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**The role of a multidisciplinary approach in non-melanoma skin cancer management**

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**Availability of data and materials:** data are available at the Fondazione IRCCS Ca' Granda (Milan, Italy) archive.

**Abstract**

A multidisciplinary team (MDT) is fundamental for properly managing non-melanoma skin cancer (NMSC). Surgery is the first treatment choice for early-stage disease; however, in cases with a high risk of recurrence or when demolitive approaches would not achieve safe margins, radiotherapy (RT) or an MDT approach is required. We retrospectively revised the population evaluated at our weekly MDT meeting, and all patients were discussed. A case series of 130 patients visited from July 2021 to March 2024 was collected. In-person visits were performed. The male/female ratio was 69.5/31.5%. Elderly patients prevailed: the mean age was 79 years (range 29-102 years). Patients affected by Gorlin syndrome were 7, and solid transplant recipients were 4. Among patients, 66 were diagnosed with cutaneous squamous cell carcinoma (SCC) (58%), 52 had basal cell carcinoma (BCC) (40%), and 12 had both SCC and BCC (9.2%). Among patients with SCC, 24 received primary surgery (36.4%), 11 received RT (16.6%), and 25 were candidates for treatment with cemiplimab (37.9%). Six patients (9.1%) were indicated to undertake a dermatological follow-up associated with best supportive care for comorbidities and performance status.

**Introduction**

At the Fondazione IRCCS Ca' Granda (Milan, Italy), a multidisciplinary team (MDT) is dedicated to the diagnosis and treatment of non-melanoma skin cancers (NMSC), particularly those that are difficult to manage or locally advanced.

NMSC is the most common type of skin cancer. The most frequent histological subtypes are basal cell carcinoma (BCC) and squamous cell carcinoma (SCC), accounting for approximately 80% and 20% of cases, respectively. Its incidence is rapidly increasing due to population aging and environmental exposure to ultraviolet radiation. While NMSC rarely metastasizes, it can have a significant impact on quality of life.

Despite recent advances in diagnostics, surgical techniques (*e.g.*, Mohs micrographic surgery), non-surgical treatments, and systemic therapies – including targeted therapies and immunotherapy – the prognosis for recurrent or metastatic disease remains poor.

Surgery is typically the first-line treatment in early-stage disease. Radiotherapy (RT) is considered when surgery is declined or poses significant functional or aesthetic challenges.

A multidisciplinary approach is strongly recommended to provide patients with a comprehensive and effective diagnostic and therapeutic pathway. The collaboration and specialized expertise of various healthcare professionals contribute to improved patient outcomes.[1]

MDT should collaboratively consider all relevant treatment options and develop an individual treatment plan for each patient. Our MDT includes oncologists, dermatologists, maxillofacial

surgeons, and radiation oncologists, with other specialists available as needed. The National Cancer Institute reports that the idea behind an MDT meeting is "to streamline and improve continuity of care, with everyone being informed of the overall picture and included in decision making about treatment for individual patients".

In our MDT, members work collaboratively to define the most appropriate diagnostic and therapeutic plan for the management of complex cases. When decisions are not unanimously shared, the majority of the components suggest the patients' flows.

The use of MDTs in cancer care is endorsed internationally, although uptake varies. In our tertiary center, it improved communication and coordination among different specialists, although a comparison of treatments before MDT is not possible.

In Table 1,[2-9] we report data that support the institution of an MDT in several neoplasm including skin cancer.

The therapeutic strategies proposed by the MDT include both locoregional treatments – such as surgery and RT – and systemic options, including immune checkpoint inhibitors (ICIs) and targeted agents like the Hedgehog pathway inhibitors (HHIs) sonidegib and vismodegib.

Locally advanced lesions might require RT, considering the radio-responsivity and satisfactory control rate. Indeed, recurrent or unresectable disease with no indication for RT are candidate to systemic therapy. Both BCC and SCC are associated with immunosuppression and high tumor mutational burden (TMB).[1,10]

Immunotherapy (inhibition of programmed cell death 1) is highly effective in locally advanced or metastatic NMSC.[1,10] Cemiplimab, an ICI, is approved for first-line treatment of SCC and second-line treatment of BCC. It has become the standard therapy for recurrent or metastatic SCC based on the single-arm Phase II EMPOWER-CSCC study.[11] Response rates of approximately 50% with a median time to response of 2 months have been confirmed in real-world experiences and meta-analyses.[12-14] Complete responses were observed in 21% of patients, while disease progression occurred in 20%.

In contrast, for locally advanced or metastatic BCC, the two approved HHIs demonstrated overall response rates (ORRs) of 43-68% with prolonged duration of response in the pivotal ERIVANCE and BOLT trials. Safety profiles and patient compliance are generally similar – common adverse effects include myalgia, fatigue, alopecia, dysgeusia, and anorexia – although HHIs and cemiplimab differ in pharmacokinetics and tissue distribution.[15-17]

For patients who are intolerant or resistant to HHIs, cemiplimab achieves an objective response rate of 31%, with approximately 80% of responses maintained at 1 year.[17]

According to current guidelines,[1,10] HHIs and ICIs are indicated, respectively, for patients with BCC and SCC who are not suitable candidates for locoregional therapies.

## Material and Methods

All patients with NMSC evaluated by the MDT at the Fondazione IRCCS Ca' Granda (Milan, Italy) between July 2021 and March 2024 were retrospectively analyzed, with a particular focus on SCC.
This case series includes 130 patients diagnosed with SCC, BCC, or both. Inclusion criteria were the presence of locally advanced disease requiring multidisciplinary evaluation and at least one follow-up visit after the MDT meeting. Exclusion criteria included death from other causes following the MDT evaluation, withdrawal of consent, or contraindications to ICIs.
All patients with SCC who, due to tumor extent, number of lesions, or primary tumor site, were not eligible for locoregional treatment were included in the analysis. These patients were recommended to initiate systemic therapy with cemiplimab.
Treatment response and its durability during follow-up were evaluated. Specifically, treatment outcomes were analyzed in relation to patients' performance status and tumor differentiation. Performance status was assessed using the Eastern Cooperative Oncology Group (ECOG) scale.
Additionally, the efficacy of systemic therapy was analyzed by age, with patients divided into two subgroups: those younger than 80 years and those aged 80 years or older. Subgroup analyses were also performed based on previous treatment history (RT *vs.* no RT; multiple surgeries *vs.* no surgery) to assess any differences in treatment response.
Special attention was given to the effectiveness of cemiplimab in immunosuppressed patients. Finally, the occurrence of adverse events during immunotherapy was documented and analyzed.

## Results

### *Demographic characteristics*

Between July 26, 2021, and March 22, 2024, 130 patients were evaluated by the MDT, of which 41 were female (31.5%), and 89 were male (69.5%). The mean age was 79 years, and the age range was 29-102 years. Among these patients, 66 were diagnosed with SCC (58%), 52 were diagnosed with BCC 40% and 12 were diagnosed with both SCC and BCC (9.2%). Patients' characteristics are summarized in Table 2.
Among patients with SCC, 24 received primary surgery (36.4%), 11 received RT (16.6%), and 25 were candidate to treatment with cemiplimab for not operable disease (37.9%). Six patients (9.1%) were advised to undergo regular dermatological follow-up combined with best supportive care, including daily complex medication regimens, wound care for skin lesions, and the use of analgesics

as needed. Following surgery, one patient was advised to begin systemic treatment with cemiplimab due to local recurrence, while another patient was scheduled for a chemotherapy regimen because of a history of solid organ transplantation. After progression, the latter patient was treated with cemiplimab without any serious events. Two patients were considered candidates for cemiplimab after progression following RT. Among patients with BCC, 27 were considered for surgery (51.9%), 6 for RT (11.5%), and 14 for systemic therapy with sonidegib (26.9%). Patients eligible for systemic therapies were not suitable for loco-regional approaches. Review of medical history revealed that all patients had a previous history of local excision for both SCC and BCC.

Among patients with a higher performance status and contraindications to medical treatments, 5 patients (9.7%) were deemed suitable for dermatological follow-up combined with best supportive care. This approach included topical skin medications, lesion dressing, surgical toilette, and other local treatments. Among patients with both SCC and BCC, 7 were considered for surgery (58.3%), 3 for systemic therapy with cemiplimab (25%), and 2 (16.7%) were candidates to undertake a dermatological follow-up associated with the best supportive care.

We reviewed patients' histories and found that the MDT discouraged further surgery in 3 patients (2 were candidates for systemic therapy and 1 for RT). Unfortunately, since cemiplimab and HHIs have only been used in recent years, it is not possible to assess the impact of the MDT in a head-to-head population comparison. However, we can speculate that patients managed outside multidisciplinary discussions were less frequently offered all available treatment modalities (surgery, RT, and medical therapies). A direct comparison to assess whether a multidisciplinary approach influences treatment selection and patient outcomes (including response rates, surgical outcomes, time to progression, and safety) was not feasible. Most patients with locally advanced NMSC have only recently been discussed within a multidisciplinary setting, while those who were not discussed have largely been lost to follow-up.

***Response to treatment***

The SCC cohort analyzed in this study comprised 32 patients who were deemed eligible for systemic therapy with cemiplimab. Of these, 29 had SCC alone, while 3 had concomitant SCC and BCC.

Patients were treated with a standard schedule of cemiplimab 350 mg administered intravenously every 21 days, until disease progression or until the onset of intolerable adverse effects. Patients' treatments are reported in Figure 1. Therapy was carried out for a mean period of 34.8 weeks (range 3-127) and the mean duration of follow-up was equal to 38.6 weeks (range 6-150).

In the analyzed sample, 5 patients (15.6%) were also naive to local treatments for the considered SCC (although all had a history of previous excisions) and started therapy with cemiplimab as first-line

treatment. Conversely, 13 patients (40.6%) received cemiplimab after failure of locoregional therapies such as surgery (10 patients), RT (2 patients), and HHIs for BCC (one patient).

Finally, in 14 patients (43.8%), cemiplimab was administered as the third treatment, following two locoregional approaches; in 13 cases after surgery and RT, and in one case after surgery and HHIs for BCC.

The cohort treated with cemiplimab included 9 females (28.1%) and 23 males (71.9%). The mean age of these NMSC patients was 81.7 years (range 47-102 years); 25 patients (78.1%) were over 80 years old and 7 patients (21.9%) were under 80 years old.

We previously published our experience in ultra-octogenarian patients in which we reported a clinical benefit from cemiplimab comparable with younger patients, including tumor shrinkage and pain relief.[18]

Cemiplimab confirmed its effectiveness in elderly patients in a real-world setting, with no new safety concerns. In this cohort study, 62.5% of patients had an ECOG performance status of 0-1, while 37.5% had a performance status of 2. The majority presented with various comorbidities: in particular, 62.5% had at least one cardiovascular comorbidity, 12 patients (37.5%) had at least one metabolic comorbidity, 5 patients (15.6%) had at least one respiratory comorbidity, and one patient (3.1%) had a neurological comorbidity. Furthermore, 5 patients (15.6%) were immunosuppressed: 2 of them were affected by polycythemia vera, one by myelofibrosis, one by chronic lymphocytic leukemia, and one had received a kidney transplant.

With regard to the histological characteristics of the disease, 3 patients (9.4%) were affected by a well-differentiated SCC (G1), 20 patients (62.5%) by a moderately differentiated SCC (G2), and 9 patients (28.1%) by a poorly differentiated SCC (G3).

Most patients (24; 75%) underwent at least one surgery for this primary SCC and 20 patients (62.5%) underwent at least 2 surgeries. Instead, 15 patients (47.9%) underwent RT treatment before starting cemiplimab therapy. Finally, 2 patients (6.3%) underwent chemotherapy treatment before starting immunotherapy. Median time to response to cemiplimab was 10.4 weeks (3-27 weeks) of therapy, with the administration of an average number of doses equal to 3.5. However, after an average of 20.6 weeks, 5/32 patients experienced disease progression. At the end of follow-up, complete responses were observed in 2 patients (6.2%) and partial responses in 16 patients (50%). Furthermore, 6 patients (18.8%) remained stable and 8 patients (25%) experienced disease progression. The disease control rate (DCR) was 75%. Responses in the sample of patients treated with cemiplimab are reported in Table 2.

Considering the 3 patients affected by a well-differentiated SCC (G1), 2 patients responded to cemiplimab and one remained stable. Among the 20 patients with a moderately differentiated SCC

(G2), 12 responded, 2 remained stable, and 6 experienced disease progression. Finally, considering the 9 patients affected by a poorly differentiated SCC (G3), 4 responded to cemiplimab, 3 remained stable, and 2 experienced disease progression.

Concerning patients with ECOG performance status of 0-1, 13 patients (65%) responded to cemiplimab, 2 (10%) remained stable, and 5 (25%) experienced disease progression. Among patients with an ECOG of 2, 5 patients (41.7%) responded to cemiplimab, 4 (33.3%) remained stable, and 3 (25%) experienced disease progression. Table 3 reports responses according to the SCC grade of differentiation and performance status.

The over-80 age group included 25 patients, of whom 7 were female (28%) and 18 were male (72%). The mean age was 86.6 years (range 80-102). Considering this subgroup, 18 patients (72%) responded after 11.1 weeks (3-27 weeks) of therapy, with the administration of an average number of doses equal to 3.8. Among these patients, 3 (16.7%) experienced a disease progression after an average of 23.3 weeks, while 15 (83.3%) have maintained the response.

At the end of follow-up, a complete response was observed in 2 patients (8%) and a partial response in 13 patients (52%). Four patients (16%) remained stable, and 6 (24%) experienced disease progression.

The under-80 age group included 7 patients, of whom 2 were female (28.6%), and 8 were male (71.4%). The mean age was 64.3 years, and the age range was 47-77 years. Considering this subgroup, 5 patients (71.4%) responded after 7.8 weeks (3-18 weeks) of therapy, with the administration of an average number of doses equal to 2.6. Among these patients, 2 (40%) experienced disease progression after an average of 16.5 weeks, while 3 (60%) maintained a standard disease.

At the end of follow-up, a partial response was observed in 3 patients (42.8%), and none of them achieved a complete response. Two patients (28.6%) remained stable, and 2 (28.6%) exhibited disease progression.

The DCR was equal to 76% in the older patient's subgroup and equal to 71.4% in the younger patient's subgroup.

Taking into consideration the subgroup of patients who underwent RT before starting cemiplimab, 12 patients (80%) responded after 12.3 weeks (6-27 weeks) of therapy, with the administration of an average number of doses equal to 4.1. Among these patients, 4 (33.3%) experienced disease progression after an average of 23.5 weeks (20-26 weeks), while 8 (66.7%) have maintained the response.

At the end of follow-up, a response was observed in 8 patients (53.3%), of whom 2 achieved a complete response and 6 a partial response. Seven patients (46.7%) exhibited disease progression.

Considering the subgroup of patients who did not undergo RT before starting cemiplimab, 11 patients (64.7%) responded after 8.7 weeks (3-18 weeks) of therapy, with the administration of an average number of doses equal to 2.9. Among these patients, one (9.1%) experienced disease progression after 9 weeks, while 10 (90.9%) maintained the response.

At the conclusion of follow-up, a partial response was observed in 10 patients (58.8%), and none achieved a complete response. Six patients (35.3%) remained stable, and one (5.9%) experienced disease progression.

DCR in the two subgroups was 53.3% and 94.1%, respectively. Table 4 reports the comparison of responses in relation to age and previous treatments.

With regard to the 4 patients affected by hematological disease, one (25%) experienced disease progression, one (25%) remained stable, and 2 (50%) achieved a response after 18 weeks of therapy. However, in these 2 patients, disease progression was observed after an average of 25 weeks of therapy.

The patient who had received a kidney transplant remained stable, but the administration of cemiplimab was stopped after two doses due to the onset of kidney toxicity.

Consequently, at the end of follow-up, 2 patients (40%) remained stable, and 3 (60%) experienced disease progression.

***Adverse events***

During immunotherapy, 20 patients (62.5%) reported at least one treatment-related adverse event. Adverse events were mostly mild, leading to the discontinuation of cemiplimab in only 4 cases. There was one fatal adverse event. Table 5 reports adverse events in the whole population.

The most frequent adverse events were fatigue, subclinical hypothyroidism, widespread pruritus, cutaneous rash, nausea, and elevation of creatinine and transaminases. Other adverse events were elevation of lipase and amylase, bowel inflammatory disease, electrolyte imbalance, and dry mouth.

Furthermore, 4 patients experienced symptomatic hyperthyroidism, colitis, cutaneous rash, and renal impairment, respectively. In 4 patients, the therapy was suspended due to hepatic toxicity, kidney toxicity, and intestinal sub-occlusion.

Considering all grades of adverse events, no significant difference was reported between older and younger patients (60 *vs.* 71%, respectively). Therapy was discontinued in 4 patients – 2 in the younger group and 2 in the elderly group – due to intestinal sub-occlusion, elevated transaminases, and increased creatinine levels, respectively.

Among patients who underwent previous RT, adverse events occurred in 8 patients (53.3%), while among patients who did not undergo RT, adverse events occurred in 12 patients (70.6%). In both groups, adverse events led to therapy discontinuation in 2 cases.

In the subgroup of immunocompromised patients, 4 (80%) had at least one adverse event. In particular, 2 cases of fatigue and one case of creatinine elevation, hyperthyroidism, electrolyte imbalance, and constipation were observed. Only one patient discontinued therapy and experienced mortality due to kidney toxicity.

**Discussion**

The study focuses on a population with advanced stages of SCC – patients for whom local treatments (surgery, RT) are no longer viable, indicating a poor prognosis and few treatment options.

The main characteristics of our cohort were older age and frailty. Indeed, the mean age was 81.7 years – a particularly high-risk, underrepresented age group in oncology trials. Moreover, approximately 40% of patients had an ECOG performance status of 2, indicating that a substantial portion of the cohort experienced functional limitations – patients who are often excluded from clinical trials.

Patients with comorbidities and immunocompromised patients were 5 out of 32. These additional health burdens further highlight the real-world complexity of the population, differentiating it from "ideal" trial cohorts.

The strength of this paper is addressing a gap between controlled clinical trial data and real-world treatment scenarios, especially for the most vulnerable patients.

This is a retrospective, real-world, mono-institutional study; the design is therefore observational and rooted in routine clinical practice rather than the tightly controlled environment of randomized clinical trials. While the sample is small (32 patients), the strength lies in its external validity, as it reflects real patient characteristics and outcomes rather than idealized ones.

MTD management is globally recommended in the field of oncology. This study provides a retrospective description of treatment outcomes in patients discussed within an MDT.

A key limitation of this paper is the absence of a comparator group, which restricts the ability to clearly determine the impact of MDT decision-making on outcomes. However, we reported that MDT discussions altered the therapeutic course for 3 out of 31 patients compared to what would have been decided by a single specialist. Noteworthy patients referred to the MDT are typically selected by the proposing case manager as candidates for a combined treatment approach. In contrast, patients with early-stage disease or those suitable for a single treatment strategy are usually not referred. Our data are pragmatically relevant to clinicians treating similar patient profiles, and, as reported in other real-world experiences, the treatment is effective in elderly and frail patients as well.

In our cohort, DCR (including stable disease, partial, and complete responses) was 75%; the ORR was 56.2%, with complete responses at 6.2% and partial responses at 50%. This represents a robust outcome, especially considering the patients' frailty and comorbidity burden. Notably, these results are comparable to those seen in trial populations, which are typically healthier and younger. Moreover, in the elderly subgroup (>80 years), response rates were even higher at 60% and DCR at 76%, suggesting that age alone may not diminish the efficacy of cemiplimab, offering strong real-world reassurance for oncologists hesitant to treat elderly patients.

Furthermore, we treated immunocompromised patients, indicating potential safety and efficacy even in complex cases. When analyzing the response rate in relation to patient and disease characteristics, it was observed that the response rate was higher among patients affected by well-differentiated cutaneous SCC and among those with a lower ECOG performance status score.

These findings are not surprising, as dedifferentiation is a known tumor strategy for evading immune surveillance, and cellular plasticity contributes to immune resistance. From a biological standpoint, histological dedifferentiation leads to a reduction in differentiation-associated antigens and induces transcriptional changes that promote the recruitment of immunosuppressive myeloid cells.[19]

A comparison between the over-80 and under-80 age subgroups revealed that the response rate was not lower among elderly patients. In particular, the disease control rate was 76% in the over-80 group and 71.4% in the under-80 group. These findings suggest that advanced age should not be considered a contraindication for initiating immunotherapy with cemiplimab.

Our results are consistent with those reported in other retrospective studies.[20] A single-center, real-world study from Italy included patients with a median age of 81 years and a frailty prevalence of 83%. That study reported an ORR of 76.6%, including 30% complete responses, and a DCR of 80%. Similarly, a higher response rate was observed among patients with well-differentiated disease.[21]

Another real-world study, published in 2023, included 35 patients treated with cemiplimab. The median age was 75.4 years; 36.1% of the patients were over 80 years old, and 27.8% had an ECOG performance status of 2 or higher. Additionally, 27.8% of the sample had hematological malignancies, and 5.6% were solid organ transplant recipients. This study reported a response rate of 69.5% and a disease control rate of 83.4%.[22] We reported a similar response among patients untreated and those previously treated with RT (53.3% *vs.* 58.8%).

However, among patients who had previously undergone RT, the rate of disease progression was higher (46.7% *vs*. 5.9%). Therefore, in our cohort, cemiplimab appeared to be more effective in controlling the disease in patients who had not received prior RT. These findings were consistent with those reported in a previous Italian multicenter retrospective study including 131 patients with SCC treated with cemiplimab. In that cohort, 44.8% of patients had received prior RT.[14] Baggi *et al.*

reported an objective response rate of 58% and a disease control rate of 71.1%. Furthermore, among patients who underwent previous RT, a higher rate of disease progression was observed (33.9% *vs.* 18.5%).[14]

Considering the cohort of immunocompromised patients, 40% achieved disease stability, while 60% experienced disease progression. Although the activity of cemiplimab appeared to be lower in this subgroup, immunotherapy may still play an important role even among immunocompromised patients, as disease control was achieved in 40% of cases.

This result is consistent with real-world data reported in a few previous studies.[13,14,23] A single-center, retrospective study published in 2024 included 53 patients affected by SCC. The median age was 81.8 years, and 34% of the patients were immunocompromised. All patients were treated with cemiplimab, and an ORR of 57% was observed; among immunocompromised patients, the response rate was 47%.[24]

Similarly, a multicenter, retrospective analysis from the German ADOReg Registry included 39 patients with advanced SCC treated with ICIs. Of these, 9 patients were immunocompromised due to hematological malignancies or immunosuppressive therapy.[25] The study reported an overall tumor response rate of 48.6%, with a median progression-free survival of 29 months. Notably, no significant difference in tumor response rate was observed between immunocompromised and immunocompetent patients (50.0% *vs.* 48.1%).[25]

Regarding adverse events, the most frequently reported were fatigue, subclinical hypothyroidism, widespread pruritus, cutaneous rash, elevated creatinine and transaminases, and nausea. Less common adverse events included colitis, xerostomia, and elevations of lipase and amylase. These events are consistent with those reported in clinical trials[26,27] and in other retrospective studies.[28,29]

During immunotherapy treatment, 62.5% of patients experienced at least one adverse event, although only 4 patients discontinued cemiplimab due to toxicity.

When comparing the previously analyzed subgroups, no increase in the severity of adverse events was observed in older patients or in those who had undergone RT. Conversely, adverse events were more frequently reported among younger patients (71.4% *vs.* 60%) and among patients who had not received RT (70.6% *vs.* 53.3%). A similar trend was observed in the Italian retrospective study by Baggi *et al.*[14] It could be hypothesized that younger patients are more precise in reporting adverse effects and demonstrate greater adherence to treatment protocols.

Considering immunocompromised patients, adverse events were reported in 4 out of 5 individuals. Among 4 patients with hematological malignancies, 3 experienced mild adverse effects that did not lead to treatment discontinuation. In patients with comorbidities and a G8 screening score <7, consultation with a geriatrician or hematologist was requested when needed. Our results confirm that

the use of cemiplimab in immunosuppressed patients is not associated with a higher frequency or greater severity of adverse events, as previously reported in another study.[29]

During cemiplimab therapy, a kidney transplant patient developed fatal renal toxicity. Another retrospective single-center study reported the case of a kidney transplant patient whose renal function decreased following cemiplimab treatment.[30] However, a larger sample of transplant patients may be needed to draw more accurate conclusions on the impact and safety of cemiplimab in this setting. Indeed, only a limited number of studies in the literature have highlighted the potential role of immunotherapy in kidney transplant recipients.[31,32] At the time we treated our patient, we were not aware of the Hanna protocol with prednisone augmentation; we have since adopted this approach and are now successfully treating selected patients.[31]

## Conclusions

Our data underscore the importance of a multidisciplinary approach in managing NMSC and emphasize the need to consider all available therapeutic options, while also highlighting that systemic therapy should not be unnecessarily delayed, since heavily pretreated patients generally derive less benefit from medical treatments.

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**Table 1.** Role of multidisciplinary evaluation in solid cancer.

| Author, year | Neoplasm | Findings |
|---|---|---|
| Chang *et al.*, 2021[2] | Breast cancer | Multidisciplinary evaluation led to a change in treatment recommendations for 43% of patients. |
| Dietz, 2013[3] | Rectal cancer | Multidisciplinary approaches have dramatically improved rectal cancer outcomes in Scandinavian countries and the UK |
| Engelhardt *et al.*, 2021[4] | Different tumors | An increase in the number of MTBs will not "automatically" improve cancer patients' OS. Rather, it is the quality of insightful discussions – ideally within MTBs and involving statisticians – that can generate meaningful recommendations truly beneficial for patients. |
| Sassun *et al.*, 2025[5] | Mucosal melanoma | Multidisciplinary approach allows neoadjuvant immunotherapy and radical surgery with OS improvements. |
| Pangarsa *et al.*, 2023[6] | Breast cancer | Based on the meta-analysis of the pooled hazard ratios from the included studies, the authors reported an overall effect size of 0.80. Breast cancer patients who participated in well-organized MDT discussions showed improved survival compared with those who did not. |
| Rudolph *et al.*, 2024[7] | NMSC | The primary goal of this interdisciplinary collaboration is to achieve a functional, cosmetically and aesthetically acceptable result in addition to adequate tumor treatment. Depending on the stage of the tumor and the clinical course, a case may be discussed in an interdisciplinary tumor board in order to determine a personalized, appropriate and adequate treatment concept for each patient, including prevention, therapy and follow-up. |
| Chin *et al.*, 2023[8] | NMSC | Use of checklist for each patient to ensure completion of all required information has been proposed as a method to minimize errors by the human factors. |
| Liu *et al.*, 2020[9] | HNSCC | Discussion at MTB was associated with significant improvement in OS and disease-specific survival. |

MTB, multidisciplinary tumor board; OS, overall survival; MDT, multidisciplinary team; NMSC, non-melanoma skin cancer; HNSCC, head and neck squamous cell carcinoma.

**Table 2.** Patients' characteristics.

| **Characteristics** | **Number (%)** |
|---|---|
| Total cohort | 130 |
| Gender | |
| Male | 89 (69.5) |
| Female | 41 (31.5) |
| Mean age (range) | 79 (29-102) |
| Diagnosis | |
| SCC | 66 (50.8) |
| BCC | 52 (40) |
| SCC + BCC | 12 (9.2) |
| Cemiplimab treated patients | 32 |
| Gender | |
| Male | 23 (71.9) |
| Female | 9 (28.1) |
| Mean age (range) | 81.7 (47-102) |
| >80 | 25 (78.1) |
| <80 | 7 (21.9) |
| Performance status (ECOG) | |
| 0 | 3 (9.4) |
| 1 | 17 (53.1) |
| 2 | 12 (37.5) |
| Comorbidities | |
| Cardiovascular | 20 (62.5) |
| Metabolic | 12 (37.5) |
| Respiratory | 5 (15.6) |
| Neurological | 1 (3.1) |
| Immunodepression | 5 (15.6) |
| Polycythemia Vera | 2 (6.3) |
| Myelofibrosis | 1 (3.1) |
| Chronic lymphocytic leukemia | 1 (3.1) |
| Kidney transplant | 1 (3.1) |
| SCC grading | |
| G1 | 3 (9.4) |
| G2 | 20 (62.5) |
| G3 | 9 (28.1) |
| TNM staging | |
| T | |
| T1 | 4 (12.5) |
| T2 | 12 (37.5) |
| T3 | 13 (40.6) |
| T4 | 3 (9.4) |
| N | |
| N0 | 25 (78.1) |
| N1 | 6 (18.8) |
| N2 | 1 (3.1) |
| M | |
| M0 | 30 (93.7) |
| M1 | 2 (6.3) |
| Previous surgery | |
| ≥2 | 20 (62.5) |
| <2 | 12 (37.5) |
| Previous radiotherapy | |

| | |
|---|---|
| Yes<br>No | 15 (46.9)<br>17 (53.1) |
| Previous chemotherapy | |
| Yes<br>No | 2 (6.3)<br>30 (93.7) |
| Response in the sample of patients treated with cemiplimab | |
| DCR | 24 (75) |
| Response<br>Complete response<br>Partial response<br>Stable disease | 18 (56.2)<br>2 (6.2)<br>16 (50)<br>6 (18.8) |
| Progressive disease | 8 (25) |
| Total | 32 (100) |

SCC, squamous cell carcinoma; BCC, basal cell carcinoma; ECOG, Eastern Cooperative Oncology Group; TNM, tumor, node, metastasis; DCR, disease control rate.

**Figure 1.** Indications proposed to patients visited by the MDT.

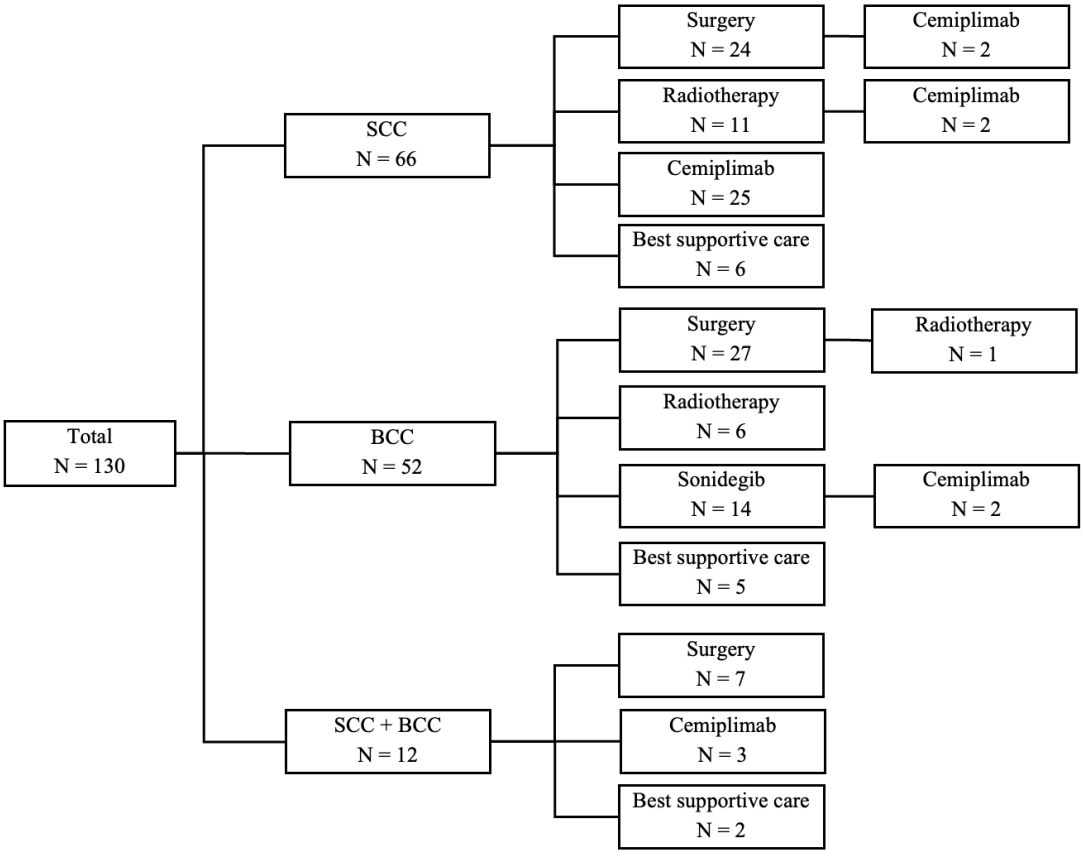

**Table 3.** Response according to SCC grade of differentiation and performance status.

| | **G1**<br>**n (%)** | **G2**<br>**n (%)** | **G3**<br>**n (%)** | **PS 0-1**<br>**n (%)** | **PS 2**<br>**n (%)** |
|---|---|---|---|---|---|
| DCR | 3 (99) | 14 (70) | 7(77) | 14(75) | 9 (75) |
| Overall response rate | 2 (67) | 12 (60) | 4 (44) | 13 (65) | 5 (41.7) |
| Stable disease | 1 (33) | 2 (10) | 3 (33) | 2 (10) | 4 (33.3) |
| Progressive disease | 0 (0) | 6 (30) | 2 (23) | 5 (25) | 3 (25) |
| Total | 3 (100) | 20 (100) | 9 (100) | 20 (100) | 12 (100) |

DCR, disease control rate; PS, performance status.

**Table 4.** Comparison of response in relation to age, previous treatments, and immune suppression.

| | **>80**<br>**n (%)** | **<80**<br>**n (%)** | **Previous RT**<br>**n (%)** | **No previous RT**<br>**n (%)** | **Immunocompromised patients**<br>**n (%)** | **Non-immunocompromised patients**<br>**n (%)** |
|---|---|---|---|---|---|---|
| DCR | 19 (76) | 5 (71.4) | 8 (53.3) | 16 (94.1) | 2 (40) | 22 (81.5) |
| Overall response rate | 15 (60) | 3 (42.8) | 8 (53.3) | 10 (58.8) | 0 (0) | 18 (66.7) |
| Complete response | 2 (8) | 0 (0) | 2 (13.3) | 0 (0) | 0 (0) | 2 (7.4) |
| Partial response | 13 (52) | 3 (42.8) | 6 (40) | 10 (58.8) | 0 (0) | 16 (59.3) |
| Stable disease | 4 (16) | 2 (28.6) | 0 (0) | 6 (35.3) | 2 (40) | 4 (14.8) |
| Progressive disease | 6 (24) | 2 (28.6) | 7 (46.7) | 1 (5.9) | 3 (60) | 5 (18.5) |
| Total | 25 (100) | 7 (100) | 15 (100) | 17 (100) | 5 (100) | 27 (100) |

RT, radiotherapy; DCR, disease control rate.

**Table 5.** Adverse events.

| **Adverse event** | **Number of events n (%) all grades** | **Number of events n (%) > G3** | **Treatment discontinuation n (%)** |
|---|---|---|---|
| Fatigue | 6 (18.8) | 0 | 0 |
| Subclinical hypothyroidism | 4 (12.5) | 0 | 0 |
| Widespread pruritus | 4 (12.5) | 0 | 0 |
| Cutaneous rash | 3 (9.4) | 0 | 0 |
| Creatinine elevation | 3 (9.4) | 1 (3.1) | 1 (3.1) |
| Transaminases elevation | 3 (9.4) | 2 (6.3) | 2 (6.3) |
| Nausea | 3 (9.4) | 0 | 0 |
| Lipase and amylase elevation | 2 (6.3) | 0 | 0 |
| Intestinal sub occlusion | 2 (6.3) | 1 (3.1) | 1 (3.1) |
| Electrolyte imbalance | 2 (6.3) | 0 | 0 |
| Dry mouth | 2 (6.3) | 0 | 0 |
| Hyperthyroidism | 1 (3.1) | 0 | 0 |
| Edema | 1 (3.1) | 0 | 0 |
| Constipation | 1 (3.1) | 0 | 0 |
| Diarrhea | 1 (3.1) | 0 | 0 |