

ROLE OF FUNCTIONAL MRI IN DIAGNOSIS OF CANCER PROSTATE

Essay

By

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ويسر لي
أمري

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دور الفحص الوظيفي بالرنين المغناطيسي في تشخيص سرطان البروستاتا

مقال مقدم من الطبيب

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(بكالوريوس الطب و الجراحة)

توطئة للحصول على درجة الماجستير في الأشعة التشخيصية

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INTRODUCTION & AIM OF THE WORK

**PATHOLOGY
OF
CANCER PROSTATE**

**MANIFESTATION & TECHNIQUE
OF
MRI EXAMINATION**

MRI OF CANCER PROSTATE

SUMMARY & CONCLUSION

REFERENCES

LIST OF ABBREVIATIONS

Abbreviation	Name
ADC	Apparent diffusion coefficient
B.W.	Body weight
BASING	Band selective inversion with gradient dephasing
BOLD	Blood oxygen level density
BPH	Benign prostatic hyperplasia
CAD	computer-assisted detection
CC:C	Choline and creatine to citrate
Ch	Choline
Cit	Citrate
CM	Contrast media
Cr	Creatine
CT	Computed tomography
DCE	Dynamic contrast enhanced
DHT	Dihydrotestosterone
DRE	Digital rectal examination
DSC	Dynamic susceptibility contrast
DW	Diffusion-weighted
EES	Extra-cellular space
ERC	Endorectal surface coil
FLASH	Fast low-angle shot
FOV	field of view
FSE	Fast spin echo
FSPGR	Fast spoiled gradient-recalled
Gd-DTPA	Gadolinium diethylene-triamine-penta-acetic acid

GRAPPA	Generalized Auto calibrating Partially Parallel Acquisition
GRE	Gradient-echo
HASTE	Half-Fourier single shot turbo spin echo
HGPIN	high grade prostatic intraepithelial neoplasia
HPC	Hereditary prostate cancer
Hz	Hertz
IAUGC	Integral area under gadolinium contrast concentration
kg	Kilogram
Ktrans	Transfer constant
MHz	Mega hertz
mmol	Millimol
MR	Magnetic resonance
MRI	Magnetic resonance imaging
MRSI	Magnetic resonance spectroscopy imaging
MTT	Mean transit time
MVD	Microvessel density
ng	Nanogram
PAP	Prostatic acid phosphatase
PASCs	Phased-array surface coils
PIN	Prostatic intraepithelial neoplasia
ppm	Peak per minute
PRESS	Point-resolved spectroscopy
PSA	Prostatic specific antigen
PZ	Peripheral zone
rBF	Relative blood flow
rBV	Relative blood volume
s	Second
SE	Spin echo

SHBG	Sex-hormone-binding globulin
SI	Signal intensity
SNR	Signal to noise ratio
SSFSE	Single shot fast spin echo
STIR	Short-tau inversion recovery
SV	Seminal vesicles.
T	Tesla
TE	Echo time
TNM	Tumor, Nodes, Metastasis
TR	Repetition time
TURP	Transurethral prostatectomy
TZ	Transition zone
US	Ultrasonography
USA	United states of america
ve	Percentage of unit volume of tissue
VEGF	Vascular endothelial growth factor
VSS	Volume saturation
3D	Three-dimensional

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