Patient Examination
History and Physical Examination
101

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May 13, 2023
Objectives

Describe the components of a basic history and physical in the management and care for patients with cancer

Review common tools available to assist providers in the diagnosis, management and monitoring of patients with cancer
Cancer - Facts

- Not just one disease
  - Rather a collection of diseases

- Occurs anywhere in the body

- A disease of the genes
  - Genes control the way our cells work
  - Alterations or malfunctions interrupt the normal cell cycle
    - Growing and dividing when they should not
    - Disruption of cellular process prevents apoptosis
  - Thus, CANCER
Management

- Multidisciplinary Team
  - Providers
  - Hematologist/Oncologist
  - Advance providers
  - Surgeons
  - Radiation Oncologist
  - Radiologist
  - Pathologist
  - Pharmacist
  - Tumor boards
  - Nurses (variety of roles)
  - Social workers
  - Etc...

- Patients
  - Shock/disbelief
  - Understanding
  - Acceptance
Here we go!

• How do you prepare?
• How do you equip yourself?
• How do you encourage?
• This is a fight for life...
Preparation

- Prepare for the visit:
  - Review the chart
    - Type of cancer
    - Treatment
    - Review labs
    - Diagnostic testing
    - Look at the last note...
Components of Basic History and Physical

- Create an atmosphere of comfort
- Discuss subjective data
- Review medications
- Physical assessment
- Formulate a plan of care
Atmosphere of Comfort

• During the visit:
  • Introductions
    • Patient comfort level
      • Smile
      • Shake hands or fist bumps
      • Be confident
  • Acknowledge everyone in the room
    • This is important for patient comfort and future visits
    • Document – everything
  • Look at the patient
    • Give them your full attention
    • If not, explain why?
Subjective Data

• Ask the right questions...
  • Start from head to toe
    • Compare from last visit
      • Need starting point for comparison
  • Make applicable to:
    • Cancer
    • Treatment
    • Symptoms
Subjective Data

- Head to toe
  - Chills, fevers, appetite, weight loss, fatigue
  - Eyes, nose, mouth sores, or problems swallowing
  - Dyspnea (exertional or all the time), cough, secretions, sleeping up in a chair or on pillows
  - Abnormal or rapid heart beats, heart pain, swelling
  - Nausea, vomiting, diarrhea, constipation, heartburn, gas, bloating, distention – What is the normal bowel pattern?
  - Urinary frequency, urgency, flow, nightly, color, burning or painful
  - Numbing, tingling, fingers, toes, or dizziness
  - Weakness (if yes – where is it), abnormal gait, assistive devices
Medications

Review medications
Current medications
Include over the counter (OTC)

Could any recent changes account for symptoms
Physical Examination

- What do you see?
  - Eyes – Pupils, EOMI, sclera
  - Nose – drainage, sores, bleeding, perforations
  - Look at the chest, **listen** to lung sounds anterior and posteriorly
  - Heart tones **listen**, are they regular – slow – fast check all valves, murmurs, gallops, or rubs, is there a change from last visit
  - Abdomen (normal, hyper or hypo bowel sounds), soft, tender, painful (where), palpate liver
  - Motor – Ambulation (exam table or in a wheelchair). Does the patient need assistance.
• Know the plan?
  • Surgery
  • Treatment – therapy
  • Radiation
  • Manage side effects
Plan of Care

• It all comes down to the cancer...
  • Type (4 main types)
    • Carcinomas
    • Sarcomas
    • Leukemias
    • Lymphomas

• Guidelines
  • National Cancer Center Network (NCCN)
    • https://www.nccn.org/
  • American Society of Clinical Oncology (ASCO)
    • https://www.cancer.net/cancer-types
  • American Cancer Society (ACS)
    • https://www.cancer.org/cancer.html
Plan of care

• Common Cancer Treatments
  • Surgery
  • Chemotherapy
  • Radiation therapy
  • Hyperthermia therapy
  • Photodynamic therapy
  • Hormone therapy
  • Immunotherapy
  • Stem cell transplant

• Treatments are determined by cancer type
Cancer Treatment

• Surgery
  • What kind?
    • Resect
    • Debulk
    • Palliative
    • Reconstruction
    • Prevention

• Considerations
  • Location and type of cancer
  • Type of surgery
  • General health
  • Treatment prior to surgery
    • Neo-adjuvant chemo or radiation
  • Medications
    • Anti-VEGF inhibitors
    • Anticoagulants
Cancer Treatment

Chemotherapy
- Works by stopping or slowing growth

Routes
- Oral
- IV
- Injection
- Intrathecal
- Intraperitoneal (IP)
- Intra-arterial (IA)
- Topical

Symptoms
- Depend on drug
Cancer Treatment

• Targeted therapy
  • Targets proteins

• Monoclonal antibodies
  • Help the immune system stop cancer
  • Stops signals that help form blood vessels
  • Deliver cell-killing substances to cancer cells
  • Cause cancer death
  • Starve cancer of hormones to grow

• Side effects
  • Resistant
  • Diarrhea, liver, hypertension, mouth sores, nail changes, rashes, loss of pigmentation

Side effects

• Resistant
  • Target changes itself
  • Target cannot interact

Most common:

• Fatigue
• Hypertension
• Diarrhea and liver problems
• Mouth sores
• Nail changes
• Rashes or dry skin
• Loss of pigmentation (hair color)
Cancer Treatment

• Radiation Therapy
  • External beam radiation
    • Aims radiation at the cancer
    • Local treatment for specific parts of the body
  • Internal radiation therapy
    • Interstitial brachytherapy
      • Seeds
      • Ribbons
      • Capsules
    • Radioactive isotopes
      • Iodine-131

• Side Effects
  • Depends on location
    • Head and neck
    • Chest
    • Stomach and abdomen
    • Pelvis
  • Common
    • Dry mouth, difficulty swallowing, nausea, hair loss, lymphedema, tooth decay, shortness of breath, loss of appetite, loose stool or diarrhea, incontinence, sexual dysfunction, fertility dysfunction
Cancer Treatment

• Hyperthermia
  • Tissues are heated to kill cancer cells

• Techniques
  • Probes from microwaves
  • Radiofrequency
  • Lasers
  • Ultrasound
  • Hyperthermic intraperitoneal chemotherapy
    • Heated chemotherapy
Cancer Treatment

• Photodynamic
  • Using light to activate mediations or sensitizing agents to kill cancer
Cancer Treatment

• Hormone Therapy
  • Used to treat cancer, stop or slow growth

• Side effects
  • Hot flashes
  • Decrease libido
  • Weakened bones
  • Diarrhea
  • Nausea
  • Enlarged breast
  • Fatigue
  • Mood changes
  • Changes in menses (women)
  • Vaginal dryness (women)
Cancer Treatment

• Immunotherapy
  • Designed to help the immune system fight cancer
    • Checkpoint inhibitors – block immune checkpoints
    • T-cell transfer – boost T-cells to fight cancer
    • Modulators – enhance immune response
    • Monoclonal antibodies – specific targets on cancer cells
    • Vaccines – boost immune response

• Side Effects (most commons)
  • Pain
  • Swelling
  • Soreness
  • Redness
  • Itchiness
  • Rash

• Side Effects Continued...
  • Flu-like symptoms
    • Fever
    • Chills
    • Weakness
    • Dizziness
    • Nausea or vomiting
    • Muscle or joint aches
    • Fatigue
    • Headaches
    • Trouble breathing
    • High/low blood pressure
    • Sinus congestion
    • Diarrhea
Cancer Treatment

**Stem Cell Transplant**

- Leukemia
- Lymphoma
- Neuroblastoma
- Multiple myeloma

**Side effects**

- Bleeding
- Infection
- (Allogenic transplant) graft-versus-host disease

**Affects individuals differently depending on:**

- Type
- Treatment
- Type of cancer and advancement
- Health prior to transplant
When Cancer Spreads

• How?
  • Local invasion
    • Invades nearby
  • Intravasation
    • Walls of nearby lymph or blood vessels
  • Circulation
    • Lymphatic system and blood stream
  • Arrest and extravasation
    • Stop in capillaries in distant locations and migrate
  • Proliferation
    • Multiply to form micrometastases
  • Angiogenesis
    • Micrometastases form new blood supply
Where Does Cancer Spread?

- Bladder
  - Bone, liver, lung
- Breast
  - Bone, brain, liver lung
- Colorectal, Stomach, Pancreas
  - Liver, lung, peritoneum
- Kidney
  - Adrenal gland, bone, brain, liver, lung
- Lung
  - Adrenal gland, bone, brain, liver, lung and other lung
- Melanoma
  - Bone, brain, liver, lung, skin/muscle
- Ovary
  - Liver, lung, peritoneum
- Prostate
  - Adrenal gland, bone, liver, lung
- Thyroid
  - Bone, liver, lung
- Uterus
  - Bone, liver, lung, peritoneum, vagina
Symptoms of Cancer Metastasis

- **Brain**
  - Headaches
  - Seizures
  - Vertigo
- **Respiratory**
  - Cough
  - Hemoptysis
  - Dyspnea
- **Lymph nodes**
  - Lymphadenopathy
- **Liver**
  - Hepatomegaly
  - Jaundice
- **Skeletal**
  - Pain
  - Fractures
  - Spinal cord compression
Findings Requiring Immediate Intervention

- Dehydration
- Failure to thrive
- Superior Vena Cava Syndrome
- Jaundice, abdominal pain, nausea & vomiting
- Bleeding

What will you see?
What should you think about?
Case Study

• 64y male
• Pancreas cancer, Stage I resectable
• PMHx: heart disease, HTN, diabetes, GERD, depression
• SMHx: CABGx4, gastric bypass, Left ACL repair
• Social: Former smoker, occasional ETOH, Active

• Adjuvant therapy
  • Gemcitabine/capecitabine
    • Cycle 3, Day 15
      • Gemcitabine D1, 8 and 15
      • Capecitabine day 1-21 – 28 days

• Role play...
What do we know?

• Gemcitabine
  • [https://medlineplus.gov/druginfo/meds/a696019.html#special-dietary](https://medlineplus.gov/druginfo/meds/a696019.html#special-dietary)

• Capecitabine
  • [https://medlineplus.gov/druginfo/meds/a699003.html](https://medlineplus.gov/druginfo/meds/a699003.html)
Important???

What did the patient say:
- Review of systems

What did you see?
- Physical assessment

What should we do?
- Plan
Review of Systems

• What did the patient say that may clue you that is a potential problem?
  • “I was feeling alright after my last treatment but all the sudden I noticed I was having a problems breathing sometimes”
  • I have this swollen area on my arm and my “PCP” gave me an antibiotic for an infection and it is not getting better”
  • “Now it is hard to walk to the bathroom without having to stop and catch my breath”
  • “Now my other arm appears to be swollen and getting an infection, why am I getting these infections?”
  • The swelling in my legs is worse
Important???

What did the patient say:
- Review of systems

What did you see?
- Physical assessment

What should we do?
- Plan
Physical Assessment

- VS: T 38.1 (100.4), HR 103, RR 22, B/P 100/55, O2 sat: 89%
- PERRLA, MMM with mouth sores, EOMI, NCAT, Pale
- Diminished breath sounds, labored breathing, difficulty completing sentences, murmur, with regular pulses, pulses equal
- Abd soft, NTND, no hepatosplenomegaly, + BSx4

- No CVA tenderness
- MOE but weak, came into room in wheelchair
- 2+ edema pedal extremities
- RUA with erythema and induration
- LLA with erythema and induration
Important???

What did the patient say:
• Review of systems

What did you see?
• Physical assessment

What should we do?
• Plan
Plan

• What do you think is going on?
  • Pulmonary embolism
  • Metastasis to lung
  • Heart failure
  • Pneumonia
    • All could be...

• What are we going to do?
  • Pulmonary embolism
    • Treat

• ECG
• Labs
• Doppler US r/o DVT
• CT pulmonary angiography
• Chest X-ray
BE THE CHANGE
you want to see
IN THE WORLD.

Mahatma Gandhi – Civil Rights Activist
Questions?
References

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