Expression of Urinary miRNA as a Potential Biomarker for Bladder Cancer Diagnosis

Thesis

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By

Esraa Mohamed Ali
Demonstrator of Medical Biochemistry and Molecular Biology
(M.B., B.Ch)
Faculty of Medicine - Ain Shams University

Supervised By

Prof. Dr. Sanaa Eissa Mohamed
Professor of Medical Biochemistry and Molecular Biology
Faculty of Medicine
Ain Shams University.

Dr. Haidy Zakaria Habib
Lecturer of Medical Biochemistry and Molecular Biology
Faculty of Medicine
Ain Shams University.

Associate Prof. Dr. Mohamed Esmat Abbas
Associate Professor of Urology Department
Faculty of Medicine
Ain Shams University

Medical Biochemistry and Molecular Biology Department
Faculty of Medicine
Ain Shams University
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Contents

List of Abbreviations

Abb.	Meaning
ADAM9	A disintegrin and metalloprotease domain 9
Ago2	Argonaute protein 2
AJCC	American Joint Committee on Cancer
BAX	BCL2-associated X protein
BC	Bladder cancer
BCL2	B-cell lymphoma 2 gene
BCLA	Bladder cancer–specific nuclear matrix protein
bp	Base pair
BPH	Benign prostatic hypertrophy
BTA	Bladder tumor antigen
BTA-stat	A test for early detection of bladder cancer
BTA-TRAK	An assay to diagnose transitional cell carcinoma of the bladder
CD44	A cell surface glycoprotien
CDK	Cyclin dependent kinase
cDNA	Complementary DNA
CEACAM1	Carcinoembryonic antigen-related cell adhesion molecule
CertNDx	Bladder cancer assay test includes three types of tests; Hematuria Assessment, Molecular Grading, and Recurrence Monitoring.
CIS	Carcinoma in situ
c-MYC	Myelocytomatosis oncogene
CT	Computed tomography
CxBladder	A non-invasive bladder cancer detection test
DD23	Tumor-associated antigen for bladder cancer detection and recurrence monitoring.

Abb.	Meaning
DGCR8	DiGeorge syndrome chromosomal [or critical] region 8
DNA	Deoxynucleic acid
DNMT3A	DNA (cytosine-5-)-methyltransferase 3 alpha
ds	Double stranded
dsRNA	Double stranded RNA
FDA	US Food and Drug Administration
FDP	Fibrin/fibrinogen degradation products
FFPE	Formalin-fixed and paraffin embedded
FISH	Fluorescence in-situ hybridization
FOXO	Forkhead Box O subfamily of transcription factors
FSCN1	Fascin actin-bundling protein 1,
G1	Gap1 phase of cell cycle
GST	Glutathione S-transferase
GSTP1	Glutathione S-transferase P 1
HCC	Hepatocellular carcinoma
HDAC4	Histone deacetylase
HNPCC	Hereditary non-polyposis colorectal cancer
IARC	International Agency for Research on Cancer
ImmunoCyt/uCyt+	urinary marker assay with high sensitivity for the diagnosis of urothelial carcinoma (UC)
ISH	In situ hybridization
ISUP	International society of Urological Pathology
IVP	Intravenous pyelogram
IVU	Intravenous urogram
kb	kilo base

Abb.	Meaning
KRAS	Kirsten rat sarcoma viral oncogene
LASP1	LIM and SH3 domain protein 1
LCSs	Let-7 complementary sites
let-7	A family of miRNA originally discovered in the nematode Caenorhabditis elegans
LNA	Locked nucleic acid, oligonucleotides for the detection of small or highly similar DNA or RNA targets
M	Metastasis
MCL1	Induced myeloid leukemia cell differentiation protein
MDM-2	Mouse double minute 2 homolog
miRBase	microRNA database
miRISC	miRNA-induced silencing complex
miRNA	Micro RNA
MRI	Magnetic resonance imaging
mRNA	messenger RNA
N	Nodes
NAT	N-acetyltransferase
NMP-22	Nuclear matrix protein 22
NPV	Negative predictive value
NS	Non significance
NSCLC	Non-small cell lung cancer
nt	Nucleotide
P53	Tumor protein of 53Kilo Dalton
p53RE	p53 response element
PARP-1	Poly [ADP-ribose] polymerase 1

Abb.	Meaning
PCR	Ploymerase chain reaction
PDCD4	Programmed cell death protein 4
Ploy (A) tail	Poly adenylated tail
poly-T	Has poly thiamine bases
PPV	Positive predictive value
pT2	Pathological stage T2
pT4	Pathological stage T4
PTEN	Phosphatase and tensin homolog gene
RB1	Retinoblastoma gene
RISC	RNA-induced silencing complex
RNA	Ribonucleic acid
RNAi	RNA-mediated interference
RNU-6	RNA, U6A Small Nuclear
ROC	Receiver operating characteristic
ROCK1	Rho-associated, coiled-coil-containing protein kinase 1
RQ-PCR	Quantitative real-time PCR
RT	Reverse transcription
S	Synthesis phase of cell cycle
SC	Squamous cell
SCCB	Small cell carcinoma of the bladder
SH	Shistosoma Hematobium
shRNAs	Small hairpin RNAs
siRNAs	Small interfering RNAs
SIRT1	Deacetylase sirtuin
SNPs	Single nucleotide polymorphisms

Abb.	Meaning
SPSS	Statistical Package for the Social Sciences
SRF	Serum response factor
T	Tumor grade
TAGLN2	Transgelin 2
TCC	Transitional cell carcinoma
TGF-β1	Transforming growth factor beta 1
TNM	Tumor-Nodes-Metastasis
TPM1	Tropomyosin-1
TRBP	Transactivator RNA-binding protein
UTR	Untranslaated region
WHO	World Health Organization

List of Figures

List of Tables

Introduction

Aim of the Work

Review of Literature

Patients and Methods

Results