

## Supplemental Information

Characteristic	IgG serostatus <sup>e</sup>		p value <sup>f</sup>
	IgG+ (n = 1,015)	IgG- (n = 2,001)	
Admission status			.001
Admitted	96 (9)	291 (15)	
Not admitted	919 (91)	1,710 (85)	
Gender			.969
Female	473 (56)	994 (56)	
Male	369 (44)	778 (44)	
District			<.001
Bo	13 (5)	114 (14)	
Kenema	213 (86)	591 (73)	
Other	23 (9)	107 (13)	
Time since illness onset			.779
< 7 days	128 (55)	369 (54)	
≥ 7 days	103 (45)	310 (46)	
Season of presentation <sup>a</sup>			.762
Rainy	541 (54)	1,057 (53)	
Dry	467 (46)	934 (47)	
Age, years			<.001
< 5	33 (5)	225 (15)	
5-14	58 (9)	213 (14)	
15-40	399 (62)	819 (55)	
> 40	153 (24)	241 (16)	
Ag <sup>+</sup> <sup>b</sup>			.101
Died	12 (63)	85 (80)	
Discharged	7 (37)	21 (20)	
Ag-/IgM <sup>+</sup> <sup>c</sup>			.634
Died	24 (34)	40 (31)	
Discharged	47 (66)	91 (69)	
Ag-/IgM <sup>-</sup> <sup>d</sup>			<.001
Died	111 (68)	142 (48)	
Discharged	52 (32)	156 (52)	

**Table S1.** IgG serostatus by age group, Kenema Government Hospital Lassa Fever Ward, 2012-2019. Note. All results expressed as frequencies and percentages unless indicated otherwise. Those characteristics with aggregate frequencies less than their respective aggregate serostatus group sample sizes reflect missing characteristic data.

<sup>a</sup> Rainy and dry seasons were defined as May 1-October 31 and November 1-April 30, respectively.

<sup>b</sup> Ag+ = Samples testing positive according to Ag ELISA (acute Lassa exposure).

<sup>c</sup> Ag-/IgM+ = Samples testing negative according to Ag ELISA and positive according to IgM ELISA (recent Lassa exposure).

<sup>d</sup> Ag-/IgM- = Samples testing negative according to both Ag and IgM ELISA.

<sup>e</sup> IgG serostatus = Immunoglobulin G ELISA test result for detecting convalescent Lassa fever exposure.

<sup>f</sup> Calculated using Pearson's chi-square test assessing general differences in proportions between serostatus groups.

Characteristic	Survival outcome		p value <sup>c</sup>
	Died (n = 106)	Discharged (n = 29)	
Admission status			.308
Admitted	78 (74)	24 (83)	
Not admitted	28 (26)	5 (17)	
Gender			.978
Female	51 (49)	14 (48)	
Male	54 (51)	15 (52)	
Age, years			.178
< 5	17 (16)	8 (28)	
5-14	18 (17)	8 (28)	
15-40	58 (56)	12 (41)	
> 40	11 (11)	1 (3)	
District			.806
Bo	8 (9)	3 (10)	
Kenema	74 (80)	24 (83)	
Other	10 (11)	2 (7)	
Time since illness onset			.501
< 7 days	35 (46)	10 (38)	
≥ 7 days	41 (54)	16 (62)	
IgG serostatus <sup>a</sup>			.101
Positive	12 (12)	7 (25)	
Negative	85 (88)	21 (75)	
Season of presentation <sup>b</sup>			.022
Rainy	44 (42)	19 (66)	
Dry	62 (58)	10 (34)	

**Table S2.** Characteristics of confirmed Lassa fever cases by survival outcome, Kenema Government Hospital Lassa Fever Ward, 2012-2019. Note. All results expressed as frequencies and percentages unless indicated otherwise. Those characteristics with aggregate frequencies less than their respective aggregate serostatus group sample sizes

reflect missing characteristic data. Patient survival outcome was determined at hospital discharge (or following initial consultation for non-hospitalized subjects).

<sup>a</sup> IgG serostatus = Immunoglobulin G ELISA test result for detecting convalescent Lassa fever exposure.

<sup>b</sup> Rainy and dry seasons were defined as May 1-October 31 and November 1-April 30, respectively.

<sup>c</sup> Calculated using Pearson's chi-square test assessing general differences in proportions between serostatus groups.

Serostatus group / Admission status	Survival outcome		p value <sup>d</sup>
	Died (n = 432)	Discharged (n = 400)	
Overall			
Admitted	146 (34)	217 (54)	<.001
Not admitted	286 (66)	183 (46)	
Ag <sup>+</sup> <sup>a</sup>			
Admitted	78 (74)	24 (83)	.308
Not admitted	28 (26)	5 (17)	
Ag <sup>-</sup> /IgM <sup>+</sup> <sup>b</sup>			
Admitted	31 (46)	116 (78)	<.001
Not admitted	36 (54)	33 (22)	
Ag <sup>-</sup> /IgM <sup>-</sup> <sup>c</sup>			
Admitted	37 (14)	77 (35)	<.001
Not admitted	222 (86)	145 (65)	

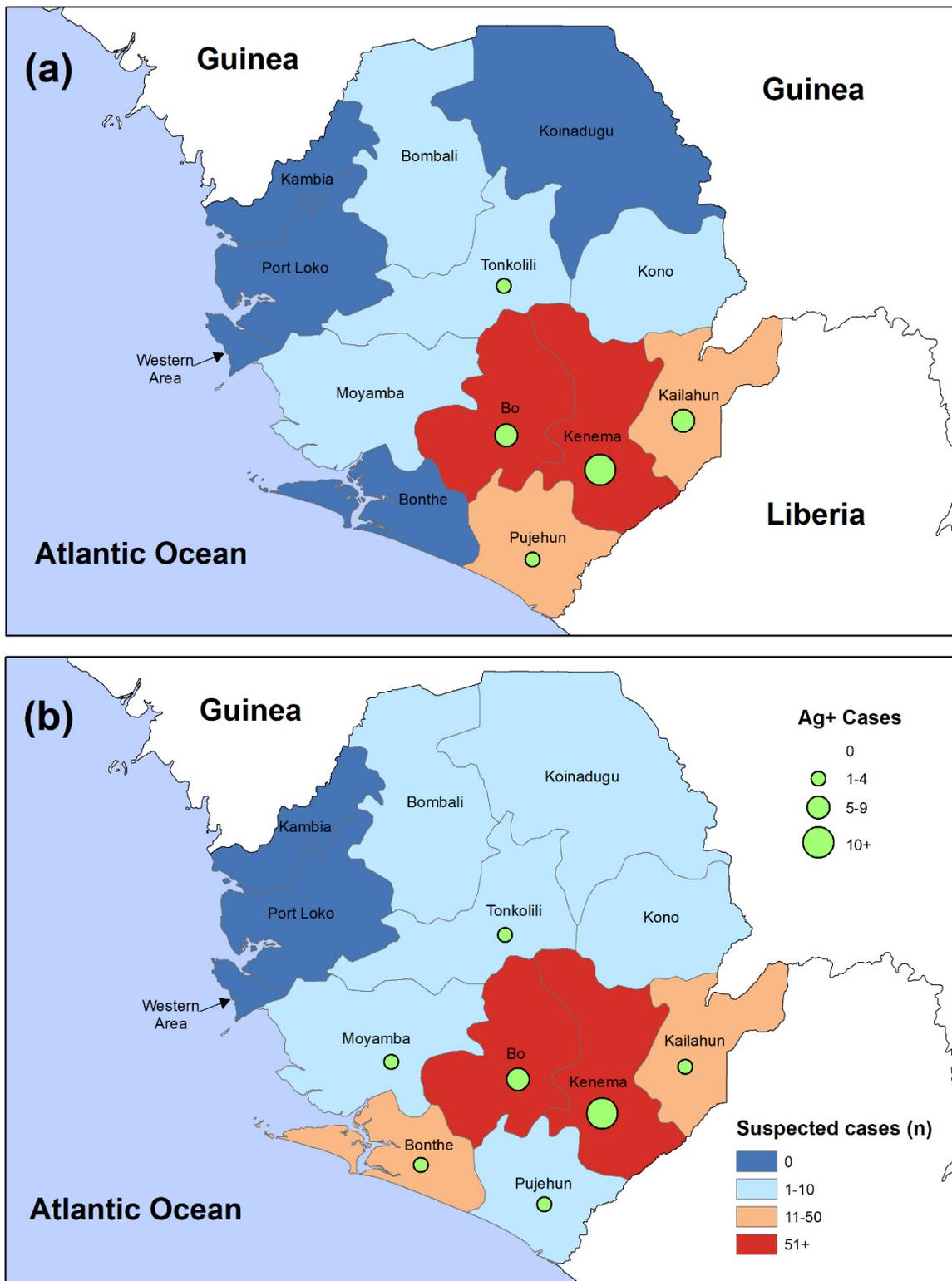
**Table S3.** Hospital admission status by survival outcome, Kenema Government Hospital Lassa Fever Ward, 2012-2019. Note. All results expressed as frequencies and percentages unless indicated otherwise. Those characteristics with aggregate frequencies less than their respective aggregate serostatus group sample sizes reflect missing characteristic data. Patient survival outcome was determined at hospital discharge (or following initial consultation for non-hospitalized subjects).

<sup>a</sup> Ag<sup>+</sup> = Samples testing positive according to Ag ELISA (acute Lassa exposure).

<sup>b</sup> Ag<sup>-</sup>/IgM<sup>+</sup> = Samples testing negative according to Ag ELISA and positive according to IgM ELISA (recent Lassa exposure).

<sup>c</sup> Ag<sup>-</sup>/IgM<sup>-</sup> = Samples testing negative according to both Ag and IgM ELISA.

<sup>d</sup> Calculated using Pearson's chi-square test assessing general differences in proportions between serostatus groups.



**Figure S1.** Spatial distribution of Lassa fever screenings and confirmed LF cases at Kenema Government Hospital by season of clinical presentation, 2012-2019. (a) Screenings during the rainy season (May 1 to October 31); (b) Screenings during the dry season (November 1 to April 30).