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## Background

- In the SWORD-1&2 studies, the combination of Dolutegravir (DTG) and Rilpivirine (RPV) maintained viral suppression for 148 weeks with low rates of virologic failure [1].
- The German JUNGLE cohort provides real-world data on DTG/RPV use in a more extensively pre-treated population than in SWORD with a higher prevalence of advanced HIV disease.
- Here we present the 12-month outcomes.

## Methods

JUNGLE is an ongoing non-interventional, 3-year, prospective, multi-center cohort study in Germany

### Main inclusion criteria

- Adult HIV-1 infected patients on suppressive ART for ≥6 months switched to DTG/RPV
- No prior virologic failure
- No INSTI or NNRTI resistance mutations
- No hepatitis B coinfection
- No contraindication based on the SmPC (summary of product characteristics)

### Outcomes

- Month-12 (M12) viral suppression was defined as HIV-RNA <50 cp/mL in data window (9-15 months) or 50-200 cp/mL with subsequent HIV-RNA <50 cp/mL (excluding missing data/loss-to-follow-up).
- Persistence on study and/or DTG/RPV was estimated using Kaplan-Meier analysis.
- Adverse drug reactions (ADRs) were coded by MedDRA (Medical Dictionary for Regulatory Activities) using system organ class (SOC) and preferred terms (PT).
- Patient-reported outcomes were assessed using validated questionnaires (HIV Symptom Distress Module [HIV-SDM] and Treatment Satisfaction [HIV-TSQ]).

## Results

### Study population

- 200 patients were enrolled in the JUNGLE cohort.
- At data-cut (5 May 2020), 183 patients were eligible for M12 analysis (90% men, 49 years [median], 18% CDC C, 709 CD4 cells/μL [median]). Baseline characteristics are shown in Table 1.

### Antiretroviral treatment (ART) prior to switch to DTG/RPV

- The median duration of the previous ART regimen before DTG/RPV was 2.6 years (IQR, interquartile range: 1.6 – 5.1 [n=167]).
- Of 183 patients, 11% switched from first-line ART, 42% had a history of ≥3 ART changes (Table 1).
- 86% of patients were switched from triple ART and 48% had been on a multi-tablet regimen.

Table 1. Baseline characteristics

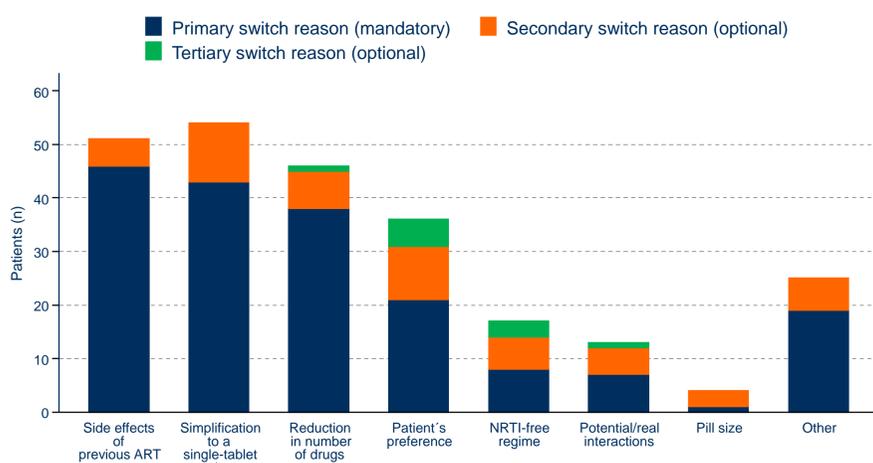
	Total	N
Sex, male, n (%)	164 (90)	183
Age, years, median (interquartile range; IQR)	49 (40 – 57)	183
Age ≥50 years, n (%)	88 (48)	183
BMI, kg/m <sup>2</sup> , median (IQR)	24 (22 – 27)	152
CD4 T-cell count, cells/μL, median (IQR)	709 (577 – 925)	183
History of AIDS (CDC C), n (%)	33 (18)	183
Time since HIV diagnosis, years (median, IQR)	11 (5 – 16)	180
Time on ART, years (median, IQR)	8 (5 – 13)	163
Treatment switches prior to DTG/RPV, n (%)		183
no modifications	20 (11)	
1-2 modifications	77 (42)	
≥3 modifications	76 (42)	
unknown	10 (5)	
Most common comorbidities (>10%), n (%)		183
Hypertension	55 (30)	
Lipid disorders	32 (17)	
Depression	29 (16)	
Insomnia	25 (14)	
Chronic kidney disease	24 (13)	

IQR, interquartile range

### Reasons for switching to DTG/RPV

- Primary reasons for switching to DTG/RPV were side effects of previous ART (25%), switch to a single-tablet regimen (23%) and reduction of substance exposure (21%) (see Figure 1).

Figure 1. Primary, secondary and tertiary reasons for switch to DTG/RPV



### Persistence on study and/or DTG/RPV and discontinuation reasons

- Persistence on study and/or DTG/RPV through M12 was 86% (Figure 2).
- 26 patients (14%) discontinued the study. Reasons were adverse drug reactions (ADRs; n=18 [10%]), patient preference (n=4 [2%]), doctor's decision (n=3 [2%]) and withdrawal of consent (n=1 [1%]); no discontinuation due to virologic failure.

Figure 2. Persistence on study and/or DTG/RPV (Kaplan-Meier analysis)



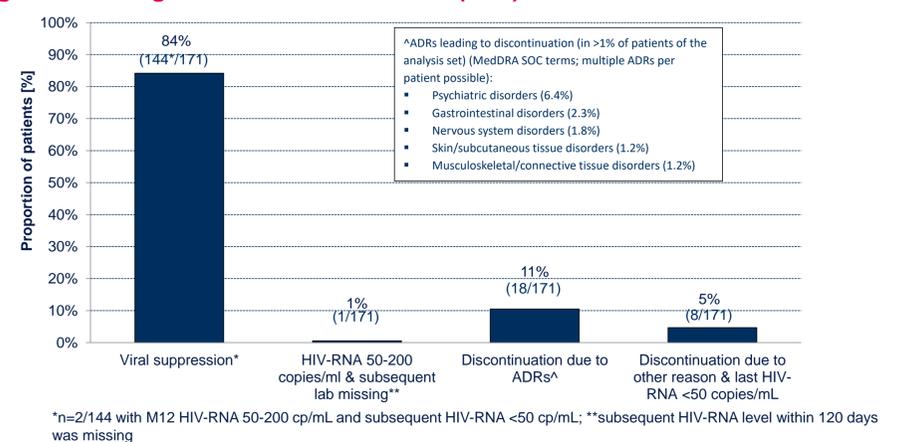
### Safety

- Until data-cut, 31 ADRs (grades 1-2 [n=30], grade 3 [n=1]) had been documented in 22 patients (12%). No serious ADR was reported.
- In 18 patients (10%), ADRs led to discontinuation of DTG/RPV (n=27 ADRs; multiple ADRs per patient possible). Most common ADRs (MedDRA PT terms) were (>1 event):
  - Sleep disorder (n=7 [4%])
  - Depression (n=4 [2%])
  - Nervous system disorder (n=2 [1%])

### Effectiveness

- M12 viral suppression rate was 84% (n=144/171; n=12 excluded due to missing data) (Figure 3).
- Of note, in 94% of patients with virologic data during follow-up, HIV-RNA measurements were continuously <50 cp/mL (n=165/175; with a median of 4 HIV-RNA measurements per individual, range 1-7).

Figure 3. Virologic outcomes at month 12 (M12)



### Patient reported outcomes

- In patients completing questionnaires at both time points (baseline, M12), mean changes in HIV-SDM and TSQ were +1.1 (p=0.479) and +2.7 (p<0.001), respectively (Table 2).

Table 2. HIV Symptom Distress Module (HIV-SDM) and Treatment Satisfaction (HIV-TSQ) in patients completing baseline and month-12 (M12) questionnaires

	N	Baseline Total score; mean/median (IQR)	M12 Total score; mean/median (IQR)	Change from baseline mean/median (IQR)	p-value (Wilcoxon-sign- rank test)
HIV-SDM <sup>^</sup>	81	12.4/8.0 (4.0 - 18.0)	13.5/9.0 (4.0 - 21.0)	+1.1/±0.0 (-5.0 - +6.0)	0.4793
HIV-TSQ <sup>*</sup>	76	53.4/55.5 (51.0 - 59.0)	56.1/58.0 (55.0 - 60.0)	+2.7/+1.0 (-0.5 - +4.5)	<0.001

<sup>^</sup>HIV-SDM: 20 items, range of total score 0-80; negative changes indicate improvement; <sup>\*</sup>HIV-TSQ: range of total score 0-60; positive changes indicate improvement;

## Conclusion

- Real-world DTG/RPV use showed a high virologic suppression rate over one year with no discontinuation attributed to virologic failure.
- Although 10% discontinued DTG/RPV due to ADRs, Treatment Satisfaction (HIV-TSQ) increased in patients remaining on DTG/RPV for one year.

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1 Libbre JM, Hung CC, Brinson C, et al. Lancet. 2018 Mar 3;391(10123):839-849.