A previously healthy 68-year-old man presented with a solid erosive sore on the inner aspect of his upper lip (Panel A). The painless lesion had been present for approximately 6 weeks. On examination, the patient had sharply demarcated erythematous, scaly plaques on his hands and feet, including the palms and soles (Panels B, C, and D). The patient reported that the lesions were waxing and waning and had been present for more than 1 year. There were no other symptoms. Laboratory investigations revealed a positive *Treponema pallidum* particle agglutination assay (titer, 1:2560; normal value, <1:80) and a positive Venereal Disease Research Laboratory test (titer, 1:8; normal value, <1:2). Serologic tests for human immunodeficiency virus and hepatitis were negative. Immunoblot analyses were positive for syphilis-specific IgM and IgG. Histopathological analyses of biopsy specimens obtained from the lip lesion and a representative lesion from the foot showed ulceration of the lip lesion and psoriasiform hyperplasia of the foot lesion; both specimens were associated with abundant CD79a-positive plasma cells and masses of *T. pallidum* bacteria (Fig. S1 in the Supplementary Appendix, available with the full text of this article at NEJM.org). Concomitant primary and secondary syphilis was diagnosed. Intramuscular injections of penicillin G benzathine (three injections in 4-week intervals at a dose of 2.4×10⁶ IU) led to complete resolution of the lesions within 2 months and to substantially decreased titers on laboratory tests. The concomitant presence of primary and secondary syphilis in the same patient is unusual; however, it is possible to acquire a superimposed second infection.