Breast Cancer – Noninvasive

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.

Note: Consider Clinical Trials as treatment options for eligible patients.

**DIAGNOSIS EVALUATION**

- Ductal carcinoma in situ (DCIS)
- Stage 0
- Tis N0 M0

- Bilateral diagnostic mammography
- Pathology review
- Consider ultrasound of affected breast for mammographic findings other than clustered microcalcifications alone
- Consider referral to genetics when clinically appropriate based on age of DCIS diagnosis and family history

**LOCAL TREATMENT**

- Not a breast conservation candidate or patient choice
- Total mastectomy with or without sentinel node dissection with or without reconstruction
- Invasive disease

**SYSTEMIC TREATMENT**

- Refer to Breast Cancer - Invasive Algorithm

**SURVEILLANCE/FOLLOW-UP**

- For patients who have had mastectomy, see Breast Cancer Risk Reduction Therapy Algorithm for risk reduction of a second contralateral primary breast cancer

- Physical exam with clinical breast exam annually
- Diagnostic mammography annually
- For breast conservation therapy: diagnostic mammography 6-12 months after radiation therapy, then annually

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1 Pathology review to include:
- Tumor size
- Rule out invasive component
- Lymph node status if lymph node surgery performed
- ER/PR status, preferably on the surgical specimen (unless patient is undergoing bilateral mastectomy)

2 Candidates for breast conservation therapy:
- Unicentric disease
- Tumor to breast size ratio allows for acceptable cosmetic result
- Attempt margins greater than or equal to 2 mm
- No evidence of diffuse microcalcifications on mammography
- No contraindication to radiation therapy

3 DCIS lymph node evaluation not recommended unless patient having total mastectomy which would preclude mapping at a later date if invasive disease noted on final pathology

4 For estrogen receptor (ER) or progesterone receptor (PR) positive DCIS, Endocrine therapy with tamoxifen for 5 years or aromatase inhibitor (AI) therapy is also an option for postmenopausal patients for risk reduction. See Breast Cancer Risk Reduction Therapy Algorithm for risk reduction of a second contralateral primary breast cancer. For patients who underwent bilateral mastectomy, there is no indication for risk reduction therapy.

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Consider hypofractionation whole breast schedules for all patients greater than 40 years of age.

**LOCAL TREATMENT**

- For ER or PR positive DCIS, if breast conserving surgery and radiation:
  - Endocrine therapy with tamoxifen for 5 years is recommended to lower risk of ipsilateral breast tumor recurrence.
  - Aromatase inhibitor (AI) therapy is also an option for post-menopausal women.

**SYSTEMIC TREATMENT**

- For patients who have had mastectomy, see guidelines for risk reduction of a contralateral primary breast cancer.

**SURVEILLANCE/FOLLOW-UP**

- Physical exam with clinical breast exam annually.
- Diagnostic mammography annually.
- For breast conservation therapy: diagnostic mammography 6-12 months after radiation therapy, then annually.

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**DIAGNOSIS EVALUATION**

- Breast conservation candidate

  - Yes: Consider hypofractionation whole breast schedules for all patients greater than 40 years of age.
  - No: Resect to obtain negative margins.

  **Negative margins**

    - Yes: No
    - No: Re-excite or Total mastectomy with or without sentinel node dissection with or without reconstruction.

1. Candidates for breast conservation therapy:
   - Unicentric disease
   - Tumor to breast size ratio allows for acceptable cosmetic result
   - If less than 2 mm negative margins and planned radiation therapy, multidisciplinary planning to consider need to re-excite and consider radiation therapy boost 14-16 Gy as an alternative to re-excision.
   - If less than 2 mm and no planned radiation therapy, re-excite.

2. DCIS lymph node evaluation not recommended unless patient having total mastectomy which would preclude mapping at a later date if invasive disease noted on final pathology.

3. For ER or PR positive DCIS, if patient undergoes breast conserving surgery and radiation, endocrine therapy is recommended to lower risk of ipsilateral breast tumor recurrence. The magnitude of local recurrence risk reduction depends on absolute risk of local recurrence based on factors such as grade and size (molecular profiling impact still is uncertain). Tamoxifen 20 mg daily for 5 years is approved to lower ipsilateral breast tumor recurrence after breast conserving surgery and radiation. AI therapy (anastrozole 1 mg daily for 5 years) has been shown to be equally effective, yet not FDA-approved for this indication. Endocrine therapy can also be considered for ER or PR positive DCIS treated with breast conserving surgery without radiation, but less supportive data exists. For patients undergoing mastectomy, refer to breast cancer prevention guidelines for prevention of a contralateral breast cancer.

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Note: Consider Clinical Trials as treatment options for eligible patients.
SUGGESTED READINGS


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Approved by The Executive Committee of the Medical Staff on 10/31/2017