseline study for future cancer prevention interventions, especially for those with the most prominent increase.

Acknowledgements

National Cancer Registry of Panama Ministry of Health of Panama

Contact information

Arturo Rebollón arebollo@health.usf.edu
Dawood Sultan dsultan@health.usf.edu

Results Morbidity

Tumor site	APC	
Lymphatic system	10.9	4
Skin	9.0	
Liver and intrahepatic ducts	8.4	
Pancreas	8.4	
Other	8.1	
Corpus Uteri	5.3	
Thyroid	5.1	
Larynx	4.1	
Breast	4.1	
Brain	2.8	
Prostate	2.0	
Haematopoietic and		
reticuloendothelial system	0.2	
Vulva	0.2	
Urinary Bladder	-0.1	
Stomach	-1.1	
Vagina	-1.8	
Cervix Uteri	-2.0	
Colon, rectum, anu	-2.7	
Lung, Trachea and bronquiae	-3.7	
Ovarian	-5.4	
Kidney	-7.8	4

APC: Annual Percentage Change

Lymphatic Systen

Mortality

Tumor Site	APC
Ovarian	5.6
Larynx	5.0
Breast	4.0
Pancreas	3.6
Liver and intrahepatic ducts	2.2
Other	2.2
Melanoma	1.7
Leukemia	1.4
Prostate	1.3
Colon, rectum, anus	1.0
Urinary Bladder	1.0
Stomach	0.5
Non-Hodgkin Lymphoma	0.3
Lung, Trachea and bronquiae	-0.3
Cervix Uteri	-1.3
Central Nervous System	-2.8
Lip, oral cavity, and pharinx	-2.9
Esophagus	-2.9
Multiple Mieloma and plasmatic cell	-3.5

APC: Annual Percentage Change



