Oncologic Emergencies
1. Discuss the major classifications and sub-classifications of oncologic emergencies

2. Discuss the signs, symptoms and treatment for each emergency
What is an Oncologic Emergency?

A clinical condition resulting from a metabolic, neurologic, cardiovascular, hematologic, and/or infectious change caused by cancer or its treatment that requires immediate intervention to prevent loss of life or quality of life.

Clinical Reasoning in Evaluating & Treating an Oncologic Emergency

» Is there a previous diagnosis of malignancy?
» Are symptoms due to tumor or complications of treatment?
» What were the patient’s previous treatments?
» How quickly are symptoms progressing?
» What is the interval between treatment and onset of symptoms?
» Should treatment be directed at treating the malignancy or the complication?
» What are the patient’s other existing medical conditions?
Always Be Prepared!

» ANTICIPATE potential emergencies & RECOGNIZE them early!
» Regular monitoring of lab values every shift by RN.
» Need for RN & AP communication & documentation throughout the shift—updating each other, sharing “gut feelings” of observations—“something just doesn’t seem right.....”
» Identification of risk factor(s): Is there a history of MI, multiple surgeries, DVTs, drug abuse, etc.?
» Review of admission history if RN has not cared for assigned patient; review eMAR, patient 24° flow sheet, & post-pain scores.
» Educate patients/families of potential problems and need to notify RN/AP as soon as possible.
Classifications

Major Classifications
• Metabolic
• Structural

Sub-Classifications
• Metabolic
• Neurologic
• Cardiovascular
• Hematologic
• Infectious

(Oncology Nursing Society-ONS)
<table>
<thead>
<tr>
<th>Classifications</th>
<th>Oncologic Emergencies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metabolic</td>
<td>1. Hypercalcemia (most common)</td>
</tr>
<tr>
<td></td>
<td>2. Tumor Lysis Syndrome</td>
</tr>
<tr>
<td></td>
<td>3. SIADH (Syndrome of Inappropriate antidiuretic syndrome)</td>
</tr>
<tr>
<td>Neurologic</td>
<td>1. Spinal Cord Compression</td>
</tr>
<tr>
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<td>2. Brain metastases/↑ ICP</td>
</tr>
<tr>
<td>Cardiovascular</td>
<td>1. Malignant Pericardial Effusion</td>
</tr>
<tr>
<td></td>
<td>2. Superior Vena Cava Syndrome</td>
</tr>
<tr>
<td>Hematologic</td>
<td>1. Hyperviscosity due to Dysproteinemia</td>
</tr>
<tr>
<td></td>
<td>2. Hyperleukocytosis</td>
</tr>
<tr>
<td></td>
<td>3. DIC (disseminated intravascular coagulation)</td>
</tr>
<tr>
<td>Infectious</td>
<td>1. Neutropenic fever</td>
</tr>
<tr>
<td></td>
<td>2. Septic shock</td>
</tr>
</tbody>
</table>
## Hypercalcemia

<table>
<thead>
<tr>
<th>Definition</th>
<th>Signs &amp; Symptoms</th>
<th>Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Normal = 8.5 - 10.5 mg/dL)</td>
<td>Serum calcium levels &gt; 11.0 mg/dL.</td>
<td>IV hydration, corticosteroids, antitumor treatment.</td>
</tr>
<tr>
<td>MOST COMMON Metabolic Emergency!</td>
<td>Lethargy, restlessness, confusion, nausea/vomiting, polyuria, constipation, dysrhythmias.</td>
<td>Loop diuretics used to promote excretion of calcium.</td>
</tr>
<tr>
<td>Associated with multiple myeloma &amp; lung, breast, kidney, head/neck, &amp; esophageal cancers.</td>
<td>Hypokalemia, hyponatremia, hypophosphatemia</td>
<td>Bisphosphonates to interfere with bone resorption (breakdown). Examples are: Pamidronate or Zometa.</td>
</tr>
<tr>
<td>Bony metastases</td>
<td>Increased BUN and creatinine</td>
<td>Increase mobility/exercise to help maintain bone mass; dialysis.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>I&amp;O and daily weights</td>
</tr>
</tbody>
</table>
Hypercaldemia Case Study

A 78-year-old man who was a resident of a nursing home was brought to the emergency department for evaluation of sudden onset of mental status changes. He was confused and lethargic but reported no seizure activity. He had no personal or significant family history of malignancy. 75 pack/year smoking history and COPD.

On examination, he was found to have dry oral mucosa with loss of skin turgor. He was afebrile, 184/88 mm Hg, HR 126. No focal neurologic findings. His complete blood count was normal, serum calcium level of 14.2 mg/dL, a potassium level of 2.9 mEq/L, and a phosphorous level of 2.4 mg/dL.

Noncontrast computed tomography (CT) of the head revealed a new left frontoparietal mass arising from the skull, causing bone destruction. Chest CT revealed a 2-cm spiculated right lung nodule, osseous metastatic disease, and vertebral collapse.

Treatment:
- Fluid and lasix given in ED
- Started on Zometa
What are the important nursing considerations for management a patient with hypercalcemia?

A. Monitor for patient safety related to mental status changes
B. Monitor daily weights
C. Monitor I & O
D. Patient education regarding symptoms of hypercalcemia
E. All of the above
What are the important nursing considerations for management a patient with hypercalcemia?

A. Monitor for patient safety related to mental status changes
B. Monitor daily weights
C. Monitor I & O
D. Patient education regarding symptoms of hypercalcemia
E. **All of the above**
# Syndrome of Inappropriate ADH

## Metabolic

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<th>Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Associated with SCLC, pancreatic/prostate/brain cancers/Infusions of Cytoxan, Vincristine, or Cisplatin can cause SIADH.</td>
<td><strong>Na &lt;130mEq/L</strong></td>
<td>Control the underlying cause.</td>
</tr>
<tr>
<td>Occurs when antidiuretic hormone (ADH) is secreted w/o response to the body’s usual feedback mechanisms, resulting in water intoxication. The kidneys continue to return water to the body, diluting the Na.</td>
<td>H/A, thirst, n/v, confusion, lethargy, hyporeflexia, oliguria, seizures, hypotension, muscle cramps.</td>
<td>Correcting electrolyte imbalance, Fluid restriction 500-1000 cc/day, Infusion of 3% hypertonic NS so sodium is not depleted further.</td>
</tr>
</tbody>
</table>

- **ADH** Anti-diuretic hormone functions to regulate body water.
  - Daily weights and I&O
  - Daily labs

- **ADH** is a hormone that is stored in the pituitary gland and acts on kidneys to regulate water.
  - Declomycin po= inhibits ADH secretion
  - Other new agents to increase serum sodium.
Increased levels of ADH

Renal Tubules permeable to water

Water Reabsorption

↓ urine volume

↑ urine osmolality

↑ urine sodium

↓ aldosterone

↑ blood volume

↑ serum hypoosmolality

Dilutional hyponatremia

Anorexia, Nausea, Vomiting

Irritability, Confusion, Hallucinations, Seizures
Patient Case:

Assessment

65 yo with h/o RIC alloSCT in Jan 2012 for MDS, now in remission, with chronic GVH in skin/joints, liver, lung, 6 months hx cough/DOE acutely worsened over last week with worsening LE edema, found to be 90% on RA in clinic. Labs remarkable for hyponatremia, new.

Low volume concentrated urine output

Labs

<table>
<thead>
<tr>
<th>Patient lab values</th>
<th>Normal Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium 128mmol/L</td>
<td>135-145 mmol/L</td>
</tr>
<tr>
<td>Urine Osmolality 322 mOsm/kg</td>
<td>&gt;100 mOsm/kg water</td>
</tr>
<tr>
<td>Serum Osmolality 275 mOsm/kg</td>
<td>&lt;280 mOsm/kg</td>
</tr>
<tr>
<td>Urine Sodium 49 mmol/L</td>
<td>&gt;20mmol/L</td>
</tr>
</tbody>
</table>

Plan

Hyponatremia, hypervolemia, acute. High urinary Na/osm suggest SIADH but may be affected by recent diuretic use. Possibly due to underlying condition of graft vs host disease.
What treatments would you expect to see started for this SIADH patient?

A. Encourage fluid intake
B. 1000 liter fluid restriction
C. Bolus with 0.9% normal saline
What treatments would you expect to see started for this SIADH patient?

A. Encourage fluid intake
B. **1000 liter fluid restriction**
C. Bolus with 0.9% normal saline
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<tr>
<td>May affect a pt. w/lymphoma or leukemia, or a pt. with a large tumor burden.</td>
<td><strong>Hyperkalemia (&gt; 5):</strong> weakness, nausea, diarrhea, flaccid paralysis, muscle cramps, parathesias</td>
<td>✓ labs: Monitor electrolytes, BUN, Creatinine, Uric Acid, Calcium, Magnesium</td>
</tr>
</tbody>
</table>
| Chemotherapy causes rapid cell death and rapid/overwhelming release of intracellular contents into the blood. The body is unable to safely metabolize and excrete the potassium, sodium, phosphorus, and nucleic acids that metabolize into uric acid causing potentially life-threatening problems. | **Hyperphosphatemia (> 10):** oliguria, anuria, azotemia, renal insufficiency  
**Hypocalcemia (< 4.5):** parathesias, muscle twitching, tetany, seizures, hypotension  
**Hyperuricemia (> 10):** N/V/D, altered mental status, edema, hematuria, oliguria, anuria, azotemia | Hydration/ Diuresis/ **Sodium Bicarb** (alkalinizes the blood and urine)  
**Rasburicase** IV (enzyme/endocrine metabolic agent that catalyzes oxidation of uric acid into an inactive and soluble metabolite.)  
**Allpurinol** PO (antigout/xanthine oxidase inhibitor that Allopurinol and its metabolite, oxipurinol (alloxanthine) decreases the production of uric acid by inhibiting the action of xanthine oxidase, the enzyme that converts hypoxanthine to xanthine and xanthine to uric acid.) |
What abnormal lab values are you watching for when cell content explodes into the blood stream during Tumor Lysis Syndrome?

A. ↓Potassium, ↓Sodium, ↑Calcium
B. ↑Potassium, ↑Uric Acid, ↑Phosphorus
C. ↓Uric Acid, ↓↑Calcium, Sodium
What abnormal lab values are you watching for when cell content explodes into the blood stream during Tumor Lysis Syndrome?

A. ↓ Potassium, ↓ Sodium, ↑ Calcium

B. ↑ Potassium, ↑ Uric Acid, ↑ Phosphorus

C. ↓ Uric Acid, ↓ ↑ Calcium, Sodium
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| The partial or complete obstruction of the structure that coordinates and transmits neurological function. | **Initial:** Back pain, motor weakness, decreased sensation, footdrop, unsteady gait. | - Spinal films, MRI, Bone scan, CT scan  
- Steroid use- IV Decadron to ↓ inflammation. |
| Occurs as a result of tumor invasion of the vertebrae and collapse of the vertebrae on the spinal cord, tumor invasion of the spinal canal with resulting ↑ pressure on the cord, or primary tumors of the spinal cord. | **Late:** Loss of motor strength, loss of sensation, bowel/bladder dysfunction. | - Radiation therapy: shrink tumor.  
- Surgery: Provide surgical decompression.  
- Chemotherapy as adjuvant tx to radiation and/or surgery. |
| - Commonly associated with metastatic cancers.  
- 10% - cervical, 20%- lumbosacral & 70%- thoracic. | | |
Mr. K, 68 years old, comes to the oncology clinic for his scheduled appointment. He seems uncomfortable and walks much slower than usual. When asked about the presence of pain, Mr. K states: "The low back pain that I have had on and off for years is acting up again." He rates his pain as 3 to 4 during the day but 7 to 8 at night, when he is in bed. Mr. K took several doses of oxycodone, but it only took the edge off his pain.

Mr. K’s wife says symptoms are trouble getting up from the chair last night, leg weakness and complaints that his legs are cold and his feet are numb, he denies constipation and urinary retention.

On assessment he has an unsteady gait, and he is unable to stand without holding on to a stationary object. He has bilateral leg weakness and some loss of pinprick sensation and cannot feel the vibration of the tuning fork in either leg. Muscle strength and sensory function are normal in the upper extremities. There is some percussion tenderness over his lumbar spine. His mental status is normal, with memory and cognition intact. Emergency MRI shows the vertebrae at L5 to be compressed by a tumor mass.

Treatment:
- Immediate hospitalization
- Dexamethasone 100mg bolus (x3 additional 100mg)
- Emergent radiation therapy (x 10 days)
- Pain switched to long acting morphine
- No loss of bladder or bowel function
- Slight numbness and weakness at discharge.
What is the most important nursing consideration for a spinal cord compression patient?

A. Being sure family is with the patient
B. Speed in which treatments are started
C. Having patient keep activity level high
What is the most important nursing consideration for a spinal cord compression patient?

A. Being sure family is with the patient

B. **Speed in which treatments are started**

C. Having patient keep activity level high
### DIC

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<thead>
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<th>Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Defined as the inappropriate, accelerated, and systemic activation of the coagulation cascade, resulting in thrombosis and, subsequently, bleeding &amp; hemorrhage.</td>
<td>Uncontrolled bleeding and rapid consumption of clotting factors.</td>
<td>Treat underlying problem, such as antibiotics with sepsis</td>
</tr>
</tbody>
</table>
| Usually secondary to an underlying disease process or condition such as sepsis, liver disease, blood transfusion reaction, hepatic failure. | Bleeding from gums/nosebleeds, dyspnea, hemoptysis, tachypnea, lethargy, confusion. | - Plasmapheresis.  
- Low-dose heparin will act as a fibrinolytic inhibitor.  
- Hemodynamic supportive measures for shock, hypoxia such as with IV fluids, Oxygen. |
| Two Pathways: Extrinsic pathway for DIC is tissue injury resulting from malignancy, trauma, or obstetric complications. | Prolonged PT & PTT, ↓ platelets, ↓ fibrin level, & ↑ fibrin split products (↑ D-dimer level) | |
| Intrinsic pathway for DIC can be triggered by infection and sepsis. Solid tumors are associated with this type of pathway—ovarian, pancreatic, lung, breast, prostate. | | |
Diagram of DIC:

**Homeostasis**

- **Coagulation + Fibrinolysis**
  - Vascular Injury
  - Tissue Injury
  - Coagulation Cascade
  - FDPs Excreted
  - Prothrombin
  - Fibrin Degradation Products (FDPs)
  - Thrombin
  - Fibrinogen + Fibrin Clot Breakdown
  - Fibrinogen
  - Plasmin
  - Plasminogen
  - Fibrin ... Stable Clot Formation

**Flowchart**

1. **Balance of Coagulation**
   - Precipitating Event (e.g., infection or sepsis)
   - Tissue Factor Release
   - Coagulation Cascade
   - Excess Thrombin
   - Conversion of Plasminogen to Plasmin
   - Microvascular Clotting
   - Macrovacular Clotting
   - Thrombocytopenia
   - Consumption of Clotting Factors
   - Fibrinolysis with Excess FDPs

2. **Excess Clotting**
   - Ischemia
   - Impaired Organ Perfusion
   - End-Organ Damage

3. **Excess Bleeding**
   - Shock
   - Hypotension
   - Increased Vascular Permeability
DIC Case study

65 year old man with c/o chest pain, back pain, shortness of breath. Dx BCR-ABL positive pre-B-cell ALL s/p Hyper CVAD/imatinib, now with relapse presenting with leukostasis (WBC 195K) resolved symptomatically after leukopheresis x 4. WBC 91,000 with 72% blasts. Hgb 9.1 Plt 27

3/3
INR 1.0 (PT 11.); PTT 24.3  Fibrinogen 296 (all WNL) No evidence of DIC or TLS
Plan: review BM bx slides for disease status
Started patient on desatinib (Sprycel) to manage relapse -- DIC and TLS labs BID
3/4
INR 1.4 (PT 14.5); PTT 24.5; Fibrinogen 104  WBC 38.8, Hgb 8.9 plts 11K, No evidence of bleeding  Evidence of DIC with increased INR and decreased fibrinogen
Transfuse for Hgb <7 and plts <20  Received 5pk platlets. If bleeding Hgb <8.
3/5
INR 1.7 (PT 17.8)  PTT 26.4  Fibrinogen 38  DIC worsening.  No bleeding or headache
WBC 6.9  Hgb 7.1  Plts 22K
Transfused 20 units Cryo, 3u FFP, 2 5pk Platlets, 2 u pRBCs total through day and overnight
Watching fluid status carefully – IV kept to TKO while products infusing
3/6
Oozing around femoral sorensen catheter. No other signs of bleeding
1 u pRBCs, 1 5pk plts, 5 u Cryo  Monitoring fluid status with lasix prn
Fibrinogen 91 with a bump to 123 with 10 more units of cryoglobulin overnight

3/7
Fibrinogen 112 with a bump to 153 with 10 units cryo

3/8
INR 1.4 (PT 14.5)  PTT 24.5  Fibrinogen 59 bumped to 103 with 10 u cryo and 1 unit plts and 1 unit pRBCs for Hgb 7.0. No active bleeding. Denies symptoms. Reporting dark stools.

3/9
Fibrinogen 105 with a bump to 156 with 10 u cryo in am, 1 u pRBCs. Still reporting dark stools, will collect stool sample. Additional 5 units cryo in pm with increased fibrinogen to 144, followed by 10 units cryo
Will continue to replenish products as necessary. Fibrinogen slowly stablizing.
Management of patients in DIC include which of the following?

A. Bleeding precautions
B. Monitoring of lab values at least BID
C. Administration of multiple blood products
D. All of the above
Management of patients in DIC include which of the following?

A. Bleeding precautions
B. Monitoring of lab values at least BID
C. Administration of multiple blood products
D. All of the above
# Increased Intracranial Pressure

## Structural

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<tr>
<th>Definition</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Lung cancer, breast cancer, &amp; melanoma are the most common causes.</td>
<td>Symptoms can be focal or generalized, depending on the location of the lesion(s) within the brain.</td>
<td>MRI</td>
</tr>
<tr>
<td>Distribution of brain mets within the brain is in accordance with the regional blood flow.</td>
<td>Nausea/vomiting, headache, seizures.</td>
<td>IV steroids, IV anticonvulsants, Radiation therapy, Surgery.</td>
</tr>
<tr>
<td>Brain edema &amp; tumor expansion commonly result in ↑ ICP.</td>
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</table>
# Superior Vena Cava Syndrome (SVCS)  
**Structural**

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<th>Signs &amp; Symptoms</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Associated with lung cancer,</td>
<td>Cough, dyspnea, dysphagia, head/neck/upper extremity swelling/discholoration,</td>
<td>- <strong>Non-invasive</strong>: CXR, venogram</td>
</tr>
<tr>
<td>metastatic mediastinal tumors,</td>
<td>development of collateral venous circulation, jugular vein distention (JVD),</td>
<td>- <strong>Invasive</strong>: bronchoscopy, thoracotomy, mediastinoscopy.</td>
</tr>
<tr>
<td>lymphoma, breast cancer,</td>
<td>mental status changes, seizures, hypotension</td>
<td></td>
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<tr>
<td>indwelling venous catheters.</td>
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</tr>
<tr>
<td>Occurs when blood flow through</td>
<td></td>
<td>- Chemotherapy and/or radiation therapy to reduce tumor.</td>
</tr>
<tr>
<td>the superior vena cava (the</td>
<td></td>
<td>- Stent placement.</td>
</tr>
<tr>
<td>major vein that carries blood</td>
<td></td>
<td>- Diuretics to ↓ edema, steroids to ↓ laryngeal/cerebral edema, &amp;</td>
</tr>
<tr>
<td>from the head, neck, upper</td>
<td></td>
<td>thrombolytic agents for clots.</td>
</tr>
<tr>
<td>chest, and arms to the heart)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>is compressed: ↓ venous</td>
<td></td>
<td></td>
</tr>
<tr>
<td>return to heart, ↓ cardiac</td>
<td></td>
<td></td>
</tr>
<tr>
<td>output, ↑ venous congestion &amp;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>edema.</td>
<td></td>
<td></td>
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<tr>
<td>Result of compromised venous</td>
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<td></td>
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<tr>
<td>drainage of the head, neck,</td>
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<td></td>
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<tr>
<td>upper extremities, and thorax</td>
<td></td>
<td></td>
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<tr>
<td>through the SVC because of</td>
<td></td>
<td></td>
</tr>
<tr>
<td>compression or obstruction of</td>
<td></td>
<td></td>
</tr>
<tr>
<td>the vessel by, for example,</td>
<td></td>
<td></td>
</tr>
<tr>
<td>tumor or thrombus.</td>
<td>SEVERE when decreased cardiac filling occurs along with cerebral edema, and</td>
<td></td>
</tr>
<tr>
<td></td>
<td>respiratory distress!</td>
<td></td>
</tr>
<tr>
<td></td>
<td>↑ HOB &gt; 45°, O2.</td>
<td></td>
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<td></td>
<td>I&amp;O, daily labs, daily weight, avoid BPs in arms.</td>
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<td></td>
<td>Minimize energy expenditure, assist with ADLs</td>
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</table>
Superior Vena Cava Syndrome

- vena cava
- aorta
- cancer
- heart
- lung

[Image of a medical illustration showing the heart, lung, vena cava, aorta, and cancer.]

[Images of medical scans with labels like Thrombus, RSV, LSV, SVC, Stent.]
Which of the following is **NOT** a symptom of superior vena cava syndrome?

A. Upper extremity, head and neck swelling  
B. Discoloration of neck and face  
C. Swelling and discoloration of both lower extremities  
D. Development of collateral circulation around the superior vena cava to bypass obstruction
Which of the following is NOT a symptom of superior vena cava syndrome?

A. Upper extremity, head and neck swelling
B. Discoloration of neck and face
C. **Swelling and discoloration of both lower extremities**
D. Development of collateral circulation around the superior vena cava to bypass obstruction
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<td><strong>SEPSIS</strong>= A systemic response to infection.</td>
<td>Sepsis usually occurs with TWO or more of the following: Temperature &gt; 100.4 or &lt; 96.8, HR &gt; 90 bpm, RR &gt; 20bpm, and/or WBC &gt;12,000 or &lt; 4,000, or &gt; 10% immature bands.</td>
<td><strong>Blood, throat, wound &amp; urine cultures</strong></td>
</tr>
<tr>
<td><strong>SEVERE SEPSIS</strong>= Hypo- perfusion with organ dysfunction or hypotension.</td>
<td><strong>Early Signs:</strong> anxiety, restlessness, confusion, chills/fever, tachypnea, warm/flushed skin, anorexia, N/V/D</td>
<td><strong>Antibiotics.</strong></td>
</tr>
</tbody>
</table>
| **SEPTIC SHOCK**= Body’s response to an overwhelming infection characterized by persistent hypotension with organ dysfunction. | **Late Signs:** febrile, cold/clammy skin, hypotension, dyspnea, cyanosis, increased pulmonary congestion, decreased/absent urinary output, elevated blood glucoses, hematemesis, black/tarry stools. | **O2.** 
**Electrolyte replacement.** |
| | | (NOTE: Mortality is associated with causative organism, site of infection, & level/duration of neutropenia.) |

Hemodynamic instability, abnormal coagulation, and altered metabolism in response to infection.

Gram(-) bacteria account for 40%: E. Coli, Klebsiella, & Pseudomonas; Gram (+) bacteria account for 5-10%: Strep, Staph. Other: fungi, viruses.

Risk factors include: multiple biopsies & invasive tests, indwelling lines, alteration in microbial flora from antacids/chronic abx use, nosocomial infections, repeated use of steroids or chemotherapy, hematologic malignancies.
65 year old female diagnosed with acute myeloid leukemia s/p chemotherapy with 7+3 AraC and Daunarubicin infused through a Hickman.

**Nurse receives report this morning and patient is not doing well.**

Vital signs at 0800: Temp 39.6 (103.3) HR 133 BP 78/40
Patient is alert and oriented x3
Urine output 200cc throughout the night
Recognizing the signs of sepsis, RN calls Rapid Response Team and notifies medical team

Fluid bolus initiated at 1 liter over 30 minutes
Blood cultures and other labs obtained, UA and chest x-ray ordered
Antibiotics ordered and obtained from pharmacy
Charge nurse calling for a bed in the ICU – Physicians in communication with ICU for transfer
What are the most important nursing actions to take during a septic episode?

A. Make sure fluid is initiated to maintain blood pressure
B. Initiate antibiotics quickly within 30 min
C. Transfer patient to higher level of care
D. All of the above
Knowledge Checkpoint

What are the most important nursing actions to take during a septic episode?

A. Make sure fluid is initiated to maintain blood pressure
B. Initiate antibiotics quickly within 30 min
C. Transfer patient to higher level of care
D. All of the above
1. Increased PT and PTT
   Increased INR
   Decreased Platelets
   Decreased Fibrinogen

2. Before

   After

3. 

4. 2 or more of the following:
   Temperature > 100.4 or < 96.8,
   HR > 90 bpm, RR > 20 bpm,
   and/or WBC > 12,000 or < 4,000,
   or > 10% immature bands.

5. Explosion of cell contents upon cell death
   Treatment includes alkalizing urine and giving medications to decrease uric acid in the blood.

Mini Quiz
References

