

Chemoprevention of bladder cancer

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Overview

In the face of the public's widespread acceptance, dietary and lifestyle changes, along with vitamin and supplements, have been given closer and more serious consideration by the medical community in the last decade.

Chemoprevention

The NCI's chemoprevention program, initiated in the early 1980s, has developed into a major effort in which more than 400 potential chemopreventive agents are being studied, including more than 25 compounds in approximately 60 ongoing clinical trials. Chemoprevention involves the administration of a natural or man-made agent to retard or prevent the development or progression of cancer. Chemopreventive trials for bladder cancer, often focused on individuals with precancerous lesions or with histories of previously treated cancers. Such individuals may already have cancer that has not yet been diagnosed and are actually receiving cancer treatment rather than cancer prevention.¹

Primary prevention involves the identification and avoidance of cancer-causing factors. Factors associated with bladder cancer incidence and progression include occupational exposure to chemicals (eg, aniline dyes), cigarette smoking, ingestion of analgesics (phenacetin), bladder infections, and bladder calculi. [See also "Risk Factors"] Cigarette smoking is the strongest risk factor for developing bladder cancer, but, unlike lung cancer and cardiovascular diseases, the risks are not precipitously reduced by smoking cessation.

Secondary prevention involves screening individuals at risk with the goal of early detection and treatment. The detection of cancers at an earlier stage can result in decreased mortality. While some evidence supports screening endeavors for bladder cancer, specific mortality has not yet been tested prospectively.

An effective chemopreventive agent will not significantly alter quality of life, and is ideally inexpensive, safe, well tolerated, and effective in preventing more than one cancer. While patients at risk for recurrence who are currently tumor-free take part in chemoprevention studies, some actually may be receiving treatment as opposed to prevention. Eventually, if agents are well tolerated and proven to prevent recurrences in patients with prior bladder tumors, they will be tested in subjects who are at risk for developing bladder cancer but have never had a tumor. Approaches that have been used in chemoprevention of bladder cancer include the use of vitamins, polyamine synthesis inhibitors, and dietary factors.¹

Ethical issues have been raised concerning the conduct of clinical chemoprevention trials and a review of the ethical considerations that should guide clinical researchers in the design and conduct of this new type of clinical trial can be found in an article entitled; "Ethical Issues of Chemoprevention Trials".

In the article Drs. Vogel and Parker state that, "The ethics of chemoprevention clinical trials are complicated because (1) chemoprevention lies at the intersection of disease management and health promotion, (2) there are conflicting interests competing in these trials, and (3) multiple values play a role in determining the nature and magnitude of the risks and benefits of chemoprevention of cancer. Ethical questions related to these trials concern the enrollment of healthy individuals rather than cancer patients, confidentiality in recruitment, the enrollment of "high-risk" subjects, randomization, informed consent, trial monitoring, and competing outcomes and toxicities. The authors conclude that these issues will be resolved with the accumulating clinical experience and ethical deliberations that accompany ongoing clinical chemoprevention research studies.²

References

1. Cancer Prevention: the Roles of Diet and Chemo Prevention

Peter Greenwald, MD, DrPH, Sharon S. McDonald, MS, Division of Cancer Prevention and Control at the National Cancer Institute, Bethesda, Md (PG) and The Scientific Consulting Group, Inc, Gaithersburg, Md (SSM)
<http://www.moffitt.usf.edu/pubs/ccj/v4n2/toc.html>

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2. Ethical Issues of Chemoprevention Trials.

Victor G. Vogel, MD, MHS, University of Pittsburgh Cancer Institute, Pittsburgh, Pa (VGV), Lisa S. Parker, PhD, Department of Human Genetics at the University of Pittsburgh (LSP) Cancer Control: JMCC 4(2): 142-149, 1997. © 1997 Moffitt Cancer Center & Research Institute

<http://www.moffitt.usf.edu/pubs/ccj/v4n2/toc.html>

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