

## RISING DERM STARS®

## Effect of Suture Spacing on Wound Cosmesis

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**Background:** Sutures are the standard of care in repairing cutaneous wounds. Most surgical reconstructions following Mohs micrographic surgery and standard surgical excisions require two layers of sutures: a deep layer and a top layer. Some surgeons feel the need to place many deep sutures in order to reduce tension on the sutures and hence decrease the chance of wound separation and dehiscence. However, there are other surgeons who feel that deep sutures are only required in areas of high tension and that a higher number of deep sutures increases the risk of a spitting suture which leads to patient anxiety and poor wound cosmesis. Thus, it is important to understand if an increased number of subdermal sutures is actually beneficial in terms of wound cosmesis. To our knowledge, there are no studies published on the effect of subdermal suture spacing on wound cosmesis.

**Objective:** To determine whether the spacing between subdermal interrupted sutures during repair of linear cutaneous surgery wounds affects scar cosmesis. In other words, the goal was to determine which of the following yields a more cosmetically appealing scar: many closely approximated subdermal sutures or fewer, more widely spaced subdermal sutures. The study specifically compared the effects of one

versus two centimeter spacing between sutures.

**Methods:** 50 patients were enrolled in a randomized clinical trial using a split wound model, where half of the wound was repaired with sutures spaced two centimeters apart and the other half was repaired with sutures spaced one centimeter apart. Both the physician and patient were blinded as to which side received which treatment. Three-months post-surgery, the scar was evaluated via POSAS: the Patient and Observer Scar Assessment Scale, a validated scar instrument.

**Results:** No statistically significant difference seen between 1 cm spacing versus 2 cm spacing of subdermal sutures in preliminary analysis.

**Limitations:** Our sample size was only 50 patients. Future studies could examine larger populations.

**Conclusion:** Suture spacing has no effect on wound cosmesis. Thus, placing fewer and more widely spaced sutures is more time efficient.