

DOPPLER ULTRASOUND OF HEPATIC HAEMODYNAMICS FOR NON-INVASIVE EVALUATION OF LIVER FIBROSIS

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By

Noura Abd el Hafeez Ahmed Ali

M.B.B.Ch

Supervisors

Prof. Dr. TAREK MAGED AHMED EL SAKATY

Professor of Gastroenterology and Hepatology - Internal Medicine

Faculty of Medicine - Ain Shams University

Prof. Dr. MARCEL WILLIAM KEDDEAS

Assistant Professor of Internal Medicine

Faculty of Medicine - Ain Shams University

Prof. Dr. NEVINE IBRAHIM MUSA IBRAHIM

Assistant Professor of Internal Medicine

Faculty of Medicine - Ain Shams University

Ain Shams University

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List of Abbreviations

3D-US	3-Dimensional color Doppler ultrasonography
AAR	AST -to- ALT ratio
ALT	Alanine aminotransferase
AMA	Anti mitochondrial antibody
ANA	Anti nuclear antibody
ANN	Artificial neural network
ANOVA	Analysis of variance
Anti-HBc	Antibody to hepatitis B core antigen
Anti-HBs	Antibody to hepatitis B surface antigen
Anti-HCV	Antibody to hepatitis C virus
Anti-HDV	Antibody to hepatitis D virus
APRI	AST -to- platelet ratio index
ARFI	Acoustic radiation frequency impulse imaging
AST	Aspartate aminotransferase
AT 2	Angiotensin 2
AUC	Area under the curve
AUROC	Area under the receiver operating characteristic curve
CBC	Complete blood count
CDEUS	Color Doppler endoscopic ultrasound
CEUS	Contrast-enhanced ultrasound
CHC	Chronic hepatitis C
CLD	Chronic liver disease
CT	Computed tomography
CTGF	Connective tissue growth factor
CV	Coefficient of variation
DI	Damping index
EASL	European association for the study of the liver
ECM	Extracellular matrix

EGF	Endothelial growth factor
ELF	Enhanced liver fibrosis
ERCP	Endoscopic retrograde cholangiopancreatography
γGT	Gamma glutamyl transpeptidase
GI	Gastrointestinal
HA	Hepatic artery
HAPI	Hepatic artery pulsatility index
HARI	Hepatic artery resistance index
Hb	Hemoglobin
HBs Ag	Hepatitis B surface antigen
HCC	Hepatocellular carcinoma
HCV	Hepatitis C virus
HIV	Human immune deficiency virus
HSC	Hepatic stellate cell
HSCs	Hepatic stellate cells
HTT	Hepatic transit time
HV	Hepatic vein
HVPG	Hepatic venous pressure gradient
IASL	International association for the study of the liver
IgG	Immunoglobulin G
IgM	Immunoglobulin M
IHCT	Intrahepatic circulatory time
IL 6	Interleukin 6
INR	International normalized ratio
IQR	Interquartile range
IVC	Inferior vena cava
KPa	KiloPascal
MMP	Matrix metalloproteinase
MRA	Magnetic resonance angiography
MRCP	Magnetic resonance cholangiopancreatography
MRE	Magnetic resonance elastography
MRI	Magnetic resonance imaging
NASH	Nonalcoholic steatohepatitis

NK	Natural killer
NO	Nitric oxide
NPV	Negative predictive value
PC	Personal computer
PDGF	Platelet derived growth factor
PGAA	Prothrombin time, gamma glutamyl transpeptidase, apolipoprotein A1, alpha-2 macroglobulin
PH	Portal hypertension
PI	Pulsatility index
PPAR γ	Peroxisome proliferator-activated receptor gamma
PPV	Positive predictive value
PV	Portal vein
PVF	Portal venous flow
PVV	Portal venous velocity
RA	Renal artery
RI	Resistance (resistive) index
ROC	Receiver operator characteristic curve
ROI	Region of interest
ROS	Reactive oxygen species
RTE	Real time elastography
SA	Splenic artery
SAFE	Sequential algorithms for fibrosis evaluation
SARI	Splenic artery resistance index
SCD	Skin to liver capsule distance
SD	Standard deviation
SMA	Superior mesenteric artery
SPI	Splenoportal index
SVF	Splenic venous flow
SVV	Splenic venous velocity
SWE	Shear wave elastography
TE	Transient elastography
TGF β	Transforming growth factor beta
TIMP	Tissue inhibitor of matrix metalloproteinase

TIPS	Transjugular intrahepatic portosystemic shunt
TLR 4	Toll like receptor 4
TNF α	Tumor necrosis factor alpha
US	Ultrasound
VEGF	Vascular endothelial growth factor
WBC's	White blood cells



Introduction
