TNM 01

PROGNOSTIC VARIABLES AND THEIR SIGNIFICANCE

P.Tautu and G.Wagner

The paper is a theoretical-probabilistic approach to the problem of predictor variables in human neoplasias. In clinical medicine,prognosis is thought of as the prediction of either the course (and outcome) or the duration of a patient's disease (particularly a chronic one). Accordingly, the significant patho-physiological traits that influence (modulate or determine) the course and the duration of a given disease are called "prognostic factors". Mathematically speaking,they represent explanatory (predictor,concomitant) variables involved in certain stochastic dependence relations. The delineation (identification) of prognostic factors provides insight into the mechanisms of a disease and makes more accurate clinical predictions possible. This knowledge facilitates the statistical analysis of randomized clinical trials (adjustment for prognostic factors, search for treatment-covariate interactions) and their design (inclusion criteria,stratification) as well as the statistical evaluation of complementary tests.

The research in progress is focused only on a particular situation by identifying the disease duration with the survival time. The main and difficult problem,namely the prediction of the course of the disease (i.e. the dynamics of the process),is still overlooked. The construction of conditional stochastic disease models is suggested as the appropriate mode of investigation in this area.

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TNM 02

COMPARATIVE STUDY OF PATIENTS WITH SMALL CELL LUNG CARCINOMA (SCLC) WITHIN AND OUTSIDE OF CLINICAL TRIAL

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From 1981 until 1983 282 patients with SCLC were treated for the first time at the CHEST-HOSPITAL HEIDELBERG-ROHRBACH. 85 patients of these were integrated in a clinical trial, 197 were treated with other therapeutic regimes.

A comparative analysis should prove whether there is a difference between these two groups and supposed there is any whether it depends on the criterions of exclusion. It was shown that the structure of both collectives concerning the prognostic factors (sex, general conditions measured by Karnofsky scale, tumour extension, loss of weight) was not influenced by criterions of exclusion, survival was nearly identical (members of study/other group: median survival 10 months/7 months; one-year-survival; 32%/28%).

Further analysis of patients not in trial revealed best prognosis for patients with surgical treatment (median survival 13 months), worst results for patients with Karnofsky scale less than 50%. In opposite to these facts survival of patients older than 70 years was similar to patients in trial group.

Therefore, importance of surgical treatment and Karnofsky scale as criterions of exclusion could be proved, but patients older than 70 years should have chance to be integrated into a clinical trial.

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TNM 03

PROGNOSIS RELATED TO STAGE AND THERAPY / COLORECTAL CARCINOMA

P.Hermanek

Early colorectal carcinoma has an excellent prognosis (age-corrected 10-year survival 100 %) which can be achieved not only by classical radical surgery but also by limited procedures provided that certain selection criteria (adenocarcinoma and mucinous adenocarcinoma, grade 1 and 2, no lymphatic invasion) are strictly observed.

The classical radical surgery for advanced colonic carcinoma (defined as carcinoma with invasion beyond the submucosa) without involvement of adjacent organs is standardized since many years. For rectal carcinoma of this stage, however, the indications for low anterior resection versus abdomino-perineal excision are discussed controversely until now. The analysis of local recurrence rates and survival demonstrates that the results of low anterior resection for rectal carcinoma are significantly influenced by the extent of the distal margin of clearance. This is valid for tumors with and without lymphnode metastases and for tumors of all histological grades. If, in low anterior resection, the distal margin of clearance does not exceed 3 cm (measured in the fresh unstretched surgical specimen, and corressponding to about 5 cm in situ), the incidence rate of local recurrence increases and worsens the prognosis.

Tumor perforation is another factor which worsens the results of classical radical surgery within cases of the same stages. This is especially important in abdomino-perineal excision of the rectum and in extended surgery for cases with invasion of adjacent organs.

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TNM 04

PROGNOSE-RELEVANCE OF STAGE AND THERAPY IN GASTRIC CANCER

F.P. Gall

The relevance of tumorstage and therapy was studied in 1500 gastric cancers, seen from 1969-84.

The 5-year survival rate, age corrected, mortality excluded, was 80 $\pm$ 11% in stage Ia, 74 $\pm$ 9% in stage Ia, 46 $\pm$ 12% in stage II, 23 $\pm$ 9% in stage III and 7 $\pm$ 5% in stage IV.

For early gastric cancer (n= 148) a 5-year survival of 80 $\pm$ 11% was recorded.

The prognosis was also influenced mainly by the surgical procedure. In patients without tumor removal the 5-year survival was 0.4 $\pm$ 0.7%, with tumor removal it was 34.5 $\pm$ 3.4% and for curative resections 40.8 $\pm$ 3.9 %. In cancer of the intestinal typ 47.9 $\pm$ 6% and in the diffuse typ 35.8 $\pm$ 5.7% survived 5 years.

A major factor of prognosis was the proximal margin of clearance; in cases with a distance of clearance of $>$ 5 cm, the 5-year survival was 40.5% and with a clearance of $<$ 5 cm it was 59.9 %.

The prognosis was also related to the extend of the radical operation. For subtotal distal resection a postoperative mortality of 5 %, for total gastrectomy of 13 % and for extended total gastrectomy of 25 % was recorded.

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