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2-17-2023

### Surgeon's Knot With 3 Throws to Facilitate Wound Closure: A Video Walkthrough

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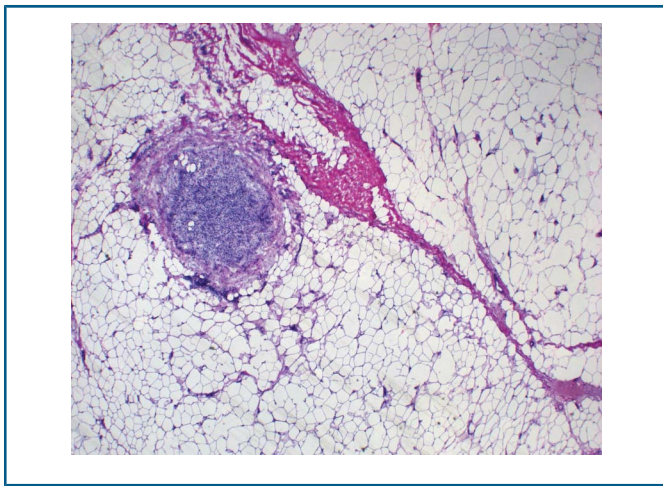
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#### Recommended Citation

Wuennenberg J, Kolli SS, Powers M, and Ozog D. Surgeon's Knot With 3 Throws to Facilitate Wound Closure: A Video Walkthrough. *Dermatol Surg* 2023.

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**Figure 4.** A 0.2-mm focus of DFSP in the subcutis. The location of the small tumor deposit in the subcutis underscores the importance of this technique as described.

increasing the risk of false positives.<sup>5</sup> Instead, by working in cryostats at  $-35^{\circ}\text{C}$  and using Peltier plates, our histotechnologists avoid excess tissue loss while efficiently processing these challenging specimens.

The successful extirpation of tumors that grow contiguously in small, infiltrative extensions requires margin examination with high fidelity to the complete surgical margin. A well-designed embedding process with careful observation

allows for consistent production of artifact-free sections in notoriously challenging adipose-rich specimens. By conscientious tissue handling, the Mohs micrographic surgery laboratory enables successful Mohs surgery on deeply infiltrative tumors.

## References

1. Aslam A, Aasi SZ. Frozen-section tissue processing in Mohs surgery. *Dermatol Surg* 2019;45:S57–S69.
2. Ellis JI, Khrom T, Wong A, Gentile MO, et al. Mohs math—where the error hides. *BMC Dermatol* 2006;6:10.
3. Reserva J, Kozel Z, Krol C, Speiser J, et al. Processing adipose-rich Mohs samples: a comparative study of effectiveness of pretreatment with liquid nitrogen versus flash freezing spray. *The Am J Dermatopathology* 2017;39:838–41.
4. Ardévol A, Cañas X, Remesar X, Alemany M. Cooling rates of tissue samples during freezing with liquid nitrogen. *J Biochem Biophysical Methods* 1993;27:77–86.
5. Taylor BR, Groover JA, Cook J. Facing the block and false positives in Mohs surgery: a retrospective study of 2,198 cases. *Dermatol Surg* 2013;39:1662–70.

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The authors have indicated no significant interest with commercial supporters.

## Surgeon's Knot With 3 Throws to Facilitate Wound Closure: A Video Walkthrough

**H**igh-tension wounds may pose a challenge during wound closures. Many techniques exist to facilitate these closures, but few have been described with an accompanying **Supplemental Digital Content, Video**, <http://links.lww.com/DSS/B219> demonstration.<sup>1</sup> The surgeon's knot with 3 throws does not require an assistant. The independent nature of the technique reduces the assistant's opportunity cost, resulting in increased clinical efficiency. The following technique we describe is a surgeon's knot with 3 throws and is a simple solution to closing a high-tension wound that has not been adequately demonstrated previously.

First, place a buried vertical mattress suture followed by 3 throws to start the surgeon's knot and cinch it down by gently tugging back and forth parallel to the wound edges until there is eversion or positive pressure on the dermal edges. Then, while maintaining tension on the tail of the suture that the needle driver is grasping, move the other end of the suture to the same side to seat your knot deeply within the wound. Then, in a tension-free field, you can complete a second throw to lock the knot. Additional single throw squared and nonsquared knots may follow it for security.<sup>2</sup> This technique of a surgeon's knot with 3 throws has been minimally described in the

literature, and the technique is possibly not equally well known among trainees. The accompanying video demonstrates this skill to help educate current and future dermatological surgeons.

## References

1. Davis DA, Tisdale GG. 1, 2, 3, 4: Four techniques to secure buried knots. *Dermatol Surg* 2002;28:588–9.
2. Leavitt E, Sako E, Lask G, Kim J. Knot tying and suture preferences among mohs surgeons. *Dermatol Surg* 2021;47:483–5.

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