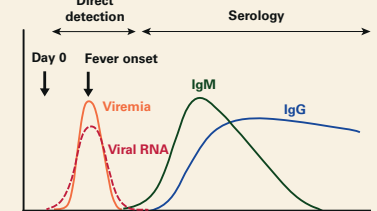


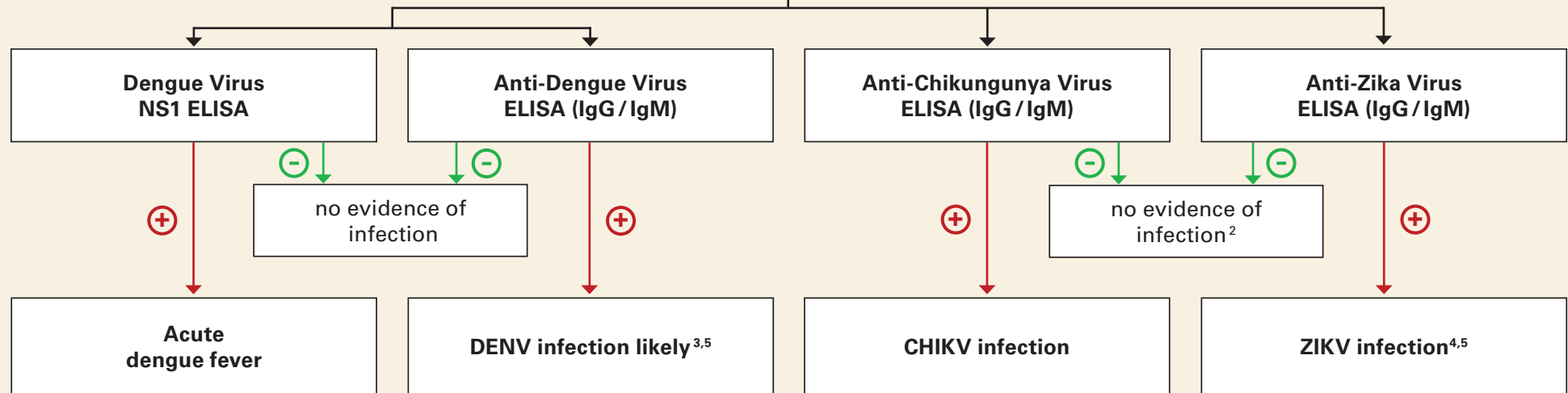
# Serological differential diagnosis in suspected cases of dengue, chikungunya or Zika virus infections (DENV, CHIKV, ZIKV)



Indications: (1) Symptoms of DENV, CHIKV or ZIKV infection  
 → Fever, rash, joint pain or neurological symptoms<sup>1</sup>  
 (2) Traveling history to endemic areas during pregnancy



Parallel determination of antibodies against DENV, CHIKV and ZIKV using ELISA



<sup>1</sup> e. g. Guillain-Barré syndrome (GBS) <sup>2</sup> For further diagnosis, a follow-up sample can be taken after 1–2 weeks. If this is negative, an acute infection is very unlikely. <sup>3</sup> Cross-reactivity to other flaviviruses cannot be excluded. <sup>4</sup> False-positive results are possible in sera from patients with Plasmodia infection.

<sup>5</sup> Possible serological constellations and their meaning in infections with flaviviruses (e. g. DENV, ZIKV, TBE virus, yellow fever virus, West Nile virus and others):

IgM	IgG	IgG titer increase after 7–10 days	Indication of
+	- / +*	+	<b>Acute infection</b> <u>without</u> prior contact with another flavivirus ( <b>primary infection</b> )
- / +**	+	+	<b>Acute infection</b> after past contact with another flavivirus ( <b>secondary infection</b> )
-	+	-	<b>Past infection</b> or virus contact in the past, respectively

\* IgG antibodies usually occur together with IgM antibodies or shortly thereafter. \*\* In the case of contact with other flaviviruses in the past, the IgM response can occur delayed or with reduced intensity, or not occur at all.