

Multiple benefits of added computed tomography for myocardial perfusion imaging in patients with psoriasis

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We congratulate Sioka et al. [1] for providing an excellent review of the use of single-photon emission computer tomography (SPECT) myocardial perfusion imaging (MPI) in patients with psoriasis. There was quite a little surprise that the images were reconstructed without the assistance of attenuation correction (AC). Low-dose, non-contrast, non-diagnostic computed tomography (CT) can be used for this purpose.

It may have assisted with the diagnosis of myocardial ischaemia, especially in the inferior left ventricular segments, and particularly given that the study ultimately showed no significant difference in the rate of haemodynamically-significant coronary atherosclerosis. It may also assist in identifying coronary artery calcification, which is often used as an anatomical marker for coronary artery stenosis [2]. The prevalence of coronary artery calcification in patients with psoriasis was well studied in a meta-analysis [3].

In addition, psoriasis is associated with many malignancies. A large series specified their respective types [4]. Of these, many would be identified on CT for AC. We found this modality helpful in identifying malignancies (and other significant findings) [5]. This would certainly be relevant for some of the cancers in patients with psoriasis, such as lymphomas, lung cancers, and pancreatic cancers. Thus, CT primarily for AC can contribute significantly to SPECT in patients with psoriasis.

Conflict of interest

No conflicts of interest declared

References

1. Sioka C, Moulis C, Voulgari PV, et al. Single photon emission computed tomography myocardial perfusion imaging in patients with moderate to severe psoriasis. *Nucl Med Rev Cent East Eur.* 2021; 24(2): 46–50, doi: [10.5603/NMR.2021.0014](https://doi.org/10.5603/NMR.2021.0014), indexed in Pubmed: [34382667](https://pubmed.ncbi.nlm.nih.gov/34382667/).
2. Lee JC, West MJ, Khafagi FA. Myocardial perfusion scans. *Aust Fam Physician.* 2013; 42(8): 564–567, indexed in Pubmed: [23971065](https://pubmed.ncbi.nlm.nih.gov/23971065/).
3. Kaiser H, Abdulla J, Henningsen KMA, et al. Coronary artery disease assessed by computed tomography in patients with psoriasis: a systematic review and meta-analysis. *Dermatology.* 2019; 235(6): 478–487, doi: [10.1159/000502138](https://doi.org/10.1159/000502138), indexed in Pubmed: [31480039](https://pubmed.ncbi.nlm.nih.gov/31480039/).
4. Chiesa Fuxench ZC, Shin DB, Ogdie Beatty A, et al. The risk of cancer in patients with psoriasis: a population-based cohort study in the health improvement network. *JAMA Dermatol.* 2016; 152(3): 282–290, doi: [10.1001/jamadermatol.2015.4847](https://doi.org/10.1001/jamadermatol.2015.4847), indexed in Pubmed: [26676102](https://pubmed.ncbi.nlm.nih.gov/26676102/).
5. Lee JC, Delaney FT. Prevalence and clinical significance of incidental findings on CT attenuation correction for myocardial perfusion imaging. *J Nucl Cardiol.* 2021 [Epub ahead of print], doi: [10.1007/s12350-020-02499-1](https://doi.org/10.1007/s12350-020-02499-1), indexed in Pubmed: [33754302](https://pubmed.ncbi.nlm.nih.gov/33754302/).

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