



Role of Multiparametric MRI in Characterization of Hepatocellular Carcinoma

Thesis

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وَقُلْ اَعْمَلُوا فَسَيَرَى اللّٰهُ
عَمَلَكُمْ وَرَسُولُهُ وَالْمُؤْمِنُونَ



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List of Abbreviations

| | |
|----------------|---|
| 2D | Two dimensional. |
| 3D | Three dimensional. |
| AASLD | American Association for the Study of Liver Diseases. |
| ADC | Apparent diffusion coefficient. |
| AFP | Alpha feto-protein. |
| AJCC | American Joint Committee on Cancer |
| APS | Arterio-portal shunts. |
| ART | Arterial. |
| BBEPI | Black-blood echoplanar imaging. |
| BCLC | Barcelona Clinic Liver Cancer |
| CHA | Common hepatic artery. |
| CT | Computed tomography. |
| DCE-MRI | Dynamic contrast enhanced-magnetic resonance imaging |
| DEL | Delayed |
| DNs | Dysplastic nodules. |
| DSC-MRI | Dynamic susceptibility contrast-magnetic resonance imaging. |
| DW | Diffusion weighted. |
| DWI | Diffusion weighted imaging. |
| EPI | Echo planner imaging. |
| FIESTA | Fast imaging employing steady state acquisition sequence. |

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|--------------------|---|
| FOV | Field of view. |
| FRFSE | Fast recovery fast spin echo. |
| FSE | Fast spin echo. |
| FSPGR | Fast spoiled gradient. |
| Gd-DTPA | Gadolinium-diethylenetriamine pentaacetic acid. |
| Gd-EOB-DTPA | Gadolinium ethoxybenzyl diethylenetriamine pentaacetic acid |
| GRE | Gradient recalled echo |
| HA | Hepatic artery |
| HCC | Hepatocellular carcinoma |
| HCV | Hepatitis C virus |
| IP | In-phase |
| LAVA | Liver Acquisition with Volume Acquisition. |
| LI-RADS | Liver Imaging-Reporting And Data System |
| ME | Maximum enhancement |
| MIP | Maximum intensity projection. |
| MRE | Maximum relative enhancement |
| MRI | Magnetic resonance imaging. |
| ms | millisecond |
| NEX | Number of excitations. |
| OP | Out-of-phase. |
| PACS | Picture archiving and communication system |
| PET | Positron-emission tomography |
| PI | Parallel imaging. |
| PST | Performance status test |

| | |
|-------------------------|---|
| PV | Portal vein |
| RE | Relative enhancement |
| RES | Reticuloendothelial system |
| RNs | Regenerative nodules. |
| ROI | Regions of interest |
| s/mm² | Second per square millimeter. |
| Sat | Saturation. |
| SE | Spin echo. |
| SI | Signal intensity. |
| SNR | Signal to noise ratio. |
| SPIO | Superparamagnetic iron oxide. |
| SSTSE | Single shot turbo spin echo. |
| T | Tesla. |
| TE | Echo Time |
| THRIVE | T1-weighted high resolution isotropic volume examination. |
| TR | Repetition time |
| True-FISP | True fast imaging with steady state precession |
| TSE | Turbo spin echo. |
| TTP | Time to peak |
| US | Ultrasound |
| VIBE | Volumetric interpolated breath hold examination. |

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