Potentially eligible participants, n=699 Excluded, n=125 (1) n=101 Patients from Nigeria with a clinical suspicion of Lassa fever who tested negative in RT-PCR. A negative RT-PCR does not rule out Lassa fever in a high endemic area (e.g. late stage, mild disease) and pre-existing antibodies hamper estimation of assay specificity. To avoid misclassification and facilitate correct estimation of specificity, these patients were excluded. (2) n=23 Nigerian patients had no RT-PCR result. (3) n=1 The diagnostic specimen was missing for one follow-up patient. Eligible participants, n=574 Definition of target condition by composite reference standard: (1) Presence of Lassa fever was defined by a positive result in the Lassa virus RT-PCR on the diagnostic specimen. (2) Absence of Lassa fever was defined by origin of the patient from a nonendemic area. Classification of non-Lassa fever in Ghana additionally included a negative RT-PCR result. Index test 1: IgM ELISA, n=574 Index test 2: IgM & IgG ELISA combined, n=574Index test 2 Index test 1 inconclusive, n=0 inconclusive, n=0 IgM ELISA IgM ELISA IgM and IgG IgM and IgG negative, n=477 positive, n=97 ELISA negative, ELISA positive, n=504n = 70Reference Reference Reference Reference standard, n=504 standard, n=477 standard, n=97 standard, n=70 Final diagnosis Final diagnosis Final diagnosis Final diagnosis -Lassa fever -Lassa fever -Lassa fever -Lassa fever present (n=186) present (n=84) present (n=200) present (n=70) -Lassa fever -Lassa fever -Lassa fever -Lassa fever absent (n=291)absent (n=13) absent (n=304) absent (n=0)