Melanoma - suspected

1 Background information

Quick info:

Scope:
- assessment and management of cutaneous melanoma in primary and secondary care

Out of scope:
- non-cutaneous melanoma

Definition:
- malignant melanoma is a tumour arising from melanocytes [1]
- superficial spreading melanoma (SSM) [2]:
  - most common type of melanoma
  - characterised by:
    - asymmetrical pigmented lesion with irregular borders
    - irregular pigmentation
    - irregular outline
    - patient may notice growth, change in sensation and/or colour, crusting, bleeding, or inflammation
    - duration of symptoms varies from months to years
- nodular melanoma (NM) [2]:
  - usually has a shorter history
  - greater tendency to bleed and/or ulcerate
- lentigo maligna melanoma (LMM) – most often occurs in sun damaged skin on the head and neck of older patients [2]
- acral lentiginous melanoma (ALM) – occurs on sites including the palms, soles, and beneath the nails [2]
- genital melanoma – melanoma can arise on the genital skin in both males and females, although this is rare [3]

Incidence and prevalence:
- melanoma of the skin is an increasingly common tumour [1]
- NM is the second most common type of melanoma [2]
- ALM is an uncommon melanoma [2]
- malignant melanoma accounts for approximately 10% of skin cancers [4]
- in 2007, approximately 10,000 cases of malignant melanoma were recorded [3]
- the mean age of diagnosis is approximately age 50 years; however, 20% of cases occur in adults aged between 15 and 39 years [1]
- the incidence of melanoma within pale skinned people correlates with the latitude of residence [1,3]

Prognosis:
- in England and Wales, there are approximately 2,000 deaths from malignant melanoma every year [3]
- up to 20% of patients develop stage IV metastatic disease [5]
- fewer than 10% of patients with stage IV metastatic disease will live beyond 5 years [3,5]

Risk factors:
- affluence [2]
- female gender [2,4]
- increasing age [2,4]
- immunosuppression, especially following organ transplantation [4]
- genetic predisposition (less than 2% of skin cancer), eg [4]:
  - xeroderma pigmentosum
  - familial melanoma [6]
- excessive sun exposure [1,3]/UV exposure [4]/sunburn [3]
- previous history of melanoma [2,6]
- previous history of non-melanoma skin cancer [7]
- sun sensitive skin [1,4] – features of this include:
  - tendency to burn in the sun [3]
  - freckles [3]
  - red or blonde hair [1]
  - blue eyes [1]
- skin that does not tan easily [2]
- large numbers of melanocytic naevi [7]
- giant congenital melanocytic naevi [2,6]
- atypical or dysplastic naevi [7]
- presence of actinic lentigines [2]

NB: This information appears on each page of this pathway.

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References:

2 Information resources for patients and carers

Quick info:
Patients and carers in England can access this pathway through NHS Choices at http://healthguides.mapofmedicine.com/choices/map/melanoma1.html

The following resources have been produced by organisations certified by The Information Standard:
- Skin cancer (URL) from Bupa at http://www.bupa.co.uk
- Melanoma skin cancer (URL) from Cancer Research UK at http://www.cancerhelp.org.uk
- Melanoma (URL) from Datapharm at http://www.medguides.medicines.org.uk
- Malignant melanoma (URL) from Macmillan Cancer Support at http://www.macmillan.org.uk
- Healthcare services for skin tumours including melanoma (PDF) from NICE at http://www.nice.org.uk
- Melanoma (PDF) from Patient UK at http://www.patient.co.uk

The following resources have been written or recommended by national policy bodies or guideline producers whose content has informed this pathway:
- Skin cancer (malignant melanoma) patient leaflet (URL) from Clinical Knowledge Summaries (CKS) at http://www.cks.nhs.uk
- Caring for someone (URL) from Directgov at http://www.direct.gov.uk
- Disabled people (URL) from Directgov at http://www.direct.gov.uk

Patient stories describing their care journeys are available at Healthtalkonline (URL) from DIPEX at http://www.healthtalkonline.org/
Explanations of clinical laboratory tests used in diagnosis and treatment are available at Understanding Your Tests (URL) from Lab Tests Online-UK at http://www.labtestsonline.org.uk. The Map of Medicine is committed to providing high quality health and social care information for patients and carers. For details on how these resources are identified, please see Map of Medicine Patient and Carer Information.

NB: This information appears on each page of this pathway.

3 Updates to this pathway

Quick info:
Date of publication: 31-Jan-2011

Three nodes now appear at the top of each pathway page. These provide:
- easy access to scope and background information on each page of the pathway whilst reducing repetition between nodes
- easy access to patient resources/leaflets
- information on pathway updates

The pathway has been updated in line with the following guidelines:
Melanoma - suspected


Further information was provided by the following references: [3,7,10-11]. For further information, please see the pathway's Provenance.

Practice-based knowledge has been contributed to this pathway by:

• Prof Julia Newton-Bishop: Professor of Dermatology, University of Leeds/Leeds Teaching Hospital Trust, Leeds, UK (clinical facilitator)
• Dr Katherine Acland: Consultant Dermatologist, Guy's and St Thomas', London, UK
• Ms Margret Brown: Clinical Nurse Specialist in Melanoma, St James Institute of Oncology, Leeds, UK
• Dr James Larkin: Consultant Medical Oncologist, Royal Marsden Hospital, London, UK
• Dr Jerry Marsden: Consultant Dermatologist, University Hospital Birmingham, Birmingham, UK
• Dr Howard Peach: Plastic Surgery Consultant, Leeds Teaching Hospital Trust, Leeds, UK

The pathway has been completely restructured and redrafted in line with the Map of Medicine editorial methodology and to bring it in line with current clinical practice.

NB: This information appears on each page of this pathway.

4 Melanoma - clinical presentation

Quick info:

NB: Approximately 50% of melanomas develop in pre-existing moles [1].

Clinical presentation of melanoma [6]:

• a new mole appearing after the onset of puberty which is changing in shape, colour, or size [6]/growing quickly [1]
• a long-standing mole that is changing in:
  • shape [1,6,8]
  • colour [1,6,8]
  • size [1,6]
• any mole that has [1,6]:
  • three or more colours; or
  • lost its symmetry
• a mole that:
  • is itching [1,6]
  • is bleeding [1,6,8]
  • is tingling [1]
  • has an irregular outline [8]
  • is ulcerated [8]
  • is inflamed [8]
• any new persistent skin lesion, especially if [6]:
  • pigmented or vascular in appearance [1]
  • the diagnosis is not clear
• a new pigmented line in a nail [1,6], especially where there is associated damage to the nail [6]
• a lesion growing under the nail [1,6]:
  • most common under the thumb nail or nail of the great toe [1,3]
  • subungal melanoma usually arises from the nail matrix and appears first at the proximal nail fold [1,3]
  • classic subungual melanoma arises as a narrow pigmented band in the nail, which slowly widens, associated with a subungal mass [1]

References:
Quick info:
Perform a thorough history and examination, assessing the following features:
• a new mole appearing after the onset of puberty, which is changing in shape, colour, or size [6]/growing quickly [1]
• a long-standing mole that is changing in shape, colour, or size [1,6]
• any mole that has [1,6]:
  • three or more colours; or
  • lost its symmetry
• a mole that is itching or bleeding [1,6]
• any new persistent skin lesion, especially if [6]:
  • pigmented or vascular in appearance [1]
  • the diagnosis is not clear
• a new pigmented line in a nail [1,6], especially where there is associated damage to the nail [6]
• a lesion growing under the nail [1,6]

British Association of Dermatology (BAD) recommends that suspicious lesions should not be removed in primary care as clinicopathological correlation is vital for diagnostic accuracy, which will determine prognosis and define adjuvant treatment [6].

References:

6 Initial assessment

Quick info:
Systems for assessing lesions – the seven-point checklist or the ABCDE system may be used to help identify melanoma [3,6]:
• seven-point system (all primary healthcare professionals should be aware of this checklist) [8]:
  • major features of the lesion [8]:
    • change in size
    • irregular shape
    • irregular colour
  • minor features:
    • largest diameter 7mm or more [8] (or lesion larger than others as melanomas may be smaller than 7mm [3])
    • inflammation [8]
    • oozing [8]
    • change in sensation [8]
  • suspicion is greater for lesions scoring three points or more (based on major features scoring two points each and minor feature scoring one point each) – if there are strong concerns about cancer, any feature can prompt urgent referral [3]

• ABCDE system:
  • asymmetry [8,9]
  • border irregularities [8,9]
  • colour heterogeneity [8,9]
  • dynamics, ie dynamics in:
    • colour [9]
    • elevation [8,9] (often excluded) [8]
  • size [9] – more than 6mm [8], but melanoma can be diagnosed with smaller lesions, particularly nodular lesion [7]

* dermoscopy – enhances diagnosis if performed by trained practitioner, but is rarely used in general practice and requires training [3]

References:
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7 Consider differential diagnoses

Quick info:
Differential diagnoses for melanoma include the following:

- benign differential diagnoses:
  - dermatofibroma [7]
  - Spitz naevus (most likely diagnosis in children) [7]
  - blue naevus [7]
  - haemangioma [7]
  - pyogenic granuloma [3]
  - pigmented seborrhoeic keratosis [3]
  - dysplastic naevus [3]
- malignant or pre-malignant differential diagnoses [7]:
  - basal cell carcinoma
  - squamous cell carcinoma
  - other spindle cell tumours
  - rare adnexal tumours

References:

9 RED FLAG!

Quick info:
Urgently refer under the 2-week rule to a specialist (screening clinics are usually run by a dermatologist) all lesions that raise suspicion of melanoma [4,6], eg:

- a new mole appearing after the onset of puberty, which is changing in shape, colour, or size [6]/growing quickly [1]
- a long-standing mole that is changing in shape, colour, or size [1,6]
- any mole that has [1,6]:
  - three or more colours; or
  - lost its symmetry
- a mole that is itching or bleeding [1,6]
- any new persistent skin lesion, especially if [6]:
  - pigmented or vascular in appearance [1]
  - the diagnosis is not clear
- a new pigmented line in a nail [1,6], especially where there is associated damage to the nail [6]
- a lesion growing under the nail [1,6]

British Association of Dermatology (BAD) recommends that suspicious lesions should not be removed in primary care as clinicopathological correlation is vital for diagnostic accuracy, which will determine prognosis and define adjuvant treatment [6].

References:

10 Consider referral to dermatologist

Quick info:
If the diagnosis is uncertain:

- National Institute for Health and Clinical Excellence (NICE) and the British Association of Dermatology (BAD) recommend referral for further assessment to a dermatologist who is a member of a local skin cancer multidisciplinary team (LSCMDT) or specialist skin multidisciplinary team (SSMDT) [4,6,8]
- Scottish Intercollegiate Guidelines Network (SIGN) recommend [2]:
  - photographing and measuring the lesion
  - reassessing within 2 months
11 Assessment of patients considered to be at risk of melanoma

Quick info:
Refer high-risk patients to a dermatologist within 13 weeks [7].

Screening and surveillance of high-risk individuals [6]:
- individuals at moderately increased risk of melanoma:
  * include patients with large numbers of moles – some may be clinically atypical
  * should be:
    * counselled about the risk
    * taught how to self-examine for changing naevi
    * long-term follow-up is not usual
- individuals at a greatly increased risk of melanoma include patients with a:
  * giant congenital pigmented hairy naevus (20cm or more in diameter and 5% of body surface) – require long-term follow-up
  * strong family history of melanoma

Patients with three or more cases of melanoma or pancreatic cancer in their family (ie one or more first degree relative [3]) should be referred to appropriate clinics managing inherited predisposition to cancer (should involve dermatologists and/or clinical geneticists) for counselling [6].

References:

12 Patients who do not require referral

Quick info:
Patients who present with the following lesions should not be referred to a dermatologist [1]:
- a typical seborrhoeic wart (basal cell papilloma)
- a maturing mole which is slowly becoming dome shaped and losing its colour

If patient presents with a low-suspicion lesion, they should still be advised to seek advice if changes subsequently occur, and re-examination at 8 weeks should be considered. Photography and/or measurement of the lesion at baseline is useful [3,8].

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14 Provide reassurance

Quick info:
All patients with an increased risk of melanoma should be:
• advised on self-examination to promote early detection of melanoma [3]
• provided with:
  • written information and access to images of moles and melanomas [6]
  * brochures and leaflets with preventative information – leaflets should be non-alarmist [8]
• educated about the need to avoid sun damage, particularly sunburn, without becoming vitamin D depleted [3]:
  * people with sun-sensitive skin should be especially careful about sun exposure [2,3] – sunburn should be avoided by avoidance in hot weather [3]
• people at risk of melanoma should avoid using [2]:
  • sunbeds
  • tanning booths
  • tanning lamps
• use of sunscreen with a sun protector (SPF) of at least 30, with five start ultraviolet A (UVA) protection as an adjunct [1]

Considerations for children:
• children should be provided with skin protection for outdoor activities [2], appropriate for their skin type [3]
• children with sun-sensitive skin should be protected so that they never burn in the sun – such children may require vitamin D supplements to avoid deficiency [3]
• children with darker skin who are more at risk of vitamin D deficiency should not be allowed to get burnt in the sun, but excessive protection should be avoided [3]

References:

16 Specialist assessment

Quick info:
As a minimum, the following should be included [6]:
• history:
  • duration of the lesion
  • change in:
    • size
    • colour
    • shape
  • symptoms, eg itching, bleeding
• examination:
  • site
  • size – maximum diameter
  • elevation, eg:
    • flat
    • palpable
    • nodular
  • description, eg:
    • irregular margins
    • irregular pigmentation
    • ulceration present
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In the presence of an atypical melanocytic lesion, or in the presence of increased number of naevi or a family history, the whole skin should be examined [3].

Excisional biopsy rather than incisional biopsy is recommended except for exceptional circumstances [3], eg:
  • to confirm the diagnosis in cosmetically sensitive areas, eg the face [4]
  • to determine the management of facial or acral lentiginous melanoma (ALM) [3]

References:
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Key Dates

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Accreditations

The care map is accredited by:
National Cancer Action Team (NCAT):
http://www.rcplondon.ac.uk/pubs/contents/f36b1656-cc74-4867-8498-cc94b378312a.pdf

The care map is accredited by:
The Chief Knowledge Officer of the NHS:
http://annonc.oxfordjournals.org/content/21/suppl_5/v194.full.pdf+html

Evidence summary for Melanoma - suspected

This pathway has been developed according to the Map of Medicine editorial methodology (http://mapofmedicine.com/whatisthemap/editorialmethodology). The content of this pathway is based on high-quality guidelines [1-2,4-6,8-9]. Practice-based knowledge has been added by contributors with front-line clinical experience [3,7], including any literature endorsed by the contributor group [10,11].

Search date: Sep-2010

References

This is a list of all the references that have passed critical appraisal for use in the care map Melanoma

<table>
<thead>
<tr>
<th>ID</th>
<th>Reference</th>
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<tbody>
<tr>
<td>3</td>
<td>Contributors representing the National Cancer Action Team. 2011.</td>
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National Cancer Action Team (NCAT)
It is not the function of the National Cancer Action Team to substitute for the role of the clinician, but to support the clinician in enabling access to know-how and knowledge. Users of the Map of Medicine are therefore urged to use their own professional judgement to ensure that the patient receives the best possible care. Whilst reasonable efforts have been made to ensure the accuracy of the information on this online clinical knowledge resource, we cannot guarantee its correctness or completeness. The information on the Map of Medicine is subject to change and we cannot guarantee that it is up-to-date.

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