

**Supplement Table 1 Summary of publications of kidney transplantation from HBsAg positive kidney donors to HBsAg negative recipients reported between 2005 to Jan, 2021**

Author (year) Country	Type of KT LD/DD (number)	Serology of HBsAg (+) donors	Serology of recipients	Level of anti-HBs titer (mIU/mL)	Prophylaxis regimen		Median F/U (range)	Outcomes	Complication (event rate)
					Nucleos(t)ide analog	HBIG			
Wang XD <sup>[35]</sup> (2020) China	83/0	HBeAg: 0% anti-HBe: 94% anti-HBc: 98% HBV DNA: 28% HBV viral load: 58.6 to 4.04x10 <sup>6</sup> IU/mL	<sup>a</sup> Naïve: 24.1% <sup>b</sup> Natural immunity: 59.1% <sup>c</sup> Vaccination : 16.8%	0: 24.1% 10-100: 37.3% > 100: 38.6%	Lamivudin or entecavir 1 to 3 months or none	2000 IU single dose before KT or none	36 mo (6-106)	5-yr graft survival: 97.6% 5-yr patient survival: 95.2%  outcomes indifference to 384 recipients of anti-HBc(+) donor	2 HBV DNA (+) 2 HBsAg (+) (both in anti-HBs (-) recipients) 1 died of liver failure 8 acute liver injury (definition: ALT M>100, F > 80 U/L or total bilirubin > 34umol/L) 7 anti-HBc positive seroconversion
Yegit <sup>[70]</sup> (2019) Turkey	1	HBV DNA: 0%	<sup>b</sup> Natural immunity 100%	>100	Lamivudine	None	Na	Patient and graft survive after treated with Tenofovir	1 HBV DNA (+) 1 HBsAg (+) 1 acute liver injury
V.T. Yilmaz <sup>[13]</sup> (2015) Turkey	24/2	HBeAg: 0% anti-HBe: 100% anti-HBc: 100% HBV DNA: 100% HBV viral load: na	<sup>d</sup> Immunization: 100%	452+384	Lamivudine 6 months	None	Na	5-yr graft survival: 85% 5-yr patient survival: 94%  outcomes indifference to 52 recipients of anti-HBs(-) donor	3 HBV DNA (+) (all in vaccination group) 0 liver failure 3 acute liver injury (definition: na) anti-HBc positive seroconversion: na
H.Asuman yavuz <sup>[37]</sup> (2015) Turkey	111/0	HBV DNA: 0%	<sup>d</sup> Immunization: 100%	>10	None	None	NA	Graft survival 96% Patient survival: 94.6%  outcomes indifference to 2168 recipients of anti-HBs(-) donor	<sup>e</sup> No HBV transmission 0 acute liver failure 0 acute liver injury (definition: 2 times above upper normal limit for 3 consecutive measurements) anti-HBc positive seroconversion: na
H. Jun <sup>[81]</sup> (2015)	4/0	HBeAg: 0% anti-HBe: 100%	<sup>b</sup> Natural immunity:	54 to >1000	Lamivudine 3 months	None	12 mo	Graft survival 100%	<sup>e</sup> No HBV transmission

Korea		anti-HBc : 100%	100%					Patient survival: 100%	0 acute liver failure 0 acute liver injury (definition: na)
W. Chanchaoenthana <sup>[14]</sup> (2014) Thailand	0/43	HBeAg: 0% anti-HBc: 100% NAT : 100% HBV DNA: 2.3% HBV viral load: 76 IU/mL	<sup>b</sup> Natural immunity: 30.2% <sup>c</sup> Vaccination : 69.8%	385.7 to >1000	Lamivudine 12 months or none	5000 IU single dose (only in 2 recipients: one underwent plasmapheresis and one receive organ from HBV DNA positive donor)	58.2 mo (16.7 to 158)	Graft and patient survival indifference to control group (86 recipients of anti-HBs(-) donor)	<sup>e</sup> No HBV transmission 0 acute liver failure 0 acute liver injury (definition: na)  anti-HBc positive seroconversion: 0%
E.Magiorkinis <sup>[45]</sup> (2013) Greece	0/1	HBeAg: 0% anti-HBe: 100% anti-HBc: 100%	<sup>c</sup> Vaccination	11.6	None	Unknown dose	16 mo	Patient died with functioning graft	Hepatitis B flare (mutationG145R) with acute liver failure
Z.K.Celebi <sup>[38]</sup> (2013) Turkey	4/0	HBeAg: 0% Anti-HBe: 100% Anti-HBc: 100% HBV DNA: 0%	<sup>c</sup> Vaccination : 100%	60 to >1000	Lamivudine	2000 IU single dose if Anti-HBs<100	5 to 26 mo	Graft survival 100% Patient survival: 100%	<sup>e</sup> No HBV transmission 0 acute liver failure 0 acute liver injury (definition: na)  anti-HBc positive seroconversion: 100% 4/4
G. Singh <sup>[82]</sup> (2013) US	1/0	HBeAg: 0% Anti-HBe: 100% Anti-HBc: 100% HBV DNA: 0%	<sup>c</sup> Vaccination	150	None	None	9 yr	Patient and graft survive at the end of follow up period	<sup>e</sup> No HBV transmission 0 acute liver failure 0 acute liver injury (definition: na)
E.Tatar <sup>[83]</sup> (2012) Turker	6/9	HBV DNA: 0%	<sup>d</sup> Immunization: 100%	>10	Lamivudine	Unknown dose	40 mo	Graft survival: 86.7% Patient survival: 86.7%	anti-HBc positive seroconversion: 0% HBV transmission: na 1 liver failure acute liver failure: na acute liver injury: na (definition: na)  anti-HBc positive seroconversion: na

M.Tuncer <sup>3</sup> 6] (2012) Turkey	35/0	HBV DNA: 0%	<sup>d</sup> Immunization: 100%	>10	None	None	2 yr	Graft survival: 97.1 % Patient survival: 100% Outcome indifference to 1195 recipients of anti-HBS(-) donor	<sup>e</sup> No HBV transmission 0 acute liver failure 0 acute liver injury (definition: na) anti-HBc positive seroconversion: na
J. mohrbach <sup>8</sup> 4] (2010) Germany	2/0	anti-HBc: 100% HBV DNA: 0%	<sup>b</sup> Natural immunity: 100%	336 and 1000	None	None	14 and 31 mo	1 patient died from ovarian cancer with functioning graft	<sup>e</sup> No HBV transmission 0 acute liver failure 0 acute liver injury (definition: na)
H. Jiang <sup>15]</sup> (2009) China	0/65	HBV DNA: 10.7% HBV Viral load: 10 <sup>4</sup> to 3.8 x 10 <sup>8</sup> copy/mL	<sup>b</sup> Natural immunity: 51% <sup>c</sup> Vaccination : 49%	98.4 +/- 81.4	Lamivudine 100 mg 6 months if donor were HBV DNA positive	400 IU on day of surgery and at 1 months or 400 IU weekly for 3 m if DNA +	30.2 mo (17-68)	Graft and patients survival indifference to control group (308 recipients of anti-HBS (-) donors)	1 HBsAg (+) (recipient with anti-HBs 4.6mIU/mL) 0 acute liver failure 60% acute liver injury (definition: ALT >50 U/L or total bilirubin > 23umol/L) anti-HBc positive seroconversion 21.8% (7/32)
V.sumethkul <sup>33]</sup> (2009) Thailand	0/14	HBeAg: 0%	<sup>b</sup> Natural immunity: 64.3% <sup>c</sup> Vaccination : 35.7%	10->1000	None	None	Mean 137 mo	10-yr graft survival: 84.6% 10-yr patient survival 92.8%	<sup>e</sup> No HBV transmission 0 acute liver failure 0 acute liver injury (definition: 2 times above upper normal limit for 3 consecutive measurements)
I.berber <sup>85]</sup> (2005) Turkey	4/3	HBeAg: 0% anti-HBc: 0% HBV DNA: 0% (All results were only available in LL group)	<sup>b</sup> Natural immunity: 28.6% <sup>c</sup> Vaccination : 71.4%	na	Lamivudine 100 1 to 3 years (only DD)	None	30 (16-121) mo	Graft survival 100% Patient survival: 100%	<sup>e</sup> No HBV transmission 0 acute liver failure 0 acute liver injury (definition: na)

**Note:** <sup>a</sup>naive: recipients who were negative for anti-HBs and anti-HBc, <sup>b</sup>natural immunity: recipients who were positive for both anti-HBs and anti-HBc, <sup>c</sup>vaccination: recipients who were positive for anti-HBs alone, <sup>d</sup>immunization: recipients were positive for anti-HBs but anti-HBc status were not reports in the study, <sup>e</sup>HBV transmission: *de novo* HBsAg positive seroconversion or detectable HBV DNA, method of detection and duration of follow up were difference across the studies. Abbreviation: (+) positivity; (-) negativity; anti-HBc: hepatitis B core antibody; anti-HBe: hepatitis B e antibody; anti-HBs: hepatitis B surface antibody; ALT: alanine aminotransferase DD: Deceased donor kidney transplant; F: female; F/U: follow-up periods; HBeAg: hepatitis B e antigen; HBIG: hepatitis B immunoglobulin; HBV: hepatitis B virus; HBV DNA: hepatitis B deoxyribonucleic acid; HBsAg: hepatitis B surface antigen; IU: international unit; KT: kidney transplant; LD: Living donor kidney transplant; M: male; na: data are not available; mo: month NAT: Nucleic acid amplification test; yr: year.

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