

EDP 05

OCCUPATIONAL CANCER PREVENTION
H. Kollmeier

For the time being it is impossible to indicate precisely the proportion of cancer cases attributed to occupational hazards, the more so as there are an enormous number of existing chemicals on which data are currently inadequate. Doll & Peto (JNCI 66, 1192, 1981) attribute 4% (2-8%) of the cancer mortality (1978) in the USA to occupational causes. Occupational cancer is predominantly caused by chemicals, partly also by radiation -X-rays, UV(B)-. 3/4 of the occupational cancer mortality concern the lungs; furthermore leukemia and urothelial tumors are comparatively more frequent whereas other localisations are rarely to be found. The cancer risks concentrate upon a comparatively small section of the activities spectrum, i.e. for more than 12% of all cancer among (male) blue collar workers (Nicholson WJ, Am J Ind Med 5, 341, 1984). Especially in the last decade, comprehensive protective regulations have been issued to eliminate or rigorously reduce the occupational cancer risk, e.g. the ArbStoffV (1980/82) and the GefStoffV (to be issued shortly), the ChemG (1980), the RöV (1973/76), the StrlSchV (1976) and numerous standards, accident prevention regulations (e.g. VBG 100, 113) and detailed codes of practice (e.g. TRGA 401, 900, 910). The employer is required to establish the carcinogenic properties (marking, manufacturer's obligation to give information; product liability), to consider the use of possible substitutes and to determine and assess the occupational cancer risks (ambient monitoring); in addition, he is responsible for informations and graduated technical measures where a total elimination of the carcinogens is (yet) impossible for social and economic reasons. Health surveillance and biological monitoring are widely standardized and include the past employee. Hypersensitive methods increasingly used tend to detect earliest strain symptoms; in this context the hypersusceptibility due to genetic factors is a special problem.

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EDP 06

THE EPIDEMIOLOGICAL APPROACH TO CANCER PREVENTION
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In this overview the various types of epidemiological information which permit (a) to establish qualitatively the potential for primary cancer prevention, and (b) to assess this potential quantitatively will be discussed.

Emphasis will be given to diet-related cancers (stomach and colon-rectum) and estimates will be presented as to what proportion of these cancers can be expected to be avoided, would certain changes in dietary habits take place in the populations concerned. Depending on several assumptions, it can be suggested that the proportion of gastro-intestinal cancers which could be prevented if populations altered their dietary habits is in the order of 20%.

There is evidence for a potential for chemoprevention of some cancers, but an epidemiological proof will be difficult to achieve as illustrated by one yet completed study (Muñoz, Wahrendorf, Lu et al., Lancet, II, 112-114, 1985).

Finally, it will be outlined that observational epidemiological studies can indeed mimic the situation of randomized research, and it will be suggested to evaluate the pertinent question of the effectiveness of screening for colo-rectal cancer by the haemoccult blood test by such means.

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EDP 07

WHAT CAN EARLY DETECTION REACH AT OPTIMAL TUMOR
MODEL? EARLY DETECTION OF CERVICAL CANCER 1968
to 1985
G. MÖBIUS

Gynaecological cytology has been practiced in the district of Schwerin since 1964, intensified since 1968. Its population of almost 600,000 has remained practically unchanged for 20 years now. The proportion of the female population over 20 included in these preventive cytological examinations has risen from 1,5 % in 1965 to approximately 55 % of all the women in the age group between 20 and 60 years by annually screening or 65 % by biannually screening. The incidence of cervical carcinoma decreased from 38.9 in 1969 to 20.7 per 100,000 women in 1982 (53 % of the initial figure). The mortality decreased from 25.1 to as little as 9.7 (39 % of the initial figure). In the decrease of incidence and mortality a stagnation has been observed since 1979. Because invasive cervical carcinoma is theoretically avoidable, all 193 new cases observed 1980 to 1982 were investigated concerning the participation in screening and reasons of failure. 129 of these women (66.8 %; average age 60.6) failed to show up for examination more than five years before diagnosis of invasive cancer. 64 women (33.2 %; average age 42.3) were examined by gynaecologists once or more in the five years preceding the diagnosis of cancer. Independent review of smears explained the highest number of negative smears by nonobtaining of representative material, only 3.1 % as false interpretation of the cytological finding.

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EDP 08

EARLY RECOGNITION OF DERMATOLOGIC TUMORS EXAMPLIFIED BY
MALIGNANT MELANOMS.
RECOGNITION OF EARLY MELANOMAS AND PRECURSORS OF MALIGNANT
MELANOMS. A REDUCTION IN THE PRETHERAPEUTIC PHASE MAKES THE
FIGHT AGAINST MELANOMA MORE SUCCESSFUL.
G. Rassner

Early removal and early diagnosis of malignant melanoma have improved our fight against malignant melanoma. In order to recognize a malignant melanoma early, 1. the patient has to see the doctor, 2. the doctor has to make the correct diagnosis.

In our study the pretherapeutic phase of 138 patients was analyzed. The pretherapeutic phase consists of the time which elapses between the first clinical symptoms and the initiation of therapy.

The pretherapeutic phase took up 7 months in 50% of the patients, more than 2 years in 25% of the patients. Only in 50% of the cases the patients noticed the melanomas themselves; frequently the melanoma was noticed by family members or it was a coincidental finding when the physician was consulted for something else.

The first consultation initiated the primary therapy in 50% of the cases within 3 weeks, in 20% it took 5 months or longer, in 10% it took 18 months and longer.

A second study consisting of 300 patients dealt with the early recognition of melanomas and precursors of melanomas. By clinical and histological examination atypical or dysplastic nevi have been identified which are precursors of melanomas or already early melanomas. An additional improvement in the early recognition of melanomas can be accomplished by incident light microscopy.

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