RECENT PROGNOSTIC PARAMETERS IN ACUTE MYELOID LEUKEMIA AND THEIR RELATION TO CLINICAL OUTCOME

Essay

Submitted for partial fulfillment of M.Sc. Degree
In ***Clinical and Chemical Pathology***

Presented by

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Botheina Ahmed Thabet Farweez

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Special Dedication To :

My Mum

My Father

My Lovely Sister Yousra

My Brother Mohammed

My Be loving Husband Mostafa

List of Abbreviations

-5	:	Monosomy 5
-7	:	Monosomy 7
AIDS	:	Acquired immune deficiency syndrome
AKT	:	Protein kinase B, a serine / threonine specific enzyme known as AKT
AL	:	Acute leukemia
ALL	:	Acute lymphoblastic leukemia
AML	:	Acute myeloid leukemia
Ang	:	Angiopoietin
ANLL	:	Acute non-lymphoblastic leukemia
AP	:	Acid phosphatase
Apaf-1	:	Apoptotic protease activating factor
APL	:	Acute promyelocytic leukemia
ARF	:	Alternate reading frame
AS_2O_3	:	Arsenic trioxide
ATP	:	Adenosine tri-phosphate
ATRA	:	All trans retinoic acid
BAALC	:	Brain and acute leukemia cytoplasmic gene
BAX	:	Bcl-2 associated protein
Bcl-2	:	B-cell lymphoma/leukemia-2 oncogene
BCR	:	Break point cluster region
b-FGF	:	basic fibroblast growth factor
BMMC's	:	Bone marrow mononuclear cells
BMT	:	Bone marrow transplantation
BRCP	:	Breast cancer resistance protein
CAE	:	Chloroacetate esterase
CAK	:	CDK-activating kinase complex
CBC	:	Complete blood count
CBF	:	Core binding factor
CBFα	:	Core binding factor alpha subunit
CBFβ	:	Core binding factor beta subunit
CBP	:	Core binding protein
CD	:	Cluster of differentiation

List of Abbreviations (Cont.)

CDK	:	Cyclin dependent kinase
CDKI	:	Cyclin dependent kinase inhibitor
cDNAs	:	Complementary DNAs
CEBPα	:	CAAT enhancer binding protein alpha
CGH	:	Comparative genomic hybridization
CML	:	Chronic myeloid leukemia
C-myc	:	Cellular myelocytoma
CNS	:	Central nervous system
CR	:	Complete remission
CRD	:	Complete remission duration
CREB	:	C-AMP response element binding protein CBP
CRR	:	Complete remission rate
CSF	:	Colony stimulating factor
CSFs	:	Colony stimulating factors
CXCR-4	:	Chemokine receptor-4
DCC	:	Deleted colorectal carcinoma gene
del	:	deletion
DFS	:	Disease free survival
der	:	derivative
DIC	:	Disseminated intravascular coagulopathy
DNA	:	Deoxyribonucleic acid
Dup	:	Duplication
EFS	:	Event free survival
EGF	:	Epidermal growth factor
EM	:	Electron microscope
EMD	:	Erythroblastic and/or megakaryocytic dysplasia
ETO	:	Eight twenty one
EVI1	:	Ectropic virus integration I gene
FA	:	Fanconi anemia
FAB	:	French-American British
FADD	:	Fas-associated death domain
FAK	:	Focal adhesion kinase

List of Abbreviations (Cont.)

Fas L	:	Fas-ligand
FISH	:	Fluorescence in-situ hybridization
FLT_3	:	Fms-like tyrosine kinase 3 receptor
FLT_3-L	:	Fms-like tyrosine kinase 3 ligand
FS	:	Free survival
G0	:	Gap phase zero
G1	:	Gap phase one
G2	:	Gap phase two
G-CSF	:	Granulocyte-monocyte colony stimulating factor
GIT	:	Gastrointestinal tract
GST	:	Glutathione-S-transferase
GSTM	:	Glutathione-S-transferase of mu class
GSTT	:	Glutathione-S-transferase of theta class
Hb	:	Hemoglobin
HDM-2	:	Human homologue of the mouse MDM-2 protein
HIDAC	:	High dose Ara-c
HLA	:	Human leucocyte antigen
HSVtK	:	Herpes simplex virus thymidine kinase gene
IAPs	:	Inhibitors of apoptosis proteins
IL1β	:	Interleukin 1 beta
IL-3	:	Interleukin-3
IL6	:	Interleukin-6
ILS	:	Interleukins
INK4	:	Inhibitors of cyclin dependent kinase 4
INF	:	Interferon
Inv	:	Inversion
ITD	:	Internal tendem duplication
JM	:	Juxtamembrane
kDa	:	Kilodalton
LDH	:	Lactate dehydrogenase
LM	:	Light microscope
LN	:	Lymph node

List of Abbreviations (Cont.)

LRP	:	Lung resistance protein
M-CSF	:	Macrophage-colony stimulating factor
MDR	:	Multi drug resistance
MDR-1 gene	:	Multi drug resistant gene
MDS	:	Myelodysplastic syndrome
M-FISH	:	Multi-colour FISH
MIC	:	Morphologic-immunologic-cytogenetic
MLL	:	Mixed lineage leukemia gene
MMPS	:	Marrow matrix metalloproteinases
MoAb's	:	Monoclonal antibodies
MPD	:	Myeloproliferative disorder
MPF	:	M-phase promoting factor
M-phase	:	Mitotic phase
MPO	:	Myeloperoxidase
MRD	:	Minimal residual disease
m-RNA	:	Messenger RNA
MRP	:	Multiple drug resistance related protein
MVP	:	Major vault protein
MYHII	:	Smooth muscle myosin heavy chain
NFI	:	Neurofibromatosis I
NK	:	Natural killer cell
NSE	:	Non specific esterase
OS	:	Overall survival
P	:	Short arm of the chromosome
p21	:	Protein 21 kDa
p53	:	Protein 53 kDa
PAS	:	Periodic acid schiff
PBSC	:	Peripheral blood stem cell
PCR	:	Polymerase chain reaction
PDGF	:	Platelet derived growth factor
P-gp	:	P-glycoprotein
PLCγ	:	Phospholipase C γ

List of Abbreviations (Cont.)

PLZF	:	Promyelocytic leukemia zinc finger
PML	:	Promyelocytic leukemia
PRb	:	Phosphorylated retinoblastoma
PRINS	:	Primed in-situ hybridization
PTD	:	Partial tandem duplication
q	:	Long arm of the chromosome
RARA	:	Retinoic acid receptor alpha
RAS-GAP	:	RAS GTpase-activating protein
Rb	:	Retinoblastoma
RIA	:	Radioimmunoassay
RNA	:	Ribonucleic acid
RQ-PCR	:	Real time PCR
RTKs	:	Receptor tyrosine kinases
RT-PCR	:	Reverse transcriptase-polymerase chain reaction
S-phase	:	Synthetic phase
SBB	:	Sudan black-B
SCF	:	Stem cell factor
sE	:	Soluble E-selectin
SHGF	:	Soluble hepatocyte growth factor
SKY	:	Spectral karyotyping
sL	:	Soluble L-selectin
sNRP1	:	Soluble neuropilin 1
SOCS	:	Suppressors of cytokines signaling
SOS	:	Son of sevenless guanine nucleotide exchange factor
STAT	:	Signal transducer and activator of transcription proteins
t	:	Translocation
TA	:	Telomerase activity
TdT	:	Terminal deoxynucleotide transferase
TGF-β	:	Transforming growth factor-beta
TIMPS	:	Tissue inhibitors of metalloproteinases

List of Abbreviations (Cont.)

TLC	:	Total leucocytic count
TNF	:	Tumor necrosis factor
TSG	:	Tumor suppressor gene
VEGF	:	Vascular endothelial growth factor
VEGFR	:	Vascular endothelial growth factor receptors
WAF	:	Wild type p53 activated fragment 1
WBC's	:	White blood cells
WHO	:	World Health Organization
Wt-1	:	Wilim's tumor 1 gene

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