

## Supplementary Material\*

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**Supplement Figure 7. Results of one-way sensitivity analysis for genotype 3**

\* This supplementary material was provided by the authors to give readers further details on their article. The material was reviewed but not copyedited.

**Supplement Table.** Characteristics of key studies that were used to inform model parameters.

	Study name	Study design	HCV genotypes	Treatment history	Treatment	Measurement	Sample size	Mean age	Fibrosis stage	Men	Alcohol use	
	Lawitz et al (2014)	LONESTAR	RCT	G1	TX naïve	SOF+LDV (8W)	SVR (95%)	20	48	F0:F3:100%	70%	NA
	Lawitz et al (2014)	LONESTAR	RCT	G1	TX naïve	SOF+LDV+RBV (8W)	SVR (100%)	21	50	F0:F3:100%	57%	NA
	Lawitz et al (2014)	LONESTAR	RCT	G1	TX naïve	SOF+LDV (12W)	SVR (95%)	19	46	F0:F3:100%	58%	NA
	Afdhal et al (2014)	ION1	RCT	G1	TX naïve	SOF+LDV (12W)	SVR (99%)	214	52	F4:16%	59%	NA
	Afdhal et al (2014)	ION1	RCT	G1	TX naïve	SOF+LDV+RBV (12W)	SVR (97%)	217	52	F4:15%	59%	NA
	Afdhal et al (2014)	ION1	RCT	G1	TX naïve	SOF+LDV (24W)	SVR (98%)	217	53	F4:17%	64%	NA
	Afdhal et al (2014)	ION1	RCT	G1	TX naïve	SOF+LDV+RBV (24W)	SVR (99%)	217	53	F4:17%	55%	NA
	Kowdley et al (2014)	ION3	RCT	G1	TX naïve	SOF+LDV (8W)	SV R (94%)	215	53	F0:F3: 100% F4: 0%	60%	NA
	Kowdley et al (2014)	ION3	RCT	G1	TX naïve	SOF+LDV+RBV (8W)	SVR (93%)	216	51	F0:F3: 100% F4: 0%	54%	NA
	Kowdley et al (2014)	ION3	RCT	G1	TX naïve	SOF+LDV (12W)	SVR (95%)	216	53	F0:F3: 100% F4: 0%	59%	NA
	Sulkowski et al (2014)	A1444040	RCT	G1	TX naïve	SOF+DCV (12 W)	SVR (98%)	126	55	F0-F1:35%; F2-F3: 49%; F4:13.5%	51%	NA
	Lawitz et al (2014)	COSMOS	RCT	G1	TX naïve (48%)	SOF+SMV (12 W)	SVR (93%)	80	57	F0-F1:20%; F2:28% F3: 28%; F4:25%	64%	NA
	Sulkowski et al (2014)	A1444040	RCT	G2	TX naïve	SOF+DCV (24 W)	SVR (92%)	26	51	F0-F1:41%; F2-F3: 46%; F4:16%	50%	NA
	Sulkowski et al (2014)	A1444040	RCT	G3	TX naïve	SOF+DCV (24 W)	SVR (89%)	18	51	F0-F1:41%; F2-F3: 46%; F4:16%	50%	NA
	Lawitz et al (2013)	NEUTRINO	RCT	G1	TX naïve	SOF+RBV+PEG (12W)	SVR (90%)	327	52	F4 or higher: 17%	64%	NA
	Lawitz et al (2013)	FISSION	RCT	G2,3	TX naïve	SOF+RBV(12W)	SVR (67%)	256	48	F4 or higher: 20%	67%	NA
	Lawitz et al (2013)	FISSION	RCT	G2,3	TX naïve	RBV+PEG (24W)	SVR (67%)	243	48	F4 or higher: 21%	64%	NA
	Zeuzem et al (2014)	VALENCE	RCT	G2	TX naïve (44%)	SOF+RBV(12W)	SVR (93%)	73	58	15	55	NA
	Zeuzem et al (2014)	VALENCE	RCT	G3	TX naïve (18%)	SOF+RBV(12W)	SVR (27%)	11	46	18	55	NA
	Zeuzem et al	VALENCE	RCT	G3	TX naïve (42%)	SOF+RBV(24W)	SVR (85%)	250	48	24	62	NA

(2014) Poordad et al (2011)	SPRINT-2	RCT	G1	TX naïve	BOC[24-32W]+RBV+PEG [28-48W]	SVR (67%)	1097	50	F0-F2:88%; F3-F4: 12%	60%	NA
Thompson et al (2010)		Observational	G1		NA	SVR	1628	48	F0:2%; F1:71%; F2:16%; F3:5%; F4:7%	61%	NA
Fried et al (2002)		RCT	G1:65%; G2:13%; G3:18%; G4:4%		RBV+PEG	SVR (46%)	1121	42	F4 or higher: 13%	71%	NA
Poynard et al (1997)		Retrospective cohort	G1:63%; G2:13%; G3:15%; G4:8%		NA	METAVIR score	2235	46	F0:10%; F1:36%; F2:21%; F3:15%; F4:18%	58%	11%
Thein et al (2008)		Meta analysis	G1: 54% G2,3,4: 26%				111 studies	43		62%	19%
McAdam-Marx et al (2011)		Claims data			NA	Costs	34597	50	F4 or higher: 22%	62%	4%
Liu et al (2012)		Simulation	G1	TX naïve	Triple therapy(boceprevir or telaprevir) vs dual therapy	Cost, QALYs	NA	50	F0:30%/0%; F1:41%/0%; F2:29%/29%; F3:0%/23%; F4:0%/48%	50%	NA

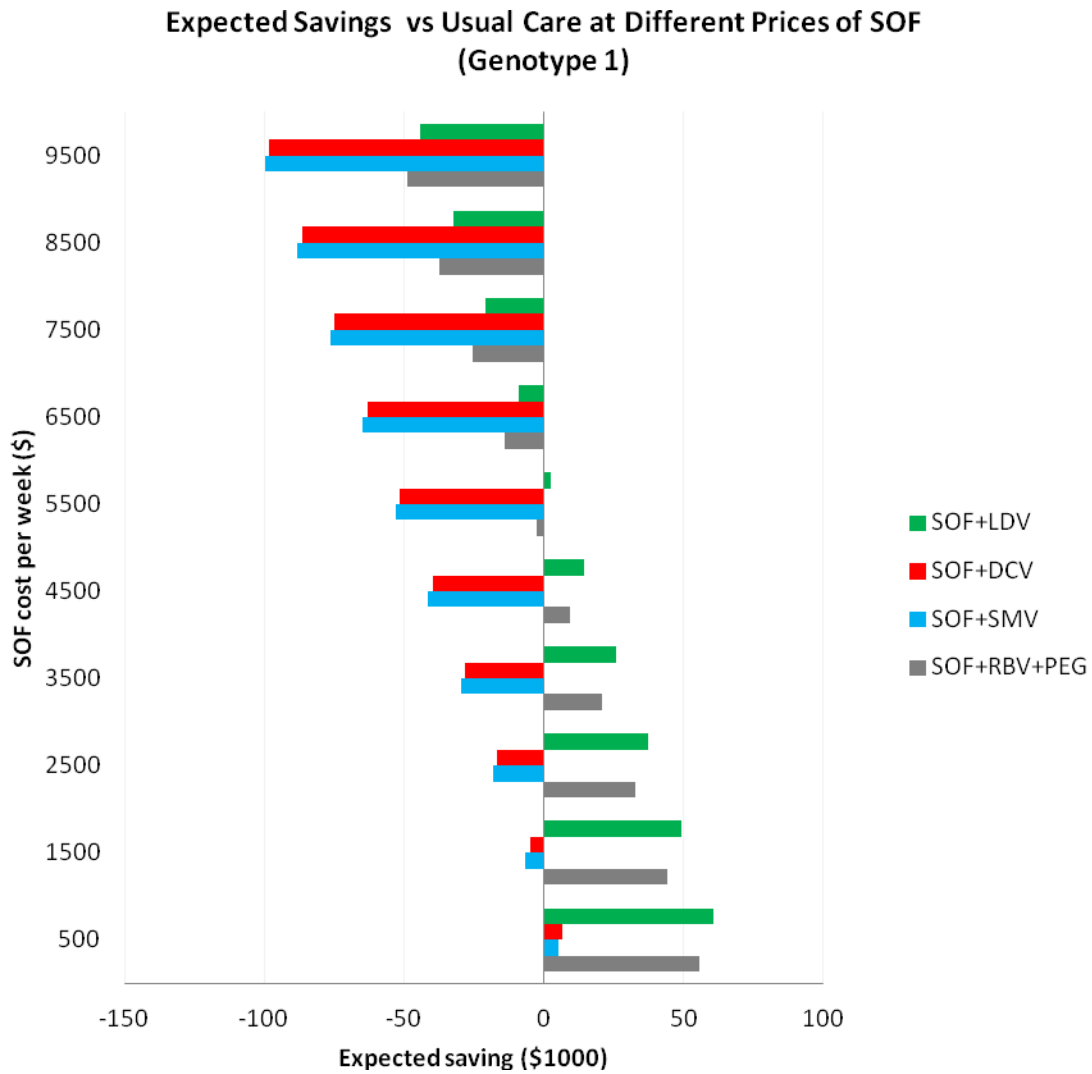
PEG: pegylated interferon; RBV: ribavirin; BOC: boceprevir; SOF: sofosbuvir; SMV: simeprevir; DCV: daclatasvir; LDV: ledipasvir; SVR: sustained virologic response; RCT: randomized clinical trial; QALY: quality adjusted life years.

## Supplement Figure 1. Timing and duration of treatment regimen, by genotype

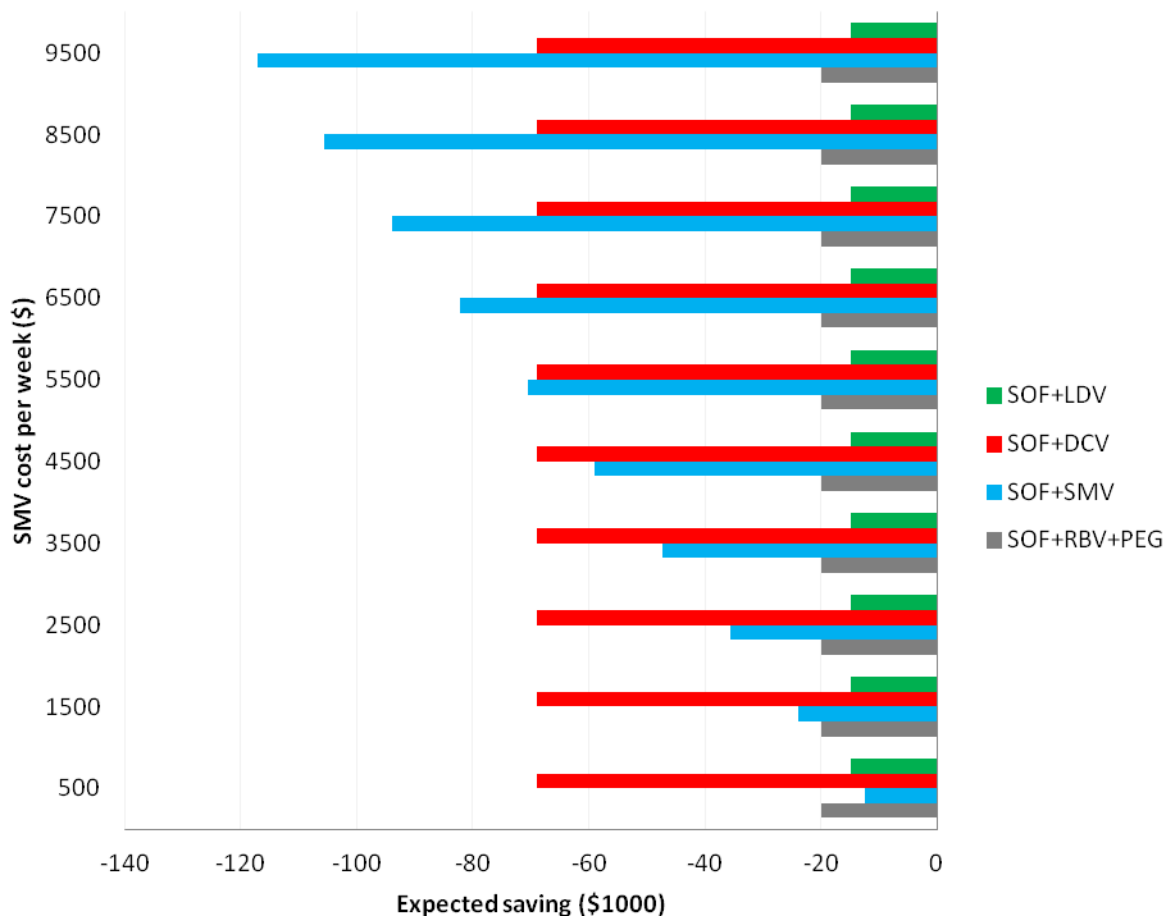


PEG: pegylated interferon; RBV: ribavirin; BOC: boceprevir; SOF: sofosbuvir; SMV: simeprevir; DCV: daclatasvir; LDV: ledipasvir; SVR: Sustained virological response.

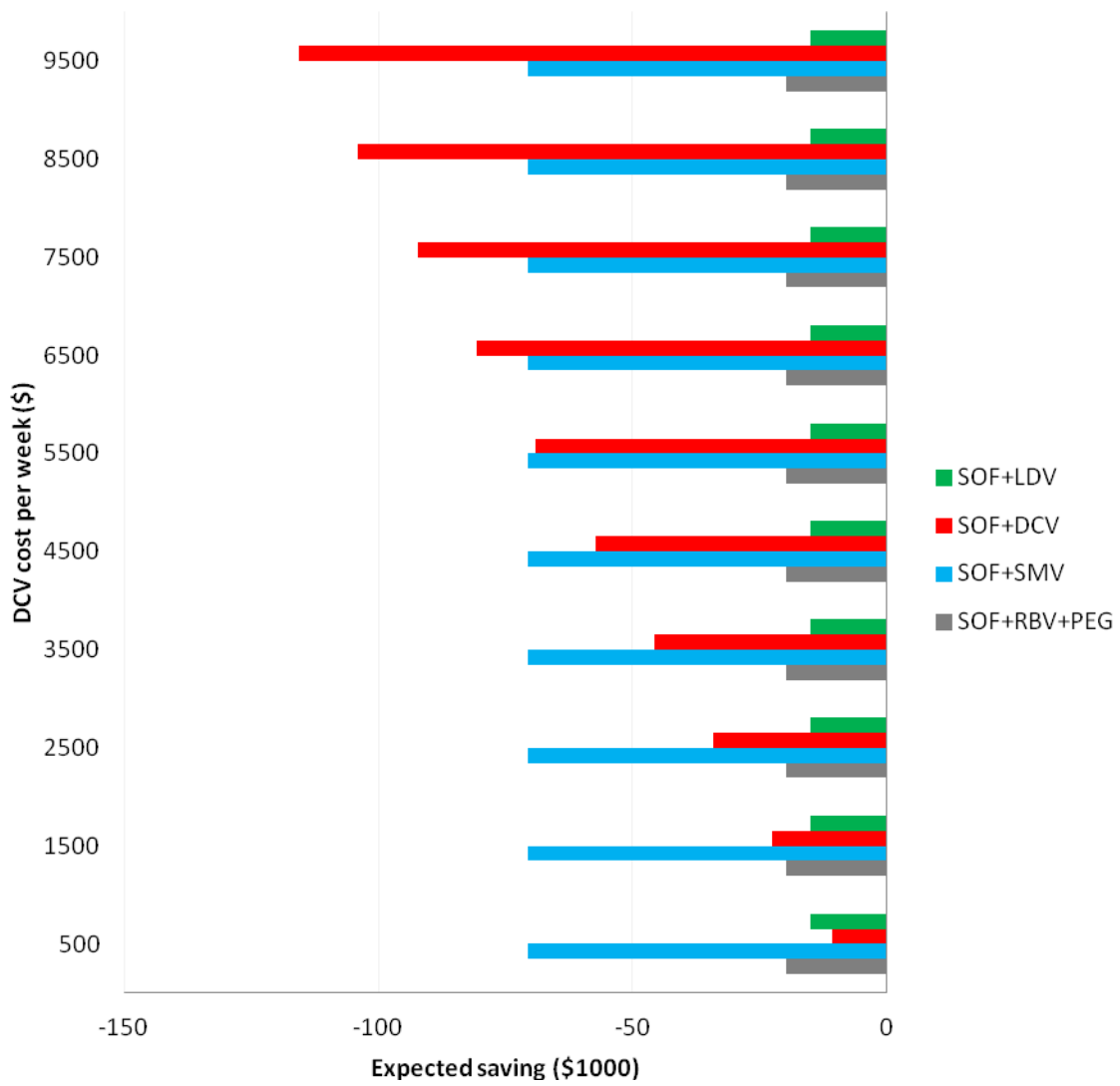
**Supplement Figure 2.** Expected cost savings from each treatment strategy compared with usual care for genotype 1 for different prices of sofosbuvir, simeprevir, daclatasvir, and ledipasvir.



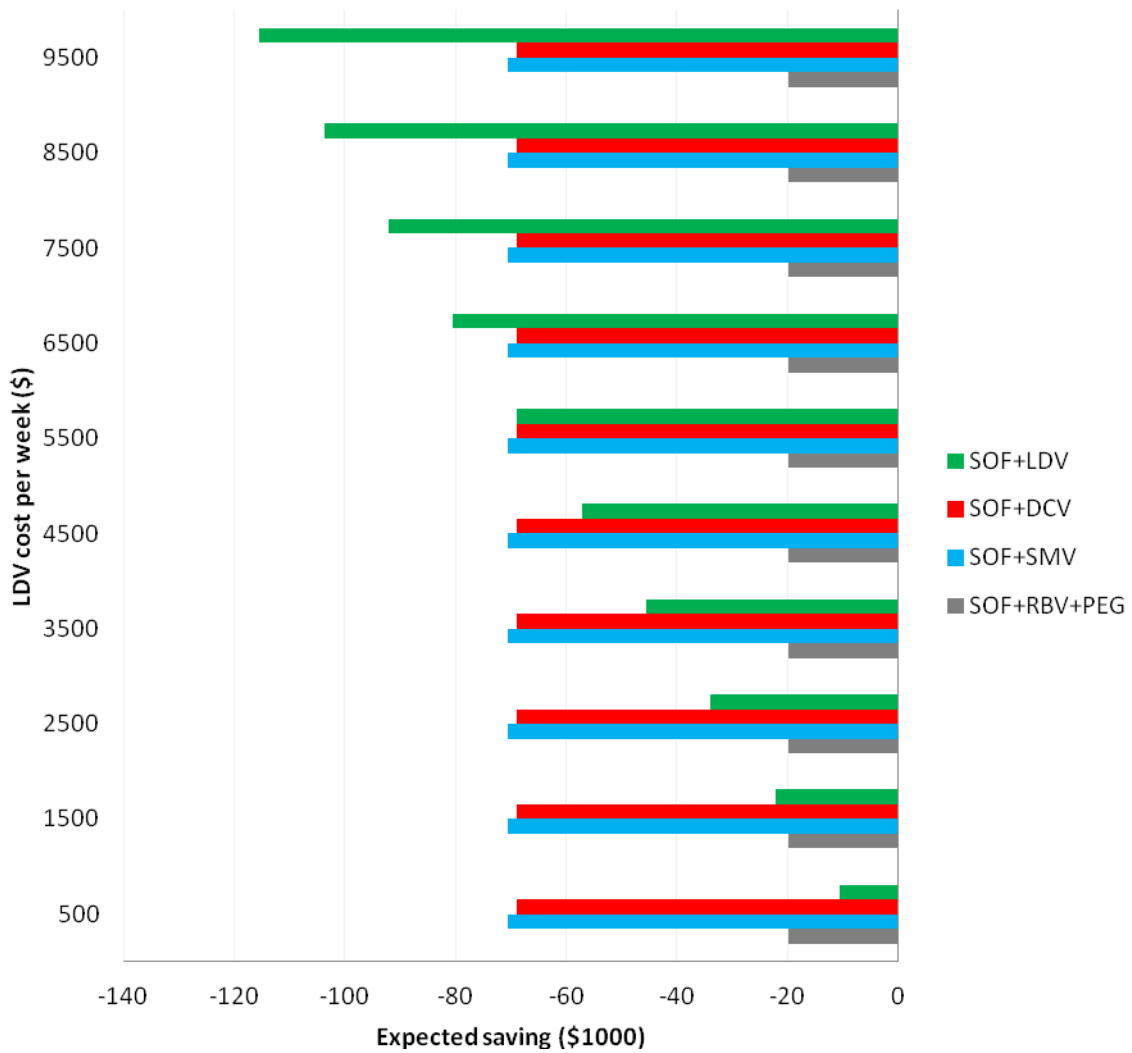
### Expected Savings Compared to Usual Care at Different Prices of SMV (Genotype 1)



### Expected Savings Compared to Usual Care at Different Prices of DCV (Genotype 1)



### Expected Savings Compared to Usual Care at Different Prices of LDV (Genotype 1)

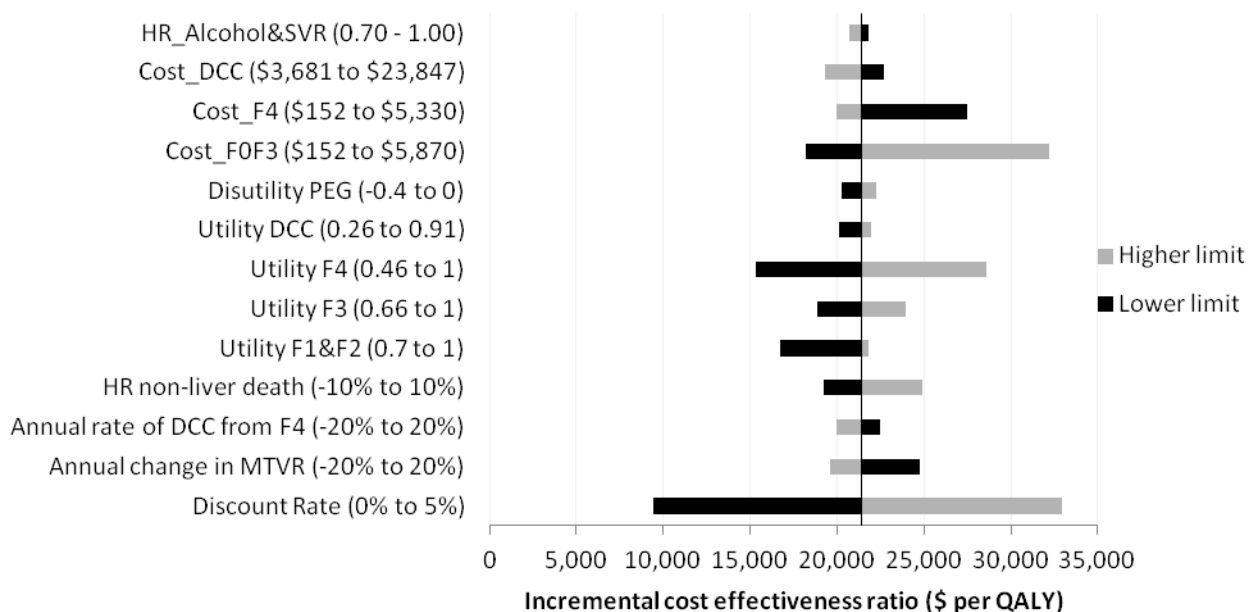


PEG: pegylated interferon; RBV: ribavirin; BOC: boceprevir; SOF: sofosbuvir; SMV: simeprevir; DCV: daclatasvir; LDV: ledipasvir. Positive numbers indicate monetary saving.

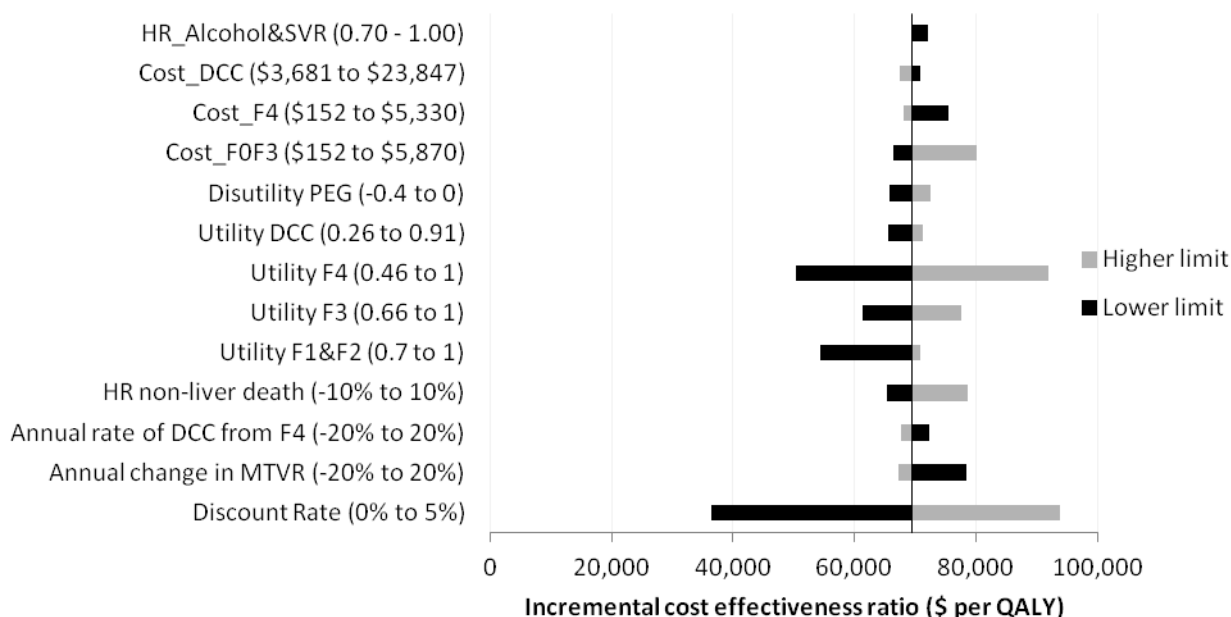


**Supplement Figure 3. Results of one-way sensitivity analysis for genotype 1.**

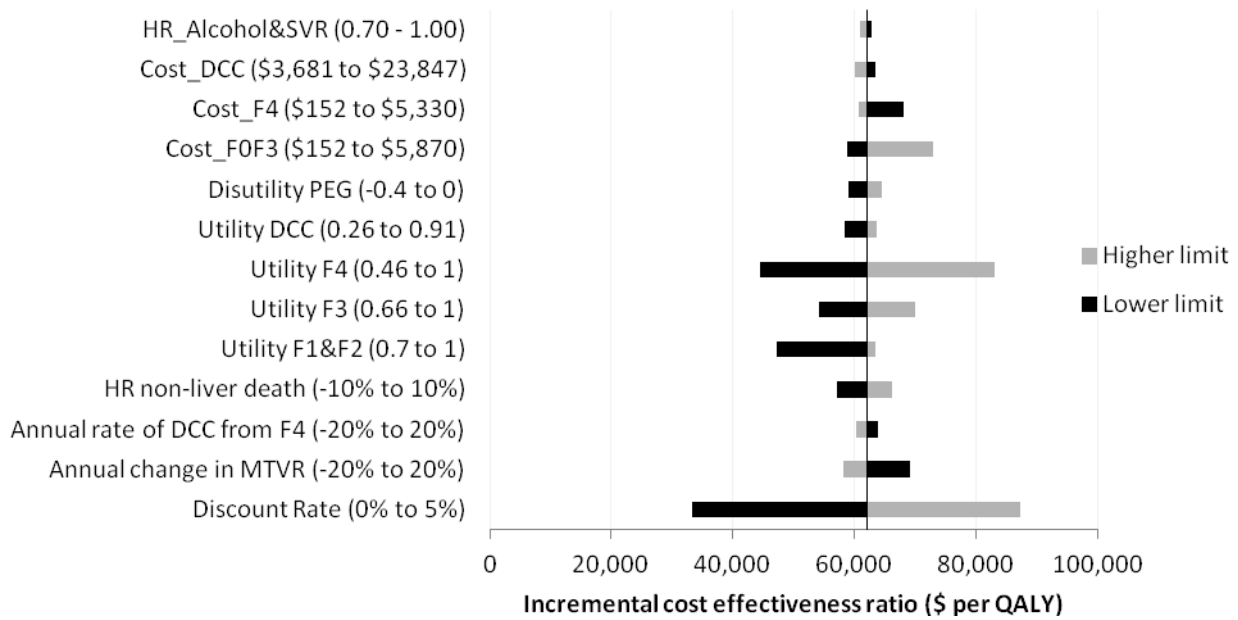
**One Way Sensitivity Analyses of SOF+RBV+PEG vs Usual Care (Genotype 1)**



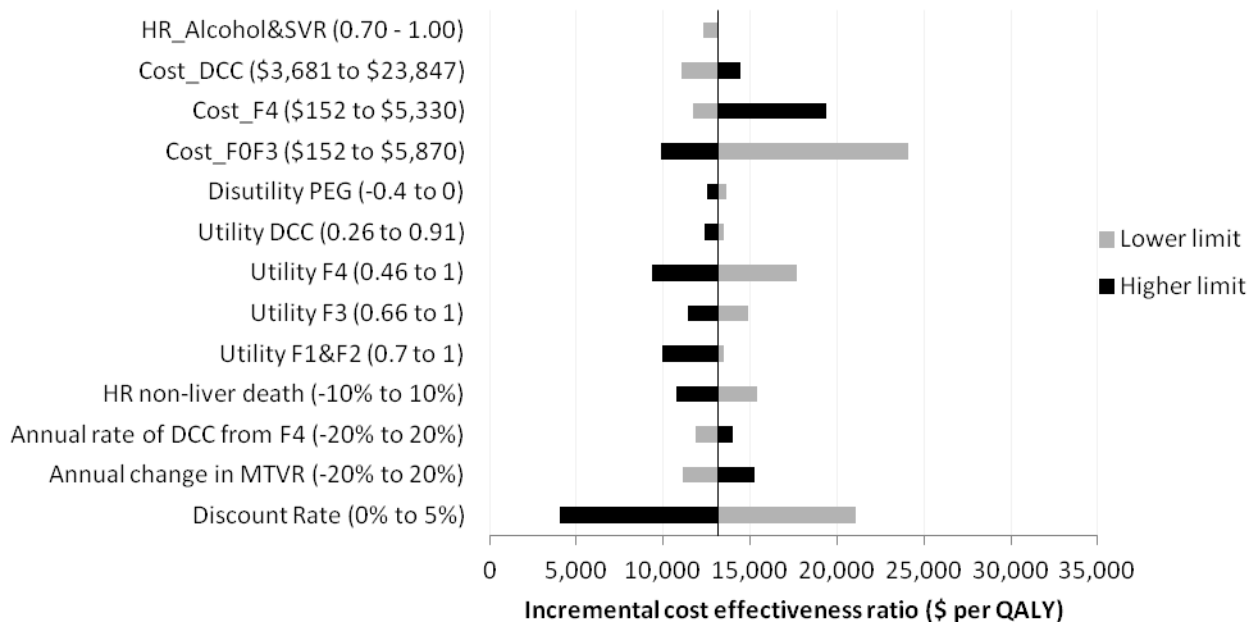
**One Way Sensitivity Analyses of SOF+SMV vs Usual Care (Genotype 1)**



### One Way Sensitivity Analyses of SOF+DCV vs Usual Care (Genotype 1)



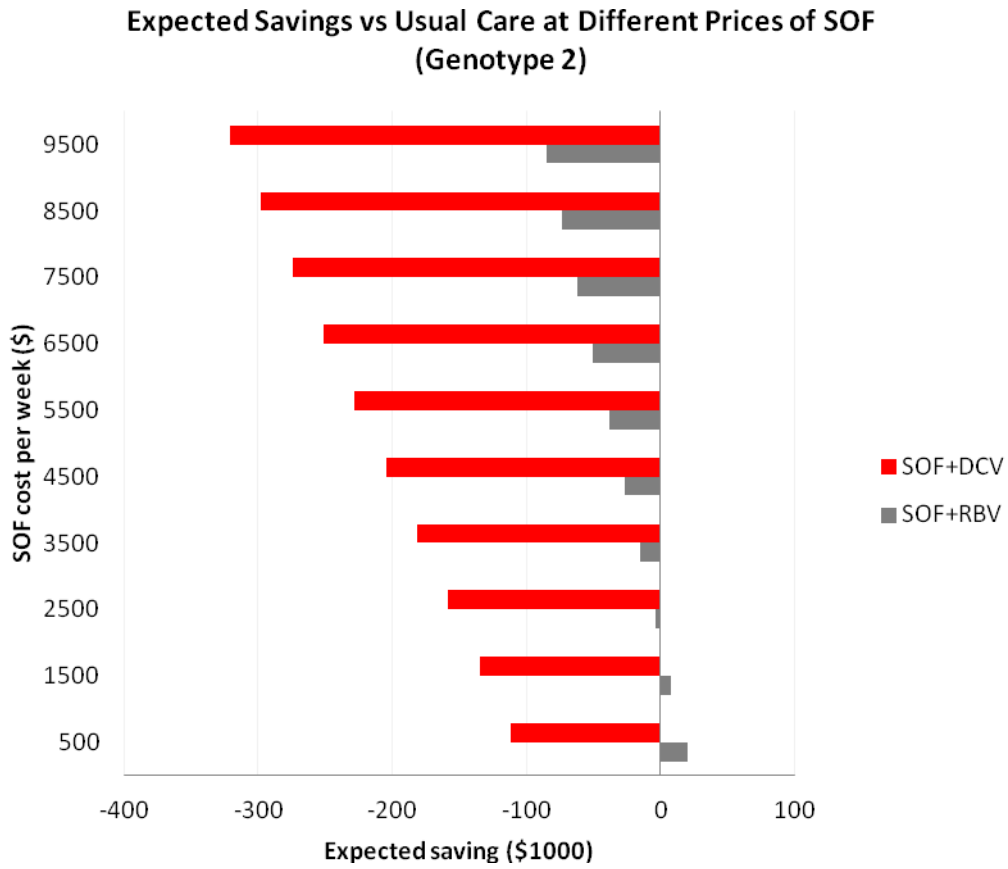
### One Way Sensitivity Analyses of SOF+LDV vs Usual Care (Genotype 1)



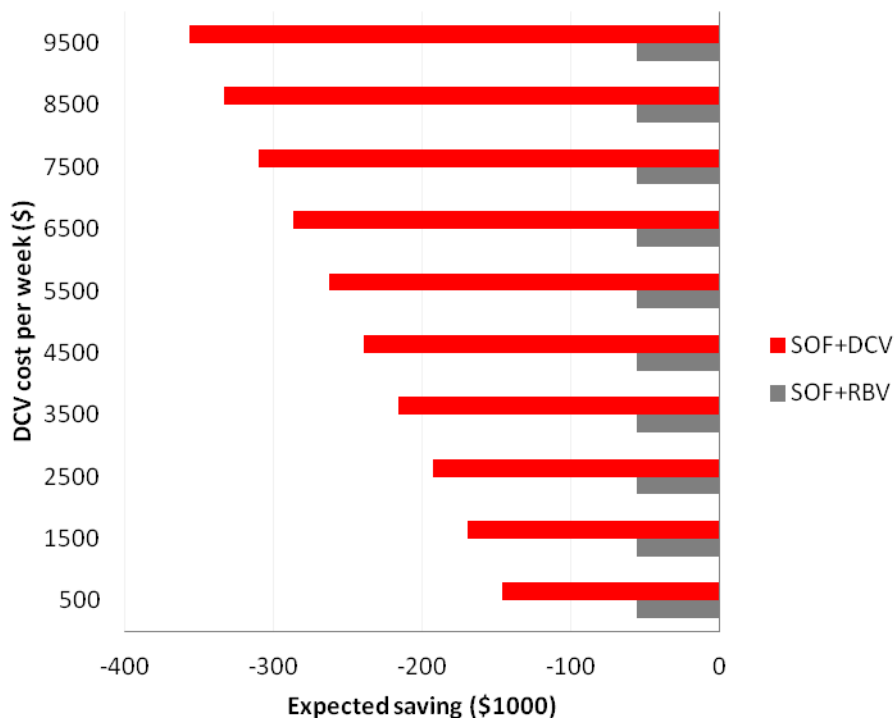
PEG: pegylated interferon; RBV: ribavirin; BOC: boceprevir; SOF: sofosbuvir; SMV: simeprevir; DCV: daclatasvir; LDV: ledipasvir. SVR: Sustained virological response; QALY: quality-adjusted life years; ICER: incremental cost-effectiveness ratio; HR: hazard ratio; DCC: decompensated cirrhosis; F0, F1, F2, F3, F4: METAVIR fibrosis stages.

The tornado plots show ICER of treatment strategies vs. usual care for different values for parameters. Vertical line shows the incremental cost-effectiveness ratio under base case analyses.

**Supplement Figure 4.** Expected cost savings from each treatment strategy compared with usual care for genotype 2 for different prices of sofosbuvir and daclatasvir.



### Expected Savings Compared to Usual Care at Different Prices of DCV (Genotype 2)

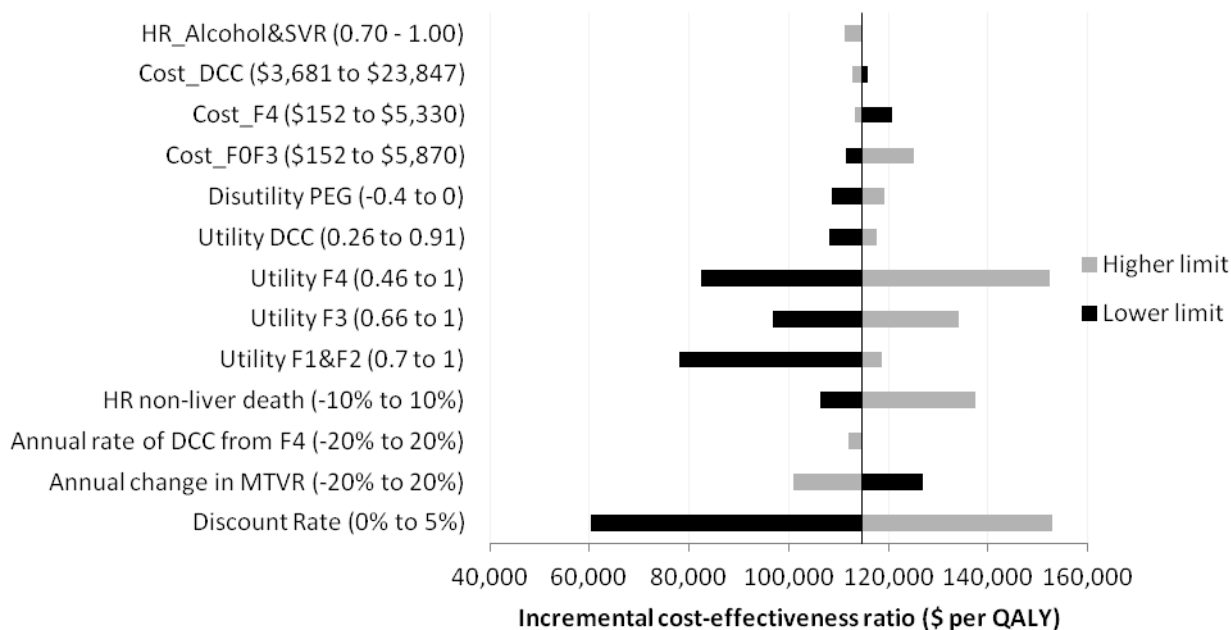


PEG: pegylated interferon; RBV: ribavirin; SOF: sofosbuvir; DCV: daclatasvir.

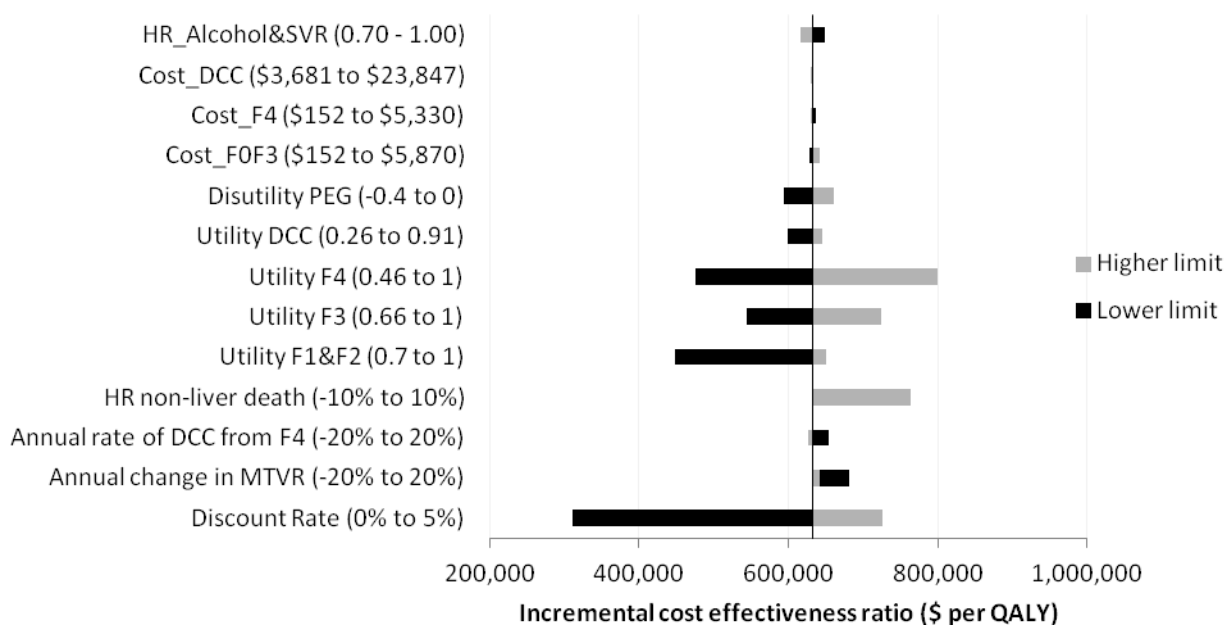
Positive numbers indicate monetary saving.

**Supplement Figure 5. Results of one-way sensitivity analysis for genotype 2**

**One Way Sensitivity Analyses of SOF+RBV vs Usual Care (Genotype 2)**



**One Way Sensitivity Analyses of SOF+DCV vs Usual Care (Genotype 2)**

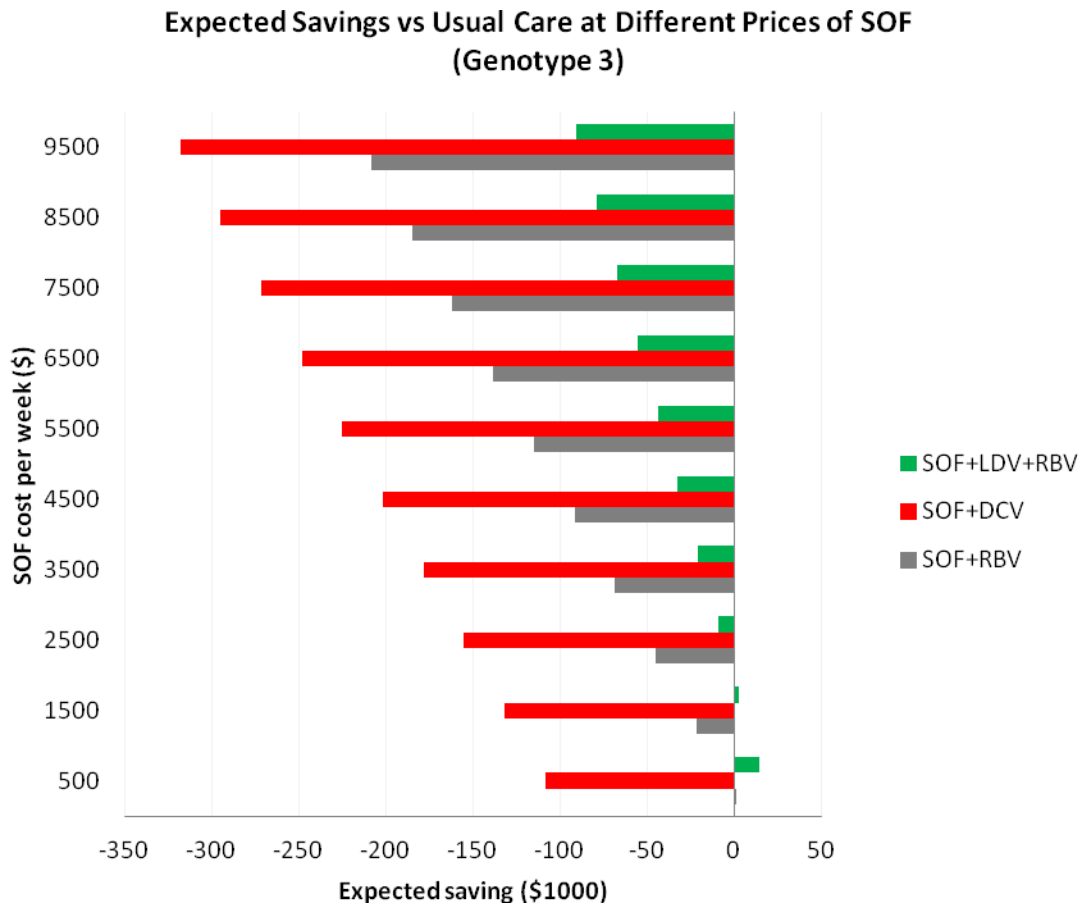


PEG: pegylated interferon; RBV: ribavirin; BOC: boceprevir; SOF: sofosbuvir; SMV: simeprevir; DCV: daclatasvir; LDV: ledipasvir.

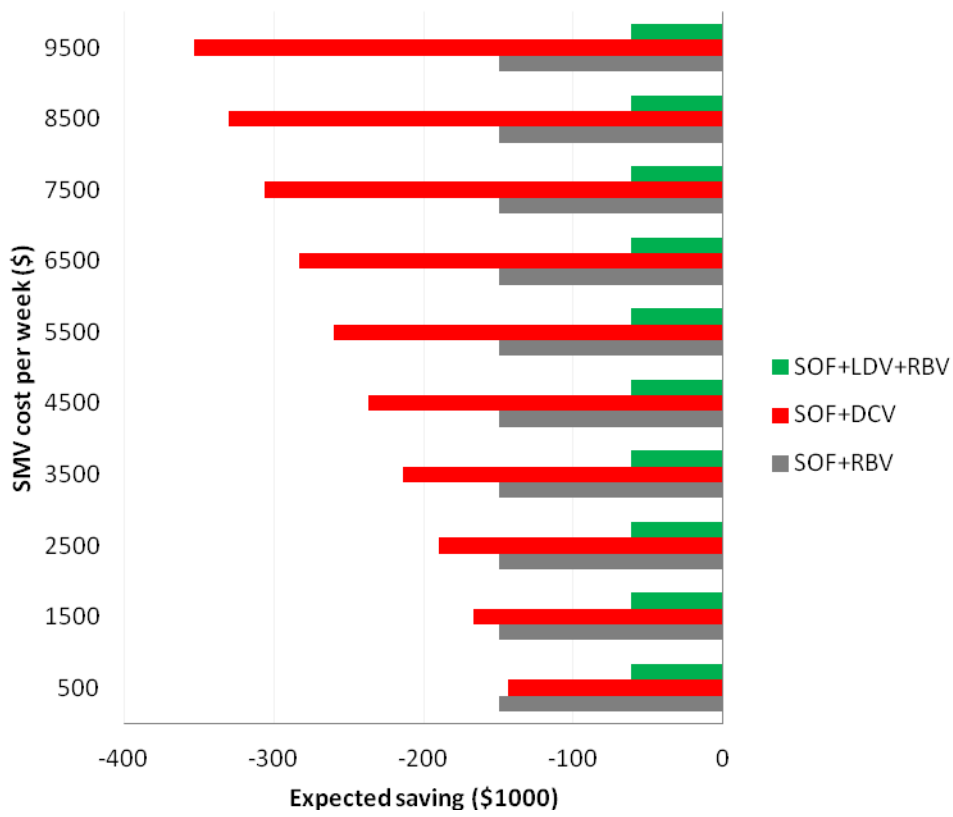
SVR: Sustained virological response; QALY: quality-adjusted life years; ICER: incremental cost-effectiveness ratio; HR: hazard ratio; DCC: decompensated cirrhosis; F0, F1, F2, F3, F4: METAVIR fibrosis stages.

The tornado plots show ICER of treatment strategies vs. usual care for different values for parameters. Vertical line shows the incremental cost-effectiveness ratio under base-case analyses.

**Supplement Figure 6.** Expected cost savings from each treatment strategy compared with usual care for genotype 3 for different prices of sofosbuvir and daclatasvir.

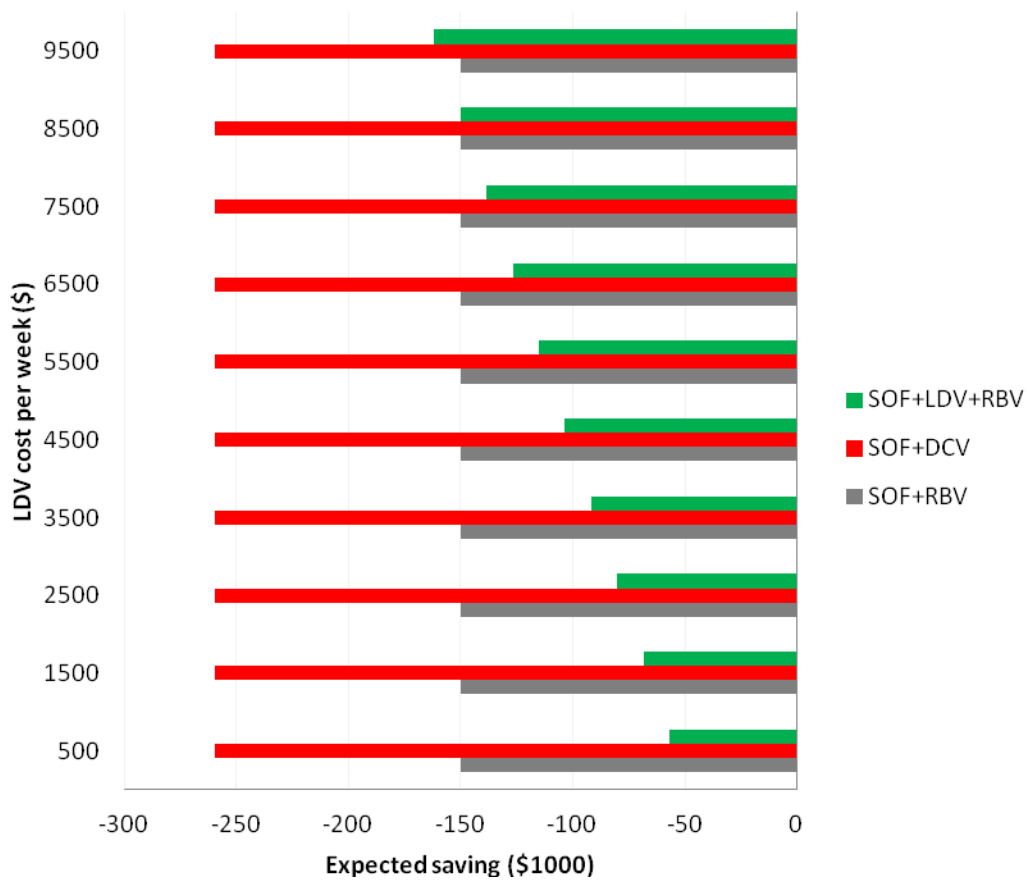


### Expected Savings Compared to Usual Care at Different Prices of DCV (Genotype 3)





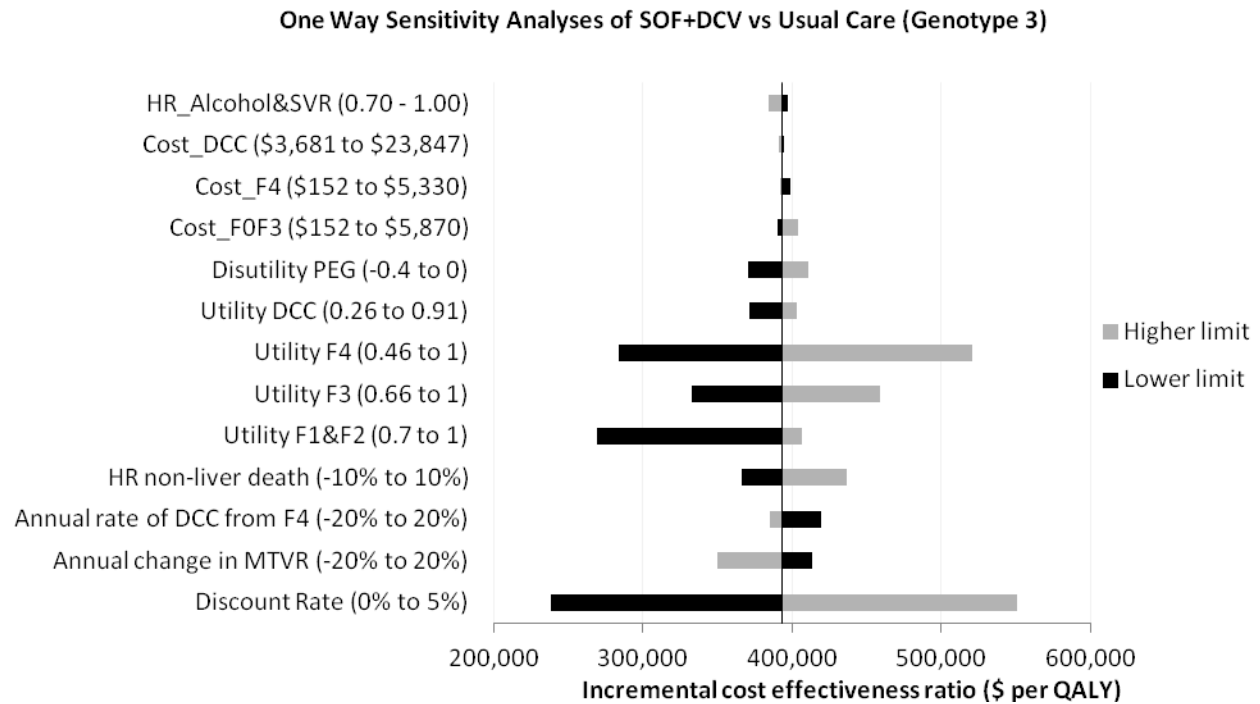
### Expected Savings Compared to Usual Care at Different Prices of LDV (Genotype 3)



PEG: pegylated interferon; RBV: ribavirin; SOF: sofosbuvir; DCV: daclatasvir; LDV: ledipasvir.

Positive numbers indicate monetary saving.

**Supplement Figure 7. Results of one-way sensitivity analysis for genotype 3.**



Note: SOF+RBV was a dominated strategy for genotype 3 and has not been included in this analysis.

PEG: pegylated interferon; RBV: ribavirin; BOC: boceprevir; SOF: sofosbuvir; SMV: simeprevir; DCV: daclatasvir; LDV: ledipasvir. SVR: Sustained virological response; QALY: quality-adjusted life years; ICER: incremental cost-effectiveness ratio; HR: hazard ratio; DCC: decompensated cirrhosis; F0, F1, F2, F3, F4: METAVIR fibrosis stages.

The tornado plots show ICER of treatment strategies versus usual care for different values for parameters. Vertical line shows the incremental cost-effectiveness ratio under base-case analyses.