

4 Most expensive cancers for males and females at various ages

The 10 most expensive cancers for males and females

Table 3 shows the total health system costs for males and females and the male to female cost ratio for the 10 most expensive cancers listed in Table 2. Overall, health system treatment costs for cancers are 14% higher for females than males, unlike costs for the most expensive cancer, NMSC, which are 24% higher for males than females. Costs for colorectal cancer and lymphoma are 17% higher for males than females, and costs for lung cancer are over twice as large for males as for females, reflecting the higher smoking prevalence among males in the past.

Table 3: The 10 most expensive cancers: health system costs (\$ million) by sex, and male/female ratio of health system costs, 1993–94

Cancer site	Total health system costs (\$ million)		Cost ratio ^(a)
	Males	Females	Male/Female
1. Non-melanoma skin	128.4	103.9	1.24
2. Colorectal	110.3	94.6	1.17
3. Breast ^(b)	—	183.9	—
4. Leukemia	62.9	48.3	1.30
5. Lung	73.1	34.2	2.14
6. Lymphoma ^(c)	56.5	49.2	1.15
7. Prostate	101.1	—	—
8. Cervix	—	86.1	—
9. Uterus	—	85.6	—
10. Melanoma	28.5	37.0	0.77
All cancers	889.7	1014.6	0.88

(a) Ratio of total health system costs, not adjusted for numbers of cancer cases in males and females.

(b) Female breast cancers only.

(c) Includes multiple myeloma.

Table 4 shows the health system costs by sector for the 10 most expensive cancers for males and females, ranked separately for each sex. Non-melanoma skin cancer is the most expensive cancer for males, followed by colorectal cancer, prostate cancer, then lung cancer. Breast cancer is the most expensive cancer for women, followed by non-melanoma skin cancer, then colorectal and cervical cancer.

For cervical cancer, 26% of costs are hospital costs, 54% medical costs and 20% of costs are in the 'other' sector (which includes costs for the national screening program, allied health, research etc.).

For NMSC, 54% of costs are hospital costs and 33% are medical costs for both males and females, reflecting the large number of same-day hospital admissions for excision of skin lesions.

For breast cancer, 44% of costs are hospital costs, 10% are pharmaceutical costs, 6% medical costs, and 42% fall in the 'other' sector. The 'other' costs reflect the large contribution of the national breast screening program to this sector (approximately \$50 million).

Table 4: The 10 most expensive cancers for males and females: health system costs by sector, 1993-94 (\$ million) and numbers of new cases and deaths, 1993

Cancer site ^(a)	Total costs	Hospitals	Medical ^(b)	Pharmaceuticals	Nursing home and other ^(c)	New cases 1993	No. of deaths 1993
Males							
1. Non-melanoma skin	128.4	70.6	42.6	2.3	12.9	145,946	273
2. Colorectal	110.3	93.5	5.9	1.1	9.8	5,178	2,360
3. Prostate	101.1	65.8	13.9	8.4	13.1	10,013	2,544
4. Lung	73.1	57.4	3.8	2.0	10.0	4,873	4,560
5. Leukemia	62.9	53.1	1.6	1.2	7.1	931	653
6. Lymphoma	56.5	49.2	2.2	0.8	4.3	2,087	1,261
7. Bladder	39.0	32.7	2.0	0.8	3.5	1,794	538
8. Melanoma	28.5	7.0	14.6	0.4	6.5	3,794	575
9. Brain and CNS	26.5	21.4	1.9	0.5	2.6	646	601
10. Head and neck	24.4	20.2	1.3	0.3	2.5	1,738	466
All cancers	889.7	671.3	104.4	22.9	91.1	184,966	18,727
Female							
1. Breast	183.9	80.0	10.6	16.2	77.1	8,448	2,641
2. Non-melanoma skin	103.9	55.4	34.1	1.7	12.7	97,745	108
3. Colorectal	94.6	77.2	5.4	2.4	9.7	4,360	2,080
4. Cervix	86.1	22.4	46.2	0.9	16.6	1,002	317
5. Uterus	86.1	22.4	46.2	0.9	16.6	1,227	262
6. Lymphoma	49.2	40.1	3.7	0.9	4.5	1,611	1,027
7. Leukemia	48.3	40.4	1.3	0.9	5.7	731	557
8. Melanoma	37.0	7.7	20.3	0.6	8.4	3,160	279
9. Lung	34.2	23.6	3.0	0.7	6.9	2,038	1,833
10. Ovary	31.3	24.7	2.7	1.0	2.9	1,059	716
All cancers	1,014.6	656.0	156.6	30.2	172.0	128,685	14,449

(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 nursing homes, allied health services, 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.

Skin cancer (melanoma and NMSC) accounts for 55% of total cancer-related medical costs for males and 35% for females. Cervical cancer accounts for a further 30% of cancer-related medical costs for females; prostate cancer for a further 13% of cancer-related medical costs for males.

Breast cancer accounts for 54% of all cancer-related pharmaceutical costs for females and prostate cancer for 37% for males.

Health system costs of cancer by age and sex

Health system costs for cancer rise with age at younger ages then decline at older ages, reflecting the decreasing population size at older ages (Figure 3). In terms of 10-year age groups, cancer costs peak in the 45–54 year age group for females and the 65–74 year age group for males. Figure 4 shows the health system costs for cancer per head of population by age and sex. Per capita health system costs for cancer rise with age through to the oldest ages.

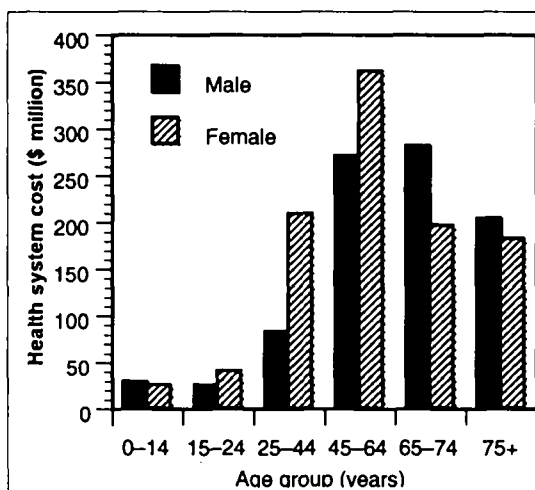


Figure 3: Total health system cancer costs (\$ million), by age group and sex, 1993–94

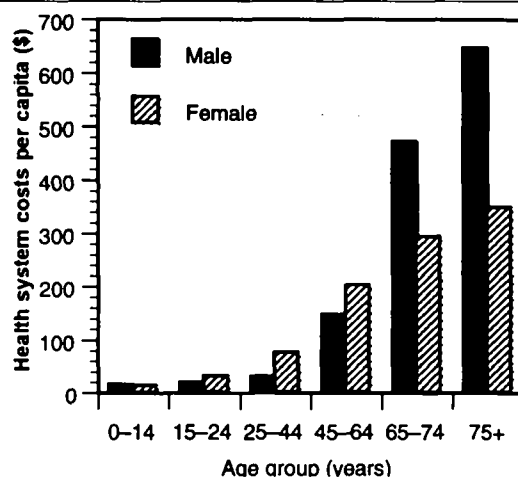


Figure 4: Health system cancer costs (\$) per capita by age group and sex, 1993–94

For young and middle-aged people, cancer costs per capita for females exceed those for males. Among older people, cancer costs per capita for males substantially exceed those for females. In part, this is because the incidence rates for the commonest cancers in both sexes are greater for males than females at older ages. Such cancers include colorectal cancer, lung cancer and skin cancers. Additionally, the commonest sex-specific cancers have a different age distribution. Breast cancer costs are greatest for women aged 45–64 years, whereas prostate cancer costs become very large over 65 years.

Table 5: Per cent distribution of health system costs for cancer by age group, males, females and persons, Australia, 1993-94

Age group	Males	Females	Persons
0-14	3.2	2.5	2.8
15-24	2.8	4.0	3.4
25-44	9.2	20.6	15.3
45-64	30.3	35.6	33.1
65-74	31.5	19.3	25.0
75+	22.9	18.1	20.3
Total	100.0	100.0	100.0

Table 6: Total health system costs (\$ million) of cancer by health sector, age and sex, 1993-94 and numbers of new cases and deaths, 1993

Sex/ age	Total costs	Hospitals	Medical ^(a)	Pharma- ceuticals	Nursing home	Other ^(b)	New cases 1993	No. of deaths 1993
Males								
0-14	28.7	22.3	3.6	0.1	—	2.8	296	75
15-24	25.0	14.4	7.0	0.4	—	3.2	376	64
25-44	82.0	57.2	14.7	1.0	0.4	8.7	14,022	676
45-64	269.7	208.6	31.7	6.2	1.7	21.5	68,877	4,767
65-74	280.7	216.9	28.7	8.7	1.8	24.6	57,026	6,241
75+	203.6	151.9	18.7	6.5	9.0	17.5	44,366	6,904
Total	889.7	671.3	104.4	22.9	12.9	78.2	184,966	18,727
Females								
0-14	25.2	20.0	2.8	0.1	—	2.3	237	72
15-24	40.6	18.8	15.0	0.2	—	6.6	1,293	74
25-44	209.0	115.8	59.2	4.2	—	29.8	16,032	776
45-64	360.8	236.3	45.4	7.7	—	71.3	47,067	3,589
65-74	195.6	146.3	18.5	7.7	—	23.1	32,868	3,992
75+	183.3	118.7	15.6	10.2	18.7	20.1	31,186	5,946
Total	1014.6	656.0	156.6	30.2	18.7	153.2	128,685	14,449
Persons								
0-14	53.9	42.3	6.4	0.2	—	5.0	533	147
15-24	65.6	33.3	22.0	0.6	—	9.8	1,669	138
25-44	291.0	173.0	73.9	5.2	0.4	38.5	30,053	1,452
45-64	630.5	444.9	77.1	13.9	1.7	92.8	115,944	8,356
65-74	476.3	363.1	47.2	16.5	1.8	47.7	89,895	10,233
75+	387.0	270.5	34.4	16.7	27.7	37.6	75,552	12,850
Total	1904.3	1327.2	261.0	53.1	31.6	231.5	313,651	33,176

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

(b) 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.

Table 5 shows cancer costs by age group as a proportion of total health system costs of cancer for each sex. Table 6 shows the total health system costs for cancers by age, sex and health sector and also the numbers of new cases and deaths in 1993. The following sections examine the costs for the five most costly cancers for males and females in the following age groups: 0–24 years, 25–44 years, 45–64 years, 65 years and over.

The 5 most costly cancers: persons 0–24 years

Table 7 shows health system costs by sector for the 5 most costly cancers among young people aged 0–24 years. Leukemia contributes the largest direct costs for both males and females aged 0–24 years (about \$17 million for males and \$12 million for females), followed by cervical cancer for females (\$12 million) and then melanoma and non-melanoma skin cancers for both sexes.

Table 7: Males and females aged 0–24 years: health system costs (\$ million) for all cancers and the 5 most expensive cancers, 1993–94

Cancer site ^(a)	Total costs	Hospitals	Medical ^(b)	Pharmaceuticals	Nursing home and other ^(c)	New cases 1993	No. of deaths 1993
Males							
1. Leukemia	16.6	14.8	0.1	0.0	1.8	121	43
2. Melanoma	9.2	0.4	6.8	0.1	1.8	124	9
3. Non-melanoma skin	5.3	3.0	1.8	0.1	0.4	—	—
4. Lymphoma	4.9	4.1	0.4	0.0	0.3	99	19
5. Brain and CNS	3.3	2.4	0.5	0.1	0.3	81	25
All cancers	53.7	36.7	10.6	0.4	6.0	672	139
Females							
1. Leukemia	12.1	10.8	0.0	0.0	1.3	105	53
2. Cervix	11.8	1.8	7.1	0.1	2.8	12	—
3. Melanoma	8.4	0.7	6.0	0.1	1.6	143	1
4. Non-melanoma skin	7.8	5.3	1.9	0.0	0.6	922	—
5. Lymphoma	4.2	3.5	0.5	0.0	0.3	71	10
All cancers	65.8	38.9	17.8	0.3	8.8	1,530	146

(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 nursing homes, allied health services, 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.

The 5 most costly cancers: persons 25–44 years

Table 8 shows health system costs by sector for the 5 most costly cancers among adults aged 25–44 years. Cervical cancer contributes the most to costs in women 25–44 years (\$46 million), followed by uterus cancer (\$33 million), and breast cancer (\$29 million). NMSC contributes the most to total direct costs of cancer in men 25–44 (\$12 million), followed by leukemia (\$11 million). Total health system costs of cancer are over 2.5 times higher for women than men in this age group.

Table 8: Health system costs (\$ million) for all cancers and the 5 most expensive cancers, males and females aged 25–44 years, 1993–94

Cancer site ^(a)	Total costs	Hospitals	Medical ^(b)	Pharmaceuticals	Nursing home and other ^(c)	New cases 1993	No. of deaths 1993
Males							
1. Non-melanoma skin	12.4	5.2	6.2	0.1	0.9	11,354	28
2. Leukemia	10.8	9.6	0.1	0.0	1.1	78	55
3. Lymphoma	9.7	8.9	0.1	0.0	0.7	299	93
4. Melanoma	7.0	1.1	3.6	0.1	2.1	763	86
5. Colorectal	5.2	4.4	0.3	0.0	0.4	216	63
All cancers	82.0	57.2	14.7	1.0	9.1	14,022	676
Females							
1. Cervix	46.1	11.0	26.4	0.3	8.3	396	71
2. Uterus	33.1	24.5	6.7	0.3	1.6	69	5
3. Breast	28.5	16.4	2.7	0.7	8.6	1,331	235
4. Non-melanoma skin	16.0	7.8	6.6	0.2	1.4	12,145	5
5. Melanoma	13.9	1.6	8.6	0.2	3.6	853	31
All cancers	209.0	115.8	59.2	4.2	29.8	16,032	776

(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 nursing homes, allied health services, 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.

The 5 most costly cancers: persons 45–64 years

Table 9 shows health system costs by sector for the 5 most costly cancers among adults aged 45–64 years. Breast cancer contributes the most to costs in women 45–64 years (\$93 million), followed by cancer of the uterus (\$42 million), and colorectal cancer (\$31 million). Colorectal cancer contributes the most to costs in men 45–64 years (\$41 million), followed by NMSC (\$38 million) and lung cancer (\$22 million).

Table 9: Health system costs (\$ million) for all cancers and the 5 most expensive cancers, males and females aged 45–64 years, 1993–94

Cancer site ^(a)	Total costs	Hospitals	Medical ^(b)	Pharmaceuticals	Nursing home and other ^(c)	New cases 1993	No. of deaths 1993
Males							
1. Colorectal	40.8	34.9	2.2	0.4	3.3	1,741	680
2. Non-melanoma skin	38.0	19.6	14.3	1.0	3.2	57,988	58
3. Lung	21.8	17.6	1.4	0.3	2.5	1,440	1,305
4. Prostate	18.4	11.7	4.5	0.2	2.0	1,586	205
5. Leukemia	17.3	13.8	0.5	1.1	1.9	216	121
All cancers	269.7	208.6	31.7	6.2	23.2	68,877	4,767
Females							
1. Breast	92.7	35.6	4.5	3.8	48.8	3,729	975
2. Uterus	41.6	36.0	3.1	0.5	2.0	510	62
3. Colorectal	30.6	25.8	2.0	0.7	2.2	1,276	465
4. Non-melanoma skin	28.3	13.8	11.8	0.6	2.1	36,724	13
5. Cervix	22.1	6.4	11.0	0.2	4.5	340	99
All cancers	360.8	236.3	45.4	7.7	71.3	47,067	3,589

(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 nursing homes, allied health services, 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.

The 5 most costly cancers: persons 65 years and over

Table 10 shows health system costs by sector for the 5 most costly cancers among people aged 65 years and over. Breast cancer contributes the most to costs in older women (\$60 million), followed by colorectal cancer (\$58 million) and NMSC (\$51 million). Prostate cancer contributes the most to direct costs of cancer in men aged 65 years and over (\$82 million), followed by NMSC (\$73 million) and colorectal cancer (\$64 million).

Table 10: Health system costs (\$ million) for all cancers and the 5 most expensive cancers, males and females aged 65 years and over, 1993–94

Cancer site ^(a)	Total costs	Hospitals	Medical ^(b)	Pharmaceuticals	Nursing home and other ^(c)	New cases 1993	No. of deaths 1993
Males							
1. Prostate	81.9	54.0	8.9	8.1	11.0	8,417	2,339
2. Non-melanoma skin	72.7	42.8	20.4	1.1	8.4	76,604	186
3. Colorectal	64.1	54.1	3.3	0.7	6.1	3,213	1,617
4. Lung	48.2	38.5	2.4	1.7	5.6	3,340	3,185
5. Bladder	29.7	25.0	1.1	0.7	2.9	1,268	463
All cancers	484.3	368.7	47.4	15.2	52.9	101,225	13,145
Females							
1. Breast	59.7	25.8	3.1	11.7	19.2	3,377	1,430
2. Colorectal	57.8	47.4	2.7	0.7	7.1	2,928	1,552
3. Non-melanoma skin	51.7	28.5	13.7	0.9	8.6	47,955	89
4. Lung	20.3	14.3	1.4	0.6	4.0	1,360	1,283
5. Leukemia	15.1	10.9	1.0	0.9	2.2	413	358
All cancers	379.0	264.9	34.2	17.9	62.0	64,057	9,938

(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 nursing homes, allied health services, 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.