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# **PROGNOSTIC FACTORS IN INOPERABLE ADENOCARCINOMA OF THE LUNG: A MULTIVARIATE REGRESSION ANALYSIS IN 259 PATIENTS.**

J.B. Sørensen, J.H. Badsberg, J. Olsen.  
Department of Oncology ONB, Finsen Institute,  
Copenhagen, Denmark.

The prognostic factors for survival in advanced adenocarcinoma of the lung were investigated in a consecutive series of 259 pts. treated with chemotherapy. Twenty-seven pretreatment variables were investigated by use of Cox's multivariate regression model. Factors predicting poor survival were low performance status, no surgical resection, liver metastases, high values of white blood cell count (WBC) and lactate dehydrogenase (LDH) and low values of aspartate aminotransaminase (ASAT). The non-radical resection may not be a prognostic factor because of the resection itself, but rather serve as an indicator for patients having minimal disease spread. Liver metastases was the only prognostic factor requiring more than patient history and laboratory values. A new Cox analysis ignoring the influence of this variables revealed no other variable than those occurring in the former Cox model to be of importance (performance status, surgical resection, WBC, ASAT and LDH). This simplified model appears to be a feasible clinical tool based on easily obtainable information, allowing for prognostic stratification of patients without extensive staging when first the inoperability of the patient is known.

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# **RESPONSE TO CYTOSTATIC TREATMENT IN INOPERABLE ADENOCARCINOMA OF THE LUNG: CLINICAL IMPLICATIONS**

J.B. Sørensen, J.H. Badsberg, H.H. Hansen.  
Department of Oncology ONB, Finsen Institute,  
Copenhagen, Denmark.

The present study evaluated prognostic factors for response and the prognostic impact of response status on survival among 218 inoperable patients (pts.) with adenocarcinoma of the lung. All pts. had measurable (110 pts.) or evaluable disease parameter (108 pts.) and 53 achieved a complete or partial response (23%). A multiple logistic regression analysis including 27 pretreatment variables revealed only disease parameter to be a significant predictor of response among patients alive 16 weeks after treatment start. Univariate analyses among 189 patients alive at 8 weeks, 173 at 12 weeks, 157 at 16 weeks and 122 patients alive at 24 weeks showed no significant survival differences between responding and non-responding patients. The ratio of intensity of death for non-responding and responding patients at these landmark times was 0.91 (95% confidence interval: 0.48-1.73), 0.89 (0.60-1.33), 0.79 (0.54-1.16), and 0.73 (0.49-1.09), respectively. No prognostic impact of response status ( $p = 0.57$ ) was demonstrated in a multivariate regression analysis including 27 pretreatment variables as well as response status for future survival among patients alive at 16 weeks. Thus, response status was not a major prognostic factor for future survival.

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# **EFFECT OF SCREENING ON INCIDENCE AND MORTALITY OF CERVICAL CANCER IN DENMARK**

Elsebeth Lynge, Mette Madsen, Gerda Engholm.

Danish Cancer Registry and Danish Institute of Clinical Epidemiology.

Pap smears were used only on a limited scale in Denmark until the late 1960s. Since then smears have been taken both in organized screening programmes and outside the programmes by GPs, private gynaecologists and hospital wards. The present smear taking activity is equivalent to an average of one smear every second year per woman. As the responsibility for health care rests with the counties in Denmark, differences are found between the counties both concerning organization of screening programmes, and concerning the overall level of the smear taking activity. An analysis using multiplicative poisson models on county based incidence and mortality data for women aged 30-59 years in 1963-82, showed a statistical significant effect of organized screening in reducing both the incidence (RR=0.67, 95% CI 0.61-0.73), and the mortality (RR=0.68, 95% CI 0.59-0.78) of cervical cancer from five years after introduction of a screening programme. The level of overall smear taking activity was found to be of limited importance, when organized screening was taken into account.

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# **CARBOHYDRATE ANTIGEN CHANGES IN EXPERIMENTAL RAT BLADDER CANCER: IMMUNOCYTOLOGY AND IMMUNOHISTOLOGY.**

N.C.Langkilde, P.Nørgård, J.Hastrup, S.Olsen, H. Wolf and T.F.Ørntoft.

The Danish Cancer Society, Dept Exp Clin Oncology, Dept Pathol, the Municipal Hospital of Aarhus, and Dept Surgery I, Aarhus County Hospital, Aarhus, Denmark.

We have studied carbohydrate antigen expression in urothelium and exfoliated cells in urine by the use of the lectins Peanut Agglutinin (PNA) and Wheat Germ Agglutinin (WGA) in an N-Nitroso-N-Methyl-Urea (NMU) induced rat bladder cancer model. The stainings were performed with a conventional indirect peroxidase method using biotinylated lectins and avidin-biotin-complex. Using WGA as ligand we found that normal urothelium only stained in cytoplasm, whereas atypical urothelium stained on membranes. The number of membrane stained cells increased with increasing grade of atypia. PNA stainings showed both membranous and cytoplasmic staining in both normal and atypical urothelium. The WGA stainings of urine sediments showed a significantly higher number of positive cells among morphologically normal cells from NMU-treated animals, than among cells from control animals. We conclude that WGA detects changes in carbohydrate antigen structure associated with the development of rat urothelial atypia, and that changes in exfoliated urothelial cells can be detected before morphological changes are recognized.