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PROSTATIC SPECIFIC ANTIGEN (PSA) IN PROSTATIC CANCER.

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PSA serum levels have been evaluated in 75 patients with previously untreated prostatic cancer with radio-immuno-assay in competition (Travenol) at presentation and every 3 months after treatment. In the same period, PSA was evaluated in 523 patients (120 males considered to be normal, 180 patients with non prostatic carcinoma and 223 patients with benign prostatic hypertrophy (BPH). In stage C and D prostatic cancer, PSA levels were much higher than in BPH. However, in early stage prostatic cancer and in BPH, PSA levels were similar (10 to 50 ng/ml). Curative treatment results in PSA decrease to undetectable serum levels. Following hormonal treatment, monitoring of clinical staging and PSA serum levels are parallel.
In conclusion, our data suggest that PSA is not a specific serum marker of prostatic cancer. However, increased serum PSA levels must draw the physician's attention on the possible presence of prostatic cancer. Following treatment, PSA serum levels can be useful to follow up the disease, especially after radical prostatectomy.

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SPECIFICITY ANALYSIS OF TWO NEW MOUSE MONOCLONAL ANTIBODIES REACTIVE WITH PROSTATE CANCER.

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We have generated 2 new mouse monoclonal antibodies (mAb) against prostate cancer. P25.48 (IgG3) and P25.91 (IgG2a) were derived from a fusion using fresh prostate cancer cells as the immunogen. Initial screening was performed by indirect immunofluorescence on frozen tissue sections of prostate cancer specimens. The specificity analysis was performed by indirect immunoperoxidase on frozen sections of normal tissues and benign and malignant prostate tissues.
P25.48 and P25.91 showed restricted patterns of reactivity in normal tissues. P25.48 did not react with any normal tissues tested except for staining in some ducts of female breast tissues (1/35). P25.91 reacted only with proximal tubules of the kidney (weak reactivity in 1 out of 3 specimens) and with some ducts of female breast tissues (2/35).
P25.48 and P25.91 did not react with benign prostatic tissues (0/15), but reacted with a subset of the malignant prostatic tissues tested (7/13). Both mAb reacted with the same malignant prostatic tissues suggesting that they may recognize the same antigen. In those malignant prostatic tissues staining with P25.48 and P25.91, the benign prostatic epithelium remained unstained. These findings suggest that the antigen(s) recognized is selectively expressed by malignant prostatic cells. These antibodies may become useful for the diagnosis classification or management of prostate cancer.

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THE TREATMENT OF METASTATIC PROSTATIC CANCER WITH THE SLOW RELEASE LHRH ANALOGUE, "ZOLADEX"

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With the synthesis and development of potent LHRH analogues a new modality of hormonal treatment for metastatic prostatic cancer has now been introduced into urological practice. A prospective study was carried out in 55 previously untreated patients with metastatic prostatic cancer to evaluate the clinical and endocrine response to treatment with the LHRH analogue, ZOLADEX, administered as a monthly depot injection. The subjective response was assessed on the basis of relief of bone pain, reduced analgesic requirement, and the resolution of clinical signs. Objective response was assessed by means of changes in acid and alkaline phosphatase, bone scan appearances, serum LH and testosteroene values and per-rectal ultrasound measurement of prostate size. 70% of the patients were completely relieved of their bone pain with treatment. However, 35% suffered a return of symptoms and disease progression with 2-16 months (mean 8.8 months). There was complete resolution of lymphoedema in 3 patients. Prostatic acid phosphatase was raised in 76% of patients, this decreased to normal values in 3/4 of these patients. Both acid and alkaline phosphatase rose prior to signs and symptoms of relapse. Although there was improvement in bone scan appearances with treatment in no case did the bone scan become normal. In all patients studied the per-rectal ultrasound showed a reduction in prostate size, with the maximum reduction occurring within the first 3 months of treatment. There was an overall reduction in prostate size of 63% after 12 months of treatment. Gonadal androgen suppression was achieved in all patients; following an initial stimulation after the first depot injection, LH and testosterone were maximally suppressed with testosterone reaching castrate levels by 21 days. Serious side effects were not encountered in this study. The depot formulation is a simple, safe and convenient method of administering Zoladex and offers an alternative hormonal treatment for metastatic prostatic cancer.

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Results of a combined treatment in advanced prostate cancer

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In 78 patients with prostate cancer stage D2 orchiectomy was performed as basis therapy. In a prospective study the patients were randomized to four groups, three groups received an additionel endocrine treatment (I. diethylstilbendiphosphate, II. prednisone, III. cyproterone acetate, IV. placebo).

Serum testosterone was significantly reduced only in those patients who received additionel prednisone. After one year we found a tumor remission in 67 %, the best results were seen in group II and III (73 %, 77 %). After two years the remission rate was 41 % and after five years 9 %. Only one patient out of the cyproterone acetate group with bone metastases lived more than 10 years with a tumor remission.