

19 Follow-up

19.1 Introduction

Ideally, routine follow-up in melanoma patients should be conducted in a cost-effective manner that has been scientifically proven to be beneficial. Unfortunately, however, guidelines for follow-up are typically based only on opinions of experts around the world as there have been no valid randomised trials comparing different follow-up schedules. The best guidelines available to date come from two systematic reviews of all the available reports on follow-up schedules.^{1,2}

The main purpose of follow-up is to detect recurrences early so that early treatment can be undertaken. This assumes that earlier treatment is likely to result in improvements in regional disease control, quality of life and survival. Therefore, follow-up should be mainly prognosis-oriented but should also include the detection of new invasive melanomas. The reported incidence of these ranges from 2–8%.^{1–3} A second invasive melanoma is most commonly thinner than the initial primary melanoma and has a more favourable prognosis which does not adversely affect survival.¹ The rate of occurrence of a subsequent *in-situ* melanoma is about four times higher than the risk of a subsequent invasive melanoma,⁴ but most series do not recommend follow-up for *in-situ* melanomas.⁵

19.2 Undertaking follow-up

Current guidelines world-wide do not specify where routine follow-up should take place or who should do it.^{6,7} However, it is becoming accepted by most^{8–10} but not all^{11–13} that patients themselves rather than doctors are likely to detect their own recurrence. Those studies reporting a high patient-detection rate attribute this to patients receiving thorough explanations of the signs and symptoms of recurrences and new primary melanomas. Despite such explanations, it is obvious that the ability of individual patients to detect recurrence varies. Some can identify recurrences that are not discernible to doctors, while others can be unaware of a large tumour mass. The existence of these latter patients perhaps explains the reticence of some centres to forego routine follow-up. In Australia, with its heightened awareness of the disease, up to 75% of patients detect their own recurrences.¹⁴ World-wide the mean percentage is 62%.¹

The UK Medical Research Council has designed a 'framework for the design of an integrated follow-up program'.¹⁵ One technique employed was to interview patients to determine their preferred follow-up requirements. Most supported follow-up by general practitioners, and felt that the main purpose of follow-up was reassurance. However, there was concern over travelling times, costs, brevity of consultations, and poor continuity. Nearly all queried the experience and skill of the general practitioners and said training would be vital, with rapid access to specialist advice if necessary. Total skin examination, instruction in self-examination and the provision of more information were seen as desirable at visits to general practitioners. Other studies assessing patients' opinions of the value

of follow-up^{6,16} found that most considered routine follow-up worthwhile, with only a few considering that it was not. While favouring follow-up, more than half the patients in these studies reported anxiety before each visit.

Evidence summary	Level	Reference
There is a consensus that the majority of patients detect their own recurrence if they have received a thorough explanation of the signs and symptoms of recurrences and new primary melanomas	IV	14–16
Self-examination may be combined, if appropriate, with routine follow-up by the patient's preferred health professional	IV	14–16

Recommendation

	Grade
1. Self-examination by patients is essential and they should be taught the process. Routine follow-up by the patient's preferred health professional may be appropriate to emphasise sun smart behaviour and perform skin checks	C

19.3 Follow-up intervals and tests

In the past, the choice of intervals between routine follow-up visits has been mostly arbitrary, but all suggested schedules have stipulated more frequent visits for patients with more advanced disease. More frequent visits may also be warranted for AJCC stage I patients with many atypical naevi, a family history of melanoma, or those who have difficulty in performing self-examination. Six-monthly intervals for five years and yearly thereafter are probably appropriate for patients with stage I disease, and three-monthly or four-monthly intervals for five years and yearly thereafter (all with ultrasound examination of regional nodes) for patients with stage II and III disease. These intervals are based on the consistent observation that about 80% of recurrences develop in the first three years.⁴ Lifetime surveillance has been recommended by some because recurrences as late as 46 years after excision of a primary melanoma have been recorded.¹⁷ There is general consensus that the most cost-effective component of a strategy resulting in the detection of the majority of recurrences is careful history taking and physical examination. The detection of distant metastases in patients with early localised disease is unusual. Very few patients have metastases identified by the routine use of imaging techniques and blood tests.^{18,19} There are no randomised trials indicating that such tests are of value and in any case it would be difficult to prove that the few who survive did so merely because they underwent these tests.

Ultrasonography is a technique that is being used increasingly for higher-risk patients with the goal of detecting regional lymph node metastases. However, its usefulness depends entirely on the technical skill and experience of the personnel involved. Most centres dealing with only a few melanoma patients lack experience as this technique has been used routinely for less than ten years.^{20–23} There is a consensus of opinion that ultrasound is superior to

clinical examination of regional lymph nodes although its survival advantage is unproven.²⁴ A French group²⁵ obtained a sensitivity of 92.9% for ultrasound compared with only 71.4% for the clinical examination of regional lymph nodes. Their specificity was equally high for both procedures (> 98%). Despite this apparent superiority of ultrasound, very few patients actually benefited by the addition of ultrasound to clinical examination. The reasons cited for this were that although ultrasound was useful in the earlier detection of regional disease or avoidance of unnecessary surgery in 7.2% of patients, 5.9% had deleterious effects such as unnecessary stress caused by repetition of ultrasounds for benign lymph nodes or useless removal of benign lymph nodes. Thus in sum, in only 1.3% of patients was the use of ultrasound advantageous. Only from a large prospective randomised clinical trial could the efficacy of ultrasound be established, but this would be hardly feasible since about 3000 patients would have to be enrolled.

Evidence summary	Level	Reference
Intervals between routine visits are mostly arbitrary. However, all studies stress that the more advanced the disease, the more frequent the visits need to be. Ultrasound, only if performed by experienced ultrasonographers, is a useful adjunct to clinical examination in the follow-up assessment of more advanced primary disease. No other tests have significant value in patients with localised disease	IV	20–25

Recommendation	Grade
2. Follow-up intervals are preferably six-monthly for five years for patients with stage I disease, three-monthly or four-monthly for five years for patients with stage II or III disease, and yearly thereafter for all patients. Ultrasound may be used in conjunction with clinical examination only in the follow-up of patients with more advanced primary disease. For patients enrolled in clinical trials, the above recommendations may vary in accordance with the follow-up protocols of these trials	D

19.4 Value of follow-up

Some have questioned the value of any routine follow-up. Review of the advantages and disadvantages does not provide convincing evidence that regional control, quality of life or overall survival is increased through intense surveillance. Three studies showed no survival difference when comparing who detected recurrence.^{6,13,26} Even if patient survival were increased due to the metastases being detected by a doctor at a routine follow-up visit rather than by the patients themselves, it would be hard to prove that this occurred as a result of the follow-up. Interpretation of data would be thwarted by possible lead-time bias. This latter problem was one flaw of the sole prospective study to date that claimed to demonstrate the efficacy of routine follow-up.²⁷ The reasons for the lack of valid

prospective randomised trials assessing the value of routine follow-up are numerous, but foremost among them may be patient reluctance to accept a 50% risk of being assigned to the arm not receiving ultrasound or other follow-up. Enrolment of large numbers of patients with monitoring in excess of 15 years would be required because any difference in end-points would be small. There would also be a problem in determining recurrence rate and survival in patients not receiving routine ultrasound or follow-up.

Evidence summary	Level	Reference
There is a lack of valid prospective studies of the efficacy of routine follow-up. No study has demonstrated an improvement in survival due to intense routine surveillance. There may be some advantage in terms of patient reassurance and the detection of new melanomas	IV	6, 13, 26, 27

Recommendation

	Grade
3. While it is important that clinicians weigh up the advantages and disadvantages of undertaking routine follow-up, individual patient's needs be considered before appropriate follow-up is offered	C

The recommendations given above are based on the best evidence currently available, but it is acknowledged that this is low-level evidence. Individual patients may prefer more frequent follow-up for reassurance, while others may prefer less frequent follow-up because of the anxiety provided by the follow-up visits or the time and expense associated with attendance for follow-up. However, the recommendations are a reasonable compromise which, reinforced by good patient education, should ensure that most melanoma recurrences are detected promptly and new primary melanomas are diagnosed early.

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