

4. Genereux P, Palmerini T, Caixeta A, et al. Quantification and impact of untreated coronary artery disease after percutaneous coronary intervention. *J Am Coll Cardiol* 2012;59:2165-74.

4. Russo C, Jin Z, Homma S, et al. Subclinical left ventricular dysfunction and silent cerebrovascular disease: the Cardiovascular Abnormalities and Brain Lesions (CABL) study. *Circulation* 2013;128:1105-11.

Asymptomatic Cardiovascular Risk Assessment: The Road Less Traveled



We read with great interest the recent paper by Friedman et al. (1). The authors have endeavored to highlight the importance of early recognition of risk factors for cardiovascular and cerebrovascular disease and early management of these risk factors. However, we would like to highlight a factor worth considering.

Risk factors are no doubt important in the development of subclinical disease; however, we cannot treat every patient with risk factors, nor can we perform imaging on everyone with risk factors. This is just not practical.

However, there is growing evidence (2,3) that there is a strong correlation between subclinical cardiac dysfunction and subclinical brain infarcts, for example, as detected by Russo et al. (4) in the landmark CABL (Cardiovascular Abnormalities and Brain Lesions) trial through speckle tracking echocardiography. Therefore, imaging of the heart would be much more cost-effective in detecting subtle and pre-clinical changes. Nevertheless, it is an excellent systematic review that elucidates the importance of being pre-emptive in the management of any disease entity, hence reminding us, "get it before it metabolizes you."

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REFERENCES

1. Friedman JI, Tang CY, de Haas HJ. Brain imaging changes associated with risk factors for cardiovascular and cerebrovascular disease in asymptomatic patients. *J Am Coll Cardiol Img* 2014;7:1039-53.
2. Knipp S, Matatko N, Schlamann M, et al. Small ischemic brain lesions after cardiac valve replacement detected by diffusion-weighted magnetic resonance imaging: relation to neurocognitive functions. *Eur J Cardiothorac Surg* 2005;28:88-96.
3. Jefferson A, Himali J, Beiser A, et al. Cardiac index is associated with brain aging: the Framingham Heart Study. *Circulation* 2010;122:690-7.

REPLY: Asymptomatic Cardiovascular Risk Assessment: The Road Less Traveled



We thank Dr. Rai and colleagues for their interest in our paper (1). We agree with them on the importance of these risk factors in the development of subclinical disease. These risk factors need to be addressed in accordance with the American Heart Association/American College of Cardiology guidelines to reduce cardiovascular risk (2), and should be applicable to adults both with and without existing cardiovascular disease. In our review, we have gathered evidence from the published studies that the subjects without symptomatic cardiovascular, cerebrovascular, or peripheral vascular disease, but harboring the same risk factors for development of cardiovascular disease, also experience structural and functional brain imaging changes with cognitive consequences. Given that a greater number of persons in our aging population are projected to develop mild forms of vascular cognitive impairment and cardiovascular disease, it is important, through continued imaging investigations, to gain a better understanding of the mechanisms underlying their mutual development. Such research endeavors may lead to enhanced early interventions to reverse or halt their progression and improve clinical outcomes. We have not suggested that we undertake brain imaging in every patient harboring a vascular risk factor (1).

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REFERENCES

1. Friedman JI, Tang CY, de Haas HJ, et al. Brain imaging changes associated with risk factors for cardiovascular and cerebrovascular disease in asymptomatic patients. *J Am Coll Cardiol Img* 2014;7:1039-53.
2. Eckel RH, Jakicic JM, Ard JD, et al. 2013 AHA/ACC guideline on lifestyle management to reduce cardiovascular risk: a report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines. *J Am Coll Cardiol* 2014;63:2960-84.