## Comorbidities in Psoriasis Psoriasis and Cardiovascular Disease

PsO and cardiometabolic disorders may be associated with each other via systemic **inflammation**<sup>1</sup>

The development of atherosclerosis in PsO may result from a combination of induced immune system activation and pan-arterial inflammation, alongside comorbid cardiometabolic conditions<sup>2</sup>



#### PsO and atherosclerosis share common disease pathways<sup>3</sup>

- Reduced T-regulatory cell numbers result in decreased production of anti-inflammatory and increased activity of Th1 and Th17 cells
- Th1 cells release pro-inflammatory cytokines that activate macrophages, keratinocytes, and vascular cells, triggering additional cytokine production

# **Risk** of CVD for patients with PsO is

## **1.5x higher**

compared to those without PsO<sup>2</sup>

### Severe PsO confers the highest CV risk (compared with control subjects), including up to<sup>2</sup>



increased odds of myocardial infarction



higher odds of CV-related mortality

### **AAD/NPF Recommendations**<sup>4</sup>

#### **CV risk assessment**

(screening for hypertension, diabetes, and hyperlipidemia) with national guidelines is recommended for **all patients with PsO** 

Clinicians should consider early and more frequent screening for hypertension, diabetes, and hyperlipidemia in PsO patients who are candidates for systemic or phototherapy or who have

PsO involving >10% of the BSA

### **Risk score models should be adapted for patients with PsO** by

introducing a **1.5** multiplication factor when the patient with PsO meets either criteria:

disease severity of BSA >10% or candidate for systemic or phototherapy

 CV risk management in PsO for hypertension and dyslipidemia should be carried out according to national guidelines. The target for blood pressure and lipid levels are based on risk calculated for PsO. Antihypertensives and statins may be used as in the general population.
CV risk management should be performed by either a primary care physician or other healthcare provider experienced in CV risk management or the dermatologist



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AAD=American Academy of Dermatologists; BSA=Body Surface Area; CV=Cardiovascular; CVD=Cardiovascular Disease; NPF=National Psoriasis Foundation; PsO=Psoriasis; Th=T Helper.

1. Hu SC, Lan CE. Int J Mol Sci. 2017;18(10):2211. 2. Garshick MS, et al. J Am Coll Cardiol. 2021;77(13):1670-1680.

3. Coumbe AG, et al. Am J Med. 2014;127(1):12-18. 4. Elmets CA, et al. J Am Acad Dermatol. 2019;80(4):1073-1113.

