This Quick Reference Guide provides a summary of the main recommendations in
SIGN 146 Cutaneous melanoma

Recommendations are graded R to indicate the strength of the supporting evidence. Good
practice points ✔️ are provided where the guideline development group wishes to highlight
specific aspects of accepted clinical practice.

Details of the evidence supporting these recommendations can be found in the full
guideline, available on the SIGN website: www.sign.ac.uk. This Quick Reference Guide is also
available as part of the SIGN Guidelines app.
PREVENTION, SURVEILLANCE AND GENETICS

R Information on preventing melanoma should be provided to the general public through a variety of media and resources.

Healthcare professionals and members of the public should be aware of the risk factors for melanoma. Individuals identified as being at higher risk should be advised about appropriate methods of sun protection, educated about the diagnostic features of cutaneous melanoma and encouraged to perform self examination of the skin.

R Genetic testing for mutations in \textit{CDKN2A} should be offered to an affected individual who has a first degree relative affected by melanoma or pancreatic cancer.

DIAGNOSIS AND PROGNOSTIC INDICATORS

✓ All patients with a diagnosis of melanoma should be discussed at a specialist multidisciplinary team meeting.

CLINICAL DIAGNOSIS

R Clinicians should be familiar with the 7-point or the ABCDE checklist for assessing lesions.

✓ Assess all pigmented skin lesions that are either referred for assessment or identified during follow up in secondary or tertiary care, using dermoscopy carried out by healthcare professionals trained in this technique.

R Health professionals should be encouraged to examine patients’ skin during other clinical examinations.

✓ Emphasis should be given to the recognition of early melanoma by both patients and health professionals.

EDUCATING HEALTH PROFESSIONALS ABOUT DIAGNOSIS

✓ Targeted education can enhance health professionals’ ability to diagnose melanoma.

BIOPSY OF SUSPICIOUS LESIONS

R A suspected melanoma should be excised with a 2 mm margin and a cuff of fat.

If complete excision cannot be performed as a primary procedure an incisional or punch biopsy of the most suspicious area is advised.

A superficial shave biopsy is inappropriate for suspicious pigmented lesions.

✓ GPs should refer urgently all patients in whom melanoma is a strong possibility rather than carry out a biopsy in primary care.

Newly-diagnosed patients should receive both verbal and written information about melanoma including the treatment options and support services available to them.
PATHOLOGICAL DIAGNOSIS

HANDLING A SUSPECTED MELANOMA

- The macroscopic description of a suspected melanoma should:
  - state the biopsy type, whether excision, incision, or punch
  - describe and measure the biopsy (in mm)
  - state the size of the lesion in mm and describe the lesion in detail (shape, pattern of pigment distribution, presence or absence of a nodular component and presence or absence of ulceration)
  - state the clearance of the lesion (in mm) from the nearest lateral margin and the deep margin.

Selection of tissue blocks:
- the entire lesion should be submitted for histopathological examination
- the lesion should be sectioned transversely at 3 mm intervals and the blocks loaded into labelled cassettes
- cruciate blocks should not be routinely selected (they limit the assessment of low power architectural features such as symmetry)
- cruciate blocks may be used to assess margins in very large lentigo maligna excisions.

PROGNOSTIC INDICATORS/CORE MICROSCOPIC DATASET ITEMS

HISTOGENETIC TYPE
- The histogenetic type should be included in the pathology report.

BRESLOW THICKNESS
- An accurate measurement of the Breslow thickness should be included in the pathology report for any melanoma that has an invasive component.

ULCERATION
- The presence or absence of histological evidence of epidermal ulceration should be noted in the pathology report.

MITOTIC RATE
- Mitotic rate is used as a defining criterion for pT1b melanomas and should be recorded in the pathology report.

MICROSCOPIC SATELLITES/IN-TRANSIT METASTASIS
- Identification of microscopic satellites upstages the pN status of melanoma according to the AJCC cancer staging manual (7th edition) and should be included in the pathology report. The defining criteria should be strictly adhered to and the presence or absence of microsatellites should be stated in the pathology report.

RADIAL VERSUS VERTICAL GROWTH PHASE
- The growth phase characteristics should be stated in the pathology report of all melanomas.
TUMOUR INFILTRATING LYMPHOCYTES

Tumour infiltrating lymphocytes are a core dataset item and should be recorded in the pathology report.

REGRESSION

If the presence or absence of regression is apparent it should be included in the pathology report.

CLARK LEVEL

If the pT1a/pT1b status cannot be determined through the presence of ulceration and/or mitotic activity then a Clark level of 4 or 5 can be used to upstage the tumour. Clark level only need be documented in these cases.

BRAF STATUS

Serine/threonine-protein kinase B-Raf (BRAF) status should be requested in all patients with advanced disease and recorded on the pathology report.

SPECIALIST PATHOLOGY REPORTING

Pathologists responsible for reporting melanocytic lesions must be aware of the diagnostic pitfalls in this area. Participation in appropriate continuing professional development (CPD) activity is advisable. Cases where significant diagnostic doubt exists should be referred for specialist dermatopathology opinion.

CORE FEATURES OF A PATHOLOGY REPORT FOR INVASIVE MELANOMA

<table>
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<td>Tumour stage (pT)</td>
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<td>BRAF status (if applicable)</td>
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SURGICAL MANAGEMENT AND STAGING

WIDE LOCAL EXCISION SURGERY FOR PRIMARY MELANOMA

- Consider a clinical margin of at least 0.5 cm when excising stage 0 melanoma.
- If excision for stage 0 melanoma does not achieve an adequate histological margin, discuss further management with the multidisciplinary team.
- Offer excision with a clinical margin of at least 1 cm to people with stage I melanoma.
- Offer excision with a clinical margin of at least 2 cm to people with stage II melanoma.

MANAGEMENT OF PALPABLE LYMPH NODES

- If there is palpable lymphadenopathy, fine needle aspiration should be used to obtain cytological confirmation of metastases.
- If open biopsy is undertaken the incision must be placed in the same line as for a potential radical lymphadenectomy.
- Therapeutic lymph node dissection requires complete and radical removal of all draining lymph nodes to allow full pathological examination.
- Patients with a confirmed metastatic lymph node(s) should be radiologically staged prior to lymph node dissection.
- Regional lymph node dissection carries a well defined and significant morbidity and should be undertaken only by surgeons with appropriate expertise.
- Patients should be advised of the risk of lymphoedema following lymph node dissection. If lymphoedema occurs, patients should be referred to a lymphoedema specialist.

MANAGEMENT OF NON-PALPABLE LYMPH NODES

- Sentinel lymph node biopsy (SNLB) should be considered as a staging technique in patients with IB-IIC melanoma with a Breslow thickness of >1 mm. It should not be offered to patients with stage IB melanoma where Breslow thickness is ≤1 mm.
- Patients should be given detailed verbal and written information regarding the possible advantages and disadvantages of the SLNB procedure to allow them to make an informed decision.
- Patients with a positive sentinel lymph node should be offered appropriate counselling regarding the advantages and disadvantages of completion lymphadenectomy.
- Following lymphadenectomy all patients should have access to specialist lymphoedema services.
FURTHER INVESTIGATIONS

CROSS SECTIONAL IMAGING

- Staging CT should be offered to patients with stage IIC or above melanoma.
- Staging CT should include head, chest, abdomen and pelvis. The neck should be included in patients with head and neck melanoma.
- PET-CT should only be considered for patients with indeterminate findings on CT or for patients who are being considered for major surgical resection, after discussion with the specialist multidisciplinary team.

IDENTIFYING BRAIN METASTASES

- CT of the head with contrast should be used as the first-line imaging modality for identifying brain metastases.
  - MRI of the head should be considered where CT findings are equivocal.
  - If patients are being considered for locoregional treatment of brain metastases, contrast MRI should be performed to identify further lesions which may alter management.

LABORATORY INVESTIGATIONS

- Routine blood tests are not indicated in staging asymptomatic patients with melanoma, with the exception of lactate dehydrogenase in patients with stage IV disease, which is part of routine classification.

ADJUVANT TREATMENT

ADJUVANT RADIOTHERAPY FOR RESECTED STAGE III MELANOMA

- Consider adjuvant radiotherapy for patients with completely resected stage IIIB or IIIC melanoma after discussion of the risk of local recurrence and the benefits and risk of adjuvant therapy including risk of significant adverse effects.

INTERFERON

- Adjuvant interferon should not be used for patients with AJCC stage II and III melanoma other than in a trial setting.

IMMUNOSUPPRESSION

- All patients with melanoma and a history of immunosuppression should have a multidisciplinary team approach to care and minimising the immunosuppressive therapy should be considered where possible.
FOLLOW UP

✓ Patients who have had melanoma in situ do not require follow up.

✓ Patients should be given information and education on personal regular skin surveillance and nodal disease.

✓ Patients with an invasive melanoma should have a period of follow up.

PSYCHOLOGICAL AND EMOTIONAL SUPPORT

✓ Follow up frequency and duration should take account of patients’ psychological and emotional needs.

SURVEILLANCE IMAGING

R Routine surveillance imaging should not be offered to patients with stage I-IIB melanoma.

Decisions on the use of routine surveillance imaging for patients with stage IIC-III melanoma should be made at a regional managed clinical network level after identifying and agreeing any additional imaging resources required and considering other factors, including patient choice.

✓ CT should be used for surveillance imaging, if this is undertaken.

MANAGEMENT OF ADVANCED (UNRESECTABLE STAGE IIIC OR IV) MELANOMA

✓ All patients with advanced melanoma should be tested for mutations in BRAF and have their management discussed at a specialist multidisciplinary team in order to determine the optimal management strategy taking into account patient fitness, comorbidity, disease burden and overall aim of treatment.

✓ All patients with advanced melanoma should be offered the opportunity to participate in clinical trials.

SURGERY

✓ Metastasectomy should be considered in patients with stage IV disease.

SYSTEMIC THERAPY

BRAF AND MEK INHIBITORS

R Trametinib in combination with dabrafenib is recommended for patients with unresectable stage IIIC or stage IV melanoma with a BRAF V600 mutation.

IMMUNOTHERAPIES

R Ipilimumab, pembrolizumab and nivolumab monotherapy or ipilimumab/nivolumab combination therapy are recommended for patients with unresectable stage IIIC and IV melanoma.

ISOLATED LIMB PERFUSION

✓ Isolated limb perfusion (ILP) should be performed in a specialist centre.

ILP should not be used as an adjuvant treatment

ILP is a treatment option for patients with bulky disease confined to one limb.
ABLATIVE THERAPIES

CARBON DIOXIDE LASER ABLATION

✓ Carbon dioxide laser ablation can be considered for multiple lesions of trunk or abdomen and for limb disease.

ELECTROCHEMOTHERAPY

R Electrochemotherapy should be considered as a treatment option for patients with cutaneous melanoma metastases after multidisciplinary team discussion and careful consideration of alternative systemic therapy options, or when other options have been exhausted.

RADIOTHERAPY

BONE METASTASES

R Single-dose radiotherapy of a least 8 Gy may be an effective treatment for bone metastases.

SPINAL CHORD COMPRESSION

✓ If a patient presents with spinal cord compression consideration should be given to available medical oncology options ie BRAF testing should be considered if this has not already been done, and targeted BRAF therapy should be considered in new cases.

BRAIN METASTASES

R Patients with good performance status, favourable response to corticosteroid treatment, absence of systemic disease and who harbour favourable central nervous system (CNS) disease should be considered for surgical resection of their CNS disease.

If surgery is not possible, patients should be considered for systemic therapy.

✓ All patients with brain-limited metastasis should tested for BRAF mutations and their management discussed at a neuro-oncology multidisciplinary team to discuss the optimal choice of treatment including systemic or targeted therapy, surgery or stereotactic radiosurgery.

SPECIALIST PALLIATIVE CARE

R Patients with advanced melanoma require a co-ordinated multiprofessional approach with input from a specialist palliative care team.

Patients with poorly controlled symptoms should be referred to specialist palliative care at any point in the cancer journey.
MELANOMA IN WOMEN

PREGNANCY

✓ Women with a significant risk of recurrence (localised disease of ≥1 mm thickness) who wish to become pregnant after surgery for stage I or II melanoma should be advised to delay pregnancy for two years postsurgery, as the likelihood of recurrence is highest during this period.

Pregnant women who present with growing or changing pigmented lesions should be treated as non-pregnant women.

ORAL CONTRACEPTIVE AFTER MELANOMA TREATMENT

✓ Women who have had a melanoma treated should select contraception in the same way as women who have not had a melanoma.

HORMONE REPLACEMENT THERAPY (HRT) AFTER MELANOMA TREATMENT

✓ Women who have had stage I and II melanoma and who wish to take HRT should be treated as women who have not had melanoma.

INFORMATION PROVISION

R Patients should receive targeted information throughout their journey of care.

✓ Healthcare professionals working with cancer patients should have training in communication skills.

R Communication skills training should be provided across the multidisciplinary team.

✓ Information needs should be resourced and provided using a variety of media, to meet individual patient/carer needs.

PATIENT SUPPORT GROUPS

✓ Health service patient support groups should be structured, facilitated by trained professionals and incorporate health education.

Information on all patient support groups should be made easily available to patients.
SOURCES OF FURTHER INFORMATION

NHS inform
www.nhsinform.scot
www.nhsinform.scot/illnesses-and-conditions/cancer

Skin cancer (melanoma)

Care, support and rights
Tel: 0800 22 44 88 (8am–10pm)
www.nhsinform.scot/care-support-and-rights/

Cancer Support Centre, Cancer Support Scotland
The Calman Centre, 75 Shelley Road, Glasgow G12 0ZE
Freephone: 0800 652 4531
Tel: 0141 337 8199
Email: info@cancersupportscotland.org
www.cancersupportscotland.org

Macmillan Cancer Support (Scotland)
Third floor, 132 Rose Street, Edinburgh. EH2 3JD
Tel: 0131 260 3720
Email: pmather@macmillan.org.uk

Maggie’s Cancer Caring Centres Scotland
The Gatehouse, 10 Dumbarton Road, Glasgow G11 6PA
Tel: 0300 123 180
Email: enquiries@maggiescentres.org
www.maggiescentres.org

MASScot (Melanoma Action and Support Scotland)
208 Clyde Street, Glasgow G1 4JY
Tel: 0141 221 98780
Email: info@masscot.org.uk
www.masscot.org.uk