The Impact of Obesity on Cancer Care: An Expanding Challenge

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Overview

• Background
  – The magnitude of the obesity and cancer problem in Wisconsin

• Obesity in Cancer Care
  – How obesity affects everyday management of breast cancer patients
    • Treatments given and side effects
    • Effectiveness of treatment and likelihood of recurrence
The Obesity Epidemic in Wisconsin

- In 2012, 28% of Wisconsin adults were obese.
- Nearly 63% of Wisconsin adults were overweight (BMI > 25).

Breast Cancer

• The most common cancer in women and second leading cause of death
  – In the U.S.
    • Over 200,000 women diagnosed in 2011
    • Over 40,000 deaths
  – In Wisconsin
    • Over 4,000 new cases of breast cancer yearly
    • Nearly 750 deaths annually

American Cancer Society Facts and Figures, 2012
Wisconsin Cancer Facts and Figures 2013-2014
Breast Cancer Treatments

• Many treatments often used
  – Surgery
  – Chemotherapy
  – Anti-endocrine therapy
  – Radiation

• Obesity can affect cancer treatment choices and side effects
Breast Cancer Surgery

• Greater rates of complications in obese patients
  – Higher risk of wound infections
  – Increased arm swelling (lymphedema)
  – Two to three times higher overall complication rate

Chemotherapy and Anti-Endocrine Treatment

- Some studies show reduced doses may be given, likely due to side effects
- Fatigue can be increased
- Patients with higher body mass index have worse outcomes
- Hormone levels may be higher due to fat tissue

Breast Radiation Treatment

• Side effects from radiation increased in obese patients
  – The breast appearance may be altered
  – Increased risk to surrounding organs
  – More variation in radiation dose given
  – May need to change treatment delivery to lessen side effects

Obesity and Chemotherapy and Anti-Endocrine Treatment

• Breast radiation is typically given with the patient lying on her back

• At the sites of skin folds, increased skin side effects from radiation can occur

• Overweight patients can have increased side effects due to increased areas of skin folds
Positioning for Prone Radiation in Larger Patients

• Alternative treatment method for obese patients to improve radiation side effects – prone positioning
  – The patient lies face-down, allowing the treated breast to fall through an opening
  – This minimizes skin folds in obese patients, decreasing skin side effects

Bergom et al. IJROBP, 83:821; 2012.
Prone Positioning for Breast Radiation

• This positioning can also decrease radiation doses to the heart and lungs

• It can be difficult for some patients to sustain this position throughout treatment

• This method is not available in all centers

Bergom et al. IJROBP, 83:821; 2012.
Obesity in Cancer Patients – After Treatment

• Overweight and obese breast cancer patients have increased risk of cancer recurrence and lower overall survival

• Diet and exercise may improve outcomes and decrease development of other medical problems

Ligibel and Strickler. ASCO Education Book; 2013
Obesity in Daily Cancer Practice

• Overweight patients are counseled on improving diet and activity level during and after cancer treatment
  – Our institution created a 0.2 mile route in our Cancer Center for use year-round
  – We offer free nutritional services in our Cancer Center during and after treatment
  – At provider visits, encourage small initial changes, i.e. walking daily, swimming, other activities and healthier food choices
Obesity in the Larger Cancer Context

• The challenges created due to obesity in cancer are not unique to breast cancer
  – In prostate cancer (the most common cancer in men), the treatments, responses, and side effects are also influenced by obesity
  – Improved diet and exercise may decrease chance of developing a second new cancer

Conclusions

- Obesity in cancer patients creates challenges in optimizing treatment and minimizing side effects.
- Obesity can increase the risk of cancer recurrence.
- Policies that promote healthy lifestyles have the potential to decrease cancer rates, lessen treatment side effects, and improve survival after diagnosis.
Thank You

Questions?