## XV. Among children <15 years old with HIV who are receiving treatment for TB disease, does liver chemistry testing at 2-week intervals during the first 2 months of treatment compared to less frequent monitoring result in better clinical outcomes?

Routine monitoring of liver enzyme is not necessary in children who have no risk factors for hepatotoxicity. For children with additional risk factors (such as concomitant ART), routine monitoring of liver enzymes should be performed before initiation and 2, 4, and 8 weeks after starting TB treatment (the same monitoring schedule as for ART initiated while a patient is receiving treatment for TB) **(expert opinion).** Beyond 2 months, routine testing every 2 to 3 months is advisable for all children receiving ART, or more frequently if clinically indicated **(expert opinion).**

Mild elevations in serum transaminase concentration (i.e., less than 5 times the upper limit of normal) do not require drug discontinuation in children who are asymptomatic and in whom other findings (including bilirubin) are normal **(expert opinion).**

While the overall incidence of hepatotoxicity is low, it is the most common serious adverse effect during treatment of TB disease. This toxicity includes subclinical hepatic enzyme elevation, which usually resolves spontaneously during continuation of treatment, and clinical hepatitis that usually resolves when the drug is discontinued. Hepatotoxicity rarely progresses to hepatic failure, but the likelihood increases when isoniazid is continued despite hepatitis symptoms (jaundice; tender, enlarged liver). Hepatotoxicity is even less frequent in children than in adults,[77,150] but no age group is risk free. The rate of hepatotoxicity may be higher in children who take multiple hepatotoxic medications. There is a lack of data comparing the clinical consequences of routine versus clinically directed measurement of liver enzymes, and no studies which conclusively demonstrate that routine measurements reduce the incidence of liver disease in children on antituberculosis therapy. AAP recommends routine liver transaminase monitoring for children receiving ART.[23,85] Mild elevations in serum transaminases do not require drug discontinuation.[85]

## XVI. Among children <15 years old who are diagnosed with TB disease, does routine HIV testing compared to HIV testing and counseling upon request identify more cases of HIV?

All children in whom TB is diagnosed should be tested for HIV infection **(expert opinion).**

WHO and CDC both recommend routine HIV testing for all people in whom TB disease is diagnosed given the increased risk of disease among those who are immunocompromised.[45,85] WHO explicitly recommends HIV testing for children as the diagnosis of HIV has important implications for the management of both TB and HIV. Excluding HIV infection also has implications for confirming the clinical diagnosis of TB.[85]