

Gloria Julia Guzmán Pérez-Carrillo, MD, MSc

American Board of Radiology Certified since 2009 / Neuroradiology CAQ Certified since 2016

PROFESSIONAL EXPERIENCE

- 8/16 – On **UNIVERSITY OF ARIZONA**, Tucson, Arizona
Assistant Professor of Radiology
Director of Advanced Neuro-Imaging Biometrics Initiative
- 7/13 – 1/14 **VALLEY MRI**, Stockton, California
- Locums position
 - General radiology practice, all modalities
 - Updated all neuroradiology MRI protocols
- 12/10 – 5/13 **CENTRO DE DIAGNÓSTICO, S.A.**, Granada, Spain
- Developed and implemented advanced tumor imaging including spectroscopy functional MRI and tractography
 - Developed and implemented dementia imaging protocols
 - Improved multiple neuroradiology imaging protocols, including research functional MRI protocols
 - Participated in multiple research trials using functional MRI
- 8/10 – 10/10 **REGIONAL MEDICAL CENTER OF SAN JOSE**, San Jose, California
- Locums position. General radiology practice, all modalities
- 1/10 – 7/10 **WEST VIRGINIA UNIVERSITY**, East Ranson, West Virginia
Assistant Professor of Radiology
- General radiology practice, all modalities, including breast biopsies

EDUCATION

- 7/15 – 6/16 **MALLINCKRODT INSTITUTE**, Washington University in St. Louis, St. Louis, Missouri
Neuroradiology KARI Research Fellowship / Junior Faculty Neuroradiology
- 7/14 – 6/15 **MALLINCKRODT INSTITUTE**, Washington University in St. Louis, St. Louis, Missouri
Neuroradiology Fellowship
- 10/10 – 9/11 **UNIVERSITY OF GRANADA**, Granada, Spain
Masters in Radiology
Thesis: “Diagnostic value of diffusion-weighted magnetic resonance imaging in head and neck tumors”
- 7/05 – 6/09 **WEST VIRGINIA UNIVERSITY**, Ruby Memorial Hospital, Morgantown, West Virginia
Radiology Residency, **Chief Resident**
- 7/04 – 6/05 **ALAMEDA COUNTY MEDICAL CENTER**, Oakland, California
Transitional Residency Program

8/00 – 6/04 **UNIVERSITY OF PUERTO RICO SCHOOL OF MEDICINE**, Medical Sciences Campus,
San Juan, Puerto Rico
Doctor in Medicine, **Certificate of Investigator**

8/95 – 7/99 **JOHNS HOPKINS UNIVERSITY**, Baltimore, Maryland
Bachelor of Arts, Latin American Studies. Minor, French

HONORS AND AWARDS

Post-Fellowship

- Scholarship from the Diversity and Inclusion Office of the University of Arizona to attend the Association of American Medical Colleges (AAMC) 2017 Leadership and Management Foundations for Academic Medicine and Science
- Selected to attend RSNA 2017 Clinical Trials Methodology Workshop

Fellowship

- 2016 R25 NIH Cancer Genomics and Outcomes Research STRENGTH Program
- 2016 Washington University in St. Louis Clinical Research Training Center (CRTC) Tuition Award program

Post-Residency

- 2012 SERAM Educational Exhibit Magna Cum Laude Award, Neuroradiology Section

Residency

- 2008 RSNA Roentgen Resident/Fellow Research Award
- Chief Resident 2007-2008
- 2008 Radiological Society of North America Educational Exhibit Excellence in Design and Certificate of Merit Awards
- Film Panel Co-Chair and Member of the Steering Committee, American Alliance of Academic Chief Residents in Radiology (A3CR2)
- Radiological Society of North America Introduction to Research Scholarship
- Society of Interventional Radiology Resident-In-Training Scholarship

Medical School

- Most Distinguished Student in Radiology
- Magna Cum Laude
- Certificate of Investigator

Undergraduate

- Student Excellence Award in Leadership and Service (SEALS)
- Service Award for Hopkins Emergency Response Unit (HERU)
- Departmental Honors upon Graduation, Dean's List

ACADEMIC PRESENTATIONS

- “Diffusion Basis Spectrum Imaging with Extended Isotropic Spectrum (DBSI-EIS): Initial Experience in the Evaluation of Gliomas”, American Society of Neuroradiology (ASNR), Long Beach 2017
- “The Use of Hippocampal Volumetric Measurements to Improve Diagnostic Accuracy in Pediatric Patients with Mesial Temporal Sclerosis”, American Society of Neuroradiology (ASNR), Long Beach 2017
- “Perfusion Imaging”, Imaging Grand Rounds, University of Arizona Medical Center, Tucson 2017
- “Research Opportunities in Head and Neck Imaging- Breakout Session”, Head and Neck Cancer Program Retreat, Tucson 2016

- “Clinical Uses of Resting-State Functional Magnetic Resonance Imaging”, American Society of Neuroradiology (ASNR), Washington D.C. 2016
- “Focal cortical dysplasia and mesial temporal sclerosis”, Imaging Grand Rounds, University of Arizona Medical Center, Tucson 2015
- “Film Panel”, Association of University Radiologist (AUR), Seattle 2008

PUBLICATIONS

Guzmán, Gloria; Owen, Christopher; Schwetye, Katherine; McFarlane, Spencer; Vellimana, Ananth; Mar, Soe; Miller-Thomas, Michelle; Shimony, Joshua; Smyth, Matthew; Benzinger, Tammie L.S. “The Use of Hippocampal Volumetric Measurements to Improve Diagnostic Accuracy in Pediatric Patients with Mesial Temporal Sclerosis”. Accepted, Pending Publication in *Journal of Neurosurgery, Pediatrics*.

Faber, Pamela; Verdejo, Juan; León-Araúz, Pilar; Reimerink, Arianne; **Guzmán, Gloria**. “Neural Substrates of Specialized Knowledge Representation: an fMRI study”. *Revue Française de Linguistique Appliquée*. 19(1): 15-32, 2014.

Guzmán, Gloria and Hogg, Jeffery. “Intracranial Vascular Lesions All Residents Should Know”. *Current Problems in Diagnostic Radiology*. 2010 May/June; 39(3):91-109. PMID: 20307787.

Guzmán, Gloria. Case of the Day in Neuroradiology. “Atretic Cephalocele”. *Radiological Society of North America (RSNA)*, Chicago December 2nd, 2008.

Guzmán, Gloria. “Persistent Hypoglossal Artery”. *American College of Radiology (ACR) Case-in-Point*, May 14th, 2008.

PUBLICATIONS SUBMITTED / IN PREPARATION

Guzmán, Gloria; Rodriguez, David; Miller-Thomas, Michelle. “Comparison of FDG-18 uptake and ADC values in thyroid cancer”. Submitted to *Clinical Radiology & Imaging Journal*.

Leuthardt, Eric; **Guzmán, Gloria;** Bandt, Katie; Hacker, Carl; Marcus, Daniel; Vellimana, Ananth; Limbrick, David; Roland, Jarod; Miller-Thomas, Michelle; Shimony, Joshua; Benzinger, Tammie. “Integration of Resting State Functional MRI Into Clinical Practice- A Large Single Institution Experience”. Submitted to *Journal of Neurosurgery*.

Maitree, Rapeepan; **Guzmán, Gloria;** Michael Gach; Shimony, Joshua; Chundury, Anupama; Roach, Michael; Yang, Deshan. “Adaptive Anatomical Preservation Optimal Denoising (AAPOD) for Radiation Therapy Daily MRI”. Submitted to *Physics in Medicine and Biology*.

Mathews, Joanne; **Guzmán, Gloria;** Speidel, Benjamin; Shimony, Joshua; Leuthardt, Eric; Miller-Thomas, Michelle. “Determining the Accuracy of Resting-State Functional Magnetic Resonance Imaging in Lateralizing Language Dominance”. In preparation.

POSTER PRESENTATIONS

“Quantitative characterization of brain tumor heterogeneity using diffusion basis spectrum imaging with extended isotropic spectrum (DBSI-EIS)”

International Society for Magnetic Resonance in Medicine (ISMRM), Honolulu 2017

Washington University Oncology Imaging Symposium, St. Louis 2016

“Crucial Magnetic Resonance Imaging Anatomy of the Head and Neck in Cancer Staging,”

American Society of Head and Neck Radiology (ASHNR) Congress, Washington D.C. 2016

European Society for Magnetic Resonance in Medicine and Biology (ESMRMB) Congress, Lisbon 2012

“Maximal Noise Reduction Filter with Anatomical Structure Preservation”

American Association of Physicist in Medicine (AAPM), Washington D.C. 2016

"Thyroid cancer metastasis: Comparison of FDG-18 uptake and apparent diffusion coefficient values in PET/MR"
European Congress of Radiology (ECR), Vienna 2016

"Language lateralization in resting-state functional magnetic resonance imaging"
American Society of Neuroradiology (ASNR), Washington D.C. 2016
European Congress of Radiology (ECR), Vienna 2016

"TIP: The Translational Imaging Portal"
Mallinckrodt Institute of Radiology (MIR) Research Symposium, St. Louis 2016

"Gadolinium Deposition in the Brain: MIR neuroradiology action to promote patient safety"
Mallinckrodt Institute of Radiology (MIR) Research Symposium, St. Louis 2016

"Volumetric Resonance Imaging Evaluation: New Horizons"
European Congress of Radiology (ECR), Vienna 2016
American Society of Neuroradiology (ASNR), Chicago 2015

- **Chosen for oral presentation**

"Focal Cortical Dysplasia Deconstructed"
European Congress of Radiology (ECR), Vienna 2016
American Society of Neuroradiology (ASNR), Chicago 2015

"Beyond intravenous thrombolysis in acute ischemic stroke: radiological findings and treatment review"
Sociedad Española de Radiología Médica (SERAM), Granada 2012.

- **Won Educational Exhibit Magna Cum Laude Award, Neuroradiology Section**
- **Chosen by the Educational Committee of the Sociedad Española de Radiología Médica (SERAM) to represent Spain at the European Congress of Radiology (ECR), Vienna 2013 and the American Roentgen Ray Society Congress (ARRS), Washington D.C. 2013**

"The Phakomatosis: Pictorial and Pathological Overview"
European Congress of Radiology (ECR), Vienna 2012
Radiological Society of North America (RSNA), Chicago 2009
Sociedad Española de Radiología Médica (SERAM), Sevilla 2008

"Intracranial Vascular Lesions All Residents Should Know"
Radiological Society of North America (RSNA), Chicago 2008

- **Won Excellence in Design and Certificate of Merit Awards**

"Neoplastic Disease of the Orbit: Pictorial Overview"
Association of University Radiologist (AUR), Seattle 2008
Educational Committee of the American Society of Head and Neck Radiologists (ASHNR), Seattle 2007 **(By Invitation)**
American Society of Neuroradiology (ASNR), Chicago 2007

"Non-Neoplastic Disease of the Orbit: Pictorial Overview"
Association of University Radiologist (AUR), Seattle 2008
Educational Committee of the American Society of Head and Neck Radiologists (ASHNR), Seattle 2007 **(By Invitation)**
American Society of Neuroradiology (ASNR), Chicago 2007

"Temporal Bone Lesions: Pictorial Overview"
Association of University Radiologist (AUR), Seattle 2008

“Neoplastic Disease of the Skull Base Foramina: Pictorial and Pathological Review”

Radiological Society of North America (RSNA), Chicago 2007

- **Selected for oral presentation for continuing medical education (CME) credit**

“Non-Neoplastic Disease of the Skull Base Foramina: Pictorial and Pathological Review”

Radiological Society of North America (RSNA), Chicago 2007

- **Selected for oral presentation for continuing medical education (CME) credit**

“Teaching Reference Guides for Entry-Level Radiology Residents in Nuclear Medicine”

Office of Graduate Medical Education Week Fair, West Virginia University, Morgantown 2007

PATENT

016652-PRO1: Quantitative Differentiation of Tumor Heterogeneity Using Diffusion Magnetic Resonance (MR) Imaging Data

LABORATORY

Laboratory for Advanced Neuro-Analysis and Imaging (LANAI): Advanced Imaging laboratory dedicated to facilitating and developing translational and precision neuroradiological sequence processing

RESEARCH

Research support 1/16- Present

- R25CA190190: Guzman, PI. “DWI in head and neck squamous cell carcinoma”. Role: Principal Investigator
- Translational Imaging Program Project Stimulus (TIPPS), College of Medicine and Department of Medical Imaging - University of Arizona: Trouard, PI. “MRI Development to Evaluate Cognitive Dysfunction in Carotid Vascular Disease: An Underappreciated and Untreated Disease”. Role: Co-Investigator

Pending research support

- ASNR: Guzman PI. “Diffusion-Weighted Imaging for the Evaluation of Post-Treatment Squamous Cell Carcinoma in the Neck: Image Optimization and a New Quantitative and Qualitative Assessment Metric”. Role: Principal Investigator
- NIH: Chen PI. “Development of high-speed and quantitative neuro MRI technologies for challenging patient populations”. Role: Co-Investigator

Research salary support 7/15-6/16

- UF1AG032438 and 1UO1AGO4279101A1: Dominantly Inherited Alzheimer Network (DIAN) and Dominantly Inherited Alzheimer Network Trial Unit (DIAN-TU) respectively. Role: Collaborator
- Barnes Jewish Hospital (BJH) Foundation: Neurosurgical Translational Interference Pipeline for Clinical Resting State Functional MRI, to develop a clinical workflow for volumetric MRI and rs-fMRI at BJH. Role: Co-Investigator
- Center for Disease Control and Prevention: Acute Flaccid Myelitis (AFM) MRI Study Group. Role: Co-Investigator.

Investigator, co-author 7/15- Present

- In conjunction with Dr. Michael Lemole and Dr. Nan-kuei Chen. “DTI of cranial nerves using high-resolution multi-shot EPI (MUSE).
- In conjunction with Dr. Nan-kuei Chen, Dr. Ted Trouard, Dr. Maria Altback and Dr. Manoj Saranathan. “Advanced DWI imaging techniques for head and neck oncologic imaging”.
- In conjunction with Dr. Manoj Saranathan and NeuroQuant. “Standardized Dementia Imaging Protocol Including Quantitative Volumetric Assessment”.

- In conjunction with Dr. Eric Leuthardt, Director, Center for Innovation in Neuroscience and Technology and Dr. Tammie Benzinger, Director, Neuromagnetic Resonance Imaging and Advanced Imaging. “Resting State fMRI: Clinical Experience”, “Resting State fMRI: Language Lateralization”
- In conjunction with the Center for Disease Control (CDC). “Retrospective MRI Evaluation for Acute Flaccid Myelitis”
- In conjunction with Dr. Tammie Benzinger, Director, Neuromagnetic Resonance Imaging and Advanced Imaging. “Dominantly Inherited Alzheimer Network Trial (DIAN-TU)”, “F-DOPA Evaluation of Gliomas”
- In conjunction with Dr. Robert McKinstry, Chief Pediatric Neuroradiologist at St. Louis Children’s Hospital, in conjunction with Dr. Matthew Smyth, Director of Pediatric Epilepsy Surgery Program and Director of the Pediatric Radiosurgery Program at St. Louis Children’s Hospital. “3D cortical mapping of Focal Cortical Dysplasia” and “Case-Review of Focal Cortical Dysplasias”, “3D cortical mapping of Mesial Temporal Sclerosis”

Investigator, co-author 01/12 – 4/13

- In conjunction with Professor Pamela Faber, Director EcoLexiCon Research Group and Catedrática de Universidad, Translation and Interpreting Faculty, University of Granada, Granada, Spain. “Neurolinguistic Pathways in Expert Knowledge Acquisition: An fMRI Study”

Research Assistant 9/04 – 10/04

- Supervisor: William P. Dillon, MD, Director of the Neuroradiology Section University of California, San Francisco (UCSF), San Francisco, California. “Detection of Thrombi in the Left Atrial Appendage Using CTA: A Comparative Study with TEE”. “Correlation Between Carotid Siphon Calcification and Coronary Artery Calcification in CTA”

EDITORIAL SERVICE FOR JOURNALS

- 2017- Present Associate Editor, Clinical Radiology and Imaging Journal
- 2015- Present American Journal of Neuroradiology, Reviewer

NATIONAL COMMITTEES

- Member, Awards Committee, American Association of Women Radiologists
- Member, International Relations Steering Committee, American Society of Head and Neck Radiology
- Member, RSNA Quantitative Imaging Biomarkers Alliance (QIBA) PDF-MRI Biomarker Committee

UNIVERSITY COMMITTEES

- 2016- Present IT Radiology Committee, Member, University of Arizona
- 2016- Present LGBT+ Faculty Group, **Co-Founder**, University of Arizona
- 2016- Present Neuroradiology Protocol Development Committee, **Co-Chair**, University of Arizona
- 2016- Present Neuroradiology Integrated Research Committee, **Co-Chair**, University of Arizona
- 2016- Present Women In Academic Medicine Society, Member, University of Arizona
- 2016- Present Brain and Spine Tumor Board Conference, Member, University of Arizona
- 2016- Present Head and Neck Tumor Board, Member, University of Arizona
- 2016- Present Neuroradiology Fellow Selection Committee, Member, University of Arizona
- 2015 - 2016 Barnes-Jewish Hospital Quality Assessment Committee for MRI, Member, Washington University in St. Louis

TEACHING EXPERIENCE / CURRICULUM DEVELOPMENT

- 2017 “Different uses of diffusion-weighted imaging in Neuroradiology”, Fellow Conference, University of Arizona
- 2017 “Diffusion Basis Spectrum Imaging”, Tumor Board, University of Arizona
- 2017 “Gadolinium Deposition”, Neuroradiology Fellow Conference, University of Arizona

- 2016 “The Phakomatoses”, Radiology Resident Conference, University of Arizona
- 2016 “Cross Cultural Competency Panel”, Office of Diversity Programs Noon Conference, Washington University in St. Louis
- 2015 “Diffusion-weighted imaging in the head and neck”, Radiology Noon Conference, Washington University in St. Louis
- 2015 “Neuroradiology: 1 sy year survival guide for residents”, Radiology Resident Manual, Washington University in St. Louis
- 2015 “Focal Cortical Dysplasia”, Radiology Resident Conference, Washington University in St. Louis
- 2015 “Atypical Meningiomas”, Conjoint Neuroradiology/Neurosurgery/Neuropathology Conference, Washington University in St. Louis
- 2014 “Latest articles in diffusion-weighted images in head and neck cancer”, Neuroradiology Journal Club, Washington University in St. Louis

MENTORING ACTIVITIES

- 2017 Jennifer Kramer, Medical Student, University of Arizona
- 2017 Efren Bernal, Medical Student, University of Arizona
- 2016 Joanne Matthews, Neuroradiology Fellow, Washington University in St. Louis
- 2016 David Rodriguez, Neuroradiology Fellow, Washington University in St. Louis
- 2015 Vanessa Sanders, Emily Jun and Robert Stone, Radiology Residents, Washington University in St. Louis

RESEARCH COURSES / FACULTY DEVELOPMENT

- Association of American Medical Colleges (AAMC) Leadership and Management Foundations for Academic Medicine and Science, 2017
- Winning NIH Grant Proposals, University of Arizona, 2017
- K Award Workshop, University of Arizona, 2017
- Clinical Trial and Methodology Workshop, Radiological Society of North America, 2017
- R25 Cancer Genomics and Outcomes Research STRENGTH Program, National Institutes of Health 2016
- Introduction to the Principles and Practices of Clinical Research, National Institutes of Health, 2016
- Responsible Conduct of Research, National Institutes of Health, 2016
- Manuscript Writing Master Level Course, Clinical Research and Training Center, Washington University in St. Louis, 2016
- Mallinckrodt Institute of Radiology (MIR) Mini-Symposium, Washington University in St. Louis, 2016
- Patient Centered Outcomes Research Symposium, Washington University in St. Louis, 2016
- Research Career Development Program, Washington University in St. Louis, 2016
- I-teach Conference, Washington University in St. Louis, 2016
- Day of Discovery and Dialogue, Washington University in St. Louis, 2016
- Grant Writing Master Level Course, Clinical Research and Training Center, Washington University in St. Louis, 2015
- Central Nervous System (CNS) Curriculum Development, ABC Medical Education/Bracco, 2015

RADIOLOGY CONFERENCES / COURSES

- Arizona Alzheimer’s Consortium Retreat, Grand Canyon AZ 2017
- Radiological Society of North America (RSNA), Chicago IL 2016
- American Society of Head and Neck Radiology (ASHNR), Washington, D.C. 2016
- American Society of Neuroradiology (ASNR), Washington, D.C. 2016
- American Society of Head and Neck Radiology (ASHNR), Naples FL 2015
- American Society of Neuroradiology (ASNR), Chicago IL 2015
- Radiological Society of North America (RSNA), Chicago IL 2014

- Highlights – PET CT for Head and Neck Cancers: Part 1 and 2, 2013 [CME credit 0.75, SAM credit 0.75]
- ACR Mammography Case Review CD #5, 2013 [CME credit 10.00, SAM credit 3.00]
- European Congress of Radiology (ECR), Vienna Austria 2013
- American Roentgen Ray Society Congress (ARRS), Washington D.C. 2013
- Mammography Case Review: Detection, Diagnosis CD #4, 2013 [CME credit 9.00, SAM credit 3.00]
- Sociedad Española de Radiología Médica (SERAM), Granada Spain 2012
- European Society for Magnetic Resonance in Medicine and Biology (ESMRMB) Congress, Lisbon Portugal 2012
- European Congress of Radiology (ECR), Vienna Austria 2012
- Hands-On MRI: fMRI and DTI for Clinical Practice, Paris France 2012
- Advanced Head & Neck MR Imaging School of MRI, European Society of Magnetic Resonance in Medicine and Biology (ESMRMB), Santander Spain 2011
- Sociedad Española de Neuroradiología (SENOR), VII Curso Nacional de Neurorradiología: Neurorradiología en la Patología Vasculat Cerebral, Lleida Spain, 2011
- Cardiac and Peripheral Vascular MR, ACR Education Center, Reston VA 2011 [CME credit 19.75, SAM credit 4.00]
- Musculoskeletal MR ACR Education Center, Reston VA 2011
- Radiological Society of North America (RSNA), Chicago IL 2009
- Sociedad Española de Radiología Médica (SERAM), Sevilla Spain 2008
- Radiological Society of North America (RSNA), Chicago IL 2008
- Association of University Radiologist (AUR), Seattle WA 2008
- Educational Committee of the American Society of Head and Neck Radiologists (ASHNR), Seattle WA 2007
- Breast Knowledge Assessment Test, 2007 [CME credit 5.00; SAM credit 5.00]
- Chest Knowledge Assessment Test, 2007 [CME credit
- American Society of Neuroradiology (ASNR), Chicago IL 2007
- Radiological Society of North America (RSNA), Chicago IL 2007
- Cardiac Knowledge Assessment Test, 2007 [CME credit 5.00, SAM credit 5.00]
- Society of Interventional Radiology (SIR) 2007 Annual Scientific Meeting, Seattle WA 2007

LICENSES

- American Board of Radiology Certified Neuroradiologist, November 2016 - Present
- Arizona Medical Board, March 2016- Present
- Authorized User (AU), February 2016- Present
- Medical Board of Missouri, March 2014 - Present
- European Diploma in Radiology (EDiR), European Board of Radiology, May 2012 - Present
- Homologated Diagnostic Radiology specialty, Ministry of Education, Spain, October 2010 - Present
- Medical Board of California, April 2010 - Present
- American Board of Radiology Certified Radiologist, June 2009 - Present

PROFESSIONAL MEMBERSHIPS

- American Association for Women Radiologist, December 2014- Present
- American Society of Neuroradiology, July 2014- Present
- American Society of Head and Neck Radiology, July 2014- Present
- European Society for Magnetic Resonance in Medicine and Biology, December 2010 – Present
- Sociedad Española de Radiología Médica, February 2008- Present
- European Society of Radiology, November 2007- Present
- Radiological Society of North America, July 2005- Present
- American College of Radiology, July 2005- Present

CERTIFICATES

- Good Clinical Practice-International Council for Harmonization Certification
- Collaborative Institutional Training Initiative (CITI)
- Amyvid Reader Training
- Musculoskeletal MR American College of Radiology (ACR) Education Center Certification
- Cardiac and Peripheral Vascular MR American College of Radiology (ACR) Education Center Certification

PROFICIENCY IN RADIOLOGICAL MODALITIES

- MRI: Neural axis, Brain, Spectroscopy, Tractography, fMRI (tasked-based and resting-state), MRA, MRV, CSF flow studies, MSK, Cardiac, GI, GU, Fetal. Vital, Brainlab, Olea, Vitrea, StealthViz, Syngo Via, Nordic, Leonardo software
- CT: Neuroradiology, Body, Cardiac CT, Vitrea 3D reconstructions, stroke protocols, CTA, CTV
- Nuclear medicine including SPECT/CT and PET/CT, heart and brain PET
- Plain film and ultrasound
- Fluoroscopy including myelograms, lumbar punctures, epidural blood patches, GI, GU, MSK

LANGUAGES

Fluent in Spanish, English and French; basic German