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Epidemiology of Lung Cancer and Prevention Strategy in Japan

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Abstract The incidence of and mortality from lung cancer have been increasing rapidly during recent decades in Japan, and in 1993 lung cancer became the leading cause of death from cancer in males. This increasing tendency is most striking for older age groups, especially those above 70 years of age. The incidence of multiple cancers related to lung cancer has been also increasing.

Of the major risk factors for lung cancer, direct smoking has the greatest influence. When divided by histologic type, above 90% of cases of squamous cell carcinoma and small cell carcinoma can be explained by direct smoking, while this is true for only about 40% of adenocarcinomas.

Although the efficacy of lung cancer screening is still controversial, its role in lung cancer control strategy appears to be limited. Therefore, a multi-disciplinary control program, including anti-smoking activity, chemoprevention and early detection by new techniques should be developed.

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Problems Related to Organ Transplantation as an Allocation of Scarce Medical Resources: A Review

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Abstract The criteria for allocation of medical resources at three different stages which lead to organ transplantation are discussed, along with advantages and disadventages.

When each criterion was examined individually, it was difficult to determine the best criterion for selection of recipients of donated organs in the most ethically desirable fashion. However, when we examined the suggested criteria on the basis of an actual case, the efficacy of transplantation or expected length of the survival years was most often used as a criterion to select the recipients of donated organs.

To increase more support for organ transplantation in our society, it is necessary to more fully discuss how scarce donated organs should be allocated to recipients in a fair and equitable manner.

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The National Health Service in the United Kingdom-Past, Present and Future

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Abstract Britain's National Health Service (NHS) came into existence in 1948. It was the first comprehensive health system in any Western society to be based on the national provision of services and to offer free medical care to the entire population. The NHS has gone through several developments since, in particular the reorganisations of 1974 and 1982 and the general management overhaul of 1984. Until 1991, however, the NHS kept to the following principles: health service for everyone; sharing of financial costs and free at the point of use; geographical equality; the same high standard of care for everyone; selection on the basis of need for health care; and encouragement of a non-exploitative ethos. Britain's achievement with respect to health care has generally received high praise.

Nevertheless, Mrs. Thatcher's government was convinced that the NHS contained a number of serious weakness. This view sprang from the government's belief that, because the NHS did not have a competitive market structure, it lacked an incentive for efficient behaviour. The reforms that were introduced in 1991 were designed to overcome these perceived flaws by creating a limited or internal market in health care, in whch multiple providers of services compete with each other for the custom of independent purchasers.

Competitive pressures now focus greater attention on patient needs, and the separation of purchasing functions has placed resource allocation under greater scrutiny. Making hospitals financially dependent on general practitioner (GP) referrals has resulted in consultants establishing closer contact with GPs. More is being done in GP surgeries and this has the effect not only of widening the range of general practice but also of raising GP standards. However, there are also some internal problems. Administrative costs have increased steeply, and new inequalities are developing as a consequence of competition.

To reduce management costs and to allocate as much of the NHS budget as possible to direct patient care, the government produced and made public its plans for the future structure of NHS management in 1993 and a simplified structure is expected to go into effect by 1996. The Labour Party's document on health and health services in Britain was made public in 1994. The plan rejects the use of competition in the NHS and promises to reverse recent developments, reasserting the importance of the original principles of the NHS.

It is too early to reach a verdict on the British experiment. Given the direction of change in Labour's thinking and the fact that the current reforms by the Conservatives are becoming more and more firmly embedded, almost anything is possible.

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The US Health Care and the Reform

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Abstract Securing access to medical services, controlling costs and improving quality are goals of health care system. Although they are all the same all over the country, each country has its own culture, health care system and health care problems. In the United States, employer-based and individual purchases of private health insurance coverage play a major role, although governmental programs such as Medicaid and Medicare exist for the poor and the elderly. Private health insurance had traditionally secured patients' freedom of choice of health care providers and physicians' professional freedom and had paid providers on a fee-for-service basis. Now, the U.S. has 40 million uninsured persons who do not have access to medical services, although it spends as much as its 14% of GNP on health care. In the early 1990s, this became a major political problem. President Clinton proposed the 'Health Security Act' which would enable any American to have access to comprehensive health care with managed competition to activate the health care market, but it was not enacted. Nevertheless, it is clear that managed care and managed competition will dominate and that traditional fee-for-service plan will be eroded in the health care market. Japan has a universal health care system. We do not have any uninsured or high medical costs. However, it is difficult to improve the quality of health care services within the present system. Japan can learn the system about disclosure of health care information from the managed care in the U.S.

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A Population-Survey on Bone Mineral Density in a Fishing Village in Wakayama Prefecture (Part 2); The Analysis of the Risk Factors Affecting the Bone Mineral Density

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Abstract The purpose of this study was to detect factors affecting lumbar bone mineral density (BMD) of general inhabitants in a rural community. A cohort consisting of 2261 inhabitants aged 40-79 years was set up based on the resident registration in Taiji town, Wakayama Prefecture in 1992. Fifty men and 50 women in each of four age strata (40-49, 50-59, 60-69, 70-79), totaling 400 inhabitants, were selected randomly. After completion of a questionnaire by an interviewer, items about physical characteristics such as height, body weight, wrist length and grip power were measured. Examination of BMD of the lumbar spine and proximal femur by dual energy X-ray absorptiometry was performed. Correlation coefficients between BMDs and values of physical characteristics were determined. Lumbar BMD was examined to determine whether the following factors were positive or negative: past history, alcohol consumption, smoking habit, dietary habit, exercise, and in addition, pregnancy times and menstrual status for women.

Among the values of physical characteristics, body weight was the most closely correlated with lumbar BMD. The items that showed significantly high values as factors affecting lumbar BMD were a past history of diabetes mellitus (men and women in their 70s), and exercise (men in their 50s and women in their 40s). Regarding pregnancy times and menstruation, BMD in women with a history of childbirth was significantly higher than that in those without the history among the women in their 70s. Although the BMD in the women with lactation was significantly lower than that in those without it among the women in their 40s, there was no difference in BMD between the women with and without the history who were 50 years old or over. The effect of menstrual status was investigated according to years after menopause in the women in their 50s. BMD was significantly lower in the women with ar least six years after menopause than in those within five years.

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An Improved Method for Estimating Daily Intake of Environmental Contaminants Using Monte-Carlo Simulation

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Abstract We previously developed a new method for estimating intakes of environmental contaminants, called Estimated Ecological Daily Intake (EEDI), which is based on food consumption data. This method accurately estimates the intakes of food additives and contaminants and provides rough estimates of averages and distribution curves for the target population. By this method, we originally considered only food consumption, but did take into account the contamination level of each food article. Therefore, we attempted to improve EEDI by incorporating contamination levels of foodstuffs.

Practically, we developed an improved Estimated Ecological Daily Intake estimation method for the daily intake of food contaminants and additives, and estimated daily intake of environmental contaminants based on food consumption data of 159 female volunteers, assuming that the contamination level follows Poisson distribution.

The results obtained are as follows:

1) Estimated intakes were found to be accurate enough to obtain important values of distribution, such as mean, maximum value, mode, and median, which could be used to determine a standard.
2) Comparing the distribution of the estimated intakes, with that of intakes estimated by the fixed contamination level, the class-containing mode became lower and the class-containing the maximum value became higher.
3) This method was shown to provide information on the risk or probability of exceeding tolerable intake due to excessive food consumption or eating highly contaminated foods.

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