

# INFOGRAPHICS IN ANESTHESIOLOGY

Complex Information for Anesthesiologists Presented Quickly and Clearly

## Turning up the HEAT on Pain Relief: Phase 2 Trial of Vocacapsaicin



- Phase 4 Trials**
  - Continued tracking of safety and treatment benefits
- Phase 3 Trials**
  - More patients (thousands)
  - Effectiveness compared to current treatment
- Phase 2 Trials**
  - More patients (100–300)
  - Efficacy and safety
- Phase 1 Trials**
  - Few patients (20–80)
  - Safety, side effects, dosing



Capsaicin, a chili pepper extract, is an agonist at TRPV1 receptors on afferent sensory neurons. Agonism causes pain followed by a refractory period.<sup>1</sup> Vocacapsaicin is a water-soluble prodrug of capsaicin designed for tissue infiltration. Shafer *et al.* report a phase 2 trial of vocacapsaicin for bunionectomy.<sup>2</sup>

### Study Design



147 subjects



Triple-blinded randomized



Vocacapsaicin doses studied:

0.30 mg/ml  
0.15 mg/ml  
0.05 mg/ml

### Sizzling Outcomes

<b>AUC Pain NRS 0–96 h</b> ↓ 33% (95% CI, 10–52%) P=0.005	<b>No postop opioids</b> 26% (vs. 5%) P=0.025
<b>Total opioids 0–96 h</b> ↓ 50% (95% CI, 26–67%) P=0.002	<b>AUC Pain NRS 0–168 h</b> ↓ 37% (95% CI, 12–57%) P=0.004

Vocacapsaicin .03 mg/ml vs. Placebo

### Study Conditions



Homogenous population



Compared to placebo not local anesthetic



No postoperative nonopioid analgesics or regional anesthesia



### CONCLUSION

A single dose of vocacapsaicin, administered locally into tissues, reduced pain and opioid consumption after bunionectomy, a common model of postoperative pain. Further phase 3 studies are needed to determine the clinical effectiveness of this new drug.

AUC, area under the curve; NRS, numeric rating scale; TRPV1, transient receptor potential vanilloid subfamily member 1.

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1. Clark JD: A spicy new treatment for postoperative pain. *ANESTHESIOLOGY* 2024; 141:201–3

2. Shafer SL, Teichman SL, Gottlieb IJ, et al.: Safety and efficacy of vocacapsaicin for management of postsurgical pain: A randomized clinical trial. *ANESTHESIOLOGY* 2024; 141:250–61