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FUNDAMENTAL AND CLINICAL STUDY OF PAP
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This paper describes our fundamental and
clinical study of serum PAP with a 'Eiken'
PAP RIA Kit.
We measured a total of 121 sera (20 nor-
mal controls, 29 patients with benign pros-
tatic hypertrophy (BPH), 28 patients with
prostatic cancer and 44 patients with other
diseases.
The results are as follows: 1) Coeffi-
cients of variation for 3 control sera in
within-assay were 2.3, 2.7, 2.4%, and the
ones for 2 sera in between-assay were 14.7
and 6.5%. 2) Recovery test of 2 control
sera by the use of standard sera gave 108.2
and 100.1% on the average in C.V. Dilution
test of 3 sera of PAP high concentration by
the use of phosphate buffer showed almost
linear regression. 3) Normal value for se-
rum PAP ranged 1.26 ± 0.80ng/ml(mean+S.D.)
and dispersed under 2.75ng/ml. Thus, the
normal range was determined under 3ng/ml.
The mean serum PAP concentrations (mean+S.
D.) were 1.72 ± 1.25ng/ml for BPH, 52.13 ± 187.15ng/ml for prostatic cancer and 1.26 ± 1.64ng/ml for other diseases. 4) PAP and
Ac-P did not correlated high (r=0.635),
and PAP and CEA correlated high (r=0.885)
in the case of prostatic cancer. As for
the stage D, PAP was more useful than CEA,
and was significant in tracing the progress
of treatment.

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CORRELATION BETWEEN EXTENT OF METASTATIC
LESIONS IN WHOLE BODY BONE SCINTIGROPHY OF
POTIENTS WITH PROSTATIC CANCER AND PROSTATIC
ACID PHOSKHATASE(PAP)IN BLOOD WITH PAP RIA
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Whole body bone scintigraphy of thirteen
patients who were pathohistologically confi-
rmed prostatic cancer was processed by four
colors,and then the extent of bone metastas-
es was estimated quantitatively.On the basis
of this estimation,the grade of the expansi-
on of bone metastases was classified into 4
grades(0,1,2 and 3 grades).
And then,correlations of the expansion of
bone metastases with PAP,ACP and ALP levels
in blood were investigated.
The results are as follows:
1)Correlation between the extent of bone me-
tastases and PAP levels was relatively high
(r=0.81).
2)As for the relation between the expansion
grade of bone metastases and PAP levels,the
levels did nct increase in 0 and 1 grades,
but markedly increased in 2 and 3 grades.
ACP also showed a little similar tendency.
3)In the correlation of PAP with ACP and wi-
th ALP,ACP(r=0,78)was higher than ALP(r=0.42
).
4)Therefore,PAP levels seem to be a good
index of the extent of bone metastases in
prostatic cancer.

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CLINICAL EVALUATION OF THE PAP VALUE WITH
THE NEWLY APPLIED RIA ASSAY KIT. I.KOGA
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The increase of the prostatic acid phosp-
hatase value in the prostatic cancer patien-
ts has been published by many authors. Enzy-
me assay method for the measurement of PAP
had been used. But the sensibity is very
low. The newly developed RIA-PAP has utiliz-
ed since the end of 1978 in our hospital.
The method: PAP- RIA kit of Daiichi Seiyaku
is used. The studied group of patient is de-
vided largely three groups: prostatic cancer
of stage A and B, prostatic cancer of stage
C and D, and non cancer group of prostatitis
and prostatic hypertrophy. Results: PAP val-
ue of stage C and D group is always more th-
an 2.0 ng/ml. The decrease of PAP value was
occurred in the patients who responded well
for the treatment. But stage A and B group
value did'nt always visualize more than 2.0
ng/ml. The non cancer group value is usually
less than 2.0 ng/ml. Those facts might be
suggested the PAP value measured with RIA
method will be used for the indication of
the prognosis and the recurrence detection.
PAP value measured with RIA system is relia-
ble and useful for the clinical application.
Conclusion: Before the treatment of prostat-
ic cancer the RIA-PAP should be measured.
And the therapeutic results must be checked
with the PAP. But our clinical study still
now is going on to evaluate the exact data
of clinical application.

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MEASUREMENTS OF PROSTATIC ACID PHOSPHATASE
(PAP) BY RIA: COMPARISON OF PAP WITH OTHER
METHOD. T.HODA,   T.ASO,   T.ISHIGAMI and
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A determination of prostatic acid phos-
phatase in serum has been used as specific
tumor marker for diagnosis of prostatic ca-
ncer and for observation after treatment.
However, methods hitherto to measure enzyme
activity have problems in it's specificity
and sensitivity, and are not satisfactory.
We have studied two kinds of RIA kit and
also compared these kits with the Kind-King
method and the counter immuno electrophore-
sis method.The RIA gave 75% positive resul-
ts with 16 patients having prostatic cancer;
the Kind-King method and the CIEP method
gave 69% positive results, respectively.
With 9 patients having prostatic hypertrop-
hy, the RIA and the CIEP method gave all
negative results, but the Kind-King method
gave one positive result. Based on the
results of serum PAP, prostatic cancer can
be distinguished from prostatic hyper-
trophy. In the cases of PAP concentration
above 3.0 ng/ml, prostatic cancer can be
suspected. When prostatic cancer is classi-
fied to its progressing stages, a tendency
of increasing PAP values has been found as
the stage progresses. Thus, PAP RIA is
superior to the Kind-King and the CIEP met-
hod in sensitivity and accuracy. We think
that PAP will further increase its signifi-
cance as tumor marker.