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Nebraska ACC

SUPPORTING PHYSICIANS, TRAINEES, AND CARDIOVASCULAR TEAM MEMBERS WITH EDUCATION, ADVOCACY, & NETWORKING OPPORTUNITIES

Chapter News

As you cautiously increase your in-person activities in 2022, please make sure to attend Nebraska ACC events!

Andrew M. Goldsweig, MD, MS, FACC, FSCAI, FSVM, RPVI
Governor, Nebraska ACC

- A HUGE thank you to **Dr. Natraj Katta,** our new **Newsletter Associate Editor**. Dr. Katta will soon take the editor-in-chief reins as Dr. Anuradha Tunuguntla serves as the next Nebraska ACC Chapter Governor (2023-2026).
- Cheer the **Nebraska FIT Jeopardy Team** to victory at ACC.22! This year's official Cornhusker Cardiologists will be Drs. Shantanu Patil and Gaurav Gill from Creighton and Dr. Kara Stout from UNMC. The first match will occur on Saturday 4/2 at 9:45am on the Engage Stage in Hall C on the Lower Level of the Convention Center.
- Come challenge the Cornhusker Cardiologists at **Jeopardy practices**. Practices will be held at UNMC on 3/14 (Leid Transplant Center 8708) and at Creighton on 3/23 (room 21214). Both practices can also be attended on Zoom (meeting ID 955 4601 1465, passcode 384779): https://creightonhipaa.zoom.us/j/95546011465?pwd=STR0b2xYNFJjMnBNL01pUHduNERWdz09
- Attend the **ACC.22 Scientific Sessions** April 2-4, 2022 in Washington, DC. Register at accscientificsession.acc.org.
- Meet up with Nebraska colleagues after the first round FIT Jeopardy match. Join the Nebraska ACC on Saturday, 4/2 at 10:30am at "Café ACC" on the Lower Level of the Convention Center.
- The Nebraska ACC Advocacy Committee plans to **meet with State Senator Jen Day** (District 49) this spring to discuss telehealth coverage, prior authorization, and pharmacy benefit pricing regulation. E-mail executive director Carmen Chinchilla Gutierrez (carmencg@nebmed.org) if you would like to participate.
- The Nebraska ACC **2nd Annual Cardiovascular Team Meeting** will take place on May 19, 2022 at the Happy Hollow Club. E-mail CVT Representative Jessica Livingston, MSN, AAAC (livingston@nebraskamed.com) to get involved in future CVT events.
- Save the date! The **Nebraska ACC 5th Annual Meeting** is scheduled for Wednesday, October 19, 2022 at the Regency Marriott, Omaha. National ACC President Dr. Ed Fry will be the keynote speaker.
- We want to hear from YOU! Contact Dr. Anu Tunuguntla if you would like to **write for this Newsletter**. The Newsletter features four brief articles quarterly: Chapter News, Cardiology Update (by a cardiologist), FIT Corner (by a fellow in training), and CVT Corner (by a CV team member).
- Please **follow us** on Twitter and Facebook!

Nebraska CHAPTER

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CARDIOLOGY UPDATE

Jeremy Stone, MD
General Cardiology / Cardiac Imaging
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A BRIEF OVERVIEW OF THE ROLE OF CARDIAC MRI IN THE DIAGNOSIS OF CARDIAC AMYLOIDOSIS

Cardiac amyloidosis has previously been perceived as a rare condition, but with the development of new diagnostic tools and treatment options, it is clear it is more common than previously believed. The predominant types of cardiac amyloidosis are transthyretin amyloidosis (ATTR) or light chain amyloidosis (AL), and CMR is indispensable as a non-invasive diagnostic tool regardless the type of amyloidosis. While certain features seen on two-dimensional echocardiography can suggest the presence of cardiac amyloidosis (concentric left ventricular wall thickening, restrictive filling pattern, bi-atrial dilation, and/or valve thickening), the tissue characterization provided by CMR increases the diagnostic yield significantly. The following are the key parameters to look for when you get a CMR report back on your patient with suspected cardiac amyloidosis.

Late gadolinium enhancement (LGE) is a very sensitive and specific for the detection of cardiac amyloidosis.[1] The presence of cardiac amyloidosis leads to abnormal gadolinium kinetics which results in simultaneous "nulling" of the blood pool and myocardium during image acquisition.[2] The pattern of LGE in the resulting images is typically circumferential subendocardial enhancement or diffuse transmural enhancement.[3] Diffuse transmural enhancement with a base-to-apex gradient appearance is suggestive of ATTR type cardiac amyloidosis (Figure 1).[4]

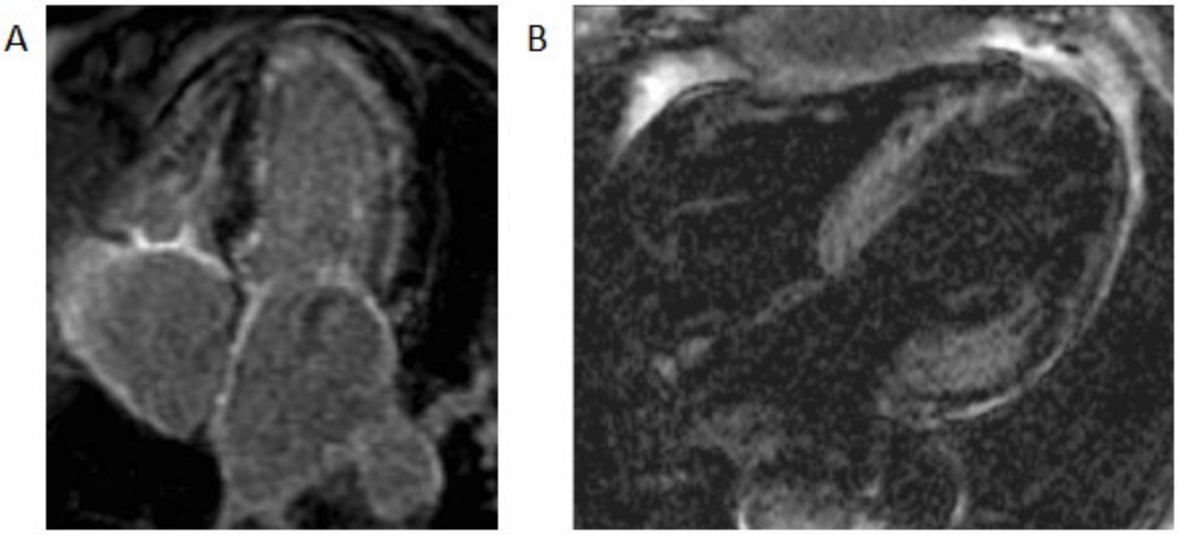

Figure 1. LGE images demonstrating typical patterns of cardiac amyloidosis. Panel A shows circumferential subendocardial LGE. Panel B shows diffuse transmural LGE, with a base-to-apical gradient, suggestive of ATTR amyloidosis.

Image source: Dungu, et al (2014). *JACC Cardiovascular Imaging*.[4]

Often patients with cardiac amyloidosis have severe renal dysfunction, preventing the safe administration of gadolinium for LGE imaging. In these patients, T1 mapping can serve as a potential surrogate to LGE. Native T1 times are elevated with cardiac amyloidosis (Figure 2) and can serve as an early disease marker.[5] However, T1 mapping cannot distinguish between the underlying process, as edema and fibrosis can also prolong T1 times.

A parameter of emerging importance is extracellular volume (ECV) fraction, which is calculated using pre- and post-contrast T1 times as well as the patient's hematocrit. Essentially, this quantifies the interstitial expansion occurring with amyloidosis. It closely mirrors amyloid burden and can be used to monitor response to treatment (Figure 2).[6]

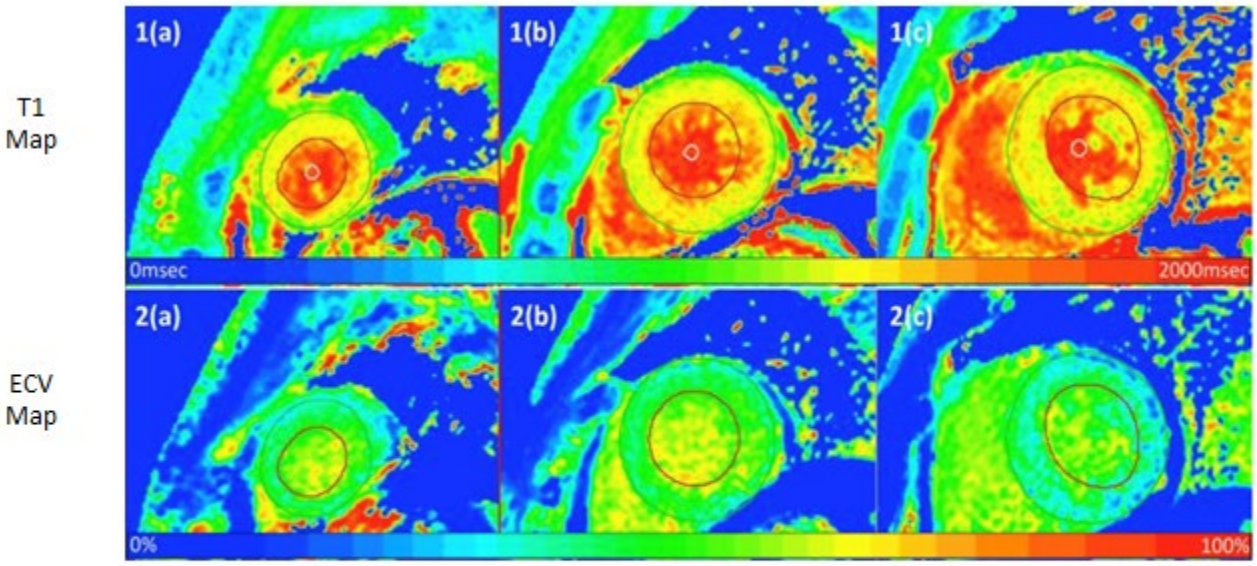

Figure 2. Example of T1 mapping and ECV mapping in a patient with cardiac amyloidosis. The top row (1) of images demonstrates T1 mapping in three short axis slices (a, b, c), with diffusely elevated T1 times exceeding 1000 msec. The bottom row (2) of images demonstrates ECV mapping of the corresponding short axis slices (a, b, c), with diffusely elevated ECV values exceeding 35%.

Image source: Herzog, et al (2017). CMR Pocket Guide.[7]

The information that LGE, T1 mapping, and ECV can provide from a single CMR study can secure a diagnosis of cardiac amyloidosis and may even help differentiate the type of amyloidosis, short of obtaining a tissue biopsy. CMR is complemented by our other tools for non-invasive evaluation of cardiac amyloidosis, such as echocardiography-derived strain and Tc99m-PYP scintigraphy (for ATTR amyloidosis). With the increasing widespread availability of CMR, providers should be encouraged to evaluate any eligible patient with suspected cardiac amyloidosis with this safe and accurate diagnostic tool.

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FIT CORNER

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Cardiovascular Disease Fellow
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NEED FOR WOMEN IN CARDIOLOGY AND ROLE OF FELLOWS IN ENCOURAGING FEMALE RESIDENTS

Cardiovascular disease (CVD) is the leading cause of mortality in women; CAD is equally prevalent in both genders. However, several biological and pathophysiologic differences exist between men and women, such as etiology, presentation, treatment, and outcomes. Moreover, specific disorders such as coronary dissection, microvascular angina, myocardial infarction with normal coronary arteries (MINOCA) along with female-specific novel risk factors like gestational diabetes, autoimmune disorders, and treatment of breast cancer, plus others, make the management of CVD in this population challenging1. Women are less likely to be diagnosed with heart disease, and once diagnosed, less likely to receive interventions and guideline-directed medical therapy compared to men. Further, as a result of the long history of underrepresentation of women in CVD trials, there remains a lack of evidence as to whether current therapy is as effective in women as in men. Finally, emerging evidence suggests the existence of unconscious physician bias, and physician-patient gender incongruence impact care and outcomes adversely. This is pronounced in women who are treated by male physicians2. Hence, in addition to the education of all physicians, an increase in female cardiologists could benefit our female patients.

Although the number of women pursuing medical training has increased, women remain a minority in the field of cardiology and comprise less than 15% of the CVD trainees3. Reasons for the underrepresentation of women in our field are multifactorial; they include poor work-life balance, discrimination, and lack of visible female role models. Several organizations including ACC, AHA, SCAI, ESC have started Women in Cardiology sections to promote diversity, equity, and inclusion. Male and female cardiologists around the globe especially those in leadership are actively promoting the presence of women in our specialty.

Despite all these efforts, women remain a minority in the cardiology workforce. To help address this gap, it is important for current fellows to encourage women to consider cardiology training, as we work more closely with residents than faculty physicians and those in leadership. In order to promote the field as an option for women, fellows could:

1. Actively identify residents interested in cardiology and encourage the pursuit
2. Address their concerns and assist with their questions about the fellowship or work-life balance
3. Connect women residents with mentors who can help them
4. Act as role models for women and mentor residents into the field
5. Pursue formal training and education in leadership and mentorship and apply what is learned
6. Participate in or design studies that seek to better understand decision-making about how women choose specialties and subspecialties

It is imperative that we as fellows play our part and contribute the most to see a future that can better manage women's cardiovascular health.

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CVT CORNER

A BRIEF HISTORY OF SGLT2 INHIBITORS- EVERYONE'S FAVORITE NEW ~~DIABETES~~ HEART FAILURE DRUG

Since the FDA approval of the first sodium-glucose cotransporter 2 (SGLT2) inhibitor in 2013, perhaps no other drug class has been the subject of so many trials and new recommendation. Initially approved for treatment of type 2 diabetes, manufacturers were required to show safety of SGLT2 inhibitors in cardiovascular disease, which led to the EMPA-REG OUTCOME trial (Zinman, 2015). Empagliflozin lowered rates of a cardiovascular composite outcome and death from any cause in diabetic patients, and thus began a host of other trials using the three drugs (canagliflozin, empagliflozin, and dapaglifozin) that were on the market at the time. The heart failure with reduced ejection fraction (HFrEF) population was the first to show significant benefits in nondiabetic patients. In May 2020, based on the results of the DAPA-HF trial (McMurray, 2019) which showed decreased death from CV causes and heart failure hospitalizations in HFrEF patients with dapagliflozin compared to placebo, the FDA approved dapagliflozin for the treatment of HFrEF alone, with similar approval for empagliflozin in August 2021. Perhaps the most exciting development is recent data supporting SGLT2 inhibition in the heart failure with preserved ejection fraction (HFpEF) population, as effective HFpEF therapies are lacking. EMPEROR-Preserved (Anker, 2021) compared empagliflozin to placebo and found a reduction in its composite endpoint primarily driven by reduced. heart failure hospitalizations, and results of DELIVER with dapagliflozin in HFpEF are eagerly anticipated. Future important questions include which subsets of HFpEF may gain the most benefit and appropriate timing of initiation of SGLT2 inhibitors

ACC CV TEAM NEWSLETTER

Did you know? The ACC has a monthly newsletter for CV Team Members. Click on the link below to learn more about what is happening on the national stage!

Read the ACC CV Team Newsletter here!

AGENDA

5:30-6:30PM-COCKTAIL RECEPTION & EXHIBITS
6:30-7:00PM– ORDER SET OPTIMIZATION LEADS TO EFFICIENCY AND SAFETY
7:00-7:45PM– DINNER
7:45-8:15PM– PHARMACY PRESENCE IN THE CATH LAB
8:15-8:30PM-FINAL REMARKS

NURSES, PHARMACISTS, TECHNOLOGISTS, AND ALL OTHER CV TEAM MEMBERS INVITED

THURSDAY, MAY 19, 2022 • 5:30PM-8:00PM
HAPPY HOLLOW CLUB, 1701 S 105 STREET • OMAHA, NE 68124

REGISTER

CNE CREDITS PENDING APPROVAL

CONGRATULATIONS TO THE NEW FACC AND AACC!

Join us in congratulating this year's new Nebraska FACCs and AACCs! The members below will be honored at the annual ACC meeting in April during convocation. Fellowship in the American College of Cardiology identifies you to your peers and patients as a cardiovascular professional at the very top of your field.

Christopher R Balwanz, MD, FACC
Lincoln

Scott Lundgren, DO, FACC
Omaha

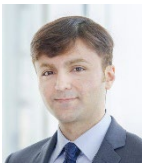
Arif Albulushi, MB BCh, FACC
Omaha

Furqan Habib Khattak, MD, FACC
Omaha

Beth Brey, NP, AACC
Lincoln

Vivek Varma, MD, FACC
Kearney

Shahbaz Malik, MBBS, FACC
Omaha



Isaac Meier, MD, FACC
Lincoln

Joseph Thibodeau, MD, FACC
La Vista

Natraj Katta, MD, FACC
Lincoln

Paul P. Dobesh, PharmD, FACC
Omaha

Aleem Siddique, MBBS, FACC
Omaha

Becoming an FACC offers professional recognition and lifelong learning opportunities to members. If you are also interested in becoming a Fellow of the ACC, please visit the ACC's website.

NEW PHYSICIAN WELLBEING PROGRAM AVAILABLE TO ALL NEBRASKA PHYSICIANS

LIFEBRIDGE NEBRASKA—NEBRASKA'S PHYSICIAN WELLNESS PROGRAM

The Nebraska Medical Association has launched their peer-to-peer physician coaching program LifeBridge Nebraska. LifeBridge Nebraska was developed by physicians, for physicians. It is a FREE coaching program available to all Nebraska physicians, regardless of NMA membership. The NMA hopes Nebraska physicians will reach out as a normal response to acute and chronic stress rather than just "powering through."

Confidential appointments are self-referred without medical diagnoses, insurance billing, or electronic records. Notification is not given to employers, NMA, or the board of medicine. Program participants can expect complete confidentiality –information and/or identity is never disclosed to others without written consent.

Physicians can connect with LifeBridge Nebraska by calling a confidential third party call center at 1-888-569-2036. To learn more and to view coach profiles, please visit nebmed.org/lifebridge. Questions? Please contact Lindsey Hanlon at lindseyh@nebmed.org.

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