Supplementary Table 1: Detailed clinical information on 16 HBV/HDV enrolled in the study

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| **Patient ID** **Age at sample collection /Sex/Country of Birth/****Date PBMC Sample collected** **Follow-up (range)**  | **HBV:** **(All HBeAg negative except ID#370)****Genotype,** **Serial HBV DNA & Quantitative (q) HBsAg (IU/mL)** |  **HDV: Genotype & Serial Hepatitis Delta RNA testing (copies/mL)** | **Antiviral Therapy (Year initiated)** | **Liver Tests: Serial ALT, (U/L), Transient Elastography or FibroScan (TE, kPa), Ultrasound for HCC surveillance.** | **Other clinical data** **(i.e., pregnancy, co-morbidities)** |
| Database ID: 07-1431-1411Sample ID# 103 40 M / Mongolia/2011-2020 | Genotype DHBV-DNA: 130 (2011), 3.4 x 106 (2012), 7.1 x 105 (July 2015), 180 (October, 2015), undetectable (2016-2020)/ qHBsAg: 1444 (2015), 38000 (2018), 94 (2019), 98.4 (2020) | Genotype 12.7 x 103 (July 2015), 2.6 x 104 (Oct 2015),undetectable (2017, 2019). | Peg-IFN/TDF (2013)TDF (2015)ETV (2020) | 53 (2015), 175 (Jan 2016), 40 (April 2016), 35 (2017), 65 (2018), 38 (2019), 51 (2020)TE: 5.5 (2014), 22 (2015), 21.3 (2017), 16.1 (2019), 13.1 (2020)US: no HCC, cirrhosis (2020) | Child-Pugh A Cirrhosis, prior acute/chronic liver failure afteracute HDV superinfection from spouse in July 2015 ID#104, see case report (1) |
| Database ID: 07-1241-0432Sample ID# 10438 F/ Mongolia/2011-2020 | Genotype AHBV-DNA: 160 (2012), 12 (2013), <10 (2014-2018), undetectable (2019), 12 (2020)qHBsAg: 38621 (2015), 33057 (2016), 17054 (2017),6610 (2018) | Genotype 1 HDV RNA: positive (2011, 2015), negative (2017, 2018, 2019), Positive (May 2020), Negative (Oct 2020). | TDF (2016-2017)ETV (2020) | ALT – 32-60 (2011), 38 (2012), 23-38 (2013), 26 (2014), 34-49 (2015), 34-405 (2016), 55-186 (2017), 46-51 (2018), 40 (2019), 57 (2020)TE- 9.3 (2014), 6.3,9.5 (2015), 9.9 (2017), 5.7 (2020) US (2020) –mild coarsening, no HCC  | G2P2 (children HBV immune); see refs (1)(2) |
| Database ID: 07-1741-1401Sample ID# 17735 M/ Sudan/2012-2017 | Genotype DHBV-DNA: 2700 (2012), 4x109 (January 2016), 3022 (April 2016)qHBsAg: 21235 (January 2016), 7255 (April 2016) | Genotype 1HDV RNA Positive (2012 & 2016) | TDF prescribed in January 2016 | ALT – 339 (2013), 79 (2014), 31 (2018)TE – 8 (2012), 12.6 (2016)US – Left lobar atrophy, no HCC (2017) | Child Pugh A Cirrhosis |
| Database ID: 07-8569-1560Sample ID#21862 M/ Canada/ 2013-2019 | Genotype DHBV-DNA: <10 (2014), 13 (2016), undetectable (2019)qHBsAg: 2283 (2014), 0.13 (2016), 0 (2020) | Genotype 1Positive (2013), negative (2016, 2019) | Initially on Lamivudine, IFN (2014-2015), switched to TDF | ALT -139 (2013), 79 (2014), 31 (2018)TE - 9.4 (2013), 7.4 (2014), 6.4 (2018), 5 (2019)Liver biopsy: Grade 2, Stage 2 (2012) | Lamivudine resistance, |
| Database ID: 07-8651-1428Sample ID#32321 F/ Liberia/2016-2017 | Genotype unknownHBV-DNA: 17 (2015), 17 (2016), <10 (2017), 69 (2019) | Genotype 22 x 107 (2016) | Prescribed IFN, TDF.  | ALT 145 (2015), 43 (2016), 57 (2017)TE 8.9 (2016), 7.7 (2017)US: Normal (2012) | Lost to follow-up |
| Database ID: 07-1871-0915Sample ID#32548M/Mongolia/2016-2018 | Genotype unknownHBV-DNA: <10 (2016-2017), 24 (March 2018), undetectable (2018)qHBsAg 26000 (2017), 20072 (2018) | Genotype 13.1x108 (2016), 4.8x107 (2018)  | TDF (2016-present), IFN (2017-2018) | ALT 81(2016), 65 (2017), 109 (2018)TE 9.5 (2016), 10.4 (2018)US: No HCC, subtle nodularity (2018) | Child-Pugh A CirrhosisEGD-portal hypertensive gastropathy. |
| Database ID: 07-4831-1437Sample ID #33237 F/ Columbia/2016-2020 | Genotype DHBV-DNA: <10 (2016-2017), undetectable (2018-2020)qHBsAg: 5087 (2017), 4353 (2018), 5276 (2020) | Genotype 1HDV RNA: 4.5x 106 (2016), 1.4 x 105 (2018) | Untreated, ETV recommend | ALT: 41 (2016), 50 (2017), 57 (2018), 51 (2020)TE: 9.8 (2016), 6.4 (2017), 7.9 (2018), 5.2 (2020)US: No HCC, suspect regenerative nodules/cirrhosis | G4P3 (children HBV immune) |
| Database ID: 07-9941-0348Sample ID#33640 F/ Mongolia/ 2016-2020 | Genotype AHBV-DNA: <10 (2016-October 2020)qHBsAg: 6335 (2016), 5545 (2017), 7105 (2018), 5458 (2019), 6464 (2020) | Genotype 1HDV RNA: Positive (2016), 2.3x106 (2018), 7.8x105 (2019),2.4X 106 (2020) |  ETV (2020) | ALT: 68 (2016), 104 (2017), 35 (2018), 125 (2019), 38 (2020)TE: 5.8 (2016), 4.4 (2017), 6 (2018), 7.9 (2020)MR elastography: Stage 0US: no HCC, no cirrhosis (2020) | G3P3 (children HBV immune)Syphilis (treated 2007 and 2016) |
| Database ID: 07-1281-0810Sample ID#34255 M/Mongolia/2016-2020 | Genotype E HBV-DNA: <10 (2016-2020)qHBsAg: 210 (2017), 90 (2018), 83(2019)  | Genotype 1 HDV RNA: 7.1x103 (2016), not detected (2017-2020) | IFN: (2012-2014) TDF: 2014-2017Tenofovir alafenamide (TAF): (2017) | ALT 25 (2016), 28 (2017), 12 (2018), 14 (2019), 21 (2020)TE 14.3 (Feb 2016), 8.4 (May 2016), 8.5 (2017), 9.1 (2018)Liver biopsy: October 2011- stage 3, grade 3US: no HCC, no cirrhosis (2020) | Portal hypertensive gastropathy (2013) |
| Database ID: 07-3611-1559Sample ID#34748 M/Sudan/2016-2020 | Genotype unknownHBV-DNA: 31 (2016), undetectable (2017-2019)qHBsAg: 2237 (2017),582 (2019) | Genotype 1HDV RNA: 3.5x106 (2017), undetectable (2018), positive (2019) | TDF (2016) | ALT: 92 (2016), 224 (2017), 94 (2018), 40 (2020)TE: 11.1 (2016),9.7 (2017), 9.8 (2018) 4.7 (2020)US: no HCC, regenerative nodules, TIPS patent (2020) | Decompensated cirrhosis (Child Pugh B), Ascites, Esophageal variceal bleeding, transhepatic portosystemic shunt (TIPS), thrombosis (2016) |
| Database ID: 07-3051-1565Sample ID#35358M/ Eastern Siberia/ 2016-2020 | Genotype unknownHBV-DNA: <10 (2016-2018), 11 (2019)qHBsAg: 10321 (2017), 9078 (January 2018), 6516 (August 2018), 8072 (2020) | Genotype 2HDV RNA: 1.8x106 (2017), 3.9x106 (2018), 3.5x105 (2019) | ETV (2017), referred to clinical trial | ALT 110 (2016), 164 (2017), 130 (2018), 219 (2019), 314 (2020)TE: 16.1 (2019) 13 (2019)8.9 (2018)10.6 (2017)US: no HCC, no portal hypertension (2020) | Child Pugh A Cirrhosis Hyperthyroidism  |
| Database ID: 07-7581-1563Sample ID#35833F/Kenya/2018-2019 | Genotype EHBV-DNA: 532 (2018), 19 (2019)qHBsAg: 2615 (2017), 183.8 (2019) | Genotype 1HDV RNA: 3.3x104 (2017),Negative (2019) | ETV  | ALT 23 (2017), 2018 (17)TE: 5.3 (2017), 6.6 (2018), 5.2 (2019)US: no HCC, no cirrhosis, mild coarsening (2019) | -G1P1, (HBV immune)-TB+ (pleural biopsy)- Typhoid- Focal segmental glomerular sclerosis - Schistosomi mansoni +  |
| Database ID: 07-3641-0472Sample ID#360(2)36F/Liberia/2017-2020 | Genotype EHBV-DNA: 70 (2017, <10 (2017)qHBsAg: 11453.3 (2017), 2558 (2019) | Genotype 1HDV RNA: 8.5x104 (June 2017), 107 (August 2017) | TDF (2012, pregnancy)TDF (May 2017-2020-sporadic use, loss benefits) | ALT: 70 (2017)TE: 42 (2017), 42 (2018), 43.6 (2019)US/MRI: – no residual HCC (2020), radiofrequency ablation of dysplastic liver nodule (2019) | -G2P2, HBV immune childrenEssential HypertensionChild-Pugh A Cirrhosis |
| Database ID: 07-1381-1567Sample ID#36429M/Kenya/2017 | Genotype DHBV-DNA: 93 (2017), <10 (February 2018), 19 (August 2018)qHBsAg: | Genotype 1HDV RNA: 4.2x105 (2017), 6.9x 104 (2018) | ETV (Oct 2017),IFN for 4 weeks (Nov 2018) | ALT 88-167 (2017), 1-115 (2018), TE 22.4 (2017), 22.5 (2018) | IFN side effects cytopenia, fatigue |
| Database ID: 07-2551-0388Sample ID #37039F/ Moldovia/2017-2019 | Genotype unknownHBV-DNA: 24,000 (2010), undetectable (2017), <10-13(2018), 10 (2019)qHBsAg: 25,755 (Sept 2018), 33,198 (Feb 2018), 26,033 (Oct 2016)\*HBeAg Positive, HBeAb Negative | Genotype 1HDV RNA: 4.1x107 (2017), 4x105-4.2x106 (2018), 7.5x105 (2019), 2.75x106 (July 2019, after finish IFN) | TDF (2017)IFN ( 48 weeks 2017-2018) | ALT: 22-60 (2017), 29-42 (2018), 37 (2019)TE: 11.6 (2017), 5.6 (2018), 12.6 (2018), 8.9 (2019)US: mild heterogenous echotexture, no cirrhosis or overt portal hypertension (2020) | G1P1 (child HBV immune)  |
| Database ID: 07-1094-1600Sample ID#39545M/Mongolia/2018-2020 | Genotype DHBV-DNA: 103 (2018), undetectable (2020)qHBsAg: 0.6 (2018), undetectable (2020) | Genotype unknownHDV RNA: Negative (2017),Negative (2018) | ETV last dispensed September 2020 (possible stop If cleared HBsAg) | ALT: 31 (2018)TE: 5.5 (2018)US: no HCC, no cirrhosis (2020) |  |

References:

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