

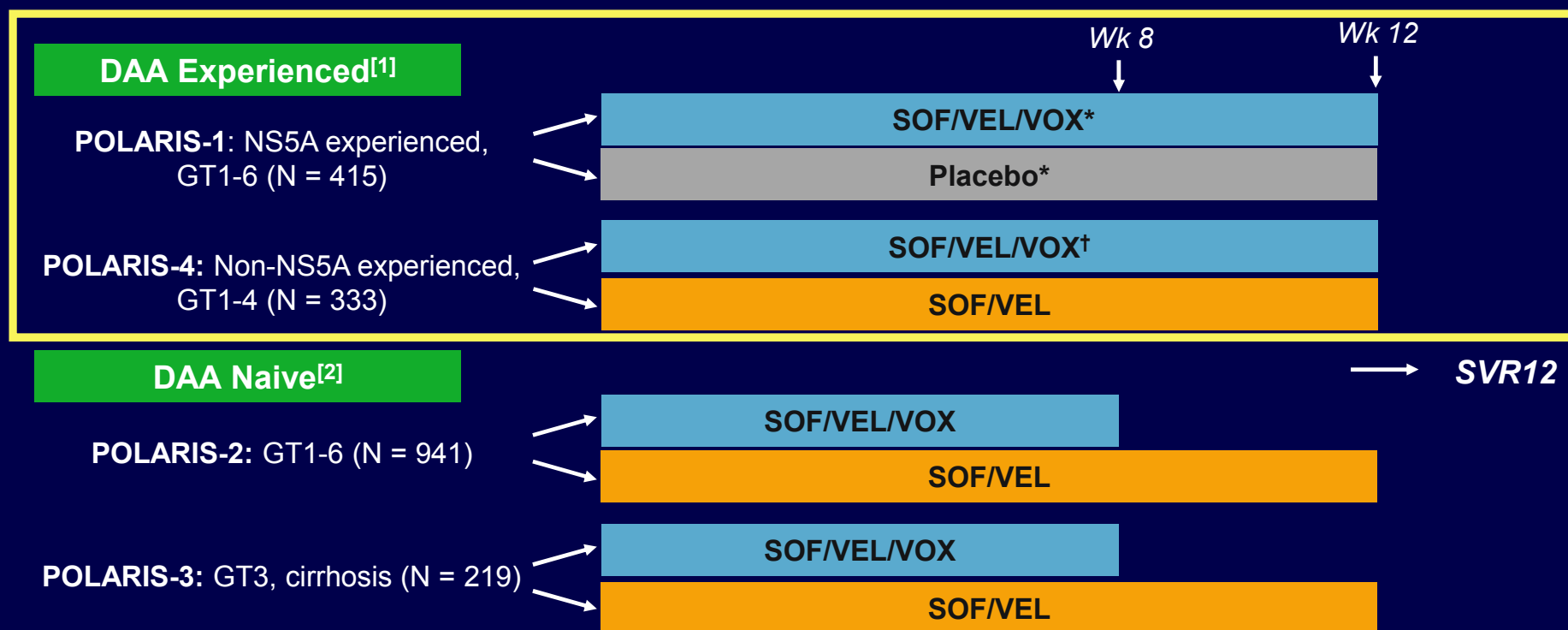
# New Options for Retreating DAA Failure



# Sofosbuvir/Velpatasvir/Voxilaprevir

- § SOF: potent pangenotypic nucleoside polymerase inhibitor
- § VEL: potent pangenotypic NS5A inhibitor
- § VOX: potent pangenotypic NS3/4A protease inhibitor
- § **SOF/VEL/VOX**: once daily, oral, fixed-dose combination (400/100/100 mg) for GTs 1-6

# POLARIS Phase III: 4 Trials of SOF/VEL/VOX



\*Only pts with GT1 infection randomized to SOV/VEL/VOX vs placebo. All others received SOV/VEL/VOX.

<sup>†</sup>All pts with GT4 infection received SOV/VEL/VOX.

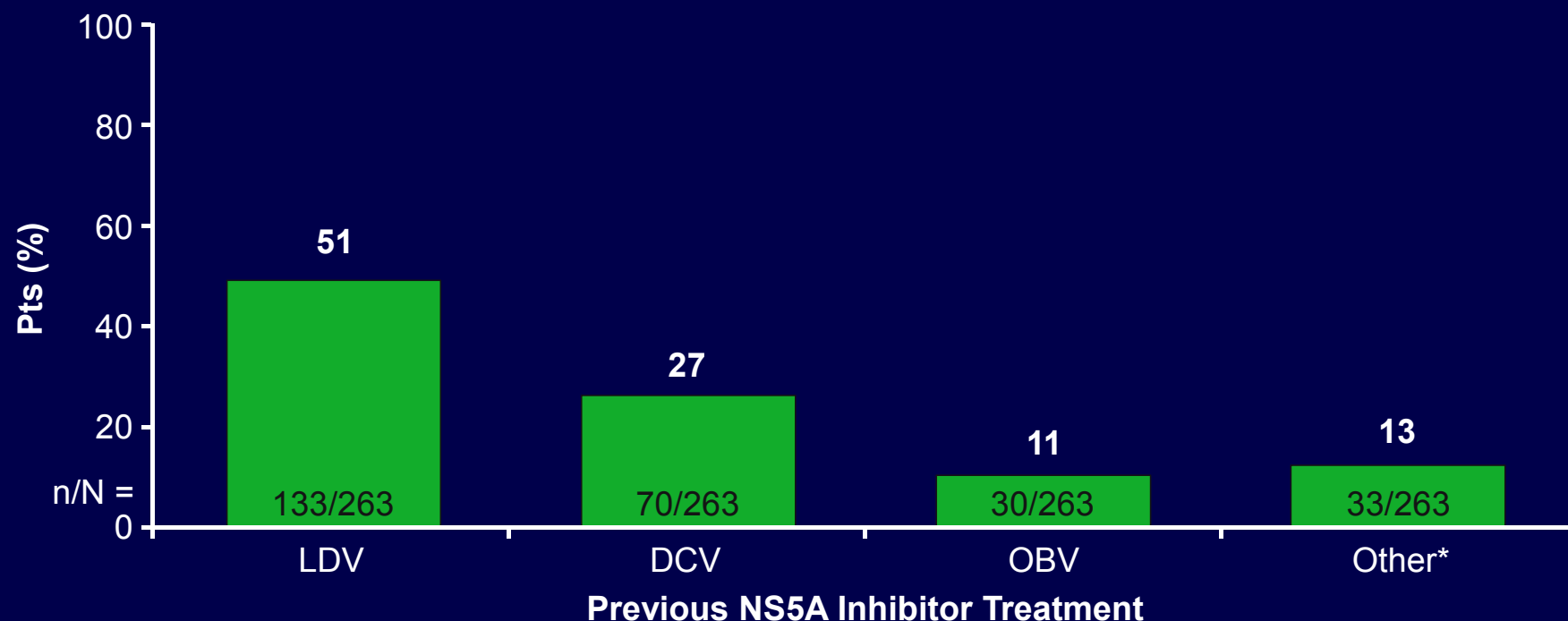
1. Bourlière M, et al. N Engl J Med. 2017;376:2134-2146.

2. Jacobson IM, et al. Gastroenterology. 2017;153:113-122.



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# POLARIS-1: SOF/VEL/VOX for 12 Wks in NS5A Inhibitor–Experienced GT1-6 HCV



\*Included SOF/VEL, EBR/GZR, and other investigational combinations and/or medications from discontinued programs.

Three pts received both LDV and DCV.

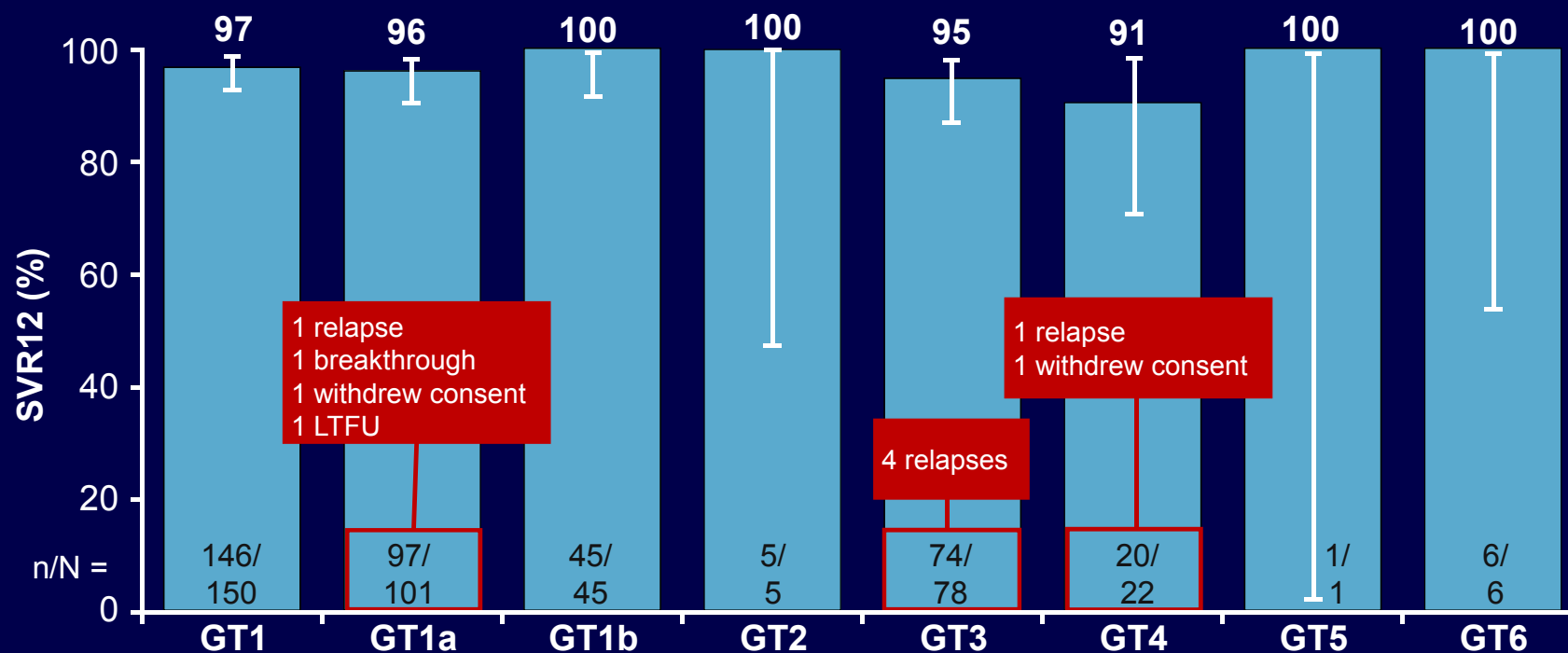
Bourlière M, et al. AASLD 2016. Abstract 194.



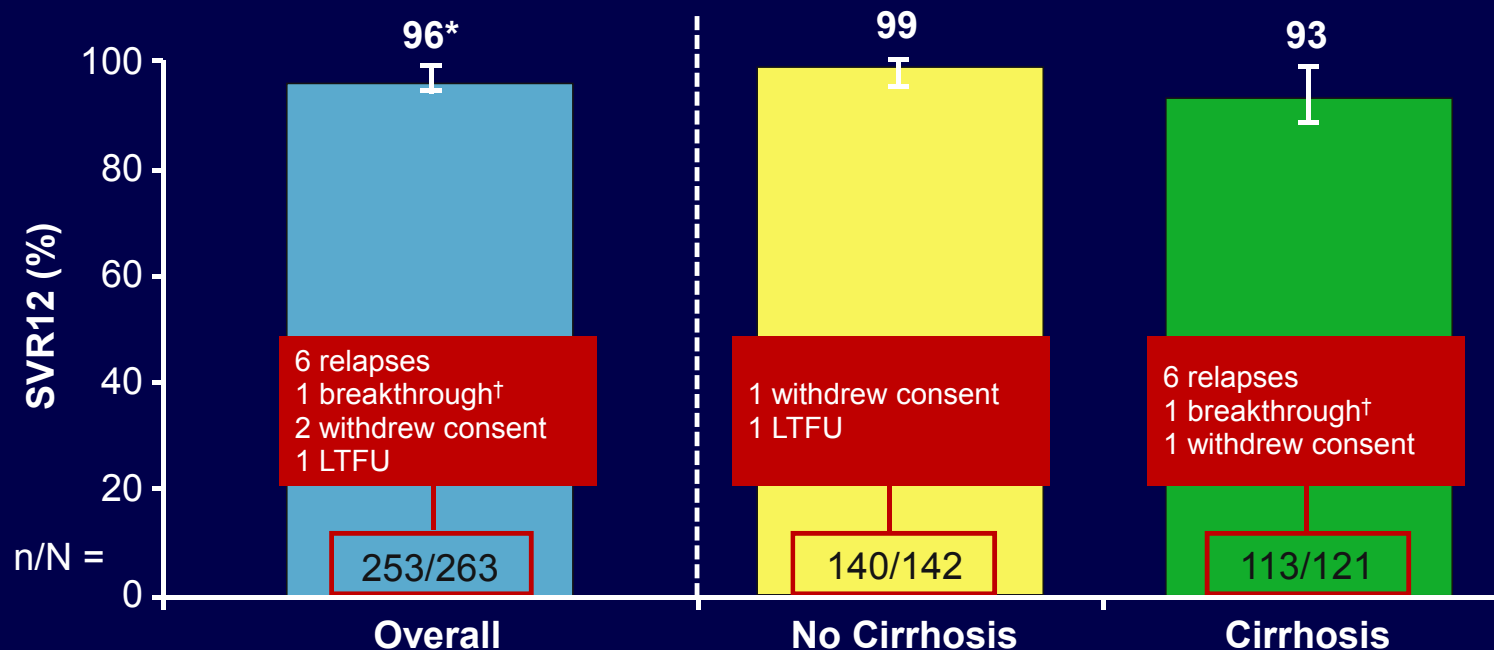
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# POLARIS-1: SVR12 by Genotype With 12-Wk SOF/VEL/VOX in NS5A Inhibitor–Experienced Pts

§ Only 1 GT4 pt developed a treatment-emergent RAS (NS5A Y93H)



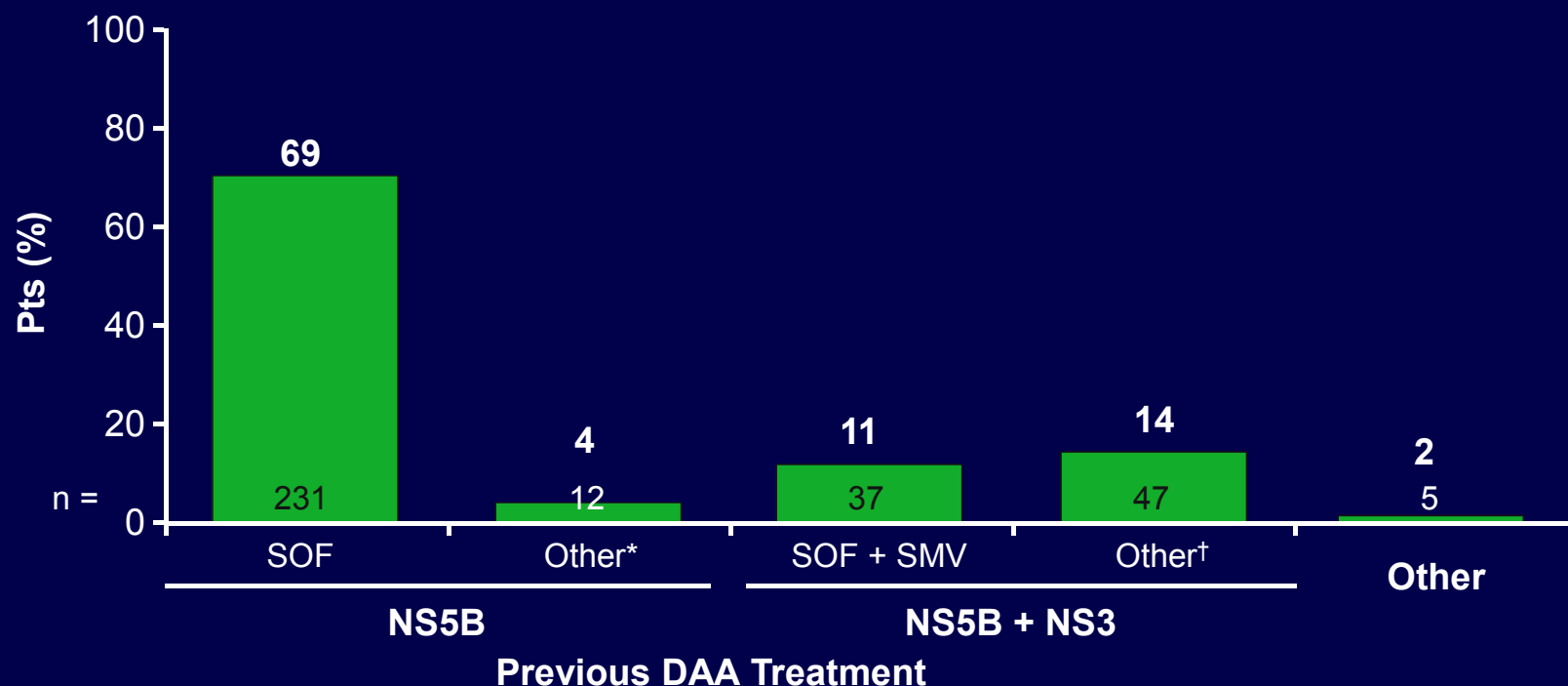
# POLARIS-1: SVR12 With SOF/VEL/VOX for 12 Wks Overall and by Cirrhosis Status



\* $P < .001$  for superiority vs prespecified 85% performance goal for SOF/VEL/VOX.

†Exposure was consistent with nonadherence.

## POLARIS-4: SOF/VEL/VOX for 12 Wks in Non-NS5A Inhibitor, DAA-Experienced GT1-4 HCV



\*Other NS5B included mericitabine (n = 7).

†Other NS5B + NS3 included deleobuvir + faldaprevir (n = 14), mericitabine + danoprevir (n = 8), and SOF + telaprevir (n = 6).

One pt without previous DAA exposure excluded.

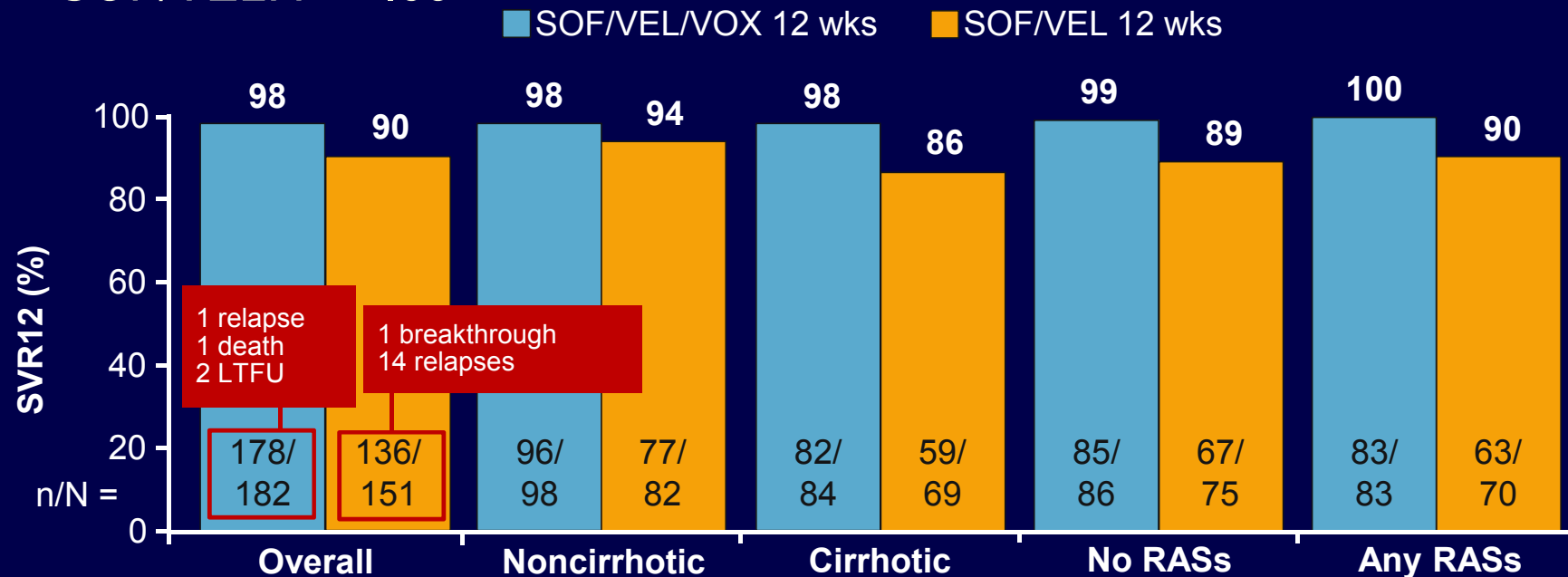
Zeuzem S, et al. AASLD 2016. Abstract 109.



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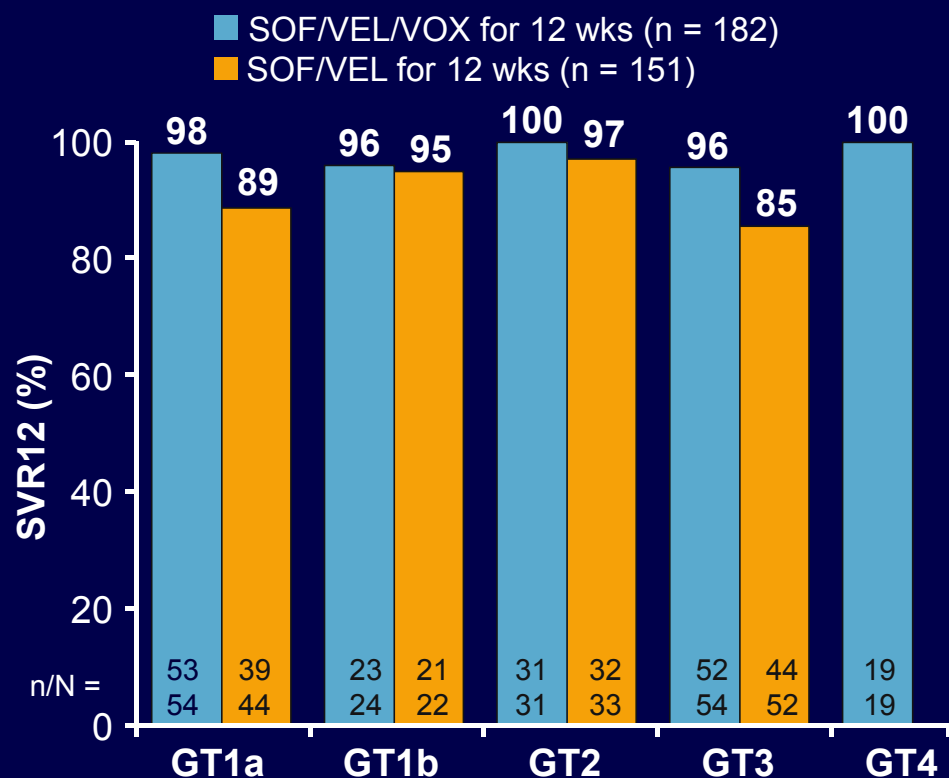
# POLARIS-4: SVR12 With SOF/VEL/VOX for 12 Wks in Non-NS5A Inhibitor, DAA-Exp'd Pts

§ SOF/VEL/VOX:  $P < .001$  for superiority vs prespecified 85% goal;  
SOF/VEL:  $P = .09$





# POLARIS-4: SVR12 by Genotype and Other Outcomes



## § Treatment emergent RASs

- SOF/VEL/VOX: none
- SOF/VEL: 11 of 15 with Y93H

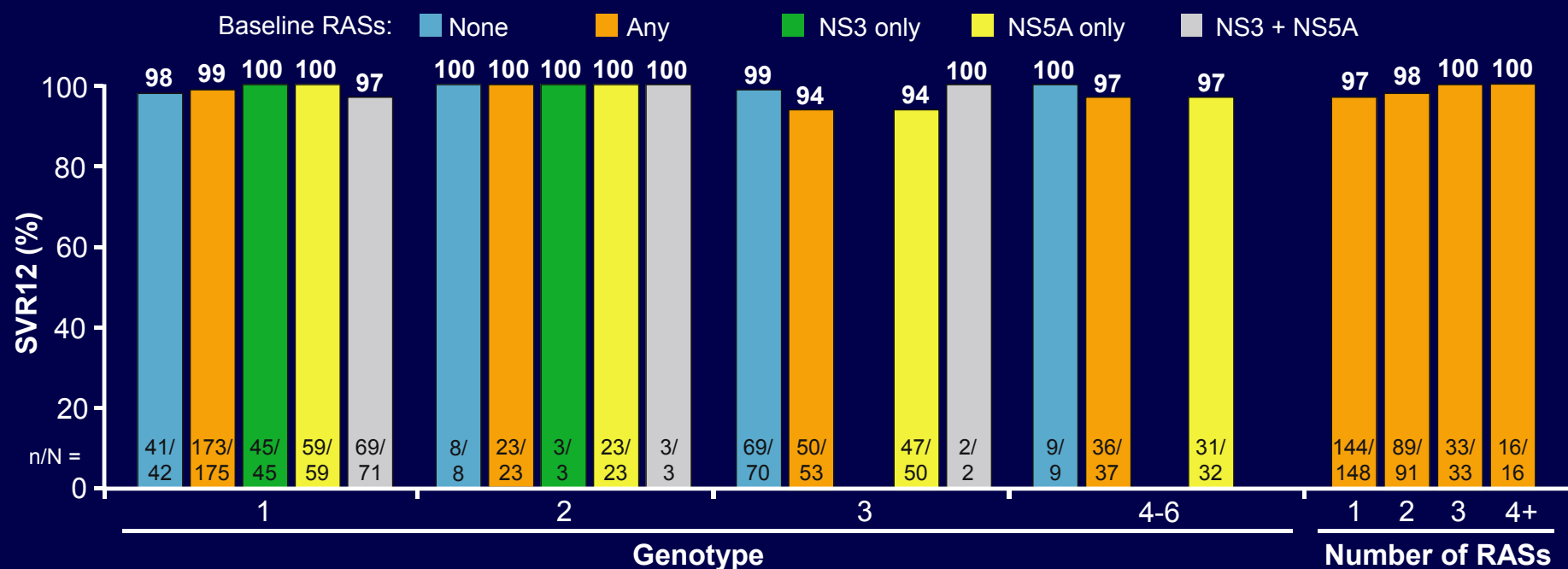
## § 4 serious AEs in each arm; no discontinuation for AE with SOF/VEL/VOX

## § VOX associated with increase in diarrhea (20%) vs SOF/VEL alone (5%) and trend toward more nausea

- All mild and no discontinuations

# POLARIS-1 and -4: Impact of Baseline RASs on 12-Wk SOF/VEL/VOX in DAA-Experienced Pts

§ Integrated analysis of data from SOF/VEL/VOX arms of 2 phase III trials of DAA-experienced pts with (n = 263) and without (n = 182) previous NS5A inhibitors, 46% with cirrhosis

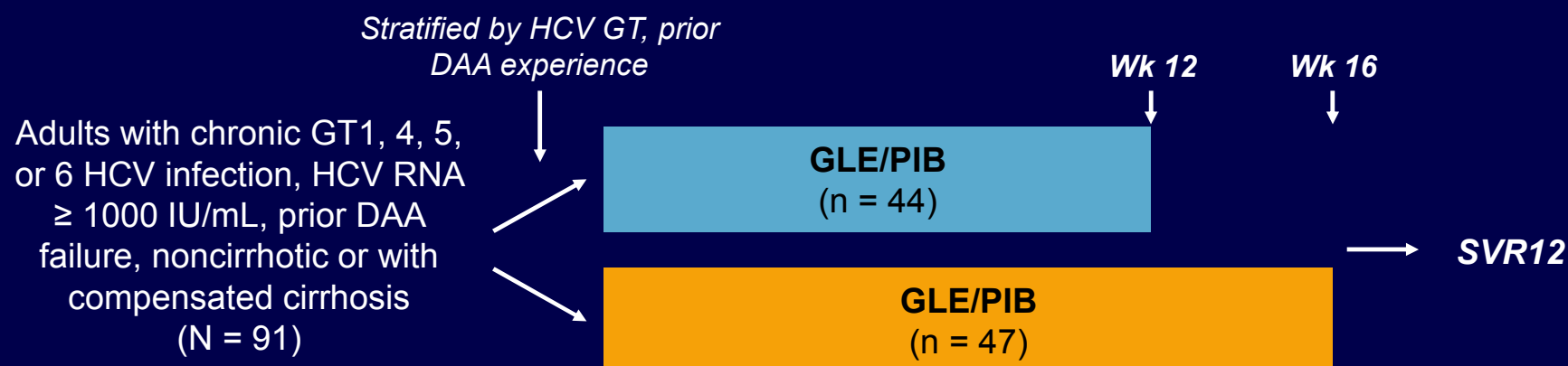


# Glecaprevir/Pibrentasvir

- § GLE: potent pangenotypic NS3/4A protease inhibitor
- § PIB: potent pangenotypic NS5A inhibitor
- § **GLE/PIB**: once daily (taken as 3 tablets with food), oral, fixed-dose combination (100/40 mg) for GT1-6

# MAGELLAN-1, Pt 2: GLE/PIB for 12 or 16 Wks in DAA-Experienced Pts With GT1 or 4 HCV

§ Randomized, open-label study



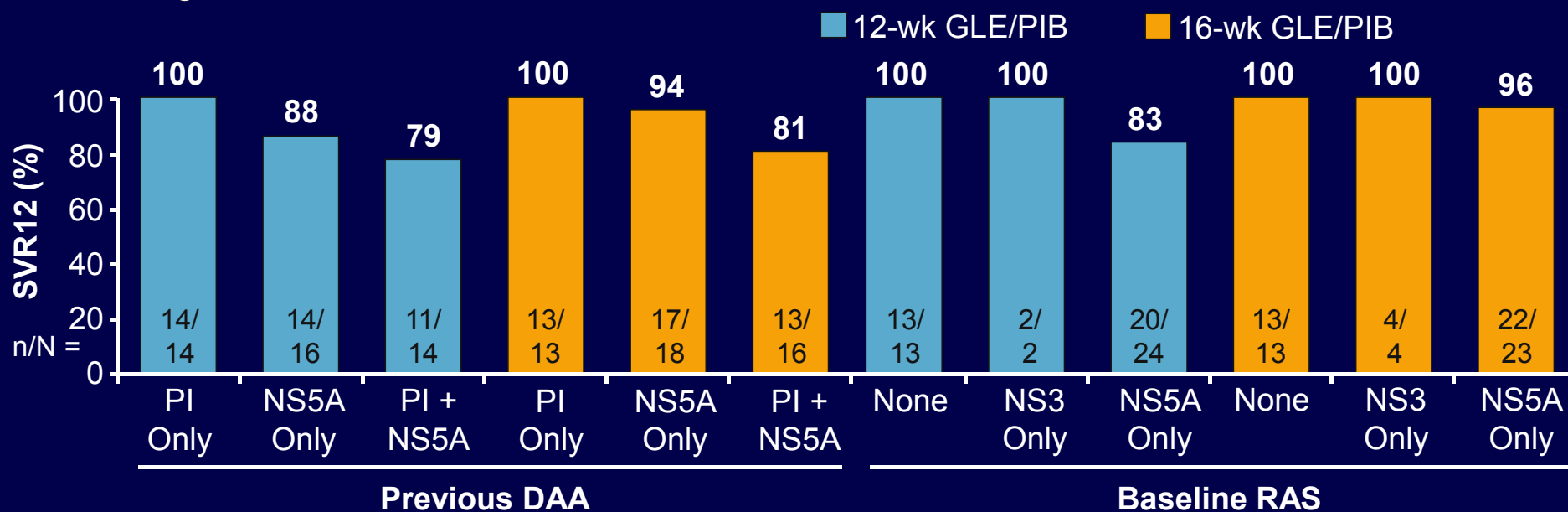
§ BL characteristics of 12-wk vs 16-wk arms well balanced by sex, race, BMI, previous DAA regimen and response, RASs

– GT1a, 80% vs 71%; compensated cirrhosis, 34% vs 26%

# MAGELLAN-1, Pt 2: SVR12 With GLE/PIB in GT1 or 4 HCV With Previous DAA Failure

§ Of pts with NS3 & NS5A RASs, 9/9 had previous failure with PI + NS5A, 5/9 had SVR12 on GLE/PIB

§ Rare grade 3 lab abnormalities, no d/c for AEs, no DAA-related serious AEs



# AASLD/IDSA Recommended Retreatment Regimens for DAA-Experienced **GT1** HCV

§ **SOF experienced**, but no previous NS5A inhibitor, ± compensated cirrhosis

- **SOF/VEL/VOX** for 12 wks (GT1a)
- **SOF/VEL** for 12 wks (GT1b)
- **GLE/PIB** for 12 wks (GT1a or 1b)

FDA indications include GLE/PIB for 8 wks if no cirrhosis

§ **NS5A inhibitor experienced** (regardless of NS3 inhibitor experience) ± compensated cirrhosis:

- **SOF/VEL/VOX** for 12 wks

FDA indications include GLE/PIB for 16 wks if NS5A (without NS3) experienced

# AASLD/IDSA Recommended Retreatment Regimens for DAA-Experienced GT3 HCV

§ DAA experienced (including NS5A inhibitors) ± compensated cirrhosis

- SOF/VEL/VOX for 12 wks
- Add RBV if previous NS5A inhibitor failure + compensated cirrhosis

# Key Take-home Points for Retreatment of DAA-Experienced GT1 or 3 HCV Infection

- § GLE/PIB approved for GT1 with NS5A *or* NS3 inhibitor experience only, not both<sup>[1]</sup>
  - AASLD/IDSA only recommends for GT1 with SOF experience without NS5A inhibitor experience<sup>[2]</sup>
- § SOF/VEL/VOX approved for GT1, 2, 3, 4, 5, or 6 with NS5A inhibitor experience (regardless of NS3 experience) and GT1a or GT3 with SOF experience without NS5A inhibitor experience (regardless of NS3 experience)<sup>[3]</sup>

**SOF/VEL/VOX is now the go-to regimen for dual NS5A and NS3 inhibitor–experienced pts with GT1 or 3**



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