Using data from a standard CT scan, the non-invasive HeartFlow Analysis creates a personalized 3D model of the coronary arteries and analyzes the impact that blockages have on blood flow. (Image by Josh Richman)
Coronary artery disease is the leading cause of death for both men and women in the United States. The disease develops when the arteries providing blood to the heart muscle narrow, often because of the buildup of plaque in the vessel walls. These coronary narrowings can reduce blood flow to the heart, causing chest pain, heart attacks and death.

Using the images obtained from a coronary CT angiogram, the HeartFlow technology creates a personalized, digital 3D model of each patient’s arteries. Powerful computer algorithms then solve millions of complex equations to assess the impact of any blockages on blood flow. This information aids physicians in determining the appropriate course of action for each patient.

“The HeartFlow Analysis will help us develop the most appropriate treatment plan for each patient with coronary artery disease, usually without the need for additional and often invasive procedures,” Dr. Hendel said. “We are very proud to be the first to offer this service, which is part of our expanding cardiovascular services and cutting-edge technologies at Tulane.”