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

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1. EXECUTIVE SUMMARY

1. There has been a dramatic increase in the prevalence of skin cancers of all types.
2. There is no central database in Wales for the recording of clinical outcome following treatment by the various specialties involved in the treatment of skin cancer.
3. The vast majority of skin cancers treated surgically are done so under outpatient local anaesthesia.
4. Is there a cost effective argument for the screening of individuals at risk, such as those with changing moles, higher than average mole counts, a family history of skin cancer, outdoor workers and those over 50 years of age with fair skin?
5. All cases of suspected melanoma should be assessed by a consultant dermatologist. Rapid access clinics should be available for pigmented lesions.
6. In general, non melanoma skin cancer, which is very common, should continue to be treated in most district general hospitals. In some cases joint clinics between dermatologists and surgical specialities may be appropriate but not essential.
7. Melanomas are far less common and are life threatening. There are difficulties both in the histological diagnosis and surgical management of melanomas. Extensive melanomas should be managed in centres staffed by a multidisciplinary team with access to joint clinics.
8. Most skin cancers are preventable. Health Education measures should be funded appropriately.

2. INTRODUCTION

Epidemiology

2.01 Welsh data are included in Volume 1 and are summarised as follows:
   - Average yearly registrations (1984-1988): 1,801
   - Registrations in 1990: 1,793
   - Projected new registrations in the year 2000: not available
   - 5 year survival in melanoma: 79%
   - Deaths from 1985-1994: 1,005
   - Years of Life Lost for death under 70 years (1985-94): 8,262

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

2.02 Skin cancers are the commonest type of malignancy in the United Kingdom. They may be divided into two main groups, melanoma and non-melanoma skin cancer. Non-melanoma skin cancer may then be further divided into basal cell carcinoma and squamous cell carcinoma.

2.03 Malignant melanoma (ICD 172) is rarer than non melanoma skin cancer and is thought to have an incidence of about 10 new cases per 100,000 persons annually in the UK. Non melanoma skin cancer (basal and squamous cell carcinoma) is thought to have an incidence of about 170 new cases per 100,000 persons per year. The great majority of these (approximately 80%) are basal cell carcinomas.

2.04 In the UK in 1985 there were 26,936 new cases of non-melanoma skin cancer and 3,119 cases of melanoma over the same period. In this year the incidence of melanoma in females was twice that of males. The distribution of non-melanoma skin cancer between the sexes was about equal.

2.05 About 200 new cases of melanoma are registered by the Welsh Cancer Registry each year of which 60% are in females. The number of new cases have been rising rapidly since 1982. Indeed the 1988 numbers were more than twice the 1979 levels for males and nearly 90% above 1979 levels for women.

2.06 The incidence of malignant melanoma rises at a much earlier age than most cancers; for females rising to about 11 or 12 new cases per 100,000 population by the age of 40, and remaining steady then until the age of 80. In men the incidence rises to just over 10 per 100,000 by about 50 years of age and again remains steady until the age of 80.

2.07 Within Wales, the incidence of melanoma is highest for females in East Dyfed, Pembrokeshire and West Glamorgan, and for males also in South Glamorgan. It is lowest in Gwynedd, Gwent and Mid Glamorgan. There is a marked social class relationship with professional and non manual workers showing higher rates. The survival rate depends largely on the stage at which the disease is diagnosed and treated.
Registrations for non-melanoma skin cancer (ICD 173) are much higher than for melanoma. About 1600 cases a year were recorded during the period 1984-1988, accounting for about 11% of all registrations in Wales. The ratio of males to females is 1.2:1. It is likely however that these figures are a gross underestimation of the true prevalence of the disease in Wales.

The registration rates rise rapidly over the age of 35 in both sexes. Recorded registrations of non melanoma skin cancer are highest in West Glamorgan and lowest in Powys and South Glamorgan.

Of the non melanoma skin cancers, about 80% are basal cell carcinomas; most of the remainder are squamous cell carcinomas. Frequently, one person will have been treated for more than one or even several non melanoma skin cancers. The way in which registries collect data in different parts of the country vary, and comparisons between regions are misleading.

Mortality

Mortality from skin cancer is found mainly in malignant melanoma. Thus melanoma is relatively rare but serious. Non melanoma skin cancer is very common but usually not life threatening as long as prompt treatment is carried out.

In the UK in 1988 there were 484 deaths from non-melanoma skin cancer ranking it 26th in the cause of death from cancer in that year. Over the same period there were 1,192 deaths from melanoma ranking it 19th in the cause of deaths from cancer. Deaths from skin cancer are distributed fairly equally between the sexes.

Trends in Prevalence and Incidence

There is good evidence that the incidence of skin cancer in the UK has been rising steadily. For instance, in Humberside, in a study of the incidence of the four main types of skin cancer between 1978 and 1991, there had been a 2.5 fold increase in the number of basal cell carcinomas and a 1.5 fold increase in the numbers of squamous cell carcinomas and melanomas. Bowen’s disease of the skin showed a 5 fold increase over the same period. In this study it was suggested that the increase in skin cancer may have been due to environmental factors including increased exposure to solar radiation, changing lifestyles and holiday habits particularly in fair skinned populations.

Because of the worldwide progressive increase in the prevalence of skin cancer, this aspect of skin disease now forms an increasingly large proportion of the dermatologists workload. In Wales, the dermatology unit at UHW has recently appointed a consultant with a special interest in skin cancer and cutaneous surgery. This is the only appointment of this kind in Wales, and one of the first in the UK.

The Current Treatment of Skin Cancer

Specialities Currently Treating Skin Cancers in Wales

The majority of skin cancers are referred from the primary care sector. No data is available for the number of cases treated in general medical practice. In the report of the Welsh Medical Committee’s Working Group on Minor Surgery1 there are guidelines for skin surgery in general medical practice. In this they advise that treating malignant diseases of skin should be avoided unless the practitioner has the appropriate experience, and that the biopsy of moles should be avoided.

Within the hospital sector, the following specialities are at present involved in the treatment of skin cancer:

- Dermatology
- Maxillofacial Surgery
- Oculoplastic Surgery
- ENT Surgery
- Plastic Surgery
- General Surgery
- Radiotherapy/Oncology
- Gynaecologists (vulval skin cancer)

The data for the number of cases treated in each of the categories is incomplete.

Within South Glamorgan, the majority of patients with skin cancer are treated by dermatologists based at the University Hospital of Wales. In 1992, 550 patients with skin cancer underwent surgical excision by dermatologists at the University Hospital of Wales. Almost 3000 skin biopsy specimens were examined by the pathology service over the same period. In 1992, 63 melanomas were treated at UHW, 31 by dermatologists and 27 by the Professorial Surgical Unit which has a special interest in melanoma and 5 by other surgeons. About 20% of patients attending UHW Dermatology are from Mid Glamorgan and a smaller percentage from Gwent.
A large number of skin cancers appear to be referred directly to the radiotherapy units in Swansea and Cardiff. For example, data from the Radiotherapy Service at Singleton Hospital in Swansea indicate that they treat approximately 400 cases of primary skin cancer a year, the majority of which had been referred directly to them from the primary sector. In those cases of head and neck skin cancer where salvage surgery is required or radiotherapy was thought to be inappropriate, cases have been referred on to the Maxillofacial Unit or Plastic Surgery Unit at Morriston Hospital. In 1992, 276 patients with basal cell carcinoma were treated with radiotherapy at Velindre.

In North Wales, the majority of skin cancers of the head and neck have been treated surgically, usually under outpatient local anaesthesia, by the Maxillofacial Unit at Glan Clwyd Hospital, following referral from local dermatology units or the primary sector. Cases requiring radiotherapy have been referred to Clatterbridge or the Christie radiotherapy units. It is however, anticipated that there will be a radiotherapy/oncology unit in North Wales within two to three years. There is an established North Wales Melanoma Group. In the one year period 1994-1995, the Maxillofacial Unit in North Wales operated on 10 malignant melanomas of the head and neck and 242 other skin cancers in this region.

In both North and South Wales, skin cancers adjacent to the eye are treated by oculoplastic surgeons in addition to the other surgical specialties.

The Burns and Plastic Surgery Unit is situated at Morriston Hospital in Swansea with outlying clinics at the major district general hospitals in South Wales. The unit undertakes the surgical treatment of skin cancer involving any area of the body, referred both locally and from other hospitals in South and West Wales in particular. In 1992, when the unit was still based in Chepstow, 505 patients were treated for skin cancer (100 from South Glamorgan). 55 of these were melanomas, 16 of whom were from South Glamorgan. Figures for 1995 provided by the histopathologists at Morriston Hospital NHS Trust indicate that in that year the Plastic Surgery Centre in Swansea treated 106 basal cell carcinomas, 29 malignant melanomas, and 84 squamous cell carcinomas of the skin. These figures are for Morriston Hospital alone and it is believed that there may have been a degree of under reporting.

The Maxillofacial Units at Prince Charles Hospital in Merthyr Tydfil, The Royal Gwent Hospital and Bridgend all treat skin cancer of the head and neck. For example, the Maxillofacial Unit in Merthyr Tydfil in 1995 treated 230 skin cancers.

Throughout the UK there is a trend towards Dermatologists undertaking more local skin surgery within the speciality. There have been large variations in dermatological practice depending on the training and interests of individual dermatologists. In 1992, for example, 550 patients with skin cancer had their cancer excised by a dermatologist in Cardiff. In the same year, in Gwent, only 99 patients with skin cancer were treated by dermatologists, 270 being referred to surgical units, and 111 being referred to Velindre for radiotherapy.

The majority of basal cell and squamous cell carcinomas are referred directly to dermatology departments, the various surgical specialties and radiotherapy units. Of those cases referred to a dermatology unit, most will be treated within the unit with a percentage being referred for more extensive surgery or radiotherapy. Within West Glamorgan 10-20% are referred from the dermatology departments for surgery and about 5% for radiotherapy.

Malignant Melanoma

Malignant melanomas may be very difficult to diagnose in their early stages. There is evidence that dermatologists are in the best position to carry out the initial screening of patients presenting with a pigmented lesion. The majority of cases are probably referred from the primary sector to a dermatology clinic. Some cases are however, referred directly to a surgical speciality. The majority of cases referred to a dermatology unit are dealt with entirely within the unit. About 35% will be referred for more specialised surgery. The initial management of a melanoma is by surgery but radiotherapy may occasionally be used in the palliation of recurrent disease.
3. CHARACTERISTICS OF A HIGH QUALITY SERVICE

3.1 Skin cancer is common and treated by a variety of specialities in almost every district general hospital in Wales. No data on outcome other than crude mortality data appears to be available.

3.2 Dermatologists are particularly skilled at diagnosing cutaneous lesions both clinically and through skin biopsy. Dermatologists would consider it desirable that all patients with skin cancer should be referred to them for diagnosis. In Wales, however, it is apparent that a large percentage of skin cancer cases are referred to and treated primarily by surgical specialities or radiotherapy/oncology units.

3.3 The early diagnosis of melanoma is mandatory if there is to be a satisfactory outcome. Waiting lists for routine dermatology consultations are excessively long and so many dermatologists have established rapid access pigmented lesion clinics for the early detection of melanoma. Excision biopsy of a suspected melanoma is mandatory in the majority of cases, and the surgical skills and facilities for this must be available at short notice. Melanoma is considered separately from the non-melanoma skin cancers because there is a high risk of early metastatic spread of the tumour. It is important that there is a well co-ordinated approach to the management of melanoma at all stages. This is best achieved by a multidisciplinary melanoma team at regional or subregional level. The members of the team from the various specialities should meet regularly to audit and review all aspects of the management of melanoma and develop further protocols and guidelines for treatment based on the best evidence available at that time. A central database should be established by the group and outcome data collected. There is such a melanoma group in Cardiff at present involving oncologists, dermatologists, general surgeons with an interest in melanoma, plastic surgeons and pathologists. A similar melanoma group has been established in North Wales.

3.4 Although the histological diagnosis of basal cell and squamous cell carcinoma is relatively straightforward, the diagnosis of melanoma and the rarer forms of skin cancer may be more difficult. The pathologist providing this service should have regular access to regular review by other pathologists experienced in the diagnosis and grading of melanoma. Funding should be available for such tertiary pathology services. Moreover, histopathology laboratories should be accredited and the pathologists should take part in an external quality assurance programme. The pathologist should also take part in regular case review and oncology meetings with the clinicians involved in the cases.

3.5 Most skin cancers can be treated surgically under outpatient local anaesthesia. Surgeons must be available who are trained to undertake more extensive surgery when required including regional node dissection and reconstruction of large residual defects. In certain situations, for instance when there is a recurrence of a basal cell carcinoma, the facility to undertake microscopically controlled surgical excision is an advantage (micrographic surgery). Cardiff is only one of six sites in the UK where this is available, the nearest other centre being Oxford.

3.6 Although the majority of skin cancers will be treated surgically, a number may be treated by non surgical methods such as curettage and cautery, cryotherapy or topical chemotherapy.

3.7 Where reconstruction of facial defects is impractical or likely to be unsatisfactory, following the removal of very extensive facial cancers, the facility to construct facial prostheses such as those to replace ears or noses should be available. These are constructed by a Maxillofacial Technician and retained by titanium implants inserted into the adjacent facial bones by a Maxillofacial Unit. This service is currently a regional service based on Morriston Hospital.

3.8 The facility for high dose chemotherapy by limb perfusion should be available. There are only about 6 centres in the UK carrying this out on a regular basis. The Department of Surgery at UHW has this facility and treats patients from the whole of Wales and large parts of the West of England.

4. ORGANISATION AND FUNCTIONS TO DELIVER SERVICES

4.1 Skin cancer is in the main a preventable disease. Following the recommendations of the Health of the Nation document in 1992, a number of groups are establishing public education exercises, mainly under the aegis of the UK Skin Cancer Working Party. The aim is to increase public awareness of factors which make the development of skin cancer more likely, and to encourage appropriate changes in behaviour. At present this concentrates mainly of developing awareness of the damaging effects of ultraviolet radiation and encouraging people to avoid over exposure to sunlight. This is being aimed mainly at the young because of the evidence that sun exposure early in life is a major risk factor for the subsequent development of all types of skin cancer. It is therefore essential that commissioners fund the appropriate health education programmes.
4.2 The chart below summarises the roles of a variety of medical and ancilliary staff in the prevention and treatment of skin cancer. It is likely that non-melanoma skin cancer will continue to be treated in district general hospitals in Wales where dermatologists have sessions.

A Blueprint for Skin Cancer Care

<table>
<thead>
<tr>
<th>Service level</th>
<th>Involvement</th>
<th>Action required</th>
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<tbody>
<tr>
<td>School Teachers</td>
<td>Education of children</td>
<td>Health education funding</td>
</tr>
<tr>
<td></td>
<td>Sun awareness</td>
<td></td>
</tr>
<tr>
<td>Pharmacists</td>
<td>Advice on sunscreens</td>
<td>Training</td>
</tr>
<tr>
<td></td>
<td>Recognition of features of skin cancer</td>
<td>Postgraduate education</td>
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<tr>
<td></td>
<td></td>
<td>Posters and leaflets</td>
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<tr>
<td>Nurse specialists</td>
<td>Identification of skin cancers, teacher and GP</td>
<td>Further develop the role of nurse</td>
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<tr>
<td></td>
<td>education</td>
<td>practitioner</td>
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<tr>
<td>General Practitioners</td>
<td>Recognition of common benign skin lesions and the</td>
<td>Improved undergraduate and</td>
</tr>
<tr>
<td></td>
<td>features of skin cancer</td>
<td>postgraduate teaching</td>
</tr>
<tr>
<td>Dermatologists</td>
<td>Clinical/histological identification of skin</td>
<td>Improved pathology support</td>
</tr>
<tr>
<td></td>
<td>cancers</td>
<td>Organisation and funding</td>
</tr>
<tr>
<td></td>
<td>Rapid access pigmented lesion clinics</td>
<td>Some dermatologists may need further</td>
</tr>
<tr>
<td></td>
<td>Dermatological surgery of skin cancers</td>
<td>surgical training</td>
</tr>
<tr>
<td>Pathologists</td>
<td>Diagnosis and grading of melanoma and other skin</td>
<td>Develop quality assurance programmes.</td>
</tr>
<tr>
<td></td>
<td>tumours</td>
<td>Fund tertiary melanoma review</td>
</tr>
<tr>
<td>Surgical specialities: Plastic, Maxillofacial,</td>
<td>Excision and reconstruction, regional lymph</td>
<td>Regional surgical services to be</td>
</tr>
<tr>
<td>ENT, General Surgeons</td>
<td>lymph node dissection, limb perfusion service</td>
<td>funded. Multidisciplinary joint clinics</td>
</tr>
<tr>
<td>Radiotherapy/Oncology</td>
<td>Treatment of primary and metastatic tumours</td>
<td>Need to ensure diagnostic skills</td>
</tr>
<tr>
<td></td>
<td></td>
<td>maintained. Regional services need to</td>
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<tr>
<td></td>
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<td>be funded</td>
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5. MONITORING OF PROGRESS AND PERFORMANCE

5.1 In order to assess the results of any changes in the service it will be necessary to establish appropriate databases to record survival and outcome data.

6. RECOMMENDATIONS

Skin Cancer in General

1. There should be an increased emphasis on prevention and health promotion. This should include health education for both the public and primary care professionals<sup>a</sup>.

2. The adequacy of excision and accuracy of diagnosis should be audited by dermatopathology collaboration<sup>b</sup>. The UK Cancer Registries have stated their aim to collect the pathological staging in 80 - 90% of melanomas.

Melanoma

3. Rapid access clinics should be available for pigmented lesions in which patients may be seen within two weeks of referral<sup>b</sup>.

4. All cases of suspected melanoma should be assessed by a consultant dermatologist prior to treatment<sup>b</sup>.

5. There should be a close working relationship between the dermatologist and an appropriate surgeon trained in the surgical management of melanoma. This would generally be a plastic surgeon, maxillofacial surgeon or general surgeon<sup>c</sup>.
6. Melanomas should be excised by a dermatologist with the appropriate training, or by a surgeon with a special interest in melanoma. Advanced melanomas or those in anatomical sites such as the face posing reconstructive difficulties, should be referred to designated centres in which there are established melanoma groups. Such centres should be staffed by a multidisciplinary team with access to joint clinics. A melanoma group would normally consist of a dermatologist, surgeon, oncologist/radiotherapist and a histopathologist with particular expertise in the field of pigmented lesions(c).

Non-melanoma Skin Cancer

7. Treatment will generally continue to be at district general hospital level under the direction of a dermatology department(b).

8. Many cases of non-melanoma skin cancer will be treated by dermatologists with the appropriate training. In addition, the dermatology unit should develop close working relationships with a surgeon trained in the management of more extensive non-melanoma skin cancer. Patients with recurrent or ill defined basal cell carcinoma may benefit from treatment in a dermatology unit with expertise in Mohs’ surgery. Many non-melanoma skin cancers will be on the face, and the treatment of the larger lesions should be carried out by surgeons with appropriate training in facial reconstruction. In the majority of cases this would be a plastic, maxillofacial or oculoplastic surgeon(c).

9. Where there is histological evidence of complete excision of a basal cell carcinoma, there may be no need for follow-up. Where complete excision is uncertain, or long term follow-up is felt to be desirable, follow up arrangements between primary and secondary care should be determined by local criteria(b).

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<tr>
<th>Evidence base</th>
<th>a. Published papers</th>
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<tr>
<td></td>
<td>b. Consensus - Welsh oncology units and dermatology departments</td>
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<tr>
<td></td>
<td>c. Consensus - dermatology, plastic surgery, maxillofacial surgery and general surgery units consulted in Wales</td>
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Consensus drawn from evidence provided by those units who contributed to this task group report.

7. REFERENCES/BIBLIOGRAPHY

13. Welsh Medical Committee: *Minor Surgery Working Group 1995*
8. ACKNOWLEDGEMENTS

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