HEPATITIS WEB STUDY HEPATITIS C ONLINE

Treatment of Chronic HCV Genotype 1

Robert G. Gish MD
Staff Physician, Stanford University Medical Center
Senior Medical Director, St Josephs Hospital and Medical Center, Liver Program, Phoenix, Arizona
Clinical Professor of Medicine, University of Nevada, Las Vegas
Medical Director, Hepatitis B Foundation
Vice Chair, Executive Committee, National Viral Hepatitis Roundtable (NVHR)

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Robert Gish, MD: Disclosures

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Treatment of Chronic HCV Genotype 1

- Background and Definitions
- Initial Treatment
- Retreatment of Prior Relapsers
- Retreatment of Prior Nonresponders
- Issues and Controversies
- Future Therapies
- Summary

Treatment of Chronic Hepatitis C: Genotype 1

Background and Definitions

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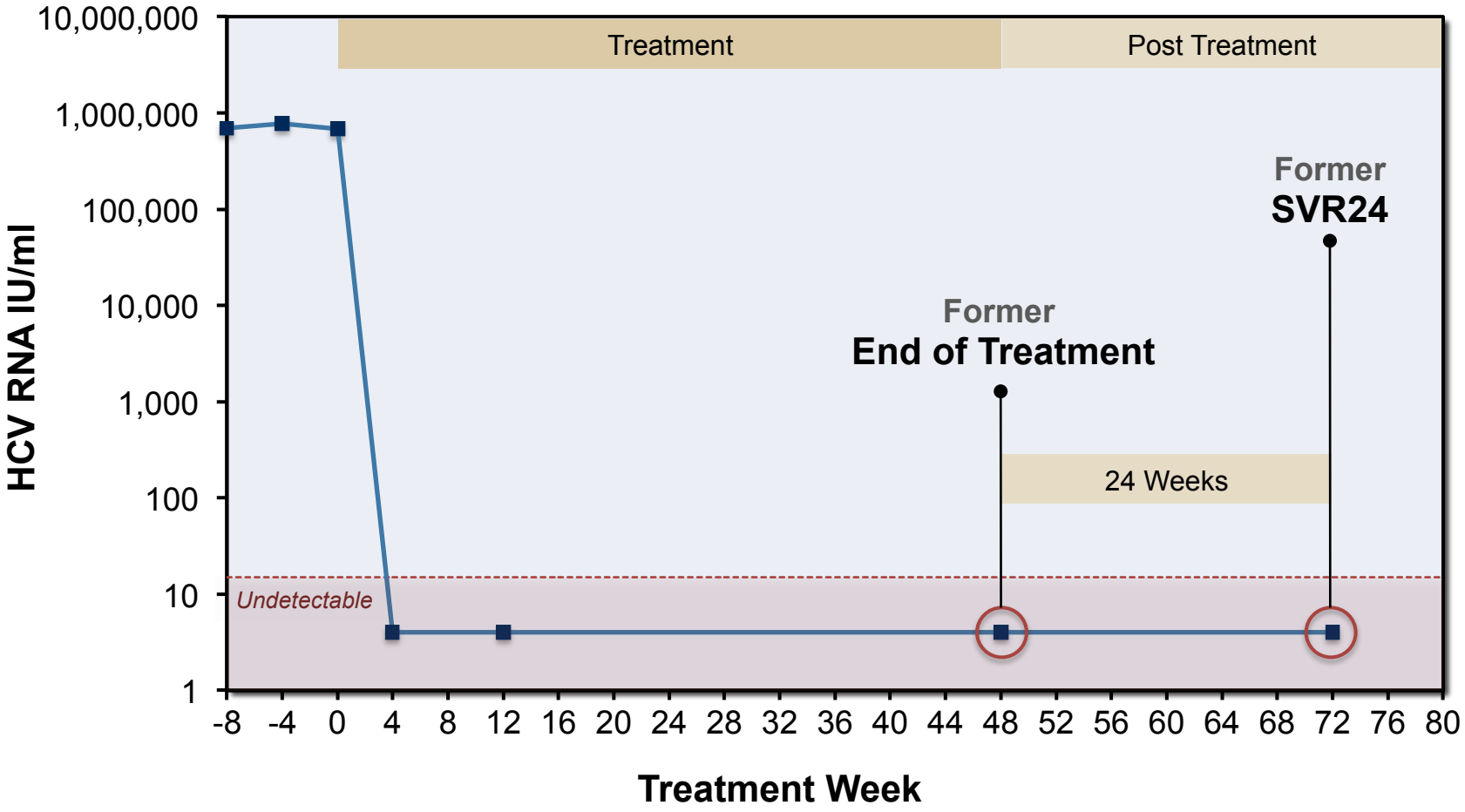
Treatment of Chronic HCV Genotype 1
Background

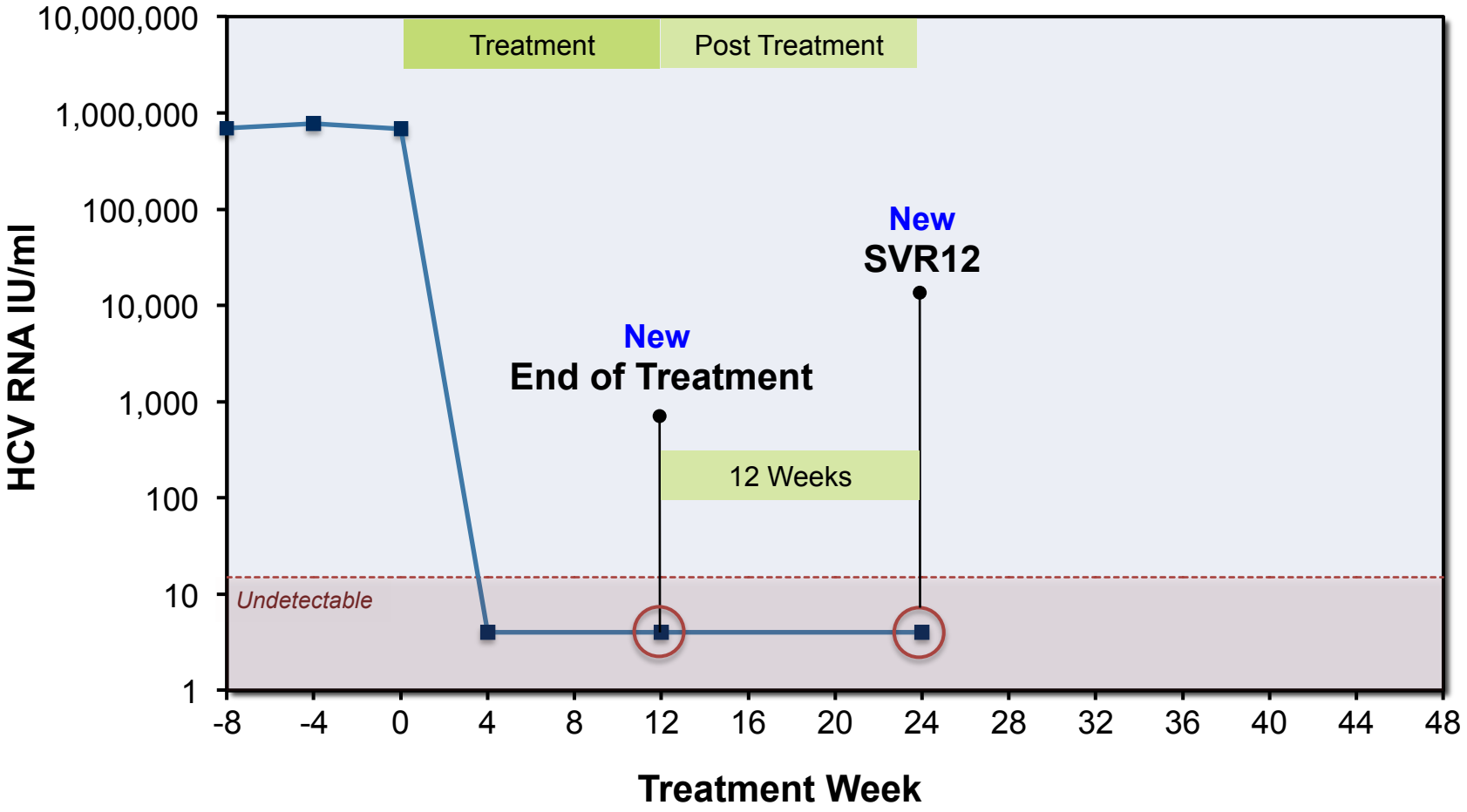
- HCV infects ~ 5 million people in the US today
- Genotype 1 most common HCV genotype in US
- The risk of cirrhosis is 20-40% over a follow-up of 20-40 years
- Up to 85% of patients have contraindications for interferon therapy
- HCV increases all cause mortality
- HCV is a systemic disease
- HCV is a leading cause of HCC
- HCC now the # 2 cause of cancer death world-wide

Sustained Virologic Response (SVR) after End of Therapy
Former 48-Week Therapy & Former SVR Standard (SVR24)



Sustained Virologic Response (SVR24) = Undetectable HCV RNA 24 Weeks Post Treatment

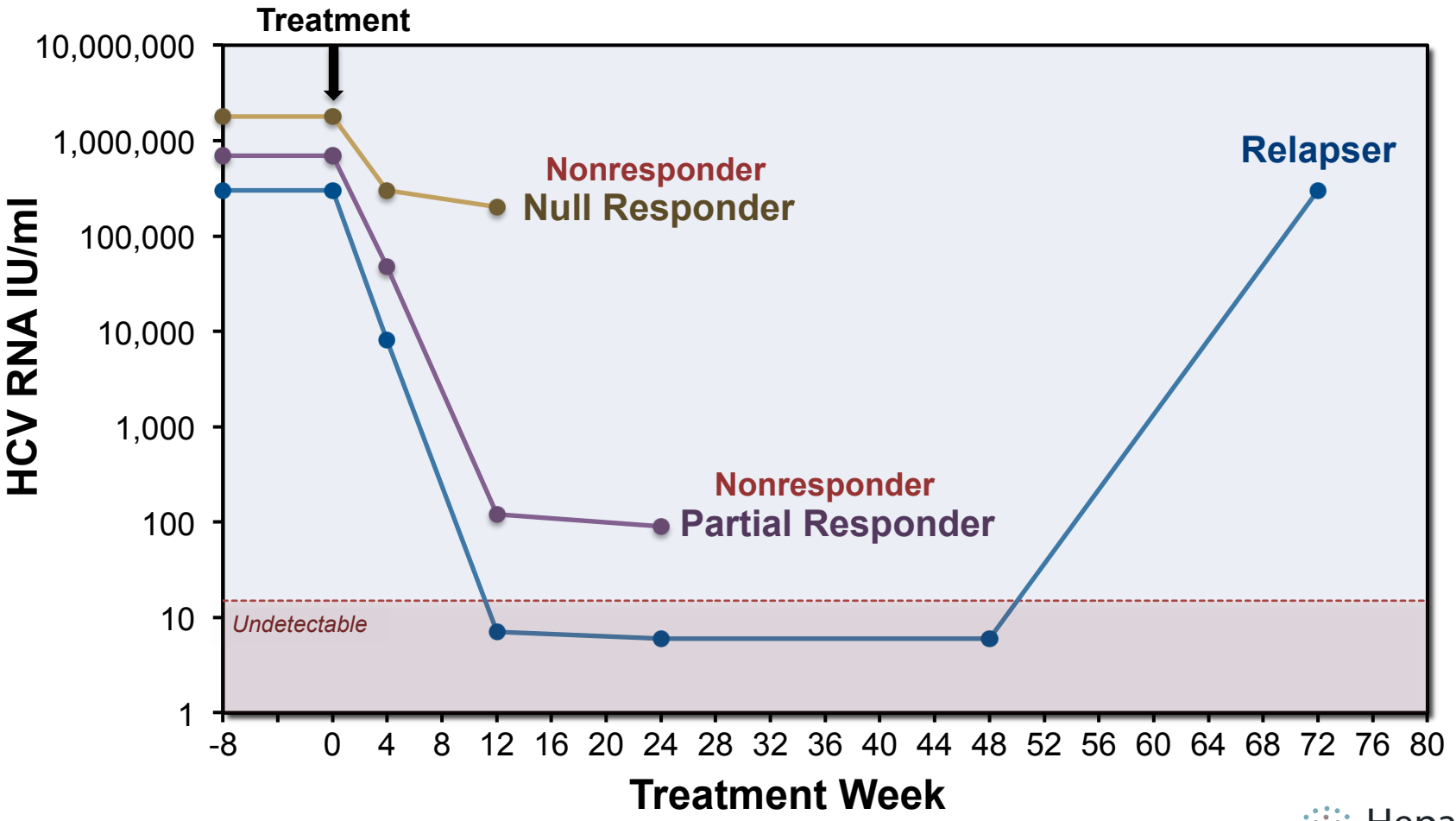
Sustained Virologic Response (SVR) after End of Therapy
New 12 Week Therapy & New SVR Standard (SVR12)



Sustained Virologic Response (SVR12) = Undetectable HCV RNA 12 Weeks Post Treatment

Virologic Failure with HCV Therapy
Relapser and Nonresponder (Null and Partial)

Different Types of Virologic Failure with HCV Therapy



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AASLD/IDSA/IAS-USA 2014 HCV Treatment Recommendations
Criteria for Interferon Ineligible

Interferon Ineligible is defined as one or more of the following:
• Intolerance to interferon
• Autoimmune hepatitis and other autoimmune disorders
• Hypersensitivity to peginterferon or any of its components
• Decompensated hepatic disease
• Major uncontrolled depressive illness
• A baseline neutrophil count below 1500/μL, a baseline platelet count below 90,000/μL or baseline hemoglobin below 10 g/dL
• A history of preexisting cardiac disease

Source: AASLD/IDSA/IAS-USA (www.hcvguidelines.org). Accessed May 12, 2014

Treatment of Chronic Hepatitis C: Genotype 1

Treatment-Naïve and Prior Relapsers

AASLD/IDSA/IAS-USA 2014 HCV Treatment Recommendations
Initial Therapy for Patients with Genotype 1 Chronic HCV

Patients with GT 1 HCV: Initial Treatment & Retreatment of Relapsers*
Recommended Therapy
Interferon Eligible Sofosbuvir + Peginterferon + Ribavirin x 12 weeks
Not Interferon Eligible Sofosbuvir + Simeprevir +/- Ribavirin x 12 weeks
Alternative Therapy
Interferon Eligible Simeprevir x 12 weeks + [Peginterferon + Ribavirin] x 24 weeks
Not Interferon Eligible Sofosbuvir + Ribavirin x 24 weeks
Not Recommended
Peginterferon + Ribavirin +/- [Boceprevir or Telaprevir]
Monotherapy with Peginterferon, Ribavirin, or a Direct Acting Antiviral Agent
Treatment of Decompensated Cirrhosis with Peginterferon or Simeprevir
*Patients who experienced relapse after Peginterferon plus Ribavirin therapy

Source: AASLD/IDSA/IAS-USA (www.hcvguidelines.org). Viewed April 22, 2014

AASLD/IDSA/IAS-USA 2014 HCV Treatment Recommendations
Initial Therapy for Patients with Genotype 1 Chronic HCV

Patients with GT 1 HCV: Initial Treatment & Retreatment of Relapsers*
Recommended Therapy
Interferon Eligible Sofosbuvir + Peginterferon + Ribavirin x 12 weeks
Not Interferon Eligible Sofosbuvir + Simeprevir +/- Ribavirin x 12 weeks
*Patients who experienced relapse after Peginterferon plus Ribavirin therapy

Source: AASLD/IDSA/IAS-USA (www.hcvguidelines.org). Viewed April 22, 2014

AASLD/IDSA/IAS-USA 2014 HCV Treatment Recommendations
Initial Therapy for Patients with Genotype 1 Chronic HCV

Patients with GT 1 HCV: Initial Treatment & Retreatment of Relapsers*
Alternative Therapy
Interferon Eligible ^Simeprevir x 12 weeks + [Peginterferon + Ribavirin] x 24 weeks
Not Interferon Eligible +Sofosbuvir + Ribavirin x 24 weeks

*Patients who experienced relapse after Peginterferon plus Ribavirin therapy

^Acceptable regimen for persons with genotype 1b or genotype 1a in whom Q80K polymorphism not detected prior to treatment

+Preliminary data suggest this regimen may be less effective than sofosbuvir + simeprevir, particularly for patients with cirrhosis

Source: AASLD/IDSA/IAS-USA (www.hcvguidelines.org). Viewed April 22, 2014

AASLD/IDSA/IAS-USA 2014 HCV Treatment Recommendations
Initial Therapy for Patients with Genotype 1 Chronic HCV

Patients with GT 1 HCV: Initial Treatment & Retreatment of Relapsers*
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*Patients who experienced relapse after Peginterferon plus Ribavirin therapy

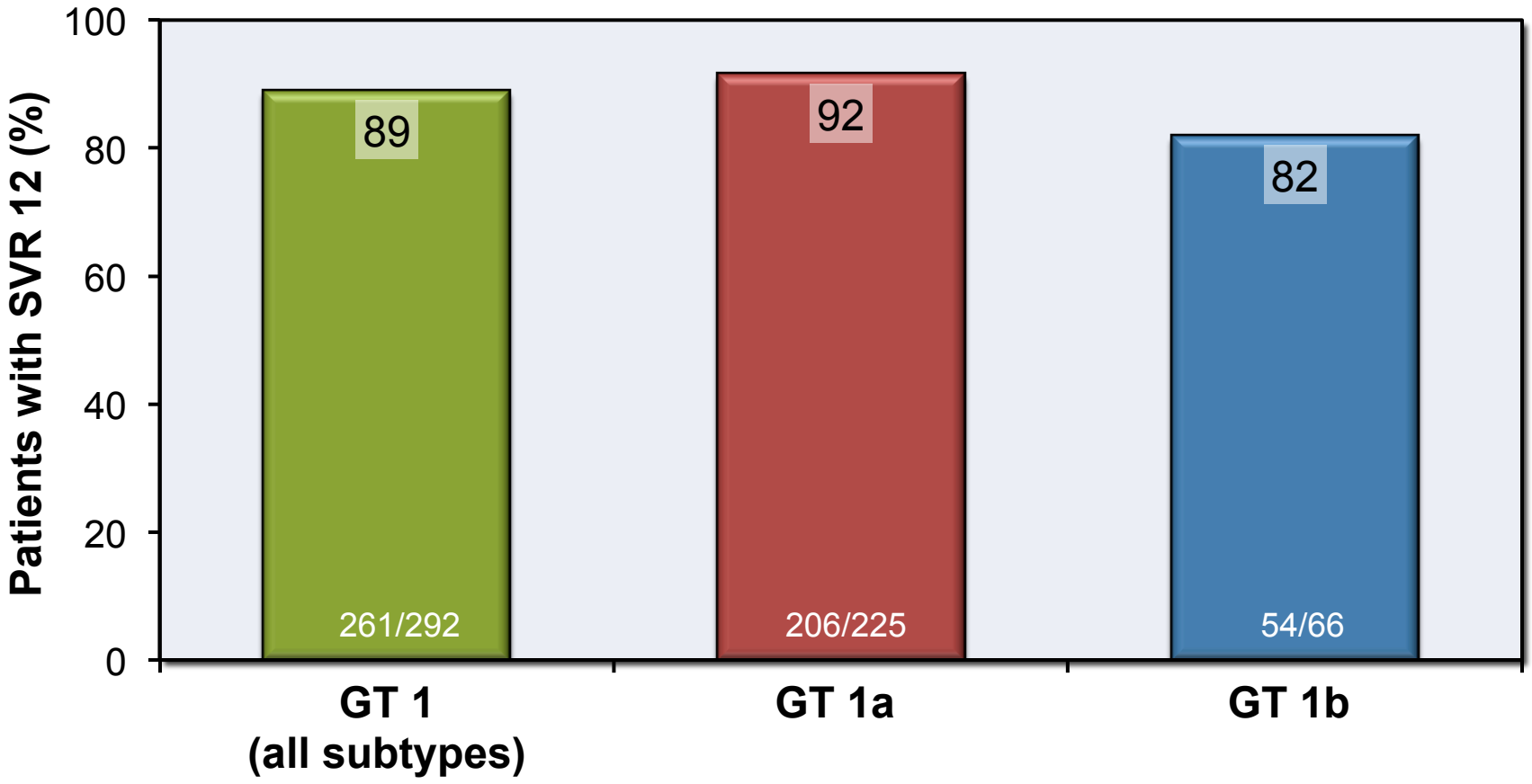
Source: AASLD/IDSA/IAS-USA (www.hcvguidelines.org). Viewed April 22, 2014

Treatment-Naïve & Prior Relapsers with GT1 Chronic HCV
Key Studies that Support Recommendations

- **Sofosbuvir + Ribavirin +/- Peginterferon**
  - NEUTRINO
  - NIH SPARE
  - QUANTUM
  - ELECTRON
  - PHOTON-1
- **Sofosbuvir + Simeprevir**
  - COSMOS (Cohort 1 & Cohort 2)
- **Simeprevir + Ribavirin + Peginterferon**
  - QUEST-1
  - QUEST-2

Sofosbuvir + PEG + RBV: Treatment-Naive HCV GT 1,4,5,6
NEUTRINO Trial: Results for GT1

NUTRINO: SVR 12 for Patients with GT1



Source: Lawitz E, et al. N Engl J Med. 2013;368:1878-87.

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Sofosbuvir and Ribavirin for Treatment-Naïve HCV GT 1
NIH SPARE Trial: Features

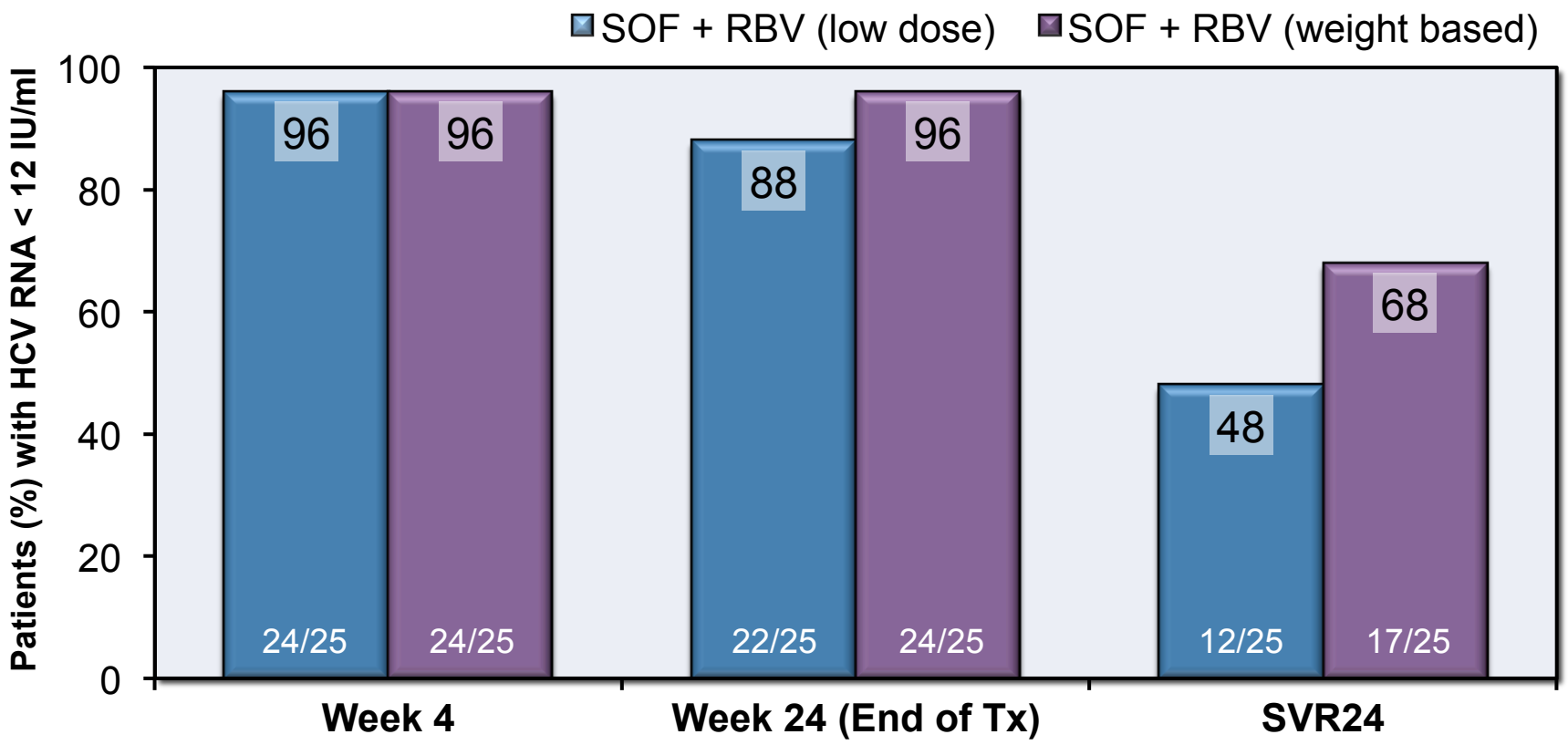
NIAID/NIH Trial: Features

- **Design**
  - Randomized, open-label, 2-part, phase 2 study of sofosbuvir and ribavirin
  - Part 1: “proof of concept”
  - Part 2: low dose versus weight-based dose of ribavirin in GT-1
- **Setting**: Single center: NIAID
- **Entry Criteria**: HCV genotype 1; treatment-naïve
- **Patient Characteristics**
  - HCV Genotype: 1A (70%), 1B (30%)
  - IL28B Genotype: 81% non-CC
  - Age and Sex: median 54 (range 48-57); 62% male
  - Race: 83% black; 13% white
  - Liver disease: 23% had advanced fibrosis (F3-F4 by Knodell-HAI scoring)
- **Primary end-points**: Efficacy (SVR24) and safety

Source: Osinusi A, et al. JAMA. 2013;310:804-11.

Sofosbuvir and Ribavirin for Treatment-Naïve HCV GT 1
NIH SPARE Trial: Part 2 Results

NIAID/NIH Part 2: HCV RNA <12 IU/ml by Study Timepoint



SOF = Sofosbuvir; RBV = Ribavirin

Source: Osinusi A, et al. JAMA. 2013;310:804-11.

Treatment of Chronic Hepatitis C: Genotype 1

Retreatment of Prior Nonresponders

AASLD/IDSA/IAS-USA 2014 HCV Treatment Recommendations
Retreatment of Patients with Genotype 1 Chronic HCV

Patients with GT 1 HCV: Retreatment of Prior Nonresponders*
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Sofosbuvir + Simeprevir +/- Ribavirin x 12 weeks
Alternative Therapy
Sofosbuvir x 12 weeks + [Peginterferon + Ribavirin] x 12-24 weeks
Sofosbuvir + Ribavirin x 24 weeks
^Simeprevir x 12 weeks + [Peginterferon + Ribavirin] x 48 weeks
Not Recommended
Peginterferon + Ribavirin +/- [Boceprevir or Telaprevir]
Monotherapy with Peginterferon, Ribavirin, or a Direct Acting Antiviral Agent
Treatment of Decompensated Cirrhosis with Peginterferon or Simeprevir

*Patients who experienced nonresponse (partial or null) with Peginterferon plus Ribavirin therapy

^For genotype 1a, baseline resistance testing for Q80K should be performed and alternative treatments considered if this mutation is present

Source: AASLD/IDSA/IAS-USA (www.hcvguidelines.org). Viewed April 8, 2014

AASLD/IDSA/IAS-USA 2014 HCV Treatment Recommendations
Retreatment of Patients with Genotype 1 Chronic HCV

Patients with GT 1 HCV: Retreatment of Prior Nonresponders*
Recommended Therapy
Sofosbuvir + Simeprevir +/- Ribavirin x 12 weeks

*Patients who experienced nonresponse (partial or null) with Peginterferon plus Ribavirin therapy

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Alternative Therapy
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Sofosbuvir + Ribavirin x 24 weeks
^Simeprevir x 12 weeks + [Peginterferon + Ribavirin] x 48 weeks

*Patients who experienced nonresponse (partial or null) with Peginterferon plus Ribavirin therapy

^For genotype 1a, baseline resistance testing for Q80K should be performed and alternative treatments considered if this mutation is present

Source: AASLD/IDSA/IAS-USA (www.hcvguidelines.org). Viewed April 8, 2014

AASLD/IDSA/IAS-USA 2014 HCV Treatment Recommendations
Retreatment of Patients with Genotype 1 Chronic HCV

Patients with GT 1 HCV: Retreatment of Prior Nonresponders*
Not Recommended
Peginterferon + Ribavirin +/- [Boceprevir or Telaprevir]
Monotherapy with Peginterferon, Ribavirin, or a Direct Acting Antiviral Agent
Treatment of Decompensated Cirrhosis with Peginterferon or Simeprevir

*Patients who experienced nonresponse (partial or null) with Peginterferon plus Ribavirin therapy

Source: AASLD/IDSA/IAS-USA (www.hcvguidelines.org). Viewed April 8, 2014

Treatment Experienced Nonresponders with GT1 Chronic HCV
Key Studies that Support Recommendations

- **Sofosbuvir + Simeprevir**
  - COSMOS (Cohort 1 & Cohort 2)
- **Sofosbuvir + Ribavirin**
  - ELECTRON
- **Simeprevir + Ribavirin + Peginterferon**
  - ASPIRE
- **Boceprevir + Ribavirin + Peginterferon**
  - RESPOND-2
  - PROVIDE
- **Telaprevir + Ribavirin + Peginterferon**
  - REALIZE

Sofosbuvir + Simeprevir +/- Ribavirin for HCV GT 1
COSMOS Trial: Study Features

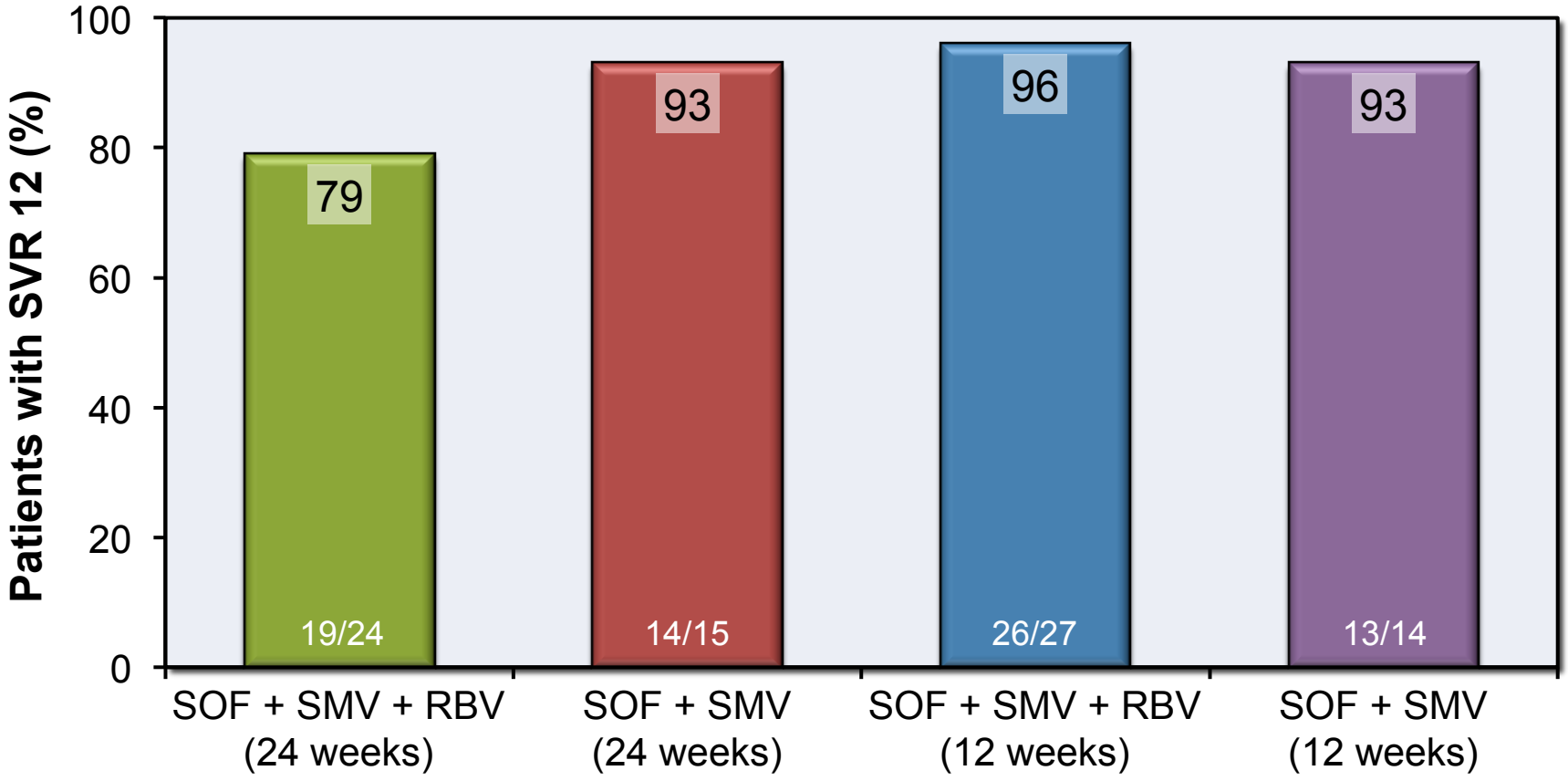
COSMOS Trial: Features

- **Design**: Randomized, phase 2a, open-label, using sofosbuvir + simeprevir +/- ribavirin in treatment naive or experienced, chronic HCV GT 1
- **Setting**: United States and Europe
- **Entry Criteria**
  - Chronic HCV Genotype 1
  - Cohort 1: prior null responders; Metavir F0-F2
  - Cohort 2: treatment naïve & prior null responders; Metavir F3-F4
- **Patient Characteristics (range in different treatment arms)**
  - N = 167 (n = 80 in Cohort 1 and n = 87 in Cohort 2)
  - Baseline GT1a with Q80K: Cohort 1 = 50%; Cohort 2 = 40%
  - Non-CC IL28b Genotype: Cohort 1 = 94%; Cohort 2 = 79%
- **End-Points**: Primary = SVR12; Secondary = safety

Source: Sulkowski M, et al. EASL. April 2014. Abstract 07.
Lawitz E, et al. EASL. April 2014. Abstract 165.

Sofosbuvir + Simeprevir +/- Ribavirin for HCV GT 1
COSMOS Trial: Cohort 1 Results

COSMOS (Cohort 1): SVR 12 by Regimen



SOF = sofosbuvir; SMV = simeprevir; RBV = ribavirin

Source: Sulkowski M, et al. EASL. April 2014. Abstract 07.

Sofosbuvir + Simeprevir +/- Ribavirin for HCV GT 1
COSMOS Trial: Cohort 1 Subgroup Analysis

Impact of Q80K on SVR in Patients with GT1

COSMOS Cohort 1: SVR12 Rates, According to Subgroup*

Regimen and Duration	1b	1a without 80K	1a with 80K
SMV + SOF + RBV x 24 weeks	4/4 (100%)	7/7 (100%)	8/9 (89%)
SMV + SOF x 24 weeks	3/3 (100%)	7/7 (100%)	3/3 (100%)
SMV + SOF + RBV x 12 weeks	6/6 (100%)	12/12 (100%)	8/9 (89%)
SMV + SOF x 12 weeks	4/4 (100%)	5/5 (100%)	5/6 (83%)

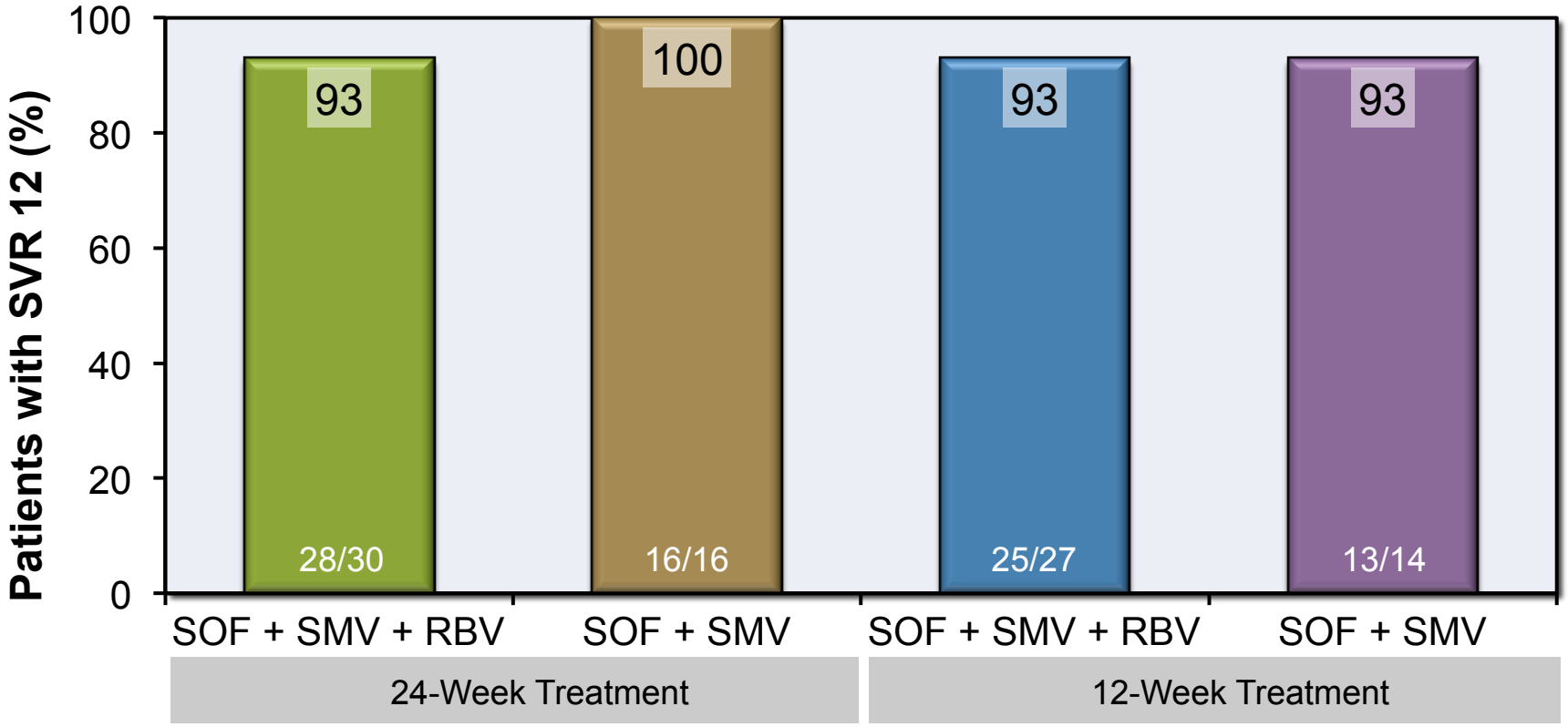
*Excluding patients who discontinued for non-virologic reasons

SOF = sofosbuvir; SMV = simeprevir; RBV = ribavirin

Source: Sulkowski M, et al. EASL. April 2014. Abstract 07.

Sofosbuvir + Simeprevir +/- Ribavirin for HCV GT 1
COSMOS Trial: Cohort 2 Results

COSMOS (Cohort 2 with F3-F4 Fibrosis): SVR12 by Regimen



SOF = sofosbuvir; SMV = simeprevir; RBV = ribavirin

Source: Lawitz E, et al. EASL. April 2014. Abstract 165.

Sofosbuvir + Simeprevir +/- Ribavirin for HCV GT 1
COSMOS Trial: Cohort 2 Subgroup Analysis

Impact of Q80K on SVR in Patients with GT1

COSMOS Cohort 2: SVR12 Rates, According to Subgroup*

Regimen and Duration	1b	1a without 80K	1a with 80K
SMV + SOF + RBV x 24 weeks	6/6 (100%)	11/11 (100%)	11/11 (100%)
SMV + SOF x 24 weeks	4/4 (100%)	7/7 (100%)	4/4 (100%)
SMV + SOF + RBV x 12 weeks	5/5 (100%)	13/14 (93%)	7/8 (88%)
SMV + SOF x 12 weeks	3/3 (100%)	7/8 (88%)	3/3 (100%)

*Excluding patients who discontinued for non-virologic reasons

SOF = sofosbuvir; SMV = simeprevir; RBV = ribavirin

Source: Lawitz E, et al. EASL. April 2014. Abstract 165.

Treatment of Chronic Hepatitis C: Genotype 1

Issues and Controversies

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Issues and Controversies

- Cost of Therapy
- HCV Genotype 1 subtypes
- When to Defer Therapy
  - Decisions on when to warehouse?
- (Non) Role of IL-28b Testing
- Degree of Liver Fibrosis
  - How to stage?
- Patients with Detectable HCV RNA at Week 4
  - Stopping rules?
- Response Guided therapy

How is cost of therapy impacting treatment decisions?

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Hepatitis C Genotype 1
Estimated Medication Costs for Treatment-Naïve & Prior Relapsers

Patients with GT 1 HCV: Initial Treatment & Retreatment of Relapsers	
Regimen and Duration	**Regimen Cost**
Recommended	
Sofosbuvir + Ribavirin + Peginterferon x 12 weeks	$97,000
Sofosbuvir + Simeprevir +/- Ribavirin x 12 weeks	$150,000
Alternative	
Simeprevir x 12 weeks + [Ribavirin + Peginterferon] x 24 weeks	$79,000
Sofosbuvir + Ribavirin x 24 weeks	$169,000

Hepatitis C Genotype 1
Estimated Medication Costs for Retreatment of Nonresponders

Patients with GT 1 HCV: Retreatment of Prior Nonresponders	
Regimen and Duration	**Regimen Cost**
Recommended	
Sofosbuvir + Simeprevir +/- Ribavirin x 12 weeks	$150,000
Alternative	
Sofosbuvir x 12 weeks + [Peginterferon + Ribavirin] x 12-24 weeks	$97,000-$109,000
Sofosbuvir + Ribavirin x 24 weeks	$169,000
Simeprevir x 12 weeks + [Peginterferon + Ribavirin] x 48 weeks	$104,00

HCV Therapy for Genotype 1 Chronic HCV
Cost Analysis Based on Cost per SVR

Patient Characteristics	Regimen Options	SVR	Cost per SVR
Naïve, no cirrhosis	Wait until 2015	?	?
	SOF/Peg-IFN/RBV x 12 wks	92%	$114,500
	SOF/RBV x 24 wks	**~68%**	**$266,176**
Naïve, cirrhosis	SOF/Peg-IFN/RBV x 12 wks	80%	$131,675
	SOF/Simeprevir x 12 wks	>90%	$169,800
Treatment experienced, no cirrhosis	Wait until 2015	?	?
	SOF/Peg-IFN/RBV x 12 wks	?	?
Treatment experienced, cirrhosis	SOF/Peg-IFN/RBV x 12 wks	?	?
	SOF/Simeprevir x 12 wks	>90%	$169,800

Source: Camilla Graham, MD, MPH. Beth Israel Deaconess Medical Center

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Which patients are more likely to fail sofosbuvir?

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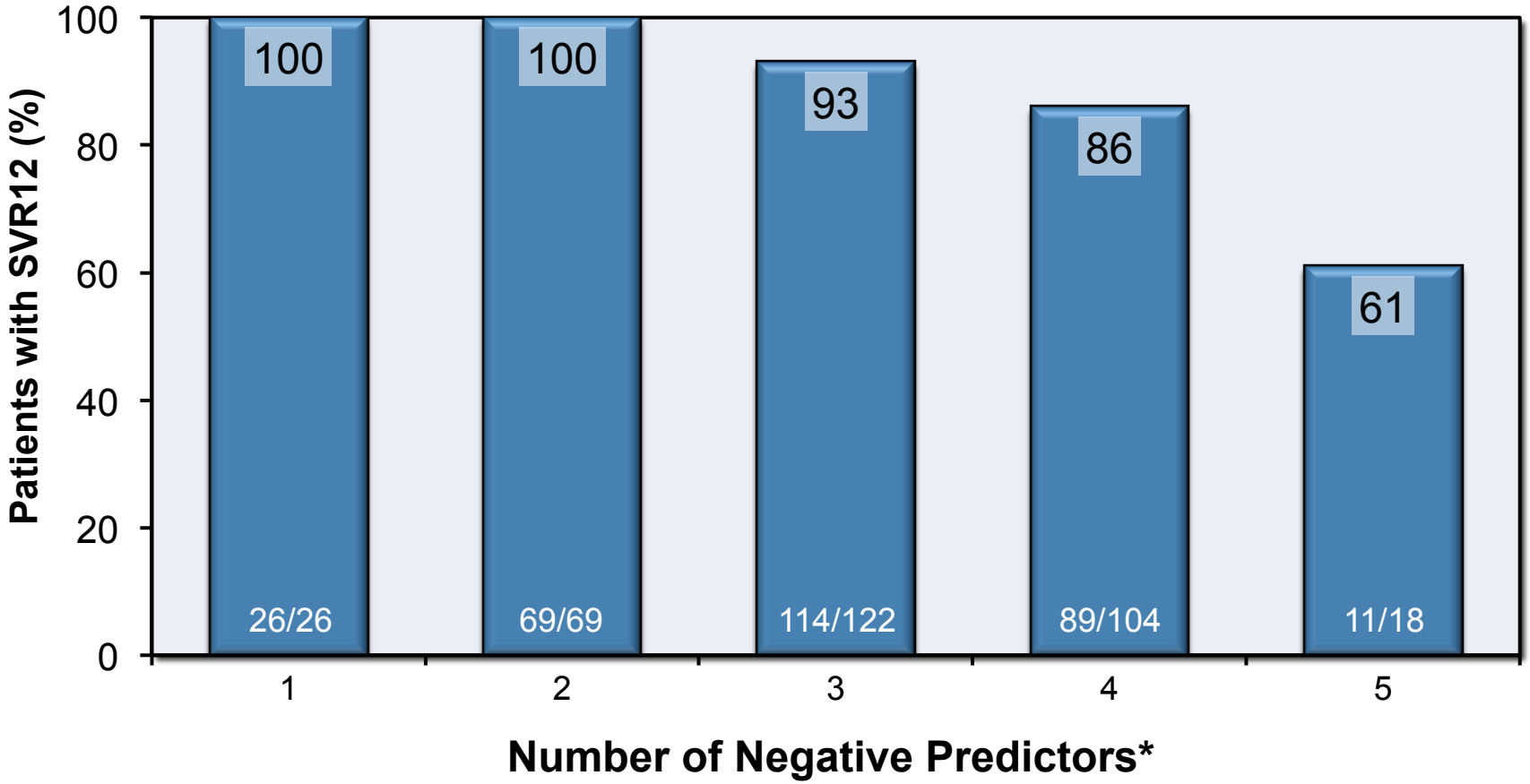
GT1 Patients Treated with Sofosbuvir + PEG + RBV
Influence of Multiple Negative Baseline Factors on SVR12

Multivariate Regression Analysis for GT1*		
Factor	**Odds Ratio**	**P-value**
Weight ≥ 75 kg	6.8	0.01
IL28B non-CC	7.2	0.009
Cirrhosis	3.2	0.009
Genotype subtype not important determinant of response in sofosbuvir-based regimens		

*Analysis based on data from the ATOMIC and NEUTRINO Trials
ATOMIC: Kowdley KV, et al. Lancet. 2013;381:2100-7.
NEUTRINO: Lawitz E, et al. N Engl J Med. 2013;368:1878-87.

Source: Foster GR, et al. 49th EASL. 2014:Abstract O66.

GT1 Patients Treated with Sofosbuvir + PEG + RBV
SVR12 Rates by Number of Negative Predictors



*Prior treatment, male sex, weight ≥ 75 kg, IL28B nonCC, cirrhosis, and HCV RNA level > 800,000 IU/mL

Source: Foster GR, et al. 49th EASL. 2014:Abstract O66.

Treat now or defer therapy?

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Factors Favoring Treat GT1 Now

- Advanced Fibrosis (F3-F4)
  - Platelet count < 150,000/uL
  - Large spleen and/or portal vein
  - Esophageal varices
- Synthetic dysfunction
- Systemic disease
  - Cryoglobulinemia (+Rheumatoid Factor)
- Highly motivated patients/symptomatic patients
- Patients with Increased Mortality Risk
  - All cause
  - HCC risk

Hepatitis C: Genotype 1

Future Treatment Options

Future Regimens for GT-1

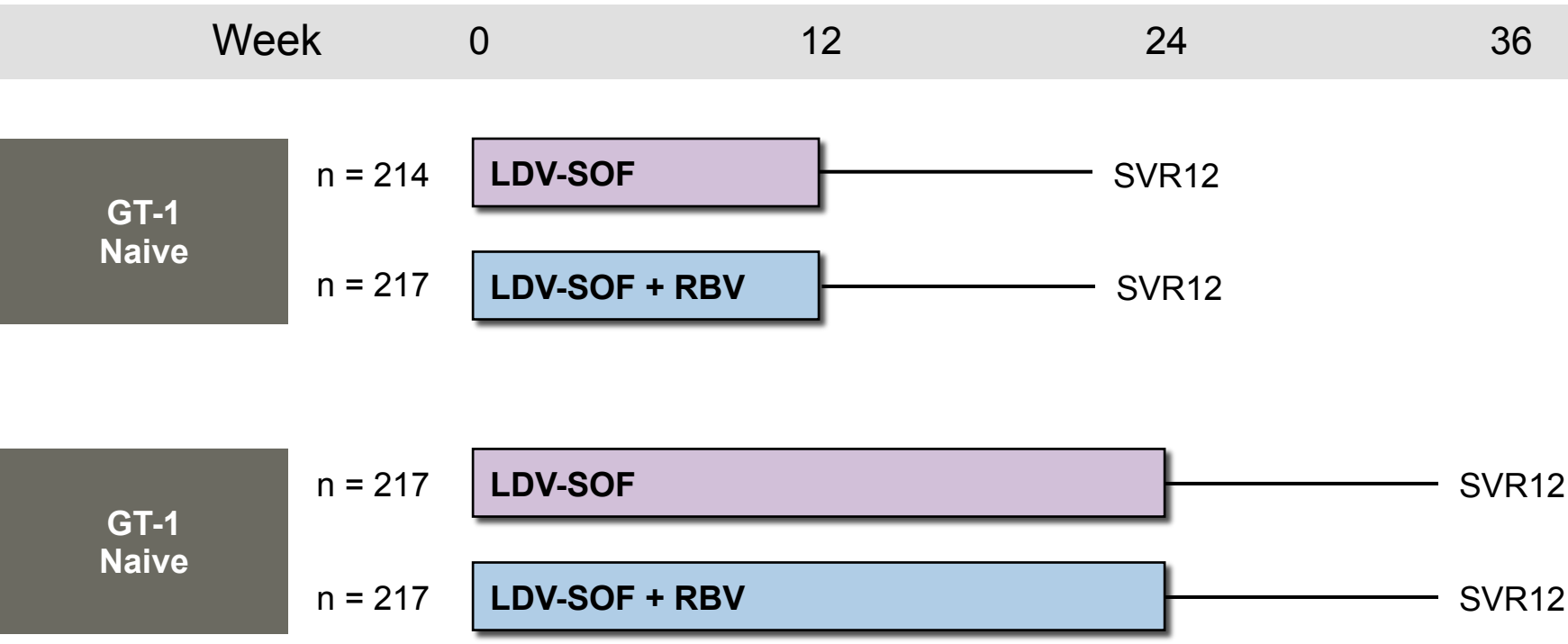
- **Ledipasvir-Sofosbuvir**
  - Ledipasvir: NS5A replication inhibitor
  - Sofosbuvir: NS5b polymerase inhibitor
- **Abbvie Regimen (ABT-450/r-Ombitasvir + Dasabuvir)**
  - ABT-450/r: NS3 protease inhibitor with ritonavir boosting
  - Ombitasvir (formerly ABT-267): NS5A replication inhibitor
  - Dasabuvir (formerly ABT-333):NS5b polymerase inhibitor
- **Daclatasvir + Asunaprevir**
  - Daclatasvir: NS5A replication inhibitor
  - Asunaprevir: NS3 protease inhibitor
- **Daclatasvir + Sofosbuvir**
  - Daclatasvir: NS5A replication inhibitor
  - Sofosbuvir+ NS5 NS5b polymerase inhibitor

Sofosbuvir-Ledipasvir Fixed-Dose Combination +/- RBV
ION-1, ION-2, and ION-3

Study	Population	Treatment	Duration	SVR 12 Rates
ION-1* (n= 865)	GT-1 Treatment-naïve (16% with cirrhosis)	LDV/SOF	12 weeks	99% (211/214)
		LDV/SOF + RBV	12 weeks	97% (211/217)
		LDV/SOF	24 weeks	98% (212/217)
		LDV/SOF + RBV	24 weeks	99% (215/217)
ION-2+ (n= 440)	GT-1 Treatment-experienced (20% with cirrhosis)	LDV/SOF	12 weeks	94% (102/109)
		LDV/SOF + RBV	12 weeks	96% (107/111)
		LDV/SOF	24 weeks	99% (108/109)
		LDV/SOF + RBV	24 weeks	99% (110/111)
ION-3^ (n= 647)	GT-1 Treatment-naïve (0% with cirrhosis)	LDV/SOF	8 weeks	94% (202/215)
		LDV/SOF + RBV	8 weeks	93% (201/216)
		LDV/SOF	12 weeks	95% (206/216)

*Afdhal N, et al. N Engl J Med. 2014; April 11 [Epub ahead of print]
+Afdhal N, et al. N Engl J Med. 2014; April 11 [Epub ahead of print]
^Kowdley KV, et al. N Engl J Med. 2014; April 10 [Epub ahead of print]

Ledipasvir-Sofosbuvir +/- Ribavirin in Treatment-Naïve HCV GT 1
ION-1 Study: Study Design



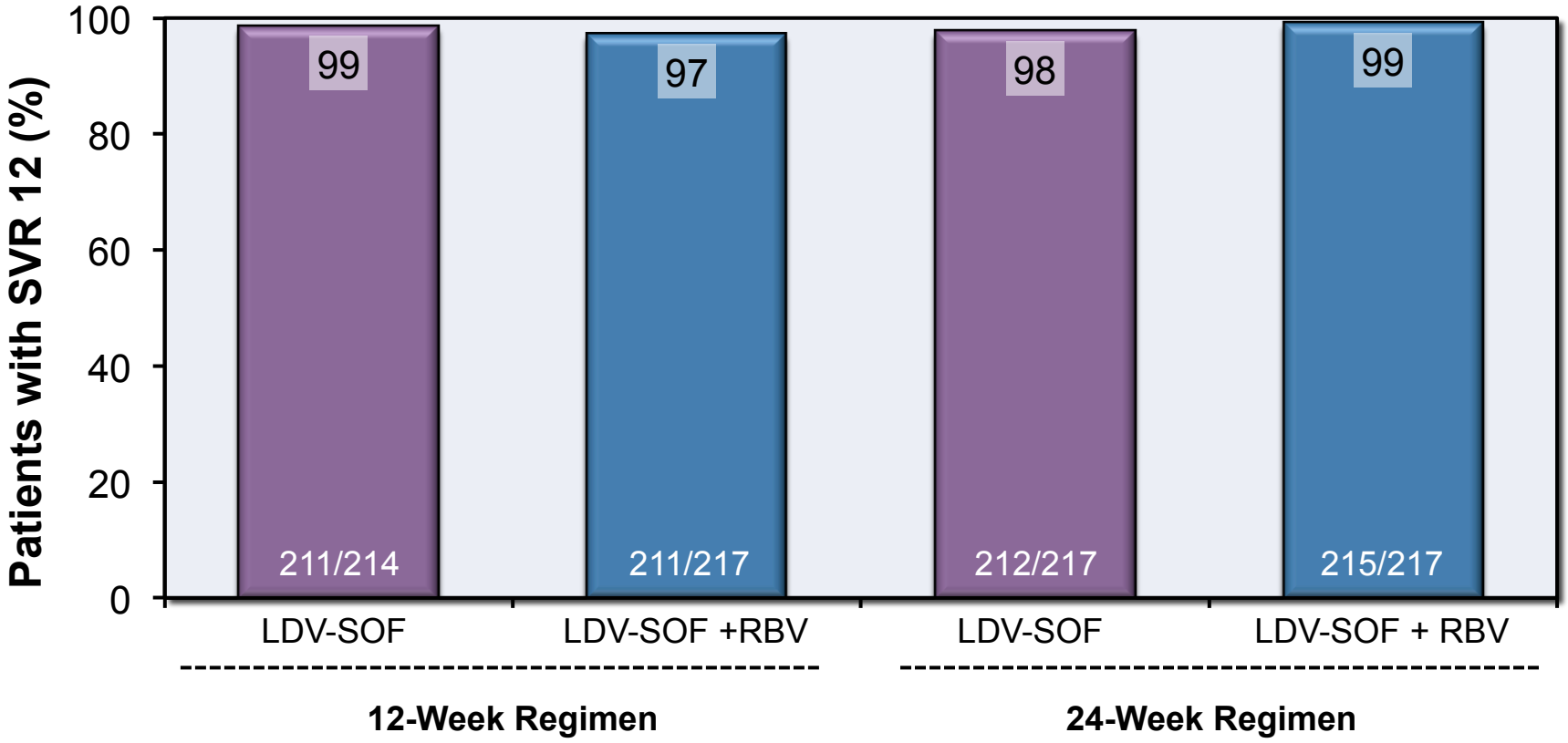
Drug Dosing
Ledipasvir-sofosbuvir (90/400 mg): fixed dose combination; one pill once daily
Ribavirin (weight-based and divided bid): 1000 mg/day if < 75 kg or 1200 mg/day if ≥ 75 kg

Abbreviations: LDV= ledipasvir; SOF = sofosbuvir; RBV = ribavirin

Source: Afdhal N, et al. N Engl J Med. 2014 April 11. [Epub ahead of print]

Ledipasvir-Sofosbuvir +/- Ribavirin in Treatment-Naïve HCV GT 1
ION-1 Study: Results

SVR 12, by Treatment Duration and Regimen



LDV= ledipasvir; SOF = sofosbuvir; RBV = ribavirin

Source: Afdhal N, et al. N Engl J Med. 2014 April 11. [Epub ahead of print]

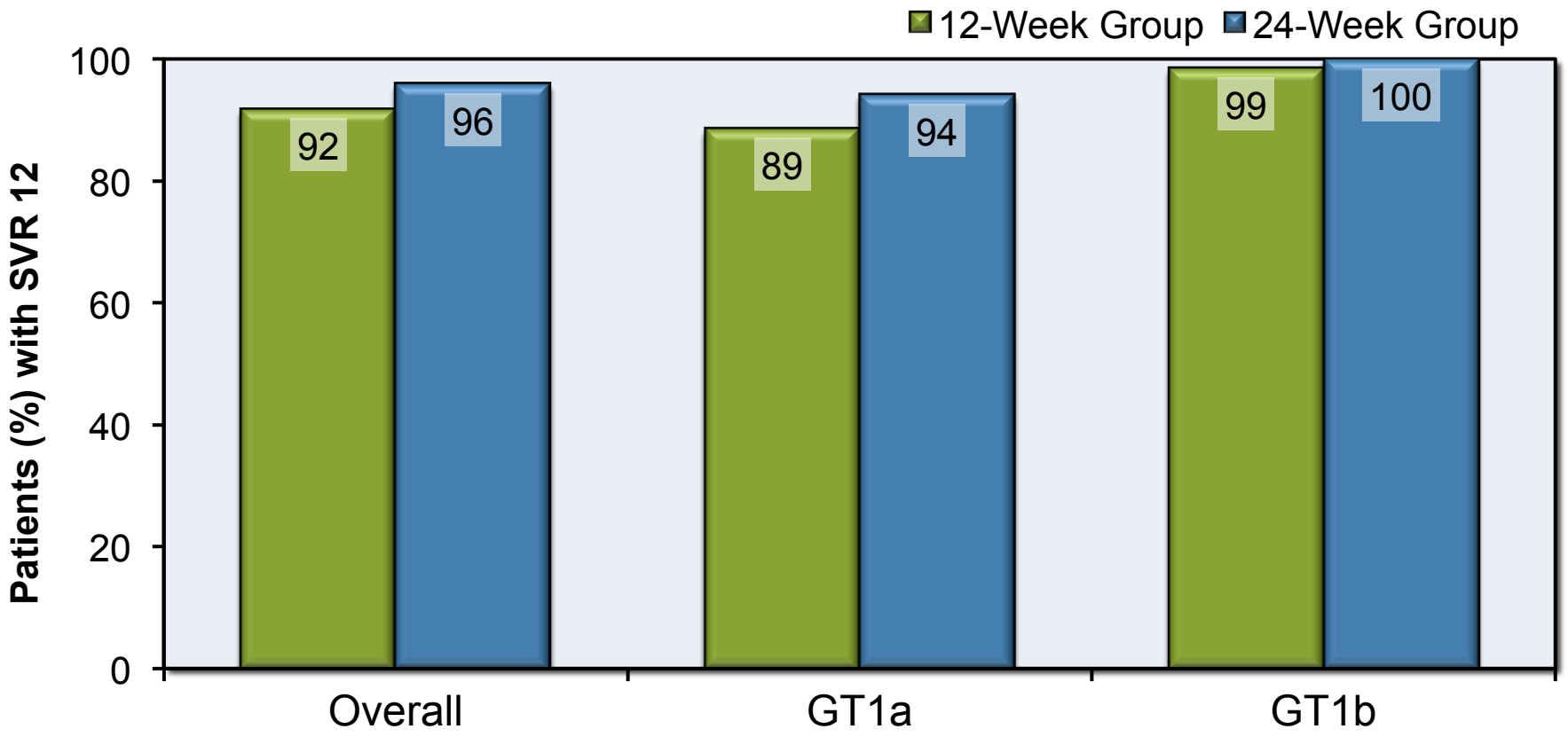
"AbbVie Regimen"
Phase 3 Clinical Development Program

Study	Patients	Treatment Regimen	SVR_{12}
PEARL-II (12 weeks)	GT1b treatment-experienced (N=179)	AbbVie regimen* + RBV (n=88)	97% (85/88)
		AbbVie regimen* only (n=91)	100% (91/91)
PEARL-III (12 weeks)	GT1b treatment-naive (N=419)	AbbVie regimen* + RBV (n=210)	99% (209/210)
		AbbVie regimen* only (n=209)	99% (207/209)
PEARL-IV (12 weeks)	GT1a treatment-naive (N=305)	AbbVie regimen* + RBV (n=100)	97% (97/100)
		AbbVie regimen* only (n=205)	90% (185/205)
TURQUOISE-II (12 & 24 weeks)	GT1 treatment-naive and treatment-experienced w/ compensated cirrhosis (N=380)	AbbVie regimen* + RBV, 12 weeks (n=208)	92% (191/208)
		AbbVie regimen* + RBV, 24 weeks (n=172)	96% (165/172)
SAPPHIRE-I (12 weeks)	GT1 treatment-naive (N=631)	AbbVie regimen* + RBV (n=473)	96% (455/473)
SAPPHIRE-II (12 weeks)	GT1 treatment-experienced (N=394)	AbbVie regimen* + RBV (n=297)	96% (286/297)

* AbbVie Regimen = ABT-450/r/Ombitasvir (150/100/25 mg QD) plus Dasabuvir (250 mg BID)

ABT450/r-Ombitasvir + Dasabuvir + Ribavirin GT 1 and Compensated Cirrhosis: TURQUOISE-II Study

TURQUOISE II: SVR12

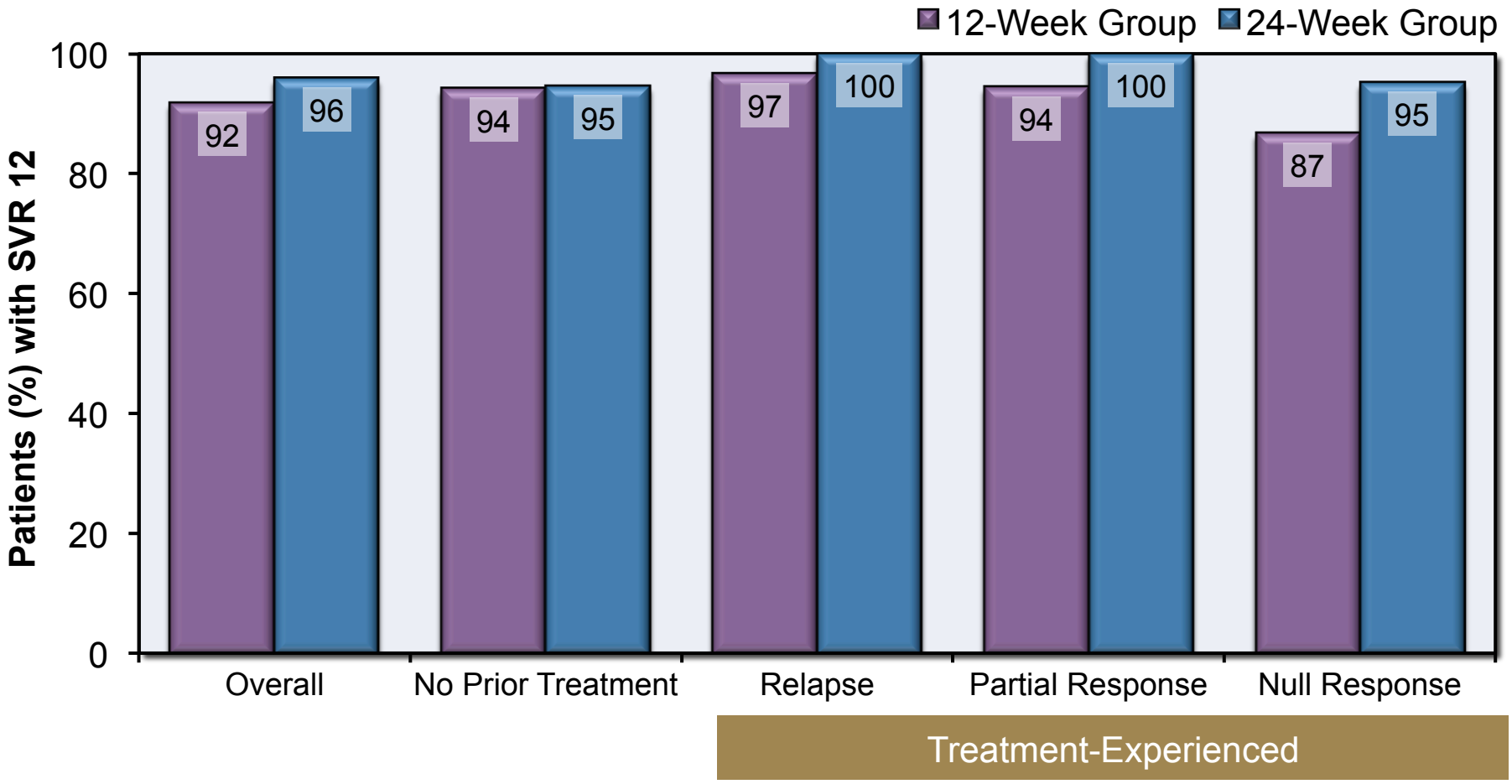


Soource: Poordad F, et al. N Engl J Med. 2014; April 12 [Epub Ahead of Print]

Hepatitis web study

ABT450/r-Ombitasvir + Dasabuvir + Ribavirin GT 1 and Compensated Cirrhosis: TURQUOISE-II Study

TURQUOISE II: SVR12

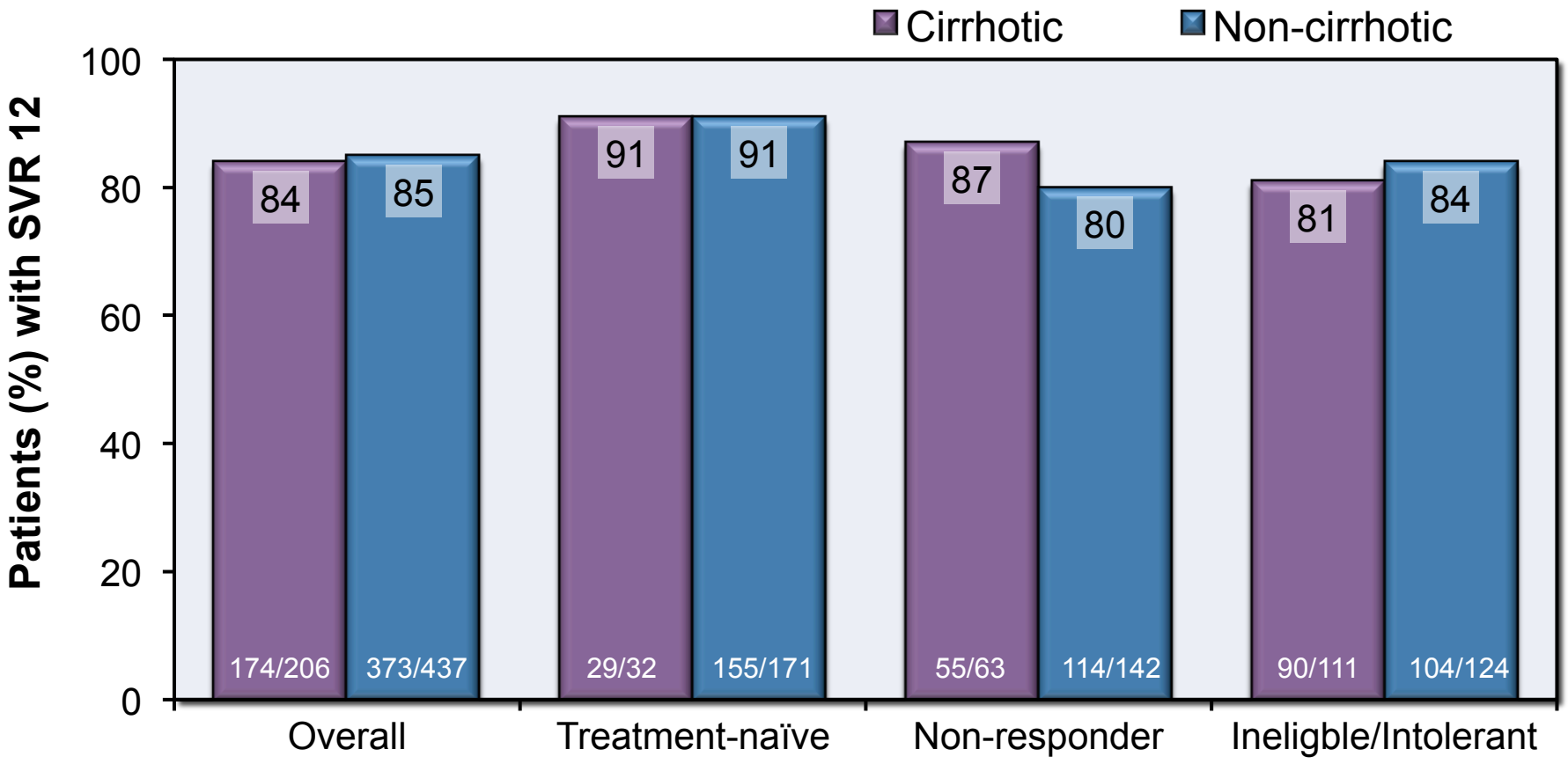


Soource: Poordad F, et al. N Engl J Med. 2014; April 12 [Epub Ahead of Print]

Hepatitis web study

Daclatasvir + Asunaprevir in Genotype 1b
HALLMARK-DUAL Study

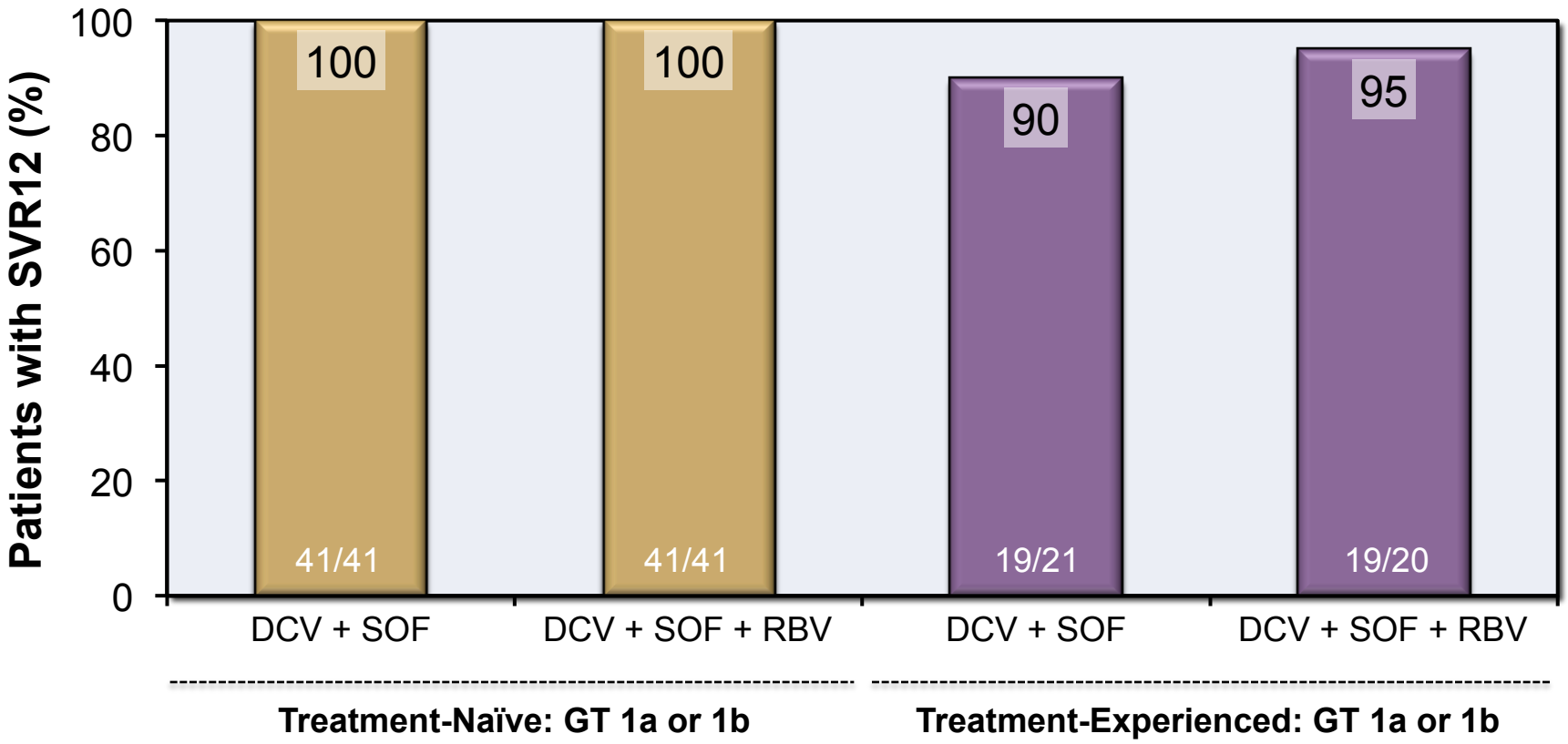
HALLMARK: SVR12



Source: Manns M, et al. 49th EASL.2014:LB-0166.

Hepatitis web study

Daclatasvir + Sofosbuvir +/- Ribavirin for HCV GT 1-3
GT1 Treatment-Naïve & Experienced 12 Week Rx: Results



DCV = daclatasvir; SOF = sofosbuvir; RBV = ribavirin

Source: Sulkowski MS, et al. N Engl J Med. 2014;370:211-21.

Summary Points for Treatment of Chronic HCV GT-1

- Current Standard is Sofosbuvir Backbone
  - Triple: Sofosbuvir + Peginterferon + Ribavirin for 12 weeks
  - Dual: Sofosbuvir + Ribavirin for 24 weeks
  - Dual: Sofosbuvir + Simeprevir (+/- Ribavirin) for 12 weeks

- Late 2014: Major Additions
  - Ledipasvir/Sofosbuvir FDC, ribavirin free with 8-12 weeks of therapy
  - BMS Regimen: Daclatasvir + Asunaprevir for GT 1b
  - ABBVIE Regimen: ABT450/r-Ombitasvir + Dasabuvir

- New Standard SVR 12
  - >80-90 with 95-100% possible with off-label use of Sofosbuvir + Simeprevir and with future treatments

- Future regimens will allow some patients to shorten treatment to 8 weeks

Summary Points for Treatment of Chronic HCV GT-1

- By late 2014, most treatment regimens for GT-1 will be interferon-free
  - Many will be ribavirin free
- Competition in the market will likely bring about downward price pressures
- Response guided therapy is not gone, exploratory studies pending
- African American race, HIV co-infection, IL28B SNPs, and advanced fibrosis no longer impact treatment response
- Composite of > 3 negative predictors may be only residual predicting lower response
- Special patient populations now include a narrower group of patients
  - Patients with liver failure
  - Post organ transplantation
  - Renal dialysis patients

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/

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Hepatitis
web study