

Thank you, UArizona  
Men's Basketball Team!



Announcements?  
[Jennifer Fischahs](#)



#Sweet16

# R & R

## RECOGNIZE & REWARD

MARCH 2022



Banner  
University Medicine



COLLEGE OF MEDICINE TUCSON  
Medical Imaging

# WELCOME SHAMAR YOUNG, MD

## **DIVISION CHIEF, INTERVENTIONAL RADIOLOGY**

- BACHELOR OF SCIENCE, *CUM LAUDE*  
**University of Florida**
- DOCTOR OF MEDICINE  
**University of Florida**
- DIAGNOSTIC RADIOLOGY RESIDENCY  
**University of Florida**
- VASCULAR & INTERVENTIONAL RADIOLOGY  
FELLOWSHIP  
**University of Minnesota Medical Center**





WELCOME

Proud Dad,  
Dr. Chris Miller



Melanie Rose Miller

February 2, 2022



Proud Dad,  
Dr. Raza Mushtaq



*Welcome, Hannah Mushtaq*

*March 24, 2022*

# CONGRATULATIONS



**Terry Matsunaga, PhD**, professor of medical imaging in the University of Arizona College of Medicine – Tucson, was elected as a fellow of the **National Academy of Inventors (NAI)**. The NAI Fellows Program highlights academic inventors who have demonstrated a spirit of innovation in creating or facilitating inventions that have a tangible impact on quality of life, economic development and the welfare of society.

Dr. Matsunaga's current research focuses on using contrast-enhanced ultrasound and microbubble technology for cancer imaging as well as drug and gene delivery.



**NATIONAL ACADEMY  
of INVENTORS  
FELLOW**

# KUDOS DR. SAVIR-BARUCH

**CCSNMMI 2022  
President**

## Congratulations



**ACNM 2022  
AWARD WINNER**

2022 ACNM Fellow  
President's Award

Best Clinical Mentor



**BITAL SAVIR-BARUCH, MD**



# OUTSTANDING STUDENT POSTER PRESENTATION AWARD



Congratulations to Dr. Witte's graduate student, **Eric Reichel**, for winning the poster competition for the **Industrial Affiliated Corporate Showcase** recently hosted by the James C. Wyant College of Optical Sciences

**Real-Time Trimodal Ultrasound, Photoacoustic, and Thermoacoustic Imaging for Biomedical Applications**  
 Eric Reichel<sup>1</sup>, Russell S. Witte, PhD<sup>1,2</sup>  
<sup>1</sup>Wyant College of Optical Science, <sup>2</sup>Department of Medical Imaging

**Why Trimodal Imaging?**  
**Motivation:** Traditional ultrasound lacks specificity in cancer diagnosis, drug delivery and guided thermal therapy.  
**Objective:** Demonstrate the advantages of a multi-modal, trimodal system capable of imaging acoustic backscatter, optical, and microwave absorption.

**What is Photoacoustic & Thermoacoustic Imaging?**  
 1. Electromagnetic absorption leads to rapid expansion in tissue.  
 2. Tissue expansion creates ultrasound (US) waves.  
 3. Traditional ultrasound systems are used for image formation.  
 4. Different optical wavelengths allow for material identification.

**Real-Time Imaging**  
 • Bolus of Methylene Blue (0.025% in dH2O) through an evacuated tube.  
 • Video captures real-time flow across the imaging plane.  
 • Flow Direction: Left to Right.  
 • Frame Rate: 10 Hz.  
 • Velocity resolution: 200 mm/s for each modality.

**Photoacoustic Spectroscopy**  
 • PA images taken within NIR spectrum at 1 nm increments.  
 • Change in image intensity over spectrum will depend upon material's intrinsic absorption.  
 • Can differentiate materials by sorting pixels with similar intensity changes.  
 • Figure 3C: Blind searching using principle and independent component analysis.

**Photoacoustic & Thermoacoustic Thermometry**  
 • Sound generated from PA and TA is temperature dependent.  
 • Changes in image intensity will then occur with changes in temperature.  
 • Different materials will react to temperature changes uniquely.  
 • PA & TA can be used for both quantifying temperature and differentiating.

**Conclusion**  
 • Demonstrated real-time imaging to provide image guidance for drug delivery and thermal therapy.  
 • Spurred optical capabilities to help differentiate materials such as malignancies.  
 • Validated thermometry with both PA and TA imaging and presented strong temperature correlation.

**Future Work**  
 • Integrate ultrasound with optical and microwave sources.  
 • Clinical mice studies for drug delivery and guided therapy.

**Support**  
 • Banner Health  
 • Banner University Medicine  
 • National Institutes of Health (NIH)  
 • National Science Foundation (NSF)  
 • Wyant College of Optical Sciences

**References**  
 1. Reichel, E., Witte, R. S., "Real-Time Trimodal Ultrasound, Photoacoustic, and Thermoacoustic Imaging for Biomedical Applications," 2021 IEEE International Ultrasonics Symposium (IUS), pp. 1-4, Oct. 1-5, 2021, DOI: 10.1109/IUS49680.2021.9808909.



Eric Reichel, PhD Student



Russell Witte, PhD

# WELCOME OUR NEWEST TRAINEES



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DR Resident



**Nicholas Barney, MD**  
University of Arizona College of Medicine-Tucson

DR Resident



**James Dolan, DO**  
Rocky Vista University College of Osteopathic Medicine

DR Resident



**Martin Dufwenberg, MD/MPH**  
University of Arizona College of Medicine-Tucson

DR Resident



**Jad El Bulbul, MD**  
American University of Beirut Faculty of Medicine

DR Resident



**John Lee, MD**  
University of Arizona College of Medicine-Tucson

DR Resident



**Gabriella Mamo, DO**  
Philadelphia College of Osteopathic Medicine

DR Resident



**Cheyenne Moffett, MD**  
University of Arizona College of Medicine-Tucson

DR Resident



**Salikh Murtazaliev, MD**  
Lékařská Fakulta, Univerzity Karlovy

DR Resident



**Andrew Nguyen, DO**  
Lake Erie College of Osteopathic Medicine

IR Resident



**Sarah Placek, DO**  
Idaho College of Osteopathic Medicine

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# KUDOS TO R4 DAVID SAWYER!



Hello all,

Email to Medical Imaging Dept. on 3/29/22  
Re: Cerner Downtime March 28



Thank you to all in Medical Imaging for helping us through last night. Special thanks to resident **David Sawyer** who came down to SC to read. He got lost when he first showed up (HA) but made me smile to have a radiologist down here again.

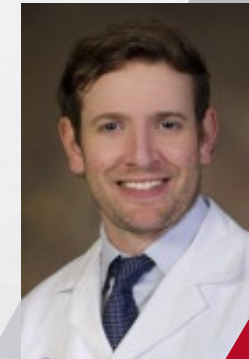
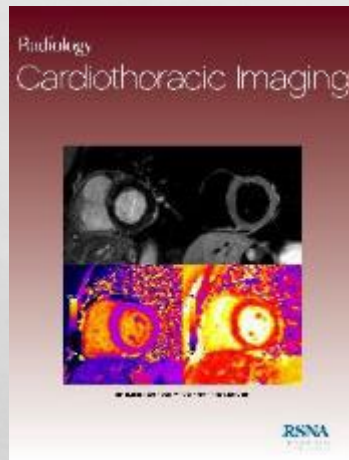
Seriously thanks.

**Matthew Berkman, MD, FACEP**  
Clinical Professor of Emergency Medicine  
Emergency Department Medical Director, BUMC-S  
Chief of Staff, BUMC-S

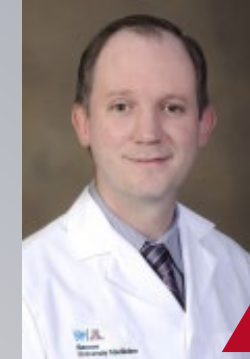


# PUBLICATION

- ▶ Cardiac MRI for Evaluation of Right Heart Function before and after Catheter-directed Therapy in Submassive Pulmonary Embolism: A Prospective Study of Feasibility and Potential Utility



**Greg Woodhead,  
MD, PhD**



**Charles Hennemeyer,  
MD**



**Matthew LeComte, MD, PhD  
Resident/Fellow Alum**



**Abdul Khan, MD  
3rd Year Resident**

# PUBLICATION

- ▶ Diagnosis of acute heart failure in CT pulmonary angiography: feasibility and accuracy

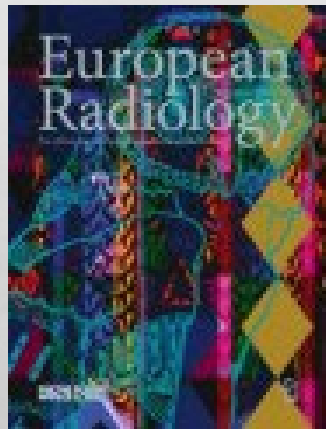
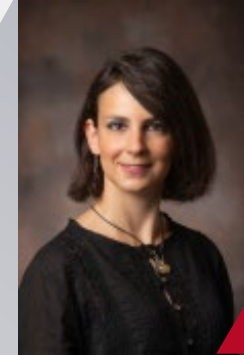
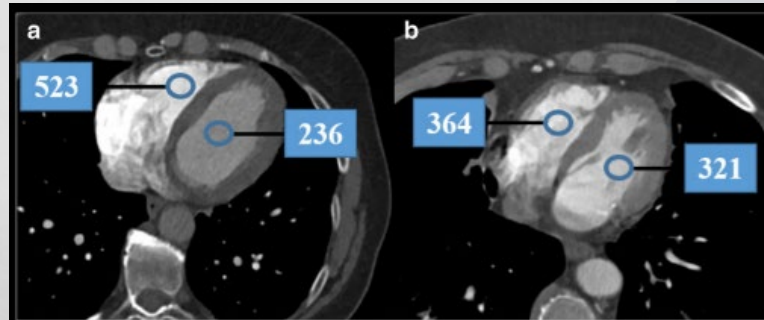


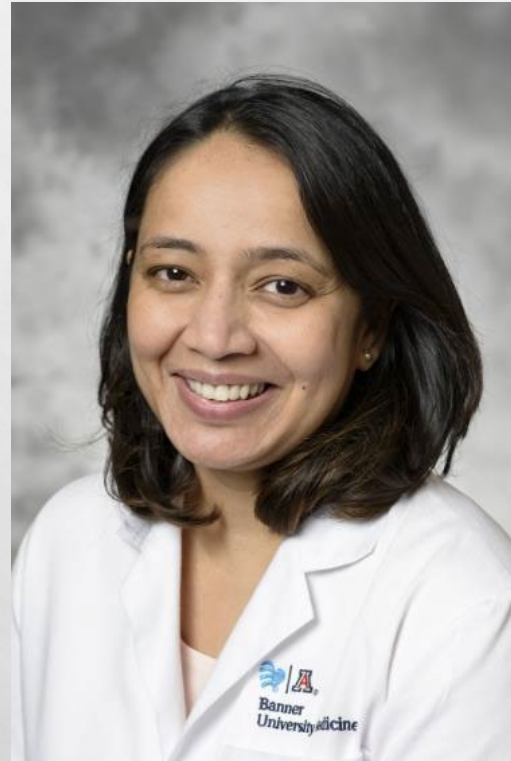
Fig. 2 Attenuation measurements in the right and left ventricles.



**Ilaria de Martini, MD**

# STR ANNUAL MEETING

**Kavitha Yaddanapudi, MD,**  
presented:  
“Bubble Trouble—Lung  
Cancer Presenting as  
Cavitary and Cystic Lesions”  
and served as a panelist on:  
“Nodules Live Q&A +  
Interactive Case Review”



**Aubrey Frazzitta, MD, 3<sup>rd</sup> Year Resident** (left of podium), presented  
“Social Eating and Establishing  
Professional Community: Novel  
Strategies and Technology  
Applications in the COVID Era”

**Anjali Taneja, DO, 4<sup>th</sup> Year Resident**  
(right of podium), presented  
"Women in Radiology: Before and  
After the Start of COVID 19  
Pandemic"



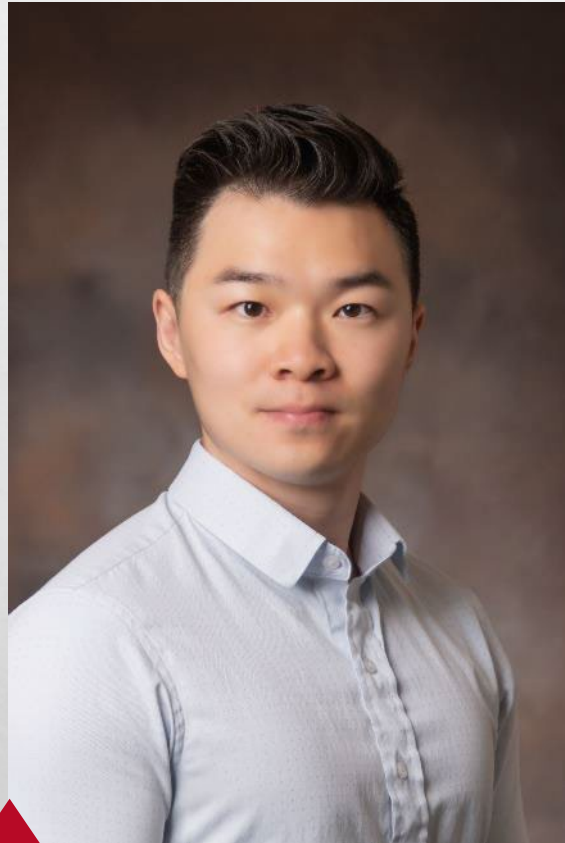
# AUR ANNUAL MEETING 2022



**Drs. Unni Udayasankar and Geoffrey Rubin** were invited to share their expertise by participating in the 2022 AUR Strategic Planning Retreat



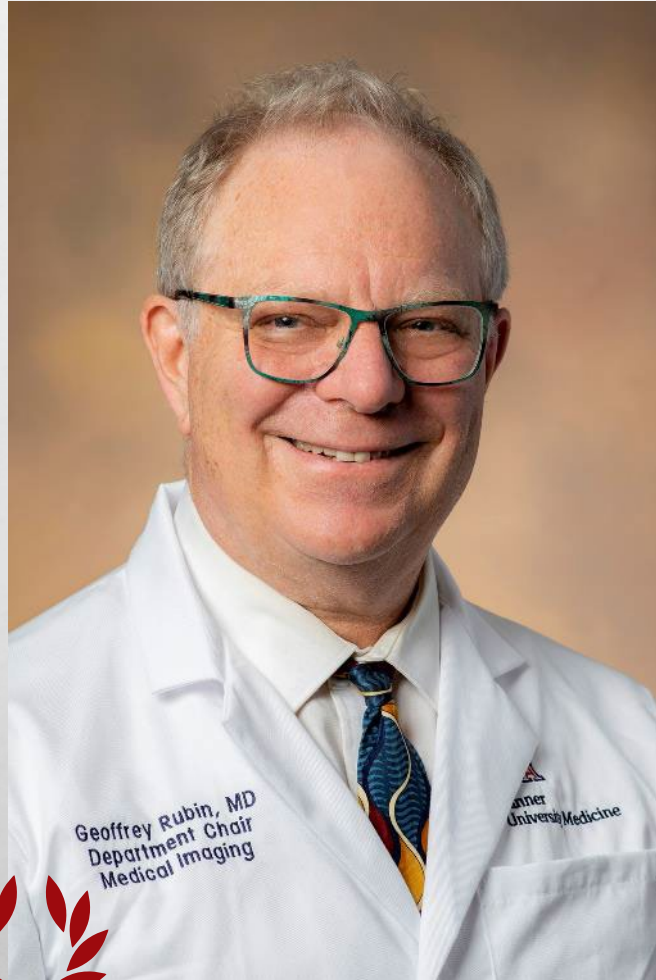
# AUR ANNUAL MEETING 2022



Congratulations to 2<sup>nd</sup> Year DR Resident **Jason Lee, MD**, for being selected to participate in the AUR Radiology Resident Academic Leadership Development (ARRALD) Program 2022



# AUR ANNUAL MEETING 2022



Medical Imaging Chair, **Dr. Geoffrey Rubin**, was a key contributor to the **AUR 2022 Annual Meeting**

- ▶ Chair's Roundtable Panelist at the Faculty Development Program
- ▶ Strategic Planner for the AUR
- ▶ AUR-Industry Roundtable Moderator, Radiology Workforce
- ▶ Presenter of "Financial Performance Measures in Radiology: What Everyone Should Know" and "Chair's View of Environmental Stewardship"

## **Formal appointments include**

- ▶ Chair, Finance Committee
- ▶ Secretary Treasurer Research & Education Foundation
- ▶ AUR Board of Directors
- ▶ AUR Research and Education Board of Directors
- ▶ Member Board of Review, GERRAF Program

# AUR ANNUAL MEETING

## ▶ PARTICIPANTS

Geoffrey Rubin, MD, MBA, FACR

Sarah Desoky, MD

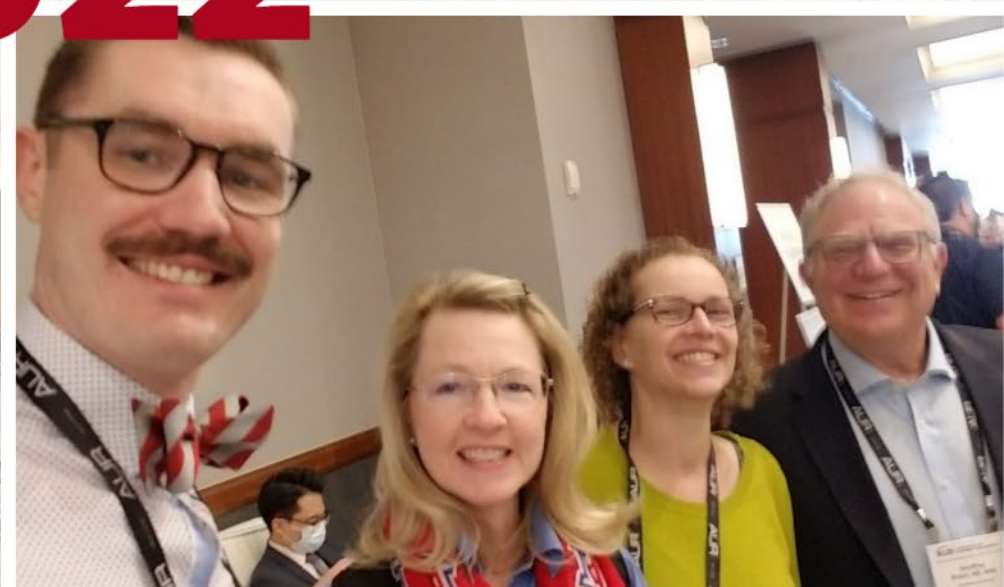
Dorothy Gilbertson, MD

Unni Udayasankar, MD

### *Residents*

Jason Lee, MD

David Sawyer, MD



AUR  
2022



THE UNIVERSITY OF ARIZONA  
COLLEGE OF MEDICINE TUCSON  
Medical Imaging





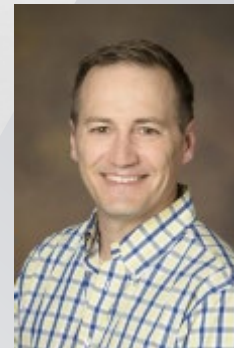
# SPIE PRESENTATION

- ▶ Simulations and analysis of fluorescence effects in semiconductor x-ray and gamma-ray detectors

- ▶ [Physics of Medical Imaging Conference](#)  
*SPIE Medical Imaging, 2022*



**Kelsea Cronin, Graduate Student**



**Matthew Kupinski,  
PhD**



**Brad Barber,  
PhD**



**Lars Furenlid,  
PhD**

# HCNMC PRESENTATION



**Bital Savir-Baruch, MD** presents at the High Country Nuclear Medicine Conference



**Dr. Savir-Baruch** and colleagues in Sun Valley, ID

# PEDIATRICS IN THE DESERT CONFERENCE APRIL 23<sup>RD</sup> – 24<sup>TH</sup>



**Sarah Desoky, MD**  
Presenter



	date	start time	end time
Pediatrics in the Desert 2022 - Day 1	4/23/22	7:30 AM	4:00 PM
Pediatrics in the Desert 2022 - Day 2	4/24/22	7:30 AM	3:00 PM

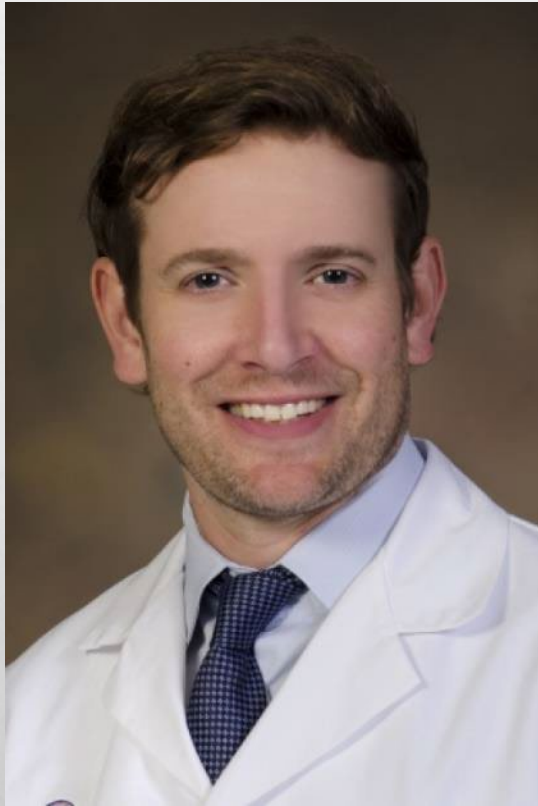
Location: The Forum at The University of Arizona Health Sciences Innovation Building (HSIB - 1670 E Drachman St, Tucson, AZ 85721)

- 12 Speakers
- Guided tour of UArizona ASTEC Simulation Lab
- Med Students and Residents are able to attend FREE



[REGISTER](#)

# PILOT STUDY

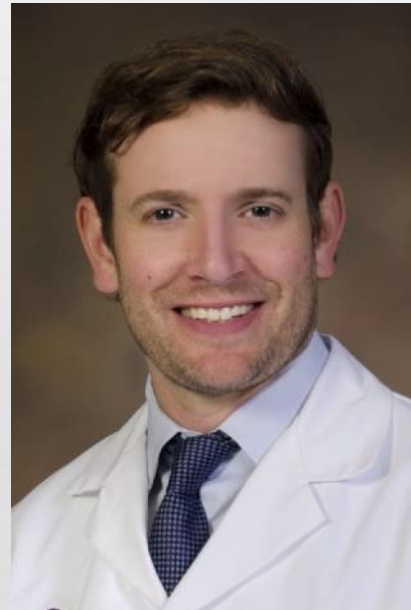


As of Feb 23, 2022, Banner University – University of Arizona has been approved for an industry sponsored study with Inari Medical by **Dr. Gregory Woodhead** as PI: Ventilation and Perfusion Imaging in Acute Pulmonary Embolism Following Catheter Directed Aspiration Thrombectomy Versus Conservative Therapy Alone: A Pilot Study.



# FLASH: CLINICAL REGISTRY STUDY

As of Feb 7, 2022, Banner University – University of Arizona is an official site study for FLASH: A Clinical Registry Study Run by Inari Medical to study high-intermediate risk pulmonary embolism. **Dr. Gregory Woodhead** is the site primary investigator.



## FLASH STUDY ENROLLMENT



February 07, 2022

We are pleased to inform you that your site is now activated to enroll subjects in the **FLASH Study!** This Site Activation Letter confirms that your protocol, consent, and IRB approvals have been received, study staff have completed appropriate training as documented below, required documents have been collected, and clinical operational systems are in place.

### ◆ Time Sensitive

- ◆ Point of enrollment will be defined as when 1) the patient is diagnosed with PE and the primary treatment strategy of anticoagulation is administered and 2) the patient consents to the study. The timing of treatment and consent are interchangeable.

### ◆ Inclusion Criteria

- ◆ Age 18+
- ◆ Clinical signs and symptoms consistent with acute PE
- ◆ Echo, CTPA, or pulmonary angiographic evidence of proximal filling defect in at least one main or lobar pulmonary artery

### ◆ Exclusion Criteria

- ◆ Unable to anticoagulate with heparin or alternative
- ◆ Diagnosed with a minor PE with less than a 0.9 RV/LV ratio
- ◆ Life expectancy < 30 days, as determined by the Investigator
- ◆ Current participation in another investigational drug or device treatment study that, in the investigator's opinion, would interfere with participation in this study

# Upcoming DEI Events

Sponsored by the  
DMI Diversity, Equity,  
and Inclusion  
Committee



**A** Medical Imaging  
in collaboration with the COM-T ODEI, invites you to a SPARK Lecture  
presented by Jabraan Pasha, MD, Associate Professor,  
The University of Oklahoma School of Community Medicine

**OVERCOME  
IMPLICIT BIAS IN  
MEDICINE**

Learning Objectives  
\* Define and discuss implicit bias  
\* Recognize and discuss the societal effects of implicit bias  
\* Understand the impact of implicit bias through shared experience  
\* Discuss methods to mitigate implicit bias

Approved for 1 hour  
DEI credit



**PRESENTER** Jabraan Pasha, MD  
**WHEN** May 11 | 12pm-1pm (AZ Mountain Time)  
**WHERE** <https://arizona.zoom.us/j/85992078891>

**Spark**  
Igniting Interest in Inclusive Excellence

**A** THE UNIVERSITY OF ARIZONA  
COLLEGE OF MEDICINE TUCSON  
**Office of Diversity,  
Equity & Inclusion**

**A** Medical Imaging

## HEALTH EQUITY GRAND ROUNDS

WED., MAY 18, 2022  
12:00 NOON – 1:00 PM  
COM-T 2117

### Healthcare Disparities in Radiology

presented by

**Dallin Christensen, DO**

Diagnostic Radiology Resident  
DMI Diversity, Equity and  
Inclusion Committee Member  
College of Medicine – Tucson



#### OUTCOME OBJECTIVES:

- 1) To understand the and assess disparities in healthcare involving radiology
- 2) To become familiar with the barriers to radiology
- 3) To discuss resources and solutions for disparities in radiology

#### ABSTRACT:

It has been documented in literature that people in lower-socioeconomic communities have a difficult time due to access to radiology services. Difficulties with time obtaining imaging procedures have been noted due to factors such as travel, scheduling, and time taken from work.

**A** THE UNIVERSITY OF ARIZONA  
College of Medicine  
Tucson

#### ACCREDITATION STATEMENT:

The University of Arizona College of Medicine - Tucson is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians.

The University of Arizona College of Medicine - Tucson designates this live activity for a maximum of 1.0 AMA PRA Category 1 Credit(s)<sup>™</sup>. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

#### DISCLOSURE STATEMENT(S):

The University of Arizona College of Medicine - Tucson is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians.

**In Person: COM-T 2117**

**Streaming Via Zoom:**

<https://arizona.zoom.us/j/83801133505>

CME Code: 421626

- DEI credit approved 1 hour
- Brown bag lunch

**A** THE UNIVERSITY OF ARIZONA  
COLLEGE OF MEDICINE TUCSON  
**Office of Diversity,  
Equity & Inclusion**

# GRAND ROUNDS

## ▶ March 2<sup>nd</sup> Neuroradiology Grand Rounds



“Mayhem in the Brainstem & Posterior Fossa Stroke-Syndrome”  
- Sam Rogers, MD

“An Unusual Case of an Aggressive Schwannoma”

- Mark Greenhill, DO

“Pediatric Posterior Fossa Infarcts: Bow Hunter’s Syndrome”

- Aubrey Frazzitta, MD

“Polymethyl Methacrylate Embolic Cerebral Infarction”

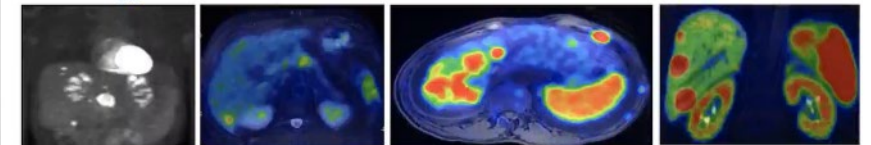
- Daniel Destiche, MD

## ▶ March 16th

Body PET/MRI at the Mayo Clinic: From Bedside to Bench - Ajit Goenka, MD



Body PET/MRI at the Mayo Clinic  
From Bedside to Bench



Ajit H. Goenka, MD  
Associate Professor of Radiology  
Chair, PET/MRI R & D  
Program Director, Nuclear Radiology Fellowship  
Co-Chair, Nuclear Radiology Research Operations  
Divisions of Abdominal & Nuclear Radiology, Mayo Clinic, Rochester, MN

University of Arizona Grand Rounds 2022





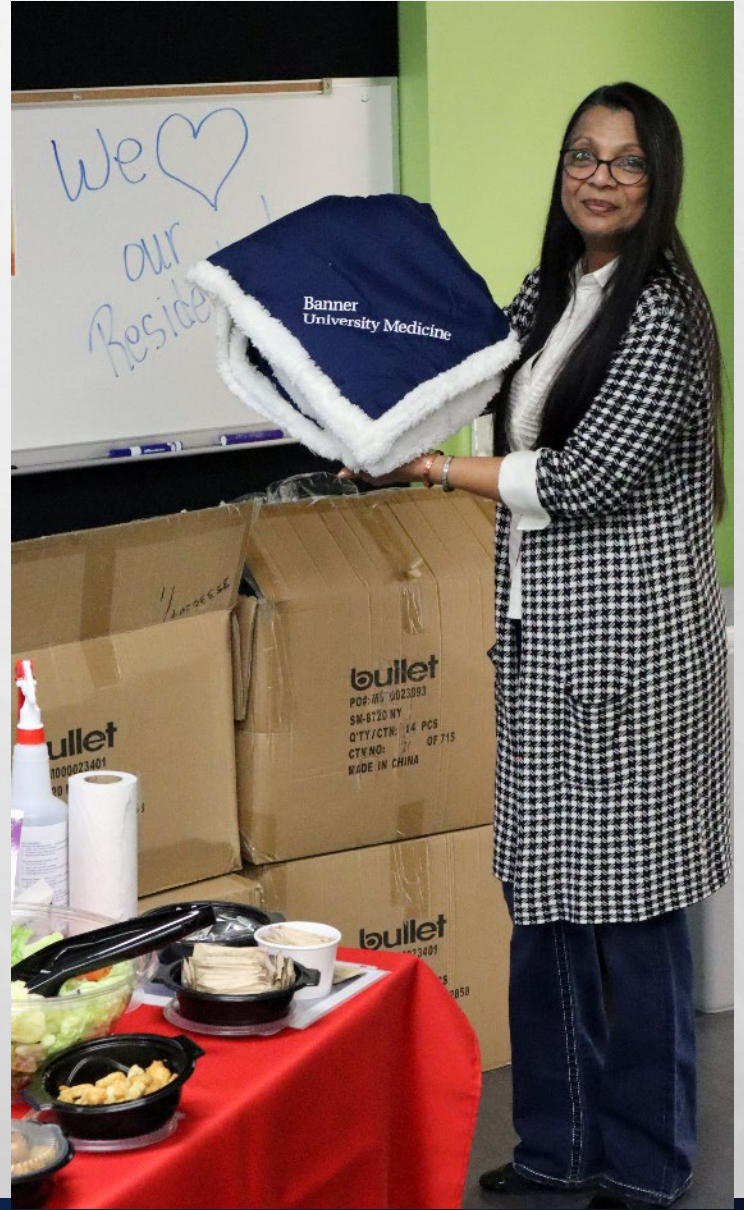
## UPCOMING GRAND ROUNDS

- April 06 ▶ **Howard Fleishon, MD, MIMM, FACR**  
Chair, Board of Chancellors, American College of Radiology
- April 20 ▶ **Reed Omary, MD, MS**  
Professor and Chair of Radiology  
Radiology and Biomedical Engineering  
Vanderbilt
- ▶ ACR and Organizational Radiology: Current Issues
- ▶ Radiology, Leadership and Climate Change



# RESIDENT APPRECIATION DAY



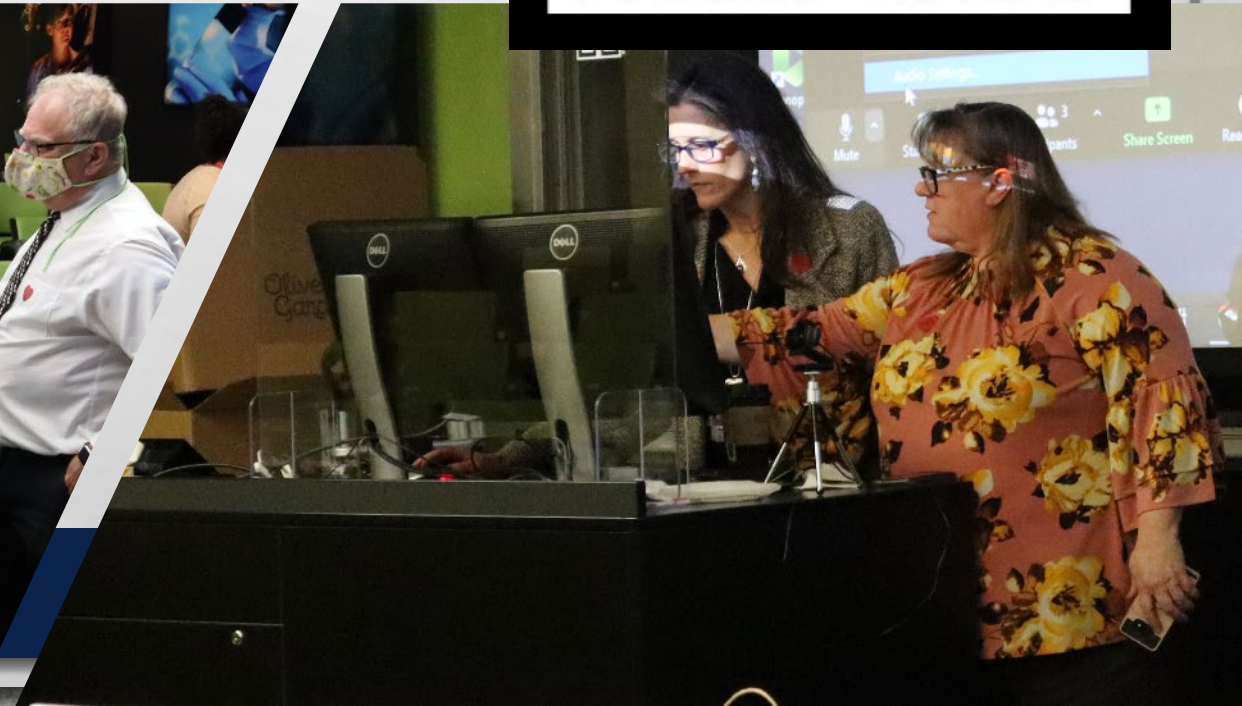




You are the best residents, collectively and individually, I have had the privilege and pleasure to work with. Thanks for learning and teaching with enthusiasm.

Added by Frank P. Morello

WE ❤️ OUR RESIDENTS





# MEET & GREET W/ DR. YOUNG

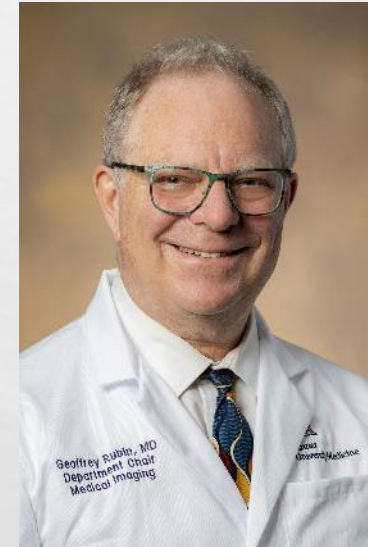


**Wednesday, March 23<sup>rd</sup>**  
**Tower 1**

# TAKING THE LEAD PODCAST



Episode 43  
Nicole B. Saphier, MD  
*Leading With Grit*



**Geoffrey Rubin, MD, MBA, FACR**  
Chair and Professor, Medical Imaging



@geoffrubin

# OUTREACH

**Dr. Berndt Schmit** to the rescue, again! He recently flew to pick up a new mama dog and her 6 puppies from Farmington, NM and delivered them safely to Deer Valley in Phoenix, for adoption





# ARIZONA WILDCATS BEAR DOWN



**Hats off to the Arizona  
Men's Basketball  
team! #Sweet16**



UMANA.org is sending 100% of donations to  
Ukrainian refugees needing medical aid