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**Charbel Y. Ishak (Isaac) MD, MBA, DABR**  
**Professor of Radiology and Surgery**

**Topics:**

Cardiovascular and interventional radiology

Musculoskeletal imaging

Artificial Intelligence in radiology

Imaging Acquisition in Navigational sonography, Magnetic Resonance, computed tomography (CT), positron emission tomography (PET)

Nanotechnology

Cancer imaging and mini-invasive therapy

Neuroimaging

**Biography**

Charbel Ishak MD, MBA, DABR is a professor of radiology and surgery and the chairman of radiology and Radiation Safety Officer at BronxCare Health System, affiliate of the Icahn School of Medicine at Mount Sinai. He is the chief of cardiovascular and interventional radiology affiliated with the Empire State Radiology, a subsidiary of Radiology Partners, a national radiology practice. He earned his medical diploma from the Lebanese medical school then completed a post-doctoral fellowship as associate Physician Researcher in Musculoskeletal diseases and Imaging with Surgery residency at New York University, followed by Radiology residency at Zucker School of Medicine at Hofstra teaching hospitals/Northwell and Nassau, followed by fellowship in Cardiovascular and Interventional Radiology at New York-Presbyterian Weill Cornell Medical College and Memorial Sloan Kettering Cancer Center. This was followed by many fellowships in Neuroradiology, Breast Imaging, Nuclear imaging and Musculoskeletal Imaging from the American College of Radiology. Dr. Ishak also earned MBA in Health Services Administration and Management with High Distinction from Hofstra University, Zarb Business School. It is noteworthy that Dr. Ishak is double board-certified in Diagnostic Radiology as well as in Vascular and Interventional Radiology from the American Board of Radiology. He is active member, mentor and reviewer at the Society of Interventional Radiology. He is an invited Oral Board Examiner at the American Board of Radiology.

## **EDUCATION**

Master of Business Administration, MBA degree with Distinction  
Hofstra University, Zarb Business School, New York

Doctor of Medicine, MD degree with Dean's Honor Graduation  
Lebanese School of Medicine

General Surgery  
New York University School of Medicine

Diagnostic Radiology Residency and Chief Residency  
Nassau/SUNY Stony Brook/Zucker School of Medicine at Hofstra Northwell

Cardiovascular and Interventional Radiology Fellowship  
Weill Cornell Medical College/Memorial Sloan Kettering Cancer Center

Neuroradiology American College of Radiology (ACR) Fellowship

Breast Imaging American College of Radiology (ACR) Fellowship

Musculoskeletal American College of Radiology (ACR) Fellowship

Nuclear Imaging American College of Radiology (ACR) Fellowship

## **CERTIFICATION**

Diplomate American Board of Radiology (**DABR**)  
American Board of Interventional Radiology (**IR/DR**)  
Thomas Edison State University, Radiation Safety Officer (**RSO**)

## **RESEARCH**

Dr Ishak has contributed significantly to the field of imaging, cardiovascular and interventional radiology through both clinical practice and academic research. He published works covering a range of topics including the use of advanced imaging guided therapies, innovative treatments for musculoskeletal injuries, and cardiovascular venous thromboembolic diseases. He has developed protocols that improve diagnostic accuracy for conditions, providing clinicians with better tools to assess and treat these common yet debilitating conditions. He has explored the use of fluoroscopy, MRI, CT, and ultrasound in guiding interventions ultimately improving patient outcomes with less invasive procedures. He contributed to the growing field of endovascular treatments for treating atherosclerosis, deep vein thrombosis, women's health cancer, neurology and peripheral artery disease to reduce procedural risks and enhance recovery times for patients with cardiovascular conditions. He is continuously looking ahead for future research on integrating artificial intelligence and machine learning to further refine imaging techniques, improving the accuracy of early diagnosis and expanding the potential for minimally invasive interventions. This direction

promises to revolutionize medicine in radiology, ensuring targeted therapies that are safer, faster, and more effective.

Dr Ishak has an extensive hands-on experience in a variety of general and specialty radiology, cardiovascular and interventional radiology, radiological pre- and post-procedural care of imaging guided vascular, non-vascular, oncological, women's health, pulmonary, musculoskeletal and sports medicine, gastrointestinal, urological, and neurosurgical mini-invasive procedures. His contributions to radiological clinical care include minimally invasive techniques that have significantly improved patient outcomes in vascular and non-vascular interventions, with a focus on embolization therapies, thrombectomy, advanced image-guided procedures, women's health and mini-invasive treatments for cancer patients. He was able to reduce recovery times, minimized complications, and expanded treatment options for patients who might not be suitable for conventional surgery.

As chairman of radiology, he has overseen significant improvements in the quality of care by introducing standardized protocols, advancing the use of artificial intelligence in diagnostic reading, and prioritizing patient-centered approaches. These initiatives have led to reduce diagnostic errors, to enhance collaboration between radiologists and referring physicians, and improved patient satisfaction. As a mentor in radiology at many teaching hospitals and at the society of interventional radiology, his focus has been on guiding students, residents, and junior faculty through individualized mentorship, with an emphasis on research, clinical practice, communication skills and professional development. Overall, his two-decade research, clinical work, and leadership in radiology and radiation safety have had a broad impact in improving patient care and research fields, enabling earlier detection of conditions, enhancing patients safety, and influencing the development of best practices in imaging locally, nationally, and internationally.

### **HONORS/AWARDS**

- Radiological Society North America (RSNA) Roentgen Research & Education Award
- Beta Gamma Sigma Honor Award
- World Interventional Oncology (WCIO) Award
- New York American College of Physicians Award
- New York State Assembly Recognition Award

### **SELECTED PEER REVIEWED PUBLICATIONS**

- Role of Transcatheter Arterial Embolization in Acute Refractory Non Variceal Upper Gastrointestinal Bleeding Not Controlled by Endoscopy: A Single Center Experience and a Literature Review. Ishak C, Ghazanfar H, Kandhi S, et al. 2022 Oct 5;14(10):e29962. doi: 10.7759/29962
- Devices for Management of Acute Pulmonary Embolism. In: Sharma SK, Vittorio TJ, Saad M. eds. Devices in Cardiac Critical Care. Hayagreev V, Ishak C in Chapter 7

Textbook, McGraw Hill; 2024. Accessed October 03, 2024.

<https://accesscardiology.mhmedical.com/content.aspx?bookid=3466&sectionid=2860919>

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- Uterine Artery Pseudoaneurysm After Cesarean Section: A Rare Cause of Delayed Postpartum Hemorrhage. Di Francesco, Bettoli..., Ishak. *Ann Case Report* 9: 1681. March 2024 DOI: 10.29011/2574-7754.101681.
- Spontaneous Hepatic Hemorrhage: An Unexpected Complication From Enoxaparin. Ghazanfar, Ishak C, 2023;15(1):e33371. doi: 10.7759/.33371.
- Jugular foramen paragangliomas: preoperative transcatheter particle embolization. Charbel Ishak, Varun Danda. *J Cerebrovasc Endovasc Neurosurg*. 2020 Dec; 22(4):273-281. doi: 10.7461/jcen. 2020.E 2019.09.033.
- Catheter-directed clot fragmentation using the Cleaner™ device in a patient presenting with massive pulmonary embolism. Barjaktarevic I, Ishak C, Sista AK. *J Radiol Case Rep*. 2014 Feb 1;8(2):30-6. doi: 10.3941/jrcr.v8i2.1455. PMID: 24967017
- Principles of Percutaneous Ablation Therapy. Ishak C, Thornton R, Solomon S. Chapter 3 in *Textbook: Clinical Interventional Oncology Edition 2014*. Editors: Kee, Madoff et Al. ISBN: 978-1-4557-1221-2
- Ultrasound Elastography–guided liver biopsy: a value added technique to improve histopathological yield of liver fibrosis. Ishak, Chilimuri. *Journal Vascular Interventional Radiology (JVIR)*. March 2019, Volume 30, Issue 3, Pages S137–S138 doi.org/10.1016/j.jvir.2018.12.377.
- Temporary retrograde superficial femoral artery puncture for challenging and otherwise uncrossable complete total occlusion in superficial femoral artery. Zhang, Ishak. *Journal Vascular Interventional Radiology (JVIR)*. Vol 31, issue 3, S143, March 01, 2020. doi.org/10.1016/j.jvir.2019.12.367
- May-Thurner Syndrome: A Rare Case of Unilateral Deep Vein Thrombosis in an Elderly Woman. PI Charbel Ishak. *Am J Case Rep* 2021 Aug 30;22:e929897. doi: 10.12659/AJCR.929897.

- Strategies for Collaborating with Anesthesia Teams to Improve the Safety and Efficacy of Image-Guided Thoracic Procedures. Hawari, Ishak, Erinjeri, Solomon, Durack. Accepted to American Journal of Radiology AJR, 2022
- Nontraumatic intraluminal recanalization of difficult below-the-knee total occlusions using combination of laser ablation and wire back-end wire support in a crossing catheter. Zhang, Ishak. Journal Vascular Interventional Radiology (JVIR). Vol 31, issue 3, S169, March 01, 2020. doi.org/10.1016/j.jvir.2019.12.436
- Cryptococcal Meningitis in a HIV Seronegative Patient: A Rare Complication of Cerebrospinal Fluid Leak Detected with a New Cisternographic Technique. Chime, Ishak, Kelly et Al. Case Reports ID. Volume 2019, Article ID 3510860, 5 pages [https://doi.org/ 10.1155/2019/3510860](https://doi.org/10.1155/2019/3510860)
- Safety and Efficacy of using telescoping CTO devices for complex chronic occlusions in SVC syndrome. Ishak et Al. Journal Vascular Interventional Radiology (JVIR). April 2018 <https://doi.org/10.1016/j.jvir.2018.01.686>
- Cost analysis of using Viatorr stent vs. Fluency/Wallstent for TIPS at a community hospital. Zhang, Ishak et Al. Journal Vascular Interventional Radiology (JVIR), February 2017. <https://doi.org/10.1016/j.jvir.2016.12.654>
- Splenic Trauma during Colonoscopy: The Role of Intra-Abdominal Adhesions. Chime, Ishak, Chilimuri et Al. Case Reports in Gastrointestinal Medicine. Volume 2018, ID 4879413, doi.org/10.1155/2018/4879413.
- Rare presentations of paragangliomas. Ishak, Chilimuri. J Clin Case Rep. DOI: 10.4172/2165-7920-C1-015
- Bladder trauma: multidetector computed tomography cystography. Ishak C, Kanth N. Emerg Radiol. 2011 Aug;18(4):321-7. doi: 10.1007/s10140-011-0947-6. Review. PMID: 21523470

- Proximal biceps tendon--a biomechanical analysis of the stability at the bicipital groove. Kwon Ishak C, Walker PS, Khan S, Bosco JA 3rd, Jazrawi LM. Bull NYU Hosp Jt Dis. 2009;67(4):337-40. PMID: 20001935
- Young man with fishing injury. Intracranial fishing line sinker. Seitelman E, Ishak C, et Al. Ann Emerg Med. 2009 Dec;54(6):854; diagnosis 864. doi: 10.1016/j.annemergmed.2009.04.014. PMID: 19942072
- Effect of specialty and experience on the interpretation of knee MRI scans. Kim A, Khoury L, Schweitzer M, Jazrawi L, Ishak C, Meislin R, Kummer F, Sherman OH. Bull NYU Hosp Jt Dis. 2008;66(4):272-5. PMID: 19093902
- Distal clavicular osteolysis: a review of the literature. Schwarzkopf R, Ishak C, Elman M, Gelber J, Strauss DN, Jazrawi LM. Bull NYU Hosp Jt Dis. 2008;66(2):94-101. Review. PMID: 18537776
- Bone plug versus suture fixation of the posterior horn in medial meniscal allograft transplantation: a biomechanical study. Hunt S, Kaplan K, Ishak C, Kummer FJ, Meislin R. Bull NYU Hosp Jt Dis. 2008;66(1):22-6. PMID: 18333824
- Surgical management of os acromiale: a case report and review of the literature. Sahajpal D, Strauss EJ, Ishak C, Keyes JM, Joseph G, Jazrawi LM. Bull NYU Hosp Jt Dis. 2007;65(4):312-6. PMID: 18081552
- The modified racking hitch(MRH) knot: a new sliding knot for arthroscopic surgery. Chokshi BV, Ishak C, Iesaka K, Jazrawi LM, Kummer FJ, Rosen JE. Bull NYU Hosp Jt Dis. 2007;65(4):306-7. PMID: 18081550.
- Effect of tibial positioning on the diagnosis of posterolateral rotatory instability in the posterior cruciate ligament-deficient knee. Strauss EJ, Ishak C et Al. Br J Sports Med. 2007 Aug;41(8):481-5; discussion 485. PMID:17261553
- Hybrid femoral fixation of soft-tissue grafts in anterior cruciate ligament reconstruction using the EndoButton CL and bioabsorbable interference screws: a biomechanical study.

Oh YH, Ishak C et Al. Arthroscopy. 2006 Nov;22(11):1218-24 and in 2007 Feb;23(2):A14. PMID: 17084300

- Operative treatment of acute Achilles tendon ruptures: an institutional review of clinical outcomes. Strauss EJ, Ishak C, Jazrawi L, et Al.. Injury. 2007 Jul;38(7):832-8.PMID: 16945370
- The interaction between the whipstitch sutures of multi-strand ACL grafts and interference screw fixation. Bravman J, Ishak C, et al. Bull Hosp Jt Dis. 2006;63(3-4):156-7. PMID: 16878838
- A survey of decision-making processes in the treatment of common shoulder ailments among primary care physicians. Loebenberg MI, Ishak C, Jazrawi LM, Zuckerman JD. Bull Hosp Jt Dis. 2006;63(3-4):137-44. PMID:16878835
- Arthroscopic Meniscal Repair: Current Techniques and Outcomes. Bravman, J, Ishak C, Jazrawi, L, et Al. Min Ortho & Trauma Volume 55, Issue 5, October 2004, Pages 145-167
- Magnetic resonance imaging evaluation of the ulnar collateral ligament in young baseball pitchers less than 18 years of age. Jazrawi LM, Leibman M, Ishak C, Schweitzer M, et Al. Bull Hosp Jt Dis. 2006;63(3-4):105-7. PMID: 16878828
- The Frozen Shoulder, in textbook: “Shoulder Surgery Complications”. Jazrawi L, Ishak C, Zuckerman J. LWW 2005, ISBN: 0781757290
- Fixation of greater tuberosity fractures: a biomechanical comparison of three techniques. Ishak C, Sahajpal D, et Al.. Bull Hosp Jt Dis. 2006;63(3-4):98-9. PMID: 16878826.

### **Office Locations**

BMEII  
BronxCare

### **Industry Relationships**

Physicians and scientists on the faculty of the Icahn School of Medicine at Mount Sinai often interact with pharmaceutical, device, biotechnology companies and other outside entities to improve patient care, develop new therapies and achieve scientific breakthroughs. In order to promote an ethical and transparent environment for conducting research, providing clinical care

and teaching, Mount Sinai requires that salaried faculty inform the School of their outside financial relationships.

Dr. Ishak did not report having any of the following types of financial relationships with industry and other outside entities during 2024: consulting, scientific advisory board, industry-sponsored lectures, service on Board of Directors, participation on industry-sponsored committees, equity ownership valued at greater than 5% of a publicly traded company or any value in a privately held company. Please note that this information may differ from information posted on corporate sites due to timing or classification differences.

Mount Sinai's faculty policies relating to faculty collaboration with industry are posted on our website. Patients may wish to ask their physician about the activities they perform for companies.