Supplementary Data 1. Detailed Description of Individual Patients

Case 1
A 30-year-old Hispanic female was notified of having a positive hepatitis B test after blood donation in 2001. She was initially treated with interferon for 4 months, but treatment was discontinued early because of neutropenia (ANC 1,000/mm³). In 2007, serum hepatitis B virus (HBV) DNA level rose to more than 110 million IU/mL and alanine aminotransferase (ALT) to 123 U/L. Pegylated interferon (p-IFN) was commenced in February 2007 and entecavir was added subsequently. At week 16 on p-IFN, she developed hypothyroidism and required hormone replacement for about 1 year. At week 24, her HBV DNA level was undetectable. Following the completion of p-IFN therapy for 48 weeks, she was found to be HBsAg-negative and anti-HBs-positive. Three months later, HBeAg was also found negative, while her anti-HBe remained negative. As of the last follow-up, the HBs seroconversion and HBeAg loss was maintained 29 weeks and 16 weeks after discontinuation of entecavir, respectively.

Case 2
A 30-year-old Asian female was presumed to have acquired HBV infection early in her life. In 2006, she had no symptoms, but review of past medical records indicated that she had had fluctuating levels of transaminases. Her ALT at that time was 146 U/L and HBV DNA levels 3 million IU/mL. We started p-IFN and tenofovir was added after 8 weeks. Tenofovir was chosen because she was interested in having a baby. Other than mild leukopenia (ANC 910/mm³), p-IFN was well-tolerated. At week 20 after stopping p-IFN, she was HBeAg-negative and anti-HBe-positive. Her HBV DNA was undetectable and her liver tests normal. She continued the tenofovir for another 8 months before stopping it when she became pregnant. She delivered a healthy baby and as of the last follow-up 243 weeks after seroconversion, her status remained unchanged with normal ALT and anti-HBe-positive.

Case 3
A 40 year-old Vietnamese man was incidentally found to be HBsAg-positive in 2001. He received lamivudine therapy for 8 months in 2002, but failed to seroconvert. He took adefovir for 10 months and tenofovir for about 4 years beginning in 2004, but remained HBeAg-positive. In October 2010, the patient was started with p-IFN and entecavir was added at week 8. Laboratory data from week 8, however, showed negative HBeAg and positive anti-HBe. All of his treatment was stopped at week 31 after starting p-IFN therapy when he lost health insurance. As of the last follow-up at 29 weeks after HBe seroconversion, his serostatus was unchanged.

Case 4
A 31-year-old Cambodian male was first found to be HBsAg-positive in 2001. He received lamivudine therapy for 8 months in 2002, but failed to seroconvert. He took adefovir for 10 months and tenofovir for about 4 years beginning in 2004, but remained HBeAg-positive. In October 2010, the patient was started with p-IFN and entecavir was added at week 8. Laboratory data from week 8, however, showed negative HBeAg and positive anti-HBe. All of his treatment was stopped at week 31 after starting p-IFN therapy when he lost health insurance. As of the last follow-up at 29 weeks after HBe seroconversion, his serostatus was unchanged.

Case 5
A 43-year-old Caucasian man was discovered to be HBsAg-positive and anti-HBc IgM-positive in 2001, when he presented with body aches. He failed to clear HBV and upon evaluation in 2011, he was HBeAg-positive with ALT of 390 U/L, HBV DNA more than 110 million IU/mL and anti-HIV-negative. An MR elastography showed liver stiffness of 3.33 kPa (minimal increase). While on p-IFN and tenofovir added at week 10, his ALT increased to 747 at week 17. Subsequently, HBV DNA became undetectable at week 37, when he became HBeAg-negative as well. After completing a 48-week course of p-IFN therapy, he continues on tenofovir monotherapy, as he remains anti-HBe-negative.

Case 6
A 38-year-old Laotian man was diagnosed with chronic hepatitis B in 1991. His liver biopsy showed grade 3 inflammation and stage 2 fibrosis with HBeAg positivity. In August 2006, he started treatment with p-IFN and 1 month later entecavir was added. Treatment continued until February 2009. During treatment, his ALT normalized and HBV DNA undetectable, and at week 23 after completion of p-IFN therapy, he seroconverted to HBeAg-negative and anti-HBe-positive. After 1-year of consolidation treatment, entecavir was stopped. At 160 weeks post-HBe-seroconversion, he remains anti-HBe-positive, although fluctuating levels of HBV DNA (45 to 2,230 IU/mL) and of ALT (65 to 107 U/L) were seen over time. An magnetic resonance imaging showed a fatty liver, but no other significant changes, with normal liver stiffness on elastography.

Case 7
A 51-year-old female African immigrant was diagnosed with hepatitis B in 2002. Her liver biopsy showed grade 1 inflammation and stage 2 fibrosis. She was started on lamivudine in 2003 and after 1.5 years, she was switched to adefovir due to resistance to lamivudine. In 2007, after 2.5 years of adefovir therapy, her viral load decreased from 2.4 million IU/mL to 56 IU/mL. In November 2008, her HBV DNA was 5.4 million IU/
The patient was given p-IFN and after 8 weeks, tenofovir was added. Because of increasing difficulty with side effects of p-IFN including persistent fatigue and body aches, p-IFN was discontinued at week 34 and she continued on tenofovir. By November 2010, she had normal liver tests and achieved HBe seroconversion. After an additional 6 months of consolidation, tenofovir was discontinued. Subsequent, follow-up showed persistence of HBe seroconversion.

Case 8

A 28-year-old female, a daughter of case no. 7, was diagnosed with HBV in 2005. She had positive HBeAg, HBV DNA more than 110 million IU/mL and grade 3 inflammation and stage 3 fibrosis on liver biopsy. In December 2005, p-IFN therapy was started and 6 weeks later, entecavir 0.5 mg daily was added. Because of side effect of interferon such as depression and low ANC (470/mm$^3$), her p-IFN was reduced to 90 µg at week 6 and eventually discontinued at week 16, when her HBV DNA had decreased to 800 IU/mL. In July 2006, she complained nausea and vomiting, which she felt was consistently associated with entecavir. She was switched from entecavir to tenofovir. After slightly over 3-years of tenofovir therapy, she had HBe seroconversion. In January 2010, off all antiviral therapy, she was found to have inoperable hepatocellular carcinoma during work-up of ultrasound for prenatal care, for which she underwent successful liver transplantation in 2011. Currently she is receiving tenofovir for posttransplant prophylaxis and doing well without recurrence of hepatocellular carcinoma or HBsAg.

Case 9

A 16-year-old Vietnamese male was found HBsAg positive at the time of immigration evaluation at the age of 4 year. In 2011, his HBV DNA level was more than 110 million IU/mL and ALT 235 U/mL, when he began therapy with p-IFN followed by an addition of entecavir at week 8. After 49 weeks of p-IFN, he remained HBeAg-positive and anti-HBe-negative, while his HBV DNA was less than 20 IU/mL. He continues on entecavir with undetectable HBV DNA, but remains HBeAg-positive.

Case 10

A 12-year-old brother of case no. 9 was found to have HBeAg-positive chronic hepatitis B. In 2011, he had grade 2 inflammation and stage 1 fibrosis on liver biopsy. He was started on p-IFN followed by introduction of entecavir 8 weeks thereafter. After completion of 48 weeks of p-IFN therapy, he remains on entecavir. At week 85, he was found to be HBsAg-negative and anti-HBs-positive. In spite of the HBs seroconversion, he had detectable HBV DNA (22 IU/mL) as well as positive HBeAg. For the time being, he remains on entecavir.