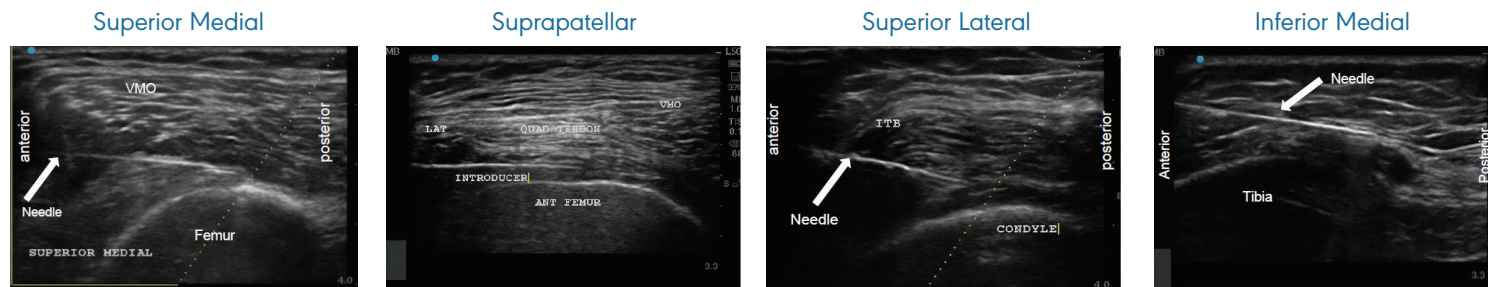
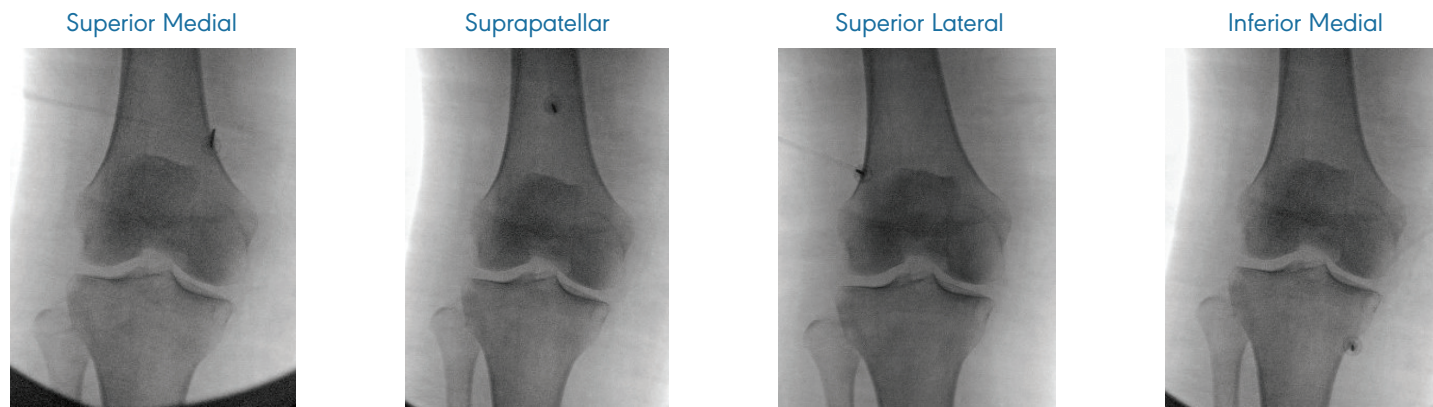


Final Probe Placement Using Ultrasound



Final Probe Placement Using Fluoroscopy



**GET YOUR PATIENTS
BACK TO THE THINGS
THAT MATTER.**

Learn more about how COOLIEF* Cooled RF
can fit into your treatment algorithm
for chronic OA knee patients.
CooliefForOrthos.com

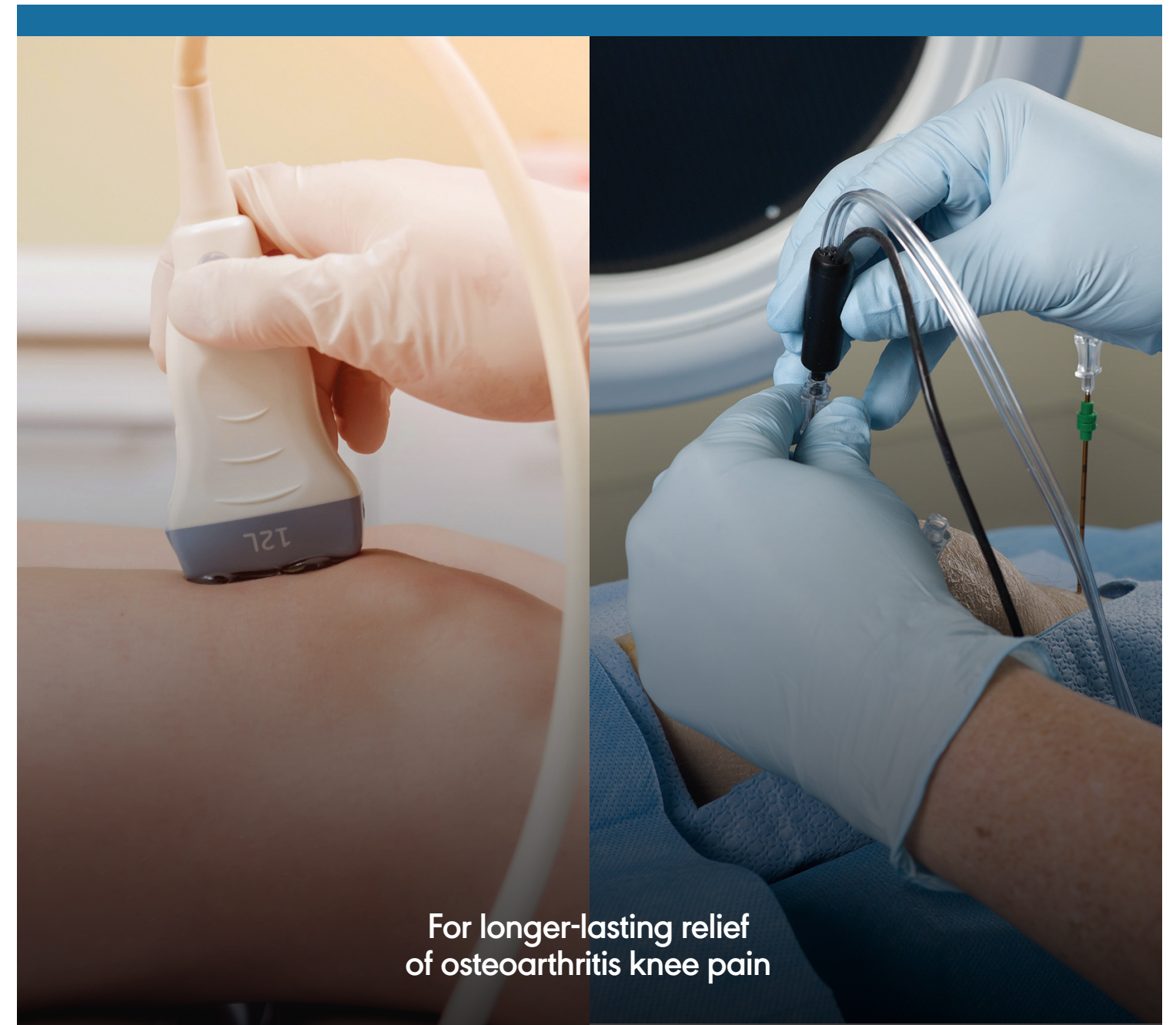
References: 1. Davis T. Study: Cooled RF Ablation Superior to Corticosteroids in Knee Osteoarthritis. Pain Medicine News 2017 Feb. 2. Halyard Health Inc. sponsored study: A Prospective, Multi-Center, Randomized, Clinical Trial Evaluating the Safety and Effectiveness of Using COOLIEF™ Cooled Radiofrequency Probe to Create Lesions of the Genicular Nerves and Comparing Corticosteroid Injection in the Management of Knee Pain. Final results 03Apr2017. Study available upon request from Avanos.

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COOLIEF* COOLED RF: ULTRASOUND AND FLUOROSCOPIC-GUIDED KNEE TECHNIQUES OVERVIEW



**For longer-lasting relief
of osteoarthritis knee pain**

AVANOS

Indication for Use

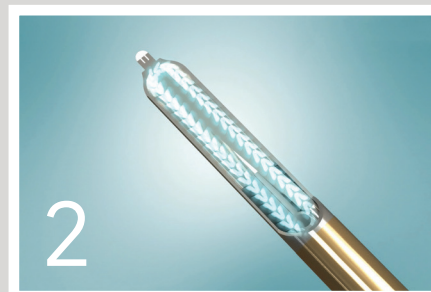
The COOLIEF* Cooled Radiofrequency Probe is to be used in conjunction with a radiofrequency generator to create lesions in nervous tissue. It is intended for use in Radiofrequency (RF) heat lesion procedures for relief of pain and includes a fluid delivery system for commonly used fluid agents limited to contrast medium, saline, and/or anesthetic solution delivery at the target site.

This device is also indicated for creating radiofrequency lesions of the genicular nerves for the management of moderate to severe knee pain of more than 6 months with conservative therapy, including medication, in patients with radiologically-confirmed osteoarthritis (grade 2-4) and a positive response ($\geq 50\%$ reduction in pain) to a diagnostic genicular nerve block.

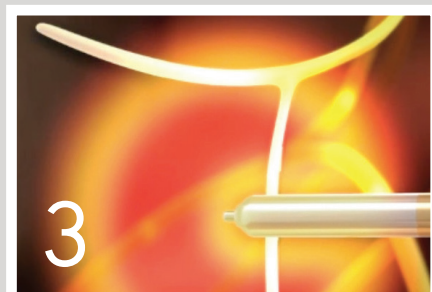
HOW COOLIEF* Cooled Radiofrequency (RF) WORKS



The COOLIEF* Cooled Radiofrequency Generator transmits a small current of RF energy through an insulated electrode placed within the knee's tissue



The electrode delivers water-cooled energy through RF electrodes



This RF energy creates a targeted lesion that ablates and deactivates the sensory nerves responsible for sending pain signals to the brain, while leaving motor nerves intact to preserve function.

Please see Instructions for Use for detailed information regarding proper use that includes indications and lists of warnings, precautions and contraindications

Patient Selection Considerations

Diagnosis

- Radiologically confirmed grades 2-4 osteoarthritis
- Moderate to severe knee pain > 6 months, and no longer adequately managed by conservative therapy
- Greater than 50% pain relief from a single block of the genicular nerves (no more than 0.5 - 1.0 ml injectate per block)

COOLIEF* COOLED RF: ULTRASOUND AND FLUOROSCOPIC-GUIDED KNEE TECHNIQUES OVERVIEW

COOLIEF* Cooled RF Technique

- Utilize 4mm active tip
- Use same positioning and targets as the diagnostic blocks
- Remove stylet, insert probe and stimulate each genicular nerve branch at 2 Hz up to 1-2 volt searching for any lower extremity motor activity
- If no motor response is observed, inject local anesthetic prior to lesioning, allow adequate time for the anesthetic to disperse
- Radiofrequency lesioning at COOLIEF* Cooled RF Default Settings for 2:30 min at each site

ULTRASOUND TECHNIQUE: TOP TAKEAWAYS

- Placement Target Priority: Nerve>Vessel>Bone
- Energy dissipation from lesioning causes artifacts on ultrasound
- Beware of effusions -consider burning the nerve proximal to the effusion or aspirating the effusion before the procedure is performed
- An additional lesion can be considered if two genicular arteries are present or the anatomy is poorly defined
- Angled approach for very thin patients to better support probe
- Ensure diagnostic block is no more than .5 -1 mL