



REAL-WORLD OUTCOMES OF ALPELISIB: PIK3CA VARIANTS IMPLICATIONS



J. Esquivel Negrín, S. González Munguía, B. Del Rosario García, I. González Perera, J. Peña Hernández, A. Magdalena Pérez, J. Muñoz Manrique, P. Fumero Cruz, J. González Chávez, C.L. Díaz Díaz, M.P. Díaz Ruiz
SERVICIO DE FARMACIA. HOSPITAL UNIVERSITARIO NUESTRA SRA. DE CANDELARIA. S/C DE TENERIFE



Background and importance

Alpelisib: **PIK3CA inhibitor** that exhibits anti-tumour activity in hormone receptor positive (HR+), human epidermal growth factor receptor-2 negative (HER2-), and PIK3CA mutated breast cancer cells.

Only 11 PIK3CA gene variants have been represented in randomised controlled trials (RCT) *BYLieve* and *SOLAR-1*.
Few real-world studies have been published concerning this.

Aim



1. Alpelisib outcomes in **real-world practice**.
2. Study whether there are different findings in **PIK3CA mutations other than the ones included in RCT**.

Material and methods

Ambispective-observational, descriptive, longitudinal study.
11/2019 - 03/2024.

Population

- Locally advanced or metastatic HR+, HER2-, PIK3CA mutated breast cancer.
 - Treatment: alpelisib + fulvestrant.
 - Previous line: CDK4/6 inhibitor + aromatase inhibitor.
 - ECOG performance status: 0-1.
- Two groups:
 - Group 1: variants NOT included in RCT.
 - Group 2: variants included in RCT.



Effectivity assessment

- Progression free survival (PFS) and overall survival (OS) medians: Kaplan-Meier method.
- Differences between groups: logrank tests.
- Statistical analysis: R-4.3.2 software.



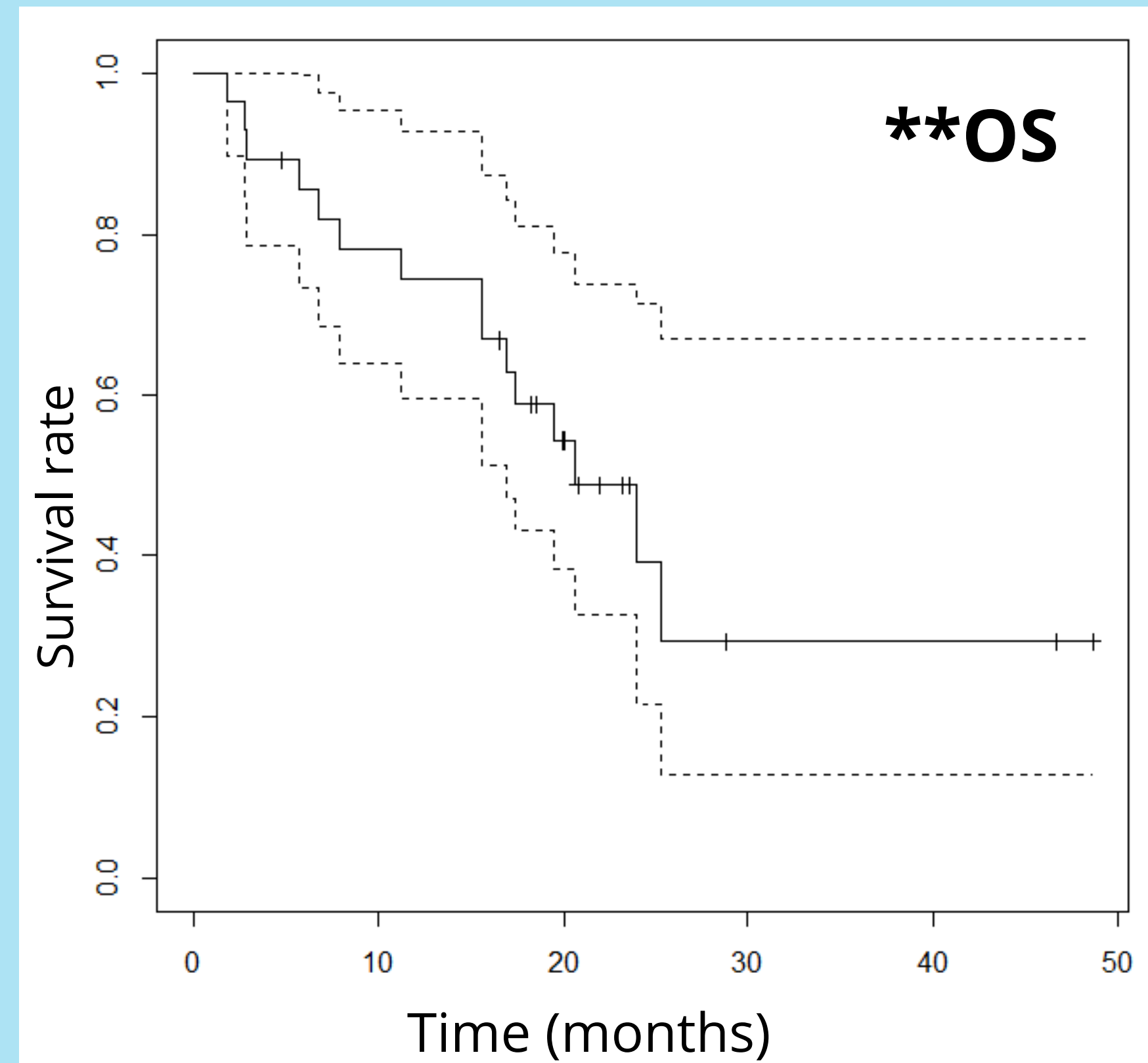
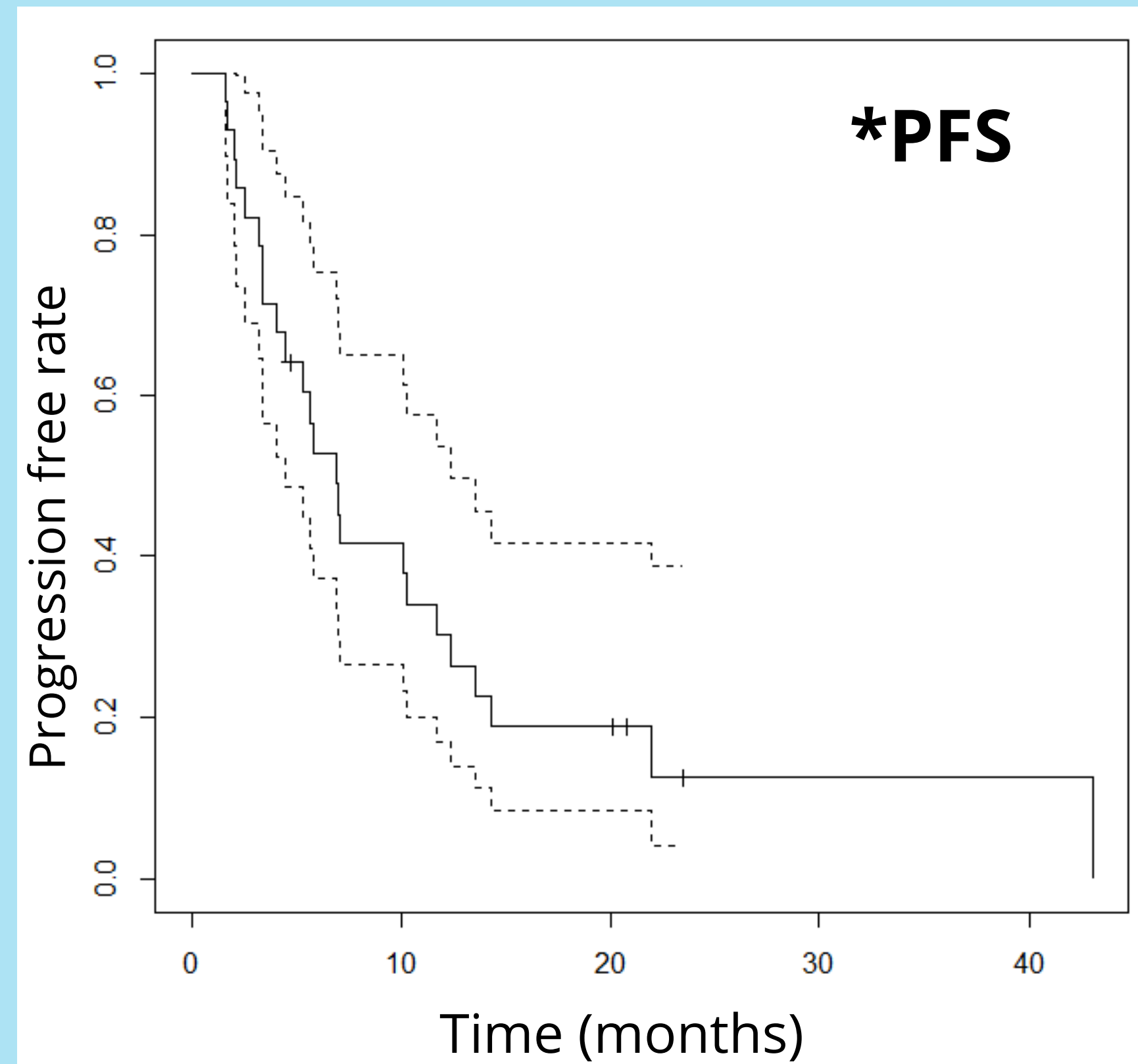
Results

31 patients (all women)

- 3 excluded (off label: alpelisib+nab-paclitaxel).
 - 2 excluded from subgroup analysis (PIK3CA variant not reported).
- Median age 61.76 years (range 34.17-76.83).
Median treatment duration: 6.71 months (1.61-39.93).

	Total population	Group 1 (n=5)	Group 2 (n=21)
PFS (months)	6.89* (95%CI: 4.49-12.33)	13.90 (95%CI = 6.89, NR)	5.61 (95%CI = 3.41, 12,33)
OS (months)	20,59** (95%CI: 16.92-NR)	20,59 (CI95% = 15.61, NR)	NR (CI95% = 11.21, NR)

CI: confidence interval; NR: not reached



• As compared to phase III RCT *SOLAR-1*, **our study showed lower PFS** (6.89 vs 11.0 months), but similar to other real-world cohorts.

• There are **no** statistically significant **differences** in PFS or OS **between groups** (p = 0.09 and p = 0.3, respectively). Nonetheless, results suggest a **tendency in favour of group 1** outcomes.

Conclusions

- Our results show a modest benefit observed with alpelisib in real-world clinical practice when used in a second line therapy.
- Finally, the clinical utility of PIK3CA mutations need further research that might detect benefits from mutation guided treatment algorithms to optimise and ease clinical decisions, improving end results.