# Cancer in Children and Young People with Primary Care

Robert Johnston

September 2026

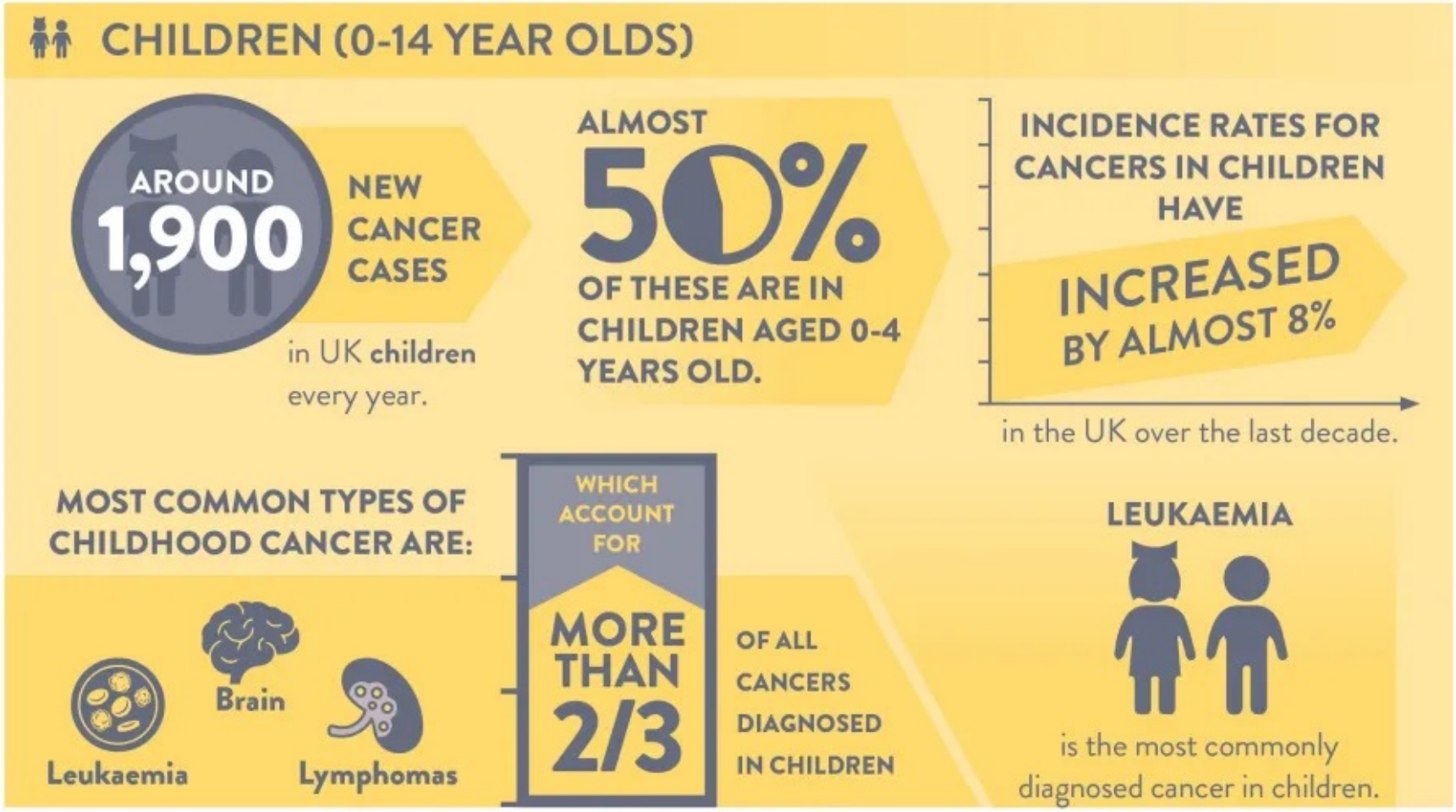

AWARENESS MONTH
CHILDHOOD CANCER
SEPTEMBER

# Goals for today

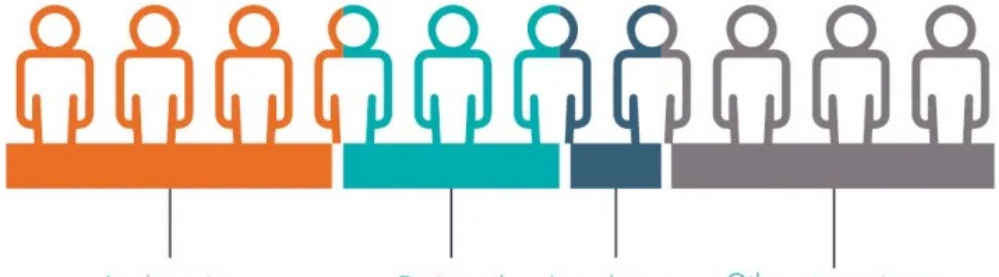
- Introduce the context, some epidemiology
- Pathways and services in NI
- Recognising childhood cancer
- Q&A

child cancer smart

# Childhood cancer in UK

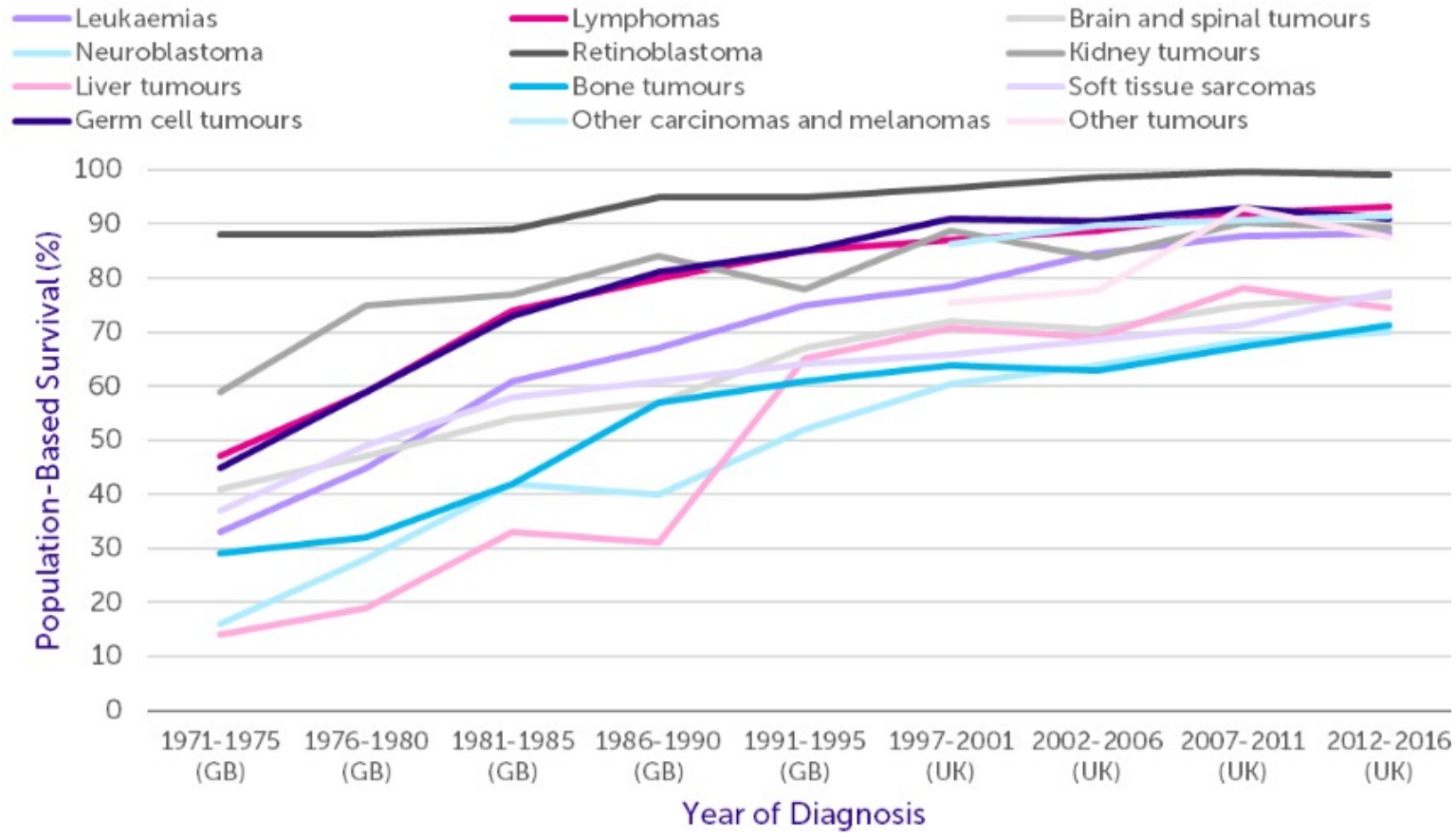


# Childhood Cancer in UK

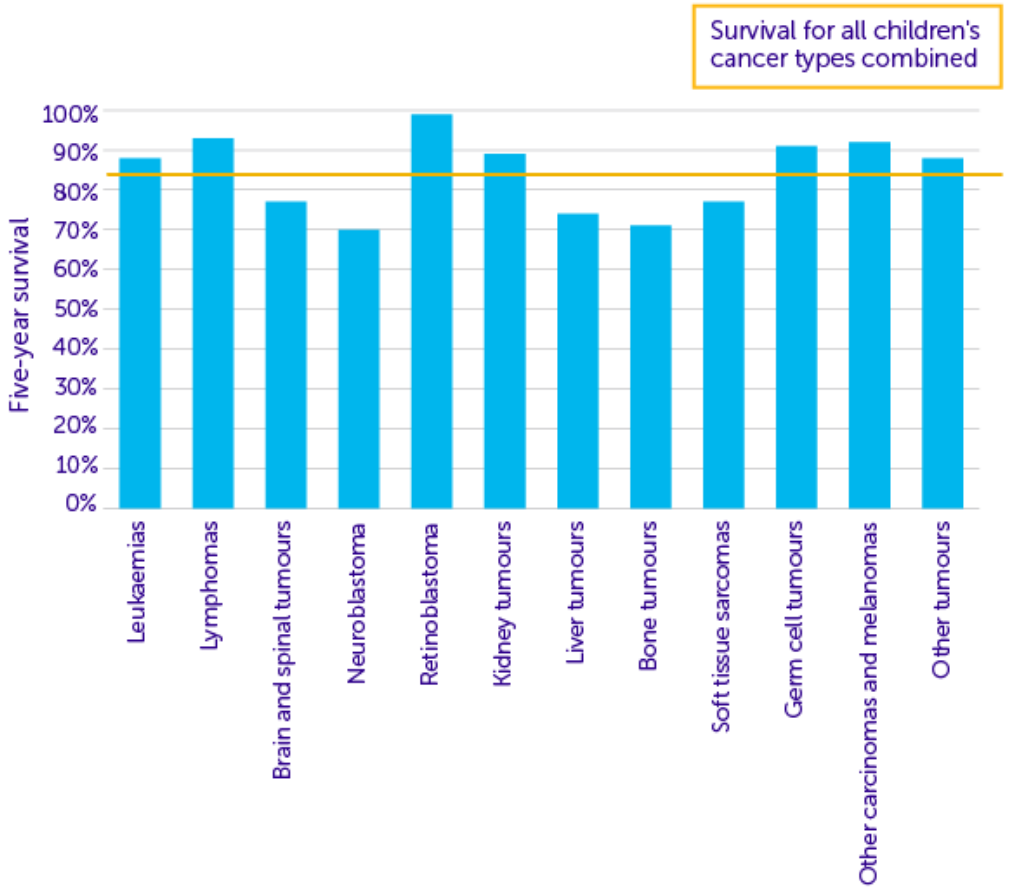



| | |
|---|---|
| Soft tissue sarcomas | 6% |
| Neuroblastoma | 6% |
| Kidney tumours | 6% |
| Bone tumours | 4% |
| Germ cell tumours | 3% |
| Eye tumours | 3% |
| Other types | 3% |
| Liver tumours | 1% |

# Improved Survival over time



# Differences in Survival



# Survivorship

- Excellent progress over recent decades

- >80% children are cured

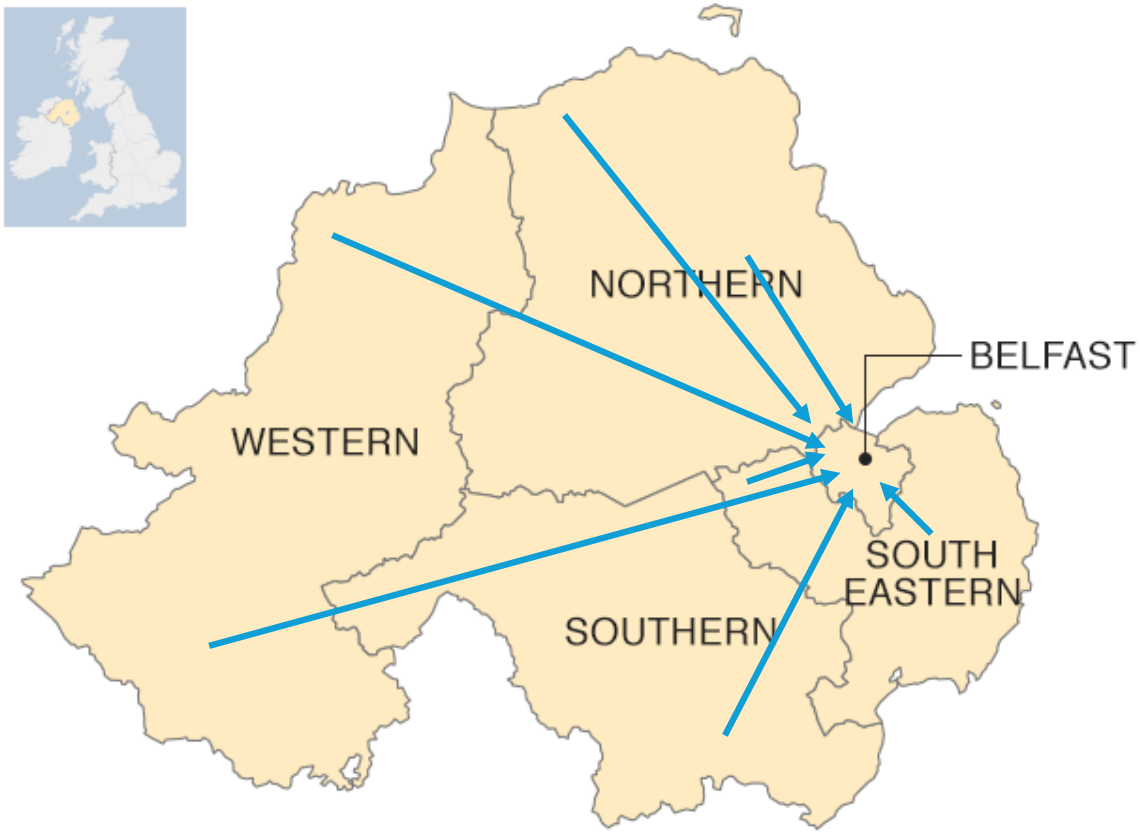
- Adverse physical / psychological outcomes

- 60-90% develop >/= chronic health condition

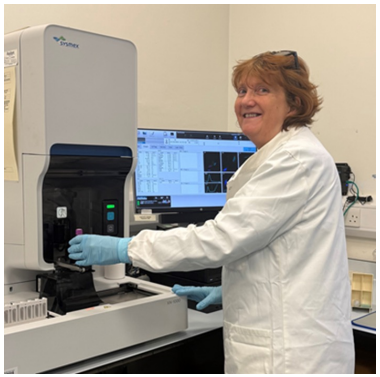
- 20-80% experience severe or life-threatening complication in adulthood

# Northern Ireland patient Journey






IM
SM
MD



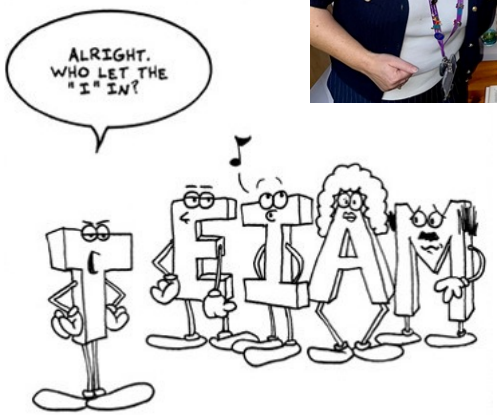


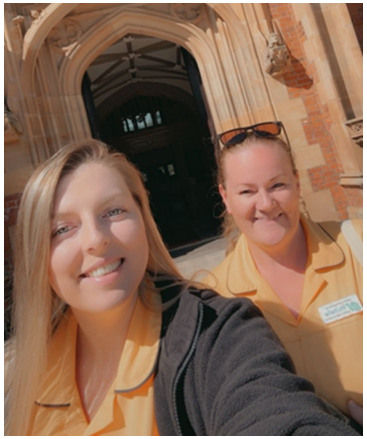

Welcome to
Haematology
and Oncology


Welcome to
Haematology
Oncology U




Welcome to
Haematology
and Oncolo


ALRIGHT. WHO LET THE "I" IN?
TEAM

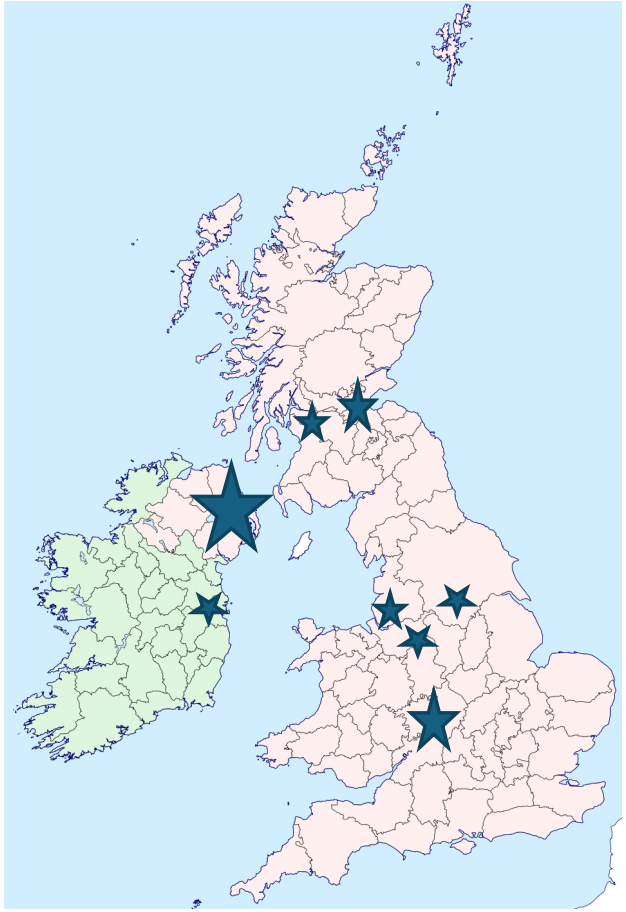


# Northern Ireland patient Journey














# Paediatrics and Childhood cancer in PC

- Infants < 1year – 6-7 visits per child /yr
- Children 1-15 – approx. 2 visits per child/yr
- >50% acute self-limiting illness esp URTI / eczema / coughs
- Small group of high user – multiple chronic health or high parental anxiety

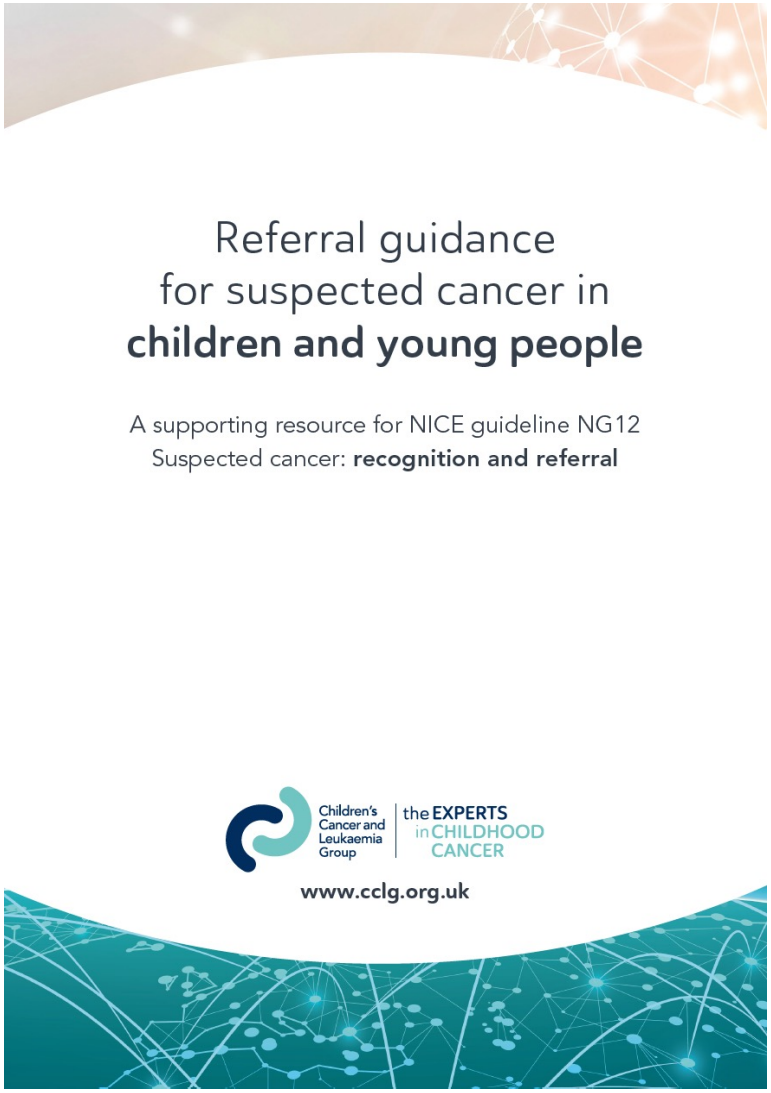
- Individual GP sees 1 childhood cancer case every 5-10yrs
- Individual practice one case evrry 1.8yrs

# Referral guidance for suspected cancer in **children and young people**

A supporting resource for NICE guideline NG12
Suspected cancer: **recognition and referral**

Children's Cancer and Leukaemia Group | the EXPERTS in CHILDHOOD CANCER

**www.cclg.org.uk**




- NICE Guideline covers the identification of symptoms that could be caused by cancer in people of all ages
- Outline of appropriate investigations in primary care
- Selection of people to refer for specialist opinion

https://www.cclg.org.uk/information-professionals/diagnosing-cancer-children-and-young-people/referral-guidance-suspected-cancer-children-and-young-people

# Rationale for a paediatric supplement

- Referral guidelines first published 2005, revised 2015
- Differences in incidence, presentation, types of malignancy seen in younger children
- Risk of cancer 1 in 180 by age 25yrs
- Uncommon in primary care however important to consider in differential of child with unexplained symptoms
- Trauma of cancer pathway vs extended diagnostic delay

# NICaN Pathways

## CANCER IN CHILDREN AND YOUNG PEOPLE

- 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.
- 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, children or young people with either:**

- Unexplained petechiae, or
- Hepatosplenomegaly

**Lymphomas**

**Immediate referral, children or young people with either:**

- Hepatosplenomegaly, or
- Mediastinal or hilar mass on chest X-ray

**Red flag referral**, children or young people:

With one or more of the following (particularly if there is no evidence of local infection):

- 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).

## CANCER IN CHILDREN AND YOUNG PEOPLE CONT'D

**Brain and CNS tumours**

**Immediate referral**, children or young people with:

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

**Immediate referral**, children aged younger than 2 years with any of the following symptoms:

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

**Red flag or immediate referral**, children with any of the following neurological symptoms and signs:

- 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.

**Red flag referral**, children aged 2 years and older, and young people, with:

Persistent headache where you cannot carry out an adequate neurological examination in primary care.

**Red flag referral**, children aged younger than 2 years with any of the following symptoms suggestive of CNS cancer:

- 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.

## CANCER IN CHILDREN AND YOUNG PEOPLE CONT'D

**Neuroblastoma** (all ages)

**Red flag referral**, children with:

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

**Wilms' tumour** (all ages)

**Red flag referral:**

- a child or young person presenting with haematuria

**Soft tissue sarcoma** (all ages)

**Red flag referral, 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:
  - 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** (all ages)

**Referral, children or young people with:**

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

**Retinoblastoma** (mostly children less than 2 years)

**Red flag referral, children with:**

- a white pupillary reflex (leukocoria). Pay attention to parents reporting an odd appearance in their child's eye
- a new squint or change in visual acuity if cancer is suspected. (Refer non-urgently if cancer is not suspected.)

a family history of retinoblastoma and visual problems. (Screening should be offered soon after birth.)

**Early identification of cancer must be a goal for all healthcare practitioners**

# Quantifying diagnostic intervals and routes to diagnosis for children and young people with cancer in the UK (Childhood Cancer Diagnosis study, CCD): a population-based observational study

*Dhurgshaarna Shanmugavadivel,[a,*] Jo-Fen Liu,[b] Timothy A. Ritzmann,[c] Ashley Ball-Gamble,[b] Angela Polanco,[b] Neil Ranasinghe,[b] Kavita Vedhara,[d] Shalini Ojha,[a,e] and David Walker[c,e]*

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| | n | Col % |
|---|---|---|
| **Sex** | | |
| Male: Female | 1075:882 | 55%:45% |
| **Region** | | |
| England | 1690 | 86% |
| Wales | 5 | 0.3% |
| Scotland | 211 | 11% |
| Northern Ireland | 51 | 3% |
| **Ethnicity** | | |
| White | 1528 | 78% |
| Mixed/Multiple ethnic groups | 91 | 5% |
| Asian/Asian British | 156 | 8% |
| Black/African/Caribbean/Black British | 43 | 2% |
| Other ethnic group | 56 | 3% |
| Not known | 83 | 4% |
| **IMD in quintile**[a] | | |
| 1 (most deprived) | 391 | 21% |
| 2 | 341 | 19% |
| 3 | 341 | 19% |
| 4 | 392 | 21% |
| 5 (least deprived) | 369 | 20% |
| **Age group** | | |
| Under 1 | 152 | 8% |
| 1–4 | 717 | 37% |
| 5–9 | 432 | 22% |
| 10–14 | 409 | 21% |
| 15+ | 247 | 13% |
| **Diagnosis** | | |
| Leukaemia | 778 | 40% |
| Lymphoma & related | 254 | 13% |
| CNS tumour | 275 | 14% |
| Neuroblastoma | 105 | 5% |
| Retinoblastoma | 32 | 2% |
| Renal tumour | 139 | 7% |
| Hepatic tumour | 40 | 2% |
| Bone tumour | 124 | 6% |
| Soft tissue sarcoma | 128 | 7% |
| Germ cell tumour | 28 | 1% |
| Carcinoma & melanoma | 13 | 0.7% |
| Other & unspecified malignant | 5 | 0.3% |
| Langerhans Cell histiocytosis (LCH) and other histiocytosis | 36 | 2% |

[a]IMD data only available for 1834 CYP.

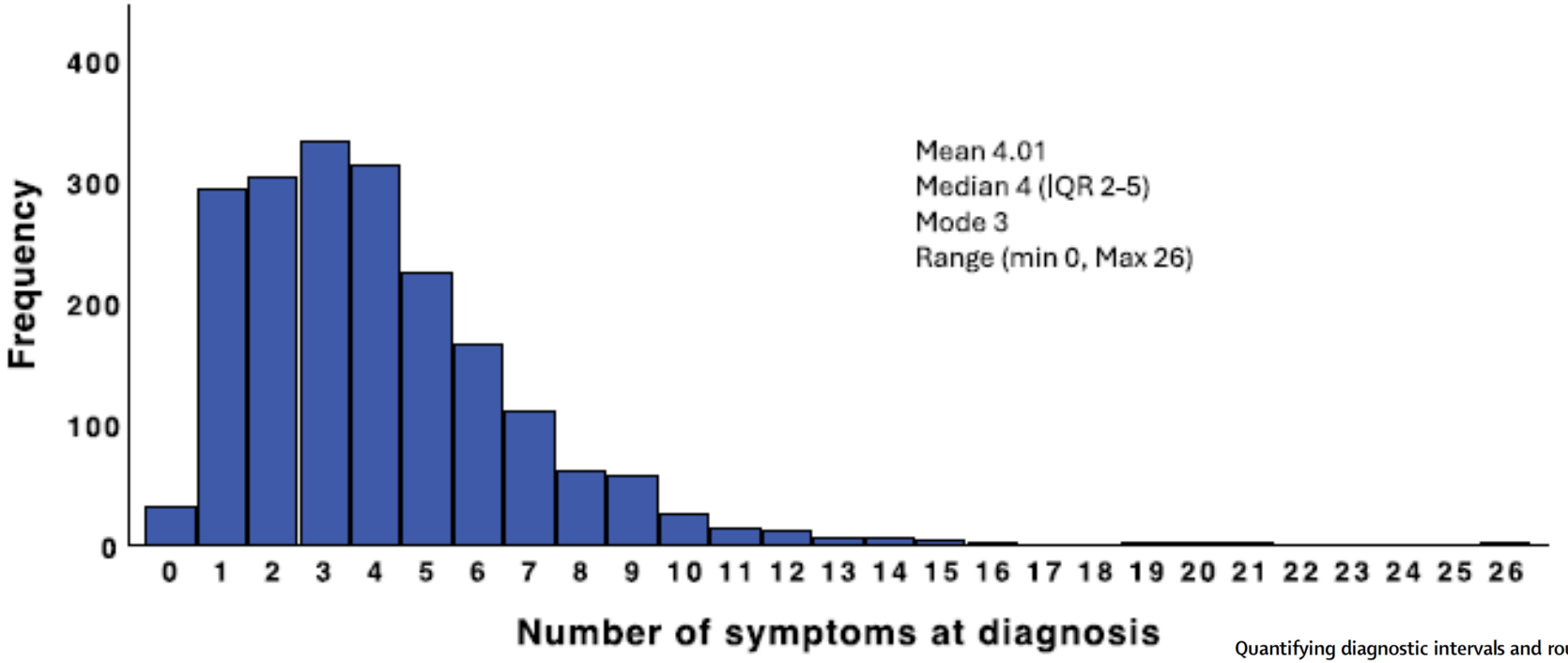
***Table 1*: Summary characteristics of cohort (n = 1957).**

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| | n | % |
|---|---|---|
| **The first HCP patient saw about symptoms** | | |
| GP | 1113 | 57% |
| Emergency doctor | 562 | 29% |
| Paediatrician | 107 | 5% |
| Optometrist | 35 | 2% |
| Sub-specialist doctor | 35 | 2% |
| WIC/UCC/MIU | 16 | 0.8% |
| NHS111/NHS24[a] | 14 | 0.7% |
| Nurse practitioner | 13 | 0.7% |
| Pre/peri-natal | 12 | 0.6% |
| Dentist | 10 | 0.5% |
| Health visitor | 10 | 0.5% |
| Physiotherapist | 6 | 0.3% |
| Private | 5 | 0.3% |
| Pharmacist | 3 | 0.2% |
| School nurse | 2 | 0.1% |
| Other | 8 | 0.4% |
| **Number of HCP visits before diagnosis** | | |
| 1–3 | 1438 | 74% |
| 4–6 | 375 | 19% |
| 7–9 | 88 | 5% |
| 10+ | 51 | 3% |
| **Source of referral leading to diagnosis** | | |
| Emergency presentation[c] | 1312 | 67% |
| GP referral | 463 | 24% |
| Other[b] | 178 | 9% |
| Unknown | 3 | 0.2% |
| **Incidental finding** | | |
| No | 1913 | 98 |
| Yes | | |
| Asymptomatic | 40 | 2 |
| Antenatal diagnosis | 3 | 0.2 |
| **Place of care which requested investigation identifying the cancer** | | |
| Inpatient | 784 | 40% |
| Emergency | 572 | 29% |
| Outpatient | 366 | 19% |
| Primary care | 208 | 11% |
| Private | 11 | 0.6% |
| Other | 10 | 0.5% |
| Not known | 5 | 0.3% |

# Number of symptoms at diagnosis




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# 5 most common symptoms by age



**Under 1s (n=152)**

- Abdominal distention/ mass (41; 30%)
- Loss of appetite (33; 24%)
- Vomiting (29; 21%)
- Pallor (24; 18%)
- Fever (24; 18%)



**1-4 years (n=717)**

- Tiredness, fatigue or lethargy (307; 43%)
- Fever (264; 37%)
- Loss of appetite (208; 29%)
- Pallor (208; 29%)
- Abdominal distention/ mass (149; 21%)



**5-9 years (n=432)**

- Tiredness, fatigue or lethargy (164; 39%)
- Fever (141; 33%)
- Loss of appetite (112; 26%)
- Bone or joint pain (110; 26%)
- Pallor (108; 25%)



**10-14 years (n=409)**

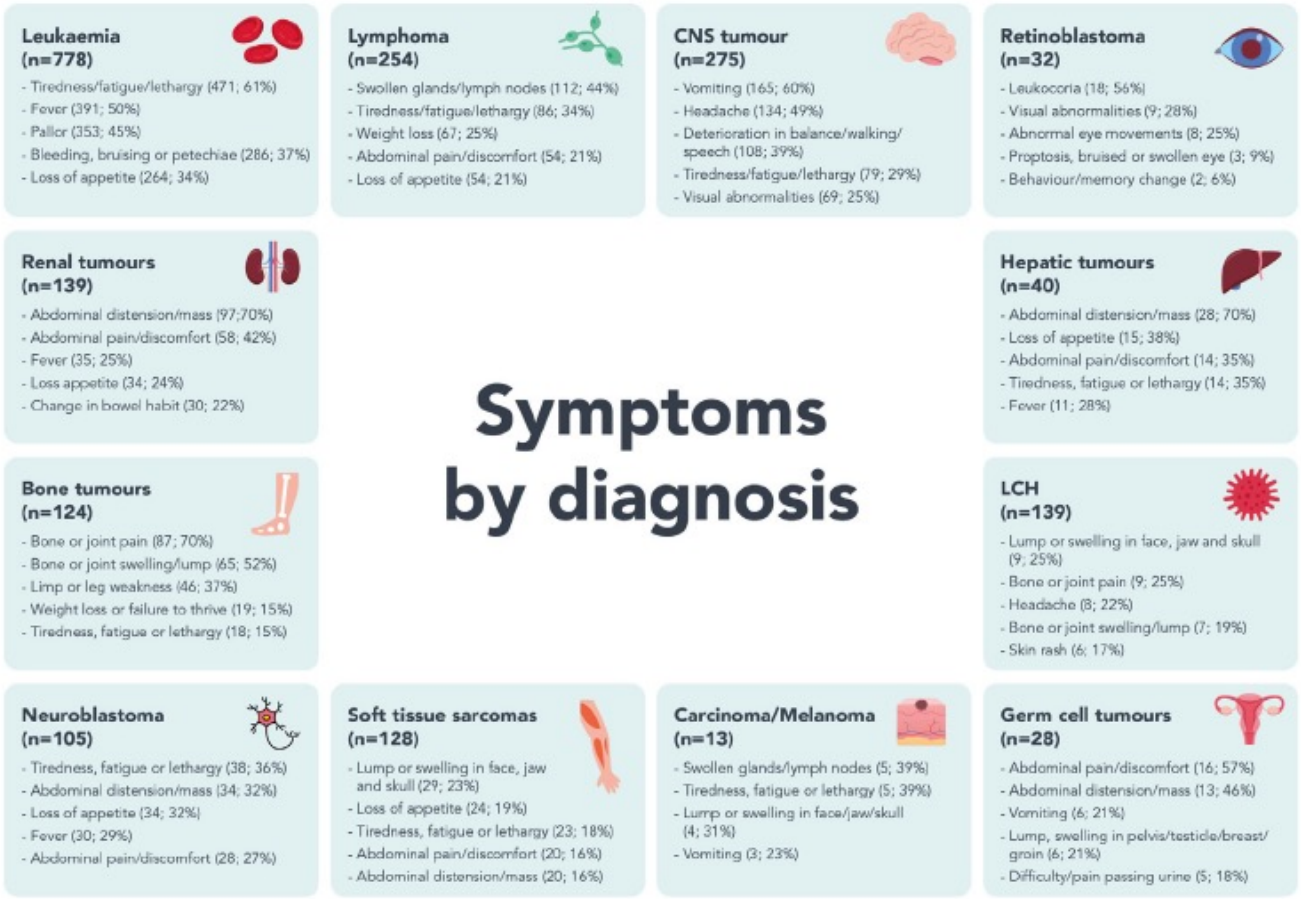
- Tiredness, fatigue or lethargy (177; 44%)
- Bone or joint pain (102; 25%)
- Headache (100; 25%)
- Fever (93; 23%)
- Vomiting (88; 22%)



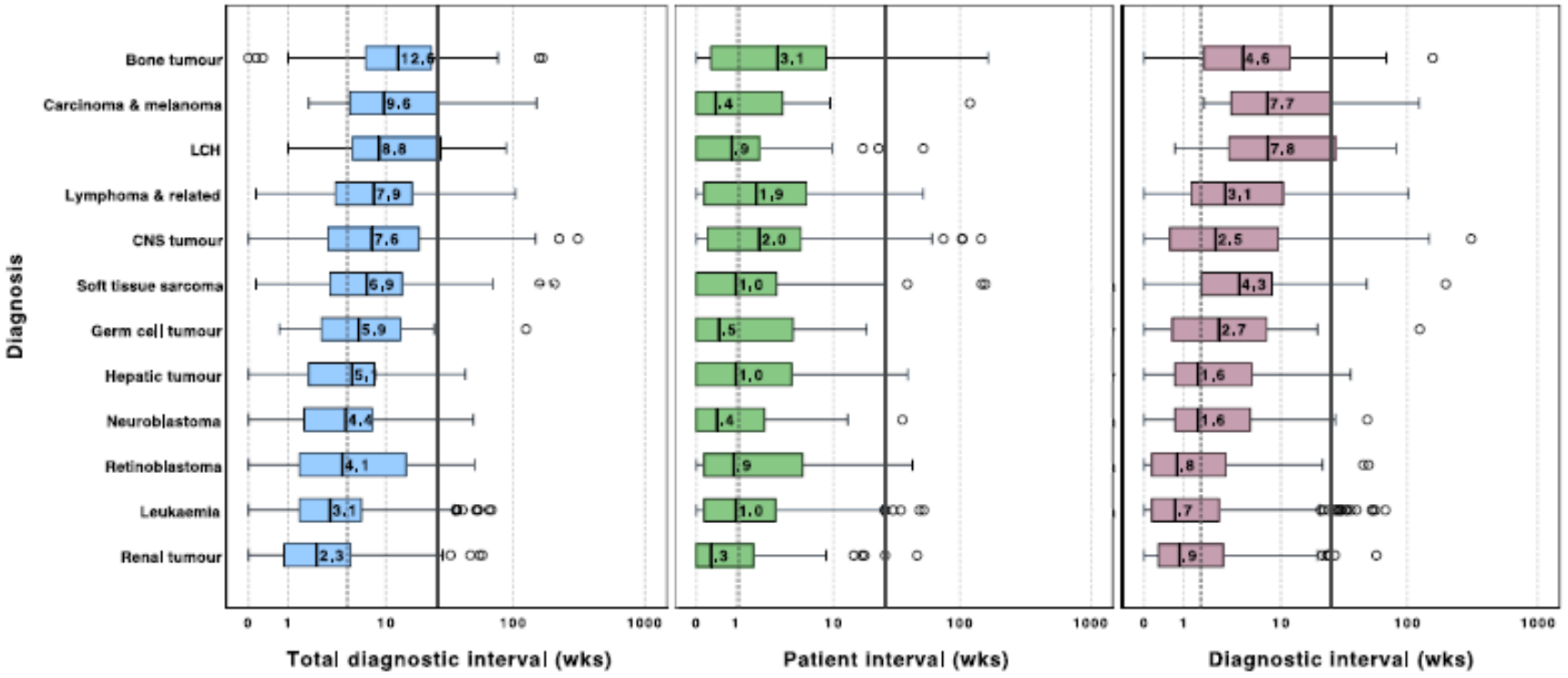
**15 or older (n=247)**

- Tiredness, fatigue or lethargy (94; 38%)
- Weight loss or failure to thrive (64; 26%)
- Swollen glands/ lymph nodes (60; 24%)
- Bone or joint pain (57; 23%)
- Headache (54; 22%)

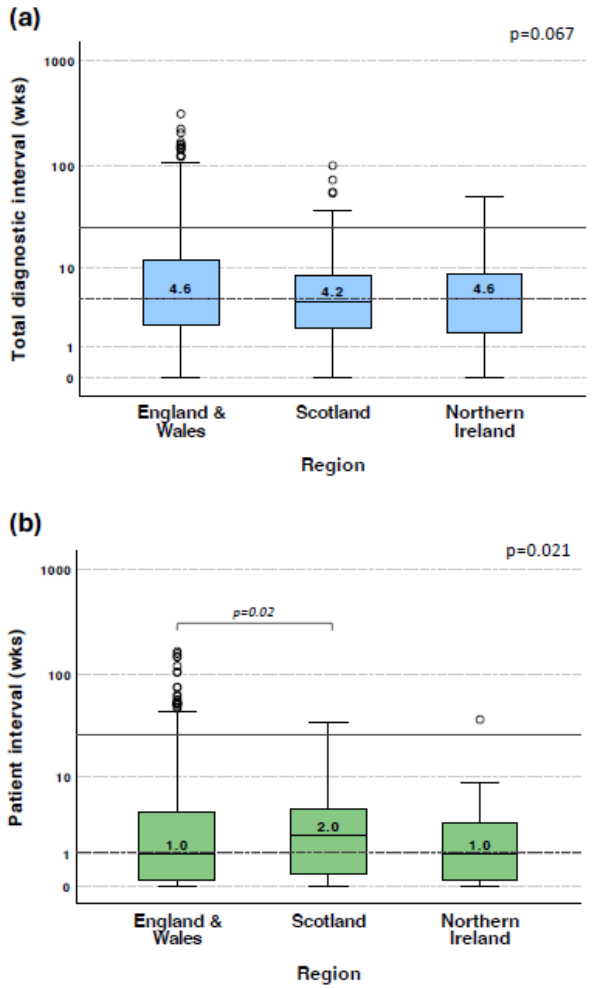
# 5 most common symptoms by tumour type



# Diagnostic interval based on final diagnosis



# Regional Variation?



# Summary findings

- 75% of cases have 1-3 consultations and present with a median of 4 symptoms
- Majority present to GP and emergency doctors prior to receiving the diagnosis, only 5% diagnosed by paediatrician
- Among teenagers, bone tumours, LCH and rare carcinoma have slowest diagnosis

CCLG The Children & Young People's Cancer Association



child cancer smart

# What is Child Cancer Smart

- An EVIDENCE-based public and professional awareness campaign
- Aim: to raise awareness about signs and symptoms
- Goal: to speed up diagnosis

# Background

- Cancer is the most common cause of death by illness in CYP in UK
- Delayed diagnosis can lead to worse survival and poorer long-term health in survivors
- No screening option for CYP
- No lifestyle measures to prevent childhood cancer

# 3 main strands

child cancer smart



**Research**

Research into what we currently know about the signs, symptoms, and diagnosis of children and young people's cancers. These 'systematic reviews' will bring together all of the current high-quality information we have, to understand how children, teenagers and young adults.



**Resources**

The development of resources for GPs, emergency medical practitioners, and other healthcare professionals, including clinical referral guidelines, e-learning modules, and decision support tools to help them understand what tests and scans might be needed to ensure a quick diagnosis.



**Awareness**

Signs and symptoms awareness campaigns that will help parents, schools and the general public know how to spot childhood cancer.

# Resources for families

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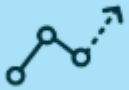
**Cancer symptoms often present as clusters**

A **cluster** is a group of symptoms that appear together.



**Symptoms of childhood cancer persist**

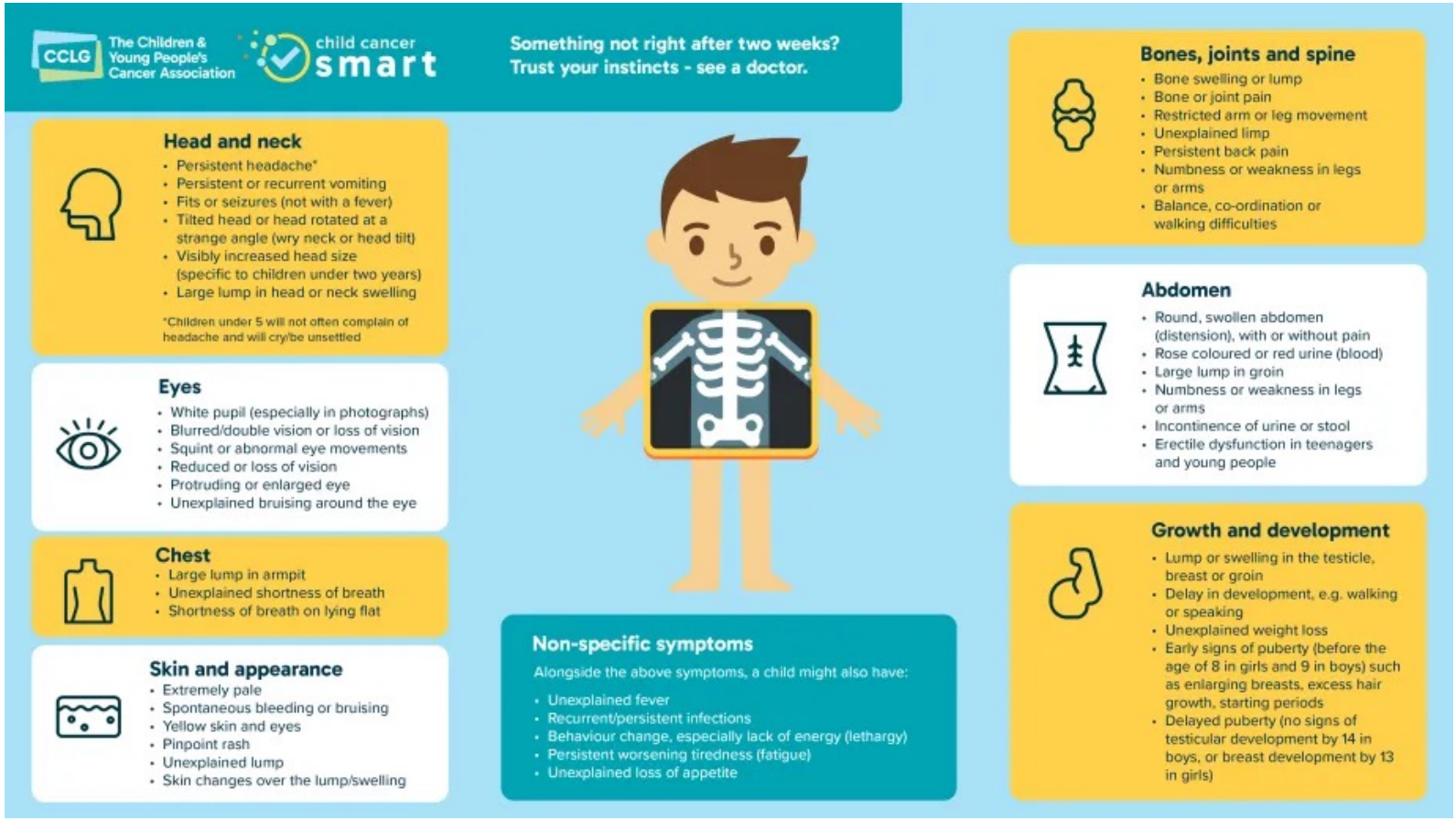
**Persistent** symptoms do not improve or go away like they do in other childhood illnesses.



**Childhood cancer symptoms can be progressive**

**Progressive** symptoms means that a child may start with something like a headache but then more and more symptoms appear over time.

# Resources for families



# Resources for professionals

child cancer smart



**3**

persistent symptoms



**3**

visits to the doctor



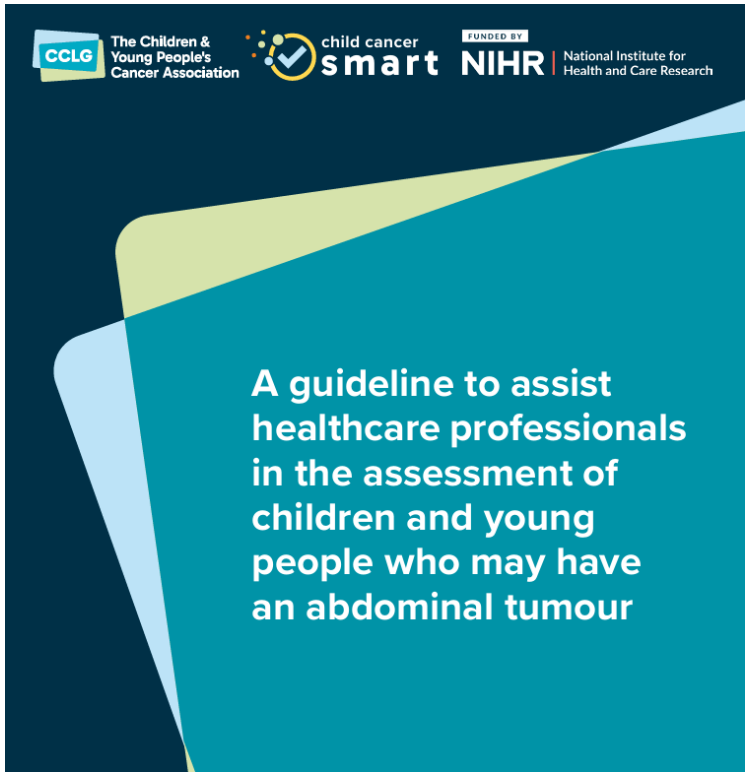
**3**

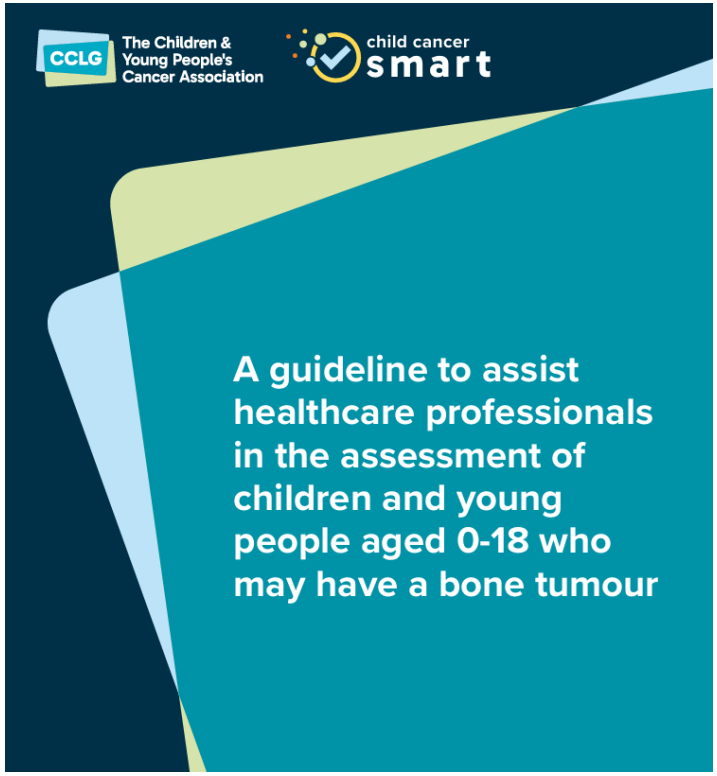
weeks of unexplained symptoms

# Resources for professionals



# Resources for professionals



# Bone tumour guidelines



## Diagnosis of bone tumours in children and young people

A summary for healthcare professionals

child cancer smart

CCLG The Children & Young People's Cancer Association

### Consider a bone tumour in any child presenting with:

- Bone pain
- Swelling
- Bone mass/lump
- Restricted movement/limp

### Associated symptoms:

- Persistent back pain, especially with associated bladder/bowel/ erectile dysfunction
- Weight loss

### Ask about common predisposing factors

- Personal history of Li-Fraumeni syndrome
- Hereditary retinoblastoma

### Assess with:

**History**

- associated symptoms
- any predisposing factors
- family history
- detailed injury history

**Examination of:**

- Joint/limb
- Joint above and below
- Weight
- Neurological examination
- pGALS examination*

https://ped-rheum.biomedcentral.com/articles/10.1186/1546-0096-11-44]

### Diagnostic pitfalls

- Initial symptoms of bone tumour can be attributed to injury
- Symptoms frequently fluctuate - resolution then recurrence does not exclude a bone tumour
- An initial normal X-ray does not exclude a tumour
- Attributing a red, warm swelling or a bony lump/mass to infection despite no response to antibiotics
- Not enquiring about activities of daily living

### Referral from primary care

- High risk of tumour: SAME DAY referral to secondary care
- Lower risk*: discuss with paediatrics by phone to advise best route

### Imaging

- High risk of tumour: URGENT X-ray imaging
- Lower risk*: X-ray imaging within 4 weeks

*bone tumour in differential diagnosis, low index of suspicion

### Bone pain

- Consider a bone tumour in any child with persistent* bone pain
- Ask about the presence of the other symptoms of a bone tumour (swelling, palpable lump, restricted movement/limp, fever, weight loss, back pain and bowel/bladder/erectile dysfunction) in a CYP presenting with persistent bone pain.
- Bone pain from a bone tumour can occur at any time of the day or night
- Injuries can be a red herring. Take a detailed history of the events including the onset of the symptoms after the alleged injury. Pain secondary to an injury will get better day by day.

**X-ray imaging required with:**

- Persistent bone pain, especially if worsening
- Localised bone pain that is waking a child or young person at night
- Unexplained bone pain (i.e. without any preceding injury)
- Bone pain that is out of proportion to the injury sustained or that does not improve 2 weeks from injury
- Bone pain with associated neurological symptoms
- Persistent back pain or pelvic pain (discuss with paediatric radiologist as X-ray may not be best imaging of choice)

**Diagnostic pitfalls:**

- Attributing symptoms to an injury incorrectly
- Assuming that a normal X-ray findings exclude a bone tumour

*Persistent = continuous or recurrent bone pain present for more than 2 weeks

### Swelling

- Swelling from a bone tumour can be discrete or diffuse
- It can occur along the long bone or around a joint
- Swelling due to a bone tumour can present with overlying erythema
- Ask about the presence of the other symptoms of a bone tumour (bone pain, palpable lump, restricted movement/limp, fever, weight loss, back pain and bowel/bladder/erectile dysfunction)

**X-ray imaging required with:**

- Persistent swelling* rapidly increasing in size.
- Persistent swelling* not resolving despite treatment with regularanti-inflammatories or antibiotics.

**Diagnostic pitfalls:**

- Attributing a red warm swelling to infection despite no improvement with antibiotics

*Persistent swelling present for more than 2 weeks

### Bone mass/lump

- A bony mass/lump which is increasing in size can be a sign of a bone tumour
- Ask and examine for the other signs and symptoms suggestive of a bone tumour (bone pain, swelling, limp/restricted movement, fever, weight loss, back pain and bladder/bowel/erectile dysfunction) in CYP with a lump/mass.

**X-ray imaging required with:**

- A rapidly increasing lump
- A lump/mass with one or more other symptoms

**Diagnostic pitfalls:**

- Attributing a bony lump/mass to infection despite no response to antibiotics

### Restricted movement/limp

- A bone tumour in the pelvis or lower limb can present as a limp
- A bone tumour in the upper limb can manifest as restricted movement
- Ask about the presence of the other symptoms of a bone tumour (bone pain, palpable lump, restricted movement/limp, fever, weight loss, back pain and bowel/bladder/erectile dysfunction. Have a high level of concern for a CYP who is normally highly
- active or sporty but is no longer able to play sport due to the presenting symptom.

**X-ray imaging required with:**

- A CYP who is non-weight bearing
- Persistent restricted movement despite adequate analgesia

**Diagnostic pitfalls:**

- Failure to enquire about activities of daily living

*Persistent = present for more than 2 weeks

### Associated symptoms

- Persistent back pain especially with associated bladder/bowel/ erectile dysfunction
- Weight loss

For additional support, visit
**www.cclg.org.uk/childcancersmart/bone**

CCLG and The Children & Young People's Cancer Association are operating names of The Children's Cancer and Leukaemia Group, registered charity in England and Wales (1182637) and Scotland (SC049948).

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- Hereditary retinoblastoma

### Assess with:

**History**

- associated symptoms
- any predisposing factors
- family history
- detailed injury history

**Examination of:**

- Joint/limb
- Joint above and below
- Weight
- Neurological examination
- pGALS examination*

https://ped-rheum.biomedcentral.com/articles/10.1186/1546-0096-11-44]

### Diagnostic pitfalls

- Initial symptoms of bone tumour can be attributed to injury
- Symptoms frequently fluctuate - resolution then recurrence does not exclude a bone tumour
- An initial normal X-ray does not exclude a tumour
- Attributing a red, warm swelling or a bony lump/mass to infection despite no response to antibiotics
- Not enquiring about activities of daily living

### Referral from primary care

- High risk of tumour: SAME DAY referral to secondary care
- Lower risk*: discuss with paediatrics by phone to advise best route

### Imaging

- High risk of tumour: URGENT X-ray imaging
- Lower risk*: X-ray imaging within 4 weeks

*bone tumour in differential diagnosis, low index of suspicion

### Bone pain

- Consider a bone tumour in any child with persistent* bone pain
- Ask about the presence of the other symptoms of a bone tumour (swelling, palpable lump, restricted movement/limp, fever, weight loss, back pain and bowel/bladder/erectile dysfunction) in a CYP presenting with persistent bone pain.
- Bone pain from a bone tumour can occur at any time of the day
- or night
- Injuries can be a red herring. Take a detailed history of the events including the onset of the symptoms after the alleged injury. Pain secondary to an injury will get better day by day.

**X-ray imaging required with:**

- Persistent bone pain, especially if worsening
- Localised bone pain that is waking a child or young person at night
- Unexplained bone pain (i.e. without any preceding injury)
- Bone pain that is out of proportion to the injury sustained or that does not improve 2 weeks from injury
- Bone pain with associated neurological symptoms
- Persistent back pain or pelvic pain (discuss with paediatric radiologist as X-ray may not be best imaging of choice)

**Diagnostic pitfalls:**

- Attributing symptoms to an injury incorrectly
- Assuming that a normal X-ray findings exclude a bone tumour

*Persistent = continuous or recurrent bone pain present for more than 2 weeks

### Swelling

- Swelling from a bone tumour can be discrete or diffuse
- It can occur along the long bone or around a joint
- Swelling due to a bone tumour can present with overlying erythema
- Ask about the presence of the other symptoms of a bone tumour (bone pain, palpable lump, restricted movement/limp, fever, weight loss, back pain and bowel/bladder/erectile dysfunction)

**X-ray imaging required with:**

- Persistent swelling* rapidly increasing in size.
- Persistent swelling* not resolving despite treatment with regularanti-inflammatories or antibiotics.

**Diagnostic pitfalls:**

- Attributing a red warm swelling to infection despite no improvement with antibiotics

*Persistent swelling present for more than 2 weeks

### Bone mass/lump

- A bony mass/lump which is increasing in size can be a sign of a bone tumour
- Ask and examine for the other signs and symptoms suggestive of a bone tumour (bone pain, swelling, limp/restricted movement, fever, weight loss, back pain and bladder/bowel/erectile dysfunction) in CYP with a lump/mass.

**X-ray imaging required with:**

- A rapidly increasing lump
- A lump/mass with one or more other symptoms

**Diagnostic pitfalls:**

- Attributing a bony lump/mass to infection despite no response to antibiotics

### Restricted movement/limp

- A bone tumour in the pelvis or lower limb can present as a limp
- A bone tumour in the upper limb can manifest as restricted movement
- Ask about the presence of the other symptoms of a bone tumour (bone pain, palpable lump, restricted movement/limp, fever, weight loss, back pain and bowel/bladder/erectile dysfunction. Have a high level of concern for a CYP who is normally highly
- active or sporty but is no longer able to play sport due to the presenting symptom.

**X-ray imaging required with:**

- A CYP who is non-weight bearing
- Persistent restricted movement despite adequate analgesia

**Diagnostic pitfalls:**

- Failure to enquire about activities of daily living

*Persistent = present for more than 2 weeks

### Associated symptoms

- Persistent back pain especially with associated bladder/bowel/ erectile dysfunction
- Weight loss

For additional support, visit **www.cclg.org.uk/childcancersmart/bone**

CCLG and The Children & Young People's Cancer Association are operating names of The Children's Cancer and Leukaemia Group, registered charity in England and Wales (1182637) and Scotland (SC049948).

child cancer smart



**3**

persistent symptoms



**3**

visits to the doctor



**3**

weeks of unexplained symptoms

The Children & Young People's Cancer Association

# For professionals and families supporting a child with cancer in the community

The Community Care Information Resource has been developed by CCLG to support professionals who are supporting a child with cancer in the community. The resource will also be useful for family members and friends who are supporting a child with cancer.

## What is it?

Bite size, easy read, foundation level information about supporting a child or adolescent with cancer in the community. (0 to 16yrs at diagnosis or up to 19yrs on treatment).

## Who is it for?

All the caring people in a local community who want to know how best to help and support a child with cancer and their family. People who may be concerned about saying or doing the 'right thing' or who may think you need specialist expert knowledge to help and do not feel confident enough. If you are on this list, we're here to help...

| | |
|---|---|
| • Family GP<br>• Community paediatrician<br>• Local pharmacist<br>• Children's community nurse<br>• Community health professional<br>• Health visitor<br>• District nurse | • Head teacher<br>• Class teacher<br>• SENCO<br>• Nursery school staff<br>• Other school staff<br>• Statutory social worker |

The resource may also be helpful for family members, friends and other people supporting the child.

### Section 1: Background

In this section you will find general background information about childhood cancer.

### Section 2: Communication

In this section of the resource you will find advice on what to tell siblings, children and young people at diagnosis, current information parents receive, how to talk about a cancer diagnosis and how you can support the family.

### Section 3: Children's cancer services

In this section of the resource you will find introductory information about children and young people's cancer services.

### Section 4: Challenges

In this section of the resource you will find information about some of the commonest challenges faced by children with cancer.

### Section 5: Psychosocial support

In this section of the resource you will find information about some aspects of psychosocial support.

### Section 6: Treatment

In this section of the resource you will find information about some of the treatments faced by children with cancer.

### Section 7: Side effects and supportive care

In this section of the resource you will find information about common side effects faced by children with cancer and some options for supportive care.

### Section 8: Palliative care

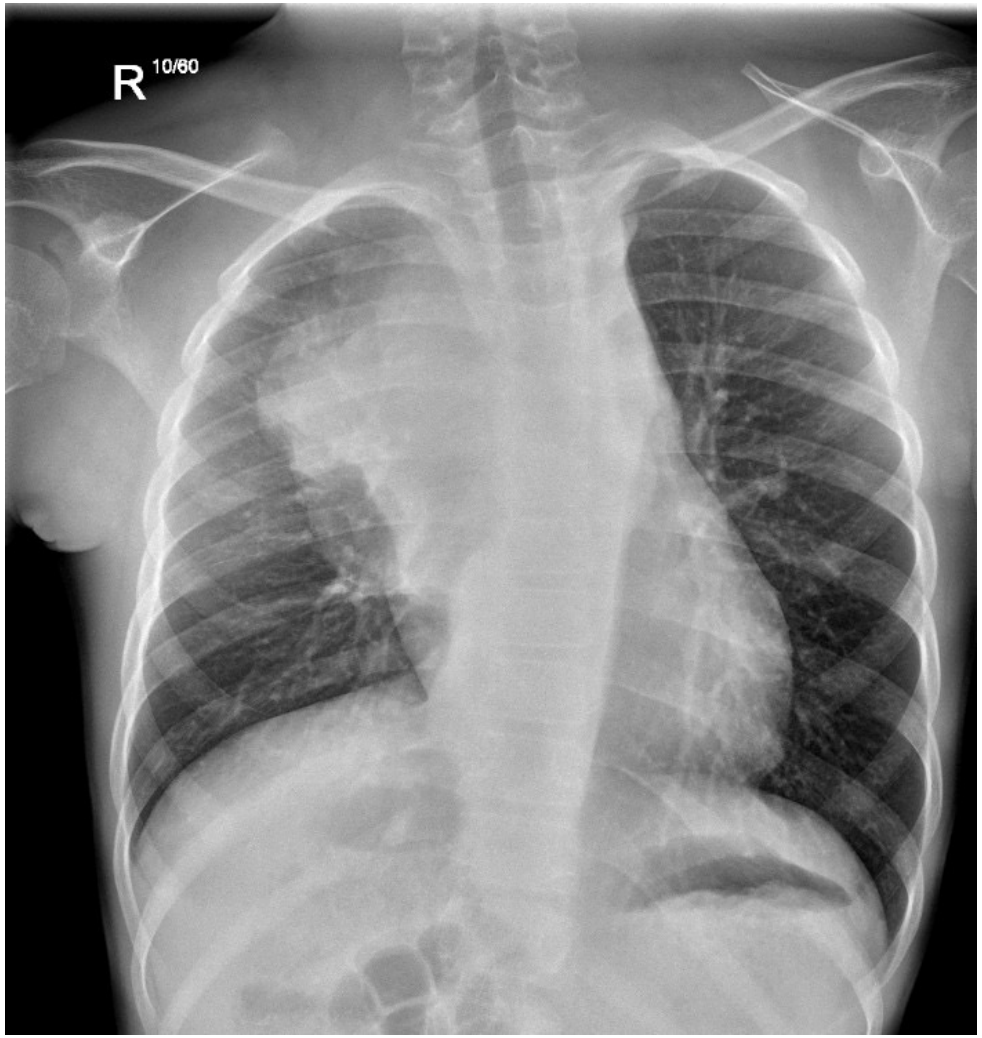
In this section of the resource you will find information about the basics of palliative care for children with cancer.

# Thank-you



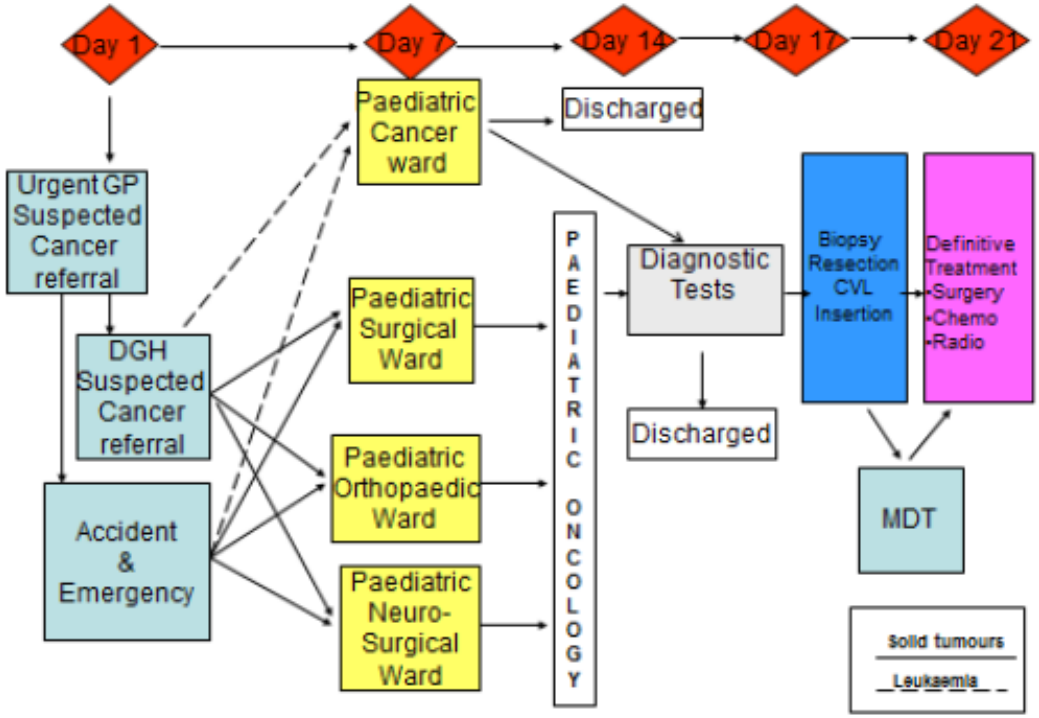





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# NI Paediatric Cancer pathway






# 5 most common symptoms by age



**Under 1s (n=152)**

- Abdominal distention/ mass (41; 30%)
- Loss of appetite (33; 24%)
- Vomiting (29; 21%)
- Pallor (24; 18%)
- Fever (24; 18%)



**1-4 years (n=717)**

- Tiredness, fatigue or lethargy (307; 43%)
- Fever (264; 37%)
- Loss of appetite (208; 29%)
- Pallor (208; 29%)
- Abdominal distention/ mass (149; 21%)



**5-9 years (n=432)**

- Tiredness, fatigue or lethargy (164; 39%)
- Fever (141; 33%)
- Loss of appetite (112; 26%)
- Bone or joint pain (110; 26%)
- Pallor (108; 25%)



**10-14 years (n=409)**

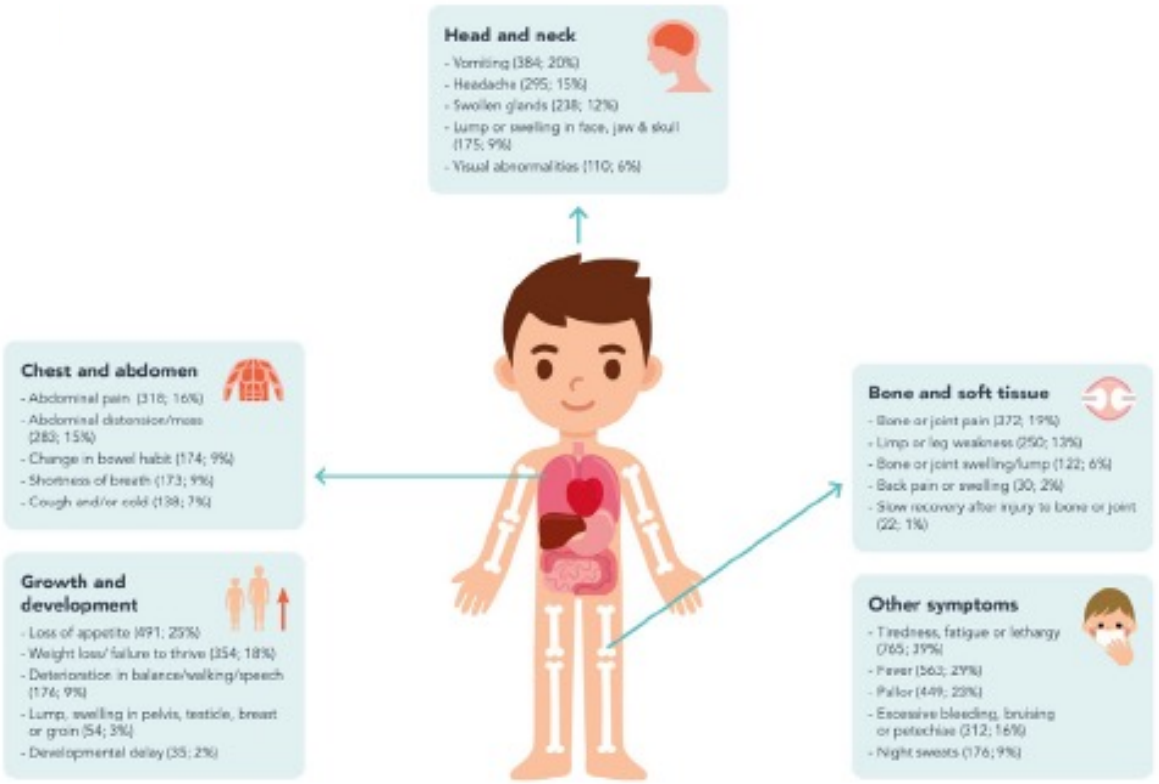
- Tiredness, fatigue or lethargy (177; 44%)
- Bone or joint pain (102; 25%)
- Headache (100; 25%)
- Fever (93; 23%)
- Vomiting (88; 22%)



**15 or older (n=247)**

- Tiredness, fatigue or lethargy (94; 38%)
- Weight loss or failure to thrive (64; 26%)
- Swollen glands/ lymph nodes (60; 24%)
- Bone or joint pain (57; 23%)
- Headache (54; 22%)

# 5 most common symptoms by anatomical site



# 5 most common symptoms by tumour type

