REAL-WORLD EVIDENCE STUDY ON PD-L1 TESTING AND USE OF IMMUNO-ONCOLOGY (IO)-TREATMENTS AMONG CANCER PATIENTS IN THE HELSINKI AND UUSIMAA (HUS) REGION, FINLAND

RWD157

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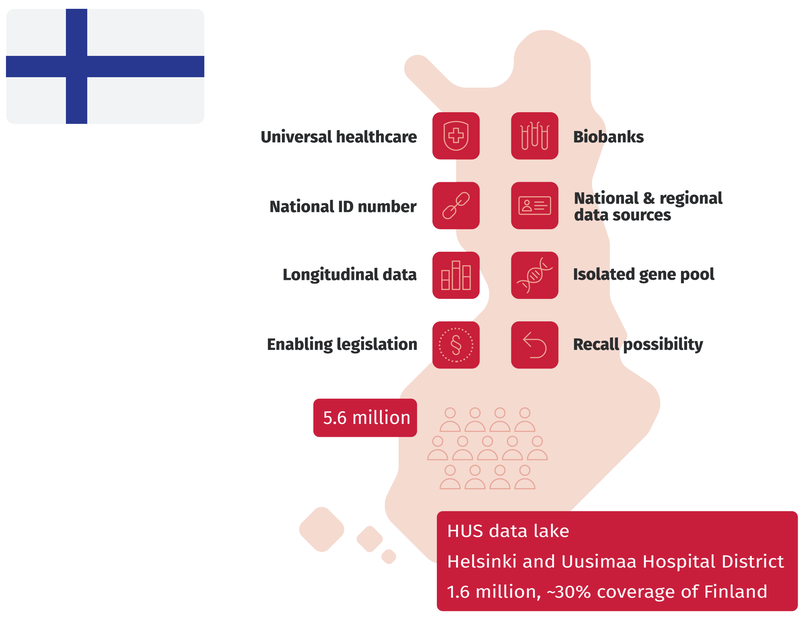

CORE DATASET

- The Collaboration Research (CORE) initiative by Medaffcon, is a retrospective registry-based cohort investigation in Helsinki and Uusimaa region (HUS) data lake.
- All patients with cancer diagnosis (C00-C99*; '*' indicates any character) starting from 2015 are included in the cohort and the dataset is updated continuously.
- The dataset includes all diagnoses, healthcare contacts (outpatient and inpatient visits), laboratory measures, pathological tests and results, procedures and operations, hospital medications and prescriptions, radiological tests and results from the baseline and follow-up period.
- Please see poster RWD 156 for more information.

BACKGROUND

According to the GLOBOCAN 2022 estimates, the cancer with the highest incidence worldwide is lung cancer (12.4%), followed by cancers of the breast (11.6%), colorectum (9.6%), prostate (7.3%), and stomach (4.9%).

In Finland, the cancers with the highest incidences in the 20–69-year-old female population are breast cancer (179.6/100 000), colorectal cancer (35.4/100 000) and melanoma of the skin (27.6/100 000) (1).

In the male population of the same age, the highest incidences were observed for prostate cancer (116.7/100 000), colorectal cancer (48.4/100 000) and lung and tracheal cancer (33.8/100 000) (1).

OBJECTIVES

How the recent advances in genetic testing and the introduction of IO-treatments in several cancers have been implemented in the clinical care has not been described in Finland. This real-world evidence (RWE) study aimed to define the changes in the coverage of PD-L1 testing and the use of IO-treatments over time among cancer patients in the Helsinki and Uusimaa region (HUS), Finland.

METHODS

The electronic health records (EHRs) of all patients with an ICD-10 diagnosis for cancer (C*) were collected from the HUS region (1.6 million inhabitants, 30% of the Finnish population). A total of 107 630 incident cancer patients were identified between 2015-2023 and followed for one year after diagnosis.

The collected data included diagnoses, contacts, contact types, pathology, genetic mutations, in-hospital treatments, prescriptions, radiology, deaths, ECOG, smoking status and metastases.

The cancers with the highest amount of PD-L1 testing were identified, and the use of IO-treatments among these patients was defined from EHRs.

The IO-treatments included nivolumab, pembrolizumab, durvalumab, avelumab, atezolizumab, cemiplimab, dostarlimab, ipilimumab and tremelimumab.

RESULTS

PD-L1 testing was most frequently done in patients with melanoma, colorectal, lung, breast, kidney and bladder cancer. Of these, in 2023 testing was most frequent in lung cancer, where 35.6% of the patients were tested during the study period (Figure 1 and Table 1). The second was bladder cancer, with only 2.6% of the patients being tested.

In 2023, IO-treatments were most commonly used among lung cancer patients (11.4%), but also a notable proportion of kidney cancer (5.3%), melanoma (5.3%), breast cancer (3,4%) and bladder cancer (3.2%) patients received IO-treatment (Figure 2 and Table 1).

We also looked at the proportion of patients with PD-L1 testing and IO treatments over time by inclusion year (Figure 3).

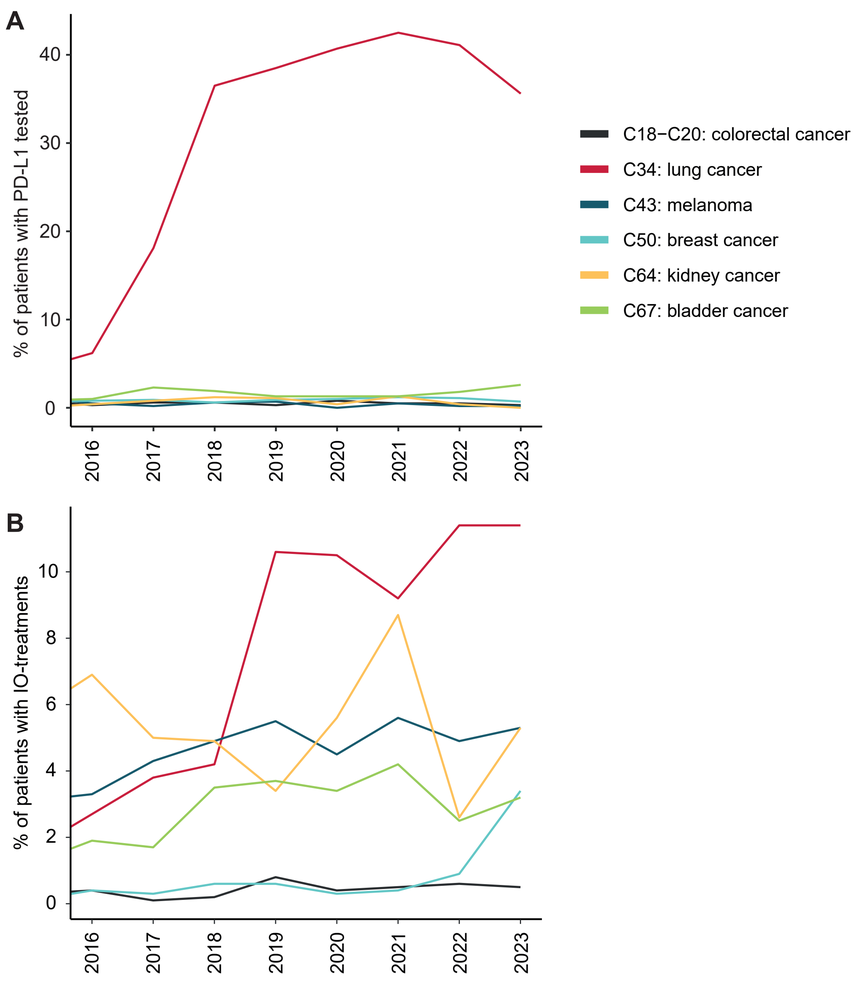

Figure 3. Proportion (%) of all patients (including also untreated) with (A) PD-L1 testing and (B) IO-treatments in HUS region, categorized by year of inclusion in the study

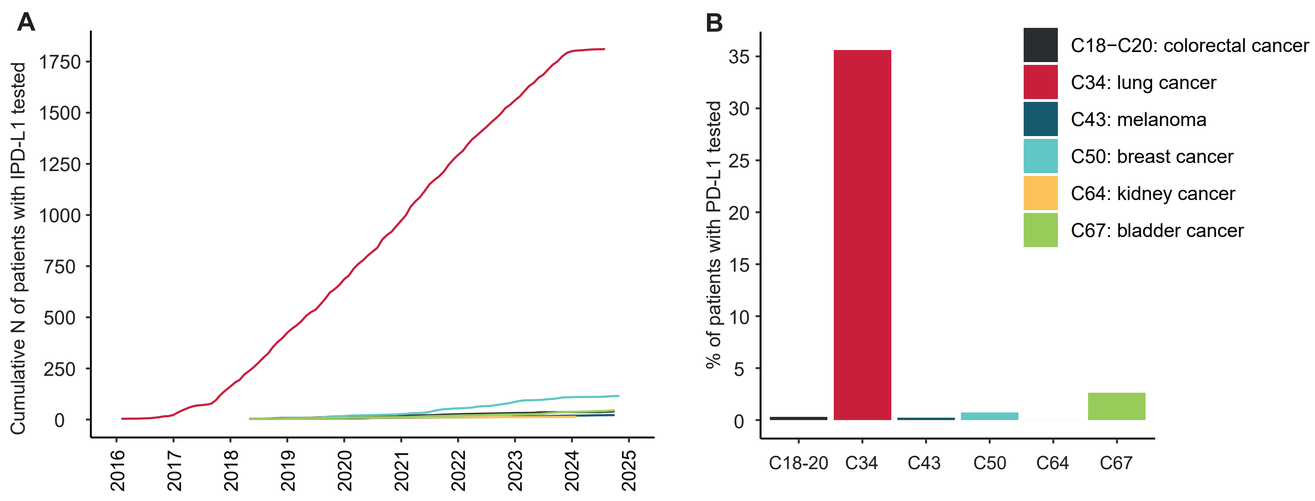

Figure 1. (A) Cumulative number (N) over time and (B) the proportion (%) of PD-L1 tested patients in 2023 in HUS region

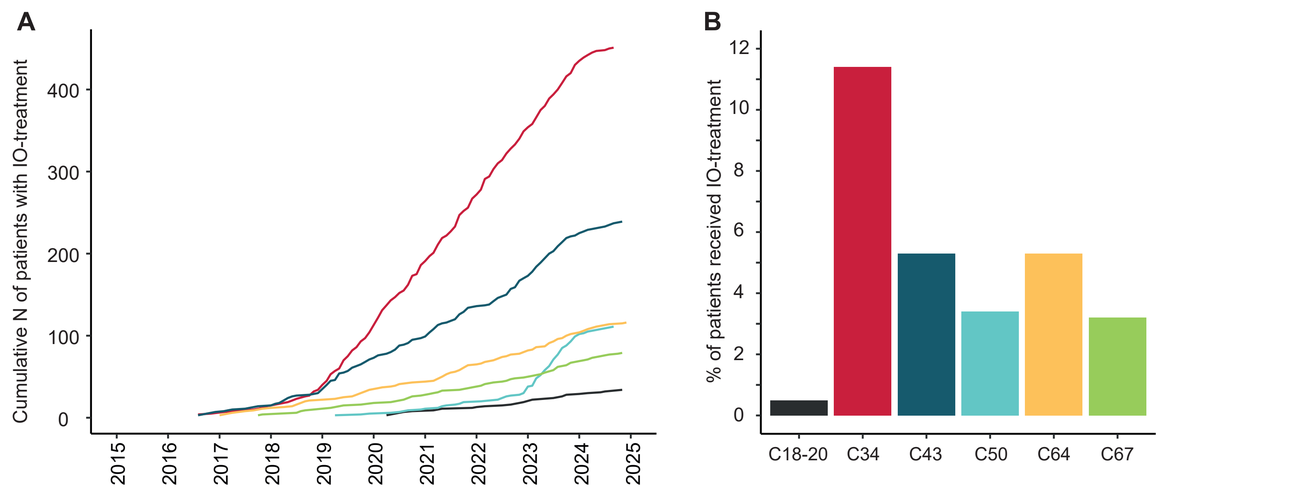

Figure 2. (A) Cumulative number (N) over time and (B) the proportion of (%) IO-treated patients in 2023 in HUS region

	Total			2015-2023				2023			
				PD-L1 testing		IO-treatments		PD-L1 testing		IO-treatments	
Cancer type	**N (2015-2023)**	**N (2023)**	**%¤**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**
Lung (C34*)	6123	713	5.7	1811	29.6	451	7.4	254	35.6	81	11.4
Bladder (C67*)	2777	346	4.8	45	1.6	79	2.8	9	2.6	11	3.2
Breast (C50*)	13443	1655	12.5	116	0.9	111	0.8	11	0.7	57	3.4
Kidney (C64*)	2183	228	2	14	0.6	116	5.3	0	0	12	5.3
Colorectal (C18-C20*)	8035	1148	2.6	40	0.5	34	0.4	3	0.3	6	0.5
Melanoma (C43*)	5166	637	7.5	22	0.4	239	4.6	<3	-	34	5.3

Table 1. PD-L1 testing and IO-treatments per cancer type in HUS region during 2015-2023

¤ % of all incident cancer (ICD-10 C*) patients in HUS region during 2015-2023

CONCLUSIONS

In this study, which is part of the Collaboration Research (CORE) initiative by Medaffcon, we show:

- The frequency of PD-L1 testing and use of IO-treatments in HUS region, Finland for patients with melanoma, colorectal, lung, breast, kidney and bladder cancer.
- Both PD-L1 testing and the use of IO-treatments were most common among lung cancer patients.
- A notable increase in both PD-L1 testing and the use of IO-treatments over time.
- Continuous monitoring of biomarker testing and IO-treatment adoption is essential, as cancer therapies evolve rapidly across indications. A holistic view beyond single cancer types is needed to understand trends and optimize clinical practice.

CONTACT

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References: 1. The Finnish Cancer Foundation. The costs of cancer in Finland [Internet]. 2022. https://syopa.azurewebsites.net/