

Cancer 101

**Satellite Conference and Live Webcast
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Outline

- **Cancer basics**
 - **General information**
 - **Types, causes / contributors, signs and symptoms**
- **Types of treatments**
 - **Surgery, radiation, drug therapy, and supportive care**

Outline

- **Care for cancer patients**
 - **During and after treatment**
- **Miscellaneous**
 - **Resources, Questions and Discussion**

Cancer Basics

- **What is cancer?**
 - **Not ONE disease**
 - **Collection of MANY diseases**
 - **Cancers are genetic but not typically inherited**
 - **ALL cancers start with abnormal cells that grow out of control**

Cancer Basics

- **A cancer is named from its originating site**

Cancer Basics

- **Who has cancer?**
 - Nearly 12 million Americans with a history of cancer
 - Over 1.5 million NEW cases expected in 2012
 - Over 26,000 NEW cases expected in Alabama in 2012

Cancer Basics

- **Types**
 - Solid tumor cancers
 - Breast, lung, colon, kidney, prostate, liver, brain
 - Cancer of the blood ('liquid' cancers)
 - Leukemias and lymphomas

Most Common Types of Cancer

| Men | Women |
|--------------------------------------|--------------------------------------|
| Prostate: 241,740 (29%) | Breast: 226,870 (29%) |
| Lung and Bronchitis: 116,470 (14%) | Lung and Bronchitis: 109,690 (14%) |
| Colon and Rectum: 73,420 (9%) | Colon and Rectum: 70,040 (9%) |
| Urinary Bladder: 55,600 (7%) | Uterine Corpus: 47,130 (6%) |
| Melanoma of the Skin: 44,250 (5%) | Thyroid: 43,210 (5%) |
| Kidney and Renal Pelvis: 40,250 (5%) | Melanoma of the Skin: 32,000 (4%) |
| Non-Hodgkin Lymphoma: 38,160 (4%) | Non-Hodgkin Lymphoma: 31,970 (4%) |
| Oral cavity and Pharynx: 28,540 (3%) | Kidney and Renal Pelvis: 24,520 (3%) |
| Leukemia: 26,830 (3%) | Ovary: 22,280 (3%) |
| Pancreas: 22,090 (3%) | Pancreas: 21,830 (3%) |
| All sites: 848,170 (100%) | All sites: 790,740 (100%) |

Most Deadly Forms of Cancer

| Men | Women |
|---|--|
| Lung and Bronchitis: 87,750 (29%) | Lung and Bronchitis: 72,590 (29%) |
| Prostate: 28,170 (9%) | Breast: 39,510 (14%) |
| Colon and Rectum: 26,470 (9%) | Colon and Rectum: 25,220 (9%) |
| Pancreas: 18,850 (6%) | Pancreas: 18,540 (7%) |
| Liver and Intrahepatic Bile Duct: 13,980 (5%) | Ovary: 15,500 (6%) |
| Leukemia: 13,500 (4%) | Leukemia: 10,040 (4%) |
| Esophagus: 12,040 (4%) | Non-Hodgkin Lymphoma: 8,620 (3%) |
| Urinary Bladder: 10,510 (3%) | Uterine Corpus: 8,010 (3%) |
| Non-Hodgkin Lymphoma: 10,320 (3%) | Liver and Intrahepatic Bile Duct: 6,570 (2%) |
| Kidney and Renal Pelvis: 8,650 (3%) | Brain/Other Nervous System: 5,980 (2%) |
| All sites: 301,820 (100%) | All sites: 275,370 (100%) |

Cancer Basics

- **Most common cancer ≠ most deadly**
 - **Most common**
 - Men: Prostate
 - Women: Breast
 - **Most deadly**
 - Men: Lung and bronchitis
 - Women: Lung and bronchitis

Cancer Basics

- **What are some of the known 'causes' of cancer?**
 - Environmental exposures
 - Genetic susceptibility
 - Age

Cancer Basics

- **General risk factors for cancer**
 - **Environmental**
 - **Poor diet**
 - **Sedentary lifestyle**
 - **Obesity**
 - **UV light**

Cancer Basics

- **Exposure to chemicals**
 - **Tobacco / alcohol**
 - **Pollution**
 - **At work or at home**

Cancer Basics

- **General risk factors for cancer**
 - **Genetic**
 - **Inherited**
 - **Only ~ 5% (i.e. NOT the norm)**
 - **Acquired**
 - **From environmental risks**

Cancer Basics

- **What are common signs and symptoms of different types of cancer?**
 - **Dependent on:**
 - **The TYPE of cancer**
 - **The level of involvement**
 - **The individual**

Cancer Basics

- **Signs and symptoms**
 - **Fatigue or difficulty sleeping**
 - **Unexplained and rapid weight loss**
 - **Pain**
 - **Hoarseness or nagging cough**
 - **Bloating or indigestion**
 - **Changes in bowel / bladder habits**

Cancer Basics

- **Blood or abnormal discharge**
- **May have any or all of the above symptoms and not have cancer!**

Cancer Basics

- **How is cancer diagnosed?**
 - Signs / symptoms
 - Clinical laboratory tests
 - Imaging scans
 - CT / MRI / PET
 - Biomarkers
 - Biopsies

Types of Cancer Treatments

- **Surgery**
 - Used for diagnosis, treatment, and prevention
 - Stand alone or in combination with other treatments
 - Best chance for a cure
 - Early stages

Caring for Cancer Patients

- **After surgery**
 - Grogginess from anesthesia
 - Surgical site
 - Nutrition
 - ADLs
 - Pain

Caring for Cancer Patients

- Radical changes
 - Mastectomy
 - Ostomy
- Depression

Types of Cancer Treatments

- **Surgery – Central Venous Catheters**
 - Ports / PICC lines / Indwelling Catheters
 - Used for long-term access to veins for delivering chemotherapy
 - May be accessed for laboratory or blood draws

Caring for Cancer Patients

- **Central Venous Catheters**
 - Ports / PICC lines / Indwelling Catheters
 - Clean
 - Sterile wipes / AIR dry / non-latex (nitrile) gloves

Caring for Cancer Patients

- Flushed
 - Heparin flushes
- Operational
 - Access for medications / troubleshooting

Types of Cancer Treatments

- Radiation
 - Delivery of HIGH doses of radiation (energy) directly to cancer cells to kill the cancer cells, stop their growth, and shrink the tumor
 - Stand alone or in combination with other treatments

Caring for Cancer Patients

- Radiation
 - Site of therapy
 - Loose coverings; SPF; lukewarm water; ONLY paper or sensitive skin tapes if needed
 - Rest to combat fatigue
 - Eat well

Caring for Cancer Patients

- Radioprotective drugs – controversial
 - May / may not be used

Outline

- Cancer basics
 - General information
 - Types, causes / contributors, signs, and symptoms
- Types of treatments
 - Surgery, radiation, drug therapy, and supportive care

Outline

- Care for cancer patients
 - Post surgery and CVCs
 - Post radiation
 - During and after treatment
- Miscellaneous
 - Resources, Questions and Discussion

Types of Cancer Treatments

- **Drug therapy**
 - Chemotherapy (chemo / CMT)
 - Immunotherapy
 - **Monoclonal Antibodies (MAbs)**
 - Targeted therapy

Types of Cancer Treatments

- Supportive care
 - **Anti-nausea**
 - **Blood boosters**
 - **Pain management**
 - **Anti-depressants**

Types of Cancer Treatments

- **Drug therapy: Chemotherapy**
 - Drugs given IV on a schedule
 - Target “active” cells
 - **Cancer and normal (healthy) cells**

Types of Cancer Treatments

- **Side effects**
 - Pain
 - N/V/D
 - Fatigue
 - Hair loss
 - Altered taste
 - Loss of appetite

Types of Cancer Treatments

- **Risk of infection**
 - Fever
 - Rash
 - Sores

Types of Cancer Treatments

- **Drug therapy: Immunotherapy**
 - Monoclonal antibodies
 - Cancer vaccines
 - Stimulate the immune system to work harder to kill cancer cells

Types of Cancer Treatments

- Side effects
 - Fever
 - Rash
 - Fatigue
 - Chills
 - N/V/D
 - Low BP

Types of Cancer Treatments

- Drug therapy: Targeted therapy
 - Disrupts certain processes and signals need for cancer cells to grow and divide
 - Technically a type of chemo!
 - OFTEN are oral medications

Types of Cancer Treatments

- Grouped by the target
 - Enzyme inhibitors (e.g. TKIs)
 - Cell-death inducers (e.g. proteasome inhibitors)
 - Blood supply inhibitors (e.g. VEGF inhibitors)

Types of Cancer Treatments

- Side effects
 - N/V/D/C
 - HA
 - Fatigue
 - Fever
 - Chills
 - Rash / skin changes

Types of Cancer Treatments

- Supportive care
 - Drugs that combat the side effects of cancer treatment
 - Pain
 - N/V
 - Diarrhea
 - Decrease in blood counts
 - Immune support

Caring for Cancer Patients

- During treatment
 - Eat and eat well!
 - Lots of water
 - Watch for signs of infections:
 - Fever, chills, sores, rash
 - PREVENT pain - do NOT chase pain

Caring for Cancer Patients

- PREVENT N/V/D - do not wait until it happens
- Depression

Caring for Cancer Patients

- During treatment
 - Side effects tracker
 - Keep a list of ALL medications (drug, dose, route, frequency)
 - Include vitamins, herbal products, natural products (super juices, supplements)

Caring for Cancer Patients

- Keep away from kids and babies
- Masks, gloves
- Keep living environment clean

Caring for Cancer Patients

- Assure someone goes to ALL MD visits with the patient
- Assure that the patient does NOT drive on the days of treatment
- Take a list of all medications to EACH MD visit
 - Drug / dose / route / schedule / prescribing doctor

Caring for Cancer Patients

- Include vitamins, herbal therapies, nutritional supplements / juices
- Keep a diary of side effects
 - Assure the patient has an oral thermometer

Caring for Cancer Patients

- After treatment
 - Lingering pain
 - Depression
 - Permanent changes
- Survivorship
 - Long-term adjustment
 - Follow-up

Resources

- **American Cancer Society (ACS)**
– <http://www.cancer.org/>
- **National Institutes of Health, National Cancer Institute (NCI)**
– <http://www.cancer.gov/>
- **Leukemia & Lymphoma Society**
– <http://www.lls.org/>

Resources

- **American Society of Clinical Oncology; Patient Information**
– <http://www.cancer.net/>