[MUSIC PLAYING]

JEREMY JONES: We have tremendous amount of clinical trials that are available. In fact, being at Mayo Clinic, and we have three shields. One is excellence in clinical care. One is excellence in teaching, and then the third, which I think is equally important, is excellence in research. And so we all feel the need and the drive to not only practice to the best evidence that we have today, but also to help develop what is the best evidence of the future.

TANIOS BEKAII-SAAB: One the jewels, I think, of our research in terms of how we're going to move the field forward is a study called Colomate that's running through our ACCRU research consortium. So that's a Mayo Clinic Cancer Center supported consortium, and that's essentially going to be available through 12 to 16 centers across the United States, including of course, all our Mayo Clinic sites.

This study, essentially I think, is going to transform the way we treat colon cancer. The platform itself is looking to screen anywhere between 2,000 and 5,000 patients over the next two to five years. And it will use the principle of liquid biopsies. Essentially, we look for circulating free DNA from the cancer, and we capture the genetic alterations from the circulating free DNA.

And patients will be assigned to one of the arms depending on what they match, what target we find that matches the alteration on the circulating free DNA. We have multiple arms that are present through the study that can either be referred to from the outside or through the platform itself. From HER2 amplification, to EGFR rechallenge, to FGFR alterations, to Met amplifications, to BRAF mutations.

EGFR amplifications and a number of other alterations that are being integrated. It's a very dynamic platform where all these arms are coming together. There is no other study like it in the United States. One study that was recently published was a study that, again, was run by Mayo Clinic investigators through our Mayo Clinic Cancer Center supported consortium called the ACCRU consortium.

This is a study that looked at a commonly used agent regorafenib a multikinase inhibitor that's used in more refractory colorectal cancer patients. And it was a difficult agent to use, although, we knew that it improves outcomes, improves survival of patients who've seen multiple other therapies.

But it had quite a bit of toxicity, and so we went back and revisited the dose scheduling. We went to a dose escalation strategy from a lower dose to a higher dose in the first cycle of treatment versus the standard.

And we've shown, essentially, that going with a dose escalation strategy improved significantly the outcome. It lessens the toxicities, improves the quality of life of the patients, and improves survival significantly versus the standard dosing.

JEREMY JONES: We have seen one of the most common mutations in colon cancer occurs about 50% to 60% of patients is in a gene called KRAS. For many, many years, this is felt to be un-druggable, meaning we could not design a drug that would block it.

More recently over the last four or five years there have been drugs available that have started to show promise in terms of blocking these mutations. We have not one but two trials that are ongoing now for patients who have colorectal cancer that blocks this specific mutation. And we've seen very promising results.

As a fellow, I was researching and looking at these types of mutations. And it turns out that we had a large database and so we were actually able to define one of these BRAF mutations. It's quite rare. We call them non-V600 BRAF mutations, whereas previously, they were sort of being thrown around and nobody knew what they actually were, and what they meant.

We were able to, with our collaborative effort, to define what these mutations are, what they mean in terms of the cancer. So now, the second part of that is we have designed a trial that will be opening here soon on how do we target these mutations.

I think that the next 20 or 30 years, we will see dramatic improvements in colon and rectal cancer, in some part, by the research that we are laying the foundation for today.