Gynecologic Cancer Survivorship: Bone Health

This practice algorithm has been specifically developed for MD Anderson using a multidisciplinary approach and taking into consideration circumstances particular to MD Anderson, including the following: MD Anderson’s specific patient population; MD Anderson’s services and structure; and MD Anderson’s clinical information. Moreover, this algorithm is not intended to replace the independent medical or professional judgment of physicians or other health care providers. This algorithm should not be used to treat pregnant women.

Baseline BMD and 25-OH Vitamin D:

- **Age greater than or equal to 50 years or post-menopausal with any risk factor?**
  - Yes
    - **BMD normal** (T-score greater than or equal to -1.0)
      - Repeat in 2 years
      - Reinforce universal recommendations
    - **BMD abnormal** (T-score between -1.0 and -2.5)
      - Consider medical therapy based on risk factors (FRAX5)
      - Reinforce universal recommendations
    - **BMD abnormal** (T-score less than or equal to -2.5)
      - Start medical therapy6
      - Repeat BMD in 1 year
      - BMD stable3?
        - Yes
          - Repeat BMD in 2 years
        - No
          - Medical therapy not initiated
          - Continue medical therapy
          - Yes
            - Refer to Bone Health Specialist
          - No
            - Continue medical therapy
            - No
              - Repeat BMD in 2 years

- **25-OH Vitamin D abnormal** (less than 30 ng/mL)
  - **25-OH Vitamin D abnormal** (less than 30 ng/mL)
    - **BMD normal** (T-score greater than or equal to -1.0)
      - Repeat in 2 years
      - Reinforce universal recommendations
    - **BMD abnormal** (T-score between -1.0 and -2.5)
      - Consider medical therapy based on risk factors (FRAX5)
      - Reinforce universal recommendations
    - **BMD abnormal** (T-score less than or equal to -2.5)
      - Start medical therapy6
      - Repeat BMD in 1 year
      - BMD stable3?
        - Yes
          - Repeat BMD in 2 years
        - No
          - Medical therapy not initiated
          - Consider medical therapy5
            - Yes
              - Refer to Bone Health Specialist
            - No
              - Continue medical therapy

Universal recommendations:
- Calcium 1,200 mg/day
- Vitamin D 800 units/day
- Exercise (See Physical Activity Algorithm)
- Avoid tobacco (See Tobacco Cessation Algorithm)
- Limit alcohol
- Limit caffeine

Medical therapy chosen

- **Ergocalciferol 50,000 units once a week for 8 weeks, then continue once a month**
- **Repeat BMD in 1 year**
- **Repeat calcium, albumin, and Vitamin D on next visit**
- **Repeat calcium, albumin, and Vitamin D in one year**
- **Repeat BMD in 2 years**

Risk factors:
- Low body weight
- Prior bone fracture
- Family history of hip fracture
- High risk medical condition
- Rheumatoid arthritis
- History of prior steroid use of 3 months or longer

Notes:
- 25-OH Vitamin D: 25-hydroxyvitamin D (hydroxycholecalciferol, calcidiol), the main vitamin D circulating in plasma
- Stable BMD = same T-score or improvement
- Abnormal BMD: Osteopenia T-score between -1.0 and -2.5
- Osteoporosis T-score less than or equal to -2.5

5 FRAX - WHO Fracture Risk Assessment Tool at www.shef.ac.uk/frax
6 Consider bisphosphonate, denosumab, raloxifene or if clinically indicated

Department of Clinical Effectiveness V5
Approved by the Executive Committee of the Medical Staff 04/25/2017

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SUGGESTED READINGS


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This survivorship algorithm is based on majority expert opinion of the Gynecologic Survivorship work group at the University of Texas MD Anderson Cancer Center. It was developed using a multidisciplinary approach that included input from the following core development team:

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