# Seven cancer patients receiving guselkumab for treatment of moderate-to-severe psoriasis

**Luca Mastorino, Niccolò Siliquini, Gianluca Avallone, Michela Ortoncelli, Pietro Quaglino, Paolo Dapavo, Simone Ribero**

**Medical Science Department, Section of Dermatology, University of Turin, Italy**

To the Editor:

Limited evidence on the use of biologic treatments in psoriatic patients with a history of malignancy is currently available in the literature. The recently published European guidelines recommend the use of anti-TNF, anti-IL17, and anti-23 biological drugs in this special population after discussion case-by-case with a cancer-specialist.[1] Recent data show successful treatment on biologics despite concurrent or previous malignancy in psoriatic patients but to date, there are poor experiences about Guselkumab in these patients.[2,3] The role of IL-23 in tumorigenesis is contradictory: high levels are correlated with poor prognosis in many human neoplasms, but in contrast, it proved effective in inhibiting cell proliferation in some cases of leukemia.[4] IL-23 inhibitors have shown efficacy and safety in the treatment of psoriasis.[5,6] Guselkumab was the first IL-23 subunit p19 inhibitor monoclonal antibody to be approved in the United States and Europe. In phase III pre-clinical trials (VOYAGE 1 and VOYAGE 2) two cases of prostate cancer, one case of breast cancer, and three cases of non-melanoma skin cancers (NMSC) were reported.[5,6] Kamiya *et al.* reported successful treatment of psoriasis Vulgaris with guselkumab in a patient with non-small lung cancer.[7]

In our clinic, Guselkumab was prescribed to 75 psoriatic patients, all with uncontrolled psoriasis and eligible for treatment with biological therapy, seven of whom had a previous diagnosis of cancer (Table 1).

Three patients (1,4,5) had a history of previous NMSC, a category of tumors whose incidence is higher in psoriatic patients. One patient among these had a history of basal cell carcinoma (BCC) and squamous cell carcinoma (SCC) and Guselkumab was the first biological drug he received. Only patients 4 and 5 received other biological treatments before Guselkumab (Etanercept, Adalimumab, and Ustekinumab) and both have experienced the onset of BCCs since the start of biological treatment. In particular, patient 4 reports a history of multiple BCCs (the first dating back to 2000) whose frequency did not increase after the introduction of the first biological drug in 2011, despite the risk associated with the use of anti-Tumor Necrosis Factor an (anti-TNFa) drugs.[4] These patients needed only surgical treatment.

Patient 7 is a biologic-naive woman reporting previous stage Ia melanoma, surgically treated, which occurred 8 years before starting Guselkumab therapy and for which regular follow-up is ongoing.

History of leiomyosarcoma of stage Ib dating back to 2000 and of stage I clear cell renal carcinoma dating back to 2014 were respectively reported by patients 2 and 3. In both cases, given the low degree of illness, only a surgical approach was necessary. Both patients are biological-naive and report a regular follow-up from the beginning of treatment.

Patient 6 experienced stage IIA ductal breast cancer, treated with surgery, radiotherapy, and hormone therapy until February 2020. A favorable opinion from the oncologist was obtained before starting treatment with Guselkumab. To date, the follow-up has been regular.

Only patient 1 reported a period of immunosuppressive agent treatment that occurred before cancer diagnosis.

All the patients have been treated with Guselkumab for at least 11 months reaching PASI>70 in 6 out of 7 cases. Only patients 4 interrupted Guselkumab after almost one year due to intolerance.

To our knowledge, this is the first case series of cancer patients receiving Guselkumab for the treatment of moderate-to-severe psoriasis. All patients experienced low-grade neoplasia for which Guselkumab does not seem to raise concerns about possible cancer recurrence, showing more safety and resulting in more reliability than traditional immunosuppressive agents for this category of patients. Surely proof of concept studies is required to clearly define the safety profiles of this biological therapy in patients with a history of neoplasia.

Correspondence: Luca Mastorino, Medical Science Department, Section of Dermatology, University of Turin, Via Cherasco 23, Turin, Italy
E-mail: simone.ribero@unito.it

Key words: Psoriasis, Guselkumab, Cancer, IL-23, Neoplasia, Biological therapy.

Contributions: All authors contributed to the study conception and design. Material preparation, data collection and analysis were performed by LM and NS. The first draft of the manuscript was written by SR and all authors commented on previous versions of the manuscript. All authors read and approved the final manuscript.

Conflict of interest: The authors declare no potential conflict of interest.

Funding: None.

Ethical approval and consent to participate: Written informed consent was obtained from the patient.

Availability of data and material: Data and materials are available by the authors.

*Please cite this article as: Mastorino L, Siliquini N, Avallone G, et al. Seven cancer patients receiving guselkumab for treatment of moderate-to-severe psoriasis. Dermatol Rep 2022;14:9282.*

Received for publication: 3 June 2021.
Accepted for publication: 7 July 2021.


*Dermatology Reports 2022; 14:9282*
*doi:10.4081/dr.2022.9282*



## References

1. Nast A, Smith C, Spuls PI et al. EuroGuiDerm Guideline on the systemic treatment of Psoriasis vulgaris - Part 2: specific clinical and comorbid situations. J Eur Acad Dermatol Venereol 2021;35:281-317.
2. Kahn JS, Casseres RG, Her MJ. Treatment of psoriasis with biologics and Apremilast in patients with a history of malignancy: a retrospective chart review. J Drugs Dermatol 2019;18.
3. Bellinato F, Gisondi P, Maurelli M, Girolomoni G. IL-17A inhibitors in patients with chronic plaque psoriasis and history of malignancy: A case series with systematic literature review. Dermatol Ther 2021;34:e14889.
4. Chyuan IT, Lai JH. New insights into

**Table 1. Summary.**

| Patient | Age | Sex | Cancer/year of diagnosis | Stage | Treatment | Follow-up | Previous immunosuppressive treatment | Previous biologic treatment | Date of first biologic therapy | Years from cancer diagnosis and Guselkumab start | Follow-up under Guselkumab | Absolute PASI at start date | Absolute PASI at 48 weeks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 81 | F | Scc 2017 | Bcc 2017 | Ii | Surgery | Regular | Methotrexate | None | 3 | 14 months | 4 | 1 |
| 2 | 90 | M | Leiomyosarcoma 2000 | Ib | Surgery | Regular | None | None | | 20 | 11 months | 3.5 | 2 |
| 3 | 61 | M | Clear cell kidney cancer 2014 | I | Radical nefrectomy+ lymphoadenectomy | Regular | None | None | | 6 | 12 months | 9.5 | 1.9 |
| 4 | 66 | F | Multiple bccs since 2000 | | Surgery | BCCs insurgent during tratment with biologics | Methotrexate | Etanercept, adalimumab | 2011 | | 12 months | 9.5 | 1 |
| 5 | 74 | M | Bccs 2015 and 2020 | | Surgery | Regular | None | Ustekinumab | 2015 | | 14 months | 15 | 4 |
| 6 | 52 | F | Breast cancer 2014 | Iia | Wide resection+SLN+RT+ OT with tamoxiphene | Regular | None | None | | 6 | 14 months | 10 | 0 |
| 7 | 57 | F | Melanoma 2012 | Ia | Surgery | Regular | None | None | | 8 | 15 months | 12.6 | 0 |

PASI: Psoriasis Area Severity Index, BCC: Basal Cell Carcinoma, SCC: Squamous Cell Carcinoma, SLN: sentinel lymphonode, RT: radiotherapy, OT: ormonetherapy.

the IL-12 and IL-23: From a molecular basis to clinical application in immune-mediated inflammation and cancers. Biochem Pharmacol 2020;175:113928.
5. Reich K, Armstrong AW, Foley P, et al. Efficacy and safety of guselkumab, an anti-interleukin-23 monoclonal antibody, compared with adalimumab for the treatment of patients with moderate to severe psoriasis with randomized withdrawal and retreatment: Results from the phase III, double-blind, placebo- and active comparator-controlled VOYAGE 2 trial. J Am Acad Dermatol 2017;76:418-31.
6. Bilal J, Berlinberg A, Bhattacharjee, et al. A systematic review and meta- analysis of the efficacy and safety of the interleukin (IL)-12/23 and IL-17 inhibitors ustekinumab, secukinumab, ixekizumab, brodalumab, guselkumab and tildrakizumab for the treatment of moderate to severe plaque psoriasis. J Dermatolog Treat 2018;29:569-78.
7. Kamiya K, Yamauchi H, Ohtsuki M. Treatment of psoriasis vulgaris with guselkumab in a patient with non-small cell lung cancer. Eur J Dermatol