

■ Pancreatic cancer

Cancer of the pancreas currently ranks 11th among males and 10th among females for incidence, but is the sixth most common cause of cancer deaths among males and the fifth among females. Survival from pancreatic cancer is extremely poor (Australian Institute of Health and Welfare 2001b). The high case fatality of this cancer means that annual incidence and mortality rates (or counts) are closely similar: in 1996/97 156 registrations and 145 deaths were reported for males, and 163 registrations and 156 deaths for females.

The average annual age standardised incidence rate of pancreatic cancer increased steadily from 1956 and peaked in the mid to late 1970s at 14 per 100,000 among males and 9 per 100,000 among females. The rate has since declined among males to 10 per 100,000 by 1996, but has remained essentially stable among females at approximately 8 per 100,000. Over the observation period, however, the annual number of registrations has more than doubled among males and almost quadrupled among females, reflecting growth in population size and changes in age structure.

Trends in incidence since 1970 are mirrored by trends in mortality, reflecting the high case fatality of this cancer. Among males the annual average age standardised mortality rate decreased steadily from the peak of 13 per 100,000 in the late 1970s to 9 per 100,000 by 1997, while among females the rate fluctuated within a small range of 7–8 per 100,000.

Trends in both incidence and mortality are consistent with cohort smoking patterns. The recent diverging trends between the two genders has helped to narrow the gender gap, reducing the male excess risk to around 25% by the late 1990s.

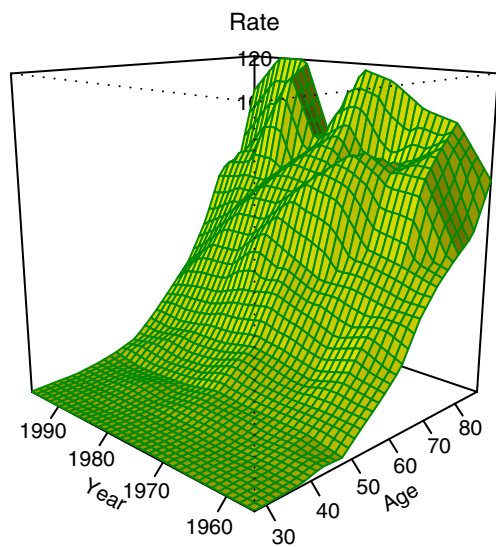
Pancreatic cancer has a typical cancer age distribution. Both the incidence and mortality rates at 65 years and above are approximately five times higher than the corresponding rates at 45–64 years, and onsets in old age account for over two-thirds of all cases.

The rates of pancreatic cancer among Māori are approximately 50–100% higher than those among non-Māori, after adjusting for age. There is also strong evidence of a direct deprivation gradient in the risk of pancreatic cancer, with the more deprived groups having higher rates, though the pattern for mortality among females is less clear.

Recent trends in pancreatic cancer incidence and mortality are forecast to continue, and the male excess risk is projected to disappear. By 2011 the age standardised incidence rate is projected to reduce to 8 per 100,000 among both males (CI 6 – 11) and females (CI 6 – 10), resulting in moderate increases in the annual number of registrations to 177 (CI 130 – 251) males and 214 (CI 159 – 295) females. The age standardised mortality rate is projected to decrease to 6 per 100,000 (CI 6 – 9) among males and 7 per 100,000 (CI 5 – 9) among females, corresponding to 148 deaths (CI 115 – 209) and 190 deaths (CI 138 – 260) among males and females, respectively, in 2012.

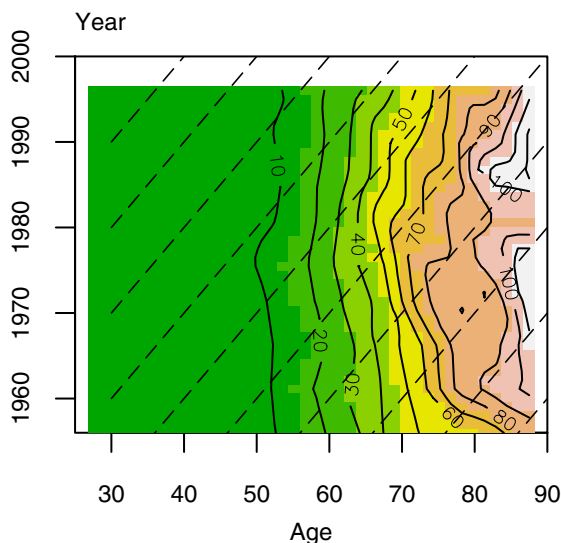
Figure 29.1 Historical trends in age specific rates, pancreatic cancer, males

(a) Male incidence rates, perspective plot

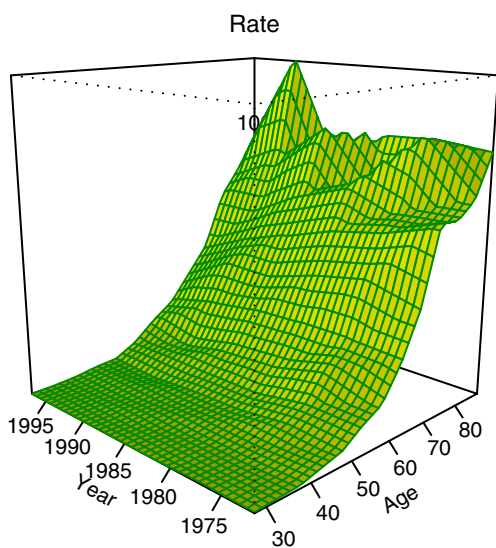


Maximum rate = 122 per 100,000

(b) Male incidence rates, contour plot

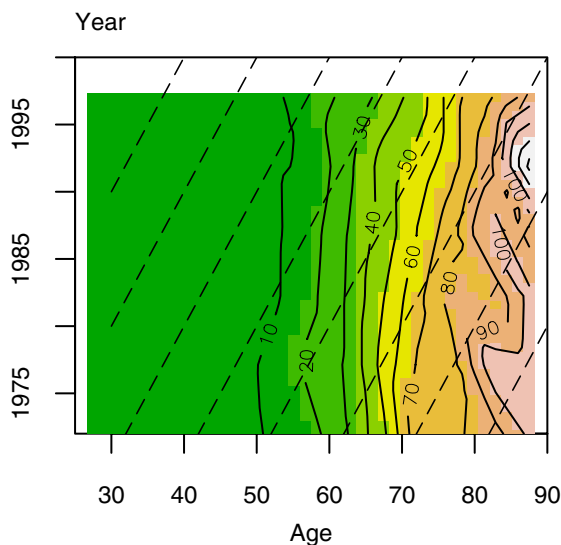


(c) Male mortality rates, perspective plot



Maximum rate = 134 per 100,000

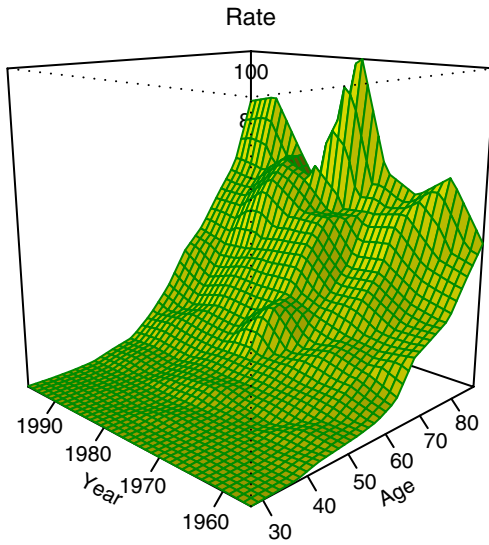
(d) Male mortality rates, contour plot



Please refer to Chapter 2 for interpretation of charts

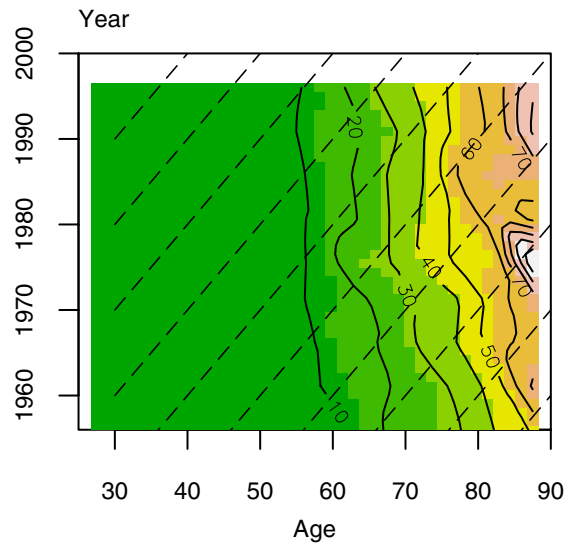
Figure 29.2 Historical trends in age specific rates, pancreatic cancer, females

(a) Female incidence rates, perspective plot

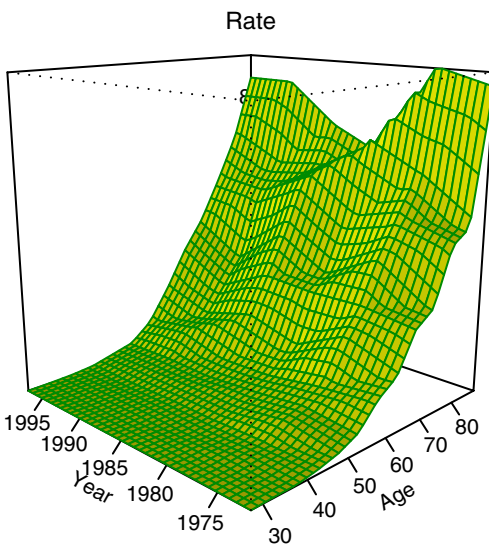


Maximum rate = 113 per 100,000

(b) Female incidence rates, contour plot



(c) Female mortality rates, perspective plot



Maximum rate = 96 per 100,000

(d) Female mortality rates, contour plot

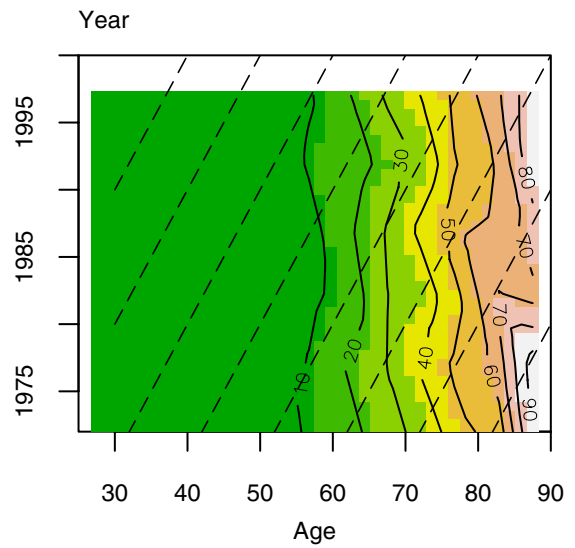
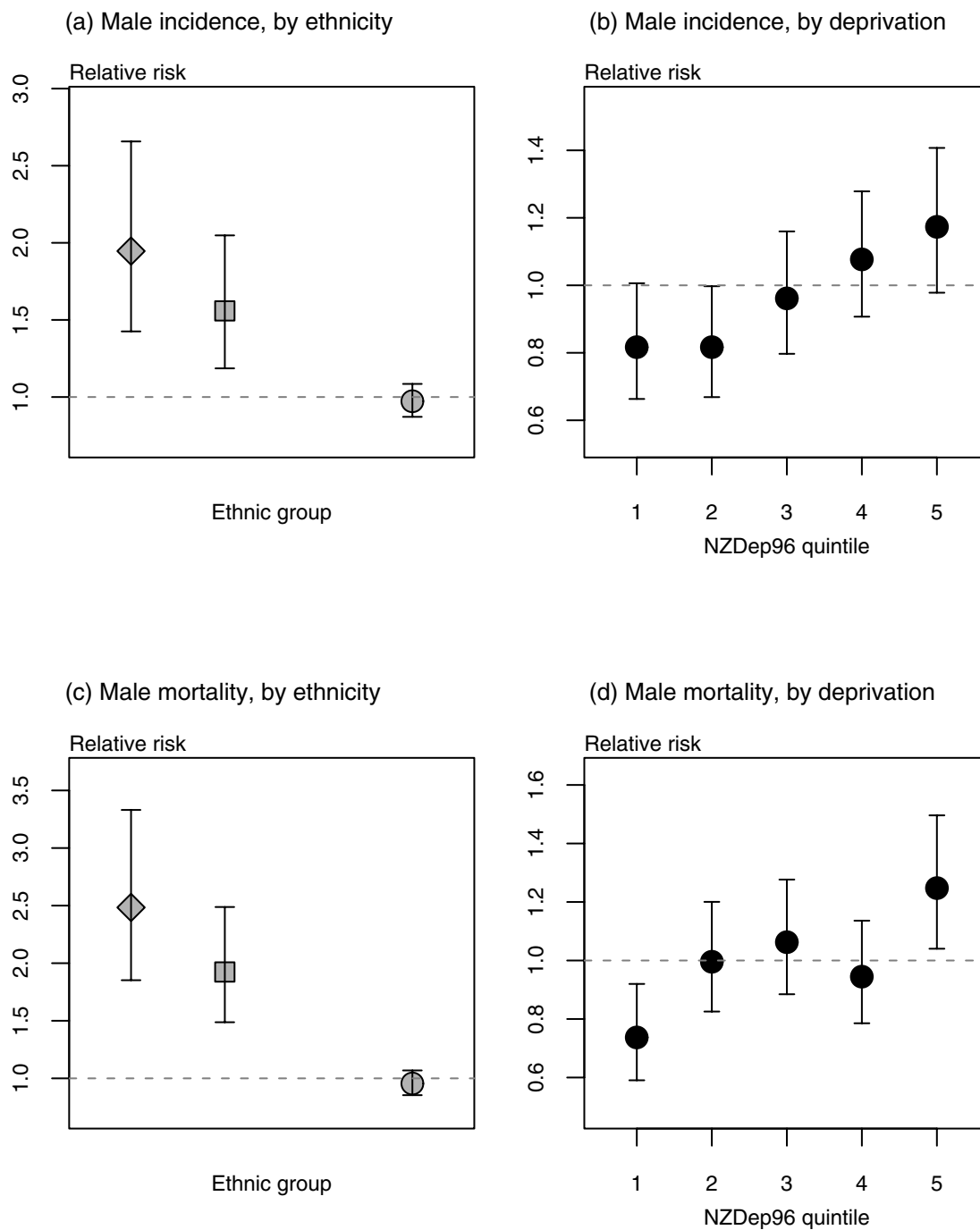


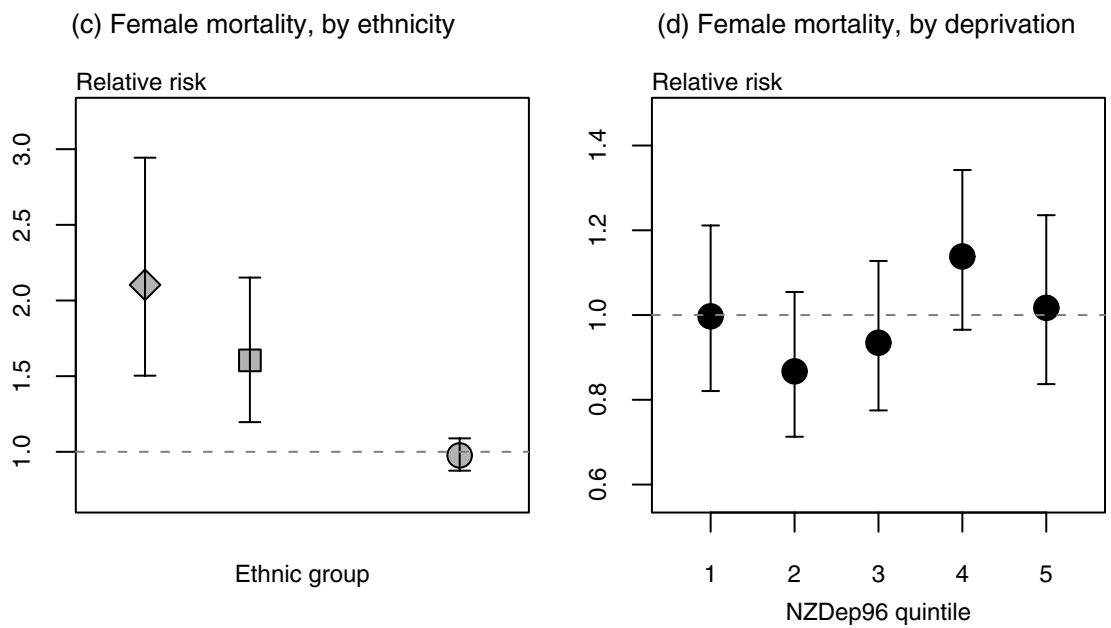
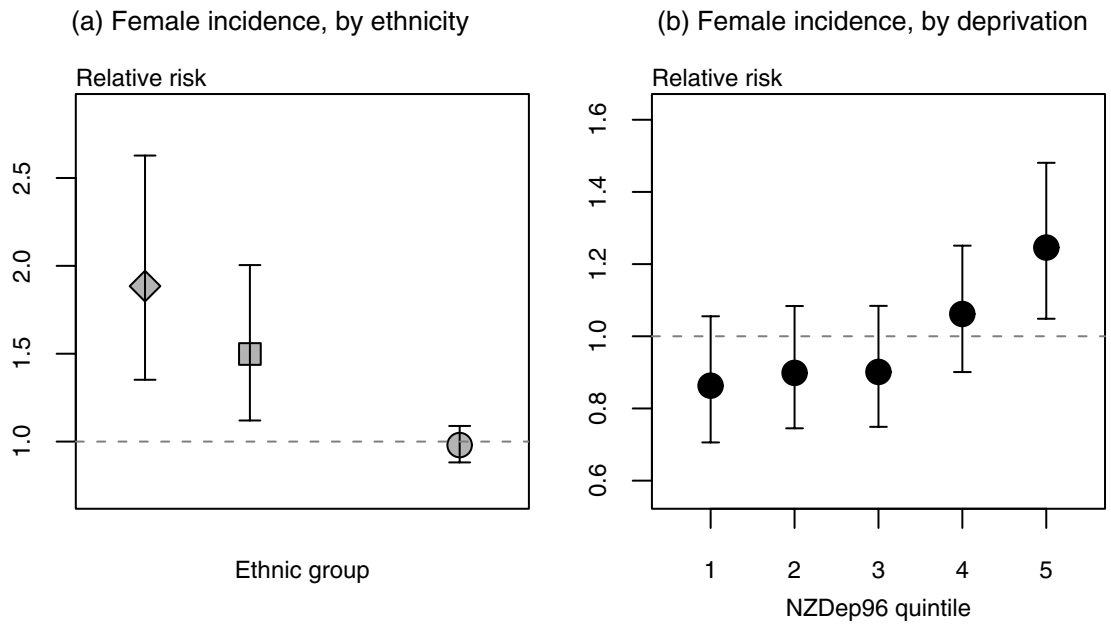
Figure 29.3 Relative risk 1996/97, pancreatic cancer, males



Ethnic group key:

- ◆ sole Māori
- total Māori
- non-Māori

Figure 29.4 Relative risk 1996/97, pancreatic cancer, females

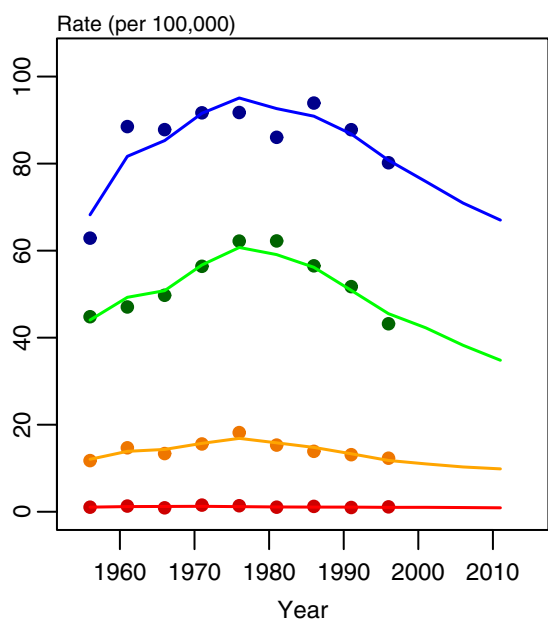


Ethnic group key:

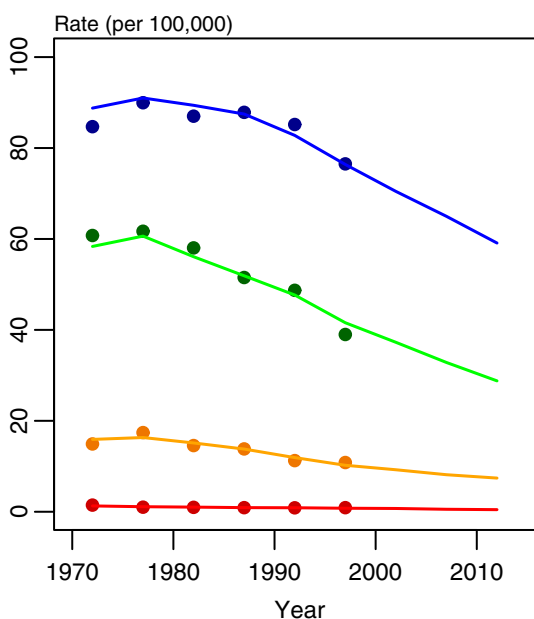
- ◆ sole Māori
- total Māori
- non-Māori

Figure 29.5 Trends and projections of life cycle stage specific rates, pancreatic cancer

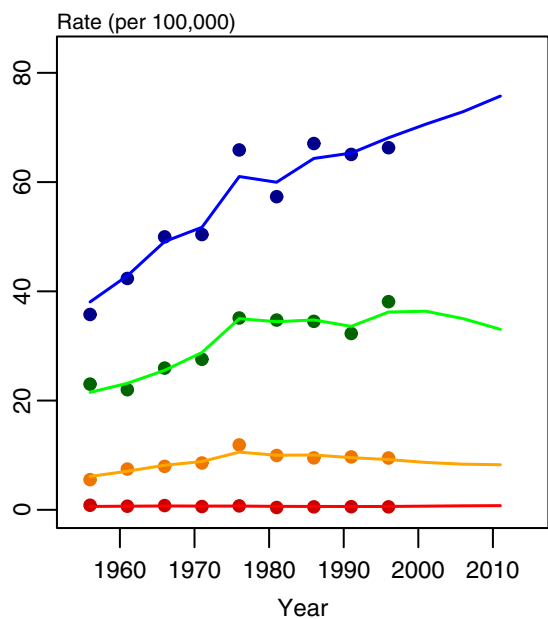
(a) Male incidence rates



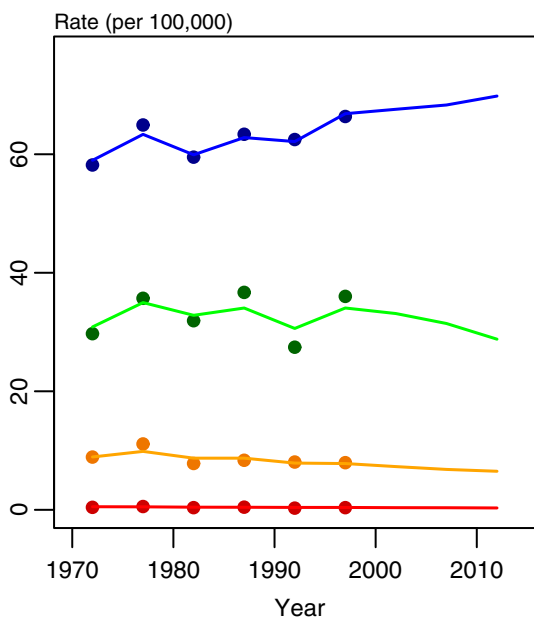
(b) Male mortality rates



(c) Female incidence rates



(d) Female mortality rates

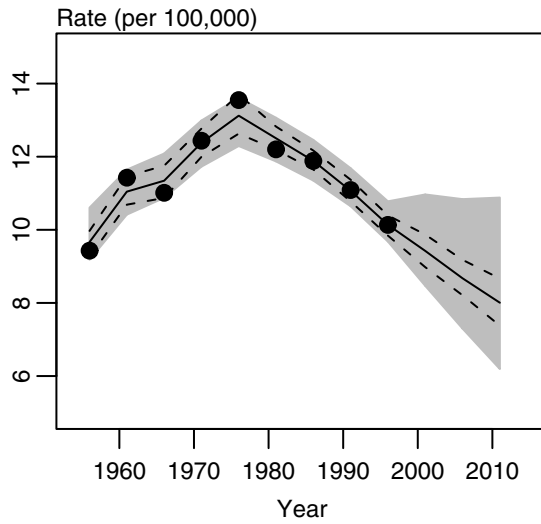


Key:

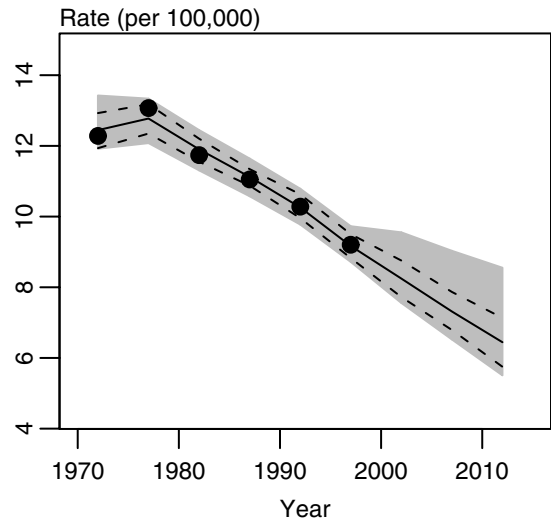
- 25-44 years
- 45-64 years
- 65-74 years
- 75 years and above

Figure 29.6 Trends and projections of age standardised rates, pancreatic cancer

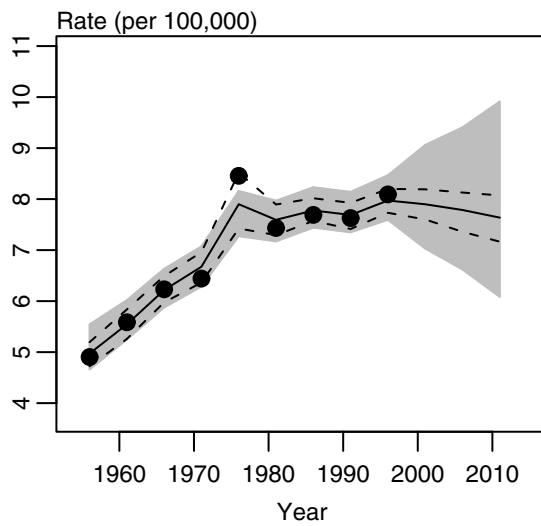
(a) Male incidence rates



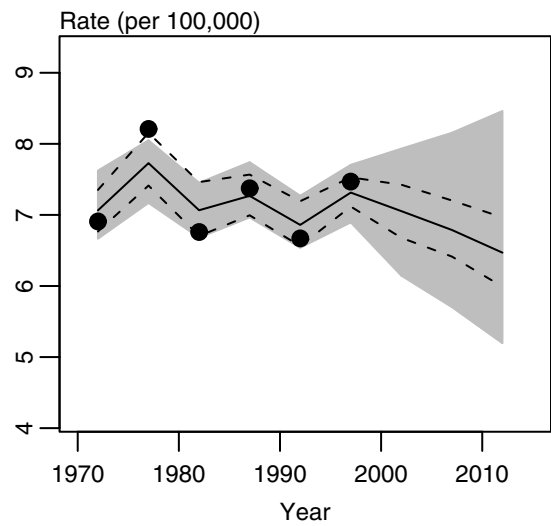
(b) Male mortality rates



(c) Female incidence rates



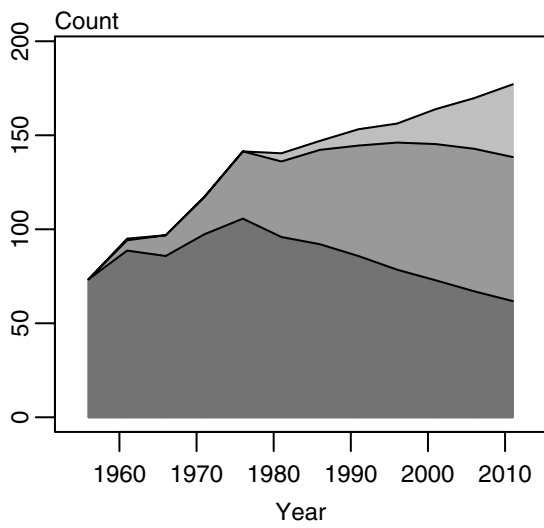
(d) Female mortality rates



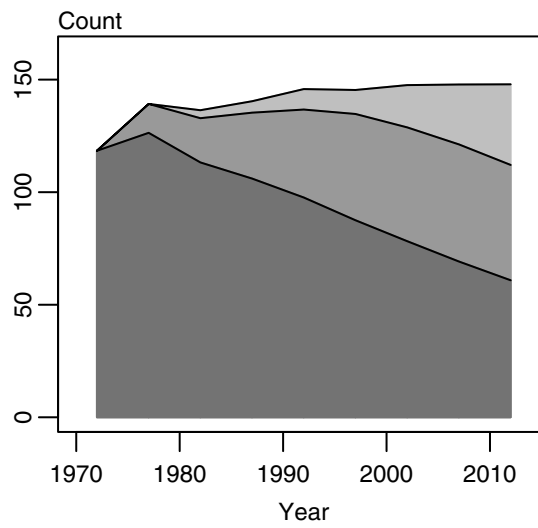
Key: ● Observed
 — Fitted and projected
 - - Minimum and maximum estimates
 ■ 90% Bayesian credible interval

Figure 29.7 Drivers of change in the cancer burden, pancreatic cancer

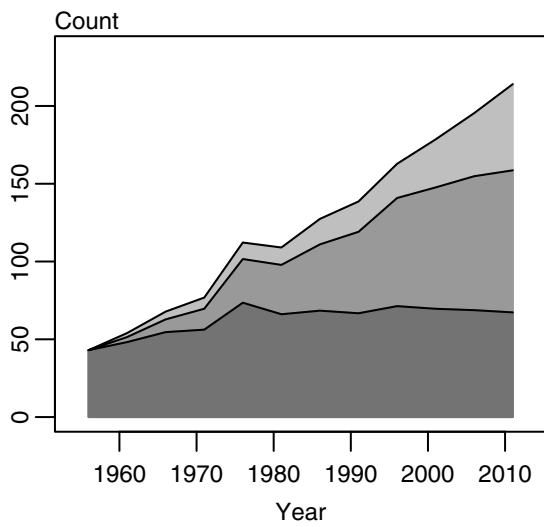
(a) Male registrations



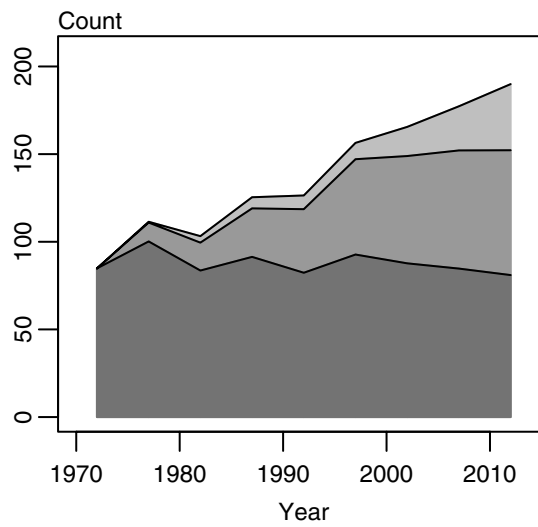
(b) Male deaths



(c) Female registrations



(d) Female deaths



Key:

- Risk effect
- Population size effect
- Population ageing effect

Table 29.1 Key results, pancreatic cancer

Males

| | Incidence | | | Mortality | | |
|--|-----------|-----------------|------------|-----------|-----------------|------------|
| | 1996 | 2011 (CI) | change (%) | 1997 | 2012 (CI) | change (%) |
| <i>Age standardised or age specific rate (per 100,000)</i> | | | | | | |
| 15+ | 10 | 8 (6 – 11) | -21 | 9 | 6 (6 – 9) | -30 |
| 25–44 | 1 | 1 (1 – 1) | - | 1 | 1 (0 – 1) | - |
| 45–64 | 12 | 10 (7 – 14) | -20 | 11 | 7 (5 – 10) | -32 |
| 65+ | 57 | 48 (36 – 68) | -15 | 53 | 41 (33 – 57) | -23 |
| <i>Number of cases</i> | | | | | | |
| 15+ | 156 | 177 (130 – 251) | 13 | 145 | 148 (115 – 209) | 2 |
| 25–44 | 6 | 5 (3 – 7) | -17 | 5 | 3 (2 – 4) | - |
| 45–64 | 46 | 53 (38 – 74) | 15 | 41 | 40 (30 – 57) | -2 |
| 65+ | 104 | 119 (89 – 170) | 14 | 99 | 105 (84 – 148) | 6 |

Females

| | Incidence | | | Mortality | | |
|--|-----------|-----------------|------------|-----------|-----------------|------------|
| | 1996 | 2011 (CI) | change (%) | 1997 | 2012 (CI) | change (%) |
| <i>Age standardised or age specific rate (per 100,000)</i> | | | | | | |
| 15+ | 8 | 8 (6 – 10) | -6 | 8 | 7 (5 – 9) | -13 |
| 25–44 | 1 | 1 (0 – 1) | - | 0 | 0 (0 – 1) | - |
| 45–64 | 10 | 8 (6 – 12) | -13 | 8 | 7 (5 – 10) | -19 |
| 65+ | 51 | 53 (40 – 72) | 4 | 50 | 48 (35 – 63) | -5 |
| <i>Number of cases</i> | | | | | | |
| 15+ | 163 | 214 (159 – 295) | 31 | 156 | 190 (138 – 260) | 22 |
| 25–44 | 3 | 4 (2 – 6) | - | 2 | 2 (1 – 4) | - |
| 45–64 | 35 | 46 (34 – 68) | 31 | 30 | 37 (27 – 57) | 23 |
| 65+ | 124 | 164 (123 – 222) | 32 | 124 | 151 (109 – 200) | 22 |

CI = 90% Bayesian credible interval

Percentage change omitted when estimate is not robust because of small numbers.

