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Significance of PSA and PAP in patients with or without prostatic cancer.

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PSA and PAP levels are measured using radio-immunological essay (Yang Lob).

. in patients from our institution with prostatic cancer untreated or in follow-up. 235 serum samples were collected from 71 patients. Preliminary results support the conclusions that PSA is a more sensitive marker than PAP.

. in patients with "apparently benign prostatic hyperplasia" moderately high PSA levels found in some cases (2,5 ng and 20 ng) are either false positive or the expression of an undecteted carcinoma. What should be done with these patients ? Close follow-up or surgical removal ? This is still an ongoing study.

. in controls of different ages to determine if there is a significant PSA increase in relation with age. On finding such a significant relationship, we would be able to compare these results to these obtained with healthy male participants in a cancer screening program and then to interpret the impact of PSA and digital rectal examination on early detection of prostatic carcinoma.

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IS THE DETERMINATION OF BONE MARROW ACID PHOSPHATASE A USEFUL TEST IN PROSTATIC CANCER?

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The value of bone marrow acid phosphatase(BMAP) in the staging of prostatic cancer has been a controversial issue. We have studied its part in 26 patients suffering from prostatic cancer: 7 stage B, 7 stage C, 12 stage D2. We have measured serum prostatic acid phosphatase(SPAP) and BMAP simultaneously by enzyme immunoassay at primodiagnosis. The normal range was 2 ng/ml for SPAP and 4 ng/ml for BMAP. Of the 14 patients initially staged B and C, 4 display progressive disease noted by a positive scan. All of them are positive for both SPAP and BMAP. Ten patients are disease free: SPAP is negative in all cases but BMAP is negative in only 5.

	M+	M-
SPAP+	4	-
SPAP-	-	10

	M+	M-
BMAP+	4	5
BMAP-	-	5

All stage D2 patients are BMAP positive, while 2 patients are SPAP negative. The BMAP value is consistently higher than the corresponding SPAP concentration in 10 pts ($p < 0.001$). BMAP is not an effective test in predicting osseous metastases (specificity 50%) and does not provide any further information compared to the use of peripheral serum specimens. On the other hand, SPAP has the distinct advantage of being much more easily obtained.

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A COMPARISON OF LEUPROLIDE WITH FLUTAMIDE AND LEUPROLIDE IN PREVIOUSLY UNTREATED PATIENTS WITH CLINICAL STAGE D_2 CANCER OF THE PROSTATE, PHASE III, INTERGROUP STUDY-0036

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Complete androgen blockade for the treatment of advanced prostate cancer has been championed by Labrie. He has reported that with combination therapy both time to progression and survival are superior to historical controls treated with either DES or orchiectomy. In order to test these hypotheses an intergroup trial was instituted comparing Leuprolide alone to the combination of Leuprolide with Flutamide. Eligibility requirements included previously untreated histologically confirmed stage D2 adenocarinoma of the prostate, measurable bone or soft tissue metastases, performance status (PS) of 3 or better, acceptable renal and hepatic function, no severe cardiac disease, and no prior or concomitant endocrine therapy. Stratification at entry was on the basis of PS and none or minimal versus severe degree of bone metastases. After randomization, patients received either Leuprolide plus Flutamide 250 mg po tid. Patients were evaluated by the usual parameters on day 8, weeks 4 and 12, and every 12 weeks thereafter. 617 patients with newly diagnosed stage D2 cancer of the prostate were entered into this study between March, 1985 and April, 1986. The median age in the Leuprolide only group was 68.0 years (range 43-98 years), and in the combination arm (Leuprolide+Flutamide) 67 years (range 44-98 years). At registration 494 patients were stratified as severe disease, PS-0-2, 39 severe disease, PS-3, and 86 minimal disease, PS-0-2. There was no statistically significant difference in the toxicity between the two arms. There are currently 98 deaths in both arms combined. Time to progression was 12.8 months in the Leuprolide group and 14.5 months in the Leuprolide+Flutamide group. Median survival time has not been reached as yet at 20 months.

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SOME ADVANCES IN TUMOUR MARKERS OF PROSTATIC CANCER . AN HELP FOR THE CLINICIAN ?

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Combined results of Acid Phosphatase and Prostatic Specific Antigen (PSA) assays would improve a more accurate assessment of clinical response,and were able to detect the recurrence of metastatic growth before it become evident clinically, and the information obtained would enable the early modification of treatment regimens .

Not only the size of tumour but also its grade and more recently the combination of ploïdy (flow cytometry) with histological grading (Gleason numerical system) must be considered before selecting patients for active or expectant treatment . The practical problem has been to determine in loco-regional prostatic cancer the exact extent of the tumour .

All studies using either, surgery or irradation as a primary treatment show that all these parameters are pronostic related and for example, patients whose cancer have high DNA values and high tumour markers concentrations tended to have a worse prognosis .

Prostatic gland depends on androgens for its function and normal development ; published procedures grossly underestimate the receptor concentration (receptor stabilization, exchange assay improvement, radio-ligand specificity) .

Heterogeneity of prostatic cancer will be approached by stimultaneously determination of androgen receptors concentation, DNA content measurement, and pre-treatment levels of PAP and PSA .