



Annual Report to the Nation on the Status of Cancer, 1975-2009

National Cancer Institute
Surveillance Research Program

NCAB Feb 8, 2013

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Report to the Nation 1975-2009

Focus: Burden & Trends in HPV-Associated Cancers and HPV Vaccination Coverage Levels



- Journal of the National Cancer Institute
 - ◆ ePub: Jan 7, 2013 4 pm embargo; Print Issue 3, Feb 2013
- Special Feature (Dr. Lowy)
 - ◆ Trends of HPV associated cancers
 - ◆ Prevalence of HPV vaccination coverage & Pap testing
- Coordinated & shared responsibility since 1998
 - ◆ National Cancer Institute (NCI)
 - ◆ Centers for Disease Control & Prevention (CDC)
 - ◆ American Cancer Society (ACS)
 - ◆ North American Association of Central Cancer Registries (NAACCR)
- ACS (lead)
 - ◆ Also: Cancer Statistics, 2013 published in January



ACS Cancer Facts & Figures 2013

➤ **1,660.290** estimated new cases in 2013

➤ **580,350** estimated deaths in 2013

➤ Long-term cancer mortality trends (1930-2009)

➤ Regional variation in cancer rates

➤ **Based on NCI SEER website:**

➤ *Probably of developing invasive cancers*

➤ *Stage at diagnosis*

➤ *5-year relative survival rates*

➤ *Cancer occurrence by race/ethnicity*

CA Cancer J Clin 2013;63:11-30. © 2013 American Cancer Society.

CA CANCER J CLIN 2013;63:11-30

Cancer Statistics, 2013

Rebecca Siegel, MPH¹; Deepa Naishadham, MA, MS²; Ahmedin Jemal, DVM, PhD³

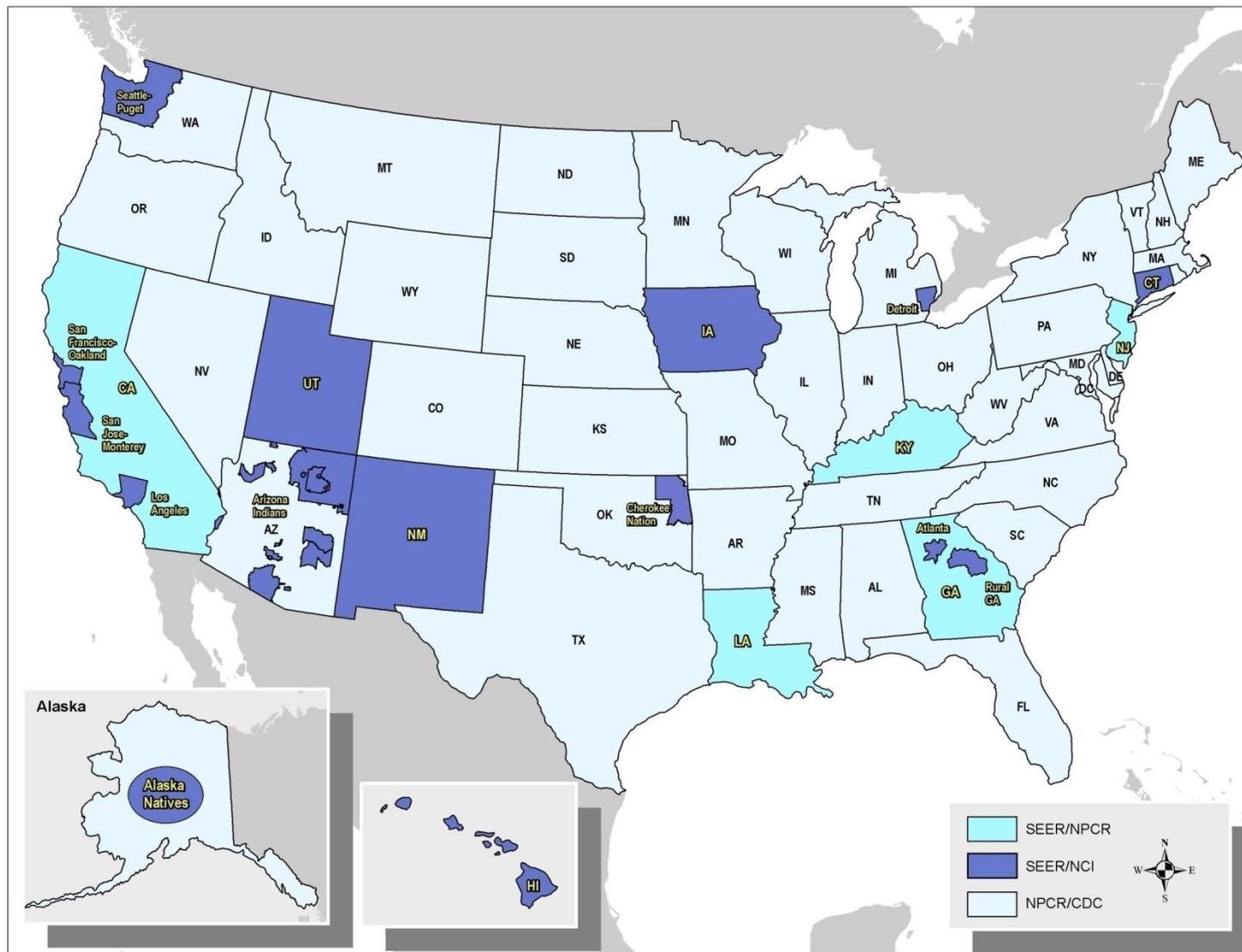
Each year, the American Cancer Society estimates the numbers of new cancer cases and deaths expected in the United States in the current year and compiles the most recent data on cancer incidence, mortality, and survival based on incidence data from the National Cancer Institute, the Centers for Disease Control and Prevention, and the North American Association of Central Cancer Registries and mortality data from the National Center for Health Statistics. A total of 1,660,290 new cancer cases and 580,350 cancer deaths are projected to occur in the United States in 2013. During the most recent 5 years for which there are data (2005-2009), delay-adjusted cancer incidence rates declined slightly in men (by 0.6% per year) and were stable in women, while cancer death rates decreased by 1.8% per year in men and by 1.5% per year in women. Overall, cancer death rates have declined 20% from their peak in 1991 (215.1 per 100,000 population) to 2009 (173.1 per 100,000 population). Death rates continue to decline for all 4 major cancer sites (lung, colorectum, breast, and prostate). Over the past 10 years of data (2000-2009), the largest annual declines in death rates were for chronic myeloid leukemia (8.4%), cancers of the stomach (3.1%) and colorectum (3.0%), and non-Hodgkin lymphoma (3.0%). The reduction in overall cancer death rates since 1990 in men and 1991 in women translates to the avoidance of approximately 1.18 million deaths from cancer, with 152,900 of these deaths averted in 2009 alone. Further progress can be accelerated by applying existing cancer control knowledge across all segments of the population, with an emphasis on those groups in the lowest socioeconomic bracket and other underserved populations. CA Cancer J Clin 2013;63:11-30. © 2013 American Cancer Society.

Selected Key Findings



- Decline in cancer mortality continues
- Decline in cancer incidence for men
- Cancer incidence stable for women
- Childhood cancer (age 0-14)
 - ◆ Incidence increased
 - ◆ Mortality decreased
- Dr. Lowy to present:
- 32% of girls aged 13-17 received three doses of HPV vaccine in 2010
 - ◆ 35% in 2011
 - ◆ Coverage lower among uninsured and some Southern states
- 87% of women aged 21-65 had a Pap test in last 3 years
- Incidence of HPV-related oropharyngeal cancer increased among white men and women
- Incidence of anal cancer increased among white and black men and women
- Incidence of cervical cancer generally declined among almost all women

Surveillance, Epidemiology and End Results (SEER) Program



Cancer Incidence & Mortality Statistics



➤ Cancer incidence

- ◆ Long-term trends, 1992-2009
 - With and without delay adjustment
 - SEER areas, 14% coverage

- ◆ Short-term trends (2000-2009)
 - By race and ethnicity
 - SEER + NPCR, 87% coverage

- ◆ Short-term rates (2005-2009)
 - By race and ethnicity
 - SEER + NPCR, 93% coverage

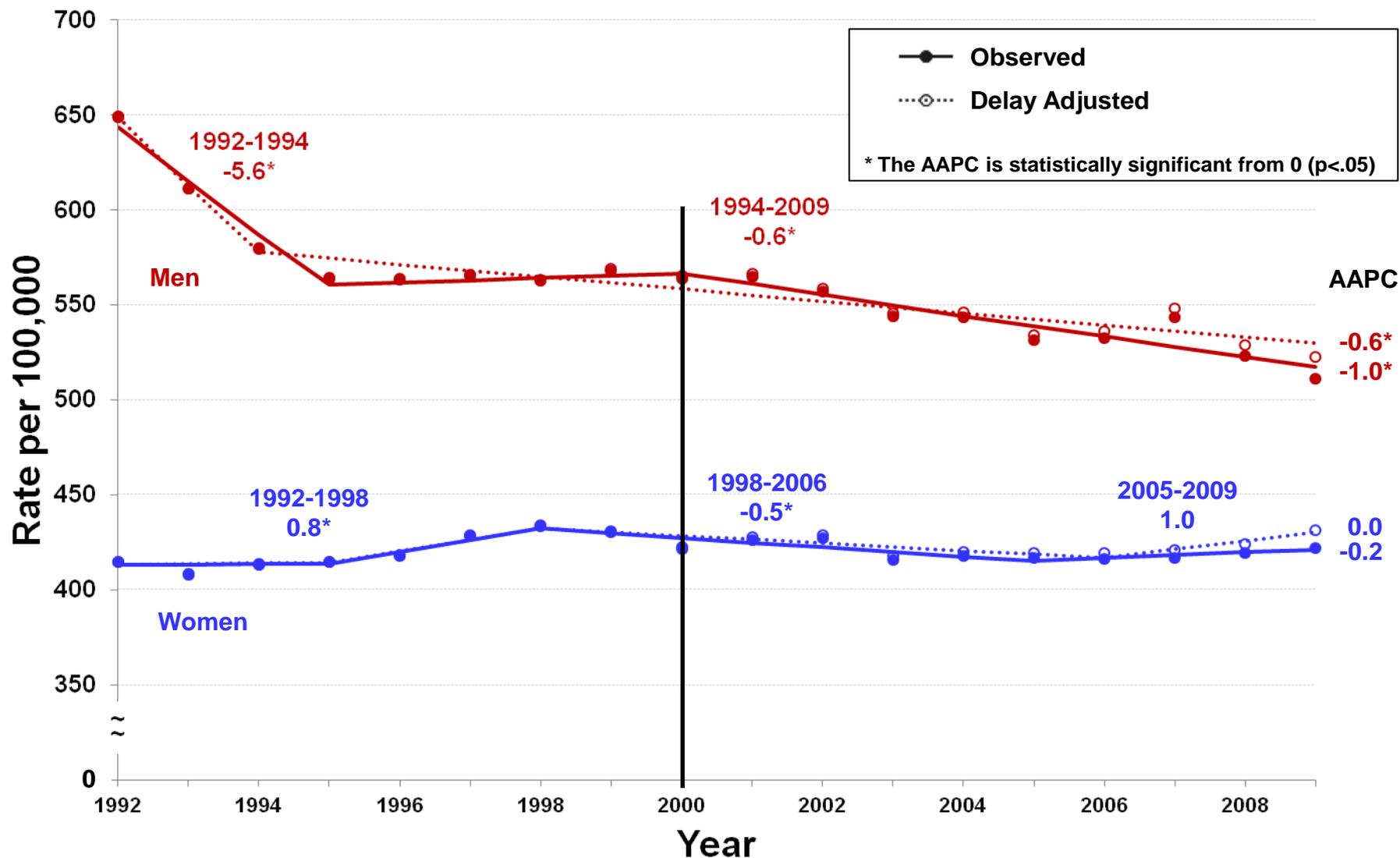


➤ Cancer mortality

- ◆ Long-term trends, 1975-2009
- ◆ Entire US (source: CDC's National Center for Health Statistics)

10 Year Average Annual Percent Change (AAPC) For Observed and Delay-Adjusted Incidence Rates

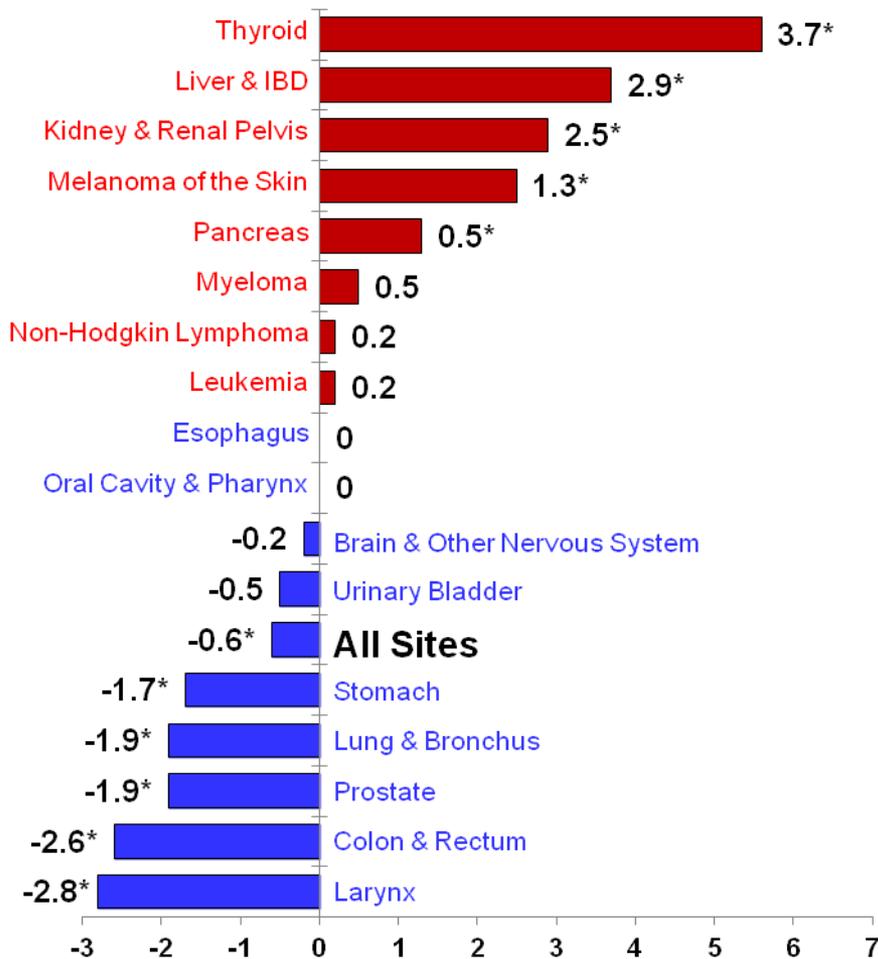
All Cancer Sites by Sex



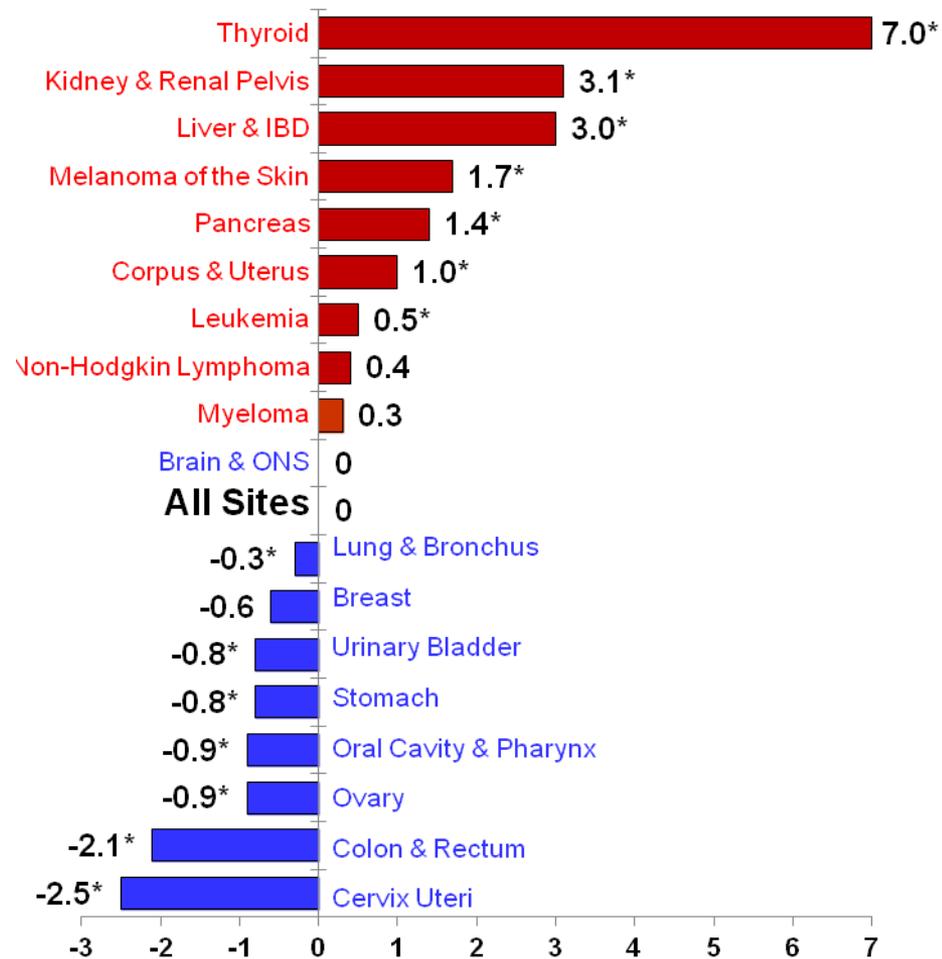
Recent Delay-adjusted SEER Incidence Trends with AAPC, 2000-2009 By Cancer Site*



Men



Women



Average Annual Percent Change 2000-2009

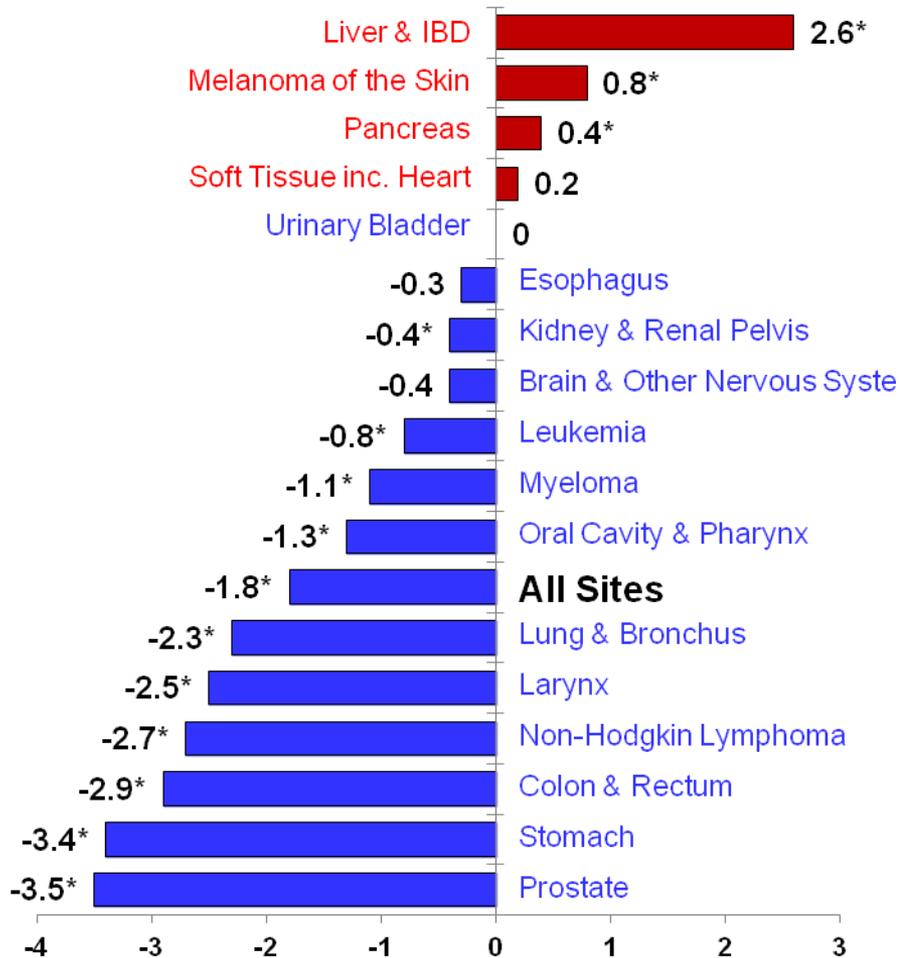
* 10 year AAPC is statistically significant from 0 ($p < .05$) based on joinpoint model fit to SEER 13 delay adjusted rates from 1992-2009

Long-Term US Mortality Trends with AAPC, 2000-2009

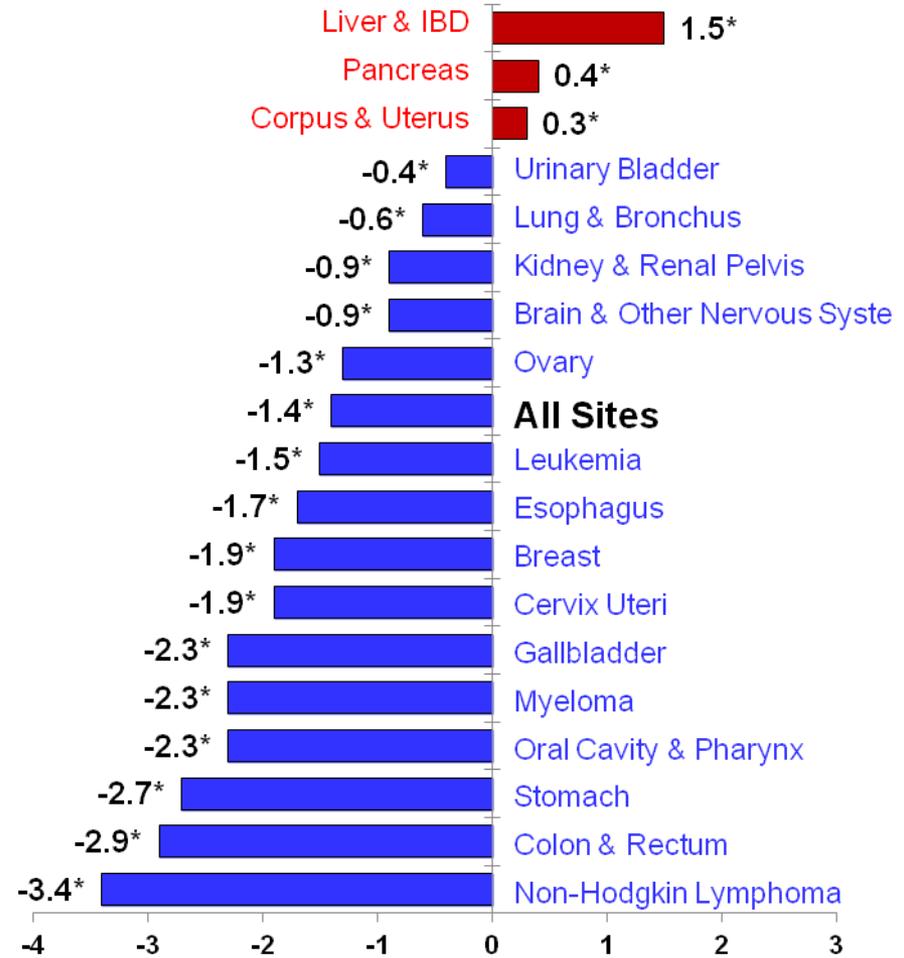
By Cancer Site*



Males



Females

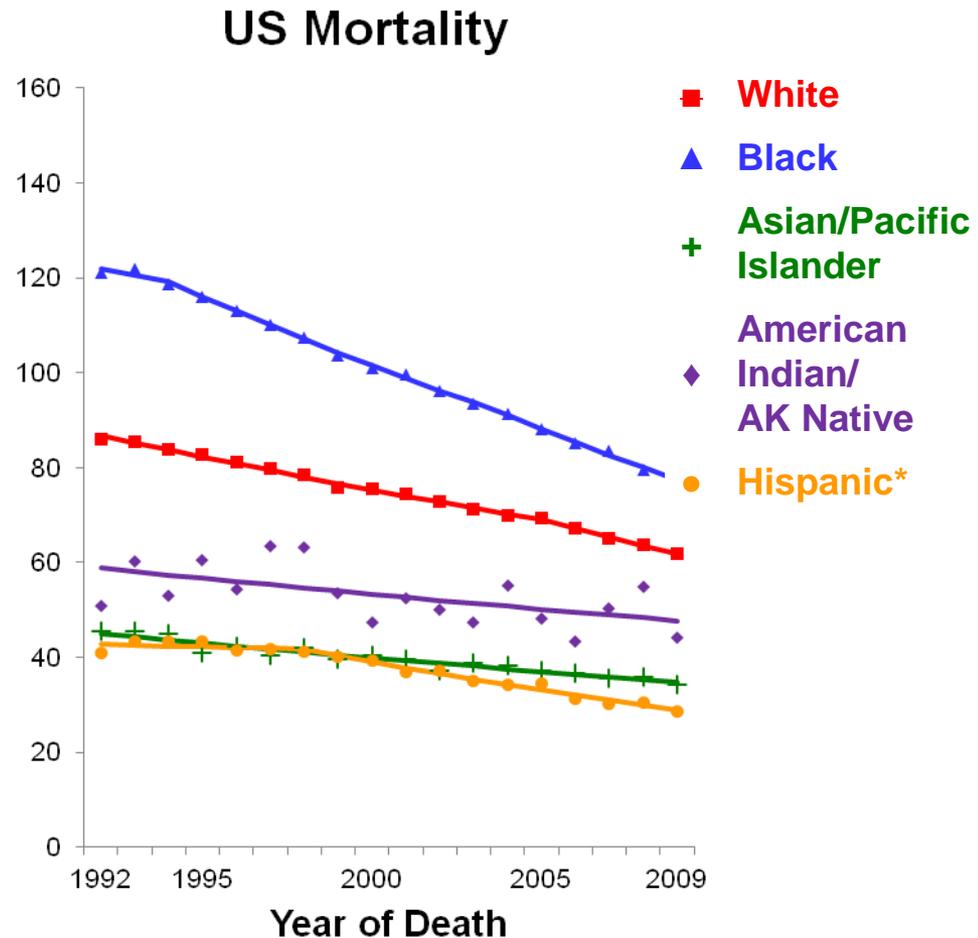
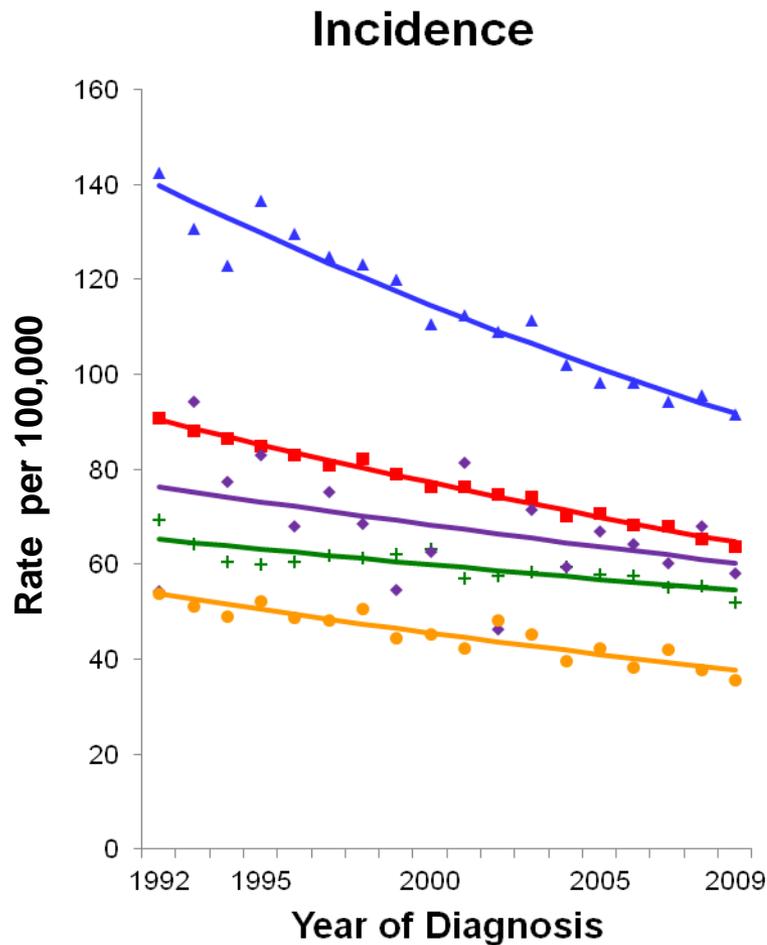


Average Annual Percent Change 2000-2009

* 10 year AAPC is statistically significant from 0 ($p < .05$) based on joinpoint model. Incidence data from SEER 13, mortality data from NCHS.

Lung & Bronchus: Men

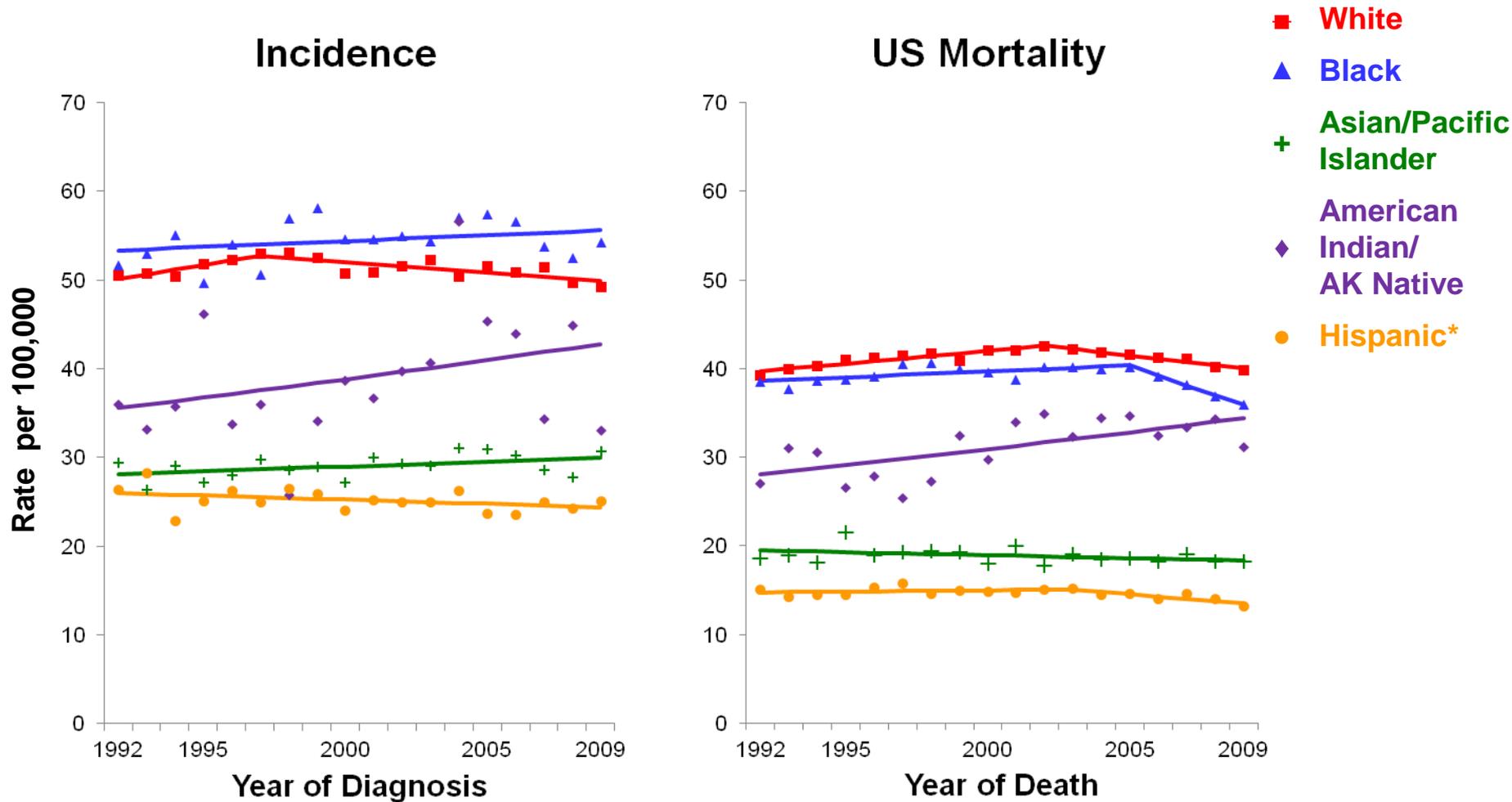
Incidence and Mortality Age-Adjusted Trends



*Hispanic is not mutually exclusive from other groups
 Incidence data from SEER 13 1992-2009, Mortality data from NCHS

Lung & Bronchus: Women

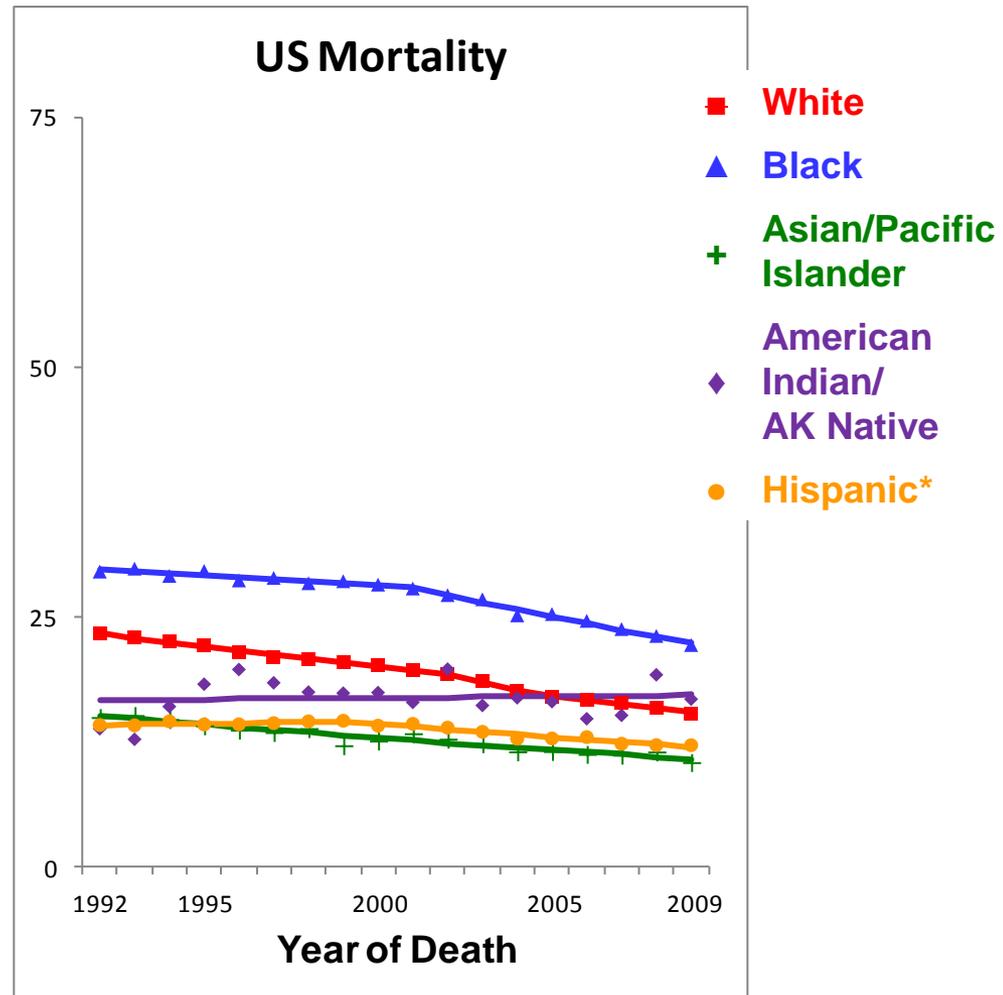
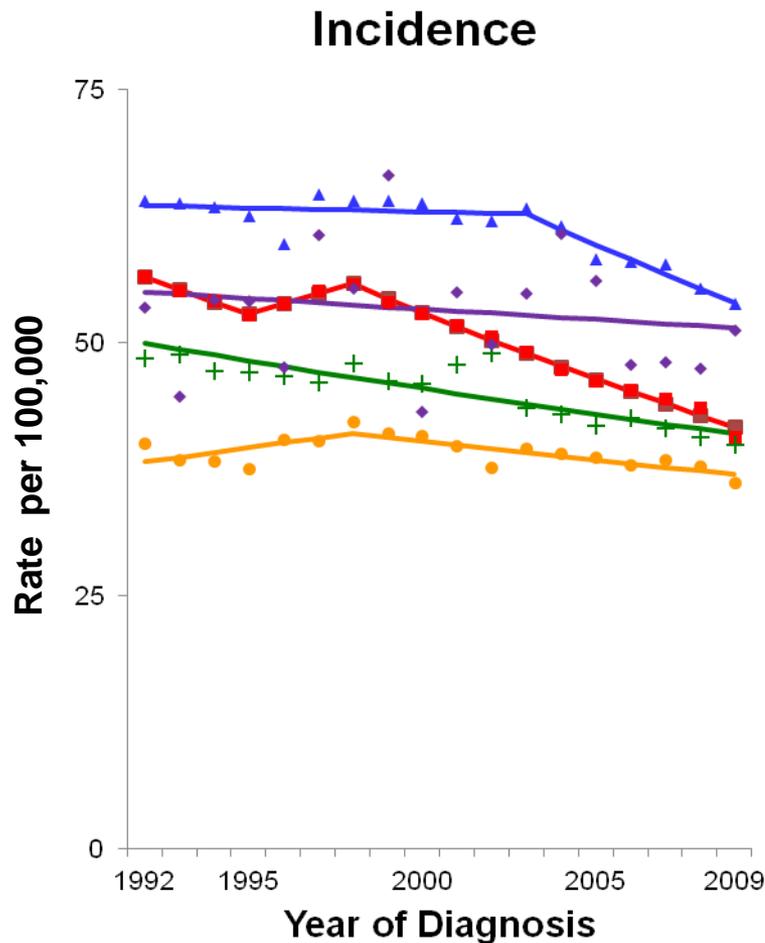
Incidence and Mortality Age-Adjusted Trends



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Colon & Rectum

Incidence and Mortality Age-Adjusted Trends

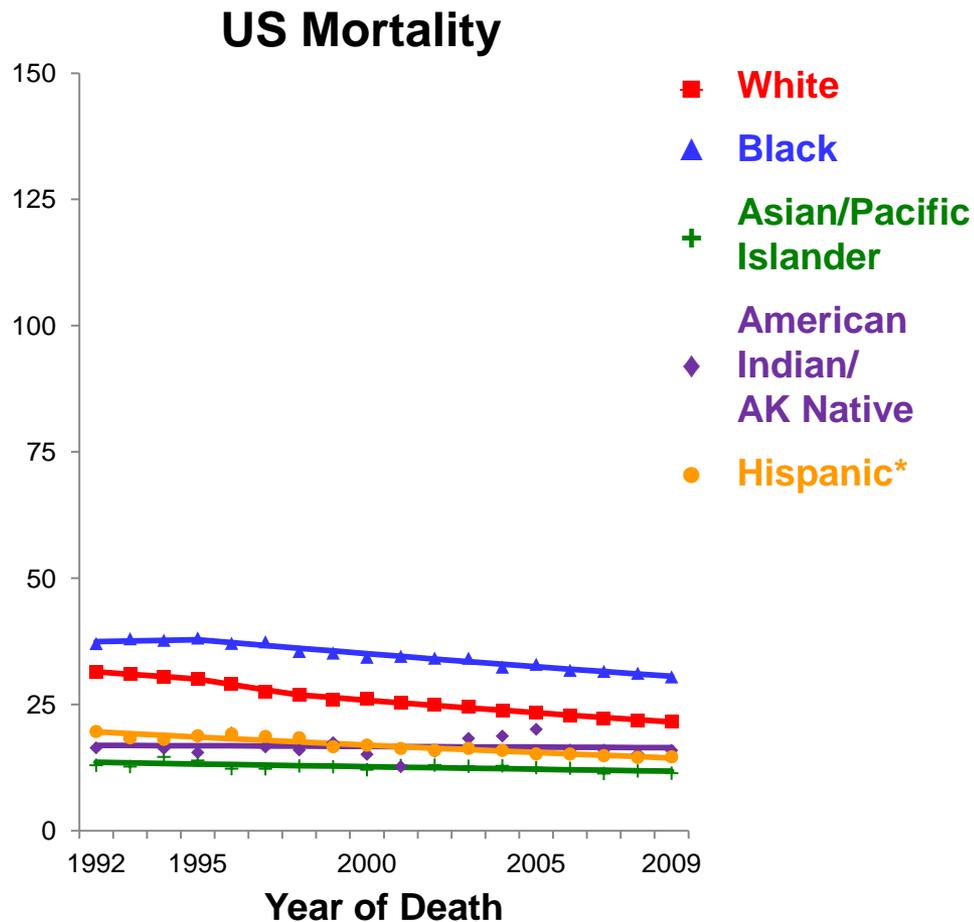
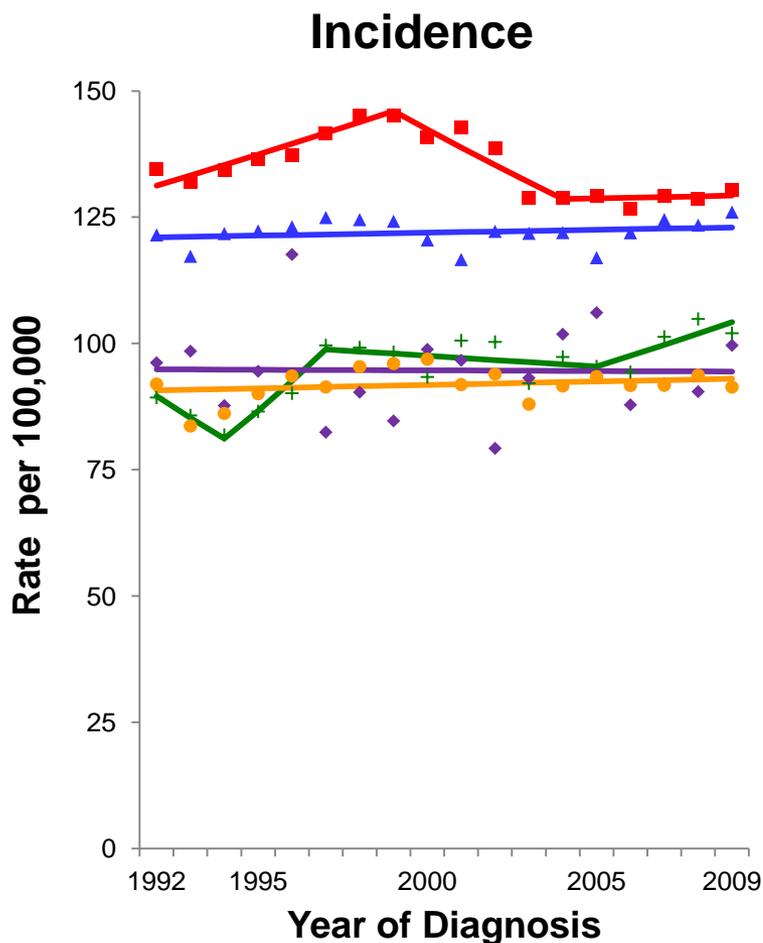


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 Incidence data from SEER 13 1992-2009, Mortality data from NCHS



Breast (Women)

Incidence and Mortality Age-Adjusted Trends

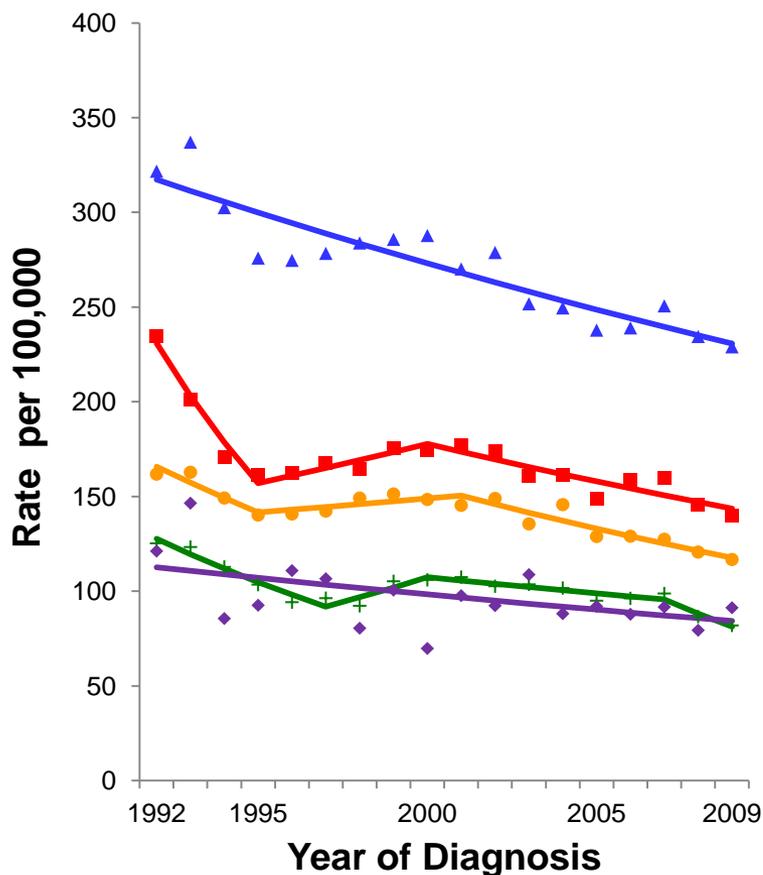


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Incidence data from SEER 13 1992-2009, Mortality data from NCHS

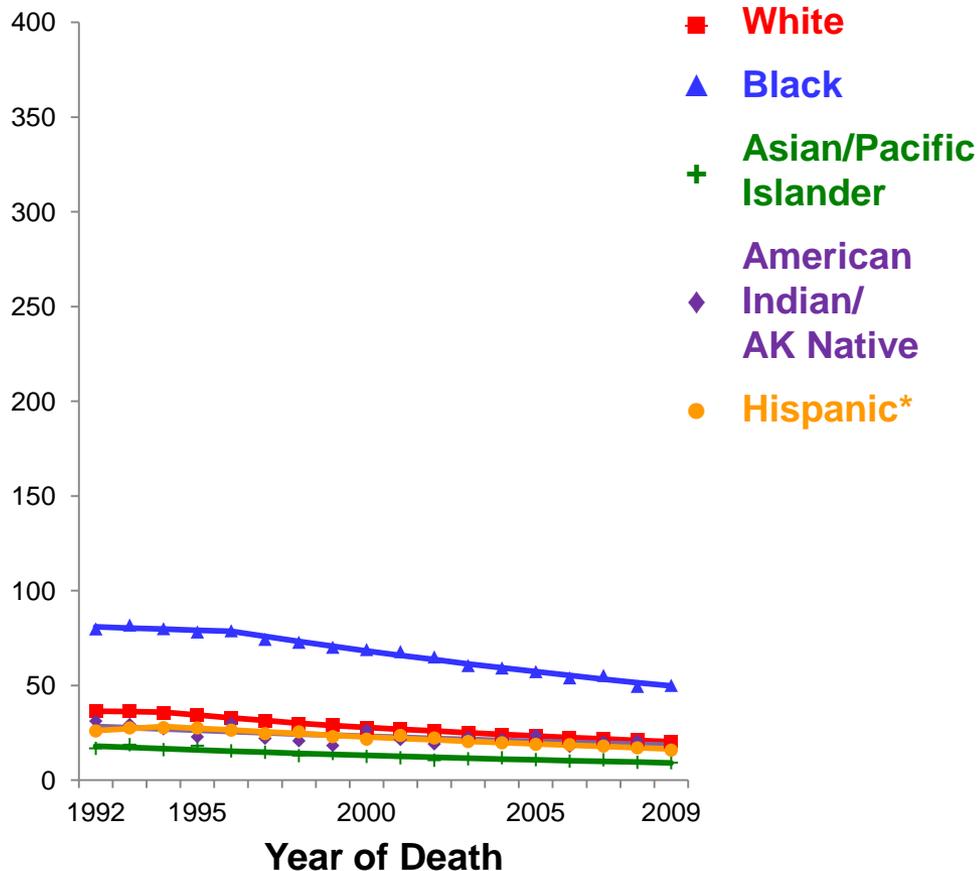


Prostate (Men) Incidence and Mortality Age-Adjusted Trends

Incidence



US Mortality

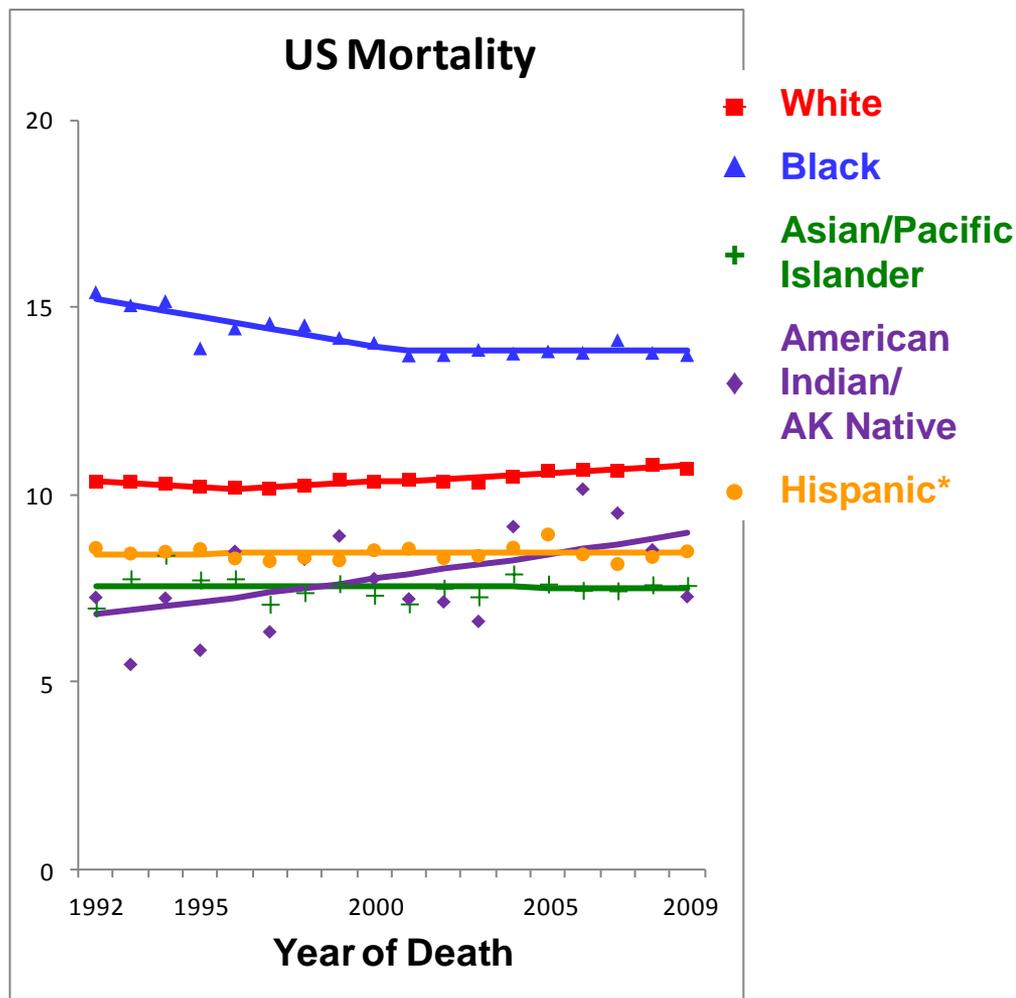
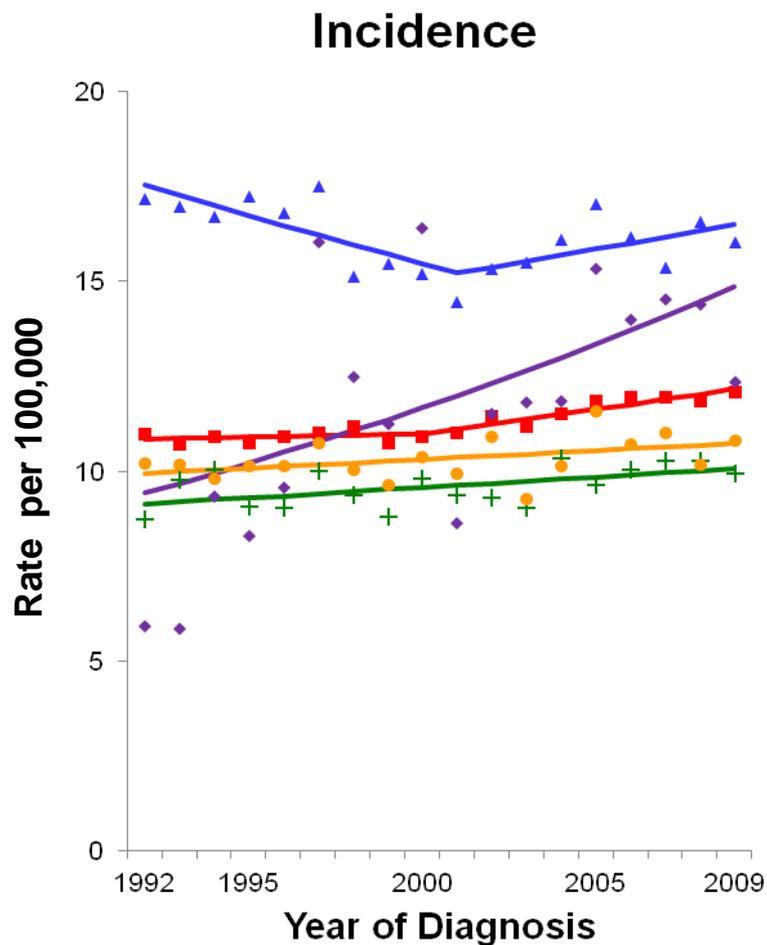


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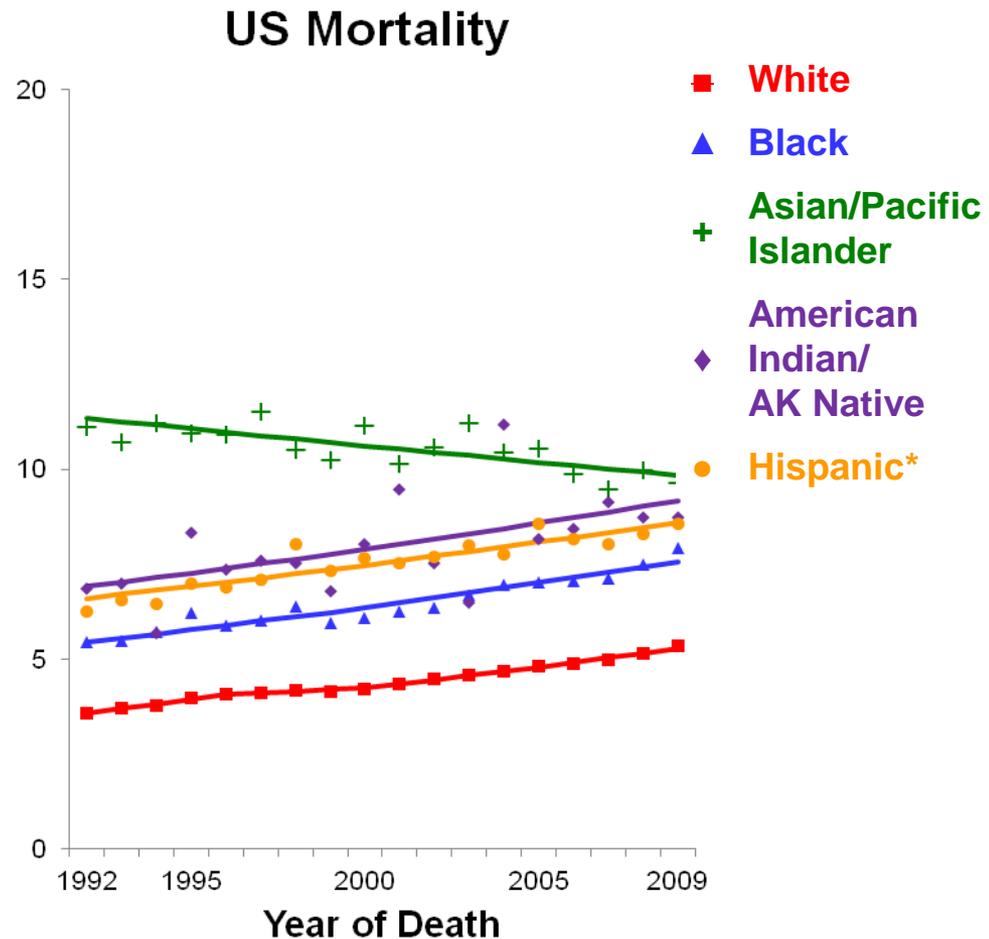
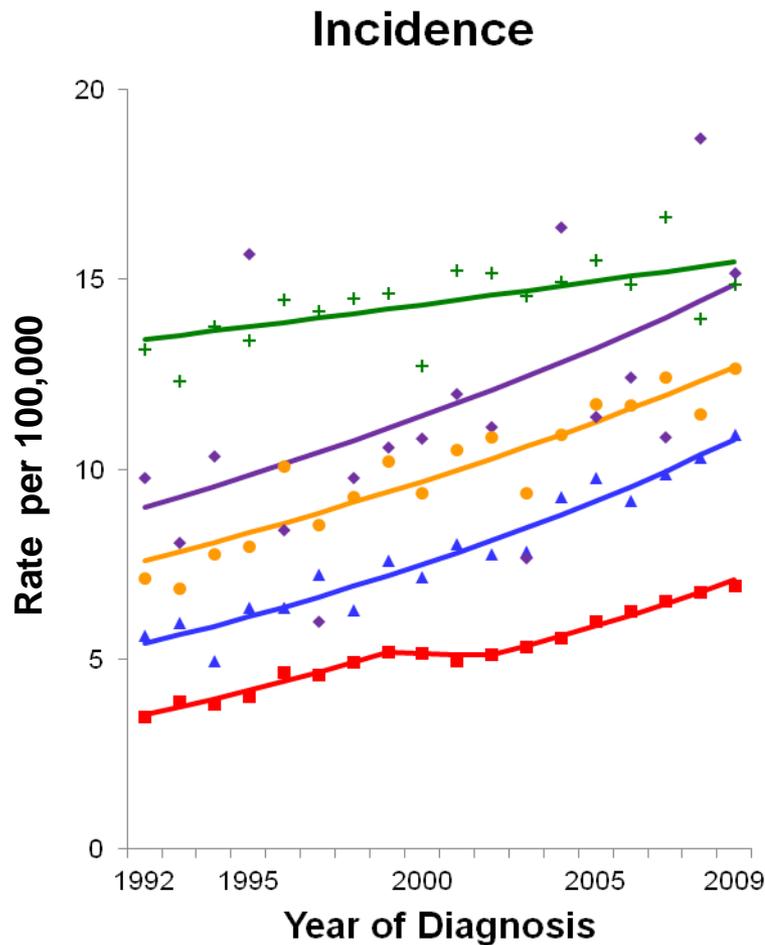
Pancreas

Incidence and Mortality Age-Adjusted Trends



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Incidence data from SEER 13 1992-2009, Mortality data from NCHS

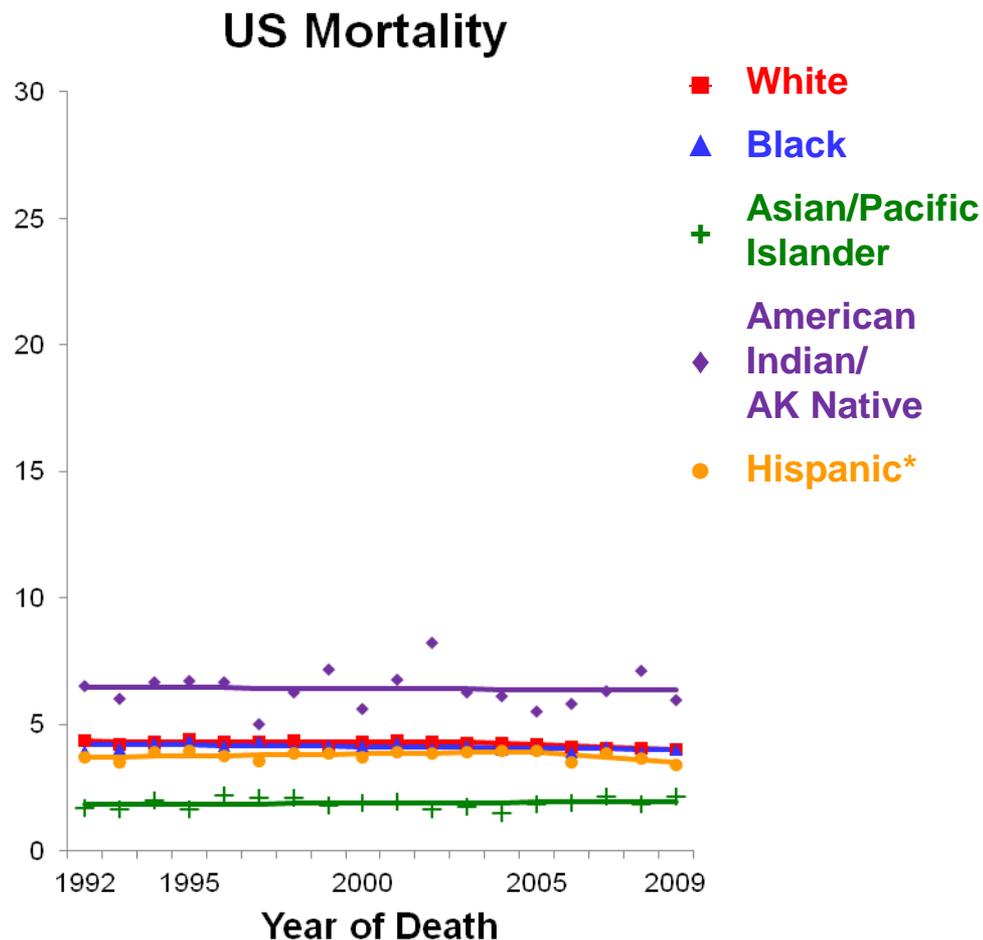
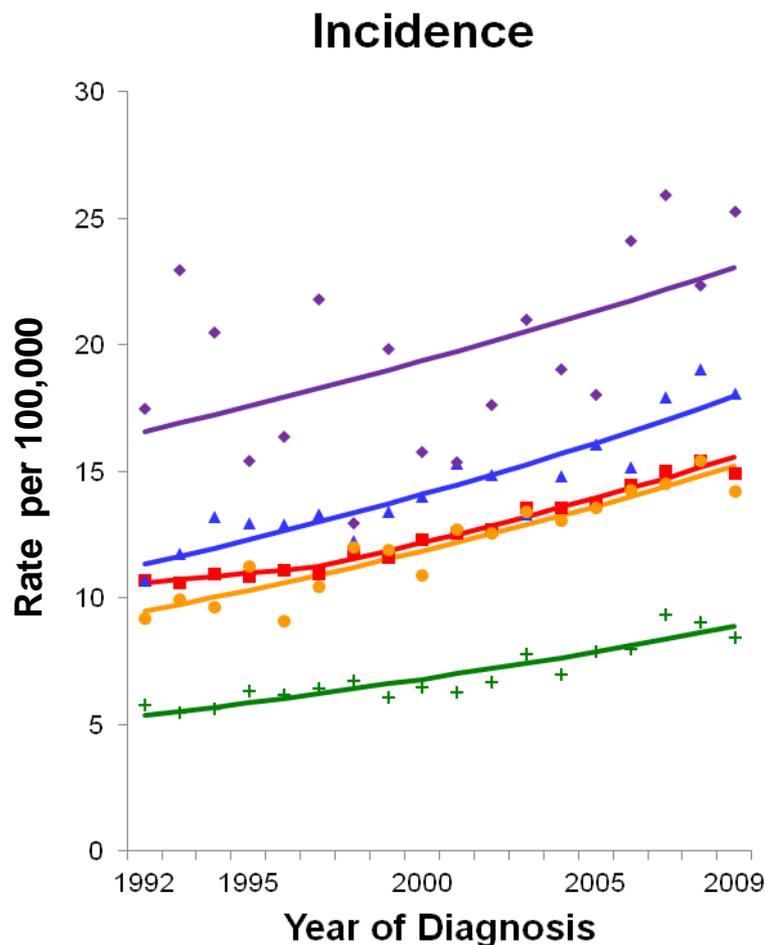
Liver & Intrahepatic Bile Duct Incidence and Mortality Age-Adjusted Trends



*Hispanic is not mutually exclusive from other groups
Incidence data from SEER 13 1992-2009, Mortality data from NCHS

Kidney & Renal Pelvis

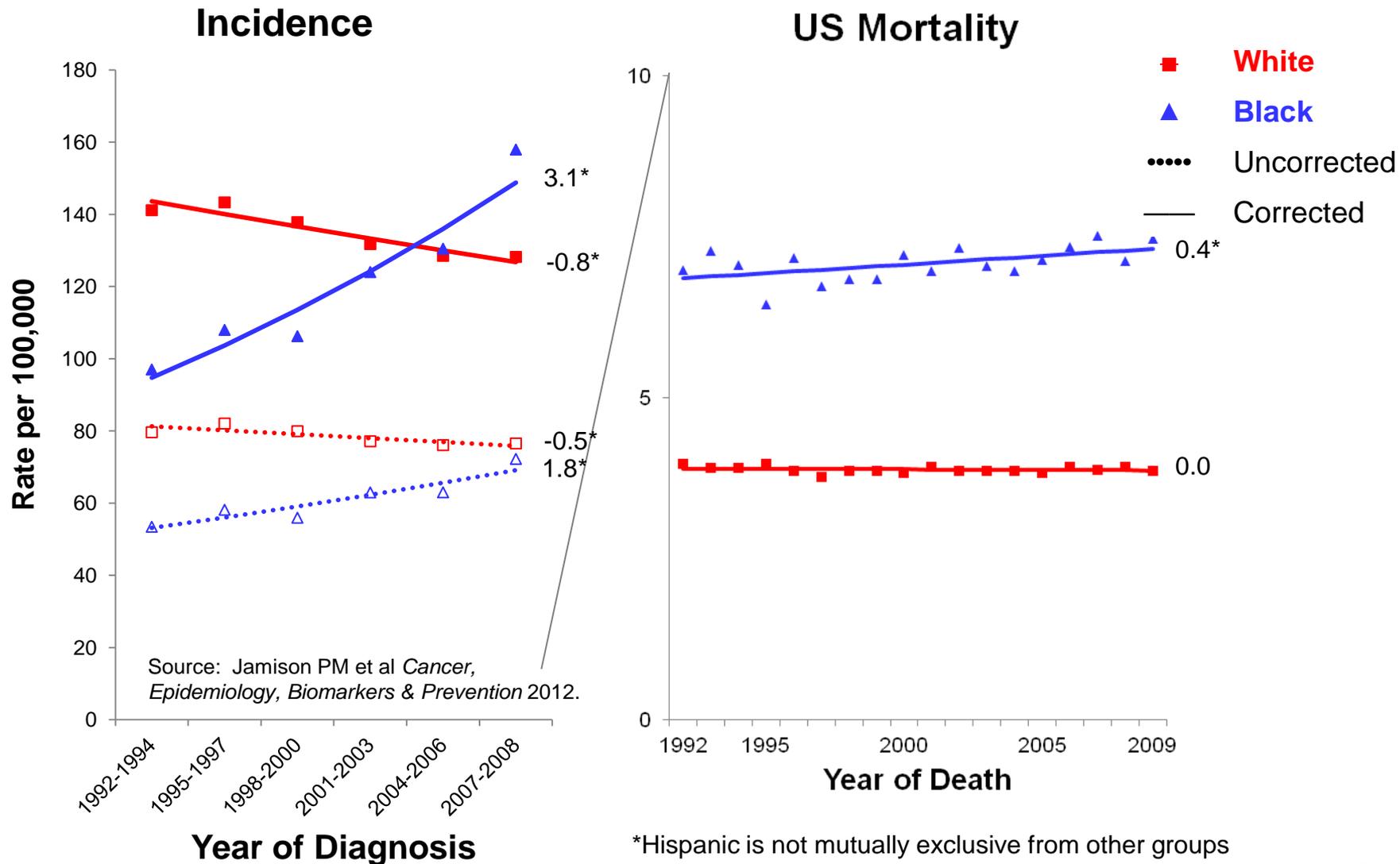
Incidence and Mortality Age-Adjusted Trends



*Hispanic is not mutually exclusive from other groups
 Incidence data from SEER 13 1992-2009, Mortality data from NCHS

Corpus & Uterus, NOS

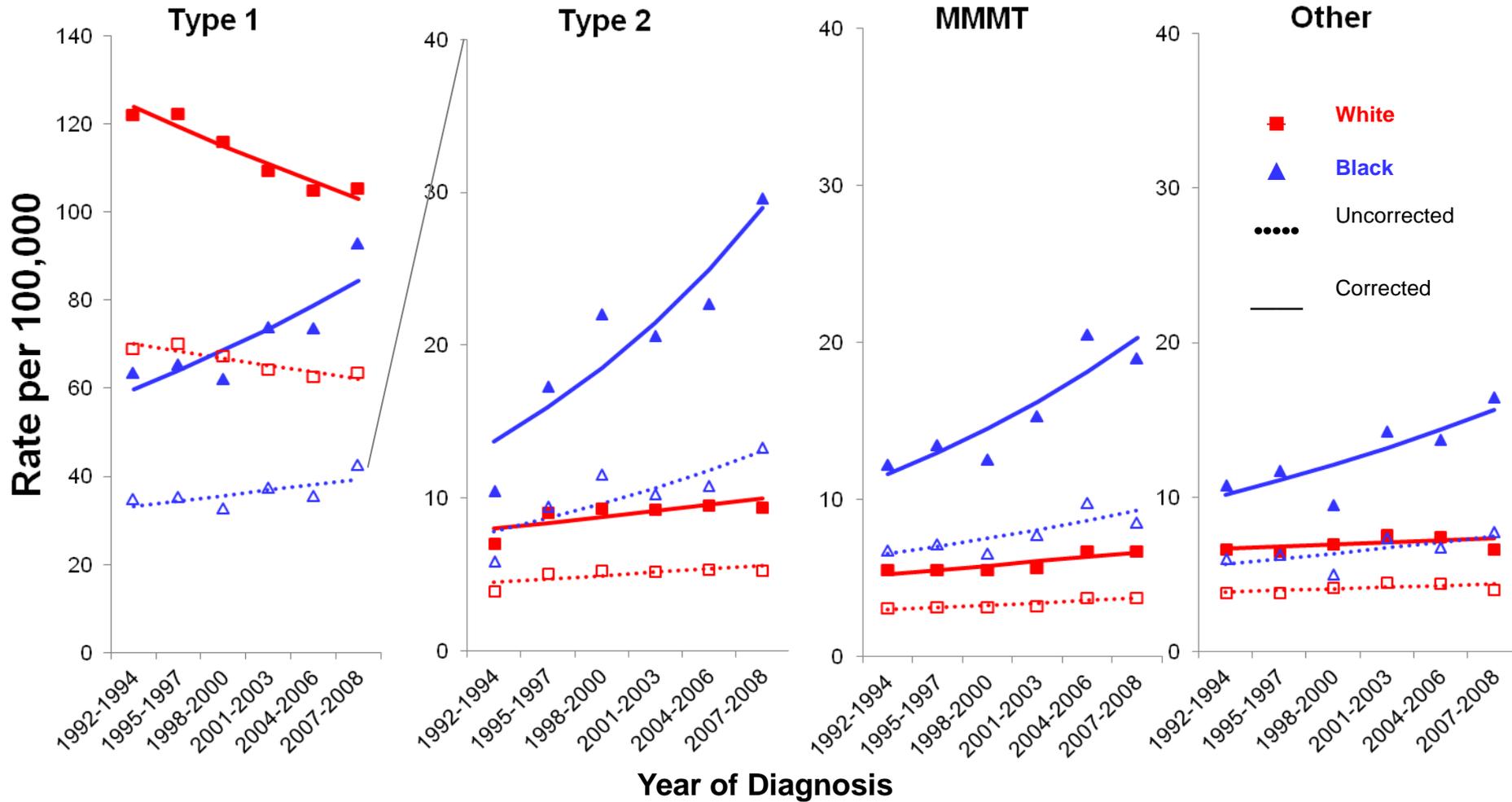
Incidence and Mortality Age-Adjusted Trends



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 Incidence data from SEER 13 1992-2009, Mortality data from NCHS

Corpus & Uterus, NOS by Type

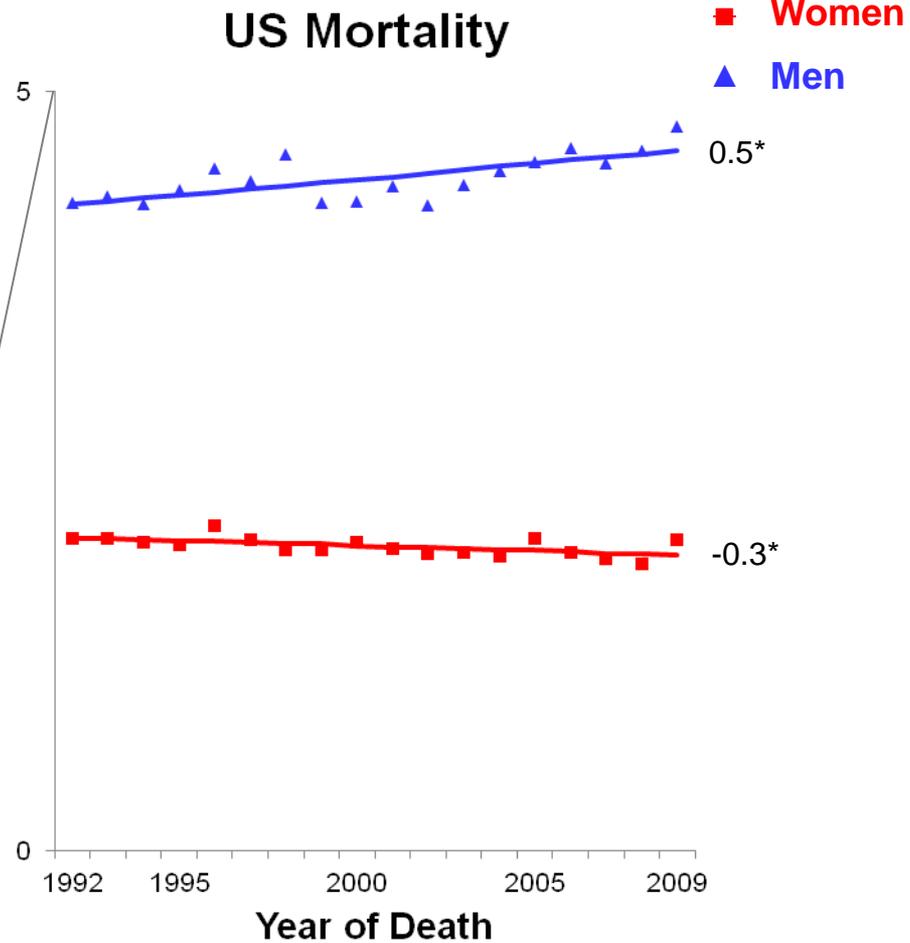
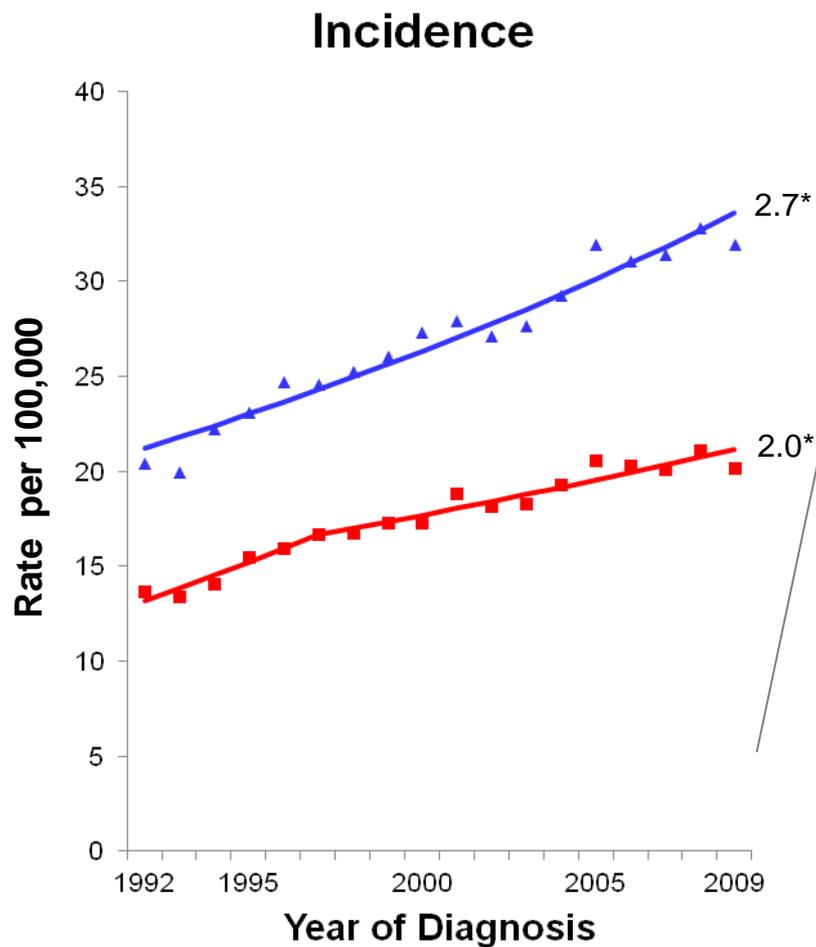
Incidence Trends with Correction for Hysterectomy



Source: Jamison PM et al. Trends in Endometrial Cancer Incidence by Rate and Histology with a Correction for the Prevalence of Hysterectomy, SEER 1992-2008. *Cancer, Epidemiology, Biomarkers & Prevention* 2012.

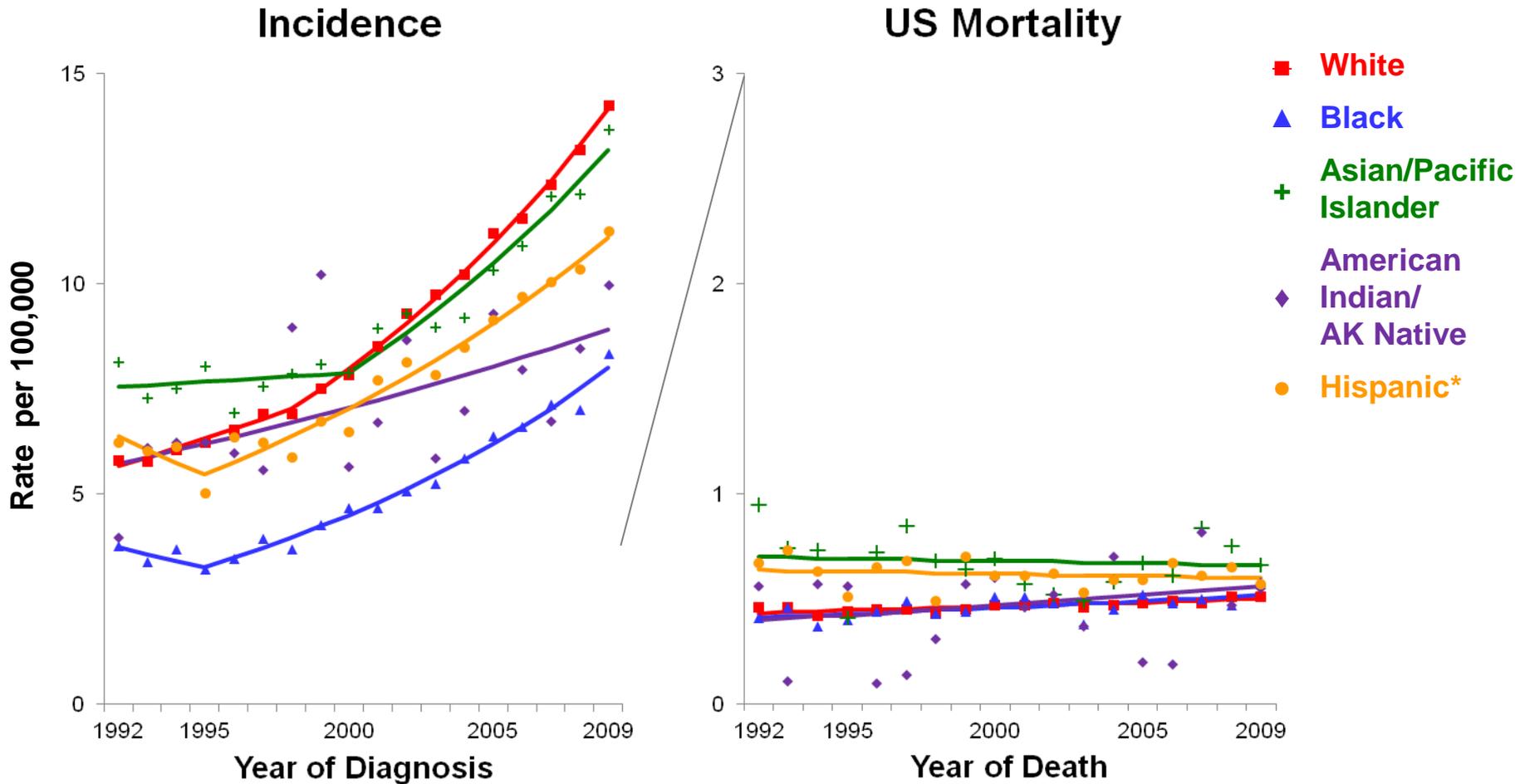
Melanoma of the Skin among White Men & Women

Incidence and Mortality Age-Adjusted Trends



*Hispanic is not mutually exclusive from other groups
Incidence data from SEER 13 1992-2009, Mortality data from NCHS

Thyroid Incidence and Mortality Age-Adjusted Trends



*Hispanic is not mutually exclusive from other groups
 Incidence data from SEER 13 1992-2009, Mortality data from NCHS

2012 ARN Collaborators



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