Hi, everyone. My name is Alison Ranum. I am a third-year internal medicine resident at the Hospital of the University of Pennsylvania, and I was lucky enough to work on a project with Ashwin Nathan that we titled “CMR vs CTA for TAVR Planning: A Single-Center Retrospective Cohort Review.” Today, I'm going to be talking about my abstract that was accepted to the American College of Cardiology (ACC) conference.

Your study shows that CMRI was used in only 2% of TAVR cases—what institutional or clinical factors do you think are limiting broader adoption of CMRI for TAVR planning, or is it simply based on habit?

Absolutely. I don't think it's something that is completely based on habit, but I think that there are institutional as well as clinical reasons for why CMR is not as widely used as CTA. In terms of institutional reasons why CMR is less widely used, it is a very highly valued resource that isn't always available in certain settings—it has longer acquisition times, it takes specialized equipment, specialized training, and oftentimes specialized imaging training to be able to read the studies. And so, it's something that, based on certain institutions, is harder to implement because of those reasons.

Clinically, what I think ends up happening is that oftentimes, we're not as familiar with interpreting the CMR data, and so it's easier for us to rely on the gold standard CTA and to feel more comfortable interpreting those measurements.

The CMRI group had significantly higher rates of kidney disease, diabetes, and PAD. To what extent do you think this reflects intentional patient selection versus underlying referral bias at your center, and how did (or did) this affect your analysis of the results?

Absolutely. I think this is primarily driven by patient selection, and so oftentimes the patients that are more likely to get CMR imaging studies as compared to CTA are patients with underlying kidney disease, which can be driven by diabetes, and patients with peripheral vascular disease. And so, these are the kinds of patients that we would want to be avoiding the iodine contrast views that we see in CTA. Thus, it's more likely that we're going to select patients that have underlying kidney disease or severe diabetes that's potentially contributing to their kidney disease for CMRI.

Also, it's a little bit dependent, of course, on some referral habits as well. Some clinicians are going to be more comfortable referring for CMR vs CTA for these specific things, so I think it's more based on patient factors as compared to referral bias, but it also does depend upon the clinician who's thinking about TAVR planning and what they're most comfortable with.

How do you envision CMRI fitting into future TAVR workflows, particularly for patients with advanced kidney disease or other high-risk comorbidities?

Absolutely, I think that's a really good question. Where I see CMR fitting in is more of a complementary role into our current guidelines. So, we know that CTA is the gold standard for TAVR planning for imaging workup for our TAVR procedures, and I don't think that that will necessarily change, or that CMR should supplant that current guideline. I think it can be seen as a potential complementary pathway for patients who are high risk, have chronic kidney disease, people who are really trying to reduce the contrast load that they would be receiving.

We feel confident in this based on the fact that there have been prior noninferiority trials that have shown that CMR is noninferior to CTA. But what was really reassuring to us in this small experience here in our own institution is that we weren't seeing that there were any differences in peri- and postprocedural outcomes, particularly permanent pacemaker placement between patients that had CMR vs CTA for the TAVR planning. Especially with something like permanent pacemaker placement, that's a really important outcome for our patients, and so we feel reassured and hopeful that this is another imaging option for our patients that are in these high-risk categories where we'd really like to avoid iodine use.

The transcript has been lightly edited for clarity.