

Meek Micrografting in the German Hospital Setting: An Assessment of Recent Developments in Wound Management

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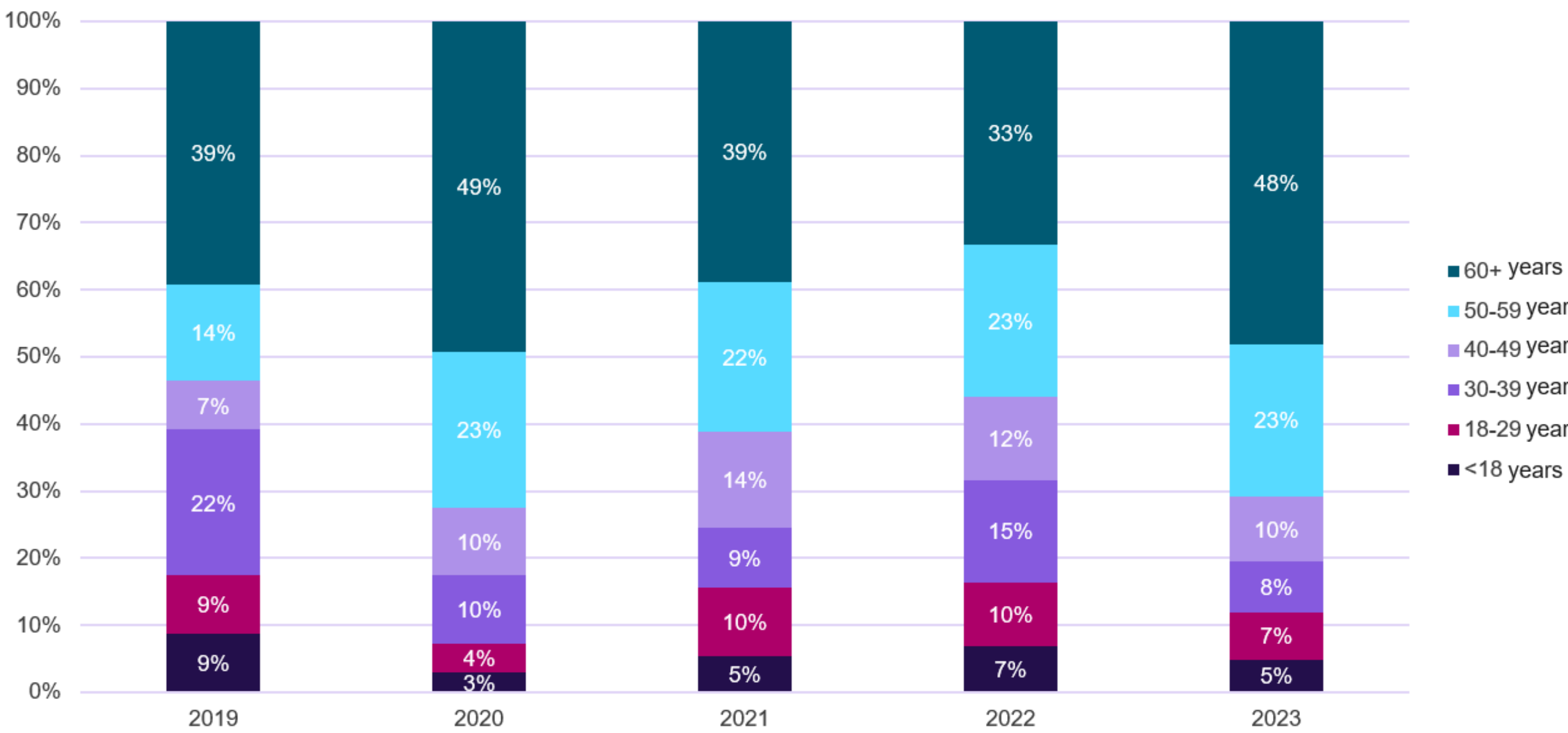
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OBJECTIVES: It is estimated that approximately 3.500 per one million people are living with a wound, of which 525 per one million people suffer from a chronic wound, which lasts at least one year. The standard of care for wound coverage is to use an autologous skin graft, but large and or chronic wounds pose a challenging problem. Innovative developments in autologous micrografting technologies provide a minimally invasive alternative to traditional meshed skin grafting for wound coverage.

METHODS: This retrospective data analysis was based on German hospital data from the Institute for the Hospital Remuneration System (InEK) of the years 2019 - 2023. Meek micrografting procedures were identified by operation and procedure key (OPS code) 5-925.7*. Localizations of treatment were identified by OPS 6-digit codes.

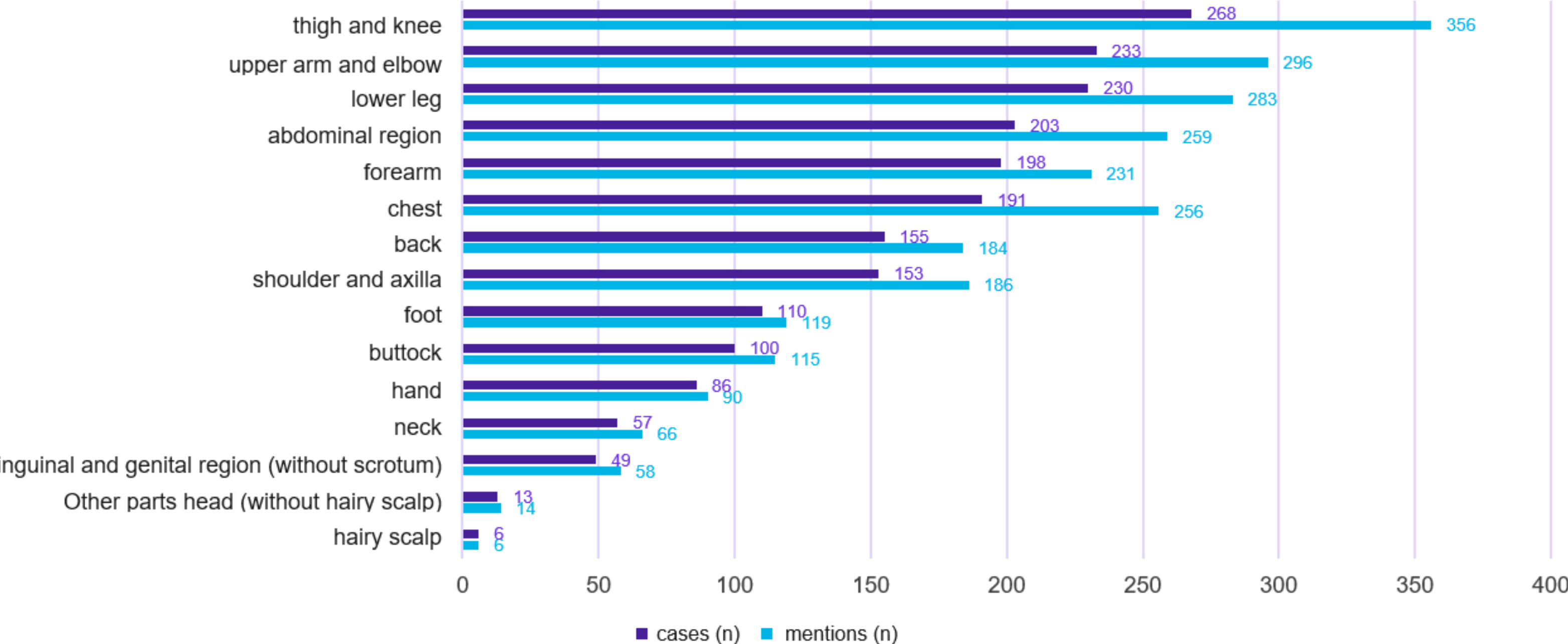
RESULTS: In contrast to the well-established Mesh procedures (>2.000 p.a.), a total of n=647 hospitalized patients received at least one Meek micrografting procedure during 2019-2023. The number of patients undergoing such procedure increased 2.7-times from 2019 (n=69) to 2023 (n=185). On average, patients received 1.2 applications of Meek micrografting during their hospitalization.

Figure 1: Age-distribution of patients receiving a Meek micrografting from 2019-2023



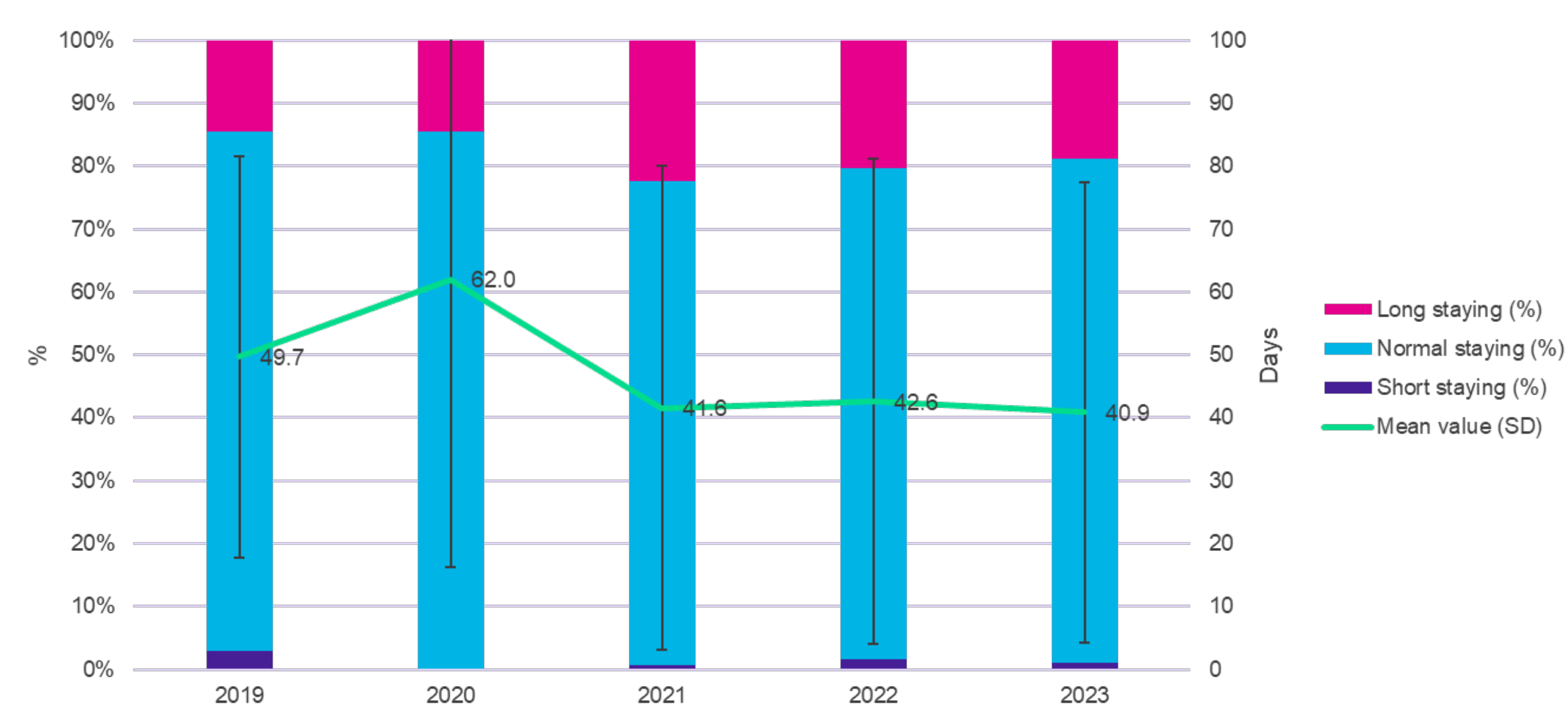
41% of these patients were 60+ years old and 65% were male. Noteworthy, 2.5% of patients were <10 years and 3.9% were <16 years young.

Figure 2: Number of cases and applications of Meek micrografting procedures by treatment localization



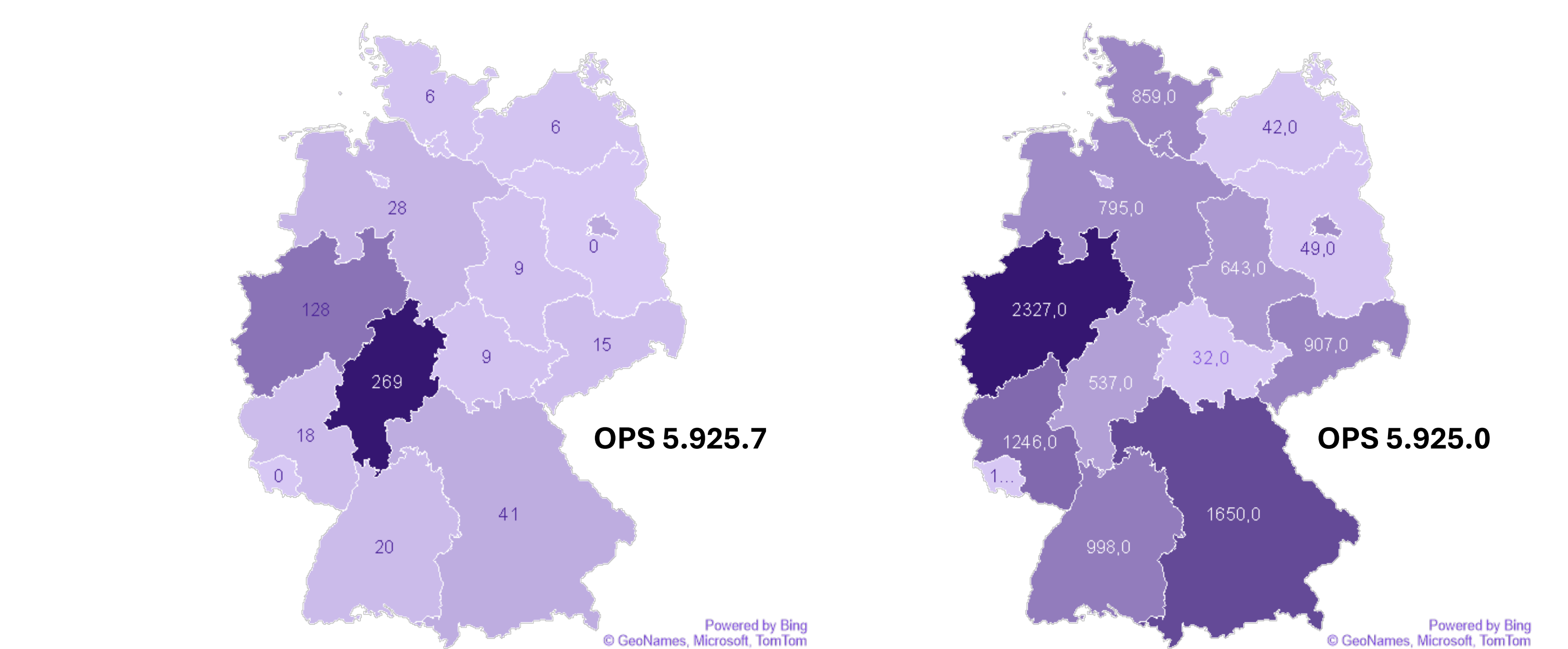
Most treated localizations with Meek micrografting were thighs and knees (13.1%), followed by upper arm and elbow (11.4%) and lower leg (11.2%). Least treated localization was hairy scalp (0.3%).

Figure 3: Length-of-stay of patients receiving a Meek micrografting from 2019-2023



Weighted average length of stay was 44.7 days (2019-2023). Arithmetic mean length of stay decreased by 8.8 (95%CI: -0.4, 18.0) days from 49.7 ($\pm$ 31.8) days in 2019 to 40.9 ($\pm$ 36.5) days in 2023.

Figure 4: Density-pattern of Meek and Mesh procedures in Germany between 2019-2023



Cumulated numbers in Meek (OPS 5.925.7; left) and Mesh (OPS 5.925.0; right) procedures in Germany from 2019-2023). Preference and adoption pattern of procedures seem to be distributed entropically.

SUMMARY:

The number of Meek micrografting procedures increased by more than twofold from 2019 to 2023.

Most treated localizations with Meek micrografting were thighs and knees followed by upper arm and elbow.

Interestingly, and the pandemic considered, the arithmetic mean length of stay of patients receiving Meek micrografting procedures decreased by 8.8 days over a period of five years.

CONCLUSION:

Autologous micrografting may provide the starting signal for faster endogenous wound healing response. The increased usage of Meek micrografting procedures in the inpatient setting in Germany might prompt the implementation of innovative technologies in wound management.

The impact for the outpatient setting remains to be assessed.