Dermatoscopically narrowed surgical margins for head and neck basal cell carcinoma: A retrospective case-control study

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Summary

Background: Basal cell carcinoma (BCC) can cause extensive tissue damage if untreated. Complete surgical excision is the treatment of choice, but especially in the head-and neck area, defining both radical and healthy skin sparing surgical margins is complex.

Materials and methods: Excised, small (≤ 1 cm), BCCs of the head and neck were retrospectively analyzed, comparing histological properness of surgical margins after clinical-dermatoscopical preoperative evaluation (cases), vs. clinical evaluation only (controls) and recurrences.

Results: Of 281 BCCs: 6 % (8/139) of cases and 8 % (12/142) of controls had unproper deep margins; 4 % (5/139) of cases, 20 % (29/142) of controls had unproper lateral margins (P < 0.001). Surgical 3 mm lateral margins were unproper in 0 % (15/66) of cases, 15 % (10/66) of controls (P > 0.005); surgical 1–2 mm lateral margins were unproper in 7 % (5/73) of cases, 25 % (19/76) of controls (P < 0.01). Of cases excised at 3 mm, 1–2 mm, and controls, 1.5 %, 0 %, and 7.7 % recurred, respectively.

Conclusions: BCC excision at 3 mm may be appropriate in the head and neck for small, dermatoscopically well-defined and non-aggressive BCCs, attaining surgical cure rates of 100 % and 1.5 % recurrences. Excision at 1–2 mm should be reserved only for BCCs in very difficult-to-treat areas, as the surgical cure rate was only 93 %.

Introduction

Basal cell carcinoma (BCC) is the most common skin cancer, accounting for 75–77 % of all skin malignancies [1, 2]. It is characterized by slow growth, but infiltrating and destructive potential [1]. UV-radiation exposed areas, especially in light-skinned individuals, are the sites of predilection for BCC development: about 80 % of cases occur in the head and neck area [1, 3, 4]. Particularly on the face, if left untreated or incompletely treated, BCC can cause extensive tissue damage [3, 5]. The treatment of choice in primary BCC is complete surgical excision with histological examination of excision margins [1, 6, 7]. According to the recurrence risk of each BCC, surgical options are the gold standard three dimensional (3D) microscopically margin controlled surgery, where available, or otherwise, conventional excision with wide 5–15 mm margins (for high risk BCCs) and 3–5 mm margins (for low risk BCCs) [1, 6–12]. The updated German S2k Guidelines for cutaneous BCC recommend surgical margins of > 5 mm in case of conventional excision for high recurrence risk BCCs, including head and neck BCCs ≥ 6 mm in diameter of the H zone (eyelids, eyebrows, periorbital region, nose, upper lip, jaw angle, pre-and postauricular region, ears, temples) and BCCs ≥ 10 mm in diameter of the M zone (cheeks, forehead, chin, lower lip, scalp, neck) [6].

In the clinical practice, however, recommended surgical margins are not always feasible, and narrow surgical margins (1–3 mm) are often applied to reduce the size of the surgical defect, especially in the facial region, where BCCs fall mostly under the high-risk category [6–8]. Indeed, safety margins

should reasonably be designed both to minimize anatomical and functional damage and to obtain the safest surgical margin possible to avoid cancer recurrence [4, 13–15].

Especially in the head and neck region, the need to integrate radicality of tumor excision with a minimization of healthy tissue damage has recently led to efforts to reach agreement on narrower safety margins [5, 8]. Indeed, it has been proposed that a 3 mm surgical margin can be safely used to attain 95 % cure rates in the head and neck area, for small (≤ 2 cm) well-defined (nodular and superficial type) non-morpheaform BCCs [5], or of 2–3 mm in well-defined, primary, pigmented, nodular or superficial BCCs [8].

Dermatoscopy, introduced in the surgical setting, may be of considerable assistance to determine the tumor area more precisely and thereby reduce the extent of safety margins [16, 17]. Indeed, dermatoscopical correction of the clinical surgical margin has been proven to be 1 mm [17] and dermatoscopical tumor borders have been shown to fit closely with histopathological borders [8]. In this study, we aimed to evaluate if dermatoscopy can be efficiently used to reduce wideness of surgical safety margins in well-defined, non-aggressive BCCs of the head and neck.

Materials and Methods

In this study we compared the histological properness of surgical safety lateral and deep margins, obtained after clinical-dermatoscopical preoperative evaluation (cases), and after clinical evaluation only (controls). Also, we compared clinical recurrences observed during follow-up in cases vs. controls. In detail, we conducted a retrospective case-control study on BCCs of the head and neck.

Inclusion criteria were primary BCC, histologically confirmed BCCs on head and neck, tumor size ≤ 1 cm, nodular and superficial histotype, surgical excision performed with radical intent with safety margins (≥ 1 mm).

Exclusion criteria were: other locations than head and neck, non-histologically confirmed BCCs, tumor size > 1 cm, histotypes other than nodular and superficial, recurrent BCCs, organ transplant patients, previous treatment by topical chemotherapies or radiotherapy at the tumor excision site, excisions planned preoperatively to be incomplete (comprising shave excisions, curettage, incisional biopsies, excisions in two stages), as well as excisions on the tumor margin (safety margins < 1 mm).

The group of cases included consecutive BCCs, surgically excised after preoperative clinical and dermatoscopical evaluation, between November 2019 and November 2020.

The group of controls included consecutive BCCs, surgically excised without preoperative dermatoscopical evaluation, but only clinically evaluated, with the naked eye, between January 2013 and January 2014 (Figures 1a, b; 2a, b).
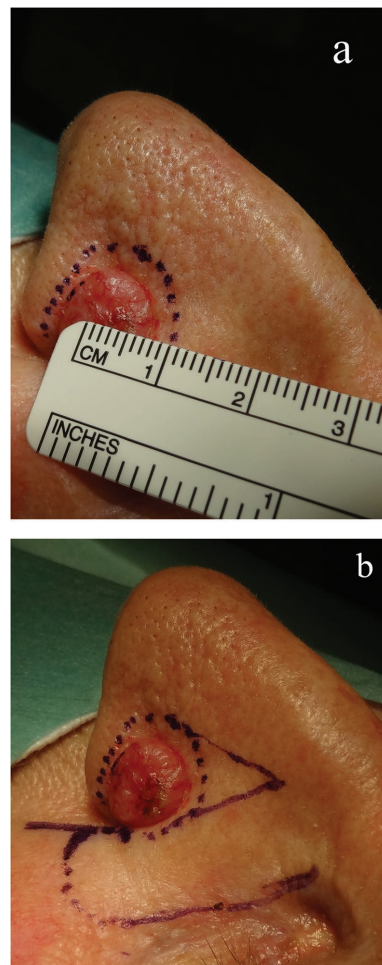
Figure 1 Basal cell carcinoma of the nose (control, only clinically evaluated): surgical safety margins at 1.5 mm are outlined by blue dots (a). Clinically evaluated surgical margins at 1.5mm (blue dots) and surgical planning (blue full line) (b).

Indeed, at this time dermatoscopical presurgical evaluation was not in use at our hospital.

To define adequate pre-surgical safety margins, the tumor area was first evaluated clinically in both cases and controls. Clinical margins were then also outlined dermographically in the cases group, applying dermatoscopy of the tumor margin, which was redefined if ulterior dermatoscopic BCC-criteria were present over the clinical tumor margin (Figures 3a, b; 4a, b). Among dermatoscopical criteria allowing definition of tumor vs. tumor-free skin, the traditional BCC-criteria commonly used at our institute since 2015 were used [18, 19]. These are based on the presence of fine, short telangiectasias, the so called "serpentine vessels", multiple small erosions, leaf-like/spoke-wheel areas, concentric structures indicating superficial BCC (sBCC), and in focus arborizing vessels, shiny white areas, blue-grey ovoid nests and
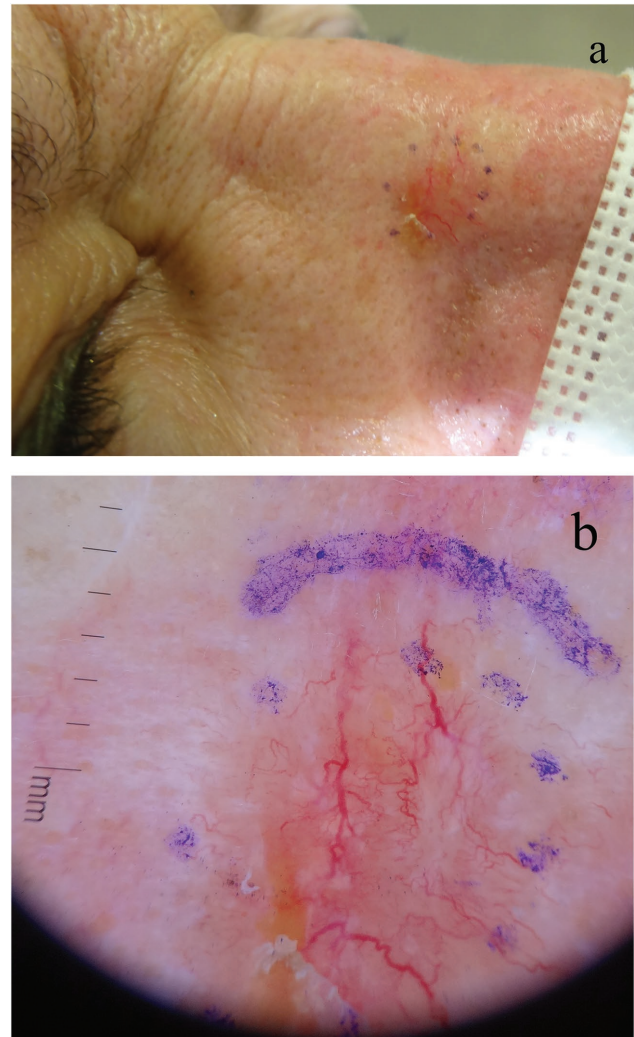
Figure 2 Basal cell carcinoma of the forehead (control, only clinically evaluated): surgical safety margins at 3 mm are displayed by light-blue dots (a). Clinically evaluated surgical margins at 3 mm overwritten by surgical planning, in light-blue full line (b).

Figure 3 Basal cell carcinoma of the nose (case): surgical safety margins at 1.5 mm were at first clinically evaluated and outlined by blue dots (a). Clinically evaluated surgical margins at 1.5 mm (blue dots) and dermatoscopically evaluated margins at 1.5 mm (blue full line) (b).

globules and ulceration structures, indicating nodular BCC (nBCC) [18–22].

An expert dermatoscopist supported the identification of the tumor's extent in the group of cases. Dermatoscopic evaluation was performed using a digital dermatoscope (DermLite DL4 with 10 x magnification) with polarized light and excellent vascular structure definition.

All histological slides were examined by specialized dermatopathologists, experienced in skin tumor diagnosis.

Conventional histology using the bread-loaf technique for macroscopic slicing was used, completely dissecting the specimen perpendicular to its longest axis into multiple vertical, parallel macroscopic slices of 2–3 mm. A routine staining procedure with hematoxylin and eosin stain was applied to histologic sections.

Histopathological reports and electronic patients' reports were used to extrapolate the following data: patient's age, sex, anatomical location of the BCC, tumor size, clinical (dermatoscopical) surgical safety margins, histopathological microscopic margins (lateral and deep margins), histological type of BCC.
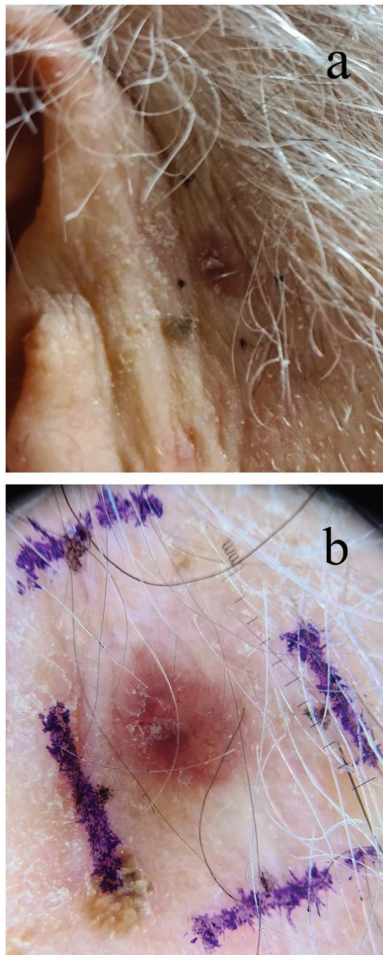
Figure 4 Preauricular basal cell carcinoma (case): surgical safety margins at 3 mm were at first clinically evaluated and displayed by black dots (a). Clinically evaluated surgical margins at 3 mm (black dots) and dermatoscopically evaluated margins at 3 mm (blue full line) (b).

One author retrospectively analyzed all patients' data including electronic files and histopathological reports. All the obtained data were double-checked by two other authors.

The source data were all retrieved from the patients of a single consultant plastic surgeon, expert in dermatologic surgery. The dimensions of the skin lesion and of the recommended surgical margins, based on the surgeon's personal experience, were routinely recorded in millimeters, as well as photographed.

After surgery, both cases and controls were clinically followed-up for a minimum of twelve months: controls were followed up for five years, cases for twelve months.

A wait-and-see approach was adopted in patients with histologically suboptimal (< 1 mm) lateral and deep margins, while patients with tumor-involved margins were re-excised.

Data were statistically analyzed by means of χ^2 test, Fisher's exact test, and logistic regression analysis; P values < 0.01 were considered statistically significant. Person-time, in person-years, was used to estimate the actual time-at-risk that all participants contributed to study BCC recurrences in the follow up period.

Results

Features of patients

In the present study, 281 BCCs (139 cases, 142 controls) were excised, and histological examination confirmed the diagnosis. The mean age of cases was 70.9 years (standard deviation [SD] ± 10.3), median age 74 years. Controls had a mean age of 73.6 years (SD ± 11.8), median age 77 years. Overall, 37 % of patients were female (105; 47 cases, 58 controls), 64 % were male (176; 92 cases, 84 controls). The two populations appeared homogeneous ($P > 0.01$) for age ($P = 0.004$) and sex ($P = 0.22$).

BCC subtypes and location

Of 281 BCCs, 76 % were nodular, 24 % were superficial. Overall, 58 % were excised from the face, 32 % from the neck, and 10 % from the scalp. Of the 281, 22 % (31 cases; 30 controls) were pigmented, 78 % (108 cases; 112 controls) were not. Cases and controls were homogeneous ($P > 0.01$) for type of BCC presented ($P = 0.42$), for distribution of excised BCCs ($P = 0.39$) (Table 1) and for BCC pigmentation presented ($P = 0.89$).

Regarding nodular BCCs, 67 % (143/214) were excised from the face, 11 % (23/214) from the scalp, and 22 % (48/214) from the neck (Table 1). Regarding superficial BCCs, 30 % (20/67) were excised from the face, 7 % (5/67) from the scalp, and 63 % (42/67) from the neck (Table 1).

It emerged that nodular BCCs were significantly more expressed on the face (67 %; 143/214), than superficial BCCs (30 %; 20/67) ($P < 0.001$). Conversely, superficial BCCs were significantly more expressed on the neck, (63 %; 42/67) than nodular BCCs (22 %; 48/214) ($P < 0.001$).

Nodular BCCs (11 %; 23/214) and superficial BCCs (7 %; 5/67) were homogeneously distributed on the scalp ($P = 0.61$) (Table 1).

Surgical margins

Of the 281 excised BCCs, unproper margins in histology were more frequently observed for lateral margins (12 %; 34/281) than for deep margins (7 %; 20/281).

Table 1 Clinical subtype and anatomical distribution of excised BCCs in cases and controls.

	Nodular BCC % (cases n, controls n)	Superficial BCC % (cases n, controls n)	Total BCC n° or % (cases n, controls n)	Chi square test *P*
Total	76 % (103, 111)	24 % (36, 31)	281 (139, 142)	0.42 Cases vs. controls compared for BCC type (nodular vs. superficial)
Face	67 % (68, 75)	30 % (7, 13)	58 % (75, 88)	< 0.001* (nodular vs. superficial BCCs, in both cases and controls, compared for face vs. all other locations)
Scalp	11 % (11, 12)	7 % (4, 1)	10 % (15, 13)	0.61 (nodular vs. superficial BCCs, in both cases and controls, compared for scalp vs. all other locations)
Neck	22 % (24, 24)	63 % (25, 17)	32 % (49, 41)	< 0.001 *(nodular vs. superficial BCCs, in both cases and controls, compared for neck vs. all other locations)

*Statistically significant.

Deep surgical margins

Furthermore, regarding deep surgical margins, all BCCs were excised to the superficial muscular fascia. Overall, 6 % (8/139) of cases and 8 % (12 /142) of controls presented histologically unproper deep margins (suboptimal [< 1 mm]) or tumor-involved). Only three of the deep margins in the cases were tumor-involved, vs. all in the controls. The difference between cases and controls was not statistically significant for deep margin involvement (*P* = 0.49) (Table 2).

Lateral surgical margins

Regarding lateral margins, 4 % (5/139) in cases and 20 % (29/142) in controls were unproper as seen in histological analysis. The difference between cases and controls was statistically significant for lateral margin involvement (*P* < 0.001) (Table 2).

In detail, tumor-involved lateral margins were never observed in cases, hence unproper margins were in fact only suboptimal (< 1 mm). Unproper lateral margins in controls were suboptimal (< 1 mm margins) in 83 % (24/29) and tumor-involved in 17 % (5/29) of cases. Simultaneously unproper deep and lateral margins were found in three controls, whereas none were found in cases.

Width of lateral surgical margins

Regarding the width of lateral surgical margins, 132 BCCs (66 cases, 66 controls) were excised with an intended surgical margin of 3 mm. Of cases, 0 % (0/66) resulted in having histologically unproper margins, compared to 15 % (10/66) of controls. The difference between the two groups was statistically significant (*P* = 0.0014) (Table 2).

Even narrower surgical margins, from 1 mm to 2 mm, were used in 149 BCCs (73 cases, 76 controls). Of cases, 7 %

Table 2 Width and properness of lateral and deep surgical margins, in cases and controls.

	Cases		Controls		Chi square test *P*
	Unproper margins	**Proper margins**	**Unproper margins**	**Proper margins**	
Lateral margins	4 % (5/139)	96 % (134/139)	20 % (29/142)	80 % (113/142)	< 0.001*
– 3 mm	0 % (0/66)	100 % (66/66)	15 % (10/66)	85 % (56/66)	0.0014*
– 1 mm to 2 mm	7 % (5/73)	93 % (68/73)	25 % (19/76)	75 % (57/76)	0.003*
Deep margins	6 % (8/139)	94 % (131/139)	8 % (12 /142)	92 % (130/142)	0.49

*Statistically significant.

(5/73) resulted in having histologically unproper margins, of controls this was 25 % (19/76). The difference between the two groups was statistically significant (P = 0.003) (Table 2).

Of note, in the group of cases, dermatoscopical examination resulted in a mean correction of + 1 mm of tumor-involved skin from the clinically evaluated tumor margins, appreciable in 58 % (81/139) of patients.

Lateral surgical margins and BCC histotype and pigmentation

Furthermore, in the present study the histotype of BCC (nodular vs. superficial) did not influence the properness of lateral surgical margins. Indeed, neither in cases, nor in controls, had nodular BCCs (214; 103 cases, 111 controls) or superficial BCCs (67; 36 cases, 31 controls) show statistically significant differences in terms of properness of lateral surgical margins (respectively 14 % [29/214] and 7 % [5/67]) (P = 0.18). Indeed, in cases, 4 % (4/103) of nodular and 3 % (1/36) of superficial BCCs had unproper margins (P = 0.76). In controls, 23 % (25/111) of nodular and 13 % (4/31) of superficial BCCs had unproper margins (P = 0.24).

In the present study the pigmentation of BCC (pigmented vs. non-pigmented) did not influence the properness of lateral surgical margins. Indeed, neither in cases, nor in controls, did pigmented BCCs (61; 31 cases, 30 controls) or non-pigmented BCCs (220; 108 cases, 112 controls) show statistically significant differences in terms of properness of lateral surgical margins. Indeed, in cases, 6 % (2/31) of pigmented and 3 % (3/108) of non-pigmented BCCs had unproper margins (P = 0.31). In controls, 3 % (1/30) of pigmented and 10 % (11/112) of non-pigmented BCCs had unproper margins (P = 0.46).

Lateral surgical margins and BCC anatomical location

Regarding the anatomical location of BCCs, we evaluated if the scalp/face/neck location could influence the properness of lateral margins in the two groups. Histologically unproper lateral margins of the facial (12 %, 20/163), neck (9 %, 8/90), and scalp areas (21 %, 6/28) were each not more unproper than in the other locations (respectively P = 0.92; P = 0.33; P = 0.13).

More in detail regarding the facial area, Table 3 shows the anatomical distribution of facial BCC in cases and controls and the corresponding unproper margins obtained after excision.

The face areas most frequently presenting unproper margins after excision were the lips and the temple-preauricular area, especially in controls (Table 3), whereas no unproper safety margins were found in the forehead and ear of either cases or controls. No statistically significant differences among facial areas were found regarding proper safety margins in cases vs. controls (Table 3).

Logistic regression analysis of properness of lateral surgical margins

With the logistic regression, we analyzed parameters already studied with the t test and the χ^2 test. In detail, the logistic regression analysis examined the relationship between properness of lateral margins with presurgical evaluation, age, sex, anatomic distribution of BCCs, BCC histotype, BCC pigmentation, and width of lateral margins, when all aspects were considered together.

Proper lateral surgical margins were significantly more associated with cases than controls (P < 0.001), and with

Table 3 Anatomic distribution of facial BCCs in cases and controls and respective unproper surgical lateral margins.

	Cases n (unproper lateral margins n, %)	Controls n (unproper lateral margins n, %)	Total n (unproper lateral margins n, %)	Chi square test P
Lip	4 (0; 0 %)	4 (3; 75 %)	8 (3; 38 %)	0.14
Temple-preauricular	9 (1; 11 %)	16 (6; 38 %)	25 (7; 28 %)	0.35
Eyelid	4 (1; 25 %)	7 (1; 14 %)	11 (2; 18 %)	1
Cheek	13 (1; 8 %)	22 (3; 14 %)	35 (4;11 %)	1
Nose	14 (0; 0 %)	14 (3; 21 %)	28 (3; 11 %)	0.2
Mandible	11 (1; 9 %)	4 (0; 0 %)	15 (1; 7 %)	1
Ear	5 (0; 0 %)	4 (0; 0 %)	9 (0; 0 %)	N/A
Forehead	15 (0; 0 %)	17 (0; 0 %)	32 (0; 0 %)	N/A

Abbr.: N/A, not applicable.

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wider (3 mm vs.1–2 mm) lateral margins ($P = 0.02$), whereas no statistical associations were found with age ($P = 0.66$), sex ($P = 0.94$), anatomical distribution of BCCs (respectively facial $P = 0.83$, scalp $P = 0.13$, neck $P = 0.26$), BCC histotype ($P = 0.30$), or BCC pigmentation ($P = 0.75$).

Clinical-dermatoscopical follow-up

Regarding clinical-dermatoscopical follow-up, only one of 139 BCC cases (0.7 %) recurred, six months after surgery with 3 mm, histologically proper, margins. Of BCCs excised with 3 mm presurgical margins, 1.5 % (1/66) recurred. Of BCCs excised with 1–2 mm presurgical margins 0 % (0/73) recurred. Of controls, 7.7 % (11/142) of BCCs recurred: 7 in histologically proper surgical margins, 4 in unproper surgical margins.

In cases, 138.5 person-years were totaled until recurrence, accounting for 1.00 cases per person-years. In controls, 678 person-years were totaled until recurrence, accounting for 0.21 cases per person-years.

However, these data are speculative, and only barely comparable as follow-up periods differed widely between cases and controls.

Discussion

Complete surgical removal with histological control of excision margins is undoubtedly the most effective treatment for BCC and should be considered as first-line therapy whenever feasible [6, 7], ensuring complete eradication with low recurrence rates, enabling complete examination of surgical margins, and allowing for good cosmetic results through preservation of unaffected tumor-adjacent tissue. In contrast, the vertical section method used in this study, also termed bread loaf technique, only examines about 1 % of the tumor margins, and does not provide certainty of complete tumor resection [6, 23–26].

Regrettably, many dermato-oncological centers, especially in Italy, have not yet come to adopt 3D microscopically controlled surgery (MCS) techniques, possibly because of the required specific training, necessary for both the pathologist and the surgeon, to appropriately master and perform the technique [6, 23–26].

Also, regarding the currently adopted 2D technique, agreement on the width of surgical margins used in BCCs is still lacking, especially in the head and neck zone [7, 8, 15, 27, 28], where defining reasonable BCC safety margins should not only aim at radicality, but also at minimization of damage to healthy skin [5].

Presurgical dermatoscopical evaluation to improve tumor definition has been proposed to maintain both radicality and minimize healthy tissue damage during 2D surgical interventions [16–18, 21, 22]. Only few reports claim that no actual statistical difference exists between clinical evaluation of surgical margins of BCCs, and clinical-dermatoscopical evaluation [29].

Data from the present study show that dermatoscopy can be efficiently used to reduce width of lateral surgical safety margins, in dermatoscopically well-defined, small, non-aggressive BCCs of the head and neck, treated in a conventional, vertical 2D approach.

Indeed, a 3 mm surgical margin attained a 100 % cure rate after dermatoscopy, (vs. 85 % in controls without dermatoscopy), in line with literature data that also report a complete removal rate of 100 % in dermatoscopically determined primary nodular and superficial pigmented BCCs of the head and neck [8]. Furthermore, adding to the study by Ito et al., our study comprised all pigmented and non-pigmented BCCs, highlighting that for all pigmented and non-pigmented, small, well-defined, nodular and superficial head and neck BCCs, a 3 mm surgical margin is reasonable, if dermatoscopically determined.

Also, Caresana et al. suggested that even narrower margins can be safely used in the head and neck area, reporting that dermatoscopically detected 2 mm surgical margins achieved complete excisions in 98.5 % of their cases [28]. Another report by Lalloo et al. shows complete excision in 95 % of head and neck BCCs, treated using a 2 mm clinical excision margin [27]. Of note, there was no evidence of BCC recurrence over a 24-month follow-up period in the latter study [27].

In the present study, especially 3 mm surgical margins seemed appropriate. Conversely, the properness of dermatoscopically assessed lateral tumor margins dropped to 93 % for 1–2 mm margins, though this is still in line with literature data that reported 95 % properness for 1–2 mm surgical margins and considered it acceptable [27]. Indeed, the choice of 1 to 2 mm margins may represent an adequate compromise in very difficult-to-treat areas, such as the eyelid. Truly, the eyelid was the zone with most unproper margins in dermatoscopically evaluated cases (25 % unproper surgical margins), in line also with literature data that confirmed the eyelid as the most frequent margin-positive location (5.1 % unproper surgical margins) [8]. Additionally, it must be considered that reported tumor recurrences are actually low also in case of unproper surgical margins, as exemplified by the study of Lalloo et al., suggesting the choice of 1–2 mm margins may be considered satisfactory, at least in selected cases [27]. Noteworthily, the low number of tumor recurrences after incomplete surgery has been ascribed to tumor regression phenomena of the residual, small tumor quantities [30–32]. Also, in the present study, none of the dermatoscopically evaluated BCCs excised at 1 to 2 mm margins actually had tumor-involved margins that were suboptimal (< 1 mm). Hence the probability of recurrence would be lower.

Overall, in the present study, the identification of correct lateral tumor margins through dermatoscopy has been shown to permit excision of small superficial and nodular BCCs of the head and neck with narrow margins, using conventional means.

However, while the influence of dermatoscopy regarding lateral margins was significant, with unproper lateral margins by histological examination in only 4 % of cases vs. 20 % of controls ($P < 0.01$), dermatoscopy did not seem to influence properness of deep margins, which were comparably unproper by histological examination in both cases (6 %) and controls (8 %).

Furthermore, in line with literature data that ascribe incomplete excisions in 66 % of cases to unproper lateral margins and 21 % to deep margins [33], in the present study incomplete excisions were more frequently due to unproper lateral margins (12 %) than deep margins (7 %). This highlights the importance of better assessing lateral margins, as permitted by the use of dermatoscopy.

Of note, it has been suggested that BCC histotype and location may possibly influence the properness of surgical margins, affecting cure rates [33]. From the present study it emerged that nodular BCCs had twice as much (14 %) unproper lateral margins than superficial BCCs (7 %), though the difference was not statistically significant ($P = 0.18$).

Also, we found that nodular BCCs more frequently localized to high-incidence sites, such as the face (67 %), than did superficial BCCs (30 %) ($P < 0.001$). Conversely, superficial BCCs were more frequently localized on low-incidence sites, such as the neck (63 %), than were nodular BCCs (22 %;) ($P < 0.001$). Correspondingly, facial histological margins of BCCs were more unproper (12 %) than histological neck margins (9 %). Therefore, particular attention must be provided during presurgical evaluation and surgical excision of nodular facial BCCs, where the incidence of unproper surgical margins has been shown to be higher, though not significantly higher, than for other histotypes and locations.

In conclusion, our study provides data showing that a 3 mm surgical lateral margin may be appropriate in the conventional excision of pigmented and non-pigmented, small (≤ 1 cm), dermatoscopically well-defined and non-aggressive BCCs of the head and neck, attaining surgical cure rates of 100 %, with only 1.5 % recurrence at one year.

Conversely, our data suggests that the choice of a 1–2 mm surgical lateral margin should be reserved for BCCs in very difficult-to-treat areas, such as the eyelid. Indeed, though recurrence rates at one year were null, the immediate surgical cure rate was only 93 %.

Interestingly, dermatoscopical demarcation of surgical margins has proven its effectiveness also in slow Mohs surgery, reducing the number of Mohs stages needed to achieve complete clearance and the number of positive lateral margins [34].

Nonetheless, it is not the authors' intention to raise the role of the conventional surgical approach against the gold standard represented by Mohs surgery, but to come to a consensus on the surgical lateral margins that may be most appropriate when obliged to perform a conventional excision.

Rather, we suggest that the "dermatoscopically enhanced 2D approach", which we propose as the "best version of the conventional vertical 2D approach", could be compared in future studies to the gold standard slow Mohs approach using dermatoscopy, to sensitize towards the importance of adopting slow Mohs in Italy and in Europe.

Acknowledgement

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