

# Analysis of cancers of unknown primary site

## Definition

'Cancers of unknown primary site' is a term applicable to cancers for which the site of origin is undetermined, and is generally applicable only to some types of tumours. It does not generally include tumours of lymphohaematopoietic origin (such as lymphoma, leukaemia and myeloma) as these are regarded as systemic diseases, and are usually tabulated by their type, rather than the location at which they are found. It generally applies to carcinomas, sarcomas and other tumours for which the available information does not permit an assessment of the true site of origin.

Sometimes patients are diagnosed with metastatic cancer, but the primary cancer site is not known. When doctors cannot determine the location of the primary cancer site, patients are said to have cancer of unknown primary site.

For the purposes of this analysis, cancers of unknown primary site are analysed using the general-purpose grouping of malignant neoplasms proposed by Berg (1996).

## Sex

Between 1983 and 1990 there was little variation in the incidence of cancers of unknown primary site for both sexes; however, since 1993, male incidence rates have shown an average annual decline of 1.6% while the female rate declined marginally (Figure 14). The incidence rates for males are much higher than for females. This could indicate that males delay presentation and hence treatment and are more likely to present with an unknown primary cancer.

## Histological groups

There is more variation when the cancers are broken down into different histological groups (Figure 15). Among females, adenocarcinomas are the largest group, on average 60% larger than the second main contributor, epidermoid carcinomas. The situation is different for males, for whom the rates of these two groups are approximately equal, especially in the more recent years. Rates for epidermoid carcinoma for both males and females rose substantially up to 1989 but have remained relatively unchanged since then. 'Unspecified types of cancer' is the third largest group among cancers of unknown primary site. Both male and female rates declined sharply for this group in the mid-1980s. Since then the rates in males have varied from year to year and have declined slightly, on average; the female rates have remained fairly constant.

## Cancers of unknown primary site by State and Territory of residence

The Northern Territory reported the highest incidence rate for cancers of unknown primary site for the period 1994–1998 (21.5 per 100,000 population), while Victoria reported the lowest incidence rate (14.5 per 100,000 population) (Table 24). Most States and Territories averaged about 15 cases per 100,000 population. The State and Territory rates are more varied when the cancers are broken down into the different histological groups

(Tables 4 & 5). The Australian Capital Territory reported higher than average rates for adenocarcinomas for males. Tasmania and the Northern Territory reported high rates for unspecified types of cancer for both males and females. Queensland reported high rates for epidermoid cancers and very low rates for unspecified carcinomas and unspecified types of cancer for both males and females. In sharp contrast, South Australia reported very low rates for epidermoid carcinomas but higher rates for the unspecified groups and other specific carcinomas; these differences may be due to variations in reporting practices.

## Age

Both the incidence and mortality rates for unknown primary site for males and females were highest in 1998 in the 80–84 and 85 and over age groups (Table 24).

**Table 4: Age-standardised incidence rates for cases of unknown primary site by cancer type for males, 1994–1998 combined**

Cancer type	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aust
Adenocarcinomas	7.4	6.4	6.4	5.6	5.1	7.0	9.9	2.7	6.6
Epidermoid carcinomas	7.6	3.2	11.5	6.3	1.5	4.1	5.7	5.6	6.4
Other specific carcinomas	1.2	0.9	1.0	1.3	5.3	1.0	1.6	4.3	1.5
Other specified types of cancer	0.1	0.1	0.2	2.5	0.0	0.0	0.0	0.0	0.3
Sarcomas & other soft tissue tumours	0.0	0.1	0.0	0.2	0.0	0.1	0.0	0.0	0.1
Unspecified (carcinoma NOS)	0.5	0.6	0.1	0.1	1.2	0.0	0.7	3.3	0.5
Unspecified types of cancer	2.5	5.3	0.5	3.3	4.3	7.0	0.9	8.8	3.2

**Table 5: Age-standardised incidence rates for cases of unknown primary site by cancer type for females, 1994–1998 combined**

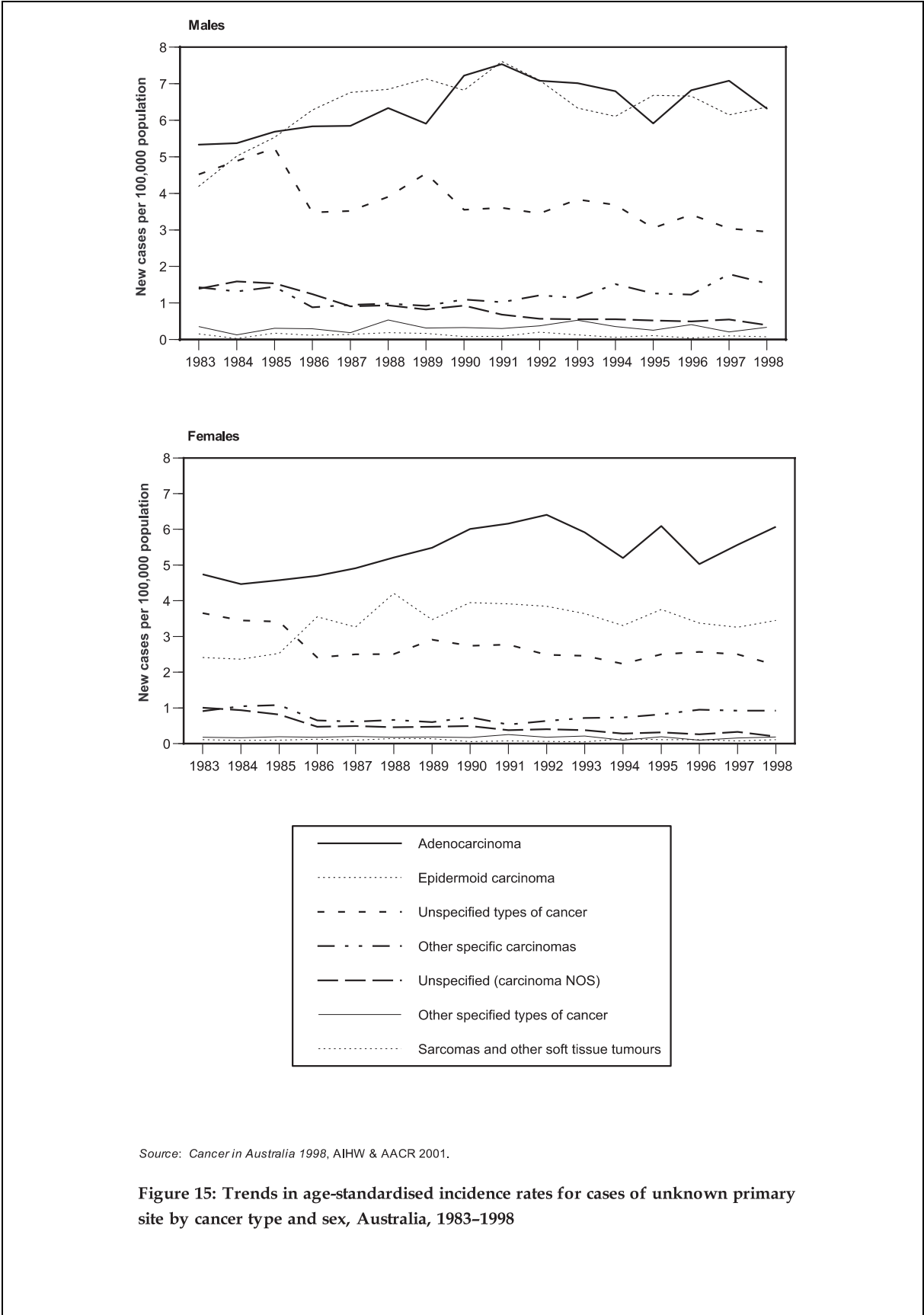
Cancer type	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aust
Adenocarcinomas	6.0	5.7	5.5	4.7	4.6	6.2	5.5	5.1	5.6
Epidermoid carcinomas	4.3	1.7	6.3	3.1	0.5	2.4	3.2	1.4	3.4
Other specific carcinomas	0.7	0.5	0.7	0.5	3.3	0.3	0.7	4.0	0.9
Other specified types of cancer	0.1	0.1	0.0	1.0	0.0	0.1	0.0	0.2	0.1
Sarcomas & other soft tissue tumours	0.1	0.1	0.1	0.2	0.0	0.0	0.2	0.0	0.1
Unspecified (carcinoma NOS)	0.2	0.4	0.0	0.1	0.7	0.2	0.2	0.0	0.3
Unspecified types of cancer	1.6	4.1	0.2	2.5	3.5	6.0	1.3	6.7	2.4

Table 6 shows the percentage of each major cancer grouping for which the primary site was unknown. All States and Territories reported that a large proportion of 'unspecified types of cancer' and 'unspecified carcinoma' were of unknown primary site, although the distribution between these two groups varied, possibly due to variations in reporting practices.

**Table 6: Cases of unknown primary site as 5-year average percentage of specific cancers and all cancers (excluding non-melanocytic skin cancer) for persons, 1994–1998 combined**

<b>Cancer type</b>	<b>NSW</b>	<b>Vic</b>	<b>Qld</b>	<b>WA</b>	<b>SA</b>	<b>Tas</b>	<b>ACT</b>	<b>NT</b>	<b>Aust</b>
Adenocarcinomas	3.2	2.8	2.9	2.4	2.4	3.0	3.2	2.4	2.9
Epidermoid carcinomas	7.3	3.9	8.3	5.9	2.2	4.2	6.6	4.1	6.3
Leukaemia	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lymphomas	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other specific carcinomas	7.6	5.8	6.6	6.4	10.6	5.1	9.3	9.1	7.7
Other specified types of cancer	0.1	0.2	0.1	2.7	0.0	0.1	0.0	0.4	0.4
Sarcomas & other soft tissue tumours	1.9	2.5	1.0	3.8	0.0	1.9	1.6	0.0	1.9
Unspecified (carcinoma NOS)	26.7	30.1	26.9	12.7	36.6	15.8	28.6	44.4	28.8
Unspecified types of cancer	29.5	14.1	23.5	43.6	17.7	21.1	35.3	23.7	18.8
<b>All cancers</b>	<b>4.0</b>	<b>3.6</b>	<b>3.7</b>	<b>3.8</b>	<b>3.8</b>	<b>4.2</b>	<b>3.4</b>	<b>4.9</b>	<b>3.8</b>

**Cancers of unknown primary site by cancer type and sex**



Source: Cancer in Australia 1998, AIHW & AACR 2001.

**Figure 15: Trends in age-standardised incidence rates for cases of unknown primary site by cancer type and sex, Australia, 1983-1998**