

# ONCOGENE AND GROWTH FACTOR INVOLVEMENT IN PROSTATIC DISEASE

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The mitogenic properties of proteins secreted by several established prostatic tumour cell lines have been examined in a number of bio-assay systems. A novel growth promoter, affecting normal prostatic epithelium *in vitro* has been partially purified and characterized. While the presence of such autoregulatory factors in androgen-independent prostatic tumours may be involved in the development of tumour autonomy, the interdependence of growth factor activities with other regulatory mechanisms identified in prostatic tumours is of obvious interest. In related studies, the binding of radioiodinated epidermal growth factor (EGF) has been examined in human prostatic cancer and benign prostatic hypertrophy (BPH) specimens. High affinity, EGF receptors were detected in most samples and were demonstrated in the presence and absence of androgen receptors. The expression of cellular oncogenes was also evaluated in these specimens. Transcripts of c-myc, c-Ha-ras, c-Ki-ras, c-sis c-fos, c-myb, c-erb A, c-erb B, c-src and the p53 gene were found in BPH and prostatic cancer tissue, the first five most consistently. Oncogene expression has been correlated with tumour differentiation and androgen EGF receptor status.

# IS PROSTATE-SPECIFIC ANTIGEN (PSA) THE MOST USEFUL MARKER FOR SCREENING IN PROSTATE CANCER ?

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Prostate-specific antigen (PSA) and prostatic acid phosphatase (PAP) levels were determined in 241 patients attending the department of Urology. The population consisted of 140 prostate cancer patients (34 newly diagnosed and 106 under treatment) and 101 patients with benign prostatic hypertrophy (BPH). The diagnostic values of PAP measured by enzymatic assay (EA) and by immunoenzymetric assay (IEMA) appeared to be similar. Elevated PAP (IEMA) levels were found in 10% of the patients with BPH and in 38% of the cancer patients. PSA was measured by immunoradiometric assay (IRMA) and receiver operating characteristic curves were constructed to compare the diagnostic values at different cutoff values. PSA (10 ug/l) reached a specificity of 80% and a sensitivity of 46%. With a cutoff value of 2.7 ug/l the sensitivity increased to 64%, whereas the specificity lowered to 58%. It is concluded that PSA is the most useful marker as a screening test.

# SIGNIFICANCE OF THE HISTOLOGIC PATTERN (ACINAR VERSUS DUCTAL) IN THE PROGNOSIS OF PROSTATIC CARCINOMA

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We have reviewed the histologic sections of 469 patients with prostatic carcinoma diagnosed between January 1970 and December 1986. 258 patients were followed-up for more than five years. 408 patients (86.9%) had adenocarcinoma of acinar origin and 34 patients (7.2%) adenocarcinoma of ductal origin. We also analyzed total survival as a function of several prognostic factors for both groups.

# SMALL CELL ANAPLASTIC PROSTATIC CARCINOMA ASSOCIATED WITH ADENOCARCINOMA OF THE PROSTATE: TWO NEW CASES AND REVIEW OF THE LITERATURE

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Two additional cases of small cell anaplastic prostatic carcinoma associated with adenocarcinoma, diagnosed by different methods, are presented. All cases lead to death in a short period of time. The histologic and histochemical findings are analyzed.