UROLOGICAL CANCER
This working paper has been prepared by Professor J G Williams, Consultant Physician and Director of the School of Postgraduate Studies, Morriston Hospital. The views of clinicians in Wales with an interest in the management of urological cancers were obtained via Mr M Lucas and established groups in North, South West and South East Wales. The recommendations in this report have been agreed by CSEG.

Further information, regarding recommendation priorities and mechanisms for monitoring their implementation, is available from the Project Office.

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1. **INTRODUCTION**

1.1 This report covers the care of patients with cancer of the prostate, bladder, kidney and testis.

2. **EPIDEMIOLOGY**

2.1 Welsh data for urological cancers, as a group, are included in Volume 1 and are summarised as follows:

- Average yearly (1984-88) registrations: 1,747
- Registrations in 1990: 2,072
- Projected new registrations in the year 2000: 2,839
- 5 year Survival: Testicular cancer 89%; Bladder cancer 63%; Prostate cancer 44.8%; Kidney Cancer 37%
- Deaths from 1985-94: 8,414
- Years of Life Lost for death under 70 years (1985-94): 21,664

*Survival data are from the West Midlands Cancer Registry. For other data sources and ICD9 codes see CSEG Report, Volume 1*

2.2 Further detail by cancer site is summarised in Table 1.

### TABLE 1 : Average Cancer Registration Per Year and By Site

<table>
<thead>
<tr>
<th></th>
<th>Prostate</th>
<th>Bladder</th>
<th>Kidney</th>
<th>Testis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incidence (per annum)</td>
<td>701</td>
<td>707</td>
<td>100</td>
<td>66</td>
</tr>
<tr>
<td>Prevalence</td>
<td>2322</td>
<td>2934</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mortality (per annum)</td>
<td>394</td>
<td>257</td>
<td>95</td>
<td>3</td>
</tr>
</tbody>
</table>

3. **PROFESSIONAL GUIDELINES**

3.1 Guidelines for the investigation and treatment of urological cancer have been produced by a working party of the British Association of Urological Surgeons.

3.2 A national working party has been convened to draw up detailed guidelines on the management of prostate cancer with representatives from the British Prostate Group, British Association of Urological Surgeons, Medical Research Council and the Royal College of Radiologists. The working party has not yet reported.

4. **PROVISION OF SERVICES FOR UROLOGICAL CANCER**

**South East Wales**

**Urologists**
- Nevill Hall & District NHS Trust: 1
- Glan Hafren NHS Trust: 2
- University Hospital of Wales Healthcare NHS Trust: 4
- East Glamorgan NHS Trust: 2

**Outreach Clinics**
- Llwynypia, Porth, Caerphilly

**General Surgeons with Special Interest in Urology**
- Nevill Hall & District NHS Trust: 1

**Oncology Velindre Hospital**
- 8.5 clinical oncologists with 2 sub specialising in urological cancers

**Provision of Service**

4.01 The following assessment of the services provided has been taken from documentation produced by the South East Wales Urological Oncology Expert Advisory Group and the South Glamorgan Urological Oncology Advisory Group and made available to the CSEG.
4.02 The Urological Cancer services in South East Wales have evolved through co-operation of a team of surgeons, oncologists, radiotherapists, radiologists, pathologists, specialised nurses, palliative care pain specialists and counsellors. Many of the clinicians involved in the care of prostate cancer patients in South East Wales are members of the British Prostate Group. They are supported by a highly trained, motivated and dedicated nursing team with a special training in cancer care. The nursing service is being increasingly supported by pain control teams and there is widespread use of patient control analgesia pumps which has revolutionised the care of the post operative patient.

4.03 The non-surgical and surgical aspects of anticancer treatment are strongly supported by Palliative Care Teams headed by 3 palliative care consultants. Palliative Care services in Gwent are also underpinned by St David’s Foundation and St Ann’s Hospice and by Sandville Court in Bridgend.

4.04 The Non-surgical Oncology is based at Velindre Hospital. Dr Mason is a member of two MRC Urological Cancer Working Parties (Testicular Tumours and Prostate Cancer), and is the national co-ordinator of two MRC Clinical Trials (PR04 and TE19). He is the lead oncologist for urological cancer and has drawn up and implemented treatment guidelines. Velindre Hospital has facilities for the comprehensive non-surgical care of patients with Urological Cancers. Patients undergoing radiotherapy have access to modern computerised tomography (CT) treatment planning, a new radiotherapy simulator which was installed in 1993, and treatment with modern Linear Accelerators. Patients with urological cancers are regularly entered into ongoing local or national clinical trials such as those sponsored by the Medical Research Council. Additionally, there is regular access to palliative care facilities and there is a full range of other support services including counselling, physiotherapy and occupational therapy.

4.05 The emphasis of cancer treatment in South East Wales is on multidisciplinary treatment. Haematuria clinics are provided in Bridgend, Glen Hafren, University Hospital of Wales and Llandough NHS Trusts. Regular combined uro-oncology clinics are also provided at the University Hospital of Wales, Bridgend, Royal Gwent Hospital, and Porth Hospital. Additionally, cases are discussed at our regular monthly clinico-pathological conferences with a dedicated Uro-pathologist, and there are several collaborative research projects in progress.

**South West Wales**

**Urologists**

Morriston Hospital: 3

Neath General Hospital: 1 locum

Prince Philip Hospital: 1

**General Surgeons with a Special Interest in Urological Cancer**

Princess of Wales Hospital: 1

Urological cancer services are provided in West Wales General Hospital, Withybush General Hospital and Bronglais Hospital

**Oncology Singleton Hospital**

4 clinical oncologists with 1 specialising in renal and testicular cancer and all treating prostate and bladder cancer

Outreach oncology clinics are held in Bronglais, Prince Philip, West Wales General and Withybush NHS Trusts. Regular fortnightly multidisciplinary clinico-pathology meetings are held at Morriston to discuss the management of difficult Urological Cancers.

**Provision of Service**

4.06 The following assessment of the services provided has been taken from documentation produced by the South West Wales Urological Cancer Steering Group and made available to the CSEG Task Group. The urology unit based in Morriston Hospital NHS Trust will see, per annum, approximately 10 new testicular tumours, 100 new prostate cancers (80 per annum appear to be registered on average), 150 new bladder tumours (75 appear to be registered) and 25 renal cancers.

4.07 In terms of workload this represents 400 episodes of bladder cancer care, 150 transurethral resections of bladder cancer, 103 episodes of prostate cancer care including: 16 radical prostatectomies, 20 cystectomies and 25 nephrectomies. This workload is well within the levels recommended to function at cancer centre level.
Patient Flows

4.08 There is a substantial flow of patients from Dyfed and Pembrokeshire, and, to some extent, Powys into West Glamorgan. Until recently there were no specific accredited urologists working in those areas. This represents about 15% of the overall work, but 56% of major surgery is for patients coming from outside West Glamorgan, and the majority of this is cancer surgery.

Radiotherapy and Oncology

4.09 About 270 patients with urological cancer are seen each year by the Oncology Clinic at Swansea NHS Trust. Referrals are often made directly from non urologists outside West Glamorgan to the oncological service.

Bladder Cancer

4.10 One-stop investigation haematuria services are run by the urologists at Morriston and Llanelli/Dinefwr Trusts. All 4 practising urologists in South West Wales provide endoscopic control of superficial disease and manage cases with more difficult superficial disease. Many patients are entered into MRC and Welsh Urological Society Trials.

4.11 A number of general surgeons in West Wales also currently carry out endoscopic treatment of bladder cancer.

4.12 Invasive bladder cancer is currently treated by either surgery or radiotherapy in this area. All urologists in South West Wales perform cystectomies of which between 16 and 20 per annum are done in West Glamorgan. These are mostly primary cystectomies but salvage cystectomies are still occasionally performed. Total bladder reconstruction and continent urinary diversion is offered as a service.

Prostate Cancer

4.13 All urologists in South West Wales manage patients with prostate cancer both early and late. Two local urologists currently perform radical prostatectomy. Over 20 operations have been done in the last two years but the frequency is increasing. In West Wales, general surgeons currently manage prostate cancer but do not perform radical prostatectomies.

4.14 Diagnosis and staging depends on PSA, rectal examination and transrectal ultrasound and biopsy and MRI, all of which are available at Morriston Hospital.

Renal Cancer

4.15 All urologists and some general surgeons, in South West Wales, do nephrectomies. Cases requiring IVC clearance have usually been referred to the University Hospital of Wales, where cardiothoracic services are available.

Carcinoma of Testis

4.16 Orchiectomies are performed by urologists and occasionally by general surgeons all over South West Wales. Dr Colin Askill is a member of the MRC Working Party on Testicular Cancer and is expert in the chemotherapy and radiotherapy of these diseases. Occasional cases are referred back to urology for retroperitoneal lymph node clearance and the practice has usually been to refer such cases outside the area, for example, to the Royal Marsden Hospital. The numbers of such cases are always likely to be so small that it is unlikely that any one surgeon in South West Wales would gain enough experience to offer the best results with surgical clearance.

4.17 The provision of both impotence and infertility counselling is well developed in West Glamorgan in both the urology department and the infertility service at Singleton Hospital. Sperm freezing facilities are essential.

Mid Wales

4.18 Cancer patients resident in Mid Wales travel to neighbouring English and Welsh hospitals for their major treatment. Care is provided locally by Community Hospitals (see The Baseline, Volume 2).

Hospital Episodes

4.19 PEDW data for 1993/4 showing the flow of patients from Powys with urological cancer were obtained. However, it should be noted that primary validation of these figures in two centres, Royal Gwent and Morriston Hospitals, show them to be unreliable.
Approximately half (52%) of hospital episodes for patients from Powys are carried out in Hereford and District and the Royal Shrewsbury Hospitals NHS Trusts:

Hereford (10 prostate, 64 bladder); and
Shrewsbury (28 prostate, 40 bladder, 7 kidney)

A further 19 admissions were to:

Bronglais (6 prostate, 10 bladder, 3 kidney) where no urologist is located

The remaining referrals were made to hospitals in surrounding districts as follows:

<table>
<thead>
<tr>
<th>Hospital</th>
<th>Procedure Details</th>
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<tbody>
<tr>
<td>Morriston (6 bladder)</td>
<td></td>
</tr>
<tr>
<td>Neath (8 bladder)</td>
<td></td>
</tr>
<tr>
<td>Nevill Hall (12 bladder, 10 prostate, 2 kidney)</td>
<td>UHW (3 bladder, 1 kidney)</td>
</tr>
<tr>
<td>Cardiff Royal Infirmary (1 bladder)</td>
<td>Velindre (2 bladder)</td>
</tr>
<tr>
<td>Wrexham Maelor Hospital (1 prostate)</td>
<td>Queen Elizabeth Hospital, Birmingham (4 testis)</td>
</tr>
<tr>
<td>South Birmingham (1 kidney)</td>
<td></td>
</tr>
</tbody>
</table>

Only three admissions of patients from Powys were to hospitals in Wales with oncology and radiotherapy units (Velindre 2 bladder and Swansea NHS Trust 1 prostate), and the reasons for this need to be explored further. A large number of hospital episodes (60, 21%) are to local community hospitals in Powys.

**North Wales**

**Urologists**
- Bangor: 2
- Glan Clwyd: 2
- Wrexham: 2

**Outreach Clinics**
- Dolgellau
- Mold
- Deeside

**Oncology**

**Wrexham**: Radiotherapists and oncologists from the Christie Hospital, Manchester undertake weekly clinics. Chemotherapy and radiotherapy are then given in Manchester.

**Ysbyty Gwynedd and Ysbyty Glan Clwyd**: Clinics are held by oncologists and radiotherapists from Clatterbridge on the Wirral, where chemotherapy and radiotherapy are given.

**Provision of Service**

4.21 There are currently two urologists based at the Wrexham Maelor Hospital, with outreach clinics in Dolgellau once a month, Mold twice a month and Deeside twice a month. A haematuria clinic is provided at Wrexham.

4.22 The number of new urological cancers seen within the unit is not immediately available but are considered to be in excess of the numbers required for a cancer unit. The pattern of referral is fairly evenly divided between the two of them.

4.23 The pattern of care of urological oncology in North Wales is likely to change in the next few years when the expected development of the North Wales Cancer Centre comes to completion. At the moment patients from Wrexham are seen by radiotherapists and oncologists from the Christie Hospital, Manchester in weekly clinics given in Wrexham. Chemotherapy and radiotherapy are then given in Manchester. Ysbyty Gwynedd and Ysbyty Glan Clwyd have similar arrangements with the Radiotherapy Centre in Clatterbridge on the Wirral. It is anticipated that when the new North Wales Cancer Centre comes on stream the patients from all of North Wales will receive radiotherapy at Ysbyty Glan Clwyd. There will be increased liaison between the cancer centre at Glan Clwyd and the two other hospitals in terms of outpatient and inpatient chemotherapy, etc.
It is anticipated that most urological surgery will still be performed in the district general hospitals. It is yet to be finally decided where the more complex forms of surgery, such as retroperitoneal lymph node dissection, will be performed, but the feeling is that this should be taken on by one or two surgeons based in the cancer unit. There does, however, seem considerable doubt at the moment as to the size and scope of the proposed unit and, for the foreseeable future, it would appear likely that the links with the Christie Hospital will continue.

5. CONCLUSIONS

5.1 Multidisciplinary urological cancer groups throughout Wales are committed to the principles outlined by the CMO's report and to the provision of shared care through a network of cancer services within the framework of national and locally developed professional guidelines. Such guidelines are being actively developed at present. The care of patients with urological cancer falls conveniently and appropriately into three geographical areas.

5.2 Services in South East Wales are well organised, on a multi-disciplinary basis, and the geographical coverage is good so that patient flows are appropriate.

5.3 Services in South West Wales are also well organised, though many hospitals do not have specific urological expertise and patients have to travel greater distances.

5.4 The picture in North Wales is in more of a state of flux. Whilst the urological services are well established in three main centres, oncology services are provided for this area by both Clatterbridge Hospital and by the Christie Hospital in Manchester, but specific oncology services are being planned at Glan Clwyd Hospital.

5.5 The exception to this clear cut geographical distribution is Powys, where many patients go east to Shrewsbury and Hereford. There is also considerable use of community hospitals for these patients.

5.6 The paucity of accurate data from central sources illustrated by this exercise underlines the central importance of each area setting up its own cancer registry with ownership of the clinical and demographic data. Each of the multidisciplinary groups described in this document has placed the quality control of information high amongst its priorities for developing services.

5.7 Data on patient flows, diagnoses, procedures and outcomes has been very difficult to accumulate. It is impossible to see how improvements in the care of patients with cancer can be documented without the wide introduction of patient focused clinical information systems.

6. RECOMMENDATIONS

1. All GPs should have access to a service offering rapid investigation and diagnosis for patients with visible haematuria\(^{(a,b)}\).

2. All local groups should agree local protocols for the investigation of patients with prostatic symptoms. This will have two aims:

3. To avoid unnecessary referral of patients with mild symptoms; and

4. To identify patients with a high probability of a diagnosis of malignancy (abnormal digital rectal examination or abnormal PSA or both). Examples of this might be a one-stop clinic or a visiting expert service.

5. All GPs should have access to a surgeon with urological training. GPs should know who provides this service in their locality\(^{(a)}\).

6. The guidelines on urological cancer, produced by the British Association of Urological Surgeons, should be adopted nationally, with local interpretation to fit local geography and variations in service provision.

7. All cases of urological cancer should be registered with a central cancer registry, including information on diagnosis and staging, and linking this with eventual outcome measures.

8. The network should audit adherence to the national guidelines on management of urological cancer.

9. Access to palliative care should be available in all areas.

10. It is reasonable for general surgeons with urological training, (approved by the Specialist Advisory Committee in Urology or British Association of Urological Surgeons) but who are not full-time specialist urologists, to provide a service for the endoscopic control of superficial bladder cancer, the management of benign prostatic hypertrophy and the surgical management of renal cancer, provided that they comply with nationally accepted guidelines.
11. There should be a multidisciplinary team holding either combined clinico-pathological meetings or combined clinics, at which major management decisions can be made on complex cases. Along with a urologist, the team should comprise a clinical oncologist, radiologist and pathologist with a special interest in urological oncology.

12. The multidisciplinary teams should participate in audit and research.

13. Specialised surgery for urological cancer would include radical cystectomy\(^a\), radical prostatectomy\(^b\), retroperitoneal lymph node dissection for testicular cancer\(^b\), nephrectomy for renal cancer with IVC involvement\(^b\), and reconstruction following ablative surgery\(^b\). This range of surgery should only be performed in a hospital with the appropriate support and backup facilities (e.g. radiology, intensive therapy, fully trained anaesthetists, dedicated theatre and theatre team, and dedicated ward and ward staff) by surgeons who have appropriate training and experience in those techniques\(^b\).

14. External beam radiotherapy should be performed by appropriate site-specific oncologists with radiotherapy equipment of the highest possible standard.

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<tbody>
<tr>
<td></td>
<td>b. Published Papers</td>
</tr>
</tbody>
</table>

7. REFERENCES


8. ACKNOWLEDGEMENTS

Mr AR de Bolla, Consultant Urological Surgeon, Wrexham Maelor Hospital NHS Trust

Mr WG Bowsher, Consultant Urological Surgeon, Glan Hafren NHS Trust

Mr MG Lucas, Consultant Urological Surgeon, Morriston Hospital NHS Trust

Dr M Mason, Consultant Clinical Oncologist, Velindre NHS Trust