Kathryn Kennedy:	00:00	Dr. Rymer, thank you so much for making some time for us today and talking to us from the west coast. Tell me a little bit about what you've observed at TCT so far this year, and are there any learnings or takeaways that you're already benefiting from and plan to bring back with you?
Jennifer Rymer:	00:15	Well, I think one of the really unique points and aspects of TCT compared to a lot of the other conferences, particularly for fellows or the live cases, I think that's a huge draw for many of the attendees. Yesterday they had four live cases, and basically it can be ranging anywhere from a complex PCI case to a structural case, and just allowing you to actually see in the cath lab what practices are in other institutions as compared to what your own experience is. Then walking through potential complications, how people handle different complications in their cath lab versus what you know would happen at Duke. I think that this was a huge draw to me.
Jennifer Rymer:	01:03	Certainly discussion over the COAPT trial and MitraClip has been sort of a huge topic of discussion at TCT this year, but I think in general for particularly first-time attendees and then fellow attendees, the hands-on training ... There's lots of workshops with various pharmaceutical companies to work with the structural devices and sort of learn about them in a more hands on way, and then the live cases are a huge draw to this particular conference compared with the others.
Kathryn Kennedy:	01:39	I understand you're presenting at this meeting as well this year. I believe you had a presentation yesterday around TAVR?
Jennifer Rymer:	01:45	Yes.
Kathryn Kennedy:	01:45	Can you tell us a little bit about what you presented?
Jennifer Rymer:	01:47	Yes, so I presented about the predictors and outcomes associated with the board of TAVR. So, interestingly, thought we have lots of data in the TAVI realm at this point. We don't have much data on what are sort of the reasons that patients have aborted procedures, and what their outcomes look like, even at a 30-day time period. Really our only published data is from the German aortic valve registry. As you can imagine, being that the STS, NCDR, TVT registry just has a wealth of information on over 100,000 TAVR patients now and are experienced, this is a great question to ask of that registry.
Jennifer Rymer:	02:36	We looked at a couple of different aspects of aborted TAVR procedures. We looked at patients, sort of the overall

experience of aborted procedures, and then we further subdivided patients by what type or what reason they had for having their procedure aborted. As we know, some procedures are aborted due to the limitations of the devices. So, there's complications with the vascular access, or maybe complications with the delivery system. Other patients have aborted procedures because of inherent issues with the patient themselves. So, they have a clinical condition or there may be systems issues that are at play.

Jennifer Rymer:	03:18	In general, we found that as could be expected, patients with aborted procedures compared with those with successful procedures had higher rates of death and stroke at 30 days and then higher rates of bleeding and vascular complications. Interestingly, we found that patients with aborted procedures due to device limitations had lower death or stroke at 30 days compared to patients with aborted procedures due to other causes. The opposite trend was present for bleeding and vascular complications. So those patients with aborted procedures due to device limitations had higher 30-day rates of vascular and bleeding complications. I think a lot of this confirms what we already know sort of anecdotally but has never been published from our US or American data.
Jennifer Rymer:	04:12	Overall the patients with aborted procedures have poor outcomes or worsened outcomes compared to those with successful procedures. We should be thinking about patient characteristics going into the actual procedure be it if the patient has significant peripheral arterial disease, if they have lots of comorbidities, diabetes or really severe chronic lung disease, a history of smoking, and sort of looking at the overall picture to determine what their risk is going in. Then I think that that can inform A, what type of vascular access sites are used, and if there's other potential alterations in the procedure itself that can potentially make it more successful based on the individual patient profile. I think that this is really just a starting point to look at predictors of and what the outcomes are amongst these patients.
Kathryn Kennedy:	05:13	You've also got, if I'm correct, you've got a poster that you're involved with tomorrow as well about PCI?
Jennifer Rymer:	05:20	Mm-hmm (affirmative), yes.
Kathryn Kennedy:	05:21	Tell us a little bit about that work.
Jennifer Rymer:	05:37	Yes, so this will be a moderated poster tomorrow, so this is based on work with Sunil Rao at the Durham VA as well as a

host of other co-authors at VA medical centers around the country. We wanted to look at same day discharge rates versus overnight stay for PCI patients. As you can imagine, the increasing trend that a lot of different centers around the country is that if you're coming in for an elective PCI procedure, really if you don't have a lot of high risk, sort of, comorbidities, you would be a great candidate to go home same-day. The literature has been borne out to be something that patients really like, patient satisfaction is increased. Obviously, we know that the more time that we hold patients in the hospital, the more we are exposing them to various potential iatrogenic effects and so we wanted to look at A, rates of same day discharge in the VA medical center nationally, and also the characteristics of those patients, their 30-day readmission and mortality rates.

Jennifer Rymer: 06:54 Then we additionally wanted to look at cost, and so I'll break this out a little bit. We've seen a significant increase from 2008 to 2016 in same-day discharge, however rates are still relatively low. So, in 2008 it was hovering around 2% nationally, now up to just below 10% in 2016 nationally for annual percentage of same-day discharge. We sort of expected... same-day discharge patients less frequently had a history of A Fib, peripheral arterial disease, and they oftentimes received treatment at higher volume centers, which one might expect as well. We did see no significant difference, which was very important between the rates of readmission at 30 days as well as 30-day mortality between the two groups. That helps us to feel more comfortable, that if you're choosing the right patients or the patients that don't have lots of comorbidities, elderly patients with severe chronic kidney disease, other comorbidities that might make them at a risk for needing to come back to the hospital quickly, this makes us feel more comfortable about going ahead and sending those patients home same-day versus keeping them an additional night.

Jennifer Rymer: 08:23 Then from a cost perspective, we also show that there was an association of lower 30 day accumulated average costs in patients with same-day discharge, and that was compared with patients who had been observed overnight. For each admission, this was around $800 to $1,000. Not as much as we thought we would see, but certainly I think when you take this sort of in accumulation with the outcomes, with the potential cost savings, with patient satisfaction, this lends us to feel more comfortable as operators and interventionalists in letting the appropriate patient go home, and not keeping them overnight.

Kathryn Kennedy:	09:06	Yeah, that sounds like great news for patients. Given the outcomes and the relative cost benefits as well, do you expect to see ... If you had to hypothesize, do you expect to see those numbers continue to rise the way they have from 2008 up until 2016?
Jennifer Rymer:	09:21	I think so. I think a lot is taking place right now in the realm of trying to create increasingly sophisticated algorithms for interventionalists and operators to say, "This is the appropriate patient population." It's really... the most important thing that we can do right now, is to come up with these definitions of what the appropriate patient is for discharge. That is ongoing work. I think if the VA has traditionally in the realm of PCI, sort of taken the lead in radial access and same-day discharge, I think we will continue to see sort of the rapid increase in this practice among VA hospitals over the next decade. Hopefully by the time we're 5 to 10 years from now, this will be sort of an expectation of lower to intermediate risk patients, then that's something that we're actually actively studying and trying to figure out how to increase.