

# **Cancer Incidence and Mortality Patterns Among Chinese Americans**

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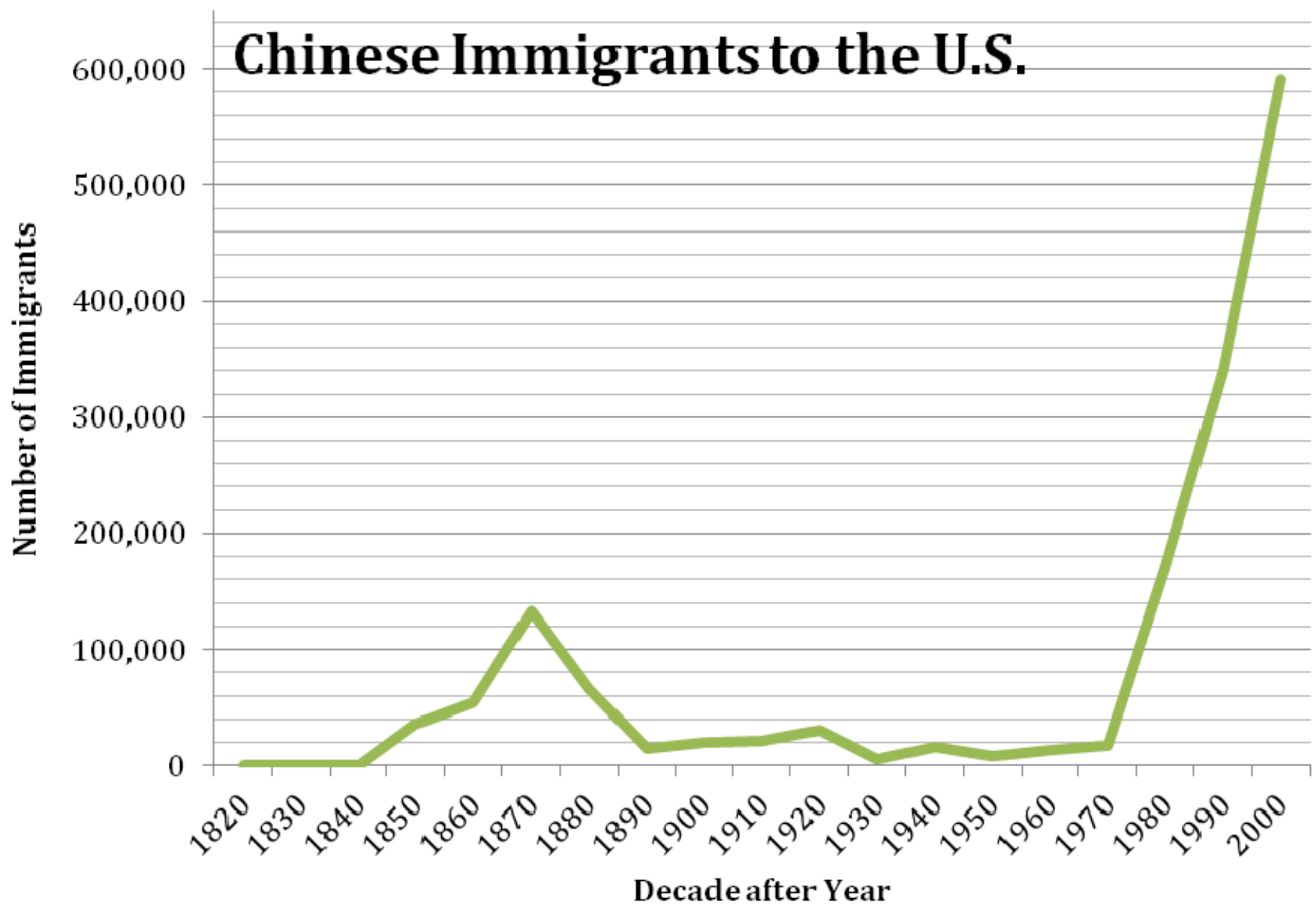
St. Louis, Missouri

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# History of Chinese migration to U.S.

- Dates back to 1820s
- 1850s: Gold Rush, first wave arrived in California
- 1860s: Central Pacific Railroad recruited labors
- Chinese Exclusion Act of 1882, result of anti-Chinese racial tension and economic depression
- Immigration and Nationality Act of 1965, abolished racial discrimination in immigration law, beginning a period of renewed Chinese immigration to the U.S
- China's Open Door policy of 1979, resulted in record numbers of government-sponsored young well-educated Chinese students coming to the U.S. for graduate studies throughout 1980s.
- 1990s and on, increasing numbers of Chinese emigrate to the U.S. through business, investment, family reunification, and a variety of venues, besides education.

# Chinese Immigrants to the U.S.



# Origins of Chinese Americans

- Mainland China
  - Qing Dynasty (1644-1911)
  - Republic of China (1911-present in Taiwan)
  - People's Republic of China (1949-present)
- Taiwan
- Hong Kong
- Macau
- Other parts of the world

- Characteristics of Chinese American vary by origin
  - Education
  - Socioeconomic status
  - Dietary habits
  - Cultural practice
  - Acculturation
  - Generation



# General Characteristics of Chinese Americans

- lower unemployment rate (4.4% vs. 5.2% for all Asians and 6.5% for whites)
- higher earnings (in 2013: \$1093/week vs. , as compared to \$987 for API and \$865 for whites)
- higher levels of education (56.8% college graduate vs. 53.4% of all Asians and 31.9% of whites)
- higher poverty rate (2000-2012: 15.2% vs. 13.0% for API and 13.6% for whites)

# Challenges of Studying Cancer in Chinese Americans

- First systematic national study of cancer occurrence among Chinese Americans was published in 1956 using cancer mortality data of 1949-1952.
  - documented the different cancer risk profile as compared to the U.S. whites
  - confirmed findings from the few analysis of clinical and autopsy materials reported prior to that time
- Reliance on mortality data, no systematic collection of incidence data until SEER program was established in 1973



# Challenges of Studying Cancer in Chinese Americans

- Small volumes of Chinese American cancer cases until 1970s
- Lack of official annual population estimates for Chinese American and other disaggregated Asian American ethnic populations
- SF and LA registries have had long traditions of monitoring cancer incidence patterns in the large Chinese communities in their catchment areas. But only LA continues to report to CI5.

# Data Sources and Methods

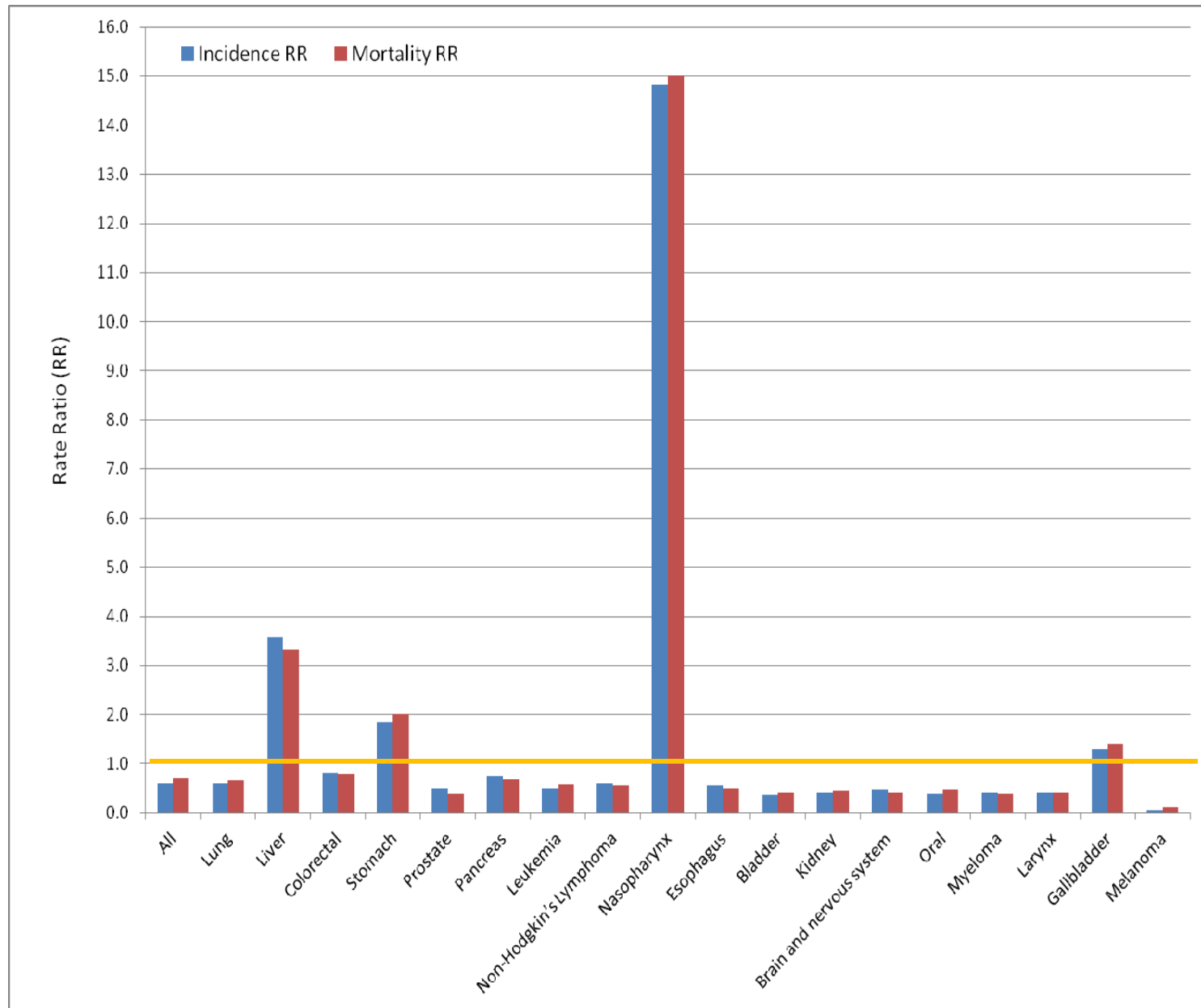
- SEER API cancer database
  - Previously published reports
    - Miller et al (2008)
    - Gomez et al (2013)
  - CI5 series
    - SEER 9 – white (updated to 2012)
    - LACSP – Chinese (updated to 2012)
    - China – Shanghai (1988-2007)

# Top 5 Cancers Among Chinese Americans, 2004-2008

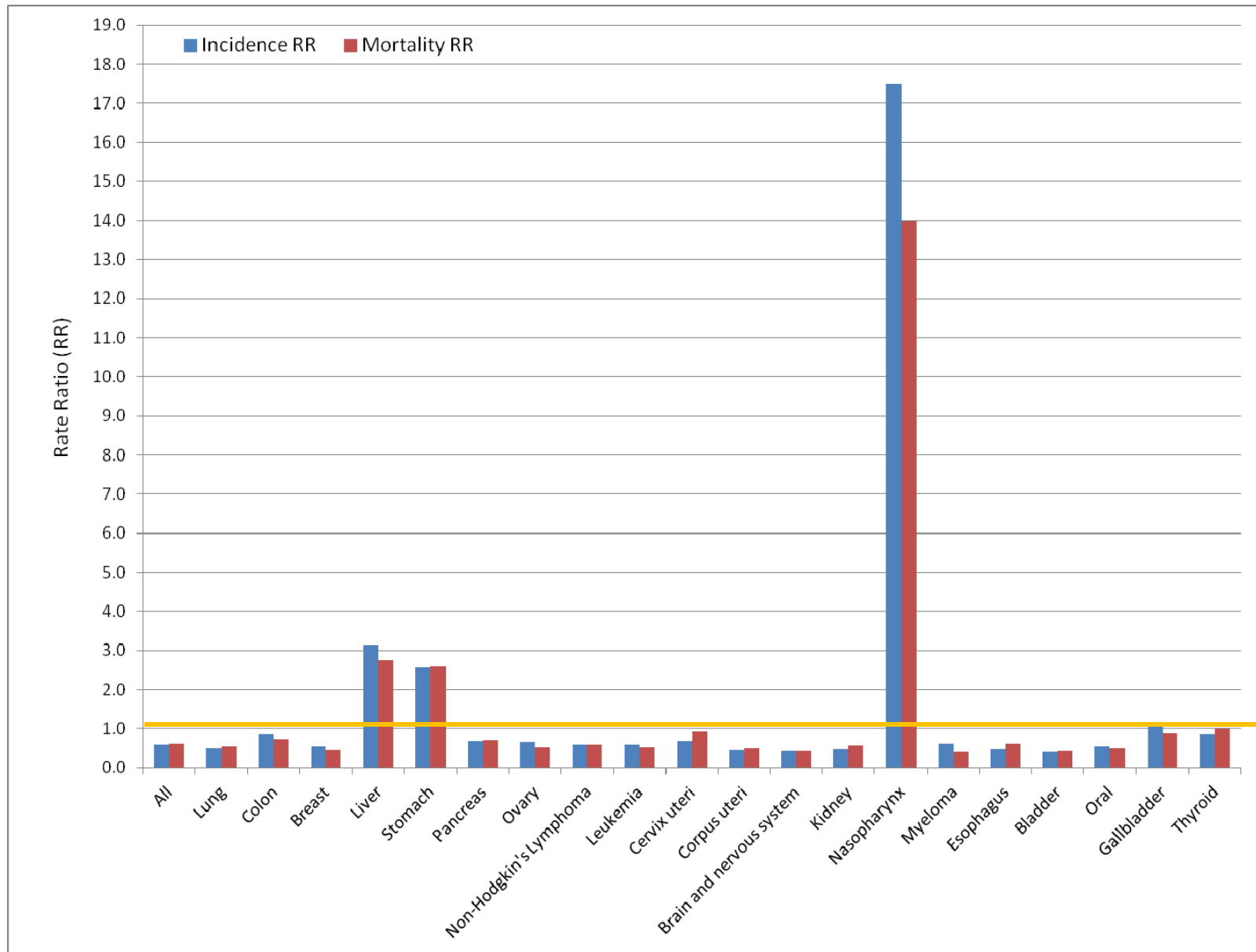
Miller et al (2008)

	Chinese Men		NH White Men		Incidence
	Cases	Rate	Cases	Rate	Rate Ratio
All Sites	10,705	320.9	572,704	560.2	0.6
Prostate	2,488	74.9	162,504	154.7	0.5
Lung and Bronchus	1,678	52.0	74,729	74.0	0.7
Colon and Rectum	1,410	42.1	54,752	54.0	0.8
Liver	845	24.1	8,301	7.7	3.1
Stomach	524	16.3	8,832	8.7	1.9
	Chinese Women		NH White Women		Incidence
	Cases	Rate	Cases	Rate	Rate Ratio
All Sites	11,103	263.4	538,349	440.0	0.6
Breast	3,477	78.8	162,591	135.3	0.6
Colon and Rectum	1,447	35.7	53,352	40.6	0.9
Lung and Bronchus	1,207	29.9	72,103	56.6	0.5
Corpus Uteri	621	14.3	32,452	26.3	0.5
Thyroid	549	12.2	18,712	18.2	0.7

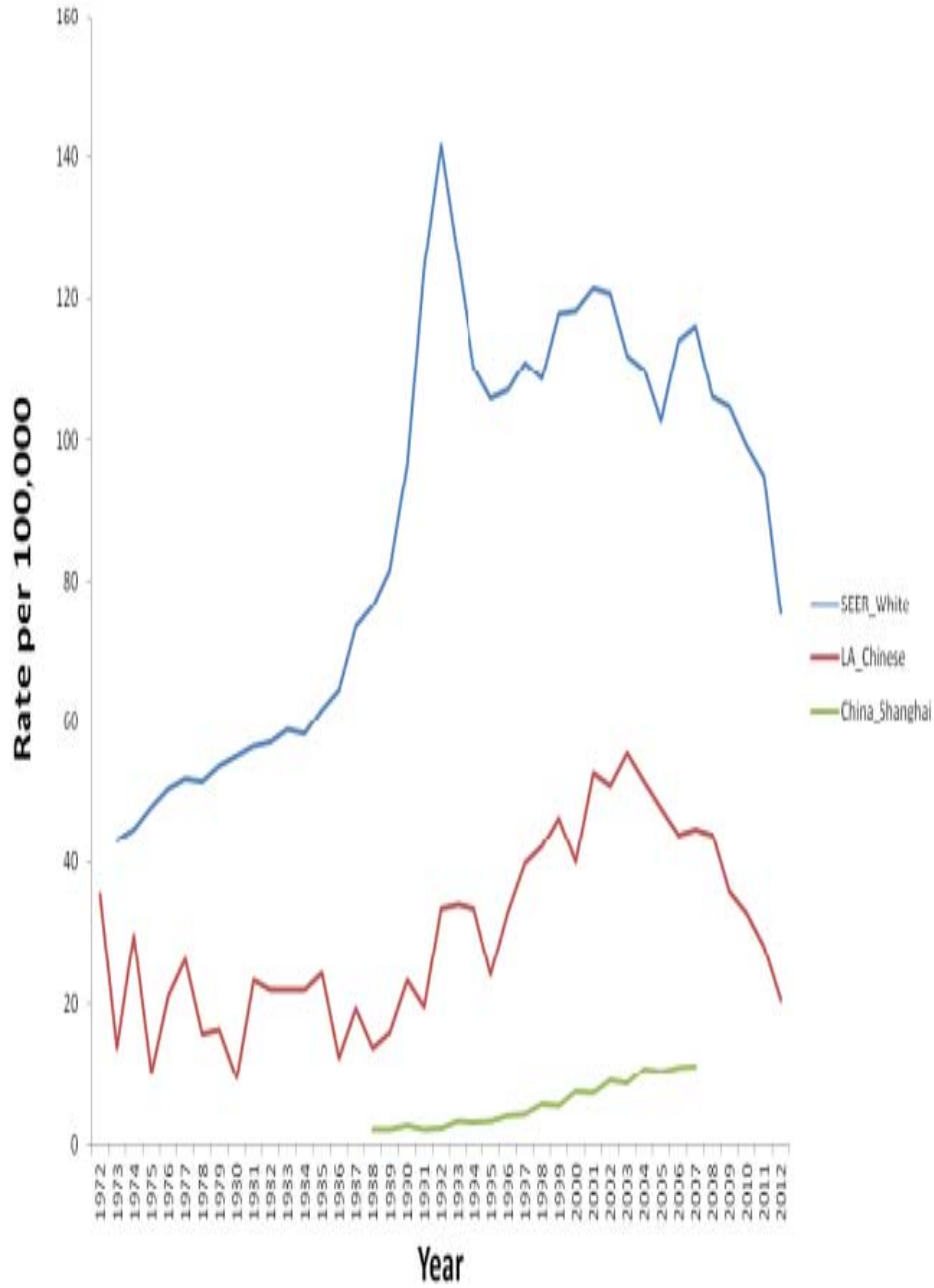
# Rate Ratios by Cancer Site, SEER, Men, 1998-2002



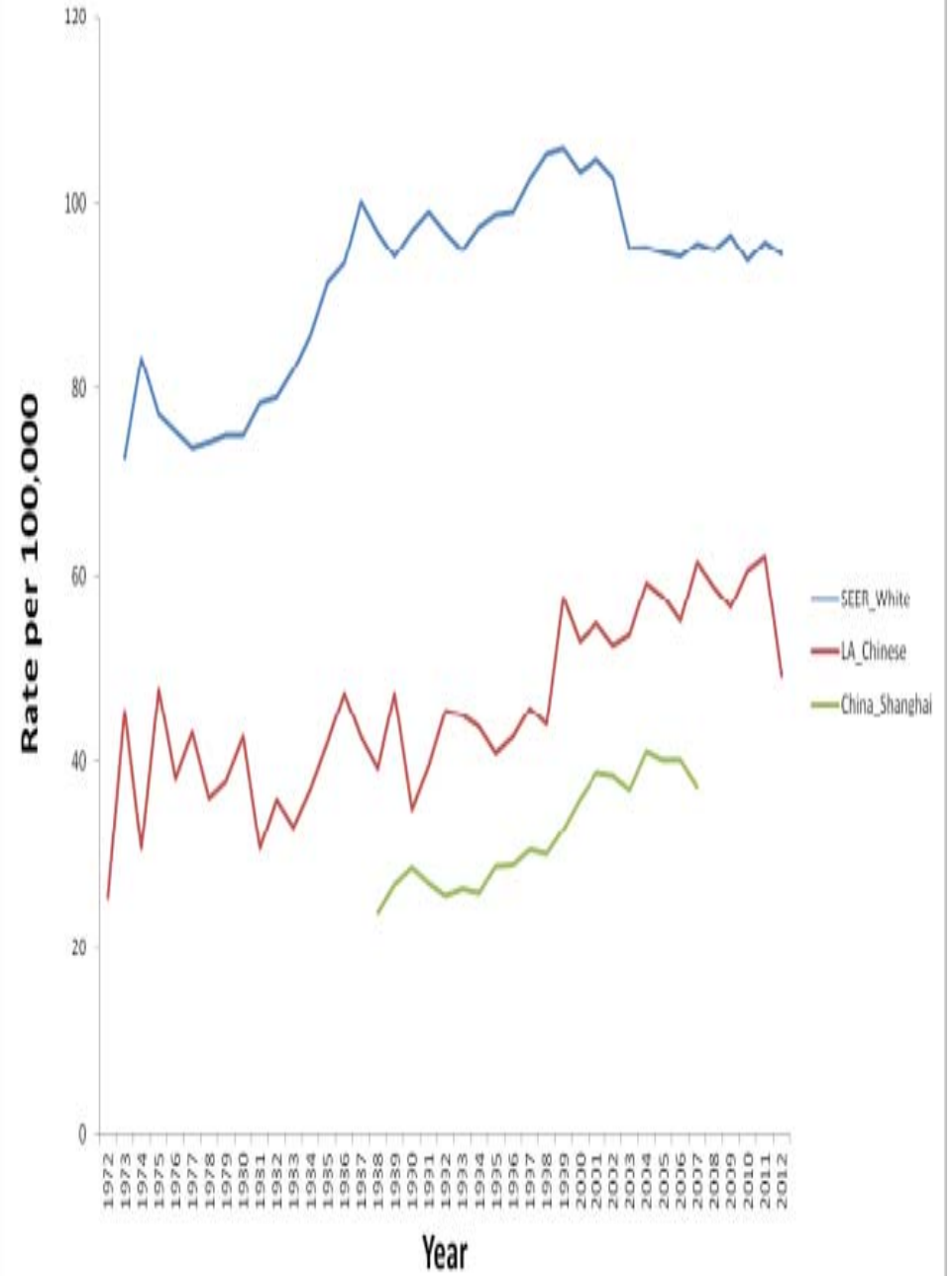
# Rate Ratios by Cancer Site, SEER, Women, 1998-2002

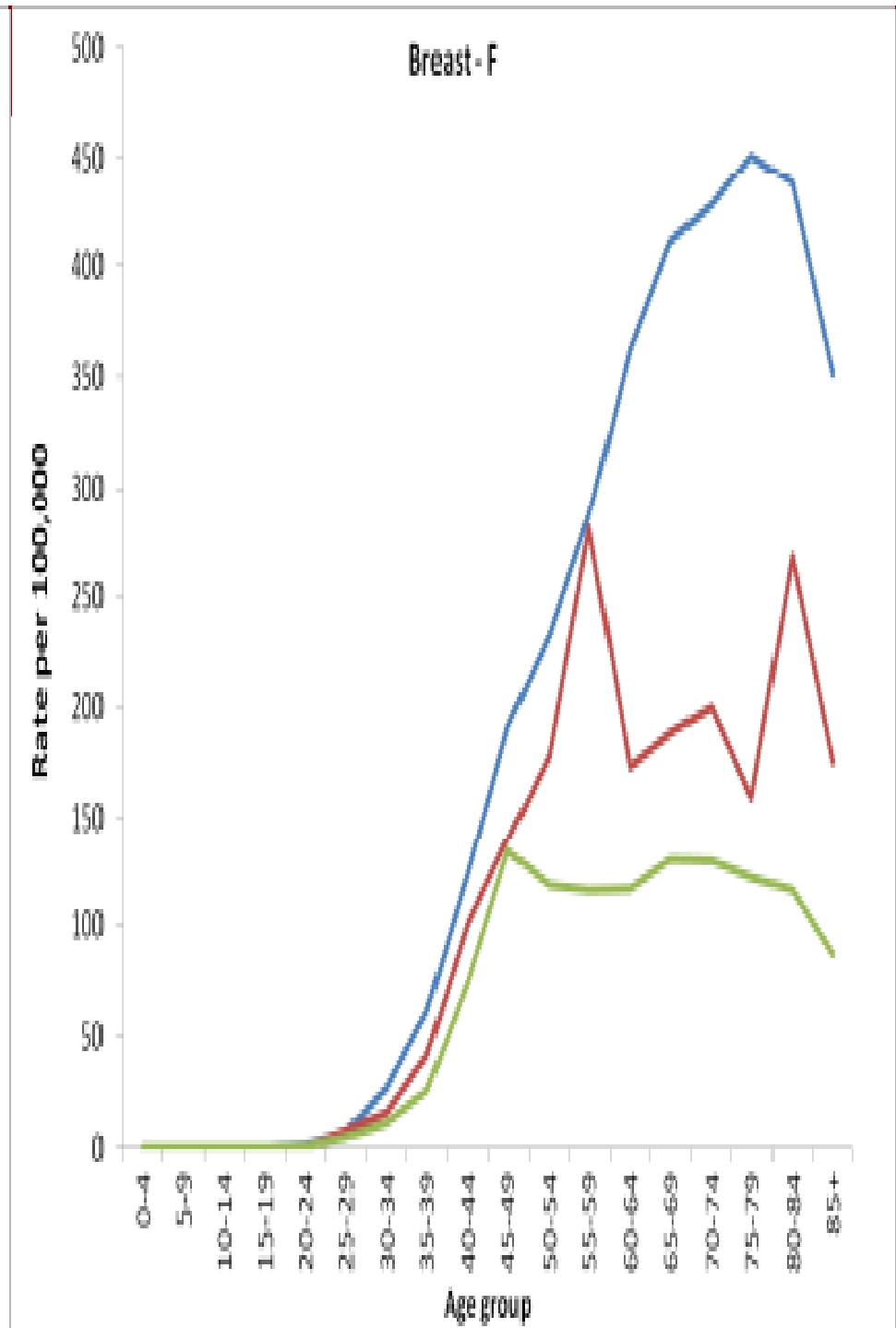
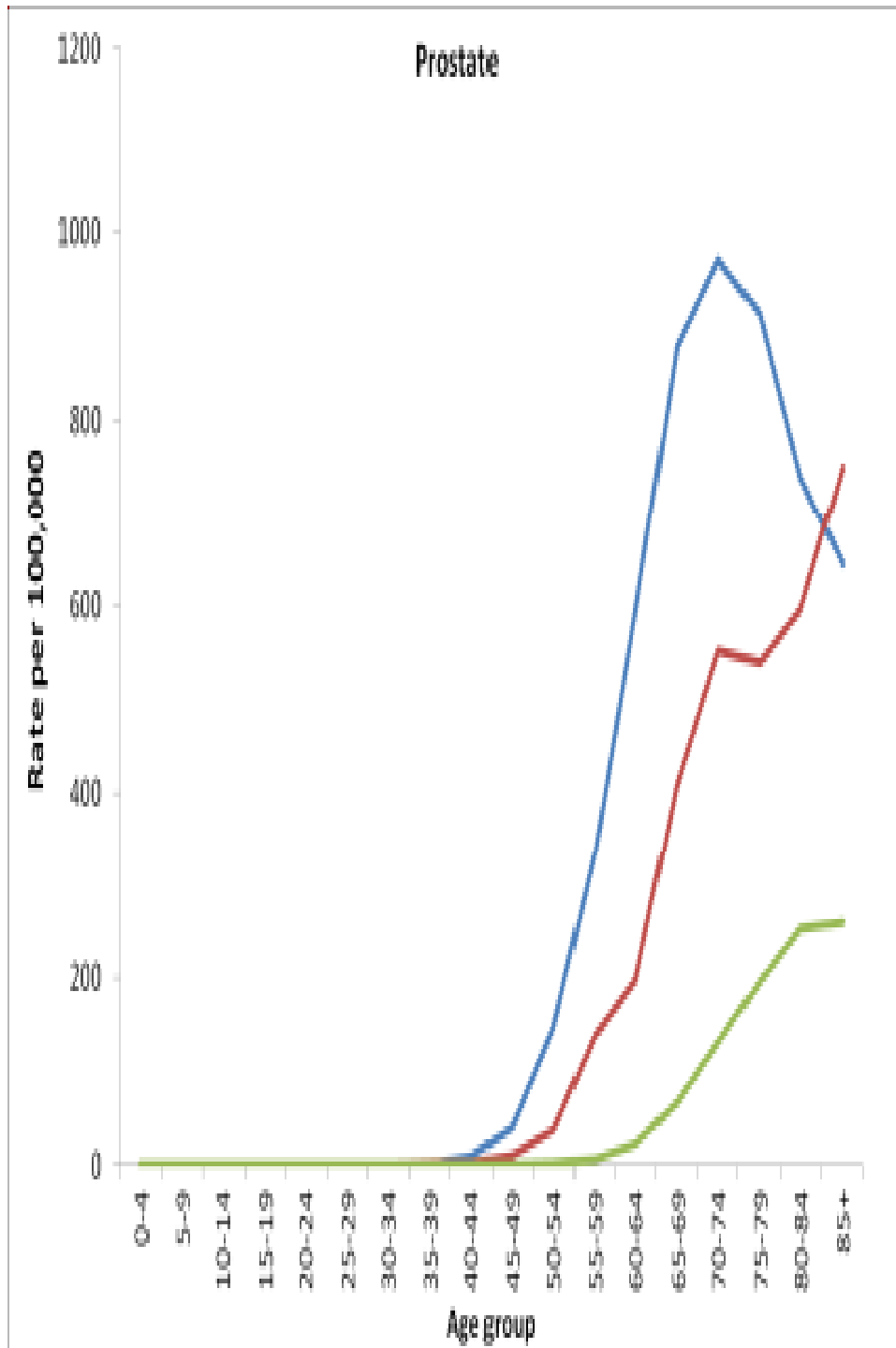


### Prostate

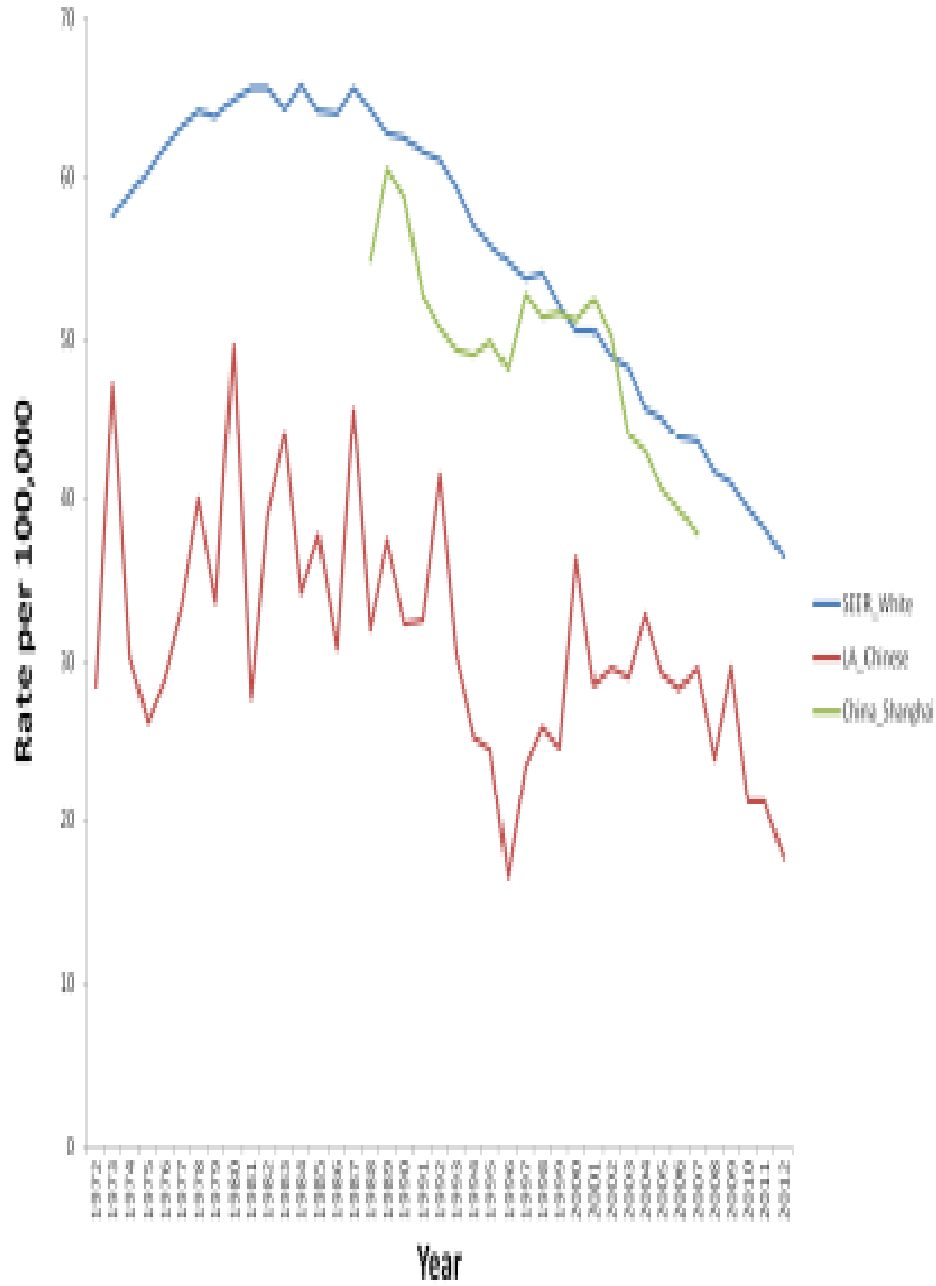


### Breast-F

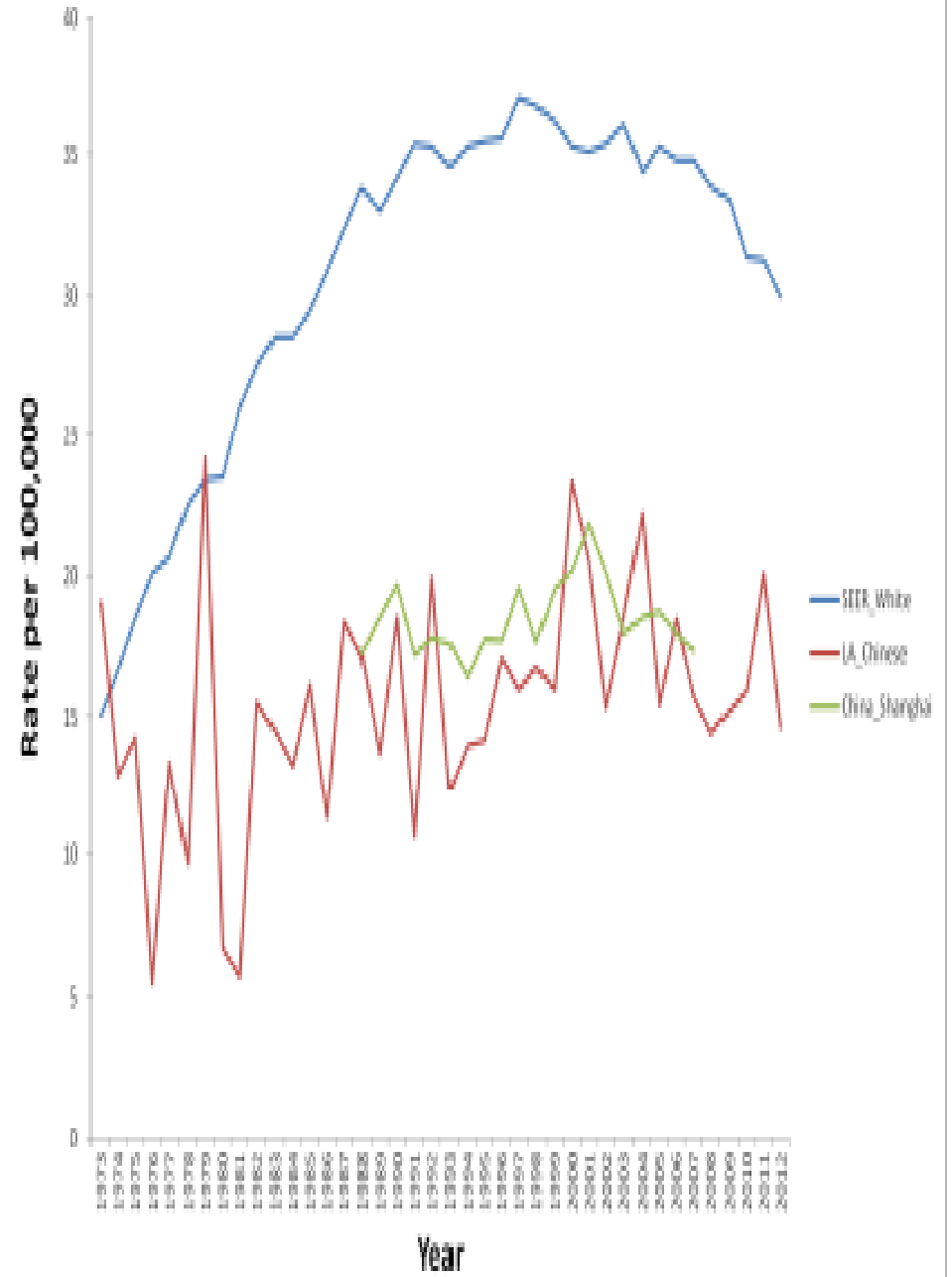




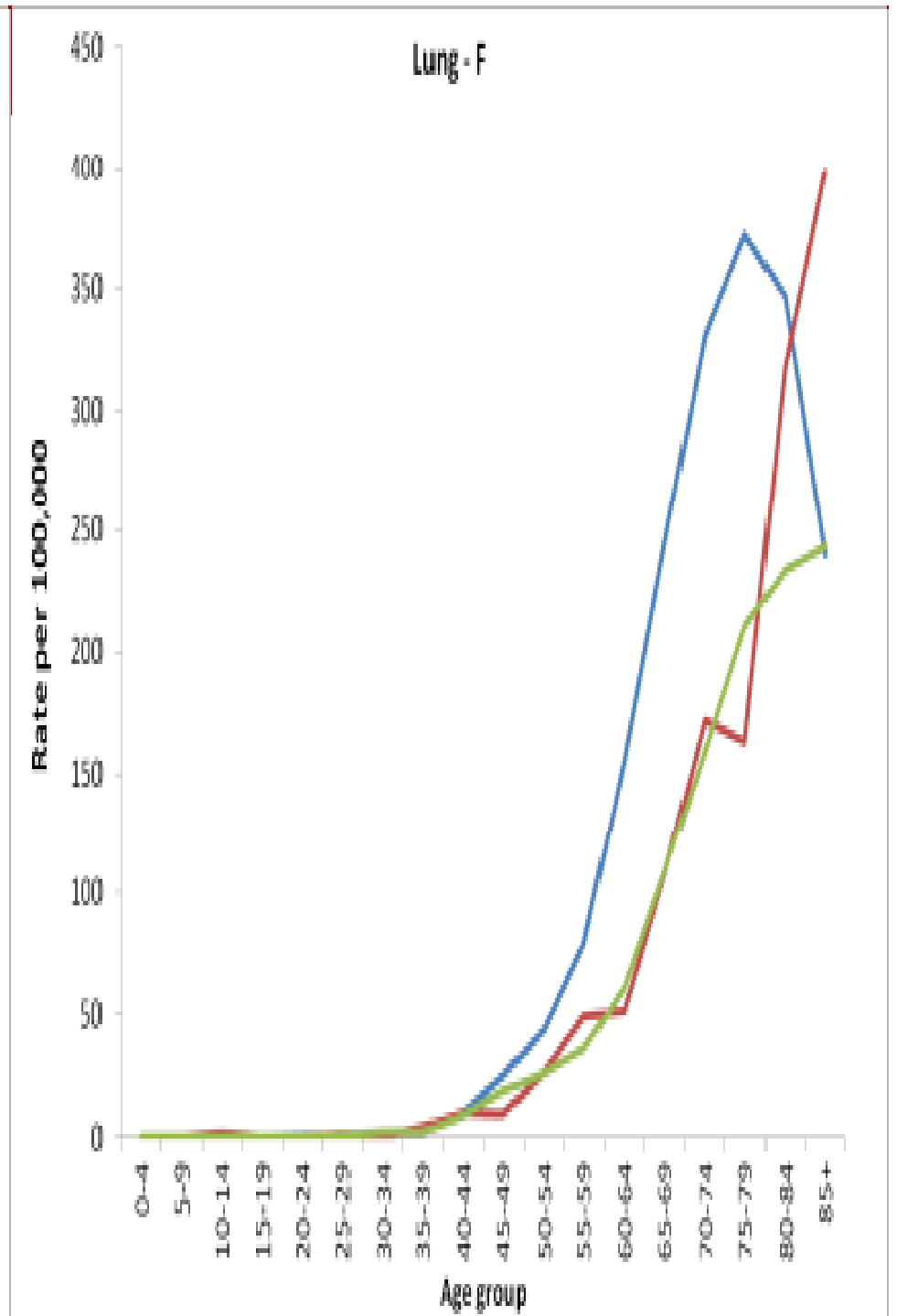
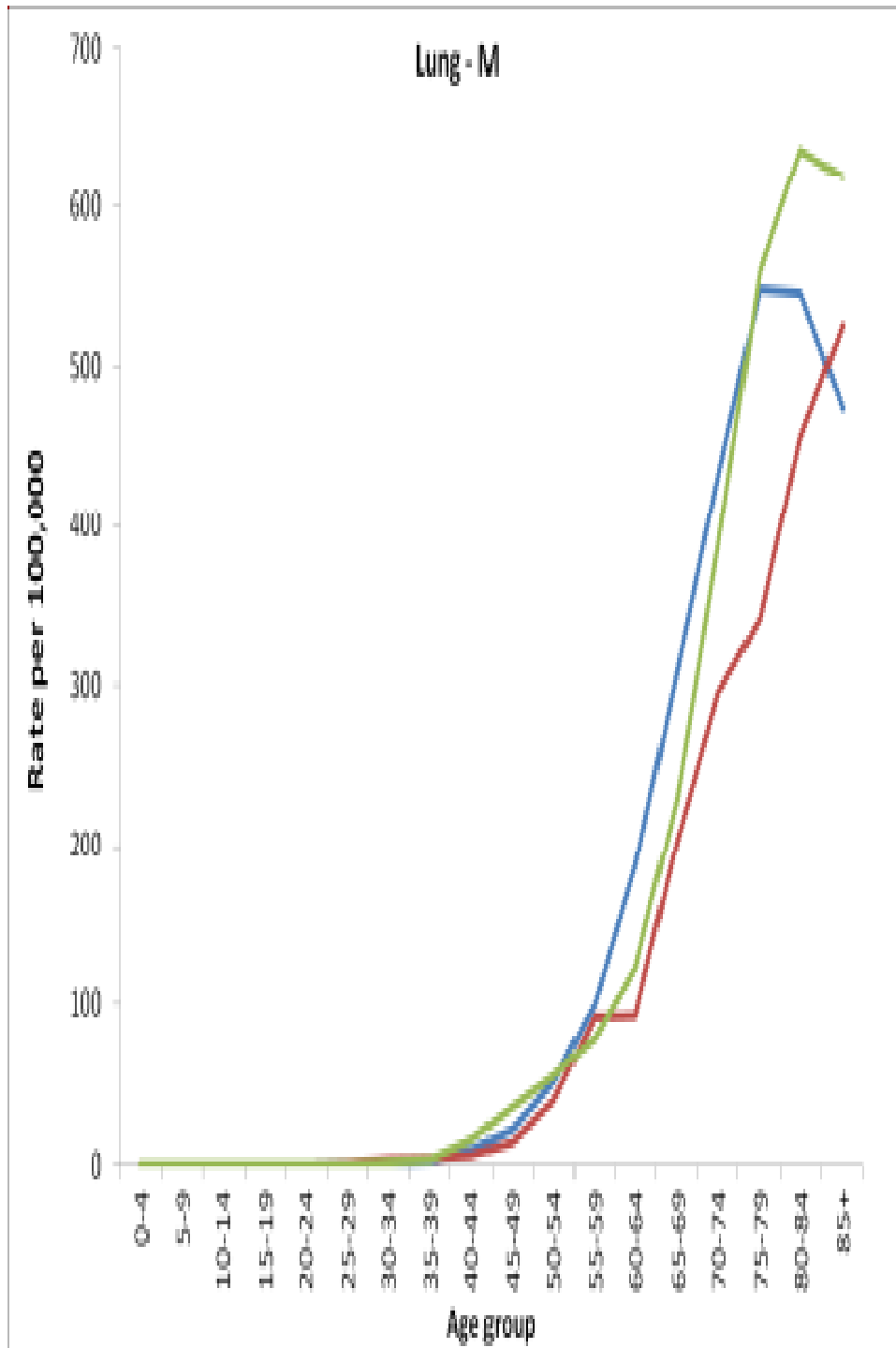
Lung - M



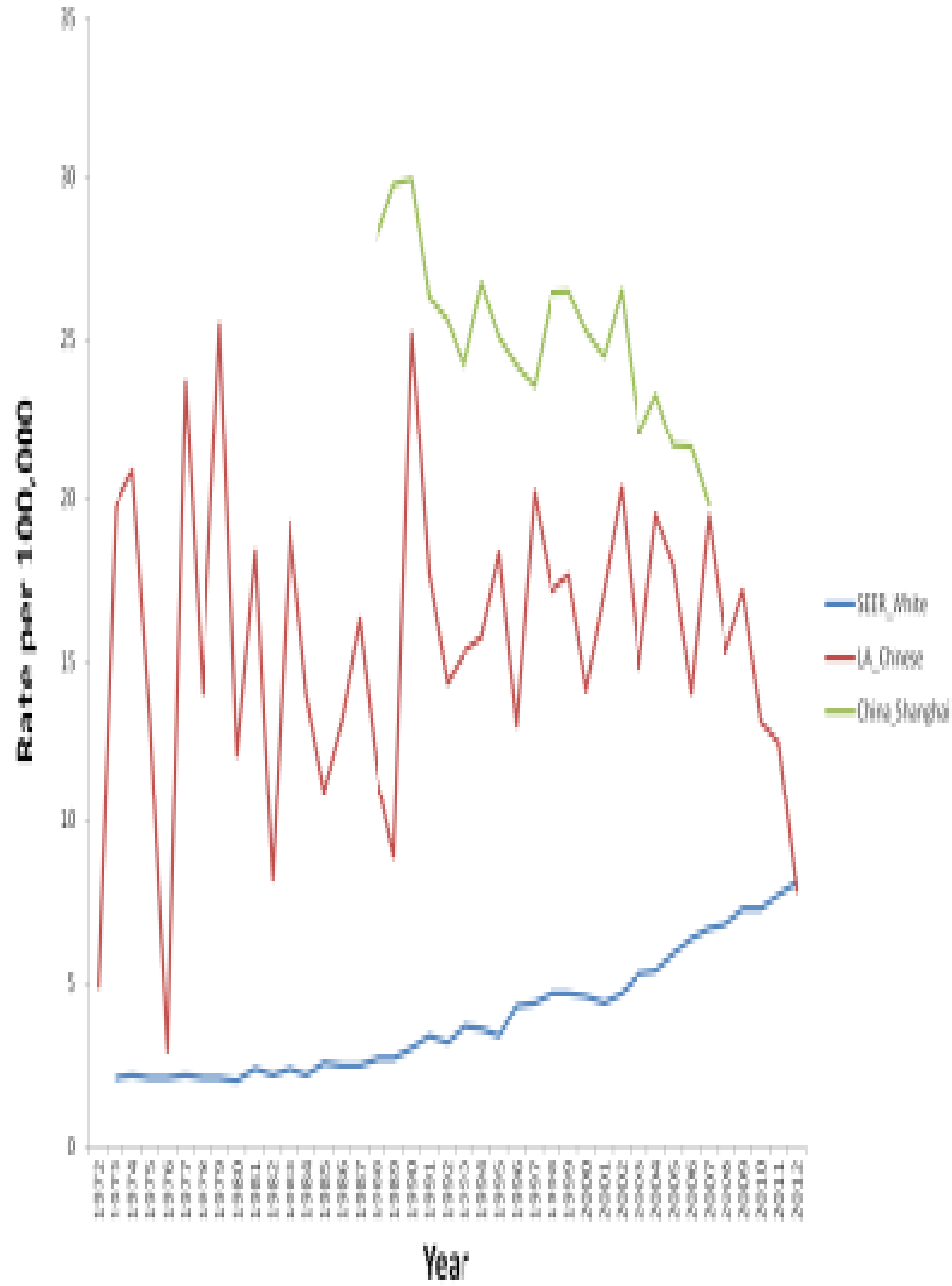
Lung - F



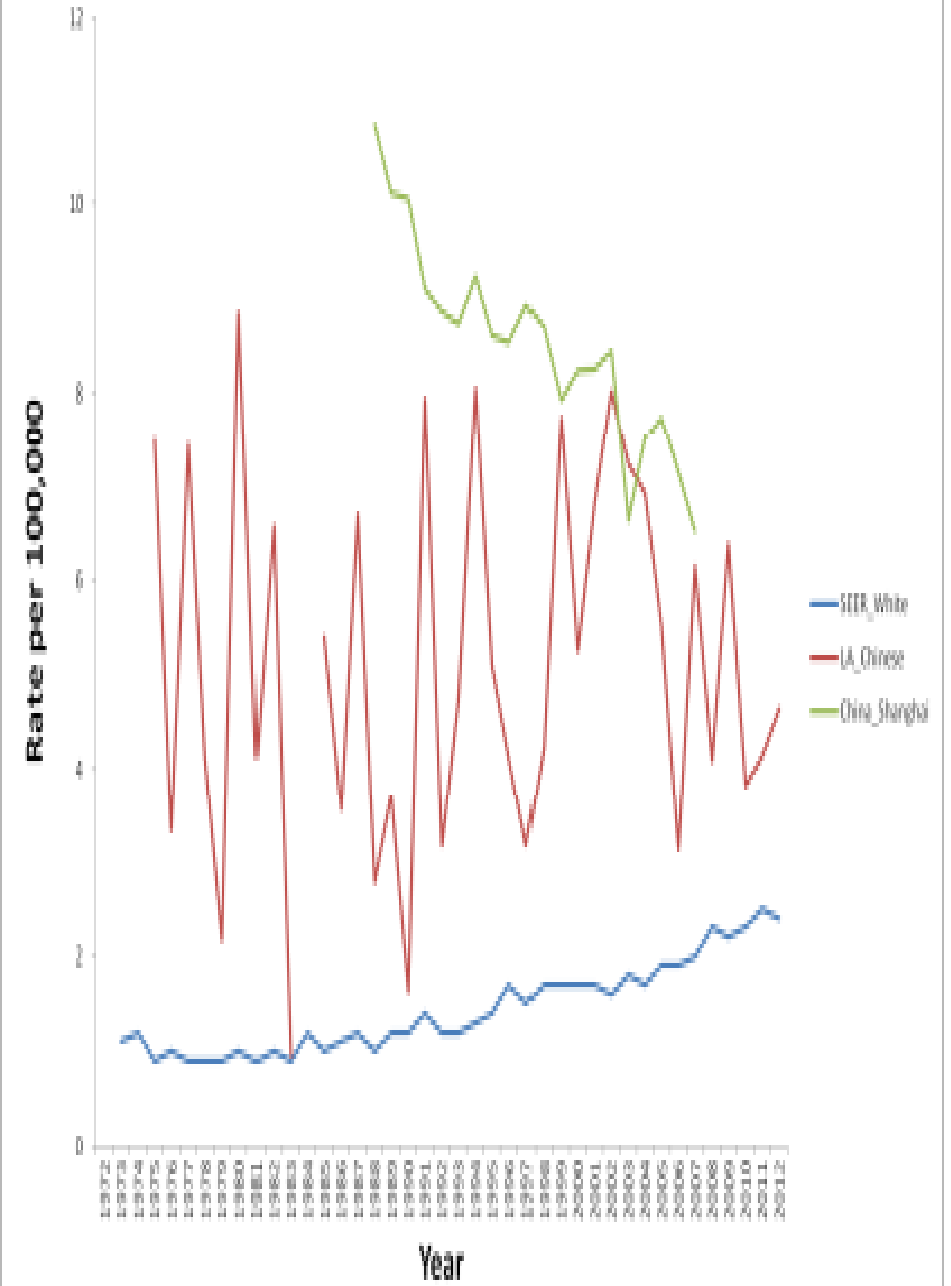


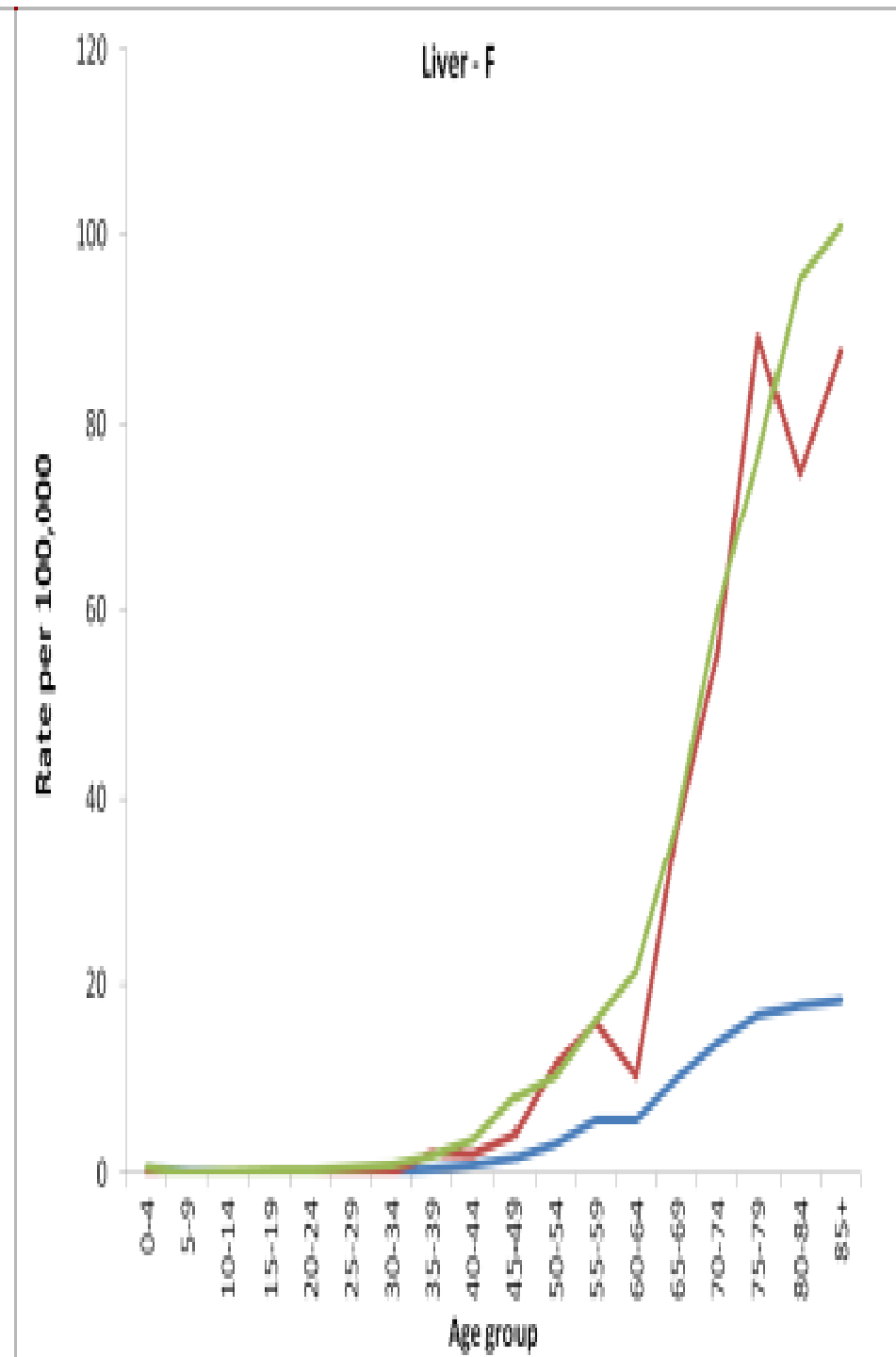
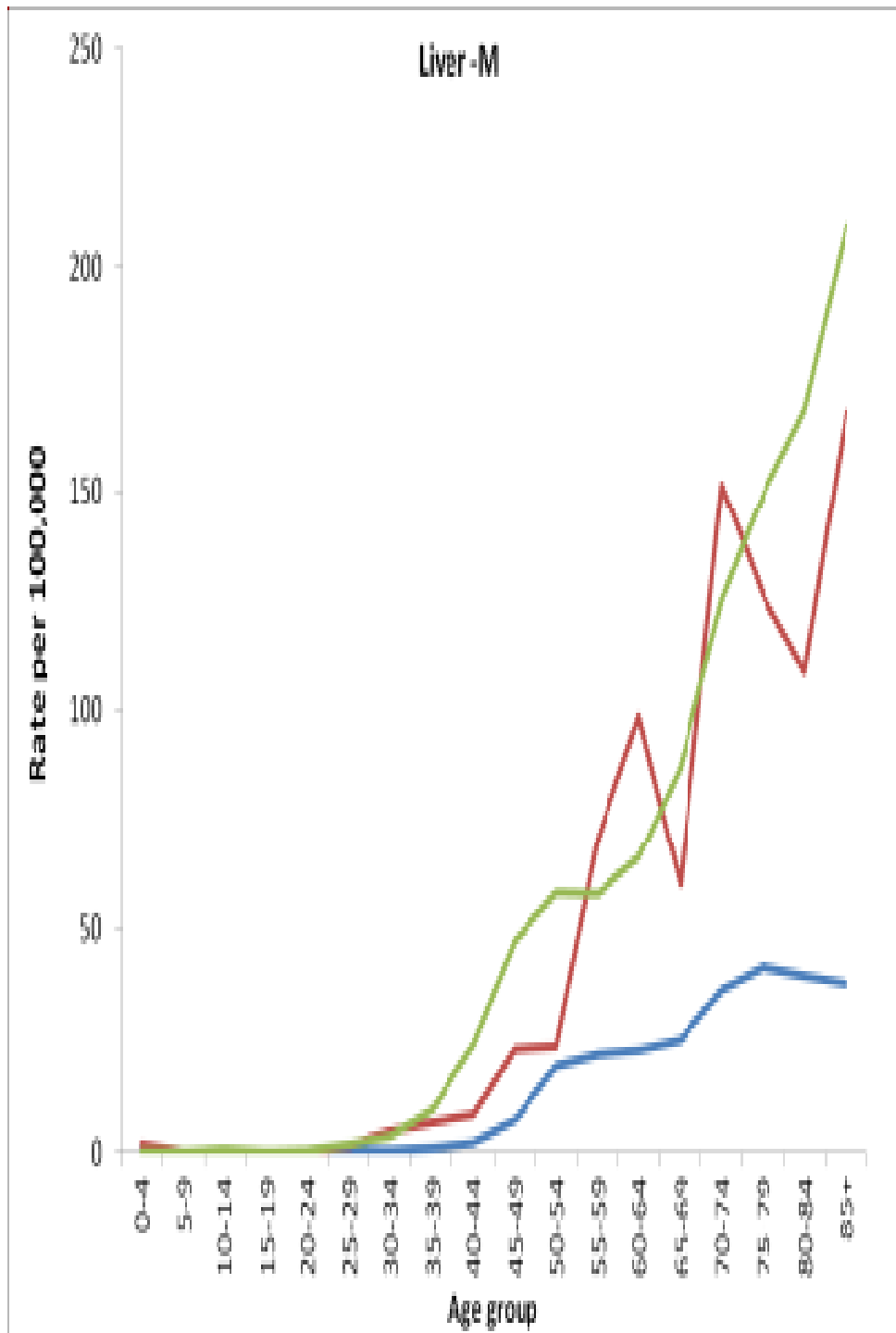


Liver - M

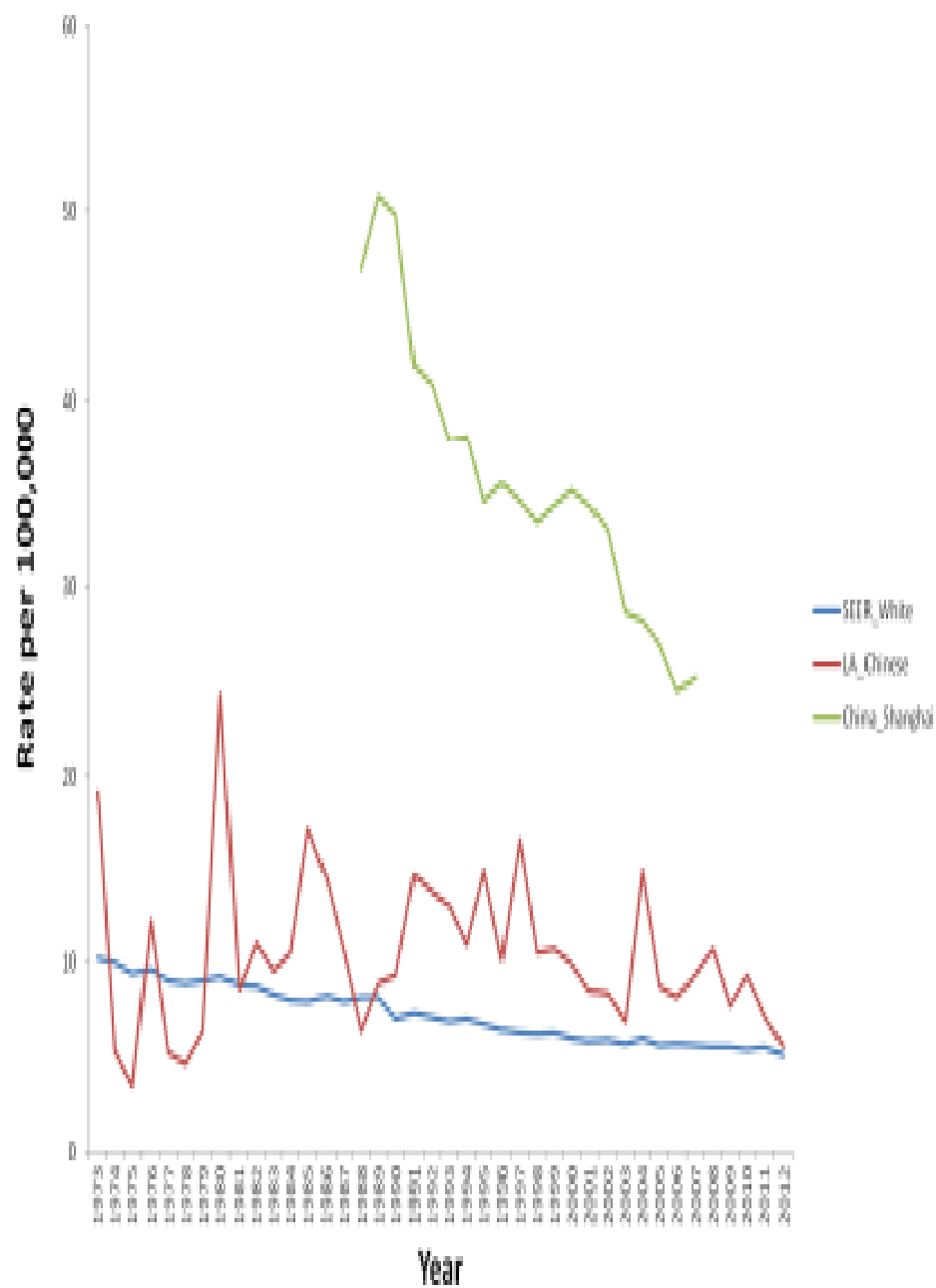


Liver - F

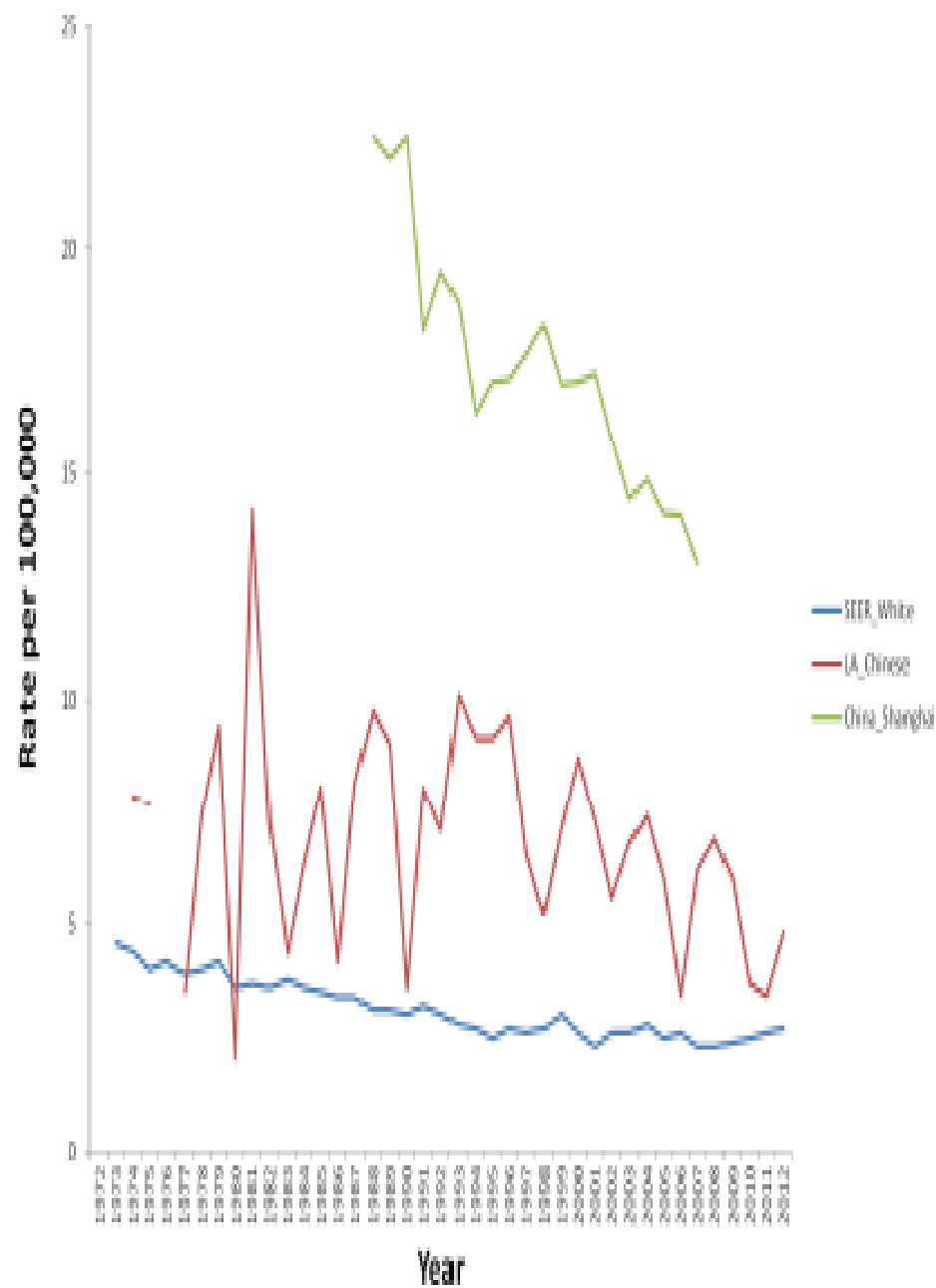


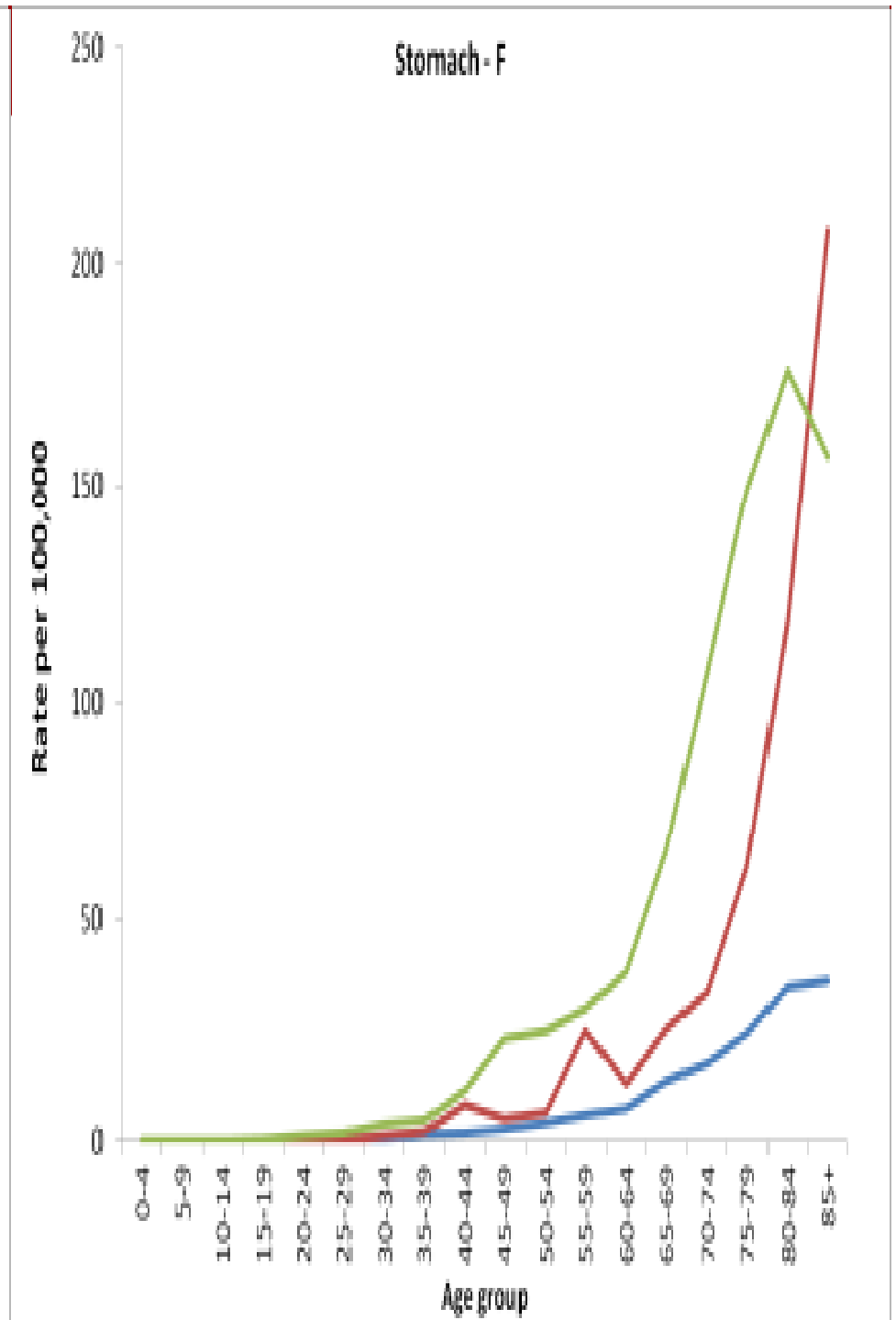
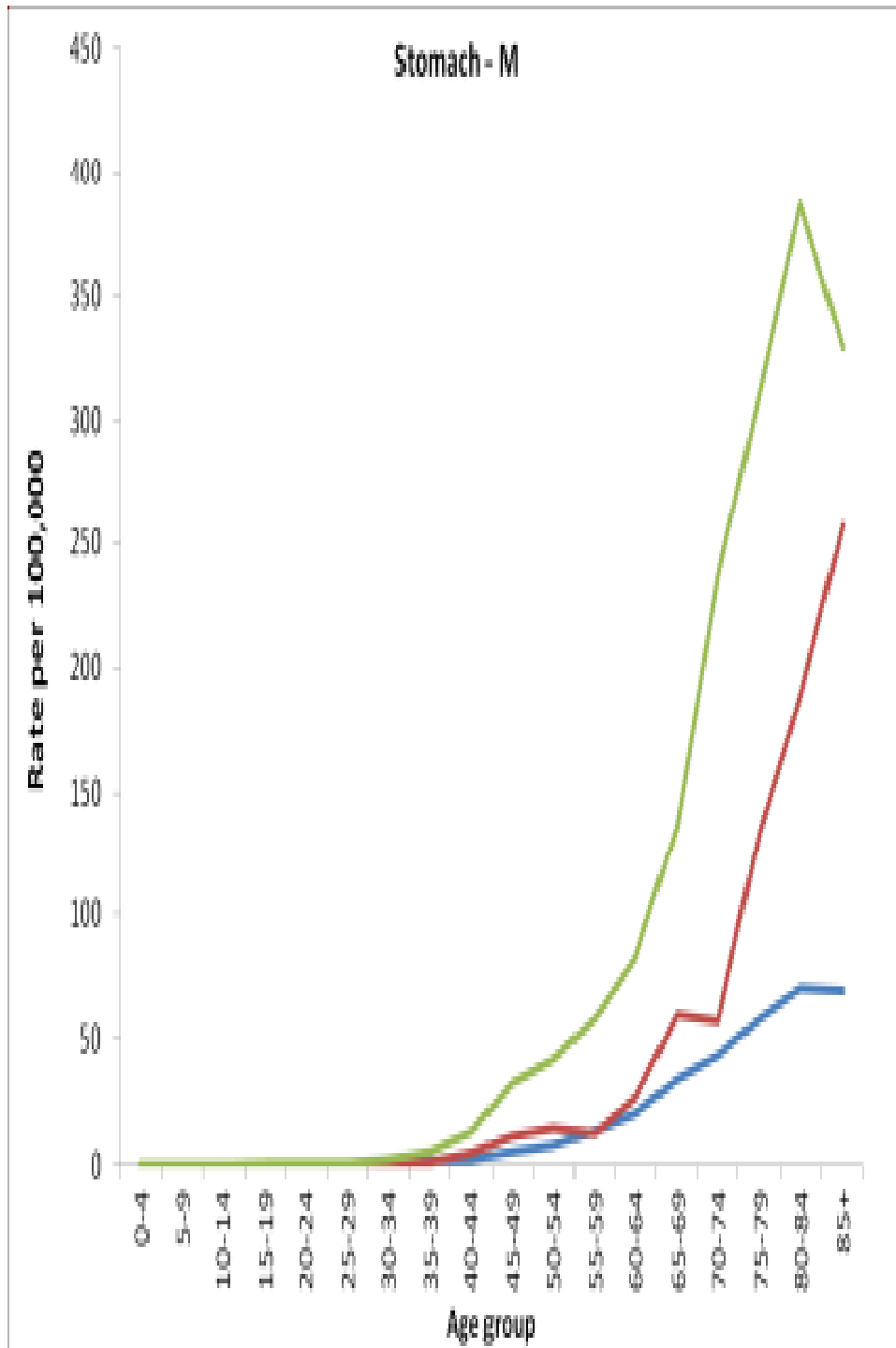


### Stomach - M

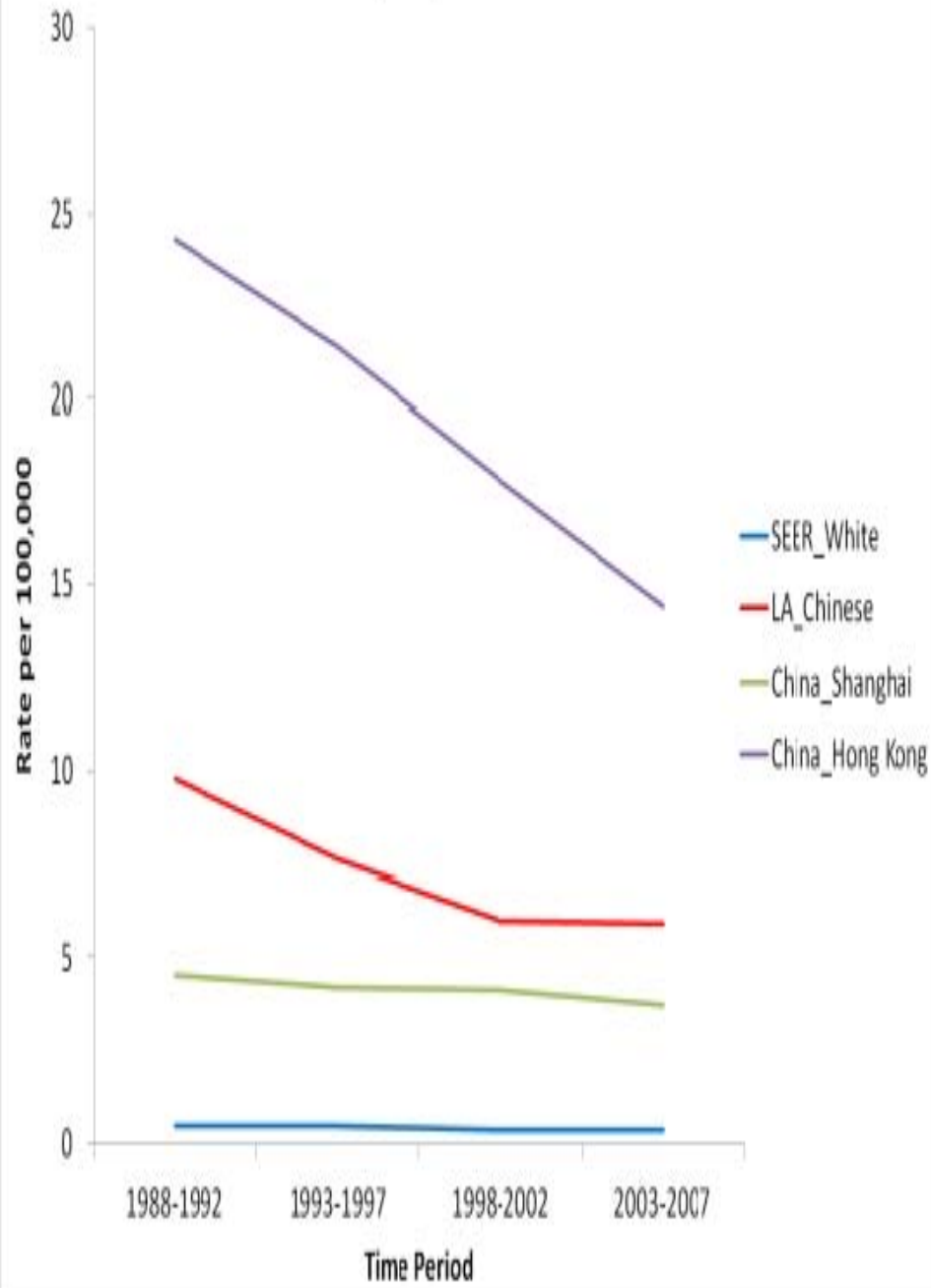


### Stomach - F

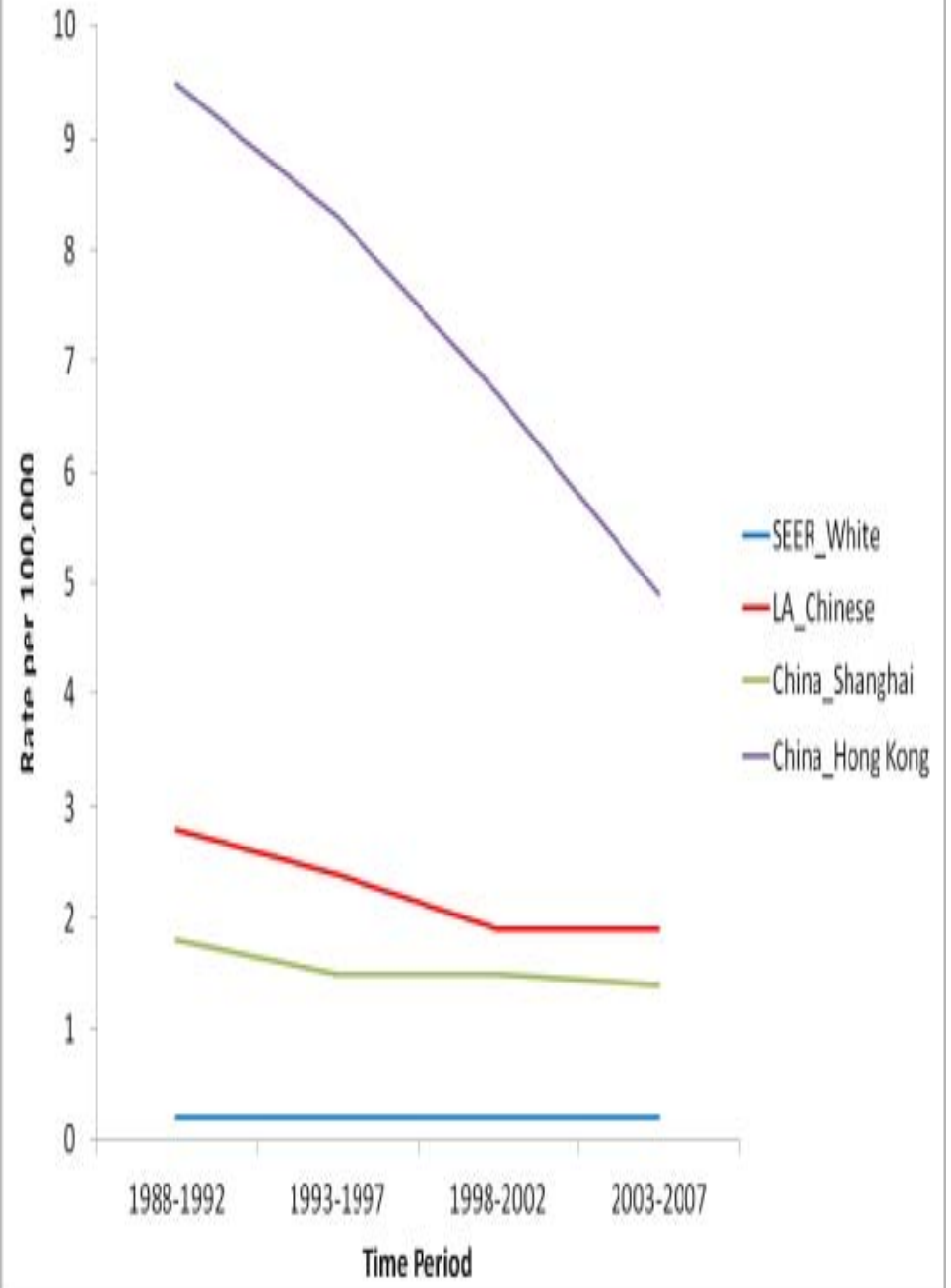




Nasopharynx - M, Ci5 VII-X

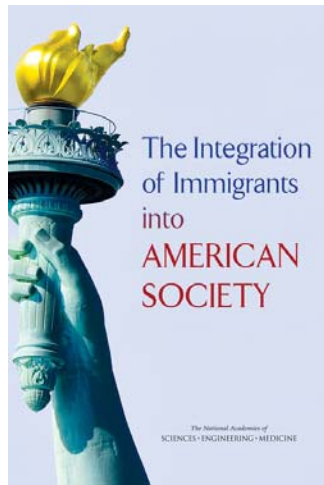


Nasopharynx - F, Ci5 VII-X



# Summary

- Chinese Americans have different cancer risk profile from whites
- Excessive risks particularly for nasopharyngeal, liver, and stomach
- Intermediate risk for most cancers between U.S. whites and Chinese in China
- Changing risk levels underline the importance of environmental factors in cancer risk
- Provide opportunities to generate hypothesis for cancer causes and control



## The Need for Better Data

**“This is a longstanding problem, but it has become increasingly critical as immigration to the United States has increased and as immigrants have become dispersed throughout the country.”**

- Collection of birthplace (individual and parental)