

We live in an extraordinary time that takes us away from one an unfinished pandemic to a new and unacceptable situation of strong concern about what is happening today. We cannot be indifferent to innocent victims, separated families and children forced to leave their homes, we cannot accept that today Europe is again a scene of war. We as women, mothers, professionals with resilience, empathy and concern for the whole society, we believe that reason will prevail and the human spirit is stronger and will always be leading - to save lives, to save children!

The dynamic times we are experiencing motivate us to focus our efforts and support our community on generating revolutionary new knowledge that will help us deal with the increasingly complex problems we have to solve.

Highlight of the month by Dr. Indah Sukmawati, MD

Interview – Women Leaders in Cardiovascular Imaging



Subha V. Raman, MD, FSCMR

Immediate Past President, Society for Cardiovascular Magnetic Resonance (SCMR)

Professor of Medicine and Chief of Cardiovascular Medicine, Indiana University School of Medicine -- Indianapolis, Indiana, USA

It was a privilege to interview Professor Subha V. Raman for this second issue of EACVI Task Force for Women in CVI Newsletter.

Professor Raman is greatly known as a cardiologist and physician-scientist who dedicate her life in research program specifically to earlier detection and improved outcomes in cardiovascular disease. She is actively involved in many organizations within the cardiovascular societies such as American Heart Association, American College of Cardiology, U.S. National Institutes of Health and Society of Cardiovascular Magnetic Resonance which she is now serving as President.

- **Professor Raman, you are currently serving as President of SCMR where you are the second female President since SMCR was established in 1996. In the string of previously dominated by male leaderships, how have you developed your confidence as a leader?**

Confidence has come from knowing that we have a very **diverse team** that's supporting the SCMR. I will add that we actually have a tremendous pipeline of talent coming up in future leaders, across all backgrounds. So, I'm very excited about the future of SCMR.

- **Before embarking in the world of medicine, you already had a Bachelor's and Master's degree in electrical engineering. What's one piece of advice that greatly impacted you and your career trajectory?**

So, I actually was one of those people that knew from childhood that I want to be a doctor. I got to high school and really liked math and physics. You have to do something pre-med in the US, so I thought why not electrical engineering. Looking back, what advice would I offer, I would say, ***"Be open to the possibilities. You'll never know where the world would lead."*** My Master's thesis was on a topic that I thought I would never use again as a physician called computer vision, yet that's very relevant to today's work on AI and machine learning in imaging.

- **What were the challenges you had in the early years of your career and what would you suggest to cardiac imaging fellows and early career cardiac imaging specialists in dealing with those challenges?**

I think when you are starting out, you often have a very clear idea about what you want to accomplish as an individual, but perhaps less insights on the broader team it takes to get anything done. Over the years, I've grown a better sense of how my aspirations aligned with my team and with the larger organization, which helps in two ways: (1) you actually shape what you are trying to do by being informed by a broader group; (2) you have a group of people that are championing your cause as you face the inevitable challenges on the road to success.

- **What do you think about mentorship and mentor-mentee relationships?**

I was very fortunate to have mentors outside of my institution when I started, complementing the expertise of mentors within my institution. I think it's important for people starting out to recognize a mentor-mentee relationship means two people come together with complementary perspectives on something. As a mentee, do have a mentoring team to help with different aspects of your life that you would like guidance on. You may not necessarily have one mentor that resonate across all of those different frequencies.

- **What are your main takeaways of the 2021 AHA/ACC/ASE/CHEST/SAEM/ SCCT/SCMR Guideline for the Evaluation and Diagnosis of Chest Pain? How do you think this new guideline will impact our practice especially in countries where CMR services are still limited?**

First of all, kudos to the people who work incredibly hard on getting this guideline to its final form. It took a few years for the group to really say, wow there is great evidence supporting CMR's utility for patients with chest pain, and we need to include it. Putting useful guidelines together really requires contributions from people with diverse voices. Perspectives from CMR experts and others said, let's bring this evidence in line with the European guidelines that, for some time, have highlighted the importance of providing access to CMR for patients for some time, and these voices were heard to bring the American guidelines up to date. I think it's been a very positive step forward for the field. In terms of impacting countries where the services are still limited, you'll see some publications coming out soon on how we can improve access to CMR: we can shorten scans, we can standardized protocols, we can work with different stakeholders across not just our imaging team but administrative partners, people who support the provision of healthcare, be it the government services and others, and absolutely take advantages of societies like SCMR with advocacy and other experts to help you build a CMR practice wherever you live, tailoring solutions to the challenges you face in your region.

- **After the guideline was published, in your own institution, have you seen an increase in CMR referrals?**

I have. Having CMR champions at each of our health system's facilities armed with these guidelines has been key to breaking down barriers to patient access. And again, we don't do any of these things in isolation, it helps partner with hospital administrators, facility leaders and others to say that *"This is the standard of care that people with cardiovascular disease deserve. How do we work together to improve access with these guidelines in hand?"*

- **This new guideline may encourage hospitals and cardiac centres all around the world to develop and improve their non-invasive imaging centres. Given the increasing demand, how will the SCMR address the need for human resource development in terms of increasing the number and skills of cardiac imaging specialists around the world? For example, in my country, Indonesia, we only have <20 CMR experts, serving a nation of 270 million people.**

SCMR is very committed to education, and Level 2 or 3 education allows you to perform CMR independently. There's a really nice portfolio of educational programs to support this that are being planned for the coming year. There's also been great work done showing the value of level 1 training, meaning you know how and when to order CMR. A well-defined level 1 curriculum for general cardiologists or those interested in CMR helps them understand CMR's utility in practice. We also have a new *international outreach committee* – so that wherever you are in the world, you have a specific partner on this committee to help you be successful with issues unique to your region. In fact, I think we need to put Indonesia on this group's radar! The goal is to recognize what are the local challenges and leverage our societies' wealth of expertise to enable the growth of CMR anywhere in the world.

- **What advice would you give a general cardiologist to consider imaging particularly CMR as a subspecialty?**

Imaging is an exciting and ever-growing field that, as someone who takes care of patients and families affected by cardiovascular disease, really makes an impact on your ability to properly diagnose and treat CVD. CMR in particular offers the right diagnosis with great accuracy, affording personalized CMR-based care to get people back to doing what they care about in life.

- **How do you see the CMR field developing in the next five year in this modern multi-modality imaging era?**

We need to *do the best test to answer the questions that need to be answered for optimal outcomes for each patient*. With better guidelines that take the evidence to eminence, I am confident that clinicians will increasingly incorporate CMR to help patients in ways that may not have occurred before. It will take a concerted effort where CMR champions work with the entities that pay for healthcare, the people that run facilities, staff, and trainees.

From this inspiring interview with Professor Raman, we know that this is a really exciting time to be working in cardiac imaging particularly in CMR with the recently published 2021 Guideline for the Evaluation and Diagnosis of Chest Pain. Even though challenges do exist especially in developing countries where CMR services are still limited, they can be overcome when all stakeholders work together hand-in-hand. SCMR as an international organization provides supports and valuable educational resources for its members and those who are interested in learning more about CMR.

On behalf of the EACVI Task Force for Women in CVI, I would like to thank Professor Raman for her time and insights. It was an absolute delight to talk in person with such gracious and inspiring role model in CMR world.

Education and career development

Grants

1. **EACVI Research Grants**

The best way to boost your career!

Application period is 31 March to 30 September.

More information available at: [EACVI Research Grants](#)

2. **EACVI Training Grants**

The best opportunity for specialised training in the field of non-invasive cardiovascular imaging!

Application period is 31 March to 30 September.

More information available at: [EACVI Training Grants](#)

Upcoming courses & educational programmes

1. **EACVI Course on Cardiac Computed Tomography (CCT)**

Thursday 28 - Saturday 30 April 2022 (3 Days)

Sophia Antipolis – France

The European Association of Cardiovascular Imaging (EACVI) is pleased to announce the first edition of the EACVI CCT Course taking place from 28 to 30 April 2022. This face-to-face course, bringing faculty and participants together, will be an opportunity for valuable exchange.

More information available at: [EACVI Course on Cardiac Computed Tomography \(CCT\)](#)

2. **Artificial Intelligence in Cardiovascular Magnetic Resonance Imaging - A Joint Summit of the EACVI and SCMR**

Thursday 05 - Friday 06 May 2022 (2 Days)

London - United Kingdom of Great Britain and Northern Ireland

Artificial intelligence (AI) promises to revolutionise cardiovascular magnetic resonance (CMR) in the near future by offering previously inconceivable new possibilities in the acquisition, workflow and interpretation of images. Therefore, the EACVI and the SCMR has decided to organise their first joint summit on AI in CMR imaging, taking place on 5 and 6 May 2022. This face-to-face summit, bringing faculty and participants together, will be an opportunity for valuable exchange.

More information available at: [Artificial Intelligence in Cardiovascular Magnetic Resonance Imaging - A Joint Summit of the EACVI and SCMR](#)

3. **EACVI EchoNice Course**

Thursday 19 - Saturday 21 May 2022 (3 Days)

Nice – France

A new EACVI course on transthoracic echocardiography, EchoNice will present the latest

information on clinical studies and technologies in echocardiography.
More information available at: [EACVI EchoNice Course](#)

Upcoming exams & certification

1. **EACVI Cardiovascular Magnetic Resonance Certification Online Exam (CMR)**
New date: Wednesday 03 November 2022
More information available at: [EACVI Cardiovascular Magnetic Resonance \(CMR\) Certification](#)
2. **EACVI Cardiovascular Magnetic Resonance CHD Certification Exam Online (CMR-CHD)**
New date: Tuesday 02 November 2022
More information available at: [EACVI Cardiovascular magnetic resonance in congenital and paediatric heart disease certification \(CMR CHD\)](#)

Suggested manuscripts on Women in cardiology & cardiovascular diseases

- 1) **Understudied, Under-Recognized, Underdiagnosed, and Undertreated: Sex-Based Disparities in Cardiovascular Medicine (Circulation: Cardiovascular Interventions):**
<https://www.ahajournals.org/doi/10.1161/CIRCINTERVENTIONS.121.011714>
- 2) **Women leaders: transforming the culture in cardiology (Open Heart):**
<https://openheart.bmj.com/content/9/1/e001967>
- 3) **Childbearing Among Women Cardiologists: The Interface of Experience, Impact, and the Law (Journal of the American College of Cardiology):**
<https://www.jacc.org/doi/10.1016/j.jacc.2021.12.034>
- 4) **Mechanical Circulatory Support in Myocardial Infarction Complicated by Cardiogenic Shock: Impact of Sex and Timing (Journal of the Society for Cardiovascular Angiography & Interventions):** <https://www.sciencedirect.com/science/article/pii/S2772930321000028>
- 5) **Pregnancy and Reproductive Risk Factors for Cardiovascular Disease in Women (Circulation Research):** <https://www.ahajournals.org/doi/10.1161/CIRCRESAHA.121.319895>
- 6) **Coronary Arterial Function and Disease in Women With No Obstructive Coronary Arteries (Circulation Research):** <https://www.ahajournals.org/doi/10.1161/CIRCRESAHA.121.319892>
- 7) **Sex Differences and Similarities in Valvular Heart Disease (Circulation Research):**
<https://www.ahajournals.org/doi/10.1161/CIRCRESAHA.121.319914>

- 8) **Body weight and physical fitness in women with ischaemic heart disease: does physical fitness contribute to our understanding of the obesity paradox in women?** (European Journal of Preventive Cardiology): <https://academic.oup.com/eurjpc/advance-article/doi/10.1093/eurjpc/zwac046/6542306>
- 9) **Sex Difference in the Association between Lipid Profile and Incident Cardiovascular Disease among Young Adults** (Journal of Atherosclerosis and Thrombosis): https://www.jstage.jst.go.jp/article/jat/advpub/0/advpub_63166/article/-char/ja/
- 10) **Cardiovascular Disease Screening in Women: Leveraging Artificial Intelligence and Digital Tools** (Circulation Research): <https://www.ahajournals.org/doi/10.1161/CIRCRESAHA.121.319876>

A message from the task force

An initiative was launched in March by WTF in CVI to prevent cardiovascular disease in women. You can watch a short video here.



Be part of our professional community!

[EACVI Task Force - Women in Cardiovascular Imaging](#)