Survivorship – Gynecologic Cancer: Bone Health

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**PRESENTATION**

- **Age ≥ 50 years or post-menopausal with any risk factors**?
  - Yes
  - **Baseline BMD**
  - **25-OH Vitamin D**
  - Inquiry of new osteoporotic fractures (low impact)
  - **25-OH Vitamin D**: 25-hydroxyvitamin D (hydroxycholecalciferol, calcidiol), the main vitamin D circulating in plasma

- No

- **BMD normal** (T-score ≥ -1.0) and vitamin D normal (≥ 30 ng/mL) and no new low impact fracture

- **BMD abnormal** (T-score between -1.0 and -2.5) and any vitamin D level and no new low impact fracture

- **BMD abnormal** (T-score ≤ -2.5) and any vitamin D level and no new low impact fracture

- **25-OH Vitamin D** abnormal (< 30 ng/mL)

- Any BMD with new low impact fracture

- **Universal recommendations**
  - Start universal recommendations
  - Refer to Bone Health Specialist

**TREATMENT**

- **Repeat tests in 2 years and**
- **Reinforce universal recommendations**

- **Consider medical therapy based on risk factors (FRAX®) and**
- **Reinforce universal recommendations**

- **Start medical therapy** and **Reinforce universal recommendations**

- **Repeat BMD and 25-OH vitamin D in 2 years**

- **Medical therapy not initiated**

- **Medical therapy chosen**

- **Repeat BMD and 25-OH vitamin D in 1 year**

- **Repeat 25-OH vitamin D on the next visit**

- **Vitamin D abnormal?**
  - Yes
  - Continue medical therapy
  - No
  - Refer to Bone Health Specialist

- **BMD stable?**
  - Yes
  - Continue over the counter vitamin D3 1,000-2,000 IU daily to maintain vitamin D level at 30-50 ng/mL
  - No

- **BMD abnormal**? (T-score ≤ -2.5)

- **BMD normal** (T-score ≥ -1.0)

- **BMD abnormal** (T-score between -1.0 and -2.5)

- **BMD normal** (T-score ≥ -1.0)

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- **Abnormal BMD: Osteopenia T-score between -1 and -2.5**
- **Osteoporosis T-score ≤ -2.5**

- **FRAX® - Fracture Risk Assessment Tool at www.shef.ac.uk/frax**

- **Consider bisphosphonate, denosumab, raloxifene or if clinically indicated**

- **If vitamin D level is < 30 ng/mL, replenish with supplementation prior to initiating medical therapy for osteoporosis. See Box A for recommendation on vitamin D repletion.**

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

2 25-OH Vitamin D: 25-hydroxyvitamin D (hydroxycholecalciferol, calcidiol), the main vitamin D circulating in plasma

3 Stable BMD = same T-score or improvement

4 Universal recommendations:
- Elemental calcium 1,000 - 1,200 mg/day from all sources
- Avoid tobacco (see Tobacco Cessation algorithm)
- Vitamin D 800 - 1,000 IU/day
- Limit alcohol
- Weight-bearing/muscle - strengthening exercises (see Physical Activity algorithm)
- Limit caffeine

5 Abnormal BMD: Osteopenia T-score between -1 and -2.5
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SUGGESTED READINGS


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Seminars in Oncology Nursing, 23(6), 295-298. doi:10.1053/j.seminoncol.2006.08.016


The University of Sheffield. (n.d.). Welcome to FRAX. Retrieved from https://www.sheffield.ac.uk/FRAX/


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 Leads**

Jeena Varghese, MD (Endocrine Neoplasia & HD)

**Workgroup Members**

Therese Bevers, MD (Cancer Prevention)
Wendy Garcia, BS*
Katherine Gilmore, MPH (Cancer Survivorship)
Thoa Kazantsev, MSN, RN, OCN*
Huifang Lu, MD (Rheumatology)
Ana Nelson, MSN, DNP, APRN, FNP-BC (Cancer Prevention)

*Clinical Effectiveness Development Team