

**THE BRITISH ASSOCIATION OF
UROLOGICAL SURGEONS**

SECTION of ONCOLOGY

**Analyses of Minimum data set for Urological cancers
January 1st – 31st December 2001**

October 2002

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PRODUCED FOR BAUS SECTION OF ONCOLOGY

by

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BAUS Section of Oncology Analyses of the 2001 Minimum Dataset for Newly presenting Urological Cancers

Introduction

On behalf of the Executive Committee, I am pleased to introduce the analyses of the 2001 data collected by our members and their staff. We have **more** colleagues from **more** centres collecting **more** data than in 2000. Prostate cancer continues to dominate our overall practice and we report on some preliminary outcome data on patients with penile cancer registered during 1998 and 1999.

This chartbook will be available to download, in full colour, from the BAUS web site from 27th November 2002.

BAUS Cancer Registry

At last we have a name!

The executive committee has agreed 'The BAUS Cancer Registry (BCR)' as the official title for our database.

Changes to the dataset

In 2001 we made some changes to the dataset including the addition of "Priority of Referral". This was included to identify patients who were referred with clinical suspicion of malignant disease and to try and separate such patients from those who were routine referrals or who were diagnosed during follow-up for another condition. We are now able to analyse delays in terms of the clinical priority, at the time of referral. The "Date of Definitive Treatment" was added to help analyse the full extent of the patient's journey. Initial Treatment Type(s) were changed to enable recording of laparoscopic surgery and we have included a table showing the procedures in use in the UK during 2001.

Is the BAUS Cancer Registry a useful epidemiological tool?

This question was posed during a special meeting of the Section's executive committee devoted to a review of progress and strategy for the registry. Dr Steven Oliver – an Epidemiologist from the University of Bristol was invited to give a critical appraisal of our progress to date.

In summary, Dr Oliver considered our data to be valid and to be an excellent resource for identifying and studying populations of patients. He questioned our goal of complete data collection pointing out that the dataset will never be complete and suggested that instead of trying to achieve 100% coverage, it may be better to concentrate on areas where data collection is already strong. He considered that inclusion of data from the private sector made our database unique. He considered our staging data to be of high quality when compared with other cancer registries and suggested that limited outcome data (such as hospital stay and 30 day mortality/morbidity) would enhance the usefulness, notwithstanding the effort of data collection. Overall the section was encouraged to continue its efforts.

As an example of how representative our data are, we examined all the returns for the Northern and Yorkshire Region and cross-referenced them with the BAUS Handbook of Urological Departments and National Cancer Registration figures. We found that 31 of 31 urological consultants in Yorkshire and 19 of 28 in Northern region return data. From the same region, we estimate that 83% of incident tumours are reported to our registry.

Matching with Conventional Cancer Registry Data

Our relationship with National Cancer Registration continues to create discussion. We have incorporated a report of an investigation into the feasibility of matching our data with existing cancer registry data. We are pleased to report a success rate of 94.5% from the West Midlands Cancer Registry.

National Cancer Dataset Project

We have continued our involvement with the National Cancer Dataset Project. A pilot study of the feasibility for collection of this large dataset was undertaken at Harrogate Healthcare Trust, Nottingham Cancer Centre, Frimley Park NHS Trust and the Royal Free Hampstead NHS Trust from April to June 2002. A copy of the **Pilot Lessons Learned Report** (Version Draft 4c – Urology) is available at www.nhs.uk/cancer/pages/dataset and shows the data collection form used in the pilot. Our thanks go to those involved for their hard work.

Acknowledgement

The Section of Oncology remains indebted to Sarah Fowler for her management of the database and her industry and patience in the preparation of this report.

We still consider the contents to be the best available UK data on urological cancer at the time of clinical presentation.

Alastair Ritchie

October 2002

Bladder Cancer: A Pilot Study for Matching Cases on the BAUS Database with Cancer Registration Data in the West Midlands

Cheryl Livings, Stacey Croft, Lou Gonsalves and Gill Lawrence
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1. Introduction

The West Midlands Cancer Intelligence Unit (WMCIU) is part of a network of 13 cancer registries throughout the United Kingdom and Ireland. Cancer registries record a large amount of data on cancer patients, their tumour(s) and their treatment, and receive death notifications from National Statistics at the National Cancer Intelligence Centre. Data is, however, limited for some cancer sites on variables such as stage.

The WMCIU covers a population of 5.3 million people and registers approximately 35,000 tumours per year, including nearly 2,000 urological tumours. This report describes a pilot project which investigated whether cases on the BAUS database could be matched to the WMCIU cancer registration database. Once the databases are linked, this could have several mutual benefits. For example, death notifications could be added to the BAUS database and more detailed information on stage and treatment could be added to the WMCIU database.

2. Methods

All bladder tumours diagnosed in 1999 in the West Midlands were identified on the BAUS database. Information on NHS number, date of birth, postcode, sex, hospital number, date of diagnosis, hospital of diagnosis and treating clinician was provided to the WMCIU. The WMCIU matched the cases to their cancer registration database using both electronic and manual methods.

3. Results

In 1999 the WMCIU registered 1,546 cases of bladder cancer. Over the same time period, BAUS registered 725 bladder cases, indicating a coverage of approximately 47%.

3.1 Summary of Data

Table 1 summarises the three main fields that were used to match the WMCIU and BAUS data. Over 30% of the BAUS cases did not have a valid NHS number. This made the matching process considerably more difficult as many cases had to be matched on combinations of dates of birth, postcodes, hospital numbers, hospitals of diagnosis and treating clinicians.

Field	Present in BAUS data?		Present in WMCIU data?	
	Yes	No	Yes	No
NHS Number	500 (69%)	225* (31%)	1512 (98%)	34 (2%)
Date of Birth	712 (98%)	13 (2%)	1546 (100%)	0 (0%)
Postcode	664 (92%)	61 (8%)	1520 (98%)	26 (2%)

Table 1 Summary of BAUS and WMCIU Data

* This includes 18 cases which had an invalid NHS number.

3.2 Matching Cases

Of the 725 cases provided by BAUS, 685 (94.5%) were matched with the WMCIU database. A summary of how these cases were matched is provided in Table 2. Most of the cases were

matched without manual intervention using combinations of NHS numbers, dates of birth and postcodes (n=607, 89%).

Type of Match	Number of Cases (%)
No Manual Intervention	
NHS Number + Date of Birth + Postcode	381 (56%)
Date of Birth and Postcode	131 (19%)
NHS Number + Date of Birth	73 (11%)
NHS Number + Postcode	16 (2.3%)
NHS Number	6 (0.9%)
Manual Intervention	
Date of Birth + Manual Intervention	66 (9.6%)
Postcode + Manual Intervention	5 (0.7%)
Manual Intervention	7 (1.0%)
Total	685 (100%)

Table 2 Summary of Matched Cases

Manual intervention involved matching similar dates of birth, postcodes or hospital numbers, treating hospitals or clinicians and dates of treatment.

There were a small number of discrepancies between the two databases. Of the 685 matched cases, 87 (13%) were recorded on the WMCIU database as having been diagnosed in 1972-1998. Whilst some of the cases diagnosed in 1998 would be expected to match due to small differences in diagnosis dates over the 1998/99 year end, the majority were probably due to recurrences or metastases in 1999 rather than primary bladder tumour diagnoses. A small number of cases (n=19, 2.8%) were also registered under a different site on the WMCIU database; most of these were other urological sites and some were recurrences or metastases in the bladder.

Of the 40 cases that were not matched, nearly half were missing an NHS number in the BAUS data (n=19, 48%); 8 of these cases also lacked a date of birth or postcode, making a match with the WMCIU data impossible. The remaining 21 cases were not located on the WMCIU database, despite extensive searching.

3.3 Death Notifications

Of the 685 cases matched, 191 (28%) were registered as being deceased on the WMCIU database. Nearly two-thirds of these died from their bladder tumours (n=123, 64%); the remainder either died from another primary tumour (n=23, 12%), an indeterminate case of death due to more than one primary (n=3, 2%) or from other causes (n=42, 22%).

4. Conclusions

This project has demonstrated that BAUS and cancer registration data can be matched successfully, despite the lack of patient names on the BAUS database. Concern has been expressed in the past as to whether in situ bladder tumours or bladder tumours diagnosed without histology are being missed from cancer registry databases¹. This project has shown that the West Midlands cancer registration database holds at least 94.5% of the cases on BAUS. Of the 40 cases that could not be matched, nearly half of these were not matched due to insufficient data on the BAUS database. It is interesting to note that of the 21 remaining cases that were not found on the WMCIU database, 16 were diagnosed in just 2 of the 18 acute NHS trusts in the region, indicating that missing data may only be a problem with a few

¹ BAUS Section of Oncology (2001). 'Analyses of Minimum Data Set for Urological Cancers January 1st - 31st December 2000'.

trusts. This project has enabled the WMCIU to identify and follow up these missing cases with the relevant hospitals to help complete their cancer registration database.

Most cases were matched electronically using combinations of NHS numbers, dates of birth and postcodes. Some cases were matched using manual intervention; although this was acceptable for the relatively small number of bladder tumours diagnosed in 1999, it would not be feasible for a larger scale project matching all urological sites. A major limiting factor of the BAUS data was the lack of NHS numbers in over 30% of the cases. When analysed by treating clinician, it was noted that the four clinicians who did not provide any NHS numbers accounted for nearly half of all missing NHS numbers. Hopefully this problem will improve in the future as NHS numbers become more widely used within the NHS.

Penile Cancer in the UK – Presenting Features and Clinical Outcome

A preliminary report on behalf of the BAUS Section of Oncology

Alastair Ritchie, Paul Foster & Sarah Fowler

A total of 243 men with a diagnosis of penile cancer diagnosed between 9/10/97 and 24/12/99 were identified from the BAUS Cancer Registry. The responsible clinicians were contacted with a request for outcome data during June 2002.

Of the 243 patients, follow up data are available on 171 men.
Some data are still awaited on 72 men.

The following report is based on the 171 patients with follow up reported up to October 18th 2002.

HISTOLOGY

Squamous cell carcinoma

(SCC): 152 (89%)

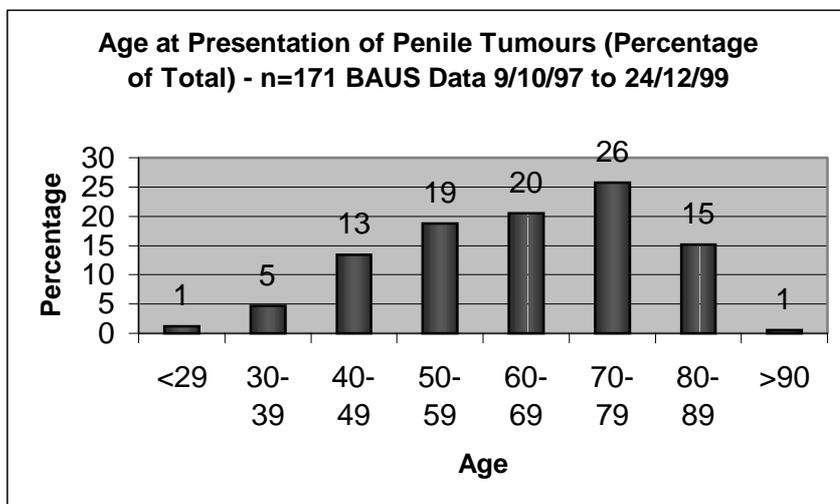
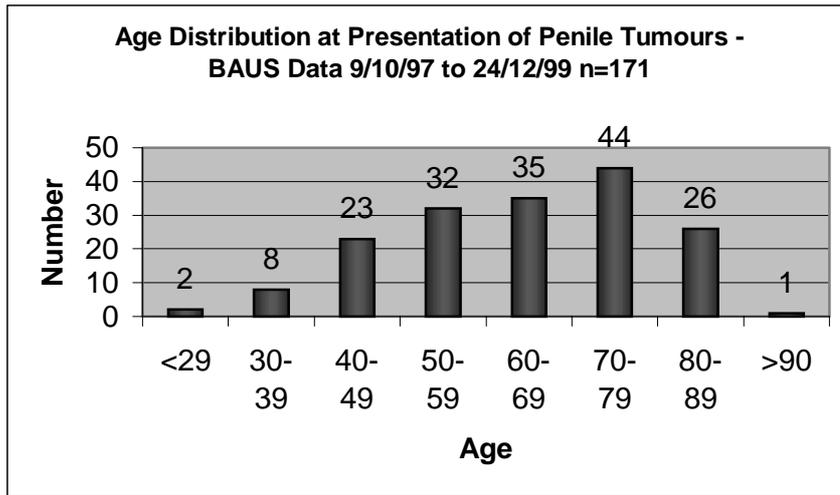
Others: 19	Verrucous	4	Lentigo	1
	SCC in situ	4	BCC	1
	Melanoma	2	Leiomyosarcoma	1
	Bowens	1	TCC/SCC	3
	Metastatic	1	No histology	1

DIFFERENTIATION OF SCC (n = 152)

Poor	26 (17%)
Moderate	52 (34%)
Well	59 (39%)
No record	13 (9%)

AGE AT DIAGNOSIS

AGE	SCC	OTHERS	TOTAL
20-29	2	-	2
30-39	7	1	8
40-49	23	-	23
50-59	28	4	32
60-69	28	7	35
70-79	39	5	44
80-89	25	1	26
90-99	-	1	1
Total	152	19	171



PRESENTATION

SYMPTOMS	SCC	OTHERS	TOTAL
Lump	52 (34%)	5	57
Ulcer	28 (18%)	4	32
Phimosis	18 (12%)	2	20
Bloody discharge	8 (5%)	2	10
Redness	9 (6%)	1	10
Balanitis	5 (3%)	-	5
Rash	2 (1%)	1	3
Acute retention	3 (2%)	1	4
Pigmentation	-	1	1
Ref. From another physician	5 (3%)	1	6
Uti	2 (1%)	-	2
Gangrene	1	-	1
Meatal stenosis	1	-	1
Granuloma	1	-	1
Hydradu. suppurtiva	1	-	1
Penile warts	-	1	1
Not stated	16 (11%)	-	16
Total	152	19	171

CIRCUMCISION PRIOR TO PRESENTATION

CIRCUMCISION	SCC	OTHER	TOTAL
Yes	20	1	21
No	117	17	134
Unknown	14	1	15
Total	152	19	171
Percentage Yes	13%	5%	12%

PRE-EXISTING PENILE SKIN DISEASE

PRE EXISTING	SCC	OTHERS	TOTAL
Yes	39	3	42
No	105	15	120
Unknown	8	2	10
Total	152	19	171
Percentage Yes	26%	16%	25%

ENTRY INTO CLINICAL TRIALS

STATUS	SCC	OTHERS	TOTAL
Not considered	91	8	99
Ineligible	10	-	10
Eligible	-	1	1
Unknown	51	10	61
Total	152	19	171

STAGING

STAGE	SCC	OTHERS	TOTAL
0	15 (10%)	7	22
1	65 (43%)	6	71
2	48 (32%)	-	48
3	15 (10%)	2	17
4	4 (3%)	3	7
Unknown	5 (3%)	1	6
Total	152	19	171

TREATMENT INTENTION

INTENTION	SCC	OTHERS	TOTAL
Curative	137 (90%)	13	150
Palliative	9 (6%)	2	11
No treatment	2 (1%)	2	4
Not stated	4 (3%)	2	6
Total	152	19	171

DEFINITIVE TREATMENT

TREATMENT	SCC	OTHERS	TOTAL
Local excision	9 (6%)	8	17
Circumcision	18 (12%)	4	22
Circumcision + radiotherapy	8 (5%)	-	8
Partial penectomy	65 (43%)	2	67
Radical penectomy	12 (8%)	1	13
Penectomy + radiotherapy	18 (12%)	-	18
Radical radiotherapy	14 (9%)	1	15
Palliative biopsy	2 (1%)	1	3
Refused	2 (1%)	1	3
Not known	4 (3%)	1	5
Total	152	19	171

ONCOLOGY REFERRAL

REFERRED?	SCC	OTHERS	TOTAL
Yes	73 (48%)	6	79
No	69 (45%)	12	81
Not known	10	1	11
Total	152	19	171

SYSTEMIC CHEMOTHERAPY

CHEMOTHERAPY	SCC	OTHERS	TOTAL
Yes	10 (15%)	2	12
No	63 (41%)	4	67
Total	73	6	79

LYMPH NODE DISSECTION

DISSECTION?	SCC	OTHERS	TOTAL
Yes	43 (28%)	2	45
No	115 (72%)	16	125
Not known	-	1	1
Total	152	19	171

LENGTH OF TIME UNTIL LYMPH NODE DISSECTION

(From date of diagnosis to date of dissection)

Total 45 cases; Range: 1-34 months

Months	Number of cases
<1	6
<2	9
<3	4
<4	5
5-10	8
10-20	3
20+	2
Unknown	8
Total	45

TREATMENT ACCORDING TO STAGE (SCC)

	Stage 0	Stage 1	Stage 2	Stage 3	Stage 4	Unknown	Total
Local excision	3	5	1	-	-	-	9
Circumcision	4	12	1	1	-	-	18
Circ + radio	1	5	-	-	2	-	8
Partial penectomy	7	30	23	4	-	1	65
Radical penectomy	-	1	7	3	1	-	12
Pen + radio	-	5	9	3	-	1	18
Radical radio	-	5	5	3	1	-	14
Palliative biopsy	-	1	-	1	-	-	2
Refused	-	-	2	-	-	-	2
Not known	-	-	-	-	1	3	4
Total	15	64	48	15	5	5	152

TREATMENT ACCORDING TO STAGE (Non SCC)

	Stage 0	Stage 1	Stage 2	Stage 3	Stage 4	Unknown	Total
Local excision	3	3	-	-	2	-	8
Circumcision	3	1	-	-	-	-	4
Circ + radio	-	-	-	-	-	-	-
Partial penectomy	-	1	-	-	1	-	2
Radical penectomy	-	-	-	1	-	-	1
Pen + radio	-	-	-	-	-	-	-
Radical radio	1	-	-	-	-	-	1
Palliative biopsy	-	1	-	-	-	-	1
Refused	-	-	-	1	-	-	1
Unknown	-	-	-	-	-	1	1
Total	7	6	-	2	3	1	19

CURRENT STATUS

STATUS	SCC	OTHERS	TOTAL
Alive + well	96	11	107
Alive + local recur	3	-	3
Alive + lymph nodes	5	-	5
Dead	44	5	51
Not known	4	1	5
Total	152	19	171

LENGTH OF FOLLOW UP

(Time from date of diagnosis to date last seen)

Range: 0-49 months
 Median: 30 months
 Mean: 21 months

OUTCOME RELATED TO STAGE

Stage	N	Penile Cancer Deaths	Other Deaths
0	22	1	4
1	71	3	10
2	48	5	7
3	17	7	3
4	7	6	1
N/A	6	5	

CAUSES OF DEATH

Of the 51 deaths:

Directly attributable to penile cancer	22
Bronchopneumonia	2
Myocardial infarction	2
Pulmonary embolism	1
Bladder cancer	1
Bronchial carcinoma	1
Colon cancer	1
Prostate cancer	1
Unknown cause of death	20

COMPLICATIONS

Complication	Radiotherapy +/- surgery	Surgery	Total
None	19	92	111
Further Surgery	2	5	7
Telangiectasia	7	-	7
Meatal stenosis	6	8	14
Subsequent radiotherapy	-	1	1
Haematospermia	1	-	1
Lymphoedema	3	6	9
Wound infection	-	6	6
Wound breakdown	2	3	5
No response	1	-	1
Has to sit to urinate	-	1	1
Total	41	122	163

Treatment unknown: 5

Treatment refused: 3

PARTICIPANTS

We thank the following participants who have returned the follow up data:

Mr A Adamson	Royal Hampshire County	Dr W G Jones	Cookridge Hospital
Mr A K Ahiaiku	Ysbyty Gwynedd Hospital	Mr M A Jones	Sandwell D G Hospital
Mr M Aitchison	Gartnavel General Hospital	Mr S S Kangaga-Sundaram	Pontefract General Infirmary
Mr P S Anandaram	Wrexham Maelor Hospital	Mr P F Keane	Belfast City Hospital
Mr J B A Anderson	Royal Hallamshire Hospital	Mr JP Kelleher	Wycombe General Hospital
Mr K Anson	St George's Hospital	Professor D Kirk	Gartnavel General Hospital
Mr M J Bailey	Epsom General Hospital	Mr R J Lemberger	Nottingham City Hospital
Mr A J Ball	Southend Hospital	Mr J Leveckis	Doncaster Royal Infirmary
Mr A W Baluch	Dorset County Hospital	Mr S Liu	North Staffordshire Hospital
Mr P K Basu	Lincoln & Louth NHS Trust	Mr M G Lucas	Morrison Hospital
Mr C A Bates	Royal Gwent Hospital	Mr J P MacDermott	Torbay Hospital
Mr C J M Beacock	Royal Shrewsbury Hospital	Mr S S Matanhelia	Royal Preston Hospital
Mr R Beard	Worthing Hospital	Mr T A Mc Nicholas	Lister Hospital
Mr R Beck	Princess Margaret Hospital	Mr R N Meddings	Ayr Hospital
Mr A R E Blacklock	Walsgrave Hospital	Miss GE Mobb	Bolton Royal Infirmary
Miss R A Blades	Royal Preston Hospital	Mr C U Moisey	Royal United Hospital
Mr N R Boucher	Chesterfield & North Derbyshire	Mr A L Morton	Royal Alexandra Hospital
Mr W Bowsler	Royal Gwent Hospital	Mr K Munson	Derby City General
Mr S F Brewster	Churchill Hospital	Mr M A Palmer	Gartnavel General Hospital
Mr J P Britton	St Richard's Hospital	Mr M L Pantelides	Bolton Royal Infirmary
Mr T W Carr	Southend Hospital	Mr C J Parker	Yeovil District Hospital
Mr C J M Carter	Royal Bournemouth Hospital	Mr R Persad	United Bristol Health Care Trust
Mr N E Cetti	Queen Elizabeth Hospital	Mr R O Plail	Conquest Hospital
Mr N Cohen	Aberdeen Royal Infirmary	Mr A J Pope	Hillingdon Hospital
Mr G Cooksey	Castle Hill Hospital	Mr R Popert	Guy's Hospital
Mr J G Corr	Colchester General Hospital	Mr P H Powell	Freeman Hospital
Mr R A Cowan	Christie Hospital	Mr A W S Ritchie	Gloucestershire Royal Hospital
Mr D Cranston	Churchill Hospital	Mr L Q Robinson	Warrington D G Hospital
Mr N Dahar	Pilgrim Hospital	Mr K M Rogawski	Royal Halifax Infirmary
Mr A R De Bolla	Wrexham Maelor Hospital	Mr A C N Rogers	Stirling Royal Infirmary
Mr I Dickinson	Darent Valley Hospital	Mr M B Rose	Singleton Hospital
Mr M Dunn	Nottingham City Hospital	Mr N B Sarangi	Queen Elizabeth Hospital
Mr B W Ellis	Ashford Hospital	Mr B D Sarmah	Birmingham Heartlands Hospital
Mr D J Farrar	Queen Elizabeth Hospital	Mr M Saxby	North Staffordshire Hospital
Mr D P Fawcett	Battle Hospital	Mr K K Sethia	Norfolk & Norwich Hospital
Mr J G W Feggetter	Wansbeck General Hospital	Mr N A Shaikh	Airedale General Hospital
Mr T Ford	Kent and Sussex Hospital	Mr G Sole	County Hospital
Mr M Fordham	Royal Liverpool Hospital	Mr J J F Somerville	Halifax General Hospital
Mr M French	North Staffordshire Hospital	Mr M J Stower	York District Hospital
Mr D Gillatt	Southmead Health Services Trust	Mr J R Strachan	Warwick Hospital
Ms Jane Gosling	Derriford Hospital	Mr M Taube	West Wales General Hospital
Mr R Gower	Royal Gwent Hospital	Mr M C Taylor	King's Mill Hospital
Mr D R Greene	Sunderland Royal Hospital	Mr T R Terry	Leicester General Hospital
Mr D C Hanbury	Lister Hospital	Mr D M Thomas	Queen's Hospital
Mr D Harriss	Nottingham City Hospital	Mr P J Thomas	Royal Sussex County Hospital
Mr A J L Hart	Royal Glamorgan Hospital	Mr D N Tulloch	Western General Edinburgh
Mr J Hetherington	Castle Hill Hospital	Mr DTL Turner	Pilgrim Hospital
Mr G Howell	Royal United Hospital	Mr J A Vale	St Mary's Hospital, London
Mr V Izegbu	Warrington D G H	Mr S G Vesey	Southport D G Hospital
Mr L James	Stafford District General Hospital	Mr M E Watson	Royal Preston Hospital
Mr M J James	Chesterfield & North Derbyshire	Mr P Whelan	St James's University Hospital
Mr P Javle	Leighton Hospital	Mr J H Williams	Derby City General Hospital
Mr B Jenkins	University Hospital Of Wales		

RESULTS SUMMARY January 1st – 31st December 2001

Who took part?

426 consultant urologists from 167 hospital centres in England, Wales, Scotland and Northern Ireland provided data for this study submitting data on 26,746 newly presenting urological tumours from 1st January to 31st December 2001. Of the 426 consultants, 234 (55%) are members of the BAUS section of Oncology. These figures represent approximately 62% of the total UK tumours registered in 1998/99 (43,347) (the most recent years available).

55% of the consultants (234/426) are members of the section of oncology and returned 71% of the data. 4.2% (1118/26746) were the private patients of 155 consultants.

How were the data analysed?

Information obtained from consultants was entered into the computer database using unique identifying numbers for individual consultants or, if they preferred, a centre number. 12 centres returned data under a centre number only (34 consultants in total) and data from one other centre was returned under the centre number only for 4 out of 6 consultants.

Data could be returned either by completion of a pro forma for each patient (7,222 -27% of returns) or in electronic format using either an Access (Microsoft) database or "in-house" database (18,895 -71% of returns) or a Psion database (Urocas) (629 -2% of returns) designed for the purpose. The pro formas were entered directly into an Access database, at which time validation comprising mainly of checks for duplicate entries and on dates and sex of patient could be carried out. 52 tumours were registered twice as a tertiary referral from another centre or another consultant in the same centre. They were only included once in all the analyses using the data from the tertiary site for all analyses except those relating to delays when the primary site data was used. In addition 19 benign tumours were registered but these have been excluded from all analyses.

The data presented here are a summary of the data received up to 23rd August 2002 and relate to diagnoses made during the whole of 2001. The following data was included:

- a. Patients for who the date of diagnosis fell within the time period. (01/01/2001 to 31/12/2001). 26,284 registrations (98.3%).
- b. Patients for whom the date of diagnosis was not included, but the referral date fell within the study period. (01/01/2001 to 31/12/2001) 406 registrations (1.5%).
- c. Patients for whom the diagnosis and referral dates were not included, but the date of first consultation fell within the study period. (01/01/2001 to 31/12/2001). 56 (0.2%).

For the ranked charts (2, 3, 5 & 6) the individual consultant or centre identification numbers were removed and replaced with rank numbers starting at 1. A unique, confidential "Ranking Sheet" was prepared for each surgeon to enable them to identify their rank in these charts. For those charts where overall figures for the entire database are shown the ranking sheet displays the consultant's individual figures. No one else can identify the results of an individual consultant. The ranked charts comprise single bars, with in addition the 25, 50, and 75 percentiles and are ranked from left to right in the ascending order of the data item being measured. Where percentages are included figures have been rounded up to one decimal point. Unless otherwise stated all analyses represent the 2001 dataset. Editorial comments precede each section where appropriate.

A personal ranking sheet for each consultant was issued individually with this chartbook.

Sarah Fowler
BAUS Cancer Registry (BCR) Manager
October 2002

A. Who took Part and Overall Figures

We note a 9.9% increase in returns from 2000.

The number of prostate cancers has increased by 17% compared with an increase of only 2.4% for bladder cancers.

As in 2000, we have incorporated comparison with National Cancer Statistics from 1998/9 – the latest years available.

Chart 10 shows the registrations by region as compared to National Cancer statistics and the percentage change in BAUS returns by region from 2000. There has been a large increase in returns from Scotland due primarily to the SUCA initiative.

The comparison with the national data suggests that our data are representative of the UK as a whole. However when comparing our data with that of the national data we should bear in mind the following:

- Our data are only being collected by urologists. We have no way of estimating the number of urological cancers that are not being seen or diagnosed by urologists. In the case of kidney cancer, it seems that a substantial number are never seen by a urologist.
- These data are being presented within nine months of the completion of the year of data collection and being compared to projected national figures from 1998/9, which are the latest to be published.
- For the majority of participants, there is no specific funding for data collection and the analysis and presentation is entirely funded by the Section of Oncology.

Chart 1

BAUS - Register of Newly Presenting Urological Tumours January 1st - December 31st 2001 Who took part

- **426 Consultants from 167 Centres provided data on 26,746 newly presenting urological tumours.**
- **55% (234/426) Consultants are members of the Section of Oncology. These Consultants returned 71% of the data**
- **4.2% (1118/26746) were from the private patients of 155 Consultants**
- **Range of Consultants per Centre = 1 - 14, (Median 2)**
- **Median number of tumours per Consultant =51, Range 1 - 226**
- **Median number of tumours per Centre = 135, Range 3 - 757**
- **73% (19524/26746) of the data were returned electronically**

Chart 2

Total Number of Newly Presenting Tumours Reported per Consultant
Median: 51 (Interquartile Range 24 - 85)

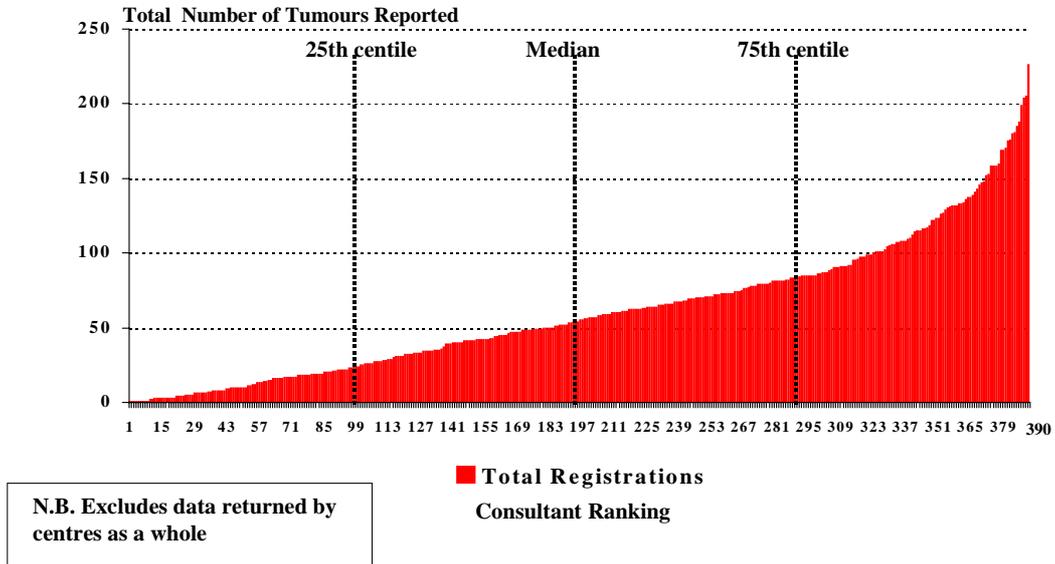


Chart 3

Total Number of Newly Presenting Tumours Reported per Centre
Median: 135 (Interquartile Range 65 - 222)

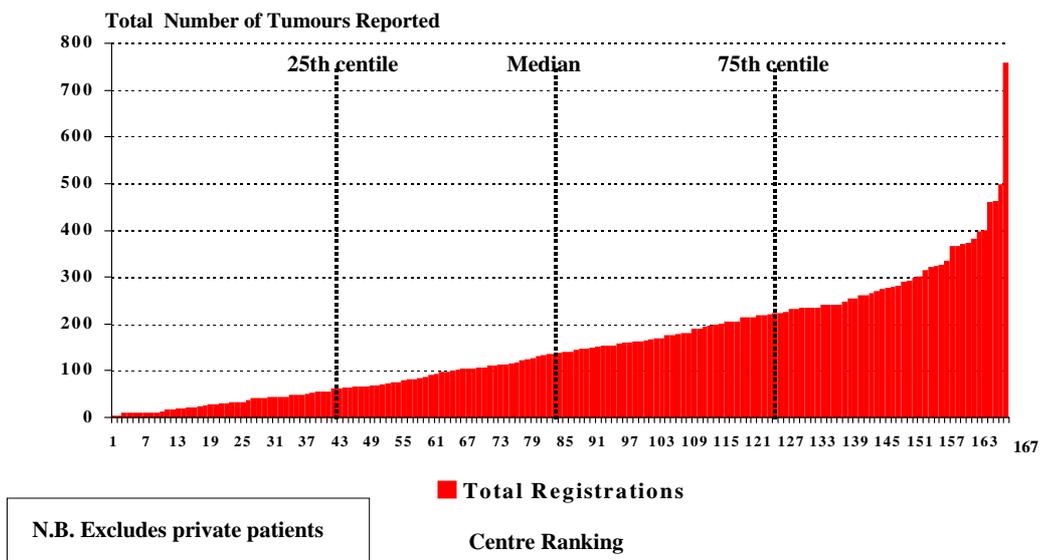


Chart 4

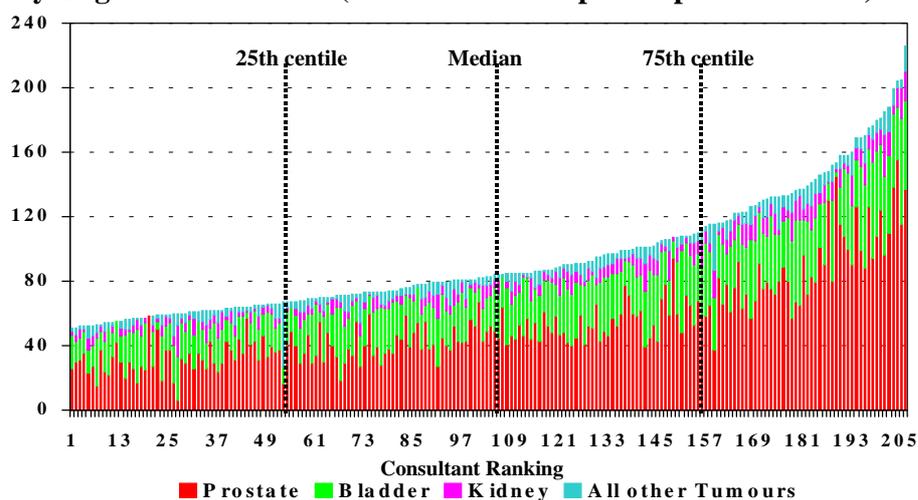
Number of Newly presenting Tumours by Organ per Consultant
426 Consultants reported 26,746 Tumours
Median Total per Consultant = 51

Organ	Total Number Reported	Median per Consultant	Range
Prostate *	15099	27	0 – 155
Bladder	7730	15	0 – 66
Kidney	2071	3	0 – 26
Testis	963	1	0 – 34
Pelvis/Ureter	358	0	0 - 12
Penis	217	0	0 – 12
Urethra	37	0	0 – 3
Prostatic Urethra	19	0	0 – 3

* Includes 109 registrations with High Grade PIN only

Chart 5

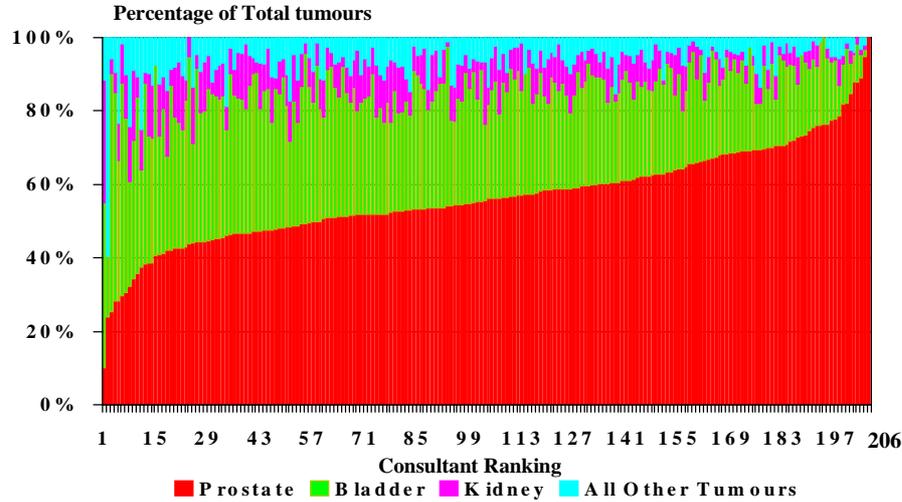
Total Number of Newly Presenting Tumours Reported per Consultant by Organ where $n \geq 51$ (i.e. the median reported per consultant)



N.B. Excludes data returned by centres as a whole

Chart 6

Total Number of Newly Presenting Tumours Reported per Consultant by Organ where n >=51 (i.e. the median reported per consultant) Ranked by Prostate proportion



N.B. Excludes data returned by centres as a whole

Chart 7

Overall Data by Organ

Organ	Number Recorded	Percentage of Total (26,746)	Mean Age at Diagnosis & Range	Males	Females
Prostate *	15099	56.5%	72.3; 10 – 101	15099	-
Bladder	7730	28.9%	71.3; 11 – 101	5688	1983
Kidney	2071	7.7%	65.1; 17 – 100	1325	732
Testis	963	3.6%	38.2; 8 – 92	963	-
Pelvis/Ureter	358	1.3%	70.6; 38 – 100	237	120
Penis	217	0.8%	64.3; 23 – 93	217	-
Urethra	37	0.14%	72.2; 58 – 102	31	5
Prostatic Urethra	19	0.07%	70.4; 43 – 88	19	-
Other	62	0.23%	64.0; 32 – 89	43	18
Not recorded	190	0.7%	71.8; 22 – 90	158	30

* Includes 109 registrations with High Grade PIN only

Chart 8

Overall Data by Organ by Year

Organ	2001 Number Recorded	% of Total (26,746)	2000 Number Recorded	% of Total (24,343)	1999 Number Recorded	% of Total (19,009)	1998** Number Recorded (6406)	% of Total
Prostate	15099 *	56.5%	12892	53.0%	9277	48.8%	2909	45.4%
Bladder	7730	28.9%	7549	31.0%	6584	34.6%	2440	38.1%
Kidney	2071	7.7%	2037	8.4%	1661	8.7%	515	8.0%
Testis	963	3.6%	980	4.0%	838	4.4%	263	4.1%
Pelvis/Ureter	358	1.3%	371	1.5%	281	1.5%	121	1.9%
Penis	217	0.8%	221	0.9%	165	0.9%	73	1.1%
Urethra	37	0.14%	33	0.14%	-	-	-	-
Prostatic Urethra	19	0.07%	34	0.14%	-	-	-	-
Other	62	0.23%	90	0.37%	120	0.6%	58	0.9%
Not recorded	190	0.7%	136	0.6%	85	0.4%	27	0.4%

* Includes 109 registrations with High Grade PIN only

** 6 months data only

Chart 9

“Other” Organ Tumours

The 62 “Others” included:

- 11 Adrenal tumours**
- 7 Cervix / Ovarian**
- 5 Spermatic cord / Scrotum / Paratesticular**
- 3 Bones**
- 2 Retroperitoneum**
- 1 Breast**
- 1 Liver**

Chart 10

Total Registrations per Region - 1 Prostate, Bladder, Kidney, Testis, Pelvis/Ureter & Penile Tumours*

Region	2001 Total Registrations* BAUS	National figures**	2001 BAUS % National	2000 BAUS % National	% Change from 2000#
England:					
EA & Oxford	1917	4022	47.7%	43.4%	+4.3%
Northern & Yorks***	3568	4395	81.2%	91.6%	-10.4%
North Thames	2565	4442	57.5%	61.6%	-4.1%
North Western	2018	4867	41.5%	34.7%	+6.8%
South Thames	2909	4807	60.5%	60.5%	0%
South Western	4032	5994	67.3%	59.6%	+7.7%
Trent	2594	3546	73.2%	78.5%	-5.3%
West Midlands	3010	4299	70.0%	70.1%	-0.1%
Total England	22613	36372	62.2%	61.7%	+0.5%
Scotland	1877	3705	50.7%	25.6%	+25.1%
Wales	1617	2948	54.9%	51.0%	+3.9%
Northern Ireland	331	914	36.2%	44.4%	-8.2%
Total UK	26438	43939	60.2%	57.3%	+2.9%

**England : cancer statistics - registrations of cancer diagnosed in 1998, England. Series MBI no. 29 - 2002

Wales: Welsh Cancer Intelligence & Surveillance Unit - 1999

Scotland:Scottish Cancer Registry,Scottish Cancer Intelligence Group, ISD Scotland (SMR6)- 1998

Northern Ireland:Northern Ireland Cancer Registry - 1999 - www.qub.ac.uk/nicr

*** Known under registrations from former Northern Region

Change in BAUS returns for 2001 cf 2000 as a % of the National figures

Chart 11

Total Registrations per Region - 2

Region	Prostate BAUS	National figures*	BAUS % National	Bladder BAUS	National figures*	BAUS % National	Kidney BAUS	National figures*	BAUS % National
England:									
EA & Oxford	1167	2194	53.2%	508	1094	46.4%	129	429	30.1%
Northern & Yorks	1830	2404	76.1%	1172	1154	101.6%	296	612	48.4%
North Thames	1619	2578	62.8%	687	1099	62.5%	153	485	31.5%
North Western	1068	2463	43.4%	686	1507	45.5%	150	562	26.7%
South Thames	1859	2790	66.6%	702	1151	61.0%	196	563	34.8%
South Western	2356	3153	74.7%	1117	1846	60.5%	339	635	53.4%
Trent	1377	1550	88.8%	853	1320	64.6%	223	466	47.9%
West Midlands	1836	2203	83.3%	788	1357	58.1%	225	443	50.8%
Total England	13112	19335	67.8%	6513	10528	61.9%	1711	4195	40.8%
Scotland	887	1862	47.6%	640	954	67.1%	190	565	33.6%
Wales	928	1561	59.4%	470	900	52.2%	138	361	38.2%
Northern Ireland	172	470	36.6%	107	234	45.7%	32	128	25.0%
Total UK	15099	23228	65.0%	7730	12616	61.3%	2071	5249	39.5%

*England : cancer statistics - registrations of cancer diagnosed in 1998, England. Series MBI no. 29 - 2002

Wales: Welsh Cancer Intelligence & Surveillance Unit - 1999

Scotland:Scottish Cancer Registry,Scottish Cancer Intelligence Group, ISD Scotland (SMR6)- 1998

Northern Ireland:Northern Ireland Cancer Registry - 1999 - www.qub.ac.uk/nicr

Chart 12

Total Registrations per Region - 3

Region	Testis BAUS	National figures*	BAUS % National	Pelvis/ Ureter BAUS	National figures*	BAUS % National	Penis BAUS	National figures*	BAUS % National
England:									
EA & Oxford	69	191	36.1%	26	74	35.1%	18	40	45.0%
Northern & Yorks	169	186	90.9%	63	**0		38	39	97.4%
North Thames	59	209	28.2%	29	38	76.3%	18	33	54.5%
North Western	64	211	30.3%	30	73	41.1%	20	51	39.2%
South Thames	96	227	42.3%	40	46	87.0%	16	30	53.3%
South Western	150	229	65.5%	44	82	53.7%	26	49	53.1%
Trent	95	120	79.2%	29	50	58.0%	17	40	42.5%
West Midlands	98	168	58.3%	42	95	44.2%	21	33	63.6%
Total England	800	1541	51.9%	303	458	66.2%	174	315	55.2%
Scotland	98	211	46.4%	34	80	42.5%	28	33	84.8%
Wales	50	73	68.5%	18	35	51.4%	13	18	72.2%
Northern Ireland	15	58	25.9%	3	14	21.4%	2	10	20.0%
Total UK	963	1883	51.1%	358	587	61.0%	217	376	57.7%

*England : cancer statistics - registrations of cancer diagnosed in 1998, England. Series MBI no. 29 - 2002
Wales: Welsh Cancer Intelligence & Surveillance Unit - 1999
Scotland:Scottish Cancer Registry,Scottish Cancer Intelligence Group, ISD Scotland (SMR6)- 1998
Northern Ireland:Northern Ireland Cancer Registry - 1999 - www.qub.ac.uk/nicr
** Known problem with registrations from former Northern Region

Chart 13

Laterality by Organ

Organ	Total Number Recorded	Laterality recorded & % of total	Left Side *	Right Side *
Kidney	2071	1978 95.5%	946 47.8%	1032
Testis	963	911 92.9%	458 50.3%	453
Pelvis/Ureter	358	323 90.2%	187 57.9%	136

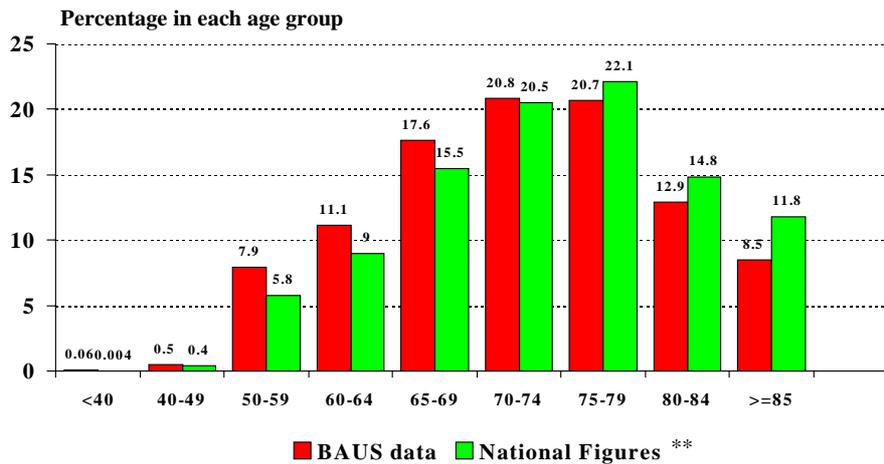
* Number and percentage of those where laterality was recorded

Chart 14

- **Total number of synchronous bilateral tumours = 12**
7 Kidney
3 Testicular
2 Pelvis/ureter
- **Total number of Tumours registered twice = 52**
(Tertiary referral from another centre or another consultant in the same centre). Only included once in all analyses
- **Total number of patients where there were tumours in different organs in the same year = 287**
(including 2 patients with 4 separate tumours and 1 patient with 3 separate tumours)

Chart 15

Percentage Age Distribution - Prostate Tumours
BAUS 2001 median: 73 Years; Range 10 -101 (n= 14,829*)

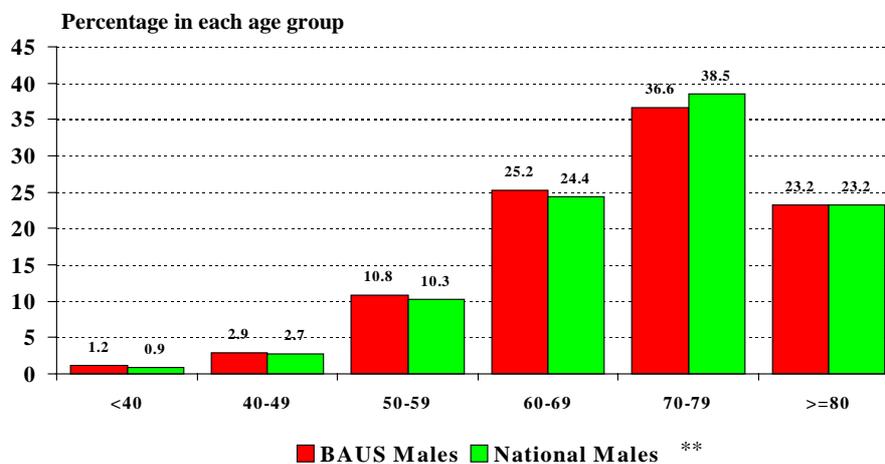


* Age could be calculated when both date of birth and diagnosis date were recorded = 14,829/15,099 = 98%

** National figures are for 1998 (England and Scotland) and 1999 (Northern Ireland and Wales)

Chart 16

Percentage Age Distribution - Bladder Tumours - Males BAUS 2001 median Males: 72 Years; Range 11 -100 (n= 5,590*)



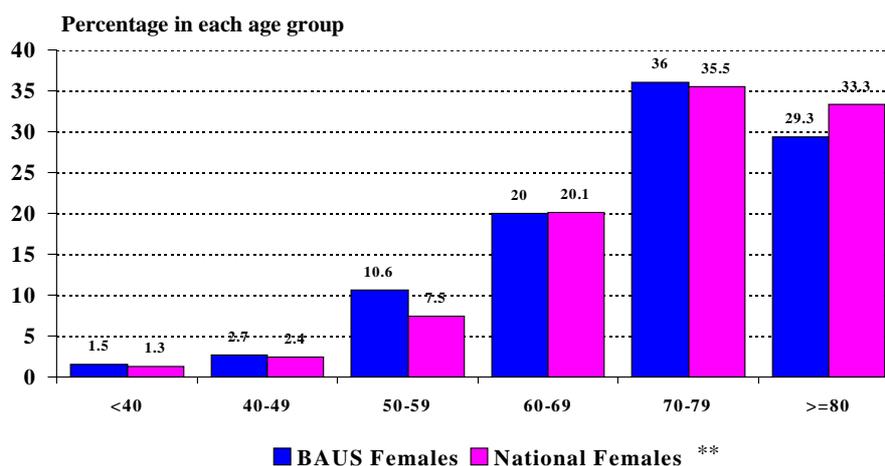
* Sex was recorded in 7671/7730 (99%) bladder tumours (5688 males & 1983 females)

Age could be calculated when both date of birth and diagnosis date were recorded = 5590/5688 (98%) & 1945/1983 (97.4%)

** National figures are for 1998 (England and Scotland) and 1999 (Northern Ireland and Wales)

Chart 17

Percentage Age Distribution - Bladder Tumours - Females BAUS 2001 median Females: 72 Years; Range 22 -101 (n= 1,945*)



* Sex was recorded in 7671/7730 (99%) bladder tumours (5688 males & 1983 females)

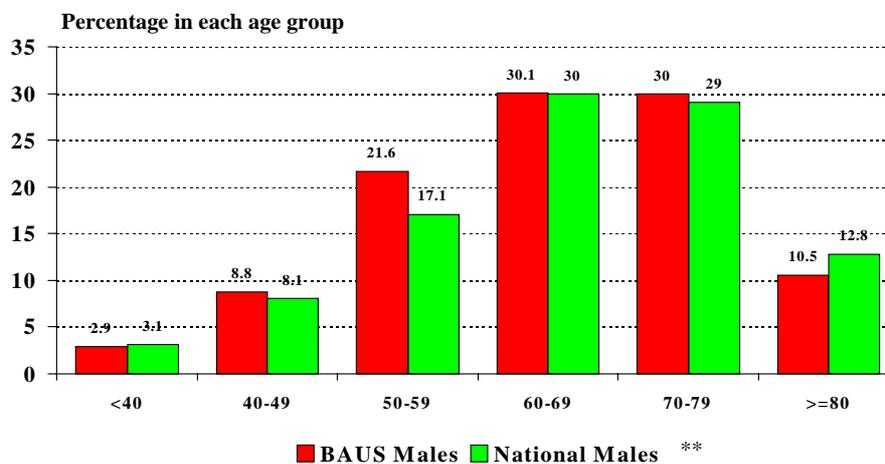
Age could be calculated when both date of birth and diagnosis date were recorded = 5590/5688 (98%) & 1945/1983 (97.4%)

** National figures are for 1998 (England and Scotland) and 1999 (Northern Ireland and Wales)

Chart 18

Percentage Age Distribution - Kidney Tumours- Males

BAUS 2001 median Males : 66 Years; Range 17 -100 (n= 1,289*)



* Sex was recorded in 2057/2071 (99.3%) kidney tumours (1325 males & 732 females)

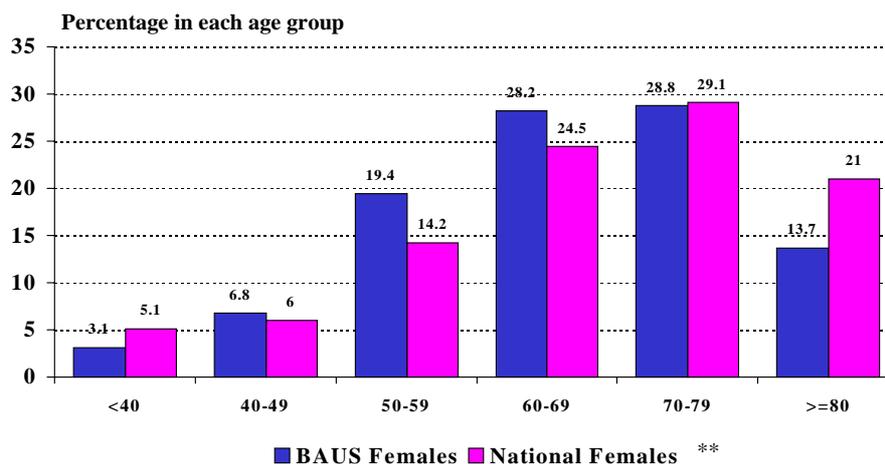
Age could be calculated when both date of birth and diagnosis date were recorded = 1289/1325 (97.3%) & 706/732 (96.4%)

** National figures are for 1998 (England and Scotland) and 1999 (Northern Ireland and Wales)

Chart 19

Percentage Age Distribution - Kidney Tumours - Females

BAUS 2001 median Females : 67 Years; Range 26 -100 (n= 706*)



* Sex was recorded in 2057/2071 (99.3%) kidney tumours (1325 males & 732 females)

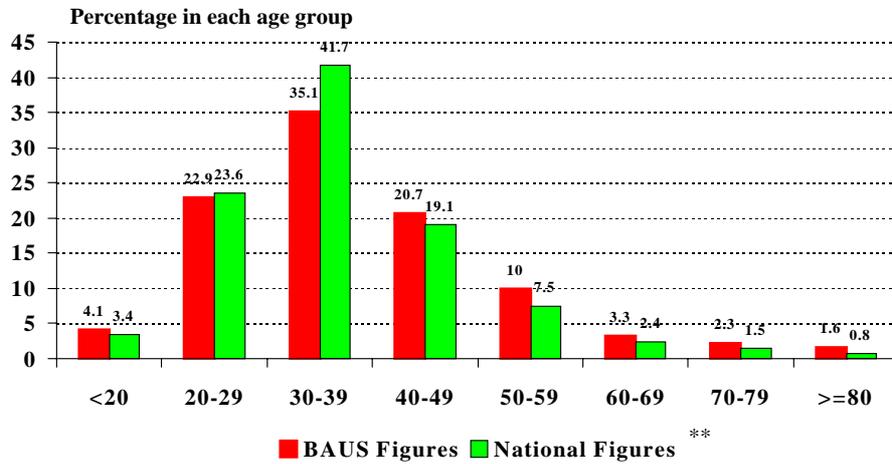
Age could be calculated when both date of birth and diagnosis date were recorded = 1289/1325 (97.3%) & 706/732 (96.4%)

** National figures are for 1998 (England and Scotland) and 1999 (Northern Ireland and Wales)

Chart 20

Percentage Age Distribution - Testicular Tumours

BAUS 2001 median: 36 Years; Range 8 -92 (n= 940*)



* Age could be calculated when both date of birth and diagnosis date were recorded = 940/963 (97.6%).

** National figures are for 1998 (England and Scotland) and 1999 (Northern Ireland and Wales)

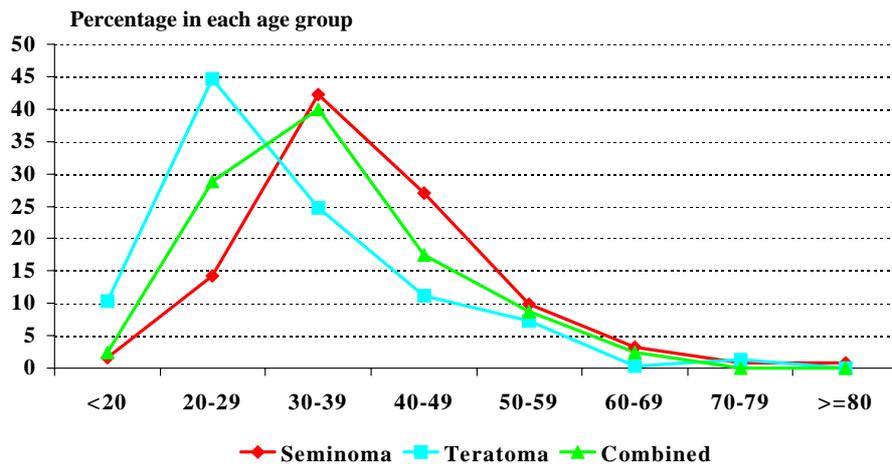
Chart 21

Percentage Age Distribution - Testicular Tumours

Seminoma median age : 38 years; Range 15 -86; Mean 39.3 years (n = 506*)

Teratoma median age : 28 years; Range 9 - 76; Mean 31.1 years (n = 231*)

Combined seminoma/teratoma median age : 34 years; Range 17 -65; Mean 35.4 years (n = 80*)

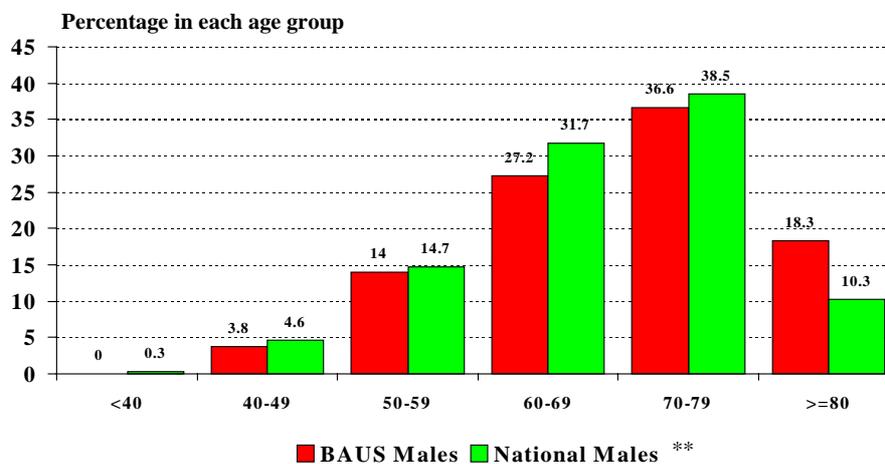


* Age could be calculated when both date of birth and diagnosis date were recorded = 940/963 (97.6%).

Histology was reported in 907 of these tumours. (907/940 = 96.5%), 90 of these were histologies other than the above groups

Chart 22

Percentage Age Distribution - Pelvis/Ureteric Tumours - Males
BAUS 2001 median Males : 71 Years; Range 43 -100 (n= 235*)



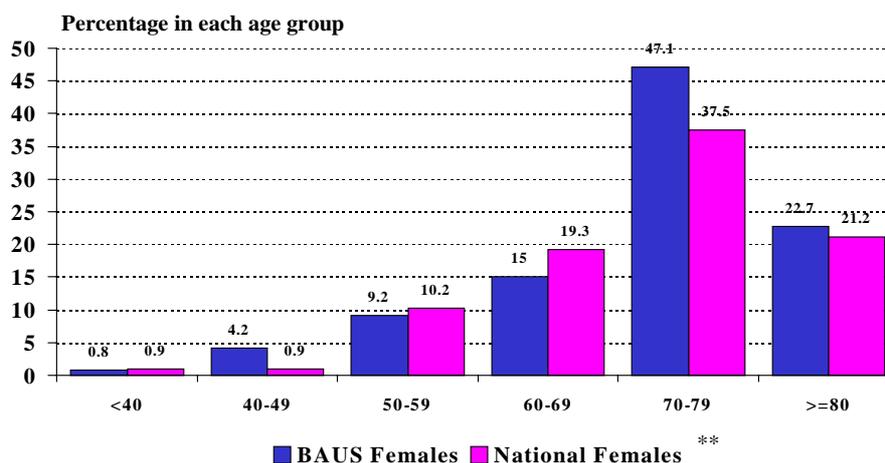
* Sex was recorded in 357/358 (99.7%) pelvis/ureteric tumours (237 males & 120 females)

Age could be calculated when both date of birth and diagnosis date were recorded = 235/237 (99.2%) & 119/120 (99.2%)

** National figures are for 1998 (England and Scotland) and 1999 (Northern Ireland and Wales)

Chart 23

Percentage Age Distribution - Pelvis/Ureteric Tumours - Females
BAUS 2001 median Females : 75 Years; Range 38 -90 (n=119*)



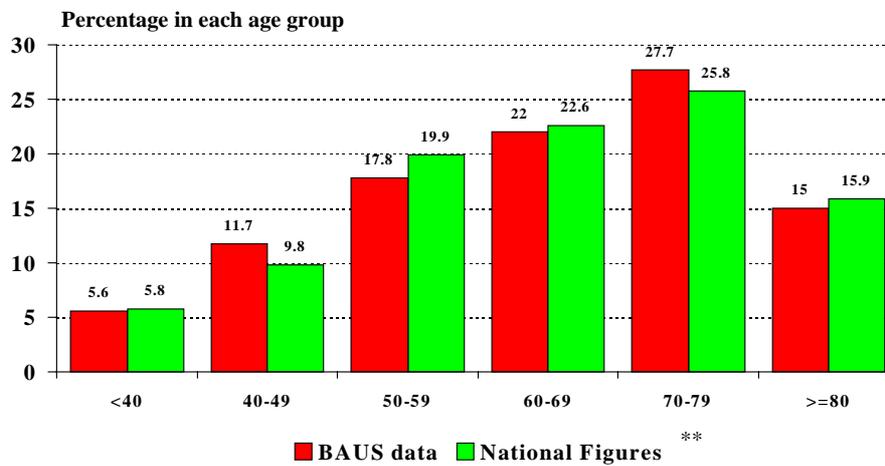
* Sex was recorded in 357/358 (99.7%) pelvis/ureteric tumours (237 males & 120 females)

Age could be calculated when both date of birth and diagnosis date were recorded = 235/237 (99.2%) & 119/120 (99.2%)

** National figures are for 1998 (England and Scotland) and 1999 (Northern Ireland and Wales)

Chart 24

Percentage Age Distribution - Penile Tumours BAUS 2001 median: 65 Years; Range 23 -93 (n= 213*)



* Age could be calculated when both date of birth and diagnosis date were recorded = 213/217 = 98.2%

** National figures are for 1998 (England and Scotland) and 1999 (Northern Ireland and Wales)

B. Referral Source, Priority & Time between Referral, First Consultation, Diagnosis and Definitive Treatment

In this section we have included charts from the 2000 dataset to allow for comparisons.

'Priority of referral' has been recorded in nearly 90% of GP referrals and has enabled analysis of patients referred with suspicion of cancer as distinct from other types of referral. Forty-eight (48%) of GP referrals, with suspicion of cancer, were seen within 14 days.

Overall the time from referral to consultation has decreased but the time from consultation to diagnosis has increased. The time from consultation to diagnosis was notably shorter in Scotland than other parts of the UK.

When analysing the 2000 dataset we responded to feedback from members and their nursing colleagues that the delays in the patient journey were unnecessarily elongated by use of total days rather than 'working days' and thus based our analyses on working days. It became apparent, however, that this was not a popular interpretation and we have reverted to total days. All charts showing 2000 data have therefore been **reworked** to represent total days and allow for meaningful comparisons.

Another new data item in 2001 was the 'date of definitive treatment'. Only 55% of the returns included this information and interpretation must therefore be cautious. In some cases, the date of definitive treatment was recorded as being before the date of diagnosis! Any negative times between diagnosis and definitive treatment date were treated as 0 i.e. definitive treatment date = date of diagnosis.

The delays from referral to definitive treatment are substantial and disease progression during this time should be considered.

Chart 25

Source of Referral by Organ - 2001

Organ	GP		Urologist		Other		Not Recorded	
	N	%	N	%	N	%	N	%
Prostate	11648	77.1	724	4.8	1681	1.1	0146	6.9
Bladder	5967	77.2	155	2.0	1028	13.3	580	7.5
Kidney	1108	53.3	92	4.4	753	36.4	118	5.7
Testis	736	76.4	44	4.6	124	12.9	59	6.1
Pelvis/Ureter	238	66.5	32	8.9	64	17.9	24	6.7
Penis	140	64.5	17	7.8	48	22.1	12	5.5
Urethra	23	62.2	2	5.4	7	18.9	5	13.5
Prostatic Urethra	12	63.2	2	10.5	4	21.1	1	5.3
Other or Not Recorded	151	59.9	6	2.4	45	17.9	50	19.8
Totals	20023	74.9	1074	4.0	3754	14.0	1895	7.1

Chart 26

Source of Referral by Organ - 2000

Organ	GP		Urologist		Other		Not Recorded	
	N	%	N	%	N	%	N	%
Prostate	9727	75.5	701	5.4	1420	11.0	1044	8.1
Bladder	5636	74.6	337	4.5	915	2.1	661	8.8
Kidney	977	47.9	156	7.7	748	36.7	156	7.7
Testis	670	68.4	118	12.0	129	13.2	63	6.4
Pelvis/Ureter	241	65.0	33	8.9	65	17.5	32	8.6
Penis	135	61.1	20	9.1	50	22.6	16	7.2
Urethra	20	60.6	3	9.0	5	15.2	5	15.2
Prostatic Urethra	19	55.9	3	8.8	4	11.8	8	23.5
Other or Not Recorded	105	46.5	7	3.1	41	8.1	73	14.3
Totals	17530	72.0	1378	5.7	3377	13.9	2058	8.4

Chart 27

“Other” Sources of Referral by Organ included:

	Prostate	Bladder	Kidney	Testis	Pelvis/ Ureter	Penis	Urethra	Prostatic Urethra
Consultant Physicians	506	259	309	13	16	22	1	1
Consultant Surgeons	372	147	209	26	10	9	-	1
A & E	335	286	69	28	19	6	2	-
Gynaecology	-	145	38	-	5	-	2	-
Care of Elderly	101	54	14	-	1	1	-	1
Haematology	22	12	20	1	-	-	-	-
Oncologists	28	11	30	13	1	3	1	-
Discovered during Urological Follow-up	95	33	12	5	5	2	-	1
Radiology	4	4	5	26	-	-	-	-
Incidental Finding	105	15	9	1	2	1	-	-

Chart 28

Source of Referral by Region - 2001 Region could be identified in 26745/26746 tumours (99.9%)

Region	GP		Urologist		Other		Not Recorded	
	N	%	N	%	N	%	N	%
England:								
EA & Oxford	1665	86.2	46	2.4	157	8.1	63	3.3
Northern & Yorks	2529	69.5	239	6.6	544	15.0	326	9.0
North Thames	1762	68.1	96	3.7	367	14.2	361	14.0
North Western	1588	77.7	35	1.7	380	18.6	40	2.0
South Thames	1996	67.8	97	3.3	417	14.2	435	14.8
South Western	3170	77.5	173	4.2	501	12.3	244	6.0
Trent	2061	79.0	64	2.5	332	12.7	152	5.8
West Midlands	2295	75.0	208	6.8	430	14.1	126	4.1
Total England	17066	74.5	958	4.2	3128	13.7	1747	7.6
Scotland	1440	76.6	77	4.1	311	16.6	51	2.7
Wales	1260	77.3	20	1.2	255	15.6	96	5.9
Northern Ireland	256	76.2	19	5.7	60	17.9	1	0.3
Total UK	20022	74.9	1074	4.0	3754	14.0	1895	7.1

Chart 29

Source of Referral by Region - 2000 Region could be identified in 24337/24343 tumours (99.9%)

Region	GP		Urologist		Other		Not Recorded	
	N	%	N	%	N	%	N	%
England:								
EA & Oxford	1321	81.6	54	3.3	97	6.0	147	9.1
Northern & Yorks	2252	61.8	474	13.0	461	12.7	456	12.5
North Thames	1683	64.1	87	3.3	416	15.9	438	16.7
North Western	1112	68.2	223	13.7	269	16.5	27	1.7
South Thames	2053	71.2	77	2.7	389	13.5	365	12.6
South Western	2871	81.0	113	3.2	352	9.9	208	5.9
Trent	2227	77.9	80	2.8	448	15.7	102	3.6
West Midlands	2080	72.9	180	6.3	475	16.6	117	4.1
Total England	15599	72.0	1288	6.0	2907	13.4	1860	8.6
Scotland	748	74.4	43	4.3	178	17.7	36	3.6
Wales	945	72.4	38	2.9	199	15.2	124	9.5
Northern Ireland	235	63.2	9	2.4	90	24.2	38	10.2
Total UK	17527	72.0	1378	5.7	3374	13.9	2058	8.4

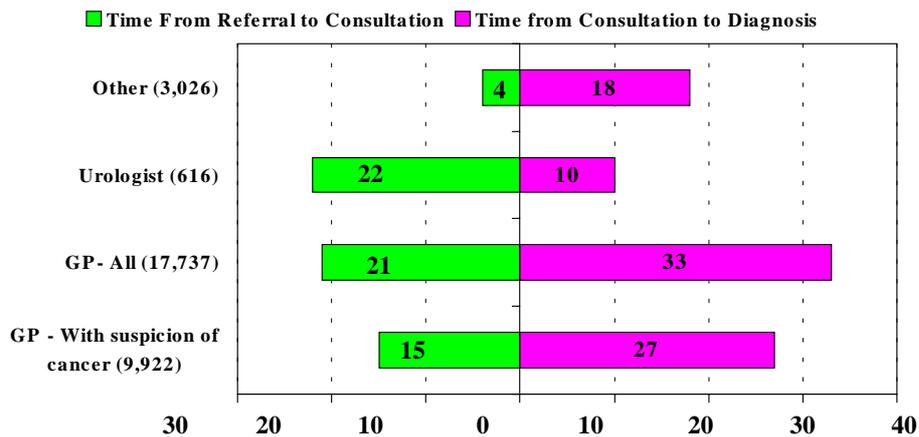
Chart 30

Priority of GP Referrals by Organ - 2001

Organ	With suspicion of cancer		Routine		Discovered During Follow-up		Other / Not Recorded	
	N	%	N	%	N	%	N	%
Prostate (11648)	6012	51.6	2674	23.0	597	5.1	2365	20.3
Bladder (5967)	3358	56.3	1235	20.7	137	2.3	1237	20.7
Kidney (1108)	662	59.7	174	15.7	45	4.1	227	20.5
Testis (736)	519	70.5	55	7.5	7	1.0	155	21.1
Pelvis/Ureter (238)	133	55.9	40	16.8	18	7.6	47	19.7
Penis (140)	74	52.9	28	20.0	4	2.9	34	24.3

Chart 31

Median Time to First Consultation and Diagnosis in Days by Referral Source in Days Excluding tumours diagnosed before Referral* - 2001



* Times were calculated when dates of referral, consultation and diagnosis were known and diagnosis date was not before referral date (N = 21,632/26,746 = 81% tumours Referral Source was recorded in 21,379/21,632 cases:
 GP - 17737/20023 = 88.6%; Urologist 616/1074 = 57.4%; Other 3026/3754 = 81.0%).
 Referral priority was recorded in 91% (16082/17737) GP referrals

Chart 32

Times to First Consultation and Diagnosis in Days when referred by GP (17,737 tumours) Excluding those diagnosed before Referral - 2001

Days to Diagnosis	Time to first Consultation	Time from first consultation to Diagnosis
0 *	1210 – 6.8%	1857 – 10.5%
1 – 14	5628 – 31.7%	3397 – 19.2%
15 – 28	4128 – 23.3%	2826 – 15.9%
29 - 60	4137 – 23.3%	4444 – 25.1%
More than 60 days	2634 – 14.9%	5213 – 29.4%

* = the number seen either on the day
of referral or diagnosed at first consultation

Chart 33

Times to First Consultation and Diagnosis in Days when referred by GP with suspicion of cancer (9,922 tumours) Excluding those diagnosed before Referral - 2001

Days to Diagnosis	Time to first Consultation	Time from first consultation to Diagnosis
0 *	548 – 5.5%	1051 – 10.6%
1 – 14	4240 – 42.7%	2245 – 22.6%
15 – 28	2522 – 25.4%	1869 – 18.8%
29 - 60	1952 – 19.7%	2657 – 26.8%
More than 60 days	660 – 6.7%	2100 – 21.2%

* = the number seen either on the day
of referral or diagnosed at first consultation

Chart 34

**Times to First Consultation and Diagnosis in Days
when referred by a Urologist (616 tumours)
Excluding those diagnosed before Referral - 2001**

Days to Diagnosis	Time to first Consultation	Time from first consultation to Diagnosis
0 *	119 – 19.3%	157 – 25.5%
1 – 14	116 – 18.8%	177 – 28.7%
15 – 28	120 – 19.5%	58 – 9.4%
29 - 60	145 – 23.5%	108 – 17.5%
More than 60 days	116 – 18.8%	116 – 18.8%

* = the number seen either on the day
of referral or diagnosed at first consultation

Chart 35

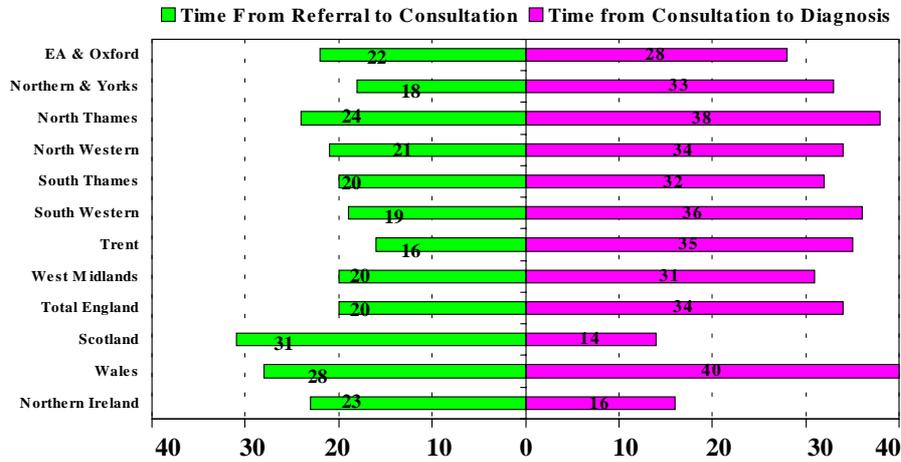
**Times to First Consultation and Diagnosis in Days
when referred by “Other”source (3026 tumours)
Excluding those diagnosed before Referral - 2001**

Days to Diagnosis	Time to first Consultation	Time from first consultation to Diagnosis
0 *	1036 – 34.2%	449 – 14.8%
1 – 14	976 – 32.3%	956 – 31.6%
15 – 28	403 – 13.3%	426 – 14.1%
29 - 60	375 – 12.4%	554 – 18.3%
More than 60 days	236 – 7.8%	641 – 21.2%

* = the number seen either on the day
of referral or diagnosed at first consultation

Chart 36

**Median Time to First Consultation and Diagnosis in Days by Region for tumours referred by GP - 2001
Excluding tumours diagnosed before Referral***



* Times were calculated when region (n = 26,745), dates of referral, consultation and diagnosis were known and diagnosis date was not before referral date (N = 21,632/26,746 = 80.9% tumours)

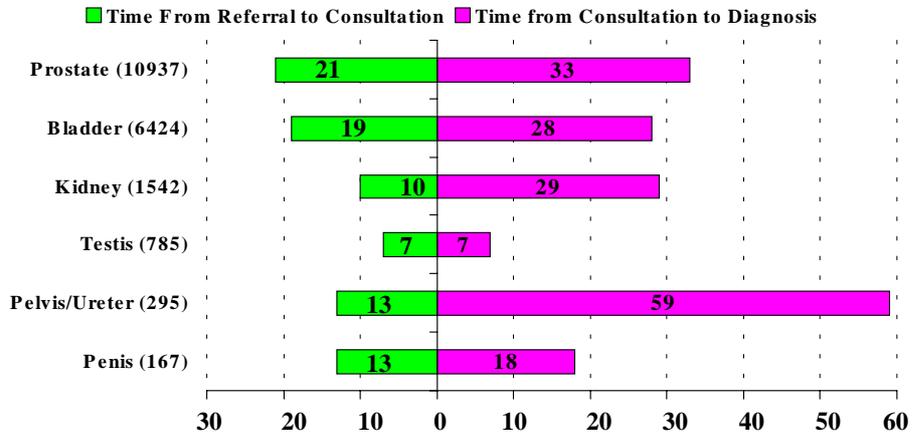
Chart 37

**Times to First Consultation and Diagnosis in Days by Region for tumours referred by GP - 2001
Excluding tumours diagnosed before Referral**

Region	Time to Consultation			Time to Diagnosis		
	Median	Mean	Range (0-95%)	Median	Mean	Range (0-95%)
EA & Oxford (1339 tumours)	22	34.2	0 – 110 days	28	80.3	0 – 286 days
Northern & Yorks (2315 tumours)	18	31.9	0 – 100 days	33	77.6	0 – 268 days
North Thames (1561 tumours)	24	40.7	0 – 125 days	38	111.4	0 – 496 days
North Western (1471 tumours)	21	33.3	0 – 102 days	34	91.4	0 – 336 days
South Thames (1676 tumours)	20	35.4	0 – 107 days	32	101.3	0 – 434 days
South Western (2869 tumours)	19	32.9	0 – 93 days	36	88.7	0 – 349 days
Trent (1874 tumours)	16	30.4	0 – 103 days	35	99.5	0 – 358 days
West Midlands (2040 tumours)	20	34.5	0 - 105 days	31	89.5	0 – 355 days
Total England (15145 tumours)	20	33.9	0 – 105 days	34	91.7	0 – 355 days
Scotland (1308 tumours)	31	50.9	0 – 131 days	14	58.5	0 – 229 days
Wales (1048 tumours)	28	42.5	0 – 137 days	40	128.3	0 – 513 days
Northern Ireland (236 tumours)	23	46.6	0 – 130 days	16	107.4	1 – 466 days

Chart 38

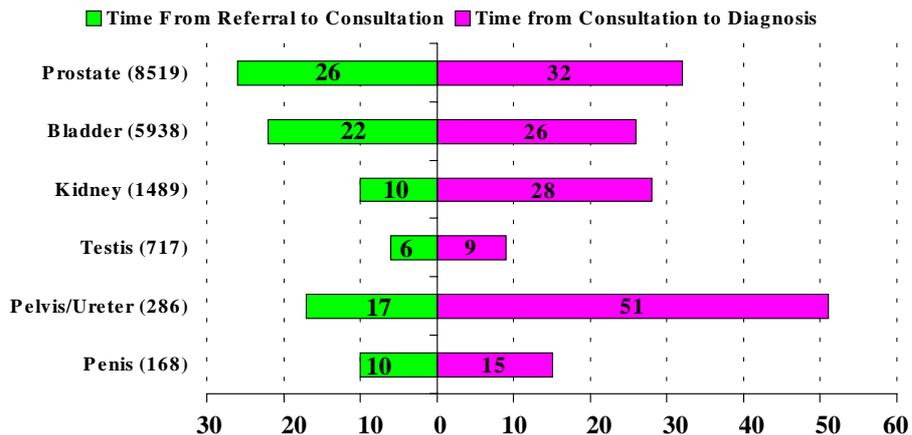
**Median Time to First Consultation and Diagnosis in Days by Organ
Excluding tumours diagnosed before Referral*
2001 dataset**



* Times were calculated when dates of referral, consultation and diagnosis were known and diagnosis date was not before referral date (N = 21,632/26,746 = 80.9% tumours - Bladder = 6424/7730 = 83.1%; Kidney = 1542/2071 = 74.5%; Testis = 785/963 = 81.5%; Pelvis/Ureter = 295/358 = 82.4%; Penis = 167/217 = 77.0%. Prostate tumours were only included if they > T1b = 10937/11966 = 91.4%

Chart 39

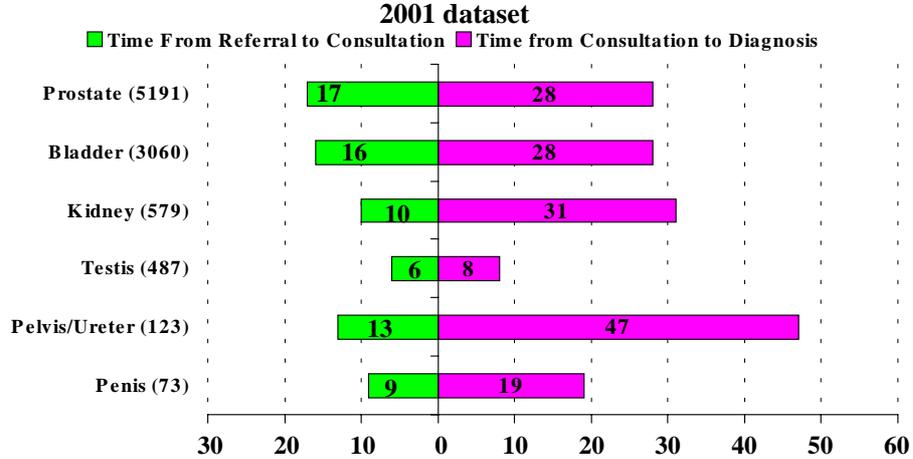
**Median Time to First Consultation and Diagnosis in Days by Organ
Excluding tumours diagnosed before Referral*
2000 dataset**



* Times were calculated when dates of referral, consultation and diagnosis were known and diagnosis date was not before referral date (N = 18722/24343 = 76.9% tumours - Bladder = 5938/7549 = 78.7%; Kidney = 1489/2037 = 73.1%; Testis = 717/980 = 73.2%; Pelvis/Ureter = 286/371 = 77.1%; Penis = 168/221 = 76.0%. Prostate tumours were only included if they > T1b = 8519/10757 = 79.2%

Chart 40

Median Time to First Consultation and Diagnosis in Days by Organ When referred by GP with suspicion of cancer Excluding tumours diagnosed before Referral*



* Times were calculated when dates of referral, consultation and diagnosis were known and diagnosis date was not before referral date (N = 21,632/26,746 = 80.9% tumours - Bladder = 3060/3358 = 91.1%; Kidney = 579/662 = 87.5%; Testis = 487/519 = 93.8%; Pelvis/Ureter = 123/133 = 92.5%; Penis = 73/74 = 98.6%. Prostate tumours were only included if they > T1b = 5191/5615 = 92.4%

Chart 41

Times to First Consultation and Diagnosis in Days - All Referrals Excluding Patients Diagnosed before Referral

Year	Time between Referral and First Consultation in Days			Time between First Consultation and Diagnosis in Days		
	Median	Mean	Range (0 - 95%)	Median	Mean	Range (0 - 95%)
2001 (21,632)	19	34.0	0 - 107	30	87.2	0 - 327
2000 (18,722)	22	35.1	0 - 109	29	77.0	0 - 272
1999 (15,912)	-	-	-	53*	84.7*	0 - 282*

* In 1999 only referral date and diagnosis date were recorded therefore these figures represent total time to diagnosis

Chart 42

Times to Definitive Treatment in Days by Organ - 2001

Organ	Time between Referral and Definitive Treatment in days			Time between Diagnosis and Definitive Treatment in days		
	Median	Mean	Range (0 – 95%)	Median	Mean	Range (0 – 95%)
Prostate (5764)	93	178.4	0 – 577	20	43.5	0 – 135
Bladder (4384)	63	111.3	0 – 287	0	22.3	0 – 79
Kidney (1118)	55	90.8	0 – 279	0	16.3	0 – 57
Testis (578)	15	37.4	0 – 122	0	7.29	0 – 28
Pelvis/Ureter (226)	105	192.0	0 – 578	0	25.8	0 – 90
Penis (106)	50	95.1	4 – 353	0	25.1	0 – 88

Definitive treatment date was recorded in 55.3% tumours (14787/26746)

Chart 43

**Times to Definitive Treatment in Days by Organ - 2001
When referred by GP with suspicion of cancer**

Organ	Time between Referral and Definitive Treatment in days			Time between Diagnosis and Definitive Treatment in days		
	Median	Mean	Range (0 – 95%)	Median	Mean	Range (0 – 95%)
Prostate (2809)	75	122.9	0 – 302	20	41.5	0 – 126
Bladder (2151)	58	83.7	0 – 186	0	23.1	0 – 80
Kidney (441)	54	73.2	0 – 184	0	16.8	0 – 58
Testis (367)	15	29.5	0 – 91	0	8.5	0 – 28
Pelvis/Ureter (90)	95	115.1	5 – 399	0	22.7	0 – 77
Penis (45)	45	67.5	4 – 177	0	31.6	0 – 126

Definitive treatment date was recorded in 66.9% tumours referred by GP under suspicion of cancer(6634/9922))

Chart 44

**Times to Definitive Treatment in Days - Prostate Cancer by Stage - 2001
When referred by GP with suspicion of cancer**

Stage	Time between Referral and Definitive Treatment in days				Time between Diagnosis and Definitive Treatment in days		
	N	Median	Mean	Range (0 - 95%)	Median	Mean	Range (0 - 95%)
Stage I (T1a N0 M0 Well Differentiated)	10	78	48.7	0 - 120	0	10.7	0 - 15
Stage II (T1a N0 M0 Mod or Poor differentiation T1b, 1c, 1, 2, N0 M0 Any differentiation)	<i>T1 - 89</i> <i>T1a - 21</i> <i>T1b - 26</i> <i>T1c - 389</i> <i>T2 - 764</i>	119 108 69 125 102	209.6 228.8 266.9 163.7 151.3	0 - 517 0 - 547 0 - 560 0 - 354 0 - 390	43 9 4 43 34	58.0 52.2 51.4 60.8 52.0	0 - 135 0 - 132 0 - 118 0 - 163 0 - 142
Stage III (T3 N0 M0 Any differentiation)	855	64	99.7	0 - 226	17	35.2	0 - 105
Stage IV (T4 N0 M0 Any differentiation Any T N1 M0 Any differentiation Any T Any N M1 Any differentiation)	675	37	74.5	0 - 177	4	22.2	0 - 79

Chart 45

Times to First Consultation, Diagnosis and Definitive Treatment in Days by Prostate (10937 tumours)- 2001 dataset Excluding tumours diagnosed before Referral and those with T1a or T1b

Days to Diagnosis	Time to first Consultation	Time from first consultation to Diagnosis	Time from Diagnosis to Definitive Treatment
0 *	905 – 8.3%	1301 – 11.9%	1473 - 13.5%
1 – 14	3253 – 29.7%	2217 – 20.3%	1705 – 15.6%
15 – 28	2478 – 22.6%	1518 – 13.9%	881 – 8.1%
29 - 60	2522 – 23.1%	2601 – 23.8%	1062 – 9.7%
More than 60 days	1779 – 16.3%	3300 – 30.2%	1422 – 13.0%
Not Recorded	-	-	4394 – 40.2%

* = the number seen either on the day of referral or diagnosed and/or treated at first consultation

Chart 46

Times to First Consultation and Diagnosis in Days by Prostate (8519 tumours) - 2000 dataset Excluding tumours diagnosed before Referral and those with T1a or T1b

Days to Diagnosis	Time to first Consultation	Time from first consultation to Diagnosis
0 *	897 – 10.5%	964 - 11.3%
1 – 14	1892 – 22.2%	1785 – 20.9%
15 – 28	1892 – 22.2%	1259 – 14.8%
29 - 60	2280 – 26.8%	1935 – 22.7%
More than 60 days	1558 – 18.3%	2576 – 30.2%

* = the number seen either on the day of referral or diagnosed at first consultation

Chart 47

Times to First Consultation, Diagnosis and Definitive Treatment in Days by Bladder (6424 tumours) - 2001 dataset Excluding those diagnosed before Referral

Days to Diagnosis	Time to first Consultation	Time from first consultation to Diagnosis	Time from Diagnosis to Definitive Treatment
0 *	801 – 12.5%	779 – 12.1%	2945 - 45.8%
1 – 14	1877 – 29.2%	1284 – 20.0%	1674 – 26.1%
15 – 28	1492 – 23.2%	1171 – 18.2%	341 – 5.3%
29 - 60	1480 – 23.0%	1705 – 26.5%	496 – 7.7%
More than 60 days	774 – 12.0%	1485 – 23.1%	346 – 5.4%
Not Recorded	-	-	622 – 9.7%

* = the number seen either on the day of referral or diagnosed and/or treated at first consultation

Chart 48

Times to First Consultation and Diagnosis in Days by Bladder (5938 tumours) - 2000 Dataset Excluding those diagnosed before Referral

Days to Diagnosis	Time to first Consultation	Time from first consultation to Diagnosis
0 *	854 – 14.4%	586 – 9.9%
1 – 14	1301 – 21.9%	1362 – 22.9%
15 – 28	1349 – 22.7%	1089 – 18.3%
29 - 60	1547 – 26.1%	1554 – 26.2%
More than 60 days	887 – 14.9%	1347 – 22.7%

* = the number seen on the day
of referral or diagnosed at first consultation

Chart 49

Times to First Consultation, Diagnosis and Definitive Treatment in Days by Kidney (1542 tumours) - 2001 dataset Excluding those diagnosed before Referral

Days to Diagnosis	Time to first Consultation	Time from first consultation to Diagnosis	Time from Diagnosis to Definitive Treatment
0 *	279 – 18.1%	173 – 11.2%	818 – 53.1%
1 – 14	668 – 43.3%	297 – 19.3%	451 – 29.2%
15 – 28	264 – 17.1%	294 – 19.1%	84 – 5.5%
29 - 60	228 – 14.8%	378 – 24.5%	96 – 6.2%
More than 60 days	103 – 6.7%	400 – 25.9%	51 – 3.3%
Not Recorded	-	-	42 – 2.7%

* = the number seen either on the day of referral or diagnosed and/or treated at first consultation

Chart 50

Times to First Consultation and Diagnosis in Days by Kidney (1489 tumours) - 2000 Dataset Excluding those diagnosed before Referral

Days to Diagnosis	Time to first Consultation	Time from first consultation to Diagnosis
0 *	337 – 22.6%	143 – 9.6%
1 – 14	546 – 36.7%	318 – 21.4%
15 – 28	290 – 19.5%	294 – 19.7%
29 - 60	218 – 14.6%	403 – 27.1%
More than 60 days	98 – 6.6%	331 – 22.2%

* = the number seen on the day
of referral or diagnosed at first consultation

Chart 51

Times to First Consultation, Diagnosis and Definitive Treatment in Days by Testis (785 tumours) - 2001 dataset Excluding those diagnosed before Referral

Days to Diagnosis	Time to first Consultation	Time from first consultation to Diagnosis	Time from Diagnosis to Definitive Treatment
0 *	128 – 16.3%	90 – 11.5%	445 – 56.7%
1 – 14	478 – 61.0%	473 – 60.3%	285 – 36.3%
15 – 28	95 – 12.1%	116 – 14.8%	21 – 2.7%
29 - 60	55 – 7.0%	62 – 7.9%	20 – 2.5%
More than 60 days	29 – 3.7%	44 – 5.6%	8 – 1.0%
Not Recorded	-	-	6 – 0.8%

* = the number seen either on the day of referral or diagnosed and/or treated at first consultation

Chart 52

Times to First Consultation and Diagnosis in Days by Testis (717 tumours) - 2000 Dataset Excluding those diagnosed before Referral

Days to Diagnosis	Time to first Consultation	Time from first consultation to Diagnosis
0 *	124 – 17.3%	65 – 9.1%
1 – 14	408 – 56.9%	423 – 59.0%
15 – 28	93 – 13.0%	122 – 17.0%
29 - 60	58 – 8.1%	63 – 8.8%
More than 60 days	34 – 4.7%	44 – 6.1%

* = the number of seen on the day
of referral or diagnosed at first consultation

C. Histology

Histological confirmation was available in 91% of all tumours. This figure may reflect the fact that many participants use their histology departments to prompt registration of new patients. Every effort should be made to record data on patients seen in clinics and on the wards, where there is no histological diagnosis.

Following comments from colleagues in Histopathology, we have removed simple histological differentiation categories for testis and kidney – see Chart 57.

Chart 53

Histological Confirmation of Diagnosis by Organ

Organ	Confirmation Obtained		Confirmation Not Obtained		Not Recorded	
	N	%	N	%	N	%
Prostate (15099)	14092	93.3	751	5.0	256	1.7
Bladder (7730)	7175	92.8	147	1.9	408	5.3
Kidney (2071)	1613	77.9	315	15.2	143	6.9
Testis (963)	883	91.7	22	2.3	58	6.0
Pelvis/Ureter (358)	303	84.6	29	8.1	26	7.3
Penis (217)	206	94.9	2	0.9	9	4.1
Urethra (37)	34	91.9	2	5.4	1	2.7
Prostatic Urethra (19)	19	100	-	-	-	-
Other or Not Recorded (252)	97	38.5	11	4.4	144	57.1
Totals (26746)	24422	91.3	1279	4.8	1045	3.9

Chart 54

Known Histology by Organ

	Prostate	Bladder	Kidney	Testis	Pelvis/ Ureter	Penis	Urethra	Prostatic Urethra
Adenocarcinoma	13912 97.9%	121 1.6%	1512* 84.5%	3 0.3%	10 3.0%	3 1.4%	18 52.9%	4 21.1%
TCC	51 0.4%	7168 94.7%	147 8.2%	1 0.1%	317 93.8%	2 1.0%	11 32.4%	13 68.4%
SCC	58 0.4%	105 1.4%	4 0.2%	6 0.6%	4 1.2%	196 93.3%	5 14.7%	1 5.3%
Mixed TCC / SCC	7 0.05%	48 0.6%	4 0.2%	8 0.9%	1 0.3%	1 0.5%	-	1 5.3%
Seminoma	-	-	1 0.1%	515 55.7%	-	-	-	-
Teratoma	-	-	-	233 25.2%	-	-	-	-
Mixed Seminoma / Teratoma	-	-	-	82 8.9%	-	-	-	-
High Grade PIN	109 0.8%	-	-	-	-	-	-	-
Other	75 0.5%	122 1.6%	122 6.8%	76 8.2%	6 1.8%	8 3.8%	-	-

*N.B. Includes 1323 renal cell carcinomas

Chart 55

“Other” Histologies reported included:

	Prostate	Bladder	Kidney	Testis	Penis
Carcinoma in situ	2	50	-	-	1
Oncocytoma	-	-	33	-	-
Sarcoma/Liposarcoma /Leiomyosarcoma	3	3	5	5	2
Haematological cancers	2	3	3	28	1
Leydig cell	-	-	-	15	-
Adenocarcinoma & TCC	-	2	4	-	-
Sertoli	-	-	-	3	-
Intratubular germ cell	-	-	-	10	-
Melanoma	-	1	-	-	-
Small cell ca/papillary renal cell / spindle cell	6	2	50	-	-

Chart 56

Basis of Diagnosis when Histological Confirmation Not Obtained (1279 tumours - 4.8% of total)

Organ	Radiology	Cytology	Tumour Marker	Clinical	Other
Prostate (751 tumours)	179	6	546	512	31
Bladder (147 tumours)	33	13	2	63	45
Kidney (315 tumours)	280	6	1	51	6
Pelvis/Ureter (29 tumours)	21	5	2	7	2
Testis (22 tumours)	18	-	10	5	1
Penis (2 tumours)	-	-	-	1	1
Urethra (2 tumours)	-	1	-	-	1

N.B. More than one method might be used for each tumour

Chart 57

Known Differentiation by Organ Percentage & Total of Known Differentiation

Organ (Number Known)	Well		Moderate		Poor		% of Total Tumours Reported
	N	%	N	%	N	%	
Prostate (12582)	1746	13.9	7573	60.2	3236	25.9	83.3
Bladder (6975)	1930	27.7	2639	37.8	2406	34.5	90.2
Pelvis/Ureter (302)	46	15.2	151	50.0	105	34.8	84.4
Penis (162)	62	38.3	57	35.2	43	26.5	74.7
Urethra (30)	4	13.3	13	43.3	13	43.3	81.1
Prostatic Urethra (17)	5	29.4	3	17.6	9	52.9	89.5

N.B. Testis and Kidney not included - RCPATH minimum data set does not ask for this data which would be irrelevant to the vast majority of testicular tumours, which are mostly germ cell tumours. Kidney tumours are generally given a nuclear grade rather than a differentiation score.

D. Staging

Participants were asked to return both clinical and, where appropriate, pathological* TNM categories using the 1997 version of the TNM classification for Urological tumours which were included in the data dictionary sent to all participants.

In order to make interpretation of the resultant information easier each patient was staged, wherever possible, using the classifications as shown in the following charts. If the pathological TNM categories were given and appropriate then these were used for the staging, failing this the clinical TNM categories were used.

*The pathological assessment of the primary tumour (pT) entails a “resection of the primary tumour or biopsy adequate to evaluate the highest pT category”

Less than 50% of the returns had either the full pathological TNM or clinical TNM categories and an estimate had to be made from what information was provided. (Many forms did not include any N and M categories or these were recorded as “X” – Cannot be assessed.)

The data on the following charts should therefore be regarded with caution.

The number of prostate cancers with metastases at presentation has shown a small decline since 1998.

Chart 58

Staging of Kidney Tumours A total of 2071 Kidney Tumours were reported Staging could be estimated in 1820 (87.4%)

Known Staging	Total Known N	%
Stage I (T1 N0 M0)	644	35.4
Stage II (T2 N0 M0)	411	22.6
Stage III (T1, T2, T3 N0,N1 M0)	435	23.9
Stage IV (T4 N0,N1 M0 Any T N2 M0 Any T any N M1)	330 including 237 with metastases	18.1 13.0

N.B. A pathological staging for Kidney tumours was only included for those where radical or organ conserving surgery was performed (n =1269)

Chart 59

Staging of Pelvis / Ureteric Tumours

A total of 358 Tumours were reported
Staging could be estimated in 311 (86.9%)

Known Staging	Total Known	
	N	%
Stage 0a (Ta N0 M0)	66	21.2
Stage 0is (Tis N0 M0)	4	1.3
Stage I (T1 N0 M0)	77	24.8
Stage II (T2 N0 M0)	60	19.3
Stage III (T3 N0 M0)	58	18.6
Stage IV (T4 N0 M0)	46	14.8
Any T N1, N2, N3 M0 Any T any N M1)	including 20 with metastases	6.4

N.B. A pathological staging for Pelvis / Ureteric tumours was only included for those where radical or organ conserving surgery was performed (n=220)

Chart 60

Staging of Bladder Tumours

A total of 7730 Bladder Tumours were reported
Staging could be estimated in 6935 (89.7%)

Known Staging	Total Known	
	N	%
Stage 0a (Ta N0 M0)	3028	43.7
Stage 0is (Tis N0 M0)	158	2.3
Stage I (T1 N0 M0)	1984	28.6
Stage II (T2a, 2b N0 M0)	899	13.0
Stage III (T3a, 3b, 4a N0 M0)	567	8.2
Stage IV (T4b N0 M0)	299	4.3
Any T N1, N2, N3 M0 Any T any N M1)	including 125 with metastases	1.8

N.B. A pathological staging for Stage II, III or IV Bladder tumours was only included for tumours where radical surgery was performed (n=307)

Chart 61

Staging of Prostate Tumours

A total of 15099 Prostate Tumours were reported
Staging could be estimated in 12100 (80.1%)

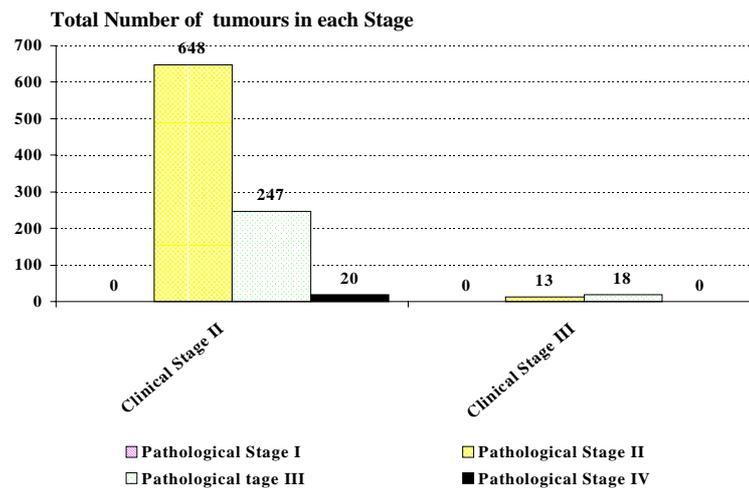
Known Staging	Total Known	
	N	%
Stage I (T1a N0 M0 Well Differentiated)	146	1.2
Stage II (T1a N0 M0 Mod or Poor differentiation T1b, 1c, 1, 2, N0 M0 Any differentiation)	t1 - 580	4.8
	t1a - 277	2.3
	t1b - 354	2.9
	t1c - 2106	17.4
	t2 - 3548	29.3
Stage III (T3 N0 M0 Any differentiation)	2959	24.5
Stage IV (T4 N0 M0 Any differentiation Any T N1 M0 Any differentiation Any T Any N M1 Any differentiation)	2130	17.6
	including 1441 with metastases	11.9

N.B. A pathological staging for Prostate tumours was only included for those where radical surgery was performed (n =1076)

Chart 62

Staging of Prostate Tumours

Comparison of clinical & pathological staging

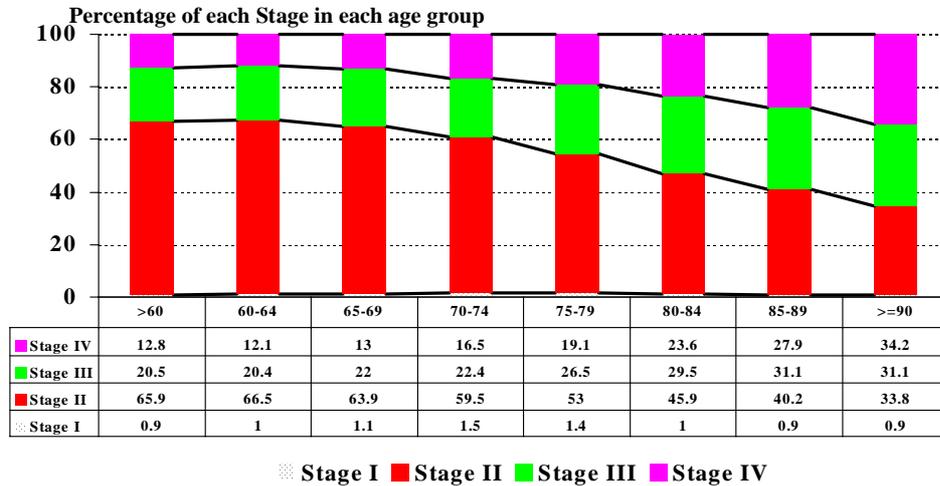


N.B. A pathological staging for Prostate tumours was only included for those where radical surgery was performed (n =1076).
Staging could be compared in 87.8% of these (945/1076).

Chart 63

Staging of Prostate Tumours by Age Group

Total in Stage I where age was known = 143
 Total in Stage II where age was known = 6781
 Total in Stage III where age was known = 2914
 Total in Stage IV where age was known = 2100



* Age could be calculated when both date of birth and diagnosis date were recorded

Chart 64

Prostate Cancers reported 1998 - 2001

	1998 (6 months only)	1999	2000	2001
Total number reported	2909	9781	12892	15099
Median age at diagnosis	74	73	73	73
Number having T1c	250 – 8.6%	1366 – 14.0%	1636 – 12.7%	2107 – 17.4%
Number having Metastases (M +ve)	43 – 14.9%	1214 – 12.4%	1267/10329* 12.6%	1441 / 12100* 11.9%

* Number where staging could be estimated

Chart 65

Staging of Prostate Tumours by PSA

Numbers falling in each category*

PSA was recorded in 91% tumours (13743/15099)

Gleason scores were recorded in 80.6% tumours (12735/15099)

Known Clinical Staging	Total Patients	PSA 0-5		PSA 6-10		PSA 11-20		PSA 21-50		PSA > 50	
		N	%	N	%	N	%	N	%	N	%
Stage I (T1a N0 M0 Well Differentiated)	108	55	50.9%	35	32.4%	12	11.1%	6	5.6%	0	0%
Stage II (T1a N0 M0 Mod or Poor differentiation T1b, 1c, 1, 2, N0 M0 Any differentiation)	6350	706	11.1%	2005	31.6%	1885	29.7%	1163	18.3%	591	9.3%
Stage III (T3 N0 M0 Any differentiation)	2377	96	4.0%	224	9.4%	455	19.1%	772	32.5%	830	34.9%
Stage IV (T4 N0 M0 Any differentiation Any T N1 M0 Any differentiation Any T Any N M1 Any differentiation)	1640	39	2.4%	60	3.7%	139	8.5%	284	17.3%	1118	68.2%
Totals	10475 *	896	8.6%	2324	22.2%	2491	23.8%	2225	21.2%	2539	24.2%

N.B. Excluding pathologies other than Adenocarcinoma.

* Tumours where staging could be estimated, PSA was recorded and Histology = adenocarcinoma

Chart 66

Staging of Testicular Tumours

A total of 963 Testicular Tumours were reported

Staging could be estimated in 803 (83.4%)

Known Staging	Seminoma		Teratoma		Combined Seminoma/ Teratoma		Other Histology	
	N	%	N	%	N	%	N	%
Total numbers where staging & histology known:	441		213		72		77	
Stage 0 (Tis N0 M0 S0, SX)	9	2.0	0	0	0	0	2	2.6
Stage I (T1,2,3,4 N0 M0 SX)	136	30.8	56	26.3	21	29.2	31	40.3
Stage IA (T1, N0 M0 S0)	159	36.1	33	15.5	4	19.4	16	20.8
Stage IB (T2, 3, 4, N0 M0 S0)	42	9.5	14	6.6	6	8.3	4	5.2
Stage IS (Any T N0 M0 S1, 2, 3)	81	18.4	85	39.9	28	38.9	16	20.8
Stage II (Any T, N1, 2, 3, M0, SX, 0, 1)	11	2.5	16	7.5	1	1.4	5	6.5
Stage III (Any T, Any N, M1, 1a, SX, 0, 1, 2, 3 Any T, N1, 2, 3, M0, S2, 3 Any T, Any N, M1b, Any S)	3	0.7	9	4.2	2	2.8	3	3.9

Chart 67

Testicular Tumours by Serum Tumour Marker A total of 963 Testicular Tumours were reported Tumour markers and Histology were reported in 560 (58.1%)

Serum Tumour Marker Total numbers where tumour marker & histology known:	Seminoma		Teratoma		Combined Seminoma/ Teratoma		Other Histology	
	N	%	N	%	N	%	N	%
S0 (Serum marker study levels within normal limits)	227	73.0	55	37.2	3	3.4	30	62.5
S1 (LDH <1.5*N and HCG (ml/U/ml) <5,000 and AFP (ng/ml) <1,000)	68	21.9	74	50.0	21	39.6	13	27.1
S2 (LDH 1.5 – 10 *N or HCG (ml/U/ml) 5,000 - 50,000 or AFP (ng/ml) 1,000 – 10,000)	15	4.8	14	9.5	8	15.1	4	8.3
S3 (LDH >10*N or HCG (ml/U/ml) > 50,000 or AFP (ng/ml) >10,000)	1	0.3	5	3.4	1	1.9	1	2.1

N.B. N indicates the upper limit or normal for the LDH assay

Chart 68

Staging of Penile Tumours A total of 217 Penile Tumours were reported Staging could be estimated in 172 (78.8%)

Known Staging	Total Known	
	N	%
Stage 0 (Tis, a, N0 M0)	31	18.0
Stage I (T1 N0 M0)	71	41.3
Stage II (T2 N0, N1 M0)	41	23.8
Stage III (T1, 2, N2 M0 T3, N0, N1, N2, M0)	22	12.8
Stage IV (T4 Any N M0 Any T N3 M0 Any T Any N M1)	7 including 0 with metastases	4.1

E. Initial Treatment Intention and Type

Of all the tumour sites, prostate cancer has the smallest proportion treated with curative intent. The percentage of prostate cancers treated with curative intent has increased from 28.4% in 1999 to 35.6% in 2001.

Radical ablative surgery for prostate cancer continues in patients with PSA levels over 50.

Immunotherapy has been sub-divided into intra-vesical and systemic immunotherapy in the 2001 dataset.

Laparoscopic procedures have been recorded as the initial treatment in 89 patients.

Chart 69

**Initial Treatment Intention by Organ
Percentage & Total of Known Intent**

Organ (Number Known)	Curative		Palliative		Surveillance		% of Total Tumours Reported
	N	%	N	%	N	%	
Prostate (12613)	4492	35.6	6127	48.6	1994	15.8	83.5
Bladder (6683)	5565	83.3	960	14.4	158	2.4	86.5
Kidney (1829)	1384	75.7	318	17.4	127	6.9	88.3
Testis (770)	755	98.1	13	1.7	2	0.3	80.0
Pelvis/Ureter (322)	258	80.1	51	15.8	13	4.0	89.9
Penis (193)	163	84.5	24	12.4	6	3.1	88.9
Urethra (26)	12	46.2	11	2.3	3	11.5	70.3
Prostatic Urethra (14)	9	64.3	5	35.7	0	-	73.7

Chart 70

Treatment Intention of Prostatic Tumours by PSA and Age
Percentage by PSA in each Age Group

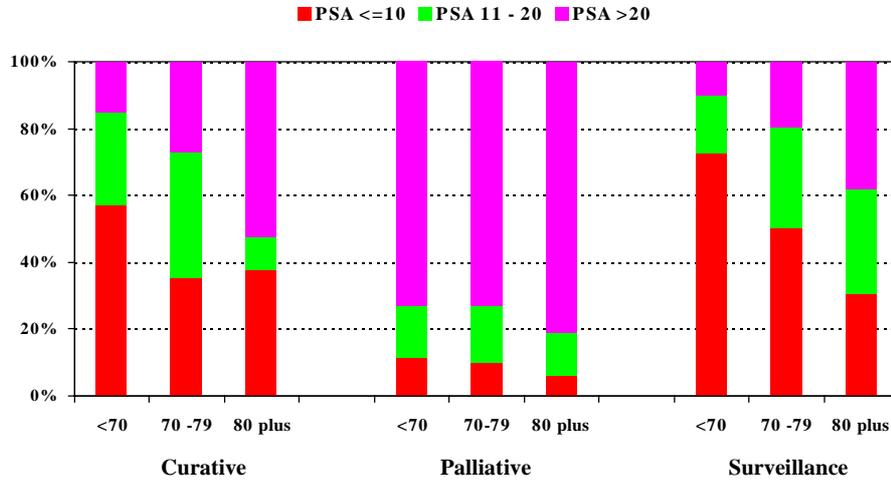


Chart 71

Known Treatment Management - Kidney Tumours
Total Numbers Reported with those as only Treatment in ()
(N.B. Excluding TCC's)

Treatment	Curative	Palliative	Surveillance
Surgery:			
Endoscopic Resection	5 (2)	1	1 (1)
Radical Ablative Surgery	1151 (1096)	116 (57)	4 (4)
Organ Conserving Surgery *	52 (50)	-	2 (2)
Other Surgery	18 (4)	14 (6)	1 (1)
Radiation Therapy	9 (3)	23 (6)	-
Systemic Chemotherapy	12	15 (5)	-
Hormone Therapy	1	10 (5)	-
Systemic Immunotherapy	15	52 (15)	-
Other Treatment	19	20	2

* Performed by 36 centres, median per centre = 1, Range 1 - 8
131 centres performed no organ conserving surgery

Chart 72

Known Treatment Management - Pelvis/Ureteric Tumours Total Numbers Reported with those as only Treatment in ()

Treatment	Curative	Palliative	Surveillance
Surgery:			1
Endoscopic Resection	17 (9)	4 (1)	
Endoscopic Resection + 1 shot intravesical chemotherapy	4	1 (1)	-
Radical Ablative Surgery	221 (196)	11 (6)	1 (1)
Organ Conserving Surgery	14 (13)	2 (1)	-
Other Surgery	9 (7)	5	-
Radiation Therapy	11	12 (7)	-
Systemic Chemotherapy	8	8 (2)	-
Hormone Therapy	1 (1)	8 (6)	-
Intra-vesical Chemotherapy (course)	1	-	-
Intra-vesical Immunotherapy (course)	2	1	-
Other Treatment	3	5 (3)	1 (1)

Chart 73

Known Management by T category and Grade - Bladder Tumours Total Numbers Reported with those as only Treatment in ()

Treatment	Tis	Ta G1	Ta G2	Ta G3	T1 G1	T1 G2	T1 G3
Surgery:							
Endoscopic Resection	27 (8)	567 (520)	528 (469)	81 (56)	222 (187)	385 (308)	298 (168)
Endoscopic Resection + 1 shot intravesical chemotherapy	20 (12)	502 (475)	520 (487)	74 (51)	221 (207)	388 (348)	195 (125)
Radical Ablative Surgery	3 (3)	1 (1)	3 (2)	5 (3)	5 (4)	5 (4)	19 (11)
Organ Conserving Surgery	-	-	-	1 (1)	-	1	-
Other Surgery	1	35 (14)	9 (2)	3 (1)	10 (1)	17 (5)	16 (1)
Radiation Therapy	1	2 (2)	4 (1)	4	2	13 (3)	63 (16)
Systemic Chemotherapy	-	1 (1)	-	-	2	4 (1)	3
Intra-vesical Chemotherapy (course)	12 (4)	17	46 (4)	17	25 (1)	53 (1)	63 (4)
Hormone Therapy	-	4	3	-	-	4	2 (1)
Systemic Immunotherapy	8 (3)	1	4	3	-	-	15 (3)
Intra-vesical Immunotherapy (course)	21 (7)	6	11	16	1	20	64 (2)
Other Treatment	2	24 (2)	20 (3)	1	8 (1)	8	6 (1)
Total Tumours Reported	66	1132	1091	169	455	807	552

Chart 74

Known Management by T category and Grade - Bladder Tumours where Age is less than 70
Total Numbers Reported with those as only Treatment in ()

Treatment	T2 G1	T2 G2	T2 G3	T3 G1	T3 G2	T3 G3	T4 G1	T4 G2	T4 G3
Surgery: Endoscopic Resection	7 (3)	37 (19)	91 (28)	-	11 (3)	64 (18)	1	10 (5)	40 (10)
Endoscopic Resection + 1 shot intravesical chemotherapy	4 (3)	12 (9)	20 (7)	1	1	3	1 (1)	-	6 (2)
Radical Ablative Surgery	2 (1)	22 (14)	88 (57)	3 (2)	10 (6)	68 (46)	-	5 (3)	30 (15)
Organ Conserving Surgery	-	-	2 (1)	-	1 (1)	-	-	-	-
Other Surgery	1	3 (1)	10 (1)	-	3	5 (2)	-	3 (1)	3 (2)
Radiation Therapy	1	13 (3)	57 (12)	1	6 (3)	32 (19)	1	5 (1)	23 (3)
Systemic Chemotherapy	-	-	11 (2)	1	2	12 (4)	-	5	29 (9)
Intra-vesical Chemotherapy (course)	1	3	-	-	2	-	-	-	-
Hormone Therapy	1	1	1	-	-	-	-	-	-
Systemic Immunotherapy	-	4	4	-	-	-	-	-	-
Intra-vesical Immunotherapy (course)	-	-	-	-	-	-	-	-	-
Other Treatment	-	2	3	-	1	3 (1)	-	1	6 (1)
Total Tumours Reported	13	74	207	4	24	135	3	17	88

Chart 75

Known Management by T category and Grade - Bladder Tumours where Age >= 70
Total Numbers Reported with those as only Treatment in ()

Treatment	T2 G1	T2 G2	T2 G3	T3 G1	T3 G2	T3 G3	T4 G1	T4 G2	T4 G3
Surgery: Endoscopic Resection	8 (6)	78 (33)	245 (92)	1	40 (18)	195 (65)	5 (4)	12 (5)	92 (35)
Endoscopic Resection + 1 shot intravesical chemotherapy	8 (8)	28 (21)	39 (16)	-	3 (1)	17 (3)	1 (1)	-	3 (1)
Radical Ablative Surgery	-	13 (6)	42 (27)	1 (1)	13 (8)	42 (24)	-	1	19 (13)
Organ Conserving Surgery	-	-	2 (2)	-	-	1 (1)	-	-	-
Other Surgery	-	6	13 (2)	-	1 (1)	7 (2)	-	3 (2)	8 (4)
Radiation Therapy	2 (1)	50 (12)	185 (43)	1	19 (3)	149 (39)	-	9 (3)	53 (7)
Systemic Chemotherapy	-	1	7	-	1	2	-	1 (1)	10 (1)
Intra-vesical Chemotherapy (course)	1	4 (2)	3	-	-	2	1	-	-
Hormone Therapy	-	-	2	-	2	3	-	1 (1)	2 (1)
Systemic Immunotherapy	-	-	-	-	-	1	-	-	-
Intra-vesical Immunotherapy (course)	-	-	5	-	-	3(1)	-	-	-
Other Treatment	-	4	14 (1)	1 (1)	3 (1)	4	-	1	6 (2)
Total Tumours Reported	19	133	395	3	59	295	6	23	132

Chart 76

Known Management Intention - Prostate Tumours Total Numbers Reported with those as only Treatment in ()

Treatment	Curative	Palliative/ Surveillance
Surgery:		
Endoscopic Resection	301 (114)	1027 (439)
Radical Ablative Surgery	1456 (1318)	50 (20)
Organ Conserving Surgery	2 (1)	10 (4)
Other Surgery	141 (46)	494 (168)
Radiation Therapy	2241 (966)	459 (53)
Systemic Chemotherapy	6	12 (4)
Intravesical Chemotherapy (course)	16 (1)	1
Hormone Therapy	1466 (243)	5661 (4527)
Intravesical Immunotherapy (course)	3 (1)	-
Other Treatment	164 (63)	232 (135)

Chart 77

Known Management by PSA - Prostate Tumours where age is less than 70 Total Numbers Reported with those as only Treatment in ()

Treatment	PSA 0-5	PSA 6-10	PSA 11-15	PSA 16-20	PSA 21-50	PSA >50
Surgery:						
Endoscopic Resection	77 (46)	22 (11)	26 (13)	21 (13)	40 (7)	65 (6)
Radical Ablative Surgery	245 (223)	643 (603)	247 (224)	55 (49)	47 (36)	11 (3)
Other Surgery	24 (10)	66 (26)	43 (18)	20 (6)	47 (10)	45 (8)
Radiation Therapy	143 (75)	451 (230)	260 (117)	195 (68)	331 (97)	126 (20)
Systemic Chemotherapy	2 (1)	1	1	-	1	5 (1)
Intravesical Chemotherapy (course)	-	1	4	1	40	1
Hormone Therapy	81 (17)	281 (77)	207 (67)	205 (72)	448 (187)	741 (541)
Intravesical Immunotherapy (course)	-	1 (1)	-	-	-	-
Other Treatment	33 (15)	78 (41)	25 (12)	7 (2)	6 (2)	18 (3)

Chart 78

Known Management by PSA - Prostate Tumours
where age is >= 70
Total Numbers Reported with those as only Treatment in ()

Treatment	PSA 0-5	PSA 6-10	PSA 11-15	PSA 16-20	PSA 21-50	PSA >50
Surgery: Endoscopic Resection	136 (90)	134 (81)	124 (68)	63 (25)	220 (69)	251 (27)
Radical Ablative Surgery	18 (14)	75 (63)	43 (34)	6 (15)	22 (15)	25 (10)
Organ Conserving Surgery	-	-	1	-	5 (3)	7 (2)
Other Surgery	17 (5)	70 (33)	52 (17)	40 (18)	114 (33)	125 (21)
Radiation Therapy	63 (25)	349 (145)	269 (108)	190 (64)	290 (77)	106 (17)
Systemic Chemotherapy	1	-	-	-	2 (1)	2 (1)
Intravesical Chemotherapy	-	5	2(1)	-	3	1 (1)
Hormone Therapy	130 (65)	432 (218)	505 (314)	439 (283)	1481 (1096)	2379 (1991)
Other Treatment	24 (9)	73 (43)	47 (28)	33 (16)	59 (29)	30 (10)

Chart 79

Known Management - Testicular Tumours
Total Numbers Reported with those as only Treatment in ()

Treatment	Curative	Palliative
Radical Ablative Surgery	706 (291)	11 (1)
Organ Conserving Surgery	1 (1)	-
Other Surgery	13 (3)	-
Radiation Therapy	208 (7)	3
Systemic Chemotherapy	198 (10)	7
Other Treatment	47 (4)	-

Chart 80

Known Management - Penile Tumours Total Numbers Reported with those as only Treatment in ()

Treatment	Curative	Palliative
Surgery:		
Radical Ablative Surgery	59 (48)	7 (7)
Organ Conserving Surgery	62 (48)	5 (3)
Other Surgery	29 (16)	4 (1)
Radiation Therapy	23 (11)	4 (1)
Other Treatment	8 (4)	2 (1)

Chart 81

Laparoscopic Procedures Performed Number of tumours recorded as being operated on laparoscopically = 89*

Organ	Procedure and Number Reported	Organ	Procedure and Number Reported
Prostate 45 total *	10 Radical prostatectomies 3 Node dissections 32 Procedure not recorded	Kidney 31 total	18 Nephrectomy 1 Embolisation 12 Procedure not recorded
Bladder 7 total *	2 Ileal conduit 1 Ileal neobladder 2 Laparotomies (? Conversions) 2 Procedure not recorded	Pelvis/Ureter 6 total	2 Nephroureterectomy 4 Procedure not recorded

* 27 prostate procedures, 6 bladder procedures and 1 testicular procedure appear to have been recorded as laparoscopic in error as clearly indicated by the text entered and have been excluded.

Chart 82

Laparoscopic Surgery by Organ and Stage

Number of tumours recorded as being operated on laparoscopically = 89*

Staging	Prostate N	Bladder N	Kidney N	Pelvis/Ureter N
Stage 0a	N/A	1	N/A	2
Stage I	-	-	22	3
Stage IS	N/A	N/A	N/A	N/A
Stage II	39	3	3	-
Stage III	3	2	-	1
Stage IV	2	-	-	-
Not Recorded	1	1	6	-
Totals	45	7	31	6

* 27 prostate procedures, 6 bladder procedures and 1 testicular procedure appear to have been recorded as laparoscopic in error as clearly indicated by the text entered and have been excluded.

E. Tertiary Referrals

A smaller percentage (4.4%) of the returns in 2001 were tertiary referrals than in 2000 – 6.0%.

Chart 83

Tertiary Referrals - Overall Data by Organ
4.4% (1165/26746) of all tumours were tertiary referrals
(referred by a Urologist (1074) or Oncologist (91))

Organ	Number Recorded	Mean Age at Diagnosis & Range	Males	Females	* % of Total Registrations	** % of Total Registrations in 2000
Prostate	752	68.6; 26 – 100	752	-	5.0	5.6
Bladder	166	68.2; 21 – 94	129	5	2.1	4.6
Kidney	122	65.6; 38 – 85	90	31	6.0	9.1
Testis	57	35.4; 15 – 74	57	-	5.9	13.6
Pelvis/Ureter	33	68.3; 38 – 91	25	8	9.2	9.2
Penis	20	68.9; 43 – 87	20	-	9.2	10.4
Urethra	3	68.3; 62 – 72	2	-	8.1	9.1
Prostatic Urethra	2	70.0; 64 – 76	2	-	10.5	8.8
Other	5	55.8; 32 – 71	2	3	8.1	11.1
Not recorded	5	65.7; 63 – 67	4	-	2.6	2.2

* % of the total registrations for each tumour site e.g. prostate = 752/15099 = 5.0%

** Equivalent figures recorded for diagnoses in 2000

F. Completeness of Data

The trends are favourable. The recording of NHS number remains a problem and has implications for matching our data to that of other cancer registries.

Chart 84

Completeness of Data -1 Percentage and numbers of Total Returns unknown

Data Item	2001 Number Unknown	% of Total Returns 26746	2000 Number Unknown	% of Total Returns 24343	1999 Number Unknown	% of Total Returns 19009
Centre no or Cons no	0	0%	0	0%	9	0.04%
Hospital number	*469	1.8%	**577	2.4%	***257	1.4%
NHS number	9620	36.0%	8580	35.2%	6946	36.5%
Postcode	1525	5.7%	1573	6.5%	1319	6.9%
Sex	78	0.3%	39	0.2%	118	0.6%
Date of Birth	193	0.7%	192	0.8%	217	1.1%
Organ	189	0.7%	136	0.6%	83	0.4%
Date of Diagnosis	462	1.7%	466	1.9%	604	3.2%
Referral Source	1892	7.1%	2058	8.5%	1096	5.8%
Priority of GP Referrals	2356/20023	11.8%	-	-	-	-
Date of Referral	3057	11.4%	2931	12.0%	1820	9.6%
Date of First Consultation	2641	9.9%	3205	13.2%	-	-
Date of Definitive Treatment	11996	44.9%	-	-	-	-
Histological confirmation	1044	3.9%	483	2.0%	321	1.7%
Basis of diagnosis if no Histology	112/1279	8.8%	111/1233	9.0%	71/875	8.1%

includes private patients, * = 326; ** = 349 ; *** = 198

Chart 85

Completeness of Data -2 Percentage and numbers of Total Returns unknown

Data Item	2001 Number Unknown	% of Total Returns 26746	2000 Number Unknown	% of Total Returns 24343	1999 Number Unknown	% of Total Returns 19009
Histology	297/24422	1.2%	261/22627	1.2%	258/17813	1.4%
Differentiation	3176/24422	13.0%	2690/22627	11.9%	2200/17813	12.4%
Clinical T Category	1933	7.2%	3835	15.8%	3357	17.7%
Clinical N Category	4514	16.9%	6244	25.7%	6555	34.5%
Clinical M Category	4502	16.8%	6273	25.8%	6467	34.0%
Pathological T Category	897/7916*	11.3%	7175/22627	31.7%	6223/17813	34.9%
Pathological N Category	1663/7916*	21.0%	9703/22627	43.0%	9061/17813	50.9%
Pathological M Category	1739/7916*	22.0%	9793/22627	43.3%	9055/17813	50.8%
PSA at time of Diagnosis	1356/15099	9.0%	1361/12892	10.6%	1071/9277	11.5%
Gleason Scores	2364/15099	15.7%	2495/12892	19.4%	-	-
S Category	403/963	41.8%	338/980	34.5%	307/838	36.6%
Treatment Intention	4201	15.7%	3067	12.6%	1646	8.7%
Treatment Type	623/20223	3.1%	567/19299	2.9%	331/15714	2.1%

* A pathological staging for Stage II, III or IV bladder tumours and all prostate tumours was only expected where radical surgery was performed. For kidney & pelvis/ureteric tumours it was only expected for those where radical or organ conserving surgery was performed.