DR. HARRY YOON: We've known for a long time that black individuals have worse survival compared to white individuals who have colon cancer. And the reasons that have been cited so far include socioeconomic factors, so decreased access to care, suboptimal therapy. But what we wanted to look at was to see if when you looked at the genetics of the colon tumor, were those different according to white, black, and Asian individuals?

We found two main things. One was that we looked at the mutation frequency of two cancer related genes-- BRAF and KRAS. And we, in fact, found that the difference in the frequency of those genes were different according to whether you were black, white, or Asian.

The second thing we found was that the black patients had shorter survival compared to white patients. And that that difference was evident only in patients younger than age 50. And that that difference in survival was driven by the colon cancer coming back, or it was driven by a colon cancer recurrence. So all of that, when you put it together, suggests that perhaps the reason the survival is different between black and whites is partly driven by the differences in biology, potentially the genetics of the colon tumor.

So right now, the main implications are for research. This puts the issue of race more prominently on the radar of investigators to examine more whether there are biological drivers that drive the tumors of black patients compared to white patients. In terms of the implications for a patient right now, there isn't any specific thing that I would change in terms of the clinical management. But that's where our research is. And we're hoping we're going to be able to find things that could help individuals of all race.

There are two things that we're hoping to accomplish. The first was whether there are differences in the genetics of colon tumors between individuals of black versus white versus Asian race. And secondly, what we wanted to see is whether the survival of patients according to race was different. And more specifically than that, we wanted to see whether the differences in survival by race was due to the colon cancer coming back after it had already undergone resection through surgery.

The colon cancer recurrence part of it is really important because we have very little data on colon cancer recurrence according to race. And colon cancer recurrence is harder to collect as opposed to patient survival because you need frequent follow-up, specifically for colon cancer recurrence. Whereas patient survival is mainly determined by whether a patient is alive or dead at a particular time.

And colon cancer recurrence is more applicable to the biology of colon cancer. So we were able to do that because we looked at patients that were enrolled in a phase three study where everyone would see the same treatment. They all had surgery. They all had the same stage. They were all stage three. And they all received the same chemotherapy, FOLFOX chemotherapy, which is the modern standard of care. And they also received the same follow-up.

So we're able to see whether the colon cancer recurrence was what was driving the differences in patient survival. So those are the two things-- whether the genetics of the colon cancer were different according to race and whether survival, and specifically colon cancer recurrence, was different according to race.