

# Guidance issued for interventional radiologists treating frostbite

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(HealthDay)—For interventional radiologists, intraarterial (IA)

administration and intravenous (IV) administration of tissue plasminogen activator (tPA) are both useful strategies for treating severe frostbite injuries, according to a review and meta-analysis recently published in the *American Journal of Roentgenology*.

John Lee, M.D., and Mikhail C.S.S. Higgins, M.D., M.P.H., from Boston Medical Center, reviewed case reports, case series studies, cohort studies, and randomized prospective studies reporting the use of tPA, a thrombolytic therapy, in treating severe [frostbite](#) injuries. An initial literature search yielded 157 citations, and 16 articles passed a manual screening to qualify for review. The authors note that initial imaging evaluation was performed via both digital subtraction angiography and triple-phase bone scan.

The researchers found that of 209 patients and 1,109 digits at risk for amputation, 116 and 77 patients were treated with IA tPA and IV tPA, respectively. Of 926 digits at risk that were treated with IA tPA, 222 resulted in amputation (76 percent salvage rate). Of 63 patients with digits at risk that were treated with IV tPA, 24 resulted in amputation (62 percent salvage rate). Concurrent treatments included therapeutic heparin, warfarin, nonsteroidal anti-inflammatory drugs, [pain management](#), and light dressings with topical antimicrobials.

"For many years, the axiom 'frostbite in January, amputate in July' was an accurate description of the common outcome in frostbite injuries," the authors write. "Through a meta-analysis of thrombolytic therapy in the management of severe frostbite, this article provides a useful guideline for interventional radiologists, including a suggested protocol, inclusion and exclusion criteria, and potential complications."

**More information:** [Abstract/Full Text \(subscription or payment may be required\)](#)

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