

Transcript Details

This is a transcript of an educational program. Details about the program and additional media formats for the program are accessible by visiting: <https://reachmd.com/programs/medical-industry-feature/critical-considerations-of-residual-cv-risk-in-patients-with-t2d-ascvd/14772/>

ReachMD

www.reachmd.com
info@reachmd.com
(866) 423-7849

Critical Considerations of Residual CV Risk in Patients With T2D & ASCVD

ReachMD Announcer:

You're listening to *Heart Matters* on ReachMD. This medical industry feature, titled "Critical Considerations of Residual Cardiovascular Risk in Patients with Type 2 Diabetes and Atherosclerotic Cardiovascular Disease," is developed and sponsored by Novo Nordisk Inc. Here's your host, Dr. Jennifer Caudle.

Dr Caudle:

Living with type 2 diabetes and atherosclerotic cardiovascular disease, or ASCVD, can be a heavy burden for patients. And that's why effective risk-reducing strategies, including lifestyle modifications and guideline-directed medications, are crucial, and why they'll be the focus of today's discussion.

This is *Heart Matters* on ReachMD, and I'm your host, Dr Jennifer Caudle. And joining me to discuss the importance of reducing risk from atherosclerotic cardiovascular disease, or ASCVD, in patients with type 2 diabetes and CVD is Ms Melissa Magwire. She's a Registered Nurse, Certified Diabetes Care Education Specialist, and the Program Director at the Cardiometabolic Center Alliance, Incorporated in Kansas City, Missouri.

Ms Magwire was compensated for her time by Novo Nordisk. Melissa, welcome to the program.

Melissa:

Thank you. I'm really happy to be here to talk about such an important topic.

Dr Caudle:

So let's dive right in, Melissa. Why has ASCVD risk management in patients with type 2 diabetes remained a focus for physicians?

Melissa:

Well I'm really glad we're starting with this because it's so important to take proactive measures to reduce the risk from ASCVD. I've seen in my time in the critical care unit that so many of my patients had a history of type 2 diabetes, and the additional burden of disease and it was devastating. And despite the decline in cardiovascular mortality in patients without type 2 diabetes, cardiovascular mortality remains a threat to those with type 2 diabetes despite A1c control.¹

In fact, ASCVD is the number one cause of death and disability in those living with type 2 diabetes.²

Not only do people with diabetes have a higher risk for ASCVD—and up to four times higher risk of experiencing a stroke or a myocardial infarction,³⁻⁵ they also tend to have earlier onset of ASCVD by almost 15 years compared to those without type 2 diabetes.^{2,6,7}

ReachMD Announcer:

Footnote:

Based on a retrospective cohort study using claims to identify adults with (n=379,003) and without (n=9,018,082) T2D living in Ontario,

Canada, on or before April 1, 1994. Individuals were followed up to record CVD events until March 31, 2000.

Melissa:

Unfortunately, a large, prospective cohort showed that people with type 2 diabetes and ASCVD may experience shorter life expectancy as well.⁸ And this is partly because type 2 diabetes actually accelerates ASCVD⁹⁻¹¹ over time.

ReachMD Announcer:

Footnotes:

Patients aged 50 years with T2D and a history of MI and stroke at baseline.

An analysis of individual patient data from the Emerging Risk Factors Collaboration (n=689,300; years of baseline surveys: 1960-2007) and the UK Biobank, a prospective cohort study (n=499,808; years of baseline surveys: 2006-2010). Patient-level data were analyzed to determine the associations of cardiometabolic multimorbidity with mortality and reductions in life expectancy. Cumulative survival was estimated by applying the calculated age-specific hazard ratios for mortality to contemporary US age-specific death rates.

Melissa:

So the longer a patient has type 2 diabetes, the greater the risk of developing ASCVD.^{12,13} Even though we provide these patients with standards of care to manage type 2 diabetes and cardiovascular, or CV risk reduction and have achieved their glycemic control, their blood pressure, and lipid goals, the risk for major cardiovascular events remains.¹⁴

For instance, in the Treating to New Targets double-blind study, patients with type 2 diabetes and established coronary heart disease received either a low dose or a high dose statin according to standards of care. However, a residual risk of cardiovascular disease of up to 14 to 18 percent was still observed for the occurrence of major cardiovascular events.¹⁵

ReachMD Announcer:

Footnotes:

A subanalysis of the Treating to New Targets (TNT) study, assessing whether benefits from high-dose intensive atorvastatin therapy demonstrated in the TNT study would be similar in patients with T2D and coronary heart disease (CHD). Patients with diabetes and CHD with LDL cholesterol levels of <130 mg/dL (n=1501) were randomized to receive either atorvastatin 10 mg or 80 mg per day. Follow-up was a median of 4.9 years with the primary endpoint being time to first major cardiovascular event (death from CHD, nonfatal procedure-related myocardial infarction, resuscitated cardiac arrest, or fatal or nonfatal stroke).

There was a range in residual risk because a primary CV event occurred in 2 different groups of patients with clinically evident CHD: in 13.8% of patients on atorvastatin 80 mg and in 17.9% of patients on atorvastatin 10 mg.

Melissa:

So in patients with type 2 diabetes, the literature not only advocates for strategies that target glycemic control, but also, simultaneously reduce cardiovascular risk, through both non-pharmacologic and pharmacologic approaches.¹⁶

Dr Caudle:

And if our goal is to improve patient care through glycemic control and CV risk reduction in patients with type 2 diabetes and ASCVD, what strategies are recommended?

Melissa:

Well even though we are focused on reducing ASCVD risks, maintaining awareness of other complications, like chronic kidney disease, diabetic kidney disease, or heart failure, may lead to different strategies in managing our patients.

So if we take a look at the American Heart Association, or AHA, for example, cardiovascular disease or CVD risk management for patients with type 2 diabetes, really requires a multifactorial approach that includes lifestyle modifications with improvements needed for physical activity, nutrition, weight management, reduced alcohol consumption, and the elimination of smoking.¹

We also need to consider achieving and maintaining glycemic control with antidiabetic therapeutics and managing blood pressure with angiotensin-converting enzyme inhibitors or angiotensin receptor blockers.¹

Then there are lipid-management therapies that help lower low-density lipoprotein cholesterol with statins and non-statins, lower triglycerides, and raise high-density lipoprotein cholesterol.¹

And then, we can use antithrombotic therapies as well to help prevent clots from forming, and finally, we should be screening regularly for cardiovascular and renal complications.¹

In conjunction with lifestyle modifications the use of medications that can concurrently reduce blood glucose and the risk of major adverse cardiovascular events—or MACE—such as heart attack, stroke, or death, is recommended.¹⁶

So, for patients with both type 2 diabetes and ASCVD, major medical societies support the use of glucagon-like peptide-1 receptor agonists and/or sodium-glucose cotransporter-2 inhibitors, otherwise known as GLP-1 RAs and SGLT-2is, with proven CVD benefit as appropriate to lower the risk of major CV events.^{1,16-19}

Dr Caudle:

And with that being said, what are some highlights these medical societies recommend for using GLP-1 RAs and SGLT-2is?

Melissa:

Sure. So along with lifestyle changes and guideline-directed medical therapies that I mentioned earlier, the AHA and the American College of Cardiology, or ACC, both recommend a GLP-1 RA or an SGLT-2 inhibitor with proven CVD benefit for patients with type 2 diabetes and established ASCVD as part of patient-centered care plans.^{1,16}

ReachMD Announcer:

Footnotes:

Initiate a GLP-1 RA with proven CV benefit after discussion of patient-clinician preferences and priorities.

Patients should be optimized on guideline-directed medical therapy concurrently (lifestyle, blood pressure, lipids, glucose, antiplatelet). An SGLT-2i with proven CV benefit is also an option for patients with established ASCVD. Please refer to the ACC ECDP for full recommendations.

The ACC defines ASCVD as: a history of an acute coronary syndrome or MI, stable or unstable angina, coronary heart disease with or without revascularization, other arterial revascularization, stroke, or peripheral artery disease assumed to be atherosclerotic in origin.

Melissa:

For patients with ischemic stroke or transient ischemic attack and type 2 diabetes, the American Stroke Association, or ASA, also recommends that diabetes management should include glucose-lowering agents with proven CVD benefit to reduce the risk of future MACE.¹⁹ And for patients with type 2 diabetes and established ASCVD, the use of a GLP-1 RA or an SGLT-2i with proven CVD benefit is recommended, regardless of baseline A1c or individualized A1c target.¹⁹

ReachMD Announcer:

Footnotes:

Refer to AHA/ASA Stroke 2021 Guideline for the Prevention of Stroke in Patients With Stroke and Transient Ischemic Attack for full recommendations.

GIP/GLP-1 RA is being investigated for CV risk reduction (effect on MACE and HF).

Melissa:

And finally, in addition to similar recommendations from the ACC, the American Diabetes Association takes things a step further by stating that patients with type 2 diabetes and ASCVD who require additional glycemic control should consider treatment with both a GLP-1 RA and an SGLT-2 inhibitor.¹⁷

ReachMD Announcer:

Footnotes:

According to the ADA, "proven CVD benefit" means it has a label indication for CVD benefit.

Please refer to the 2023 ADA Standards of Medical Care in Diabetes, the AACE Clinical Practice Guideline 2022 Update, the 2020 AHA Scientific Statement on Cardiorenal Protection With the Newer Antidiabetic Agents, the 2020 ACC Expert Consensus Decision Pathway,

or the 2021 AHA/ASA Guideline for the Prevention of Stroke in Patients With Stroke and Transient Ischemic Attack.

Dr Caudle:

For those of you who are just tuning in, you're listening to Heart Matters on ReachMD. I'm your host Dr Jennifer Caudle, and today I'm speaking with Registered Nurse and Certified Diabetes Care Education Specialist Melissa Magwire about ASCVD risk reduction strategies for patients with type 2 diabetes and established CVD.

Now with those recommendations in mind, let's apply them practically. What approaches can we use to help reduce the risk of ASCVD in patients with type 2 diabetes?

Melissa:

So as with all patients, shared decision-making is a critical part of all patient encounters and treatment decisions.¹⁷ This includes identifying what matters most to the patients based on their priorities and preferences for health outcomes and treatment in addition to using clinical information to estimate their prognosis.¹⁷

For example, in a patient with type 2 diabetes and ASCVD who's a former smoker, weighs 189 pounds, has a body mass index of 29.8, an A1c of 6.7 percent, and moderate hypertension, this person may benefit from a CV-risk-lowering antidiabetic as they're at high risk for major ASCVD-related events like an MI or a stroke.

With a multidisciplinary care team, including a cardiologist, a primary care physician, an endocrinologist, perhaps a dietitian, with focused efforts on coordinating care to reduce risk and patient barriers. I would always suggest some lifestyle changes, such as a heart-healthy diet and exercise, stress reduction, and adherence to a medication regimen.

Dr Caudle:

So as we wrap up our discussion, Melissa, would you like to leave any key takeaways with our audience today?

Melissa:

In my experience, it's not just about lifestyle changes, glycemic control, or lipid management that collectively help patients with type 2 diabetes and ASCVD. It's about providing coordinated comprehensive, patient-centered care.

Essentially, it's a shift in mindset from looking at type 2 diabetes and ASCVD as separate comorbidities with separate care plans, to looking at these conditions in their totality and individualizing management strategies to meet patients where they are and set achievable goals. And for eligible patients, these strategies may include CV-risk lowering antidiabetic therapies independent of glycemic levels.¹

Dr Caudle:

Well, with those key takeaways in mind, I'd like to thank my guest, Ms Melissa Magwire, for providing excellent insights and strategies for managing cardiovascular risk and glycemic control in patients with type 2 diabetes and ASCVD. Melissa, it was great speaking with you today.

Melissa:

Thank you so much.

ReachMD Announcer:

This medical industry feature was sponsored by Novo Nordisk. If you missed any part of this discussion, visit ReachMD.com/HeartMatters. This is ReachMD. Be Part of the Knowledge.

References:

1. Joseph JJ, Deedwania P, Acharya T, et al. Comprehensive management of cardiovascular risk factors for adults with type 2 diabetes: A scientific statement from the American Heart Association. *Circulation*. 2022;145(9):722-759. doi:10.1161/CIR.0000000000001040/FORMAT/EPUB
2. Low Wang CC, Hess CN, Hiatt WR, Goldfine AB. Clinical update: cardiovascular disease in diabetes mellitus. *Circulation*. 2016;133(24):2459-2502. doi:10.1161/CIRCULATIONAHA.116.022194

3. Almdal T, Scharling H, Jensen JS, Vestergaard H. The independent effect of type 2 diabetes mellitus on ischemic heart disease, stroke, and death: a population-based study of 13 000 men and women with 20 years of follow-up. *Arch Intern Med*. 2004;164(13):1422-1426. doi:10.1001/ARCHINTE.164.13.1422
4. Fox CS, Coady S, Sorlie PD, et al. Trends in cardiovascular complications of diabetes. *JAMA*. 2004;292(20):2495-2499. doi:10.1001/jama.292.20.2495
5. Martín-Timón I, Sevillano-Collantes C, Segura-Galindo A, Del Cañizo-Gómez FJ. Type 2 diabetes and cardiovascular disease: Have all risk factors the same strength? *World J Diabetes*. 2014;5(4):444-470. doi:10.4239/wjd.v5.i4.444
6. Booth GL, Kapral MK, Fung K, Tu J V. Relation between age and cardiovascular disease in men and women with diabetes compared with non-diabetic people: a population-based retrospective cohort study. *Lancet*. 2006;368(9529):29-36. doi:10.1016/S0140-6736(06)68967-8
7. Tancredi M, Rosengren A, Svensson AM, et al. Excess mortality among persons with type 2 diabetes. *N Engl J Med*. 2015;373(18):1720-1732. doi:10.1056/NEJMoa1504347
8. Di Angelantonio E, Kaptoge S, Wormser D, et al. Association of cardiometabolic multimorbidity with mortality. *JAMA*. 2015;314(1):52. doi:10.1001/jama.2015.7008
9. King RJ, Grant PJ. Diabetes and cardiovascular disease: pathophysiology of a life-threatening epidemic. *Herz*. 2016;41(3):184-192. doi:10.1007/s00059-016-4414-8
10. He C, Yang J gang, Li Y ming, et al. Comparison of lower extremity atherosclerosis in diabetic and non-diabetic patients using multidetector computed tomography. *BMC Cardiovasc Disord*. 2014;14(1):125. doi:10.1186/1471-2261-14-125
11. Zeadin MG, Petlura CI, Werstuck GH. Molecular mechanisms linking diabetes to the accelerated development of atherosclerosis. *Can J Diabetes*. 2013;37(5):345-350. doi:10.1016/j.jcjd.2013.06.001
12. Fox CS, Sullivan L, D'Agostino RB, Wilson PWF. The significant effect of diabetes duration on coronary heart disease mortality. *Diabetes Care*. 2004;27(3):704-708. doi:10.2337/diacare.27.3.704
13. Halter JB, Musi N, McFarland Horne F, et al. Diabetes and cardiovascular disease in older adults: current status and future directions. *Diabetes*. 2014;63(8):2578-2589. doi:10.2337/db14-0020
14. Fruchart JC, Davignon J, Hermans MP, et al. Residual macrovascular risk in 2013: what have we learned? *Cardiovasc Diabetol*. 2014;13(1):26. doi:10.1186/1475-2840-13-26
15. Shepherd J, Barter P, Carmena R, et al. Effect of lowering LDL cholesterol substantially below currently recommended levels in patients with coronary heart disease and diabetes. *Diabetes Care*. 2006;29(6):1220-1226. doi:10.2337/dc05-2465
16. Das SR, Everett BM, Birtcher KK, et al. 2020 Expert Consensus Decision Pathway on novel therapies for cardiovascular risk reduction in patients with type 2 diabetes. *J Am Coll Cardiol*. 2020;76(9):1117-1145. doi:10.1016/j.jacc.2020.05.037
17. Standards of Care in Diabetes—2023. *Clin Diabetes*. 2023;41(Supplement 1).
18. Joseph JJ, Deedwania P, Acharya T, et al; American Heart Association Diabetes Committee of the Council on Lifestyle and Cardiometabolic Health. Comprehensive management of cardiovascular risk factors for adults with type 2 diabetes: a scientific statement from the American Heart Association. *Circulation*. 2022;145(9):e722-e759. doi:10.1161/CIR.0000000000001040
19. Samson SL, Vellanki P, Blonde L, et al. American Association of Clinical Endocrinology Consensus Statement: Comprehensive type 2 diabetes management algorithm – 2023 Update. *Endocr Pract*. 2023;29(5):305-340. doi:10.1016/J.EPRAC.2023.02.001
20. Kleindorfer DO, Towfighi A, Chaturvedi S, et al. 2021 Guideline for the Prevention of Stroke in Patients With Stroke and Transient Ischemic Attack: A guideline from the American Heart Association/American Stroke Association. *Stroke*. 2021;52(7):E364-E467. doi:10.1161/STR.0000000000000375