Comparison of Esophageal Cancer Mortality in Five Countries: France, Italy, Japan, UK and USA from the WHO Mortality Database (1960–2000)

Esophageal cancer mortality age-standardized rates (ASRs; using 1985 Japanese standard population) are shown for France, Italy, Japan, UK and USA between 1996 and 2000 (Fig. 1). Although males tend to have higher ASRs compared with females in all five countries, the trends in ASRs show different patterns over the four decades. For males, ASRs in France, which had the highest mortality rate until the 1990s, have continuously decreased since the later half of the 1960s. On the other hand, ASRs in the UK and USA have gradually increased since 1960, and ASRs in the UK have overtaken those in France since the later half of the 1990s. ASRs in Japan have been constant throughout the previous four decades, whilst in Italy, rates began to decrease in the 1980s. For females, ASRs in the UK showed a gentle increase over the four decades. After an increasing trend in the USA and a decreasing trend in France, ASRs reached a plateau in both countries between 1980 and 2000. Rates in Italy have shown a declining trend since the later half of the 1970s. Different from other countries, ASRs in Japan constantly decreased until 2000.

Age-specific mortality trends of males and females for esophageal cancer are shown according to year of death (Figs 2 and 3). Regarding males in the USA and UK, age-specific mortality showed similar increasing trends for all age groups. In Japan, a U-shaped curve for mortality trend was observed among age groups between 45–79 years over the four decades, and the bottom of the U-shaped curve, which appeared first in 1965 in the 45–49 year-old age group, occurred later in older age groups. For France and Italy, a peak in mortality rate was found around 1980 in the 45–49 year-old age group and later in older age groups. For females in the USA, increasing trends in mortality were shown after 1970 among age groups of 65 years or older, whereas decreasing trends were found among age groups of 59 years and younger. A similar pattern was observed in the UK. In France, decreasing trends

Figure 1. Age-standardized mortality rates (ASRs) for esophageal cancer for males and females with 1985 Japanese population, rates per 100,000.
Mortality for esophageal cancer by age group, year of death

Source: WHO Mortality Database

Figure 2. Age-specific rates for males over 40 years of age by year of death for esophageal cancer in five countries, rates per 100 000.

Mortality for esophageal cancer by age group, year of death

Source: WHO Mortality Database

Figure 3. Age-specific rates for females over 40 years of age by year of death for esophageal cancer in five countries, rates per 100 000.
Figure 4. Age-specific rates for males over 40 years of age by birth cohort for esophageal cancer in five countries, rates per 100,000.

Figure 5. Age-specific rates for females over 40 years of age by birth cohort for esophageal cancer in five countries, rates per 10,000.
were observed among age groups of 65 years or older, whereas increasing trends were shown among age groups of 45–64 years. In Italy, declining trends appeared in all age groups during the four decades. With regard to females in Japan, mortality trends have been constantly declining throughout the 40 year period among age groups of 70 years or older, although mortality rates among age groups of 40–69 years tended to increase after 1990.

According to the age-specific mortality rates by year of birth, there seems to be a group with a higher risk in males born around 1930 in all five countries (Fig. 4). In recent birth cohorts, the USA and UK appear to have increasing trends, whilst in France and Italy rates appear to have a decreasing trend. A dramatic declining trend is observed in the 70 years or older age groups of France and Italy. With regard to females in Japan, the birth cohorts around 1900 show a peak in the 70 years or older age groups, followed by a constantly decreasing trend until the 1940 birth cohort. For females in the USA and UK, declining trends shown in recent birth cohorts are contrary to those in males. Mortality trends for females in France are similar to those for males. In Italian females, mortality rates have continuously decreased from the 1900 birth cohort (Fig. 5).

Note: Original data were downloaded from the WHO Mortality Database (version as of August 2004). The data were then tabulated by I. Yoshimi with 150 (ICD-7,8,9), and C15 (ICD-10). Responsibility for this presentation and interpretation lies with the authors, not the WHO Mortality Database.