Sofosbuvir-Velpatasvir in HIV-HCV Coinfected Patients
ASTRAL-5

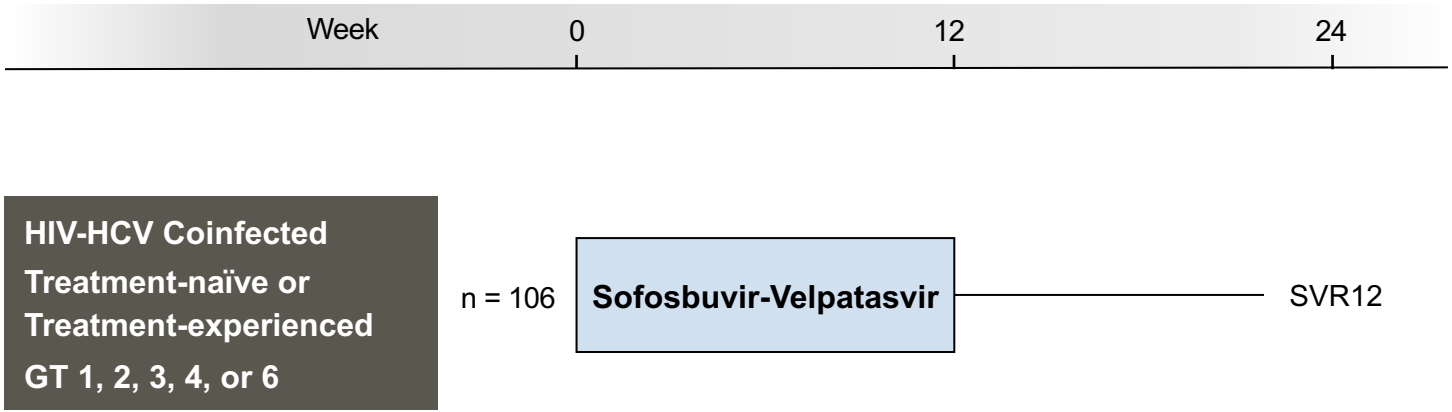
Source: Wyles D, et al. Clin Infect Dis. 2017;65:6-12.

Sofosbuvir-Velpatasvir in HIV-HCV Coinfected Patients
ASTRAL-5: Study Features

- **Design**: Single-arm, open-label, multicenter, phase 3 trial of sofosbuvir-velpatasvir in HIV-HCV coinfected treatment-naïve and treatment-experienced patients with genotypes 1-6 HCV
- **Setting**: Multiple sites in US
- **Entry Criteria**
  - Chronic HCV GT 1-6
  - Age ≥18 years
  - HIV coinfection
  - CD4 count ≥100 cells/mm^3 and HIV RNA ≤50 copies/mL
  - On stable ART for ≥8 weeks
  - Prior treatment failure allowed (but no prior NS5A or NS5B)
  - Patients with compensated cirrhosis allowed
- **Primary End Point**: SVR12

Source: Wyles D, et al. Clin Infect Dis. 2017;65:6-12.

Sofosbuvir-Velpatasvir in HIV-HCV Coinfected Patients
ASTRAL-5: Study Design



Drug Dosing: Sofosbuvir-velpatasvir (400/100 mg): fixed-dose combination; one pill once daily

Source: Wyles D, et al. Clin Infect Dis. 2017;65:6-12.

Sofosbuvir-Velpatasvir in HIV-HCV Coinfected Patients
ASTRAL-5: Participants

Baseline Characteristic	Sofosbuvir-Velpatasvir (n = 106)
Age, mean, years (range)	54 (25-72)
Male, n (%)	91 (86)
Black race, n (%)	48 (45)
HCV genotype, n (%)	
1a	66 (62)
1b	12 (11)
2	11 (10)
3	12 (11)
4	5 (5)
IL28B non-CC, n (%)	82 (77)
Mean HCV RNA, $\log_{10}$ IU/mL (range)	6.3 (5.0-7.4)
Cirrhosis, n (%)	19 (18)
Treatment experienced, n (%)	31 (29)

Source: Wyles D, et al. Clin Infect Dis. 2017;65:6-12.

Sofosbuvir-Velpatasvir in HIV-HCV Coinfected Patients
ASTRAL-5: Participants

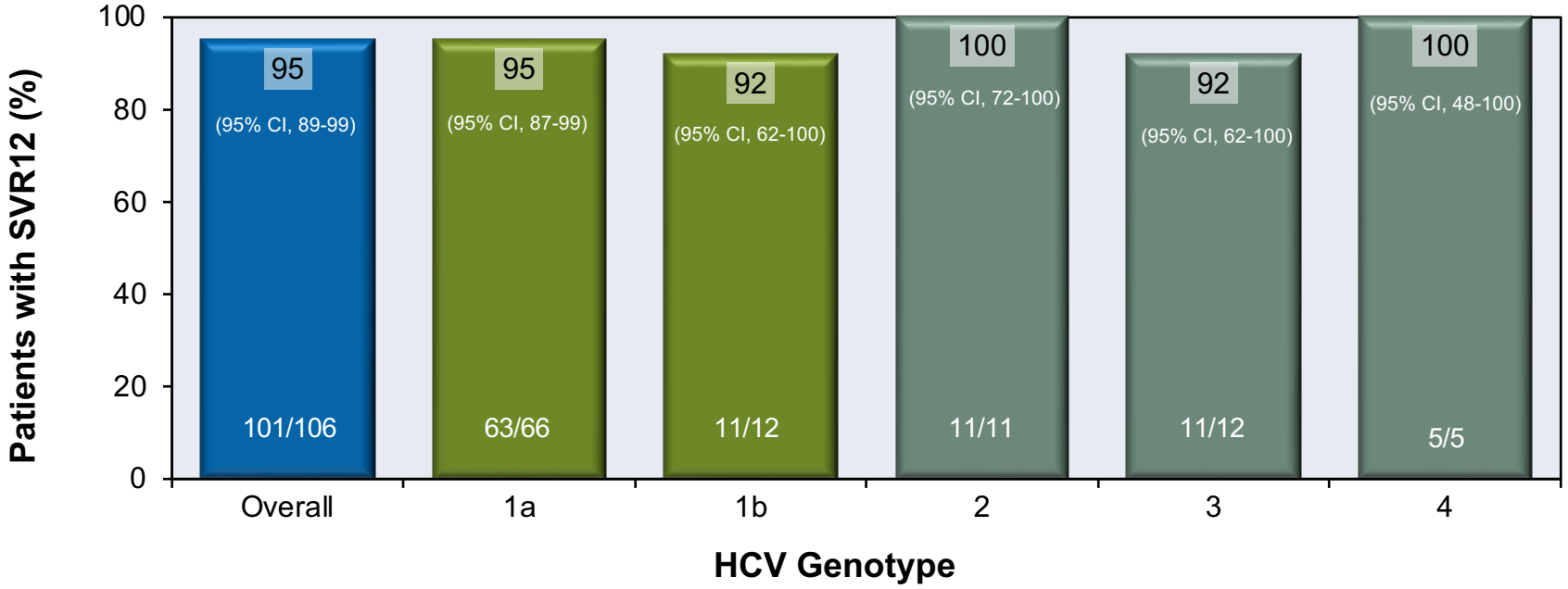
HIV Baseline Characteristics	Sofosbuvir-Velpatasvir (n = 106)
Mean CD4 cell count, (range)	598 (183-1513)
Nucleos(t)ide pair	
TDF with boosted agent (Ritonavir or Cobicistat)	56 (53)
TDF without boosted agent	35 (33)
Abacavir-lamivudine	15 (14)
Other antiretroviral agent(s)	
Protease Inhibitor (DRV, LPV, or ATV)	50 (47)
NNRTI (RPV)	13 (12)
Integrase inhibitor (RAL or EVG)	36 (34)
Other (>1 of above classes)	7 (7)

Abbreviations: TDF, Tenofovir disoproxil fumarate; RTV, ritonavir; DRV, darunavir; LPV, lopinavir; ATV, atazanavir; RPV, rilpivirine; RAL, raltegravir; EVG, elvitegravir

Source: Wyles D, et al. Clin Infect Dis. 2017;65:6-12.

Sofosbuvir-Velpatasvir in HIV-HCV Coinfected Patients
ASTRAL-5: Results

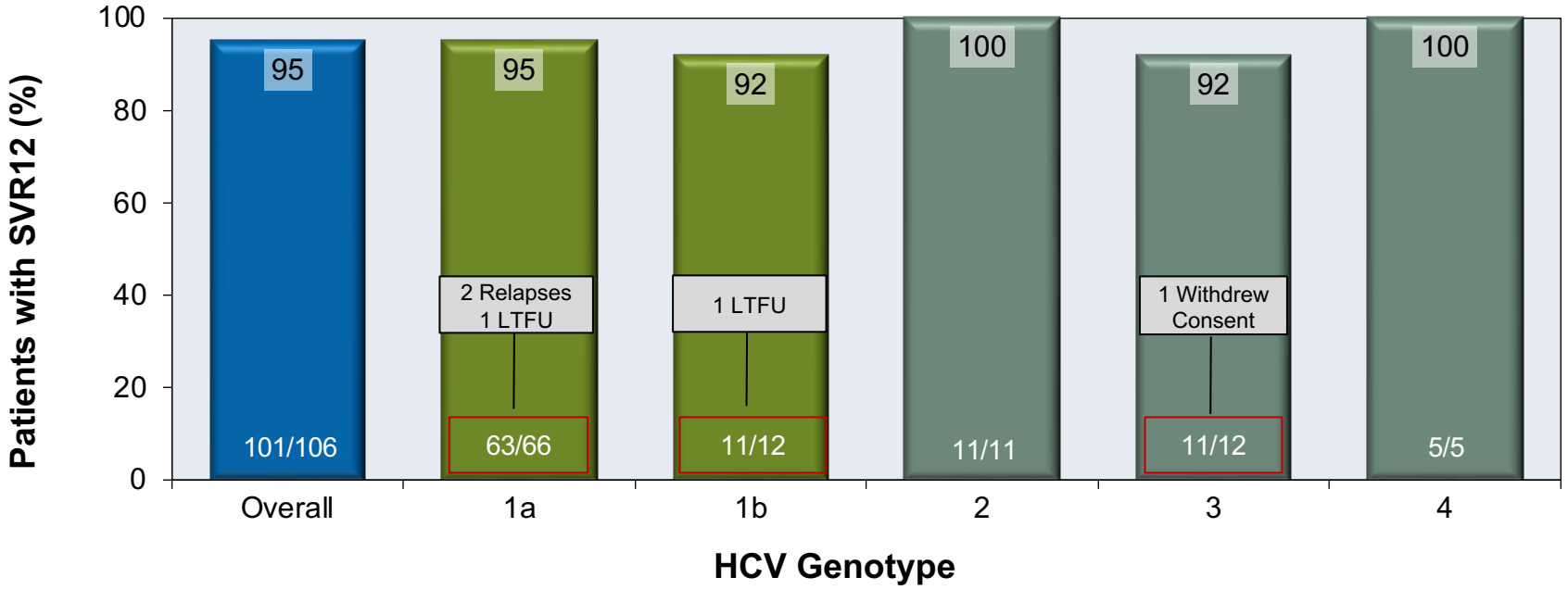
SVR12 Results by Genotype



Source: Wyles D, et al. Clin Infect Dis. 2017;65:6-12.

Sofosbuvir-Velpatasvir in HIV-HCV Coinfected Patients
ASTRAL-5: Results

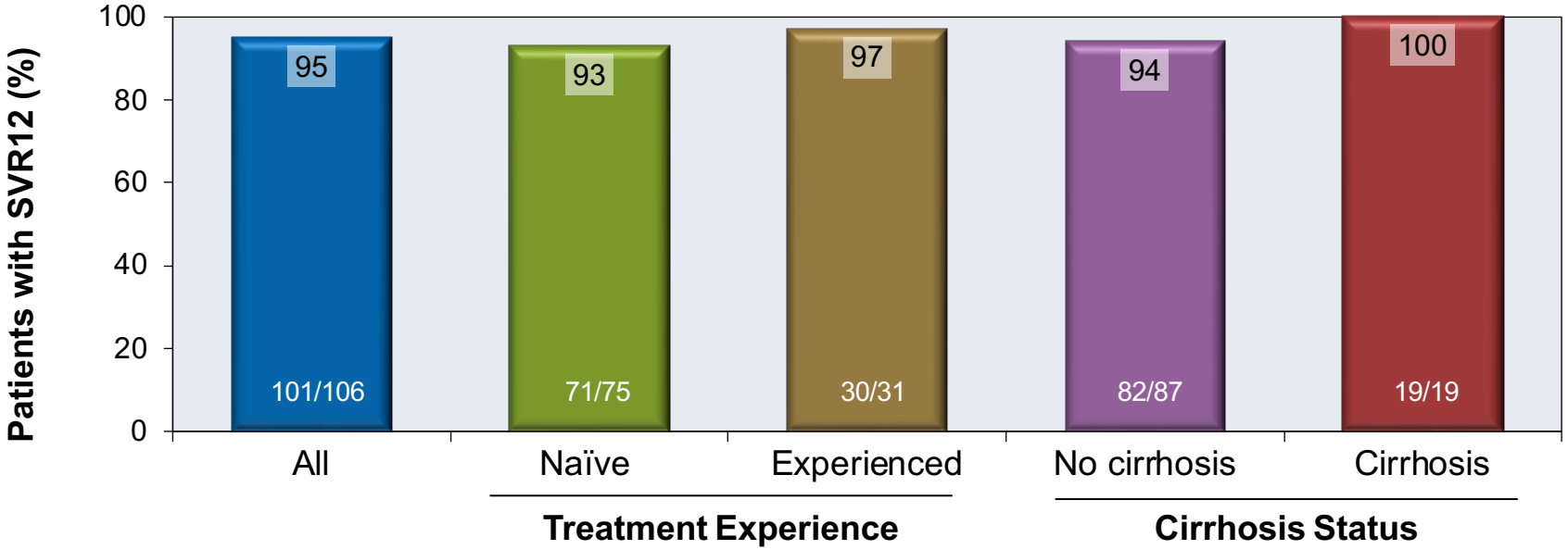
SVR12 Results by Genotype



Source: Wyles D, et al. Clin Infect Dis. 2017;65:6-12.

Sofosbuvir-Velpatasvir in HIV-HCV Coinfected Patients
ASTRAL-5: Results

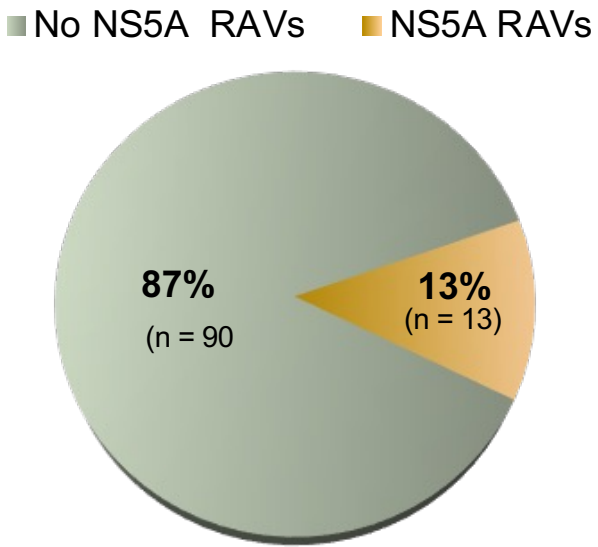
SVR12 Results by Treatment Experience and Cirrhosis Status



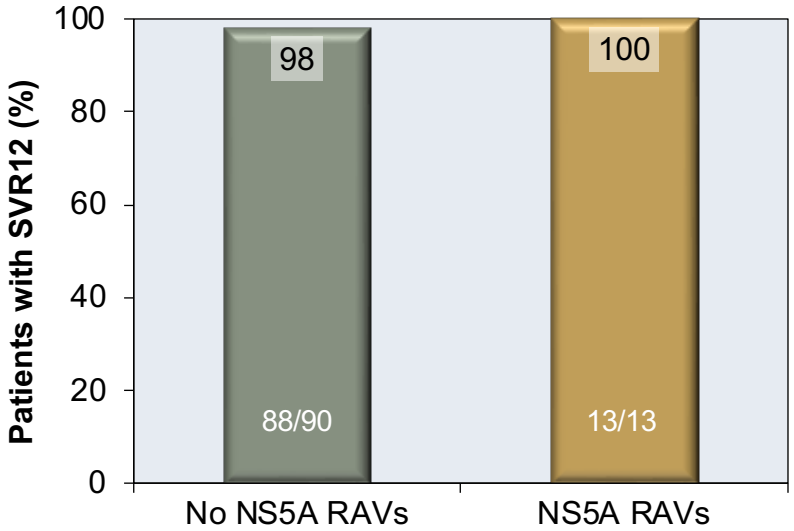
Source: Wyles D, et al. Clin Infect Dis. 2017;65:6-12.

Sofosbuvir-Velpatasvir in HIV-HCV Coinfected Patients
ASTRAL-5: Resistance

Baseline Resistance-Associated Variants (RAVs)



Response to Treatment (SVR12)



Source: Wyles D, et al. Clin Infect Dis. 2017;65:6-12.

Sofosbuvir-Velpatasvir in HIV-HCV Coinfected Patients
ASTRAL-5: Tenofovir Pharmacokinetics

Mean (%CV) PK Parameters of Tenofovir by Boosted or Unboosted ART Regimen		
Tenofovir PK Parameter	**Sofosbuvir-Velpatasvir + Unboosted Tenofovir DF-Containing Regimens** (n = 35)	**Sofosbuvir-Velpatasvir + Boosted Tenofovir DF-Containing Regimens** (n = 56)
AUC_{tau} (h•ng/mL)	3590 (23.2)	3740 (26.3)
C_{max} (ng/mL)	319 (26.4)	351 (30.8)
C_{tau} (ng/mL)	91.2 (37.9)	92.9 (41.4)

Source: Wyles D, et al. Clin Infect Dis. 2017;65:6-12.

Sofosbuvir-Velpatasvir in HIV-HCV Coinfected Patients
ASTRAL-5: Adverse Events

Adverse Event (AE), n (%)	Sofosbuvir-Velpatasvir (n = 106)
Discontinuation due to AE	2 (2)
Serious AEs	2 (2)
Deaths	0
Any AE in >5% of patients	
Fatigue	26 (25)
Headache	14 (13)
Arthralgia	9 (8)
Upper respiratory tract infection	9 (8)
Diarrhea	9 (8)
Insomnia	7 (7)
Nausea	7 (7)

The majority of AEs were mild in severity (grade 1 or 2)
No patient with confirmed on-treatment HIV virologic breakthrough

Source: Wyles D, et al. Clin Infect Dis. 2017;65:6-12.

Sofosbuvir-Velpatasvir in HIV-HCV Coinfected Patients
ASTRAL-5: Conclusions

Conclusions: “Sofosbuvir-velpatasvir for 12 weeks was safe and provided high rates of SVR12 in patients coinfected with HCV and HIV-1.”

Source: Wyles D, et al. Clin Infect Dis. 2017;65:6-12.

Acknowledgments

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