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Referral guidelines for suspected cancer

Understanding NICE guidance –
information for people with suspected
cancer, their families and carers,
and the public



Ordering information

You can download the following documents from www.nice.org.uk/CG027

- This booklet.
- The NICE guideline – all the recommendations on referral guidelines for suspected cancer.
- A quick reference guide, which has been distributed to health professionals working in the NHS in England.
- The full guideline – all the recommendations, details of how they were developed, and summaries of the evidence on which they were based.

For printed copies of the quick reference guide or information for the public, phone the NHS Response Line on 0870 1555 455 and quote:

- N0851 (quick reference guide)
- N0852 (information for the public)

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About this information

This booklet provides a simple guide to the clinical guideline that the National Institute for Health and Clinical Excellence (NICE) issued to the NHS in England and Wales on referral for suspected cancer.

This guideline is an update of a guideline published by the Department of Health in 2000. The recommendations made here take account of new research and override those made previously.

Clinical guidelines

Clinical guidelines are recommendations for good practice. The recommendations in NICE guidelines are prepared by groups of health workers, patients, carers and scientists. The groups look at the evidence available on the best way of treating or managing the condition and make recommendations based on this evidence.

What the recommendations cover

NICE clinical guidelines can look at different areas of diagnosis, treatment, care, self-help or a combination of these. The areas that a guideline covers depend on the topic. They are laid out in a document called the scope at the start of guideline development.

The information that follows tells you about the NICE guideline on referral guidelines for suspected cancer. This guideline will help general practitioners (GPs) make decisions about when to refer people to specialists when they present with symptoms that could be caused by cancer. This guideline is not about treating cancer.

How guidelines are used in the NHS

In general, health professionals in the NHS are expected to follow NICE's clinical guidelines. But there will be times when the recommendations won't be suitable for someone because of his or her specific medical condition, general health, wishes or a combination of these. If you think that the treatment or care you receive does not match the treatment or care described on the pages that follow, you should talk to your doctor, nurse or other health professional involved in your treatment.

You have the right to be fully informed and to share in making decisions about your healthcare, and the care you receive should take account of your individual needs.

Cancer referral and your information needs

How to use this booklet

This booklet is divided into three sections.

- This section (pages 4–11) is for everyone reading this booklet. Recommendations on the support and information needs of people being referred are covered, as well as general recommendations on diagnosis.
- The second section (pages 12–41) is for adults being referred with suspected cancer. Symptoms of each type of cancer are listed together with referral recommendations. This will help GPs identify patients with suspected cancer and refer them to an appropriate specialist.
- The third section (pages 42–53) is about referral of children and young people with suspected cancer.

Please read the first section as well as the specific section you are interested in.

Your needs

Cancer can be difficult for your GP to spot because it can have the same symptoms as other common diseases. Your GP should be able to identify the most typical symptoms of cancer and should look out for patients who have unusual symptoms or who don't get better after treatment for other conditions.

Being referred to a specialist does not necessarily mean you have cancer; in fact, most people referred don't have cancer

If your GP suspects you may have cancer, you should be fully informed and given the time and opportunity to take part in making decisions about being referred and any tests. Your GP should discuss any other conditions that may be causing the symptoms and the potential risks and benefits of any tests you may need to have.

You should be able to choose whether to see a male or female GP

Being referred for suspected cancer can be upsetting. Your GP should help and support you. You, and anyone who cares for you, should be given information tailored to your needs. Your GP should also be able to give you information about support groups that might be able to help you.

People with special needs, such as learning disabilities or impaired sight or hearing, may need particular support.

If you are being referred your GP should be able to tell you:

- where you are being referred to
- how soon the appointment will be
- who will see you
- what you can expect to happen at your appointment
- how long it will be before you get a diagnosis or test results
- whether someone can go with you to the appointment.

Your culture, responsibilities, gender and age may affect how you feel about being referred and the type of support and information your GP should offer you

While you are waiting for your appointment, your GP should continue to provide support and ask you to contact him/her again if you have any concerns.

If you feel unhappy about the care you have received you can ask to see a different GP

Children

Cancer is uncommon in children and is difficult to spot. Your GP should recognise that parents are usually the best observers of their children, and listen carefully to their concerns. When a child doesn't recover as expected the GP should reassess the child or seek a second opinion from a colleague.

When cancer is suspected in a child, the GP should discuss the referral decision and information to be given to the child with the parents or carers (and the child if appropriate).

Tests

Tests can be helpful when trying to find out if a patient has cancer. In patients with typical cancer symptoms, tests should not be carried out by the GP if this could delay referral. In patients with less typical symptoms, tests might be needed and should be carried out urgently. An urgent referral to a specialist should be made if tests are not readily available in your area.

Referral times

When making a referral your GP will assess how urgently you need to be seen by the specialist. This decision will be based on your symptoms and on the other factors described in following sections of this booklet.

The words immediate, urgent and non-urgent are used to distinguish between the types of referral needed.

- **Immediate:** the patient needs to be referred and seen within a few hours, or even more quickly if necessary
- **Urgent:** the patient is seen within the national target for urgent referrals (2 weeks at the time of publication)
- **Non-urgent:** all other referrals.

Definitions

In this booklet, the word **unexplained** is often used. NICE has defined unexplained as a symptom that has not led to a diagnosis being made by the GP after initial assessment of the history, examination and primary care investigations (if any).

The word **persistent** is also used in many of the recommendations. NICE has said that in this guideline persistent refers to symptoms that present for longer than expected.

Your local NHS

The NHS in your area should make sure that the process of being referred runs smoothly. Your GP can help this by making sure that:

- referrals are made within 1 working day
- all relevant information is sent to the specialist; this includes notifying the specialist of any support needs the patient may have
- each referral is to a team specialising in the particular type of cancer suspected.

The NHS in your area should also have plans in place to make sure that:

- letters about non-urgent referrals are checked by the specialist
- a maximum waiting period for non-urgent referrals exists
- patients who miss their appointments are followed up.

Adult cancer

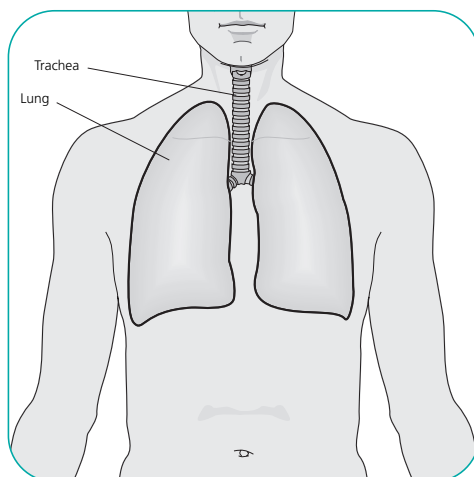
Lung cancer

A patient with symptoms of lung cancer should be referred by the GP to a team specialising in lung cancer.

Immediate referral

Immediate referral should be considered for patients with:

- swelling affecting both the face and neck caused by an obstruction in the jugular veins (these veins run down either side of the neck), or
- stridor (this is a harsh sound heard when breathing in).



The lungs and trachea

Urgent referral

Urgent referral should be made for patients:

- who are coughing up blood persistently and are smokers or ex-smokers aged 40 years and older
- with a chest X-ray showing signs of lung cancer
- with a normal chest X-ray, but in whom the GP strongly suspects lung cancer
- with a history of asbestos exposure and a chest X-ray showing signs of lung cancer.

Urgent chest X-ray

Urgent referral for a chest X-ray should be made for patients:

- who are coughing up blood
- with unexplained or persistent (lasting more than 3 weeks):
 - chest and/or shoulder pain
 - difficulty breathing
 - weight loss
 - signs of cancer when the chest is examined
 - hoarse voice
 - swelling in the ends of the fingers
 - swelling in the glands in the neck or above the collar bone
 - cough
 - features suggesting that lung cancer has spread to other parts of the body
- who have had breathing problems for a long time and have unexplained changes in existing symptoms
- with a history of asbestos exposure with new chest pain, difficulty breathing or unexplained symptoms and a chest X-ray showing signs of cancer.

Risk factors

The GP should consider an earlier referral for chest X-ray or to a specialist for patients at greater risk of lung cancer. These patients include:

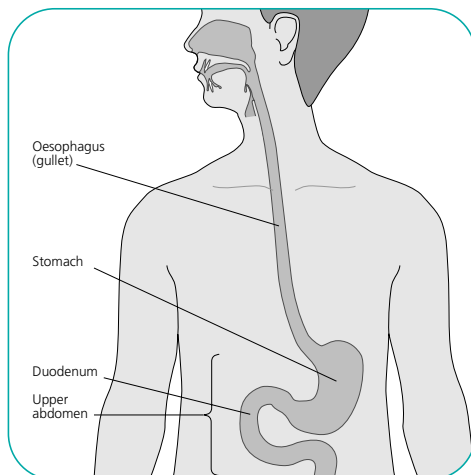
- all smokers or ex-smokers
- people with chronic obstructive pulmonary disease (COPD)
- people who have been exposed to asbestos
- people with previous history of cancer (especially head and neck cancer).

Upper gastrointestinal cancer

Upper gastrointestinal cancer can affect the oesophagus, stomach or first part of the intestine (duodenum).

A patient with symptoms of upper gastrointestinal cancer should be referred by the GP to a team specialising in upper gastrointestinal cancer.

Indigestion is a rare symptom of upper gastrointestinal cancer. It can also be linked to a stomach infection caused by a bacterium called *Helicobacter pylori* (*H. pylori* for short). If these bacteria are found this infection should be treated first. The presence of these bacteria, however, should not affect the GP's decision on referral.



The upper gastrointestinal tract

Urgent endoscopy

An endoscope is a tube with a light and a tiny camera on the end that allows doctors to look inside the body. The GP should make an urgent referral for endoscopy in patients:

- aged 55 years and older with unexplained and persistent indigestion that started recently.

If you are being referred for an endoscopy you may need to stop taking certain medicines for at least 2 weeks before the test. Your GP should discuss this with you.

Urgent referral

An urgent referral to a specialist team or for an endoscopy should be made for patients with:

- indigestion and ongoing, persistent gastrointestinal bleeding that has been present for a long time (it is possible to have gastrointestinal bleeding without any symptoms; however, vomiting blood and passing stools with blood in them can be symptoms)
- indigestion and difficulty in swallowing
- indigestion and ongoing unexplained weight loss
- indigestion and persistent vomiting
- indigestion and anaemia
- indigestion and a lump in the upper abdomen
- indigestion, with an unexpected barium meal test result. (A barium meal test involves swallowing a liquid containing barium, which shows up on X-ray.)

In patients under 55 years with indigestion, an endoscopy is not needed unless it exists with any of the above symptoms.

An urgent referral should be made for patients with:

- difficulty swallowing
- unexplained pain in the upper abdomen and weight loss, with or without back pain
- a lump in the upper abdomen without indigestion
- jaundice caused by an obstruction of the bile ducts. (Symptoms of jaundice include yellowing of the skin and the eyes.) An urgent ultrasound test should also be considered by the GP.

An urgent referral should be considered for patients with:

- persistent vomiting and weight loss without indigestion
- unexplained weight loss or anaemia without indigestion.

Risk factors

The GP should consider an urgent referral if there is a change in the type of indigestion and the patient has:

- Barrett's oesophagus (a disease in the lining of the oesophagus)
- stomach or intestinal disease
- had a peptic ulcer operation over 20 years ago.

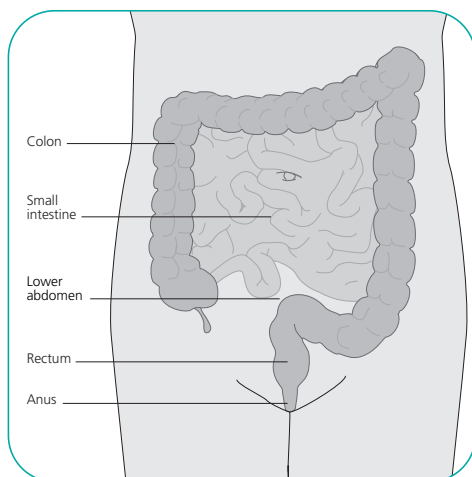
Tests

A blood test may be considered for anyone presenting with indigestion for the first time. This will help to identify anaemia. Results of a blood test are also useful for the specialist when the patient is referred.

Lower gastrointestinal cancer

Lower gastrointestinal cancer affects the lower part of the digestive system. This includes the colon, the rectum and the anus.

A patient with symptoms of colorectal or anal cancer should be referred by the GP to a team specialising in lower gastrointestinal cancer. If your symptoms are not clear, and you are not overly anxious, it is reasonable for the GP to treat the symptoms and see if they get better.



The lower gastrointestinal tract

Urgent referral

Urgent referral should be made in patients:

- aged 40 years and older, with rectal bleeding with a change in stool frequency or stool consistency that has persisted for 6 weeks or more
- aged 60 years and older, with rectal bleeding persisting for 6 weeks or more without a change in bowel movements and without anal symptoms (anal symptoms include discomfort, itching and lumps as well as pain)
- aged 60 years and older, with a change in bowel movement with looser stools and/or more frequent stools persisting for 6 weeks or more without rectal bleeding
- of any age with a lump in the lower abdomen on the right side

- of any age with a lump in the rectum
- who are men of any age with unexplained anaemia
- who are non-menstruating women with unexplained anaemia.

Risk factors

The GP should follow up patients with a disease called ulcerative colitis or who have had this disease in the past (this disease involves inflammation of the colon and rectum). Patients with this disease have a higher risk of colorectal cancer. The GP should agree a follow-up plan with a specialist and offer it to the patient. The aim of follow-up is to spot cancer early.

There is not enough evidence to suggest that the GP should use family history of colorectal cancer as a factor when making a decision about referral.

Tests

Any patients with unexplained symptoms related to the lower gastrointestinal tract should be offered a digital rectal examination. This is usually carried out by the GP and involves the GP feeling inside the rectum with a finger to check for anything unusual.

A blood test may be carried out by the GP. This will help to identify anaemia which may indicate lower gastrointestinal cancer. The results of this test will also be useful for the specialist if you are being referred.

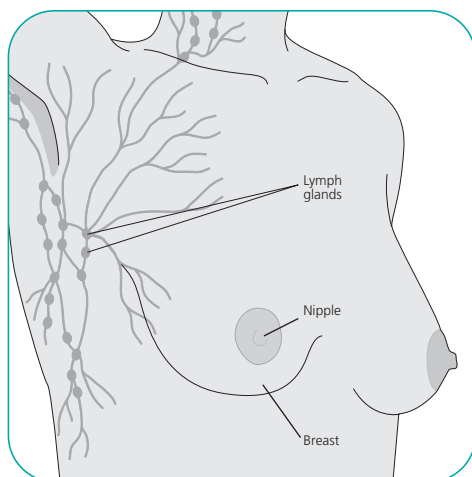
Apart from an abdominal or digital rectal examination and blood tests, GPs should not carry out any other tests as they may delay referral.

Breast cancer

Breast cancer is cancer of the breasts and can occur in men as well as women. A patient with symptoms of breast cancer should be referred by the GP to a team specialising in breast cancer.

Your GP should explain that treatments for breast cancer are very effective and help many people survive. The GP should be sensitive towards patients being referred for suspected breast cancer and discuss any specific information and support needs the patient may have.

The GP should encourage all patients, including women over 50 years old, to be breast aware¹. This should help avoid delays in people coming forward with symptoms. The GP should take a patient's history into account when making decisions about referral. For example, the GP might talk to a specialist and arrange referral for patients reporting a lump or other symptom that has been present for several months.



The breasts and lymph glands.

¹Breast awareness means knowing what your breasts look and feel like normally (see www.cancerscreening.nhs.uk for further information).

Urgent referral

Urgent referral should be made in patients:

- of any age with a separate, distinct, hard lump that is fixed, with or without dimpling of the skin (sometimes called skin tethering)
- aged 30 years and older with a separate, distinct lump that is still present after their next period, or occurs after the menopause
- aged younger than 30 years with a lump that is growing or has other features linked with cancer (such as being fixed and hard), or other factors such as family history²
- of any age, who have had breast cancer before, and have a new lump or other suspicious symptoms
- with eczema on one breast or a nipple change that does not get better when treated
- with a recent change in nipple shape
- with a bloody discharge from one nipple
- who are male, aged 50 years and older with a firm lump in one breast with or without a change in nipple shape or skin changes.

²NICE has published a guideline on familial breast cancer; it is available from www.nice.org.uk/page.aspx?o=203181

Non-urgent referral

Harmless lumps in people under 30 years of age are very common. Patients under 30 with a lump should be referred non-urgently by the GP.

The GP should also make a non-urgent referral for patients with breast pain and no other symptoms, when the first treatment that the GP offers doesn't work. A non-urgent referral should also be made if there are any unexplained persistent symptoms.

Tests

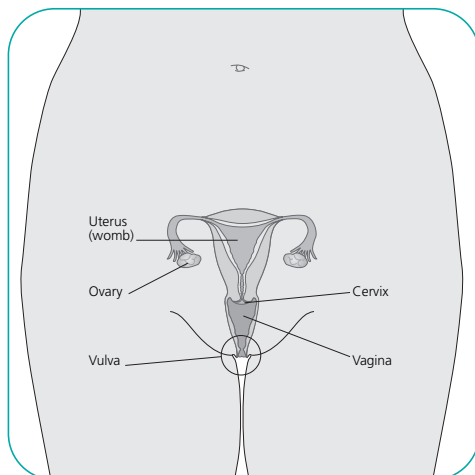
Where patients have symptoms suggestive of breast cancer, NICE recommends that tests should not be carried out before referral to a specialist.

Gynaecological cancer

Gynaecological cancer is cancer of a woman's sex organs and includes cancer of the uterus, ovaries, cervix and vulva. A patient who presents with symptoms suggesting gynaecological cancer should be referred by the GP to a team specialising in gynaecological cancer.

The first symptoms of gynaecological cancer can be changes in the menstrual cycle, bleeding between periods, bleeding after sex, bleeding after the menopause or vaginal discharge. The GP should carry out a full pelvic examination in women with these symptoms. In a pelvic examination the GP will insert two fingers into the vagina to feel for anything unusual. A full pelvic examination should include looking at the cervix using an instrument called a speculum.

Ovarian cancer is particularly difficult to diagnose as the symptoms are often vague. Women may have abdominal symptoms such as bloating, constipation, abdominal or back pain, or urinary symptoms. In these patients, the GP should carry out an abdominal examination. This examination involves the GP touching and pressing the abdomen to feel for anything unusual. If the GP suspects cancer, a pelvic examination might also be carried out.



The gynaecological system

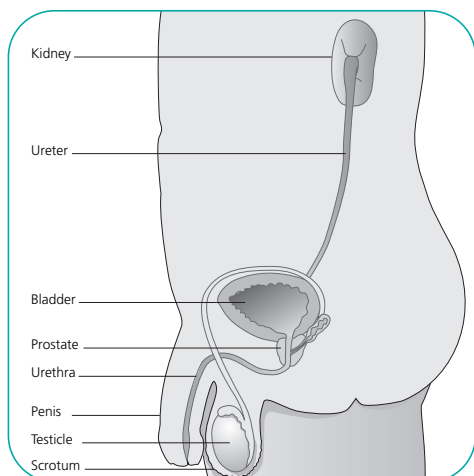
Urgent referral

An urgent referral should be made in women:

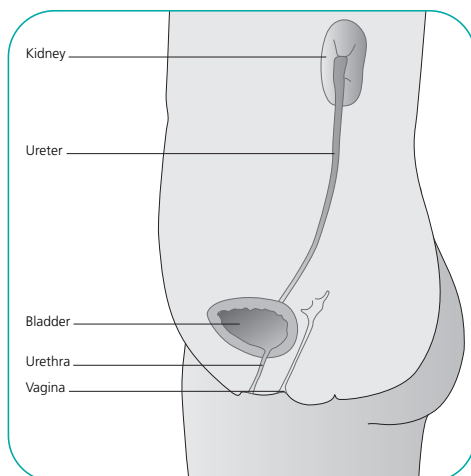
- with features of cervical cancer seen on examination. The GP will use a speculum to look at the cervix and check for these features. (A smear test is not needed before the referral, and a negative result from a previous smear test is not a reason to delay referral.)
- with postmenopausal bleeding, who are not on hormone replacement therapy
- on hormone replacement therapy who have persistent or unexplained postmenopausal bleeding that doesn't stop after 6 weeks of not taking hormone replacement therapy
- with postmenopausal bleeding who are taking a medicine called tamoxifen
- with repeated bleeding between periods who have had a pelvic examination that didn't show any signs or symptoms
- with symptoms of vulval cancer. (The vulva is the general term for all the external sex organs of a woman.) These symptoms include an unexplained lump on the vulva and vulval bleeding due to ulcerated skin.

The GP should treat a woman with vulval itching or pain and see if the symptoms improve. If the symptoms don't get better and the GP can't make a diagnosis, the GP should make a referral. This referral may be urgent or non-urgent, depending on the symptoms and on whether the GP suspects cancer.

Urological cancer



The male urological system



The female urological system

Urological cancer is cancer of the urinary tract, which includes the bladder and kidneys. This section also covers cancer of the penis, testicles and prostate.

A patient with symptoms of urological cancer should be referred by the GP to a team specialising in urological cancer.

Prostate cancer

The prostate is a small gland found only in men. Symptoms of prostate cancer include:

- difficulty passing urine
- a weak or sometimes intermittent flow of urine
- difficulty in starting to pass urine
- blood in the urine
- lower back pain
- bone pain
- weight loss, especially in the older men
- erectile dysfunction (an inability to get or keep an erection firm enough for sexual activity).

Tests

Any patients with symptoms of prostate cancer should be given a digital rectal examination. This involves the GP gently feeling inside the rectum with a finger to check for anything unusual.

There is a blood test which measures the level of a protein called prostate specific antigen (or PSA for short). The levels of this protein in the blood are sometimes higher in patients with prostate cancer. The GP should discuss the implications of this test and offer it to patients with symptoms of prostate cancer with the patient's agreement.

Before a PSA test the GP should make sure that the symptoms seen aren't due to a urine infection confirmed by a test. Any infection should be treated and a PSA test delayed until 1 month after the infection has gone.

Urgent referral

An urgent referral should be made in patients with:

- a hard, irregular prostate (PSA levels should also be tested). If the prostate is simply enlarged and the PSA level is in the age-specific range³ an urgent referral is not needed
- PSA levels above the age-specific range with or without lower urinary tract symptoms and a normal prostate
- symptoms and high PSA levels.

In patients with a borderline level of PSA and no other symptoms of prostate cancer, the GP should carry out another PSA test 1 to 3 months later. If the second test shows that the PSA level is rising, the GP should refer the patient urgently.

Bladder and kidney cancer

Bladder and kidney cancer can affect men and women.

Urgent referral

In patients with symptoms of bladder and kidney (renal) cancer the GP should test for a urinary tract infection before deciding whether to make a referral. The infection should be treated if present, and if there isn't an infection an urgent referral should be made.

Urgent referral should also be made in patients:

- aged 40 years and older with urine infection with blood in the urine that keeps coming back or is long-lasting
- aged 50 years and older with unexplained blood in the urine
- with an abdominal lump that might be in the urinary tract.

³The levels of PSA in the blood are age specific. This means that the PSA level is compared to that of an average man of that age.

Tests

In patients under the age of 50 years with traces of blood in the urine, the GP should carry out tests to find out if the kidneys and renal system are working properly. Depending on the results of these the GP should make a referral to the appropriate specialist.

Testicular cancer Urgent referral

An urgent referral should be made in patients with a swelling or lump in the testicles. The GP should consider arranging an urgent ultrasound scan if there is a lump in the scrotum that can't be distinguished from the testicles.

Penile cancer Urgent referral

An urgent referral should be made in patients with:

- symptoms of penile cancer. These include an ulcer or a lump on the penis.

Haematological cancer

Haematological cancer is cancer of the blood and blood-forming tissues. This includes cancers such as leukaemia, lymphoma and myeloma.

A patient with symptoms of haematological cancer should be referred by the GP to a team specialising in haematological cancer.

Patients with the following symptoms should be tested and examined by the GP and may need a referral:

- extreme tiredness
- drenching night sweats
- fever
- weight loss
- generalized itching
- difficulty breathing
- bruising
- bleeding
- infections that keep occurring
- bone pain
- pain induced by alcohol
- abdominal pain
- swollen lymph glands
- an enlarged spleen.

Immediate referral

An immediate referral should be made in patients:

- with a blood test result that indicates acute leukaemia
- with symptoms of spinal cord compression. These symptoms include pins and needles, numbness, tingling or weakness in the feet or legs and difficulty passing urine or stools.

Urgent referral

An urgent referral should be made in patients with:

- enlargement of the spleen that cannot be explained and is persistent.

Tests

The GP should request a blood tests in patients with:

- unexplained extreme tiredness that is persistent. The tests should be repeated at least once if the patient's condition remains unexplained and does not improve
- persistent swollen lymph glands
- unexplained bruising, bleeding, and a rash or symptoms suggesting anaemia
- persistent, unexplained bone pain
- swollen lymph glands that:
 - have lasted 6 weeks or more
 - are increasing in size
 - are greater than 2 cm in size
 - are widespread
 - are linked with an enlarged spleen, night sweats or weight loss.

In patients with bone pain the GP should also arrange an X-ray, and other bone and liver tests.

Skin cancer

The skin is made up of several layers, and different types of cancer occur in these different layers. A skin lesion can be a symptom of skin cancer. This is a damaged patch of skin or injured skin, or it can be a mole.

A patient with skin lesions suggestive of skin cancer should be referred to a team specialising in skin cancer. Sometimes a GP with appropriate training may have removed a tiny part of the skin lesion so that it can be checked for cancer under a microscope. This is called a biopsy. If the biopsy shows signs of cancer the GP should refer the patient to a team specialising in skin cancer.

A patient with a persistent or slowly changing skin condition with an unclear diagnosis should be referred to a skin specialist (dermatologist) if cancer is a possibility.

Urgent referral

Melanoma

Melanoma is a cancer which usually starts in the skin, either in a mole or in normal-looking skin. The GP will be looking for changes in the mole or the way the skin looks when trying to make a diagnosis. There is a checklist of features that the GP will look for when assessing the mole; these include size, shape and colour. Any changes should be monitored and recorded by the GP.

An urgent referral should be made in patients with skin lesions that have features associated with skin cancer or melanoma. In these patients the melanoma should not be cut out by the GP – this may be done by a specialist following referral.

Squamous cell carcinoma

Squamous cell carcinoma is a cancer of the outermost layer of skin cells.

An urgent referral should be made in patients:

- with a scaly or crusty skin lesion bigger than 1 cm that won't heal
- who are taking drugs to suppress their immune system and have symptoms of squamous cell carcinoma
- who have had an organ transplant and have a new or growing skin lesion
- with a squamous cell carcinoma that has been confirmed by tests.

Non-urgent referral

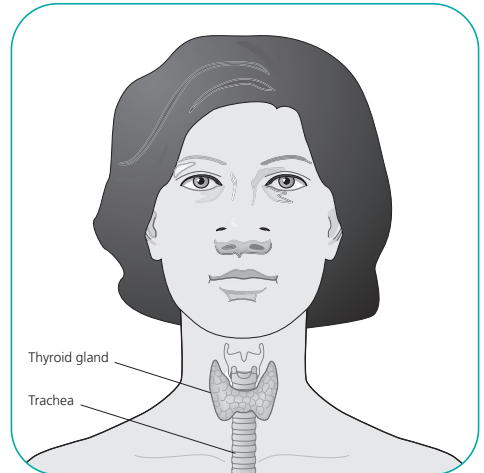
Basal cell carcinoma

Basal cell carcinoma is a cancer of one of the layers of the skin called the epidermis. This type of cancer is slow growing and usually occurs on the face. If the GP suspects this type of cancer a non-urgent referral should be made.

Head and neck cancer including thyroid cancer

Head and neck cancer can occur in any of the organs or tissues of the head and neck including the mouth, ears, eyes and nose. Thyroid cancer is cancer of the thyroid gland, a small gland that makes hormones and is located at the base of the throat.

A patient with symptoms of head, neck or thyroid cancer should be referred by the GP to a specialist or the neck lump clinic.



Head and neck region showing thyroid gland

Urgent referral

An urgent referral should be made in patients with:

- an unexplained lump in the neck which has recently appeared or a lump which has not been diagnosed before that has changed over a period of 3 to 6 weeks
- an unexplained swelling in the salivary glands
- an unexplained, persistent sore or painful throat
- an unexplained pain in one side of the head and neck area for more than 4 weeks, and ear ache, but with normal results on ear examination
- unexplained ulcers or a lump in the mouth lasting for more than 3 weeks

- unexplained red and white patches inside the mouth that are:
 - painful, or
 - swollen, or
 - bleeding

(If these patches are not painful, swollen or bleeding a non-urgent referral should be made.)

- persistent undiagnosed symptoms in the mouth lasting longer than 6 weeks.

Urgent referral to a dentist

Urgent referral to a dentist should be made for patients with:

- loose teeth (or tooth) for more than 3 weeks that cannot be explained.

All patients, including those with dentures, should have regular dental checkups.

Urgent referral for chest X-ray

An urgent referral for chest X-ray should be made in patients with a hoarse voice that has persisted for more than 3 weeks, particularly smokers and heavy drinkers aged 50 years and older.

Thyroid cancer

Immediate referral

An immediate referral should be made if the patient has symptoms indicating that the trachea is being obstructed by a swollen thyroid gland. These symptoms include stridor (a harsh sound heard when breathing in).

Urgent referral

An urgent referral should be made if the patient has thyroid swelling together with any of the following factors:

- a single node (lump) that is growing
- a history of previous radiotherapy on the neck
- family history of a hormonal cancer
- unexplained hoarse voice or voice changes
- disease of the lymph nodes in the neck
- the patient has not gone through puberty
- the patient is 65 years or older.

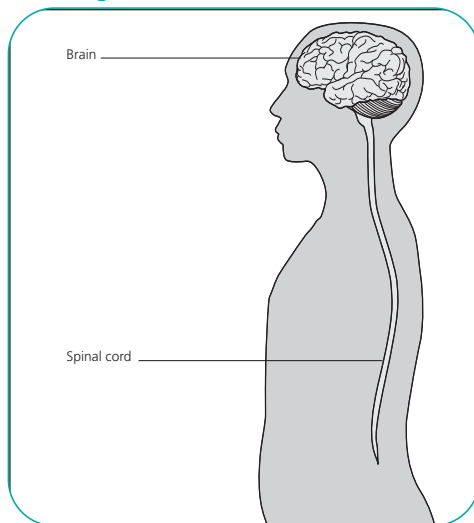
Tests

With the exception of persistent hoarseness, tests for head and neck or thyroid cancer are not recommended as they can delay referral.

Brain and central nervous system cancer

The central nervous system (CNS) is made up of the spinal cord and the brain. A patient with symptoms of brain or CNS cancer should be referred to a team specialising in the management of brain and CNS cancer.

Certain types of medical scans (for example, an MRI scan or a CT scan) may be used to take pictures of the brain or spinal cord. If these scans are readily available the GP may arrange for this to happen before deciding whether a referral is needed.



The brain and the spinal cord

Urgent referral

An urgent referral should be made in patients in whom brain cancer is suspected with:

- progressive problems with the nervous system (neurological symptoms)
- new onset seizures (fits or blackouts that have started recently)
- new different headaches that get progressively worse
- mental changes
- one-sided deafness

- recent headaches and features of raised pressure in the skull, such as:
 - vomiting
 - drowsiness
 - headache related to posture
 - tinnitus (ringing in the ears)
- or other neurological symptoms, such as blackouts, changes in personality, behavioural changes or memory loss.

Non-urgent referral

The GP should consider a non-urgent referral or a discussion with a specialist if a patient has unexplained recent headaches, present for at least 1 month, without the features of raised pressure in the skull that are listed above.

Risk factors

Patients who have been previously diagnosed with any cancer and have any of the following symptoms are at greater risk of brain and CNS cancer:

- new seizures (fits or blackouts that have started recently)
- progressive problems with the nervous system
- persistent headaches
- changes in awareness or judgement
- other mental changes
- other newly started neurological problems.

Tests

In a patient with unexplained headaches of recent onset or symptoms that affect the nervous system, the GP should carry out a neurological examination. This examination may include hearing, eye, coordination and balance tests.

In patients who have had a seizure, the GP should carry out a physical examination. This may include tests on the patient's heart, nervous system and mental state. Details of the seizure should be taken from the patient and a witness if possible.

Bone cancer and sarcoma

Bone cancer that starts in the bones is called primary bone cancer and it is very rare. Sarcomas are a group of cancers that arise in the supportive tissues of the body and include bone sarcoma and soft tissue sarcoma.

A patient with symptoms suggesting bone cancer or sarcoma should be referred to a team specialising in bone cancer and sarcoma, or to a recognised bone cancer centre.

Urgent tests

The GP should carry out urgent tests in patients with unexplained or persistent bone pain or tenderness that gets increasingly worse. Bone pain while resting, especially if not in the joint, or an unexplained limp also need investigating. The type of tests needed will vary according to the individual concerned. In older people metastases, myeloma or lymphoma as well as sarcoma should be considered.

Immediate referral

A patient with an unexpected bone fracture should be referred by the GP for an immediate X-ray.

Urgent referral

An urgent referral should be made in patients:

- with an unexpected bone fracture and an X-ray showing symptoms of bone cancer. (If the X-ray is normal but the patient continues to have symptoms, the GP should monitor the patient and repeat the X-ray or make a referral if needed.)
- with a lump that is:
 - deep, fixed or immobile
 - greater than about 5 cm in diameter
 - increasing in size
 - painful
 - regrowth of a previously removed lump.

In people with HIV, the GP should consider Kaposi sarcoma (a type of cancer sometimes seen in HIV patients) and refer if this is suspected.

Cancer in children and young people

Cancer in children and young people is rare. It can be very difficult to spot as the typical symptoms of cancer are the same as those for less serious conditions.

Children and young people who have symptoms suggesting cancer should be referred to a paediatrician (a doctor who specialises in treating children) or a specialist children's cancer service. Young people over the age of 16 may be referred to adult cancer services or a team specialising in cancer in teenagers/young people.

When making a referral, the GP should inform the parents, child or young person and explain why they are being referred and what will happen next. The GP should aim to build a supportive relationship with the parents, child or young person involved.

Consider referral

The GP should consider referring a child or young person if:

- they present with persistent back pain (an examination is needed as well as a blood test)
- their parents or carers remain anxious, even if the GP considers that cancer is unlikely.

As a parent is usually the best observer of a child or young person's symptoms, the GP should take parents' knowledge of their child into account when deciding whether to refer them.

Some syndromes such as Down's syndrome and neurofibromatosis have been linked to the development of certain types of cancers. The GP should be alert to any unexplained symptoms in children and young people with such syndromes.

Urgent referral

Urgent referral should be made when a child or young person sees the GP three or more times with the same problem, but no clear diagnosis is made.

Tests

Some tests may be carried out before referral. These tests will help the GP decide whether to make a referral.

A blood test should be carried out when a child or young person presents with any of the following symptoms:

- paleness
- extreme tiredness
- irritability
- unexplained fever
- persistent or recurrent sinus, nose and/or throat infections
- swollen lymph glands
- persistent or unexplained bone pain
- unexplained bruising.

Leukaemia

Leukaemia is a cancer of the white blood cells.

Immediate referral

Immediate referral should be made for all children or young people with either of the following:

- unexplained small red spots under the skin (petechiae)
- an enlarged liver or spleen.

Tests

If one or more of the following symptoms are present a blood test should be carried out:

- paleness
- extreme tiredness
- unexplained irritability
- unexplained fever
- persistent or repeated infections affecting the sinuses, nose and/or throat
- swollen glands
- persistent or unexplained bone pain
- unexplained bruising
- persistent back pain.

If the results of the tests indicate leukaemia then an urgent referral should be made.

Lymphomas

Lymphoma is a cancer of the lymphatic system. The lymphatic system is a complex system made up of vessels and glands throughout the body. There are two main types of lymphoma: Hodgkin's lymphoma and non-Hodgkin's lymphoma.

Immediate referral

Immediate referral should be made for children or young people with either:

- an enlarged liver or spleen, or
- a lump seen on a chest X-ray.

Urgent referral

Urgent referral should be made in children or young people:

- with one or more of the following (particularly if there is no evidence of local infection):
 - firm lymph glands that don't hurt when pressed
 - lymph glands bigger than 2 cm in size
 - lymph glands increasing in size
 - other features of general illness, such as fever or weight loss
 - swollen glands under the arms
 - swollen glands near the collar bone
- with trouble breathing and unexplained small red spots under the skin or enlargement of the liver and spleen.

Brain and CNS cancer

Brain cancer is cancer of the brain. CNS cancer is cancer of the central nervous system, which includes the spinal cord.

Immediate referral

Immediate referral should be made in all children or young people with:

- a reduced level of consciousness.

Immediate referral should be made in children aged 2 years and older and young people with:

- signs of raised pressure in the skull. This includes headache and vomiting that causes them to wake up or happens when they wake up.

Immediate referral should be made in children aged younger than 2 years with:

- any of the following symptoms:
 - recent onset seizures (blackout or fit)
 - a bulge in the soft part of the head
 - extensor attacks (an attack where the body arches continually)
 - persistent vomiting.

Children and young people of any age with any of the following should be referred urgently or immediately depending on how severe the symptoms are:

- recent onset seizures (blackout or fit)
- problems with nerves in head
- problems with vision
- abnormal walking or limp

- problems with movement or sensation
- unexplained worsening school performance or failure to develop as expected
- unexplained changes in mood or behaviour.

Urgent referral

Urgent referral should be made in children aged younger than 2 years:

- with any of the following symptoms:
 - an abnormal increase in head size
 - movement development that has stopped or reversed
 - different behaviour from normal
 - abnormal eye movements
 - inability to follow objects with eyes
 - poor feeding or failure to grow as expected.

In a child with a squint the urgency of the referral depends on other factors.

Tests

A neurological examination should be carried out in children aged 2 years and older and young people with a persistent headache.

Neuroblastoma (all ages)

Neuroblastoma is a cancer of specialised nerve cells called neural crest cells. These cells are involved in the development of the nervous system and other tissues.

Neuroblastoma is very rare and the symptoms include a general feeling of ill health, paleness, bone pain, irritability, fever or breathing problems. These symptoms are very similar to those seen in acute leukaemia.

Tests

The GP should carry out a blood test if a child or young person presents with any of the following:

- persistent or unexplained bone pain (an X-ray is also required)
- paleness
- extreme tiredness
- unexplained irritability
- unexplained fever
- persistent or recurrent throat or chest infections
- swollen lymph glands
- unexplained bruising.

If the GP suspects neuroblastoma, an abdominal examination should be carried out. If access to an ultrasound scan is readily available, this tool could be used to look inside the body at the abdomen.

The GP should also arrange a chest X-ray and blood test for children or young people with persistent or recurrent throat or chest infections. If a lump is seen on the X-ray, the GP should make an urgent referral.

Immediate referral

Immediate referral should be made in infants younger than 6 months of age with a lump in the abdomen or small lumps on the skin.

Urgent referral

Urgent referral should be made in children or young people with:

- eye(s) pushed forwards
- unexplained back pain
- leg weakness
- unexplained retention of urine.

Wilms' tumour (all ages)

Wilms' tumour is a type of kidney cancer. It most often affects children under the age of 5. The GP should carry out an abdominal examination if a child has a persistently swollen abdomen or a growing swollen abdomen.

Immediate referral

- If a lump is found an immediate referral should be made.

Urgent referral

- If it is not possible for the GP to carry out an abdominal examination, a referral for an urgent ultrasound scan should be considered.
- The child should be referred urgently if there is blood in the urine (this is a rare symptom of Wilms' tumour).

Sarcoma

Sarcomas are rare types of cancer that develop in the supporting structures of the body. There are two main types: soft tissue sarcomas and bone sarcomas.

Soft tissue sarcomas

Sarcomas are cancers that develop from cells in the soft, supporting tissues of the body. They can occur in muscle, fat, blood vessels or in any of the other tissues that support, surround and protect the organs of the body.

Urgent referral

Urgent referral should be made for a child with an unexplained lump anywhere in the body that has one or more of the following features. The lump:

- is deep in the body tissue
- doesn't hurt when pressed
- is growing
- is near a lymph gland that is also swollen/growing
- is bigger than 2 cm across.

Consider referral

Sarcomas can cause unusual symptoms.

In head and neck sarcoma these symptoms include:

- eye(s) pushed forwards
- persistent unexplained blockage of one nostril with or without discharge or bleeding
- polyps in the ear or discharge (polyps are small protruding lumps).

In genital or urinary sarcoma these symptoms include:

- retention of urine
- a swollen scrotum
- bloody vaginal discharge.

Bone sarcomas

Bone sarcomas can develop in any of the bones, but they can also develop in the soft tissue near bones. The legs and arms are the most common places for bone sarcomas. The GP should not exclude the possibility of bone sarcoma in children or young people with a history of broken bones or other injuries.

If a child or young person presents with:

- pain on resting
- back pain
- unexplained limp

the GP should talk to a paediatrician, make a referral or arrange an X-ray.

Urgent referral

In children and young people with persistent localised bone pain and swelling the GP should arrange an X-ray. If the GP suspects sarcoma following the results of the X-ray, an urgent referral should be made.

Retinoblastoma (mostly children younger than 2 years)

Retinoblastoma is a rare cancer that occurs in the retina. The retina is the light-sensitive lining of the eye.

Urgent referral

Urgent referral should be made in children or young people with:

- a white pupil that does not reflect light. This can often be seen in photographs, in which the eye looks white
- a new squint or change in the sharpness of their eyesight. If the GP does not suspect cancer, a non-urgent referral should be made.
- a family history of retinoblastoma and visual problems.

The GP should pay careful attention to parents who report an odd appearance in their child's eye.

Where you can find more information

If you need further information about any aspects of referral for suspected cancer or the care that you are receiving, please ask your doctor, nurse or other member of your healthcare team. You can discuss the NICE guideline on referral for suspected cancer with them, especially if you aren't sure about something in this booklet.

If you want to read the other versions of this guideline

There are four versions of this guideline:

- this one
- the full guideline, which contains all the details of the guideline recommendations and how they were developed, and information about the evidence on which they were based
- a version called the NICE guideline, which lists all the recommendations on referral for suspected cancer
- the quick reference guide, which is a summary of the main recommendations in the NICE guideline for healthcare professionals.

All versions of the guideline are available from the NICE website (www.nice.org.uk/CG027). This version and the quick reference guide are also available from the NHS Response Line – phone 0870 1555 455 and give the reference number(s) of the booklets you want (N0852 for this version and N0851 for the quick reference guide).

If you want to know more about cancer

If you are looking for more information on cancer, NHS Direct is a good starting point. Phone NHS Direct on 0845 46 47 or visit the website (www.nhsdirect.nhs.uk). The website lists 'NHS Direct Info

Partners', which are organisations with websites that provide more detailed information.

If you have questions about the specific treatments and options covered, talk to your doctor or nurse, or another health professional, depending on what it is you want to know.

If you want to know more about NICE

There is more about NICE and the way that the NICE guidelines are developed on the NICE website (www.nice.org.uk). You can download the booklet 'The guideline development process – an overview for stakeholders, the public and the NHS' from the website, or you can order a copy by phoning the NHS Response Line on 0870 1555 455 (quote reference number N0472).

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