



Coronary Artery Calcium Scores Now Available

By Peter Clark, MD

One of the most powerful qualities science possesses is an ability, in admittedly a very limited and small basis, to predict the future. By looking at large groups of people, and crunching numbers, generalizations can be made - some of which might seem like common sense, but some of which are not so obvious. For instance, if you smoke a single cigarette per day, intuitively to some people that might not seem like such a big deal or health impact, but if you really drill down into the statistics a single cigarette produces half the risk of smoking a whole pack per day in its effect on your blood vessels, heart and lungs. Not a tiny fraction but half the impact, which is huge. Not so obvious, but shown true in huge groups of people and thus more likely a valid observation.

A few years ago, there began a push to get many patients to take a "statin," which is term for a family of cholesterol medications that lower cholesterol and have an anti-inflammatory effect in the bloodstream of people taking them regularly. The United States Preventative Task Force, came out with firm guidelines saying that if your 10 year risk (calculated by a formula based on numbers including age, race, diabetes, blood pressure and medications taken) of a stroke or heart attack was greater than 10%, then a statin was firmly suggested based on their interpretation. So, if you smoke and have diabetes and high blood pressure, it is a no-brainer that a statin medication is warranted and worth the potential cost or side effects because of its potentially lifesaving benefit. But what about people of medium risk- which is defined as a 5 to 7.5% 10-year risk?

Enter the Coronary Artery CT Calcium Score. This test is



a three dimensional X-ray of the blood vessels in your heart, which shows if there is any calcium deposited in the blood vessels which supply the heart muscle with oxygen. New guidelines issued in November 2018 by the American College of Cardiology and American Heart Association (and agreed on by dozens of other societies) for the first time formally endorse this test as a means of determining whether patients should take a cholesterol medication. The gist of the recommendation is that if you fall into the intermediate risk category, get the test, and the score is zero, you don't need a cholesterol medication, and should save your money and inconvenience. And it has a so-called five-year guarantee, where the five-year rate of events in people with a zero score is extremely small.

Not to say that you should not exercise and watch your diet and quit smoking and those other health behaviors associated with heart health (and wear your ski helmet!), but it does mean you can avoid a cholesterol medication

guilt free. And in five more years if the result is still zero, you can do the same. When the score is higher, then more deep thought is required and calculations run, but the value of the test is in its ability to show health. Another value is also that if we actually see undeniable calcium deposited in the blood vessels of the heart and the score is high, this can be a tremendous motivator to patients to take their cholesterol medication prescribed, knowing that doing so is possibly preventing a heart attack and prolonging their lives.

Another group of people who may benefit from a Coronary Artery Calcium Score test is those with a strong family history of early heart attacks in parents or sibling who have good blood pressure and cholesterol and want to know if despite this their genetics are taking a toll. In this case, the test can either relieve their anxiety about their health, or target them for further intervention if appropriate.

Mammoth Hospital has stepped up, in response to these latest widespread guidelines, and acquired the equipment to perform Coronary Artery Calcium Scores. Insurance coverage varies but we have made it as inexpensive as possible and priced comparable to urban centers. And if it allows you to stop your medication and expensive blood tests, it is cost-effective. Our hope is that it improves your health, and in some instances, actually reduces the number of medications you have to take (imagine that!), while insuring good care and the best possible health. Our primary care providers would be happy to discuss the logistics and statistics and engage you in a conversation about being as healthy and happy as possible, as partners in shared decision-making.