- [Instructor] Hi, my name is Emma Svennberg, I'm a cardiologist at the Karolinska University Hospital, the Karolinska Institute in Stockholm, Sweden. And I appreciate the opportunity to discuss with you today about the findings from our study, the STROKESTOP study, a systematic screening study for atrial fibrillation looking at clinical outcomes. Please note my conflicts of interest.

We do know that patients with atrial fibrillation have a five-fold increase than the risk of ischaemic stroke. And they're also at a higher risk of death. Unfortunately, for some patients their atrial fibrillation remains undetected leaving them at an increased risk of ischaemic stroke but unable to benefit from oral anticoagulants that might have prevented their risk of stroke and death albeit at a small cost of bleeding. In our study, we set out to see if we, through early detection, by a screening of atrial fibrillation and the initiation of treatment, could reduce the risk of ischaemic stroke and death without causing an excess risk of bleeding.

This was a very pragmatic study and what we did was we identified all residents aged 75 and 76 in two regions of Sweden. There were no exclusion criteria. All those identified were randomised in a one-to-one fashion, into a group, invited to screening or into a controlled group. They were then followed for a minimum of five years with regards to our primary endpoint, a combined endpoint of ischaemic stroke, systemic thromboembolism, all-cause mortality, and severe bleeding.

In the group invited to screening, we sent a letter of invitation asking them to participate in our screening intervention. At the screening centre, if they had no prior atrial fibrillation, they were taught to do a single-lead ECG at home, twice daily for two weeks. In the case of a new diagnosis of atrial fibrillation, we organised the systematic follow-up within our study. Additionally, for patients with prior atrial fibrillation but not on oral anticoagulants, we also did a systematic follow-up of those patients.

Overall, we identified more than 28,000 75- and 76-year-olds residing in our two regions. A small proportion of patients were excluded due to death or immigration prior to our screening intervention. But overall, almost 14,000 individuals were randomised to be invited to screening or to control group. All of these were followed for a minimum of 5.6 years. There was no loss of follow-up.

Looking at the group invited to screening, we could see after our screening intervention that the diagnosis of atrial fibrillation became significantly more common as compared to the control group. The clinical characteristics of the group, randomised to screening and randomised to control were as expected very similar.

On average, they were 76 years old, a small a little more women than men participate or were invited to screening or to controlled. And the CHADSVASc was 3.5 on average.

Now, with regards to our primary combined endpoint then of ischaemic stroke, systemic embolism, death and major bleedings, we could see that those randomised to screening had significantly fewer events compared to those randomised to control. The hazard ratio was small but statistically significant and we needed to invite 91 individuals in order to prevent one event. But these were the groups that were invited to screening compared to the control group. When you're invited, it doesn't mean that you will participate, and we could see that not all chose to participate or were not able to participate. But 51.3% chose to participate in our screening study. We could see that those coming to the screening intervention were overall, slightly younger and more healthy, as compared to the non-participants and if we look at our pre-specified secondary endpoint, our as treated analysis, we could see that those participating in our screening study did significantly better when it came to the endpoint of ischaemic stroke.

However, one must bear in mind when interpreting these results that these participants were also more healthy as compared to the non-participants.

So, ladies and gentlemen, to conclude we could see that population-based screening for atrial fibrillation provided a net clinical benefit in our elderly population. However, efforts should be made to increase participation in atrial fibrillation screening. We could see that the non-participants were at the highest risk of adverse events.

Thank you very much for your attention. And I would also like to thank our financial sponsors of the trial.

Thank you.