variation or changes in clinical practice and patient choice; greater awareness of end of life planning and prolonged waiting lists may encourage conservative management of these tumours, where appropriate, or perhaps there is greater skin cancer awareness and prevention in these populations.

The reversal of the male:female ratio in younger age groups is a matter of concern and may be due to lifestyle factors such as increased sunbathing among young women. With one in five persons developing NMSC in their lifetime, optimization of skin cancer research, prevention and clinical management is essential.

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Supporting Information

Additional Supporting Information may be found in the online version of this article at the publisher’s website:

File S1 Full list of affiliations and acknowledgments.

The effect of surgical-site infections on patient-reported cosmetic outcomes of scars in dermatological surgery

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Deb Editor, Surgical-site infections (SSIs) are highly unsought complications that add unnecessary costs to patients and healthcare systems.1–4 SSIs are also believed to contribute to poor wound cosmesis,4 but studies supporting this idea are scarce. We aimed to examine whether differences were found in patient-reported scar outcomes between patients who had an SSI after dermatological surgery and patients with normal wound healing. This comparison was made using SCAR-Q, a validated, patient-reported outcome instrument.

Following ethical approval and registration at ClinicalTrials.gov (NCT04744961), a case–control telephone interview study was conducted at the Department of Dermatology, Skåne University Hospital, Sweden, from March to April 2021. Randomly selected patients over 18 years old diagnosed with SSIs who had undergone skin cancer surgery between March 2017 and March 2020 were compared with a matched control group with no registered SSIs. SSIs were retrieved from an electronic database containing all cases assessed by a dermatologist as infected. All surgical excisions were repaired by either direct closure or skin grafting.
Patients with cognitive impairment, patients with hearing disabilities that would not allow for a telephone interview to be conducted, and/or patients unreachable after four telephone attempts were excluded. All interviews were conducted by a single investigator (R.H.). All included patients responded to the SCAR-Q scar appearance scale and psychosocial impact scale. Data from SCAR-Q were converted into an equivalent Rasch transformed score. Each score ranged from 0 to 100, and a higher score indicated a better scar outcome. We hypothesized that the anticipated mean SCAR-Q scores would differ between the two groups by at least 10 units with an SD of 20 for each mean score. To achieve a statistical power of 80%, approximately 60 patients were needed in each group.

Reported variables included the patient’s age and sex, the anatomical location of the scar and the type of surgical repair technique. Statistical analysis was performed in SPSS (IBM, Armonk, NY, USA). Patient demographics were compared using a t-test for ages and χ2-test for categorical variables. A Mann–Whitney test was used to compare mean SCAR-Q score differences between two categorical variables, and a Kruskal–Wallis H-test was used to compare multical- egorical variables. A multiple linear regression analysis was used to examine which variables were related to SCAR-Q scores. All P-values were deemed statistically significant at P ≤ 0·05.

In total 114 patients were included. Fifty-seven patients had a diagnosis of SSI, and 57 patients had normal postoperative wound healing (Table 1). Seven patients with an SSI declined to participate in the survey, as did five in the control group. Results from the SCAR-Q surveys are shown in Table 1. No significant differences in either scar appearance scores (P = 0·71) or psychosocial impact scores (P = 0·16) were found between the groups.

Multiple regression analysis revealed that patient sex was related to both scar appearance and psychosocial impact scores (P = 0·005 and 0·003, respectively) after adjusting for all other variables.

In summary, SSIs did not have a significant effect on SCAR-Q scores in our study. Additional and larger multicentre studies would be needed to support the general notion of an SSI leading to a less cosmetically appealing scar from a patient’s perspective.

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Dear Editor, Systemic treatment with programmed death receptor 1 (PD-1) inhibitors has been approved for patients with advanced cutaneous squamous cell carcinoma (cSCC) ineligible for curative surgery or radiation. The PD-1 inhibitors cemiplimab and pembrolizumab have shown promising response rates of 50% and 38-5%, respectively.\(^1\)\(^2\) Experience of the use of PD-1 inhibitors in the treatment of cSCC of the head and neck region (cSCCHN) is limited. We hypothesized that PD-1 inhibitors would have a limited place in clinical practice, as a large proportion of patients with advanced disease are immunocompromised (e.g. organ transplant patients) and would have a contraindication for PD-1 inhibitors. Therefore, we analysed the proportion of our institutional cohort of patients with advanced cSCCHN who would theoretically be eligible for treatment with PD-1 inhibitors according to the eligibility criteria of the registration study and according to expected real-life eligibility criteria.

Patients with primary cSCCHN treated between 2000 and 2014 at the University Medical Center Groningen were retrospectively included. Patients diagnosed with nodal and/or distant metastatic cSCCHN or inoperable locally advanced cSCCHN (T3/T4 in the American Joint Committee on Cancer 8\(^{th}\) edition classification system) were identified. Patients were deemed inoperable if surgery was decided against by the tumour board prior to treatment because of tumour size, expected loss of functionality or severely impaired condition of the patient. The reason for the decision not to operate was extracted from the tumour board notes in the electronic patient files.

Exclusion criteria in the registration study were categorized into absolute and relative contraindications based on clinical experience and the literature. Contraindications defined absolute were immunosuppression equalling ≥ 10 mg prednisolone, organ transplant other than kidney, and an Eastern Cooperative Oncology Group (ECOG) performance score > 2. Relative contraindications were organ failure,\(^3\) autoimmune disease in the last 5 years,\(^4\) brain metastases,\(^5\) kidney transplant,\(^6\) ECOG performance score = 2, malignancy in the past 5 years (unless treated with curative intent and no recurrence) and tumour location on eyelid or lip.\(^7\)

Kidney transplant was considered a relative contraindication as opposed to other organ transplants, as graft rejection in kidney recipients (which may be induced by PD-1 inhibitors) does not influence overall survival.\(^6\) Furthermore, although not preferable, kidney recipients with a failing graft could restart dialysis to replace renal function. The reason for exclusion of patients with tumours arising from the eyelid or lip is not stated in the protocol of the registration study. Furthermore, these patients may especially benefit from systemic therapy, as surgical excision will often cause a loss of functionality.

All analyses were performed at the patient level. In case of multiple tumours per patient the tumour with the highest stage was selected; in case of equal stages the tumour that developed first within the inclusion period was selected. Statistical analyses were performed using SPSS Statistics (v. 23-0; IBM, Armonk, NY, USA).

From the total of 770 patients with 1116 cSCCHNs, 164 patients had locally advanced tumours (21-3%), of whom 12 patients were deemed inoperable (1-6%). Metastatic disease occurred in 64 patients (8-3%), including 13 patients with

| Reason ineligible for PD-1 inhibitors, n (%) | Inoperable locally advanced or metastatic disease (n = 69) |
|--------------------------------------------|-------------------------------------------------------|
| Absolute exclusion criteria                |                                                      |
| Immune suppression equaling ≥ 10 mg prednisolone | 0                                                   |
| Organ transplant other than kidney         | 1 (1)                                                 |
| ECOG performance score > 2                 | 3 (4)                                                 |
| Total absolute                             | 4 (6)                                                 |
| Relative exclusion criteria\(^a\)           |                                                      |
| Organ failure                              | 2 (3)                                                 |
| Autoimmune disease diagnosed or treated in the last 5 years | 2 (3)                  |
| Brain metastases                           | 1 (1)                                                 |
| Kidney transplant                          | 3 (4)                                                 |
| ECOG performance score = 2                 | 6 (9)                                                 |
| ECOG performance score unknown             | 10 (14)                                               |
| Malignancy in the past 5 years (not treated locally) | 3 (4)               |
| Tumour location on eyelid or lip           | 16 (23)                                               |
| Total relative                             | 36 (52)                                               |

ECOG, Eastern Cooperative Oncology Group. \(^a\)Some patients were ineligible for checkpoint inhibitors due to more than one reason, making the total number lower than when all separate criteria numbers are counted. If a criterion was unknown, the patient was considered unfit.

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Eligibility criteria for programmed death receptor 1 inhibitors vs. real-world advice: a retrospective analysis of 69 patients with advanced cutaneous squamous cell carcinoma of the head and neck

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