REVIVA
Red de VIH/SIDA
del Valle del Cauca

Simposio de Actualización en VIH
Cali 2023

Moderadora
Claudia Isabel González
Médica experta en VIH - Cali

08:00 - 08:35 TB y VIH: Novedades terapéuticas que cambian paradigmas
José Fernando García
Médico infectólogo - Cali

08:45 - 09:20 Enfoque y manejo de las viremias de bajo nivel
Ernesto Martínez
Médico infectólogo - Cali

09:30 - 10:05 Hepatitis B y VIH, certezas e incertidumbres en diagnóstico y manejo
Abraham Katime
Médico infectólogo - Santa Marta

10:15 - 10:30 Receso

10:30 - 11:05 ¿Qué hacer y qué no hacer en el manejo de la sífilis en PVVIH?
Juan Carlos Cataño
Médico infectólogo - Medellín

11:15 -11:40 Actualización tratamiento antirretroviral en niños y adolescentes
Alexandra Sierra
Médica infectóloga pediatra - Cali

11:50 - 12:25 Micosis endémicas en VIH
Julián Hoyos
Médico infectólogo - Pereira

Inscripciones

Sábado 15 de julio
08:00 am a 01:00pm

Hotel Marriot
Av 8N 10-18

GSK × ViiV Healthcare GILEAD Creating Possible **www.reviva.org.co**

Dr. Abraham Katime Zuñiga

Katime@dr.com

- ***Especialista en Medicina Interna e Infectología.***
- ***Egresado de los programas de Universidad del Norte, Universidad Militar Nueva Granada (Hospital Militar Central) y Universidad Nacional Autónoma de México (Instituto Nacional De Ciencias Médicas y Nutrición "Salvador Zubirán").***
- ***Miembro de la ACIN – Asociación Colombiana De Infectología.***
- ***Docente Universidad Metropolitana en el postgrado de Medicina Interna.***
- ***Asesor externo equipos de vigilancia enfermedades interés en salud publica en Distrito de Santa Marta y Departamento del Magdalena.***
- ***Asesor del Comité de Evaluación Regional de Casos Especiales de Tuberculosis Costa Caribe.***
- ***Infectólogo en programas de atención integral VIH (Quimiosalud IPS e IPS de la Costa).***
- ***Infectólogo en Hospital Universitario Julio Méndez Barreneche y Clínicas Privadas de la ciudad de Santa Marta.***
- ***Múltiples publicaciones en el área de VIH y Medicina Tropical.***

Hepatitis B y VIH

Dr. Abraham Katime Zúñiga.

Especialista Medicina Interna – Enfermedades Infecciosas.

Docente Postgrado Universidad Metropolitana.

Miembro Asociación Colombiana de Infectología (ACIN).

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ACIN ASOCIACIÓN COLOMBIANA DE INFECTOLOGÍA

REVIVA

Disclosures

No conflicto de interés

REVIVA

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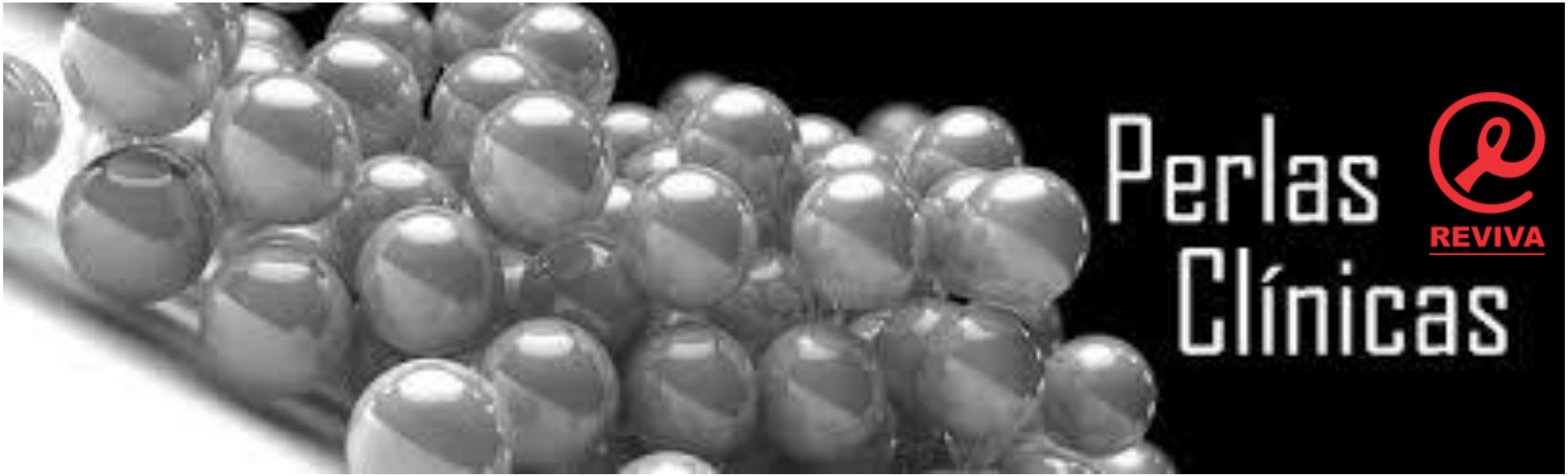
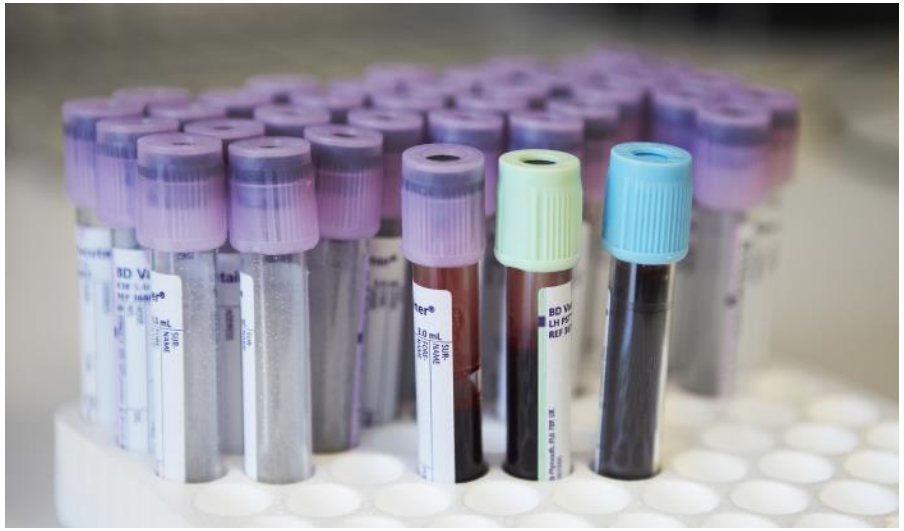
Simposio de Actualización en VIH
Cali 2023



Cuales son los laboratorios de tamizaje hepatitis virales que se deben solicitar al ingreso del paciente VIH a programa de atención integral?

Guía de Práctica Clínica (GPC)
basada en la evidencia científica para la atención de la infección por VIH/SIDA en personas adultas, gestantes y adolescentes

Guía para profesionales de la salud. Guía N° 39-2021

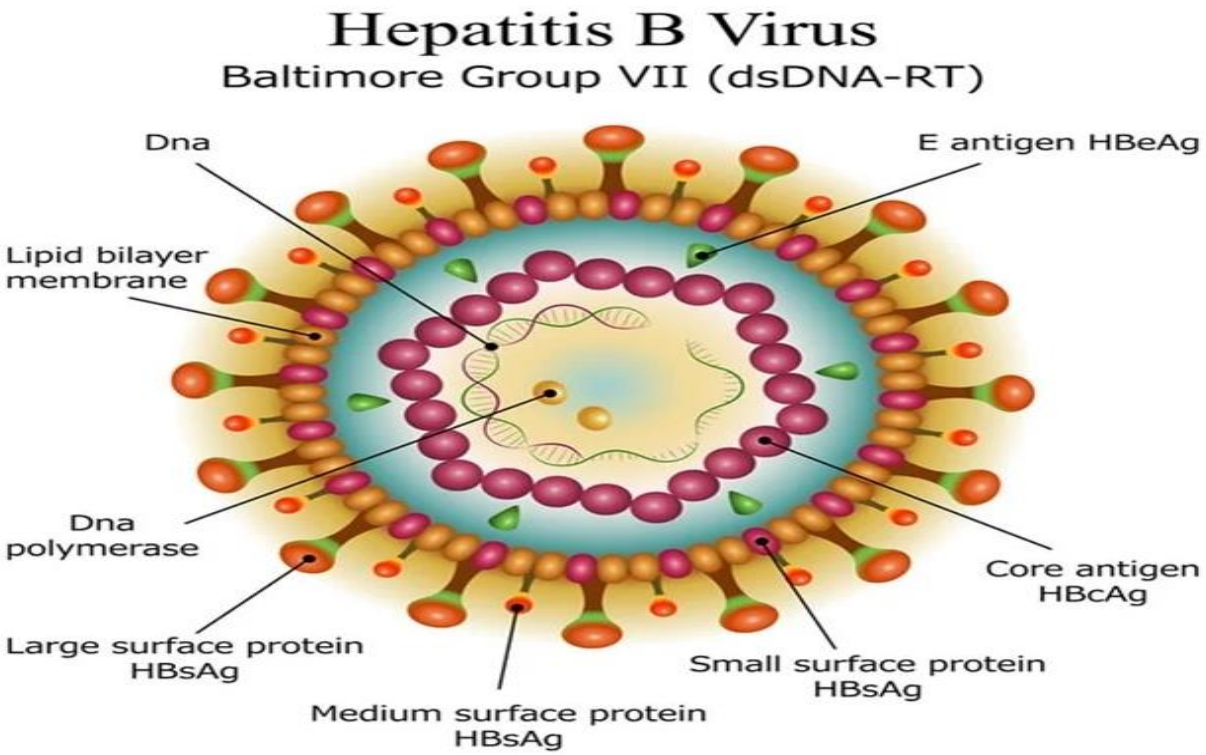


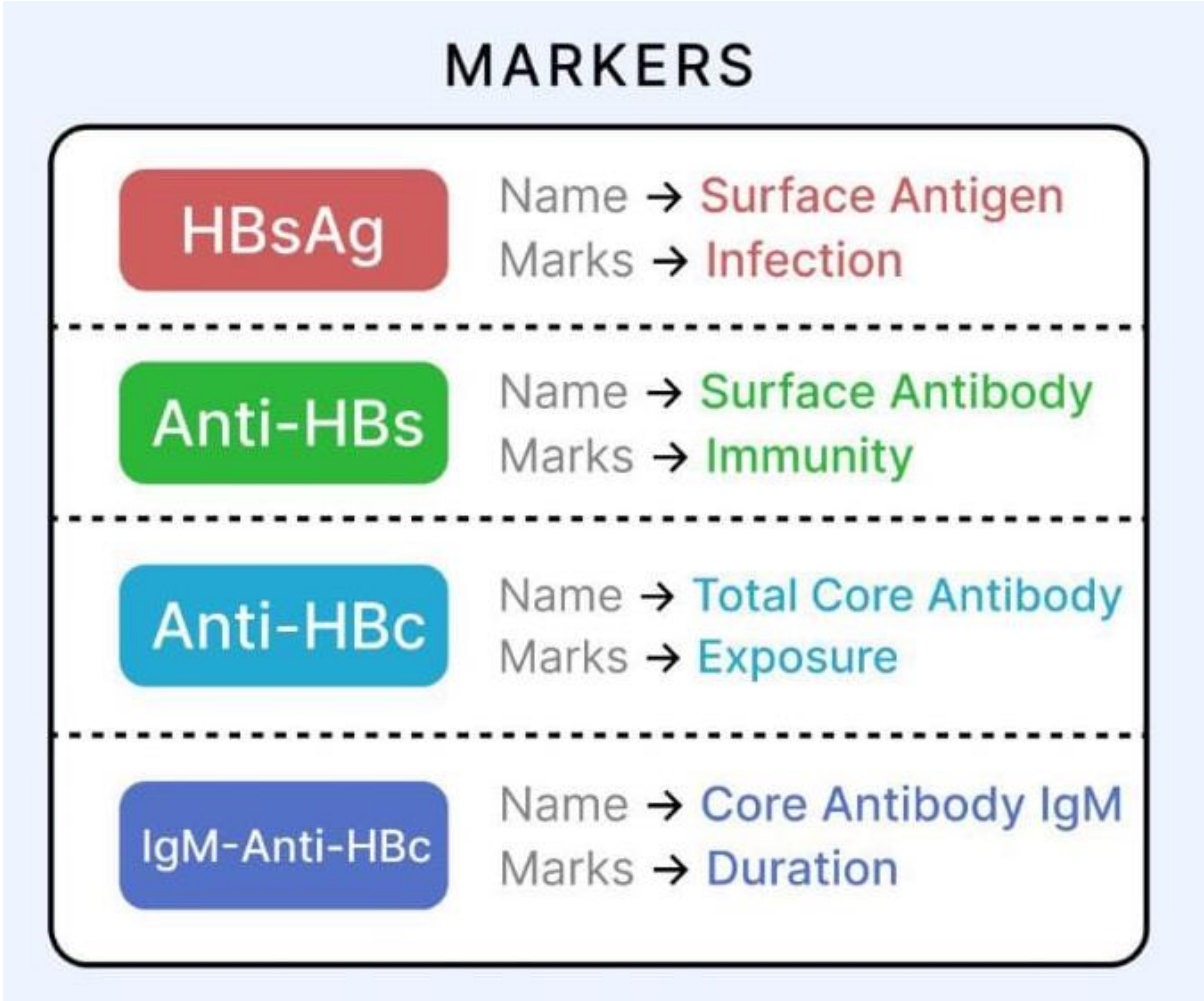
Estudio	Código CUPS
Hepatitis A ANTICUERPOS TOTALES SEMIAUTOMATIZADO O AUTOMATIZADO HEPATITIS A, ANTICUERPO IgG	906219
Hepatitis B ANTÍGENO DE SUPERFICIE [Ag HBs]	906317
Hepatitis B ANTICUERPOS CENTRAL TOTALES [ANTI-CORE HBc] SEMIAUTOMATIZADO O AUTOMATIZADO	906221
Hepatitis B ANTICUERPOS S [ANTI-HBs] SEMIAUTOMATIZADO O AUTOMATIZADO	906223
Hepatitis C ANTICUERPO SEMIAUTOMATIZADO O AUTOMATIZADO	906225

https://www.minsalud.gov.co/sites/rid/Lists/BibliotecaDigital/RIDE/INEC/IETS/gpc-vih-adultos-2021.pdf

https://pospopuli.minsalud.gov.co/PospopuliWeb/paginas/home.aspx

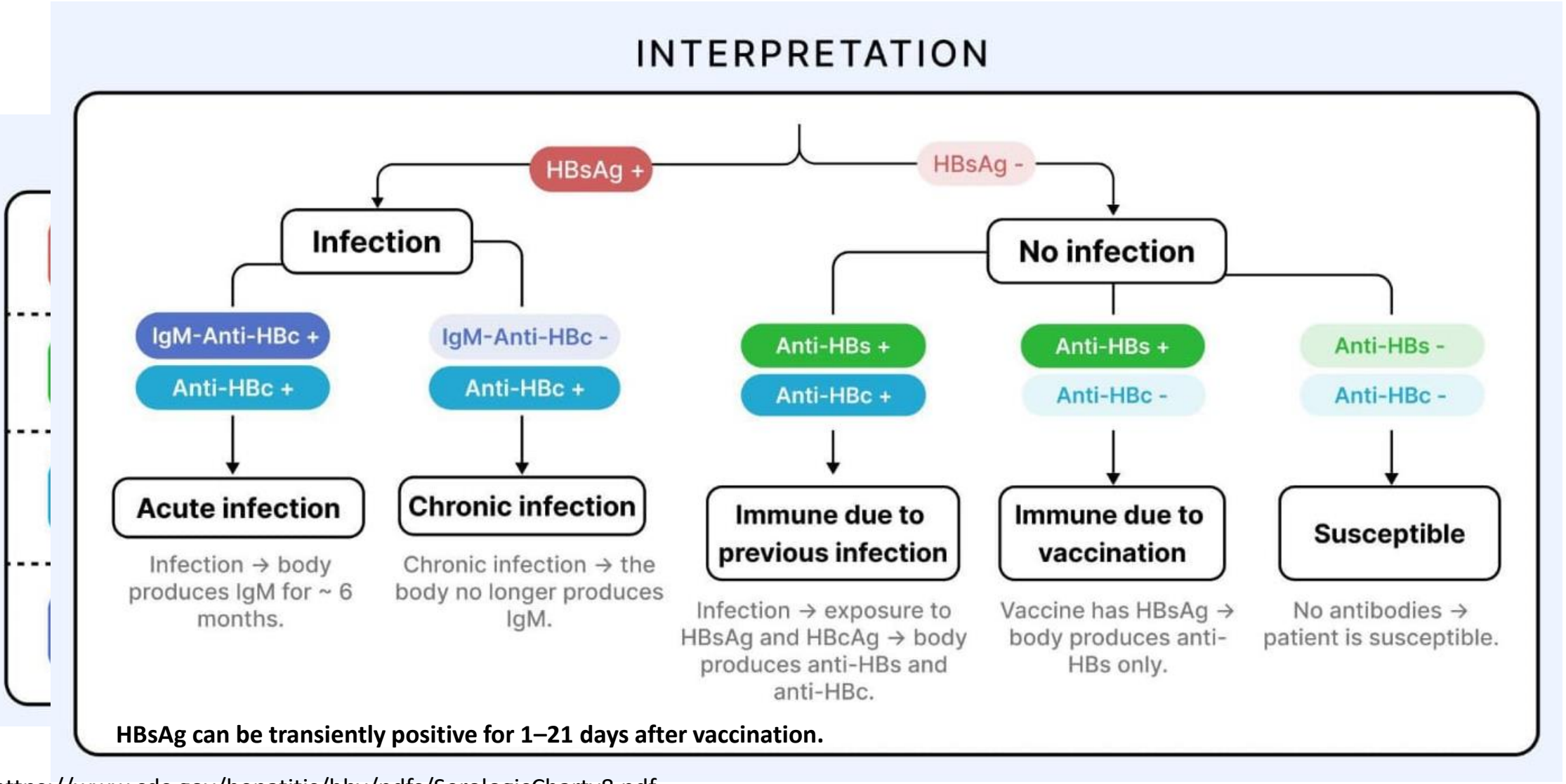
Hepatitis B y VIH - Escenarios serológicos





https://www.cdc.gov/hepatitis/hbv/pdfs/SerologicChartv8.pdf
https://www.cdc.gov/hepatitis/hbv/hbvfaq.htm#ref10

Hepatitis B y VIH - Escenarios serológicos



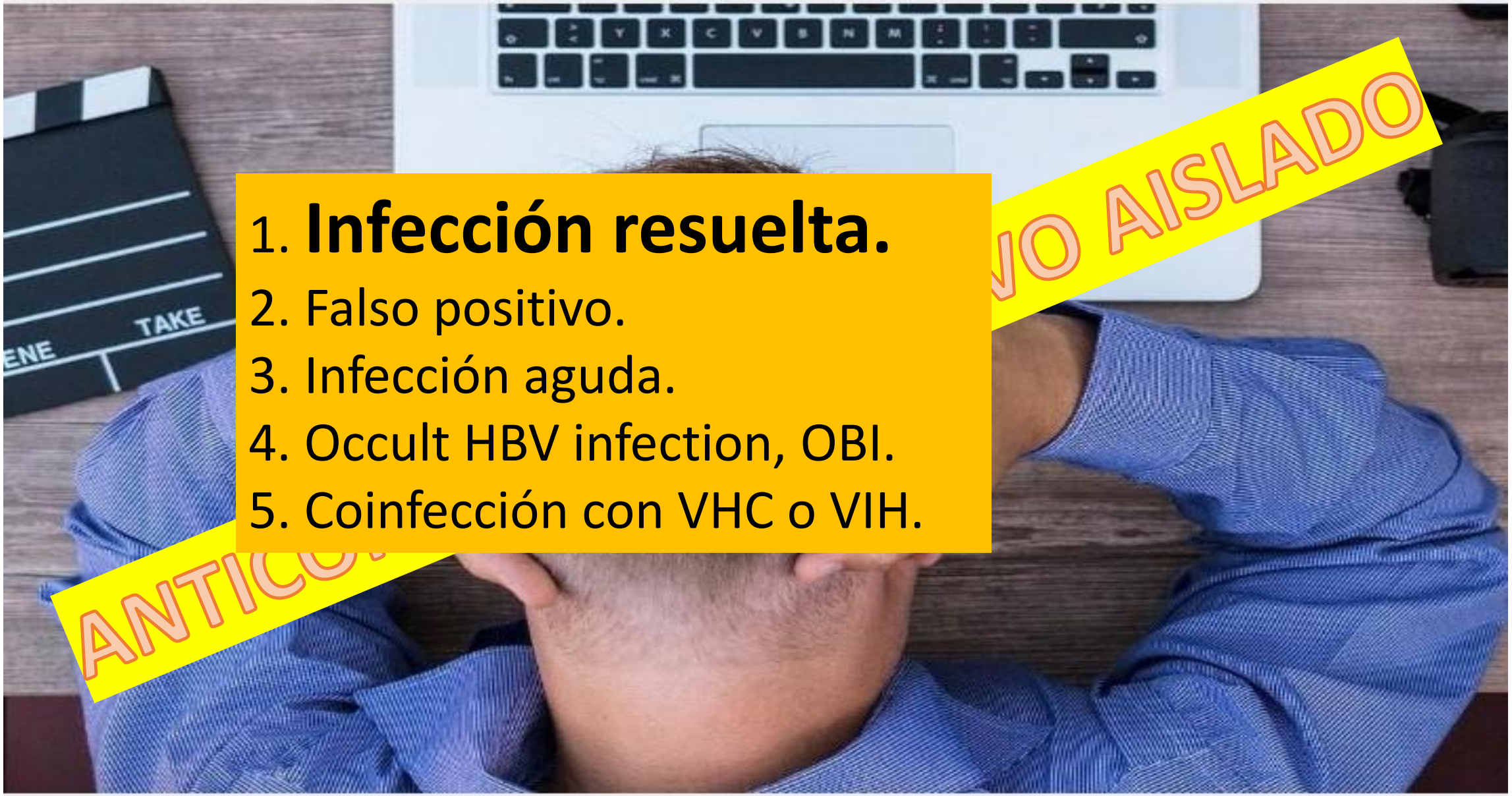
HBsAg can be transiently positive for 1–21 days after vaccination.

https://www.cdc.gov/hepatitis/hbv/pdfs/SerologicChartv8.pdf
https://www.cdc.gov/hepatitis/hbv/hbvfaq.htm#ref10

HBsAg -	Anti-HBc +	Anti-HBs -

https://clinicalinfo.hiv.gov/en/guidelines/adult-and-adolescent-opportunistic-infection/hepatitis-b-virus-infection?view=full

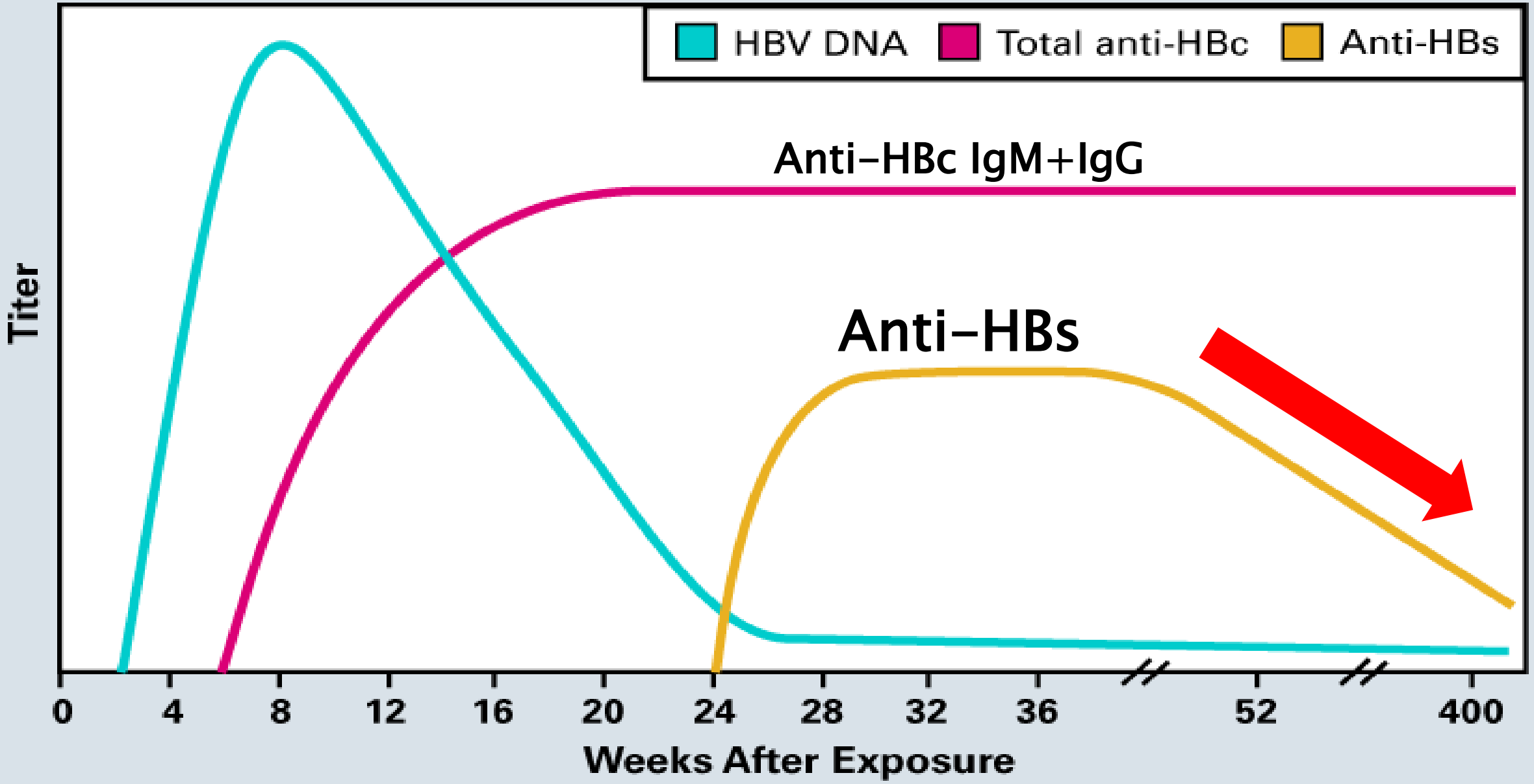
HBsAg -	Anti-HBc +	Anti-HBs -



1. **Infección resuelta.**
2. Falso positivo.
3. Infección aguda.
4. Occult HBV infection, OBI.
5. Coinfección con VHC o VIH.

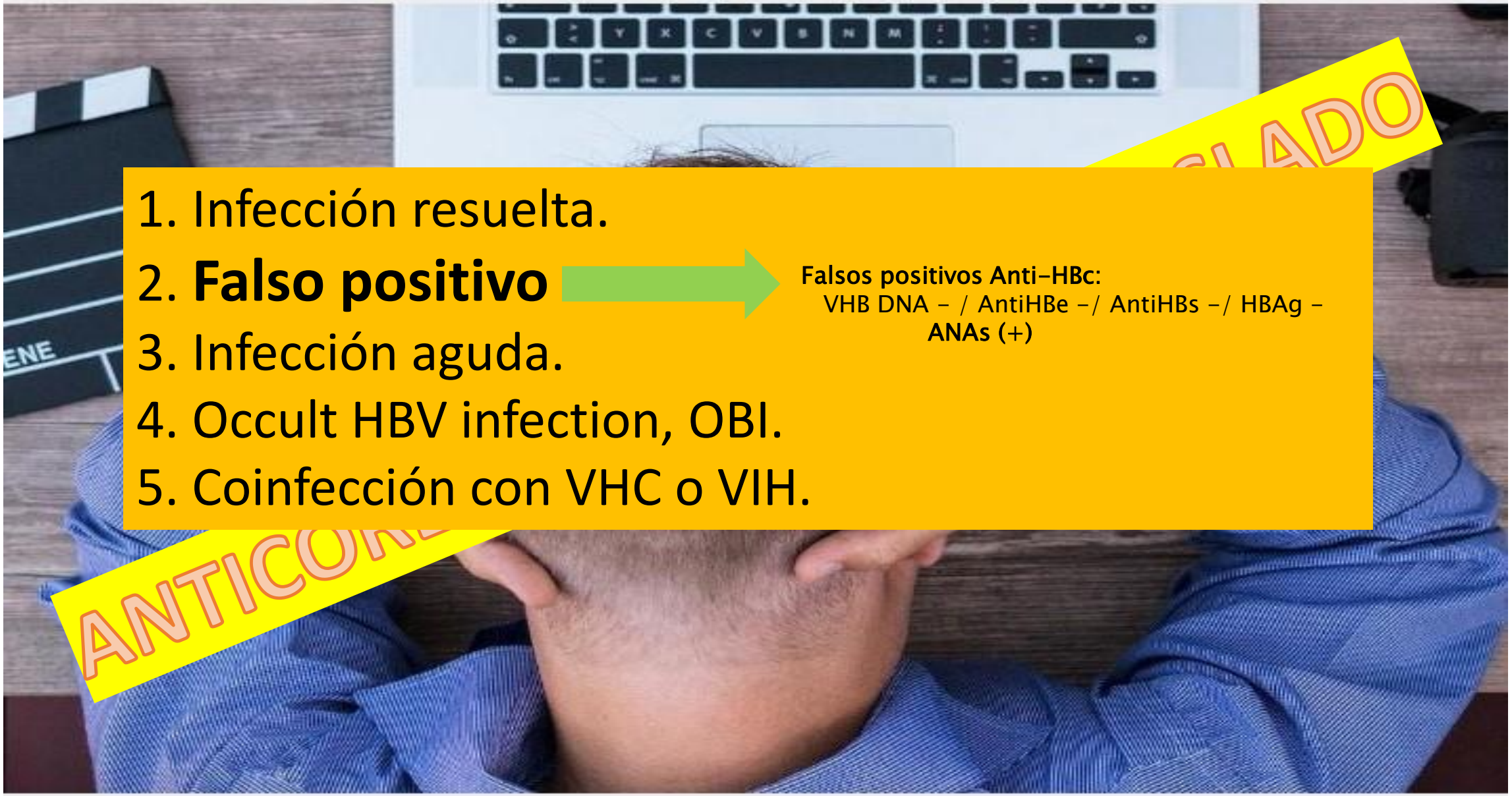
https://clinicalinfo.hiv.gov/en/guidelines/adult-and-adolescent-opportunistic-infection/hepatitis-b-virus-infection?view=full

Resolved HBV Infection with Waning Anti-HBs



http://depts.washington.edu/hepstudy/images/hepB/HBVDx_IsoCore_d05.png

HBsAg -	Anti-HBc +	Anti-HBs -



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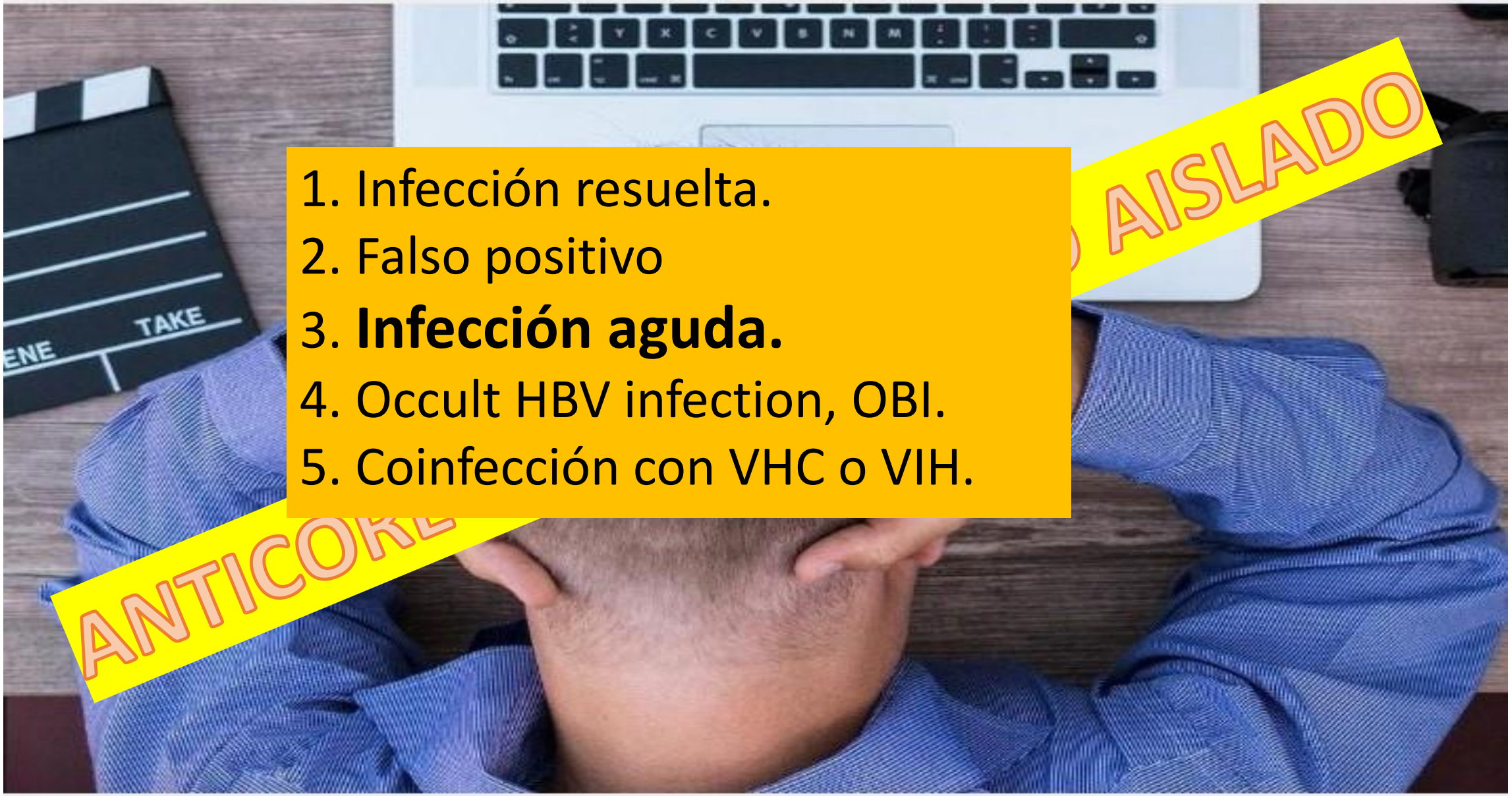
Falsos positivos Anti-HBc:
VHB DNA – / AntiHBe –/ AntiHBs –/ HBAg –
ANAs (+)

https://clinicalinfo.hiv.gov/en/guidelines/adult-and-adolescent-opportunistic-infection/hepatitis-b-virus-infection?view=full

HBsAg -	Anti-HBc +	Anti-HBs -



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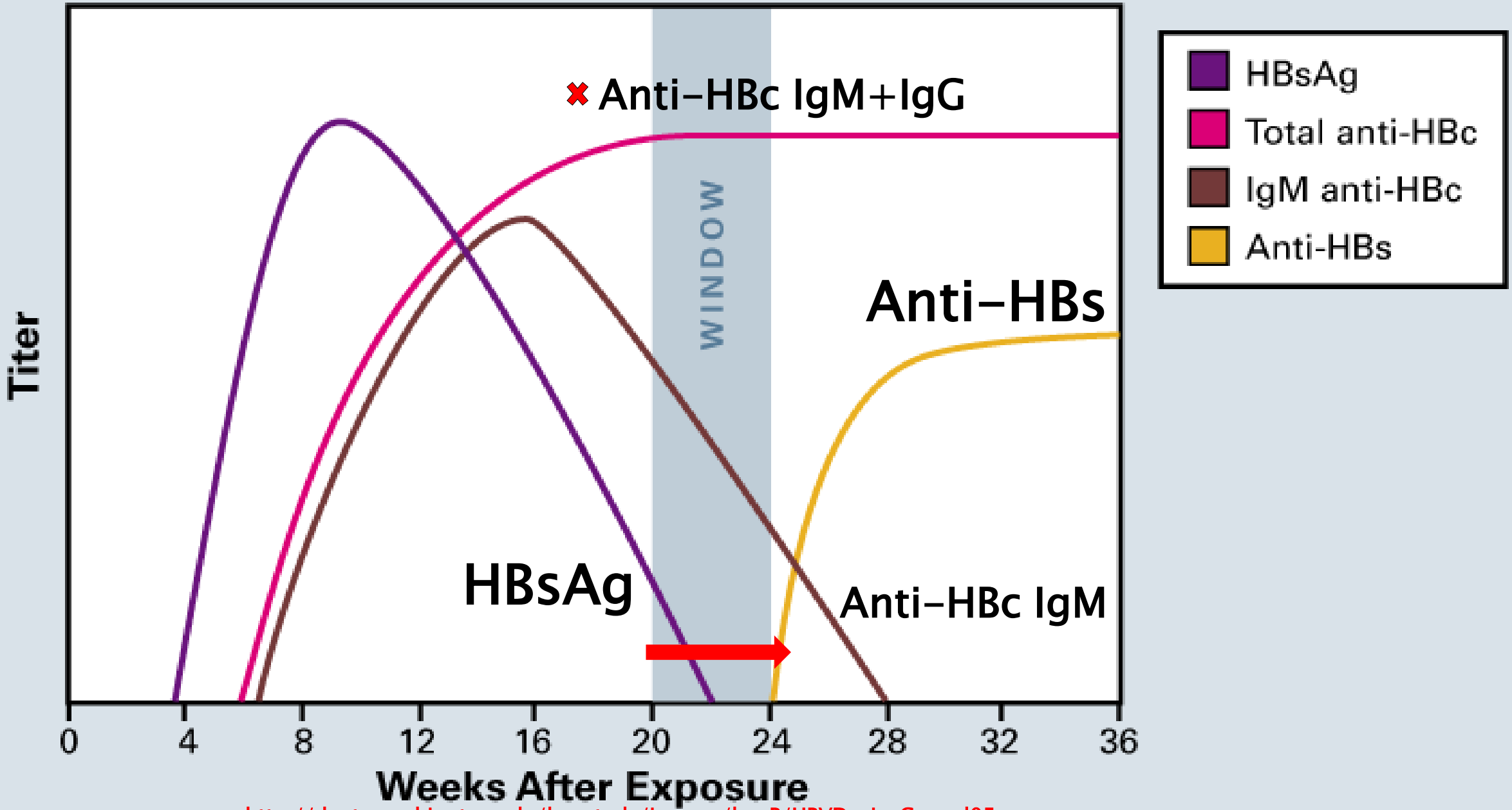
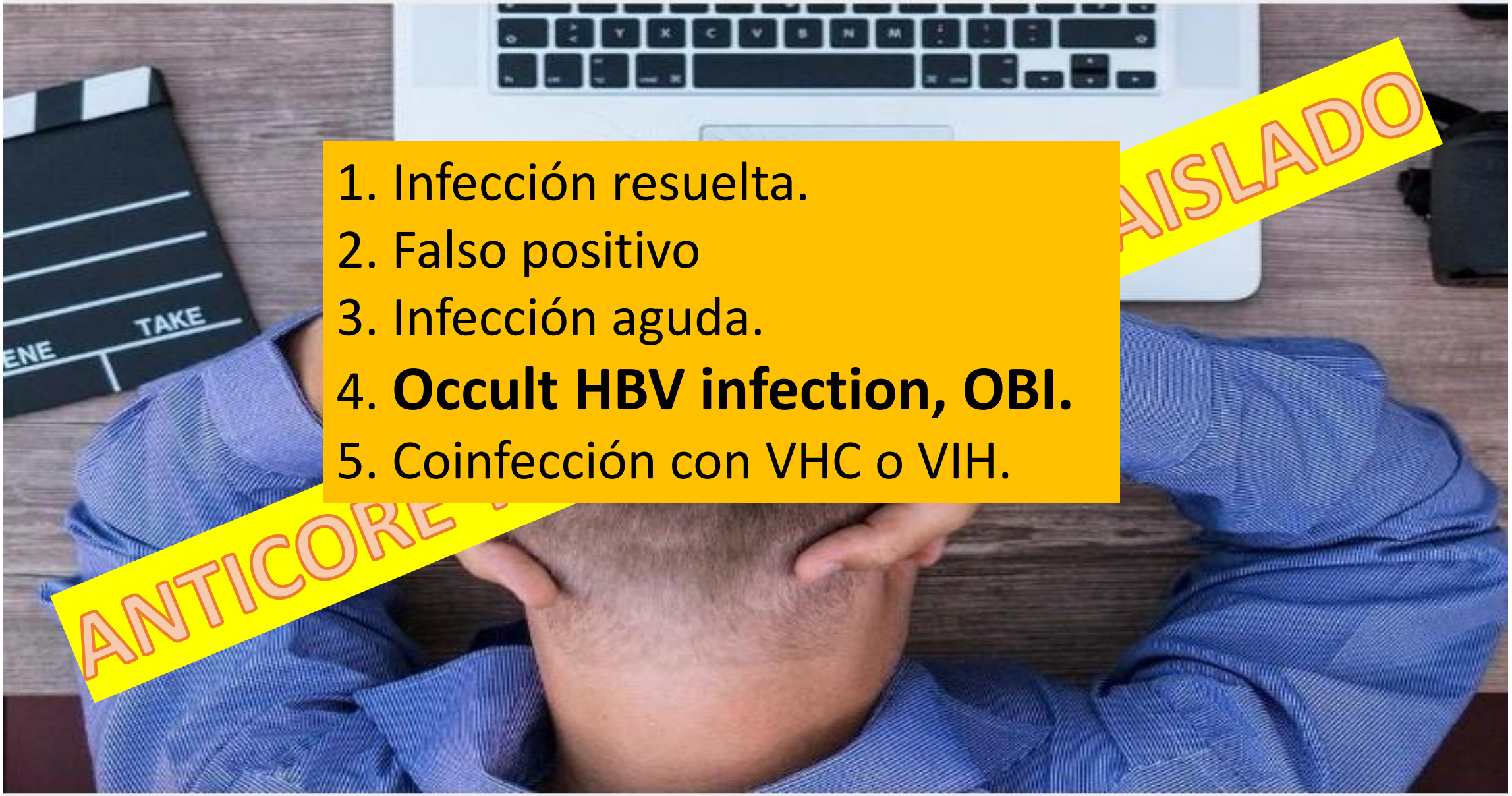
https://clinicalinfo.hiv.gov/en/guidelines/adult-and-adolescent-opportunistic-infection/hepatitis-b-virus-infection?view=full

Acute HBV Infection with Recovery: Window Period Serologic Response



http://depts.washington.edu/hepstudy/images/hepB/HBVDx_IsoCore_d05.png

HBsAg -	Anti-HBc +	Anti-HBs -



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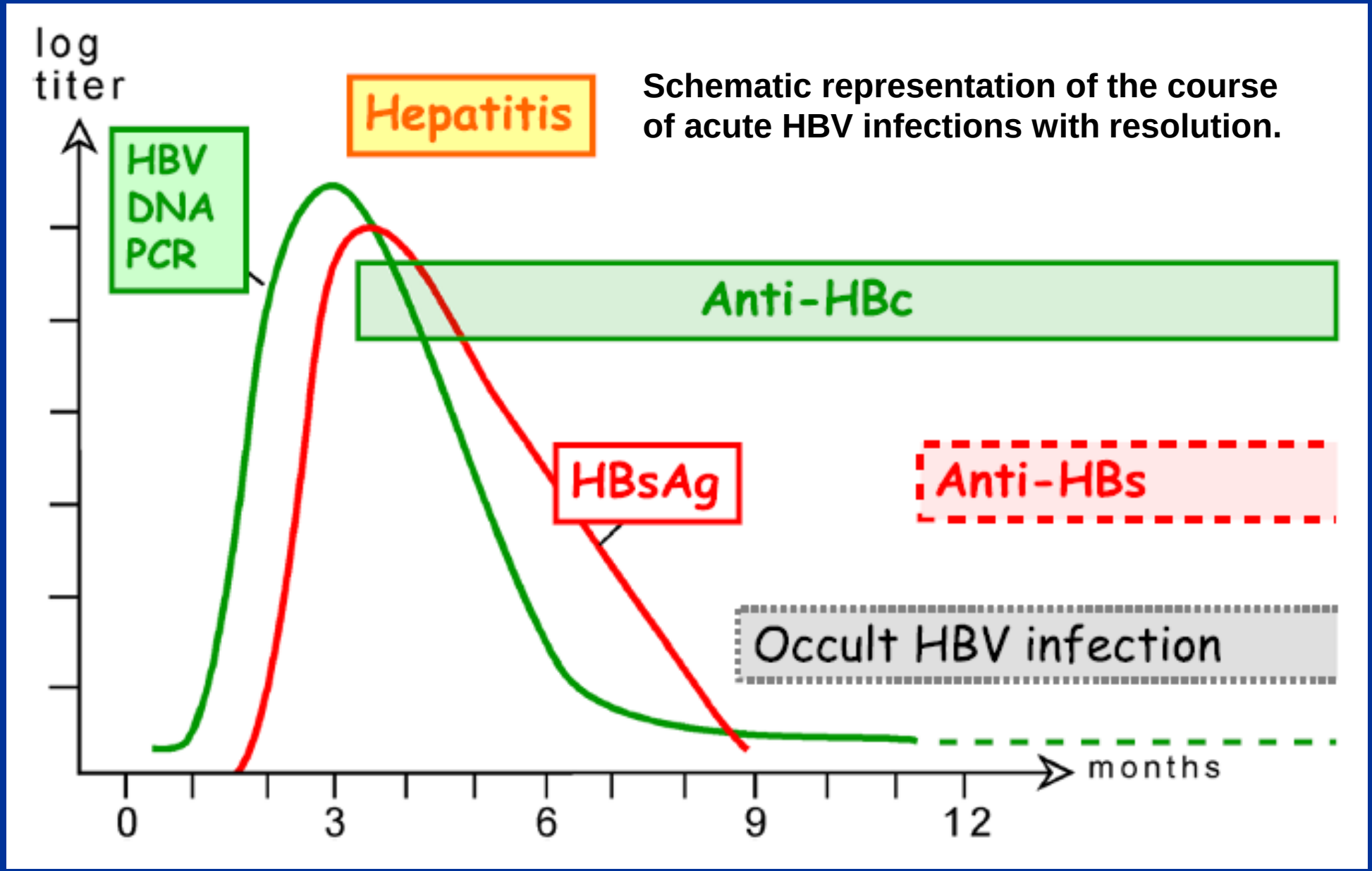
https://clinicalinfo.hiv.gov/en/guidelines/adult-and-adolescent-opportunistic-infection/hepatitis-b-virus-infection?view=full



Schematic representation of the course of acute HBV infections with resolution.

Gerlich, W.H. Medical Virology of Hepatitis B: how it began and where we are now. Virol J 10, 239 (2013). https://doi.org/10.1186/1743-422X-10-239

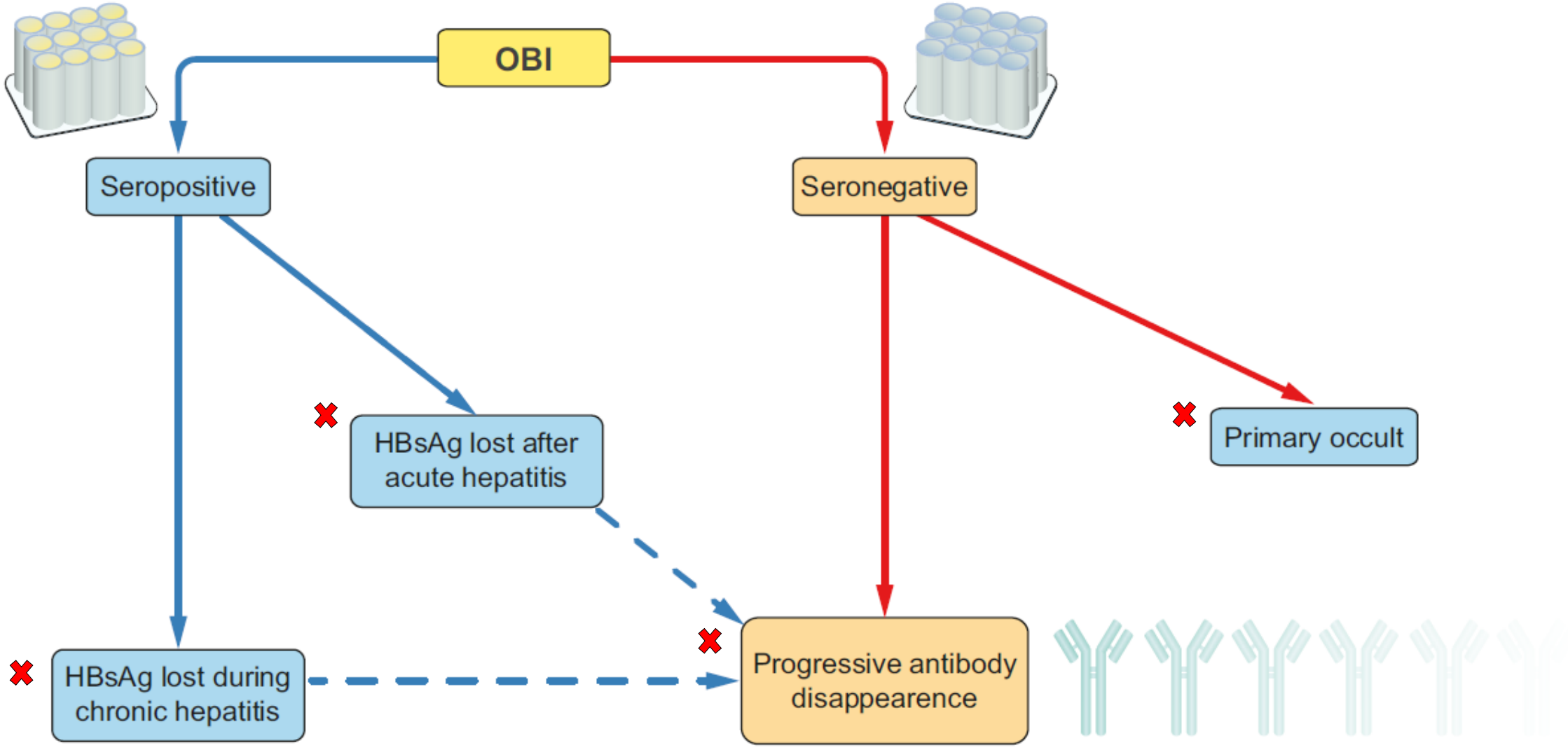


Fig. 1. Schematic representation of HBV serum marker profile in naturally occurring OBI. AH, acute hepatitis; CH, chronic hepatitis; HBV, hepatitis B virus; OBI, occult HBV infection.

Raimondo, G., Locarnini, S., Pollicino, T., Levrero, M., Zoulim, F., Lok, A.S., and the Taormina Workshop on Occult HBV Infection Faculty Members, Update of the statements on biology and clinical impact of occult hepatitis b virus infection, Journal of Hepatology (2019).

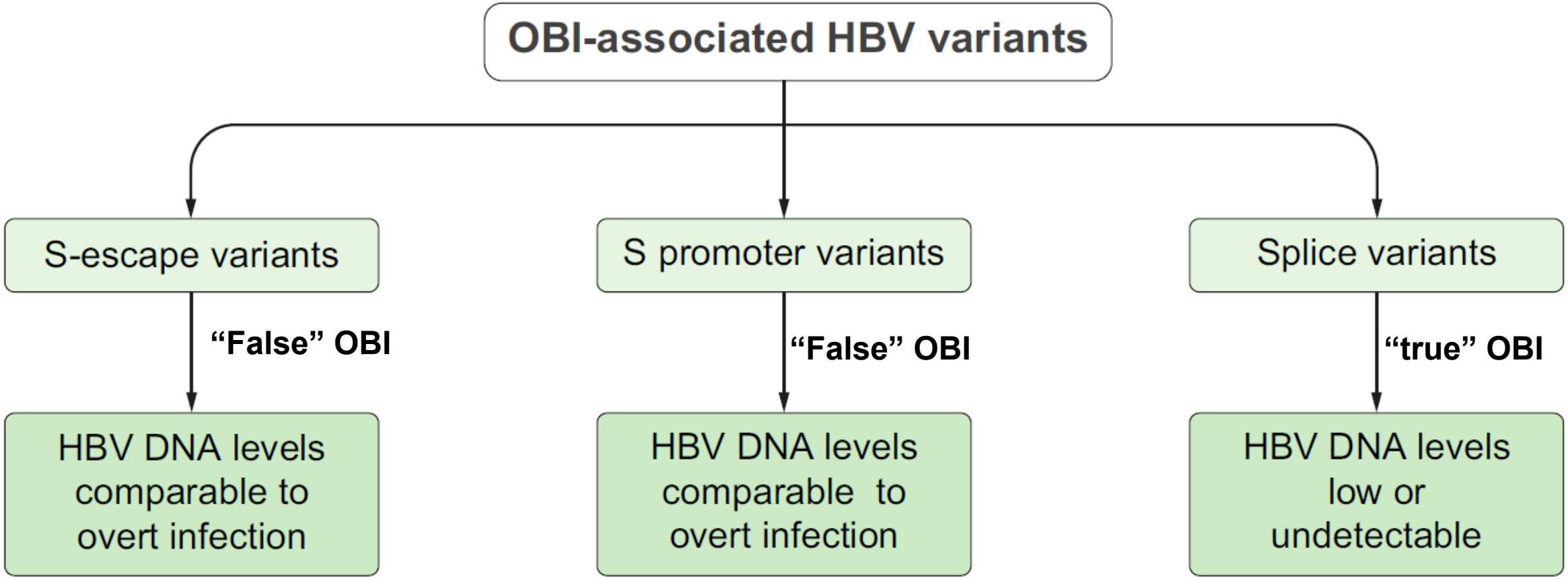
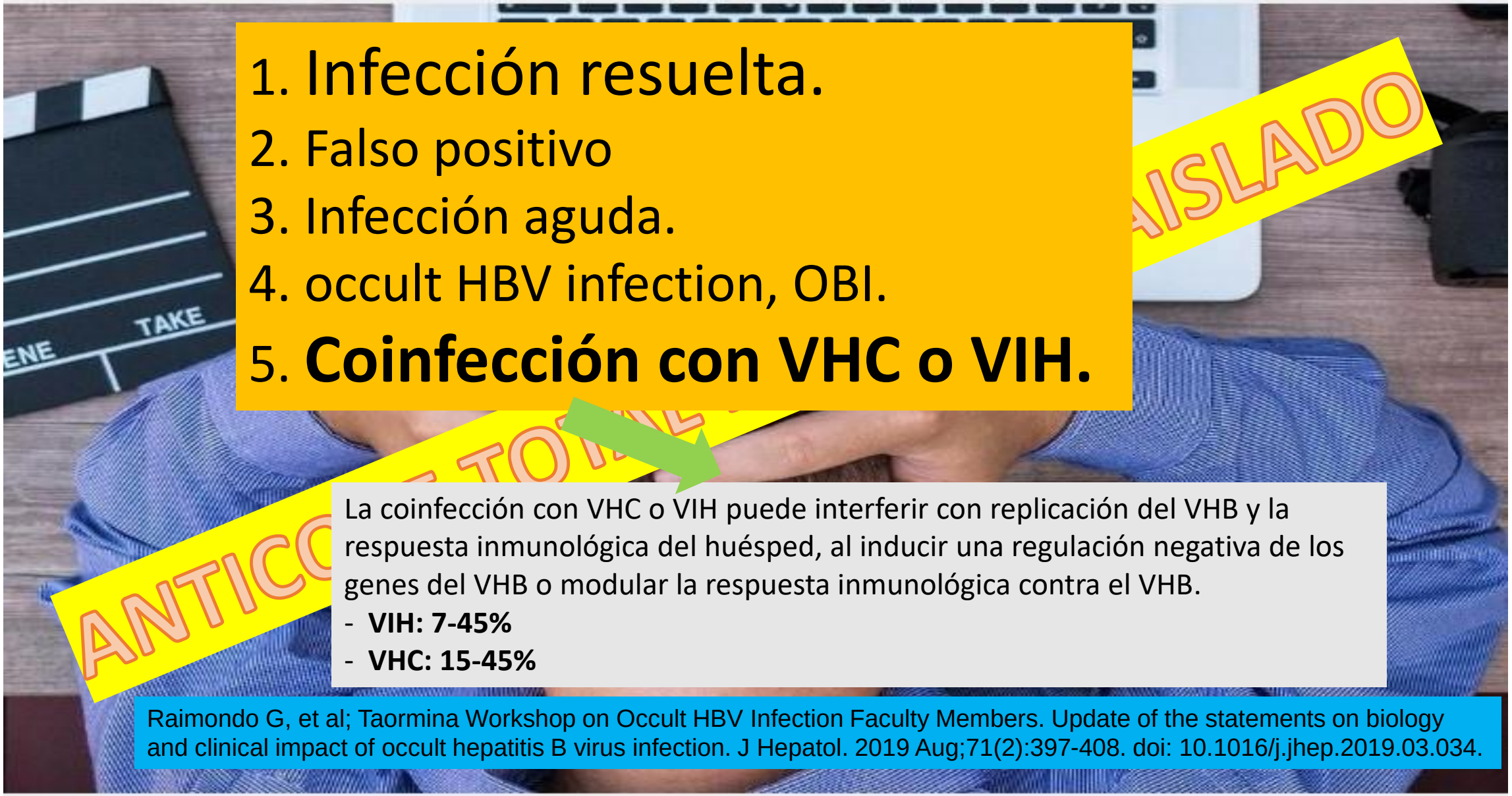


Fig. 2. HBV genetic variants leading to the synthesis of HBsAg unrecognised by available assays or affecting its production/secretion. HBV, hepatitis B virus; HBsAg, HBV surface antigen.

“False” OBI is usually due to rare infection with S gene escape mutants, which produce a modified HBsAg that is not recognized by routinely used detection assays.

Raimondo, G., Locarnini, S., Pollicino, T., Levrero, M., Zoulim, F., Lok, A.S., and the Taormina Workshop on Occult HBV Infection Faculty Members, Update of the statements on biology and clinical impact of occult hepatitis b virus infection, Journal of Hepatology (2019).

HBsAg -	Anti-HBc +	Anti-HBs -



1. Infección resuelta.
2. Falso positivo
3. Infección aguda.
4. occult HBV infection, OBI.
5. **Coinfección con VHC o VIH.**

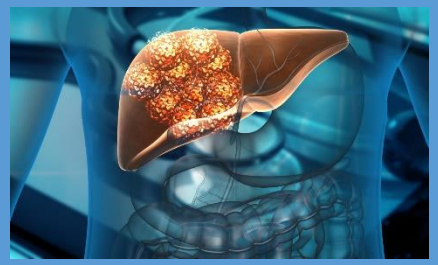
La coinfección con VHC o VIH puede interferir con replicación del VHB y la respuesta inmunológica del huésped, al inducir una regulación negativa de los genes del VHB o modular la respuesta inmunológica contra el VHB.

- **VIH: 7-45%**
- **VHC: 15-45%**

Raimondo G, et al; Taormina Workshop on Occult HBV Infection Faculty Members. Update of the statements on biology and clinical impact of occult hepatitis B virus infection. J Hepatol. 2019 Aug;71(2):397-408. doi: 10.1016/j.jhep.2019.03.034.

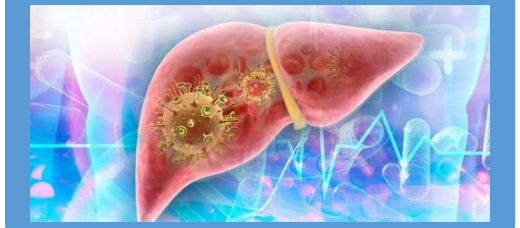
https://clinicalinfo.hiv.gov/en/guidelines/adult-and-adolescent-opportunistic-infection/hepatitis-b-virus-infection?view=full

Hepatitis B y VIH
Escenarios clínicos



No Inmune

Inmune

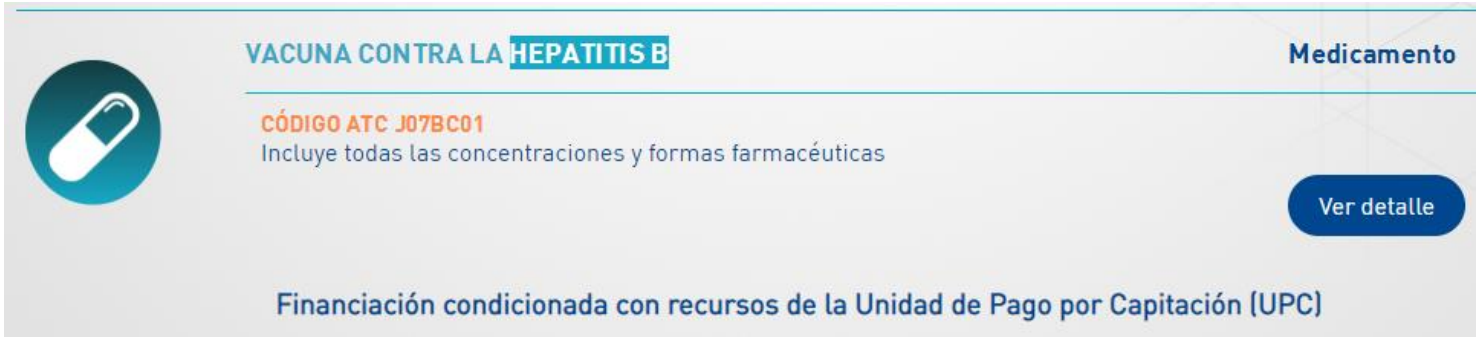


Hepatitis B crónica

Hepatitis B aguda

Vacunación Hepatitis B

https://www.who.int/immunization_standards/en/



Buscar Principio Activo en Denominación Común Internacional - DCI:

50168

	#	Principio activo
✖	1	HEPATITIS B, ANTIGENO PURIFICADO

Buscar Concentraciones

Codigo	Principio activo-concentracion (nombre preciso)
5096	[ANTIGENO DEL VIRUS DE HEPATITIS B 20µg] 1Dosis/1ml
4317	[ANTIGENO DEL VIRUS DE HEPATITIS B] 20µg/1ml

5096

Principio activo-concentración

Aclaración cobertura:

FINANCIADO CON RECURSOS DE LA UPC PARA USO SEGÚN LAS "GUÍAS DE PRÁCTICA CLÍNICA PARA LA PREVENCIÓN, DIAGNÓSTICO Y TRATAMIENTO DE PACIENTES CON VIH/SIDA"

Mipres

No VIH

https://pospopuli.minsalud.gov.co/PospopuliWeb/paginas/resultadomedicamentos.aspx?value=H4sIAAAAAAAEAGNgZGBg%2bA8EIBoE2EAMpeT8lMz0fFtTQzMDtaTS4sLS1JREWw%2fXAMcQzxDPYFUjAyduABXGFrk6AAAA

GlaxoSmithKline

720unidades ELISA/1ml
20mcg/1ml

Combined Hepatitis A and B Vaccines		
Twinrix	HAV: 720 EL.U *plus* HBsAg: 20 mcg	Standard 3-Dose Schedule: 1 ml given IM at 0, 1, and 6 months *or* Accelerated 4-Dose Schedule: 1 ml given IM on days 0, 7, and 21-30, followed by a booster dose at month 12

DATOS DE LA PRESCRIPCIÓN DEL MEDICAMENTO NO PBSUPC

Twinrix Adultos está indicado para su utilización en adultos y adolescentes a partir de 16 años de edad.

Tipo de prestación: ○ Única ● Sucesiva

Mipres

Buscar Principio Activo en Denominación Común Internacional - DCI:

50812

	#	Principio activo
✗	1	ANTIGENOS DE HEPATITIS B Y A

Buscar Concentraciones

Código	Principio activo-concentración (nombre preciso)
669	[ANTIGENO DEL VIRUS DE LA HEPATITIS 720unidades ELISA&ANTIGENO SUPERFICIAL DEL VIRUS HEPATITIS B 20µg] 720unidades ELISA/1ml **Twinrix Adultos**

Aclaración cobertura:

Observaciones cobertura:

https://www.cdc.gov/mmwr/preview/mmwrhtml/rr5516a1.htm

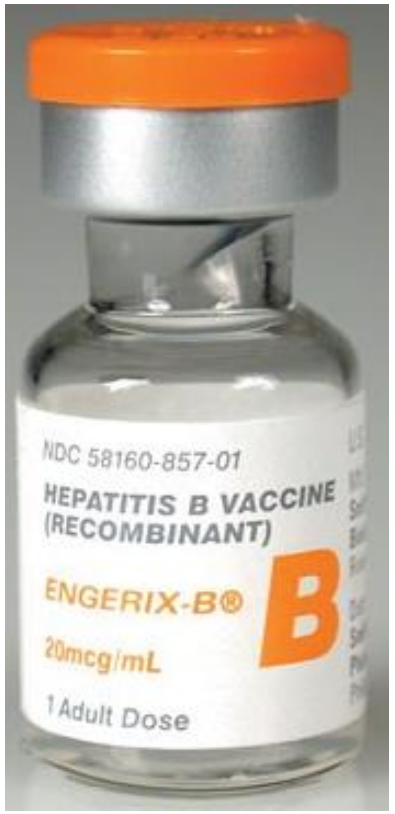
https://mipres.sispro.gov.co/MIPRESNOPBS/Mod1/RegPrescripcion.aspx

Respuesta vacuna VHB

- Esquema clásico 20 ug/dosis 0 – 1 – 6 meses.

-VIH 17.5 a 72%

CD4 >500 céls/mm³: 87%.
CD4 200-500 céls/mm³: 33%



- No VIH 85 a 95%

Catherine FX, Piroth L. Hepatitis B virus vaccination in HIV-infected people: A review. Hum Vaccin Immunother. 2017;13(6):1-10. doi:10.1080/21645515.2016.1277844

Table 2 Recommended Adult Immunization Schedule by Medical Condition or Other Indication, United States, 2023

Vaccine	Pregnancy	Immuno-compromised (excluding HIV infection)	HIV infection CD4 percentage and count		Asplenia, complement deficiencies	End-stage renal disease, or on hemodialysis	Heart or lung disease; alcoholism[a]	Chronic liver disease	Diabetes	Health care personnel[b]	Men who have sex with men
			<15% or <200 mm³	≥15% and ≥200 mm³							
HepA			✖				2, 3, or 4 doses depending on vaccine				
HepB	3 doses (see notes)		0 – 1 – 6 m		2, 3, or 4 doses depending on vaccine or condition						

Hepatitis B vaccination

Routine vaccination

- **Age 19 through 59 years: complete a 2- or 3- or 4-dose series**
  - 2-dose series only applies when 2 doses of Heplisav-B* are used at least 4 weeks apart
  - 3-dose series Engerix-B, PreHevbrio*, or Recombivax HB at 0, 1, 6 months [minimum intervals: dose 1 to dose 2: 4 weeks / dose 2 to dose 3: 8 weeks / dose 1 to dose 3: 16 weeks])
  - 3-dose series HepA-HepB (Twinrix at 0, 1, 6 months [minimum intervals: dose 1 to dose 2: 4 weeks / dose 2 to dose 3: 5 months])
  - 4-dose series HepA-HepB (Twinrix) accelerated schedule of 3 doses at 0, 7, and 21–30 days, followed by a booster dose at 12 months

***Note:** Heplisav-B and PreHevbrio are not recommended in pregnancy due to lack of safety data in pregnant persons.

- **Age 60 years or older with** known risk factors for hepatitis B virus infection **should** complete a HepB vaccine series.
- **Age 60 years or older without** known risk factors for hepatitis B virus infection **may** complete a HepB vaccine series.

- **Risk factors for hepatitis B virus infection include:**
  - **Chronic liver disease** (e.g., persons with hepatitis C, cirrhosis, fatty liver disease, alcoholic liver disease, autoimmune hepatitis, alanine aminotransferase [ALT] or aspartate aminotransferase [AST] level greater than twice upper limit of normal)
  - **HIV infection**
  - **Sexual exposure risk** (e.g., sex partners of hepatitis B surface antigen [HBsAg]-positive persons; sexually active persons not in mutually monogamous relationships; persons seeking evaluation or treatment for a sexually transmitted infection; men who have sex with men)
  - **Current or recent injection drug use**
  - **Percutaneous or mucosal risk for exposure to blood** (e.g., household contacts of HBsAg-positive persons; residents and staff of facilities for developmentally disabled persons; health care and public safety personnel with reasonably anticipated risk for exposure to blood or blood-contaminated body fluids; persons on maintenance dialysis, including in-center or home hemodialysis and peritoneal dialysis, and persons who are predialysis; patients with diabetes)
  - **Incarceration**
  - **Travel in countries with high or intermediate endemic hepatitis B**

Special situations

- **Patients on dialysis:** complete a 3- or 4-dose series
  - 3-dose series Recombivax HB at 0, 1, 6 months (note: use Dialysis Formulation 1 mL = 40 mcg)
  - 4-dose series Engerix-B at 0, 1, 2, and 6 months (note: use 2 mL dose instead of the normal adult dose of 1 mL)

https://www.cdc.gov/vaccines/schedules/hcp/imz/adult-conditions.html#table-conditions

Tabla 7. Tabla de vacunación de acuerdo al recuento de CD4, para adultos que viven con VIH

Condición	VHA	VHB	Influenza	Neumococo	TD/TdaP	Triple Viral	VPH	Varicela	Zoster	COVID-19	Fiebre amarilla
VIH CD4>200 células/mm^3.	x	x	x	X	x	X	x	x	x	x	x
VIH con recuento CD4<200 células/mm^3.		x	x*	x*	x		x*			x	

VHA: virus de hepatitis A, VHB: virus de hepatitis B, TD/TdaP: vacuna de tétano, difteria y tos ferina, VPH: Virus de papiloma humano, COVID19: coronavirus.

VHA: se recomienda en personas con factores de riesgo (sexo anal y hepatopatías~), con anticuerpos totales o IgG negativos y cuando el conteo de células CD4 sea mayor de 200 células/mm3.

Ministerio de Salud y Protección Social, Empresa Nacional Promotora del Desarrollo Territorial e Instituto de Evaluación Tecnológica en Salud. Guía de Práctica Clínica basada en la evidencia científica para la atención de la infección por VIH/SIDA en personas adultas, gestantes y adolescentes. Versión para profesionales de salud. Bogotá D.C. Colombia; 2021. Guía para profesionales de la salud. Guía N° 39-2021.

BOX 5. Hepatitis B vaccine schedules for adults (aged ≥20 years)*

0, 1, and 6 months

0, 1, and 4 months ✖

0, 2, and 4 months ✖

0, 1, 2, and 12 months†

Intervalos mínimos entre dosis:
1era y 2da dosis: 4 semanas.
2da y 3era dosis: 8 semanas.
1era y 3era dosis: 16 semanas.

CDC
CENTERS FOR DISEASE CONTROL AND PREVENTION

* All schedules are applicable to single-antigen hepatitis B vaccines; Twinrix® (combined hepatitis A and hepatitis B vaccine) may be administered at 0, 1, and 6 months.

† A 4-dose schedule of Engerix-B® is licensed for all age groups.

https://www.cdc.gov/mmwr/preview/mmwrhtml/rr5516a1.htm

Esquema vacunación incompleto VHB

# dosis aplicadas	Recomendación
1	Aplicar dosis 2 y 3 con intervalo de mínimo 8 semanas
1 y 2	Aplicar dosis 3
?	Aplicar dosis 1, 2 y 3

Interrupted Vaccine Schedules

- When the hepatitis B vaccine schedule is interrupted, the vaccine series does not need to be restarted.
- If the series is interrupted after the first dose, the second dose should be administered as soon as possible, and the second and third doses should be separated by an interval of at least 8 weeks.
- If only the third dose has been delayed, it should be administered as soon as possible.

https://www.cdc.gov/mmwr/preview/mmwrhtml/rr5516a1.htm

https://www.cdc.gov/hepatitis/hbv/hbvfaq.htm#D4

Vacunación VHB según Anti-HBs - VIH

Niveles Anti-HBs ingreso al programa de atención integral	Vacunación Hepatitis B	Anti-HBs control
< 10 mUI/ml sin historia de vacunación	Esquema completo	1- 2 meses
< 10 mUI/ml con historia de vacunación	Aplicar 1 dosis – Respuesta 25-50% o Aplicar 3 dosis – Respuesta 44-100%	1- 2 meses No respuesta ↑ dosis a 40 ug
10-100 mUI/ml +/- historia de vacunación	Aplicar 1 dosis	Si exposición de riesgo
>100 mUI/ml +/- historia de vacunación	No requiere	Si exposición de riesgo

Catherine FX, Piroth L. Hepatitis B virus vaccination in HIV-infected people: A review. Hum Vaccin Immunother. 2017;13(6):1-10. doi:10.1080/21645515.2016.1277844
https://www.hepatitisb.uw.edu/go/prevention-hbv/hbv-immunizations/core-concept/all
https://clinicalinfo.hiv.gov/en/guidelines/adult-and-adolescent-opportunistic-infection/hepatitis-b-virus-infection?view=full
https://clinicalinfo.hiv.gov/en/guidelines/hiv-clinical-guidelines-adult-and-adolescent-opportunistic-infections/immunizations?view=full

Dr. Abraham Katime

Review

A systematic review and meta-analysis of management options for adults who respond poorly to hepatitis B vaccination

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[d] Travel Medicine Alliance Clinics, Australia

Table 3
Pooled seroconversion rates by management option and number of additional doses.

Management option	Number of studies	Total (*N*)	Seroconversion rate % (95% CI)			
			1st additional dose	2nd additional dose	3rd additional dose	4th additional dose
IM-20	9	833	62% (41–83%)	68% (61–100%)	81% (61–100%)	Not available
IM-40	3	161	60% (23–97%)	50% (33–67%)	53% (36–70%)	Not available
ID-5	3	50	54% (39–69%)	77% (65–89%)	85% (75–95%)	89% (80–98%)
ID-20	1	23	61% (47–75%)	90% (78–100%)	Not available	Not available
Total	16	1067				

After one additional dose, the four approaches produced very similar seroconversion rates and we did not find any evidence to support the use of 40 mcg IM in healthy adults.

David MC, et al. A systematic review and meta-analysis of management options for adults who respond poorly to hepatitis B vaccination. Vaccine. 2015 Nov 27;33(48):6564-9. doi: 10.1016/j.vaccine.2015.09.051.

Safety and Immunogenicity of 4 Intramuscular Double Doses and 4 Intradermal Low Doses vs Standard Hepatitis B Vaccine Regimen in Adults With HIV-1

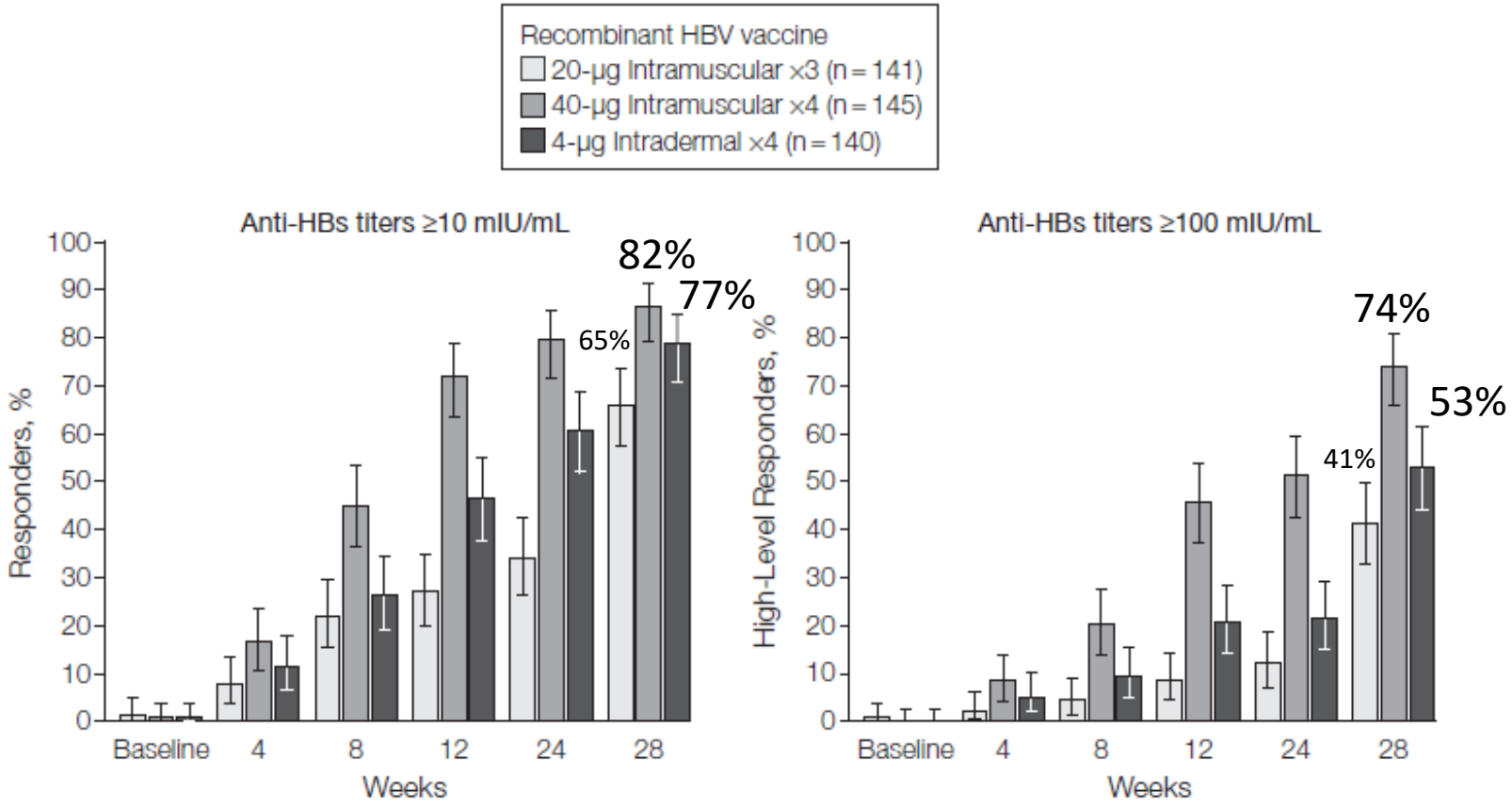
A Randomized Controlled Trial

GenHevac B Pasteur 20 µg, Sanofi Pasteur.

Weeks 0, 4, and 24 (group IM20x3, n=145)
Weeks 0, 4, 8, and 24 (group IM40X4, n=148)
Weeks 0, 4, 8, and 24 (group ID4X4, n=144)

Patients were eligible to participate if they were adults with HIV-1 infection, had a **CD4 cell count >200 cells/µL**, had no HBV serological marker (ie, negative for hepatitis B surface antigen, hepatitis B surface antibody [anti-HBs], and hepatitis B core antibody), had unchanged **antiretroviral treatment** for the last 2 months for patients who were receiving antiretroviral treatment at the time of the screening visit (patients with a CD4 cell count <350 cells/µL were required to have received antiretroviral therapy for the last 6 months in conjunction with an undetectable plasma HIV-1 RNA level [<50 copies/µL]), and had a negative pregnancy test at screening and inclusion visits.

Figure 2. Percentages of Responders and High-Level Responders by Vaccination Regimen



Anti-HBs indicates hepatitis B surface antibody; HBV, hepatitis B virus. Last observation carried forward (LOCF) rule applied for missing values. Because the calculations were performed on LOCF-imputed data, the denominators are the number of patients receiving at least 1 vaccine dose at each time point. Error bars represent 95% confidence intervals.

P<.001 IM40X4 group vs IM20X3 group

Launay O, et al; **ANRS HB03 VIHVAC-B Trial**. Safety and immunogenicity of 4 intramuscular double doses and 4 intradermal low doses vs standard hepatitis B vaccine regimen in adults with HIV-1: a randomized controlled trial. JAMA. 2011 Apr 13;305(14):1432-40. doi: 10.1001/jama.2011.351

Vacunación VHB en no Respondedores (VIH)

Guidelines for the Prevention and Treatment of Opportunistic Infections in Adults and Adolescents with HIV

Immunizations for Preventable Diseases in Adults and Adolescents with HIV

Updated: Apr. 13, 2023
Reviewed: Apr. 13, 2023

Some experts consider that a double-dose, four-dose vaccine series of recombinant hepatitis B vaccine (Engerix-B® 40 mcg [2 injections of 20 mcg each] or Recombivax® 20 mcg [2 injections of 10 mcg each] at 0, 1, 2, and 6 months) may produce a better immunologic response, but this approach has not been demonstrated to be superior to a double-dose, three-dose series.

For people with low CD4 count at the time of first vaccination series, some experts might delay revaccination until after the CD4 count is ≥200 cells/mm3(CIII).

Vaccine nonresponder (if anti-HBs <10 mIU/mL after 3-dose series)	Revaccinate with either: • Second 3-dose series of Engerix-B® (40 mcg) or ✖ Recombivax® (20 mcg) **(BIII);** *or* • 2-dose series of Heplisav-B® **(BIII)** Delay repeat vaccination until after the CD4 count is ≥200 cells/mm^3 **(CIII).**

https://clinicalinfo.hiv.gov/en/guidelines/hiv-clinical-guidelines-adult-and-adolescent-opportunistic-infections/immunizations?view=full

Vacunación VHB según Anti-HBs - VIH

Niveles Anti-HBs ingreso al programa de atención integral	Vacunación Hepatitis B	Anti-HBs control
< 10 mUI/ml sin historia de vacunación	Esquema completo	1- 2 meses
< 10 mUI/ml con historia de vacunación	Aplicar 1 dosis – Respuesta 25-50% o Aplicar 3 dosis – Respuesta 44-100%	1- 2 meses No respuesta ↑ dosis a 40 ug
10-100 mUI/ml +/- historia de vacunación	Aplicar 1 dosis	Si exposición de riesgo
>100 mUI/ml +/- historia de vacunación	No requiere	Si exposición de riesgo
Anticore total reactivo aislado	Aplicar 1 dosis	1-2 meses ≥100 mUI/ml: No dosis adicionales* <100 mUI/ml: 2 dosis adicionales

*Respuesta sostenida de AntiHBs durante >18 meses en el 100% de los pacientes (vs 23%).

Catherine FX, Piroth L. Hepatitis B virus vaccination in HIV-infected people: A review. Hum Vaccin Immunother. 2017;13(6):1-10. doi:10.1080/21645515.2016.1277844
https://www.hepatitisb.uw.edu/go/prevention-hbv/hbv-immunizations/core-concept/all
https://clinicalinfo.hiv.gov/en/guidelines/adult-and-adolescent-opportunistic-infection/hepatitis-b-virus-infection?view=full
https://clinicalinfo.hiv.gov/en/guidelines/hiv-clinical-guidelines-adult-and-adolescent-opportunistic-infections/immunizations?view=full

Dr. Abraham Katime

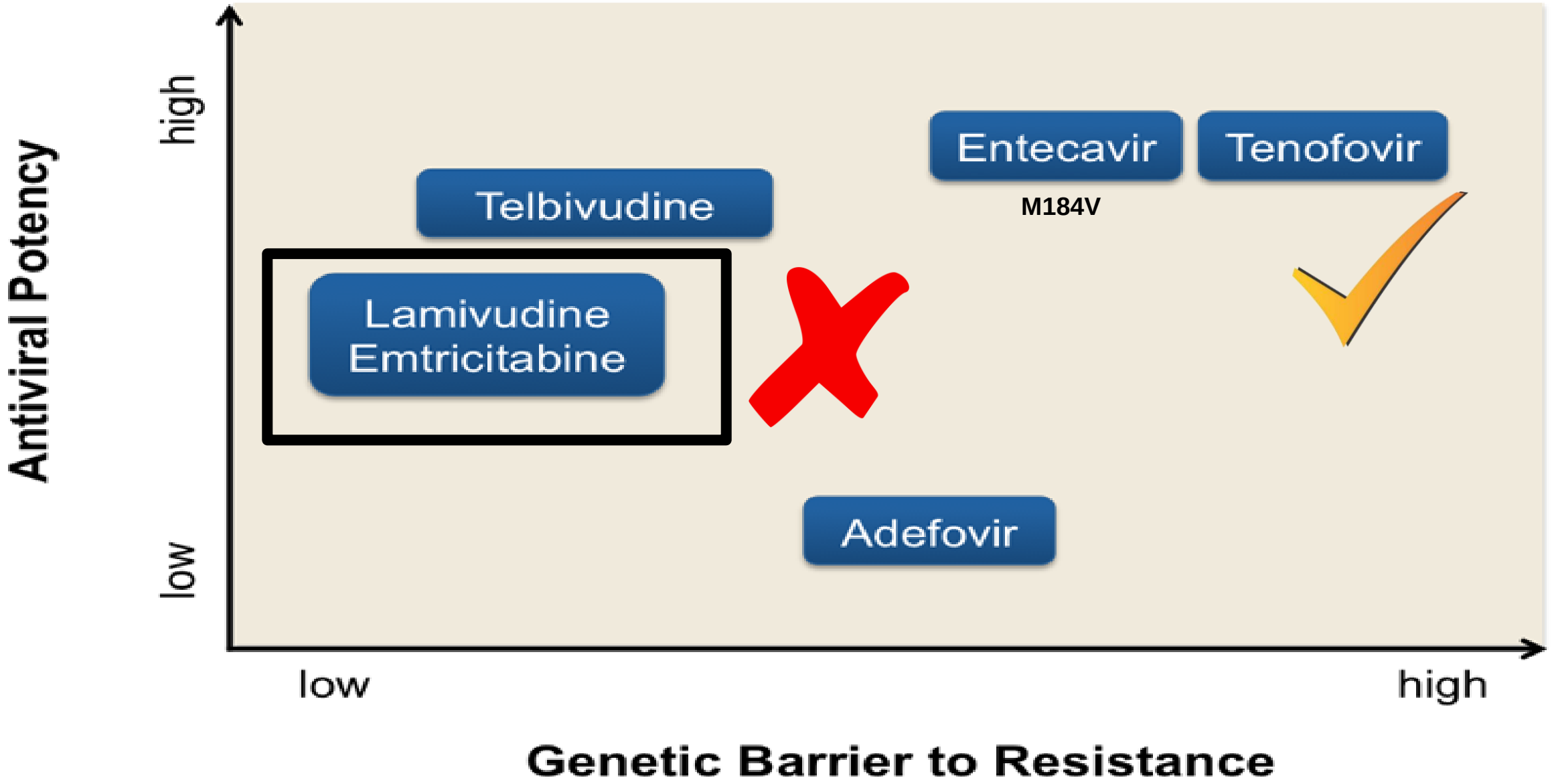
Table 2. Vaccination in people living with HIV with isolated anti-HBc serological profile.

Study (year)	Design	Schedule	% HAART Median CD4 cell count (/μL)	HCV Co-infection	Age / %male	Anamnestic response	Response rate	Predictors
Piroth et al, 2016	Prospective N = 54	20μg W0 then 40μg W5–9–24	100% 538	30%	46 / 59%	✖ 46%	89%	NA
Kaech et al, 2012	Prospective N = 37	20μg M0 +/– 20μg M0–1–6	89% 443	51%	42 / 49%	22%	60%	Injected drug use
Chakvetadze et al, 2010	Prospective N = 40	20μg +/– 2–5 20μg W4–8–12–16–20	87.5% 463	12.5%	40 / 55%	32.5%	40.7% W10 64% W21	None
Gandhi et al, 2005	Prospective N = 69	20μg W 0–4–24	72% 518	33%	43 / 62%	16%	62%	Male sex HCV co-infection
Jongjirawisan et al, 2006	Prospective N = 140	20μg once	80% 300	12%	38.1 / 59.3%	✖ 7%	NA	Intravenous drug use and HCV co-infection ✓

An anamnestic response is defined by the production of antiHBs > 10 mIU/mL after a single injection of hepatitis B vaccine.

NR: Non Responders

Catherine FX, Piroth L. Hepatitis B virus vaccination in HIV-infected people: A review. Hum Vaccin Immunother. 2017;13(6):1-10. doi:10.1080/21645515.2016.1277844



http://depts.washington.edu/hepstudy/images/hepB/HBV_Rx_Res_d01.png

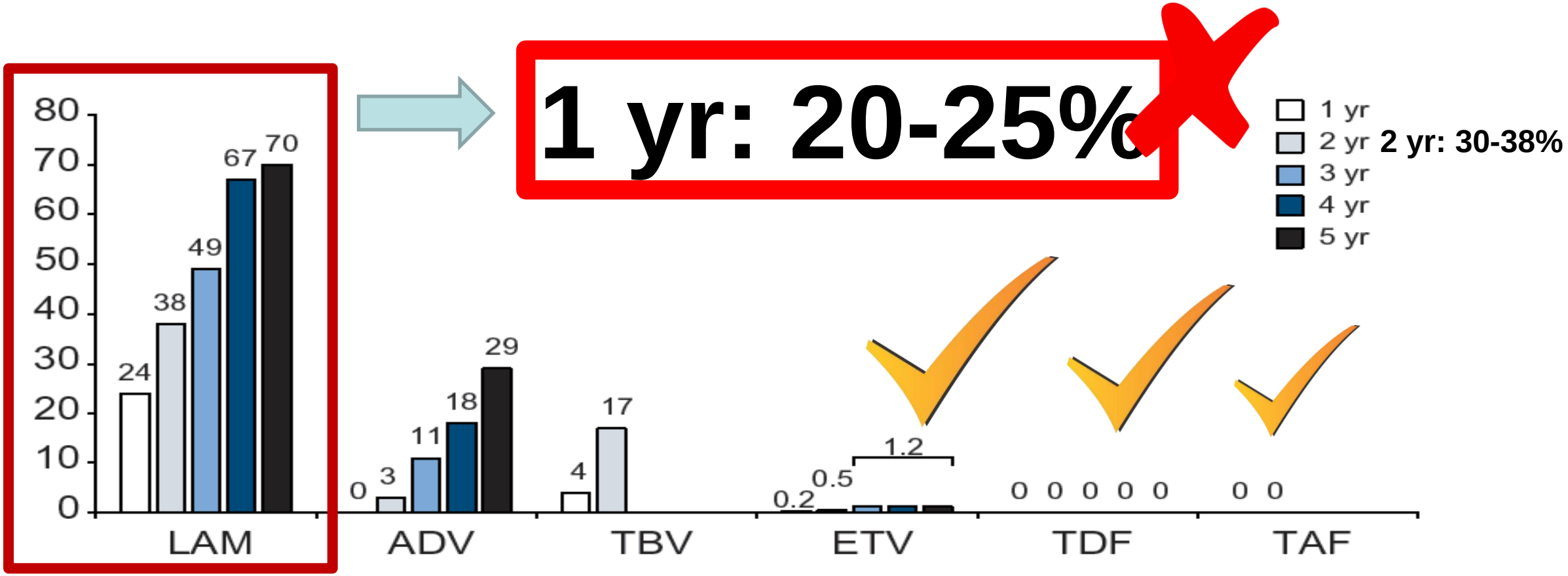


Fig. 3. Cumulative incidence of HBV resistance for lamivudine (LAM), adefovir (ADV), entecavir (ETV), telbivudine (TBV), tenofovir (TDF) and tenofovir alafenamide (TAF) in pivotal trials in nucleos(t)ide-naïve patients with chronic hepatitis B. (Collation of currently available data – not from head-to-head studies). No evidence of resistance has been shown after 8 years of TDF treatment.[69]

Journal of Hepatology 2017 vol. 67 / 370–398.

Table 1. Primary Resistance Mutations, Frequency of Resistance at 1 Year and Preferred Management Strategies to Resistance with the Approved Nucleoside Analogs

Antiviral Agent	Primary Antiviral Resistant Mutation	Frequency of Resistance at 1 Year		Preferred Management
		HBeAg Positive	HBeAg Negative	
Lamivudine	rtM204V/I rtA181V/T	11%–32%[12,31,32]	11%–27%[12,34,35,81,82]	●Add adefovir ●Add or switch to tenofovir
Telbivudine	rtM204I	5%[12]	2%[12]	●Add adefovir ●Add or switch to tenofovir
Adefovir	rtA181V/T rtN236T	0%[83]	0%[84]	●Add lamivudine or telbivudine ●Switch to tenofovir ●Switch to entecavir
Tenofovir	None	0%[45]	0%[45]	?
Entecavir	rtL180M and rtM204V plus rtI169T and rtM250V or rtT184G and rtS202I	0%[52]	0%[34]	●Add adefovir ●Add or switch to tenofovir

HEPATOLOGY 2009;49:S174-S184.

HIVinfo.NIH.gov

Guidelines for the Prevention and Treatment of Opportunistic Infections in Adults and Adolescents with HIV

Hepatitis B Virus Infection

Updated: Apr. 13, 2023
Reviewed: Apr. 13, 2023

Recommendations for Treating Hepatitis B Virus Infection

Indication for Therapy

- For all people with HIV/HBV coinfection, including pregnant people, regardless of CD4 count and HBV DNA level **(AIII)**, therapy should be selected that includes drugs active against both HIV and HBV infections **(AIII)**.

Preferred Therapy (CrCl ≥60 mL/min)

- The ART regimen must include two drugs active against HBV, preferably with (TDF 300 mg plus [FTC 200 mg or 3TC 300 mg]) or (TAF [10 or 25 mg]a plus FTC 200 mg) PO once daily **(AII)**.

Preferred Therapy (CrCl 30–59 mL/min)

- The ART regimen must include two drugs active against HBV, preferably with TAF (10 or 25 mg)a plus FTC 200 mg PO once daily **(AII)**.

Preferred Therapy (CrCl <30 mL/min, Not Receiving HD)

- Renally dosed entecavir (in place of TDF or TAF), *or*
- ART with renally dose-adjusted TDF and FTC **(BIII)** when recovery of renal function is unlikely (see Table 6 for dosing recommendation for TDF and FTC or 3TC for people with renal impairment). Guidance for TAF use in people with CrCl <30 is not yet established.

Preferred Therapy (Receiving HD)

- (TDF or TAF) plus (FTC or 3TC) can be used. Refer to Table 6 for dosing recommendation.

Duration of Therapy

- People on treatment for HBV and HIV should receive therapy indefinitely **(BIII)**.

https://clinicalinfo.hiv.gov/en/guidelines/hiv-clinical-guidelines-adult-and-adolescent-opportunistic-infections/hepatitis-b-0?view=full

Generic Name (Abbreviation) *Trade Name*	Usual Dose[a]	Dosing in Adults with Renal Insufficiency		Dosing in Adults with Hepatic Impairment
Tenofovir Alafenamide/Emtricitabine (TAF/FTC) *Descovy*	TAF for HIV treatment is only available as a component of FDC tablets (i.e., in Descovy, Genvoya, Odefsey, Biktarvy, and Symtuza). TAF 10 mg PO daily with EVG/c (Genvoya) or DRV/c (Symtuza) TAF 25 mg PO daily in other FDC tablets	**CrCl (mL/min)**	**Dose**	*Child-Pugh Class A or B*: No dose adjustment *Child-Pugh Class C*: No dose recommendation
		<30 and not on HD	**Not recommended**	
		<30 and on HD	One tablet once daily	
Tenofovir Disoproxil Fumarate/Emtricitabine (TDF/FTC) *Truvada*	One tablet PO once daily	**CrCl (mL/min)**	**Dose**	No dose recommendation.
		30–49	One tablet every 48 hours	
		<30 or on HD	**Not recommended**	
Tenofovir Disoproxil Fumarate/Lamivudine (TDF/3TC) *Cimduo*	One tablet PO once daily	**CrCl (mL/min)**	**Dose**	No dose recommendation.
		<50 or on HD	**Not recommended**	

Updated May 26, 2023

https://clinicalinfo.hiv.gov/en/guidelines/hiv-clinical-guidelines-adult-and-adolescent-arv/drug-characteristics-tables-renal-hepatic-insufficiency-full

Dosage adjustment of nucleos(t)ide analogue for patients with reduced creatinine clearance

Entecavir	Recommended dosage		Dosage forms
Creatinine clearance (mL/min)	Entecavir[28]	Entecavir in Lamivudine-Refractory[28]	Entecavir[28]
> 50	0.5 mg once daily	1 mg once daily	Tablets: 0.5 mg and 1 mg Oral solution: 0.05 mg/mL
30-49	0.25 mg once daily OR	0.5 mg once daily OR	
	0.5 mg every 48 h	1 mg every 48 h	
10-29	0.15 mg once daily OR	0.3 mg once daily OR	
	0.5 mg every 72 h	1 mg every 72 h	
Hemodialysis	0.05 mg once daily OR	0.1 mg once daily OR	
	0.5 mg every 7 d following dialysis	1 mg every 7 d following dialysis	

Ridruejo E. Antiviral treatment for chronic hepatitis B in renal transplant patients. World J Hepatol. 2015 Feb 27;7(2):189-203. doi: 10.4254/wjh.v7.i2.189

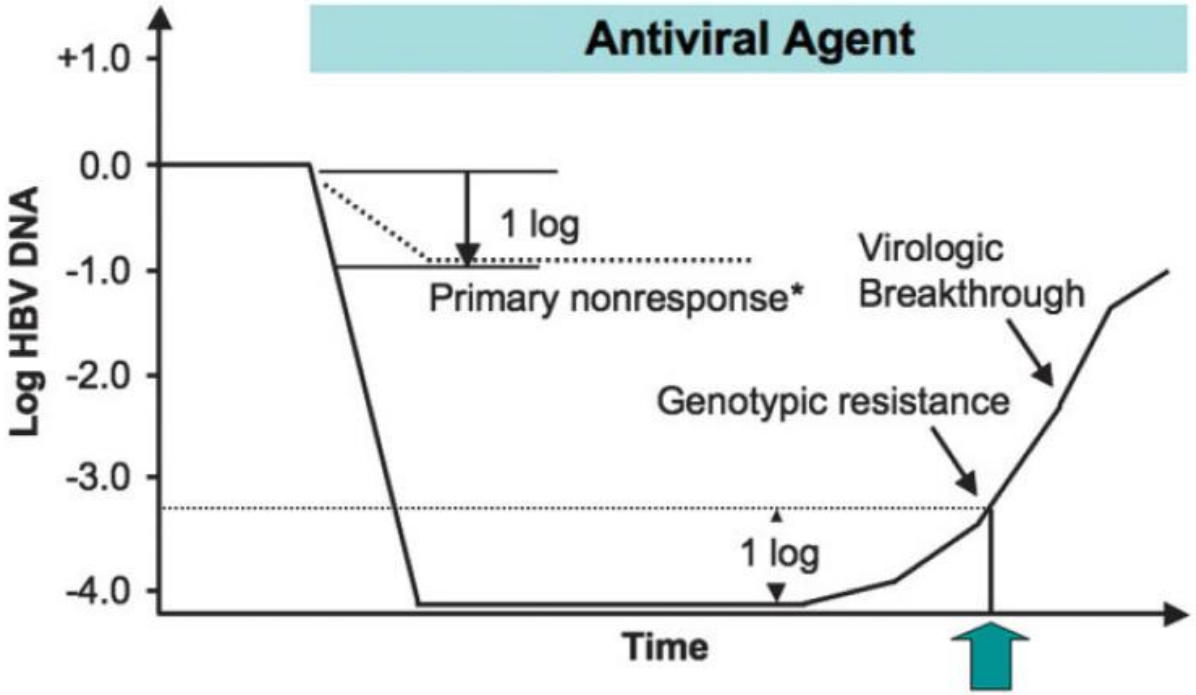
Table 1 Selected hot-spot mutations in the HBV polymerase conferring drug resistance

HBV reverse transcriptase mutations	Nucleoside analogues			Nucleotide analogues	
	LMV	LdT	ETV	ADV	TDF
Wildtype	S	S	S	S	S
M204I	R	R	S	S	S
L180M + M204V/S	R	R	I	S	S
L180M + M204V/I ± T184G ± S202I/G	R	R	R	S	S
L180M + M204V/I ± I169T ± V173L ± M250V	R	R	R	S	S
A181T/V	I	S	S	R	S
N236T	S	S	S	R	I
A194T	R	S	S	?	I

The susceptibility to the different drugs is indicated by sensitive (S), resistant (R) and intermediate/in vitro resistance (I). LMV, lamivudine; LdT, telbivudine; ETV, entecavir; ADV, adefovir dipivoxil; TDF, tenofovir; HBV, hepatitis B virus.

Gut and Liver, Vol. 11, No. 2, March 2017, pp. 189-195.
HEPATOLOGY 2009;49:S174-S184.

Annals of Translational Medicine, Vol 4, No 18 September 2016.



Primary nonresponse is defined as the inability of the antiviral agent to reduce serum HBV DNA by ≥ 1 $\log_{10}$ IU/mL within the first 6 months of treatment.

Virological breakthrough is the first clinical indication of the development of antiviral drug resistance. It is defined as an increase in serum HBV DNA by by ≥ 1 $\log_{10}$ IU/mL above a nadir on two or more consecutive occasions at least 1 month apart while on treatment after achieving an initial response in a compliant patient.

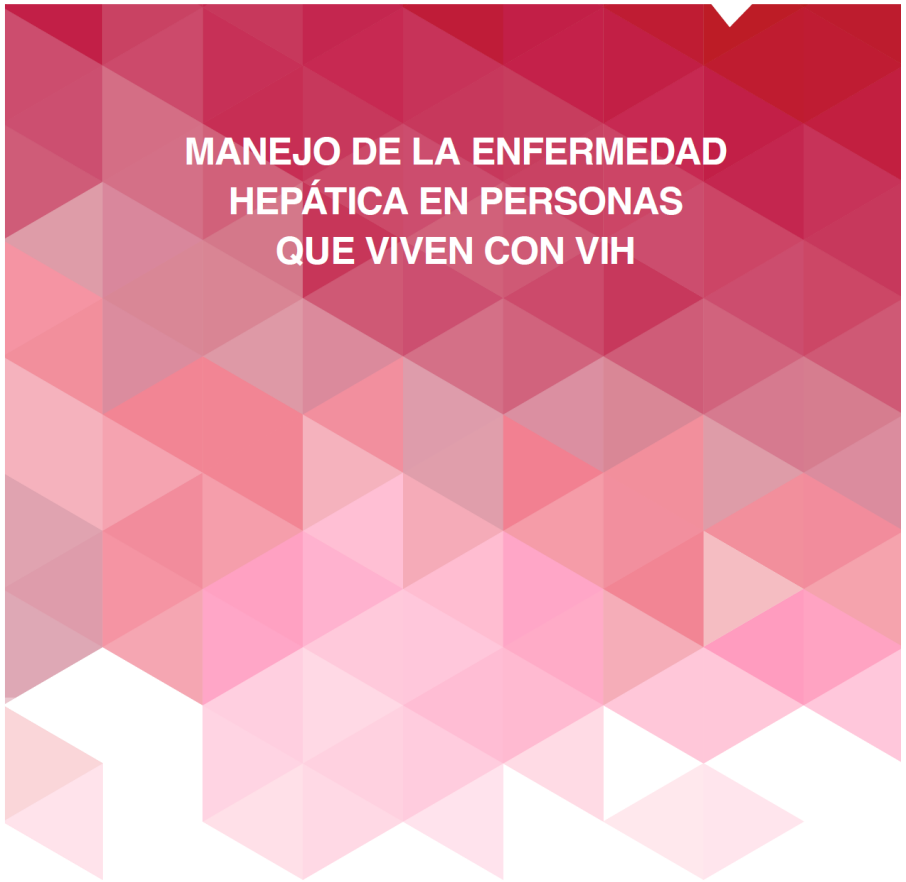
Table 2 Practical management of treatment failure

Resistance to	Rescue therapy
Lamivudine	Tenofovir
Telbivudine	Tenofovir
Entecavir	Tenofovir (or tenofovir + entecavir)
Adefovir	Entecavir (or tenofovir)
Tenofovir	Entecavir (or tenofovir + entecavir)
Multiple drugs	Tenofovir + entecavir

Typical treatment options for the management of HBV antiviral resistance. In most cases, the switch to a monotherapy with a noncross-resistance profile is sufficient. HBV, hepatitis B virus.

Gut and Liver, Vol. 11, No. 2, March 2017, pp. 189-195.
HEPATOLOGY 2009;49:S174-S184.

Annals of Translational Medicine, Vol 4, No 18 September 2016.



Cribado de hepatocarcinoma

La detección precoz de hepatocarcinoma es el principal desafío en el seguimiento de los pacientes con infección crónica por VHB y, pese a que no existe una evidencia directa de su beneficio en pacientes coinfectados, **se recomienda el cribado mediante ecografías hepáticas semestrales en pacientes cirróticos, o en los no cirróticos con antecedentes familiares de CHC, coinfectados por el VHD, o procedentes de países africanos o asiáticos con edad superior a 40 años en varones, o 50 en mujeres.**

16 febrero, 2023.

https://gesida-seimc.org/documento-de-manejo-de-la-enfermedad-hepatica-en-personas-que-viven-con-vih/

HIVinfo.NIH.gov

Guidelines for the Prevention and Treatment of Opportunistic Infections in Adults and Adolescents with HIV

Immunizations for Preventable Diseases in Adults and Adolescents with HIV

Updated: Apr. 13, 2023
Reviewed: Apr. 13, 2023

Vaccine	Indication	Recommendations	Additional Comments	ACIP Recommendations
Hepatitis A virus (HAV)	HAV susceptible with HIV infection **(AIII)**	2-dose series of either single antigen vaccine: Havrix®: 1.0 mL IM (0, 6–12 months) **(AII);** *or* Vaqta®: 1.0 mL IM (0, 6–18 months) **(AIII)** Alternative for individuals susceptible to both HAV and HBV: Twinrix®: 1.0 mL IM 3-dose series (0, 1, 6 months) **(AII)**	Assess antibody response (total or IgG anti-HAV) 1–2 months after completion of the series, and if negative, revaccinate, preferably after the CD4 count is ≥200 cells/mm^3 **(BIII).** For travelers, some clinicians recommend: • 4-dose series (0, 7, 21–30 days, 12 months) of Twinrix® **(BII)**	No difference in recommendations

https://clinicalinfo.hiv.gov/en/guidelines/hiv-clinical-guidelines-adult-and-adolescent-opportunistic-infections/immunizations?view=full

Table 2 Recommended Adult Immunization Schedule by Medical Condition or Other Indication, United States, 2023

Vaccine	Pregnancy	Immuno-compromised (excluding HIV infection)	HIV infection CD4 percentage and count		Asplenia, complement deficiencies	End-stage renal disease, or on hemodialysis	Heart or lung disease; alcoholism[a]	Chronic liver disease	Diabetes	Health care personnel[b]	Men who have sex with men
			<15% or <200 mm³	≥15% and ≥200 mm³							
HepA			✖ 0 – 6 months			2, 3, or 4 doses depending on vaccine					
HepB	3 doses (see notes)	2, 3, or 4 doses depending on vaccine or condition									

Hepatitis A vaccination

Routine vaccination

- **Not at risk but want protection from hepatitis A** (identification of risk factor not required): 2-dose series HepA (Havrix 6–12 months apart or Vaqta 6–18 months apart [minimum interval: 6 months]) or 3-dose series HepA-HepB (Twinrix at 0, 1, 6 months [minimum intervals: dose 1 to dose 2: 4 weeks / dose 2 to dose 3: 5 months])

Mipres

Special situations

- **At risk for hepatitis A virus infection:** 2-dose series HepA or 3-dose series HepA-HepB as above
  - **Chronic liver disease** (e.g., persons with hepatitis B, hepatitis C, cirrhosis, fatty liver disease, alcoholic liver disease, autoimmune hepatitis, alanine aminotransferase [ALT] or aspartate aminotransferase [AST] level greater than twice the upper limit of normal)
  - **HIV infection**
  - **Men who have sex with men**
  - **Injection or noninjection drug use**
  - **Persons experiencing homelessness**
  - **Work with hepatitis A virus** in research laboratory or with nonhuman primates with hepatitis A virus infection
- **Travel in countries with high or intermediate endemic hepatitis A** (HepA-HepB [Twinrix] may be administered on an accelerated schedule of 3 doses at 0, 7, and 21–30 days, followed by a booster dose at 12 months)
- **Close, personal contact with international adoptee** (e.g., household or regular babysitting) in first 60 days after arrival from country with high or intermediate endemic hepatitis A (administer dose 1 as soon as adoption is planned, at least 2 weeks before adoptee's arrival)
- **Pregnancy** if at risk for infection or severe outcome from infection during pregnancy
- **Settings for exposure,** including health care settings targeting services to injection or noninjection drug users or group homes and nonresidential day care facilities for developmentally disabled persons (individual risk factor screening not required)

https://www.cdc.gov/vaccines/schedules/hcp/imz/adult-conditions.html#table-conditions

Observed immunogenicity of HIV-infected subjects and HIV-uninfected control subjects who received an inactivated hepatitis A vaccine (VAQTA; Merck).

	Observed responses among HIV-infected subjects, by CD4 cell count					
	<300 cells/mm³			⩾300 cells/mm³		
	Seropositive status			Seropositive status		
Study week	% of subjects (95% CI)	*n/N*[a]	GMT[b] (95% CI)	% of subjects (95% CI)	*n/N*[a]	GMT[b] (95% CI)
Week 4[c]	48 (29–68)	13/27	10 (8–14)	74 (54–89)	20/27	19 (13–28)
Week 24[d]	72 (51–88)	18/25	49 (20–125)	92 (75–99)	24/26	55 (33–93)
Week 28[e]	✖ 87 (66–97)	20/23	517 (163–1644)	✖ 100 (87–100)	26/26	1959 (1297–2958)
Week 52[f]	80 (59–93)	20/25	214 (75–613)	100 (86–100)	25/25	643 (376–1100)

e Four weeks after second VAQTA injection.

✖ **Seropositive for HAV antibody ≥10 mIU/mL.**

Wallace MR, et al, Safety and Immunogenicity of an Inactivated Hepatitis A Vaccine among HIV-Infected Subjects, Clinical Infectious Diseases, Volume 39, Issue 8, 15 October 2004, Pages 1207–1213. https://doi.org/10.1086/424666

Table 1. Frequency of seroconversion among human immunodeficiency virus–infected patients randomly assigned to receive 2 doses of hepatitis A vaccine (1440 ELISA units) intramuscularly 6 months apart, by month and baseline CD4 cell count.

Month after first vaccination	Baseline CD4 cell count, cells/mm³ <200 (n = 19)	200–499 (n = 32)	⩾500 (n = 17)	P[a]
1	0/13 (0)	4/22 (18.2)	1/10 (10.0)	.34
6	0/13 (0)	2/20 (10.0)	2/11 (18.2)	.25
7[b]	1/9 (11.1)	8/15 (53.3)	8/11 (72.7)	.023
9[b]	1/11 (9.1)	11/16 (68.8)	8/12 (66.7)	.004

NOTE. Data are no. of patients who seroconverted/no. of patients with evaluable specimens (%). Seroconversion was defined as achieving an anti–hepatitis A virus antibody titer ⩾33 mIU/mL.

[a] Calculated by the χ^2 test for differences among the 3 baseline CD4 groups.

[b] The month 7 and 9 visits occurred 1 month and 3 months after the second dose of vaccine.

Kemper CA, et al; California Collaborative Treatment Group. Safety and immunogenicity of hepatitis A vaccine in human immunodeficiency virus-infected patients: a double-blind, randomized, placebo-controlled trial. J Infect Dis. 2003 Apr 15;187(8):1327-31. doi: 10.1086/374562.

Seroconversion was defined as achieving an anti–HAV antibody titer ≥33 mIU/mL.

Tabla 7. Tabla de vacunación de acuerdo al recuento de CD4, para adultos que viven con VIH

Condición	VHA	VHB	Influenza	Neumococo	TD/TdaP	Triple Viral	VPH	Varicela	Zoster	COVID-19	Fiebre amarilla
VIH CD4>200 células/mm^3.	x	x	x	X	x	X	x	x	x	x	x
VIH con recuento CD4<200 células/mm^3.		x	x*	x*	x		x*			x	

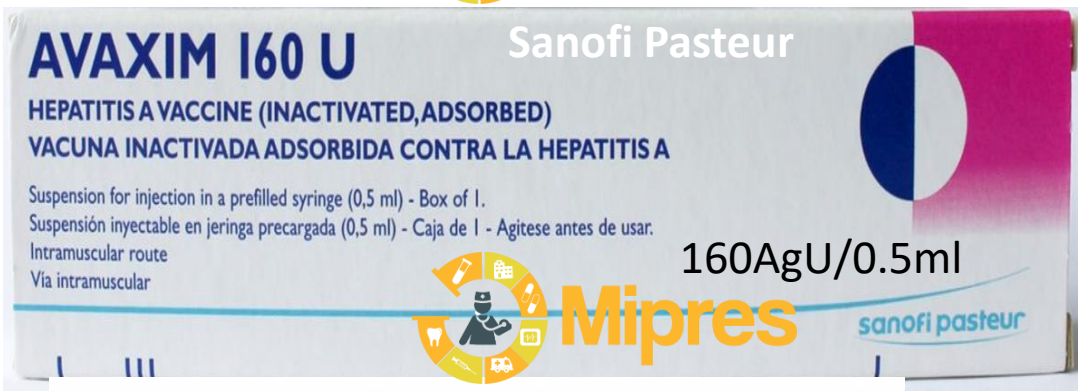
VHA: virus de hepatitis A, VHB: virus de hepatitis B, TD/TdaP: vacuna de tétano, difteria y tos ferina, VPH: Virus de papiloma humano, COVID19: coronavirus.

VHA: se recomienda en personas con factores de riesgo (sexo anal y hepatopatías~), con anticuerpos totales o IgG negativos y cuando el conteo de células CD4 sea mayor de 200 células/mm3.

Ministerio de Salud y Protección Social, Empresa Nacional Promotora del Desarrollo Territorial e Instituto de Evaluación Tecnológica en Salud. Guía de Práctica Clínica basada en la evidencia científica para la atención de la infección por VIH/SIDA en personas adultas, gestantes y adolescentes. Versión para profesionales de salud. Bogotá D.C. Colombia; 2021
Guía para profesionales de la salud. Guía N° 39-2021.

1440unidades ELISA/1ml

Mipres

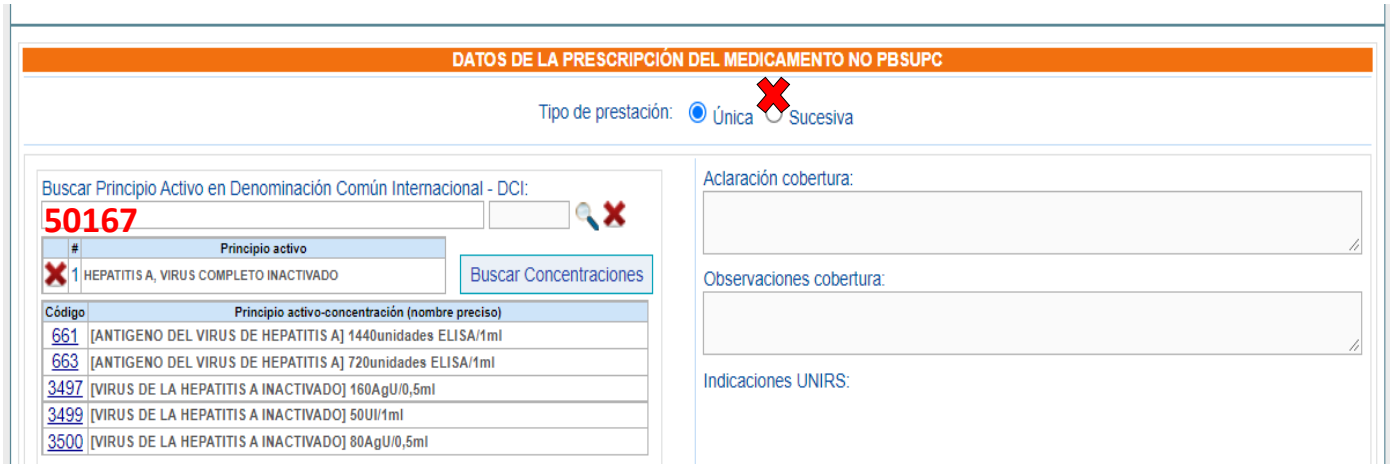


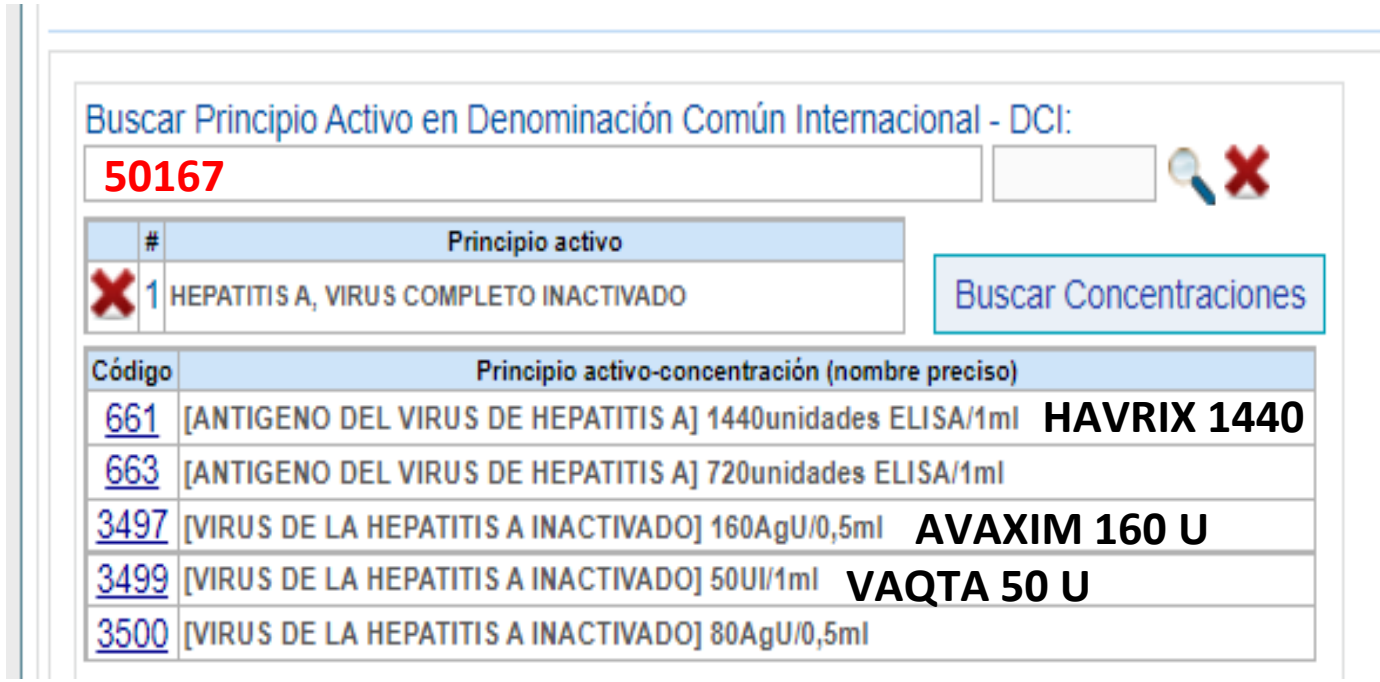
160AgU/0.5ml

Mipres

50UI/1ml

Mipres





https://mipres.sispro.gov.co/MIPRESNOPBS/Mod1/RegPrescripcion.aspx

FDA Drug Safety Communication: FDA warns about the risk of hepatitis B reactivating in some patients treated with direct-acting antivirals for hepatitis C

Clinical Infectious Diseases

MAJOR ARTICLE

Antiviral Therapy for Hepatitis B Prevents Liver Injury in Patients With Tuberculosis and Hepatitis B Coinfection

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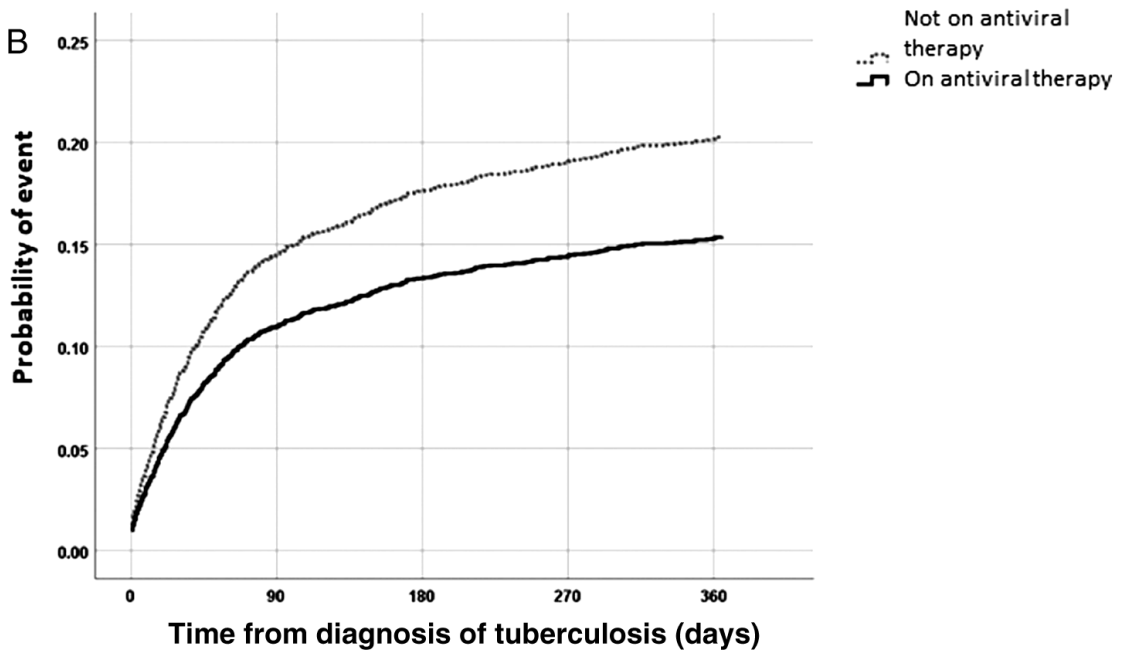
Background. Chronic hepatitis B virus (HBV) infection increases the risk of liver injury in patients who undergo antituberculosis treatment. It is uncertain whether antiviral treatment for HBV at the time of tuberculosis diagnosis would reduce the risk of liver injury.

Methods. We performed a population-level, retrospective, cohort study that involved all patients with tuberculosis–HBV coinfection treated in public hospitals in Hong Kong over a 16-year period. Patients who received antiviral treatment at the time of tuberculosis diagnosis were considered "patients on antiviral therapy." A multivariable Cox proportional hazards model was used to determine the adjusted hazard ratio of hospitalization due to drug-induced liver injury within 1 year in patients on antiviral therapy, adjusting for the propensity score.

Results. Of 3698 patients with tuberculosis–HBV coinfection, 488 (13.2%) were patients on antiviral therapy. Of the remaining 3210 patients, 446 (13.9%) started antiviral therapy within 1 year of tuberculosis diagnosis. Adjusting for the propensity score, patients on antiviral therapy had a lower risk of hospitalization due to drug-induced liver injury compared with those not on treatment (adjusted hazard ratio, 0.44; 95% confidence interval .26–.72). Compared with patients who started antiviral therapy within 1 year of tuberculosis diagnosis, patients on antiviral therapy also had a lower risk of hospitalization due to drug-induced liver injury and a lower risk of liver-related mortality.

Conclusions. We show that antiviral treatment for HBV given at the time of tuberculosis diagnosis reduced the risk of liver injury in tuberculosis–HBV coinfected patients.

Keywords. hepatitis B; tuberculosis; liver injury; antiviral treatment.



Time from diagnosis of tuberculosis (days)

Number at risk	Day 0	Day 90	Day 180	Day 270	Day 360
On antiviral therapy	488	319	295	289	278
Not on antiviral therapy	3210	2153	2025	1961	1921

Clinical Infectious Diseases® 2020;70(4):660-6

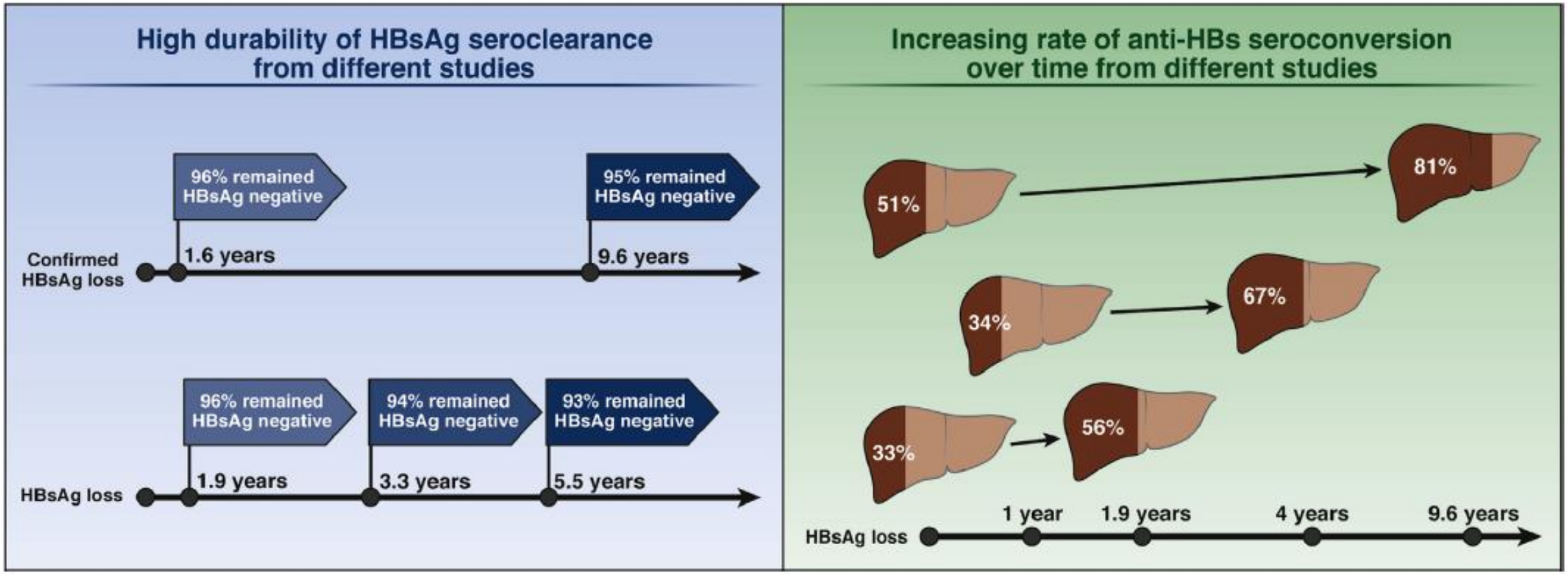
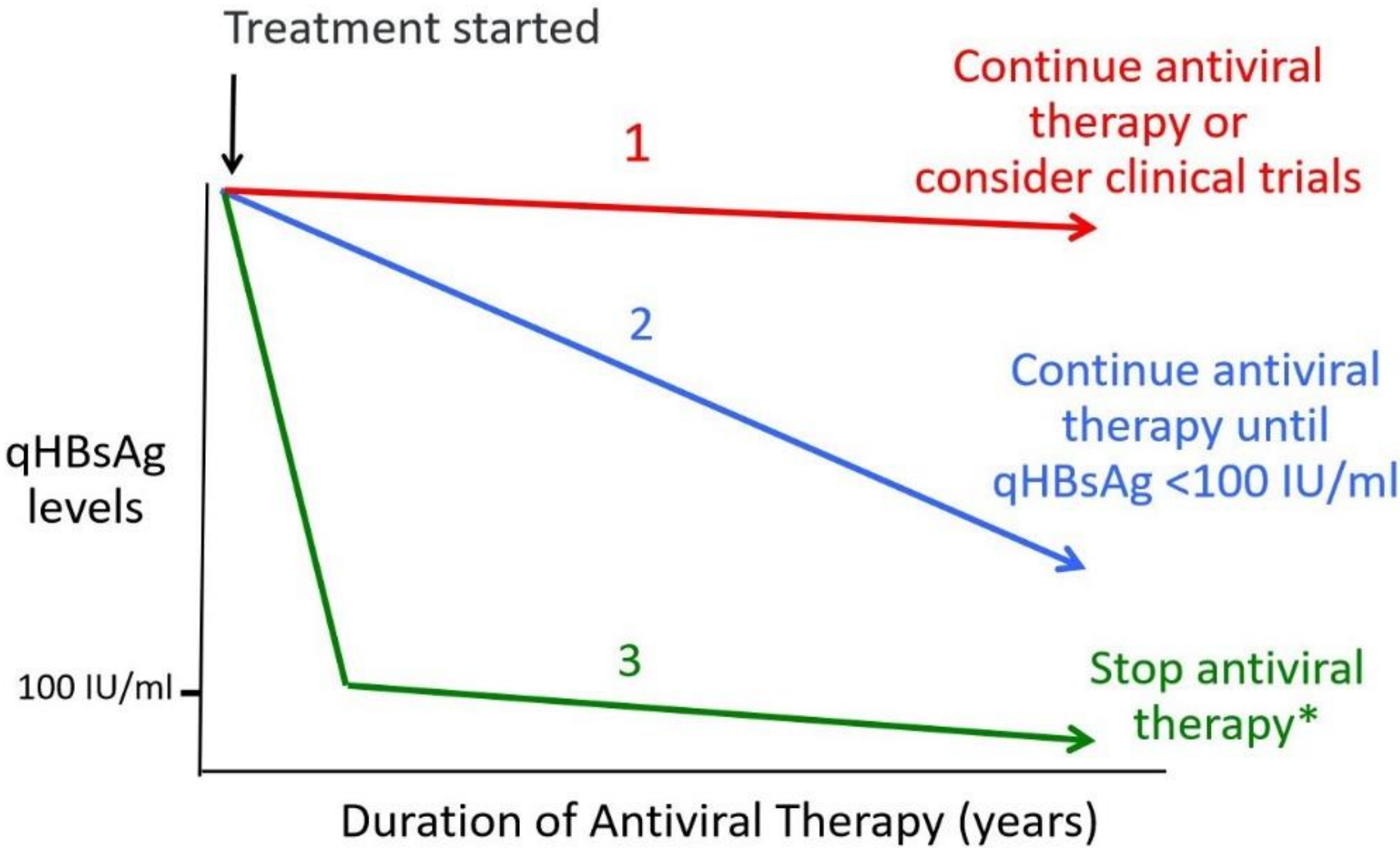


Figure 1. Summary on durability of hepatitis B surface antigen (HBsAg) seroclearance and rate of hepatitis B surface antibody (anti-HBs) seroconversion.

Yip TC, Lok AS. How Do We Determine Whether a Functional Cure for HBV Infection Has Been Achieved? Clin Gastroenterol Hepatol. 2020 Mar;18(3):548-550. doi: 10.1016/j.cgh.2019.08.033.

Patterns of HBsAg Decline on Treatment



Viruses 2022, 14(4), 657; https://doi.org/10.3390/v14040657

Research Article
Viral Hepatitis

JOURNAL OF HEPATOLOGY

A multicenter randomized-controlled trial of nucleos(t)ide analogue cessation in HBeAg-negative chronic hepatitis B

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Background & Aims: Nucleos(t)ide analogues (NUCs) are the standard and mostly lifelong treatment for chronic HBeAg-negative hepatitis B, as functional cure (loss of HBsAg) is rarely achieved. Discontinuation of NUC treatment may lead to functional cure; however, to date, the evidence for this has been based on small or non-randomized clinical trials. The STOP-NUC trial was designed with the aim of increasing the HBsAg loss rate using a NUC treatment interruption approach.
Methods: In this multicenter, randomized-controlled trial, 166 HBeAg-negative patients with chronic hepatitis B on continuous long-term NUC treatment, with HBV DNA <172 IU/ml (1,000 copies/ml) for ≥4 years, were randomized to either stop (Arm A) or continue NUC treatment (Arm B) for a 96-week observation period. In total, 158 patients were available for final analysis, 79 per arm. The primary endpoint was sustained HBsAg loss up to week 96.
Results: Our study met its primary objective by demonstrating HBsAg loss in eight patients (10.1%, 95% CI 4.8%–19.5%) in Arm A and in no patient in Arm B ($p = 0.006$). Among patients with baseline HBsAg levels <1,000 IU/ml, seven (28%) achieved HBsAg loss. In Arm A, re-therapy was initiated in 11 (13.9%) patients, whereas 32 (40.5%) patients achieved sustained remission. A decrease of HBsAg >1 log IU/ml was observed in 16 patients (20.3%) in Arm A and in one patient (1.3%) in Arm B. No serious adverse events related to treatment cessation occurred.
Conclusions: Cessation of NUC treatment was associated with a significantly higher rate of HBsAg loss than continued NUC treatment, which was largely restricted to patients with end of treatment HBsAg levels <1,000 IU/ml.

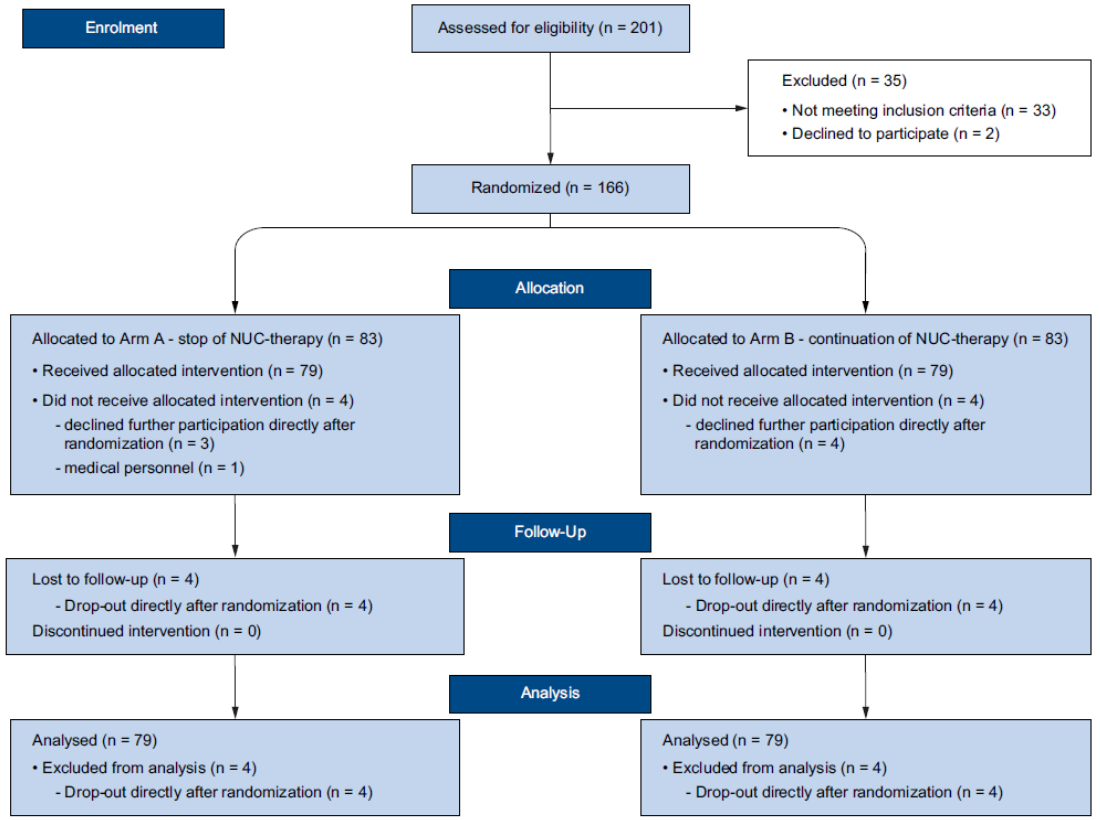

Fig. 1. CONSORT diagram showing enrolment and randomization of patients.

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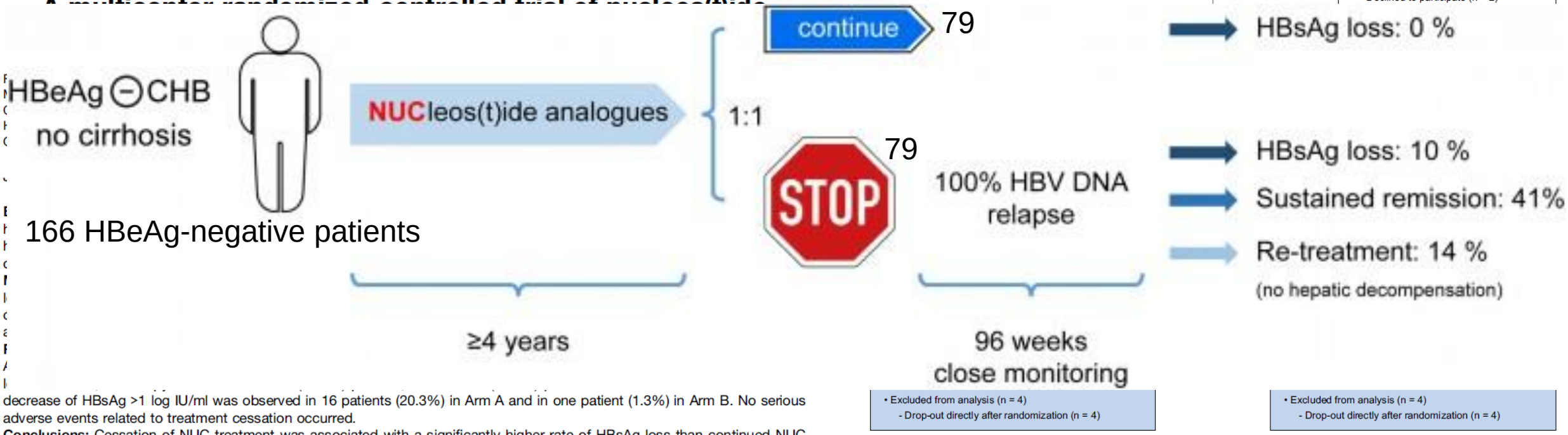
Patients with a history of decompensated liver function or signs of advanced liver fibrosis defined either histologically by Scheuer score ≥ stage 3 (within last year before screening) and/or liver stiffness ≥10 kPa by elastography (FibroScan) at screening, with evidence of hepatocellular carcinoma, concomitant human immunodeficiency, hepatitis delta or hepatitis C virus infections, alcohol consumption >30 g/day for women and >50 g/day for men, extrahepatic manifestations of HBV infections, or pregnancy were excluded.

van Bömmel F, et al. A multicenter randomized-controlled trial of nucleos(t)ide analogue cessation in HBeAg-negative chronic hepatitis B. J Hepatol. 2023 May;78(5):926-936. doi: 10.1016/j.jhep.2022.12.018.

Research Article
Viral Hepatitis

JOURNAL
OF HEPATOLOGY



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Conclusions: Cessation of NUC treatment was associated with a significantly higher rate of HBsAg loss than continued NUC treatment, which was largely restricted to patients with end of treatment HBsAg levels <1,000 IU/ml.

Fig. 1. CONSORT diagram showing enrolment and randomization of patients.

Sustained remission up to week 96 defined by HBV DNA <2,000 IU/ml and ALT <ULN in all subsequent assessments after first occurrence of remission.

van Bömmel F, et al. A multicenter randomized-controlled trial of nucleos(t)ide analogue cessation in HBeAg-negative chronic hepatitis B. J Hepatol. 2023 May;78(5):926-936. doi: 10.1016/j.jhep.2022.12.018.

Hepatitis B y VIH

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REVIVA