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76 - Tissue agnostic application of mTOR inhibitors for the management of therapy refractory solid tumors

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Objective

In this analysis, we examined the efficacy, feasibility and limitations of the application of mTOR inhibitors based on the individual molecular profile of heavily pretreated cancer patients after failure of all standard treatments.

Patients and Methods

In this single center, real-world retrospective analysis of our platform for precision medicine, we analyzed the molecular characteristics of 70 cancer patients. Tumor samples of the patients were analyzed using next-generation sequencing panels of mutation hotspots, MSI testing, and immunohistochemistry. All profiles were reviewed by a multidisciplinary team to provide a targeted treatment recommendation after consensus discussion.

Results

Seventy cancer patients with activation of the p-mTOR pathway were offered a mTOR inhibitor-based targeted therapy and 17 (24%) of them eventually received the targeted therapy.

Four patients (6%) achieved stable disease. The other 13 patients (19%) experienced progressive disease. The median time to treatment failure was 3.2 months.

In total, we detected 133 mutations in 60 patients. The five most frequent mutations were TP53, PTEN, KRAS, ATR, and POLE that accounted for over 40% (46%) of all mutations.

Conclusion

The antitumoral activity of mTOR inhibitor in therapy refractory solid tumors was modest.

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Conflict of Interest:

Taghizadeh H received fees from La Roche, Pierre Fabre and Merck.
All other authors have nothing to declare.