表4-8　C型慢性肝炎治療の医療経済評価結果一覧(8)

No	Author	Pub Year	Time horizon	Condition	Age	Male (%)	Strategy	Currency	cost	LY	QALY	ICER		
												Comparator	Cost/LY	Cost/QALY
41	Lidgren M	2007	lifelong		45	61	S8:PegIFNα-2a/b +RBV for 14W for Genotype 2 achieving RVR (HCV RNA Neg week 4)，24W of treatment for the remaining Genotype 2 patients. PegIFNα-2a/b +RBV for 14W for Genotype 3 with LVL (< 800,000 IU/ml) and RVR(week 4 <600 IU/ml)，24W offtreatment for the remaining Genotype 3 patients. PegIFNα-2a/b +RBV for 48W for Genotype1 patients	Swedish kronor	243,044	-	16.80	-	-	-
							S7:Low-dosage PegIFN +RBV for 24W for Genotypes 2-3 and PegIFNα-2a/b +RBV for 48W for Genotype 1		247,689	-	16.80	-	-	Dominated
							S4:IFNα-2b +RBV 24W		249,439	-	16.24	-	-	Dominated
							S9:The same as treatment S8 for Genotypes2-3.PegIFN +RBV for 24W for Genotype 1 with LVL(＜600,000IU/ml) and RVR (week 4＜50IU/ml), 72W for Genotype 1 with slow virological response (W12 >50 IU/ml)，a nd 48W of treatment for the remaining genotype 1 patients.		251,313	-	16.87	S8:PegIFN +RBV for 14W	-	119,841.00
							S6:PegIFNα-2a/b +RBV:low-dosage RBV 24W Genotypes 2-3		251,520	-	16.80	-	-	Dominated
							S5:PegIFNα-2a/b +RBV:Genotype 2-3 24W,Genotype 1 48W		255,592	-	16.80	-	-	Dominated
							S1:No treatment		286,684	-	14.02	-	-	Dominated
							S3:IFNα-2b +RBV 48W		293,477	-	16.24	-	-	Dominated
							S2:IFNα-2b 48W		316,075	-	14.91	S1:No treatment	-	Dominated
42	Nakamura J	2007	lifelong (upto 30 yrs)	Genotype1	45	100	No treatment	€Euro	50,834	13.93	8.88	New protocol subgroup:C Genotype:1 viral load:Low	Dominated	Dominated
							New protocol subgroup:B Genotype:1 viral load:Low		29,933	18.20	14.54		-	-
							New protocol subgroup:(Weighted average of subgroupB and C) Genotype:1 viral load:Low		38,606	17.57	13.68	Standard protocol Genotype:2or3 viral load:not considerd	Dominated	Dominated
							Standard protocol Genotype:1 viral load:Low		44,599	17.35	13.35	New protocol subgroup:E Genotype:2or3 viral load:not considerd	Dominated	Dominated
							New protocol subgroup:C Genotype:1 viral load:Low		46,313	17.02	12.92	Standard protocol Genotype:1 viral load:Low	Dominated	Dominated
							Standard protocol Genotype:1 viral load:not considerd		50,854	16.38	12.02	No treatment	Dominated	Dominated
							New protocol subgroup:A Genotype:1 viral load:High		54,064	15.90	11.36	Standard protocol Genotype:1 viral load:not considerd	Dominated	Dominated

表4-9　C型慢性肝炎治療の医療経済評価結果一覧(9)

No	Author	Pub Year	Time horizon	Condition	Age	Male (%)	Strategy	Currency	cost	LY	QALY	ICER		
												Comparator	Cost/LY	Cost/QALY
42	Nakamura J	2007	lifelong (upto 30 yrs)	Genotype 2 or 3	45	100	New protocol subgroup:D Genotype:2or3 viral load:not considerd	€Euro	25,964	18.01	14.32	-	-	-
							New protocol subgroup:(Weighted average of subgroupD and E) Genotype:2or3 viral load:not considerd		31,154	17.61	13.76	New protocol subgroup:D Genotype:2or3 viral load:not considerd	Dominated	Dominated
							Standard protocol Genotype:2or3 viral load:not considerd		34,005	17.61	13.74	New protocol subgroup:D Genotype:2or3 viral load:not considerd	Dominated	Dominated
							New protocol subgroup:E Genotype:2or3 viral load:not considerd		39,990	16.93	12.80	New protocol subgroup:D Genotype:2or3viral load:not considerd	Dominated	Dominated
43	Shepherd J	2007	lifelong	Genotype 1	45		No treatment	£ Ponds	5,989	27.94	20.17	-	-	-
							IFNα-2b SVR 0.18 watchful waiting		9,074	28.07	20.33	No treatment	-	19,022
							IFNα-2b SVR 0.18 Early treatment		14,297	28.08	20.66	IFN - 2b SVR 0.18 watchful waiting	-	15,954
							IFNα-2b SVR 0.30 watchful waiting		8,641	28.16	20.51	No treatment	-	7,766
							IFNα-2b SVR 0.30 Early treatment		13,640	28.18	21.06	IFN - 2b SVR 0.30 watchful waiting	-	9,021
							PEG α- 2a watchful waiting		9,293	28.23	20.65	No treatment	-	6,867
							PEGα - 2a Early treatment		16,799	28.25	21.38	PEG - 2a watchful waiting	-	10,270
							PEGα - 2b watchful waiting		9,143	28.33	20.84	No treatment	-	4,670
							PEGα - 2b Early treatment		17,273	28.36	21.82	PEG - 2b watchful waiting	-	8,324
				Genotype non-1	45		No treatment	£ Ponds	5,989	27.94	20.17	-	-	-
							IFN - 2b SVR 0.49 watchful waiting		7,944	28.30	20.80	No treatment	-	3,105
							IFN - 2b SVR 0.49 Early treatment		12,584	28.34	21.72	IFN - 2b SVR 0.18 watchful waiting	-	5,050
							IFN - 2b SVR 0.65 watchful waiting		7,351	28.43	21.04	No treatment	-	1,558
							IFN - 2b SVR 0.65 Early treatment		11,687	28.47	22.27	IFN - 2b SVR 0.30 watchful waiting	-	3,528
							PEG - 2a watchful waiting		7,399	28.52	21.23	No treatment	-	1,326
							PEG - 2a Early treatment		12,868	28.57	22.70	PEG - 2a watchful waiting	-	3,725
							PEG - 2b watchful waiting		7,733	28.62	21.42	No treatment	-	1,387
							PEG - 2b Early treatment		15,138	28.68	23.14	PEG - 2b watchful waiting	-	4,320

表4-10　C型慢性肝炎治療の医療経済評価結果一覧(10)

No	Author	Pub Year	Time horizon	Condition	Age	Male (%)	Strategy	Currency	cost	LY	QALY	ICER		
												Comparator	Cost/LY	Cost/QALY
44	Yeh, Wei-Shi	2007	lifelong	Genotype 1	45	100	Peginterferon α-2b + Ribavirin	US$	30,777	27.74	14.74	-	-	-
							Peginterferon α-2a + Ribavirin		31,719	27.81	14.77	Peginterferon α-2b + Ribavirin	13,457	31,400
							No Treatment		41,302	22.74	12.39	Peginterferon α-2a + Ribavirin	Dominated	Dominated
				Genotype 2/3	45	100	Peginterferon α-2b + Ribavirin	US$	11,129	31.81	16.85	-	-	-
							Peginterferon α-2a + Ribavirin		15,725	30.88	16.38	Peginterferon α-2b + Ribavirin	Dominated	Dominated
							No Treatment		41,302	22.74	12.39	Peginterferon α-2a + Ribavirin	Dominated	Dominated
				Genotype 1	55	100	Peginterferon α-2b + Ribavirin	US$	29,967	20.84	12.07	-	-	-
							Peginterferon α-2a + Ribavirin		30,920	20.89	12.09	Peginterferon α-2b + Ribavirin	19,060	47,650
							No Treatment		39,748	17.34	10.15	Peginterferon α-2a + Ribavirin	Dominated	Dominated
				Genotype 2/3	55	100	Peginterferon α-2b + Ribavirin	US$	10,925	23.68	13.83	-	-	-
							Peginterferon α-2a + Ribavirin		14,933	23.04	13.45	Peginterferon α-2b + Ribavirin	Dominated	Dominated
							No Treatment		39,748	17.34	10.15	Peginterferon α-2a + Ribavirin	Dominated	Dominated
45	Nakamura J	2008	30 years		43	100	No treatment	US$	59,640	14.88	13.52	-	-	-
							PegIFN α-2a + Ribavirin 72W		69,438	16.40	15.35	No treatment	6,446	5,354
							PegIFN α-2a + Ribavirin 48W		71,559	15.99	14.80	extended protocol	Dominated	Dominated
46					NS		Non Case-finding	£ Ponds	738		1.644			
	Sutton AJ	2008	80 Years				Case-finding		1013		1.65			45,785
47	Tan JA	2008	lifelong	-	40-49		Treatment (Pegα-2a/b+RBV)	US$	179,484	-	18.25	No treatment	-	Dominated
							No Treatment		220,715	-	17.50	-	-	-
				Genotype I			Treatment (Pegα-2a/b+RBV)		189,598	-	18.09	No treatment	-	Dominated
							No Treatment		220,834	-	17.40	-	-	-
				Genotype 2-3			Treatment (Pegα-2a/b+RBV)		141,820	-	18.82	No treatment	-	Dominated
							No Treatment		219,750	-	17.50	-	-	-
				-	50-59		Treatment (Pegα-2a/b+RBV)	US$	113,485	-	15.00	No treatment	-	Dominated
							No Treatment (Pegα-2a/b+RBV)		149,930	-	14.31	-	-	-
				Genotype I			Treatment		122,294	-	14.86	No treatment	-	Dominated
							No Treatment (Pegα-2a/b+RBV)		146,847	-	14.31	-	-	-
				Genotype 2-3			Treatment		82,252	-	15.52	No treatment	-	Dominated
							No Treatment (Pegα-2a/b+RBV)		147,223	-	14.30	-	-	-
				-	60-69		Treatment (Pegα-2a/b+RBV)	US$	52,667	-	10.48	No treatment	-	Dominated
							No Treatment		64,304	-	9.98	-	-	-
				Genotype I			Treatment (Pegα-2a/b+RBV)		57,697	-	10.37	No treatment	-	Dominated
							No Treatment		65,395	-	9.98	-	-	-
				Genotype 2-3			Treatment (Pegα-2a/b+RBV)		34,833	-	10.87	No treatment	-	Dominated
							No Treatment		64,697	-	9.99	-	-	-
48	Fonseca MC	2009	lifelong		30		No treatment	R$	39147.32	16.8				
							IFN α-2b		44334.25	18.52	+2.61			
							PegIFN α-2b		59782.93	19.03	+3.39	IFN α-2b	30,292	19806

表4-11　C型慢性肝炎治療の医療経済評価結果一覧(11)

No	Author	Pub Year	Time horizon	Condition	Age	Male (%)	Strategy	Currency	cost	LY	QALY	ICER		
												Comparator	Cost/LY	Cost/QALY
49	Grishchenko, M	2009	lifelong	Cirrhosis Genotype 1	40		No treatment	£ Ponds	44,476	-	7.71	-	-	-
							Peginterferon α-2a (or 2b)		47,709		8.12	No treatment	-	7,885
				Cirrhosis Genotype non- 1	40		Peginterferon α-2a (or 2b)	£ Ponds	34,977	-	9.45	Peginterferon α-2a (or 2b)	-	Dominated
							No treatment	£ Ponds	44,539	-	7.71	Peginterferon α-2a (or 2b)	-	Dominated
				Mild hepatitis Genotype non-1	40		Peginterferon α-2a (or 2b)	£ Ponds	10,750	-	16.25	-	-	-
							No treatment	£ Ponds	15,362	-	14.20	Peginterferon α-2a (or 2b)	-	Dominated
				Mild hepatitis Genotype 1	40		No treatment	£ Ponds	12,228	-	14.67	-	-	-
							Peginterferon α-2a (or 2b)		16,104	-	15.78	No treatment	-	3,492
				Moderate hepatitis Genotype 1	40		Peginterferon α-2a (or 2b)	£ Ponds	29,122	-	12.59	-	-	-
							No treatment		30,044	-	11.64	Peginterferon α-2a (or 2b)	-	Dominated
				Moderate hepatitis Genotype non-1	40		Peginterferon α-2a (or 2b)	£ Ponds	17,250	-	13.43	-	-	-
							No treatment		32,442	-	11.15	Peginterferon α-2a (or 2b)	-	Dominated
50	Siebert U	2009	lifelong	32% Genotype 2/3 15% Mild CH 78% Moderate CH 7%CIR	44	66	No antiviral treatment	€Euro	15,400	17.15	15.22	-	-	-
							PegIFNα-2b+RBV)wbR guideline 12-48W		18,800	19.25	17.45	No antiviral treatment	1,619	1,525
							IFN-α-2b+ RBV 12-48W		20,400	18.82	16.96	German guideline	Dominated	Dominated
							PegIFN-α-2b+RBV 12-48W		22,700	19.29	17.48	PegIFN wbR guideline 12-48W	97,500	130,000
51	Gheorghe, L.	2010	lifelong	Genotype 1	56	70	Peg-IFN α-2a (Pegasys) +Ribavirin(Copegus)	RoI	107	28.67	15.21	-	-	-
							Peg-IFN α-2b(PegIntron) +Ribavirin(Rebetol)		108	28.29	14.95	Peg-IFN α-2a (Pegasys) +Ribavirin(Copegus)	Dominated	Dominated
52	Saab S	2010	17 Years		55		Treatment during compensated cirrhosis	US$	300,159	-	10.13	-	-	-
							Treatment during decompensated cirrhosis		349,962	-	9.22	Treatment during compensated cirrhosis	-	Dominated
							Treatment during posttransplant recurrence		352,250	-	9.24	Treatment during compensated cirrhosis	-	Dominated
							No treatment		355,473	-	9.18	No treatment	-	Dominated
53	Iwasaki Y	2011	lifelong	genotype 2	45	100	CIFN，18μg with induction	US$	19,660	-	20.15	-	-	-
							CIFN，12μg with induction		20,219	-	19.82	CIFN，18μg with induction	-	Dominated
							PEG-IFN α-2b +RBV		22,386	-	21.08	CIFN，12μg with induction	-	1,720
							PEG-IFN α-2a +RBV		24,566	-	20.57	PEG-IFN α-2b plus ribavirin	-	Dominated
							IFN α-2b + RBV		30,464	-	19.53	PEG-IFN α-2a plus ribavirin	-	Dominated
							CIFN，9μg TIW		48,851	-	16.44	IFN α-2b plus ribavirin	-	Dominated
							IFN α-2b		52,323	-	16.09	CIFN，9μg TIW	-	Dominated
							No IFN therapy		57,826	-	15.18	IFN α-2b	-	Dominated

表4-12　C型慢性肝炎治療の医療経済評価結果一覧(12)

No	Author	Pub Year	Time horizon	Condition	Age	Male (%)	Strategy	Currency	cost	LY	QALY	ICER		
												Comparator	Cost/LY	Cost/QALY
54	Martin NK	2012	lifelong	20% prevalance	20		No treatment	£ Ponds	2,001	-	13.71	-	-	-
							Treat IDUs		2,016		13.74	No treatment	-	521
							Treat ex/non-IDUs		2,055		13.71	Treat IDUs	-	Dominated
				40% prevalance	20		No treatment	£ Ponds	4,077		12.31	-	-	-
							Treat IDUs		4,112		12.32	No treatment	-	2,539
							Treat ex/non-IDUs		4,132		12.31	Treat IDUs	-	Dominated
				60% prevalance	20		No treatment	£ Ponds	6,148		10.91	-	-	-
							Treat IDUs		6,202		10.92	No treatment	-	6,803
							Treat ex/non-IDUs		6,207		10.92	Treat IDUs	-	Dominated

文献:

1. Bennett WG. Estimates of the cost-effectiveness of a single course of interferon-alpha 2b in patients with histologically mild chronic hepatitis C. 1997. Ann Intern Med. 127(10):855-65. [PMID : 9382363]
2. Kim WR. Cost-effectiveness of 6 and 12 months of interferon-alpha therapy for chronic hepatitis C. 1997. Ann Intern Med. 127(10):866-74. [PMID 9382364
3. Davis GL. Prolonged treatment with interferon in patients with histologically mild chronic hepatitis C: a decision analysis. 1998. J Viral Hepat. 5(5):313-21. [PMID : 9795915]
4. Shiell A. Hepatitis C: an economic evaluation of extended treatment with interferon. 1999. Med J Aust. 171(4):189-93. [PMID : 10494234]
5. Younossi ZM. Cost effectiveness of interferon alpha2b combined with ribavirin for the treatment of chronic hepatitis C. 1999. Hepatology. 30(5):1318-24. [PMID :10534357]
6. Buti M. Cost-effectiveness of combination therapy for naive patients with chronic hepatitis C. 2000. J Hepatol. 33(4):651-8. [PMID : 11059872]
7. Sinha M. Cost effectiveness analysis of different strategies of management of chronic hepatitis C infection in children. 2000. Pediatr Infect Dis. 19(1):23-30. [PMID : 10643846]
8. Wong JB. Watchful waiting with periodic liver biopsy versus immediate empirical therapy for histologically mild chronic hepatitis C. A cost-effectiveness analysis. 2000. Ann Intern Med. 133(9):665-75. [PMID:11074899]

9. Wong JB. Cost-effectiveness of 24 or 48 weeks of interferon alpha-2b alone or with ribavirin as initial treatment of chronic hepatitis C. International Hepatitis Interventional Therapy Group. 2000. Am J Gastroenterol. 95(6):1524-30. [PMID: 10894590]
10. Wong JB. Cost effectiveness of ribavirin/interferon alfa-2b after interferon relapse in chronic hepatitis C. 2000. Am J Med. 108(5):366-73 [PMID : 10759092]
11. Sagmeister M. A pragmatic and cost-effective strategy of a combination therapy of interferon alpha-2b and ribavirin for the treatment of chronic hepatitis C. 2001. Eur J Gastroenterol Hepatol. 13(5):483-8. [PMID : 11396525]
12. Sennfält K. Cost-effectiveness of interferon alfa-2b with and without ribavirin as therapy for chronic hepatitis C in Sweden. 2001. Scand J Gastroenterol. [PMID 36(8):870-6. [PMID : 11495084]
13. Grieve R. Economic evaluation for hepatitis C. 2002. Acta Gastroenterol Belg. 65(2):104-9. [PMID : 12148430]
14. Kuehne FC. Treatment for hepatitis C virus in human immunodeficiency virus-infected patients: clinical benefits and cost-effectiveness. 2002. Arch Intern Med. 162(22):2545-56. [PMID : 12456226]
15. Stein K. Cost effectiveness of combination therapy for hepatitis C: a decision analytic model. 2002. Gut. 50(2):253-8. [PMID : 11788569]
16. Buti M. A cost-effectiveness analysis of peginterferon alfa-2b plus ribavirin for the treatment of naive patients with chronic hepatitis C. 2003. Aliment Pharmacol Ther. 17(5):687-94. [PMID : 12641518]
17. Salomon JA. Cost-effectiveness of treatment for chronic hepatitis C infection in an evolving patient population. 2003. JAMA. 290(2):228-37. [PMID : 12851278]
18. San Miguel R. Cost-effectiveness analysis of therapeutic strategies for patients with chronic hepatitis C previously not responding to interferon. 2003. Aliment Pharmacol Ther. 17(6):765-73. [PMID : 12641498]
19. Siebert U. Antiviral combination therapy with interferon/peginterferon plus ribavirin for patients with chronic hepatitis C in Germany: a health technology assessment commissioned by the German Agency for Health Technology Assessment 2003. Ger Med Sci. 1. [PMID : 19675705]
20. Siebert U. Cost effectiveness of peginterferon alpha-2b plus ribavirin versus interferon alpha-2b plus ribavirin for initial treatment of chronic hepatitis C. 2003. Gut. 52(3):425-32. [PMID : 12584228]

21. Wong JB. Economic and clinical effects of evaluating rapid viral response to peginterferon alfa-2b plus ribavirin for the initial treatment of chronic hepatitis C 2003. Am J Gastroenterol. 98(11):2354-62. [PMID : 14638334]

22. Annemans L. A health economic model to assess the long term effects and cost-effectiveness of PEG IFN alpha-2a in hepatitis C virus infected patients. 2004. Acta Gastroenterol Belg. 67(1):1-8. [PMID : 15149079]

23. Ishida H. Cost-effectiveness of ribavirin plus interferon alpha-2b for either interferon relapsers or non-responders in chronic hepatitis C: a Japanese trial. 2004. Hepatol Res. 28(3):125-136. [PMID : 15036068]

24. Salomon JA. Taking account of future technology in cost effectiveness analysis. 2004. BMJ. 329(7468):733-6. [PMID : 15388618]

25. Shepherd J. Pegylated interferon alpha-2a and -2b in combination with ribavirin in the treatment of chronic hepatitis C: a systematic review and economic evaluation. 2004. Health Technol Assess. 8(39):iii-iv, 1-125. [PMID : 15461877]

26. Sullivan SD. Cost effectiveness of peginterferon alpha-2a plus ribavirin versus interferon alpha-2b plus ribavirin as initial therapy for treatment-naive chronic hepatitis C. 2004. Pharmacoeconomics. 22(4):257-65. [PMID : 14974875]

27. Sullivan SD. Cost-effectiveness of combination peginterferon alpha-2a and ribavirin compared with interferon alpha-2b and ribavirin in patients with chronic hepatitis C 2004. Am J Gastroenterol. 99(8):1490-6. [PMID : 15307866]

28. Shepherd J. Clinical- and cost-effectiveness of pegylated interferon alfa in the treatment of chronic hepatitis C: a systematic review and economic evaluation.
2005. Int J Technol Assess Health Care. 21(1):47-54. [PMID : 15736514]

29. Siebert U. Effectiveness and cost-effectiveness of initial combination therapy with interferon/peginterferon plus ribavirin in patients with chronic hepatitis C in Germany: a health technology assessment commissioned by the German Federal Ministry of Health and Soci 2005. Int J Technol Assess Health Care. 21(1):55-65. [PMID : 15736515]

30. Siebert U. Using competence network collaboration and decision-analytic modeling to assess the cost-effectiveness of interferon alpha-2b plus ribavirin as initial treatment of chronic hepatitis C in Germany. 2005. Eur J Health Econ. 6(2):112-23. [PMID : 15902546]

31. Bernfort L. Cost-effectiveness of peginterferon alfa-2b in combination with ribavirin as initial treatment for chronic hepatitis C in Sweden. 2006. Scand J

Infect Dis. 38(6-7):497-505. [PMID : 16798701]

32. García-Contreras F. Cost-effectiveness of chronic hepatitis C treatment with thymosin alpha-1. 2006. Arch Med Res. 37(5):663-73. [PMID : 16740439]
33. Grieve R. Cost effectiveness of interferon alpha or peginterferon alpha with ribavirin for histologically mild chronic hepatitis C. 2006. Gut. 2006 55(9):1332-8. [PMID : 15994216]
34. Hornberger J. The economics of treating chronic hepatitis C patients with peginterferon alpha-2a (40 kDa) plus ribavirin presenting with persistently normal aminotransferase. 2006. J Viral Hepat. 13(6):377-86. [PMID : 16842440]
35. Hornberger J. Cost-effectiveness of peginterferon alfa-2a (40kDa) plus ribavirin in patients with HIV and hepatitis C virus co-infection. 2006. J Clin Virol. 36(4):283-91. [PMID : 16765638]
36. Lin WA. Cost-utility analysis of different peg-interferon alpha-2b plus ribavirin treatment strategies as initial therapy for naïve Chinese patients with chronic hepatitis C. 2006. Aliment Pharmacol Ther. 24(10):1483-93. [PMID : 17081165]
37. Wright M. Health benefits of antiviral therapy for mild chronic hepatitis C: randomised controlled trial and economic evaluation. 2006. Health Technol Assess. 10(21):1-113, iii [PMID : 16750059]
38. Campos NG. Cost-effectiveness of treatment for hepatitis C in an urban cohort co-infected with HIV. 2007. Am J Med. 120(3):272-9. [PMID : 17349451]
39. Gerkens S. A health economic model to assess the cost-effectiveness of PEG IFN alpha-2a and ribavirin in patients with mild chronic hepatitis C 2007. J Viral Hepat. 14(8):523-36. [PMID : 17650286]
40. Gerkens S. A health economic model to assess the cost-effectiveness of pegylated interferon alpha-2a and ribavirin in patients with moderate chronic hepatitis C and persistently normal alanine aminotransferase levels 2007. AActa Gastroenterol Belg. 70(2):177-87 [PMID : 17715631]
41. Lidgren M. Productivity improvements in hepatitis C treatment: impact on efficacy, cost, cost-effectiveness and quality of life. 2007. Scand J Gastroenterol. 42(7):867-77. [PMID : 17558912]
42. Nakamura J. The cost-effectiveness of the new protocol reflecting rapid virologic response to peginterferon alpha-2b and ribavirin for chronic hepatitis C. 2007. Eur J Gastroenterol Hepatol. 19(9):733-9. [PMID : 17700257]
43. Shepherd J. Interferon alpha (pegylated and non-pegylated) and ribavirin for the treatment of mild chronic hepatitis C: a systematic review and economic

evaluation. 2007. Health Technol Assess. 11(11):1-205, iii. [PMID : 17346498]

44. Yeh, Wei-Shi . Peginterferon alpha-2a versus Peginterferon alpha-2b as initial treatment of hepatitis C infection: A cost-utility analysis from the perspective of the Veterans Affairs Health Care System 2007. Pharmacotherapy 27(6):813-824. [PMID : 17542764]
45. Nakamura J. Economic impact of extended treatment with peginterferon alpha-2a and ribavirin for slow hepatitis C virologic responders. 2008. J Viral Hepat. 15(4):293-9. [PMID : 18307591]
46. Sutton AJ. The cost-effectiveness of screening and treatment for hepatitis C in prisons in England and Wales: a cost-utility analysis. 2008. J Viral Hepat. 15(11):797-808. [PMID : 18637074]
47. Tan JA. Treating hepatitis C in the prison population is cost-saving. 2008. Hepatology. 48(5):1387-95. [PMID : 18924228]
48. Fonseca MC. Cost effectiveness of peginterferon alfa-2b combined with ribavirin for the treatment of chronic hepatitis C in Brazil. 2009. Braz J Infect Dis. 13(3):191-9. [PMID : 20191195]
49. Grishchenko, M. Cost-effectiveness of pegylated interferon and ribavirin for patients with chronic hepatitis C treated in routine clinical practice 2009. Int J Technol Assess Health Care. 25(2):171-180:2009 [PMID : 19331708]
50. Siebert U. Clinical effectiveness and cost effectiveness of tailoring chronic hepatitis C treatment with peginterferon alpha-2b plus ribavirin to HCV genotype and early viral response: a decision analysis based on German guidelines 2009. Pharmacoeconomics. 27(4):341-54 [PMID : 19485429]
51. Gheorghe, L.. Cost-effectiveness of peginterferon alpha-2a and peginterferon alpha-2b combination regimens in genotype-1 naive patients with chronic hepatitis C. 2010. Hepatogastroenterology. 57(101):939-44 [PMID : 21033255]
52. Saab S. Timing of hepatitis C antiviral therapy in patients with advanced liver disease: a decision analysis model. 2010. Liver Transpl. 16(6):748-59. [PMID : 20517909]
53. Iwasaki Y. Efficacy and cost-effectiveness of consensus interferon monotherapy with high-dose induction for hepatitis C patients with genotype 2. 2011. Scand J Gastroenterol. 46(1):79-90. Epub 2010 Sep 7. [PMID : 20822376]
54. Martin NK. Cost-effectiveness of hepatitis C virus antiviral treatment for injection drug user populations. 2012. Hepatology. 55(1):49-57. [PMID : 21898506]

表 5-1　B 型慢性肝炎治療の医療経済評価　文献リスト(1)

No	Author	Pub. Year	Country	Target Cohort	Age, male ratio of Cohort	Comparators	Perspective of Analysis	Model	Time Horizon	Discount rate/y	Journal
1	Wong JB	1995	USA	HBeAg(+) CHB /cirrhosis (−)	35 yo	1. IFN alpha-2b 2. Standard care	Societal(Only direct cost)	Markov	Lifetime	5%	Ann Intern Med. 1995 May 1;122(9):664-75.
2	Louis-Jacques O	1997	USA	HBeAg(+)CHB /cirrhosis (−)	2 yo, 12 yo, 25 yo	1. Standard care 2. IFN alpha	Not described, Only direct cost	Markov	Lifetime	5%	J Pediatr Gastroenterol Nutr. 1997 Jan;24(1):25-32.
3	Crowley SJ	2000	Australia	HBeAg(+) CHB /cirrhosis (−)	30 yo (Male:70%)	1. No treatment 2. Lamivudine 3. IFN alpha	Australian healthcare	Markov	70years	5%	Pharmacoeconomics. 2000 May;17(5):409-27.
4	Brooks EA	2001	USA	CHB	−	1. IFN alpha 2. Lamivudine	Third-party payer/health care provider	Decision Tree	1year	−	Am J Manag Care. 2001 Jul;7(7):677-82.
5	Aggarwal R	2002	India	HBeAg(+) CHB /IFN naïve & previously teated	30 yo	1. No treatment 2. IFN alpha	Not described, Only direct cost	Decision Tree	30years	3, 5%	Natl Med J India. 2002 Nov-Dec;15(6):320-7.
6	Crowley S	2002	Australia	HBeAg(+)CHB	30 yo (Male:70%)	1. No antiviral treatment 2. Lamivudine and IFN alpha 3. IFN alpha	Australian health-care provide	Markov	70years	5%	J Gastroenterol Hepatol. 2002 Feb;17(2):153-64.
7	Orlewska E	2002	Poland	HBeAg(+)CHB/cirrhosis(−)/IFN-alpha naive	30-50 yo (Male:40%)	1. No antiviral treatment 2. Lamivudine→IFN alpha if not eligible 3. IFN alphal→Lamivudine if not eligible 4. IFN alpha	healthcare payes's perspective	Markov	1year	−	Value Health. 2002 Sep-Oct;5(5):405-21.
8	Pwu RF	2002	Taiwan	HBeAg(+)CHB/cirrhosis(−)	35 yo	1. No treatment 2. IFN alpha	Societal(Only direct cost)	Markov	Lifetime	3%	J Formos Med Assoc. 2002 Sep;101(9):632-41.
9	Kanwal F	2005	USA	CHB/ 55% HBeAg(−)	40 yo	1. No treatment 2. IFN monotherapy 3. Lamivudine monotherapy 4. Adefovir monotherapy 5. Lamivudine→ Adefovir on resistance	Third-party payer.	Decision Tree	Lifetime	3%	Ann Intern Med. 2005 May 17;142(10):821-31.
10	Buti M	2006	Spain	HBeAg(−)CHB	−	1. Lamivudine 2 Adefovir dipivoxil	Spanish Public Health System	Markov	4years	3%	Aliment Pharmacol Ther. 2006 Feb 1;23(3):409-19.
11	Kanwal F	2006	USA	HBV cirrhosis(50%)/decompensated cirrhosis (50%)	50 yo	1. No treatment 2. Lamivudine monotherapy 3. Adefovir monotherapy 4. Lamivudine→Adefovir on resistance 5. Entecavir monotherapy 6. .Lamivudine→Entecavir on resistance	Third party payer	Markov	Lifetime	Cost 3%	Am J Gastroenterol. 2006 Sep;101(9):2076-89.
12	Shepherd J	2006	UK	CHB	HBeAg(+): 31 yo/ Male:23% HBeAg(−): 40 yo/ Male:19%	1. Adefovir 2. PegIFN-2a 3. IFN alpha 2a/2b 4. No Treatment 5. Sequential treatment(IFN/PegIFN→ Lamivudine, IFN/PegIFN→Adefovir IFN/PegIFN→Lamivudine+Adefovir)	NHS and personal social services.	Markov	Lifetime	Cost 6% Effect. 1.5%	Health Technol Assess. 2006 Aug;10(28):iii-iv, xi-xiv, 1-183.
13	Lacey LF	2007	Singapore	HBeAg(−)CHB	40 yo (Male:50%)	1. No treatment 2. Conventional IFN alpha(IFN) 3. PegIFN alpha-2a 4. Lamivudine→Adefovir on resistance 5. Adefovir→Lamivudine on resistance	Singapore healthcare system	Decision Tree	Lifetime	5%	J Viral Hepat. 2007 Nov;14(11):751-66.
14	Sullivan SD	2007	Taiwan	HBeAg(+)CHB/17% compensated cirrhosis	32 yo (Male:78%)	1. Lamivudine 2. PegIFN alpha-2a	Taiwan Bureau of National Health Insurance (BNHI)	Markov	Lifetime	3%	J Gastroenterol Hepatol. 2007 Sep;22(9):1494-9.
15	Veenstra DL	2007	USA	HBeAg(+)CHB/cinhosis(−) /elevated ALT	35 yo	1. Entecavir 2. Lamivudine with Adefovir salvage	US payer	Markov	Lifetime	3%	Pharmacoeconomics. 2007;25(11):963-77.
16	Veenstra DL	2007	UK	HBeAg(+)/17% compensated cirrhosis	32 yo (Male:78%)	1. Lamivudine 2. PegIFN alpha-2a	UK National Health Service	Markov	Lifetime	Cost 6% Effect. 1.5%	Eur J Gastroenterol Hepatol. 2007 Aug;19(8):631-8.

表 5-2　B 型慢性肝炎治療の医療経済評価　文献リスト(2)

No	Author	Pub. Year	Country	Target Cohort	Age, male ratio of Cohort	Comparators	Perspective of Analysis	Model	Time Horizon	Discount rate/y	Journal
17	All Wales Medicines Strategy Group (AWMSG)	2008	UK Wales	CHB	–	1. Tenofovir 2. Adefovir 3. Entecavir 4. Lamivudine 5. Adefovir+Lamivudine 6. Entecavir+Adefovir 7. Tenofovir+Lamivudine	NHS Wales	Decision Tree	40years	3.5%	All Wales Therapeutics and Toxicology Centre (AWTTC), secretariat of the All Wales Medicines Strategy Group (AWMSG)
18	Arnold E	2008	Australia	CHB	–	1. Entecavir 2. Lamivudine	Australian payer	Markov	20years	5%	Appl Health Econ Health Policy. 2008;6(4):231-46. doi: 10.2165/00148365-200806040-00005.
19	Costa AM	2008	Brazil	CHB	–	1. Entecavir 2. Lamivudine	Brazilian National Health System (SUS)	Markov	10years	3%	Braz J Infect Dis. 2008 Oct;12(5):368-73.
20	Lacey L	2008	Taiwan	HBeAg(+) CHB/HBeAg(-) CHB	HBeAg(+): 31 yo/ Male:50%) HBeAg(-): 40 yo/ Male:50%)	1. No treatment. 2. IFN-alpha 3. PegIFN-alpha 2a(1year) 4. Lamivudine(1year) 5. Adefovir(1year) 6. PegIFN-alpha 2a(2years) 7. Lamivudine(2years) 8. Adefovir(2years) 9. Adefovir→Lamivudine on resistance (5years) 10. Lamivudine→Adefovir on resistance (5years)	Taiwan Bureau of National Health Insurance (BNHI)	Markov	40years	3%	J Gastroenterol Hepatol. 2008 Apr;23(4):571-9.
21	Spackman DE	2008	USA	CHB	35 yo	1. No treatment 2. Adefovir→Entecavir on resistance 3. Entecavir→Adefovir on resistance 4. lamivudine→Adefovir on resistance 5. Telbivudine→Adefovir on resistance 6. PegIFN→Entecavir on resistance	US payer	Markov	Lifetime	3%	Pharmacoeconomics. 2008;26(11):937-49.
22	Veenstra DL	2008	USA	HBeAg(-)CHB/cirrhosis(-)	44 yo	1. Lamivudine 5years, 10years, lifetime, 5on-1off* 2. Adefovir 5years, 10years, lifetime 5on-1off 3. Entecavir 5years, 10years, lifetime 5on-1off	US payer	Markov	Lifetime	3%	Aliment Pharmacol Ther. 2008 Jun;27(12):1240-52. Epub 2008 Mar 27.
23	Veenstra DL	2008	Taiwan	HBeAg(-)CHB	40 yo	1. PegIFN alfa-2a 2. Lamivudine	Taiwan Bureau of National Health Insurance (BNHI)	Markov	Lifetime	3%	Value Health. 2008 Mar-Apr;11(2):131-8.
24	Yuan Y	2008	China	CHB/HBeAg(+) 0.85-0.87	30 yo Male: 0.82-0.83	1. Lamivudine 2. Entecavir	China social security program	Markov	10years	3%	Value Health. 2008 Mar;11 Suppl 1:S11-22.
25	Yuan Y	2008	USA	HBeAg(+) CHB/ nucleos(t)ide-naïve	–	1. Lamivudine→Adefovir on resistance 2. Entecavir→ Adefovir on resistance	U.S. third-party payer	Markov	10years	3%	J Manag Care Pharm. 2008 Jan-Feb;14(1):21-33.
26	Buti M	2009	Spain	HBeAg(+)CHB / HBeAg(-)CHB	40 yo	1. No treatment 2. Lamivudine 3. Adefovir dipivoxil 4. Entecavir 5. Telbivudine 6. Tenofovir	Spanish National Health System	Markov	Lifetime	3%	J Hepatol. 2009 Oct;51(4):640-6. Epub 2009 May 20.
27	Dakin H	2010	UK	CHB 94.7%HBeAg(+) 5.3%HBeAg(-)/cirrhosis(5.3%) 44.5%HBeAg(+) 55.5%HBeAg(-)	–	1. Basic Support Care 2. Lamivudine 3. Telbivudine 4. Adefovir 5. Entecavir	UK National Health Service	Markov	Lifetime	3.5%	Value Health. 2010 Dec;13(8):922-33. doi: 10.1111/j.1524-4733.2010.00782.x. Epub 2010 Sep 3.
28	Lui YY	2010	Multiple	CHB	–	1. Lamivudine→Tenofovir on resistance 2. Tenofovir 3. Entecavir 4. Lamivudine roadmap** 5. Telbivudine roadmap***	Global market	Markov	2years	–	Antivir Ther. 2010;15(2):145-55.

表 5-3　B 型慢性肝炎治療の医療経済評価　文献リスト(3)

No	Author	Pub. Year	Country	Target Cohort	Age, male ratio of Cohort	Comparators	Perspective of Analysis	Model	Time Horizon	Discount rate/y	Journal
29	Vanagas G	2010	Lithuania	CHB	40 yo	1. PegIFN alpha 2. IFN alpha (24 W) 3. Lamuvudine (48W) 4. Lamivudine(5years)		Markov	Lifetime	5%	Medicina (Kaunas). 2010;46(12):835-42.
30	Wu B	2010	China	HBeAg(+)/ HBeAg(-)CHB	30 yo	1. No pharmacologic treatment 2. Lamivudine →Adefovir on Lamivudine resistance 3. Adefovir→Entecavir on Adefovir resistance 4. Telbivudine → Adefovir Telbivudine resistance 5. Entecavir →Adefovir Entecavir resistance	Chinese social security program	Markov	Lifetime	3%	Value Health. 2010 Aug;13(5):592-600. Epub 2010 Apr 30.
31	Almeida AM	2011	Brazil	HBsAg(+)CHB / No cirrhosis	-	1. IFN 2. PegIFN 3. Lamivudine	Brazilian National Health System	Decision Tree	40years	5%	Value Health. 2011 Jul-Aug;14(5 Suppl 1):S24-8.
32	Colombo GL	2011	Italy	CHB/ HBeAg(+) 20% /cirrhosis (7.30%)	>=18 yo	1. Tenofovir → add-on Entecavir 2. Lamivudine → add-on Tenofovir 3. Adefovir → add-on Entecavir 4. Entecavir → add-on Tenofovir 5. Telbivudine → add-on Tenofovir 6. PegIFN→ switch to Entecavir or Tenofovir	Italian National Health Service	Markov	10years	range 0-3%	Clinicoecon Outcomes Res. 2011;3:37-46. doi: 10.2147/CEOR.S16655. Epub 2011 Feb 15.
33	Dakin H	2011	Canada	CHB /HIV(-)/HBeAg(+)/HBeAg(-)/elevated ALT/HBeAg(+) CHB cirrhosis 17%	47 yo	1. Tenofovir DF 2. Adefovir 3. Entecavir 4. Lamivudine, 5. Adefovir + Lamivudine 6. Tenofovir DF + Lamivudine 7. Best supportive care (BSC)	Publicly funded healthcare payers in Canada	Decision Tree	33years	5%	Pharmacoeconomics. 2011 Dec 1;29(12):1075-91. doi: 10.2165/11589260-000000000-00000.
34	Wiens A	2011	Brazil	CHB	40 yo	1. Lamivudine 2. Telbivudine	Brazilian public system	Decision Tree	10years	5%	Braz J Infect Dis. 2011 May-Jun;15(3):225-30.
35	He J	2012	Canada	HBsAg(+)CHB / No cirrhosis/ anti-HBV nucleos(t)ides naïve	34 yo (Male: 72%)	1. Lamvudine→Adefovir or Tenofovir on resistance 2. Telbuvudine→Adefovir or Tenofovir on resistance 3. Entecavir→Adeforvir on resistance 4. Tenofovir→Lamivudine on resistance	Ontario Ministry of Health and Long Term Care	Markov	Lifetime	5%	Value Health. 2012 Sep-Oct;15(6):894-906. doi: 10.1016/j.jval.2012.06.005. Epub 2012 Aug 9.
36	Lee KK	2012	HongKong	HBeAg(-)CHB	-	1. Entecavir 2. Lamivudine	Not described, Only direct cost	Markov	10years	5%	J Gastroenterol Hepatol. 2012 Jul;27(7):1167-74. doi: 10.1111/j.1440-1746.2011.07047.x.
37	Toy M	2012	Turkey	CHB/treatment-naïve	-	1. No antiviral treatment 2. Lamivudine monotherapy 3. Tenofovir monotherapy 4. Lamivudine→ Adefovir 5. Lamivudine→Tenofovir 6. PegIFN→ Tenofovir 7. Roadmap	Not described, Only direct cost	Markov	20years	3%	Eur J Health Econ. 2012 Oct;13(5):663-76. doi: 10.1007/s10198-012-0413-8. Epub 2012 Jul 20.
38	Tsai N	2012	USA	HBV decompesated cirrhosis	>=16 yo	1. Entecavir 2. Adefovir	Third-party US paye	Markov	3years	3%	Clinicoecon Outcomes Res. 2012;4:227-35. doi: 10.2147/CEOR.S31784. Epub 2012 Aug 23.
39	Wu B	2012	China	CHB/Lamivudine resistant	45 yo	1. No treatment 2. Adefovir monotherapy 3. Lamivudine + Adefovir 4. Entecavir 5. Tenofovir	Chinese health care	Markov	Lifetime	3%	BMC Health Serv Res. 2012 Nov 8;12:385. doi: 10.1186/1472-6963-12-385.

表 6.　B 型慢性肝炎の医療経済評価における自然歴　遷移確率

Transition Before→After	HBV Marker	N	Mean	SD	Min	Max	Reference#
Chronic hepatitis							
→Compensated cirrhosis							
		12	0.061	0.030	0.020	0.120	2,5,7,12,14,15,16,21,23,29,34,35
	HBeAg(+)	9	0.055	0.037	0.020	0.121	1,3,8,13,27,30,31,32,37
	HBeAg(−)	7	0.066	0.031	0.020	0.097	13,22,27,30,31,32,37
	HBsAg(−)	3	0.003	0.005	0.000	0.010	1,6,8
→Hepatocellular carcinoma							
		14	0.007	0.003	0.004	0.015	6,9,12,13,14,15,16,21,23,27,29,31,34,35
Compensated cirrhosis							
→Decompensated cirrhosis							
		19	0.048	0.012	0.023	0.073	2,3,5,6,8,9,11,12,13,14,15,16,21,23,27,29,31,34,35
	HBeAg(−)	5	0.055	0.022	0.027	0.073	22,30,32,37,39
	HBeAg(+)	4	0.065	0.015	0.039	0.073	30,32,37,39
→Hepatocellular Carcinoma							
		20	0.035	0.017	0.020	0.071	1,2,3,5,6,8,9,11,12,13,14,15,16,21,23,27,29,31,34,35
	HBeAg(−)	5	0.031	0.005	0.022	0.034	22,30,32,37,39
	HBeAg(+)	4	0.030	0.007	0.018	0.034	30,32,37,39
→Death							
		14	0.046	0.010	0.023	0.054	3,9,11,12,13,14,16,23,27,29,31,34,35,37
	HBeAg(−)	3	0.049	0.000	0.049	0.049	30,32,39
	HBeAg(+)	3	0.049	0.000	0.049	0.049	30,32,39
Decompesanted cirrhosis							
→Liver transplantation							
		13	0.088	0.101	0.014	0.250	9,11,12,14,15,16,21,23,27,29,34,35,37
	HBeAg(−)	4	0.084	0.073	0.026	0.210	22,30,32,39
	HBeAg(+)	3	0.103	0.075	0.050	0.210	30,32,39
→Hepatocellular carcinoma							
		13	0.031	0.016	0.022	0.071	3,12,13,14,15,16,21,23,27,29,31,34,35
	HBeAg(−)	3	0.030	0.006	0.022	0.034	22,30,39
	HBeAg(+)	2	0.034	0.000	0.034	0.034	30,39
→Death							
		24	0.263	0.103	0.039	0.390	1,2,3,5,9,11,12,13,14,15,16,18,21,23,24,25,27,29,31,34,35,36,37
	HBeAg(−)	4	0.175	0.032	0.144	0.220	22,30,32,39
	HBeAg(+)	3	0.159	0.022	0.144	0.190	30,32,39
Hepatocellular carcinoma							
→Liver transplantation							
		10	0.103	0.142	0.000	0.352	9,11,12,14,23,27,29,34,35,37
	HBeAg(−)	3	0.117	0.094	0.050	0.250	30,32,39
	HBeAg(+)	3	0.117	0.094	0.050	0.250	30,32,39
→Death							
		22	0.369	0.163	0.056	0.843	1,2,3,5,9,11,12,13,14,15,16,18,21,23,24,25,27,29,34,35,36,37
	HBeAg(−)	5	0.301	0.085	0.233	0.433	22,30,31,32,39
	HBeAg(+)	4	0.365	0.139	0.233	0.560	30,31,32,39
Liver transplantation (first year)							
→Death							
		12	0.155	0.040	0.066	0.210	12,14,15,16,21,23,27,29,34,35,37
	HBeAg(−)	4	0.085	0.026	0.069	0.130	22,30,32,39
	HBeAg(+)	3	0.070	0.000	0.069	0.070	30,32,39
Liver transplantation (second year−)							
→Death		9	0.036	0.018	0.015	0.057	12,15,16,21,23,27,29,35
	HBeAg(−)	1	0.025	0.000	0.025	0.025	22

The numbers are the same as reference list

表7　B 型慢性肝炎の医療経済評価における効用値

Heatlth State	N	Utility				Reference#
		Mean	SD	Min	Max	
Chronic hepatitis/ Chronic active hepatitis	20	0.80	0.13	0.52	0.99	1,5,8,9,13,14,15,18,21,22,23,24,25,27,29,30,33,35,36,37
Chronic hepatitis (HBeAg seroconverted)	9	0.87	0.12	0.69	0.99	1,3,15,21,22,27,30,33,35
Chronic hepatitis (HBsAg loss)	6	0.93	0.06	0.86	0.99	15,21,22,27,33,35
Compensated cirrhosis	23	0.77	0.12	0.56	0.92	1,3,5,8,9,11,13,14,15,18,21,22,23,24,25,29,30,32,34,35,36,37,39
Decompensated cirrhosis	25	0.40	0.14	0.15	0.65	1,3,5,8,9,11,13,14,15,18,21,22,23,24,25,27,29,30,32,33,34,35,36,37,39
Hepatocellular carcinoma	25	0.43	0.15	0.12	0.73	1,3,5,8,9,11,13,14,15,18,21,22,23,24,25,27,29,30,32,33,34,35,36,37,39
Liver transplantation	16	0.65	0.12	0.50	0.86	9,11,14,15,21,22,23,27,29,30,32,33,34,35,37,39
Liver transplantation (2nd year–)	9	0.71	0.04	0.64	0.76	14,15,21,22,23,27,29,33,35

#The number is same as number of reference list

表8-1 B型慢性肝炎治療の医療経済評価結果一覧（1）

No	Authors	Pub. Year	Time Horizon	Condition	Stragegy	Cost (US$)	Effect 1		Effect 2		ICER	
							Unit	Value	Unit	Value	(Comparison)	Cost(US$)/QALY
1	Wong JB	1995	lifetime	HBeAg(+)	Standard Care	32,700	LY	24.8	QALY	22.4		
					IFN-alpha	30,600		27.9		25.8	Standard Care	Dominated
2	Louis-Jacques O	1997	lifetime	HBeAg(+) Children	Stadard Care		Cost/LY saved	17,315				
					IFN-alpha(30% response)			16,227				
					IFN-alpha(6% response)			20,209				
				HBeAg(+) Adolescents	Stadard Care		Cost/LY saved	17,566				
					IFN-alpha(30% response)			18,563				
					IFN-alpha(6% response)			22,606				
				HBeAg(+) Adult	Stadard Care		Cost/LY saved	16,604				
					IFN(30% response)			17,673				
					IFN-alpha(6% response)			21,658				
3	Crowley SJ	2000	70 years	HBeAg(+)	No treatment	14,308	LY	24.1				
					IFN-alpha	14,620		24.7				
					Lamivudne (52W)	15,092		28.6				
4	Brooks EA	2001	1year	CHB	IFN-alpha		Number of SC/Fixed drug budet	32	Number of progressed CC/Fixed drug buget	28		
					Lamivudine			62		6		
5	Aggarwal R	2002	30 years		No treatment	842	LY	24.54	QALY	22.75		
					IFN	6,207	LY	25.14		23.69	No treatment	5,729
6	Crowley S	2002	70 years		No treatment	19,825	LY	23.8	QALY	16.40		
					IFN-alpha	20,102	LY	24.4		17.00	No treatment	1,270
					Lamivudine and IFN-alpha	20,480	LY	29.4		21.10	IFN-alpha	Dominated
7	Orlewska E	2002	1 years	HBeAg(+)	no antiviral treatment	392	seroconversion rate	0.06	non-progression to cirrhosis rate	0.890		
					IFN alpha	2,673		0.13		0.900		
					IFN alpha, not ineligible Lamivudine	3,127		0.169		0.930		
					Lamivudine, not ineligible, IFN alpha	1,990		0.17		0.970		
8	Pwu RF	2002	lifetime	HBeAg(+)	no treatment, Discounted	20,300	LY	28.67	QALY	16.45		
					IFN, Discounted	22,900	LY	29.08		16.63	no treatment	14,200
9	Kanwal F	2005	lifetime	HBeAg(-)	No treatment	30,580			QALY	7.77		
					IFN-alpha	33,402				9.21	No treatment	2,280
					Lamivudine	46,495				9.28		ext.dominace
					Lamivudine→Adefovir	78,148				11.10	IFN	16,593
					Adefovir	85,489				11.18	Lamivudine→Adefovir	90,983
				HBeAg(+)	No treatment	11,964			QALY	10.86	Adefovir salvage	Dominated
					IFN-alpha	15,564				11.52	Adefovir salvage	Dominated
					Lamivudine	20,582				11.77	Adefovir salvage	Dominated
					Adefovir	21,018				12.57	Adefovir salvage	Dominated
					Adefovir salvage	10,436				12.70		

表8－2　B型慢性肝炎治療の医療経済評価結果一覧（2）

No	Authors	Pub. Year	Time Horizon	Condition	Stragegy	Cost (US$)	Effect 1		Effect 2		ICER	
							Unit	Value	Unit	Value	(Comparison)	Cost(US$)/QALY
10	Buti M	2006	4 years	HBeAg(−)	Lamivudine /4 years treatment	13,586	viological response/4 years	0.404				
					Adefovir /4 years treatment	25,975		0.78				
11	Kanwal F	2006	lifetime		No teatment	111,000			QALY	3.36		
					Lamivudine	139,800				4.23		
					Adefovir	137,700				4.55	No teatment	22,362
					Entecavir	147,000				4.73	Adefovir	53,143
12	Shepherd J	2006	lifetime	All	No treatment	15,275	LY	22.29	QALY	17.07		
					IFN-alpha	22,513		22.98		17.75	No treatment	10,702
					PegIFN	28,113		23.51		18.26	IFN	10,925
					Lamivudine	21,937		23.36		18.08	No treatment	6,580
					Adefovir	53,419		24.55		19.15	Lamivudine	29,584
				HBeAg(+)	No treatment	13,216	LY	25.27	QALY	20.08		
					IFN-alpha	20,281		25.78		20.58	No treatment	14,170
					PegIFN	26,254		25.99		20.78	IFN	28,864
					Lamivudine	19,478		26.32		21.08	No treatment	6,230
					Adefovir	45,037		27.35		22.02	Lamivudine	27,299
				HBeAg(−)	No treatment	20,082	LY	15.32	QALY	10.05		
					IFN-alpha	27,718		16.45		11.14	No treatment	7,003
					PegIFN	32,446		17.72		12.36	IFN	3,860
					Lamivudine	27,673		16.46		11.08	No treatment	7,376
					Adefovir	72,973		18.01		12.44	Lamivudine	33,246
				All	No treatment	15,275	LY	22.29	QALY	17.07		
					IFN-alpha	22,513		22.98		17.75	No treatment	10,702
					IFN-alpha→Lamivudine	27,066		23.76		18.45	IFN	6,435
					IFN-alpha→Adefovir	48,998		24.81		19.40	IFN	16,046
					IFN-alpha→Lamivudine(Adefovir salvage)	49,530		25		19.56	IFN→Lamivudine	20,358
					PegIFN	28,113		23.51		18.26	No treatment	10,925
					PegIFN→Lamivudine	32,234		24.2		18.88	IFN→Lamivudine	12,081
					PegIFN→Adefovir	51,613		25.13		19.71	IFN→Adefovir	8,301
					PegIFN→Lamivudine(Adefovir salvage)	51,737		25.28		19.83	IFN→Lamivudine(Adefovir salvage)	7,949

表8－3　B型慢性肝炎治療の医療経済評価結果一覧（3）

No	Authors	Pub. Year	Time Horizon	Condition	Stragegy	Cost (US$)	Effect 1		Effect 2		ICER	
							Unit	Value	Unit	Value	(Comparison)	Cost(US$)/QALY
13	Lacey LF	2007	lifetime		No treatment							
				HBeAg(+)	IFN-alpha	3,930	LY	+0.273	QALY	0.11	No treament	35,701
					PegIFN (1 year)	11,076		+0.566		0.57		19,434
					Lamivudine (1 year)	1,296		+0.324		0.32		4,065
					Adefovir (1 year)	1,719		+0.275		0.30		5,760
					Lamivudine (5 years)	4,629		+0.644		0.63		7,334
					Adefovir (5 years)	6,477		+0.738		0.74		8,747
					Lamivudine + Adefovir as rescue (5 years)	4,873		+0.872		0.85		5,709
					Adefovir + Lamivudine as rescue (5 years)	6,251		+0.805		0.81		7,692
				HBeAg(−)	PegIFN (1 year)	11,404	LY	+0.642	QALY	0.49	No treament	23,462
					Lamivudine (1 year)	1,112		+0.625		0.57		1,956
					Adefovir (1 year)	1,650		+0.516		0.47		3,504
					Lamivudine (5 years)	6,229		+1.133		1.08		5,783
					Adefovir (5 years)	7,765		+1.731		1.67		4,663
					Lamivudine + Adefovir as rescue (5 years)	6,197		+1.838		1.74		3,561
					Adefovir + Lamivudine as rescue (5 years)	7,557		+1.887		1.82		4,161
				HBeAg(+)	IFN-alpha	2,635	LY	−0.05	QALY	−0.21	1 year course of Lamivudine	Dominated
					PegIFN (1 year)	9,780		+0.242		0.25		38,928
					Adefovir (1 year)	424		−0.048		−0.02		Dominated
					Lamivudine (5 years)	3,333		+0.32		0.31		10,667
					Adefovir (5 years)	5,181		+0.414		0.42		12,285
					Lamivudine + Adefovir as rescue (5 years)	3,578		+0.548		0.54		6,689
					Adefovir + Lamivudine as rescue (5 years)	4,955		+0.481		0.49		10,031
				HBeAg(−)	PegIFN (1 year)	10,292	LY	+0.017	QALY	−0.08	1 year course of Lamivudine	Dominated
					Adefovir (1 year)	539		−0.109		−0.10		Dominated
					Lamivudine (5 years)	5,117		+0.508		0.51		10,059
					Adefovir (5 years)	6,653		+1.106		1.10		6,066
					Lamivudine + Adefovir as rescue (5 years)	5,085		+1.213		1.17		4,339
					Adefovir + Lamivudine as rescue (5 years)	6,446		+1.262		1.25		5,165
14	Sullivan SD	2007	lifetime		Lamivudine monotherapy	5,750	LY	14.86	QALY	14.18		
					PegIFN alfa-2a monotherapy	10,233		15.19		14.49	Lamivudine monotherapy	10,943

表8－4　B 型慢性肝炎治療の医療経済評価結果一覧（4）

No	Authors	Pub. Year	Time Horizon	Condition	Straggegy	Cost (US$)	Effect 1		Effect 2		ICER	
							Unit	Value	Unit	Value	(Comparison)	Cost(US$)/QALY
15	Veenstra DL	2007	lifetime		Lamivudine plus Adefovir salvage	34,400			QALY	18.27		
					Entecavir	36,600				18.55	Entecavir	7,600
16	Veenstra DL	2007	lifetime		Lamivudine monotherapy	23,061	LY	22.6	QALY	18.55	PegIFN alfa-2a monotherapy	
					PegIFN alfa-2a monotherapy	29,131		22.99		18.85	Lamivudine monotherapy	20,451
17	All Wales Medicines Strategy Group (AWMSG)	2008	40 years	lowest†	Tenofovir→Lamivudine→BSC				QALY		Lamivudine	17,811
					Tenofovir + Lamivudine→Lamivudine →Tenofovir							23,952
					Entecavir→Lamivudine→Tenofovir							28,140
					Adefovir→Lamivudine→Tenofovir							30,173
					Adefovir + Lamivudine→Tenofovir→ Tenofovir+Lamivudine							40,289
				highest††	Tenofovir→Adefovir+Entecavir→ Adefovir+Lamivudine						Lamivudine	18,583
					Tenofovir + Lamivudine→Entecavir +Adefovir→Entecavir							30,239
					Enrecavir→Entecavir+Adefovir→ Adefovir+Lamivudine							30,443
					Adefovir→Entecavir＋Adefovir→ Lamivudine							40,604
					Adefovir + Lamivudine							49,940
18	Arnold E	2008	20 years	HBeAg(+)	Lamivudine (10 years)	3,472,141	LY		QALY			
					Entecavir (10 years)	1,684,650					Lamivudine	4,362
				HBeAg(−)	Lamivudine (10 years)	5,678,819	LY		QALY			
					Entecavir (10 years)	3,618,292					Lamivudine	5,866
19	Costa AM	2008	10 years	HBeAg(+)	Lamivudine	3,042	LY loss	0.667	QALY loss	0.598		
					Entecavir	2,401		0.224		0.201	Lamivudin	Dominated
				HBeAg(−)	Lamivudine	2,300	LY loss	0.479	QALY loss	0.429		
					Entecavir	2,035		0.142		0.127	Lamivudin	Dominated
20	Lacey L	2008	40 years		Lamivudine(1 year)		LY		QALY			
				HBeAg(+)	IFN-alpha	1,628		−0.066		−0.164	Lamivudine(1 year)	Dominated
					PegIFN (1 year)	5,263		+0.364		+0.413		12,733
					Adefovir (1 year)	979		−0.054		−0.006		Dominated
					Lamivudine (2 years)	707		+0.216		+0.201		3,522
					Adefovir (2 years)	2,621		+0.182		+0.208		12,586
					Lamivudine + Adefovir as rescue (2 years)	948		+0.286		+0.265		3,576
					Adefovir + Lamivudine as rescue (2 years)	2,621		+0.182		+0.208		12,586
					Lamivudine (5 years)	2,316		+0.451		+0.418		5,540
					Adefovir (5 years)	6,250		+0.611		+0.599		10,433
					Lamivudine + Adefovir as rescue (5 years)	34,512		+0.782		+0.724		4,769
					Adefovir + Lamivudine as rescue (5 years)	5,935		+0.707		+0.697		8,514

＊,＊＊第一選択抗ウイルス剤別のその後の薬剤の選択の組合せによる、ICER が最も低い薬剤の組合せ(＊)と最も高い組合せ(＊＊)

表8－5 B型慢性肝炎治療の医療経済評価結果一覧 (5)

No	Authors	Pub. Year	Time Horizon	Condition	Stragegy	Cost (US$)	Effect 1		Effect 2		ICER	
							Unit	Value	Unit	Value	(Comparison)	Cost(US$)/QALY
20	Lacey L	2008	40 years	HBeAg(−)	PegIFN (1 year)	5,657	LY	+0.025	QALY	−0.075	Lamivudine(1 year)	Dominated
					Adefovir (1 year)	1,054		−0.138		−0.116		Dominated
					Lamivudine (2 years)	928		+0.277		+0.255		3,635
					Adefovir (2 years)	2,973		+0.39		+0.353		8,429
					Lamivudine + Adefovir as rescue (2 years)	1,173		+0.445		+0.398		2,945
					Adefovir + Lamivudine as rescue (2 years)	2,973		+0.39		+0.353		8,429
					Lamivudine (5 years)	3,595		+0.672		+0.625		5,757
					Adefovir (5 years)	8,305		+1.484		+1.368		6,072
					Lamivudine + Adefovir as rescue (5 years)	4,693		+1.629		+1.466		3,201
					Adefovir + Lamivudine as rescue (5 years)	8,098		+1.697		+1.56		5,191
21	Spackman DE	2008	lifetime	HBeAg(+)	No treament->NA	28,017	LY	20.34	QALY	17.880		
					Adefovir->Entecavir	51,914		20.57		18.250	Lumivudine	Dominated
					Lamivudine->Adefovir	46,176		20.65		18.380	Entecavir	Ext.dominace
					Telibivudine->Adefovir	53,618		20.77		18.550	entecavir	Dominated
					PegIFN->Entecavir	53,482		20.81		18.640	entecavir	Dominated
					Entecavir->Adefovir	50,264		20.86		18.700	No treatment	27,184
22	Veenstra DL	2008	5 years 10 years lifetime	HBeAg(−)	Adefovir(5 years)	60,058			QALY	15.85		
					Lamivudine(5 years)	47,346				16.07		
					Adefovir(10 years)	86,936				16.69		
					Entecavir(5 years)	57,758				16.71	Lamivudine(5 years)	16,272
					Lamivudine(10 years)	72,673				16.99		
					Entecavir(10 years)	81,891				17.59		
					Adefovir (5 on−1 off)	140,615				18.00		
					Adefovir(Lifetime)	181,702				18.42		
					Lamivudine(5 on−1 off)	117,186				18.49		
					Lamivudine(Lifetime)	152,127				18.83		
					Entecavir(5 on−1 off)	117,958				19.21	Entecavir(5 years)	24,080
					Entecavir(Lifetime)	155,351				19.46	Entecavir (5 on−1 off)	525,084
23	Veenstra DL	2008	lifetime		Lamivudine(48 W)	7,162	LY	11.07	QALY	10.12		
					PegIFN alfa−2a (48 W)	12,001		11.45		10.57	Lamivudine(48 W)	10,690
24	Yuan Y	2008	10 years		Lamivudine	1,430	LY Loss	1.46	QALY Loss	0.116		
					Entecavir	1,071		1.075		0.853	Lamvudine	2,178

表8－6　B 型慢性肝炎治療の医療経済評価結果一覧（6）

No	Authors	Pub. Year	Time Horizon	Condition	Stragegy	Cost (US$)	Effect 1		Effect 2		ICER	
							Unit	Value	Unit	Value	(Comparison)	Cost(US$)/QALY
25	Yuan Y	2008	10 years	HBeAg(+)	Lumivudine	4,664	LY Loss	1.499	QALY Loss	1.34		
				HBeAg(+)	Entecavir			0.682		0.61	Lumivudine	3,230
26	Buti M	2009	lifetime	HBeAg(+)	Tenofovir-BC*	123,007	LY	18.39	QALY	15.430		
					Lamivudine-BC	122,332		17.65		14.670	Tenofovir-BC	887
					Adefovir dipivoxilr-BC	128,039		17.67		14.680	Tenofovir-BC	Dominated
					Entecavir-AS_b	126,739		18.18		15.210	Tenofovir-BC	Dominated
					Telbivudiner-BC	127,368		17.94		14.960	Tenofovir-BC	Dominated
					No treatment-BC	117,098		16.7		13.690	Tenofovir-BC	3,406
				HBeAg(-)	Tenofovirr-BC	148,663	LY	19.28	QALY	16.280		
					Lamivudiner-BC	134,143		17.44		14.300	Tenofovir-BC	7,317
					Adefovir dipivoxilr-BC	145,893		17.36		14.210	Tenofovir-BC	1,339
					Entecavir-AS_b	161,409		19.13		16.110	Tenofovir-BC	Dominated
					Telbivudiner-BC	155,975		18.53		15.470	Tenofovir-BC	Dominated
					No treatment-BC	127,571		15.69		12.480	Tenofovir-BC	5,544
				HBeAg(+)	Tenofovir-AS_a**	134,507	LY	18.64	QALY	15.690		
					Lamivudine-AS_a	134,965		17.94		14.960	Tenofovir-AS_a	Dominated
					Adefovir dipivoxilr-AS_a	140,648		17.96		14.980	Tenofovir-AS_a	Dominated
					Entecavir-AS_b	138,568		18.44		15.480	Tenofovir-AS_a	Dominated
					Telbivudiner-AS_a	139,571		18.21		15.240	Tenofovir-AS_a	Dominated
					No treatment-AS_a	117,098		16.7		13.690	Tenofovir-AS_a	8,710
				HBeAg(-)	Tenofovir-AS_a	150,623	LY	19.44	QALY	16.450		
					Lamivudine-AS_a	136,920		17.67		14.540	Tenofovir-AS_a	7,177
					Adefovir dipivoxilr-AS_a	148,702		17.6		14.460	Tenofovir-AS_a	966
					Entecavir-AS_b	163,446		19.29		16.280	Tenofovir-AS_a	Dominated
					Telbivudiner-AS_a	158,279		18.72		15.660	Tenofovir-AS_a	Dominated
					No treatment-AS_a	127,571		15.69		12.480	Tenofovir-AS_a	5,807
				HBeAg(+)	Tenofovir-AS_b***	158,064	LY	19.5	QALY	16.600		
					Lamivudine-AS_b	161,057		18.92		15.990	Tenofovir-AS_b	Dominated
					Adefovir dipivoxilr-AS_b	166,684		18.94		16.000	Tenofovir-AS_b	Dominated
					Entecavir-AS_b	162,865		19.34		16.420	Tenofovir-AS_b	Dominated
					Telbivudiner-AS_b	164,702		19.15		16.230	Tenofovir-AS_b	Dominated
					No treatment-AS_b	117,098		16.7		13.690	Tenofovir-AS_b	14,113
				HBeAg(-)	Tenofovir-AS_b	173,312	LY	20.95	QALY	18.170		
					Lamivudine-AS_b	169,701		20.09		17.200	Tenofovir-AS_b	3,716
					Adefovir dipivoxilr-AS_b	181,893		20.05		17.160	Tenofovir-AS_b	Dominated
					Entecavir-AS_b	187,071		20.88		18.100	Tenofovir-AS_b	Dominated
					Telbivudiner-AS_b	185,208		20.6		17.780	Tenofovir-AS_b	Dominated
					No treatment-AS_b	127,571		15.69		12.480	Tenofovir-AS_b	8,028

*BC : Base Case　AS-a:第 1 選択薬が無効あるいは耐性時には Tenofovir＋Entecavir の併用投与を行う（HBsAg(+)で 60%，HBsAb(-)で 70%の反応）　AS-b: :第 1 選択薬が無効あるいは耐性時には Tenofovir＋Entecavir の併用投与を行う（HBsAg(+)で 85%，HBsAb(-)で 95%の反応）