Supplementary Information
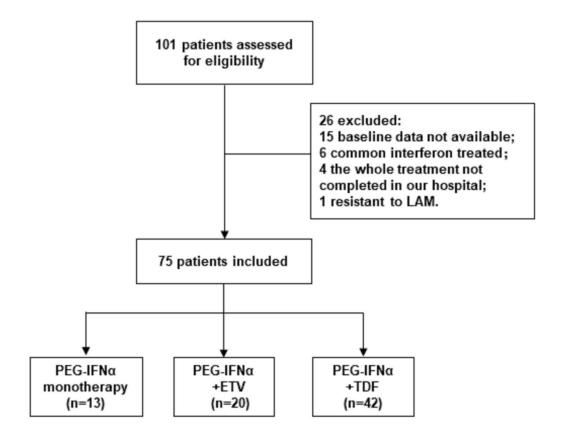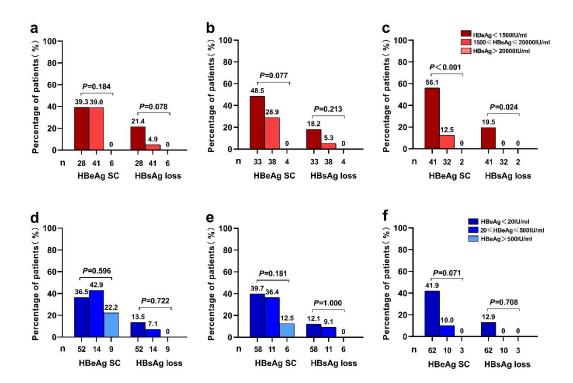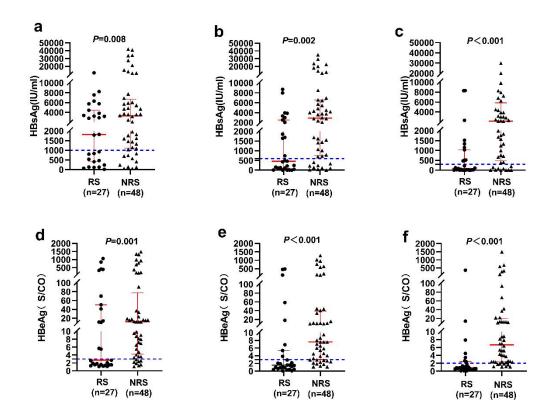

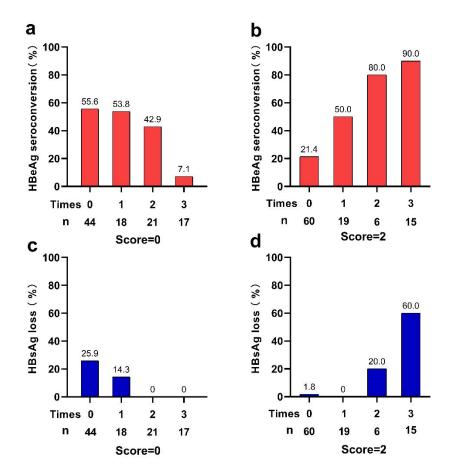**Supplementary figures and figure legends**

Supplementary Figure 1. Flow chart of study patients

Supplementary Figure 2. Application of the single prediction rule based on HBsAg and HBeAg levels at different time points to assess HBeAg seroconversion and HBsAg clearance at 24 weeks post-treatment. (**a,d**) Baseline HBsAg levels, (**b,e**) HBsAg levels at week 12, (**c,f**) HBsAg levels at week 24.

Supplementary Figure 3. Distribution of scatter plots of HBsAg and HBeAg at baseline, week 12, and week 24 based on patients classified into RS (responders) and NRS (non-responders). (**a, d**) baseline, (**b, e**) week 12, (**c, f**) week 24.

Supplementary Figure 4. Relationship between score times at baseline, weeks 12, and week 24, and HBeAg seroconversion and HBsAg loss at 24 weeks post-treatment. (**a**) Score of 0 and HBeAg seroconversion, (**b**) score of 2 and HBeAg seroconversion, (**c**) score of 0 and HBsAg loss, (**d**) score of 2 and HBsAg loss.

Supplementary Tables

Supplementary Table 1. Univariate and multivariate logistic regression analyses at baseline to identify the most meaningful predictors of response at 24 weeks post-treatment

Variables	Univariate analysis OR (95%CI)	*P* value	Multivariate analysis OR (95%CI)	*P* value
Sex (female)	0.341 (0.110–1.060)	0.063		
Age ≤ 40 years	1.709 (0.486–6.009)	0.403		
Pre-treatment duration ≥1 year	1.859 (0.641–5.388)	0.253		
PEG-IFN duration ≥1 year	5.833 (1.983–17.163)	0.001		
Initial				
ALT ≥3×ULN	1.786 (0.598–5.331)	0.299		
HBV DNA ≤4.3 log IU/mL	6.000 (1.682–21.409)	0.006		
HBsAg ≤30000 IU/mL	5.127 (1.296–20.285)	0.020		
HBeAg ≤1000 S/CO	4.263 (1.208–15.040)	0.024		
Baseline				
ALT ≥2×ULN	1.331 (0.378–4.689)	0.656		
HBsAg ≤1000 IU/mL	3.040 (1.085–8.518)	0.034	0.466 (0.153–1.421)	0.180
HBeAg ≤3 S/CO	5.385 (1.983–17.163)	0.002	0.222 (0.074–0.671)	0.008

Prior antiviral therapy (compared with TDF)

ETV	0.722 (0.249–2.095)	0.549
LAM, ADV, LdT	1.296 (0.303–5.540)	0.726
Current therapy (compared with PEG-IFN monotherapy)		
PEG-IFN+TDF	0.429 (0.121–1.519)	0.189
PEG-IFN+ETV	0.367 (0.086–1.567)	0.176

Supplementary Table 2. Univariate and multivariate logistic regression analyses at week 12 to identify the most meaningful predictors of response at 24 weeks post-treatment

Variables	Univariate analysis OR (95%CI)	*P* value	Multivariate analysis OR (95%CI)	*P* value
ALT ⩾ 3×ULN	1.979 (0.706–5.548)	0.195		
HBsAg ⩽600 IU/mL	4.750 (1.695–13.309)	0.003	0.271 (0.091–0.810)	0.019
HBeAg ⩽3 S/CO	5.385 (1.937–14.970)	0.001	0.230 (0.079–0.668)	0.007
ALT decline ⩾ 1×ULN	1.375 (0.284–6.658)	0.692		
HBsAg decline ⩾2 log IU/mL	1.872 (0.664–5.281)	0.236		
HBeAg decline ⩾0.3 S/CO	2.368 (0.692–8.106)	0.170		

Supplementary Table 3. Univariate and multivariate logistic regression analyses at week 24 to identify the most meaningful predictors of response at 24 weeks post-treatment

Variables	Univariate analysis OR (95%CI)	*P* value	Multivariate Analysis OR (95%CI)	*P* value
ALT ＜ 2×ULN	0.978 (0.348–18.398)	0.966		
HBsAg ≤300 IU/mL	6.460 (2.268–18.398)	＜0.001	0.225 (0.067–0.759)	0.016
HBeAg ≤2 S/CO	14.286 (4.534–45.011)	＜0.001	0.089 (0.027–0.297)	＜0.001
ALT decline ≥ 1×ULN	0.523 (0.120–2.284)	0.389		
HBsAg decline ≥3 lg IU/mL	1.548 (0.596–4.020)	0.37		
HBeAg decline ≥0.6 S/CO	3.294 (0.852–12.732)	0.084		

Supplementary Table 4. Kappa coefficient between baseline and week 12, weeks 12 and 24, and baseline and week 24 according to the weighted Kappa consistency test

	Kappa coefficient	*P* value
Baseline to week 12	0.677	＜0.001
Week 12–week 24	0.666	＜0.001
Baseline to week 24	0.542	＜0.001

Supplementary Table 5. Weighted Kappa consistency test between baseline and week 12

Score/number		Week 12			Total
		0	1	2	
Baseline	0	31(4)	9(4)	2(2)	42(10)
	1	2(1)	18(6)	2(1)	22(8)
	2	0(0)	0(0)	11(9)	11(9)
Total		33(5)	27(10)	15(12)	75(27)

Consistent number between scores 0, 1, and 2 at baseline and 12 weeks: 60

Numbers in the brackets refer to the patients that achieved response at 24 weeks post-treatment.

Supplementary Table 6. Weighted Kappa consistency test between week 12 and week 24

Score/number		Week 24			Total
		0	1	2	
Week 12	0	29(2)	4(3)	0(0)	33(5)
	1	6(1)	17(6)	4(3)	27(10)
	2	1(1)	1(0)	13(11)	15(12)
Total		36(4)	22(9)	17(14)	75(27)

Consistent number between scores 0, 1, and 2 at baseline and 12 weeks: 59

Numbers in the brackets refer to the patients that achieved response at 24 weeks post-treatment.

Supplementary Table 7. Weighted Kappa consistency test between baseline and week 24

Score/number		Week 24			Total
		0	1	2	
Baseline	0	31(3)	8(5)	3(2)	42(10)
	1	5(1)	13(4)	4(3)	22(8)
	2	0(0)	1(0)	10(9)	11(9)
Total		36(4)	22(9)	17(14)	75(27)

Consistent number between scores 0, 1, and 2 at baseline and 12 weeks: 54

Numbers in the brackets refer to the patients that achieved response at 24 weeks post-treatment.