Survival from cancer of the pancreas in England and Wales up to 2001

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Cancer of the pancreas accounts for some 3% of cancer in both sexes combined, with about 6000 new cases a year (Cooper et al, 2005). The only established risk factor for pancreatic cancer is tobacco smoking (Lowenfels, 1984). Incidence has fallen some 20% to 22% in the 1990s (Coleman et al, 1999). As they were also excluded because pancreatic cancer was not their first primary malignancy. These patterns are hard to interpret, as the efficiency and timeliness of registration have increased over this period, and the proportion of other cancers registered solely from a death certificate has generally declined. Overall estimates of survival may thus be slightly high. In contrast, the impact of exclusions for zero survival on trends in the deprivation gap in survival during the 1990s is likely to have been small or negligible, as there was no systematic difference in the proportion of such cases among socioeconomic groups (data not shown). The vital status of 1.4% of patients was unknown at 5 November 2002, and a further 2.8% were also excluded because pancreatic cancer was not their first primary malignancy.

SURVIVAL TRENDS

Short-term survival has increased slightly in men, but there is no evidence of improvement in longer-term survival in either sex (Figure 1). One-year survival rose slightly from around 12% for men diagnosed during the 10 years 1986–1995 to 13.9% for those diagnosed during 1996–1999. The fitted, deprivation-adjusted average increase of 1.6% every 5 years was statistically significant (Table 1). For women, 1-year survival rose very slowly, from 10.9 to 12.1%, with an average increase of just 0.3% every 5 years. There was, however, no improvement at all in 5-year survival, which was actually slightly lower for those diagnosed during 1996–1999 (2.7% in men, 2.3% in women) than for those diagnosed during 1986–1990 (3.1 and 2.5%, respectively). Median survival is less than 6 months in both sexes, and it did not improve.

Short-term predictions of survival for patients diagnosed during 2000–2001, using hybrid analysis (Brenner and Rachet, 2004), show no evidence of any pending improvement in survival up to 10 years after diagnosis (Table 1).

DEPRIVATION

Differences in survival between deprivation categories were small. For those diagnosed during the late 1990s, the deprivation gap in 1- and 5-year survival was slightly more marked in men (Table 2, Figure 2). For women diagnosed in 1996–1999,
5-year survival was slightly better in the deprived than the affluent (deprivation gap positive, +1.1%) and this difference was of borderline statistical significance. The deprivation gap in survival for women diagnosed during the 14 years 1986–1999 appears to have fallen for 1-year survival or even reversed for 5-year survival, but the fitted average improvement every 5 years was less than 1%, and this trend was not statistically significant. There was no systematic trend towards better survival in the deprived than the affluent, and short-term predictions of survival for patients diagnosed during 2000–2001, using
Table 2  Trends in the deprivation gap in relative survival (%) by sex, time since diagnosis and calendar period of diagnosis: England and Wales, adults (15–99 years) diagnosed during 1986–1999 and followed up to 2001.

| Time since diagnosis | 1986–1990 | 1991–1995 | 1996–1999 | Average change (%) every 5 years | Prediction* for patients diagnosed during 2000–2001 |
|----------------------|-----------|-----------|-----------|-------------------------------|----------------------------------|
|                      | Deprivation gap (%) | 95% CI | Deprivation gap (%) | 95% CI | Deprivation gap (%) | 95% CI | Deprivation gap (%) | 95% CI | Deprivation gap (%) | 95% CI |
| 1 year Men | –0.9 (–2.7, 1.0) | –3.2** (–5.0, –1.4) | –2.8* (–4.9, –0.6) | –1.1 (–2.6, 0.4) | –3.4* (–6.4, –0.5) |
| 1 year Women | –1.5 (–3.3, 0.2) | –3.5** (–5.3, –1.8) | –0.5 (–2.5, 1.4) | 0.4 (–1.0, 1.7) | –1.0 (–3.7, 1.7) |
| 5 years Men | –0.0 (–1.0, 1.1) | –1.2** (–2.1, –0.3) | –0.9 (–2.2, 0.4) | –0.6 (–1.5, 0.3) | –0.6 (–2.0, 0.8) |
| 5 years Women | –0.4 (–1.3, 0.6) | –0.9* (–1.8, –0.1) | 1.1* (0.1, 2.1) | 0.7 (0.0, 1.4) | 0.5 (–0.5, 1.5) |
| 10 years Men | –0.7 (–3.3, 1.7) | –0.8 (–1.8, –0.1) | –1.5* (–2.9, –0.1) | –1.1 (–2.3, 0.2) | 0.5 (–0.4, 1.5) |
| 10 years Women | –0.2 (–0.8, 1.1) | –0.9* (–1.8, 0.0) | –1.0 (–1.7, 0.0) | 0.7 (0.4, 1.0) | 0.4 (–0.1, 0.9) |

CI = confidence interval. *Survival estimated with cohort or complete approach (see Rachet et al., 2008). **Mean absolute change (%) in the deprivation gap in survival every 5 years, adjusted for the underlying trend in survival (see Rachet et al., 2008). *Survival estimated with hybrid approach (see Rachet et al., 2008). * P < 0.05; **P < 0.01.

hybrid analysis, do not suggest any imminent change in the deprivation gap.

COMMENT

Relative survival at 5 years, less than 3% in both sexes, is lower than for any other of the 20 most common adult cancers in England and Wales. No improvement has occurred since the 1970s (Coleman et al., 1999). Despite progress in diagnostic procedures, most cases are still metastatic at diagnosis, and are not amenable to surgical resection of curative intent. Even when curative surgery can be attempted, most patients will relapse. A small trial has shown that palliative chemotherapy may extend median survival from 2.5 to 6 months (Glimelius et al., 1996), but efficacy remains disappointing, and any therapeutic progress over the last 30 years has not been reflected in higher survival for all patients with pancreatic cancer.

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