

14.1. INTRODUCTION AND SUMMARY

Table 14.1. Summary of incidence and mortality statistics: bladder cancer

	INCIDENT CASES			DEATHS		
	males	females	both sexes	males	females	both sexes
All cancers (invasive, in situ and uncertain) (ICD-O-2 C67)						
1997 cases	345	129	474	115	62	177
% of all cancers	3.3%	1.2%	2.2%	2.9%	1.8%	2.3%
<i>Incidence and mortality rates (per 100,000 persons per year)</i>						
crude rate	19.1	7.0	13.0	6.4	3.4	4.9
World age-standardised rate	14.4	4.7		4.2	1.8	
European age-standardised rate	22.4	6.7		7.2	2.8	
cumulative risk (0-74)	1.6%	0.6%		0.4%	0.2%	
mortality/incidence ratio	0.333	0.481	0.373			
Time trends (all cancers)						
1994 cases	353	175	528	115	71	186
1995 cases	344	111	455	116	46	162
1996 cases	352	133	485	114	49	163
1997 cases	345	129	474	113	60	173
1994-1997 average	349	137	486	115	57	171
annual % change 1994-97	-1.2%	-7.6%	-3.4%	-1.8%	-3.6%	-3.1%
95% confidence limits of trend	(-1.6%; -0.8%)	(-22.5%; 10.1%)	(-8.4%; 2.0%)	(-2.4%; -1.1%)	(-21.2%; 17.8%)	(-9.9%; 4.2%)
Invasive cancers only (ICD-10-C67)						
1997 cases	332	122	454	113	60	173
% of all invasive cancers	3.4%	1.4%	2.4%	2.8%	1.7%	2.3%
<i>Incidence and mortality rates (per 100,000 persons per year)</i>						
crude rate	18.3	6.6	12.5	6.2	3.3	4.7
World age-standardised rate	13.9	4.4		4.2	1.7	
European age-standardised rate	21.5	6.4		7.0	2.7	
cumulative risk (0-74)	1.6%	0.6%		0.4%	0.2%	
mortality/incidence ratio	0.340	0.492	0.381			

Bladder cancer was almost three times as common in men as in women, although there was less of a difference in mortality (Table 14.1). Overall survival was 68% in men and 53% in women. There is no evidence of a significant upward or downward time trend at present.

14.2. AGE AND SEX PROFILE

Table 14.2. Annual average number of cases, age-specific incidence rate and relative age-specific rate for bladder cancers, 1994 to 1997

	MALES			FEMALES		
	cases	cases per 100,000	relative rate	cases	cases per 100,000	relative rate
0-4	0	0	0.0	0	0	0.0
5-9	0	0	0.0	0	0	0.0
10-14	0	0	0.0	0	0	0.0
15-19	0	0	0.0	0	0	0.0
20-24	1	1	0.6	0	0	0.0
25-29	1	1	0.6	1	1	0.2
30-34	1	1	0.3	0	0	0.1
35-39	4	3	0.8	2	1	0.3
40-44	3	3	0.4	4	3	0.6
45-49	11	9	0.9	5	5	0.7
50-54	19	20	1.0	5	5	0.5
55-59	30	39	1.1	10	13	0.9
60-64	34	50	0.9	13	18	1.1
65-69	52	85	1.0	20	30	1.3
70-74	63	126	1.0	27	43	1.4
75-79	63	179	1.2	20	40	1.1
80-84	41	195	1.1	18	53	1.3
>85	27	255	1.3	14	58	1.4
all ages	349	19.4	1.0	137	7.5	1.0

The largest number of cases for men was in the 70-79 age group and for women in the 70 to 74 year olds (Table 14.2). The highest relative age-specific rates for men were in those aged 75 to 79 and for women in those aged 70 to 74.

14.3. SUBSITES

50% of male cases and 66% of female cases were assigned to a subsite in the bladder (Table 14.3). Most of these were on the lateral wall.

Table 14.3. Subsites of bladder cancer

	ICD-O-2 code	MALES		FEMALES	
		cases	% of total	cases	% of total
trigone	C67.0	10	2.9%	6	4.7%
dome	C67.1	7	2.0%	6	4.7%
lateral wall	C67.2	63	18.3%	36	27.9%
anterior wall	C67.3	5	1.4%	6	4.7%
posterior wall	C67.4	13	3.8%	10	7.8%
neck	C67.5	16	4.6%	5	3.9%
ureteric orifice	C67.6	28	8.1%	4	3.1%
urachus	C67.7	3	0.9%	0	0.0%
overlapping lesion	C67.8	27	7.8%	12	9.3%
bladder NOS	C67.9	173	50.1%	44	34.1%
all cancers		345		129	

14.4. GEOGRAPHICAL VARIATION

INTERNATIONAL

The international position of Ireland with regard to bladder cancer was similar to that for lung cancer, with a relatively low incidence rate in males, but a higher in females (Table 14.4). The incidence rate for men was lower than in Scotland and England but higher than for Northern Ireland, and that for women was lower than in all three countries.

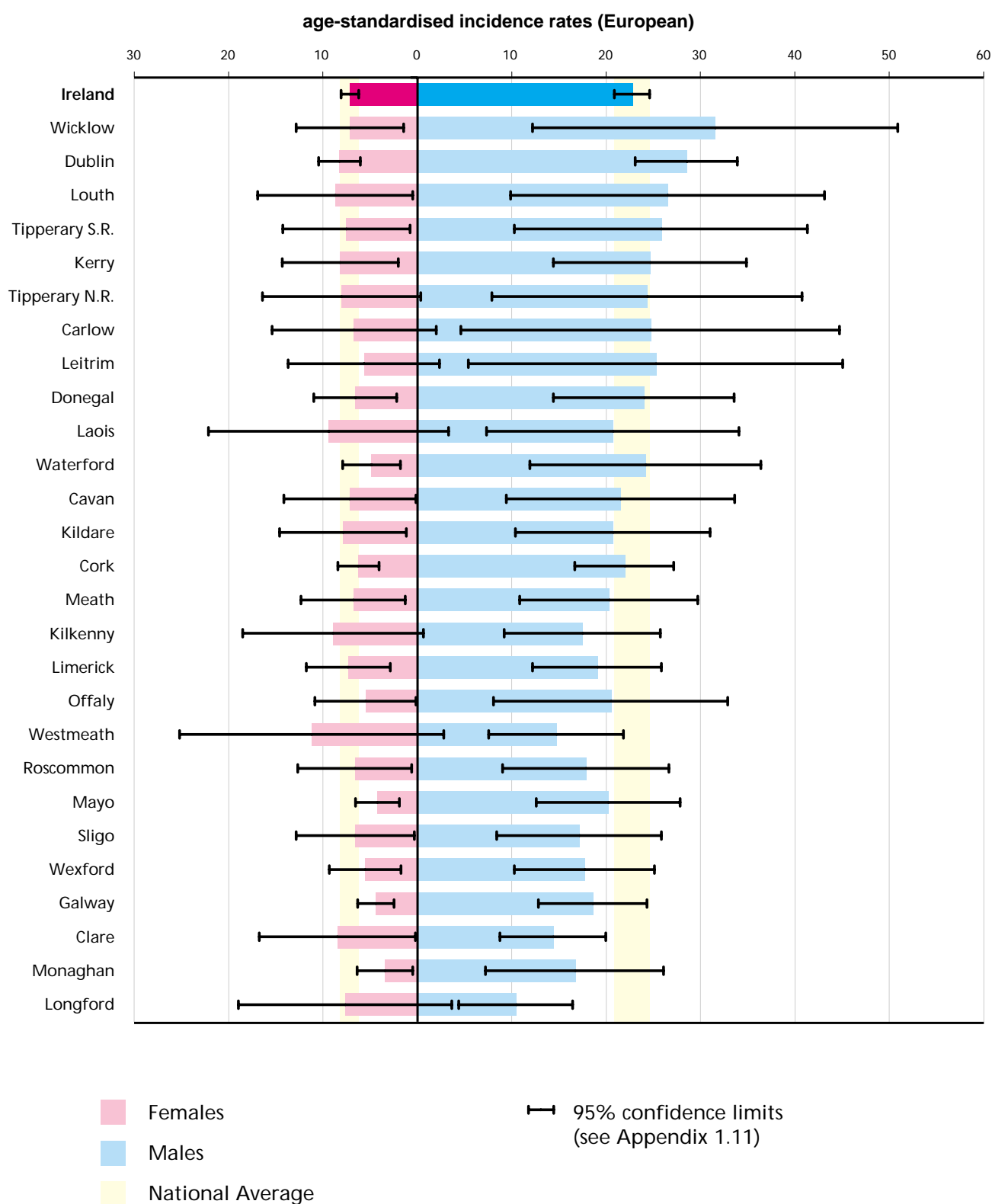
Table 14.4. Age-adjusted annual incidence rate (European standard population) and rank of rates by country, 1995: bladder cancer (invasive cases only)

	MALES		FEMALES	
	age-standardised rate	rank	age-standardised rate	rank
Spain	46.0	1	7.5	4
Scotland	35.8	3	12.2	1
Malta	36.4	2	4.6	18
Norway	32.5	4	8.4	3
Iceland	31.3	5	8.4	2
Austria	29.0	6	6.7	8
Czech Republic	27.8	8	6.8	6
England	24.8	10	7.4	5
France	28.2	7	4.0	20
Sweden	23.7	12	6.6	9
Netherlands	25.3	9	4.8	16
Germany	23.4	14	5.7	11
Finland	23.7	12	5.2	13
Ireland (1994-1997)	22.1	17	6.0	10
Switzerland	22.7	15	4.9	15
Poland	23.8	11	3.0	22
Italy	22.5	16	4.2	19
Estonia	21.1	19	5.1	14
N. Ireland	19.3	20	6.7	7
Slovakia	21.2	18	4.6	17
Denmark	18.5	21	5.3	12
Slovenia	18.1	22	3.2	21
Bulgaria	15.4	23	2.7	23

NATIONAL

The incidence of bladder cancer varied from 139% of expected for men in Wicklow to 46% in Longford and from 157% of expected for women in Westmeath to 48% in Monaghan (Figure 14.1). However, the incidence rate was not significantly different from expectation in any county.

Figure 14.1. Age-adjusted (European population) rates and 95% confidence limits by county, 1994 to 1997: bladder cancer



14.5. BASIS OF DIAGNOSIS AND HISTOLOGICAL TYPE

Table 14.5. Most valid basis of diagnosis of cancer

BASIS OF DIAGNOSIS	CASES	% OF TOTAL
tissue diagnosis	457	96.4%
histology of primary	445	93.9%
histology of other site	9	1.9%
cytology	3	0.6%
clinical diagnosis	17	3.6%
clinical	12	2.5%
radiology	3	0.6%
post-mortem	1	0.2%
other/not known	1	0.2%
all cancers	474	

Histological diagnosis of bladder cancer was the rule, with only 2% of clinical or radiological diagnoses (Table 14.5).

The morphological classification of bladder cancer is not consistent between registries. The National Cancer Registry registers all bladder cancers, including those of uncertain behaviour. Most of the cancers were transitional cell carcinoma, either papillary or NOS. 3.6% were in situ (Table 14.6).

Table 14.6. Morphology

Description	ICD-O-2 code	1997		1994-1997 AVERAGE	
		cases	% of total	cases	% of total
papillary transitional cell carcinoma	8130/3	230	48.5%	214	44.0%
transitional cell carcinoma, NOS	8120/3	162	34.2%	198	40.7%
malignant neoplasm	8000/3	16	3.4%	23	4.6%
carcinoma, NOS	8010/3	8	1.7%	9	1.8%
squamous cell carcinoma, NOS	8070/3	13	2.7%	9	1.8%
transitional cell carcinoma in situ	8120/2	13	2.7%	7	1.5%
adenocarcinoma, NOS	8140/3	9	1.9%	7	1.4%
papillary carcinoma, NOS	8050/3	6	1.3%	7	1.3%
carcinoma in situ, NOS	8010/2	4	0.8%	2	0.5%
urothelial papilloma	8120/1	2	0.4%	2	0.5%
squamous cell carcinoma large cell, keratinizing	8071/3	3	0.6%	2	0.4%
small cell carcinoma, NOS	8041/3	1	0.2%	1	0.2%
undifferentiated carcinoma, NOS	8020/3	0	0.0%	1	0.2%
mucous adenocarcinoma	8480/3	1	0.2%	1	0.2%
clear cell adenocarcinoma, NOS	8310/3	0	0.0%	1	0.1%
mucin-secreting adenocarcinoma	8481/3	1	0.2%	1	0.1%
all other types		5	1.1%	4	0.9%
Behaviour					
uncertain		3	0.6%	3	0.6%
in situ		17	3.6%	10	2.1%
invasive		454	95.8%	473	97.4%
all cases		474		486	

14.6. STAGE

Table 14.7. Summary stage

stage	1997		1994-1997 AVERAGE	
	cases	% of total	cases	% of total
0a	4	0.8%	12	2.5%
0is	15	3.2%	9	1.9%
I	25	5.3%	47	9.6%
II	25	5.3%	28	5.8%
III	9	1.9%	6	1.1%
IV	28	5.9%	29	5.9%
not applicable	3	0.6%	3	0.6%
not staged	365	77.0%	353	72.7%
all cancers	474		486	

Few of the cancers were staged (Table 14.7).

Table 14.8. Extent of disease

EXTENT OF DISEASE	CASES	% OF TOTAL
local	82	17.3%
regional	59	12.4%
distant	24	5.1%
not applicable	3	0.6%
not known	306	64.6%
all cancers	474	

Extent of disease information was more widely available (Table 14.8). Most of the staged cancers were confined to the bladder.

The commonest TNM combination, of those cases which were fully staged, was T1 N0 M0 (Table 14.9).

Table 14.9. TNM stage

T stage	N stage	M0		M1		NOT STAGED	
		cases	% of total	cases	% of total	cases	% of total
Tis/Ta	N0	19	4.0%	0	0.0%	0	0.0%
T1	N0	25	5.3%	1	0.2%	9	1.9%
	N1	0	0.0%	0	0.0%	0	0.0%
	N2	0	0.0%	0	0.0%	0	0.0%
	N3	0	0.0%	0	0.0%	0	0.0%
	not staged	16	3.4%	2	0.4%	106	22.4%
T2	N0	17	3.6%	0	0.0%	5	1.1%
	N1	0	0.0%	0	0.0%	0	0.0%
	N2	1	0.2%	0	0.0%	1	0.2%
	N3	0	0.0%	0	0.0%	0	0.0%
	not staged	7	1.5%	3	0.6%	46	9.7%
T3	N0	14	3.0%	2	0.4%	3	0.6%
	N1	1	0.2%	0	0.0%	2	0.4%
	N2	2	0.4%	0	0.0%	3	0.6%
	N3	0	0.0%	0	0.0%	0	0.0%
	not staged	11	2.3%	5	1.1%	24	5.1%
T4	N0	3	0.6%	1	0.2%	0	0.0%
	N1	0	0.0%	1	0.2%	0	0.0%
	N2	1	0.2%	0	0.0%	2	0.4%
	N3	0	0.0%	0	0.0%	1	0.2%
	not staged	4	0.8%	3	0.6%	13	2.7%
not staged	N0	4	0.8%	0	0.0%	0	0.0%
	N1	0	0.0%	0	0.0%	0	0.0%
	N2	0	0.0%	2	0.4%	1	0.2%
	N3	0	0.0%	0	0.0%	0	0.0%
	not staged	16	3.4%	4	0.8%	90	19.0%
all T	all N	141	29.7%	24	5.1%	306	64.6%
staging not applicable		3	0.6%				
all cancers		474					

14.7. TREATMENT

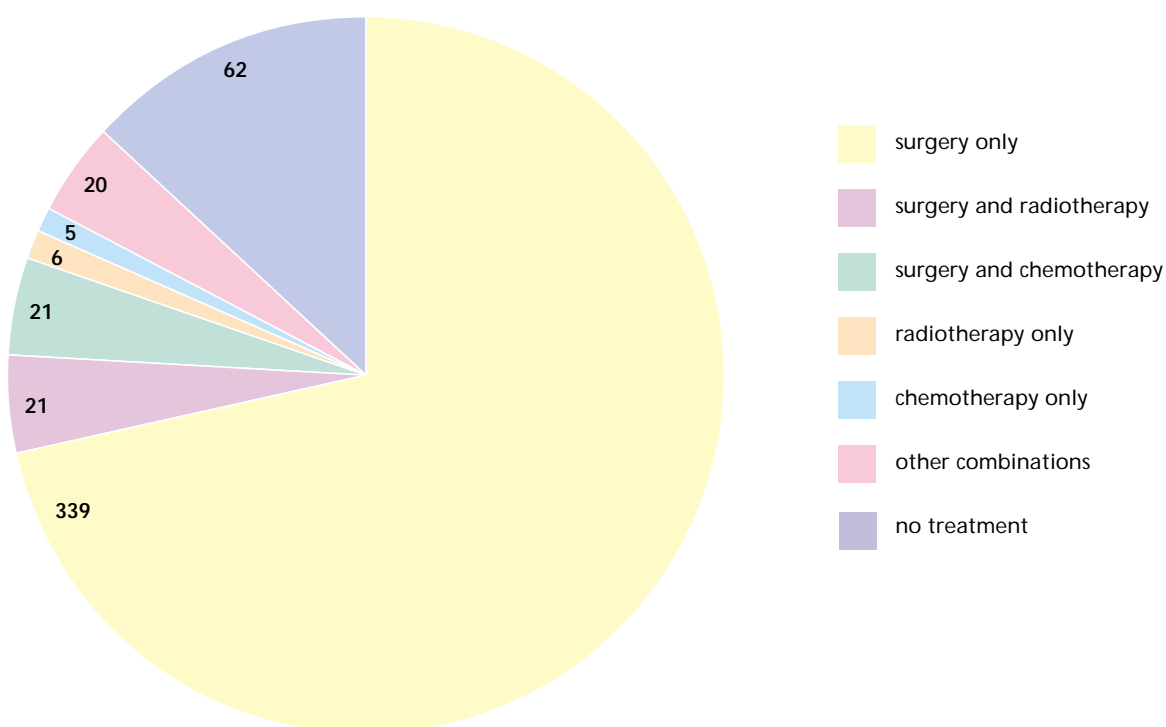
Most patients (83%) had surgical treatment (Table 14.10). The most common additional treatment was radiotherapy, which was administered to 5.9% of patients. Both surgery and chemotherapy have become more common as treatments for bladder cancer since 1994. Combination therapy was infrequent (Figure 14.2).

Table 14.10. Treatment summary

	NUMBER OF 1997 CASES TREATED	TRENDS IN % OF CASES TREATED			
		1997	1996	1995	1994
surgery	393	82.9%	81.9%	70.3%	54.0%
chemotherapy	26	5.5%	4.1%	4.8%	3.2%
hormone	3	0.6%	0.2%		
radiotherapy	28	5.9%	7.2%	5.9%	7.4%
other treatment	18	3.8%	7.8%	3.8%	45.8%
all cases treated	412	86.9%	88.0%	86.9%	91.7%
no treatment	62	13.1%	12.0%	13.1%	8.3%
all cases	474	474	485	455	528

Figure 14.2. Frequent treatment combinations

Note: numbers indicated refer to the number of cases treated



14.8. SURVIVAL

Overall survival at five years was 76%±5% for men and 75%±5% for women (Table 14.11). The large percentage of unstaged cancers makes stage-specific calculation quite unreliable. Five-year survival for stage I cases was 95%±15% for men and 112%±11% for women, while survival for stage IV cases was 22%±11% for men and was unavailable for women (Figure 14.3).

Table 14.11. One to five year relative survival (\pm 95% confidence limits) for cancers diagnosed from 1994 to 1997

sex	stage	cases	YEARS FROM DIAGNOSIS					
			1		3		5	
			survival	95% confidence limits (\pm)	survival	95% confidence limits (\pm)	survival	95% confidence
males	0	48	1.02	0.06	0.99	0.14	0.92	0.23
	I	125	0.96	0.05	0.96	0.08	0.95	0.15
	II	74	0.83	0.10	0.75	0.13	0.74	0.18
	III	11	0.67	0.30	0.30	0.41	0.33	0.41
	IV	80	0.47	0.12	0.27	0.10	0.22	0.11
	X	934	0.86	0.03	0.80	0.04	0.77	0.05
	all	1272	0.85	0.02	0.78	0.03	0.76	0.05
females	0	15	1.02	0.00	1.07	0.00	1.10	0.00
	I	50	1.04	0.00	1.01	0.11	1.12	0.11
	II	30	0.90	0.13	0.80	0.18	0.78	0.21
	III	10	0.52	0.32	0.24	0.30		
	IV	20	0.11	0.14				
	X	393	0.77	0.05	0.69	0.05	0.73	0.06
	all	518	0.78	0.04	0.70	0.05	0.75	0.05

Figure 14.3. Relative survival by stage for cases diagnosed from 1994 to 1997

