# Dr. Michael J. Bank

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# Curriculum Vitae

## SELECTED OCCUPATIONAL HISTORY

Medical Director, Advanced Health NY/Carmel Medical Care, PC, Carmel, NY 10512, 2016 to present

Medical Director, Advanced Health & Injury Care/Gleneida Medical Care, PC, Carmel, NY 10512, 2004 to 2016

Internist, Seacoast Medical Associates, Newburyport, MA 2003 to 2004

Medical Director, New Jersey Total Health Center and Bloomfield Total Health Center 2003

Hospitalist, Infectious Disease Consultants of Morristown, Morristown, NJ, 2002

Residency in Internal Medicine, Morristown Memorial Hospital, Morristown, NJ, 2000 to 2002

Internship in Internal Medicine, Montefiore Medical Center, Bronx, NY 1999 to 2000

Medical Doctor, Columbia University College of Physicians and Surgeons, New York, NY 1996 to 1999

#### **EDUCATION & LICENSURE**

MLMIC Proactive Risk Management Follow Up Program 2019 to 2020

FMCSA, Medical Examiner 2016 to present

New York, License to Practice Medicine 2004 to Present

Board certified in Internal Medicine 2002 to Present

Connecticut, License to Practice Medicine 2002 to Present

Master of Arts in Physiology, Columbia University College of Physicians and Surgeons and GSAS 1992

Master of Philosophy, Columbia University College of Physicians and Surgeons and GSAS 1992

Bachelor of Arts in Physics and Chemistry, Harvard College 1986

# SELECTED POST-GRADUATE EDUCATION, CERTIFICATIONS & DIPLOMATES

Impairment Rating, The understanding and utilization of the protocols and parameters of the AMA Guide to the Evaluation of Permanent Impairment 6th Edition. Spine, neurological sequelae, migraine, sexual dysfunction, sleep and arousal disorders, station and gait disorders and consciousness are detailed for impairment rating. Herniated discs, radiculopathy, fracture, dislocation and functional loss are also detailed in relation to impairment ratings. ACCME Joint Providership with the State University of New York at Buffalo Jacobs School of Medicine and Biomedical Sciences, Buffalo, NY, 2023

Electrodiagnostics: Electromyogram/Nerve Conduction Velocity (EMG/NCV), Diagnosis & Interpretation: Anatomy and Physiology of Electrodiagnostics: An in-depth review of basic neuro-anatomy and physiology dermatomes and myotomes to both the upper and lower extremities and the neurophysiology of axons and dendrites along with the myelin and function of saltatory for conduction. The sodium and potassium pump's function in action potentials. Cleveland University, Kansas City, Academy of Chiropractic, Post-Doctoral Division, Long Island NY, 2023

Electrodiagnostics: Electromyogram/Nerve Conduction Velocity (EMG/NCV), Diagnosis & Interpretation: Nerve Conduction Velocity (NCV) Part 1: Nerve conduction velocity testing, the equipment required and the specifics of motor and sensory testing. This section covers the motor and sensory NCV procedures and interpretation including latency, amplitude (CMAP) physiology and interpretation including the understanding of the various nuances of the wave forms. Cleveland University, Kansas City, Academy of Chiropractic, Post-Doctoral Division, Long Island NY, 2023

Electrodiagnostics: Electromyogram/Nerve Conduction Velocity (EMG/NCV), Diagnosis & Interpretation: Nerve Conduction Velocity (NCV) Part 2: Compound motor action potentials (CMAP) and sensory nerve action potentials (SNAP) testing and interpretation including the analysis and diagnosis of the wave forms. It also covers compressive neuropathies of the median, ulnar and posterior tibial nerves; known as carpal tunnel, cubital tunnel and tarsal tunnel syndromes. This section offers interpretation algorithms to help understand the neurodiagnostic conclusions. Cleveland University, Kansas City, Academy of Chiropractic, Post-Doctoral Division, Long Island NY, 2023

Electrodiagnostics: Electromyogram/Nerve Conduction Velocity (EMG/NCV), Diagnosis & Interpretation: Needle Electromyogram (EMG) Studies: The EMG process, inclusive of how the test is performed and the steps required in planning and electromyographic study. This covers the spontaneous activity of a motor unit action potential, positive sharp waves and fibrillations. The insertional activity (both normal and abnormal), recruitment activity in a broad polyphasic presentation and satellite potentials. This covers the diagnosing of patterns of motor unit abnormalities including neuropathic demyelinated neuropathies along with acute myopathic neuropathies. This section also covers the ruling out of false positive and false negative results. Cleveland University, Kansas City, Academy of Chiropractic, Post-Doctoral Division, Long Island NY, 2023

Electrodiagnostics: Electromyogram/Nerve Conduction Velocity (EMG/NCV), Diagnosis & Interpretation: Overview of EMG and NCV Procedures, Results, Diagnoses and Documentation. The clinical incorporation of electrodiagnostic studies as part of a care plan where neuropathology is suspected. It also covers how to use electrodiagnostics in a collaborative environment between the chiropractor as the primary spine care provider and the surgeon, when clinically indicated. This section covers sample cases and health conclude and accurate treatment plans based upon electro-neurodiagnostic findings when clinically indicated. Cleveland University, Kansas City, Academy of Chiropractic, Post-Doctoral Division, Long Island NY, 2023

MRI History and Physics, Magnetic fields, T1 and T2 relaxations, nuclear spins, phase encoding, spin echo, T1 and T2 contrast, magnetic properties of metals and the historical perspective of the creation of NMR and MRI. ACCME Joint Providership with the State University of New York at Buffalo Jacobs School of Medicine and Biomedical Sciences, Buffalo, NY, 2023

MRI Spinal Anatomy and Protocols, *Normal anatomy of axial and sagittal views utilizing T1, T2, 3D gradient and STIR sequences of imaging. Standardized and desired protocols in views and sequencing of MRI examination to create an accurate diagnosis in MRI.* ACCME Joint Providership with the State University of New York at Buffalo Jacobs School of Medicine and Biomedical Sciences, Buffalo, NY, 2023

MRI Disc Pathology and Spinal Stenosis, *MRI interpretation of bulged, herniated, protruded, extruded, sequestered and fragmented disc pathologies in etiology and neurological sequelae in relationship to the spinal cord and spinal nerve roots.* ACCME Joint Providership with the State University of New York at Buffalo Jacobs School of Medicine and Biomedical Sciences, Buffalo, NY, 2023

MRI Spinal Pathology, MRI interpretation of bone, intradural, extradural, cord and

neural sleeve lesions. Tuberculosis, drop lesions, metastasis, ependymoma, schwanoma and numerous other spinal related tumors and lesions. ACCME Joint Providership with the State University of New York at Buffalo Jacobs School of Medicine and Biomedical Sciences, Buffalo, NY, 2023

MRI Methodology of Analysis, *MRI interpretation sequencing of the cervical, thoracic and lumbar spine inclusive of T1, T2, STIR and 3D gradient studies to ensure the accurate diagnosis of the region visualized.* ACCME Joint Providership with the State University of New York at Buffalo Jacobs School of Medicine and Biomedical Sciences Jacobs Buffalo, NY, 2023

MRI Clinical Application, *The clinical application of the results of space occupying lesions. Disc and tumor pathologies and the clinical indications of manual and adjustive therapies in the patient with spinal nerve root and spinal cord insult as sequelae.* ACCME Joint Providership with the State University of New York at Buffalo Jacobs School of Medicine and Biomedical Sciences, Buffalo, NY, 2023

MRI Protocols Clinical Necessity, *MRI slices, views, T1, T2, STIR axial, stacking, FFE, FSE and sagittal images. Clinical indication for the utilization of MRI and pathologies of disc in both trauma and non-trauma sequellae, including bulge, herniation, protrusion, extrusion and sequestration.* ACCME Joint Providership with the State University of New York at Buffalo Jacobs School of Medicine and Biomedical Sciences, Buffalo, NY, 2023

MRI Interpretation of Lumbar Degeneration/Bulges, *MRI slices, views, T1, T2, STIR axial, stacking, FFE, FSE and sagittal images in the interpretation of lumbar degeneration. With the co-morbidities and complications of stenosis, pseudo-protrusions, cantilevered vertebrate, Schmorl/'s nodes and herniations. Central canal and cauda equina compromise interpretation with management.* ACCME Joint Providership with the State University of New York at Buffalo Jacobs School of Medicine and Biomedical Sciences, Buffalo, NY, 2023

MRI Interpretation of Lumbar Herniations, *MRI slices, views, T1, T2, STIR axial, stacking, FFE, FSE and sagittal images in the interpretation of lumbar herniations. With the co-morbities and complications of stenosis, pseudo-protrusions, cantilevered vertebrate, Schmorl/'s nodes and herniations. Morphology of lumbar disc pathologies of central and lateral herniations, protrusions, extrusions, sequestration, focal and broad based herniations are defined and illustrated. Central canal and cauda equina compromise interpretation with management. ACCME Joint Providership with the State University of New York at Buffalo Jacobs School of Medicine and Biomedical Sciences, Buffalo, NY, 2023* 

MRI Interpretation of Cervical Degeneration/Bulges, *MRI slices, views, T1, T2, STIR axial, stacking, FFE, FSE and sagittal images in the interpretation of cervical degeneration. With the co-morbidities and complications of stenosis,* 

pseudo-protrusions, cantilevered vertebrate, Schmorl/'s nodes and herniations. Spinal cord and canal compromise interpretation with management. ACCME Joint Providership with the State University of New York at Buffalo Jacobs School of Medicine and Biomedical Sciences, Buffalo, NY, 2023

MRI Interpretation of Cervical Herniations, *MRI slices, views, T1, T2, STIR Axial, FFE, FSE and sagittal images in the interpretation of lumbar herniations. With the co-morbidities and complications of stenosis, pseudo-protrusions, cantilevered vertebrate, Schmorl/'s nodes and herniations. morphology of lumbar disc pathologies of central and lateral herniations, protrusions, extrusions, sequestration, focal and broad based herniations are defined and illustrated. Spinal cord and canal compromise interpretation with management.* ACCME Joint Providership with the State University of New York at Buffalo Jacobs School of Medicine and Biomedical Sciences, Buffalo, NY, 2023 Module #6: Virtual Grand Rounds

MRI Interpretation of Degenerative Spine and Disc Disease with Overlapping Traumatic Insult to Both Spine and Disc, *MRI slices, views, T1, T2, STIR Axial, FFE, FSE and sagittal images in the interpretation of degenerative spondylolesthesis, spinal canal stenosis, Modic type 3 changes, central herniations, extrusions, compressions, nerve root compressions, advanced spurring and thecal sac involvement from an orthopedic, emergency room, chiropractic, neurological, neurosurgical, physical medicine perspective.* ACCME Joint Providership with the State University of New York at Buffalo Jacobs School of Medicine and Biomedical Sciences, Buffalo, NY, 2023

Neurodiagnostics, Imaging Protocols and Pathology of the Trauma Patient, An in-depth understanding of the protocols in triaging and reporting the clinical findings of the trauma patient. Maintaining ethical relationships with the medical-legal community. CMCS Post-Doctoral Division, Long Island, NY, 2022

Diagnostics, Risk Factors, Clinical Presentation and Triaging the Trauma Patient, An extensive understanding of the injured with clinically coordinating the history, physical findings and when to integrate neurodiagnostics. An understanding on how to utilize emergency room records in creating an accurate diagnosis and the significance of "risk factors" in spinal injury. CMCS Post-Doctoral Division, Long Island, NY, 2022

Crash Dynamics and Its Relationship to Causality, An extensive understanding of the physics involved in the transference of energy from the bullet car to the target car. This includes G's of force, newtons, gravity, energy, skid marks, crumple zones, spring factors, event data recorder and the graphing of the movement of the vehicle before, during and after the crash. Determining the clinical correlation of forces and bodily injury. CMCS Post-Doctoral Division, Long Island, NY, 2022 MRI, Bone Scan and X-Ray Protocols, Physiology and Indications for the Trauma Patient, MRI interpretation, physiology, history and clinical indications, bone scan interpretation, physiology and clinical indications, x-ray clinical indications for the trauma patient. CMCS Post-Doctoral Division, Long Island, NY, 2022

Neurodiagnostic Testing Protocols, Physiology and Indications for the Trauma Patient, Electromyography (EMG), Nerve Conduction Velocity (NCV), Somato Sensory Evoked Potential (SSEP), Visual Evoked Potential (VEP), Brain Stem Auditory Evoked Potential (BAER) and Visual-Electronystagmosgraphy (V-ENG) interpretation, protocols and clinical indications for the trauma patient. CMCS Post-Doctoral Division, Long Island, NY, 2022

Documentation and Reporting for the Trauma Victim, Understanding the necessity for accurate documentation and diagnosis utilizing the ICD-9 and the CPT to accurately describe the injury through diagnosis. Understanding and utilizing state regulations on reimbursement issues pertaining to healthcare. CMCS Post-Doctoral Division, Long Island, NY, 2022

Documenting Clinically Correlated Bodily Injury to Causality, Understanding the necessity for accurate documentation, diagnosis and clinical correlation to the injury when reporting injuries in the medical-legal community. Documenting the kinesiopathology, myopathology, neuropathology, and pathophysiology in both a functional and structural paradigm. CMCS Post-Doctoral Division, New York State Education Department, Long Island, NY, 2022

Team Physician Course Part 2, American College of Sports Medicine 2008

Team Physician Course Part 1, American College of Sports Medicine 2007

#### SELECTED BOOK PUBLICATIONS

Sidereal Harmony: Relating the Circle of Fifths to the Wheel of the Zodiac, ISBN 1483433307 2015

#### SELECTED JOURNAL PUBLICATIONS

M. Bank and S. Schacher, Segregation of Presynaptic Inputs on An Identified Target Neuron In Vitro: Structural Remodeling Visualized Over Time, The Journal of Neuroscience. 1 August 1992 12(8) 2960-2972

Michael J. Bank, Nicola Scafetta, Scaling, Mirror Symmetries and Musical Consonances Among the Distances of the Planets of the Solar System, Frontiers in Astronomy and Space Sciences 2022

#### SELECTED MEMBERSHIPS

Danbury Hospital Medical Staff, Danbury CT 2008 to present

The American College of Sports Medicine 2007 to 2014

Putnam Hospital Center Community Physician, Carmel, NY 2005 to present

American College of Physicians 2001 to present

# SELECTED JOURNAL SUBSRIPTIONS

Annals of Internal Medicine 2002 to present

ACP Internist 2002 to present

## SELECTED HONORS & AWARDS

Best of Putnam Medical, Dental or Physical Therapy Office, Putnam Business Council 2022

Sigmund L Wilens Prize for Excellence in Pathology, Columbia University, 1999

# SELECTED COMMUNITY SERVICE

Danbury Music Centre, Board of Directors, Danbury, CT 2016 to present

Putnam Hospital Center, Peer Review Committee Member, 2010 to 2015

Americares Volunteer Physician 2008 to 2010

# SELECTED SKILLS

Jazz Pianist: Studied with Jaki Byard, Dick Katz, Red Richards, Larry Hamm

Violist: Danbury Symphony and Community Orchestra