

PROSTATE CANCER

Table 14.1: Characteristics of the cohort

	Males
First primary cancer	42,492
Age at diagnosis	
Mean	71.5
<65 years	10,226
=>65 years	32,266
Total person-years	199,979
Mean follow-up (years)	4.7
Histological confirmation (%)	93.9
Adenocarcinoma	91.1
Other specific carcinoma	0.1
Unspecified carcinoma	2.6
No histological confirmation	6.1
Second primary cancers	
Non-simultaneous	3706
Simultaneous	269

Table 14.2: Cumulative risk (%) of the most common second primary cancers

	Sex	Follow-up years					
		1	5	10	15	20	23
All cancers	M	1.7	6.7	10.8	13.4	14.4	14.4
Colon	M	0.3	1.0	1.7	2.1	2.3	2.3
Rectum	M	0.1	0.6	1.0	1.2	1.3	1.3
Lung	M	0.3	1.2	1.9	2.4	2.6	2.6
Melanoma	M	0.1	0.7	1.1	1.3	1.3	1.3
Bladder	M	0.1	0.5	0.7	0.8	0.9	0.9

All other cancers have 10-year cumulative risk of less than 0.5 %.

Common second cancers

From Table 14.2 a man's 10-year cumulative risk of contracting a second cancer following prostate cancer is seen to be 1 in 9. Common second primary cancers are colon, rectum, lung, melanoma and bladder.

Age-specific Incidence

The principal feature of Figure 14.1 is that the age incidence curves for the second primary cancers are orders of magnitude higher but parallel to those for first primaries.

Trends in the SIRs

The trends in Figure 14.2 show decreased SIRs following a diagnosis of prostate cancer and that this decreases further with each year of follow-up.

Trends in SIRs for specific cancer types by period of follow-up can be found in Table 14.4 (page 86) and overall 23-year SIRs are given in Table 1.3 (pages 58-61). The overall 23-year SIR is 0.69 which is significantly less than 1. SIRs statistically greater than 1 were found for CLL 1.29, bladder 1.25, melanoma 1.19 and SIR significantly less than 1 for stomach 0.82, lung 0.86, ill-defined sites 0.63 and prostate 0.01.

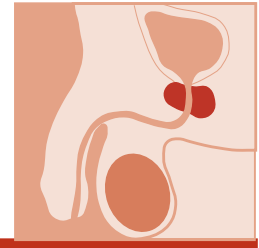


Figure 14.1: Age-specific rates

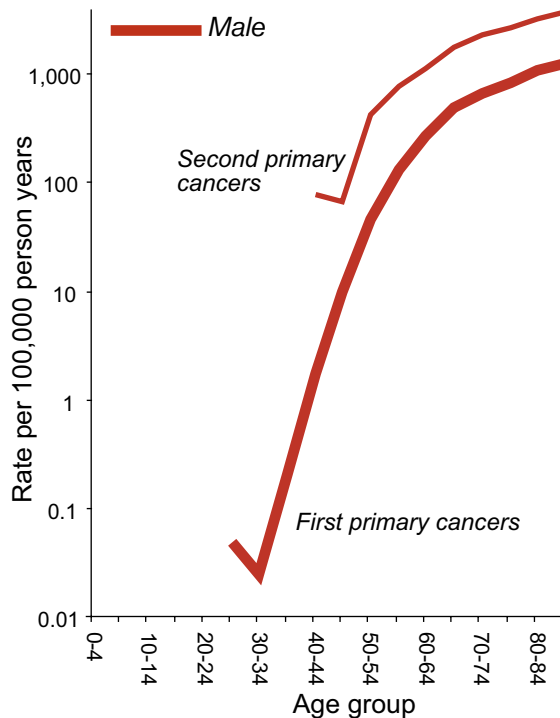
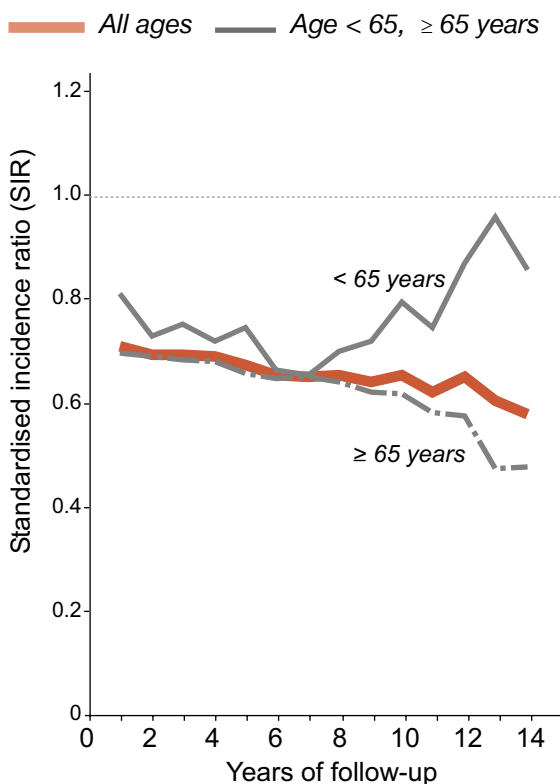


Figure 14.2: Trends in the annual SIR for all second primary cancers



Trends in SIRs with age

In Figure 14.2 the general pattern of decreasing SIRs with increasing follow-up is initially observed for both age groups, though SIR for the under 65 year age group start to increase after 5 years of follow-up. SIR for both age groups remain less than 1.0 throughout the period of follow-up.

Estimates of overall 23-year SIRs by age group and sex are to be found in Table 14.5 (page 87). The younger and older age groups have similar SIRs. The SIRs are 0.74 for men first diagnosed before 65 years of age compared with 0.67 for those diagnosed at an older age - both are significantly less than 1.

For the under 65 year age group the highest SIRs are melanoma 1.56, thyroid 3.03, bladder 1.80 with ratios significantly less than 1 for cancers of the stomach 0.58 and prostate 0.02.

For older men the only SIR greater than 1 is for bladder 1.18 with significantly lower SIR for lung 0.85, prostate 0.01, NHL 0.82 and ill-defined sites 0.57.

Comments

During the period that this monograph covers, the nature of prostate cancer diagnosed in Victoria has changed substantially. The incidence has more than doubled, and the average age at diagnosis has decreased from 73.5 years in 1985 to 69.5 years in 2005, largely due to the widespread use of Prostate Specific Antigen (PSA) testing that began in the early 1990s. This will influence the pattern of second cancers following prostate cancer.

There were no notable excess risks for other cancers following a diagnosis of prostate cancer. Second primary prostate cancers are very rare partly because treatment of the first primary often involves whole organ removal.

TESTICULAR CANCER

Table 15.1: Characteristics of the cohort

	Males
First primary cancer	2,746
Age at diagnosis	
Mean	34.5
<65 years	2,687
=>65 years	59
Total person-years	25,903
Mean follow-up (years)	9.4
Histological confirmation (%)	98.1
Seminoma	55.0
Non-seminomatous germ cell tumour	38.5
Other & unspecified tumours	4.6
No histological confirmation	1.9
Second primary cancers	
Non-simultaneous	121
Simultaneous	13

Table 15.2: Cumulative risk (%) of the most common second primary cancers

	Sex	Follow-up years					
		1	5	10	15	20	23
All cancers	M	0.4	2.1	3.9	6.0	9.0	10.6
Prostate	M	0.0	0.2	0.3	0.6	1.8	2.3
Testis	M	0.0	0.6	1.4	1.7	1.8	1.8

All other cancers have 10-year cumulative risk of < 0.5% for both sexes.

Common second cancers

From Table 15.2 a man's 10-year cumulative risk of contracting a second cancer following testicular cancer is 1 in 26 with risks > 0.5% for prostate and second testicular cancers.

Age-specific Incidence

The principal feature of Figure 15.1 is that the age incidence curves for the second primary cancers are much higher at early ages and begin to converge from age 55 years.

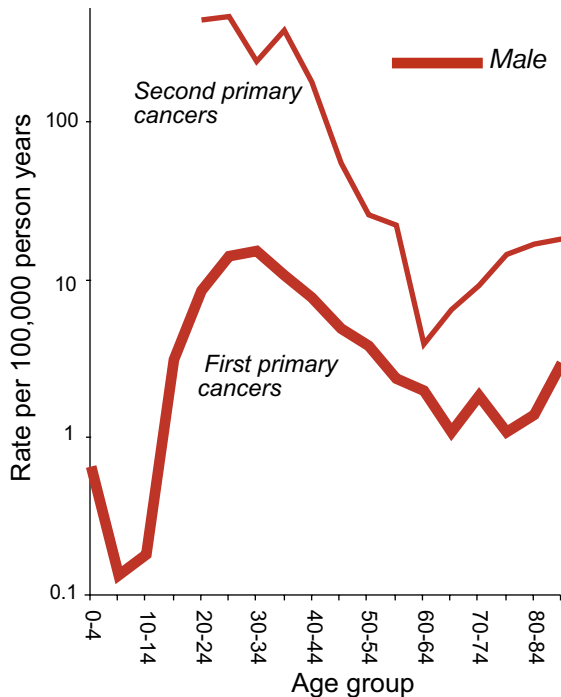
Trends in SIRs

The trends in Figure 15.2 show a twofold increased SIR in the first five years following diagnosis of the first primary decreasing to unity at 8-10 years and increasing slightly again thereafter.

Trends in SIRs for specific cancer types by period of follow-up can be found in Table 15.4 (page 88) and overall 23-year SIRs are given in Table 1.3 (pages 58-61). The overall 23-year SIR is 1.59 (significantly greater than 1). There are no SIRs less than 1 and statistically significant SIRs only for second testicular cancer 12.15.



Figure 15.1: Age-specific rates



Trends in SIRs with age

In Figure 15.2 the general pattern of decreasing SIRs during the first 10 years of follow-up is observed for the under 65 years age group. For older men SIRs are close to 1 during the first 10 years of follow-up. Both age groups show increasing SIRs after ten years with ratios for older men rapidly overtaking those for men under 65 years though converging again by 15 years from initial diagnosis.

Estimates of overall 23-year SIRs by age group and sex are to be found in Table 15.5 (page 89). The younger age group has a 50% higher SIR than the older age group. The SIRs are 1.67 for men first diagnosed before 65 years of age compared with 1.14 (not significant) for those diagnosed at an older age.

For the under 65 year age group the only significant SIR is for testicular cancer, 12.18, whilst for older men the only significant SIR was for melanoma 5.39.

Comments

Men who have had one testicular cancer are at substantially increased risk of having a second testicular cancer but have no higher risks for other second cancers than do other men.

Figure 15.2: Trends in the annual SIR for all second primary cancers

