

Supplementary Table 1. Clinical manifestations of early Lyme disease patients from the Northeast.

Patient	IgA Positive	Gender	Age	Routine Lyme Serology Result ¹	Single/Multiple EM ¹	EM duration at entry (days) ¹	EM size (cm) ^{1,2}	EM area (cm ²) ^{1,2}	Clinical Manifestations ¹
1	Yes	F	48	Pos	M	2	3x6	18	Arthralgia, fatigue, headache, myalgia, stiff neck
8	Yes	F	62	Pos	M	8	29x17	493	Arthralgia upon first visit and subsequent visits, hand for 2 yrs, elbow 2 months, shoulder 3 months before entry into study; fatigue
9	Yes	M	86	Pos	M	5	16x8.5	136	Fatigue, headache
11	Yes	M	22	Pos	M	7	19x16	304	Arthralgia, fatigue, headache, myalgia, stiff neck
12	Yes	F	70	Pos	M	3	60x24	1440	Arthralgia, fatigue, myalgia, Neuro-radiculitis, meningitis,
13	Yes	M	54	Pos	M	4	10x8	80	Arthralgia (>10 yrs), dizziness, fatigue, headache, myalgia, stiff neck, tingling (pre-Lyme diagnosis)
18	Yes	M	31	Pos	M	60	47x22	1034	Arthralgia, fatigue, headache, stiff neck, tingling, Neuro-facial palsy, meningitis-12 days
20	Yes	M	40	Pos	M	5	12x15	180	Dizziness, fatigue, tingling, Nystagmus, balance problems, confusion, possible meningitis-5 days
23	Yes	M	53	Pos	M	2	10.5x5	52.5	Arthralgia, fatigue
24	Yes	M	35	Pos	M	6	19x20	380	Fatigue, myalgia, stiff neck, Neuro-mild right facial palsy-14 days duration at entry
2	No	F	84	ND ³	S	5	8x10	80	Tingling for 1 week near EM
3	No	M	46	Neg	S	4	9x9	81	Myalgia
4	No	F	64	Neg	M	5	8x13.5	108	Headache
5	No	M	64	Pos	S	4	11x9	99	None reported
6	No	M	46	Pos	M	11	9x11	99	Arthralgia, dizziness, fatigue, prior LD in 2002, 2008
7	No	F	56	Pos	S	8	10x10	100	Fatigue, headache
10	No	M	N/A	Pos	No skin lesion ⁵	N/A	N/A	N/A	7 th nerve palsy
14	No	F	56	Neg	M	3	4x3.5	14	Arthralgia, fatigue, myalgia
15	No	F	55	Pos	S	2	9.5x10.5	99.8	Arthralgia (pre-Lyme diagnosis)
16	No	F	42	Pos	S	4	8.5x6	51	Fatigue
17	No	M	32	Pos	M	7	10x5	50	Arthralgia, fatigue
19	No	F	63	Pos	S	4	11x22	242	Fatigue, headache, myalgia
21	No	F	45	Neg	S	1	7.5x4.5	33.8	Arthralgia, fatigue, dizziness, headache, myalgia, stiff neck
22	No	M	59	Pos	M	4	4x5.5	22	Fatigue, headache
25	No	F	58	Neg	M	3	14x8	112	Arthralgia, dizziness, fatigue, headache, myalgia, stiff neck, tingling
26	No	M	40	Neg	S	2	12x14	168	None reported
27	No	M	68	Pos	S	5	22x27	594	None reported
28	No	M	36	Pos	M	8	21x10	210	None reported

¹-Information obtained at patient's first visit,

²-Size of primary lesion

³-Not determined

⁴-Contaminated

⁵-Patient was EM negative, however, diagnosis was serologically confirmed

Supplementary Table 2. Clinical manifestations of early Lyme disease patients from the Upper Midwest.

Patient	Gender	Age	Duration of symptoms at entry	IgA Positivity	Clinical Manifestations ¹
Early Lyme					
1	M	25	Unknown	Yes	Multiple EM
2	F	40	14d	Yes	EM
3	M	58	13d	Yes	EM
4	M	25	21d	Yes	Cranial neuritis ³
5	M	60	Unknown	Yes	EM, Fever, fatigue, myalgias
6	F	61	15d	Yes	EM, fever, myalgia
7	M	61	Unknown	Yes	Tick exposure, myalgias, arthralgias, jaw pain ³
8	F	57	Unknown	Yes	EM
9	F	63	Unknown	Yes	EM, Chills, fever, myalgias, headache, diplopia,
10	F	50	12d	Yes	EM, Fever, headache, myalgia, arthralgia
11	M	7	1d	Yes	EM
13	F	40	Unknown	Yes	EM, Headache, neck soreness
14	F	19	7d	Yes	EM
15	M	8	Unknown	Yes	EM, Fever, lethargy
16	M	19	Unknown	Yes	EM, Headache, myalgias, arthralgias
17	M	47	Unknown	Yes	EM, Malaise, myalgias, arthralgias
18	F	27	Unknown	Yes	EM, Fever, fatigue, headache, myalgias
19	M	74	Unknown	Yes	EM, Chills, headache, chest pain, shortness of breath
20	M	14	14d	Yes	EM, headache, neck pain
22	F	81	Unknown	Yes	EM, Myalgias, tick bite
25	M	55	Unknown	Yes	EM, Fever, fatigue, nausea, myalgia
26	M	52	Unknown	Yes	EM, Fever, myalgia, arthralgia, headache, fatigue
27	M	38	Unknown	Yes	EM, Malaise, myalgia, headache, fever
29	M	8	Unknown	Yes	EM, headache, myalgia, arthralgia, possible CNS involvement
30	M	69	Unknown	Yes	EM, fever, fatigue, myalgia
32	F	40	Unknown	Yes	EM, chills, knee pain, stiff neck, trouble with eye
34	F	13	26d	Yes	EM, headache
31	M	14	Unknown	No ²	EM, arthralgia
36	M	50	Unknown	No ²	EM, fever, myalgia, arthralgia, headache
12	F	45	Unknown	No	EM, Tick bite
21	M	6	Unknown	No	EM, Headache, fever
23	F	40	Unknown	No	EM, headache, arthralgia, myalgia, fatigue
24	F	9	Unknown	No	EM, fatigue
28	M	3	Unknown	No	EM
33	F	8	45d	No	EM, parathesia in hands and feet
35	F	11	Unknown	No	EM, malaise
Late Lyme					
1	F	58	Unknown	No	Right knee pain and swelling
2	M	32	Unknown	Yes	Left knee swelling
3	M	57	Unknown	No	Right knee and left elbow pain and swelling
4	F	34	Unknown	No	Left knee pain & swelling, fatigue, myalgias
5	M	42	Unknown	Yes	Left knee, ankle, and foot pain & swelling
6	F	58	Unknown	No	Left knee pain & swelling
7	M	13	Unknown	No	Right knee & leg swelling
8	M	67	Unknown	No	Swollen painful knee
9	F	15	Unknown	No	Chronic left knee arthritis
10	M	10	Unknown	Yes	Right knee pain & swelling
11	M	69	Unknown	Yes	Bilateral knee arthritis
12	M	10	Unknown	No	Acute Lyme arthritis
13	M	73	Unknown	Yes	Left knee swelling & pain
14	M	9	Unknown	No	Left knee & wrist pain & swelling
15	M	9	Unknown	No	Left knee pain & swelling
16	F	8	Unknown	No	Left wrist pain & swelling
17	M	12	Unknown	No	Left knee pain & swelling
18	M	8	Unknown	Yes	Right knee pain & swelling
19	F	57	Unknown	No	Right knee pain

¹-Clinical data are reported as provided. All patients were serologically positive by whole cell ELISA (VIDAS).

²-patient had equivocal antibody binding to either FlaB-mV or C6 (greater than 2SD but less than 3SD from the mean absorbance of nonendemic healthy controls)

³-EM was not reported in the patient's chart, however, diagnosis was confirmed serologically