
INDIANA ONCOLOGY NURSING SOCIETY SYMPOSIUM

ONCOLOGIC EMERGENCIES: STRUCTURAL & METABOLIC: A NURSING PERSPECTIVE

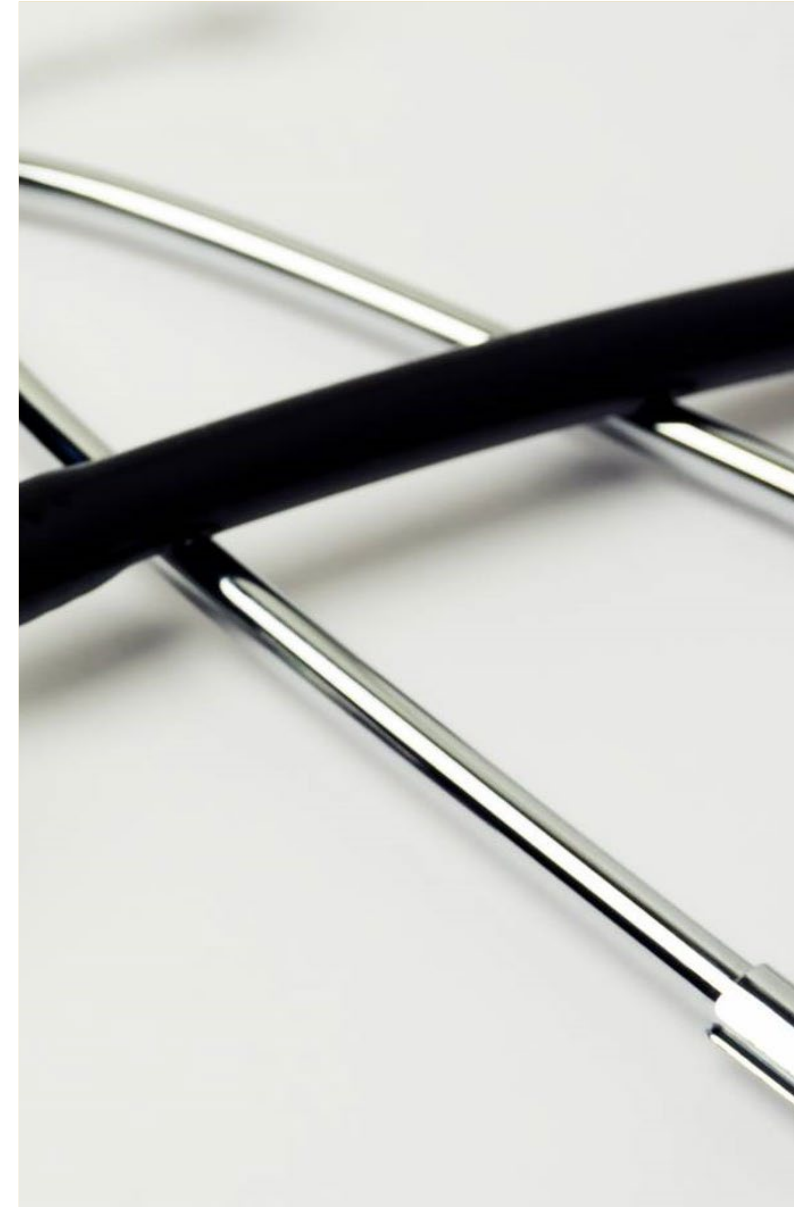
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OBJECTIVES

- Define various structural and metabolic oncologic emergencies
- Discuss nursing interventions to treat specific oncologic emergencies.
- Examine case studies that apply to nursing interventions related to the oncologic emergencies discussed.

No disclosures



STRUCTURAL ONCOLOGIC EMERGENCIES

- ❑ Increased Intracranial Pressure
- ❑ Spinal Cord Compression
- ❑ Superior Vena Cava Syndrome
- ❑ Cardiac Tamponade
- ❑ Bowel Perforation
- ❑ Bowel Obstruction
- ❑ Pneumonitis

Increased Intracranial Pressure

- **Define:** An increase in pressure of the cranium
- **Key symptoms:** AMS, nausea, headache, HTN, bradycardia
- **Nursing Interventions:** Increased neuro assessments (GCS), elevate HOB to reduce pressure, protect airway
- **Provider orders to consider:** Head CT, Brain MRI, LP to rule out meningitis

Image retrieved from:
[Interactive Brain - How Injury Can Affect the Brain | BrainLine](#)



CASE STUDY

WOODY IS A 40-YEAR-OLD MAN WITH METASTATIC MELANOMA. YOU ARE GOING TO DO SOME TEACHING WITH FAMILY ABOUT SIGNS AND SYMPTOMS TO MONITOR WHEN IT COMES TO INCREASED ICP

1. Which of the following is not a sign of increased ICP?
 - a) Increased drowsiness
 - b) Headache
 - c) AMS
 - d) Nausea
2. After teaching, a family member notices the patient is saying things that don't make sense. What should the nurse do?
 - a) Notify the provider
 - b) Increase neuro assessments
 - c) Ask the provider about obtaining a head CT
 - d) All of the above

SPINAL CORD COMPRESSION

- **Define:** Occurs when a tumor extends into the epidural space or can happen when vertebral bone fragments compress on the spinal cord.
- **Nursing Interventions**
 - Pain Assessment
 - Safe mobility
 - Bladder/Bowel dysfunction
- **Provider orders to consider**
 - MRI of the spine





CASE STUDY

BUZZ IS AN 80-YEAR-OLD MALE WHO CAME TO ED WITH A CHIEF COMPLAINT OF BACK PAIN FOR THE LAST SEVERAL WEEKS UNRELIEVED BY OXYCODONE. HE HAS PROGRESSIVE WEAKNESS IN BILATERAL LEGS.

1. What should the nurse assess for?
2. What orders should the nurse anticipate from the provider?
3. What additional measure should the nurse put in place for this patient?

- **Define:** When the superior vena cava (SVC) becomes obstructed and decreases blood flow to the brain and upper body.
- **Nursing Interventions**
 - Airway protection
 - Comfort measures
- **Provider orders to consider**
 - Chest x-ray
 - Bolus dose radiation
 - Chemotherapy if applicable
 - Clot related: thrombolytic or anticoagulants

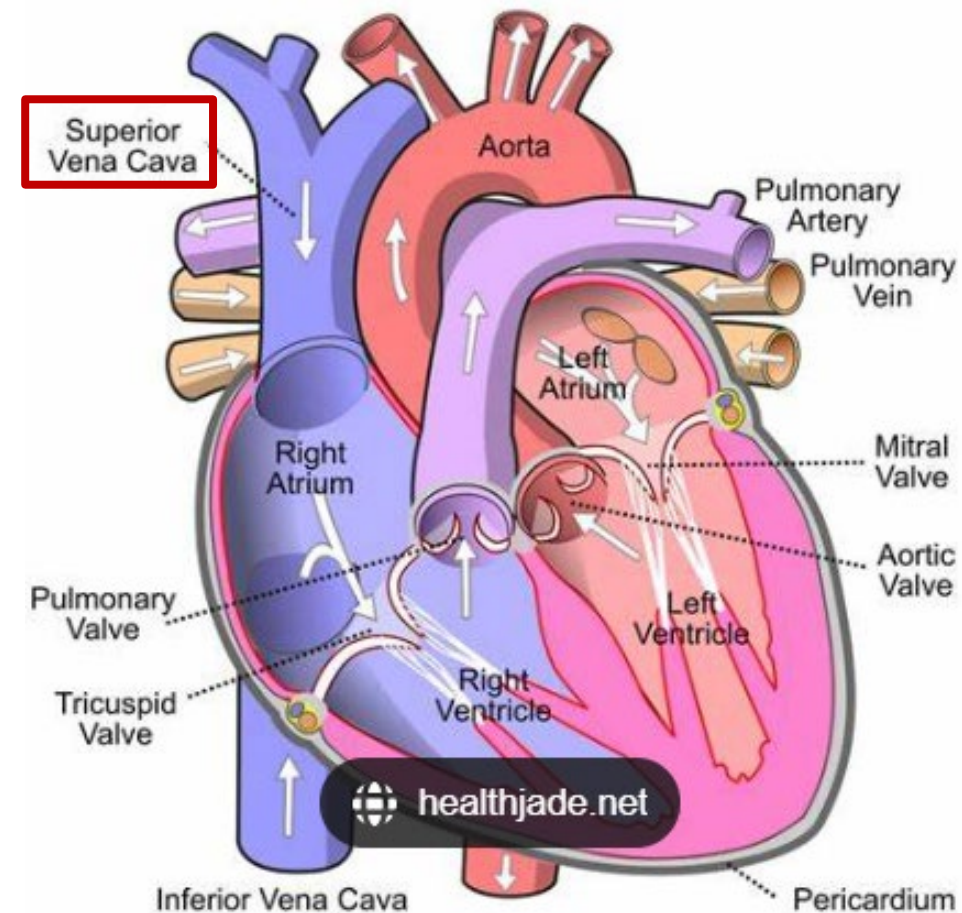


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<https://th.bing.com/th/id/OIP.qFYa30m2CGeYQb26qLHLoAHaHR?rs=1&pid=ImgDetMain>

SUPERIOR VENA CAVA SYNDROME



CASE STUDY

REX IS A 70-YEAR-OLD MAN WITH B-CELL LYMPHOMA. HE IS CURRENTLY GETTING TREATMENT WITH RCHOP.

1. What makes the patient at risk for SVC syndrome?
2. What are some signs and symptoms you can teach the patient to be aware of?

(Based on nursing practice, NO reference)

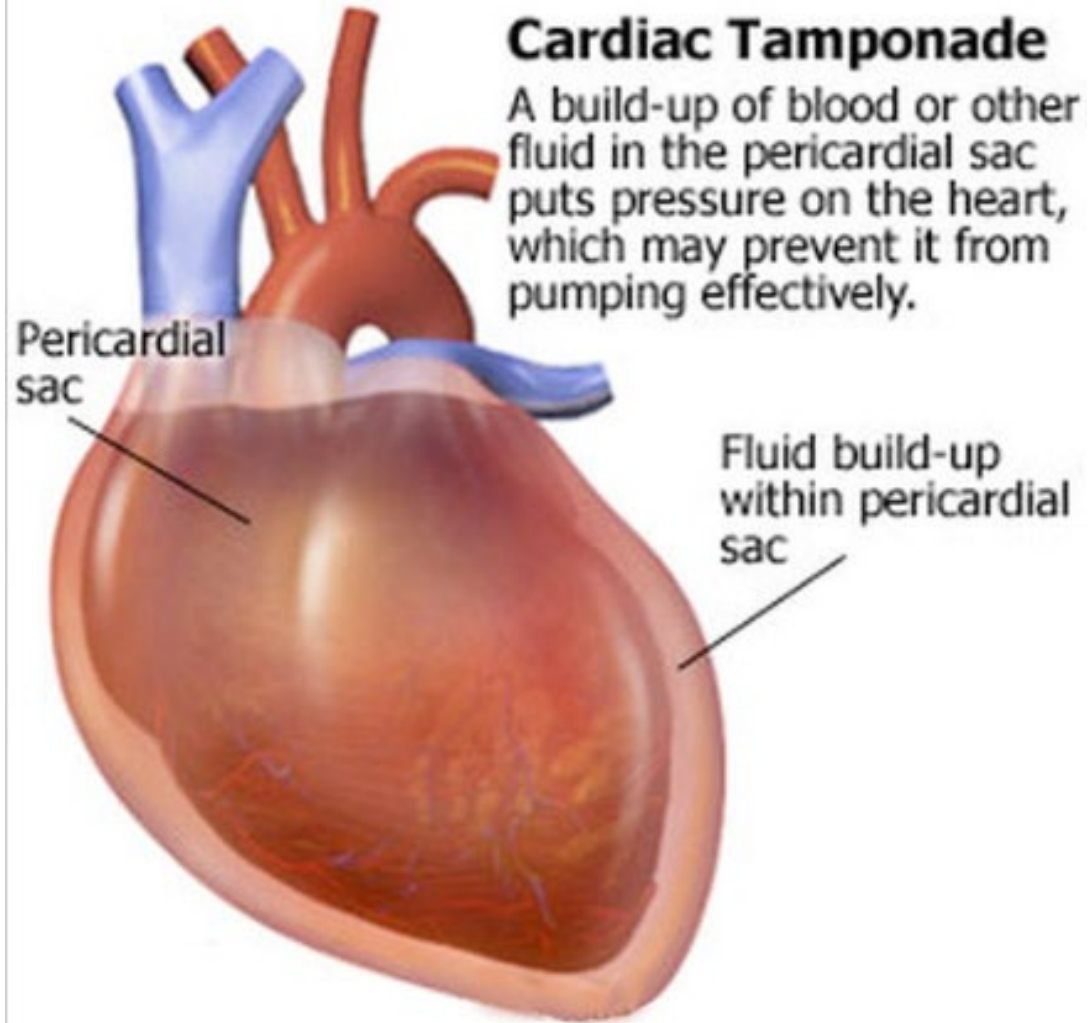


Image retrieved from:
<https://www.myamericannurse.com/wp-content/uploads/2017/07/Acute-cardiac-tamponade4.jpg>

CARDIAC TAMPONADE

- **Define:** An accumulation of fluid around the heart impacting blood flow and cardiac output.
- **Nursing Interventions**
 - Quick recognition
 - Good resp, cardiac, neuro assessment
- **Provider orders to consider**
 - Initial chest x-ray (water bottle shaped)
 - Echo
 - Remove fluid, treat underlying cause
- **Case Study**

(Kaplan, 2018; ONS, 2024; Backler et al., 2024)



CASE STUDY

BO PEEP IS A 50-YEAR-OLD PATIENT WITH METASTATIC BREAST CANCER. SHE IS ADMITTED TO THE HOSPITAL FOR RECURRENT FEVERS. SHE SUDDENLY DEVELOPS SOB.

1. What are the initial nursing interventions for this patient?
2. What orders might you suggest to the provider?

(Based on nursing practice, NO reference)

BOWEL PERFORATION

- **Define:** a weakening of the bowel wall causing contents to be expressed in the peritoneal space.
- **Nursing Interventions**
 - Good Abdominal Assessments
 - NG Tube placement
 - NPO
- **Provider orders to consider**
 - Abdominal CT with contrast
 - Broad spectrum IV antibiotics
 - Additional surgical intervention
- **Case Study**



Image retrieved from: <https://www.oh-mygut.com/wp-content/uploads/2020/11/Untitled-design-7.jpg>

(Hughes, 2024)

BOWEL OBSTRUCTION

- Define: “A mechanical interruption in the flow of colic contents”.
- Nursing Interventions
 - Abdominal assessments
 - Placement of NG tube
 - Patient is NPO
- Provider orders to consider
 - Abdominal and pelvis CT with IV contrast
- Case Study

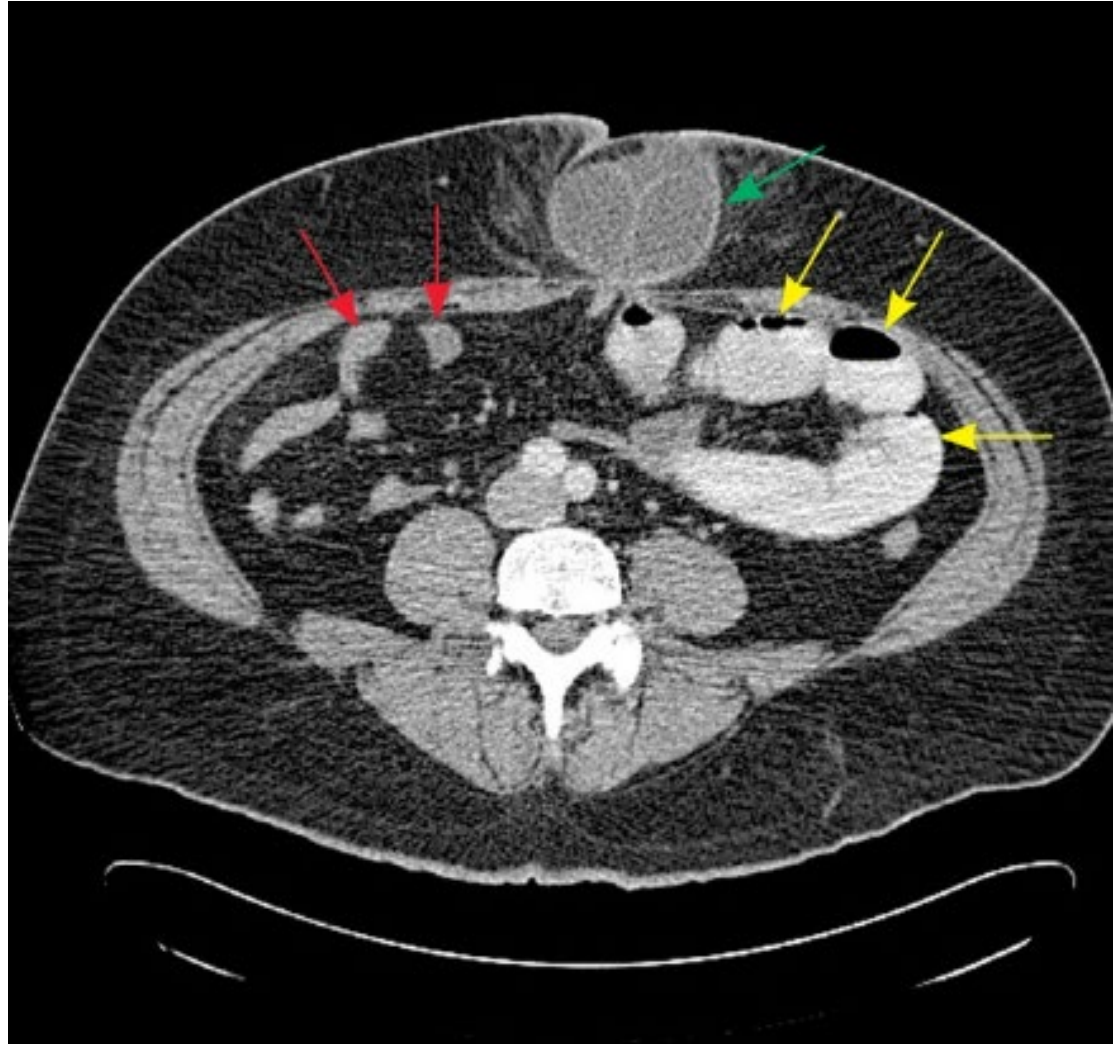


Image retrieved from: <https://healthjade.com/wp-content/uploads/2018/01/CT-scan-bowel-obstruction.jpg>

(Verheyden et al., 2020; Madariaga et al., 2022)

CASE STUDY

JESSIE IS A 25-YEAR-OLD FEMALE CURRENTLY STAYING IN THE HOSPITAL RECEIVING HER FIRST CYCLE OF HYPER CVAD. SHE CALL THE NURSE BECAUSE SHE IS EXPERIENCING SEVERE ABDOMINAL PAIN.

1. What is the first thing the nurse should do?
 - a) Call the provider
 - b) Complete an abdominal assessment on the patient
 - c) Bring the patient pain medication
2. You discover the patient has rebound tenderness 10/10 and has her arms crossed over her abdomen. What orders should you anticipate from the provider?
 - a) Abdominal CT with contrast
 - b) Antibiotics
 - c) Blood Cultures
 - d) All of the above
3. What else can we do for this patient?

(Based on nursing practice, NO reference)

PNEUMONITIS

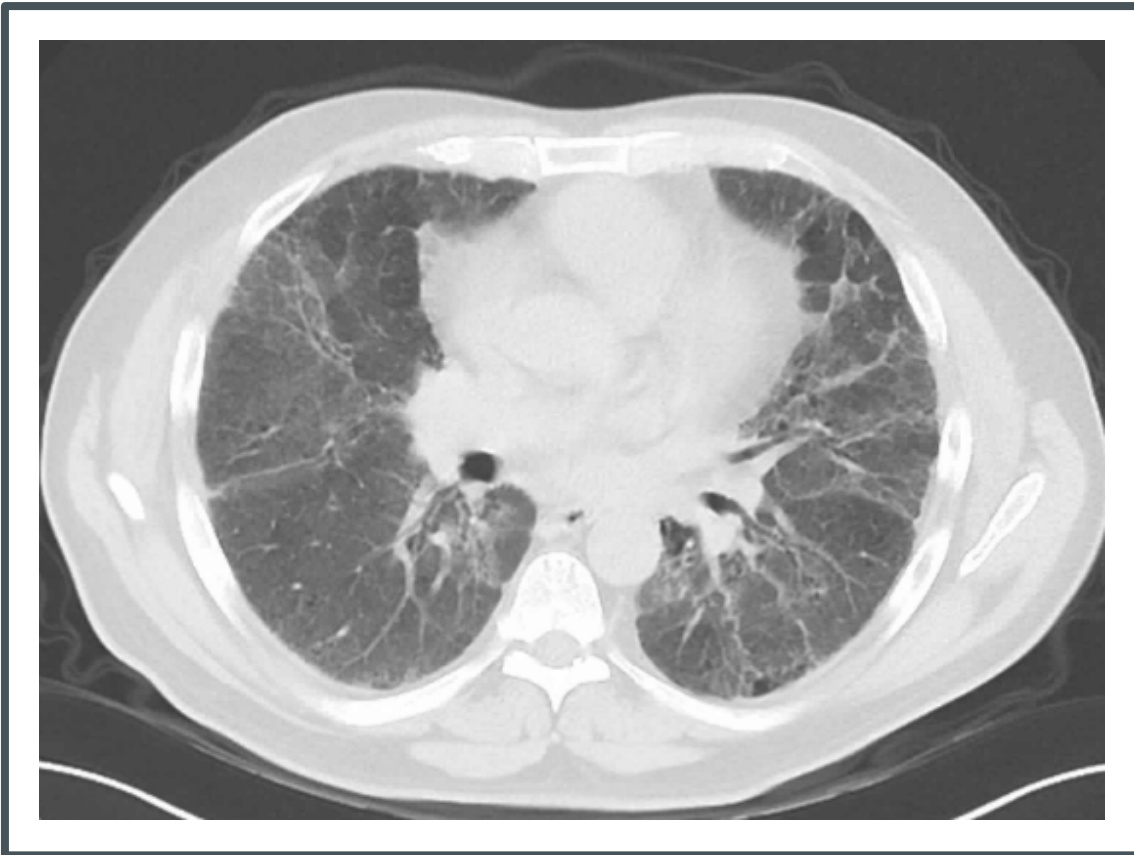


Image retrieved from: [Hypersensitivity pneumonitis causes, symptoms, diagnosis, treatment & prognosis \(healthjade.net\)](https://www.healthjade.net)

- **Define:** Inflammation of lung tissue resulting in acute toxicity
- **Nursing Interventions**
 - Provide oxygen
 - Teach patient to conserve energy and modify activity
- **Provider orders to consider**
 - Chest CT
 - PFTs
 - ABG
 - CBC

(Keffer et al., 2020; Webster, 2017)

CASE STUDY

HAMM IS A 70-YEAR-OLD MALE RECEIVING RADIATION FOR HIS ADVANCED SMALL CELL LUNG CANCER. HE RECENTLY STARTED HAVING A PRODUCTIVE COUGH.

1. What additional questions should you ask the patient?
2. What diagnostic tests should you anticipate?

METABOLIC ONCOLOGIC EMERGENCIES

- ❑ Syndrome of Inappropriate Anti-Diuretic Hormone
- ❑ Hypercalcemia

Syndrome of Inappropriate Anti-Diuretic Hormone

- **Define:** An endocrine disorder characterized by the unregulated secretion of the antidiuretic hormone resulting in water retention, hyponatremia, and concentrated urine.
- **Nursing Interventions**
 - Lab draws
 - Patient education on fluid restriction
 - Prevention of injury- seizure precautions
- **Provider orders to consider**
 - Blood draw for electrolytes (Na⁺)
 - Fluid restriction (500mL-1L/Day)
 - Hypertonic saline infusion
 - Urine sodium and osmolarity test
 - Demeclocycline

SIADH

Levels of ADH increased

- Certain tumors
- Pulmonary conditions
- Medications
- Neurologic conditions



Renal tubules increase permeability to water



Water resorption

↓ Urine volume

↑ Urine osmolality

↑ Urine sodium

Increased blood volume

Increased serum hypo-osmolality

Dilutional hyponatremia

- headache
- muscle cramping
- nausea
- vomiting
- irritability
- confusion
- hallucinations
- seizure

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CASE STUDY

MR. POTATO HEAD IS A 60-YEAR-OLD MALE WITH A HISTORY OF SQUAMOUS CELL CARCINOMA OF THE TONGUE. HE'S GETTING A COMBINATION OF RADIATION THERAPY ALONG WITH CARBOPLATIN AND 5-FU.

1. Mr. Potato Head is complaining of a headache is very thirsty and has had a large amount of urine output in the last few hours. What are some things we should assess and escalate to the provider?
2. What nursing interventions can we do for this patient?

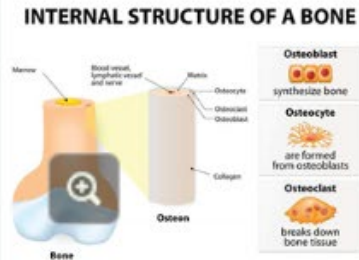
HYPERCALCEMIA

- **Define:** A metabolic disorder associated with high levels of calcium
- **Nursing Interventions**
 - Fall precautions (risk for fracture)
 - Neuro Assessments
 - Educate on prevention (hydration, weight-bearing activities)
- **Provider orders to consider**
 - Lab testing
 - ECG
 - Fluids
 - Bisphosphonates, loop diuretics, corticosteroids
 - Dialysis

Image retrieved from (Beckler et al., 2024)

HCM can occur as the result of four different mechanisms:

Mechanism 1



Tumor stimulation of osteoclasts or parathyroid hormone results in an increase of bone resorption

Mechanism 2



Tumor invasion of the bone, results in increased bone resorption

Mechanism 3



Decreased renal clearance of calcium

Mechanism 4



Increase of gut absorption of calcium

(Kaplan, 2018; ONS, 2024; Beckler et al., 2024)

CASE STUDY

BULLSEYE IS A 55-YEAR-OLD MAN WITH HISTORY OF SQUAMOUS CELL LUNG CANCER WITH BONE METASTASIS.

1. What education can you provide this patient about prevention of hypercalcemia?
2. Which two body systems should the nurse focus on when assessing for hypercalcemia?
 - a) Cardiac and GI
 - b) Neuro and Renal
 - c) Pulmonary and GU

FINAL TIPS AND TAKEAWAYS-ONCOLOGY EMERGENCIES



- Early recognition is key
- Remember to complete thorough nursing assessments and escalate anything that is abnormal to the provider.
- Remember nursing interventions (follow nursing process)
- Treat underlying cause
- Use your resources

THANK YOU!

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Image retrieved from: [Breast cancer myths busted: Diagnosis, treatment and types \(usatoday.com\)](#)

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