THE PROGNOSTIC VALUE OF FLOW CYTOMETRY (FCM) IN BENIGN AND MALIGNANT OVARIAN TUMORS

Thesis

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by

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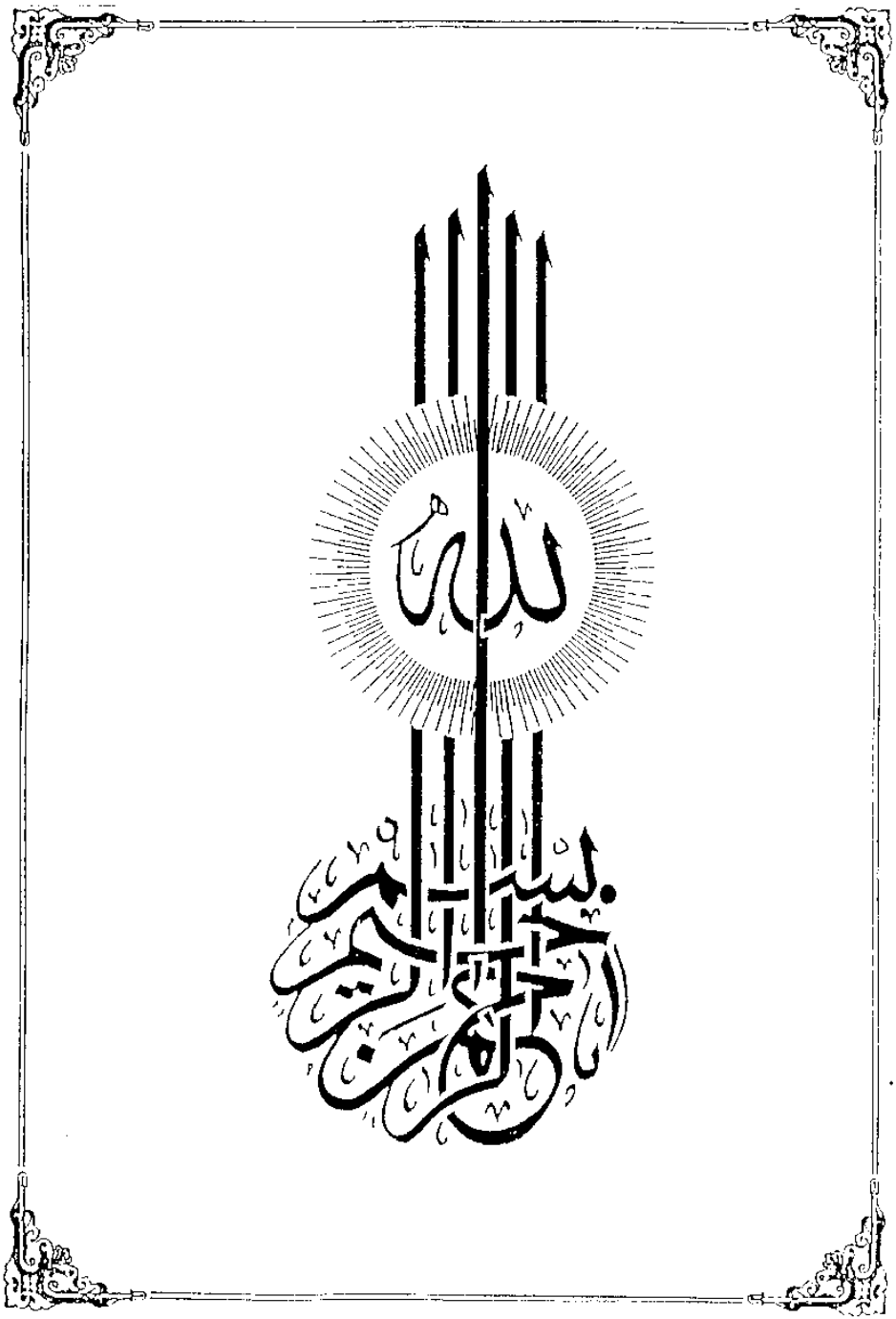

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INTRODUCTION

Ovarian carcinoma is the third most common malignancy of the female genital tract, yet it is the leading cause of death for all female genital tract cancers, and the fifth most common cause of cancer death among women (Disaia, P.J., 1993).

Symptoms are non specific and frequently do not bring the patient to the attention of the gynecologist until the disease is at an advanced stage.

Various clinical and pathologic parameters have been used to help determine prognosis and therapy in patients with high stage disease.

Several parameters have been used for tumor grading such as the percentage of undifferentiated cells, architectural features and nuclear grading which are subjective to a large extent. Significant intra and interobserver variations have been noted in the diagnosis made by experienced pathologists.

It has recently been shown that the DNA content of various malignant tumors provides an objective parameter reflecting tumor biological behavior and predict prognosis. Several studies on the DNA content of ovarian tumors as

determined by absorption cytometry has shown a relationship between ploidy and prognosis as well as tumor grade and histologic types. Image cytometric studies are time consuming, labor intensive and impractical for routine clinical use.

The technique of flow cytometry (FCM) allows thousands of measurements to be made in a fraction of the time it takes to do image analysis. DNA flow cytometric studies have revealed that in advanced ovarian cancer diploid tumors are associated with better prognosis than aneuploid. Moreover, the simultaneous evaluation of DNA index, the number of anenploid cells clones and S-phase fraction (SPF) gave additional prognostic information than the tumor ploidy alone (Schweler et al., 1993).

AIM OF THE WORK

This study will estimate the ploidy pattern and S-phase fraction (SPF) in benign and malignant ovarian tumors.

The serum levels of CA125 will be correlated with those of the flow cytometry, histopathological and clinical parameters of the patients.

The usefulness of the obtained data in the management of patients with these lesions will be declared.

REVIEW OF LITERATURE