21 IL-6 AS PROGNOSTIC FACTOR IN ADJUVANT OR METASTATIC SKIN CANCER PATIENTS TREATED WITH IMMUNOTHERAPY – A REAL LIFE STUDY

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Background The immune checkpoint inhibitors revolutioned cancer therapeutic landscape and substantially improved the survival of patients with advanced malignancies, especially in skin cancer patients.[1–5] Several predictive biomarkers are under evaluation, in order to identify patients who can derive benefit from ICI while also limiting exposure and toxicity. IL-6 is a pleiotropic cytokine involved not only in immune responses but it is also a major player in chronic inflammatory diseases.[6–7] Additionally, elevated levels of IL-6 are observed in a large number of patients (pts) with solid tumours.[8] The purpose of this study is to retrospectively investigate the relationships between IL-6 serum concentration and outcome in skin cancer patients treated with immunotherapy.

Methods From June 2020 to October 2021 at INT IRCCS Pascale, Naples, we analyzed interleukin -6 from 265 consecutive serum samples in different skin cancer pts before and during immunotherapy treatment. We included pts with cutaneous squamous cell carcinoma (SCC) treated with cemiplimab (n=32), melanoma in adjuvant setting (n=61), metastatic melanoma treated with: anti-PD1 (n=103), combo ipi+nivo (n=36) and ipilimumab alone (n=32). All patients signed informed consent. Patients baseline characteristics are listed in table 1. IL6 ere measured by Electrochemiluminescence immunoassays (ECLIA) from Roche Cobas. ROC curves were used to determine the best cut off. Survival rates were analyzed using the Kaplan-Meier method and differences among curves were assessed by the log-rank test. Hazard Ratios (HR) and their 95% confidence intervals (CI) were estimated using a Cox regression model.

Results Among 265 pts, lower serum concentration of interleukin-6 was associated with a better PFS (15.07 months (95% CI 9,76 to 18,86) versus 8.01 months (95% CI 2,80 to 4,03), HR = 0.34 (CI 0,23–0,50, p<0.0001), OS (19.83 months (95% CI 18.57 to 21.03) versus 14.53 months (95% CI 12.38 to 16.68), HR = 0.41 (CI 0,26–0,64, p=0.0001) and ORR (95% CI 6.86 to 13.30, p<0.001). Similarly, IL6 (p <0.01) and ORR (p <0.01) are significantly associated with OS and PFS in the multivariate analysis. We also confirmed the association between IL6 with PFS and OS in adjuvant setting. Moreover, pts with an IL-6 ratio (on treatment/baseline) ≤1 have a better PFS and OS.

Conclusions In this retrospective study, we found that lower IL-6 level are associated with better OS, PFS and ORR. In addition, minimum variation of IL-6 during immunotherapy are strongly associated to outcome. Further investigations are needed to get additional information.

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Ethics Approval This study was approved by the Ethics Committee of Istituto Nazionale Tumori – IRCCS – Fondazione 'G. Pascale', Naples, Italy, protocol number 17/17 oss.

Abstract 21 Table 1 Patients clinical parameters

Patient characteristics	N = 265
Median age	62 (range 23-96)
Gender: female/male, n(%)	96/169 (36/64)
BRAF Status:	
Wild type	104 (39)
Mutation, n(%)	77 (29)
NA, n (%)	84 (32)
Line of treatment in mtx pts	**N = 207**
1st line treatment, anti-PD1	77 (38)
pretreated, anti-PD1	26 (13)
1st line treatment, anti-CTLA4	2 (1)
pretreated, anti-CTLA4	30 (15)
1st line treatment, ipi+nivo	22 (11)
pretreated, ipi+nivo	14 (7)
1st line treatment, Cemiplimab	25 (12)
pretreated, Cemiplimab	7 (3)
Response rate at 1st assessment in mtx	
Complete response , n (%)	5 (2)
Partial response , n (%)	43 (21)
Stable disease , n (%)	36 (17)
Progression disease , n (%)	119 (60)
ORR, n (%)	48 (25)
DCR n (%)	69 (34)
Patient characteristics adjuvant focus	N = 61
Median age	57 (range 44-81)
Gender: female/male, n(%)	25/36 (41/59)
BRAF Status:	
Wilde type , n (%)	30 (50)
Mutation, n(%)	24 (39)
NA, n (%)	7 (11)
Response rate	
Progression disease, n (%)	19 (31)
Median RFS	8,16 Months

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