



The Relationship between Single Nucleotide Polymorphism of ERCC1 Gene and the Response to Platinum Based Chemotherapy in Egyptian Non-Small Cell Lung Cancer Patients

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By

Rana Ehab Moustafa Ahmed

M.B, B.Ch. Ain Shams University

Under Supervision of

Prof. Dr. Abeer Ibrahim Abd El-Mageed

Professor of Clinical Pathology

Faculty of Medicine, Ain Shams University

Assist. Prof. Dr. Manal Mohsen M.Kamal EL Din

Assistant Professor of Clinical Pathology

Faculty of Medicine, Ain Shams University

Assist. Prof. Dr. Heba M. Adel Abou Zaghla

Assistant Professor of Clinical Pathology

Faculty of Medicine, Ain Shams University

Dr. Dina Abdelmoneim Mahmoud Abdelhakam

Lecturer of Clinical Pathology

Faculty of Medicine, Ain Shams University

Faculty of Medicine

Ain Shams University

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بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

قالوا

لَسْبَدَانُكَ لَا نَعْلَمُ لَنَا
إِلَّا مَا عَلَّمْتَنَا إِنَّكَ أَنْتَ
الْعَلِيمُ الْعَظِيمُ

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Dedication

To:

My parents

for their endless love, support,

and continuous care

My Husband

&

My Son

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List of Abbreviations

Abb.	Full term
ADP	Adenosine di-phosphate
AID	Autoimmune deficiency
AJCC	American Joint Committee on Cancer
ALK	Anaplastic lymphoma kinase
ALT.....	Alanine aminotransferase
APE	Apurinic/Apyrimidinic endonuclease
ASN	Asparagine
AST.....	Aspartate aminotransferase
ATM	Ataxia-telangiectasia mutatd
ATP.....	Adenosine-tri-phosphate
ATR	Ataxia telangiectasia Rad3-related
BER	Base-excision repair
BRAF	B-Raf proto-oncogene gene
BRCA 2.....	Breast Cancer gene
CA 125.....	Cancer antigen 125
CAFs.....	Cancer-associated fibroblasts
CBC	Complete blood count
CEA	Carcinoembryonic antigen
CHK1.....	Checkpoint Kinase 1
CHK2	Checkpoint Kinase 2
COFS	Cerebro-oculo-facio-skeletal syndrome
COPD	Chronic obstructive pulmonary disease
CR.....	Complete response
CS	Cockayne syndrome
CSA	Cockayne syndrome group A
CSB	Cockayne syndrome group B
CT.....	Computed Tomography
CTCs	Circulating tumor cells
ctDNA	Circulating tumor DNA
CTR1	Copper transporter 1
DDR	DNA damage response

List of Abbreviations *cont...*

Abb.	Full term
DNA.....	Deoxyribonucleic acid
DNA PK.....	DNA Protein Kinase
dNTP	Deoxyribonucleotide triphosphate
DSB	Double strand break
ECOG PS	Eastern Cooperative Oncology Group Performance Status
EGFR.....	Epidermal growth factor receptor
EML4.....	Echinoderm microtubule associated protein- like 4
ERBB2.....	Erb-B2 receptor tyrosine kinase 2
FA	Fanconi anemia
FAM.....	Fluorescein amidites
GGR.....	Global genome repair
GSH.....	Glutathione
GWAS.....	Genome worldwide association studies
H. pylori	Helicobacter pylori
HDM2.....	Human double minute 2
HER2.....	Human epidermal growth factor receptor 2
HhH	Helix-hairpin-helix
HIFs.....	heterodimeric transcription factors
HIV	Human immunodeficiency virus
HPV	Human papilloma virus
HR	Homologous recombination
HS.....	Highly significant
ICL.....	Interstrand crosslinks
IL-6.....	Interleukin 6
IL-8.....	Interleukin 8
k3 EDTA.....	Tri-potassium ethylene diamine tetra acetate
KRAS.....	Kirsten rat sarcoma
LC	Lung cancer
Let-7	Lethal-7
MDH.....	Malate dehydrogenase

List of Abbreviations *cont...*

Abb.	Full term
MET.....	Mesenchymal–epithelial transition
MGB	Minor groove binder
MiR.....	OncomiRs
MiRNAs.....	MicroRNA
MMR.....	Mismatch repair
MRI.....	Magnetic resonance imaging
mRNA.....	Messenger RNA
MRP	Multidrug resistance protein
MT	Metallothionein proteins
Mtor	Mechanistic target of rapamycin
MWW.....	Mann– Whitney–Wilcoxon
N	Number
NER	Nucleotide excision repair
NFQ	A non-fluorescent quencher
NGS	Next-generation sequencing
NHEJ	Non- homologous end joining
NS.....	Non significant
NSCLC	Non- small cell lung carcinoma
NSE	Neuron-specific enolase
OCTs	Organic cation transporters
OS	Overall survival
P53.....	Tumor protein p53
P5P	Pyridoxal-5'-phosphate
PARP	Poly ADPribose polymerase
PCR	Polymerase chain reaction
PD.....	Progressive disease
PET-CT	Positron-emission tomography-computed tomography
PFS	Progression free survival
PR.....	Partial response
Pt	Platinum
P-value	Probability value

List of Abbreviations *cont...*

Abb.	Full term
RAS.....	Rat Sarcoma
RECIST	Response Evaluation Criteria In Solid Tumors
RET	Rearranged during Transfection gene
RFLP	Restriction Fragment Length Polymorphism
RNA Poll.....	RNA polymerase
RNA	Ribonucleic acid
RNAP.....	RNA polymerase
ROS	Reactive oxygen species
RPA	Replication Protein A
RRM1	Ribonucleotide Reductase Catalytic Subunit M1
RTK	Receptor tyrosine kinases
RT-PCR	Real-time polymerase chain reaction
S.....	Significant
SCC.....	Squamous cell lung cancer
SCCA	Squamous cell carcinoma antigen
SCLC	Small cell lung cancer
SD	Stable disease
SD	Standard deviation
SNP	Single nucleotide polymorphisms
SPSS.....	Statistical package of social science
SSB.....	Single strand break
SSDNA	Single stranded DNA
TCR	Transcription- coupled repair
TFIIH	Transcription/DNA repair factor IIIH
Tm	Melting temperature
TNM	Tumor, Node, Metastasis
TP53	Tumor protein 53 suppressor gene
TPA	Tissue Polypeptide Antigen
TS	Template Switching

List of Abbreviations *cont...*

Abb.	Full term
UICC	Union for International Cancer Control
UV	Ultraviolet
VAC A.....	Vacuolating cytotoxin A
VIC	Victoria
WB.....	Wash Buffer
WHO.....	World Health Organization
X2	Chi square test
XP	Xeroderma pigmentosum
XRCC1.....	X-ray repair cross-complementing protein 1