1960P – Real-world overall survival with immune checkpoint inhibitors: insights from FAIR-ICI multicenter cohort and comparison with clinical trials

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BACKGROUND

Immune checkpoint inhibitors (ICIs) have improved survival across multiple cancer types, but evidence is primarily derived from clinical trials with **selected patient populations.**

Real-world evidence can show how trial efficacy translates to routine clinical care.

FAIR-ICI cohort

3,231 ICI-treated patients

2,514 (77.8%) metastatic

23 tumor types

4 Belgian hospitals • 9 ICIs • 2015–2024

METHODS

Electronic health record
Structured + unstructured data

Natural language processing enrichment
OMOP Common Data Model harmonization

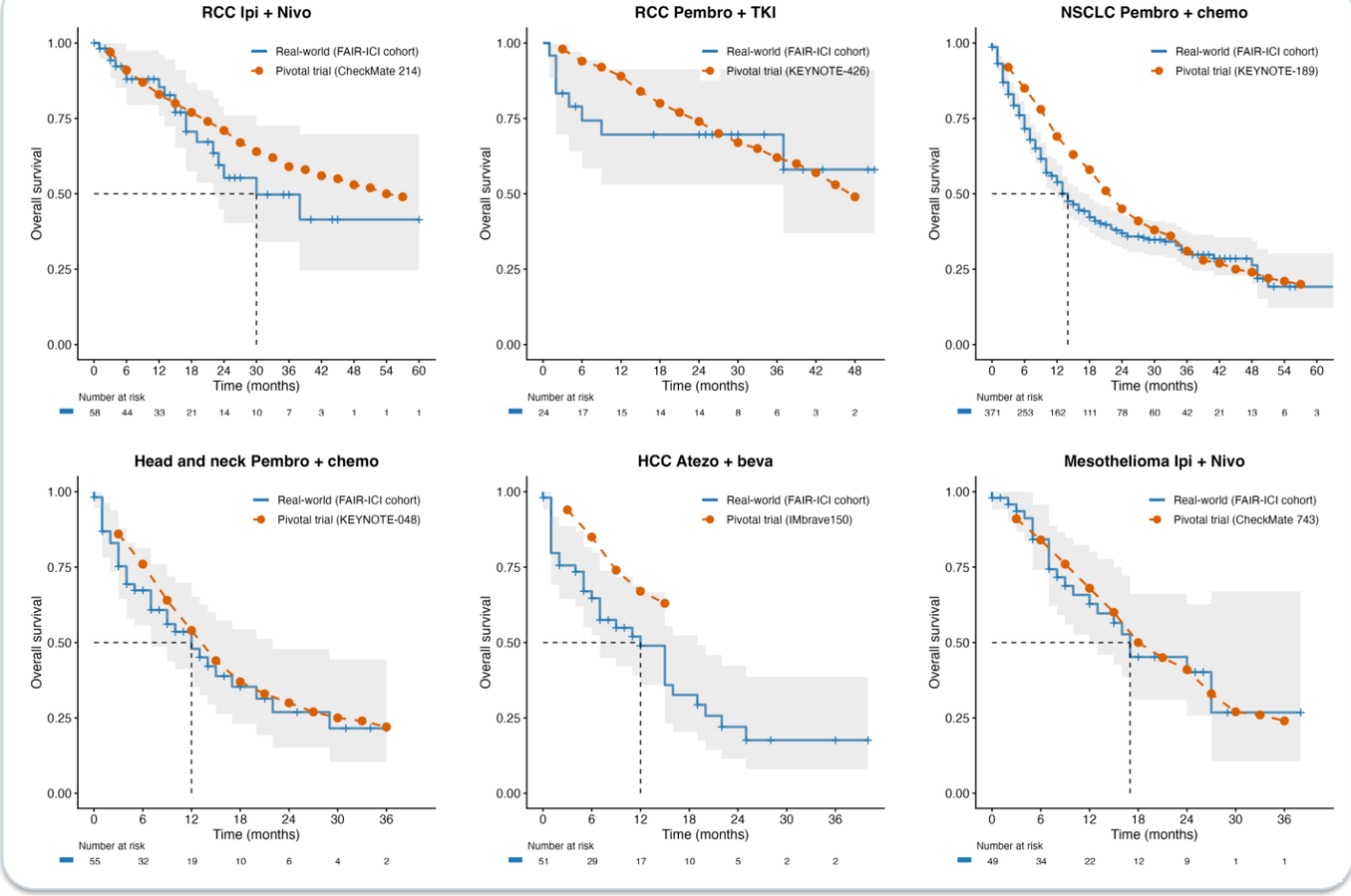
Overall survival (OS)
Metastatic cohort + first-line regimen subgroups

Analysis

- **Overall survival**: Kaplan–Meier
- **Trial comparisons**: Published KM curves reconstructed for selected first-line subgroups
- **Performance status** ECOG 0–1 vs ECOG ≥2 + **Association with overall survival**: multivariable Cox proportional hazards regression model

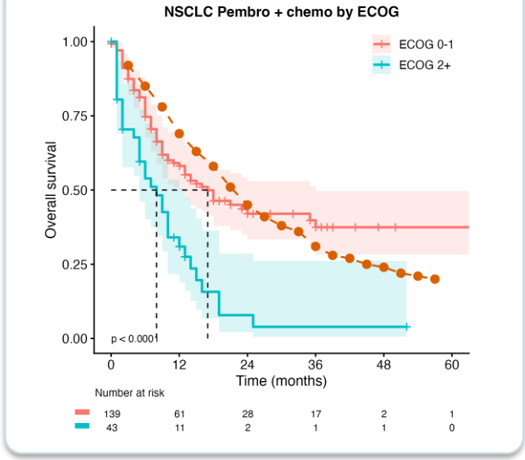
Real-world overall survival compared with pivotal trials

Real-world OS generally followed trends in pivotal trials but was often lower. During early follow-up, the most pronounced visual discrepancies were observed in NSCLC treated with pembrolizumab plus chemotherapy, HCC treated with atezolizumab plus bevacizumab, and RCC treated with pembrolizumab plus TKI.



A closer look at performance status
in NSCLC pembrolizumab + chemotherapy

ECOG 0–1 survival was closer to trial outcomes, whereas ECOG ≥2 had much poorer survival.



Among metastatic patients:
ECOG ≥2: **aHR = 2.18** (95% CI 1.82–2.60)

CLINICAL IMPLICATIONS

Translating trial efficacy to routine care

- Real-world survival may differ from trials, highlighting the importance of real-world evidence when interpreting trial outcomes.

Performance status matters

- Poor performance status are often excluded from trials, which may contribute to trial–real-world survival differences.

Disclosure: Linh T. Ha declares no conflicts of interest.

OMOP, Observational Medical Outcomes Partnership • ECOG, Eastern Cooperative Oncology Group • NSCLC, non-small cell lung cancer • RCC, renal cell carcinoma • HCC, hepatocellular carcinoma • Pembro, pembrolizumab • Atezo, atezolizumab • Nivo, nivolumab • Ipi, ipilimumab • chemo, chemotherapy • TKI, tyrosine kinase inhibitor • beva; bevacizumab