Utilization trends for Mohs micrographic surgery versus wide local excision for melanoma: a 5-year, global analysis

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Background
Recent study has demonstrated no survival disadvantage for patients with primary cutaneous melanoma treated with Mohs micrographic surgery (MMS) versus wide local excision (WLE), but it is unclear if practice patterns have changed accordingly. This analysis aims to assess utilization trends for melanomas treated with either MMS or WLE during the past 5 years.

Type of Study:
Global cohort analysis.

Methods
A global health research network (TriNetX) consisting of de-identified medical records from 100 health care organizations was used to identify cohorts of patients with primary cutaneous melanomas treated with either WLE or MMS from 2018-2022. Within these groups, the location of each treated melanoma was recorded and compared between both years and cohorts.

Results:
The number of melanomas treated surgically increased over the past 5 years (2018: 6,265, 2019: 6,394, 2020: 5,903, 2021: 6,834, 2022: 6,874), comprising a 10% increase. During this time, there was a 31% (+160) absolute increase in the number of melanomas treated with MMS compared to an 8% (+449) absolute increase in those treated with WLE. However, the relative proportions remained the same for each treatment cohort over 5 years, with approximately 9% and 91% of surgical cases each year treated with MMS and WLE, respectively. Tumors treated with MMS heavily favored the face (40%) compared with WLE (13%) on average over the study period.

Conclusions:
While the absolute number of melanomas treated with either MMS or WLE increased from 2018 to 2022, there remained minimal differences in percentage treated with each modality. This stagnation could be explained by several reasons, including an unawareness of the changing criteria for MMS for melanoma or a lack of standardization and thus comfort with performing MMS. As surgical training adapts to meet evolving guidelines and novel technologies (i.e. immunostaining) are implemented, it is reasonable to expect an increase in these treatment proportions.