

## Curriculum Vitae

**Julia Heisler Indik, MD PhD FACC FHRS FAHA**

January 2025

**Education:** A.B., Summa cum laude in astrophysics  
Princeton University, June 1982

Ph.D., Physics  
Massachusetts Institute of Technology, June 1986

M.D.  
College of Medicine, University of Arizona, May 1996

### **Clinical Training:**

July 1996- June 1999	Internal Medicine Internship and Residency, University of Arizona Affiliated Hospitals. Tucson, Arizona
July 1999-June 2002	Fellowship, Cardiovascular Disease, University of Arizona Affiliated Hospitals. Tucson
July 2002-June 2003	Fellowship, Clinical Electrophysiology, University of Arizona Affiliated Hospitals. Tucson, Arizona

### **Research Training and Fellowship**

American Heart Association student research fellowship (1992-1993, for one year of research in the department of Radiation Oncology).

NIH medical student research fellowship (spring and summer 1991, summer 1992)

National Science Foundation Graduate Fellowship in astrophysics (1982-1985)

### **Academic Positions (Medicine and Astrophysics):**

July 2015- present: Professor of Medicine with tenure, Division of Cardiology, University of Arizona.

Flinn Foundation and American Heart Association Endowed Chair in Electrophysiology – 2005 to present

May 1, 2022 – Dec 2022: Interim Department of Medicine Chair for Promotion and Tenure

July 2009 – June 2015: Associate Professor of Medicine with tenure, Division of Cardiology, University of Arizona

July 1, 2003 - 2009: Assistant Professor of Medicine, Division of Cardiology, University of Arizona.

1989-1991. Postdoctoral Research Associate, Lunar and Planetary Lab., University of Arizona, Tucson, Arizona.

1986-1989. Postdoctoral Research Associate, Steward Observatory, University of Arizona, Tucson, Arizona.

## **Academic and Administrative Service:**

University of Arizona:

### **Biomedical Engineering Graduate Interdisciplinary Program:**

I have been a faculty member of the BME Graduate Interdisciplinary Program from 2008-2016. In that time I have mentored several students who pursued their Master's degree doing research with me. These have included: Daniel Allen (Master's degree awarded 2010); Fahd Chaudhry (Master's degree awarded 2011); Meghan McGovern (Master's degree awarded 2013). I also serve on the comprehensive exam and thesis committees for Darren Haskett who is currently pursuing his PhD. I have also mentored students for lab experiences with me, including Darren Haskett (2010) and Zach Dean (2010).

Section of Cardiology:

Program Director, Clinical Cardiac Electrophysiology Fellowship program – 7/1/23 to present

Associate Program Director, Cardiovascular Disease Fellowship program – 7/1/23 to present

Program Director, Cardiovascular Disease Fellowship program - 10/1/09 to 6/30/2023

Search committee for Director of Electrophysiology Service, 2014.

Co-Director Cardiovascular Disease Fellowship program – 12/06 to 9/09

Housestaff Committee – 2007-2009

Interventional Cardiologist Recruitment Search Committee – 2004

University Physicians Healthcare at Kino Cardiologist Recruitment Search Committee – 2004-2005

Sarver Heart Center Scientific Development Committee, Co-Chair (2009-2010)

College of Medicine:

Member, GMEC Special Review Subcommittee. Appointed September 2023.

Search committee for Head of the Department of Surgery at the University of Arizona College of Medicine, appointed November 2013.

Department of Medicine Promotion and Tenure Committee – appointed December 2011

Curriculum Committee – 2007 to 2008

Chairman, Medical Student Research Committee (2007 -2009)

Development of Cardiovascular Block for first year medical students (2006)

Faculty Subcommittee for preparation for re-accreditation of the College of Medicine by the Liaison Committee on Medical Education (LCME) – 2005

#### University of Arizona Health Network:

Member, UAMC code blue committee (University campus). Appointed May 2012 - 2014

#### Banner Health:

Member, Pacemaker Workgroup, Cardiology Clinical Consensus Group. Appointed January 2016

Member, Lead Extraction Workgroup, Cardiology Clinical Consensus Group. Appointed Jan 2016

MR Imaging of Patients with Cardiac Implantable Electronic Devices or Retained Pacemaker Wires (policy written by J. Indik and E. Mendoza for Banner Health, March 2020).

#### State of Arizona:

Medical Consultant to the State of Arizona Medical Board –2005-2009.

### **Certification and Licensure:**

Medical License: State of Arizona, #25675 (Board of Medical Examiners, State of Arizona)

American Board of Internal Medicine: certified as of 1/04 in Clinical Cardiac Electrophysiology, recertification 2013, 2022.

American Board of Internal Medicine: certified as of 1/03 in Cardiovascular Disease, recertification 2012, 2021

American Board of Internal Medicine: certified as of 1/99 in Internal Medicine, recertification 2009, 2020.

USMLE: Passed Step 1 in June 1994, Step 2 in August 1995, and Step 3 in May 1997

### **Honors and Awards:**

National:

1. 2023 Circulation Arrhythmia and Electrophysiology 2020-2021 Platinum Reviewer Recognition Award
2. 2022 Circulation Arrhythmia and Electrophysiology 2020-2021 Platinum Reviewer Recognition Award
3. 2021 Laennec Master Clinician Award. Council on Clinical Cardiology, American Heart Association. Awarded at Scientific Sessions, American Heart Association November 13-15, 2021.
4. 2020 Circulation Arrhythmia and Electrophysiology 2019-2020 Gold Reviewer Recognition Award
5. 2019 Circulation Arrhythmia and Electrophysiology 2018-19 Silver Reviewer Recognition Award
6. 2007 American College of Cardiology – Proctor Harvey Teaching Award (awarded at the annual scientific sessions of the American College of Cardiology March 2007)
7. Best Doctors in America database: 2006 to present
8. 2006 Resuscitation Best Abstract Award – American Heart Association Scientific Sessions, AHA Council on Cardiopulmonary, Perioperative and Critical Care – November 2006
9. Selected to participate in the American College of Cardiology Foundation Emerging Faculty Program – 10/2006

#### University of Arizona:

1. Named to the Flinn Foundation and American Heart Association Endowed Chair in Electrophysiology - 2005
2. Charles W. Hall, Jr. Memorial Award for outstanding service on the Coronary Care Unit. June 1998
3. Arizona Foundation Outstanding Senior Award (awarded to the medical student with the highest academic record). May 1996
4. American Medical Women's Association, Inc. (AMWA) Janet M. Glasgow Memorial Award to the Most Outstanding Female Medical Student. May 1996
5. Excellence in Research Award as evaluated by the Honors and Awards Committee. May 1996
6. Eleanor Johnson Academic Excellence Award. May 1996
7. Jay W. Smith, M.D. Award for Outstanding Students of Medicine. May 1996
8. Outstanding Academic Achievement in Pathology. May 1996

9. Alpha Omega Alpha medical honor society (inducted 1995, junior year). President, Arizona AOA chapter, 1995-1996.
10. Letters of Special Commendation for performance in medical school, awarded by the Student Progress Committee, Univ. of Arizona College of Medicine, January 1994, January 1995, and June 1995.
11. American Society of Clinical Pathologists' Award for Academic Excellence and Achievement; awarded April 1994.
12. McGraw Hill Award for the most outstanding student in the class of 1995, College of Medicine, University of Arizona, (awarded March 1992).

### Prior Honors (Related to Astrophysics)

Sigma Xi science honor society (elected 1985, at the Massachusetts Institute of Technology)

Phi Beta Kappa (elected 1982, at Princeton University)

### Memberships in Professional and Scientific Societies

American Heart Association, appointed to Fellow status (FAHA) in 2013

Heart Rhythm Society, appointed to Fellow status (FHRS) in 2011

American College of Cardiology, appointed to Fellow status (FACC) in 2005

### Editorial Boards

- 1) American Journal of Medicine, Section Editor for ECG of the Month, 2005 to 2017
- 2) Cardiology in Review, Section Editor for electrocardiography, 2002-2004
- 3) American College of Cardiology, member of Editorial board for Cardiosmart ([www.cardiosmart.org](http://www.cardiosmart.org)). 2008.
- 4) Member, Editorial Board for Circulation: Arrhythmia and Electrophysiology. July 1, 2017 – present.
- 5) Member, Editorial Board for Heart Rhythm O<sup>2</sup> (HRO<sup>2</sup>). December 9, 2019 – present.
- 6) Associate Editor, Heart Rhythm Journal. Appointed August 3, 2023.

### National Committee Positions

- 1) Participated as a discussion leader at the Scientific Sessions of the American Heart Association (November 2004), Early Career Development Pre-Session on the topic of Women in Cardiology

- 2) Faculty – ABIM Maintenance of Certification session, at the American College of Cardiology Board Review course. September 2007, September 2008, and annually at the Scientific Sessions of the American College of Cardiology, March 2009- 2014, and for the Scientific Sessions of the American Heart Association, November 2011, November 2012.
- 3) Editorial Board, Cardiosmart. American College of Cardiology 2008.
- 4) Editor, ECG section of ACCIS, (American College of Cardiology In-Service, part of the Cardiosource website: [www.cardiosource.com](http://www.cardiosource.com)). American College of Cardiology (appointed July 2008).
- 5) Member, ACCIS editorial board and Fellow In Training Portfolio ACCIS Workgroup (2009-2011)
- 6) Faculty – American College of Cardiology Foundation workshop for Performance Improvement, A New ERA: Evidence Based Stroke and Symptom Reduction in Atrial Fibrillation (September 2010, December 2010, May 2011, September 2011).
- 7) Member, Training Materials Development Committee (TMDC) for the development of the ACC In Training Examination (2010 to 2016)
- 8) Associate Editor, for the development of the 8<sup>th</sup> edition of ACCSAP, for the American College of Cardiology, 2011
- 9) Clinical Topic Editor of Cardiac Arrhythmias, for the ACC Question Writing Committee (2011-2013)
- 10) Member and Arrhythmic Topic-Co-Coordinator, Scientific Sessions Program Committee, and Abstract Reviewer (2012), American College of Cardiology Scientific Sessions 2012.
- 11) Member, ACC/AHA/HRS Key Data Elements and Definitions for Electrophysiological Studies and Procedures committee (to update the ACC/AHA Electrophysiology Data Standards document); 2011.
- 12) Member, of the 3CPR Program Committee for the American Heart Association's Scientific Sessions for the term beginning Dec. 1, 2011 and ending Nov. 30, 2014.
- 13) Abstract Reviewer, for Scientific Sessions of the Heart Rhythm Society, 2012.
- 14) Member and Arrhythmia Topic-Coordinator, Scientific Sessions Program Committee (2013), American College of Cardiology Scientific Sessions 2013, member of ACC.14 and ACC.15 Annual Scientific Session Program Committee and abstract reviewer (2014, 2015).
- 15) Member, Scientific and Clinical Documents Committee. Heart Rhythm Society, appointed for term 2012-2016.
- 16) Member, Writing group for the HRS/AHA Expert Consensus Statement on Implantable Cardioverter Defibrillator (ICD) Indications Outside of Current Guidelines. December 2012
- 17) Member, American College of Cardiology Curriculum Development Team, appointed April 2012
- 18) Member, American College of Cardiology Annual Scientific Sessions Presidential Task Force, appointed May 2012

- 19) Member, Task Force on Critical Care Cardiology for the revision of the ACCF 2008 Recommendations for Training in Adult Cardiovascular Medicine Core Cardiology Training (COCATS). Appointed December 2012.
- 20) Co-Editor, Arrhythmia SAP (self-assessment program), American College of Cardiology, appointed December 2012.
- 21) Member, Professional Education Committee, American Heart Association (July 1, 2013-2016).
- 22) Chair, Training Materials Development Committee (TMDC) for the development of the ACC In Training Examination (January 2014 – December 2016)
- 23) Member, ACCSAP 9 Advisory Board, American College of Cardiology. Appointed February 2014.
- 24) Associate Editor, for the development of the 9<sup>th</sup> edition of ACCSAP, for the American College of Cardiology, Released July 11, 2016
- 25) Member, Writing committee on the ACC/AHA/HRS Guidelines for the management of patient with supraventricular arrhythmias. February 2014.
- 26) Peer Reviewer, Committee for Review of Grant applications to the American Heart Association (Lung-Clinical section). April 2014.
- 27) Member, Writing committee on the ACC/AHA/HRS EP Advanced Training Statement. November 2014.
- 28) Member, Writing committee for the AHA Policy Statement: “Cardiac Emergency Response Planning for Schools: A Joint Policy Statement”. March 2015.
- 29) Peer Reviewer, Committee for Review of Grant applications to the American Heart Association (Lung/Cardiac Arrest section). April 2015.
- 30) Peer Reviewer, Committee for Review of Grant applications to the American Heart Association (Lung/Cardiac Arrest section). October 2015.
- 31) Chair, Writing committee for 2017 HRS Expert Consensus Statement on MRI and Radiation Exposure in Patients with CIEDs.
- 32) Chair, Professional Education Committee for the American Heart Association. Appointed 2016- 2017.
- 33) Chair, Scientific and Clinical Documents Committee. Heart Rhythm Society. Appointed May 2016- May 2019.
- 34) Peer Reviewer, Committee for Review of Grant applications to the American Heart Association (Lung/Cardiac Arrest section). April 2016.
- 35) Peer Reviewer, Committee for Review of Grant applications to the American Heart Association (Lung/Cardiac Arrest section). October 2016.
- 36) Peer Reviewer, Committee for Review of Grant applications to the American Heart Association (Lung/Cardiac Arrest section). May 2017.
- 37) Member, Writing committee for the American College of Cardiology and Heart Rhythm Society CCEP Advanced Training Lifelong Learning Statement. September 2016

- 38) Member, Writing committee for the Heart Rhythm Society Expert Consensus Statement on Evaluation, Risk Stratification, and Management of Arrhythmogenic Cardiomyopathies. August 2017.
- 39) Member, Editorial Board, Circulation: Arrhythmia and Electrophysiology. Appointed June 2017.
- 40) Editor-in-Chief, for the American College of Cardiology self assessment products (SAP). Role of Performance Question Editor-in-Chief (covering all collaborative maintenance pathways). Appointed January 2018, reappointed May 2023.
- 41) Member, Governance Committee for the Heart Rhythm Society. Appointed May 2019- May 2022.
- 42) Member, Program Committee for the ACC.20 Together with the World Congress of Cardiology meeting (ACC.20/WCC), appointed April 2019 to April 2022.
- 43) Member, Program Committee for the ACC.21 Together with the World Congress of Cardiology meeting (ACC.21/WCC), appointed April 2019 to April 2022.
- 44) Abstract Captain for Electrophysiology: Special Populations for ACC.21 Scientific Sessions.
- 45) Member, Editorial Board, Heart Rhythm O2 Journal. Appointed December 2019.
- 46) Peer Reviewer, for “Part 1: Executive Summary: 2020 AHA Guidelines for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care”. May 2020.
- 47) Member, Writing Committee for the 2023 HRS/APHRS/LAHRS Guideline on Cardiac Physiological Pacing for the Avoidance and Mitigation of Heart Failure. January 2021.
- 48) Member, Program Committee for the ACC.22 Together with the World Congress of Cardiology meeting (ACC.22), appointed April 2019 to April 2022.
- 49) Abstract Captain for the category: Electrophysiology: Clinical Science, for ACC.22 Scientific Sessions.
- 50) Member, Rating Panel for the ACC/AHA/ASA/ASE/ASNC/HFSA/HRS/SCAI/SCCT/SCMR/STS 2022 Appropriate Use Criteria (AUC) for Multimodality Imaging in Cardiovascular Evaluation of Patients Undergoing Non-Emergent, Non-Cardiac Surgery (aka Preop Eval)
- 51) Member, Question Writing Committee for the HRS In-Service Examination. January 2022.
- 52) Member, Planning Committee for ACC Middle East 2022 Together With 13<sup>th</sup> Emirates Cardiac Society Congress, for October 7-9, 2022 (Dubai, United Arab Emirates).
- 53) Vice Chair, Ethics Committee for the Heart Rhythm Society. Appointed May 2022.
- 54) Member and Topic Co-Coordinator, Program Committee for the ACC.23 Together with the World Congress of Cardiology meeting (ACC.23), appointed April 2022.



- 55) Member, Writing Committee for the 2023 AHA/ACC Guideline for the Management of Patients with Atrial Fibrillation.
- 56) Member and Topic Coordinator (Arrhythmia Pathway), Program Committee for the ACC.24 Annual Scientific Sessions (to be held April 2024). Appointed February 2023.
- 57) Member, Technical Review Panel for the SCAI/HRS Clinical Practice Guideline on Transcatheter Left Atrial Appendage Closure (LAAC). Appointed June 1, 2023.
- 58) Associate Editor, Heart Rhythm Journal. Appointed August 3, 2023.
- 59) Member, Writing Committee for SCAI Position Statement on Simulation in Interventional Cardiology Training. Appointed August 2023.
- 60) Chair, Ethics Committee for the Heart Rhythm Society. Appointed January 2024.
- 61) Member, ACC Task Force on Certification and Assessment Strategy. Appointed April 2024.
- 62) Vice-Chair, Clinical Cardiac Electrophysiology Advanced Training Statement, Focused Update Document Leadership Team. Appointed June 2024.
- 63) Member, HRS Leadership Institute Task Force. Heart Rhythm Society. Appointed Dec 1, 2024.

## **Scholarly Presentations**

- 1) Presentation at Frontiers in Medical Research Cardiovascular Datablitz, University of Arizona, September 2006. (Presentation of research in ventricular fibrillation in acute myocardial infarction).
- 2) Grand Rounds: Department of Internal Medicine, University of Arizona:
  - a. Predicting Shock Success in Ventricular Fibrillation. September 2003
  - b. All patients with an EF < 30% should receive a defibrillator. Nov 2005, Debate with Dr. Peter Ott.
  - c. Management of Atrial Fibrillation, 2009, 2011
  - d. Clinicopathological Conference (CPC) – 2005, 2013
  - e. New Anticoagulants, 2013.
  - f. Academic Half Day: Atrial Fibrillation January 29, 2015, Cardiac Implantable Electronic Devices October 27, 2016
- 3) Ventriculography of the Right Ventricle. Invited lecture presentation at the Non-Invasive Imaging Conference, University of Arizona, Section of Cardiology, March 2005.
- 4) Indik J.H., Ott P., Marcus F. Heart Rate Turbulence and Fractal Scaling Coefficient in Response to Premature Atrial and Ventricular Complexes and Relationship to the Degree

- of Prematurity (abstract). Presented at the annual scientific sessions of the American College of Cardiology, March 2002. *J. Am. Coll Card* 2002; 39: 97A (see below)
- 5) Indik J.H., Donnerstein R, Kern K, Goldman S, Gaballa M and Berg R. Ventricular fibrillation waveform characteristics are different in ischemic heart failure compared with structurally normal hearts. Presented as an oral abstract presentation at the annual scientific sessions of the American Heart Association, November 2005.
  - 6) Indik JH, Donnerstein R, Berg R, Hilwig R, Berg M, and Kern K. Ventricular Fibrillation Frequency Characteristics are Altered in Acute Myocardial Infarction. Presented as best oral abstract at the Resuscitation Science Symposium, at the annual scientific sessions of the American Heart Association, November 2006.
  - 7) Indik JH, Wichter T, and Marcus FI. Arrhythmogenic Right Ventricular Dysplasia/Cardiomyopathy Can Be Distinguished from Benign Right Ventricular Outflow Tract Arrhythmia Using A Wall Motion Score Index. Oral abstract presented at the annual scientific sessions of the Heart Rhythm Society, May 2007
  - 8) Indik JH, Donnerstein RL, Feigelman J, Hilwig RW, Zuercher M, Kern KB, Berg MD and Berg RA. Waveform Characteristics of Ventricular Fibrillation Are Altered in Post-Myocardial Infarction Swine. Oral abstract presentation at the annual scientific sessions of the American Heart Association, November 2007.
  - 9) Indik J, Allen D, Shanmugasundaram M, Kern KB, Hilwig RW, Berg RA. Predictors of resuscitation in a swine model of VF cardiac arrest: superiority of amplitude spectral area (AMSA) to predict a return of spontaneous circulation when resuscitation efforts are prolonged. Oral abstract presentation at the annual scientific sessions of the American Heart Association, November 2009.
  - 10) Indik, J, Allen D, Gura M, Dameff C, Hilwig RW, Kern KB. Predictors of resuscitation in a swine model of VF cardiac arrest: amplitude spectral area (AMSA) and slope predict a return of spontaneous circulation independent of the presence of a prior non-acute myocardial infarction. Oral abstract presentation at the annual scientific sessions of the American Heart Association, November 2010.
  - 11) Indik JH. Waveform Analysis of Patients with Out-Of-Hospital VF. Invited lecture at the annual scientific sessions of the Heart Rhythm Society, May 2011.
  - 12) Indik JH. Newer Anticoagulants: New Options But in Which Patients and How Best to Manage? 18<sup>th</sup> Annual 2013 Cardiology at Cancun. Topics in Cardiology March 1, 2013. Mayo School of Continuous Professional Development.
  - 13) Indik JH. Ventricular Arrhythmias in Patients With and Without Structural Heart Disease: When to Worry. 18<sup>th</sup> Annual 2013 Cardiology at Cancun. Topics in Cardiology March 1, 2013. Mayo School of Continuous Professional Development.
  - 14) Indik JH. ARVC Arrhythmia Management: Devices, Ablations and Drugs. Invited lecture at the annual scientific sessions of the Heart Rhythm Society, May 2013
  - 15) Indik JH. A Case of ARVC. Invited lecture at the annual scientific sessions of the Heart Rhythm Society, May 2013
  - 16) Indik JH. Interesting ECGs. Mayo Clinic Hospital Medicine: Managing Complex Patients. November 7, 2013. Mayo School of Continuous Professional Development.
  - 17) Indik JH. Timing of ICD implant after revascularization. Always 90 days? CON: A 60 year old woman with heart failure, remote anterior wall MI and LVEF 25%, recent angina and stent to obtuse marginal artery. Invited presentation at the annual scientific sessions of the American College of Cardiology, March 2015.

- 18) Indik JH. Update on In-Training Examination. Invited presentation at the annual scientific sessions of the American College of Cardiology, March 2015.
- 19) Indik JH. Real Cases: managing anticoagulation in specific populations and high risk patients. Invited presentation at the annual scientific sessions of the American College of Cardiology, March 2015.
- 20) Indik JH. ACCF study session for maintenance of certification: ABIM recertification made easy: ACC general cardiology module 11. Invited presentation at the annual scientific sessions of the American College of Cardiology, March 2015.
- 21) Indik JH. Guidelines, consensus statements, AUC, and Reimbursement: Where are the gaps? Invited lecture at the annual scientific sessions of the Heart Rhythm Society, May 2015.
- 22) Indik JH. Faculty at Best of ACC 2015 (American College of Cardiology) for Arrhythmia Management. May 2015.
- 23) Indik JH. ACCF study session for maintenance of certification: ABIM recertification made easy: ACC general cardiology module 14. Invited presentation at the annual scientific sessions of the American College of Cardiology, March 2016.
- 24) Indik JH. Contemporary Clinical Controversies Involving Anticoagulation in Atrial Fibrillation. Pharmacology Program III Invited panel member at the annual scientific sessions of the American College of Cardiology, March 2016.
- 25) Indik JH. Faculty at Best of ACC.16 (American College of Cardiology) for Arrhythmia Management. June 2016.
- 26) Indik JH. Faculty at ACC Cardiovascular Board Review for Certification and Recertification Course. Chicago September 2016.
- 27) Indik JH. ACCF study session for maintenance of certification: ABIM recertification made easy: ACC general cardiology module 14. Invited presentation at the annual scientific sessions of the American College of Cardiology, March 2017.
- 28) Indik JH. Preparing to Chair a Session at the Annual Meeting, in Teaching with Intent: Secrets from the Masters II. Invited presentation at the annual scientific sessions of the American College of Cardiology, March 2017.
- 29) Indik JH. Faculty at ACC Cardiovascular Board Review for Certification and Recertification Course. Chicago September 2017.
- 30) Indik JH. ACCF study session for maintenance of certification: Test yourself with questions: ABIM 2017-2018 Clinical Cardiac Electrophysiology. Invited presentation at the annual scientific sessions of the American College of Cardiology, March 2018
- 31) Indik JH. Arrhythmias During Pregnancy. Invited presentation at the annual scientific sessions of the Heart Rhythm society. May 2018.
- 32) Indik JH. Faculty at ACC Cardiovascular Board Review for Certification and Recertification Course. Chicago September 2018.
- 33) Indik JH. Can Patients with a Non-MRI Conditional Device Undergo Safe MRI? Invited presentation at the annual scientific sessions of the American Heart Association. November 2018.
- 34) Indik JH. How to Manage Implantable Cardiac Electronic Devices in Patients Who Require Cardiac MRIs: Highlights of the 2017 HRS Expert Consensus Statement. Invited presentation at the SCMR 22nd Annual Scientific Sessions. February 8, 2019.
- 35) Indik JH. Test Your Knowledge: Heart Failure and Arrhythmias. Invited presentation at the annual scientific sessions of the American College of Cardiology, March 2019.

- 36) Indik JH. Arrhythmogenic Cardiomyopathies Discussant. Invited presentation at the annual scientific sessions of the American College of Cardiology, March 2019.
- 37) Indik JH. HRS Consensus Statement on Arrhythmogenic Cardiomyopathies. Invited presentation at the Johns Hopkins 20<sup>th</sup> Anniversary Arrhythmogenic Right Ventricular Cardiomyopathy International Symposium. May 6, 2019.
- 38) Indik JH. Can Patients with a Non-MRI Conditional Device Undergo a Safe MRI? Invited presentation at the 15<sup>th</sup> Annual Congress of the European Cardiac Arrhythmia Society, Marseille, France, June 16-18, 2019.
- 39) Indik JH. Faculty at ACC Cardiovascular Board Review for Certification and Recertification Course. Chicago September 2019.
- 40) Indik JH. Faculty at American College of Cardiology Cardiovascular Fellowship Program director Summit: Career Development and Leadership Skills for the PD. October 26-27, 2019. Washington DC.
- 41) Indik JH. 2019 HRS Expert Consensus Statement on Evaluation, Risk Stratification and Management of Arrhythmogenic Cardiomyopathy. Invited presentation at the annual scientific sessions of the American Heart Association, November 2019.
- 42) Indik, JH. ECGs and EGMs in Real-Time. Invited presentation of cases at the annual scientific sessions of the American Heart Association, November 2019.
- 43) Indik, JH. Late-Breaking Clinical Trials Featured Clinical Research II. Invited Panelist. Annual Scientific Sessions of the American College of Cardiology (ACC.20). Virtual presentation due to COVID-19.
- 44) Sherrow, BL, Indik JH and Shenoy S. Fellows Boot Camp Workshop Series: Part II: Studying for Your In-Training-Exam/Building your Subspecialty Knowledge. 10/23/2020. University of Arizona College of Medicine Tucson Graduate Medical Education.
- 45) Indik JH. Arrhythmogenic Cardiomyopathy. Sarver Heart Center Grand Rounds. December 18, 2020.
- 46) Indik, JH. Late-Breaking Clinical Trials V. Invited Panelist. Annual Scientific Sessions of the American College of Cardiology (ACC.21). Virtual presentation due to COVID-19.
- 47) Indik, JH. Devising a Plan for Digital Health During COVID-19: What Were the Challenges in Your Practice as the Guidelines Continued to Change. Invited virtual presentation at the annual scientific sessions of the Heart Rhythm Society July 2021.
- 48) Indik JH. Web Based Learning. Invited presentation at the Program Director's Symposium at the Annual Scientific Sessions of the American College of Cardiology (ACC.22). Washington DC. April 2022.
- 49) Indik, JH. Late-Breaking Clinical Trials V. Invited Panelist. Annual Scientific Sessions of the American College of Cardiology (ACC.22). April 2022.
- 50) Indik, JH. Clinical Spotlight Series Rapid Review Afib-The Latest in Management Strategies. At the Annual Scientific Sessions of the American College of Cardiology (ACC.22). Chair and development of case studies.
- 51) Indik, JH. Getting Creative: Looking Beyond the Clinical Curriculum. Invited lecture for the Chief Fellows Leadership Symposium, from the American College of Cardiology Fellows-In-Training (ACC FIT) Leadership Council. May 27, 2022.

- 52) Indik, JH. Acute and Chronic Management of the Patient with WPW. Invited international presentation. ACC Middle East 2022 Together With 13<sup>th</sup> Emirates Cardiac Society Congress, for October 7-9, 2022 (Dubai, United Arab Emirates).
- 53) Indik, JH. Managing the Pacemaker Patient Undergoing MRI. ACC Middle East 2022 Together With 13<sup>th</sup> Emirates Cardiac Society Congress, for October 7-9, 2022 (Dubai, United Arab Emirates).
- 54) Indik, JH. The Importance of Rhythm Control Early in the Management of Atrial Fibrillation. Invited international presentation. ACC Middle East 2022 Together With 13<sup>th</sup> Emirates Cardiac Society Congress, for October 7-9, 2022 (Dubai, United Arab Emirates).
- 55) Indik, JH. Arrhythmogenic Cardiomyopathy: When to Suspect and How to Approach. Invited international presentation. ACC Middle East 2022 Together With 13<sup>th</sup> Emirates Cardiac Society Congress, for October 7-9, 2022 (Dubai, United Arab Emirates).
- 56) Indik, JH. Late-Breaking Science: Treating Atrial and Supraventricular Arrhythmias. Invited Discussant for the RAPID trial. Annual Scientific Sessions of the American Heart Association. November 7, 2022.
- 57) Indik, JH. Starting a new physiological pacing program. Invited presentation. Annual Scientific Sessions of the American Heart Association. November 6, 2022.
- 58) Indik, JH. EPSAP Session Featuring this Year's CMP Topic: Test Yourself with Questions on Cardiac Implantable Electronic Devices. Invited presentation. Annual Scientific Sessions of the American College of Cardiology (ACC.23). March 2023.
- 59) Indik JH. After the Implant-Follow up Considerations for CPP Devices. Invited Presentation. Annual Scientific Sessions of the Heart Rhythm Society. May 2023.
- 60) Indik JH. Invited Commentary on the late breaking clinical trial of Left Bundle Branch Area Pacing Compared to Biventricular Pacing for Cardiac Resynchronization Therapy: Results from the International LBBAP Collaborative Study Group. Annual Scientific Sessions of the Heart Rhythm Society. May 2023.
- 61) Indik JH. AVNRT and Atrial Tachycardia. Invited Presentation. Annual Scientific Sessions of the Heart Rhythm Society. May 2023.
- 62) HRS Podcast, "The Lead". Discussion of the CIRCA-DOSE trial. Discussants: Fred M. Kusomoto MD FHRS and Julia H. Indik MD PhD FHRS, hosted by Janice Chyou MD. March 25, 2024. Podcast accessed at: [The Lead | Heart Rhythm Society \(hrsonline.org\)](https://hrsonline.org)
- 63) Indik JH. A Deeper Dive into the 2023 ACC/AHA Atrial Fibrillation Guideline: New Guiding Principles and Insights Based on Evidence. Invited Lecture at Mayo Clinic – Arizona, Cardiovascular Grand Rounds. June 13, 2024.
- 64) Indik JH. Just Five More Minutes! Devices, AF and AHRE's – New Data, New Guidelines. Invited Presentation. Annual Scientific Sessions of the American Heart Association. November 2024.
- 65) Indik JH. Can I Stop OAC After Ablation? Invited Lecture at the 13<sup>th</sup> Annual Heart Rhythm & ECG Course: A Case-Based Approach. Mayo Clinic School of Continuous Professional Development. Scottsdale, AZ December 6, 2024.
- 66) Indik JH. SCAF (Sub-Clinical Atrial Fibrillation). Invited Lecture at the 13<sup>th</sup> Annual Heart Rhythm & ECG Course: A Case-Based Approach. Mayo Clinic School of Continuous Professional Development. Scottsdale, AZ December 6, 2024.

## **Outreach Presentations**

### **Public service cardiology education lectures:**

- 1) Long QT Syndrome, The Basic Science. Lecture given for the Indian Health Service to the public from the Salt River tribe, Arizona, March 2005 (see also lecture to Health Care Providers below)
- 2) Sarver Heart Center public lectures on arrhythmias and sudden death:
  - a. November 2003, Yuma, Arizona
  - b. November 2004, Yuma, Arizona
  - c. January 2005, University of Arizona
  - d. October 2006, Tucson Arizona
  - e. February 2008, Tucson Arizona
  - f. January 2009, Green Valley, Arizona
  - g. February 2009, Tucson Arizona
  - h. November 2009, Yuma, Arizona
  - i. February 2015, Healthy Heart Day, University of Arizona Medical Center, Tucson , AZ
- 3) Sudden Cardiac Death. Appearance on the television news program, Arizona Illustrated, KUAT, Tucson. April 5, 2006 and April 2009.

### **Community Lectures (to Health Care Professionals):**

- 1) Grand Rounds, Atrial Fibrillation: From Drugs to Ablation. Northwest Medical Center, March 2008.
- 2) Pacemakers and Arrhythmias. Lecture given at Northwest Medical Center to nursing staff. June 2006.
- 3) Focus on Bradyarrhythmias. Lecture given at University Medical Center Nursing Symposium, Advanced EKG course, June 2005
- 4) Preventing Sudden Cardiac Death. Lecture given at Heart Failure Management symposium (sponsored by Medtronic and University of Arizona), February 2005.

- 5) Supraventricular Tachycardia and Atrial Flutter. Lecture given to the Health Care Providers at the S. Arizona VA Health Care System, as part of all day symposium (providers from all of Arizona, and Amarillo, Texas). January 2004
- 6) Pacemakers and Arrhythmias. Lecture presented to nursing staff of Northwest Medical Center, June 15, 2006
- 7) The QT Interval and Sudden Death” Lecture at Case Management Conference, S. Arizona VA Health Care System, June 22, 2006

## **External Reviews**

I have been invited to perform external reviews of faculty under consideration for promotion at the following Universities:

- 1) Geisel School of Medicine, Dartmouth (2019)
- 2) Johns Hopkins (2020, 2021)
- 3) University of California, Davis (2020)
- 4) University of California, San Francisco (2019)
- 5) University of Massachusetts (2012)
- 6) University of Tennessee (2019)
- 7) University of Washington (2020, 2021)
- 8) Georgetown University (2021)
- 9) University of Virginia (2020)

## **Reviews (Journals)**

I have been invited to critically review manuscripts for the following journals:

- 1) Circulation and Circulation: Arrhythmia and Electrophysiology
- 2) Cardiology
- 3) Archives of Internal Medicine
- 4) Anesthesia and Analgesia
- 5) Pacing and Clinical Electrophysiology
- 6) American Journal of Cardiology
- 7) American Journal of Medicine
- 8) International Journal of Cardiology
- 9) Resuscitation
- 10) Critical Care Medicine
- 11) Journal of the American College of Cardiology, and Journal of the American College of Cardiology: Electrophysiology
- 12) JAMA Cardiology
- 13) Heart Rhythm O2

## **Editorial Positions:**

Section editor for electrocardiography, *Cardiology in Review* (2002-2004). Cases published:

- 1) Indik, J. A Slow Rhythm Following Mitral Valve Surgery. *Cardiology in Review* 10: 197 (2002).
- 2) Indik JH. Two hearts are better than one? *Cardiology in Review*. 10:261, (2002)
- 3) Indik JH. What are the Vital Signs? *Cardiology In Review*. 10:319-320 (2002).
  
- 4) Indik JH. Irregular Wide Complex Tachycardia. *Cardiology in Review*. 11: 1-2 (2003).
- 5) Indik JH. Alternating Bundle Branch Block. *Cardiology in Review*. 11: 56-57 (2003).
- 6) Indik JH. Pacing Problems. *Cardiology in Review*. 11: 206-207 (2003).
- 7) Indik JH. A Not-So-Narrow Complex Tachycardia. *Cardiology in Review*. 11:247-248 (2003).
- 8) Indik JH. A Revealing Holter Monitor. *Cardiology in Review*. 11: 299-300 (2003).
- 9) Indik JH. Spontaneous conversion of atrial fibrillation in the setting of biventricular pacing. *Cardiology in Review* 12:1-2 (2004).
- 10) Indik JH. Decompensated heart failure in a patient with an intracardiac defibrillator. *Cardiology in Review* 12: 125 (2004).
- 11) Indik JH. Two-to-One Atrioventricular Block: Where is the Block? *Cardiology in Review* 12: 183-184 (2004).
- 12) Indik JH. A narrow complex tachycardia in a man with palpitations for many years. *Cardiology in Review* 12: 285-286 (2004).
- 13) Indik JH. Syncope a positive tilt table test. *Cardiology in Review* 1: 1-2 (2005).
- 14) Indik JH. A patient with septic shock and a regular, narrow complex rhythm. *Cardiology in Review* 13: 57-58 (2005).
- 15) Indik JH. A man with syncope and ST segment elevation. *Cardiology in Review* 13: 111-112 (2005).

Section editor for electrocardiography for *American Journal of Medicine* (2005-present). (Cases published as sole author)

- 1) Indik JH. Diagnosing chest pain. *American Journal of Medicine* 2005; 118:23-4.
- 2) Indik JH. Syncope in a man with a pacemaker. *American Journal of Medicine* 2005; 118: 111-112.
- 3) Indik JH and Ott P. An 18 year old man with peculiar QRS complexes. *American Journal of Medicine* 2005;118: 222-224.
- 4) Indik JH. A Treatment option for some failing hearts. *American Journal of Medicine* 2005;118:368-370.
- 5) Indik JH. Moving to a slow beat. *American Journal of Medicine* 2005;118:480-481.
- 6) Indik JH. When minutes go missing. *American Journal of Medicine*. 2005;118:606-8.
- 7) Indik JH. What is the real rhythm? *American Journal of Medicine*. 2005;118: 838-9 .
- 8) Indik JH. A pointed clue. *American Journal of Medicine*. 2005;118:1221-2.
- 9) Indik JH. Evolution of a T wave. *American Journal of Medicine*. 2005;118: 1352-3 .
- 10) Indik JH. Block Times Two. *American Journal of Medicine*. 2006;119: 312-4.
- 11) Indik JH. VT or not VT. *American Journal of Medicine*. 2007;120: 146-7.



- 12) Indik JH. A racing heart. *American Journal of Medicine* 2007; 120:325-7.
- 13) Indik JH. Troubleshooting pacemakers. *American Journal of Medicine* 2007; 8:673-4.
- 14) Indik JH. Not just slow: double trouble. *American Journal of Medicine* 2008; 1:19-20.
- 15) Indik JH. When Palpitations Worsen. *American Journal of Medicine* 2010; 123: 517-9.

**Monographs Written As Member of the Editorial Board for Cardiosmart ([www.cardiosmart.org](http://www.cardiosmart.org)), (American College of Cardiology)**

- 16) Learn About Heart Disease: Monograph written on “Cardiopulmonary Resuscitation” (2008)
- 17) Learn About Heart Disease: Monograph written on and “How to Use an Automated External Defibrillator” (2008).

## **Research**

### **Personal Statement**

The previous focus of research has been the investigation of methods to improve the resuscitation of cardiac arrest due to ventricular fibrillation (VF) by incorporating analysis of the VF waveform. We have demonstrated that amplitude-spectral area is predictive of survival to hospital discharge in patients with cardiac arrest with an initial rhythm of VF in the state of Arizona. My collaborators have included Drs. Karl Kern and Gordon Ewy from the University of Arizona and Dr. Robert Berg at the University of Pennsylvania where we have analyzed the time evolution of the VF waveform in three myocardial states, acute myocardial infarction, healed myocardial infarction and normal myocardium, in both a swine and rat model of VF cardiac arrest.

Since 2016, I have also collaborated on projects that look at the risk of sudden cardiac death in patients with sickle cell cardiomyopathy, in collaboration with Dr. Ankit Desai at the University of Arizona. This research explores ECG parameters, notably QTc, arrhythmia markers and inflammatory markers in relation to mortality. This is translational research that incorporates genetics, animal models of sickle cell disease and a human cohort.

I have also been involved in the development of our protocols at the University of Arizona for the performance of MRI studies in patients with pacemakers and implantable cardioverter defibrillators, with a manuscript describing our single center cohort under review.

I have also been involved in research in arrhythmogenic cardiomyopathy, a disorder that affects the cell to cell adhesion in the ventricles and a cause for sudden death and heart failure. I have also served on the writing committee for the 2019 Heart Rhythm Society Consensus Statement for the management of patients with arrhythmogenic cardiomyopathy.

I was also involved in investigations in the use of simulation technology for the training of cardiac catheterization skills with Dr. Kwan Lee.

I was also involved in the investigation of the use of direct oral anticoagulants in the care of patients undergoing left atrial appendage occlusion and trends in patient referrals for this procedure with Dr. Muhammad Ajmal, Dr. Mathew Hutchinson and Dr. Kwan Lee.

I was also involved in investigations of arrhythmias in the care of patients with COVID-19 infection and relation to clinical outcomes with Dr. Preethi William.

My current research is in investigations of left atrial voltage characterization for patients with atrial fibrillation with Dr. Mathew Hutchinson. We have devised a customized computational platform to analyze and compare voltage from different patients and different user selected regions of interest with a goal to understand factors that relate to abnormal voltage and clinical outcomes.

### Research Support:

#### Current Research Support:

I currently receive research funding (approximately \$40,000/yr) from the **Flinn Foundation and American Heart Association endowed chair in electrophysiology**, which was awarded to me at the University of Arizona in 2005.

#### **NIH: 1R01HL116906-01A1** Towbin J (PI), Marcus FI (PI)

Genetics, Mechanisms and Clinical Phenotypes of Arrhythmogenic Cardiomyopathy 8/23/2013-6/30/2017

Role: Image Analyst and Director of Core Lab for Angiography (Julia Indik)

This NIH funded study will test the hypothesis that mutations that encode the desmosome/cell-cell junction pathway lead to disruption of the intercalated disk, causing the clinical characteristics of arrhythmogenic cardiomyopathy. Arrhythmogenic cardiomyopathy is now recognized as a heterogeneous disorder that encompasses arrhythmogenic RV cardiomyopathy, arrhythmogenic LV cardiomyopathy and dilated cardiomyopathies where arrhythmias are common. New causative genes will also be investigated, along with genotype-phenotype associations. New biomarkers will be sought to improve the accuracy of diagnosis and prediction of arrhythmias.

#### **NHLBI: NCT 03685149** Zareba, W (PI)

Effects of Flecainide on Cardiac Arrhythmias in ARVC Patients (12/4/2018 –

Role: Local site PI at the University of Arizona

This NHLBI funded study will test whether flecainide is effective and safe in arrhythmogenic right ventricular cardiomyopathy (ARVC) patients. Patients with ARVC are at risk for sudden death and ventricular tachycardia and for which effective and safe antiarrhythmic drugs are needed. The study will enroll ARVC patients who already have an implantable cardioverter defibrillator (ICD) and in a randomized double-blinded placebo-controlled crossover trial will be treated with flecainide or placebo over 10 week durations to determine the effect upon ventricular arrhythmias.

**Completed Research Support:**

**American Heart Association Grant In Aid, 0855587G** Julia H. Indik, (PI)

7/1/08-

6/30/2011

Influence of myocardial substrate upon the ventricular fibrillation waveform to predict the success of defibrillation.

Role: Principal Investigator

The purpose of this research is to examine the effect of myocardial substrate, such as in acute myocardial ischemia or a post-infarction state upon the likelihood of defibrillation resulting in a return of spontaneous circulation (ROSC) in VF arrest using a swine model. Our hypotheses using the swine model of VF cardiac arrest are as follows: 1) that successful defibrillation of ventricular fibrillation is best predicted by consideration of both the VF waveform and duration of VF, and 2) the waveform characteristics that do predict successful defibrillation are dependent on the myocardial substrate that is fibrillating.

**U18 HS10385-04** Woosley, RL (PI)

9/30/02-

9/29/07

AHRQ

Center for Education and Research on Therapeutics

Role: Electrophysiology Physician

The major goal of this Center is to conduct translational basic and clinical research and related educational programs that will result in improved use of therapies, especially medications. The Pharmacodynamics Core of the Center includes the projects: 1) an international registry for recognition and characterization of drug-induced arrhythmias; and 2) determination of the relationship between cytochrome P450 genotypes, methadone dose and QT prolongation in humans; and 3) determination of the validity of QT correction algorithms in the presence of QT prolonging drugs

**U01-HL65594** Marcus, FI (PI)

Multidisciplinary Study of Right Ventricular Dysplasia

9/27/01-7/31/06

Role: Right Ventriculography Imaging Analyst

The proposed five-year research plan is a multidisciplinary, multicenter, collaborative study to investigate the cardiac, clinical, and genetic aspects of arrhythmogenic right ventricular dysplasia (ARVD), a progressive disorder that predominantly affects the right side of the heart and causes ventricular arrhythmias. The overall objective of the Multidisciplinary Study of Right Ventricular Dysplasia is to characterize the genetic and clinical features of arrhythmogenic right ventricular dysplasia. The specific aims are: 1) To establish a North American ARVD Registry enrolling ARVD patients and their family members, based on standardized diagnostic test criteria, in a prospective longitudinal follow up study. 2) To determine the genetic background of ARVD by identifying chromosomal loci and specific gene mutations associated with this disorder. 3) To determine the influence of the genotype on the clinical course of patients with ARVD and explore phenotype-genotype associations that will contribute to improved diagnosis, risk stratification, and therapy. 4) To develop quantitative methods to assess right ventricular function in order to enhance the specificity and sensitivity of ARVD diagnosis.

**American Heart Association Beginning Grant-In-Aid (Indik, P.I.)** 7/1/00-6/30/02  
The role of oxygen free radicals in endothelial dysfunction in the rat model of ischemic heart failure.

Role: Principal Investigator

**American Heart Association Beginning Grant-In-Aid (Indik, P.I.)** 7/1/98-6/30/99  
Effects of carvedilol on vasodilatation and nitric oxide production in heart failure rats

Role: Principal Investigator

**Steven M. Gooter Research Award for Sudden Cardiac Death** – November 2005 (Sarver Heart Center), Principal Investigator, Amount: \$30,000.

**Walt and Vinnie Hinz Memorial Award for New Initiatives** – August 2004 (Sarver Heart Center), Principal Investigator, Amount: \$10,000.

**The Colonel Stanley Trachta Memorial Heart Disease Research Award** – August 2001 (Sarver Heart Center), Principal Investigator, Amount \$1,000

### Other Invited Articles, Book Chapters, Monographs:

1. **Indik, J.H.** and Reed, K.L. Umbilical Venous Pulsations can Indicate Problems with Forward Blood Flow Through the Heart. In *Fetal Cardiac Function*, eds. Arduini, D., Rizzo G. and Romanini, C. (Parthenon Publ., Park Ridge, N.J.) (1993) (*invited article*).
2. **Indik, J.H.** and Alpert, J.S. Detection of Pulmonary Embolism by D-Dimer Assay, Spiral CT and MRI. *Prog. In Cardiovascular Dis.* 2000; 42, 261-272, (*invited article*).
3. **Indik, J.H.** and Alpert, J.S. Post-Myocardial Infarction Pericarditis. Current Treatment Options in *Cardiovascular Medicine*, 2000; 2, 351-356, (*invited article*).
4. **Indik JH** and Marcus FI. Arrhythmogenic Right Ventricular Dysplasia. (Invited Review in electronic journal) *Indian Pacing and Electrophysiology Journal* 2003;3:148-156.
5. Woosley R and **Indik JH**. Antiarrhythmic Drugs In: Fuster, V, Alexander RW, and O'Rourke RA eds. *Hurst's The Heart*, New York: McGraw Hill; 2004: 949-974. (Book Chapter reviewing state of the field)
6. **Indik J.** The evolution and revolution of the implantable cardioverter defibrillator. *Expert Review Cardiovasc Ther.* 2004;2:461-4 (invited article).

7. Wichter T, **Indik J**, Daliento L: Diagnostic Role of Angiography. In Marcus FI, Nava A, Thiene G (eds). Arrhythmogenic RV Cardiomyopathy/Dysplasia. Milan: Springer Verlag, 2007: pp 147-158. (Invited book chapter).
8. **Indik J**. Hypothermia: Is it just for VF? Invited Editorial. Critical Care Medicine 2009, 37:3175-6.
9. **Indik JH**, Alpert JS. The patient with atrial fibrillation. Am J Med 2009; 122: 415-8.
10. Sorrell VL, **Indik JH**, Kalra N, and Marcus FM; Chapter 19: Right Ventricular Cardiomyopathies; pp 322-353; In Multimodal Cardiovascular Imaging: Principles and Clinical Applications; McGraw Hill; New York, New York; 2011; Pahlm O and Wagner GS Eds.
11. **Indik JH** and Woosley R. Pharmacokinetics/pharmacodynamics of Antiarrhythmic Drugs; pp 341-358; In Cardiac Electrophysiology Clinics: Advances in Antiarrhythmic Drug Therapy; W.B. Saunders (A Division of Elsevier Inc.); Philadelphia, PA; 2010; Kowey PR and Naccarelli GV Eds.
12. Banna M, **Indik JH**. Risk stratification and prevention of sudden death in patients with heart failure. Curr Treat Options Cardiovasc Med 2011; 13:517-27.
13. **Indik JH**. ACCSAP 8th edition (2012): Modules a) Evaluation of the patient with syncope b) Pharmacology of antiarrhythmic medications c) pharmacology of medications for cardiac arrest
14. **Indik JH**, Conover Z, Kern KB, Silver AE, Bobrow BJ, Spaite DW. Response to Letter from Shiyovich et al. Regarding Article, "Resumption of Chest Compressions after Successful Defibrillation and Risk for Recurrence of Ventricular Fibrillation in Out-of-Hospital Cardiac Arrest. Circulation: Arrhythmia and Electrophysiology 2014; 7:1278
15. **Indik JH**. Editorial: Can we improve outcomes by using active compression-decompression and impedance threshold devices during resuscitation. Critical Care Medicine 2015; 43:929-30.
16. **Indik JH**, Marcus FI, Arrhythmogenic Right Ventricular Cardiomyopathy, in: J.L. Jefferies, A.C. Chang, J.W. Rossano, R.E. Shaddy, J.A. Towbin (Eds.), Heart Failure in the Child and Young Adult: From Bench to Bedside, Academic Press, ELSEVIER, 2018, pp. 291–296.
17. **Indik, JH**. ACCSAP 9<sup>th</sup> edition (2016): Modules:
  - a. Pharmacology of antiarrhythmic drugs
  - b. Prevention of Arterial Embolism and Stroke in Patients with Atrial Fibrillation (co-authored with Dr. Joseph Alpert)

18. **Indik, JH.** Editorial: True or False: With medical therapy, survivors of sudden cardiac death due to variant angina have an excellent prognosis. *Journal of the American College of Cardiology* 2016; 68:146-8.
19. **Indik, JH.** Editorial: Is It Like Night and Day, or Weekend? *Journal of the American College of Cardiology*, 2018. 71:412-413.
20. **Indik, JH.** Editorial: Arrhythmic Risk Stratification for Arrhythmogenic Right Ventricular Cardiomyopathy: Should We Ask Who is at High Risk or Who is at Low Risk? *Circulation: Arrhythmia and Electrophysiology*, 2018; 11:e006160
21. **Indik, JH.** Editorial: Radiation Safety Is Not a No-Brainer. *Journal of the American College of Cardiology: Clinical Electrophysiology* 2021; 7:171-3.
22. **Indik, JH.** Calkins, H. Remembering Frank Marcus. *Heart Rhythm*. 2023; 20:486-487.
23. **Indik, JH.** Editorial: Rhythm Control Treatment for Atrial Fibrillation Is Not Just for the Healthy. *Circulation: Arrhythmia and Electrophysiology*, 2023; 16:e011949.
24. **Indik, JH.** Editorial: Introducing the 2023 HRS/APHRS/LAHRs Guideline on Cardiac Physiologic Pacing for the Avoidance and Mitigation of Heart Failure. Are We Entering a New Age in Pacing? *Heart Rhythm O2*, 2023; <https://doi.org/10.1016/j.hroo.2023.08.002>
25. **Indik, JH.** Editorial: Pulsed field ablation: the temptation for “more” while keeping it safe. In press.

## Peer-Reviewed Journal Articles: Medicine

1. **Indik, J.H.** and Reed, K.L. Variation and Correlation in Human Fetal Umbilical Doppler Velocities with Fetal Breathing: Evidence of the Cardiac-Placental Connection. *Am. J. Obstet. Gynecol* 1990;163, 1792-1796.
2. **Indik, J.H.**, Chen, V. and Reed, K.L. Association of Umbilical Venous with Inferior Vena Cava Blood Flow Velocities *Obstet. and Gynecol.* 1991;77, 551-557.
3. **Indik, J.H.** and Reed, K.L. Correlations in Umbilical Blood Flow Doppler Velocities in the Human Fetus During Breathing, *Ultrasound in Obstet. Gynecol.* 1994;4, 1-6.
4. Indik, R.A. and **Indik, J.H.** A New Computer Method to Quickly and Accurately Compute Steady State Temperatures from Ferromagnetic Seed Heating. *Medical Physics*, 1994;21, 1135-1144.
5. **Indik, J.H.**, Indik, R.A., and Cetas, T.C. Fast and Efficient Computer Modeling of Ferromagnetic Seed Arrays of Arbitrary Orientation for Hyperthermia Treatment Planning. *Int. J. Rad. Oncol. Biol. Phys.* 1994;30,653-662.

6. **Indik, J.H.** and Masters, L. What Appears To Be Cancer. *Arch Int Med.* 1998;158, 1374-1377.
7. **Indik J.H.,** Goldman S. and Gaballa M. Oxidative Stress Contributes to Vascular Endothelial Dysfunction in Heart Failure. *American Journal of Physiology Heart Circ Physiol* 2001;281, H1767-H1770.
8. **Indik J.H.,** Ott P., Butman S. Syncope with ST-segment Abnormalities Resembling Brugada Syndrome due to Reversible Myocardial Ischemia. *Pacing and Clinical Electrophysiology* 2003;25: 1270-1273.
9. **Indik J.H.,** Smith D, Sobonya R. and Marcus F. Arrhythmogenic Right Ventricular Dysplasia: A case report of identical twins with heart failure. *Pacing and Clinical Electrophysiology* 2003;25:1387-1390.
10. Huang MH, Roeske WR, Hu H, **Indik JH,** Marcus FI. Postural position and neurocardiogenic syncope in late pregnancy. *Am J Cardiol.* 2003;92:1252-1253.
11. **Indik JH,** Donnerstein R, Berg M, Samson R and Berg R. Ventricular fibrillation frequency characteristics and time evolution in piglets. A developmental study. *Resuscitation* 2004;63:85-92.
12. Ott P and **Indik JH.** Two hearts and one defibrillator. *Journal of Cardiovascular Electrophysiology* 2004; 15: 1220-21.
13. **Indik JH** and Ott P. An elderly woman with AV block in sinus rhythm and conducted atrial tachycardia. *Pacing and Clinical Electrophysiology* 2005; 1:67-70.
14. **Indik JH,** Dallas W, Ovitt T, Wichter T, Gear K and Marcus F. Do Patients with Right Ventricular Outflow Tract Ventricular Arrhythmias Have Normal Right Ventricular Wall Motion? A Quantitative Analysis Compared to Normal Subjects? *Cardiology* 2005;104:10-1
15. Sabbath, A and **Indik JH.** Sudden death on the treadmill. *American Journal of Medicine* 2006;119:932-934.
16. **Indik JH,** Donnerstein R, Kern K, Goldman S, Gaballa M and Berg R. Ventricular Fibrillation Waveform Characteristics are Different in Ischemic Heart Failure compared with Structurally Normal Hearts. *Resuscitation* 2006; 69: 471-477.
17. **Indik JH,** Pearson E, Fried K and Woosley R. Bazett and Fridericia QT correction formulae interfere with measurement of drug-induced changes in QT interval. *HeartRhythm* 2006; 9: 1003-7.

18. **Indik JH**, Donnerstein R, Berg R, Hilwig R, Berg M, and Kern K. Ventricular Fibrillation Frequency Characteristics are Altered in Acute Myocardial Infarction. *Critical Care Medicine*, 2007; 35:1133-8.
19. **Indik, J**, Wichter T, Gear K, Dallas W, and Marcus F. Quantitative Assessment of Angiographic Right Ventricular Wall Motion in Arrhythmogenic Right Ventricular Dysplasia/Cardiomyopathy (ARVD/C). *J Cardiovasc Electrophys*. 2008; 19: 39-45.
20. Marcus FI, Sorrell V, Zanetti J, Bosnos M, Baweja G, Perlick D., Ott P, **Indik J**, He DS, Gear K. Accelerometer-derived time intervals during various pacing modes in patients with biventricular pacemakers: comparison with normals. *Pacing Clin Electrophysiol* 2007 Dec 30: 1476-81.
21. Berg RA, Hilwig RW, Berg MD, Berg DB, Samson RA, **Indik JH**, Kern KB. Immediate post-shock chest compressions improve outcome from prolonged ventricular fibrillation. *Resuscitation* 2008; 78: 71-76.
22. **Indik JH**, Peters CM, Donnerstein RL, Ott P, Kern KB, Berg RA. Direction of signal recording affects waveform characteristics of ventricular fibrillation in humans undergoing defibrillation testing during ICD implantation. *Resuscitation* 2008; 78:38-45.
23. **Indik JH**, Donnerstein RL, Hilwig RW, Zuercher M, Feigelman J, Kern KB, Berg MD, Berg RA. The influence of myocardial substrate upon ventricular fibrillation waveform: A swine model of acute and post-myocardial infarction. *Critical Care Medicine*, 2008; 36:2136-42.
24. **Indik, JH**, Hilwig, RW, Zuercher M, Kern KB, Berg MD, Berg RA. Pre-shock CPR worsens outcome from circulatory phase VF with acute coronary artery obstruction in swine. *Circulation: Arrhythmia and Electrophysiology* 2009 2: 179-184.
25. Meaney P, Nadkarni VM, Kern KB, **Indik JH**, Halperin HR, Berg RA and the American Heart Association's National Registry of Cardiopulmonary Resuscitation Investigators. Rhythms and outcomes of adult in-hospital cardiac arrest. *Crit Care Med* 2010; 38:101-8.
26. **Indik, JH**, Shanmugasundaram M, Allen D, Valles A, Kern KB, Hilwig RW, Zuercher M, Berg RA. Predictors of resuscitation outcome in a swine model of VF cardiac arrest: A comparison of VF duration, presence of acute myocardial infarction and VF waveform. *Resuscitation* 2009; 80: 1420-1423.
27. **Indik, JH**, Allen, D, Shanmugasundaram M, Zuercher, M, Hilwig, RW, Berg RA, Kern KB. Predictors of resuscitation in a swine model of ischemic and non-ischemic VF cardiac arrest: superiority of amplitude spectral area and slope to predict a return of spontaneous circulation when resuscitation efforts are prolonged. *Critical Care Medicine*, 2010; 38:2352-7.
28. Zuercher M, Kern KB, **Indik JH**, Loedl M, Hilwig RW, Ummenhofer W, Berg RA, Ewy GA. Epinephrine improves 24-hour survival in a swine model of prolonged ventricular fibrillation demonstrating that early intraosseous is superior to delayed intravenous administration. *Anesth Analg* 2011; 112: 884-90.



29. **Indik, JH**, Allen D, Gura M, Dameff C, Hilwig RW, Kern KB. Utility of the VF waveform to predict a return of spontaneous circulation and distinguish acute from post myocardial infarction or normal swine in VF cardiac arrest. *Circulation: Arrhythmia and Electrophysiology* 2011; 4:337-343.
30. **Indik JH**, Dallas WJ, Gear K, Tandri H, Bluemke DA, Moukabary T, Marcus FI. Right ventricular volume analysis by angiography in right ventricular cardiomyopathy. *International Journal Cardiovascular Imaging* 2012;28: 995-1001.
31. Shanmugasundaram, M, Valles A., Kellum, M., Ewy G., and **Indik JH**. Analysis of amplitude spectral area and slope to predict defibrillation in out of hospital cardiac arrest due to ventricular fibrillation (VF) according to VF type: recurrent versus shock-resistant". *Resuscitation*, 2012; 83:1242-7.
32. Kusumoto FM, Calkins H, Boehmer J, Buxton AE, Chung MK, Gold MR, Hohnloser SH, **Indik J**, Lee R, Mehra MR, Menon V, Page RL, Shen W-K, Slotwiner DJ, Stevenson LW, Varosy PD, Welikovitich L. HRS/ACC/AHA Expert Consensus Statement on the Use of Implantable Cardioverter-Defibrillator Therapy in Patients Who Are Not Included or Not Well Represented in Clinical Trials. *Circulation* 2014; 130:94-125. (Also published in *Heart Rhythm Journal* and *Journal of the American College of Cardiology*).
33. Conover Z, Kern KB, Silver AE, Bobrow BJ, Spaite DW, and **Indik JH**. Resumption of Chest Compressions Following Successful Defibrillation and Risk for Recurrence of Ventricular Fibrillation in Out-Of-Hospital Cardiac Arrest. *Circulation: Arrhythmia and Electrophysiology*. 2014; 7:633-639.
34. **Indik JH**, Conover Z, McGovern M, Silver A, Spaite DW, Bobrow BJ, Kern KB. Association of Amplitude-Spectral Area of the VF Waveform with Survival from Out-of-Hospital Ventricular Fibrillation Cardiac Arrest. *Journal of the American College of Cardiology*. 2014; 64:1362-1369.
35. Khalpey Z, March KM, Ferng A, Riaz IB, Friedman M, **Indik J**, Avery R, Jokerst C, Oliva I. First in man: amniotic patch reduces postoperative inflammation. *Am J Med* 2015; 128:e5-6.
36. McGovern M, Allen D, Chaudhry F, Conover Z, Hilwig R, and **Indik JH**. A VF waveform approach to direct post-shock chest compressions in a swine model of VF arrest. *Journal of Emergency Medicine* 2015; 48:373-81.
37. Kuvin JT, Soto A, Foster L, Dent J, Kates A, Polk D, Rosenzweig B, and **Indik J**. The cardiovascular in-training examination: development, implementation, results and future directions. *Journal of the American College of Cardiology* 2015; 65:1218-28.
38. O’Gara PT, Adams JE 3<sup>rd</sup>, Drazner MH, **Indik JH**, Kirtaine AJ, Klarich KW, Newby LK, Scirica BM, Sundet TM 3<sup>rd</sup>. COCATS 4 Task Force 13: Training in Critical Care Cardiology. *Journal of the American College of Cardiology* 2015; 65:1877-1886.
39. Enakpene EO, Riaz IB, Shirazi FM, Raz Y, **Indik JH**. The Long QT Teaser: “A House Investigation”. *American Journal of Medicine*, 2015; 128:1083-6.
40. **Indik JH**, Conover Z, McGovern M, Silver AE, Spaite DW, Bobrow BJ, Kern KB. Amplitude-Spectral Area and Chest compression release Velocity Independently Predict Hospital Discharge and Good Neurological Outcome in Ventricular Fibrillation Out-of-Hospital Cardiac Arrest. *Resuscitation*, 2015; 92: 122-8.

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## Peer Reviewed Journal Articles – Astrophysics (as Julia Heisler)

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## Abstracts:

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- 24) Shah, A, Nyotowidjojo I, Skinner K, Bisla J, Singh S, Khoubyari R, Kalb B, Ott P, **Indik JH**. Risks and Outcomes for Patients that Undergo Thoracic Versus Non-Thoracic Magnetic Resonance Imaging Who Have a Magnetic Resonance Non Conditional Cardiac Implantable Electronic Device. *Circulation* 2017; 136:A14602. Poster presentation at the annual sessions of the American Heart Association, November 2017.
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