

Skin Cancer CD: Early identification and management of skin cancer

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The project team intends is developing a CD-ROM interactive learning package to assist undergraduate medical students to develop their knowledge and skills in early recognition of skin cancers to improve patient's survival. The module will be used extensively by all medical students and by other students within the Faculty. Currently skin cancer is taught at different semesters in the medical curriculum including:

- Semester 1, when students are required to investigate a patient with skin burn and a mole, and a family history of malignant melanoma (220 students),
- In semester 5, one problem is based on a patient with Malignant Melanoma (MM) (270 students),
- During clinical rotation, in particular dermatology and surgery, students are required to identify and compare different skin lesions, and

The package is potentially useful for students in postgraduate medical courses such as Master of Internal Medicine and Master of Medicine in Primary Medical Care, and students of other schools including Physiotherapy and Postgraduate Nursing. In fact, such a tool would be useful for all students of Medicine & Health Sciences who interact with people and patients during their professional life. This type of knowledge would be beneficial for physiotherapists, dentists, counsellors, nurses and teachers as it could provide a means of sensitising non-medical related health professionals to skin cancer. This could be of assistance in early detection of skin cancer by recommending that the patient seek medical advice.

Non-melanocytic skin (NMSC) cancer is the most common cancer type in Australia, forming about 78% of all cancer diagnosis. **Two of every three Australian will be afflicted by NMSC during their life.** Although such cancers are less life threatening than most other cancers, they have to be recognised and differentiated from the more lethal skin cancer, MM that constitute about 10% of all new registrable cancer diagnosis. Most students and general practitioners have difficulty in differentiating types of skin cancers. It is of crucial importance for survival of patients with skin cancers, in particular MM, that medical students and other health professionals learn to detect the lesion at the earliest possible opportunity to instigate the proper management.

The proposed CD-ROM package will provide an easily accessible, integrated and interactive tool, through the following:

- **Integration of material, comparing and contrasting images**
In this package we intend to examine dermatology, pathology, cytology, anatomy and principles of screening to integrate clinical materials and histopathological images as well as, epidemiological data. High quality clinical and histopathological images of various lesions in different skin types will assist in developing student's knowledge and skills in comparing and contrasting. Statistics presented as high quality graphics/animations will demonstrate the incidence and mortality data of different types of skin cancers, in comparisons with other common invasive cancers in Australia and illustrate the evidence for effectiveness of early intervention and the principles of screening and case finding in GP and Hospital settings.
- **Learning loops and interaction**
The package will provide opportunities for students to answer questions by click and drag, comparison and contrast of various skin lesions, self-testing modules and the provision of text feedback.. This will be provided using learning loops triggered by questions and answers, followed by further examinations triggered by another, more advanced, question
- **Zooming in and out:** students will be able to magnify the images to examine close-up detail of the skin lesion. Rollovers will allow the student to read further information in relation to the lesion.
- Self-testing & feedback

- **Self-testing modules and feedback** as to why each answer is correct or incorrect will be provided at each step.

The package can be housed within existing shells available at The University of Melbourne, namely TopClass and TeleQACE, and others templates used for the production of Skin Atlas and Sensitive Examination Technique, minimising development costs. It is envisaged at this point that a CD-ROM would be created, however web-based delivery will also be explored.

At the end of the integrated self-learning package students will be able to:

1. Discuss the principles of screening and case finding in General Practice
2. Appraise the burden of skin cancer in Australia
3. Compare different types of skin cancers
4. Explain the dermatological, histopathological characteristics & pathogenesis of each type of skin cancer
5. Identify the early features of malignant melanoma and recognise the value of early recognition
6. Review the survival patterns of skin cancers by type.
7. Appraise the barriers to early detection
8. Recognise management modalities of different skin cancers