NICE National Institute for Health and Care Excellence

NICE guideline

Suspected cancer: recognition and referral

NICE guideline
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www.nice.org.uk/guidance/ng12

Your responsibility

The recommendations in this guideline represent the view of NICE, arrived at after careful consideration of the evidence available. When exercising their judgement, professionals and practitioners are expected to take this guideline fully into account, alongside the individual needs, preferences and values of their patients or the people using their service. It is not mandatory to apply the recommendations, and the guideline does not override the responsibility to make decisions appropriate to the circumstances of the individual, in consultation with them and their families and carers or guardian.

All problems (adverse events) related to a medicine or medical device used for treatment or in a procedure should be reported to the Medicines and Healthcare products Regulatory Agency using the Yellow Card Scheme.

Local commissioners and providers of healthcare have a responsibility to enable the guideline to be applied when individual professionals and people using services wish to use it. They should do so in the context of local and national priorities for funding and developing services, and in light of their duties to have due regard to the need to eliminate unlawful discrimination, to advance equality of opportunity and to reduce health inequalities. Nothing in this guideline should be interpreted in a way that would be inconsistent with complying with those duties.

Commissioners and providers have a responsibility to promote an environmentally sustainable health and care system and should assess and reduce the environmental impact of implementing NICE recommendations wherever possible.

Contents

This guideline replaces CG27.

This guideline partially replaces CG122.

This guideline is partially replaced by HTG690.

This guideline is the basis of QS96, QS124, QS130, QS203 and QS90.

This guideline should be read in conjunction with QS155.

Overview

This guideline covers identifying children, young people and adults with symptoms that could be caused by cancer. It outlines appropriate investigations in primary care, and selection of people to refer for a specialist opinion. It aims to help people understand what to expect if they have symptoms that may suggest cancer.

Who is it for?

- Healthcare professionals
- People involved in clinical governance in both primary and secondary care
- People with suspected cancer and their families and/or carers.

Introduction

Safeguarding children

Remember that child maltreatment:

- is common
- can present anywhere
- may co-exist with other health problems, including suspected cancer.

See NICE's guideline on child maltreatment for clinical features that may be associated with maltreatment.

People have the right to be involved in discussions and make informed decisions about their care, as described in NICE's information on making decisions about your care.

We have used the terms 'men' and 'women' in some recommendations on gender-related cancers, but they also apply to people who have changed or are in the process of changing gender, and who retain the relevant organs.

Making decisions using NICE guidelines explains how we use words to show the strength (or certainty) of our recommendations (although this may not apply to recommendations made before 2009; see the section on recommendation wording in guideline updates below). It also has information about prescribing medicines (including off-label use), professional guidelines, standards and laws (including on consent and mental capacity) and safeguarding.

How the guideline is organised

The recommendations in this guideline have been organised into 3 separate sections to help healthcare professionals find the relevant information easily. The recommendations for investigation and referral organised by site of suspected cancer are also presented in

tables of recommendations organised by symptoms and investigation findings. Either section should be used in conjunction with the recommendations on patient support, safety netting and the diagnostic process.

Recommendation wording in guideline updates

NICE began using standard wording to denote the strength of recommendations in guidelines that started development after January 2009. It does not apply to any recommendations ending **[2005]** (see update information for details about how recommendations are labelled). In particular, for recommendations labelled **[2005]** the word 'consider' may not necessarily be used to denote the strength of the recommendation.

Recommendations organised by site of cancer

Use this guideline to guide referrals. If still uncertain about whether a referral is needed, consider contacting a specialist (see the recommendations on the diagnostic process). Consider a review for people with any symptom associated with increased cancer risk who do not meet the criteria for referral or investigative action (see the recommendations on safety netting).

1.1 Lung and pleural cancers

Lung cancer

1.1.1 Refer people using a suspected cancer pathway referral for lung cancer if they:

- have chest X-ray findings that suggest lung cancer **or**
- are aged 40 and over with unexplained haemoptysis. **[2015]**

1.1.2 Offer an urgent chest X-ray (to be done within 2 weeks) to assess for lung cancer in people aged 40 and over if they have 2 or more of the following unexplained symptoms, or if they have ever smoked and have 1 or more of the following unexplained symptoms:

- cough
- fatigue
- shortness of breath
- chest pain
- weight loss
- appetite loss. **[2015]**

1.1.3 Consider an urgent chest X-ray (to be done within 2 weeks) to assess for lung cancer in people aged 40 and over with any of the following:

- persistent or recurrent chest infection
- finger clubbing
- supraclavicular lymphadenopathy or persistent cervical lymphadenopathy
- chest signs consistent with lung cancer
- thrombocytosis. **[2015]**

Mesothelioma

1.1.4 Refer people using a suspected cancer pathway referral for mesothelioma if they have chest X-ray findings that suggest mesothelioma. **[2015]**

1.1.5 Offer an urgent chest X-ray (to be done within 2 weeks) to assess for mesothelioma in people aged 40 and over, if:

- they have 2 or more of the following unexplained symptoms **or**
- they have 1 or more of the following unexplained symptoms and have ever smoked **or**
- they have 1 or more of the following unexplained symptoms and have been exposed to asbestos:
  - cough
  - fatigue
  - shortness of breath
  - chest pain
  - weight loss
  - appetite loss. **[2015]**

1.1.6 Consider an urgent chest X-ray (to be done within 2 weeks) to assess for mesothelioma in people aged 40 and over with either:

- finger clubbing **or**
- chest signs compatible with pleural disease. **[2015]**

1.2 Upper gastrointestinal tract cancers

Oesophageal cancer

1.2.1 Refer people using a suspected cancer pathway referral for oesophageal cancer if they:

- have dysphagia **or**
- are aged 55 and over, with weight loss, and they have any of the following:
  - upper abdominal pain
  - reflux
  - dyspepsia. **[2015, amended 2025]**

1.2.2 Consider non-urgent, direct access upper gastrointestinal endoscopy to assess for oesophageal cancer in people with haematemesis. **[2015]**

1.2.3 Consider non-urgent, direct access upper gastrointestinal endoscopy to assess for oesophageal cancer in people aged 55 or over with:

- treatment-resistant dyspepsia **or**
- upper abdominal pain with low haemoglobin levels **or**
- raised platelet count with any of the following:
  - nausea
  - vomiting

  - weight loss
  - reflux
  - dyspepsia
  - upper abdominal pain **or**
- nausea or vomiting with any of the following:
  - weight loss
  - reflux
  - dyspepsia
  - upper abdominal pain. **[2015]**

Pancreatic cancer

1.2.4 Refer people using a suspected cancer pathway referral for pancreatic cancer if they are aged 40 and over and have jaundice. **[2015]**

1.2.5 Consider an urgent, direct access CT scan (to be done within 2 weeks), or an urgent ultrasound scan if CT is not available, to assess for pancreatic cancer in people aged 60 and over with weight loss and any of the following:

- diarrhoea
- back pain
- abdominal pain
- nausea
- vomiting
- constipation
- new-onset diabetes. **[2015]**

Stomach cancer

1.2.6 Consider a suspected cancer pathway referral for people with an upper abdominal mass consistent with stomach cancer. **[2015]**

1.2.7 Refer people using a suspected cancer pathway referral for stomach cancer if they:

- have dysphagia **or**
- are aged 55 and over, with weight loss, and they have any of the following:
  - upper abdominal pain
  - reflux
  - dyspepsia. **[2015, amended 2025]**

1.2.8 Consider non-urgent, direct access upper gastrointestinal endoscopy to assess for stomach cancer in people with haematemesis. **[2015]**

1.2.9 Consider non-urgent, direct access upper gastrointestinal endoscopy to assess for stomach cancer in people aged 55 or over with:

- treatment-resistant dyspepsia **or**
- upper abdominal pain with low haemoglobin levels **or**
- raised platelet count with any of the following:
  - nausea
  - vomiting
  - weight loss
  - reflux
  - dyspepsia
  - upper abdominal pain **or**

- nausea or vomiting with any of the following:
  - weight loss
  - reflux
  - dyspepsia
  - upper abdominal pain. **[2015]**

Gall bladder cancer

1.2.10 Consider an urgent, direct access ultrasound scan (to be done within 2 weeks) to assess for gall bladder cancer in people with an upper abdominal mass consistent with an enlarged gall bladder. **[2015]**

Liver cancer

1.2.11 Consider an urgent, direct access ultrasound scan (to be done within 2 weeks) to assess for liver cancer in people with an upper abdominal mass consistent with an enlarged liver. **[2015]**

1.3 Lower gastrointestinal tract cancers

Colorectal cancer

Recommendations 1.3.1 to 1.3.4 are adapted from NICE's diagnostics guidance on quantitative faecal immunochemical testing to guide colorectal cancer pathway referral in primary care.

1.3.1 Offer quantitative faecal immunochemical testing (FIT) using HM-JACKarc or OC-Sensor to guide referral for suspected colorectal cancer in adults:

- with an abdominal mass **or**
- with a change in bowel habit **or**
- with iron-deficiency anaemia **or**
- aged 40 and over with unexplained weight loss and abdominal pain **or**
- aged under 50 with rectal bleeding and either of the following unexplained symptoms:
  - abdominal pain
  - weight loss **or**
- aged 50 and over with any of the following unexplained symptoms:
  - rectal bleeding
  - abdominal pain
  - weight loss **or**
- aged 60 and over with anaemia even in the absence of iron deficiency.

FIT should be offered even if the person has previously had a negative FIT result through the NHS bowel cancer screening programme. People with a rectal mass, an unexplained anal mass or unexplained anal ulceration do not need to be offered FIT before referral is considered. **[2023]**

1.3.2 Refer adults using a suspected cancer pathway referral for colorectal cancer if they have a FIT result of at least 10 micrograms of haemoglobin per gram of faeces. **[2023]**

1.3.3 For people who have not returned a faecal sample or who have a FIT result below 10 micrograms of haemoglobin per gram of faeces:

- safety netting processes should be in place
- referral to an appropriate secondary care pathway should not be delayed if there is strong clinical concern of cancer because of ongoing unexplained

symptoms (for example, abdominal mass). **[2023]**

1.3.4 Clinicians should consider if people need additional help, information or support to return their sample. **[2023]**

1.3.5 Consider a suspected cancer pathway referral for colorectal cancer in adults with a rectal mass. **[2015, amended 2023]**

Anal cancer

1.3.6 Consider a suspected cancer pathway referral for anal cancer in people with an unexplained anal mass or unexplained anal ulceration. **[2015]**

1.4 Breast cancer

1.4.1 Refer people using a suspected cancer pathway referral for breast cancer if they are:

- aged 30 and over and have an unexplained breast lump with or without pain **or**
- aged 50 and over with any of the following symptoms in one nipple only:
  - discharge
  - retraction
  - other changes of concern. **[2015]**

1.4.2 Consider a suspected cancer pathway referral for breast cancer in people:

- with skin changes that suggest breast cancer **or**
- aged 30 and over with an unexplained lump in the axilla. **[2015]**

1.4.3 Consider non-urgent referral in people aged under 30 with an unexplained breast lump with or without pain. See also recommendations 1.16.2 and 1.16.3 for

information about seeking specialist advice. **[2015]**

1.5 Gynaecological cancers

Ovarian cancer

The recommendations in this section have been incorporated from NICE's guideline on ovarian cancer and have not been updated. The recommendations for ovarian cancer apply to women aged 18 and over.

1.5.1 Make a referral to a gynaecological cancer service using a suspected cancer pathway referral if physical examination identifies ascites and/or a pelvic or abdominal mass (which is not obviously uterine fibroids). **[2011, amended 2020]**

1.5.2 Carry out tests in primary care (see recommendations 1.5.6 to 1.5.9) if a woman (especially if aged 50 or over) reports having any of the following symptoms on a persistent or frequent basis – particularly more than 12 times per month:

- persistent abdominal distension (women often refer to this as 'bloating')
- feeling full (early satiety) and/or loss of appetite
- pelvic or abdominal pain
- increased urinary urgency and/or frequency. **[2011]**

1.5.3 Consider carrying out tests in primary care (see recommendations 1.5.6 to 1.5.9) if a woman reports unexplained weight loss, fatigue or changes in bowel habit. **[2011]**

1.5.4 Advise any woman who is not suspected of having ovarian cancer to return to her GP if her symptoms become more frequent and/or persistent. **[2011]**

1.5.5 Carry out appropriate tests for ovarian cancer (see recommendations 1.5.6 to 1.5.9) in any woman aged 50 or over who has experienced symptoms within the last 12 months that suggest irritable bowel syndrome (IBS), because IBS rarely presents for the first time in women of this age. (See NICE's guideline on irritable

bowel syndrome in adults). **[2011]**

1.5.6 Measure serum CA125 in primary care in women with symptoms that suggest ovarian cancer (see recommendations 1.5.1 to 1.5.5). **[2011]**

1.5.7 If serum CA125 is 35 IU/ml or greater, arrange an ultrasound scan of the abdomen and pelvis. **[2011]**

1.5.8 If the ultrasound suggests ovarian cancer, make a referral to a gynaecological cancer service using a suspected cancer pathway referral. **[2011, amended 2020]**

1.5.9 For any woman who has normal serum CA125 (less than 35 IU/ml), or CA125 of 35 IU/ml or greater but a normal ultrasound:

- assess her carefully for other clinical causes of her symptoms and investigate if appropriate
- if no other clinical cause is apparent, advise her to return to her GP if her symptoms become more frequent and/or persistent. **[2011]**

Endometrial cancer

1.5.10 Refer women using a suspected cancer pathway referral for endometrial cancer if they are aged 55 and over with post-menopausal bleeding (unexplained vaginal bleeding more than 12 months after menstruation has stopped because of the menopause). **[2015]**

1.5.11 Consider a suspected cancer pathway referral for endometrial cancer in women aged under 55 with post-menopausal bleeding. **[2015]**

1.5.12 Consider a direct access ultrasound scan to assess for endometrial cancer in women aged 55 and over with:

- unexplained symptoms of vaginal discharge who:
  - are presenting with these symptoms for the first time **or**

  - have thrombocytosis **or**
  - report haematuria **or**
- visible haematuria **and**:
  - low haemoglobin levels **or**
  - thrombocytosis **or**
  - high blood glucose levels. **[2015]**

Cervical cancer

1.5.13 Consider a suspected cancer pathway referral for women if, on examination, the appearance of their cervix is consistent with cervical cancer. **[2015]**

Vulval cancer

1.5.14 Consider a suspected cancer pathway referral for vulval cancer in women with an unexplained vulval lump, ulceration or bleeding. **[2015]**

Vaginal cancer

1.5.15 Consider a suspected cancer pathway referral for vaginal cancer in women with an unexplained palpable mass in or at the entrance to the vagina. **[2015]**

1.6 Urological cancers

Prostate cancer

1.6.1 Refer people using a suspected cancer pathway referral for prostate cancer if their prostate feels malignant on digital rectal examination. **[2015]**

1.6.2 Consider a prostate-specific antigen (PSA) test and digital rectal examination to assess for prostate cancer in people with:

- any lower urinary tract symptoms, such as nocturia, urinary frequency, hesitancy, urgency or retention **or**
- erectile dysfunction **or**
- visible haematuria. **[2015]**

1.6.3 Consider referring people with possible symptoms of prostate cancer, as specified in recommendation 1.6.2, using a suspected cancer pathway referral for prostate cancer if their PSA levels are above the threshold for their age in table 1. Take into account the person's preferences and any comorbidities when making the decision. **[2021]**

Table 1 Age-specific PSA thresholds for people with possible symptoms of prostate cancer

Age (years)	Prostate-specific antigen threshold (micrograms/litre)
Below 40	Use clinical judgement
40 to 49	More than 2.5
50 to 59	More than 3.5
60 to 69	More than 4.5
70 to 79	More than 6.5
Above 79	Use clinical judgement

For a short explanation of why the committee made the 2021 recommendation and how it might affect practice, see the rationale and impact section on PSA testing for prostate cancer.

Full details of the evidence and the committee's discussion are in evidence review A: PSA testing for prostate cancer.

Bladder cancer

1.6.4 Refer people using a suspected cancer pathway referral for bladder cancer if they are:

- aged 45 and over and have:
  - unexplained visible haematuria without urinary tract infection **or**
  - visible haematuria that persists or recurs after successful treatment of urinary tract infection **or**
- aged 60 and over and have unexplained non-visible haematuria and either dysuria or a raised white cell count on a blood test. **[2015]**

1.6.5 Consider non-urgent referral for bladder cancer in people aged 60 and over with recurrent or persistent unexplained urinary tract infection. **[2015]**

Renal cancer

1.6.6 Refer people using a suspected cancer pathway referral for renal cancer if they are aged 45 and over and have:

- unexplained visible haematuria without urinary tract infection **or**
- visible haematuria that persists or recurs after successful treatment of urinary tract infection. **[2015]**

Testicular cancer

1.6.7 Consider a suspected cancer pathway referral for testicular cancer in men if they have a non-painful enlargement or change in shape or texture of the testis. **[2015]**

1.6.8 Consider a direct access ultrasound scan for testicular cancer in men with unexplained or persistent testicular symptoms. **[2015]**

Penile cancer

1.6.9 Consider a suspected cancer pathway referral for penile cancer in men if they have:

- a penile mass or ulcerated lesion, when a sexually transmitted infection has been excluded as a cause **or**
- a persistent penile lesion after treatment for a sexually transmitted infection has been completed. **[2015]**

1.6.10 Consider a suspected cancer pathway referral for penile cancer in men with unexplained or persistent symptoms affecting the foreskin or glans. **[2015]**

1.7 Skin cancers

Malignant melanoma of the skin

1.7.1 Refer people using a suspected cancer pathway referral for melanoma if they have a suspicious pigmented skin lesion with a weighted 7-point checklist score of 3 or more. **[2015]**

Weighted 7-point checklist

Major features of the lesions (scoring 2 points each):

- change in size
- irregular shape
- irregular colour.

Minor features of the lesions (scoring 1 point each):

- largest diameter 7 mm or more
- inflammation
- oozing
- change in sensation.

1.7.2 Refer people using a suspected cancer pathway referral if dermoscopy suggests melanoma of the skin. **[2015]**

1.7.3 Consider a suspected cancer pathway referral for melanoma in people with a pigmented or non-pigmented skin lesion that suggests nodular melanoma. **[2015]**

Squamous cell carcinoma

1.7.4 Consider a suspected cancer pathway referral for people with a skin lesion that raises the suspicion of squamous cell carcinoma. **[2015]**

Basal cell carcinoma

1.7.5 Consider routine referral for people if they have a skin lesion that raises the suspicion of a basal cell carcinoma. (Typical features of basal cell carcinoma

include: an ulcer with a raised rolled edge; prominent fine blood vessels around a lesion; or a nodule on the skin [particularly pearly or waxy nodules].) **[2015]**

1.7.6 Only consider a suspected cancer pathway referral for people with a skin lesion that raises the suspicion of a basal cell carcinoma if there is particular concern that a delay may have a significant impact, because of factors such as lesion site or size. **[2015]**

1.7.7 Follow NICE's guidance on improving outcomes for people with skin tumours including melanoma for advice on who should excise suspected basal cell carcinomas. **[2015]**

1.8 Head and neck cancers

Laryngeal cancer

1.8.1 Consider a suspected cancer pathway referral for laryngeal cancer in people aged 45 and over with:

- persistentunexplained hoarseness **or**
- an unexplained lump in the neck. **[2015]**

Oral cancer

1.8.2 Consider a suspected cancer pathway referral for oral cancer in people with either:

- unexplained ulceration in the oral cavity lasting for more than 3 weeks **or**
- a persistent and unexplained lump in the neck. **[2015]**

1.8.3 Consider an urgent referral (for an appointment within 2 weeks) for assessment for possible oral cancer by a dentist in people who have either:

- a lump on the lip or in the oral cavity **or**

- a red or red and white patch in the oral cavity consistent with erythroplakia or erythroleukoplakia. **[2015]**

1.8.4 Consider a suspected cancer pathway referral by the dentist for oral cancer in people when assessed by a dentist as having either:

- a lump on the lip or in the oral cavity consistent with oral cancer **or**
- a red or red and white patch in the oral cavity consistent with erythroplakia or erythroleukoplakia. **[2015]**

Thyroid cancer

1.8.5 Consider a suspected cancer pathway referral for thyroid cancer in people with an unexplained thyroid lump. **[2015]**

1.9 Brain and central nervous system cancers

Adults

1.9.1 Consider an urgent, direct access, MRI scan of the brain (or CT scan if MRI is contraindicated; to be done within 2 weeks) to assess for brain or central nervous system cancer in adults with progressive, sub-acute loss of central neurological function. **[2015]**

Children and young people

1.9.2 Consider a very urgent referral (for an appointment within 48 hours) for suspected brain or central nervous system cancer in children and young people with newly abnormal cerebellar or other central neurological function. **[2015]**

1.10 Haematological cancers

Leukaemia in adults

1.10.1 Consider a very urgent full blood count (within 48 hours) to assess for leukaemia in adults with any of the following:

- pallor
- persistent fatigue
- unexplained fever
- unexplained persistent or recurrent infection
- generalised lymphadenopathy
- unexplained bruising
- unexplained bleeding
- unexplained petechiae
- hepatosplenomegaly. **[2015]**

Leukaemia in children and young people

1.10.2 Refer children and young people for immediate specialist assessment for leukaemia if they have unexplained petechiae or hepatosplenomegaly. **[2015]**

1.10.3 Offer a very urgent full blood count (within 48 hours) to assess for leukaemia in children and young people with any of the following:

- pallor
- persistent fatigue
- unexplained fever
- unexplained persistent infection

- generalised lymphadenopathy
- persistent or unexplained bone pain
- unexplained bruising
- unexplained bleeding. **[2015]**

Myeloma

1.10.4 Offer the following to assess for myeloma in people aged 60 and over with persistent bone pain, particularly back pain, or unexplained fracture:

- a full blood count **and**
- blood tests for:
  - calcium
  - plasma viscosity or erythrocyte sedimentation rate
  - paraprotein, using serum protein electrophoresis
  - free light chains contained in serum.

    If serum free light chain testing is not available, use a Bence–Jones test to check for free light chains contained in urine. **[2015, amended 2025]**

1.10.5 Refer people using a suspected cancer pathway referral if the results of the blood tests outlined in recommendation 1.10.4 suggest myeloma. **[2015, amended 2025]**

Non-Hodgkin's lymphoma

Separate recommendations have been made for adults and for children and young people to reflect that there are different referral pathways. In practice young people (aged 16 to 24) may be referred using either pathway depending on their age and local arrangements.

Adults

1.10.6 Consider a suspected cancer pathway referral for non-Hodgkin's lymphoma in adults presenting with unexplained lymphadenopathy or splenomegaly. When considering referral, take into account any associated symptoms, particularly fever, night sweats, shortness of breath, pruritus or weight loss. **[2015]**

Children and young people

1.10.7 Consider a very urgent referral (for an appointment within 48 hours) for specialist assessment for non-Hodgkin's lymphoma in children and young people presenting with unexplained lymphadenopathy or splenomegaly. When considering referral, take into account any associated symptoms, particularly fever, night sweats, shortness of breath, pruritus or weight loss. **[2015]**

Hodgkin's lymphoma

Separate recommendations have been made for adults and for children and young people to reflect that there are different referral pathways. In practice young people (aged 16 to 24) may be referred using either pathway depending on their age and local arrangements.

Adults

1.10.8 Consider a suspected cancer pathway referral for Hodgkin's lymphoma in adults presenting with unexplained lymphadenopathy. When considering referral, take into account any associated symptoms, particularly fever, night sweats, shortness of breath, pruritus, weight loss or alcohol-induced lymph node pain. **[2015]**

Children and young people

1.10.9 Consider a very urgent referral (for an appointment within 48 hours) for specialist assessment for Hodgkin's lymphoma in children and young people presenting with unexplained lymphadenopathy. When considering referral, take into account

any associated symptoms, particularly fever, night sweats, shortness of breath, pruritus or weight loss. **[2015]**

1.11 Sarcomas

Separate recommendations have been made for adults and for children and young people to reflect that there are different referral pathways. In practice young people (aged 16 to 24) may be referred using either pathway depending on their age and local arrangements.

Bone sarcoma in adults

1.11.1 Consider a suspected cancer pathway referral for adults if an X-ray suggests the possibility of bone sarcoma. **[2015]**

Bone sarcoma in children and young people

1.11.2 Consider a very urgent referral (for an appointment within 48 hours) for specialist assessment for children and young people if an X-ray suggests the possibility of bone sarcoma. **[2015]**

1.11.3 Consider a very urgent direct access X-ray (to be done within 48 hours) to assess for bone sarcoma in children and young people with unexplained bone swelling or pain. **[2015]**

Soft tissue sarcoma in adults

1.11.4 Consider an urgent, direct access ultrasound scan (to be done within 2 weeks) to assess for soft tissue sarcoma in adults with an unexplained lump that is increasing in size. **[2015]**

1.11.5 Consider a suspected cancer pathway referral for adults if they have ultrasound scan findings that are suggestive of soft tissue sarcoma or if ultrasound findings are uncertain and clinical concern persists. **[2015]**

Soft tissue sarcoma in children and young people

1.11.6 Consider a very urgent, direct access ultrasound scan (to be done within 48 hours) to assess for soft tissue sarcoma in children and young people with an unexplained lump that is increasing in size. **[2015]**

1.11.7 Consider a very urgent referral (for an appointment within 48 hours) for children and young people if they have ultrasound scan findings that are suggestive of soft tissue sarcoma or if ultrasound findings are uncertain and clinical concern persists. **[2015]**

1.12 Childhood cancers

NICE has published a guideline on babies, children and young people's experience of healthcare.

Neuroblastoma

1.12.1 Consider very urgent referral (for an appointment within 48 hours) for specialist assessment for neuroblastoma in children with a palpable abdominal mass or unexplained enlarged abdominal organ. **[2015]**

Retinoblastoma

1.12.2 Consider referral for ophthalmological assessment using a suspected cancer pathway referral for retinoblastoma in children with an absent fundal ('red') reflex. If there is new-onset squint that occurs together with an absent fundal ('red') reflex, see the recommendation on new-onset squint with loss of fundal 'red' reflex in NICE's guideline on suspected neurological conditions. **[2015]**

Wilms' tumour

1.12.3 Consider very urgent referral (for an appointment within 48 hours) for specialist

assessment for Wilms' tumour in children with any of the following:

- a palpable abdominal mass
- an unexplained enlarged abdominal organ
- unexplained visible haematuria. **[2015]**

1.13 Non-site-specific symptoms

Some symptoms or symptom combinations may be features of several different cancers. For some of these symptoms, the risk for each individual cancer may be low but the total risk of cancer of any type may be higher. This section includes recommendations for these symptoms.

Symptoms of concern in children and young people

1.13.1 Take into account the insight and knowledge of parents and carers when considering making a referral for suspected cancer in a child or young person. Consider referral for children if their parent or carer has persistent concern or anxiety about the child's symptoms, even if the symptoms are most likely to have a benign cause. **[2015]**

Symptoms of concern in adults

1.13.2 For people with unexplained weight loss, which is a symptom of several cancers including colorectal, gastro-oesophageal, lung, prostate, pancreatic and urological cancer:

- carry out an assessment for additional symptoms, signs or findings that may help to clarify which cancer is most likely **and**
- offer urgent investigation or a suspected cancer pathway referral. **[2015]**

1.13.3 For people with unexplained appetite loss, which is a symptom of several cancers including lung, oesophageal, stomach, colorectal, pancreatic, bladder and renal

cancer:

- carry out an assessment for additional symptoms, signs or findings that may help to clarify which cancer is most likely **and**
- offer urgent investigation or a suspected cancer pathway referral. **[2015]**

1.13.4 For people with deep vein thrombosis, which is associated with several cancers including urogenital, breast, colorectal and lung cancer:

- carry out an assessment for additional symptoms, signs or findings that may help to clarify which cancer is most likely **and**
- consider urgent investigation or a suspected cancer pathway referral. **[2015]**

Recommendations on patient support, safety netting and the diagnostic process

Use this guideline to guide referrals. If still uncertain about whether a referral is needed, consider contacting a specialist (see the recommendations on the diagnostic process). Consider a review for people with any symptom associated with increased cancer risk who do not meet the criteria for referral or investigative action (see the recommendations on safety netting).

1.14 Patient information and support

1.14.1 Discuss with people with suspected cancer (and their carers, as appropriate, taking account of the need for confidentiality) their preferences for being involved in decision-making about referral options and further investigations including their potential risks and benefits. **[2015]**

1.14.2 When cancer is suspected in a child, discuss the referral decision and information to be given to the child with the parents or carers (and the child if appropriate). **[2015]**

1.14.3 Explain to people who are being referred with suspected cancer that they are being referred to a cancer service. Reassure them, as appropriate, that most people referred will not have a diagnosis of cancer, and discuss alternative diagnoses with them. **[2015]**

1.14.4 Give the person information on the possible diagnosis (both benign and malignant) in accordance with their wishes for information (see also NICE's guideline on patient experience in adult NHS services). **[2015]**

1.14.5 The information given to people with suspected cancer and their families and/or carers should cover, among other issues:

- where the person is being referred to

- how long they will have to wait for the appointment
- how to obtain further information about the type of cancer suspected or help before the specialist appointment
- what to expect from the service the person will be attending
- what type of tests may be carried out, and what will happen during diagnostic procedures
- how long it will take to get a diagnosis or test results
- whether they can take someone with them to the appointment
- who to contact if they do not receive confirmation of an appointment
- other sources of support. **[2015]**

1.14.6 Provide information that is appropriate for the person in terms of language, ability and culture, recognising the potential for different cultural meanings associated with the possibility of cancer. **[2015]**

1.14.7 Have information available in a variety of formats on both local and national sources of information and support for people who are being referred with suspected cancer. For more information on information sharing, see the section on enabling patients to actively participate in their care in NICE's guideline on patient experience in adult NHS services. **[2015]**

1.14.8 Reassure people in the safety netting group (see recommendation 1.15.2) who are concerned that they may have cancer that with their current symptoms their risk of having cancer is low. **[2015]**

1.14.9 Explain to people who are being offered safety netting (see recommendation 1.15.2) which symptoms to look out for and when they should return for re-evaluation. It may be appropriate to provide written information. **[2015]**

1.14.10 When referring a person with suspected cancer to a specialist service, assess their need for continuing support while waiting for their referral appointment. This

should include inviting the person to contact their healthcare professional again if they have more concerns or questions before they see a specialist. **[2005]**

1.14.11 If the person has additional support needs because of their personal circumstances, inform the specialist (with the person's agreement). **[2005]**

1.15 Safety netting

1.15.1 Ensure that the results of investigations are reviewed and acted upon appropriately, with the healthcare professional who ordered the investigation taking or explicitly passing on responsibility for this. Be aware of the possibility of false-negative results for chest X-rays and tests for occult blood in faeces. **[2015]**

1.15.2 Consider a review for people with any symptom that is associated with an increased risk of cancer, but who do not meet the criteria for referral or other investigative action. The review may be:

- planned within a time frame agreed with the person **or**
- patient-initiated if new symptoms develop, the person continues to be concerned, or their symptoms recur, persist or worsen. **[2015]**

1.16 The diagnostic process

1.16.1 Take part in continuing education, peer review and other activities to improve and maintain clinical consulting, reasoning and diagnostic skills, in order to identify at an early stage people who may have cancer, and to communicate the possibility of cancer to the person. **[2005]**

1.16.2 Discussion with a specialist (for example, by telephone or email) should be considered if there is uncertainty about the interpretation of symptoms and signs, and whether a referral is needed. This may also enable the primary healthcare professional to communicate their concerns and a sense of urgency to secondary healthcare professionals when symptoms are not classical. **[2005]**

1.16.3 Put in place local arrangements to ensure that letters about non-urgent referrals are assessed by the specialist, so that the person can be seen more urgently if necessary. **[2005]**

1.16.4 Put in place local arrangements to ensure that there is a maximum waiting period for non-urgent referrals, in accordance with national targets and local arrangements. **[2005]**

1.16.5 Ensure local arrangements are in place to identify people who miss their appointments so that they can be followed up. **[2005]**

1.16.6 Include all appropriate information in referral correspondence, including whether the referral is urgent or non-urgent. **[2005]**

1.16.7 Use local referral proformas if these are in use. **[2005]**

1.16.8 Once the decision to refer has been made, make sure that the referral is made within 1 working day. **[2005]**

Recommendations organised by symptom and findings of primary care investigations

The recommendations in this section are displayed alphabetically by symptom then in order of urgency of the action needed, to make sure that the most urgent actions are not missed. Where there are several recommendations relating to the same cancer these have been grouped for ease of reference. Occasionally the same symptom may suggest more than 1 cancer site. In such instances, the recommendations are displayed together and the GP should use their clinical judgement to decide on the most appropriate action.

Use this guideline to guide referrals. If still uncertain about whether a referral is needed, consider contacting a specialist (see the recommendations on the diagnostic process). Consider a review for people with any symptom associated with increased cancer risk who do not meet the criteria for referral or investigative action (see the recommendations on safety netting).

Abdominal symptoms

See also the section on bleeding for recommendations on rectal bleeding.

Abdominal distension

Symptom and specific features	Possible cancer	Recommendation
Abdominal distension (persistent or frequent – particularly more than 12 times per month) in women, especially if 50 and over	Ovarian	Carry out tests in primary care [1.5.2] Measure serum CA125 in primary care [1.5.6] See the section on primary care investigations for more information on tests for ovarian cancer These recommendations apply to women aged 18 and over

Abdominal examination findings

Symptoms and signs	Possible cancer	Recommendation
Ascites and/or a pelvic or abdominal mass identified by physical examination (which is not obviously uterine fibroids) in women	Ovarian	Refer women using a suspected cancer pathway referral [1.5.1] These recommendations apply to women aged 18 and over

Abdominal, pelvic or rectal mass or enlarged abdominal organ

Symptom and specific features	Possible cancer	Recommendation
Abdominal or pelvic mass identified by physical examination (which is not obviously uterine fibroids) in women	Ovarian	Refer women using a suspected cancer pathway referral [1.5.1] These recommendations apply to women aged 18 and over
Abdominal mass	Colorectal	Offer quantitative faecal immunochemical testing [1.3.1]
Rectal mass	Colorectal	Consider a suspected cancer pathway referral [1.3.5]

Symptom and specific features	Possible cancer	Recommendation
Splenomegaly (unexplained) in adults	Non-Hodgkin's lymphoma	Consider a suspected cancer pathway referral. When considering referral, take into account any associated symptoms, particularly fever, night sweats, shortness of breath, pruritus or weight loss [1.10.6] Separate recommendations have been made for adults and for children and young people to reflect that there are different referral pathways. In practice young people (aged 16 to 24) may be referred using either pathway depending on their age and local arrangements
Upper abdominal massconsistent with stomach cancer	Stomach	Consider a suspected cancer pathway referral [1.2.6]
Upper abdominal massconsistent with an enlarged gall bladder	Gall bladder	Consider an urgent direct access ultrasound scan (to be done within 2 weeks) [1.2.10]
Upper abdominal massconsistent with an enlarged liver	Liver	Consider an urgent direct access ultrasound scan (to be done within 2 weeks) [1.2.11]
Hepatosplenomegaly	Leukaemia	Consider a very urgent full blood count (within 48 hours) [1.10.1]

Abdominal or pelvic pain

Symptom and specific features	Possible cancer	Recommendation
Abdominal pain with weight loss (unexplained), 40 and over	Colorectal	Offer quantitative faecal immunochemical testing [1.3.1]
Abdominal pain (unexplained) with rectal bleeding in adults under 50	Colorectal	Offer quantitative faecal immunochemical testing [1.3.1]
Abdominal pain (unexplained), 50 and over	Colorectal	Offer quantitative faecal immunochemical testing [1.3.1]

Symptom and specific features	Possible cancer	Recommendation
Upper abdominal pain with weight loss, 55 and over	Oesophageal or stomach	Refer using a suspected cancer pathway referral [1.2.1] [1.2.7]
Upper abdominal pain with low haemoglobin levels or raised platelet count or nausea or vomiting, 55 and over	Oesophageal or stomach	Consider non-urgent, direct access upper gastrointestinal endoscopy [1.2.3] [1.2.9]
Abdominal or pelvic pain (persistent or frequent – particularly more than 12 times per month) in women, especially if 50 and over	Ovarian	Carry out tests in primary care [1.5.2] Measure serum CA125 in primary care [1.5.6] See the section on primary care investigations for more information on tests for ovarian cancer These recommendations apply to women aged 18 and over
Abdominal pain with weight loss, 60 and over	Pancreatic	Consider an urgent, direct access CT scan (to be done within 2 weeks), or an urgent ultrasound scan if CT is not available [1.2.5]
Irritable bowel syndrome symptoms within the last 12 months in women 50 and over	Ovarian	Carry out appropriate tests for ovarian cancer, because irritable bowel syndrome rarely presents for the first time in women of this age [1.5.5] Measure serum CA125 in primary care [1.5.6] See the section on primary care investigations for more information on tests for ovarian cancer These recommendations apply to women aged 18 and over Also see the NICE guideline on irritable bowel syndrome in adults.

Change in bowel habit

Symptom and specific features	Possible cancer	Recommendation
Change in bowel habit	Colorectal	Offer quantitative faecal immunochemical testing [1.3.1]
Change in bowel habit (unexplained) in women	Ovarian	Consider carrying out tests in primary care [1.5.3] Measure serum CA125 in primary care [1.5.6] See the section on primary care investigations for information on tests for ovarian cancer These recommendations apply to women aged 18 and over
Diarrhoea or constipation with weight loss, 60 and over	Pancreatic	Consider an urgent, direct access CT scan (to be done within 2 weeks), or an urgent ultrasound scan if CT is not available [1.2.5]
Irritable bowel syndrome symptoms within the last 12 months, in women 50 and over	Ovarian	Carry out appropriate tests for ovarian cancer, because irritable bowel syndrome rarely presents for the first time in women of this age [1.5.5] Measure serum CA125 in primary care [1.5.6] See the section on primary care investigations for more information about tests for ovarian cancer These recommendations apply to women aged 18 and over Also see the NICE guideline on irritable bowel syndrome in adults

Dyspepsia

Symptom and specific features	Possible cancer	Recommendation
Dyspepsia (treatment-resistant), 55 and over	Oesophageal or stomach	Consider non-urgent, direct access upper gastrointestinal endoscopy [1.2.3] [1.2.9]

Symptom and specific features	Possible cancer	Recommendation
Dyspepsia Dyspepsia with weight loss, 55 and over	Oesophageal or stomach	Refer using a suspected cancer pathway referral [1.2.1] [1.2.7]
Dyspepsia with raised platelet count or nausea or vomiting, 55 and over	Oesophageal or stomach	Consider non-urgent, direct access upper gastrointestinal endoscopy [1.2.3] [1.2.9]

Dysphagia

Symptom and specific features	Possible cancer	Recommendation
Dysphagia	Oesophageal or stomach	Refer using a suspected cancer pathway referral [1.2.1] [1.2.7]

Nausea or vomiting

Symptom and specific features	Possible cancer	Recommendation
Nausea or vomiting with weight loss, 60 and over	Pancreatic	Consider an urgent, direct access CT scan (to be done within 2 weeks), or an urgent ultrasound scan if CT is not available [1.2.5]
Nausea or vomiting with raised platelet count or weight loss or reflux or dyspepsia or upper abdominal pain, 55 and over	Oesophageal or stomach	Consider non-urgent, direct access upper gastrointestinal endoscopy [1.2.3] [1.2.9]

Rectal examination findings

Symptom and signs	Possible cancer	Recommendation
Prostate feels malignant on digital rectal examination, in men	Prostate	Refer men using a suspected cancer pathway referral [1.6.1]
Anal mass or anal ulceration (unexplained)	Anal	Consider a suspected cancer pathway referral [1.3.6]
Rectalmass	Colorectal	Consider a suspected cancer pathway referral [1.3.5]

Reflux

Symptom and specific features	Possible cancer	Recommendation
Reflux with weight loss, 55 and over	Oesophageal or stomach	Refer using a suspected cancer pathway referral [1.2.1] [1.2.7]
Reflux with raised platelet count or nausea or vomiting, 55 and over	Oesophageal or stomach	Consider non-urgent, direct access upper gastrointestinal endoscopy [1.2.3] [1.2.9]

Bleeding

See also:

- the section on urological symptoms for haematuria
- the section on primary care investigations for faecal occult blood.

Bleeding, bruising or petechiae

Symptom and specific features	Possible cancer	Recommendation
Bleeding, bruising or petechiae (unexplained)	Leukaemia	Consider a very urgent full blood count (within 48 hours) [1.10.1]

Haematemesis

Symptom and specific features	Possible cancer	Recommendation
Haematemesis	Oesophageal or stomach	Consider non-urgent, direct access upper gastrointestinal endoscopy [1.2.2] [1.2.8]

Haemoptysis

Symptom and specific features	Possible cancer	Recommendation
Haemoptysis (unexplained), 40 and over	Lung	Refer people using a suspected cancer pathway referral [1.1.1]

Post-menopausal bleeding

Symptom and specific features	Possible cancer	Recommendation
Post-menopausal bleeding in women 55 and over	Endometrial	Refer women using a suspected cancer pathway referral [1.5.10]
Post-menopausal bleeding in women under 55	Endometrial	Consider a suspected cancer pathway referral [1.5.11]

Post-menopausal bleeding is unexplained vaginal bleeding more than 12 months after menstruation has stopped because of the menopause.

Rectal bleeding

Symptom and specific features	Possible cancer	Recommendation
Rectal bleeding (unexplained), 50 and over	Colorectal	Offer quantitative faecal immunochemical testing [1.3.1]
Rectal bleeding with unexplained abdominal pain or weight loss in adults under 50	Colorectal	Offer quantitative faecal immunochemical testing [1.3.1]

Vulval bleeding

Symptom and specific features	Possible cancer	Recommendation
Vulval bleeding (unexplained) in women	Vulval	Consider a suspected cancer pathway referral [1.5.14]

Gynaecological symptoms

See also the section on bleeding for post-menopausal (vaginal) bleeding

Gynaecological examination findings

Symptom and signs	Possible cancer	Recommendation
Appearance of cervixconsistent with cervical cancer	Cervical	Consider a suspected cancer pathway referral [1.5.13]

Vaginal symptoms

Symptom and specific features	Possible cancer	Recommendation
Vaginal discharge (unexplained) either at first presentation or with thrombocytosis or with haematuria, in women 55 and over	Endometrial	Consider a direct access ultrasound scan [1.5.12]
Vaginal mass (unexplained and palpable) in or at the entrance to the vagina	Vaginal	Consider a suspected cancer pathway referral [1.5.15]

Vulval symptoms

Symptom and specific features	Possible cancer	Recommendation
Vulval bleeding (unexplained)	Vulval	Consider a suspected cancer pathway referral [1.5.14]
Vulval lump or ulceration (unexplained)	Vulval	Consider a suspected cancer pathway referral [1.5.14]

Lumps or masses

Lumps and masses

Symptom and specific features	Possible cancer	Recommendation
Anal mass (unexplained)	Anal	Consider a suspected cancer pathway referral 1.3.6]
Axillary lump (unexplained), 30 and over	Breast	Consider a suspected cancer pathway referral [1.4.2]
Breast lump (unexplained) with or without pain, 30 and over	Breast	Refer people using a suspected cancer pathway referral [1.4.1]

Symptom and specific features	Possible cancer	Recommendation
Breast lump (unexplained) with or without pain, under 30	Breast	Consider non-urgent referral See also recommendations 1.16.2 and 1.16.3 for information about seeking specialist advice [1.4.3]
Lip or oral cavitylump	Oral	Consider an urgent referral (for an appointment within 2 weeks) for assessment by a dentist [1.8.3] Consider a suspected cancer pathway referral by the dentist in people when assessed by a dentist as having a lump on the lip or in the oral cavity consistent with oral cancer [1.8.4]
Lump (unexplained) that is increasing in size in adults	Soft tissue sarcoma	Consider an urgent, direct access ultrasound scan (to be done within 2 weeks) [1.11.4] Separate recommendations have been made for adults and for children and young people to reflect that there are different referral pathways. In practice young people (aged 16 to 24) may be referred using either pathway depending on their age and local arrangements
Neck lump (unexplained), 45 and over	Laryngeal	Consider a suspected cancer pathway referral [1.8.1]
Neck lump (persistent and unexplained)	Oral	Consider a suspected cancer pathway referral [1.8.2]
Penile mass (and sexually transmitted infection has been excluded as a cause) in men	Penile	Consider a suspected cancer pathway referral [1.6.9]
Thyroid lump (unexplained)	Thyroid	Consider a suspected cancer pathway referral [1.8.5]

Symptom and specific features	Possible cancer	Recommendation
Vaginal mass (unexplained and palpable) in or at the entrance to the vagina in women	Vaginal	Consider a suspected cancer pathway referral [1.5.15]
Vulval lump (unexplained) in women	Vulval	Consider a suspected cancer pathway referral [1.5.14]

See also the section on abdominal symptoms for abdominal, anal, pelvic and rectal lumps or masses.

Lymphadenopathy

Symptom and specific features	Possible cancer	Recommendation
Lymphadenopathy (unexplained) in adults	Non-Hodgkin's lymphoma or Hodgkin's lymphoma	Consider a suspected cancer pathway referral When considering referral for Hodgkin's lymphoma, take into account any associated symptoms, particularly fever, night sweats, shortness of breath, pruritus, weight loss or alcohol-induced lymph node pain [1.10.8] When considering referral for non-Hodgkin's lymphoma, take into account any associated symptoms, particularly fever, night sweats, shortness of breath, pruritus or weight loss [1.10.6] Separate recommendations have been made for adults and for children and young people to reflect that there are different referral pathways. In practice young people (aged 16 to 24) may be referred using either pathway depending on their age and local arrangements

Symptom and specific features	Possible cancer	Recommendation
Lymphadenopathy (supraclavicular or persistent cervical), 40 and over	Lung	Consider an urgent chest X-ray (to be done within 2 weeks) [1.1.3]
Lymphadenopathy (generalised) in adults	Leukaemia	Consider a very urgent full blood count (within 48 hours) [1.10.1]

Oral lesions

Symptom and specific features	Possible cancer	Recommendation
Ulceration in the oral cavity (unexplained and lasting for more than 3 weeks)	Oral	Consider a suspected cancer pathway referral [1.8.2]
Lip or oral cavity lump	Oral	Consider an urgent referral (for an appointment within 2 weeks) for assessment by a dentist [1.8.3] Consider a suspected cancer pathway referral by the dentist in people when assessed by a dentist as having a lump on the lip or in the oral cavity consistent with oral cancer [1.8.4]

Neurological symptoms in adults

Neurological symptoms in adults

Symptom and specific features	Possible cancer	Recommendation
Loss of central neurological function (progressive, sub-acute) in adults	Brain or central nervous system	Consider an urgent, direct access MRI scan of the brain (or CT scan if MRI is contraindicated; to be done within 2 weeks) [1.9.1]

Pain

See also the section on abdominal symptoms for abdominal or pelvic pain.

Pain

Symptom and specific features	Possible cancer	Recommendation
Alcohol-induced lymph node pain with unexplained lymphadenopathy in adults	Hodgkin's lymphoma	Consider a suspected cancer pathway referral. When considering referral, take into account any associated symptoms [1.10.8] Separate recommendations have been made for adults and for children and young people to reflect that there are different referral pathways. In practice young people (aged 16 to 24) may be referred using either pathway depending on their age and local arrangements
Back pain with weight loss, 60 and over	Pancreatic	Consider an urgent, direct access CT scan (to be done within 2 weeks), or an urgent ultrasound scan if CT is not available [1.2.5]
Back pain (persistent), 60 and over	Myeloma	Offer a full blood count and blood tests for: • calcium • plasma viscosity or erythrocyte sedimentation rate • paraprotein, using serum protein electrophoresis • free light chains contained in serum. If serum free light chain testing is not available, use a Bence–Jones protein urine test. [1.10.4] See the section on primary care investigations for more information on tests for myeloma

Symptom and specific features	Possible cancer	Recommendation
Bone pain (persistent), 60 and over	Myeloma	Offer a full blood count and blood tests for: • calcium • plasma viscosity or erythrocyte sedimentation rate • paraprotein, using serum protein electrophoresis • free light chains contained in serum. If serum free light chain testing is not available, use a Bence–Jones protein urine test. [1.10.4] See the section on primary care investigations for more information on tests for myeloma
Chest pain (unexplained), 40 and over, ever smoked	Lung or mesothelioma	Offer an urgent chest X-ray (to be done within 2 weeks) [1.1.2] [1.1.5]
Chest pain (unexplained), 40 and over, exposed to asbestos	Mesothelioma	Offer an urgent chest X-ray (to be done within 2 weeks) [1.1.5]
Chest pain (unexplained) with cough or fatigue or shortness of breath or weight loss or appetite loss (unexplained), 40 and over	Lung or mesothelioma	Offer an urgent chest X-ray (to be done within 2 weeks) [1.1.2] [1.1.5]

Respiratory symptoms

Chest infection

Symptom and specific features	Possible cancer	Recommendation
Chest infection (persistent or recurrent), 40 and over	Lung	Consider an urgent chest X-ray (to be done within 2 weeks) [1.1.3]

Chest pain

Symptom and specific features	Possible cancer	Recommendation
Chest pain (unexplained), 40 and over, ever smoked	Lung or mesothelioma	Offer an urgent chest X-ray (to be done within 2 weeks) [1.1.2] [1.1.5]
Chest pain (unexplained), 40 and over, exposed to asbestos	Mesothelioma	Offer an urgent chest X-ray (to be done within 2 weeks) [1.1.5]
Chest pain (unexplained) with cough or fatigue or shortness of breath or weight loss or appetite loss (unexplained), 40 and over	Lung or mesothelioma	Offer an urgent chest X-ray (to be done within 2 weeks) [1.1.2] [1.1.5]

Cough

Symptom and specific features	Possible cancer	Recommendation
Cough (unexplained), 40 and over, ever smoked	Lung or mesothelioma	Offer an urgent chest X-ray (to be done within 2 weeks) [1.1.2] [1.1.5]
Cough (unexplained), 40 and over, exposed to asbestos	Mesothelioma	Offer an urgent chest X-ray (to be done within 2 weeks) [1.1.5]
Cough (unexplained) with fatigue or shortness of breath or chest pain or weight loss or appetite loss (unexplained), 40 and over	Lung or mesothelioma	Offer an urgent chest X-ray (to be done within 2 weeks) [1.1.2] [1.1.5]

Hoarseness

Symptom and specific features	Possible cancer	Recommendation
Hoarseness (persistent and unexplained), 45 and over	Laryngeal	Consider a suspected cancer pathway referral [1.8.1]

Respiratory examination findings

Symptom and signs	Possible cancer	Recommendation
Chest signsconsistent with lung cancer, 40 and over	Lung	Consider an urgent chest X-ray (to be done within 2 weeks) [1.1.3]
Chest signs compatible with pleural disease, 40 and over	Mesothelioma	Consider an urgent chest X-ray (to be done within 2 weeks) [1.1.6]
Finger clubbing, 40 and over	Lung or mesothelioma	Consider an urgent chest X-ray (to be done within 2 weeks) [1.1.3] [1.1.6]

Shortness of breath

Symptom and specific features	Possible cancer	Recommendation
Shortness of breath (unexplained), 40 and over, ever smoked	Lung or mesothelioma	Offer an urgent chest X-ray (to be done within 2 weeks) [1.1.2] [1.1.5]
Shortness of breath (unexplained), 40 and over, and exposed to asbestos	Mesothelioma	Offer an urgent chest X-ray (to be done within 2 weeks) [1.1.5]
Shortness of breath with cough or fatigue or chest pain or weight loss or appetite loss (unexplained), 40 and over	Lung or mesothelioma	Offer an urgent chest X-ray (to be done within 2 weeks) [1.1.2] [1.1.5]

Symptom and specific features	Possible cancer	Recommendation
Shortness of breath with unexplained lymphadenopathy in adults	Non-Hodgkin's lymphoma or Hodgkin's lymphoma	Consider a suspected cancer pathway referral. When considering referral, take into account any associated symptoms [1.10.6] Separate recommendations have been made for adults and for children and young people to reflect that there are different referral pathways. In practice young people (aged 16 to 24) may be referred using either pathway depending on their age and local arrangements
Shortness of breath with unexplained splenomegaly in adults	Non-Hodgkin's lymphoma	Consider a suspected cancer pathway referral. When considering referral, take into account any associated symptoms [1.10.6] Separate recommendations have been made for adults and for children and young people to reflect that there are different referral pathways. In practice young people (aged 16 to 24) may be referred using either pathway depending on their age and local arrangements

Skeletal symptoms

Back pain

Symptom and specific features	Possible cancer	Recommendation
Back pain with weight loss, 60 and over	Pancreatic	Consider an urgent, direct access CT scan (to be done within 2 weeks), or an urgent ultrasound scan if CT is not available [1.2.5]

Symptom and specific features	Possible cancer	Recommendation
Back pain (persistent), 60 and over	Myeloma	Offer a full blood count and blood tests for: • calcium • plasma viscosity or erythrocyte sedimentation rate • paraprotein, using serum protein electrophoresis • free light chains contained in serum. If serum free light chain testing is not available, use a Bence–Jones protein urine test. [1.10.4] See the section on primary care investigations for more information on tests for myeloma

Bone pain

Symptom and specific features	Possible cancer	Recommendation
Bone pain (persistent), 60 and over	Myeloma	Offer a full blood count and blood tests for: • calcium • plasma viscosity or erythrocyte sedimentation rate • paraprotein, using serum protein electrophoresis • free light chains contained in serum. If serum free light chain testing is not available, use a Bence–Jones protein urine test. [1.10.4] See the section on primary care investigations for more information on tests for myeloma

Fracture

Symptom and specific features	Possible cancer	Recommendation
Fracture (unexplained), 60 and over	Myeloma	Offer a full blood count and blood tests for: • calcium • plasma viscosity or erythrocyte sedimentation rate • paraprotein, using serum protein electrophoresis • free light chains contained in serum. If serum free light chain testing is not available, use a Bence–Jones protein urine test. [1.10.4] See the section on primary care investigations for more information on tests for myeloma

Skin or surface symptoms

See also the section on lumps or masses for oral lesions.

Skin or surface symptoms

Symptoms and signs	Possible cancer	Recommendation
Anal ulceration (unexplained)	Anal	Consider a suspected cancer pathway referral [1.3.6]
Bruising (unexplained) in adults	Leukaemia	Consider a very urgent full blood count (within 48 hours) [1.10.1]
Nipple changes of concern (in one nipple only) including discharge and retraction, 50 and over	Breast	Refer people using a suspected cancer pathway referral [1.4.1]

Symptoms and signs	Possible cancer	Recommendation
Oral cavity red or red and white patchconsistent with erythroplakia or erythroleukoplakia	Oral	Consider urgent referral (for an appointment within 2 weeks) for assessment by a dentist [1.8.3] Consider a suspected cancer pathway referral by the dentist for people when assessed by a dentist as having a red or red and white patch in the oral cavity consistent with erythroplakia or erythroleukoplakia [1.8.4]
Pallor	Leukaemia	Consider a very urgent full blood count (within 48 hours) [1.10.1]
Penile lesion (ulcerated and sexually transmitted infection has been excluded, or persistent after treatment for a sexually transmitted infection has been completed) in men	Penile	Consider a suspected cancer pathway referral [1.6.9]
Penile mass (and sexually transmitted infection has been excluded as a cause) in men	Penile	Consider a suspected cancer pathway referral [1.6.9]
Penile symptomsaffecting the foreskin or glans (unexplained or persistent) in men	Penile	Consider a suspected cancer pathway referral [1.6.10]
Petechiae (unexplained) in adults	Leukaemia	Consider a very urgent full blood count (within 48 hours) [1.10.1]

Symptoms and signs	Possible cancer	Recommendation
Pruritus with unexplained splenomegaly in adults	Non-Hodgkin's lymphoma	Consider a suspected cancer pathway referral. When considering referral, take into account any associated symptoms [1.10.6] Separate recommendations have been made for adults and for children and young people to reflect that there are different referral pathways. In practice young people (aged 16 to 24) may be referred using either pathway depending on their age and local arrangements
Pruritus with unexplained lymphadenopathy in adults	Hodgkin's lymphoma or non-Hodgkin's lymphoma	Consider a suspected cancer pathway referral. When considering referral, take into account any associated symptoms [1.10.8] Separate recommendations have been made for adults and for children and young people to reflect that there are different referral pathways. In practice young people (aged 16 to 24) may be referred using either pathway depending on their age and local arrangements
Skin changes that suggest breast cancer	Breast	Consider a suspected cancer pathway referral [1.4.2]
Skin lesion (pigmented and suspicious) with a weighted 7-point checklist score of 3 or more	Melanoma	Refer people using a suspected cancer pathway referral [1.7.1]
Skin lesion (pigmented or non-pigmented) that suggests nodular melanoma	Melanoma	Consider a suspected cancer pathway referral [1.7.3]

Symptoms and signs	Possible cancer	Recommendation
Skin lesion that raises the suspicion of a squamous cell carcinoma	Squamous cell carcinoma	Consider a suspected cancer pathway referral [1.7.4]
Skin lesion that raises the suspicion of a basal cell carcinoma	Basal cell carcinoma	Consider routine referral [1.7.5] Only consider a suspected cancer pathway referral if there is particular concern that a delay may have a significant impact, because of factors such as lesion site or size [1.7.6] Typical features of basal cell carcinoma include: an ulcer with a raised rolled edge; prominent fine blood vessels around a lesion; or a nodule on the skin (particularly pearly or waxy nodules)
Vulval lump or ulceration (unexplained) in women	Vulval	Consider a suspected cancer pathway referral [1.5.14]

Urological symptoms

Dysuria

Symptom and specific features	Possible cancer	Recommendation
Dysuria with unexplained non-visible haematuria, 60 and over	Bladder	Refer people using a suspected cancer pathway referral [1.6.4]

Erectile dysfunction

Symptom and specific features	Possible cancer	Recommendation
Erectile dysfunction in men	Prostate	Consider a prostate-specific antigen (PSA) test and digital rectal examination [1.6.2] See the section on primary care investigations for more information on PSA tests and digital rectal examination

Haematuria

Symptom and specific features	Possible cancer	Recommendation
Haematuria (visible and unexplained) either without urinary tract infection or that persists or recurs after successful treatment of urinary tract infection, 45 and over	Bladder or renal	Refer people using a suspected cancer pathway referral [1.6.4] [1.6.6]
Haematuria (non-visible and unexplained) with dysuria or raised white cell count on a blood test, 60 and over	Bladder	Refer people using a suspected cancer pathway referral [1.6.4]
Haematuria (visible) with low haemoglobin levels or thrombocytosis or high blood glucose levels or unexplained vaginal discharge in women 55 and over	Endometrial	Consider a direct access ultrasound scan [1.5.12]
Haematuria (visible) in men	Prostate	Consider a prostate-specific antigen (PSA) test and digital rectal examination [1.6.2] See the section on primary care investigations for more information on PSA tests and digital rectal examination

Testicular symptoms

Symptom and specific features	Possible cancer	Recommendation
Testis enlargement or change in shape or texture (non-painful) in men	Testicular	Consider a suspected cancer pathway referral [1.6.7]
Testicular symptoms (unexplained or persistent) in men	Testicular	Consider a direct access ultrasound scan [1.6.8]

Other urinary tract symptoms

Symptom and specific features	Possible cancer	Recommendation
Urinary tract infection (unexplained and recurrent or persistent), 60 and over	Bladder	Consider non-urgent referral for bladder cancer in people aged 60 and over with recurrent or persistent unexplained urinary tract infection [1.6.5]
Lower urinary tract symptoms, such as nocturia, urinary frequency, hesitancy, urgency or retention in men	Prostate	Consider a prostate-specific antigen (PSA) test and digital rectal examination [1.6.2] See the section on primary care investigations for more information on PSA tests and digital rectal examination
Urinary urgency or frequency (increased and persistent or frequent – particularly more than 12 times per month) in women, especially if 50 and over	Ovarian	Carry out tests in primary care [1.5.2] Measure serum CA125 in primary care [1.5.6] See the section on primary care investigations for information on tests for ovarian cancer These recommendations apply to women aged 18 and over

Non-specific features of cancer

Appetite loss or early satiety

Symptom and specific features	Possible cancer	Recommendation
Appetite loss (unexplained)	Several, including lung, oesophageal, stomach, colorectal, pancreatic, bladder or renal	Carry out an assessment for additional symptoms, signs or findings that may help to clarify which cancer is most likely Offer urgent investigation or a suspected cancer pathway referral [1.13.3]
Appetite loss (unexplained), 40 and over, ever smoked	Lung or mesothelioma	Offer an urgent chest X-ray (to be done within 2 weeks) [1.1.2] [1.1.5]
Appetite loss (unexplained), 40 and over, exposed to asbestos	Mesothelioma	Offer an urgent chest X-ray (to be done within 2 weeks) [1.1.5]
Appetite loss (unexplained) with cough or fatigue or shortness of breath or chest pain or weight loss (unexplained), 40 and over	Lung or mesothelioma	Offer an urgent chest X-ray (to be done within 2 weeks) [1.1.2] [1.1.5]
Appetite loss or early satiety (persistent or frequent – particularly more than 12 times per month) in women, especially if 50 and over	Ovarian	Carry out tests in primary care [1.5.2] Measure serum CA125 in primary care [1.5.6] See the section on primary care investigations for information on tests for ovarian cancer These recommendations apply to women aged 18 and over

Deep vein thrombosis

Symptom and specific features	Possible cancer	Recommendation
Deep vein thrombosis	Several, including urogenital, breast, colorectal and lung	Carry out an assessment for additional symptoms, signs or findings that may help to clarify which cancer is most likely Consider urgent investigation or a suspected cancer pathway referral [1.13.4]

Diabetes

Symptom and specific features	Possible cancer	Recommendation
Diabetes (new onset) with weight loss, 60 and over	Pancreatic	Consider an urgent, direct access CT scan (to be done within 2 weeks), or urgent ultrasound scan if CT is not available [1.2.5]

Fatigue

Symptom and specific features	Possible cancer	Recommendation
Fatigue (unexplained), 40 and over, ever smoked	Lung or mesothelioma	Offer an urgent chest X-ray (to be done within 2 weeks) [1.1.2] [1.1.5]
Fatigue (unexplained), 40 and over, exposed to asbestos	Mesothelioma	Offer an urgent chest X-ray (to be done within 2 weeks) [1.1.5]
Fatigue with cough or shortness of breath or chest pain or weight loss or appetite loss (unexplained), 40 and over	Lung or mesothelioma	Offer an urgent chest X-ray (to be done within 2 weeks) [1.1.2] [1.1.5]
Fatigue (persistent) in adults	Leukaemia	Consider a very urgent full blood count (within 48 hours) [1.10.1]

Symptom and specific features	Possible cancer	Recommendation
Fatigue (unexplained) in women	Ovarian	Carry out tests in primary care [1.5.2] Measure serum CA125 in primary care [1.5.6] See the section on primary care investigations for information on tests for ovarian cancer These recommendations apply to women aged 18 and over

Fever

Symptom and specific features	Possible cancer	Recommendation
Fever (unexplained)	Leukaemia	Consider a very urgent full blood count (within 48 hours) [1.10.1]
Fever with unexplained splenomegaly in adults	Non-Hodgkin's lymphoma	Consider a suspected cancer pathway referral. When considering referral, take into account any associated symptoms [1.10.6] Separate recommendations have been made for adults and for children and young people to reflect that there are different referral pathways. In practice young people (aged 16 to 24) may be referred using either pathway depending on their age and local arrangements
Fever with unexplained lymphadenopathy in adults	Hodgkin's lymphoma or non-Hodgkin's lymphoma	Consider a suspected cancer pathway referral. When considering referral, take into account any associated symptoms [1.10.8] Separate recommendations have been made for adults and for children and young people to reflect that there are different referral pathways. In practice young people (aged 16 to 24) may be referred using either pathway depending on their age and local arrangements

See also the section on respiratory symptoms for chest infection.

Infection

Symptom and specific features	Possible cancer	Recommendation
Infection (unexplained and persistent or recurrent) in adults	Leukaemia	Consider a very urgent full blood count (within 48 hours) [1.10.1]

Night sweats

Symptom and specific features	Possible cancer	Recommendation
Night sweats with unexplained splenomegaly in adults	Non-Hodgkin's lymphoma	Consider a suspected cancer pathway referral. When considering referral, take into account any associated symptoms [1.10.6] Separate recommendations have been made for adults and for children and young people to reflect that there are different referral pathways. In practice young people (aged 16 to 24) may be referred using either pathway depending on their age and local arrangements
Night sweats with unexplained lymphadenopathy in adults	Hodgkin's lymphoma or non-Hodgkin's lymphoma	Consider a suspected cancer pathway referral. When considering referral, take into account any associated symptoms [1.10.8] Separate recommendations have been made for adults and for children and young people to reflect that there are different referral pathways. In practice young people (aged 16 to 24) may be referred using either pathway depending on their age and local arrangements

Pallor

Symptom and specific features	Possible cancer	Recommendation
Pallor	Leukaemia	Consider a very urgent full blood count (within 48 hours) [1.10.1]

Pruritus

Symptom and specific features	Possible cancer	Recommendation
Pruritus with unexplained splenomegaly in adults	Non-Hodgkin's lymphoma	Consider a suspected cancer pathway referral. When considering referral, take into account any associated symptoms [1.10.6] Separate recommendations have been made for adults and for children and young people to reflect that there are different referral pathways. In practice young people (aged 16 to 24) may be referred using either pathway depending on their age and local arrangements
Pruritus with unexplained lymphadenopathy in adults	Hodgkin's lymphoma or non-Hodgkin's lymphoma	Consider a suspected cancer pathway referral. When considering referral, take into account any associated symptoms [1.10.8] Separate recommendations have been made for adults and for children and young people to reflect that there are different referral pathways. In practice young people (aged 16 to 24) may be referred using either pathway depending on their age and local arrangements

Weight loss

Symptom and specific features	Possible cancer	Recommendation
Weight loss (unexplained)	Several, including colorectal, gastro-oesophageal, lung, prostate, pancreatic or urological cancer	Carry out an assessment for additional symptoms, signs or findings that may help to clarify which cancer is most likely Offer urgent investigation or a suspected cancer pathway referral [1.13.2]
Weight loss (unexplained) with abdominal pain, 40 and over	Colorectal	Offer quantitative faecal immunochemical testing [1.3.1]

Symptom and specific features	Possible cancer	Recommendation
Weight loss (unexplained) with rectal bleeding in adults under 50	Colorectal	Offer quantitative faecal immunochemical testing [1.3.1]
Weight loss (unexplained), 50 and over	Colorectal	Offer quantitative faecal immunochemical testing [1.3.1]
Weight loss (unexplained), 40 and over, ever smoked	Lung or mesothelioma	Offer an urgent chest X-ray (to be done within 2 weeks) [1.1.2] [1.1.5]
Weight loss (unexplained), 40 and over, exposed to asbestos	Mesothelioma	Offer an urgent chest X-ray (to be done within 2 weeks) [1.1.5]
Weight loss with cough or fatigue or shortness of breath or chest pain or appetite loss (unexplained), 40 and over, never smoked	Lung or mesothelioma	Offer an urgent chest X-ray (to be done within 2 weeks) [1.1.2] [1.1.5]

Symptom and specific features	Possible cancer	Recommendation
Weight loss with unexplained splenomegaly in adults	Non-Hodgkin's lymphoma	Consider a suspected cancer pathway referral. When considering referral, take into account any associated symptoms [1.10.6] Separate recommendations have been made for adults and for children and young people to reflect that there are different referral pathways. In practice young people (aged 16 to 24) may be referred using either pathway depending on their age and local arrangements
Weight loss with unexplained lymphadenopathy in adults	Hodgkin's lymphoma or non-Hodgkin's lymphoma	Consider a suspected cancer pathway referral. When considering referral, take into account any associated symptoms [1.10.6] [1.10.8] Separate recommendations have been made for adults and for children and young people to reflect that there are different referral pathways. In practice young people (aged 16 to 24) may be referred using either pathway depending on their age and local arrangements
Weight loss with upper abdominal pain or reflux or dyspepsia, 55 and over	Oesophageal or stomach	Refer using a suspected cancer pathway referral [1.2.1] [1.2.7]

Symptom and specific features	Possible cancer	Recommendation
Weight loss (unexplained) in women	Ovarian	Consider carrying out tests in primary care [1.5.3] Measure serum CA125 in primary care [1.5.6] See the section on primary care investigations for information on tests for ovarian cancer These recommendations apply to women aged 18 and over
Weight loss with diarrhoea or back pain or abdominal pain or nausea or vomiting or constipation or new-onset diabetes, 60 and over	Pancreatic	Consider an urgent, direct access CT scan (to be done within 2 weeks), or an urgent ultrasound scan if CT is not available [1.2.5]
Weight loss with raised platelet count or nausea or vomiting, 55 and over	Oesophageal or stomach	Consider non-urgent, direct access upper gastrointestinal endoscopy [1.2.3] [1.2.9]

Primary care investigations

Blood test findings

Investigation findings and specific features	Possible cancer	Recommendation
Anaemia (iron-deficiency)	Colorectal	Offer quantitative faecal immunochemical testing [1.3.1]
Anaemia (non-iron-deficiency), 60 and over	Colorectal	Offer quantitative faecal immunochemical testing [1.3.1]

Investigation findings and specific features	Possible cancer	Recommendation
Blood glucose levels high with visible haematuria in women 55 and over	Endometrial	Consider a direct access ultrasound scan [1.5.12]
Diabetes (new-onset) with weight loss, 60 and over	Pancreatic	Consider an urgent, direct access CT scan (to be done within 2 weeks), or an urgent ultrasound scan if CT is not available [1.2.5]
Haemoglobin levels low with visible haematuria in women 55 and over	Endometrial	Consider a direct access ultrasound scan [1.5.12]
Haemoglobin levels low with upper abdominal pain, 55 and over	Oesophageal or stomach	Consider non-urgent, direct access upper gastrointestinal endoscopy [1.2.3] [1.2.9]
Hypercalcaemia or leukopenia with persistent bone pain, particularly back pain, or unexplained fracture, 60 and over	Myeloma	Refer using a suspected cancer pathway referral [1.10.5]
Plasma viscosity or erythrocyte sedimentation rate suggests myeloma, plus persistent bone pain, particularly back pain, or unexplained fracture	Myeloma	Refer using a suspected cancer pathway referral [1.10.5]
Platelet count raised with nausea or vomiting or weight loss or reflux or dyspepsia or upper abdominal pain, 55 and over	Oesophageal or stomach	Consider non-urgent, direct access upper gastrointestinal endoscopy [1.2.3] [1.2.9]
Prostate-specific antigenlevels above the age-specific threshold in table 1 plus lower urinary tract symptoms such as nocturia, urinary frequency, hesitancy, urgency or retention or erectile dysfunction or visible haematuria	Prostate	Consider a suspected cancer pathway referral [1.6.3]

Investigation findings and specific features	Possible cancer	Recommendation
Serum protein electrophoresis result suggests myeloma, plus persistent bone pain, particularly back pain, or unexplained fracture	Myeloma	Refer people using a suspected cancer pathway referral [1.10.5]
Serum CA125 results	Ovarian	If serum CA125 is 35 IU/ml or greater, arrange an ultrasound scan of the abdomen and pelvis [1.5.7] Normal serum CA125 (less than 35 IU/ml), or CA125 of 35 IU/ml or greater but a normal ultrasound: assess her carefully for other clinical causes of her symptoms and investigate if appropriate if no other clinical cause is apparent, advise her to return to her GP if her symptoms become more frequent and/or persistent. [1.5.9] These recommendations apply to women aged 18 and over
Serum free light chain testing suggests myeloma, plus persistent bone pain, particularly back pain, or unexplained fracture	Myeloma	Refer people using a suspected cancer pathway referral [1.10.5]
Thrombocytosis, 40 and over	Lung	Consider an urgent chest X-ray (to be done within 2 weeks) [1.1.3]

Investigation findings and specific features	Possible cancer	Recommendation
Thrombocytosis with visible haematuria or vaginal discharge (unexplained) in women 55 and over	Endometrial	Consider a direct access ultrasound scan [1.5.12]
White cell count raised on a blood test with unexplained non-visible haematuria, 60 and over	Bladder	Refer people using a suspected cancer pathway referral [1.6.4]

Dermoscopy findings

Investigation findings and specific features	Possible cancer	Recommendation
Dermoscopy suggests melanoma of the skin	Melanoma	Refer people using a suspected cancer pathway referral [1.7.2]

Digital rectal examination findings

Examination findings and specific features	Possible cancer	Recommendation
Prostate feels malignant on digital rectal examination	Prostate	Refer men using a suspected cancer pathway referral [1.6.1]

Faecal tests

Investigation findings and specific features	Possible cancer	Recommendation
Occult blood in faeces	Colorectal	Refer adults using a suspected cancer pathway referral [1.3.2]

Imaging tests

Investigation findings and specific features	Possible cancer	Recommendation
Chest X-ray suggests lung cancer	Lung	Refer people using a suspected cancer pathway referral [1.1.1]
Chest X-ray suggests mesothelioma	Mesothelioma	Refer people using a suspected cancer pathway referral [1.1.4]

Investigation findings and specific features	Possible cancer	Recommendation
Ultrasound suggests ovarian cancer	Ovarian	Refer women using a suspected cancer pathway referral [1.5.8] These recommendations apply to women aged 18 and over
Ultrasound normal with CA125 of 35 IU/ml or greater	Ovarian	Assess carefully for other clinical causes of her symptoms and investigate if appropriate If no other clinical cause is apparent, advise her to return to her GP if her symptoms become more frequent and/or persistent [1.5.9] These recommendations apply to women aged 18 and over
Ultrasoundsuggests soft tissue sarcoma or is uncertain and clinical concern persists in adults	Soft tissue sarcoma	Consider a suspected cancer pathway referral [1.11.5] Separate recommendations have been made for adults and for children and young people to reflect that there are different referral pathways. In practice young people (aged 16 to 24) may be referred using either pathway depending on their age and local arrangements
X-ray suggests the possibility of bone sarcoma in adults	Bone sarcoma	Consider a suspected cancer pathway referral [1.11.1] Separate recommendations have been made for adults and for children and young people to reflect that there are different referral pathways. In practice young people (aged 16 to 24) may be referred using either pathway depending on their age and local arrangements

Jaundice

Investigation findings and specific features	Possible cancer	Recommendation
Jaundice, 40 and over	Pancreatic	Refer people using a suspected cancer pathway referral [1.2.4]

Urine test findings

Investigation findings and specific features	Possible cancer	Recommendation
Bence–Jones protein urine results (used if serum free light chain testing is not available)suggest myeloma, plus persistent bone pain, particularly back pain, or unexplained fracture	Myeloma	Refer people using a suspected cancer pathway referral [1.10.5]

Symptoms in children and young people

Abdominal symptoms

Symptom and specific features	Possible cancer	Recommendation
Hepatosplenomegaly (unexplained) in children and young people	Leukaemia	Refer for immediate specialist assessment [1.10.2]
Abdominal mass (palpable) or enlarged abdominal organ (unexplained) in children	Neuroblastoma or Wilms' tumour	Consider very urgent referral (for an appointment within 48 hours) for specialist assessment [1.12.1] [1.12.3]
Splenomegaly (unexplained) in children and young people	Non-Hodgkin's lymphoma	Consider a very urgent referral (for an appointment within 48 hours) for specialist assessment. When considering referral, take into account any associated symptoms, particularly fever, night sweats, shortness of breath, pruritus or weight loss [1.10.7] Separate recommendations have been made for adults and for children and young people to reflect that there are different referral pathways. In practice young people (aged 16 to 24) may be referred using either pathway depending on their age and local arrangements

Bleeding, bruising or rashes

Symptom and specific features	Possible cancer	Recommendation
Petechiae (unexplained) in children and young people	Leukaemia	Refer for immediate specialist assessment [1.10.2]
Bleeding or bruising (unexplained) in children and young people	Leukaemia	Offer a very urgent full blood count (within 48 hours) [1.10.3]

Lumps or masses

Symptom and specific features	Possible cancer	Recommendation
Lymphadenopathy (unexplained) in children and young people	Non-Hodgkin's lymphoma or Hodgkin's lymphoma	Consider a very urgent referral (for an appointment within 48 hours) for specialist assessment. When considering referral, take into account any associated symptoms, particularly fever, night sweats, shortness of breath, pruritus or weight loss [1.10.7] [1.10.9] Separate recommendations have been made for adults and for children and young people to reflect that there are different referral pathways. In practice young people (aged 16 to 24) may be referred using either pathway depending on their age and local arrangements
Lymphadenopathy (generalised) in children and young people	Leukaemia	Offer a very urgent full blood count (within 48 hours) [1.10.3]

Symptom and specific features	Possible cancer	Recommendation
Lump (unexplained) that is increasing in size in children and young people	Soft tissue sarcoma	Consider a very urgent, direct access ultrasound scan (to be done within 48 hours) [1.11.6] See the section on primary care investigations for more information on ultrasound scans Separate recommendations have been made for adults and for children and young people to reflect that there are different referral pathways. In practice young people (aged 16 to 24) may be referred using either pathway depending on their age and local arrangements

See also the section on abdominal symptoms for abdominal mass or unexplained enlarged abdominal organ, splenomegaly and hepatosplenomegaly.

Neurological symptoms

Symptom and specific features	Possible cancer	Recommendation
Newly abnormal cerebellar or other central neurological function in children and young people	Brain or central nervous system cancer	Consider a very urgent referral (for an appointment within 48 hours) [1.9.2]

Respiratory symptoms

Symptom and specific features	Possible cancer	Recommendation
Shortness of breath with lymphadenopathy in children and young people	Non-Hodgkin's lymphoma or Hodgkin's lymphoma	Consider a very urgent referral (for an appointment within 48 hours) for specialist assessment. When considering referral, take into account any associated symptoms [1.10.7] [1.10.9] Separate recommendations have been made for adults and for children and young people to reflect that there are different referral pathways. In practice young people (aged 16 to 24) may be referred using either pathway depending on their age and local arrangements

Symptom and specific features	Possible cancer	Recommendation
Shortness of breath with splenomegaly (unexplained) in children and young people	Non-Hodgkin's lymphoma	Consider a very urgent referral (for an appointment within 48 hours) for specialist assessment. When considering referral, take into account any associated symptoms [1.10.7] Separate recommendations have been made for adults and for children and young people to reflect that there are different referral pathways. In practice young people (aged 16 to 24) may be referred using either pathway depending on their age and local arrangements

Skeletal symptoms

Symptom and specific features	Possible cancer	Recommendation
Bone pain (persistent or unexplained) in children and young people	Leukaemia	Offer a very urgent full blood count (within 48 hours) [1.10.3]
Bone pain (unexplained) in children and young people	Bone sarcoma	Consider a very urgent, direct access X-ray (to be done within 48 hours) [1.11.3] See the section on primary care investigations for more information on X-rays
Bone swelling (unexplained) in children and young people	Bone sarcoma	Consider a very urgent, direct access X-ray (to be done within 48 hours) [1.11.3] See the section on primary care investigations for more information on X-rays

Skin or surface symptoms

Symptom and specific features	Possible cancer	Recommendation
Petechiae (unexplained) in children and young people	Leukaemia	Refer for immediate specialist assessment [1.10.2]

Symptom and specific features	Possible cancer	Recommendation
Bruising (unexplained) in children and young people	Leukaemia	Offer a very urgent full blood count (within 48 hours) [1.10.3]
Pallor in children and young people	Leukaemia	Offer a very urgent full blood count (within 48 hours) [1.10.3]

Urological symptoms

Symptom and specific features	Possible cancer	Recommendation
Haematuria (visible and unexplained) in children	Wilms' tumour	Consider very urgent referral (for an appointment within 48 hours) for specialist assessment [1.12.3]

Non-specific features of cancer

Symptom and specific features	Possible cancer	Recommendation
Fatigue (persistent) in children and young people	Leukaemia	Offer a very urgent full blood count (within 48 hours) [1.10.3]
Fever with lymphadenopathy (unexplained) in children and young people	Non-Hodgkin's lymphoma or Hodgkin's lymphoma	Consider a very urgent referral (for an appointment within 48 hours) for specialist assessment. When considering referral, take into account any associated symptoms [1.10.7] [1.10.9] Separate recommendations have been made for adults and for children and young people to reflect that there are different referral pathways. In practice young people (aged 16 to 24) may be referred using either pathway depending on their age and local arrangements

Symptom and specific features	Possible cancer	Recommendation
Fever with splenomegaly (unexplained) in children and young people	Non-Hodgkin's lymphoma	Consider a very urgent referral (for an appointment within 48 hours) for specialist assessment. When considering referral, take into account any associated symptoms [1.10.7] Separate recommendations have been made for adults and for children and young people to reflect that there are different referral pathways. In practice young people (aged 16 to 24) may be referred using either pathway depending on their age and local arrangements
Fever (unexplained) in children and young people	Leukaemia	Offer a very urgent full blood count (within 48 hours) [1.10.3]
Infection (unexplained and persistent) in children and young people	Leukaemia	Offer a very urgent full blood count (within 48 hours) [1.10.3]
Lymphadenopathy (unexplained) in children and young people	Non-Hodgkin's lymphoma or Hodgkin's lymphoma	Consider a very urgent referral (for an appointment within 48 hours) for specialist assessment. When considering referral, take into account any associated symptoms, particularly fever, night sweats, shortness of breath, pruritus or weight loss [1.10.7] [1.10.9] Separate recommendations have been made for adults and for children and young people to reflect that there are different referral pathways. In practice young people (aged 16 to 24) may be referred using either pathway depending on their age and local arrangements

Symptom and specific features	Possible cancer	Recommendation
Lymphadenopathy (generalised) in children and young people	Leukaemia	Offer a very urgent full blood count (within 48 hours) [1.10.3]
Night sweats with lymphadenopathy (unexplained) in children and young people	Non-Hodgkin's lymphoma or Hodgkin's lymphoma	Consider a very urgent referral (for an appointment within 48 hours) for specialist assessment. When considering referral, take into account any associated symptoms [1.10.7] [1.10.9] Separate recommendations have been made for adults and for children and young people to reflect that there are different referral pathways. In practice young people (aged 16 to 24) may be referred using either pathway depending on their age and local arrangements
Night sweats with splenomegaly (unexplained) in children and young people	Non-Hodgkin's lymphoma	Consider a very urgent referral (for an appointment within 48 hours) for specialist assessment. When considering referral, take into account any associated symptoms [1.10.7] Separate recommendations have been made for adults and for children and young people to reflect that there are different referral pathways. In practice young people (aged 16 to 24) may be referred using either pathway depending on their age and local arrangements
Pruritus with lymphadenopathy (unexplained) in children and young people	Non-Hodgkin's lymphoma or Hodgkin's lymphoma	Consider a very urgent referral (for an appointment within 48 hours) for specialist assessment. When considering referral, take into account any associated symptoms [1.10.7] [1.10.9] Separate recommendations have been made for adults and for children and young people to reflect that there are different referral pathways. In practice young people (aged 16 to 24) may be referred using either pathway depending on their age and local arrangements

Symptom and specific features	Possible cancer	Recommendation
Pruritus with splenomegaly (unexplained) in children and young people	Non-Hodgkin's lymphoma	Consider a very urgent referral (for an appointment within 48 hours) for specialist assessment. When considering referral, take into account any associated symptoms [1.10.7] Separate recommendations have been made for adults and for children and young people to reflect that there are different referral pathways. In practice young people (aged 16 to 24) may be referred using either pathway depending on their age and local arrangements
Weight loss with lymphadenopathy (unexplained) in children and young people	Non-Hodgkin's lymphoma or Hodgkin's lymphoma	Consider a very urgent referral (for an appointment within 48 hours) for specialist assessment in children and young people. When considering referral, take into account any associated symptoms [1.10.7] [1.10.9] Separate recommendations have been made for adults and for children and young people to reflect that there are different referral pathways. In practice young people (aged 16 to 24) may be referred using either pathway depending on their age and local arrangements
Weight loss with splenomegaly (unexplained) in children and young people	Non-Hodgkin's lymphoma	Consider a very urgent referral (for an appointment within 48 hours) for specialist assessment. When considering referral, take into account any associated symptoms [1.10.7] Separate recommendations have been made for adults and for children and young people to reflect that there are different referral pathways. In practice young people (aged 16 to 24) may be referred using either pathway depending on their age and local arrangements

Ocular examination

Examination findings and specific features	Possible cancer	Recommendation
Absent fundal ('red') reflex in children	Retinoblastoma	Consider referral for ophthalmological assessment using a suspected cancer pathway referral [1.12.2]

Parental concern

Symptom and specific features	Possible cancer	Recommendation
Parental or carer insight, concern or anxiety about the child's or young person's symptoms (persistent)	Childhood cancer	Take into account the insight and knowledge of parents and carers when considering making a referral for suspected cancer in a child or young person Consider referral for children if their parent or carer has persistent concern or anxiety about the child's symptoms, even if the symptoms are most likely to have a benign cause [1.13.1]

Primary care investigations

Symptom and specific features	Possible cancer	Recommendation
Ultrasound scan suggests soft tissue sarcoma or is uncertain and clinical concern persists in children and young people	Soft tissue sarcoma	Consider a very urgent referral (for an appointment within 48 hours) for specialist assessment [1.11.7] Separate recommendations have been made for adults and for children and young people to reflect that there are different referral pathways. In practice young people (aged 16 to 24) may be referred using either pathway depending on their age and local arrangements

Symptom and specific features	Possible cancer	Recommendation
X-ray suggests the possibility of bone sarcoma in children and young people	Bone sarcoma	Consider a very urgent referral (for an appointment within 48 hours) for specialist assessment [1.11.2] Separate recommendations have been made for adults and for children and young people to reflect that there are different referral pathways. In practice young people (aged 16 to 24) may be referred using either pathway depending on their age and local arrangements

Terms used in this guideline

Children

From birth to 15 years.

Children and young people

From birth to 24 years.

Consistent with

The finding has characteristics that could be caused by many things, including cancer.

Direct access

When a test is done and primary care retain clinical responsibility throughout, including acting on the result.

Immediate

An acute admission or referral occurring within a few hours, or even more quickly if necessary.

Non-urgent

The timescale generally used for a referral or investigation that is not considered very urgent or urgent.

Persistent

The continuation of specified symptoms and/or signs beyond a period that would normally be associated with self-limiting problems. The precise period will vary depending on the

severity of symptoms and associated features, as assessed by the health professional.

Raises the suspicion of

A mass or lesion that has an appearance or a feel that makes the healthcare professional believe cancer is a significant possibility.

Safety netting

The active monitoring in primary care of people who have presented with symptoms. It has 2 separate aspects:

- timely review and action after investigations
- active monitoring of symptoms in people at low risk (but not no risk) of having cancer to see if their risk of cancer changes.

Suspected cancer pathway referral

Person to receive a diagnosis or ruling out of cancer within 28 days of being referred urgently by their GP for suspected cancer. For further details, see NHS England's webpage on faster diagnosis of cancer.

Unexplained

Symptoms or signs that have not led to a diagnosis being made by the healthcare professional in primary care after initial assessment (including history, examination and any primary care investigations).

Urgent

To happen or be done before 2 weeks.

Very urgent

To happen within 48 hours.

Young people

Aged 16 to 24 years.

Recommendations for research

The guideline committee has made the following recommendations for research.

Key recommendations for research

1 Age thresholds in cancer

Longitudinal studies should be carried out to identify and quantify factors in adults that are associated with development of specific cancers at a younger age than the norm. They should be designed to inform age thresholds in clinical guidance. The primary outcome should be likelihood ratios and positive predictive values for cancer occurring in younger age groups.

2 Primary care testing

Diagnostic accuracy studies of tests accessible to primary care should be carried out for a given cancer in symptomatic people. Priority areas for research should include tests for people with cough, non-visible haematuria, suspected prostate cancer, suspected pancreatic cancer, suspected cancer in childhood and young people and other suspected rare cancers. Outcomes of interest are the performance characteristics of the test, particularly sensitivity, specificity and positive and negative predictive values.

3 Cancers insufficiently researched in primary care

Observational studies of symptomatic primary care patients should be used to estimate the positive predictive value of different symptoms for specific cancers. Priority areas for research are those where the evidence base is currently insufficient and should include prostate cancer, pancreatic cancer, cancer in childhood and young people and other rare cancers. Outcomes of interest are positive predictive values and likelihood ratios for cancer.

4 Patient experience

Qualitative studies are needed to assess the key issues in patient experience and patient

information needs in the cancer diagnostic pathway, particularly in the interval between first presentation to primary care and first appointment in secondary care. Outcomes of interest are patient satisfaction, quality of life and patient perception of the quality of care and information.

5 Prostate-specific antigen testing

What is the diagnostic accuracy of using age-adjusted and fixed prostate-specific antigen thresholds for people with symptoms of prostate cancer, including those at high risk of developing prostate cancer (such as those with an African family background or a family history of prostate cancer)?

For a short explanation of why the committee made the recommendation for research see the rationale section on prostate-specific antigen testing for prostate cancer.

Full details of the evidence and the committee's discussion are in evidence review A: PSA testing for prostate cancer.

Rationale and impact

This section briefly explains why the committee made the recommendation and how it might affect practice.

Prostate-specific antigen testing for prostate cancer

Recommendation 1.6.3

Why the committee made the recommendation

The evidence on the diagnostic accuracy of fixed and age-specific prostate-specific antigen (PSA) thresholds was very uncertain because all of the studies were based on a population that had already been referred to secondary care. The 2019 guideline recommended referral if PSA levels were above the age-specific reference range. The committee agreed that referral should be considered based on PSA thresholds, but did not make a stronger recommendation because of the uncertainty in the evidence and the likely low positive predictive value of the PSA test for prevalence estimates based on UK population data. The committee noted that many prostate cancers are slow growing and might never impact a person's life expectancy. Some people might choose not to be referred to secondary care to avoid invasive investigations and treatment that might not benefit them. Therefore, the committee agreed that a patient-centred approach to referral is important, and recommended that the person's preferences and any comorbidities should be taken into account.

The committee agreed that more research is needed in this area to better understand the most appropriate thresholds that should prompt referral to secondary care for each age group. The committee noted that ethnicity and family history are important factors that affect the risk of prostate cancer. Therefore, they recommended that the data from research be stratified by these factors to determine whether different PSA levels should prompt referral in these groups. Research in this area may also help to address health inequalities in prostate cancer diagnosis and outcomes in the UK.

There was no strong evidence to differentiate between using age-specific or fixed PSA

thresholds. The committee also noted that no cost-effectiveness evidence comparing age-specific thresholds with fixed thresholds was identified. However, because PSA levels increase naturally with age, the committee agreed a lower fixed PSA threshold would detect more cases of prostate cancer but also lead to unnecessary biopsies and overtreatment in some age groups. This would also be likely to result in more referrals to secondary care and have a significant impact on NHS resources. The committee therefore recommended the use of age-specific thresholds, which are already established in current practice and were recommended in the previous version of the guideline. Because of regional variations in practice (particularly in the 50 to 69 age range), the committee decided to define the age-specific PSA thresholds. The committee agreed that the thresholds used in the reviewed studies on people with symptoms of possible prostate cancer should be used in the absence of evidence to support alternative values, because these studies were most applicable to the population that the recommendation applies to. No evidence was available specifically for people under 40 or over 79, and so the committee recommended that clinical judgement is used when deciding whether to refer people in these groups to secondary care.

How the recommendation might affect practice

Referral based on age-specific PSA thresholds is already recommended, so practice should not change significantly. Also, clarifying the age-specific thresholds will help standardise care. Taking into account patient preferences and comorbidities should also lead to a more patient-centred approach to referral.

Return to recommendation

Context

Cancer has an enormous impact, both in terms of the number of people affected by it and the individual impact it has on people with cancer and those close to them. More than 300,000 new cancers (excluding skin cancers) are diagnosed annually in the UK, across over 200 different cancer types. Each of these cancer types has different presenting features, though they sometimes overlap. Approximately one-third of the population will develop a cancer in their lifetime. There is considerable variation in referral and testing for possible cancer, which cannot be fully explained by variation in the population.

The identification of people with possible cancer usually happens in primary care, because most people first present to a primary care clinician. Therefore, evidence from primary care should inform the identification process and was used as the basis for this guideline.

The recommendations were developed using a 'risk threshold', whereby if the risk of symptoms being caused by cancer is above a certain level, then action (investigation or referral) is warranted. The positive predictive value (PPV) was used to determine the threshold. In the previous guideline, a disparate range of percentage risks of cancer was used to form the recommendations. Few corresponded with a PPV of lower than 5%. The guideline development group (GDG) felt that, in order to improve diagnosis of cancer, a PPV threshold lower than 5% was preferable. Taking into account the financial and clinical costs of broadening the recommendations, the GDG agreed to use a 3% PPV threshold value to underpin the recommendations for suspected cancer pathway referrals and urgent direct access investigations, such as brain scanning or endoscopy. Certain exceptions to a 3% PPV threshold were agreed. Recommendations were made for children and young people at below the 3% PPV threshold, although no explicit threshold value was set. The threshold was not applied to recommendations relating to tests routinely available in primary care (including blood tests such as prostate-specific antigen and imaging such as chest X-ray), primary care tests that could be used in place of specialist referral, non-urgent direct access tests and routine referrals for specialist opinion. Further information about the methods used to underpin the recommendations can be found in the full guideline.

It is well recognised that some risk factors increase the chance of a person developing cancer in the future, for example, increasing age and a family history of cancer. However, risk factors do not affect the way in which cancer presents. Of the risk factors that were reported in the evidence, only smoking (in lung cancer) and age were found to significantly

influence the chance of symptoms being predictive of cancer. Therefore, these are included in the recommendations where relevant. For all other risk factors, the recommendations would be the same for people with possible symptoms of cancer, irrespective of whether they had a risk factor. However, an exception was made to include asbestos exposure in the recommendations because of the high relative risk of mesothelioma in people who have been exposed to asbestos.

Finding more information and committee details

To find NICE guidance on related topics, including guidance in development, see the NICE topic page on cancer.

For full details of the evidence and the guideline committee's discussions, see the full guideline. You can also find information about how the guideline was developed, including details of the committee.

NICE has produced tools and resources to help you put this guideline into practice. For general help and advice on putting NICE guidelines into practice, see resources to help you put guidance into practice.

Update information

January 2026: We have removed an incorrect recommendation on blood tests for myeloma.

May 2025: We amended recommendations 1.2.1 and 1.2.7 to recommend a suspected cancer referral for people with symptoms indicating a 3% or more probability of having oesophageal or stomach cancer (rather than an urgent, direct access referral for an endoscopy). We have made these changes following stakeholder feedback. The tables of symptoms have also been updated to reflect these changes.

April 2025: We amended the recommendations on blood tests for myeloma in response to a series of NHS England National cancer programme reviews looking at opportunities for earlier diagnosis, including for myeloma. The tables of symptoms and primary care investigation findings have also been updated to reflect these changes. Amended recommendations are marked **[2015, amended 2025]**.

October 2023: We updated the definition of suspected cancer pathway referral in line with NHS England's standard on faster diagnosis of cancer.

August 2023: We updated the recommendations on criteria for faecal testing and referral for suspected colorectal cancer in line with NICE's diagnostics guidance on quantitative faecal immunochemical testing to guide colorectal cancer pathway referral in primary care. The tables of symptoms and primary care investigation findings have been updated to reflect these changes. New and amended recommendations are marked **[2023]** or **[2015 amended 2023]**.

December 2021: We reviewed the evidence on fixed and age-adjusted thresholds for PSA testing and updated recommendation 1.6.3.

January 2021: We amended the recommendations in the section on colorectal cancer to include the full list of criteria for faecal testing.

September 2020: We amended the recommendations in the section on colorectal cancer to clarify when to offer faecal testing for colorectal cancer to adults without rectal bleeding.

July 2017: Recommendation 1.3.4 was replaced by NICE diagnostics guidance on quantitative faecal immunochemical tests to guide referral for colorectal cancer in primary care and other recommendations were amended accordingly. In December 2017, some of the wording in the section on colorectal cancer was clarified, and the tables on abdominal and pelvic pain, change in bowel habit and primary care investigations updated in line with this.

June 2016: Recommendations in the section on colorectal cancer have been changed to say 'adults' instead of 'people' to more accurately reflect the populations they cover.

June 2015: This guideline updates and replaces NICE guideline CG27 (published June 2005).

Recommendations are marked as **[2021]**, **[2020]**, **[2015]**, **[2011]**, **[2011, amended 2020]** or **[2005]**:

- **[2021]** indicated that the evidence has been reviewed and the recommendation has been updated in 2021.
- **[2020]** indicates that the evidence has been reviewed and the recommendation has been added or updated in 2020.
- **[2011, amended 2020]** indicates that the wording has been changed but the evidence has not been reviewed since 2020.
- **[2015]**, **[2005]** or **[2011]** indicates the date that the evidence was last reviewed.

Minor changes since publication

March 2024: In recommendation 1.12.2 and the table on symptoms in children and young people, we changed absent red reflex to absent fundal ('red') reflex. See the surveillance report for more information.

October 2021: In recommendation 1.12.2 we added a cross-reference to NICE's guideline on suspected neurological conditions for advice for children who have new-onset squint with an absent fundal 'red' reflex. See the surveillance report for more information. We also added a link to NICE's guideline on babies, children and young people's experience of healthcare in the sections on childhood cancers and symptoms in children and young people.

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