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Multidisciplinary research urged for optimal melanoma surgery

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In an editorial published October 23rd in the *Lancet*, UNC Lineberger member David Ollila, MD, and co-author John Thompson, MD, of the Melanoma Institute Australia, praise a new study on optimal margins for melanoma surgery but urge researchers to bring new molecular and genetic techniques to bear on the question of how to minimize the need for more complex surgical techniques while maximizing long-term patient survival.

When removing melanomas from the skin, surgeons have to plan an excision 'margin' around thecancer to minimize the chance of a localized recurrence. However, larger excision margins often require a skin graft or a complex flap to close,, note Ollila and Thompson, citing one study where 46 percent of patients with four centimeter margins needed a skin graft compared with only 11 percent of patients with a two centimeter margin.

A recent meta-analysis – a technique where multiple trial results are compiled and compared to assess the evidence base – notes that current evidence from randomized clinical trials is not adequate to tell surgeons the best margin for common clinical presentations of melanoma. An article published today in the same issue of The Lancet adds to the evidence base with a trial that notes no significant difference in overall survival or recurrence-free survival for patients with a melanoma thicker than 2mm who were randomly assigned to a two centimeter or four centimeter resection margin.

The authors note that the next appropriate study would be to compare one centimeter and two centimeter margins in a randomized trial which could potentially further minimize the need for skin grafts and/or complex closure techniques. They also urge their colleagues in the field to advance the understanding of melanoma tumor biology to help ensure a safe excision margin using multidisciplinary team science. One possibility could be new techniques to evaluate the cells near the margins called comparative genomic hybridization and fluorescent in-situ hybridization. These techniques could be used to ensure that a smaller surgical margin around the tumor still has an adequate clearance of malignant melanocytic cells. If not this could be the possible explanation for a local recurrence.

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