Evaluating the Cancer Patient and Tumor Markers

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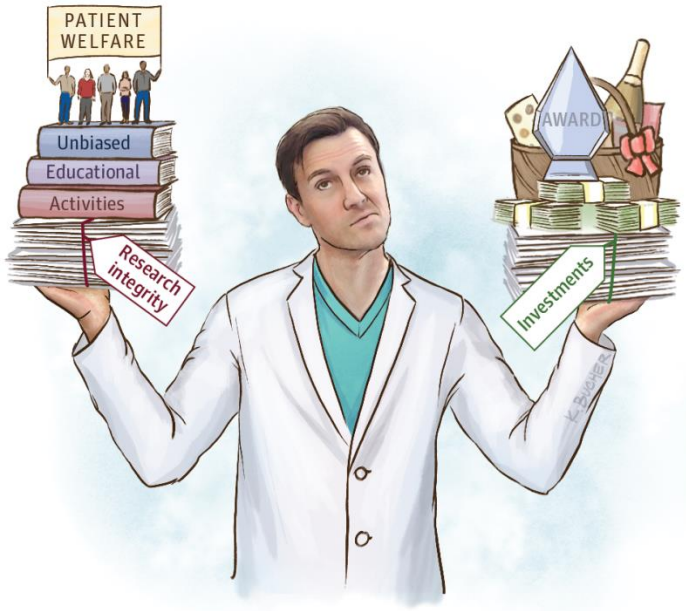
Disclosures

- I have no actual or potential conflict of interest in relation to this program/presentation.



Objectives

- Review elements of focused history and physical with cancer diagnosis
- Correlate signs and symptoms of disease, treatments, and side effects
- Discuss relevant tumor markers to diagnoses

Cancer Culture Complexity

- Multiethnic
- Multicultural

- Cultural differences compounded
  - Socioeconomic factors
  - Unequal access
  - Screening
  - Optimal standard care
  - Clinical trials
  - Effective pain control
  - Adequate supportive and end-of-life care
  - Psychosocial research
  - Survivorship care

Elements of Focused History & Physical

- Chief complaint
  - Why is the patient here?
    - Cancer type
    - Treatment
    - Pertinent labs
    - Procedures or imaging since last visit

You don’t want to be surprised!

https://www.google.com/url?sa=i&source=images&cd=&ved=2ahUKEwi5n4P52eDkAhVCq1kKHcTTArAQjRx6BAgBEAQ&url=http%3A%2F%2Fyourserve.com%2Fbbtao%2Flibrary%2Ffree-a-history-of-physical-theories-of-comets-from-aristotle-to-whipple%2F&psig=AOvVaw0B_byu0zXW7Q2fV84BhBSp&ust=1569113627447175

Elements of Focused History & Physical

- Atmosphere
  - Comfortable and relaxing
    - Introductions (document everyone in room)
    - Shake hands (if culturally appropriate)
    - Look at the patient

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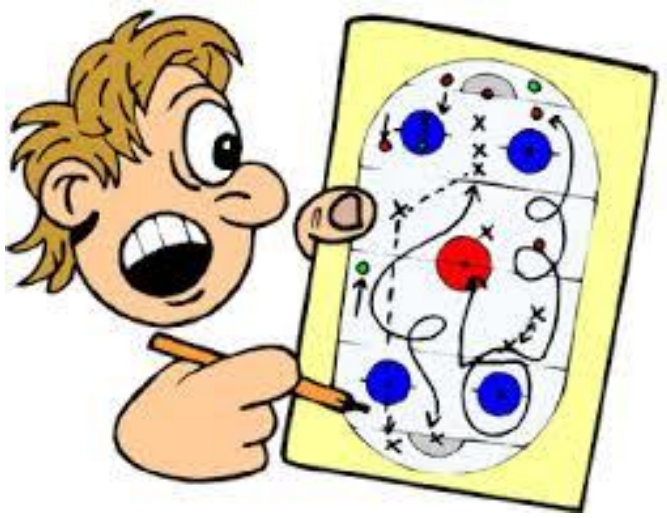
Plan

- Based on review, assessment and current treatment
  - Treat symptoms
    - Know area of typical metastasis for cancer
  - Dose adjust medications as needed
    - Grading criteria
  - Scans



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Subjective Data

- Head to toe (from last visit – need starting point
  - 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 (where), gait, assistive devices, abnormal gait

https://www.practicalpainmanagement.com/sites/default/files/images/2017/02/07/describe-pain-to-doctor68606185_L.jpg

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.
  - Male and Female assessment – disease specific

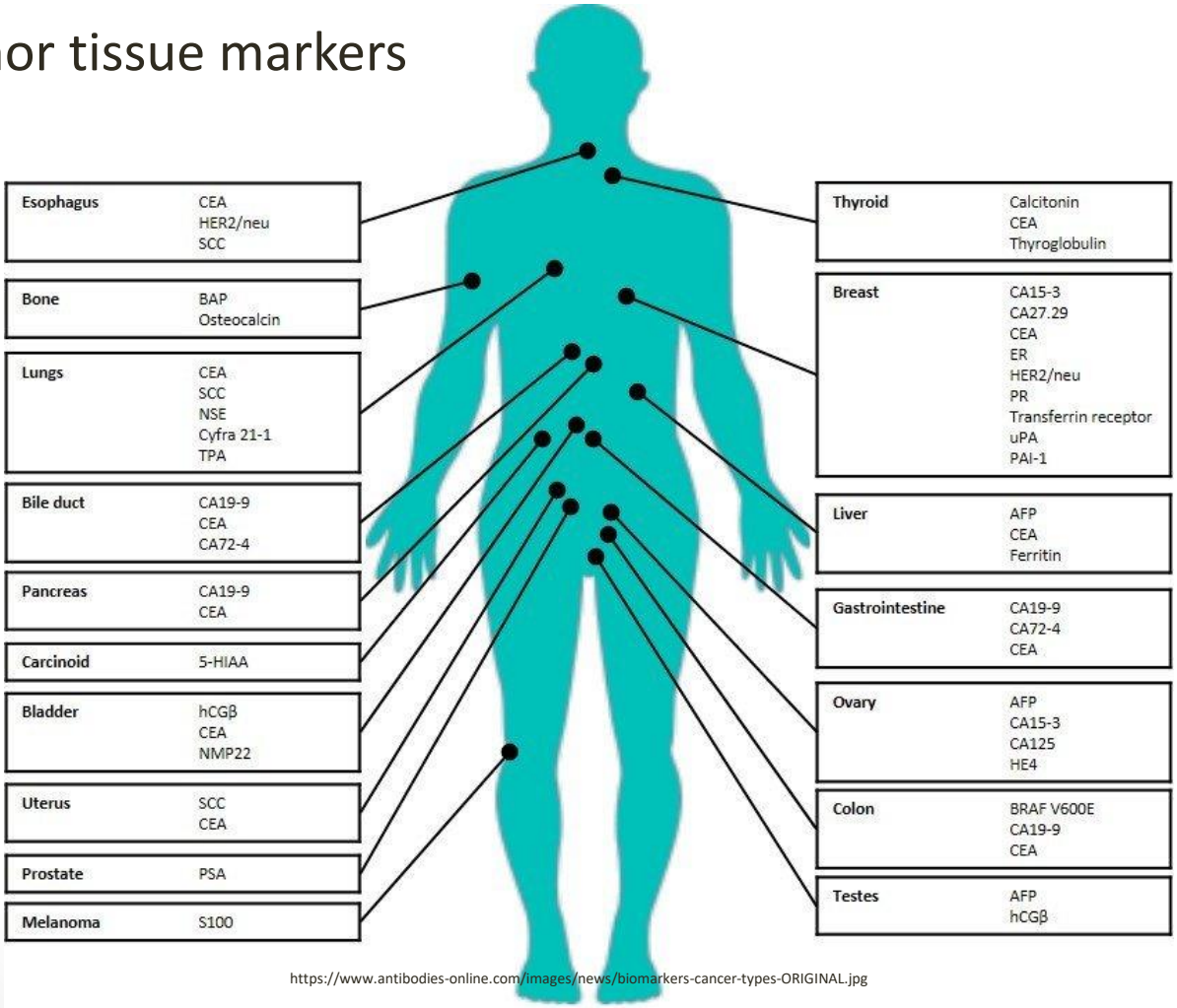
Acute Findings

https://clipartstation.com/wp-content/uploads/2018/09/fainting-clipart-3.jpg

- Dehydration
- Acute kidney failure
- Failure to thrive
- Superior vena cava syndrome
- Deep vein thrombosis
- Pulmonary embolism
- Bleeding

Tumor Markers

- Circulating tumor markers
- Tumor tissue markers



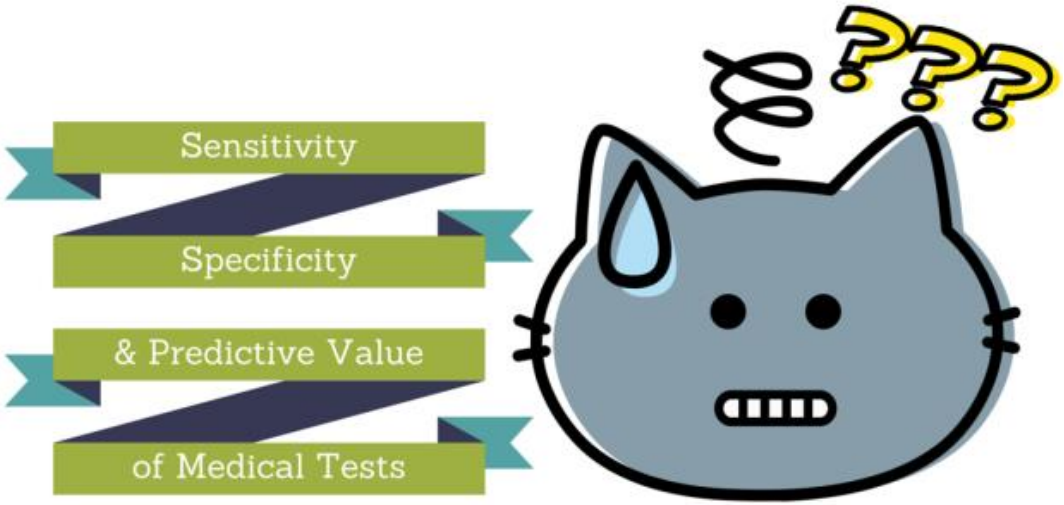
https://www.antibodies-online.com/images/news/biomarkers-cancer-types-ORIGINAL.jpg

Tumor Marker Guidelines

- American Society Clinical Oncology (ASCO)
  - Clinical practice guidelines
    - Breast, Colorectal, Lung, and others
- National Academy of Clinical Biochemistry
  - Use of Tumor Markers in Clinical Practice: Quality Requirements
    - Appropriate use of tumor markers for specific cancers
- National Cancer Institute
  - Tumor Markers in Common Use.
    - https://www.cancer.gov/about-cancer/diagnosis-staging/diagnosis/tumor-markers-list

Cancer Screening

- Markers
  - Sensitivity
  - Specificity



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Importance

New Players

- Proteomics
  - Analyze the structure, function and interactions of proteins produced by genes of a cell, tissue or organism
- Proteogenomics
  - Uses genomic and proteomic information to understand the molecular variations that lead to cancer
  - Used to identify and provide potential treatments by determining proteomic markers for tumors
- Liquid biopsies
  - Uses blood work to look for cancer cells in circulating blood by looking at DNA
  - Tumor molecular profiling without having tissue

Molecular Markers

- Diagnostic
  - Genetic and epigenetic alterations in many diseases
  - Pathways of neoplastic cells, genetic alterations, abnormality in the neoplastic transformation and mutations
- Predictive
  - Value of predicting the effectiveness of a particular targeted therapy for a specified tumor
- Companion
  - Biomarkers that are highly specific to a target or therapy
  - Test that detects the predictive biomarker to classify the tumor as responders and non-responders

Conclusion

- Important to use all tools available
- Look, listen and touch patient
- Review your data

"Hello, doc. This is the 'hypochondriac.'
Guess where I'm calling from?"

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