



# Cancer Among Asians and Pacific Islanders in New Jersey, 1990-2007

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## Abstract

As the Asian and Pacific Islander (API) populations are rapidly growing in the United States, the need for API cancer data is increasing. The cancer incidence and survival statistics presented here are based on data from the New Jersey State Cancer Registry, and include all invasive cancers and bladder *in situ* cancers diagnosed during 1990-2007. Age-adjusted rates and five-year relative survival rates were tabulated using SEER\*Stat. API cancer cases (N=15,512) accounted for about 2% of the total cancer cases diagnosed among NJ residents in 1990-2007. Compared to the total NJ population, NJ APIs had lower incidence rates for all cancers combined and for the commonly diagnosed cancers (prostate, breast, lung, and colorectal). APIs had higher stomach and liver cancer incidence rates. NJ APIs had lower incidence rates than U.S. APIs for all cancers combined and the commonly diagnosed cancers with the exception that the incidence rates for stomach, bladder, and thyroid cancer and non-Hodgkin lymphoma were higher in NJ API males and uterine and thyroid cancer incidence rates were higher for NJ API females. From 1990 to 2007, the cancer incidence and mortality rates for APIs followed similar trends as in the NJ population for most cancers except for increasing female breast cancer mortality rates. The five-year relative survival rate for all cancers combined in API males diagnosed in 1990-2002 was lower than NJ males due to the larger proportion of liver and stomach cancer. API females had higher all cancer and breast cancer survival than NJ females. Although APIs had lower incidence rates for many types of cancer compared to the population in both NJ and the U.S., stomach and liver cancer incidence rates were higher for APIs. Prevention from chronic infection with the bacterium *Helicobacter pylori* and infections with hepatitis B and C viruses are essential to reduce these cancer burdens in the API population.

## Introduction

- New Jersey has the fourth highest number of Asian residents in the United States, after California, New York, and Texas.
- In 2009, there were an estimated 746,307 Asian and Pacific Islander (API) residents of NJ, comprising approximately 8.6% of the population. This number included API alone and API in combination with one or more other races.
- APIs are an important part of our population and the requests for API cancer data are increasing.
- The information will help healthcare planners in designing cancer prevention and control programs.

## Methods

### Data Sources:

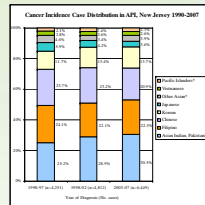
- New Jersey cancer incidence data in 1990-2007 were taken from the December 2009 analytic file of the New Jersey State Cancer Registry.
- Cancer mortality data in 1990-2007 were from the National Center for Health Statistics (NCHS).
- The 1990-2007 population data used for the incidence and mortality rates are estimates from the NCHS based on U.S. Census Bureau data and bridged to single race categories, which were downloaded from NCI SEER's website.

### Methods:

- SEER\*Stat software was used to calculate cancer incidence and mortality rates and survival rates.
- Age-adjusted incidence and mortality rates are per 100,000 population and age-adjusted to the 2000 U.S. standard population.
- Five-year relative survival rates were generated using expected survival rates for the U.S. population.
- Data are presented for the five-year period 2003-2007 for cancer incidence and mortality and for trends from 1990 to 2007 in three-year moving averages.
- Five-year cancer survival rates are calculated for patients diagnosed during 1990-2002 (all cases have at least five years of follow-up time).
- API rates were compared with total NJ population rates.

## Results

### Cancer Case Distribution Among Detailed API Groups

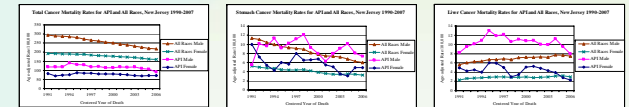


- Among the 6,449 API cancer cases diagnosed in NJ during 2003-2007, 30.5% were Asian Indians or Pakistanis, 22.5% were Filipinos, 20.9% were Chinese, and 13.7% were Koreans.
- The total API cancer cases increased from 4,251 during 1990-1997 to 6,449 during 2003-2007. Among the total API cancer cases, the proportions of Asian Indians and Pakistanis had the largest increase from the time period 1990-1997 to the time period 2003-2007.

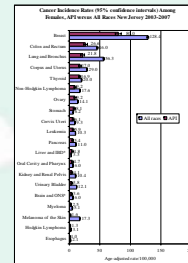
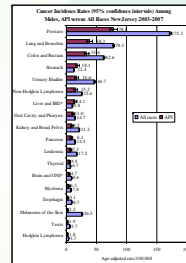
\*Other Asian includes Laotian, Hmong, Kampuchean, Thai, and other/not specified Asian. Pacific Islander includes Hawaii, Micronesia, Chamorro, Guamanian, Polynesian, Samoan, Tongan, Melanesian, Fiji Islander, New Guinean, and other/not specified Pacific Islander.  
NAACCR Asian and Pacific Islander Identification Algorithm was used to recode other Asian to more specific Asian race categories based on birthplace and name.

### Cancer Mortality Rates and Time Trends for API and All Races

- The most common cancer causes of death were lung, colorectal, and stomach for API males and lung, breast, and colorectal cancer for API females in 2003-2007.
- The cancer mortality rates for most cancers were lower for APIs.
- Stomach and liver cancer mortality rates were higher for API males and females.
- From 1990 to 2007, cancer mortality rates decreased for APIs with some fluctuations, while the mortality rates decreased in the NJ general population.



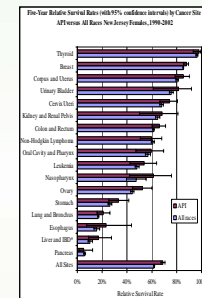
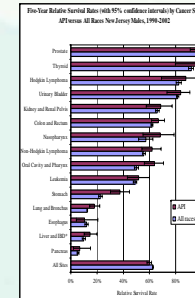
### Cancer Incidence Rates for APIs and All Races



\*IBD=Intrahepatic Bile Duct; NOS=Not Otherwise Specified

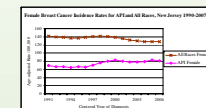
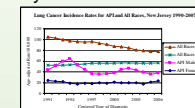
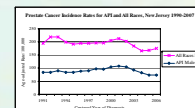
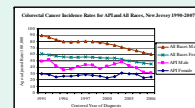
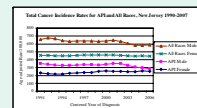
- The most commonly diagnosed cancers among APIs were prostate, colorectal, lung, stomach, and non-Hodgkin lymphoma for males and breast, colorectal, thyroid, lung, and uterus for females.
- Age-adjusted cancer incidence rates for API males and females were lower than for all NJ males and females for most cancers.
- The rates for stomach cancer and liver cancer were higher among APIs.

### Five-year Relative Cancer Survival Rates for APIs Diagnosed in 1990-2002



- The five-year total cancer survival rate was lower for NJ API males than for all NJ males for cancers diagnosed during 1990-2002. The larger proportions of liver and stomach cancer cases resulted in lower all-site cancer survival rates for API males.
- The five-year relative survival rates for all sites and breast cancer were higher for NJ API females than for all NJ females. The survival differences for other selected cancers were not statistically significant.

### Cancer Incidence Trends for APIs in New Jersey 1990-2007



## Discussion

- NJ API populations are: younger, highly educated, higher median household income, higher percentage of foreign born.
- Behavioral risk factors in NJ API population: lower percentage of smokers, lower percentage of alcohol consumption, lower percentage of obesity or over weight
- Chronic infection with the bacterium *Helicobacter pylori* is a major risk factor for stomach cancer.
- The prevalence of *H. pylori* infection is reported to be higher in some Asian countries than in the U.S., and the majority of API in New Jersey are foreign-born.
- Infections with hepatitis B and C virus are established causes of liver cancer, and higher prevalence of these infections in some Asian countries may influence risk for liver cancer in API immigrants to the U.S.

For more details, please visit [http://nj.gov/health/ces/documents/api\\_report.pdf](http://nj.gov/health/ces/documents/api_report.pdf)

## Limitations

- Unknown and misclassification of race could result in underestimates of API incidence rates.
- Rates were not calculated by detailed API race groups due to lack of accurate population data.

## Conclusions

- The total cancer and most types of cancer incidence and mortality rates in APIs were lower than in the NJ general population.
- APIs had higher stomach and liver cancer incidence and mortality rates.
- Control and prevention of the infections from *H. pylori* and HBV or HCV in API population could reduce the cancer burden.