Cancer control: introduction to a series of reports on strategies and approaches

J. STJERNSWARD,¹ K. STANLEY,² & I. C. HENDERSON³

No search for new treatments of cancer or new preventive measures can realistically hope to offer benefits anywhere near as large as those that can be gained by the wider application of current knowledge. A series of papers on strategies in cancer control, to be published in the Bulletin of the World Health Organization, will describe the foundations and approaches that can significantly reduce morbidity and mortality from cancer.

Commencing with this issue of the Bulletin of the World Health Organization, a series of papers on cancer control strategies will appear in this journal; they will be concerned with primary prevention and early detection of cancer, cost-effectiveness of approaches, and health education, and will review the state of the art in the control of some common cancers. The initial article in this series (see p. 73) considers the five phases of a systematic approach to cancer control, which will prevent premature acceptance of unproven hypotheses and inappropriate consumption of limited health care resources.

A GROWING PROBLEM

Cancer is increasingly recognized as an important public health problem worldwide. The latest global statistics on cancer released by the World Health Organization show that in absolute numbers there are now more cases and deaths from cancer in the Third World than in the industrial countries (1, 2). After the age of five years, cancer is one of the three most frequent causes of death in both developed and developing countries (3). According to present trends, the incidence of cancer will continue to rise in many developing countries because of increases in life expectancy and in the consumption of tobacco, and a reduction in mortality from infectious diseases. It is unrealistic to expect that resources for cancer treatment will increase markedly in the near future. However, the cancer problem can be dramatically reduced with the available resources by setting the right priorities (4). Approaches are available to prevent a third of all existing cancers, to cure another third (if the cases are detected early enough and adequate therapy is provided), and to ensure that virtually all cancer patients are spared pain.

The need for new priorities and strategies, even in developed countries, was indicated by recent data on mortality from cancer in 28 industrial countries (5). This analysis showed an overall increase of death rates from cancer by 55% in males and 40% in females from 1960 to 1980. The most dramatic rise in age-adjusted mortality was registered for lung cancer, 76% for men and 135% for women, which confirms the urgency for action against tobacco use.
It is clear that existing knowledge in this area has not been exploited very effectively. In these developed countries, the limited impact on overall cancer mortality by therapy alone (for most cancers) and the clear reduction in cervical cancer mortality in countries with adequate screening programmes are indications for the proper setting of priorities in national control efforts.

**PRIORITIES FOR CANCER CONTROL**

A method for setting priorities for cancer control programmes has been developed by WHO. It compares the effectiveness and costs of various cancer control activities by providing a structure and language so that each element can be addressed separately and then recombined to estimate the impact of different activities. This method is currently being tested in selected countries and will be reviewed later in this series.

Primary prevention offers the greatest hope for reducing the number of deaths caused by some cancers. Further, the measures aimed at preventing cancer sometimes also reduce morbidity and mortality caused by other diseases; for example, a reduction in tobacco consumption would not only substantially diminish the cancer problem, but also reduce cardiovascular and respiratory diseases.

Approximately 90% of **lung cancers** in developed countries are caused by the smoking of cigarettes (6). There is a strong dose-response relationship and the risk is greater among those who start smoking at an early age. Anti-tobacco legislation, education and information on tobacco and health, and coordinated national tobacco control efforts have been recommended by WHO as the best approach to reducing mortality from lung cancer, which is currently the second most common cancer worldwide and could soon become the most common (7).

A major health problem in south-east Asia is **oral cancer** with more than a hundred thousand new cases each year. Approximately 90% of oral cancers in this region are caused by local forms of tobacco chewing and smoking. Early detection of this cancer by primary health care workers has been shown to be feasible (9). A health education programme in India has demonstrated that it is possible to reduce the number of persons with this habit, the number of pre-cancerous lesions, and the disease itself (7).

In the developing countries about 80% of **liver cancer** cases evidently result from infection with hepatitis B virus (8). Effective vaccines have been developed, but they are still too costly for use in the Third World; when cheaper vaccines become available they will play an important role in reducing not only the mortality from liver cancer which is especially high in parts of Africa and eastern Asia, but also chronic hepatitis which is a major health problem in these areas.

Cancer of the **uterine cervix** is the most common in developing countries and is the second most common cancer worldwide in women, with approximately half a million new cases each year. Decreases of 50-60% in cervical cancer mortality have been observed in countries where cytological screening has been undertaken in a well-organized fashion. However, even though extensive knowledge on the conduct and value of cytology screening is available, it has not been applied optimally in many locations, and not even minimally in others. Strategies are being formulated to ensure establishment of early detection approaches which cover the women at risk, to ensure adequate cytological services, and to provide appropriate therapy to the identified cases. For example, in countries where resources are limited, the aim should be to screen every woman once in her lifetime between 35 and 50 years of age. When more resources are available and every woman has been covered at least once, the frequency of screening can be increased and the age range extended in a stepwise fashion. A detailed report of these approaches will also be presented in this series.

Mammography and clinical examination, with or without self-examination of the breasts, have generally proved effective in the early detection of breast cancer (10). In many countries, however, self-examination will probably be the only feasible approach to wide population coverage for a long time to come. Its effectiveness as a single measure has not yet been determined, but controlled studies are proceeding.

At present, in most countries, cancer control activities lack overall coordination. Guidelines for the formulation of national cancer programmes have been developed to assist countries in realistically dealing with cancer problems using the available limited resources. The recommended approach involves assessing the existing situation, defining health objectives, evaluating possible control strategies, and setting priorities on the basis of quantitative assessments (4).

No search for new treatments of cancer or new preventive measures can, in the foreseeable future, realistically hope to offer benefits anywhere near as large as those that can be gained by the wider application of current knowledge. This series of papers on strategies in cancer control will therefore describe the foundations and approaches that can significantly reduce morbidity and mortality from cancer.
RÉSUMÉ

LUTTE ANTICANCÉREUSE: INTRODUCTION À UNE SÉRIE D'ARTICLES
SUR LES STRATÉGIES ET LES APPROCHES

Dans le présent numéro du Bulletin de l'Organisation mondiale de la Santé, commence la publication d'une série d'articles sur la lutte anticancéreuse qui auront trait à la prévention primaire et au dépistage précoce du cancer, aux approches coût/efficacité et à l'éducation pour la santé. On y fera également le point des possibilités actuelles en matière de lutte contre certains cancers fréquents. Le premier article de cette série examine les cinq phases d'une nouvelle approche systématique de la lutte anticancéreuse qui évitera d'admettre un peu trop rapidement des hypothèses non vérifiées et d'employer inopportunément des moyens limités d'action sanitaire.

Actuellement, dans la plupart des pays, la lutte anticancéreuse manque de coordination d'ensemble. Des directives applicables à la formulation de programmes nationaux de lutte anticancéreuse ont été élaborées afin d'aider les pays à faire face de façon réaliste aux problèmes que pose le cancer en se servant des moyens limités dont ils disposent. L'approche recommandée consiste à évaluer la situation existante, à définir des objectifs sanitaires, à évaluer des stratégies éventuelles de lutte, et à fixer des priorités sur la base d'appréciations quantitatives.

On ne saurait sérieusement espérer que les recherches en vue de nouveaux traitements ou les mesures nouvelles de prévention puissent, dans un avenir prévisible, donner des résultats d'ampleur presque aussi grande que ceux susceptibles d'être obtenus par une application plus étendue des connaissances actuelles. En conséquence, cette série d'articles sur les stratégies de lutte anticancéreuse exposer les principes de base et les approches qui peuvent continuer à réduire sensiblement la morbidité et la mortalité par cancer.

REFERENCES
