Persistence of Immunoglobulin M or Immunoglobulin G Antibody Responses to *Borrelia burgdorferi* 10–20 Years after Active Lyme Disease

Robert A. Kalish,1

Gail McHugh,1

John Granquist,1

Barry Shea,1

Robin Ruthazer,² and

Allen C. Steere¹

Divisions of ¹Rheumatology/Immunology and ²Clinical Care Research, Tufts University School of Medicine, New England Medical Center,

Received 19 December 2000; revised 5 February 2001; electronically published 10 August 2001.

Informed consent was obtained from all patients, human experimentation guidelines were followed in the conduct of this research, and approval of the protocol for the research was obtained from the New England Medical Center Institutional Review Board.

Financial support: Centers for Disease Control and Prevention (cooperative agreement CCU110291), the Lyme/Arthritis Research Foundation, and the Eshe fund.

Reprints or correspondence: Dr. Robert Kalish, New England Medical Center, Box 599, 750 Washington St., Boston, MA 02111

(rkalish@lifespan.org).

The interpretation of serological results for patients who had Lyme disease many years ago is not well defined. We studied the serological status of 79 patients who had had Lyme disease 10–20 years ago and did not currently have signs or symptoms of active Lyme disease. Of the 40 patients who had had early Lyme disease alone, 4 (10%) currently had IgM responses to Borrelia burgdorferi, and 10 (25%) still had IgG reactivity to the spirochete, as determined by a 2 - test approach (enzyme - linked immunosorbent assay and Western blot). Of the 39 patients who had had Lyme arthritis, 6 (15%) currently had IgM responses and 24 (62%) still had IgG reactivity to the spirochete. IgM or IgG antibody responses to B. burgdorferi may persist for 10–20 years, but these responses are not indicative of active infection.