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International Cancer News

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From the Globe

NCI Statement on Genetic Testing for Cancer Risk

The National Cancer Institute have issued a new statement for health professionals on genetic testing for cancer risk.

Although it may soon be possible test populations for genetic predisposition towards cancer, many issues should be addressed before such testing can be accepted or recommended as routine practice. The statement outlines a number of these unresolved issues, some of which are presented here.

Current genetic testing strategies are focused on genes that confer greatly increased cancer risk; these genes only account for about 5–10% of all breast and colon cancers. Good estimates are needed of the risks associated with specific mutations or types of mutations in cancer susceptibility genes. Estimates of how these risks may differ in various populations are also needed.

Almost all available information is based on families selected because they have a very high incidence of cancer.

There may possibly be some mutations for which risk information is uncertain. It is assumed that mutations occurring with cancer in the very-high-risk cancer families confer increased cancer risk. However, additional mutations that may change protein structure have been observed outside these families. It is uncertain if such mutations confer an increased cancer risk or, if there is increased risk, what the magnitude of increase in cancer risk will be.

Intervention to reduce cancer mortality should be offered to individuals who carry a cancer susceptibility gene. Depending on the cancer site, the following interventions are currently offered: early cancer detection, prevention through prophylactic surgeries, and chemoprevention.

However, the efficacy of these measures, especially among the general population, is unproved in many instances. Even among individuals who carry cancer susceptibility, genes efficacy is largely unknown. Also, there is a practical limit to surgical strategies for individuals at high risk for cancer in multiple organs.

For example, for carriers of breast/ovarian cancer susceptibility genes, the main options are early detection and prevention through prophylactic surgical procedures. However, it is uncertain if early detection efforts will reduce mortality. It is not clear if mammography in these high risk women younger than 50 years is beneficial. There is no proven early detection strategy for ovarian cancer. Says the report, "Some women are interested in prophylactic mastectomy and/or oophorectomy, but that strategy does not eliminate breast/ovarian cancer risk and it is not known to what extent, if any, it reduces cancer incidence or moratlity." Clinicians, scientists and the general public are only just beginning to understand the limitations and social, legal, and ethical issues surrounding genetic testing for cancer susceptibility.

Genetic counselling is an integral part of the process of genetic testing for cancer susceptibility; specialists in oncology and mental health will also need to be part of the process. Genetic testing protocols are currently being developed and tested.

The testing of young children for cancer risk, the report states, " should be considered only when it is clear that intervention will provide medical benefits for young people."

Informed consent should be an essential part of the genetic counselling and testing process. Individuals who are considering genetic testing for cancer susceptibility should be given the opportunity to consider the physical, social and legal risks balanced aginst the potential benefits of genetic testing for cancer risk, including the uncertainties of the state of our knowledge of cancer risk and effective interventions.

Dr Bernard Fisher Exonerated by Office of Research Integrity

Dr Bernard Fisher, forced to step down as head of the National Surgical Adjuvant Breast and Bowel Project in 1994 after being accused of allowing "tainted data" to go through, has been exonerated.

The Office of Research Integrity in the U.S.A. found no evidence of scientific misconduct and cleared him of all charges. Dr Fisher was glad at the outcome of the inquiry but disappointed that the process lasted so long and prolonged the concern of people involved in breast cancer treatment unnecessarily.