Joint Symposium

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Genetics: A hope for prevention

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Since the recent identification of multiple cancer predisposing genes, molecular genetics represents an emerging field in oncology and genetic testing can be presented as a new tool in genetic counselling. Although genetic testing allows the identification of asymptomatic individuals who carry predisposing genes, it can actually only be proposed to defined individuals and the percentage of informative results remains limited.

But with or without genetic testing and during the complex process of molecular analysis, members of the families who, have been identified as presenting a familial cancer predisposing syndrome still need information on screening and preventive measures. Cancer prevention strategy includes three levels; at first possible modifications of life-style (i.e. dietary measures), the second level includes surveillance measures (i.e. mammography or colonoscopy) and the third is a direct intervention (i.e. chemo- prevention with Tamoxifen or preventive surgery).

Cost-benefit analyses of recommended screening and preventive strategies are currently under evaluation. They are expected to provide means to assess real benefits in terms of life expectancy and quality-adjusted life expectancy for this specific population.

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Does modern oncology need medical genetics?

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It is recognised that some individuals have a genetic susceptibility to malignancies. Understanding the mechanisms by which this has already had impact in the clinical management of these individuals and their families. Currently the areas of management that have been affected, are mainly in screening and prevention. In the near future, the treatment of neoplasia in these individuals may be altered based upon knowledge of the underlying molecular pathology. Identification, counselling and management of the patients and their families will require a multidisciplinary approach.

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Psychosocial issues in cancer genetics – Progress and prospects

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If the clinical application of new genetic knowledge about inherited susceptibility to some common cancers is to result in a net public health gain, attention must be given to what the lay public and health care professionals think and feel and do in response to these developments. Empirical data are needed to inform policy and practice and cross cultural differences need to be noted. Currently there are large margins of uncertainty around the information which asymptomatic individuals can be given about their personal cancer risk and the effectiveness of available strategies for early detection or prevention of cancer remains the subject of research. At present the challenge lies in the organisation of services in such a way as to provide information appropriate to the level of risk in such a way that the lay public can understand and use to make informed health care choices. Data will be presented to review progress and highlight the psychosocial issues requiring further research.

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The experience of hereditary cancer in families – implications for cancer genetics counselling

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Individuals with an inherited cancer predisposition may seek counselling for cancer genetic risk many years after their relatives have died. The reason for this is that cancer genes may cause early development of malignancy and a person may die at a relatively young age. Therefore, children may grow up without a mother or father and it could be many years before they choose to discuss their risk in a cancer genetics clinic.

The notion that cancer is inherited poses deep concerns to healthy relatives who may or may not have inherited the genetic susceptibility that runs in the family. The individual seeking genetic counselling may be living with a partner who has never known their family. This paper highlights issues that relate to perception of cancer risk and family dynamics and illuminates the need for professional understanding. Examples are used from clinical practice and a small case study that focused hereditary cancer in the family.