JASON M. JOHNSON, MD, MBA

REPORT

Re: Hon. Pauline Newman
DOB: 06/20/1927

I am a board-certified diagnostic radiologist with a certificate of added qualification in neuroradiology following a fellowship in diagnostic neuroradiology at Massachusetts General Hospital / Harvard Medical School and a fellowship in pediatric neuroradiology at the University of California San Francisco. I have 13 years of dedicated neuroradiology experience and am currently an Associate Professor of Radiology and Biomedical Imaging at Yale University where I also serve as the Chief of Neuroradiology. I am also a Colonel in the United States Air Force and currently serve as the Chief of Aerospace Medicine for the 147th Attack Wing of the Texas Air National Guard. I have military training in aerospace medicine and accident investigation. I have written more than 25 chapters on topics of neuroradiology and approximately 100 peer-reviewed scientific articles. My curriculum vitae is attached.

This report will summarize my findings and opinions as an expert regarding a report from Dr. Aaron Filler dated 9/17/2024 regarding Hon. Pauline Newman. Dr. Filler provided conclusions regarding his interpretation of a perfusion computed tomography (CT) of the brain with contrast performed on 8/22/2024.

My opinions reflect the results of evaluation of Judge Newman's neuroimaging studies as provided by Dr. Filler. I have not met or personally examined Judge Newman. No doctor-patient relationship has been established.

I am being compensated for my time in this matter at my customary rate of $650 an hour.

The materials I have examined are the following:

- Report Dr. Aaron Filler dated 9/17/2024.
- Perfusion CT interpretation report from Dr. M. Reza Taheri dated 8/22/2024.
- Processed perfusion CT JPEG images.

MY INTERPRETATION OF THE NEUROIMAGING:

Perfusion CT of the brain with contrast 8/22/2024:

The raw data from this examination is not available for my review or independent processing. The submitted data consists of 134 JPEG images processed by i-RAPID AI CTP iSchemaView software. The Food and Drug Administration 510(k) clearance indication for this software is, "…

can be used by physicians to aid in the selection of acute stroke patients (with known occlusion of the intracranial internal carotid artery or proximal middle cerebral artery)."[1]

The provided images reveal a satisfactory quality examination without findings of significant motion or artifact. The data suggests no evidence of an acute arterial infarction or evidence of abnormal regional cerebral blood flow or increased blood transit time.

On page 1 of the report, Dr. Filler annotated an image from the Perfusion CT (Series 231, Image 16) with arrows labelling "High Focal Blood Flow in Right Hippocampal Region" and "High Focal Blood Flow in Left Hippocampal Region." These labels are incorrect and what Dr. Filler has designated with his arrows are not the hippocampi.

The annotated image provided in the report by Dr. Filler (page 1) and included as Figure 1 below is an image of a slice of the brain at a position higher (closer to the top of the head) than the level of the hippocampi. The hippocampi reside below the level of the putamen and Sylvian fissure - which as my annotations show (Figure 2) are visible on this image. The annotated red areas in the images are related to significant concentration of iodine in the large cerebral arteries and veins. They do not reflect blood flow to the hippocampi. In fact, elevated relative cerebral blood flow to this degree would be pathologic if observed in the hippocampus.

[1] U.S. Food and Drug Administration, Center for Devices and Radiological Health. Rapid Section 510(k) K213165 approval letter, February 8, 2022. Retrieved February 6, 2025, from https://www.accessdata.fda.gov/cdrh_docs/pdf21/K213165.pdf.

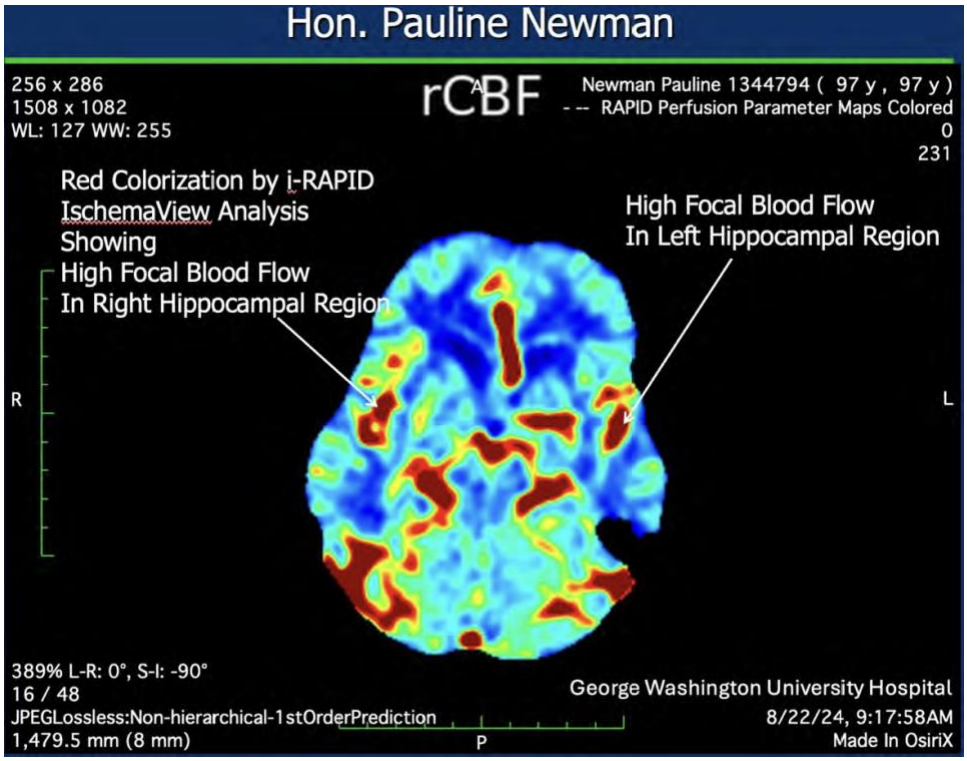


Figure 1. Annotated image from Page 1 of Dr. Filler's report dated 9/17/2024.

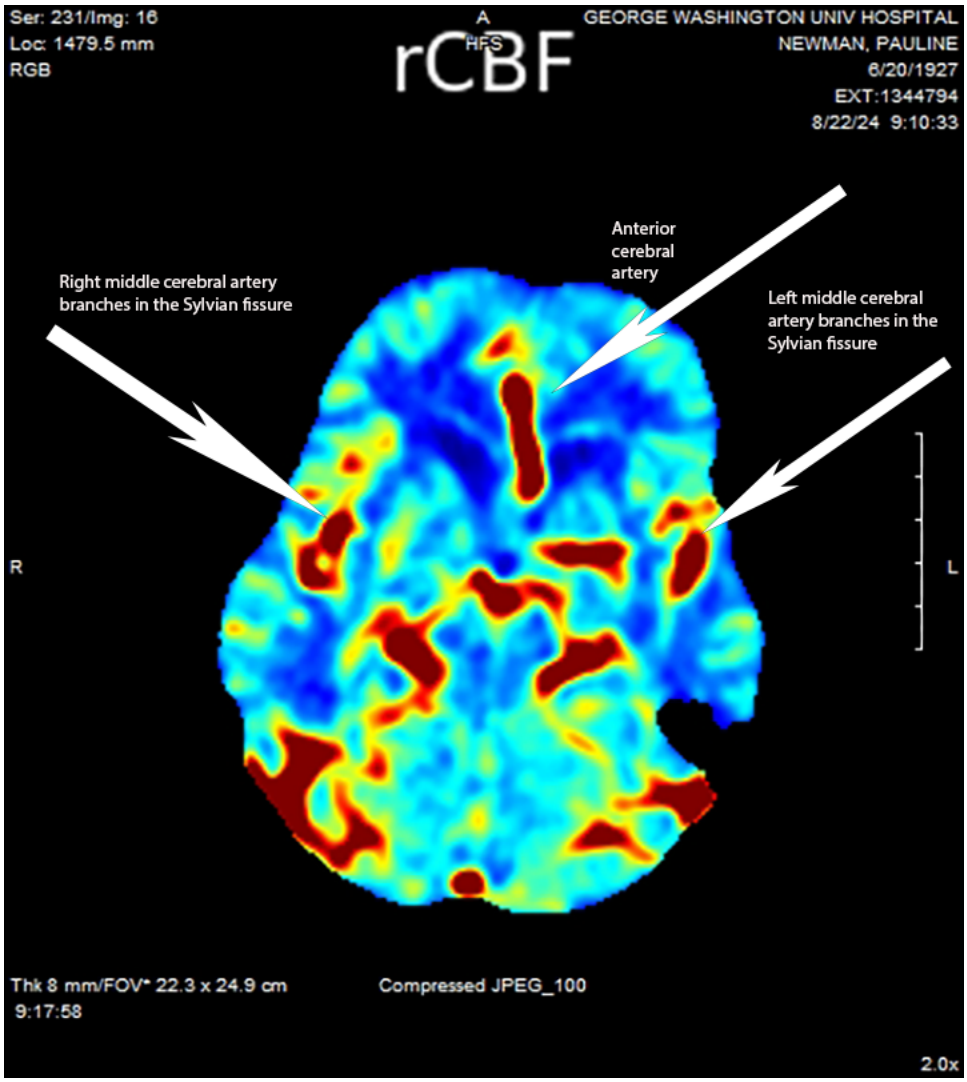


Figure 2. Dr. Johnson's annotation of the processed image which was annotated above.

I also disagree with Dr. Filler's assertion that a Perfusion CT examination can be utilized to rule out apparent cognitive dysfunction.

Perfusion CT examinations and specifically the chosen data processing methodology have not been FDA approved and is not marketed for the evaluation of cognitive function. The Food and Drug Administration 510(k) clearance indication for this software is, "… can be used by physicians to aid in the selection of acute stroke patients (with known occlusion of the intracranial internal carotid artery or proximal middle cerebral artery)."

Dr. Filler points to a limited number of articles indicating preliminary research suggesting a relationship between cerebral perfusion and certain types of dementia at the population level, but Perfusion CT has not been demonstrated to reliably identify individuals as either having or NOT

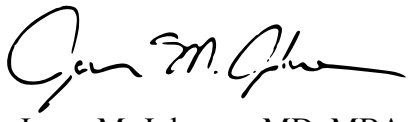
having cognitive dysfunction. The use of Perfusion CT to exclude cognitive dysfunction is not considered as a reasonable standard of care in clinical practice. Perfusion CT has not been demonstrated to be either sensitive (consistently identifying patients with cognitive impairment) or specific (consistently excluding patients without cognitive impairment).

The pretest likelihood that Judge Newman has a cognitive dysfunction should be considered unchanged by this examination. This test should not be construed as either ruling in or excluding the likelihood that a cognitive dysfunction is present.

I reserve the right to amend these opinions after review of any discovery documents and should any additional medical records become available.

My opinions are offered to a reasonable degree of medical certainty.

I hereby certify that the foregoing opinions and disclosures are true and correct to the best of my knowledge under penalty of perjury pursuant to 28 U.S.C. 1746.



Jason M. Johnson, MD, MBA

DEPARTMENT OF HEALTH AND HUMAN SERVICES
Food and Drug Administration

Indications for Use

Form Approved: OMB No. 0910-0120
Expiration Date: 06/30/2023
See PRA Statement below.

510(k) Number *(if known)*

K213165

Device Name
Rapid

Indications for Use *(Describe)*

Rapid is an image processing software package to be used by trained professionals, including but not limited to physicians and medical technicians. The software runs on a standard off-the-shelf computer or a virtual platform, such as VMware, and can be used to perform image viewing, processing and analysis of images. Data and images are acquired through DICOM compliant imaging devices.

Rapid provides both viewing and analysis capabilities for functional and dynamic imaging datasets acquired with CT, CT Perfusion (CTP), CT Angiography (CTA), and MRI including a Diffusion Weighted MRI (DWI) Module and a Dynamic Analysis Module (dynamic contrast-enhanced imaging data for MRI and CT).

The CT analysis includes NCCT maps showing areas of hypodense and hyperdense tissue.

The DWI Module is used to visualize local water diffusion properties from the analysis of diffusion - weighted MRI data.

The Dynamic Analysis Module is used for visualization and analysis of dynamic imaging data, showing properties of changes in contrast over time. This functionality includes calculation of parameters related to tissue flow (perfusion) and tissue blood volume.

Rapid CT-Perfusion and Rapid MR-Perfusion can be used by physicians to aid in the selection of acute stroke patients (with known occlusion of the intracranial internal carotid artery or proximal middle cerebral artery)
Instructions for the use of contrast agents for this indication can be found in Appendix A of the User's Manual. Additional information for safe and effective drug use is available in the product-specific iodinated CT and gadolinium-based MR contrast drug labeling.

In addition to the Rapid imaging criteria, patients must meet the clinical requirements for thrombectomy, as assessed by the physician, and have none of the following contraindications or exclusions:

- Bolus Quality: absent or inadequate bolus.
- Patient Motion: excessive motion leading to artifacts that make the scan technically inadequate
- Presence of hemorrhage

Type of Use *(Select one or both, as applicable)*

☒ Prescription Use (Part 21 CFR 801 Subpart D) ☐ Over-The-Counter Use (21 CFR 801 Subpart C)

CONTINUE ON A SEPARATE PAGE IF NEEDED.

This section applies only to requirements of the Paperwork Reduction Act of 1995.

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510(k) Summary

iSchemaView, Inc.'s Rapid

This document contains the 510(k) summary for the iSchemaView Rapid. The content of this summary is based on the requirements of 21 CFR Section 807.92(c).

Applicant Name and Address:

Name:	iSchemaView, Inc.
Address:	1120 Washington St., Suite 200 Golden, CO 80401
Official Contact:	Jim Rosa Phone: (303) 704-3374 Email: rosa@ischemaview.com

Summary Preparation Date: `September 24, 2021

Device Name and Classification:

Trade Name:	iSchemaView Rapid
Common Name:	PACS – Picture Archiving Communications System
Classification:	II
Product Code:	Primary: QIH, Secondary: LLZ
Regulation No:	21 C.F.R. §892.2050
Classification Panel:	Radiology Devices

Predicate Devices:

The iSchemaView Rapid is claimed to be substantially equivalent to the following legally marketed predicate devices:

Primary: qER-Quant (K211222)
Secondary: iSchemaView Rapid (K182130)

Previous Related FDA Submission:

iSchemaView Rapid (K121447)
iSchemaView Rapid (K172477)
iSchemaView Rapid (K182130)

Device Description:

Rapid is a software package that provides for the visualization and study of changes in tissue using digital images captured by diagnostic imaging systems including CT (Computed

Tomography) and MRI (Magnetic Image Resonance), as an aid to physician diagnosis. Rapid can be installed on a customer's Server or it can be accessed online as a virtual system. It provides viewing, quantification, analysis and reporting capabilities.

Rapid works with the following types of (DICOM compliant) medical image data:

- CT (Computed Tomography)
- MRI (Magnetic Image Resonance)

Rapid acquires (DICOM compliant) medical image data from the following sources:

- DICOM file
- DICOM CD-R
- Network using DICOM protocol

Rapid provides tools for performing the following types of analysis:

- selection of acute stroke patients for endovascular thrombectomy
- volumetry of thresholded maps
- time intensity plots for dynamic time courses
- measurement of mismatch between labeled volumes on co-registered image volumes
- large vessel density

Rapid is a Software as a Medical Device (SaMD) consisting of one or more Rapid Servers (dedicated or virtual). The Rapid Server is an image processing engine that connects to a hospital LAN, or inside the Hospital Firewall. It can be a dedicated Rapid Server or a VM Rapid appliance, which is a virtualized Rapid Server that runs on a dedicated server.

Rapid is designed to streamline medical image processing tasks that are time consuming and fatiguing in routine patient workup. Once Rapid is installed it operates with minimal user interaction. Once the CT (NCCT, CT, CTA) or MR (MR, MRA) data are acquired, the CT or MRI console operator selects Rapid as the target for the DICOM images, and then the operator selects which study/series data to be sent to Rapid. Based on the type of incoming DICOM data, Rapid will identify the data set scanning modality and determine the suitable processing module. The Rapid platform is a central control unit which coordinates the execution image processing modules which support various analysis methods used in clinical practice today:

- Rapid CTP/MRP, DWI, Dynamic Analysis (Original: K121447, Updated with K172477; and K182130);
- Rapid CTA (K172477);
- Rapid ASPECTS(K190395);
- Rapid ICH (K193087);
- Rapid LVO (K200941);

The iSchemaView Server is a dedicated server that provides a central repository for Rapid data. All iSchemaView Server data is stored on encrypted hard disks. It also provides a user interface for accessing Rapid data. It connects to a firewalled Data Center Network and

has its own firewall for additional cyber/data security. The iSchemaView Server connects to one or more Rapid Servers via WAN. Available types of connection include VPN (Virtual Private Network - RFC2401 and RFC4301 Standards) Tunnel and SSH (Secure Shell).

Indications for Use:

Rapid is an image processing software package to be used by trained professionals, including but not limited to physicians and medical technicians. The software runs on a standard off-the-shelf computer or a virtual platform, such as VMware, and can be used to perform image viewing, processing and analysis of images. Data and images are acquired through DICOM compliant imaging devices.

Rapid provides both viewing and analysis capabilities for functional and dynamic imaging datasets acquired with CT Perfusion (CTP), CT Angiography (CTA), and MRI including a Diffusion Weighted MRI (DWI) Module and a Dynamic Analysis Module (dynamic contrast-enhanced imaging data for MRI and CT).

The CT analysis includes NCCT maps showing areas of hypodense and hyperdense tissue.

The DWI Module is used to visualize local water diffusion properties from the analysis of diffusion - weighted MRI data.

The Dynamic Analysis Module is used for visualization and analysis of dynamic imaging data, showing properties of changes in contrast over time. This functionality includes calculation of parameters related to tissue flow (perfusion) and tissue blood volume.

Rapid CT-Perfusion and Rapid MR-Perfusion can be used by physicians to aid in the selection of acute stroke patients (with known occlusion of the intracranial internal carotid artery or proximal middle cerebral artery)

Instructions for the use of contrast agents for this indication can be found in Appendix A of the User's Manual. Additional information for safe and effective drug use is available in the product-specific iodinated CT and gadolinium-based MR contrast drug labeling.

In addition to the Rapid imaging criteria, patients must meet the clinical requirements for thrombectomy, as assessed by the physician, and have none of the following contraindications or exclusions:

- Bolus Quality: absent or inadequate bolus.
- Patient Motion: excessive motion leading to artifacts that make the scan technically inadequate
- Presence of hemorrhage

Technological Characteristics:

Rapid performs the following functions:

- processes DICOM images from multiple sources to provide visualization of changes of tissue perfusion, diffusion and change.
- receives DICOM images from external DICOM image providers (modalities (CT/MRI Scanners), PACS and Workstations) and sends DICOM images to external image consumers.
- processes requests, statuses and results, and references therein, which are stored in a searchable database
- processing status is available through a web browser using HTTP, HTML and PHP.
- for NCCT images, a motion filter (AI/ML) is employed which provides a textual overlay on an image suspected of having motion artifacts, without distorting the original image
- can send summary results to the user over email. For this, Rapid generally connects to the infrastructure of the medical partner (e.g., the hospital). In particular, Rapid uses a SMTP protocol with security extensions to provide secure communications.

Rapid is available in the following configurations:

- Standard Rapid, which is installed directly on a customer's Linux-based server and integrated with medical image processing software such as commercial PACS.
- Virtual Rapid, wherein the user accesses Rapid online and uses it to process DICOM images otherwise available on his/her computer.

Rapid is a DICOM-compliant PACS software that provides comprehensive functionality to transfer, process, and display modality specific imaging data. Rapid runs on standard "off-the- shelf' computer and networking hardware. Rapid is entirely independent from CT, MRI, or independent PACS platforms. It supports secure VPN (Virtual Private Network) networking or encapsulated Secure Shell (SSH), and seamlessly integrates into an existing radiological data network.

NCCT Motion Artifact AI/ML Module Performance:

Training was performed on 23066 (Pos:1021, Neg:12877) axial image slices from multiple sites, training validation included 5906 (pos: 422,neg: 5484) with a test set of 3262 (pos:2914, neg:348) images. Slice thickness ranged from 1.2-6.0 mm; The optimal performance for the final engineering solution showing an optimal AUC = 0.95, Sensitivity=0.95, Specificity=0.96. Samples were obtained from Siemens, GE, Toshiba, Philips, and Neurologica.

For final independent validation, an N=619 was used with ground truth established by 3 experienced truthers. Testing was performed independent of the development group to avoid bias. The primary endpoint was passed (weak artifact = 0) with Sensitivity = 0.91(0.83,0.95) and Specificity = 0.86(0.83,0/89) with AUC = 0.96(0.94,0.97). The cases were split Male:55%, Female 45% with an age range or 32-88 years. The samples were primarily from Siemens with GE mixed.

Clinical Characteristics:

The primary users of Rapid software are medical imaging professionals who analyze tissue using CT or MRI images. The images generated by Rapid provide additional diagnostic information, which is derived from the temporal/diffusion/density features of the native CT or MRI images.

Rapid CT Perfusion and Rapid MRI can be used by physicians to select acute stroke patients for endovascular thrombectomy. The recommended selection criteria are listed in the table below. Patients must meet the clinical requirements for thrombectomy as assessed by the physician.

Performance Standards:

Rapid has been developed in conformance with the following standards, as applicable:

EN ISO 14971:2019	Application of Risk Management to Medical Devices
IEC 62304:2016	Medical device software – Software lifecycle processes
IEC 62366:2015	Application of Usability Engineering to Medical Devices
NEMA PS 3.1 - 3.20	Digital Imaging and Communications in Medicine (DICOM)

Performance Data:

Rapid complies with DICOM (Digital Imaging and Communications in Medicine) - Developed by the American College of Radiology and the National Electrical Manufacturers Association. NEMA PS 3.1 - 3.20.

Additionally, iSchemaView conducted extensive performance validation testing and software verification and validation testing of the Rapid system. This performance validation testing demonstrated that the Rapid system provides accurate representation of key processing parameters under a range of clinically relevant parameters and perturbations associated with the intended use of the software. Software performance, validation and verification testing demonstrated that the Rapid system met all design requirements and specifications.

Prescriptive Statement:

Caution: Federal law restricts this device to sale by or on the order of a physician.

Safety & Effectiveness:

Rapid has been designed, verified and validated in compliance with 21 CFR, Part 820.30 requirements. The device has been designed to meet the requirements associated with EN ISO 14971:2019 (risk management). The Rapid System performance has been validated through the use of phantoms and case data.

Substantial Equivalence:

Rapid is as safe and effective as the previously cleared Rapid (K182130) with an extension of two parameters similar to the hyperdensity defined in qER-Quant (K211222). Rapid has the same intended use and similar indications, technological characteristics and principles of operation as its predicate devices. Rapid raises no new issues of safety or effectiveness compared to qER-Quant (K211222) or Rapid (K182130), as demonstrated by the testing

conducted with Rapid that confirms the software reliably processes and supports analysis of CT and MRI medical images for tissue evaluation. Thus, the Rapid software is substantially equivalent. The claims have been expanded to include the use of Rapid to show areas of hypodensity and hyperdensity and NCCT Motion Suspicion (AI/ML).

Substantial Equivalence Discussion:

Parameter	**Rapid** (K182130) – Secondary	**qER-Quant** (K211222) - Primary	**Rapid**
Product Code	LLZ	QIH	QIH, LLZ
Regulation	21 CFR §892.2050	21 CFR §892.2050	21 CFR §892.2050
Intended Use/ Indications for Use	iSchemaView's Rapid is an image processing software package to be used by trained professionals, including but not limited to physicians and medical technicians. The software runs on a standard off-the-shelf computer or a virtual platform, such as VMware, and can be used to perform image viewing, processing and analysis of images. Data and images are acquired through DICOM compliant imaging devices. The iSchemaView Rapid provides both viewing and analysis capabilities for functional and dynamic imaging datasets acquired with CT Perfusion, CT Angiography, and MRI including a Diffusion Weighted MRI (DWI) Module and a Dynamic Analysis Module (dynamic contrast-enhanced imaging data for MRI and CT). The DWI Module is used to visualize local water diffusion properties from the analysis of diffusion - weighted MRI data. The Dynamic Analysis Module is used for visualization and analysis of dynamic imaging data, showing properties of changes in contrast over time. This functionality includes calculation of parameters related to tissue flow (perfusion) and tissue blood volume. Rapid CT-Perfusion and Rapid MR-	The qER-Quant device is intended for automatic labeling, visualization and quantification of segmentable brain structures from a set of Non-Contrast head CT (NCCT) images. The software is intended to automate the current manual process of identifying, labeling and quantifying the volume of segmentable brain structures identified on NCCT images. qER-Quant provides volumes from NCCT images acquired at a single time point and provides a table with comparative analysis for two or more images that were acquired on the same scanner with the same image acquisition protocol for the same individual at multiple time points. The qER-Quant software is indicated for use in the analysis of the following structures: Intracranial Hyperdensities, Lateral Ventricles and Midline Shift.	Rapid is an image processing software package to be used by trained professionals, including but not limited to physicians and medical technicians. The software runs on a standard off-the-shelf computer or a virtual platform, such as VMware, and can be used to perform image viewing, processing and analysis of images. Data and images are acquired through DICOM compliant imaging devices. Rapid provides both viewing and analysis capabilities for functional and dynamic imaging datasets acquired with CT, CT Perfusion (CTP), CT Angiography (CTA), and MRI including a Diffusion Weighted MRI (DWI) Module and a Dynamic Analysis Module (dynamic contrast-enhanced imaging data for MRI and CT). The CT analysis includes NCCT maps showing areas of hypodense and hyperdense tissue. The DWI Module is used to visualize local water diffusion properties from the analysis of diffusion - weighted MRI data. The Dynamic Analysis Module is used for visualization and analysis of dynamic imaging data, showing properties of changes in contrast over time. This functionality includes calculation of

	Perfusion can be used by physicians to aid in the selection of acute stroke patients (with known occlusion of the intracranial internal carotid artery or proximal middle cerebral artery) Instructions for the use of contrast agents for this indication can be found in Appendix A of the User's Manual. Additional information for safe and effective drug use is available in the product-specific iodinated CT and gadolinium-based MR contrast drug labeling. In addition to the Rapid imaging criteria, patients must meet the clinical requirements for thrombectomy, as assessed by the physician, and have none of the following contraindications or exclusions. Contraindications/Exclusions: • Bolus Quality: absent or inadequate bolus. • Patient Motion: excessive motion leading to artifacts that make the scan technically inadequate • Presence of Hemorrhage		parameters related to tissue flow (perfusion) and tissue blood volume. Rapid CT-Perfusion and Rapid MR-Perfusion can be used by physicians to aid in the selection of acute stroke patients (with known occlusion of the intracranial internal carotid artery or proximal middle cerebral artery) Instructions for the use of contrast agents for this indication can be found in Appendix A of the User's Manual. Additional information for safe and effective drug use is available in the product-specific iodinated CT and gadolinium-based MR contrast drug labeling. In addition to the Rapid imaging criteria, patients must meet the clinical requirements for thrombectomy, as assessed by the physician, and have none of the following contraindications or exclusions. Contraindications/Exclusions: • Bolus Quality: absent or inadequate bolus. • Patient Motion: excessive motion leading to artifacts that make the scan technically inadequate • Presence of hemorrhage
	PACS Functionality		
Basic PACS Functions	Software package which interfaces to a PACS or allows viewing within the application	Viewing through user PACS	Same
Computer Platform	Standard off-the-shelf Hardware: On-Premise	Standard off-the-shelf Hardware: On-Premise and Secure Cloud	Standard off-the-shelf Hardware: On-Premise
Software	Traditional Coding	AI/ML	Mixed Traditional and AI/ML(NCCT Motion Filter)
DICOM Compliance	Yes	Yes	Yes

Functional Overview	Rapid is a software package that provides for the visualization and study of changes of tissue in digital images captured by CT and MRI. Rapid provides viewing and quantification.	Same	Same
Data/Image Types	Computed Tomography (CT) via DICOM Format	Same	Same
	Magnetic Image Resonance (MRI) via DICOM Format	Not supported	Supported
	Acquisition and Modalities Features		
MRI	Diffusion Weighted Image (DWI)	Not supported	Supported
	Dynamic Analysis tissue flow (perfusion) and tissue blood volume	Not supported	Supported
CT	CT Perfusion (CTP)	Not supported	Supported
	CTA-large vessel density analysis	Not Supported	Supported
	Computed Parameter Maps		
Diffusion MRI	Isotropic DWI (isoDWI)	Not supported	Supported
	ADC	Not supported	Supported
	Trace of diffusion tensor (Trace)	Not supported	Supported
	Fractional Anisotropy (FA) and color FA	Not supported	Supported
Perfusion MRI and Perfusion CT	Cerebral blood flow (CBF)	Not supported	Supported
	Cerebral blood volume (CBV)	Not supported	Supported
	Mean transit time (MTT)	Not supported	Supported
	Tissue residue function time to peak (Tmax)	Not supported	Supported
	Measurement Tools		
MRI and CT Tools	Arterial input function (AIF)Venous output function (VOF)	Not supported	Supported
	Time-course	Not supported	Supported
	Mask	Not supported	Supported
	Region of interest (ROI) and Volumetry	Not supported	Supported
	Volumetric comparison between 2 ROIs	Not supported	Supported
	Motion correction	Not supported	Supported
	Export perfusion and diffusion files to PACS and DICOM file systems	Not supported	Supported

	Acquire, transmit, process, and store medical images	Not supported	Supported
Thrombectomy	Selection of Patients meeting criteria for Thrombectomy	Supported	Supported
NCCT	Hyperdensity (Not included)	Supported	Supported
	Hypodensity (Not included)	Not supported	Supported
	Motion Artifact Filter (Not included)	Not supported	Supported

Conclusion:

In conclusion, the iSchemaView Rapid is substantially equivalent in intended use, technological characteristics, safety, and performance characteristics to the legally marketed predicate devices, qER-Quant (K211222) and Rapid (K182130).

CURRICULUM VITAE

Jason Michael Johnson, MD, MBA, DABR

Version Date: 11/14/2024

Contact Information:

Address	20 York Street New Haven, CT 06510
Phone:	1 (203) 785-5913
Email:	jason.johnson@yale.edu

School: Yale School of Medicine

Education:

09/1998 - 12/2001	BS, Arizona State University, Psychology, Tempe, AZ
08/2002 - 05/2006	MD, University of Arizona, Medicine, Tucson, AZ
10/2012 - 04/2013	Air University, Squadron Officer School (SOS), Montgomery, AL
06/2015 - 12/2015	Air Force Institute of Technology, Nuclear Weapons Effects, Policy, and Proliferation Certificate, Wright-Patterson Air Force Base, OH
01/2017 - 07/2017	Air University, Air Command and Staff College (ACSC), Montgomery, AL
05/2019 - 11/2019	Air University, Air War College, Montgomery, AL
12/2019 - 07/2020	Rice University, Data Analytics, Houston, TX
08/2020 - 05/2022	MBA, Rice University, Business Administration, Houston, TX
10/2023 - 06/2024	Yale School of Medicine Office of Academic and Professional Development, Healthcare Leadership Program, New Haven, CT

Career/Academic Appointments:

06/2006 - 06/2007	Intern, Internal Medicine, Banner Good Samaritan Regional Medical Center / Carl T. Hayden VAMC, Phoenix, AZ
07/2007 - 06/2011	Resident, Radiology, University of Vermont, Burlington, VT
07/2011 - 06/2013	Fellow, Neuroradiology, Massachusetts General Hospital / Harvard Medical School, Boston, MA
07/2012 - 06/2013	Clinical Instructor, Radiology, Massachusetts General Hospital, Boston, MA
07/2013 - 06/2014	Clinical Instructor, Radiology & Biomedical Imaging, University of California San Francisco, San Francisco, CA
07/2013 - 06/2014	Fellow, Neuroradiology, University of California, San Francisco, San Francisco, CA
07/2014 - 08/2014	Health Sciences Assistant Clinical Professor, Radiology & Biomedical Imaging, University of California San Francisco, San Francisco, CA
09/2014 - 08/2019	Assistant Professor, Neuroradiology, The University of Texas MD Anderson Cancer Center, Houston, TX

09/2019 - 08/2023	Associate Professor, Neuroradiology, The University of Texas MD Anderson Cancer Center, Houston, TX
10/2023 - 06/2028	Associate Professor on Term, Radiology and Biomedical Imaging, Yale School of Medicine, New Haven, CT

Administrative Positions:

2015 - 2021	Operations Committee Representative, Diagnostic Imaging, The University of Texas MD Anderson Cancer Center, Houston, TX
2016 - 2019	Directory of Neuroradiology Magnetic Resonance Imaging, Diagnostic Radiology, The University of Texas MD Anderson Cancer Center, Houston, TX
2016 - 2023	Co-Director of Advanced Neurologic Imaging Program, Neuroradiology, The University of Texas MD Anderson Cancer Center, Houston, TX
2023 - Present	Section Chief, Neuroradiology, Yale School of Medicine, New Haven, CT

Board Certification:

2011 - 2024	AB of Radiology, Diagnostic Radiology
2013 - 2024	AB of Radiology, Neuroradiology

Professional Honors & Recognition:

International/National/Regional

2009	Leading Scientific Advancements in Medical Imaging, Radiologic Society of North America
2010	Roentgen Resident/Fellow Research Award, Radiologic Society of North America
2011	Certificate of Merit, Radiologic Society of North America
2011	Cum Laude Award, Radiologic Society of North America
2013	Air Force Outstanding Unit Award, United States Air Force
2013	Air Force Training Ribbon, United States Air Force
2014	Air Force Achievement Medal, United States Air Force
2017	Air Force Commendation Medal, United States Air Force
2017	Air Force Expeditionary Service Ribbon, United States Air Force
2017	Air Force Expeditionary Service Ribbon with Gold Border, United States Air Force
2017	Meritorious Service Medal, United States Air Force
2018	Global War on Terrorism Service Award, United States Air Force
2018	Humanitarian Service Award, United States Air Force
2018	National Defense Service Medal, United States Air Force
2018	Leading Scientific Advancements in Medical Imaging, Radiological Society of North America
2019	International Society of Magnetic Resonance in Medicine Magna Cum Laude Merit Award, International Society of Magnetic Resonance in Medicine
2019	Korean Defense Service Medal, United States Air Force
2019	Aerial Achievement Medal, United States Air Force
2019	Air Medal, United States Air Force

2020	Robert D. Zimmerman Scientific Award, The Eastern Neuroradiological Society
2024	Meritorious Service Medal, United States Air Force

Yale University/Yale School of Medicine/Hospital System

2016	Diagnostic Radiology Enhancement Award, The University of Texas MD Anderson Cancer Center
2016	Recognition for Act Project, The University of Texas MD Anderson Cancer Center
2017	Pilot Research Program Award, The University of Texas MD Anderson Cancer Center

Other

2003 - 2004	Young Investigator Award, Yuma Friends of Arizona Health Sciences Center
2004	Leadership Award, Shubitz Family Clinic / Commitment to Underserved People
2004	Representative of the Year, The University of Arizona Graduate & Professional Student Council
2008	Resident Award in Informatics, University of Vermont, Department of Radiology
2010	Resident Award in Informatics, University of Vermont, Department of Radiology

Grants/Clinical Trials History:

Past Grants

Agency:	NIH/NCI
I.D.#:	R01 CA231513
Title:	Development and dissemination of clinical CEST MRI acquisition and analysis method for cancer imaging applications
P.I.:	Marty Pagel, PhD
Role:	Co-Investigator
Percent effort:	4%
Total costs:	$2,039,450.00
Project period:	12/01/2018 - 11/30/2023

Agency:	NIH/NCI
I.D.#:	FP00014104
Title:	Quantitative Imaging Biomarker Prospective Validation of Dynamic Contrast-Enhanced MRI as a Metric of Orodental Injury After Radiotherapy (QI-ProVE-MRI)
P.I.:	Stephen Y. Lai, MD, PhD
Role:	Co-Investigator
Percent effort:	4%
Total costs:	$2,486,689.00
Project period:	07/01/2022 - 08/30/2023

Agency:	Blue Earth Diagnostics

I.D.#:	HIC# 080950034072
Title:	Study of F18 Fluciclovine PET CT for Assessment of Glioblastoma Tumor Volume and Radiation Response
Role:	Principal Investigator
Percent effort:	5%
Total costs:	$60,000.00
Project period:	06/01/2018 - 08/30/2023

Agency:	Arizona Disease Control Research Commission
I.D.#:	0055-66-01
Title:	Genetic basis of Auriculo-Condylar Syndrome in 2 Arizona Families
P.I.:	David Duggan, PhD
Role:	Sub-PI
Percent effort:	10%
Total costs:	$150,000.00
Project period:	07/22/2005 - 08/01/2008

Agency:	UTMDACC Diagnostic Imaging Clinical Research Committee
I.D.#:	2018-0659
Title:	Dual Time Point FDG PET Imaging Optimization for the Evaluation of Glioblastoma
Role:	Principal Investigator
Percent effort:	10%
Total costs:	$124,520.00
Project period:	05/19/2016 - 08/17/2020

Agency:	NIH/NCI
I.D.#:	1R01DE025248-01
Title:	Using Dynamic Contrast-Enhanced Magnetic Resonance Imaging (DCE-MRI) to Establish Objective Clinical Outcome Measures for Mandibular Osteoradionecrosis
P.I.:	Stephen Y. Lai, MD, PhD
Role:	Co-Investigator
Percent effort:	2%
Total costs:	$938,430.00
Project period:	04/01/2017 - 03/31/2021

Agency:	American Society of Head and Neck Radiology
I.D.#:	2017-0826
Title:	Post-treatment Assessment of Head and Neck Tumors Following Definitive Chemoradiation Therapy
Role:	Principal Investigator
Percent effort:	1%
Total costs:	$23,700.00

Project period: 06/30/2017 - 06/29/2021

Agency: UTMDACC Diagnostic Imaging Clinical Research Committee
I.D.#: 2018-0303
Title: Advanced CT Imaging Optimization for the Detection of Intracranial Metastasis
Role: Principal Investigator
Percent effort: 5%
Total costs: $35,000.00
Project period: 12/29/2017 - 12/29/2023

Agency: The Brockman Foundation
I.D.#: 01
Title: The Brockman Foundation
P.I.: Ganesh Rao, MD, PhD
Role: Co-Investigator
Percent effort: 1%
Total costs: $2,173,913.00
Project period: 04/01/2020 - 03/31/2023

Pending Clinical Trials

Agency: -
I.D.#: 2000038610
Title: Imaging Neuroplasticity in Focal Lesions
P.I.: Luca Pasquini
Role: Sub-Investigator
Percent effort: N/A
Total costs: -

Agency: -
I.D.#: 2000038843
Title: Clinical Neuroplasticity Repository
P.I.: Luca Pasquini
Role: Sub-Investigator
Percent effort: N/A
Total costs: -
Project period: 11/13/2024 - ongoing

Invited Speaking Engagements, Presentations & Workshops Not Affiliated With Yale:

International/National

1. "Pearls and pitfalls of magnetic resonance perfusion imaging in the evaluation of central nervous system neoplasms". European Society of Neuroradiology , 38th European Society of Neuroradiology Annual Meeting, Naples, Campania, September 2015. (Oral Presentation)

2. "Practical case-based discussions of single vs fractionated stereotactic radiosurgery for benign brain tumors". American Society for Radiation Oncology , American Society for Radiation Oncology 60th Annual Meeting, San Antonio, TX, September 2018. (Lecture)
3. "AI in Skull Base Surgery, Head and Neck Radiology". North American Skull Base Society, North American Skull Base Society Annual Meeting, Atlanta, GA, February 2024. (Other)
4. "It Takes a Village: How to Create a Research Team". American Society of Neuroradiology, American Society of Neuroradiology Annual Meeting, Las Vegas, NV, May 2024. (Lecture)

Regional

1. "Case Presentations of Tumor and Tumor-like Conditions: Evaluation with Advanced Imaging". New York University Section of Neuroradiology, Visiting Professor, New York, NY, May 2015. (Lecture)
2. "Unusual Cases in Neuroradiology". North Shore / Long Island Jewish Medical Center Department of Radiology, Visiting Professor, Manhasset, NY, July 2015. (Lecture)
3. "Advanced Imaging in Tumors and Tumor-like Conditions". University of Vermont Department of Radiology, Grand Rounds, Burlington, VT, August 2015. (Lecture)
4. "Advanced Brain Tumor Imaging". Tufts Medical Center Department of Radiology, Visiting Professor, Boston, MA, September 2015. (Lecture)
5. "Cutting-edge MRI". Eastern Neuroradiological Society, 27th Annual Meeting of the Eastern Neuroradiological Society, Newport, RI, September 2015. (Oral Presentation)
6. "Zebras and Unicorns: Rare and Exotic Cases in Neuroradiology". Stanford University Section of Neuroradiology, Visiting Professor, Palo Alto, CA, October 2015. (Lecture)
7. "Select Cases with MR Perfusion and Spectroscopy". Visiting Professor, San Francisco, CA, October 2015. (Lecture)
8. "Advanced Neuro-Imaging of Brain Lesions". University of South Alabama Department of Radiology, Grand Rounds, Mobile, AL, April 2016. (Lecture)
9. "Zebras and Unicorns in Neuroradiology". Visiting Professor, New York, NY, June 2016. (Lecture)
10. "Difficulties in Glioblastoma Treatment Assessment". Massachusetts General Hospital / Harvard Medical School Section of Neuroradiology, Visiting Professor, Boston, MA, March 2018. (Lecture)
11. "Challenges in Glioblastoma Imaging: 2018". Columbia University Department of Radiology, Visiting Professor, New York, NY, May 2018. (Lecture)
12. "Providing Added Clinical Value in Imaging of Glioblastoma". University of California San Francisco Department of Radiology & Biomedical Imaging, Visiting Professor, San Francisco, CA, September 2018. (Lecture)
13. "Defeating Glioblastoma: The Terminator". Stanford University Section of Neuroradiology, Visiting Professor, Palo Alto, CA, September 2018. (Lecture)
14. "Business in Radiology". Diagnostic Radiology Residency Training Program at Bridgeport Hospital, Bridgeport Hospital Diagnostic Radiology Noon Lecture, Bridgeport, CT, April 2024. (Lecture)
15. "PET Imaging for Head and Neck Cancer". University of California, Midwest Head and Neck Imaging Conference 2024, Chicago, IL, April 2024. (Lecture)
16. "Opportunities in Imaging Glioblastoma: PET and Advanced MRI". Zucker School of Medicine at Hofstra/Northwell, Zucker School of Medicine at Hofstra/Northwell Residency in Diagnostic Radiology Conference Series, Hempstead, NY, September 2024. (Lecture)
17. "Cutting-edge Innovations in Advanced Brain Tumor Imaging". Massachusetts General Hospital / Harvard Medical School Neuroradiology Grand Rounds, Boston, MA, October 2024. (Lecture)

Peer-Reviewed Presentations Given at Meetings Not Affiliated With Yale:

International/National

1. **Johnson JM** . Performance assessment of dynamic susceptibility contrast versus dynamic contrast enhanced perfusion imaging in distinguishing between true progression and pseudoprogression in a series of patients with high-grade glial neoplasm. European Society of Neuroradiology, 38th European Society of Neuroradiology Annual Meeting, Naples, Campania, September 2015. (Oral Presentation)
2. **Johnson JM** . Clinical performance characteristics of multivoxel magnetic resonance spectroscopy in distinguishing between true progression and pseudoprogression in a series of patients with high-grade glial neoplasm. Radiological Society of North America, 101st Radiological Society of North America Scientific Program and Annual Meeting, Chicago, IL, November 2015 - December 2015. (Oral Presentation)
3. **Johnson JM** . Pearls and pitfalls of multivoxel magnetic resonance spectroscopy in the evaluation of true progression versus pseudoprogression of high-grade glial neoplasm. Radiological Society of North America, 101st Radiological Society of North America Scientific Program and Annual Meeting, Chicago, IL, November 2015 - December 2015. (Poster Presentation)
4. Bronson Ciavarra, **Johnson JM** . Delayed FDG-PET in differentiating recurrent cerebral metastatic disease from radiation necrosis following stereotactic radiosurgery. European Society of Neuroradiology , European Society of Neuroradiology 41st Annual Meeting, Rotterdam, ZH, September 2018. (Oral Presentation)

Regional

1. Ayesha Masood, **Johnson JM** . Accuracy of ultrasound-guided 18-gauge fine-needle aspiration in the detection of persistent lymph node metastasis after chemoradiation. Western Neuroradiological Society, Western Neuroradiological Society , Austin, TX, October 2016. (Oral Presentation)

Professional Service:

Journal Services

Editorial boards

2023 - Present Editorial Board Member, Frontiers in Neuroimaging

Reviewer

2020 - Present Reviewer, American Society of Neuroradiology

Professional Organizations

American Society of Functional Neuroradiology - Clinical Practice Committee

2022 - 2025 Committee Member, American Society of Functional Neuroradiology - Clinical Practice Committee

American Society of Functional Neuroradiology - Membership Committee Member

2024 - 2027 Committee Member, American Society of Functional Neuroradiology - Membership Committee Member, Three-year term as a member of the ASFNR Membership Committee

American Society of Functional Neuroradiology - Research Committee Member

2022 - 2025 Committee Member, American Society of Functional Neuroradiology - Research Committee Member

American Society of Neuroradiology - Computer Science & Informatics Committee

2023 - Present Committee Member, American Society of Neuroradiology - Computer Science & Informatics Committee, Computer Science & Informatics Committee Member

American Society of Neuroradiology - Diversity & Inclusion Committee Member

2023 - Present Committee Member, American Society of Neuroradiology - Diversity & Inclusion Committee Member, Diversity & Inclusion Committee Member

American Society of Neuroradiology - Research Committee Member

2023 - Present Committee Member, American Society of Neuroradiology - Research Committee Member, Research Committee Member

American Society of Pediatric Neuroradiology - Research Committee Member

2015 - 2018 Committee Member, American Society of Pediatric Neuroradiology - Research Committee Member, Research Committee Member

North American Skull Base Society

2024 - Present Member, North American Skull Base Society

Radiological Society of North America - Education Exhibits Awards Committee, Nuclear Medicine & Molecular Imaging

2024 - 2025 Committee Member, Radiological Society of North America - Education Exhibits Awards Committee, Nuclear Medicine & Molecular Imaging

Yale University / Hospital System

Department

2024 - 2025 Member, Diagnostic Radiology Resident Selection Committee

Public Service / Media Presence

Public Service

2014 - Present	Volunteer, Houston Livestock Rodeo Health Committee
2017 - 2019	Executive Board Member, Houston Livestock Rodeo Health Committee - Captain

Bibliography:

Peer-Reviewed Original Research

1. Storm A, **Johnson J** , Lammer E, Green G, Cunniff C. Auriculo-condylar syndrome is associated with highly variable ear and mandibular defects in multiple kindreds. American Journal Of Medical Genetics Part A 2005, 138A: 141-145. PMID: 16114046 , DOI: 10.1002/ajmg.a.30883 .
2. Filippi C, Meyer R, Cauley K, Nickerson J, Burbank H, **Johnson J** , Linnell G, Alsofrom G. The misinterpretation rates of radiology residents on emergent neuroradiology magnetic resonance (MR) angiogram studies: correlation with level of residency training. Emergency Radiology 2009, 17: 45. PMID: 19499257 , DOI: 10.1007/s10140-009-0820-z .
3. Rieder M, Green G, Park S, Stamper B, Gordon C, **Johnson J** , Cunniff C, Smith J, Emery S, Lyonnet S, Amiel J, Holder M, Heggie A, Bamshad M, Nickerson D, Cox T, Hing A, Horst J, Cunningham M. A Human Homeotic Transformation Resulting from Mutations in PLCB4 and GNAI3 Causes Auriculocondylar Syndrome. American Journal Of Human Genetics 2012, 91: 397. PMCID: PMC3415552 , DOI: 10.1016/j.ajhg.2012.07.011 .
4. Filippi C, Carlson M, **Johnson J** , Burbank H, Alsofrom G, Andrews T. Improvements in lumbar spine MRI at 3 T using parallel transmission. American Journal Of Roentgenology 2012, 199: 861-7. PMID: 22997379 , DOI: 10.2214/ajr.11.8139 .
5. **Johnson J** , Reed M, Burbank H, Filippi C. Quality of Extracranial Carotid Evaluation with 256-Section CT. American Journal Of Neuroradiology 2013, 34: 1626-1631. PMID: 23471025 , PMCID: PMC8051452 , DOI: 10.3174/ajnr.a3433 .
6. van Eeghen A, Terán L, **Johnson J** , Pulsifer M, Thiele E, Caruso P. The neuroanatomical phenotype of tuberous sclerosis complex: focus on radial migration lines. Neuroradiology 2013, 55: 1007-1014. PMID: 23644537 , DOI: 10.1007/s00234-013-1184-3 .
7. Gordon C, Cunniff C, Green G, Zechi-Ceide R, **Johnson J** , Henderson A, Petit F, Kokitsu-Nakata N, Guion-Almeida M, Munnich A, Cunningham M, Lyonnet S, Amiel J. Clinical evidence for a mandibular to maxillary transformation in Auriculocondylar syndrome. American Journal Of Medical Genetics Part A 2014, 164: 1850-1853. PMID: 24677549 , DOI: 10.1002/ajmg.a.36505 .
8. Mehan W, González R, Buchbinder B, Chen J, Copen W, Gupta R, Hirsch J, Hunter G, Hunter S, **Johnson J** , Kelly H, Larvie M, Lev M, Pomerantz S, Rapalino O, Rincon S, Romero J, Schaefer P, Shah V. Optimal Brain MRI Protocol for New Neurological Complaint. PLOS ONE 2014, 9: e110803. PMID: 25343371 , PMCID: PMC4208779 , DOI: 10.1371/journal.pone.0110803 .
9. Gierach G, Geller B, Shepherd J, Patel D, Vacek P, Weaver D, Chicoine R, Pfeiffer R, Fan B, Mahmoudzadeh A, Wang J, **Johnson J** , Herschorn S, Brinton L, Sherman M. Comparison of Mammographic Density Assessed as Volumes and Areas among Women Undergoing Diagnostic Image-Guided Breast Biopsy. Cancer Epidemiology Biomarkers & Prevention 2014, 23: 2338-2348. PMID: 25139935 , PMCID: PMC4337788 , DOI: 10.1158/1055-9965.epi-14-0257 .
10. **Johnson J** , Johnson A, O'Meara E, Miglioretti D, Geller B, Hotaling E, Herschorn S. Breast Cancer Detection with Short-Interval Follow-up Compared with Return to Annual Screening in Patients

with Benign Stereotactic or US-guided Breast Biopsy Results. Radiology 2014, 275: 54-60. PMID: 25423143 , PMCID: PMC4497520 , DOI: 10.1148/radiol.14140036 .

11. Gierach G, Patel D, Pfeiffer R, Figueroa J, Linville L, Papathomas D, **Johnson J** , Chicoine R, Herschorn S, Shepherd J, Wang J, Malkov S, Vacek P, Weaver D, Fan B, Mahmoudzadeh A, Palakal M, Xiang J, Oh H, Horne H, Sprague B, Hewitt S, Brinton L, Sherman M. Relationship of Terminal Duct Lobular Unit Involution of the Breast with Area and Volume Mammographic Densities. Cancer Prevention Research 2016, 9: 149-158. PMID: 26645278 , PMCID: PMC4784982 , DOI: 10.1158/1940-6207.capr-15-0282 .
12. Felix A, Lenz P, Pfeiffer R, Hewitt S, Morris J, Patel D, Geller B, Vacek P, Weaver D, Chicoine R, Shepherd J, Mahmoudzadeh A, Wang J, Fan B, Malkov S, Herschorn S, **Johnson J** , Cora R, Brinton L, Sherman M, Gierach G. Relationships between mammographic density, tissue microvessel density, and breast biopsy diagnosis. Breast Cancer Research 2016, 18: 88. PMID: 27552842 , PMCID: PMC4995674 , DOI: 10.1186/s13058-016-0746-9 .
13. Shiao J, Mohamed A, Messer J, Hutcheson K, **Johnson J** , Enderling H, Kamal M, Warren B, Pham B, Morrison W, Zafereo M, Hessel A, Lai S, Kies M, Ferrarotto R, Garden A, Schomer D, Gunn G, Phan J, Frank S, Beadle B, Weber R, Lewin J, Rosenthal D, Fuller C. Quantitative pretreatment CT volumetry: Association with oncologic outcomes in patients with T4a squamous carcinoma of the larynx. Head & Neck 2017, 39: 1609-1620. PMID: 28464542 , PMCID: PMC5511768 , DOI: 10.1002/hed.24804 .
14. Ng S, Jomaa M, Pollard C, Ayoub Z, Mohamed A, Garden A, Berends J, Gunn G, Frank S, Skinner H, Phan J, Rosenthal D, Morrison W, **Johnson J** , Sturgis E, Lai S, Fuller C. Cost of surveillance imaging in head and neck cancer patients treated with definitive radiotherapy. Journal Of Clinical Oncology 2017, 35: 6610-6610. DOI: 10.1200/jco.2017.35.15_suppl.6610 .
15. Hansen C, Smith J, Mohamed A, Mulcahy C, Wefel J, Hutcheson K, Chrane K, Phan J, Frank S, Garden A, Smith B, Eichelberger H, Anderson C, McCoy C, Horiates M, Patrick C, Floris S, French C, Beadle B, Morrison W, Su S, Lewis C, Kupferman M, **Johnson J** , Skinner H, Lai S, Hanna E, Rosenthal D, Fuller C, Gunn G, Group A. Cognitive function and patient-reported memory problems after radiotherapy for cancers at the skull base: A cross-sectional survivorship study using the Telephone Interview for Cognitive Status and the MD Anderson Symptom Inventory-Head and Neck Module. Head & Neck 2017, 39: 2048-2056. PMID: 28763137 , PMCID: PMC6082378 , DOI: 10.1002/hed.24876 .
16. Ordóñez-Rubiano E, **Johnson J** , Enciso-Olivera C, Marín-Muñoz J, Cortes-Lozano W, Baquero-Herrera P, Ordóñez-Mora E, Cifuentes-Lobelo H, Enciso-Olivera C, Cifuentes-Lobelo H. Reconstruction of the Ascending Reticular Activating System with Diffusion Tensor Tractography in Patients with a Disorder of Consciousness after Traumatic Brain Injury. Cureus 2017, 9: e1723. PMID: 29188167 , PMCID: PMC5705170 , DOI: 10.7759/cureus.1723 .
17. Ng S, Jomaa M, Pollard C, Berends J, Ayoub Z, Mohamed A, Gunn G, Frank S, Garden A, Rosenthal D, Skinner H, Phan J, Morrison W, **Johnson J** , Ferrarotto R, Lai S, Sturgis E, Fuller C. Second Primary Malignancies in Head and Neck Cancer Patients Treated with Definitive Radiotherapy. International Journal Of Radiation Oncology • Biology • Physics 2017, 99: s122. DOI: 10.1016/j.ijrobp.2017.06.286 .
18. Mohamed A, Westergaard S, Cardenas C, Ng S, Aristophanous M, **Johnson J** , Sturgis E, Fuller C, Garden A. Pre- and Posttreatment FDG-PET for Tumor Control Prediction in Human Papillomavirus

Associated Oropharyngeal Cancer Patients Treated With Definitive IMRT. International Journal Of Radiation Oncology • Biology • Physics 2017, 99: s197. DOI: 10.1016/j.ijrobp.2017.06.489 .

19. Weng H, Noll K, **Johnson J** , Prabhu S, Tsai Y, Chang S, Huang Y, Lee J, Yang J, Yang C, Tsai Y, Yang C, Hazle J, Schomer D, Liu H. Accuracy of Presurgical Functional MR Imaging for Language Mapping of Brain Tumors: A Systematic Review and Meta-Analysis. Radiology 2017, 286: 512-523. PMID: 28980887 , DOI: 10.1148/radiol.2017162971 .
20. Patel R, Sitton C, Ketonen L, Hou P, **Johnson J** , Romo S, Fletcher S, Shah M, Kerr M, Zaky W, Rytting M, Khatua S, Sandberg D. Phase-contrast cerebrospinal fluid flow magnetic resonance imaging in qualitative evaluation of patency of CSF flow pathways prior to infusion of chemotherapeutic and other agents into the fourth ventricle. Child's Nervous System 2017, 34: 481-486. PMID: 29170836 , DOI: 10.1007/s00381-017-3669-6 .
21. Kamal M, Ng S, Eraj S, Rock C, Pham B, Messer J, Garden A, Morrison W, Phan J, Frank S, El-Naggar A, **Johnson J** , Ginsberg L, Ferrarotto R, Lewin J, Hutcheson K, Cardenas C, Zafereo M, Lai S, Hessel A, Weber R, Gunn G, Fuller C, Mohamed A, Rosenthal D. Three-dimensional imaging assessment of anatomic invasion and volumetric considerations for chemo/radiotherapy-based laryngeal preservation in T3 larynx cancer. Oral Oncology 2018, 79: 1-8. PMID: 29598944 , PMCID: PMC5880303 , DOI: 10.1016/j.oraloncology.2018.01.025 .
22. Hsu A, Hou P, **Johnson J** , Wu C, Noll K, Prabhu S, Ferguson S, Kumar V, Schomer D, Hazle J, Chen J, Liu H. IClinfMRI Software for Integrating Functional MRI Techniques in Presurgical Mapping and Clinical Studies. Frontiers In Neuroinformatics 2018, 12: 11. PMID: 29593520 , PMCID: PMC5854683 , DOI: 10.3389/fninf.2018.00011 .
23. Cardenas C, Mohamed A, Ng S, Westergaard S, Aristophanous M, **Johnson J** , Sturgis E, Garden A, Fuller C. Evaluation of Pre- and Post-IMRT FDG-PET SUV Values for the Prediction of Tumor Control In HPV-Positive Oropharyngeal Cancer Patients. International Journal Of Radiation Oncology • Biology • Physics 2018, 100: 1361. DOI: 10.1016/j.ijrobp.2017.12.141 .
24. Ng S, Kamal M, Pollard C, Berends J, Ayoub Z, Mohamed A, Gunn G, Frank S, Skinner H, Phan J, Morrison W, Rosenthal D, Garden A, **Johnson J** , Lai S, Sturgis E, Fuller C. Cost of Surveillance Imaging in Head and Neck Cancer Patients Treated With Definitive Radiation therapy. International Journal Of Radiation Oncology • Biology • Physics 2018, 100: 1387-1388. DOI: 10.1016/j.ijrobp.2017.12.208 .
25. Ng S, Kamal M, Pollard C, Berends J, Ayoub Z, Mohamed A, Gunn G, Frank S, Skinner H, Phan J, Morrison W, Garden A, **Johnson J** , Ferrarotto R, Lai S, Sturgis E, Fuller C, Rosenthal D. Second Primary Malignancies in Head and Neck Cancer Patients Treated With Definitive Radiation Therapy. International Journal Of Radiation Oncology • Biology • Physics 2018, 100: 1352. DOI: 10.1016/j.ijrobp.2017.12.119 .
26. Ng S, **Johnson J** , Gunn G, Rosenthal D, Skinner H, Phan J, Frank S, Morrison W, Sturgis E, Mott F, Fuller C, Garden A. Significance of Negative Posttreatment 18-FDG PET/CT Imaging in Patients With p16/HPV-positive Oropharyngeal Cancer. International Journal Of Radiation Oncology • Biology • Physics 2018, 100: 1360. DOI: 10.1016/j.ijrobp.2017.12.139 .
27. Ng S, **Johnson J** , Gunn G, Rosenthal D, Skinner H, Phan J, Frank S, Morrison W, Sturgis E, Mott F, Williams M, Fuller C, Garden A. Significance of Negative Posttreatment 18-FDG PET/CT Imaging in Patients With p16/HPV-Positive Oropharyngeal Cancer. International Journal Of Radiation Oncology • Biology • Physics 2018, 102: 1029-1035. PMID: 29960060 , PMCID: PMC9620951 , DOI: 10.1016/j.ijrobp.2018.06.031 .

28. Ng S, Bahig H, Wang J, Cardenas C, Lucci A, Hall C, Meas S, Sarli V, Yuan Y, Urbauer D, Ding Y, Ikner S, Dinh V, Elgohari B, **Johnson J** , Skinner H, Gunn G, Garden A, Phan J, Rosenthal D, Morrison W, Frank S, Hutcheson K, Mohamed A, Lai S, Ferrarotto R, MacManus M, Fuller C. Predicting treatment Response based on Dual assessment of magnetic resonance Imaging kinetics and Circulating Tumor cells in patients with Head and Neck cancer (PREDICT-HN): matching 'liquid biopsy' and quantitative tumor modeling. BMC Cancer 2018, 18: 903. PMID: 30231854 , PMCID: PMC6148797 , DOI: 10.1186/s12885-018-4808-5 .
29. Feghali K, Yeboa D, Chasen B, Gule M, **Johnson J** , Chung C. The Use of 68Ga-DOTATATE PET/CT in the Non-invasive Diagnosis of Optic Nerve Sheath Meningioma: A Case Report. Frontiers In Oncology 2018, 8: 454. PMID: 30386741 , PMCID: PMC6198069 , DOI: 10.3389/fonc.2018.00454 .
30. Ordóñez-Rubiano E, **Johnson J** , Younus I, Avila M, Fonseca-Mazeau P, Marín-Muñoz J, Cortes-Lozano W, Enciso-Olivera C, Ordóñez-Mora E. Recovery of consciousness after a brainstem cavernous malformation hemorrhage: A descriptive study of preserved reticular activating system with tractography. Journal Of Clinical Neuroscience 2018, 59: 372-377. PMID: 30595167 , DOI: 10.1016/j.jocn.2018.10.074 .
31. Harrison R, Kesler S, **Johnson J** , Penas-Prado M, Sullaway C, Wefel J. Neurocognitive dysfunction in adult cerebellar medulloblastoma. Psycho-Oncology 2018, 28: 131-138. PMID: 30315720 , DOI: 10.1002/pon.4920 .
32. Ordóñez-Rubiano E, Valderrama-Arias F, Forbes J, **Johnson J** , Younus I, Marín-Muñoz J, Sánchez-Montaño M, Angulo D, Cifuentes-Lobelo H, Cortes-Lozano W, Pedraza-Ciro M, Bello-Dávila M, Patiño-Gómez J, Ordóñez-Mora E. Identification of Preoperative Language Tracts for Intrinsic Frontotemporal Diseases: A Pilot Reconstruction Algorithm in a Middle-Income Country. World Neurosurgery 2019, 125: e729-e742. PMID: 30735870 , DOI: 10.1016/j.wneu.2019.01.163 .
33. Ng S, Pollard C, Berends J, Ayoub Z, Kamal M, Garden A, Bahig H, Cantor S, Schaefer A, Ajayi T, Gunn G, Frank S, Skinner H, Phan J, Morrison W, Ferrarotto R, **Johnson J** , Mohamed A, Lai S, Hessel A, Sturgis E, Weber R, Fuller C, Rosenthal D. Usefulness of surveillance imaging in patients with head and neck cancer who are treated with definitive radiotherapy. Cancer 2019, 125: 1823-1829. PMID: 30748005 , PMCID: PMC7234834 , DOI: 10.1002/cncr.31983 .
34. Jethanandani A, Chen M, Gule-Monroe M, Morrison W, Lai S, **Johnson J** . Incidental detection of oropharyngeal cancer with fluciclovine PET. Head & Neck 2019, 41: e141-e145. PMID: 31046173 , DOI: 10.1002/hed.25798 .
35. Jethanandani A, Gule-Monroe M, Chen M, **Johnson J** . Extraneural Metastases From a High-Grade Glioma (HGG) With an H3F3A G34R Mutation. Frontiers In Oncology 2019, 9: 373. PMID: 31139567 , PMCID: PMC6519298 , DOI: 10.3389/fonc.2019.00373 .
36. Ferrarotto R, Bell D, Rubin M, Lee J, **Johnson J** , Goepfert R, Phan J, Elamin Y, Myers J, Hessel A, Johnson F, Gillison M, Sikora A, Glisson B, Gross N. Checkpoint inhibitors assessment in oropharynx cancer (CIAO): Safety and interim results. Journal Of Clinical Oncology 2019, 37: 6008-6008. DOI: 10.1200/jco.2019.37.15_suppl.6008 .
37. Sanders J, Fletcher J, Frank S, Liu H, **Johnson J** , Zhou Z, Chen H, Venkatesan A, Kudchadker R, Pagel M, Ma J. Deep learning application engine (DLAE): Development and integration of deep learning algorithms in medical imaging. SoftwareX 2019, 10: 100347. PMID: 34113706 , PMCID: PMC8188855 , DOI: 10.1016/j.softx.2019.100347 .
38. Zhou Z, Sanders J, **Johnson J** , Guha-Thakurta N, Chen M, Briere T, Wang Y, Son J, Li J, Ma J. Machine Learning Based Detection of Brain Cancer Metastases in MR Images for Stereotactic

Radiosurgery Using Single-Shot Detectors. International Journal Of Radiation Oncology • Biology • Physics 2019, 105: s116-s117. DOI: 10.1016/j.ijrobp.2019.06.082 .

39. Ng S, Pollard C, Kamal M, Ayoub Z, Garden A, Bahig H, Gunn G, Frank S, Skinner H, Phan J, Berends J, Morrison W, **Johnson J** , Ferrarotto R, Sturgis E, Mohamed A, Lai S, Fuller C, Rosenthal D. Risk of second primary malignancies in head and neck cancer patients treated with definitive radiotherapy. Npj Precision Oncology 2019, 3: 22. PMID: 31583278 , PMCID: PMC6764977 , DOI: 10.1038/s41698-019-0097-y .
40. Ordóñez-Rubiano E, Solano-Noguera D, Row W, Weinberg J, Tatsui C, **Johnson J** , Gule-Monroe M. Dual Time-Point 18F-FDG PET/CT in Spinal Sarcoidosis: A Single Institution Case Series. Spine 2019, 44: e1248-e1255. PMID: 31634300 , DOI: 10.1097/brs.0000000000003122 .
41. Ng S, Ajayi T, Schaefer A, Pollard C, Bahig H, Garden A, Rosenthal D, Gunn G, Frank S, Phan J, Morrison W, **Johnson J** , Mohamed A, Sturgis E, Fuller C. Surveillance imaging for patients with head and neck cancer treated with definitive radiotherapy: A partially observed Markov decision process model. Cancer 2019, 126: 749-756. PMID: 31725906 , PMCID: PMC8439665 , DOI: 10.1002/cncr.32597 .
42. Mullooly M, Ehteshami Bejnordi B, Pfeiffer R, Fan S, Palakal M, Hada M, Vacek P, Weaver D, Shepherd J, Fan B, Mahmoudzadeh A, Wang J, Malkov S, **Johnson J** , Herschorn S, Sprague B, Hewitt S, Brinton L, Karssemeijer N, van der Laak J, Beck A, Sherman M, Gierach G. Application of convolutional neural networks to breast biopsies to delineate tissue correlates of mammographic breast density. Npj Breast Cancer 2019, 5: 43. PMID: 31754628 , PMCID: PMC6864056 , DOI: 10.1038/s41523-019-0134-6 .
43. Mullooly M, Puvanesarajah S, Fan S, Pfeiffer R, Olsson L, Hada M, Kirk E, Vacek P, Weaver D, Shepherd J, Mahmoudzadeh A, Wang J, Malkov S, **Johnson J** , Hewitt S, Herschorn S, Sherman M, Troester M, Gierach G. Using Digital Pathology to Understand Epithelial Characteristics of Benign Breast Disease among Women Undergoing Diagnostic Image-Guided Breast Biopsy. Cancer Prevention Research 2019, 12: 861-870. PMID: 31645342 , PMCID: PMC7357278 , DOI: 10.1158/1940-6207.capr-19-0120 .
44. Hsu A, Chen H, Hou P, Wu C, **Johnson J** , Noll K, Prabhu S, Ferguson S, Kumar V, Schomer D, Chen J, Liu H. Presurgical resting-state functional MRI language mapping with seed selection guided by regional homogeneity. Magnetic Resonance In Medicine 2019, 84: 375-383. PMID: 31793025 , DOI: 10.1002/mrm.28107 .
45. Pestana R, Becnel M, Rubin M, Torman D, Crespo J, Phan J, Hanna E, Bell D, Glisson B, **Johnson J** , Lee J, Ferrarotto R. Response rates and survival to systemic therapy after immune checkpoint inhibitor failure in recurrent/metastatic head and neck squamous cell carcinoma. Oral Oncology 2019, 101: 104523. PMID: 31864957 , DOI: 10.1016/j.oraloncology.2019.104523 .
46. Khatua S, Cooper L, Sandberg D, Ketonen L, **Johnson J** , Rytting M, Liu D, Meador H, Trikha P, Nakkula R, Behbehani G, Ragoonanan D, Gupta S, Kotrotsou A, Idris T, Shpall E, Rezvani K, Colen R, Zaky W, Lee D, Gopalakrishnan V. Phase I study of intraventricular infusions of autologous ex vivo expanded NK cells in children with recurrent medulloblastoma and ependymoma. Neuro-Oncology 2020, 22: 1214-1225. PMID: 32152626 , PMCID: PMC7594549 , DOI: 10.1093/neuonc/noaa047 .
47. Zhou Z, Sanders J, **Johnson J** , Gule-Monroe M, Chen M, Briere T, Wang Y, Son J, Pagel M, Li J, Ma J. Computer-aided Detection of Brain Metastases in T1-weighted MRI for Stereotactic Radiosurgery Using Deep Learning Single-Shot Detectors. Radiology 2020, 295: 407-415. PMID: 32181729 , PMCID: PMC8287889 , DOI: 10.1148/radiol.2020191479 .

48. Mohamed A, He R, Ding Y, Wang J, Elgohari B, Elhalawani H, **Johnson J** , Stafford J, Bankson J, Sandulache V, Fuller C, Lai S. Prospective Assessment of DCE-MRI Parameters Associated with Advanced Mandibular Osteoradionecrosis after IMRT of Head and Neck Cancer. International Journal Of Radiation Oncology • Biology • Physics 2020, 106: 1167. DOI: 10.1016/j.ijrobp.2019.11.163 .
49. Ng S, Ajayi T, Schaefer A, Pollard C, Bahig H, Garden A, Rosenthal D, Gunn G, Phan J, Morrison W, **Johnson J** , Mohamed A, Sturgis E, Fuller C. Surveillance Imaging for Patients with Head and Neck Cancer Treated with Definitive Radiotherapy: A Partially Observed Markov Decision Process Model. International Journal Of Radiation Oncology • Biology • Physics 2020, 106: 1154. DOI: 10.1016/j.ijrobp.2019.11.234 .
50. Ng S, Cardenas C, Elhalawani H, Pollard C, Elgohari B, Fang P, Meheissen M, Guha-Thakurta N, Bahig H, **Johnson J** , Kamal M, Garden A, Reddy J, Su S, Ferrarotto R, Frank S, Gunn G, Moreno A, Rosenthal D, Fuller C, Phan J. Comparison of tumor delineation using dual energy computed tomography versus magnetic resonance imaging in head and neck cancer re-irradiation cases. Physics And Imaging In Radiation Oncology 2020, 14: 1-5. PMID: 33458306 , PMCID: PMC7807720 , DOI: 10.1016/j.phro.2020.04.001 .
51. Gunn G, Ferrarotto R, Johnson F, Bell D, Cardoso R, **Johnson J** , Rubin M, Yuan Y, Frank S, Fuller C, Rosenthal D, Kupferman M, Goepfert R, Hessel A, Hutcheson K, Gross N. Prospective, longitudinal digital activity monitoring before and after treatment of low-risk oropharyngeal squamous cell carcinoma: A feasibility study. Journal Of Clinical Oncology 2020, 38: 6578-6578. DOI: 10.1200/jco.2020.38.15_suppl.6578 .
52. Ferrarotto R, Bell D, Rubin M, Hutcheson K, **Johnson J** , Goepfert R, Phan J, Elamin Y, Torman D, Warneke C, Hessel A, Garden A, Myers J, Johnson F, Lee J, Sikora A, Gillison M, Glisson B, Gross N. Impact of Neoadjuvant Durvalumab with or without Tremelimumab on CD8+ Tumor Lymphocyte Density, Safety, and Efficacy in Patients with Oropharynx Cancer: CIAO Trial Results. Clinical Cancer Research 2020, 26: 3211-3219. PMID: 32269052 , PMCID: PMC8362306 , DOI: 10.1158/1078-0432.ccr-19-3977 .
53. Kumar V, Heiba I, Prabhu S, Chen M, Colen R, Young A, **Johnson J** , Hou P, Noll K, Ferguson S, Rao G, Lang F, Schomer D, Liu H. The role of resting-state functional MRI for clinical preoperative language mapping. Cancer Imaging 2020, 20: 47. PMID: 32653026 , PMCID: PMC7353792 , DOI: 10.1186/s40644-020-00327-w .
54. Cooperative J, Mohamed A, He R, Ding Y, Wang J, Fahim J, Elgohari B, Elhalawani H, Kim A, Ahmed H, Garcia J, **Johnson J** , Stafford R, Bankson J, Chambers M, Sandulache V, Fuller C, Lai S. Quantitative Dynamic Contrast-Enhanced MRI Identifies Radiation-Induced Vascular Damage in Patients With Advanced Osteoradionecrosis: Results of a Prospective Study. International Journal Of Radiation Oncology • Biology • Physics 2020, 108: 1319-1328. PMID: 32712257 , PMCID: PMC7680450 , DOI: 10.1016/j.ijrobp.2020.07.029 .
55. Sanders J, Chen H, **Johnson J** , Schomer D, Jimenez J, Ma J, Liu H. Synthetic generation of DSC-MRI-derived relative CBV maps from DCE MRI of brain tumors. Magnetic Resonance In Medicine 2020, 85: 469-479. PMID: 32726488 , DOI: 10.1002/mrm.28432 .
56. Zhong L, Li T, Shu H, Huang C, **Johnson J** , Schomer D, Liu H, Feng Q, Yang W, Zhu H. (TS)2WM: Tumor Segmentation and Tract Statistics for Assessing White Matter Integrity with Applications to Glioblastoma Patients. NeuroImage 2020, 223: 117368. PMID: 32931941 , PMCID: PMC7688588 , DOI: 10.1016/j.neuroimage.2020.117368 .

57. Zhou Z, Sanders J, **Johnson J** , Gule-Monroe M, Chen M, Briere T, Wang Y, Son J, Pagel M, Ma J, Li J. MetNet: Computer-aided segmentation of brain metastases in post-contrast T1-weighted magnetic resonance imaging. Radiotherapy And Oncology 2020, 153: 189-196. PMID: 32937104 , DOI: 10.1016/j.radonc.2020.09.016 .
58. Noll K, Chen H, Wefel J, Kumar V, Hou P, Ferguson S, Rao G, **Johnson J** , Schomer D, Suki D, Prabhu S, Liu H. Alterations in Functional Connectomics Associated With Neurocognitive Changes Following Glioma Resection. Neurosurgery 2020, 88: 544-551. PMID: 33080024 , PMCID: PMC7884148 , DOI: 10.1093/neuros/nyaa453 .
59. Ng S, Cardenas C, Bahig H, Elgohari B, Wang J, **Johnson J** , Moreno A, Shah S, Garden A, Phan J, Gunn G, Frank S, Ding Y, Na L, Yuan Y, Urbauer D, Rosenthal D, Morrison W, MacManus M, Fuller C. Changes In Apparent Diffusion Coefficient (ADC) In Serial Weekly MRI During Radiotherapy In Patients With Head And Neck Cancer: Results From The PREDICT-HN Study. International Journal Of Radiation Oncology • Biology • Physics 2020, 108: e790-e791. DOI: 10.1016/j.ijrobp.2020.07.264 .
60. **Johnson J** , Mohamed A, Ding Y, Wang J, Lai S, Fuller C, Shah R, Butler R, Weber R. Ultra-small superparamagnetic iron oxide (USPIO) magnetic resonance imaging in benign mixed tumor of the parotid gland. Clinical Case Reports 2020, 9: 123-127. PMID: 33489146 , PMCID: PMC7813040 , DOI: 10.1002/ccr3.3477 .
61. Chen H, Kumar V, **Johnson J** , Chen M, Noll K, Hou P, Prabhu S, Schomer D, Liu H. Effect of brain normalization methods on the construction of functional connectomes from resting-state functional MRI in patients with gliomas. Magnetic Resonance In Medicine 2021, 86: 487-498. PMID: 33533052 , DOI: 10.1002/mrm.28690 .
62. Schellingerhout D, Jacobsen M, Le Roux L, **Johnson J** , Baladandayuthapani V, Hwang K, Hazle J, Schomer D, Cody D. The Calcium Versus Hemorrhage Trial. Investigative Radiology 2021, 56: 385-393. PMID: 33534507 , DOI: 10.1097/rli.0000000000000758 .
63. Weinberg J, McAleer M, **Johnson J** , Kudchadker R, Wefel J, Yuan Y, Lin H. A phase III multicenter randomized controlled trial of postsurgical stereotactic radiotherapy versus surgically targeted radiation therapy (STaRT) for the treatment of large (>2.5cm) newly diagnosed brain metastases: Trial in progress. Journal Of Clinical Oncology 2021, 39: tps2067-tps2067. DOI: 10.1200/jco.2021.39.15_suppl.tps2067 .
64. Bodelon C, Mullooly M, Pfeiffer R, Fan S, Abubakar M, Lenz P, Vacek P, Weaver D, Herschorn S, **Johnson J** , Sprague B, Hewitt S, Shepherd J, Malkov S, Keely P, Eliceiri K, Sherman M, Conklin M, Gierach G. Mammary collagen architecture and its association with mammographic density and lesion severity among women undergoing image-guided breast biopsy. Breast Cancer Research 2021, 23: 105. PMID: 34753492 , PMCID: PMC8579610 , DOI: 10.1186/s13058-021-01482-z .
65. **Johnson J** , Chen M, Rohren E, Prabhu S, Chasen B, Mawlawi O, Liu H, Gule-Monroe M. Delayed FDG PET Provides Superior Glioblastoma Conspicuity Compared to Conventional Image Timing. Frontiers In Neurology 2021, 12: 740280. PMID: 34867723 , PMCID: PMC8635110 , DOI: 10.3389/fneur.2021.740280 .
66. Upadhyay R, Khose S, Pokhylevych H, Paulino A, McAleer M, Ghia A, Li J, Yeboa D, Loghin M, Harrison R, O'Brien B, Kamiya-Matsuoka C, De Groot J, Puduvalli V, Tatsui C, Alvarez-Breckenridge C, Prabhu S, Rhines L, Zaky W, Lin F, Weinberg J, Fuller G, Sandberg D, **Johnson J** , McGovern S. Patterns of failure after radiation therapy in primary spinal high-grade gliomas: A single

institutional analysis. Neuro-Oncology Advances 2022, 4: vdac129. PMID: 36128585 , PMCID: PMC9476222 , DOI: 10.1093/noajnl/vdac129 .

67. Amer A, Khose S, Alhasan H, Pokhylevych H, Fuller G, Chasen N, de Groot J, **Johnson J** . Clinical and survival characteristics of primary and secondary gliosarcoma patients. Clinical Neurology And Neurosurgery 2022, 214: 107146. PMID: 35101778 , DOI: 10.1016/j.clineuro.2022.107146 .
68. Yeh M, Chen H, Hou P, Kumar V, **Johnson J** , Noll K, Prabhu S, Ferguson S, Schomer D, Peng H, Liu H. Cerebrovascular Reactivity Mapping Using Resting-State Functional MRI in Patients With Gliomas. Journal Of Magnetic Resonance Imaging 2022, 56: 1863-1871. PMID: 35396789 , DOI: 10.1002/jmri.28194 .
69. Gross N, Ferrarotto R, Amit M, Nagarajan P, Yuan Y, Bell D, **Johnson J** , Morrison W, Rosenthal D, Glisson B, Johnson F, Mott F, Esmaeli B, Diaz E, Gidley P, Goepfert R, Lewis C, Wargo J, Weber R, Myers J. Long-term outcomes of a phase II trial of neoadjuvant immunotherapy for advanced, resectable cutaneous squamous cell carcinoma of the head and neck (CSCC-HN). Journal Of Clinical Oncology 2022, 40: 9519-9519. DOI: 10.1200/jco.2022.40.16_suppl.9519 .
70. Bronk J, Amer A, Khose S, Flint D, Adair A, Yepes P, Grosshans D, **Johnson J** , Chung C. Brain Radiation Necrosis Outside the Target Volume After Proton Radiation Therapy: Analyses of Multiparametric Imaging and Proton Biologic Effectiveness. Advances In Radiation Oncology 2022, 7: 101044. PMID: 36420203 , PMCID: PMC9677210 , DOI: 10.1016/j.adro.2022.101044 .
71. Ng S, Cardenas C, Bahig H, Elgohari B, Wang J, **Johnson J** , Moreno A, Shah S, Garden A, Phan J, Gunn G, Frank S, Ding Y, Na L, Yuan Y, Urbauer D, Mohamed A, Rosenthal D, Morrison W, MacManus M, Fuller C. Changes in Apparent Diffusion Coefficient (ADC) in Serial Weekly MRI during Radiotherapy in Patients with Head and Neck Cancer: Results from the PREDICT-HN Study. Current Oncology 2022, 29: 6303-6313. PMID: 36135064 , PMCID: PMC9498049 , DOI: 10.3390/curroncol29090495 .
72. Pokhylevych H, Khose S, Gule-Monroe M, Chen M, Fuller G, Gruschkus S, Sadighi Z, Zaky W, Sandberg D, McGovern S, **Johnson J** . Contrast Enhancement Patterns in Pediatric Glioblastomas. Journal Of Computer Assisted Tomography 2022, 47: 115-120. PMID: 36112052 , DOI: 10.1097/rct.0000000000001379 .
73. Johnson F, Janku F, Gouda M, Tran H, Kawedia J, Schmitz D, Streefkerk H, Lee J, Andersen C, Deng D, Rawal S, Shah P, El-Naggar A, **Johnson J** , Frederick M. Inhibition of the Phosphatidylinositol-3 Kinase Pathway Using Bimiralisib in Loss-of-Function NOTCH1-Mutant Head and Neck Cancer. The Oncologist 2022, 27: 1004-e926. PMID: 36124629 , PMCID: PMC9732253 , DOI: 10.1093/oncolo/oyac185 .
74. Ziyaee H, Cardenas C, Yeboa D, Li J, Ferguson S, **Johnson J** , Zhou Z, Sanders J, Mumme R, Court L, Briere T, Yang J. Automated Brain Metastases Segmentation With a Deep Dive Into False-positive Detection. Advances In Radiation Oncology 2022, 8: 101085. PMID: 36299565 , PMCID: PMC9589017 , DOI: 10.1016/j.adro.2022.101085 .
75. Matsui J, **Johnson J** , Paulino A, McAleer M, Grosshans D, Ghia A, Li J, Zaky W, Chintagumpala M, McGovern S. Simultaneous Integrated Boost Technique for Pediatric High-Grade Gliomas: A Single-Institution Experience. International Journal Of Radiation Oncology • Biology • Physics 2022, 114: e482-e483. DOI: 10.1016/j.ijrobp.2022.07.1751 .
76. Pokhylevych H, Khose S, Amer A, Alhasan H, Kaya D, Johnson R, Fuller G, Gruschkus S, Zaky W, Weinberg J, **Johnson J** . Retrospective Analysis of Imaging Characteristics of Tectal Gliomas. Journal

Of Computer Assisted Tomography 2022, 47: 136-143. PMID: 36598462 , DOI: 10.1097/rct.0000000000001391 .

77. McGovern S, Luo D, **Johnson J** , Nguyen K, Li J, McAleer M, Yeboa D, Grosshans D, Ghia A, Chung C, Bishop A, Song J, Thall P, Brown P, Mahajan A. A Prospective Study of Conventionally Fractionated Dose Constraints for Reirradiation of Primary Brain Tumors in Adults. Practical Radiation Oncology 2022, 13: 231-238. PMID: 36596356 , DOI: 10.1016/j.prro.2022.12.006 .
78. Acosta-Medina E, Zorro-Guío OF, Abdala-Vargas NJ, Jacomussi-Alzate L, Figueredo LF, Johnson JM, Patiño-Gómez JG, Ordóñez-Rubiano EG. Postnatal Surgical Correction of Myelomeningoceles: Preoperative and Intraoperative Risk Factors Associated with Postoperative Neurologic Outcomes. World Neurosurg 2023, 170: e629-e638. PMID: 36410703 , DOI: 10.1016/j.wneu.2022.11.079.
79. Multidisciplinary OPC ENE Group. Multi-Specialty Expert Physician Identification of Extranodal Extension in Computed Tomography Scans of Oropharyngeal Cancer Patients: Prospective Blinded Human Inter-Observer Performance Evaluation. MedRxiv 2023 PMID: 36865096 , DOI: 10.1101/2023.02.25.23286432.
80. Ferrarotto R, Johnson F, Hutcheson K, Sui D, **Johnson J** , Ebersole B, Mott F, Lewis C, Bonini F, Hoff C, Mitani Y, Cortez M, Bell D, El-Naggar A, Gunn G, Fuller C, Myers J, Lee J, Rosenthal D, Diaz E. Immuno-chemotherapy as single treatment modality for larynx preservation (ICoLP): Co-primary endpoints and safety results. Journal Of Clinical Oncology 2023, 41: 6008-6008. DOI: 10.1200/jco.2023.41.16_suppl.6008 .
81. Matsui J, Allen P, Perlow H, **Johnson J** , Paulino A, McAleer M, Fouladi M, Grosshans D, Ghia A, Li J, Zaky W, Chintagumpala M, Palmer J, McGovern S. Prognostic factors for pediatric, adolescent, and young adult patients with non-DIPG grade 4 gliomas: a contemporary pooled institutional experience. Journal Of Neuro-Oncology 2023, 163: 717-726. PMID: 37440097 , DOI: 10.1007/s11060-023-04386-4 .
82. Ferrarotto R, Nagarajan P, Maronge J, Johnson J, Rosenthal D, Myers J, Gross N. Outcomes of Treatment With Neoadjuvant Cemiplimab for Patients With Advanced, Resectable Cutaneous Squamous Cell Carcinoma of the Head and Neck. JAMA Otolaryngology - Head & Neck Surgery 2023, 149: 847-849. PMID: 37535378 , PMCID: PMC10401391 , DOI: 10.1001/jamaoto.2023.1729 .
83. Hoebel KV, Bridge CP, Ahmed S, Akintola O, Chung C, Huang RY, Johnson JM, Kim A, Ly KI, Chang K, Patel J, Pinho M, Batchelor TT, Rosen BR, Gerstner ER, Kalpathy-Cramer J. Expert-centered Evaluation of Deep Learning Algorithms for Brain Tumor Segmentation. Radiol Artif Intell 2024, 6: e220231. PMID: 38197800 , DOI: 10.1148/ryai.220231.
84. Yadav D, Upadhyay R, Kumar V, Chen M, **Johnson J** , Langshaw H, Curl B, Farhat M, Talpur W, Beckham T, Yeboa D, Swanson T, Ghia A, Li J, Chung C. Additive Value of Magnetic Resonance Simulation Before Chemoradiation in Evaluating Treatment Response and Pseudoprogression in High-Grade Gliomas. Practical Radiation Oncology 2024, 14: e449-e457. PMID: 38685448 , DOI: 10.1016/j.prro.2024.04.009 .
85. O'Brien B, Murthy R, Berry D, Singareeka Raghavendra A, Gule-Monroe M, **Johnson J** , Schwartz-Gomez J, Topletz-Erickson A, Lobbous M, Melisko M, Morikawa A, Ferguson S, de Groot J, Krop I, Valero V, Rimawi M, Wolff A, Tripathy D, Lin N, Stringer-Reasor E. Tucatinib-trastuzumab-capecitabine for treatment of leptomeningeal metastasis in HER2+ breast cancer: TBCRC049 phase 2 study results. Journal Of Clinical Oncology 2024, 42: 2018-2018. DOI: 10.1200/jco.2024.42.16_suppl.2018 .

86. Figueredo LF, Mejía-Cordovez JA, Gomez-Amarillo DA, Hakim F, Pimienta-Redondo HD, Almeida JP, Kehayov I, Angelova P, Apostolov G, Luzzi S, Baldoncini M, Johnson JM, Ordóñez-Rubiano EG. Differential tractography and whole brain connectometry in primary motor area gliomas resection: A feasibility study. Clin Neurol Neurosurg 2024, 241: 108305. PMID: 38713964 , DOI: 10.1016/j.clineuro.2024.108305.
87. Samir A. Dagher, MD, Ho-Ling Liu, PhD, Burak Berksu Ozkara, MD, Susana Calle, MD, Diana Kaya, MD, Maria K. Gule, MD, Noah N. Chasen, MD, Dawid Schellingerhout, MD, Kim O. Learned, MD, Komal B. Shah, MD, Jason M. Johnson, MD, Jia Sun, PhD, Donald F. Schomer, MD, Vinodh A. Kumar, MD, Max Wintermark, MD, Nazanin K. Majd, MD, PhD, Joo Yeon Nam, MD, Melissa M. Chen, MD. The Impact of MRI-Based Advanced Neuroimaging on Neuro-Oncologists' Clinical Decision-Making in Patients With Posttreatment High-Grade Glioma: A Prospective Survey. AJR 2024 Aug 14 [published online]. Accepted manuscript. doi:10.2214/AJR.24.31595

Peer-Reviewed Reviews, Practice Guidelines, Standards, and Consensus Statements

1. **Johnson J** , Kiankhooy A, Bertges D, Morris C. Percutaneous Image-Guided Aspiration and Sclerosis of Adventitial Cystic Disease of the Femoral Vein. CardioVascular And Interventional Radiology 2009, 32: 812-816. PMID: 19449068 , DOI: 10.1007/s00270-009-9581-z .
2. **Johnson J** , Moonis G, Green G, Carmody R, Burbank H. Syndromes of the First and Second Branchial Arches, Part 1: Embryology and Characteristic Defects. American Journal Of Neuroradiology 2010, 32: 14-19. PMID: 20299437 , PMCID: PMC7964959 , DOI: 10.3174/ajnr.a2072 .
3. **Johnson J** , Moonis G, Green G, Carmody R, Burbank H. Syndromes of the First and Second Branchial Arches, Part 2: Syndromes. American Journal Of Neuroradiology 2010, 32: 230-237. PMID: 20360348 , PMCID: PMC7965699 , DOI: 10.3174/ajnr.a2073 .
4. Caruso P, **Johnson J** , Thibert R, Rapalino O, Rincon S, Ratai E. The Use of Magnetic Resonance Spectroscopy in the Evaluation of Epilepsy. Neuroimaging Clinics Of North America 2013, 23: 407-424. PMID: 23928197 , DOI: 10.1016/j.nic.2012.12.012 .
5. **Johnson J** , Franceschi A, Reed M, Primm J, Herschorn S. Axillary Lymph Node Calcification. Contemporary Diagnostic Radiology 2014, 37: 1-5. DOI: 10.1097/01.cdr.0000451016.34682.05 .
6. Caruso P, **Johnson J** , Thibert R, Rapalino O, Rincon S, Ratai E. The use of MRS in the evaluation of pediatric epilepsy. Journal Of Pediatric Epilepsy 2015, 02: 033-048. DOI: 10.3233/pep-13046 .
7. Najjar A, **Johnson J** , Schellingerhout D. The Emerging Role of Amino Acid PET in Neuro-Oncology. Bioengineering 2018, 5: 104. PMID: 30487391 , PMCID: PMC6315339 , DOI: 10.3390/bioengineering5040104 .
8. Yeh R, Amer A, **Johnson J** , Ginat D. Pearls and Pitfalls of 18FDG-PET Head and Neck Imaging. Neuroimaging Clinics Of North America 2022, 32: 287-298. PMID: 35526957 , DOI: 10.1016/j.nic.2022.01.005 .
9. Chen MM, Terzic A, Becker AS, Johnson JM, Wu CC, Wintermark M, Wald C, Wu J. Artificial intelligence in oncologic imaging. Eur J Radiol Open 2022, 9: 100441. PMID: 36193451 , DOI: 10.1016/j.ejro.2022.100441.
10. Hooper G, Ansari S, **Johnson J** , Ginat D. Advances in the Radiological Evaluation of and Theranostics for Glioblastoma. Cancers 2023, 15: 4162. PMID: 37627190 , PMCID: PMC10453051 , DOI: 10.3390/cancers15164162 .

Peer-Reviewed Case Reports and Technical Notes

1. Zeeb L, **Johnson J** , Madsen M, Keating D. Sclerosing angiomatoid nodular transformation. American Journal Of Roentgenology 2009, 192: w236-8. PMID: 19380529 , DOI: 10.2214/ajr.08.1487 .
2. Saemi A, **Johnson J** , Morris C. Treatment of Bilateral Hand Frostbite Using Transcatheter Arterial Thrombolysis After Papaverine Infusion. CardioVascular And Interventional Radiology 2009, 32: 1280. PMID: 19449067 , DOI: 10.1007/s00270-009-9584-9 .
3. **Johnson J** , Patten L, Robson C, Teele R. Ultrasonographic detection of intracranial melanocytosis in an infant. Pediatric Radiology 2009, 40: 210-214. PMID: 19763554 , DOI: 10.1007/s00247-009-1402-7 .
4. **Johnson J** , Higgins T, Lemos D. Appearance of the delta phalanx (longitudinally bracketed epiphysis) with MR imaging. Pediatric Radiology 2010, 41: 394-396. PMID: 20972673 , DOI: 10.1007/s00247-010-1863-8 .
5. Johnson A, **Johnson J** , Ames E, Filippi C. Spontaneous Clinical and Radiological Resolution of Vertebral Sarcoidosis. Spine 2012, 37: e414-e416. PMID: 22422442 , DOI: 10.1097/brs.0b013e31822f30fd .
6. Hoesli R, **Johnson J** , Meyer A, Green G. Eustachian Tube Duplication. Otology & Neurotology 2014, 35: 1099-1101. PMID: 24751751 , DOI: 10.1097/mao.0000000000000381 .
7. Cabot R, Rosenberg E, Harris N, Shepard J, Cort A, Ebeling S, McDonald E, Olson K, Freitag S, **Johnson J** , Branda J. Case 36-2014 — An 18-Year-Old Woman with Fever, Pharyngitis, and Double Vision. New England Journal Of Medicine 2014, 371: 2018-2027. PMID: 25409375 , DOI: 10.1056/nejmcpc1310001 .
8. Kansara S, Bell D, **Johnson J** , Zafereo M. Head and neck inflammatory pseudotumor: Case series and review of the literature. The Neuroradiology Journal 2016, 29: 440-446. PMID: 27650653 , PMCID: PMC5131759 , DOI: 10.1177/1971400916665377 .
9. Ozkizilkaya HI, Johnson JM, O'Brien BJ, McCutcheon IE, Prabhu SS, Ghia AJ, Fuller GN, Huse JT, Ballester LY. Intracranial mesenchymal tumor, FET::CREB fusion-positive in the lateral ventricle. Neurooncol Adv 2023, 5: vdad026. PMID: 37051329 , DOI: 10.1093/noajnl/vdad026.
10. Chelariu-Raicu A, Piha-Paul SA, Chavez-MacGregor M, Johnson J, Sawaya R, McAleer MF, Nguyen A, Hartnett A, Tsimberidou AM, Meric-Bernstam F, Dumbrava EE. Multidisciplinary Care of a Large Brain Metastasis in a Patient with Hormone-Receptor-Positive Breast Cancer with Ataxia-Telangiectasia Mutation. J Immunother Precis Oncol 2023, 6: 158-161. PMID: 37637237 , DOI: 10.36401/JIPO-22-33.

Chapters

1. Johnson JM. Leukodystrophies. In: Neuroradiology: Key Differential Diagnoses and Clinical Questions. Ed(s) JE Small, PW Shaefer. Saunders: Philadelphia, 411-416, 2013.
2. Johnson JM, Meader A, Hunt DT, Romero JM. Carotid and vertebral. In: Problem Solving in Radiology Cardiovascular Imaging. Ed(s) S Abbara, SP Kalva. Saunders: Philadelphia, 685-698, 2012.
3. Johnson JM, Lev ML. Computed tomography in acute stroke. In: The Stroke Book, 2. Ed(s) MT Torbey, MH Selim. Cambridge University Press: New York, 93-123, 2013.
4. Arcot K, **Johnson J** , Lev M, Yoo A. Neurovascular Imaging of the Acute Stroke Patient. 2013, 16-36. DOI: 10.1002/9781118560730.ch2 .

5. Arcot KM, Johnson JM, Lev MH, Yoo AJ. Neurovascular imaging of the acute stroke patient. In: Stroke. Ed(s) JF Meschia, KM Barrett. Wiley-Blackwell: New Jersey, 16-36, 2013.
6. Johnson JM, Reed MS. Acute disc herniation. In: Emergency Radiology Cases. Ed(s) H Abujudeh. Oxford University Press: New York, 103, 2014.
7. Johnson JM, Reed MS. Epidural abscess. In: Emergency Radiology Cases. Ed(s) H Abujudeh. Oxford University Press: New York, 104, 2014.
8. Johnson JM, Reed MS. Epidural hematoma. In: Emergency Radiology Cases. Ed(s) H Abujudeh. Oxford University Press: New York, 105, 2014.
9. Johnson JM, Reed MS. Paraspinal abscess. In: Emergency Radiology Cases. Ed(s) H Abujudeh. Oxford University Press: New York, 106, 2014.
10. Johnson JM, Reed MS. Pyogenic discitis osteomyelitis. In: Emergency Radiology Cases. Ed(s) H Abujudeh. Oxford University Press: New York, 107, 2014.
11. Johnson JM, Reed MS. Spinal cord infarction. In: Emergency Radiology Cases. Ed(s) H Abujudeh. Oxford University Press: New York, 108-109, 2014.
12. Stalcup S, **Johnson J** , Romero J. Neurovascular Imaging (CTA and MRA). 2014, 1-25. DOI: 10.1007/978-3-642-37393-0_35-1 .
13. Kallianos K, Franceschi A, Carr J, Mehan W, **Johnson J** . CT of Carotid Arteries. 2015, 61-92. DOI: 10.1007/978-1-4899-7618-5_3 .
14. **Johnson J** , Li Y, Ginat D. Synthetic Corticosteroids. 2015, 319-327. DOI: 10.1007/978-3-319-12715-6_46 .
15. Kallianos K, Ginat D, **Johnson J** . Oral Contraceptives (Estrogen and Progestin). 2015, 329-334. DOI: 10.1007/978-3-319-12715-6_47 .
16. Ginat D, **Johnson J** . Angiotensin Converting Enzyme (ACE) Inhibitors. 2015, 303-308. DOI: 10.1007/978-3-319-12715-6_43 .
17. Aboian M, **Johnson J** , Ginat D. Propofol. 2015, 347-349. DOI: 10.1007/978-3-319-12715-6_50 .
18. Reed M, **Johnson J** , Ginat D. Recombinant Human Bone Morphogenetic Protein. 2015, 359-361. DOI: 10.1007/978-3-319-12715-6_52 .
19. Franceschi A, Ginat D, **Johnson J** . Bisphosphonates. 2015, 351-358. DOI: 10.1007/978-3-319-12715-6_51 .
20. Stalcup S, **Johnson J** , Romero J. Neurovascular Imaging: Computed Tomography and Magnetic Resonance Imaging. 2015, 1259-1278. DOI: 10.1007/978-3-642-37078-6_35 .
21. Hess CP, Johnson JM. Supratentorial white matter tracts and their organization. In: Diffusion Weighted and Diffusion Tensor Imaging, 1. Ed(s) CC Leite, M Castillo. Thieme Medical Publishers: New York, 36-49, 2015.
22. Forghani R, Johnson JM, Ginsberg LE. Imaging of head and neck cancer. In: Cancer of the Head and Neck, 5. Ed(s) JN Myers, EYN Hanna, EN Myers. Wolters Kluwer: Philadelphia, 92-148, 2017.
23. Gule-Monroe M, Kwon M, Shah K, **Johnson J** , Vu T, Edeiken-Monroe B. Ultrasound Characteristics and Ultrasound-Guided Fine-Needle Aspiration of Lymph Nodes in the Cervical Soft Tissues: A Radiology Perspective. 2017, 227-239. DOI: 10.1007/978-3-319-44100-9_22 .
24. **Johnson J** , Gule-Monroe M, Kwon M, Ahmed S, Schlingerhout D, Kumar V, Edeiken-Monroe B, Debnam J. Pattern Recognition of Benign and Malignant Thyroid Nodules: Ultrasound Characteristics and Ultrasound-Guided Fine Needle Aspiration of Thyroid Nodules. 2017, 179-194. DOI: 10.1007/978-3-319-44100-9_18 .

25. Ordóñez-Rubiano E, Hicklen R, Rivera-Osorio L, **Johnson J** . Imaging of Pediatric Central Nervous System Tumors. 2017, 55-70. DOI: 10.1007/978-3-319-55430-3_3 .
26. Ginat D, Cipriani N, **Johnson J** . Neuroimaging of Infectious, Inflammatory, and Autoimmune Skin and Subcutaneous Lesions. 2018, 63-109. DOI: 10.1007/978-3-319-90931-8_4 .
27. Kimberly Kallianos, Daniel Thomas Ginat, Jason M Johnson. Oral Contraceptives (Estrogen and Progestin). In: Neuroimaging Pharmacopoeia (2022). Springer International Publishing, 427-432, 2022.
28. Marianne S Reed, Jason M Johnson, Daniel Thomas Ginat. Recombinant Human Bone Morphogenetic Protein. In: Neuroimaging Pharmacopoeia (2022). Springer International Publishing, 415-417, 2022.
29. Jason M Johnson, Yi Li, Daniel Thomas Ginat. Synthetic Corticosteroids. In: Neuroimaging Pharmacopoeia (2022). Springer International Publishing, 381-389, 2022.

Commentaries, Editorials and Letters

1. van Eeghen A, Ortiz-Terán L, **Johnson J** , Pulsifer M, Thiele E, Caruso P. Erratum to: The neuroanatomical phenotype of tuberous sclerosis complex: focus on radial migration lines. Neuroradiology 2013, 55: 1015-1015. DOI: 10.1007/s00234-013-1215-0 .
2. **Johnson J** , Chung C. Glioblastoma: does PET shed light to a difficult problem? Translational Cancer Research 2016, 5: s680-s683. DOI: 10.21037/tcr.2016.10.03 .
3. **Johnson J** . Head and neck imaging Gaurang Vrindavan Shah, Jeffrey Robert Wesolowski, Jeanie Choi, Elliott Friedman Thieme Medical Publishers, New York, NY, 2016, USD 59.99 (pbk), 224 pages. Head & Neck 2017, 39: 1935-1935. DOI: 10.1002/hed.24828 .
4. La Corte E, Ordóñez-Rubiano EG, Paiva WS, Johnson JM, Serrao G. Editorial: Current state of the art of human brain white matter: From structural and functional connectivity to neurosurgical applications. Front Neurol 2022, 13: 1068212. PMID: 36484018 , DOI: 10.3389/fneur.2022.1068212.