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Efficacy and safety of RP1 + nivolumab (nivo) in patients with non-melanoma skin cancer (NMSC)

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Background

Patients (pts) with NMSC that has progressed on an anti-PD-(L)1-containing therapy have poor clinical outcomes and limited treatment options. RP1 (vusolimogene oderparepvec) is an oncolytic immunotherapy that expresses human granulocyte-macrophage colony-stimulating factor and a fusogenic glycoprotein (GALV-GP-R⁻). Here, we report the efficacy of RP1 + nivo from the NMSC cohort of the phase 1/2 IGNYTE trial (NCT03767348).

Methods

The trial enrolled pts with anti–PD-1-naïve and -failed NMSC, including Merkel cell carcinoma (MCC), basal cell carcinoma (BCC), angiosarcoma, and cutaneous squamous cell carcinoma (CSCC). RP1 was administered intratumorally, at 1×10^6 PFU/mL initially, then at 1×10^7 PFU/mL Q2W (≤ 7 doses) with intravenous nivo. The objective response rate (ORR) was assessed by investigator assessment using modified RECIST (mRECIST); the key modification was that progression had to be confirmed by further tumor increase to allow for the potential of pseudoprogression.

Results

A total of 99 pts with NMSC were evaluable for efficacy; 71% of pts overall had disease progression on prior anti-PD-1 therapy. Substantial responses to RP1 + nivo occurred across tumor types (MCC, BCC, angiosarcoma), with confirmed responses seen both in pts with anti-PD-1-na \ddot{v} e and -failed disease, as well as in locally advanced (LA) and metastatic (met) CSCC (Table). The most common treatment-related adverse events (TRAEs; \geq 15%) were fatigue, chills, and pyrexia. The most common grade \geq 3 TRAEs (\geq 2 events in pts with anti-PD-1-na \ddot{v} e or -failed disease) were fatigue, rash maculo-papular, abdominal pain, diarrhea, hyponatremia, and pyrexia. Table: 1661P

Confirmed response by NMSC type

BOR, n (%)	MCC	BCC		Angiosarcoma			CSCC PD-1 naïve			CSCC PD-1 failed		
	PD-1 naïve	PD-1 failed	d (n PD-1 naïve	PD-1 fail	ed (n PD-1 naïve	PD-1 failed	LA (n	Met (n	= Total (n = LA (n	Met (n	= Total (n =
	(n = 4)	= 19)	(n = 3)	= 10)	(n = 6)	(n = 8)	= 5)	11)	16)	= 8)	25)	33)

BOR, n (%)	MCC		BCC	Angiosarcoma			CSCC PD-1 naïve			CSCC PD-1 failed		
	PD-1 naïve (n = 4)	PD-1 failed (= 19)	n PD-1 naïve (n = 3)	PD-1 failed (= 10)	n PD-1 naïve (n = 6)	PD-1 failed (n = 8)	LA (n = 5)	Met (n = 11)	: Total (n : 16)	= LA (n = 8)	Met (n = 25)	Total (n = 33)
CR	4 (100)	3 (15.8)	1 (33.3)	0	2 (33.3)	2 (25.0)	2 (40.0)	4 (36.4)	6 (37.5)	1 (12.5)	1 (4.0)	2 (6.1)
PR	0	2 (10.5)	0	3 (30.0)	2 (33.3)	1 (12.5)	1 (20.0)	2 (18.2)	3 (18.8)			
ORR	4 (100)	5 (26.3)	1 (33.3)	3 (30.0)	4 (66.7)	3 (37.5)	3 (60.0)	6 (54.5)	9 (56.3)	2 (25.0)	3 (12.0)	5 (15.2)

BOR, best overall response.

Conclusions

RP1 + nivo induced responses across multiple NMSC tumor types, including anti-PD-1-failed disease, and represents a promising treatment approach for pts with advanced skin cancers, including those with disease progression on prior anti-PD-1 therapy.

Clinical trial identification

NCT03767348.

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Legal entity responsible for the study

Replimune, Inc.

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