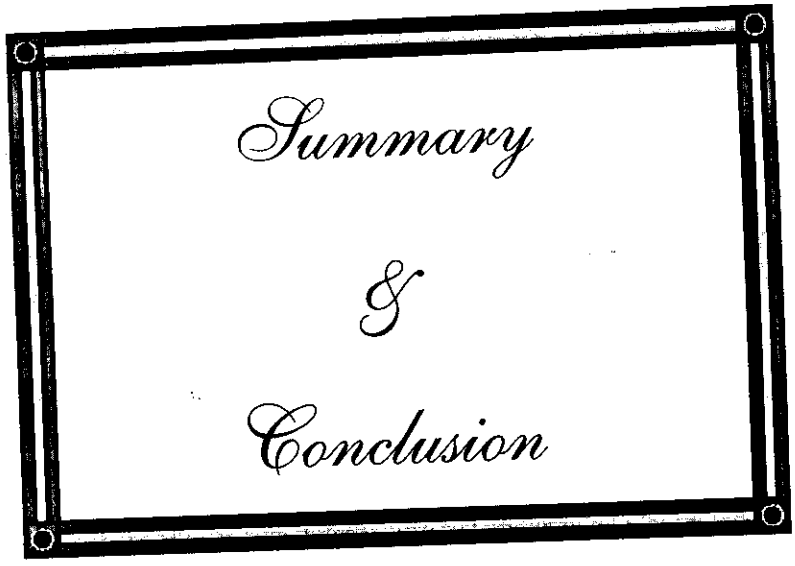
Summary
&
Conclusion

SUMMARY & CONCLUSION

The present study was performed on 70 individuals categorized as follows:

- Thirty patients suffering from bronchogenic carcinoma, (26 males and 4 females), 19 were smokers and 11 non-smokers with their age ranging from 33 to 80 years (mean of 63).
- Twenty patients with benign chest diseases, 10 patients with pulmonary tuberculosis, and 10 patients with chronic obstructive pulmonary disease, their sex and age were matched with bronchogenic carcinoma group.
- Twenty apparently healthy individuals as reference group, their sex and age were matched with other groups.

Serum samples were obtained from patients before treatment had been instituted in order to avoid any effect of therapy. Hemolytic sera were excluded to avoid the effect of hemolysis on serum markers.

CYFRA 21-1 levels were measured in the serum by an immunoradiometric assay (IRMA), using two mouse MoAb, KS 19-1 and BM 19-21. Serum CYFRA 21-1 of 1.1 ng/ml was considered the cut off value of CYFRA 21-1.

CEA levels were measured in the serum by the IMx CEA assay, a microparticle enzyme immunoassay (MEIA). Serum CEA of 3.6ng/ml was considered the cut-off value of CEA.

All the control subjects had normal CYFRA 21-1 and CEA serum levels.

In patients with benign chest disease five of the cases had elevated serum CYFRA 21-1 and seven of them had elevated serum CEA.

In patients with bronchogenic carcinoma only eight of the thirty cases had no elevation of CYFRA 21-1 serum level. Fourteen of the thirty cases had no elevation of CEA serum level.

Significantly elevated serum CYFRA 21-1 and CEA values were found in patients with lung cancer. When cancerous patients were segregated according to histopathologic classification to small and non-small cell lung cancer types, we found significant positive correlation between serum CYFRA 21-1 and CEA and the histopathologic type of the tumor. However, the most striking

elevation of serum CYFRA 21-1 and CEA was found in patients with squamous cell carcinoma.

It is apparent from the present study that, patients with advanced disease (stage IV) showed the highest percentage of positivity of both CYFRA 21-1 and CEA.

From the present study, the sensitivity of CYFRA 21-1 in bronchogenic carcinoma (73.3%) was found to be higher than the sensitivity of CEA (53.3%). Also, the specificity of CYFRA 21-1 (71.4%) was higher than the specificity of CEA (58.8%). The sensitivity of the combined measurement of CYFRA 21-1 and CEA (86.7%) was found to be higher than the sensitivity of CYFRA 21-1 alone.

It is apparent from the present study that, there was a significant intermarker correlation between CYFRA 21-1 and CEA.

Also there was a significant positive correlation between CYFRA 21-1 and lung cancer stage and also between CEA and lung cancer stage.

The introduction of each new laboratory parameter for diseases should be coupled with questions about the efficiency, reliability, sensitivity and specificity. When considering a new tumor marker, more questions should be added about its role in early diagnosis of disease, assessment of prognosis, monitoring of therapy, its role in clinical staging and prediction of response. In addition, it remains to be seen whether there is real need for this new index in view of the quality of the available alternative indices.

CYFRA 21-1 claims this special field of application because of the simplicity of the measurement, its reliability and being the most sensitive and specific indices of lung cancer. Moreover, it is a valuable and useful tumor marker for the monitoring of bronchogenic carcinoma especially in patients with non-small cell lung cancer, squamous cell type.