BACKGROUND: The current recommended treatment for lentigo maligna (LM) is surgical resection, which can cause significant scarring. The reported recurrence rate after Mohs micrographic surgery is 0-6·25%. There is little published data on long-term outcome after imiquimod therapy. Several reports record progression to LM melanoma during treatment. Clinical assessment of clearance is difficult. Histological confirmation is preferred but risks sampling error and missing areas of invasion. Confocal microscopy can be used to assess entire lesions. OBJECTIVES: To assess the 5-year recurrence rate of LM after imiquimod treatment. METHODS: Forty patients with LM were treated with imiquimod between 2002 and 2007. Their previous treatments included cryotherapy, incomplete surgical excision and radiotherapy. All applied imiquimod three times per week for 6 weeks; 25 (62·5%) experienced inflammation. The other 15 (37·5%) then applied imiquimod five times per week for a further 4 weeks; all experienced inflammation. All patients were subsequently examined and biopsied. Clinical clearance did not always correlate with histological clearance. Eleven patients (27·5%) had residual LM on histology and underwent surgical excision. At the time of this study, three patients had died (deaths were unrelated to LM). Eighteen of the 27 patients (66·7%) who were clear on biopsy after imiquimod attended for the study and were assessed using confocal microscopy (Vivascope 1500 and 3000). RESULTS: The recurrence rate of LM in patients who were clear on histology after imiquimod treatment who attended for this follow-up study was 0% (n = 18). CONCLUSIONS: Imiquimod is an effective long-term treatment for LM. Its use avoids potentially disfiguring surgical resection. © 2015 British Association of Dermatologists. PMID: 26595446