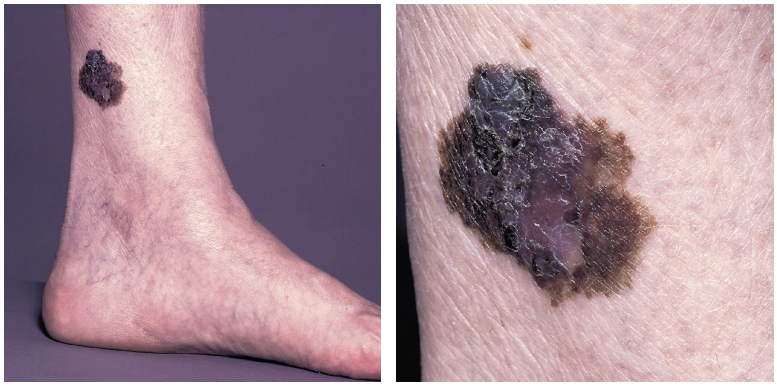
Case 17 A pigmented skin lesion that has got bigger



(a) (b)

Figure 17.1

Figure 17.1a shows a pigmented lesion above the left ankle of a schoolmistress aged 40 years. She had noticed a brownish spot there for many years but over the past few months she was aware that it had begun to enlarge quite rapidly. Naturally, she was extremely anxious about this. Figure 17.1b is a close-up view of the lesion.

What features suggest that this is a malignant melanoma?

The story of recent enlargement is important. Careful inspection shows irregularity in its outline, its surface and its pigmentation – all highly suspicious.

What other features, not present in this patient, indicate malignant change?

Other features are bleeding, ulceration, spread of pigment beyond the edge of the tumour and surrounding daughter nodules. A history of itching or pain is also suspicious.

Where would you examine the patient next for evidence of metastatic spread?

Examine all the way along the lower limb for the presence of satellite nodules deposited along the lymphatics. Carefully examine the groin for inguinal lymphadenopathy.

Where else, apart from the skin, may malignant melanomas occur?

Malignant melanomas may occur on the mucosa of the nose, mouth, anal canal and intestine. In the eye, malignant melanomas may be found in the conjunctiva, choroid and pigmented layer of the retina.

What factors determine the prognosis in patients with cutaneous malignant melanomas?

The prognosis in a case of cutaneous malignant melanoma depends on the following:

- The thickness of the primary tumour (the Breslow depth*). If this is less than 0.75 mm, the outlook is excellent. The deeper the lesion, the worse becomes the survival rate; this is associated with the greater danger of lymphatic spread as the invading tumour reaches the lymphatic vessels, which lie in the dermis (Table 17.1).
- A superficial spreading lesion has a better prognosis than a penetrating and ulcerating melanoma – for exactly the same reason.

*Alexander Breslow (1928–1980), pathologist, George Washington University Hospital, Washington DC.

Table 17.1 Survival according to Breslow depth.

Depth (mm)	Five-year survival
<1.0	>95%
1.0–2.0	80–95%
2.1–4.0	60–75%
>4.0	<50%

• Melanomas on the limbs (termed acral melanomas) have a better prognosis than those of the trunk, the eye and the viscera.
• The presence of cutaneous or lymphatic deposits greatly increases the gravity of the prognosis, while blood-borne metastases, for example to the liver, make the prognosis virtually hopeless (Table 17.2).

This patient was treated along standard lines. What are these?

• The lesion was excised and the diagnosis confirmed histologically by frozen section. A wider local excision was then performed with a clearance of 1 cm for every millimetre of Breslow depth of the lesion and the defect repaired by means of a split-skin graft taken from the other thigh (see Case 9, p. 22).
• The sentinel lymph node† in the groin was identified by injection of blue dye around the melanoma pre-operatively and was excised – in this case it was free of tumour.
• At follow-up a careful check was performed at each visit on the local area, the skin along the line of the lymphatics of the lower limb and the groin lymph nodes.
• Should inguinal node metastases develop, a block dissection of the groin would be performed.

†A sentinel lymph node is the first lymph node to receive the lymphatic drainage from a tumour. If it is free of tumour on histological examination, lymphatic metastasis has not occurred. If it is positive (tumour is identified), the lymphatic field is excised (block dissection).

Table 17.2 Survival according to melanoma stage

Stage	Description	5-year survival	10-year survival
0 (In situ)	No deep invasion	100	100
1A	<1mm thick. No ulceration. No lymph node spread.	95%	88%
1B	No lymph node spread and either of: • <1 mm thick and ulceration • 1-2 mm, no ulceration	90%	82%
2A	No lymph node spread and either of: • 1–2 mm and ulcerated • 2–4 mm, no ulceration.	78%	53%
2B	No lymph node spread and either of: • 2–4 mm and ulcerated • >4 mm, no ulceration	60-70%	50-60%
2C	>4 mm. No ulceration, no spread.	45%	33%
3A	≤ 3 local nodes involved, but microscopic nodal spread only, nodes not enlarged, tumour not ulcerated, no distant spread	60-70%	50–70%
3B	Any of: • Ulcerated and microscopic spread to 1–3 draining, non-enlarged lymph nodes • Not ulcerated and spread to 1–3 draining lymph nodes which are enlarged. • Not ulcerated, spread to small areas of skin or lymphatics, but draining lymph nodes are free of tumour	40–55%	30–50%
3C	• Lymph node involvement and adjacent skin or lymphatic involvement • Tumour ulcerated & macroscopic spread to 1–3 lymph nodes • Spread to ≥4 draining lymph nodes • Spread to draining nodes which have fused	20–35%	10–30%
4	Generalised spread, eg to liver, lungs, brain.	≤20%	–