

Rare Bladder Cancers

NCIN Data Briefing

Introduction

The majority of bladder cancers are transitional cell carcinomas (TCC). About 1 in 6 are not TCCs and include squamous cell carcinoma, adenocarcinoma and small cell carcinoma. It is unclear if the epidemiology of this group is different, and if their treatments and outcomes are the same.

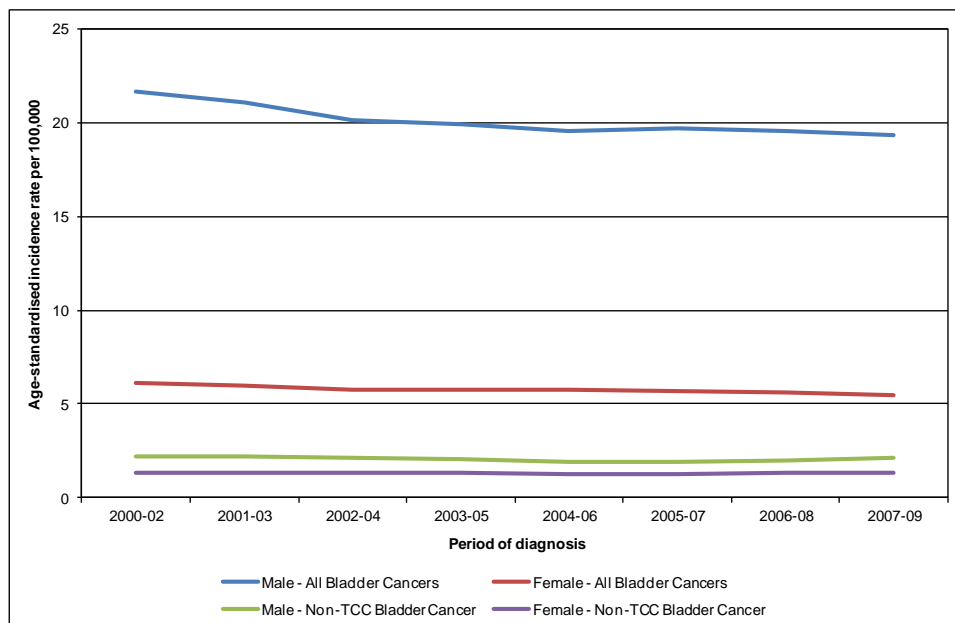
Results

Invasive bladder cancers were identified using ICD-10 Code C67, from the National Cancer Data Repository (NCDR). The recorded morphology codes were used to identify non-TCC tumours.

The incidence of non-TCC bladder cancers shows no clear trend between 2000-02 and 2007-09. In males the age-standardised rate (ASR) decreased from 2001-03 to 2004-06 ($p < 0.001$), but increased from 2004-06 to 2007-09 ($p = 0.002$). In females the ASR decreased from 2001-03 to 2004-06 ($p = 0.03$) but there was no statistically significant difference between 2004-06 and 2007-09. In the same time periods for all bladder cancers, the ASR in males firstly decreased ($p < 0.001$) and then was unchanged; and the ASR in females decreased in both periods ($p = 0.01$, $p = 0.003$). The number of cases in 2007-09 in males was 970 (annual average), in females it was 634.

Incidence rates prior to the year 2000 are not shown as there was a change in recording which makes comparisons either side of this date invalid.

Incidence of non-TCC and all bladder cancers, age-standardised rate per 100,000, in England



Mortality rates from non-TCC bladder cancer cannot be calculated as the morphology codes are not recorded on the ONS deaths database. However all-cause survival can be calculated from NCDR. Period survival is calculated for the year 2000 onwards, for one and five years survival. Period survival is a technique which allows survival past the point of follow-up to be estimated using a combination of the most recent data. This is why five year survival for more recent years can be shown.

KEY MESSAGE:

Non-transitional-cell-carcinomas make up 1 in 6 bladder cancers. They have a much worse survival, which may reflect differences in aetiology, treatment or degree of advanced disease at presentation.

One-year relative survival for all bladder cancers has increased by 2% from 2000-2004 to 2005-09 ($p<0.05$), but five-year has not changed significantly. Both one and five-year survival for non-TCC bladder cancers shows no statistically significant difference between 2000-04 and 2005-09.

The relative survival from non-TCC bladder cancers is less than half the overall survival from bladder cancers. Bladder cancer is notable for survival in females being worse than in males and this is true for non-TCC cancers too. Females have a much higher proportion of non-TCC bladder cancer (about 1 in 4), so this is likely to contribute to the overall poorer survival for females.

Relative period survival from non-TCC and all bladder cancers, at one and five years, in England

Years	Non-TCC Bladder Cancer				All Bladder Cancer			
	Males		Females		Males		Females	
	1 year	5 year	1 year	5 year	1 year	5 year	1 year	5 year
2000-2004	35.4	23.7	23.6	14.7	74.4	56.4	59.2	44.0
2001-2005	34.9	23.8	23.6	13.6	74.2	56.9	59.2	42.0
2002-2006	35.5	24.7	24.2	13.6	74.3	56.3	59.3	41.3
2003-2007	35.4	23.5	25.1	15.2	74.4	55.0	59.9	41.6
2004-2008	35.4	22.4	25.2	15.1	74.8	55.4	60.4	42.9
2005-2009	38.8	26.5	27.2	16.9	75.2	55.8	61.0	44.4

Patients with non-TCC bladder cancer have a lower recorded level treatment than the average for all bladder cancers. Only 47% receive surgery (which here includes trans-urethral resections) compared to 82% for all bladder cancers. This may reflect differences in response to treatment, or that non-TCC bladder cancers are more advanced at presentation. Chemotherapy is not well recorded by cancer registries, and immunotherapy is not recorded at all. These are common treatment options for bladder cancers at an early stage, and if they are more widely used for non-TCC cancers it may explain the apparent differences.

Recorded treatments for non-TCC and all bladder cancers, in England 2007-09

Treatment	Non-TCC Bladder Cancer		All Bladder Cancer	
	Number of Patients	Percentage	Number of Patients	Percentage
Surgery	2,269	47	21,641	82
Radiotherapy	375	8	3,341	13
Chemotherapy	598	12	7,567	29
Hormone Therapy	10	0	194	1
Any Treatment	2,509	52	22,408	84
Total	4,812	100	26,526	100

Conclusion

Non-TCC bladder cancers make up around 1 in 6 invasive bladder cancers. The outcomes are much worse, with relative survival less than half the average for all bladder cancers. Their treatments also appear to be different, with a much lower rate of surgical intervention in particular.

FIND OUT MORE:

South West Public Health Observatory

The South West Public Health Observatory is the lead Cancer Registry for urological cancers.

<http://www.swpho.nhs.uk>

Other useful resources within the NCIN partnership:

Cancer Research UK CancerStats – Key facts and detailed statistics for health professionals.

<http://info.cancerresearchuk.org/cancerstats/>

The National Cancer Intelligence Network is a UK-wide initiative, working to drive improvements in standards of cancer care and clinical outcomes by improving and using the information collected about cancer patients for analysis, publication and research. Sitting within the National Cancer Research Institute (NCRI), the NCIN works closely with cancer services in England, Scotland, Wales and Northern Ireland. In England, the NCIN is part of the National Cancer Programme.