- My name is DJ Lakkireddy, I'm the Executive Medical Director for the Kansas City Heart Rhythm Institute in Kansas City, Kansas.

Please summarise the aim, study design and endpoints?

So the STROKE-VT is a randomised controlled trial that was designed to look at impact of novel oral anticoagulation post left ventricular arrhythmia ablation compared to that of aspirin. So this is a multicenter trial that essentially asked a fundamental question for those patients who undergo left ventricular ablation, can you diminish or decrease the risk of systemic thromboembolization and asymptomatic cerebral embolizations by using novel oral anticoagulation instead of aspirin alone. So that's kind of the question we asked and that's what the study is about.

What were your major findings?

So what we found in this study was the use of novel oral anticoagulation is significantly better in terms of reducing and thromboembolic events and strokes compared to that of aspirin. And we also noticed that the risk of asymptomatic cerebral embolizations, these are essentially MRI findings, are also dramatically better in patients who were on NOACs than those who are on aspirin alone clearly indicating that by anticoagulating these people post-procedurally, you could minimise the risk of systemic thromboembolic events of which a major chunk of those could be cerebral events that may have long-term influence on overall brain function, neurological function, and things like that.

What further research is required?

This is the first randomized controlled trial in this particular space. I think the data with regards to the risk of systemic embolization for left side of procedures has been well established with the AFib ablation procedures in the last 20 plus years of the electrophysiology world being involved in AFib ablations. We very quickly learned that anytime you have ablation in the left side of the heart, which is in direct communication with the systemic circulation, including brain, there is always a risk of post ablation embolic events. And so a practice of keeping people on uninterrupted anticoagulation has come into emergence and our group has extensive amounts of work in this particular space for the last two decades. And on that note, this study basically is an additional, a bit of evidence in that space that when you have left-sided ablations, I think one should always, whenever possible, anticoagulate patients in order to minimise or mitigate the risk of strokes in these patients. With regards to what else needs to be done, I think the question is how long should this anticoagulation be? I mean, we ended at 30 days of post-procedural anticoagulation, so the question is. Is there a benefit to extending this anticoagulation farther out to more three months or six months post-procedural, is it beneficial? Or not? I think some of those nuanced details need to be further figured out, but what is beyond doubt is anticoagulating these patients after a VT ablation is very critical. And what we also learned in this particular study is the retrograde aortic approach that is becoming increasingly less popular, which used to be a mainstay of getting access into the left ventricle, is also associated with a significant risk of stroke and embolic events. I think it's pretty intuitive to realise that a lot of these patients actually are older and they do have significant amount of atherosclerotic disease in the aorta. So when you use a retrograde aortic approach, oftentimes you end up breaking up a lot of these other material with your sheets and catheters, and that could easily embolize and cause embolic events. So as operators became increasingly facile and comfortable with transseptal approach and the introduction of intracardiac echocardiography, have really helped to make a huge difference in improving the comfort level of the operators to use the transseptal approach where you don't have a similar problem with atherosclerotic material embolization, septal approach really becomes a lot more safer. So I think, in summary, what the studies showed is post-procedural anticoagulation with oral anticoagulation is important to minimise the risk of strokes and embolic events and avoiding retrograde aortic approach is also beneficial in improving overall stroke risk. So that's, I think are the two important aspects of the study.

What are your take home messages?

My take-home message is the same as what I alluded to earlier on, when you're doing left sided ablations, even if it is a PVC ablation, there is going to be some amount of endocardial denervation, and there could be tissue damage, even though you use it to get open, to get a catheter, there's always the risk of thrombus formation. And then the ablation itself could actually, the tissue that gets destroyed over a period of time could embolize and keeping people on oral anticoagulation post-procedurally is critical. So whenever possible it's important to keep these people on systemic oral anticoagulation for at least four weeks, post-procedurally to improve the overall risk of a stroke and other neurological events.