BACKGROUND
Primary cutaneous CD30+ lymphoproliferative disorders include lymphomatoid papulosis (LyP) and primary cutaneous CD30+ anaplastic large T-cell lymphoma (ALCL). Because of overlapping histological features, it is impossible to distinguish ALCL from LyP on histological grounds. MUM1 (Multiple Myeloma oncogene 1) is expressed in systemic ALCL and classical Hodgkin lymphoma. MUM1 expression has not been studied in detail in CD30+ lymphoproliferative disorders.

OBJECTIVES
To examine the expression of MUM1 in CD30+ lymphoproliferative disorders and to assess its value as a diagnostic marker.

METHODS
Thirty-one formalin-fixed paraffin-embedded specimens of LyP (n = 15), primary cutaneous ALCL (n = 10), secondary cutaneous infiltrates of systemic ALCL (n = 4) and secondary cutaneous Hodgkin lymphoma (n = 2) were analysed by immunohistochemistry with a monoclonal antibody against MUM1.

RESULTS
Positive staining for MUM1 was observed in 13 cases of LyP (87%), two cases of primary cutaneous ALCL (20%), four cases of secondary cutaneous ALCL (100%) and two cases of secondary cutaneous Hodgkin lymphoma (100%). In 11 of 13 LyP cases (85%), MUM1 was displayed by the majority, i.e. 50-90%, of the tumour cells. In contrast to LyP and secondary cutaneous ALCL, only two cases of primary cutaneous ALCL (20%) harboured MUM1-positive tumour cells. There was a statistically significant difference in the expression of MUM1 between LyP and primary cutaneous ALCL (P = 0.002) and between primary cutaneous ALCL and secondary cutaneous ALCL (P = 0.015).

CONCLUSIONS
MUM1 expression is a valuable tool for the distinction of LyP and ALCL and thus represents a novel adjunctive diagnostic marker in CD30+ lymphoproliferative disorders.