

Sonographer Leaders and ASE

NOCIA Spring Meeting 2019



Allan L Klein M.D.
Director, Center of Pericardial Diseases
Professor of Medicine
Heart and Vascular Institute
Cleveland Clinic
Past-President, ASE



Sonographer Leaders and ASE

- **Introduction**
- **ASE and Sonographers**
- **Aspirational Leaders**
- **Mentorship**
- **Future**



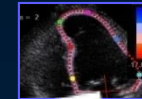
Evolution of Echo



Handheld echo



LIVE 3D TEE



Speckle Tracking

LIVE 3D

Doppler

2019

Artificial Intelligence

Doppler

2 Dimensional

M-mode

A-mode

1950 1975 1980 1985 1990 1995 2000 2005 2010 2018

Courtesy of Drs. Zoghbi and Martin



Giants of Diastology and Pericardiology



“The winter of 1986 / 87 in the echo lab at the Mayo Clinic in Rochester was an exciting period with young fellows eager to use a new technique to obtain hemodynamic information noninvasively. This has lead to improved noninvasive assessment of the hemodynamics in a variety of cardiac lesions, including in patients with pericardial disease”.

Liv Hatle, MD 2018
“Mother of Diastology”



Mayo Clinic 1980's



Cleveland Clinic

Diastology 1992



THE CLEVELAND CLINIC FOUNDATION
In Joint Sponsorship with the
AMERICAN SOCIETY OF ECHOCARDIOGRAPHY

Presents
DIASTOLOGY

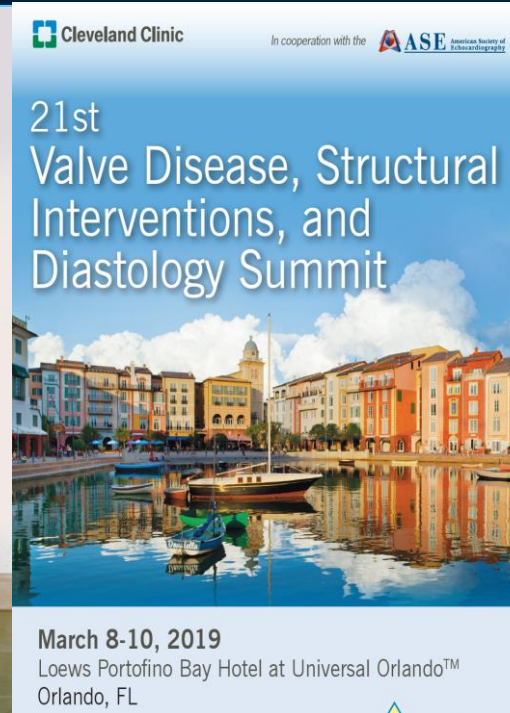
BASIC, DIAGNOSTIC AND THERAPEUTIC ASPECTS OF DIASTOLIC FUNCTION

A Comprehensive Clinical, Echocardiographic, Catheterization, and Nuclear/MRI Approach to Diastolic Function

December 7-9, 1992
Ritz Carlton
Cleveland, Ohio



Diastology 2019



Cleveland Clinic
In cooperation with the ASE American Society of Echocardiography

21st
Valve Disease, Structural
Interventions, and
Diastology Summit

March 8-10, 2019
Loews Portofino Bay Hotel at Universal Orlando™
Orlando, FL



Pericardial Center of Excellence

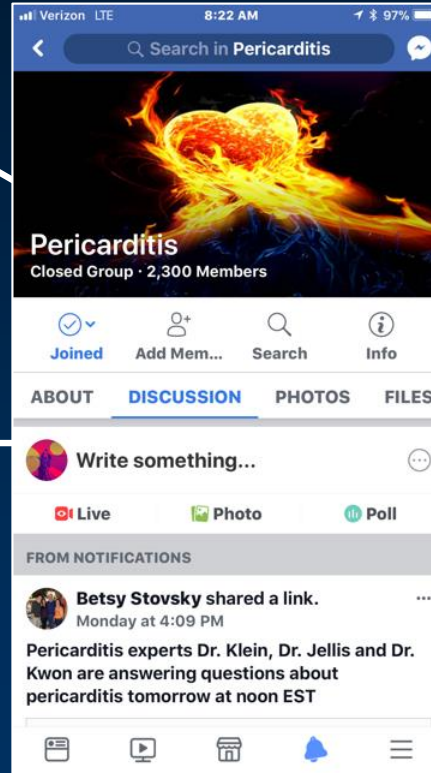
Cardiothoracic Surgery:

- Pericardial Window
- Pericardiectomy

Cath LAB:

- Right and left heart cath with dual catheters
- Respirometer
- Interventricular dependence
- Hemodynamic measurements

Research



Subspecialties:

- Rheumatology
- Infectious Disease
- Oncology
- Anesthesiology
- Genetics

Blood and Pericardial Fluid and Tissue Analysis:

Infectious, immunologic and rheumatologic tests

Imaging Center:

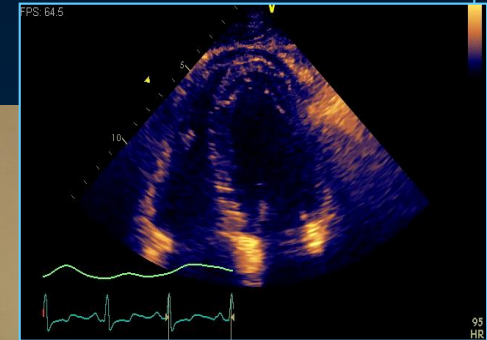
- EKG
- Echo/TEE
- MRI
- CT



~~CONSTRICTION STUDY~~

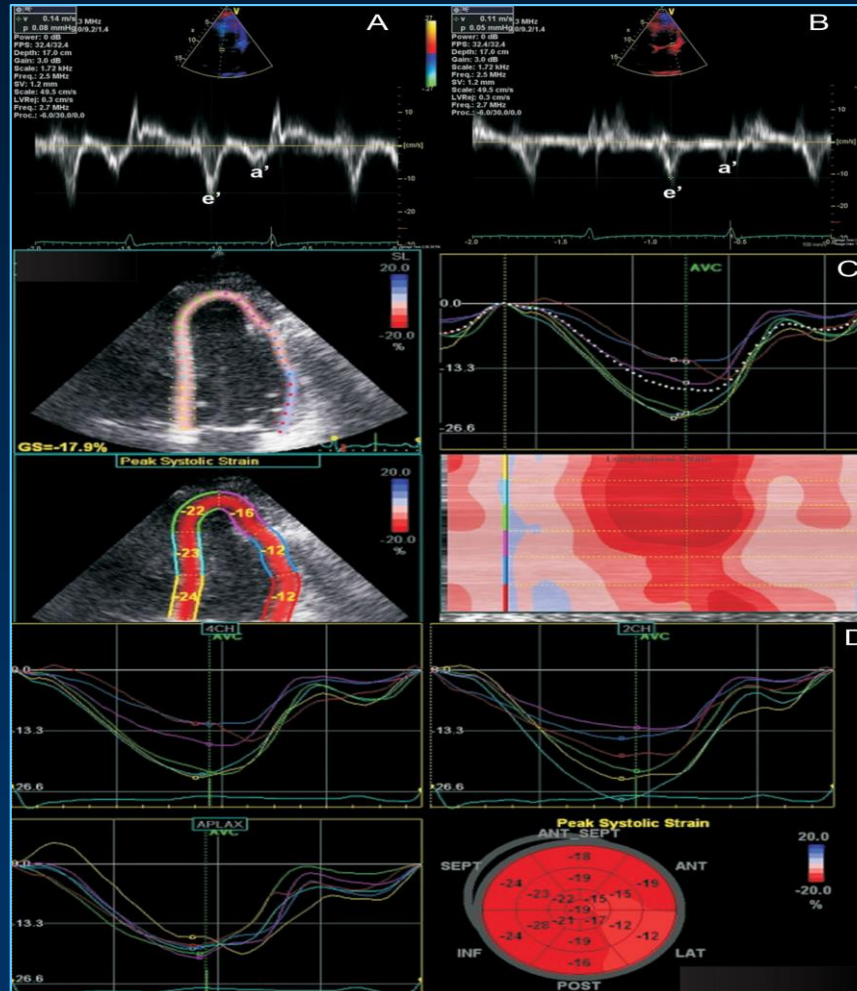


Sonographer doing an Echo



Constrictive Pericarditis

Advanced Imaging

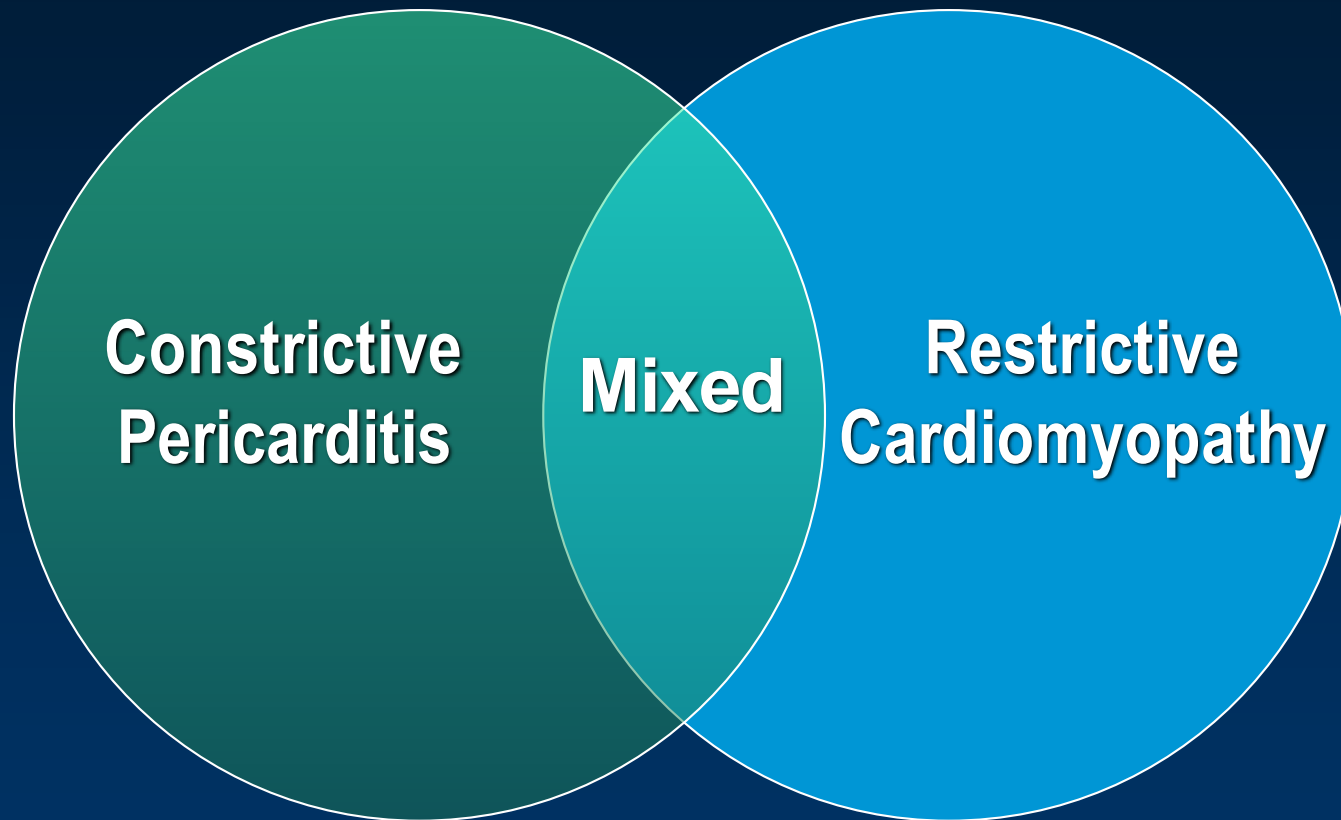


Xu et al, Echo Research and Practice 2018



Mixed Constriction/Restriction

“Mixed Bag”



Issues Facing Sonographers

- **Volume of studies**
- **Work related injury**
- **Radiation exposure**
- **Scope of Practice**
- **Training and subspecialization**
- **ACS degree**



Volume of Studies

Busy Schedule

Dept: ECHO-HVI / COECHO01ND1

Studies From: ECHO-HVI / COECHO01ND1

Quick Search: Any

Search: Yesterday's

Rel.	Study Type	Study Date	Patient Name	Patient ID	Date Of Birth	Accession #	Report Sta...	# of I...	Technologist	Diagnosing Physician	Study Status	Master P...	Diagnosis
Sec	ECHO	4/3/2019 7:21:18 AM											
Sec	ECHO	4/3/2019 7:41:38 AM											
Sec	ECHO	4/3/2019 7:55:57 AM											
Sec	ECHO	4/3/2019 8:00:28 AM											
Sec	ECHO	4/3/2019 8:02:22 AM											
Sec	TEE	4/3/2019 8:02:58 AM											
Sec	ECHO	4/3/2019 8:03:58 AM											
Sec	ECHO	4/3/2019 8:03:58 AM											
Sec	ECHO	4/3/2019 8:04:37 AM											
Sec	ECHO	4/3/2019 8:05:48 AM											
Sec	ECHO	4/3/2019 8:08:28 AM											
Sec	ECHO	4/3/2019 8:08:40 AM											
Sec	ECHO	4/3/2019 8:08:55 AM											
Sec	ECHO	4/3/2019 8:09:26 AM											
Sec	ECHO	4/3/2019 8:09:37 AM											
Sec	ECHO	4/3/2019 8:11:09 AM											
Sec	ECHO	4/3/2019 8:12:13 AM											
Sec	ECHO	4/3/2019 8:12:23 AM											
Sec	ECHO	4/3/2019 8:13:32 AM											
Sec	ECHO	4/3/2019 8:13:34 AM											
Sec	ECHO	4/3/2019 8:14:50 AM											
Sec	STRESS	4/3/2019 8:14:52 AM											
Sec	ECHO	4/3/2019 8:16:14 AM											
Sec	ECHO	4/3/2019 8:16:29 AM											
Sec	TEE	4/3/2019 8:16:37 AM											
Sec	ECHO	4/3/2019 8:17:11 AM											
Sec	ECHO	4/3/2019 8:18:04 AM											
Sec	ECHO	4/3/2019 8:18:15 AM											
Sec	ECHO	4/3/2019 8:18:57 AM											
Sec	ECHOL	4/3/2019 8:19:04 AM											
Sec	STRESS	4/3/2019 8:20:30 AM											
Sec	ECHO	4/3/2019 8:20:33 AM											
Sec	ECHO	4/3/2019 8:22:04 AM											
Sec	ECHO	4/3/2019 8:22:17 AM											

Copy Studies To... Assign Studies To...

Daily Staff and Sonographer Assignments

Date: Thursday April 4, 2019

Stress AM/Main PM: Thamilarasan

Main AM/Stress PM: Grimm

TEE: Ayoub

OR: Popovic - Lindsey, Carol, Jessica L

A17: Fares - Angela, Amanda P, Taylor

SI: Desai - Hung, Danielle P, Jess H

LVMech: Lever - Evelina, Kat, Veronica, Holly

LV Mech 2: NA

Stat: Laffin - Julie, Emily, Amanda, Danielle S

Singh - Kourtney K (Grimm to over read)

Congenital: (Majdalany out all week) Read with your assigned reader, if complex congenital read with Grimm

Nuclear: Hachamovitch

CT-J1: N/A CT-F30: Kalahasti

MRI: Weekday On-call:



The Powerful Role of the Sonographer in Clinical Medicine and Research

Journal of Diagnostic Medical Sonography

2019, Vol. 35(1) 1–2

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Carol Mitchell, PhD, ACS, RDMS, RDCS, RVT, RT(R),
FASE, FSDMS

University of Wisconsin–Madison
School of Medicine and Public Health

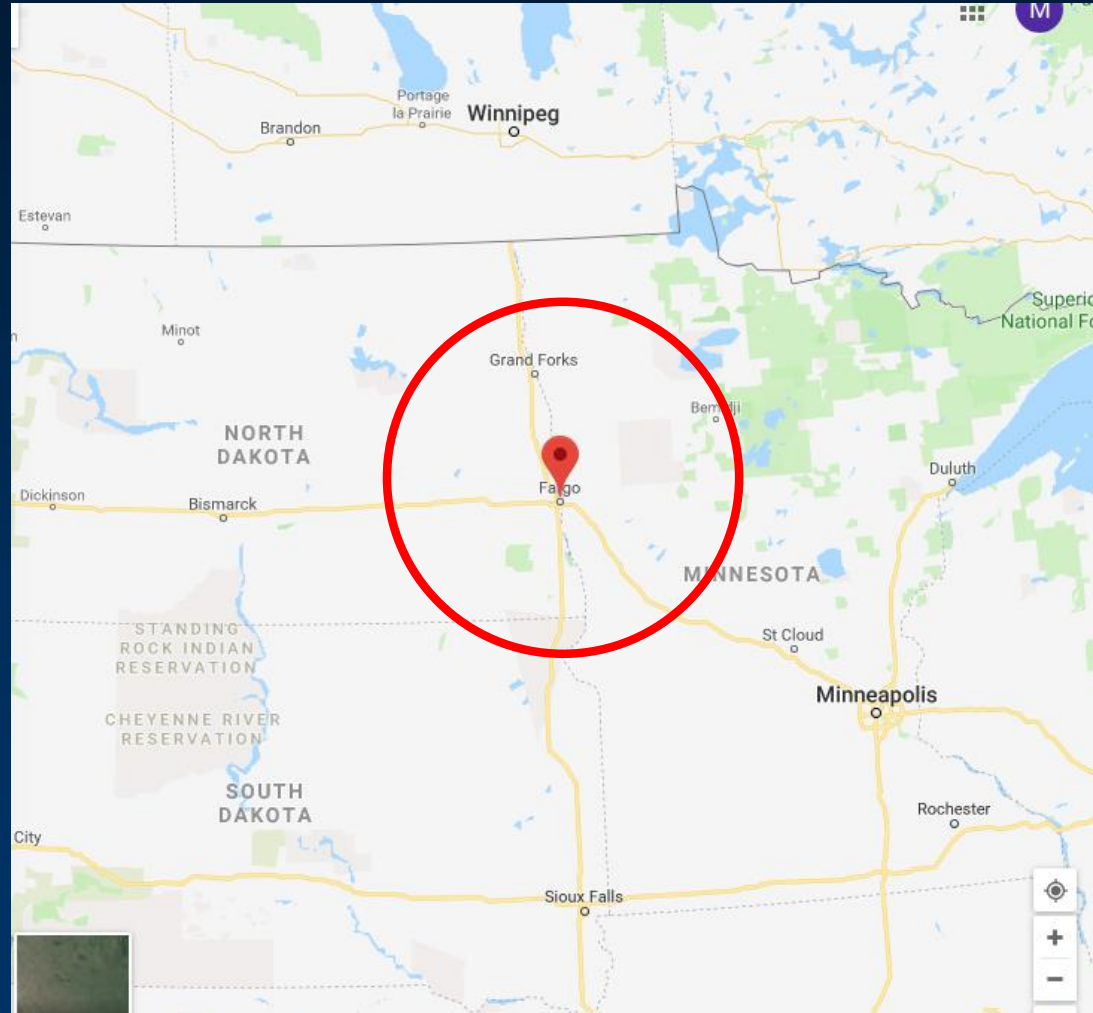
Department of Medicine
Division of Cardiovascular Medicine

ccm@medicine.wisc.edu



Fargo, North Dakota

Pam Ruff BS, RDCS
Important discovery



The New England Journal of Medicine

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VOLUME 337

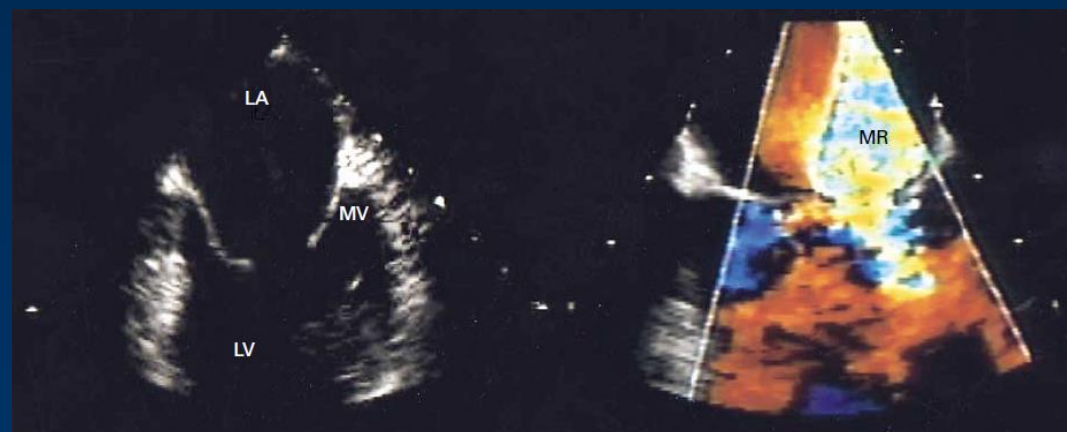
AUGUST 28, 1997

NUMBER 9



VALVULAR HEART DISEASE ASSOCIATED WITH FENFLURAMINE- PHENTERMINE

HEIDI M. CONNOLLY, M.D., JACK L. CRARY, M.D., MICHAEL D. MCGOON, M.D., DONALD D. HENSRUD, M.D., M.P.H.,
BROOKS S. EDWARDS, M.D., WILLIAM D. EDWARDS, M.D., AND HARTZELL V. SCHAFF, M.D.



0419-110



Echo Core Lab

Natural History of Valvular Regurgitation Using Side-by-Side Echocardiographic Analysis in Anorexigen-Treated Subjects

Allan L. Klein, MD*, Brian P. Griffin, MD, Richard A. Grimm, DO,
L. Leonardo Rodriguez, MD, John A. Sallach, MD, and Annitta J. Morehead, BA, RDCS

Am J Cardiol 2005;96:1711–1717



Aspirational Sonographer Leaders



Sonographer Leaders and ASE

- Introduction
- **ASE and Sonographers**
- Aspirational Leaders
- Mentorship
- Future



American Society of Echocardiography

Who We Are

- Nonprofit founded in 1975 by Dr. Harvey Feigenbaum
- Largest global organization for cardiovascular ultrasound imaging professionals
- Headquartered in the Research Triangle Park area of North Carolina
- Over 17,000 members worldwide; 2,800 outside the U.S.
- ASE is open to anyone who has an interest in cardiovascular ultrasound

TOP 10 AREAS OF PRACTICE



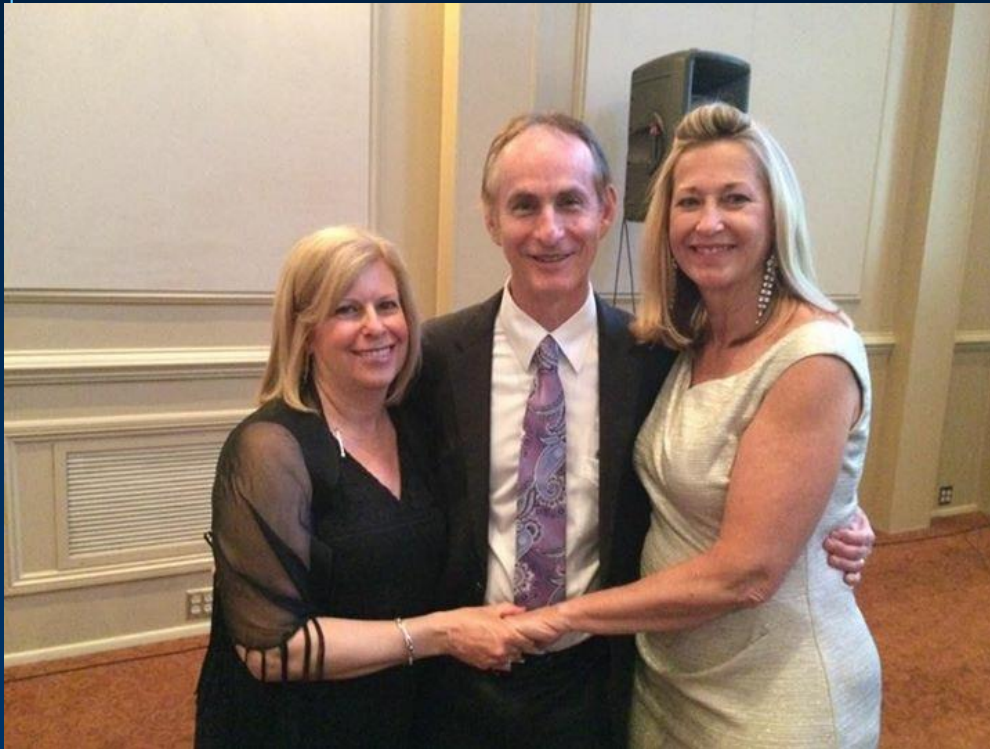
1. Adult Echocardiography
2. Cardiovascular Sonography
3. Pediatric Echocardiography
4. Nuclear Cardiology
5. Adult Congenital Heart Disease
6. Anesthesiology
7. Perioperative Echocardiography
8. Research
9. Interventional Cardiology
10. Vascular Medicine



ASE Past President



ASE President with Sonographers



Cozy with Sonographers Presidential Suite



ASE is the Whole Echo Team!

- **Sonographers are an integral part of ASE since its inception.**
- **Sonographers serve on the Executive Committee, Board of Directors, and have leadership positions on their Sonographer Council.** In addition the following committees have Sonographer chairs or co-chair leaders: Membership, PR, Awards, Bylaws and Ethics, FASE, Finance, Nominations, and Scientific Sessions Program.
- ASE also has a **robust track for new sonographers with a Leadership Academy, a Rising Star Task Force, and Mentor Match program** to engage up and coming leaders.
- **The ASE Foundation** also involves sonographers on its global outreach events, bringing patient care to parts of the world that need training including Kenya, China, Vietnam, Cuba, etc.



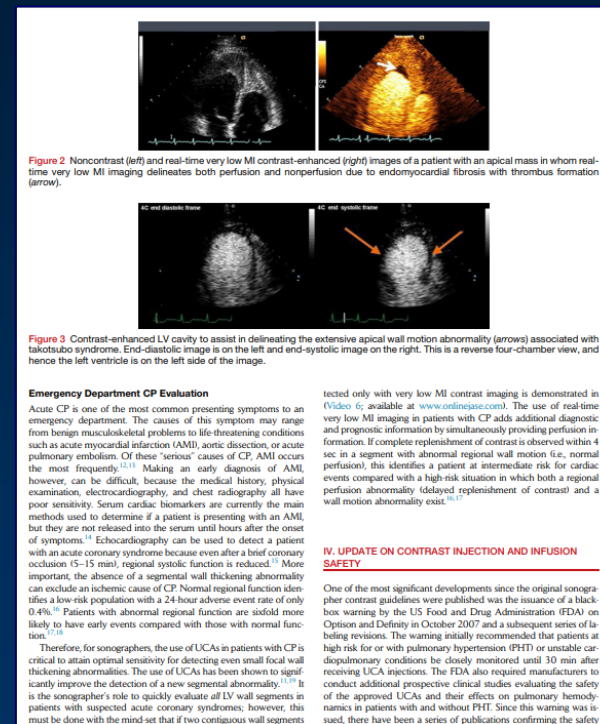
ASE Board member Keith A. Collins, MS, RDCS, FASE, with ASE Treasurer, Carol K. C. Mitchell, PhD, RDMS, RDCS, RVT, RT(R), ACS, FASE



ASE is the Whole Team!

Recent ASE Guidelines with Sonographer Focus/Leadership:

- Guidelines for Performing a Comprehensive TTE in Adults: Recommendations from the ASE, C Mitchell et al, JASE, January 2019
- Guidelines for the Cardiac Sonographer in the Performance of Contrast Echocardiography: A Focused Update from ASE, T Porter et al, JASE, August 2014
- Radiation Safety for the Cardiac Sonographer: Recommendations of the Radiation Safety Writing Group for the Council on Cardiovascular Sonography of the ASE, E McIlwain et al, JASE, August 2014



For Sonographers

Created to provide the foundation for the daily clinical practice of echocardiography worldwide

Earn over 30 CME credits per year. ASE regularly reports educational RDMS, and CI. \$750 per year



SONOGRAPHERS' COMMUNICATION

The ASE Council on Cardiovascular Sonography is Working for the Sonography Community

Free and discounted online and live educational courses, on-demand webinars, conference recordings, exam review materials, and more CME credits available.

ASE educational products include guideline-based posters, flip charts, reference books, and more.

PRODUCTS

COUNCILS

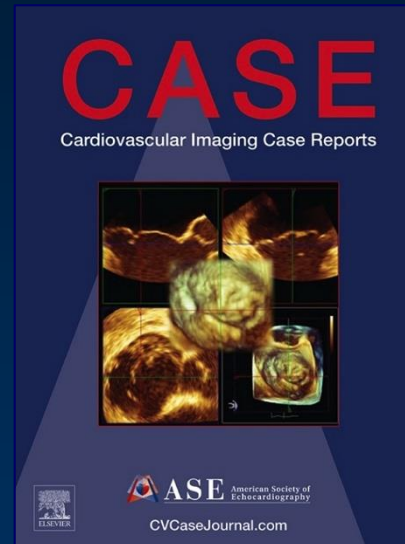
Opportunity to network, exchange best practices, serve on the council steering committee, and ability to work up the ASE leadership ladder.



ASE Journals



Focus on Cardiovascular
Research
ONLINEJASE.COM



Focus on Case-based
Research
CVCASEJOURNAL.COM



**Karen G. Zimmerman, BS, ACS,
RDCS, RVT, FASE
Editor-in-Chief**



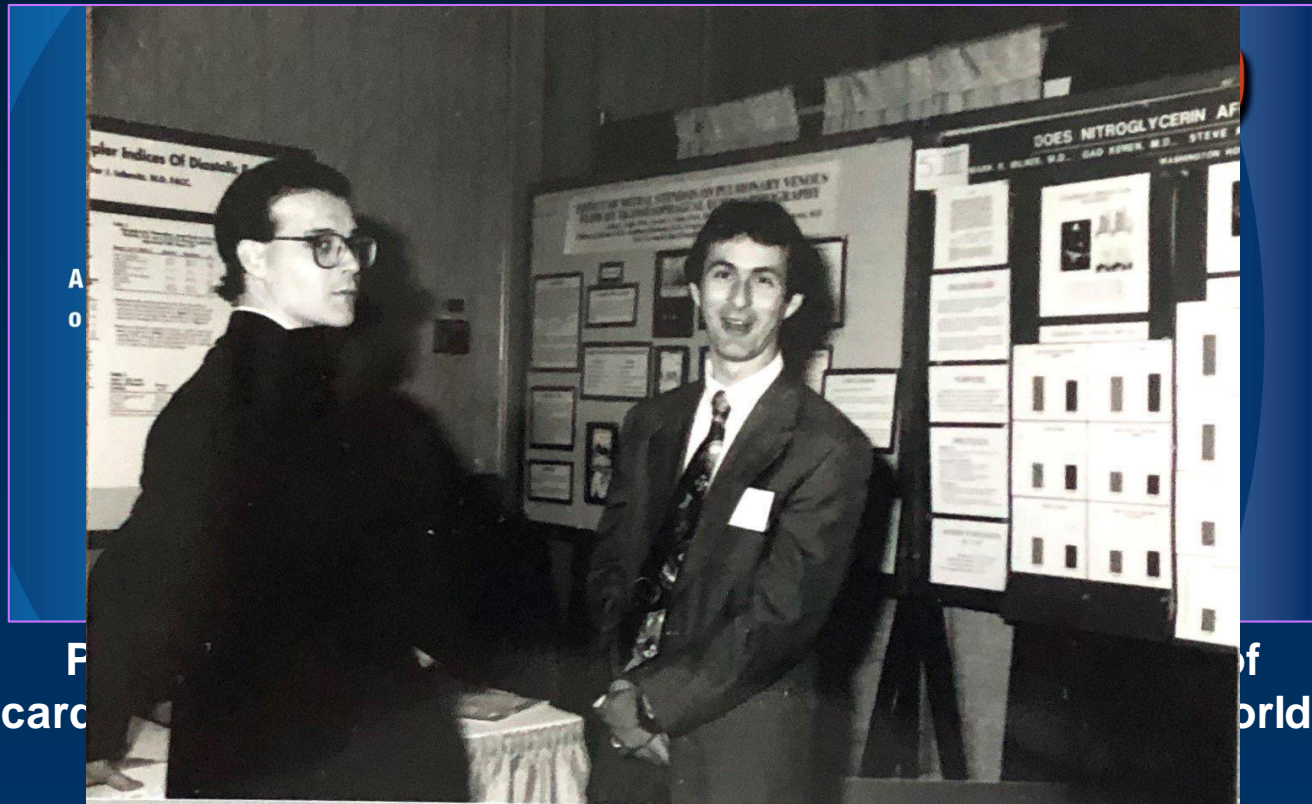
Rising Stars Taskforce



ASE Leadership Academy



ASE Scientific Sessions



F
caro

of
world.

1st ASE Scientific Session
Diastology



ASE Foundation



Telegram Group- Remote Echo Training to India



Connect with ASE



- [Facebook.com/asecho](https://www.facebook.com/asecho)



- [@ASE360](https://twitter.com/ASE360)



- [The American Society of Echocardiography](https://www.linkedin.com/company/the-american-society-of-echocardiography)



- [@ASE360](https://www.instagram.com/ASE360)



- [Connect.asecho.org](https://connect.asecho.org)



- [Pinterest.com/ASE360](https://www.pinterest.com/ASE360)



- [ASE360](https://www.youtube.com/ASE360)

ASEcho.org

2530 Meridian Parkway, Suite 450, Durham, NC 27713



Sonographer Leaders and ASE

- Introduction
- ASE and Sonographers
- **Aspirational Leaders**
- Mentorship
- Future



Professional Pathways

- **College Degree**
- **Certificate Level Program**
- **On The Job Training**
- **Echo Credentials- RCS, RDCS (AE/PE/FE), RCCS**
- **Multiple Credentials- RVS, RVT, RDMS**
- **Advanced Credential- ACS**



Where Will You Work?



Aspirational Sonographer Leaders

- **Clinical**
- **Research**
- **Education**
- **Consulting**
- **Industry**





Helga Lombardo
RDCS (ARDMS-
Adult and Pediatric Echo) FASE

Current Position:

- **Clinical Manager of CCF Main Campus,**
- **Family Health Center and Regional Hospitals**



A Typical Day for Helga

- **Oversee daily schedules and staffing assignments at all sites**
- **Communicate with scheduling office regarding additions/changes**
- **Communicate with supervisors and work leaders**
- **Listen to the needs of your employees, patients and their families**
- **Be a mentor, negotiator, budget conscious, and quality focused**





Neha Soni-Patel
BS (Mechanical Engineering)
RDCS (ARDMS-Adult and Pediatric Echo)
RCCS (CCI), FASE

Current Positions:

- **Education Coordinator | Cleveland Clinic Children's**
- **Adjunct Instructor- Pediatric Echo | Cuyahoga Community College**
- **President | NOCIA**
- **Sonographer Steering Committee Member At Large | American Society of Echocardiography**
- **Journal Reviewer for the JDMS| Society of Diagnostic Medical Sonographers**



@nehasonipatel





CLINICAL

- 2011 Passed RDCS Echo Registry
- 2011 Sonographer at Cleveland Clinic Children's
- 2016 Echo Educator CC Children's



ACADEMIC

- 1997 Graduate Purdue University
- 2011 Graduated Cuyahoga Community College
- 2019 Starting Masters of Education at Cleveland State University



PRESENTATIONS

- 2014 1st NOCIA presentation
- 2015 1st SDMS presentation
- 2017 1st ASE Presentations
- To date Presented 17 times locally and nationally with one international presentation



AWARDS

- 2012 ASE Sonographer Travel Grant
- 2016 Fellowship of ASE
- 2017 ASE Volunteer of the Month
- 2019 Lake County Woman of Achievement Award



SDMS (VOLUNTARY)

- 2010 Joined SDMS
- 2015 Microvolunteer
- 2015 JDMS Editorial Board



ASE (VOLUNTARY)

- 2009 Joined ASE
- 2012 ASE Global Outreach-India
- 2014 Work with Dr. Feigenbaum ASE Test and Teach
- 2017 ASE at Capitol Hill
- Current



TEXTBOOKS

- 2019 1st book chapter author



INTERNATIONAL (VOLUNTARY)

- 2012 ASE Global Outreach-India
- 2015 Telegram Project-Faculty
- 2016 Indian Academy of Echocardiography Presenter

- Sonographer Steering Committee
- By-Laws and Ethics Committee
- Twitter Journal Club



A Typical Day for Neha

7:00-5:00 Working Day (If adjunct teaching then 7:00AM-9:30 PM)

Full time sonographer duties - Hands On Teaching of Cardiac Fellow and New trainees – One on one echo training on outpatients and inpatients to teach pediatric echo protocol and reporting.

Internal Projects:

- IAC Focused Protocols Specific to Cardiac Defect
- Evaluate Sonographer studies for feedback
- Educational Presentations to be presented once a month
- Invited Faculty to Cleveland Clinic Congenital Symposium
- Attend Echo Teaching Meeting– Education sessions once every two weeks that consist of reviews of historical echoes for fellows to read. I later combine the didactic version with the presented echo images to be released to sonographers who were unable to attend the session.
- Lunch...if I get it

External Projects:

- ASE presentations
- SDMS presentations
- SDMS Journal Review articles
- Teach Pediatric Echo at Local Community College





Amy Dillenbeck
MS, ACS, RDCS, FASE

Current Positions:

- **Coordinator of Education and Training**
 - Adult Cardiovascular Imaging Lab
 - Cleveland Clinic
- **IAC Echo Board of Directors**
 - Representative of ASE



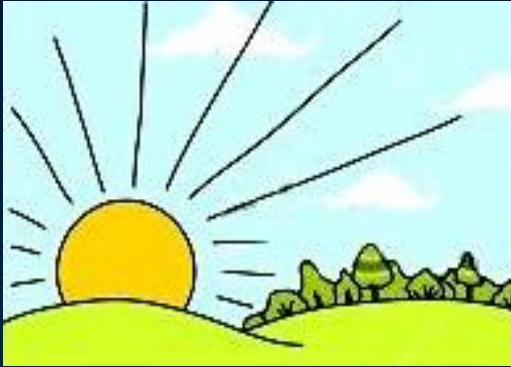
- **Clinical Background**
 - 1997 **Exercise Physiologist**
(cardiac rehab and exercise testing)
 - 2006 Cardiac Sonographer
 - 2015 Cardiac **Sonographer Workleader**
 - 2018 Coordinator of Education and Training



- 2009 member
- **FASE**
- ASE Scientific Sessions Invited Faculty
- May 2017 Volunteer of the Month
- **ASE Innovation Competition Task Force**
- Abstract Grader ASE Scientific Sessions
- CASE Manuscript Reviewer
- Membership Committee

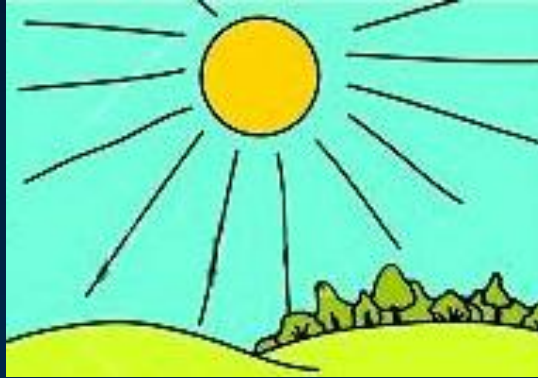


A Typical Day for Amy



Early morning (before clinic):

- Review assigned daily quality assurance studies via PACs system and provide feedback return emails
- Meetings
- Morning sonographer educational sessions



Workday:

- Train and teach new hires and mentor junior sonographers (6 ASE abstracts accepted!)
- update lab policies and procedures
- coordinate fellowship rotations, prepare contents for educational sessions
- communicate with vendors



Evening:

- 1-3 evenings/quarter ASE or IAC board meeting
- conference calls





Annitta (Morehead) Flinn
BA (Health Technology Management)
RDCS (ARDMS-Adult Echo)
CCRC (Certified Clinical Research
Coordinator) FASE

Current Positions:

- **Research Program Manager** | Imaging Core Lab | C5Research | Cleveland Clinic
- **Awards Committee**, American Society of Echocardiography (2016 – Present)





CLINICAL

- 1977 Certified Medical Assistant
- 1984 Registered Cardiovascular Technologist (RCT)
- 1989 RDCS (Adult Echo)
- 2003 Certified Clinical Research Coordinator (CCRC)



ACADEMIC

- 1987 1st Adjunct Faculty for Adult ECHO - CVT AAS Program Tri-C (1987-1992)
- 1993 1st Adjunct Faculty for Adult ECHO - ECHO Diploma Ultrasound Diagnostic School (presently Sanford Brown)
- 1998 SDMS CME development (4yrs) volunteer
- 2001 ARDMS exam item writer (2yrs) volunteer



PRESENTATIONS

- 1988 1st ECHO presentation
- 1994 1st ASE Presentation
- 2003 1st SDMS presentation

To date: 144 presentations



MANUSCRIPTS ABSTRACTS

Author/CoAuthor

To date: 28 Manuscripts

To date: 91 Abstracts



TEXTBOOK

- 2002 CV Principles & Instrumentation SDMS Exam Review

BOOK CHAPTERS

- 2005 How to Perform Tissue Doppler
- 2008 Measuring Diastolic Function
- 2011 Sonographer Goal Oriented Technique



ASE (VOLUNTEER)

- 1985 Joined ASE
- 1996 Scientific Session Sonographer Chair

- 2005 Board of Directors
- 2005 ASE at Capitol Hill

To date: Served on 18 committees in various capacities as Member, Chair, or CoChair



INTERNATIONAL PRESENTATIONS

- 1994 Cairo, Egypt
- 1995 Toronto, Canada
- 2001 Tokyo & Osaka, Japan
- 2009 Riyadh, Saudi Arabia



HONORS / AWARDS

- 2001 Outstanding Research Capital University
- 2002 Fellowship of ASE
- 2006 ASE Distinguished Sonographer Teacher
- 2011 ASE Volunteer of the Month



Typical Day for Annitta

8:00-6:00pm - Oversight of Core Lab analysis of cardiovascular imaging collected in clinical research trials

- Morning huddles to plan, prioritize and problem solve 3 functional groups

1. Imaging CORE: Echo, Nuclear, cardiac MRI, cardiac CT
2. Imaging CORE: IVUS and Angiography
3. Imaging CORE: Vascular CT and Ultrasound

- Operations conference calls with Sponsors of research studies

1. Contribute to the clinical research protocol
2. Establish timelines / deadline
3. Problem solving at recruiting sites

- Develop and write Independent Image Review Charters

- Develop and review imaging related documents and forms to standardize image data collection.

- Advise sponsors and site in research image process

- Tons of research study related correspondences (Sponsors, CROs, Sites)

Administrative duties include: Managing a team of 16, clinical research education, oversight of image analysis process, budget planning, marketing and development and enforcement of standard operating procedures (SOPs)





**Margaret M. Park “Koko”
BS, ACS, RDCS, RVT, FSDMS, FASE,
(Research practice includes Cardiac Adult &
Pediatric, Large and Small Animal Imaging,
Vascular technology, PET and Cardiac MRI)**

Current Positions:

- **Lead Heart and Vascular Institute Imaging Specialist Cleveland Clinic, C5 Research Imaging Core Lab**
- **Research Coordinator, Respiratory Institute and Lerner Research Institute, Cleveland Clinic**
- **Speakers Bureau, member Speakers Bureau Advisory Board, Lantheus Medical Imaging**
- **Adjunct Clinical Instructor, Lorain County Community College**
- **BOD, Northern Ohio Vascular Association**

 **@Kokopark**





CLINICAL

- 1974 Stress Testing Technologist
- 1975 3rd Sonographer trained CCF
- 1978 Sonographer Supervisor Non Invasive Cardiology, Mt. Sinai Hospital
- 1988 Mobile Sonography Service, Cardiovascular Diagnostics
- 1996 Technical Director Lakeshore Heart
- 2002 Clinical Sonographer Specialist
- 2004 Imaging Specialist, Research Sonographer



ACADEMIC

- 1982 ARDMS Registry, Adult Cardiac
- 2001 ARDMS, RVT, Vascular Sonography
- 2002 FASE
- 2008 Bachelor of Science Degree
- 2014 Adjunct Instructor
- 2017 Cardiac MR Analysis



PRESENTATIONS

- 1999 1st Regional Lecture
- 2007 1st National Lecture
- 2012 1st International Lecture

*To date more than 115 presentations



COMMITTEES (VOLUNTARY)

- PAST** Founding member Greater Cleveland Echo Society.
- Founding Member Northern Ohio Cardiac Imaging Association
- ARDMS (EDTF) Exam Development Committee,
- SDMS, National Certification Exam Review Task Force, Advanced Sonographer Task Force, Annual Conference Planning Committee (Cardiac Ultrasound)
- Chapters Co-chair, Regional Advisor, SVU
- NOW** JDMS, Editorial Board
- SDMS, Practice Management
- BOD, Northern Ohio Vascular Association



ASE (VOLUNTARY)

- 1999 ASE Membership
- 2002 First class of Sonographers to receive FASE
- 2017 ASE Lifetime Achievement Award Recipient

COMMITTEES/ROLES

- PAST** ASE Board of Directors
- Secretary and Chair Elect Council on Cardiac Sonography Steering Committee
- Scientific Sessions Program Committee
- Research Awards Committee
- Vascular Council Board
- Accreditation and Fellowship Committee
- See my Heart Task Force
- SS Abstract Reviewer
- Radiation Safety Writing Group
- Contrast Writing Group
- NOW** CASE Editorial Board, JASE Reviewer
- Governance Task Force
- Ethics Committee, Nomination Committee
- Basics of Bubbles, Writing Group/Presenter
- Strain Deformation Imaging Writing Group
- Vascular Writing Group on the Assessment of Plaque Burden



Peer Reviewed Publications / Textbook

- 2007 1st published case study
- 2008 Co-author original research
- 2012 First author, original research
- 2010 1st chapter in textbook
- 2020 1st Textbook

*Since 2010, Collaborating author (second, third) on 9 original research articles

*Since 2007 32 abstracts and 33 publications



A Typical Day for Koko

Imaging Core Lab

Early Morning



Early bird gets the worm

At work by 6 Am. First hour consist of email, calendar review organization of days work load. Finishing up loose ends from previous day.

Morning



Research Patient Days

Performing study echoes in the Clinical Research Unit, Consenting patients, reviewing PET scans in Radiology

Afternoon/Evening



Desk Work

Cardiac MRI analysis inclusive of strain, scar, delayed enhancement, T1 mapping. Echo analysis including strain and 3D. Team meetings, project collaboration. At home- book review; assignments from writing groups and volunteer activities.



Daily Routine: Research Coordinator Activities

Early Morning



Research Collaboration

Weekly meetings and scheduled calls with Research team and study PI's
E-mail correspondence and scheduling

Morning/Afternoon



Data Collection/Reporting

More analysis of study echoes, Pet scans and other omics. Collaboration with PHD's, medical students, fellows. Chart review, analysis of data, abstract and manuscript activities.

Evening



Home Work

Family dinner time and walking dogs. Personal e-mail. Book chapter reviewing, reviewing journal articles, preparing presentations for upcoming conferences, volunteer assignments.



Daily Routine: Non-work Day (Includes Weekends)

Through out the day mixed in with chores/errands



- Emails: checking, replying, writing
- Book chapter reviewing
- Editing manuscripts for scientific journals
- Scheduling travel, preparing lectures for CEU Lantheus speaker activities
- Preparing presentations for upcoming conferences
- Reviewing journal articles pertinent to current interest and learning





Carol Mitchell, PhD
ACS, RDMS (Abdomen, Ob/Gyn, Breast, Neurosonology, Fetal Echocardiography), RDCS (Adult Cardiac, Pediatric Cardiac), RVT, RT(R), FASE, FSDMS

Current Positions:

- **Assistant Professor** | School of Medicine and Public Health, Department of Medicine, Division of Cardiovascular Medicine | University of Wisconsin - Madison
- **Affiliate Appointment** | School of Medicine and Public Health, Department of Medical Physics | University of Wisconsin - Madison
- **Treasurer** | American Society of Echocardiography

 **@CarolKCM**





CLINICAL

- 1985 CT Assistant
- 1986 Radiologic Technologist
- 1987 Sonographer
- 1988 Clinical Instructor DMS Program
- 1990 Supervisor
- 1997 Outreach Coordinator /Technical Director
- 1997 Program Director School of DMS
- 2006 Clinical Assistant Professor
- 2008 Manager of Education



ACADEMIC

- 1996 Masters Degree
- 2002 Doctorate Degree
- 2002 Associate Researcher
- 2010 Assistant Professor – College of Health Sciences, University of Wisconsin Milwaukee
- 2011 Began submitting grants as a PI
- 2014 Assistant Professor – School of Medicine and Public Health, University of Wisconsin Madison



PRESENTATIONS

- 1990 1st Regional Lecture
- 1996 1st National Lecture
- 2008 1st International Lecture

***To date more than 100 presentations**



(VOLUNTARY)

- 2000 Joined and applied to become FASE as soon as eligible



Peer Reviewed Publications / Textbook

- 1991 1st published case study
- 2004 Co-author original research
- 2009 1st author ASE position paper "Advanced cardiovascular sonographer: A proposal of the American Society of Echocardiography Advanced Practice Sonographer Task Force."
- 2010 First author, original research
- 2010 Author chapters in textbooks
- 2018 1st Textbook
- * Since 2014, First author/senior author on 8 original research articles



COMMITTEES (VOLUNTARY)

- PAST Founding member Iowa Society of Ultrasound
- ARDMS item writer OB Boards
- Member of the National Educational Curriculum Task Force Cardiac Writing group (2008)
- JRC-DMS (Board of Directors, Chair Elect, Chair, Past Chair, Historian)
- Commissioner CAAHEP
- SDMS Annual Conference Planning Committee (Cardiac Ultrasound)
- Founding member South Central Wisconsin Ultrasound Society
- NOW CCI item writer ACS board examination

COMMITTEES/ROLES

- PAST ASE Board of Directors
- CME Committee
- Chair and Co-Chair Awards Committee
- Secretary and Chair Elect Council on Cardiac Sonography Steering Committee
- Scientific Sessions Program Task Force
- Industry Relations Committee
- New Technology Implementation Task Force
- Radiation Safety Writing Group
- International Sonographer Training Task Force
- Co-Chair, TTE Comprehensive Protocol Guideline Writing Group
- Treasurer
- NOW Governance Task Force
- CoA-ACS

0419-147



A Typical Day for Carol

Evening

Morning/Afternoon

Early Morning



**Email Catch-up/
Meetings**

Early morning is the best time to meet
with research collaborators
Usually have meetings scheduled
0700-0900



**Research Scans / Analyze
Data/Teaching lectures**

Develop research imaging protocols,
implement training for research
protocols, analyze, data, meet with
biostatisticians, perform research
ultrasound exams and image processing
techniques, write grants, lecture to CV
fellows, Medical Physics Graduate
Students, guest lecture to DMS program



Computer Work

Miscellaneous work on teaching
presentations, research abstracts,
manuscript reviews, volunteer work for
professional societies, more emails

0419-148





Bonita Anderson
DMU (Cardiac), M App Sc (Med
Ultrasound), AMS, ACS, FASE, FASA

Current Positions:

- **Clinical Fellow | School of Clinical Sciences | Faculty of Health | Queensland University of Technology**
- **Advanced Cardiac Scientist | Cardiac Sciences Unit | The Prince Charles Hospital**
- **International Representative | Board of Directors | American Society of Echocardiography**

 **@BonitaEcho**





CLINICAL

- 1984 Cardiac Tech (ECG, Holter, EST, Cath Lab then Echo)
- 1995 Senior Cardiac Scientist – Echo Lab
- 2001 Echo Educator
- 2016 Advanced Cardiac Scientist



ACADEMIC

- 2001 Established Grad Dip in Cardiac Ultrasound (1st accredited echo course in Australia)
- 2005 Senior Lecturer
- 2016 Clinical Fellow



PRESENTATIONS

- 1992 1st national short course
- 2001 1st International Course
- 2001 Echo Australia (now in 18th year)
- To date Presented at more than 70 echo courses



Textbooks

- 2000 1st echo book published
- 2007 2nd edition
- 2014 “Path” book published
- 2016 ASE Book chapter
- 2017 3rd edition
- 2019 2 book chapters (Klein/Garcia, ASE) one textbook (Klein/Asher ‘spin-off’)



COMMITTEES (VOLUNTARY)

- PAST ASUM Board of Examiners
- ASUM DMU Advisory committee
- ASAR Accreditation Council
- ASA Cardiac Sonographers Working Group
- NOW ASA Fellowship Panel
- CSANZ Imaging Council



ASE

- 1998 Joined
- 2009 FASE

COMMITTEES

- PAST International Task Force
- Membership Steering
- NOW International Representative, Board of Directors
- CASE Editorial Board



A Typical Day for Bonita Scanning Hospital Day

Early Morning



Email Catch-up

emails from the USA overnight so deal with these asap

Morning



Scanning

Performing echoes on pts. with ACHD or teaching others how to scan pts. with ACHD

Afternoon/Evening



Computer Work

Book chapter reviewing, grading abstracts for scientific meeting, organizing conferences (program, faculty invites, other admin), preparing presentations for upcoming conferences, more emails



A Typical Day for Bonita

Daily Routine: QA Hospital Day

Early Morning



Email Catch-up

Due to time differences, I receive emails from the USA overnight so deal with these asap

Morning/Afternoon



Quality Assurance

Develop, implement, analyze, report on various QA activities (basic to advanced activities)

Evening



Computer Work

Miscellaneous work on presentations, book review, conference prep, more emails, catching up on Twitter



A Typical Day for Bonita Working from Home Day



Up to a 12 hour day on the Computer

- **Emails: checking, replying, writing**
- **Book chapter reviewing**
- **Grading abstracts for scientific meeting**
- **Organizing Echo Australia conference: program development, faculty invites, other admin**
- **Preparing presentations for upcoming conferences**
- **Catching up on Twitter, reading journal articles**
- **Other association activities: ASE, ASA, CSANZ**





Kimberly Radigan
RDCS (ARDMS-Adult Echo), FASE

Current Position:

- **Consulting Cardiac Sonographer | Cleveland Clinic Strategic Operations – Affiliate Program**
- **Cleveland Clinic HVI International Sonographer Advisor- Echocardiography**

radigak@ccf.org





CLINICAL

- 2008 Passed RDCS Echo Registry
- 2007 Sonographer at Cleveland Clinic
- 2016 Consulting Cardiac Sonographer



ACADEMIC

- 2007 Graduated Cuyahoga Community College
- 2015 Aspiring Leadership Program
- 2018 Continuing Masters of Health Care Management at Western Governors University



PRESENTATIONS

- 2012 1st ASE Presentation
- 2015 1st Cleveland Clinic Presentation
- 2016 1st NOCIA Presentation
- 2017 Siemens Presentation
- 2018 Director CC Affiliate Echo QA Boot Camp

To date Presented 23 times locally and nationally



NATIONAL/ INTERNATIONAL TRAVEL

- National-
 - 2018 16 Routine CVM Visits
 - 2018-19 8 Initial Consulting Visits
- International- Past
 - 2 (Canada, Abu Dhabi)
- International- Future
 - 3 (London, Saudi Arabia, Columbia)



PUBLICATION

- 2018 Cleveland Clinic Cardiac Consult Article



ASE (VOLUNTARY)

- 2009 Joined ASE
- 2016 Fellowship of ASE



A Typical Day for Kim: Consulting Site Assessment

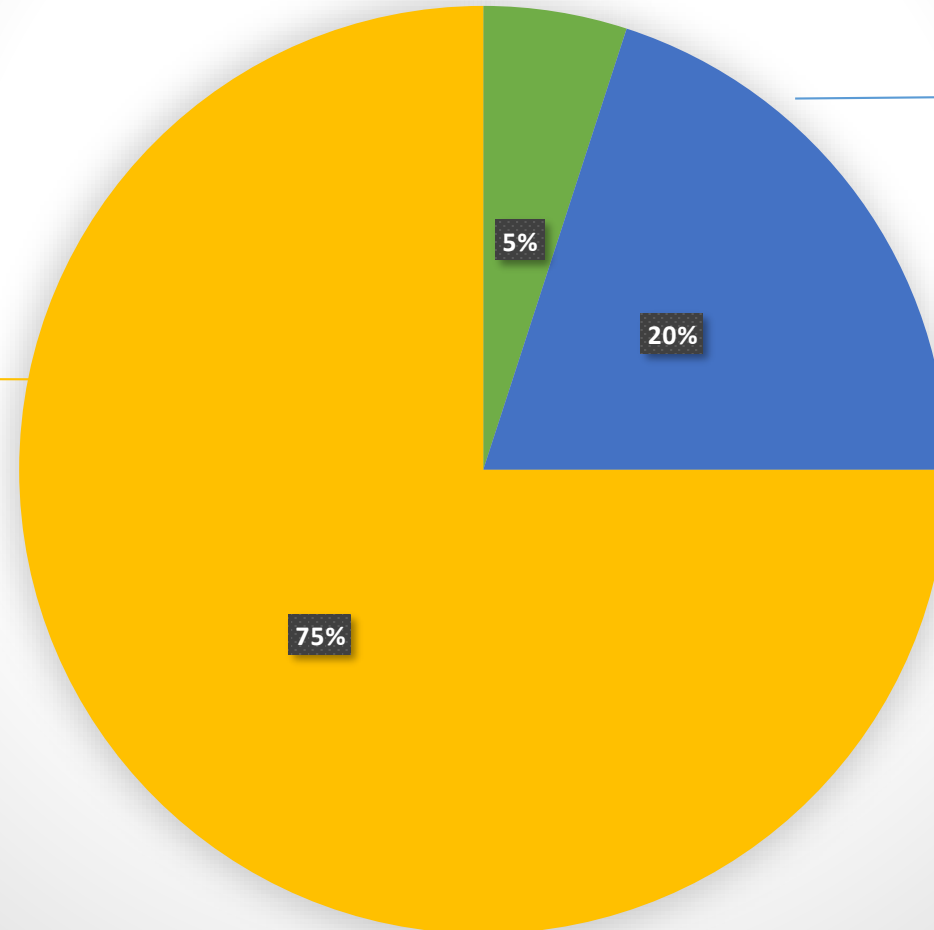
■ Pre-Visit ■ Assessment ■ Post-Visit

Pre-Visit

- Gather hospital Data
- Send proposed agenda
- Joint conference call with CC CVM team and hospital to review agenda and objectives
- CC Cardiologist and Consultant review data pack
- Travel logistics

Post-Visit

- Closeout with Cardiologist (review notes)
- Concur (expense report)
- Consultant writes preliminary report
- Cardiologist edits report
- Sent report to editor
- Close out meeting with Affiliate team and administration
- Approve edits and send to Project manager as final report
- Webinar with hospital to review high level findings and recommendations



Assessment

- Depart (evening prior)
- 7AM agenda starts
- Participates:
 - CEO, COO, CMO, CNO, Director echocardiography/Nuclear Medicine/Cardiac CT and MRI, Manager Non-invasive Imaging, Lead sonographer, and technologist
- Discussions:
 - Structural organization, leadership, staffing, operations, equipment, quality assurance, reporting, informatics, education
- Depart for CLE

A Typical Day for Kim: Affiliate- To Do List

■ Conference Calls

■ Staff Meetings

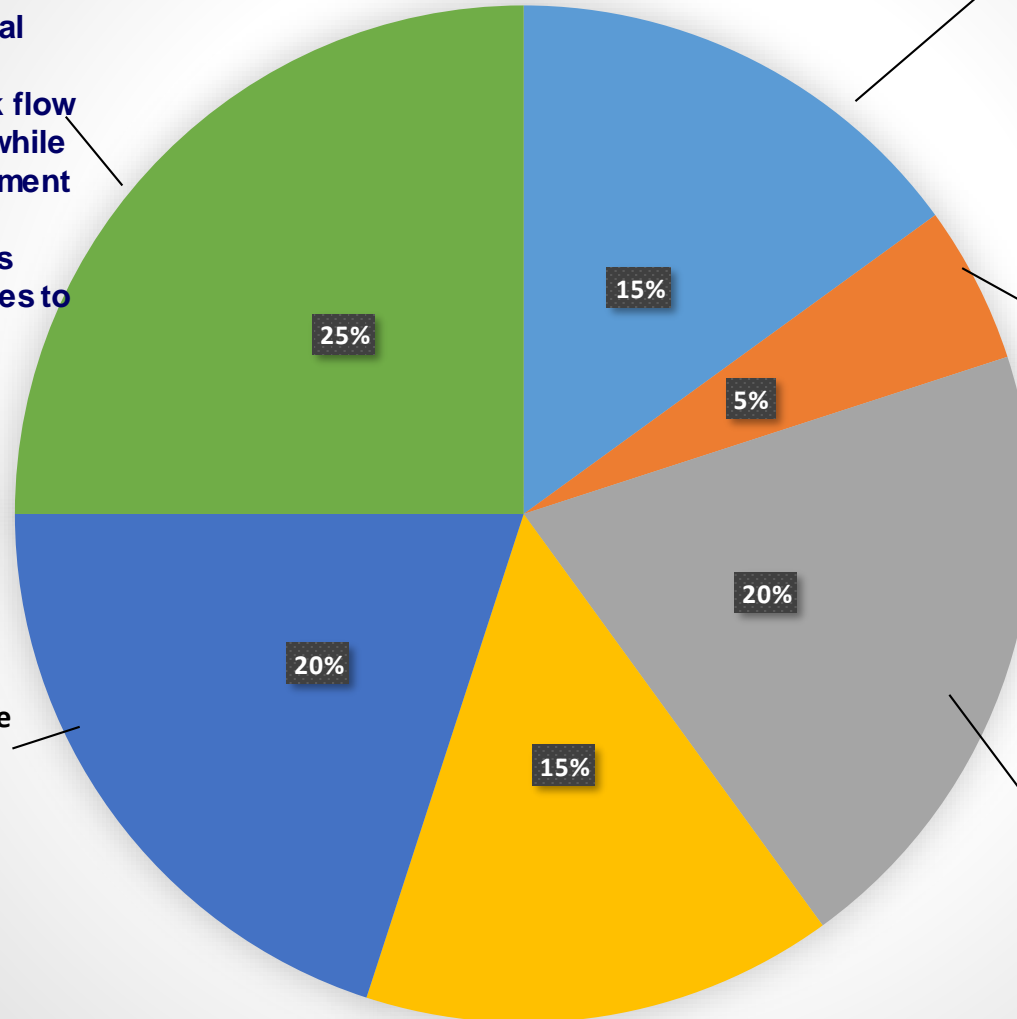
■ Projects

■ QA

■ Emails

■ Reports/Travel

- Annual site visit with formal written report
- Direct observation of work flow and through put process while performing on site assessment for front line continuous improvement opportunities
- Perform consulting services to non-affiliated sites



- Monthly calls with each affiliate site to review ongoing initiatives
- Facilitate conversation among affiliates to find best practices
- Echo QA outcomes

- Updates between CV medical/surgical teams
- Current consulting engagements, proposals, and opportunities
- Team project for continuous

- Triage affiliate second medical/surgical opinions to the correct in-house physician for review
- Various request regarding policies, SOP, and protocols

- Provide education opportunities to our peers from outside programs
- Work with affiliates on mutually beneficial projects
- In-house site visits from affiliates
- Efficiency metrics

Monitor quality of outside programs by way of echo QA peer reads



Deborah A. Agler
ACS, RDCS, FASE , CTT+

Current Position:

- **CV Clinical Service Specialist Virtual Classroom Instructor Philips Ultrasound (Develops and Delivers Virtual Classes)**

Deborah.agler@philips.com





CLINICAL

- 1974 Cardiac Function Technologist, Cleveland Clinic
- 1982 Chief Sonographer, Parma Hospital
- 1984 Cardiac Sonographer, Cleveland Clinic
- 1996 Research Cardiac Sonographer Specialist Cardiovascular Imaging and Core Laboratory Cleveland Clinic

2007 Coordinator of Education and Training Cardiovascular Imaging, Cleveland Clinic

Peer Reviewed Publications / Textbook

- 1998 1st published case study
- 1990 Co-author original research
- 2002 First author, original research
- 2011 1st chapter in textbook

*Since 1986, Collaborating author (second, third) on more than 70 original research articles, abstracts and publications



ACADEMIC

- 1984 Registered Diagnostic Sonographer (RDCS)
- 2003 Fellow, American Society Echocardiography (FASE)
- 2016 Advanced Cardiac Sonographer (ACS)
- 2017 Certified Technical Trainer (CTT+)



Professional Affiliations (VOLUNTARY)

PAST

Advisory Board of Cardiovascular Credentialing International (CCI)

Advisory Committee, Cardiovascular Technology Program, Cuyahoga Community College



PRESENTATIONS

- 1990 1st Regional Lecture
- 1991 1st National Lecture
- 2014 1st International Lecture

*To date more than 130 presentations



ASE (VOLUNTARY)

PAST

- ASE Board of Directors
- ASE Executive Board of Directors–Secretary
- Workflow Taskforce
- ASE COA-ACS Board
- Scientific Sessions Co-chair 2016
- Research Awards Committee
- SS Abstract Reviewer
- JASE Editorial Board
- ASE Writing Groups
- Multimodality Cardiovascular Imaging of Adult Patients during and after Cancer Therapy
- Multimodality Cardiovascular Imaging of Patients with Pericardial Disease
- Recommendations for the Use of Echocardiography in Patients with Mechanical Assist Devices
- Dyssynchrony Echo



A Typical Day For Debbie



- **Emails: checking, replying, writing**
- **Developing Virtual Classes**
- **Scheduling Virtual Classes (Day/Time)**
- **Delivering Virtual Classes (Zoom Platform) or Instructor for classes held at Cleveland Headquarters (2 – 3 days)**
- **Administrative Duties**
- **Team Organizational Conference Calls (Skype)**
- **Review current literature including educational Webinars**



Sonographer Leaders and ASE

- Introduction
- ASE and Sonographers
- Aspirational Leaders
- **Mentorship**
- Future



MENTORS

Sometimes in life we get to work with people who enrich our lives and make us better people!



MENTORING

Successful people never reach their goals alone.



SONOGRAPHERS' COMMUNICATION

From Mentee to Mentor: A Cardiovascular Sonographer's Perspective



Margaret M. Park,
BS, ACS, RVT,
RDCS, FASE

April 2016



SONOGRAPHERS' COMMUNICATION

Mentorship is a Win Win



April 2017



Mentorship

Common Threads

- **Have mentors**
- **Started as staff sonographers**
- **Earned professional credentials: ACS, RCS, RCCS, RDCS (AE, PE, FE), RVS, RVT**
- **Love sonography and looked at their careers as professions not jobs**
- **Active volunteers with ASE, ARDMS, CCI, IAC, SDMS**
- **Believe in mentoring others!**





Margaret "KOKO" Park David Adams



Dr. Sengupta and Evaline



Dr. Feigenbaum and Neha



Dr. Linder and Koko and Bonita



Dr Klein and Amy



Sonographer Leaders and ASE

- Introduction
- ASE and Sonographers
- Aspirational Leaders
- Mentorship
- **Future**



Future Sonographer Leaders

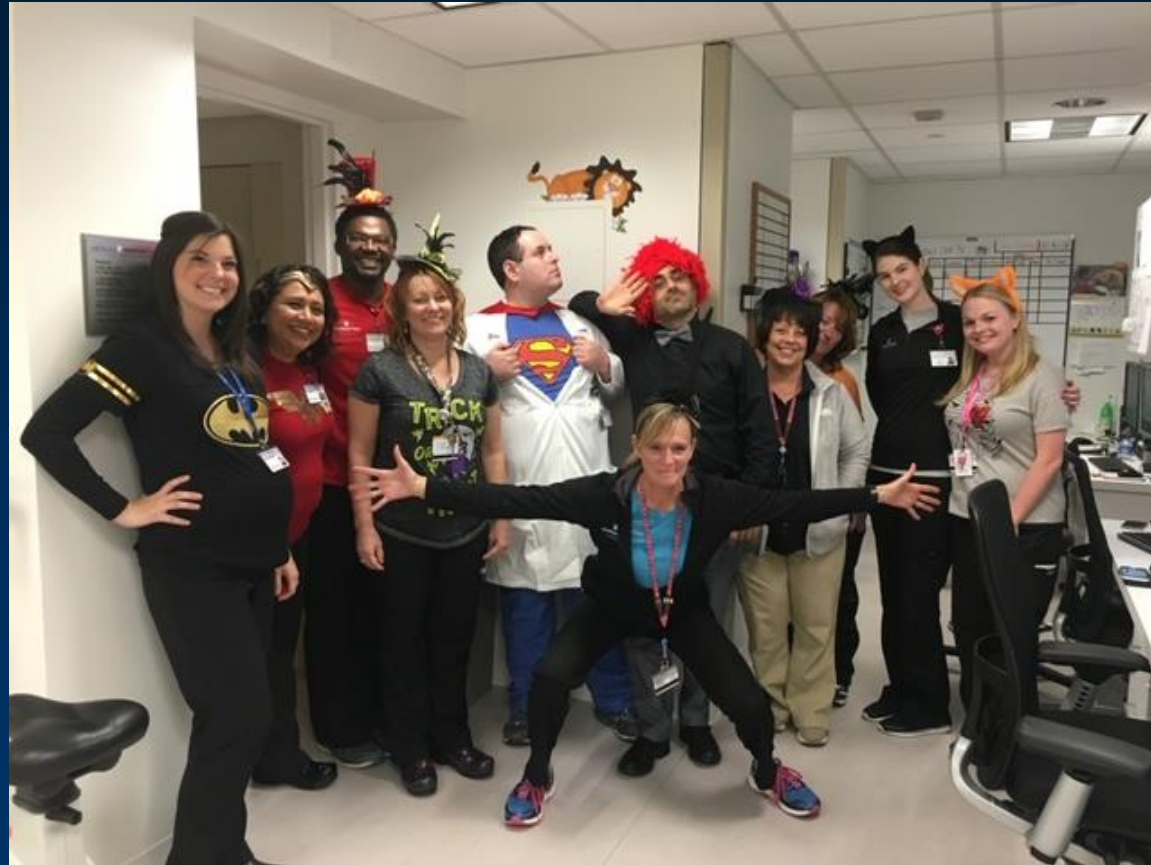


2019 ASE Scientific Session

Abstract Presenters



Sonographers Want to have Fun



Conclusion

- **Sonography is a great career**
- **Honor of working with sonographers with ASE**
- **ASE is the place for sonographers**
- **Aspirational sonographer leaders**
- **Clinical, research, education, consulting and industry**
- **Mentorship is a key part**



Thanks to all the Sonographers



Cleveland Clinic Pericardial Center

kleina@ccf.org



@AllanLKleinMD1

0418-1102

