

CYTOPHOTOMETRIC DNA ANALYSIS AS A PROGNOSTIC FACTOR IN PRIMARY LUNG CANCER

Thesis

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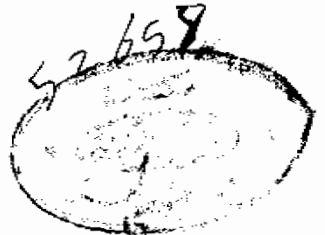
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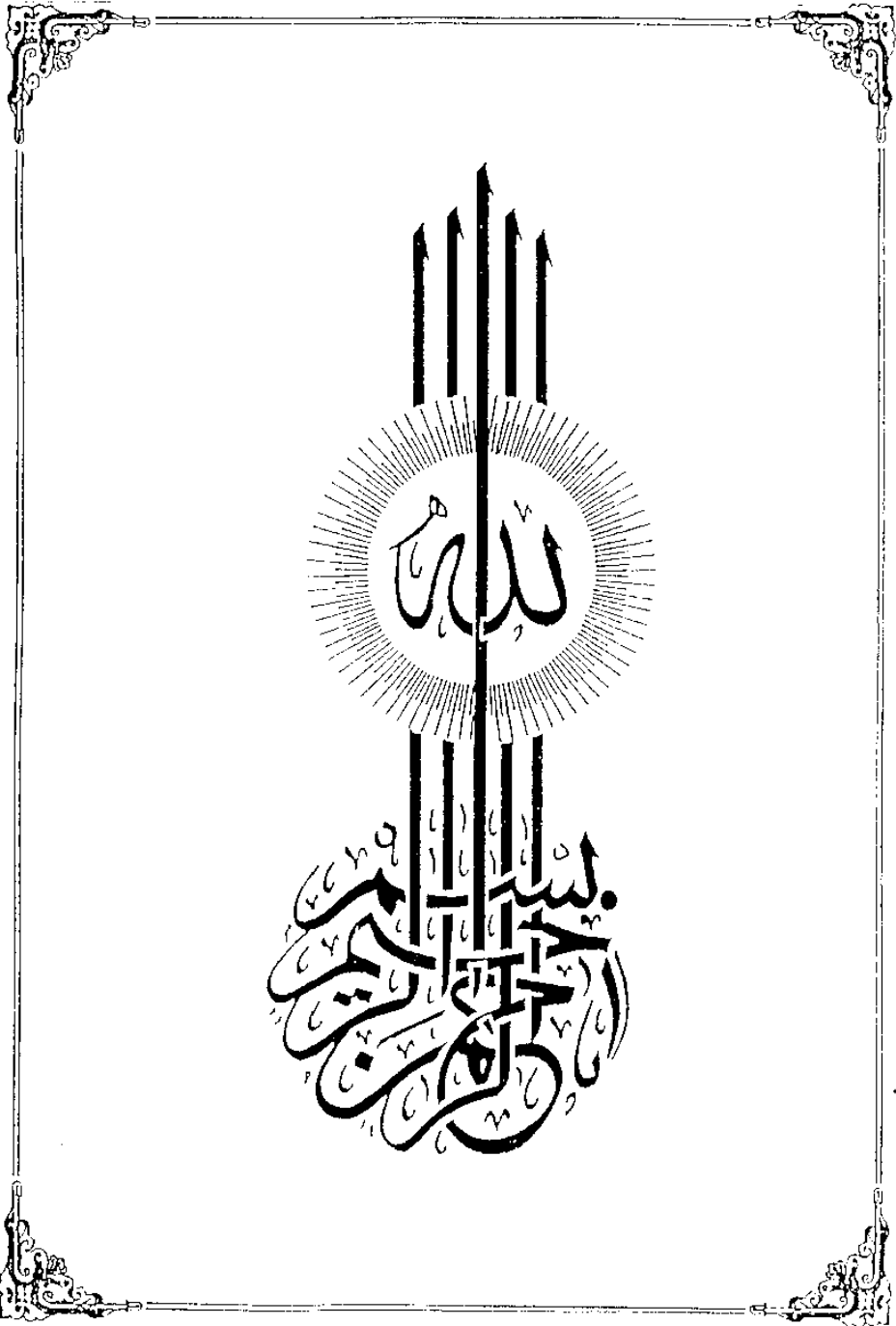


بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

"رب أوزعني أن أشكر نعمتك التي
أنعمت علي وعلى والدي وأن أعمل صالحا
ترضاه وأدخلني برحمتك في عبادك
الصالحين"

بِسْمِ اللَّهِ
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LIST OF ABBREVIATIONS

Adeno.	Adenocarcinoma
BAI	Bronchial Artery Infusion Chemotherapy
BSC	Best Supportive Care
DDP	Diamminedichloroplatinum
DNA	Deoxyribonucleic Acid
DVA	Vindesine
ECOG	Eastern Co-operative Oncology Group
erb-B	Avian Erythroblastosis Virus
F.O.B	Fiberoptic Bronchoscopy
fos	FBJ Osteosarcoma Virus
GRP	Gastrin Releasing Peptide
Ha-ras	Harvey Murine Sarcoma virus
Hb	Haemoglobin
HLA	Human Leucocytic Antigen
IL-2	Interleukin-2
ILI	Interleukin-1
INF	Interferon
jun	Avian Sarcoma Virus 17
Ki-ras	Kirsten Murine Sarcoma
LCLC	Large Cell Lung Cancer
LNS	Lymph Nodes
Met	Metastatic
MG	Malignancy Grade
MI	Malignancy Index
Mito	Mitomycin
Moabs	Monoclonal Antibodies
myb	Avian Myeloblastosis Virus
myc	Avian Myelocytomatosis Virus
NSCLC	Non Small Cell Lung Cancer
PAI	Proliferative Aneuploid Index

PCI	Prophylactic Cranial Irradiation
PFNA	Percutaneous Fine Needle Aspiration
PS	Performance Status
Pts	Patients
raF	3611 Nurine Sarcoma Virus
Resp. Dur.	Response Duration
RNA	Ribonucleic Acid
RTH	Radiotherapy
SCLC	Small Cell Lung Cancer
Sq. Ca	Squamous Cell Carcinoma
Src	Rous Sarcoma Virus
SVC	Superior Vena Cava
TAG	Tissue Associated Antigen
TCF	Transferrin Like Growth Factor
TRT	Thoracic Radiotherapy
Undff. Ca	Undifferentiated Cell Carcinoma
VIb	Vinblastin
2C-DI	2C Deviation Index
3P	Short Arm Chromosome 3

***Introduction and
Aim of The Work***

INTRODUCTION

Lung cancer is the major leading cause of cancer death throughout the world in men 35 years old or older, it is also the second leading cause of cancer death in women 35 years to 74 years old (Minna et al., 1989).

In spite of the known etiological factors for lung cancer as smoking and exposure to other carcinogens as asbestos and radon progeny, the overall cure rate of lung cancer is only 10% (Auerbach and Giasfink, 1991). This persuades for new recent approaches to prevention, diagnosis and staging of lung cancer, which is based on more understanding of molecular and cellular biology of the disease.

It is assumed nowadays, that carcinogens exposure probably enhanced by inheritance of a certain debrisoquine metabolic phenotype, leads to the production of growth factors and damage of DNA, creating many genetic lesions, resulting in locally invasive lesion, and activation of proto-oncogenes, thus increasing production and transcription of genes providing the malignant phenotype (Bunn et al., 1989).

Many chromosomal abnormalities either structural or numerical were detected in lung cancer specimens and cell lines, including 3p deletion and under presentation of chromosomal 13 and abnormalities on chromosomes 1, 2, 5, 6 and 9. For these observations, relatively recent technical advances are now used. Among these is the cellular DNA evaluation by cytometric ploidy determination. This method provides information about the total amount of DNA per cell which is indicative of the activity of the cell and it correlates with chromosomal numerical aberrations in lung cancer tumors (Siegfried et al., 1991).
