RWD103

Real-world results of reimbursed immune checkpoint inhibitors in Taiwan's health insurance system.

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INTRODUCTION

To improve the accessibility of immune checkpoint inhibitors (ICIs) for various cancers, the Taiwan National Health Insurance Administration (NHIA) implemented risk-sharing reimbursement with national, mandatory real-world data registry.

OBJECTIVES

This study aims to provide efficacy and safety outcomes of the ICI monotherapy from that registry.

METHODS

- This nationwide, multicenter, retrospective cohort study collected data mainly from the Immune Checkpoint Inhibitor Registry Database (ICIRD), which enrolled cancer patients treated with ICIs (pembrolizumab, nivolumab, atezolizumab and avelumab) that were reimbursed by NHIA.
- The registry data were linked to the National Health Insurance Research Database (NHIRD) to investigate patient characteristics and the Death Certification Research database (DCRD) for survival analysis.
- The effectiveness endpoints included overall survival (OS) and progression-free survival (PFS).
- Immune-related adverse events were only collected in the ICIRD at the time of reporting discontinuation of treatment.

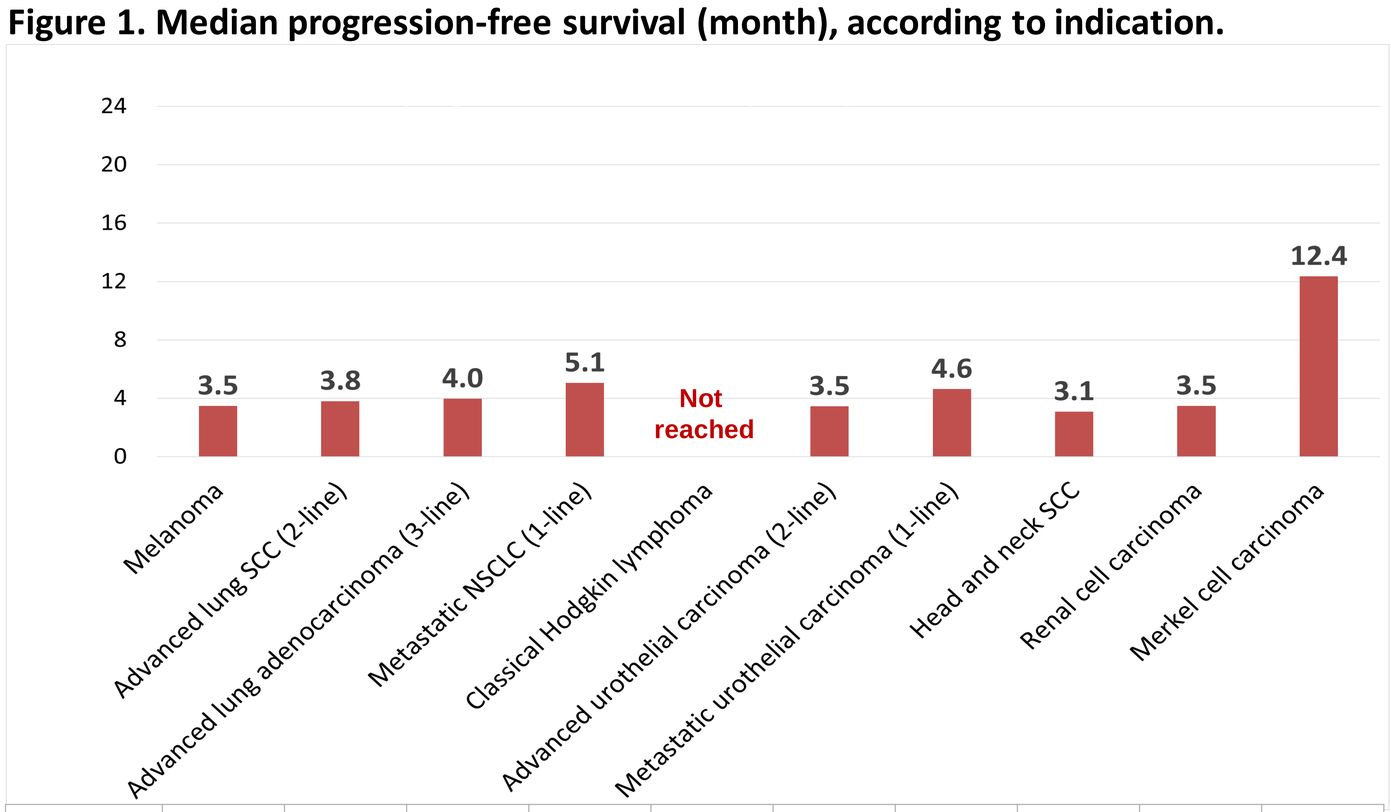
RESULTS

- The study enrolled those who used ICIs reimbursed by NHIA from April 2019 to March 2021, and their outcome was followed up to September 2021.
- A total of 2,382 patients with 10 indications of 7 types of cancers were analyzed for efficacy.
- The most prevalent indications were head and neck squamous cell carcinoma (n=582, 24.4%), and metastatic NSCLC 1st-line (n=456, 19.1%).
- The median progression-free survival (PFS) was 3.7 months (95% CI 3.4-4.3 months) overall [Figure 1].
- The median overall survival (OS) was 10.0 months (95% CI 9.4-11.1 months) overall, while the best and worst OS were observed in classical Hodgkin lymphoma (median and 95% CI not reached) and head and neck squamous cell carcinoma (7.1, 6.2 to 8.1 months), respectively [Figure 2].
- Of the 2,114 patients registered for discontinuation, 164 (7.8%) patients had immune-related adverse events (irAEs) [Table 1]. Grade 3 or higher irAEs were rare (3.7%, 78/2114).

CONCLUSION

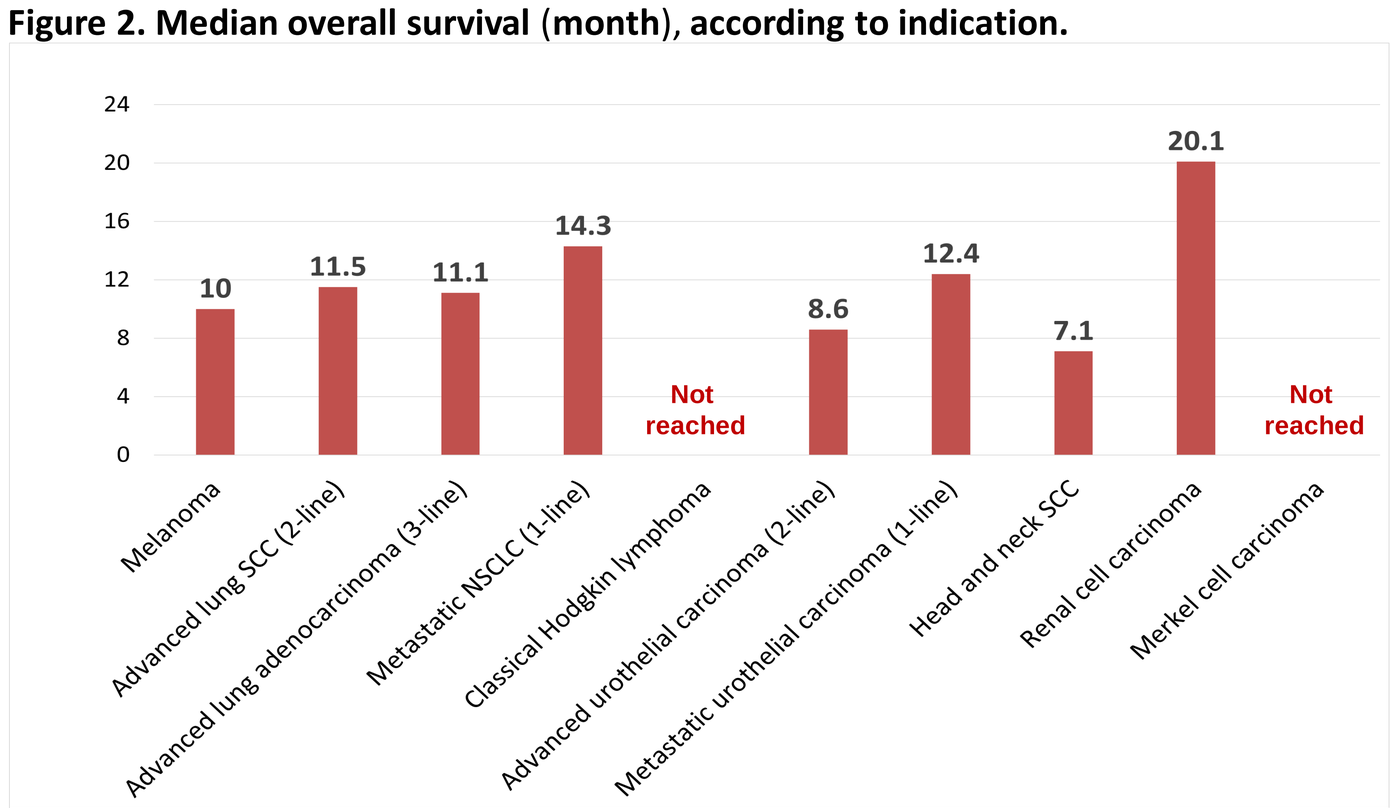
This study overviews the effectiveness and safety of ICIs for various cancers in a single-payer reimbursement system. Under the national registry, the RWE could reassess payment regulations to facilitate the optimal use of these high-cost drugs.

Figure 1. Median progression-free survival (month), according to indication.



No. of patients with ICIs	250	202	236	456	26	307	127	582	190	6
Event rate	77.6%	74.8%	73.7%	64.5%	30.8%	70.7%	66.1%	79.4%	71.6%	50.0%

Figure 2. Median overall survival (month), according to indication.



No. of patients with ICIs	250	202	236	456	26	307	127	582	190	6
Event rate	63.6%	62.4%	61.9%	50.9%	19.2%	63.2%	56.7%	71.8%	51.6%	33.3%

Table 1. Adverse events (AEs) reported in patients using ICIs, according to indication.

Indications	No. of patients discontinuing ICIs, N	No. of patients with irAE reports, N (%)
Melanoma	230	12 (5.2%)
Advanced lung SCC (2-line)	177	17 (9.6%)
Advanced lung adenocarcinoma (3-line)	212	24 (11.3%)
Metastatic NSCLC (1-line)	368	45 (12.2%)
Classical Hodgkin lymphoma	16	0 (0%)
Advanced urothelial carcinoma (2-line)	272	15 (5.5%)
Metastatic urothelial carcinoma (1-line)	100	7 (7.0%)
Head and neck SCC	561	34 (6.1%)
Renal cell carcinoma	175	9 (5.1%)
Merkel cell carcinoma	3	1 (33.3%)
Total	2,114	164 (7.8%)