Treatment-Experienced

Daclatasvir + Asunaprevir + Peg/RBV in Genotype 1 and 4

HALLMARK-QUAD Study

Jensen D, et. al. J Hepatol. 2015;63:30-7.

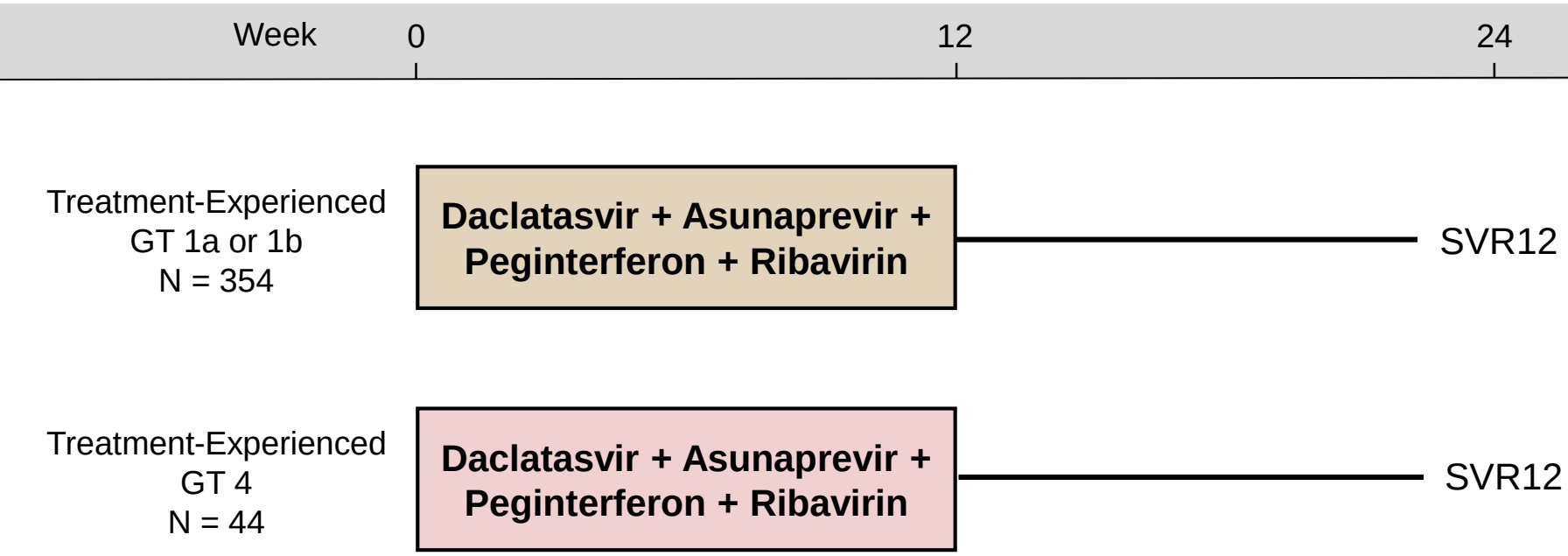
Daclatasvir + Asunaprevir + P/R for HCV GT 1,4
HALLMARK-QUAD Trial: Study Features

Daclatasvir + Asunaprevir with Peginterferon + Ribavirin: Features

- **Design**: Phase 3 open-label single-arm study of daclatasvir (DCV) plus asunaprevir (ASV) with peginterferon alfa-2a and ribavirin in treatment-experienced, chronic HCV GT 1 or 4
- **Setting**: North & South America, Europe and Asia
- **Entry Criteria**
  - Chronic HCV Genotype 1 or 4
  - Treatment-experienced (prior null or partial responder to peginterferon + ribavirin)
  - Compensated cirrhosis allowed
- **Intervention (Single-arm)**
  - Daclatasvir plus asunaprevir with peginterferon alfa-2a and ribavirin (weight-based dosing)
- **End-Points**: Primary = SVR12

Source: Jensen D, et. al. J Hepatol. 2015;63:30-7.

Daclatasvir + Asunaprevir + P/R for HCV GT 1,4
HALLMARK-QUAD Trial: Design



Drug Dosing
Daclatasvir: 60 mg once daily
Asunaprevir: 100 mg twice daily
Peginterferon alfa-2a: 180 mcg once weekly
Ribavirin, weight-based dosing, twice daily: 1000 mg/day if < 75kg or 1200 mg/day if ≥ 75kg

Source: Jensen D, et. al. J Hepatol. 2015;63:30-7.

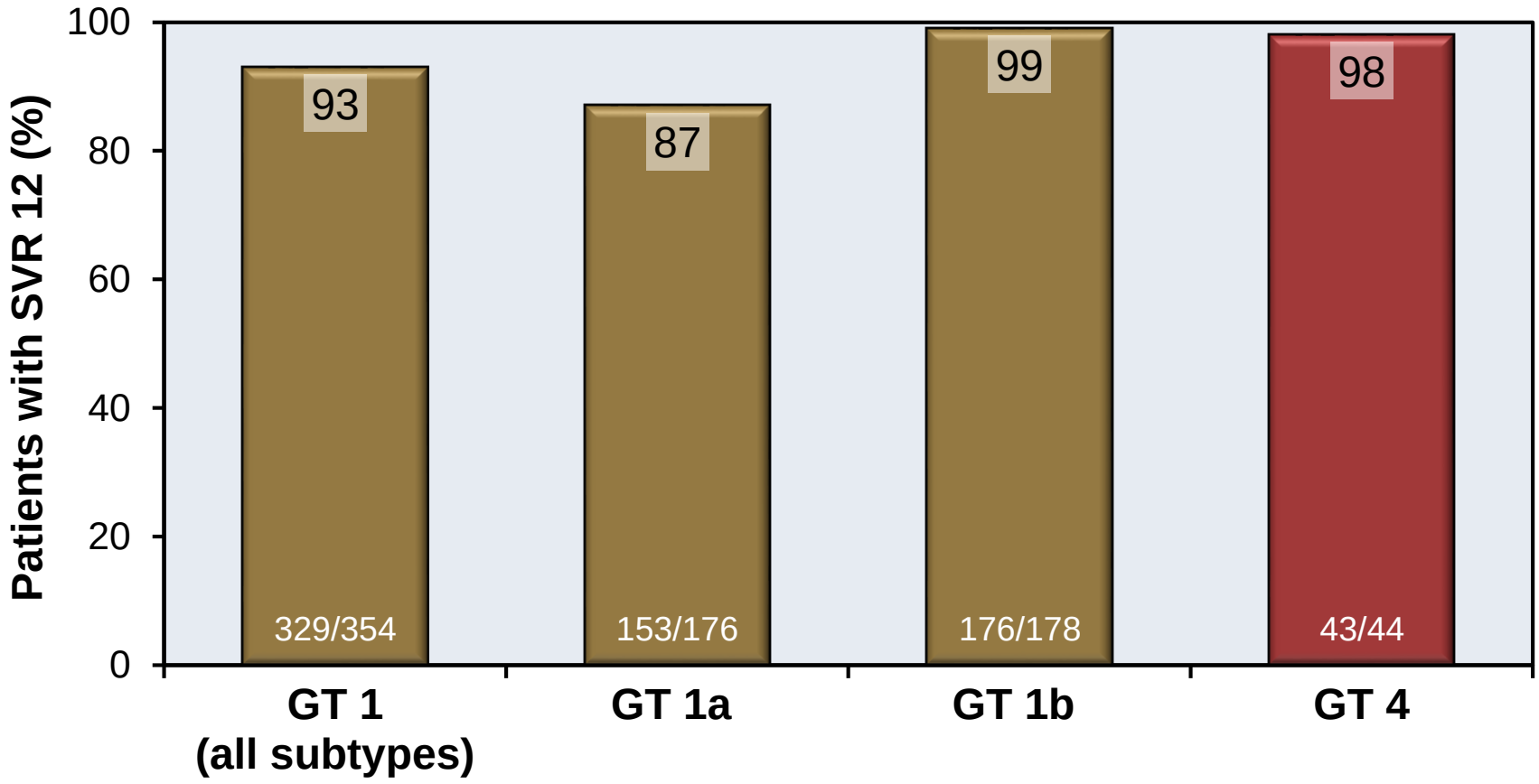
Daclatasvir + Asunaprevir + P/R for HCV GT 1,4
HALLMARK-QUAD Trial: Patient Characteristics

Characteristic	Genotype 1 (n=354)	Genotype 4 (n=44)
Male, n (%)	240 (68%)	33 (75%)
Median age, years (range)	54 (19-76)	52 (20-71)
Race White Black Asian	 271 (77%) 33 (9%) 47 (13%)	 33 (75%) 4 (9%) 1 (2%)
HCV genotype 1a 1b	 176 (50%) 178 (50%)	N/A
HCV RNA ≥800,000 IU/ml	307 (87%)	29 (66%)
Cirrhosis	73 (21%)	20 (46%)
IL28B non-CC genotype	321 (91%)	41 (93%)
Prior treatment failure Partial response Null response	 120 (34%) 234 (66%)	 10 (23%) 34 (77%)

Source: Jensen D, et. al. J Hepatol. 2015;63:30-7.

Daclatasvir + Asunaprevir + P/R for HCV GT 1,4
HALLMARK-QUAD Trial: Results

HALLMARK-QUAD: SVR 12 by Genotype[a]

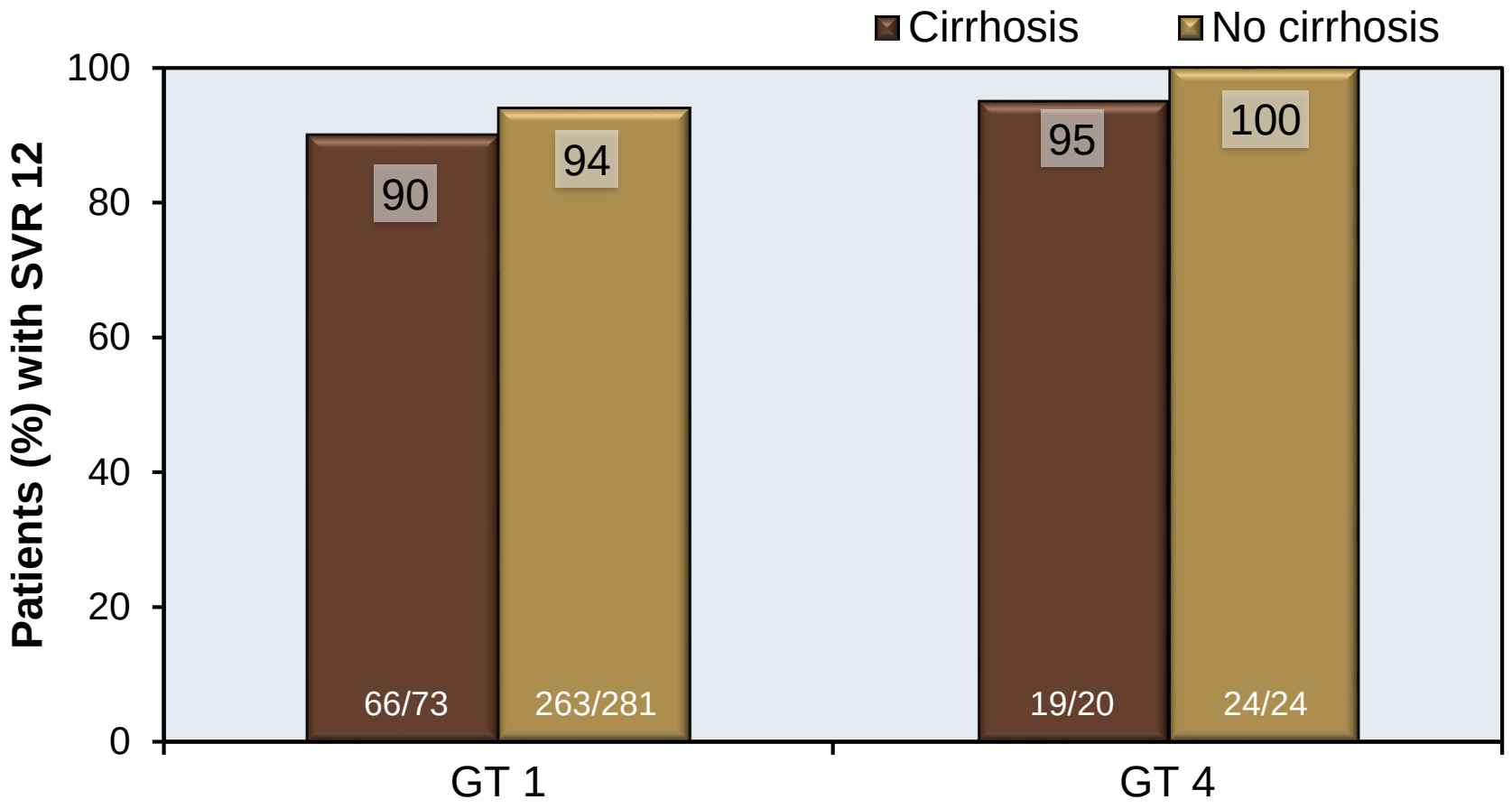


[a] Modified intention-to-treat analysis; GT = genotype

Source: Jensen D, et. al. J Hepatol. 2015;63:30-7.

Daclatasvir + Asunaprevir + P/R for HCV GT 1,4
HALLMARK-QUAD Trial: Results

HALLMARK-QUAD: SVR12, by Cirrhosis Status



Source: Jensen D, et. al. J Hepatol. 2015;63:30-7.

Hepatitis web study

Daclatasvir + Asunaprevir + P/R for HCV GT 1,4
HALLMARK-QUAD Trial: Adverse Events

Event	All patients (n=398)
Serious Adverse Events (AEs)	22 (6%)
AEs leading to discontinuation	18 (5%)
Adverse Events in ≥20% of patients	
Fatigue	165 (41%)
Headache	124 (31%)
Pruritus	104 (26%)
Asthenia	96 (24%)
Influenza-like illness	89 (22%)
Insomnia	89 (22%)
Rash	82 (21%)
Grade 3 or 4 Lab Abnormalities	
Hemoglobin < 9 g/dL	25 (6%)
Neutrophils < 0.75 x 10^9/L	89 (22%)
Platelets < 50 x 10^9/L	15 (4%)

Source: Jensen D, et. al. J Hepatol. 2015;63:30-7.

Daclatasvir + Asunaprevir + P/R for HCV GT 1,4
HALLMARK-QUAD Trial: Conclusions

Conclusions: “Daclatasvir plus asunaprevir and peginterferon/ribavirin demonstrated high rates of SVR12 in genotype 1- or 4-infected prior null or partial responders. The combination was well tolerated and no additional safety and tolerability concerns were observed compared with peginterferon/ribavirin regimens.”

Source: Jensen D, et. al. J Hepatol. 2015;63:30-7.

This slide deck is from the University of Washington's *Hepatitis C Online* and *Hepatitis Web Study* projects.

Hepatitis C Online

www.hepatitisc.uw.edu

Hepatitis Web Study

http://depts.washington.edu/hepstudy/

Funded by a grant from the Centers for Disease Control and Prevention.

Hepatitis
web study