**Chronic hepatitis B treatment decision tool for adults**

**成人慢性乙型肝炎治疗决策工具**

**Home page**

People who are chronically infected with hepatitis B (HBsAg positive) often have no symptoms but can harbor or develop active hepatitis, liver cirrhosis and liver cancer.

慢性乙肝患者通常没有症状，但肝炎病毒可存活于体内并导致活动性肝炎、肝硬化或肝癌。

Antiviral treatment is indicated if the infected person has active hepatitis or liver cirrhosis and is effective in reducing risk of disease progression and death.

如果患者有活动性肝炎或肝硬化，抗病毒治疗可以降低病情发展的风险和致死率。

To access the treatment decision tool based on and adapted from the World Health Organization 2015 Hepatitis B Treatment Guidelines. Enter

慢性乙肝治疗决策工具基于世界卫生组织(WHO)2015年乙型肝炎治疗指南，用于帮助医务人员和患者决定是否需要开始抗病毒治疗。点此进入

To access the treatment decision tool based on and adapted from the 2018 hepatitis B treatment guidelines from the American Association for the Study of Liver Diseases (AASLD). Enter

基于美国肝病研究学会（AASLD）的2018年乙型肝炎治疗指南的治疗决策工具。点此进入

**WHO Treatment Guidelines page**

**1 Does your patient have CIRRHOSIS?**

**1 患者是否有肝硬化?**

Yes

是

No

否

If you don’t know, tap here to APRI and FIB-4 Calculator

如果你不确定，点击这里使用 APRI 和 FIB-4 指数计算器

**2 What is your patient's ALT level?**

**2 患者的谷丙转氨酶(ALT)水平怎么样？**

Persistently Normal

一直在正常范围

Intermittently Abnormal

间断性升高

Persistently Abnormal

持续性升高

( > 60 U/L in man, > 40 U/L in women)

(男性高于60U/L，女性高于40U/L)

**3 What is your patient's HBV DNA level?**

**3患者乙肝病毒载量(HBV DNA)是多少？**

Undetectable

低于检测下限

< 2000 IU/mL

2000 ~ 20,000 IU/mL

≥ 20,000 IU/mL

Submit

提交

**WHO Treatment Recommended page**

**Recommendation: Treatment 建议: 需要治疗**

**The result shows antiviral treatment is indicated at this time**

**结果表明需要抗病毒治疗**

**Entecavir (ETV 0.5 mg/pill/day) or Tenofovir disoproxil fumarate (TDF 300mg/pill/day) or Tenofovir alafenamide fumarate (TAF 25mg/pill/day) are the recommended first line treatment because of their potency and low risk of developing drug resistance.**

**• 恩替卡韦（ETV 0.5mg/片/天）或替诺福韦酯（TDF 300 mg/片/天）或替诺福韦艾拉酚胺（TAF 25 mg/片/天）是推荐的一线药物。它们的药效较好且产生耐药性的风险较低。**

The medicines act by preventing the hepatitis B virus from replicating.

药物作用为抑制乙肝病毒的复制。

Important to take the medicine daily to prevent the development of drug resistance. Patients who had taken lamivudine and developed drug resistance should be placed on tenofovir.

为防止耐药性的产生，应坚持每天服药。既往服用拉米夫定并产生耐药性的患者，应换用替诺福韦。

Duration of treatment is likely life-long. Stopping treatment can result in hepatitis flare.

可能需要终身治疗，终止治疗可导致炎症加剧。

**•Long-term Monitoring Recommendations**

**• 长期随访建议**

1. Blood test for ALT level to monitor for treatment response and hepatitis flare every 6 months. Blood test for creatinine every 6 -12 months to monitor kidney function if taking tenofovir.
2. 每六个月应检测ALT水平，以观察治疗效果和肝脏炎症加剧的风险。如果患者在服用替诺福韦，每6到12个月应查一次肌酐，以观察肾功能。
3. Blood test for hepatitis B DNA level 3 - 6 months after starting treatment to evaluate treatment response. Repeat if ALT level becomes elevated on treatment and if feasible once a year.
4. 开始治疗后3到6个月应检测HBV DNA载量以观察疗效。如果治疗期间ALT水平升高，应重复HBV DNA检测。如果可能，HBV DNA应每年查一次。
5. Blood test for alpha fetoprotein (AFP) level every 6 months and liver ultrasound every 6-12 months for liver cancer screening (Particularly important if the patient has cirrhosis or a family history of liver cancer).
6. 每6个月应检测甲胎蛋白(AFP)水平，每6-12个月应做肝脏超声检查，以早期发现肝癌。（筛查对有肝硬化或有肝癌家族史的患者尤为重要。）

**• Avoid drinking alcohol and moldy food. Advise the patient to receive the hepatitis A vaccine if unprotected and the patient’s family and partner to get tested for hepatitis B and get vaccinated if they are not protected.**

**• 避免饮酒和食用发霉食物。如果对甲肝还没有免疫力，建议接种甲肝疫苗。确保家人和伴侣接受乙肝检查，如果他们对乙肝还没有免疫力，建议他们接种乙肝疫苗。**

**WHO No Treatment Recommendation page**

**Recommendation: No Treatment 建议: 无须治疗**

**The result shows antiviral treatment is not indicated at this time**

**结果表明暂时不需要抗病毒治疗**

**Even though treatment is not indicated for now, the chronically infected person still has a risk of developing liver cancer and active hepatitis that would require treatment in the future. It is important to follow long-term monitoring recommendations.**

**尽管患者现在暂时不需要抗病毒治疗，肝癌或活动性肝炎的风险依然存在，将来可能需要治疗。长期随访尤为重要。**

•**Long-term Monitoring recommendations**

**• 长期随访建议**

1. Blood test for ALT level to monitor for active hepatitis every 6-12 months. When ALT becomes elevated, repeat HBV DNA level to check for increased viral activity.
2. 每6-12个月检测ALT，以监测活动性肝炎。当ALT升高时，需要复检乙肝DNA水平查看乙肝病毒活跃性的高度。
3. Blood test for alpha fetoprotein (AFP) level every 6 months and liver ultrasound every 6-12 months for liver cancer screening (Particularly important if there is a family history of liver cancer).

2.每6个月应检测甲胎蛋白(AFP)水平，每6-12个月应做肝脏超声检查，以早期发现肝癌。（筛查对有肝癌家族史的患者尤为重要。）

1. Baseline blood test for HBeAg and anti-HBe. Blood test for HBV DNA level once a year if feasible to monitor viral activity.

3.如有可能，在初访时检测乙肝e抗体抗原与抗体 (HBeAg, anti-HBe) 和每年复检一次乙肝DNA水平，以监测病毒活动程度。

•**Circumstances where prophylactic antiviral treatment may be appropriate**

**• 预防性抗病毒治疗可能适合的情况**

1. To prevent hepatitis flare while receiving or following immunosuppressive therapy

1.正在接受或接受了免疫抑制治疗的患者，以预防肝炎发作

1. To further reduce the risk of mother to child transmission in pregnant women with very high hepatitis B DNA level
2. HBV DNA载量很高的孕妇，以进一步降低母婴传播风险

• **Avoid drinking alcohol and moldy food. Advise the patient to receive the hepatitis A vaccine if unprotected and the patient’s family and partner to get tested for hepatitis B and get vaccinated if they are not protected.**

**• 避免饮酒和食用发霉食物。 如果对甲肝还没有免疫力，建议接种甲肝疫苗。确保家人和伴侣接受乙肝检查，如果他们对乙肝还没有免疫力，建议他们接种乙肝疫苗。**

**AASLD Guidelines Page**

**1. Is your patient HBeAg positive?**

**1. 患者是否是为HBeAg阳性？**

Yes

是

No

否

**2. Does your patient have cirrhosis or significant fibrosis (F2-F4)?**

**2. 患者是否患有肝硬化或显著肝纤维化（F2-F4)?**

If you don’t know, tap here to APRI and FIB-4 Calculator

如果你不确定，点击这里使用 APRI 和 FIB-4 指数计算器

Yes

是

No

否

**3. What is your patient’s ALT level?**

**3. 患者的谷丙转氨酶(ALT)水平怎么样？**

Persistently normal

一直在正常范围

Intermittently abnormal

间断性升高

Persistently abnormal (men 35-69 U/l, women 25-49 U/l)

持续性升高(男性: 35-69 U/L, 女性: 25-49 U/L)

Persistently abnormal (men > 70 U/l, women > 50 U/l)

持续性升高(男性: ≥ 70 U/L, 女性: ≥ 50 U/L)

**4. What is your patient’s HBV DNA level?**

**4. 患者乙肝病毒载量(HBV DNA)是多少？**

Undetectable

低于检测下限

<2000 IU/ml

2000~20,000 IU/mL

>20,000 IU/mL

Submit

**提交**

**AASLD Treatment Recommended Page**

**Recommendation: Treatment 建议: 需要治疗**

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Duration of treatment is likely life-long. Stopping treatment can result in hepatitis flare.

可能需要终身治疗，终止治疗可导致炎症加剧。

**•Long-term Monitoring recommendations:**

**• 长期随访建议**

1.Blood test for ALT level to monitor for treatment response and hepatitis flare every 6 months. Blood test for creatinine every 6 -12 months to monitor kidney function if taking tenofovir.

1. 每六个月应检测ALT水平，以观察治疗效果和肝脏炎症加剧的风险。如果患者在服用替诺福韦，每6到12个月应查一次肌酐，以观察肾功能。

2. Blood test for hepatitis B DNA level 3 - 6 months after starting treatment to evaluate treatment response. Repeat if ALT level becomes elevated on treatment and if feasible once a year.

2. 开始治疗后3到6个月应检测HBV DNA载量以观察疗效。如果治疗期间ALT水平升高，应重复HBV DNA检测。如果可能，HBV DNA应每年查一次。

3. Blood test for alpha fetoprotein (AFP) level every 6 months and liver ultrasound every 6-12 months for liver cancer screening (Particularly important if the patient has cirrhosis or a family history of liver cancer)

3. 每6个月应检测甲胎蛋白(AFP)水平，每6-12个月应做肝脏超声检查，以早期发现肝癌。（筛查对有肝硬化或有肝癌家族史的患者尤为重要。）

**• Avoid drinking alcohol and moldy food. Advise the patient to receive the hepatitis A vaccine if unprotected and the patient’s family and partner to get tested for hepatitis B and get vaccinated if they are not protected.**

**• 避免饮酒和食用发霉食物。如果对甲肝还没有免疫力，建议接种甲肝疫苗。确保家人和伴侣接受乙肝检查，如果他们对乙肝还没有免疫力，建议他们接种乙肝疫苗。**

**AASLD No Treatment Recommended page**

**Recommendation: No Treatment 建议: 无须治疗**

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**• 尽管患者现在暂时不需要抗病毒治疗，肝癌或活动性肝炎的风险依然存在，将来可能需要治疗。长期随访尤为重要。**

**•Long-term Monitoring recommendations**

**• 长期随访建议**

1. Blood test for ALT level to monitor for active hepatitis every 6-12 months. When ALT becomes elevated, repeat HBV DNA level to check for increased viral activity.

1. 每6-12个月检测ALT，以监测活动性肝炎。当ALT升高时，需要复检乙肝DNA水平查看乙肝病毒活跃性的高度。

1. Blood test for alpha fetoprotein (AFP) level every 6 months and liver ultrasound every 6-12 months for liver cancer screening (Regular liver cancer screening is particularly important if there is a family history of liver cancer)

2. 每6个月应检测甲胎蛋白(AFP)水平，每6-12个月应做肝脏超声检查，以早期发现肝癌。（筛查对有肝癌家族史的患者尤为重要。）

1. Baseline blood test for anti-HBe. Blood test for HBV DNA level once a year if feasible to monitor viral activity.

3. 如有可能，在初访时检测乙肝e抗体 (anti-HBe) 和每年复检一次乙肝DNA水平，以监测病毒活动程度。

**•Circumstances where prophylactic antiviral treatment may be appropriate**

**• 预防性抗病毒治疗可能适合的情况**

1. To prevent hepatitis flare while receiving or following immunosuppressive therapy

1. 正在接受或接受了免疫抑制治疗的患者，以预防肝炎发作

2.To further reduce the risk of mother to child transmission in pregnant women with very high hepatitis B DNA level

2. HBV DNA载量很高的孕妇，以进一步降低母婴传播风险

• **Avoid drinking alcohol and moldy food. Advise the patient to receive the hepatitis A vaccine if unprotected and the patient’s family and partner to get tested for hepatitis B and get vaccinated if they are not protected.**

**• 避免饮酒和食用发霉食物。 如果对甲肝还没有免疫力，建议接种甲肝疫苗。确保家人和伴侣接受乙肝检查，如果他们对乙肝还没有免疫力，建议他们接种乙肝疫苗。**

**APRI** (aspartate aminotransferase [AST]-to-platelet ratio index) is recommended as the preferred non-invasive test (NIT) to assess for the presence of cirrhosis (APRI score >2 in adults) in resource-limited settings. Transient elastography (e.g. FibroScan) or FibroTest may be the preferred NITs in settings where they are available and cost is not a major constraint.

**APRI** (天冬氨酸氨基转移酶/血小板比值指数)是在资源受限地区所推荐的评估肝硬化的非侵入性行测试。APRI>2提示肝硬化存在。超声弹性成像（如FibroScan）或FibroTest在条件和资金允许的情况下，可作为首选的非侵入性测试。

AST level U/L

AST 水平

AST ULN (Lab Upper Limit of Normal) U/L

AST ULN 水平 (参考范围上限)

Platelet count 109/L

血小板计数

**Your APRI Score**

**您的 APRI 指数:**

APRI score = (AST/AST ULN) x100 / platelet count

APRI 指数 = (AST/AST ULN) x 100 / 血小板计数

**Interpretation**

**指数解释:**

APRI score > 2 is 89% specific in detecting cirrhosis (F4). With a sensitivity of 35%, an APRI value > 2 can miss two thirds with cirrhosis. APRI score > 1 is more sensitive (65%) but is less specific (75%) in detecting cirrhosis. APRI score > 1.5 is 92% specific but can miss almost two thirds with significant hepatic fibrosis (F2-F4).

APRI评分>2用于对肝硬化(F4)筛查的特异度为89%，但此时敏感度为35%，这意味着APRI评分>2用于筛查可能会漏诊三分之二的肝硬化患者。APRI评分>1用于对肝硬化筛查则有更高的敏感度(65%)，但特异度较低(75%)。APRI评分>1.5用于对显著性肝纤维化(F2-F4)筛查的特异度是92%，但会漏诊近三分之二的显著性肝纤维化的病人。

(Guidelines for the prevention, care and treatment of persons with chronic hepatitis B infection. 2015, WHO)

(世界卫生组织2015年慢性乙肝预防和治疗指南)

**FIB-4** (fibrosis-4 score) is a simple index for estimating hepatic fibrosis based on a calculation derived from AST, ALT and platelet concentrations, and age. Transient elastography (e.g. FibroScan) or FibroTest may be the preferred NITs in settings where they are available and cost is not a major constraint.

FIB-4是一个用于评价肝纤维化的指数，它基于天冬氨酸氨基转移酶（AST）、谷丙转氨酶（ALT）水平、 血小板计数和患者年龄。超声弹性成像（如FibroScan）或FibroTest在条件和资金允许的情况下，可作为首选的非侵入性测试。

Age (years)

年龄(年数)

AST Level (U/L)

AST 水平(U/L)

Platelet count (109/L)

血小板计数(109/L)

ALT Level (U/L)

ALT 水平(U/L)

Your FIB-4 Score

您的 FIB\_4 指数

FIB-4 Score = (Age x AST) / (Platelet Count x ALT)

FIB\_4 指数 = (年龄x AST ) / (血小板计数x ALT)

**Interpretation**

**指数解释:**

Interpretation: FIB-4 score > 3.6 has a 90.8% positive predictive value with 98% specificity and 30% sensitivity in detecting cirrhosis, whereas FIB-4 score < 1.6 has a negative predictive value of 93% in detecting cirrhosis. FIB 4 > 2.6 has a 94.6% positive predictive value and 97.8% specificity in detecting severe liver fibrosis (> F3).

FIB-4评分>3.6用于对肝硬化筛查的阳性预测值为90.8%，特异度为98%，敏感度为30%，而FIB-4评分<1.6用于对肝硬化筛查的阴性预测值为93%。FIB-4>2.6用于对重度肝纤维化(>F3)筛查的阳性预测值为94.6%，特异度为97.8%。(Kim BK et al. Liver International 2009)

(Kim BK et al. Liver International 2009)

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**关于**

The chronic hepatitis B Treatment Decision Tool for Adults is developed by the Asian Liver Center at Stanford University. The app is an educational tool intended for primary healthcare professionals particularly in resource-limited countries as a general guide in the monitoring of HBsAg positive adults, and when antiviral treatment would be recommended based on the guidelines adapted from the World Health Organization or from the American Association for the Study of Liver Diseases.

成人慢性乙型肝炎治疗决策工具由斯坦福大学亚裔肝脏中心研发。该程序是一种教育工具，专门用于医疗保健人员，尤其是在资源有限的国家，作为监测乙型肝炎表面抗原阳性成年人的一般指南，并且根据世界卫生组织 (WHO) 治疗指南或美国肝病学会 (AASLD) 治疗指南推荐何时进行抗病毒治疗。

**Disclaimer**

**免责声明**

This app provides general guidance and is not a substitute for the advice provided by specialists in the management of liver disease and chronic hepatitis. Any course of action recommended or suggested in this educational tool should not be undertaken by the healthcare professional without an evaluation of the patient’s condition and contraindications. The patient should be provided with information about hepatitis B facts, and the potential benefits and risks of antiviral treatment.

这个应用程序只提供一般性指导，不能代替肝病和慢性肝炎管理专家提供的建议。在未评估患者的病情和禁忌症的情况下，医疗从业者不得采取此教育工具中建议的任何措施，而应向患者提供有关乙肝的事实以及抗病毒治疗潜在益处和风险的信息。

**Privacy**

**隐私声明**

This app does not collect or retain any personal identifiable information including your device internet protocol (IP) address.

此应用不会收集或保留任何个人身份信息，包括您的设备互联网协议（IP）地址。

**Asian Liver Center at Stanford University**

**斯坦福大学亚裔肝脏中心**

Founded: in 1996 to address the gaps in hepatitis B and liver cancer awareness, education and training, research and national policies.

成立: 成立于1996年，致力于解决乙肝和肝癌认识、教育培训、科研和国家政策方面的差距。

Goal: to eliminate worldwide hepatitis B transmission, deaths and stigma, and reduce the burden of liver cancer

目标: 消除世界范围内乙型肝炎的传播、死亡和歧视，减轻肝癌带来的负担。

Jade Ribbon and Join Jade (green color): global call to action to eliminate hepatitis B and liver cancer.

“翡翠丝带”行动: 全球范围内发起的一个旨在消除乙肝和乙肝歧视的运动。

**Languages**

语言选择