

3 Cancer costs in 1993–94

Overview: cancer and other diseases

The health system costs of disease and injury in Australia in 1993–94, summarised at the broad disease group level (according to ICD-9 chapters), are presented in Table 1. They are ranked in descending order of total costs.

The total direct costs of cancer are \$1,904 million (6% of health system costs). Cancer ranks eighth in terms of direct costs, yet is the second highest contributor to deaths (33,176 deaths, which represent 27% of all deaths). Direct costs for both digestive and circulatory diseases are approximately double those of cancer.

Table 1: Cancers and other diseases and injury: health system costs (\$ million) by health sector, 1993–94 and numbers of deaths 1993

ICD-9 chapter	Total costs	Hospitals	Medical ^(a)	Pharmaceuticals	Dental and allied health services	Nursing home	Other ^(b)	No. of deaths
Circulatory	3,719	1,657	503	715	40	587	218	53,240
Digestive	3,715	1,070	284	275	1,849	35	202	3,759
Musculoskeletal	3,002	1,207	518	276	416	430	154	681
Injury	2,601	1,663	393	127	160	112	146	7,021
Mental	2,586	1,007	432	198	83	718	147	2,344
Respiratory	2,521	833	624	784	37	107	135	9,245
Nervous system	2,334	766	431	248	227	503	159	2,794
Cancer	1,904	1,327	261	53	12	32	219	33,176
Genitourinary	1,662	997	383	143	17	32	90	1,924
Symptoms	1,334	478	426	302	57	5	66	571
Complications of pregnancy	1,051	941	32	11	6	0	60	15
Endocrine	966	235	222	309	54	47	98	3,892
Skin	956	336	247	259	56	6	53	175
Infectious	849	246	316	193	15	13	65	933
Perinatal	239	221	1	0	0	3	14	696
Blood	192	101	42	24	1	5	18	394
Congenital	159	116	18	2	0	13	8	739
Other ^(c)	1,607	859	505	122	44		77	—
Total	31,397	14,062	5,640	4,042	3,075	2,647	1,932	121,599

(a) Medical services for private patients in hospitals are included under Hospitals.

(b) Includes breast, cervical, lung and skin cancer public health programs, research and other institutional, non-institutional and administration expenditure. Does not include other public health services, community health services, ambulances, or medical aids and appliances.

(c) Other contact with health services: fertility control, reproduction and development (including normal pregnancy and birth), cosmetic surgery, general health examination, and treatment for unspecified disease.

Circulatory diseases have the highest total direct costs of \$3,719 million and account for the largest number of deaths (53,240, which represent 44% of all deaths). Circulatory diseases and cancer combined account for over 70% of deaths yet only 18% of total direct costs.

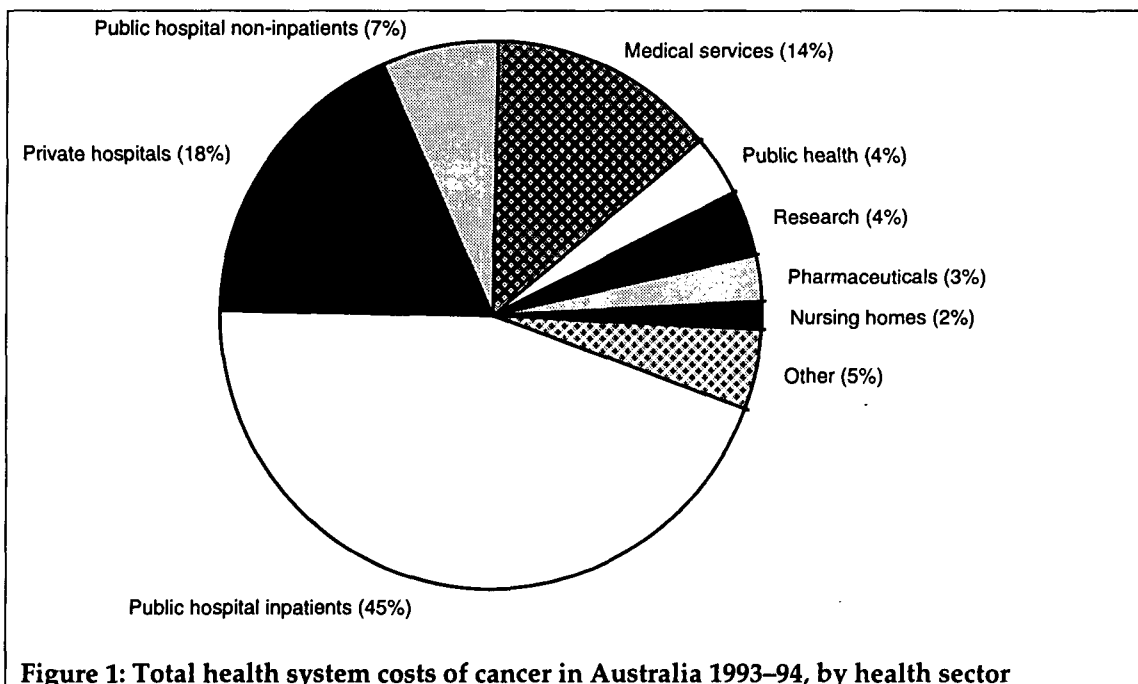
Digestive diseases have almost the same total direct costs (\$3,715 million) as circulatory diseases but rank sixth in terms of deaths (3,759 deaths in 1993). A considerable component of the costs for digestive diseases is the \$1,849 million for allied health services, of which \$1,830 million represent dental services.

Musculoskeletal and mental disorders, which rank highly in terms of costs (\$3,002 million and \$2,586 million respectively) and relatively low in terms of deaths (681 and 2,344 deaths respectively), contain chronic diseases with low fatality rates. The disease groups with the lowest direct health system costs are congenital (\$159 million) and blood diseases (\$192 million), which account for relatively few deaths (739 and 394 respectively).

For all diseases, 45% of direct costs are within the hospital sector (which includes inpatient and non-inpatient services in public, private and repatriation hospitals), 18% medical, 13% pharmaceutical, 10% allied health, 8% nursing homes and 6% other.

Hospital expenditure accounts for 70% of the health system costs of cancer. This proportion is greater for cancer than for any other diseases except complications of pregnancy, and perinatal problems. Medical service costs outside hospitals account for a further 14% (see Figure 1), followed by 4% for the included public health programs, 4% for research and 3% for pharmaceutical costs.

Cancer contributes significantly to hospital costs, but makes a relatively small contribution to medical, pharmaceutical and allied health costs, compared to other diseases. Cancer contributes 9% of hospital costs and is the third highest contributor after injury and circulatory diseases.



The 10 most expensive cancers

Table 2 shows the 10 most expensive cancers ranked in descending order by total health system costs (including prevention costs and the costs of treating benign and in-situ neoplasms for each site). Appendix Table C.2 gives health system cost estimates for all cancer sites.

The highest contributor to direct cancer costs is non-melanoma skin cancer (NMSC) (\$232 million) which accounts for a small number of deaths (379 in 1993). However, NMSC dominates new cases, with almost 244,000 in 1993 (78% of all new cancers). This estimate of the incidence of NMSC does not include NMSC which is treated but not diagnosed histologically. Costs shown in Table 2 for each cancer site include costs associated with prevention and treatment of benign neoplasms, in-situ neoplasms, and neoplasms of uncertain behaviour as well as malignant neoplasms. Much of the costs for non-malignant neoplasms are associated with excluding or preventing malignancy.

Colorectal cancer is significant in terms of costs, deaths and new cases. It is the second highest contributor to direct costs (\$205 million), ranks second in terms of cancer deaths (4,440 in 1993, 13% deaths), and ranks third in terms of new cases (9,538 cases, which is 3% of all new cases and 14% of new cases excluding NMSC).

Breast cancer ranks third in terms of direct costs (\$184 million), third in terms of deaths (2,641, 8% deaths), and fourth in terms of new cases (8,448 cases). Breast cancer costs are about 80% of those for NMSC.

Table 2: The 10 most expensive cancers: health system costs by sector, 1993–94 (\$ million) and numbers of new cases and deaths in 1993

Cancer site ^(a)	Total costs	Hospitals	Medical ^(b)	Pharmaceuticals	Nursing home	Other ^(c)	New cases	No. of deaths
1. Non-melanoma skin	232.3	126.0	76.7	4.0	6.0	19.6	243,691	379
2. Colorectal	204.9	170.8	11.3	3.4	4.1	15.4	9,538	4,440
3. Breast ^(d)	183.9	80.0	10.6	16.2	1.5	75.7	8,448	2,641
4. Leukemia	111.3	93.5	2.8	2.1	1.2	11.7	1,662	1,210
5. Lung	107.3	80.9	6.8	2.7	1.9	14.9	6,911	6,393
6. Lymphoma ^(e)	105.7	89.3	5.9	1.7	1.5	7.3	3,698	2,288
7. Prostate	101.1	65.8	13.9	8.4	2.1	11.0	10,013	2,544
8. Cervix	86.1	22.4	46.2	0.9	0.1	16.4	1,002	317
9. Uterus	85.6	68.3	11.7	1.2	0.4	4.1	1,227	262
10. Melanoma	65.6	14.7	34.9	1.0	0.4	14.6	6,954	854
All cancers	1,904.3	1,327.2	261.0	53.1	31.6	231.5	313,651	33,176

(a) Cancer sites are defined to include malignant neoplasms, benign neoplasms, in-situ neoplasms and neoplasms of uncertain behaviour, except for new cases, which include incident cases of malignant neoplasm only (see Appendix A).

(b) Medical services for private patients in hospitals are included under Hospitals.

(c) Includes breast, cervical, lung and skin cancer public health programs, allied health services, research and other institutional, non-institutional and administration expenditure. Does not include other public health services, community health services, ambulances, or medical aids and appliances.

(d) Female breast cancers only.

(e) Includes multiple myeloma.

Lung cancer accounts for the largest number of cancer deaths (6,393, 19% deaths), has approximately the same number of new cases as deaths (6,911), and ranks fifth in terms of costs (\$107 million). Lung cancer costs are less than half those for NMSC.

Figure 2 shows total health system costs for the 10 most expensive cancers, in descending order. Total health system costs for each site are divided into treatment costs for malignant neoplasms only (black area) and other costs (including treatment costs for benign and in-situ neoplasms and prevention costs for neoplasms of all types). Appendix Table C.3 gives more detailed information on treatment costs for all cancer sites.

Treatment costs for malignant neoplasms represent around 80% of total costs for NMSC and 50% for breast cancer, but only 11% for cervical cancer, whose costs are dominated by the costs of the national screening program. Other cancers where treatment costs are a low proportion of total costs include melanoma (25%), cancer of the uterus (16%), ovarian cancer (43%) and brain and nervous system cancers (56%). In contrast, treatment costs for lung and prostate cancer represent over 90% of total health system costs for these sites.

For most cancer sites the vast majority of direct costs are for hospital costs. The exceptions are cervical cancer, NMSC and breast cancer, where a significant proportion of the costs are in the medical sector (which includes general practice and specialist consultations, and pathology tests which are not conducted in hospitals) and in the 'other' sector (because public health programs for these three sites have been included in the disease cost estimates).

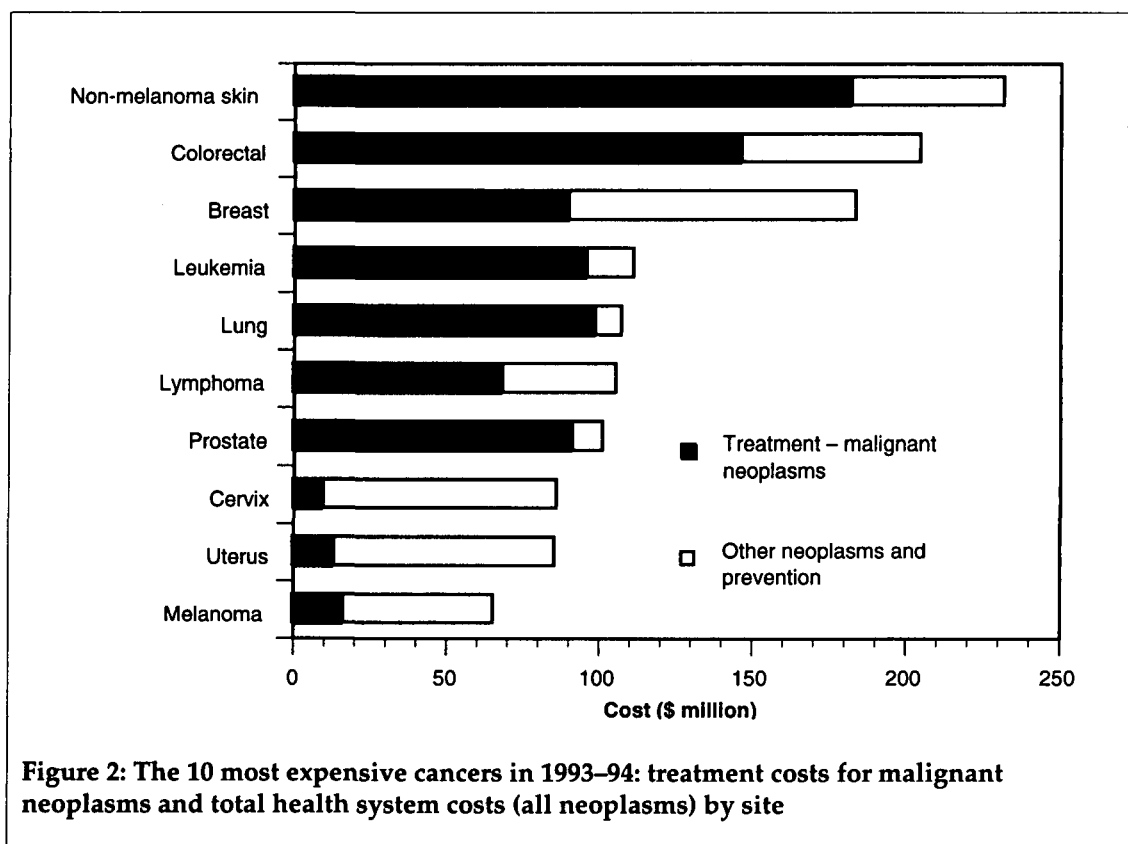


Figure 2: The 10 most expensive cancers in 1993-94: treatment costs for malignant neoplasms and total health system costs (all neoplasms) by site