

# HIV/HCV-Koinfektion: „Good news?“



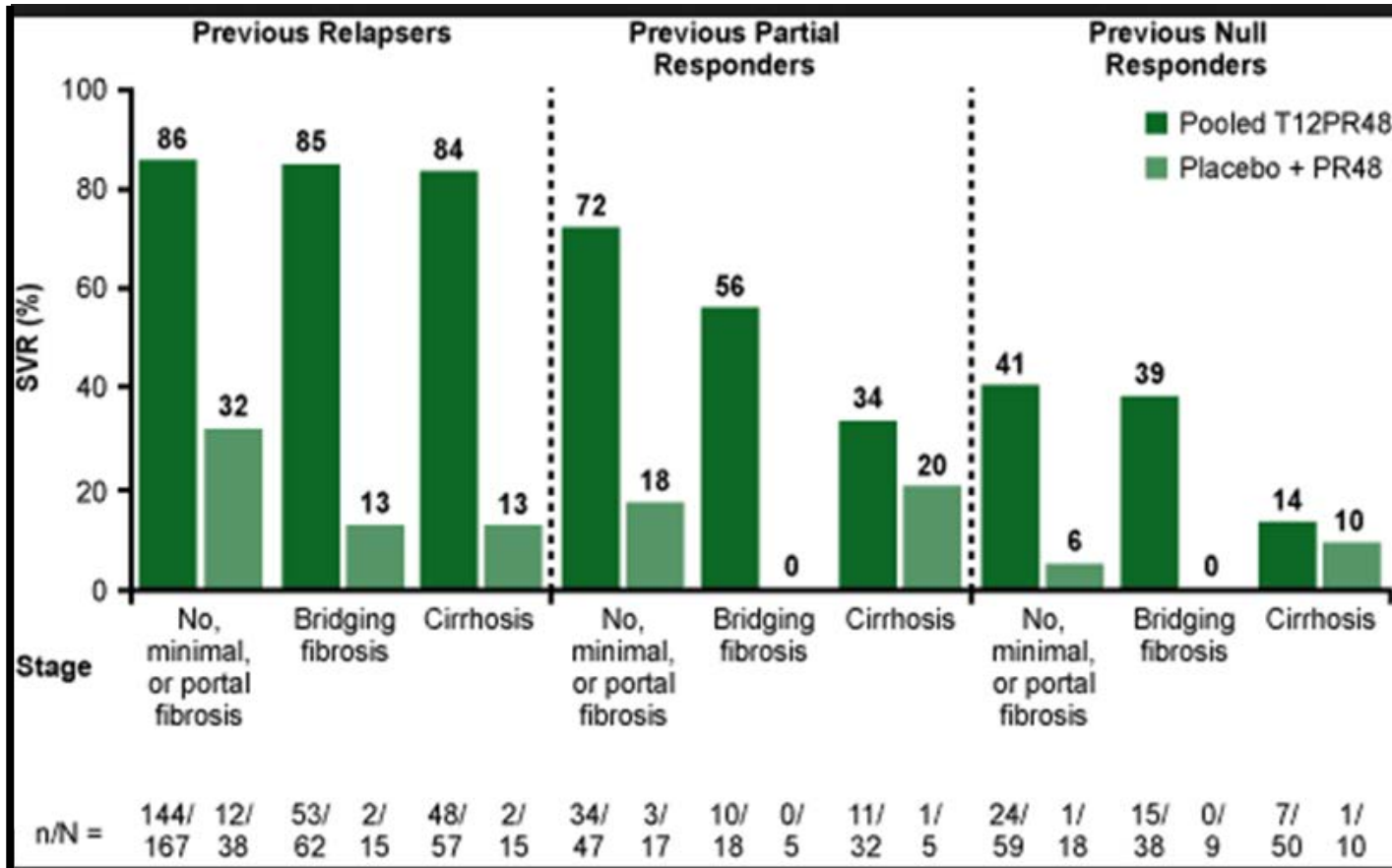
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# Telaprevir und Boceprevir bei vorbehandelten Patienten



2 ANRS Studien bei 'difficult-to-treat' Patienten

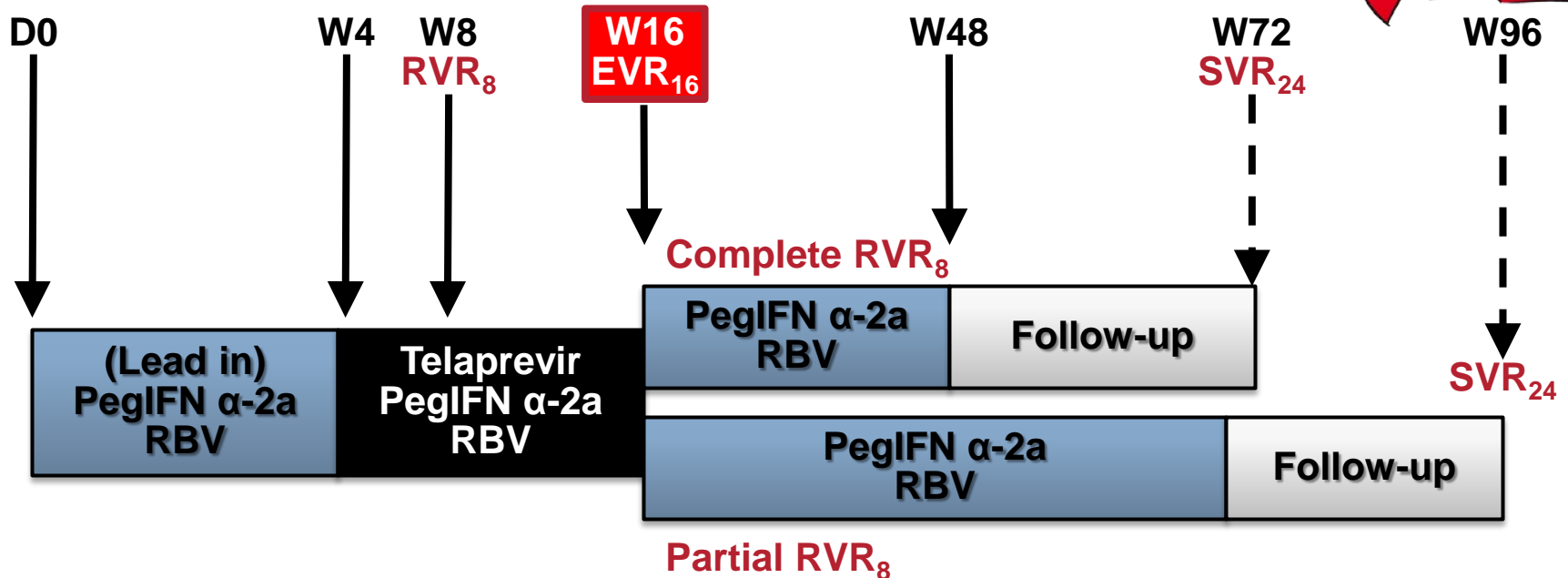
Pooled data on telaprevir in treatment-experienced patients



# Telaprevir + PegIFN + RBV in HIV/HCV Co-infected Patients with Virologic Failure on IFN + RBV



## Single Arm, Phase 2 Clinical Trial



- Complete RVR<sub>8</sub> (HCV-RNA <15 IU/mL): 32 weeks PR phase (Total treatment: 48 weeks)
- Partial RVR<sub>8</sub> (15 IU/mL <HCV-RNA <1,000 IU/mL) 56 weeks PR phase (Total treatment: 72 weeks)

# Telaprevir + PegIFN + RBV in HIV/HCV Co-infected Patients with Virologic Failure on IFN + RBV



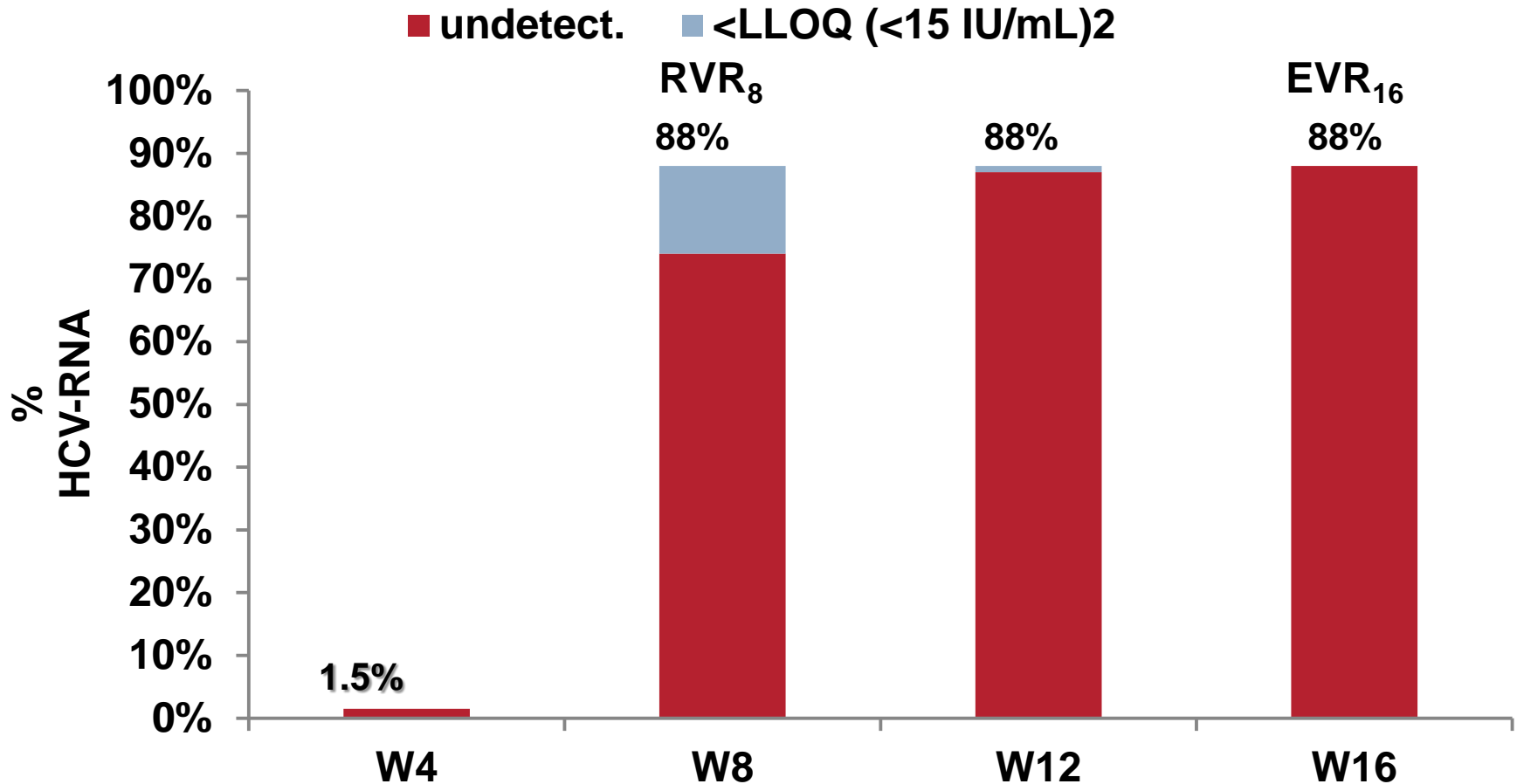
- Main Inclusion Criteria
  - HCV genotype 1 infection and HIV-1 infection
  - **Previous virological failure** after  $\geq 12$  weeks PegIFN + RBV
  - Stable ART for  $\geq 3$  months
  - Authorized antiretrovirals: **ATV, ATVr, EFV, RAL, TDF, FTC, 3TC**
  - CD4  $\geq 200$  cells/mm<sup>3</sup>, plasma HIV-RNA levels  $< 50$  cp/mL
  - Liver biopsy  $< 3$  years or cirrhosis on any previous biopsy
- Main Exclusion Criteria
  - HVB coinfection, HIV-2 infection
  - **Previous null response with cirrhosis**
- Important patient characteristics
  - **Relapser 39%, previous breakthrough 9%, partial responder 22%, Null-responder 30%**
  - F3 16%, F4 23%; HCV GT1a 70%

# Grade 3-4 AEs and treatment discontinuations up to W16

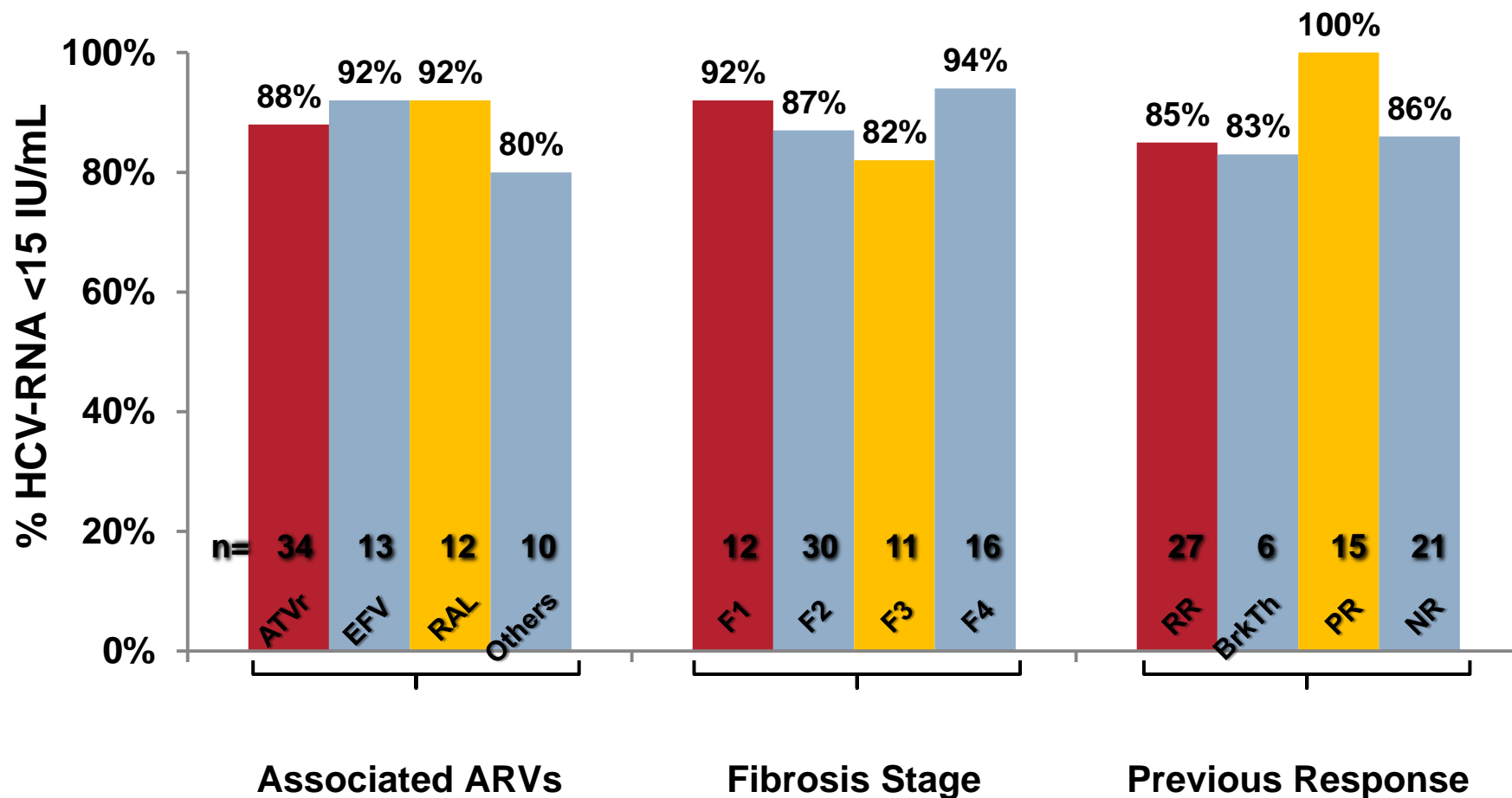


	N (%), n=69
Grade 3 AEs	18 (26%)
Blood	<u>6 (9%)</u>
General	5 (7%)
GI	2 (3%)
Cutaneous	<u>3 (4%)</u>
Neurological	2 (3%)
Psychiatric	1 (1%)
Others	2 (3%)
Grade 4 AEs	5 (7%)
Blood	<u>4 (6%)</u>
Psychiatric	1 (1%)
Reasons for treatment discontinuations	
Psychiatric AEs	3 (4%)
Cutaneous AEs	3 (4%)
Others AEs	1 (1%)
Virological failure	1 (1%)

# Telaprevir + PegIFN + RBV in HIV/HCV Co-infected Patients with Virologic Failure on IFN + RBV: Virologic Response



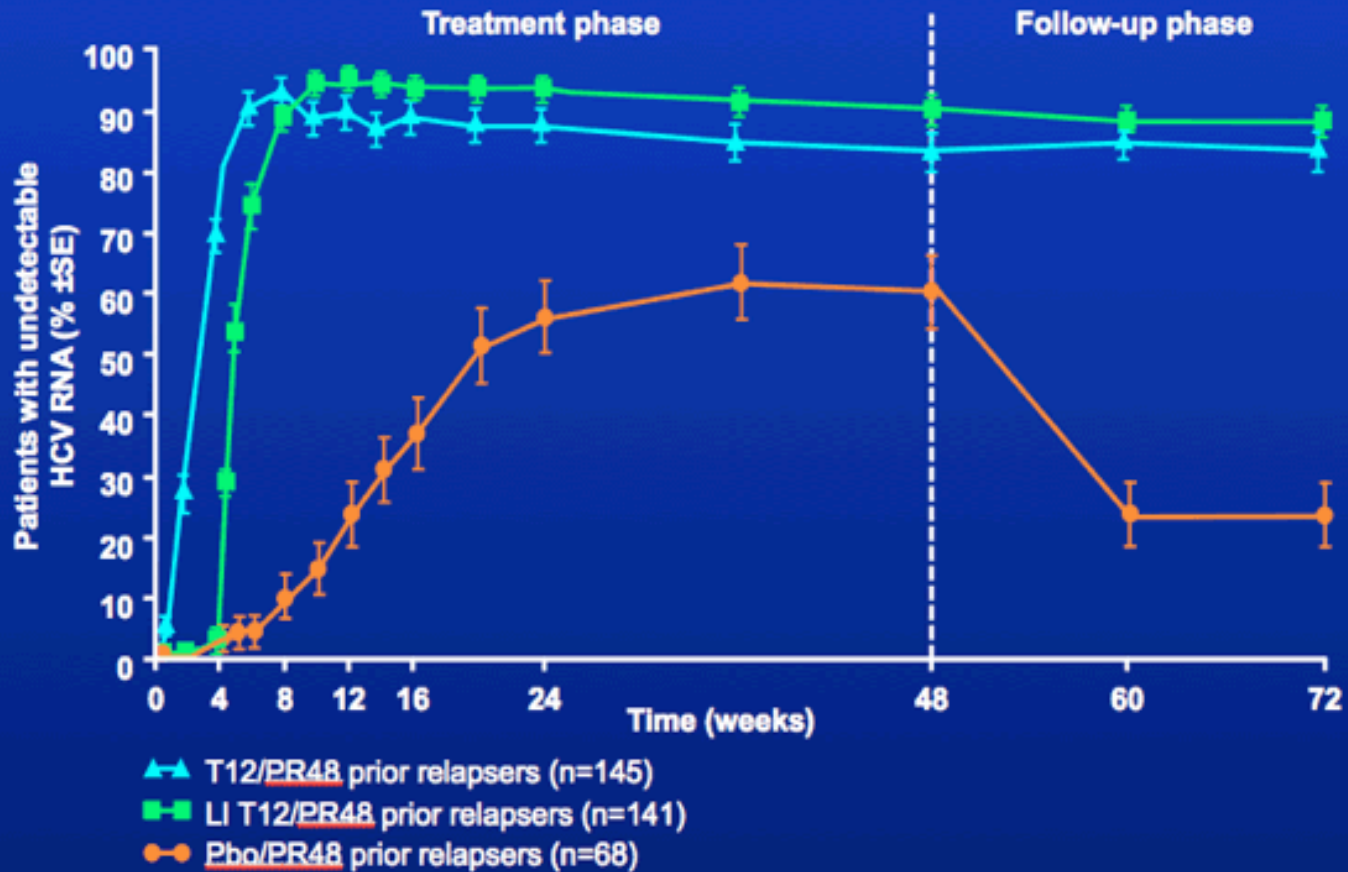
# Telaprevir + PegIFN + RBV in HIV/HCV Co-infected Patients with Virologic Failure on IFN + RBV: Early Virologic Response by Patient Group



# Besser als bei HCV-Monoinfizierten?



## REALIZE: Undetectable Viral Load over Time in Prior Relapsers



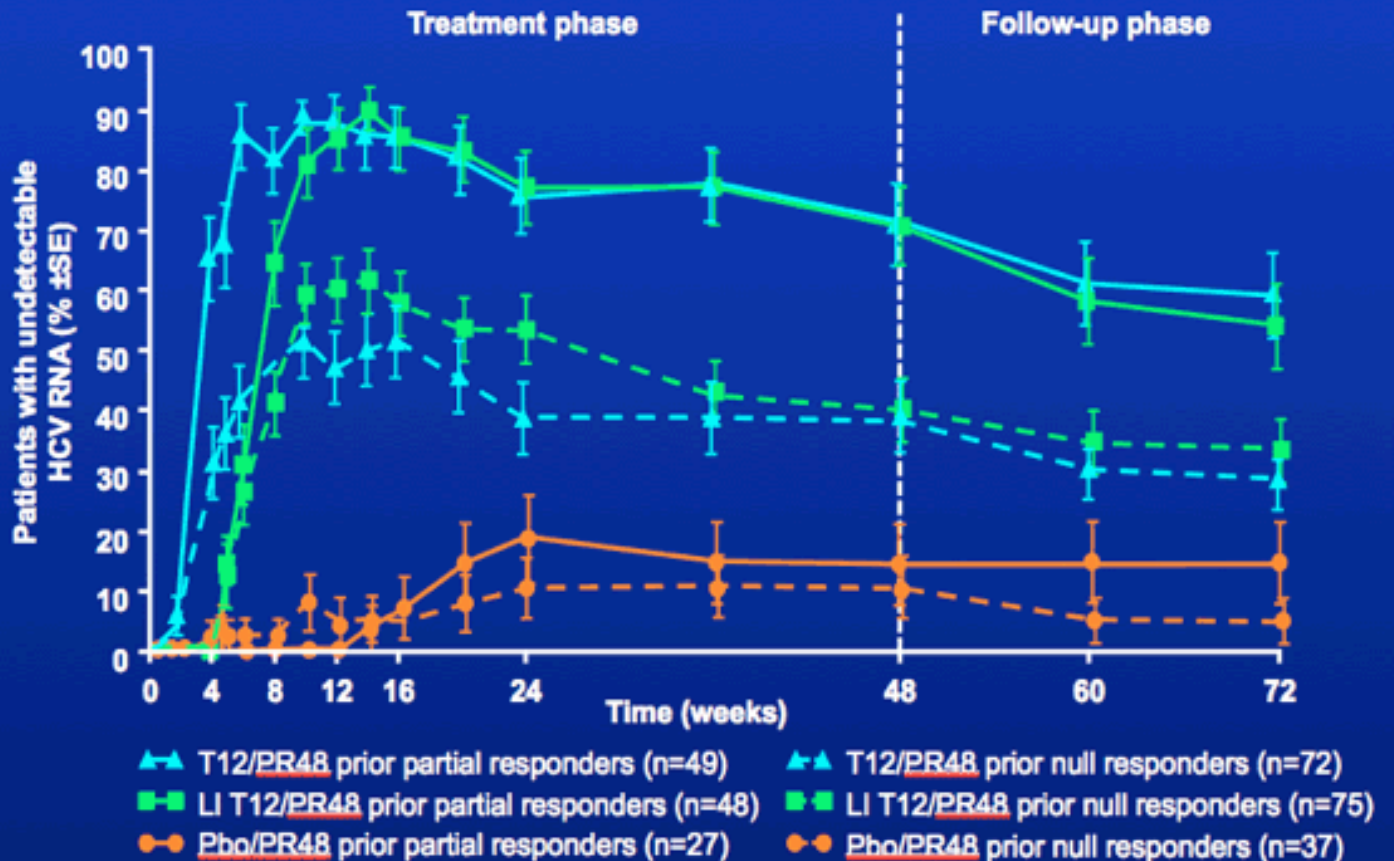
Undetectable HCV RNA defined as  $<25$  IU/mL



# Besser als bei HCV-Monoinfizierten?

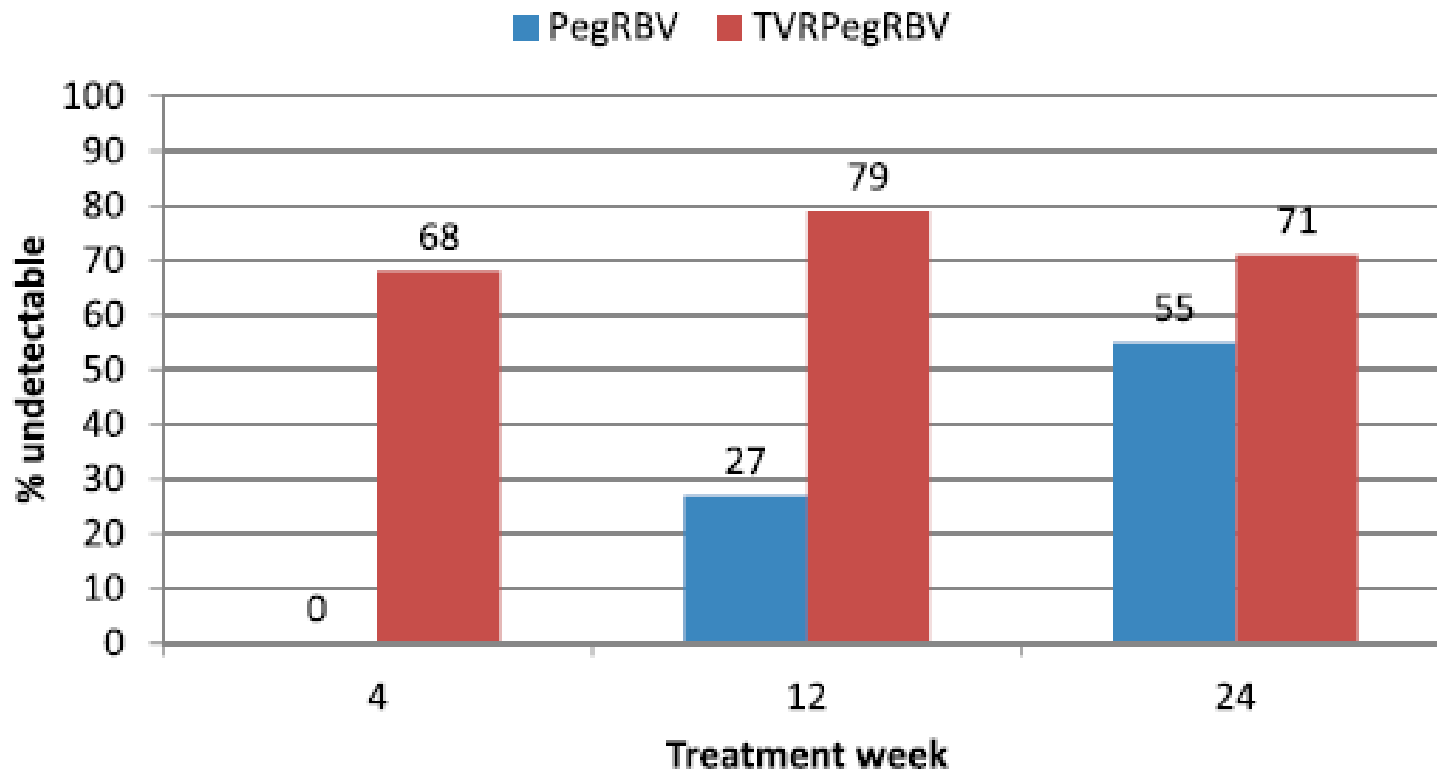


## REALIZE: Undetectable Viral Load over Time in Prior Partial and Prior Null Responders

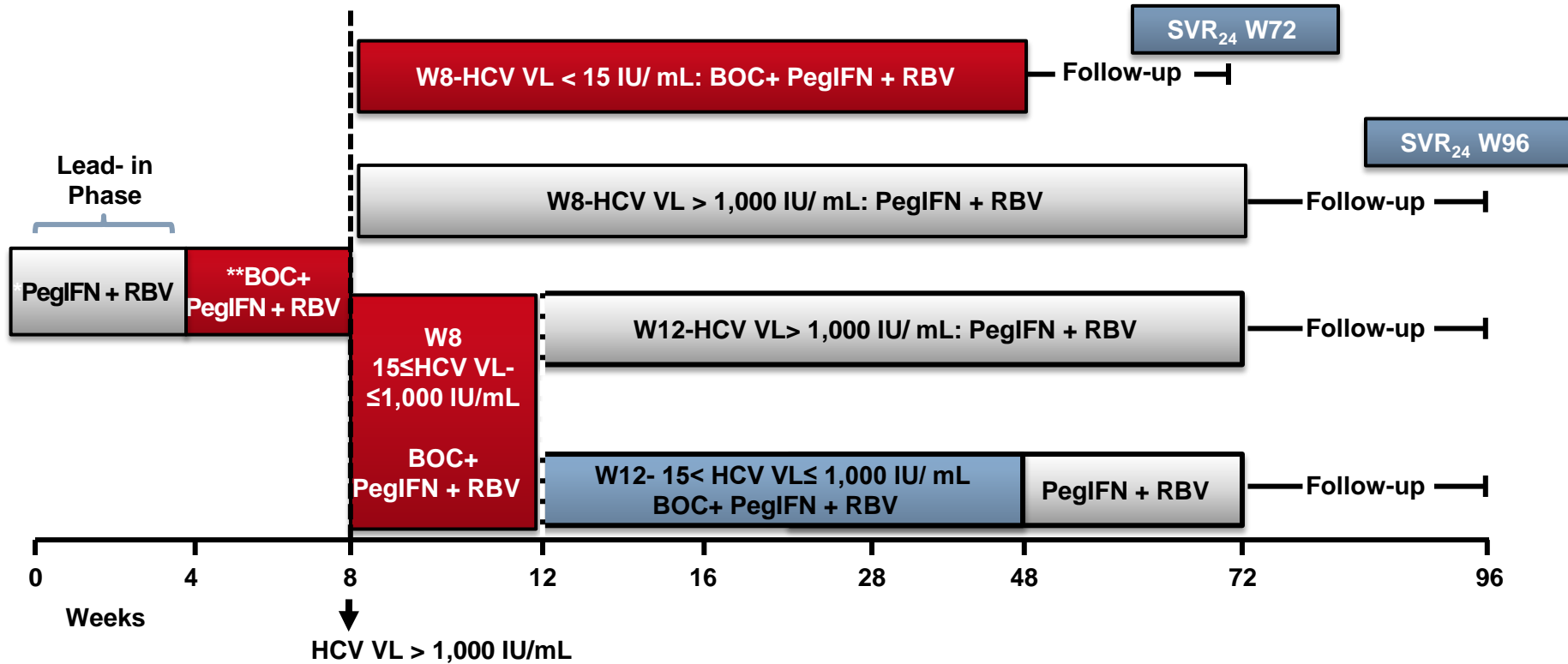


Undetectable HCV RNA defined as  $<25$  IU/mL.

# Besser als bei therapie-naiven?



# Boceprevir + PegIFN + RBV for HIV-HCV Co-Infected Patients with Previous Virologic Failure on PegIFN + RBV



# Inclusion/Exclusion Criteria



- Inclusion
  - Chronic HCV genotype 1
  - Previous virologic failure on PegIFN + RBV
  - Stable antiretroviral therapy with 3 or more ARV agents among **TDF, ABC, FTC, 3TC, ATV (boosted or not), and RAL**
  - CD4+ count  $\geq 200$  cells/mm<sup>3</sup> and VL  $< 50$  c/mL for  $\geq 6$  months
  - Any fibrosis level on liver bx within past 3 years or cirrhosis
- Exclusion
  - HBV co-infection, Childs B or C; decompensated cirrhosis
  - Previous null response with cirrhosis
- Important patient characteristics
  - F4 17%
  - GT1a 78%
  - **Previous null responders 33%**

# Grade 3-4 AEs and SAEs

		Grade 3-4 SAEs		
G3/4 N=26	General Disorders ( <b>asthenia</b> )	8	3	SAEs N= 11
	Gastrointestinal Disorders ( <b>cholecystitis</b> )	4	1	
	Cardiac Disorders ( <b>cardiac insufficiency</b> )	3	2	
	Infections ( <b>cellulitis, pneumonia</b> )	3	2	
	Psychiatric	2		
	Musculoskeletal ( <b>arthritis</b> )	2	1	
	Respiratory	2		
	Skin ( <b>pruritus</b> )	1	1	
Anorexia	1	1		
G3/4 N=39	Blood and lymphatic system	28	7	SAEs N= 8
	Hyperbilirubinemia	6		
	ASAT/ALAT	5	1	

**AES lead Discontinuation: n= 4** Cardiac Insufficiency grade 3, Coronaropathy grade 3, Vomiting grade 2, Infection with anemia grade 2

N (%), (n=64)

**Anemia** 27 (42%)

**Grade 3-4 (<7 g/dL)** 3 (5%)

**EPO use** 27 (42%)

Transfusion 2 (3%)

**RBV dose reduction** 5 (8%)

**Neutropenia** 45 (70%)

**Grade 3-4 (< 750 G/L)** 11 (17%)

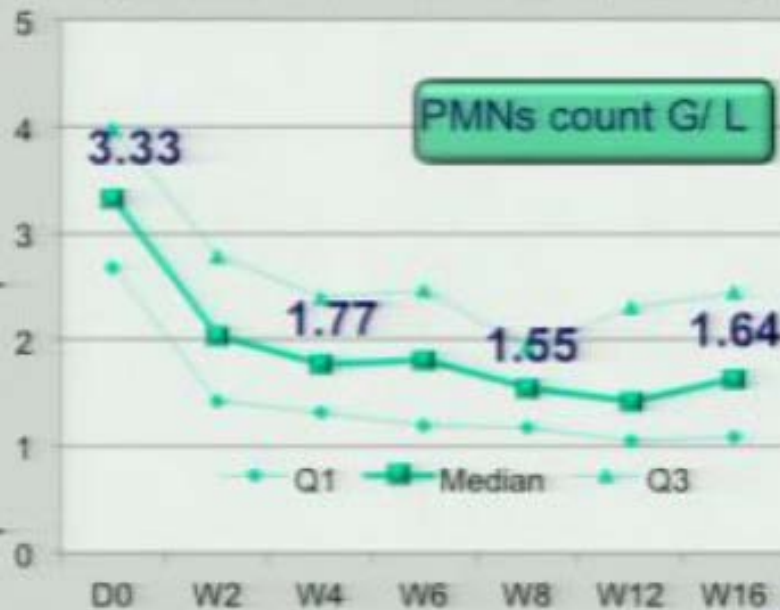
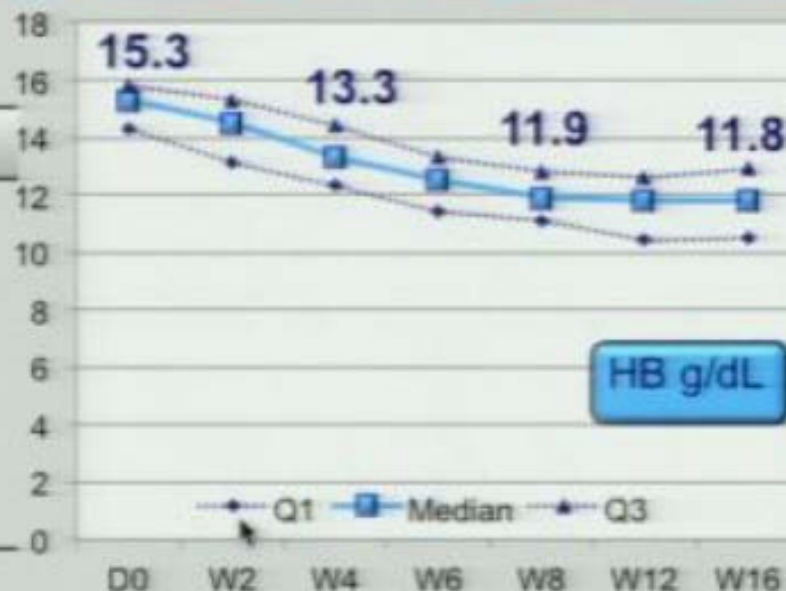
**G-CSF use** 3 (5%)

PegIFN dose reduction 2 (3%)

**Thrombocytopenia** 27 (42%)

**Grade 3-4 (<50 G/L)** 2 (3%)

PegIFN dose reduction 1 (2%)

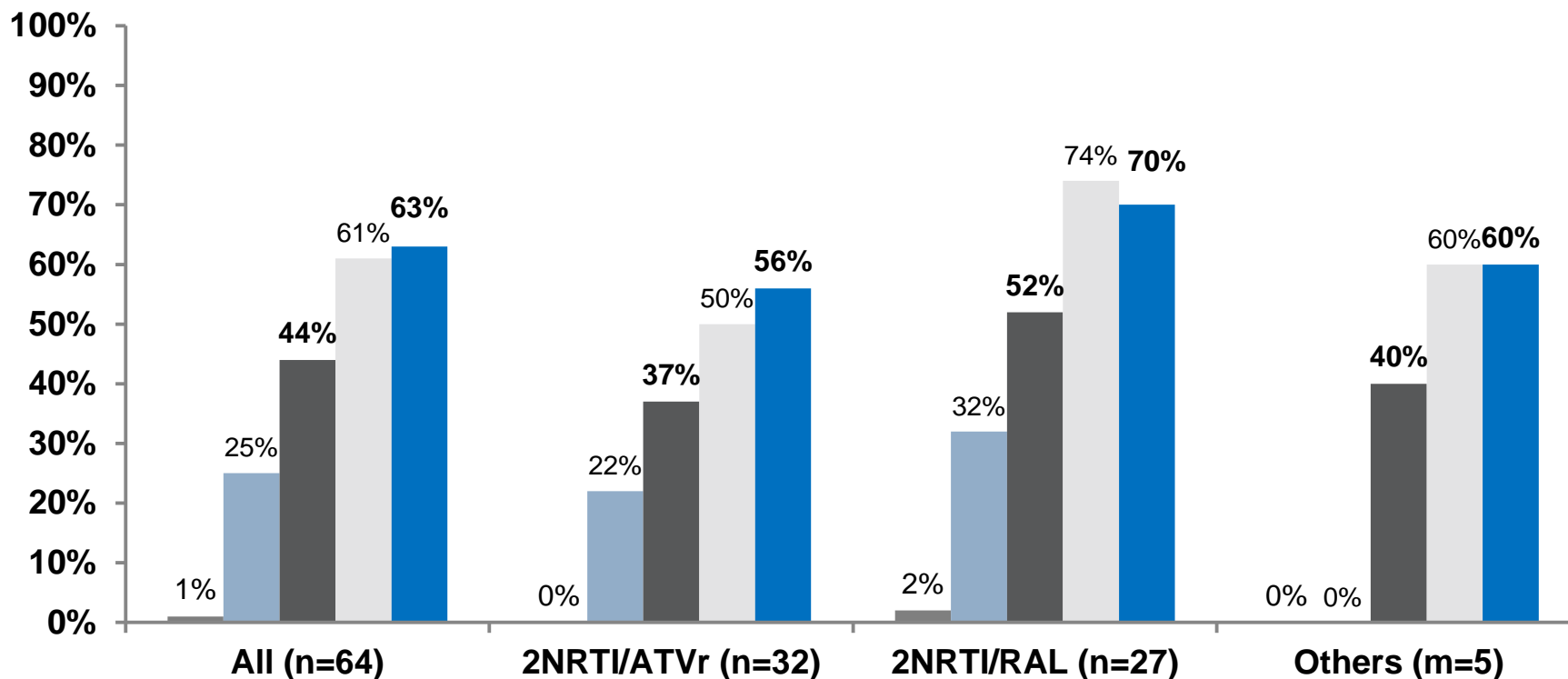


# BOC/IFN/RBV Following Virologic Failure: Results by ARV Regimen

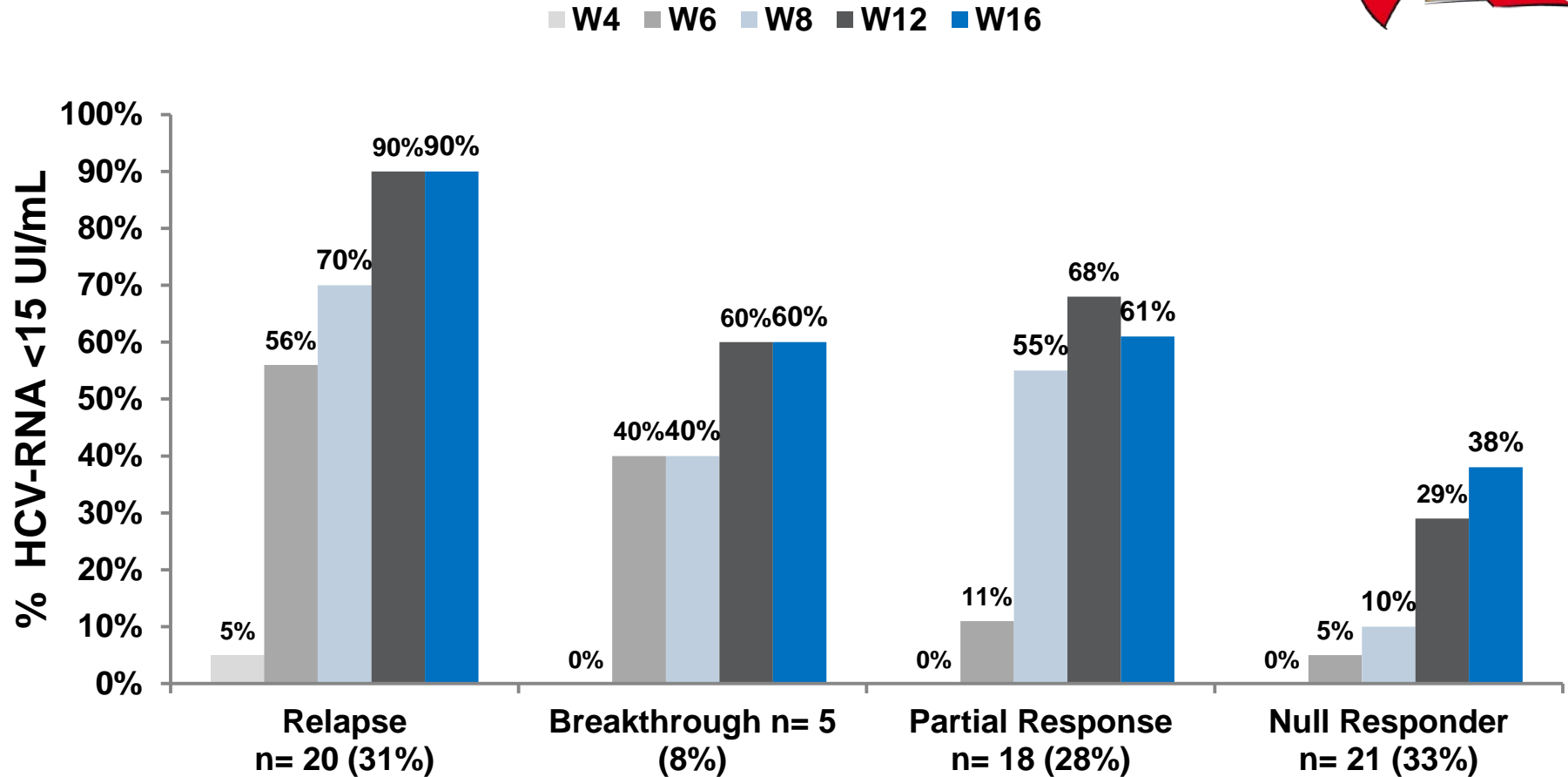


Patients (%) with HIV-RNA <15 IU/mL

■ W4 ■ W6 ■ W8 ■ W12 ■ W16

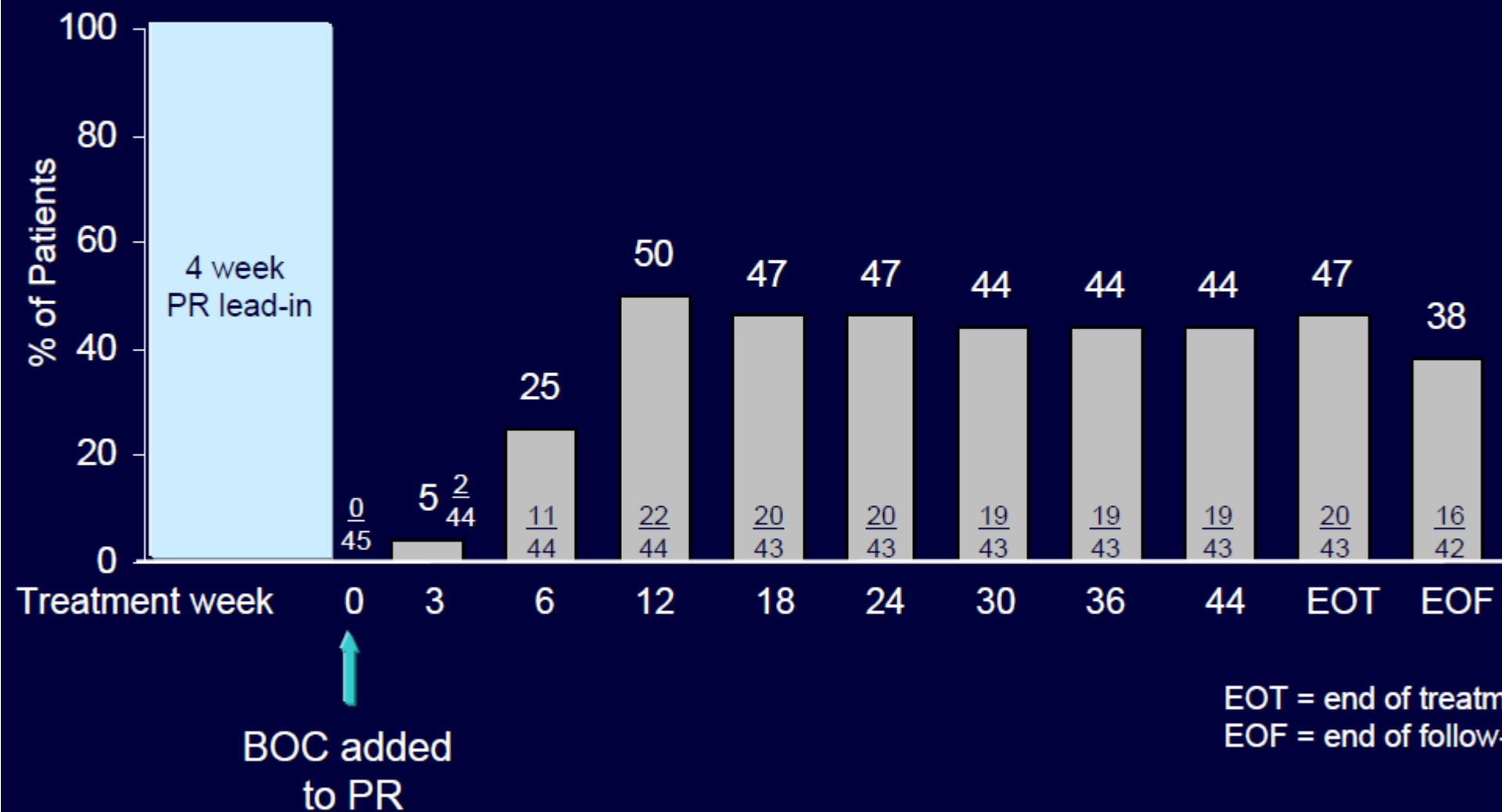


# BOC/IFN/RBV Following Virologic Failure: Results by Previous Response to PegIFN + RBV



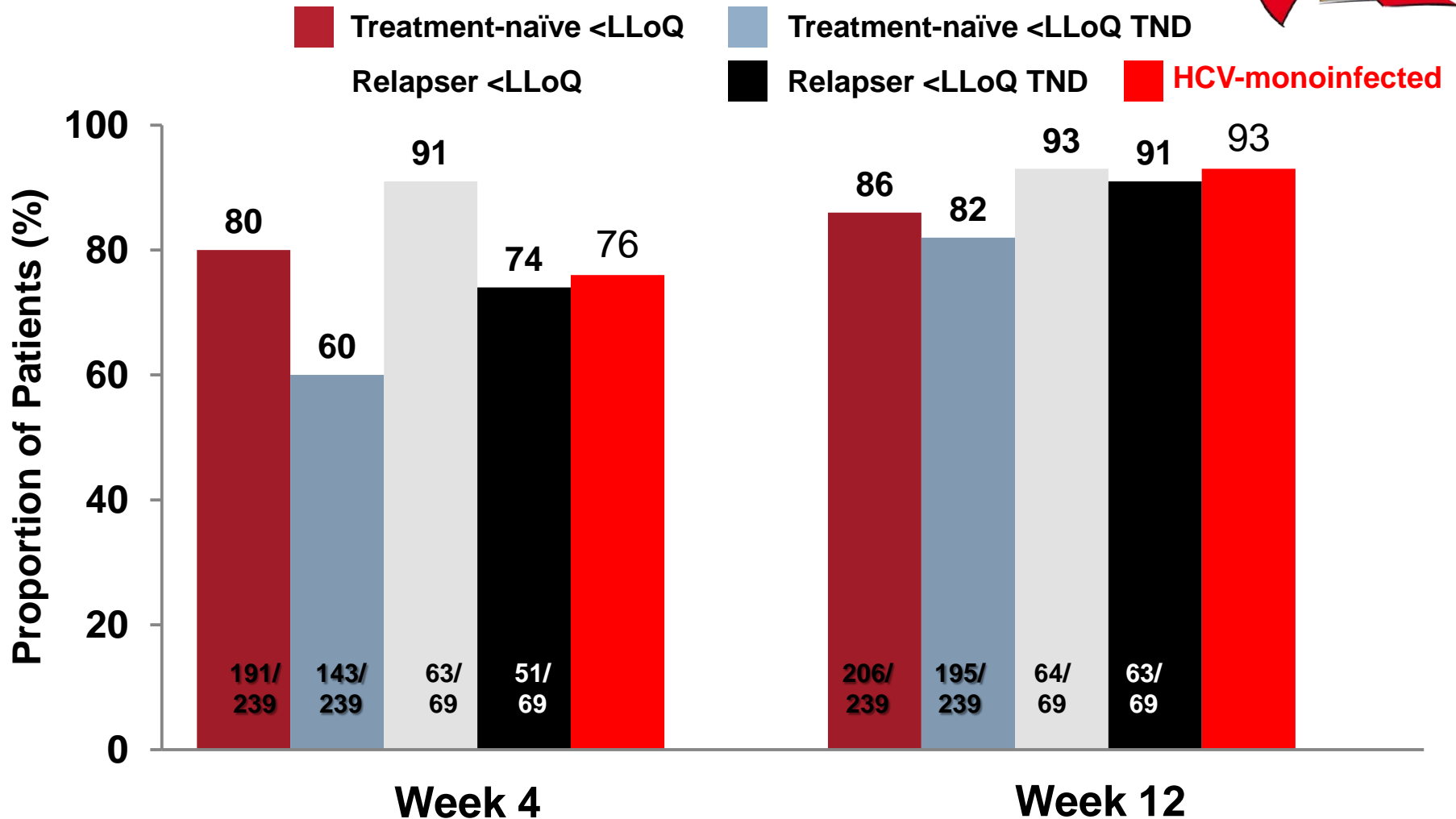


# Cumulative Achievement of Undetectable HCV RNA in Prior Null Responders\*



\*Of 48 prior Null Responders from SPRINT-2 and RESPOND-2, 3 discontinued during the lead-in phase.

# Early Virologic Response in HIV/HCV Co-infected Patients: HCV Treatment-naïve and Relapsers treated with Faldeprevir



# HIV/HCV-Koinfektion: Good news?

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## Good news:

- Telaprevir und boceprevir effektiv bei previous non-response
- Severe rash <5%, Anämie 'manageable'

## Allerdings:

**EVR ≠ SVR!**



# THISTLE

# The HIV-HCV Silibinin Trial

SWISS
HIV
COHORT STUDY

SHCS #688

Flow-chart for HCV therapy in HIV-infected patients (Page 1)

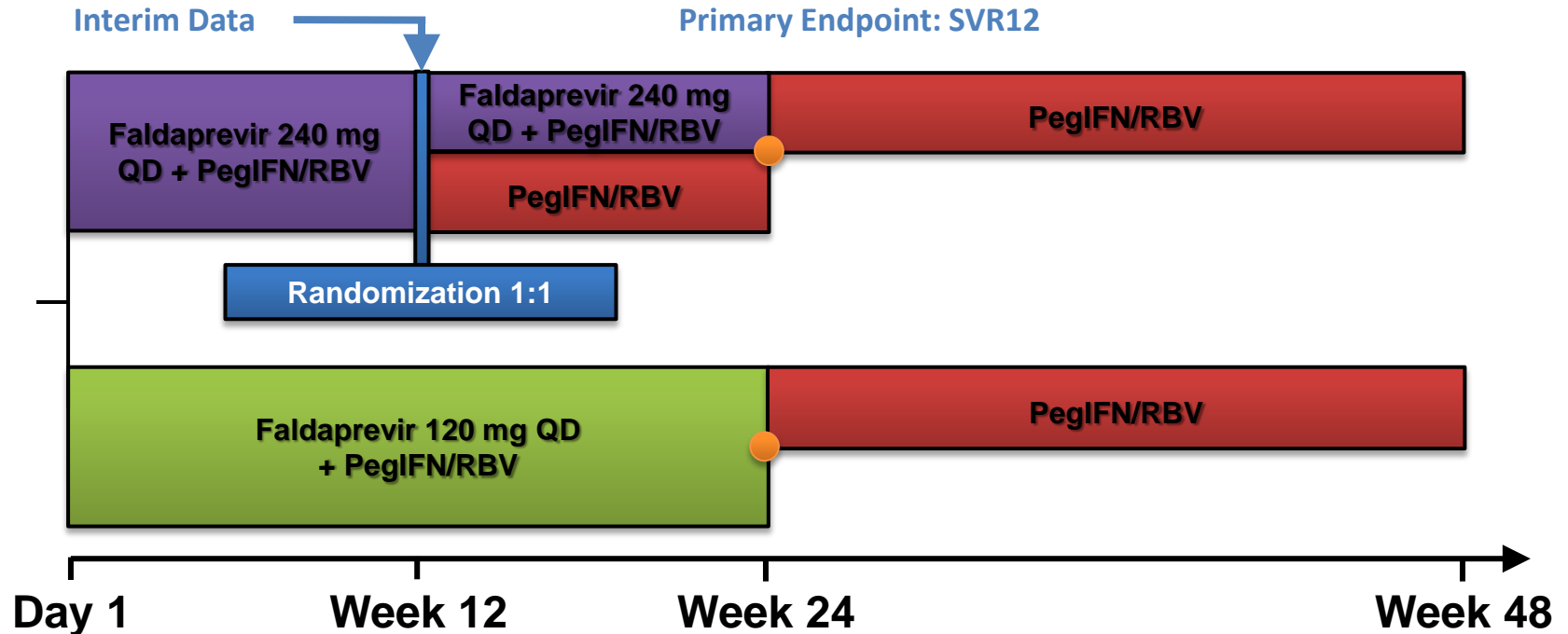
SHCS-ID: HCV-Genotype: Fibrosis (Metavir):		HCV Treatment history <input type="checkbox"/> Treatment naive <input type="checkbox"/> Partial response: >2 log IU/ml decrease in HCV RNA at wk 12 but detectable HCV RNA at wks 12 or 24 <input type="checkbox"/> Breakthrough: Reappearance of HCV RNA at any time during treatment after virological response <input type="checkbox"/> Relapse: Reappearance of HCV RNA after virological response at the end-of-treatment <input type="checkbox"/> Premature discontinuation of Tx: Insufficient duration or dosage of previous therapy due to side effects <input type="checkbox"/> Other: _____ RVR: Undetectable HCV RNA at wk 4 during previous therapy: <input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> unknown												*Reasons for stopping HCV therapy: 1. HCV virological failure/stopping rule 2. Anemia 3. Leukopenia 4. Thrombocytopenia 5. Depression 6. Rash 7. Other side effects (specify)					** Patients with lead-in: Additional visits with plasma storage 4 and 2 weeks <u>before</u> starting the HCV PI				
Date of Tx start:		Start or change of dosage = dose. Stop = ↓, unchanged = →. Indicate treatment interruption of ≥ 1 day. For a stop always indicate predominant reason for each drug, see legend. Date and treatment week (mandatory visits with sample storage at weeks 0,1,2,4,8,12,24,48, 72 and at treatment failure for pts treated with an HCV PI)**																					
.....		Base-line																					
Interferon-alpha (indicate product name) _____ (µg/wk)																							
Ribavirin (indicate product name) _____ (mg/d)																							
HCV Protease Inhibitor (indicate product name) _____ (mg/d)																							
Other HCV drug (indicate product name) _____ (mg/d)																							
EPO, neupogen or transfusion																							
Reason for stopping drug (see legend)																							
HCV RNA (log <sub>10</sub> IU/ml)																							
Hemoglobin (g/L)																							
Neutrophil count (G/L)																							
Thrombocyte count (G/L)																							
Adherence: How often did you miss a dose of your HCV medication?		Every day	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		More than 1/week	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		Less than 1/week	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		Never	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Pharmacokinetics, register time of sampling and drug intake; only weeks 0,1,4 for patients treated with an HCV-Protease- or Polymeraseinhibitor

For instructions see page 2	Sampling time: day/month hour/min		HIV-PI, NNRTI or Int.inh. N°1 Product name: day/month hour/min		HIV-PI, NNRTI or Int.inh. N°2 Product name: day/month hour/min		HCV Protease or Polymerase Inhibitor day/month hour/min		Ribavirin day/month hour/min		Additional comments:  After completion of HCV therapy send flow chart to: A. Rauch, PKT2B, Inselspital, 3010 Bern
	Baseline		/ /		/ /		Not applicable		Not applicable		
	Week 1		/ /		/ /		/ /		/ /		
	Week 4		/ /		/ /		/ /		/ /		

# STARTVerso 4: Study Design

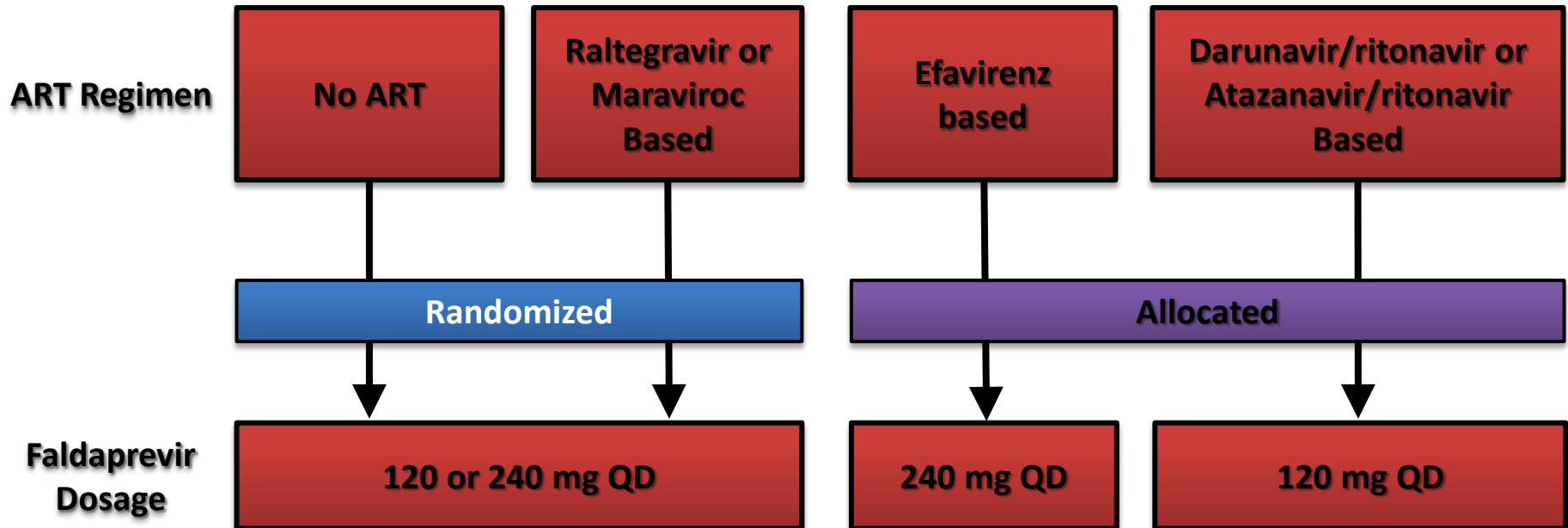
Phase III Open-label, Sponsor-blinded Study in Treatment-naïve and Relapser Patients with Chronic HCV GT-1 and HIV Infection



● Patients with HCV RNA below LLoQ, at Week 4, and HCV RNA below LLoQ target not detected at Week 8 (=ETS) will be re-randomized 1:1 at week 24 to stop treatment or continue pegIFN/RBV through week 48  
● Patients who did not achieve ETS will continue pegIFN/RBV through week 48

# STARTVerso 4: Study Design

- HCV GT-1 infection, including compensated cirrhosis
  - HCV treatment-naive or relapsers
  - Cirrhosis F4 or FibroScan >13 kPa 17%; GT1a 78%



# Early Virologic Response in HIV/HCV Co-infected Patients: HCV Treatment-naïve and Relapsers

