# Optimal surveillance strategies for patients with stage 1 cutaneous melanoma post primary tumour excision: three systematic reviews and an economic model

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**Declared competing interests of authors:** Luke Vale was a member of the National Institute for Health Research (NIHR) Clinical Evaluation and Trial Panel from 2015 to 2018. His partner is the Chief Executive Officer (employed by Newcastle University) of a Newcastle University spin-out company called AMLo Biosciences Ltd (Newcastle upon Tyne, UK). She is also a shareholder of the same, and holds patents for biomarkers in this area. AMLo Biosciences Ltd is developing a prognostic biomarker for melanoma. Dawn Craig is a member of the NIHR Health Services and Delivery Research programme's Prioritisation Committee (Researcher-led). Robert Ellis reports personal fees from AbbVie Inc. (Lake Bluff, IL, USA) and AMLo Biosciences Ltd outside the submitted work. Penny Lovat and Marie Labus report personal fees from AMLo Biosciences Ltd, outside the submitted work. In addition, Penny Lovat has a patent family arising from PCT/GB2015/053347 (biomarkers for disease progression in melanoma; assignee: AMLo Biosciences Ltd; inventors: Penny Lovat, Robert Ellis and Marie Labus; issued), patent 1818168.9 (monoclonal antibodies against AMBRA1; assignee: AMLo Biosciences Ltd; inventors: Penny Lovat, Robert Ellis, Ashleigh McConnell and Marie Labus; issued) and patent 118622.1 (monoclonal antibodies against loricrin; assignee: AMLo Biosciences Ltd; inventors: Penny Lovat, Robert Ellis, Ashleigh McConnell and Marie Labus; pending).

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# Plain English summary

Surveillance strategies for stage 1 cutaneous melanoma

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# **Plain English summary**

Malignant melanoma is the deadliest of skin cancers; in the UK, > 2500 people die from it every year. Initially, the cancer is removed surgically, which cures it for most people, but, for some, the cancer returns. For this reason, after a melanoma is removed, patients are followed up to see if the melanoma reoccurs or if new melanomas have developed. It is felt that early cancer detection improves the chance of future treatment working. A key question is how best to follow up patients after initial melanoma surgery. This study concentrates on the earliest stage of melanoma (American Joint Committee on Cancer stage I), which accounts for more than 7 out of 10 of all melanoma diagnoses. The study also investigates if new ways of follow-up could be at least as good as current practice and a better use of NHS money.

We systematically reviewed studies comparing different ways of organising follow-up, and then methods to identify those patients at high risk of developing a further melanoma and how good different tests are at detecting this cancer. We then compared different possible follow-up strategies. For each strategy, we considered its impact on quality and length of life, and how well it used NHS resources.

We found little evidence to support a change in how follow-up should be organised currently. There were some ways of organising follow-up that might be better than current care, but further research is needed. We found that new research on whether or not follow-up should be performed by a cancer nurse specialist, rather than a dermatologist or surgeon, would be worthwhile. We also found that more research could be worthwhile on how frequently melanoma recurs and spreads, as well as how accurately a diagnosis of further cancer is made and how to identify those most at risk of further melanoma spread.

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