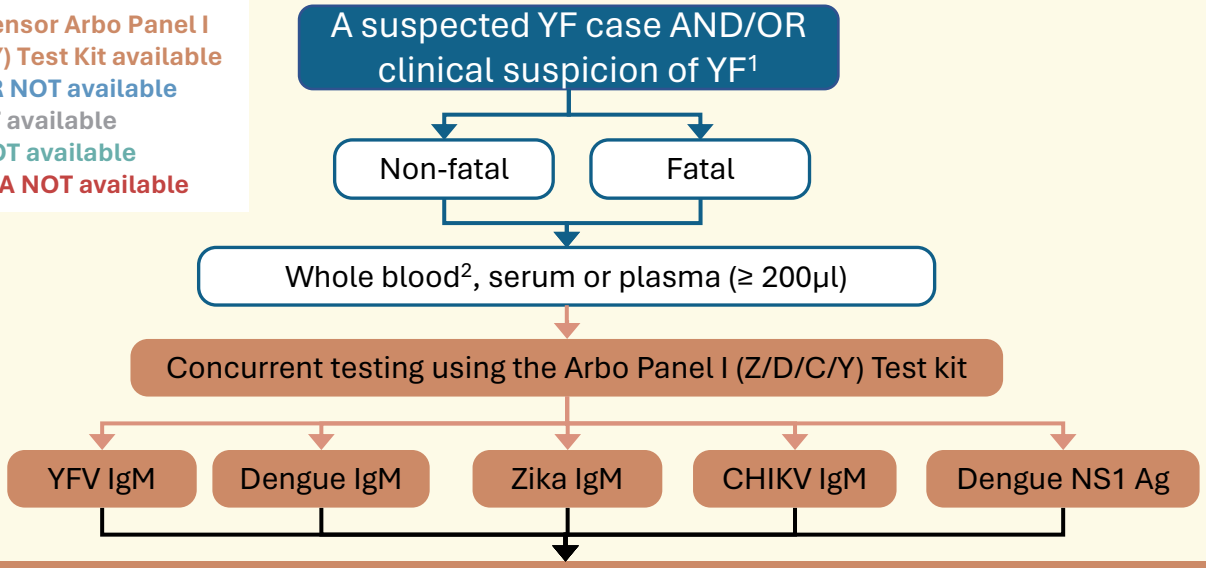
Yellow Fever **SIMPLIFIED** Testing Algorithm Using Arbo Panel kit for **Countries with no access to YF RT-qPCR, YF ELISA and PRNT testing**

- ❑ SD Biosensor Arbo Panel I (Z/D/C/Y) Test Kit available
- ❑ RT-qPCR NOT available
- ❑ IHC NOT available
- ❑ PRNT NOT available
- ❑ IgM ELISA NOT available



Interpretation guide of results of the Arbo Panel I (Z/D/C/Y) Test kit

YFV IgM result	Dengue IgM result	Zika IgM result	CHIKV IgM result	Dengue NS1 Ag result[6]	Differential Interpretation based on all test results of the Arbo Panel I (Z/D/C/Y) Test
+	-	-	-	-	**Evidence of recent YF virus infection OR of YF vaccination[3]**
+	-	-	-	+	**Evidence of recent Flavivirus infection[4]**
+	+	-	-	+ or -	
+	+	+	-	+ or -	
+	-	+	-	+ or -	
-	+	+	-	+ or -	
-	-	+	-	+	
+	+	+	+	+ or -	**Evidence of Chikungunya[7] co-infection with at least one Flavivirus[4]**
+	-	+	+	+ or -	
+	-	-	+	+ or -	
-	+	+	+	+ or -	
-	-	+	+	+ or -	
-	-	-	+	+	**Evidence of concurrent acute Dengue virus infection and recent Chikungunya virus infection[4,7]**
-	+	-	-	+ or -	**Evidence of recent Dengue virus infection[4]**
-	-	-	-	+	**Evidence of recent Dengue virus infection[4]**
-	-	+	-	-	**Evidence of recent Zika virus infection[4]**
-	-	-	+	-	**Evidence of recent Chikungunya virus infection[4,7]**
-	-	-	-	-	**Negative YF IgM result.** YF infection can be excluded if the specimen was collected >7 days post symptom-onset symptoms and/or collected from a jaundice or haemorrhagic fever case[5]

[1] A suspected YF case is any person with acute onset of fever, with jaundice appearing within 14 days of onset of the first symptoms. Clinical suspicion of YF may be made prior to the appearance of jaundice and is based on other clinically compatible symptoms such as fever, headache, myalgia, nausea, vomiting, and fatigue and on epidemiologic factors. Assessment of YF vaccination history, malaria testing history, travel history, and history of contact with known YF cases should be recorded and taken into consideration when interpreting test results.

[2] Including the possibility of using either capillary or venous whole blood. Collect the venous whole blood into the commercially available anti-coagulant tube such as heparin, EDTA or sodium citrate by venipuncture. If venous whole blood in an anti-coagulant tube is stored in a refrigerator at 2-8°C, the specimen can be used for testing within 1-2 days after collection. Do not use hemolyzed blood samples.

[3] In the event of an individual with a documented history of YF vaccination, report as: "PRESENCE OF YF IgM IN VACCINATED INDIVIDUAL. Interpret with care, considering clinical presentation & epidemiological context". Whereas in the event of an individual never vaccinated against YF or with an unknown YF vaccination history, report as: "PRESUMPTIVE EVIDENCE OF ACUTE YF INFECTION". Final case confirmation requires plaque-reduction neutralization testing (PRNT). If PRNT is not available in the region, such case could be classified as a Probable YF case in the light of the clinical presentation & epidemiological context.

[4] Case classification should consider the epidemiologic context of co-circulation of other flaviviruses and previous vaccination of the Individual. Also, malaria and rheumatic diseases should also be considered as there is documented cross-reactivity affecting the specificity of the IgM result.

[5] If the specimen was collected within 7 days post onset of illness, a second sample taken ≥10 days post onset of illness should be requested and tested again whenever possible to account for possible seroconversion.

[6] The SD Biosensor Arbo Panel I (Z/D/C/Y) Test kit also includes testing for Dengue NS1 antigen, which is optional in the context of YF surveillance. A positive Dengue NS1 test result is an indication of an acute Dengue infection.

[7] The result suggests a recent Chikungunya virus infection. However, the documented risk of cross-reactivity with Mayaro and O'nyong nyong virus IgM cannot be excluded and should be considered if epidemiologically relevant.