

# PRN Program: Cancer



**Materials:** Flip chart or Whiteboard and Markers

Provide participant guide at least one week in advance

**Room Setup:** In tables of 4 or 6-8 depending on number of participants

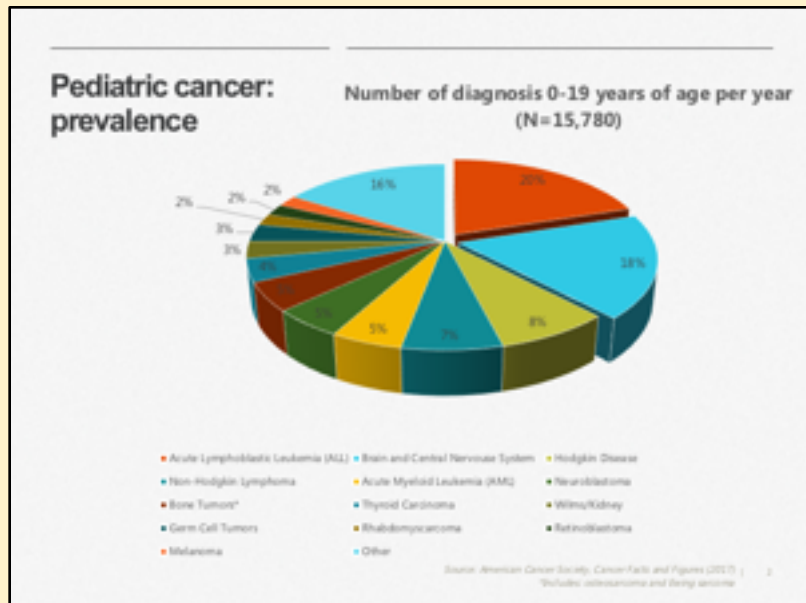
- Display slide as participants walk in
- This session is **45 minutes**

**Welcome & Introductions:** *Introduce facilitator if necessary.*

**READ:** The learning objectives for this content are to:

- Recognize the variety of reasons for pain and barriers to optimal pain management for children with cancer.
- Develop evidence-based multimodal and interdisciplinary individualized plans of care to treat children with pain and cancer.

# PRN Program: Cancer



**READ:** Overall survival rate for childhood cancer was just 10%-50 years ago and is nearly 90% today.

- Yet, the number of cases diagnosed annually have not declined in nearly 20 years.
- Each year >15,000 children are diagnosed with cancer and 40,000 are in active treatment in the US.

**ASK:** As a PRN, why are these statistics significant?

*Select participants willing to share their answers to this question.*

*Write on flipchart or whiteboard [Limit discussion to 3 minutes]*

**READ these Key points (if not included by participants):**

- 49% of children report pain at cancer diagnosis. This is in primary care offices, EDs, school clinics, diagnostic imaging, specialty clinics and hem/onc.
- In advanced disease, pain is the most common physical symptom of cancer.
- Pain is the greatest source of anxiety for children (more than the fear of not being cured).
- Inadequately controlled pain decreases quality of life and increases morbidity, mortality, and care costs.

**[4 MINUTES of 45 minute session is complete]**

# PRN Program: Cancer



**What is your response?**

**What additional questions might you ask Billy and his mother to obtain a complete initial pain assessment and history?**

**Billy**

Billy is a 4-year-old who presents to the pediatrician with his mother. He has refused to walk for the last 2 days and has complained of leg pain for the last week with fatigue and dyspnea with mild exertion. Lab results initially revealed anemia and decreased platelets. Blood pathology revealed Billy has B cell ALL.

**ASK:** What additional questions would you ask Billy and his mother to obtain a complete initial pain assessment and history?

**READ:** With your **table** discuss your answers to the question on the slide. You will have **5 minutes**.

*[Give groups **5 minutes** to discuss case.]*

**ASK:** What types of pain are associated with cancer?

*Select participants willing to share their answers to this question.  
Write on flipchart or whiteboard **[Limit discussion to 1 minute]***

**READ these Key points (if not included by participants):**

The primary sources of pain in children with cancer are related to chemotherapy, radiation and medical procedures:

- Mucositis, dermatitis, burns,
- Lab draws, Implanted venous or intrathecal pump access
- Lumbar punctures, Bone marrow aspirates/biopsies

***[10 MINUTES of 45 minute session is complete]***

# PRN Program: Cancer

## Pediatric Cancer Pain Management

**ASK:** How do you consistently and systematically prevent and manage the pain from common cancer-related diagnostic procedures? Does your healthcare system provide optimal pain management during every procedure, the first to the last?

*Select participants willing to share their answers to this question.*

***[Limit discussion to 2 minutes]***

**ASK:** What about operative procedures?

- Is anesthesia consulted preoperatively and are pain management expectations and plans developed with the patient, family and interdisciplinary teams, including anesthesia, surgery, oncology, nursing, pharmacy, child life, physical therapy, etc.?
- Is there plan to continually assess and address persistent post-operative pain or phantom limb pain?

*Select participants willing to share their answers to this question.*

***[Limit discussion to 2 minutes]***

***[15 MINUTES of 45 minute session is complete]***

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**Billy**

What is your response?

What can be done immediately to relieve Billy's leg pain?

What pain medications would be indicated for persistent pain?

With your **table** discuss your answers to the questions on the slide. **This is a 10 minute case.** You will have **5 minutes** to discuss the case and prepare to share your plan with the group

*[Give groups **5 minutes** to discuss case.]*

*Select participants willing to share their group's answers.*

*Write changes to the plan on flipchart or whiteboard*

***[LIMIT discussion to 1-2 minute/group, max of 5]***


***READ these Key points (if not included by participants):***

- Sometimes leukemia cells build up near the surface of the bone or inside the joint and cause diffuse bone or joint pain, which is a likely cause for Billy's leg pain.
- NSAIDs have been shown to be more effective than opioids for bone fractures; but NSAIDs are often contraindicated during chemotherapy.
- Therefore opioids are usually the drug of choice.
- Once Billy is started on chemotherapy the leukemic blasts usually respond quickly and in turn the pain should go away.
- It is essential to begin a bowel regimen when starting any opioid therapy. Consider adding a stimulant such as senna to prevent abdominal pain from opioid-induced constipation.

***[25 MINUTES of 45 minute session is complete]***

# PRN Program: Cancer

**Pharmacological Management of Cancer Pain**



**Treatments**

- Chemotherapy
- Biotherapy
- Radiation

**Non-opioids**

- Acetaminophen
- Nonsteroidal anti-inflammatory drugs

**Opioids**

**Adjuvants**

**Corticosteroids**

**Off-label use of cannabinoids**

**READ:** Chemotherapy, biotherapy and radiation can decrease tumor burden and alleviate pain.

Use interdisciplinary, evidence-based, multimodal, individualized plans of care to treat children with pain and cancer.

- Use nonopioids with care.
  - ✓ Acetaminophen may mask fever. Neutropenic cancer patients with fever require immediate antibiotic treatment to prevent septic shock.
  - ✓ Acetaminophen should be used with caution in patients with primary or metastatic liver tumors because of potential for hepatotoxicity.
  - ✓ Most NSAIDs are contraindicated for thrombocytopenic patients, because most NSAIDs affect platelet function.
  - ✓ More selective Cox2 inhibitors like celecoxib should be considered.
- Initiate opioid treatment with short-acting IV or oral opioids at starting doses recommended for opioid-naïve children.
  - ✓ Most IV opioids reach peak analgesia at 10 to 15 minutes and doses can be repeated if appreciable pain reduction is not achieved.
  - ✓ Duration of analgesia is only 1 to 2 hours after IV administration as compared to 3 to 4 hours after oral doses. References of longer duration are typically based on intramuscular injection not IV route.
  - ✓ Relative potency of opioids differ; but ineffectiveness is typically related to dose rather than opioid choice.
  - ✓ Some pain management specialists recommend rotating opioids when treatment is over several weeks to prevent tolerance to an opioid and the consequential need for larger


and larger doses.

# **PRN Program: Cancer**

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**Goals of Cancer Pain Treatment**

- Prevention*
- Reduce pain that can not be relieved*
- Prevent/manage adverse effects associated with cancer and pain treatment*
- Promote patient safety and function*
- Enhance quality of life*

A photograph of a young child dressed as a superhero, wearing a blue mask, a blue shirt with a white star, and a red cape. The child is standing in a brightly lit hallway with blue walls and a blue carpet, looking towards the camera.

**READ:** The goals of cancer pain treatment include:

- preventing pain whenever possible,
- reducing pain that can not be relieved,
- preventing adverse analgesic effects, like opioid-induced constipation,
- promoting patient safety,
- optimizing function, and
- enhancing quality of life to the end of life.



# PRN Program: Cancer

## Barriers to Cancer Pain Relief



- Common barriers**
  - Healthcare professionals
  - Expectations
  - Knowledge
  - Fear of Tolerance
  - Lack of Interdisciplinary cooperation
- Patients and families**
  - Most believe pain is an unavoidable
  - Assume treatment team would address
  - Reluctant to "complain" about pain
- The healthcare system**
  - Low priority
  - Few treatments approved by FDA **for children**
  - Lack of evidence/funding for research for most biobehavioral treatments.

## **ASK:**

Are there other barriers to these goals that you want to add to this list ?

Tell us about a time you tried to address one of these barriers.

*Select participants willing to share their answers to this question.*

***[Limit discussion to 3 minutes]***

***[30 MINUTES of 45 minute session is complete]***

## PRN Program: Cancer



The slide features a light blue circular icon with a white wrench. To the right of the icon, the name 'Billy' is written in a large, dark blue font. Below the icon, the text 'What is your response?' is displayed in a smaller, dark blue font. To the right of this text, two questions are listed in a smaller, dark blue font: 'What biobehavioral therapies might be useful for Billy?' and 'What education should be provided to Billy and his family?'. The slide is set against a light yellow background.

**READ:** With your **table** discuss your answers to the questions on the slide. You will have **5 minutes**.

*[Give groups **5 minutes** to discuss case.]*

**READ:** Relaxation, guided imagery, massage and other cognitive behavioral therapies may assist Billy in coping with pain and pain management. Many of these interventions, for example, massage, TENs, and chiropractic care, have traditionally been considered contraindicated; but efforts to individualize patient treatments have revealed their widespread use without consequential adverse effects, like metastasis.

- Assess Billy's experience with these strategies and willingness to try any of these.
- Safety issues are significant. Billy may have an unstable gait because of leg pain. Safety issues regarding storage of opioid analgesics and other drugs should be addressed.

***[35 MINUTES of 45 minute session is complete]***

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**Billy**

**What is your response?**

A week after completing the first cycle of chemotherapy, Billy refuses to put socks or shoes on.

How would you treat his peripheral neuropathic pain?

**READ:** With your **table** discuss your answers to the question on the slide. You will have **5 minutes**.


*[Give groups **5 minutes** to discuss case.]*

**READ:** Allodynia of the feet with vincristine exposure suggests Billy is experiencing neuropathic pain. Agents of first choice for neuropathic pain are gabapentin, and tricyclic antidepressants. Based on age and size, gabapentin offers more appropriate dosing options for this pediatric patient. A different chemotherapy regimen that is less likely to have neurotoxicity might be considered if anti-cancer treatment is to be continued.

***[40 MINUTES of 45 minute session is complete]***

# PRN Program: Cancer

## Key Points



### Cancer pain management

- Consider the variety of causes of children's cancer pain
- Conduct a thorough pain assessment
- Develop evidence-based, multimodal, interdisciplinary, individualized plans
- Prevent or promptly treat adverse effects
- Evaluate and modify treatment plan
- Address existential distress
- Educate
- Lead organizational efforts to reduce barriers to optimal pain management

**ASK:** Are there any questions related to treating children's cancer pain.?

***[45 MINUTE SESSION COMPLETE]***