**Title: AHA 22: EMPEROR-POOLED: Clinical Outcomes & Efficacy of Empagliflozin in Black vs White Pts With HF**

**Participants: Dr Subodh Verma**

**Date: 23 Nov 2022**

**Dr Subodh Verma**

" - Hello, I'm Professor Subodh Verma from the University of Toronto at St. Michael's Hospital. I'm a cardiac surgeon and a professor of surgery and pharmacology. I also hold the Canada Research Chair in cardiovascular surgery.

**Importance of this Pooled Analysis**

So at the American Heart Association meeting 2022 we presented as one of the featured science presentations a pooled analyses from the EMPEROR-Reduced and EMPEROR-Preserved trials, two trials that enrol people with heart failure and a reduced or a mildly reduced or preserved ejection fraction. These two trials were pooled together and from this pooled analyses we specifically asked the question as to whether black patients had similar or different efficacy with empagliflozin in the context of heart failure.

**Patient Population**

So from the pooled analyses, we had 9,714 patients. We restricted the analyses here to people enrolled from the Americas. And we had just over 3000 white patients and about 474 black patients. And in this population we compared the outcomes of the cardiovascular outcomes the heart failure outcomes in black versus white patients and then evaluated the efficacy and safety of empagliflozin according to race.

**Key Findings**

So the, the first finding was that black patients in the pooled analyses were actually at substantially higher risk of the primary outcome of cardiovascular death or heart failure hospitalizations. In fact, when we looked at all of the outcomes in the trial, not just the primary outcome but total heart failure events time to first heart failure event the extended composite outcome mortality, they all were higher in black patients compared to white patients. And that was observed mostly in patients with heart failure and a reduced ejection fraction. But we saw that, you know to be statistically significant in the pooled analyses. The second observation was that empagliflozin was efficacious consistently in black and white patients. And I think this is really important because in the past we know that there are several heart failure therapies such as RAS inhibitors, beta blockers that have shown to be less efficacious in black patients. And therefore, understanding the safety and efficacy of newer therapies such as SGLT-2 inhibitors in the context of ethnicity and race is quite important. So we found that there was a consistent benefit observed with empagliflozin across the spectrum of ejection fraction in patients with heart failure. And importantly because black patients were at higher risk of events because their absolute risk was higher the absolute risk reduction was also higher with empagliflozin compared to placebo in black patients versus white patients which yielded a much lower number needed to treat in black patients compared to white patients.

**Impact on Practice**

Well, I think the important, there's three important messages here. One is that for the small number of black patients that were enrolled in the trial we demonstrate a consistent benefit of empagliflozin in that population. And therefore, this speaks to the generalizability of empagliflozin in black patients with heart failure with either a reduced or preserved ejection fraction. The second observation is that the safety profile of empagliflozin is comparable in black versus white patients. There were more adverse events in black patients in the placebo group, but there was no step up with empagliflozin in black versus white patients in terms of side effects, adverse events adverse events of special interest, et cetera. And I think the most important overarching message here is that moving forward, we need to make a concerted effort to include more black patients in clinical trials. The sample size here is quite small and the fact that black patients are at higher risk are poorly represented in clinical trials is a really important reminder of the need for us to diversify the populations that we include in clinical trials.”