Real-World Adherence to Ribociclib-Based Therapy in HR+/HER2− Advanced Breast Cancer: A Retrospective Cohort Study in Romania

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203
patients with HR+/HER2− aBC on ribociclib + AI or fulvestrant (2020–2024)

90.1%
overall mean MPR (± 12.95%)

85.2%
adequately adherent (MPR ≥ 0.80): 173 of 203 patients

p = 0.595
no difference in MPR between AI and fulvestrant partners

Objectives

Ribociclib in combination with endocrine therapy is a standard treatment for HR+/HER2− advanced breast cancer, yet real-world adherence data remain limited, particularly in Central and Eastern Europe. We evaluated adherence patterns to ribociclib-based therapy and compared adherence between endocrine partner regimens in a Romanian regional cohort.

Methods

- Retrospective, observational cohort: 203 patients with HR+/HER2− advanced breast cancer treated with ribociclib + aromatase inhibitor (AI) or + fulvestrant, 2020–2024, Dolj County, Romania
- Source: electronic database of the Romanian Health Insurance House, Dolj County (disease code 124)
- Adherence: medication possession ratio (MPR); adequate adherence defined as MPR ≥ 0.80
- Between-group comparison: Mann-Whitney U test; significance at $p < 0.05$

Results

Overall mean MPR was **90.08 ± 12.95%**. Of 203 patients, **173 (85.2%)** achieved adequate adherence, while 30 (14.8%) were non-adherent. Adherence was comparable between endocrine partners (Table 1).

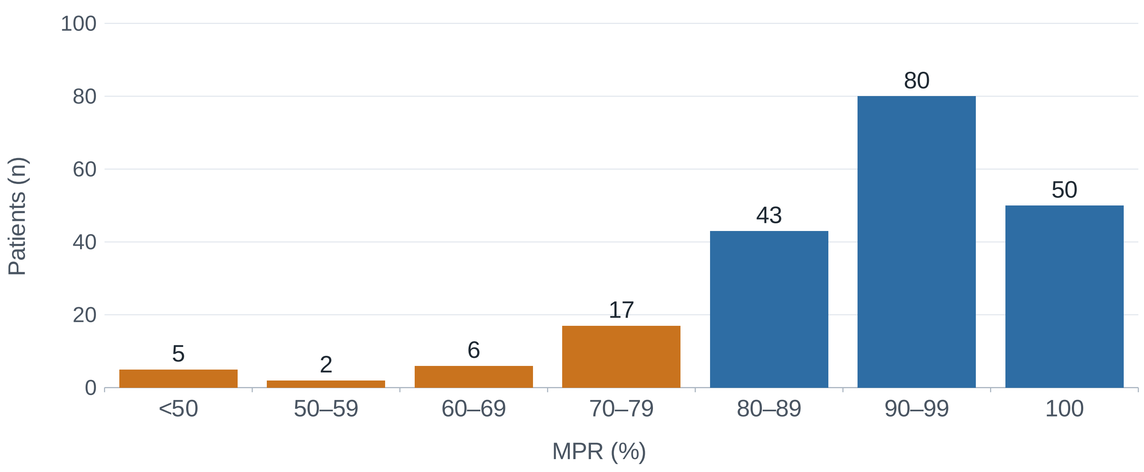
Table 1. MPR by endocrine partner (full cohort, n = 203)

Regimen	n	Mean MPR ± SD
Ribociclib + AI	142	89.1 ± 13.9%
Ribociclib + fulvestrant	61	92.0 ± 8.10%
Overall	**203**	**90.08 ± 12.95%**
Mann-Whitney U test: p = 0.595 (not significant)		

Adherence patterns in the full cohort (n = 203)

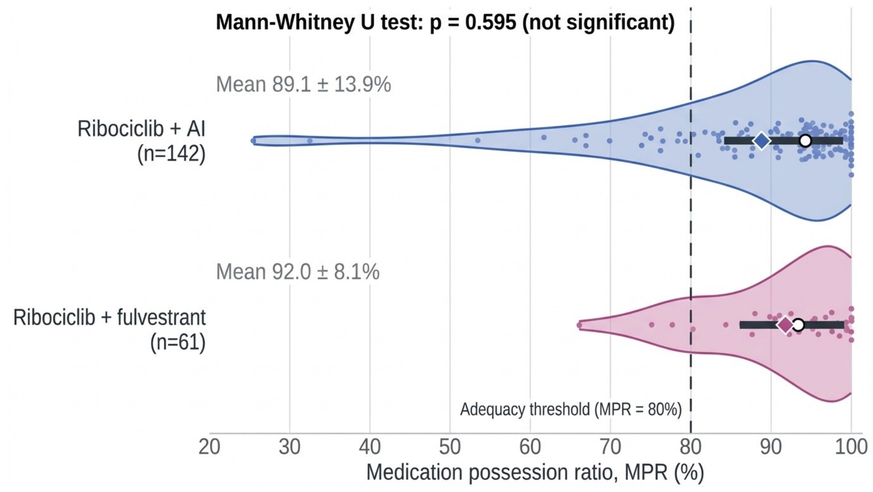
203 patients (202 women); mean age 64.3 ± 12.0 years; median MPR 94.6%; 173/203 (85.2%) with MPR ≥ 80%. Endocrine partner recorded in the dataset for 131 patients (AI 90, fulvestrant 41).

Figure 1. Distribution of patient-level MPR



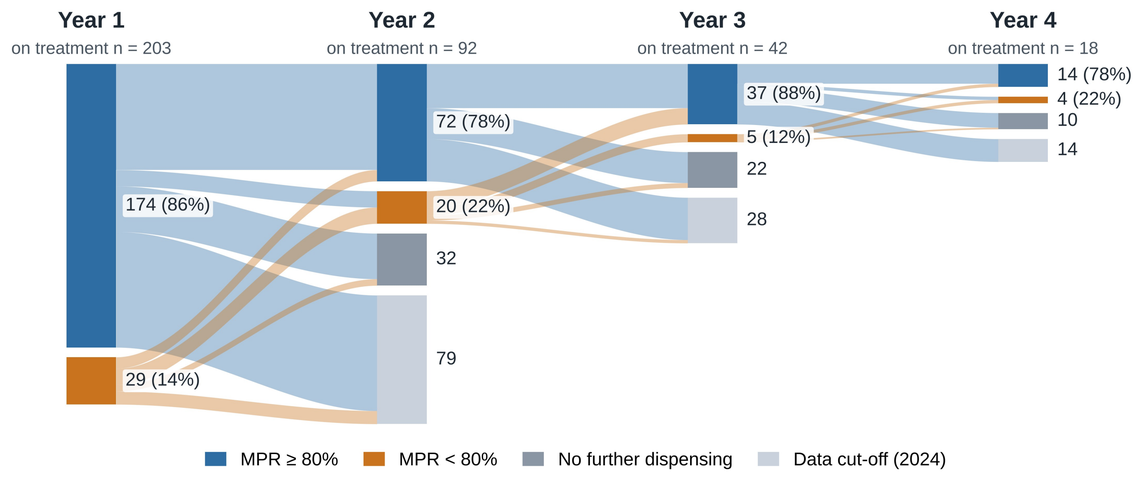
Amber: MPR < 80% (non-adherent, n = 30); blue: MPR ≥ 80% (adherent, n = 173). Median MPR = 94.6%.

Figure 2. MPR by endocrine partner



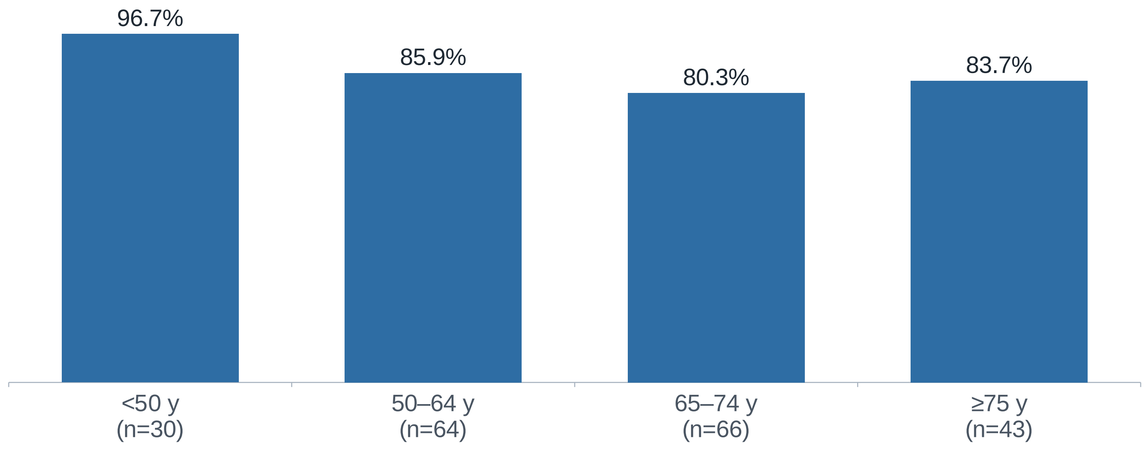
Diamond: mean; white dot: median; bar: IQR; dots: individual patients. Density cut at 100%.

Figure 3. Adherence by calendar year of treatment



Annual MPR per patient-year; a patient contributes to every year on treatment.

Figure 4. Adequate adherence (MPR ≥ 80%) by age group



No correlation between age and MPR (Spearman ρ = -0.02, p = 0.77).

Conclusions

- Adherence to ribociclib-based therapy was high in this real-world Romanian cohort, regardless of the endocrine partner.
- The choice of AI vs fulvestrant did not meaningfully influence adherence; patient-related or system-level factors may play a more prominent role.
- Among patients who continued treatment, adherence was largely stable: 87% of patients adherent in Year 1 remained adherent in Year 2. Non-adherence was often transient, as 7 of 17 patients with MPR < 80% in Year 1, and 10 of 15 in Year 2, reached MPR ≥ 80% the following year.
- These findings support proactive, regimen-agnostic adherence monitoring in routine clinical practice.

Abbreviations: AI, aromatase inhibitor; aBC, advanced breast cancer; HER2, human epidermal growth factor receptor 2; HR, hormone receptor; MPR, medication possession ratio; SD, standard deviation.