Non-Fasting Lipids for Cardiovascular Risk Evaluation - Frankly Speaking EP8

Transcript Details

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Dr. Frank Domino

This is Frankly Speaking and I am your host, Dr. Frank J. Domino. I'm a professor at the University of Massachusetts Medical School in the Department of Family Medicine and Community Health. With me today is Jill Terrien, she is an Associate Professor at the University of Massachusetts Medical School, Graduate School of Nursing, where she is the Director of the UMass Nurse Practitioner program. She has been a Nurse Practitioner for 20 years, with her practice focused on internal medicine, women's health, employee health, and most recently, college health, practicing at the Worcester State University Student Health Services. Welcome to the show, Jill.

Jill Terrien:

Thank you, Frank.

Dr. Domino:

Our subject for today is around cholesterol testing for coronary artery disease prevention. And there's always been some controversy about how to obtain that testing. Let's pretend it's middle of the afternoon, you're seeing patients, and a patient comes in for a health maintenance visit and they have not been fasting. What's the current best recommendations about approaching this patient and can they get their cholesterol drawn today, or do they need to come back?

Jill Terrien:

Thank you, Frank. Well, I think that the most important thing to remember is, yes, the data that you want to obtain at that visit, but also the patient convenience. And is it really a bad idea to get a non-fasting lipid panel on your patient? So a patient that comes to mind is just like what you described, somebody that's coming, maybe it's going to be a new visit to the clinic or maybe it's somebody that's coming for their annual screening. What I would say is, that it would be okay, based on recent literature and guidelines, that getting a non-fasting sample in a certain type of patient, one being that you know they don't have any existing coronary artery disease. They do not have... You have to think about these considerations. You have to think about, "Do they have any existing cardiovascular diseases? Do they need to have lab work for anything else that would require a fasting test?" So thinking about certain drug levels, or are they a diabetic patient? In that case, you really would want to get a fasting sample.

So if you have, like I said, a new patient that's coming for their initial assessment of risk factors and you're getting to know that patient, so one thing I do is to use the American Heart Association risk calculator, which will take into consideration their age, their race, and are they being treated for diabetes or hypertension, and come up with their risk score. So that's one thing that you might want to do as a screening, initially. What the literature, I think getting back to what you originally asked me was, "What is the evidence telling us about non-fasting lipid panels?" And there was recently an evidence-based study that looked at 68 perspective trials. Three of them were very large statin trials, it included over 40,000 patients, it obtained collectively over 100,000 samples of lipids. And what they found was, there was not a big discrepancy in both numbers and in outcomes, including all-cause mortality from cardiovascular factors or from mortality in general. So I would say that in this circumstance, you could use a non-fasting lipid profile to guide your care.

Dr. Domino:

Alright, so to summarize, it sounds like in a patient without known heart disease who is coming for general health maintenance, use of a non-fasting lipid panel does not affect their risk score calculation or their overall heart risk in general. And that's really refreshing because, as we both

know, it's hard for patients to take time off and get in and get their blood drawn before they have to head out to work or their other family responsibilities, so this has actually been a wonderful, wonderful change. You've mentioned that a non-fasting lipid panel can often show you an elevated triglyceride level, and you mentioned 500 as a cut-off. What are the things that cause very high levels of triglycerides and what are their implications?

Jill Terrien:
Oh, yes. So there's actually the different areas that I would consider if I had a number that concerned me of triglycerides of 500. I'm going to even say somebody who would be 400, that would make me think, "What's going on here?" I would look at their diet. So when you think of diet, you think about weight gain, you think about a high, refined carbohydrate intake of their diet, and excessive alcohol use. Drugs do affect triglycerides as well. An example, and a very common one, is oral contraceptive pills. Glucocorticoids, Retin A, Tamoxifen, some thiazides, and also beta blockers. So that is something to consider. And the other one is disease, nephrotic syndrome or any kind of chronic renal failure or lipodystrophies. And the last D is disorders. And that could be hypothyroidism, poorly controlled diabetes, obesity, and actually pregnancy. Triglycerides do rise and cholesterol rises during pregnancy, but those are not the types of patients that you would consider treating, but you might refer them.

Dr. Domino:
Jill, that's a really important point and I'm glad you brought it up. Medications and lifestyle and certain diseases can cause hypertriglyceridemia. It's very rare for someone to have a primary hypertriglyceridemia, and therefore using medications to lower triglyceride needs to be done only after you've worked up all those other conditions and found them absent. So in the patient we began chatting about, if their triglyceride was over 400, you might take a more close history looking at what their diet's like, what their alcohol intake is like. Think about other conditions like thyroid disease or pregnancy, and in particular, poorly controlled diabetes, so that's a really strong point. I think use of medication to lower triglycerides is something we need to think about doing as a last resort, after we've ruled out all those other conditions, so I appreciate you bringing that up. You mentioned the hyper-triglyceride issue as an important consideration.

When do you want to refer patients with wildly abnormal lipid panels or even elevated triglyceride levels?

Jill Terrien:
Great question. So I think that is, number one, how comfortable are you in your practice? If I have explored all the different areas of my patient, their social history, their lifestyle, their stress level, I've looked for other causes of, for instance, the triglycerides being elevated and I can't really come up with a reason to say, "This is definitely caused by their diet intake. This is a familial cause," I'm going to call my friendly cardiologist or lipidologist, and I think I've heard you refer, in your other podcasts, Frank, about how you know your resources. And I am much the same way as many of you are, is that I'm reaching out to people and discussing the case or with my colleagues to say, "This is what I have and I don't know where to go next, but I think I'm comfortable referring."

Dr. Domino:
I think that's great, thank you. Many patients still believe they need a fasting cholesterol level. What do you say to them?

Jill Terrien:
Well, first of all, I can't blame them, because that has been kind of the standard of practice for many years. I think about when I went to school to become a nurse practitioner and the guidelines we used, everything was an eight to 12-hour fast, prior to drawing a cholesterol level. I would want to ask the patient, what was their reasoning behind it? Because I want to be patient-centered in my approach always, and if they have a request, I want to understand where they're coming from. That might be their way of... It might be a way of control. "I've always done it this way, I want to continue to do it that way." And if they have no problem fasting and going for the test, I'm absolutely fine to meet them that way.

Dr. Domino:
I think that's a great point that being patient-centered, I think many people get their sense of

control and their ego built around some of the numbers that we've focused on. A1Cs are another thing that patients maybe over-focus on, maybe clinicians over-focus on, too, that sometimes, it's really important to the patient to be consistent and even if we say, "Gee, your total cholesterol and HDL do not change whether you're fasting or not," they don't care. They want to have that one sense of, "This is where I've always been, I want to keep doing it that way." And as you say, being patient-centered's always got to be our strongest priority.

Jill, on the discussion of statin use, I'm sometimes frustrated, because I think when you've got a highly motivated patient and they're interested in being cardiovascularly fit, and being careful with their diet, and they're good with eliminating or never having high risk factors like smoking, it's easy to apply some of these guidelines. But what are your thoughts about the obese patient who's sedentary, they're hypertensive, they're a smoker? Does screening for hyperlipidemia and use of agents really improve outcomes?

Jill Terrien:
Great question. So that is quite a bit of information in one sentence, and I think that we can all think of that patient that's in our practice. And the bottom line here is, is that lifestyle modifications and lifestyle discussion is going to underpin every single one of those conditions that you just brought up. Will a statin help them? Absolutely. The statins are very good. They're going to lower cholesterol, but the bottom line is, do they that mean they're going to lower their all-cause mortality? But based on everything that is going on with this patient, being overweight, not exercising, their hypertension's not controlled, and they smoke, I think that the statin is kind of like throwing something at them in the wind, that it's really a false sense of hope.

So it's again, meeting the patient, especially if a patient would say, "Well, can I have a pill for that?" And my answer is going to be, "Yes, you can have a pill for that, but the pill is not going to do everything and you'll get so much more benefit out of changing your behavior. And it doesn't have to be that you never eat potato chips again." It's moderation, is what they've shown in studies, that helps people achieve better outcomes with their lifestyle changes. And it's not a lifestyle change, it's a different adaptation of what you do every day. And usually, there are some

patients that will come into your practice that will say, "My father had a heart attack," or they have a close friend that had some sort of event and they come in and they say, "What can I do differently?" You have caught them at a possible time when they're ready to make a change and committed to it. So there's a lot to be said about motivational interviewing, behavior change, and assisting patients on a continuum.

Dr. Domino:
I think those are really two important points, first being that use of a statin in lowering those numbers in a high risk patient may give them a false sense of security and the reality of the matter, it probably has a very small impact, if any, on their outcomes. And secondly, meeting the patient where they are and when they seem ready or when you use tools like motivational interviewing to help them get ready, and identify those points when they're willing to make a change, help facilitate that change. To end up, Jill, I was wondering if you could just remind us quickly about the age to start screening for the primary prevention of heart disease, using a lipid panel.

Jill Terrien:
Yes. So The American College of Cardiology, American Heart Association guidelines from 2013, recommend initial screening begin at age 21 or older. So you should have a baseline on your patient from that time. And then in discussion, all the way up to the age of 75. So that's what their guidelines state, 21 to 75.

Dr. Domino:
That's great, Jill, thanks so much. Jill Terren is an Associate Professor at the University of Massachusetts Medical School, Graduate School of Nursing, where she is the Director of the Nurse Practitioner program. Thank you as well for listening. I'm Frank Domino, your host here at the University of Massachusetts Medical School, and we hope to see you again soon.