

Lung cancer

Refer a patient who presents with symptoms suggestive of lung cancer to a team specialising in the management of lung cancer, depending on local arrangements. ●

Immediate referral

Consider immediate referral for patients with: **D**

- signs of superior vena caval obstruction (swelling of the face/neck with fixed elevation of jugular venous pressure)
- stridor.

Urgent referral

Refer urgently patients with:

- persistent haemoptysis (in smokers or ex-smokers aged 40 years and older) **D**
- a chest X-ray suggestive of lung cancer (including pleural effusion and slowly resolving consolidation) **D**
- a normal chest X-ray where there is a high suspicion of lung cancer **D**
- a history of asbestos exposure and recent onset of chest pain, shortness of breath or unexplained systemic symptoms where a chest X-ray indicates pleural effusion, pleural mass or any suspicious lung pathology. **C**

Urgent chest X-ray

Refer urgently for chest X-ray (the report should be returned within 5 days) for patients with any of the following: **D**

- haemoptysis
- unexplained or persistent (longer than 3 weeks):
 - chest and/or shoulder pain
 - dyspnoea
 - weight loss
 - chest signs
- hoarseness
- finger clubbing
- cervical or supraclavicular lymphadenopathy
- cough
- features suggestive of metastasis from a lung cancer (for example, secondaries in the brain, bone, liver, skin)
- underlying chronic respiratory problems with unexplained changes in existing symptoms. **D**

Risk factors

The following patients have a high risk of developing lung cancer: ●

- all current or ex-smokers
- patients with chronic obstructive pulmonary disease
- people who have been exposed to asbestos
- people with a previous history of cancer (especially head and neck).

An urgent referral for a chest X-ray or to a specialist can be considered sooner in these patients (for example, if signs and symptoms have lasted less than 3 weeks).

Upper gastrointestinal cancer

Refer a patient who presents with symptoms suggestive of upper gastrointestinal cancer to a team specialising in the management of upper gastrointestinal cancer, depending on local arrangements. ●

Helicobacter pylori status should not affect the decision to refer for suspected cancer. ●

Urgent referral for endoscopy/referral to specialist

Refer urgently for endoscopy, or to a specialist, patients of any age with dyspepsia and any of the following: **C**

- chronic gastrointestinal bleeding
- dysphagia
- progressive unintentional weight loss
- persistent vomiting
- iron deficiency anaemia
- epigastric mass
- suspicious barium meal result.

Urgent referral

Refer urgently patients presenting with:

- dysphagia **C**
- unexplained upper abdominal pain and weight loss, with or without back pain **C**
- upper abdominal mass without dyspepsia **C**
- obstructive jaundice (depending on clinical state) – consider urgent ultrasound if available. **C**

Consider urgent referral for patients presenting with:

- persistent vomiting and weight loss in the absence of dyspepsia **C**
- unexplained weight loss or iron deficiency anaemia in the absence of dyspepsia **C**
- unexplained worsening of dyspepsia and: **C**
 - Barrett's oesophagus
 - known dysplasia, atrophic gastritis or intestinal metaplasia
 - peptic ulcer surgery over 20 years ago.

Urgent endoscopy

- Refer urgently for endoscopy patients aged 55 years and older with unexplained² and persistent recent-onset dyspepsia alone. **D**

Note that for patients under 55 years, referral for endoscopy is not necessary in the absence of alarm symptoms. ●

Patients being referred urgently for endoscopy should ideally be free from acid suppression medication, including proton pump inhibitors or H₂ receptor agonists, for a minimum of 2 weeks. ●

Investigations

- When referring, a full blood count may assist specialist assessment in the outpatient clinic. This should be carried out in accordance with local arrangements. ●
- For all patients with new-onset dyspepsia, consider a full blood count to detect iron deficiency anaemia. ●

² In this guideline, unexplained is defined as 'a symptom(s) and/or sign(s) that has not led to a diagnosis being made by the primary care professional after initial assessment of the history, examination and primary care investigations (if any)'. In the context of this recommendation, the primary care professional should confirm that the dyspepsia is new rather than a recurrent episode and exclude common precipitants of dyspepsia such as ingestion of NSAIDs.

Lower gastrointestinal cancer

Refer a patient who presents with symptoms suggestive of colorectal or anal cancer to a team specialising in the management of lower gastrointestinal cancer, depending on local arrangements. ●

In a patient with equivocal symptoms who is not unduly anxious, it is reasonable to 'treat, watch and wait'. ●

Urgent referral

Refer urgently patients:

- aged 40 years and older, reporting rectal bleeding with a change of bowel habit towards looser stools and/or increased stool frequency persisting 6 weeks or more **C**
- aged 60 years and older, with rectal bleeding persisting for 6 weeks or more without a change in bowel habit and without anal symptoms **C**
- aged 60 years and older, with a change in bowel habit to looser stools and/or more frequent stools persisting for 6 weeks or more without rectal bleeding **C**
- of any age with a right lower abdominal mass consistent with involvement of the large bowel **C**
- of any age with a palpable rectal mass (intraluminal and not pelvic; a pelvic mass outside the bowel would warrant an urgent referral to a urologist or gynaecologist) **C**
- who are men of any age with unexplained iron deficiency anaemia and a haemoglobin of 11 g/100 ml or below³ **C**
- who are non-menstruating women with unexplained iron deficiency anaemia and a haemoglobin of 10 g/100 ml or below³. **C**

Risk factors

Offer patients with ulcerative colitis or a history of ulcerative colitis a follow-up plan agreed with a specialist in an effort to detect colorectal cancer in this high-risk group. ●

There is insufficient evidence to suggest that a positive family history of colorectal cancer can be used to assist in the decision about referral of a symptomatic patient. ●

Investigations

- Always carry out a digital rectal examination in patients with unexplained symptoms related to the lower gastrointestinal tract. ●
- Where symptoms are equivocal a full blood count may help in identifying the possibility of colorectal cancer by demonstrating iron deficiency anaemia, which should then determine if a referral should be made and its urgency. **C(DS)**
- When referring, a full blood count may assist specialist assessment in the outpatient clinic. ●
- When referring, no examinations or investigations other than abdominal and rectal examination and full blood count are recommended as this may delay referral. ●

³ In this guideline, unexplained is defined as 'a symptom(s) and/or sign(s) that has not led to a diagnosis being made by the primary care professional after initial assessment of the history, examination and primary care investigations (if any)'. In the context of this recommendation, unexplained means a patient whose anaemia is considered on the basis of a history and examination in primary care not to be related to other sources of blood loss (for example, ingestion of NSAIDs) or blood dyscrasia.

Breast cancer

Refer a patient who presents with symptoms suggestive of breast cancer to a team specialising in the management of breast cancer. ●

In general:

- convey optimism about the effectiveness of breast cancer treatments and survival of breast cancer patients ●
- discuss the information and support needs of your patient and respond sensitively ●
- encourage all patients, including women over 50 years old, to be breast aware⁴. ●

Always take the patient's history into account. For example, it may be appropriate, in discussion with a specialist, to agree referral within a few days in a patient who reports a lump or other symptom that has been present for several months. ●

Urgent referral

Refer urgently patients:

- of any age with a discrete, hard lump with fixation, with or without skin tethering ●
- who are female, aged 30 years and older with a discrete lump that persists after their next period, or presents after menopause ●
- who are female, aged younger than 30 years:
 - with a lump that enlarges ●
 - with a lump that is fixed and hard ●
 - in whom there are other reasons for concern such as family history⁵ ●
- of any age, with previous breast cancer, who present with a further lump or suspicious symptoms ●
- with unilateral eczematous skin or nipple change that does not respond to topical treatment ●
- with nipple distortion of recent onset ●
- with spontaneous unilateral bloody nipple discharge ●
- who are male, aged 50 years and older with a unilateral, firm subareolar mass with or without nipple distortion or associated skin changes. ●

Non-urgent referral

Consider non-urgent referral in:

- women aged younger than 30 years with a lump ●
- patients with breast pain and no palpable abnormality, when initial treatment fails and/or with unexplained persistent symptoms. (Use of mammography in these patients is not recommended.) ●(DS)

Investigations

In patients presenting with symptoms and/or signs suggestive of breast cancer, investigation prior to referral is not recommended. ●

⁴ Breast awareness means the woman knows what her breasts look and feel like normally. Evidence suggests that there is no need to follow a specific or detailed routine such as breast self examination, but women should be aware of any changes in their breasts (see www.cancerscreening.nhs.uk/breastscreen/breastawareness for further information).

⁵ National Institute for Clinical Excellence (2004) Familial breast cancer: the classification and care of women at risk of familial breast cancer in primary, secondary and tertiary care. *NICE Clinical Guideline* No. 14. London: National Institute for Clinical Excellence. Available from: www.nice.org.uk/CG014

Gynaecological cancer

Refer a patient who presents with symptoms suggesting gynaecological cancer to a team specialising in the management of gynaecological cancer, depending on local arrangements. ●

Urgent referral

Refer urgently patients:

- with clinical features suggestive of cervical cancer on examination. A smear test is not required before referral, and a previous negative result should not delay referral **C**
- not on hormone replacement therapy with postmenopausal bleeding **C**
- on hormone replacement therapy with persistent or unexplained postmenopausal bleeding after cessation of hormone replacement therapy for 6 weeks **C**
- taking tamoxifen with postmenopausal bleeding **C**
- with an unexplained vulval lump **C**
- with vulval bleeding due to ulceration. **D**

Consider urgent referral for patients with persistent intermenstrual bleeding and negative pelvic examination. **D**

Refer urgently for an ultrasound scan patients:

- with a palpable abdominal or pelvic mass on examination that is not obviously uterine fibroids or not of gastrointestinal or urological origin. If the scan is suggestive of cancer, an urgent referral should be made. If urgent ultrasound is not available, an urgent referral should be made. **C**

Investigations

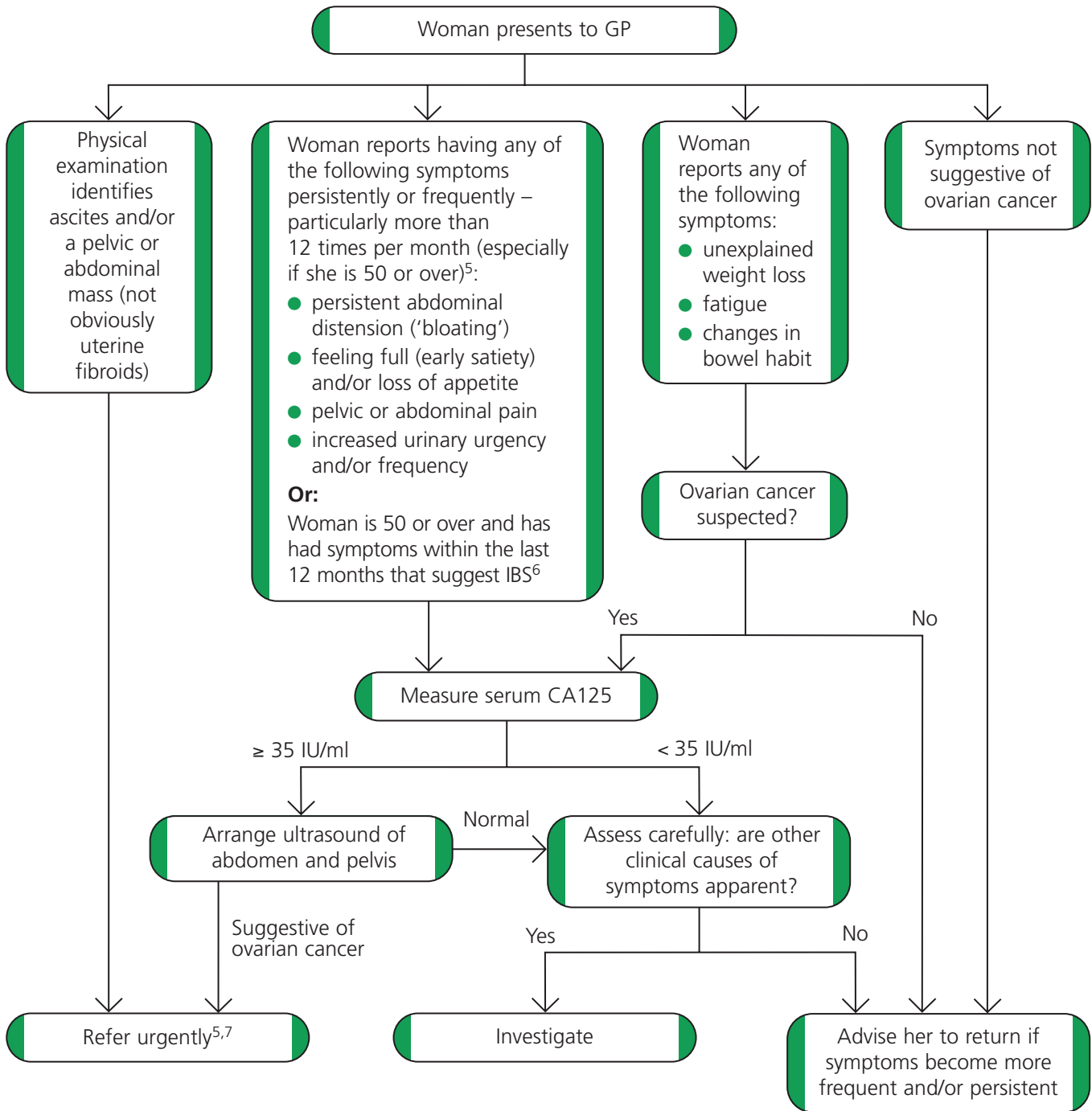
- A full pelvic examination, including speculum examination of the cervix, is recommended for patients presenting with any of the following: ●
 - alterations in the menstrual cycle
 - intermenstrual bleeding
 - postcoital bleeding
 - postmenopausal bleeding
 - vaginal discharge.
- ~~Ovarian cancer is difficult to diagnose. In patients with vague, non-specific, unexplained abdominal symptoms such as:~~
 - bloating
 - constipation
 - abdominal pain
 - back pain
 - urinary symptoms

carry out an abdominal palpation. Also consider a pelvic examination. ●
- In patients with vulval pruritus or pain, a period of 'treat, watch and wait' is reasonable. Active follow-up is recommended until symptoms resolve or a diagnosis is confirmed. If symptoms persist, the referral may be urgent or non-urgent, depending on the symptoms and the degree of concern about cancer. ●

Note:

This recommendation has been updated and replaced by section 1.1.1 in 'Ovarian cancer' (NICE clinical guideline 122, 2011). The guideline and accompanying quick reference guide are available from www.nice.org.uk/guidance/CG122

Detection in primary care



⁵ See also 'Referral guidelines for suspected cancer' (NICE clinical guideline 27; available at www.nice.org.uk/guidance/CG27) for recommendations about the support and information needs of people with suspected cancer.

⁶ See 'Irritable bowel syndrome in adults' (NICE clinical guideline 61; available at www.nice.org.uk/guidance/CG61). Irritable bowel syndrome (IBS) rarely presents for the first time in women of this age.

⁷ An urgent referral means that the woman is referred to a gynaecological cancer service within the national target in England and Wales for referral for suspected cancer, which is currently 2 weeks.

Urological cancer

Refer a patient who presents with symptoms or signs suggestive of a urological cancer to a team specialising in the management of urological cancer, depending on local arrangements. ●

Urgent referral

Refer urgently patients:

- with a hard, irregular prostate typical of a prostate carcinoma. Prostate-specific antigen (PSA) should be measured and the result should accompany the referral. (An urgent referral is not needed if the prostate is simply enlarged and the PSA is in the age-specific reference range⁶.) **C**
- with a normal prostate, but rising/raised age-specific PSA, with or without lower urinary tract symptoms. (In patients compromised by other comorbidities, a discussion with the patient or carers and/or a specialist may be more appropriate.) **C**
- with symptoms and high PSA levels. **C**

Prostate

Refer urgently patients:

- of any age with painless macroscopic haematuria **C**
- aged 40 years and older who present with recurrent or persistent urinary tract infection associated with haematuria **C**
- aged 50 years and older who are found to have unexplained microscopic haematuria **C**
- with an abdominal mass identified clinically or on imaging that is thought to arise from the urinary tract. **C**

Bladder and renal

- Refer urgently patients with a swelling or mass in the body of the testis. **C**

Testicular

- Refer urgently patients with symptoms or signs of penile cancer. These include progressive ulceration or a mass in the glans or prepuce particularly, but can involve the skin of the penile shaft. (Lumps within the corpora cavernosa can indicate Peyronie's disease, which does not require urgent referral.) **D**

Penile

⁶ The age-specific cut-off PSA measurements recommended by the Prostate Cancer Risk Management Programme are as follows: aged 50–59 ≥ 3.0 ng/ml; aged 60–69 ≥ 4.0 ng/ml; aged 70 and over ≥ 5.0 ng/ml. (Note that there are no age-specific reference ranges for men over 80 years. Nearly all men of this age have at least a focus of cancer in the prostate. Prostate cancer only needs to be diagnosed in this age group if it is likely to need palliative treatment.)

Non-urgent referral

- Refer non-urgently patients under 50 years of age with microscopic haematuria. Patients with proteinuria or raised serum creatinine should be referred to a renal physician. If there is no proteinuria and serum creatinine is normal, a non-urgent referral to a urologist should be made. **C**

Investigations

- In an asymptomatic male with a borderline level of PSA, repeat the PSA test after 1 to 3 months. If the PSA level is rising, refer the patient urgently. ●
- A digital rectal examination and a PSA test (after counselling) are recommended for patients with any of the following unexplained symptoms: ●
 - inflammatory or obstructive lower urinary tract symptoms ●
 - erectile dysfunction ●
 - haematuria ●
 - lower back pain ●
 - bone pain ●
 - weight loss, especially in the elderly. ●
- Exclude urinary infection before PSA testing. Postpone the PSA test for at least 1 month after treatment of a proven urinary infection. ●
- In male or female patients with symptoms suggestive of a urinary infection and macroscopic haematuria, diagnose and treat the infection before considering referral. If infection is not confirmed, refer them urgently. ●

Consider an urgent ultrasound in men with a scrotal mass that does not transilluminate and/or when the body of the testis cannot be distinguished. ●

Haematological cancer

- Refer a patient who presents with symptoms suggesting haematological cancer to a team specialising in the management of haematological cancer, depending on local arrangements. ●
- Be aware that haematological cancers can present with a variety of symptoms that may have a number of different clinical explanations. ●
- Combinations of the following symptoms and signs warrant full examination, further investigation (including a blood count and film) and possible referral:
 - fatigue
 - drenching night sweats
 - fever
 - weight loss
 - generalised itching
 - breathlessness
 - bruising
 - bleeding
 - recurrent infections
 - bone pain
 - alcohol-induced pain
 - abdominal pain
 - lymphadenopathy
 - splenomegaly.

The urgency of referral depends on the symptom severity and findings of investigations. ●

Immediate referral

Refer immediately patients:

- with a blood count/film reported as acute leukaemia **D**
- with spinal cord compression or renal failure suspected of being caused by myeloma. **C**

Urgent referral

- Refer urgently patients with persistent unexplained splenomegaly. **C**

Investigations

In patients with:

- persistent unexplained fatigue carry out a full blood count, blood film and erythrocyte sedimentation rate, plasma viscosity or C-reactive protein (according to local policy). Repeat at least once if the patient's condition remains unexplained and does not improve **B(DS)**
- unexplained lymphadenopathy carry out a full blood count, blood film and erythrocyte sedimentation rate, plasma viscosity or C-reactive protein (according to local policy) **B(DS)**
- any of the following additional features of lymphadenopathy: **C(DS)**
 - persistence for 6 weeks or more
 - lymph nodes increasing in size
 - lymph nodes greater than 2 cm in size
 - widespread nature
 - associated splenomegaly, night sweats or weight loss
 investigate further and/or refer
- unexplained bruising, bleeding and purpura or symptoms suggesting anaemia, carry out a full blood count, blood film, clotting screen and erythrocyte sedimentation rate, plasma viscosity or C-reactive protein (according to local policy) **B(DS)**
- persistent and unexplained bone pain, carry out a full blood count and X-ray, urea and electrolytes, liver and bone profile, PSA test (in males) and erythrocyte sedimentation rate, plasma viscosity or C-reactive protein (according to local policy). **C(DS)**

Skin cancer

Refer a patient presenting with skin lesions suggestive of skin cancer or in whom a biopsy has confirmed skin cancer to a team specialising in skin cancer. ●

- Refer patients with persistent or slowly evolving unresponsive skin conditions with uncertain diagnosis to a dermatologist. ●
- If you perform minor surgery you should have received appropriate accredited training in relevant aspects of skin surgery including cryotherapy, curettage, and incisional and excisional biopsy techniques, and should undertake appropriate continuing professional development. ●

Melanoma

- Change is a key element in diagnosing malignant melanoma. For low-suspicion lesions, undertake careful monitoring for change using the 7-point checklist (see below) for 8 weeks. Make measurements with photographs and a marker scale and/or ruler. ●
- Be aware of and use the 7-point weighted checklist for assessment of pigmented skin lesions. ●

<p><i>Major features of lesions:</i></p> <ul style="list-style-type: none"> - change in size - irregular shape - irregular colour. 	<p><i>Minor features of lesions:</i></p> <ul style="list-style-type: none"> - largest diameter 7 mm or more - inflammation - oozing - change in sensation.
---	--
- Lesions scoring 3 points or more (based on major features scoring 2 points each and minor features scoring 1 point each) in the 7-point checklist above are suspicious. (If you strongly suspect cancer any one feature is adequate to prompt urgent referral.) ●

Urgent referral

Refer urgently patients:

- with a lesion suspected to be melanoma. (Excision in primary care should be avoided.) C

Melanoma

Refer urgently patients:

- with non-healing keratinizing or crusted tumours larger than 1 cm with significant induration on palpation. They are commonly found on the face, scalp or back of the hand with a documented expansion over 8 weeks C
- who have had an organ transplant and develop new or growing cutaneous lesions as squamous cell carcinoma is common with immunosuppression but may be atypical and aggressive C
- with histological diagnosis of a squamous cell carcinoma. C

Squamous cell carcinomas

Non-urgent referral

- Basal cell carcinomas are slow growing, usually without significant expansion over 2 months, and usually occur on the face. If basal cell carcinoma is suspected, refer non-urgently. **C**

Basal cell
carcinomas

Investigations

- All pigmented lesions that are not viewed as suspicious of melanoma but are excised should have a lateral excision margin of 2 mm of clinically normal skin and cut to include subcutaneous fat in depth. **B(DS)**
- Send all excised skin specimens for pathological examination **C(DS)**
- When referring a patient in whom an excised lesion has been diagnosed as malignant, send a copy of the pathology report with the referral correspondence. ●

Head and neck cancer including thyroid cancer

Refer a patient who presents with symptoms suggestive of head and neck or thyroid cancer to an appropriate specialist or the neck lump clinic, depending on local arrangements. ●

Urgent referral

Refer urgently patients with:

- an unexplained lump in the neck, of recent onset, or a previously undiagnosed lump that has changed over a period of 3 to 6 weeks **C**
- an unexplained persistent swelling in the parotid or submandibular gland **D**
- an unexplained persistent sore or painful throat **D**
- unilateral unexplained pain in the head and neck area for more than 4 weeks, associated with otalgia (ear ache) but a normal otoscopy **D**
- unexplained ulceration of the oral mucosa or mass persisting for more than 3 weeks **C**
- unexplained red and white patches (including suspected lichen planus) of the oral mucosa that are painful or swollen or bleeding.

For patients with persistent symptoms or signs related to the oral cavity in whom a definitive diagnosis of a benign lesion cannot be made, refer or follow up until the symptoms and signs disappear. If the symptoms and signs have not disappeared after 6 weeks, make an urgent referral. **D**

- Refer urgently to a dentist patients with unexplained tooth mobility persisting for more than 3 weeks. **C**

Monitor for oral cancer patients with confirmed oral lichen planus, as part of routine dental examination. ●

Advise all patients, including those with dentures, to have regular dental checkups⁷. ●

To a dentist

- Refer urgently for chest X-ray patients with hoarseness persisting for more than 3 weeks, particularly smokers aged older than 50 years and heavy drinkers.

If there is a positive finding, refer urgently to a team specialising in the management of lung cancer. If there is a negative finding, refer urgently to a team specialising in head and neck cancer. **C**

For a chest X-ray

Non-urgent referral

- Refer non-urgently a patient with unexplained red and white patches of the oral mucosa that are not painful, swollen or bleeding (including suspected lichen planus). **C**

⁷ National Institute for Clinical Excellence (2004) Dental recall: recall interval between routine dental examinations. *NICE Clinical Guideline* No. 19. National Institute for Clinical Excellence. Available from: www.nice.org.uk/CG019

Investigations

With the exception of persistent hoarseness, investigations are not recommended as they can delay referral. ●

Thyroid cancer

Immediate referral

- Refer immediately patients with symptoms of tracheal compression including stridor due to thyroid swelling. **D**

Urgent referral

Refer urgently patients with a thyroid swelling associated with any of the following: **D**

- a solitary nodule increasing in size
- a history of neck irradiation
- a family history of an endocrine tumour
- unexplained hoarseness or voice changes
- cervical lymphadenopathy
- very young (pre-pubertal) patient
- patient aged 65 years and older.

Investigations

- Primary care initiation of investigations such as ultrasonography or isotope scanning is not recommended. ●
- Request thyroid function tests in patients with a thyroid swelling without stridor or any of the features listed above. Refer patients with hyper- or hypothyroidism and an associated goitre, non-urgently, to an endocrinologist. Patients with goitre and normal thyroid function tests without any of the features listed above should be referred non-urgently. ●

Brain and CNS cancer

Refer a patient who presents with symptoms suggestive of brain or CNS cancer to an appropriate specialist, depending on local arrangements. ●

- Discuss any concerns about a patient's symptoms and/or signs with a local specialist. If rapid access to scanning is available, consider as an alternative to referral. ●
- Re-assessment and re-examination is required if the patient does not progress according to expectations. ●

Urgent referral

Refer urgently patients with:

- symptoms related to the CNS, including:
 - progressive neurological deficit
 - new-onset seizures
 - headaches
 - mental changes
 - cranial nerve palsy
 - unilateral sensorineural deafness
 in whom a brain tumour is suspected ●
- headaches of recent onset accompanied by features suggestive of raised intracranial pressure, for example:
 - vomiting
 - drowsiness
 - posture-related headache
 - pulse-synchronous tinnitus
 or by other focal or non-focal neurological symptoms, for example blackout, change in personality or memory ●
- a new, qualitatively different, unexplained headache that becomes progressively severe ●
- suspected recent-onset seizures (refer to neurologist)⁸. ●

Consider urgent referral (to an appropriate specialist) in patients with rapid progression of:

- subacute focal neurological deficit ●
- unexplained cognitive impairment, behavioural disturbance or slowness, or a combination of these ●
- personality changes confirmed by a witness and for which there is no reasonable explanation even in the absence of the other symptoms and signs of a brain tumour. ●

⁸ National Institute for Clinical Excellence (2004) The epilepsies: the diagnosis and management of the epilepsies in adults and children in primary and secondary care. *NICE Clinical Guideline* No. 20. National Institute for Clinical Excellence. Available from: www.nice.org.uk/CG020

Non-urgent referral

Consider non-urgent referral or discussion with specialist for: **D**

- unexplained headaches of recent onset:
 - present for at least 1 month
 - not accompanied by features suggestive of raised intracranial pressure.

Risk factors

Refer urgently patients previously diagnosed with any cancer who develop any of the following symptoms: ●

- recent-onset seizure
- progressive neurological deficit
- persistent headaches
- new mental or cognitive changes
- new neurological signs.

Investigations

- In a patient with new, unexplained headaches or neurological symptoms, undertake a neurological examination guided by the symptoms, but including examination for papilloedema. Note that the absence of papilloedema does not exclude the possibility of a brain tumour. ●
- When a patient presents with seizure, take a detailed history from the patient and an eyewitness to the event. Carry out a physical examination, including cardiac, neurological and mental state, and developmental assessment, where appropriate. ●

Bone cancer and sarcoma

- Refer a patient who presents with symptoms suggesting bone cancer or sarcoma to a team specialising in the management of bone cancer and sarcoma, or to a recognised bone cancer centre, depending on local arrangements. ●
- If you have concerns about a patient's symptoms and/or signs, consider a discussion with the local specialist. ●

Immediate X-ray

Refer for an immediate X-ray a patient with a suspected spontaneous fracture. **B(DS)**

If the X-ray:

- indicates possible bone cancer, refer urgently **C(DS)**
- is normal but symptoms persist, follow up and/or request repeat X-ray, bone function tests or referral. **C(DS)**

Bone tumours

Urgent referral

Refer urgently if:

- a patient presents with a palpable lump that is: **C**
 - greater than about 5 cm in diameter
 - deep to fascia, fixed or immobile
 - increasing in size
 - painful
 - a recurrence after previous excision.

If a patient has HIV, consider Kaposi's sarcoma and make an urgent referral if suspected. **C**

Soft tissue sarcomas

Urgent investigation

- Urgently investigate increasing, unexplained or persistent bone pain or tenderness, particularly pain at rest (and especially if not in the joint), or an unexplained limp. In older people metastases, myeloma or lymphoma, as well as sarcoma, should be considered. **C(DS)**

Cancer in children and young people

- Refer children and young people who present with symptoms and signs of cancer to a paediatrician or a specialist children's cancer service, if appropriate. ●
- When making a referral, inform the parents and child or young person about the reason for referral and which service they are going to attend so that they know what to do and what will happen next. ● Establish good communication in order to develop the supportive relationship that will be needed if cancer is found. ●

Consider referral

Consider referral when a child or young person presents with persistent back pain (an examination is needed and a full blood count and blood film). ●

Persistent parental anxiety is sufficient reason for referral, even where a benign cause is considered most likely. ● Take into account parental insight and knowledge when considering urgent referral. ●

Urgent referral

Refer urgently when a child or young person presents:

- several times (for example, three or more times) with the same problem, but with no clear diagnosis (investigations should also be carried out). ●

There are associations between Down's syndrome and leukaemia, between neurofibromatosis and CNS tumours, and between other rare syndromes and some cancers. Be alert to the potential significance of unexplained symptoms in children with such syndromes. ●

Leukaemia (children of all ages)

Immediate referral

Refer immediately children or young people with either: ●

- unexplained petechiae, or
- hepatosplenomegaly.

Investigations

- Investigate with full blood count and blood film one or more of the following symptoms and signs: ●(DS)
 - pallor
 - fatigue
 - unexplained irritability
 - unexplained fever
 - persistent or recurrent upper respiratory tract infections
 - generalised lymphadenopathy
 - persistent or unexplained bone pain
 - unexplained bruising.

If the blood film or full blood count indicates leukaemia, make an urgent referral.

Lymphomas

Immediate referral

Refer immediately children or young people with either: **C**

- hepatosplenomegaly, or
- mediastinal or hilar mass on chest X-ray.

Urgent referral

Refer urgently children or young people:

- with one or more of the following (particularly if there is no evidence of local infection): **C**
 - non-tender, firm or hard lymph nodes
 - lymph nodes greater than 2 cm in size
 - lymph nodes progressively enlarging
 - other features of general ill-health, fever or weight loss
 - axillary node involvement (in the absence of local infection or dermatitis)
 - supraclavicular node involvement
- with shortness of breath and unexplained petechiae or hepatosplenomegaly (particularly if not responding to bronchodilators). **C**

Brain and CNS tumours

Immediate referral

Refer immediately children or young people with:

- a reduced level of consciousness **C**
- headache and vomiting that cause early morning waking or occur on waking as these are classical signs of raised intracranial pressure. **C**

Refer immediately children aged younger than 2 years with any of the following symptoms: **C**

- new-onset seizures
- bulging fontanelle
- extensor attacks
- persistent vomiting.

Refer urgently or immediately children with any of the following neurological symptoms and signs: **D**

- new-onset seizures
- cranial nerve abnormalities
- visual disturbances
- gait abnormalities
- motor or sensory signs
- unexplained deteriorating school performance or developmental milestones
- unexplained behavioural and/or mood changes.

Urgent referral

Refer urgently children aged 2 years and older, and young people, with:

- a persistent headache where you cannot carry out an adequate neurological examination in primary care. **D**

Refer urgently children aged younger than 2 years with:

- any of the following symptoms suggestive of CNS cancer: **C**
 - abnormal increase in head size
 - arrest or regression of motor development
 - altered behaviour
 - abnormal eye movements
 - lack of visual following
 - poor feeding/failure to thrive.
 - squint, urgency dependent on other factors.

Neuroblastoma (all ages)

Most children and young people with neuroblastoma have symptoms of metastatic disease which may be general in nature (malaise, pallor, bone pain, irritability, fever or respiratory symptoms), and may resemble those of acute leukaemia.

Investigations

- Investigate with a full blood count any of the following symptoms and signs: **C(DS)**
 - persistent or unexplained bone pain (X-ray also needed)
 - pallor
 - fatigue
 - unexplained irritability
 - unexplained fever
 - persistent or recurrent upper respiratory tract infections
 - generalised lymphadenopathy
 - unexplained bruising.
- If neuroblastoma is suspected carry out an abdominal examination (and/or urgent ultrasound), and consider chest X-ray and full blood count. If any mass is found, refer urgently. **C(DS)**
- Infants aged younger than 1 year may have localised abdominal or thoracic masses, and in infants younger than 6 months of age there may also be rapidly progressive intra-abdominal disease. Some babies may present with skin nodules. If any such mass is identified, refer immediately. **C**

Urgent referral

Refer urgently children with: **C**

- proptosis
- unexplained back pain
- leg weakness
- unexplained urinary retention.

Wilms' tumour (all ages)

Wilms' tumour most commonly presents with a painless abdominal mass.

Investigations

Persistent or progressive abdominal distension should prompt abdominal examination. ●

- If a mass is found, refer immediately.
- If the child or young person is uncooperative and abdominal examination is not possible, consider referral for an urgent abdominal ultrasound.

Urgent referral

- Refer urgently a child or young person presenting with haematuria. C ●

Soft tissue sarcoma (all ages)

- A soft tissue mass in an unusual location may give rise to misleading local and persistent unexplained symptoms and signs, and sarcoma should be considered. These include: ●
 - head and neck:
 - ◆ proptosis
 - ◆ persistent unexplained unilateral nasal obstruction with or without discharge and/or bleeding
 - ◆ aural polyps/discharge
 - genitourinary tract:
 - ◆ urinary retention
 - ◆ scrotal swelling
 - ◆ bloodstained vaginal discharge.

Urgent referral

- Refer urgently a child or young person presenting with an unexplained mass at almost any site that has one or more of the following features. The mass is: C ●
 - deep to the fascia
 - non-tender
 - progressively enlarging
 - associated with a regional lymph node that is enlarging
 - greater than 2 cm in diameter in size.

Bone sarcomas (osteosarcoma and Ewing's sarcoma) (all ages)

History of an injury should not be assumed to exclude the possibility of a bone sarcoma. ●

Referral

Refer children or young people with:

- rest pain, back pain and unexplained limp (a discussion with a paediatrician or X-ray should be considered before or as well as referral) C
- persistent localised bone pain and/or swelling, and X-ray showing signs of cancer. In this case refer urgently. C

Retinoblastoma (mostly children less than 2 years)

Urgent referral

Refer urgently children with:

- a white pupillary reflex (leukocoria). Pay attention to parents reporting an odd appearance in their child's eye C
- a new squint or change in visual acuity if cancer is suspected. (Refer non-urgently if cancer is not suspected.) C
- a family history of retinoblastoma and visual problems. (Screening should be offered soon after birth.) C

Investigations

- Imaging may be best done by a paediatrician, following referral. ●
- Any of the following symptoms and signs requires a full blood count: C(DS)
 - pallor
 - fatigue
 - irritability
 - unexplained fever
 - persistent or recurrent upper respiratory tract infections
 - generalised lymphadenopathy
 - persistent or unexplained bone pain (X-ray also needed)
 - unexplained bruising.