

BroadcastMed | Warfarin Sensitivity Genotype Test - Physician Application of Results

SPEAKER 1: If you think about warfarin sensitivity genotyping, when would a physician use it? Why would a physician use it and what benefit can you expect to derive out of it? The warfarin sensitivity to genotype results will allow you to categorize patients into, I think, four different significant subsets. There will be a group of patients that have the CYP2C9 wild-type in VKOR wild-type. The vast majority of individuals of African descent are of that type and I think it's fairly well known that African-Americans require a larger warfarin dose than do Caucasians.

So the way you would manage that patient is you would look at them in the context of what would be their typical dose. If they're the right age and if they have no confounding co-medications, you might choose to start them on 5 milligrams per day. With that particular genotype, our recommendation would be to start them on six milligrams a day.

OK. Let's talk about the other group. You have a group of patients that have moderately decreased CYP2C9 metabolic capability. And they might be a mixture of the wild-type and the less sensitive VKOR type. And that actually describes a significant fraction of the Caucasian population.

If you were to say, based on other circumstances, I would normally start this patient at 5 milligrams per day. In that case, you'd probably choose to start that patient at 4 milligrams per day. Or if you had an elderly patient, 70-years-old, and you're more inclined to say I would typically start them at 4. With this particular genotype combination, a slightly reduced CYP2C9 and a change in the VKOR that makes them more sensitive to warfarin, instead of starting them at four, you might choose to reduce that dose by maybe 20% down to three milligrams per day.

If you have one of the more rarer types of patients, these are with significantly decreased CYP2C9 activity, and very, very sensitive VKOR genotype, and a patient over age 65, or you might have started them at 3 milligrams a day, in that case, our recommendation would be that you drop it by 50% to maybe 1 and 1/2 to 2 milligrams per day.

Key point is that these recommendations will come out with the genotype report, so you'll have some guidance in the report as to how you should adjust the warfarin dose. I think the key point is start the patient on the dose that you would typically start that patient on based on their age and other confounded factors. And then once they have become stabilized and you get the genotype report back, then you make the dose adjustments to get them to the optimal dose.

And what that will do is will get them to target INR faster and they will stay at target INR more predictably than if you just simply started the patient on the usual dose and then use the INR as your course to adjust the dose. So our findings are that if you use this genotyping, your patients will get to steady state faster, and to a stable INR faster, and avoid all of the fluctuations that you will see occasionally in some patients.