Melanoma, the deadliest form of skin cancer, is highly treatable in its early stages. Thin melanomas are highly curable with excision alone. Invasive melanomas, particularly those ≥1mm, are associated with risks for metastasis. Several investigational compounds and a newly approved drug (ipilimumab) may yet provide new therapeutic options for the adjuvant management of patients with thicker melanomas. Meanwhile, recent research has provided new insights on surgical management, patient follow-up, and adjuvant therapy for patients with invasive melanoma.

**Excision Depths are Variable Among Clinicians**
Surgical excision is first-line therapy of melanoma and is associated with favorable long-term outcomes for melanoma in situ and thin melanomas.\(^1\,^2\) Local recurrence is directly associated with failure to adequately excise the primary lesion.\(^3\) Inadequate margins contribute to the risk of recurrence.\(^1\,^4\) Determining the appropriate depth of excision is a clinical challenge. In fact, a recent survey found, there is notable variability in excision depth among cutaneous surgeons.\(^5\)

In a recent survey of 115 melanoma specialists (both dermatologists and non-dermatologists) and 383 non-specialist dermatologists, more than half of the specialists had diagnosed more than 20 invasive melanomas in the previous year, compared with just 11 percent of the non-specialists. While there was no significant difference in reported excision depths between the groups for melanoma in situ, there were differences in excision depths for thin invasive melanomas. Specialist non-dermatologists reported excising more deeply than did specialist dermatologists and non-specialist dermatologists. More specialist non-dermatologists excised to the fascia compared to specialist and non-specialist dermatologists. For melanomas thicker than 1mm, there was less incongruence between the groups, with a majority of all respondents excising to the fascia.

What it means: The lack of standards for excision depth has been a subject of discussion in the past. The current survey reveals that dermatologists—both melanoma specialists and non-specialists—excise more conservatively than non-dermatologist melanoma specialists for thin melanomas. We now need studies to determine the long-term outcomes of deeper compared to more conservative excisions.

**Chest Radiography is Futile for Surveillance**
The risk for recurrence and metastasis is higher in patients with melanoma of 1mm thickness or more and increases in direct proportion to melanoma thickness. One method used to monitor patients for metastasis has been the use of serial chest x-rays taken at six- to 12-month intervals. A recent analysis suggests that these chest radiographs provide no clinically meaningful information and are not useful for surveillance.\(^6\)

The analysis comes from a post hoc analysis of data from 1,235 patients in a prospective, randomized, multi-institutional study on melanoma with Breslow thickness ≥1mm. All patients underwent...
excision of the primary lesion and sentinel node biopsy. Positive nodes were removed. All patients were followed with annual chest radiography. Median follow-up was 74 months. A total of 210 patients (17 percent) had a recurrence, mostly local or in-transit. Overall, 99 percent of radiographs were read as normal or were falsely positive. Of radiographs associated with recurrence, only 7.7 percent were read as abnormal; less than one percent (0.9 percent, n=38) of all radiographs were true positives. Of these 38 patients, only three had isolated pulmonary metastases amenable to resection. The remainder had widely disseminated disease.

These findings echo those of an earlier study that found that serial chest radiographs provided a high rate of false positives, did not detect metastases earlier, and detected only half of all pulmonary metastases.7

What it means: The need to carefully monitor for recurrence and metastasis in patients with melanoma ≥1mm is unquestionable. Unfortunately, chest radiography does not appear to provide clinically relevant information to meaningfully influence patient care. There are studies investigating alternative imaging methods that may prove useful. If chest radiography is used for surveillance in the melanoma patient, clinicians and patients should both be aware of the limitations of chest x-rays; the rate of false positives should be addressed in efforts to minimize patient anxiety about possible results.

Ulceration Predicts Response to Interferon

Even as research continues into new adjuvant therapies for the management of patients with advanced melanoma who have undergone resection, research continues to assess the benefits of adjuvant interferon (IFN) therapy, which has shown inconsistent efficacy in the trials conducted to date.8

A post hoc analysis of data from a prospective multi-institutional randomized study of observation versus adjuvant IFN therapy suggests that ulceration may predict response to IFN.8 Of the 1,769 analyzed patients, 1,311 did not have ulceration and 458 did. Median follow-up was 71 months. IFN therapy had no significant impact on overall survival regardless of ulceration status, however, it did improve disease-free survival in node-positive patients with ulcerated melanomas. Multivariate analysis revealed that IFN treatment was a significant independent predictor of disease-free survival among ulcerated patients, with an odds ratio of 0.51 (95 percent CI), but not among patients without ulceration.

What it means: The failure of IFN therapy to improve overall survival has disappointed researchers, clinicians, and patients. However, these findings and others suggest that there is a role for IFN in the adjuvant management of certain melanoma patients. Future studies are indicated to elucidate the role of IFN in melanoma patient management.

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